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*Frontispiece.*



Looking Northward.



Looking Southward.

PHOTOGRAPHS OF A MODEL OF THE REGION SURROUNDING THE WINTER QUARTERS OF THE "DISCOVERY."

Vertical scale eight times the horizontal.

The straight lines are meridians. The wavy line shows the ice-crack between the barrier and the temporary ice. The position of the Winter Quarters is shown by a vertical standard carrying a small square flag.

The island on the left of the *lower* photograph is Ross Island, with Mounts Erebus and Terror.

The three small islands just beyond the Winter Quarters are White Island, Black Island, and Brown Island; the prominent cone in the middle distance is Mount Discovery, with Minna Bluff on the left, and the range Royal Society Mountains with its glaciers on the right. In the background is the continuation of the Great Ice Barrier.

NATIONAL ANTARCTIC EXPEDITION

1901-1904

Publication

# METEOROLOGY

## PART I

OBSERVATIONS AT WINTER QUARTERS AND ON  
SLEDGE JOURNEYS

WITH

DISCUSSIONS BY VARIOUS AUTHORS

PREPARED UNDER THE SUPERINTENDENCE OF THE DIRECTOR OF THE  
MÉTÉOROLOGICAL OFFICE WITH THE CO-OPERATION OF  
A COMMITTEE OF THE ROYAL SOCIETY

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## PREFACE.

BY

THE DIRECTOR OF THE METEOROLOGICAL OFFICE.

THIS volume contains the chief part of the results of the Meteorological Observations made in connexion with the voyage of the ship "Discovery" of the National Antarctic Expedition, which left Cowes under the command of Commander R. F. SCOTT, R.N., on the 6th August, 1901, and returned to Spithead on the 10th September, 1904.

There still remain for publication the discussions of the special features of the traces of the barographs, thermographs and hygrographs obtained at Winter Quarters, and of about 1000 synchronous charts of the regions south of 30° S. latitude, which have already been prepared from the daily observations at Greenwich noon contributed by international co-operation.

To the results now presented many persons have contributed, and in various ways.

## PROGRAMME AND EQUIPMENT.

The 'Antarctic Manual,' edited by GEORGE MURRAY, F.R.S., Director of the Civilian Scientific Staff of the Expedition until July, 1901, the guide to the scientific work of the Expedition, contains sections on Antarctic Climate, and on Meteorological Instruments contributed by R. H. SCOTT, F.R.S., and J. Y. BUCHANAN, F.R.S., respectively.

The ordinary meteorological equipment of the Expedition was supplied through the Meteorological Office at the expense partly of the Office and partly of the Admiralty. A number of additional instruments were also provided at the cost of the funds of the Expedition.

Sir WILLIAM WHARTON, F.R.S., Hydrographer of the Navy, and member, *ex officio*, of the Meteorological Council, took an active part in selecting the equipment. Dr. SCOTT was also on the Advisory Committee, and in the later stages of the preparation I was associated with them, and the duty of working out the details of special construction and arranging for the manufacture and supply devolved upon me.

Ultimately the meteorological equipment supplied by the Office was made up as follows:—

2 marine barometers.	1 DINES' self-registering pressure-tube anemometer.
2 station barometers.	1 DINES' sight-indicating anemometer.
3 large aneroids.	1 ROBINSON anemometer.
6 watch aneroids.	1 ASSMANN'S psychrometer.
3 barographs.	1 EXNER'S electrometer.
2 portable hypsometers.	3 thermographs (RICHARD type).
12 mercurial thermometers, 0° to 100° F.	2 hygrographs (RICHARD type).
12 mercurial thermometers, -40° to 90° F.	8 solar radiation thermometers.
12 low-range spirit thermometers +52° to -80° F.	2 earth thermometers.
6 sling thermometers.	2 terrestrial radiation thermometers.
3 maximum thermometers -30° to 90° F.	1 AITKEN'S dust-counter.
2 8-inch rain gauges, with duplicate receivers, cases and glasses.	1 standard spirit thermometer.
2 special thermometer screens.	5 PICHE'S evaporation gauges.
2 sunshine recorders (for 24 hours) with special cards.	6 hydrometers.
	12 spare tubes for anemometers.

The Meteorological Office also provided books of forms for the entry of observations which were prepared in consultation with Sir W. WHARTON.

## MISCARRIAGE OF INSTRUCTIONS.

Care was taken to draw up special instructions for working the self-recording instruments in order to secure correct timing and accurate records, and opportunity was also provided for members of the ship's staff to practise the working of the instruments beforehand. Unfortunately, in consequence of changes in the staff, these well-intentioned efforts failed altogether, and the meteorological observers under Lieutenant C. W. R. ROYDS, R.N., had to do the best they could with the instruments which they found at their disposal.

This failure of communication between those responsible for supplying the instruments and those using them accounts for some of the peculiarities in the procedure with regard to instruments. The presence of an "index" in the low-temperature thermometers led the observers to set them apart for reading the minimum and to use almost exclusively, for ordinary temperature readings, the mercury thermometers which were included in the equipment as auxiliaries. It was never contemplated that the station barometers would, as a rule, be so exposed as to fail because the attached thermometers were not graduated below 0° F. The Dines self-recording anemograph was sent out with the idea that the recording part would be kept in the living room and that the conducting pipes would be lashed to the stove-pipe. It seems doubtful, from what Lieutenant ROYDS says, whether even that provision would have got over the difficulty of the pipes filling up with ice needles. The difficulties experienced with the sunshine recorder, of which the records, sometimes practically continuous for 72 hours, are so interesting a feature of the results, would not have occurred if the observer had had any previous experience with the instruments, and a number of questions arise as to temperature differences, indicated by adjacent thermometers, which cannot be answered by the information at our disposal. They must be left for an observer in some future expedition who may be on the look-out for such differences when they occur.

In spite of the disadvantages at which they were placed by the want of rehearsal, Lieutenant ROYDS and his staff of observers must be congratulated upon their success in devising and carrying out arrangements for the exposure of the instruments, and their devotion in maintaining the readings in such inhospitable conditions. Many of the instruments used were of a new type, as applied in regions of intense cold, and the notes which Lieutenant ROYDS has made will serve as a valuable guide to the equipment of future expeditions.

## ARRANGEMENTS FOR THE DISCUSSION AND PUBLICATION OF THE OBSERVATIONS. MATERIAL AVAILABLE.

When the Expedition left England no provision had been made for the discussion of the observations which they were expected to bring back. Some preliminary observations, taken on the voyage to New Zealand, which were sent home from Lyttelton, were forwarded to the Meteorological Office by the Committee of the Expedition (26th March, 1902), with a request from the Presidents of the Royal and Royal Geographical Societies for reports upon them.

Later on (21st October, 1903) documents began to be received in response to a request for international co-operation in the collection of daily observations at noon G.M.T. on land and sea beyond 30° S. latitude during the period of the Expedition's stay in the Antarctic. The marine observations for which special forms had been prepared and sent out to the ships of the Navy and the Mercantile Marine came to the Meteorological Office, while records from certain observatories were sent to the Royal Society and were forwarded thence to the Office.

This led to correspondence as to the means of dealing with the data which were in process of collection and which were ultimately summarised as follows:—

I. *Observations of the "Discovery" Expedition.*

The METEOROLOGICAL REGISTER of the "Discovery" comprising two-hourly readings from November 29, 1901, to December 10, 1903, and thereafter daily observations only, with supplementary observations, remarks, and also daily observations of temperature at Cape Armitage.

The ROUGH BOOKS from which the registers had been compiled.

METEOROLOGICAL REGISTERS (with ROUGH BOOKS) for the sledge journeys.

The TRACES of the following self-recording instruments:—

*Barograph*.—From December 2, 1901, till March 28, 1904, complete, generally in duplicate.

*Thermograph*.—From December 2, 1901, till February 29, 1904, complete, generally in duplicate.

*Hygograph*.—Nearly complete, sometimes in duplicate, but traces often unsatisfactory.

*Sunshine Recorder*.—Some days missing.

*Dines' Anemograph*.—Incomplete and of doubtful value.

## II. *Auxiliary Daily Observations at Noon G.M.T.*

- (a) LAND OBSERVATIONS.—Transcripts, daily charts, and traces of self-recording instruments from the Argentine Republic, Cape of Good Hope (Cape Town), Mauritius, Australia (Perth and Sydney), New Zealand (Wellington), Falkland Isles (Cape Pembroke), collected in response to a circular of the International Antaretic Committee and of the Royal Society.
- (b) MARINE OBSERVATIONS.—30,200 days' readings between 1st October, 1901, and 31st March, 1904, in special or ordinary ship's logs. Collected by the Meteorological Office.

For the explanation of local circumstances and conditions we were dependent upon Lieutenant ROYDS' 'Notes' and the Narrative of the Expedition, published by Smith, Elder, and Co. for Captain SCOTT. An occasional visit from one or other of the members of the Expedition supplemented to some extent the information from other sources.

The Meteorological Council, whose staff was already overloaded with material collected in the ordinary course of office business, were not prepared to accept responsibility for this additional volume of data. Undoubtedly, had circumstances permitted, it would have been advisable to detail a special staff for the work under the control of a competent meteorologist, who would have been responsible for the issue of a complete report upon the observations. There were two objections to this obviously desirable course. First, competent meteorologists in this country were all too fully occupied to be able to devote the necessary time to the supervision; and, secondly, a meteorological staff requires some training and experience for which, in this case, no provision was available.

It was eventually decided that the work should be done in the Meteorological Office under my general supervision, the office staff being increased for the time being by a few additional clerks in order to set free experienced tabulators and computers for the work of critical examination. The expense was charged against a guarantee of the Royal Geographical Society, but ultimately placed upon the funds of the Expedition.

Scientific control was provided for by a Committee appointed by the Royal Society, consisting of Mr. J. Y. BUCHANAN, Dr. C. CHREE, Mr. W. H. DINES, Admiral FIELD, Dr. GLAZEBROOK, Sir J. MURRAY, Dr. W. N. SHAW, Captain TIZARD, Mr. C. T. R. WILSON, Mr. H. N. DICKSON, Mr. FERRAR, Mr. A. J. HERBERTSON, Dr. H. R. MILL, and Lieutenant ROYDS.

## PRESENTATION OF THE RESULTS.

The data of the observations at Winter Quarters and on the sledge journeys have been carefully examined and are printed *in extenso*, pp. 17 to 364, with maps prepared by Lieutenant MULOCK for the Royal Geographical Society to illustrate the geographical positions.

The two-hourly values have also been reproduced, arranged in the form adopted by international agreement for the publication of results from stations of the first order, pp. 365 to 406; and a summary of monthly results in the form usual for stations of the second order is given on p. 408. Readers who wish to obtain a conspectus of the salient meteorological features of the Winter Quarters of the "Discovery" will find it in this table. Tables of results for other expeditions are given for the purpose of comparison.

The introduction, which gives an account of the exposure of the instruments, is by Lieutenant C. W. R. ROYDS, R.N., who was in charge of the meteorological work of the Expedition. Various members of the

staff of the Expedition have been consulted as to different points arising in the course of the examination of the observations.

The preparation of a report upon the climatology of South Victoria Land and the neighbouring seas was entrusted to Captain CAMPBELL HEPWORTH, Marine Superintendent of the Meteorological Office, and notes on various aspects of the collected observations have been written by Mr. R. H. CURTIS, Superintendent of Instruments, Dr. C. CHREE, F.R.S., and Mr. W. H. DINES, F.R.S. Mr. C. T. R. WILSON, F.R.S., has contributed the report upon the observations of atmospheric electricity.

Observations were made with ozone papers (p. 4), but it has not been found practicable to formulate the results. Lieutenant ROYDS' note that the coloration of the papers was most marked during heavy southerly gales should be remembered in connexion with the occurrence of abnormally high electrical potentials in drifting snow.

The division of the responsibility for the discussion of the observations between a number of different persons is a method of procedure which is subject to obvious disadvantages, but in the present case it was inevitable. The task of dealing with observations in the absence of the observers themselves is always a difficult one, especially so in the case of the "Discovery" observations, because there was no opportunity for preliminary understanding as to the course to be pursued and the precautions to be taken to ensure accuracy and avoid ambiguities. In preparing the observations for press, careful comparison was made between the original entries in the rough books and the final records in the register and the curves of the self-recording instruments. A number of doubtful points were thereby resolved. While this work was going on, the auxiliary observations from ships and land stations south of latitude 30° S. were examined, transcribed on to separate sheets for each day, and plotted on charts.

It is essential that a primary discussion of observations thus obtained should be undertaken by those who have conducted the examination and seen the evidence for the readings adopted in cases of doubt; otherwise the conclusions drawn may be weakened, if not invalidated, by stress being laid on uncertain values. The programme that was approved by the Committee included a primary discussion of the land observations by Mr. R. H. CURTIS, who was in charge of the documents from Winter Quarters, and of the auxiliary marine and land observations in relation to the observations at Winter Quarters by Captain HEPWORTH. The points referred to Dr. CHREE and Mr. DINES were special points concerning the instruments employed, or observations which were outside the ordinary routine. It was my purpose to complete the examination and printing of the observations forming the Journal as soon as possible and to distribute the copies to those who were engaged upon the discussions, so that the whole of the material might be at their service. I then hoped to gather up the threads and deal with the general meteorological bearings of the results.

But this programme has not been fully realised. The task of examining and editing the observations has been a very long and difficult one. The plan of supplementing the staff of the Office by persons appointed temporarily, and therefore subject to frequent changes, proved unworkable, and when the special funds were exhausted the duty was taken over by the Office staff. In the meantime special transcripts of data were supplied to Dr. CHREE and Mr. DINES, and their notes were completed before the printing of the Journal was accomplished. Moreover, the various authors used a permissible latitude in interpreting their terms of reference, and travelled, to a certain extent, over each other's ground. The titles of their contributions have been adjusted accordingly.

While this work has been in progress the Office itself has passed through many changes. As Director I succeeded in 1905 to the responsibilities of the Council for the administration of the internal affairs of the Office, and therewith presumably to the undertaking with the Royal Society to carry out the preparation of the Antarctic observations for publication; but the various duties incidental to the changes in administration have left me less opportunity for taking a personal share in the discussion of the observations than I anticipated.

The pressure of Office business has also postponed the preparation of a paper on "The Sequence of Weather Changes as indicated by the Antarctic Records." This was entrusted to Mr. R. G. K. LEMPERT, who joined me in the authorship of "The Life-History of Surface Air-Currents," a strictly cognate subject.

As Superintendent of Statistics, Mr. LEMPERT has been in charge of the revision of the weekly reports and other publications which have demanded the whole of his personal attention. I trust that he will be in a position to take up the interesting question of the sequence of weather changes in the Antarctic before the close of the current year.

#### METEOROLOGICAL RESULTS.

Although not strictly in accordance with the original programme, and inadequate as regards the observations of temperature, the papers published in this volume represent the primary discussion of the meteorological results of the Expedition.

It may be useful if I give in a few sentences what appear to be the salient features of the climate according to the two years' experience of the explorers.

Although the Winter Quarters were regarded as an exceptionally warm position in relation to others in the locality, temperature ranged from a maximum of only 42° F. to a minimum of -58°·5 F. Fluctuations are extraordinarily rapid and violent at all seasons. They are sometimes, but not always, associated with changes of wind direction. Polar winds often bring with them an increase of temperature.

The daily range is large in consequence of the sudden fluctuations, but the mean diurnal variation, as represented by the averages of the two-hourly readings, amounts to only 3° in midsummer and 1° in midwinter. The time of maximum as regards the latter is rather dubious, but there is evidence of a diurnal and semidiurnal oscillation of temperature even in the Antarctic night.

The summers were remarkably cold. Very few days gave a mean temperature above the freezing-point. The highest mean temperature for any month was 26°·2 F., the lowest -21°·0 F.

The air is remarkably dry and transparent, fog is comparatively infrequent; precipitation is slight, but there may be deep drifts of snow. Sunshine is remarkably abundant; the total for 1903 equalled that for Scilly, and in December of that year an average of 16 hours per day was registered. The sun's rays are intensely hot and terrestrial radiation extremely vigorous.

Pressure ranged between 30·181 and 28·140 inches; the two extremes occurring in consecutive months of 1902. The barometer stands high as compared with the values obtained for other positions in the Antarctic. The sequence of pressure changes as shown on the barographic records presents no very noteworthy peculiarities, and the use of the barometer for anticipating coming weather is less effective than in this country.

The pressure observations show the common semidiurnal oscillation. It amounts to 0·002 inch, with maxima at about 10 a.m. and 10 p.m. at all seasons of the year. The variation of twenty-four hours' period has, on the average, an amplitude of twice that amount, but the times of maximum are different at different seasons.

The changes of pressure in high southern latitudes may be regarded as associated with the passage of cyclonic depressions much in the same way, *mutatis mutandis*, as elsewhere.

The surface winds are chiefly easterly. Northerly and southerly winds occur, but winds from between south-west and north-west are almost unknown. The chief characteristic of the wind is its gustiness. Gales are experienced from every quarter between north-east round to south-west on the eastern side, but, on the whole, they are not so frequent as in the British Isles.

The direction of motion of the lower clouds may be from any point of the compass. The resultant is a moderate frequency from the south-east; there is a marked deficiency as regards the west.

The resultant motion of smoke from Mount Erebus is from south of west and that of the upper clouds from the west.

Subject to some uncertainty on account of the state of the instrument, the mean electrical potential is rather lower than at Kew, but abnormally high in drifting snow, or ice-crystals. A diurnal variation is shown in summer, with a maximum in the middle of the day and a minimum in the early morning hours. The seasonal variation has a maximum in summer and a minimum in winter. No relation is shown between potential and aurora.

I add a few comments upon some of the points which have been raised in the course of the discussion.

*Temperatures.*

Captain HEPWORTH has called attention to the comparative warmth of southerly, *i.e.* polar, winds, which was also a special feature of the observations at Cape Adare by the "Southern Cross" expedition. Mr. DINES has dealt with the extraordinarily low summer temperatures in relation to the dryness of the atmosphere; he has also referred to the locally high temperature of the station at the Winter Quarters of the "Discovery," and has suggested an explanation. Dr. CHREE has dealt with the diurnal inequalities and the extremes of temperature. There are other points which may be noted. The great range of temperature during the winter months is very remarkable; the range in June, July, and August, 1903, during the Antarctic night was 64° F., 66·2° F., and 65° F., respectively, and closely connected with this point is the extraordinarily rapid fluctuation of temperature as shown by the thermograph. A specimen of the thermograph traces, giving examples of these rapid fluctuations of temperature, is reproduced here (fig. 1, p. xi.).

There is additional evidence of the existence of such rapid fluctuations. In default of any instructions to the contrary, an alcohol minimum thermometer, mounted in the screen beside the mercury thermometers, was read and set every two hours. Mr. CURTIS has called my attention to the fact that the minimum reading for the interval is in nearly every case below the mercury readings at the beginning and end.

Such would certainly not occur in any ordinary climate. So persistent is this occurrence of a minimum every two hours that Mr. CURTIS is disposed to doubt the accuracy of the readings as not being always borne out by the thermograph curves, but if there be an error of reading it is difficult to say which of the two thermometers is liable to the error, and in very many cases a depression of temperature within the two-hour interval is shown on the thermograms.

In connexion with these extraordinary results for temperature it must be remembered that when the physical process going on at the surface is a transference of heat from the air to the ground, cooled by radiation or otherwise, very capricious results are likely, because the cooled air remains at the surface. In any locality the fluctuations of minimum temperature on a clear night are, for that reason, far greater than the fluctuations of maximum temperature on a cloudless day. This property of cooled air must be borne in mind in considering all questions of Antarctic surface temperatures. The coldest temperatures are likely to be found in stagnant air, and any wind that disturbs stagnant air will be a warm wind. Every fluctuation in the strength of the wind will, similarly, cause an alteration of the conditions governing the temperature. From this point of view it is to be regretted that the variation of temperature with height, within such moderate compass as can be reached on the ship, up to 50 or 60 feet, was not made the subject of experiment or observation at comparatively short horizontal distances apart.

On p. 429, and elsewhere, Captain HEPWORTH suggests that the experience of relatively warm winds from the polar quarter may be attributed to the circulation of warm air in cyclonic systems, by which the current brought to any point from the southward may be traced to some equatorial quarter. It is difficult to know how far such an explanation may be carried. Without some limitation it would enable one to assign any desired characteristic as regards temperature to any part of the storm area. The detailed work upon the paths of air in travelling storms of temperate northern latitudes in "The Life-History of Surface Air-Currents" tends to show that it is difficult to give any general rule for the ultimate origin of the air supply for any particular part of a depression. In our experience in these latitudes, winds from equatorial quarters are generally warmer than those from polar quarters. But there is so little information about the mechanism of a travelling depression in the Antarctic regions that no final opinion is possible with regard to the question of the association of temperature and wind direction.

*Pressure and Winds.*

The question of the prevailing wind at Winter Quarters and its relation to the distribution of pressure is another interesting point which is not entirely disposed of. The idea of an anticyclone, possibly of no great vertical height, but spreading over the surface of the South Polar continent, has found expression in many forms in meteorological literature; the references to HANN and SUPAN given by SCOTT in the

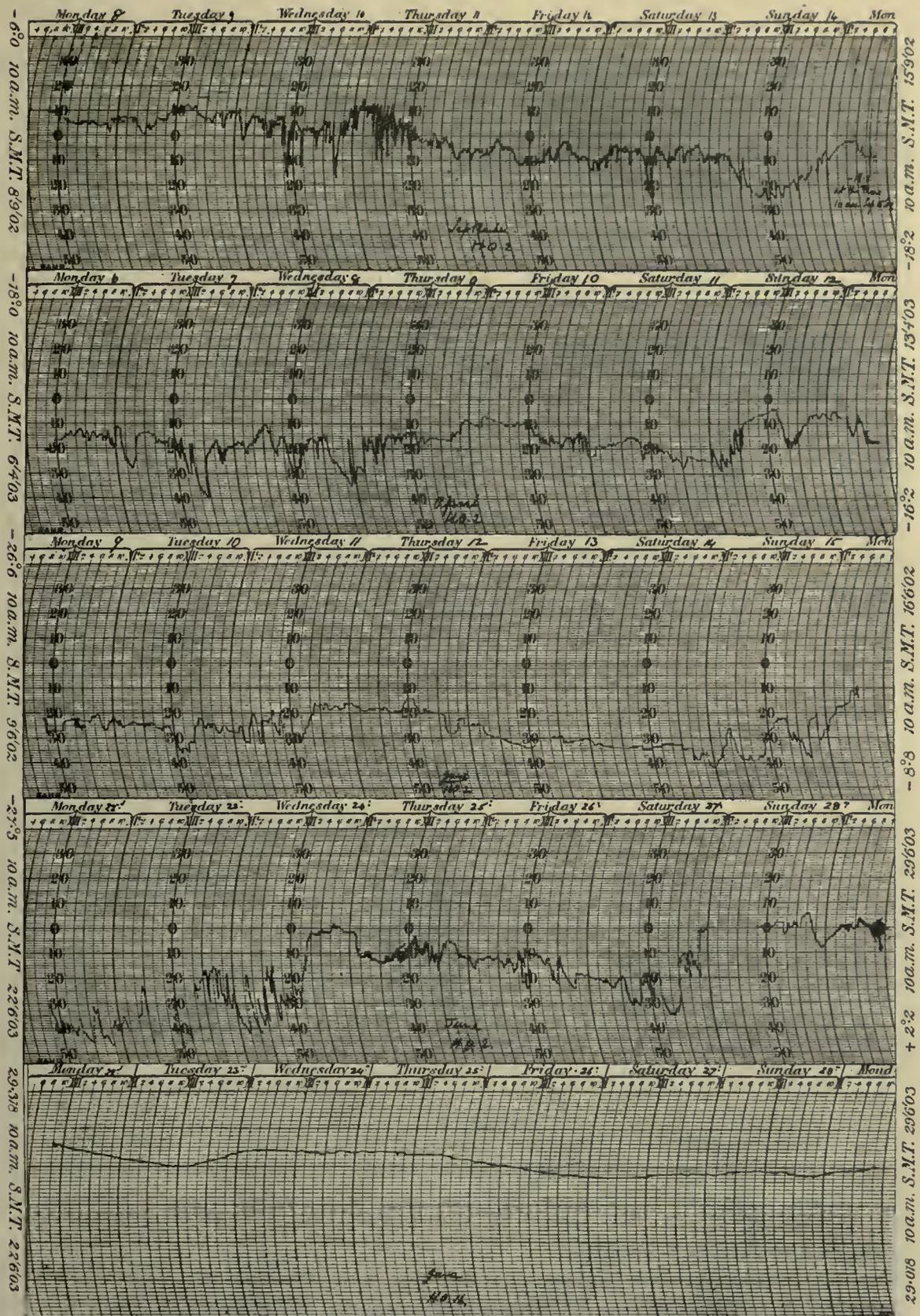


Fig. 1.

Faesimile reproductions of five traces of the self-recording instruments at Winter Quarters, representing rapid fluctuations of temperature and one associated barometric trace.

- No. 1. Thermograph record of temperatures above and below zero. September 8 to 14, 1902.
- " 2. " " " " below zero F. April 6 to 12, 1903.
- " 3. " " " " below -10° F. June 9 to 15, 1902.
- " 4. " " " " between -50° F. and 5° F. June 22 to 28, 1903.
- " 5. Barograph record for comparison, showing the absence of any noteworthy change of pressure to correspond with changes of temperature.

Antarctic Manual' bear out this statement, and the idea was also put forward by Sir J. MURRAY and Dr. BUCHAN, and was referred to by Mr. BERNACCHI in his account of the observations at Cape Adare. I gave very precise expression to the idea in the 'Proceedings of the Royal Society,' vol. 74, p. 20, 1904, and showed that an east to west circulation at the surface, with a superposed west to east circulation in the upper air was to be expected.

Such were the conditions actually found by the "Discovery" at Winter Quarters, as well as by the "Gauss" in a far distant part of the Antarctic. Mr. CURTIS has set out very clearly the full data on the question, and it seems difficult not to regard the observations as confirming the inference from general conditions, about which there can be no doubt. But Captain SCOTT and other members of the Expedition brought back the general impression that the winds at Winter Quarters were a local phenomenon due to local configuration (see p. 422), and that as soon as an "open" situation was reached the prevailing wind was really from south-west. South-westerly winds were certainly noted at Cape Crozier on several occasions, though some of the Cape Crozier observations were at an altitude of nearly 1000 feet; and southerly winds helped to bring back Captain SCOTT from farthest south, across the barrier ice. In spite of these facts it is difficult to imagine any cause for the existence of an easterly wind as a "local wind" at Winter Quarters or Cape Armitage and the practical absence of observations of westerly or south-westerly winds at these points. In order to place those who were discussing these questions in as favourable a position as possible for realising the local conditions, I had a model in clay of Ross Island and the region round the Winter Quarters, prepared in the office by Miss HUMPHREYS, who used all the indications that could be collected from maps and photographs to give a true representation of the locality. The model was exhibited at the Royal Society in 1907, and was seen by various members of the Expedition, who used it to recall their experience in considering points put to them. It was approved as an accurate representation. Two photographs of it are reproduced here, to show the general orographical conditions in regard to the point in question.

It is curious that endeavours to reach, by two separate crucial tests, a definite conclusion upon this interesting point, as to whether the easterly wind at Winter Quarters is a local wind or a true general wind implying a high pressure to the south, fail through very slight omissions in the observations or the records.

The first test is the experience of Lieutenant ROYDS on his journey across the ice barrier, November 10 to December 10, 1903 (p. 352), which should have been very favourable for extending the reach of the observers beyond the open position of Cape Armitage. Mr. ROYDS' observations are nearly all printed S.W., but it is curious that the deviation of that direction from the easterly direction observed at Winter Quarters and Cape Armitage is actually the deviation of the compass in that locality. There is no entry in the registers to show how the direction was obtained, nor whether the original entries were magnetic or true. Cross-examination of the members of the Expedition who visited the Office led to varying opinions, but finally Mr. ROYDS wrote (2nd May, 1907), "I believe on some other occasions wind has been entered as magnetic, but I do not remember doing it on that journey; in fact I am sure I did not." They are therefore printed as they stand.

It is clear that when the magnetic variation is so great as to make the difference between a south-westerly and an easterly direction of the wind, special care should be taken to distinguish between the two specifications of direction. Indeed, anyone who has to deal with the uncertainties arising in a question of this kind will agree that our geographical knowledge has now become too extensive for the continued use of the symbol N. to mean true or magnetic north according to circumstances, and that some other name for magnetic north ought to be devised when the point intended to be defined may be within twenty-five degrees of due south.

The second crucial test consists in endeavouring to identify the increase of pressure polewards that must correspond with a normal wind from the east in south-polar regions. This also must be considered to have failed, for Captain HEPWORTH and Mr. CURTIS have both attempted to use it and have felt themselves justified in adopting different conclusions. The failure arises from the fact that the explorers brought back no certain information about the amount of slope of the barrier surface towards the sea. The fact that there is a definite "ice-fall" between White Island and Black Island leads one to infer that, in that

part at any rate, the surface was rising slightly from the sea-level at Winter Quarters, but how much is very doubtful. Captain HERWORTH (p. 439), using an average height for the barrier, is of opinion that the observations give no conclusive indication of an increase of pressure southward, and conjectures an isobar running nearly north and south. Mr. CURTIS shows that the rise of surface necessary to account for the observed diminution of pressure southward is so slight that more might well be allowed, and infers that the sea-level pressure increased to the southward.

*The Antarctic Anticyclone and Local Winds.*

In this connexion it may be desirable to reconsider the general aspect of the question. First of all it is necessary to distinguish the average conditions and the instantaneous conditions on any particular occasion. No doubt the average is made up of the aggregate of individual occasions, and no process of averaging can convert a persistent south-westerly wind into an easterly one, or *vice versa*. Actual averages are only available for a few points, and the true relation of even a considerable number of isolated observations in different localities to the average conditions is not easily estimated. The Antarctic anticyclone, if it exists, is a comparatively superficial effect attributable to the surface cold. But to give an easterly wind there must be sufficient thickness of cold air to reverse the gradient of the upper air, which, as shown by the smoke of Erebus, by cloud observations, and by the observations at high levels, is poleward; 5000 feet is probably an ample allowance for the thickness of the cold surface cap which has an east to west rotation. In order to give a resultant gradient for easterly winds, the gradient of the cold surface layer must exceed that of the westward moving layer up above. One requires, therefore, a rapid *change of pressure* in the surface layer, and with that we should expect to find a *rapid temperature gradient poleward*.\*

There seems no reason to suppose that when once the permanent ice is reached there is very rapid diminution of temperature further to the south. We may suppose, on the contrary, that when the transition from open water to ice takes place there will be a transition of air temperature, and a pressure gradient associated therewith, but once upon the permanent ice continent the changes of general temperature and their influence upon surface pressure will be slight and possibly local.

The pressure conditions to be anticipated over the Antarctic may, perhaps, be described rather as a plateau with a steep fringe along the line of transition from ice to water than as a region of continually increasing elevation. The shape of the plateau will follow, roughly speaking, the shape of the permanent ice continent, and the average isobars will therefore roughly follow the coast line. Captain HERWORTH, on p. 440, has drawn attention to the tendency of isobars to conform to the coast line in other regions. What local variations there may be within the area of the plateau is altogether undetermined.

The number of calms observed in the Antarctic shows that the surface gradients are often very slight. The rapid fluctuations of temperature which must be associated with change of surface pressure, extending perhaps to no great height and therefore not recorded on the barograph, show that changes must be local and spasmodic, and we get the idea of the polar region within the line of minimum pressure as a region with a fringe of gradient for easterly winds where the rapid transition of temperature takes place from sea to ice, and within that belt little regular change of pressure, frequent calms with spasmodic changes of temperature and wind not closely associated with the general surges shown on the barograph.

Attention may also be called here to Mr. DINES' conclusion (p. 475) that the air of the Antarctic is exceptionally dry, and that the dryness may be attributed to the descending air of an anticyclonic region. This suggestion obviates to some extent the difficulty of the divergence of observation as regards wind

\* It may be noted that, in order to account for the transition from the surface gradient for easterly winds through an intermediate stage of southerly airs to a gradient for westerly winds at the level of the upper clouds, we require a temperature distribution with a fall of temperature towards the east of south in the first stage and towards the west of south in the second stage. Regarding these distributions as a fall of temperature towards the south in both stages, with a west to east gradient of temperature in the lower stage and one from east to west in the upper stage, we get a combination of conditions which is by no means improbable, in view of the fact that the temperature fell to the south along the surface, and in the upper layer the high land surface to the west would imply lower temperature there than at the same level in the free air over the sea of cold air lying on the barrier surface.

direction and the exceptional surface temperature. The descending air represents a supply to some neighbouring low-pressure area, and the air so supplied will be subject to a certain though unknown amount of dynamical warming.

It is in accord with these ideas that the Antarctic anticyclone seems to be such an elusive object of pursuit. Every Antarctic expedition gets almost within touch of it, but none actually grasps it. Mr. BERNACCHI inferred it from the observations at Cape Adare; the inference is confirmed, although not much strengthened, by the observations at Ross Island, 400 miles further south, but, be it remarked, along the coast line. The "Gauss," in the same way, got to the easterly winds in a much lower latitude than the "Discovery." The "Discovery" found easterly winds when coasting along the ice barrier to King Edward VII. land. The "Scotia" found an increased barometric reading at her furthest south (p. 451). It appears indeed to be possible that the limit of the low-pressure area defines the limit that can be reached by a ship, and that wherever and whenever a ship is brought to a standstill by permanent ice on its voyage south, the zone of lowest pressure is passed and the pressure has begun to show an indication of anticyclonic conditions. The easterly wind met with in these circumstances may well be a general accompaniment of the pressure gradient associated with the transition from water to ice, and therefore only local in so far as it is confined to a narrow belt just beyond the line of minimum pressure. But whenever the limit has been passed, the temperature gradient ceases, and therewith the pressure gradient; and beyond the Winter Quarters of the ship, on the line of nearest approach to the pole, wherever it may be, the pressure is generally uniform, with spasmodic gradients.

It must be allowed that these are merely suggestions not fully worked out. There is material in the observations now published for pursuing these ideas somewhat further.

The whole question of local winds is one of great meteorological interest and importance, which has long been noted for discussion in the Meteorological Office as soon as opportunity offers.

I had hoped to have the opportunity of completing the discussion as regards Antarctic winds before the publication of this volume, but, in the circumstances, it has not been possible, and to delay the publication of the volume on that account would serve no useful purpose.

W. N. SHAW.

22nd March, 1908.

# METEOROLOGY.

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## I. EXPLANATORY NOTES REGARDING THE TABLES OF OBSERVATIONS

(Pp. 17-272).

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THE data contained in the tables of Meteorological Observations have been arranged as follows:—

Column 1. **Hour.**—The hour at which the observations given in the succeeding columns were made.

Column 2. **Barometer.**—The barometer was hung on board the “Discovery,” where its cistern was 9 feet above the level of the sea. The readings have been corrected for instrumental error and reduced to sea-level and to 32° F., but have not been corrected for gravity. The mean of the bi-hourly readings made each day is given at the foot of the column.

Column 3. **Cape Armitage.**—The temperature of the air in degrees Fahrenheit observed at a point off Cape Armitage about 3000 yards south-south-east of the “Discovery.” The thermometer used was a spirit minimum thermometer, supported upon a light wooden stand at a height of 4 feet above the snow, and freely exposed to the air. Throughout the summer months the supporting frame was covered by a wooden awning to protect the thermometer from the sun’s rays, but during the winter months the awning was removed and the bulb left open to the sky. The reading of the thermometer at the time of observation as well as the minimum temperature shown by the index was recorded at each observation.

Column 4. **Spirit Minimum.**—The minimum temperature of the air recorded by a spirit minimum thermometer placed in a screen about 120 yards from the ship. The thermometer was read and set every two hours. The following corrections have been applied to the readings of this thermometer:—

	Correction.
When the temperature was above $-5^{\circ}$ F. . . . .	$0^{\circ}\cdot 0$
“ “ was $-5^{\circ}$ F. and not below $-15^{\circ}$ F. . . . .	$+0^{\circ}\cdot 5$
“ “ was below $-15^{\circ}$ F. . . . .	$+1^{\circ}\cdot 0$

Column 5. **Dry.**—The temperature of the air in degrees Fahrenheit, obtained from a mercurial thermometer exposed in the same thermometer screen as the minimum thermometer, at a height of 4 feet above the snow. No correction for instrumental error has been applied to the readings of this thermo-

meter. During the winter months the thermometer sometimes gave readings below the freezing-point of mercury\* ; but it was occasionally frozen, and when this was the case the temperature shown by the spirit minimum thermometer at the time of observation is entered in this column as the temperature of the air. The mean of the bi-hourly observations is given each day at the foot of the column.

Column 6. **Wet.**—Temperature of the “wet” bulb in degrees Fahrenheit, obtained from another mercurial thermometer placed by the side of the dry bulb, and at the same height above the snow. Throughout the stay of the “Discovery” in her winter quarters, water in the open air was invariably frozen. The muslin with which the bulb of the thermometer was covered was therefore allowed to hang a little below the bulb and was kept coated with ice, the rule being to put a few drops of water upon it from a rubber syringe at each time of observation, immediately after the thermometer had been read, care being taken, however, to keep the coating of ice as thin as possible. The mean of each day’s wet-bulb observations is given at the foot of the column. Occasionally the wet-bulb thermometer indicated a higher temperature than the dry-bulb. In such cases, if the difference did not exceed one degree, the reading is given, but when the difference was greater than one degree the wet-bulb reading has been omitted.

Column 7. **Unscreened Thermometer.**—The temperature in degrees Fahrenheit by an ordinary mercurial thermometer placed in an upright position above the screen in which the dry- and wet-bulb thermometers were hung. Up to March, 1903, the thermometer was attached by india-rubber bands to one of the posts to which the screen itself was fixed, but from that date onwards it was supported vertically by strips of brass fastened to the top of the screen, the height of the bulb above the screen being 2 inches, and its distance back from the front edge of the screen 4 inches. The thermometer was therefore fully exposed to the air, and to the sun’s rays whenever the sun was shining. The screen was painted white.

Column 8. **Wind Direction and Force.**—The direction of the wind was obtained from a vane erected upon a post forming one of the supports of the thermometer screen. The height of the vane above the snow varied with the depth of snow between 15 feet and 8 feet. All the wind directions given for Winter Quarters have been corrected for magnetic variation, and are therefore true. The force of the wind was estimated by BEAUFORT’S Scale of Thirteen Points (0 to 12), in which 0 indicates a calm and 12 a hurricane.

Column 9. **Wind Velocity by Cup Anemometer.**—The mean velocity of the wind in statute miles per hour as recorded by a small cup anemometer, the cups of which were 3 inches in diameter and the arms  $6\frac{1}{2}$  inches long. This instrument was exposed upon another of the upright posts carrying the thermometer screens, the cups being at the same level as the vane. The dials were read every two hours, and the reading has been divided by 2 to get the average hourly run of the cups in the interval. Before it left England the anemometer was tested at the Kew Observatory of the National Physical Laboratory, and found to give approximately the same result as the large, “Kew pattern,” anemometer. The readings of that instrument have to be corrected for the factor, and reduced in the ratio 2·2 to 3·0 to get results in statute miles per hour, and therefore the readings of the small instrument have been similarly dealt with.

Column 10. **Wind Velocity by Pressure Tube Anemometer.**—The actual velocity of the wind in statute miles per hour at the time of observation as indicated by a portable “sight-indicating” pressure-tube anemometer. This instrument was attached to the side of another of the posts carrying the thermometer screens, and was connected by 5 feet of composition tubing with a vane placed at the top of the post 10 feet above the snow level. It was read every two hours when the other observations were made, and the oscillation of the fluid in the tube, denoting the variation in the wind force, was observed during a short interval. Thus the entry “15-20” indicates that whilst the observation was being made the velocity of the wind varied between 15 miles and 20 miles per hour.

Column 11. **Weather.**—The weather at the time of observation indicated by the Beaufort notation, or by the International weather symbols, as follows:—

\* See Note on this subject by Dr. J. A. HARKER, p. 15.

## BEAUFORT NOTATION AND INTERNATIONAL WEATHER SYMBOLS.

b.	blue sky.	s.	✕	snow.
c.	clouds (detached).		⊕	snow drift.
o.	overcast.		⊗	snow lying (more than half the surrounding country covered with snow).
g.	gloomy, dull appearance.	h.	▲	hail.
u.	ugly, threatening appearance.		△	soft hail.
v.	visibility, unusually clear atmosphere.	t.	⊥	thunder.
∞	haze.	l.	<	lightning.
m.	☼ <sup>0</sup> mist, light fog.		⚡	thunderstorm.
f.	☼ fog.		☼	strong wind.
w.	⊖ dew.	q.		squally.
	⊖ hoar frost.		○	solar corona.
	↑ ice crystals.		⊕	solar halo.
	∨ silver thaw.		☾	lunar corona.
	~ glazed frost.		☾	lunar halo.
p.	passing showers.		☾	rainbow.
d.	drizzling rain.		☾	aurora.
r.	● rain.			

A bar (—) under a letter indicates persistency, and a dot (.) intensity. The figure <sup>0</sup> attached to a symbol indicates very slight, whilst the figure <sup>2</sup> indicates strong or heavy: thus ●<sup>0</sup> = slight rain, ●<sup>2</sup> = heavy rain.

Column 12. **Sunshine.**—The duration of sunshine is shown by the number of two-hour spaces covered by the vertical black line within the column. The record was obtained by a Campbell-Stokes sunshine recorder specially designed for use in high latitudes where the sun may be above the horizon throughout the twenty-four hours. The instrument was placed on Hut Point, a conical mass of rock 50 feet high and about 300 yards to the west of the ship (see map, p. 16). The base of the recorder was about 2 feet above the ground. The only possible obstruction to the free horizon of the instrument was Crater Hill, 1,000 feet high and about 2 miles to the eastward, which may possibly have cut off some of the morning sunshine in November and February.

Columns 13 and 14. **Clouds: Amount and Movement.**—The form, amount, and direction of movement of the **upper** and **lower** clouds are given in these columns. As regards **form**, the classification and nomenclature adopted is that of the **International Cloud Atlas**. The **amount** is given by a scale of 11 points (0 to 10) in which "0" signifies a cloudless sky, and "10" a sky completely covered with cloud. The **direction** of movement is that **from which** the cloud appeared to be travelling, and in common with all the observations made at Winter Quarters, the bearings given are **true** and not magnetic.

Column 15. **Temperatures by Assmann's Aspirator.**—This apparatus was suspended from an iron arm attached to one of the posts carrying the thermometer screens, and was 3 feet above the level of the snow. The upper of the two readings taken at each observation is that of the dry bulb and the lower that of the wet bulb.

**At the foot of the Columns. Maximum Temperature. Solar Radiation. Evaporation. Precipitation.**—Observations of the **maximum temperature** were made twice daily, at 8 a.m. and 8 p.m., from a mercurial maximum thermometer placed in the same screen as the dry- and wet-bulb thermometers.

The observations of **solar radiation** were made on Hut Point, near the position occupied by the sunshine recorder. Both black-bulb and bright-bulb thermometers *in vacuo* were used, and were arranged horizontally upon a stand  $3\frac{1}{2}$  feet above the snow with their bulbs pointing to the north. Thermometers with large and small vacuum bulbs were employed, but, unless otherwise stated, the readings given are always those from the instruments having the larger bulbs.

The daily amount of **evaporation** was obtained by weighing a small tin vessel containing ice, which was kept exposed upon the top of one of the thermometer screens. Generally two, and occasionally three, such vessels were weighed at each observation.

The amount of **precipitation** was got from a rain gauge placed on the ice near the thermometer screens. It was measured only when the snow fell without much wind; at other times the drift made it impossible to use either the rain gauge or the indications of the snow gauges, which were graduated stakes placed upright in the snow.

**Remarks and Notes.**—The observations given in the columns have occasionally been amplified by notes, and they have also been supplemented by descriptions of phenomena which it was not possible to tabulate. The following observations made at more or less irregular intervals as occasion offered are always entered in these notes:—

- (A) The direction of drift of smoke from Mount Erebus as observed from a point a short distance to the westward of the "Discovery." The bearings have been corrected for variation and are therefore true.
- (B) The temperature of the air observed off Cape Armitage at times other than those specified in the table.
- (C) The temperature of the air at the High-Level Station on the summit of Crater Hill, to the eastward of the ship and 1000 feet above sea-level. The thermometer used was a spirit minimum thermometer, which was placed in a ventilated box protected by stones placed against it.
- (D) Observations of the amount of ozone present in the atmosphere, determined by the amount of discoloration of a strip of prepared paper exposed to the action of a current of air. The amount of discoloration was estimated by a scale of 11 points, in which "0" indicated complete absence of ozone and "10" the presence of the maximum amount.

All **compass bearings** given in the notes relating to observations made at Winter Quarters have been corrected for variation and are therefore true.

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## II. NOTES ON THE METEOROLOGICAL INSTRUMENTS AND THEIR EXPOSURE.

BY  
LIEUTENANT C. ROYDS, R.N.

### WITH ILLUSTRATIONS OF SOLAR PHENOMENA AND CLOUD OBSERVATIONS.

BY  
DR. E. A. WILSON.

#### METHOD OF TAKING OBSERVATIONS AT SEA.

On the port side of the Upper Deck, under the bridge and in a small alley way, through which there was free circulation of air, was hung the meteorological screen, in which were placed the Dry- and Wet-Bulb Thermometer and the Maximum and Minimum Thermometers. The Barometer was hung in the lobby leading down into the Ward Room.

Observations were taken by the Officer of the Watch every two hours, when possible, and always at the end of the watch, and were entered in the rough book supplied for the purpose. Water temperatures (surface) were also taken, the water being drawn by means of a canvas bucket from the bridge. The thermometer was immersed in it, left for a few moments, and then read.

Winds and direction of cloud-movement were taken by the Compass and are entered as magnetic. The latter observation at sea is difficult owing to the motion of the ship. The Maximum and Minimum Thermometers are also affected by the same cause, and, when the motion is excessive, erroneous readings must occur.

#### METHOD OF TAKING OBSERVATIONS IN WINTER QUARTERS.

Until the sea was frozen over, after our arrival in winter quarters, the same system of observing was used as at sea. As soon as the sea was frozen over, a meteorological screen was set up on the ice, about 120 yards astern of the ship, so as to be well clear from any effects which the ship might cause, except in westerly winds, which did not occur (figs. 1 and 2).

Facing the E.N.E. was placed a screen enclosing the Thermograph and Hygrograph. The screen with the Dry- and Wet-Bulb and the Maximum and Minimum Thermometers was hung facing W.S.W., about 4 feet from the ground. There was also another screen in which another Thermograph and Hygrograph were placed.

A wind vane was made on board the ship and placed about 12 feet from the ground, being set up true; all winds taken in winter quarters are logged as True Winds. The Robinson Anemometer was set up about 15 feet from the ground; the instrument we called "Dines" small Anemometer was set up with its head about 10 feet above the level and with about 5 feet of tubing to the recording part. Observations were taken, with hardly a break, every two hours, night and day by the Officers, assisted at times by the four Quarter-masters and by the assistant Cook, from April, 1902, to November, 1903. It is due to the conscientious care shown by each observer, and the unselfish interest they all took in the work, that the record is as complete as it is.

The question of a lamp for taking the observations at night, and when the Sun is below the horizon during the Winter, is one for very careful consideration before the ship leaves the home port. For a time we used a small electric lamp, but this necessitated taking out a heavy battery, so a candle lamp was made which worked well and seldom blew out, even in the strongest winds.

The observations were written down at the screens on a piece of paper, printed for the purpose, secured to a board, and on the arrival of the observer on board were copied into the rough book.

The time of observations was every two hours, local mean time, and every care was taken that the observer should leave the ship punctually. He was instructed to take the barometer first, then to read



Fig. 1. "Discovery" in Winter Quarters, looking South.

the dry- and wet-bulb and minimum thermometers, resetting the latter; next to ascertain the direction and force of the wind by Beaufort scale, reading the Robinson anemometer and the "small Dines," and, lastly, to observe the clouds and to make any general remarks that might be called for.

As the work of Meteorological Observations cannot depend wholly on one person, my thanks are due to one and all for their very great assistance.

#### BAROMETER.

Throughout the voyage from England until we got into Winter Quarters in Latitude  $77^{\circ} 50' S$ . the barometers were hung in the entrance to the Ward-room lobby; the cistern being about 9 feet above the sea-level.

Before our arrival at Cape Town, barometer No. 592 was broken and was replaced by No. 2244, kindly given us by the Cape Town Observatory, and always used at sea. When we reached Winter Quarters the three barometers No. 915, No. 2244, No. 612 were hung in the Magnetic House, which was situated on the upper deck, below the bridge and above the mess-deck.

Two-hourly observations were taken with No. 915 and attached thermometer and at noon, and throughout the first year at other times. Comparison observations were made with the other two barometers, but owing to the attached thermometers on these instruments not registering below zero, many observations were taken without the attached thermometer.

It will be noticed that there are large fluctuations of the attached thermometer on No. 915. This variation was due to the door having been at times left open between the observations, and when it was at

length closed the heat from the mess-deck below warmed the Magnetic House. Again, the snow-drift on the upper deck used often to block the door, and prevent it from being closed tightly.

The height of the cisterns of these barometers was about the same as when hung in the lobby, viz., 9 feet. The instruments were in an ideal place, except for the temperatures being low at times. Except the observer, no one used the Magnetic House, so that the barometers were free from any rough or unnecessary handling.

On the journey back to England the barometer was still kept in the Magnetic Room, but, owing to the observations for "Dip," the cistern being made of iron, the instrument had to be moved each day during the times that the magnetic observations were being taken.

#### DRY-BULB THERMOMETER.

This instrument, placed in the screen with the Wet-Bulb and with the Maximum and Minimum Thermometers, was read every two hours. If the temperature at the time was below  $-40^{\circ}$ , the readings of the dry-bulb thermometer, which was a mercurial one, were not taken, but the present time readings of the spirit maximum as well as the minimum were read instead. Sometimes the mercury was not frozen until below  $-40^{\circ}$ .\*



Fig. 2. Thermometer screens and anemometers.

It was noticed that the present reading of the spirit minimum often showed a lower reading than the mercurial, and at one time the two were recorded and entered in the register for the information of the authorities at home. The readings of the thermometer exposed outside and of the dry bulb in the screen were seldom similar, and at one time I thought the screen seemed to retain the heat from the sunshine during the day and more especially on calm nights, when the sun was below the horizon. Radiation would, of course, affect the outside thermometer, and would account for the difference.

\* See Note by Dr. J. A. HARKER, p. 15.

## WET-BULB THERMOMETER.

This instrument, placed in the same screen with the dry-bulb and the maximum and minimum thermometers, was read every two hours. Throughout the first year in winter quarters it did not work at all satisfactorily, probably owing to the accumulation of too much ice on the bulb. Throughout the second year, when I was careful to see that this accumulation did not take place, it worked much better.

It was by no means uncommon for the reading of the wet-bulb thermometer to be higher than that of the dry bulb. The fact of the muslin being round the bulb, with a coating of ice on it, however thin, seems to me to indicate that in any quick change of temperature, this instrument should necessarily be more sluggish than where the bulb is free. On more than one occasion, when the temperatures were very low, the mercurial dry bulb was observed to be frozen whilst the wet bulb was not.

## MAXIMUM THERMOMETER.

This instrument was placed in the screen with the dry- and wet-bulb thermometers and with the minimum thermometer, and was read and reset at 8 a.m. and 8 p.m. When the mercury was frozen, no maximum temperature could be read, unless the temperature had been above the freezing-point of mercury during the time of observation. At sea this instrument is liable to show incorrect readings through the motion of the ship.

## MINIMUM THERMOMETER.

This instrument was placed in the screen with the dry- and wet-bulb and maximum thermometers, and was read every two hours and reset. When the temperature of the air was low enough to freeze the mercurial thermometers, the present time reading as well as the minimum was read and entered in the book. Also, as it was observed that there was a difference between the present time reading and the mercurial dry-bulb readings, a series of observations was taken for a short time. No defect in either thermometer was apparent.

These instruments gave considerable trouble on account of the column breaking, and a large number of them were broken in the vain attempts to restore them to working order.

## RADIATION THERMOMETERS.

*Black and Bright Bulbs.*

These were placed on a stand at Hut Point, 5 feet above snow-level, and about 30 feet above sea-level (fig. 3). They were read and reset at 8 p.m. daily. During our second year three thermometers were in use, a large and small black bulb and a small bright bulb. During the winter these thermometers were not kept in position, but were placed as soon as possible after the sun returned.

## RECORDING INSTRUMENTS.

*Thermographs.*—Two of these instruments were placed in screens on the Meteorological stand; one was with large dimensions, and the other with small dimensions on the scale. The disadvantages that belong to this instrument are the same for all instruments of the same nature. The screens themselves are, of course, not drift-tight, and gradually get absolutely full of hard-packed drift snow, which surrounds the working part of the instrument and absolutely stops all working. Then, again, the drift gets inside and around the clock, and on and over the pen: consequently, after a blizzard, it was necessary to clean the instruments and get them into working order again. Time after time the record for the week has been spoiled by the snow getting on the pen, and either causing a big thick line or else drying up the ink and preventing it from marking altogether.

*Hygrograph.*—The same remarks apply to this instrument, of which we had two in use during the greater part of the time. Another disadvantage of the Hygrograph is that snow, getting on the hairs, effectually prevents any accuracy. In all these recording instruments the clock was found to give a great deal of

trouble in the very cold temperatures, and every means was tried to overcome this defect, but with no satisfactory result.

During the time we were at sea, the recording instruments were kept at Greenwich mean time, but on the start of observations from the screen on the ice, Ship apparent time was used, and the records were shifted on Mondays at 10 a.m. The pain caused to the observers of these instruments is really great at times, for as it was nearly impossible to shift the papers with mits on, they had to be removed, and handling the metal meant frost-bitten fingers.

*Barographs.*—Two and sometimes three of these were kept going on board, down in the living space. They always seemed to work well, and there was no reason why they should not. If found to be very different from the present time reading of the Mercurial Barometer, they were set to that reading.



Fig. 3. Solar radiation thermometers.

*ASSMANN'S Aspirator.*—For a considerable time during our second year this instrument was in use, and worked most satisfactorily. It was kept out at the screen, and was wound up on arrival of the observer at the screen. He then proceeded to take the various other observations and read the aspirator last. The observations, therefore, cannot be quite comparable with those of the dry- and wet-bulb thermometers, as the changes of temperature were very rapid, instances of its falling having been observed whilst actually reading the dry bulb.

I think very highly of this instrument, although it is a most difficult one to use, its graduations being so small, and there being so much metal connected with it. Moreover, the winding of it up with mits on is by no means an easy task. Then, again, the wetting of the wet bulb means the unscrewing of the protecting part, which, in our experience, necessitated removing one's mits. Taking it all in all, the disadvantages of the instrument are great, but these, I think, could be overcome with a little trouble before leaving home, and the readings which it affords represent, in my opinion, much more the true air-temperature than those taken by the thermometer in the screen.

It was unfortunate that during a blizzard our instrument was broken. It should always be taken in before a heavy wind, because the dome for the fan will always get badly choked with drift snow. I do not know whether the speed which the fan reaches would in any way affect the readings. If so, this is another matter for consideration.

#### CAPE ARMITAGE THERMOMETER.

This was a minimum thermometer, placed on a stand about 4 feet 6 inches above the snow-level and well clear of all land (see map, p. 16, for position). It was read always once a day, weather permitting, and very often twice and three times, as any Officer going out would make this an excuse for a walk, and would read and reset the thermometer, taking the time he did so. The differences between the readings of this thermometer and those of the minimum in the screen for the same interval were very marked.

During the Winter months the thermometer was open to the sky, but during the Summer a shade was placed to protect it from the sun's rays (fig. 4). Dr. KOETTLITZ was the originator of this series of observations, and it is mainly due to him that the series remained as unbroken as it is. During the second year Lieutenant MULOCK assisted Dr. KOETTLITZ in taking the observations, and generally recorded two observations in the day.



Fig. 4. Thermometers at Cape Armitage, looking North (showing the screen placed over the thermometer during the Summer).

#### DINES SMALL ANEMOMETER.

This instrument was set up on the screen, the head being about 10 feet above the level, and the connecting pipes about 5 feet long. During the heavy snow drifts which always accompanied a southerly gale the open head of this instrument was invariably choked, and necessitated clearing every two hours, before observations were taken. The highest and lowest readings were recorded during the time the observer was looking at the instrument. Snow was found not only to collect in the head, but also in the pipes, and the only way to clear them was to take them on board and thaw them out. A leak was observed at the lower glass joint, and the Engineer soldered all round it and so more or less stopped the leak. Pure alcohol was used, coloured by staining matter, and the evaporation of the alcohol appeared to be rapid. The observations taken with the instrument seemed to agree more or less with those of the Robinson, and more especially the estimates on the Beaufort scale.

## ROBINSON'S ANEMOMETER.

The instrument was fixed to the end of two long pipes and was secured to the screen at about 15 feet above the level (fig. 2). Observations were taken of the miles run every two hours. This instrument worked well, but the credit of its performance is due to Engineer-Lieutenant SKELTON, who always repaired the instrument after any heavy blizzard. No spare parts having been provided, the observations had to cease while the repairs were being effected. Snow was observed to collect in the cups, and this necessitated their being cleared at every observation when snow was drifting or falling. Also the glass face is by no means drift-tight, and unless made so, by gumming paper all round the edges, the working parts inside would very soon be completely covered.

## LARGE DINES RECORDING ANEMOMETER.

The head of this instrument was secured on the mizen cross-trees, about 34 feet above the cistern, and the pipes were led down the T'g't. back-stay, and through the top of the signal locker to the cistern in the locker. During the strong drifts which invariably accompanied the southerly blizzards this head became choked, and was cleared, to the best of the observer's ability, by his going aloft and knocking out the snow collected in the head. Owing to its position the whole could not be taken down, and so the pipes were never touched. It was found that the snow remaining in and about the head would be melted in Summer by the heat of the sun, and then freezing again would stop the head from revolving. On some of the anemograms this can be seen to have been the case by the line working low down and, on the head being freed, shooting up to a higher level.

This instrument, to my mind, always worked too low, and thus under-rated the strength of the wind. When it was first set up, the liquid supplied was used, but when the colder weather came on, the piston stuck fast. On opening it up, I found ice on the top of the liquid, then the spirit, and below that a thick substance like condensed milk, which I presumed was the glycerine, which had separated. I then took all this out and filled it with spirit containing only a small amount of glycerine. In the very low temperatures and calms I always found that the piston was inclined to work in thick liquid and had to stir the whole lot up. Then, again, whilst shifting the anemogram, one's breath used to collect on the piston rod and prevent it working easily through the collar. The clock gave a great deal of trouble, as it would not work in the very cold weather, and the ink also was very unsatisfactory; it was often found frozen and not marking.

Taking it on the whole, this instrument has many disadvantages in the antarctic climate. Could one only keep the recording part down below in the warmth, it would be very much simplified, but if this were done the cold would be conducted down the pipes and collect all over the cistern and piston rod, and effectually stop all working. This was the case with the unused stove, the whole of the stove in the Mess being covered with a thick coating of rime. Even if the pipes led up through the working stove funnel, the head itself would become blocked, as around the tops of the funnels ice and snow collected to some extent. I see no way to get over the fact that the orifice in the head always gets blocked.

For a recording wind instrument I would suggest a Robinson, attached to the mast head, and led down to the deck, and even down to the living space, care being taken that the connecting rods are within easy reach. Such an instrument has, I own, many disadvantages, of which the height is the greatest. Should the observing party be living in hut, this objection could be easily overcome, and records of direction as well as force could be obtained.

## EVAPORATION EXPERIMENTS.

About the middle of our first Winter, the question of Evaporation being discussed among the Officers, it was decided to try an experiment suggested by Captain SCOTT. Two open shallow dishes, 3 inches by 4 inches, filled with water which was allowed to freeze, were placed on the top of the meteorological screen. These were weighed before being taken out, and 24 hours later were weighed again, the difference in

grammes being the amount lost in the interval, which could only be by evaporation. Sometimes the dishes weighed a trifle more than the day before, and this I put down to the fact of a fall of very minute ice crystals adhering to the ice surface. Any loose drift or snow was brushed off before the dishes were weighed.

It will be noticed that the differences are seldom actually the same for each dish, and this is rather singular, seeing that they were placed side by side, and presumably what affected one dish should also have affected the other. In summer it was found impossible to continue these observations, for the ice in the dishes was then melted, and it was most difficult to weigh them without spilling the water.

#### RAIN OR SNOW GAUGE.

This instrument was placed on the snow at a little distance from the Meteorological Screen (fig. 2). During the ordinary snow-fall it worked well, and the amount of snow was recorded at the actual time it was taken. During the southerly gales, which invariably brought with them a heavy snow-fall as well as dense drift, this instrument was useless, as any other instrument of a similar kind would have been under those circumstances. Very often after one of these gales it became exceedingly difficult to find the instrument at all, since it might be buried under three and four feet of snow, and it was only because we knew its exact position and dug down to it that we did not lose it more than once. For some time the snow-fall was so small that it was measured in cubic centimetres and entered in the fair register in that scale. The bay in which we were situated formed a regular cone for the full strength of the southerly gales, and the drift which accumulated all round and about the ship, or any other obstacle, was enormous.

#### SUNSHINE RECORDER.

This instrument was placed on a box on the summit of Hut Point about 40 feet above the sea-level. The cards were shifted at Noon. Only since the return of the expedition have I ascertained that the cards were placed in the instrument inaccurately, which is the reason of the mark of the burn not going straight and at times jumping up or down on the card.

In the early Spring some few hours of sunlight could not be recorded, because the rays were cut off from us by hills in the vicinity—Observation Hill, Crater Hill, Arrival Heights. This can be seen from the map of our Winter Quarters (p. 16).

The manipulation of small screws, &c., connected with the sunshine recorder, and the very exposed position of the instrument, made it by no means a pleasing duty to shift the cards, and often involved frost-bitten fingers. The cards were not kept shipped during the first Winter, but during the second Winter a card was in the whole time and took the first record.

#### OZONE OBSERVATIONS.

For a long time during our cruise no attempt was made to observe ozone; it was such a very doubtful observation. Towards the end of our second Winter, however, I decided to try and see what effect would be produced on the papers supplied. One of these was placed in a small tea-strainer and hung in one of the meteorological screens, and when taken out was carried on board in a glass tube and placed in water. The depth of tint obtained was then compared with the scale supplied.

To test whether the fact of doing this in the ward room affected the result, one of the papers was hung in the mess all night, and on being placed in the water next morning, it was found to remain clean white. Also at times a paper was taken direct from the tin box in which they were kept, and was placed in water, but it always showed clean white, very different from the tint produced by exposure in the open air. The papers seemed most affected during heavy southerly gales, and were quite brown before being put into water. The length of time the paper was exposed was always noted, and also the colour of the paper before being immersed in water.

## INSTRUMENTS EMPLOYED IN SLEDGING.

The instruments generally taken on a sledge journey were a minimum thermometer and an aneroid. Some parties carried a hypsometer, and the reading was taken once daily at the same time as the aneroid was used. I would suggest, for future guidance, that some indication should be given of what is wanted to be done at these secondary stations, which must necessarily be moving stations, and that instruments should be supplied for sledging purposes only; an aspirator would, I think, be a good and useful instrument, and also a minimum thermometer.

I strongly recommend the hypsometer, provided the observations are useful. The work of boiling and getting a reading is small, and can easily be done whilst the observer is waiting for the pot to boil at the meal hours. The question of weight has to be considered, as it is a most important factor in the work; and the sum total of instruments forms already a large proportion of the equipment in sledge journeys.

The work of observing is easily performed, as the whole set of observations does not take more than a few minutes. Two-hourly readings can easily be obtained.

## NOTES TO ILLUSTRATIONS OF SOLAR AND CLOUD PHENOMENA,

BY

EDWARD A. WILSON, M.B.

Plate I. Solar phenomenon observed on the Great Ice Barrier, November 29, 1902.—4 P.M., appt. time. S. lat.  $80^{\circ} 30'$ , E. long.  $165^{\circ}$ . Wind S.S.W., force 1, driving showers of ice crystals. Blue sky with cirro-stratus rapidly crossing to the N.E. A white fog-bank lay on the horizon persisting up to  $30^{\circ}$  of altitude. A complete ring or band of white light ran horizontally through the Sun (altitude  $27^{\circ}$ ). In this ring, dividing its circumference into three equal parts, appear the Sun and two luminous white mock-suns. Round the Sun was a Solar halo of prismatic colour with small arcs of intense prismatic colour outside it, on a level with the Sun. The blue of the sky within the halo was considerably darker than the blue outside. Immediately below the Sun—on the horizon—was a luminous white mock-sun. In a vertical line above the Sun—close to the zenith, and forming part of a small circle with zenith for centre—was an exceedingly brilliant arc of prismatic colour, set in the deep blue of the sky. The following measurements were taken by Captain SCOTT:—Altitude of Mock-suns, Sun, and white band of light  $27^{\circ}$  above the horizon. Bearing of "White Mock-suns"  $120^{\circ}$  from one another. Diameter of Solar halo  $54^{\circ}$ . Radius of upper prismatic arc (centre = zenith),  $7^{\circ}$ . Fr.-cir.-str. rapidly cleared away as phenomenon appeared, leaving clear blue sky overhead down to within  $30^{\circ}$  of horizon, where white fog-bank or low stratus persisted.

Plate II. Solar phenomenon observed on the Great Ice Barrier, December 16, 1902.—1 A.M. S. lat.  $80^{\circ} 45'$ , E. long.  $162^{\circ}$ . Driving showers of ice crystals. Southerly breeze, force 1–2. Low driving stratus clouds in patches, breaking occasionally to expose clear blue sky and fracto-cirro-stratus. The white mock-suns seen on November 29th were occasionally visible, but were not connected by the horizontal band of white light. There was much more drifting cloud this day than on November 29th, and much less blue sky visible. The difference in depth of blue colour between the sky inclosed by the Solar halo and that outside it was not noticeable, owing to the fact that a white mistiness obscured the blue of the sky almost all over the Sun's quarter (S). Z, zenith; *a*, broad prismatic arc; *b*, narrower ditto.

Plate III. Solar phenomenon observed on the Great Ice Barrier, December 29, 1902.—2 P.M. S. lat.  $82^{\circ} 17'$ . The most brilliant and the broadest bands of prismatic colour were those at *c* and at the four points on the Sun's completed halo. The halo itself was neither broad nor brilliant. The horn-shaped band was at times very bright and moved round the halo with a change in the position of observer's eyes. The white mock-suns on the north, south-east, and south-westerly horizon were large and bright and dome-shaped. The zenith-centred smaller white circle and the detached white arcs in the south appeared only for a few moments and were never very pronounced. The sky was blue and all the drift

seemed low—ice crystals—passing in low showers rapidly overhead with south-westerly wind. Sun visible all the time; low fog-banks and drift all round horizon. Wind south-westerly. Temperature, +15° F.

Plate IV. February 9, 1903.—5 P.M. McMurdo Sound. Drawn from a sketch by Lieutenant C. R. ROYDS, R.N. The prismatic halo round Sun is incomplete in this case, as is also the zenith-centred halo.

Plate V. Solar phenomenon observed on February 12, 1903, in McMurdo Sound. Drawn from a sketch by Lieutenant C. R. ROYDS, R.N. No mock-sun was visible. Lower part of outer ring hidden by land. A very faint white beam crossed the inner and outer ring.

Plate VI. A fog bow frequently seen on the Great Ice Barrier when one stood, back to the Sun, in the morning hours, shortly after midnight. It was always white, and brightest at the lower ends of the limbs. A good example was observed on December 17, 1902, and another well-marked instance occurred on November 15, 1902.

Plate VII. A remarkable shadow which appeared constantly in the southern sky when the Sun was below, or low down on, the northern horizon. It gave rise to many conjectures as to its cause, the most probable being that it was the shadow of Mount Erebus and Mount Terror on a thin alto-stratus. Various notes as to its appearance will be found in the Remarks of the Register, and also in the notes on clouds. As the Sun moved apparently to the west, this shadow moved to the east, and was always visible in the forenoons in clear weather, while the Sun was sufficiently low on the horizon.

Plate VIII. A not uncommon type of cirrus cloud, or fracto-cirro-stratus, which often accompanied very magnificent colour effects in spring and autumn when the Sun was low on the horizon for hours at a time.

Plate IX. An unusual appearance at the summit of Mount Erebus, namely the differentiation of several columns of steam issuing from distinct vents. This was possible only when there was a flat calm at 13,000 feet above sea level. The collection and condensation of the steam at a still higher level to form a heavy cloud was less unusual.

Plate X. represents the condensed vapour rising from the crater of Mount Erebus and acting as a wind vane at a height of 13,000 feet above sea level.

Plate XI. shows another phase in which the presence of a flat calm is demonstrated between about 13,000 feet and 14,000 feet, while above this level the pennant of "smoke" clearly shows the presence and direction of an upper current.

Plate XII., fig. 1, from a photograph taken at Sea, March 2, 1904, looking to the north over an extent of open ice-free water. The island, known as Buckle Island, is one of the Balleny group. Its summit is hidden by the heavy stratus cloud which lies low over the water and forms a typical open-water sky, with very little reflected light in it.

Fig. 2, from a photograph taken in Wood Bay, February 21, 1904, looking westward to Mount Melbourne. The cloud here represented, a fracto-cirro-stratus, is very much higher than that shown in fig. 1, much higher even than the summit of Mount Melbourne, which is 8337 feet above sea level.

Plate XIII., fig. 1, from a photograph taken in Robertson Bay, January 9, 1902, looking in a southerly direction over a stretch of open water, above which hangs a typical low cumulo-stratus cloud. In the distance are the ice-covered inland mountains of South Victoria Land, over which the sky is free from cloud.

Fig. 2, from a photograph taken looking south-west from Cape Adare, February 24, 1904. In the distance is a clear sky over the inland ice-covered mountains of South Victoria Land; the open water of Robertson Bay, on the other hand, is overhung by a heavy stratus, whose edge coincides with the coast line which lies beneath it.

Plate XIV., fig. 1, from a photograph taken looking north, at Cape Adare, February 24, 1904. In the far distance is seen the well-defined border of a low and extensive stratus overhanging the open sea.

Fig. 2, from a photograph taken looking westward to Mount Melbourne. Small patches of cloud which have formed at the summit of the higher peaks, from 8000 to 12,000 feet above sea level, are seen to be floating off into an otherwise cloudless sky. Mount Melbourne is not known to have any activity as a volcano, and the cloud patches must therefore be distinguished from such as are represented in Plate IX. as forming round a nucleus of steam emitted from the active crater of Mount Erebus.

## REPORT

BY

DR. J. A. HARKER

ON OBSERVATIONS MADE AT THE NATIONAL PHYSICAL LABORATORY

UPON THE

TEMPERATURE OF SOLIDIFICATION OF THE MERCURY IN THERMOMETER No. M.O. 30.

The thermometer was compared with a standard under the most favourable conditions obtainable with the present apparatus, in a vacuum vessel in acetone, cooled by adding solid  $\text{CO}_2$ .

The stirring was found to be absolutely *essential* when readings to any considerable accuracy were required.

As our own mercury standard Tonnelot only reads to  $-40^\circ \text{C}$ ., and comparisons were wanted to the actual freezing-point of the mercury in the thermometer to be tested, the standard chosen was a toluene Tonnelot thermometer.

For this instrument it was not convenient to have complete immersion, so an emergent stem correction, amounting to  $.2^\circ \text{F}$ ., has been applied when necessary.

The thermometer M.O. 30 was tested down to the point at which its mercury solidified.

This point was determined six times. The lowest temperature reached before solidification was  $-45.5^\circ \text{F}$ ., on its own scale, and the highest about  $-44^\circ \text{F}$ . It was elamped independently of the stirrer, so as to be affected as little as possible by its vibration. During the whole time solid  $\text{CO}_2$  was added in small quantities to prevent rise of temperature during the readings.

The corrections, as determined under these conditions, were as follows, the toluene readings being reduced to the hydrogen scale :—

## CORRECTION.

At $-38^\circ \text{F}$ .	0.0	Freezing-point $32^\circ.3 \text{F}$ .
$-40^\circ \text{F}$ .	$-0.1$	
$-41^\circ \text{F}$ .	$-0.3$	
$-45^\circ \text{F}$ .	$-0.4$	

The readings could not be made by telescope, and the divisions are only about 1.3 millims. to  $1^\circ \text{F}$ ., and the thermometer is divided into whole degrees.

No perceptible difference appeared in the indication at the freezing-point of mercury ( $-38^\circ \text{F}$ .) of the thermometer before and after its mercury had been frozen.

After the freezing of the mercury the thermometer was taken out of the liquid as quickly as possible, and, on the last occasion, the thawing of the mercury in the bulb took place probably before the capillary neck had been quite freed from solid, and the bulb was broken, thus rendering impossible the observations contemplated at the higher ranges.

The freezing-point of mercury as deduced from—

Mercury Tonnelot 11562 =	$-37.98^\circ \text{F}$ .
Toluene 71042 =	$-37.96^\circ \text{F}$ .



Map of south-western extremity of Ross Island, showing Winter Quarters of H.M.S. "Discovery."

Position of ship at Winter Quarters as given on Lieutenant MULOCK'S final chart:—

Latitude 77° 50' 50" S.

Longitude 166° 44' 45" E.



*Seen November 29<sup>th</sup> 1902.*





*Seen December 16th 1902.*





*Seen December 29<sup>th</sup> 1902.*





*Seen February 9<sup>th</sup> 1903.*





*Seen February 12<sup>th</sup> 1903.*



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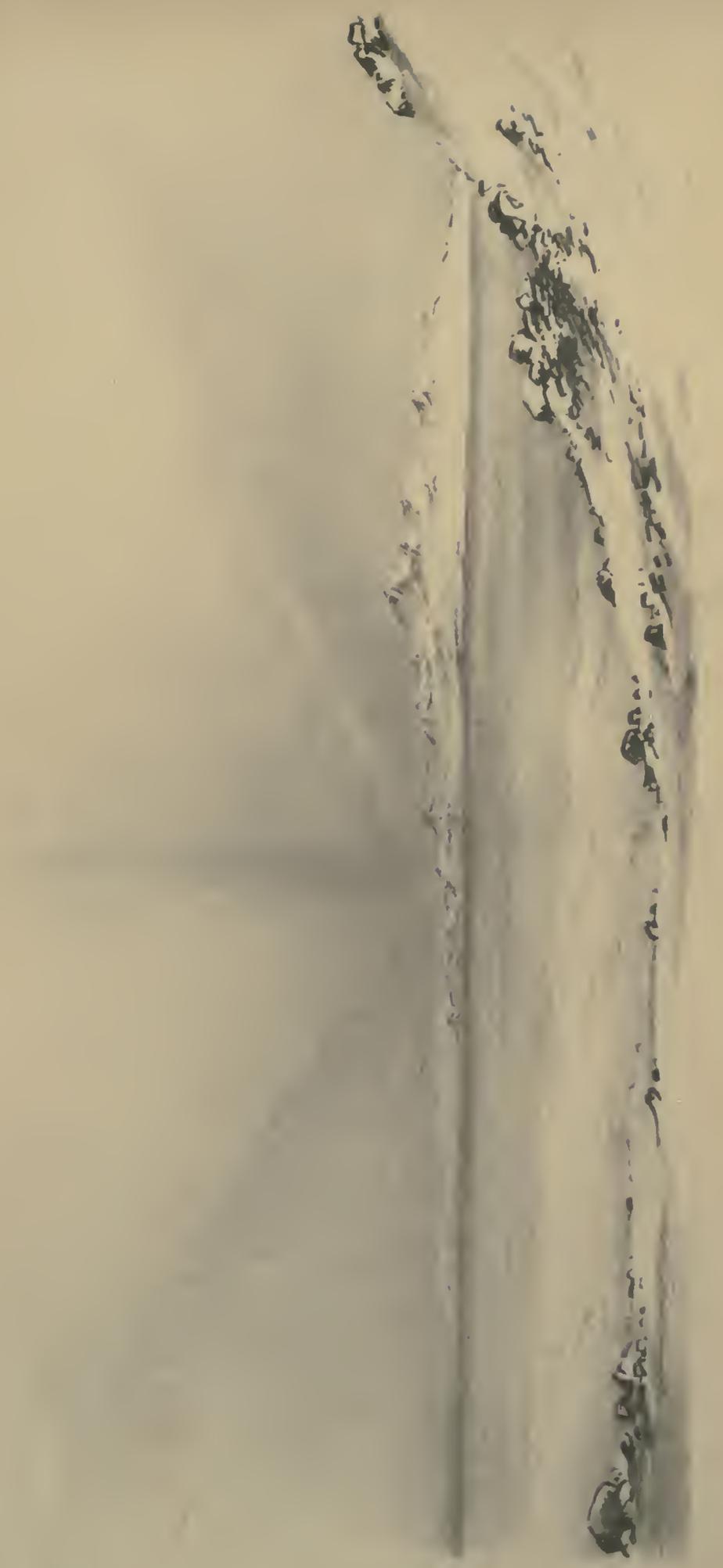
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Fig. 602 - on the Great Ice Barrier

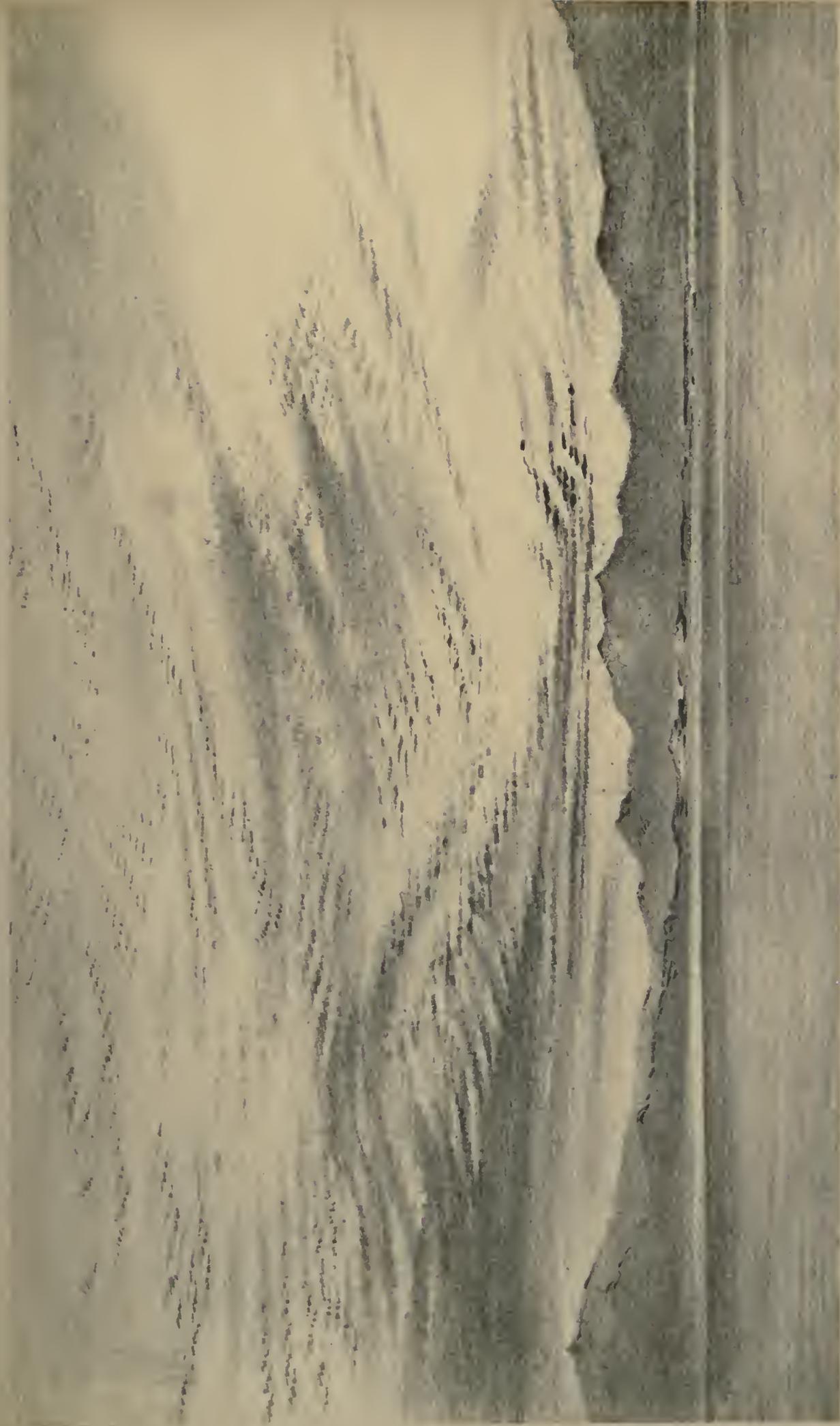
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*Earth Shadows*





*Cirrus and Cirro-stratus Clouds, looking to S W.*





*Mount Erebus as Cloud-Producer.*

Mount Erebus as Cloud-Producer.





"Smoke" of Mount Erebus as a Wind Vane





*"Smoke" of Mount Erebus Showing Upper Current of Air*



ANTARCTIC CLOUD FORMS.



Fig. 1. Buckle Island, one of the Balleny Group ; from the South.  
Showing a form of stratus cloud.



Fig. 2. Mount Melbourne from Wood Bay ; looking West.  
Showing cirro-stratus clouds.



ANTARCTIC CLOUD FORMS.



Fig. 1. Looking South to Mount Sabine from Cape Adare.  
Showing typical cumulo-stratus clouds.



Fig. 2. Looking South-west from Cape Adare.  
Showing a common type of heavy stratus with defined edge, beneath which the sky is clear.



ANTARCTIC CLOUD FORMS.



Fig. 1. Looking North from Cape Adare.  
Showing stratus.



Fig. 2. Mount Melbourne from the East.  
With examples of the cloud patches which form over high peaks in an otherwise cloudless sky.



### III. METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

[1902—February.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.			Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.	Aspirator.	
				Dry.	Wet.										
2	28.862	—	9.0	10.8	9.5	—	ESE, 2	—	—	bc	—	—	S.-cu. 3, ESE	9th.	
4	28.867	—	9.0	13.2	12.2	—	SE by S, 1	—	—	oc	—	—	Cu. 9, ESE		
6	28.891	—	12.0	14.0	12.8	—	NW by W, 2	—	—	oc	—	—	S.-cu. 10		
8	28.891	—	12.5	14.5	13.0	—	NNW, 2	—	—	oc	—	—	S.-cu. 10		
10	28.895	—	13.0	14.5	13.2	—	NNW, 2-4	—	—	oc	—	—	Cu. 10		
Noon	28.899	—	12.9	14.0	12.8	—	ENE, 3-4	—	—	oc	—	—	Cu. 10, ENE		
2	28.903	—	11.5	12.5	11.5	—	NW, 4	—	—	oc	—	—	Cu. 10, NW		
4	28.911	—	10.5	12.0	10.8	—	NW, 4	—	—	oc	—	—	Cu. 10, NW		
6	28.928	—	9.0	10.8	10.0	—	ENE, 4	—	—	oc	—	—	S.-cu. 10		
8	28.911	—	8.0	9.8	9.0	—	ENE, 4	—	—	oc	—	—	Cu. 10		
10	28.932	—	8.0	11.5	10.5	—	ENE, 3	—	—	oc	—	—	Cu. 10		
Mldt.	28.943	—	9.5	10.8	9.9	—	ENE, 3	—	—	oc	—	—	Cu. 10		
Mean	28.903	—	—	12.4	11.3	—	—	—	—	—	—	—	—	Dull, overcast day. Strong wind blowing down from the hills. Barometer rising. Thermometer steady. Skua gulls seen; a good many seals on ice in small bay. Bay ice gradually breaking away.	
Max. therm. read at		{ 8 a. 16°·5.		—.		Solar radiation { black bulb —.		—.		Evapn. — grammes.		Precipn. — in.			

2	29.954	—	9.5	11.0	10.5	—	ENE, 2	—	—	bc	—	—	Cl.-cu. 9, NNW	10th.
4	29.967	—	9.6	11.2	10.5	—	ENE, 2	—	—	bc	—	—	Cl.-cu. 8, NNW	
6	29.904	—	10.0	13.1	12.1	—	ENE, 1	—	—	bc	—	—	Cl.-cu. 4, NNW	
8	29.905	—	12.0	13.8	13.0	—	ENE, 2	—	—	bc	—	—	Cl. 1, NNE	
10	29.951	—	12.2	15.0	14.2	—	ENE, 2	—	—	b	—	—	—	
Noon	29.984	—	12.8	16.0	15.2	—	ENE, 2	—	—	bc	—	—	Cl. 2, NNE	
2	29.116	—	13.0	17.0	16.5	—	Calm	—	—	oc*	—	—	Cu.-n. 10	
4	29.127	—	14.0	18.5	18.0	—	SSE, 1	—	—	oc*	—	—	Cu.-n. 10	
6	29.138	—	16.0	17.5	17.5	—	Calm	—	—	o*	—	—	N. 10	
8	29.165	—	16.0	17.2	17.0	—	Calm	—	—	o*	—	—	N. 10	
10	29.215	—	16.0	18.5	18.2	—	Calm	—	—	o*	—	—	N. 10	
Mldt.	29.287	—	18.0	18.5	18.2	—	N, 1	—	—	oc	—	—	Cu. 10	
Mean	29.093	—	—	15.6	15.1	—	—	—	—	—	—	—	—	Fine in morning, becoming overcast with snow fall later. Light ENE winds and calms all day. Barometer and thermometer rising. Skua gulls seen, and seals on the ice in bay; large numbers round on other side of hill. Some bay ice floated away.
Max. therm. read at		{ 8 a. 18°·9.		—.		Solar radiation { black bulb —.		—.		Evapn. — grammes.		Precipn. — in.		

2	29.289	—	13.0	20.0	19.5	—	Calm	—	—	oc	—	—	Cu. 10, ENE	11th.
4	29.324	—	17.5	19.0	18.6	—	ENE, 1	—	—	oc	—	—	Cu. 10, ENE	
6	29.362	—	17.0	19.8	19.5	—	ENE, 1	—	—	oc	—	—	Cu. 10, ENE	
8	29.389	—	15.5	20.5	20.0	—	WSW, 2	—	—	oc*	—	—	Cu. 10, ENE	
10	29.414	—	18.6	20.8	20.2	—	SE, 1	—	—	bc	—	Cl.-s. 2	—	
Noon	29.418	—	20.0	21.5	21.0	—	Lt. SSE airs	—	—	bc	—	Cl. 2, ESE	—	
2	29.396	—	20.0	24.0	23.8	—	Lt. ENE airs	—	—	b	—	—	—	
4	29.381	—	19.0	19.8	18.4	—	NE by E, 1	—	—	b	—	—	—	
6	29.364	—	17.0	21.1	19.2	—	NE by E, 2	—	—	b	—	—	—	
8	29.307	—	18.4	24.8	23.0	—	NNW, 1	—	—	bc	—	—	Cu. 5, WNW	
10	29.301	—	21.0	21.5	23.0	—	NNW, 1	—	—	bc	—	Cl. 2	Cu. 3	
Mldt.	29.263	—	23.2	23.8	22.0	—	NNW, 1	—	—	bc	—	—	Cu. 3	
Mean	29.351	—	—	21.6	20.7	—	—	—	—	—	—	—	—	Overcast in morning, clearing to fine later. Light variable breezes. Barometer rose until 10 a.m., then fell slowly. Thermometer steady. A good deal of bay ice floated away.
Max. therm. read at		{ 8 a. 21°·0.		—.		Solar radiation { black bulb —.		—.		Evapn. — grammes.		Precipn. 0.35 in.		

1902—February.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.			
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, sec p. 2.		Weather.	Upper.			Lower.		
				Dry.	Wet.												
12th. 2	29.247	—	16.0	21.0	19.8	—	Calm	—	—	b	—	—	—	Fine, clear day. Wind rose from a calm to a strong breeze from ENE, then fell calm again. Barometer falling. Thermometer steady. More bay ice broke away.			
4	29.230	—	14.5	21.5	19.8	—	Calm	—	—	b	—	—	—				
6	29.223	—	20.5	24.5	23.0	—	NE by E, 1	—	—	bc	Cl.-a 7, S	S.-cu. 6, ENE	—				
8	29.189	—	23.5	24.0	22.8	—	NE by E, 1	—	—	oc	—	S.-cu. 9, ENE	—				
10	29.170	—	14.0	16.0	15.2	—	ENE, 1-4	—	—	bc	—	S.-cu. 5, ENE	—				
Noon	29.160	—	10.4	15.6	15.5	—	E, 4	—	—	bc	Cl.-s. 2, W	Cu. 6, ENE	—				
2							No observations taken.										
4	29.115	—	14.0	19.5	16.8	—	E, 2	—	—	bc	—	S.-cu. 6, ENE	—				
6							No observations taken.										
8	29.091	—	14.2	22.2	20.8	—	Calm	—	—	b	—	—	—				
10	29.060	—	16.0	17.0	16.5	—	Calm	—	—	b	—	—	—				
Midl.	29.030	—	15.0	16.5	15.8	—	Calm	—	—	b	—	—	—				
Mean	29.152	—	—	19.8	18.6	—	—	—	—	—	—	—	—				
Max. therm. read at { 8 a. 26° 0. / 8 p. —.											Solar radiation { black bulb — / bright bulb —.		Evapn. — grammes.		Precipn. — in.		

13th. 2	29.016	—	15.0	19.0	18.2	—	Calm	—	—	oc	A.-cu. 10	—	—	Fine day, but overcast at times. Wind, calm in morning, freshened to 5-6 in evening. Barometer and thermometer steady. More ice floated out of the bay.		
4	29.006	—	16.0	20.0	19.2	—	Calm	—	—	oc	Cl.-s. 10, ESE	—	—			
6	28.990	—	17.5	21.0	20.2	—	Calm	—	—	bc	Cl.-s. 8, ESE	—	—			
8	28.959	—	18.0	22.0	21.0	—	Lt. ESE airs	—	—	oc	Cl.-s. 9, ESE	—	—			
10	28.951	—	21.0	23.8	23.0	—	ESE, 1	—	—	oc	Cl.-s. 10	—	—			
Noon	28.946	—	23.8	24.4	23.5	—	ESE, 1	—	—	oc	S.-cu. 10	—	—			
2	28.951	—	21.0	22.2	22.0	—	NE, 2	—	—	bc	Cl.-s. 7	—	—			
4	28.965	—	21.0	23.0	22.2	—	SSE, 2	—	—	bc	S.-cu. 6, SSW	—	—			
6	28.976	—	16.0	18.6	17.2	—	SSE, 3-4	—	—	bc	—	Cu. 6, SSW	—			
8	28.965	—	—	16.8	16.5	—	SSE, 5-6	—	—	bc	—	Cu. 7, SSE	—			
10	28.992	—	—	14.6	14.0	—	ENE, 5-6	—	—	b	—	—	—			
Midl.	29.035	—	10.8	11.5	11.5	—	E by N, 6	—	—	b	—	—	—			
Mean	28.979	—	—	19.7	19.0	—	—	—	—	—	—	—	—			
Max. therm. read at { 8 a. 25° 0. / 8 p. 25° 0.											Solar radiation { black bulb — / bright bulb —.		Evapn. — grammes.		Precipn. — in.	

14th. 2	29.044	—	8.0	10.5	10.4	—	ENE, 5	—	—	b	—	—	—	Fine greater part of day. Wind strong from ENE. Barometer rising. Thermometer steady. More bay ice floated out.		
4	29.069	—	10.5	11.2	11.0	—	ENE, 5	—	—	b	—	—	—			
6	29.086	—	9.0	11.2	11.0	—	ENE, 5	—	—	b	—	—	—			
8	29.116	—	10.0	12.8	12.5	—	ENE, 5-6	—	—	b	—	—	—			
10	29.133	—	10.0	15.0	15.0	—	ENE, 5	—	—	b	—	—	—			
Noon	29.137	—	13.0	17.0	15.2	—	ENE, 5	—	—	bc	Cl.-cu. 6, WNW	Cu. 2, ENE	—			
2	29.145	—	17.0	17.4	15.8	—	ENE, 5	—	—	oc	—	S. 10	—			
4	29.146	—	16.0	17.2	15.8	—	ENE, 4-5	—	—	oc	—	S. 10	—			
6	29.158	—	15.2	17.2	15.8	—	ENE, 4-5	—	—	oc	—	S. 10	—			
8	29.159	—	16.0	17.0	15.8	—	ENE, 3-4	—	—	bc	Cl. 5, SSW	—	—			
10	29.179	—	13.0	14.8	13.6	—	ENE, 3-4	—	—	bc	—	S.-cu. 6, ENE	—			
Midl.	29.159	—	13.0	14.0	13.2	—	ENE, 3	—	—	bc	Cl.-s. 4, ENE	—	—			
Mean	29.128	—	—	14.6	13.8	—	—	—	—	—	—	—	—			
Max. therm. read at { 8 a. — / 8 p. 17° 5.											Solar radiation { black bulb — / bright bulb —.		Evapn. — grammes.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.172	—	13.1	14.5	13.5	—	ENE, 1-2	—	—	b		—	—	—	15th.
4	29.180	—	12.0	13.0	12.3	—	ENE, 4	—	—	bc		S.-cu., ENE	—	—	
6	29.194	—	11.0	12.2	12.0	—	ENE, 5-6	—	—	bc		Cl.-s. 5	—	—	
8	29.216	—	11.0	12.0	11.6	—	ENE, 5	—	—	bc		Cl. 4, SSW	—	—	
10	29.245	—	12.0	13.5	12.3	—	E by N, 5	—	—	bc		—	—	—	
Noon	29.256	—	8.5	11.8	11.2	—	E by N, 5	—	—	bc		—	Fr.-cu., E	—	
2	29.273	—	9.0	11.5	10.8	—	E by N, 5-6	—	—	bc		—	Fr.-cu. 7, E	—	
4	29.280	—	10.0	11.4	10.5	—	E by N, 5-6	—	—	bc		—	Fr.-cu. 6, E	—	
6	29.310	—	9.2	11.0	10.0	—	E by N, 5-6	—	—	bc		—	Fr.-cu. 5, E	—	
8	29.374	—	9.8	12.8	11.5	—	E by N, 4-5	—	—	bc		—	Fr.-cu. 6, E	—	
10	29.344	—	11.8	14.1	12.5	—	E by N, 4	—	—	oc		—	Cu. 10, E	—	
Midt.	29.382	—	13.0	13.9	12.5	—	E by N, 3	—	—	oc		—	Cu. 10, E	—	
Mean	29.269	—	—	12.6	11.7	—	—	—	—	—		—	—	—	
Max. therm. read at		{ 8 a. 17°0. 8 p. —.		Solar radiation		{ black bulb —. bright bulb —.		Evapn. — grammes.		Precipn. — in.		Fine day. Wind, strong E by N, falling away in evening. Barometer rising. Thermometer steady, but lower. More ice floated out of bay.			

2	29.402	—	12.0	14.6	13.2	—	E by N, 4	—	—	oc		—	S.-cu. 10	—	16th.
4	29.409	—	13.8	15.2	14.0	—	E by N, 3	—	—	oc		—	S.-cu. 10	—	
6	29.434	—	13.0	14.3	13.2	—	E by N, 2-3	—	—	oc		—	Cu. 10	—	
8	29.460	—	13.0	16.6	14.5	—	E by N, 1	—	—	oc		—	Cu. 10	—	
10							No observations taken.								
Noon							No observations taken.								
2	29.434	—	12.0	17.0	16.1	—	E, 2	—	—	oc		—	S.-cu. 10	—	
4	29.500	—	15.0	17.0	16.0	—	E, 1	—	—	oc		—	S.-cu. 10	—	
6	29.486	—	16.0	23.0	21.0	—	ESE, 1	—	—	bc		Cl.-cu. 6, WSW	—	—	
8	29.474	—	16.5	17.2	16.8	—	ESE, 1	—	—	b		—	—	—	
10	29.461	—	12.5	13.5	13.0	—	ESE, 1	—	—	b		—	—	—	
Midt.	29.462	—	12.0	13.0	12.5	—	ESE, 1	—	—	b		—	—	—	
Mean	29.453	—	—	16.1	15.0	—	—	—	—	—		—	—	—	
Max. therm. read at		{ 8 a. 17°0. 8 p. 23°2.		Solar radiation		{ black bulb —. bright bulb —.		Evapn. — grammes.		Precipn. — in.		Morning overcast, but cleared later to blue sky. Light ESE breeze. Barometer rising, but steady in evening. Thermometer steady. A great deal of ice drifted out of the bay.			

2	29.442	—	12.2	13.5	13.0	—	Calm	—	—	b		—	—	—	17th.
4	29.446	—	12.0	14.2	14.0	—	Calm	—	—	b		—	—	—	
6	29.403	—	11.5	15.8	15.5	—	ENE, 1	—	—	b		—	—	—	
8	29.353	—	14.5	15.0	14.8	—	NE, 1	—	—	b		—	—	—	
10	29.356	—	14.0	20.0	19.0	—	Calm	—	—	b		—	—	—	
Noon	29.330	—	18.2	19.8	17.5	—	Calm	—	—	b		—	—	—	
2							No observations taken.								
4	29.291	—	19.0	20.5	18.2	—	NE, 1	—	—	b		—	—	—	
6	29.286	—	8.8	11.5	9.3	—	NE, 4-5	—	—	b		—	—	—	
8	29.323	—	7.9	10.5	8.5	—	NE, 4-5	—	—	b		—	—	—	
10	29.352	—	7.5	10.2	8.6	—	NE by E, 4-5	—	—	b		—	—	—	
Midt.	29.360	—	7.9	12.8	11.2	—	NE by E, 4-5	—	—	b		—	—	—	
Mean	29.358	—	—	14.9	13.6	—	—	—	—	—		—	—	—	
Max. therm. read at		{ 8 a. 17°0. 8 p. 21°0.		Solar radiation		{ black bulb —. bright bulb —.		Evapn. — grammes.		Precipn. — in.		Bright, clear day. Calm in morning, then wind rose to fresh from NE. Barometer steady. Temperature variable.			

1902—February.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

18th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2							No observations taken.								
4							No observations taken.								
6	29.394	—	1.5	3.1	2.8	—	ENE, 5-6	—	—	b		—	—	—	
8	29.421	—	0.8	2.8	2.0	—	ENE, 6	—	—	b		—	—	—	
10	29.402	—	0.8	9.2	8.1	—	ENE, 4	—	—	b		—	—	—	
Noon	29.354	—	8.0	17.0	15.5	—	Calm	—	—	b		—	—	—	
2	29.294	—	15.8	18.4	16.6	—	Calm	—	—	bc		—	Cu. 8, W	—	
4	29.204	—	17.0	19.5	18.0	—	N, 1	—	—	oc		—	Cu. 9, N	—	
6	29.161	—	17.8	23.2	21.4	—	N, 4	—	—	bc		—	Cu. 8, N	—	
8	29.079	—	17.8	25.0	23.0	—	NNW, 5-6	—	—	bc		—	Cu. 5, NNW	—	
10	29.008	—	24.0	24.8	23.0	—	N by W, 7-8	—	—	bcq		—	Cu. 4, NNW	—	
Midt.	28.973	—	22.5	23.0	21.5	—	N by W, 6-5	—	—	bc		—	Cu. 7, NNW	—	
Mean	29.229	—	—	16.6	15.2	—	—	—	—	—		—	—	—	

Max. therm. read at { 8 a. —  
8 p. —. Solar radiation { black bulb —  
bright bulb —. Evapn. — grammes. Precipn. — in.

Fine nearly the whole day. Wind, strong ENE in morning, falling to calm, then rising again to strong N. Barometer falling. Thermometer rising. Bay ice drifting in from S.

19th.

2	28.980	—	17.5	17.8	17.0	—	ENE, 1	—	—	bc		Ci.-s. 5	Fr.-cu. 2, NNW	—	
4	28.992	—	15.5	16.5	15.0	—	E, 2	—	—	bc		—	Cu. 8, NNW	—	
6	29.027	—	14.5	20.4	19.2	—	ESE, 3	—	—	bc		—	Cu. 5, NNE	—	
8	29.064	—	14.0	15.2	14.4	—	ESE, 4-5	—	—	b		—	—	—	
10							No observations taken.								
Noon	29.056	—	12.0	11.5	13.2	—	E by N, 3-1	—	—	b		—	—	—	
2	29.089	—	12.4	14.0	—	—	E, 5-6	—	—	b		—	—	—	
4	29.102	—	13.0	15.8	14.0	—	ESE, 5-6	—	—	b		—	—	—	
6	29.132	—	11.8	15.2	13.0	—	ESE, 4-6	—	—	b		—	—	—	
8	29.164	—	11.2	13.5	13.0	—	ESE, 7-8	—	—	b		—	—	—	
10	29.242	—	8.0	8.8	8.4	—	ENE, 6	—	—	bc		Ci.-cu. 2	S.-cu. 3, ESE	—	
Midt.	29.235	—	7.5	10.0	9.2	—	ENE, 5-6	—	—	ocq		—	S.-cu. 10	—	
Mean	29.098	—	—	14.7	—	—	—	—	—	—		—	—	—	

Max. therm. read at { 8 a. —  
8 p. 17.0. Solar radiation { black bulb —  
bright bulb —. Evapn. — grammes. Precipn. — in.

Fine and clear. Wind Ely, strong. Barometer rising. Thermometer steady. A good deal of ice was blown into the bay, but cleared out again later.

20th.

2	29.245	—	8.8	13.0	11.8	—	ENE, 1	—	—	b		—	—	—	
4	29.246	—	12.0	14.2	13.6	—	ENE, 1	—	—	b		—	—	—	
6							No observations taken.								
8	29.240	—	11.4	17.2	15.0	—	ENE, 1	—	—	bc		—	S.-cu. 8, ENE	—	
10	29.238	—	11.5	19.4	17.0	—	NE, 1	—	—	b		—	—	—	
Noon	29.217	—	19.2	19.9	17.2	—	Calm	—	—	b		—	—	—	
2	29.180	—	19.8	22.2	20.5	—	NE by E, 1	—	—	b		—	—	—	
4	29.186	—	17.0	20.0	17.2	—	Lt. SSE airs	—	—	b		—	—	—	
6	29.170	—	17.0	22.5	19.2	—	Calm	—	—	b		—	—	—	
8	29.161	—	17.0	19.5	17.2	—	NNE, 1	—	—	bc		Ci.-cu. 8, NNE	—	—	
10	29.154	—	14.0	14.5	13.2	—	E by N, 4-5	—	—	bc		Ci.-cu. 5	Cu. 6, ENE	—	
Midt.	29.151	—	13.8	14.6	12.6	—	ENE, 4-5	—	—	bc		—	Fr.-cu., ENE	—	
Mean	29.199	—	—	17.9	15.9	—	—	—	—	—		—	—	—	

Max. therm. read at { 8 a. —  
8 p. 23.0. Solar radiation { black bulb —  
bright bulb —. Evapn. — grammes. Precipn. — in.

Fine and clear. Wind, calm to light from NE. Barometer falling a little. Thermometer steady. Ice drifted out of the bay.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.				
				Dry.	Wet.										Unscreened.	
2	29.153	—	15.2	15.5	14.8	—	E by N, 4	—	—	b	—	—	—	21st.		
4	29.153	—	14.0	14.2	13.6	—	ENE, 3-4	—	—	bc	—	S.-cu. 5, ENE	—			
6	29.166	—	13.0	13.5	12.0	—	ENE, 4	—	—	b	—	—	—			
8	29.184	—	12.0	13.0	11.5	—	E, 4	—	—	b	—	—	—			
10	29.209	—	6.7	10.9	10.0	—	E, 4-5	—	—	b	—	—	—			
Noon	29.224	—	9.2	11.4	9.0	—	E, 5	—	—	bc	Cl.-s. 4, SE by S	—	—			
2	29.228	—	10.0	15.0	12.5	—	E by S, 5	—	—	b	—	—	—			
4	29.261	—	12.0	16.0	13.8	—	E by S, 5	—	—	bc	Cl.-s. 4, SE by S	—	—			
6	29.292	—	14.0	17.2	15.1	—	NE by N, 4-5	—	—	b	—	—	—			
8	29.304	—	15.5	17.8	16.0	—	E by S, 4	—	—	b	—	—	—			
10	29.366	—	14.5	15.2	13.0	—	E by S, 3-4	—	—	b	—	—	—			
Midt.	29.378	—	11.0	13.0	11.5	—	SE, 2-3	—	—	b	—	—	—			
Mean	29.243	—	—	14.4	12.7	—	—	—	—	—	—	—	—			
Max. therm. read at		{ 8 a. 20° 0.		{ 8 p. 18° 0.		Solar radiation		{ black bulb —.		{ bright bulb —.		Evapn. — grammes.			Precipn. — in.	
Fine and clear. Strong E wind all day. Barometer rising. Thermometer steady. Nearly all the ice has drifted out of the bay.																

2	29.430	—	11.8	12.2	12.0	—	E by S, 4	—	—	bc	—	—	—	22nd.	
4	No observations taken.														
6	29.511	—	9.8	12.2	11.6	—	E by S, 5-6	—	—	b	—	—	—		
8	29.552	—	-0.5	0.8	0.6	—	E by N, 6-7	—	—	b	—	—	—		
10	29.572	—	-0.8	2.8	2.2	—	E by N, 7	—	—	b	—	—	—		
Noon	29.596	—	2.0	5.2	5.0	—	E, 7-8	—	—	b	—	—	—		
2	29.563	—	4.2	6.1	5.2	—	E, 6-7	—	—	bc	—	Fr.-cu. 4, E	—		
4	29.580	—	4.5	7.0	5.8	—	ENE, 6-7	—	—	bc	—	S.-cu. 6, ENE	—		
6	29.559	—	4.6	6.8	5.9	—	ENE, 6-7	—	—	bc	—	—	—		
8	29.574	—	4.0	7.0	6.2	—	ENE, 6	—	—	bc	Cl.-s. 4	—	—		
10	29.562	—	6.0	9.5	8.4	—	E, 3-4	—	—	bc	Cl.-s. 2	—	—		
Midt.	29.546	—	6.0	6.2	6.0	—	ENE, 3	—	—	bc	—	—	—		
Mean	29.547	—	—	6.9	6.3	—	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. 21° 0.		{ 8 p. 8° 0.		Solar radiation		{ black bulb —.		{ bright bulb —.		Evapn. — grammes.		Precipn. — in.	
Fine; cloudy in evening. Very strong E wind, falling in evening. Barometer rising, but fell in evening. Thermometer unsteady and low.															

2	29.550	—	1.6	3.5	3.2	—	ENE, 3	—	—	b	—	—	—	23rd.	
4	29.537	—	0.0	2.2	2.0	—	ENE, 4	—	—	b	—	—	—		
6	29.492	—	0.0	4.6	3.0	—	E by N, 4	—	—	b	—	—	—		
8	29.458	—	0.0	8.2	7.8	—	E by N, 4	—	—	b	—	—	—		
10	29.434	—	7.5	9.8	8.6	—	E by N, 4	—	—	oc	—	S.-cu. 10	—		
Noon	29.402	—	8.0	11.6	10.2	—	E by N, 4	—	—	oc	—	S.-cu. 10	—		
2	29.351	—	10.5	12.2	10.1	—	E by N, 5-6	—	—	oc	—	S.-cu. 10	—		
4	29.339	—	10.5	11.5	9.8	—	E by N, 5	—	—	ocp*	—	Cu.-u. 10	—		
6	29.322	—	10.0	10.8	9.2	—	E by N, 6	—	—	ocp*	—	Cu.-u. 10	—		
8	29.297	—	8.5	9.6	8.2	—	E by N, 6	—	—	ocp*	—	Cu.-u. 10	—		
10	29.257	—	5.0	6.2	5.5	—	E by N, 5-6	—	—	oc	—	Cu. 10	—		
Midt.	29.221	—	2.8	4.2	3.9	—	SE, 6	—	—	oc	—	Cu. 10	—		
Mean	29.389	—	—	7.9	6.8	—	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. 9° 5.		{ 8 p. 12° 5.		Solar radiation		{ black bulb —.		{ bright bulb —.		Evapn. — grammes.			Precipn. — in.
Fine in morning, becoming overcast with snow showers. Strong wind from E by N. Barometer falling. Thermometer steady and low.															

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24th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Amritage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.213	—	-0.6	3.0	2.2	—	ESE, 4	—	—	oc	—	S.-cu. 10	—	Overcast and cloudy, light snow showers. Wind E by rising to force 6 in evening. Barometer rising. Thermometer low and rising.	
4	29.200	—	1.0	5.0	4.2	—	ESE, 4	—	—	oc	A.-fr.-cu. 8, NNE	Cu. 9, ESE	—		
6	29.204	—	3.5	5.5	5.0	—	ESE, 3-4	—	—	bc	—	Cu. 8	—		
8	29.214	—	5.0	6.5	6.1	—	ESE, 3	—	—	oc *	—	Cu.-n. 10, ESE	—		
10	29.217	—	5.8	7.4	7.2	—	ESE, 3-4	—	—	oc *	—	Cu.-n. 10, ESE	—		
Noon	29.214	—	6.5	8.2	8.2	—	ESE, 4-6	—	—	oc *	—	Cu.-n. 10, ESE	—		
2	29.252	—	6.5	9.0	8.6	—	ESE, 5-6	—	—	oc *	—	Cu.-n. 10, ESE	—		
4	29.277	—	8.2	10.0	9.8	—	E, 5-6	—	—	oc *	—	Cu.-n. 10	—		
6	29.306	—	4.0	10.0	9.6	—	E, 5-6	—	—	oc	—	Cu. 10	—		
8	29.318	—	9.0	11.0	10.2	—	E, 5-6	—	—	oc	—	Cu. 10	—		
10	29.346	—	9.9	11.0	10.1	—	E, 5-6	—	—	oc	—	Cu. 10	—		
Midt.	29.357	—	11.0	13.2	12.3	—	E, 6	—	—	oc	—	Cu. 10	—		
Mean	29.280	—	—	8.3	7.8	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 9°0. / 8 p. 11°1. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. { 10 a. 0.30 in. / measured at { 8 p. 0.25 in.

25th.

2	29.373	—	12.5	14.0	13.0	—	E, 5-6	—	—	oc	—	S.-cu. 10	—	Overcast and cloudy. Wind strong from E, then fell to calm, and light ESE airs. Barometer steady. Thermometer higher and rising.
4	29.389	—	14.2	15.5	14.0	—	E, 5	—	—	oc	—	S.-cu. 10	—	
6	29.408	—	13.0	15.8	14.0	—	E, 3-4	—	—	oc	—	S.-cu. 10	—	
8	29.416	—	13.5	16.2	15.8	—	Lt. SSE airs	—	—	bc	Cl.-cu. 7, WSW	—	—	
10	29.409	—	13.0	17.5	15.0	—	NE, 3-4	—	—	b	—	—	—	
Noon	29.424	—	15.0	16.0	14.0	—	ESE, 3	—	—	b	—	—	—	
2	29.439	—	15.2	19.5	16.2	—	Lt. ESE airs	—	—	oc	—	S.-cu. 10	—	
4	29.452	—	19.2	21.0	18.4	—	Calm	—	—	oc	—	S.-cu. 10	—	
6	29.453	—	20.0	20.0	18.2	—	Calm	—	—	oc	—	S.-cu. 10	—	
8	29.452	—	19.0	19.0	17.0	—	Lt. ESE airs	—	—	oc	—	S.-cu. 10	—	
10	29.427	—	17.2	18.2	16.5	—	SE, 1	—	—	oc	—	S. 10	—	
Midt.	29.410	—	18.0	19.0	17.0	—	ESE, 1	—	—	oc	—	S.-cu. 10	—	
Mean	29.421	—	—	17.6	15.8	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 16°4. / 8 p. 21°0. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. — in.

26th.

2							No observation taken.								Overcast and cloudy nearly all day. Fresh E wind, falling to calm in evening. Barometer fell a little, but thermometer high and rising.
4							No observation taken.								
6	29.333	—	16.5	18.8	17.8	—	SSW, 3	—	—	oc	—	S.-cu. 10	—		
8	29.323	—	16.0	17.5	16.5	—	E, 3	—	—	oc	—	S. cu. 10	—		
10	29.309	—	15.0	15.2	15.0	—	E, 4	—	—	oc	—	S.-cu. 10	—		
Noon	29.265	—	13.6	14.8	14.0	—	E, 4	—	—	oc	Cl.-s. 9	—	—		
2	29.242	—	14.0	17.6	16.0	—	E, 2-3	—	—	oc	—	S.-cu. 10	—		
4	29.221	—	16.8	22.0	19.4	—	E, 1	—	—	bc	—	S.-cu. 8	—		
6	29.201	—	16.8	21.5	19.2	—	Calm	—	—	bc	Cl.-a. 3	S.-cu. 4	—		
8	29.233	—	20.2	20.5	18.2	—	Lt. ESE airs	—	—	bc	Cl.-cu. 3	—	—		
10	29.240	—	20.0	21.2	19.0	—	ESE, 1	—	—	oc	Cl.-cu. 10	—	—		
Midt.	29.264	—	20.0	21.2	18.6	—	Calm	—	—	oc	—	Cu. 10	—		
Mean	29.264	—	—	19.0	17.4	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 20°0. / 8 p. 21°0. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2						No observations taken.								
4	20.270	—	20.0	22.2	21.0	—	—	—	oc *	—	Cu.-n. 10	—	Much ice forming in bay.	
6	20.274	—	21.0	23.0	21.6	—	—	—	oc *	—	Cu.-n. 10	—		
8	20.278	—	21.5	24.0	22.5	—	—	—	oe	—	Cu.-n. 10	—		
10	20.305	—	23.4	26.0	24.2	—	—	—	oe	—	Cu.-n. 10	—		
Noon	20.326	—	25.0	25.2	24.8	—	—	—	oe	—	S.-cu. 10	—	0.30 p.m. Wind shifted suddenly to SSE, force 5.	
2	20.338	—	24.8	26.5	25.5	—	—	—	oe	—	S.-cu. 10	—		
4	20.375	—	24.5	26.8	25.8	—	—	—	oe	Cl.-cu. 7	S.-cu. 6, SSW	—	Lower clouds moving fast.	
6	20.362	—	26.0	27.8	25.8	—	—	—	be	Fr.-cu. 6, SSW	S.-cu. 5, SSW	—	Lower clouds moving fast.	
8	20.387	—	25.6	28.2	24.5	—	—	—	be	Cl.-cu. 8, SSW	Cu. 3, SSW	—	Lower clouds moving fast. Bay full of floe ice.	
10	20.382	—	20.8	22.8	20.8	—	—	—	oe	—	Cu. 10, SSW	—		
Midt.	20.394	—	19.0	21.0	20.0	—	—	—	ocq	—	S.-cu. 10, SSW	—		
Mean	20.336	—	—	24.7	23.3	—	—	—	—	—	—	—	Overcast and cloudy. Calm to strong SSW wind. Barometer rising. Thermometer high and rising. New ice formed in bay but was swept out by the wind.	
Max. therm. read at		8 a. 24°-0.		8 p. —.		Solar radiation { black bulb —, bright bulb —.			Evapn. — grammes.	Precipn. — in.				

27th.

2	20.432	—	18.6	22.0	20.5	—	—	—	oe	—	S.-cu. 10	—	
4						No observations taken.							Midt. to 2 a.m. Ice cleared out of bay.
6	20.440	—	19.6	22.2	20.5	—	—	—	be	Cl. 1, E	—	—	1.15 a.m. Wind shifted to E.
8						No observations taken.							
10	20.451	—	20.5	22.6	21.0	—	—	—	be	Cl.-s. 4, ENE	—	—	
Noon	20.454	—	22.0	27.0	25.0	—	—	—	be	Cl.-s. 3, ENE	—	—	
2	20.444	—	24.0	26.5	24.3	—	—	—	be	Cl.-s. 3	—	—	
4	20.437	—	25.3	26.1	24.2	—	—	—	oe	—	Cu. 9	—	
6	20.428	—	21.5	22.0	21.0	—	—	—	oe	—	S.-cu. 10	—	
8	20.411	—	20.0	22.0	19.6	—	—	—	oe	—	Cu. 10	—	
10	20.441	—	21.0	25.0	21.8	—	—	—	oe	—	S.-cu. 10	—	
Midt.	20.457	—	22.0	23.0	20.0	—	—	—	oe	—	S.-cu. 10	—	
Mean	20.442	—	—	23.8	21.8	—	—	—	—	—	—	—	Fine in morning, overcast and cloudy later. Light E airs. Barometer rising. Thermometer high and steady. Bay full of drift ice, but all blown out again by wind.
Max. therm. read at		8 a. 23°-2.		8 p. 20°-2.		Solar radiation { black bulb —, bright bulb —.			Evapn. — grammes.	Precipn. — in.			

28th.

1902—March.]

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
1st.	2	29.463	—	19.1	21.0	18.6	—	SE by S, 1	—	—	oc	—	Cu. 10, ESE	—	
	4	29.445	—	20.0	21.8	19.4	—	SE, 2	—	—	bc	Ci.-cu. 6, ESE	S.-cu. 5, ESE	—	
	6	29.451	—	20.0	23.0	20.2	—	S by E, 2	—	—	oc	—	S.-cu. 10	—	
	8	29.448	—	22.2	24.0	21.8	—	E, 2	—	—	oc	Cl.-s. 6	S. 10	—	Very thin stratus.
	10	29.456	—	21.8	22.8	21.2	—	SSE, 3	—	—	oc	Ci.-cu. 9	—	—	
	Noon	29.451	—	21.0	22.0	20.6	—	SSE, 4-5	—	—	oc	—	S. 9	—	Stratus, high and thin.
	2	29.449	—	20.0	21.2	20.0	—	SE by S, 3-4	—	—	oc	—	S.-cu. 10	—	
	4	29.449	—	19.8	21.0	20.2	—	SE by S, 3	—	—	bc	Ci.-s. 10	—	—	
	6	29.454	—	19.5	21.8	20.2	—	E by N, 4	—	—	bc	Cl.-s. 10	—	—	Hills looking very near.
	8	29.447	—	20.8	23.0	21.8	—	E by N, 3	—	—	bc	Cl.-cu. 5	—	—	
	10	29.421	—	21.0	22.0	20.8	—	E by N, 3-4	—	—	bc	—	S.-cu. 8	—	
	Midt.	29.410	—	19.6	22.1	21.2	—	E by N, 4	—	—	bc	Ci.-s. 4	S.-cu. 6	—	
	Mean	29.445	—	—	22.1	20.1	—	—	—	—	—	—	—	—	Fine day, thin stratus remaining high all day. Strong variable E wind. Barometer falling. Thermometer high and steady. Young ice forming in the bay.
		Max. therm. read at { 8 a. 25° 0.		Solar radiation { black bulb —		Evapn. — grammes.		Precipn. — in.							

2nd.	2	29.416	—	19.5	20.0	19.2	—	E by N, 2	—	—	b	—	—	—	
	4	29.400	—	14.2	15.8	15.0	—	Calm	—	—	b	—	—	—	
	6	29.386	—	14.0	14.2	13.5	—	Calm	—	—	b	—	—	—	
	8	29.361	—	12.0	13.0	12.8	—	ENE, 5-6	—	—	b	—	—	—	7.30 a.m. Wind rose and blew up strong very quickly.
	10							No observations taken.							
	Noon	29.352	—	13.2	15.5	13.6	—	ENE, 5	—	—	bc	Cl.-s. 8, ENE	—	—	
	2	29.350	—	12.0	15.5	14.0	—	ENE, 6	—	—	b	—	—	—	
	4							No observations taken.							
	6							No observations taken.							
	8	29.343	—	13.4	15.2	14.0	—	ENE, 3	—	—	bc	Cl. 8, ENE	—	—	
	10							No observations taken.							First star seen to-night.
	Midt.	29.334	—	12.0	12.6	12.0	—	ENE, 5	—	—	b	—	—	—	
	Mean	29.368	—	—	15.2	14.3	—	—	—	—	—	—	—	—	Fine, clear day. Wind calm in morning, later rising strong from ENE. Barometer falling. Thermometer falling. Young ice in the bay, but being blown out.
		Max. therm. read at { 8 a. 23° 0.		Solar radiation { black bulb —		Evapn. — grammes.		Precipn. — in.							

3rd.	2	29.330	—	10.0	11.2	10.5	—	ENE, 4	—	—	b	—	—	—	
	4	29.329	—	10.0	11.0	10.2	—	ENE, 4-5	—	—	b	—	—	—	
	6	29.323	—	9.5	10.6	9.8	—	ENE, 5-6	—	—	bc	Cl.-s. 6	Cu. 4, ENE	—	
	8	29.320	—	9.0	10.0	9.4	—	ENE, 6	—	—	oc	—	S.-cu. 10, ENE	—	
	10	29.302	—	9.2	11.8	10.0	—	ENE, 6	—	—	oc	—	Cu. 10, ENE	—	
	Noon	29.289	—	10.2	12.8	11.1	—	NE, 6-7	—	—	oc	—	Cu. 10	—	
	2	29.290	—	11.5	12.4	11.6	—	ENE, 7	—	—	b	—	—	—	
	4	29.268	—	11.1	13.0	11.2	—	ENE, 7	—	—	bc	—	Cu. 10, ENE	—	
	6							No observations taken.							
	8	29.308	—	12.0	14.0	12.2	—	ENE, 4-5	—	—	bc	—	Cu. 8, ENE	—	
	10	29.305	—	12.2	14.2	13.0	—	Lt. ENE airs	—	—	b	—	—	—	
	Midt.	29.296	—	12.2	14.8	13.2	—	Calm	—	—	b	—	—	—	
	Mean	29.306	—	—	12.3	11.1	—	—	—	—	—	—	—	—	Overcast and cloudy all day. Strong ENE wind, falling calm at midnight. Barometer and thermometer steady.
		Max. therm. read at { 8 a. 16° 0.		Solar radiation { black bulb —		Evapn. — grammes.		Precipn. — in.							

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2						No observations taken.							4th.	
4						No observations taken.								
6	29.261	—	12.0	17.0	15.0	—	—	—	b					
8	29.214	—	13.6	18.5	17.0	—	—	—	b					
10	29.240	—	12.0	16.5	15.0	—	—	—	bc	Cl. 5, ENE	Cu. 1, ENE			
Noon	29.190	—	14.0	15.5	14.5	—	—	—	oc	—	Cu. 10, NE			
2	29.204	—	14.0	15.8	14.8	—	—	—	bc	Cl. 6, ENE	Cu. 3, ENE			
4	29.211	—	13.8	14.5	14.0	—	—	—	bc	Cl. 5	—			
6	29.218	—	10.9	13.0	12.0	—	—	—	bc	Cl.-cu. 6	S.-cu. 3, NE			
8	29.201	—	12.0	13.4	12.8	—	—	—	bc	Cl. 7	Cu. 8			
10	29.177	—	10.8	12.4	11.9	—	—	—	oc	—	Cu. 10			
Midt.	29.197	—	11.4	12.0	11.8	—	—	—	oc	—	Cu. 10			
Mean	29.211	—	—	11.9	13.9	—	—	—	—	—	—			
Max. therm. read at $\begin{cases} 8 \text{ a. —} \\ 8 \text{ p. —} \end{cases}$ Solar radiation $\begin{cases} \text{black bulb —} \\ \text{bright bulb —} \end{cases}$ Evapn. — grammes.                     Precipn. — in.														Fine and clear. Fresh NE <sup>y</sup> breezes. Barometer and thermometer steady. Young ice in bay.

2	29.195	—	11.0	12.5	12.0	—	—	—	bc		Cl.-cu. 3, ENE	—	5th.
4	29.192	—	10.0	10.6	10.0	—	—	—	bc		Cl.-cu. 4, ENE	—	
6	29.142	—	10.0	11.6	11.0	—	—	—	bc		Cl.-cu. 3, ENE	—	
8	29.143	—	12.5	15.8	15.0	—	—	—	bc		Cl.-cu. 3, ENE	—	
10	29.090	—	14.0	16.0	15.0	—	—	—	bc		Cl.-cu. 3, ENE	—	
Noon	29.085	—	14.5	16.5	15.5	—	—	—	bc		Cl.-cu. 3, ENE	—	
2	29.058	—	13.3	15.6	14.0	—	—	—	b		—	—	
4	29.047	—	12.2	16.0	—	—	—	—	b		—	—	
6	29.037	—	11.8	16.0	—	—	—	—	b		—	—	
8	29.040	—	11.9	15.0	13.0	—	—	—	b		—	—	
10	29.014	—	13.6	13.6	11.5	—	—	—	b		—	—	
Midt.	28.966	—	12.0	14.0	12.0	—	—	—	b		—	—	
Mean	29.084	—	—	14.4	—	—	—	—	—		—	—	
Max. therm. read at $\begin{cases} 8 \text{ a. —} \\ 8 \text{ p. —} \end{cases}$ Solar radiation $\begin{cases} \text{black bulb —} \\ \text{bright bulb —} \end{cases}$ Evapn. — grammes.                     Precipn. — in.													

2						No observations taken.							6th.
4	29.010	—	11.8	13.3	12.0	—	—	—	bc		Cl.-cu.	—	
6	29.002	—	—	13.6	12.0	—	—	—	bc		Lt. Cl.	—	
8	29.051	—	13.0	15.5	13.6	—	—	—	bc		—	—	
10	29.077	—	14.0	17.9	15.8	—	—	—	bc		Cl.-cu. 3, ESE	S.-cu. 3, ESE	
Noon	29.085	—	15.2	16.8	15.2	—	—	—	bc		Cl.-cu. 3, ESE	—	
2	29.083	—	15.8	19.2	17.5	—	—	—	b		—	—	
4	29.115	—	17.9	20.5	18.8	—	—	—	bc		—	Cu. 6, ESE	
6	29.085	—	18.0	18.5	17.0	—	—	—	bc		—	Cu. 3, ESE	
8	29.084	—	17.6	20.0	18.8	—	—	—	oc		—	Cu. 10	
10	29.038	—	19.0	21.5	20.0	—	—	—	oc		—	Cu. 10	
Midt.	29.054	—	16.8	21.2	20.2	—	—	—	oc		—	Cu. 10	
Mean	29.062	—	—	18.0	16.5	—	—	—	—		—	—	
Max. therm. read at $\begin{cases} 8 \text{ a. —} \\ 8 \text{ p. —} \end{cases}$ Solar radiation $\begin{cases} \text{black bulb —} \\ \text{bright bulb —} \end{cases}$ Evapn. — grammes.                     Precipn. — in.													

1902—March.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
7th.	2						No observations taken.							
	4	28.993	—	17.2	19.4	18.9	—	—	oc		—	Cu. 8		
	6	28.930	—	20.0	20.5	19.5	—	—	bc		Ci-cu.	—		
	8	28.967	—	19.8	21.8	20.8	—	—	b		—	—		
	10	28.944	—	19.8	22.0	21.5	—	—	b		—	—		
	Noon	28.929	—	20.5	22.8	22.0	—	—	bc		Ci. 7, ESE	Cu. 4, ESE		
	2	28.928	—	20.9	21.5	21.0	—	—	b		—	—		
	4	28.929	—	20.0	19.8	19.0	—	—	bc		Ci. 5, SSE	Cu. 3, SSE		
	6	28.935	—	15.5	18.8	15.0	—	—	bc		Ci-cu. 4, SSE	S-cu. 3, SSE		
	8	28.928	—	10.9	11.9	11.9	—	—	bc		—	S-cu. 3		
	10	28.932	—	10.8	12.3	12.2	—	—	bc		—	S-cu. 6		
	Midt.	28.943	—	11.5	13.1	13.0	—	—	c		Ci. 7	Cu-n. 3, SSW		
	Mean	28.942	—	—	18.5	17.7	—	—	—		—	—		
Max. therm. read at $\begin{cases} 8 \text{ a.} \\ 8 \text{ p.} \end{cases}$ —. Solar radiation $\begin{cases} \text{black bulb} \\ \text{bright bulb} \end{cases}$ —. Evapn. — grammes. Precipn. — in.														
Fine and clear, with fresh ENE <sup>y</sup> breezes to calm. Barometer falling. Thermometer steady.														

8th.	2	28.944	—	16.5	17.8	16.8	—	—	oc		—	Cu. 10, SSE	
	4	28.978	—	11.8	16.6	16.5	—	—	b		—	—	
	6	28.933	—	8.8	14.8	14.4	—	—	bc		Ci.	—	
	8	28.998	—	13.8	16.6	16.0	—	—	bc		Ci-cu. 4, SSE	Cu. 3, ESE	
	10	28.955	—	15.5	19.5	—	—	—	bc		Ci-cu. 3, ESE	S-cu. 3, ESE	
	Noon	28.999	—	15.5	19.5	16.5	—	—	bc		Ci. 3, ESE	S-cu. 3, ESE	
	2	28.974	—	18.5	22.5	19.5	—	—	bc		—	Cu. 3, ESE	
	4	28.961	—	17.5	18.5	16.5	—	—	b		—	—	
	6	28.976	—	16.2	17.5	15.8	—	—	b		—	—	
	8	28.988	—	15.5	16.8	15.5	—	—	bc		Ci. 8, ESE	Cu. 4, ESE	
	10	28.976	—	15.7	21.0	19.9	—	—	oc		—	Cu. 10	
	Midt.	28.977	—	12.1	18.0	17.1	—	—	oc		—	Cu. 10	
	Mean	28.972	—	—	18.3	—	—	—	—		—	—	
Max. therm. read at $\begin{cases} 8 \text{ a.} \\ 8 \text{ p.} \end{cases}$ —. Solar radiation $\begin{cases} \text{black bulb} \\ \text{bright bulb} \end{cases}$ —. Evapn. — grammes. Precipn. — in.													
Fine and clear. Wind steady between SSE and ESE. Barometer and thermometer steady.													

9th.	2	28.971	—	16.6	16.8	16.0	—	—	oc		—	Cu. 10, SSE	
	4	28.958	—	15.8	17.0	16.0	—	—	oc		—	Cu. 10, SSE	
	6	28.967	—	20.2	20.8	19.3	—	—	oc		—	Cu. 10	
	8	29.007	—	18.8	22.0	20.5	—	—	bc		—	S-cu. 4, SSE	
	10	29.014	—	20.5	27.0	24.8	—	—	b		—	—	
	Noon	29.011	—	24.0	27.5	25.0	—	—	b		—	—	
	2	29.044	—	20.2	20.8	19.7	—	—	b		—	—	
	4	29.036	—	19.5	21.0	19.8	—	—	b		—	—	
	6	29.044	—	20.0	21.0	20.0	—	—	b		—	—	
	8	29.065	—	19.0	20.4	19.9	—	—	o*		—	Cu-n. 10	
	10	29.101	—	17.9	17.9	17.2	—	—	oc*		—	Cu-n. 10	
	Midt.	29.158	—	13.1	14.0	14.0	—	—	oc		—	Cu. 10	
	Mean	29.031	—	—	20.5	19.4	—	—	—		—	—	
Max. therm. read at $\begin{cases} 8 \text{ a.} \\ 8 \text{ p.} \end{cases}$ —. Solar radiation $\begin{cases} \text{black bulb} \\ \text{bright bulb} \end{cases}$ —. Evapn. — grammes. Precipn. — in.													
Overcast in morning, then clearing; becoming overcast again in evening, with snow. Wind calm, rising to fresh from E in evening. Barometer rising. Thermometer high, but falling.													

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.										
2	29.195	—	9.5	10.0	10.0	—	ESE, 4	—	—	oc	—	Cu. 10, ESE	—	10th.
4	29.205	—	7.2	8.4	8.1	—	SSE, 5	—	—	oc	—	S.-cu. 10, SSE	—	
6	29.209	—	9.5	9.5	9.0	—	ENE, 2	—	—	b	—	—	—	
8	29.216	—	10.0	12.0	11.5	—	SSE, 3	—	—	b	—	—	—	
10	29.167	—	12.0	13.0	12.5	—	SSE, 2	—	—	bc	—	—	—	
Noon	29.180	—	11.8	17.8	16.5	—	SSE, 1	—	—	b	—	—	—	
2	29.134	—	13.3	15.5	14.8	—	SSE, 1	—	—	oc	—	Cu. 10, SSE	—	
4	29.063	—	12.8	15.0	14.5	—	SSE, 1	—	—	b	—	—	—	
6	29.060	—	13.2	15.0	14.5	—	Calm	—	—	oc	—	Cu. 10, SSE	—	
8	29.030	—	13.5	15.1	14.9	—	Calm	—	—	oc	—	Cu. 10	—	
10							No observations taken.							
Midt.	29.001	—	14.8	17.1	16.2	—	Calm	—	—	oo	—	Cu. 10	—	
Means	29.135	—	—	13.5	13.0	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. —, 8 p. —.											Solar radiation { black bulb —, bright bulb —.	Evapn. — grammes.	Precipn. — in.	

Fine and clear. Wind fell from fresh SSE breeze to calm and light S<sup>w</sup> airs. Barometer unsteady and thermometer falling.

2	28.986	—	14.5	18.0	16.5	—	Calm	—	—	oc	—	S.-cu., E	—	11th.
4	28.991	—	15.6	17.0	16.0	—	Calm	—	—	oc	—	Cu. 10, E	—	
6	29.013	—	9.0	14.0	13.0	—	ESE, 1	—	—	o*	—	Cu.-n. 10	—	
8	29.105	—	9.0	10.5	10.0	—	SE, 2	—	—	oc*	—	Cu.-n. 6, ESE	—	
10	29.129	—	7.0	8.5	8.3	—	SE, 5-6	—	—	ocq*	—	Cu.-n. 10, ESE	—	
Noon	29.163	—	2.5	3.5	3.5	—	SE, 7-8	—	—	ocq*	—	Cu.-n. 10, E	—	
2	29.215	—	2.0	3.5	3.5	—	SE, 7-8	—	—	ocq*	—	Cu.-n. 10	—	
4	29.247	—	2.2	3.0	3.0	—	E, 7-8	—	—	ocq*	—	Cu.-n. 10	—	
6	29.305	—	2.0	3.5	3.5	—	ESE, 2-7	—	—	ocq*	—	Cu.-n. 10	—	
8							No observations taken.							
10	29.311	—	2.0	6.0	5.0	—	ESE, 7	—	—	oq*	—	Cu.-n. 10	—	
Midt.	29.427	—	5.0	5.0	5.0	—	ESE, 7	—	—	oq*	—	Cu.-n. 10	—	
Mean	29.172	—	—	8.4	7.9	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. —, 8 p. —.											Solar radiation { black bulb —, bright bulb —.	Evapn. — grammes.	Precipn. — in.	

Overcast and cloudy all day. From a calm the wind blew up to a gale from SE with heavy squalls of snow. Barometer rising, but thermometer falling.

2	29.392	—	3.5	9.0	9.0	—	E, 7	—	—	oq*	—	Cu.-n. 10	—	12th.
4	29.415	—	2.5	3.5	3.5	—	E, 6	—	—	oc	—	Cu. 10	—	
6	29.500	—	3.2	4.0	3.6	—	E by N, 5-6	—	—	oc	—	Cu. 10	—	
8	29.511	—	4.5	5.0	5.0	—	E, 5	—	—	oc	—	Cu. 10	—	
10	29.496	—	4.0	4.6	4.6	—	E, 5-6	—	—	oc	—	Cu. 10	—	
Noon	29.473	—	4.0	4.6	4.6	—	E, 5	—	—	oc	—	Cu. 10	—	
2	29.572	—	3.8	4.5	4.5	—	E, 6	—	—	oc	—	Cu. 10	—	
4	29.595	—	3.8	5.5	5.5	—	E, 7-8	—	—	ocq	—	Cu. 10	—	
6	29.612	—	3.5	4.0	4.2	—	E, 7-8	—	—	ocq	—	Cu. 10	—	
8	29.669	—	1.5	2.2	2.2	—	E, 7	—	—	oc	—	Cu. 10	—	
10	29.677	—	0.5	1.2	1.0	—	E, 8	—	—	oc	—	Cu. 10	—	
Midt.	29.691	—	0.0	1.0	0.8	—	E, 7	—	—	oc	—	Cu. 10	—	
Mean	29.550	—	—	4.1	4.0	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. —, 8 p. —.											Solar radiation { black bulb —, bright bulb —.	Evapn. — grammes.	Precipn. 0.17 in.	

Overcast and cloudy all day. Gale from E with heavy squalls. Barometer rising, but thermometer falling.

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13th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.											
2	29.672	—	0.0	0.5	0.0	—	E, 5-7	—	—	ocq	—	—	—	—	—	
4	29.663	—	-1.2	0.2	0.0	—	E, 5-6	—	—	oc	—	—	—	—	—	
6	29.681	—	-1.4	0.0	-1.4	—	E, 5-6	—	—	o	—	—	S.-cu. 10	—	—	
8	29.698	—	-4.5	-3.5	-3.5	—	E, 5-6	—	—	bc	—	—	Fr.-cu. 3, ESE	—	—	
10	29.693	—	-5.0	-4.0	-4.5	—	E, 5	—	—	bc	—	—	Fr.-cu. 4, ESE	—	—	
Noon	29.683	—	-6.2	-5.0	-5.2	—	E, 4-5	—	—	bc	—	—	Fr.-cu. 3, ESE	—	—	
2	29.696	—	-7.0	-4.5	-4.8	—	E, 4-5	—	—	b	—	—	—	—	—	
4	29.702	—	-6.0	-4.5	-4.5	—	E, 5	—	—	b	—	—	—	—	—	
6	29.690	—	-6.0	-3.5	-3.5	—	E, 3	—	—	b	—	—	—	—	—	
8	29.715	—	-4.6	-3.5	-4.0	—	ESE, 2	—	—	b	—	—	—	—	Light stratus radiating from S.	
10	29.685	—	-6.2	-0.5	-1.0	—	SSE, 3	—	—	b	—	—	—	—	—	
Midt.	29.706	—	-6.0	0.2	-0.2	—	NW by N, 4	—	—	b	—	—	—	—	—	
Mean	29.690	—	—	-2.3	-2.7	—	—	—	—	—	—	—	—	—	—	Cleared in afternoon; fine clear evening. Strong E wind, but decreasing. Barometer rising, and thermometer falling.
Max. therm. read at		8 a. —.		8 p. —.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.		

14th.

2	29.782	—	-3.0	-2.0	-3.0	—	SE, 2-3	—	—	b	—	—	—	—	—	
4	29.701	—	-3.2	-0.4	-1.0	—	SE, 2	—	—	b	—	—	—	—	—	
6	29.714	—	0.5	1.0	1.5	—	SSW, 4	—	—	b	—	—	—	—	—	
8	29.722	—	2.0	2.0	1.0	—	SSW, 3	—	—	b	—	—	—	—	—	
10	29.770	—	0.8	2.5	1.5	—	SSW, 3	—	—	b	—	—	—	—	—	
Noon	29.731	—	0.9	2.6	1.5	—	SSW, 3	—	—	b	—	—	—	—	—	
2	29.741	—	-1.0	1.0	0.5	—	SE, 2	—	—	bcq	—	Ci. 5, SSE	Cu. 2, SSE	—	—	
4	29.753	—	-2.4	-1.2	-1.6	—	ESE, 4	—	—	oc	—	—	Cu. 10, ESE	—	—	
6						—	No observations taken.				—	—	—	—	—	
8	29.739	—	-2.4	-1.2	-1.6	—	ENE, 8	—	—	oc	—	—	Cu. 10, ESE	—	—	
10	29.752	—	-4.0	-3.0	-3.2	—	ENE, 8	—	—	oc	—	—	Cu. 10, ESE	—	—	
Midt.	29.742	—	-5.0	-3.8	-4.2	—	ENE, 8	—	—	oc	—	—	Cu. 10, ESE	—	—	
Mean	29.741	—	—	-0.2	-0.8	—	—	—	—	—	—	—	—	—	—	Fine and clear nearly all day. Clouded over in evening. Light to fresh SSW wind rising to a gale from ENE. Barometer steady. Thermometer unsteady.
Max. therm. read at		8 a. 2.0.		8 p. 3.0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.		

15th.

2	29.723	—	-5.0	-4.5	-5.0	—	ESE, 8-7	—	—	ocq	—	—	Cu. 10, ESE	—	—	
4	29.683	—	-6.2	-5.0	-6.0	—	ESE, 7-6	—	—	oc	—	—	Cu. 10, ESE	—	—	
6	29.618	—	-6.5	-5.0	-6.5	—	ESE, 6	—	—	oc	—	—	Cu. 10, ESE	—	—	
8	29.656	—	-8.5	-3.0	-5.5	—	ESE, 5	—	—	oc	—	—	Cu. 10, ESE	—	—	
10	29.631	—	-4.0	-1.0	-3.0	—	ESE, 5	—	—	bc	—	Ci. 4, ESE	Cu. 3, ESE	—	—	
Noon	29.614	—	-1.0	-1.0	-1.0	—	ESE, 4-5	—	—	bc	—	Ci.-cu. 4, ESE	Cu. 3, ESE	—	—	
2	29.588	—	-2.0	-1.5	-1.5	—	ESE, 4	—	—	bc	—	Ci.-cu. 4, ESE	Cu. 3, ESE	—	—	
4	29.570	—	-2.5	-0.5	-1.8	—	ESE, 4-3	—	—	bc	—	Ci. 5, ESE	Cu. 4, ESE	—	—	
6	29.558	—	-2.5	-0.5	-1.2	—	ESE, 3-4	—	—	oc	—	—	Cu. 10, ESE	—	—	
8	29.522	—	-2.2	1.8	1.0	—	Calm	—	—	oc	—	—	Cu. 10	—	—	
10						—	No observations taken.				—	—	—	—	—	
Midt.	29.562	—	-1.5	1.8	1.2	—	Lt. SSE airs	—	—	oc	—	—	Cu. 10	—	—	
Mean	29.611	—	—	-1.7	-2.7	—	—	—	—	—	—	—	—	—	—	Overcast and cloudy nearly all day. Strong ESE wind, falling calm in evening. Barometer falling. Thermometer unsteady.
Max. therm. read at		8 a. 2.0.		8 p. —.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.		

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.			P. tube, see p. 2.	Upper.			Lower.
				Dry.	Wet.										
2	29.398	—	-6.0	-5.6	-5.6	—	Lt. SSE airs	—	—	oc	—	Cu. 10	—	16th.	
4	29.374	—	-1.8	-1.0	-1.3	—	Lt. SE airs	—	—	oc	—	Cu. 10	—		
6	29.383	—	-2.0	1.0	0.0	—	SSE, 1	—	—	oc	—	Cu. 10	—		
8	29.374	—	-2.0	1.5	1.0	—	SSW, 2	—	—	oc *	—	Cu.-n. 10	—		
10	29.347	—	—	—	—	—	SSE, 1	—	—	bc	—	Cu.	—		
Noon	29.323	—	2.5	3.5	3.0	—	ESE, 1	—	—	b	—	—	—		
2	29.274	—	6.0	6.2	5.8	—	ESE, 1	—	—	b	—	—	—		
4	29.310	—	8.0	8.8	7.6	—	SE, 2	—	—	bc	Cl. 3, SE	Cu. 3, ESE	—		
6	29.335	—	5.0	5.5	5.0	—	Calm	—	—	bc	Cl. cu. 3, ESE	S.-cu. 4, ESE	—		
8	29.306	—	-0.2	5.8	5.0	—	Calm	—	—	oc	—	Cu. 10	—		
10							No observations taken.								
Midt.							No observations taken.								
Mean	29.342	—	—	2.9	2.3	—	—	—	—	—	—	—	—		Overcast in morning, clearing later. Wind light and variable to calm. Barometer steady. Thermometer rising.
Max. therm. read at		{ 8 a. — 8 p. —		Solar radiation { black bulb — bright bulb —		Evapn. — grammes.		Precipn. — in.							

2	29.338	—	7.0	11.5	11.0	—	NNE, 1	—	—	bc	—	Cu. 5, NNE	—	17th.
4	29.301	—	7.0	11.0	10.5	—	NNE, 1	—	—	oc	—	Cu. 10, ENE	—	
6	29.326	—	7.6	8.0	7.5	—	NNE, 1	—	—	bc	—	Cu.	—	
8	29.426	—	7.5	10.8	10.0	—	NNE, 2	—	—	bc	—	Cu. 5, ENE	—	
10	29.460	—	12.0	14.5	12.8	—	NNE, 1	—	—	bc	—	Cu. 6, NNE	—	
Noon	29.490	—	12.8	14.0	13.8	—	SSE, 2	—	—	oc	—	Cu. 10, SSE	—	
2	29.495	—	12.0	14.0	13.5	—	SSE, 6-5	—	—	oc	—	Cu. 10, SSE	—	
4	29.538	—	12.2	14.5	14.0	—	SSE, 6-7	—	—	ocq	—	Cu. 10, SSE	—	
6	29.567	—	14.5	15.0	15.0	—	SSW, 7-9	—	—	ocq	—	Cu. 10, SSW	—	
8	29.596	—	13.5	16.0	15.0	—	SSW, 8	—	—	oc	—	Cu. 10	—	
10	29.601	—	14.6	17.8	14.8	—	SSW, 8	—	—	oc	—	Cu. 10	—	
Midt.	29.607	—	15.8	17.2	16.8	—	SSW, 9	—	—	oc	—	Cu. 10	—	
Mean	29.479	—	—	13.7	12.9	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. — 8 p. —		Solar radiation { black bulb — bright bulb —		Evapn. — grammes.		Precipn. — in.						

2							No observations taken.							18th.
4	29.636	—	15.2	17.0	16.0	—	S, 3	—	—	oc	—	Cu. 10, SSW	—	
6	29.679	—	15.0	15.4	15.4	—	S, 3	—	—	oc	—	Cu. 10, SSW	—	
8	29.719	—	14.0	15.1	15.0	—	SSW, 3-4	—	—	oc	—	Cu. 10, SSW	—	
10	29.732	—	14.2	17.0	16.3	—	SSW, 4-5	—	—	oc	—	Cu. 10, SSW	—	
Noon	29.780	—	15.0	16.0	16.0	—	SSW, 3	—	—	oc	—	Cu. 10, SSE	—	
2	29.800	—	14.0	15.8	14.8	—	SSW, 4-5	—	—	oc	—	Cu. 10, SSE	—	
4	29.752	—	14.5	16.5	15.4	—	SSE, 3	—	—	oc	—	Cu. 10, SSE	—	
6	29.792	—	12.0	14.8	13.8	—	SSE, 3	—	—	oc	—	Cu. 10	—	
8	29.746	—	11.2	13.0	12.1	—	E, 3	—	—	oc	—	Cu. 10	—	
10	29.808	—	10.6	11.5	11.0	—	E, 4	—	—	oc	—	Cu. 10	—	
Midt.	29.796	—	10.5	14.0	13.0	—	E by N, 2-3	—	—	oc	—	Cu. 10	—	
Mean	29.749	—	—	15.1	14.4	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. — 8 p. —		Solar radiation { black bulb — bright bulb —		Evapn. — grammes.		Precipn. — in.						

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19th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Split minimum.	Dry.										
2						No observations taken.								
4	29.732	—	13.6	14.0	14.5	—	SSW, 1	—	bc		Cl.	—	—	
6	29.761	—	12.3	14.3	13.7	—	Lt. SSE airs	—	b		—	—	—	
8	29.735	—	13.3	17.0	16.0	—	Calm	—	b		—	—	—	
10	29.735	—	13.8	18.5	17.5	—	SSE, 2	—	bc		—	Cu. 9, SSE	—	
Noon	29.612	—	16.5	18.0	17.0	—	SSE, 2-3	—	oc		—	Cu. 10	—	
2	29.672	—	13.5	14.8	14.0	—	ESE, 3	—	oc		—	Cu. 10, ESE	—	
4	29.662	—	14.0	21.8	19.8	—	ESE, 1	—	bc		Cl.-cu. 3, ESE	—	—	
6							No observations taken.							
8	29.714	—	12.0	18.5	18.0	—	SSE, 0-1	—	oc		—	Cu. 10	—	
10	29.705	—	18.0	20.3	19.8	—	SSE, 1	—	oc		—	Cu. 10	—	
Midt.	29.696	—	19.5	22.8	22.4	—	SW by S, 3	—	c		—	Cu. 10	—	
Mean	29.705	—	—	18.0	17.3	—	—	—	—		—	—	—	
Max. therm. read at $\begin{cases} 8 \text{ a.} \\ 8 \text{ p.} \end{cases}$ —. Solar radiation $\begin{cases} \text{black bulb} \\ \text{bright bulb} \end{cases}$ —. Evapn. — grammes. Precipn. — in.													Fine in morning, clouding over in evening. Wind light and variable. Barometer steady. Thermometer rising.	

20th.

2	29.686	—	19.7	20.4	20.0	—	SSW, 2-4	—	oc		—	S.-cu. 9, SSW	—	
4	29.672	—	19.0	21.2	21.2	—	SW, 1	—	oc		—	S.-cu. 10	—	
6	29.607	—	19.1	19.5	19.3	—	SSE, 1	—	bc		Cl.-cu. 6	—	—	
8	29.674	—	18.5	21.8	21.5	—	S, 2-3	—	oc		—	Fr.-cu. 10, S	—	
10	29.608	—	18.3	20.5	20.0	—	S, 2	—	oc		—	Cu. 10, S	—	
Noon	29.531	—	18.5	21.5	21.2	—	S, 1	—	bc		Cl. 5, S	Cu. 3, S	—	
2	29.544	—	19.5	20.5	20.2	—	S, 2	—	bc		Cl. 5, S	S.-cu. 3, S	—	
4	29.569	—	17.8	19.8	19.5	—	S, 4-5	—	bc		Cl. 5, S	S.-cu. 3, S	—	
6	29.587	—	13.0	14.5	13.8	—	S, 3	—	bc		—	S.-cu. 6	—	
8	29.632	—	12.0	14.0	13.9	—	E, 1-2	—	c		—	Cu. 10	—	
10	29.601	—	12.0	17.0	17.0	—	SSW, 6-8	—	oc		—	S.-cu. 10	—	
Midt.	29.636	—	16.0	18.2	18.0	—	SSW, 2-3	—	oc		—	S.-cu. 10	—	
Mean	29.612	—	—	19.1	18.8	—	—	—	—		—	—	—	
Max. therm. read at $\begin{cases} 8 \text{ a.} \\ 8 \text{ p.} \end{cases}$ —. Solar radiation $\begin{cases} \text{black bulb} \\ \text{bright bulb} \end{cases}$ —. Evapn. — grammes. Precipn. — in.													Generally fine, overcast at intervals. Strong SSW and S wind. Barometer falling, but thermometer steady.	

21st.

2	29.650	—	12.0	13.0	13.0	—	SSW, 2-3	—	oc		—	Cu. 10	—	
4	29.639	—	11.6	13.1	13.1	—	ESE, 2	—	oc		—	Cu. 10	—	
6	29.591	—	13.0	13.0	13.0	—	SSW, 2	—	oc		—	Cu. 10	—	
8							No observations taken.							
10							No observations taken.							
Noon							No observations taken.							
2							No observations taken.							
4							No observations taken.							
6							No observations taken.							
8	29.600	—	10.8	18.0	17.9	—	SE, 1	—	oc		—	Cu. 10	—	
10	29.543	—	10.0	12.5	12.2	—	E, 3	—	b		—	—	—	
Midt.	29.530	—	8.6	10.0	9.9	—	ESE, 4	—	b		—	—	—	
Mean	29.592	—	—	13.3	13.2	—	—	—	—		—	—	—	
Max. therm. read at $\begin{cases} 8 \text{ a.} \\ 8 \text{ p.} \end{cases}$ —. Solar radiation $\begin{cases} \text{black bulb} \\ \text{bright bulb} \end{cases}$ —. Evapn. — grammes. Precipn. — in.													Overcast and cloudy. Fresh SSW to ESE wind. Barometer falling, but thermometer steady. A good deal of young ice in the bay.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.											
2	29.477	—	8.8	10.2	10.0	—	ESE, 2-3	—	—	b	—	—	—	22nd.		
4	29.483	—	2.1	3.0	3.0	—	ESE, 4	—	—	b	—	—	—			
6	29.505	—	2.5	3.5	4.0	—	ESE, 4	—	—	bc	Cl. s.	—	—			
8	29.504	—	1.5	12.2	12.0	—	ESE, 2	—	—	bc	Cl. s. 4	—	—			
10	29.504	—	10.0	11.0	11.0	—	ESE, 1	—	—	b	—	—	—			
Noon	29.508	—	9.0	11.2	11.0	—	ESE, 1	—	—	bc	Cl., S.	—	—			
2	29.472	—	10.5	13.0	—	—	Calm	—	—	b	—	—	—			
4	29.431	—	11.5	12.0	10.5	—	Calm	—	—	b	—	—	—			
6	29.420	—	10.0	10.0	8.8	—	Calm	—	—	bc	—	Cu., SSE	—			
8	29.401	—	6.5	7.0	6.1	—	ESE, 2	—	—	b	—	—	—			
10	29.322	—	4.0	5.4	4.4	—	ESE, 1	—	—	b	—	—	—			
Midt.	29.262	—	4.5	8.0	7.2	—	Calm	—	—	b	—	—	—			
Mean	29.441	—	—	8.9	—	—	—	—	—	—	—	—	—			
Max. therm. read at		{ 8 a. 22° 8.		{ 8 p. —.		Solar radiation		{ black bulb —.		{ bright bulb —.		Evapn. — grammes.			Precipn. — in.	
Fine, clear day Ligh ESE wind, falling calm. Barometer and thermometer falling. Young ice forming thick in the bay.																

2	29.184	—	5.0	6.8	6.5	—	ESE, 2	—	—	b	—	—	—	23rd.		
4	29.132	—	5.9	6.5	5.5	—	ESE, 2	—	—	bc	—	S.-Cu.	—			
6	29.113	—	-0.5	0.8	0.0	—	NE, 2	—	—	b	—	—	Strong mirage at the foot of all land to the S.			
8	29.065	—	0.0	4.2	3.0	—	E by N, 3	—	—	bc	—	Cu. 8, NNW	—			
10	29.054	—	0.0	3.6	2.0	—	E by N, 3-4	—	—	bc	—	Cu. 6, NNE	—			
Noon	29.032	—	-0.8	0.0	-0.5	—	E by N, 3-4	—	—	oc	—	Cu. 9, NNE	—			
2	29.018	—	-1.0	0.0	-0.8	—	E by N, 4	—	—	oc †	—	Cu. 10	—			
4	29.035	—	-5.0	-4.0	-5.8	—	E by N, 6-7	—	—	oc †	—	S.-cu. 10	—			
6	29.070	—	-6.0	-4.5	-5.0	—	E by N, 7	—	—	oc †	—	Cu. 10	—			
8	29.082	—	-5.0	-4.2	-4.0	—	ESE, 8	—	—	oc †²	—	Cu. 10	—			
10	29.169	—	-5.0	-3.2	-3.2	—	ESE, 8	—	—	oc †²	—	Cu. 10	—			
Midt.	29.150	—	-4.0	-1.0	-1.5	—	ESE, 4	—	—	oc * †	—	Cu.-n. 10	—			
Mean	29.092	—	—	6.4	-0.3	—	—	—	—	—	—	—	—			
Max. therm. read at		{ 8 a. 14° 0.		{ 8 p. —.		Solar radiation		{ black bulb —.		{ bright bulb —.		Evapn. — grammes.			Precipn. — in.	
Fine early, but overcast for rest of day. Wind rose from E by N moderate to a gale from ESE, and fell again at midnight. Barometer rose after 2 p.m. Thermometer falling. Much ice driven out of the bay, but the larger part held.																

2	29.197	—	-3.0	0.0	-0.1	—	ESE, 2-3	—	—	bc	—	S.-cu. 3, ESE	—	24th.		
4	29.159	—	-1.0	-0.4	-1.2	—	ESE, 2	—	—	bc	Cl.	—	Strong mirage to the NNW.			
6	29.241	—	-2.5	0.0	-1.0	—	E, 1	—	—	b	—	—	—			
8	29.230	—	-1.6	-0.6	-1.2	—	E, 2	—	—	b	—	—	—			
10	29.348	—	-1.0	0.2	-0.6	—	E, 1	—	—	b	—	—	—			
Noon	29.373	—	-1.0	2.3	1.8	—	E, 1	—	—	b	—	—	—			
2	29.392	—	0.0	1.0	0.5	—	Calm	—	—	b	—	—	—			
4	29.407	—	0.0	3.2	3.0	—	Calm	—	—	b	—	—	—			
6	29.422	—	3.0	3.8	3.2	—	Calm	—	—	b	—	—	—			
8	29.452	—	3.0	6.0	5.4	—	Calm	—	—	b	—	—	—			
10	29.451	—	4.2	6.1	5.1	—	Lt. ESE airs	—	—	b	—	—	Clouds banking up in ENE horizon.			
Midt.	29.418	—	4.0	6.4	6.0	—	Calm	—	—	oc	—	Cu. 10	—			
Mean	29.349	—	—	2.3	1.7	—	—	—	—	—	—	—	—			
Max. therm. read at		{ 8 a. 0° 5.		{ 8 p. —.		Solar radiation		{ black bulb —.		{ bright bulb —.		Evapn. — grammes.			Precipn. — in.	
Fine and clear all day. Wind light from E to calm. Barometer and thermometer rising. Bay frozen over; communicated with shore over ice.																

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25th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Dry.	Wet.											
2	29.417	—	6.0	10.0	9.8	—	ESE, 0-1	—	—	oc	—	Cu. 10, ESE	—	Thin stratus over the whole sky.	
4	29.395	—	9.0	9.6	9.0	—	Calm	—	—	oc	—	Cu. 10	—		
6	29.402	—	9.1	11.2	10.8	—	NNE, 1	—	—	oc	—	Cu. 10	—		
8	29.395	—	10.2	11.2	10.8	—	N, 1	—	—	bc	Cl.-s. 5, NNW	S.-cu. 6, NNE	—		
10	29.391	—	10.8	11.3	11.0	—	N, 1-2	—	—	oc*	—	Cu.-n. 10, NNE	—		
Noon	29.370	—	11.0	12.2	11.6	—	Calm	—	—	bc*	Cl. 5, NNW	Cu.-n. 7, NNE	—		
2	29.336	—	10.0	10.2	10.0	—	Calm	—	—	bc*	Cl. 5, NNW	Cu.-n. 6, NNE	—		
4	29.299	—	9.0	9.0	9.0	—	E, 2	—	—	oc*	—	Cu.-n. 10, NNE	—		
6	29.240	—	4.6	6.0	5.8	—	Calm	—	—	oc*	—	Cu.-n. 10	—		
8	29.266	—	4.0	5.0	4.9	—	Lt. ENE alrs	—	—	oc*	—	Cu.-n. 10	—		
10	29.304	—	4.0	4.5	4.2	—	ESE, 1	—	—	oc*	—	Cu.-n. 10	—		
Midd.	29.334	—	0.5	1.8	1.6	—	ESE, 3-4	—	—	ocq*	—	Cu.-n. 10	—		
Mean	29.346	—	—	8.5	8.2	—	—	—	—	—	—	—	—		Overcast and cloudy, with snowfall. Wind light and variable to calm. Barometer steady. Thermometer falling.
Max. therm. read at		8 a. 11° 2.		8 p. —.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.			Precipn. — in.

26th.

2	29.332	—	0.1	2.5	2.4	—	ESE, 3-4	—	—	bc	Fr.-cu. 3, ESE	Cu. 4, ESE	—	Fine until 4 p.m., then became overcast. Wind rose to a gale from E by N. Barometer steady. Thermometer falling. Ice formed completely round the ship and beyond the bay.	
4	29.318	—	3.5	4.0	4.0	—	ESE, 2-3	—	—	b	—	—	—		
6	29.361	—	1.3	4.9	4.0	—	SSE, 1	—	—	b	—	—	—		
8	29.381	—	0.5	1.5	1.0	—	E by N, 2	—	—	b	—	—	—		
10	29.350	—	0.5	1.2	0.8	—	E by N, 2	—	—	b	—	—	—		
Noon	29.364	—	-2.5	-1.5	-2.0	—	E by N, 2-4	—	—	b †	—	—	—		
2	29.331	—	-6.0	-3.5	-4.0	—	E by N, 5	—	—	bc †	—	Cu. 3, NNW	—		
4	29.378	—	-4.8	-3.0	-3.6	—	E by N, 6	—	—	ocq †	—	S.-cu. 10	—		
6	29.325	—	-5.0	-4.8	-5.0	—	E by N, 6-7	—	—	ocq † <sup>2</sup>	—	S.-cu. 10	—		
8	29.310	—	-5.1	-4.7	-4.9	—	E by N, 8	—	—	ocq † <sup>2</sup>	—	S.-cu. 10	—		
10	29.312	—	-6.0	-5.0	-4.9	—	E by N, 7	—	—	oc † <sup>2</sup>	—	S.-cu. 10	—		
Midd.	29.307	—	-5.5	-4.0	-4.9	—	E by N, 8	—	—	oc † <sup>2</sup>	—	S.-cu. 10	—		
Mean	29.339	—	—	-1.0	-1.4	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 5° 0.		8 p. 1° 9.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. 0.14 in.	

27th.

2	29.287	—	-6.2	-5.0	-5.0	—	SE, 7-8	—	—	oc*	—	Cu.-n. 10, ESE	—	2.30. Observed parhelson. Parhelson visible. Overcast and foggy until noon, then fine and clear. Wind fell from a gale to calm. Barometer rose a little. Thermometer falling.	
4	29.287	—	-5.5	-5.3	-5.8	—	SE, 6	—	—	oc*	—	Cu.-n. 10	—		
6	29.277	—	-8.2	-7.0	-7.0	—	ESE, 3	—	—	oc*	—	Cu.-n. 10	—		
8	29.294	—	-9.0	-7.0	-7.0	—	ESE, 2-3	—	—	ocf*	—	S.-cu. 10	—		
10	29.290	—	-8.0	-7.5	-7.5	—	E by S, 2	—	—	ocf	—	S.-cu. 10	—		
Noon	29.304	—	-9.0	-7.0	-7.0	—	E by S, 2-3	—	—	ocf*	—	S.-cu. 10	—		
2	29.306	—	-7.0	-7.0	-7.0	—	E, 1-2	—	—	b	—	—	—		
4	29.298	—	-8.0	-6.5	-7.0	—	SE, 1	—	—	b	—	—	—		
6	29.264	—	-7.0	-6.5	-7.0	—	Calm	—	—	b	—	—	—		
8	29.302	—	-6.5	-6.5	-6.5	—	Calm	—	—	b	—	—	—		
10	29.300	—	-8.0	-8.0	-8.0	—	Calm	—	—	b	—	—	—		
Midd.	29.300	—	-9.8	-8.8	-8.9	—	Calm	—	—	b	—	—	—		
Mean	29.292	—	—	-6.8	-7.0	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. —.		8 p. - 6° 5.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. 0.58 in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.				
				Dry.	Wet.										Unscreened.	
2	29.288	—	—	9.0	7.2	7.2	—	—	—	—	—	—	—	28th.		
4	29.281	—	—	6.5	6.3	6.5	—	—	—	—	—	—	—			
6	29.284	—	—	10.2	10.0	10.0	—	—	—	—	—	—	—			
8	29.254	—	—	10.0	6.5	7.0	—	—	—	—	—	—	—			
10	29.266	—	—	8.0	7.0	7.0	—	—	—	—	—	—	—			
Noon	29.260	—	—	7.6	5.2	5.5	—	—	—	—	—	—	—			
2	29.244	—	—	6.5	3.5	3.8	—	—	—	—	—	—	—			
4	29.258	—	—	7.0	5.2	5.5	—	—	—	—	—	—	—			
6	29.248	—	—	6.0	6.0	6.0	—	—	—	—	—	—	—			
8	29.261	—	—	6.2	5.6	5.4	—	—	bc	Cl.-s. 1	—	—	Cirrus stripes lying E and W.			
10	29.237	—	—	7.0	6.0	6.0	—	—	b	—	—	—	—			
Midt.	29.235	—	—	8.0	7.5	7.5	—	—	b	—	—	—	—			
Mean	29.260	—	—	6.3	6.5	—	—	—	—	—	—	—	—			
Max. therm. read at		8 a. —5°·5.		8 p. —.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.			Precipn. — in.	

2	29.218	—	—	13.2	13.0	13.0	—	—	b	—	—	—	—	29th.		
4	29.215	—	—	9.0	8.0	8.0	—	—	b	—	—	—	—			
6	29.213	—	—	8.9	6.6	6.7	—	—	b	—	—	—	—			
8	29.228	—	—	7.0	5.0	5.0	—	—	bc	—	Cu. 6, S	—	Strong mirage to the NNW.			
10	29.190	—	—	6.0	5.5	5.5	—	—	bc	Cl.-s. 3	—	—	—			
Noon	29.204	—	—	6.0	3.8	4.0	—	—	b	—	—	—	—			
2	29.183	—	—	5.0	4.0	4.5	—	—	b	—	—	—	—			
4	29.160	—	—	5.0	1.0	1.2	—	—	b	—	—	—	—			
6	29.155	—	—	3.0	3.0	3.0	—	—	b	—	—	—	—			
8	29.097	—	—	6.4	6.0	6.0	—	—	b	—	—	—	—			
10	29.140	—	—	7.8	6.5	6.3	—	—	b	—	—	—	—			
Midt.	29.135	—	—	9.5	8.2	8.6	—	—	b	—	—	—	—			
Mean	29.178	—	—	5.9	6.0	—	—	—	—	—	—	—	—			
Max. therm. read at		8 a. —.		8 p. 4°·0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.			Precipn. — ins.	

2	29.152	—	—	6.8	6.0	6.0	—	—	b	—	—	—	—	30th.		
4	29.088	—	—	7.2	7.0	7.0	—	—	b	—	—	—	—			
6	29.140	—	—	11.0	10.5	10.5	—	—	b	—	—	—	—			
8	29.138	—	—	12.0	7.0	7.0	—	—	b	—	—	—	—			
10	29.136	—	—	7.9	3.6	3.8	—	—	b	—	—	—	—			
Noon	29.096	—	—	4.2	2.5	2.8	—	—	N, 1	—	—	—	—			
2	29.060	—	—	3.0	0.0	0.5	—	—	N, 2	—	—	—	—			
4	29.016	—	—	1.0	0.5	0.8	—	—	Lt. N airs	—	—	—	—			
6	29.033	—	—	1.5	1.0	1.2	—	—	N, 2	—	—	—	—			
8	28.998	—	—	1.5	0.9	0.9	—	—	N, 1	—	—	—	—			
10	28.989	—	—	1.0	0.2	0.2	—	—	N, 2	—	—	—	—			
Midt.	29.002	—	—	4.9	4.9	4.9	—	—	Calm	—	—	—	—			
Mean	29.071	—	—	3.7	3.8	—	—	—	—	—	—	—	—			
Max. therm. read at		8 a. —4°·5.		8 p. —1°·5?		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.			Precipn. — in.	

1902—March.]

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31st.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.							Wet.			
2	28.976	—	—	-5.5	-5.5	—	Calm	—	—	b	—	—	—	
4	28.976	—	—	-6.0	-6.3	—	ESE, 1	—	—	b	—	—	—	
6	28.985	—	—	-6.6	-6.7	—	E, 1	—	—	b	—	—	—	
8	29.013	—	—	-7.0	-6.7	—	E, 5	—	—	b	—	—	—	
10	29.030	—	—	-7.0	-7.0	—	E, 5-6	—	—	b	—	—	—	
Noon	29.004	—	—	-9.8	-9.8	—	E, 6	—	—	b	—	—	—	
2	29.016	—	—	-8.0	-8.6	—	Lt. E airs	—	—	b	—	—	—	
4	29.020	—	-9.0	-8.2	-8.2	—	Calm	—	—	b	—	—	—	
6							No observations taken.							
8	29.045	—	-9.8	-9.8	-9.8	—	Calm	—	—	b	—	—	—	
10	29.072	—	-9.0	-8.0	-8.2	—	Calm	—	—	bc	Ci. 4	—	—	
Midd.	29.069	—	-3.5	-3.0	-3.2	—	SE, 1	—	—	bc	Ci. 4	—	—	
Mean	29.019	—	—	-7.2	-7.3	—	—	—	—	—	—	—	—	

Fine and clear. Wind rose from calm to strong from E, then fell calm again. Barometer rose a little. Thermometer low and steady.

Max. therm. read at { 8 a. 0° 0.  
8 p. -4° 5.

Solar radiation { black bulb —  
bright bulb —.

Evapn. — grammes.

Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.						Unscreened.			
2	29.097	—	—	4.2	3.0	3.0	—	—	—	—	—	—	—	1st.
4	29.112	—	—	7.5	7.2	—	—	—	—	—	—	—	—	
6	29.121	—	—	7.8	5.9	5.8	—	—	—	—	—	—	—	
8	29.196	—	—	6.5	6.5	6.5	—	—	—	—	—	—	—	
10	29.213	—	—	10.8	7.0	7.2	—	—	—	—	—	—	—	
Noon	29.251	—	—	10.8	7.9	8.0	—	—	—	—	—	—	—	
2	29.267	—	—	9.2	6.8	7.0	—	—	—	—	—	—	—	
4	29.257	—	—	7.5	4.0	4.8	—	—	—	—	—	—	—	
6	29.272	—	—	13.0	13.0	13.5	—	—	—	—	—	—	—	
8	29.299	—	—	10.0	7.8	7.8	—	—	—	—	—	—	—	
10	29.315	—	—	9.0	8.2	8.2	—	—	—	—	—	—	—	
Midt.	29.305	—	—	12.0	11.6	11.8	—	—	—	—	—	—	—	
Mean	29.225	—	—	7.4	7.6	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. — 2° 4. 8 p. — 4° 0.		Solar radiation { black bulb — bright bulb —		Evapn. — grammes.		Precipn. — in.		Fine clear day. Calm in morning, wind rising to fresh from SE, then calm in evening. Barometer rising. Thermometer low and steady.						

2	29.310	—	—	8.9	8.0	8.2	—	—	—	bc	—	—	—	2nd.
4	29.330	—	—	12.0	6.0	6.0	—	—	—	b	—	—	—	
6	29.343	—	—	12.0	9.0	8.5	—	—	—	b	—	—	—	
8	29.355	—	—	12.4	11.5	11.5	—	—	—	bc	—	—	—	
10	29.374	—	—	12.5	11.8	11.8	—	—	—	bc	—	—	—	
Noon	29.373	—	—	12.0	5.8	6.0	—	—	—	bc	—	—	—	
2	29.369	—	—	7.0	5.0	5.5	—	—	—	—	—	—	—	
4	29.363	—	—	13.2	9.0	9.0	—	—	—	b	—	—	—	
6	29.354	—	—	13.5	8.0	8.0	—	—	—	b	—	—	—	
8	29.355	—	—	9.2	9.2	—	—	—	—	b	—	—	—	
10	29.346	—	—	9.8	9.0	9.0	—	—	—	b	—	—	—	
Midt.	29.366	—	—	14.0	5.0	4.2	—	—	—	b	—	—	—	
Mean	29.353	—	—	8.1	8.1	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. — 6° 0. 8 p. — 5° 0.		Solar radiation { black bulb — bright bulb —		Evapn. — grammes.		Precipn. — in.		1.5 a.m. Beams of aurora in S and ENE. Fine and clear. Calm all day. Barometer steady. Thermometer low and steady.						

2	29.322	—	—	11.8	11.9	—	—	—	—	bc	—	—	—	3rd.
4	29.313	—	—	14.2	11.0	11.2	—	—	—	b	—	—	—	
6	29.296	—	—	13.8	13.0	13.2	—	—	—	bc	—	—	—	
8	29.236	—	—	13.5	12.0	13.0	—	—	—	bc	—	—	—	
10	29.273	—	—	13.8	11.8	12.0	—	—	—	bc	—	—	—	
Noon	29.247	—	—	12.0	8.5	8.8	—	—	—	oc	—	—	—	
2	29.227	—	—	9.0	7.8	8.0	—	—	—	oc	—	—	—	
4	29.212	—	—	12.0	8.5	8.8	—	—	—	oc	—	—	—	
6	29.198	—	—	9.0	9.0	9.0	—	—	—	oc	—	—	—	
8	29.175	—	—	10.0	9.0	9.2	—	—	—	oc	—	—	—	
10	29.153	—	—	13.0	9.0	9.0	—	—	—	b	—	—	—	
Midt.	29.154	—	—	10.0	9.4	9.4	—	—	—	b	—	—	—	
Mean	29.233	—	—	10.1	10.3	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. — 8 p. — 6° 0.		Solar radiation { black bulb — bright bulb —		Evapn. — grammes.		Precipn. — in.		Very faint aurora beam in SSE, alt. 6°. Generally fine; overcast in afternoon. Calm nearly all day. Barometer falling. Thermometer low and steady.						

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.	
			Spirit minimum.	Dry.											Wet.
4th. 2	29.163	—	—	-13.6	-13.6	—	—	—	—	—	—	—	Thin stratus over the sky.		
4	29.130	—	-14.5	-9.5	-9.7	—	—	—	—	—	—	—	Very faint aurora.		
6	29.056	—	-11.0	-6.1	-6.2	—	—	—	—	—	S.-cu. 10	—			
8	28.979	—	-9.0	-4.5	-4.9	—	—	—	—	—	—	Cu.	—		
10	28.987	—	-5.2	-3.8	-4.0	—	—	—	—	—	—	S.-cu. 10	—		
Noon	28.972	—	-7.0	-3.0	-3.2	—	—	—	—	—	—	S.-cu. 10	—		
2	28.980	—	-6.0	-4.8	-4.8	—	—	—	—	—	—	Cu.-n. 10	—		
4						No observations taken.									
6						No observations taken.									
8	28.927	—	-5.0	-1.8	-2.0	—	—	—	—	—	—	—	—		
10	28.921	—	-4.0	-3.5	-3.6	—	—	—	—	—	—	—	—		
Midt.	28.921	—	-4.0	-1.8	-1.8	—	—	—	—	—	—	Cu.-n. 10	—		
Mean	29.004	—	—	-5.2	-5.4	—	—	—	—	—	—	—	Dull and cloudy most of day, with snow showers. Calm, but wind rising in evening. Barometer falling. Thermometer rising.		
Max. therm. read at		8 a. -4° 0.		8 p. —.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

5th. 2	28.887	—	-2.2	1.0	0.2	—	—	—	—	—	—	Cu. 10	—		
4	28.898	—	—	-3.5	-3.3	—	—	—	—	—	—	Cu. 10	—		
6	28.850	—	-5.0	-5.0	-5.1	—	—	—	—	—	—	S.-cu. 10	—		
8	28.855	—	-4.9	-0.1	-0.4	—	—	—	—	—	—	S.-cu. 10	—		
10	28.852	—	-1.0	0.0	-0.5	—	—	—	—	—	—	S.-cu. 10	—		
Noon	28.887	—	-5.0	-5.0	-5.0	—	—	—	—	—	—	S.-cu. 10	—	In the afternoon an awning was spread over the after part of the ship.	
2	28.863	—	-5.2	-4.2	-4.5	—	—	—	—	—	—	S.-cu. 10	—		
4	28.854	—	-9.0	-8.0	-8.0	—	—	—	—	—	Ci.-s. 5, NNE	Cu. 3, SSW	—		
6	28.856	—	-8.0	-5.0	-5.2	—	—	—	—	—	—	—	—		
8	28.869	—	-6.0	0.0	-0.2	—	—	—	—	—	—	—	—		
10	28.863	—	-2.8	0.8	0.2	—	—	—	—	—	—	S. 10	—		
Midt.	28.894	—	-4.0	-0.7	-0.2	—	—	—	—	—	—	S.-cu. 10	—		
Mean	28.869	—	—	-2.5	-2.7	—	—	—	—	—	—	—	—	Overcast and cloudy all day; wind variable.	
Max. therm. read at		8 a. 1° 0.		8 p. 1° 0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

6th. 2	28.918	—	-2.5	-1.0	-1.0	—	—	—	—	—	—	Cu. 9	—		
4	28.964	—	-5.0	-4.8	-4.6	—	—	—	—	—	—	Cu.-n. 10	—		
6	28.943	—	-8.2	-6.0	-6.0	—	—	—	—	—	—	Cu.-n. 10	—		
8	29.018	—	-16.3	-16.0	-15.5	—	—	—	—	—	—	S.-n. 10	—		
10	29.106	—	-23.0	-21.0	-21.2	—	—	—	—	—	—	S.-n. 10	—		
Noon	29.136	—	-24.0	-12.0	-12.0	—	—	—	—	—	—	S.-n. 10	—		
2	29.153	—	-19.0	-11.6	-11.8	—	—	—	—	—	—	S.-n. 10	—		
4	29.145	—	-20.0	-15.0	-15.0	—	—	—	—	—	—	—	—		
6	29.141	—	-15.0	-9.0	-9.5	—	—	—	—	—	—	—	—		
8	29.130	—	-10.0	-4.8	-5.0	—	—	—	—	—	—	—	—		
10	29.170	—	-7.2	-7.2	-7.4	—	—	—	—	—	—	—	—		
Midt.	29.161	—	-9.0	-9.0	-9.2	—	—	—	—	—	—	—	—		
Mean	29.082	—	—	-9.8	-9.9	—	—	—	—	—	—	—	—	Overcast and cloudy, with heavy snow squalls. Wind rose to strong from SE, but fell again in evening. Barometer rising. Thermometer falling.	
Max. therm. read at		8 a. 1° 0.		8 p. 2° 0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.147	—	—	-10.4	-10.0	—	—	—	b	—	—	—	7th.	
4	29.095	—	-10.4	-2.2	-2.8	—	—	—	b	—	—	—		
6						No observations taken.								
8	29.083	—	-5.8	-6.9	-6.8	—	—	—	oc	—	S. 10	—		
10	29.064	—	-7.0	5.0	4.0	—	—	—	oc	—	S. 10	—		
Noon	29.061	—	4.1	8.8	7.7	—	—	—	h	Cl. 1	—	—		
2	29.066	—	4.1	6.0	5.2	—	—	—	oc	—	S.-cu. 10	—		
4	29.116	—	2.0	4.0	3.8	—	—	—	oc	—	S.-cu. 10	—		
6	29.133	—	-5.2	-4.2	-4.4	—	—	—	oc	—	S.-cu. 10	—		
8	29.147	—	-6.4	-6.2	-6.4	—	—	—	bq +	—	—	—		
10	29.154	—	-8.0	-6.0	-6.0	—	—	—	bq +	—	—	—		
Midt.	29.170	—	-10.0	-5.0	-5.2	—	—	—	bq	—	—	—		
Mean	29.112	—	—	-1.6	-1.9	—	—	—	—	—	—	—		Overcast nearly all day. Wind calm in morning, rose to SE gale. Thermometer rising till midday.
Max. therm. read at		8 a. - 2° 2.		8 p. 10° 0.		Solar radiation		black bulb —	Evapn. — grammes.	Precipn. — in.				

2	29.156	—	-2.0	1.9	1.5	—	—	—	ocq	—	Cu. 10	—	8th.	
4	29.157	—	-2.3	6.0	6.0	—	—	—	oc	—	Cu. 10	—		
6	29.092	—	4.5	5.5	5.5	—	—	—	ocq *	—	Cu.-n. 10	—		
8	29.064	—	9.0	9.8	9.9	—	—	—	ocq	—	S.-cu. 10	—		
10	29.049	—	10.0	13.0	13.0	—	—	—	oc * +	—	Cu.-n. 10	—		
Noon	29.173	—	-10.0	-10.0	-10.0	—	—	—	ocq * +	—	Cu.-n. 10	—		
2	29.177	—	-11.0	-7.2	-7.8	—	—	—	bq +	Cl.-cu. 6, S	—	—		
4	29.198	—	-8.0	-5.0	-5.2	—	—	—	ocqm +	—	Cu. 10	—		
6	29.200	—	-7.0	-7.0	-7.2	—	—	—	bm +	—	—	—		
8	29.207	—	-10.0	-8.2	-8.5	—	—	—	ocq * +	—	S.-cu. 10	—		
10	29.208	—	-11.0	-6.2	-6.5	—	—	—	ocq * +	—	Cu.-n. 10	—		
Midt.	29.202	—	-8.0	-2.5	-2.8	—	—	—	bq	—	S.-cu. 6	—		
Mean	29.157	—	—	0.8	-1.0	—	—	—	—	—	—	—		Overcast and cloudy; snowing all day. A gale from S to ESE and ENE with heavy squalls. Barometer rose after 10 a.m. and thermometer fell.
Max. therm. read at		8 a. 11° 3.		8 p. 13° 0.		Solar radiation		black bulb —	Evapn. — grammes.	Precipn. — in.				

2	29.186	—	-6.0	-2.0	-2.0	—	—	—	b	—	—	—	9th.	
4	29.193	—	-4.0	1.7	1.3	—	—	—	h	—	—	—		
6	29.172	—	-4.0	-3.0	-3.0	—	—	—	bq	—	Cu. 4, NE	—		
8	29.165	—	-2.8	0.2	0.1	—	—	—	o	—	S. 10	—		
10	29.164	—	-1.0	0.8	0.6	—	—	—	bc	Cl.-s. 4	Fr.-cu. 6, S	—		
Noon	29.180	—	0.0	1.5	1.0	—	—	—	bc	Cl.-s. 6	—	—		
2	29.190	—	1.5	1.8	1.6	—	—	—	b	—	—	—		
4	29.204	—	-2.0	-2.0	-2.0	—	—	—	h	—	—	—		
6	29.212	—	-2.5	0.0	0.0	—	—	—	b	—	—	—		
8	29.233	—	-3.0	0.5	0.0	—	—	—	b	—	—	—		
10	29.241	—	-0.8	1.5	1.0	—	—	—	b	—	—	—		
Midt.	29.241	—	-1.0	-1.0	-1.0	—	—	—	b	—	—	—		
Mean	29.198	—	—	0.0	-0.2	—	—	—	—	—	—	—		Bright aurora from SE to S, alt. 10°; changed from bright arch to crown of streamers. Fine and clear. Light variable Ely breezes. Barometer rose a little.
Max. therm. read at		8 a. 2° 5.		8 p. 4° 0.		Solar radiation		black bulb —	Evapn. — grammes.	Precipn. — in.				

1902—April.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.			Remarks.		
		Cape Armitage.	Spirit minimum.		Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, sec p. 2.	Weather.	Sunshine.	Upper.		Lower.	Aspirator.
			Dry.	Wet.	Dry.	Wet.										
10th.	2	29.242	—	-1.8	-1.0	-1.0	—	Calm	—	—	b	—	—	—	Slight aurora in SE.	
	4	29.269	—	-1.8	-1.0	-1.0	—	Calm	—	—	b	—	—	—		
	6	29.218	—	-2.0	-1.0	-1.0	—	Calm	—	—	bc	—	Cu. 3, NE	—		
	8	29.242	—	-1.8	2.3	2.3	—	Calm	—	—	bc	—	—	—	Thickness of ice, 15½ inches.	
	10	29.237	—	1.5	6.2	6.0	—	Lt. NNE airs	—	—	b	—	—	—		
	Noon	29.230	—	6.0	7.5	7.0	—	Lt. N airs	—	—	tc	—	—	—		
	2	29.240	—	6.2	7.2	6.8	—	N, 1	—	—	bc	—	—	—		
	4	29.242	—	0.5	5.0	4.0	—	Lt. E airs	—	—	bc	—	—	—		
	6	29.234	—	3.0	4.2	3.8	—	Calm	—	—	o	—	—	—		
	8	29.243	—	4.0	5.0	3.8	—	Calm	—	—	bc	—	—	—		
	10	29.233	—	4.0	7.0	6.0	—	Calm	—	—	bm	—	—	—		
	Midt.	29.217	—	6.0	8.0	7.0	—	Calm	—	—	bm	—	—	—		
	Mean	29.237	—	—	4.1	3.6	—	—	—	—	—	—	—	—	Fine and clear. Wind calm to light and variable. Barometer steady. Thermometer rising.	
		Max. therm. read at { 8 a. 2.5, 8 p. 9.0.					Solar radiation { black bulb —, bright bulb —.			Evapn. — grammes.		Precipn. — in.				

11th.	2	29.239	—	4.5	7.8	6.2	—	S by E, 3-5	—	—	oc	—	—	—	Slight aurora in SE.
	4	29.185	—	5.5	5.8	5.3	—	S, 3-4	—	—	ocq	—	—	—	Faint aurora in S., arch about 80°.
	6	29.241	—	5.8	7.2	7.2	—	S, 7-8	—	—	ocq	—	—	—	
	8	29.283	—	7.0	9.0	8.8	—	SW, 7-8	—	—	oc	—	—	—	
	10	29.269	—	8.0	10.0	9.5	—	S, 5	—	—	oc	—	—	—	Thickness of ice, 15½ inches.
	Noon	29.271	—	9.0	11.0	10.8	—	SSE, 3-4	—	—	oc	—	—	—	
	2	29.249	—	10.0	12.0	11.8	—	S by E, 3-4	—	—	oc	—	—	—	Heavy squalls, of force 8, between noon and 2 p.m.
	4	29.253	—	11.0	13.0	12.0	—	S, 3	—	—	oc	—	—	—	
	6	29.218	—	11.0	13.0	12.0	—	S, 3-4	—	—	oc	—	—	—	
	8	29.206	—	12.5	12.8	12.0	—	E, 2	—	—	oc	—	—	—	
	10	29.143	—	11.2	13.0	12.0	—	ESE, 1	—	—	oc	—	—	—	
	Midt.	29.096	—	12.5	14.8	13.0	—	Calm	—	—	b	—	—	—	
	Mean	29.221	—	—	10.8	10.1	—	—	—	—	—	—	—	—	Dull, overcast day. Wind rose to strong from S, falling again in evening. Barometer rose until noon, then fell quickly. Thermometer rose. Wind during the night drove the ice out of McMurdo Bay from 11ut Point to westward.
		Max. therm. read at { 8 a. 9.0, 8 p. 15.0.					Solar radiation { black bulb —, bright bulb —.			Evapn. — grammes.		Precipn. — in.			

12th.	2	29.111	—	11.2	11.8	11.2	—	SE, 3	—	—	oc	—	—	—	
	4	29.087	—	11.5	12.0	11.8	—	ESE, 3	—	—	oq	—	—	—	
	6	29.083	—	11.0	11.8	11.0	—	ESE, 5-8	—	—	oq *	—	—	—	Thickness of ice to surface of water, 15½ inches.
	8	29.119	—	9.4	10.6	10.2	—	ESE, 1	—	—	o	—	—	—	
	10	29.121	—	10.0	11.8	11.1	—	SE, 1	—	—	o	—	—	—	
	Noon	29.110	—	11.0	12.2	12.0	—	SE, 2	—	—	o	—	—	—	
	2	29.131	—	10.0	10.8	10.0	—	SE, 3	—	—	oc	—	—	—	
	4	29.175	—	8.6	9.0	8.2	—	SE, 2-3	—	—	o *	—	—	—	
	6	29.206	—	5.2	5.2	5.0	—	SE, 3	—	—	bc	—	—	—	
	8	29.215	—	-2.4	0.1	-0.1	—	SE, 4-5	—	—	ocq †	—	—	—	
	10	29.218	—	-3.2	0.0	-0.2	—	SE, 4-6	—	—	bq	—	—	—	
	Midt.	29.185	—	-0.6	5.0	4.9	—	SE, 0-1	—	—	bqm	—	—	—	
	Mean	29.147	—	—	8.4	7.9	—	—	—	—	—	—	—	—	Overcast and cloudy, with some snow. Wind steady in SE, squally in morning, falling in evening. Barometer rose after noon. Thermometer fell towards evening.
		Max. therm. read at { 8 a. 14.9, 8 p. 13.0.					Solar radiation { black bulb —, bright bulb —.			Evapn. — grammes.		Precipn. — in.			

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.			Remarks.		
		Cape Armitage.	Spirit minimum.		Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.		Lower.	Aspirator.
			Dry.	Wet.												
2	29.153	—	3.9	6.5	5.8	—	Calm	—	—	b	—	—	—	—	13th. Exceptionally strong squalls from 2 to 6 a.m., wind veering and backing between S and ESE.  Min. thermometer on ship's rail, -4°0.  9.30, sky cleared.  Min. thermometer on ship's rail, -5°5.  Faint aurora in SE.  Overcast, with heavy snowfall. Wind rose quickly after noon and soon blew a strong gale with heavy squalls from the S. Barometer fell until the wind rose, then rose quickly, whilst the temperature fell.	
4	29.076	—	5.0	7.0	6.5	—	Lt. ESE airs	—	—	o*	—	—	N. 10	—		
6	28.963	—	4.0	14.5	14.5	—	N, 3-5	—	—	ocq	—	—	Cn. 10	—		
8	28.983	—	13.7	16.5	16.0	—	Lt. ENE airs	—	—	o*	—	—	N. 10	—		
10	28.946	—	15.0	19.0	18.0	—	S, 2	—	—	o*	—	—	N. 10	—		
Noon	28.935	—	14.0	14.5	14.2	—	Calm	—	—	o	—	—	N. 10	—		
2	29.072	—	4.0	4.0	4.0	—	SSE, 4-5	—	—	o*†	—	—	N. 10	—		
4	29.185	—	2.8	2.8	2.8	—	S, 8-9	—	—	o*† <sup>2</sup>	—	—	N. 10	—		
6	29.275	—	5.0	2.0	2.0	—	S, 7-8	—	—	o*† <sup>2</sup>	—	—	N. 10	—		
8	29.358	—	3.0	2.0	2.0	—	ESE, 5	—	—	o*†	—	—	N. 10	—		
10	29.372	—	3.0	1.0	1.0	—	ESE, 4-5	—	—	b	—	—	—	—		
Midt.	29.398	—	1.5	1.9	1.8	—	ESE, 6	—	—	b	—	—	—	—		
Mean	29.147	—	—	6.3	6.1	—	—	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. 16°8, 8 p. 19°5.		Solar radiation { black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.										

2	29.390	—	1.2	5.6	5.6	—	Calm	—	—	oc	—	—	Cn. 10	—	14th. Thickness of ice to surface of water, 15½ inches.  Thermographs placed in screens on the ice.  Min. on ship's rail, -4°0.  Cleaned thermometers; renewed unsin on wet bulb. Wet bulb reading higher than dry bulb. Sky clearing.  Min. on ship's rail, -15°5.  Overcast, with snowfall and much drift. Wind rose about noon and soon blew a strong gale from SE. Barometer rose steadily until 8 p.m., then a little unsteady. Thermometer fell as wind rose.
4	29.397	—	0.0	1.8	1.7	—	Calm	—	—	o*	—	—	N. 10	—	
6	29.493	—	1.0	12.0	12.0	—	Calm	—	—	oc	—	—	S. 10	—	
8	29.582	—	11.5	12.1	12.0	—	Lt. NNW airs	—	—	o*	—	—	N. 10	—	
10	29.670	—	7.0	7.6	7.6	—	SSE, 2-3	—	—	o*†	—	—	N. 10	—	
Noon	29.778	—	6.0	5.8	5.8	—	ESE, 4-6	—	—	ocq*† <sup>2</sup>	—	—	Cn.-n. 10	—	
2	29.843	—	8.2	6.0	6.0	—	SE, 5-6	—	—	oq*† <sup>2</sup>	—	—	Cn.-n. 10	—	
4	29.862	—	9.3	6.0	5.8	—	SE, 5	—	—	o*†	Thin S. 10	—	—	—	
6	29.880	—	10.2	9.8	9.8	—	ESE, 4-5	—	—	bm†	—	—	—	—	
8	29.850	—	12.0	12.0	11.8	—	ESE, 7-8	—	—	bqm† <sup>2</sup>	—	—	—	—	
10	29.861	—	15.0	13.0	12.8	—	ESE, 7	—	—	bm† <sup>2</sup>	—	—	—	—	
Midt.	29.858	—	14.0	10.0	10.0	—	ESE, 7	—	—	b†	—	—	—	—	
Mean	29.705	—	—	2.0	1.9	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. —, 8 p. 12°5.		Solar radiation { black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. { 8 a. 0°30 in. 8 p. 0°20 in.									

2	29.836	—	7.2	5.0	5.0	—	ESE, 5-6	—	—	b	—	—	—	—	15th. Thickness of ice to surface of water, 15½ inches.  Min. on ship's rail, -14°5.  Min. on ship's rail, -18°6. Curtain of aurora stretching from WSW to ENE. Long faint streamers of aurora from SW to zenith.  Overcast. Wind calm in the morning, but rose to strong from SE with squalls. Sky cleared in evening. Barometer fell a little, then rose quickly. Thermometer low and unsteady.
4	29.794	—	11.0	0.3	0.0	—	SE, 1	—	—	o	—	—	S. 10	—	
6	29.797	—	4.2	1.5	1.5	—	SE, 1	—	—	oc	—	—	Cn. 10, S	—	
8	29.829	—	2.9	1.0	0.9	—	Calm	—	—	o	—	—	S. 10	—	
10	29.848	—	3.5	3.0	2.8	—	Calm	—	—	o	—	—	S. 10	—	
Noon	29.884	—	8.0	7.8	7.4	—	SE, 2	—	—	o	—	—	S. 10	—	
2	29.957	—	10.0	10.0	10.0	—	SE, 3-4	—	—	of	—	—	S. 10	—	
4	30.019	—	10.6	10.6	10.5	—	SE, 4	—	—	o	—	—	S. 10	—	
6	30.055	—	18.5	10.5	10.5	—	SE, 4-5	—	—	ocq†	—	—	Thin S. 10	—	
8	30.067	—	12.0	8.0	8.0	—	SE by E, 5-6	—	—	bq†	—	—	—	—	
10	30.081	—	9.8	8.2	8.0	—	ESE, 5	—	—	bm†	—	—	—	—	
Midt.	30.073	—	10.5	1.9	2.1	—	S, 4	—	—	bn	—	—	—	—	
Mean	29.937	—	—	5.4	5.4	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. 1°0, 8 p. -2°0.		Solar radiation { black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.									

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.								Unscreened.		
16th.	2	30.046	-7.6	-5.8	-6.2	-	S by E, 5-6	-	-	oc †	-	-	Cu. 10	-	
	4	30.004	-8.0	-0.8	-0.6	-	S, 3-5	-	-	oq	-	-	S. 10	-	
	6	29.997	-5.0	-4.0	-4.0	-	SSE, 3-7	-	-	ocq	-	-	Cu. 10	-	
	8	29.997	-4.9	-3.5	-3.7	-	SSE, 2-5	-	-	ocq	-	-	Cu. 10	-	
	10	29.961	-5.2	-4.0	-4.1	-	SSE, 3-6	-	15-20	oq	-	-	S. 10	-	Min. on ship's rail, -11° 0'. Snow surface min., -11° 2'. Thickness of ice to surface of water, 15½ inches.
	Noon	29.921	-4.8	-1.1	-1.5	-	S, 2-5	12	15-20	oq †	-	-	S. 10	-	
	2	29.897	-2.0	-1.0	-1.1	-	SE, 2-5	10	15	oq *	-	-	N. 10	-	
	4	29.849	-2.0	0.0	-0.1	-	ESE, 2-3	15	15-20	o	-	-	N. 10	-	Min. thermometer (M. 0.45, H. 0.10) taken to high-level station, 960 feet up.
	6	29.823	-1.0	0.6	0.2	-	S, 2-3	10	10-15	op *	-	-	N. 10	-	
	8	29.768	-2.0	-1.0	-1.1	-	SE by E, 3	-	-	o *	-	-	N. 10	-	Min. on ship's rail, -5° 0'.
	10	29.745	-2.0	-1.0	-1.1	-	S, 3	-	-	om	-	-	N. 10	-	
	Midd.	29.697	-2.1	-2.0	-2.1	-	S, 3	-	-	bmp *	-	-	-	-	
	Mean	29.892	-	-2.0	-2.1	-	-	-	-	-	-	-	-	-	Overcast. Wind variable from E to SE and S; squally, with passing showers of snow. Barometer fell steadily all day. Thermometer low and steady.
		Max. therm. read at { 8 a. —, 8 p. 1° 0.		Solar radiation { black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.							

17th.	2	29.618	-5.0	-2.5	-2.9	-	SSE, 3	-	-	oc	-	-	Cu. 10	-	
	4	29.597	-3.0	0.0	-0.2	-	SE, 3-4	-	-	b	-	-	-	-	Faint light over Mt. Erebus.
	6	No observations taken.													
	8	29.562	-1.5	0.0	-0.5	-	Lt. SE airs	-	-	b	-	Ci.-a, 1	-	-	
	10	29.517	-2.0	-0.1	-0.3	-	Lt. NE airs	-	5	bc	-	Cl. 3, SW	-	-	Min. on ship's rail, -5° 0'. Temp. on snow, -9° 0'. Commenced using thermometers in screen on the ice.
	Noon	29.541	-1.0	0.0	-0.2	-	Calm	3	0	b	-	-	-	-	
	2	29.507	0.0	2.8	2.5	-	NNE, 1	7	5	oc	-	-	S.-cu. 10, NE	-	
	4	29.503	3.0	4.8	4.2	-	SE, 2	6	10	oc	-	-	S.-cu. 10, NE	-	4.30 p.m. Min. at high-level station for 24 hours, -15° 0'.
	6	29.509	2.8	5.0	4.8	-	E, 1-2	9	10	o	-	-	S. 10	-	
	8	29.493	-5.0	5.0	4.2	-	ESE, 1-2	12	10-15	o	-	-	S. 10	-	Clear in morning, but clouded over about 1 p.m. and remained overcast for the rest of the day. Winds light and variable. Barometer unsteady, but inclined to rise at night. Thermometer rose a little. Up to this date the thermometers had been exposed in the screen on board the "Discovery." The after awning was spread on April 5th, and subsequently the minimum temperature was observed on the ship's rail and compared with the minima from the screen. A screen was now erected on the ice 120 yards from the ship, and from noon of this day the observations of air temperature were obtained from thermometers exposed in it.
	10	29.493	-0.2	2.2	2.0	-	ESE, 2	10	10-15	o	-	-	S. 10	-	
	Midd.	29.503	-5.1	-1.0	-1.0	-	SE, 2	10	15	o	-	-	S. 10	-	
	Mean	29.532	-	1.5	1.1	-	-	-	-	-	-	-	-	-	
		Max. therm. read at { 8 a. 2° 0, 8 p. 6° 2.		Solar radiation { black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.							

18th.	2	29.513	-1.2	-1.1	-1.1	-	SE, 3	8	15-20	o	-	-	S. 10	-	
	4	29.513	-1.0	4.0	3.8	-	SE, 2-3	8	10	o	-	-	S. 10	-	
	6	29.544	-1.8	6.5	6.0	-	E, 1-2	8	10	o	-	-	S. 10	-	
	8	29.571	-4.0	-3.1	-4.0	-	ESE, 2	8	15-20	o	-	-	S. 10	-	
	10	29.578	-4.0	2.0	2.0	-	SE, 2-3	11	10-15	oc	-	-	S.-cu. 10, NE	-	Min. on ship's rail, -4° 0'.
	Noon	29.593	-3.5	2.2	2.0	-	E, 2-3	5	10-15	oc	-	-	Fr.-s. 10	-	
	2	29.599	-6.8	-3.9	-4.0	-	SE, 2-3	11	10-15	oc	-	-	Fr.-s. 10	-	
	4	29.605	-6.0	-3.8	-4.0	-	SE, 2	8	10-15	o	-	-	S. 10	-	Min. at high-level station for 24 hours, -12° 0'. Temp. at 4 p.m., -11° 0'.
	6	29.587	-5.0	-3.2	-3.3	-	E by S, 2	9	13	o	-	-	S. 10	-	
	8	29.556	-7.0	-6.0	-6.0	-	SE, 3-4	12	15	o *	-	-	N. 10	-	
	10	29.559	-7.0	-3.0	-3.0	-	NE, 2-3	11	15-17	o *	-	-	N. 10	-	Min. on ship's rail, -6° 0'.
	Midd.	29.572	-4.0	-2.8	-2.8	-	NE, 2-3	14	22	o * †	-	-	N. 10	-	
	Mean	29.596	-	-1.0	-1.2	-	-	-	-	-	-	-	-	-	Overcast all day, turning to snow in evening. Wind steady. Barometer rose until 4 p.m. then fell a little. Thermometer unsteady and low, temperature rising and falling to a great extent, as shown by thermograph curve.
		Max. therm. read at { 8 a. 7° 3, 8 p. 6° 0.		Solar radiation { black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.							

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.561	—	-4.0	-2.5	-2.5	—	SE, 3-5	22	10-25	ocq	+	—	N. 10	—	Slight aurora streamer in SW, arc 10°, alt. 70°. <b>19th.</b>  Min. on ship's rail, -4° 0.  Min. at high-level station for 24 hours, -15° 0. Temp. at 4 p.m. -13° 0.  Min. on ship's rail, -6° 5.  Overcast all day. Wind squally from NE; max. run for 2 hours, 56 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer rose all day, inclined to fall at midnight. Thermometer low and pretty steady. More of the ice was blown out of the bay.
4	29.591	—	-5.0	-3.5	-3.2	—	ENE, 6	15	20-25	b	W	—	—	—	
6	29.598	—	-3.5	-2.5	-2.5	—	ENE, 7-8	23	20-25	oc	+	+	S. 10	—	
8	29.683	—	-4.0	-2.0	-2.0	—	NE, 6	26	20-27	oc	+	—	S. 10	—	
10	29.707	—	-3.0	-1.2	-1.6	—	NE, 3-4	21	20-25	oc	+	—	Fr.-n. 10, NE	—	
Noon	29.749	—	-4.0	-3.2	-3.6	—	NE, 4	23	25-30	oc	+	—	Fr.-s. 10, NE	—	
2	29.763	—	-6.0	-5.2	-5.2	—	NE, 4	24	25-30	o	+	—	Fr.-s. 10, NE	—	
4	29.783	—	-6.0	-5.2	-5.4	—	NE, 4-6	25	25-35	o	+	—	Fr.-s. 10	—	
6	29.797	—	-6.0	-5.0	-5.2	—	NE, 5-6	24	25-30	o	+	—	S. 10	—	
8	29.825	—	-7.5	-6.0	-6.0	—	ENE, 5	28	25-30	o	+	—	S.-n. 10	—	
10	29.828	—	-7.0	-7.0	-7.0	—	NE, 5-4	20	22-25	o	+	—	S.-n. 10	—	
Midt.	29.821	—	-8.0	-5.4	-6.0	—	E by N, 3-4	16	10-15	o	—	—	S.-n. 10	—	
Mean	29.726	—	—	-4.1	-4.2	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 0° 1.		8 p. -1° 2.		Solar radiation		black bulb —		bright bulb —		Evapn. — grammes.		Precipn. 0.01 in.	

2	29.806	—	-8.2	-6.5	-6.8	—	E by S, 4	20	15-20	o	—	—	S.-n. 10	—	<b>20th.</b>  New ice forming on open water.  Sky clearing low in NW.  Sky clear. 9.30 thin strata and scud moving fast from NW.  Overcast and cloudy all day, but clearing for a short time in evening. Wind variable and light; max. run by cup anemometer for 2 hours, 39 miles; max. rate observed by pressure tube, 20 miles per hour. Barometer fell all day, inclined to rise at midnight. Thermometer rose. Young ice forming on open water in bay.
4	29.804	—	-7.2	-4.3	-4.4	—	ESE, 2	9	10	o	—	—	S.-n. 10	—	
6	29.810	—	-6.0	-1.0	-1.2	—	E, 1	4	5	o	—	—	Cu. 10	—	
8	29.770	—	-4.2	0.1	0.1	—	S, 1	4	0-5	oc	*	—	S. 10	—	
10	29.751	—	-3.2	-1.6	-1.8	—	Calm	5	0	o	—	—	S. 10	—	
Noon	29.727	—	-2.6	5.2	5.0	—	NNW, 2-3	5	10-20	oq	—	—	S. 10	—	
2	29.693	—	3.0	4.2	4.0	—	NW, 1-2	11	0-5	oc	—	—	S.-cu. 10, NW	—	
4	29.675	—	3.8	5.4	5.1	—	NW, 2-3	11	10-20	oc	—	—	S.-cu. 10, N	—	
6	29.654	—	5.0	5.8	5.5	—	NW, 2	9	0-10	oc	—	—	S.-cu. 10, N (fast)	—	
8	29.635	—	2.2	6.0	5.5	—	Lt. N airs	5	0-5	oc	—	—	Cu. 10, NW (fast)	—	
10	29.623	—	3.2	6.0	5.8	—	Lt. WNW airs	5	0-2	bc	—	—	S.-cu. 7, NW (fast)	—	
Midt.	29.627	—	-0.6	0.0	0.0	—	NE, 2-3	11	15-20	oc	—	—	S.-cu. 10	—	
Mean	29.715	—	—	1.6	1.4	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 0° 2.		8 p. 6° 0.		Solar radiation		black bulb —		bright bulb —		Evapn. — grammes.		Precipn. 0.001 in.	

2	29.638	—	-8.5	-7.8	-7.6	—	E, 6	17	20-25	oc	—	—	S.-cu. 10	—	<b>21st.</b>  Clear sky low in SE and E.  Thermometer on ship's rail, -11° 0.  Thickness of ice near screens, 2 feet 1½ inches.  Sky clearing; scud passing rapidly.  Overcast nearly all day, clearing for a short time at 6 p.m. Wind ENE, strong all day; max. run of cups for 2 hours, 53 miles; max. observed by pressure tube, 33 miles per hour. Barometer rising steadily all day. Thermometer low, and fell as wind increased. Young ice all blown out of the bay.
4	29.645	—	-11.0	-10.0	-10.0	—	NE, 6-7	20	20-25	ocq	—	—	S.-cu. 10	—	
6	29.642	—	-11.4	-8.9	-8.3	—	NE, 5	15	15-20	oc	—	—	Fr.-s. 8	—	
8	29.660	—	-12.0	-10.0	-10.0	—	NE, 5-4	20	10-20	o	—	—	Fr.-s. 10	—	
10	29.703	—	-12.0	-11.2	-11.0	—	ENE, 3-4	9	15-20	o	—	—	S. 10	—	
Noon	29.737	—	-12.2	-11.2	-11.0	—	E by S, 3-4	11	18-25	o	*	—	N. 10	—	
2	29.749	—	-13.0	-13.0	-12.6	—	E by S, 4	16	20-27	o	*	+	N. 10	—	
4	29.789	—	-15.0	-14.5	-14.8	—	E by N, 3-4	22	20-25	oc	—	—	Fr.-s. 9, ENE (fast)	—	
6	29.817	—	-18.0	-18.0	-18.0	—	ENE, 4-5	24	25-30	bc	—	—	Cu. 7, ENE (fast)	—	
8	29.843	—	-19.8	-18.0	-18.0	—	ENE, 5-6	27	27-33	o	—	—	S. 10	—	
10	29.859	—	-18.8	-16.5	-16.6	—	ENE, 6-7	21	25-33	o	—	—	S. 10	—	
Midt.	29.878	—	-17.5	-17.0	-17.0	—	E by N, 6	27	23-27	o	—	—	S. 10	—	
Mean	29.747	—	—	-13.0	-12.9	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 6° 0.		8 p. -11° 0.		Solar radiation		black bulb —		bright bulb —		Evapn. — grammes.		Precipn. — in.	

1902—April.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

22nd.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.										Unscreened.
2	29.862	—	-18.8	-18.5	-18.6	—	ENE, 6	24	20-25	bc	—	S.-cu. 6, NE	—		
4	29.907	—	-19.9	-17.8	-17.5	—	ENE, 6-7	20	28	b	—	—	—		
6	29.972	—	-22.5	-20.0	-19.9	—	ENE, 6-8	24	25-30	b	—	—	—		
8	29.954	—	-23.0	-18.1	-18.0	—	ENE, 2-3	15	15-20	c	—	Cl., NE	Fr.-s.-cu.	—	Western range clearly visible, with much fresh snow fallen. Blue sky all round horizon, E, S and W, to 30°.
10	29.900	—	-20.0	-17.0	-16.8	—	NE, 4-6	28	25-30	oq	—	—	S. 10	—	10 a.m. Min. on ship's rail, -23° 0.
Noon	29.895	—	-21.5	-19.8	-19.2	—	NE, 5	27	28-32	o	—	—	S. 10	—	
2	29.901	—	-21.0	-18.1	-18.0	—	ENE, 4-5	24	20-25	b	—	—	—	—	Wet bulb has been showing a higher temperature than the dry bulb, although wet bulb is coated with ice.
4	29.897	—	-25.0	-24.1	-23.8	—	ENE, 5	23	25-30	b	—	—	—	—	
6	29.903	—	-25.6	-23.5	-23.2	—	E by N, 4-5	23	15-25	b	—	—	—	—	
8	29.905	—	-24.8	-21.2	-21.0	—	ENE, 3	17	15-20	bc	—	Cl. 2, SE (mod.)	—	—	
10	29.891	—	-21.5	-23.8	-23.2	—	E by N, 3	20	22-24	bc	—	Cl.-s. 3, SE (slow)	S.-cu. 4, E (mod.)	—	Min. on ship's rail, -24° 5.
Midt.	29.891	—	-25.1	-21.0	-20.8	—	NE, 4	15	18-24	bcq	—	—	Fr.-cu. 2, N	—	
Mean	29.909	—	—	-20.2	-20.0	—	—	—	—	—	—	—	—	—	Fine day; cloudy at intervals. Wind strong from NE; max. run of cups for 2 hours, 56 miles; max. rate observed by pressure tube, 32 miles per hour. Barometer steady after 10 a.m. Thermometer low and steady all day.
Max. therm. read at		8 a. -15° 6.		8 p. -15° 8.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

23rd.

2	29.889	—	-22.0	-21.0	-20.2	—	E by S, 3	22	16-18	bc (J)	—	Fr.-cl.-s	—	—	
4	29.890	—	-23.5	-18.0	-17.5	—	E by N, 5	17	20-25	oc	—	—	Cu. 10, E	—	
6	29.875	—	-22.8	-21.0	-21.0	—	NE, 4	17	22-24	og	—	—	S. 10	—	
8	29.881	—	-24.5	-24.0	-23.0	—	NE, 3-4	22	20-25	oc	—	Cl.-s. 7	S. 3	—	
10	29.879	—	-25.0	-17.5	-17.5	—	NE, 2-3	14	10	bc	—	Cl.-s. 6, SE	—	—	Min. on ship's rail, -24° 5.
Noon	29.863	—	-31.5	-31.1	-30.5	—	ESE, 3-4	15	20-25	bc	—	Cl. 1, SE	—	—	Moon shows an irregular, flattened, oval shape from excessive mirage.
2	29.854	—	-31.6	-19.0	-19.0	—	ENE, 2-3	12	10-15	bc (J)	—	Cl.-s. 5, NE	Fr.-s. 2, SE	—	
4	29.842	—	-24.0	-22.5	-22.0	—	NE, 3	16	15-20	bc	—	Cl.-s. 6, N	—	—	Min. at high-level station for 96 hours, -32° 1. Temp. at 4 p.m. -30° 0. Cl.-s. radiating N.
6	29.823	—	-23.8	-23.0	-22.8	—	NE, 4-5	20	25-30	bc	—	Cl.-s. 5, N	—	—	
8	29.810	—	-25.1	-24.3	-24.1	—	NE, 5	24	25-30	bc	—	Cl.-s. 0, NE	—	—	
10	29.804	—	-24.6	-24.2	-24.0	—	NE, 5	23	20-25	bc	—	Cl.-s. 6, N	—	—	
Midt.	29.789	—	-25.2	-24.2	-23.8	—	ENE, 4	18	18-24	cv	—	High S. 8 (Dir.?)	—	—	Fine clear weather. Cloud direction not discernible.
Mean	29.850	—	—	-22.5	-22.1	—	—	—	—	—	—	—	—	—	Fine day. Fresh NE breeze; max. run of cups for 2 hours, 48 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer falling slightly all day. Thermometer lower and steady.
Max. therm. read at		8 a. -16° 0.		8 p. -16° 0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

24th.

2	29.764	—	-26.1	-25.0	-24.1	—	ENE, 6	29	26-31	cv	—	—	High S. 7	—	Unable to tell cloud direction. Moon has watery appearance.
4	29.759	—	-25.0	-24.2	-24.0	—	NE by E, 4	23	22-24	bem	—	Cl.-s. 2	High S. 2	—	
6	29.743	—	-26.0	-25.0	-24.5	—	NE, 4	20	22-23	bc	—	Cl. 1	High S. 2	—	
8	29.730	—	-26.0	-24.2	-24.0	—	NE, 5	22	25-30	b	—	—	—	—	
10	29.683	—	-25.2	-23.0	-23.2	—	ENE, 4-5	9	15-22	b	—	—	—	—	Min. on ship's rail, -25° 0.
Noon	29.668	—	-25.8	-23.0	-22.8	—	ENE, 3-5	17	15-20	b	—	—	—	—	
2	29.649	—	-25.6	-23.0	-22.5	—	NE, 3-4	18	20-25	bc	—	Cl. 2, NW	Loose Cu. 1/2, NE	—	Cl. radiating NW and SE.
4	29.614	—	-23.9	-21.0	-21.0	—	NE, 4	13	10-25	bcq *	—	Cl. 8, NW	Fr.-u. 1, NE	—	
6	29.601	—	-23.2	-22.0	-21.5	—	NE, 4	24	15-25	oq *	—	—	S. 10	—	From 2 p.m. to midt. very fine snow falling.
8	29.575	—	-25.2	-24.2	-24.0	—	NE, 5-6	21	15-25	oq *	—	—	S. 10	—	
10	29.570	—	-25.0	-23.8	-23.5	—	NE, 4	20	22-28	oc †	—	Cl.-s. 4	S. 6	—	Min. on ship's rail, -23° 0.
Midt.	29.596	—	-25.9	-22.8	-22.8	—	NE, 4	17	22-25	oq *	—	—	S. 10	—	Indications of strong aurora glow through clouds in N notwithstanding bright moonlight.
Mean	29.663	—	—	-23.4	-23.2	—	—	—	—	—	—	—	—	—	Fine day, clouding over at 4 p.m., with very slight snowfall. Strong NE wind; max. run of cups for 2 hours, 57 miles; max. rate observed by pressure tube, 31 miles per hour. Barometer falling. Thermometer steady. Clouds of frost smoke rising from the open water.
Max. therm. read at		8 a. -22° 3.		8 p. -20° 0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.576	—	-23.9	-21.0	-21.0	—	NE, 3-4	14	10-15	o*	—	S-n, 10	—	25th. Very light snow falling. Mln. on ship's rail, -25° 0. Mln. at high-level station for 48 hours, -30° 1. Temp. at 4 p.m., -29° 8. Fine, clear evening. Western hills very clear. Winter awning spread over ship. Fine day after noon. Hardly any wind until 10 p.m., when breeze from NW sprang up; max. run for 2 hours, 28 miles; max. rate observed by pressure tube, 20 miles per hour. Barometer falling steadily all day. Thermometer low, but rose quickly as wind sprang up. Open water frozen over.
4	29.510	—	-21.9	-19.1	-19.1	—	NE, 2-3	10	5-10	o	—	N, 10	—	
6	29.492	—	-19.8	-18.7	-18.7	—	E by N, 1-5	6	0-5	o	—	N, 10	—	
8	29.474	—	-20.2	-17.2	-17.2	—	Lt. NE airs	6	0-5	oc*	—	N, 10	—	
10	29.473	—	-28.5	-27.4	-27.2	—	Calm	2	0	oc	High S. 7	Fr.-a., 5	—	
Noon	29.449	—	-28.0	-23.2	-23.0	—	Calm	1	0	oc	Cl.-s, 8	—	—	
2	29.427	—	-26.6	-25.5	-25.0	—	Calm	1	0	ocm	—	Low S., 10.	—	
4	29.409	—	-27.6	-25.0	-24.9	—	Calm	1	0	bv	—	—	—	
6	29.381	—	-26.8	-26.2	-26.0	—	Calm	1	0	b	—	—	—	
8	29.372	—	-28.0	-27.5	-27.0	—	Calm	1	0	b	—	—	—	
10	29.335	—	-28.0	-15.6	-15.4	—	NNW, 1-2	4	0-5	b	—	—	—	
Midt.	29.294	—	-16.8	-15.2	-15.8	—	NW, 2-4	9	10-20	bc	Cl. 3, NW	—	—	
Mean	29.433	—	—	-21.8	-21.7	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -16° 5. / 8 p. -16° 8. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn., not measurable.

2	29.279	—	-16.6	-15.0	-15.0	—	NW by N, 2-4	11	15-20	bc	Cl.-a. 4, NW	—	—	26th. Moon misty. Hills very clear. Ci. radiating NW and SE. Low bank of high S. from N to SE horizon. Fresh NW breeze all day, with clear sky; max. run of cups for 2 hours, 30 miles; max. rate observed by pressure tube, 25 miles. Barometer fell steadily all day. Thermometer rose and remained higher all day.
4	29.227	—	-16.2	-14.1	-14.1	—	N by W, 2-5	12	14-18	bcq	Cl. 3, NW	—	—	
6	29.204	—	-15.0	-12.8	-12.8	—	N by W, 1-5	13	5-23	bcq	Cl.-s. 8, N by W	—	—	
8	29.247	—	-13.8	-11.0	-11.2	—	NNW, 2-3	15	15-25	bcq	Cl. 8	—	—	
10	29.233	—	-12.0	-8.8	-8.8	—	NNW, 2-3	14	10-15	b	—	—	—	
Noon	29.206	—	-9.6	-7.0	-7.2	—	NW, 3	12	10-17	b	—	—	—	
2	29.190	—	-9.8	-9.0	-9.0	—	N, 3-4	11	15-20	b	—	—	—	
4	29.174	—	-10.0	-6.0	-6.0	—	NW, 2-3	12	10-22	b	—	—	—	
6	29.159	—	-7.0	-6.2	-6.3	—	NNW, 2-3	11	10-15	b	—	—	—	
8	29.158	—	-9.0	-8.2	-8.2	—	NW, 2-3	12	15-20	h	—	—	—	
10	29.150	—	-10.5	-9.2	-9.2	—	NW, 2-3	12	5-12	bc	Cl. 2	—	—	
Midt.	29.151	—	-10.6	-10.0	-10.0	—	NW by N, 2-3	10	5-14	bc	Cl. 2	—	—	
Mean	29.198	—	—	-9.8	-9.8	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. — / 8 p. -4° 0. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. — ln.

2	29.176	—	-11.0	-10.0	-10.0	—	NW, 2-3	8	5-15	bc	Cl. 2	—	—	27th. Ci. radiating NW and SE at 8 a.m. Direction of smoke from Mt. Erebus, WNW. Mln. at high-level station for 48 hours, -30° 8. Temp. at 4 p.m., -21° 2. Ci. radiating NW and SE. ☐, 45° 0 diameter, outer rings not all complete. 11.30, remarkable Cl.-a. cloud in NE horizon, running NW and SE. Midt. Same cloud, only smaller. Slight aurora. Fine, clear day with hardly any wind; max. run of cups for 2 hours, 31 miles; max. rate observed by pressure tube, 28 miles per hour. Barometer rose steadily all day. Thermometer low and steady.
4	29.175	—	-18.0	-17.6	-17.6	—	Calm	3	0	bc	Cl. 1	—	—	
6	29.229	—	-20.0	-17.5	-17.2	—	Calm	2	0	bc	Cl. 1	—	—	
8	29.292	—	-18.8	-15.0	-16.0	—	Lt. NE airs	0	0-5	bc	Cl. 4	—	—	
10	29.305	—	-19.0	-18.0	-18.0	—	Lt. E airs	4	0-5	b	—	—	—	
Noon	29.343	—	-20.8	-14.8	-14.8	—	E, 4	13	20-28	b	High S., thin	—	—	
2	29.389	—	-18.0	-14.8	-14.8	—	Lt. var. N airs	16	0-10	b	High S., thin	—	—	
4	29.433	—	-17.5	-14.0	-14.0	—	Lt. N airs	7	0-5	b	High S., thin	—	—	
6	29.445	—	-17.0	-12.0	-12.0	—	Lt. N airs	2	0-2	b	—	—	—	
8	29.473	—	-25.5	-24.0	-24.0	—	Calm	2	0	b	—	—	—	
10	29.499	—	-24.8	-17.2	-17.2	—	Calm	0	0	bc	Cl.-s. 2	—	—	
Midt.	29.486	—	-22.0	-17.0	-17.0	—	E, 1-2	7	0	bcq	Cl.-s. 5	—	—	
Mean	29.354	—	—	-16.0	-16.1	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -8° 2. / 8 p. -11° 0. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. — ln.

1902—April.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

28th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Dry.	Wet.											
2	29.483	—	-20.5	-16.5	-16.5	—	NE by N, 1-3	4	5-10	bcq		Cl.-s. 5	—	—	
4	29.468	—	-19.8	-16.2	-16.0	—	NNE, 3	9	10	bc		Cl.-s. 4	—	—	
6	29.450	—	-21.5	-17.5	-17.0	—	N, 2	2	15	b		—	—	—	
8	29.430	—	-20.3	-15.5	-15.3	—	Calm	12	0	b		—	—	—	
10	29.412	—	-17.5	-11.2	-11.0	—	Lt. N airs	5	0-2	b		—	—	Low mirage all along foot of land to S and SW.	
Noon	29.395	—	-19.0	-19.0	-18.5	—	Calm	4	0	b		—	—	—	
2	29.357	—	-22.5	-21.0	-21.0	—	Calm	0	0	b		—	—	3 p.m. Removed muslin from wet bulb and used a wet paint brush to coat bulb with ice.	
4	29.327	—	-23.0	-18.8	-18.2	—	Calm	1	0	b		—	—	4 p.m. Cl.-s. low down, moving across face of moon in S fast to E. Clouds gathering in NW, W, and SW. Hills completely obscured.	
6	29.309	—	-19.0	-17.0	-16.5	—	Lt. NE airs	3	0-2	b		—	—	6 p.m. Heavy clouds from S to NW horizons, moving apparently E.	
8	29.291	—	-19.0	-17.2	-17.0	—	E by S, 1-2	9	5-7	oc		High S. 10, SE	—	—	
10	29.292	—	-19.0	-17.2	-17.0	—	E by S, 2	9	10-12	o		—	S. 10	—	
Mldt.	29.294	—	-18.0	-17.0	-17.0	—	E, 2	8	12	bc U +		Thin high S. 8, E	Thin low S. 8	—	
Mean	29.376	—	—	-17.0	-16.8	—	—	—	—	—		—	—	—	
Max. therm. read at		8 a. -15° 2.		8 p. -11° 0.		Solar radiation		black bulb	—	Evapn.	—	grammes.	Precipn.	—	in.

45° 31' diameter. Fine drift or falling snow. Peculiar frost rime on everything. 4 p.m. High level station, min. for 24 hours, -31° 2. Temp. at 4 p.m., -22° 8. Smoke of Erebus going SE in very long streamers. Fine clear day with hardly any wind; max. run of cups for 2 hours, 23 miles; max. rate observed by pressure tube, 15 miles per hour. Barometer fell steadily all day. Thermometer steady.

29th.

2	29.297	—	-25.2	-20.5	-20.2	—	E, 3	14	22	bc U		Thin S. 8	Thin S. 6	—	U, 48° diameter.
4	29.303	—	-21.0	-19.0	-18.6	—	E, 3-4	18	10-15	bc		Cl.-s. 7, N	—	—	U, prismatic colours. Cl.-s. radiating NW and SE, very distinct and marked.
6	29.307	—	-20.5	-19.0	-19.0	—	E by N, 3-4	20	15-20	bc +		Cl.-s. 6, SE	—	—	Cl.-s. in broad bands, radiating NW and SE, moving fast from SE.
8	29.314	—	-21.5	-19.8	-19.2	—	E, 4-5	23	15-25	ocq + <sup>o</sup>		—	S. 10	—	—
10	29.332	—	-20.0	-17.0	-17.0	—	E, 4	17	15-20	bc +		Cl.-s. 7	Thin S. 10	—	—
Noon	29.339	—	-20.2	-17.0	-17.0	—	E, 4	15	15-22	bc		Cl.-s. 6, SE	—	—	—
2	29.346	—	-23.2	-22.0	-21.8	—	E, 3-4	13	15-22	oc		High S. 8	Thin S. 10	—	—
4	29.357	—	-23.0	-18.0	-17.8	—	E, 3-4	19	18-22	bcm		Cl.-s. 3	—	—	Moon very misty, and elongated by strong mirage in S.
6	29.367	—	-18.5	-14.5	-14.3	—	E, 2	12	10-15	bc		Cl.-s. 2	—	—	Moon misty, and nearly obscured by clouds in the SSE horizon, about 30°.
8	29.374	—	-16.5	-14.5	-14.2	—	ESE, 2	14	10-12	bc		Cl.-s. 5	—	—	—
10	29.355	—	-19.1	-18.8	-18.4	—	SE, 3-4	11	20-25	ocq * <sup>o</sup>		—	N. 10	—	No moon visible.
Mldt.	29.319	—	-23.0	-20.0	-20.0	—	E by N, 4	26	25	om		—	S. 10	—	—
Mean	29.334	—	—	-18.3	-18.1	—	—	—	—	—		—	—	—	—
Max. therm. read at		8 a. -14° 8.		8 p. -13° 5.		Solar radiation		black bulb	—	Evapn.	—	grammes.	Precipn.	—	in.

Fine, with a good deal of cirro-stratus. Strong Ely breeze; max. run of cups for 2 hours, 51 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer rose steadily, then fell suddenly at 10 p.m. Thermometer unsteady.

30th.

2	29.312	—	-23.8	-20.6	-21.0	—	E, 4	9	15	o		Cl.-s. 10	—	—	—
4	29.312	—	-21.0	-20.5	-20.0	—	E by N, 3	9	15	oc U		A.-s. 10	—	—	—
6	29.344	—	-22.5	-19.5	-18.5	—	E, 6	32	23	ocq +		A.-s. 10	—	—	A little drifting snow.
8	29.339	—	-26.0	-25.0	-24.5	—	E, 6	23	15-25	ocq + <sup>a</sup>		—	S. 10	—	—
10	29.335	—	-25.0	-23.0	-22.8	—	E, 5	27	20-24	o +		A.-s. 10	—	—	—
Noon	29.329	—	-24.0	-24.0	-23.8	—	E by N, 4	20	20-25	o +		Cl.-s. 10	—	—	—
2	29.318	—	-25.0	-25.0	-25.0	—	ENE, 4-6	22	25-30	ocq +		Cl.-s. 10	—	—	Cl.-s. radiating N.
4	29.310	—	-26.5	-25.0	-25.0	—	ENE, 4	24	23	bc		Cl.-s. 5	—	—	Cl.-s. radiating N.
6	29.317	—	-26.0	-24.0	-24.0	—	E, 3-4	19	15-20	bc		Cl.-s. 5	—	—	Moon very watery.
8	29.295	—	-25.0	-24.2	-24.0	—	NE, 4-5	22	15-20	bc		Cl.-s. 8	—	—	—
10	29.293	—	-25.2	-23.0	-22.5	—	NE, 4	19	15-22	bc U		Cl.-s. 6	—	—	Moon very misty.
Mldt.	29.261	—	-24.5	-23.0	-22.0	—	ENE, 4-5	17	15-25	bcm		Cl.-s. 3	—	—	Moon very watery.
Mean	29.314	—	—	-23.1	-22.8	—	—	—	—	—		—	—	—	—
Max. therm. read at		8 a. -14° 0.		8 p. -14° 0.		Solar radiation		black bulb	—	Evapn.	—	grammes.	Precipn.	—	in.

Wind remained strong from E, with overcast and cloudy sky all day; max. run of cups for 2 hours, 63 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer inclined to fall in evening. Thermometer lower and steady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.265	—	-25.0	-19.0	-18.6	—	E, 4	17	15-18	ocq ↗	—	S. 10	—	Wind gusty; slight snow drift.
4	29.255	—	-21.0	-15.5	-15.0	—	E NE, 3-4	15	10-15	ocq	—	S. 10	—	
6	29.258	—	—	-17.2	—	—	E by S, 4-5	15	15-25	ocq ↗	—	S. 10	—	
8	29.253	—	-16.6	-16.0	-15.6	—	E by S, 5-6	23	25-30	ocq ↗	—	S. 10	—	Moon's position only just visible through mist.
10	29.249	—	-18.0	-17.0	-16.8	—	E by S, 2	13	10-22	oc	—	S. 10	—	
Noon	29.233	—	-18.8	-18.8	-18.5	—	E, 2-3	11	15-22	o ↗	—	S. 10	—	
2	29.190	—	-19.8	-15.0	-14.5	—	E NE, 3-4	21	15-22	o	Cl.-s. 10	—	—	Clearer to SW.
4	29.166	—	-15.5	-10.5	-10.2	—	E, 2-3	15	15	o	Cl.-s. 10	—	—	Clearing in S and SW. Land visible.
6	29.153	—	-11.0	-11.0	-11.0	—	E, 1-2	8	10-12	bcm	Cl.-s. 5	—	—	
8	29.147	—	-11.5	-9.0	-9.0	—	E, 1-2	9	10-12	bc	Cl.-s. 3	—	—	
10	29.143	—	-9.0	-9.0	-8.5	—	E, 1-2	12	10-12	b	—	—	—	
Midt.	29.149	—	-15.0	-14.8	-14.8	—	NE, 4-5	15	20-25	b	Cl.-s. 2	—	—	Mist over sky, through which the moon and stars were visible.
Mean	29.206	—	—	-14.4	—	—	—	—	—	—	—	—	—	Overcast all the early part of day. Clearing in the evening, but thin mist over the whole sky. Wind E by S; squally early, but falling in evening; max. run of cups for 2 hours, 45 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer falling steadily all day. Thermometer low and unsteady.
Max. therm. read at		{ 8 a. -14° 9. 8 p. -8° 5.		Solar radiation		{ black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.				

1st.

2	29.161	—	-15.9	-9.9	-9.9	—	E by N, 4	14	15-20	b	—	—	—	Misty ☐, rather faint.
4	29.150	—	-13.8	-10.0	-10.0	—	NE, 4-5	15	20-25	bm	—	S. 4	—	
6	29.139	—	-11.0	-8.3	-8.3	—	NE, 5	18	20-25	bm	—	—	—	Very misty ☐, well defined. Stars visible through mist.
8	29.110	—	-9.0	-5.0	-5.0	—	SE, 2-3	17	15-20	ocq ☐	—	S. 10	—	
10	29.089	—	-8.0	-7.8	-7.8	—	ESE, 3-1	17	15-22	oc ↗	Cl.-s. 10	A.-s. 3, E	—	Very misty to S, clearer to SW.
Noon	29.057	—	-10.0	-7.2	-7.2	—	ESE, 5-6	23	20-38	ocq ↗	A.-s. 10	—	—	
2	29.023	—	-10.0	-6.0	-6.0	—	E by S, 4-5	20	20-25	og ↗ <sup>2</sup>	A.-s. 10	—	—	Very dark and threatening to S, clouds of drift between the islands.
4	28.952	—	-7.0	-2.0	-2.0	—	S, 7-9	—	25-40	og ↗ <sup>2</sup>	A.-s. 10	—	—	Lamp blew out, so could not read anemometer.
6	28.890	—	-3.0	-3.0	-3.0	—	S by W, 7-9	—	38-15	og ↗ <sup>2</sup>	—	S. 10	—	Unable to read anemometer. Thermograph box filling with snow [7.30. Furious gusts.]
8	28.928	—	-3.0	—	—	—	S by W, 8-10	34	45-52	og ↗ <sup>2</sup>	—	S. 10	—	Thermometer screen completely filled, and weather too rough to clear it. Large drift accumulating by screens.
10	28.911	—	-4.0	—	—	—	SW, 8-9	33	?	og ↗ <sup>2</sup>	—	S. 10	—	10 p.m. Unable to read dry or wet bulbs or Dines' small anemometer. Furious gusts. Drift or wet snow covering everything.
Midt.	28.909	—	-3.0	—	—	—	S by W, 10	39	?	og ↗ <sup>2</sup>	—	S. 10	—	
Mean	29.036	—	—	-6.6	-6.6	—	—	—	—	—	—	—	—	Misty, with fine display of lunar halo early, becoming overcast, with dark and threatening look to S and SE. Wind strong from NE in early morning, shifting at about 7 a.m. to SE and falling, but rising as it went back to E. At 4 p.m. wind shifted suddenly to S in a heavy squall and blew a strong gale for the rest of the day. Clouds of drift snow, very damp and very fine. Furious squalls. Max. run of cups in 2 hours, 78 miles; max. rate observed by pressure tube, 52 miles per hour. The small Dines' head became choked, and the recorder was soon under the snow. Barometer, after a rise at 2 a.m., fell quickly until between 6 and 8 p.m., and then rose quickly. Thermometer rose as the S gale came on. After 6 p.m. the thermometer box became full of snow, and only the minimum could be read.
Max. therm. read at		{ 8 a. -5° 0. 8 p. no observation.		Solar radiation		{ black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.				

2nd.

2	28.978	—	-2.5	—	—	—	S by W, 7-8	30	—	og ↗ <sup>2</sup>	—	S. 10	—	
4	28.932	—	-1.5	—	—	—	SW, 10	35	—	og ↗ <sup>2</sup>	—	S. 10	—	
6	28.900	—	—	—	—	—	SW, 10	44	—	og ↗ <sup>2</sup>	—	S. 10	—	
8	28.887	—	—	—	—	—	SW, 10	33	—	og ↗ <sup>2</sup>	—	S. 10	—	Unable to read thermometers, wind very strong and gusty.
10	28.876	—	—	—	—	—	SW, 9-10	41	—	og ↗ <sup>2</sup>	—	S. 10	—	Thermometer boxes nearly covered; unable to open doors. Drift over 4 feet by the screens.
Noon	28.859	—	-4.0	—	—	—	SW, 8-9	28	—	og ↗ <sup>2</sup>	—	S. 10	—	
2	28.881	—	-5.0	—	—	—	SSW, 8-0	35	—	og ↗ <sup>2</sup>	—	S. 10	—	2, 4, 6, and 8 p.m. temperatures taken with slug thermometer.
4	28.914	—	-5.0	—	—	—	S by W, 9	30	—	og ↗ <sup>2</sup>	—	S. 10	—	
6	28.926	—	-7.0	—	—	—	S, 8-0	25	—	og ↗ <sup>2</sup>	—	S. 10	—	
8	28.939	—	-5.0	—	—	—	S, 8-10	34	—	og ↗ <sup>2</sup>	—	S. 10	—	Wind inclined to fall.
10	28.893	—	—	—	—	—	S, 8-9	28	—	og ↗ <sup>2</sup>	—	S. 10	—	Wind seemed to be rising. Very heavy and prolonged gusts. Small pressure tube anemometer under snow.
Midt.	28.888	—	—	—	—	—	S by E, 9-10	36	—	og ↗ <sup>2</sup>	—	S. 10	—	
Mean	28.906	—	-3.1	—	—	—	—	—	—	—	—	—	—	Overcast all day. Wind shifted from S to SW, gradually hauling back to S in the evening. Blowing a whole gale with furious gusts. Clouds of drift snow banking up to windward and leeward of the ship. Unable to read small Dines'; Robinson's anemometer cups full of snow.
Max. therm. read at		{ 8 a. } Not observed; box { 8 p. } covered with snow.		Solar radiation		{ black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.				

3rd.

Max. run in 2 hours, 88 miles. Barometer, after rising, fell steadily till noon, and then became unsteady. No pumping was observed, although the gusts were very severe. As thermometer screen was full of snow, a "sling" thermometer was taken out and used. The noon observation (4° 0) was taken by a very sluggish sledge thermometer; only 7 observations were taken. NOTE.—The snow has been logged as drift and the sky as overcast with stratus (?). The snow was very moist and fine, and should perhaps have been called "falling snow." No measurement of fall could be taken as the gauge was 3 feet 8 inches under the surface when dug out.

1902—May.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
				Dry.	Wet.										
4th. 2	28.919	—	—	10.5	—	—	S by E, 9-10	36	—	oq † <sup>2</sup>	—	S. 10	—		
4	28.946	—	—	12.0	—	—	S, 9-10	35	—	oq † <sup>2</sup>	—	S. 10	—		
6	28.974	—	—	18.0	—	—	S, 7-9	35	—	oq † <sup>2</sup>	—	S. 10	—		
8	28.972	—	—	19.0	—	—	SE, 4-5	30	—	oq † <sup>2</sup>	—	S. 10	—		
10	28.961	—	—	11.0	—	—	SE, 4-5	22	—	oq † <sup>2</sup>	—	S. 10	—	Wind falling, but heavy drift continues.	
Noon	28.969	—	—	9.0	—	—	SE, 5-6	18	—	oq † <sup>2</sup>	—	S. 10	—		
2	28.981	—	—	7.0	—	—	SE, 6	17	—	oq † <sup>2</sup>	—	S. 10	—	Wind increasing, squalls heavier.	
4	28.963	—	—	7.0	—	—	SE, 5-7	23	—	oq † <sup>2</sup>	—	S. 10	—	Heavy squalls.	
6	29.099	—	—	7.0	—	—	SE, 5-7	22	—	oq † <sup>2</sup>	—	S. 10	—	Heavy squalls, much drift.	
8	29.113	—	—	6.0	—	—	SE, 4-6	24	—	oq † <sup>2</sup>	—	S. 10	—	Wind falling, squalls fewer and not so heavy.	
10	29.145	—	—	6.0	—	—	E by S, 4-5	22	—	oq † <sup>2</sup>	—	S. 10	—	Wind had shifted, and falling.	
Midt.	29.157	—	—	8.0	—	—	E, 3-4	17	—	oq †	—	S. 10	—	Wind squally.	
Mean	29.019	—	—	10.0	—	—	—	—	—	—	—	—	—	Remained overcast all day, with the heavy drift snow continuing. The wind gradually hauled round from the S to the E, falling as it did so. Heavy gusts were frequent throughout the day; max. run of cups for 2 hours, 73 miles. Barometer rose all day.	
Max. therm. read at { 8 a. —. } Not observed; boxes full of snow. Solar radiation { black bulb —. } Evapn. — grammes. Precipn. — in.															
Temperature up to 10 a.m. was taken with a thermometer, which was very slow in attaining the temperature of the air; after 10 a.m. it was taken with a sling thermometer. A large piece of the ice abreast Hut Point was observed to have been swept out, and McMurdo Bay seemed clear of ice. Cleared the cups of Robinson's anemometer, which were filled with snow. The heads of both pressure-tube anemometers are completely choked.															

5th. 2	29.198	—	—	7.0	—	—	E, 4-5	26	—	oq †	—	S. 10	—	Wind decreasing.
4	29.181	—	—	10.7	—	—	E by S, 4-5	18	—	bmq †	—	—	—	Lighter overhead. 4.15 a.m. heavy gusts.
6	29.199	—	—	10.8	—	—	S by E, 4-5	23	—	oq †	—	S. 10	—	
8	29.191	—	—	12.0	—	—	SE, 3-4	19	—	oq †	—	S. 10	—	
10	29.196	—	—	11.0	—	—	E, 3-4	18	—	oq	—	S. 10	—	
Noon	29.190	—	9.5	11.2	11.5	—	E by N, 3-4	15	—	oc †	A.-s. 10, E.	—	—	1 p.m. Took cup anemometer down. Cleared thermometer screens. Took down pressure tube.
2	29.174	—	11.0	12.0	12.0	—	E, 2-3	—	—	oc	A.-s. 10, E.	—	—	2 p.m. Stratus in short dark lines lying E and W. Clear to SW and W.
4	29.133	—	9.8	10.2	10.5	—	ESE, 2-3	—	—	oc †	A.-s. 10, E.	—	—	4 p.m. Wind rising in gusts. Very dark to S and SE.
6	29.120	—	7.0	9.0	9.0	—	E by S, 2-3	—	—	bc	Thin S. 6	—	—	6 p.m. Clearing overhead.
8	29.097	—	5.0	7.5	7.5	—	E, 3	—	—	bc	Thin S. 5	—	—	
10	29.060	—	3.0	5.0	5.0	—	E by N, 3-4	—	—	bc	Thin S. 3	—	—	Clearer overhead; thick low down.
Midt.	29.024	—	4.8	7.0	7.0	—	ENE, 4	—	—	b	—	—	—	Fine and clear.
Mean	29.147	—	—	9.5	—	—	—	—	—	—	—	—	—	Cleared slowly towards evening. Wind was strong and shifty, with a good deal of snow drift at times. Max. run of cups for 2 hours, 51 miles. Straightened the arms and cups of anemometer. Also took down small pressure tube anemometer to thaw
Max. therm. read at { 8 a. not observed. } Solar radiation { black bulb —. } Evapn. — grammes. Precipn. — in.														
the head and put up on higher place. Barometer unsteady in the morning, and then fell steadily. Up to 10 a.m. used the sluggish thermometer; after 10 a.m. the screen was clear. When taken out of the snow the minimum thermometer showed -10° 0 and the maximum 12° 5. More ice was swept out of the bay during the night, and water is now up to 100 yards from the bow of the ship. Cleared thermographs, which had been completely covered with snow, also hygrograph.														

6th. 2	28.981	—	5.5	10.0	10.0	—	ENE, 3-4	—	—	bv	—	—	—	Fine; very clear.
4	28.958	—	8.8	17.0	17.0	—	E, 2	—	—	hyq	—	—	—	Gusts, force 4; very clear. Auroral streamers from N by W through E to S, altitude 10° to 60°, of faint straw colour generally. Dense batch of streamers to N, eclipsing stars of 3rd magnitude, of a light green colour with rose-tinted lower points and pulsating laterally. All streamers converging towards zenith.
6	28.944	—	2.0	3.0	2.0	—	SSW, 1-2	—	—	byq	—	—	—	
8	28.921	—	-10.0	10.0	9.4	—	E by N, 1-2	—	—	b	—	—	—	
10	28.830	—	6.0	8.0	7.2	—	Calm	—	—	bc	Cl. 2, N (mod. fast)	—	—	
Noon	28.810	—	6.0	6.0	5.0	—	Calm	4	—	h	—	—	—	6 a.m. Aurora in same position only very faint. Temperature falling rapidly; fell 2° at time of observation while reading off.
2	28.731	—	4.8	7.0	5.8	—	Calm	4	—	h	—	—	—	10 a.m. Cl. radiating NW and SE. Drift on hills to S and W. Fleecy cirrus.
4	28.669	—	4.2	6.0	5.0	—	Calm	5	—	b	—	—	—	1 p.m. Temperature at high-level station, 6° 0. Min. for last 8 days, -34° 8. Erebus smoke going E, but very little.
6	28.639	—	-8.0	-1.8	-1.8	—	E, 4-5	17	—	bq †	—	—	—	4.30 p.m. Wind came in squalls from SSW.
8	28.634	—	-11.0	-10.5	—	—	E, 5-6	35	—	bq †	—	—	—	
10	28.692	—	-12.0	-8.0	—	—	E, 3-4	20	—	h	—	—	—	
Midt.	28.697	—	-9.0	-4.0	—	—	SSE, 2-4	15	—	b	—	—	—	Fine clear day; wind falling to calm, but rising quickly from E in strong squalls with drift. Set up Robinson's anemometer again. Max. run in 2 hours, 70 miles. Barometer falling steadily until about 9 p.m., then rose. Thermometer very unsteady; fell rapidly as wind got up at 4.30 p.m. All water frozen in the bay.
Mean	28.792	—	—	3.6	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. —. } Solar radiation { black bulb —. } Evapn. — grammes. Precipn. — in.														

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.										Unscreened.
2	28.698	—	5.0	—	3.2	—	E by S, 1-2	9	—	bc	—	Cl. 1, E	—	7th.	
4	28.715	—	3.0	—	2.8	—	E by N, 1-2	5	—	b	—	—	—		
6	28.706	—	3.1	—	3.3	—	N by E, 1-2	6	—	b	—	—	—		
8	28.759	—	6.0	—	4.8	—	NW, 0-1	3	—	bc	—	Cl.-s. 6	—		
10	28.760	—	4.0	—	8.0	—	N, 2-3	14	—	bc	—	Cl.-s. 4	—		
Noon	28.760	—	6.2	—	8.5	—	NE, 2-3	14	—	bc	—	Cl.-s. 5, SW	—		
2	28.765	—	6.5	—	8.0	—	N, 1-2	12	10-15	bc	—	Cl.-cu. 6	—		
4	28.789	—	2.0	—	2.0	—	NE, 2-3	8	20-22	beq	—	Cl.-cu. 5, SW	—		
6	28.811	—	4.0	—	3.5	—	NE, 2-3	16	20-25	b	—	—	—		
8	28.845	—	6.0	—	6.0	—	NE, 3	19	30-33	b	—	—	—		
10	28.874	—	7.0	—	4.2	—	NE, 2-3	18	20	b	—	—	—		
Midt.	28.880	—	6.5	—	3.7	—	E by N, 2-3	14	24-26	o w	—	Cl.-s. 4	—		
Mean	28.780	—	—	—	0.9	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 13° 5.		8 p. 9° 0.		Solar radiation		black bulb —		bright bulb —		Evapn. — grammes.			Precipn. — in.

2	28.884	—	11.2	—	9.0	—	NE, 3-4	26	28-31	o †	—	Cl.-s. 10	—	8th.	
4	28.929	—	11.4	—	10.0	—	ENE, 3-4	22	20-24	o † 2	—	Cl.-s. 8	—		
6	28.972	—	11.2	—	9.0	—	ENE, 4	24	30-36	bc † 0	—	Cl.-s. 3	—		
8	29.035	—	13.0	—	10.8	—	ENE, 4-5	23	25-30	bc † 0	—	Cl.-s. 6	—		
10	29.056	—	13.0	—	12.5	—	ENE, 3-4	22	20-23	bc †	—	Cl. 5	—		
Noon	29.076	—	14.0	—	7.2	—	E by N, 2-3	18	15-20	bc	—	Cl.-s. 2	—		
2	29.096	—	22.5	—	10.0	—	E, 2-3	16	20-22	bc	—	Thin S. 7	—		
4	29.114	—	11.5	—	10.2	—	NE, 2	15	17	b	—	—	—		
6	29.122	—	11.5	—	10.2	—	NE, 2-3	15	18	b	—	—	—		
8	29.102	—	11.2	—	10.0	—	E by N, 2	14	15	b	—	—	—		
10	29.090	—	14.2	—	14.2	—	E by S, 1-2	12	12-15	bc	—	Cl.-s. 5	—		
Midt.	29.090	—	16.6	—	10.5	—	E, 2	8	10-13	c w	—	Cl.-s. 6	—		
Mean	29.047	—	—	—	10.3	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. —		8 p. -7° 0.		Solar radiation		black bulb —		bright bulb —		Evapn. — grammes.			Precipn. — in.

2	29.100	—	15.0	—	12.5	—	ESE, 3-4	13	20-24	c	—	Cl. 7	—	9th.	
4	29.116	—	18.2	—	17.5	—	E by N, 4	14	23-27	bc †	—	Cl.-s. 2	—		
6	29.150	—	19.5	—	17.0	—	E by N, 4-5	23	25-28	bc	—	Cl.-s. 3	—		
8	29.182	—	20.2	—	18.0	—	NE, 5-7	24	30-35	bcq † 0	—	Cl.-s. 4	—		
10	29.206	—	19.8	—	18.0	—	ENE, 3-4	22	22-25	bm	—	—	—		
Noon	29.208	—	20.0	—	18.5	—	ENE, 2	15	18-20	bc	—	Cl. 2, N	—		
2	29.212	—	19.0	—	18.0	—	ENE, 3-4	15	25	oc †	—	Fr.-s. 8, N (mod.)	—		
4	29.212	—	19.0	—	12.0	—	E by N, 2-3	16	15-20	o †	—	A.-s. 10, W	—		
6	29.220	—	14.0	—	10.0	—	Calm	11	0	b	—	—	—		
8	29.216	—	27.0	—	27.0	—	Calm	2	0	b	—	—	—		
10	29.209	—	27.0	—	24.2	—	Calm	0	0	b	—	—	—		
Midt.	29.202	—	24.0	—	6.5	—	N, 1-2	5	10-15	bc	—	—	—		
Mean	29.186	—	—	—	16.6	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. -7° 2.		8 p. -7° 0.		Solar radiation		black bulb —		bright bulb —		Evapn. — grammes.			Precipn. — in.

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10th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.200	—	-15.0	-12.0	—	—	Calm	6	0	o*	Thin S. 8	N. 5, W	—	
4	29.191	—	-12.5	-6.2	—	—	Lt. N airs	7	0-5	b	—	—	—	Faint aurora glow in S, alt. 40°, arc 50°.
6	29.184	—	-7.5	-6.2	—	—	Lt. N airs	8	0-7	bv	—	—	—	Very clear overhead. Stars most brilliant.
8	29.175	—	-7.3	-6.0	—	—	N by W, 1-2	10	15-20	b	—	—	—	Thermometer and stones round earth thermometer frosted all over. Thermometer reading 3° higher than screen.
10	29.163	—	-7.0	-5.0	—	—	N, 1-2	11	10-15	b	—	—	—	10 a.m. and Noon. Hills quite clear.
Noon	29.152	—	-7.0	-4.0	—	—	N, 1-2	11	10-15	b	—	—	—	Mfn. at high-level station for last 96 hours, -30°; temp. at noon, -15°.
2	29.135	—	-4.0	-2.0	—	—	Lt. N airs	12	0-10	bv	—	—	—	Very clear.
4	29.122	—	-10.0	-1.5	—	—	N, 1-2	5	12	b	—	—	—	
6	29.108	—	-2.8	-0.6	—	—	NW, 1-2	7	0-10	b	—	—	—	
8	29.100	—	-10.0	-9.0	—	—	Calm	5	0	b	—	—	—	Faint aurora to ESE, arc 30°, streamer 12°.
10	29.065	—	-9.5	-5.8	—	—	ENE, 1-2	6	15	b	—	—	—	
Midt.	29.089	—	-8.0	-7.2	—	—	ENE, 1-2	7	15	b	—	—	—	
Mean	29.144	—	—	-5.5	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -6° 0. / 8 p. 0° 2. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn., not measurable.

Fine, clear day, with light N by breezes. Max. run of cups for 2 hours, 23 miles; max. rate observed by pressure tube, 20 miles per hour. Barometer fell slowly all day. Thermometer rose until 6 p.m. and then fell again as E by wind increased.

11th.

2	29.089	—	-8.0	-7.5	—	—	NE, 1-2	9	10	b w	—	—	—	
4	29.104	—	-9.0	-8.6	—	—	ENE, 2	9	15	b	—	—	—	
6	29.106	—	-21.0	-20.5	—	—	SE, 2-3	14	15	b w	—	—	—	
8	29.079	—	—	-25.1	—	—	E by S, 2-3	19	15-20	bq	—	—	—	Hills clear most of day. Layer of stratus cloud about halfway down, and another just above. Misty round the foot and along the coast.
10	29.103	—	-20.8	-20.5	—	—	E, 1-2	11	12-15	b	—	—	—	1 p.m. Temp. at high-level station, -20° 0; min. for 24 hours, -25° 0.
Noon	29.134	—	-20.0	-20.0	—	—	E, 2	9	10-12	b	—	—	—	
2	29.153	—	-20.0	-20.0	—	—	E by S, 2-3	15	15-20	b	—	—	—	
4	29.164	—	-21.0	-19.0	—	—	ENE, 3-4	23	20-28	bc	Ci.-s. 4	—	—	
6	29.172	—	-20.0	-19.0	—	—	E by N, 2-5	21	25-27	b	—	—	—	
8	29.187	—	-21.0	-18.4	—	—	E by N, 5	24	33-35	oc	—	S. 10	—	
10	29.191	—	-20.0	-24.8	—	—	ENE, 5	28	30-36	bm †	—	—	—	
Midt.	29.175	—	-25.2	-22.0	—	—	ENE, 4	30	20-25	b	—	—	—	Fine, clear day. Wind rose from E about noon and freshened towards evening. Max. run of cups for 2 hours, 59 miles; max. rate observed by pressure tube, 33 miles per hour. Barometer unsteady, inclined to rise. Thermometer fell and kept low all day.
Mean	29.138	—	—	-18.8	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -1° 8. / 8 p. -8° 8. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. — in.

12th.

2	29.173	—	-26.4	-25.2	—	—	ENE, 4	25	20-25	bm †	—	—	—	
4	29.173	—	-23.6	-19.8	—	—	ENE, 3-4	19	15-20	b †	—	—	—	
6	29.178	—	-22.5	-19.5	—	—	ENE, 4	19	20	bm †	—	—	—	
8	29.217	—	-20.2	-17.3	—	—	NE, 1-2	22	10-15	bm	—	—	—	Stars faintly visible through mist. Thermometer on ground, -18° 0.
10	29.235	—	-19.0	-15.0	—	—	Calm	8	0	o*	—	Fr.-n, 10	—	Very light snow.
Noon	29.249	—	-19.0	-16.2	—	—	Calm	3	0	o*	—	Fr.-n, 8	—	Very light and dry snow.
2	29.270	—	-17.0	-14.6	—	—	Calm	3	0	om*	—	Fr.-n, 10	—	
4	29.278	—	-20.2	-17.0	—	—	Calm	4	0	b	—	—	—	Very clear. Frost on glass in front of anemometer.
6	29.299	—	-39.0	-37.0	—	—	Calm	1	0	b	—	—	—	Temperature fell suddenly.
8	29.335	—	-37.0	-24.5	—	—	Calm	4	0	b	—	—	—	
10	29.364	—	-22.2	-17.0	—	—	Calm	6	0	b	—	—	—	
Midt.	29.384	—	-26.7	-21.8	—	—	Calm	0	0	b	—	—	—	Fine, clear day on the whole. A very light, fine, dry snow fell for about 4 hours. Wind fresh from ENE in early morning, but fell at 8 a.m. and remained calm all day. Max. run for 2 hours, 51 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer rose steadily; temperature very unsteady.
Mean	29.263	—	—	-20.4	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -11.1. / 8 p. -14.0. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.414	—	-30.9	-13.0	—	N by E, 1	2	0-5	h	—	—	—	13th.	
4	29.449	—	-33.0	-23.0	—	Calm	0	0	h	—	—	—		
6	29.476	—	-28.6	-21.3	—	SE, 1-2	6	20	b q	—	—	—		
8	29.527	—	-30.0	-28.0	—	Calm	6	0	b	—	—	—		
10	29.585	—	-31.0	-26.0	—	Calm	4	0	b	—	—	—		
Noon	29.638	—	-36.0	-22.8	—	Calm	2	0	bv	—	—	—		
2	29.688	—	-39.0	-31.0	—	Calm	1	0	b	—	—	—		
4	29.722	—	-39.5	-23.0	—	Calm	2	0	b	—	—	—		
6	29.751	—	-24.0	-20.5	—	NE, 1-2	8	10	b	—	—	—		
8	29.765	—	-25.0	-22.0	—	NE, 1-2	10	10-15	h	—	—	—		
10	29.800	—	-22.5	-20.0	—	NE by E, 2	13	20	b	—	—	—		
Midt.	29.820	—	-21.0	-19.8	—	N by E, 3	15	20-22	b	—	—	—		
Mean	29.637	—	—	-22.5	—	—	—	—	—	—	—	—		

Min. at high-level station for last 48 hours, -35° 0. Temp. at noon, -30° 0. Very clear. Temperature still unsteady.

Wind apparently rising.

Fine and clear all day. Wind calm and light, rising from NE in the evening; max. run of cups for 2 hours, 30 miles; max. rate observed by pressure tube, 22 miles per hour. Barometer rising all day. Temperature low and unsteady, falling very low between noon and 6 p.m.

Max. therm. read at { 8 a. -13° 3, 8 p. -19° 0. Solar radiation { black bulb —, bright bulb —. Evapn. — grammes. Precipn., not measurable.

2	29.821	—	-20.8	-16.0	—	ENE, 2	11	12-15	h	—	—	—	14th.
4	29.829	—	-22.0	-18.6	—	E by S, 1	5	10	b	—	—	—	
6	29.834	—	-20.0	-18.5	—	Calm	2	0	b	—	—	—	
8	29.851	—	-23.9	-22.3	—	Calm	1	0	h	—	—	—	
10	29.866	—	-27.0	-22.0	—	Calm	1	0	bc	—	Fr.-n. 6, NW	—	
Noon	29.865	—	-25.2	-19.2	—	Lt. NE airs	3	0-5	bm	—	—	—	
2	29.869	—	-31.0	-22.8	—	Calm	2	0	bc	Thin S. 5	—	—	
4	29.859	—	-23.0	-15.0	—	NE, 1-2	5	10	o	Thin S. 10	—	—	
6	29.861	—	-28.0	-16.2	—	E, 1-2	12	10	o	Cl.-a. 10	—	—	
8	29.868	—	-19.0	-18.2	—	E, 2	13	15	o *	—	N. 10	—	
10	29.870	—	-20.0	-18.0	—	E, 2	12	15-17	o *	—	N. 10	—	
Midt.	29.874	—	-20.0	-17.2	—	E, 3	12	22-24	o †	—	S. 10	—	
Mean	29.856	—	—	-18.7	—	—	—	—	—	—	—	—	

Hills clear. Stars visible through stratus.

A few stars visible through stratus, but faint.

No stars visible.

Fine clear morning, clouding over about 4 p.m.; after that some light fine and dry snow fell. Wind light, rising from E towards evening; max. run of cups for 2 hours, 26 miles; max. rate observed by pressure tube, 24 miles per hour. Barometer steady, but inclined to rise. Temperature steady, but fell suddenly at 2 p.m.

Max. therm. read at { 8 a. -13° 3, 8 p. -15° 0. Solar radiation { black bulb —, bright bulb —. Evapn. — grammes. Precipn. — in.

2	29.873	—	-22.5	-22.0	—	E by N, 2	18	15-20	bmq †	—	—	—	15th
4	29.886	—	-24.0	-22.2	—	ENE, 3-4	27	22	bmq †	—	—	—	
6	29.893	—	-23.0	-21.5	—	ENE, 3-4	24	22	oq †	—	S. 10	—	
8	29.889	—	-25.2	-21.6	—	ENE, 5-6	22	35-38	oq † 2	—	S. 10	—	
10	29.902	—	-26.5	-25.0	—	ENE, 4-6	37	39-42	oq †	—	S. 10	—	
Noon	29.867	—	-27.0	-21.0	—	ENE, 5	26	25-27	o †	Thin S. 10	—	—	
2	29.851	—	-25.0	-25.0	—	ENE, 4-5	18	20-22	o †	—	S. 10	—	
4	29.825	—	-26.2	-24.8	—	E, 4-5	21	25-28	o †	Thin S. 8	—	—	
6	29.802	—	-25.5	-25.0	—	E, 5-6	25	28-32	o †	—	S. 10	—	
8	29.779	—	-27.5	-26.0	—	E, 3-4	25	30-33	bc †	Thin S. 4	—	—	
10	29.753	—	-26.5	-25.5	—	E, 4-5	22	28-30	bcm †	Thin S. 4	—	—	
Midt.	29.706	—	-29.5	-28.7	—	E, 5-6	31	30-35	bcm	Cl.-a. 7	—	—	
Mean	29.836	—	—	-24.5	—	—	—	—	—	—	—	—	

A few stars visible.

Becoming clearer overhead.

Weather getting worse. No stars. Wind increasing.

Clearing overhead.

Stars visible through stratus.

Overcast most of the day. Misty, with fresh breeze from E rising towards evening; max. run for 2 hours, 73 miles; max. rate observed by pressure tube, 42 miles per hour. Barometer steady until about 10 a.m., when it commenced to fall. Temperature low and very steady.

Max. therm. read at { 8 a. -12° 3, 8 p. -21° 0. Solar radiation { black bulb —, bright bulb —. Evapn. — grammes. Precipn. — in.

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16th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.688	—	-31.0	-30.1	—	—	E, 4-5	24	20-25	bem †	—	Cl.-s. 6	—	—
4	29.632	—	-30.5	-29.6	—	—	E, 5-6	33	30-40	bem †	—	Cl.-s. 8	—	—
6	29.607	—	-31.4	-29.9	—	—	E, 5-6	30	33-35	bem †	—	Cl.-s. 9	—	—
8	29.587	—	-32.0	-31.0	—	—	NE, 5-6	31	35	oc † <sup>2</sup>	—	—	S. 10	—
10	29.588	—	-33.0	-32.0	—	—	NE, 5-6	34	36-38	bem † <sup>2</sup>	—	—	—	—
Noon	29.574	—	-33.0	-32.0	—	—	ENE, 4-5	27	30	oc †	—	—	S. 10	—
2	29.560	—	-33.0	-33.0	—	—	ENE, 5-6	24	34	oc † <sup>2</sup>	—	—	S. 10	—
4	29.543	—	-36.0	-34.0	—	—	ENE, 5-7	30	36	o † <sup>2</sup>	—	—	S. 10	—
6	29.525	—	-34.6	-32.2	—	—	ENE, 5-6	24	30	bm † <sup>2</sup>	—	—	—	—
8	29.501	—	-34.0	-32.0	—	—	ENE, 4-5	26	25-28	bm †	—	—	—	—
10	29.485	—	-33.0	-32.0	—	—	NE, 4-5	18	20-25	bm †	—	—	—	—
Midt.	29.464	—	-32.3	-28.8	—	—	E, 1-2	14	10	bm	—	—	—	—
Mean	29.563	—	—	-31.4	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. —, -30° 0. / 8 p. — } Solar radiation { black bulb —, / bright bulb — } Evapn. — grammes. Precipn. — in.

A few stars faintly visible.  
A few stars faintly visible through drifting snow.  
Stars faintly visible through drifting snow.  
Very misty, with strong NE<sup>ly</sup> and E<sup>ly</sup> breeze and drifting snow all day. Max. run by cups for 2 hours, 68 miles; max. rate observed by pressure tube, 40 miles per hour. Barometer fell steadily all day. Temperature low and steady.

17th.

2	29.437	—	-29.0	-25.5	—	—	E, 1	4	8	bm *	—	—	—	—	Very fine snow falling. Stars shining dimly.
4	29.417	—	-27.0	-25.8	—	—	Calm	0	0	bm *	—	—	—	—	Flakes rather larger, but still fine.
6	29.410	—	-28.0	-26.0	—	—	Calm	1	0	bm *	—	—	—	—	Stars faintly visible through white mist.
8	29.391	—	-28.0	-25.3	—	—	Calm	2	0	bm	—	—	—	—	—
10	29.396	—	-26.2	-24.8	—	—	Calm	5	0	bm	—	—	—	—	—
Noon	29.400	—	-25.2	-23.8	—	—	Lt. NE airs	3	0-10	om	A. s. 10	—	Fr.-n. 4	—	—
2	29.388	—	-25.0	-24.2	—	—	Lt. E airs	10	5-10	bcm	—	—	Fr.-n. 3	—	Fr. N. in N. Very misty, hills not visible. Erebus smoke being ejected in big clouds going S <sup>ly</sup> .
4	29.409	—	-25.0	-23.8	—	—	E, 1-2	9	10-24	bcm	A. s. 4	—	—	—	Moon very misty through drift over hill.
6	29.423	—	-34.0	-31.0	—	—	SE, 2-3	15	25	bm †	—	—	—	—	—
8	29.467	—	-31.0	-30.0	—	—	E, 2-3	18	23-25	bm † <sup>2</sup> U	—	—	—	—	—
10	29.515	—	-32.0	-28.0	—	—	E, 3-4	19	23-25	om †	A. s. 10	—	—	—	—
Midt.	29.527	—	-32.6	-25.8	—	—	ENE, 4	21	25	om †	—	—	—	—	No wind in morning, but rose about 4 p.m., gradually freshening; max. run of cups for 2 hours, 43 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer fell during the calm, but rose immediately wind rose. Ther. monometer rose during calm, but fell immediately wind rose.
Mean	29.432	—	—	-26.2	—	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. -25° 0. / 8 p. -23° 0. } Solar radiation { black bulb —, / bright bulb — } Evapn. — grammes. Precipn. 0.002 in.

18th.

2	29.549	—	-26.2	-23.5	—	—	E by N, 3-4	18	25	om †	—	—	—	—	—
4	29.591	—	-23.7	-23.0	—	—	E by N, 5-6	20	25	om † <sup>2</sup>	—	—	—	—	—
6	29.600	—	-23.0	-20.7	—	—	E by N, 5-6	23	25	om † <sup>2</sup>	—	—	—	—	—
8	29.606	—	-22.9	-19.0	—	—	ENE, 4-5	22	20-25	m †	—	—	—	—	Drift obscuring all but 1st magnitude stars.
10	29.777	—	-22.8	-20.2	—	—	E, 4-5	24	25-28	om †	A. s. 10	—	—	—	—
Noon	29.833	—	-22.0	-21.0	—	—	E, 4-5	26	20-25	om †	A. s. 10	—	—	—	—
2	29.872	—	-24.2	-23.2	—	—	E by N, 3-4	22	20-25	om †	A. s. 10	—	—	—	—
4	29.916	—	-24.2	-23.2	—	—	ENE, 3-4	18	20-23	om †	A. s. 10	—	—	—	—
6	29.966	—	-23.8	-21.6	—	—	ENE, 4-5	22	28-30	om †	A. s. 10	—	—	—	—
8	30.014	—	-22.0	-21.6	—	—	NE, 4-5	25	25-27	om †	A. s. 10	—	—	—	—
10	30.022	—	-22.0	-21.6	—	—	NE, 5	22	25-29	om †	A. s. 10	—	—	—	Moon faintly visible through mist.
Midt.	30.068	—	-22.5	-22.5	—	—	ENE, 4-5	21	21-24	oc †	A. s. 10	—	—	—	Strong E <sup>ly</sup> wind all day. Overcast with misty appearance, the mist probably being drifting snow. Max. run of cups for 2 hours, 51 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer rose all day. Thermometer kept low and steady.
Mean	29.825	—	—	-21.8	—	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. -18° 8. / 8 p. -20° 0. } Solar radiation { black bulb —, / bright bulb — } Evapn. — grammes. Precipn. — in.

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshinc.	Clouds, Amount and movement.			Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 24.			Upper.	Lower.	Aspirator.	
			Dry.	Wet.										
2	30.071	—	-22.5	-20.0	—	E by N, 4-5	22	21-23	e †	—	Cl.-s. 7	—	—	Several stars faintly visible.
4	30.090	—	-21.0	-18.5	—	E by N, 4	19	20-23	bc †	—	Cl.-s. 2	—	—	Clear sky overhead.
6	30.083	—	-21.6	-19.5	—	E by N, 5	25	21-24	oc †	—	Cl. s. 10	—	—	
8	30.161	—	-20.5	-18.3	—	E by N, 4-5	19	22	oc	—	—	S. 10	—	No stars visible. Near land quite clear.
10	30.177	—	-19.5	-18.8	—	E, 3-4	22	23-25	oc †	—	A.-s. 10	—	—	
Noon	30.165	—	-20.5	-20.0	—	E, 2-3	17	23-25	oc	—	A.-s. 10	—	—	Min. at high-level station for last 144 hours, -39.5. Temp. at noon, -29.0.
2	30.181	—	-20.5	-20.0	—	E, 2-3	20	20-23	oc	—	A.-s. 10	—	—	
4	30.167	—	-21.5	-21.0	—	E, 3-4	20	20-23	oc	—	A.-s. 10	—	—	
6	30.153	—	-22.0	-21.5	—	E, 3-4	18	20-24	oc	—	A.-s. 10	—	—	} Position of moon only apparent by slight glare in sky through mist or drifting snow.
8	30.137	—	-23.0	-21.2	—	E, 5-6	24	23-25	oc †	—	A.-s. 10	—	—	
10	30.107	—	-22.0	-21.2	—	E by N, 5-6	22	25-27	oc †	—	A.-s. 10	—	—	
Midt.	30.074	—	-22.0	-20.0	—	E, 5-6	27	20-30	ocfq †	—	—	S. 10	—	
Mean	30.131	—	—	-20.0	—	—	—	—	—	—	—	—	—	Overcast and cloudy, with strong, steady wind from E; max. run of cups for 2 hours, 53 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer rose until about 2 p.m. and then fell quickly. Thermometer steady.
Max. therm. read at		8 a. -18.0.3.		8 p. -18.0.0.		Solar radiation		black bulb —	—	Evapn. — grammes.	Precipn. — in.			

19th.

2	30.044	—	-21.5	-20.5	—	E by N, 4-5	32	20-24	ocf †	—	—	S. 10	—	
4	29.991	—	-21.0	-18.6	—	E by N, 5-6	20	25-23	ocf * †	—	—	N. 10	—	
6	29.947	—	-21.0	-13.2	—	NNE, 5-6	30	23-25	ocf * †	—	—	N. 10	—	Snow of a very fine character, dry and hard.
8	29.921	—	-19.0	-14.8	—	E, 3-4	23	20-22	oc *	—	—	N. 10	—	
10	29.910	—	-15.0	-14.8	—	SE, 2-3	16	20-27	of *	—	—	N. 10	—	
Noon	29.888	—	-16.3	-15.2	—	SE, 3-4	14	20-25	om †	—	—	S. 10	—	
2	29.874	—	-16.5	-16.0	—	SSE, 3-4	18	25-23	om †	—	—	S. 10	—	
4	29.838	—	-17.5	-17.0	—	E, 2	21	20	om † <sup>0</sup>	—	—	S. 10	—	
6	29.793	—	-19.5	-19.0	—	E, 3-4	13	20-25	om † <sup>0</sup>	—	—	S. 10	—	
8	29.732	—	-19.7	-18.3	—	ENE, 5	23	25	om * † <sup>0</sup>	—	—	N. 10	—	The exhaust portion of the pressure tube anemometer almost wholly choked all day.
10	29.685	—	-19.6	-18.1	—	ENE, 5	21	25	om * † <sup>0</sup>	—	—	N. 10	—	
Midt.	29.647	—	-18.5	-18.0	—	E, 3-4	18	20-23	om †	—	—	S. 10	—	Overcast with fog, turning to mist later in the day. Wind of steady force from E, backing and veering from NNE to SE; max. run of cups for 2 hours, 59 miles; max. rate observed by pressure tube, 28 miles. Barometer fell steadily all day.
Mean	29.856	—	—	-17.4	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -14.0.8.		8 p. -13.0.9.		Solar radiation		black bulb —	—	Evapn. — grammes.	Precipn. — in.			

20th.

2	29.599	—	-19.5	-18.5	—	E, 3-4	17	20-22	om † <sup>0</sup>	—	—	S. 10	—	Moon just visible through stratus.
4	29.544	—	-20.0	-20.0	—	E by N, 4-5	26	25-28	bcm † U	A.-s. 6	—	—	—	Much clearer; stars visible; wind increasing.
6	29.524	—	-20.2	-18.6	—	E by N, 3-4	23	23-25	om †	—	—	S. 10	—	
8	29.466	—	-21.0	-20.0	—	E by N, 7-8	32	40	om † <sup>2</sup>	—	—	S. 10	—	
10	29.423	—	-21.3	-20.0	—	E by N, 8-9	37	45	bm † <sup>2</sup>	—	—	—	—	Dense drifting snow; stars visible.
Noon	29.439	—	-22.5	-21.0	—	E by N, 6-8	28	30	bcm † <sup>2</sup>	Cl. 8	—	—	—	Cl. radiating N and S. A. S. converging N and S over whole sky.
2	29.395	—	-22.9	-22.0	—	E by N, 6-7	23	35	bcm † <sup>2</sup>	Cl. 8	—	—	—	Cl. radiating N and S.
4	29.388	—	-21.0	-23.0	—	E by N, 8-9	47	35-37	bm † <sup>2</sup> U	—	—	—	—	Exhaust pipe of pressure tube partly choked.
6	29.386	—	-24.0	-24.0	—	E by N, 7-8	38	40-42	bm † <sup>2</sup> U	—	—	—	—	
8	29.375	—	-24.5	-23.0	—	ENE, 8-9	41	35-40	bcm † <sup>2</sup> U	—	Cl. 6	—	—	
10	29.393	—	-24.0	-20.0	—	NE, 5-7	27	25-35	ocmq † <sup>2</sup>	Cl.-en. 7, SE (mod.)	—	—	—	Mackerel sky in lines NW and SE.
Midt.	29.355	—	-21.8	-21.2	—	ENE, 6-7	31	30-33	oq †	A.-s. 10	—	—	—	Cl.-s. low down N, radiating NW and SE.
Mean	29.438	—	—	-20.9	—	—	—	—	—	—	—	—	—	Cleared about 10 a.m., but wind increased to a strong gale from E with much drift snow; max. run of cups for 2 hours, 94 miles; max. rate observed by pressure tube, 45 miles per hour. Barometer fell steadily all day. Thermometer steady and low.
Max. therm. read at		8 a. -17.0.0.		8 p. -20.0.0.		Solar radiation		black bulb —	—	Evapn. — grammes.	Precipn. 0.01 in.			

21st.

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22nd.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.343	—	-22.0	-21.8	—	—	ENE, 6	27	30	oq +	—	S. 10	—	
4	29.315	—	-21.8	-20.8	—	—	ENE, 5	27	25	oq +	—	S. 10	—	
6	29.293	—	-21.3	-20.2	—	—	NE, 5	29	25	oq +	—	S. 10	—	
8	29.277	—	-23.5	-21.2	—	—	NE, 4-5	23	33	e +	—	S.-cu. 8	—	A few stars visible. Moon invisible, though its position can be made out.
10	29.254	—	-23.2	-21.0	—	—	NE, 4-5	27	30-33	om +	—	S. 10	—	
Noon	29.225	—	-21.0	-20.8	—	—	NE, 3	22	20-25	om +	—	S.-cu. 10	—	
2	29.184	—	-23.0	-21.8	—	—	NE, 2-3	20	20-25	om	—	S. 10	—	
4	29.141	—	-22.0	-17.2	—	—	NE, 1-2	17	8-15	om	—	S. 10	—	
6	29.117	—	-24.0	-23.8	—	—	E, 1-2	21	10-15	om	—	S. 10	—	Precipitation in form of rime, dulling glass of anemometer, at 6, 8, and 10 p.m.
8	29.131	—	-24.0	-21.5	—	—	E, 1-2	17	15-18	o U	A. s. 10	—	—	
10	29.084	—	-22.0	-16.0	—	—	Lt. N airs	12	0-10	o U	A. s. 10	—	—	10 p.m. Wind shifted to N. Quick fall of barometer and rise of temperature. No movement of upper clouds visible.
Midt.	29.048	—	-22.1	-22.1	—	—	E by S, 1	5	0-10	b	—	—	—	11 p.m. Clouds more of the type of Fr. A.-cu. moving rapidly from NW.
Mean	29.201	—	—	-20.7	—	—	—	—	—	—	—	—	—	Overcast and misty all day. Wind strong from ENE to NE, gradually falling in the evening. Max. run of cups for 2 hours, 57 miles; max. rate observed by pressure tube, 33 miles per hour. Barometer fell steadily all day. Thermometer low and steady, but variable later in the day.
Max. therm. read at		8 a. -13° 5,		8 p. -16° 0.		Solar radiation			black bulb —	Evapn. — grammes.		Precipn. — in.		

23rd.

2	28.999	—	-24.0	-22.2	—	—	Calm	2	0	b V	—	—	—	Remarkably clear to W and SW, hills clear. Deposit of crystals on everything. Ice at tide crack in rapid motion.
4	28.957	—	-27.9	-27.2	—	—	NNW, 0-1	4	0-8	bm U V	—	—	—	
6	28.927	—	-28.1	-21.0	—	—	NE, 0-1	1	8-10	o V	—	S. 10	—	4 a.m. Same kind of rime deposit. Slight mist NW and N, clear to S and SE.
8	28.831	—	-28.0	-18.9	—	—	E by S, 0-1	1	10-15	bc	Fr.-ci.-s. 6, NW	—	—	6 a.m. Same deposit; entirely overcast.
10	28.857	—	-20.0	-14.0	—	—	Calm	4	0	oc ~	—	Fr.-s.-cu. 10, NNW	—	Precipitation in form of ice crystals.
Noon	28.830	—	-14.8	-9.2	—	—	Calm	3	0	oc	—	Fr.-s.-cu. 10, NW (last)	—	7.30 p.m. U 49° diameter with paraselena. Fr.-s, or possibly Nim., clouds moving up rapidly from ESE. Heavy bank of fog (?) low down over E hills. Rime on everything.
2	28.823	—	-14.0	-12.0	—	—	Calm	1	0	o	—	Fr.-s. 9, WNW, (fast)	—	
4	28.836	—	-13.0	-11.0	—	—	Lt. NNW airs	2	0	oc	—	Fr.-cu. 7	—	10 p.m. Much precipitation. Sky intensely blue. U 48° diameter. Heavy bank of clouds on hill tops to E and NE. Misty to S and W.
6	28.886	—	-19.0	-18.0	—	—	ESE, 1-2	5	10-15	oc	—	Fr.-cu. 9	—	
8	28.954	—	-22.5	-22.2	—	—	ENE, 2-3	14	18-22	bcq U V	—	Fr.-s. 6, ESE (rapid)	—	Midt. Clouds on hill tops more diffuse. Moon and stars brilliant through a slight mist. Appearance of fog all round to S and W, low down. Large U. Low banks of cloud on hill top drifting from E. Anemometer glass well coated with rime.
10	28.982	—	-24.0	-20.5	—	—	ENE, 2-3	11	20	bm U V	—	—	—	Clearer. Wind light and variable. Large amount of precipitation in form of ice crystals. Max. run of cups for 2 hours, 29 miles; max. rate observed by pressure tube, 22 miles per hour. Barometer fell until 2 p.m., then rose quickly. Thermometer very unsteady, but higher than usual.
Midt.	28.994	—	-21.9	-14.9	—	—	E, 1-2	13	15	bm ~ U	—	—	—	
Mean	28.911	—	—	-17.6	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -15° 2,		8 p. -9° 0.		Solar radiation			black bulb —	Evapn. — grammes.		Precipn. — in.		

24th.

2	29.048	—	-24.2	-23.9	—	—	S by W, 1	9	10	bm X U ~	—	—	—	1 a.m. From Crater Hill to Observation Hill, and thence to SW and NW, is absolutely blotted out in dense white fog, which now seems to cover the whole Strait from the ship. All the northern hills quite clear. Moon and a few stars visible. All the near hills dimly visible in white mist, which is now all round.
4	29.049	—	-24.7	-18.5	—	—	Lt. E airs	4	0	b U	—	—	—	
6	29.049	—	-21.8	-19.5	—	—	Calm	1	0	cm U	Cl.-cu. 8, N (rapid)	—	—	
8	29.038	—	-22.0	-21.2	—	—	Calm	1	0	om	—	S. 10	—	3 a.m. Mist entirely cleared away.
10	29.029	—	-22.5	-16.2	—	—	Calm	1	0	om V	—	S. 10	—	4 a.m. Quite clear. Mountain range visible and fairly distinct.
Noon	29.011	—	-17.5	-10.0	—	—	Lt. NW airs	1	0	ocm	—	Fr.-n. 9, NW (mod.) S. 10	—	6 a.m. A few stars visible; mountain range hidden by mist.
2	28.995	—	-15.5	-14.2	—	—	Calm	2	0	om	—	—	—	10 a.m. High fog. Moon shining under fog to SW. Large precipitation in form of soft snow particles.
4	29.007	—	-15.0	-10.0	—	—	Lt. NW airs	1	0	om	—	S. 10, WNW (rapid)	—	Heavy bank of Nim. or Str. low down from NE to SE, moving bodily from E. Snriace rapid.
6	29.028	—	-13.5	-11.8	—	—	Lt. N airs	4	0	b	—	—	—	8 p.m. A few scattered low clouds (send) moving from E. Mist obscuring mountain range.
8	29.066	—	-16.0	-13.0	—	—	Calm	3	0	b	—	—	—	Min. at high-level station during past 126 hours, -34° 0; temp. at 10 p.m., -25° 8, NW side of post covered with rime.
10	29.091	—	-17.0	-14.8	—	—	Calm	5	0	oc V ~	—	Fr.-all. cu. 8, NNW (fast) S. 10	—	10 p.m. A brilliant meteor fell from about 3° N of Saturn to 2° or 3° E of Jupiter, lasting about 1 sec., and was as bright as Jupiter.
Midt.	29.133	—	-19.9	-13.9	—	—	Calm	1	0	oc ~	—	—	—	
Mean	29.015	—	—	-15.6	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -12° 0,		8 p. -9° 0.		Solar radiation			black bulb —	Evapn. — grammes.		Precipn. — in.		

Calm all day. Overcast and misty until 6 p.m. A good deal of precipitation (in form of ice crystals) on outside things. Max. run of cups for 2 hours, 18 miles; max. rate observed by pressure tube, 10 miles per hour. Barometer steadier and inclined to rise towards evening. Thermometer rose a little and was pretty steady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.			Remarks.	
		Cape Armfitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.	Lower.		Aspirator.
Dry.	Wet.	Unscreened.	Upper.	Lower.										
2	29.176	—	-20.9	-15.9	—	ESE, 1	3	0-8	oc	—	S. 9	—	25th.  Only low land visible; low bank of mist all round.  Hills to W visible.  5 p.m. Cl. clouds forming and moving from SE fast. Lower clouds moving rapidly; streak of cloud NW and SE. Vane E. Bank of A.-s. clouds low down E to NE.  Bank of A.-s. from N to E, about 50°. Stratus lying NW and SE, with cirrus fringe. Vane NE. Slight halo. [Calm all day. Overcast early, but clearing for rest of the day. Max. run of cups for 2 hours, 19 miles; max. rate observed by pressure tube, 15 miles per hour. Barometer rising slowly until 11 p.m., then began to fall. Temperature very unsteady.	
4	29.222	—	-21.0	-17.2	—	ESE, 1	5	0-10	oc	—	S. 3	—		
6	29.273	—	-23.4	-20.7	—	ESE, 2	10	10-15	oc	—	S. 4	—		
8	29.317	—	-21.5	-19.0	—	ESE, 1	10	5-10	bc U	Cl.-cu. 5, NW	—	—		
10	29.316	—	-22.0	-21.0	—	Calm	5	0	b	—	—	—		
Noon	29.353	—	-24.8	-24.5	—	Calm	3	0	b	—	—	—		
2	29.361	—	-32.0	-22.5	—	Lt. E airs	2	0-5	b	—	—	—		
4	29.362	—	-23.0	-19.5	—	Lt. E airs	6	0-5	b	—	—	—		
6	29.366	—	-23.0	-17.0	—	Lt. var. airs	6	0-5	b	—	—	—		
8	29.382	—	-29.2	-28.0	—	Calm	1	0	b	—	—	—		
10	29.377	—	-24.0	-23.2	—	Calm	1	0	b U	—	—	—		
Midt.	29.373	—	-30.8	-23.6	—	Calm	1	0	b	—	—	—		
Mean	29.325	—	—	-21.2	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. -12° 8.		8 p. -17° 0.		Solar radiation		black bulb —	Evapn. — grammes.	Precipn. — in.				
								bright bulb —						

2	29.376	—	-24.0	-22.0	—	Calm	1	0	oc	Cl.-cu. 9, NW	—	—	26th.  A.-s. over the hills from E to NW.  Entirely overcast with thin A.-s. Diameter of halo, 46°. Mountain range visible. Diameter of halo, 46°. Cirrus radiating NW and SE. Moon very watery.  Diameter of halo, 45°. Stars visible, but watery. Moon very watery. Diameter of halo, 46°. Very watery moon. Stars clearer.  Calm and overcast all day until 6 p.m., when breeze sprang up from ESE, quickly freshening; max. run of cups for 2 hours, 42 miles; max. rate observed by pressure tube, 27 miles per hour. Barometer fell slowly until just before the wind sprang up, and then rose. Temperature higher and rather unsteady.	
4	29.360	—	-23.6	-16.0	—	Lt. N airs	1	0	oc	Cl.-cu. 8, NW	—	—		
6	29.361	—	-17.9	-16.1	—	Calm	1	0	oc U	A.-s. 10	—	—		
8	29.351	—	-18.4	-17.0	—	Calm	1	0	c U U	Fr.-ci.-s. 8	—	—		
10	29.347	—	-18.0	-14.0	—	Calm	1	0	c U	Cl.-s. 9, WSW	—	—		
Noon	29.331	—	-18.0	-16.0	—	Calm	1	0	c	A.-s. 10	—	—		
2	29.326	—	-15.8	-10.2	—	Calm	2	0	c	A.-s. 10	—	—		
4	29.335	—	-12.0	-10.8	—	Calm	2	0	c	A.-s. 10	—	—		
6	29.345	—	-12.0	-10.0	—	ESE 1-2	7	5-10	o	Thin A.-s. 10	—	—		
8	29.375	—	-17.0	-13.2	—	ESE 2	10	15-18	o U U	Thin A.-s. 10	—	—		
10	29.389	—	-15.5	-11.2	—	ESE 2	11	18-23	bc U U	A.-s. 5	—	—		
Midt.	29.423	—	-16.8	-15.0	—	E 3	21	26-27	bmc †	A.-s. 5	—	—		
Mean	29.390	—	—	-14.3	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. -13° 9.		8 p. - 8° 0.		Solar radiation		black bulb —	Evapn. — grammes.	Precipn. — in.				
								bright bulb —						

2	29.415	—	-17.0	-14.5	—	E by N, 6	22	23-30	bcq U	Cl. 1, N	—	—	27th.  Cl. radiating from N. Mountains obscured by fog, very clear overhead. 2.15 mountains cleared. Mist obscuring island to S. 4 a.m. Diameter of halo, 46°. 5.15 a.m. S.-cu. 8; wind force, 4-6. Mountains and a few stars visible. Mountains visible at first, but disappeared; U faint and also disappeared.  From noon to 4 p.m., sky overcast; clearing as wind increased.  Wind shifted from ENE to SE and blew up in strong gusts. Clear overhead, misty all round. Strong wind, no drift. Clear overhead. Low down Fr.-a.-s. moving fast from SW. Fringe of Cl. radiating SE. Midt. Moon very watery.  Overcast, clearing towards the evening. Wind fresh and unsteady; max. run of cups for 2 hours, 56 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer very unsteady, but inclined to rise. Temperature steady.	
4	29.413	—	-17.0	-15.9	—	E by N, 4	25	24	bem U	Cl.-s. 1, N	—	—		
6	29.423	—	-18.9	-11.2	—	E, 4	18	22-23	c	S.-cu. 10, W	—	—		
8	29.421	—	-18.9	-16.5	—	E by N, 3-4	18	15-20	oc	—	S. 10	—		
10	29.419	—	-18.6	-15.5	—	E by N, 3-4	21	22-25	bc	Thin A.-s. 6	—	—		
Noon	29.379	—	-16.8	-16.5	—	NE, 4	26	25-28	o	A.-s. 10	—	—		
2	29.389	—	-17.0	-11.0	—	ENE, 2-3	24	20-22	o	Thin A.-s. 10	—	—		
4	29.393	—	-15.0	-11.8	—	ENE, 3-4	22	18-22	o	Thin A.-s. 10	—	—		
6	29.419	—	-14.5	-12.0	—	SE, 2-3	15	18-20	bc	Thin A.-s. 5	—	—		
8	29.425	—	-13.8	- 9.8	—	SE, 4-5	28	25-35	bmq	—	—	—		
10	29.439	—	-15.0	-15.0	—	E, 2-3	20	20-22	b	—	—	—		
Midt.	29.418	—	-20.0	-20.0	—	E by N, 5	25	25-28	bc †	A.-s. 6	—	—		
Mean	29.416	—	—	-14.1	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. -11° 2.		8 p. - 9° 8.		Solar radiation		black bulb —	Evapn. — grammes.	Precipn. — in.				
								bright bulb —						

1902—May.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Spirit minimum.	Dry.								Wet.		
28th.	2	29.459	-21.0	-18.8	-	-	E by N, 4-5	25	20-22	bc †	A.-s. 2	-	-	Moon very watery.
	4	29.431	-20.0	-18.5	-	-	E by N, 5	32	24-26	bc ☽	Cl.-s. 1	-	-	Clouds very wind-swept.
	6	29.445	-20.5	-19.2	-	-	E by N, 2-3	18	12-14	bc	Cl., Cl.-s. 4	-	-	Moon misty. Sudden lull in wind.
	8	29.419	-21.0	-20.0	-	-	E, 4-5	25	25-33	e † ☽	Fr.-ci.-s. 10	-	-	6.10. Sounded like force 6-7 up in the rigging. Drift on hills.
	10	29.420	-23.0	-22.5	-	-	E, 3-4	30	25-28	b ☽	-	-	-	8 a.m. Erebus smoking in big quantities and apparently coming from the N.
	Noon	29.429	-24.0	-23.5	-	-	E by N, 3	20	20-23	b ☽	-	-	-	-
	2	29.318	-24.2	-22.6	-	-	E by N, 4	24	30-35	b	-	-	-	-
	4	29.340	-25.0	-24.5	-	-	ENE, 4	28	22-25	b	-	-	-	Although blowing fresh all day, there was no drift.
	6	29.361	-27.0	-27.0	-	-	ENE, 3-4	21	15-20	b	-	-	-	-
	8	29.345	-30.0	-30.0	-	-	ENE, 3-4	25	22-27	b	-	-	-	Three streamers of aurora in ESE, alt. 7°.
	10	29.319	-31.0	-30.2	-	-	ENE, 3-4	21	24-26	b ☽ ☽	-	-	-	Diameter of halo, 45°.
	Midt.	29.294	-31.0	-29.0	-	-	E by N, 5-6	35	35-40	om † <sup>2</sup>	Fr.-ci.-s. 10	-	-	Clear most of the day, with fresh E and ENE wind; max. run of cups for 2 hours, 70 miles; max. rate observed by pressure tube, 40 miles per hour. Barometer very unsteady until noon, then fell quickly. Temperature low and falling.
	Mean	29.383	-	-23.8	-	-	-	-	-	-	-	-	-	-
		Max. therm. read at { 8 a. -10°·5. 8 p. -20°·0.		Solar radiation { black bulb —. bright bulb —.		Evapn. — grammes.		Precipn. — in.						

29th.	2	29.246	-29.0	-25.2	-	-	E by N, 4	22	30	om † <sup>0</sup>	Fr.-s. 10, E	-	-	-
	4	29.239	-25.2	-25.0	-	-	E by N, 4-5	31	33	om † <sup>2</sup>	Fr.-s. 10, E	-	-	At 2, 4, and 6 a.m., the Fr.-s. might possibly have been comparatively high driving snow (?)
	6	29.252	-27.8	-25.2	-	-	E by N, 5	33	28-36	om † <sup>2</sup>	Fr.-s. 10, E	-	-	-
	8	29.275	-27.0	-16.0	-	-	E, 3-5	27	20-25	oq † <sup>0</sup>	-	S. 10	-	-
	10	29.283	-17.0	-11.2	-	-	ESE, 1-4	18	8-15	oq	-	S. 10	-	Shore thermometer reading 1°·5 higher than screen.
	Noon	29.274	-11.5	- 9.0	-	-	SE, 3-6	23	30-35	oq †	-	S. 10	-	-
	2	29.250	-13.0	- 9.0	-	-	ESE, 2-4	25	10-20	oq †	-	Fr.-s. 10	-	-
	4	29.221	-10.0	- 5.0	-	-	Var. SE, 2-5	22	10-25	oq †	-	S. 10	-	Wind shifting from ESE to SE to E, and back again.
	6	29.212	- 6.0	- 3.0	-	-	Var. E, 2-4	19	10-20	oq	Thin A.-s. 10	-	-	5 p.m. Heavy squalls; light breeze between them.
	8	29.104	- 4.5	- 1.8	-	-	E, 2-4	18	20-25	oq †	A.-s. 10	-	-	6 p.m. Wind shifting from E to SE in squalls. Some stars, dimly seen.
	10	29.026	- 3.5	- 1.2	-	-	SE, 3-5	24	25-34	oq †	A.-s. 10	-	-	Very gusty, with frequent lulls.
	Midt.	28.926	- 3.4	- 1.0	-	-	SE, 2-4	21	21-25	oq † <sup>0</sup>	A.-s. 10	-	-	-
	Mean	29.192	-	-10.9	-	-	-	-	-	-	-	-	-	Overcast, with strong squalls from E to SE; max. run of cups for 2 hours, 68 miles; max. rate observed by pressure tube, 36 miles per hour. Barometer falling after midday; temperature rising all day.
		Max. therm. read at { 8 a. -15°·5. 8 p. —.		Solar radiation { black bulb —. bright bulb —.		Evapn. — grammes.		Precipn. — in.						

30th.	2	28.846	- 0.0	- 5.0	-	-	S by E, 1-5	26	15-33	oq †	A.-s. 10	-	-	-
	4	28.731	- 4.2	- 6.0	-	-	S, 1-5	22	15-36	oq † <sup>2</sup>	A.-s. 10	-	-	-
	6	28.638	- 5.0	- 9.0	-	-	S, 3-6	23	25-39	oq † <sup>2</sup>	A.-s. 10	-	-	-
	8	28.586	- 8.0	- 9.6	-	-	SSE, 2-3	22	10-15	oq *	-	N. 10	-	Outlook very limited, cannot even see the shore.
	10	28.585	- 8.2	-10.8	-	-	ESE, 1-3	13	15-20	oq	-	N. 10	-	-
	Noon	28.524	-10.0	-13.0	-	-	ESE, 1-4	19	15-20	oq †	-	N. 10	-	-
	2	28.465	-12.0	-13.8	-	-	S, 2-3	16	20-25	oq †	-	N. 10	-	-
	4	28.468	-12.5	-13.5	-	-	S by W, 2-5	22	25-30	oq †	-	N. 10	-	-
	6	28.483	-12.5	-13.2	-	-	SE, 1-3	17	10-15	o	-	S. 10	-	-
	8	28.521	-12.5	-13.8	-	-	ESE, 1-2	19	10-15	be	A.-s. 2	-	-	-
	10	28.535	-12.0	-13.8	-	-	SSE, 1-2	9	10-15	oe	A.-s. 9	-	-	Stars visible, but dimly.
	Midt.	28.579	-12.5	-14.5	-	-	SSE, 3	11	15-20	oe	A.-s. 10	-	-	Overcast most of the day, with S to ESE wind, unsteady and squally; max. run of cups for 2 hours, 51 miles; max. rate observed by pressure tube, 39 miles per hour. Barometer falling until 2 p.m., then rose slowly. Temperature showed an extraordinary rise all day.
	Mean	28.580	-	-11.3	-	-	-	-	-	-	-	-	-	-
		Max. therm. read at { 8 a. 6°·8. 8 p. 14°·0.		Solar radiation { black bulb —. bright bulb —.		Evapn. — grammes.		Precipn. — in.						

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Clouds, Amount and movement.			Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Sunshine.		Upper.	Lower.	Aspirator.	
			Dry.	Wet.										
2	28.633	—	13.2	14.2	14.0	—	S by E, 1-2	13	3-8	oc	—	A.-s. 10	—	<p>31st.</p> <p>Hazy seen round moon, lunar corona (?). Stars can be seen through fog-like haze. Two patches of aurora to NE.</p> <p>Mountain range not visible. Moon and stars all misty.</p> <p>Fine day on the whole. Wind light at mid-day, rising from NE about 4 p.m., and freshening towards evening; max. run of cups for 2 hours, 48 miles; max. rate observed by pressure tube, 28 miles per hour. Barometer rising slowly all day. Thermometer still extraordinarily high, but falling all day.</p>
4	28.686	—	13.0	14.5	14.2	—	S by W, 2-3	10	10-12	oc	—	Cl. 10	—	
6	28.739	—	12.0	14.2	13.8	—	ESE, 2-3	10	10-12	oc *	—	Cl. 7	N. 3	
8	28.785	—	12.0	13.2	13.0	—	Lt. S airs	7	0	cu *	—	—	Thin N. 10	
10	28.815	—	11.0	11.2	11.0	—	Lt. N airs	4	0	bc	—	A.-cu. 3, W	—	
Noon	28.858	—	7.5	11.2	11.0	—	Calm	6	0	oc	—	Cl. cu. 5, NW	A.-cu. 4	
2	28.876	—	8.5	13.2	12.8	—	Calm	5	0	bc	—	Cl.-cu. 4	—	
4	28.899	—	8.5	11.2	10.8	—	NE, 1-2	6	10-15	b	—	—	—	
6	28.939	—	5.5	6.0	5.5	—	NE, 2	14	10-20	oc	—	A.-s. 10	—	
8	28.987	—	2.5	4.2	3.8	—	E, 2	24	20-25	b †	—	—	—	
10	29.028	—	3.0	3.0	2.8	—	NE, 2-3	16	25-28	oc †	—	Thin A. s. 10	—	
Midt.	29.035	—	1.0	3.0	2.8	—	NE, 2-3	17	20-23	o	—	Thin A.-s. 10	—	
Mean	28.857	—	—	9.9	9.6	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 15° 3.  
8 p. 14° 0.

Solar radiation { black bulb —  
bright bulb —.

Evapn. — grammes.

Precipn. — in.

1902—June.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.			Wind.		Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Anemometer.	Spirit minimum.	Mercurial.	Direction and force (Beaufort scale).	Upper.					Lower.			
1st.	2	29.063	—	1.0	0.0	0.2	—	E by N, 2-3	20	25-28	o	Very thin A.-s. 10	—	Stars dimly visible. Glow of aurora, alt. 25°, N to SE.
	4	29.103	—	3.0	2.2	2.5	—	E, 2	20	20-22	b	—	—	Heavy bank of clouds low down to N and E.
	6	29.130	—	5.0	2.0	2.2	—	E, 2-3	18	20-27	bc	Cl.-cu. 4, NW (very slow)	—	"Mackerel sky," movement extremely slow.
	8	29.151	—	3.9	2.9	3.4	—	NE, 1-2	18	10-20	c	Cl.-cu. 8	—	Four rays of aurora rose to 30° in NE and disappeared.
	10	29.163	—	4.0	1.5	1.5	—	ENE, 1-2	13	20-25	bc	A.-cu. 3	—	—
	Noon	29.169	—	3.0	2.0	2.0	—	ENE, 1-2	11	15	b	—	—	Low stratus all round covering hills to NE and passing rapidly over from NE.
	2	29.162	—	4.0	2.8	2.8	—	ENE, 2-3	11	20-23	b~	—	—	Low stratus over hills to NE and E. Slight precipitation.
	4	29.158	—	5.0	4.5	4.5	—	NE, 2-3	17	25	b~	—	—	Same precipitation.
	6	29.141	—	6.5	5.5	5.5	—	NE, 2-3	19	25-28	b~	—	—	Same precipitation.
	8	29.143	—	7.0	4.5	5.0	—	ENE, 3	23	28-33	b	—	—	Precipitation had apparently stopped.
	10	29.131	—	6.0	4.2	4.5	—	NE, 3	21	28-33	bc	Thin A.-s. 5	—	—
	Midt.	29.117	—	5.1	3.0	3.1	—	E by N, 3	18	25	o	A.-s. 10	—	—
	Mean	29.136	—	—	2.9	3.1	—	—	—	—	—	—	—	On the whole a clear day, with light to fresh NE breezes; max. run of cups for 2 hours, 46 miles; max. rate observed by pressure tube, 33 miles per hour. Barometer rose until noon, and then fell slowly. Temperature remains high and steady.
		Max. therm. read at { 8 a. 7°·5. 8 p. -1°·5.		Solar radiation { black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.						

2nd.	2	29.105	—	4.0	1.8	2.0	—	NE, 3	16	22	o	—	S. 10	—	—
	4	29.091	—	2.8	0.0	0.2	—	E by S, 1	8	8	o	—	S. 10	—	—
	6	29.090	—	4.0	2.9	3.0	—	E by S, 1	7	0	b	—	—	—	Faint aurora beam in NE.
	8	29.078	—	7.2	2.5	2.5	—	NE, 2	4	10-15	c	—	S. 8	—	—
	10	29.049	—	10.2	8.5	8.5	—	NE, 2	17	20-25	bc	Cl.-s. 5	—	—	—
	Noon	29.025	—	10.0	7.0	7.0	—	NE, 1-2	11	10-15	b	Cl. 1, NW	Fr.-n. 4, WNW (fast)	—	Min. at high-level station during past 216 hours, -41°·0. Temp. at 1 p.m., -20°·0. Erebus smoke in big quantity going to NE.
	2	29.001	—	17.2	14.8	14.8	—	SE, 2-4	10	20-25	b	—	—	—	—
	4	29.025	—	18.0	17.5	—	—	NE, 3	27	20-27	b	—	—	—	—
	6	29.054	—	19.0	18.0	—	—	E, 3-4	27	30-33	b	—	—	—	—
	8	29.136	—	19.0	18.0	—	—	E, 3-4	30	35-38	b	—	—	—	—
	10	29.221	—	18.0	15.0	—	—	ENE, 1-2	24	20-23	b	—	—	—	—
	Midt.	29.282	—	16.8	10.0	—	—	E, 1-2	11	10-15	b	—	—	—	Clear, fine day; wind light and variable early, freshening from E towards middle day, and falling light in evening; max. run of cups for 2 hours, 61 miles; max. rate observed by pressure tube, 33 miles per hour. Barometer fell steadily to about 2 p.m., then rose quickly. Thermometer fell steadily.
	Mean	29.066	—	—	9.7	—	—	—	—	—	—	—	—	—	—
		Max. therm. read at { 8 a. 2°·0. 8 p. -3°·0.		Solar radiation { black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.							

3rd.	2	29.296	—	12.0	9.2	—	—	ESE, 1-2	11	10-15	b	—	—	—	—
	4	29.383	—	18.0	11.4	—	—	Calm	3	5-10	oc	—	S. 10	—	—
	6	29.407	—	18.0	15.5	—	—	Calm	1	5-10	b	—	—	—	—
	8	29.432	—	16.2	10.2	—	—	Calm	3	0	oc	—	S. 10	—	Stars dimly visible. Stratus may be high or low (?)
	10	29.456	—	13.0	5.0	—	—	Lt. SE airs	5	0	bc	A.-s. 5	—	—	—
	Noon	29.462	—	7.0	3.8	—	—	SE, 1-2	3	8-10	o	A.-s. 10	—	—	—
	2	29.494	—	5.5	3.8	—	—	E by N, 1-2	12	0-8	o	A.-s. 10	—	—	—
	4	29.505	—	5.0	2.2	—	—	S, 2-4	16	20-25	o †	—	S. 10	—	—
	6	29.535	—	4.0	2.0	—	—	SE var., 2-4	21	15-25	oq †	—	S. 10	—	Wind coming from Observatory Hill; very variable, E by S to S by E.
	8	29.579	—	4.0	3.0	—	—	E, 2-3	22	15-20	o	—	S. 10	—	—
	10	29.632	—	5.0	3.0	—	—	SE var., 2-3	17	15-18	o	—	S. 10	—	Wind coming from Observatory Hill; very variable, ESE to SSE.
	Midt.	29.607	—	—	5.2	—	—	ESE, 1-2	11	10-15	b	—	—	—	Clear sky. Mist apparent to the E. Overcast nearly all day, with wind of variable force; max. run of cups for 2 hours, 43 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer rising steadily all day. Temperature rose again and remained steadily high.
	Mean	29.482	—	—	6.2	—	—	—	—	—	—	—	—	—	—
		Max. therm. read at { 8 a. -8°·2. 8 p. -1°·0.		Solar radiation { black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.							

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Spirit minimum.	Dry.								Wet.		
2	29.601	—	-10.1	-8.0	—	—	ESE, 1	7	10	b	—	—	} Strong gusts of wind now and then.  Heavy bank of Str. or Nim. covering whole sky from E to W, coming up quickly from NNW. Noon. Bank of Str. or Nim. clearing in N, passing rapidly from NNW. 2 p.m. Clear to N low down.  Clear to SW and NW.  Fine on the whole, with fresh E wind early, falling during the day, and freshening again from NE; max. run of cups for 2 hours, 48 miles; max. rate observed by pressure tube, 27 miles per hour. Barometer fell steadily to 2 p.m. and then rose slowly. Thermometer fell a little, but is still rather high.	
4	29.584	—	-10.1	-9.8	—	—	ENE, 2-3	7	20-25	b	—	—		
6	29.560	—	-11.0	-7.0	—	—	E by N, 2-3	24	15-25	b	—	—		
8	29.536	—	-9.0	-8.0	—	—	E, 4-5	20	15-20	b	—	—		
10	29.535	—	-11.0	-9.0	—	—	E, 2	19	15-22	bc	—	S. 2, NNW		
Noon	29.501	—	-10.0	-9.2	—	—	ENE, 3	22	23-27	oc	—	S. 9, NNW		
2	29.499	—	-10.8	-7.8	—	—	NE, 1-3	17	15-23	oq	—	Fr.-s. 10, N		
4	29.517	—	-11.8	-10.8	—	—	NE, 1-2	18	15-20	bc	—	Fr.-s. 5, N		
6	29.533	—	-12.2	-9.0	—	—	NE, 1-2	12	10-15	bc	—	Fr.-s. 4, N		
8	29.606	—	-11.0	-9.2	—	—	ENE, 1-2	14	12-15	b	—	—		
10	29.595	—	-12.0	-10.5	—	—	NE, 1-2	14	12	bv	—	—		
Midt.	29.601	—	-18.0	-16.5	—	—	NE, 3-4	21	20-25	b	—	—		
Mean	29.556	—	—	-9.6	—	—	—	—	—	—	—	—	—	

4th.

Max. therm. read at { 8 a. -2°0.  
8 p. -2°0. Solar radiation { black bulb —  
bright bulb —. Evapn. — grammes. Precipn. — in.

2	29.618	—	-17.8	-16.5	—	—	E by N, 4	21	20-22	b	—	—	} Faint but extensive ☽ in SE.  Faint auroral arch in E. Starlight very brilliant. Faint auroral arch extending NE to S.  11 a.m. Erebus smoking thickly; not possible to say which way smoke is going. 1.30 p.m. Observed meteor fall; radiant point α Argus.  Faint ☽ SE until 12.15 a.m. Fine ☽ clear on the whole. Wind falling from E 4 in the morning, and remaining light all day; max. run of cups for 2 hours, 42 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer fairly steady and inclined to rise. Thermometer lower and falling.
4	29.630	—	-18.0	-15.0	—	—	E, 2-3	18	10-15	b	—	—	
6	29.652	—	-17.8	-16.6	—	—	NE, 1-2	10	5-10	b	—	—	
8	29.649	—	-16.8	-14.8	—	—	NE, 2-3	21	15-23	b	—	—	
10	29.646	—	-18.0	-11.2	—	—	NE, 1-2	16	10-15	oc	—	S.-cu. 8, NE (mod.)	
Noon	29.655	—	-12.5	-6.0	—	—	Lt. NNE airs	13	0-5	bc	—	Ci. 2, NW S.-cu. 4, N	
2	29.685	—	-15.6	-12.8	—	—	NE, 1-2	11	10	b	—	—	
4	29.689	—	-13.5	-11.5	—	—	NE, 2	14	15-18	o	—	S. 10	
6	29.699	—	-17.5	-17.2	—	—	NE, 2-3	18	25	b	—	—	
8	29.715	—	-20.2	-20.0	—	—	E, 3-4	21	23	b	—	—	
10	29.738	—	-21.0	-19.0	—	—	E, 3	18	20	b	—	—	
Midt.	29.747	—	-22.2	-21.5	—	—	NE, 1	13	0	b	—	—	
Mean	29.677	—	—	-14.9	—	—	—	—	—	—	—	—	—

5th.

Max. therm. read at { 8 a. -11°0.  
8 p. -5°2. Solar radiation { black bulb —  
bright bulb —. Evapn. { 1. 4.8 } grammes in  
11. 4.1 } 23 hours. Precipn. — in.

2	29.753	—	-24.2	-17.5	—	—	Lt. N airs	4	0	b	—	—	} 5 a.m. Slight precipitation in form of ice crystals for 2 mins. Between 10 a.m. and noon very light precipitation in form of minute ice particles, forming shapes like sprays. 8 a.m. A large and perfect auroral arch, with very bright beams in several places, from N to S across E, alt. about 45°. 11 a.m. Erebus smoking very little; (smoke) nearly upright, inclined to E. 1 p.m. Mtn. at high-level station since 72 hours, -34°9; temp. at 1 p.m., -23°0. Temp. in crevasse, 41 feet down, -11°0; temp. at surface, -23°0. 1.10 p.m. Snow fell for 2 mins., minute ice particles. 1.30 p.m. Observed meteor radiant point α Caus Majoris to horizon. 2 p.m. Precipitation in form of very minute ice crystals. 8 p.m. Very faint aurora curtain, alt. 8°, SW to ESE. 10 p.m. Very faint aurora glow in NE, alt. 20°. Fine and clear all day, with calm and light variable winds; max. run of cups for 2 hours, 27 miles; max. rate observed by pressure tube, 15 miles per hour. Barometer rose a little until 8 a.m. and then fell for remainder of day. Temperature low; made a big fall at 4 p.m., rising again at 8 p.m.
4	29.745	—	-18.2	-14.0	—	—	NE, 2-3	9	15	bc	—	A.-s. 6, NW	
6	29.762	—	—	-14.5	—	—	ENE, 1-3	4	0-5	b	—	—	
8	29.767	—	-19.0	-17.0	—	—	NE, 1-2	13	10	b	—	—	
10	29.763	—	-18.0	-11.0	—	—	Lt. N airs	12	0	b → ☽	—	—	
Noon	29.753	—	-18.2	-15.5	—	—	Calm	2	0	b	—	—	
2	29.710	—	-18.0	-12.0	—	—	N, 1	2	6	o → ☽	—	N. 10, NNW	
4	29.675	—	-25.8	-25.0	—	—	Calm	1	0	b	—	—	
6	29.613	—	-28.0	-26.5	—	—	Calm	0	0	b	—	—	
8	29.544	—	-28.0	-9.8	—	—	NNW, 1	3	5-10	b	—	—	
10	29.488	—	-10.2	-9.8	—	—	NW, 1-2	10	10-15	b	—	—	
Midt.	29.497	—	-19.0	-18.0	—	—	E by S, 1-2	7	14	h	—	—	
Mean	29.673	—	—	-16.1	—	—	—	—	—	—	—	—	—

6th.

Max. therm. read at { 8 a. -10°6.  
8 p. -9°8. Solar radiation { black bulb —  
bright bulb —. Evapn. { 1. 2.4 } grammes in  
11. 2.1 } 23 hours. Precipn. — in.

1902—June.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.							Wet.			
7th.	2	29.515	-19.0	-16.2			Lt. E airs	5	0	b				Faint ☉.
	4	29.475	-19.5	-19.0			Lt. NE airs	7	0	b				Faint ☉ NE to S.
	6	29.451	-19.0	-15.0			NE, 1-2	10	10	b ☉				
	8	29.449	-19.1	-17.0			E by N, 1	5	0-10	b				An extended arch of beams gradually working round from S to SE, then S to E, and eventually S to NE. Very bright in places. Alt. about 20°.
	10	29.449	-24.2	-25.5			E by N, 1	18	25-27	b				
	Noon	29.463	-30.5	-30.0			E, 3-4	26	30-32	b				
	2	29.510	-32.5	-29.5			E, 3-4	24	23-25	b				
	4	29.575	-30.8	-26.2			E, 3-4	26	25-27	b				
	6	29.647	-29.0	-25.2			E, 2	18	15	bm				Stars visible, but dim.
	8	29.706	-29.0	-22.0			E by S, 1-2	12	12	b				
	10	29.696	-23.2	-16.8			NE, 1-2	6	10-12	b				Faint aurora glow in NE to SW, alt. 40°.
	Midt.	29.701	-22.0	-21.0			N, 1	10	0	bm				Stars shining through a mist.
	Mean	29.553	-	-22.0			-	-	-	-				Fine and clear all day. Light airs in the morning, rising to strong from E, falling towards evening; max. run of cups for 2 hours, 53 miles; max. rate observed by pressure tube, 32 miles per hour. Barometer fell until 10 a.m., then rose quickly. Temperature fell and remained low.
		Max. therm. read at { 8 a. -9°-3. 8 p. -16°-0.		Solar radiation { black bulb — bright bulb —.		Evapu. — grammes.		Precipn. — in.						

8th.	2	29.720	-20.0	-21.5			ESE, 0-1	2	0	bm				Stars shining as though through mist.
	4	29.729	-22.0	-17.0			E by N, 0-1	3	0	bm				Faint auroral streamers from N through NE to E., alt. 15°-45°.
	6	29.737	-18.5	-15.0			S, 1-2	4	0	cm			S. 8	
	8	29.735	-12.0	-10.0			Lt. SE airs	3	0	om			S. 10	A few stars shining through misty stratus.
	10	29.787	-25.0	-21.0			E, 2	12	12-17	o			S. 10	
	Noon	29.853	-27.5	-20.2			E, 1-3	16	10-23	oq			S. 10	
	2	29.903	-28.0	-26.2			E by N, 3-4	22	25	oc			Fr.-s. 8	Clearing overhead. Stratus very wind-swept to N and NW.
	4	29.931	-27.0	-21.0			E, 1	18	5-10	oc			Fr.-s. 7	Stars dimly visible in places. Clear to S and NW.
	6	29.944	-23.5	-16.6			E by S, 1-2	13	10-15	b				
	8	29.931	-19.0	-15.0			NE, 2-3	16	15-22	b				
	10	29.929	-17.8	-15.5			E by N, 1-2	13	10-20	b				
	Midt.	29.888	-18.5	-14.8			E by N, 1-2	7	10-12	b				Overcast the greater part of day, clearing at 6 p.m. Wind light and variable easterly, fresh about 2 p.m.; max. run of cups for 2 hours, 44 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer rose until 6 p.m., and then fell slowly. Temperature rather unsteady.
	Mean	29.841	-	-17.8			-	-	-	-				
		Max. therm. read at { 8 a. -9°-4. 8 p. -9°-8.		Solar radiation { black bulb — bright bulb —.		Evapu. — grammes.		Precipn. — in.						

9th.	2	29.830	-19.8	-16.8			ENE, 2-3	13	12-15	b				
	4	29.855	-23.0	-20.5			E by S, 1	7	5-10	b				
	6	29.836	-22.5	-19.5			E, 1-2	6	10-12	b				
	8	29.846	-21.0	-20.0			NE, 1-2	7	5-10	b				
	10	29.814	-27.0	-26.6			ENE, 3-4	25	30-32	b				
	Noon	29.841	-27.8	-26.2			ENE, 1-2	22	8-15	b				
	2	29.841	-27.0	-23.0			E, 1	14	10-12	b				
	4	29.822	-23.0	-20.2			E, 1	10	8-10	b				
	6	29.831	-23.0	-22.0			E, 1-2	13	12	b				Very faint aurora glow in NE, alt. 15°.
	8	29.825	-24.0	-20.2			Lt. SE airs	13	8-10	b				
	10	29.816	-25.0	-24.2			E, 1-2	11	10-15	b				Very faint aurora glow E to SSE, alt. 8°.
	Midt.	29.792	-26.9	-22.0			SE, 1-2	11	11	b				Very faint aurora glow E to SE, alt. 12°.
	Mean	29.829	-	-21.8			-	-	-	-				Fine and clear day. Wind light, rising quickly between 8 and 10 a.m. and falling as quickly between 10 and 11 a.m.; max. run of cups for 2 hours, 51 miles; max. rate observed by pressure tube, 32 miles per hour. Barometer falling generally. Temperature low and steady all day.
		Max. therm. read at { 8 a. -13°-2. 8 p. -16°-0.		Solar radiation { black bulb — bright bulb —.		Evapu. { 1.41 } grammes in 11.39 } 73 hours.		Precipn. — in.						

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Capo Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.793	—	-26.2	-25.5	—	ESE, 1-2	11	14	b	—	—	—	10th. Exceedingly faint aurora glow NE to SE and one bright streamer N. Aurora arc at 4 a.m., single bright streamer N by E. Auroral arch N to S arc 20°-30° alt. Beams broad and brilliant to S, narrow and faint in N. Between 2 and 4 p.m. slight precipitation in form of minute ice crystals forming sprays, and also of the few larger prisms. Erebus smoke going NE. 6, 8, 10 p.m., and Midt., precipitation in form of minute ice crystals. Fine and clear day. Wind calm all day; max. run for 2 hours, 23 miles; max. rate observed by pressure tube, 14 miles per hour. Barometer falling all day. Temperature steady and low.	
4	29.781	—	-25.2	-21.5	—	SE by E, 1-2	11	11	b	—	—	—		
6	29.729	—	-25.0	-23.0	—	SE by E, 1	7	5	b	—	—	—		
8	29.676	—	-25.5	-21.3	—	Lt. NE alrs	7	0-5	b	—	—	—		
10	29.604	—	-26.5	-26.0	—	Calm	2	0	b	—	—	—		
Noon	29.590	—	-27.0	-27.0	—	Lt. N alrs	4	0	b	—	—	—		
2	29.551	—	-36.8	-31.0	—	Calm	1	0	b	—	—	—		
4	29.501	—	-31.0	-29.0	—	Calm	1	0	b	—	—	—		
6	29.460	—	-30.0	-20.2	—	Calm	2	0	b →	—	—	—		
8	29.426	—	-26.5	-24.0	—	Calm	1	0	b →	—	—	—		
10	29.408	—	-28.0	-28.0	—	Calm	0	0	b →	—	—	—		
Midt.	29.382	—	-27.0	-25.0	—	Calm	0	0	b →	—	—	—		
Mean	29.575	—	—	-25.2	—	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. -19° 0. 8 p. —		Solar radiation { black bulb — bright bulb —		Evapn. — grammes.		Precipn. — in.						

2	29.363	—	-27.5	-24.5	—	Calm	1	0	b →	—	—	—	11th. 2, 4, 6, and 10 a.m., precipitation in form of minute oblong right-angled crystals. Fine rime on anemometer glass. Faint arch of streamers in S. Auroral arch of streamers S to E., alt. 20°. Min. temperature at high-level station since 120 hours, -42° 5. Temp. at 1 p.m., -28° 7. Big quantity of smoke from Erebus going NNE. Stars looking misty. Fine, calm and clear until 6 p.m., when wind sprang up from E, shifting to S and SSW and bringing very wet snow; max. run of cups for 2 hours, 33 miles; max. rate observed by pressure tube, 12 miles per hour. Barometer fell until 8 a.m. and then rose quickly. Temperature low and steady until wind rose, then it rose also.
4	29.349	—	-33.6	-29.0	—	Calm	0	0	b →	—	—	—	
6	29.332	—	-31.5	-30.5	—	Calm	1	0	b →	—	—	—	
8	29.317	—	-32.0	-22.0	—	Calm	1	0	b	—	—	—	
10	29.333	—	-30.5	-28.5	—	Calm	0	0	b →	—	—	—	
Noon	29.314	—	-34.2	-30.8	—	Calm	10	0	b ↓	—	—	—	
2	29.305	—	-31.8	-30.2	—	Calm	0	0	b ↓	—	—	—	
4	29.495	—	-31.0	-24.0	—	Calm	0	0	b → ↓	—	—	—	
6	29.552	—	-24.2	-15.8	—	E, 1-2	2	10-12	b *	—	—	—	
8	29.603	—	-18.0	-15.8	—	ESE, 1-2	19	10	o *	—	N. 10	—	
10	29.647	—	-20.0	-17.0	—	S, 1	15	10-12	of *	—	N.-s. 10	—	
Midt.	29.698	—	-20.0	-16.0	—	SSW, 1-2	13	10-12	o *	—	N. 10	—	
Mean	29.453	—	—	-23.4	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. -19° 0. 8 p. -15° 5.		Solar radiation { black bulb — bright bulb —		Evapn. { 1. 1.4 } grammes in 11. 1.6 } 48 hours.		Precipn. — in.					

2	29.790	—	-18.0	-17.0	—	S, 2	12	15-20	of *	—	N.-s. 10	—	12th. A few stars dimly visible. Snow very damp. All instruments in screens covered with soft, wet snow. Pressure-tube heads badly choked. Stars misty. 8 a.m. Arch of auroral beams SE and NE, about 15°. 10 a.m. Clouds low down to N, moving from NW fast. Faint aurora NE to SW. Overcast and foggy early with wet snow; clearing at 6 a.m. and remaining clear all day. Wind gradually backing from S to E and remaining light; max. run of cups for 2 hours, 42 miles; max. rate observed by pressure tube, 23 miles per hour. Barometer rose until 6 a.m., and then dropped for rest of the day. Temperature fell in evening, but was steady up till then.
4	29.824	—	-20.0	-18.0	—	S, 2-3	20	15-23	o *	—	Thin S. 8	—	
6	29.833	—	-20.0	-18.2	—	SSE, 1-2	19	10-12	b	—	—	—	
8	29.812	—	-19.5	-17.0	—	E, 1-2	10	10-12	b	—	—	—	
10	29.749	—	-20.5	-19.0	—	NE, 2-3	17	15-20	b	—	—	—	
Noon	29.719	—	-20.0	-14.0	—	NE, 1	12	8	b	—	—	—	
2	29.699	—	-15.2	-14.0	—	Calm	7	0	b	—	—	—	
4	29.681	—	-22.0	-17.5	—	Calm	1	0	b	—	—	—	
6	29.679	—	-21.0	-19.2	—	Lt. ENE alrs	8	0	b	—	—	—	
8	29.663	—	-26.0	-26.0	—	E, 1-2	10	10-12	b	—	—	—	
10	29.657	—	-29.0	-25.0	—	E, 1	13	8-10	h ~	—	—	—	
Midt.	29.656	—	-26.0	-25.0	—	E by S, 1	4	8-10	b ~	—	—	—	
Mean	29.731	—	—	-19.2	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. -15° 5. 8 p. -12° 8.		Solar radiation { black bulb — bright bulb —		Evapn. { 1. 0.2 } grammes in 11. 0.2 } 24 hours.		Precipn. 0.02 in.					

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13th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Dry.	Wet.											
2	29.606	—	-26.5	-24.0	—	E, 0-1	11	10	b	—	—	—			
4	29.621	—	-32.0	-28.0	—	E, 1-2	6	15	b	—	—	—			
6	29.622	—	-35.0	-28.0	—	E by S, 2-3	21	22	b	—	—	—	Faint aurora all night.		
8	29.657	—	-32.0	-31.2	—	E, 4	21	22	bm ↗	—	—	—	Faint aurora, alt. 30° to 40°, in S to SE.		
10	29.665	—	-33.0	-32.0	—	E by N, 3-4	26	18-22	b ↗	—	—	—	Anemometer glass found covered with rime or glazed frost at every 2-hour observation.		
Noon	29.652	—	-35.2	-33.0	—	ENE, 4-5	23	25	b ↗	—	—	—			
2	29.609	—	-34.5	-29.0	—	ENE, 3	23	20-22	b	—	—	—			
4	29.546	—	-34.0	-28.0	—	E by N, 2-3	19	20-22	b ☐	—	—	—			
6	29.551	—	-29.0	-27.5	—	ENE, 2-3	18	20	b ☐	—	—	—			
8	29.504	—	-30.6	-30.0	—	ENE, 3	13	20-22	b ☐	—	—	—			
10	29.462	—	-30.5	-29.5	—	NE, 3	15	15-18	b ☐	—	—	—			
Midt.	29.393	—	-30.0	-27.8	—	ENE, 1-2	17	10-15	bm	—	—	—			
Mean	29.574	—	—	-29.0	—	—	—	—	—	—	—	—	Clear, with strong E by breezes; max. run of cups for 2 hours, 54 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer rose up to 10 a.m., and then dropped for rest of day. Temperature low and steady.		
Max. therm. read at		8 a. -18°·9.		8 p. -29°·0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

14th.

2	29.336	—	-31.2	-30.2	—	ENE, 1-2	12	15	bm	—	—	—	Very slight aurora glow in SE.		
4	29.296	—	-32.9	-31.8	—	ENE, 2-3	11	15-20	b	—	—	—	Slight aurora arch NE to SE, alt. 45°.		
6	29.247	—	-33.8	-32.5	—	ENE, 2-3	15	15-20	b	—	—	—	Aurora curtain and streamers, the former about 30°, the latter 30° to 70°, in the SE to S.		
8	29.159	—	-34.0	-32.0	—	NE, 1-2	13	15	b	—	—	—	8 a.m. Brilliant aurora, arch of vertical beams from S through E to NW, coloured pale green over SE. Alt. of arch 30°. One long streamer from S horizon to zenith.		
10	29.122	—	-33.0	-31.5	—	N, 1	12	10	b ☐	—	—	—			
Noon	29.068	—	-43.0	-32.0	—	Calm	6	0	b ☐	—	—	—			
2	29.012	—	-33.0	-31.3	—	Calm	2	0	b	—	—	—			
4	29.962	—	-33.0	-29.8	—	NE, 1	7	5-10	b ☐	—	—	—			
6	29.932	—	-32.0	-30.0	—	Lt. NE airs	4	0	b	—	—	—			
8	29.918	—	-36.0	-30.0	—	NE, 1	8	8	b	—	—	—			
10	29.913	—	-40.2	-36.2	—	Calm	2	0	bv	—	—	—			
Midt.	29.921	—	-38.0	-32.2	—	Calm	3	0	b	—	—	—			
Mean	29.074	—	—	-31.6	—	—	—	—	—	—	—	—	Fine and clear day; wind light NE, falling midday and remaining calm; max. run of cups for 2 hours, 31 miles; max. rate observed by pressure tube, 20 miles per hour. Barometer falling steadily all day. Temperature low and steady.		
Max. therm. read at		8 a. -27°·5.		8 p. -29°·5.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

15th.

2	28.921	—	-42.0	-33.8	—	Calm	1	0	b	—	—	—	Mercury in dry bulb probably frozen.		
4	28.921	—	-38.2	-34.5	—	NW, 1	1	0	b	—	—	—			
6	28.916	—	-35.0	-24.8	—	N, 1-2	7	0	b	—	—	—			
8	28.922	—	-37.4	-36.6	—	Calm	2	0	b	—	—	—	Aurora arch of beams from S to N through E, alt. 20° to 30°.		
10	28.938	—	-37.0	-37.0	—	Calm	1	0	b	—	—	—			
Noon	28.956	—	-37.5	-34.0	—	Lt. SE airs	0	0	b	—	—	—			
2	28.972	—	-34.5	-25.0	—	Lt. SE airs	3	8	bc	A.-s. 5	—	—			
4	29.013	—	-25.5	-20.5	—	SE, 1	4	8-10	o*	—	N. 10	—			
6	29.047	—	-26.0	-23.5	—	S by E, 2	16	10-12	b ↗	—	—	—			
8	29.068	—	-30.5	-29.0	—	E by N, 3-5	26	25-30	b ↗	—	—	—			
10	29.054	—	-35.5	-35.2	—	ENE, 4-5	26	30-32	bc ☐	Cl.-s. 3, NW	—	—	Cl.-s. radiating NW and SE. 11 p.m. ☐ 47° diameter. ☐ 47° diameter.		
Midt.	29.011	—	-36.0	-22.9	—	NE, 3-4	26	15-20	e	Very thin Cl.-s. 10	—	—			
Mean	28.978	—	—	-30.2	—	—	—	—	—	—	—	—	Fine and generally clear day; wind light and calm up to 4 p.m., then a strong breeze from SE backing to NE; max. run of cups for 2 hours, 53 miles; max. rate observed by pressure tube, 32 miles per hour. Barometer rose until wind freshened, and then fell. Thermometer low and rising.		
Max. therm. read at		8 a. -23°·8.		8 p. -20°·0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. { 1. 0.9 } grammes in { 11. 1.1 } 72 hours.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	28.959	—	-30.0	-27.9	—	—	Lt. W alrs	13	0	oc *	—	Cl.-s. 10	—	Variable puffs from NW, W, and SW. 4 to 5 a.m. Wind NNW, force 2-3; pressure tube, 20 miles. Temp. -26°, with heavier snow. Very heavy drift with rising temperature all the afternoon. 9.30 p.m. Wind fell, and moon showed through drft. Overcast, with snow all day. Wind variable, NW <sup>ly</sup> up to noon, when it began to blow hard from S and SSW. Snow very wet and much drift. Max. run of cups for 2 hours, 67 miles; max. rate observed by pressure tube, 40 miles per hour.
4	28.895	—	-29.4	-22.2	—	—	NNW, 1-2	1	20	oc *	—	N. 10	—	
6	28.803	—	-26.0	-16.0	—	—	N, 2-3	13	15	ocq *	—	N. 10	—	
8	28.753	—	-16.0	-12.0	—	—	NW, 1-2	19	10-22	oc *	—	N. 10	—	
10	28.653	—	-12.0	-8.8	—	—	Lt. NW alrs	13	8	o *	—	N. 10	—	
Noon	28.571	—	-10.0	-9.8	—	—	Calm	8	12	o *	—	N. 10	—	
2	28.543	—	-10.5	0.8	—	—	S, 2-3	7	0	o *	—	N. 10	—	
4	28.509	—	0.0	9.0	—	—	SSW, 3-4	13	15-20	o *	—	N. 10	—	
6	28.487	—	8.5	11.0	—	—	SSW, 5-7	20	25-40	ocq *	—	N. 10	—	
8	28.566	—	7.5	9.0	—	—	S, 4-6	33	25-38	ocq *	—	N. 10	—	
10	28.730	—	-3.0	-2.0	—	—	SSE, 1-2	23	10-15	o *	—	N. 10	—	
Midt.	28.868	—	-14.5	-14.5	—	—	E by S, 2-3	17	12-15	o *	—	N. 10	—	
Mean	28.695	—	—	-7.0	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -12° 0, 8 p. 11° 0. Solar radiation { black bulb —, bright bulb —. Evapn. — grammes. Precipn. 0.14 in. since 10 a.m. 12th.

Barometer fell until wind went S, then rose quickly. Temperature rose as wind blew from W, and rose quickly with wind in SSW, falling again with wind from E and SE.

16th.

2	28.950	—	-17.8	-16.0	—	—	E, 3-4	13	18-20	bc *	—	S. 6, NW	—	Small arc of halo. Cleaned instruments and cleared boxes. Overcast generally all day, with same quality of snow. Wind fresh from E, falling towards evening; max. run of cups for 2 hours, 51 miles; max. rate observed by pressure tube, 32 miles per hour. Barometer rose until 4 p.m., and then fell a little. Temperature fairly steady all day.
4	28.956	—	-17.2	-14.0	—	—	E by N, 4	26	20-25	o *	—	N. 10	—	
6	28.999	—	-19.0	-17.5	—	—	NE, 2-4	23	10-15	o *	—	N. 10	—	
8	29.079	—	-20.0	-19.0	—	—	ENE, 3	15	10	o *	—	N. 10	—	
10	29.117	—	-20.0	-18.8	—	—	NE, 2-3	14	15-20	o *	—	N. 10	—	
Noon	29.117	—	-22.0	-20.0	—	—	E, 3-4	19	23-32	b † <sup>2</sup>	—	—	—	
2	29.147	—	-26.0	-15.0	—	—	E, 2-3	26	15-18	b †	—	—	—	
4	29.179	—	-17.2	-13.0	—	—	ENE, 2	13	15	bc †	—	Fr.-en. 3, SSE (fast)	—	
6	29.165	—	-16.5	-10.2	—	—	E, 1	13	8-10	bc †	—	A.-en. 2, S (fast)	—	
8	29.101	—	-23.0	-23.0	—	—	Lt. SW alrs	5	0-5	o * †	—	N. 10	—	
10	29.145	—	-24.0	-7.5	—	—	Lt. E alrs	7	0-5	o * †	—	N. 10	—	
Midt.	29.125	—	-14.2	-10.8	—	—	ESE, 1-3	12	10-15	bqm * †	—	S.	—	
Mean	29.095	—	—	-15.4	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 8° 8, 8 p. -8° 0. Solar radiation { black bulb —, bright bulb —. Evapn. — grammes. Precipn. 0.012 in. since 10 p.m. 16th.

17th.

2	29.111	—	-15.9	-12.0	—	—	ENE, 1-3	15	14	bc †	—	A.-s. 1	N. 1	A.-s. radiating NE and SW. Nm. NE and SW. 10.30 a.m. † 46° 20' diameter. Paraselenic visible. Fine, clear day, with fresh E <sup>ly</sup> breezes; max. run for 2 hours, 44 miles. Barometer rose steadily. Temperature steady.
4	29.126	—	-14.5	-13.0	—	—	E by N, 1-3	18	10	bem	—	—	Fr.-s. 5, NW	
6	29.107	—	-16.0	-13.0	—	—	ENE, 1-3	16	10-14	bmcq † <sup>2</sup>	—	—	S. 3	
8	29.139	—	-15.8	-12.2	—	—	NE, 3-4	22	10	bc †	—	Cl.-s. 3	—	
10	29.157	—	-14.5	-13.8	—	—	E, 3	18	10	b †	—	—	—	
Noon	29.191	—	-16.2	-15.5	—	—	E, 2	20	10-15	b	—	—	—	
2	29.223	—	-19.0	-17.8	—	—	E, 1-2	14	10-15	b	—	—	—	
4	29.247	—	-20.0	-18.0	—	—	E, 2-3	18	15-20	b †	—	—	—	
6	29.277	—	-20.0	-16.0	—	—	ENE, 2-3	20	10-15	b †	—	—	—	
8	29.301	—	-18.0	-12.0	—	—	E, 1-2	15	10-15	b †	—	—	—	
10	29.319	—	-13.0	-10.0	—	—	SE, 1-2	9	10-12	b †	—	—	—	
Midt.	29.335	—	-13.5	-13.0	—	—	SSE, 2	7	12-14	bqv	—	Cl.-s. 2	—	
Mean	29.211	—	—	-13.9	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -7° 2, 8 p. -12° 0. Solar radiation { black bulb —, bright bulb —. Evapn. { 1.1 1 } grammes for 72 hours. Precipn. — in.

18th.

1902—June.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

19th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.366	—	-16.0	-15.2	—	ESE, 2-3	15	15	bev ⊕		Ci.-s. 1	—	2 a.m., lunar halo, radius 27° 49', alt. 23° 20', bearing NW. 2.30 a.m., wind suddenly increased in furious squalls, with driving snow, and backed to the eastwards. 4 a.m. Halo denser. 6 a.m. Very clear and distinct halo; prismatic colouring.  Ci.-s. radiating SW, NE. Very fine snow falling. Very fine snow falling. Min. temp. at high-level station since (?) = -46° 0'; temp. at 4 p.m. = -18° 5'.  Fine most of the day, becoming overcast, with very fine snowfall, about 4 p.m. Wind blew a gale from E early, gradually falling away to calm; max. run of cups for 2 hours, 68 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer rose until the wind fell, and then fell slowly. Temperature steady.	
4	29.350	—	-18.8	-18.0	—	E by N, 7-8	34	27-30	bc ⊕ ⊕		Ci.-s. 2	—		
6	29.373	—	-19.5	-18.5	—	NE, 4-5	22	20-22	bev ⊕ ⊕		Ci.-s. 3	—		
8	29.372	—	-20.0	-16.8	—	E by N, 3-4	13	10-15	bme		Ci.-s. 6	—		
10	29.380	—	-18.0	-17.0	—	NE, 2	14	10-15	b		—	—		
Noon	29.353	—	-18.0	-12.8	—	NE, 1-2	11	8-10	bc		Ci.-s. 6	—		
2	29.341	—	-22.0	-16.2	—	Calm	7	0	bc *		Ci.-s. 7, NW (slow)	—		
4	29.321	—	-18.0	-18.0	—	Calm	1	0	oc *		Ci.-s. 10	—		
6	29.287	—	-18.5	-10.8	—	Lt. NW ahrs	1	0-8	o *		—	S. 10, NW (fast)		
8	29.284	—	-15.5	-14.0	—	Lt. NNE ahrs	1	0-8	o *		—	N. 10		
10	29.292	—	-16.8	-14.6	—	Calm	2	0	o * ⊕		Ci.-s. 6	A.-s. 6, SE (mod.)		
Midt.	29.276	—	-16.2	-15.5	—	Calm	0	0	o * ⊕		Ci.-s. 8	—		
Mean	29.332	—	—	-15.6	—	—	—	—	—		—	—		

Max. therm. read at { 8 a. -10° 0.  
8 p. - 9° 8. Solar radiation { black bulb —  
bright bulb —. Evapu. { I. 0.1 } grammes for  
II. 0.0 } 24 hours. Precipn. { 0.03 in. since  
10 a.m. 17th.

20th.

2	29.280	—	-15.5	-12.5	—	Calm	2	0	o * ⊕		A.-s. 10	—	Spray forming on anemometer glass.  Ice crystals falling.  Wind shifting quickly in gusts from NE to NW. Drift flying high and, being off the hill tops, in thick clouds. Overcast, with slight snowfall until noon, then clearing and becoming fine and clear. Wind calm, with peculiar variable gusts at 8 p.m.; max. run of cups for 2 hours, 21 miles; max. rate observed by pressure tube, 20 miles per hour. Barometer rose until 10 a.m. and then fell quickly. Temperature rose quickly until 8 p.m. and then fell.
4	29.297	—	-21.5	-17.5	—	Calm	2	0	o * ⊕		A.-s. 10	—	
6	29.311	—	-17.5	-12.5	—	Calm	2	0	oc *		Ci.-s. 4	S. 2, SE	
8	29.354	—	-19.7	-10.5	—	N by E, 1	2	2	om		—	—	
10	29.385	—	-11.2	- 7.2	—	Lt. N ahrs	7	0	oc		Ci.-s. 8	—	
Noon	29.373	—	- 8.0	- 6.8	—	N, 1-2	7	10	oc ⊕		Ci.-s. 8	—	
2	29.353	—	- 8.0	- 6.0	—	N, 1-2	10	10-12	bc ⊕		Ci.-s. 5	—	
4	29.303	—	-15.0	-14.0	—	Calm	7	0	b ⊕		—	—	
6	29.282	—	-18.0	-11.0	—	Calm	2	0	bv →		—	—	
8	29.225	—	-16.0	5.0	—	Var. N, 0-3	7	0-20	b ⊕		—	—	
10	29.194	—	-11.0	- 8.8	—	Lt. W by N ahrs	10	0-8	b		—	—	
Midt.	29.134	—	-15.0	-11.7	—	Calm	2	0	bv		—	—	
Mean	29.291	—	—	- 9.5	—	—	—	—	—		—	—	

Max. therm. read at { 8 a. -9° 5.  
8 p. - 5° 0. Solar radiation { black bulb —  
bright bulb —. Evapu. { I. 1.2 } grammes for  
II. 1.2 } 24 hours. Precipn. { 0.02 in. since  
10 p.m. 19th.

21st.

2	29.164	—	-19.6	-13.5	—	NE by E, 1-2	10	12-15	bv		—	—	5 p.m. Observed very large meteor or fire ball in W of greenish yellow colour, starting about 70° and disappearing in 10° of alt. 6 p.m. Frost sprays forming on anemometer glass. 9 p.m. Min. at high-level station since 48 hours, -30° 8; temp. at 9 p.m., -25° 0. Erebus smoke going NE, with distinct red glare on lower part of smoke. Fine, clear day. Wind freshening from E. until noon and then falling to calm; max. run of cups for 2 hours, 48 miles; max. rate observed by pressure tube, 31 miles per hour. Barometer steady. Temperature fell and was unsteady.
4	29.177	—	-18.7	-16.4	—	E, 3-4	18	25-31	bv ⊕		—	—	
6	29.145	—	-18.2	-11.5	—	E, 3-4	21	25-31	bv ⊕		—	—	
8	29.175	—	-20.5	-18.0	—	E, 5	22	25	bqv ⊕		—	—	
10	29.189	—	-21.8	-20.2	—	E, 4-5	24	25-31	bv ⊕		—	—	
Noon	29.191	—	-21.2	-17.5	—	E by N, 3-4	22	20-25	b		—	—	
2	29.177	—	-20.0	-19.0	—	E, 2	19	10-15	b		—	—	
4	29.157	—	-19.8	-15.8	—	E, 1-2	11	8-12	b		—	—	
6	29.155	—	-20.0	-19.0	—	Calm	11	0	b		—	—	
8	29.110	—	-26.0	-25.5	—	Calm	3	0	b		—	—	
10	29.102	—	-36.0	-21.0	—	Calm	1	0	b		—	—	
Midt.	29.143	—	-36.0	-35.0	—	Calm	0	0	bv ⊕		—	—	
Mean	29.157	—	—	-19.4	—	—	—	—	—		—	—	

Max. therm. read at { 8 a. -5° 0.  
8 p. -14° 8. Solar radiation { black bulb —  
bright bulb —. Evapu. { I. 1.5 } grammes for  
II. 1.5 } 24 hours. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.167	—	-30.5	-30.0	—	—	Calm	0	0	—	—	—	22nd.	
4	29.193	—	-30.8	-23.8	—	—	ENE, 3-4	9	25	—	—	—		
6	29.222	—	-25.8	-18.5	—	—	E, 3	16	10-16	—	—	—		
8	29.250	—	-20.5	-18.5	—	—	SE, 2	15	15	—	—	—		
10	29.274	—	-22.8	-18.8	—	—	Calm	10	0	—	—	—		
Noon	29.300	—	-32.0	-20.0	—	—	Lt. N airs	5	0	—	—	—		
2	29.311	—	-23.0	-19.0	—	—	Lt. N airs	4	0	—	—	—		
4	29.309	—	-26.0	-20.0	—	—	Calm	2	0	—	—	—		
6	29.313	—	-25.0	-23.6	—	—	Calm	2	0	—	—	—		
8	29.304	—	-25.0	-25.0	—	—	Calm	3	0	—	—	—		
10	29.316	—	-32.5	-31.8	—	—	Calm	0	0	—	—	—		
Midt.	29.305	—	-31.8	-19.0	—	—	Lt. E airs	8	0-8	—	—	—		Minute lee particles forming on anemometer glass.
Mean	29.272	—	—	-22.3	—	—	—	—	—	—	—	—		Fine, clear day. Light to fresh E breeze early, falling to calm; max. run of cups for 2 hours, 33 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer rose on the whole. Thermometer steady.
Max. therm. read at { 8 a. -16° 4. / 8 p. -14° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { 1.05 / 11.15 } grammes for 24 hours. Precipn. — in.														

2	29.287	—	-23.0	-18.8	—	—	E, 1	7	5-10	—	—	—	23rd.	
4	29.265	—	-27.0	-22.0	—	—	Calm	4	0	—	—	—		
6	29.233	—	-26.0	-20.0	—	—	E, 1-2	4	10-15	—	—	—		
8	29.181	—	-27.0	-26.0	—	—	NE, 5	25	30-35	—	—	—		
10	29.156	—	-28.0	-26.0	—	—	E by N, 3-5	28	25-30	—	—	—		
Noon	29.143	—	-27.6	-25.8	—	—	NE, 4-5	24	28-33	—	—	—		
2	29.121	—	-27.0	-23.2	—	—	Lt. NE airs	18	0-8	—	—	—		Cl.-s. low down on horizon from NW to SW, radiating NW and SE.
4	29.097	—	-25.0	-20.0	—	—	Lt. NE airs	7	0-5	—	—	—		Evaporation dishes were placed outside the screen on the top.
6	29.055	—	-33.0	-23.2	—	—	Calm	7	0	—	—	—		Ice spicules forming on anemometer glass.
8	29.021	—	-40.0	-33.0	—	—	Calm	0	0	—	—	—		
10	28.987	—	-35.2	-30.8	—	—	Calm	4	0	—	—	—		Glazed surface on anemometer glass.
Midt.	28.943	—	-31.8	-27.8	—	—	Lt. NE airs	4	0-8	—	—	—		—
Mean	29.124	—	—	-25.2	—	—	—	—	—	—	—	—		—
Max. therm. { 8 a. -18° 0. / 8 p. -19° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { 1.11 / 11.22 } grammes for 24 hours. A piece of ice fell from dish No. II, when weight 4 lt. Precipn. — in.														

2	28.933	—	-29.0	-25.5	—	—	N, 0-1	2	5	—	—	—	24th.	
4	28.937	—	-29.5	-29.2	—	—	N by E, 1	6	10	—	—	—		
6	28.935	—	-36.0	-34.5	—	—	E, 1-2	3	15	—	—	—		
8	28.991	—	-35.2	-26.0	—	—	E, 1	8	5-10	—	—	—		Glazed coating on anemometer glass.
10	29.013	—	-28.5	-23.5	—	—	SE, 2	7	10-15	—	—	—		
Noon	29.043	—	-31.0	-27.0	—	—	NE, 1-2	10	10-12	—	—	—		Glazed surface on anemometer glass.
2	29.073	—	-47.0	-34.0	—	—	Calm	3	0	—	—	—		Glazed surface on anemometer glass.
4	29.083	—	-38.0	-24.2	—	—	Lt. SE airs	2	0	—	—	—		
6	29.086	—	-38.2	-31.8	—	—	Calm	1	0	—	—	—		
8	29.092	—	-38.0	-35.0	—	—	Calm	0	0	—	—	—		Cl.-s. 2, SW (slow)
10	29.095	—	-36.0	-21.2	—	—	Lt. E airs	4	0	—	—	—		A.-s. 10
Midt.	29.073	—	-29.2	-18.0	—	—	N, 1-2	3	10-15	—	—	—		A.-s. 10
Mean	29.030	—	—	-28.1	—	—	—	—	—	—	—	—		—
Max. therm. read at { 8 a. -21° 6. / 8 p. -23° 0. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. — in.														

Fine and clear until 10 p.m., when it became completely overcast. Light winds to calm all day; max. run of cups for 2 hours, 19 miles; max. rate observed by pressure tube, 15 miles per hour. Barometer rising slowly all day. Temperature low and unsteady.

1902—June.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

25th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.			Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.	Aspirator.	
				Dry.	Wet.										
2	29.069	—	-21.0	-21.0	—	N by W, 1	5	0-10	oc	—	A. s. 9, NNW	—	—	Overcast with snow. Wind rising to strong from E, with a good deal of drift snow; max. run of cups for 2 hours, 59 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer rising until 4 p.m. and then fell quickly. Temperature steady and higher.	
4	29.083	—	-22.1	-20.2	—	Calm	2	0	o*	—	—	N. 10	—		
6	29.086	—	-23.0	-21.3	—	S by W, 1	2	0-10	o*	—	—	N. 10	—		
8	29.107	—	-22.5	-12.0	—	E by S, 1-3	4	10-15	o*	—	—	N. 10	—		
10	29.117	—	-15.5	-15.0	—	ESE, 1	12	0-8	o	—	—	S. 10	—		
Noon	29.135	—	-17.2	-16.0	—	E, 1	9	0-10	o	—	—	S. 10	—		
2	29.110	—	-21.0	-19.0	—	E, 1-2	11	10-12	o	—	—	S. 10	—		
4	29.156	—	-26.0	-21.0	—	E by N, 3	20	20-22	o †	—	—	S. 10	—		
6	29.111	—	-26.0	-21.8	—	E, 3-5	17	15-23	oq †	—	—	S. 10	—		
8	29.132	—	-26.0	-21.5	—	E, 3-6	29	30-35	oq †	—	—	S. 10	—		
10	29.123	—	-27.0	-23.2	—	E, 5-6	23	20-25	oq †	—	—	S. 10	—		
Midt.	29.096	—	-21.0	-15.0	—	E by N, 3	23	10-15	oq †	—	—	S. 10	—		
Mean	29.115	—	—	-19.2	—	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. -12° 0. / 8 p. -12° 0. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. 0.01 in. since 10 a.m. 25th.

26th.

2	29.068	—	-16.5	-14.6	—	SE, 1	7	0	o	—	Cl.-s. 10	—	—	Overcast, with snowfall. Light variable winds to calm, rising to fresh at 6 p.m. and to very strong from S at midnight; max. run of cups for 2 hours, 51 miles; max. rate observed by pressure tube, 28 miles per hour. Barometer falling slowly all day. Temperature unsteady, rising quickly with S'ly wind.
4	29.039	—	-20.7	-17.2	—	SSE, 3	12	10	o	—	Cl.-s. 8	—	—	
6	29.011	—	-19.8	-15.1	—	ENE, 2	10	0-10	o	—	Cl.-s. 10	—	—	
8	28.957	—	-21.2	-17.5	—	SE, 1	11	10	oim	—	—	S. 10	—	
10	28.925	—	-17.5	-12.5	—	Calm	4	0	o*	—	—	N. 10	—	
Noon	28.897	—	-11.0	-9.8	—	Calm	3	0	o*	—	—	N. 10	—	
2	28.841	—	-10.8	-8.6	—	Calm	3	0	o*	—	—	N. 10	—	
4	28.788	—	-11.0	-10.0	—	Calm	2	0	o*	—	—	N. 10	—	
6	28.761	—	-11.0	-5.0	—	E by S, 1-3	7	10-18	oq*	—	—	N. 10	—	
8	28.763	—	-5.8	-4.5	—	SE, 2-3	23	15-20	oq* †	—	—	N. 10	—	
10	28.699	—	-1.8	-3.0	—	E, 1-3	14	10-20	oq* †	—	—	N. 10	—	
Midt.	28.696	—	-4.2	2.8	—	S, 5-6	27	25-28	oq* †	—	—	N. 10	—	
Mean	28.870	—	—	-9.6	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -12° 6. / 8 p. -4° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { 1.0 0 } / { 11.0 0 } grammes for 24 hours. Precipn. 0.09 in. since 10 a.m. 25th.

27th.

2	28.665	—	-4.0	3.5	—	S by W, 5-6	26	25-30	oq*	—	—	N. 10	—	A. s. very thin, no movement visible. A heavy bank of low clouds appearing over hills to E. 6 a.m. Heavy rolling A.-cu. clouds, which appeared as a bank in the E and SE at 4 a.m., have now spread over a third of the sky in the opposite direction to that from which they are moving. Wind shifting SE to NE in squalls.  Aurora glow E.  Fine on the whole. Wind strong from SE, falling towards evening, but variable with heavy squalls about noon; max. run of cups for 2 hours, 53 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer unsteady and falling generally. Temperature unsteady and high.
4	28.700	—	-0.2	0.8	—	SE, 4	21	10-15	eq	—	A. s. 8	—	—	
6	28.699	—	-0.5	4.0	—	SE, 1-2	13	10-12	eq	—	A.-cu. 6, SW (fast)	—	—	
8	28.609	—	-4.0	-4.0	—	SE, 1-2	13	10-15	b	—	—	—	—	
10	28.627	—	-8.0	-8.0	—	SE, 1-2	13	15	b	—	—	—	—	
Noon	28.610	—	-8.0	-5.0	—	Var. E, 1-5	21	10-30	bq †	—	—	—	—	
2	28.658	—	-10.6	-8.0	—	SE, 1	11	8-10	b	—	—	—	—	
4	28.628	—	-10.8	-8.0	—	SE, 2-3	11	15-18	b	—	—	—	—	
6	28.609	—	-9.5	-7.0	—	E, 1-2	18	10-15	b	—	—	—	—	
8	28.541	—	-3.0	-2.8	-3.2	E, 1	13	8-10	b	—	—	—	—	
10	28.499	—	-4.0	-1.0	-1.8	NE, 1	11	0-8	bc	—	Thin A. s. 5	—	—	
Midt.	28.454	—	-4.5	-2.0	-2.2	ENE, 1	9	8-10	bc	—	A. s. 2	—	—	
Mean	28.611	—	—	-3.1	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 4° 0. / 8 p. -2° 8. Solar radiation { black bulb — / bright bulb —. Evapn. { 1.0 0 } / { 11.0 0 } grammes for 24 hours. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.							Wet.	Upper.		
2	28.439	—	4.5	1.9	1.9	—	E by S, 1-2	2	10-12	oc	—	—	—	28th.  Cleaned instruments and boxes. 1 p.m. Min. temp. at high-level station since 150 hours = -51° 0'; temp. at 1 p.m. = -4° 0'. Wind southerly. 4.20 p.m. Wind rose from S in heavy gusts.  Puffs of wind from S, fine snow falling.  Overcast and cloudy with some snow. Wind went to S and gradually blew up strong; max. run of cups for 2 hours, 56 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer fell until noon, and then rose very unsteadily. Temperature high and rising, fell in the evening again.
4	28.357	—	2.5	3.0	3.0	—	NW, 1-3	10	12-15	oc	A.s. 7, NE	—	—	
6	28.298	—	0.5	4.1	4.2	—	Calm	8	0	oc	A.s. 10	—	—	
8	28.248	—	0.6	4.5	—	—	Calm	2	0	oc *	A.s. 10	—	—	
10	28.192	—	3.0	6.0	6.0	—	Lt. NE ahrs	3	0	o	A.s. 10	—	—	
Noon	28.140	—	4.5	5.2	5.4	—	Calm	7	0	o	A.s. 10	—	—	
2	28.206	—	3.5	7.6	6.2	—	Calm	2	0	o	A.s. 10	—	—	
4	28.197	—	5.5	9.0	8.2	—	Calm	2	0	o	A.s. 10	—	—	
6	28.282	—	8.0	8.5	8.2	—	S, 1-2	13	10-12	o †	—	S. 10	—	
8	28.406	—	0.0	0.0	0.0	—	S, 3-5	29	15-25	oq †	—	S. 10	—	
10	28.558	—	3.0	2.0	2.0	—	SW, 1-3	16	10-15	oq †	—	S. 10	—	
Midt.	28.632	—	3.9	2.0	2.0	—	SW by S, 0-1	15	0	oq *	—	S. 10	—	
Mean	28.320	—	—	3.5	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 6° 0. / 8 p. 13° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { 1.0 4 / 11.0 7 } gramme for 24 hours. Precipn. — in.

2	28.690	—	5.0	3.0	3.0	—	SW by S, 5-6	7	10-15	oq * †	—	S. 10	—	29th.  1.30 a.m. Wind came up from S in heavy gusts.  Str. radiating NW and SE. Heavy bank of clouds to E. Apparently a high wind; sounding aloft, but not so much on the level. Wind variable, W to SSW to SW in heavy squalls. Very heavy squalls followed by nearly calms. Very heavy squalls, apparently high. Clear, but with very strong variable S to SWy wind, with clouds of snowdrift and heavy gusts; max. run of cups for 2 hours, 57 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer rising all day. Temperature lower and fairly steady.
4	28.741	—	5.0	3.0	3.0	—	SW by S, 7-8	29	15-20	oq * †	—	S. 10	—	
6	28.839	—	5.5	4.0	4.0	—	S, 0-1	17	0	bu †	—	—	—	
8	28.901	—	6.0	4.0	4.0	—	SE, 0-2	10	0	bcq †	—	S. 4	—	
10	28.963	—	7.5	5.0	5.0	—	S, 3-4	16	20-25	bqm †	—	—	—	
Noon	28.989	—	10.0	9.0	9.0	—	SSW, 3-6	23	20-30	bqm †	—	—	—	
2	29.059	—	10.0	7.5	7.5	—	SE, 2-3	13	10-18	bm †	—	—	—	
4	29.094	—	10.0	9.0	9.0	—	SW, 1-3	18	10-20	bqm †	—	—	—	
6	29.113	—	10.0	8.8	8.8	—	SW, 2-4	13	10-30	bqm †	—	—	—	
8	29.122	—	9.0	6.0	6.0	—	SW, 3-7	24	10-25	bqm †	—	—	—	
10	29.146	—	8.0	6.0	6.0	—	SSW, 1-5	21	10-25	oqm †	—	S. 10	—	
Midt.	29.125	—	8.0	7.0	—	—	S by W, 7	16	22-28	b †	—	—	—	
Mean	28.982	—	—	6.0	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 0° 2. / 8 p. -4° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { 1.0 2 / 11.0 2 } gramme for 24 hours. Precipn. 0.06 in. since 6 p.m., 26th.

2	29.162	—	8.5	7.5	—	—	SE, 2-5	33	12-21	oq †	—	S. 10	—	30th.  Wind apparently strong high up. Wind strong, gusts high over head.  Cleaned instruments and boxes. Str. clearing to N.  Took down Robinson's anemometer to clean. Put up Robinson's anemometer. Auroral glow in ENE very bright, but lasting only a few minutes. Midt. Weak auroral glow ENE. Overcast most of the day, and wind falling gradually to calm. Max. run of cups for 2 hours, 67 miles; max. rate observed by pressure tube, 22 miles per hour. Barometer falling quickly all day; temperature lower and steady.
4	29.151	—	8.0	7.0	—	—	SSE, 5	32	22	oq †	—	S. 10	—	
6	29.141	—	9.0	8.0	7.5	—	S by E, 4	22	15-22	oq †	—	S. 10	—	
8	29.112	—	10.0	9.0	9.0	—	SSE, 4	16	15	oq †	—	S. 10	—	
10	29.102	—	10.0	5.2	5.2	—	E, 1-2	13	10-12	o	—	S. 10	—	
Noon	29.042	—	9.0	7.0	7.0	—	SE, 1-2	10	10	o	—	S. 10	—	
2	29.032	—	8.0	6.0	6.8	—	SE, 1-2	7	10	o	—	S. 10	—	
4	29.002	—	10.0	9.0	9.8	—	Lt. E ahrs	8	0	o	Thin A.s. 10	—	—	
6	28.932	—	10.0	7.0	7.6	—	Lt. NE ahrs	10	0	b	—	—	—	
8	28.888	—	11.8	11.0	11.8	—	Calm	3	0	b	—	—	—	
10	28.856	—	15.0	11.0	11.0	—	Calm	—	0	b	—	—	—	
Midt.	28.803	—	15.5	11.0	11.5	—	Calm	0	0	b	—	—	—	
Mean	29.019	—	—	8.7	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -5.3. / 8 p. -5.0. Solar radiation { black bulb — / bright bulb —. Evapn. { 1.0 2 / 11.0 2 } gramme for 24 hours. Precipn. — in.

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.				
			Spirit minimum.	Dry.									Wet.			
1st.	2	28.759	—	-19.0	-15.0	—	—	Calm	0	0	b	—	—	—	Aurora curtain with streamers ENE to ESE.	
	4	28.722	—	-17.0	-13.0	—	—	Lt. N by E alrs	0	0	b	—	—	—	Distinct double aurora curtain in SSE. Streamers to 40° alt.	
	6	28.729	—	-22.3	-22.0	—	—	Calm	0	0	b	—	—	—	Faint aurora glow N to NE.	
	8	28.714	—	-22.6	-22.0	—	—	Calm	0	0	b	—	—	—	Faint auroral arch NE, ESE; alt. 30°.	
	10	28.714	—	-22.5	-8.0	—	—	Calm	0	0	bm	—	—	—		
	Noon	28.709	—	-8.0	-2.2	-3.0	—	Lt. N alrs	6	0-5	b	—	—	—		
	2	28.709	—	-3.0	-1.0	-1.8	—	Lt. N alrs	4	0-5	b	—	—	—		
	4	28.738	—	-9.0	-5.0	—	—	Calm	4	0	o	A.s. 10	—	—	Unmounted registering spirit thermometer placed on snow round Cape Armitage.	
	6	28.746	—	-6.5	-1.0	—	—	Calm	4	0	o*	—	N. 10	—		
	8	28.792	—	-6.0	-4.0	—	—	Lt. SE alrs	4	0	o*	—	N. 10	—		
	10	28.808	—	-7.0	-5.8	-6.0	—	Lt. E alrs	7	0	bm	—	—	—		
	Midd.	28.756	—	-7.8	-4.5	—	—	E by N, 1-2	9	0-8	bm	—	—	—	Fine day on the whole, with a little snow fall. Wind, calm to light variable airs; max. run of cups for 2 hours, 18 miles; max. rate observed by pressure tube, 8 miles per hour. Barometer low and steady, inclined to rise. Temperature rose quickly and remained high and steady.	
	Mean	28.741	—	—	-8.6	—	—	—	—	—	—	—	—	—		
		Max. therm. read at { 8 a. -10°-0. / 8 p. -1°-0.		Solar radiation { black bulb — / bright bulb —.				Evapn. { 1.06 / 11.08 } gramme in 24 hours.		Precipn. — in.						

2nd.	2	28.788	—	-6.0	-4.1	—	—	Lt. N alrs	5	0	bm	—	—	—	Faint auroral curtain ENE to E by S, 45° alt.	
	4	28.776	—	-9.3	-8.5	—	—	Calm	0	0	bm	—	—	—		
	6	28.772	—	-9.5	-4.0	—	—	Lt. E by N alrs	0	0	bm*	—	—	—	Very fine snow.	
	8	28.796	—	-4.6	-1.6	—	—	E, 1	4	0	o*	—	N. 10	—	Snow falling thickly in large flakes.	
	10	28.797	—	-2.0	-1.2	—	—	E, 2-3	15	15-20	o* †	—	N. 10	—		
	Noon	28.810	—	-5.5	-5.0	—	—	E by S, 2	15	15-17	o* †	—	N. 10	—		
	2	28.841	—	-9.0	-7.0	—	—	E by S, 2-3	16	15-20	o* †	—	N. 10	—		
	4	28.867	—	-16.0	-16.0	—	—	E, 4-5	21	25-30	b †	—	—	—		
	6	28.877	—	-17.0	-13.2	—	—	E, 4-5	19	20-25	bm †	—	—	—		
	8	28.875	—	-14.0	-11.0	—	—	E, 3-4	21	15-20	o †	—	Thin S. 10	—		
	10	28.876	—	-11.5	-8.8	—	—	E, 2-3	15	10-15	o †	—	Thin S. 10	—	8 to 10 p.m. Stars just visible through Str.	
	Midd.	28.849	—	-9.0	-5.1	—	—	SE, 4	12	20	o	—	Thin S. 10	—	Overcast most of the day, with some snow-fall. Wind rose about 10 a.m., and blew up fresh; max. run of cups for 2 hours, 41 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer steady, inclined to rise. Temperature high and steady.	
	Mean	28.827	—	—	-7.1	—	—	—	—	—	—	—	—	—		
		Max. therm. read at { 8 a. — / 8 p. -0°-8.		Solar radiation { black bulb — / bright bulb —.				Evapn. { 1.04 / 11.04 } gramme in 24 hours.		Precipn. 0.02 in. since 8 a.m. 29th ult.						

3rd.	2	28.826	—	-6.1	-3.8	—	—	SE, 4-5	17	20-25	o †	—	Thin S. 10	—		
	4	28.814	—	-5.6	-4.6	—	—	E by N, 3	15	10-15	o	—	Thin S. 10	—		
	6	28.779	—	-6.8	-4.9	—	—	E by S, 3-4	10	15-20	o	—	Thin S. 10	—	Stars just visible through Str.	
	8	28.751	—	-7.2	-5.0	-5.1	—	SE, 1-2	14	10	o	—	S. 10	—		
	10	28.740	—	-7.0	-6.0	—	—	SE, 1-2	10	12-15	om	—	Thin S. 10	—		
	Noon	28.717	—	-7.0	-3.8	-4.0	—	SE, 1-3	10	10-22	o	—	Thin S. 10	—	Unshipped Robinson's anemometer for repairs.	
	2	28.691	—	-7.0	-6.0	—	—	E, 1-2	—	10-15	o	—	Thin S. 10	—		
	4	28.672	—	-8.0	-6.5	—	—	E, 1-2	—	10-15	b	—	—	—		
	6	28.616	—	-8.0	-8.0	—	—	Lt. E alrs	—	0-8	b	—	—	—	Replaced Robinson's anemometer.	
	8	28.556	—	-9.0	-5.0	—	—	Lt. NE alrs	3	0	b	—	—	—		
	10	28.518	—	-11.0	-11.0	—	—	Calm	2	0	b	—	—	—		
	Midd.	28.450	—	-12.5	-8.0	—	—	N by E, 1	2	10	b	—	—	—	Overcast most of the day. Wind strong early, but fell to light airs; max. run of cups for 2 hours, 31 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer low and falling. Temperature high and steady.	
	Mean	28.678	—	—	-6.1	—	—	—	—	—	—	—	—	—		
		Max. therm. read at { 8 a. -3°-5. / 8 p. -4°-2.		Solar radiation { black bulb — / bright bulb —.				Evapn. { 1.18 / 11.13 } gramme in 24 hours.		Precipn. 0.03 in. since 8 a.m. 2nd.						

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Dry.	Wet.								Unscreened.		
2	28.401	—	-11.5	-7.0	—	N, 0-1	7	8	b	—	—	—	Aurora patches E and NE.	
4	28.331	—	-12.0	-9.2	—	NNE, 0-1	0	6	b	—	—	—	Bands of streamers E and NE, radiating towards zenith.	
6	28.296	—	-12.5	-9.0	—	Calm	2	0	b	—	—	—	Arch band (interrupted) of streamers SW to NNE.	
8	28.304	—	-11.1	-8.0	—	Lt. NE airs	1	5	b	—	—	—	Faint arch of vertical beams from S to E.	
10	28.338	—	-24.0	-14.0	—	NE, 1	10	10-12	b	—	—	—		
Noon	28.343	—	-14.6	-9.0	—	E, 1	12	10	b	—	—	—	Aurora streamer in zenith showing faint through twilight. Mln. temp. at high-level station since 13 days = -22°·3.	
2	28.353	—	-10.2	-6.0	—	Lt. SE airs	9	0	b	—	—	—	Erebus smoke going to the NE.	
4	28.294	—	-11.6	-11.0	—	NE, 1	7	0	b	—	—	—		
6	28.257	—	-13.0	-7.0	—	Lt. NE airs	7	0	o	—	N. 10	—		
8	28.226	—	-12.8	-12.0	—	Calm	5	0	bm*	—	—	—	Stars visible but misty. Big flakes of dry snow falling.	
10	28.177	—	-12.5	-7.0	—	Lt. N airs	2	0	b	—	—	—		
Midt.	28.167	—	-8.2	-6.0	—	NE, 1	7	10	b	—	—	—	Faint arch in SSE.	
Mean	28.291	—	—	-8.8	—	—	—	—	—	—	—	—	Fine and clear day. Light variable airs to calm all day; max. run of cups for 2 hours, 12 miles; max. rate observed by pressure tube, 12 miles per hour. Barometer low and falling; temperature high and steady.	
Max. therm. read at { 8 a. -5°·4. 8 p. -4°·0. } Solar radiation { black bulb —, bright bulb —. } Evapn. { 1. 0·8 } gramme in 24 hours. Precipn. — in.														

4th.

2	28.199	—	-10.5	-10.0	—	Lt. NE airs	6	0	b	—	—	—	Bright aurora in N; glow in E and W; arch in SSE, E, NE, N, NW and W; greenish in northerly arches.	
4	28.289	—	-12.5	-6.5	—	Lt. N airs	3	0	b	—	—	—	4 a.m. Very faint aurora streamers in N, NE, S and NW.	
6	28.396	—	-15.0	-14.0	—	Calm	2	0	b	—	—	—	Stars visible through mist, showing coronæ.	
8	28.536	—	-16.3	-11.0	—	Lt. SE airs	2	0	bm	—	—	—	A good deal of daylight in the NE horizon. 11 a.m. Temp. at Cape Armitage = -24°·0; mln. = -27°·4.	
10	28.689	—	-14.2	-12.8	—	Lt. SE airs	4	0	b	—	—	—		
Noon	28.798	—	-14.9	-12.6	—	Lt. SE airs	4	0	c	—	Cl.-a. 8	—		
2	28.928	—	-16.0	-13.8	—	SE, 1	7	2	b	—	A.-a. 4	—		
4	29.037	—	-20.5	-18.0	—	SE, 1	6	8	b	—	—	—		
6	29.170	—	-19.0	-18.0	—	SE, 2	9	10-12	b	—	—	—		
8	29.251	—	-18.5	-13.8	—	S by E, 2	10	10-12	b	—	—	—		
10	29.297	—	-16.0	-13.5	—	SE, 2	10	15-18	b	—	—	—		
Midt.	29.298	—	-17.0	-12.3	—	S by E, 2	11	15	b	—	—	—	Fine and clear day. Light whids in morning, rising from SE later; max. run of cups for 2 hours, 22 miles; max. rate observed by pressure tube, 12 miles per hour. Barometer rising very quickly all day; temperature steady.	
Mean	28.824	—	—	-13.0	—	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. — 8 p. -11°·0. } Solar radiation { black bulb —, bright bulb —. } Evapn. { 1. 0·1 } gramme in 24 hours. Precipn. — in.														

5th.

2	29.325	—	-13.8	-10.0	—	SE, 2	8	15	b	—	—	—		
4	29.367	—	-12.0	-10.5	—	ESE, 2	5	10-15	b	—	—	—	Aurora very faint, SE to S.	
6	29.407	—	-12.5	-9.0	—	SE, 2	6	10	b	—	—	—		
8	29.463	—	-12.0	-8.5	—	SE, 1-2	4	18	b	—	—	—		
10	29.491	—	-15.0	-12.0	—	SE, 2-3	12	10-15	b	—	—	—		
Noon	29.501	—	-16.0	-14.2	—	E, 3	15	20-25	b	—	—	—	1 p.m. Erebus smoke going to the E.	
2	29.509	—	-19.0	-17.5	—	ESE, 1-2	10	10-12	b	—	—	—		
4	29.487	—	-19.0	-15.2	—	E, 1	4	10	b	—	—	—		
6	29.479	—	-19.0	-16.0	—	ENE, 1	7	0-8	b	—	—	—		
8	29.470	—	-19.0	-16.6	—	ENE, 1	7	10	b	—	—	—		
10	29.461	—	-23.2	-17.5	—	Calm	7	0	b	—	—	—		
Midt.	29.427	—	-31.0	-15.5	—	ESE, 1	2	10	b	—	—	—	Faint auroral arch in S.	
Mean	29.449	—	—	-13.5	—	—	—	—	—	—	—	—	Fine and clear day, with fresh SE wind, falling towards evening; max. run of cups for 2 hours, 29 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer rose until 2 p.m. and fell slowly afterwards; temperature fairly steady.	
Max. therm. read at { 8 a. -8°·2. 8 p. -10°·0. } Solar radiation { black bulb —, bright bulb —. } Evapn. { 1. 0·4 } gramme in 24 hours. Precipn. — in.														

6th.

1902—July.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
				Dry.	Wet.										
7th.	2	29.442	—	-20.0	-16.2	—	E by S, 1	4	10	b	—	—	—	Faint auroral beams in NE.	
	4	29.423	—	-20.0	-13.8	—	E by N, 1-2	4	10-15	bm	—	—	—		
	6	29.397	—	-20.5	-19.5	—	Lt. S airs	6	0-10	b	—	—	—	Faint auroral curtain ESE to S.	
	8	29.397	—	-25.0	-24.0	—	Calm	0	0	b	—	—	—	Faint auroral arch in E and SE to 30° alt.	
	10	29.371	—	-21.8	-19.0	—	Calm	0	0	b	—	—	—	Took down Robinson's anemometer.	
	Noon	29.316	-31.2	-20.0	-15.6	—	Calm	—	0	b	—	—	—	Min. temp. at Cape Armitage since (?) = -36°0.	
	2	29.343	—	-23.2	-23.2	—	Calm	—	0	b	—	—	—	1 p.m. Temp. at high-level station = -22°0; min. since 3 days = -28°0. Erebus smoke going NE.	
	4	29.317	—	-23.8	-13.8	—	E, 1	—	10	b	—	—	—	4 p.m. Put up Robinson's anemometer in place.	
	6	29.277	—	-17.2	-17.2	—	E, 1-2	12	10	b	—	—	—	6 p.m. Very bright aurora glare in SE.	
	8	29.245	—	-21.0	-14.5	—	E, 1-2	15	15	b	—	—	—		
	10	29.234	—	-17.0	-11.6	—	Lt. E airs	10	5-10	b	—	—	—		
	Midt.	29.218	—	-32.0	-19.0	—	Calm	4	0	b	—	—	—		
	Mean	29.334	—	—	-17.3	—	—	—	—	—	—	—	—	Fine and clear day, with hardly any wind; max. run of cups for 2 hours, 31 miles; max. rate observed by pressure tube, 15 miles per hour. Barometer fell steadily all day. Temperature lower and not so steady.	
		Max. therm. read at { 8 a. — 8 p. -13°0.		Solar radiation { black bulb — bright bulb —.		Evapn. { 1. 0.6 } gramme.		Precipn. — in.							

8th.	2	29.183	—	-33.3	-25.5	-25.8	—	Calm	0	0	b	—	—	—	
	4	29.159	—	-28.9	-20.2	—	—	Calm	0	0	b	—	—	—	
	6	29.134	—	-23.0	-12.5	—	—	Calm	0	0	b	—	—	—	
	8	29.129	—	-20.0	-28.5	—	—	Calm	0	0	b	—	—	—	
	10	29.121	—	-30.0	-23.5	—	—	Calm	0	0	b	—	—	—	
	Noon	29.135	-31.0	-27.5	-15.0	—	—	Calm	2	0	b	—	—	—	Min. temp. at Cape Armitage, -46°5. Temp. at bottom of crevasse at 30 ft., -14°0.
	2	29.139	—	-17.0	-17.0	—	—	Calm	2	0	b	—	—	—	1 p.m. Temp. at high-level station, -20°2. Min. temp. for 24 hours, -30°0. Erebus smoke going NNE.
	4	29.155	—	-35.0	-35.0	—	—	Calm	0	0	b	—	—	—	
	6	29.181	—	-38.0	-18.0	—	—	Calm	0	0	b	—	—	—	
	8	29.209	—	-26.0	-22.4	—	—	Calm	0	0	b	—	—	—	Unshipped and thawed head of small Dines; found the inside very full of snow.
	10	29.215	—	-25.0	-20.2	—	—	Calm	0	0	o	—	S. 10	—	Fine and clear nearly all the day, becoming overcast at 10 p.m. Dead calm all day; max. run of cups for 2 hours, 4 miles; max. observed by pressure tube, 0.0 mile per hour. Barometer fell slowly until 10 a.m. and then rose slowly. Temperature very unsteady and going low.
	Midt.	29.203	—	-16.5	-16.2	—	—	Calm	0	0	bm	A-8.5	—	—	
	Mean	29.164	—	—	-21.2	—	—	—	—	—	—	—	—	—	
		Max. therm. read at { 8 a. -11°0. 8 p. -13°0.		Solar radiation { black bulb — bright bulb —.		Evapn. { 1. 0.6 } gramme in 24 hours.		Precipn. — in.							

9th.	2	29.183	—	-16.5	4.9	4.9	—	S by E, 0-2	4	10-15	o	—	S. 10	—	
	4	29.206	—	1.2	3.0	2.6	—	E, 0-1	7	10-12	o	—	S. 10	—	
	6	29.231	—	0.5	2.0	1.8	—	E, 1-3	14	21-27	o	—	S. 10	—	
	8	29.261	—	-0.4	3.0	3.0	—	SE, 2-3	15	25	o	—	S. 10	—	
	10	29.245	—	0.0	2.5	2.3	—	SE, 1-3	18	13-23	o	—	S. 10	—	
	Noon	29.213	—	2.0	4.0	3.2	—	E by S, 1-2	12	15	o	—	Fr.-s. 8	—	12.30. Temp. at Cape Armitage, -2°0; min., -45°7.
	2	29.180	—	1.0	1.8	1.0	—	E, 1-3	12	10-20	o	—	Fr.-s. 9	—	
	4	29.156	—	1.0	3.0	2.0	—	Var. E, 0-3	13	0-20	o	—	S. 10	—	Wind varied from E to SE, and gusty.
	6	29.135	—	1.8	3.0	2.0	—	ESE, 1-2	8	10-14	b	—	—	—	
	8	29.080	—	0.0	2.2	2.0	—	ENE, 0-1	5	10-12	bc	—	S. 4	—	
	10	29.028	—	-3.0	3.0	2.0	—	Lt. E airs	2	0	o	—	S. 10	—	
	Midt.	28.986	—	-1.5	-0.5	-0.3	—	Calm	1	0	b	—	—	—	Coronæ round stars.
	Mean	29.150	—	—	2.7	2.1	—	—	—	—	—	—	—	—	Overcast all day, with rising E' breezes, falling towards evening; max. run of cups for 2 hours, 36 miles; max. rate observed by pressure tube, 27 miles per hour. Barometer rose until 8 a.m. and then fell. Temperature rose quickly and remained above zero all day.
		Max. therm. read at { 8 a. 6°0. 8 p. 4°8.		Solar radiation { black bulb — bright bulb —.		Evapn. { 1. 4.8 } grammes in 24 hours.		Precipn. — in.							

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds. Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
				Dry.	Wet.										
2	28.949	—	0.5	3.0	2.0	—	Calm	2	0	b	—	—	—	10th.  Min. temp. at Cape Armitage, -25° 5. Precipitation in form of icy fern patterns on the glass. 1 p.m. Temp. at high-level station, -6° 2; min., -20° 5. Erebus smoke going NE, but very small in amount. 2 p.m. Very small precipitation; 6 p.m., a good deal of precipitation. 6 p.m. Faint aurora in SE.  Calm all day, with clear sky. Wind sprang up from E at 6 p.m. and blew freshly; max. run of cups for 2 hours, 47 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer fell slowly until noon and then rose. Thermometer fell as wind rose.	
4	28.909	—	3.0	4.0	3.0	—	Calm	2	0	b	—	—	—		
6	28.869	—	5.0	4.0	3.0	—	NE by E, 1	2	10	b	—	—	—		
8	28.834	—	9.0	8.8	8.8	—	Calm	4	0	b ☐	—	—	—		
10	28.818	—	12.0	1.0	0.5	—	Calm	4	0	b	—	—	—		
Noon	28.806	-25.5	12.0	5.0	5.0	—	Calm	0	0	b	—	—	—		
2	28.808	—	17.0	2.5	—	—	Calm	1	0	b	—	—	—		
4	28.836	—	17.2	4.0	—	—	Calm	1	0	b	—	—	—		
6	28.859	—	11.0	5.0	—	—	E, 3	12	25-28	bm ☐	—	—	—		
8	28.940	—	7.5	7.0	—	—	E, 2-3	18	20-27	b ☐	—	—	—		
10	29.007	—	10.1	9.3	—	—	E, 5	23	30-35	b	—	—	—		
Midl.	29.103	—	12.5	11.5	—	—	E, 4	21	22-26	bv	—	—	—		
Mean	28.895	—	—	3.0	—	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 7° 0.  
8 p. 8° 0.

Solar radiation { black bulb —.  
bright bulb —.

Evapn. { 1. 2.1 } grammes in  
11. 2.5 } 24 hours.

Precipn. — in.

2	29.188	—	12.5	8.0	—	—	E by N, 3-4	15	18-21	bv	—	—	—	11th.  12.30. Temp. at Cape Armitage, -5° 0; min., -29° 0. Strong blizzard from S.  Very black to southward.  Clear in the morning, becoming overcast with snow midday, and again clearing in evening. Wind fresh from SE; max. run of cups for 2 hours, 34 miles; max. rate observed by pressure tube, 28 miles per hour. Barometer rising steadily all day. Temperature steady and high.
4	29.260	—	9.5	1.2	—	—	SE, 3-4	8	20-23	bv	—	—	—	
6	29.342	—	9.5	6.0	—	—	S, 3-4	11	21-27	bm	—	—	—	
8	29.415	—	7.1	4.5	—	—	SW, 1-2	17	15-20	bm	—	—	—	
10	29.463	—	8.0	4.0	—	—	SE, 1-2	10	15-20	o *	—	N. 10	—	
Noon	29.515	—	8.0	2.2	—	—	SE, 1-2	11	10-20	o	—	N. 10	—	
2	29.559	—	6.0	4.8	—	—	SE, 1-2	13	10-12	o *	—	N. 10	—	
4	29.603	—	5.4	4.0	—	—	SSW, 2-3	16	20-25	ou * †	—	N. 10	—	
6	29.652	—	0.0	4.8	—	—	SE, 2	10	25	o	—	N. 10	—	
8	29.693	—	6.8	5.0	—	—	SE, 1-3	12	15-28	bcm	—	Cu. 2, SE	—	
10	29.721	—	0.2	3.2	—	—	SE, 2-3	10	15-20	bm ☐	—	—	—	
Midl.	29.703	—	8.5	7.5	—	—	E by N, 3	11	20-23	bm	—	—	—	
Mean	29.510	—	—	4.6	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. —  
8 p. -3° 0.

Solar radiation { black bulb —.  
bright bulb —.

Evapn. { 1. 1.6 } grammes in  
11. 1.5 } 24 hours.

Precipn. — in.

2	29.713	—	10.0	8.0	—	—	E by N, 3-4	16	18-25	bm	—	—	—	12th.  Faint auroral curtain and streamers in S. Very bright semi-arch S to E.  12.30. Temp. at Cape Armitage, -17° 4; min., -19° 8. Erebus smoke going to the E.  Clouds low down, but clear above.  Apparently blowing hard out by Cape Armitage and through the Strait, with heavy drift. Clear sky, but misty nearly all day. Wind strong from ENE; max. run of cups for 2 hours, 40 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer rising a little. Temperature falling.
4	29.764	—	9.0	8.0	—	—	E by N, 3	10	18-21	bm	—	—	—	
6	29.805	—	13.0	12.0	—	—	ENE, 4-5	16	22-27	bm	—	—	—	
8	29.818	—	14.3	11.2	—	—	E by S, 1-2	14	15-20	b	—	—	—	
10	29.838	—	12.5	9.0	—	—	E, 1-2	12	10-15	b	—	—	—	
Noon	29.862	—	16.2	15.0	—	—	E, 2-3	9	20-23	b	—	—	—	
2	29.870	—	16.0	13.0	—	—	SE, 2	13	15-22	b	—	—	—	
4	29.873	—	19.0	18.5	—	—	E, 2-3	14	25-28	b	—	—	—	
6	29.880	—	20.0	18.8	—	—	ENE, 3	18	28-30	bm ☐ ☐	—	—	—	
8	29.897	—	19.2	17.6	—	—	NE, 3	20	23-25	bm	—	—	—	
10	29.903	—	18.8	15.0	—	—	SE, 1-3	14	15-28	bm ☐	—	—	—	
Midl.	29.879	—	16.9	14.6	—	—	SE, 1-3	9	15-25	bm	—	—	—	
Mean	29.843	—	—	13.4	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. -1° 0.  
8 p. —

Solar radiation { black bulb —.  
bright bulb —.

Evapn. { 1. 0.9 } grammes in  
11. 0.9 } 24 hours.

Precipn. 0.01 in. since 10 a.m. 3rd.

1902—July.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

13th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.				Upper.	Lower.		
			Dry.	Wet.			P. tube, see p. 2.							
2	29.877	—	-17.2	-15.2	—	SE by S, 2-3	12	22-30	bm	—	—	—	Bright aurora NW to NE and in zenith. Slight aurora N to NE. Faint aurora in NE, also low bank of clouds in E and NE. 12.30. Temp. at Cape Armitage -20° 0'; min. -27° 5'. Brebus smoke going 15 <sup>00</sup> in thick clouds. 1 p.m. Temp. at high-level station, -27° 0'; min., -28° 0'. 4, 6, and 8 p.m. $\cup, \cup$ diameter 46° 0'. Ci.-a. radiating NE and SW. } Ci.-s. radiating N and S. Fine day. Wind falling until only light airs, but rising quickly at 8 p.m. to strong from NE; max. run of cups for 2 hours, 56 miles; max. rate observed by pressure tube, 43 miles per hour. Barometer fairly steady, but fell on wind springing up. Temperature falling.	
4	29.877	—	-15.2	-14.8	—	SE by S, 2-3	19	25-30	b	—	—	—		
6	29.877	—	-20.0	-16.2	—	E, 1-3	13	10-18	b	—	—	—		
8	29.907	—	-19.0	-10.9	—	E by N, 1	9	15	b	—	—	—		
10	29.889	—	-18.0	-14.0	—	E, 1-2	12	15-20	bc	Ci.-s. 2	—	—		
Noon	29.893	—	-20.0	-18.2	—	SE, 1	5	10	b $\cup$	—	—	—		
2	29.887	—	-20.0	-20.0	—	E, 1-2	10	10-18	b	—	—	—		
4	29.877	—	-21.2	-17.0	—	Lt. E airs	8	0-8	bm	—	—	—		
6	29.879	—	-25.0	-19.0	—	Lt. E airs	4	0-8	bc	Ci.-s. 2	—	—		
8	29.850	—	-26.0	-20.0	—	NE, 5-6	22	39-12	bc	Ci.-s. 2	—	—		
10	29.837	—	-26.5	-26.0	—	NE, 5-6	26	35-37	bc $\cup$	Ci.-s. 2 A.-s. 1 } Ci.-s. 2 } <sup>3</sup>	—	—		
Midt.	29.830	—	-27.5	-27.0	—	ENE, 6	28	40-43	bc $\rightarrow$	—	—	—		
Mean	29.873	—	—	-18.7	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. -14° 2.  
8 p. -13° 0. Solar radiation { black bulb —.  
bright bulb —. Evapu. { 1. 0.8 } grammes in  
11. 0.8 } 24 hours. Precipn. — in.

14th.

2	29.815	—	-27.0	-26.5	—	ENE, 6	28	41-11	o	—	A.-s. 10	—	Ci.-s. radiating N and S. $\cup, \cup$ diameter 44° 32'. Ci.-s. radiating N and S. $\cup, \cup$ diameter 44° 32'. Ci.-s. radiating N and S. $\cup, \cup$ diameter 47°. Ci.-s. radiating N and S. $\cup, \cup$ diameter 49°. Ci.-s. radiating N and S. $\cup, \cup$ diameter 51°. Ci.-s. radiating N and S. $\cup, \cup$ diameter 53° 20'. Overcast early, but clearing later. Wind remaining very strong from the ENE to NE; max. run of cups for 2 hours, 56 miles; max. rate observed by pressure tube, 44 miles per hour. Barometer falling steadily. Temperature low and steady.
4	29.802	—	-28.5	-27.0	—	NE, 5	27	26-32	o	—	A.-s. 10	—	
6	29.798	—	-27.5	-26.0	—	NE, 4-5	24	23-26	o	—	Ci. 10	—	
8	29.765	—	-28.2	-27.0	—	NE, 5-6	17	35-40	bm	—	—	—	
10	29.751	—	-28.2	-26.2	—	ENE, 4-5	21	30-35	b	—	—	—	
Noon	29.750	—	-29.0	-28.0	—	ENE, 3-4	15	25-30	b	—	—	—	
2	29.726	—	-31.0	-29.6	—	ENE, 2-3	10	20-25	bc	—	Ci.-a. 4	—	
4	29.688	—	-30.0	-26.0	—	ENE, 5-6	15	35-40	bc	—	Ci.-s. 3	—	
6	29.696	—	-28.2	-28.0	—	ENE, 3-4	18	20-25	bc	—	Ci.-s. 5	—	
8	29.659	—	-29.0	-27.2	—	ENE, 3-5	17	32-38	bc	—	Ci.-s. 3	—	
10	29.621	—	-28.0	-24.2	—	ENE, 5-6	21	30-40	bc	—	Ci.-s. 4	—	
Midt.	29.600	—	-26.0	-26.0	—	E by N, 5	19	30-35	bc	—	Ci.-s. 4	—	
Mean	29.723	—	—	-26.8	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -25° 8.  
8 p. -21° 2. Solar radiation { black bulb —.  
bright bulb —. Evapu. { 1. 1.1 } grammes in  
11. 0.9 } 24 hours. Precipn. — in.

15th.

2	29.586	—	-26.2	-25.2	—	ENE, 4-5	20	28-35	bc	—	Ci.-s. 4	—	Western hills very clear. $\cup, \cup$ diameter 46°. Land to W and SW remarkably clear. Moon hidden. Land to SSW and W very clear. Moon in SE hazy; partly obscured by Ci.-s. Stars and moon visible, but hazy. Heavy bank of clouds SE. 12.30. Temp. at Cape Armitage, -22° 5'; min. -36° 2'. Found one of Robinson's cups twisted round. Overcast and cloudy nearly all day. Wind 13 <sup>00</sup> remaining strong, falling a little midday, but freshening up in the evening; max. run of cups for 2 hours, 41 miles; max. rate observed by pressure tube, 40 miles per hour. Barometer falling generally. Temperature rose a little.
4	29.592	—	-26.0	-23.8	—	ENE, 3-4	15	23	bc $\cup$	—	Ci.-s. 6	—	
6	29.576	—	-24.2	-22.2	—	E, 4-5	15	25-30	bc	—	Ci.-s. 5	—	
8	29.551	—	-23.0	-21.8	—	NE, 5-6	21	30-35	bc	—	Ci.-s. 6	—	
10	29.523	—	-23.5	-20.5	—	E by N, 4-5	18	30-33	c	—	Ci.-s. 10	—	
Noon	29.513	—	-22.0	-19.5	—	E by N, 2	13	18-23	c	—	Ci.-s. 10	—	
2	29.506	—	-19.7	-13.5	—	SE, 1-2	6	15-20	c	—	Ci.-s. 10	—	
4	29.510	—	-17.8	-14.2	—	SE, 1-2	2	10-15	oc $\cup$	—	A.-s. 10, NW (rapid)	—	
6	29.501	—	-16.0	-14.2	—	ESE, 1	4	10	oc	—	—	S. 10	
8	29.487	—	-16.0	-14.2	—	ENE, 4-5	4	30-33	oc	—	—	S. 10	
10	29.468	—	-19.0	-17.0	—	E by N, 4-5	13	30-35	bc	—	A.-s. 6	—	
Midt.	29.446	—	-21.0	-20.5	—	E by N, 5-6	18	35-40	b	—	—	—	
Mean	29.522	—	—	-18.9	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. —  
8 p. -13° 0. Solar radiation { black bulb —.  
bright bulb —. Evapu. { 1. 1.3 } grammes in  
11. 1.3 } 24 hours. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.				Upper.	Lower.		
			Spirit minimum.	Dry.			Wet.	P. tube, see p. 2.						
2	29.445	—	-24.2	-22.2	—	E by N, 6	19	30	b	—	—	—	<p>16th.</p> <p>5 p.m. Observed glow on smoke from Mt. Erebus; the smoke was going E. 7 p.m. Temp. at Cape Armitage, -32° 0; min., -32° 0. A piece of ice fell from Evaporation Dish No. 11. Fine and clear sky all day. Wind very strong until 6 p.m. when it dropped to calm, but rose about midnight; max. run of cups for 2 hours, 38 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer rising slowly all day. Temperature rose quickly in the evening.</p>	
4	29.445	—	-25.8	-20.0	—	E by N, 4	13	20-25	b	—	—	—		
6	29.454	—	-26.5	-17.8	—	E by N, 4	12	20-25	b	—	—	—		
8	29.506	—	-21.6	-21.0	—	NE, 2-3	11	25-30	b	—	—	—		
10	29.533	—	-25.0	-24.8	—	ENE, 4-5	14	28-30	b	—	—	—		
Noon	29.544	—	-26.0	-24.2	—	ENE, 5	17	33-35	b	—	—	—		
2	29.564	—	-25.6	-24.2	—	ENE, 5	17	30	b	—	—	—		
4	29.596	—	-25.6	-23.8	—	ENE, 5	13	23-30	b	—	—	—		
6	29.626	—	-20.0	-20.0	—	Calm	7	0	b	—	—	—		
8	29.642	—	—	-15.0	—	Calm	1	0	b	—	—	—		
10	29.652	—	-16.5	-10.0	—	Calm	1	0	b	—	—	—		
Midt.	29.662	—	-13.9	-9.9	—	SE, 2	4	10	b	—	—	—		
Mean	29.556	—	—	-19.4	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. -14° 8, 8 p. -14° 5. Solar radiation { black bulb —, bright bulb —. Evapm. { 1. 2.6 } grammes in 24 hours. Precipn. — in.

2	29.663	—	-11.1	-8.0	—	SE, 2-3	5	20-25	b	—	—	—	<p>17th</p> <p>E and NE sky was overcast with dark stratus, overhead were large masses of high white cumulus. In S horizon some Fr.-s.</p> <p>Wind shifting from S to W to SW in squalls. Wind shifting as at 4 p.m.</p> <p>10.30. Wind shifted from E to S.</p> <p>Clear until about 10 a.m.; but from noon it was completely overcast with snow falling and drift. Wind light until 2 p.m., when it went S and blew in very furious gusts; max. run of cups for 2 hours, 55 miles; max. rate observed by pressure tube, 40 miles per hour. Barometer rose a little. Temperature rose quickly and remained high.</p>
4	29.658	—	-10.0	-6.9	—	E by S, 1	4	10-12	b	—	—	—	
6	29.650	—	-8.5	-3.8	—	E by S, 1	2	10-12	b	—	—	—	
8	29.649	—	-5.0	0.0	—	Lt. E alrs	3	0-5	bc	A.-cu. 2	S. 4	—	
10	29.666	—	-1.0	1.0	—	E, 1	7	10	bc	A.-cu. 5	S. 2	—	
Noon	29.667	—	-0.2	2.2	—	Lt. SE alrs	7	0-8	o*	—	Fr.-n. 10	—	
2	29.671	—	1.0	3.0	—	S by W, 2	5	20	o*	—	Fr.-n. 10, S.W. (fast)	—	
4	29.672	—	0.5	6.0	—	Var. S, 2-4	10	15-25	o*†	—	N. 10	—	
6	29.671	—	5.0	7.5	—	Var. S, 3-6	14	25-40	o*†	—	N. 10	—	
8	29.705	—	6.0	6.0	—	E, 2-5	13	20-30	o*†	—	N. 10	—	
10	29.691	—	5.5	7.0	—	E, 2-4	17	15-25	o*	—	N. 10	—	
Midt.	29.700	—	5.0	9.0	—	S, 7-8	23	35-40	o*†	—	N. 10	—	
Mean	29.672	—	—	1.9	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -1° 0, 8 p. —. Solar radiation { black bulb —, bright bulb —. Evapm. { 1. 2.5 } grammes in 22 hours. Precipn. 0.01 in. since 10 a.m., 12th.

2	29.695	—	—	7.0	—	SSE, 5-6	27	30	o*†	—	N. 10	—	<p>18th.</p> <p>Very black water sky over NNW and NW.</p> <p>Evaporation not taken. Dishes entirely covered, but were cleared.</p> <p>* Observations were taken from a screen on board ship on account of weather, observations from screen on the lee being discontinued during the night. The small pressure tube anemometer was choked with snow.</p> <p>Overcast all day. Wind very strong early, fell at 8 a.m., but soon after went into the SSW and blew a howling blizzard. Tremendous clouds of snow drift, and very heavy and furious prolonged squalls; max. run of cups for 2 hours, (?) 125 miles; max. rate observed by pressure tube, (?) 55 miles per hour, but the anemometer was choked after 6 p.m. Barometer very unsteady. The temperature rose with the gale.</p>
4	29.707	—	7.0	8.0	—	SSE, 3-4	30	15-25	o*†	—	N. 10	—	
6	29.701	—	6.0	10.0	—	S, 2-4	23	20	o†	—	N. 10	—	
8	29.656	—	8.7	10.2	—	S, 1-2	16	15	oq*†	—	N. 10	—	
10	29.603	—	9.8	11.2	—	S, 4-5	34	20-30	oq*†	—	N. 10	—	
Noon	29.571	—	10.5	11.2	—	S, 4-5	24	20-30	oq*†	—	N. 10	—	
2	29.598	—	11.0	11.2	—	SSE, 3-4	26	20-30	oq*† <sup>2</sup>	—	N. 10	—	
4	29.492	—	10.0	12.0	—	SSW, 5-8	40	20-27	oq*† <sup>2</sup>	—	N. 10	—	
6	29.495	—	11.5	12.0	—	S, 8-9	47	30-55	oq*† <sup>2</sup>	—	N. 10	—	
8	29.509	—	—	12.2*	—	S, 8-9	54	} choked.	oq*† <sup>2</sup>	—	N. 10	—	
10	29.520	—	10.0	11.6	—	SSW, 9-10	54		oq*† <sup>2</sup>	—	N. 10	—	
Midt.	29.524	—	—	11.8*	—	SSW, 9-10	63 <sup>2</sup>	oq*† <sup>2</sup>	—	N. 10	—		
Mean	29.590	—	—	10.7	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 10° 2, 8 p. 13° 0. Solar radiation { black bulb —, bright bulb —. Evapm.—see note at 4 p.m. Precipn. 1.12 in. since 10 p.m., 17th.

max. rate observed by pressure tube, (?) 55 miles per hour, but the anemometer was choked after 6 p.m. Barometer very unsteady. The temperature rose with the gale.

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19th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.640	—	—	11.7*	—	S by W, 8-10	—	—	oq * †	—	N. 10	—	A few hills.	
4	29.680	—	—	12.5*	—	S by W, 10	—	—	oq * †	—	N. 10	—		
6	29.620	—	—	11.8*	—	S by W, 10	—	—	oq * †	—	N. 10	—	Blowing harder than ever.	
8	29.620	—	—	12.8*	—	S, 10-11	—	—	oq * †	—	N. 10	—		
10	29.648	—	—	14.0*	—	S, 9-10	—	choked	oq * †	—	N. 10	—	11 to 11.45 a.m. A hill. Wind drew to WSW, but went back to S by W and blew strong again in heavy gusts.	
Noon	29.669	—	—	15.5*	—	S, 8-9	55	—	oq * †	—	N. 10	—	The temperature 15°·5 was observed in the screen on board, and this thermometer showed the same as the one on the ice whilst wind was strong.	
2	29.774	—	9.8	14.8	—	SE, 7-8	46	—	oq * †	—	N. 10	—	2 p.m. It was not possible to register snowfall, as the gauge was completely covered with accumulated drift.	
4	29.800	—	12.0	13.0	—	SE, 6-7	35	30-35	oq * †	—	N. 10	—	4 p.m. Evaporation not taken. Drifts clear of snow.	
6	29.832	—	11.8	13.0	—	ESE, 6	28	25-32	o * †	—	N. 10	—	8 p.m. Inclined to clear overhead.	
8	29.844	—	12.0	13.8	—	SE, 6	26	20-25	†	—	Fr.-n. 10	—	* From 2 a.m. until noon the dry-bulb readings were taken from a screen on board ship.	
10	29.847	—	12.0	12.8	—	ESE, 3-5	21	—	oe	A.-cu. 9, S (fast)	—	—	Overcast all day. Wind remained in the same quarter and with the same velocity until about noon, when it backed to the SE and gradually eased. The drift snow was very thick and accumulated in big drifts round the ship. Throughout the night the Rotinson's	
Midt.	29.843	—	12.2	13.2	—	ESE, 3-5	18	—	oe	A.-cu. 8, S (fast)	—	—	Temperature remained high and steady.	
Mean	29.733	—	—	13.2	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 15°·0. / 8 p. —. Solar radiation { black bulb — / bright bulb —. Evapn. — see Note at 4 p.m. Precipn. — in.

anemometer showed an average run of 63 miles an hour for 13 hours; the max. run recorded after 10 a.m., was 110 miles in 2 hours. Barometer rose slowly, but was very unsteady.

20th.

2	29.839	—	12.2	12.8	12.9	E, 2-3	17	—	oev	A.-cu., S by W	Fr.-cu. 4, E	—	
4	29.827	—	12.5	13.0	13.0	E by N, 4	19	—	oev	A.-s. 10, WSW	—	—	
6	29.805	—	9.2	9.5	8.8	E by N, 4-5	32	—	oe	Cl.-cu., W by N	S.-cu., E	—	
8	29.779	—	6.2	7.0	6.5	E, 4	26	15-20	be	Cl.-s. 6	—	—	
10	29.758	—	4.0	5.0	4.5	E, 4	26	10-15	b U	—	—	—	
Noon	29.694	-1.5	2.1	3.0	3.0	NE, 4	21	10-15	be U	—	Cu. 2, NE	—	Min. temp. at Cape Armitage, -5°·0.
2	29.639	—	3.0	4.8	4.2	NE, 4	25	15-20	oe	A.-s. 10	—	—	12.30. Temp. at high-level station, -2°·0; min., -6°·2. Wind on summit NE.
4	29.583	—	1.0	2.0	2.0	NE, 4-5	24	10-23	b U	—	—	—	Heavy bank of S.-cu. to E, low down, moving rapidly from NE.
6	29.543	—	-8.0	-7.0	-7.0	E, 6-7	43	25-35	b U †	Cl. 1	—	—	Heavy bank of A.-cu. to E, low down, moving rapidly from NE.
8	29.528	—	-12.0	-11.5	—	E, 6	29	35-38	o	A.-s. 10	—	—	
10	29.493	—	-12.0	-10.0	—	E, 6-7	30	35-40	o	A.-s. 10	—	—	
Midt.	29.485	—	-11.0	-7.5	—	E, 4	28	20	o	A.-s. 10	—	—	Overcast most of the day, clearing a little between 8 a.m. and 4 p.m. Wind E, strong; max. run of cups for 2 hours, 85 miles; max. rate observed by pressure tube, 40 miles per hour. Barometer fell steadily. Temperature fell steadily all day.
Mean	29.664	—	—	1.8	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 14°·2. / 8 p. 7°·0. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. — in.

21st.

2	29.487	—	-9.0	-8.3	—	E, 3	15	15	o	A.-s. 10	—	—	
4	29.471	—	-9.2	-4.5	—	E, 4	10	10-15	o *	A.-s. 10	—	—	
6	29.482	—	-9.0	-8.0	—	E by N, 4-5	12	20-22	o	A.-s. 8	Fr.-s. 2, W	—	
8	29.484	—	-12.0	-11.2	—	NE, 2-3	17	10-15	be U	A.-s. 5	—	—	Western range of hills very distinct.
10	29.495	—	-13.0	-7.0	—	SE, 1	7	10	b U	—	—	—	Cleaned instruments and screens.
Noon	29.495	-18.8	-9.0	-8.5	—	E, 1	9	10	b U	—	—	—	Min. temp. at Cape Armitage, -22°·8.
2	29.501	—	-10.0	-7.8	—	E, 1	9	10	b U	—	—	—	Erebus smoke going E, very small amount. NE breeze at Cape Armitage.
4	29.507	—	-10.0	-9.0	—	Lt. E airs	8	0	b U	—	—	—	
6	29.525	—	-9.8	-7.5	—	Calm	8	0	b U	—	—	—	
8	29.534	—	-9.8	-9.2	—	SE, 1	8	10	b U	—	—	—	
10	29.542	—	-12.0	-11.0	—	Lt. E airs	8	0	b U	—	—	—	
Midt.	29.565	—	-11.0	-9.0	—	SE, 2	8	10-15	bv	—	—	—	Overcast early, but cleared, and remained fine and clear all day. Wind strong early, but fell to light airs in the evening; max. run of cups for 2 hours, 34 miles; max. rate observed by pressure tube, 22 miles per hour. Barometer very steady, rose a little. Temperature steady.
Mean	29.507	—	—	-8.4	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. —. / 8 p. -5°·8. Solar radiation { black bulb — / bright bulb —. Evapn. { 1. 1.0 / 11. 1.7 } grammes in 24 hours. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Dry.	Wet.	Unscreened.									
2	29.562	—	-14.8	-7.0	—	SE, 2	7	20-25	bv	—	—	—	22nd.  Moon much distorted by mirage when setting. 1 p.m. Temp. at high-level station, -15° 8'; min., -21° 8'. Wind on summit SE, 1; out 4 miles to N in McMurdo Bay light E airs. Considerable drift on W side of Erebus. Erebus smoke going E <sup>v</sup> . island rocks greatly distorted by mirage.  Erebus smoke going SE.  Fine and clear all day. Wind light, rising in the evening; max. run of cups for 2 hours, 29 miles; max. rate observed by pressure tube, 29 miles per hour. Barometer very steady, but rose a little. Temperature steady.	
4	29.570	—	-14.0	-11.5	—	E by S, 1-2	4	10-18	bv	—	—	—		
6	29.601	—	-16.0	-13.0	—	Calm	4	0	by	—	—	—		
8	29.611	—	-17.1	-11.2	—	Lt. SE airs	1	0	b	—	—	—		
10	29.619	—	-18.0	-12.8	—	Lt. E airs	1	0	b	—	—	—		
Noon	29.617	—	-21.0	-20.0	—	Calm	2	0	b	—	—	—		
2	29.621	—	-22.0	-13.0	—	Lt. E airs	2	0	b	—	—	—		
4	29.626	—	-19.8	-13.2	—	Lt. E airs	4	0	b	—	—	—		
6	29.628	—	-15.0	-11.0	—	Lt. E airs	1	0	b	—	—	—		
8	29.621	—	-13.5	-10.2	—	E, 2	10	20	b	—	—	—		
10	29.614	—	-14.2	-11.8	—	ENE, 2-3	10	25-28	bm U	—	—	—		
Midt.	29.598	—	-14.0	-11.5	—	NE by E, 3-4	13	26-29	b	—	—	—		
Mean	29.608	—	—	-12.2	—	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. - 6° 9. 8 p. - 10° 0.		Solar radiation { black bulb — bright bulb —		Evapu. { 1. 1'8 } grammes in 11. 1'7 } 24 hours.		Precipn. — in.								

2	29.593	—	-13.0	-10.5	—	NE by E, 2-3	13	20-22	b	—	—	—	23rd.  Moon much distorted by mirage low down in SW. Erebus smoke going SW in big cloud. Cl.-s. radiating N and S.  U, U. Fine day, but cloudy. Wind very steady both in direction and velocity, viz.: E <sup>v</sup> , force 2-3; max. run of cups for 2 hours, 35 miles; max. rate observed by pressure tube, 33 miles per hour. Barometer very steady. Temperature steady, but rose in the evening.	
4	29.583	—	-11.5	-7.5	—	ENE, 2	10	10-12	b	Cl.-s. 2, E	—	—		
6	29.586	—	-24.5	-8.5	—	NE by E, 2-4	17	20-30	b	Cl.-s. 4, E	—	—		
8	29.621	—	-15.2	-10.0	—	E by N, 2	4	20-25	bc	Fr.-cl.-s. 6	—	—		
10	29.611	—	-11.0	-10.0	—	E, 2-3	12	25-39	b	—	—	—		
Noon	29.603	-19.5	-16.2	-15.0	—	E, 2-4	15	25-33	bc	Cl.-s. 3	—	—		
2	29.593	—	-16.5	-12.0	—	E, 2-3	17	25-30	bc	Cl.-s. 5	—	—		
4	29.591	—	-15.0	-11.2	—	ENE, 3	15	23-27	bc	Cl.-s. 4	—	—		
6	29.583	—	-14.0	-10.2	—	E, 2-3	14	23-25	bc	Cl.-s. 4	—	—		
8	29.579	—	-12.0	-9.0	—	E, 2	18	20-22	bc	Cl.-s. 3	—	—		
10	29.575	—	-12.0	-3.2	—	E, 2	15	20	bc	Cl.-s. 3	—	—		
Midt.	29.571	—	-5.8	-4.5	—	E, 2-3	17	20-27	bc	Cl.-s. 2, N	—	—		
Mean	29.591	—	—	-9.3	—	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. - 6° 7. 8 p. - 8° 0.		Solar radiation { black bulb — bright bulb —		Evapu. { 1. 3'1 } grammes in 11. 3'2 } 24 hours.		Precipn. — in.								

2	29.569	—	-7.0	-5.0	—	E, 2-3	16	22-30	bc	Cl.-s. 3, N	—	—	24th.  Min. temp. at Cape Armitage -20° 2. Erebus smoke going SW in big column. 4.20. Long column of smoke from Erebus falling away over ship from NNE.  Fine day, but cloudy. Wind most persistent, remaining E <sup>v</sup> , force 2-4; max. run of cups for 2 hours, 52 miles; max. rate observed by pressure tube, 40 miles per hour. Barometer falling very slowly. Temperature steady.	
4	29.545	—	-10.0	-8.2	—	E, 3	18	26-31	bc	Cl.-s. 3	—	—		
6	29.563	—	-11.8	-11.0	—	ENE, 4-5	23	34-40	bc	Cl.-s. 2	—	—		
8	29.563	—	-11.5	-8.3	—	E by N, 4	26	30-35	bc	A.-s. 4	—	—		
10	29.568	—	-10.0	-9.0	—	E, 4-5	23	28-33	bc	A.-s. 4	—	—		
Noon	29.545	-10.7	-11.0	-8.5	—	E, 3-5	21	20-33	bc	A.-s. 5	—	—		
2	29.541	—	-12.5	-10.0	—	E, 3-5	23	28-36	bc	A.-s. 4	—	—		
4	29.541	—	-11.0	-10.0	—	E, 3-4	21	25-30	bc	A.-s. 5	—	—		
6	29.530	—	-10.5	-9.0	—	NE, 3-4	19	25-33	bc	A.-s. 4	—	—		
8	29.523	—	-11.0	-11.0	—	E, 5-6	26	30-40	bc	A.-s. 2	—	—		
10	29.520	—	-12.0	-11.0	—	E, 3-5	21	20-33	b	—	—	—		
Midt.	29.512	—	-13.0	-9.8	—	E, 4-5	24	20-30	bc	Cl.-s. 4	—	—		
Mean	29.543	—	—	-9.2	—	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. - 3° 1. 8 p. - 8° 0.		Solar radiation { black bulb — bright bulb —		Evapu. { 1. 3'1 } grammes for 11. 3'0 } 24 hours.		Precipn. — in.								

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.										
25th.	2	29.519	—	-11.3	-9.0	—	E, 3-4	20	20	bc →		Ci.-s. 7	—	
	4	29.523	—	-10.7	-8.3	—	E, 4-5	17	20-35	o		Ci.-s. 9	—	
	6	29.577	—	-10.1	-9.0	—	E, 3-4	15	20-25	o		Ci.-s. 10	—	
	8	29.513	—	-10.9	-6.1	—	E, 1-2	22	10-15	oc		—	S. 10	
	10	29.522	—	-10.0	-8.0	—	E, 2-3	10	15-23	o		A.-s. 10	—	
	Noon	29.573	-12.5	-11.0	-9.0	—	E, 1-2	7	10-12	o		A.-s. 10	—	Min. temp. at Cape Armitage, -14° 0. Erebus smoke going SE in big column. Temp. at high-level station, -19° 0; min., -26° 2.
	2	29.570	—	-10.2	-8.2	—	E, 2-3	7	15-20	o		A.-s. 10	—	
	4	29.519	—	-9.0	-7.0	—	E, 1	8	10-12	bn		—	—	
	6	29.510	—	-10.0	-6.0	—	E, 1	7	10-12	bn		—	—	
	8	29.506	—	-7.2	-6.0	—	SE, 2-3	8	20-25	bn		—	—	
	10	29.512	—	-9.0	-7.0	—	Lt. SSE airs	8	0-5	bn		—	—	
	Midt.	29.525	—	-7.8	-6.9	—	ESE, 0-1	9	0-8	bn →		—	—	A few icy speules falling.
	Mean	29.531	—	—	-7.5	—	—	—	—	—		—	—	Overcast all the morning; clearing about 4 p.m., but still remaining misty overhead. Wind fresh early, falling towards evening; max. run of cups for 2 hours, 44 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer steady. Thermometer steady.
		Max. therm. read at { 8 a. —, 8 p. -4° 0.		Solar radiation { black bulb —, bright bulb —.		Evapn. { I. 2.7 } grammes in 24 hours.		Precipn. — in.						

26th.	2	29.522	—	-10.8	-10.0	—	E by N, 2-3	2	20-23	bnq		—	—	
	4	29.509	—	-10.5	-8.5	—	ENE 2-3	8	15-25	bnq		—	—	
	6	29.504	—	-10.5	-7.8	—	E by S, 2	9	15-24	bnq		—	—	
	8	29.490	—	-10.0	-9.0	—	E by S, 1	11	15-22	b		—	—	
	10	29.498	—	-10.8	-8.2	—	E, 2	12	20-22	b		—	—	
	Noon	29.490	—	-10.0	-7.0	—	SE, 2-3	13	20-25	b		—	—	
	2	29.489	—	-8.0	-7.0	—	Lt. SE airs	7	0-8	o		—	S. 10	
	4	29.482	—	-8.5	-4.8	—	Lt. SE airs	7	0-8	o		—	S. 10	
	6	29.467	—	-6.5	-5.0	—	Lt. SE airs	5	0-5	o		—	S. 10	
	8	29.459	—	-5.2	-3.0	—	SE, 1	6	10	o		—	S. 10	
	10	29.441	—	-6.4	-5.0	—	Lt. SE airs	3	0-5	o		—	S. 10	
	Midt.	29.423	—	-6.0	-3.3	—	Lt. SE airs	2	0-5	o		—	S. 10	9.45 p.m. Temp. at Cape Armitage, -7° 5; min., -16° 8.
	Mean	29.482	—	—	-6.6	—	—	—	—	—		—	—	Fine and clear until about 2 p.m., when it became overcast and remained so for the rest of the day. Wind was E by fresh all the morning, gradually falling to light airs; max. run of cups for 2 hours, 26 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer fell slowly all day. Temperature high and steady.
		Max therm read at { 8 a. —, 8 p. -3° 0.		Solar radiation { black bulb —, bright bulb —.		Evapn. { I. 3.1 } grammes in 24 hours.		Precipn. — in.						

27th.	2	29.414	—	-6.0	-5.0	—	Lt. NE airs	2	5-8	o		—	S. 10	
	4	29.397	—	-5.9	-2.9	—	Calm	4	0	o		—	S. 10	
	6	29.365	—	-4.5	-3.5	—	Calm	0	0	o		—	S. 10	
	8	29.351	—	-5.0	-3.0	—	Lt. E airs	1	0	o		—	S. 10	
	10	29.318	—	-4.5	-2.5	—	Calm	0	0	o		—	S. 10	
	Noon	29.390	-10.0	-5.0	-4.8	—	Lt. NE airs	5	0-8	o		—	S. 10	Min. temp. at Cape Armitage, -10° 0. Light E by breezes.
	2	29.270	—	-7.0	-6.4	—	NE, 1	4	10-12	o		—	S. 10	1 p.m. Temp. at high-level station, -13° 0; min., -20° 6. Wind N by E, 1.
	4	29.239	—	-9.8	-9.0	—	NE, 2-3	11	18-22	o		—	S. 10	
	6	29.224	—	-10.0	-8.0	—	NE, 2-3	8	20-25	o		—	S. 10	
	8	29.192	—	—	-7.8	—	E by N, 2-4	10	18-24	o		—	S. 10	
	10	29.180	—	-11.0	-10.2	—	NE, 3-4	7	23-25	o		—	S. 10	
	Midt.	29.122	—	-12.5	-10.6	—	NE, 3-4	14	20-25	o		—	S. 10	
	Mean	29.281	—	—	-6.1	—	—	—	—	—		—	—	Overcast all day. Light breezes until noon, and then a freshening NE breeze; max. run of cups for 2 hours, 28 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer falling steadily all day. Temperature steady.
		Max. therm. read at { 8 a. -2° 0, 8 p. -1° 5.		Solar radiation { black bulb —, bright bulb —.		Evapn. { I. 2.4 } grammes in 24 hours.		Precipn. — in.						



1902—July.]

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31st.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.204	—	-16.2	-12.9	—	—	Lt. N ahrs	1	0	bc	—	A.-s. 10	—	—	
4	29.207	—	-15.5	-11.0	—	—	Lt. NE ahrs	0	0	bc	—	A.-s. 10	—	—	
6	29.212	—	-11.8	-8.2	—	—	Lt. E by S ahrs	1	0	bc	—	A.-s. 10	—	—	
8	29.188	—	-11.9	-5.0	—	—	E, 1-2	7	10-20	o	—	—	S. 10	—	
10	29.196	—	-11.0	-9.0	—	—	E, 2-3	13	15-20	o * †	—	—	N. 10	—	
Noon	29.178	-11.5	-10.5	-7.0	—	—	E, 3	12	20	o * †	—	—	N. 10	—	
2	29.142	—	-8.0	-6.5	—	—	E, 3-4	18	20-35	o * †	—	—	N. 10	—	
4	29.130	—	-7.5	-3.6	—	—	SE, 5-6*	18	35-44	o * †	—	—	N. 10	—	
6	29.126	—	-5.6	-4.2	—	—	SE, 4-5	16	25-30	o * †	—	—	N. 10	—	
8	29.112	—	-9.5	-8.0	—	—	SW, 4-5	24	28-32	o * †	—	—	N. 10	—	
10	29.110	—	—	-6.5*	—	—	SW, 5-6	—	—	o * †	—	—	N. 10	—	
Midt.	29.142	—	—	-4.8*	—	—	SW, 7	—	—	o * †	—	—	N. 10	—	
Mean	29.162	—	—	-7.2	—	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. —, 8 p. -3° 0.		Solar radiation { black bulb —, bright bulb —.				Evapn. { I. 2.8 } grammes in 48 hours.				Precipn. — in.					

Min. temp. at Cape Armitage, -20° 5.  
Wind E, 4, with much drift snow.

\* 10 p.m. and Midt. Observations of temperature were taken from the screen on board.

Overcast and cloudy most of the day. Wind strong from E, changing and increasing until it blew a strong gale from SW. Barometer very unsteady, but falling generally. Temperature steadier than is usual with a SW wind.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.				
				Dry.	Wet.								Unscreened.			
2	29.128	—	—	*4.0	—	—	—	—	o * † <sup>2</sup>	—	—	N. 10	—	<p>1st.</p> <p>* 2, 4, and 6 a.m. Observations of temperature were taken from the screen on board.</p> <p>Min. temp. at Cape Armitage, -11° 5. Wind ESE, force 2-3, with drift. Erebus smoke going to NE.</p> <p>Overcast until 10 a.m., then clearing and remaining clear until midnight, when it again became overcast. Wind blew strong all the morning, with heavy drift and snowfall; max. run of cups for 2 hours, 46 miles. Barometer unsteady and inclined to fall. Temperature steady, and did not rise above zero with the S. wind.</p>		
4	29.136	—	—	*5.0	—	—	—	—	o * †	—	—	N. 10	—			
6	29.106	—	—	*4.0	—	—	—	—	oq * † <sup>2</sup>	—	—	N. 10	—			
8	29.132	—	—	9.5	4.8	—	—	—	oq * †	—	—	N. 10	—			
10	29.179	—	—	6.2	5.8	—	—	10-30	oq †	—	—	Fr.-n. 10	—			
Noon	29.171	-11.5	—	8.5	6.2	—	—	—	—	—	—	—	—			
2	29.173	—	—	13.0	9.8	—	—	—	b	—	—	—	—			
4	29.155	—	—	11.8	10.8	—	—	—	b	—	—	—	—			
6	29.117	—	—	12.8	11.0	—	—	—	bq	—	—	—	—			
8	29.091	—	—	12.6	8.8	—	—	—	bq	—	—	—	—			
10	29.055	—	—	10.2	5.8	—	—	—	be	—	—	—	—			
Midt.	28.990	—	—	10.0	8.8	—	—	—	c	—	—	—	—			
Mean	29.119	—	—	7.1	—	—	—	—	—	—	—	—	—			
Max. therm. read at { 8 a. —, 8 p. —.		Solar radiation { black bulb —, bright bulb —.		Evapn. { 1. Blown away, 11. 0.0 grammes in 24 hours.		Precipn. — in.										

2	28.908	—	—	10.5	7.8	—	—	—	o	—	—	S.-cu. 10	—	<p>2nd.</p> <p>Fine, damp snow falling.</p> <p>Very fine snow falling.</p> <p>Min. temp. at Cape Armitage, -26° 0; temperature falling quickly. Wind ESE, 2. Air very thick with snow.</p> <p>Drifting snow quite obscuring clouds.</p> <p>Overcast all the day. Wind light early, blowing up fresh from E towards the evening; max. run of cups for 2 hours, 46 miles. Barometer fell steadily throughout the day. Temperature very unsteady and fell quickly in the evening.</p>		
4	28.824	—	—	8.5	4.0	—	—	—	oq *	—	—	N. 10	—			
6	28.775	—	—	5.0	2.0	—	—	—	ogq *	—	—	N. 9	—			
8	28.732	—	—	1.3	0.5	—	—	—	o *	—	—	N. 10	—			
10	28.746	—	—	2.6	1.2	—	—	—	o *	—	—	N. 10	—			
Noon	28.669	-18.0	—	1.2	0.8	—	—	—	o *	—	—	N. 10	—			
2	28.634	—	—	8.7	3.6	—	—	—	o *	—	—	N. 10	—			
4	28.596	—	—	8.5	6.2	—	—	—	o *	—	—	N. 10	—			
6	28.592	—	—	13.0	11.5	—	—	—	o * †	—	—	N. 10	—			
8	28.597	—	—	17.0	16.2	—	—	—	bm †	—	—	—	—			
10	28.613	—	—	17.0	11.0	—	—	—	o	—	—	A.-s. 10	—			
Midt.	28.612	—	—	21.1	20.0	—	—	—	o †	—	—	A.-s. 10	—			
Mean	28.692	—	—	6.4	—	—	—	—	—	—	—	—	—			
Max. therm. read at { 8 a. —, 8 p. —.		Solar radiation { black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.										

2	28.640	—	—	21.8	20.8	—	—	—	o †	—	—	Cl.-s. 10	—	<p>3rd.</p> <p>Overcast all day. Wind strong from the E, falling light in evening; max. run of cups for 2 hours, 83 miles. Barometer rose steadily until 6 p.m., then fell quickly. Temperature low and steady.</p>		
4	28.626	—	—	22.0	21.0	—	—	—	o	—	—	—	—			
6	28.662	—	—	23.1	22.0	—	—	—	o †	—	—	—	—			
8	28.741	—	—	24.3	22.8	—	—	—	o †	—	—	—	—			
10	28.765	—	—	24.2	23.0	—	—	—	oq †	—	—	S. 10	—			
Noon	28.813	—	—	26.0	25.2	—	—	—	oq †	—	—	S. 10	—			
2	28.858	—	—	26.2	25.0	—	—	—	oq †	—	—	S. 10	—			
4	28.880	—	—	25.8	21.6	—	—	—	oq	—	—	S. 10	—			
6	28.879	—	—	23.8	19.0	—	—	—	oq	—	—	S. 10	—			
8	28.849	—	—	26.6	15.2	—	—	—	o	—	—	S. 10	—			
10	28.804	—	—	25.0	22.8	—	—	—	o	—	—	S. 10	—			
Midt.	28.720	—	—	25.0	14.0	—	—	—	o	—	—	S. 10	—			
Mean	28.771	—	—	21.0	—	—	—	—	—	—	—	—	—			
Max. therm. read at { 8 a. —, 8 p. —.		Solar radiation { black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.										

1902—August.]

## METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, sec p. 2.			Upper.	Lower.			
				Dry.	Wet.											
4th. 2	28.658	—	-18.0	-14.5	—	—	Calm	0	—	o	—	—	S. 10	—	Observations taken without a lamp. 1.10 p.m. Temp. at Cape Armitage -28° 5, min., -28° 5.	
4	28.606	—	-16.0	-12.5	—	—	NE, 1-2	2	—	o	—	—	S. 10	—		
6	28.496	—	-13.5	-12.5	—	—	E by N, 2	7	—	o	—	—	S. 10	—		
8	28.496	—	-23.0	-22.1	—	—	E by N, 2-3	15	—	o * †	—	—	N. 10	—		
10	28.521	—	-26.5	-26.2	—	—	ENE, 5-6	20	30-40	oq * †	—	—	S. 10	—		
Noon	28.580	—	-26.8	-25.0	—	—	E by N, 6-7	18	—	bcq †	A. eu. 4	—	—	—		
2	28.579	—	-26.5	-25.4	—	—	E by N, 5-6	31	25-30	bcq †	A. eu. 3	—	—	—		
4	28.639	—	-28.0	-27.0	—	—	E by N, 4-5	22	15-25	bcq †	A. eu. 3	—	—	—		
6	28.683	—	-28.5	-24.0	—	—	E by N, 5-6	23	30-35	oq †	—	—	—	—		
8	28.764	—	-26.0	-25.5	—	—	E by N, 2-3	21	—	oq	—	—	—	—		
10	28.803	—	-26.0	-23.0	—	—	E by S, 1	10	—	b	—	—	—	—		
Midt.	28.805	—	-24.0	-22.0	—	—	E by N, 1-2	10	—	b	—	—	—	—		
Mean	28.636	—	—	-21.6	—	—	—	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. — 8 p. -20° 0.		Solar radiation		{ black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.						

Pressure-tube anemometer not working properly.

Overcast, with little snow; clearing in the evening. Wind rose from calm to strong E by N at noon, falling again in evening; max. run of cups for 2 hours, 68 miles. Barometer steadier and inclined to rise. Temperature low and steady.

5th. 2	28.827	—	-26.0	-24.5	—	—	SSE, 1-2	11	—	b	—	—	—	—	Observation taken without a lamp. Min. temp. at Cape Armitage, -34° 0.	
4	28.818	—	-25.2	-24.8	—	—	SSE, 2	10	—	b	—	—	—	—		
6	28.788	—	-29.6	-29.0	—	—	ENE, 4-5	18	—	b	—	—	—	—		
8	28.777	—	-29.8	-28.0	—	—	NE, 5	25	10-23	b	—	—	—	—		
10	28.757	—	-30.1	-28.9	—	—	NE, 6	23	20-28	oq	—	—	S. 10	—		
Noon	28.724	-29.4	-29.4	-26.9	—	—	NE, 6	21	15-20	oq	—	—	S. 10	—		
2	28.695	—	-29.0	-28.2	—	—	NE, 3-4	18	15-20	bcq	A. eu. 6	—	S. 4	—		
4	28.685	—	-30.8	-30.0	—	—	E by N, 3-4	19	10-17	oq	—	—	S. 10	—		
6	28.681	—	-31.6	-30.5	—	—	E, 3	17	13-15	o	—	—	S. 10	—		
8	28.679	—	-32.8	-31.5	—	—	NE, 2-3	17	10-16	b	—	—	—	—		
10	28.677	—	-33.5	-30.2	—	—	NE, 2-3	15	10-13	b	—	—	—	—		
Midt.	28.659	—	-31.5	-30.5	—	—	ENE, 3	13	0-20	b ☽	—	—	—	—		
Mean	28.731	—	—	-28.6	—	—	—	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. — 8 p. -26° 0.		Solar radiation		{ black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.						

Faint aurora streamer in SSW.

Clear most of the day. Wind rising till noon and falling in evening; max. run of cups for 2 hours, 49 miles. Barometer falling slightly all day. Temperature lower and falling.

6th. 2	28.667	—	-34.0	-32.5	—	—	ENE, 3-4	17	—	b ☽	—	—	—	—	Long shallow arches of auroral streamers issuing from dark clouds from ENE to SW. 4 a.m. Odd streamers in NE.	
4	28.669	—	-34.0	-31.5	—	—	ENE, 0-1	11	—	b ☽	—	—	—	—		
6	28.663	—	-37.0	-34.5	—	—	ENE, 3	5	—	b	—	—	—	—		
8	28.662	—	-38.9	-38.0	—	—	NE, 5	26	20-28	b	—	—	—	—		
10	28.671	—	-39.2	-37.5	—	—	NE, 5	26	15-20	b	—	—	—	—		
Noon	28.653	—	-38.4	-36.6	—	—	NE, 3-4	17	—	b	—	—	—	—		
2	28.639	—	-39.0	-38.5	—	—	NE, 3-4	16	—	b	—	—	—	—		
4	28.635	—	-40.5	-39.0	—	—	E by N, 3-4	23	—	b	—	—	—	—		
6	28.622	—	-41.5	-40.0	—	—	E by N, 4-5	23	—	b	—	—	—	—		
8	28.608	—	-43.0	-39.8	—	—	E by N, 3-4	19	10-13	b	—	—	—	—		
10	28.609	—	-40.8	-33.8	—	—	ENE, 1-2	18	10-12	b	—	—	—	—		
Midt.	28.577	—	-36.0	-34.0	—	—	NE, 0-1	10	—	b	—	—	—	—		
Mean	28.640	—	—	-36.3	—	—	—	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. — 8 p. —.		Solar radiation		{ black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.						

Dines' pressure-tube anemometer not working properly.

Fine and clear all day. Wind E by N, strong; max. run of cups for 2 hours, 54 miles. Barometer steadier, but falling slightly. Temperature lower and falling. Making observations is far from being a pleasant task in this temperature.

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

[1902— August.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	28.596	—	-34.2	-34.0	—	—	Calm	1	—	bm	—	—	—	<p>7th.</p> <p>Faint curtain of aurora in N, alt. 40°, and in NE and E.</p> <p>Faint semi-arch of beams in S to SE, alt. 30°.</p> <p>8 a.m. to Noon. Mercury frozen in bulb of dry-bulb thermometer.</p> <p>White fog. Min. temp. at Cape Armitage, -82° 0. Erebus smoke going SE. Marked cloud colouring was observed over Erebus in NE.</p> <p>Min. temp. at Cape Armitage, -57° 8.</p> <p>* Readings of spirit thermometer at time of observation.</p> <p>Fine and clear all day. Wind light and calm; max. run of cups for 2 hours, 18 miles. Barometer rising slowly. Temperature lower and steady.</p>
4	28.613	—	-34.5	-32.9	—	—	Calm	0	—	b W	—	—	—	
6	28.619	—	-35.6	-29.1	—	—	Calm	0	—	b W	—	—	—	
8	28.648	—	-44.0	-42.5*	—	—	Calm	0	—	bm	—	—	—	
10	28.668	—	-49.5	-47.0*	—	—	Calm	0	—	b	—	—	—	
Noon	28.704	-57.5	-50.5	-48.5*	—	—	Calm	0	—	bm	—	—	—	
2	28.723	—	-50.2	-34.0	—	—	NE, 1	1	—	bm	—	—	—	
4	28.745	-52.4	-33.8	-33.2	—	—	E by N, 1-2	6	—	b W	—	—	—	
6	28.762	—	-33.8	-32.0	—	—	ENE, 1	6	—	b	—	—	—	
8	28.790	—	-35.5	-35.0	—	—	ENE, 1	6	—	b	—	—	—	
10	28.807	—	-37.0	-33.2	—	—	NE, 1	7	—	bm	—	—	—	
Midt.	28.801	—	-37.8	-36.4	—	—	NE, 1	10	—	bm	—	—	—	
Mean	28.706	—	—	-36.5	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. —		8 p. —		Solar radiation { black bulb —, bright bulb —.			Evapn. — grammes.		Precipn. — in.			

2	28.827	—	-38.0	-38.0	—	—	NE, 1	4	—	bm W	—	—	—	<p>8th.</p> <p>1 faint streamer in S, alt. 10° to 40°.</p> <p>1 bright streamer in NE to zenith.</p> <p>3 faint streamers in SE, alt. 15° to 40°.</p> <p>12.30. Temp. at Cape Armitage, -37° 0; min., -59° 0. Wind N by E. Erebus smoke going SW.</p> <p>2 p.m. Snow drifting past island and on barrier.</p> <p>Overcast most of the day. Wind variable Ely, blowing up very strong towards the evening, with heavy drift snow; max. run of cups for 2 hours, 47 miles. Barometer rising all day. Temperature very low and decidedly unpleasant with this wind.</p>
4	28.851	—	-35.5	-34.0	—	—	NE, 1-2	9	—	b W	—	—	—	
6	28.857	—	-38.5	-36.0	—	—	ENE, 3-4	10	—	bm W	—	—	—	
8	28.970	—	-40.2	-38.0	—	—	NE, 3-4	16	—	om	A.-s. 7	—	—	
10	28.981	—	-40.5	-37.0	—	—	ENE, 2	21	—	oc	—	Cu. 3	—	
Noon	29.014	—	-38.2	-31.5	—	—	E by S, 2	16	—	oc	—	S. 10	—	
2	29.035	—	-33.2	-31.0	—	—	E by N, 2	11	—	o	A.-s. 10	—	—	
4	29.047	—	-32.0	-29.4	—	—	E by S, 2-4	18	—	oq †	A.-s. 10	—	—	
6	29.041	—	-31.2	-29.1	—	—	E by S, 3	15	—	oq * †	—	N. 10	—	
8	29.059	—	-30.0	-25.4	—	—	SE, 1-3	19	—	oq * †	—	N. 10	—	
10	29.085	—	-33.2	-31.0	—	—	E, 3-4	18	—	oq * †	—	N. 10	—	
Midt.	29.090	—	-35.0	-34.0	—	—	SE, 6	23	—	oq * †	—	N. 10	—	
Mean	28.988	—	—	-32.9	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -32° 0.		8 p. -25° 4.		Solar radiation { black bulb —, bright bulb —.			Evapn. — grammes.		Precipn. — in.			

2	29.113	—	-34.3	-29.0	—	—	S, 7-8	26	—	oq * † <sup>2</sup>	—	N. 10	—	<p>9th.</p> <p>2.30. Wind shifted to E and dropped, in gusts.</p> <p>Min. temp. at Cape Armitage, -36° 8. Wind NE, force 4. Very thick, much drift.</p> <p>Evaporation dish (II.) blown away.</p> <p>W. W.</p> <p>Overcast most of the day, but clearing towards the evening. Wind strong from the S and E, falling towards evening; max. run of cups for 2 hours, 51 miles. Barometer falling quickly all day. Temperature low and steady.</p>
4	29.069	—	-35.1	-29.8	—	—	E by S, 3-5	15	—	bq †	—	—	—	
6	29.018	—	-30.2	-27.0	—	—	E, 3-5	18	—	bq †	—	—	—	
8	28.990	—	-29.3	-27.5	—	—	E by S, 3-4	15	—	oq †	—	S. 10	—	
10	28.940	—	-30.6	-30.5	—	—	E by S, 3-4	18	—	oq * †	—	N. 10	—	
Noon	28.876	-34.0	-32.9	-32.0	—	—	E by S, 3-4	23	—	oq * †	—	N. 10	—	
2	28.861	—	-34.2	-34.0	—	—	NE, 3-4	22	—	oq * †	—	N. 10	—	
4	28.838	—	-34.3	-32.0	—	—	NE, 2-3	18	—	bmc †	Cl.-s. 5	—	—	
6	28.807	—	-32.4	-30.5	—	—	NE, 2	11	—	bmc †	Cl.-s. 2	—	—	
8	28.781	—	-31.3	-29.0	—	—	NE, 1-2	13	—	b	—	—	—	
10	28.766	—	-32.0	-28.2	—	—	ENE, 2	14	—	om	—	S. 8	—	
Midt.	28.726	—	-30.0	-24.9	—	—	NE, 0-1	7	—	bm	—	—	—	
Mean	28.899	—	—	-29.5	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -25° 2.		8 p. -27° 6.		Solar radiation { black bulb —, bright bulb —.			Evapn. — grammes.		Precipn. — in.			

1902—August.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.			Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.	Lower.		Aspirator.
				Dry.	Wet.										
10th. 2	28.733	—	-25.7	-23.3	—	—	Lt. NE airs	2	—	bm $\rightarrow$	—	—	—	Faint auroral glow in S; streamers in NE.	
4	28.725	—	-32.6	-28.6	—	—	Calm	0	—	bm $\rightarrow$	—	—	—	Faint arch of vertical beams in N to SE.	
6	28.725	—	-30.4	-29.5	—	—	Calm	0	—	bm $\rightarrow$	—	—	—	Precipitation in form of crystals.	
8	28.718	—	-32.0	-31.9	—	—	Calm	0	—	bm	—	—	—		
10	28.728	—	-37.6	-34.0	—	—	Calm	0	—	b	—	—	—		
Noon	28.732	-50.0	-35.8	-35.0	—	—	Lt. E airs	—	—	b $\sim$	—	—	—	Min. temp. at Cape Armitage, -53° 3. Erebus smoke going NE. Wind, NE, 2. $\rightarrow$ .	
2	28.724	—	-36.2	-32.2	—	—	Lt. E airs	—	—	b	—	—	—	1 p.m. Temp. at high-level station, -37° 0; min., -44° 5. Erebus smoke going about SE.	
4	28.694	—	-32.5	-27.2	—	—	ESE, 1	—	—	b	—	—	—		
6	28.712	—	-34.5	-32.8	—	—	NE, 1-2	—	—	b $\rightarrow$	—	—	—		
8	28.750	—	-35.0	-30.0	—	—	ENE, 0-1	—	—	b	—	—	—		
10	28.817	—	-30.3	-28.8	—	—	Calm	—	—	b $\rightarrow$	—	—	—		
Midt.	28.868	—	-39.1	-36.8	—	—	Calm	—	—	b $\rightarrow$	—	—	—	Bright auroral display of streamers, with probable corona in zenith.	
Mean	28.744	—	—	-30.8	—	—	—	—	—	—	—	—	—	Fine and clear, with hardly any wind. Robinson anemometer not recording accurately, so taken down. Barometer inclined to rise a little. Temperature low and steady.	
Max. therm. read at		8 a. -23° 0.		8 p. -25° 0.		Solar radiation		black bulb —		bright bulb —		Evapn. — grammes.		Precipn. — in.	

11th. 2	28.882	—	-33.9	-29.0	—	—	NE, 2-3	—	—	b $\rightarrow$ $\rightarrow$	—	—	—		
4	28.911	—	-30.0	-24.2	—	—	NE, 1-2	—	—	b $\rightarrow$	—	—	—		
6	28.905	—	-34.2	-33.0	—	—	Calm	—	—	bm $\rightarrow$	—	—	—		
8	28.912	—	-37.8	-20.2	—	—	NE, 1-2	—	—	b	—	—	—		
10	28.912	—	-30.7	-29.9	—	—	Calm	—	—	b $\rightarrow$	A.-s. 2	—	—		
Noon	28.898	-36.0	-35.2	-31.2	—	—	Calm	—	—	b	A.-s. 2	—	—	Cleaned instruments and thermometer screens. Min. temp. at Cape Armitage, -54° 0. Erebus smoke going SSE.	
2	28.872	—	-34.0	-27.6	—	—	Calm	—	—	bc	A.-s. 4	—	—	Temp. at high-level station, -30° 8; min., -40° 8.	
4	28.860	—	-30.0	-26.0	—	—	Calm	0	—	of $\rightarrow$	A.-s. 10	—	—	2 p.m. Replaced the (Robinson) anemometer.	
6	28.847	—	-27.5	-21.2	—	—	Lt. SE airs	0	—	of	A.-s. 10	—	—	6 p.m. Refilled evaporation dish (II); 98.661 grammes.	
8	28.805	—	-22.5	-18.0	—	—	E by S, 1-2	10	—	o $\rightarrow$	—	S. 10	—		
10	28.800	—	-20.0	-17.8	—	—	E by S, 1-2	10	—	o $\rightarrow$	—	N. 10	—		
Midt.	28.818	—	-25.0	-20.0	—	—	E by N, 2-3	19	—	oc $\rightarrow$	—	N. 10	—		
Mean	28.869	—	—	-24.8	—	—	—	—	—	—	—	—	—	Fine until 4 p.m., becoming overcast for the remainder (of the day). Wind light in morning and evening, but calm all midday. Barometer fairly steady all day. Temperature rose towards the evening.	
Max. therm. read at		8 a. -20° 0.		8 p. —		Solar radiation		black bulb —		bright bulb —		Evapn. — grammes.		Precipn. — in.	

12th. 2	28.804	—	—	-18.0	—	—	E by N, 2-3	20	—	oc $\rightarrow$	—	N. 10	—	Observer did not set minimum (ther.) at midnight. Wind steadier, but weather thicker.	
4	28.785	—	-20.2	-18.0	—	—	ENE, 4	23	—	oc $\rightarrow$	—	N. 10	—	4 a.m. More boisterous than ever.	
6	28.821	—	-19.0	-12.5	—	—	SE, 2	22	—	o $\rightarrow$	—	N. 10	—	Snow heavier.	
8	28.811	—	-14.3	-10.2	—	—	E by S, 2-3	21	—	o $\rightarrow$	—	N. 10	—		
10	28.857	—	-14.8	-12.5	—	—	SE, 4-6	32	—	oc $\rightarrow$	—	N. 10	—		
Noon	28.816	—	-14.0	-13.2	—	—	S by W, 5-6	—	—	oc $\rightarrow$	—	N. 10	—	Snow got inside anemometer and made its indications unreliable.	
2	28.865	—	-15.4	-14.2	—	—	SSE, 6-7	—	—	oc $\rightarrow$	—	N. 10	—		
4	28.919	—	-15.4	-14.6	—	—	ESE, 2-5	—	—	oc $\rightarrow$	—	N. 10	—		
6	28.891	—	-15.0	-14.5	—	—	SE, 2-3	—	—	oc $\rightarrow$	—	N. 10	—		
8	28.891	—	-16.2	-14.0	—	—	SE, 2-3	—	—	oc $\rightarrow$	—	N. 10	—		
10	28.875	—	-15.0	-12.5	—	—	ESE, 1-2	—	—	o $\rightarrow$	—	N. 10	—		
Midt.	28.861	—	-15.0	-14.0	—	—	SE, 4	—	—	oc $\rightarrow$	—	N. 10	—		
Mean	28.850	—	—	-14.0	—	—	—	—	—	—	—	—	—	Overcast all day. Wind very strong; much snow drift. Barometer fairly steady all day. Temperature rising slowly.	
Max. therm. read at		8 a. -9° 0.		8 p. -10° 0.		Solar radiation		black bulb —		bright bulb —		Evapn. { 1.7 grammes in 24 hours. (A piece of ice fell out of dish.)		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	28.826	—	-19.0	-18.0	—	E by N, 2-3'	—	—	cm	—	S. 9	—	Stars of second magnitude in zenith dimly visible.  Stars dimly visible at altitude 15°.  Min. temp. at Cape Armitage, -36° 8. Wind SE.  W W.  Stars dimly visible.  Overcast most of the day. Wind fresh from the eastward. Barometer falling all day. Temperature steady.	
4	28.784	—	-19.0	-19.0	—	ENE, 5	—	—	bem	—	S. 6	—		
6	28.773	—	-19.5	-15.0	—	ENE, 4	—	—	cm †	—	S. 9	—		
8	28.738	—	-17.9	-15.2	—	ENE, 1-2	—	—	o *	—	N. 10	—		
10	28.712	—	-21.0	-20.2	—	E, 3	—	—	o * †	—	N. 10	—		
Noon	28.710	-19.2	-21.0	-16.5	—	E, 2	—	—	o †	—	S. 10	—		
2	28.710	—	-17.0	-16.2	—	E, 2'	—	—	o †	—	S. 10	—		
4	28.661	—	-18.2	-14.0	—	E, 2	—	—	o W	—	S. 10	—		
6	28.635	—	-15.2	-13.5	—	E, 1-2	—	—	o W	—	S. 10	—		
8	28.604	—	-15.9	-14.0	—	NE, 1-2	—	—	om *	—	N. 10	—		
10	28.599	—	-16.0	-12.5	—	ENE, 1-2	—	—	o W	—	Thin S. 10	—		
Midt.	28.570	—	-13.5	-11.5	—	ESE, 2-3	—	—	o	—	S. 10	—		
Mean	28.691	—	—	-15.5	—	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. — 8 p. -13° 7.		Solar radiation { black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.						

13th.

2	28.530	—	-11.5	-9.5	—	SE, 1-2	—	—	o	—	S. 10	—	Wind coming in short puffs; heard first in rigging. Calm between puffs. Conditions much the same; wind slightly steadier. Moon visible, but very misty; no stars.  Min. temp. at Cape Armitage, -24° 0.  Diameter of halo, 43° 27'.  Wind strong all day and variable. Overcast all forenoon, clearing after noon, and overcast again at midnight. Barometer fell until noon and then rose. Temperature fell during the day.
4	28.479	—	-10.0	-7.5	—	SE, 0-3	—	—	oq	—	S. 5	—	
6	28.463	—	-15.5	-12.5	—	SE, 1-3	—	—	oq	—	S. 10	—	
8	28.482	—	-18.9	-18.0	—	NE, 3-4	—	—	oc †	—	S. 10	—	
10	28.462	—	-19.0	-16.5	—	ENE, 4	—	—	o †	—	S. 10	—	
Noon	28.462	-24.0	-19.4	-18.8	—	ENE, 5	—	—	o	—	Thin S. 10	—	
2	28.488	—	-20.0	-19.0	—	ENE, 4	—	—	bc	Ci.-s. 5	—	—	
4	28.516	—	-23.0	-19.0	—	ENE, 3-4	—	—	b	—	—	—	
6	28.521	—	-20.5	-19.0	—	NE, 4	—	—	b W W	—	—	—	
8	28.543	—	-20.0	-16.5	—	ENE, 2-3	—	—	b	—	—	—	
10	28.581	—	-18.0	-17.2	—	ENE, 2-3	—	—	bc	Ci. 2, S by W (fast)	—	—	
Midt.	28.642	—	-20.6	-20.0	—	ENE, 2-3	—	—	oc	—	S. 10	—	
Mean	28.514	—	—	-16.1	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. — 6° 3. 8 p. -16° 0.		Solar radiation { black bulb — bright bulb —.		Evapn. 1.5 grammes in 48 hours. (See note on 12th as to lee.)		Precipn. — in.					

14th.

2	28.704	—	-21.7	-20.2	—	ENE, 3-4	—	—	oqm	—	S. 10	—	Min. temp. at Cape Armitage, -40° 0. Wind ENE, 2. †. High drift half-way up Mt. Terror. Upper halves of both Mt. Erebus and Mt. Terror obscured. 1 p.m. Temp. at high-level station, -26° 0; min., -31° 8. Ci.-s. radiating E and W, also NW and SE. Diameter of halo, 45° 27'.  Stars gleaming through thin clouds.  Clear during the forenoon, but clouded over later. Wind fresh early, falling to calm at noon, and then rising to fresh from NE. Barometer rose slowly. Temperature lower and steady.
4	28.790	—	-22.2	-16.8	—	ESE, 1-2	—	—	by	—	—	—	
6	28.808	—	-23.8	-18.3	—	ENE, 2-3	—	—	b	—	—	—	
8	28.838	—	-21.1	-16.1	—	Lt. E alrs	—	—	b	—	—	—	
10	28.833	—	-22.0	-21.2	—	Calm	—	—	b	—	—	—	
Noon	28.883	-37.5	-28.5	-20.0	—	Lt. E alrs	—	—	o	A.-s. 10	—	—	
2	28.880	—	-21.0	-21.0	—	NE, 1-2	—	—	o	A.-s. 10	—	—	
4	28.889	—	-27.0	-25.2	—	NE, 2-3	—	—	o	A.-s. 10	—	—	
6	28.893	—	-26.2	-24.5	—	NE, 3	—	—	bc W	Ci.-s. 3	—	—	
8	28.882	—	-26.6	-26.0	—	NE, 4	—	—	bc W W	A.-s. 4	—	—	
10	28.897	—	-28.5	-27.0	—	ENE, 5	—	—	oc †	A.-s. 10	—	—	
Midt.	28.893	—	-28.5	-26.5	—	E, 4	—	—	oc W W	A.-s. 10	—	—	
Mean	28.853	—	—	-21.9	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. -15° 4. 8 p. -15° 0.		Solar radiation { black bulb — bright bulb —.		Evapn. 1.7 grammes in 24 hours.		Precipn. — in.					

15th.

1902—August.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
16th. 2	28.893	—	-27.8	-25.5	—	E by N, 5	—	—	oc →	—	A.-s. 10	—	U, U.	
4	28.882	—	-26.8	-25.2	—	NE, 4-5	—	—	oc → U	—	A.-s. 10	—	Brought thermometer screens on board whilst digging out frame.	
6	28.857	—	-26.2	-24.5	—	NE, 3-4	—	—	bc	—	A.-s. 3	—		
8	28.854	—	-26.6	-23.8	—	NE, 1	—	—	b	—	—	—		
10	28.849	—	-26.0	-25.0	—	Calm	—	—	b	—	—	—	Very dark and ugly looking towards S and SW, with heavy stratus.	
Noon	28.851	—	-26.8	-22.8	—	Calm	—	—	b	—	—	—	12.5. Temp. at Cape Armitage, -45° 2; min., -47° 0. Wind ESE, 1. Erebus smoke going E <sup>W</sup> .	
2	28.848	—	-27.0	-24.0	—	Calm	—	—	b U	—	—	—	12.20. Temp. at Cape Armitage, -45° 2; min., -45° 2.	
4	28.851	—	-31.0	-31.0	—	Calm	—	—	bc U →	—	Ci.-s. 5	—		
6	28.830	—	-32.0	-21.0	—	Calm	—	—	o U →	—	Thin A.-s. 10	—		
8	28.831	—	-31.5	-25.8	—	ESE, 2-3	—	—	o U	—	Thin A.-s. 10	—		
10	28.854	—	-29.0	-25.2	—	ESE, 2	—	—	bc U U	—	Thin A.-s. 5	—	Diameter of halo, 43° 20'.	
Midt.	28.877	—	-26.3	-22.0	—	E by S, 3-4	—	—	o	—	—	S. 10		
Mean	28.856	—	—	-24.7	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -24° 0. 8 p. -22° 0. Solar radiation { black bulb —. bright bulb —. Evapn. 0.9 gramme in 24 hours. Precipn. — in.

17th. 2	28.899	—	-23.5	-22.2	—	E, 5	—	—	o U	—	—	N. 10	—	
4	28.950	—	-22.7	-19.0	—	E by S, 5	—	—	o → U	—	—	N. 10	—	
6	28.950	—	-22.5	-19.5	—	E by S, 5	—	—	o → *	—	—	N. 10	—	U.
8	28.967	—	-24.2	-20.2	—	SE, 4-5	—	—	o * →	—	—	N. 10	—	Snow mhn., -30° 2.
10	28.991	—	-21.0	-18.0	—	SE, 4-5	—	—	o * →	—	—	N. 10	—	
Noon	28.943	—	-19.0	-14.0	—	S, 6-8	—	—	oq * → <sup>2</sup>	—	—	N. 10	—	
2	28.919	—	-17.8	-13.0	—	SSW, 6-8	—	—	oq * → <sup>2</sup>	—	—	N. 10	—	
4	28.968	—	-14.0	-11.0	—	SSW, 6-8	—	—	oq * → <sup>2</sup>	—	—	N. 10	—	
6	29.029	—	-12.0	-11.2	—	S, 5-7	—	—	oq * → <sup>2</sup>	—	—	N. 10	—	
8	29.003	—	-13.8	-11.0	—	SSW, 5	—	—	oq * → <sup>2</sup>	—	—	N. 10	—	
10	29.009	—	-13.5	-12.8	—	S, 4	—	—	oq * →	—	—	N. 10	—	
Midt.	28.940	—	-14.6	-13.0	—	E by S, 4	—	—	oq →	—	—	N. 10	—	
Mean	28.964	—	—	-15.4	—	—	—	—	—	—	—	—	—	Overcast all day. Strong blizzard from S with accompanying drift snow. Barometer rose until wind shifted to S, then fell and became mustealy. Temperature rose during the day.

Max. therm. read at { 8 a. -17° 2. 8 p. -10° 5. Solar radiation { black bulb —. bright bulb —. Evapn. — grammes. Precipn. — in.

18th. 2	28.933	—	-14.8	-13.0	—	ESE, 3-4	—	—	oq	—	—	N. 10	—	
4	28.880	—	-13.2	-12.0	—	S by E, 1-3	—	—	oq	—	—	N. 10	—	
6	28.785	—	-13.0	-10.2	—	E, 2-3	—	—	bcq	—	—	Fr.-s. 10	—	Cleaned instruments and screens.
8	28.817	—	-16.9	-14.5	—	SE, 2-5	—	—	bcq	—	Fr.-ci.-s. 3	—	—	
10	28.789	—	-18.8	-14.0	—	E, 3-4	—	—	bc	—	Ci.-s. 2	—	—	
Noon	28.793	—	-18.0	-15.0	—	SSE, 2-3	—	—	bc	—	Fr.-ci.-s. 3	—	—	
2	28.781	—	-19.8	-18.0	—	SE, 1	—	—	bc	—	Ci.-s. 4	—	—	
4	28.716	—	-20.2	-14.8	—	E, 2	—	—	b	—	—	—	—	
6	28.700	—	-23.8	-20.0	—	E, 1-2	—	—	b	—	—	—	—	
8	28.624	—	-23.0	-22.2	—	ENE, 4	—	—	bv U	—	—	—	—	
10	28.580	—	-30.0	-29.2	—	NE, 5	—	—	bv U	—	—	—	—	
Midt.	28.565	—	-30.0	-24.0	—	ESE, 2	—	—	bv U	—	—	—	—	
Mean	28.747	—	—	-17.2	—	—	—	—	—	—	—	—	—	Fine most of the day, and very clear in the evening. Wind still fresh and variable. Barometer falling all day. Temperature fell again in the evening.

Max. therm. read at { 8 a. -9° 8. 8 p. -12° 0. Solar radiation { black bulb —. bright bulb —. Evapn. 2.6 grammes in 48 hours. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.		Upper.	Lower.		
				Dry.	Wet.									
2	28.524	—	-25.5	-20.2	—	E, 2-3	—	—	by U	—	—	—	19th.  Min. temp. at Cape Armitage, -34°·2. Wind ENE, 2. Upper parts of Erebus and Terror obscured.  Very ugly and threatening appearance to S. Wind gusty high up.  Fine in morning, but became overcast about 10 a.m. and remained so the rest of the day. Wind fresh from SE all day. Barometer fell until 6 p.m. and then rose. Temperature rose rapidly till 6 p.m.	
4	28.490	—	-20.2	-16.0	—	ESE, 2	—	—	by U	—	—	—		
6	28.461	—	-17.8	-16.0	—	ESE, 1-2	—	—	b U	—	—	—		
8	28.403	—	-16.4	-7.0	—	S by E, 1-2	—	—	bc	—	Fr.-s. 5	—		
10	28.388	—	-9.6	-7.0	—	S by E, 1-2	—	—	oc	—	A.-s. 10	—		
Noon	28.354	-11.0	-7.7	-4.0	—	S by E, 1	—	—	oc	—	A.-s. 10	—		
2	28.321	—	-4.9	0.8	—	SE, 1-2	—	—	oc	Cl.-s. 10	—	—		
4	28.305	—	-1.0	2.0	—	SSE, 2-4	—	—	oqg	A.-s. 10	—	—		
6	28.295	—	0.8	1.8	—	S, 4-5	—	—	oq * †²	—	N. 10	—		
8	28.368	—	-7.0	-6.2	—	S, 5	—	—	oq * †	—	N. 10	—		
10	28.445	—	-7.8	-6.0	—	SE, 3	—	—	o	A.-s. 10	—	—		
Midt.	28.446	—	-7.0	-5.3	—	SSE, 3-5	—	—	oq	—	S. 10	—		
Mean	28.400	—	—	-6.9	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. —, 8 p. 4°·0. Solar radiation { black bulb —, bright bulb —. Evapn. { 4.9 grammes in 24 hours (piece out). Precipn. — in.

2	28.450	—	-7.5	-6.2	—	SSE, 3-6	—	—	oq	—	S. 10	—	20th.  Whirlwinds down the Strait.  12.30. Temp. at Cape Armitage, -5°·2; min., -20°·5. Wind S by W, 4-6. †².  Evaporation dish blown away.  At noon, 2, 4, and 6 p.m., the sky was apparently clear, and drift snow apparently very high.  Blue sky with clouds all day. Wind very variable and strong. Barometer fairly steady. Temperature fell early, but rose again quickly in evening.
4	28.446	—	-9.2	-7.2	—	SE, 2-4	—	—	oq	—	S. 10	—	
6	28.456	—	-10.0	-8.6	—	E, 2-3	—	—	bq	—	—	—	
8	28.465	—	-12.2	-11.2	—	E by N, 1-2	—	—	bc	—	Fr.-s. 3, S (fast)	—	
10	28.426	—	-12.0	-8.8	—	E, 1-2	—	—	bc	Cl.-s. 5	Fr.-s. 3, S (fast)	—	
Noon	28.362	—	-9.5	-5.0	—	S, 4-5	—	—	bq † *	—	N. 10	—	
2	28.357	—	-5.5	-3.0	—	SSW, 5	—	—	bq	—	—	—	
4	28.390	—	-3.8	-2.0	—	SSW, 5	—	—	bq †²	—	—	—	
6	28.398	—	-2.5	1.0	—	S, 2-3	—	—	bq	—	—	—	
8	28.377	—	-1.2	1.0	—	SE, 1-2	—	—	bin	—	—	—	
10	28.377	—	-0.5	0.8	—	S, 2	—	—	bc	A.-s. 5, S (mod.)	—	—	
Midt.	28.358	—	0.0	1.4	—	E, 0-1	—	—	bc	Cl.-s. 6	Cu. 6, SW	—	
Mean	28.405	—	—	-4.2	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. —, 8 p. 1°·0. Solar radiation { black bulb —, bright bulb —. Evapn. — grammes. Precipn. — in.

2	28.398	—	0.6	2.2	—	S, 5-6	—	—	bcq †	A.-cu. 3, S (fast)	—	—	21st.  5 a.m. Snow falling, with slight breeze.  10.30. Came on to blow from SSE. Sky cleared, but heavy drift; very squally. Off Cape Armitage. Too thick to find thermometer. Wind S by W, 7-8. †². 12.30. Wind shifted to SSW and went to W for short time; heavy squalls; much drift. 2 p.m. Apparently clear overhead; heavy drifts.  Sky clearing to NE.  Overcast most of the day. Wind variable and strong. Barometer rising all day. Temperature higher, but fell towards evening.
4	28.418	—	0.3	2.7	—	Lt. S alrs	—	—	oc	—	S. 10	—	
6	28.427	—	2.3	4.5	—	Calm	—	—	oc *	—	N. 10	—	
8	28.445	—	3.0	5.0	—	Calm	—	—	oc *	—	Fr.-n. 8, SW (mod.)	—	
10	28.503	—	2.0	5.0	—	Calm	—	—	o *	—	Fr.-n. 8, SW (mod.)	—	
Noon	28.490	—	0.0	5.0	—	SSE, 1	—	—	bc	—	Fr.-n. 5, SW (mod.)	—	
2	28.648	—	1.5	2.0	—	S, 6-7	—	—	b †	—	—	—	
4	28.757	—	-0.8	0.0	—	E, 1-2	—	—	o * †²	—	N. 10	—	
6	28.818	—	-1.2	0.0	—	SSE, 2-3	—	—	o * †	—	N. 10	—	
8	28.883	—	-2.0	-0.2	—	SSE, 4	—	—	o * †²	—	N. 10	—	
10	28.894	—	-1.8	-0.2	—	ESE, 2-3	—	—	o * †	—	N. 10	—	
Midt.	28.930	—	-1.8	-0.6	—	E by S, 1-2	—	—	bc †	—	N. 5, NE	—	
Mean	28.634	—	—	2.1	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 6°·0, 8 p. 5°·2. Solar radiation { black bulb —, bright bulb —. Evapn. — grammes. Precipn. — in.

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.											
22nd.	2	28.799	—	-1.6	-0.2	—	E by N, 2-3	—	—	bc	—	—	—	—	—	
	4	28.797	—	-0.8	-0.2	—	Lt. ENE alrs	—	—	bc	Thin A.-s. 6, SE	—	—	—	—	
	6	28.867	—	-2.0	-1.5	—	NNE, 1-2	—	—	bc	Thin A.-s. 2, SE	—	—	—	—	
	8	28.831	—	-4.6	-2.4	—	NNE, 1	—	—	oc	A.-s. 10	—	—	—	—	
	10	28.804	—	-4.5	3.0	—	NE, 1	—	—	b	—	—	—	—	—	
	Noon	28.805	-7.1	-1.8	0.0	—	NE, 1-2	—	—	bc	A.-s. 5	—	—	—	Noon. Cape Armitage. Mtn. temp. (2 days), -14° 0. Wind E, 1. Erebus smoke rolling down the E side of hill. Wind strong on summit and much drift on both mountains. Sun observed above the horizon for the first time.	
	2	28.849	—	-7.0	-5.0	—	NE, 2	—	—	b	—	—	—	—	12.30. Temp. at high-level station, -10° 0; min., -37° 0.	
	4	28.886	—	-9.0	-8.2	—	E, 3	—	—	b	—	—	—	—	4 p.m. Evaporation dish empty = 45.492 grammes.	
	6	28.938	—	-11.0	-9.0	—	ENE, 4	—	—	b	—	—	—	—	6 p.m. Evaporation dish full, too heavy to weigh, being over 100 grammes.	
	8	28.998	—	-10.2	-9.4	—	ENE, 2	—	—	b	—	—	—	—	10 p.m. Slight auroral arch from E to SE, alt. 14°. 2 streamers in zenith from SE.	
	10	29.073	—	-11.0	-9.2	—	ENE, 2	—	—	b	—	—	—	—	Midt. Eastern horizon overclouded.	
	Midt.	29.156	—	-12.5	-10.0	—	E, 2	—	—	bc	—	Fr.-cn. 2	—	—	—	
	Mean	28.900	—	—	-4.3	—	—	—	—	—	—	—	—	—	—	
		Max. therm. read at { 8 a. 1° 6. / 8 p. 3° 6.		Solar radiation { black bulb — / bright bulb —.		Evapn., see remarks.		Precipn. — in.								

23rd.	2	29.227	—	-12.0	-10.0	—	E, 2	—	—	bc	A.-s. 1	—	—	—	—	
	4	29.273	—	-13.0	-8.0	—	E, 1-2	—	—	bc	A.-s. 2	—	—	—	—	
	6	29.291	—	-13.0	-6.0	—	E, 2	—	—	b	—	—	—	—	—	
	8	29.325	—	-9.3	-7.1	—	Calm	—	—	oc	A.-s. 10	—	—	—	Red glow at sunrise, visible above hills. Read instruments without lamp.	
	10	29.339	—	-11.2	-11.0	—	Calm	—	—	b	—	—	—	—	—	
	Noon	29.319	-12.2	-12.0	-5.0	—	SE, 1	—	—	b	—	—	—	—	Min. temp. at Cape Armitage, -21° 0. Wind NE, 2. Mt. Erebus smoke going to eastwards, rising in big column about 1000 feet vertically before being deflected by the upper current.	
	2	29.289	—	-10.0	-8.0	—	Lt. E alrs	—	—	b	—	—	—	—	4 p.m. Evaporation dish too heavy to weigh, over 100 grammes.	
	4	29.235	—	-15.0	-13.0	—	ENE, 2	—	—	b	—	—	—	—	—	
	6	29.186	—	-17.5	-16.8	—	ENE, 3	—	—	b	—	—	—	—	—	
	8	29.152	—	-17.8	-10.2	—	ENE, 1	—	—	b	—	—	—	—	—	
	10	29.098	—	-13.0	-10.0	—	ENE, 1	—	—	b	—	—	—	—	—	
	Midt.	29.074	—	-18.0	-16.0	—	ENE, 4	—	—	bv	—	—	—	—	Midt. Auroral arch NE to SW through zenith, alt. 70°, apparently wind driven.	
	Mean	29.234	—	—	-10.1	—	—	—	—	—	—	—	—	—	Clear most of the day. Wind light E by morning, freshening up in evening. Barometer rose until 10 a.m., and then fell steadily. Temperature falling steadily.	
		Max. therm. read at { 8 a. -4° 1. / 8 p. -5° 0.		Solar radiation { black bulb — / bright bulb —.		Evapn., see remarks.		Precipn. — in.								

24th.	2	29.022	—	-17.0	-15.5	—	NE, 4	—	—	bv	—	—	—	—	Auroral display as at (previous) midt.	
	4	29.020	—	-18.0	-16.0	—	NE, 4-5	—	—	bv	—	—	—	—	—	
	6	28.951	—	-18.0	-15.0	—	E by N, 4	—	—	bv	—	—	—	—	—	
	8	28.877	—	-16.4	-12.9	—	ENE, 4	—	—	oc	—	S. 10	—	—	—	
	10	28.825	—	-13.0	-11.0	—	NE, 3	—	—	o	—	N. 10	—	—	—	
	Noon	28.777	—	-18.0	-15.2	—	E, 1-2	—	—	o * †	—	N. 10	—	—	12.30. Temp. at Cape Armitage, -21° 0; min., -28° 0. Wind SE, 1-2, osf.	
	2	28.727	—	-16.5	-14.0	—	ENE, 3	—	—	o * †	—	N. 10	—	—	—	
	4	28.699	—	-18.2	-17.2	—	NE, 4-5	—	—	b †	—	—	—	—	Read instruments without lamp.	
	6	28.681	—	-19.5	-17.2	—	ENE, 3-4	—	—	o * †	—	N. 10	—	—	—	
	8	28.663	—	-19.6	-17.0	—	ENE, 4	—	—	bm †	—	—	—	—	—	
	10	28.651	—	-18.2	-16.8	—	ENE, 2-3	—	—	o	—	Thin S. 8	—	—	—	
	Midt.	28.617	—	-19.0	-17.0	—	ENE, 1-3	—	—	bm	—	—	—	—	—	
	Mean	28.793	—	—	-15.4	—	—	—	—	—	—	—	—	—	Clear early, becoming overcast with snow, and clearing again in evening. Wind steady ENE, and strong all day. Barometer falling steadily all day. Temperature steady.	
		Max. therm. read at { 8 a. -8° 1. / 8 p. -10° 1.		Solar radiation { black bulb — / bright bulb —.		Evapn. — grammes.		Precipn. — in.								

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Dry.	Wet.										
2	28.662	—	-21.0	-16.0	—	E by S, 2	—	—	bm	—	—	—	<p>25th.</p> <p>12.15. Temp. at Cape Armitage, -19° 5; min., -31° 0. Wind WNW, 2. High drifts upon barrier. Mt. Erebus smoke ascending in vertical column 700 to 1000 feet, and then going sharply to NW.</p> <p>Auroral streamers from NNE to ENE.</p> <p>Fine, but cloudy. Fresh N<sup>y</sup> breeze all day. Barometer rising steadily all day. Temperature not so low.</p>	
4	28.685	—	-18.0	-15.0	—	Calm	—	—	bm *	—	—	—		
6	28.722	—	-16.0	-12.0	—	N, 2	—	—	b	—	S.-cu. 3, NE	—		
8	28.793	—	-25.0	-12.9	—	N, 2	—	—	om †	—	Cl.-s. 10, very thin	—		
10	28.826	—	-14.0	-10.0	—	N, 1-2	—	—	bc	—	Cl.-s. 3	—		
Noon	28.862	—	-14.6	-10.0	—	NNW, 2	—	—	bc	—	Cl.-s. 3	—		
2	28.919	—	-13.5	-10.0	—	NNW, 2	—	—	b	—	—	—		
4	28.967	—	-11.2	-9.0	—	Lt. N airs	—	—	o	—	A.-s. 10	—		
6	28.982	—	-11.0	-9.0	—	N, 1	—	—	bm	—	—	—		
8	28.987	—	-10.2	-8.0	—	N by W, 1-2	—	—	bc †	—	Very thin A.-s. 6	—		
10	28.988	—	-10.0	-8.0	—	N, 2	—	—	b	—	—	—		
Midt.	28.981	—	-9.8	-8.5	—	NNW, 2-3	—	—	b	—	—	—		
Mean	28.865	—	-10.7	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. -11° 5.		8 p. -8° 0.		Solar radiation		black bulb —, bright bulb —.		Evapn. 0.4 grammes in 24 hours.		Precipn. — in.		

2	28.981	—	-9.7	-8.0	—	N by W, 2	—	—	bm	—	—	—	<p>26th.</p> <p>Faint pink glow in the S.</p> <p>12.30. Temp. at Cape Armitage, -4° 5; min., -26° 0. Wind NNW, 3. †, ofs.</p> <p>Overcast and snowing most of the day. Wind still N<sup>y</sup> and W<sup>y</sup>, fresh to light breezes. Barometer steady. Temperature rising during the day.</p>	
4	28.975	—	-9.0	-7.0	—	NW, 2-3	—	—	bm	—	—	—		
6	28.966	—	-8.0	-7.0	—	NW by N, 2-3	—	—	oc * †	—	N. 10	—		
8	28.986	—	-8.5	-7.2	—	NW, 1-2	—	—	bc *	—	N. 10	—		
10	29.001	—	-8.0	-6.2	—	NNW, 2	—	—	o	—	N. 10	—		
Noon	28.999	—	-7.0	-6.0	—	NNW, 1	—	—	o * †	—	N. 10	—		
2	29.015	—	-6.0	-5.0	—	NW, 1	—	—	o * †	—	N. 10	—		
4	29.009	—	-5.8	-5.0	—	NW, 2	—	—	o *	—	N. 10	—		
6	29.012	—	-5.8	-4.2	—	NW, 2	—	—	o *	—	N. 10	—		
8	29.007	—	-4.5	-2.8	—	NNW, 1-2	—	—	o * †	—	N. 10	—		
10	29.017	—	-4.5	-2.2	—	NW, 1	—	—	o *	—	N. 10	—		
Midt.	28.993	—	-3.8	-2.0	—	NNW, 1	—	—	o *	—	N. 10	—		
Mean	28.997	—	-5.2	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. —.		8 p. —.		Solar radiation		black bulb —, bright bulb —.		Evapn. 0.1 grammes in 24 hours.		Precipn. — in.		

2	28.991	—	-8.0	-7.0	—	Calm	—	—	bc →	—	N. 3	—	<p>27th.</p> <p>12.30. Temp. at Cape Armitage, -10° 3; min., -12° 0. Temp. on snow surface, -9° 0. Calm, bef.</p> <p>Patches of aurora in zenith. Solar radiation thermometers, black and bright bulb, in vacuo, erected 2 feet above snow on Hut Point, bulbs facing NW. Overcast, snowing, and foggy all day. No wind. Barometer rose a little. Temperature variable and high.</p>	
4	28.990	—	-8.3	-6.5	—	Calm	—	—	o *	—	N. 10	—		
6	28.978	—	-6.9	-4.5	—	SE, 1	—	—	o *	—	N. 10	—		
8	28.970	—	-5.7	-4.1	—	Calm	—	—	om	—	S. 10	—		
10	28.961	—	-4.8	-2.0	—	ENE, 2	—	—	o †	Fr.-a.-s. 10	—	—		
Noon	28.957	—	-3.0	0.0	—	W, 1	—	—	o	Fr.-a.-s. 10	—	—		
2	28.979	—	-8.1	-6.0	—	Calm	—	—	om	—	Thin S. 10	—		
4	28.988	—	-6.9	-2.8	—	Calm	—	—	o *	—	N. 10	—		
6	28.986	—	-4.0	0.0	—	Calm	—	—	of *	—	N. 10	—		
8	28.966	—	-4.8	-4.0	—	Calm	—	—	of *	—	N. 10	—		
10	28.972	—	-5.3	-4.8	—	ESE, 1	—	—	bmf	—	—	—		
Midt.	28.966	—	-5.7	-4.0	—	Calm	—	—	bf	—	—	—		
Mean	28.980	—	-3.8	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. —.		8 p. 1° 2.		Solar radiation		black bulb —, bright bulb —.		Evapn. 0.0 grammes in 24 hours.		Precipn. — in.		

1902—August.]

## METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Lower.			Upper.	
28th.	2	29.000	—	7.0	5.2							—	—	ENE, 3	—	—
	4	28.980	—	6.0	4.0	—	—	ESE, 4-5	—	—	—	—	—	—	—	
	6	29.005	—	7.3	6.8	—	—	E by N, 4-5	—	—	—	S. 3	—	—	—	
	8	29.030	—	8.9	7.0	—	—	NE, 3-4	—	—	—	—	A.-s. 10	—	—	Placed screens on new frame. Erected the Robinson and small Dines' anemometers.
	10	29.060	—	10.5	9.0	—	—	NE, 2-3	—	—	—	—	—	—	—	
	Noon	29.078	-16.8	10.5	5.8	—	—	E, 1	—	12-15	bc	—	Cl.-s. 3	—	—	Min. temp. at Cape Armitage, -20° 0. Temp. on snow surface, -15° 0. Wind E, 0-1. Temp. at high-level station, -17° 0; min., -27° 0. Erebus obscured.
	2	29.098	—	6.5	4.0	—	—	ESE, 2	9	15-18	bc †	—	Cl.-cu. 6	—	—	
	4	29.130	—	11.7	11.6	—	—	SSE, 1-2	15	12-15	om	—	Thin A.-s. 10	—	—	
	6	29.144	—	11.7	7.0	—	—	SE, 2-3	4	20-25	b	—	—	—	—	
	8	29.149	—	14.5	8.2	—	—	E, 1	13	12-15	b	—	—	—	—	
	10	29.155	—	14.5	12.0	—	—	NE, 4-5	13	28	b †	—	—	—	—	
	Midt.	29.157	—	13.5	9.0	—	—	NE, 3	17	23-25	b	—	—	—	—	Auroral arch extending from 12° to zenith, NE. Patches in zenith. All very faint.
	Mean	29.082	—	—	7.5	—	—	—	—	—	—	—	—	—	—	
Max. therm. { 8 a. 1° 1.      Solar { black bulb 11° 3 (read at 6 p.m.) { 8 p. -4° 0.      radiation { bright bulb —.      Evapn. 0.6 gramme in 24 hours.      Precipn. — in.															Fine overhead, but foggy early, clearing after 4 p.m. Wind NE to SE, strong in morning, and again freshening at night. Barometer rising steadily all day. Temperature inclined to fall again.	
29th.	2	29.150	—	10.5	5.0	—	—	N, 1	7	12	b ☐	—	—	—	—	Double arch in SE, alt. 12° and 45°, faint.
	4	29.156	—	20.0	18.8	—	—	Calm	4	0	b →	—	—	—	—	Auroral display in N, streamers; bright glare in SE.
	6	29.160	—	25.0	18.8	—	—	Calm	0	0	b →	—	—	—	—	Twilight plainly visible in E and SE.
	8	29.157	—	19.8	11.3	—	—	E by S, 1-2	6	15-20	om *	—	N. 10	—	—	Precipitation in form of minute crystals at 4 and 6 a.m.
	10	29.134	—	14.8	14.0	—	—	ENE, 2-3	13	15-25	om *	—	N. 10	—	—	
	Noon	29.139	-20.4	16.7	16.2	—	—	ENE, 3	18	25-29	bc †	—	Fr.-cl.-s. 5, SW	—	—	Min. temp. at Cape Armitage, -30° 5. Temp. on snow surface, -18° 2; min. on snow, -27° 0. Wind E, 2-3. †.
	2	29.113	—	18.2	15.2	—	—	NE by E, 2-3	20	20-25	bc	—	Cl.-s. 3	—	—	
	4	29.131	—	16.5	12.8	—	—	NE, 2-3	20	25-26	o	—	A.-s. 10	—	—	
	6	29.127	—	13.3	4.8	—	—	NE, 0-1	2	12	o * †	—	N. 10	—	—	
	8	29.128	—	11.3	10.2	—	—	Calm	2	0	o	—	S. 10	—	—	
	10	29.124	—	15.0	15.0	—	—	Lt. W airs	4	10	of	—	S. 10	—	—	
	Midt.	29.110	—	18.4	5.8	—	—	Lt. NW airs	9	10	of	—	S. 10	—	—	Fine early, clouding over with snow and fog later. Wind variable E, and fresh; max. run of cups for 2 hours, 40 miles; max. rate observed by pressure tube, 29 miles per hour. Barometer fairly steady, but fell slightly. Temperature rose quickly in evening.
	Mean	29.136	—	—	12.3	—	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. —      Solar { black bulb 8° 7. { 8 p., not observed.      radiation { bright bulb —.      Evapn. 1.0 gramme in 24 hours.      Precipn. — in.																
30th.	2	29.109	—	6.7	5.0	—	—	SE, 1-2	7	20	of †	—	S. 10	—	—	
	4	29.071	—	5.5	3.8	—	—	ESE, 1-2	11	15	of q	—	S. 10	—	—	
	6	29.087	—	11.3	8.0	—	—	SE, 3	17	35	of † <sup>2</sup>	—	S. 10	—	—	
	8	29.163	—	12.6	10.3	—	—	E, 3-4	21	25-28	o * †	—	N. 10	—	—	
	10	29.172	—	12.3	10.0	—	—	SE, 4-6	21	20-36	oq †	—	N. 10	—	—	
	Noon	29.203	—	12.5	12.0	—	—	SE, 4	19	20-26	o †	—	N. 10	—	—	
	2	29.210	—	17.0	14.2	—	—	E, 5	23	30-38	o †	—	N. 10	—	—	
	4	29.232	-17.5	15.2	15.2	—	—	E, 4	21	23-28	o †	—	N. 10	—	—	Min. temp. at Cape Armitage, -28° 8. Temp. on snow surface, -13° 0; min. on snow, -21° 0. Wind E, 3. oq † <sup>2</sup> .
	6	29.237	—	16.0	16.0	—	—	E, 4	19	25-31	o †	—	N. 10	—	—	
	8	29.231	—	21.0	21.0	—	—	E by N, 3-4	22	23-27	o †	—	N. 10	—	—	
	10	29.220	—	24.0	24.0	—	—	E, 6-7	20	25-42	o †	—	N. 10	—	—	
	Midt.	29.216	—	25.0	23.8	—	—	ENE, 6	20	30-35	o †	—	N. 10	—	—	Overcast, snowing, foggy, and squally all day. Wind strong to a fresh gale from the E, with much drift; max. run of cups for 2 hours, 46 miles; max. rate observed by pressure tube, 42 miles per hour. Barometer rose until 6 p.m., and then fell. Temperature falling rapidly.
	Mean	29.179	—	—	13.6	—	—	—	—	—	—	—	—	—	—	
Max. therm. { 8 a. —      Solar { black bulb, below scale. { 8 p., -10° 2.      radiation { bright bulb —.      Evapn. 1.6 grammes in 24 hours.      Precipn. — in.																

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.							Wet.	—		
2	29.214	—	-25.0	-23.2	—	E, 6	32	30-35	oq †	—	N. 10	—	<p>12.45. Temp. at Cape Armitage, -25° 0; min., -28° 8. Wind E, 4. †<sup>2</sup>, oc.</p> <p>Stars faintly visible through A.-s. at 2, 4, 6, 8 and 10 p.m. Considerable drift between 6 and 8 p.m.</p> <p>Overcast and squally most of the day. Strong Ely winds, with a good deal of drift snow; max. run of cups for 2 hours, 62 miles; max. rate observed by pressure tube, 42 miles per hour. Barometer falling slowly. Temperature low, but rose quickly in the evening.</p>	
4	29.229	—	-24.8	-24.0	—	E by S, 5-6	29	30-35	oq † <sup>2</sup>	—	N. 10	—		
6	29.227	—	-24.5	-23.8	—	ENE, 5-6	26	30-35	oq	—	N. 10	—		
8	29.236	—	-26.2	-26.0	—	NE, 5-6	20	35-42	o †	—	S. 10	—		
10	29.225	—	-27.5	-25.0	—	E, 5-6	29	35-40	o †	A.-s. 10	—	—		
Noon	29.215	—	-25.8	-24.0	—	E, 4-5	23	25-35	bc †	Cl.-s. 4, NE (mod.)	S.-cu. 4	—		
2	29.221	—	-25.0	-21.0	—	E, 4-5	23	23-28	bc †	Thin A.-s. 10	—	—		
4	29.205	—	-21.5	-15.2	—	E, 2-4	16	12-24	oq †	Thin A.-s. 10	—	—		
6	29.183	—	-16.0	-11.5	—	SE, 2-4	17	20-23	oq †	Thin A.-s. 10	—	—		
8	29.163	—	-12.5	- 8.0	—	S, 2-5	16	20-30	oq †	Thin A.-s. 10	—	—		
10	29.158	—	- 9.5	- 7.0	—	Lt. SE atrs	14	8-10	o †	Thin A.-s. 10	—	—		
Midn.	29.121	—	- 8.4	- 4.4	—	SE, 2-5	16	20-30	oq * †	—	N. 10	—		
Mean	29.200	—	—	-17.8	—	—	—	—	—	—	—	—		

31st

Max. therm. read at { 8 a. - 19° 4. / 8 p. - 8° 0. Sotar radiation { black bulb — / bright bulb —. Evapn. 1.4 grammes in 24 hours. Precipn — in.

1902—September.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.			Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.	Lower.		Aspirator.
				Dry.	Wet.									
1st.	2	29.124	—	-6.1	-3.2	—	S by E, 2-5	13	20-25	oq * † <sup>2</sup>	—	N. 10	—	
	4	29.125	—	-4.1	-1.0	—	SE, 1	13	15-20	oq	—	S. 10	—	
	6	29.114	—	-1.9	1.8	—	E, 1-2	10	20	oq	—	S. 10	—	
	8	29.120	—	-1.5	0.8	—	ESE, 2	13	20	o	—	S. 10	—	Drift clouds whirling down Strait; wind apparently S by out there; very threatening all round.
	10	29.109	—	-1.0	4.2	—	ESE, 2	13	18-20	o	—	S. 10	—	
	Noon	29.120	—	1.0	3.8	—	E, 2	13	20-23	o	Thin A.-s. 10	—	—	12.15. Temp. at Cape Armitage, -0° 2; min., -29° 0. Wind E, 2. Mt. Erebus obscured.
	2	29.143	—	0.8	2.5	—	E, 1-2	13	18	o	Thin A.-s. 10	—	—	
	4	29.197	—	1.1	2.8	—	SE, 2	13	18-23	o	A.-s. 10	—	—	Snow drifting down Strait. Very threatening look over W and SW hills, and to the S.
	6	29.259	—	-1.0	1.6	—	ESE, 2-4	16	20-30	oq	—	S. 10	—	
	8	29.319	—	-2.8	0.2	—	E, 2-6	20	15-42	oq	—	S. 10	—	
	10	29.329	—	-1.0	2.0	—	SSE, 1-3	18	10-18	oq * †	—	N. 10	—	
	Midt.	29.355	—	-0.5	1.5	—	S, 5-6	18	18-31	oq * †	—	N. 10	—	
	Mean	29.193	—	—	1.4	—	—	—	—	—	—	—	—	Overcast and squally most of the day. Strong SE by wind; max. run of cups for 2 hours, 40 miles; max. rate observed by pressure tube, 42 miles per hour. Barometer rose steadily all day. Temperature high.
		Max. therm. read at { 8 a. 2° 0. / 8 p. —		Solar radiation { black bulb — / bright bulb —		Evapn. 7.9 grammes in 24 hours.		Precipn. — in.						

2nd.	2	29.412	—	-1.0	0.0	—	S by E, 3-6	28	15-26	oq * †	—	N. 10	—	
	4	29.470	—	-1.0	1.0	—	SE, 1-4	13	10-22	oq * †	—	N. 10	—	
	6	29.504	—	-0.8	1.2	—	ESE, 2-4	18	14-22	oq * †	—	N. 10	—	
	8	29.512	—	0.0	2.2	—	SE, 5-6	21	25-38	oq * †	—	N. 10	—	
	10	29.524	—	0.5	1.2	—	ESE, 1-2	15	15-20	o * †	—	N. 10	—	
	Noon	29.503	-1.0	-2.0	0.5	—	ENE, 4-5	16	25	oc †	Ci.-cu. 8	—	—	Min. temp. at Cape Armitage, -2° 5. Wind ENE, 2-4, †. bef. Mt. Erebus obscured.
	2	29.484	—	-3.5	-2.8	—	E, 4-5	23	25-32	bc †	Ci.-s. 6	—	—	
	4	29.476	—	-7.5	-4.8	—	E, 5-6	26	28-34	b †	—	—	—	
	6	29.455	—	-8.0	-6.0	—	E by N, 5-6	26	26-39	b †	—	—	—	
	8	29.474	—	-7.1	-4.5	—	ENE, 4-5	25	24-32	bc †	C.-s. 4	—	—	
	10	29.492	—	-7.5	-4.0	—	NE, 4-5	26	28-33	b	—	—	—	
	Midt.	29.482	—	-6.4	-5.0	—	E by S, 2-4	19	25	bq	—	—	—	Squally.
	Mean	29.482	—	—	-1.8	—	—	—	—	—	—	—	—	Overcast and cloudy up to 2 p.m., clearing after that. Strong, squally, variable E by wind all day. Some snow early. Barometer rose until 10 a.m., then fairly steady. Temperature still high, but falling in evening.
		Max. therm. read at { 8 a. 2° 1. / 8 p. 2° 2.		Solar radiation { black bulb — / bright bulb —		Evapn. 3.9 grammes in 24 hours.		Precipn. — in.						

3rd.	2	29.461	—	-5.9	-4.2	—	NE, 5	14	30	b	Thin A.-s.	—	—	
	4	29.455	—	-5.5	-4.9	—	NE, 5	21	25-35	o	Thin A.-s. 10	—	—	
	6	29.453	—	-8.0	-6.2	—	NE, 5	23	25-35	o	Thin A.-s. 10	—	—	
	8	29.459	—	-7.3	-6.0	—	ENE, 5-6	13	25-35	oq	A.-s. 10	—	—	
	10	29.472	—	-8.5	-8.0	—	ENE, 5	19	28-32	o	A.-s. 10	—	—	
	Noon	29.475	—	-10.3	-9.8	—	ENE, 5-6	23	28-36	oq	A.-s. 10	—	—	12.30. Temp. at Cape Armitage, -11° 2; min., -11° 2. Wind E by S, 2. o. Tops of mountains obscured.
	2	29.494	—	-12.3	-11.8	—	ENE, 6-7	19	28-43	oq †	A.-s. 10	—	—	
	4	29.508	—	-14.0	-13.5	—	E, 6-7	22	30-41	oq †	A.-s. 10	—	—	
	6	29.524	—	-15.0	-15.0	—	E, 6-7	24	35-40	oq †	A.-s. 10	—	—	
	8	29.527	—	-15.0	-14.2	—	E by N, 4-6	24	28-36	oq †	A.-s. 10	—	—	
	10	29.560	—	-14.2	-13.4	—	E by N, 4-5	22	26-32	oq †	A.-s. 10	—	—	
	Midt.	29.588	—	-14.5	-14.0	—	NE, 4-5	20	25-33	oq * †	—	N. 10	—	
	Mean	29.498	—	—	-10.1	—	—	—	—	—	—	—	—	Overcast all day. Strong to fresh E by gale; max. run of cups for 2 hours, 49 miles; max. rate observed by pressure tube, 43 miles per hour. Barometer rising steadily all day. Temperature falling.
		Max. therm. read at { 8 a. -2° 0. / 8 p. -7° 6.		Solar radiation { black bulb — / bright bulb —		Evapn. 7.4 grammes in 24 hours.		Precipn. — in.						

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.603	—	-14.5	-14.0	—	—	ENE, 3-4	18	25-33	o † *	—	N. 10	—	4th.  12.30. Temp. at Cape Armitage, -13° 2; min., -19° 2. A.s. 9. Wind E, 1. Mountains obscured.  Overcast up to 4 p.m., and then fine and clear. Wind E <sup>ly</sup> and falling; max. run of cups for 2 hours, 37 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer rose until 6 p.m., and then began to fall. Temperature lower and steadier.
4	29.604	—	-14.5	- 8.0	—	—	E, 1-2	10	10-15	o	A.s. 10	—	—	
6	29.610	—	-10.0	- 6.5	—	—	E, 1-2	10	10-15	o	A.s. 10	—	—	
8	29.612	—	-13.2	-12.8	—	—	SE, 1-3	5	15-20	o	A.s. 10	—	—	
10	29.632	—	-14.5	- 8.8	—	—	Lt. E airs	7	8-10	o	A.s. 10	—	—	
Noon	29.617	—	-11.5	-10.0	—	—	ESE, 2	8	15-18	o	A.s. 10	—	—	
2	29.650	—	-13.7	-13.0	—	—	E, 1-2	10	10-15	o	—	S. 10	—	
4	29.654	—	-15.0	-15.0	—	—	E, 4-6	19	25-35	oq † *	—	N. 10	—	
6	29.651	—	-17.0	-16.0	—	—	E, 2-3	18	20-22	b	—	—	—	
8	29.646	—	-18.0	-17.0	—	—	NE, 3	16	23	b	—	—	—	
10	29.640	—	-18.0	-13.8	—	—	Calm	10	0	b	—	—	—	
Midt.	29.641	—	-15.8	-13.0	—	—	Lt. E airs	2	0	b	—	—	—	
Mean	29.633	—	—	-12.3	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. -6° 5. 8 p. -8° 8.		Solar radiation { black bulb — bright bulb —.		Evapn. 2.5 grammes in 24 hours.		Precipn. — in.								

2	29.630	—	-14.5	-11.4	—	—	NE airs	7	0	b	—	—	—	5th.  Bright light on S and SE horizon.  Bright crimson glow in SE.  Strong mirage all round horizon.  Mirage very strong. 12.15. Temp. at Cape Armitage, -23° 8; min., -32° 8. E <sup>ly</sup> light air. Erebus smoke flowing down hill on E side. Summit of Terror obscured. 4 p.m. Mirage remaining all day.  Stars faintly visible.
4	29.630	—	-16.0	-16.0	—	—	Lt. NE airs	2	0	b	—	—	—	
6	29.628	—	-16.8	-16.5	—	—	Lt. SE airs	0	0	o	A.s. 10	—	—	
8	29.623	—	-16.0	-14.2	—	—	Calm	0	0	o	A.s. 10	—	—	
10	29.606	—	-21.0	-19.0	—	—	Calm	0	0	o	A.s. 10	—	—	
Noon	29.590	—	-19.2	-17.0	—	—	Calm	0	0	o	A.s. 10	—	—	
2	29.574	—	-17.6	-15.8	—	—	Calm	0	0	o	A.s. 10	—	—	
4	29.564	—	-16.2	-14.5	—	—	Calm	0	0	o	A.s. 10	—	—	
6	29.550	—	-14.7	- 6.0	—	—	Lt. N airs	6	5	o	A.s. 10	—	—	
8	29.538	—	-11.5	-10.2	—	—	Calm	0	0	o	Thin A.s. 10	—	—	
10	29.530	—	-10.7	- 5.0	—	—	N, 0-2	2	0-20	oq	A.s. 10	—	—	
Midt.	29.528	—	- 7.8	- 7.8	—	—	Lt S airs	6	0	o	A.s. 10	—	—	
Mean	29.583	—	—	-12.8	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. -11° 0. 8 p. - 6° 0.		Solar radiation { black bulb — bright bulb —.		Evapn. 0.7 gramme in 24 hours.		Precipn. — in.								

2	29.521	—	- 9.5	- 7.0	—	—	Calm	0	0	o	A.s. 10	—	—	6th.  Min. temp. at Cape Armitage, -27° 0. Wind SE, 1. os.  Snow very damp, and falling in large flakes, at 8 and 10 p.m. and midt.  Overcast and snowing nearly all day. Wind light and variable. Barometer rose slowly all day. Temperature higher and steady.
4	29.518	—	- 8.0	- 2.0	—	—	NW, 2-4	4	15-22	oq * †	—	N. 10	—	
6	29.516	—	- 3.0	- 2.0	—	—	N, 1-3	9	15-20	oq * †	—	N. 10	—	
8	29.536	—	- 3.4	- 2.0	—	—	N by E, 2	8	15-20	o *	—	N. 10	—	
10	29.539	—	- 3.2	- 2.4	—	—	NE, 1	7	10-12	o *	—	N. 10	—	
Noon	29.542	- 6.2	- 4.2	- 2.2	—	—	ENE, 1	4	8-10	o *	—	N. 10	—	
2	29.551	—	- 5.7	- 5.2	—	—	ESE, 1-2	8	10-15	o *	—	N. 10	—	
4	29.563	—	- 6.3	- 4.8	—	—	SE, 2	7	10-20	o *	—	N. 10	—	
6	29.575	—	- 7.0	- 4.0	—	—	Calm	7	0	om *	—	N. 10	—	
8	29.604	—	- 8.4	- 7.2	—	—	E by N, 3-5	7	21-29	o * †	—	N. 10	—	
10	29.626	—	- 6.7	- 5.2	—	—	E, 3	13	15-18	o *	—	N. 10	—	
Midt.	29.654	—	- 9.5	- 8.0	—	—	E by N, 3-4	15	20-25	o *	—	N. 10	—	
Mean	29.562	—	—	- 4.3	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. — 8 p. -0° 2.		Solar radiation { black bulb — bright bulb —.		Evapn. 1.0 gramme in 24 hours.		Precipn. 0.03 in. since 10 p.m., 18th ult.								

1902—September.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

7th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.670	—	—	9.5	—	6.0	—	—	—	—	—	—	—	Wind shifting from ESE to ENE in squalls. A few stars faintly visible in zenith. Wind apparently rising in squalls.  12.45. Temp. at Cape Armitage, -3°·5; min., -10°·5; calm. ofs.  Overcast and snowing all day. Wind SE <sup>v</sup> , squally and variable in force; max. run of eups for 2 hours, 44 miles; max. rate observed by pressure tube, 40 miles per hour. Barometer falling nearly all day. Temperature high and steady.
4	29.690	—	—	8.3	—	7.0	—	—	—	—	—	—	—	
6	29.706	—	—	9.0	—	6.8	—	—	—	—	—	—	—	
8	29.698	—	—	8.3	—	6.0	—	—	—	—	—	—	—	
10	29.700	—	—	7.9	—	7.0	—	—	—	—	—	—	—	
Noon	29.686	—	—	8.0	—	5.0	—	—	—	—	—	—	—	
2	29.674	—	—	7.9	—	5.0	—	—	—	—	—	—	—	
4	29.658	—	—	7.7	—	7.0	—	—	—	—	—	—	—	
6	29.652	—	—	9.7	—	7.0	—	—	—	—	—	—	—	
8	29.611	—	—	8.0	—	6.8	—	—	—	—	—	—	—	
10	29.624	—	—	8.7	—	8.0	—	—	—	—	—	—	—	
Midt.	29.609	—	—	9.0	—	7.5	—	—	—	—	—	—	—	
Mean	29.665	—	—	—	—	6.6	—	—	—	—	—	—	—	

Max. therm. { 8 a. —      Solar radiation { black bulb —  
                  { 8 p. -4°·5.                           { bright bulb —      Evapn. 1.1 grammes in 24 hours.      Precipn. 0.20 in. since noon, 6th.

8th.

2	29.575	—	—	7.9	—	5.2	—	—	—	—	—	—	—	Wind variable, S to SW.  12.15. Temp. at Cape Armitage, -10°·0; min., -10°·3. Wind SSE, 3-5. ofsq. +.  Sky clearing in zenith.  Moon misty; low str. in SW.  Wind variable S to SE; low str. in W.  Overcast, snowing and foggy nearly all day. Wind variable, S <sup>v</sup> and E <sup>v</sup> , squally; max. run of eups for 2 hours, 44 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer falling all day. Temperature high, and still rising in the evening.
4	29.577	—	—	8.5	—	6.0	—	—	—	—	—	—	—	
6	29.567	—	—	7.5	—	6.8	—	—	—	—	—	—	—	
8	29.549	—	—	7.3	—	6.0	—	—	—	—	—	—	—	
10	29.564	—	—	7.3	—	6.0	—	—	—	—	—	—	—	
Noon	29.559	—	—	7.0	—	5.8	—	—	—	—	—	—	—	
2	29.548	—	—	6.3	—	5.2	—	—	—	—	—	—	—	
4	29.550	—	—	7.1	—	6.5	—	—	—	—	—	—	—	
6	29.550	—	—	7.5	—	6.0	—	—	—	—	—	—	—	
8	29.596	—	—	7.7	—	7.0	—	—	—	—	—	—	—	
10	29.515	—	—	8.3	—	5.8	—	—	—	—	—	—	—	
Midt.	29.515	—	—	11.0	—	2.8	—	—	—	—	—	—	—	
Mean	29.550	—	—	—	—	5.8	—	—	—	—	—	—	—	

Max. therm. { 8 a. -4°·8.      Solar radiation { black bulb —  
                  { 8 p. -4°·2.                           { bright bulb —      Evapn. 0.5 gramme in 24 hours.      Precipn. 0.27 in. since noon, 7th.

9th.

2	29.527	—	—	5.0	—	4.0	—	—	—	—	—	—	—	Ci.-s. radiating NW to SE.  Some low dark str. over S horizon. Glow of sunrise on Observation Hill. Ci.-s. radiating NW to SE. Observations taken without lamp.  10 a.m. and noon, Ci.-s. radiating N and S.  12.15. Temp. at Cape Armitage, -9°·0; min., -24°·5; wind E, 1. bc. Erebus smoke going N.  Light Ci.-s. low down in SW.  Faint aurora in NW.  Cloudy nearly all day, but fine; hardly any wind. Barometer falling all day. Temperature unsteady and high.
4	29.529	—	—	6.0	—	5.4	—	—	—	—	—	—	—	
6	29.492	—	—	8.0	—	8.0	—	—	—	—	—	—	—	
8	29.477	—	—	5.3	—	5.0	—	—	—	—	—	—	—	
10	29.452	—	—	8.3	—	4.0	—	—	—	—	—	—	—	
Noon	29.429	—	—	5.3	—	0.2	—	—	—	—	—	—	—	
2	29.423	—	—	4.2	—	2.0	—	—	—	—	—	—	—	
4	29.393	—	—	1.5	—	2.0	—	—	—	—	—	—	—	
6	29.361	—	—	5.7	—	4.4	—	—	—	—	—	—	—	
8	29.325	—	—	6.5	—	6.0	—	—	—	—	—	—	—	
10	29.287	—	—	11.3	—	1.2	—	—	—	—	—	—	—	
Midt.	29.212	—	—	4.8	—	0.0	—	—	—	—	—	—	—	
Mean	29.409	—	—	—	—	2.8	—	—	—	—	—	—	—	

Max. therm. { 8 a. —      Solar radiation { black bulb 31°·4.  
                  { 8 p. 2°·0.                           { bright bulb 9°·7.      Evapn. 3.1 grammes in 24 hours.      Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.										
2	29.182	—	-13.3	-11.5	—	Calm	4	0	b		—	—	<p>10th.</p> <p>Heavy drift driving northwards up the strait; none on board the ship.</p> <p>Cl.-s. broken into wavy wisps in the N and NW, brilliantly coloured with prismatic tints. Low stratus over western hills.</p> <p>4 p.m. Mth. temp. at Cape Armitage, -34.2. Lt. S air. b.</p> <p>Fine and clear all day. Wind rose to fresh at midday, but fell in evening; max. run of cups for 2 hours, 28 miles; max. rate observed by pressure tube, 28 miles per hour. Barometer falling all day. Temperature lower and falling.</p>	
4	29.098	—	-12.7	-2.3	—	E, 0-1	3	0	b		—	—		
6	28.990	—	-10.3	-4.8	—	ENE, 1-2	8	20	b		—	—		
8	28.977	—	-9.0	-7.0	—	SE, 4	14	25-28	b		—	—		
10	28.919	—	-13.0	-13.0	—	E by S, 3-4	7	20-25	b		—	—		
Noon	28.890	—	-26.2	-5.0	—	SE, 1-2	11	10-15	b ⊕		—	—		
2	28.841	—	-20.8	-7.8	—	SE, 1-2	4	10-12	b		—	—		
4	28.791	-34.2	-11.3	-4.8	—	Calm	5	0	bc		Fr.-cl.-s. 2	—		
6	28.779	—	-14.8	-6.8	—	NE, 2-3	2	15-20	b		—	—		
8	28.748	—	-15.8	-10.0	—	Calm	2	0	b		Fr.-cl.-cu. 1	—		
10	28.758	—	-26.0	-10.0	—	SE, 0-1	2	0	b		—	—		
Midt.	28.684	—	-10.5	-4.0	—	Lt. E airs	4	0	b		—	—		
Mean	28.888	—	—	-7.3	—	—	—	—	—		—	—		

Max. therm. read at { 8 a. 0.2. / 8 p. -3.0. Solar radiation { black bulb 46.4. / bright bulb 11.0. Evapn. 5.0 grammes in 24 hours. Precipn. — in.

2	28.664	—	-8.3	-4.0	—	E by N, 1-2	7	10-15	bc		Cl.-s. 3	—	<p>11th.</p> <p>Wind variable, shifting between E and NE.</p> <p>Cl.-s. radiating NW and SE.</p> <p>Foggy appearance to S and SW. Solar halo diameter 42°, with faint mock suns.</p> <p>Noon. High-level station temp., -26.2; min., -35.0. Erebus smoke going N or NW.</p> <p>1 p.m. Temp. at Cape Armitage, -21.0; min., -37.0. Wind NE, 6. 1.2. b.</p> <p>Fine all day. Strong to fresh NE winds with heavy drift midday; max. run of cups for 2 hours, 40 miles; max. rate observed by pressure tube, 38 miles per hour. Barometer falling all day. Temperature unsteady.</p>
4	28.631	—	-2.8	1.8	—	E by N, 1-2	6	10-15	b		—	—	
6	28.575	—	-17.2	-11.8	—	SE, 1-2	10	10-15	b		—	—	
8	28.540	—	-17.5	-1.8	—	E, 2-3	13	15-22	b		Cl.-s. 2	—	
10	28.531	—	-13.9	-5.5	-6.0	ESE, 1-2	11	10-20	bc		Cl.-s. 5	—	
Noon	28.513	—	-14.8	-14.8	-14.2	NE, 2-3	15	20-28	bc ⊕ ⊔		Cl.-s. 6	—	
2	28.505	—	-14.5	-12.0	-12.0	ENE, 4-5	11	35-38	bc ⊕ ⊔ ⊔		Cl.-s. 5	—	
4	28.473	—	-15.0	-12.8	-13.0	NE, 4	21	30-35	bc ⊕ ⊔ ⊔		Cl.-s. 5	—	
6	28.420	—	-15.2	-12.0	-12.0	Calm	12	0	bc ⊔ ⊔ ⊔		Cl.-s. 5	—	
8	28.404	—	-14.2	-13.8	-13.2	Calm	4	0	b ⊔ ⊔ ⊔		Cl.-s. 1	—	
10	28.375	—	-20.5	-19.2	-19.0	NE, 3-4	13	20-35	b		—	—	
Midt.	28.361	—	-20.5	-10.5	-11.0	ENE, 2-3	9	10-20	b		—	—	
Mean	28.500	—	—	-9.7	—	—	—	—	—		—	—	

Max. therm. read at { 8 a. 3.5. / 8 p. 1.0. Solar radiation { black bulb 23.0. / bright bulb —. Evapn. 5.3 grammes in 24 hours. Precipn. — in.

2	28.366	—	-20.0	-10.0	-10.0	E by N, 4	9	25-30	b ⊕ ⊔		—	—	<p>12th.</p> <p>Masts, rigging, and everything on shore white with thick hoar frost or rime.</p> <p>Ice crystals falling.</p> <p>Stars and moon bright and clear.</p> <p>Overcast and cloudy, with snow. Wind strong and squally, with NE drift; max. run of cups for 2 hours, 30 miles; max. rate observed by pressure tube, 42 miles per hour. Barometer rising steadily all day. Temperature lower and steadier.</p>
4	28.382	—	-19.0	-10.0	-10.2	E, 1-3	13	10-15	om		—	N. 10	
6	28.382	—	-18.0	-11.2	-11.2	N by E, 2-3	8	15-20	om ⊔		—	N. 10	
8	28.406	—	-16.2	-14.8	-14.8	NE, 1-2	4	10-15	o * ⊔		—	N. 10	
10	28.434	—	-20.8	-20.0	-20.0	E by S, 4-5	7	25-33	oq ⊕ * ⊔		—	N. 10	
Noon	28.444	—	-22.0	-14.8	-14.8	E by N, 5-6	13	35-40	o ⊕ * ⊔ *		—	N. 10	
2	28.451	—	-21.0	-20.5	-20.5	ENE, 3-4	15	25-32	o ⊕ * ⊔ *		—	N. 10	
4	28.452	—	-21.2	-17.8	-17.8	ENE, 5-6	14	35-42	o ⊕ * ⊔ *		—	N. 10	
6	28.496	—	-21.0	-18.0	-18.0	E, 4-5	14	23-25	o *		—	N. 10	
8	28.508	—	-19.8	-13.2	-13.2	NE, 0-2	11	0-18	oq *		—	N. 10	
10	28.522	—	-19.0	-18.0	-18.0	Lt. E airs	1	0	bc ⊔ ⊔ →		Cl. 5	—	
Midt.	28.562	—	-20.2	-19.2	-19.5	NE, 0-1	1	0	b		—	—	
Mean	28.450	—	—	-15.6	-15.7	—	—	—	—		—	—	

Max. therm. read at { 8 a. -6.2. / 8 p. -12.5. Solar radiation { black bulb —. / bright bulb —. Evapn. — grammes. Precipn. — in.

1902—September.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

13th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	28.506	—	-24.0	-20.0	-19.8	—	Calm	2	0	b	—	—	—	—	2 and 8 a.m. Fog bank extending from S to W.  10 a.m. and noon. Strong mirage all round. Min. temp. at Cape Armitage, -41° 8'; light E <sub>v</sub> air; thick hoar frost on stand and instrument. Temp. at high-level station, -21° 0'; min., -29° 0'. Erebus smoke going to NW. 2 p.m. A well-marked halo round sun with bright prismatic coloured patches, vertically above and on each side. Air full of minute ice crystals.  Ci.-cu. radiating N and S.  Thick hoar frost on everything all day.  Cloudy, but fine generally. Wind variable and light. Barometer rising steadily all day. Temperature lower and steady.
4	28.502	—	-23.5	-18.0	-18.5	—	ESE, 1-2	2	5-10	o	—	—	—	—	
6	28.500	—	-23.0	-14.0	-14.0	—	ENE, 1-2	4	8-10	o	—	Cu. 10	—	—	
8	28.530	—	-19.0	-14.0	-14.0	—	NE, 2	6	10-15	bc	—	S. 2	—	—	
10	28.571	—	-20.8	-17.0	-17.0	—	Calm	7	0	bc	—	—	—	—	
Noon	28.584	-35.0	-25.5	-25.2	-25.2	—	Calm	0	0	bc	—	Ci.-s. 6	Cl. 2	—	
2	28.582	—	-35.2	-20.0	-20.0	—	SE, 2	2	15-20	bc ⊕	—	Ci. 7	S. 1	—	
4	28.665	—	-20.8	-18.8	-18.0	—	NE, 3-4	6	20-25	b ⊕	—	—	—	—	
6	28.679	—	-23.4	-19.0	-18.8	—	Calm	7	0	b	—	Ci. 2	—	—	
8	28.744	—	-20.8	-20.0	-19.0	—	NE, 3-4	8	20-25	bc ⊕	—	Ci. 4	—	—	
10	28.772	—	-21.5	-15.2	-15.8	—	N by E, 1-2	8	10-15	bc	—	Ci.-cu. 6	—	—	
Midt.	28.802	—	-20.8	-20.2	-20.2	—	N by E, 2	3	15-20	b ⊕	—	—	—	—	
Mean	28.620	—	—	-18.5	-18.4	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -12° 8.		8 p. -15° 0.		Solar radiation		black bulb 17° 6.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

14th.

2	28.810	—	-21.5	-20.0	-20.0	—	NE, 2	4	15-20	b	—	—	—	—	Very dark and thick look to the S.  Noon. Min. temp. at Cape Armitage, -46° 5'. Erebus smoke going N <sub>v</sub> ; calm; thick hoar frost. Excessive mirage to W, giving place to great distinctness of detail. 1 p.m. Temp. at high-level station, -24° 0'; min., -27° 2'. Wind fresh from N; frost smoke visible along northern horizon.  Thermometer brought down from high-level station. A.-s. radiating NW and SE.  Fine and clear, with hardly any wind all day; flat calm after 8 p.m. Barometer rising slowly and steadily. Temperature lower and steady.
4	28.849	—	-22.0	-18.5	-18.5	—	NE, 2-3	5	20-22	b	—	—	—	—	
6	28.875	—	-23.2	-18.8	-18.5	—	NE, 1	2	8-15	b	—	—	—	—	
8	28.892	—	-32.5	-23.0	-23.0	—	Calm	2	0	bv	—	—	—	—	
10	28.945	—	-32.8	-32.0	-32.0	—	Calm	2	0	bv	—	—	—	—	
Noon	28.993	-40.0	-35.0	-31.8	-32.0	—	Calm	0	0	bv	—	—	—	—	
2	29.014	—	-35.2	-35.0	-35.0	—	Calm	0	0	bv	—	—	—	—	
4	29.031	—	-35.5	-30.2	-30.2	—	Calm	0	0	bv	—	—	—	—	
6	29.039	—	-30.8	-27.0	-26.8	—	Calm	0	0	bc ⊕	—	Ci.-s. 2	—	—	
8	29.067	—	-31.8	-25.2	-25.0	—	Calm	0	0	bc ⊕	—	A.-s. 6	—	—	
10	29.021	—	-28.0	-18.0	-18.0	—	Calm	0	0	bc ⊕	—	A.-s. 6	—	—	
Midt.	29.020	—	-25.0	-19.0	-19.0	—	Calm	0	0	bc	—	A.-s. 5	—	—	
Mean	28.963	—	—	-24.9	-24.8	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -14° 0.		8 p. -13° 5.		Solar radiation		black bulb 14° 0.		bright bulb —.		Evapn. 0.8 gramme in 24 hours.		Precipn. — in.	

15th.

2	28.937	—	-21.8	-18.0	-18.0	—	Lt. NE airs	0	0	bm	—	—	—	—	Some snow fallen since midnight; moon hazy; very faint halo. Radiant sky in the S.  Moon's position just visible through drift and snow. Overcast. Strong S <sub>v</sub> and E <sub>v</sub> wind; drift and snow; max. run of cups for 2 hours, 49 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer fell until noon and then rose again, when wind shifted to S. Temperature steady.
4	28.922	—	-19.2	-14.8	-14.8	—	E, 1	2	12-15	o	—	A.-s. 10	—	—	
6	28.895	—	-14.2	-12.8	-12.2	—	E, 1-2	7	10-15	om	—	S. 10	—	—	
8	28.890	—	-16.8	-16.8	-16.2	—	SE, 1-2	10	10-15	om ⊕ *	—	N. 10	—	—	
10	28.877	—	-19.4	-18.2	-18.2	—	NE, 3-5	15	25-35	o ⊕ *	—	N. 10	—	—	
Noon	28.868	—	-18.9	-16.2	-16.2	—	E by N, 4-5	18	25-28	o ⊕ *	—	N. 10	—	—	
2	28.875	—	-16.5	-15.0	-15.0	—	E, 4	16	25-28	o ⊕ *	—	N. 10	—	—	
4	28.893	—	-18.5	-12.0	-12.0	—	S, 4-5	20	25-30	o ⊕ *	—	N. 10	—	—	
6	28.948	—	-18.8	-12.2	-12.2	—	S, 2-5	25	20-35	oq ⊕ *	—	N. 10	—	—	
8	28.973	—	-18.8	-18.0	-17.8	—	SSE, 3-4	21	25-30	o ⊕ *	—	N. 10	—	—	
10	29.017	—	-18.8	-18.8	-18.5	—	SSE, 3-4	21	25-30	oq ⊕ *	—	N. 10	—	—	
Midt.	29.031	—	-17.5	-10.0	-16.0	—	E, 3	13	15-20	omq *	—	N. 10	—	—	
Mean	28.927	—	—	-15.7	-15.6	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -12° 5.		8 p. —.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.013	—	-17.5	-17.0	-17.0	—	E, 3-4	11	20-30	oqm	—	A.-s. 10	—	—	<p>16th.</p> <p>4 a.m. to 2 p.m. Minimum thermometer out of order and not read.</p> <p>Appearance of heavy drift to W of Strait. Min. temp. at Cape Armitage, -41° 5. Wind N by E; Erebus smoke going S by W.</p> <p>2 p.m. Cleaned recording instruments.</p> <p>4 p.m. A little snow falling; Cu. clouds well marked, high and white.</p> <p>Mostly overcast and cloudy. Wind still E by strong, but fell in evening; max. run of cups for 2 hours, 40 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer falling slowly. Temperature steady.</p>	
4	29.011	—	—	-14.2	-14.2	—	E, 3	15	25	oqm U	—	A.-s. 10	—	—		
6	29.025	—	—	-18.8	-18.8	—	E, 3-4	20	20-30	oq †	—	A.-s. 10	—	—		
8	29.032	—	—	-20.2	-20.2	—	E, 3-5	18	20-35	bcq	—	Cl.-s. 3	S. 2	—		
10	29.008	—	—	-20.5	-20.2	—	E, 4-5	20	30-35	bc †	—	Cl.-s. 5	—	—		
Noon	28.988	-27.0	—	-19.0	-19.0	—	E by N, 3-4	18	25-30	bc	—	Cl. 2, SE	—	—		
2	28.949	—	—	-18.9	-18.9	—	NE, 3-4	13	25-30	bc	—	A.-cu. 2	—	—		
4	28.932	—	—	-17.4	-17.4	—	ESE, 1-2	7	6-12	c *	—	A.-cu. 9	—	—		
6	28.905	—	-17.0	-16.0	-16.0	—	Calm	1	0	c	—	A.-s. 8	—	—		
8	28.891	—	-17.8	-16.2	-16.2	—	Calm	0	0	o *	—	—	N. 10	—		
10	28.893	—	-23.8	-21.8	-21.2	—	ESE, 1-2	2	10-15	oc *	—	—	N. 10	—		
Midt.	28.887	—	-27.8	-23.0	-22.8	—	Lt. E. alrs	10	5-8	oc *	—	—	N. 10	—		
Mean	28.966	—	—	-18.6	-18.5	—	—	—	—	—	—	—	—	—		

2	28.915	—	-24.2	-22.7	-22.5	—	Calm	1	0	b	—	—	—	—	<p>17th.</p> <p>Min. temp. at Cape Armitage, -40° 0. bc. Cl. 4. Wind E, 4-5.</p> <p>* See remark at 10 a.m. on 18th.</p> <p>Fine, but cloudy. Wind strong from E and rising; max. run of cups for 2 hours, 40 miles; max. rate observed by pressure tube, 35 miles per hour. Much drift and squally. Barometer rising all day. Temperature low and steady.</p>
4	28.960	—	-25.5	-24.0	-23.8	—	Calm	0	0	bc U	—	Cl.-s. 4	—	—	
6	28.988	—	-26.0	-23.0	-23.0	—	E, 1	1	10-12	o	—	—	—	—	
8	29.015	—	-27.0	-24.0	-23.8	—	ENE, 2-3	9	20-23	b †	—	Cl.-s. 4	—	—	
10	29.061	—	-29.2	-28.8	-23.2	—	E, 1-4	7	10-30	bc †	—	Cl.-s. 4	—	—	
Noon	29.115	—	-29.4	-25.2	-25.2	—	E by N, 2-3	13	20-25	bc †	—	Cl. 2, NE	—	—	
2	29.155	—	-30.5	-29.8	-29.2	—	E by N, 3-4	16	25-30	bc †	—	Cl.-s. 2	—	—	
4	29.229	-32.0	-30.0	-27.0	-26.5	—	E, 4	20	25-30	o †	—	Cl.-s. 8	—	—	
6	29.266	—	-28.8	-26.8	-26.5	—	E, 4-5	18	25-35	oq †	—	Cl.-s. 8	—	—	
8	29.359	—	-29.0	-28.0	-28.0	—	E, 4-5	20	28-30	bc †	—	Cl.-s. 4	—	—	
10	29.382	—	-31.4	-30.2	-30.2	—	E, 3-4	15	25-30	o †	—	—	—	—	
Midt.	29.392	—	-30.5	-27.4	-27.4	—	E, 2-5	15*	20-35	oq †	—	—	—	—	
Mean	29.153	—	—	-26.4	-26.2	—	—	—	—	—	—	—	—	—	

2	29.391	—	-28.2	-25.2	-25.0	—	E, 3-6	17	25-38	oq †	—	—	—	—	<p>18th.</p> <p>Very heavy drift all night.</p> <p>All recording instruments buried and choked. One cup of the Robinson anemometer has been crooked all night.</p> <p>7.30 p.m. Western hills and Cape Armitage became visible.</p> <p>Aurora visible overhead, extending E and W.</p> <p>Overcast and snowing. Much drift and squally. Heavy E to S blizzard; max. run of cups for 2 hours, 55 miles; max. rate observed by pressure tube, 55 miles per hour. Barometer rising all day. Temperature low and steady.</p>
4	29.453	—	-27.8	-24.2	-24.0	—	SE, 4-7	17	30-45	oq †	—	—	N. 10	—	
6	29.478	—	-26.4	-25.2	-25.0	—	SE, 5-7	27	35-55	oq † <sup>2</sup>	—	—	N. 10	—	
8	29.483	—	-29.8	-28.5	-28.0	—	E, 4-6	23	35-45	oq † <sup>2</sup>	—	—	N. 10	—	
10	29.560	—	-30.2	-22.0	-22.0	—	S, 5-6	26	35-40	oq * † <sup>3</sup>	—	—	N. 10	—	
Noon	29.576	—	-24.0	-21.0	-21.0	—	S, 5-6	24	40-50	oq * † <sup>2</sup>	—	—	N. 10	—	
2	29.648	—	-25.4	-21.2	-21.2	—	Var. SE, 3-6	19	25-38	oq * † <sup>2</sup>	—	—	N. 10	—	
4	29.696	—	-27.2	-25.5	-25.5	—	Var. SE, 2-5	21	20-35	oq * † <sup>3</sup>	—	—	N. 10	—	
6	29.750	—	-30.5	-26.0	-25.8	—	Var. E, 4-5	25	25-30	oq * † <sup>2</sup>	—	—	N. 10	—	
8	29.778	—	-29.9	-23.0	-23.0	—	ESE, 2-3	16	10-20	bq †	—	A.-s. 3	—	—	
10	29.760	—	-28.0	-25.0	-25.0	—	E, 2-3	7	10-15	bc	—	A.-s. 4	—	—	
Midt.	29.752	—	-26.0	-20.0	-20.0	—	E by S, 1-2	11	10-13	b	—	—	—	—	
Mean	29.610	—	—	-23.9	-23.8	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -17° 2. 8 p. -21° 0. Solar radiation { black bulb —. bright bulb —. Evapn. — grammes. Precipn. — in.

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19th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Unscreened.	Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Direction and force (Beaufort scale).		Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Dry.	Wet.											
2	29.778	—	-23.5	-18.8	-18.8	—	Lt. E airs	4	0	b	—	—	—	—	
4	29.762	—	-27.8	-27.5	-27.5	—	Calm	2	0	bc	Ci.-s. 3	—	—	Cl. radiating E to W.	
6	29.710	—	-29.8	-26.0	-26.0	—	Lt. NE airs	0	0	oc	Ci.-s. 8	—	—	—	
8	29.656	—	-27.5	-24.0	-24.0	—	Lt. E airs	0	0	bc	Ci.-s. 6	—	—	—	
10	29.576	—	-24.0	-23.4	-23.4	—	Lt. E airs	1	0	bc	Ci.-s. 8	—	—	Cl. radiating N and S.	
Noon	29.520	—	-25.4	-20.0	-19.8	—	Lt. SE airs	—	0	b	—	—	—	—	
2	29.516	—	-20.5	-16.0	-16.0	—	Calm	—	0	b	—	—	—	1 p.m. Temp. at Cape Armitage, -32° 7; min., -39° 4; light Ely airs. Erebus smoke going Ely.	
4	29.467	—	-21.0	-16.0	-10.0	—	NE, 1	—	10-12	bc	Ci.-s. 2	—	—	—	
6	29.452	—	-20.8	-18.2	-18.2	—	NE, 1-2	—	10-15	bc	Ci.-s. 4, NE	—	—	—	
8	29.422	—	-22.8	-22.5	-22.0	—	Lt. NE airs	—	0	b	—	—	—	—	
10	29.431	—	-33.5	-17.0	-17.0	—	NNE, 1	2	10	b	—	—	—	—	
Midt.	29.432	—	-20.2	-20.0	-19.2	—	Calm	0	0	b	—	—	—	Faint aurora extending NE to SW through E.	
Mean	29.560	—	—	-20.8	-20.7	—	—	—	—	—	—	—	—	Cloudy, but fine. Wind remained light from NE. Barometer falling all day. Temperature not so steady and inclined to rise.	

Max. therm. read at { 8 a. —, 8 p. —. Solar radiation { black bulb 40° 4, bright bulb 4° 0. Evapn. — grammes. Precipn. — in.

20th.

2	29.475	—	-32.0	-26.0	-25.8	—	E, 0-1	0	0	b	—	—	—	Faint aurora in the N.
4	29.500	—	-29.5	-20.3	-20.0	—	E by S, 0-1	0	0	b	—	—	—	—
6	29.499	—	-28.8	-28.0	-28.0	—	Calm	0	0	b	—	—	—	—
8	29.502	—	-43.5	-40.2	-40.2	—	Calm	0	0	bc ~	Ci.-s. 5, SE	—	—	—
10	29.505	—	-40.0	-32.8	-32.0	—	Calm	0	0	b	Ci.-s. 2	—	—	—
Noon	29.495	—	-33.0	-26.2	-26.0	—	Calm	0	0	b	Fr.-cl.-s. 5	—	—	Strong mirage along coast line to SW; low Str. over lower hills to W.
2	29.470	—	-26.6	-23.0	-23.0	—	Calm	0	0	o	A.-s. 10	—	—	12.15. Temp. at Cape Armitage, -31° 0; min., -51° 5; Str. 3, Ci. 2 (moving very slowly from SW). bc. Calm. Erebus smoke going Ely.
4	29.483	—	-23.5	-16.2	-16.0	—	Calm	0	0	o	Ci.-s. 9	—	—	Extraordinarily quick rise of temperature.
6	29.471	—	-18.8	-3.8	-2.0	—	E, 1-2	3	10	bc	A.-s. 6	—	—	Cl. radiating NW and SE.
8	29.465	—	- 8.7	- 4.5	- 4.5	—	E, 0-4	8	0-30	bcq	Ci.-s. 4	—	—	—
10	29.460	—	-12.3	-12.2	-12.0	—	NE, 3-4	13	25-28	bc	—	S. 2	—	—
Midt.	29.467	—	-15.2	-15.2	-15.0	—	Var. E, 4-5	19	25-30	bc	—	S. 4	—	Aurora, with vertical beams, in NE.
Mean	29.483	—	—	-20.7	-20.4	—	—	—	—	—	—	—	—	Fine and clear nearly all day. Wind light, but rising quickly in evening. Barometer fairly steady. Temperature very unsteady and rose quickly in the evening.

Max. therm. read at { 8 a. -17° 0, 8 p. -3° 8. Solar radiation { black bulb 36° 6, bright bulb —. Evapn. 0.4 gramme in 72 hours. Precipn. — in.

21st.

2	29.455	—	-15.5	-15.0	-15.0	—	NE, 4-5	14	25-35	bc	A.-cu. 3	—	—	A.-cu. radiating E to W.
4	29.427	—	-18.5	-13.2	-13.0	—	NE, 3-4	20	25-30	bc	A.-cu. 2	—	—	—
6	29.439	—	-17.5	-13.0	-13.0	—	E, 3-4	13	15-20	bc	Ci.-s. 4	—	—	Cl.-s. radiating E to W.
8	29.445	—	-16.8	-11.5	-11.5	—	NE, 4-5	15	25-30	b	—	—	—	—
10	29.433	—	-15.8	-13.2	-13.2	—	NE, 5-6	23	35-42	b-f	—	—	—	—
Noon	29.435	—	-17.5	-16.2	-16.2	—	NE, 3-4	23	25-30	b	—	—	—	Mist low on horizon from SW to W.
2	29.423	—	-19.0	-18.0	-17.8	—	Var. E, 6-7	26	35-46	b	—	—	—	12.15. Temp. at Cape Armitage, -18° 7; min., -35° 7; wind ENE, 3. b. Erebus smoke going ENE.
4	29.421	—	-19.0	-18.0	-17.8	—	E by N, 5-6	22	28-35	b	—	—	—	2 p.m. Mist all along foot hills to W.
6	29.404	—	-20.0	-19.5	-20.0	—	NE, 3-4	18	25-30	bc	A.-cu. 2	—	—	—
8	29.442	—	-21.8	-20.0	-20.0	—	E by N, 3-4	20	25-30	b	—	—	—	—
10	29.427	—	-20.5	-18.8	-18.8	—	Var. SE, 2-4	18	25-35	b	—	—	—	—
Midt.	29.427	—	-23.8	-22.2	-22.2	—	E, 2-6	21	20-42	bq	—	—	—	Very bright purple colour on horizon from S to SW.
Mean	29.432	—	—	-16.6	-16.5	—	—	—	—	—	—	—	—	Fine and clear. Wind very strong from NE, but with no drift; max. run of cups for 2 hours, 51 miles; max. rate observed by pressure tube, 46 miles per hour. Barometer fairly steady. Temperature falling again.

Max. therm. read at { 8 a. -3° 8, 8 p. -12° 0. Solar radiation { black bulb 49° 5, bright bulb 8° 4. Evapn. — grammes. Precipn. — in.



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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Split minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, sec p. 2.			Upper.	Lower.			
				Dry.	Wet.										Unscreened.
25th.	2	29.452	—	-19.0	-18.0	-16.2	—	Calm	0	0	b	—	—	—	
	4	29.390	—	-20.4	-19.8	-19.5	—	Calm	0	0	oc	A.-s. 0	—	—	
	6	29.389	—	-21.0	-19.0	-18.8	—	E by S, 3-4	5	20-23	bc †	Cl.-s. 6	—	—	
	8	29.395	—	-24.5	-24.0	-23.8	—	E by S, 0-1	8	10-12	oc	—	S. 10	—	
	10	29.394	—	-24.8	-24.5	-24.2	—	Var. SE, 1-2	7	15-20	o †	A.-s. 10	—	—	
	Noon	29.429	-16.2	-25.2	-18.8	-18.2	—	SE, 1-3	4	8-25	oq * †	A.-s. 10	—	—	Min. temp. at Cape Armitage, -37° 5. Wind var. 12 <sup>h</sup> , 1-2. oq.
	2	29.446	—	-24.0	-23.5	-23.0	—	Var. E, 3-4	16	20-25	oq †	A.-s. 10	—	—	
	4	29.468	—	-24.0	-21.5	-21.2	—	E, 5-6	18	25-35	oq * †	A.-s. 8	—	—	
	6	29.459	—	-24.8	-23.2	-23.5	—	E by S, 4-5	23	28-35	b	—	—	—	Erebus smoking considerably, three distinct columns being seen. Smoke going NW.
	8	29.489	—	-28.0	-19.0	-19.0	—	Var. SE, 1-2	16	10-15	b	—	—	—	Very black from S to NW low down.
	10	29.503	—	-25.2	-23.0	-23.0	—	NE, 1-2	4	10-18	bc	Cl. 2, SE	—	—	Very bright on horizon from SSE to N.
	Midt.	29.507	—	-24.2	-20.8	-20.8	—	Var. SE, 0-2	7	0-22	bc	Cl.-s. 3, SE	—	—	
	Mean	29.443	—	—	-21.1	-20.9	—	—	—	—	—	—	—	—	Overcast and cloudy most of the day. Wind rose up strong from E after mid-day, but fell again later in the day; max. run of cups for 2 hours, 45 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer inclined to rise. Temperature low and steady.
Max. therm. read at { 8 a. - 5° 0. / 8 p. - 15° 0. Solar radiation { black bulb — / bright bulb —. Evapn. 0.8 gramme in 24 hours. Precip. — in.															

26th.	2	29.503	—	-21.8	-21.0	-21.0	—	Lt. var. E airs	5	0	bc	—	Fr.-s. 2, NE	—	
	4	29.501	—	-25.2	-24.0	-24.0	—	Lt. E airs	1	0	bc	Cl.-s. 2, E	—	—	Western hills obscured by mist.
	6	29.479	—	-27.5	-27.5	-27.0	—	Calm	1	0	oc	A.-s. 10	—	—	
	8	29.489	—	-28.3	-28.0	-27.4	—	Calm	0	0	oc	A.-s. 10	—	—	
	10	29.508	—	-28.0	-25.0	-24.8	—	Calm	1	0	b	—	—	—	
	Noon	29.483	—	-24.0	-19.5	-19.5	—	Calm	0	0	bv	—	—	—	12.30. Temp. at Cape Armitage, -25° 6; min., -37° 2. Wind NE, 0-1. b. Erebus smoke going NE.
	2	29.485	—	-19.8	-14.0	-14.0	—	Calm	0	0	b	—	—	—	
	4	29.489	—	-21.6	-18.2	-18.0	—	Calm	1	0	b	—	—	—	
	6	29.485	—	-22.5	-18.0	-18.0	—	Lt. NE airs	4	0	bcv	A.-s. 4	—	—	Visibility very marked; mist rising from foot hills to W; radiant sky along the horizon.
	8	29.493	—	-21.5	-21.0	-21.0	—	Lt. NE airs	3	0	b	—	—	—	
	10	29.516	—	-28.0	-22.0	-22.0	—	Calm	0	0	b	—	—	—	
	Midt.	29.512	—	-33.0	-32.0	-32.0	—	Calm	0	0	b	—	—	—	
	Mean	29.495	—	—	-22.5	-22.4	—	—	—	—	—	—	—	—	Fine and clear nearly all day, with no wind. Barometer and temperature steady.
Max. therm. { 8 a. - 18° 5. / read at { 8 p. - 11° 5. Solar radiation { black bulb 56° 0. / bright bulb 11° 5. Evapn. (inside therm. screen) 2.3 grammes in 24 hours. Precipn. — in.															

27th.	2	29.517	—	-34.0	-27.2	-27.0	—	Lt. NE airs	0	0	bc	Cl.-s. 3, NW	—	—	
	4	29.522	—	-35.5	-28.5	-28.0	—	Calm	0	0	b	—	—	—	
	6	29.547	—	-30.5	-30.0	—	—	Calm	1	0	b	—	—	—	Mirage all along horizon.
	8	29.524	—	-29.0	-10.0	-10.0	—	N, 1-2	2	10-15	b	—	—	—	
	10	29.491	—	-10.4	-7.0	-7.0	—	N, 1	6	5-10	b	—	—	—	
	Noon	29.497	-22.8	-17.2	-16.8	-16.5	—	Calm	3	0	bc	A.-s. 4	—	—	Min. temp. at Cape Armitage, -45° 0; calm. bc. Cl.-s.
	2	29.494	—	-17.2	-5.0	-5.0	—	N, 1-3	4	10-20	oc	A.-s. 8, N	—	—	
	4	29.503	—	-13.5	-7.0	-7.0	—	Calm	2	0	oc	Cl.-cu. 8, SW (mod.)	—	—	
	6	29.452	—	-11.7	-6.8	-6.8	—	Lt. NE airs	1	0	oc	S.-cu. 8, SW (rapid)	—	—	
	8	29.418	—	-7.0	7.0	7.2	—	E, 2-3	4	15-20	oc	A.-s. 5, NNW	—	—	
	10	29.379	—	4.5	6.5	6.2	—	SE, 1	7	5-10	oc	—	Cu. 10	—	
	Midt.	29.362	—	3.4	5.8	5.2	—	Lt. SE airs	7	0	oc	—	Cu. 10	—	
	Mean	29.476	—	—	-9.8	—	—	—	—	—	—	—	—	—	Fine and clear until noon, then overcast. Wind light and variable. Barometer falling. Temperature rose quickly as it became overcast.
Max. therm. read at { 8 a. - 10° 0. / 8 p. 9° 0. Solar radiation { black bulb 64° 0. / bright bulb 18° 0. Evapn. 0.1 gramme in 24 hours. Precipn. — in.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles min.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.331	—	1.0	6.0	—	—	S, 3-4	7	20-25	oc	—	Cu. 10	—	28th.  Very thick mist along the west hill. 12.30. Temp. at Cape Armitage, 10°·5; min., -26°·3. Wind S. oq. †.  Visibility very marked, S to SW.  Stars visible through Cl.-cu.  Overcast, with strong SW and variable winds, with drift, falling in evening. Barometer falling all day. Temperature high and rising all day.	
4	29.308	—	2.0	5.0	—	—	E, 4-5	10	25-30	o † *	—	Cu. 10	—		
6	29.291	—	3.2	7.0	8.0	—	Var. SE, 1-5	12	10-32	oq † *	—	S. 10	—		
8	29.256	—	4.2	7.0	8.0	—	Var. NE, 2-5	14	15-30	oq †	A.-s. 10	—	—		
10	29.202	—	6.0	11.0	10.3	—	Var. SE, 2-4	15	15-25	oc	A.-cu. 10, SE	—	—		
Noon	29.175	—	10.0	13.0	12.0	—	SE, 2-3	4	15-20	oc	A.-cu. 10, SSE	—	—		
2	29.175	—	9.5	13.8	12.0	—	SSE, 3-4	4	20-24	oc	A.-s. 9	—	—		
4	29.123	—	9.8	10.8	10.8	—	SE, 1-2	10	10-20	oc †	A.-cu. 9	—	—		
6	29.130	—	9.0	11.0	11.0	—	S, 4-5	15	25-30	oc †	—	N. 10	—		
8	29.113	—	8.8	13.0	12.2	—	E by S, 2-3	12	10-22	o	A.-s. 10	—	—		
10	29.089	—	11.5	14.0	13.8	—	Var. SE, 1-2	7	10-12	oc	A.-cu. 10, SSE	—	—		
Midt.	29.066	—	12.2	14.0	13.8	—	Var. E, 0-1	4	8-10	oc	Cl.-cu. 10, SE	—	—		
Mean	29.188	—	—	10.5	—	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 7°·4. 8 p. 13°·8. Solar radiation { black bulb 36°·0. bright bulb 20°·5. Evapn. 6.2 grammes in 24 hours. Precipn. — in.

2	29.067	—	5.5	13.0	12.5	—	SE, 0-1	1	0-5	b	—	—	—	29th.  Mirage all round horizon. Mirage from S to SW horizon. Noon. Min. temp. at Cape Armitage, -11°·2. Wind E, 1. oq.  Cl.-cu. radiating NE and SW.  Visibility very marked in S and SW all day. A.-cu. clouds all day, changing to Cl.-cu. radiating NE to SW, and at about 5 p.m. it changed to Ci.-s. radiating NE to SW; clouds moving to SW very slowly. After 6 p.m., Cl. Cloudy all day. Wind very variable, and strong in evening, falling at midnight; max. run of cups for 2 hours, 49 miles; max. rate observed by pressure tube, 42 miles per hour. Barometer rising quickly all day. Temperature still high and unsteady.
4	29.048	—	4.5	8.0	8.0	—	NE, 2-3	6	10-15	oc	A.-s. 9	—	—	
6	29.064	—	2.0	7.0	7.0	—	NNE, 1-2	7	10-15	b	—	—	—	
8	29.079	—	1.0	6.0	6.0	—	E by S, 1-2	2	10-15	b	—	—	—	
10	29.114	—	3.2	8.5	8.2	—	E, 1	3	10-12	bc	Cl.-cu. 6, NE	—	—	
Noon	29.161	0.4	8.5	15.0	14.8	—	Var. SE, 1	4	10	o	A.-s. 10	—	—	
2	29.183	—	12.8	12.8	12.2	—	ESE, 1-2	7	10-15	oc	A.-s. 10	—	—	
4	29.233	—	11.0	12.2	12.0	—	Var. E, 1-2	7	10-15	oc	Cl.-cu. 10	—	—	
6	29.245	—	0.0	0.2	0.2	—	ENE, 7-8	14	35-42	bc	Ci.-s. 2, NNE	—	—	
8	29.325	—	1.8	1.0	1.0	—	NE, 4-5	24	30-33	bc	Ci.-s. 2, NE	—	—	
10	29.376	—	1.5	2.2	2.2	—	NE, 3-5	21	20-35	bc	Cl.-cu. 4	—	—	
Midt.	29.447	—	1.0	2.8	2.8	—	Calm	9	0	bc	Ci.-cu. 3, NE	—	—	
Mean	29.195	—	—	7.2	7.1	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 15°·0. 8 p. 15°·0. Solar radiation { black bulb 69°·0. bright bulb 29°·0. Evapn. 4.6 grammes in 24 hours. Precipn. — in.

2	29.491	—	0.1	4.2	4.2	—	Calm	0	0	bc	Cl.-s. 6	—	—	30th.  Min. temp. at Cape Armitage, -19°·0. Wind E, 1. bcq. 12.45. Faint aurora over the ship in zenith. Fog hanging over Crater Hill. Heavy fog bank on horizon and on hills round the bay. 9.30. Low Str., about 900 ft. (alt.), driving rapidly from N. Bright meteorite observed falling slowly in NNE through arc of 20°, bursting into 3 distinct parts, and disappearing about alt. 50°. Cloudy and calm all day. Barometer rose until 2 p.m., and then fell slowly. Temperature unsteady, and fell quickly in the evening.	
4	29.510	—	1.0	2.0	2.0	—	Lt. NE airs	0	0	bc	Ci.-s. 4	—	—		
6	29.505	—	2.5	0.2	0.0	—	Calm	0	0	bc	A.-s. 3	—	—		
8	29.530	—	7.0	1.0	1.0	—	ENE, 2-3	3	10-20	bc	Ci.-s. 2	—	—		
10	29.548	—	1.8	1.0	1.0	—	Calm	4	0	bc	Ci.-s. 2; radiating N and S	—	—		
Noon	29.552	-7.0	3.0	1.5	1.5	—	Calm	0	0	bc	Ci.-s. 2; radiating E and W	—	—		
2	29.555	—	3.8	0.8	0.8	—	Calm	0	0	oc	A.-cu. 10	—	—		
4	29.539	—	0.8	4.0	4.0	—	Calm	1	0	bc	A.-cu. 5; radiating NW; SE	—	—		
6	29.521	—	1.0	2.0	2.0	—	Calm	1	0	oc	A.-cu. 8, NE	—	—		
8	29.504	—	0.5	2.0	2.2	—	Lt. NE airs	2	0	o	—	A.-s. 10	—		—
10	29.466	—	3.0	3.0	3.0	—	Lt. NW airs	1	0	bc	Cl.-cu. 4, E	—	—		
Midt.	29.435	—	12.0	12.0	12.0	—	Calm	0	0	b	—	—	—		
Mean	29.513	—	—	0.0	0.0	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 7°·5. 8 p. 4°·2. Solar radiation { black bulb 71°·0. bright bulb 29°·0. Evapn. 3.3 grammes in 24 hours. Precipn. — in.

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METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Split minimum.	Dry.											Wet.
1st. 2	29.395	—	-13.3	-4.0	-4.0	—	Calm	0	0	oc	—	—	—	2, 4, and 6 a.m. Heavy rime on masts and rigging. Observations taken without lamp.	
4	29.359	—	-5.0	-1.0	-1.0	—	Calm	0	0	bc	—	—	—		
6	29.333	—	-6.5	-5.0	-5.0	—	Calm	0	0	of	—	—	—		
8	29.314	—	-10.0	-10.0	-9.5	—	ESE, 1-2	1	10-15	b	—	—	—	Heavy fog bank along horizon; hills clear in the E; tops of high mountains in W visible.	
10	29.282	—	-11.0	-8.0	-8.0	—	ESE, 1	7	5-10	bc	+	—	—	10 a.m. Low fog bank all round. Bright bulb <i>in vacuo</i> found broken.	
Noon	29.234	-11.0	-10.3	-5.0	-5.0	—	ESE, 2-4	10	2-4	oc	+	—	—	Noon. Min. temp. at Cape Armitage, -19° 0. Wind E, 1-2. beq. +.	
2	29.249	—	-8.5	-6.0	-5.5	—	E by S, 3-4	12	15-20	oc	—	—	—		
4	29.251	—	-8.0	-3.2	-3.2	—	Var. E, 2-3	6	10-20	oc	—	—	—		
6	29.243	—	-7.7	-5.0	-5.0	—	SE, 3-4	18	20-28	oc	+	—	—		
8	29.249	—	-6.3	-1.0	-0.8	—	Var. E, 2-3	13	15-20	oc	—	—	—	Wind shifty, E to NE.	
10	29.244	—	-3.0	-1.2	-1.3	—	E, 1-2	6	5-10	oc	—	—	—		
Midt.	29.232	—	-3.2	-1.5	-1.5	—	E, 3-4	10	20-25	bc	—	—	—		
Mean	29.282	—	—	-4.2	-4.2	—	—	—	—	—	—	—	—	Overcast and cloudy all day. Wind rose strong from SE in afternoon; max. run of cups for 2 hours, 36 miles; max. rate observed by pressure tube, 28 miles per hour. Barometer fell steadily till noon. Temperature high.	
Max. therm. read at		8 a. 3° 6.		8 p. —.		Solar radiation		black bulb 69° 0.		bright bulb —.		Evapn. 2.1 grammes in 24 hours.		Precipn. — in.	

2nd. 2	29.308	—	-8.5	-4.0	-4.0	—	E, 1-2	10	10-20	bc	+	—	S. 4	—	
4	29.265	—	-6.5	-4.0	-4.0	—	E, 1-2	5	10-15	oc	+	—	Cu. 10	—	Tops of western hills obscured; drift blowing over Crater Hill in large quantities.
6	29.277	—	-7.3	-2.5	-2.5	—	Var. SE, 3-4	13	25-28	oc	+	—	S. cu. 10	—	
8	29.307	—	-6.0	-5.2	-5.2	—	Var. SE, 2-3	15	15-25	oc	+	—	Ci. 8	—	
10	29.313	—	-6.5	-3.8	-3.8	—	Var. E, 3-4	10	20-25	bc	+	—	Ci. s. 6, SW	—	Low bank of fog along horizon; mirage in W.
Noon	29.334	-13.0	-5.5	-3.8	-3.8	—	Var. E, 2-3	8	15-20	bc	—	—	Ci. s. 5, W	—	Min. temp. at Cape Armitage, -22° 8. Wind E, 1. bc.
2	29.336	—	-4.5	-2.5	-2.8	—	E, 2-3	15	10-20	bc	—	—	Ci. 3	—	
4	29.343	—	-5.5	-5.0	-5.0	—	ENE, 2-3	9	10-20	bc	—	—	Ci. 2	—	
6	29.330	—	-8.5	-6.0	-5.5	—	E, 4-5	13	20-25	bc	—	—	Ci. s. 4, W	—	
8	29.364	—	-7.7	-6.0	-6.0	—	Lt. E alrs	6	0	bc	—	—	Ci. s. 5, W	—	Very thick fog SE to NW, extending along horizon.
10	29.316	—	-9.5	-8.0	-8.0	—	Var. NE, 3-4	10	20-25	bc	+	—	Ci. s. 2, W	—	Heavy fog bank covering western hills, also hills astern of ship; brilliant sky showing through str.
Midt.	29.304	—	-10.5	-9.0	-9.0	—	Lt. var. E alrs	5	0	b	—	—	—	—	Midt. Heavy fog over western hills and Observation Hill; very clear overhead. Heavy rime on everything.
Mean	29.316	—	—	-5.0	-5.0	—	—	—	—	—	—	—	—	—	Cloudy most of the day; very striking Ci. s. clouds. Strong E by wind; max. run of cups for 2 hours, 30 miles; max. rate observed by pressure tube, 28 miles per hour. Barometer fairly steady. Temperature high, but falling again at night.
Max. therm. read at		8 a. 0° 2.		8 p. -2° 0.		Solar radiation		black bulb 68° 0.		bright bulb —.		Evapn. 2.4 grammes in 24 hours.		Precipn. — in.	

3rd. 2	29.259	—	-11.4	-8.0	-8.0	—	Calm	9	0	b	—	—	—	—	Heavy fog bank to S.
4	29.261	—	-14.5	-11.0	-11.0	—	Lt. NE alrs	0	0	oc	—	—	A. s. 9	—	
6	29.254	—	-8.0	-7.5	-7.0	—	Calm	0	0	oc	—	—	S. 10	—	Tops of near hills obscured by fog. Thick rime on everything.
8	29.234	—	-12.5	-6.2	-6.0	—	Calm	0	0	oc	—	—	S. 10	—	
10	29.229	—	-12.3	-5.5	-5.5	—	Calm	2	0	of	—	—	S. 10	—	
Noon	29.223	—	-8.0	-7.5	-7.5	—	Calm	0	0	of	—	—	S. 10	—	
2	29.213	—	-13.3	-13.0	-12.8	—	Var. SE, 1-2	0	8-10	of	—	—	S. 10	—	1 p.m. Temp. at Cape Armitage, -8° 5; min. -18° 0. Calm; low dense fog.
4	29.195	—	-12.7	-11.5	-11.2	—	Calm	2	0	bc	—	—	Fr. s. 6, NW	—	Heavy fog banks along horizon.
6	29.167	—	-13.7	-12.5	-12.5	—	Lt. NW alrs	2	0	bc	—	—	Fr. s. 3, NW	—	
8	29.161	—	-17.6	-7.9	-7.2	—	Calm	0	0	om	—	—	Fr. s. 10, NW	—	
10	29.163	—	-21.2	-20.0	-20.0	—	Calm	0	0	bc	—	—	—	—	
Midt.	29.152	—	-23.8	-23.8	-23.0	—	Calm	0	0	b	—	—	—	—	Thick fog in W, bright to S.
Mean	29.209	—	—	-11.2	-11.0	—	—	—	—	—	—	—	—	—	Cloudy and foggy during the day, with no wind. Barometer inclined to fall. Temperature lower, and made a big drop in the evening.
Max. therm. read at		8 a. —.		8 p. -4° 0.		Solar radiation		black bulb 47° 4.		bright bulb —.		Evapn. 0.8 gramme in 24 hours.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.										
2	29.129	—	-26.0	-23.0	-23.0	—	Calm	0	0	bc	—	S.-cu. 2, E	—	4th. Brilliant sky, very red in E. Slight fog round near hills. Heavy fog over land to W. Set up new bright-bulb radiation thermometer. Very foggy in W and over near hills. Fog to SW. Heavy rime on everything. Overcast and misty all day. Light variable airs. Barometer falling until 8 p.m., and then a slow rise. Temperature lower and unsteady.
4	29.126	—	-25.0	-15.5	-15.2	—	NE, 1-2	4	10-15	bc	—	S.-cu. 4, NE	—	
6	29.098	—	-16.8	-12.5	-12.5	—	NE, 2-3	16	20-25	oc	—	A.-cu. 10	—	
8	29.100	—	-16.0	-14.2	-14.2	—	Calm	0	0	ocm	—	S. 10	—	
10	29.087	—	-15.0	-11.8	-11.8	—	Lt. ESE ahrs	0	0	ocm	—	S. 10	—	
Noon	29.075	—	-12.7	-9.0	-8.5	—	Calm	2	0	ocm	—	S. 10	—	
2	29.069	—	-9.7	-8.8	-8.8	—	Calm	0	0	om	—	S. 10	—	
4	29.067	—	-11.3	-10.5	-10.5	—	Calm	0	0	o	—	S. 10	—	
6	29.071	—	-12.5	-12.0	-12.0	—	Lt. var. S ahrs	0	0	om	—	S. 10	—	
8	29.049	—	-14.3	-12.0	-12.0	—	Lt. SE ahrs	3	0	ocm	—	S. 10	—	
10	29.061	—	-13.5	-12.0	-12.0	—	Lt. SE ahrs	1	0	ocm	—	S. 10	—	
Midt.	29.071	—	-12.5	-10.0	-10.0	—	Calm	0	0	ocm	—	S. 10	—	
Mean	29.084	—	—	-12.6	-12.5	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. -12°-2. 8 p. -7°-0.		Solar radiation { black bulb 25°-7. bright bulb 12°-2.		Evapn. — grammes.		Precipn. — in.						

2	29.093	—	-13.0	-11.8	-11.8	—	Lt. E ahrs	0	0	ocf	—	S.-cu. 10	—	5th. Clear overhead; heavy on horizon and over near hills. Dark low fog covering western mountains. 12.30. Temp. at Cape Armitage, -17°-5; min., -35°-6. Wind ENE, 4. Erebus smoke going E; upper clouds moving slowly to SSE. Red glow in the sky to the SW. Cloudy, with fog in morning. High Ely and Nly winds, with drift; max. run of cups for 2 hours, 48 miles; max. rate observed by pressure tube, 40 miles per hour. Barometer rising. Temperature low and steady.
4	29.125	—	-14.0	-13.5	-13.0	—	Calm	0	0	ocf	—	S.-cu. 10	—	
6	29.131	—	-15.0	-14.0	-14.0	—	Calm	1	0	bcf	—	—	—	
8	29.159	—	-16.0	-16.0	-16.0	—	NE, 3-4	2	24-28	bem	—	—	—	
10	29.185	—	-19.9	-11.0	-11.0	—	ENE, 3-4	16	20-25	bc	—	Cl. 5	—	
Noon	29.187	—	-17.2	-15.5	-15.5	—	NE, 4-5	16	28-32	bc	—	Cl. 5	—	
2	29.241	—	-18.0	-11.0	-11.0	—	E by N, 6	18	35-38	bc	—	Cl.-s. 6	—	
4	29.259	—	-19.0	-18.0	-18.0	—	E by N, 6-7	24	35-40	oc	—	Cl.-s. 8	—	
6	29.285	—	-19.5	-17.8	-17.8	—	E, 2-6	23	15-35	ocq	—	Cl.-s. 3, NW	S.-cu. 5	
8	29.306	—	-18.2	-16.0	-15.8	—	ENE, 3-5	22	25-32	oc	—	—	S.-cu. 10	
10	29.307	—	-18.8	-17.0	-17.2	—	NE, 4-5	23	28-33	oc	—	—	A.-cu. 10	
Midt.	29.318	—	-19.2	-18.5	-18.5	—	NE, 3-4	18	25-30	oc	—	—	A.-cu. 10	
Mean	29.216	—	—	-15.0	-15.0	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. -10°-0. 8 p. —.		Solar radiation { black bulb 59°-9. bright bulb 12°-3.		Evapn. — grammes.		Precipn. — in.						

2	29.357	—	-20.0	-18.0	-18.0	—	ENE, 4-5	19	30-35	oc	—	Cl.-s. 8	—	6th. Strong mirage to NW. Sky on horizon, between Bluff and White Island, showed a bright red glow. Observations taken without a lamp. Overcast all day, with strong NE wind. Max. run of cups for 2 hours, 42 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer fell during the day. Temperature steady.
4	29.361	—	-19.0	-18.0	-18.0	—	E by N, 4-5	20	30-35	oc	—	S. 10	—	
6	29.372	—	-20.5	-18.5	-18.5	—	NE, 3-4	18	20-25	oc	—	S.-cu. 10	—	
8	29.371	—	-20.8	-19.0	-19.0	—	NE, 4-5	21	28-35	oc	—	S.-cu. 10	—	
10	29.369	—	-19.8	-17.0	-17.0	—	Var. NE, 3-4	18	25-30	o	—	S.-cu. 10	—	
Noon	29.369	—	-19.0	-18.0	-18.0	—	NE, 3-4	15	20-25	o	—	S.-cu. 10	—	
2	29.353	—	-19.2	-19.0	-18.8	—	NE, 3-4	13	25-30	o	—	S. 10	—	
4	29.329	—	-30.5	-20.0	-20.0	—	ENE, 2-3	17	20-28	oc	—	S. 10	—	
6	29.334	—	-21.0	-18.0	-17.5	—	E by N, 3-4	10	20-28	oc	—	S.-cu. 10	—	
8	29.315	—	-18.8	-15.5	-15.5	—	E, 1-2	14	10-15	oc	—	S.-cu. 10	—	
10	29.287	—	-16.0	-15.0	-15.0	—	Lt. N ahrs	5	0	oc	—	S.-cu. 10	—	
Midt.	29.266	—	-19.0	-16.0	-16.0	—	Calm	1	0	oc	—	S.-cu. 10	—	
Mean	29.340	—	—	-17.7	-17.6	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. -16°-8. 8 p. -15°-0.		Solar radiation { black bulb 27°-8. bright bulb —.		Evapn. — grammes.		Precipn. — in.						

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7th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.										Unscreened.
2	29.214	—	-19.0	-15.4	-15.8	—	Lt. NE airs	2	0	oc	—	S. 10	—		
4	29.192	—	-17.2	-16.8	-17.0	—	Calm	0	0	o*	—	S. 10	—		
6	29.179	—	-17.0	-15.0	-15.0	—	Calm	0	0	oc	—	S. 10	—		
8	29.144	—	-15.0	-15.0	-15.0	—	Calm	0	0	oc	—	S. 10	—	Sun shining on foot of western hills behind the fog.	
10	29.146	—	-18.6	-12.8	-12.8	—	Calm	0	0	oc	—	S. 10	—		
Noon	29.118	—	-14.5	-10.2	-10.2	—	NE, 1-2	2	10-18	oc	—	S. 10	—	Mirage to the south horizon.	
2	29.118	—	-10.5	-10.0	-10.0	—	NE, 0-1	3	0-5	o	—	S.-cu. 10	—	12.30. Temp. at Cape Armitage, -17°·2; min., -23°·4; wind ESE, 3. Erebus obscured.	
4	29.115	—	-11.0	-10.5	-10.5	—	NE, 1-2	7	12-18	o	—	S.-cu. 10	—	Evaporation dish replaced outside, having been mislaid since 3rd Inst.	
6	29.095	—	-15.6	-10.0	-10.0	—	Var. E, 2-3	11	10-20	o	—	S. 10	—		
8	29.113	—	-18.5	-17.0	-17.0	—	ESE, 3-4	11	23-26	o	—	S. 10	—		
10	29.113	—	-18.5	-16.8	-16.8	—	NE, 3-4	14	20-28	oc	—	S.-cu. 8	—		
Mldt.	29.106	—	-21.5	-20.8	-20.8	—	NE, 2-5	14	12-25	ocq	—	S. 10	—	Very red in southern sky.	
Mean	29.138	—	—	-14.2	-14.2	—	—	—	—	—	—	—	—	Overcast and cloudy all day. Wind sprang up strong about 5 p.m. Barometer (showed) a slight fall during the day. Temperature steady.	
Max. therm. read at		8 a. -13°·5.		8 p. -10°·0.		Solar radiation		black bulb 29°·5.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

8th.

2	29.102	—	-22.2	-21.8	-21.8	—	NE, 4-5	21	25-30	oc	—	S.-cu. 10, N	—		
4	29.102	—	-22.5	-19.0	-19.0	—	NE, 3-4	20	20-25	oc	—	S.-cu. 10, NE	—		
6	29.081	—	-20.5	-19.8	—	—	NE, 1-2	7	10-20	oc	—	S.-cu. 10, NE	—		
8	29.071	—	-19.8	-17.0	-17.0	—	NE, 1	11	5	o*	—	S. 10	—		
10	29.069	—	-17.0	-14.0	-14.0	—	Calm	0	0	oc	—	S. 10	—		
Noon	29.049	—	-19.0	-16.5	-16.2	—	ESE, 1-2	2	10-15	oc	—	S. 10, N	—		
2	29.025	—	-16.8	-13.0	-13.0	—	Calm	1	0	oc	Cl.-s. 8	—	—	12.15. Temp. at Cape Armitage, -18°·1; min., -25°·8. Wind ESE, 2. +. Erebus smoke going E.	
4	28.994	—	-17.0	-14.2	-14.2	—	Calm	0	0	oc	Cl.-cu. 6, NW	—	—		
6	28.976	—	-19.2	-18.8	-18.8	—	Calm	2	0	ocq	Cl.-s. 6, NW	—	—		
8	28.929	—	-20.8	-20.0	-20.0	—	NE, 0-1	1	0-5	bc	—	Low S. 2	—		
10	28.895	—	-31.0	-29.0	-29.0	—	Calm	0	0	bc	—	Low S. 4	—		
Mldt.	28.864	—	-32.0	-28.4	-28.4	—	Lt. E airs	0	0	b	—	—	—	Could take observations without a light.	
Mean	29.013	—	—	-19.3	—	—	—	—	—	—	—	—	—	Overcast and cloudy. Wind fell early and remained calm. Barometer falling all day. Temperature lower.	
Max. therm. read at		8 a. -16°·8.		8 p. - 9°·8.		Solar radiation		black bulb 65°·2.		bright bulb 13°·0.		Evapn. 1.6 grammes in 24 hours.		Precipn. — in.	

9th.

2	28.831	—	-29.0	-21.2	-21.2	—	Lt. NE airs	1	0	bc	Cl.-s. 2, SW	—	—		
4	28.785	—	-24.2	-21.0	-21.0	—	NNE, 1-2	7	10-15	b	—	—	—		
6	28.774	—	-28.2	-27.0	-27.0	—	Calm	4	0	bc	Cl.-s. 2, S <sup>v</sup>	—	—		
8	28.758	—	-32.2	-20.2	-20.2	—	Calm	0	0	oc	—	S.-cu. 9, ENE	—	Mirage along the western hills.	
10	28.718	—	-22.0	-14.9	-15.0	—	Calm	2	0	oc*	—	A.-s. 9	—		
Noon	28.701	-27.5	-17.9	-17.0	-17.0	—	Lt. E airs	0	0	oc*	—	S. 10	—	Strong mirage all along horizon. Min. temp. at Cape Armitage, -43°·0. Wind E by S, 2. o.	
2	28.641	—	-19.0	-14.0	-14.0	—	Calm	0	0	oc	—	S. 10	—		
4	28.679	—	-21.0	-16.2	-16.2	—	ESE, 1-2	4	10-14	oc	—	S. 10	—		
6	28.660	—	-17.2	-16.5	-16.5	—	Lt. NE airs	4	0	oc	—	S. 10	—		
8	28.653	—	-21.0	-18.8	-18.2	—	Lt. E airs	0	0	oc	—	S. 10	—		
10	28.601	—	-20.5	-18.0	-18.0	—	Lt. NE airs	3	0	oc	—	S.-cu. 9	—		
Mldt.	28.583	—	-22.6	-20.0	-20.2	—	Lt. NE airs	1	0	oc	—	S.-cu. 9	—		
Mean	28.699	—	—	-18.7	-18.7	—	—	—	—	—	—	—	—	Overcast and cloudy all day. Slight snowfall and light airs. Barometer fell steadily all day. Temperature lower and steady.	
Max. therm. read at		8 a. -18°·2.		8 p. -13°·5.		Solar radiation		black bulb 30°·0.		bright bulb —.		Evapn. 0.9 gramme in 24 hours.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.								Unscreened.		
2	28.577	—	-30.0	-29.0	-29.0	—	Calm	1	0	oc	—	—	—	—	10th. Sun shining brightly on Crater Hill, and on hills off starboard quarter. 8, 10 a.m., and noon. Bank of fog on western horizon. 7 p.m. Temp. at Cape Armitage, -35° 0'; min. -47° 0'. Wind E, 2. Thick mist hanging round horizon; heavy dark clouds over tops of western hills. Fine with very fine Cl.-s. clouds. Wind fresh from E and freshening; max. run of cups for 2 hours, 40 miles; max. rate observed by pressure tube, 32 miles per hour. Barometer steady, but inclined to rise in evening. Temperature lower, and falling.
4	28.611	—	-29.0	-21.0	-21.0	—	NE, 1-2	4	10-15	b	—	—	—	—	
6	28.561	—	-27.6	-24.0	-24.0	—	NE, 1-2	10	10-15	b	—	—	—	—	
8	28.576	—	-24.2	-22.0	-22.0	—	Lt. E airs	10	0	bc	Cl.-s. 2, NW	—	—	—	
10	28.567	—	-28.2	-25.0	-24.8	—	E, 2-3	7	15-20	bc	Cl.-s. 2, N	—	—	—	
Noon	28.575	—	-26.0	-24.8	-24.5	—	E, 2-3	15	20-22	bc	Cl.-s. 6	—	—	—	
2	28.545	—	-25.5	-25.0	-25.0	—	E, 2-3	16	20-25	bc	Cl.-s. 3	—	—	—	
4	28.596	—	-26.5	-25.2	-25.2	—	E, 3-4	19	25-30	bc	Cl.-s. 3	—	—	—	
6	28.636	—	-29.0	-28.0	-28.0	—	E, 3-4	17	25-30	b	—	—	—	—	
8	28.670	—	-32.2	-30.5	-30.5	—	Var. E, 3-5	20	20-30	bc	Cl.-s. 2, NW	—	—	—	
10	28.661	—	-31.0	-29.0	-29.0	—	Var. E, 4-5	18	25-32	oc	—	A.-cu, 8, NW	—	—	
Midd.	28.711	—	-32.8	-30.5	-30.5	—	E, 4-5	20	25-30	bc	—	S.-cu, 4	—	—	
Mean	28.607	—	—	-26.2	-26.1	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. —, 8 p. -23° 8. Solar radiation { black bulb 65° 1, bright bulb 90° 8. Evapn. 1.4 grammes in 24 hours. Precipn. — in.

2	28.732	—	-31.5	-28.0	-28.0	—	E, 1-2	15	10-15	oc	—	—	S. 10	—	11th. Min. temp. at Cape Armitage, -47° 2. Calm to light S by alrs. b. Erebus smoke going E by N. 2 and 4 p.m. Mirage and mist along the western hills. Fine and clear, with flat calm all day. Barometer rising all day. Temperature low and steady.
4	28.734	—	-29.2	-28.0	-28.0	—	E, 1-2	11	10-15	oc	—	—	S. 10	—	
6	28.766	—	-30.0	-27.0	-27.0	—	E, 2	10	12-15	b	—	—	—	—	
8	28.800	—	-27.0	-27.0	-27.0	—	E, 1-2	10	10-14	b	—	—	—	—	
10	28.824	—	-27.2	-21.8	-21.8	—	NE, 1-2	2	10-12	b	—	—	—	—	
Noon	28.855	-24.0	-25.8	-25.0	-24.5	—	NE, 1-2	6	10-15	b	—	—	—	—	
2	28.847	—	-26.5	-19.5	-19.5	—	Calm	5	0	b	—	—	—	—	
4	28.854	—	-25.0	-21.8	-21.8	—	Calm	5	0	b	—	—	—	—	
6	28.870	—	-26.6	-26.0	-26.0	—	Calm	5	0	b	—	—	—	—	
8	28.844	—	-23.0	-22.0	-22.0	—	Calm	0	0	b	—	—	—	—	
10	28.916	—	-40.8	-39.2	-39.2	—	Calm	0	0	b	—	—	—	—	
Midd.	28.918	—	-38.8	-36.2	-30.2	—	Calm	0	0	b	—	—	—	—	
Mean	28.830	—	—	-26.8	-26.8	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -25° 5, 8 p. -19° 0. Solar radiation { black bulb 65° 8, bright bulb 10° 0. Evapn. 1.1 grammes in 24 hours. Precipn. — in.

2	28.920	—	-37.2	-32.0	-32.0	—	Calm	0	0	oc	—	—	S. 8	—	12th. Heavy fog bank in SE. 12.45. Temp. at Cape Armitage, -40° 5; min. -57° 5. Wind E, 2-5, oc. 2 p.m. Bank of fog covering the western hills. Overcast and cloudy. Wind variable and squally, freshening in evening. Barometer falling all day, but very steadily. Temperature steady and low.
4	28.922	—	-34.2	-32.0	-32.0	—	SE, 2-3	5	15-20	b	—	—	—	—	
6	28.888	—	-35.0	-32.4	-32.4	—	SE, 2-3	5	15-25	oc	—	—	S. 10	—	
8	28.873	—	-33.2	-30.0	-30.0	—	SE, 1-4	12	10-32	bcq	Cl.-s. 4	—	—	—	
10	28.864	—	-31.0	-22.0	-22.0	—	ENE, 0-1	6	5-10	bc	Cl.-s. 6	—	—	—	
Noon	28.860	—	-25.0	-23.8	-23.8	—	Var. E, 0-1	4	5-10	oc	Cl.-s. 8	—	—	—	
2	28.853	—	-27.2	-26.0	-26.0	—	NE, 1-2	8	10-15	oc	—	—	S.-cu, 10	—	
4	28.885	—	-28.8	-25.8	-25.8	—	Var. E, 1-3	12	8-25	ocq	—	—	S.-cu, 10	—	
6	28.829	—	-29.0	-28.0	-28.0	—	E, 1-2	10	10-15	oc	—	—	S.-cu, 10	—	
8	28.827	—	-31.8	-27.0	-26.8	—	ESE, 1-2	10	5-15	oc*	—	—	N. 10	—	
10	28.827	—	-28.0	-26.0	-26.0	—	E by S, 2-3	6	10-15	oc†	—	—	N. 10	—	
Midd.	28.828	—	-28.2	-26.0	-26.0	—	E by N, 3-4	17	15-20	oc†	—	—	N. 10	—	
Mean	28.861	—	—	-27.6	-27.6	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -21° 0, 8 p. -20° 0. Solar radiation { black bulb 51° 2, bright bulb 8° 2. Evapn. 0.5 gramme in 24 hours. Precipn. — in.

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.							Wet.			
13th.	2	28.827	-26.2	-24.8	-24.8	—	NE, 5-6	22	25-30	oc	—	S. 10	—	
	4	28.834	-25.8	-25.0	-25.0	—	NE, 5-6	8	15-20	bc	—	Fr.-s. 5, NW	—	Fog bank extending from SE to NW through S.
	6	28.815	-28.2	-27.0	-27.0	—	SE, 4-5	14	20-25	oc †	—	S.-cu. 10	—	
	8	28.787	-28.0	-23.0	-23.0	—	SE, 4-6	23	20-30	o †	—	S.-cu. 10	—	Wind squally and variable from E to SE.
	10	28.725	-23.5	-20.0	-19.8	—	E, 2-6	18	10-30	oc †	—	N. 10	—	Very heavy drift during squalls.
	Noon	28.676	-20.6	-16.0	-16.0	—	SW, 2-6	15	10-20	loc †	—	N. 10	—	
	2	28.650	-16.0	-13.0	-13.0	—	Var. S, 4-5	21	20-25	oc †	—	N. 10	—	
	4	28.649	-14.5	-10.0	-10.0	—	S, 4-5	14	20-24	oc †	—	N. 10	—	
	6	28.542	-11.3	-9.0	-9.0	—	Var. S, 0-3	13	0-20	ocq †	—	N. 10	—	
	8	28.529	-11.5	-10.0	-10.0	—	Calm	2	0	oc *	—	N. 10	—	
	10	28.505	-12.5	-10.0	-10.0	—	S, 0-1	7	0-5	oc *	—	N. 10	—	
	Midt.	28.479	-11.5	-9.8	-9.8	—	Lt. S airs, 0	5	0	oc *	—	N. 10	—	
	Mean	28.668	—	-16.5	-16.5	—	—	—	—	—	—	—	—	Overcast and snowing. Strong variable winds with drift, falling in evening; max. run of cups for 2 hours, 46 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer falling all day. Temperature rose rapidly.
		Max therm. read at { 8 a. -22°·2. 8 p. -9°·0.		Solar radiation { black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.						

14th.	2	28.479	-10.5	-9.0	-9.0	—	Calm	0	0	oc *	—	N. 10	—	
	4	28.451	-10.7	-10.0	-10.0	—	Calm	0	0	oc *	—	N. 10	—	
	6	28.449	-11.3	-10.2	-10.2	—	Var. SW, 0-4	4	0-25	oc * †	—	N. 10	—	
	8	28.421	-8.3	-5.5	-5.5	—	Var. SW, 2-7	26	10-42	oc * † <sup>2</sup>	—	N. 10	—	Wind very strong, variable and squally all day with heavy drift.
	10	28.412	-6.5	-3.0	-3.0	—	Var. S, 5-7	27	25-42	oc * † <sup>2</sup>	—	N. 10	—	
	Noon	28.393	-4.8	-2.8	-2.8	—	Var. S, 4-7	25	20-42	oc † <sup>2</sup>	—	N. 10	—	
	2	28.371	-4.5	-2.5	-2.5	—	Var. S, 3-6	26	20-35	oc † <sup>2</sup>	—	N. 10	—	
	4	28.366	-5.3	-4.0	-4.0	—	Var. S, 3-4	13	20-25	oc †	—	N. 10	—	
	6	28.338	-6.5	-6.0	-6.0	—	Var. S, 4-5	15	30-33	oc †	—	N. 10	—	
	8	28.329	-6.3	-2.5	-2.5	—	Var. S, 3-5	20	18-30	oc * †	—	N. 10	—	
	10	28.319	-3.5	0.0	0.0	—	Var. S, 6-8	34	30-50	oc † <sup>2</sup>	—	N. 10	—	Wind variable and squally from SE to S and SSW. Drift very thick, observation screen obscured.
	Midt.	28.331	-4.5	-3.0	-3.0	—	SE, 4-5	18	choked	oc †	—	N. 10	—	Midt. Wind shifted to SE and became steady. Less drift.
	Mean	28.388	—	-4.9	-4.9	—	—	—	—	—	—	—	—	Overcast all day. Very heavy S <sup>b</sup> gale with much drift and heavy squalls; max. run of cups for 2 hours, 68 miles; max. rate observed by pressure tube, 50 miles per hour. Barometer fell all day. Temperature rising nearly all day.
		Max therm. read at { 8 a. -5°·0. 8 p. -2°·2.		Solar radiation { black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.						

15th.	2	28.334	-5.0	-4.0	-4.0	—	SE, 4-5	19	choked	oc †	—	N. 10	—	
	4	28.322	-5.7	-3.0	-3.0	—	Var. S, 4-6	23	choked	oc †	—	N. 10	—	
	6	28.376	-6.5	-5.0	-5.0	—	E, 4-6	29	choked	oc †	—	N. 10	—	
	8	28.434	-8.5	-7.2	-7.2	—	E, 6	21	choked	oc †	—	N. 10	—	
	10	28.478	-9.0	-7.8	-7.8	—	E, 4-6	23	25-32	oc †	—	N. 10	—	
	Noon	28.486	-8.0	-4.2	-4.2	—	E, 3-7	24	15-35	oc * †	—	N. 10	—	
	2	28.492	-4.5	0.2	0.2	—	ESE, 2-4	21	15-20	oc * †	—	N. 10	—	
	4	28.493	0.4	1.9	1.9	—	Var. SE, 2-6	13	10-25	oc * †	—	N. 10	—	Sun gleaming.
	6	28.509	0.9	2.0	2.0	—	Var. SE, 2-4	18	5-15	oc * †	—	N. 10	—	Signs of sky clearing overhead.
	8	28.495	1.0	3.0	3.0	—	Var. SE, 3-4	15	15-20	oc †	—	N. 10	—	7.30. Temp. at Cape Armitage, 0°·2; min., -49°·0.
	10	28.492	1.5	3.8	3.8	—	Var. SE, 0-5	11	0-25	oc †	—	N. 10	—	8 p.m. Tops of western hills visible.
	Midt.	28.502	1.5	2.2	2.2	—	Var. NE, 1-4	18	8-20	oc	—	N. 10	—	Overcast all day, with continuance of gale hauling to eastward. Max. run of cups for 2 hours, 63 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer rising slowly all day. Temperature high and unsteady, rising towards evening.
	Mean	28.451	—	-1.5	-1.5	—	—	—	—	—	—	—	—	
		Max therm. read at { 8 a. 0°·2. 8 p. 3°·0.		Solar radiation { black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.						



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		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.	Lower.						
			Spirit minimum.	Dry.									Wet.			
19th. 2	29.219	—	-19.0	-8.0	-8.0	—	Calm	0	0	oc	—	—	S. 10	—	Reflection of sun on western hills.	
4	29.197	—	-9.1	-8.0	-8.0	—	Calm	0	0	bc	—	—	Fr.-s. 6	—	Strong mirage all round horizon.	
6	29.207	—	-18.0	-18.0	-17.5	—	Calm	0	0	b	—	—	—	—		
8	29.166	—	-18.0	-9.0	-9.0	—	Calm	0	0	b	—	—	—	—		
10	29.159	—	-11.5	1.2	1.2	—	Lt. NE ahrs	0	0	b	—	—	—	—		
Noon	29.149	—	0.2	3.2	3.2	—	NE, 1	4	0-10	h	—	—	—	—		
2	29.143	—	0.4	2.5	1.8	—	Var. E, 1-2	13	0-10	b	—	—	—	—	Heavy haze on western hills.	
4	29.138	—	1.0	0.0	0.5	—	Var. E, 1-2	15	5-15	b	—	—	—	—		
6	29.150	—	3.5	2.5	3.0	—	Var. E, 2	16	10-20	b ↗	—	—	—	—	Surface drift.	
8	29.147	—	4.5	3.0	3.0	—	ENE, 3-4	20	15-20	b	—	—	—	—		
10	29.163	—	6.0	4.4	4.4	—	NE, 3-4	21	15-22	b	—	—	—	—		
Midt.	29.165	—	6.7	4.8	4.8	—	NE, 3-4	19	15-20	b	—	—	—	—	Fine and clear all day. Wind sprang up from the E about noon and freshened. Max. run of cups for 2 hours, 40 miles; max. rate observed by pressure tube, 22 miles per hour. Barometer fairly steady all day. Temperature very unsteady and jumpy.	
Mean	29.167	—	—	4.2	4.3	—	—	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. 3° 0. / 8 p. 3° 8.     Solar radiation { black bulb 86° 0. / bright bulb 34° 0.     Evapn. 1.7 grammes in 23 hours.     Precipn. — in.																

20th. 2	29.173	—	-5.7	-4.2	-4.5	—	NE, 3-4	18	10-15	b	—	—	—	—		
4	29.195	—	-5.7	-5.0	-5.0	—	NE, 1-2	15	0	b	—	—	—	—		
6	29.203	—	-6.3	-3.4	-3.4	—	Lt. NE ahrs	10	0	b	—	—	—	—		
8	29.209	—	-7.7	-2.0	-2.0	—	Lt. NE ahrs	10	0	b	—	—	—	—		
10	29.243	—	-7.0	-2.0	-2.0	—	ENE, 3-4	8	0	b	—	—	—	—		
Noon	29.245	—	-10.5	-10.0	-10.0	—	E by N, 4-5	21	25-30	b	—	—	—	—		
2	29.253	—	-10.5	-9.0	-9.2	—	ENE, 4-5	28	20-30	bc	—	—	S. 2	—	Heavy haze all along western horizon.	
4	29.263	—	-6.7	-6.0	-6.4	—	E, 3-4	23	10-20	oc	—	—	Cu. 8	—		
6	29.275	—	-9.2	-6.0	-6.4	—	E by S, 1-2	17	0	oc	—	—	Cu. 10	—	Dull and overcast.	
8	29.275	—	-6.5	-4.0	-4.0	—	Lt. NE ahrs	12	0	oc	—	—	Cu. 10	—		
10	29.307	—	-9.5	-6.0	-6.0	—	Lt. NE ahrs	2	0	oc	—	—	Cu. 10	—		
Midt.	29.297	—	-11.5	-11.5	-11.8	—	Calm	0	0	oc	—	—	Cu. 10	—		
Mean	29.245	—	—	-5.8	-5.9	—	—	—	—	—	—	—	—	—	Fine and clear until noon, when it became overcast. Wind fresh from ENE, dying down towards the evening. Barometer rising steadily all day. Temperature steadier and falling.	
Max. therm. read at { 8 a. -2° 0. / 8 p. -0° 4.     Solar radiation { black bulb 80° 7. / bright bulb 25° 0.     Evapn. 11.0 grammes in 24 hours.     Precipn. — in.																

21st. 2	29.291	—	-14.5	-10.0	-9.8	—	Calm	0	0	oc	—	—	Cu. 10	—		
4	29.290	—	-12.0	-9.8	-9.8	—	Calm	1	0	oc	—	—	Cu. 10	—		
6	29.285	—	-11.5	-8.0	-8.0	—	Calm	1	0	oc	—	—	A.-s. 6	—		
8	29.277	—	-9.5	-2.8	-2.8	—	Lt. S. ahrs	5	0	oc	—	—	A.-s. 8	—		
10	29.257	—	-8.0	-4.0	-4.0	—	Calm	0	0	oc	—	—	A.-s. 9	—		
Noon	29.243	—	-5.0	-5.0	-5.0	—	NE, 1-2	2	0	oc	—	—	A.-s. 8	—		
2	29.240	—	-8.2	-6.0	-6.4	—	ENE, 2-3	17	10-15	oc	—	—	S.-cu. 6, W	—		
4	29.241	—	-9.2	-7.0	-7.3	—	E by S, 2-3	21	10-15	oc	—	—	S.-cu. 6, W	—	Haze and small detached Cu. to westward.	
6	29.233	—	-7.7	-7.0	-7.2	—	Var. E, 1-2	18	0-10	oc	—	—	A.-s. 6	—	Mirage to S and W.	
8	29.231	—	-5.7	-5.0	-5.0	—	NE, 1-2	11	10-15	oc	—	—	A.-s. 8, NW	—	Mirage in front of western hills.	
10	29.217	—	-7.7	-4.8	-4.8	—	Lt. NE ahrs	7	0-5	oc	—	—	S.-cu. 9	—	9 p.m. Temp. at Cape Armitage, -27° 5.	
Midt.	29.211	—	-12.0	-5.0	-5.0	—	Lt. NE ahrs	0	0	oc	—	—	Cu. 10	—		
Mean	29.251	—	—	-6.2	-6.3	—	—	—	—	—	—	—	—	—	Overcast and cloudy all day. Light to fresh variable wind. Barometer falling generally all day. Temperature steady.	
Max. therm. read at { 8 a. -2° 5. / 8 p. -2° 5.     Solar radiation { black bulb 75° 0. / bright bulb 24° 7.     Evapn. 6.0 grammes in 24 hours.     Precipn. — in.																

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Spirit minimum.	Dry.									Wet.		
2	29.231	—	-12.3	-8.0	-8.2	—	Calm	0	—	oe	—	Cl.-cu. 6	—	—	<p><b>22nd.</b></p> <p>Erebus apparently in eruption, but unable to see summit through fog. Very black from NE to NW. Mirage all round; foggy; snowing slightly.</p> <p>Fog lifting to W. Mirage the same.</p> <p>1 p.m. Temp. at Cape Armitage, -10° 8; min., -31° 5. Wind E, 2. bc. Erebus smoke going W.</p> <p>Cu. all along western horizon.</p> <p>Cloudy all day. Wind very light and variable. Barometer rising all day. Temperature unsteady.</p>
4	29.227	—	-14.5	-12.0	-12.0	—	Calm	1	—	oe	—	—	Cu. 8	—	
0	29.233	—	-11.5	-10.0	-10.0	—	Calm	0	—	ocf *	—	—	Cu. 10	—	
8	29.251	—	-11.0	-4.2	-4.2	—	Calm	1	—	oe	—	A.-cu. 8	—	—	
10	29.268	—	-5.7	-2.2	-2.2	—	Lt. SE slrs	2	—	oe	—	Cl.-s. 0	—	—	
Noon	29.269	—	-3.2	-0.8	-0.8	—	Lt. SE slrs	7	not working	bc	—	Cl.-s. 2	—	—	
2	29.279	—	-5.3	-5.0	-5.0	—	Var. SE, 1	4	—	bc	—	Cl. 2	—	—	
4	29.295	—	-7.0	-7.0	-7.3	—	ESE, 1	7	—	bc	—	Cl.-s. 2	Cu. 2	—	
6	29.322	—	-7.0	-7.3	-7.3	—	ESE, 1-2	11	—	bc	—	Cl.-s. 4	Cu. 2	—	
8	29.356	—	-10.1	-8.0	-8.2	—	SE, 1-2	7	—	oe	—	Cl.-cu. 10	—	—	
10	29.381	—	-12.5	-9.8	-9.8	—	SE, 2-3	18	—	oe	—	—	S. 8	—	
Midt.	29.411	—	-10.7	-6.0	-6.0	—	SE by E, 1-2	13	—	oe	—	—	S. 10	—	
Mean	29.294	—	—	-0.7	-6.8	—	—	—	—	—	—	—	—	—	

2	29.414	—	-11.2	-12.0	-12.0	—	SE, 3	13	—	oe	—	—	Cu. 10	—	<p><b>23rd.</b></p> <p>Western hills covered in thick fog.</p> <p>Fog bank from NE to SW. Hills obscured. Rigging, &amp;c., covered with rime.</p> <p>Noon. Min. temp. at Cape Armitage, -28° 4. Wind E by N, 4. †. Erebus smoke going W.</p> <p>Heavy surface drift; clouds getting denser.</p> <p>Very red sky all round horizon. About 13 hours' bright sunshine. No solar record.</p> <p>Overcast and cloudy all day. Strong ENE wind with drift; max. run of cups for 2 hours, 57 miles. Barometer rising all day. Temperature steadier.</p>
4	29.442	—	-11.5	-7.5	-7.5	—	E, 3-4	18	—	oe	—	—	Cu. 10	—	
6	29.500	—	-11.5	-8.0	-8.0	—	E, 4	22	—	oe †	—	Cl.-s. 8	—	—	
8	29.521	—	-11.3	-8.2	-8.2	—	E, 4-5	15	—	bc †	—	Cl.-s. 4	—	—	
10	29.580	—	-10.2	-9.8	-9.8	—	E, 4-5	18	—	bc †	—	Cl.-cu. 5	—	—	
Noon	29.604	-10.2	-12.7	-10.0	-10.0	—	Var. SE, 4-6	19	not working	oe †	—	Cl.-s. 8	—	—	
2	29.613	—	-9.5	-7.5	-7.5	—	Var. E, 4-6	28	—	ocq †	—	Cl.-s. 7, SW	—	—	
4	29.636	—	-9.5	-7.3	-7.3	—	ENE, 6-7	26	—	ocq †	—	Cl.-s. 8, SW	—	—	
6	29.654	—	-9.7	-9.0	-8.5	—	E by N, 4-5	26	—	oe †	—	Cl.-s. 8, SW	—	—	
8	29.663	—	-9.7	-8.8	-8.8	—	E, 4-5	23	—	oe †	—	Cl.-s. 8	—	—	
10	29.669	—	-9.5	-9.0	-9.0	—	E, 4-5	22	—	oe †	—	Cl.-s. 8	—	—	
Midt.	29.653	—	-11.0	-8.0	-8.0	—	Var. E, 4-5	21	—	oe †	—	Cl.-s. 6	—	—	
Mean	29.580	—	—	-8.8	-8.7	—	—	—	—	—	—	—	—	—	

2	29.639	—	-11.7	-9.0	-9.0	—	Var. E, 4-5	17	—	ocq †	—	A.-s. 10	—	—	<p><b>24th.</b></p> <p>Driving banks of fog and drift, with occasional visibility.</p> <p>Min. temp. at Cape Armitage, -18° 5. Wind E, 4. †.</p> <p>Robinson's anemometer blown away, the cups badly damaged. Clearing to SW.</p> <p>Sun partly visible above Bluff.</p> <p>Overcast, with strong E by gale; heavy squalls and drift. Barometer falling steadily all day. Temperature lower and steadier.</p>
4	29.630	—	-12.5	-9.8	-9.8	—	Var. E, 4-5	19	—	oe †	—	A.-s. 10	—	—	
6	29.600	—	-15.8	-10.0	-10.0	—	E, 5-7	23	—	oe †	—	A.-s. 10	—	—	
8	29.600	—	-15.0	-6.0	-6.0	—	E, 5-6	21	—	oe †	—	A.-s. 9	—	—	
10	29.548	—	-7.5	-2.0	-2.8	—	Var. E, 5-6	21	—	oe †	—	—	S. 10	—	
Noon	29.485	-13.8	-12.5	-12.0	-12.0	—	E by S, 6-7	26	not working	oe †	—	—	S. 10	—	
2	29.437	—	-14.2	-13.4	-13.4	—	Var. E, 7-8	35	—	oe †	—	—	S.-cu. 10	—	
4	29.351	—	-13.0	-12.2	-12.2	—	Var. E, 7-10	—	—	ocq †	—	—	S.-cu. 10	—	
6	29.329	—	-12.2	-10.0	-10.0	—	Var. E, 9-10	—	—	ocq †	—	—	S.-cu. 10	—	
8	29.335	—	-13.3	-11.5	-10.5	—	Var. E, 9-10	—	—	ocq †	—	Cl.-s. 6	—	—	
10	29.333	—	-14.3	-13.0	-13.0	—	E by N, 5-6	—	—	oe †	—	—	S. 6	—	
Midt.	29.265	—	-15.2	-12.0	-12.0	—	ENE, 5-6	—	—	oe †	—	Cl.-cu. 10	—	—	
Mean	29.463	—	—	-10.1	-10.1	—	—	—	—	—	—	—	—	—	

1902—October.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.		Unrecouped.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Dry.	Wet.											
25th.															
2	29.226		-16.5	-12.8	-12.8		NE, 5-6			oc +		Cl.-cu. 10			
4	29.203		-15.2	-10.5	-10.5		NE, 5-6			oc			S. 10		
6	29.167		-14.2	-9.0	-9.0		NE, 2-3			oc		Cl.-cu. 10			
8	29.125		-11.5	-10.0	-10.0		NE, 3-4			oc			S.-cu. 10	Weather gloomy and threatening.	
10	29.067		-12.3	-10.2	-10.2		NE, 3-4			oc			S.-cu. 10	All the upper parts of western hills covered in dark thick fog.	
Noon	29.043		-11.0	-5.5	-5.5		NE, 1-2			oc			S.-cu. 10		
2	29.024		-5.4	-5.0	-5.0		E by N, 1-2			oc			S.-cu. 10	Heavy from N to W.	
4	28.991		-4.9	-4.6	-4.6		NE, 0-1			bc			Cu. 2	No evaporation record, dish dropped.	
6	28.964		-10.9	-10.2	-10.2		ENE, 1-2			bc			Cu. 3		
8	28.963		-10.7	-9.2	-9.2		NE, 1-2			oc			Cu. 10		
10	28.914		-10.3	-9.0	-9.0		SE, 1-2			oc *			Cu. 10		
Midt.	28.891		-10.5	-7.0	-7.0		Lt. NE ahrs			oc *			S. 10		
Mean	29.048		-8.6	-8.6	-8.6									Still overcast and cloudy, with strong NE wind early, falling later. Barometer falling steadily all day. Temperature steady.	
Max. therm. read at		8 a. -9° 0.		8 p. -4° 2.		Solar radiation		black bulb 69° 4.		bright bulb 24° 0.		Evapn. — grammes.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.		Unrecouped.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Dry.	Wet.											
26th.															
2	28.886		-10.0	-9.0	-9.0		Calm			oc					
4	28.864		-11.0	-8.0	-8.0		Calm			oc		Cl.-cu. 10			
6	28.854		-10.3	-7.8	-7.8		Calm			b		Cl.-cu. 8			
8	28.842		-14.3	-10.2	-10.2		Calm			b					
10	28.817		-13.5	-12.5	-12.2		Calm			b					
Noon	28.789		-13.5	-7.2	-7.0		Calm			b				12.30. Temp. at Cape Armitage, -7° 8; min., -23° 8. Wind NNW, 1. Erebus smoke going NE.	
2	28.764		-9.4	-5.0	-4.8		NNW, 0-1			b					
4	28.759		-7.1	-3.2	-3.0		N by W, 0-1			b					
6	28.743		-5.0	-2.0	-2.0		N, 1			b				Heavy haze to W and N, low Cu. on S horizon.	
8	28.743		-5.3	-2.8	-2.8		N, 1-2			b					
10	28.732		-4.5	-2.8	-2.5		NE by N, 1-6			b				Fog cloud along horizon.	
Midt.	28.718		-4.2	-3.0	-3.0		N by W, 1-3			bq					
Mean	28.793		-6.1	-6.0	-6.0									Overcast early, but clearing and remaining fine. No wind until the evening, when it became squally from the northward. Barometer continued to fall all day. Temperature higher but steady.	
Max. therm. read at		8 a. -3° 2.		8 p. -2° 0.		Solar radiation		black bulb 84° 2.		bright bulb 27° 0.		Evapn. 5.1 grammes in 24 hours.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.		Unrecouped.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Dry.	Wet.											
27th.															
2	28.709		-5.5	-4.8	-4.8		NE, 1			oc			S.-cu. 8		
4	28.689		-12.5	-6.0	-6.0		N, 1-2			oc			S.-cu. 8		
6	28.687		-9.0	-3.0	-3.0		N, 2-3			oc			S.-cu. 8		
8	28.673		-3.0	-1.0	-1.0		N, 2-3			oc			Cu. 10		
10	28.682		-2.5	3.8	3.8		N, 2-3			oc			Cu. 10		
Noon	28.694	4.5	2.0	4.2	4.2		N by E, 2-3			oc			Cu. 10	Min. temp. at Cape Armitage, -20° 0. Wind NNW, 3. +. cl. Erebus obscured.	
2	28.691		3.3	5.0	5.0		N by W, 0-1			oc			Cu. 9		
4	28.696		5.3	7.4	6.6		Var. N, 1-2			oc			S.-cu. 10	3 p.m. Temp. at Cape Armitage, 6° 5; min., 4° 0.	
6	28.701		5.5	8.0	5.8		N, 1-2			oc *			N. 10	Dull to S, clearing in W.	
8	28.708		5.5	6.0	6.0		N, 2			oc *			N. 10		
10	28.729		6.2	8.0	7.0		N, 1			oc *			N. 10	Snow falling lightly.	
Midt.	28.737		8.0	9.8	8.2		Lt. N ahrs			oc *			N. 10		
Mean	28.700		3.1	2.7	2.7									Overcast all day, snowing in evening. Wind fresh from N. Barometer fell until 8 a.m., and then rose slowly. Temperature rising all day.	
Max. therm. read at		8 a. -0° 2.		8 p. —		Solar radiation		black bulb 83° 0.		bright bulb 32° 6.		Evapn. 9.6 grammes.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, sec p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	28.785	—	5.0	6.0	6.0	—	—	—	—	—	—	—	—	28th.
4	28.749	—	5.0	8.0	8.0	—	—	—	—	—	—	—	—	
6	28.724	—	5.5	6.0	6.0	—	—	—	—	—	—	—	—	
8	28.722	—	6.5	10.0	10.0	—	—	—	—	—	—	—	—	
10	28.786	—	—1.0	0.0	0.0	—	—	—	—	—	—	—	—	
Noon	28.852	—0.2	—5.0	—1.0	—1.0	—	—	—	—	—	—	—	—	
2	28.893	—	—2.5	2.2	2.2	—	—	—	—	—	—	—	—	
4	28.898	—	1.0	3.0	2.5	—	—	—	—	—	—	—	—	
6	28.920	—	—2.0	0.7	0.2	—	—	—	—	—	—	—	—	
8	28.906	—	—0.8	0.0	0.0	—	—	—	—	—	—	—	—	
10	28.916	—	—3.0	—1.0	—1.0	—	—	—	—	—	—	—	—	
Midt.	28.928	—	—2.0	—1.0	—1.0	—	—	—	—	—	—	—	—	
Mean	28.840	—	—	2.7	2.7	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. 11° 5. / 8 p. 11° 0.		Solar radiation { black bulb 106° 8. / bright bulb 41° 0.		Evapn. 5.3 grammes in 24 hours.		Precipn. — in.		Overcast and snowing most of the day. Strong E by wind. Barometer fell until 8 a.m. and then rose rapidly. Temperature high and steady.						

2	28.972	—	—4.0	—2.3	—2.5	—	—	—	—	—	—	—	—	29th.
4	28.979	—	—3.5	—2.3	—2.4	—	—	—	—	—	—	—	—	
6	28.980	—	—3.8	—2.0	—2.0	—	—	—	—	—	—	—	—	
8	28.984	—	—3.2	—1.0	—1.0	—	—	—	—	—	—	—	—	
10	28.961	—	—3.5	—2.3	—2.3	—	—	—	—	—	—	—	—	
Noon	28.961	—	—3.8	—2.0	—2.8	—	—	—	—	—	—	—	—	
2	28.960	—	—2.3	0.0	—0.2	—	—	—	—	—	—	—	—	
4	28.935	0.7	—2.0	3.5	2.8	—	—	—	—	—	—	—	—	
6	28.926	—	0.0	1.0	0.9	—	—	—	—	—	—	—	—	
8	28.911	—	0.0	3.0	3.0	—	—	—	—	—	—	—	—	
10	28.911	—	0.0	6.0	4.0	—	—	—	—	—	—	—	—	
Midt.	28.872	—	0.8	5.0	2.5	—	—	—	—	—	—	—	—	
Mean	28.916	—	—	0.6	0.0	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. —0° 2. / 8 p. 6° 0.		Solar radiation { black bulb 119° 5. / bright bulb 45° 0.		Evapn. 7.3 grammes in 24 hours.		Precipn. 0.002 in.		Still overcast, with variable strong E by winds. Barometer steady, but inclined to fall slowly. Temperature unsteady, rising in evening.						

2	28.867	—	2.8	3.0	—	—	—	—	—	—	—	—	—	30th.
4	28.878	—	3.2	3.9	—	—	—	—	—	—	—	—	—	
6	28.889	—	6.5	8.3	8.1	—	—	—	—	—	—	—	—	
8	28.891	—	5.0	6.0	5.8	—	—	—	—	—	—	—	—	
10	28.870	—	5.0	9.0	8.8	—	—	—	—	—	—	—	—	
Noon	28.880	13.0	7.2	10.8	9.8	—	—	—	—	—	—	—	—	
2	28.867	—	9.6	10.4	9.8	—	—	—	—	—	—	—	—	
4	28.860	—	9.3	10.0	9.5	—	—	—	—	—	—	—	—	
6	28.851	—	9.5	11.0	10.7	—	—	—	—	—	—	—	—	
8	28.883	—	6.3	6.8	6.6	—	—	—	—	—	—	—	—	
10	28.883	—	2.8	3.0	3.0	—	—	—	—	—	—	—	—	
Midt.	28.893	—	0.8	4.0	3.8	—	—	—	—	—	—	—	—	
Mean	28.876	—	—	7.2	—	—	—	—	—	—	—	—	—	
Max. therm. { 8 a. 8° 0. / read at { 8 p. 11° 4.		Solar radiation { black bulb 82° 7. / bright bulb 35° 1.		Evapn. 6.9 grammes in 24 hours.		Precipn. 0.003 in. since 4 p.m. 29th.		Heavy Cu. clouds over western mountains. Min. temp. at Cape Armitage, —4° 2. Light E by winds. ocm. Mountains obscured. 3 p.m. Rain band, 2.						
9.25. Parhelia well marked.														
Overcast all day, with very strong variable S by and E by winds; max. run of emps for 2 hours, 35 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer steady. Temperature high and steady.														



Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	28.849	—	6.0	9.2	8.8	—	SSE, 1-2	12	10-15	oc	—	S. 10, SE	—	1st.  1 p.m. Sky breaking up overhead. Small Nim. over White Island. 2 p.m. Rabi band, 4. 3 p.m. Heavy squalls with drift.  Force of wind on Hut Point 9 to 10. Sun gleaming.  Overcast and squally all day, with a strong S <sup>w</sup> gale and much drift; max. run of cups for 2 hours, 54 miles; max. rate observed by pressure tube, 40 miles per hour. Barometer fell until 8 a.m., then steadily rose. Temperature steady.	
4	28.847	—	7.0	9.0	8.8	—	SSE, 2-3	10	15-22	ocq	—	S. 10, SE	—		
6	28.820	—	8.0	9.4	9.2	—	SE, 2-4	10	20-25	ocq ↗	—	N. 10	—		
8	28.808	—	6.8	8.8	8.6	—	SW, 3-5	19	20-37	ocq ↗	—	N. 10	—		
10	28.820	—	6.4	7.1	0.5	—	Var. S, 4-6	22	20-30	ocq ↗	—	N. 10	—		
Noon	28.867	—	5.8	9.5	7.1	—	E, 1-3	18	15-20	ocq ↗	—	S.-cu. 10	—		
2	28.855	—	7.7	10.0	10.5	—	Var. SE, 1-3	13	10-20	ocq ↗	—	S.-cu. 10	—		
4	28.869	—	6.6	8.2	8.2	—	Var. SE, 3-6	18	20-35	ocq ↗	—	S.-cu. 10	—		
6	28.891	—	7.4	8.8	8.8	—	Var. S, 4-7	27	20-40	ocq ↗	—	N. 10	—		
8	28.939	—	7.5	8.0	7.8	—	SE, 3-5	21	20-30	ocq ↗	—	N. 10	—		
10	28.945	—	8.0	8.0	7.9	—	E, 3-5	15	15-25	ocq ↗	—	N. 10	—		
Midt.	28.990	—	8.8	11.0	10.2	—	S, 4-7	19	20-35	ocq ↗	—	N. 10	—		
Mean	28.876	—	—	8.9	8.5	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 12°·2, 8 p. 13°·0. Solar radiation { black bulb 85°·0, bright bulb 31°·0. Evapu. 13.6 grammes in 24 hours. Precipn. 0.004 in.

2	29.013	—	8.8	9.4	9.4	—	S, 4-7	23	25-38	ocq ↗	—	N. 10	—	2nd.  Sun gleaming.  Weather very squally. Wind suddenly shifted from S to NE. Sky clearing to southwards.  Sun gleaming; clear S to W. 3 p.m. Rabi band, 3.  Clouds breaking up and driving S <sup>w</sup> .  Spirit minimum out of order. Overcast, with strong variable S <sup>w</sup> winds and drift; max. run of cups for 2 hours, 53 miles; max. rate observed by pressure tube, 45 miles per hour. Barometer rose steadily all day. Temperature steady, but higher.
4	29.025	—	8.8	9.6	9.5	—	S by E, 5-7	26	30-45	ocq * ↗	—	N. 10	—	
6	29.069	—	—	7.0	7.0	—	Var. S, 4-5	18	20-30	ocq ↗	—	N. 10	—	
8	29.101	—	—	10.0	10.0	—	Var. E, 2-5	17	20-35	ocq ↗	—	Cu. 10, SE	—	
10	29.141	—	—	10.8	10.0	—	Var. E, 1-3	17	5-25	ocq ↗	—	Cu. 9	—	
Noon	29.277	—	—	12.2	11.2	—	SE, 1-2	10	10-15	ocq ↗	—	A.-cu. 8	—	
2	29.332	—	—	12.8	12.0	—	SSE, 2-3	12	15-20	ocq ↗	—	S.-cu. 10	—	
4	29.274	—	9.8	10.4	9.8	—	E, 2-3	13	15-20	oc	—	Cu. 9	—	
6	29.278	—	9.7	11.0	10.0	—	Var. SE, 2-4	10	10-25	ocq ↗	—	Ci. 2, NW	—	
8	29.331	—	—	9.2	9.0	—	SE, 2-4	27	20-30	ocq	—	Ci.-s. 2, NW	—	
10	29.338	—	—	9.0	8.5	—	E, 2-4	21	20-30	ocq	—	S.-cu. 9	—	
Midt.	29.352	—	9.2	10.0	9.8	—	Var. E, 1-3	13	5-20	ocq	—	A.-cu. 8	—	
Mean	29.211	—	—	10.1	9.7	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 12°·2, 8 p. 13°·8. Solar radiation { black bulb 71°·8, bright bulb 34°·2. Evapu. 13.3 grammes in 24 hours. Precipn. 0.006 in.

2	29.346	—	9.8	10.8	10.1	—	Var. E, 1-3	18	10-25	ocq	—	A.-cu. 9	—	3rd.  Low detached Cu. to S and W. Very hazy to E and S. 3 p.m. Rabi band, 2. 4 p.m. Clear to S and W, but threatening to E. Wind very squally. Clearing all round on horizon.  Low Cu. moving from S to E.  Cloudy, with remarkable Ci.-s. clouds. Fresh S <sup>w</sup> wind. Barometer steady. Temperature higher, but steady.
4	29.365	—	10.7	11.0	11.0	—	E by S, 1-2	10	10-20	ocq	—	A.-cu. 9	—	
6	29.442	—	8.0	10.3	10.2	—	ESE, 1-2	12	5-18	bc	—	Cu. 5, SE	—	
8	29.479	—	8.9	10.5	10.5	—	ESE, 1-2	14	5-10	bc	—	S.-cu. 7, SSE	—	
10	29.462	—	8.0	12.0	11.6	—	Var. E, 1-2	12	10-15	bc	—	Cl. 3	—	
Noon	29.465	—	11.2	14.5	14.0	—	Var. E, 1-2	10	10-15	oc	—	Cl. 8	—	
2	29.450	—	10.0	12.4	12.4	—	E by N, 1-3	11	5-15	bcq	—	Ci. s. 7, NW	—	
4	29.440	—	10.2	12.5	12.0	—	Var. SE, 1-3	10	0-15	bcq	—	Ci. 3, NW	—	
6	29.448	—	9.0	10.0	9.0	—	Var. E, 1-3	13	0-15	bcq	—	Ci. 5, NW	—	
8	29.486	—	11.9	12.0	11.0	—	E by N, 1	11	0-5	bc	—	Ci. 4, NW	—	
10	29.427	—	10.3	12.4	11.0	—	ESE, 0-1	1	0	bc	—	Cl. 4	—	
Midt.	29.401	—	9.0	10.1	9.4	—	Lt. ESE airs	2	0	bc	—	Ci. 2	—	
Mean	29.435	—	—	11.5	11.0	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 13°·2, 8 p. 15°·1. Solar radiation { black bulb 128°·7, bright bulb 58°·6. Evapu. 18.0 grammes in 24 hours. Precipn. — in.

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
4th. 2	29.311	—	8.6	12.0	11.4	—	Lt. ESE airs	7	0	bc	—	Ci. 3, SW	—	—	Low Cu. moving from S to E.
4	29.319	—	6.5	12.0	11.2	—	Var. E, 0-1	6	0-5	bc	—	Ci. 2, SW	Cu. 4, S	—	
6	29.341	—	6.0	9.9	9.2	—	Var. E, 0-1	10	0-5	bc	—	Ci. 2, SW	Cu. 3, S	—	
8	29.393	—	8.9	11.3	10.4	—	E by N, 1-2	5	5-10	bc	—	Ci. 1	—	—	
10	29.389	—	10.9	14.6	13.7	—	Calm	7	0	bc	—	Ci. 1	—	—	
Noon	29.381	—	10.2	14.5	13.0	—	Lt. SE airs	1	0	bc	—	Ci.-s. 2	—	—	
2	29.367	—	12.7	17.6	15.8	—	SE, 0-1	1	0	bc	—	Ci.-s. 5, W	—	—	Low detached clouds on S horizon.
4	29.352	—	10.0	11.6	10.0	—	SE, 1-2	8	5-20	bc	—	Ci.-s. 6, W	—	—	3 p.m. Rain band, 1. Very hazy.
6	29.351	—	8.4	9.4	8.6	—	E, 1-3	11	5-20	bc	—	Ci.-s. 6, SW	—	—	Clouds very thin and changing position.
8	29.344	—	8.3	12.4	10.8	—	E by N, 1-3	13	5-20	bc	—	Ci. 3	Cu. 4, SE	—	Cu. driving up from SE in detached portions.
10	29.341	—	10.0	11.5	10.2	—	ESE, 1-3	15	5-20	bc	—	—	S.-cu. 5	—	
Midt.	29.366	—	7.8	10.0	8.9	—	E by N, 1-3	10	5-25	bc	—	Ci. 2	Cu. 4, SE	—	
Mean	29.360	—	—	12.2	11.1	—	—	—	—	—	—	—	—	—	Fine, but cloudy. Light to fresh Ely winds. Barometer steady. Temperature still higher and steady.
Max. therm. read at { 8 a. 15°.1. / 8 p. 19°.0. Solar radiation { black bulb 107°°. / bright bulb 49°°. Evapn. 21.9 grammes in 24 hours. Precipn. — in.															

5th. 2	29.293	—	7.4	9.3	8.2	—	ENE, 2-3	13	5-15	bc	—	Ci.-s. 7, SW	—	—	
4	29.284	—	4.5	6.2	5.3	—	ENE, 0-1	7	0-5	bc	—	Ci.-s. 7, SSW	—	—	Detached Cu. in S.
6	29.269	—	5.4	10.6	9.0	—	SE by E, 0-1	2	0-5	bc	—	Ci. 1	—	—	
8	29.267	—	7.4	9.0	8.2	—	ESE, 1-2	8	0-10	bc	—	Ci. 2, SW	—	—	
10	29.259	—	8.0	9.5	9.0	—	S, 1-2	8	0-10	bc	—	S. 2	—	—	
Noon	29.235	—	8.0	11.0	10.0	—	SE, 0-1	4	0-5	bc	—	S. 3	—	—	1 p.m. Observations at Cape Armitage:—
2	29.210	10.8*	10.0	11.2	10.2	—	Var. SE, 2-4	12	10-30	ocq	†	Ci.-cu. 9	—	—	Min., -11°°. Wind SSE, 3-4, bc. †°.
4	29.208	—	10.0	11.9	11.0	—	Var. SE, 1-3	15	5-20	ocq	—	—	Cu. 10	—	Wind very squally; sky becoming overcast.
6	29.201	—	9.0	10.0	9.0	—	Var. E, 1-3	13	10-25	ocq	—	—	Cu. 10	—	3 p.m. Rain band, 2.
8	29.196	—	8.1	9.3	8.2	—	SE, 0-2	6	0-10	oc	—	—	S.-cu. 7	—	Slight break in clouds on S horizon.
10	29.168	—	5.4	6.3	5.7	—	ESE, 1-3	9	5-18	bcq	—	Ci.-s. 6	—	—	
Midt.	29.149	—	4.4	5.5	5.0	—	Var. SE, 1-5	9	5-30	bcq †°	—	Ci. 3	Cu. 4, S	—	Nim. clouds to S and SE.
Mean	29.228	—	—	9.2	8.2	—	—	—	—	—	—	—	—	—	Fine until noon, then became overcast. Light to fresh variable SEly winds. Barometer fell steadily all day. Temperature steady.
Max. therm. read at { 8 a. 14°°. / 8 p. 12°°. Solar radiation { black bulb 105°°. / bright bulb 47°°. Evapn. 21.7 grammes in 24 hours. Precipn. — in.															

\* Read at 1 p.m.

† Card blown out of Sunshine Recorder and lost, about 12 hours of bright sunshine estimated.

6th. 2	29.183	—	4.4	6.2	5.3	—	SE, 1-2	11	5-15	ocq	—	—	Cu. 10	—	Low Nim. to S and SW.
4	29.186	—	4.2	4.5	3.6	—	Var. SE, 1-2	6	0-10	bcq	—	Ci.-s. 6	—	—	
6	29.133	—	4.0	5.0	4.1	—	Calm	0	0	bc	—	—	Cu. 2	—	
8	29.079	—	5.2	11.2	10.0	—	N by E, 0-1	0	0-5	bc	—	—	A.-cu. 4, S	—	
10	29.087	—	10.0	11.2	10.8	—	Lt. N airs	0	0	bc	—	Ci. 2, W	—	—	Cu. from S to SW. Thick fog bank.
Noon	29.081	—	11.0	11.8	13.8	—	Lt. N airs	0	0	bc	—	Ci. 4, NW	—	—	
2	29.078	—	13.7	16.0	14.6	—	N, 0-1	4	0-10	bc	—	Ci. 2, NW	—	—	Low detached Cu. on top of western mountains.
4	29.101	—	11.8	16.0	15.0	—	N, 0-1	2	0-10	bc	—	Ci. 2, NW	—	—	3 p.m. Rain band, 1-5.
6	29.133	—	14.0	15.0	14.0	—	NNE, 1	2	0	b	—	—	—	4 p.m. Sky almost cloudless.	
8	29.171	—	13.0	14.2	13.8	—	NNE, 0-2	6	0-10	b	—	—	—	—	Moon on northern horizon.
10	29.231	—	9.2	10.8	10.2	—	Lt. N airs	5	0	bc	—	Ci. 1, SW	—	—	
Midt.	29.290	—	5.2	6.2	6.0	—	Calm	0	0	oc	—	Ci.-s. 8	—	—	There was no record of sunshine on this day before 11 a.m. as the card was blown away and lost.
Mean	29.146	—	—	10.9	10.1	—	—	—	—	—	—	—	—	—	Fine all day, but clouded over at midnight. Light variable Nly winds all day. Barometer rose steadily. Temperature steady.
Max. therm. read at { 8 a. 11°°.3. / 8 p. 16°°.0. Solar radiation { black bulb 112°°. / bright bulb 51°°. Evapn. 20.0 grammes in 24 hours. Precipn. — in.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Sunshine.	Clouds, Amount and movement.			Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.		Upper.	Lower.	Aspirator.	
			Dry.	Wet.										
2	29.302	—	5.0	10.2	10.0	—	Lt. NE airs	3	0	bc	—	Cl. s. 6	—	7th.
4	29.326	—	6.8	11.0	10.8	—	Calm	0	0	bc	—	Cl. 4	—	
6	29.368	—	8.0	10.5	9.8	—	Calm	0	0	bc	—	Cl. 6, SW	—	
8	29.341	—	8.5	13.5	12.3	—	Calm	0	0	oc	—	Cl. s. 9	—	
10	29.428	—	11.3	12.8	12.8	—	ENE, 1-2	4	5-10	o *	—	N. 10	—	
Noon	29.435	—	11.2	12.5	12.5	—	S by W, 1-3	4	5-15	o * †	—	N. 10	—	
2	29.440	—	11.4	13.0	12.5	—	SSE, 1-2	10	0-10	oc *	—	N. 10	—	
4	29.427	—	11.5	12.5	11.0	—	E by S, 1-2	6	0-10	c	—	Cl. 3, SE	—	
6	29.401	—	11.4	13.7	12.5	—	ENE, 1-2	7	0-10	bc	—	Fr. cu. 2	—	
8	29.330	—	12.0	13.0	12.0	—	ENE, 1-2	7	5-15	bc	—	Fr. cu. 3	—	
10	29.359	—	7.4	9.0	8.0	—	Calm	2	0	b ∞	—	—	—	
Midt.	29.328	—	6.0	6.5	6.5	—	Calm	0	0	b ∞	—	—	—	
Mean	29.375	—	—	11.5	10.9	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 15° 0. / 8 p. 14° 2. Solar radiation { black bulb 87° 4. / bright bulb 40° 0. Evapn. 7.7 grammes in 24 hours. Precipn. 0.003 in.

2	29.296	—	7.5	13.2	13.0	—	Lt. NE airs	0	0	b	—	—	—	8th.
4	29.267	—	12.2	11.0	13.8	—	N, 1-2	7	10	b	—	—	—	
6	29.252	—	8.0	10.0	9.6	—	Calm	0	0	b	—	—	—	
8	29.245	—	7.0	8.0	7.8	—	NE, 0-1	4	0-5	b	—	—	—	
10	29.261	—	5.2	9.0	7.5	—	Var. E, 2-4	21	20-30	bc †	—	Cl. 2	—	
Noon	29.263	—	6.5	9.0	7.4	—	Var. E, 1-3	14	15-25	bc	—	Cl. 3	—	
2	29.303	—	9.5	11.2	10.8	—	Var. E, 0-2	10	0-10	bq	—	—	—	
4	29.324	—	9.6	10.3	10.0	—	E by N, 1-2	10	0-10	b	—	—	—	
6	29.367	—	9.8	12.2	11.0	—	ENE, 1-3	10	0-15	bcq †	—	Cl. 4, SW	—	
8	29.413	—	5.4	6.8	6.0	—	Var. E, 1-3	21	10-20	bq	—	—	—	
10	29.373	—	4.8	7.2	6.5	—	Var. E, 1-2	14	0-10	b	—	—	—	
Midt.	29.352	—	4.7	7.4	6.0	—	Var. E, 0-1	8	0-5	b	—	—	—	
Mean	29.318	—	—	9.9	9.1	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 14° 4. / 8 p. 13° 0. Solar radiation { black bulb 106° 0. / bright bulb 45° 0. Evapn. 15.4 grammes in 24 hours. Precipn. — in.

2	29.498	—	0.6	7.5	7.5	—	E by S, 0-1	4	0-5	b	—	—	—	9th.
4	29.521	—	5.5	7.8	7.5	—	Var. SE, 2-3	10	10-20	b	—	—	—	
6	29.509	—	6.5	8.2	8.0	—	Var. E, 2-3	7	10-15	b	—	—	—	
8	29.547	—	6.0	8.0	8.0	—	Var. E, 2-3	7	10-15	b	—	—	—	
10	29.545	—	7.5	8.0	7.8	—	SE, 1	11	5	b	—	—	—	
Noon	29.564	—	9.2	11.2	11.0	—	SE, 1	7	5	b	—	—	—	
2	29.588	—	10.0	12.0	12.0	—	E by S, 1-2	7	0-10	b ∞	—	—	—	
4	29.584	—	10.9	13.0	12.2	—	ESE, 1	6	5	b ∞	—	—	—	
6	29.586	—	10.0	12.4	10.2	—	Calm	0	0	b ∞	—	—	—	
8	29.590	—	6.5	10.2	10.2	—	Calm	0	0	b	—	—	—	
10	29.596	—	5.0	6.0	5.6	—	Calm	0	0	b	—	—	—	
Midt.	29.594	—	5.2	6.0	6.0	—	Calm	0	0	b	—	—	—	
Mean	29.560	—	—	9.2	8.8	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 11° 5. / 8 p. 11° 0. Solar radiation { black bulb 103° 7. / bright bulb 41° 8. Evapn. 20.4 grammes in 24 hours. Precipn. — in.

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METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles min.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.										Unscreened.
10th. 2	29.568	—	5.0	9.0	8.8	—	Calm	0	0	b	—	—	—		
4	29.539	—	7.0	10.0	9.0	—	Lt. N ahrs	0	0	b	—	—	—		
6	29.533	—	8.2	13.6	13.0	—	N by E, 0-2	5	0-10	b	—	—	—		
8	29.523	—	12.7	14.2	13.5	—	N, 1	4	0-5	b	—	—	—		
10	29.506	—	10.0	14.0	13.0	—	Calm	0	0	b	—	—	—		
Noon	29.490	—	13.8	14.2	14.0	—	Calm	0	0	b	—	—	—	S.-cu. from SE to SW. Haze on western mountains.	
2	29.474	—	15.0	21.0	21.0	—	Calm	0	0	bc ∞ <sup>2</sup>	Cl. 3, W	—	—	—	
4	29.461	—	19.0	20.0	19.0	—	Calm	0	0	bc ∞ <sup>2</sup>	Cl. 2, NW	—	—	—	
6	29.442	—	17.1	18.2	16.7	—	Calm	0	0	b ∞	—	—	—	—	
8	29.429	—	17.0	17.0	16.2	—	Calm	0	0	b	—	—	—	—	
10	29.389	—	9.2	14.0	11.0	—	Lt. N ahrs	2	0	b	—	—	—	—	
Midt.	29.371	—	9.2	14.0	11.6	—	Lt. N ahrs	2	0	b	—	—	—	—	
Mean	29.478	—	—	14.9	13.9	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 14° 5.		8 p. 26° 5.		Solar radiation		black bulb 107° 1.		bright bulb 52° 7.		Evapn. — grammes.		Precipn. — in.	

11th. 2	29.377	—	12.6	15.6	14.9	—	Calm	0	0	c	—	A.-cu. 10	—		
4	29.365	—	14.0	16.0	14.8	—	Lt. NE ahrs	0	0	bc	Cl.-s. 5, S	—	—		
6	29.365	—	13.5	15.2	15.0	—	Calm	0	0	oc	Cl. 10	—	—		
8	29.365	—	11.8	15.2	13.8	—	Calm	2	0	oc	A.-s. 10	—	—		
10	29.336	—	13.2	15.0	14.0	—	SE, 1	7	5	oc	A.-s. 10	—	—	Small Dines' anemometer ceased working.	
Noon	29.355	—	9.0	10.2	9.2	—	SE, 1-2	10	—	oc	—	S. 10	—		
2	29.397	—	6.3	7.4	7.0	—	SE, 2-4	15	—	ocq	—	Cu. 10	—	Clear to S. Heavy surface ↓.	
4	29.413	—	6.5	9.0	8.2	—	SE, 2-4	14	—	ocq	—	Cu. 10	—	3 p.m. Rain band, 3.	
6	29.415	—	6.9	8.2	8.0	—	Var. E, 1-3	14	—	eq	—	Cu. 10	—	Clearing. Clouds breaking up to S and W.	
8	29.431	—	4.0	5.0	5.0	—	Var. E, 2-3	11	—	oc	—	S.-cu. 9	—	Sun gleaming.	
10	29.416	—	1.2	4.0	4.0	—	Var. E, 2-4	15	—	oc	—	S.-cu. 8	—		
Midt.	29.428	—	0.0	3.0	3.0	—	Var. E, 4-5	23	—	oc †	—	S.-cu. 9	—		
Mean	29.339	—	—	10.3	9.7	—	—	—	—	—	—	—	—	Overcast all day, with strong freshening Ely wind; max. run of cups for 2 hours, 46 miles. Barometer steady. Temperature falling all day.	
Max. therm. read at		8 a. 18° 5.		8 p. 16° 2.		Solar radiation		black bulb 89° 9.		bright bulb 40° 7.		Evapn. — grammes.		Precipn. — in.	

12th. 2	29.430	—	1.0	7.0	6.5	—	Var. E, 2-3	25	—	oc †	—	S. 8	—		
4	29.458	—	3.5	6.0	5.2	—	Var. E, 2-3	11	—	oc	—	N. 10	—		
6	29.501	—	3.6	5.7	5.2	—	E, 2-3	11	—	c †	—	Cu. 10	—	Low Cu. over western horizon.	
8	29.524	—	0.2	4.0	3.8	—	ENE, 4	18	—	c †	—	Cu. 10	—		
10	29.522	—	3.8	12.0	11.2	—	Lt. E ahrs	15	—	oc	—	S.-cu. 10	—		
Noon	29.524	—	9.2	10.0	11.0	—	SE, 1-2	5	—	oc	—	S.-cu. 10	—		
2	29.510	—	9.2	14.0	12.8	—	Var. E, 1-3	7	—	ocq	—	S.-cu. 10	—	Sun gleaming.	
4	29.494	—	13.5	15.0	13.7	—	SSE, 1-2	8	—	oc	—	S.-cu. 10	—	3 p.m. Rain band, 3.	
6	29.504	—	9.8	11.0	10.1	—	SE, 1-2	5	—	oc	—	Cu. 10	—	Clouds breaking to W.	
8	29.505	—	8.1	9.7	8.9	—	Var. E, 1-3	13	—	c	—	S.-cu. 10	—	Clear to W. Sun gleaming.	
10	29.468	—	8.0	9.8	9.0	—	NE, 1-2	13	—	c	—	S.-cu. 8	—	Sun gleaming. Clear over western horizon.	
Midt.	29.477	—	9.0	11.0	10.2	—	NE, 1-2	10	—	c	—	S. 8	—		
Mean	29.493	—	—	9.6	9.0	—	—	—	—	—	—	—	—	Overcast all day, with variable SEly wind. Barometer rose a little, then steady. Temperature less steady.	
Max. therm. read at		8 a. 8° 3.		8 p. 15° 2.		Solar radiation		black bulb 82° 1.		bright bulb 36° 2.		Evapn. — grammes.		Precipn. — in.	

Hour.	Barometer reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.				
				Dry.	Wet.										Unscreened.	
2	29.448	—	9.6	10.0	9.8	—	SE, 1-2	7	—	oc	—	A.-s. 8	—	<p>13th.</p> <p>Western mountains obscured by fog. Very heavy Nim. over NW horizon. Heavy fog over western mountains. Sun gleaming.</p> <p>Heavy Cu. on western mountains. 3 p.m. Rain band, 4-5.</p> <p>5 p.m. Detached Cu. and heavy haze on western mountains. 6 p.m. Bright mirage to NW. Slight fog in amongst western mountains.</p> <p>Cloudy, with strong E<sup>ly</sup> wind, falling calm in evening. Barometer rising steadily all day. Temperature steady.</p>		
4	29.443	—	5.0	6.8	6.4	—	ENE, 1-2	7	—	bc	—	Cl. 2, SW	—			
6	29.449	—	5.0	9.0	7.5	—	ENE, 2-4	17	—	bc	—	Cl.-s. 2	—			
8	29.459	—	6.0	9.5	8.0	—	E by N, 2-4	19	—	bc	—	Cl.-s. 2	—			
10	29.498	—	5.8	6.4	6.0	—	ENE, 3	14	—	bc †	—	Cl. 4, SW	—			
Noon	29.519	—	6.0	12.1	11.0	—	E by N, 3-4	17	—	c	—	Cl.-s. 3	S. 7			
2	29.523	—	11.8	12.4	12.3	—	E, 1	10	—	c	—	Cl.-s. 4	Cu. 3			
4	29.538	—	11.6	14.0	12.0	—	SSE, 1	5	0-5	c	—	Cl.-s. 2, SW	Cu. 5			
6	29.553	—	13.0	15.2	13.6	—	E, 1-2	7	0-10	c ∞	—	Cl.-s. 2, W	Cu. 4			
8	29.548	—	10.0	11.5	10.0	—	Lt. airs, 0-1	0	0	c	—	Cl.-s. 2	Cu. 3			
10	29.571	—	9.5	12.0	11.2	—	Calm	1	0	o*	—	—	N. 10			
Midt.	29.574	—	11.2	11.2	11.0	—	Calm	4	0	oc*	—	—	N. 10			
Mean	29.510	—	—	10.8	9.9	—	—	—	—	—	—	—	—			
Max. therm. read at		8 a. 15° 2.		8 p. 19° 0.		Solar radiation			black bulb 116° 6.		bright bulb 49° 7.		Evapn. — grammes.		Precipn. — in.	

2	29.576	—	11.0	13.0	12.8	—	Calm	0	0	ocm*	—	—	N. 10	—	<p>14th.</p> <p>Thick mist all round and very dull.</p> <p>Sun gleaming.</p> <p>3 p.m. Rain band, 1.</p> <p>5 p.m. Clear overhead. Banks of Cu. along foot of western mountains. 6 p.m. Heavy Nim. on NW horizon.</p> <p>Overcast nearly all day, with some snow and light variable wind. Barometer inclined to fall slowly. Temperature steady and higher.</p>	
4	29.576	—	12.0	13.0	12.8	—	Calm	0	0	ocm*	—	—	N. 10	—		
6	29.584	—	13.0	14.0	13.2	—	Calm	0	0	ocm*	—	—	N. 10	—		
8	29.551	—	11.8	15.0	14.6	—	Calm	0	0	ocm*	—	—	N. 10	—		
10	29.541	—	12.0	15.0	14.2	—	Lt. airs, 0-1	9	0	oc*	—	—	N. 10	—		
Noon	29.523	—	9.0	12.4	11.2	—	NNE, 0-1	4	0	oc*	—	—	N. 10	—		
2	29.506	—	16.1	19.0	17.8	—	N, 1	1	0-10	c	—	—	Cu. 7	—		
4	29.483	—	17.0	18.0	17.0	—	NNE, 1-2	4	5-15	bc	—	Cl. 2, SE	Cu. 1	—		
6	29.460	—	17.0	17.2	17.0	—	N, 1-2	6	5-15	bc	—	Cl. 2, SE	Cu. 3	—		
8	29.441	—	11.0	12.0	11.4	—	Lt. N airs	5	0	oc	—	A.-s. 9	—	—		
10	29.451	—	14.0	15.2	14.3	—	Var. N, 1-2	5	5-10	c	—	Cl. 8	Cu. 2	—		
Midt.	29.461	—	9.8	11.0	10.0	—	N, 1-2	6	5-10	c	—	Cl. 6	—	—		
Mean	29.513	—	—	14.6	13.9	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 19° 0.		8 p. 22° 8.		Solar radiation			black bulb 94° 2.		bright bulb 42° 3.		Evapn. — grammes.		Precipn. 0.08 in. since 4 p.m. 7th.	

2	29.443	—	14.2	15.5	14.6	—	NNE, 1-3	8	10-20	c	—	Cl.-s. 8	Cu. 2	—	<p>15th.</p> <p>Low Nim. to S and SE.</p> <p>Large Cu. to S of Bluff. Misty.</p> <p>Heavy haze and Cu. to S and W.</p> <p>3 p.m. Rain band, 0-5. Cu. on western mountains.</p> <p>Heavy haze and mirage to S.</p> <p>Cl.-cu. on western mountains. Horizon hazy.</p> <p>Fine and clear most of day, with hardly any wind. Barometer rose steadily all day. Temperature higher.</p>	
4	29.436	—	14.2	15.4	14.5	—	Var. N, 1-4	7	10-25	bcq †	—	Cl.-s. 6	—	—		
6	29.457	—	9.8	14.8	14.0	—	Var. N, 1	3	0-5	bc	—	Cl.-s. 5	—	—		
8	29.454	—	13.2	14.0	14.0	—	Lt. N airs	1	0	bc	—	Cl.-cu. 2, SE	—	—		
10	29.451	—	13.3	18.0	17.2	—	Calm	1	0	b	—	—	—	—		
Noon	29.471	—	18.2	23.2	22.2	—	Calm	0	0	b	—	—	—	—		
2	29.515	—	21.6	23.2	21.0	—	Calm	0	0	b ∞	—	—	—	—		
4	29.584	—	16.0	18.4	16.2	—	Calm	0	0	b ∞	—	—	—	—		
6	29.583	—	9.8	12.3	11.0	—	N, 0-1	7	0-5	b ∞	—	—	—	—		
8	29.637	—	—	15.0	14.8	—	Lt. N airs	2	0	b	—	—	—	—		
10	29.685	—	8.2	14.0	13.4	—	Calm	0	0	b	—	—	—	—		
Midt.	29.723	—	6.5	13.6	12.1	—	N, 1-3	7	5-15	bc	—	Cl. 2	—	—		
Mean	29.537	—	—	16.5	15.4	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 17° 8.		8 p. 27° 8.		Solar radiation			black bulb 116° 7.		bright bulb 57° 0.		Evapn. — grammes.		Precipn. — in.	

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Dry.	Wet.											
16th.	2	29.751	—	5.8	10.7	10.0	—	N, 2-4	10	5-15	bc	—	—	—	Large Cu. on White Island, and Nim. to E and W. 3 p.m. Rain band, 4. 4 p.m. Clouds all along low horizon. Long Cl.-s. on NW horizon.
	4	29.797	—	6.0	11.0	10.0	—	N, 1-2	7	5-10	bc	—	—	—	
	6	29.858	—	10.0	12.2	12.0	—	NNE, 1-2	8	0-15	bc	—	—	—	
	8	29.927	—	12.0	13.2	13.0	—	Calm	7	0	b	—	—	—	
	10	29.968	—	11.5	18.2	17.4	—	Calm	0	0	b	—	—	—	
	Noon	29.971	—	17.0	18.0	17.8	—	Calm	2	0	b	—	—	—	
	2	29.970	—	17.4	20.0	19.0	—	Calm	1	0	b∞	—	—	—	
	4	29.966	—	18.0	20.6	18.8	—	Calm	2	0	b∞	—	—	—	
	6	29.961	—	15.9	18.2	16.4	—	N, 0-1	4	5-10	bc	Cl.-s. 1, SW	—	—	
	8	29.943	—	16.6	17.4	16.2	—	N, 0-1	6	0-10	b	—	—	—	
	10	29.927	—	16.0	16.0	15.2	—	Lt. N airs	7	5-10	bc	Cl. 2, NW	—	—	
	Midt.	29.905	—	12.0	15.2	15.0	—	Calm	4	0-5	bc	Cl.-cu. 4, NW	—	—	
	Mean	29.912	—	—	15.9	15.1	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 15° 0.		{ 8 p. —.		Solar radiation		{ black bulb 109° 0.		{ bright bulb 59° 2.		Evapn. — grammes.		Precipn. — in.	

17th.	2	29.868	—	14.0	16.0	15.8	—	NE, 1	4	5	oc	—	—	A.-cu. 9	—
	4	29.848	—	15.0	17.0	16.0	—	Lt. E airs	0	0	oc	—	—	A.-cu. 9	—
	6	29.832	—	14.8	17.0	16.2	—	Lt. N airs	11	0	oc*	—	—	N. 10	Very bright to S and W.
	8	29.826	—	15.0	17.3	16.8	—	Lt. N airs	2	0	oc*	—	—	N. 10	Snowing lightly.
	10	29.832	—	17.1	18.3	18.0	—	Calm	0	0	o	—	—	S. 10	—
	Noon	29.818	—	18.0	18.1	16.1	—	NE, 0-1	0	0-5	o	—	—	S. 10	—
	2	29.807	—	16.0	17.2	16.3	—	ENE, 1-2	6	5-10	oc	—	—	N. 10	Heavy Nim. on western horizon.
	4	29.810	—	10.0	11.3	10.0	—	Var. E, 2-3	12	20-25	oc †	—	—	S.-cu. 10	3 p.m. Rain band, 5.
	6	29.809	—	8.0	9.0	8.2	—	ESE, 2-3	17	20-25	oc	—	—	S.-cu. 10	Very dull and threatening, with heavy surface drift.
	8	29.799	—	6.0	12.0	11.2	—	Var. E, 2-4	24	20-30	oc †	—	—	S.-cu. 10	—
	10	29.818	—	5.7	6.6	6.5	—	ENE, 2-4	16	25-30	o †	—	—	S. 10	—
	Midt.	29.813	—	5.5	6.2	6.1	—	Var. E, 3-5	21	25-35	o †	—	—	S.-cu. 10	—
	Mean	29.824	—	—	13.8	13.1	—	—	—	—	—	—	—	—	Overcast and cloudy, with strong, variable, freshening Ely wind; max. run of cups for 2 hours, 48 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer fell slowly during day. Temperature fell towards evening.
Max. therm. read at		{ 8 a. 18° 8.		{ 8 p. 22° 2.		Solar radiation		{ black bulb 88° 7.		{ bright bulb 40° 0.		Evapn. — grammes.		Precipn. — in.	

18th.	2	29.820	—	5.2	7.0	7.0	—	E, 3-4	17	20-25	oc	—	—	S.-cu. 10	—
	4	29.823	—	6.0	7.8	7.0	—	SE, 2-3	13	10-15	oc	—	—	S.-cu. 10	—
	6	29.807	—	6.8	7.6	7.0	—	Var. E, 1-2	8	5-10	oc	—	—	S.-cu. 10	—
	8	29.807	—	2.2	3.0	2.8	—	Var. E, 4-5	21	30-35	oc	—	—	S.-cu. 10	—
	10	29.774	—	2.5	4.9	4.0	—	Var. E, 3-5	22	20-35	ocq †	—	—	S.-cu. 10	—
	Noon	29.768	—	4.4	7.0	6.5	—	Var. E, 3-4	22	20-30	c †	—	—	S. 6	Heavy fog over western hills.
	2	29.776	—	6.4	8.0	8.0	—	Var. E, 2-3	13	20-25	oc † <sup>0</sup>	—	—	S.-cu. 10	Clouds thin overhead. Sun gleaming.
	4	29.813	—	11.6	13.0	12.2	—	Var. E, 1-3	15	10-25	ocq † <sup>0</sup>	—	—	S.-cu. 10	3 p.m. Rain band, 2. Snow gauge catching drift.
	6	29.798	—	11.0	12.4	11.6	—	Var. E, 2-3	10	15-25	cq † <sup>0</sup>	—	—	S.-cu. 10	Clearing overhead and to W. Sun gleaming.
	8	29.779	—	5.8	6.2	6.0	—	Var. E, 2-3	12	15-28	oc	—	—	A.-cu. 8	Clouds changing formation.
	10	29.773	—	5.0	6.0	5.3	—	Var. E, 2-3	13	15-25	oc	—	—	S.-cu. 8	—
	Midt.	29.767	—	4.5	6.3	5.4	—	Var. E, 1-3	15	10-20	oc †	—	—	N. 10	—
	Mean	29.792	—	—	7.4	6.9	—	—	—	—	—	—	—	—	Overcast and cloudy all day, with strong, variable Ely wind and squalls; max. run of cups for 2 hours, 43 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer very unsteady. Temperature lower and steady.
Max. therm. read at		{ 8 a. 14° 1.		{ 8 p. —.		Solar radiation		{ black bulb 112° 7.		{ bright bulb 46° 4.		Evapn. — grammes.		Precipn. 0.01 in. since 4 p.m., 14th.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.772	—	3.8	4.8	4.7	—	ENE, 2-3	9	10-20	oc † *	—	N. 10	—	Slight snow. Sun gleaming.	
4	29.765	—	3.9	5.4	5.2	—	ENE, 3-4	13	25-30	oc † *	—	N. 10	—		
6	29.768	—	4.8	7.0	6.8	—	NE, 2-3	13	15-20	oc *	—	N. 8	—	Snowing slightly, and hazy.	
8	29.775	—	0.0	7.0	6.8	—	Var. E, 1-2	10	10-15	bc *	A.-s. 3, E	Cu. 4, SE	—	Western mountains obscured by thick haze. Snowing lightly at times.	
10	29.752	—	6.2	8.0	7.8	—	E, 1-2	11	10-15	bc	Cl. 2	—	—		
Noon	29.760	—	6.0	8.0	7.8	—	E, 1-2	11	10-15	bc	Cl.-s. 4	—	—		
2	29.799	—	5.7	6.4	6.4	—	Var. E, 1-3	14	10-25	bcq †	—	Cu. 6, NE	—	Clouds very thin and broken overhead. Heavy S.-cu. all round horizon.	
4	29.806	—	5.2	6.0	5.5	—	ENE, 2-4	15	15-30	bcq † ∞	—	Cu. 4, NE	—	3 p.m. Rain band, 2.	
6	29.810	—	4.5	5.4	5.0	8.2	E by N, 1-3	17	10-25	bcq ∞	Cl.-s. 2	S.-cu. 4, NE	—	4 p.m. Clear to N and W, very dull to S. Clearing all round; White Island visible.	
8	29.814	—	4.2	5.2	5.0	8.5	Var. E, 2-3	11	15-20	bc	Cl.-s. 4, W	—	—	Clearing all round, except to S of White Island, which is nearly obscured in mist.	
10	29.808	—	4.5	5.8	5.0	5.8	Var. E, 3-4	17	20-30	bc	Cl.-s. 4	—	—		
Midt.	29.786	—	4.2	5.2	5.2	5.3	Var. E, 3-4	11	20-28	bc	Cl.-s. 6	—	—		
Mean	29.785	—	—	6.2	5.9	—	—	—	—	—	—	—	—	Cloudy all day, with alight snowfall. Wind still strong and squally from E. Barometer steady. Temperature steady and low.	

Max. therm. { 8 a. 8°·2.  
read at { 8 p. 8°·5. Solar radiation { black bulb 110°·0.  
bright bulb 47°·8. Evapn. — grammes. Precipn. 0·01 in. since 4 p.m. 18th.

19th.

2	29.759	—	4.7	10.4	10.0	6.3	Var. E, 1-2	17	10-20	bc	—	Cl. 6	—	—
4	29.756	—	4.5	11.0	10.0	7.0	Var. E, 1	5	0-10	bc	—	Cl.-s. 4	—	—
6	29.819	—	4.5	5.3	4.7	7.0	SE, 2-3	7	10-18	bc	—	Cl. 1	—	—
8	29.823	—	4.7	7.0	6.5	10.8	ESE, 1-2	7	5-10	c	—	Cu. 10, SE	—	Hazy over White Island.
10	29.823	—	5.0	7.0	7.8	14.0	ESE, 1-2	7	10-12	oc *	—	N. 10	—	Thick haze all round horizon. Snowing slightly.
Noon	29.820	—	7.0	9.0	8.2	11.0	ESE, 1-2	7	10-15	oc	—	Cl.-cu. 10	—	—
2	29.830	—	8.5	9.2	8.7	9.8	NE, 1-2	13	15-20	oc	—	S.-cu. 10	—	Heavy Nim. to NNW. Sun gleaming. 3 p.m. Rain band, 3.
4	29.832	—	8.0	8.6	8.0	9.2	NNE, 2	12	15-25	oc	—	S.-cu. 10	—	Much clearer; cloud lifting; Bluff visible.
6	29.829	—	7.6	8.4	7.8	9.0	ENE, 2-3	13	10-20	c	A.-cu. 10	—	—	Nim. on western mountains, clear to S.
8	29.834	—	7.5	9.6	8.5	11.0	E by S, 1-2	5	5-10	c	—	S. 10	—	—
10	29.828	—	7.0	8.0	7.5	9.2	Var. E, 1-2	6	10-15	oc *	—	N. 10	—	Snowing slightly. Thick mist like drift over western mountains, clear to S.
Midt.	29.824	—	8.0	9.0	8.0	9.0	E, 1-2	6	5-10	oc	—	Cu. 10	—	—
Mean	29.815	—	—	8.5	8.0	—	—	—	—	—	—	—	—	Cloudy all day, with freshening E by wind. Barometer rising. Temperature steady.

Max. therm. read at { 8 a. 12°·1.  
{ 8 p. 10°·1. Solar radiation { black bulb 82°·4.  
bright bulb 34°·8. Evapn. — grammes. Precipn. — in.

20th.

2	29.810	—	8.0	9.0	8.0	9.0	E, 1-2	7	5-10	oc *	—	N. 10	—	—
4	29.790	—	8.0	10.0	9.5	10.0	NE, 1-2	6	5-10	oc *	A.-s. 9	—	—	—
6	29.753	—	6.5	12.0	11.4	11.2	Calm	3	0	oc *	—	S.-cu. 9	—	—
8	29.744	—	10.0	13.0	12.2	17.0	Lt. airs	4	0	oc *	—	Cu. 10	—	Sun gleaming.
10	29.790	—	10.5	11.3	11.3	12.8	N, 1-3	5	10-20	o † *	—	N. 10	—	—
Noon	29.797	—	10.5	12.1	11.7	15.2	N by W, 1-2	8	5-10	oc *	—	N, 9	—	—
2	29.788	—	11.4	13.7	12.0	16.0	N by W, 1-3	7	5-20	bcq	—	Cu. 3, SE	—	Clear to N and E, heavy Nim. along western horizon.
4	29.807	14.0	11.7	13.2	12.4	19.2	N, 1-2	8	5-15	bc	—	Cu. 1, SE	—	3 p.m. Rain band, 1-5.
6	29.810	—	11.9	13.7	12.6	22.0	NNE, 0-1	4	0-5	b	—	—	—	4 p.m. Temp. at Cape Armitage, 14°·0 in the sun; min., -11°·0.
8	29.861	—	9.2	10.0	9.5	15.2	NNE, 0-1	7	0-5	b	—	—	—	6 p.m. Clouds along horizon.
10	29.896	—	8.7	10.0	9.2	14.8	Lt. N airs	2	0-8	bc	Cl.-s. 2	—	—	—
Midt.	29.911	—	8.5	9.3	9.0	9.5	N by E, 1-2	10	5-15	bc	Cl. 2	—	—	—
Mean	29.816	—	—	11.4	10.8	—	—	—	—	—	—	—	—	Overcast early, but clearing later, with light N by airs. Barometer inclined to rise. Temperature rising generally.

Max. therm. { 8 a. 14°·6.  
read at { 8 p. — Solar radiation { black bulb 130°·0.  
bright bulb 56°·7. Evapn. — grammes. Precipn. 0·02 in. since 4 p.m. 19th.

21st.

1902—November.]

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Dry.	Wet.											
22nd.	2	29.912	—	9.0	9.0	8.8	9.0	Var. N, 1-2	4	5-10	bc		Cl.-s. 4, SW	—	
	4	29.935	—	8.8	10.5	10.0	11.2	NE, 1-2	13	10-15	c		A.-s. 8	—	
	6	29.943	—	9.0	11.0	10.0	11.3	N, 1	7	5	bc		A.-s. 6	—	
	8	29.973	—	10.0	11.7	11.0	13.0	N, 1	5	5	oc		—	S. 9	
	10	29.948	—	10.2	11.6	11.0	15.1	NNE, 1	12	0-10	oc		—	Cu. 10	
	Noon	30.018	—	11.8	13.2	12.5	16.2	N, 1	3	0-10	oc		—	S.-cu. 9	
	2	30.052	—	12.4	14.6	13.7	20.3	NNW, 1-2	4	5-15	c∞		—	Cu. 9	Very hazy; slight break in clouds to SE. Sun gleaming.
	4	30.057	—	13.2	14.4	13.8	17.6	N, 1-2	3	5-15	oc		—	S.-cu. 10	3 p.m. Rain band, 2.
	6	30.061	—	13.7	15.0	14.0	16.0	N by W, 1-2	5	5-10	oc		—	Cu. 9	4 p.m. Very dull and threatening. Clouds thin and rising. Sun gleaming.
	8	30.071	—	13.6	14.5	14.0	15.4	Var. N airs	0	0	oc		—	Cu. 9	
	10	30.108	—	8.5	14.5	14.0	15.0	N, 0-1	9	0-5	oc		—	S.-cu. 10	
	Midt.	30.112	—	11.0	12.0	11.8	12.0	Lt. airs	7	0	oc		—	S.-cu. 10	
	Mean	30.016	—	—	12.7	12.0	—	—	—	—	—		—	—	Overcast and cloudy all day, with steady N by wind. Barometer rising and much higher than ordinarily. Temperature higher and steady.
		Max. therm. read at { 8 a. 14°-0. 8 p. 15°-6.		Solar radiation { black bulb 112°-2. bright bulb 50°-7.		Evapn. — grammes.		Precipn. — in.							

23rd.	2	30.103	—	11.3	14.0	14.0	14.2	N, 0-1	1	0-5	bc		Cl.-s. 2	—	Small thin cloud on summit of Crater Hill.
	4	30.099	—	8.8	10.1	10.0	13.4	Calm	2	0	bc		Cl. 2	Fr.-s. 3, NNW	
	6	30.097	—	9.0	15.0	15.0	11.2	Calm	0	0	bc		—	Fr.-s. 4, N	Thick fog bank rising over hills to NE.
	8	30.084	—	13.0	13.2	13.0	27.0	Calm	0	0	bc		Cl.-s. 5, W	—	
	10	30.057	—	13.8	16.0	15.8	26.5	Lt. N airs	0	0	oc		A.-s. 8	—	
	Noon	30.045	—	16.8	20.0	19.2	28.0	Calm	0	0	oc		Cl.-s. 8	—	
	2	30.029	—	16.4	20.0	20.0	24.0	NNW, 0-1	4	0-10	c		—	S.-cu. 9	Sun gleaming. Nim. to SE. Fog hanging on Crater Hill.
	4	29.995	—	18.6	20.4	18.8	23.2	N, 1	2	5-10	c		—	S.-cu. 10	3 p.m. Rain band, 3.
	6	29.971	—	19.0	20.0	19.4	21.7	N, 1	7	5-10	c		—	S.-cu. 10	4 p.m. Low bank of cumulus on western mountains.
	8	29.940	—	19.0	19.8	19.8	20.2	Lt. N airs	4	5	c		—	S.-cu. 10	6 p.m. Clearing to W. Sun gleaming. Thin, dark fog over Crater Hill.
	10	29.905	—	17.3	18.2	18.0	18.8	Lt. NW airs	4	0	c		—	S.-cu. 10	
	Midt.	29.896	—	17.8	19.0	18.5	19.0	N, 1	7	5	c		—	Cu. 10	
	Mean	30.016	—	—	17.1	16.8	—	—	—	—	—		—	—	Cloudy most of day, with hardly any wind. Barometer falling rather quickly all day. Temperature higher.
		Max. therm. read at { 8 a. 17°-5. 8 p. 21°-8.		Solar radiation { black bulb 122°-2. bright bulb 54°-6.		Evapn. — grammes.		Precipn. — in.							

24th.	2	29.845	—	18.0	19.0	18.0	19.0	N, 2-3	8	15-18	c		—	Cu. 10	
	4	29.818	—	17.5	18.5	18.0	19.0	N, 1-2	6	0-10	oc		—	Cu. 10	Low fog bank along foot of western mountains.
	6	29.806	—	17.8	19.0	18.2	20.0	NNE, 1-2	4	5-10	bc		Cl. 2	—	Low fog bank from W to S.
	8	29.780	—	17.9	19.0	18.3	23.4	N, 0-1	5	0-10	bc		Cl. 1, NNW	—	
	10	29.766	—	18.0	19.8	19.0	27.2	Lt. N airs, 0-1	4	5-10	bc		Cl. 2, W	—	Western mountains obscured. Fog bank along western horizon.
	Noon	29.735	—	18.2	20.2	19.3	25.5	Lt. N airs	0	5	bc		Cl.-s. 6	—	
	2	29.696	—	19.6	21.3	20.4	29.0	N by W, 0-1	6	0-10	bc		Cl. 3, W	S.-cu. 2	Cloudless overhead. Low Cu. on western horizon.
	4	29.698	—	19.5	20.4	19.6	22.8	N by W, 1	2	5-10	oc		Cl. 8	—	3 p.m. Rain band, 1.
	6	29.656	—	19.7	20.6	19.8	22.5	NNW, 1	4	5	oc		Cl. 2, SW	Cu. 6	Sun gleaming. Heavy Cu. from SE. Slight mirage to NW.
	8	29.631	—	19.4	20.0	19.5	23.3	N, 1-2	5	5-10	b		—	—	
	10	29.609	—	18.0	18.8	18.0	19.0	N, 1-2	6	5-10	b		—	—	Low fog bank from S to NW.
	Midt.	29.603	—	18.0	18.0	17.2	18.0	N, 1-2	6	5-10	b		—	—	Fog bank on lower western mountains.
	Mean	29.718	—	—	19.6	18.8	—	—	—	—	—		—	—	Fine, but cloudy, with hardly any wind. Barometer falling all day. Temperature steady.
		Max. therm. read at { 8 a. 21°-5. 8 p. 23°-4.		Solar radiation { black bulb 142°-7. bright bulb 67°-0.		Evapn. — grammes.		Precipn. — in.							

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Upper.		Lower.			
			Dry.	Wet.											
2	29.549	—	15.3	17.0	16.2	17.0	N, 1-2	6	5-10	b	—	—	—	<p>25th.</p> <p>Mirage along foot of western hills. Summits obscured by bank of fog. Heavy fog over western hills; mirage at foot.</p> <p>Snowing lightly; visibility small. 3 p.m. Rain band, 4. Snow in gauge not measurable. Wind very variable.</p> <p>Western hills obscured by fog. Clear to S.</p> <p>Overcast and cloudy nearly all day. Light wind in forenoon, freshening to strong from E for the rest of the day; max. run of cups for 2 hours, 42 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer steady, inclined to rise. Temperature falling all day.</p>	
4	29.541	—	15.3	16.8	16.0	17.4	N, 1-2	6	5-10	b	—	—	—		
6	29.555	—	14.8	16.8	16.5	18.8	Lt. N alrs	4	0	b	—	—	—		
8	29.563	—	15.0	16.8	16.0	18.5	Calm	2	0	bc	—	S. 4	—		
10	29.563	—	16.0	18.5	18.2	29.0	Calm	0	0	bc	Cl.-s. 2	A.-cu. 3, N by W	—		
Noon	29.552	—	11.5	12.0	11.7	13.0	NE, 2-3	9	10-20	oc	—	Cu. 10, NNE	—		
2	29.551	—	9.2	10.0	9.8	13.0	ENE, 2-3	14	10-20	oc*	—	N. 10	—		
4	29.558	—	7.6	8.0	7.8	10.0	Var. E, 3-4	13	15-20	oc*	—	N. 10	—		
6	29.559	—	6.0	7.2	7.0	7.8	Var. E, 4-5	20	25-35	oc†	—	N. 10	—		
8	29.556	—	4.5	5.0	5.0	5.0	E by N, 4-5	19	25-30	oc†	—	N. 10	—		
10	29.579	—	3.5	4.3	4.2	4.5	Var. E, 3-5	21	20-30	ocq†	—	N. 10	—		
Midt.	29.589	—	2.6	3.2	3.0	3.0	E, 4-5	18	25-35	oc†	—	N. 10	—		
Mean	29.560	—	—	11.3	11.0	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 20° 5.		8 p. 20° 2.		Solar radiation		black bulb 130° 0.		bright bulb 61° 1.		Evapn. — grammes.			Precipn. — in.

2	29.596	—	3.0	3.4	3.2	3.0	E, 4-5	21	25-30	oc†	—	N. 10	—	<p>26th.</p> <p>Snowing slightly. Clouds breaking over western mountains. 3 p.m. Rain band, 6. Clearing to S and W. Sky clearing in S. Light snow falling.</p> <p>Overcast and cloudy with snow. Ely wind, strong and squally; max. run of cups for 2 hours, 46 miles; max. rate observed by pressure tube, 38 miles per hour. Barometer rising steadily all day. Temperature lower and steady.</p>	
4	29.594	—	3.0	3.0	3.0	3.2	E, 4-5	21	25-30	ocq†	—	N. 10	—		
6	29.596	—	2.0	2.5	2.0	2.8	Var. E, 4-5	21	25-32	oc†	—	N. 10	—		
8	29.622	—	1.8	2.2	2.2	6.8	E, 4-6	23	25-38	ocq†	—	N. 10	—		
10	29.636	—	1.0	2.5	2.0	4.0	E, 4-6	20	22-35	ocq†	—	N. 10	—		
Noon	29.697	—	1.8	4.0	3.8	5.0	Var. E, 4-5	20	25-32	oc†	—	N. 10	—		
2	29.708	—	3.5	4.8	4.8	7.6	Var. E, 3-4	17	15-25	oc†*	—	N. 10	—		
4	29.719	—	4.3	5.8	5.8	7.2	Var. E, 3-4	17	20-25	oc†*	—	N. 10	—		
6	29.729	—	4.2	7.0	7.0	6.6	Var. E, 2-3	15	20-25	oc†*	—	N. 10	—		
8	29.707	—	5.5	7.8	7.0	7.8	NE, 1-2	7	5-15	oc*	—	N. 10	—		
10	29.719	—	6.0	7.0	6.5	8.0	ENE, 0-1	15	0-10	oc	—	N. 10	—		
Midt.	29.768	—	7.0	8.0	8.0	9.0	Lt N alrs	3	0	oc*	—	N. 10	—		
Mean	29.674	—	—	4.8	4.6	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 7° 8.		8 p. 8° 0.		Solar radiation		black bulb 64° 0.		bright bulb 27° 0.		Evapn. — grammes.		Precipn. 0.01 in. since 4 p.m. 21st.	

2	29.766	—	9.0	11.2	11.0	11.3	N by E, 1-2	6	5-10	b	—	—	—	<p>27th.</p> <p>Low clouds on western horizon. 3 p.m. Rain band, 1. Detached Cu. to N and W. 5 p.m. Snow not measurable. Cu. on western mountains. Nim. in N. Low Cu. on western horizon.</p> <p>Fine and clear all day, with steady breeze from N. Barometer falling slowly all day. Temperature rising steadily.</p>	
4	29.769	—	7.4	8.3	7.8	8.1	N by W, 1	3	5	b	—	—	—		
6	29.765	—	6.2	12.0	11.8	13.0	N, 1-2	7	10-15	b	—	—	—		
8	29.760	—	13.0	13.5	13.2	16.8	N, 1-2	6	10-15	b	—	—	—		
10	29.727	—	12.2	15.5	15.0	20.2	N, 1-2	6	10-15	b	—	—	—		
Noon	29.691	—	14.6	16.0	15.5	20.3	N, 1-2	9	10-15	b	—	—	—		
2	29.698	—	15.2	17.0	16.0	21.2	N, 1-2	7	5-10	b	—	—	—		
4	29.690	—	15.4	17.3	17.0	24.0	N by W, 1	7	5	b	—	—	—		
6	29.674	—	15.7	17.0	16.8	22.3	N, 1	4	5-10	b	—	—	—		
8	29.666	—	15.2	16.0	15.8	19.2	N, 1	4	10	b	—	—	—		
10	29.663	—	13.0	14.8	14.4	16.0	N, 1-2	7	5-10	b	—	—	—		
Midt.	29.635	—	11.5	14.2	14.0	15.2	N, 1	4	5	b	—	—	—		
Mean	29.709	—	—	14.4	14.0	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 18° 8.		8 p. 17° 8.		Solar radiation		black bulb 111° 4.		bright bulb 51° 3.		Evapn. — grammes.		Precipn. — in.	

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METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Spirit minimum.	Dry.									Wet.		
28th.	2	29.609	—	12.2	14.0	13.8	15.0	N, 0-1	5	10-12	bc	—	—	—	Low mist covering top of Crater Hill and extending all round western horizon.
	4	29.579	—	11.0	14.0	12.2	12.8	Lt. N. airs	2	0	bc →	—	—	—	Light ice crystals falling. Clouds going S by E.
	6	29.571	—	11.5	16.2	16.2	16.5	Calm	0	0	b	—	—	—	Thick fog bank along foot of western hills. Mirage to SSW.
	8	29.556	—	12.7	15.6	15.0	32.0	Calm	1	0	b	—	—	—	Fog bank along foot of western hills. Mirage to SW.
	10	29.523	—	12.5	10.0	15.8	22.2	Calm	0	0	b	—	—	—	Low fog bank extending SW to N along foot of western hills. Mirage in NW.
	Noon	29.506	—	14.5	18.0	17.2	21.0	Lt. NNE airs	1	0-5	b	—	—	—	
	2	29.480	—	18.0	19.0	17.5	25.0	Calm	1	0	b	—	—	—	
	4	29.459	—	16.5	17.2	15.8	23.0	NNW, 1	2	8	b	—	—	—	Rain band, 0. Thin Str. half-way up western hills, stretching WSW to S.
	6	29.451	—	16.0	20.0	18.4	22.3	Lt. NNW airs	4	8	h	—	—	—	Wet-bulb thermometer broken, another thermometer, M. 0.17, 11.0.6, put in its place.
	8	29.451	—	19.0	19.0	17.0	21.8	Calm	0	0	b	—	—	—	
	10	29.443	—	15.4	15.8	14.2	14.5	Calm	0	0	b	—	—	—	
	Midt.	29.449	—	13.3	15.5	14.2	14.0	Calm	0	0	b	—	—	—	
	Mean	29.506	—	—	16.7	15.6	—	—	—	—	—	—	—	—	Fine and clear, with hardly any wind, all day. Barometer falling steadily. Temperature steady.
		Max. therm. read at		8 a. 18°·2. 8 p. 23°·0.		Solar radiation		black bulb 117°·2. bright bulb 57°·4.		Evapn. — grammes.		Precipn. — in.			

29th.	2	29.411	—	9.8	10.2	10.2	11.5	Calm	0	0	b	—	—	—	Mirage to S and W.
	4	29.458	—	5.0	14.0	14.0	15.0	SE, 1-2	5	10-15	b	—	—	—	
	6	29.485	—	11.8	16.0	15.2	15.8	SE, 1-2	3	10-15	b	—	—	—	Mirage along SW horizon.
	8	29.517	—	12.2	14.2	12.8	16.2	NE, 1-2	10	10-15	b	—	—	—	Fog bank on NW hills.
	10	29.536	—	12.0	13.2	12.0	17.2	E, 3-4	13	20-25	b	—	—	—	Low Cu. from E drifting across Erebus.
	Noon	29.545	—	11.5	11.8	11.0	18.0	E, 4-5	15	23-28	b	—	—	—	S.-cu. thicker, summits and bottom of hills only visible.
	2	29.556	—	10.0	11.2	10.0	16.0	E by N, 4-5	20	20-26	b →	—	—	—	S.-cu. about half-way down western hills and along to SW.
	4	29.577	—	10.0	10.8	10.0	13.8	E by N, 5-6	21	25-35	b →	—	—	—	Rain band, 1. Bottom only of western mountains visible.
	6	29.594	—	10.0	11.4	10.2	13.0	E by N, 5-6	23	28-34	bc →	—	—	—	
	8	29.629	—	10.0	10.5	9.6	11.0	E by N, 4-6	18	25-30	bc	—	—	—	Heavy Cu. over western mountains.
	10	29.661	—	12.2	13.8	12.8	12.8	E by N, 3-4	12	20-25	bc	—	—	—	Mirage along the S to NW horizon.
	Midt.	29.685	—	11.2	13.6	12.0	12.0	E by N, 1-2	7	10-15	bc	—	—	—	Cu. clouds covering western mountains. Mirage all round.
	Mean	29.555	—	—	12.6	11.7	—	—	—	—	—	—	—	—	Fine and clear nearly all day, clouded over towards evening. Wind fresh to strong from E, falling towards evening; max. run of cups for 2 hours, 45 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer rising steadily. Temperature lower and steady.
		Max. therm. read at		8 a. 24°·0. 8 p. 16°·0.		Solar radiation		black bulb 110°·0. bright bulb 49°·0.		Evapn. — grammes.		Precipn. — in.			

30th.	2	29.706	—	10.5	11.8	11.0	14.8	E by N, 2-3	7	12-20	bc →	—	—	—	Mirage all round horizon; Nim. clouds hanging over western mountains.
	4	29.730	—	6.2	14.2	14.2	16.2	Calm	12	0	bc →	—	—	—	
	6	29.751	—	12.0	13.5	13.0	15.0	ESE, 1-2	5	10-15	cc	—	—	—	Mirage extending E to S to W.
	8	29.781	—	11.5	13.0	12.5	22.0	Lt. N airs	7	0	cc	—	—	—	
	10	29.814	—	11.5	19.0	18.0	34.0	SE, 1	3	8-10	cc	—	—	—	Prismatic colouring in clouds. Summits of western mountains obscured all day.
	Noon	29.822	—	17.0	18.0	16.2	29.0	Lt. SE airs	4	0-8	cc	—	—	—	
	2	29.817	—	18.4	20.0	17.6	38.5	Lt. SE airs	3	0	bc →	—	—	—	
	4	29.815	—	18.0	18.2	16.8	28.0	Lt. N airs	4	0-5	bc →	—	—	—	
	6	29.813	—	17.5	18.6	16.5	24.0	N, 1	4	10	bc	—	—	—	Very heavy Cu. over western hills; slight mirage in S. Rain band, 2.
	8	29.805	—	16.6	17.5	16.2	17.0	N, 1	5	7-10	bc	—	—	—	Western mountains totally obscured by heavy Cu.
	10	29.797	—	16.0	17.8	10.0	18.0	N, 1	5	10	cc	—	—	—	Heavy Cu. passing over from N. Very dark to N.
	Midt.	29.727	—	15.0	17.0	15.3	17.0	N, 1-2	4	10-15	cc	—	—	—	Sun shining in S. Heavy Nim. in NW and W.
	Mean	29.782	—	—	16.6	15.2	—	—	—	—	—	—	—	—	Cloudy all day, with light variable airs. Barometer rose until noon, then fell slowly. Temperature steady and higher.
		Max. therm. read at		8 a. 19°·8. 8 p. 22°·8.		Solar radiation		black bulb 147°·0. bright bulb 69°·5.		Evapn. — grammes.		Precipn. — in.			

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles min.	P. tube, see p. 2.		Weather.	Upper.			Lower.
2	29.749	—	14.8	16.0	15.0					16.0		N, 1-2	4	10-15	oc
4	29.732	—	16.5	17.5	17.0	17.0	N, 1	5	0-10	oc →	—	N. 10	—		
6	29.721	—	16.0	17.8	16.5	18.0	N, 1	4	10-14	oc →	—	N. 10	—		
8	29.708	—	16.5	18.2	17.2	19.8	NE, 0-1	5	0-12	oc *	—	N. 10	—		
10	29.699	—	17.5	18.5	17.0	19.0	NE, 1	4	5-10	om *	—	N. 10	—		
Noon	29.693	—	18.0	18.8	17.0	19.0	NE, 1	6	5-10	om *	—	N. 10	—		
2	29.682	—	18.2	19.0	17.2	19.5	NE, 1	6	8-10	c	—	Cu. 8, NE (slow)	—		
4	29.667	—	18.8	19.5	18.2	23.0	NE, 1	7	8-12	b	—	—	—		
6	29.659	—	19.8	21.0	20.0	27.2	Calm	1	0	b	—	—	—		
8	29.665	—	19.0	19.0	17.0	21.0	Lt. NE airs	4	0-5	b	—	—	—		
10	29.665	—	17.2	18.2	16.0	18.0	Calm	4	0	b	—	—	—		
Midt.	29.669	—	17.2	17.8	16.2	17.8	Calm	1	0	b	—	—	—		
Mean	29.692	—	—	18.4	17.1	—	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 18° 5.		{ 8 p. 26° 0.		Solar radiation		{ black bulb 111° 0.		{ bright bulb 55° 0.		Evapn. — grammes.		Precipn. — in.	

2	29.672	—	9.5	11.0	10.2	12.2	Var. E, 2-3	10	15-22	bc	—	Cu. 8, NW	—	2nd. NW hills obscured; low snowdrift. High drift off hills to E. Drift from hills. It blew very hard between 6.30 and 7.30 a.m., with very heavy drift. 10 a.m. Low S.-cu. to S and SW. S.-cu. low down all round horizon; only summits of mountains to W visible. Rain band, 3. Sky clearing in S. Cloudy all day, although fine to 4 p.m., when it snowed. Wind rose strong from E going to NE; max. run of cups for 2 hours, 67 miles; max. rate observed by pressure tube, 36 miles per hour. Barometer rose until 4 p.m., then fell slowly. Temperature lower, but steady.	
4	29.678	—	7.0	7.2	7.0	7.0	Var. E, 3-4	10	25-30	bc †	—	Cu. 5, NW	—		
6	29.696	—	9.8	10.0	10.0	11.8	NE, 4-5	15	30-35	bc †	Cl.-s. 3, SE	—	—		
8	29.737	—	5.0	6.0	6.0	10.2	ENE, 5-6	34	28-34	bc †	—	Fr.-cu. 2, E (fast)	—		
10	29.753	—	5.2	6.2	5.8	9.8	ENE, 4-5	18	25-30	bc †	—	Fr.-cu. 3, E (fast)	—		
Noon	29.759	—	5.8	6.8	6.2	9.8	ENE, 4-5	21	20-28	bc †	—	Fr.-cu. 1, E	—		
2	29.768	—	6.5	7.4	6.8	10.0	E by N, 4-5	20	20-29	bc	Ci.-cu. 5, NW	—	—		
4	29.775	—	6.8	7.9	7.2	8.0	E by N, 3-4	15	18-26	oc *	—	N. 10	—		
6	29.775	—	7.5	8.0	7.5	8.5	E by N, 4	18	22-27	oc † *	—	Cu. 10	—		
8	29.769	—	7.0	8.0	7.5	8.0	ENE, 3-4	18	20-25	oc	—	Cu. 10	—		
10	29.760	—	6.0	7.2	7.0	7.0	ENE, 4	13	20-25	oc →	—	Cu. 10	—		
Midt.	29.756	—	6.0	7.2	6.2	7.0	ENE, 4	17	20-25	oc † *	—	Cu. 10	—		
Mean	29.742	—	—	7.7	7.3	—	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 22° 0.		{ 8 p. 11° 2.		Solar radiation		{ black bulb 115° 5.		{ bright bulb 46° 2.		Evapn. — grammes.		Precipn. — in.	

2	29.743	—	5.0	6.0	5.8	6.0	ENE, 4-5	15	24-28	oc *	—	Cu. 10	—	3rd 3 a.m. Very squally. Wind less strong and steadier. White Island and foot of western mountains visible. Low S.-cu. all round S and SW horizon. Summits of western mountains clear. Low Str. along foot of western mountains at elevation of about 2,000 feet, and extending along horizon. Detached Cu. over western hills, low down. 5 p.m. Rain band, 4. Detached Cu. to S and SW. Overcast until 10 a.m., when it cleared and remained fine all day, with hardly any wind. Barometer falling steadily all day. Temperature steady.	
4	29.721	—	4.8	5.2	5.0	5.0	Var. E, 4-5	14	20-25	oc † *	—	Cu. 10	—		
6	29.713	—	4.5	5.2	5.2	6.0	Var. E, 3-4	13	15-20	oc *	—	Cu. 10	—		
8	29.702	—	4.2	7.8	8.0	9.0	NE, 0-1	12	0-12	oc	—	Cu. 10	—		
10	29.710	—	7.0	8.5	8.2	12.0	NE, 1	6	10	bc	—	Fr.-cu. 1	—		
Noon	29.703	—	8.8	13.2	12.2	20.5	Calm	4	0	b	—	—	—		
2	29.691	—	10.8	14.0	13.0	20.0	Lt. NE airs	2	0-5	b	—	—	—		
4	29.686	—	11.0	12.6	12.0	19.2	Lt. N airs	4	5-7	b	—	—	—		
6	29.679	—	11.5	13.5	12.4	19.2	N, 1	4	8-10	b	—	—	—		
8	29.670	—	12.0	14.0	13.8	17.5	N, 1	4	8-10	b	—	—	—		
10	29.665	—	12.2	13.0	12.2	13.0	N by E, 1	5	10	b	—	—	—		
Midt.	29.649	—	12.0	12.0	13.0	13.0	N by E, 1-2	6	10-15	b	—	—	—		
Mean	29.694	—	—	10.4	9.5	—	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 8° 2.		{ 8 p. 17° 0.		Solar radiation		{ black bulb 111° 0.		{ bright bulb 55° 0.		Evapn. — grammes.		Precipn. — in.	

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.					
			Dry.	Wet.													
4th.	2	29.636	—	11.8	13.0	12.0	13.2	N by E, 1-2	9	10-12	b	—	—	—			
	4	29.634	—	12.0	13.0	12.0	13.0	N by E, 1-2	7	10-12	b	—	—	—			
	6	29.626	—	11.2	12.8	12.2	13.0	N, 1	5	10	b	—	—	—			
	8	29.603	—	10.8	13.2	12.8	16.8	N by E, 1-2	11	10-15	b	—	—	—	Low S. cu. along S to W horizon; detached on western mountains.		
	10	29.568	—	12.2	14.5	13.8	20.0	N, 1-2	6	10-15	b	—	—	—	Low S. cu. along S to W horizon. High detached Cu. over western mountains.		
	Noon	29.554	—	13.0	15.0	14.5	19.5	N by W, 1-2	7	10-15	bc	—	Fr. cu. 2, N (fast)	—			
	2	29.502	—	9.0	16.0	15.5	21.0	N by W, 1-2	8	9-13	bc	—	Fr. cu. 1, NNW (fast)	—			
	4	29.463	—	15.0	16.5	15.5	20.2	N by W, 1-2	8	10-15	b	—	—	—	S. cu. along S to W horizon; mountains obscured. Low detached Cu. moving fast from N in the E.		
	6	29.440	—	15.6	17.0	16.6	21.5	N by W, 1	7	8-10	b	—	—	—	6 p.m. to 10 p.m. Thin S. cu. all along S to W horizon; mountain summits clear.		
	8	29.427	—	15.2	16.0	15.2	19.2	N by W, 1	5	8-9	b	—	—	—	Rain band, 4.		
	10	29.407	—	11.5	12.2	12.0	12.0	Lt. N ahrs	4	6-8	b	—	—	—	Summits of mountains obscured. Low Cu. along S to W horizon.		
	Midt.	29.386	—	11.5	13.0	12.2	14.0	Lt. var. ahrs	4	0	b	—	—	—	Fine all day, with a steady N <sup>y</sup> breeze. Barometer falling. Temperature steady.		
	Mean	29.521	—	—	14.4	13.7	—	—	—	—	—	—	—	—			
		Max. therm. read at		{ 8 a. 14° 0.		{ 8 p. 17° 2.		Solar radiation		{ black bulb 120° 0.		{ bright bulb 54° 0.		Evapu. — grammes.		Precipn. — in.	

5th.	2	29.376	—	9.0	11.0	10.5	15.0	Calm	1	0	oc *	—	—	Cu. 10	—	Heavy mist hanging over the near land.	
	4	29.311	—	11.0	12.0	11.5	13.2	Var. S, 2-3	2	10-15	bc	—	—	Cu. 2	—	Heavy mist all around; heavy Nim. coming over Observation Hill and Cape Armitage.	
	6	29.367	—	12.0	16.0	14.0	17.0	ENE, 0-1	3	6-8	b	—	—	—	6 a.m. Sky clearing, tops of western hills visible.		
	8	29.367	—	12.8	16.2	14.0	20.0	Lt. S ahrs	1	0	b	—	—	—	8 a.m. Light fog bank all round horizon.		
	10	29.376	—	15.0	18.8	16.0	29.2	Var. E, 1	4	10	b	—	—	—			
	Noon	29.363	—	16.0	16.8	15.0	23.8	E, 2-3	8	20-22	b	—	—	—	Noon to 10 p.m. Thin S. cu. on western mountains; mirage to S.		
	2	29.361	—	13.2	14.2	13.0	19.0	E, 2-3	15	15-25	b	—	—	—			
	4	29.353	—	14.0	14.8	13.2	20.2	E by N, 3	16	22-25	b	—	—	—			
	6	29.335	—	14.0	15.0	12.2	19.2	E by N, 2-3	14	15-22	b	—	—	—	Rain band, 3.		
	8	29.312	—	13.0	13.0	11.2	16.0	E by N, 1-2	14	12-18	b	—	—	—			
	10	29.281	—	12.2	13.0	11.0	13.0	NE, 1-3	15	12-22	b	—	—	—	S. cu. on NW mountains; slight mirage on NW horizon.		
	Midt.	29.273	—	11.0	13.2	12.5	13.2	Lt. NE ahrs	2	0	b	—	—	—	Fine and clear, with fresh to strong E <sup>y</sup> wind. Barometer inclined to fall. Temperature steady.		
	Mean	29.340	—	—	14.5	12.8	—	—	—	—	—	—	—	—			
		Max. therm. read at		{ 8 a. 18° 8.		{ 8 p. 20° 1.		Solar radiation		{ black bulb 116° 0.		{ bright bulb 55° 0.		Evapu. — grammes.		Precipn. — in.	

6th.	2	29.237	—	13.2	15.0	14.8	15.0	Lt. N ahrs	4	0	b	—	—	—	—		
	4	29.197	—	13.8	15.2	15.0	15.0	Lt. N ahrs	2	0	b	—	—	—	—		
	6	29.173	—	13.2	15.2	14.8	15.2	N, 0-1	5	0-10	b	—	—	—	4 to 6 a.m. Mirage extending round horizon.		
	8	29.141	—	13.5	14.8	14.0	18.6	N, 1	7	0-10	bc	—	—	—			
	10	29.106	—	13.2	15.0	14.2	21.0	N by W, 1	6	10-15	bc	—	Fr. cu. 2, NNW (mod.)	—	8 a.m. to noon. Low S. cu. on western mountains; haze all along the western shore.		
	Noon	29.067	—	13.2	15.5	14.8	21.3	NNW, 1-2	7	5-15	bc	—	Fr. cu. 2, NNW (mod.)	—			
	2	29.025	—	14.8	16.6	15.5	21.5	NNW, 1-2	7	5-15	b	—	—	—			
	4	28.986	—	15.5	16.4	15.8	21.0	NNW, 1-2	7	8-17	b	—	—	—			
	6	28.988	—	15.8	17.2	16.0	22.0	N by W, 1	10	8-10	b	—	—	—	4 to 6 p.m. Detached Cu. to S.		
	8	28.979	—	15.1	17.0	16.2	19.8	N, 1	3	8-13	bc	—	—	—	Rain band, 5. Erebus smoke going NE.		
	10	28.967	—	15.0	18.2	15.8	19.0	N by E, 1-2	11	8-14	oc	—	—	—	Bank of S. cu. from horizon to 20°, from W through S to SE.		
	Midt.	28.949	—	14.8	18.0	15.5	17.5	N by E, 2	9	15-18	oc	—	—	—	Threatening look in SW.		
	Mean	29.069	—	—	16.2	15.2	—	—	—	—	—	—	—	—	5.30 p.m. Temp. at Cape Armitage:— in sun, 13° 2; in sh., 0° 0.		
		Max. therm. read at		{ 8 a. 17° 0.		{ 8 p. 18° 5.		Solar radiation		{ black bulb 120° 0.		{ bright bulb 56° 0.		Evapu. — grammes.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Cape Armitage.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
			Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
2	28.951	—	15.5	20.0	19.0	21.0	N, 1	7	8-10	oc *	—	—	—	—	<p>7th.</p> <p>Clouds drifting to S.</p> <p>5 a.m. Heavy squalls from various directions.</p> <p>Thick all round, clouds breaking to S.</p> <p>Blowing very hard in squalls. Much drift, nothing visible. Very wet snow.</p> <p>10 p.m. Rain band, 2.</p> <p>Sky clearing from the W. Heavy Nim. over western mountains. Much low drift in Strait.</p> <p>Midt. Very squally.</p> <p>Overcast and cloudy, with strong S<sup>y</sup> wind and much drift; max. run of cups for 2 hours, 41 miles; max. rate observed by pressure tube, 27 miles per hour. Barometer rising steadily all day. Temperature steady and higher.</p>
4	28.962	—	12.0	23.2	22.0	24.0	N, 1	7	8-10	oc *	—	—	—	—	
6	28.980	—	20.0	21.0	20.5	23.8	Var. E airs	6	0	oc † *	—	N. 10	—	—	
8	29.080	—	18.2	18.2	18.2	21.0	S, 0-4	9	0-23	ocq † *	—	N. 10	—	—	
10	29.167	—	17.0	17.0	17.0	21.2	S, 3-4	14	20-25	ocq † <sup>2</sup>	—	Fr.-cu. 2	—	—	
Noon	29.218	—	16.5	17.8	17.8	20.0	Var. SW, 1-6	18	0-30	ocq † <sup>2</sup>	—	N. 10	—	—	
2	29.261	—	16.5	17.8	17.0	20.0	S by W, 1-3	12	5-20	ocq † <sup>2</sup>	—	N. 10	—	—	
4	29.311	—	16.5	17.2	17.2	19.5	S by W, 1-6	21	10-27	ocq † <sup>2</sup>	—	N. 10	—	—	
6	29.372	—	16.5	18.0	18.0	19.8	S by W, 1-5	18	10-24	ocq † <sup>2</sup>	—	N. 10	—	—	
8	29.415	—	16.8	17.5	17.5	19.5	Var. S by W, 2-5	13	13-24	ocq † <sup>2</sup>	—	N. 10	—	—	
10	29.462	—	16.0	17.2	17.2	17.0	S by E, 1-2	16	8-14	ocq † <sup>0</sup>	—	N. 10	—	—	
Midt.	29.481	—	16.5	17.2	17.2	18.0	S by E, 0-5	7	0-25	ocq † *	—	N. 10	—	—	
Mean	29.222	—	—	18.5	18.2	—	—	—	—	—	—	—	—	—	
Max. therm. read at			8 a. 23°·5.		8 p. 20°·2.		Solar radiation			black bulb 110°·0.	bright bulb 52°·0.		Evapn. — grammes.	Precipn. — in.	

2	29.521	—	16.0	17.0	17.0	18.0	SSW, 5-8	18	25-42	ocq † <sup>2</sup>	—	N. 10	—	<p>8th.</p> <p>Very heavy low drift; sky broken in SW.</p> <p>Sky clearing from S.</p> <p>Rain band, 0.</p> <p>Ci.-s. radiating NE and SW.</p> <p>Ci.-s. radiating NE and SW.</p> <p>Clouded over quickly after 2 p.m. Wind shift. Heavy clouds hanging over all land to W and S.</p> <p>Heavy drift in Strait. Midnight, bluff covered with mist.</p> <p>Cloudy and overcast nearly all day. Wind still strong, but variable; max. run of cups for 2 hours, 40 miles; max. rate observed by pressure tube, 42 miles per hour. Barometer rose until 10 a.m., then fell steadily. Temperature higher.</p>	
4	29.535	—	16.8	17.2	17.2	18.0	S, 3-7	18	20-38	ocq † <sup>2</sup>	—	N. 10	—		
6	29.509	—	16.8	17.0	17.0	18.8	S, 2-4	13	16-25	oc †	—	N. 10	—		
8	29.658	—	16.0	19.0	18.8	20.5	S, 1-2	20	10-15	oc	—	S.-cu. 8, S	—		
10	29.661	—	18.0	21.0	20.6	24.0	ENE, 2-3	14	20-22	bc	Ci.-s. 12	Fr.-cu. 8, SW	—		
Noon	29.636	—	19.5	22.2	19.8	26.0	E, 1-2	7	10-15	bc	Ci.-s. 4, E (slow)	—	—		
2	29.627	—	21.9	23.5	20.6	35.2	E, 1-2	9	10-15	bc	Ci.-s. 5, E (slow)	—	—		
4	29.605	—	23.8	24.5	22.6	23.1	E, 1-3	8	} not working {	ocq	—	N. 10	—		
6	29.583	—	24.2	25.6	25.4	26.0	S by W, 1-3	11		ocq *	—	N. 10	—		
8	29.555	—	25.0	28.8	27.8	29.0	S, 1-3	13	15-20	bc	A.-s. 10	Fr.-s. 3, S (fast)	—		
10	29.521	—	28.4	30.5	27.8	31.2	SE, 1-2	8	12-15	bc	Ci.-cu. 8	Fr.-s. 3, SW (fast)	—		
Midt.	29.483	—	29.0	33.0	29.8	33.0	SE, 2-3	7	20-24	bc	Ci.-s. 4	—	—		
Mean	29.582	—	—	23.3	22.0	—	—	—	—	—	—	—	—		—
Max. therm. read at			8 a. 19°·0.		8 p. 33°·0.		Solar radiation			black bulb 144°·0.	bright bulb 67°·0.		Evapn. — grammes.		Precipn. 0.52 in. since 4 p.m., 26 Nov.

2	29.459	—	30.0	33.0	31.0	34.0	E by S, 2	9	15-20	bc	Ci.-cu. 4	—	—	<p>9th.</p> <p>Western mountains obscured by mist. Squally; western mountains visible.</p> <p>From 10 a.m. to 2 p.m. detached Cu. hung over western mountains, and also to E.</p> <p>Big bank of Cu. in E low down.</p> <p>Rain band, 0.</p> <p>Fine day, with E<sup>y</sup> and S<sup>y</sup> breezes, fresh to strong. Max. run of cups for 2 hours, 33 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer steady. Thermometer high and steady.</p>	
4	29.443	—	31.0	34.0	32.8	34.0	ESE, 3-5	14	20-35	oc	Ci.-cu. 8	—	—		
6	29.456	—	32.0	33.0	32.5	34.0	Var. S, 1-3	13	15-24	bc	Ci.-cu. 4	—	—		
8	29.488	—	31.8	32.0	31.8	34.0	Var. S, 3-5	11	20-35	bc	Ci.-cu. 6	—	—		
10	29.482	—	30.0	33.0	31.0	34.0	SE, 2	13	18-25	b	—	—	—		
Noon	29.473	—	31.0	34.8	31.0	35.8	E by S, 2	11	18-20	b	—	—	—		
2	29.463	—	32.8	34.5	31.8	37.6	SE, 3-5	16	22-35	b	—	—	—		
4	29.465	—	33.5	34.5	31.6	33.0	SE, 2-4	15	15-28	bc	Ci.-s. 1, SW	—	—		
6	29.467	—	34.0	35.6	32.0	39.5	E by S, 1-3	14	12-22	b	—	—	—		
8	29.466	—	33.9	36.0	31.8	41.0	E by S, 1	11	10-15	b	—	—	—		
10	29.469	—	36.0	36.0	32.0	41.2	E by S, 2	8	18-22	b	—	—	—		
Midt.	29.457	—	33.0	34.5	31.2	39.8	E by S, 2-3	10	20-25	b	—	—	—		
Mean	29.466	—	—	34.2	31.7	—	—	—	—	—	—	—	—		—
Max. therm. read at			8 a. 34°·0.		8 p. 37°·2.		Solar radiation			black bulb 126°·2.	bright bulb 67°·0.		Evapn. — grammes.		Precipn. — in.

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10th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds. Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
				Dry.	Wet.										
2	29.463	—	31.8	32.0	29.0	35.0	E, 2-3	20	20-25	b	—	—	—		
4	29.473	—	30.0	32.0	30.0	33.8	E by N, 2-3	11	20-25	b	—	—	—		
6	29.477	—	31.0	31.8	29.0	32.0	E by N, 3-4	7	25-28	b	—	—	—		
8	29.506	—	30.5	31.5	28.8	33.5	E by N, 4-5	21	20-30	b	—	—	—	Rain band, 2.	
10	29.507	—	28.2	30.2	29.2	31.6	E, 4	13	20-27	b	—	—	—		
Noon	29.500	—	29.0	30.0	27.0	31.2	E by N, 5-6	18	25-35	b	—	—	—		
2	29.496	—	28.4	29.5	27.5	32.2	E by N, 4-5	19	20-25	b	—	—	—	Absolutely clear all day.	
4	29.478	—	29.0	30.0	28.8	34.8	E by N, 3-5	16	15-23	b	—	—	—		
6	29.470	—	30.2	30.8	29.5	37.6	E, 2-3	12	15-20	b	—	—	—		
8	29.448	—	30.0	31.0	28.8	37.2	Lt. N airs	12	4-8	b	—	—	—		
10	29.437	—	26.5	28.2	27.0	—	Calm	2	0	b	—	—	—		
Midt.	29.413	—	25.0	27.5	26.0	48.2	Calm	0	0	b	—	—	—	Fog to S. Mirage along western foot hills.	
Mean	29.472	—	—	30.4	28.3	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 37° 8.		8 p. 36° 5.		Solar radiation		black bulb 123° 5.		bright bulb 65° 0.		Evapn. — grammes.		Precipn. — in.	

Fine and clear all day with very strong Ely wind, falling calm in evening; max. run of cups for 2 hours, 42 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer rose until 10 a.m., then fell slowly. Temperature steady.

11th.

2	29.401	—	26.0	28.0	26.0	41.0	Calm	1	0	b	—	—	—		
4	29.383	—	23.0	28.0	24.8	31.0	ESE, 2	2	20-24	b	—	—	—	Wind sprang up at 3 a.m. from W and gradually veered round to E.	
6	29.468	—	21.8	25.0	23.0	26.0	Var. E, 3-4	12	25-30	b	—	—	—		
8	29.387	—	24.0	26.5	—	28.8	S by E, 2-3	14	10-20	bc	Ci.-cu. 1, SW	—	—		
10	29.384	—	27.0	29.8	27.2	30.3	SE, 2-3	4	12-15	b	—	—	—	Thick detached Cu. on and over western mountains and to S.	
Noon	29.371	—	26.0	28.0	25.5	31.0	SE, 2	10	15	b	—	—	—	Western mountains quite clear.	
2	29.372	—	28.0	30.0	27.2	31.8	SE, 3-4	10	20-28	bq	—	—	—		
4	29.370	—	29.0	32.0	28.5	35.2	SE, 4-6	14	20-33	bq	—	—	—	3 p.m. Rain band, 5.	
6	29.367	—	31.5	32.5	28.8	35.8	SE, 4-6	10	20-34	bq	—	—	—	S.-cu. rising from behind western mountains.	
8	29.384	—	23.0	24.2	22.9	26.5	E, 4-6	19	25-37	bq	—	—	—	Heavy S.-cu. all along low down S to W.	
10	29.401	—	22.5	24.8	22.8	27.5	E, 3-5	14	22-32	bc	Ci.-s. 1, SW	—	—	Bank of Cu. moving fast to N in W.	
Midt.	29.429	—	21.8	22.2	21.8	22.8	Var. SE, 3-4	16	22-25	oc	—	—	—	Cu. moving very fast to N. Black to S and SW.	
Mean	29.393	—	—	27.6	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 35° 0.		8 p. 32° 8.		Solar radiation		black bulb 125° 8.		bright bulb 67° 5.		Evapn. — grammes.		Precipn. — in.	

Fine and clear all day. Wind SE, strong and squally; max. run of cups for 2 hours, 38 miles; max. rate observed by pressure tube, 37 miles per hour. Barometer very unsteady. Temperature steady.

12th.

2	29.434	—	21.8	24.0	23.0	24.0	Var. SE, 3-4	15	20-25	oc	—	N. 10	—	SW hills and White Island obscured.	
4	29.470	—	22.0	24.8	23.8	24.8	Var. SE, 2-4	14	15-25	oc + *	—	N. 10	—	2.30 a.m. Snowing and squally.	
6	29.516	—	23.2	25.0	24.0	25.0	Var. SE, 0-6	18	0-35	ocq + *	—	N. 10	—	Bank of Cu. moving very fast S to N, about 15°.	
8	29.552	—	24.2	26.8	25.0	26.8	Var. SE, 4-6	19	25-30	ocq *	—	N. 10, Fr.-n. 3, S (fast)	—	Snowing lightly; drift in Strait. Heavy gale appears to be blowing amongst western mountains and all round the coast.	
10	29.587	—	25.2	25.2	24.0	27.6	ESE, 2-3	10	15-20	oc *	—	N. 10	—		
Noon	29.601	—	25.0	26.0	25.2	29.0	ENE, 3-4	12	20-25	o	—	N. 10	—	10 a.m. Clearing generally. Fr.-n. still moving from S, but less rapidly.	
2	29.610	—	25.4	28.2	26.2	30.0	E, 1-2	14	10-18	o	—	N. 10	—	Snowing lightly.	
4	29.618	—	28.0	29.2	27.4	30.8	E, 1-2	10	12-18	o	—	Cu. 10, W	—	Noon. Very heavy Cu. over western mountains; clearing N and S.	
6	29.628	—	27.4	28.6	27.5	30.0	SE, 1-4	12	10-35	o	A.-s. 5	Cu. 6, SW	—	3 p.m. Rain band, 5.	
8	29.645	—	24.5	25.2	25.0	25.5	SE, 3-4	16	20-35	o +	—	N. 8, SW	—	Very threatening to S and W.	
10	29.653	—	24.8	25.5	24.8	25.5	SE, 1-4	14	10-30	oc + *	—	N. 10	—		
Midt.	29.643	—	24.0	26.0	25.5	26.5	SE, 0-1	11	10-12	oc *	—	N. 10	—		
Mean	29.580	—	—	26.2	25.1	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 26° 8.		8 p. 29° 5.		Solar radiation		black bulb 148° 5.		bright bulb 74° 4.		Evapn. — grammes.		Precipn. not measurable.	

Overcast all day, with Ely and Sby winds, strong and squally; max. run of cups for 2 hours, 38 miles; max. rate observed by pressure tube, 35 miles per hour. Barometer rising steadily all day. Temperature steady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.626	—	25.0	27.0	27.0	27.8	S by E, 1-2	11	10-15	oc *	—	—	—	—	—	13th.  From midnight to 6 a.m., a continual fall of snow. Wind shifty all night.  Rain band, 7.  Break in sky in SW.  Overcast and snowing all day, with fresh S <sup>y</sup> wind. Barometer falling slowly all day. Temperature steady.
4	29.607	—	25.0	28.0	27.0	28.0	Var. S, 2-3	14	15-20	oc *	—	—	—	—	—	
6	29.583	—	27.0	29.0	28.0	29.2	S, 3-4	10	20-25	oc *	—	—	—	—	—	
8	29.582	—	26.8	27.0	26.8	28.0	SE, 3-4	13	20-25	oc *	—	—	—	—	—	
10	29.568	—	26.5	27.2	27.2	28.2	S, 3-4	18	20-25	oc *	—	—	—	—	—	
Noon	29.545	—	27.0	28.0	27.8	29.0	S, 3-4	16	20-25	oc *	—	—	—	—	—	
2	29.544	—	27.0	27.5	27.5	28.5	S by E, 2-4	15	12-20	oc † *	—	—	—	—	—	
4	29.522	—	26.5	27.1	27.1	27.8	SSW, 2-t	13	15-25	oc † *	—	—	—	—	—	
6	29.504	—	27.0	27.8	27.8	27.8	SSW, 2-4	17	12-25	oc † *	—	—	—	—	—	
8	29.504	—	26.8	27.5	27.5	28.2	SE, 1-2	12	10-12	oc *	—	—	—	—	—	
10	29.488	—	26.8	27.2	27.2	27.8	SE, 2-3	9	10-15	oc *	—	—	—	—	—	
Midt.	29.485	—	26.8	28.0	28.0	28.8	SE, 1	10	0-10	oc *	—	—	—	—	—	
Mean	29.547	—	—	27.6	27.4	—	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. —  
read at { 8 p. 28° 0. Solar radiation { black bulb 84° 2.  
bright bulb 40° 1. Evapn. — grammes. Precipn. 0.40 in. since 10 p.m. 8th.

2	29.485	—	27.0	28.0	27.2	28.0	SE, 1-2	7	10-12	oc *	—	—	—	—	—	14th.  Sky clearing from S to W.  Very foggy from SE to N.  Foot of western hills visible.  A.-cu. all round below 30°. Western mountains obscured by heavy cloud.  All the afternoon low Str. has been moving rapidly from N. Western mountain obscured by heavy S.-cu.  Rain band, 4. Low Str. enveloping tops of hills and moving rapidly S.  Overcast most of the day, with light variable airs and N <sup>y</sup> winds. Barometer rose until 8 a.m., then fell slightly. Temperature rose a little.
4	29.487	—	26.5	27.0	27.0	28.0	Lt. SE airs	4	0	oc *	—	—	—	—	—	
6	29.491	—	26.8	27.2	27.2	28.0	SE, 1	4	0-10	oc	—	—	—	—	—	
8	29.532	—	26.8	29.8	28.5	34.2	Lt. var. E airs	6	0-10	oc	—	—	—	—	—	
10	29.501	—	28.5	30.0	28.8	35.5	Lt. E airs	5	10	oc	—	—	—	—	—	
Noon	29.504	—	30.0	32.5	31.5	37.0	Lt. E airs	5	8	b	—	—	—	—	—	
2	29.491	—	31.8	33.6	31.8	36.5	Lt. NE airs	4	12	bc	—	—	—	—	—	
4	29.487	—	30.0	30.5	29.5	37.8	N, 1	5	10	oc	—	—	—	—	—	
6	29.479	—	27.0	27.2	27.0	32.2	N, 1	5	10-12	oc	—	—	—	—	—	
8	29.473	—	26.9	29.0	28.8	38.6	N by W, 1	6	10-12	oc	—	—	—	—	—	
10	29.470	—	26.8	28.4	27.6	30.5	Lt. NNE airs	4	10-13	oo	—	—	—	—	—	
Midt.	29.462	—	26.0	27.5	27.0	28.5	N by E, 2-3	7	20-25	oc	—	—	—	—	—	
Mean	29.488	—	—	29.2	28.5	—	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. 32° 0.  
read at { 8 p. — Solar radiation { black bulb 134° 1.  
bright bulb 69° 1. Evapn. — grammes. Precipn. 0.22 in. since 8 p.m. 13th.

2	29.441	—	25.8	28.0	27.0	29.0	N, 1-2	3	10-15	oc	—	—	—	—	—	15th.  Blue sky to N; Crater and Observation Hill covered.  All day there has been a high fog over the land at an altitude of about 600 feet.  Rain band, 5.  Cloudy all day, with some snow. Fresh N <sup>y</sup> wind; max. run of cups for 2 hours, 22 miles; max. rate observed by pressure tube, 25 miles per hour. Barometer fell steadily all day. Temperature lower, but steady.
4	29.432	—	24.0	25.5	25.0	26.2	N, 0-1	7	0-12	bc	—	—	—	—	—	
6	29.433	—	24.5	25.0	25.0	28.0	N, 1-3	8	10-25	oq	—	—	—	—	—	
8	29.430	—	23.2	24.0	23.8	29.2	N by E, 1-2	9	10-15	ocf *	—	—	—	—	—	
10	29.431	—	22.8	24.5	24.2	29.2	N, 1-4	7	10-25	of *	—	—	—	—	—	
Noon	29.421	—	22.2	25.0	24.0	30.5	N, 2-3	11	15-20	of *	—	—	—	—	—	
2	29.413	—	23.5	24.5	24.0	28.0	N by W, 1-3	5	13-22	of	—	—	—	—	—	
4	29.413	—	21.9	22.8	21.9	24.9	N by W, 2-3	10	15-22	c	—	—	—	—	—	
6	29.411	—	21.5	22.5	23.0	24.8	N by W, 2-3	10	15-20	c	—	—	—	—	—	
8	29.407	—	22.5	23.2	22.8	24.0	NW, 2-3	10	15-25	e	—	—	—	—	—	
10	29.407	—	22.5	23.5	23.5	24.5	N, 1-2	9	12-18	c	—	—	—	—	—	
Midt.	29.415	—	23.0	23.8	23.0	25.0	N, 1-2	5	10-15	oc	—	—	—	—	—	
Mean	29.422	—	—	24.4	23.9	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 30° 5.  
8 p. 25° 0. Solar radiation { black bulb 113° 4.  
bright bulb 56° 8. Evapn. — grammes. Precipn. — in.

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16th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.412	—	21.0	22.2	22.0	23.8	N, 1-2	8	10-15	oc	—	—	Cu. 10	—	Observation Hill obscured by fog.	
4	29.429	—	21.0	22.0	22.0	23.8	Lt. N airs	4	0	oc	—	—	Cu. 10	—		
6	29.448	—	20.2	22.0	21.8	23.8	Lt. W airs	4	0	oc	—	—	Cu. 10	—		
8	29.475	—	21.0	22.2	22.0	25.5	Lt. N airs	4	0-8	o	—	—	Low S. 10	—	All land covered by a high fog at 600 feet altitude.	
10	29.481	—	21.8	23.5	23.0	31.5	Lt. N airs	3	0-5	o	—	—	Low S. 10	—		
Noon	29.493	—	22.0	24.0	23.2	32.8	Calm	2	0	o	—	—	Low S. 10	—		
2	29.493	—	22.8	25.0	24.0	37.0	Lt. N airs	3	0	o	—	—	Low S. 10	—		
4	29.485	—	22.8	24.2	23.5	32.8	Calm	2	0	o	—	—	Low S. 10	—	Fog lifted to just below 1000 feet; clearing to S.	
6	29.502	—	22.8	23.5	23.0	29.0	Lt. N airs	3	0	o	—	—	Low S. 10	—	Rain band, 3.	
8	29.500	—	22.5	23.2	22.5	25.6	Lt. NW airs	3	0-12	o	—	—	Low S. 10	—		
10	29.504	—	22.6	23.2	22.6	23.8	Lt. NW airs	4	0-6	o	—	—	Low S. 10	—		
Midd.	29.495	—	22.0	23.0	22.5	25.0	Lt. NW airs	3	0-10	oc	—	—	Cu. 10	—		
Mean	29.476	—	—	23.2	22.7	—	—	—	—	—	—	—	—	—	Overcast all day, with light N <sup>y</sup> and NW <sup>y</sup> airs. Barometer falling steadily and remained steady. Temperature steady.	
Max. therm. read at		{ 8 a. — 8 p. 25.0.8.		Solar radiation { black bulb 88° 0. bright bulb 47° 1.		Evapn. — grammes.		Precipn. — in.								

17th.

2	29.492	—	21.0	22.0	21.8	23.0	Lt. NW airs	4	0	oc	—	—	Cu. 10	—		
4	29.484	—	21.0	21.8	21.5	22.5	NW, 0-1	6	6-12	oc	—	—	Cu. 10	—	High wind blowing overhead.	
6	29.482	—	20.0	21.8	21.0	23.2	NW, 1	3	0-10	oc	—	—	Cu. 10	—		
8	29.467	—	20.2	21.2	21.0	23.2	NW, 1	5	0-10	o	—	—	Cu. 10	—	Fog from NW to SW.	
10	29.464	—	20.0	23.0	22.2	27.0	N, 1-2	5	5-15	o	—	—	S. 10	—		
Noon	29.447	—	22.0	23.5	22.8	29.5	N, 1-2	4	10-15	o	—	—	S. 10	—	Low Str. hanging over all hills the entire day, at altitude of about 1000 feet.	
2	29.431	—	22.9	24.0	23.2	28.0	NNW, 1-2	9	10-17	o	—	—	S. 10	—	3 p.m. Rain band, 2.	
4	29.425	—	22.8	26.0	25.2	30.0	N by W, 1-2	7	10-16	o	—	—	S. 10	—		
6	29.417	—	25.5	26.5	25.5	28.5	N by E, 1-2	7	10-16	o	—	—	S. 10	—	5 p.m. Temp. at Cape Armitage, 28° 0; min., 12° 0. Clear to SE, and be over Mt. Terror. Fr.-s. going S at moderate rate.	
8	29.405	—	25.4	26.8	25.2	27.6	N by W, 1-2	8	10-16	o	—	—	S. 10	—	Clouds inclined to break in E.	
10	29.405	—	25.0	26.1	25.1	27.0	Lt. NW airs	7	0-8	o	—	—	S. 10, N	—		
Midd.	29.403	—	24.0	25.2	24.8	28.2	Calm	3	0	o	—	—	S. 10	—		
Mean	29.444	—	—	24.0	23.3	—	—	—	—	—	—	—	—	—	Overcast all day, with steady N <sup>y</sup> wind. Barometer falling steadily all day. Temperature steady.	
Max. therm. read at		{ 8 a. 23° 8. 8 p. 27° 2.		Solar radiation { black bulb 100° 2. bright bulb 51° 9.		Evapn. — grammes.		Precipn. — in.								

18th.

2	29.392	—	25.0	25.8	24.8	27.0	Calm	0	0	o	—	—	Low S. 10	—	Heavy S.-cu. on western hills all night. Very bright in S.	
4	29.381	—	25.0	26.0	25.2	27.5	Calm	0	0	o	—	—	Low S. 10	—		
6	29.371	—	25.0	30.0	28.2	38.2	Calm	0	0	o	—	—	S. 10	—		
8	29.351	—	30.0	30.5	28.5	36.0	Calm	0	0	oc	—	—	Cu. 9, W (slow)	—		
10	29.346	—	30.0	30.0	27.8	31.5	Calm	0	0	bc	—	—	A.-cu. 5, SW (slow)	—		
Noon	29.327	—	28.0	28.0	25.8	29.0	Lt. S airs	3	8	bc	—	—	Fr.-cu. 5, S (mod.)	—	Heavy S.-cu. over western mountains and to S, higher summits of mountains obscured.	
2	29.306	—	27.4	27.9	26.0	29.6	SE, 1-2	7	10-20	bc	—	—	Fr.-cu. 6, SE (mod.)	—	3 p.m. Rain band, 1.	
4	29.292	—	27.0	27.0	25.5	31.0	S, 1-2	6	10-18	b	—	—	—	—	S.-cu. and detached Cu. on western mountains. Summits visible. Clouds gradually fading away.	
6	29.291	—	26.0	27.0	25.8	32.5	SSE, 1	8	8-10	b	—	—	—	—		
8	29.279	—	24.0	24.5	24.0	29.8	E, 2-3	8	15-22	b	—	—	—	—	S.-cu. and detached Cu. on western mountains and to S.	
10	29.278	—	—	21.5	—	28.2	E by N, 1-2	13	15-20	b	—	—	—	—		
Midd.	29.281	—	20.8	22.8	21.8	27.0	E, 1-2	7	15-20	b	—	—	—	—		
Mean	29.325	—	—	26.8	—	—	—	—	—	—	—	—	—	—	Overcast until about 10 a.m., when it gradually cleared. No wind until 2 p.m., when it freshened from S to E. Barometer falling steadily all day. Temperature less steady, and higher.	
Max. therm. read at		{ 8 a. 33° 0. 8 p. 35° 2.		Solar radiation { black bulb 138° 0. bright bulb 70° 0.		Evapn. — grammes.		Precipn. — in.								

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.281	—	20.0	21.0	20.5	22.0	E, 2	10	15-18	b	—	—	—	Mist hanging over Crater Hill.		
4	29.291	—	19.8	21.0	20.5	22.2	E, 2-3	12	15-20	bc *	Cl.-s. 6	—	—	Bank of Nfm. on western mountains going Nby.		
6	29.308	—	20.2	21.8	21.2	24.0	E, 2	10	10-15	oc *	—	N. 10	—	Heavy bank of S.-cu. over western hills.		
8	29.317	—	20.0	21.8	21.2	24.2	S by E, 2-3	8	10-20	oc *	—	N. 10	—	—		
10	29.341	—	21.0	23.0	22.8	24.5	SE, 1-2	13	12-15	o *	—	N. 10	—	—		
Noon	29.346	—	22.2	23.0	22.0	24.6	Var. SE, 3	9	15-20	o *	—	N. 10	—	All forenoon heavy S.-cu. over western mountains. Light snow falling.		
2	29.344	—	23.5	23.2	22.2	24.0	SE, 2-3	13	18-22	o †	—	N. 10	—	—		
4	29.340	—	22.5	23.4	22.6	24.0	SSE, 2-4	15	15-27	o †	—	N. 10	—	Rain band, 6.		
6	29.345	—	22.8	23.0	22.6	23.5	S by E, 2-3	13	18-25	o †	—	N. 10	—	—		
8	29.343	—	22.8	23.0	22.5	23.2	SSE, 2-3	11	16-25	o *	—	N. 10	—	—		
10	29.350	—	22.8	23.0	22.6	23.2	SSE, 2-3	5	15-25	o *	—	N. 10	—	—		
Midt.	29.347	—	22.8	23.5	23.0	23.8	S by E, 1-2	15	10-15	o *	—	N. 10	—	—		
Mean	29.330	—	—	22.6	22.0	—	—	—	—	—	—	—	—	—	Overcast, with snow nearly all day. Variable SE by fresh wind; max. run of cups for 2 hours, 31 miles; max. rate observed by pressure tube, 27 miles per hour. Barometer rose until 2 p.m., then remained steady. Temperature steady.	
Max. therm. read at		8 a. 25° 0.		8 p. 24° 0.		Solar radiation		black bulb 110° 0.		bright bulb 53° 0.		Evapn. — grammes.		Precipn. — in.		

19th.

2	29.339	—	23.8	24.2	24.0	24.2	S, 2-3	8	15-25	o *	—	N. 10	—	—	
4	29.332	—	23.5	24.0	24.0	24.2	S, 1-2	7	10-15	o *	—	N. 10	—	—	
6	29.327	—	23.8	24.2	23.8	25.2	S by E, 1-2	10	10-15	o *	—	N. 10	—	—	
8	29.316	—	24.0	25.0	24.8	26.8	S by E, 1-2	7	10-15	o *	—	N. 10	—	—	
10	29.321	—	24.5	25.0	24.2	32.2	Lt. E airs	6	0-8	o *	—	N. 10	—	Overcast and snowing all day. Very thick all round. Top of Observation Hill and near hills covered.	
Noon	29.311	—	23.5	24.0	23.5	28.2	E, 1-2	5	12-15	o *	—	N. 10	—	—	
2	29.298	—	23.6	24.2	23.5	26.8	ESE, 2	10	18	o *	—	N. 10	—	—	
4	29.293	—	23.0	23.0	22.6	27.0	E, 1-2	8	10-15	o *	—	N. 10	—	Rain band, 6.	
6	29.290	—	22.5	22.5	22.2	25.6	E, 2-3	11	18-20	o *	—	N. 10	—	—	
8	29.304	—	20.0	20.0	19.6	24.0	SE, 1-2	7	10-12	o *	—	N. 10	—	—	
10	29.317	—	20.0	20.0	19.5	20.8	ESE, 1-2	10	10-12	o *	—	N. 10	—	—	
Midt.	29.319	—	18.0	19.0	18.8	20.0	E, 1-2	10	10-15	o *	—	N. 10	—	Sky breaking in S.	
Mean	29.314	—	—	22.9	22.5	—	—	—	—	—	—	—	—	Overcast, with snow all day. Wind, of steady force, veering and backing between S and E. Barometer fell steadily until 6 p.m., then rose. Temperature steady.	
Max. therm. read at		8 a. 25° 0.		8 p. 27° 0.		Solar radiation		black bulb 108° 0.		bright bulb 53° 0.		Evapn. — grammes.		Precipn. 0.59 in. since 10 a.m. 14th.	

20th.

2	29.339	—	18.5	19.0	18.8	20.0	E, 2-3	13	15-20	oc *	—	N. 10	—	—	
4	29.364	—	18.0	19.0	18.5	20.0	E by N, 3-4	11	20-25	oc *	—	N. 10	—	Sun shining in S; foot of western hills visible; clouds lifting.	
6	29.388	—	18.8	19.2	19.0	21.0	Var. E, 3-4	16	20-28	oc	Cl.-cu. 8	—	—	Mist hanging over Crater Hill.	
8	29.414	—	18.8	20.2	20.0	24.8	Var. E, 2-3	14	18-22	oc †	—	S.-cu. 8, SE	—	S.-cu. on western mountains; summits visible.	
10	29.432	—	20.0	20.5	19.6	21.2	Var. E, 3-4	14	23-25	bc †	—	Fr.-s. 6, SE (fast)	—	S.-cu. on western mountains and along to SW and S.	
Noon	29.427	—	19.5	20.2	19.8	21.5	Var. E, 4-5	15	15-24	bc †	Cl.-s. 2	Fr.-s. 5, SE (fast)	—	Detached Cu. over western mountains; summits visible.	
2	29.420	—	19.5	19.5	19.0	21.7	E by S, 3-1	19	20-25	bc †	Cl.-s. 1	Cu. 2, SE	—	Low Cu. on western mountains; summits only visible.	
4	29.417	—	17.6	17.8	17.5	21.0	ESE, 3-5	13	20-30	bcq †	—	Cu. 2, SE	—	3 p.m. Rain band, 3.	
6	29.408	—	15.0	15.6	15.2	19.2	Var. E, 3-4	19	20-28	bc †	—	Cu. 3	—	8 p.m. Wind fell suddenly at 7.50 p.m.; air full of minute ice crystals. Wind rose again about 8.30.	
8	29.407	—	14.0	15.0	14.8	21.2	Lt. var. airs	18	0-5	b →	—	—	—	—	
10	29.405	—	12.5	13.0	13.0	18.2	NE, 2-3	13	18-20	bm	—	—	—	Heavy fog in Strait and over eastern hills.	
Midt.	29.401	—	11.8	14.0	13.8	21.2	NE, 2-4	15	18-23	bf	—	—	—	—	
Mean	29.402	—	—	17.8	17.4	—	—	—	—	—	—	—	—	Overcast, with some snow early, then gradually clearing; clear sky about 5 p.m. Wind E by strong and squally, backing to N; max. run of cups for 2 hours, 38 miles; max. rate observed by pressure tube, 30 miles per hour. Barometer rose until 10 a.m., then fell as wind went to N. Temperature lower and inclined to fall.	
Max. therm. read at		8 a. 24° 2.		8 p. 22° 0.		Solar radiation		black bulb 154° 0.		bright bulb 72° 0.		Evapn. — grammes.		Precipn. — in.	

21st.

1902—December.]

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Dry.	Wet.											
22nd.															
2	29.399	—	12.0	14.0	13.6	20.8	Lt. var. airs	7	0-6	bf					Thick fog outside bay, and on top of near hills.
4	29.396	—	11.5	12.8	12.5	16.5	NE, 2-3	8	15-20	bf					Thick fog in bay.
6	29.394	—	10.5	14.0	13.8	16.8	SE, 1-2	9	8-12	bf					Dark blue sky to NW, thick fog in bay and on top of near hills.
8	29.388	—	12.2	13.0	13.0	16.5	Calm	4	0	b					Thick fog all along Strait, Observation Hill clear.
10	29.388	—	13.0	20.2	19.5	27.2	Calm	2	0	b					Thick fog all round, Observation Hill visible.
Noon	29.374	—	17.0	18.0	17.0	21.0	Calm	4	0	b					Thick fog all round, summits of western mountains visible.
2	29.351	—	17.3	20.2	19.0	26.2	NNE, 0-1	3	0	oc			S. cu. 7		Dark fog bank from NW to S.
4	29.331	—	17.7	18.8	17.6	25.5	N, 1	4	5-10	e			S. cu. 9		3 p.m. Erebus smoke going NE, very little of it. Rain band, 2.
6	29.312	—	17.0	19.0	18.2	24.3	NW, 1	4	0-10	e			S. cu. 10		4 p.m. Mirage to W, sun gleaming.
8	29.280	—	16.9	18.2	18.0	20.1	NW, 1	6	0-10	ocf			S. 10		Fog on Crater Hill, only summits of western mountains visible.
10	29.233	—	17.0	19.0	18.8	20.0	NW, 1	5	0-10	ocf			S. 10		Horizon visible all round. Fog about 700 ft. up.
Midt.	29.194	—	17.8	20.0	19.2	20.0	NW, 1	4	0-10	ocf			S. 10		
Mean	29.337	—	—	17.3	16.7	—	—	—	—	—			—		Clear until noon, becoming quickly overcast and foggy. Wind very light all day from N and NW. Barometer falling slowly. Temperature lower, but rising.
		Max. therm. read at { 8 a. 16.5. 8 p. 22.0.		Solar radiation { black bulb 129.7. bright bulb 62.0.		Evapn. — grammes.		Precipn. 0.05 in.							

23rd.																	
2	29.166	—	19.0	20.2	19.8	21.8	Var. N, 1-2	4	10-18	ocf				S. 10		2 a.m. to 6 a.m. Heavy S. cu. over western mountains; tops obscured.	
4	29.147	—	18.8	19.8	19.0	21.0	Lt. N airs	4	0	oc				S. 10			
6	29.126	—	19.0	19.8	19.5	21.5	Lt. N airs	2	0	o				S. 10			
8	29.106	—	19.0	21.0	20.2	21.0	Lt. N airs	5	0	oc				S. 10			
10	29.100	—	20.0	22.8	21.5	26.2	Lt. var. airs	4	0-5	o				S. 10			
Noon	29.091	—	21.5	22.8	21.8	27.6	Calm	2	0	o				S. 10			
2	29.080	—	21.0	22.8	21.7	26.8	NW, 1	3	5-10	e			Cl. cu. 6			Clouds breaking; heavy Cu. to W and S.	
4	29.072	—	21.2	22.8	21.6	28.7	NNW, 1	3	5-10	bc				Det. Cu. 3, SW		3 p.m. Rain band, 2. Cloudless overhead and to westward.	
6	29.082	—	21.4	23.3	22.2	28.8	NW, 0-1	4	0-5	bc			Cl. 5, NW			Summits of mountains visible.	
8	29.087	—	19.8	19.8	19.0	21.2	SE, 1-2	3	12-18	oc →			Cl. cu. 8				
10	29.095	—	15.4	16.0	15.8	18.3	E, 3-4	14	20-30	oc			Cl. s. 6			Mist gathering on tops of eastern hills. Wind squally.	
Midt.	29.099	—	15.0	21.0	19.0	26.0	E by S, 3-4	10	25-30	b						Mist cleared from eastern hills.	
Mean	29.104	—	—	21.0	20.1	—	—	—	—	—			—	—		Overcast all day, but clearing at midnight, with light N by airs to calm. Barometer fell till 4 p.m., then commenced to rise slowly. Temperature higher and steadier.	
		Max. therm. read at { 8 a. 21.0. 8 p. 27.0.		Solar radiation { black bulb 144.6. bright bulb 68.0.		Evapn. — grammes.		Precipn. — in.									

24th.																	
2	29.102	—	19.8	21.8	20.0	22.0	E, 2	14	10-15	b							
4	29.110	—	20.8	21.0	19.8	25.0	Lt. S airs	7	0	b							Strong SW by wind in Seal Bay, with drift.
6	29.135	—	13.8	15.0	14.5	22.0	Lt. airs	2	0	b							Strong mirage all round horizon.
8	29.142	—	13.0	17.2	16.8	19.8	Calm	1	0	b							
10	29.142	—	17.5	20.2	19.0	25.8	Calm	1	0	oc			Cl. cu. 8				Mirage to S. Visibility well marked.
Noon	29.139	—	20.0	25.0	23.0	36.0	Calm	0	0	oc			Cl. cu. 7				Mirage to S. Visibility marked. Detached Cu. on western mountains.
2	29.140	—	23.0	27.0	24.6	36.2	Calm	1	0	e			Cl. cu. 7, NE				
4	29.136	—	26.4	27.9	25.3	36.2	ENE, 1-2	4	10-15	bc				S. 2, S			3 p.m. Rain band, 1. Detached Cu. on western mountains; S. cu. to S.
6	29.139	—	24.7	23.1	27.3		Var. E, 1-3	7	5-20	eq				S. cu. 10			Detached Cu. on western mountains; bc to overcast.
8	29.139	—	24.2	27.8	26.0	33.0	Calm	3	0	oc			Cl. cu. 9				Heavy Cu. collecting on and over western mountains.
10	29.139	—	22.0	23.0	22.0	26.0	Lt. NE airs	2	0	oc				S. cu. 5			
Midt.	29.080	—	23.0	30.8	29.2	32.0	Lt. NE airs	4	0	bc			Cl. s. 4				
Mean	29.129	—	—	23.5	21.9	—	—	—	—	—			—	—			Fine and clear until about 9.30 a.m., when it became quickly overcast from N. Hardly any wind all day. Barometer rising steadily all day. Temperature higher, and rising.
		Max. therm. read at { 8 a. 24.0. 8 p. 32.0.		Solar radiation { black bulb 146.0. bright bulb 70.3.		Evapn. — grammes.		Precipn. — in.									

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.		Upper.	Lower.		
				Dry.	Wet.										
2	29.128	—	25.0	31.0	29.0	34.0	N 1	2	10	bc	—	Cu. 6, SW (mod.)	—	25th. 2, 4, and 6 a.m. Very stormy appearance on western mountains; heavy Cu. and apparently much drift. Very striking Cl.-cu. clouds. Cl.-cu. low down on horizon, passing to NE slowly. 8 to 10 a.m. Heavy Cu. on western mountains.  Heavy detached Cu. on western mountains. Visibility small. 3 p.m. Rain band, 1. 4 p.m. Str. on western mountains and on Erebus. Detached Cu. on horizon. 6 p.m. Nln. on western mountains; detached Cu. on N and W horizon; extremely hazy.  Fine and clear most of day. Fresh E-W wind in morning, falling to calm in afternoon, and remaining so. Barometer rising steadily all day. Temperature high and steady.	
4	29.135	—	28.0	32.2	29.5	40.5	SE, 0-1	4	0-10	bc	Cl.-cu. 4, SW (slow)	—	—		
6	29.160	—	29.5	29.5	25.8	31.0	SE, 0-1	6	0-8	l	—	—	—		
8	29.219	—	24.0	24.0	22.0	28.0	SE, 1-2	4	10-15	bc	Cl.-cu. 4, SW (slow)	—	—		
10	29.257	—	22.0	24.2	22.6	25.2	SE, 2-3	13	12-25	bc	Cl.-s. 2, SW	—	—		
Noon	29.275	—	22.2	26.0	24.0	27.8	E, 2-3	10	10-15	b	—	—	—		
2	29.293	—	25.3	30.6	28.2	32.0	ESE, 2-4	10	15-30	bq +	—	—	—		
4	29.300	—	29.6	30.8	29.2	37.7	SE, 2-3	10	10-20	b +	—	—	—		
6	29.347	—	29.7	32.2	30.0	44.0	Calm	9	0	b ∞	—	—	—		
8	29.374	—	29.0	30.2	28.5	45.0	Calm	1	0	b	—	—	—		
10	29.384	—	26.0	26.8	25.0	43.8	Calm	0	0	b	—	—	—		
Midt.	29.398	—	25.7	25.7	23.0	43.0	Calm	1	0	b	—	—	—		
Mean	29.273	—	—	28.6	26.4	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 34° 5.		8 p. 37° 8.		Solar radiation { black bulb 130° 0.				Evapn. — grammes.		Precipn. — in.			

2	29.422	—	21.0	25.0	22.0	41.0	Calm	1	0	b	—	—	—	26th. 10 a.m. to noon. Mirage all round horizon.  Str. on western mountains. 3 p.m. Rain band, 0. Detached Cu. on western mountains. Wind calm at time of observation, but blowing 1-2 between hours.  Visibility well marked.  Mist rising all down Strait.  Low fog bank all down Strait.  1 p.m. Mean of 8 observations: with aspirator, dry bulb 33° 6, wet bulb 27° 5; from screen, dry bulb 33° 99, wet bulb 28° 15. Hygrograph showed 20 percent. Temperature outside screen, 38° 0. Fine and clear all day, with no wind. Barometer rising steadily all day. Temperature higher.
4	29.468	—	24.2	27.2	26.0	35.2	Calm	1	0	bc	—	Det. Cu. 2, SW	—	
6	29.484	—	25.0	29.0	28.0	35.2	Calm	3	0	bc	Cl.-cu. 2, SE	Det. Cu. 2, SW	—	
8	29.510	—	28.5	36.0	35.0	42.0	Calm	1	0	b	—	—	—	
10	29.538	—	35.0	37.0	35.5	39.0	Lt. SE airs	1	5-8	b	—	—	—	
Noon	29.548	—	33.8	35.0	32.2	37.0	NE, 1	10	10-12	b	—	—	—	
2	29.574	—	30.8	33.2	29.7	39.0	NE, 0-1	3	5-15	b ∞	—	—	—	
4	29.580	—	31.0	33.3	29.3	38.2	Calm	8	0	b ∞	—	—	—	
6	29.594	—	29.6	30.0	28.5	34.3	Calm	4	0	b ∞	—	—	—	
8	29.598	—	28.8	30.2	28.0	41.5	NNW, 1	7	8	b	—	—	—	
10	29.599	—	28.0	29.0	27.5	37.1	NNW, 0-1	4	0-8	b	—	—	—	
Midt.	29.602	—	22.0	28.5	25.0	33.0	Lt. NNW airs	4	0	b	—	—	—	
Mean	29.543	—	—	31.1	28.9	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 36° 8.		8 p. 39° 0.		Solar radiation { black bulb 133° 8.				Evapn. — grammes.		Precipn. — in.		

2	29.596	—	18.0	19.5	18.8	31.0	Calm	1	0	b	—	—	—	27th. Mirage along foot of western hills. Fog bank to S and W all night, rising and falling at intervals. 8 a.m. Mirage to W.  3 p.m. Rain band, 0. Extremely hazy.  Str. to N.  Slight haze.  Noon. Mean of 10 observations: with aspirator, dry bulb 30° 4, wet bulb 26° 8; from screen, dry bulb 31° 8, wet bulb 28° 2.  Fine and clear all day, with no wind. Barometer rising all day. Temperature steady, but lower.
4	29.599	—	18.5	31.5	27.8	40.0	Lt. var. airs	0	0	b	—	—	—	
6	29.600	—	17.0	31.2	27.8	36.0	Lt. var. airs	2	0	b	—	—	—	
8	29.618	—	24.0	26.2	25.2	28.0	Lt. airs	3	0	h	—	—	—	
10	29.633	—	24.8	29.8	27.5	36.0	Calm	1	0	b	—	—	—	
Noon	29.630	—	31.0	32.0	29.5	32.0	Lt. WNW airs	1	0-5	b	—	—	—	
2	29.626	—	31.3	32.7	29.5	33.7	NW, 1	7	8-10	b	—	—	—	
4	29.621	—	32.4	33.0	29.6	40.0	NNW, 1-2	7	10-20	b	—	—	—	
6	29.624	—	31.5	33.0	29.8	47.0	Calm	7	0	b	—	—	—	
8	29.632	—	32.0	34.0	30.0	43.0	Calm	1	0	b	—	—	—	
10	29.638	—	25.0	25.9	23.8	46.0	Calm	3	0	b	—	—	—	
Midt.	29.623	—	24.2	29.2	26.2	37.0	Lt. NW airs	2	0-8	b	—	—	—	
Mean	29.620	—	—	29.8	27.1	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 32° 5.		8 p. 38° 0.		Solar radiation { black bulb 131° 7.				Evapn. — grammes.		Precipn. — in.		

1902—December.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

28th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.620	—	23.0	28.0	27.0	34.0	NW, 1	4	8-10	b	—	—	—	Noon. Cl., Cl.-cu. and Cl.-s. forming in N up to 70° altitude radiating NW.	
4	29.611	—	28.0	32.0	28.2	39.0	Lt. N. airs	6	0-8	b	—	—	—	1 p.m. Cl.-s. forming quickly and radiating from NW to SE. A.-s. forming in N and NE. Western mountains still quite clear.	
6	29.608	—	31.2	32.2	28.2	36.2	Lt. N. airs	7	0-10	b	—	—	—	2 p.m. Cl.-cu. in almost regular horizontal bands radiating NW to SE.	
8	29.599	—	32.0	33.2	28.2	36.2	Lt. N. airs	5	0-10	b	—	—	—	3 p.m. Rain band, 3.	
10	29.606	—	32.8	34.8	32.2	38.0	Lt. N. airs	7	0-10	b	—	—	—	4 p.m. Cl.-cu. changing formation, closing into A.-s. with dark streaks on S horizon radiating NW to SE, with filmy diagonal ribs.	
Noon	29.604	—	31.0	34.2	31.8	37.0	N, 2-3	5	15-20	bc	Cl.-cu. 2, WXW	—	—	6 p.m. Clouds much lower than previous hours. Typical Cl.-cu. direction doubtful. S.-cu. to N, and on western mountains.	
2	29.598	—	31.7	33.2	29.4	37.2	N by W, 1	6	8-10	bc ∞	Cl.-cu. 5, WXW (mod.)	—	—	8 p.m. Fleecy streaks radiating NW to SE. Bank of Str. along foot of western hills.	
4	29.594	—	30.2	30.7	28.6	35.0	NNW, 1	6	8-10	oc ∞	Cl.-cu. 7, WXW (mod.)	—	—	9.15 p.m. Fr.-s. passing over rapidly from N.	
6	29.587	—	29.6	30.0	27.8	31.0	N by W, 1-2	7	10-15	oc ∞	Cl.-cu. 8	—	—	10 p.m. Thick low Str. passing over from N. No land visible to W or S; tops of hills covered. Altitude of Str., 600 feet.	
8	29.574	—	28.0	28.2	27.8	33.0	N by W, 2-4	9	10-23	oc	Cl.-cu. 8, WXW (mod.)	—	—	Midd. Very heavy Cu. to N. Snowing slightly, and squally, and then calm. Western mountains obscured. Tops of eastern hills in fog. A break to E, and blue sky visible, with very streaky and	
10	29.565	—	24.0	25.0	24.8	28.0	N by W, 1-2	9	10-15	ocf	Cl.-s. 8	S. 9, N (fast)	—	—	
Midd.	29.557	—	24.8	25.0	24.8	26.0	Var. N, 0-3	9	0-22	ocqf	—	S.-cu. 9, N (rapid)	—	—	
Mean	29.594	—	—	30.5	28.2	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 36° 8. / 8 p. 35° 0. Solar radiation { black bulb 128° 7. / bright bulb 68° 2. Evapn. — grammes. Precipn. — in.

fleecy Cl.-s. radiating NW to SE. Noon. Mean of 10 observations: with aspirator, dry bulb 34° 3, wet bulb 28° 45. Fine day, becoming overcast and foggy later. Wind light all forenoon, rising to fresh from N. Barometer steady until about 2 p.m., when it began to fall steadily. Temperature steady.

29th.

2	29.520	—	22.0	23.0	22.8	24.0	N, 0-2	8	0-18	ofq *	—	S.-cu. 10, N (fast)	—	Thick fog over Observation Hill; snowing and squally.
4	29.518	—	22.2	23.5	23.0	24.0	N, 1-2	4	5-12	ofc	—	S.-cu. 10	—	Western mountains visible. Heavy bank of S.-cu. NW to S.
6	29.495	—	22.0	23.0	22.8	25.2	NW, 1-2	7	8-10	oc	—	S.-cu. 10	—	From S to SW very clear.
8	29.477	—	22.2	24.8	24.0	27.0	Lt. NW airs	4	0	oc	—	S.-cu. 10	—	—
10	29.477	—	21.0	27.1	26.0	30.0	Lt. N airs	1	0-8	oc	—	S.-cu. 10, N (slow)	—	Low S.-cu., about 600 feet in altitude, cutting off all land above that height. Sun gleaming; clouds breaking overhead.
Noon	29.467	—	21.5	27.0	25.5	28.0	Calm	2	0	b	—	—	—	Noon. Thick fog bank hanging over all hills, about 600 feet. Tops of western mountains visible. Fog disappearing very fast.
2	29.454	—	25.7	30.0	27.6	31.0	Calm	3	0	b	—	—	—	2 p.m. Dark bank of fog on foot of western mountains and to S.
4	29.438	—	29.6	32.0	27.6	37.8	SE, 1	4	5-12	b	—	—	—	3 p.m. Rain band, 1.
6	29.431	—	26.5	30.2	26.6	35.2	SE, 1-2	5	10-15	b	—	—	—	4 p.m. Fog bank to W disappearing.
8	29.430	—	29.5	32.0	28.5	37.0	E, 2	10	12-18	b	—	—	—	6 p.m. Low fog coming up from S and W.
10	29.426	—	30.0	31.0	28.0	35.0	E, 2	10	10-20	b	—	—	—	8 p.m. Low fog all down Strait from SE to W, gradually fading away in W.
Midd.	29.419	—	27.8	34.5	31.0	40.0	E, 2	10	10-15	b	—	—	—	10 p.m. Thin fog all down Strait at altitude of 200 feet. Quite clear overhead.
Mean	29.464	—	—	28.2	29.4	—	—	—	—	—	—	—	—	Noon. Mean of 10 observations: with aspirator, dry bulb 26° 3, wet bulb 25° 2; from screen, dry bulb 31° 0, wet bulb 28° 3.

Max. therm. read at { 8 a. 28° 8. / 8 p. 36° 0. Solar radiation { black bulb 127° 6. / bright bulb 65° 2. Evapn. — grammes. Precipn. — in.

prator, dry bulb 27° 7, wet bulb 26° 6; from screen, dry bulb 30° 77, wet bulb 27° 84. Overcast and foggy until noon, when it cleared and remained fine all day. Wind got up in afternoon from E and remained steady. Barometer falling all day. Temperature steady.

30th.

2	29.414	—	22.0	24.8	23.0	28.0	NW, 3-4	8	20-25	b	—	—	—	Bank of mist all round horizon.
4	29.417	—	18.0	21.0	21.0	24.0	N by W, 2-3	10	15-20	bc	—	Cu. 6	—	Thick fog.
6	29.411	—	19.8	20.8	21.0	23.0	Lt. N airs	7	0	bc	—	Cu. 4	—	Fog clearing overhead.
8	29.409	—	19.8	20.0	20.0	23.0	Lt. N airs	1	0	bc	—	S.-cu. 3	—	—
10	29.401	—	19.0	23.0	22.8	30.0	Calm	2	0	b	—	—	—	Thin mist hanging in Strait, but gradually clearing. Thick to W, no land visible. Mist passing overhead rapidly from N.
Noon	29.388	—	21.2	24.0	23.8	26.0	NNW, 1	4	8-12	bm	—	—	—	Noon. Thick fog passing overhead from N. Fog all round in Strait.
2	29.380	—	22.7	24.2	24.0	31.4	NNW, 0-1	4	0-8	oc	—	Fog 10	—	2 p.m. No visibility.
4	29.374	—	23.2	24.6	24.4	29.4	N by W, 1	4	5-12	oc	—	Fog 10	—	3 p.m. Rain band, 3.
6	29.364	—	24.3	25.0	24.6	27.6	N, 1-3	7	8-25	ocq	—	Scudd 10, N (fast)	—	4 p.m. Fog lifting slightly. Small fern-shaped fog crystals on surface.
8	29.364	—	23.8	24.2	24.0	25.8	Var. N, 1	7	8-12	o	—	Fr.-cu. 10, N (fast)	—	6 p.m. Fog crystals on weather side of all projecting objects.
10	29.375	—	23.6	24.0	23.7	25.3	Lt. N. airs	5	0-5	o	—	Fog 10	—	8 p.m. Wind shifting from NW to NE and back. Visibility, 0. Altitude of fog, 600 feet.
Midd.	29.388	—	23.2	24.4	24.0	26.2	Lt. N. airs	4	0-5	o	—	Fog 10	—	Noon. Mean of 10 observations: with aspirator, dry bulb 22° 8, wet bulb 23° 6; from screen, dry bulb 23° 81, wet bulb 25° 53.
Mean	29.390	—	—	23.3	23.0	—	—	—	—	—	—	—	—	1.30 p.m. Mean of 10 observations: with aspirator, dry bulb 22° 3, wet bulb 23° 0; from screen, dry bulb 23° 83, wet bulb 25° 65.

Max. therm. read at { 8 a. 36° 8. / 8 p. 25° 1. Solar radiation { black bulb 111° 6. / bright bulb 57° 3. Evapn. — grammes. Precipn. — in.

Fine until just after noon, when it became overcast and foggy. Very light N and NNWly airs all day. Barometer fell until 8 p.m. and then commenced to rise. Temperature steady.



1903—January.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.											
1st.	2	29.521	—	18.8	25.0	23.5	28.0	N, 1-2	2	10-15	bc					
	4	29.504	—	22.0	25.0	23.8	28.0	N, 2-3	11	12-18	b					
	6	29.490	—	23.2	24.2	23.0	27.0	N, 1-2	9	10-12	b					
	8	29.485	—	22.8	24.0	23.0	28.0	N, 1-2	6	10-15	b					
	10	29.479	—	24.5	26.0	24.6	29.0	Lt. N airs	6	0-10	b					
	Noon	29.468	—	25.0	27.0	25.0	28.8	Var. N airs	7	0-18	bq					
	2	29.448	—	26.3	28.0	26.2	30.0	N, 0-2	7	0-10	b					
	4	29.432	—	26.4	28.4	26.3	30.7	N by W, 0-1	4	7-12	b∞					
	6	29.428	—	27.6	28.3	26.6	37.8	Lt. N airs	4	0	b∞					
	8	29.420	—	28.0	28.2	27.0	39.5	Calm	5	0	bc			S. 1, NW		
	10	29.417	—	27.0	28.0	26.8	35.5	Lt. N airs	4	0-8	bm					
	Midt.	29.415	—	25.8	27.0	26.2	37.0	Lt. N airs	3	0	b					
	Mean	29.459	—	—	26.6	25.2	—	—	—	—	—					
		Max. therm. read at		{ 8 a. 26°.8. 8 p. 29°.5.		Solar radiation		{ black bulb 119°.5. bright bulb 61°.0.		Evapn. — grammes.		Precipn. — in.				

2, 4, 6 a.m. Heavy Cu. over western mountains from NW to SSW, low. Detached S.-cu. to south.  
Heavy S.-cu. over western mountains and all along S to SW.  
Thin layer of Str. about 2000 feet up western mountains, and with a breadth of 1000 feet extending from W to S.  
2 p.m. Belt of S.-cu. on western mountains about 3000 feet. Very hazy.  
3 p.m. Rain band, 1.  
4 p.m. Str. on western horizon. Very hazy.  
6 p.m. Detached Cu. on eastern horizon driving rapidly to SE. Regular detached layers of Cu. on western mountains, 6000 feet altitude.  
8 p.m. Detached Cu. on western mountains and to S and SW.  
10 p.m. Very misty. Low bank of Str. right round from S to W.  
Noon. Mean of 10 observations: with aspirator, dry bulb 26°.4, wet bulb 25°.2; from screen, dry bulb 27°-21, wet bulb 25°-26.  
Fine all day with hardly any wind. Barometer falling slowly all day. Temperature steady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.											
2nd.	2	29.418	—	23.0	26.0	25.5	36.0	Lt. N airs	0	0	b					
	4	29.407	—	14.8	18.0	17.5	20.5	Calm	0	0	bc			S. 1		
	6	29.407	—	16.8	27.0	25.5	30.0	Lt. var. airs	2	0	bc			S. 2		
	8	29.429	—	26.2	27.8	26.2	29.2	Calm	2	0	bc					
	10	29.452	—	25.0	28.8	26.6	29.8	Calm	3	0	bc					
	Noon	29.456	—	27.0	30.0	27.8	36.0	Calm	2	0	b					
	2	29.480	—	30.0	33.2	30.2	37.6	Calm	0	0	b					
	4	29.499	—	32.2	35.0	31.5	44.8	Calm	0	0	bc					
	6	29.535	—	29.6	30.0	27.4	34.8	Calm	0	0	oc					
	8	29.540	—	28.0	29.5	28.0	31.5	Calm	5	0	o					
	10	29.558	—	26.8	27.0	25.0	28.2	NE, 1	5	0-10	o					
	Midt.	29.571	—	26.4	26.8	25.6	27.5	NE, 1-2	6	5-10	o					
	Mean	29.479	—	—	28.3	26.5	—	—	—	—	—					
		Max. therm. read at		{ 8 a. 29°-2. 8 p. 36°-0.		Solar radiation		{ black bulb 132°-8. bright bulb 68°-5.		Evapn. — grammes.		Precipn. — in.				

Bank of S.-cu. over western mountains, summits hidden.  
Heavy Cu. over western mountains and along to SW and S.  
Low S.-cu. on western mountains and round to S. Detached Cu. to E passing to S.  
2 p.m. S.-cu. all round horizon.  
3 p.m. Rain band, 2.  
4 p.m. Overhead and to W heavy fleecy, hazy Ci.-cu. moving slowly to E. Cu. to S and SE. Very dark clouds over western mountains. These clouds have formed rapidly, and appear to be dropping.  
6 p.m. Very dull to NW and N, nimbus on western mountains.  
Noon. Mean of 10 observations: with aspirator, dry bulb 28°-8, wet bulb 26°-8; from screen, dry bulb 31°-92, wet bulb 28°-75.  
Fine, but clouding over slowly until completely overcast at 6 p.m. Barometer rose quickly after 6 a.m. Temperature unsteady, making a big drop at 2 a.m. and quick rise again.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.											
3rd.	2	29.578	—	26.0	27.0	25.6	27.8	NE, 1	4	0-5	o			S. 10		
	4	29.595	—	25.5	27.0	26.0	29.0	Lt. NE airs	5	0-8	oc					
	6	29.612	—	26.0	30.2	29.2	35.0	Calm	4	0	oc					
	8	29.626	—	27.5	28.0	27.5	32.0	NW, 0-1	2	0-8	bcm					
	10	29.620	—	28.0	29.5	27.5	32.5	N, 1	6	8-12	bc					
	Noon	29.611	—	28.0	30.2	28.2	36.2	N, 1-2	7	8-15	oc					
	2	29.582	—	29.7	30.5	28.6	34.2	N, 0-2	9	5-20	bq					
	4	29.570	—	29.2	30.0	28.3	34.2	N by E, 1-2	8	5-18	bc					
	6	29.555	—	29.6	30.3	28.3	37.0	N by E, 1-3	10	5-25	bq					
	8	29.542	—	29.0	30.2	28.2	37.0	N, 1-4	8	8-20	bq					
	10	29.539	—	29.0	29.0	27.0	35.5	N, 3-5	12	15-27	bqm					
	Midt.	29.538	—	27.5	28.2	26.2	37.0	NNE, 0-1	10	0-8	b					
	Mean	29.581	—	—	29.2	27.6	—	—	—	—	—					
		Max. therm. read at		{ 8 a. 32°-0. 8 p. 32°-0.		Solar radiation		{ black bulb 137°-0. bright bulb 68°-6.		Evapn. — grammes.		Precipn. — in.				

Midt. Bank of Str. from NW to S. Noon. Mean of 10 observations: with aspirator, dry bulb 30°-4, wet bulb 28°-8; from screen, dry bulb 30°-21, wet bulb 28°-28. Fine day, but cloudy. Wind rose strong and squally from the N, but soon fell; max. run of cups for 2 hours, 24 miles; max. rate observed by pressure tube, 27 miles per hour. Barometer rose until 8 a.m. and then fell steadily. Temperature steady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscrewed.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.540	—	25.0	26.0	25.2	31.0	Var. N to W, 0-2	4	0-18	b	—	—	—	4th.	
4	29.568	—	24.0	25.2	24.0	29.2	Var. N to W, 0-3	5	0-20	bcq	—	S.-cu. 4, SE (fast)	—		
6	29.591	—	23.0	24.0	23.2	27.0	Var. S to N, 0-3	7	0-22	bcq	—	S.-cu. 8	—		
8	29.615	—	23.0	24.5	23.8	27.0	E, 4-5	14	20-28	bc	Cl. cu. 6	—	Tops of western mountains obscured by fog. Wind shifty and squally. Detached Cu. from S to SE.		
10	29.629	—	24.5	27.0	25.0	29.5	Var. E, 5	15	20-25	oc	—	Cu. 8, N (slow)	—		
Noon	29.647	—	26.0	28.2	26.0	31.0	Var. E. 2-4	13	15-20	oc	—	Cu. 9, N (slow)	—		
2	29.673	—	25.4	26.2	24.6	30.6	Var. E, 1-2	13	5-18	oc	—	Cu. 9, N (slow)	—		
4	29.681	—	26.3	29.6	25.6	30.8	ESE, 0-1	8	5-8	bc	Cl.-cu. 4, W (slow)	Cu. 1, N (slow)	—		
6	29.689	—	29.0	31.2	29.0	38.4	Calm	3	0	bc	Cl.-s. 2, W (slow)	—	2 p.m. Nln. to W, clear to S. Fog on Crater Hill.		
8	29.689	—	29.0	29.0	26.2	36.2	N, 1-2	1	10-15	b	—	—	3 p.m. Rain band, 0.		
10	29.689	—	26.5	28.0	27.0	36.8	N, 1	3	8-10	b	—	—	4 p.m. Detached Cu. to S and W.		
Midd.	29.672	—	27.0	28.0	27.0	36.2	N, 1-2	9	10-15	b	—	—	6 p.m. Large detached Cu. to W., clear to S and N, Nln. on E horizon.		
Mean	29.640	—	—	27.2	25.6	—	—	—	—	—	—	—	8.20 p.m. Detached Cu. passing overhead from S. Detached Cu. in S and SW. Low Cu. in W.		

Max. therm. read at { 8 a. 30° 0.  
8 p. 36° 8. Solar radiation { black bulb 117° 8.  
bright bulb 62° 0. Evapn. — grammes. Precipn. — in.

12.30 p.m. Mean of 10 observations: with aspirator, dry bulb 27° 6, wet bulb 25° 2; from screen, dry bulb 28° 0, wet bulb 25° 8. Fine, cloudy at times. Wind strong, variable and squally early, falling to steady from N; max. run of cups for 2 hours, 29 miles; max. rate observed by pressure tube, 28 miles per hour. Barometer rose steadily all day; inclined to fall at midnight. Temperature steady.

2	29.664	—	26.5	28.0	27.0	35.0	N, 1-2	7	10-15	b	—	—	—	5th.
4	29.647	—	25.0	28.2	27.5	32.0	N, 1-2	8	10-18	b	—	—	—	
6	29.641	—	27.0	28.0	27.0	31.0	N, 1-2	8	8-15	b	—	—	—	
8	29.644	—	25.8	27.6	26.2	29.8	Calm	2	0	bc	—	Cu. 7, N (fast)	—	
10	29.636	—	27.5	29.0	28.0	30.5	Calm	2	0	oc	—	Cu. 9, N (mod.)	—	
Noon	29.622	—	28.0	28.2	27.5	30.8	Calm	5	0	o	—	S. 10, N (slow)	—	
2	29.616	—	28.0	30.3	29.0	32.4	Calm	3	0	bc	—	Cu. 6, NW (slow)	—	
4	29.601	—	29.4	31.6	29.6	36.8	Calm	0	0	bc	Cl.-cu. 2, W (slow)	—	10 a.m. Fog on Crater Hill. S.-cu. on western mountains and along to S.	
6	29.593	—	28.3	30.0	28.2	38.3	Calm	0	0	bc	Cl.-cu. 5, W (slow)	—	Noon. High fog over all land at alt. of 600 ft.	
8	29.585	—	29.0	30.0	28.0	31.0	Calm	3	0	oc	Cl.-cu. 7, NW (slow)	—	2 p.m. Fog on Crater Hill and western mountains up to about 6000 ft. Clear to S.	
10	29.580	—	28.5	29.5	27.8	30.0	Lt. N airs	2	0	b	—	—	3 p.m. Rain band, 0.	
Midd.	29.571	—	26.5	27.0	26.0	40.0	N, 1-2	3	8-15	b	—	—	4 p.m. S.-cu. from NW to S. Upper clouds formed on NW horizon and are moving slowly to SE.	
Mean	29.617	—	—	29.0	27.7	—	—	—	—	—	—	—	6 p.m. S.-cu. at base and summits of western mountains, upper half of mountains visible.	

Max. therm. read at { 8 a. 29° 8.  
8 p. 35° 0. Solar radiation { black bulb 123° 0.  
bright bulb 62° 8. Evapn. — grammes. Precipn. — in.

10 p.m. Low fog from S to W; Cl.-s. to W; detached Cu. to E. Midd. Low fog from S to W. Cloudless sky. Noon. Mean of 10 observations: with aspirator, dry bulb 27° 5, wet bulb 27° 4; from screen, dry bulb 28° 5, wet bulb 27° 5. Fine, with some typical examples of Cl.-cu. clouds. Hardly any wind all day. Barometer fairly steady, inclined to fall later. Temperature steady.

2	29.558	—	22.0	23.0	21.8	42.0	Calm	2	0	b	Trace till noon missing	—	—	6th.
4	29.557	—	22.1	26.5	25.0	31.9	Calm	2	0	b	—	—	—	
6	29.553	—	25.2	26.0	25.0	31.2	Calm	2	0	b	—	—	—	
8	29.564	—	25.2	27.0	25.8	31.2	Calm	1	0	b	—	—	—	
10	29.564	—	26.0	28.8	27.2	30.6	NNW, 1	9	10-15	b	—	—	—	
Noon	29.565	—	28.0	31.0	29.0	32.5	Lt. NW airs	6	0-5	b	—	—	—	
2	29.573	—	30.3	32.2	29.8	31.3	N, 1-2	5	5-18	b	—	—	—	
4	29.580	—	31.2	31.8	29.8	37.4	N by W, 1-2	8	5-15	b	—	—	—	
6	29.586	—	31.3	32.0	29.5	39.5	N by E, 1-3	9	5-24	b ∞	—	—	—	
8	29.597	—	29.5	31.0	29.2	38.2	N by E, 1-2	5	10-15	b	—	—	—	
10	29.600	—	30.0	31.2	30.0	38.0	Var. N, 2-3	0	10-20	b	—	—	—	
Midd.	29.600	—	28.0	29.8	28.8	38.0	Var. N, 1-2	4	10-12	bc ∞	Cl.-cu. 2, W (slow)	—	—	
Mean	29.575	—	—	29.2	27.6	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 31° 0.  
8 p. 32° 5. Solar radiation { black bulb 119° 6.  
bright bulb 63° 0. Evapn. — grammes. Precipn. — in.

Thin bank of low fog all round from SE to W. Cloudless sky. Visibility marked in W. Visibility well marked in W. Detached Cu to S. Visibility very marked in W. Cloudless sky. 3 p.m. Rain band, 0. S.-cu. low on S horizon. Air extremely hazy. Str. to S and W. Heavy S.-cu. to E and S. Very hazy all round. Noon. Mean of 10 observations: with aspirator, dry bulb 30° 9, wet bulb 29° 1; from screen, dry bulb 31° 8, wet bulb 29° 0. Fine and clear all day. Wind rose from N about 2 p.m. and remained steady. Barometer rising all day slowly. Temperature steady.

1903—January.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

7th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.			Remarks.
		Cape Armtage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.	Aspirator.		
				Dry.	Wet.											
2	29.602	—	25.8	28.0	27.0	43.0	Calm	3	0	bem	—	—	—	—	Very heavy bank of S.-cu. all round horizon, land invisible to W and S. Fog passing S over Crater Hill.	
4	29.601	—	23.0	21.8	23.2	37.8	Calm	0	0	b	—	—	—	—	4 a.m. Low fog bank over western mountains, 600 feet. Tops visible.	
6	29.601	—	21.0	23.2	22.2	28.5	Calm	1	0	b	—	—	—	—	6 a.m. Fog bank in W, about 600 feet alt., extending to S.	
8	29.600	—	19.8	22.2	21.5	30.0	Calm	2	0	b	—	—	—	—	—	
10	29.613	—	22.0	33.0	30.0	37.0	Calm	0	0	b	—	—	—	—	Low fog bank all round from W to S. Misty over land.	
Noon	29.596	—	32.0	35.0	31.5	36.0	E, 1	6	10-12	b	—	—	—	—	Low bank of Str. to S.	
2	29.584	—	34.8	36.6	32.0	39.0	Var. E, 2		12-20	b	—	—	—	—	Extremely hazy, visibility small.	
4	29.573	—	35.0	36.0	32.2	41.8	E by N, 2-3		13	15-25	b	—	—	—	3 p.m. Rain band, 2.	
6	29.556	—	35.0	35.3	31.0	41.0	E by N, 2-3		12	15-23	b∞	—	—	—	S.-cu. on S horizon; detached cu. over western mountains.	
8	29.554	—	28.0	33.0	30.0	37.0	Calm	5	0	b	—	—	—	Low watery Str. to N and NW; detached Cu. to S and W. Mirage at foot of western mountains.		
10	29.540	—	29.0	32.0	28.2	31.8	N, 1	6	8-10	b	—	—	—	8 p.m. Thick fog in Strait and driving in from N.		
Mldt.	29.533	—	24.0	25.0	24.0	30.8	Calm	4	0	b	—	—	—	—	10 p.m. Low fog along foot of western hills from NW to S; detached Cu. in SW; low dark Str. in S.	
Mean	29.579	—	—	30.3	27.7	—	—	—	—	—	—	—	—	—	Mldt. Low fog bank all round horizon.	

Max. therm. read at { 8 a. 32° 0.  
8 p. 33° 0. Solar radiation { black bulb 123° 7.  
bright bulb 68° 8. Evapn. — grammes. Precipn. — in.

Fine and clear all day. Wind from calm sprang to fresh in afternoon, and then fell again to calm. Barometer fell steadily after 10 a.m. Temperature higher generally.

8th.

2	29.502	—	19.8	24.0	23.0	30.0	Calm	0	0	b	—	—	—	—	—
4	29.482	—	21.8	25.0	23.8	31.0	Calm	0	0	b	—	—	—	—	—
6	29.472	—	21.0	24.2	23.0	27.0	Calm	0	0	b	—	—	—	—	Strong mirage all round horizon.
8	29.473	—	25.0	33.0	28.8	32.0	Lt. SE airs	1	0	b	—	—	—	—	Heavy S.-cu. in S and SE. Bank of fog on western mountains, tops and bases visible. Slight mirage in SW.
10	29.454	—	31.0	31.5	28.8	36.0	SE, 1-2	8	10-15	b	—	—	—	—	10 a.m. Dark S.-cu. on western mountains, summits and bases visible. Light S.-cu. and Roll-cu. to S.
Noon	29.430	—	29.0	29.6	28.0	30.0	ESE, 2-4	10	15-23	b	—	—	—	—	Noon. S.-cu. over and on western mountains increasing. Cu. and low Str. to SE and S. increasing and rising. Land getting quickly obscured.
2	29.412	—	29.0	31.6	29.6	32.3	Var. E, 2-3	14	13-20	bc	—	—	—	—	12.45 p.m. Fog passing over eastern hills from E rapidly; western mountains obscured. Detached Cu. forming and going NE.
4	29.401	—	30.0	30.7	28.8	33.4	ENE, 1-2	10	5-12	b	—	—	—	—	2 p.m. Western mountains almost obscured, Str. at base and Cu. on summit. Fog on Crater and Observation Hills.
6	29.389	—	30.2	32.0	30.2	34.5	Calm	4	0	b	—	—	—	—	3 p.m. Rain band, 1.
8	29.370	—	29.5	30.0	28.2	32.5	N, 0-1	4	0-10	bc	—	—	—	—	4 p.m. Detached Cu. passing. Fog on Crater Hill; S.-cu. all round horizon. Summits of western mountains visible.
10	29.364	—	28.2	28.9	27.8	31.5	N, 1	8	0-10	b	—	—	—	—	6 p.m. Layers of Cu. on western mountains. Str. all round; Cu. passing.
Mldt.	29.351	—	26.9	27.1	26.7	29.0	N, 1	6	10	b	—	—	—	—	8 p.m. Layers of Cu. on western mountains, summits visible. Low Cu. to S and SW, detached Cu. to E. 10 p.m. Mist on summit of Observation Hill moving rapidly from N. Noon. Mean of 10 observations: with aspirator, dry bulb 29° 8, wet bulb 28° 0; from screen, dry bulb 29° 82, wet bulb 28° 23. Fine and clear all day, with a repetition of calm and wind as yesterday, rising in the middle of the day and going down in the evening. Barometer continued to fall steadily all day. Temperature steady.
Mean	29.425	—	—	29.0	27.2	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 35° 2.  
8 p. 39° 0. Solar radiation { black bulb 119° 0.  
bright bulb 63° 0. Evapn. — grammes. Precipn. — in.

9th.

2	29.336	—	26.0	27.6	26.6	26.0	N, 1-2	5	0-10	b	—	—	—	—	Mist almost gone.
4	29.327	—	26.0	26.2	25.5	29.0	N, 1-2	12	0-15	b	—	—	—	—	5 a.m. Low fog from SE to SW. Clear to W and NW.
6	29.327	—	25.5	26.5	25.2	29.2	N, 1-2	4	8-15	b	—	—	—	—	Low fog from SE to NE. Fog passing over eastern hills from N.
8	29.318	—	25.5	26.5	25.8	29.0	N, 1	5	6-12	o	—	—	—	—	Low fog over all hills above 600 feet, driving over from N.
10	29.315	—	25.0	27.0	26.0	31.0	Lt. N airs	7	5-10	o	—	—	—	—	} Sky and all land above 500 feet obscured.
Noon	29.315	—	26.0	27.5	26.8	33.0	N, 1	7	5-12	o	—	—	—	Thin S. 10, N (mod.)	
2	29.307	—	26.0	27.4	26.6	30.0	NNW, 1-2	7	0-10	oc	—	—	—	—	Sheet of S.-cu. obscuring all land over 1000 feet.
4	29.307	—	26.7	27.3	26.5	29.7	Var. N, 1-2	8	0-10	oc	—	—	—	—	3 p.m. Rain band, 3.
6	29.317	—	25.8	26.2	25.4	28.3	Var. N, 1-2	8	0-10	oc	—	—	—	—	4 and 6 p.m. Base of western mountains visible, also NW of White Island.
8	29.327	—	25.0	25.5	25.0	25.8	Var. N, 1-2	5	8-12	oc	—	—	—	—	6 p.m. Sand passing over Crater and Observation Hills.
10	29.332	—	24.5	25.0	24.3	25.0	Lt. N airs	6	0-8	oc	—	—	—	—	8 p.m. Fr.-s. passing over tops of eastern hills rapidly.
Mldt.	29.341	—	23.2	24.0	24.0	25.0	Calm	2	0	ocf	—	—	—	—	10 p.m. Fog on summits of eastern hills, alt. about 500 feet.
Mean	29.322	—	—	26.4	25.0	—	—	—	—	—	—	—	—	—	Mldt. Fog on eastern hills passing rapidly to S, alt. about 150 feet.

Max. therm. read at { 8 a. 35° 0.  
8 p. 27° 8. Solar radiation { black bulb 115° 2.  
bright bulb 58° 1. Evapn. — grammes. Precipn. — in.

Overcast most of the day, with light to fresh variable N<sup>w</sup> winds. Barometer steady. Temperature steady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.										
2	29.331	—	23.2	23.2	23.2	—	Var. N, 1-3	7	5-15	of	—	Fr.-s. 10, N (fast)	—	<p>10th.</p> <p>Heavy fog all round horizon, E hills obscured. Fog moving rapidly to S. Break in SE.</p> <p>6 a.m. Heavy fog from N to SW, alt. 15°-0, obscuring all land. Snow crystals falling.</p> <p>High fog bank to S and SW, western mountains obscured. S.-cu. to N, heavy S.-cu. to S, fog coming over eastern hills rapidly from N.</p> <p>Scud or low fog driving from N. Clear from N to E with fine Cl. Visibility very small.</p> <p>3 p.m. Rain band, 2.</p> <p>4 p.m. Sky almost overcast. Summit of Mt. Discovery and White Island visible.</p> <p>6 p.m. Cu. almost stationary, with scud passing rapidly to S. Hills to E and S visible.</p> <p>8 p.m. A.-cu. appears much wind blown. Scud passing rapidly from N. Sky showing everywhere a very windy appearance.</p> <p>10 p.m. Low fog from NW to SW. Threatening look to S. Dark, overcast, and gloomy generally.</p> <p>Cloudy all day and mostly overcast, with light to fresh N<sup>w</sup> winds. Barometer rising all day. Temperature steady.</p>
4	29.329	—	23.0	24.2	24.2	—	N, 1	4	5-10	of	—	Fr.-s. 10, N (fast)	—	
6	29.332	—	23.0	24.0	24.0	—	NW, 1	7	5-10	bc	—	S.-cu. 8	—	
8	29.351	—	23.0	27.0	26.2	27.0	Calm	0	0	bc	—	S.-cu. 8, N	—	
10	29.358	—	24.2	26.0	25.2	28.0	NNW, 1-2	3	8-15	bc	—	S.-cu. 1, N	—	
Noon	29.359	—	23.8	25.6	25.0	28.0	NNW, 1-2	11	5-15	bc	—	S.-cu. 4, N	—	
2	29.366	—	24.8	26.2	25.6	31.0	N by W, 1-3	11	5-22	bcq	—	S.-cu. 6, N (fast)	—	
4	29.382	—	25.0	26.7	25.8	29.3	N by W, 0-2	7	0-15	cq	—	S.-cu. 10, N (fast)	—	
6	29.405	—	25.8	26.5	25.5	30.0	N, 2-4	10	0-22	cq	—	S.-cu. 8, NE (slow)	—	
8	29.399	—	25.5	27.2	25.8	28.0	N, 2	11	8-12	oc	—	S.-cu. 9, NE (slow)	—	
10	29.417	—	26.5	28.0	26.2	28.5	Lt. N airs	7	0-5	o	—	S.-cu. 9	—	
Midt.	29.417	—	25.0	27.8	25.0	—	N, 1-2	3	8-10	oc	—	S.-cu. 9	—	
Mean	29.371	—	—	26.0	25.1	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 28°-5.	Solar radiation		black bulb 137°-2.	Evapn. — grammes.		Precipn. — in.						
		8 p. 29°-5.			bright bulb 64°-0.									

2	29.419	—	24.0	28.0	27.2	29.0	N, 1	5	8-10	oc * <sup>2</sup>	—	Cu. 10	—	<p>11th.</p> <p>Snowing heavily. Fog passing over Observation Hill, at alt. of about 500 ft., from N.</p> <p>Very wind-blown Str. to E; S.-cu. to S; and dark Nim. to SW and W. Land obscured from NW to S.</p> <p>Snow began to fall at 2.30 in hexagonal flakes of a very soft nature.</p> <p>Snow in nuclei finer flakes and sleety.</p> <p>Very dark Nim. to S and SW. Heavy Nim. over western mountains. Fog on Crater Hill.</p> <p>Nim. breaking overhead.</p> <p>Noon. Mean of 10 observations: with aspirator, dry bulb 30°-6, wet bulb 28°-6; from screen, dry bulb 31°-41, wet bulb 29°-02.</p> <p>Dull, overcast, and snowing nearly all day. Wind light E<sup>v</sup>. Barometer rising steadily all day. Temperature steady and higher.</p>
4	29.446	—	26.8	28.0	27.0	30.0	Lt. N airs	2	0	oc * <sup>2</sup>	—	Cu. 10	—	
6	29.456	—	26.0	29.0	28.5	32.0	Lt. N airs	3	0	oc * <sup>2</sup>	—	Cu. 10	—	
8	29.476	—	28.0	30.2	28.0	32.0	Var. NE, 0-1	2	0-8	o *	—	N. 10	—	
10	29.485	—	27.2	30.0	28.2	31.0	E, 1-2	8	5-15	o *	—	N. 10	—	
Noon	29.489	—	29.0	31.8	29.0	33.0	E, 1	9	5-12	bc	—	Fr. S. 4	—	
2	29.500	—	30.7	32.0	31.2	39.0	ESE, 0-1	9	0	oc	—	S.-cu. 10, SE (slow)	—	
4	29.513	—	29.8	30.0	29.5	31.2	Calm	2	0	oc *	—	N. 10	—	
6	29.526	—	28.2	29.7	29.0	32.2	SE, 1-2	7	0-15	oc * <sup>2</sup>	—	N. 10	—	
8	29.535	—	28.0	29.1	28.2	30.2	E, 1	8	8-10	o *	—	N. 10	—	
10	29.550	—	28.2	30.0	28.0	30.5	SE, 1	5	0-12	o *	—	N. 10	—	
Midt.	29.561	—	27.5	28.1	27.2	28.8	E, 1	9	5-12	o *	—	N. 10	—	
Mean	29.496	—	—	29.7	28.4	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 32°-2.	Solar radiation		black bulb 134°-0.	Evapn. — grammes.		Precipn. 0.03 in. since 4 p.m. 22nd ult.						
		8 p. —.			bright bulb 70°-2.									

2	29.556	—	25.0	26.0	25.0	27.0	E, 1	9	8-12	o *	—	N. 10	—	<p>12th.</p> <p>Threatening look to S, no land visible. Snowing very slightly and very sleety.</p> <p>Low Str. all round up to 50° alt.; S.-cu. passing overhead; high fog passing in E to S fast; sky very streaky and wind blown; all land invisible from S to NW; heavy Nim. in W and SW.</p> <p>2 p.m. Scud driving to S rapidly; dull to S and W, clear to N and E.</p> <p>3 p.m. Rain band, 2.</p> <p>4 p.m. Base of western mountains visible; very threatening to S and SW; sun gleaming.</p> <p>6 p.m. Cu. at foot of western mountains and Nim. on summit; fog streaming over Observation Hill.</p> <p>8 p.m. Low Str. about 500 ft. (alt.) over sky, covering all land above that alt.</p> <p>10 p.m. Snowing slightly; fog over Observation Hill and covering Crater Hill, passing to S.</p> <p>Noon. Mean of 10 observations: with aspirator, dry bulb 30°-6, wet bulb 29°-1; from screen, dry bulb 31°-8, wet bulb 29°-0. Dull, overcast, and snowing most of day. Wind light N<sup>w</sup> to fresh. Barometer remained pretty steady all day. Temperature steady.</p>
4	29.559	—	25.1	27.0	26.0	29.5	E, 1-2	12	5-10	o *	—	N. 10	—	
6	29.562	—	26.7	29.2	27.9	33.0	NE, 1	7	5-10	o *	—	N. 10	—	
8	29.563	—	28.0	29.2	28.0	35.0	Calm	1	0	o *	—	N. 10	—	
10	29.567	—	28.8	30.5	29.0	35.5	Lt. N airs	1	0-5	bc	—	Cu. 5	—	
Noon	29.519	—	29.0	30.8	29.0	32.0	N, 1	5	5-10	bc	—	A.-cu. 3, N	—	
2	29.537	—	29.3	30.2	29.0	36.0	N, 1-2	7	0-15	bc	—	S.-cu. 5, N	—	
4	29.528	—	29.8	30.7	29.6	34.2	NNE, 2-3	7	5-18	oc	—	S.-cu. 10	—	
6	29.526	—	28.5	29.4	28.5	31.7	N, 1	7	5-10	oc	—	S.-cu. 10, N (mod.)	—	
8	29.528	—	27.5	28.0	27.5	29.5	N, 1	7	5-12	o	—	S.-cu. 10	—	
10	29.528	—	27.0	28.0	27.2	28.0	N, 1-2	6	5-12	o *	—	N. 10	—	
Midt.	29.538	—	27.2	28.0	27.0	28.0	Calm	0	0	o *	—	N. 10	—	
Mean	29.515	—	—	28.9	27.8	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 30°-2.	Solar radiation		black bulb 129°-8.	Evapn. — grammes.		Precipn. 0.01 in. since 4 p.m. 11th.						
		8 p. 32°-0.			bright bulb 67°-4.									

1903—January.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

13th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.539	—	28.0	28.0	27.5	32.0	N, 1-2	2	10-15	o*	—	N. 10	—	Snow covering the thermometer (exposed) in sunshine.
4	29.544	—	27.0	28.0	27.2	32.0	Var. E, 1	6	5-10	of*	—	N. 10	—	
6	29.553	—	26.8	27.2	26.5	32.0	E by S, 1	5	5-10	of*	—	N. 10	—	
8	29.577	—	24.0	26.0	25.0	32.0	E, 1	13	0-8	oc*	—	N. 10	—	
10	29.601	—	24.8	26.0	25.1	31.2	E, 1	11	5-12	o*	—	N. 10	—	
Noon	29.601	—	25.0	26.8	25.8	30.8	ENE, 1-3	10	12-23	o*	—	N. 10	—	Clouds inclined to break overhead and to SE. Very thick all round.
2	29.603	—	25.3	27.0	26.0	31.8	Var. E, 2-3	13	10-20	oc*†	—	N. 10	—	Sun gleaming; White Island visible.
4	29.605	—	26.0	27.8	26.4	32.0	ENE, 1-2	11	5-10	oc*†	—	S.-cu. 9	—	3 p.m. Rain band, 2.
6	29.614	—	27.0	30.5	28.6	34.3	S by E, 0-1	4	0	bc	Cl.-cu. 4, NW	S.-cu. 4	—	Appearance of changing in N and E; sun gleaming; base of Mt. Discovery visible.
8	29.614	—	28.0	29.2	27.8	31.0	Lt. E airs	3	0	oc	—	S.-cu. 10	—	6 p.m. Clear with Cl. to N and E, very dull to S; mirage to NW; sun breaking through at times.
10	29.624	—	27.0	27.5	26.2	28.8	Calm	4	0	o*	—	N. 10	—	Snowing slightly; very dark to S; no land visible.
Midt.	29.616	—	25.0	26.8	25.8	28.0	E, 0-1	0	8-10	oc	—	Cu. 8	—	Sky clearing; White Island visible; sun shining.
Mean	29.591	—	—	27.6	26.5	—	—	—	—	—	—	—	—	Noon. Mean of 10 observations; with aspirator, dry bulb 26°1, wet bulb 25°1; from screen, dry bulb 26°0, wet bulb 25°0. Overcast all day with heavy snowfall. Wind variable E by light. Barometer rising steadily most of the day. Temperature steady.
Max. therm. { 8 a. 29°0. read at { 8 p. 31°5. Solar radiation { black bulb 119°8. bright bulb 61°3. Evapn. — grammes. Precipn. 0.08 in. since 4 p.m. 12th.														

14th.

2	29.617	—	20.0	24.0	23.0	28.5	Var. E, 1	0	10-12	bc	—	Cu. 6	—	Very black and threatening to W.	
4	29.619	—	22.5	26.0	24.0	30.0	Var. E, 1	8	8-10	bc	—	S.-cu. 4	—		
6	29.617	—	23.0	25.8	25.0	28.0	Lt. var. airs	3	0	oc	—	S.-cu. 8	—		
8	29.628	—	25.0	27.0	25.0	29.5	S by E, 2-3	3	15-20	oc	—	S.-cu. 8	—		Heavy S.-cu. over western hills, bases visible.
10	29.633	—	24.8	20.2	25.0	30.1	SSE, 2	9	10-15	bc	—	S.-cu. 4, S (slow)	—		Heavy Nim. to W and SW, S.-cu. to S, light winds blowing, Cl. and Ci.-s. to E, Cu. to N.
Noon	29.630	—	25.2	26.8	25.2	27.8	S by E, 2-3	10	15-22	bc†	Ci.-s. 2	Cu. 4, SE (slow)	—		Noon. Cu. over all land to S, SW, and W, and same as at 10 a.m.
2	29.632	—	25.5	28.0	26.6	30.0	SSE, 2-4	13	15-25	bcq†	Ci.-s. 2, NW (slow)	Cu. 4, SE (slow)	—		2 p.m. Fog to S and W, lifting to SW. Light surface drift.
4	29.629	—	26.0	27.0	25.6	29.0	S by E, 2-4	11	15-25	ocq†	Ci.-cu. 2	S.-cu. 7, S (mod.)	—		3 p.m. Rain band, 4.
6	29.636	—	20.5	27.0	25.8	28.5	S by E, 2-3	10	10-20	oc	—	S.-cu. 9, S (mod.)	—		4 p.m. Light surface drift; sun gleaming; clouds sinking.
8	29.629	—	25.0	26.0	25.0	27.5	S, 2	9	10-18	o*	—	N. 10	—		6 p.m. Heavy banks of Nim. to W; fog to N and E; break in clouds to S.
10	29.635	—	24.5	25.0	24.0	25.0	SSE, 1-2	10	0-10	o*	—	N. 10	—		
Midt.	29.634	—	23.0	24.9	24.2	25.1	SE, 1-2	8	0-10	o*	—	N. 10	—		
Mean	29.628	—	—	26.1	24.9	—	—	—	—	—	—	—	—	Noon. Mean of 10 observations; with aspirator, dry bulb 27°2, wet bulb 26°6; from screen, dry bulb 27°18, wet bulb 26°51. Overcast most of the day with occasional snow. Wind strong S by. Barometer rose very slowly. Temperature steady.	
Max. therm. { 8 a. 29°5. read at { 8 p. 29°0. Solar radiation { black bulb 142°8. bright bulb 72°8. Evapn. — grammes. Precipn. 0.01 in. since 6 p.m. 13th.															

15th.

2	29.635	—	24.5	25.1	24.5	25.4	SE, 1-2	7	5-10	o	—	S. 10	—	Heavy Nim. on western mountains, S.-cu. to S and SW, clear to NW, Nim. to SE.	
4	29.631	—	24.5	26.0	24.8	26.5	Var. SE, 1-2	9	8-12	o	—	Cu. 8, S (slow)	—		
6	29.627	—	25.0	26.5	25.1	28.8	Lt. SE airs	7	0-8	o	—	S.-cu. 10	—		
8	29.619	—	25.5	27.1	25.5	30.5	Lt. SE airs	4	5-12	bc	Cl. 3	A.-s. 5, SE (slow)	—		Dark Str. over western mountains, bases of mountains visible. Fog to S and SE approaching. Clear to N. Very wind-blown appearance in sky.
10	29.615	—	26.0	27.0	26.0	32.0	E, 1-2	11	5-15	bc*	Ci.-s. 4, S (slow)	Fr.-n. 2, SE (mod.)	—		10 a.m. Low Str. on Crater and Observation Hills; very thick all round; sky very wind blown.
Noon	29.596	—	26.0	27.0	26.0	29.2	E, 1-2	8	10-20	bc	Cl.-s. 5, S (slow)	Fr.-s. 2, SE (fast)	—		Noon. Western mountains visible through thin fog; sky very wind blown; summits of Crater and Observation Hills covered with passing fog from SE.
2	29.569	—	26.6	28.0	26.2	33.0	Var. SE, 2-3	13	10-22	bc	Cl.-a. 6, SW (slow)	Cu. 2, SE (mod)	—		2 p.m. Banks of Cu. on base of western mountains and on summit of Mt. Discovery; fog on Crater Hill; detached Cu. on N horizon, globular on under side.
4	29.554	—	26.7	27.3	25.5	31.2	Var. E, 2-3	9	10-20	bc	Ci.-s. 6, SW (slow)	—	—		3 p.m. Rain band, 3.
6	29.548	—	26.5	26.5	25.0	28.0	Var. E, 2-3	11	5-10	bc	Cl.-cu. 4, W (slow)	—	—		6 p.m. S.-cu. all round; Cl.-s. to N; western mountains obscured.
8	29.540	—	25.0	26.0	24.2	28.0	Var. E, 1-2	9	5-12	bc	Ci.-cu. 2, W (slow)	—	—		8 p.m. S.-cu. all round; western mountains obscured; other land visible.
10	29.533	—	22.0	25.0	23.2	25.0	ESE, 1	9	5-10	oc	—	A.-cu. 8	—	10 p.m. to Midt. Heavy S.-cu. on western mountains, extending to SSE; summits and bases visible.	
Midt.	29.526	—	22.0	24.0	23.0	24.0	SE, 1	4	5-10	oc	—	A.-cu. 8	—	Noon. Mean of 10 observations; with aspirator, dry bulb 27°6, wet bulb 27°3; from screen, dry bulb 27°06, wet bulb 26°14. Overcast early, but clearing, becoming overcast again in evening. Fresh variable E by wind. Barometer falling steadily all day. Temperature steady. The ice as seen from Arrival Bay heights appeared to have gone out as far as the islands; heavy pack on horizon.	
Mean	29.583	—	—	26.3	24.9	—	—	—	—	—	—	—	—		
Max. therm. { 8 a. 28°5. read at { 8 p. 29°0. Solar radiation { black bulb 130°0. bright bulb 65°0. Evapn. — grammes. Precipn. 0.004 in. since 4 p.m. 14th.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.509	—	22.0	23.0	22.0	23.0	Var. N to S, 1	9	5-10	oc	—	S.-cu. 9	—	<p>16th.</p> <p>S.-cu. on summits of western mountains and extending to S.</p> <p>9 a.m. Summits of western mountains visible, Str. below.</p> <p>Layers of Str. on western mountains, summits visible; fog on Crater Hill passing to W.</p> <p>Noon. Layers of Str. on western mountains and to SW and S; Cl.-s. much wind blown to S; fog on Crater Hill passing to W.</p> <p>2 p.m. Fog on Crater Hill; Nim. on western mountains, base and summits visible; S.-cu. to N and E; clear to S. Erebus smoke going high and N<sup>v</sup>.</p> <p>3 p.m. Rain band, 2.</p> <p>4 p.m. S.-cu. all round horizon. Upper clouds very regular in formation and spreading to W and N.</p> <p>Detached portions of Cu. breaking from E and driving to W, and then to NW; Str. all round; Cu. very low.</p> <p>Fog driving over Crater and Observation Hills from E.; high fog all round.</p> <p>Fog driving over eastern hills from E; fog bank all round; western mountains obscured. Strong wind blowing down from Seal Bay; very black to S; fog all round. Noon. Mean of 10 observations; with aspirator, dry bulb 23°·8, wet bulb 22°·8; from screen, dry bulb 23°·6, wet bulb 22°·5. Overcast until 4 p.m., when it cleared and remained so. Wind fresh to strong, variable Ely in direction. Barometer rose after 2 p.m. Temperature lower, but steady. As seen from Observation Hill the ice apparently went out as far as the glacier; heavy pack on horizon; one large iceberg (tabular) in NW on horizon.</p>	
4	29.509	—	22.5	24.0	23.8	25.8	Var. SE, 1	6	5-8	oc	—	S.-cu. 9	—		
6	29.509	—	22.0	25.0	24.0	26.0	Var. SE, 1-2	8	10-15	oc	—	S.-cu. 9	—		
8	29.495	—	23.0	25.0	24.0	25.8	Var. E, 1-2	10	10-15	oc	—	S. cu. 9	—		
10	29.510	—	23.5	24.0	23.5	27.5	Var. E, 2-3	10	15-20	oc	Cl.-cu. 8, SE (slow)	—	—		
Noon	29.508	—	22.8	23.5	22.5	26.6	Var. E, 3	13	15-23	oc +	Cl.-cu. 6, SE (slow)	Fr.-s. 2, SE (mod.)	—		
2	29.509	—	21.3	23.0	22.2	28.0	Var. E, 2-4	15	10-23	bcq +	Cl.-cu. 4, SE (slow)	S.-cu. 2, E (mod.)	—		
4	29.518	—	22.3	22.8	21.7	27.6	Var. E, 3-4	13	15-25	bc +	Cl.-cu. 6, S (slow)	S.-cu. 2, E (mod.)	—		
6	29.533	—	21.8	22.4	21.0	26.3	Var. E, 2	11	10-15	bc	Cl.-cu. 3, S (slow)	S.-cu. 3, E (fast)	—		
8	29.543	—	21.0	22.0	21.0	25.0	Var. E, 2	9	10-15	b	—	—	—		
10	29.553	—	20.0	20.2	20.0	21.0	NE, 2	10	10-15	b	—	—	—		
Mldt.	29.560	—	19.8	23.0	22.0	26.8	Calm	10	0	bc	Cl.-cu. 4	—	—		
Mean	29.521	—	—	23.2	22.3	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 27°·0.  
8 p. 26°·0. Solar radiation { black bulb 120°·2.  
bright bulb 59°·7. Evapn. — grammes. Precipn. — in.

tains obscured. Strong wind blowing down from Seal Bay; very black to S; fog all round. Noon. Mean of 10 observations; with aspirator, dry bulb 23°·8, wet bulb 22°·8; from screen, dry bulb 23°·6, wet bulb 22°·5. Overcast until 4 p.m., when it cleared and remained so. Wind fresh to strong, variable Ely in direction. Barometer rose after 2 p.m. Temperature lower, but steady. As seen from Observation Hill the ice apparently went out as far as the glacier; heavy pack on horizon; one large iceberg (tabular) in NW on horizon.

2	29.575	—	20.0	22.0	21.0	24.0	Calm	1	0	bc	—	Cu. 6	—	<p>17th.</p> <p>Tops of Crater and Observation Hills obscured by mist.</p> <p>No land visible to W. Fog passing Observation Hill from N.</p> <p>Low S.-cu. all round.</p> <p>Extremely close and dull. Western mountains obscured.</p> <p>3 p.m. Rain band, 1.</p> <p>4 p.m. Clouds apparently lifting, base of western land visible.</p> <p>6 p.m. Dark blue sky to N. Western mountains clear up to 3000 feet.</p> <p>Land visible up to 2000 feet, obscured above. Clearing to S.</p> <p>Clearing to S, S.-cu. apparently rising.</p> <p>Noon. Mean of 10 observations; with aspirator, dry bulb 23°·7, wet bulb 23°·0; from screen, dry bulb 24°·6; wet bulb 23°·2.</p> <p>Overcast nearly all day, with hardly any wind. Barometer rose until 8 p.m., and then commenced to fall. Temperature steady.</p>
4	29.592	—	21.0	22.0	21.5	26.0	Calm	0	0	bc	—	Cu. 8	—	
6	29.603	—	19.0	23.0	22.0	26.8	NE, 1	0	8-10	bc	—	Cu. 9	—	
8	29.626	—	18.0	19.2	18.0	23.0	NE, 1-2	8	8-15	bc	—	Cu. 9	—	
10	29.644	—	19.1	23.2	22.1	29.0	NE, 1	7	0-8	oc	—	Cu. 10, NW	—	
Noon	29.646	—	23.8	24.5	23.1	30.8	Lt. NE airs	2	0	o	—	S.-cu. 10	—	
2	29.645	—	24.5	26.8	25.3	31.0	Calm	5	0	oc	—	S.-cu. 10	—	
4	29.651	—	25.4	25.4	24.3	30.5	Calm	1	0	oc	—	S.-cu. 10	—	
6	29.656	—	24.8	25.7	24.0	27.0	Calm	1	0	oc	—	S.-cu. 10	—	
8	29.659	—	23.5	24.1	23.2	26.0	Calm	2	0	oc	—	S.-cu. 10	—	
10	29.643	—	23.5	24.0	23.0	25.5	Calm	3	0	oc	—	S.-cu. 10	—	
Mldt.	29.635	—	23.5	24.0	23.0	24.5	Calm	3	0	oc	—	S.-cu. 10	—	
Mean	29.631	—	—	23.7	22.5	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 24°·2.  
8 p. 23°·5. Solar radiation { black bulb 117°·6.  
bright bulb 51°·6. Evapn. — grammes. Precipn. — in.

Overcast nearly all day, with hardly any wind. Barometer rose until 8 p.m., and then commenced to fall. Temperature steady.

2	29.613	—	23.2	24.0	23.0	24.8	N, 1	5	0-8	oc	—	S.-cu. 10	23.9	<p>18th.</p> <p>Golden sky to S; S.-cu. about 4000 ft.; wind shifting from N to NE.</p> <p>Heavy S.-cu. on western mountains extending to SW.</p> <p>Layers of S.-cu. on western mountains, summits just obscured. Bluish-green sky low down from SE to W.</p> <p>Noon. Layers of S.-cu. on western mountains rising, extending to S. Clearing generally.</p> <p>2 p.m. Clouds driving in detached portions from SE, Nim. on summits of western mountains, clear to S and E.</p> <p>3 p.m. Rain band, 0. Temp. at Cape Armitage, 28°·0 (in sun); min., 13°·0. Erebus smoke (very little) going NE<sup>v</sup>.</p> <p>4 p.m. Very dull to W; small Cu. on summits of White Island, and on summits of western mountains.</p> <p>6 p.m. Detached Cu. driving from E. Nim. along N horizon.</p> <p>8 p.m. S.-cu. to SW, detached Cu. on western mountains; very misty all round.</p> <p>10 p.m. S.-cu. from NW to S; slight mist all round horizon. Slight S.-cu. half-way down western mountains to Mt. Discovery; detached Cu. to S. Noon. Mean of 10 observations; with aspirator, dry bulb 27°·3, wet bulb 26°·7; from screen, dry bulb 28°·2, wet bulb 26°·0. Overcast until about 2 p.m., then cleared and remained clear. No wind. Barometer falling all day. Temperature steady.</p>
4	29.606	—	23.7	25.0	23.6	26.7	N, 1	7	0-8	oc	—	S. 10	—	
6	29.594	—	24.8	25.1	24.4	28.0	N, 1	2	0-5	oc	—	S. 10	—	
8	29.578	—	24.5	26.0	24.5	28.2	Lt. N airs	1	0	oc	—	S. 10	—	
10	29.577	—	24.0	27.0	25.0	32.0	Calm	0	0	oc	—	S.-cu. 10	—	
Noon	29.567	—	27.0	28.0	25.8	35.5	Calm	0	0	oc	—	S.-cu. 9, N (slow)	—	
2	29.552	—	26.2	28.0	25.4	33.0	Calm	2	0	b	—	Cu. 5, SE (mod.)	—	
4	29.533	28.0	26.0	28.0	26.0	32.8	Calm	2	0	b	—	Cu. 2, E (mod.)	—	
6	29.527	—	26.5	26.8	25.0	32.6	Calm	1	0	b	—	—	—	
8	29.511	—	26.0	27.0	25.5	28.0	Calm	0	0	bm	—	—	—	
10	29.494	—	22.5	25.2	22.0	23.2	Lt. N airs	2	0	b	—	—	—	
Mldt.	29.477	—	21.0	22.0	21.0	23.0	Lt. N airs	2	0	b	—	—	—	
Mean	29.552	—	—	26.0	24.3	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 26°·2.  
8 p. 31°·6. Solar radiation { black bulb 117°·2.  
bright bulb 59°·8. Evapn. — grammes. Precipn. — in.

all round horizon. Slight S.-cu. half-way down western mountains to Mt. Discovery; detached Cu. to S. Noon. Mean of 10 observations; with aspirator, dry bulb 27°·3, wet bulb 26°·7; from screen, dry bulb 28°·2, wet bulb 26°·0. Overcast until about 2 p.m., then cleared and remained clear. No wind. Barometer falling all day. Temperature steady.

1903—January.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

19th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, sec p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.451	—	14.8	21.5	20.0	23.0	Lt. N airs	3	0	bm	—	—	—	—	Mist all round horizon and very low. Layers of S.-cu. from SW to S on all land around.	
4	29.422	—	20.0	20.0	19.0	23.0	N, 1	4	0-8	b	—	—	—	—	Bank of Str. from NW very low extending to SE, obscuring Bluff and White Island. Detached S.-cu. on western mountains to S.	
6	29.400	—	18.0	18.0	17.2	18.0	N, 1	3	0-8	b	—	—	—	—	8 a.m. High fog over western mountains extending to SE, summit of True Bearing Peak just visible above it.	
8	29.393	—	13.2	23.0	21.8	27.5	Calm	1	0	b	—	—	—	—	Noon. Low fog all round. Str. on summits of Crater and Observation Hills passing from E.	
10	29.377	—	22.8	24.8	23.1	29.2	Calm	1	0	bc	—	—	Cu. 4, N	—	2 p.m. Fog on Crater and Observation Hills. Mirage to S and SW.	
Noon	29.350	—	21.0	23.0	22.0	29.5	NE, 1	5	0-8	oc	—	—	S.-cu. 10, N	—	3 p.m. Rain band, 2.	
2	29.318	—	21.7	22.3	21.6	28.2	ENE, 2	5	10-15	oc	—	—	S. cu. 10, NE	—	4 p.m. Clouds very low, base of White Island to S, and western mountains just visible.	
4	29.292	—	21.6	22.2	21.0	27.3	Var. SE, 0-2	3	0-12	ocq	—	—	S.-cu. 10	—	6 p.m. Sun gleaming at times, blue sky on N horizon.	
6	29.266	—	20.8	21.4	20.2	24.0	ESE, 1-2	3	5-10	oc	—	—	S.-cu. 10	—	Noon. Mean of 10 observations: with aspirator, dry bulb 21° 2, wet bulb 20° 5; from screen, dry bulb 22° 1, wet bulb 21° 5.	
8	29.222	—	21.0	22.5	21.2	29.0	Calm	4	0	oc	—	—	S.-cu. 10	—	Fine till after 10 a.m., when it became overcast and remained so for the rest of the day. Hardly any wind. Barometer falling rapidly all day. Temperature lower and falling.	
10	29.190	—	21.0	22.5	21.0	23.0	Calm	1	0	oc	—	—	S.-cu. 10	—		
Midt.	29.156	—	18.0	20.0	19.5	21.0	Lt. Var. airs	3	0	oc	—	—	S.-cu. 10	—		
Mean	29.320	—	—	21.8	20.6	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 23° 0.		8 p. 27° 0.		Solar radiation		black bulb 125° 2.		bright bulb 59° 8.		Evapn. — grammes.		Precipn. — in.		

20th.

2	29.134	—	18.0	19.0	18.5	20.0	Var. E, 3	9	18-20	oc	—	—	Cu. 10	—	Tops of Crater and Observation Hills obscured. Very thick all round.	
4	29.100	—	17.0	20.0	19.8	20.0	E, 2-3	7	15-20	oc	—	—	Cu. 10	—		
6	29.091	—	16.0	18.0	17.5	20.0	E, 2-3	10	15-20	oc	—	—	Cu. 10	—		
8	29.088	—	16.0	17.0	16.8	20.0	E, 2-3	0	10-18	oc	—	—	Cu. 9	—		
10	29.093	—	15.0	16.5	16.0	20.6	E, 1-2	10	10-12	oc	—	—	S. 10	—		
Noon	29.085	—	15.0	16.8	16.0	19.8	SSE, 1-2	7	8-12	oc	—	—	S. 10, SE (fast)	—		
2	29.068	—	15.8	17.6	16.3	22.3	Var. SE, 2-3	9	10-20	b	—	—	—	—		
4	29.049	—	16.0	19.7	18.0	20.8	NE, 1-2	9	5-12	b	—	—	—	—		
6	29.050	—	18.7	19.6	18.0	22.3	Calm	4	0	b	—	—	—	—		
8	29.040	—	18.8	20.2	18.5	25.8	Calm	1	0	b	—	—	—	—		
10	29.036	—	15.0	17.0	15.2	20.5	Lt. NW airs	1	0	b	—	—	—	—		
Midt.	29.030	—	14.2	16.2	15.0	20.5	Calm	1	0	b	—	—	—	—		
Mean	29.073	—	—	18.1	17.1	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 23° 0.		8 p. 25° 2.		Solar radiation		black bulb 117° 8.		bright bulb 50° 6.		Evapn. — grammes.		Precipn. — in.		

21st.

2	29.011	—	14.0	20.5	18.0	23.0	Var. NE, 1	3	0-8	oc	—	—	Cu. 9, NW (fast)	—	Misty all round horizon; blue sky in N.	
4	28.965	—	18.0	24.2	23.0	28.0	Lt. NE airs	2	0-5	oc	—	—	N. 10	—	Very bright to S and W.	
6	28.960	—	20.2	29.0	26.5	30.0	W, 1-3	0	8-20	oc	—	—	N. 10	—	Very heavy Nim. from N to W over hills, tops obscured; very black and foggy.	
8	28.964	—	25.0	25.2	25.0	26.0	S, 3	0	15-20	oc*	—	—	N. 10	—	6.35. Snowing slightly and squally.	
10	28.958	—	14.0	16.5	16.5	19.0	NE, 4-5	24	20-27	o+	—	—	N. 10	—		
Noon	28.954	—	15.5	22.2	21.6	27.2	Var. E, 2-3	13	10-20	o+	—	—	N. 10	—	Very thick all round; wind gusty; sun gleaming at intervals.	
2	28.955	—	21.0	25.7	24.2	28.0	S, 2-4	9	10-25	ocq+	—	—	Cu. 10 S (mod.)	—	Very dark Nim. to S and SW; a break in sky overhead and to S; heavy surface drift.	
4	28.940	—	24.2	26.2	25.0	27.2	S, 2-4	13	10-27	ocq+	—	—	Cu. 10, S	—	3 p.m. Rain band, 2.	
6	28.897	—	24.8	20.6	25.0	28.0	S, 1-3	12	5-20	ocq	—	—	Cu. 9, S (mod.)	—	4 p.m. Western mountains visible; clearing on SW horizon.	
8	28.856	—	25.0	28.5	26.2	29.0	Lt. S airs	9	0-8	oc	—	—	Cu. 10	—	6 p.m. Barometer pumping; reflection of sun on western mountains; wind very squally; sun gleaming at times; Nim. to S and W.	
10	28.842	—	28.0	28.0	26.2	28.8	Lt. S airs	0	0	oc	—	—	Cu. 9	—	9 p.m. Heavy Nim. over western mountains, clearing to S. Sky very windy appearance in S, dark, water sky and Nim. in NW and N.	
Midt.	28.838	—	24.0	27.0	25.8	28.0	Lt. S airs	4	5-10	oc	—	—	Cu. 8	—	Overcast all day, with light snowfall. Wind very squally and strong from S, falling to light airs in the evening. Barometer falling all day. Temperature higher and unsteady.	
Mean	28.929	—	—	25.0	23.6	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 28° 8.		8 p. 29° 0.		Solar radiation		black bulb 116° 0.		bright bulb 55° 0.		Evapn. — grammes.		Precipn. 0.003 in. since 4 p.m. 15th.		

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unascended.	Direction and force (Beaufort scale).		Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.											
2	28.836	—	27.0	28.0	26.2	27.0	Var. S, 1-2	5	5-10	oc	—	—	Cu. 9, N	—	<p>22nd.</p> <p>Weather threatening; wind shifty, varying from S to SW; Nim. to S and SW and on western mountains.</p> <p>4 a.m. Very thick to S, land obscured. Heavy Nim. to W, extending to S; slight drift.</p> <p>Very thick all round; wind squally.</p> <p>Very squally and thick.</p> <p>3 p.m. Rain band, 1. Barometer pumping, wind very squally; clearing to S and SW; sun gleaming. Clearing overhead and to S; heavy flaky Nim. to W; sun gleaming.</p> <p>Heavy Nim. over western mountains; Fr.-s. passing rapidly from SW; heavy drift clouds over all lower hills to S and SW; very windy appearance generally.</p> <p>10 p.m. Very dark heavy Nim. to W and over western mountains; very windy look all round; Ci.-cu. visible through patches of Cu.</p> <p>Midt. Very bleak to W; no land in sight from W to SW; misty look in sky overhead; Ci. very wind-blown; heavy drift in Strait.</p> <p>Overcast all day, with light snowfall.</p>	
4	28.822	—	25.0	25.0	21.8	27.0	Var. S, 2-3	6	8-10	oc	—	—	S.-cu. 9, NE	—		
6	28.824	—	25.0	23.0	27.0	30.2	Var. SE, 2-3	6	10-15	oc	—	—	Cu. 8	—		
8	28.811	—	27.0	29.0	27.8	30.8	S by E, 1-4	7	5-28	oc *	—	—	Cu. 10	—		
10	28.804	—	27.0	28.2	27.8	30.0	S, 3-4	8	20-25	oc † *	—	—	S.-cu. 10, SW (rapid)	—		
Noon	28.845	—	25.9	27.2	26.0	28.7	S by E, 3-1	17	15-25	oc † *	—	—	N. 10, SW (rapld)	—		
2	28.869	—	26.5	27.0	26.1	28.2	Var. SE, 2-4	14	10-30	ocq †	—	—	S.-cu. 10, S (fast)	—		
4	28.916	—	26.0	26.7	25.6	29.6	Var. SE, 1-3	8	8-22	ocq †	—	—	S.-cu. 10, S (fast)	—		
6	28.938	—	25.7	26.3	24.6	27.4	SSE, 1-3	11	10-22	ocq	—	—	Cu. 9, SE (mod.)	—		
8	28.979	—	24.0	24.6	21.0	21.8	SSE, 3-4	10	18-26	ocq †	—	—	Ci.-cu. 6	—		
10	29.050	—	20.0	21.0	20.0	21.0	Var. E, 3	13	15-22	ocq †	—	—	Ci.-cu. 7	—		
Midt.	29.122	—	18.0	18.0	17.8	18.2	E, 3-4	13	15-25	bcmq †	—	—	Ci. 2	18.0		
Mean	28.901	—	—	25.8	24.8	—	—	—	—	—	—	—	—	17.6		

Max. therm. read at { 8 a. 31°·2. 8 p. 30°·8. Solar radiation { black bulb 121°·2. bright bulb 62°·8. Evapn. — grammes. Precipn. — in.

Wind strong, variable Ely and Sly, and very gusty. Much surface drift, and at times high drift. Barometer fell until 10 a.m., and then rose rapidly for the rest of the day. Temperature higher whilst wind was in S, but fell as wind went to E. As seen from Arrival Bay Heights, ice appears to have gone out to the foot of the glacier snout; also a large lane of open water is visible over on the W shore.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unascended.	Direction and force (Beaufort scale).		Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.											
2	29.179	—	15.2	16.0	15.5	16.8	SE, 3-4	18	15-25	ocq †	—	—	A.-cu. 9, S (slow)	—	<p>23rd.</p> <p>Very squally; sky clearing to S; blue sky to N; detached Cu. and very wind-blown Str. over SW land; W land obscured.</p> <p>2.30 a.m. Very heavy squalls; much drift in Strait.</p> <p>4 a.m. Clear and bright to S; S.-cu. from SW to W; foot hills visible; light detached Cu. to NW with bc; very dark to N; at 5.5 a.m. very heavy squall.</p> <p>6 a.m. Light detached S.-cu. to S; clear to SW; western mountains quite clear; Ci.-cu. extending NW to W over western mountains; detached Cu. to N; Ci.-cu. to E; wind very squally; Ci. very wind blown.</p> <p>Noon. Mercury in both thermometers jumping rapidly and falling.</p> <p>2 p.m. Break in clouds in S and W; sun gleaming at times.</p> <p>3 p.m. Rain band, 2.</p> <p>4 p.m. Nim. on western mountains; detached clouds in places; sun gleaming.</p> <p>6 p.m. Nim. on western mountains; S.-cu. to S and E; blue hazy sky to N.</p> <p>8 p.m. Nim. on western mountains; Cu. in large detached form all over the sky; heavy bank of roll Cu. on S horizon.</p> <p>Cloudy all day, with very strong variable Ely wind early, and heavy squalls, falling calm during afternoon, but rising again from N in evening. Barometer rising quickly all day. Temperature rose quickly about 8 p.m., and remained higher.</p>	
4	29.194	—	11.5	15.5	15.0	16.2	Var. E, 3-6	15	20-35	ocq †	—	—	A.-cu. 8, S (slow)	—		
6	29.213	—	15.0	16.0	15.5	17.2	NE, 5-6	16	25-35	bcq †	—	—	—	17.8		
8	29.259	—	15.0	21.0	22.0	26.0	Var. E, 0-1	11	0-8	bc	—	—	—	16.9		
10	29.268	—	23.8	21.7	23.2	30.2	Calm	3	0	b	—	—	—	—		
Noon	29.288	—	21.0	27.6	25.6	31.8	Calm	5	0	oc	—	—	S.-cu. 9, S (fast)	27.2		
2	29.293	—	27.0	29.6	27.4	37.4	Calm	1	0	c	—	—	S.-cu. 9, SW (slow)	25.9		
4	29.300	—	29.2	31.0	29.0	39.0	Calm	1	0	oc	—	—	Cu. 8, SW (slow)	—		
6	29.321	—	27.0	28.2	27.2	30.0	NW, 1	3	8-10	oc	—	—	Cu. 8, W (slow)	—		
8	29.329	—	27.0	27.8	26.2	29.5	Calm	5	0	oc	—	—	Cu. 7, S (slow)	—		
10	29.321	—	27.0	28.5	27.0	29.0	N, 3-4	5	20-25	bc	—	—	S.-cu. 4, S	—		
Midt.	29.335	—	27.2	28.5	27.0	29.0	N, 3	12	15-18	oc	—	—	Cu. 9	—		
Mean	29.275	—	—	21.8	23.4	—	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 25°·2. 8 p. 30°·2. Solar radiation { black bulb 127°·8. bright bulb 66°·7. Evapn. — grammes. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unascended.	Direction and force (Beaufort scale).		Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.											
2	29.369	—	28.0	28.2	27.2	28.8	Lt. N airs	8	0	oc	—	—	Cu. 10	—	<p>24th.</p> <p>Heavy Nim. on western mountains.</p> <p>Very heavy snowfall. Snow very soft and wet, and in large flakes.</p> <p>Breaking overhead; sun gleaming at intervals; snow finer, but very damp and soft.</p> <p>2 p.m. Snow falling in large irregular flakes; wind very squally.</p> <p>3 p.m. Rain band, 4.</p> <p>4 p.m. Clear to S; Nim. on western mountains.</p> <p>6 p.m. Nim. to W and S; detached Cu. passing from S and E to N and W; reflections of sun on western mountains.</p> <p>8 p.m. Threatening appearance all round.</p> <p>10 p.m. Clearing to S; heavy Nim. on western mountains.</p> <p>Midt. Heavy and dark Nim. to W and SW; clear to S; detached Cu. to N; clearing generally.</p> <p>Overcast all day; snowing heavily all the morning, clearing later a little. Barometer continued to rise all day.</p> <p>Temperature higher and steady. At 12.15 a.m. the relief ship was seen to be steaming up the Strait, and was brought up by the ice about 8 miles from the ship. Apparently no more ice has gone out.</p>	
4	29.370	—	27.0	29.0	27.8	29.0	N by W, 1-2	2	10-15	oc	—	—	Cu. 10	—		
6	29.381	—	27.0	30.0	28.5	30.0	N, 2-3	13	15-20	oc	—	—	Cu. 10	—		
8	29.435	—	29.2	32.5	30.8	35.0	Lt. N airs	7	0	oc	—	—	N. 10	—		
10	29.471	—	30.0	30.0	29.5	32.2	Lt. SE airs	3	0-5	o *	—	—	N. 10	—		
Noon	29.491	—	28.5	30.0	29.0	32.5	E, 1-2	10	10-18	o *	—	—	N. 10, S (fast)	—		
2	29.512	—	28.8	30.0	28.7	33.7	E, 1-4	12	8-28	ocq *	—	—	N. 10	—		
4	29.510	—	29.0	30.6	28.2	34.0	Var. E, 1-3	12	5-20	ocq *	—	—	Ci.-s. 2, W	—		
6	29.521	—	29.0	29.8	27.3	29.0	ESE, 2-3	10	10-20	e	—	—	A.-s. 8, W	—		
8	29.533	—	26.0	27.0	26.0	27.8	Var. E, 2-4	12	18-25	e †	—	—	A.-cu. 9, W (slow)	—		
10	29.535	—	26.0	27.0	26.0	27.2	ENE, 2-3	13	10-18	c	—	—	A.-cu. 9, W (slow)	—		
Midt.	29.545	—	26.0	26.5	25.2	27.0	ENE, 2	10	10-15	c	—	—	A.-cu. 7, W (slow)	—		
Mean	29.473	—	—	29.2	27.8	—	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 33°·0. 8 p. 31°·0. Solar radiation { black bulb 98°·7. bright bulb 55°·3. Evapn. — grammes. Precipn. 0.04 in. since 6 p.m. 21st.

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25th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.538	—	23.0	26.0	24.8	26.0	NE, 1	10	10-12	oc		Cl. 2, W (slow)	S 9, N (mod.)	26.1	Layers of Str. on western mountains extending to SE; bright to S. Str. all round at alt. of about 2000 ft.; dark in SW. Mirage to SW, Str. apparently descending. Cu. to NE; very thick to W; sun gleaming through patches of blue sky to E; western mountains obscured. Noon. Sky clear to N and W; foot hills clear. 2 p.m. Detached Cu. passing; S.-cu. to N and W; western mountains obscured. 3 p.m. Rain band, 0. Temp. at Cape Armitage, 37° 0 (in sun), min. 3° 5. Erebus' smoke going NE. Both mountains nearly obscured, Terror completely so. 4 p.m. Dark flaky Cu. all round horizon. 6 p.m. Sky cloudless; Str. to W, SW, and S. 8 p.m. Very misty to W and S; Str. over western mountains. 10 p.m. Very thick mist covering Observation Hill, Crater Hill, and all western mountains. Midd. Mist cleared from hills in E; heavy Cu. on western mountains.	
4	29.534	—	25.0	28.0	26.2	29.0	NE, 1	7	8-10	o		—	S 10	24.8		
6	29.528	—	27.2	29.2	27.8	32.0	Calm	4	0	o		—	S 10	27.5		
8	29.501	—	28.8	30.2	28.8	33.0	NE, 1	0	5-8	oc		Cl.-s. 10	—	26.4		
10	29.501	—	29.8	31.5	29.5	35.0	Lt. N airs	2	0	oc		Cl.-s. 8	—	29.1		
Noon	29.473	—	30.8	32.0	29.2	35.5	Calm	2	0	oc		Cl. 5	—	28.0		
2	29.447	—	31.8	32.0	29.3	38.2	NNW, 0-1	2	0-8	b		—	—	—		
4	29.420	—	30.7	32.0	29.4	36.5	Calm	3	0	oc		—	Cu. 9, N (slow)	—		
6	29.389	—	30.7	31.0	28.4	35.0	ENE, 1	3	7-10	b		—	—	—		
8	29.364	—	30.0	31.0	28.8	32.2	Lt. N airs	3	0-8	b		—	—	30.4		
10	29.338	—	28.0	27.2	26.5	28.0	NE, 1-2	3	5-10	ocq		—	Cu. 10, N	27.7		
Midd.	29.319	—	26.5	27.0	26.0	27.0	N, 3-4	10	10-15	oc		Cl.-cu. 8, N	—	—		
Mean	29.446	—	—	29.8	27.9	—	—	—	—	—		—	—	—		

Max. therm. read at { 8 a. 31° 2. 8 p. 34° 0. Solar radiation { black bulb 129° 2. bright bulb 63° 0. Evapu. — grammes. Precipn. — in.

Overcast and cloudy most of the day, with light NE breezes, freshening in evening and going to N. Barometer falling steadily all day. Temperature steady. No ice apparently gone out. Heavy pack outside fast ice with some big bergs.

26th.

2	29.319	—	25.0	26.8	25.2	27.0	N, 2-3	6	10-15	oc		Cl.-cu. 9	—	—	Fr.-s. passing at intervals over from SE; Str. on western mountains; clear to S. Layers of Cu. on western mountains, summits just visible above. Fr.-s. passing overhead at intervals from ESE. 2 p.m. Cu. on western mountains and very hazy. 3 p.m. Rain band, 0. 4 p.m. Visibility good; Cu. to W. 6 p.m. Clear to E and S, but misty to N and W, Cu. on western mountains. Low bank of fog all round horizon. Noon. Mean of 10 observations; with aspirator, dry bulb 27° 3, wet bulb 26° 2; from screen, dry bulb 28° 0, wet bulb 26° 3. Overcast until about 10 a.m., when it cleared and remained clear all day. Wind fresh early from N, but fell and remained calm. Barometer continued to fall slowly all day. Temperature fell suddenly at midt., otherwise steady. No ice apparently gone out, pack as yesterday, with broad open lanes visible.
4	29.289	—	25.0	26.5	25.2	28.0	Var. N, 2-3	9	10-15	oc		Cl.-cu. 8	—	—	
6	29.292	—	26.0	27.0	25.8	29.0	Lt. N, airs	7	0-5	oc		—	Cu. 10	—	
8	29.290	—	26.2	27.0	26.0	30.8	Lt. N airs	1	0	oc		—	S.-cu. 10	—	
10	29.282	—	25.0	26.0	25.0	27.5	Calm	2	0	b		—	—	—	
Noon	29.275	—	26.0	28.0	26.2	29.5	Calm	0	0	b		—	—	—	
2	29.262	—	26.0	26.3	23.2	31.0	ESE, 1-2	5	10-15	b		—	—	—	
4	29.255	—	24.8	27.0	24.3	30.2	Calm	8	0	b		—	—	—	
6	29.251	—	24.0	24.0	22.8	30.0	Calm	2	0	b ∞		—	—	—	
8	29.251	—	26.2	27.0	26.0	30.5	Lt. N aira	4	0-5	b		—	—	—	
10	29.243	—	24.0	25.0	24.0	25.0	Calm	2	0	b		—	—	—	
Midd.	29.243	—	17.0	17.0	16.5	19.8	Calm	2	0	b		—	—	—	
Mean	29.271	—	—	25.6	24.2	—	—	—	—	—		—	—	—	

Max. therm. read at { 8 a. 31° 2. 8 p. 28° 2. Solar radiation { black bulb 119° 3. bright bulb 68° 7. Evapu. — grammes. Precipn. — in.

27th.

2	29.236	—	16.0	16.5	16.2	18.5	Calm	0	0	b		—	—	—	Mirage extending SE to SW. Mirage along western horizon. Mirage to S, much looming in W and SW. Low bank of Cu. on western mountains about half-way down, extending to SW. Much mirage in SSW and W. 2 p.m. Cu. and mirage to W. Cloud on summit of Mt. Discovery. 3 p.m. Rain band, 0. 4 p.m. Heavy horizontal Cu. rising to SW, W, and N, with mirage. 6 p.m. Extremely hazy; detached S.-cu. on horizon to W and S. 8 p.m. Very misty all round; detached Cu. to SW; clear to S. 10 p.m. to midt. Heavy S.-cu. to the S; detached Cu. from S to N. Noon. Mean of 10 observations; with aspirator, dry bulb 25° 9, wet bulb 24° 4; from screen, dry bulb 27° 5, wet bulb 25° 0. Absolutely clear all day, and flat calm. Barometer very steady, inclined to rise. Temperature low early, rising, but fell again in evening.
4	29.238	—	12.0	14.5	13.2	24.0	Calm	0	0	b		—	—	—	
6	29.228	—	16.0	17.8	16.0	31.0	Calm	0	0	b		—	—	—	
8	29.231	—	15.2	22.5	21.2	32.5	Calm	0	0	b		—	—	—	
10	29.226	—	23.5	27.0	24.5	48.0	Calm	0	0	b		—	—	—	
Noon	29.228	—	26.0	26.2	24.2	39.0	Calm	1	0	b		—	—	—	
2	29.227	—	26.2	30.4	27.5	40.0	Calm	0	0	b		—	—	—	
4	29.227	—	28.3	30.0	27.6	41.8	Calm	1	0	b ∞		—	—	—	
6	29.257	—	29.2	32.2	29.0	45.2	Calm	3	0	b ∞		—	—	—	
8	29.270	—	25.2	25.2	24.2	32.2	Calm	0	0	b		—	—	—	
10	29.290	—	22.0	22.0	20.0	24.8	Calm	0	0	b		—	—	—	
Midd.	29.293	—	16.0	17.0	16.0	19.8	Calm	0	0	b		—	—	—	
Mean	29.246	—	—	23.4	21.6	—	—	—	—	—		—	—	—	

Max. therm. read at { 8 a. 33° 2. 8 p. 34° 0. Solar radiation { black bulb 116° 8. bright bulb 60° 2. Evapu. — grammes. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.293	—	14.5	20.2	18.0	19.0	Lt. N alra	3	0-5	b	—	—	—	Detached Cu. to S, allght mirage all round.
4	29.289	—	15.0	18.0	16.8	19.0	Calm	3	0	b	—	—	—	Detached Cu. to N.
6	29.287	—	17.8	20.2	19.0	21.0	Calm	5	0	b	—	—	—	Strong mirage all round. Layer of Str. over Crater Hill extending to SE.
8	29.288	—	20.0	22.2	21.8	26.0	R, 2	9	10-15	bc	—	S-cu. 4	—	
10	29.293	—	22.5	24.0	22.8	26.0	SE, 1-2	10	8-15	b	—	—	—	Detached Cu. on western mountains and along to SW.
Noon	29.267	—	22.0	24.0	21.0	26.5	SE, 2-5	14	10-30	bq ↗	—	—	—	Cu. gathering on western mountains; clear elsewhere.
2	29.222	—	23.1	24.0	22.2	27.0	ESE, 2	8	12-17	b	—	—	—	Clouds collecting on Mt. Discovery; strips of Cu. on western mountains at about 6000 feet alt.
4	29.250	—	23.0	25.6	21.2	30.2	E, 2	9	10-15	b	—	—	—	3 p.m. Rain band, 1.
6	29.232	—	24.0	26.0	22.3	32.0	Var. E, 1-2	8	5-15	b	—	—	—	4 p.m. Str. on horizon to S and W; heavy masses of Cu. on western mountains.
8	29.200	—	—	21.2	19.0	26.2	NNE, 1-2	4	5-10	bc	Cl.-cu. 1, SW	—	—	6 p.m. S.-cu. to S; Cu. to W increasing in size; rolling bank of heavy Cu. to N.
10	29.192	—	16.0	16.2	15.0	19.0	Calm	4	0	bc	Cl.-cu. 1, SW	—	—	Noon. Mean of 10 observations; with aspirator, dry bulb 27° 0, wet bulb 22° 3; from screen, dry bulb 24° 0, wet bulb 21° 3.
Midt.	29.183	—	12.6	24.0	21.0	22.7	NE, 0-5	1	0-5	bc	—	—	—	Clear and fine all day, beginning to cloud over in evening. Wind strong midday, but fell in evening. Barometer falling generally. Temperature not so steady, and fell suddenly in evening. Apparently no ice has gone out. Pack on horizon, leaving large amount of open water.
Mean	29.250	—	—	22.1	20.0	—	—	—	—	—	—	—	—	

28th.

Max. therm. read at { 8 a. 30° 2.  
8 p. 27° 6. Solar radiation { black bulb 112° 0.  
bright bulb 55° 4. Evapn. — grammes. Precipn. — in.

2	29.159	—	9.0	10.0	8.1	12.6	Lt. N airs	1	0-8	bc	—	Cu. 2, SW	—	
4	29.148	—	9.0	24.0	22.5	24.0	N, 1	4	8-12	bc	Cl. 3, SW	Cu. 3, SW	—	Sky looking very wind blown and clouds forming quickly. Detached Cu. on western mountains; summits of Mt. Discovery and S part of western mountains visible; quite clear to NW; dark and threatening appearance to S; hazy sky.
6	29.140	—	22.0	23.2	22.2	24.6	Var. N, 1	5	0-10	oc	Cl.-s. 6, SW (slow)	Fr.-s. 3, S (mod.)	—	6 a.m. S.-cu. gathering on and over western mountains; bright and clear to NW, thick and dark to SW; heavy Str. from S to E.
8	29.120	—	23.0	25.5	24.0	27.6	Var. N, 1-2	8	10-18	o	—	S. 10	—	8 a.m. Dark and heavy Str. to S and SW; western mountains clear; visibility very marked; blue sky to NW.
10	29.111	—	25.0	27.2	24.2	32.0	Calm	6	0	o	—	S. 10	—	10 a.m. Summits of western mountains obscured in Str., lower parts quite clear.
Noon	29.096	—	24.5	25.0	21.5	29.3	E, 1	4	0-10	o	—	S.-cu. 10	24.8	Very windy appearance to S and SW.
2	29.085	—	24.5	25.4	23.2	31.0	ENE, 2-4	12	10-25	oq	—	S.-cu. 10, E	21.2	Noon. Very dark to S, visibility much marked, western mountains quite clear, Str. above their summits, blue sky beyond.
4	29.066	—	25.3	25.8	22.0	31.8	NE, 1-3	10	8-20	oq	—	S.-cu. 10, E	—	2 p.m. Air very dry, with extreme visibility, clouds appear to be lifting.
6	29.055	—	26.0	28.2	21.6	32.0	Calm	5	0	oc	—	Cu. 10, E	—	3 p.m. Rain band, 0.
8	29.058	—	27.0	30.1	25.1	32.0	Lt. var. airs	1	0-8	bc	—	Cu. 4, SW (mod.)	—	4 p.m. Sun gleaming; clearing to W.
10	29.058	—	26.0	27.8	24.2	29.0	Lt. var. airs	5	0-5	oc	—	Cu. 7, SW	—	6 p.m. Clear to W and NW, slight break overhead.
Midt.	29.058	—	26.0	27.0	23.5	27.0	Lt. var. alra	2	0-5	oc	—	S.-cu. 8, S	—	8 p.m. Very dark and threatening to S; misty over western mountains; visibility marked in S. Overcast and cloudy most of the day. Wind sprang up fresh between noon and 4 p.m., but died down again later. Barometer falling all day. Temperature fairly steady, although there was a big rise early.
Mean	29.096	—	—	24.9	22.1	—	—	—	—	—	—	—	—	

29th.

Max. therm. read at { 8 a. 25° 5.  
8 p. 35° 0. Solar radiation { black bulb 97° 7.  
bright bulb 51° 6. Evapn. — grammes. Precipn. — in.

2	29.061	—	17.0	21.0	18.0	22.0	Lt. N airs	5	0	bc	—	S 6, S	—	
4	29.058	—	18.0	19.0	17.2	19.0	Calm	0	0	bc	Cl.-s. 2, SW	—	—	
6	29.061	—	12.5	27.0	22.2	31.0	Calm	2	0	bc	Cl. 2, W	—	—	
8	29.086	—	27.0	29.0	28.5	34.0	Lt. E airs	6	0	b	—	—	—	
10	29.086	—	21.0	23.8	21.5	27.0	NE, 2-3	6	15-20	b	—	—	—	Slight mirage to W and S; detached Cu. to W above western mountains.
Noon	29.078	—	21.6	22.7	21.2	23.0	NE, 3-4	10	20-27	b	—	—	—	Str. over western mountains; visibility marked.
2	29.078	—	22.0	22.8	21.0	28.4	ENE, 3-4	20	20-30	h ↗	—	—	—	Str. to S.
4	29.085	—	22.3	23.2	21.0	28.0	ENE, 4-5	18	23-32	bc ↗	Cl.-s. 1, W	—	—	3 p.m. Rain band 2.
6	29.098	—	22.0	23.0	21.0	28.0	ENE, 2-4	15	15-30	bqc ↗	Cl.-s. 2, NW (slow)	—	—	Cu. on western mountains; visibility good; detached Cl.-s. moving W by slow.
8	29.101	—	20.0	21.0	20.0	24.0	ENE, 2-3	13	18-22	bc	Cl.-cu. 5, W (slow)	—	—	Horizontal bank of Cu. from N to W by NW about 6000 feet alt.; Str. to S; bases and summits of western mountains visible.
10	29.101	—	20.0	21.0	20.0	21.0	ENE, 3-4	14	18-25	oc	Cl.-cu. 8	—	—	8 p.m. S.-cu. on western mountains.
Midt.	29.104	—	19.0	19.8	19.0	20.0	ENE, 3	11	20-25	oc	Cl.-cu. 8	—	—	10 p.m. Bank of detached mist on western mountains.
Mean	29.083	—	—	22.8	20.9	—	—	—	—	—	—	—	—	Noon. Mean of 10 observations; with aspirator, dry bulb 24° 1, wet bulb 21° 4; from screen, dry bulb 22° 2, wet bulb 20° 45.

30th.

Max. therm. read at { 8 a. 31° 0.  
8 p. 30° 0. Solar radiation { black bulb 110° 6.  
bright bulb 58° 7. Evapn. — grammes. Precipn. — in.

Fine and clear nearly all day. Strong NE wind, falling in evening. Barometer rising slowly. Temperature steady. Open water about 7 miles away. Heavy pack on horizon. Apparently no ice has broken away lately.

1903—January.]

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31st.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.106	—	17.0	18.0	17.5	20.0	SE, 1-2	7	10-15	bc		Cl.-cu. 8	—	—	
4	29.106	—	17.0	17.5	17.0	19.0	Calm	3	0	bc		—	Cu. 9	—	
6	29.116	—	16.0	17.0	16.5	17.0	Calm	3	0	bc		—	S.-cu. 4	—	Mirage all round horizon.
8	29.135	—	13.2	16.8	16.0	26.5	Calm	2	0	bc		Cl. 2	—	—	
10	29.152	—	16.8	22.0	20.6	32.8	Calm	0	0	b		—	—	—	Mirage all round: Cl.-s. to S, detached Cu. on summit of western mountains.
Noon	29.160	—	22.0	26.2	24.8	35.0	Calm	0	0	b		—	—	—	Mirage all round: detached Cu. on summit of western mountains; Cl.-s. to SE; visibility good.
2	29.154	—	26.0	27.2	25.5	31.8	Calm	3	0	bc		Cl. 1, SW (slow)	—	—	2 p.m. Detached Cu. to W; Str. to S.
4	29.158	—	27.6	28.9	26.3	33.4	Calm	3	0	b		—	—	—	3 p.m. Rain band, 0.
6	29.169	—	26.6	27.0	25.0	32.0	Calm	0	0	b		—	—	—	4 p.m. Mirage to W and SW; detached Cu. on western mountains.
8	29.182	—	—	23.0	22.1	26.6	Calm	0	0	b		—	—	—	6 p.m. Horizontal bank of Cu. from NW to W to SW, about 4000 feet alt.
10	29.183	—	—	21.8	20.0	21.5	Calm	0	0	b		—	—	—	
Midn.	29.189	—	—	24.0	23.0	21.5	Calm	0	0	b		—	—	—	Very misty to SW; low bank of Str. over White Island.
Mean	29.151	—	—	22.5	21.2	—	—	—	—	—		—	—	—	

Max. therm. read at { 8 a. 25° 0.  
8 p. 30° 5.

Solar radiation { black bulb 112° 6.  
bright bulb 58° 0.

Evapn. — grammes.

Precipn. — in.

Fine and clear all day, with no wind. Barometer rising steadily all day. Temperature steady. No ice apparently gone out. For about 1 mile from the open water the ice is very thin and rotten. Heavy pack seen on the horizon.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.				Unscreened.					
2	29.193	—	—	13.0	12.0	24.2	Calm	0	0	b	—	—	—	1st. Heavy S.-cu. half-way down western mountains, and extending to S. Heavy S.-cu. over western mountains, bases visible. Strong mirage all round horizon. 8 a.m. Heavy Nim. and strong mirage to NW obscuring mountains; very threatening appearance. Mirage on S horizon. Slight breaks overhead, mirage to W. 3 p.m. Rain band, 1. Nim. on western mountains; clear to S; visibility good. Cu. approaching from W. Mirage at foot of western mountains. Mirage on W horizon; heavy Cu. over western mountains. Fine in morning, becoming overcast, then clearing again in the evening. Hardly any wind all day. Barometer rising slightly all day. Temperature steady.
4	29.211	—	17.8	17.8	16.0	27.5	Calm	0	0	b	—	—	—	
6	29.211	—	17.5	21.0	19.8	32.0	Calm	0	0	bc	—	Cu. 3, N	—	
8	29.211	—	20.0	22.0	21.0	27.0	SE, 1	5	5-8	oc	—	S.-cu. 7, N	—	
10	29.219	—	21.0	23.5	23.3	28.5	E, 1	5	8-10	oc	—	S.-cu. 8, N	—	
Noon	29.229	—	19.8	25.0	23.0	30.0	ENE, 1-2	8	10-15	oc	—	Cu. 10, NE	—	
2	29.231	—	24.6	26.0	24.8	34.0	ENE, 0-1	3	5-8	oc	—	Cu. 10, E	—	
4	29.228	—	26.2	28.0	25.8	32.3	Calm	0	0	oc	—	Cu. 8, E	16.7 15.4	
6	29.226	—	24.6	25.0	22.4	29.0	ENE, 1	4	5-10	b	—	—	—	
8	29.233	—	20.0	20.2	18.6	22.3	Var. E, 2	11	10-15	b	—	—	—	
10	29.235	—	19.0	22.0	20.0	23.0	E, 0-1	8	0	b	—	—	—	
Midt.	29.243	—	15.0	16.0	13.5	16.0	Calm	4	0	b	—	—	—	
Mean	29.223	—	—	21.7	19.9	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 21°-2.  
8 p. 31°-0. Solar radiation { black bulb 100°-8.  
bright bulb 56°-6. Evapn. — grammes. Precipn. — in.

2	29.246	—	14.0	20.0	17.0	22.0	Calm	1	0	b	—	—	—	2nd. Heavy mirage all round horizon; Nim. to W. Very dark and gloomy to S and over western mountains; Cl.-s. much wind blown. Mirage to W; S.-cu. approaching from NW. 3 p.m. Rain band, 3. 4 p.m. Small break in sky to W. Clouds very low; visibility to N very good; mirage along base of western mountains. 8 p.m. Visibility marked; heavy clouds over western mountains; foot-hills visible. 10 p.m. Clouds breaking in SSW and S; little or no mirage. Noon. Mean of 10 observations; with aspirator, dry bulb 26°-1, wet bulb 23°-4; from screen, dry bulb 30°-0, wet bulb 26°-1. Overcast nearly all day, with no wind. Barometer rising steadily all day. Temperature steady.
4	29.248	—	21.0	21.0	17.2	26.0	Calm	1	0	bc	—	Cu. 4, N	—	
6	29.254	—	19.0	19.2	17.0	25.0	Calm	0	0	oc	—	S.-cu. 8	—	
8	29.264	—	16.2	27.2	25.0	39.0	Calm	4	0	oc	—	Cu. 8, N	—	
10	29.284	—	25.2	25.2	24.0	29.0	Calm	1	0	oc	—	Cl.-cu. 6, SW (slow)	—	
Noon	29.289	—	24.8	27.2	25.2	45.5	Calm	1	0	bc	—	Cl.-s. 2	—	
2	29.299	—	27.3	30.2	26.0	36.8	Calm	2	0	bc	—	Cl.-cu. 4, NW	Cu. 4, E (slow)	
4	29.307	—	26.7	26.7	23.5	35.6	Calm	1	0	oc	—	—	S.-cu. 10	
6	29.320	—	26.0	27.0	22.7	29.5	Calm	2	0	oc	—	—	S.-cu. 10	
8	29.334	—	26.0	26.2	23.1	27.0	Calm	3	0	oc	—	—	S.-cu. 10	
10	29.348	—	23.8	23.8	22.2	24.5	Calm	1	0	oc	—	—	S.-cu. 10	
Midt.	29.369	—	21.8	22.0	20.8	22.0	Calm	1	0	oc	—	—	S. 10	
Mean	29.297	—	—	24.6	22.0	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 27°-5.  
8 p. 32°-2. Solar radiation { black bulb 117°-6.  
bright bulb 60°-8. Evapn. — grammes. Precipn. — in.

2	29.373	—	21.5	24.0	21.5	24.5	Calm	2	0	oc	—	S.-cu. 10	—	3rd. Clouds breaking in SW and S. Clouds apparently rising; visibility marked to S. Heavy bank of roll Cu. in S; clear to SW; clearing generally. Clear to SW; layers of Cu. on western mountains, summits clear; clearing generally; sun gleaming. Noon. Roll Cu. on western mountains, summits visible; visibility good; sky clearing rapidly. 2 p.m. Heavy banks of flaky Cu. on western mountains and to SW; detached Cl.-s. and S.-cu. on horizon. 3 p.m. Rain band, 0. 4 p.m. Cu. on western mountains rising; very hazy to S; detached Str. passing. 6 p.m. Nim. in W, mountains obscured. 10 p.m. Low bank of mist all round horizon. Midt. Cu. to SW. Overcast until 10 a.m., then clearing and remaining clear, with no wind. Barometer rising until about 8 p.m., then commenced to fall. Temperature very steady, dropping quickly at midnight.
4	29.377	—	22.0	26.0	21.0	26.2	Lt. N airs	2	0-8	oc	—	S.-cu. 10	—	
6	29.381	—	25.2	26.2	24.0	27.6	Calm	5	0	oc	—	S.-cu. 10	—	
8	29.401	—	25.0	26.6	24.0	28.5	Calm	1	0	oc	—	S.-cu. 10	—	
10	29.405	—	25.0	27.0	24.8	29.0	Calm	2	0	oc	—	Cu. 9, S (slow)	—	
Noon	29.409	—	20.0	27.5	25.2	31.6	N, 1	4	10	bc	—	Cl.-s. 3, SW (slow)	—	
2	29.401	—	26.4	27.6	25.8	32.0	N, 0-1	4	0-8	b	—	—	—	
4	29.391	—	27.0	27.6	25.2	31.8	N, 0-1	7	0-10	b	—	—	—	
6	29.395	—	27.6	28.0	26.0	30.5	Calm	2	0	b	—	—	—	
8	29.417	—	27.0	29.2	24.8	30.0	Calm	2	0	b	—	—	—	
10	29.379	—	21.0	26.0	23.0	29.0	Calm	0	0	b	—	—	—	
Midt.	29.381	—	17.2	23.0	20.8	24.0	Calm	0	0	b	—	—	—	
Mean	29.393	—	—	26.6	24.1	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 27°-0.  
8 p. 30°-0. Solar radiation { black bulb 109°-8.  
bright bulb 57°-0. Evapn. — grammes. Precipn. — in.

1903.—February.]

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4th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.382	—	16.0	16.0	15.0	24.0	Calm	1	0	b	—	—	—	Heavy S.-cu. on western mountains; Nim. to SW obscuring tops of mountains. Same as at 2 a.m. and 4 a.m.; mirage all round horizon. Dark Nim. on western mountains extending to SE, summits clear. Excessive mirage all round. Noon. Heavy Str. on western mountains, about 7000 ft. alt. Excessive mirage to S and SW. 2 p.m. Land to W and S obscured except along horizon. Bank of Cu. extending from W to N. 3 p.m. Rain band, 1. 4 p.m. Cl.-s. passing Wv. S.-cu. to S and W. 6 p.m. Detached Cu. passing from N. Ci.-s. on W horizon. 8 p.m. Very misty over western mountains; detached Cu. to S and SW; Ci.-s. to NW. 10 p.m. Dark Nim. from SW extending around horizon to SE, obscuring tops of mountains. Midt. Heavy bank of Nim. over the Bluff and White Island; strong mirage in SW. Fine and clear nearly all day, with no wind. Barometer falling steadily all day. Temperature low early, rising by midday.
4	29.380	—	12.0	14.0	12.8	26.2	Lt. S airs	1	0	b	—	—	—	
6	29.352	—	13.0	18.0	16.8	28.0	Lt. SW airs	2	0	b	—	—	—	
8	29.350	—	14.0	20.2	19.0	29.0	Calm	1	0	bc	Cl.-s. 2, SW (slow)	—	—	
10	29.348	—	20.0	24.8	22.8	29.0	Calm	0	0	b	—	—	—	
Noon	29.332	—	25.0	27.5	25.5	38.8	Calm	0	0	oc	—	S. 10, N (fast)	—	
2	29.306	—	26.2	27.0	24.8	34.2	Calm	1	0	oc	—	Cu. 9, N (fast)	—	
4	29.283	—	26.8	27.8	25.0	40.0	Calm	0	0	b	—	—	—	
6	29.267	—	27.0	27.5	25.2	34.0	Calm	1	0	b	—	—	—	
8	29.249	—	25.8	26.0	25.0	26.6	Calm	4	0	b	—	—	—	
10	29.251	—	22.2	22.2	21.8	23.0	Calm	1	0	b	—	—	—	
Mldt.	29.244	—	22.0	23.0	22.0	23.0	E, 1	4	5-8	bc	—	Cu. 8, NE (slow)	—	
Mean	29.310	—	—	22.8	21.3	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 30° 0.	Solar radiation		{ black bulb 115° 6.	Evapn. — grammes.		Precipn. — in.						
		{ 8 p. 32° 0.			{ bright bulb 59° 8.									

5th.

2	29.240	—	16.8	19.8	18.0	19.8	NE, 2-3	5	10-15	oc	—	S.-cu. 9, NE (slow)	—	Nim. on western mountains, summits obscured; slight mirage in SE. Very heavy Nim. on western mountains extending from NW to SW. Very black and threatening; land obscured in NW. Heavy S.-cu. on western mountains; dark and threatening to SW. Heavy S.-cu. on western mountains; very dark and threatening to SW; blue sky in S; visibility good. 2 p.m. Heavy layers of Cu. on western mountains 4000 ft. up. 3 p.m. Rain band, 2. 4 p.m. Cu. on western mountains, but summits and bases visible. 6 p.m. Cu. to W, Nim. to N, with slight mirage. 8 p.m. Clear to S and SW; detached Cu. to E; low S.-cu. on western mountains, summits only just visible above; visibility marked. 10 p.m. Nim. clouds from W to SW. Midt. Western mountains obscured; Nim. on Mt. Discovery. Noon. Mean of 10 observations; with aspirator, dry bulb 20° 3, wet bulb 18° 0; from screen, dry bulb 20° 0, wet bulb 17° 0. Cloudy all day, with fresh E by wind which fell at night. Barometer fell all day. Temperature steady.
4	29.240	—	16.2	19.0	17.8	19.8	Var. E, 3-4	17	15-22	bc	—	S.-cu. 5, NE (slow)	—	
6	29.242	—	16.0	18.0	16.2	18.0	Var. E, 3-4	19	15-25	bc	—	S.-cu. 5, E (slow)	—	
8	29.236	—	17.0	18.0	16.0	20.2	E, 2-3	14	15-20	oc	—	S.-cu. 8, SE (slow)	—	
10	29.237	—	17.0	18.5	17.0	21.5	E, 3-4	16	20-28	oc	—	Cu. 9, S (slow)	—	
Noon	29.231	—	18.0	20.0	17.0	22.5	E, 2-3	15	10-22	oc	—	A.-cu. 8, S (slow)	—	
2	29.225	—	18.7	20.0	17.0	22.6	ENE, 2-3	16	15-23	oc	—	A.-cu. 8, SE (slow)	—	
4	29.223	—	19.0	20.0	17.8	21.3	Var. E, 2-3	11	12-20	bc	—	Cu. 2, E (mod.)	—	
6	29.215	—	18.6	20.8	18.0	23.4	E by N, 2-3	10	15-23	oc	—	Cu. 7, NE (mod.)	—	
8	29.213	—	19.5	20.0	17.0	20.8	NE, 2	14	8-12	bc	—	Cu. 5, N (mod.)	—	
10	29.213	—	19.0	19.5	16.8	20.5	NE, 1-2	8	5-10	oc	—	Cu. 7, NE	—	
Mldt.	29.213	—	19.8	21.5	19.2	21.0	Lt. NE airs	7	5-10	oc	—	Cu. 9, NE	—	
Mean	29.227	—	—	19.6	17.4	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 26° 2.	Solar radiation		{ black bulb 117° 2.	Evapn. — grammes.		Precipn. — in.						
		{ 8 p. 22° 0.			{ bright bulb 54° 3.									

6th.

2	29.216	—	17.0	17.0	15.8	13.5	Calm	1	0	oc	—	S.-cu. 5	—	Mirage in W. Very thick and dirty looking towards western mountains. Heavy Nim. to W; snowing slightly. Very thick all round. Clearing to S; much drift in Strait; very thick to W; dark water sky to NW and N. Dark shadow over western mountains; wind very variable and squally. 3 p.m. Rain band, 4. 4 p.m. Nim. to W; clearing to S. Snowing slightly; dark and threatening to N and W. Dark and threatening to W and SW; low parts of land visible to S. Overcast all day; squally, with snowfall at times. Wind calm early, rising to strong from E, and variable. Barometer rose all day. Temperature low generally.
4	29.206	—	16.0	17.5	16.0	14.0	Calm	0	0	oc	—	Cu. 8	—	
6	29.222	—	15.5	20.5	18.8	22.0	Calm	6	0	oc	—	Cu. 9	—	
8	29.222	—	19.8	22.0	20.0	26.0	Calm	3	0	oc *	—	Cu. 10	—	
10	29.246	—	10.5	11.8	11.0	14.0	SE, 2-3	8	15-20	oc †	—	S.-cu. 10	—	
Noon	29.265	—	11.0	16.0	14.2	18.0	E, 3	14	12-18	oc †	—	S.-cu. 10	—	
2	29.272	—	14.7	15.2	13.6	17.4	Var. E, 2-4	17	15-30	ocq †	—	S.-cu. 10	—	
4	29.275	—	14.0	14.7	13.2	17.0	Var. E, 2-4	16	15-28	ocq †	—	S.-cu. 10	—	
6	29.270	—	12.8	14.0	12.7	16.8	Var. E, 2-4	18	16-27	ocq † *	—	N. 10	—	
8	29.293	—	12.3	14.2	12.2	15.0	Var. E, 2-3	12	15-18	o *	—	N. 10	—	
10	29.303	—	13.0	14.0	13.5	14.4	E by N, 2-3	14	16-20	o *	—	N. 10	—	
Mldt.	29.307	—	12.0	14.0	12.5	13.2	E by N, 1-2	10	8-15	o *	—	N. 10	—	
Mean	29.259	—	—	15.9	14.5	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 22° 8.	Solar radiation		{ black bulb 90° 4.	Evapn. — grammes.		Precipn. 0.01 in. since 4 p.m. 24th ult.						
		{ 8 p. 23° 0.			{ bright bulb 44° 3.									

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirits minimum.	Dry.										
2	29.307	—	12.0	14.0	13.6	14.5	E, 1-2	14	8-12	o *	—	N 10	—	Very thick all round; no land visible.
4	29.305	—	12.5	12.8	12.2	13.0	SE, 1	7	8-10	o *	—	N 10	—	Snowed hard from 2 to 2.30; sky clearing, but very thick.
6	29.304	—	12.0	13.0	12.8	14.0	SE, 1	6	8	oc	—	A. cu. 10, N (mod.)	—	Land visible to S and SW; heavy dark Nim. on western mountains and to W.
8	29.306	—	12.2	15.1	12.5	17.0	Lt. E airs	7	0-8	oc	—	A. cu. s. 10	—	Foot-hills visible, clearing generally; mirage to SW.
10	29.313	—	14.5	16.2	14.5	19.8	Lt. E airs	8	0-8	o *	—	N 10	—	8 a.m. Clearing all round; S. cu. rising; heavy Nim. on western mountains and to N.
Noon	29.311	—	12.2	14.5	14.1	18.0	E, 1-2	10	8-10	o *	—	N 10	—	10 a.m. Foot of land visible all round; mirage SW; snowflakes hard and very small.
2	29.292	—	14.0	15.7	14.6	19.0	E, 2	10	10-15	oc *	—	N 10	—	Noon. Thick all round; snowflakes very small, soft, and wet.
4	29.285	—	15.0	15.8	14.3	18.7	E by N, 1-2	10	8-15	oc	—	N 10	—	2 p.m. Slight break in clouds to W; snow very dry and fine.
6	29.275	—	15.6	18.0	15.8	22.0	E, 0-1	8	0-8	oc	—	Cu. 9, E (slow)	—	3 p.m. Rain band, 2.5.
8	29.267	—	16.0	16.0	15.4	13.8	Calm	5	0	bc	—	—	—	4 p.m. Clearing in S and clear to W; very dull and threatening in E.
10	29.260	—	12.5	13.5	12.6	8.6	Calm	2	0	bc	—	—	—	6 p.m. Dull to E; Nim. in N; Cu. on western mountains.
Midt.	29.246	—	9.5	12.0	11.2	12.5	Lt. NNE airs	1	0	e	—	—	—	8 and 10 p.m. Low Str. obscuring summits of western mountains.
Mean	29.289	—	—	14.7	13.6	—	—	—	—	—	—	—	—	Noon. Mean of 10 observations: with aspirator, dry bulb 14.5, wet bulb 14.4; from screen, dry bulb 14.6, wet bulb 14.2.

Max. therm. read at { 8 a. 15° 1. / 8 p. 22° 2. Solar radiation { black bulb 90° 0. / bright bulb 41° 0. Evapn. — grammes. Precipn. 0.003 in. since 8 p.m. 6th.

Overcast all day, with some snowfall. Wind, light E by breezes. Barometer falling all day. Temperature lower and steady.

7th.

2	29.228	—	8.2	8.5	6.2	7.5	Calm	0	0	e	—	—	—	—	—
4	29.216	—	8.0	13.8	13.2	14.5	Lt. N airs	2	0	e	—	—	—	—	—
6	29.203	—	10.0	14.0	12.8	15.0	Calm	0	0	e	—	—	—	—	—
8	29.184	—	12.8	15.0	14.0	18.2	Calm	0	0	e	—	—	—	—	—
10	29.181	—	14.0	14.4	13.0	17.6	NE, 2-4	7	10-25	bq †	—	—	—	—	—
Noon	29.174	—	12.0	13.0	11.0	16.5	NE, 2-4	13	15-25	bq †	—	—	—	—	S. cu. on western mountains apparently rising; visibility good; summit of Mt. Discovery hidden by heavy roll Cu.
2	29.168	—	12.6	13.2	11.0	17.0	NE, 2-4	16	15-28	bq †	—	—	—	—	Noon. S. cu. on western mountains in two layers about 9000 feet alt., extending all round horizon to E; visibility good; some roll Cu. on summit of Mt. Discovery.
4	29.164	—	9.4	13.4	11.6	17.6	E by N, 4-5	23	20-28	bc †	—	—	—	—	2 p.m. Cl. to W; very thick and hazy.
6	29.162	—	8.2	13.7	11.9	18.0	E by N, 2-4	14	15-25	ocq †	—	—	—	—	3 p.m. Rain band, 3.
8	29.156	—	13.0	15.0	13.0	15.0	NE, 2-3	15	10-18	oc	—	—	—	—	4 p.m. Mirage and Str. to S; double layers of Cu. on western mountains.
10	29.158	—	11.0	16.2	14.0	16.0	ENE, 0-1	9	0-5	oc	—	—	—	—	6 p.m. Slight mirage to S; Cu. on western mountains up to 6000 feet alt.; dull and threatening in E.
Midt.	29.139	—	13.0	16.0	13.5	16.0	Lt. var. airs	5	0	oc	—	—	—	—	8 p.m. Heavy and dark Cu. on western mountains about 6,000 feet alt.; threatening and dark to S.
Mean	29.178	—	—	13.9	12.1	—	—	—	—	—	—	—	—	—	10 p.m. Tops of western mountains obscured.

Max. therm. read at { 8 a. 18° 0. / 8 p. 19° 0. Solar radiation { black bulb 105° 0. / bright bulb 48° 4. Evapn. — grammes. Precipn. — in.

from screen, dry bulb 13.0, wet bulb 11.25. Cloudy early; clearing; and again becoming overcast in evening. Wind rising in the afternoon to strong from E, but fell again in evening. Barometer falling all day. Temperature lower and steady.

8th.

2	29.111	—	11.0	12.0	11.0	18.0	Calm	0	0	oc	—	—	—	—	—
4	29.099	—	10.0	11.0	10.5	13.0	Calm	2	0	bc	—	—	—	—	—
6	29.063	—	10.0	13.0	11.0	13.0	ENE, 1	4	8-10	b	—	—	—	—	—
8	29.047	—	12.0	16.2	15.2	28.0	Calm	0	0	bc	—	—	—	—	—
10	29.034	—	15.5	15.5	14.0	18.0	Calm	1	0	bc	—	—	—	—	—
Noon	29.008	—	15.0	21.5	19.0	25.8	Lt. N airs	1	0	bc	—	—	—	—	—
2	28.985	—	20.6	22.0	20.0	27.0	Calm	3	0	bc	—	—	—	—	—
4	28.968	—	19.4	19.6	17.4	22.5	ENE, 1-2	5	8-15	bc	—	—	—	—	—
6	28.952	—	19.6	20.5	19.0	23.4	ENE, 1	8	8-10	bc	—	—	—	—	—
8	28.946	—	18.8	19.1	17.8	19.0	E, 1	8	8-12	bc ⊕	—	—	—	—	—
10	28.948	—	12.0	12.0	12.0	12.0	Var. SE, 2-3	11	10-15	bc ⊕	—	—	—	—	—
Midt.	28.951	—	10.0	12.2	11.8	15.2	Lt. E airs	6	0	bc	—	—	—	—	—
Mean	29.009	—	—	16.2	14.9	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 17° 0. / 8 p. 23° 0. Solar radiation { black bulb 114° 6. / bright bulb 53° 6. Evapn. — grammes. Precipn. — in.

Bank of Nim. to N, and heavy S. cu. extending along western mountains to S, summit of western mountains obscured; strong mirage all round horizon. 10 a.m. Clear to S; roll Cu. on western mountains at about 6000 feet alt., summits visible; strong mirage all round. Noon. Excessive mirage all round; heavy Nim. on western mountains; clear to S and SW; sky much wind blown. 2 p.m. Western mountains above 3000 feet obscured; clear to S, with good visibility. 3 p.m. Rain band, 1. 5 p.m. Very fine ⊕. Temp. at Cape Armitage 23.2 (in sun), min. — 2.5. 6 p.m. Sky very threatening; heavy Cu. to W and N. 8 p.m. Very threatening to W; heavy Nim. on western mountains; clear to S. 10 p.m. Heavy Nim. extending from NW to S, alt. about 2.0; western mountains obscured. Noon. Mean of 10 observations: with aspirator, dry bulb 20.5, wet bulb 18.9; from screen, dry bulb 21.2, wet bulb 19.0. Fine, but cloudy, all day, with hardly any wind until the evening, when it sprang up and freshened from E. Barometer falling steadily all day. Temperature higher, but not so steady.

9th.

1903—February.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

10th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	28.958	—	9.2	13.0	12.0	13.0	Var. SE alrs	4	0-8	bc	—	S-cu. 7	—	Very heavy Nim. collecting all round horizon, alt. about 2°0: very threatening to NW. 4 a.m. Very foggy to W, obscuring tops of western mountains, extending to SW. 6 a.m. Fog on western mountains, alt. 3000 ft.; slight mirage all round. 8 a.m. Low bank of mist along SSW horizon. 10 a.m. S-cn. on western mountains; extending to S, about 5000 ft. alt. Noon. Cl.-s. very wind blown and fleecy, radiating SE; Cu. low in E, passing to SE fast; heavy Nim. on western mountains; dark and threatening all along from W to S; visibility well marked. 2 p.m. Very dull and threatening to W; mountains obscured. 3 p.m. Rain band, 2. 4 p.m. Clouds breaking overhead and changing in formation. 6 p.m. Double layer of Cu. on western mountains. 8 p.m. Very threatening appearance; Str. to E, and Cu. to N and W. 10 p.m. Heavy bank of mist from White Island to Bluff. Noon. Mean of 10 observations; with aspirator, dry bulb 17°6, wet bulb 16°9; from screen, dry bulb 16°0, wet bulb 14°8. Cloudy all day, with fresh to strong SE winds. Barometer rising steadily all day. Temperature steadier.	
4	28.962	—	7.2	12.8	12.0	13.0	SE, 1	6	0-10	oc	—	Cn. 10	—		
6	28.981	—	9.8	14.0	13.0	15.0	Calm	6	0	bc	—	Ci.-cu. 6	—		
8	28.996	—	12.0	14.0	13.0	15.0	Var. E, 2-3	5	15-20	bc	—	S-cu. 2	—		
10	29.032	—	11.8	15.0	14.0	18.5	SE, 2-3	13	10-18	bc	—	—	—		
Noon	29.062	—	13.0	16.0	14.8	19.5	SE, 3	13	15-18	bc	—	Ci.-s. 3	—		
2	29.100	—	15.4	17.9	16.6	20.4	SSE, 1-3	11	5-17	ocq	—	—	—		
4	29.146	—	14.0	15.2	13.7	19.0	Var. SE, 2-3	10	10-20	ocq	—	—	—		
6	29.178	—	13.6	14.3	13.0	16.4	ESE, 2-3	11	10-20	bc	—	Cu. 9, SE	—		
8	29.195	—	12.2	12.6	11.0	15.0	ESE, 2-3	12	10-20	bc	—	Ci.-s. 5, W	—		
10	29.192	—	12.2	15.0	12.2	15.0	Var. SE, 2-5	12	10-25	bcq	—	—	—		
Midt.	29.229	—	9.8	12.0	10.8	10.8	Var. SE, 2	10	10-15	b	—	Ci.-s. 2, W	—		
Mean	29.086	—	—	14.3	13.0	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 19°8. 8 p. 22°0. Solar radiation { black bulb 119°0. bright bulb 51°0. Evapu. — grammes. Precipn. — in.

11th.

2	29.239	—	10.0	12.5	11.2	12.0	Var. ESE, 2-3	6	5-10	b	—	—	—	Mirago on western horizon.  Visibility very marked; light Ci. over western mountains, sky otherwise cloudless. Extremely hazy; wind squally; sky cloudless. 3 p.m. Rain band, 1. Double layer of Ci. running NW to SE, of a very thin shreddy appearance. Very windy appearance; Ci. radiating NW. Ci. over western mountains; hazy appearance in sky all over; ⊕ radius 23°0, prismatic colouring, with mock suns. Midt. Very hazy in sky all round; Ci.-s. over western mountains, radiating NW, SE. Noon. Mean of 10 observations; with aspirator, dry bulb 13°3, wet bulb 11°8; from screen; dry bulb 13°0, wet bulb 11°6. Fine and clear nearly all day, with fresh to strong variable to E wind. Barometer rising rapidly all day; temperature steady.
4	29.238	—	10.8	11.2	10.8	14.8	Var. SE, 2-3	9	10-15	b	—	—	—	
6	29.241	—	9.8	13.2	14.0	15.2	SE by E, 2-3	6	10-15	b	—	—	—	
8	29.273	—	11.5	12.8	12.0	13.0	ENE, 4	15	20-25	b	—	—	—	
10	29.312	—	9.0	12.0	11.2	14.0	Var. E, 3-4	21	12-25	b	—	—	—	
Noon	29.320	—	10.0	13.0	11.5	15.0	Var. E, 2-3	16	15-20	b	—	—	—	
2	29.362	—	12.2	14.5	13.0	16.0	Var. E, 2-4	16	10-25	bq	—	—	—	
4	29.377	—	12.8	15.0	13.4	18.7	Var. E, 3-4	17	15-27	b	—	—	—	
6	29.393	—	14.0	15.3	13.8	19.0	Var. E, 3-4	14	15-25	bc	—	Ci. 2, NW	—	
8	29.426	—	12.5	14.8	12.6	15.5	E, 1-2	13	8-12	bc	—	Ci. 2	—	
10	29.446	—	13.0	13.6	11.8	12.8	E by N, 1	10	10-12	b ⊕	—	—	—	
Midt.	29.457	—	9.0	13.8	12.0	14.0	E by S, 1	11	8-10	b	—	—	—	
Mean	29.341	—	—	13.5	12.3	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 15°0. 8 p. 17°0. Solar radiation { black bulb 95°3. bright bulb 41°8. Evapu. — grammes. Precipn. — in.

12th.

2	29.450	—	-1.0	4.2	4.0	5.7	Var. E, 4-6	15	20-35	bq ⊕	—	—	—	Very squally; excessive mirage to SW; misty on Mt. Discovery and western mountains; very hazy overhead. 8.2 a.m. Visibility very marked; slight mirage to S; misty all over sky. 7.2 4 a.m. Visibility very marked; low drift in Strait. Clear from S to SW low down. 7.2 6 a.m. Alt.-s. apparently descending, tops of mountains just covered. 10 a.m. Ci.-s. radiating NW, SE, very streaky; dark and threatening to W; summits of western mountains obscured. 2 p.m. Thin film of scud, with sun gleaming brightly. 4 p.m. Very fine halo. 6 p.m. Halo still very bright. Very misty in sky and over towards the W.  Overcast and cloudy most of the day, with strong E wind, and squally. Barometer rose unsteadily until noon and then fell for rest of day. Temperature lower and unsteady.
4	29.468	—	3.0	8.5	7.8	8.8	E, 3-6	18	15-20	bmq ⊕	—	—	—	
6	29.475	—	6.8	8.1	7.6	8.8	E, 4-6	18	20-32	oq	—	A.-s. 10	—	
8	29.460	—	5.0	9.8	8.8	11.0	E, 4-5	21	20-28	oq	—	Thin A.-s. 10	—	
10	29.473	—	3.0	8.8	7.0	10.5	E, 4-5	22	20-25	bq	—	Ci.-s. 5	—	
Noon	29.477	—	7.2	10.0	9.0	13.2	E by S, 1-3	13	10-15	bq	—	—	—	
2	29.463	—	7.6	10.0	9.0	15.0	Var. E, 1-2	12	5-12	oc	—	Thin scud, 10, E	—	
4	29.433	—	9.7	12.8	11.0	17.2	ENE, 1-2	11	6-12	oc ⊕	—	Thin A.-s. 10, E	—	
6	29.405	—	10.6	11.4	10.0	12.3	E by N, 2-3	13	15-25	bc ⊕	—	Thin A.-s. 4, E (nod.)	—	
8	29.400	—	9.0	10.8	9.8	13.0	E by N, 2	13	12-15	b	—	—	—	
10	29.362	—	9.5	10.6	9.4	11.0	E by N, 2-3	14	12-24	bc	—	A.-s. 2, N	—	
Midt.	29.362	—	8.5	9.6	8.8	10.0	E by S, 1-2	13	10-17	b	—	—	—	
Mean	29.436	—	—	9.6	8.5	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 16°0. 8 p. 15°0. Solar radiation { black bulb 81°0. bright bulb 39°7. Evapu. — grammes. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Amritage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.330	—	4.0	7.0	6.4	6.5	E, 2-4	17	15-26	c		Cl.-cu. 8, N	—	—	13th. Low drift along W side of Strait and between Black and White Islands; dark Str. cutting off tops of western mountains; sky clearing from NW. 6 a.m. Low Str. to S of Bluff. Cl.-cu. to E low down; visibility marked. Visibility very marked; absolutely cloudless. 3 p.m. Rain band, 0. Str. on N horizon; heavy surface drift to W. Cl.-cu. and Str. to N and NW. Very misty over western land; Fr.-cu. and cu. passing over from N; heavy bank of roll Cu. to E. Heavy Nim. on western mountains. Noon. Mean of 10 observations with aspirator: dry bulb 9°·2, wet bulb 8°·4; screen: dry bulb 8°·34, wet bulb 7°·82. Fine and clear most of the day; wind still remained strong E. Barometer inclined to fall. Temperature lower and steady.
4	29.324	—	4.8	6.2	6.0	6.0	E by S, 3-5	15	12-30	bc		Cl.-s. 4, NW	—	—	
6	29.330	—	4.0	5.8	5.2	7.0	E by S, 3-5	13	12-22	b		—	—		
8	29.330	—	4.0	8.8	8.0	9.0	E by S, 4-5	17	20-25	b		—	—		
10	29.334	—	6.5	8.8	8.0	10.2	Var. E, 3	19	18-22	b		—	—		
Noon	29.324	—	7.0	8.0	7.5	9.0	Var. E, 2-3	15	20-22	b		—	—		
2	29.312	—	7.5	7.8	7.0	9.0	Var. E, 4	21	20-25	b →		—	—		
4	29.293	—	5.0	7.8	6.8	11.0	Var. E, 3-5	19	20-35	b1 →		—	—		
6	29.292	—	6.3	9.0	7.8	11.6	E by S, 2-3	18	15-25	b		—	—		
8	29.321	—	7.0	10.0	8.5	10.0	E, 2-3	17	15-22	bc		Cu. 4, N (mod.)	—		
10	29.281	—	8.0	9.0	8.0	9.0	Var. E, 4-5	15	25-28	bc		—	Cu. 9		
Midt.	29.281	—	4.0	8.0	4.8	8.0	Var. E, 4	18	20-23	bc *		—	Cu. 9		
Mean	29.313	—	—	7.9	7.0	—	—	—	—	—		—	—	—	
Max. therm. read at		8 a. 13°·0. 8 p. 16°·0.		Solar radiation		black bulb 92°·8. bright bulb 41°·0.		Evapn. — grammes.		Precipn. — in.					

2	29.266	—	2.0	4.2	3.5	5.0	Var. E, 4-5	17	25-30	bc →		—	Cu. 8	—	Reid'sky in the S.
4	29.264	—	-1.0	2.0	1.5	3.0	E, 4-5	20	25-30	bc →		—	Cu. 8	—	Sun shining behind clouds on western mountains.
6	29.251	—	-4.5	-4.0	-4.0	-4.0	E, 6	24	35-38	oc →		—	N. 10	—	Western mountains obscured by heavy Nim.
8	29.261	—	-7.3	-4.0	-4.0	-3.0	E, 4-8	27	20-40	ocq → *		—	N. 10	—	Very heavy Nim. to W, mountain summits obscured.
10	29.256	—	-6.5	0.0	-0.5	1.0	E, 3-4	26	20-25	oc →		—	N. 10	—	Heavy and dark over western mountains; much drift in Strait; clouds breaking overhead.
Noon	29.250	—	-1.5	0.0	0.0	2.0	Var. E, 3-4	18	20-24	o → *		—	N. 10	-0.2 -0.2	Noon. Very thick all round; snow in very small flakes, and damp.
2	29.244	—	-2.4	1.0	0.8	2.0	Var. E, 2-4	20	15-25	ocq →		—	N. 10	—	2 p.m. Barometer pumping slightly.
4	29.230	—	-0.4	2.2	1.8	4.0	Var. E, 2-3	18	10-20	oc →		—	N. 10	—	3 p.m. Rain band, 8.
6	29.227	—	0.6	2.4	2.0	5.0	Var. E, 2	16	8-15	oc →		—	N. 10	—	4 p.m. Snow flakes of a fine dry nature.
8	29.220	—	1.0	2.2	2.0	3.2	E, 2	13	8-15	oc		—	S.-cu. 10	—	6 p.m. Snow, unmeasurable.
10	29.209	—	2.0	4.2	3.2	5.2	E by N, 1-2	13	5-12	bc		—	S.-cu. 9	—	Clearing to S and SW; very heavy Nim. on western mountains; sun gleaming; clearing overhead.
Midt.	29.205	—	3.0	5.0	3.8	5.8	Var. SE, 0-2	9	0-15	bc		—	S.-cu. 9	—	10 p.m. Heavy Nim. to W, extending to SW.
Mean	29.240	—	—	1.3	0.8	—	—	—	—	—		—	—	—	Midt. Heavy Nim. all round S and W horizon.
Max. therm. read at		8 a. 10°·0. 8 p. 2°·5.		Solar radiation		black bulb 78°·6. bright bulb 36°·5.		Evapn. — grammes.		Precipn. — in.					

2	29.197	—	0.0	1.0	0.0	2.5	S by E, 1-2	7	8-12	bc → high		—	S.-cu. 9, N	—	Heavy Nim. to SW.
4	29.165	—	1.0	1.0	1.0	2.0	S by E, 3-4	13	15-25	bc → high		—	S.-cu. 7, N	—	Sky clearing all round except to S.
6	29.153	—	-1.0	0.2	0.0	0.5	Var. SE airs	7	0-5	bc		—	A.-cu. 2, N (fast)	—	Fr. S.-cu. to NE; detached S.-cu. to W; heavy Cu. to S.
8	29.137	—	-1.0	4.2	2.0	5.0	Lt. var. airs	3	0	bc		—	S.-cu. 6	—	
10	29.100	—	3.0	6.0	4.8	9.0	NE, 1	7	0-8	bc		—	Fr.-cu. 5, N (mod.)	—	Clear all round low down; visibility marked; layer of thin Cu. on western mountains; dark water sky to N.
Noon	29.065	—	5.0	6.8	5.6	12.0	NE, 1	7	0-8	oc		—	Cu. 8, N (mod.)	—	Noon. Clear to S and W; mammillated Cu. very distinct to N; low layer of S.-cu. on western mountains.
2	29.034	—	5.0	5.6	4.0	8.6	E by N, 1-2	10	10-18	oc		—	Cu. 10, NE (mod.)	—	2 p.m. Nim. on western mountains; clear to S, with good visibility.
4	29.014	—	4.8	6.2	5.0	9.8	E by N, 2-3	14	15-25	oc		—	Cu. 7, NE (mod.)	—	3 p.m. Rain band, 2.
6	28.986	—	3.8	5.0	3.2	8.2	Var. E, 2-3	17	15-25	oc		—	A.-cu. 5	—	4 p.m. S.-cu. on western mountains; Nim. on summit of Discovery.
8	28.974	—	3.2	4.0	2.9	6.0	E by N, 2-3	15	12-20	bc		—	A.-cu. 3, NNW (fast)	—	6 p.m. Heavy Nim. to N, with very threatening appearance; Cu. on western mountains; wind veering to S.
10	28.960	—	1.8	3.0	1.5	2.0	Var. E, 2-3	13	10-15	bcq		—	A.-cu. 4, NW	—	10 p.m. Wind squally and varying E to SE.
Midt.	28.931	—	2.0	3.0	2.0	3.5	E, 2-3	13	5-10	b		—	A.-cu. 2, SW	—	Noon. Mean of 10 observations with aspirator: dry bulb 6°·8, wet bulb 5°·7; screen: dry bulb 7°·0, wet bulb 5°·8.
Mean	29.060	—	—	3.8	2.7	—	—	—	—	—		—	—	—	Cloudy all day, with light to fresh variable E. winds. Barometer falling all day. Temperature low and steady.
Max. therm. read at		8 a. 5°·2. 8 p. 7°·0.		Solar radiation		black bulb 95°·8. bright bulb 40°·0.		Evapn. — grammes.		Precipn. — in.					

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16th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	28.910	—	-0.3	4.0	3.0	5.0	Lt. SE airs	6	0-5	bc	—	—	—	—	—
4	28.911	—	-1.0	3.0	2.8	2.0	Lt. E airs	3	0	bc	—	—	—	—	Mirage along western horizon.
6	28.892	—	-2.8	3.0	2.2	3.0	E, 1-2	3	0-5	bc	—	—	—	—	—
8	28.889	—	0.0	7.2	6.8	9.0	E, 1-2	10	5-10	b	—	—	—	—	Bank of Str. at base of western mountains; bank of S.-cu. to N.
10	28.896	—	2.5	6.0	5.0	10.0	E, 1-2	9	10-15	b	—	—	—	—	Clear all round except light bank of Ci.-cu. to E; misty; visibility not at all marked.
Noon	28.899	—	5.5	7.0	5.2	10.0	E, 2	11	12	b	—	—	—	—	10.45. Temp. at Cape Armitage -2°-5. min. -12°-0; wind ESE 3; bc; +; refraction to NW; mammillated Cu. on Mt. Erebus; very hazy.
2	28.901	—	5.3	6.0	4.6	11.0	E by N, 2	15	15-20	b	—	—	—	—	Noon. Cu. in E passing from NW, otherwise sky cloudless; mirage slight to SW.
4	28.918	—	4.0	4.2	3.0	8.3	SE, 2	13	15-20	bc	—	—	—	—	3 p.m. Rain band, 0.
6	28.932	—	2.3	5.0	3.6	7.8	SE, 2	12	10-18	bc	—	—	—	—	6 p.m. Nim. to N; very dark and threatening.
8	28.942	—	3.0	7.0	5.8	7.0	SE, 1-2	11	10-15	bc	—	—	—	—	8 p.m. Very clear to S; mirage to SW; misty to W; very distinct mammillated Cu. to N.
10	28.944	—	4.5	5.0	3.8	6.2	E by S, 1-3	11	10-22	ocq	—	—	—	—	Noon. Mean of 10 observations with aspirator: dry bulb 7°-0, wet bulb 5°-9; screen: dry bulb 7°-0, wet bulb 5°-45. Fine, but cloudy, most of the day, becoming overcast in evening. Wind light to fresh E by and SE by. Barometer fell until 8 a.m., then rose steadily. Temperature steady.
Midt.	28.943	—	1.2	3.5	2.0	4.0	E, 1-2	10	10-13	c	—	—	—	—	—
Mean	28.915	—	—	5.1	4.0	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 7°-2.  
8 p. 9°-5. Solar radiation { black bulb 95°-4.  
bright bulb 39°-7. Evapn. — grammes. Precipn. — in.

17th.

2	28.939	—	2.0	3.0	2.8	3.2	E, 2-3	15	15-20	o	—	—	—	—	—	Clear to S, SW and W; Str. just obscuring summits of western mountains, but apparently descending.
4	28.939	—	0.0	1.8	1.5	1.8	E, 4-6	23	20-32	oq +	—	—	—	—	1.4 a.m. Clear to S, SW and W; Str. descending, about 9000 feet of western mountains visible; all summits obscured; very dark to N.	
6	28.962	—	-4.0	2.2	2.0	3.0	E, 2-5	21	10-25	oq +	—	—	—	—	6 a.m. Thick all round; sun gleaming; clouds breaking overhead.	
8	28.992	—	0.2	1.8	1.5	3.8	E, 3-5	20	20-28	oq +	—	—	—	—	8 a.m. Thick all round; clearing overhead.	
10	29.007	—	-0.2	1.8	1.0	2.8	ESE, 3-4	16	15-22	bcmq +	—	—	—	—	10 a.m. Clearing generally; land visible to S and SW, thick to W.	
Noon	29.020	—	0.0	2.0	1.5	4.5	E, 2-3	14	10-22	bcmq	—	—	—	—	Noon. Very hazy to W, but clearing; misty appearance in sky; windy appearance generally.	
2	29.026	—	1.0	2.5	2.0	5.0	Var. E, 1-2	15	8-18	bc	—	—	—	—	2 p.m. Thin film of Cu. on western mountains; very bright to S.	
4	29.031	—	2.0	5.0	4.0	8.2	E, 1-2	12	5-12	bc	—	—	—	—	3 p.m. Rain band, 2.	
6	29.052	—	4.0	6.2	4.8	8.5	E, 0-1	10	0-10	bc	—	—	—	—	6 p.m. Ci.-s. of a shreddy, dull and threatening kind.	
8	29.070	—	5.0	5.5	5.0	6.0	E, 1	10	8-10	bc	—	—	—	—	8 p.m. Very misty to W; S.-cu. on western mountains; wild appearance in sky.	
10	29.088	—	3.8	5.0	3.8	3.1	SE, 1-2	8	8-10	b	—	—	—	—	10 p.m. Very misty in sky overhead, no definite clouds; Cir. to E; Fr.-cu. to SW; clear to S; dark S.-cu. over western mountains, summits just visible.	
Midt.	29.107	—	1.0	4.5	3.0	3.0	E, 1	8	8-10	bc	—	—	—	—	Midt. Dark and threatening to SW; S.-cu. collecting on western mountains; very red to S; sun obscured behind very dark S.-cu.; moon visible in E; windy appearance in sky; Str. on land to S. Cloudy day, with strong E by wind early, with drift, falling to fresh breeze. Barometer rising all day. Temperature low and steady.	
Mean	29.019	—	—	3.4	2.7	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 7°-0.  
8 p. 7°-0. Solar radiation { black bulb 80°-0.  
bright bulb 29°-3. Evapn. — grammes. Precipn. 0.003 in. since 4 p.m. 7th.

18th.

2	29.134	—	-3.0	-2.5	-2.8	0.0	ENE, 4-5	22	20-25	bc +	—	—	—	—	—	Low Str. over western mountains and Black and White Islands.
4	29.168	—	-6.0	-1.5	-1.5	-1.0	ENE, 4	20	20	bc	—	—	—	—	—	Western mountains entirely obscured by Str.
6	29.207	—	-2.5	5.0	4.8	6.0	E, 2-3	13	10-15	bc	—	—	—	—	—	Western mountains clear; Str. hanging over summits of highest peaks, and over Black and White Islands.
8	29.239	—	4.0	5.0	4.0	6.5	SE, 2-3	8	10-15	bc	—	—	—	—	—	Very misty appearance in sky; heavy and high drift to S and SE; Ci. to E; Ci.-s. to W, very wind blown.
10	29.276	—	2.5	3.5	3.0	4.5	SE, 2-3	11	20-25	b O	—	—	—	—	—	Noon. Misty to W; very misty appearance in sky; Ci.-s. to W very wind blown; drift on White Island.
Noon	29.289	—	2.5	5.2	4.8	7.0	SE, 2-3	10	15-22	bc	—	—	—	—	—	2 p.m. Cu. on W horizon; Str. to E and SE.
2	29.288	—	4.3	7.8	6.6	11.7	SE, 2-3	12	15-23	bc	—	—	—	—	—	3 p.m. Rain band, 2.
4	29.297	—	6.3	7.0	6.0	9.2	SSE, 1-2	12	5-15	bc	—	—	—	—	—	4 p.m. Cu. on western mountains; clouds sinking.
6	29.287	—	7.0	8.1	6.6	12.4	SE, 1-2	9	5-15	bc	—	—	—	—	—	6 p.m. Dull and hazy to N; Cu. to W; clouds detached and very thin.
8	29.267	—	5.0	5.2	5.0	5.5	SE, 3-4	11	15-25	b	—	—	—	—	—	8 p.m. Very wind-blown Ci.-s. to N; layer of Str. on western mountains and misty to W.
10	29.253	—	3.8	4.8	4.2	4.0	E by N, 4	19	15-20	bq	—	—	—	—	—	Midt. Hazy to W; clouds working up from eastwards.
Midt.	29.246	—	2.0	4.0	3.2	2.5	E by N, 2	18	15°	b	—	—	—	—	—	Fine day, but cloudy, with fresh E by to SE wind. Barometer rose until 4 p.m., and then commenced to fall. Temperature not so steady.
Mean	29.246	—	—	4.3	3.7	—	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 5°-5.  
8 p. 9°-0. Solar radiation { black bulb 92°-8.  
bright bulb 36°-0. Evapn. — grammes. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.234	—	2.5	2.6	2.4	2.5	ESE, 1	8	0-8	bc	—	Ci.-s. 7, NW	—	—	<p>19th.</p> <p>Clear sky all round below alt. of 30°; much frost-smoke on open water. 4.30 a.m. Fine snow falling until 5 a.m.</p> <p>Strong mirage along W side of Strait and on N horizon.</p> <p>Excessive mirage all round; blue sky below 15° all round; very light snow falling.</p> <p>Noon. Thick all round; fine snow falling for the last two hours.</p> <p>2 p.m. Fluc and soft snow; sun gleaming faintly; big fall in temperature.</p> <p>3 p.m. Rain band, 8.</p> <p>4 p.m. Very dark and threatening to E.</p> <p>6 p.m. Heavy drift, wind very squally and shifty.</p> <p>8 p.m. Very thick all round; very misty appearance in sky; sky clearing; snowing very slightly.</p> <p>Red sky to SW.</p> <p>Overcast and dull all day, with slight snowfall. Calm, to fresh E by wind. Barometer fell all day. Temperature unsteady.</p>	
4	29.207	—	0.9	4.2	3.8	5.6	Calm	4	0	oc	—	A.-cu. 9, NW	—	—		
6	29.196	—	1.0	5.0	4.2	6.2	Calm	1	0	b	—	—	—	—		
8	29.178	—	0.8	9.0	7.0	12.2	Calm	0	0	bc	—	Ci.-cu. 4, Ci. 2	—	—		
10	29.161	—	7.6	11.0	9.6	14.5	Calm	4	0	o*	—	—	A.-s. 10	—		
Noon	29.132	—	9.2	11.5	10.2	14.0	SE, 1	6	8-10	o*	—	—	N. 10	10.2		
2	29.116	—	2.8	3.2	3.2	8.6	S by E, 0-1	10	0-10	o*	—	—	N. 10	9.7		
4	29.104	—	0.0	0.6	0.4	1.8	S, 1	8	8-12	o*	—	—	N. 10	—		
6	29.096	—	0.4	1.0	1.0	1.8	E, 3-5	21	25-35	oq +*	—	—	N. 10	—		
8	29.107	—	0.5	2.5	2.5	2.5	E, 2-3	19	15-22	oc*	—	A.-cu. 4	N. 6	—		
10	29.107	—	2.0	4.0	3.8	5.0	E by N, 3	14	10-15	oc	—	—	S.-cu. 9	—		
Midt.	29.051	—	3.0	5.0	5.0	5.0	E, 1-2	16	10-13	bc	—	—	S.-cu. 6	—		
Mean	29.141	—	—	5.0	4.4	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 9°-8.		Solar radiation { black bulb 82°-0.		Evapn. — grammes.		Precipn. 0.002 in. since 4 p.m. 17th.								
		8 p. 12°-0.		bright bulb 32°-6.												

2	29.053	—	0.0	2.0	2.0	5.0	Var. E, 1-2	9	0-8	bc	—	Ci.-s. 4	—	—	<p>20th.</p> <p>Heavy S.-cu. at base of western hills, extending to S.</p> <p>Erebus smoke going NE most of the day, at times changing to N.</p> <p>Mirage to W and S; Str. on E horizon.</p> <p>3 p.m. Rain band, 2.</p> <p>Str. to E and S; heavy surface drift.</p> <p>Slight mirage all round; threatening appearance all round.</p> <p>Heavy Nim., and very threatening all round horizon.</p> <p>Fine day, but cloudy. From calm the wind freshened to strong from E. Barometer unsteady, but rose later rather quickly. Temperature unsteady.</p>
4	29.052	—	-1.0	1.0	1.0	4.0	Lt. E airs	9	0	b	—	—	—	—	
6	29.091	—	-1.0	4.0	4.0	5.0	Calm	2	0	bc	—	—	Cu. 4	—	
8	29.087	—	0.0	1.0	1.0	10.0	Calm	1	0	bc	—	—	S.-cu. 8	—	
10	29.079	—	0.9	9.0	8.0	9.0	Calm	2	0	bc	—	—	Cu. 3	—	
Noon	29.069	—	9.0	9.8	8.8	11.0	E, 1-2	5	5-12	bc	—	Ci.-cu. 4, SW (slow)	—	—	
2	29.061	—	7.6	11.3	10.0	16.0	ESE, 2-3	10	15-25	bc +	—	Ci.-cu. 7, SW (mod.)	—	—	
4	29.091	—	8.4	10.2	8.4	12.6	E, 3-4	18	20-30	bc +	—	Ci.-cu. 8	—	—	
6	29.131	—	8.0	8.8	7.0	15.0	E by N, 3-4	18	20-30	bc +	—	Ci.-s. 2, W	S.-cu. 2, E (fast)	—	
8	29.146	—	6.5	7.5	6.2	8.1	E by N, 3-4	18	20-25	b	—	—	—	—	
10	29.171	—	7.0	8.0	6.8	8.0	Var. NE, 3-4	19	20-25	bc	—	—	S.-cu. 3, E	—	
Midt.	29.183	—	6.8	7.0	6.2	7.0	NE, 3-4	17	20-25	oc	—	—	Cu. 10	—	
Mean	29.101	—	—	6.6	5.8	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 5°-0.		Solar radiation { black bulb 111°-0.		Evapn. — grammes.		Precipn. — in.							
		8 p. 17°-0.		bright bulb 50°-0.											

2	29.203	—	6.0	6.0	5.2	6.0	E by S, 2-3	17	15-22	bc	—	—	S.-cu. 5, W (fast)	—	<p>21st.</p> <p>Heavy S.-cu. to SW, extending to S.</p> <p>S.-cu. low down to W, extending to S.</p> <p>Mirage all round horizon.</p> <p>Mirage to W; land to S obscured by low Cu. Erebus smoke going NE all day; mountains to W quite clear.</p> <p>Detached Cu. all round horizon; slight mirage to W.</p> <p>3 p.m. Rain band, 1.</p> <p>Very dull to S; Str. on horizon; detached Cu. passing.</p> <p>Very dull to S; b. to N; Nim. along western mountains. 8.15, commenced to snow.</p> <p>10 p.m. Snowing, and very thick.</p> <p>Fine most of the day, clouding over later. Light to fresh E by wind. Barometer rose until noon, and then dropped. Temperature higher.</p>
4	29.223	—	8.0	8.0	7.2	8.2	E, 2-3	7	15-20	b	—	—	—	—	
6	29.239	—	7.5	9.0	8.0	9.8	Lt. E airs	3	0	b	—	—	—	—	
8	29.239	—	3.0	10.8	9.3	12.0	N by E, 1-2	5	0-10	bc	—	—	S. 4	—	
10	29.289	—	4.4	8.6	7.3	15.2	ESE, 1-2	5	8-12	bc	—	—	S.-cu. 3, W (fast)	—	
Noon	29.289	—	7.2	10.8	9.8	14.8	ESE, 1-2	10	9-14	oc	—	—	S.-cu. 8, W	—	
2	29.271	—	9.8	14.0	12.5	21.0	E, 0-1	9	0-10	b	—	—	—	—	
4	29.265	—	12.7	14.2	12.6	21.6	E, 1	5	5-10	b	—	—	—	—	
6	29.261	—	9.4	10.5	9.0	18.7	ESE, 1-2	5	10-15	b	—	—	—	—	
8	29.247	—	9.0	10.0	8.9	10.1	E, 2	10	15-20	oc	—	—	S. 10	—	
10	29.229	—	9.2	12.0	11.0	12.0	Var. SE airs	7	5-10	om*	—	—	N. 10	—	
Midt.	29.165	—	10.0	12.0	11.8	14.2	Lt. var. airs	1	0	om*	—	—	N. 10	—	
Mean	29.243	—	—	10.5	9.4	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 11°-0.		Solar radiation { black bulb 110°-4.		Evapn. — grammes.		Precipn. 0.004 in. since 4 p.m. 19th.							
		8 p. 15°-1.		bright bulb 47°-3.											

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METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

22nd.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.	Lower.			
			Spirit minimum.	Dry.											Wet.
2	29.161	—	3.0	5.0	4.0	9.0	Var. E alra	3	5-10	om	—	Cu. 10, E	—		
4	29.145	—	4.0	4.2	3.0	9.0	NE, 1-2	4	5-10	oc	—	Cl.-cu. 8	—		
6	29.117	—	2.0	9.2	8.0	11.0	N, 1-2	4	5-10	bc	—	Cl. 4, S	—		
8	29.095	—	2.2	8.8	7.8	12.0	Calm	3	0	bc	—	Cl.-s. 2, W	—	Bank of Str. to W, detached Cu. to S.	
10	29.055	—	7.5	11.8	10.2	13.1	NNE, 1-2	6	10-15	ic	—	Cl. 2	—	Erebus covered with thin mist, smoke going W by in strong column. About noon the smoke rose vertically and then broke to NE; mountain clear.	
Noon	29.011	—	3.9	6.0	5.5	8.2	ENE, 3-4	20	25-33	b	—	—	—	1 p.m. Smoke was going in a big column to NE.	
2	29.000	—	0.0	4.0	3.0	7.2	NE, 3-4	21	25-32	b ↗ <sup>2</sup>	—	—	—	2 p.m. Heavy surface drift; sky cloudless; visibility small.	
4	28.982	—	0.0	3.5	2.7	7.0	NE, 3-4	21	25-33	b ↗ <sup>2</sup>	—	—	—	4 p.m. Heavy drift on surface; slight mirage to S.	
6	28.932	—	-4.2	4.2	3.0	9.6	ENE, 3-5	26	25-35	b ↗	—	—	—	6 p.m. Detached Nim. to N; mirage to S and W.	
8	28.922	—	0.0	4.8	3.7	4.1	E by N, 3-5	21	30-35	b ↗	—	—	—	8 p.m. Clear blue sky, only cloud a Cl.-cu. to NE.	
10	28.904	—	-0.8	2.0	1.6	1.8	ENE, 5	22	32	bc ↗	—	Cl.-s. 7, N	—	10 p.m. Thin band of Str. 4000 feet up, along Discovery and western mountains; clouds moving to S fast.	
Midd.	28.896	—	-3.0	7.0	4.9	6.9	ENE, 3-4	21	25-30	bc ↗	—	Cl.-cu. 4, NE	—	Midd. Bright along S and W horizon. Fine, but cloudy. Wind rose up strong from E and remained strong all day, with heavy surface drift. Barometer falling all day. Temperature fell lower again.	
Mean	29.018	—	—	5.9	4.8	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 12° 0.		8 p. 16° 1.		Solar radiation		black bulb 92° 5.		bright bulb 39° 3.		Evapu. — grammes.		Precipn. — in.	

23rd.

2	28.887	—	5.0	6.5	4.8	5.5	Var. NE, 4-5	12	20-28	bc ↗	—	Fr.-cu. 2, N (fast)	—	Very clear, visibility much marked; red glow to S.	
4	28.881	—	2.2	5.5	4.0	5.0	NE, 3-4	19	15-28	bc ↗	—	Cu. 2, N (fast)	5.0	Visibility very marked.	
6	28.863	—	3.0	8.2	6.0	9.0	NE, 3-4	17	15-25	o	—	A.-s. 10	8.4	Clear blue sky all round below 15°; visibility very marked.	
8	28.845	—	3.0	3.8	3.0	5.2	SE, 2-3	9	10-20	oc	—	S.-cu. 9, N (mod.)	3.6	Excessive mirage to SW and W; visibility marked; blue sky below 10°; very dark to N.	
10	28.837	—	3.0	11.0	10.0	14.5	Calm	4	0	oc	—	Cu. 8, NNW (slow)	12.0	10 a.m. Excessive mirage to W and S; visibility marked.	
Noon	28.822	—	10.2	14.0	12.4	17.2	Calm	1	0	oc	—	Cu. 7, N (slow)	11.5	Noon. Excessive mirage all round horizon; visibility marked.	
2	28.803	—	13.7	15.3	14.0	17.4	Calm	2	0	oc	—	Cu. 8, N (slow)	11.5	2 p.m. Mirage to S and SW; clear on N horizon.	
4	28.774	—	15.2	15.8	14.0	17.5	Calm	0	0	bc	—	Fr.-cu. 2, N (mod.)	—	3 p.m. Rain band, 3.	
6	28.758	—	10.0	10.4	9.2	16.8	Calm	0	0	bc	—	Fr.-cu. 2, N (fast)	—	4 p.m. Mirage all round horizon; visibility very clear and marked.	
8	28.753	—	9.0	10.1	9.2	8.8	Calm	1	0	b	—	—	—	6 p.m. Excessive mirage to W; detached Cu. passing from N.	
10	28.771	—	5.5	9.0	7.6	7.2	N by E, 0-1	5	0-10	b	—	—	—	8 p.m. Excessive mirage all round horizon; Fr.-cu. to S and W.	
Midd.	28.776	—	-0.8	2.2	2.0	-0.2	Calm	1	0	b	—	—	—	10 p.m. Strong mirage from S to W; low Str. clouds over S horizon.	
Mean	28.815	—	—	9.3	8.1	—	—	—	—	—	—	—	—	Midd. Opaque bank of fog, with sharply defined upper edge, extending the whole length of visible horizon, about 3000 feet high. Overcast most of the day, then clearing. Wind very strong from NE early, then falling and remaining calm all day. Barometer fell until 6 p.m. and then commenced to rise. Temperature higher.	
Max. therm. read at		8 a. 11° 0.		8 p. 20° 5.		Solar radiation		black bulb 98° 2.		bright bulb 44° 6.		Evapu. — grammes.		Precipn. — in.	

24th.

2	28.791	—	-9.5	5.0	4.2	2.8	N, 1	2	0-10	h	—	—	—	Fog bank all along horizon to height of 2000 feet.	
4	28.811	—	-0.9	-0.6	-2.0	-4.0	Calm	5	0	b	—	—	—	Fog all gone; strong mirage to S and SW.	
6	28.832	—	-5.3	4.6	4.0	3.5	Lt. N airs	1	0	b	—	—	—	Fog bank as at 2 a.m.; top of Black Island strongly mirrored.	
8	28.852	—	-1.8	3.8	3.0	6.0	Lt. E airs	4	0-5	b	—	—	—	Heavy fog bank from S to W covering foot-hills.	
10	28.922	—	2.0	9.5	9.0	11.8	Calm	6	0	b →	—	—	—	9 a.m. Heavy fog pouring over E land, coming from E very fast; air full of ice crystals.	
Noon	28.976	—	8.2	2	8.0	11.0	SE, 2	7	15-18	b	—	—	9.0	10 a.m. Light fog passing over E hills from E rapidly; high fog all round.	
2	29.018	—	3.8	9.5	9.0	12.0	N by W, 1	8	5-10	h	—	—	—	Noon. Light fog passing over E hills from E rapidly; clear to W and S.W.; high fog bank in S.	
4	29.095	—	5.7	15.0	13.6	16.4	Var. E, 2-3	4	12-23	b	—	—	—	2 p.m. Str. on western mountains; wind very unsteady and variable.	
6	29.155	—	0.5	1.0	0.5	11.0	NE, 2-4	12	16-28	bq ↗	—	—	—	3 p.m. Rain band, 4.	
8	29.221	—	0.0	3.5	3.0	3.5	E, 2-4	16	15-23	bq	—	—	—	4 p.m. Barometer rising rapidly; wind very changeable; Str. to S and W.	
10	29.264	—	3.0	6.0	5.2	5.0	E, 3-4	15	18-25	b	—	—	—	6 p.m. Very threatening appearance; barometer pumping slightly and rising rapidly; heavy surface drift, apparently driving W by out in bay.	
Midd.	29.300	—	5.5	8.2	7.2	7.0	NE, 3-4	15	15-23	b	—	—	—	8 p.m. Low and thick drift bank to S; mirage appearance all round.	
Mean	29.020	—	—	6.1	5.4	—	—	—	—	—	—	—	—	10 p.m. Low Str. to S and SW. Fine and clear all day. Wind from calm sprang up strong from eastwards. Barometer rose rapidly all day. Temperature very unsteady.	
Max. therm. read at		8 a. 10° 0.		8 p. —		Solar radiation		black bulb 90° 6.		bright bulb 39° 0.		Evapu. — grammes.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Spirit minimum.	Dry.									Wet.		
2	29.340	—	6.1	9.4	9.0	8.0	ENE, 1	13	8-14	b	—	—	—	Heavy bank of cloud over the Bluff.	
4	29.384	—	4.8	8.4	7.1	6.0	E, 1	8	5-10	b	—	—	—		
6	29.413	—	3.8	11.9	10.0	12.0	ENE, 2	8	15-20	oc	—	A. cu. 8, N	—	Dull to S; bright to N.	
8	29.438	—	3.8	13.0	11.8	15.0	Var. SE, 1	8	5-8	oc	—	S. cu. 9	—	Strong mirage all round horizon; bank of Str. to W obscuring summit of western mountains.	
10	29.490	—	8.0	9.0	8.2	11.0	SE, 1-2	8	10-15	oc	—	S. cu. 8, S (slow)	—	10 a.m. Heavy roll Cu. to S; western mountains clear; visibility marked.	
Noon	29.525	—	8.2	15.0	13.0	11.5	E, 1-2	12	15-22	oc	—	A. cu. 8, S (slow)	14.5	Noon. Visibility marked; windy appearance in S.	
2	29.580	—	9.7	10.2	9.8	12.0	ESE, 2-3	12	20-28	oc	—	S. cu. 10	12.7	2 p.m. Detached Cu. on N horizon; clear to S and SW.	
4	29.594	—	9.0	10.0	9.2	11.5	Var. E, 3	12	20-25	oc	—	S. cu. 10	—	3 p.m. Rain band, 2.	
6	29.605	—	8.6	9.8	9.0	10.2	E by N, 2-4	22	15-28	ocq	—	S. cu. 10	—		
8	29.610	—	8.5	14.0	13.0	14.0	E by N, 2-3	13	15-20	oc	—	S. cu. 10	—	Very windy appearance in sky; threatening appearance in N and W.	
10	29.810	—	13.0	14.0	13.0	14.0	E by N, 2-3	12	15-20	oc*	—	Cu. 10	—	Tops of western mountains obscured; red sky to S and SW.	
Midt.	29.598	—	13.0	14.5	13.0	14.5	ENE, 2-3	11	15-20	oc*	—	N. 10	—	Western mountains obscured; red sky in the S.	
Mean	29.516	—	—	11.6	10.5	—	—	—	—	—	—	—	—	Overcast all day, with some snowfall. Fresh E by wind. Barometer rose all day, and commenced to fall at midnight. Temperature higher and steadier.	
Max. therm. read at		8 a. 14° 5.		8 p. 15° 0.		Solar radiation		black bulb 90° 0.		bright bulb 32° 2.		Evapn. — grammes.		Precipn. — in.	

25th.

2	29.584	—	12.0	12.0	12.0	12.2	Lt. N ahrs	11	0	oc	—	S. cu. 8, S	—	Western mountains visible; Mt. Discovery and south-western mountains obscured.	
4	29.558	—	8.0	11.5	11.0	12.0	Calm	2	0	bc	Cl. cu. 8, S	—	—	4 a.m. Western mountains obscured.	
6	29.530	—	11.0	16.0	15.0	16.0	Lt. W ahrs	2	0	oc*	—	N. 10	—		
8	29.498	—	11.8	13.5	13.0	16.0	SE, 1	2	8-10	oc*	—	N. 10	—	Heavy Nim. to S; land to S obscured.	
10	29.464	—	13.0	17.2	18.8	20.0	E, 1	7	8-10	o*	—	N. 10	—	Thick all round; snowing slightly.	
Noon	29.439	—	14.5	17.2	18.2	19.8	E, 1	7	8-10	o*	—	N. 10	-0.8	Very dark Nim. to W and SW; snowing slightly.	
2	29.421	—	13.2	13.4	13.0	20.7	S, 1	7	5-10	o*	—	N. 10	-1.8		
4	29.416	—	12.6	13.6	13.0	21.0	SE, 1-2	8	5-12	o*	—	N. 10	—	3 p.m. Rain band, 4.	
6	29.414	—	8.5	9.3	9.0	15.6	NE, 2-4	6	10-25	o†*	—	N. 10	—	Sun gleaming faintly; snowflakes of medium size and soft.	
8	29.364	—	5.2	7.2	7.0	7.2	NE, 4-6	15	20-30	oq†*	—	N. 10	—	Sky clearing overhead and to SW; squally and snowing slightly.	
10	29.449	—	8.0	8.0	7.0	8.0	NE, 1-4	13	8-25	oq†* <sup>low</sup> *	—	N. 10	—	Sky clearing to W.	
Midt.	29.466	—	8.0	8.2	7.8	8.0	Var. NE, 2-4	13	15-25	bc†	—	Cu. 8, S (fast)	—	Very heavy Nim. from N to S through W; very clear overhead; low drift.	
Mean	29.467	—	—	12.3	11.7	—	—	—	—	—	—	—	—	Overcast all day, with some snowfall. Wind from E, light, freshened to NE, strong. Barometer fell until 8 p.m., and then rose rapidly. Temperature high and unsteady, falling in evening.	
Max. therm. read at		8 a. 16° 8.		8 p. 18° 5.		Solar radiation		black bulb 83° 6.		bright bulb 30° 0.		Evapn. — grammes.		Precipn. 0.01 in. since 4 p.m. 21st.	

26th.

2	29.496	—	6.8	7.0	6.8	7.0	E, 4-5	14	18-25	bc	—	Cu. 8, S (fast)	—	Heavy Cu. to the W.	
4	29.474	—	3.5	4.0	3.8	4.8	E, 4-6	15	20-30	bc	—	A. cu. 5, S (slow)	—	Heavy Cu. to S; slight mirage to W.	
6	29.494	—	3.5	5.8	4.8	5.0	E, 2-3	25	15-20	bc	Cl. s. 2, NE	—	—	S. cu. to S.	
8	29.497	—	4.0	7.0	6.0	8.0	E, 3-4	12	20-28	b	—	—	—		
10	29.540	—	5.0	7.8	8.8	9.2	ENE, 2-4	16	15-23	b	—	—	—	Strong mirage all round horizon.	
Noon	29.542	—	2.5	3.2	2.7	5.0	NE, 4-5	17	23-30	ocq	—	Cu. 9, NW (mod.)	3.8	Clear all round; no mirage; visibility marked.	
2	29.534	—	2.3	3.6	2.8	5.4	ENE, 4-5	24	25-32	ocq	—	Cu. 9, N (mod.)	2.8	Clear all round; wind squally and shifty.	
4	29.531	—	1.8	3.6	3.0	5.0	ENE, 4-6	20	20-35	ocq	—	Cu. 9, N (mod.)	—	3 p.m. Rain band, 2.	
6	29.537	—	0.0	4.7	3.8	5.0	Var. E, 3-4	21	20-28	oc	—	Cu. 10, NE (fast)	—	4 p.m. Barometer pumping slightly; sun gleaming; clear all round on horizon.	
8	29.542	—	3.5	6.0	5.0	6.2	E, 2-3	20	15-20	oc	—	S. cu. 10	—	6 p.m. Heavy dark sky to W; drift in Strait; visibility good; small Str. on western mountains.	
10	29.558	—	4.8	5.0	4.0	5.0	Var. E, 3-5	11	15-25	oq	—	Cu. 10	—	8 p.m. Very misty to W; visibility marked; clear below 10° alt.	
Midt.	29.571	—	4.0	5.0	4.0	5.0	Var. E, 3-5	14	15-25	oq	—	Cu. 10	—	10 p.m. Nim. to NE; wind squally and varying from E to NE.	
Mean	29.524	—	—	5.2	4.5	—	—	—	—	—	—	—	—	Clear early, becoming overcast and remaining so. Wind very strong, squally, and variable in direction from E. Barometer inclined to rise, but steadier. Temperature lower, but steadier.	
Max. therm. read at		8 a. 11° 0.		8 p. 8° 0.		Solar radiation		black bulb 78° 6.		bright bulb 26° 2.		Evapn. — grammes.		Precipn. — in.	

27th.

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METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

28th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.				
			Dry.	Wet.												
2	29.591	—	3.0	6.0	5.0	5.0	ESE, 3-4	11	20-25	oc		—	Cu. 10	—		
4	29.643	—	5.0	7.0	6.0	7.2	Var. E, 4-5	17	15-25	ocq		—	Cu. 10	—		
6	29.671	—	4.0	8.0	7.0	8.8	ESE, 2-3	13	15-20	oc		—	Cu. 10	—		
8	29.645	—	5.0	6.0	4.5	6.0	SE, 3-4	13	15-28	oc		—	A.-cu. 6	—	Slight mirage round horizon; heavy Nim. to N.	
10	29.681	—	1.0	3.2	2.8	4.6	NE, 5-6	21	25-35	bq ↗		Cl.-cu. 3, W (very slow)	—	—	Visibility marked; heavy roll Cu. to E; detached Cu. and Cl.-cu. all round; thin layer of Str. on western mountains, about 12,000 feet alt.	
Noon	29.697	—	-4.0	2.0	1.2	3.0	ENE, 6-7	23	28-36	bq ↗		—	—	3.0	Noon. Very clear all round; Cl.-cu. to NE low down; very squally.	
2	29.705	—	-5.1	2.0	1.0	5.0	ENE, 5-6	23	25-32	bq		—	—	1.8	2 p.m. Mirage to W; visibility very marked.	
4	29.721	—	-2.8	1.8	0.6	4.8	NE, 4-5	17	20-28	b		—	—	—	3 p.m. Rain band, 0.	
6	29.725	—	1.0	2.3	1.5	5.7	NE, 1-2	10	5-15	b		—	—	—	6 p.m. Exceptionally clear, with marked visibility; wind W <sup>6</sup> out in the bay.	
8	29.739	—	1.8	4.0	3.5	2.0	Calm	2	0	b		—	—	—	8 p.m. Slight mirage all round; visibility marked.	
10	29.751	—	-2.2	-1.9	-2.0	-7.0	Calm	0	0	b		—	—	—	10.25 p.m. Wisps of Fr.-cu. to SW and W, 17,000 feet alt.	
Mldt.	29.731	—	-4.0	-2.8	-3.0	-7.5	Calm	0	0	b		—	—	-2.6	Mldt. Thin layers of Str. to S; frost ferns on glass of anemometer; very red all S horizon to SW. First star seen.	
Mean	29.692	—	—	3.1	2.3	—	—	—	—	—		—	—	—	—	
Max. therm. read at { 8 a. 8°·2. 8 p. 7°·5.											Solar radiation { black bulb 81°·0. bright bulb 31°·0.		Evapn. — grammes.		Precipn. — in.	

Overcast early, then clearing and remaining fine and clear. Wind very strong from ENE to NE, falling to calm about 8 p.m. Barometer inclined to rise steadily all day. Temperature lower, falling and unsteady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.706	—	4.5	2.2	1.4	0.5	Calm	1	0	b →		—	—	1.8	<p>1st.</p> <p>Sky cloudless. Very strong looming to N, icebergs and "Morning" shown up high above the horizon. Ice crystals falling. 4 a.m. Absolutely cloudless. Ice crystals falling. 6 a.m. Excessive mirage to N and slight mirage all round. Ice crystals falling. 8 a.m. Bank of fog at base of western mountains. 10 a.m. Very clear and absolutely cloudless. 11.30 a.m. Temp. at Cape Armitage, 1°5; min., -22°5; calm; bm; Erebus smoke going NE. Excessive mirage all round, sky cloudless, visibility marked. 2 p.m. Refraction to W. 4 p.m. Erebus smoking very little, going NE. 10 p.m. Tops of western mountains obscured.</p> <p>Flne nearly all day, becoming overcast later. No wind all day. Barometer falling all day. Temperature very unsteady. On arrival on board "Morning," about 5 p.m., the whole surface of the open water was covered with 2 to 3 inches of young ice which had been set in from the N. This began to clear out about midnight.</p>	
4	29.687	—	10.5	10.5	10.8	13.0	Calm	0	0	b →		—	—	0.7		
6	29.650	—	12.0	11.0	11.0	12.0	Calm	0	0	b →		—	—	10.8		
8	29.596	—	12.0	0.0	0.5	0.0	Calm	0	0	b		—	—	10.8		
10	29.550	—	2.0	4.2	4.0	9.5	Calm	0	0	b		—	—	—		
Noon	29.503	—	5.0	9.0	7.8	15.5	Calm	0	0	b		—	—	—		
2	29.466	—	9.0	14.2	12.8	23.2	Calm	0	0	bm		—	—	—		
4	29.435	—	12.0	15.8	14.2	20.0	Calm	0	0	b		—	—	—		
6	29.344	—	10.8	10.8	10.0	12.0	Calm	0	0	bc		Cl.-cu. 6, NW	—	—		
8	29.292	—	7.8	9.2	9.0	9.2	NE, 1-2	4	0-10	bc		Cl. 4, NNE	—	—		
10	29.247	—	6.0	8.0	7.2	7.0	N by E, 1-2	6	5-10	bc		—	Cu. 8	—		
Midt.	29.203	—	1.0	6.0	6.0	6.0	Calm	5	0	oc		—	Cu. 10	—		
Mean	29.472	—	—	4.8	4.2	—	—	—	—	—		—	—	—		
Max. therm. read at		8 a. 5°0.		8 p. 17°8.		Solar radiation		black bulb 88°5.		bright bulb 44°0.		Evapn. — grammes.		Precipn. — in.		

2	29.151	—	4.0	13.0	12.0	13.0	Lt. E airs	0	0	oc		—	Cu. 10	—	<p>2nd.</p> <p>Heavy Nim. to W, sun shining behind it on mountains. Heavy Nim. in W, wind light and shifty. Snowing slightly, clear overhead; wind shifty to N and variable. Very dark to N; surface drift in Strait; thick all round, clearing at intervals. Very dark to N. Overcast all day, with strong ENE wind. Barometer steady from 6 a.m. till 4 p.m., and then rose slowly. Temperature unsteady.</p>
4	29.126	—	7.0	11.0	10.0	11.5	ESE, 1-2	6	5-10	oc		—	Cu. 10	—	
6	29.104	—	7.0	8.0	7.0	8.0	E, 2	9	10-15	oc		—	Cu. 10	—	
8	29.101	—	6.0	10.2	9.2	11.0	Lt. SW airs	4	0-5	oc		—	S.-cu. 10	—	
10	29.109	—	8.2	10.0	9.0	11.0	Lt. var. airs	17	0	oc		—	S. 10	—	
Noon	29.107	—	7.3	8.0	7.2	10.5	ENE, 1-2	7	0-5	oc *		—	N. 10	—	
2	29.105	—	7.0	9.0	8.0	10.0	ENE, 2-3	11	0-10	oc *		—	N. 10	—	
4	29.107	—	8.0	10.0	9.0	10.5	E by N, 3-4	15	15-20	oc		—	N. 10	—	
6	29.123	—	9.0	11.1	10.1	11.3	E by N, 2-3	15	5-15	oc		—	S. 10	—	
8	29.121	—	7.0	9.0	8.0	9.5	Var. NE, 3-4	15	15-22	ocq		—	S.-cu. 9, ENE	—	
10	29.158	—	6.3	10.4	9.0	8.5	SE, 1-2	10	15-20	bc		Fr.-cl.-s. 3, NW	—	—	
Midt.	29.188	—	2.2	7.0	5.0	4.5	SE, 1-3	11	10-25	bq		—	—	—	
Mean	29.125	—	—	9.7	8.6	—	—	—	—	—		—	—	—	
Max. therm. read at		8 a. 13°0.		8 p. 11°0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.	

2	29.206	—	1.0	2.2	1.8	0.8	Var. SSE, 1-2	17	10-17	b		—	—	—	<p>3rd.</p> <p>Dark bank of cloud up to 20° from SW to SSE. Tops of Black and White Islands faintly visible. Low drift in Strait. Str. on summit of western range; visibility marked; drift in Strait; thick to S. Noon. Visibility less marked; misty to W; thick to S. 2 p.m. Wind squally and changeable. 3 p.m. Rain band, 3. 4 p.m. Clearing to W and SW. Sun gleaming faintly; sky clearing to W. Clearing to S; clouds covering upper third of western range. Cl.-cu. to NW; Nim. to S and SW; alt. 3000 feet. Stars visible; Nim. to S and SW. Overcast nearly all day, with fresh SE wind. Barometer rising all day, but commencing to fall at midnight. Temperature steadier.</p>	
4	29.242	—	0.6	4.2	3.5	4.0	SE, 1-2	13	10-15	o		—	S. 10	—		
6	29.288	—	1.8	3.5	2.8	3.5	SE, 2-4	9	12-32	oc		—	N. 10	—		
8	29.290	—	1.0	5.0	5.0	6.0	S, 3-4	11	20-25	oc		—	N. 10	—		
10	29.332	—	4.6	7.8	6.9	9.2	Lt. SE airs	15	0	o		—	S. 10	—		
Noon	29.372	—	5.0	5.5	5.0	6.8	SE, 1-2	11	5-10	oc		—	S. 10	5.4		
2	29.364	—	4.8	6.5	5.7	7.2	SSE, 2-4	15	18-28	ocq		—	S.-cu. 10	4.6		
4	29.403	—	5.5	7.0	6.0	8.0	Var. SE, 1-3	13	5-20	ocq		—	S.-cu. 10	—		
6	29.473	—	4.8	5.2	4.3	7.8	SSE, 1-3	13	8-20	ocq		—	S.-cu. 10	—		
8	29.529	—	3.0	5.0	4.4	5.0	SE, 2-4	16	20-27	oc *		—	N. 10	—		
10	29.530	—	3.5	5.0	3.9	3.8	E, 2	10	15-20	oc		—	S. 10	—		
Midt.	29.518	—	3.5	4.2	3.2	2.4	ENE, 1	13	10	b		—	—	—		
Mean	29.379	—	—	5.1	4.4	—	—	—	—	—		—	—	—		
Max. therm. read at		8 a. —.		8 p. 8°0.		Solar radiation		black bulb 37°6.		bright bulb 17°2.		Evapn. — grammes.		Precipn. — in.		

1903—March.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.							Wet.	Upper.		
4th. 2	29.518	—	2.1	3.0	2.0	1.1	E, 1	6	8-10	bc	—	S.-cu. 2, W	—	Western mountains clear; heavy Ci.-s. stretching from Discovery to NE; alt. 4000 feet.
4	29.514	—	1.4	3.8	2.9	—1.5	Calm	0	0	b	—	—	—	4 a.m. Heavy bank of cloud across western mountains; detached Cl.-cu. to E.
6	29.498	—	1.0	9.2	7.1	9.7	Calm	2	0	oc	—	S. 10	—	6 a.m. Dull to S, bright to N and NW; Nim. on Mt. Discovery; Str. on western mountains' summits at about 11,000 feet alt.
8	29.504	—	2.0	4.5	4.0	6.2	Calm	1	0	oc	—	S. 10	—	8 a.m. Heavy and dark Nim. to N.
10	29.516	—	2.0	10.0	8.5	12.0	Calm	1	0	oc	—	Cu. 9, W	—	10 a.m. Clear to S and N; Str. two-thirds up western mountains.
Noon	29.513	—	10.0	12.2	10.8	15.0	Lt. N airs	2	0	b	—	—	—	11.15 a.m. Temp. at Cape Armitage, 12° 8'; min., —10° 0. Erebus obscured.
2	29.503	—	11.2	18.5	16.0	24.3	Calm	2	0	b	—	—	—	Noon. Thin mist on summit of western mountains; detached Cu. to S.
4	29.493	—	13.5	16.7	14.0	20.6	NNE, 1-2	5	5-12	b	—	—	—	2 p.m. Str. all round horizon.
6	29.487	—	14.2	16.0	14.0	20.2	N by E, 2	7	8-15	bc	—	Cl. 1, W	—	6 p.m. Ci.-s. on S horizon; very dull and threatening to N.
8	29.476	—	14.5	17.5	16.0	16.0	N, 1	8	8	bc	—	Cl. 1, W	—	8 p.m. Very black and threatening to S and SW; heavy Str. to S and SW; very golden clouds to W.
10	29.462	—	15.0	18.2	16.0	18.0	N, 1	7	10	oc	—	—	—	10 p.m. Tops of western mountains obscured by heavy Nim. clouds; very clear to S; necessary to use a light to read the barometer.
Midd.	29.470	—	15.2	18.5	17.0	18.0	Calm	9	0	oc	—	—	—	Midd. Very black and threatening all round; tops of western mountains obscured by heavy Nim. clouds; necessary to use light to read thermometer.
Mean	29.496	—	—	12.3	10.6	—	—	—	—	—	—	—	—	—
Max. therm. read at		8 a. —		8 p. 20° 5.		Solar radiation { black bulb 86° 4. bright bulb 41° 0.			Evapu. — grammes.		Precipn. — in.			

meters in screen. Fine and clear most of the day, becoming overcast at intervals. Very little wind all day. Barometer steadier, but falling later. Temperature rose rapidly.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.							Wet.	Upper.		
5th. 2	29.476	—	14.8	17.8	16.0	18.0	Calm	3	0	bc	—	S.-cu. 8, S (fast)	—	Very bright to S; tops of western mountains obscured in fog.
4	29.472	—	17.2	18.2	17.2	18.0	Lt. E airs	1	0	bc	—	S.-cu. 8, S (fast)	—	Very bright golden sky to S.
6	29.483	—	14.8	18.0	17.0	19.0	N, 0-2	4	0-10	bc	—	S.-cu. 7	—	Heavy Str. to W; mountain tops obscured; very dark and threatening to the N.
8	29.480	—	17.2	22.0	21.0	23.0	N, 1-2	5	5-8	bc	—	Cu. 4, SW	—	Heavy Str. half way up western mountains.
10	29.494	—	17.0	22.2	21.0	23.5	Lt. E airs	3	0	bc	○	Cl.-cu. 2, SW (slow)	—	Western mountains quite clear; visibility marked to S and SW, but not to W; misty appearance in sky.
Noon	29.489	—	18.0	22.0	19.4	26.8	Calm	3	0	b	—	—	—	11.30 a.m. Temp. at Cape Armitage, 25° 5'; min., 10° 0. Erebus smoke going E; summit soon covered with heavy Cu.; light ESEy airs; heavy Cu. on summit of Terror.
2	29.487	—	16.4	21.5	19.0	25.4	E, 0-1	3	0-10	b	—	—	—	Noon. Detached Cu. to S; S.-cu. to E; visibility marked; misty appearance in sky.
4	29.492	—	19.6	20.2	18.2	23.0	ENE, 2	9	15-20	b	—	—	—	2 p.m. Mirage to W; detached Cu. on S horizon.
6	29.455	—	18.2	24.7	20.6	25.8	N by E, 1-2	9	5-12	b	—	—	—	3 p.m. Rain band, 0.
8	29.437	—	18.0	24.0	22.0	23.0	N by E, 1-2	9	8-12	b	—	—	—	6 p.m. Air extremely dry; visibility good.
10	29.443	—	10.8	12.0	11.0	13.0	Var. NE, 2-3	9	15-20	bq	—	—	—	10 p.m. Wind very shifty.
Midd.	29.469	—	5.0	6.2	6.0	7.0	NE, 2-4	15	15-25	bq	—	—	—	Midd. Stars very bright overhead and to NE; red glow on S and W horizon. Fine and clear all day, with light to fresh NEy wind. Barometer steady. Temperature higher, but fell rapidly at night.
Mean	29.473	—	—	19.1	17.4	—	—	—	—	—	—	—	—	—
Max. therm. read at		8 a. 22° 2.		8 p. 25° 5.		Solar radiation { black bulb 91° 0. bright bulb 48° 2.			Evapu. — grammes.		Precipn. — in.			

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Spirit minimum.	Dry.							Wet.	Upper.			Lower.
6th. 2	29.469	—	2.5	1.0	1.0	0.0	Var. E, 6-7	24	30-40	bq	†	—	—	Wind shifted to ENE and freshened; low drift.	
4	29.432	—	2.0	1.0	0.8	2.0	ENE, 6-8	28	35-50	bq	†	—	—	—	
6	29.427	—	3.2	1.0	1.0	1.0	ENE, 5-6	24	35-40	bq	—	—	—	—	
8	29.420	—	7.5	7.0	7.0	6.0	Var. E, 5-6	28	35-40	bc	—	S.-cu. 4, N (fast)	—	—	
10	29.408	—	5.0	1.5	2.0	0.6	Var. E, 5-6	32	20-38	ocq	—	Cu. 8, N (fast)	—	Layers of S.-cu., with blue sky between, all round. Summits of western mountains visible; bases obscured. Low drift in Strait; very squally.	
Noon	29.401	—	5.0	4.8	5.0	3.0	Var. E, 6-8	26	28-44	ocq	†	—	—	3.9	
2	29.401	—	6.0	6.0	5.6	3.0	Var. E, 7-9	29	28-46	ocq	†	—	S.-cu. 10	—	Noon. Heavy and dark N to SW; thick drift in Strait; western mountains obscured.
4	29.445	—	5.7	3.4	3.8	2.2	Var. E, 4-5	26	22-35	oc	†*	—	N. 10	—	2 p.m. Wind very squally and shifty.
6	29.490	—	3.8	1.0	0.8	2.6	E by S, 2	14	8-10	oc	*	—	N. 10	—	3 p.m. Rain band, 4.
8	29.502	—	3.8	6.0	5.0	5.5	SE, 1-2	11	10-17	bc	—	Fr.-cl.-s. 1	S. 3	—	6 p.m. Snow of a soft, wet, powdery nature.
10	29.539	—	0.0	0.1	0.1	2.0	Calm	4	0	bc	—	—	Fr.-s. 2, S (mod.)	—	8 p.m. Thick Str. to S and W obscuring western mountains. Heavy banks of low clouds to E and SE.
Midd.	29.560	—	2.0	3.0	2.0	2.0	Calm	4	0	bc	—	—	—	—	1.8
Mean	29.458	—	—	1.3	1.5	—	—	—	—	—	—	—	—	—	4.3
Max. therm. read at		8 a. 20° 0.		8 p. —		Solar radiation { black bulb 64° 5. bright bulb 34° 8.			Evapu. — grammes.		Precipn. 0.01 in. since 4 p.m. 26th ult.				

wards, falling in evening. Barometer falling until noon and rising quickly after. Temperature low all day.

Hour.	Barometer, reduced to 22° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.				
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.						
				Dry.	Wet.										Unscreened.			
2	29.548	—	1.8	3.8	3.0	0.0	Calm	3	0	bc	—	Thin S. 2, SW (slow)	4.6	7th. Clearing generally. Very red sky to S; detached Str. to S, SW, and W; some stars visible; clouds all very wind blown; western mountains quite clear. 4 a.m. Detached S.-cu. to S, otherwise cloudless; visibility very marked. 6 a.m. Drift in Strait; detached Cu. to S; slight mirage in SW; visibility very marked. 10.15 a.m. Temp. at Cape Armitage, —2° 0'; min., —13° 6'. Wind E, 1-2. In. Erebus smoke going NNE. Wind squally and shifty. Heavy Cu. moving rapidly from E; clear all round horizon; dark and threatening overhead. 6 p.m. Snowing slightly; dull and threatening to N. Dark low Str. all round; red glow on S horizon; snowing to W and SW.				
4	29.562	—	1.2	0.2	0.5	1.2	Calm	3	0	h	—	—	3.4					
6	29.603	—	1.0	4.5	3.5	3.2	SE, 1	3	8-12	b	—	—	0.0					
8	29.615	—	2.0	6.8	5.8	3.2	Var. SE airs	13	0	b	—	—	2.9					
10	29.611	—	4.2	9.9	8.2	11.0	E by N, 1-2	7	5-10	b	—	—	—					
Noon	29.623	—	1.2	1.0	0.5	3.1	NE, 2-4	22	20-35	bq	—	—	1.8					
2	29.625	—	3.0	1.3	1.0	4.2	NNE, 4-6	20	25-42	bq †	—	—	1.2					
4	29.651	—	1.0	3.7	2.8	8.4	E by N, 4-6	26	23-40	ocq	—	Cu. 9, E (fast)	—					
6	29.642	—	2.8	5.6	4.0	9.6	NNE, 2-4	21	20-30	ocq	—	Cu. 10, E (fast)	—					
8	29.648	—	3.5	5.0	4.0	5.0	NE, 3-4	19	20-25	oq	—	S.-cu. 10	—					
10	29.650	—	3.0	7.5	6.2	8.2	ENE, 1-2	17	10-20	oq	—	S. 10	—					
Midt.	29.637	—	4.8	8.2	7.5	9.2	ENE, 1	8	8-10	e	—	S. 10	—					
Mean	29.618	—	—	4.8	3.8	—	—	—	—	—	—	—	—					
Max. therm. read at		8 a. 12° 0.		8 p. 10° 0.		Solar radiation		black bulb 80° 0.		bright bulb 35° 0.		Evapn. — grammes.			Precipn. — in.		Fine early, becoming overcast. Wind fresh to strong from NNE. Barometer rising unsteadily. Temperature steady.	

2	29.640	—	1.5	3.8	3.0	3.2	E by S, 1-3	13	14-23	ocq	—	S.-cu. 10, N (fast)	—	8th. Low Str. clouds from W to S, about 20° alt. Snowing very slightly. Tops of Black and White Islands obscured by Str. Heavy and dark Str. all round horizon; clear to 2° alt.; sun gleaming in N. Break in clouds to S; N. to W, mountains obscured. 3 p.m. Rain band, 2. 4 p.m. Low dark bank of cloud extending all along western mountains at about 4000 feet alt. 6 p.m. Very dull and dark to N; drift in bay to N. 8 p.m. Dark heavy str. to W; clear below 3°. 10 p.m. Detached Cu. in S, moving from E moderately fast; red glow to S. Midt. Wind variable, E to SE; black band of Str. to W, alt. 3000 feet; sky clear to S and E; overcast to W; clouds banking in E. Overcast all day, with strong E by wind. Barometer steady, but inclined to fall. Temperature lower and steadier. Ice apparently broken away 3½ miles from ship. Heavy pack on horizon.				
4	29.644	—	1.0	1.8	0.5	3.5	ENE, 1-3	10	10-22	cq *	—	S. 10	—					
6	29.649	—	0.2	1.2	0.2	2.0	ENE, 3-4	17	28-35	eq	—	S. 10	—					
8	29.647	—	1.0	0.0	0.5	1.0	NE by E, 4-5	20	25-35	ocq	—	S. 10	—					
10	29.648	—	1.0	2.0	1.0	3.0	E, 4-5	18	20-25	oc	—	S.-cu. 10	—					
Noon	29.645	—	0.2	1.0	0.2	2.5	E, 4-5	16	20-28	oc	—	S.-cu. 10, W	1.2					
2	29.637	—	0.0	2.8	1.8	4.0	E by N, 3-4	17	20-30	oc	—	Cu. 9, NW	0.1					
4	29.638	—	1.7	0.0	0.0	2.0	NNE, 2-4	18	15-30	ocq	—	S.-cu. 10	—					
6	29.640	—	1.0	2.5	1.0	4.6	E, 3-4	18	18-28	ocq	—	S. cu. 10	—					
8	29.617	—	1.5	5.8	5.0	5.5	E, 2-4	17	15-24	oc	—	S.-cu. 10	—					
10	29.610	—	4.6	4.8	4.0	6.8	NE, 2	16	10-15	o	—	S.-cu. 10	—					
Midt.	29.598	—	1.6	4.2	3.8	4.0	ESE, 0-1	9	8-10	eq	—	Cu. 9	—					
Mean	29.634	—	—	2.5	1.7	—	—	—	—	—	—	—	—					
Max. therm. read at		8 a. 9° 0.		8 p. 6° 0.		Solar radiation		black bulb 62° 8.		bright bulb 29° 7.		Evapn. — grammes.			Precipn. — in.		Overcast all day, with strong E by wind. Barometer steady, but inclined to fall. Temperature lower and steadier. Ice apparently broken away 3½ miles from ship. Heavy pack on horizon.	

2	29.572	—	2.1	5.8	4.0	3.9	E by S, 0-1	3	5-10	bc	—	Fr.-cu. 1	—	9th. Wind variable E to SE; heavy bank of Str. on Discovery and western mountains; clear to N and E; alt. of Str. about 3000 feet; Fr.-cu. radiating NE and SW. 4 a.m. Clouds still banked in SW at same alt. 5 a.m. Wind freshening considerably. 6 a.m. Clouds as at 4 a.m.; wind steadier. 8 a.m. Heavy Nm. from N to SW; tops of western mountains obscured. 10 a.m. Very thick to W; clear low down to S; drift in Strait. Noon. Clear to S low down; thick to W; visibility to S good. 3 p.m. Rain band, 1. 4 p.m. Clouds thin and very dark to S. 6 p.m. Clouds thin; very dull to N; detached Cu. to E. 8 p.m. Very bright below 4° alt.; hills below that alt. very clear to W. 10 p.m. Orange-yellow glow to SSW, fading and increasing in height to SE and NW; height about 2° at centre. Midt. Orange-red glow to S, height 2° in centre; clouds faintly thinned. Overcast and cloudy all day, with very strong NE by wind, falling a little in evening, but rising again to strong. Barometer falling all day. Temperature lower and steady.				
4	29.569	—	2.2	2.0	1.0	1.8	SE, 1-3	7	15-20	bq	—	S.-cu. 9, N	—					
6	29.559	—	2.5	3.0	2.1	3.2	E by N, 1-3	14	20-30	ocq	—	S. 10	—					
8	29.552	—	4.2	1.8	2.2	1.0	Var. NE, 6-8	24	35-48	ocq †	—	Cu. 10	—					
10	29.547	—	4.0	1.5	2.2	0.5	NE, 5-8	26	28-44	ocq † <sup>3</sup>	—	S.-cu. 10, N (fast)	—					
Noon	29.537	—	2.8	0.2	1.2	1.0	NE, 5-6	18	20-30	ocq	—	Cu. 8, NW (fast)	0.3					
2	29.521	—	1.5	0.8	0.0	2.3	N by E, 3-4	21	15-25	oc	—	S.-cu. 10	1.2					
4	29.495	—	2.2	0.2	0.3	1.2	ENE, 3-5	20	15-32	ocq	—	S.-cu. 10	—					
6	29.482	—	3.2	1.0	2.0	0.3	ENE, 3-5	19	15-30	ocq	—	Cu. 9, NE (fast)	—					
8	29.477	—	1.5	1.0	0.5	1.0	E, 1	13	8	o	—	S.-cu. 10	—					
10	29.452	—	0.0	0.8	0.0	1.0	ENE, 2-4	12	15-30	oq	—	S.-cu. 10	—					
Midt.	29.431	—	1.0	0.2	1.0	0.2	ENE, 4-5	23	20-30	oq	—	S.-cu. 10	—					
Mean	29.516	—	—	0.7	0.1	—	—	—	—	—	—	—	—					
Max. therm. read at		8 a. 5° 8.		8 p. 1° 5.		Solar radiation		black bulb 33° 0.		bright bulb 11° 8.		Evapn. — grammes.			Precipn. — in.		Overcast and cloudy all day, with very strong NE by wind, falling a little in evening, but rising again to strong. Barometer falling all day. Temperature lower and steady.	

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10th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.		Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.		Mercurial.		Direction and force (Beaufort scale).	Upper.					Lower.			
			Dry.	Wet.	Unscreened.	Dry.								Wet.		
2	29.402	—	-1.3	0.2	1.0	0.2	NE, 4-5	18	15-30	oq	—	—	S-cu. 10	—	Bright orange light to S, alt. 5°. Cu. clouds tinged to 60°.	
4	29.406	—	-1.0	2.4	1.4	1.5	NE, 3-4	12	10-20	ocq	—	—	Fr.-s.-cu. 10, N	—		
6	29.385	—	-0.2	1.8	1.0	0.8	ENE, 3-4	12	20-30	bcq	—	—	Fr.-cu. 3, N	—		
8	29.382	—	-0.5	0.0	0.2	-1.5	ENE, 3-4	12	20-25	b	—	—	—	—		
10	29.373	—	-1.0	0.1	0.8	1.6	NE, 2	15	10-15	b	—	—	—	—	Visibility very marked; layer of Str. to S, alt. about 3000 feet, otherwise cloudless.	
Noon	29.360	—	-1.0	0.0	0.8	1.0	NE, 1	10	10-15	bc	—	—	Cu. 4, N (mod.)	0.3	10.15 a.m. Temp. at Cape Armitage -7°0, min. -11°0. Wind E, 2, bc. Cu. 1; Erebus smoke going E to ENE.	
2	29.343	—	-0.4	1.0	0.0	3.0	NE, 2-3	11	12-23	oc	—	—	Cu. 9, N (mod.)	-0.4	Noon. Roll Cu. to N; summits of western mountains just obscured; slight mirage all round; visibility very marked; very dark to N.	
4	29.323	—	-1.5	0.8	2.0	0.0	ENE, 2-4	14	10-25	ocq	—	—	Cu. 10	—	2 p.m. Sun gleaming, Nim. to N.	
6	29.317	—	-2.0	1.0	1.5	-0.2	NE, 3-4	15	15-28	oc	—	—	S.-cu. 10	—	3 p.m. Rain band, 2.	
8	29.316	—	-1.0	2.5	1.8	2.5	E, 2-3	15	15-20	o	—	—	S.-cu. 10	—	6 p.m. Bright colours on W horizon; cloudless below 2° alt.	
10	29.329	—	-3.4	3.0	3.0	-2.3	E by N, 3-5	20	30-38	oq +	—	—	S. 10	—	8 p.m. Bright to S below 2° alt.; S.-cu. about 3000 feet; dark to W.	
Mldt.	29.341	—	-5.4	4.0	4.6	-3.6	E by N, 3-5	23	25-32	oq +	—	—	S. 10	—	10 p.m. Str. about 2700 feet; clear sunset light to S below 2°, otherwise entirely overcast; drift in Strait and on hills to E.	
Mean	29.356	—	—	-0.1	0.8	—	—	—	—	—	—	—	—	—	Mldt. Same remarks as at 10 p.m. Overcast early, clearing about 8 a.m. for 4 hours, and then again becoming overcast.	

Max. therm. read at { 8 a. 4° 0. 8 p. 3° 0. Solar radiation { black bulb 72° 5. bright bulb 29° 3. Evapn. — grammes. Precipn. — in.

cast and remaining so. Fresh E to NE wind all day, increasing in evening. Barometer fell until 8 p.m., and then rose quickly. Temperature low and steady all day.

11th.

2	29.357	—	-11.3	5.0	5.2	-4.8	E by N, 3-5	24	30-35	oq +	—	—	S. 10	—	Str. extending to S, leaving less sunset light clear on the horizon; very high clouds of drift running to NW in Strait.
4	29.373	—	-6.4	5.6	5.9	-5.1	E by N, 3-6	27	30-38	oq + *	—	—	S. 10	—	4 a.m. Western range hidden by drift; typical apron of cloud formed over Bluff, otherwise clear to S.
6	29.414	—	-6.1	4.0	4.8	-4.0	E by N, 2-3	20	20-25	o *	—	—	S. 10	—	6 a.m. Snowing very slightly, Bluff clear, foot-hills to W also visible through drift.
8	29.428	—	-4.5	4.0	5.0	-4.0	Var. E, 3-4	11	20-25	oc	—	—	Cu. 10	—	10 a.m. Clear below 2° alt.; drift in Strait; dark and heavy Nim. to W; foot-hills only just visible.
10	29.455	—	-5.0	2.8	3.1	-1.6	NE, 4-5	20	20-25	o	—	—	S.-cu. 10	—	10.15 a.m. Temp. at Cape Armitage -2° 4, min. -8° 0. Wind ESE, 3, oc.
Noon	29.466	—	-3.8	2.2	2.8	-1.1	NE, 3-4	19	19-27	o	—	—	S. 10	-1.7	Noon. Entirely overcast except to S, alt. 2°; Nim. to W.
2	29.466	—	-2.6	0.0	1.0	1.2	E by N, 3-4	15	15-25	oc	—	—	S.-cu. 10	-2.6	2 p.m. Clear to S and SW; summits of western mountains obscured.
4	29.462	—	-1.4	0.2	1.3	1.2	ENE, 2-3	14	15-22	oc	—	—	S.-cu. 10	—	3 p.m. Rain band, 4.
6	29.459	—	-4.3	3.0	3.5	-2.6	NE, 3	11	18-22	oc *	—	—	N. 10	—	4 p.m. General appearance of snow; clear low down to S.
8	29.479	—	-4.5	4.5	4.5	-4.5	NE, 2-3	13	15-22	o + *	—	—	N. 10	—	6 p.m. Snowing slightly; drift in Strait to NW.
10	29.464	—	-3.2	2.5	2.8	-2.2	ENE, 1-3	12	15-17	o + *	—	—	N. 10	—	8 p.m. Thick all round; no land visible.
Mldt.	29.469	—	-4.2	3.3	3.8	-2.2	E by N, 1-2	12	12-18	oc + *	—	—	N. 10	—	10 p.m. Very light drift; low parts of land visible between S and SW, alt. 0° 30'.
Mean	29.441	—	—	-3.1	3.6	—	—	—	—	—	—	—	—	—	Mldt. Less drift; clear on horizon between SSE and SW, alt. 1° 15'; low bank of Str. extending between top of the day. Temperature lower, and was below zero all day.

Max. therm. read at { 8 a. 2° 5. 8 p. 0° 0. Solar radiation { black bulb 25° 0. bright bulb 12° 3. Evapn. — grammes. Precipn. — snow not measurable.

Bluff and W end of White Island. Overcast all day, with some slight snowfall. Wind strong E by all day. Barometer rose slowly most of the day. Temperature lower, and was below zero all day.

12th.

2	29.468	—	-4.0	0.0	0.2	0.0	E, 1	7	5-8	oc	—	—	N. 9	—	Bank of Str. extending round horizon between SSE and SW to an alt. of 1° 15'.
4	29.467	—	-3.5	2.4	2.8	-2.2	ESE, 4	9	20-25	oc + *	—	—	N. 9	—	3.55 a.m. Wind rising; drift obscuring low parts of land between S and WSW; western mountains obscured; clear sky to S, alt. 2°.
6	29.472	—	-7.3	6.8	7.0	-6.2	E by N, 2-4	8	8-12	oc + *	—	—	N. 9	—	6 a.m. Wind squally; snowing and drifting; thick all round.
8	29.454	—	-7.5	2.0	2.0	-1.0	E by N, 2-3	24	10-15	oc	—	—	N. 10	—	10 a.m. Dark and threatening to S; visibility very marked; two-thirds of western mountains visible; summits obscured.
10	29.452	—	-8.0	6.0	6.0	-4.5	NE, 3-4	15	20-23	oc	—	—	Cu. 9, NW (mod.)	-4.7	10.15 a.m. Temp. at Cape Armitage -11° 0, min. -12° 2. Wind ESE, 2-3.
Noon	29.452	—	-6.5	5.5	6.0	-4.0	NE, 2-3	12	10-20	oc	—	—	S.-cu. 10	-5.3	Noon. Clear to SW low down; visibility very marked; clearing to W, summits of western mountains just obscured.
2	29.446	—	-10.5	9.8	9.6	-8.0	ENE, 4-6	17	25-35	ocq + *	—	—	N. 10	-5.1	2 p.m. Wind squally and slightly; snowing and drifting; all land obscured.
4	29.433	—	-10.2	9.6	9.6	-6.0	E by N, 4-6	22	23-35	ocq + *	—	—	Cu. 10, E	-8.0	3 p.m. Rain band, 1.
6	29.421	—	-11.1	9.5	9.8	-7.3	E by N, 3-4	20	20-30	b	—	—	Cu. 3, E	-9.0	4 p.m. Clouds breaking up to W and becoming detached in zenith.
8	29.410	—	-12.0	11.5	11.6	-7.0	ESE, 1-3	19	10-22	bc	—	—	S. 2	-9.2	6 p.m. Cu. to E and Str. to W.
10	29.396	—	-12.8	8.9	9.1	-9.5	NE by E, 2-3	11	10-20	bc	—	—	Cl.-cu. 2, NNW	-9.9	10 p.m. Red glow showing on Cl.-cu. clouds above Erebus; wind dropping; bank of Str. over Bluff.
Mldt.	29.387	—	-11.3	9.0	9.2	-9.6	E, 1	7	10	bc	—	—	Cl.-cu. 5, NNW	—	Mldt. Heavy cloud banks to S obscuring the Bluff.
Mean	29.438	—	—	-6.8	6.9	—	—	—	—	—	—	—	—	—	Overcast most of the day, clearing in evening. Strong E by wind, falling in evening. Barometer falling slightly all day. Temperature unsteady, and below zero all day.

Max. therm. read at { 8 a. 0° 0. 8 p. -2° 0. Solar radiation { black bulb 33° 7. bright bulb 12° 2. Evapn. — grammes. Precipn. — snow not measurable.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.			Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.	Aspirator.	
				Dry.	Wet.										
2	29.345	—	-11.7	-10.3	-10.6	-10.2	E NE, 0-3	17	5-17	bc	—	—	S. 2	-9.2	Heavy bank of low cloud to S.
4	29.324	—	-11.6	-6.3	-7.0	-6.6	E NE, 1-2	12	15-18	oc	—	—	—	-9.8	Mirage from SSW to W.
6	29.309	—	-7.8	-4.0	-4.7	-5.0	Var. E, 1-2	9	5-10	bc	—	—	Cl. 1, W	-7.4	Very thick over White Island.
8	29.293	—	-15.8	-12.0	-12.8	-12.8	Var. NE, 1-2	8	5-10	bc	—	—	Fr.-cu. 1, SSE	-4.4	Very thick over White Island.
10	29.273	-12.0	-12.7	-3.4	-4.0	-1.1	E, 1	10	8	bc	—	—	A.-cu. 5, S (slow)	-5.4	Mirage all round; heavy Nim. to SW.
Noon	29.258	—	-4.2	-2.8	-3.1	1.5	Lt. E airs	5	0	b ⊕	—	—	Thin A.-s. 2	-2.9	Mirage all round; thin Str. on summits of western mountains; fog to S; clear to W. Min. temp. at Cape Armitage, -22° 2. Wind E, 2. Erebus smoke going E more than usual amount.
2	29.245	—	-12.0	-7.8	-8.0	-3.0	Calm	3	0	b	—	—	—	-3.6	—
4	29.226	—	-12.5	-9.2	-9.2	-6.2	Calm	1	0	bc	—	—	A.-s. 6, SE (slow)	-2.4	Noon. Strong mirage all round; Nim. on western mountains; thin high Str. to S; ⊕ radius, 22° 30', with mock suns.
6	29.207	—	-9.5	-3.2	-4.6	0.0	Calm	2	0	bc	—	—	Cl. 2	-2.9	2 p.m. Str. to S and W.
8	29.195	—	-5.5	-4.2	-5.0	-5.8	Lt. E airs	5	0-12	b	—	—	—	-3.8	3 p.m. Rain band, 4.
10	29.197	—	-6.9	-4.8	-5.2	-0.8	E, 1	4	0-5	bc	—	—	Cl.-s. 1	-9.2	4 p.m. Looming in S and SW; mirage all along W horizon.
Midt.	29.190	—	-10.4	-8.7	-8.9	-10.5	Lt. ENE airs	5	0	bc	—	—	Cl.-s. 2	-10.1	6 p.m. Str. running in detached veins from SE to NW; broken and fleecy in zenith.
Mean	29.255	—	—	-6.4	-6.9	—	—	—	—	—	—	—	—	-11.9	8 p.m. Heavy Nim. on western mountains, bases only visible; dark and thick to S.

Max. therm. read at { 8 a. -3° 5. / 8 p. -1° 5. Solar radiation { black bulb 65° 8. / bright bulb 20° 6. Evapn. — grammes. Precipn. — in.

10 p.m. Stars of first and second magnitude clearly visible. Fine, but cloudy all day, with very little wind. Barometer continued to fall all day. Temperature low and unsteady.

13th.

2	29.170	—	-10.0	-5.5	-6.0	-6.0	N by E, 1	4	0-5	bc	—	—	Cl.-s. 5	-9.8	Dark bank of cloud in W and S.
4	29.152	—	-7.5	-3.0	-3.8	-2.5	Lt. SE airs	3	0	o	—	—	N. 10	-10.5	Strong indications of snow; became overcast during 2 hours.
6	29.153	—	-8.5	-1.9	-2.0	-1.9	NNE, 1	2	0-5	o	—	—	N. 10	-2.5	Snowing lightly; large soft flakes.
8	29.149	—	-2.5	-0.2	-0.5	2.0	NE, 2-3	7	10-15	o *	—	—	N. 10	-3.3	—
10	29.148	-3.0	-1.0	2.0	1.8	4.0	Calm	11	0	o o *	—	—	Thin N. 10	-1.7	Thick all round; snowing very slightly, flakes very small and damp. Min. temp. at Cape Armitage, -12° 0. Wind E, 1. o *. Mountains obscured.
Noon	29.146	—	1.5	2.0	2.0	4.2	E NE, 1	5	8	o o *	—	—	Thin N. 10	-1.8	Noon. Clearing generally; western mountains just visible through mist; sun gleaming.
2	29.141	—	0.8	1.5	0.8	4.0	NE, 2-3	8	10-12	bc	—	—	A.-s. 4, E (slow)	—	2 p.m. Thin film of Str. to W and S; dull to N and E.
4	29.127	—	-0.2	0.3	-0.3	2.7	Calm	6	0	bc	—	—	A.-s. 4, E (slow)	—	3 p.m. Rain band, 0.
6	29.111	—	-4.0	0.0	-1.0	1.3	Calm	3	0	b	—	—	—	-2.6	4 p.m. Detached Cu. passing; clouds thin and detached.
8	29.088	—	-4.5	-1.0	-2.0	-3.0	Lt. NE airs	4	0-5	b	—	—	—	-3.1	6 p.m. Str. low down to S; mirage to W.
10	29.078	—	-6.3	-1.0	-1.5	-2.0	Lt. N airs	1	0	b	—	—	—	—	8 p.m. Wind-blown detached Cu. to S, also some S.-cu. low down; otherwise cloudless. Fine sunset coloring.
Midt.	29.078	—	-2.2	-0.5	-1.0	-1.5	Lt. N airs	1	0	b	—	—	—	—	Midt. Very clear, with moon and stars visible; Str. from SE to S low down. All the afternoon and evening Erebus was pouring out a very heavy column until about noon, when it cleared, and
Mean	29.128	—	—	-0.6	-1.1	—	—	—	—	—	—	—	—	—	was fine and clear, with no wind. Barometer continued to fall all day. Temperature unsteady.

Max. therm. { 8 a. -0° 2. / 8 p. 3° 0. Solar radiation { black bulb 66° 0. / bright bulb 22° 3. Evapn. { 1.42 / 11.35 } grammes in 24 hours. Precipn. 0.01 in. since 6 p.m. 6th.

14th.

2	29.071	—	-2.0	2.0	1.0	-0.2	Lt. N airs	4	0-5	bc	—	—	S. 2, NE	—	—
4	29.069	—	-4.0	2.0	1.2	1.0	N, 1-2	9	10-15	o	—	—	S. 10, NW	—	—
6	29.045	—	-5.7	2.5	2.0	2.5	N, 1-2	6	0-5	oc	—	—	S.-cu. 10, W	—	—
8	29.043	—	-1.0	4.0	3.5	2.0	N, 1-2	8	10-15	oc	—	—	Cu. 10	—	—
10	29.027	—	3.8	5.2	4.5	6.2	N, 1	9	8-12	oc	—	—	S.-cu. 10	—	Heavy Nim. on western mountains; bases visible and very clear; dark and threatening to SW.
Noon	29.006	6.9	5.0	7.6	6.2	8.5	NNE, 2-3	12	10-22	oc	—	—	S.-cu. 10	7.5	Noon. Visibility of all lower land marked; heavy Nim. on western mountains and to SW. Min. temp. at Cape Armitage, -22° 0. Wind NNW, 3-4. oc. †.
2	29.000	—	6.4	8.2	7.5	10.0	N, 2-4	12	8-25	ocq	—	—	S.-cu. 10	—	2 p.m. Str. low, obscuring all land above 2000 ft.
4	28.989	—	7.6	9.2	8.3	10.5	N, 1-3	11	5-23	ocq	—	—	S.-cu. 10	—	3 p.m. Rain band, 3.
6	28.990	—	8.8	11.4	10.0	12.0	N by E, 1-5	13	5-23	ocq	—	—	S.-cu. 10	—	6 p.m. Dull and threatening to S and SW.
8	28.998	—	7.0	8.0	7.2	8.0	Lt. NNE airs	4	0	o	—	—	S. 10	8.6	8 p.m. Very dark, thick, and threatening to S and SW; snowing in SW and on western mountains.
10	28.997	—	7.0	14.0	12.0	14.0	N, 1-2	5	8-12	oc	—	—	S. 10	7.9	10 p.m. Heavy Nim. on western mountains.
Midt.	29.021	—	12.0	12.0	10.0	11.0	Calm	5	0	oc	—	—	Cu. 10	—	Midt. Sky breaking to S; Nim. on western mountains moving to N. Overcast and dull, with fresh N by wind all day. Barometer continued to fall until 4 p.m., and then rose steadily. Temperature rose all day and was higher than yesterday.
Mean	29.021	—	—	7.2	6.1	—	—	—	—	—	—	—	—	—	—

Max. therm. { 8 a. 4° 0. / 8 p. 12° 0. Solar radiation { black bulb 44° 6. / bright bulb 20° 8. Evapn. { 1.45 / 11.36 } grammes in 24 hours. Precipn. — in.

15th.

1903—March.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

16th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.027	—	10.0	11.0	10.5	11.5	N, 0-1	4	0-10	oc	—	—	Cu. 10, N	—	Very black to N and NW.	
4	29.055	—	10.0	12.0	11.0	12.0	N, 1	6	10-12	oc	—	—	Cu. 10	—	Weather very unsettled; wind shifty.	
6	29.072	—	10.0	14.0	12.0	14.5	Var. ENE, 2-4	10	15-20	oc *	—	—	N. 10	—		
8	29.112	—	13.8	15.0	13.8	15.2	Lt. NE airs	8	0	oc *	—	—	N. 10	—	Western mountains obscured.	
10	29.121	14.0	14.0	15.1	13.1	16.5	E by N, 1	4	8-10	bc	—	—	Fr.-a.-cu. 5, W (slow)	15.0	Visibility of lower parts of land very marked; heavy Nim. on western mountains. Min. temp. at Cape Armitage, 6° 9'. Wind ENE, 1. oc. Erebus smoke going NEly in a strong column.	
Noon	29.148	—	13.8	15.0	13.5	16.8	E, 1-2	10	10-15	oc ○	—	—	Thin A.-cu. 7	12.9		
2	29.187	—	12.0	12.3	11.3	13.7	ESE, 1-2	4	5-12	oc ⊕	—	—	A.-cu. 9, SE	—	Noon. Thin Str. on western mountains lifting; visibility very marked.	
4	29.201	—	2.0	2.6	2.6	2.6	ENE, 5-7	18	30-42	ocq ⊕	—	—	S.-cu. 5, SE	—	1 p.m. Erebus smoke going NWly in strong line.	
6	29.227	—	1.0	1.0	0.4	1.0	NE, 4-6	26	28-40	ocq ⊕	—	—	A.-s. 6, E	—	2 p.m. Heavy surface drift; sudden fall in temperature. Erebus smoke going Wly and a little SW.	
8	29.258	—	0.0	2.2	2.0	2.5	E by N, 4-5	24	22-33	oc	—	—	S.-cu. 8, NE	—	3 p.m. Rain band, 3.	
10	29.304	—	0.0	1.0	0.2	1.0	Var. NE, 4-6	21	25-35	oc	—	—	S. 10	—	6 p.m. Clouds thin and detached; heavy surface drift in bay. Erebus smoke rising to 3000 feet and going Nly.	
Midt.	29.335	—	4.2	3.8	4.2	3.0	Var. NE, 5-6	22	32-37	oc ⊕	—	—	S. 10	—	8 p.m. Thin layers of S.-cu. on western mountains, otherwise they were clear; clear to S; dark and threatening to N.	
Mean	29.171	—	—	8.1	7.2	—	—	—	—	—	—	—	—	—	Overcast all day. Wind sprang up from all day. Temperature rose until wind	

Max. therm. read at { 8 a. 15° 2. } Solar radiation { black bulb 70° 2. } Evapn. { I. 10.3 } grammes in Precipn. — in.  
 { 8 p. 16° 0. } { bright bulb 33° 5. } { II. 10.3 } 24 hours.

light to strong about 3 p.m., and continued to blow hard from E and NE. Barometer rose steadily freshened, and then dropped suddenly. Overcast all day. Wind sprang up from all day. Temperature rose until wind

17th.

2	29.383	—	6.3	2.2	2.0	2.0	Var. E, 1-6	27	8-35	ocq ⊕	—	—	S. 10	—	Very squally; high drift.
4	29.397	—	4.0	3.8	4.2	4.0	E, 3-4	14	20-25	oc ⊕	—	—	S. 10	—	
6	29.444	—	6.0	4.0	5.0	5.0	E, 5-6	23	30-35	oc ⊕	—	—	S.-cu. 10	—	Heavy bank of S.-cu. over western mountains, obscuring summits.
8	29.476	—	6.7	6.5	6.8	6.0	Var. E, 5-6	22	30-40	oc ⊕	—	—	S. 10	—	Very black and threatening to W; land obscured.
10	29.513	6.0	6.5	5.1	5.5	4.2	ENE, 1-6	27	10-34	oc ⊕	—	—	S. 10	—	Drift in Strait; heavy and dark Nim. to W.
Noon	29.529	—	6.0	5.5	6.2	4.5	Var. NE, 4-6	23	25-33	ocq ⊕	—	—	S.-cu. 8	—	10 a.m. Min. temp. at Cape Armitage, -6° 5. Wind ENE, 3-4. o. ⊕.
2	29.528	—	7.8	2.0	2.4	1.7	Var. E, 4-6	23	23-36	ocq ⊕	—	—	S.-cu. 10	—	Noon. Clouds breaking overhead; much drift in Strait; thick all round.
4	29.543	—	9.9	8.0	8.0	6.5	Var. E, 3-5	22	22-32	ocq ⊕ *	—	—	N. 10	—	2 p.m. Heavy Nim. to W and NW; heavy surface drift.
6	29.570	—	10.2	9.2	9.8	9.0	Var. E, 4-6	23	25-38	ocq ⊕ *	—	—	N. 10	—	3 p.m. Rain band, 4.
8	29.588	—	10.0	10.0	10.0	9.8	E, 5-7	25	25-38	o ⊕	—	—	S. 10	—	6 p.m. Heavy squalls, with snowfall; dull and threatening all round; drift in Strait.
10	29.564	—	11.3	10.2	10.2	—	E, 5-6	23	25-30	o	—	—	S. 10	—	Very thick all round.
Midt.	29.589	—	11.0	10.2	10.4	—	E, 4-5	24	20-25	o	—	—	S. 10	—	
Mean	29.510	—	—	6.4	6.7	—	—	—	—	—	—	—	—	—	Overcast all day, with very strong E wind, and squally. Barometer rose all day. Temperature low and steady all day.

Max. therm. read at { 8 a. 2° 0. } Solar radiation { black bulb 70° 0. } Evapn. { I. 8.8 } grammes in Precipn. — in.  
 { 8 p. — } { bright bulb 33° 8. } { II. 9.1 } 24 hours.

18th.

2	29.635	—	11.5	8.0	—	—	E, 4-5	22	20-25	o	—	—	S. 10, N	—	8.1
4	29.638	—	10.5	8.8	9.2	—	E, 4-5	20	25-30	o	—	—	S. 10	—	8.1
6	29.656	—	10.0	9.6	—	—	E, 3-4	20	20-25	o	—	—	S. 10	—	8.7
8	29.678	—	9.5	8.0	9.0	—	Var. E, 3-4	17	20-25	bc	—	—	S.-cu. 8	—	9.0
10	29.718	14.0	9.0	7.0	7.6	7.5	E by N, 1-2	15	10-20	b	—	—	—	—	6.5
Noon	29.720	—	8.1	5.5	6.1	3.8	E by N, 1-2	12	8-15	b	—	—	—	—	8.1
2	29.714	—	6.1	4.3	5.5	1.2	E, 1-2	12	12-20	bc	—	—	Ci.-cu. 3, W	—	5.1
4	29.709	—	7.0	6.0	6.8	3.0	E, 2	11	15-23	bc ⊕	—	—	Ci.-cu. 2, W	—	6.9
6	29.706	—	11.5	10.0	10.2	8.5	E, 2-3	17	18-22	b	—	—	—	—	8.1
8	29.701	—	11.0	8.0	8.6	9.0	E, 2-3	11	20-24	h	—	—	—	—	8.7
10	29.696	—	14.2	13.0	13.0	14.0	E by N, 3	16	20-24	bv	—	—	—	—	8.7
Midt.	29.695	—	14.5	9.2	9.5	10.5	E by S, 2	20	16-20	bv	—	—	—	—	9.2
Mean	29.689	—	—	8.1	—	—	—	—	—	—	—	—	—	—	9.8

Max. therm. read at { 8 a. -8° 0. } Solar radiation { black bulb 66° 7. } Evapn. { I. 8.6 } grammes in Precipn. — in.  
 { 8 p. -4° 0. } { bright bulb 30° 2. } { II. 9.2 } 24 hours.

Squally. Thin Str. on summit of western mountains, extending from W to S; detached Cu. in S and SW moving to S; visibility marked. Min. temp. at Cape Armitage, -14° 0. Wind E, 1. bc. Erebus smoke going E. Noon. Thin layers of Str. on western mountains' summits; detached Cu. and Ci. to S; very clear to N. 2 p.m. Mirage along W horizon, extending to S; low Str. on S horizon. 3 p.m. Rain band, 1. Erebus smoke going SW; mountain afterwards covered in thin mist. 6 p.m. Thin Str. overhead. 8 p.m. Cloudless sky; moon misty in SE. Overcast early, clearing later, and remained clear. Wind still strong from the E. Barometer rose until noon, and then commenced to fall. Temperature low and steady. From Arrival Bay heights very little or no ice has broken away. Bay covered with young ice. Pack on horizon to N.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.			Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.	Aspirator.		
				Dry.	Wet.											
2	29.692	—	—	9.6	7.8	8.2	9.7	E by N, 2-3	11	18-22	bv	—	—	—	<p>19th.</p> <p>Low and thick banks of clouds to S and SE.</p> <p>9.45 a.m. Temp. at Cape Armitage, —13° 2; min., —20° 5; wind E, 2. Erebus' summit overcast.</p> <p>10 a.m. Str. low down in S; Cu. to E; visibility very marked; slight mirage to S.</p> <p>Noon. Incomplete halo. Thin Str. on summits of western mountains; excessive mirage all round; a good deal of frost smoke over open water to N.</p> <p>2 p.m. Slight mirage to S and SW; Cu. on N horizon.</p> <p>3 p.m. Rain band, 3.</p> <p>4 p.m. Thin film of Str. on western mountains.</p> <p>6 p.m. Much frost smoke over open water to N; dull and threatening in N and E.</p> <p>8 p.m. Layers of Str. on western mountains.</p> <p>Midt. Clouds have spread over from NE; clear to SW.</p> <p>Very fine until about noon, but NE. Barometer falling all day.</p>	
4	29.679	—	—	13.3	8.0	8.0	13.8	E by N, 1-2	15	10-22	bv	Cl. 1, N	—	—		
6	29.659	—	—	8.1	6.5	7.0	8.2	E by S, 1-2	9	10-17	bv	—	—	—		
8	29.638	—	—	8.5	6.0	7.0	8.0	E, 1-2	9	10-15	b	—	—	—		
10	29.615	—	—	6.7	4.8	5.1	5.0	E, 1-2	10	10-15	b	—	—	—		
Noon	29.599	—	—	8.5	7.0	7.8	7.0	Var. E, 1-2	12	10-20	bc ⊕	Cl.-cu. 2, E (very slow)	—	—		
2	29.576	—	—	9.1	7.0	7.5	6.8	Var. E, 2-3	15	15-28	oc	Cl.-cu. 3, E (slow)	Cu. 4, N (mod.)	—		
4	29.568	—	—	11.1	10.7	11.0	10.0	E by N, 2-3	12	15-25	oc	—	A.-s. 6, N (mod.)	—		
6	29.545	—	—	11.8	11.2	12.0	11.0	ENE, 4-6	17	26-40	ocq	—	Cu. 7, NE (mod.)	—		
8	29.538	—	—	13.5	13.0	13.2	13.5	NE, 5-6	24	25-36	ocq †	—	Cu. 6, NE (slow)	—13.4		
10	29.524	—	—	14.5	14.0	14.0	14.5	E by N, 5-6	26	26-36	bcq	Cl. 5	S.-cu. 1	—13.6		
Midt.	29.502	—	—	15.5	15.0	15.0	15.0	ENE, 6-7	23	30-40	bcq	—	A.-s. 9	—		
Mean	29.565	—	—	9.3	9.7	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. —5° 0.		8 p. —4° 0.		Solar radiation			black bulb 70° 8.		bright bulb 20° 0.		Evapn. { I. 6.2 } grammes in { II. 6.1 } 24 hours.			Precipn. — in.

coming overcast and remained cloudy. Wind very strong and squally from NE. Barometer falling all day. Temperature low all day, and fell towards evening.

2	29.503	—	—	15.0	11.0	11.5	11.0	Var./NE, 3-4	24	15-28	bcq	—	Cu. 7	—11.6	<p>20th.</p> <p>Sky clearing in SW; wind variable between ENE and E; no drift.</p> <p>4 a.m. Sky clearing to SW; calm for about an hour between 2 and 4 a.m.</p> <p>6 a.m. Red glow of sunrise on western mountains.</p> <p>8 a.m. Bank of Str. to S and over western mountains.</p> <p>10 a.m. Excessive mirage all round; light cir. to E; layers of Str. to SE; otherwise cloudless sky. Min. temp. at Cape Armitage, —24° 1. Calm. Erebus smoke going N<sup>o</sup> in strong column.</p> <p>Noon. Excessive mirage all round.</p> <p>2 p.m. Double mirage to W and extending to S; visibility good.</p> <p>3 p.m. Rain band, 1.</p> <p>6 p.m. Bank of str. to W; moon in SSW.</p> <p>8 p.m. Thin S.-cu. in W passing from N quickly; fine sunset colouring; deposit of rime on thermometer screens.</p> <p>10 p.m. A layer of detached S.-cu. moving to S at moderate speed in W.</p> <p>Midt. Thin scud passing fast</p>	
4	29.515	—	—	11.9	9.0	9.5	9.0	SE by E, 0-2	8	0-10	bcq	—	Cu. 7	—11.9		
6	29.522	—	—	9.5	7.8	8.0	10.0	ENE, 0-1	5	0	bc	Cl.-cu. 1	—	—8.0		
8	29.529	—	—	12.0	10.0	10.5	11.2	Lt. NE airs	1	0	bc	Cl.-cu. 1	—	—8.7		
10	29.534	—21.2	—	16.0	15.0	15.0	16.0	Calm	1	0	bv	—	—	—		
Noon	29.532	—	—	16.2	13.2	13.2	9.8	Calm	0	0	bv	—	—	—14.4		
2	29.526	—	—	13.1	8.8	9.5	8.6	Calm	0	0	b	—	—	—		
4	29.509	—	—	11.0	9.0	9.4	8.8	Calm	2	0	b	—	—	—		
6	29.504	—	—	14.3	13.0	13.4	12.0	Calm	0	0	bj	—	—	—		
8	29.493	—	—	14.5	8.0	8.2	12.0	Calm	0	0	b	—	—	—6.0		
10	29.477	—	—	8.5	1.0	1.8	2.2	N, 1	9	8-12	b	—	—	—7.2		
Midt.	29.469	—	—	2.2	0.2	1.2	1.8	N, 1	8	10-12	b	—	—	—2.0		
Mean	29.509	—	—	8.8	9.3	—	—	—	—	—	—	—	—	—2.0		
Max. therm. read at		8 a. —5° 5.		8 p. —5° 0.		Solar radiation			black bulb 71° 3.		bright bulb 21° 4.		Evapn. { I. 4.9 } grammes in { II. 4.5 } 24 hours.			Precipn. — in.

from N. Fine and clear day, with hardly any wind. Barometer rose until about noon, and then fell steadily. Temperature low all day, rising in evening.

2	29.458	—	—	10.5	9.8	9.8	13.0	Calm	1	0	bc	—	Thin scud, 2, N (fast)	—9.0	<p>21st.</p> <p>Layers of Str. on western mountains and also to S.</p> <p>Bank of Cu. to N; dark heavy Str. over two-thirds of western mountains, bases very clearly visible; dark over White Island; detached clouds to SW and E.</p> <p>6 a.m. Western mountains obscured by detached S.-cu. passing from N fast; detached S.-cu. cloud in E passing from N and collecting in S.</p> <p>10 a.m. Str. just down to top of Black Island, about 3000 feet.</p> <p>10.15 a.m. Temp. at Cape Armitage, —17° 0; min., —28° 8. Wind ENE, 1. bc. Erebus smoke going N<sup>o</sup>.</p> <p>Noon. Layers of Str. on western mountains about half-way down; a thick band of grey fog obscures the foot of western range and all but just the summit of Brown Island, about 2700 feet; it extends to S, but there is neither fog nor mist on this side of the Strait.</p> <p>2 p.m. Heavy bank of fog in front of all land to S and W; summits of islands only visible.</p> <p>3 p.m. Rain band, 2. 6 p.m. coming up fast from SW; Bluff strongly miraged. A fine day, with fresh E<sup>o</sup> breeze. Barometer fell until 8 a.m., rose until 8 p.m., and then fell again. Temperature low and unsteady.</p>	
4	29.452	—	—	10.7	10.2	10.2	14.2	Calm	0	0	bc	—	Det. cu. 3, N (fast)	—9.2		
6	29.435	—	—	11.5	5.5	5.5	7.0	Calm	1	0	b	—	—	—10.1		
8	29.437	—	—	7.5	4.0	4.8	5.0	NE, 2-3	7	10-15	bc	Cl.-cu. 6, NE	—	—6.2		
10	29.462	—	—	11.2	10.2	10.1	10.2	E by S, 2	10	10-15	bc	—	Fr.-s. 4	—6.5		
Noon	29.482	—	—	11.2	7.1	7.1	5.0	SE, 2-3	8	15-18	b	—	—	—9.8		
2	29.518	—	—	7.5	4.5	4.6	1.8	SE, 1-2	6	7-12	bc	Cl.-s. 2, NW	—	—9.4		
4	29.526	—	—	8.8	8.6	8.4	6.5	E, 2	6	12-20	bc	Cl.-s. 3, NW	—	—5.1		
6	29.550	—	—	10.0	7.2	8.0	7.8	E, 2	13	12-20	bc	Cl.-s. 3, NW	—	—5.4		
8	29.568	—	—	14.5	14.2	14.0	15.5	ESE, 1-2	10	10-15	b	—	—	—		
10	29.556	—	—	15.0	9.5	9.2	9.5	NNE, 0-1	7	0-12	b	—	—	—9.8		
Midt.	29.518	—	—	10.0	8.2	8.0	11.0	Lt. NE airs	3	0	b	—	—	—9.8		
Mean	29.497	—	—	8.3	8.3	—	—	—	—	—	—	—	—	—9.8		
Max. therm. read at		8 a. —		8 p. —2° 8.		Solar radiation			black bulb 60° 7.		bright bulb 16° 3.		Evapn. { I. 1.6 } grammes in { II. 1.2 } 24 hours.			Precipn. — in.

Heavy bank of mist to N. 8 p.m. Thin layer of Str. to S, otherwise cloudless sky. Fine sunset colouring. 10 p.m. Str. coming up fast from SW; Bluff strongly miraged. A fine day, with fresh E<sup>o</sup> breeze. Barometer fell until 8 a.m., rose until 8 p.m., and then fell again. Temperature low and unsteady.

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22nd.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.			Remarks.		
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, sec p. 2.	Weather.	Sunshine.	Upper.	Lower.		Aspirator.	
				Dry.	Wet.											
2	29.482	—	-12.5	-6.0	-6.5	-8.0	Calm	2	0	oc	—	S.-cu. 10, N	-6.2	Clear sky from S to NW to alt. 15°; brilliant colouring over sun's position. Str. very low, alt. about 600 feet; misty to S and W. Thick all round; thin Str. blowing over Observation Hill from SE; rime forming. Noon. Rime forming on everything; thick mist pouring over eastern hills from SE. Min. temp. at Cape Armitage, -30° 4. Wind ENE, 2. o. Foggy to S and W; hoar frost and rime on instrument. 3 p.m. Rain band, 2. 4 p.m. All land to W obscured and wind very variable. 6 p.m. Heavy clouds of drift in mouth of Strait, direction SW; foot of foot-hills visible. 8 p.m. Very thick; wind squally and variable from E to SSE. 10 p.m. Stars shining overhead; dull low down; snowing very slightly; moon very misty in SSE. Midt. Clear overhead.		
4	29.426	—	-12.3	-10.0	-9.8	-10.5	SE, 1	3	8-12	oc	—	S. 10	-6.5			
6	29.393	—	-10.7	-9.2	-9.0	-11.5	ESE, 1	3	8-14	cm	—	S. 10	-10.1			
8	29.343	—	-13.5	-3.0	-3.0	-5.0	ENE, 2	8	15-18	oc	—	S. 10	-9.8			
10	29.324	—	-16.5	-12.0	-11.2	-11.5	SE, 2-3	7	18-30	oq	—	S. 10	-11.6			
Noon	29.302	-15.1	-15.5	-11.2	-11.0	-10.2	SE, 3-4	17	18-24	oq	—	S. 10	-11.6			
2	29.279	—	-11.8	-10.6	-10.6	-10.0	SE, 3-4	15	16-25	oq	—	S. 10	-10.8			
4	29.281	—	-14.0	-11.5	-11.2	-11.2	Var. ESE, 3-4	16	20-30	oc †	—	S.-cu. 10	-10.8			
6	29.283	—	-13.5	-12.0	-12.2	-12.0	Var. E by S, 4-5	22	25-35	oc †	—	S.-cu. 10	—			
8	29.289	—	-15.5	-14.8	-14.8	-14.6	Var. E, 4-5	20	24-30	oq † *	—	N. 10	—			
10	29.294	—	-17.4	-11.0	-11.0	-9.1	E by N, 2	24	18-20	bc *	—	S. 5	—			
Midt.	29.305	—	-11.7	-8.0	-7.9	-10.0	Var. E airs	9	0-5	bc	—	A.-s. 3	-8.3			
Mean	29.334	—	—	-9.9	-9.9	—	—	—	—	—	—	—	-8.7			
Max. therm. read at		8 a. -3° 0.		8 p. -3° 0.		Solar radiation		black bulb 61° 2.		bright bulb 11° 3.		Evapn. { I. 1.1 } grammes in			Precipn. — in.	

Overcast and dull all day, with strong variable SE by wind. Barometer fell until evening, and then commenced to rise. Temperature very unsteady and low.

23rd.

2	29.306	—	-18.9	-17.1	-16.8	-17.0	Calm	1	0	h	—	—	—	Hoar frost on anemometer; dull to SW. Bank of low cloud extending from SW to S. Heavy Cu. low down from SW to S. Ci.-cu. to E; layers of Str. on western mountains and to S. Min. temp. at Cape Armitage, -28° 8. Wind E by, 0-2. bc. Erebus obscured. Noon. Slight mirage in SW; Str. on western mountains; dark and gloomy to S. 3 p.m. Rain band, 3. 4 p.m. Heavy Str. to W; detached Cu. passing from E; wind veering to E. 6 p.m. Sun dipping behind western mountains to WNW; Str. to N and E; very windy appearance; brilliant tints in upper clouds. 8 p.m. Layers of Str. to W; dark and threatening to S; roll Cu. to N. 10 p.m. Long streak of dark cloud across southern sky, alt. 15°-25°; freshened from calm to strong from the NE, with drift. Barometer rose steadily all day. Temperature low and unsteady.		
4	29.312	—	-20.0	-15.2	-15.0	-16.0	Calm	0	0	b	—	—	—			
6	29.333	—	-17.9	-8.0	-8.5	-9.0	Var. E, 0-1	1	10	h	—	—	-8.0			
8	29.366	—	-9.5	-6.0	-7.2	-6.2	Var. SE, 1-2	8	8-12	b	—	—	-9.0			
10	29.415	-12.5	-9.3	-7.0	-7.9	-6.0	SE, 1	7	8-12	bv	—	—	—			
Noon	29.434	—	-10.5	-5.5	-6.5	-5.0	SE, 1	10	8-10	bc	Ci.-cu. 3, SW (mod.)	—	-6.0			
2	29.462	—	-9.0	-5.8	-6.8	-4.0	SE, 1-2	9	10-20	bc	Ci.-s. 3, SW	—	-6.9			
4	29.437	—	-7.5	-5.7	-6.8	-6.8	E by S, 2	10	15-22	bc	Ci.-s. 4, W	Cu. 2, E	—			
6	29.502	—	-6.7	-6.5	-7.5	-6.2	E by S, 2	9	13-20	bc	Ci.-s. 2, W	—	—			
8	29.525	—	-12.7	-11.0	-11.2	-11.0	E, 2	9	15-22	bc	Ci.-cu. 5, NW (slow)	—	-9.8			
10	29.509	—	-15.0	-14.0	-14.0	-14.0	NE, 4-5	21	25-35	bc †	Ci.-cu. 4	—	-10.5			
Midt.	29.532	—	-16.0	-15.6	-15.2	-14.6	NE, 5-6	25	25-40	bc †	—	Cu. 4	—			
Mean	29.432	—	—	-9.8	-10.3	—	—	—	—	—	—	—	—			
Max. therm. read at		8 a. -6° 0.		8 p. -5° 5.		Solar radiation		black bulb 53° 9.		bright bulb 9° 8.		Evapn. { 1. 2.8 } grammes in			Precipn. — in.	

24th.

2	29.557	—	-16.0	-15.5	-15.5	-15.5	ENE, 5-6	19	25-40	oq †	—	S. 10	—	Thick all round. Min. temp. at Cape Armitage, -19° 2. of, except in E. Wind ESE, 3-4. Erebus obscured. Light fall of fine powdery snow. 3 p.m. Rain band, 2. Weather showing signs of clearing. Red glare of sunset seen through mist to SW. Erebus smoke, as seen from ship, appeared to be going SW in long streamers. 10 p.m. Heavy clouds in N, W, and S to the horizon; many stars visible. Midt. These clouds have come up against the wind, and now completely overcast the sky, except for a thin streak of light on S and W horizon; no stars visible; the snow falling is very slight.		
4	29.567	—	-16.6	-16.0	-15.8	-15.5	NE, 5-6	23	25-40	oq † *	—	N. 10	-16.2			
6	29.588	—	-16.0	-15.2	-15.0	-15.0	ENE, 5-6	23	25-35	oq † *	—	N. 10	-16.2			
8	29.612	—	-15.8	-15.0	-15.0	-16.0	ENE, 4-5	20	25-30	oq † *	—	N. 10	-15.5			
10	29.648	-16.1	-16.0	-15.0	-15.0	-14.5	E, 5-6	25	25-35	oq † *	—	N. 10	—			
Noon	29.668	—	-16.0	-15.2	-15.2	-14.5	E, 3-5	24	20-26	oq † *	—	N. 10	—			
2	29.672	—	-15.7	-14.5	-14.8	-14.2	E, 2-3	16	15-24	oc † *	—	N. 10	—			
4	29.663	—	-16.0	-16.0	-16.0	-15.6	ENE, 3-4	19	22-32	oc † *	—	N. 10	—			
6	29.673	—	-16.6	-12.8	-12.8	-12.7	ENE, 3-4	16	20-30	oc †	—	N. 10	—			
8	29.677	—	-14.5	-9.0	-9.5	-9.5	SE, 1	12	10-12	o	—	N. 10	-8.9			
10	29.687	—	-18.7	-14.8	-15.0	-15.1	ESE, 2-3	17	20-25	bc	Ci. 1	S. 3	-9.8			
Midt.	29.692	—	-15.0	-9.0	-9.0	-9.0	E by S, 1-2	12	5-10	o *	—	N. 10	-15.0			
Mean	29.642	—	—	-14.0	-14.1	—	—	—	—	—	—	—	-9.8			
Max. therm. read at		8 a. -9° 8.		8 p. -9° 0.		Solar radiation		black bulb 5° 0.		bright bulb 0° 0.		Evapn. { I. 5.0 } grammes in			Precipn. 0.002 in. since 4 p.m. 14th.	

Overcast and cloudy all day, with heavy snow and drift. Very strong E by wind, gradually falling towards the evening. Barometer rising all day. Temperature low and unsteady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.			Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.	Lower.		Aspirator.
				Dry.	Wet.									
2	29.715	—	-12.4	-9.0	-9.3	-9.0	E, 2-3	8	15-20	o*	—	N. 10	-9.4	25th. Snow fall very slight.  Str. just covers summit of Black Island about 2500 feet. Clear to S and W low down. 8 a.m. Low bank of fog low down western mountains. 10 a.m. Mirage all round. Min. temp. at Cape Armitage, -21° 8. Calm. b. Erebus smoke going NE; mirage E and W. Noon. Mirage all round; very clear. 2 p.m. Mirage to NW; str. to N; detached Cu. to E. 3 p.m. Rain band, l. Between 2 and 4 p.m. a heavy and high fog passed over from N at a rapid pace, and for a time the sky was completely overcast. 8 p.m. Very fine sunset colouring; hoar frost on thermometer boxes. Overcast and snowing early, clearing about 10 a.m., and remaining clear all day, without any wind. Barometer rose until about 8 a.m., and then fell steadily. Temperature low and steadier.
4	29.770	—	-15.9	-15.9	-15.5	-15.3	E, 3-4	17	20-25	o*	—	N. 10	-9.7	
6	29.780	—	-18.1	-8.2	-8.4	-8.3	E, 2-3	17	15-20	o	—	S. 10	-16.1	
8	29.782	—	-7.5	-7.5	-7.8	-7.5	E, 1-2	10	10-15	oc	—	A. cu. 8, SE (slow)	-7.6	
10	29.775	-20.1	-12.7	-11.8	-12.0	-12.2	Lt. S ahrs	9	0	bv	—	—	-8.3	
Noon	29.775	—	-14.3	-12.0	-12.2	-13.1	Calm	0	0	bv	—	—	-11.8	
2	29.762	—	-14.5	-13.2	-13.2	-12.0	Calm	1	0	b	—	—	-12.1	
4	29.748	—	-14.2	-14.0	-14.0	-12.6	Calm	1	0	b	—	—	-13.5	
6	29.704	—	-16.2	-16.0	-15.2	-15.0	Calm	0	0	b	—	—	-13.4	
8	29.687	—	-17.0	-14.5	-14.5	-18.0	Calm	0	0	b	—	—	—	
10	29.669	—	-16.2	-11.0	-10.8	-19.0	Calm	0	0	b	—	—	—	
Midt.	29.655	—	-9.5	-9.1	-9.0	-10.0	Lt. E ahrs	2	0	b	—	—	—	
Mean	29.735	—	—	-11.9	-11.8	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. -7° 5. Solar { black bulb 47° 3. Evapn. { I. 3.6 } grammes in  
read at { 8 p. -7° 5. radiation { bright bulb 9° 8. } II. 3.5 } 24 hours. Precipn. 0.002 since 8 p.m. 24th.

2	29.623	—	-8.8	-8.2	-8.5	-9.0	E, 0-1	3	11-18	b	—	—	-7.6	26th.  Cloudless sky and very clear. 10.45 a.m. Temp. at Cape Armitage, -10° 2; min., -27° 0; long mare's tail Cl. cloud over Terror; Erebus smoke going between NW and W; wind SE, 2, increasing; hazy all round. Noon. Very clear all round; cloudless sky. 3 p.m. Rain band, l. 6 p.m. Small detached Str. on N horizon; stars visible to E; dark and threatening to N. 8 p.m. Temperature falling rapidly, and apparently neither the dry bulb nor the min. had reached their respective heights; the min. was actually falling as the observation was being taken. Cloudless sky; slight high mirage in SW. Aspirator not working. The thermographs were also working very sluggishly for such a sudden drop of temperature. 10 p.m. Cloudless sky. Midt. Cloudless sky. Fine and clear all day, with fresh Ely wind, falling to calm in evening. Barometer continued to fall steadily all day. Temperature very musteudy, falling suddenly at 8 p.m.
4	29.601	—	-8.0	-7.2	-7.8	-8.0	ENE, 1-2	5	18-23	b	—	—	-8.0	
8	29.559	—	-7.0	-8.2	-7.0	-7.0	ENE, 2	13	22-26	b	—	—	-6.0	
8	29.555	—	-13.5	-4.8	-5.2	-8.0	SE, 2-3	12	15-20	b	—	—	-7.2	
10	29.564	—	-7.3	-5.2	-6.2	-8.0	E, 2-3	12	15-25	h	—	—	-5.1	
Noon	29.556	—	-9.3	-5.6	-8.5	-5.4	Var. E, 3-4	18	22-26	b	→	→	-6.2	
2	29.540	—	-10.0	-6.2	-7.3	-6.0	Var. E, 2-3	13	15-22	b	→	→	-5.4	
4	29.506	—	-7.8	-5.4	-6.6	-5.0	E by N, 3-4	20	20-30	b	—	—	-6.5	
6	29.481	—	-7.1	-4.5	-5.5	-4.2	ENE, 2	18	15-22	b	—	—	-4.4	
8	29.473	—	—	-17.0	—	-18.5	Calm	8	0	b	—	—	-5.8	
10	29.457	—	-17.6	-14.1	-14.2	-15.8	Var. E, 0-1	3	0-7	b	—	—	—	
Midt.	29.443	—	-14.6	-12.9	-12.4	-11.6	Var. E, 0-1	6	0-7	b	—	—	-11.9	
Mean	29.530	—	—	-8.1	—	—	—	—	—	—	—	—	-12.1	

Max. therm. { 8 a. -2° 5. Solar { black bulb 53° 0. Evapn. { I. 2.1 } grammes in  
read at { 8 p. -2° 8. radiation { bright bulb 15° 0. } II. 2.0 } 24 hours. Precipn. — in.

ing very sluggishly for such a sudden drop of temperature. 10 p.m. Cloudless sky. Midt. Cloudless sky. Fine and clear all day, with fresh Ely wind, falling to calm in evening. Barometer continued to fall steadily all day. Temperature very musteudy, falling suddenly at 8 p.m.

2	29.426	—	-12.1	-1.7	-2.9	-3.8	E, 1-2	8	5-10	b	—	—	-4.0	27th.  Cl.-str. to S apparently coming up from S'ly direction, and also in SW; otherwise cloudless and very clear; visibility well marked. Min. temp. at Cape Armitage, -28° 0. Wind SE, 1; Cl. 2; hazy; Mt. Erebus smoke going NE. Noon. Cl.-str. much wind blown; very clear all round. 3 p.m. Rain band, 0. 4 p.m. Big fall in temperature; barometer falling rapidly; Str. on N horizon. 6 p.m. Mirage to W and NW; detached Cu. all along western mountains. 8 p.m. Detached Str. low down in S; otherwise cloudless sky. 10 p.m. Cloudless sky but for a thin dark wisp of Cl. in S. Midt. Same wisp of cloud to S; whd rather variable, NE to S.
4	29.401	—	-4.8	-3.4	-4.3	-3.5	ESE, 1-2	8	8-16	b	—	—	-5.1	
6	29.392	—	-4.8	-2.0	-3.1	-3.2	ESE, 1-2	9	8-15	b	—	—	-2.6	
8	29.376	—	-4.8	-3.2	-4.0	-4.2	Var. E, 2-3	8	15-20	b	—	—	-4.0	
10	29.335	-4.5	-4.0	-1.2	-2.2	-1.8	SE, 2-3	12	12-20	bv	—	—	-2.9	
Noon	29.286	—	-2.0	1.5	0.0	3.0	SE, 1	9	10-12	bc	Cl.-s. 3, SW (slow)	—	-1.5	
2	29.244	—	-7.5	-3.3	-4.2	-3.0	Calm	3	0	bc	Cl.-s. 4, SW (slow)	—	-2.9	
4	29.187	—	-11.1	-10.0	-10.5	-9.3	Calm	0	0	b	—	—	-3.2	
6	29.151	—	-11.7	-4.8	-5.8	-4.0	N by E, 0-1	1	10-10	b	—	—	-2.5	
8	29.097	—	-13.5	2.5	1.8	2.8	N, 1-2	4	12-15	b	—	—	—	
10	29.068	—	0.2	6.7	4.2	6.8	NNE, 1-2	7	5-10	b	—	—	2.1	
Midt.	29.053	—	2.2	7.0	5.5	6.0	NE, 1-2	9	5-10	b	—	—	0.7	
Mean	29.251	—	—	-1.0	-2.1	—	—	—	—	—	—	—	4.6	

Max. therm. read at { 8 a. -1° 1. Solar radiation { black bulb 56° 0. Evapn. { I. 8.4 } grammes in  
{ 8 p. 3° 0. } bright bulb 20° 3. } II. 8.4 } 24 hours. Precipn. — in.

NNE. Fine and clear all day, with light Ely wind to calm. Barometer falling all day. Temperature higher, and rising quickly in the evening.

28th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.		Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.			P. tube, see p. 2.	Upper.			Lower.
				Dry.	Wet.									
2	29.051	—	3.8	2.0	2.8	3.0	NE, 2	12	10-15	b	—	—	2.6	Wind steadier and not so gusty as at midnight.
4	29.052	—	7.7	6.3	7.0	6.8	NE, 2-3	15	15-20	b	—	—	3.3	
6	29.075	—	7.0	0.7	1.7	1.7	ENE, 2-3	8	15-20	b	—	—	6.9	Wind variable, E to NE, and rather gusty.
8	29.121	—	4.0	3.0	4.0	4.8	Lt. NE airs	10	0-5	b	—	—	7.2	
10	29.129	9.5	8.5	7.0	7.5	7.8	NW, 1	5	8-10	bv	—	—	0.0	Heavy bank of roll Cu. low down to S and SW; light and detached Str. on summits of western mountains; misty appearance in sky; very clear; visibility marked. Min. temp. at Cape Armitage, -26° 0.
Noon	29.131	—	8.5	1.2	2.2	0.2	Calm	2	0	b	—	—	1.5	
2	29.146	—	6.7	3.0	3.5	2.0	NE, 0-1	3	0-10	b	—	—	7.2	Light NWy airs; hazy; Erebus smoking well, and going NW; very little wind on summit.
4	29.118	—	3.5	1.6	0.0	2.2	NE, 1	4	5-10	bc	—	—	1.1	
6	29.111	—	1.7	3.8	2.0	4.0	NNE, 1	7	8-10	b	—	—	1.8	Noon. Detached Cu. forming rapidly in E, and going to N fast; Cu. low down in E, moving N fast; detached heavy roll Cu. to S; Str. on and over western mountains' summits; very windy appearance in SW.
8	29.119	—	11.5	2.0	3.0	1.0	N by E, 1	2	10	bc	—	—	3.2	
10	29.106	—	3.0	10.0	9.2	10.0	N by E, 1-2	10	10-15	oc	—	—	—	2 p.m. Str. to S and W; detached Cu. passing from N; Str. on summits of mountains to NW.
Midt.	29.112	—	5.0	10.0	9.0	8.0	N by E, 2-3	5	15-20	bc	—	—	—	
Mean	29.106	—	—	0.0	1.0	—	—	—	—	—	—	—	—	3 p.m. Rain band, 2.

Max. therm. read at { 8 a. 7° 2. / 8 p. 4° 5. Solar radiation { black bulb 57° 3. / bright bulb 23° 4. Evapn. { I. 7.0 / II. 7.3 } grammes in 24 hours. Precipn. — in.

4 p.m. Heavy Cu. on Mt. Discovery; Str. on western mountains, summits obscured. 6 p.m. Str. on summits of western mountains, and extending to S. 8 p.m. Dark and threatening to S and SW; windy appearance on western mountains; much detached Cu. on and over western mountains and to SW. 10 p.m. Heavy Cu. over foot-hills of western mountains; very dark all over. Midt. Cu. covering western mountains; clear overhead. Fine and clear nearly all day, becoming overcast towards evening. Wind light NE, rising to fresh in evening from N. Barometer unsteady and rising. Temperature unsteady, rising high towards evening. New lee has formed for about a mile to the N of the old ice, and is attached to it. It can be walked upon with safety.

29th.

2	29.107	—	7.0	12.0	11.0	12.0	N by E, 2-3	11	15-20	o	—	—	—	—	Dark and threatening; wind gusty.
4	29.151	—	9.2	12.0	11.0	12.0	N, 1-2	10	10-15	o	—	—	—	—	
6	29.193	—	9.0	10.0	9.0	10.0	ESE, 1-2	15	5-10	o	—	—	—	—	Wind shifty, light and gusty; very thick on horizon, SE to W; western hills obscured.
8	29.206	—	11.0	11.2	11.0	11.0	Var. E, 2-3	0	15-22	oc	—	—	—	—	
10	29.259	—	10.0	12.2	12.0	12.8	E, 3-4	14	15-28	ocq ⊕	—	—	—	—	8 a.m. Low drift; very bright to W.
Noon	29.291	—	11.2	13.0	11.5	12.2	E, 2-3	17	15-22	bcq	—	—	—	—	
2	29.298	—	10.8	11.3	10.2	12.0	NE, 1-2	14	8-15	bc	—	—	—	—	10 a.m. Windy appearance to SW; detached clouds all over sky; dark to S; western mountains very clear; heavy bank of clouds to S and SW.
4	29.298	—	9.4	19.2	16.0	20.6	NNE, 1-3	7	10-25	ocq	—	—	—	—	
6	29.304	—	16.0	17.0	15.3	18.3	N, 2-3	8	15-23	oc	—	—	—	—	Noon. Cl.-s. very wind blown, dark and threatening to S and SW; Fr.-s. on western mountains' summits; visibility marked.
8	29.325	—	15.0	17.0	15.2	16.2	N, 1	8	10	bc	—	—	—	—	
10	29.331	—	15.0	16.0	15.0	16.0	N, 1	6	8-10	oc	—	—	—	—	12.15 p.m. Temp. at Cape Armitage, 9° 5; min., -19° 0. Wind E, 3. 4.0. Cl.-cn. 4. bc. Erebus' top obscured; Cl.-cn. moving to N.
Midt.	29.356	—	5.0	7.0	6.0	7.0	Calm	3	0	b ☐	—	—	—	—	
Mean	29.260	—	—	13.2	11.9	—	—	—	—	—	—	—	—	—	2 p.m. Very thick and threatening to S.

Max. therm. read at { 8 a. 13° 2. / 8 p. 19° 2. Solar radiation { black bulb 61° 0. / bright bulb 32° 5. Evapn. { I. 9.4 / II. 8.5 } grammes in 24 hours. Precipn. — in.

8 p.m. Dark and threatening to S and SW; Fr.-s. much wind blown on western mountains. 11 p.m. over the Bluff and Mt. Discovery; flashes at short intervals, 2 to 3 seconds. Midt. Faint aurora showing ESE. Cloudy, with fresh to strong E by wind, falling in evening. Barometer rising all day. Temperature much higher, falling in evening.

30th.

2	29.358	—	2.0	6.0	5.0	7.0	Calm	1	0	b	—	—	—	—	Very windy Cl. to N; dark and heavy bank of S.-cn. to S and SW.
4	29.396	—	1.0	3.0	2.0	4.5	Calm	1	0	b	—	—	—	—	
6	29.394	—	2.0	7.0	6.0	8.0	ESE, 1	5	8-10	b	—	—	—	—	10.30 a.m. Temp. at Cape Armitage, -7° 9; min., -13° 8. Wind E, 1; hazy to S and E; Erebus smoke going NW.
8	29.430	—	6.8	9.0	8.0	12.0	NE, 2-3	7	10	b	—	—	—	—	
10	29.456	—	6.8	9.0	7.4	8.0	NE, 2-3	11	15-22	b	—	—	—	—	Noon. Cl.-s. very wind blown indeed; visibility very marked; clouding up from W.
Noon	29.499	—	3.8	4.2	3.5	4.1	NE, 3-5	17	22-30	bcq ⊕	—	—	—	—	
2	29.504	—	2.8	3.3	2.8	3.8	NE, 3-5	21	23-33	bcq	—	—	—	—	1 p.m. Temp. at Cape Armitage, 1° 8; min., -11° 0. Wind E, 3. Erebus smoke going E; sky overcast, with light Cl. halo round sun.
4	29.511	—	1.8	2.5	2.0	2.5	ENE, 4-5	23	30-40	ocq	—	—	—	—	
6	29.510	—	0.0	1.0	0.2	1.0	E by N, 3-5	22	22-33	ocq	—	—	—	—	2 p.m. Very windy appearance.
8	29.517	—	1.2	0.0	0.2	0.0	E, 3-4	18	18-25	ocq	—	—	—	—	
10	29.487	—	1.0	0.0	0.2	1.0	E by N, 3-4	17	15-22	oc	—	—	—	—	3 p.m. Rain band, 4.
Midt.	29.488	—	2.0	1.0	1.5	1.0	E, 3-4	14	18-25	b ☐	—	—	—	—	
Mean	29.463	—	—	3.7	2.9	—	—	—	—	—	—	—	—	—	4 p.m. Str. on E horizon.

Max. therm. read at { 8 a. 17° 0. / 8 p. 9° 2. Solar radiation { black bulb 34° 6. / bright bulb 16° 0. Evapn. { I. 8.3 / II. 9.0 } grammes in 24 hours. Precipn. — in.

8 p.m. Very cloudy appearance all round. 10 p.m. Very bright to S; heavy Cu. to NW. Midt. Faint aurora overhead. Fine and clear early, clouding over later. Very strong NE wind. Barometer rose until 8 p.m., and then commenced to fall. Temperature lower and falling.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dr.	Wet.						Unscreened.			
2	29.474	—	-1.8	-0.8	-1.0	-0.2	E, 4-5	14	25-32	b	—	—	—	<p>31st.</p> <p>Very heavy clouds to W; faint aurora overhead.</p> <p>Heavy Cu. from W to S low down; aurora overhead; clear sky.</p> <p>Low Str. to W obscuring tops of mountains.</p> <p>Very misty all round; Cl-s. radiating NW, SE; Cl-cu. radiating E and W; thin Str. on western mountains' summits; fog in Strait, low. Min. temp. at Cape Armitage, -16° 7.</p> <p>Wind E, 2; Cl; hazy all round; frost rime on screen; Erebus smoke going N by W.</p> <p>Noon. Very hazy and misty all round; much mirage; heavy S-cu. to N; thin fog driving over from N.</p> <p>2 p.m. Nim. on NE horizon; Str. to S and E.</p> <p>3 p.m. Rain band, 6.</p> <p>4 p.m. Mirage all along base of western mountains; very thin hard snow falling.</p> <p>6 p.m. All land above 2000 feet obscured; heavy double mirage to SW and extending to N.</p> <p>8 p.m. Thick all round; snowflakes very small and damp. Midt. Sky</p>
4	29.445	—	-3.8	-1.2	-2.0	-2.2	E, 4-5	20	25-30	h	—	—	—	
6	29.441	—	-7.2	-6.8	-7.2	-8.8	Lt. NW ahrs	10	0	bc	Cl-s. 5	—	—	
8	29.433	—	-7.5	-2.0	-2.0	-3.1	ENE, 1-2	7	10-15	bc	Cl-cu. 6	—	—	
10	29.428	-14.0	-3.0	0.1	0.0	0.0	NE, 2-3	14	15-20	bc	Cl-cu. 4, S (slow)	—	0.7	
Noon	29.420	—	-3.6	-3.6	-3.6	-4.5	Calm	4	0	bm ⊕	—	—	0.3	
2	29.417	—	-4.5	-4.5	-4.4	-5.0	Calm	0	0	b	—	—	-4.0	
4	29.406	—	-7.1	-0.2	-0.3	0.0	Calm	0	0	oc *	—	N. 10	-4.2	
6	29.402	—	-3.6	-1.8	-1.8	-0.8	Calm	0	0	oc	—	S-cu. 10	—	
8	29.450	—	-2.0	-2.0	-2.0	-2.0	SE, 2-3	9	15-22	o † *	—	N. 10	-2.2	
10	29.447	—	-5.0	-5.0	-5.0	-5.0	E, 3	17	20-23	o † *	—	N. 8, W	-2.2	
Midt.	29.451	—	-9.0	-8.2	-8.2	-8.0	E, 3	18	22-24	bmc †	—	S. 2	—	
Mean	29.435	—	—	-3.0	-3.1	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 0° 0. / 8 p. 2° 0. } Solar radiation { black bulb 31° 8. / bright bulb 11° 0. } Evapn. { I. 2.9 / II. 2.9 } grammes in 24 hours. Precipn. — in.

clearing rapidly; clouds passing away to W. Fine all the morning, becoming overcast, with snow, later. Wind fell from strong E to calm, rising again to fresh from E in evening. Barometer fell until 6 p.m., and then rose quickly. Temperature lower and falling.

1903—April.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

1st.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
					Dry.	Wet.								Unscreened.		
	2	29.474	—	6.7	5.0	5.0	5.0	E by N, 3	22	20-22	bm ↗	—	—	—	—	Apparently a light snowfall rather than drift; stars visible, but a trifle hazy.
	4	29.483	—	4.5	2.6	3.0	3.0	S, 1	11	10	bc	—	S. 2	-4.7	4 a.m. Fog and low Str. rolled away to W.	
	6	29.516	—	4.5	3.7	4.0	3.8	E, 0-1	6	0	bc	—	S. 1	-5.1		
	8	29.519	—	9.5	6.0	6.0	8.0	Calm	0	0	bc	—	S.-cu. 2	—		
	10	29.514	-12.8	-10.7	-8.8	-8.8	-8.0	Calm	1	0	bc	—	—	-8.0	Very clear; heavy Cu. SE to S.	
Noon	29.504	—	9.2	9.2	9.2	10.5	Calm	1	0	bc	—	—	-8.0	Min. temp. at Cape Armitage, -23° 0.		
	2	29.492	—	8.9	6.0	6.0	6.0	Calm	0	0	bc	—	—	-10.8	Wind WSW, 1. Cl. 4.	
	4	29.470	—	7.5	6.7	6.5	5.0	Calm	1	0	bc	—	—	-9.8	bc. Hazy; refraction E, S, and W; Erebus smoke going NE; lower crater smoke going NW; frost rime on everything.	
	6	29.452	—	7.1	5.8	0.0	5.3	E, 1-2	4	5-12	oc	—	—	—	Noon. Slight mirage all round.	
	8	29.439	—	7.0	6.0	6.0	6.0	ENE, 3-4	11	20-25	o ↗ *	—	S. 10	-6.7	2 p.m. Very thin Str. along western mountains.	
	10	29.418	—	7.0	3.0	3.0	3.8	ENE, 2-3	21	15-20	o	—	S. 10	-6.9	3 p.m. Rain band, 3.	
Midt.	29.416	—	5.5	4.2	5.0	4.0	ENE, 1-3	11	5-20	bcq	—	—	-5.1	4 p.m. Thin S.-cu. all along horizon.		
Mean	29.475	—	—	5.6	5.7	—	—	—	—	—	—	—	-5.4	6 p.m. Heavy drift all along W side of Strait going from S to N; solar thermometer coated in hoar frost.		

Max. therm. read at { 8 a. -2° 0. / 8 p. -4° 0. Solar radiation { black bulb 41° 0. / bright bulb 12° 5. Evapn. { I. 1.0 / II. 1.1 } grammes in 24 hours. Precipn. — in.

fall. Wind light, rising from E in afternoon, and freshening. Barometer rose until 8 a.m. and then fell for the rest of the day. Temperature steady.

2nd.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
					Dry.	Wet.								Unscreened.		
	2	29.410	—	4.0	2.0	2.0	3.0	ENE, 1-2	10	5-12	b	—	—	-2.2	Thick low bank of dark cloud SW, S, and SE.	
	4	29.394	—	3.0	2.0	2.0	3.0	ENE, 1	5	10	b	—	—	-1.8		
	6	29.368	—	5.5	5.0	5.5	5.0	NE by E, 2-3	18	20-25	og	—	S. 10	-2.6	Very gloomy and bleak to W.	
	8	29.364	—	5.7	5.0	5.5	5.0	NE by E, 3-4	18	20-25	og *	—	S. 10	-6.2		
	10	29.358	-15.2	-6.3	-5.2	-5.3	-5.1	ENE, 3-4	15	20-26	o ↗ *	—	Thin Nim. 10	-5.4	Very thick along horizon; snowing slightly.	
Noon	29.362	—	5.5	3.8	4.0	3.2	ENE, 2-3	14	12-20	o *	—	Thin Nim. 10	-5.6	Thick all round; snowflakes hard and small. Min. temp. at Cape Armitage, -28° 2.		
	2	29.377	—	7.5	7.4	7.6	7.0	E by S, 2	11	13-20	oc	—	—	-3.6	Wind, ENE, 3. of. * ↗. Erebus obscured.	
	4	29.376	—	9.8	9.5	9.3	9.4	E, 3	10	22-28	b	—	—	-4.0	Noon. No land visible.	
	6	29.386	—	9.9	8.7	9.0	8.0	E, 2-3	14	15-22	oc	—	S.-cu. 7 (thin)	—	2 p.m. Heavy clouds to N and W; clear to S; cloudless in zenith; summits of highest mountains obscured.	
	8	29.393	—	9.5	8.8	8.8	8.5	NE, 2-3	15	15-20	b	—	—	-8.5	3 p.m. Rain band, 1.	
	10	29.398	—	8.7	8.5	8.5	9.0	ENE, 3	13	15-23	b ↗	—	—	-8.7	4 p.m. Detached Ci.-cu. passing from SW; Str. all round horizon; highest peaks of western mountains visible.	
Midt.	29.392	—	14.3	13.0	13.0	13.5	ENE, 3-4	18	18-25	b ↗	—	—	-8.5	6 p.m. Very thin film of Str. all round horizon; Ci.-cu. passing from SW, coloured a brilliant red.		
Mean	29.382	—	—	6.6	6.7	—	—	—	—	—	—	—	—	8 p.m. Very wind-blown Str. to W and SW; thick to S; brilliant sunset colouring.		

Max. therm. read at { 8 a. -0° 5. / 8 p. -3° 0. Solar radiation { black bulb 45° 0. / bright bulb 12° 4. Evapn. { I. 1.8 / II. 1.7 } grammes in 24 hours. Precipn. — in.

10 p.m. Dark cloud low in SW, with luminous fringe at upper edge. Midt. Cl.-s. clouds rising 15° above horizon in SW. 12.15 a.m. Brilliant meteor descended from zenith to 60° above horizon, due S. Overcast most of the day, with strong E by wind. Barometer fell until noon, and then rose slightly. Temperature steady, falling in evening.

3rd.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
					Dry.	Wet.								Unscreened.		
	2	29.396	—	11.5	7.2	7.8	11.8	ENE, 2-3	18	17-23	bc ↗	—	—	-7.6	Broad faint auroral streamer, waxing and waning, 30° above SW horizon, extending towards, but not reaching zenith.	
	4	29.404	—	8.6	4.8	5.0	5.9	Var. ENE (?)	10	2-14	bcq	—	—	-8.0	Refraction in SW and S.	
	6	29.408	—	6.2	6.0	6.0	7.0	ENE, 1-2	7	8-18	bcq	—	—	-8.2		
	8	29.399	—	8.3	7.0	7.0	9.5	Calm	8	0	oc	—	—	-6.5		
	10	29.434	-27.5	-21.0	-21.0	-20.6	-22.0	Calm	1	0	bc	—	—	-20.8	Slight mirage all round; visibility very marked; layers of det. Fr.-s. all round; fog to E. Hgh. Min. temp. at Cape Armitage, -31° 2.	
Noon	29.435	—	20.0	18.0	18.0	19.0	Calm	0	0	bc	—	—	-18.6	Noon. Strong mirage all round; visibility very marked; Cl.-s. radiating NW, SE, very fleecy and wind blown; high fog coming in from N; hazy all over sky.		
	2	29.430	—	17.0	8.0	8.5	6.7	Calm	2	0	oc	—	—	-18.2	2 p.m. High peaks of western mountains obscured; Str. all round horizon; high mirage to S.	
	4	29.443	—	12.1	9.0	9.3	9.0	ESE, 2	5	12-20	oc	—	—	-9.4	3 p.m. Rain band, 3.	
	6	29.456	—	8.7	8.0	8.4	8.0	NE, 1-2	8	15-23	oc	—	—	-10.5	4 p.m. Horizontal bank of thin Str. with mirage to W; foggy to N and E.	
	8	29.473	—	10.0	9.0	9.2	10.0	NE, 2-3	10	15-20	bc	—	—	-10.1	6 p.m. Dark conical masses of Cu.; clear to NW.	
	10	29.493	—	11.5	9.8	10.0	10.0	NE, 3-4	15	18-23	b	—	—	-10.1	8 p.m. Heavy S.-cu. to S extending to SW; Fr.-str. on western mountains, otherwise clear to W. 10 p.m. Heavy clouds in S and SW. Midt. Falut aurora to S, arch about 40° alt., very faint; another arch about 15° alt., brighter than stars of second magnitude, direction of movement from E to W fast; two long streamers from SW and S to zenith; cloudless sky. Cloudy and dull most of the day, with calms. In afternoon wind rising to fresh from NE and increasing. Barometer very unsteady, rising rather quickly after noon. Temperature lower and not so steady.	
Midt.	29.505	—	10.0	10.0	10.2	11.0	NE, 2-3	10	15-23	b	—	—	-10.8			
Mean	29.440	—	—	9.8	10.0	—	—	—	—	—	—	—	—			

Max. therm. read at { 8 a. -4° 8. / 8 p. -7° 0. Solar radiation { black bulb 4° 0. / bright bulb —. Evapn. { I. 2.0 / II. 1.9 } grammes in 24 hours. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.			Upper.	Lower.
				Dry.	Wet.									
2	29.522	—	-10.5	-10.5	-11.0	-12.0	NE, 2-3	13	15-23	b	—	—	-10.7	4th. Very faint and disconnected auroral streamers in N, NE, SE, and S; faint arch in SK, alt. 12°. 4 a.m. A few detached Fr.-s. to S, low down. 6 a.m. Low Fr.-s. to E; very misty on western mountains; visibility to S. marked. 10 a.m. A few bands of low Str. half-way up western mountains; visibility marked; Cl.-s. forming up from N; one or two small wisps overhead. Min. temp. at Cape Armitage, -33° 2. Wind ENE, 3-4. bc. †. Erebus smoke going SW in big volume. Noon. Cl.-s. still thickest to N; very thin, but more extensive, overhead; a few streaks of low Str. half-way up western mountains. 2 p.m. Cl.-s. overhead; heavy S.-cu. to E. 3 p.m. Rain band, 2. 4 p.m. Detached Cu. on western mountains; clear to S. 6 p.m. Clear all round; low Nim. to N. 8 p.m. Very wind-blown Str. over western mountains. 10 p.m. Clear all round. Midt. Faint aurora from SSE to S by W, alt. 40°. Fine and clear on the whole, with strong to fresh variable E by wind. Barometer rose until 10 p.m., and then commenced to fall. Temperature steady, but low.
4	29.536	—	-12.0	-12.0	-12.2	-13.0	NE, 2-3	15	15-22	b	—	—	-11.2	
0	29.572	—	-15.0	-15.0	-15.0	-15.8	Var. NE, 5-6	16	25-33	b †	—	—	-12.3	
8	29.591	—	-16.0	-16.0	-16.0	-15.5	E by N, 4-5	20	20-25	b †	—	—	-13.0	
10	29.624	-24.9	-15.8	-14.9	-15.1	-15.5	ENE, 2-4	24	20-30	bc †	Cl. 2	—	-15.2	
Noon	29.662	—	—	-18.0	-17.8	-18.0	E by N, 3-4	15	25-30	bc †	Cl.-s. 5	—	-15.5	
2	29.685	—	-17.6	-16.0	-16.3	-16.0	E by N, 3-4	21	24-32	oc †	Cl.-s. 5, NW	S.-cu. 3, E	-17.7	
4	29.700	—	-15.7	-15.3	-16.5	-14.8	Var. E, 3-5	20	25-35	ocq †	—	—	—	
6	29.733	—	-17.0	-16.0	-16.0	-16.3	Var. E, 3-4	20	22-30	oc	—	A.-s. 10	—	
8	29.763	—	-16.5	-16.0	-16.0	-16.0	ENE, 2-3	16	10-20	bc	—	A.-s. 2	-15.0	
10	29.762	—	-15.0	-14.2	-14.2	-14.5	E by N, 2-4	15	19-27	b	—	—	-16.1	
Midt.	29.752	—	-15.0	-12.2	-12.6	-13.0	E by N, 2-3	16	20-25	b	—	—	-13.7	
Mean	29.659	—	—	-14.7	-14.9	—	—	—	—	—	—	—	-12.1	
Max. therm. read at { 8 a. - 9° 0. / 8 p. - 14° 5. Solar radiation { black bulb 18° 6. / bright bulb 8° 0. Evapn. { 1. 2.8 / 11. 2.9 } grammes in 24 hours. Precipn. — in.														

2	29.731	—	-13.0	-10.2	-10.8	-11.0	E, 2-4	20	20-27	bc	—	S. 3, S	-10.8	5th. One continuous auroral streamer from alt. 30° SSW through zenith to NNE; faint patch in SW, alt. 50°; Str. clouds obscuring tops of Black and White Islands and Bluff. 4 a.m. A few ragged Str. to S and SE moving to N slowly. 6 a.m. Overcast all over except in S, where there was a clear sky below 20° alt.; dark to N and W. 10 a.m. Cl.-s. radiating N and S; slight mirage all round and very clear; hazy in sky. Noon. Very wind-blown Cl.-s.; clear all round; hazy in sky. 12.30 p.m. Temp. at Cape Armitage, -31° 2; min., -35° 6. Wind ENE, 3. †. Erebus smoke going SW. 2 p.m. Clear all round horizon; Str. on summits of highest peaks. 3 p.m. Rain band, 4. 6 p.m. Very dark and threatening to N and E; heavy drift in Strait. 8 p.m. Windy Str. to S and SW. 10 p.m. Fr.-s. to SW. Midt. Sky dull in SW to 30° alt. Overcast and cloudy most of the day, with strong ENE wind. Barometer falling all day. Temperature lower and fairly steady.
4	29.719	—	-12.5	-11.0	-11.8	-12.2	E, 1-3	15	12-20	bq	—	—	-11.6	
6	29.701	—	-15.5	-11.8	-12.2	-12.0	E, 1-2	11	10-17	oc	—	S. 10	-12.1	
8	29.674	—	-19.2	-15.0	-15.5	-15.5	Var. NE, 3-5	18	25-35	oc	—	S.-cu. 5	-12.6	
10	29.677	—	-16.0	-15.5	-16.0	-16.0	E, 3-5	17	20-27	bcq	Cl.-s. 3	—	-13.4	
Noon	29.663	—	-23.2	-22.5	-22.5	-22.6	Var. E, 3-5	19	20-20	bcq †	Cl.-s. 4	—	-15.3	
2	29.635	—	-22.5	-21.0	-21.0	-21.0	Var. E, 4-6	24	28-37	ocq †	Cl.-s. 4	A.-s. 5	-15.9	
4	29.601	—	-21.6	-21.3	-21.2	-22.5	Var. E, 4-6	23	28-38	ocq †	—	S.-cu. 10	-22.4	
6	29.578	—	-20.5	-20.5	-20.5	-21.0	Var. E, 5-6	23	28-35	oc †	—	S.-cu. 10	-22.7	
8	29.560	—	-20.0	-17.2	-17.8	-18.0	Var. E, 4-5	22	20-27	b	—	—	—	
10	29.556	—	-20.5	-20.0	-20.2	-21.0	E by N, 5	20	25-28	b †	—	—	-18.0	
Midt.	29.515	—	-19.5	-17.0	-17.2	-19.0	Var. E, 5	27	25-30	b †	—	—	-18.4	
Mean	29.634	—	—	-16.9	-17.2	—	—	—	—	—	—	—	-18.4	
Max. therm. read at { 8 a. - 10° 0. / 8 p. - 15° 0. Solar radiation { black bulb 20° 4. / bright bulb 12° 3. Evapn. { 1. 5.7 / 11. 5.7 } grammes in 24 hours. Precipn. — in.														

2	29.472	—	-16.9	-16.6	-17.0	-17.0	Var. E, 5	21	25-30	b	—	—	-17.3	6th. Heavy gusts of wind; sky dull to SW. Sky a leaden grey. No land visible except to E. Very dirty and thick all round; wind varying NE to E. Clearing rapidly; very thick drift in Strait; western mountains showing, with clear sky behind. Min. temp. at Cape Armitage, -31° 4. Wind NE, 4. †. lcf. Erebus obscured. Noon. Very clear below 5° alt.; visibility marked; dark and heavy cloud to E; light thin Str. on western mountains. 2 p.m. Looming to W and SW; mirage to S and along foot of western mountains. 3 p.m. Rain band, 1. 4 p.m. Foggy to S. 6 p.m. Very dull to S. 8 p.m. Very heavy Str. to NW, extending to S; ice crystals falling. 9.30 p.m. Ice crystals falling; perfectly clear sky; stars very bright. Midt. Dense rime on solar thermometer. Overcast and cloudy most of the day, with some snowfall early. Wind strong and variable E to NE, and falling in evening.
4	29.428	—	-16.6	-16.0	-16.4	-16.0	ENE, 4	25	20-22	o *	—	N. 10	-18.0	
6	29.406	—	-17.0	-15.2	-16.0	-15.0	ENE, 3	17	20-25	oc *	—	N. 10	-17.0	
8	29.384	—	-17.0	-17.0	-17.8	-18.0	Var. NE, 6-7	23	30-40	ocm *	—	N. 10	-17.3	
10	29.373	-26.0	-18.2	-18.0	-18.0	-18.0	Var. E, 4-6	19	20-30	bc †	—	Fr.-s. 5, N (fast)	-15.7	
Noon	29.349	—	-18.0	-17.0	-17.2	-16.2	NE, 3-4	18	18-23	oc	—	Cu. 9, N (fast)	-16.2	
2	29.322	—	-16.4	-14.5	-15.0	-14.2	NE, 2-3	13	10-20	oc	—	S.-cu. 10	-18.8	
4	29.283	—	-15.8	-15.0	-15.0	-15.2	E, 1-2	8	8-15	oc	—	S.-cu. 10	-18.8	
6	29.252	—	-15.8	-15.6	-15.3	-15.0	SESE, 1	4	5-8	oc	—	S.-cu. 10	-16.6	
8	29.237	—	-16.2	-14.5	-14.5	-17.0	Calm	3	0	bc →	—	S.-cu. 2	-17.0	
10	29.215	—	-17.0	-16.5	-16.5	-18.0	Lt. NE airs	2	0	b →	—	—	-17.3	
Midt.	29.209	—	-19.0	-18.8	-19.0	-20.0	Calm	3	0	b	—	—	-18.8	
Mean	29.328	—	—	-16.2	-16.5	—	—	—	—	—	—	—	-19.1	
Max. therm. read at { 8 a. - 15° 2. / 8 p. - 13° 0. Solar radiation { black bulb 12° 6. / bright bulb —. Evapn. { 1. 4.1 / 11. 4.2 } grammes in 24 hours. Precipn. { 0.01 in. since 4 p.m. 25th ult.														

1903—April.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

7th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
					Dry.	Wet.									
2	29.185	—	-25.5	-20.0	-20.0	-24.6	SW, 1	2	10	b →	—	—	—	Faint auroral streamers NE and S, alt. 30° to 70°.	
4	29.175	—	-27.0	-22.3	-22.2	-26.0	Calm	2	0	o *	—	N. 10	—	Although snowing, a few stars were visible through thin film of cloud.	
6	29.109	—	-23.0	-14.0	-14.0	-14.2	Var. E, 1	4	0	o *	—	N. 10	-13.7		
8	29.179	—	-15.0	-15.0	-15.0	-15.0	Lt. E airs	4	8-10	o *	—	N. 10	-13.7		
10	29.177	-33.1	-18.8	-18.0	-18.0	-19.0	NE, 1	5	8	bm	—	—	-18.4	High Str. covering summits of western mountains; very misty all round. Min. temp. at Cape Armitage, -38°-8.	
Noon	29.194	—	-18.8	-18.8	-18.8	-21.1	Calm	5	0	b	—	—	-18.8	Wind SE, 1; refraction all round, especially to E. Erebus smoke going E.	
2	29.228	—	—	-27.4	-27.0	-30.0	Calm	2	0	b	—	—	—	Noon. Very hazy in sky; clear all round; thick fog in N over the open water.	
4	29.275	—	-28.0	-21.2	-22.0	-20.6	Calm	1	0	b	—	—	—	3 p.m. Rain band, 0.	
6	29.325	—	-38.0	-31.0	-31.5	-39.0	Calm	0	0	b	—	—	—	6 p.m. Cloudless sky.	
8	29.376	—	-30.0	-19.8	-19.8	-21.0	ESE, 1	7	8-10	b	—	—	-20.4	8 p.m. Cloudless sky.	
10	29.427	—	-26.0	-25.0	-25.4	-27.0	Lt. E by N airs	5	0-10	b	—	—	-20.6		
Midt.	29.467	—	-25.8	-18.7	-19.0	-20.0	NE, 1-2	11	15-20	b ↓	—	—	-18.8	Aurora very bright in the E and S for a few seconds.	
Mean	29.265	—	—	-20.9	-21.1	—	—	—	—	—	—	—	—	Some snow early, clearing and remaining fine and clear all day, with hardly any wind. Barometer fell until 6 a.m., and then rose quickly. Temperature very unsteady and much lower.	
Max. therm. read at { 8 a. -12°-0. / 8 p. -15°-0. } Solar radiation { black bulb 29°-0. / bright bulb —. } Evapn. { I. 0.8 / II. 0.9 } grammes in 24 hours. Precipn. 0.02 in. since 6 p.m., 6th.															

8th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
					Dry.	Wet.									
2	29.476	—	-18.1	-18.0	-18.1	-18.2	NE, 1	12	10-15	b ↓	—	—	-16.6	Bright aurora with well-marked corona.	
4	29.469	—	-21.6	-19.2	-19.2	-20.6	NE, 1	3	10-15	b	Ci.-s. 2	—	—	-17.3	Bright greenish beams in N, arch to E and S; some broken Ci. to NE. Aurora was plainly visible 20° above S horizon.
6	29.461	—	-18.0	-13.3	-13.6	-14.8	NE, 1	6	5-10	b	—	—	-18.0		
8	29.440	—	-19.0	-19.0	-18.5	-20.0	Calm	6	0	b	—	—	-18.6		
10	29.423	—	-23.0	-15.6	-15.6	-16.6	Lt. N airs	3	0-5	b ↓	—	—	-14.4		
Noon	29.421	—	-30.2	-30.2	-30.0	-32.5	Calm	1	0	b ↓	—	—	-14.6	Excessive mirage all round; very clear; misty in sky; frost rime on thermometer.	
2	29.444	—	-29.5	-18.0	-18.5	-20.0	Calm	3	0-5	b	—	—	-15.3	10.45 a.m. Temp. at Cape Armitage, -50°-0; min., -50°-0.	
4	29.458	—	-18.7	-16.8	-17.0	-19.8	E, 1	7	5-10	b	—	—	-15.9	Wind ENE, 1; some small Str. on SE horizon; much mirage all round; Erebus smoke going NNE or N <sup>y</sup> (mostly hidden from view); frost rime on thermometer.	
6	29.486	—	-17.5	-16.3	-16.8	-18.0	E, 1	6	0-8	b	—	—	—	8 p.m. to Midt. Mercury below scale	
8	29.536	—	-25.0	-25.0	-25.0	-28.0	Calm	5	0	b	—	—	—	Noon. Excessive mirage all round; frost rime on thermometer; thick fog to N low down; Str. to E and N in layers.	
10	29.556	—	-28.2	-28.2	-28.1	—	Calm	2	0	b ↓	—	—	—	2 p.m. Mirage all round.	
Midt.	29.586	—	-33.2	-27.0	-26.9	-27.0	N by E, 0-1	0	10-14	b ↓	—	—	—	3 p.m. Rain band, 0.	
Mean	29.480	—	—	-20.6	-20.6	—	—	—	—	—	—	—	—	4 p.m. Small detached specks of cloud on summits of western mountains.	
Max. therm. read at { 8 a. -11°-0. / 8 p. -15°-5. } Solar radiation { black bulb 15°-3. / bright bulb —. } Evapn. { I. 0.4 / II. 0.6 } grammes in 26 hours. Precipn. — in.															
6 a.m. and 6 p.m. observations. 8 p.m. to Midt. Cloudless sky. Fine and clear all day, with hardly any wind. Barometer fell until 10 a.m., and then rose rapidly. Temperature still very unsteady and low.															

9th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
					Dry.	Wet.									
2	29.620	—	-31.0	-26.5	-20.3	-26.2	Calm	0	0	bm	—	—	Mercury below scale	Faint auroral streamers in E and SE; cloudless sky; low mist round horizon from S to W.	
4	29.651	—	-29.0	-18.0	-17.9	-25.0	Calm	0	0	b	—	—	—	4 a.m. Faint streamers to N, alt. 0°; cloudless sky; mist apparently gone.	
6	29.661	—	-29.2	-22.5	-22.2	-22.2	NNE, 0-1	2	0	bc	Ci.-s. 1	—	-15.5	6 a.m. Light Ci.-s. clouds low down in N.	
8	29.719	—	-25.2	-15.8	-15.2	-15.8	Lt. E airs	5	0	b	—	—	—	8 a.m. Heavy S.-cu. to W.	
10	29.763	—	-19.5	-15.5	-15.5	-15.5	NE, 0-2	0	0-15	bc	Ci.-s. 4	—	-15.3	10 a.m. Ci.-s. radiating NW, SE; low bank of fog all round horizon from S to W; much frost rime on thermometers.	
Noon	29.750	—	-18.0	-14.0	-14.2	-15.2	NE, 2-3	10	15-20	bc ↑	Ci. 1, Ci.-s. 2, SE (fast)	—	-15.5	10.45 a.m. Temp. at Cape Armitage, -36°-5; min., -50°-0.	
2	29.772	—	-20.8	-20.0	-20.0	-22.0	ESE, 1-2	5	10-20	oc	—	A.-cu. 9, E	-14.1	Wind ENE, 3. ↑. Erebus smoke going N <sup>y</sup> ; frost rime over thermometer; hoar frost on guys.	
4	29.738	—	-19.3	-17.0	-17.0	-17.3	SE, 1-4	6	8-15	oc	—	S.-cu. 10	—	Noon. Ci.-s. radiating NW, SE; Ci.-s. to N and W; foggy to N low down; very fleecy and wind-blown Ci.-s. and Cl. clouds.	
6	29.722	—	-17.5	-16.2	-16.5	-15.5	Calm	3	0	oc	—	S.-cu. 10	—	2 p.m. Excessive mirage to W and SW.	
8	29.702	—	-17.5	-17.0	-17.0	-16.2	Calm	0	0	o	—	S. 10	—	3 p.m. Rain band, 3.	
10	29.655	—	-17.0	-13.0	-13.1	-12.8	Calm	2	0	om	—	S. 10	—	4 p.m. Excessive mirage along foot of western mountains; very windy appearance.	
Midt.	29.602	—	-15.0	- 8.6	- 9.0	- 9.0	Calm	2	0	om *	—	N. 10	—	6 p.m. Nim. on S and E horizon; clear to N and W. Clear early, but soon clouded over and remained overcast for the remainder of the day. Wind light all day. Barometer rose until 2 p.m., and then fell rapidly. Temperature low and steady, although very jumpy in morning early.	
Mean	29.697	—	—	-17.0	-17.0	—	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. -14°-8. / 8 p. -14°-0. } Solar radiation { black bulb 15°-5. / bright bulb —. } Evapn. — grammes. Precipn. — in.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.										
2	29.550	—	-12.2	-11.6	-11.7	-11.5	Calm	2 0	o*	—	N. 10	—	<p>10th.</p> <p>Signs of weather clearing to ESE.</p> <p>Ci.-s. radiating NW, SE; very misty over sky; clear all round; visibility good.</p> <p>Noon. Upper half of western mountains obscured; visibility marked to S; mirage to SW; misty in sky.</p> <p>12.30 p.m. Temp. at Cape Armitage, -24° 8'; min., -41° 2'. Wind ESE, 2. o. Refraction to W; clouds 5000 feet alt.; upper halves of Erebus and Terror obscured.</p> <p>2 p.m. Mirage to S; all land above 4000 feet obscured.</p> <p>3 p.m. Rain band, 4.</p> <p>Overcast all day, with fresh variable E<sup>ly</sup> and SE<sup>ly</sup> winds. Barometer falling all day. Temperature steady.</p>	
4	29.502	—	-12.7	-7.0	-7.3	-7.0	E by N, 2	3 12-15	o*	—	N. 10	—		
6	29.435	—	-10.3	-9.5	-9.7	-9.3	E by N, 2-3	13 15-21	o*	—	N. 10	—		
8	29.362	—	-12.0	-11.0	-11.8	-11.0	ENE, 3-4	15 20-22	o	—	S.-cu. 10	—		
10	29.315	—	-12.5	-11.0	-11.0	-11.0	NE, 2-3	12 15-20	bc	—	Ci.-s. 5	—		
Noon	29.277	—	-12.0	-10.8	-11.0	-11.0	NE, 1-2	7 10-15	oc	—	A.-s.-cu. 6, NW (slow) Cu. 10	—		
2	29.229	—	-15.0	-14.7	-15.0	-15.0	Var. SE, 1-3	9 10-25	ocq	—	S.-cu. 10	—		
4	29.184	—	-18.0	-17.3	-17.3	-17.5	SE, 2	12 15-20	oc	—	S.-cu. 10	—		
6	29.152	—	-19.2	-17.5	-17.5	-18.2	ESE, 2-3	13 20-28	oc	—	S.-cu. 10	—		
8	29.105	—	-20.0	-17.2	-17.3	-17.0	SE, 2-3	15 15-22	o	—	S. 10	-17.3		
10	29.078	—	-21.2	-15.0	-14.8	-14.0	ESE, 3	17 15	o	—	S. 10	-17.5 -18.8 -18.4 -14.8 -15.3		
Midt.	29.067	—	-20.9	-15.9	-10.0	-15.6	E, 2-3	11 8-12	o	—	S. 10	—		
Mean	29.271	—	-13.2	-13.4	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. - 7° 0.		8 p. - 10° 0.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 1.0 } grammes in { 11. 0.9 } 24 hours.		Precipn. { 0.004 in. since 2 p.m., 7th.		

2	29.053	—	-23.5	-22.0	-22.0	-22.5	E by S, 2-3	16 12-18	o*	—	S. 10	-22.0	<p>11th.</p> <p>Slight aurora in N.</p> <p>Slight aurora in N.</p> <p>Low S.-cu. all round horizon.</p> <p>11.30 a.m. Temp. at Cape Armitage, -31° 0'; min., -36° 3'. Wind ESE, 2. bf. Mt. Erebus' smoke going NE.</p> <p>Noon. Thick and heavy S.-cu. all round to an alt. of about 3°; Wind very shifty and gusty.</p> <p>2 p.m. Slightly coloured Fr.-cu. passing.</p> <p>3 p.m. Rain band, 0.</p> <p>6 p.m. Observed bright meteor in zenith, falling towards N.</p> <p>10 p.m. Very thick; all land obscured; moon occasionally visible through passing Cu.</p> <p>Cloudy most of the day, with fresh E<sup>ly</sup> wind early, falling to calm. Barometer falling all day. Temperature lower and not so steady.</p>
4	29.032	—	-22.5	-19.2	-19.4	-20.0	E, 4	20 25-30	bc	—	S.-cu. 3	-22.4 -17.7 -18.0	
6	29.014	—	-26.0	-18.0	-18.2	-18.1	E, 3	17 20-25	oc†	—	S. 10	-18.0 -18.4	
8	28.982	—	-19.0	-17.0	-17.0	-17.0	Var. E, 3-4	15 20-25	oc†	—	S. 10	—	
10	28.979	—	-17.0	-16.0	-16.0	-17.0	ENE, 2-3	12 10-20	bc	—	Fr.-s.-cu. 3, N (mod.) Fr.-cu. 2, E (fast)	-16.4 -16.6 -24.9 -24.5	
Noon	28.968	—	-24.5	-24.0	-24.0	-25.0	Lt. S alrs	5 0-3	bc	—	Fr.-cu. 2, E	—	
2	28.971	—	-24.4	-19.0	-19.0	-19.5	NNE, 1-2	9 5-18	b	—	—	—	
4	28.975	—	-21.5	-20.5	-20.5	-22.4	ESE, 0-1	5 0-10	oc	—	Cu. 9, E	—	
6	28.954	—	-25.2	-25.0	-25.0	-30.0	Calm	1 0	b	—	—	—	
8	28.951	—	-27.0	-27.0	-27.0	-29.0	Calm	1 0	bc	—	Cu. 3	Mercury below scale	
10	28.938	—	-28.0	-23.0	-23.0	-24.0	Calm	0 0	oc	—	Cu. 8, NE	—	
Midt.	28.930	—	-25.0	-23.5	-23.5	-24.0	Calm	0 0	bc	—	Cu. 5, E	—	
Mean	28.979	—	-21.2	-21.2	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. - 14° 0.		8 p. - 16° 0.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 1.9 } grammes in { 11. 1.8 } 24 hours.		Precipn. — in.	

2	28.908	—	-24.0	-24.0	-24.0	-24.0	Calm	0 0	bc	—	Cu. 4, NE	—	<p>12th.</p> <p>Sky cloudless.</p> <p>Very black and dark all round; no land visible; wind squally and variable.</p> <p>Noon. Very thick all round; snowflakes soft, damp, and very small.</p> <p>12.15 p.m. Temp. at Cape Armitage, -13° 9'; min., -41° 8'. Wind NNW, 4-5. †. Nlm. oc.</p> <p>2 p.m. Very powdery snow falling; wind squally.</p> <p>3 p.m. Rain band, 7.</p> <p>8 p.m. Not so much drift; wind squally and shifty.</p> <p>Overcast most of the day, with strong variable E<sup>ly</sup> wind, heavy drift and snowfall. Barometer fell until noon, and then rose quickly. Temperature not so steady, and rising.</p>
4	28.870	—	-30.0	-23.0	-23.0	-25.0	Lt. N alra	0 0	b	—	—	—	
6	28.854	—	-28.0	-19.0	-19.0	-18.0	Lt. N alrs	0 0	b	—	—	—	
8	28.835	—	-23.0	-19.0	-19.0	-18.0	Lt. N alrs	4 0	oc	—	S.-cu. 8	—	
10	28.803	—	-20.5	-9.0	-10.0	-9.5	NE, 1-3	12 8-20	oc	—	S. 10	-9.4 -10.1 -7.4 -7.8	
Noon	28.795	—	-9.7	-7.2	-7.6	-7.0	N, 3-4	15 15-27	oc†*	—	N. 10	—	
2	28.800	—	-7.7	-5.8	-6.0	-5.0	N, 2-4	17 15-30	oc†*	—	N. 10	—	
4	28.921	—	-10.5	-10.2	-10.0	-12.0	E by S, 2-4	11 18-33	oc†*	—	N. 10	—	
6	28.957	—	-19.0	-17.3	-17.0	-19.5	Var. E, 4-6	18 28-40	oc†*	—	N. 10	—	
8	29.009	—	-19.0	-15.0	-15.0	-14.5	Var. E, 4-6	28 20-30	oc†*	—	N. 10	—	
10	29.043	—	-15.0	-10.0	-10.0	-10.0	E by S, 2-4	25 10-20	oc†	—	N. 10	—	
Midt.	29.049	—	-13.5	-8.0	-8.0	-8.0	ENE, 2-3	9 10-15	oc	—	Cu. 10	—	
Mean	28.904	—	-14.0	-14.1	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. - 13° 8.		8 p. - 5° 0.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 0.3 } gramme in { 11. 0.3 } 24 hours.		Precipn. — in.	

1903—April.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

13th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Dry.	Wet.										
2	29.078	—	-10.5	-8.0	-8.0	-0.5	Calm	6	0	bc	—	Cu. 9, NE	—	
4	29.085	—	-9.5	-6.0	-6.0	-5.0	Calm	4	0	bc	—	Cu. 9, NE	—	Sky clearing in SW; black and threatening in N.
6	29.135	—	-9.5	-8.0	-8.0	-7.0	Calm	0	0	oc	—	N. 10	—	
8	29.197	—	-16.0	-7.0	-8.0	-6.0	ENE, 1-2	0	8-12	oc †	—	N. 10	—	Low drift.
10	29.237	—	-18.8	-16.8	-16.8	-16.2	Var. SE, 4-6	14	20-33	oq † *	—	N. 10	—	Heavy drift; no land visible.
Noon	29.297	—	-21.0	-19.0	-19.0	-18.8	Var. E, 4-6	22	20-30	oq † *	—	N. 10	—	10.45 a.m. Temp. at Cape Armitage, -29° 5'; min., -30° 0. Wind NE by E, 5. of. * † 2. Erebus obscured.
2	29.328	—	-25.0	-24.0	-24.0	-24.5	Var. E, 5-7	31	30-40	oq † *	—	N. 10	—	Noon. Signs of clearing overhead and to SE; wind still variable and squally.
4	29.352	—	-25.6	-24.6	-24.3	-28.0	ENE, 5-7	26	30-42	bq †	Ci-cu. 4, NE	—	—	Noon. Signs of clearing overhead and to SE; wind still variable and squally.
6	29.360	—	-24.4	-21.0	-21.0	-21.0	E by N, 4-6	31	25-35	ocq †	—	Fr-n. 8	—	2 p.m. Clouds very thin in zenith; general appearance of clearing.
8	29.367	—	-26.0	-17.0	-17.0	-16.2	Var. 2-6	24	15-28	bqm †	—	—	—	3 p.m. Rain band, 2.
10	29.359	—	-16.8	-7.5	-7.8	-7.8	Lt. NE airs	10	0	oc	—	Cu. 8, NE (fast)	—	6 p.m. Moon gleaming and showing between squalls.
Midt.	29.344	—	-13.0	-10.0	-10.0	-10.8	Lt. N airs	4	0	oc	—	Cu. 8, NE (mod.)	—	8 p.m. Clear overhead; very misty moon.
Mean	29.262	—	-14.1	-14.2	—	—	—	—	—	—	—	—	—	Overcast and cloudy all day, with very strong E by wind, squally and drifting. Barometer rose until 8 p.m., and then commenced to fall. Temperature very unsteady, with big drop in afternoon.
Max. therm. read at { 8 a. -6° 0. / 8 p. -8° 0. } Solar radiation { black bulb — / bright bulb —. } Evapn. { I. 0.9 / II. 0.9 } grammes in 24 hours. Precipn. — in.														

14th.

2	29.330	—	-15.8	-14.2	-14.2	-14.0	Calm	2	0	o *	—	N. 10	—	
4	29.308	—	-14.8	-13.8	-13.8	-13.8	Calm	2	0	o *	—	N. 10	—	
6	29.279	—	-15.5	-13.0	-13.0	-13.0	Calm	1	0	o *	—	N. 10	—	
8	29.255	—	-14.0	-10.0	-10.5	-10.0	Calm	0	0	om *	—	N. 10	—	
10	29.228	—	-14.0	-8.8	-8.8	-13.0	Calm	1	0	bc	Ci. 1, S	Fr.-a.-cu. 3, SW (mod.)	—	11.15 a.m. Temp. at Cape Armitage, -22° 5'; min., -32° 7. Calm. bet. Ci. 2; Str. all round horizon; Mt. Erebus obscured; hoar frost on thermometer.
Noon	29.207	—	-19.2	-13.2	-13.2	-14.0	Calm	—	0	bc	Ci. 4, S	Fr.-a.-s. 2, SW (mod.)	—	Noon. Thick to S; clearing to W; summits of western mountains obscured in thin Str.; Ci. clouds very wind blown.
2	29.179	—	-17.7	-14.6	-14.8	-18.8	Calm	—	0	bc	Ci.-cu. 2, S	Fr.-cu. 2, W (slow)	—	2 p.m. Heavy Nim. to SW; detached Cu. passing from NW.
4	29.160	—	-14.1	-12.8	-12.8	-15.0	Calm	—	0	bc	—	A.-cu. 8, W (slow)	—	3 p.m. Rain band, 3.
6	29.142	—	-13.8	-10.0	-10.0	-9.0	N by W, 0-1	—	0-8	oc	—	N. 10	—	4 p.m. Nim. to W.
8	29.111	—	-17.0	0.5	0.0	1.2	N, 1	—	5-10	o	—	S. 10	—	6 p.m. St. Elmo's fire on funnel of hut, accompanied by hissing noise.
10	29.076	—	-2.5	1.0	0.4	1.0	ENE, 1-2	—	8-10	o *	—	N. 10	1.0	8 p.m. Very misty to E.
Midt.	29.038	—	-7.7	-4.5	-4.5	-4.2	ESE, 2-3	—	10-15	o *	—	N. 10	1.0	Midt. Str. very thin; moon clearer.
Mean	29.193	—	-9.5	-9.6	—	—	—	—	—	—	—	—	—	Cloudy and overcast all day, with hardly any wind. Barometer falling all day. Temperature very unsteady, with sudden rise in the evening.
Max. therm. { 8 a. — / 8 p. 1° 5. } Solar radiation { black bulb 17° 8. / bright bulb —. } Evapn. { I. 0.4 / II. 0.3 } grammes in 24 hours. Precipn. 0.02 in. since 4 p.m., 10th.														

15th.

2	29.029	—	-5.8	-0.8	-1.0	-1.0	E by N, 2-3	—	12-15	o *	—	N. 10	0.0	
4	29.015	—	-1.8	0.4	0.0	0.0	ENE, 2	—	10	o *	—	N. 10	0.4	Wind variable.
6	29.001	—	-7.7	-6.0	-6.0	-6.0	Calm	—	0	o *	—	N. 10	0.0	
8	28.910	—	-6.5	1.0	1.0	2.0	N, 0-1	—	8-10	o *	—	N. 10	0.4	
10	28.970	—	-5.0	-5.0	-5.0	-4.0	Calm	—	0	o *	—	N. 10	5.3	Thick all round; snowflakes small and dry.
Noon	28.963	—	-5.0	0.0	0.0	0.0	Calm	—	0	o *	—	N. 10	5.3	11.30 a.m. Temperature at Cape Armitage, -9° 6'; min., -26° 0. Calm. of. *. Erebus obscured. Rain band, 1.
2	28.958	—	-4.2	-2.4	-2.4	-3.0	NE, 0-1	3	0-10	o † *	—	N. 10, NE (slow)	—	
4	28.941	—	-6.2	-5.5	-5.3	-7.0	ENE, 2	12	15-20	oc	—	Cu. 8	—	
6	28.933	—	-5.7	-5.0	-5.0	-5.2	NE, 0-1	10	0-8	oc	—	Thin S.-cu. 10	—	Very thin Nim.; moon gleaming at intervals.
8	28.956	—	-11.0	-10.0	-10.0	-10.5	ESE, 3-4	7	15-22	bmq † U U	—	—	-10.5	Very misty sky; halo too faint to measure.
10	28.957	—	-13.5	-10.5	-11.0	-11.5	ENE, 2	18	20	c	—	Roll Cu. 8, NE	-10.5	
Midt.	28.977	—	-14.5	-10.0	-10.0	-11.0	NE by E, 2-3	15	10-25	b	—	—	-11.8	Overcast all day, with some snowfall. Calm all the morning, wind springing up fresh from E in afternoon. Barometer falling slowly all day, commencing to rise at midnight. Temperature falling towards the evening.
Mean	28.968	—	-4.5	-4.6	—	—	—	—	—	—	—	—	-10.8	
Max. therm. { 8 a. 2° 0. / 8 p. 0° 5. } Solar radiation { black bulb — / bright bulb —. } Evapn. { I. 0.5 / II. 0.5 } grammes in 24 hours. Precipn. 0.01 in. since 4 p.m., 14th.														

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.										
2	28.971	—	14.5	12.8	13.0	ENE, 3-4	19	22-28	b	—	—	—12.6	<p>16th.</p> <p>Very faint auroral streamers to N; moonlight very bright; ice crystals falling.</p> <p>10 a.m. No land visible; misty in sky.</p> <p>11 a.m. Temp. at Cape Armitage, -24°·8; min., -27°·0. Wind ENE, 3. hf. †. Mt. Erebus' smoke ascending in thick high column, and then breaking away to E.</p> <p>Noon. Clearing generally; misty in W.</p> <p>2 p.m. Very wind-blown Cl.-s. to SW.</p> <p>3 p.m. Rain band, 2.</p> <p>6 p.m. S.-cu. to N and resting on summits of western mountains; Cl.-s. very thin and wind blown.</p> <p>10 p.m. Frost rime on outside thermometer.</p> <p>Mtd. Frost rime on outside thermometer.</p> <p>Fine, but cloudy all day, with fresh B' wind in morning, falling to calm and remaining so. Barometer rising steadily all day. Temperature falling, and steadier all day.</p>	
4	28.969	—	14.5	13.0	13.5	ENE, 2-3	17	15-22	b	—	—	-12.6 -13.0 -13.9 -15.2 -15.2		
6	29.013	—	16.0	16.0	17.0	ENE, 3-4	20	22-28	b	—	—	—		
8	29.056	—	17.0	16.0	16.0	Var. E, 3-4	22	25-28	b †	—	—	—		
10	29.091	—	16.5	15.5	16.0	NE, 3-4	17	18-26	bc †	Cl.-s. 3	—	-15.5 -15.5 -15.5		
Noon	29.109	—	16.8	15.0	15.8	NE, 2-3	15	15-23	bc †	Cl.-s. 3, SW (very slow)	—	-15.7		
2	29.145	—	15.2	14.0	14.2	Calm	9	0	bc	—	Fr.-cu. 2, NE (slow)	—		
4	29.155	—	15.0	14.2	16.0	NNE, 0-1	7	0-10	bc	Cl.-s. 2, W	—	—		
6	29.197	—	18.0	17.3	18.3	Calm	3	0	bc	Cl.-s. 2, W	S.-cu. 2, N (slow)	—		
8	29.215	—	25.0	21.0	24.0	Calm	0	0	b ☐ →	—	—	-18.8 -18.9		
10	29.240	—	26.6	23.5	25.2	Calm	0	0	bc ☐	—	Cu. 2	-20.0 -21.3		
Midt.	29.257	—	28.8	25.0	25.0	Calm	0	0	bc ☐	—	Cu. 8, N	-17.7 -18.8		
Mean	29.120	—	—	16.9	17.0	—	—	—	—	—	—	—		
Max. therm. read at		8 a. — 8 p. -13°·0.		Solar radiation		black bulb — bright bulb —.		Evapn. { 1. 0.4 } gramme in { 11. 0.2 } 24 hours.		Precipn. — in.				

2	29.273	—	27.9	22.5	23.0	Calm	0	0	bc —	—	Cu. 6, N	-19.8 -20.9	<p>17th.</p> <p>2 a.m. and 4 a.m. Frost rime on outside instruments.</p> <p>Snowflakes very small, hard, and dry; thick all round.</p> <p>11 a.m. Temp. at Cape Armitage, -31°·2; min., -47°·5. Wind SE, 1. of. *. Erebus obscured.</p> <p>Noon. Snowing very lightly; thick all round.</p> <p>4 p.m. Thick dry snow mixed with ice crystals.</p> <p>5 p.m. Rain band, 1.</p> <p>Misty in sky; wind increasing.</p> <p>Clouds round moon of prismatic colouring.</p> <p>Misty in sky to E.</p> <p>Overcast and snowing most of the day, clearing in evening. Wind light all the morning, rising up from NE, strong in evening. Barometer rose until noon, then fell slightly until 8 p.m., and then rose again. Temperature falling all day.</p>	
4	29.292	—	25.9	14.8	14.0	E, 0-1	1	0	bc —	—	Cu. 7, NNW	-13.5 -13.7 -11.3 -11.4		
6	29.296	—	14.5	11.2	11.2	E, 0-1	2	0	oc *	—	N. 10	—		
8	29.313	—	12.5	10.0	10.0	Lt. N airs	7	0	oc	—	N. 10	—		
10	29.321	—	12.3	11.0	12.0	Calm	1	0	o *	—	N. 10	-9.0 -10.1		
Noon	29.321	—	18.0	13.0	12.0	Calm	4	0	o *	—	N. 10	-13.0 -13.0		
2	29.312	—	17.3	14.2	15.0	Calm	3	0	o *	—	N. 10	—		
4	29.316	—	17.0	14.5	16.5	N by E, 1	5	0-10	o *	—	N. 10	—		
6	29.304	—	18.0	18.0	18.6	N, 1-2	9	5-12	b	—	—	—		
8	29.302	—	19.5	19.5	20.0	NE, 3-4	9	15-22	bc † ☐	—	Fr.-cu. 2, NE (slow)	-20.2 -20.2		
10	29.317	—	21.0	20.0	20.0	NE, 3-4	20	18-25	bc † ☐	—	A.-cu. 2, N (slow)	—		
Midt.	29.316	—	20.5	20.0	20.6	NE, 2-3	16	15-20	b † ☐	—	—	-19.5 -19.8		
Mean	29.307	—	—	15.7	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. -10°·0. 8 p. -10°·0.		Solar radiation		black bulb — bright bulb —.		Evapn. { 1. 0.02 } gramme in { 11. 0.03 } 24 hours.		Precipn. 0.01 in. since 4 p.m. 15th.				

2	29.320	—	21.0	20.0	21.0	NE, 4-5	17	20-25	b †	—	—	-20.6 -20.6 -21.6 -21.8	<p>18th.</p> <p>Wind-blown Cl.-s. to E low down.</p> <p>Lines of Cl.-s. over western mountains and S horizon; land showing up a pink glow over the drift.</p> <p>11 a.m. Temp. at Cape Armitage, 31°·6; min., -46°·8. Wind NE, 3-4. hf. †. Erebus smoke going E.</p> <p>2 p.m. Detached Cu. passing from E; Nil. on western mountains.</p> <p>3 p.m. Rain band, 2.</p> <p>6 p.m. Double layer of Cu. half-way up western mountains; tops and bases visible.</p> <p>8 p.m. Misty moon in SE.</p> <p>Fine and clear all day; wind strong early, falling to light breeze. Barometer rising all day. Temperature lower and steady.</p>	
4	29.323	—	22.0	22.0	22.8	NE, 4-5	18	20-26	b †	—	—	-22.2 -22.4		
6	29.329	—	22.8	22.0	22.8	NE, 4-5	18	22-26	b †	—	—	—		
8	29.354	—	23.0	22.0	23.0	NE, 4	21	20-22	b	—	—	—		
10	29.365	—	24.1	23.7	24.2	E by N, 2-3	16	20	b †	—	—	-23.4 -23.4 -22.9 -23.9		
Noon	29.363	—	21.3	22.6	23.0	E by N, 2-3	19	20-25	bc †	Cl.-s. 4	—	—		
2	29.381	—	23.3	21.0	22.3	E by N, 2-3	18	12-20	bc	Cl.-s. 2, N	—	—		
4	29.398	—	26.5	26.5	27.2	ESE, 1-2	10	5-12	b	—	—	—		
6	29.408	—	27.0	20.5	21.6	E, 1	10	5-8	b	—	—	—		
8	29.429	—	22.0	22.0	22.0	SE, 1	6	5-8	b ☐	—	—	-22.0 -22.0		
10	29.437	—	23.5	22.0	22.0	E, 1-2	8	13-19	b	—	—	-22.1 -22.4		
Midt.	29.454	—	24.0	23.5	24.0	E, 2-3	12	15-22	bc	Cl.-s. 2, N	—	-23.8 -23.8		
Mean	29.380	—	—	22.3	22.1	—	—	—	—	—	—	—		
Max. therm. read at		8 a. -18°·8. 8 p. -20°·0.		Solar radiation		black bulb — bright bulb —.		Evapn. { 1. 0.2 } gramme in { 11. 0.2 } 24 hours.		Precipn. 0.002 in. since 6 p.m. 17th.				

1903—April.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

19th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.								Unscreened.		
2	29.462	—	-24.2	-21.5	-21.2	—	E, 1-3	15	15-23	bc	—	—	—	-22.0 -21.8	No land visible through drift in S and W.
4	29.470	—	-30.5	-30.0	-29.2	—	E by N, 3-4	19	25-33	bc ↗	—	—	—	Mercury below scale	
6	29.478	—	-31.8	-30.2	-29.8	—	ENE, 2-4	21	20-35	bcq ↗	—	—	—	—	
8	29.472	—	-32.0	-27.0	-26.5	—	E by N, 4-5	21	25-30	b ↗	—	—	—	—	Clearing all round; fine colouring on western mountains. Fine colouring (orange pink) on western range. 12.30 p.m. Temp. at Cape Armitage, -30° 5'; min., 44° 6'. Wind E, 1-3. lf. ↗. Erebus smoke going E. 3 p.m. Rain band, 3. 4 p.m. Cu. to W. 6 p.m. Low bank of Nim. all round.
10	29.473	—	-27.0	-24.0	-24.0	—	NE, 3-4	11	15-20	b	—	—	—	Mercury below scale	
Noon	29.457	—	-24.9	-19.4	-19.5	—	E by S, 1-2	12	0-5	b	—	—	—	-19.7 -20.2	
2	29.437	—	-19.8	-19.0	-19.3	—	ESE, 2-3	11	10-18	b	—	—	—	—	Auroral arch extending from E to SW, 13°. Faint auroral cloud about 5° S of zenith. Fine day, with strong variable, E to ESE, wind, falling towards evening. Barometer rose until 6 a.m., and then fell for the remainder of the day. Temperature unsteady and inclined to rise.
4	29.424	—	-19.3	-18.0	-18.4	—	SE, 2-3	11	10-18	b	—	—	—	—	
6	29.398	—	-18.5	-16.8	-17.0	—	ESE, 2-5	14	10-25	bq	—	—	—	—	
8	29.388	—	-19.0	-16.0	-16.0	—	E, 2-3	13	12-24	b	—	—	—	-16.2 -16.8	
10	29.330	—	-16.9	-15.3	-15.6	—	ESE, 2-3	14	10-20	b	—	—	—	-15.2 -15.9	
Midt.	29.292	—	-15.8	-12.8	-13.3	—	E by S, 1-2	9	10-15	b	—	—	—	-11.2 -12.5	
Mean	29.423	—	—	-20.8	-20.8	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -20° 0.		8 p. -16° 0.		Solar radiation		black bulb — bright bulb —		Evapn. { 1. 0.5 } gramme in { 11. 0.6 } 24 hours.		Precipn. — in.			

20th.

2	29.249	—	-13.2	-11.8	-12.2	—	E, 1-2	10	10-15	b	—	—	—	-11.6 -12.3	Very faint aurora patches here and there, with bright moon shining.
4	29.225	—	-24.2	-21.0	-21.1	—	ENE, 3-4	16	20-30	b w	—	—	—	Mercury below scale	
6	29.209	—	-15.6	-15.0	-15.0	—	ENE, 2	16	10-20	b	—	—	—	-16.2 -17.0	2 a.m. and 6 a.m. Wind very gusty.
8	29.155	—	-17.8	-14.0	-14.0	—	ENE, 0-2	8	0-20	bq	—	—	—	—	
10	29.131	—	-26.0	-26.0	—	—	Lt. S airs	9	0	b	—	—	—	Mercury below scale	Excessive and high mirage all round; fine colouring on western mountains. 11 a.m. Temp. at Cape Armitage, -45° 5'; min., -46° 2'. Calm; much mirage; shadow of Erebus' slope on horizon and across sky to S; smoke going NE.
Noon	29.127	—	-31.0	-29.8	-29.5	—	Calm	1	0	b	—	—	—	—	
2	29.125	—	-30.3	-24.5	-25.0	—	Calm	1	0	b	—	—	—	—	Noon. Excessive mirage and fine colouring to W and SW. 2 p.m. Excessive mirage along base of western mountains; sky illuminated.
4	29.115	—	-24.2	-13.5	-13.5	—	Calm	0	0	b	—	—	—	Mercury below scale	
6	29.098	—	-13.5	-8.5	-9.5	—	N by E 1	2	5-8	b	—	—	—	-24.5 -24.5	3 p.m. Rain band, 0. 4 p.m. Mirage to W. 6 p.m. Detached Cu. to W; Nim. to N and extending to E. 8 p.m. This sudden rise and fall in temperature was apparently caused by a slight N by breeze. 10 p.m. Frost rime on glass of anemometer.
8	29.117	—	-32.0	-28.0	-28.0	—	Calm	7	0	b	—	—	—	—	
10	29.100	—	-32.0	-22.0	-22.0	—	Lt. ENE airs	1	0	b	—	—	—	—	
Midt.	29.095	—	-23.0	-12.4	-13.0	—	Lt. N airs	2	0	b	—	—	—	—	
Mean	29.146	—	—	-18.9	—	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -11° 5.		8 p. -7° 0.		Solar radiation		black bulb — bright bulb —		Evapn. { 1. 2.9 } grammes in { 11. 3.0 } 24 hours.		Precipn. — in.			
Midt. Faint auroral streamers to NE. Fine and clear all day, with strong ENE wind early, falling to calm. Barometer falling all day. Temperature low and very jumpy.															

21st.

2	29.100	—	-19.0	-18.5	-18.0	—	NNE, 1	4	0	b	—	—	—	-20.9 -20.9	Hoar frost on anemometer glass.
4	29.117	—	-20.5	-14.0	-14.0	—	NNW, 1	4	0	b L	—	—	—	-13.7 -13.7	
6	29.163	—	-25.5	-25.5	-24.5	—	Lt. NNW airs	6	0	b	—	—	—	Mercury below scale	Slight mirage all round; very fine colouring to W; frost rime on glasses. 11 a.m. Temp. at Cape Armitage, -48° 8'; min., -49° 9'. Wind ENE. b. Refraction great to E and N; Mt. Erebus' smoke going NE; frost rime on thermometer.
8	29.210	—	-28.0	-25.0	-24.8	—	SE, 1	3	5-10	b	—	—	—	—	
10	29.241	—	-25.0	-24.0	-23.8	—	Calm	4	0	b L	—	—	—	Mercury below scale	11.40 a.m. Erebus smoke going S by, and pouring down slope. Noon. Frost rime on glasses; visibility marked. 3 p.m. Rain band, 0. 6 p.m. Solar thermometer coated with frost; detached clouds on N horizon.
Noon	29.265	—	-31.0	-29.5	-29.0	—	Calm	0	0	b L	—	—	—	—	
2	29.283	—	-30.8	-27.8	-27.8	—	Calm	1	0	b L	—	—	—	-21.6 -22.0	8 p.m. Anemometer glass thickly coated with rime. 10 p.m. Anemometer glass again required scraping. Midt. No more precipitation on glass. Aurora, an extended and very perfect arch of vertical rays Barometer rising steadily all day.
4	29.313	—	-35.2	-35.2	—	—	Calm	2	0	b L	—	—	—	-20.4 -20.7	
6	29.355	—	-40.0	-40.0	-39.5	—	Calm	0	0	b L	—	—	—	Mercury below scale	
8	29.371	—	-39.5	-20.0	-20.5	—	Calm	1	0	b L	—	—	—	—	
10	29.390	—	-35.7	-23.0	-24.0	—	Lt. NE airs	2	0	b L	—	—	—	—	
Midt.	29.412	—	-39.9	-39.0	-38.9	—	Calm	2	0	b	—	—	—	—	
Mean	29.268	—	—	-26.8	—	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -10° 0.		8 p. -20° 0.		Solar radiation		black bulb — bright bulb —		Evapn. { 1. 0.0 } gramme in { 11. 0.1 } 24 hours.		Precipn. — in.			
from SW to NE, alt. 30°. Fine and clear all day, with no wind. Temperature falling and low.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Split minimum.	Dry.											Wet.
2	29.437	—	-40.1	-37.2	-36.8	—	Calm	0	0	b	—	—	Mercury below scale from 2 to 4 a.m.	A banner of auroral light crossing zenith to N and S horizon.	
4	29.473	—	-37.4	-28.0	-28.0	—	Calm	1	0	b	—	—	-21.6	Definite deposit on the scraped anemometer glass.	
6	29.496	—	-28.0	-21.5	-21.6	—	SE, 1-2	7	10-15	b-c	—	—	-21.8	—	
8	29.562	—	-33.0	-20.0	-20.0	—	Calm	2	0	b-c	—	—	—	—	
10	29.590	—	-30.2	-17.8	-18.0	—	E, 1-2	3	10-15	b	—	—	-16.4	Visibility marked.	
Noon	29.611	—	-28.2	-28.1	-28.0	—	Calm	4	0	b	—	—	-16.8	11 a.m. Temp. at Cape Armitage, -48° 2'; min., -55° 0'. Calm.	
2	29.574	—	-34.7	-23.0	-23.2	—	Calm	1	0	b	—	—	Mercury below scale	bn. Mirage to N and NW, also on summit of Erebus; smoke going N <sup>w</sup> .	
4	29.574	—	-27.6	-20.0	-20.5	—	Calm	1	0	b	—	—	—	Noon. Visibility good; shadow of Erebus' slope on southern sky; Cl.-s. forming and passing to NE (mod.); western mountains quite clear of cloud and with very fine colouring; same on Mt. Discovery.	
6	29.555	—	-37.0	-15.5	-16.0	—	E, 1-2	4	10-18	b	—	—	—	2 p.m. Mirage to W and NW.	
8	29.544	—	-17.0	-10.0	-11.0	—	E, 2-3	13	15-25	b	—	—	-10.8	3 p.m. Rain band, 2.	
10	29.539	—	-15.2	-14.7	-14.9	—	E, 2-3	13	20-40	b-†	—	—	-12.8	6 p.m. Surface drift on W side of Strait.	
Midt.	29.524	—	-23.6	-20.5	-20.8	—	E by N, 2-4	26	20-46	b-†	—	—	-13.7	8 p.m. All rime on anemometer glass has gone.	
Mean	29.540	—	—	-22.1	-22.3	—	—	—	—	—	—	—	-19.8	Midt. Wind very variable in strength; hard gusts at frequent intervals; Robinson anemometer's glass face broken.	
Max. therm. read at		8 a. -20° 0.		8 p. -10° 0.		Solar radiation		black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.		Another fine and clear day. No wind until 6 p.m., when it sprang up and freshened from E. Barometer rose until noon, and then commenced to fall. Temperature low, but unsteady all day.	

22nd.

2	29.499	—	-25.9	-15.0	-15.2	—	E by N, 2-3	—	22-24	b-†	—	—	-14.4	Faint bands of aurora E by N from zenith to hills; wind decreasing slightly, gusts less frequent.	
4	29.470	—	-15.2	-13.4	-13.8	—	E by N, 2-3	16	24-28	b-†	—	—	-12.6	4 a.m. Broad and bright streaks of aurora E by N and ENE, alt. 10°.	
6	29.445	—	-16.2	-16.0	-16.2	—	E by N, 2-3	15	15-25	b-†	—	—	-13.7	—	
8	29.417	—	-19.0	-18.0	-18.0	—	ESE, 2-3	21	15-20	b-†	—	—	-15.2	—	
10	29.385	—	-19.2	-15.0	-15.5	—	ENE, 2-3	15	10-18	b	—	—	-11.7	Brilliant colouring on western mountains; shadow of N hills on S sky.	
Noon	29.327	—	-19.2	-16.2	-16.8	—	E, 1	—	8-10	b	—	—	-16.6	11 a.m. Brought in Robinson's anemometer for repair, and replaced it at 3 p.m.	
2	29.275	—	-16.3	-16.0	-16.0	—	SE, 1	—	5-8	b	—	—	-17.0	11 a.m. Temp. at Cape Armitage, -27° 0'; min., -53° 6'. Wind W, 1.	
4	29.234	—	-19.0	-18.3	-18.0	—	ESE, 1-2	—	5-12	b	—	—	—	bf. Erebus smoke going NW <sup>w</sup> ; Earth shadow and Erebus shadow on S sky.	
6	29.212	—	-20.8	-19.0	-19.0	—	E, 2	8	18-23	b	—	—	—	Noon. Very clear; brilliant colouring on W and SW hills; shadow of Erebus on S sky.	
8	29.171	—	-22.0	-20.0	-20.0	—	NE, 5-6	17	25-33	b	—	—	-20.6	—	
10	29.135	—	-22.2	-19.5	-19.7	—	E by N, 3-4	23	22-27	b	—	—	-20.9	—	
Midt.	29.082	—	-23.8	-23.6	-23.5	—	E, 4-5	20	28-34	b	—	—	-19.8	—	
Mean	29.304	—	—	-17.5	-17.6	—	—	—	—	—	—	—	-24.2	—	
Max. therm. read at		8 a. -6° 0.		8 p. -13° 0.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 1.9 } grammes in { 11. 1.8 } 24 hours.		Precipn. — in.		Another bright and clear day, with strong to fresh variable 12 <sup>h</sup> winds. Barometer falling all day. Temperature higher and steadier.	

23rd.

2	29.052	—	-24.0	-19.4	-19.7	—	E by N, 3-4	23	22-28	b	—	—	-19.1	Auroral streamers of very slight intensity to ENE and SE, alt. up to 30°.	
4	29.037	—	-21.2	-16.8	-17.1	—	NE, 3	13	21-24	bc	—	S.-cu. 2	-17.0	—	
6	29.016	—	-18.2	-11.3	-12.1	—	ENE, 1-2	18	12-17	oc	—	S.-cu. 9	-17.5	Completely overcast, except to E and S.	
8	28.998	—	-20.0	-19.0	-19.2	—	NE, 3-4	22	20-25	b	—	—	-11.7	—	
10	28.987	—	-21.0	-21.0	-21.0	—	S, 1	7	10-15	b	—	—	-22.7	Brilliant colouring to W and in sky; shadows of N hills on S sky.	
Noon	28.961	—	-26.0	-19.0	-19.0	—	NE, 4-5	13	23-28	bc	Cl. 3, W (slow)	—	-19.1	11 a.m. Temp. at Cape Armitage, -40° 3'; min., -40° 5'. Wind E by S, 2. †. Smoke of Erebus going NE.	
2	28.964	—	-19.5	-17.0	-17.4	—	ENE, 3-4	19	22-30	oc	—	S.-cu. 10	-19.5	Noon. Brilliant colouring in S sky; Cl. forming rapidly; shadows of N hills on S sky.	
4	28.962	—	-19.0	-17.0	-17.2	—	ENE, 3-4	20	20-28	bc	—	Fr.-cu. 5, NE (fast)	—	2 p.m. Summits of all high land obscured; clouds thin.	
6	28.966	—	-16.3	-15.5	-15.5	—	ENE, 3-4	21	20-28	oc	—	S.-cu. 10	—	4 p.m. Heavy bank of Str. on western mountains at 6000 feet alt.	
8	28.962	—	-17.0	-15.0	-15.2	—	NE, 2-3	13	15-20	o	—	S. 10	-15.5	6 p.m. Clear to W.	
10	28.956	—	-16.4	-11.0	-11.8	—	NE, 0-1	13	0-5	o	—	S. 10	-11.2	10.45 p.m. Snowing slightly.	
Midt.	28.960	—	-21.0	-16.6	-16.4	—	E, 0-1	7	0-5	b	—	—	-18.9	Midt. A band of auroral light from E to W across the sky almost through the zenith.	
Mean	28.985	—	—	-16.6	-16.8	—	—	—	—	—	—	—	-19.1	Cloudy most of the day, with fresh NE <sup>w</sup> wind. Barometer falling slowly all day. Temperature rising and not so steady.	
Max. therm. read at		8 a. —		8 p. -15° 0.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 2.4 } grammes in { 11. 2.2 } 24 hours.		Precipn. — in.		—	

24th.

1903—April.]

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25th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	28.959	—	-20.1	-17.2	-17.2	—	E by N, 3	17	20-23	b	—	—	—	—
4	28.964	—	-17.9	-15.0	-15.1	—	NE, 1	15	5-15	bc	—	S. 2	—	5 a.m. Snowing slightly.
6	28.964	—	-24.0	-22.0	-22.0	—	E by S, 0-1	7	0-10	bc	—	Fr.-cu. 1, E	—	—
8	28.957	—	-24.2	-18.2	-18.8	—	Lt. E airs	8	0-5	oc	—	S.-cu. 8, SE	—	—
10	28.968	—	-19.8	-16.0	-16.0	—	Calm	7	0	oc	—	Cu. 8	—	Very clear all round; brilliant pink glow in clouds.
Noon	28.959	—	-21.0	-21.0	-21.0	—	Calm	0	0	oc	—	S.-cu. 8, E (slow)	—	11 a.m. Temp. at Cape Armitage, -33° 5'; min. -43° 5'. Wind E by S, 2. oc. Erebus obscured.
2	28.954	—	-29.6	-29.5	-29.0	—	Calm	0	0	bc	—	Ci.-cu. 2, W	—	Noon. Summits of western mountains obscured; clear below.
4	28.965	—	-29.4	-20.0	-20.0	—	NE, 0-1	2	0-8	b	—	S.-cu. 2, E	—	2 p.m. Excessive mirage to W; Bluff looming.
6	28.951	—	-20.6	-17.5	-17.5	—	ENE, 1	3	5-8	b	—	—	—	3 p.m. Rain band, 1.
8	28.963	—	-22.0	-21.5	-21.0	—	Calm	5	0	b	—	—	—	4 p.m. Mirage to W; summits of western mountains obscured.
10	28.960	—	-33.2	-25.0	-24.8	—	E, 0-1	1	0-5	b	—	—	—	Necessary to use light to take 8 a.m. and 4 p.m. observations.
Midt.	28.960	—	-30.5	-25.2	-24.8	—	E, 0-1	8	0-5	b	—	—	—	Mercury below scale
Mean	28.960	—	—	-20.7	-20.6	—	—	—	—	—	—	—	—	Cloudy early, but clearing later, with no wind all day. Barometer steady. Temperature not so steady.
Max. therm. read at		8 a. -10° 0.		8 p. -16° 0.		Solar radiation			black bulb —, bright bulb —.		Evapn. { 1. 2° 0 } grammes in { 11. 2° 1 } 24 hours.		Precipn. — in.	

26th.

2	28.960	—	-28.8	-28.2	-28.0	—	Calm	0	0	b	—	—	—	2 to 6 a.m. Mercury below scale
4	28.960	—	-35.0	-36.0	-35.8	—	Calm	0	0	b	—	—	—	—
6	28.960	—	-40.0	-39.0	-38.8	—	Calm	0	0	b	—	—	—	—
8	28.967	—	-39.0	-37.0	-37.0	—	Calm	0	0	b	—	—	—	—
10	28.988	—	-40.0	-39.2	-39.0	—	Calm	1	0	b	—	—	—	10 a.m. to noon. Mercury below scale
Noon	28.988	—	-42.0	-38.0	-38.0	—	Calm	0	0	b	—	—	—	Very clear; minute separate ice particles on anemometer glass; deep red colouring in sky to S.
2	28.990	—	-39.0	-31.6	-31.6	—	Calm	0	0	b	—	—	—	Noon. Brilliant colouring to N; low fog to S.
4	28.997	—	-32.0	-26.2	-26.4	—	Calm	0	0	b	—	—	—	12.30 p.m. Temp. at Cape Armitage, -50° 9'; min., -55° 0. Light E by S. Erebus smoke going high and E by S.
6	29.014	—	-29.0	-24.0	-24.0	—	Calm	0	0	b	—	—	—	2 p.m. Brilliant colouring on S horizon; visibility marked; rain band, 0.
8	29.035	—	-28.0	-19.5	-19.8	—	Lt. N airs	1	5	b	—	—	—	6 p.m. Faint auroral streamers from zenith to SE.
10	29.040	—	-33.0	-32.0	-32.0	—	Calm	2	0	b	—	—	—	10 p.m. to Midt. Mercury below scale
Midt.	29.040	—	-36.0	-31.0	-31.0	—	Calm	1	0	b	—	—	—	—
Mean	28.995	—	—	-31.8	-31.8	—	—	—	—	—	—	—	—	Fine and clear all day, with no wind. Barometer rising slowly. Temperature low and very jumpy.
Max. therm. read at		8 a. -21° 0.		8 p. —.		Solar radiation			black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.	

27th.

2	29.058	—	-38.0	-37.0	-37.0	—	Calm	0	0	b	—	—	—	2 to 6 a.m. Mercury below scale
4	29.076	—	-38.5	-32.0	-32.0	—	Calm	0	0	b	—	—	—	—
6	29.094	—	-34.0	-29.0	-29.0	—	Calm	0	0	b	—	—	—	—
8	29.130	—	-36.2	-35.0	-34.8	—	Calm	0	0	b	—	—	—	—
10	29.157	—	-35.5	-31.0	-30.6	—	Calm	0	0	b	—	—	—	Mercury below scale
Noon	29.173	—	-38.0	-38.0	-37.3	—	Calm	0	0	b	—	—	—	Slight mirage to S; very clear all round.
2	29.181	—	-38.0	-32.6	-32.8	—	Lt. SW airs	1	0	b	—	—	—	11 a.m. Temp. at Cape Armitage, -45° 8'; min., -51° 9'. Frost rime on thermometer. Erebus' smoke rising 1500 feet, and then breaking to NE.
4	29.210	—	-35.3	-28.0	-28.0	—	Calm	2	0	b	—	—	—	Noon. Excessive mirage all round horizon. Temp. outside screen by standard spirit thermometer, -42° 5.
6	29.214	—	-36.2	-35.0	-35.0	—	Calm	0	0	b	—	—	—	2 p.m. Rain band, 0.
8	29.235	—	-38.0	-37.0	-37.0	—	Calm	0	0	b	—	—	—	6 p.m. Faint auroral streamers from zenith to S and SE; observed meteor from zenith to S, very fast.
10	29.235	—	-38.0	-29.2	-29.2	—	Calm	0	0	b	—	—	—	8 p.m. Very faint auroral arch of streamers extending from SE to SW, alt. in centre about 7°; streamers moving slowly from W to E.
Midt.	29.227	—	-32.0	-27.0	-27.0	—	Calm	0	0	b	—	—	—	Midt. Auroral streamers from ENE to SW, alt. varying from 20° to 35°.
Mean	29.166	—	—	-32.6	-32.5	—	—	—	—	—	—	—	—	Another fine and clear day, with no wind. Barometer continues to rise slowly. Temperature low and steadier.
Max. therm. read at		8 a. -16° 8.		8 p. -21° 0.		Solar radiation			black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.	

Another fine and clear day, with no wind. Barometer continues to rise slowly. Temperature low and steadier.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.226	—	-31.8	-29.0	-29.0	—	Calm	0	0	b	—	—	—	<p>28th.</p> <p>11 a.m. Temp. at Cape Armitage, -33° 4; min., -47° 0. Frost rime; Erebus obscured; Erebus' shadow to S.</p> <p>Noon. Summits of western mountains becoming covered in thin Str.-cl.-cn., brilliantly coloured.</p> <p>2 p.m. Clear to S; heavy banks of Str. to W and SW.</p> <p>4 p.m. Heavy bank of S.-cn. along western hills.</p> <p>6 p.m. Clear to N and E.</p> <p>8 p.m. Sky clear to S and W; stars visible through Str.</p> <p>Fine and clear early, becoming overcast about noon, but clearing again at midnight. No wind all day. Barometer fell until 8 a.m., and then commenced to rise. Temperature rose rapidly in the evening.</p>
4	29.221	—	-32.0	-24.2	-24.2	—	Calm	0	0	b	—	—	—	
6	29.218	—	-28.0	-17.0	-17.0	—	Lt. N airs	3	0	b	—	—	—	
8	29.202	—	-30.0	-24.0	-24.0	—	Calm	0	0	b	—	—	—	
10	29.206	—	-28.5	-28.0	-27.0	—	Calm	0	0	bc	—	A.-cu. 3, S (mod.)	Mercury below scale	
Noon	29.220	—	-27.8	-17.5	-17.8	—	Calm	2	0	bc	Cl.-cu. 3, S	—	-18.0 -18.4	
2	29.232	—	-24.0	-24.0	-24.0	—	Calm	1	0	oc	Cl.-cu. 5	A. cu. 2, SE (slow)	—	
4	29.260	—	-26.2	-23.5	-23.5	—	Calm	1	0	b	—	—	—	
6	29.283	—	-24.3	-23.2	-23.2	—	Calm	1	0	oe	—	S.-cu. 9, W	—	
8	29.293	—	-22.5	-20.0	-20.0	—	Calm	1	0	oc	—	Thin S, 10	-18.4 -19.1	
10	29.307	—	-20.0	-14.8	-14.8	—	Lt. NE airs	0	0	oc	—	S. 8	-10.8 -11.9	
Midt.	29.315	—	-15.0	-1.0	-2.0	—	Lt. E airs	2	0	b	—	S. 2	-0.4 -1.8	
Mean	29.249	—	—	-20.5	-20.5	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -13° 0. 8 p. -15° 0.		Solar radiation			black bulb — bright bulb —		Evapn. — grammes.		Precipn. — in.			

2	29.338	—	-11.3	-10.0	-10.0	—	Lt. NNE airs	2	0	b	—	—	-10.8 -11.6	<p>29th.</p> <p>Auroral streamers ENE and S by E; auroral double arch E to ESE.</p> <p>6 a.m. Streamers NNE and S by E, very few and faint.</p> <p>Much mirage to W and SW.</p> <p>11 a.m. Temp. at Cape Armitage, -25° 2; min., -34° 5. Wind E.</p> <p>2. b. Erebus smoke rising in column about 4000 ft., inclined to NE, and then breaking away to WSW.</p> <p>Noon. Mirage all gone; visibility very marked to W and SW. Erebus smoke rising high and moving to NE, and then curving round to S.</p> <p>2 p.m. Dull and hazy; wind freshening.</p> <p>4 p.m. Faint colouring on NW horizon.</p> <p>Fine and clear all day. Wind calm up to 6 p.m., when it sprang up and freshened from the NE and blew strong. Barometer rising all day. Temperature rose and remained higher all day.</p>
4	29.353	—	-15.8	-9.8	-10.0	—	Calm	2	0	b	—	—	-3.3 -5.4	
6	29.358	—	-16.2	-14.0	-14.0	—	Calm	2	0	b	—	—	-17.0 -17.3	
8	29.417	—	-14.2	-3.8	-3.8	—	Calm	0	0	b	—	—	—	
10	29.455	—	-21.0	-20.8	-20.3	—	Calm	0	0	b	—	—	-19.1 -19.5	
Noon	29.465	—	-21.0	-15.0	-15.0	—	Calm	0	0	b	—	—	-15.3 -15.7	
2	29.459	—	-15.0	-3.0	-4.0	—	N by E, 1-2	1	10-20	b	—	—	—	
4	29.472	—	-8.0	-6.2	-6.0	—	Calm	8	0	b	—	—	—	
6	29.483	—	-6.0	-3.2	-4.0	—	NE, 2-3	9	15-25	b w	—	—	—	
8	29.489	—	-5.5	-4.2	-5.0	—	NE, 4-6	16	24-34	bq +	—	—	-4.7 -5.4	
10	29.505	—	-5.0	-2.0	-3.0	—	NE, 3-7	17	22-41	bq	—	—	-3.3 -3.6	
Midt.	29.503	—	-4.0	-3.0	-4.0	—	ENE, 4-6	16	30-36	bq	—	—	-2.9 -3.3	
Mean	29.441	—	—	-7.9	-8.3	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 5° 2. 8 p. -1° 0.		Solar radiation			black bulb — bright bulb —		Evapn. { 1. 0.8 } { 11. 0.8 } grammes in 24 hours.		Precipn. — in.			

2	29.507	—	-6.3	-5.5	-6.0	—	NE, 5-6	24	28-32	bq	—	—	-6.2 -6.0	<p>30th.</p> <p>2 and 4 a.m. Faint streamers NE and E to 60° alt.</p> <p>Very clear all round; brilliantly coloured Cl.-cu. to N and NE.</p> <p>11 a.m. Temp. at Cape Armitage, -15° 8; min., -25° 0. Wind E.</p> <p>2. 1c. Erebus smoke going to NNE.</p> <p>2 p.m. Cl.-cu. on N horizon and over western mountains.</p> <p>4 p.m. Bank of Str. to W.</p> <p>6 p.m. Nlm. to N and W.</p> <p>Clouds to SW low down.</p> <p>Heavy frost rime on everything.</p> <p>Fine and clear all day. Wind very strong early, falling to calm in afternoon. Barometer falling steadily all day. Temperature fell again in evening.</p>
4	29.523	—	-9.5	-7.0	-7.0	—	ENE, 6-7	22	32-46	bq	—	—	-8.0 -8.7	
6	29.511	—	-9.5	-7.5	-8.0	—	ENE, 4-8	28	25-45	bq	—	—	-7.6 -8.3	
8	29.494	—	-10.5	-7.5	-8.0	—	ENE, 6-7	22	30-40	bq	—	—	—	
10	29.488	—	-9.0	-7.0	-7.8	—	NE, 4-6	25	24-36	bq	—	—	-7.1 -8.0	
Noon	29.474	—	-7.5	-6.8	-7.2	—	NE, 3-4	13	20-25	b	—	—	-6.2 -7.2	
2	29.455	—	-9.7	-8.0	-8.3	—	NE, 2-3	13	18-25	b	—	—	-8.1 -8.5	
4	29.442	—	-9.5	-8.8	-8.6	—	NNE, 1-2	8	5-10	b	—	—	-9.4 -11.2	
6	29.438	—	-18.8	-18.5	-20.0	—	Calm	5	0	b	—	—	-17.0 -18.0	
8	29.426	—	-22.5	-22.5	-25.0	—	Calm	0	0	b	—	—	-23.4 -23.8	
10	29.411	—	-29.0	-26.5	-25.5	—	Calm	0	0	b	—	—	-24.5 -24.9	
Midt.	29.378	—	-27.8	-19.8	-21.0	—	Calm	1	0	b w	—	—	-15.9 -16.2	
Mean	29.462	—	—	-12.1	-12.3	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -1° 0. 8 p. -6° 5.		Solar radiation			black bulb — bright bulb —		Evapn. { 1. 1.4 } { 11. 1.3 } grammes in 24 hours.		Precipn. — in.			

1903—May.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Dry.	Wet.	Unscreened.									
1st.	2	29.344	-20.5	-17.8	-17.1	-18.4	Calm	1	0	b	—	—	-17.3	Auroral streamers to S and SE, faint; frost rime on thermometers, &c.
	4	29.331	-30.0	-30.0	-29.8	-31.0	Calm	0	0	b	—	—	-18.0	
	6	29.282	-30.6	-21.0	-21.0	-19.2	Calm	0	0	bc	—	S. 2, S	-18.8	4 a.m. Aurora over land to E and SE, faint; frost rime on everything.
	8	29.257	-21.0	-16.0	-16.0	-15.0	Calm	4	0	b	—	—	-19.8	6 a.m. Fog commencing to come up from S and pouring down over Observation Hill.
	10	29.271	-19.0	-14.0	-14.0	-14.0	Lt. SE airs	0	0-5	bm	—	—	-14.1	11 a.m. Temp. at Cape Armitage, -24° 4; min., -37° 0. Wind E, 2-3. bf. †. Erebus obscured; hoar frost on thermometer and stand.
Noon	29.243	-18.5	-12.0	-12.1	-14.0	SE, 1	5	10	bm	—	—	—	-11.9	10 a.m. Low fog all round horizon; misty appearance in sky; heavy rime on everything.
	2	29.227	-15.0	-7.8	-7.8	-7.5	Var. E, 1-2	7	10-15	bm	—	—	-8.0	Noon. No land in distance visible; fog on all eastern hills; frost rime on everything.
	4	29.210	-13.1	-11.3	-11.3	-11.5	ESE, 3-5	12	25-35	ocq †	—	Fog, 10	-11.2	2 p.m. Everything thickly coated with fog crystals.
	6	29.180	-12.5	-10.0	-10.0	-10.5	SE, 2-5	11	18-35	ocq †	—	Fog, 10	-11.6	4 p.m. Everything thickly coated with fog crystals.
	8	29.196	-14.0	-14.0	-14.0	-14.0	E, 1-4	8	10-26	oc	—	Fog, 10	-11.2	8 p.m. Fog crystals on everything, very thick and inclined to block; anemometer arms and cups heavily coated.
	10	29.184	-15.0	-6.0	-6.0	-6.0	E, 2-4	11	18-25	oc †	—	Fog, 10	-14.8	10 p.m. Brought aspirator on board thickly coated with crystals; anemometer heavily coated with same. Midt. Fog clearing. Hut Point visible; wind not so squally; no more deposit. NOTE.—On all poles, spars, &c., facing to E, the fog crystals formed to a depth of about 1 1/2 inches. The anemometer arms and cups were heavily coated, and the heads of the pressure-tubes were partially choked by the same. This is the first time since we have been in these quarters that this phenomenon has been so pronounced, and it very much resembles what is so common at Ben Nevis High-level Observatory. Fine early, but misty, clouding over in afternoon, with steadily rising Ely wind. Excessive frost rime and fog crystals. Barometer falling slowly all day. Temperature rising all day.
Midt.	29.173	-7.5	-7.5	-7.5	-8.0	E, 2-4	11	15-22	o †	—	—	N. 10	—	
Mean	29.242	-14.0	-13.9	—	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. -13° 0, Solar radiation { black bulb —, Evapn. { 1.0 8 } grammes in Precipn. 0.004 in. since 6 p.m. 18th ult. } 8 p. —, radiation { bright bulb —, } { 11.0 7 } 24 hours.														

2nd.	2	29.173	-8.5	-8.0	-8.0	-8.0	E, 1-3	13	12-22	o †	—	—	N. 10	—	2, 4, 6 a.m. Observation Hill visible, fog clearing; hoar frost ceased; snowflakes soft, damp, and very small.
	4	29.171	-9.5	-5.0	-5.0	-5.0	E, 3-4	16	18-25	o †	—	—	N. 10	—	
	6	29.155	-5.5	-2.3	-2.3	-2.3	E, 2-3	19	15-20	o †	—	—	N. 10	—	
	8	29.150	-3.0	-1.0	-1.0	-1.0	S by E, 4-5	25	30-35	o †	—	—	N. 10	—	
	10	29.174	-2.1	-1.4	-1.4	-1.2	SE, 3-6	16	20-50	oc †	—	—	N. 10	—	Shore only visible at times.
Noon	29.182	-3.7	-3.0	-3.0	-3.1	E by S, 2-4	15	20-30	oc †	—	—	N. 10	—	11 a.m. Temp. at Cape Armitage, -3° 6; min., -27° 0. Wind E, 2-3. of. †. Erebus obscured. Signs of clearing to SW.	
	2	29.187	-3.5	-3.0	-3.0	-2.3	E, 1-2	13	5-15	oc	—	—	N. 10	—	
	4	29.172	-5.7	-5.0	-5.0	-5.2	E by N, 2-4	14	15-27	ocq †	—	—	N. 10	—	
	6	29.146	-6.8	-4.2	-4.2	-4.2	Var. E, 3-5	26	25-35	ocq †	—	—	N. 10	—	Very thick; instruments coated in drift.
	8	29.163	-4.7	-3.0	-3.0	-3.0	Var. SE, 3-6	18	20-35	oc †	—	—	S. 9	—	Wind very squally and variable, ESE to S; stars dimly visible in zenith; cleared heads of both Dines.
	10	29.154	-5.7	-5.5	-5.5	-5.5	SE, 4-6	22	25-33	oc †	—	—	S. 10	—	10 p.m. Heavy bank of cloud to SW and NW; no drift above 20 feet; thin Str.; stars dimly visible through it.
Midt.	29.152	-6.7	-5.2	-5.8	-5.5	SSE, 2-4	17	20-27	oc †	—	—	S. 10	—	Midt. Same as at 10 p.m., but with more drift.	
Mean	29.165	-3.9	-3.9	—	—	—	—	—	—	—	—	—	—	Overcast and snowing most of the day, with strong variable Ely and SEly winds. Barometer steady and inclined to fall. Temperature higher and steady.	
Max. therm. read at { 8 a. 2° 0, Solar radiation { black bulb —, Evapn. { 1.0 9 } grammes in Precipn. — in. } 8 p. -1° 0, radiation { bright bulb —, } { 11.0 4 } 24 hours.															

3rd.	2	29.135	-8.0	-4.2	-4.2	-5.2	SE, 3-4	16	18-23	oc †	—	—	S. 10	—	Wind less squally.
	4	29.109	-7.0	-5.8	-5.8	-5.6	Var. E, 0-2	13	0-12	oc	—	—	S. 10	—	
	6	29.100	-12.3	-11.0	-10.8	-11.6	ENE, 4-6	16	22-28	oc †	—	—	S. 10	—	Wind increasing.
	8	29.093	-13.5	-12.0	-12.0	-12.2	ENE, 4-6	35	22-30	oc †	—	—	S. 10	—	
	10	29.079	-13.5	-3.2	-3.5	-3.0	E, 2-4	21	15-25	oc †	—	—	S. 10	—	Clouds breaking overhead and to NW; very black and stormy to S and SW; drift in Strait; western mountains just visible.
Noon	29.085	-7.5	-3.2	-3.5	-3.0	Calm	10	0	o	—	—	S. 10	-2.9	Noon. Clearing to NW.	
	2	29.088	-4.5	-4.2	-4.2	-4.4	ENE, 1-2	7	10-18	oc	—	—	S.-cu. 10	-3.6	12.45 p.m. Temp. at Cape Armitage, -6° 8; min., -19° 5.
	4	29.069	-4.7	-4.5	-4.5	-4.0	ENE, 1-2	10	10-15	oc	—	—	S.-cu. 10	-3.3	Wind ENE, 1. of. Erebus obscured.
	6	29.069	-4.8	-3.0	-3.0	-2.8	Lt. SE airs	4	0-5	oc	—	—	S.-cu. 10	-3.8	4 p.m. Summits of mountains visible; clear to W.
	8	29.073	-4.0	-3.0	-3.0	-3.0	Calm	4	0	o	—	—	Thin S. 10	-2.9	8 p.m. Stars dimly visible in zenith.
	10	29.071	-4.5	-3.0	-3.3	-3.1	Lt. SSE airs	4	0	b	—	—	—	-3.6	10 p.m. Stars visible through very thin mist.
Midt.	29.063	-4.6	-2.8	-3.4	-2.2	S by E, 1	4	0-5	b	—	—	—	-2.4	Midt. Very faint auroral arch to SE, 12° alt.; very faint auroral arch over Observation Hill; thin mist entirely disappeared. Necessary to use alight to take the 10 a.m. and 2 p.m. observations outside.	
Mean	29.086	-5.0	-5.1	—	—	—	—	—	—	—	—	—	-3.3	Overcast all day, clearing about 10 p.m. Strong variable Ely wind early, falling towards evening. Barometer falling slowly all day. Temperature higher and steady.	
Max. therm. read at { 8 a. -4° 0, Solar radiation { black bulb —, Evapn. { 1.2 1 } grammes in Precipn. — in. } 8 p. -2° 0, radiation { bright bulb —, } { 11.2 3 } 24 hours.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.		Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.			Upper.	Lower.			
				Dry.	Wet.									Unscreened.
2	29.047	—	5.5	3.3	3.7	3.6	Calm	2	0	b	—	—	— 3.5	4th. Very thin mist over sky, but stars dimly visible. Mist dispersed. 11 a.m. Temp. at Cape Armitage, -21° 5'; min., -24° 8'. Calm. bc. Erebus obscured. Noon. Slight refraction all round; dark and gloomy to S, and dull to SW on western mountains. 1 p.m. Erebus smoke going to E; small amount. 4 p.m. Cloudless from N horizon to zenith. Clear early, becoming cloudy and overcast. Wind light early, rising from SE, variable and freshening. Barometer fell slightly until 2 p.m., when wind sprang up, and then rose slowly. Temperature high and steady.
4	29.028	—	8.7	7.0	7.0	8.3	ESE, 1-2	2	5-10	b	—	—	- 4.0 - 7.6 - 8.0 - 10.1 - 10.8	
6	29.027	—	9.0	7.0	7.5	10.5	Lt. NE airs	7	0	b	—	—	—	
8	29.020	—	14.5	12.0	12.0	12.0	Lt. NE airs	1	0	bc	—	Fr.-s. 4, NE	—	
10	29.007	—	13.5	10.2	10.2	12.0	Calm	2	0	bc	—	S.-cu. 4, E	- 10.8	
Noon	29.004	—	15.0	15.0	15.0	15.0	Calm	1	0	oc	—	S.-cu. 6, E	- 11.2 - 14.4 - 14.8	
2	29.003	—	15.0	4.0	4.5	3.8	ESE, 0-1	2	0-8	oc	—	A.-cu. 9, E	- 3.3 - 4.4 - 5.8	
4	29.005	—	9.0	6.0	6.0	6.0	E by N, 1-2	4	10-18	bc	—	Cu. 5, E	- 0.5 - 4.5 - 5.8	
6	29.009	—	7.5	4.2	5.0	4.6	ENE, 2-3	17	20-28	oc	—	S.-cu. 10	- 5.8 - 4.4 - 5.4	
8	29.017	—	4.5	4.2	5.0	5.0	NE, 2-4	16	12-24	o	—	S. 10	- 6.7 - 6.7 - 8.3 - 8.7	
10	29.038	—	7.0	6.4	7.0	6.6	ENE, 3	17	20-30	o	—	S. 10	- 6.7 - 6.7 - 8.3 - 8.7	
Midt.	29.042	—	8.3	6.5	6.9	6.0	NE, 3	16	25-35	o †	—	S. 10	- 6.7 - 6.7 - 8.3 - 8.7	
Mean	29.021	—	—	7.2	7.5	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -1° 8.  
8 p. -3° 5. Solar radiation { black bulb —  
bright bulb —. Evapn. { I. 1.5 } grammes in  
{ II. 1.5 } 24 hours. Precipn. — in.

2	29.069	—	8.5	8.2	8.2	9.2	NE, 5	21	30-40	oq †	—	S. 10	- 8.3	5th. Very thick on western mountains, but clearing overhead. 11 a.m. Temp. at Cape Armitage, -15° 2'; min., -26° 0'. Wind E by S, 0-5. bc. Erebus obscured; refraction to N. Noon. Western mountains clearing, and clearing generally. 2 p.m. Detached Cu. on E horizon; Str. on western mountains; some stars visible. 6 p.m. Western mountains visible; clear to N. 8 and 10 p.m. Stars dimly visible in zenith. Midt. Stars faintly visible; a few fine crystals falling. Overcast nearly all day, with some snow. Wind strong NE early, falling to calm. Barometer rising all day. Temperature high and steady.
4	29.099	—	9.5	7.0	7.0	7.5	ENE, 5	26	20-30	oq †	—	S. 10	- 8.7 - 6.5 - 7.6	
6	29.139	—	7.5	4.8	5.0	5.4	E, 2	12	15-20	oq *	—	N. 10	- 4.4 - 4.7	
8	29.158	—	10.5	7.0	7.0	6.0	ESE, 1-2	10	10-15	oc	—	N. 10	—	
10	29.180	—	14.3	14.0	14.0	14.2	Lt. S airs	2	0-5	oc	—	Cu. 7, SW (slow)	- 14.4 - 14.4	
Noon	29.189	—	14.5	4.0	5.0	4.2	SE, 1	5	10	oc	—	Cu. 6, SW (slow)	—	
2	29.194	—	9.1	7.5	7.8	7.8	Calm	3	0	bc	—	Fr.-s. 2, SW (slow)	- 6.3 - 7.8	
4	29.206	—	8.0	6.0	6.0	6.2	ESE, 1	8	8-10	oc	—	Cu. 10	- 5.8 - 6.5	
6	29.223	—	7.7	6.2	6.8	6.8	Calm	1	0	oc	—	S.-cu. 10	- 5.4 - 6.2	
8	29.231	—	8.0	6.0	6.5	4.0	Calm	2	0	oc	—	S.-cu. 9	- 4.5 - 5.4	
10	29.241	—	7.1	5.6	6.0	5.0	Lt. NE airs	1	0	bc	—	S.-cu. 5	- 4.0 - 5.1	
Midt.	29.252	—	6.3	2.4	3.0	1.8	Calm	1	0	oc *	—	S. 8	- 1.8 - 2.6	
Mean	29.182	—	—	6.6	6.9	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -4° 0.  
8 p. -4° 0. Solar radiation { black bulb —  
bright bulb —. Evapn. { I. 3.5 } grammes in  
{ II. 3.6 } 24 hours. Precipn. — in.

2	29.255	—	4.9	2.0	2.5	2.3	Calm	2	0	bm	—	—	- 1.8	6th. Stars visible all over sky, but misty. Stars more clearly visible; minute snow crystals falling. Faint aurora in zenith; snow crystals still falling; mist apparently gone. 10 a.m. A.-a. radiating E and W; thick all round. 11 a.m. Temp. at Cape Armitage, -14° 2'; min., -21° 3'. Wind SE by S. Mt. Erebus smoke going W. Noon. A.-s. radiating E and W in very marked lines. 2 p.m. Str. to S, and Cu. to N; very wind-blown clouds to N. 4 p.m. Very thick and threatening to W. 6 p.m. A few stars visible at times in zenith; thin, soft, and rather large flakes of snow falling. 8 p.m. Snowing very lightly; flakes small and dry. Break in clouds from W to NW, alt. 8°.
4	29.271	—	3.9	1.8	2.0	2.0	Lt. SE airs	2	0	bm *	—	—	- 2.7 - 1.5 - 2.0	
6	29.291	—	4.3	3.5	3.8	4.0	Lt. SE airs	8	0	b *	—	—	- 3.1 - 3.3	
8	29.300	—	5.5	2.5	2.5	3.0	ENE, 2-3	11	12-18	b *	—	—	—	
10	29.311	—	5.0	4.8	4.8	5.0	Lt. E airs	8	0-8	bc	—	A.-a. 5	- 4.4 - 4.5	
Noon	29.311	—	11.3	10.0	10.0	12.0	Calm	4	0	bc	—	A.-a. 5	- 11.2 - 11.2	
2	29.304	—	10.7	5.0	5.3	6.0	ENE, 1-2	6	0-8	bc	—	Cu. 3, NE	- 5.8 - 6.2	
4	29.301	—	9.5	1.5	1.5	1.0	N, 1	10	0-5	bc	—	S.-cu. 3, NE	- 0.8 - 1.3	
6	29.298	—	9.3	8.0	8.0	7.3	Calm	4	0	oc *	—	N. 10	- 8.1 - 8.3	
8	29.302	—	8.5	5.5	5.5	6.0	Calm	1	0	o *	—	N. 10	- 6.2 - 6.2	
10	29.300	—	7.3	6.1	6.2	7.8	Calm	1	0	o	—	N. 10	- 3.6 - 4.4	
Midt.	29.302	—	10.7	9.2	9.3	10.7	E, 1	4	8-11	oc	—	N. 10	- 10.1 - 10.1	
Mean	29.296	—	—	5.0	5.1	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -1° 5.  
8 p. -1° 0. Solar radiation { black bulb —  
bright bulb —. Evapn. { I. 1.6 } grammes in  
{ II. 1.5 } 24 hours. Precipn. — in.

1903—May.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.										
7th.	2	29.293	—	-13.7	-11.9	-12.0	-11.8	E by S, 1	9	8-12	om	—	N. 10	-11.2	
	4	29.291	—	-14.2	-12.4	-12.5	-11.8	E by S, 0-1	9	8-11	bem	—	Cu. 1, N. 8	-11.4	Stars just visible in zenith.
	6	29.276	—	-13.0	-7.5	-7.7	-8.0	Calm	3	0	bem *	—	N. 4	-10.3	
	8	29.258	—	-10.3	-4.2	-4.5	-5.0	N by E, 1-2	2	5-10	oc	—	N. 8	-7.6	Auroral arch between E and S, alt. 12°; band of auroral light between E and NE, alt. 10°.
	10	29.253	—	-11.5	-11.5	-11.2	-13.0	Calm	5	0	bc	—	A.-s. 4	-11.9	A.-s. radiating E and W and very distinct, with big clusters of radiating clouds at the terminal points.
	Noon	29.242	-27.5	-15.0	-13.0	-13.0	-16.0	SE, 1	5	8-12	bc +	Ci.-s. 1	—	-15.5	Noon. Misty to S and W, the radiating bands have apparently dispersed, although the terminal point in W is very distinctly marked; low Str. to S and SW; Jupiter shining in NNW about 30° alt.
	2	29.239	—	-15.0	-15.0	-15.0	-15.0	Calm	3	0	bc	Cl.-s. 3, W	—	-16.2	Noon. Min. temp. at Cape Armitage, -28° 5'. Wind E, 1, bef. Erebus smoke going E in good big column; Terror obscured.
	4	29.243	—	-19.0	-15.2	-15.2	-15.8	E by N, 2-4	12	15-25	ocq +	—	S.-cu. 10 (thin)	-16.4	8 p.m. Moon shining on clouds to NE.
	6	29.260	—	-15.8	-15.0	-15.0	-14.8	Var. E, 2-4	14	12-25	ocq +	—	S.-cu. 4	-16.6	10 p.m. Moon shining behind clouds to N.
	8	29.273	—	-15.0	-13.2	-13.0	-13.0	Var. E, 1-2	14	8-15	oc	—	S.-cu. 6	-15.3	Mid. Clear sky to NNW and NW and round the moon.
	10	29.297	—	-17.0	-17.0	-16.8	-17.6	ESE, 0-2	7	0-14	oc	—	S.-cu. 9	-13.4	Fine, but cloudy, with fresh Ely breeze in afternoon, falling in evening. Barometer fell until 2 p.m., and then rose slowly. Temperature falling steadily.
	Midt.	29.299	—	-17.7	-17.8	-17.0	-18.0	ESE, 1-2	10	7-15	oc	—	S.-cu. 8	-17.0	
	Mean	29.269	—	—	-12.8	-12.7	—	—	—	—	—	—	—	-17.7	
		Max. therm. read at		8 a. -4° 0.		8 p. -4° 5.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 0.6 } gramme in { 11. 0.6 } 24 hours.		Precipn. — in.	

8th.	2	29.297	—	-19.1	-18.0	-18.0	-18.0	ESE, 1	9	7	bc —	—	S.-cu. 2	-18.0	Frost rime on instruments; low bank of clouds to N and NW.
	4	29.311	—	-18.0	-15.1	-15.0	-15.4	Calm	6	0	bem —	—	A.-s. 2	-16.6	4 a.m. Frost rime on instruments; crystals of large size falling thickly.
	6	29.302	—	-16.1	-15.0	-15.0	-14.8	Calm	2	0	oc *	—	A.-s. 2, N. 6	-15.2	
	8	29.301	—	-23.0	-23.0	-23.0	-22.0	Calm	1	0	b —	—	—	-15.3	
	10	29.307	—	-24.0	-23.0	-22.8	-24.0	Calm	1	0	b	—	—	-22.7	Low Str. to S and SW.
	Noon	29.292	-37.1	-25.0	-24.0	-24.0	-24.5	Calm	0	0	b —	—	—	-22.7	Str. to S and SW; refraction all round, low down.
	2	29.284	—	-26.0	-18.8	-20.0	-23.0	Calm	3	0	b	—	—	-24.2	Noon. Min. temp. at Cape Armitage, -38° 4'. Wind Ely, 1. Erebus smoke in some volume, rising 2000 feet and then going to WNW.
	4	29.289	—	-27.3	-25.0	-25.0	-25.7	SE, 2-4	5	10-20	bcqm +	—	S. 2, E	-22.4	1 p.m. Erebus smoke rising in big column about 1000 feet and then breaking away to a NW direction.
	6	29.291	—	-28.0	-20.0	-20.2	-21.0	E by S, 2-4	15	15-22	bcqm U	Cl.-s. 2	S.-cu. 3, E	-22.0	4 p.m. Wind-blown Ci.-cu. to N and NW; heavy bank of Str. to S.
	8	29.303	—	-22.0	-21.5	-21.5	-21.8	E, 3-4	14	18-24	ocqm U	—	S.-cu. 6, SE	-20.2	6 p.m. Diameter of halo 45°; this appeared apparently close to ship, as it was between us and the hills to E; rime on all instruments.
	10	29.306	—	-22.0	-21.1	-21.0	-21.6	E, 3	20	22-28	bc U +	Ci.-cu. 1	—	-21.3	8 p.m. Rime on everything; wind squally.
	Midt.	29.309	—	-24.0	-23.6	-23.0	-24.0	E, 4	21	25-35	b +	—	—	-23.8	10 p.m. Rime on everything; heavy clouds to S and SW. Midt. Clouds round noon, of prismatic colouring. Fine, but misty. No wind until 4 p.m., when it sprang up strong from SE. Barometer fell until 2 p.m., and then rose steadily. Temperature lower and steady.
	Mean	29.290	—	—	-20.7	-20.7	—	—	—	—	—	—	—	—	
		Max. therm. read at		8 a. -13° 0.		8 p. -16° 5.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 0.04 } gramme in { 11. 0.01 } 24 hours.		Precipn. — in.	

9th.	2	29.309	—	-24.1	-22.0	-22.0	-22.1	E, 2	23	18-22	bc	Ci. 1	—	-22.2	Heavy clouds to NW.
	4	29.313	—	-24.0	-22.1	-22.2	-23.0	E, 2	16	18-22	oc *	—	—	-22.4	
	6	29.333	—	-23.1	-22.0	-22.0	-22.5	E, 1	15	18-22	b	—	—	-22.7	Aurora to E.
	8	29.323	—	-23.0	-21.2	-21.5	-23.0	ENE, 3-4	17	20-25	oc	—	Cu. 10	-22.7	
	10	29.327	—	-22.0	-20.8	-20.6	-21.0	ENE, 1-2	15	10-15	oc	—	S.-cu. 8, E (slow)	-20.9	Thick all round.
	Noon	29.325	-29.2	-21.5	-18.0	-18.0	-18.0	ENE, 1	12	10	oc	—	S.-cu. 9	-18.0	Min. temp. at Cape Armitage, -48° 2'. E by S, 1. Erebus obscured; fog all round horizon.
	2	29.310	—	-18.5	-18.0	-18.0	-18.0	ENE, 2-3	15	5-18	oc	—	Thin S. 9	-18.4	Noon. Thick all round; necessary to use a light for observation.
	4	29.305	—	-18.0	-17.3	-17.8	-18.0	E by N, 1-2	13	0-10	bc	—	S. 4	-18.2	2 p.m. Clouds thin in zenith, and broken in N.
	6	29.304	—	-18.8	-18.2	-18.2	-18.8	E by N, 2	11	10-15	bc U	—	S. 3	-18.8	6 p.m. Very faint halo; cloudless in zenith.
	8	29.329	—	-19.0	-17.0	-17.2	-17.0	E, 1	10	8-10	bc U U	—	A.-s. 5	-17.7	8 p.m. Halo faint, diameter 45° 20'.
	10	29.327	—	-18.5	-17.0	-17.2	-18.8	ENE, 1-2	10	5-10	bc U U	—	A.-s. 6	—	Cloudy and misty, with fresh Ely wind all day, and freshening more towards the evening. Barometer very steady and inclined to rise. Temperature steady.
	Midt.	29.327	—	-20.0	-20.0	-20.0	-20.8	ENE, 3-4	12	15-20	bc	—	A.-s. 3	—	
	Mean	29.319	—	—	-19.5	-19.6	—	—	—	—	—	—	—	—	
		Max. therm. read at		8 a. -17° 0.		8 p. -17° 0.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 0.1 } gramme in { 11. 0.0 } 24 hours.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Dry.	Wet.										
2	29.328	—	-21.0	-21.0	-21.8	NE, 2-3	13	10-15	bc	—	S. 2	—	10th.	
4	29.344	—	-24.8	-24.5	-24.8	ENE, 5-6	17	32-38	bq	—	—	—		
6	29.346	—	-25.0	-23.0	-23.2	ENE, 2-1	18	15-26	bq	—	—	—		
8	29.372	—	-23.5	-23.0	-23.0	Var. NE, 2-3	21	10-15	b	—	—	—		
10	29.389	—	-23.0	-22.0	-22.0	NE, 2-3	16	10-20	b	—	—	—		
Noon	29.403	-44.2	-25.5	-24.8	-24.8	NE, 3-4	16	18-28	b	—	—	Mercury below scale -21.6 -22.0		
2	29.418	—	-26.2	-24.0	-24.8	E, 3-5	21	15-30	bq	—	—	Mercury below scale -23.4 -23.8		
4	29.425	—	-25.5	-25.0	-25.6	Var. E, 3-5	18	15-28	bq	—	—	Mercury below scale		
6	29.453	—	-27.0	-26.5	-26.5	E, 2-4	23	10-25	bq ☐☐	—	—	—		
8	29.473	—	-28.0	-27.5	-27.5	NE, 4-6	24	25-38	bq ☐☐	—	Scud 4, N (fast)	Mercury below scale		
10	29.474	—	-29.0	-29.0	-29.0	E by N, 3-5	22	20-30	bq ☐	—	S. cu. 4	—		
Midt.	29.484	—	-30.0	-26.0	-26.0	E by N, 4-5	22	20-25	bc	—	Cu. 4	—		
Mean	29.409	—	—	-24.7	—	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. -17.0. 8 p. -22.0.		Solar radiation { black bulb —, bright bulb —.		Evapn. { 1. 1.4 } grammes in 11. 0.9 } 24 hours.		Precipn. — in.						

2	29.499	—	-29.0	-26.0	-26.0	ENE, 4-5	18	25-30	bc	—	S. cu. 2	—	11th.
4	29.507	—	-28.0	-27.0	-27.0	ENE, 4-6	26	20-35	bq †	—	—	—	
6	29.508	—	-30.0	-26.0	-26.0	ENE, 3-4	26	20-25	bc †	—	S. cu. 6	—	
8	29.518	—	-28.0	-23.8	-23.8	Var. NE, 4-5	26	22-28	oc	—	A. s. 6	—	
10	29.530	—	-25.5	-25.2	-25.8	Var. E, 4-5	16	15-30	bq †	—	—	—	
Noon	29.513	-31.5	-26.0	-26.0	-26.0	NE, 3-5	19	15-30	bq †	—	—	—	
2	29.499	—	-29.7	-27.3	-27.5	ENE, 5-7	22	23-37	bq †	—	Thin S. 5	—	
4	29.474	—	-30.0	-28.0	-28.2	E by N, 3-5	19	20-30	bq †	—	—	—	
6	29.442	—	-28.6	-28.0	-28.0	E by N, 2-4	18	8-25	bq ☐	—	Ci. cu. 2, SE	—	
8	29.419	—	-28.5	-26.5	-26.8	NE, 3-5	17	15-30	bq †	—	Fr. a. s. 3, N (mod.)	—	
10	29.361	—	-30.0	-28.0	-29.0	NE, 2-3	16	10-18	bc	—	A. s. 7, N (slow)	—	
Midt.	29.305	—	-29.0	-23.8	-23.8	Lt. E airs	6	0	bf ☐	—	—	—	
Mean	29.465	—	—	-26.3	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. -22.2. 8 p. -24.0.		Solar radiation { black bulb —, bright bulb —.		Evapn. { 1. 1.3 } grammes in 11. 1.7 } 24 hours.		Precipn. — in.					

2	29.250	—	-31.2	-29.0	-29.8	Lt. E airs	4	0	b ☐	—	—	—	12th.
4	29.180	—	-38.0	-38.0	-39.0	Calm	0	0	b ☐	—	—	—	
6	29.118	—	-38.0	-37.0	-38.8	Calm	0	0	bc	—	A. s. 5, N (rapid)	—	
8	29.062	—	-39.0	-37.5	-38.8	Calm	0	0	ocm	—	S. cu. 6	—	
10	29.027	—	-38.0	-32.5	-32.0	Calm	0	0	b *	—	—	—	
Noon	29.002	-41.8	-33.0	-31.0	-32.0	Calm	0	0	b *	—	—	—	
2	28.994	—	-31.4	-29.5	-29.0	Calm	1	0	b	—	—	—	
4	28.978	—	-31.0	-28.0	-29.0	Calm	1	0	b ☐	—	—	—	
6	28.982	—	-36.5	-36.0	-37.0	Calm	1	0	b	—	—	—	
8	28.997	—	-42.0	-42.0	-42.8	Calm	0	0	bm ☐	—	—	—	
10	28.990	—	-48.0	-48.0*	Frozen	Calm	0	0	bm	—	—	—	
Midt.	29.000	—	-47.5	-45.5*	Frozen	Calm	0	0	bm	—	—	—	
Mean	29.048	—	—	-36.2	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. -22.5. 8 p. -28.0.		Solar radiation { black bulb —, bright bulb —.		Evapn. { 1. 0.3 } gramme in 11. 0.3 } 24 hours.		Precipn. — in.					

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13th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.		Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.			Upper.	Lower.		
				Dry.	Wet.		P. tube, see p. 2.						
2	29.000	—	-45.8	-41.5*	Frozen	Frozen							
4	29.011	—	-48.2	-47.5*	Frozen	Frozen							
6	29.028	—	-47.5	-42.5*	Frozen	-43.0							
8	29.100	—	-46.0	-43.0*	-40.0	-40.0							
10	29.147	—	-41.5	-32.0*	-33.0	-33.0							
Noon	29.196	-55.8	-39.0	-35.8	-36.0	-35.0							
2	29.244	—	-40.0	-31.0	-31.0	-30.0							
4	29.326	—	-34.0	-27.5	-27.5	-26.0		SE, 2-3	4	10-20	bf ↗		
6	29.365	—	-29.2	-24.0	-24.5	-23.8		S by E, 3-5	18	20-30	bqm ↗ <sup>2</sup>	-24.3	
8	29.432	—	-29.5	-23.0	-23.0	-24.0		SSE, 4-6	21	28-35	bqm ↗ <sup>2</sup>	-24.7	
10	29.456	—	-25.0	-25.0	-25.0	-26.0		E by S, 2	13	12-18	b	-24.9	
Midt.	29.497	—	-25.0	-21.5	-21.5	-22.0		E, 1-2	10	12-15	b	-25.2	
Mean	29.234	—	—	-32.9	—	—		—	—	—	—	-20.6	
Max. therm. read at		8 a. -42° 0.		8 p. -22° 0.		Solar radiation		black bulb —, bright bulb —,		Evapn. — grammes.		Precipn. — in.	

about 4 p.m. and blowing strong from SE; it then fell again in evening. Barometer rising all day. Temperature low, but rising towards evening. \* The dry-bulb thermometer remained frozen for some hours after the wet bulb had thawed. Readings of spirit thermometer at time of observation used for dry-bulb temperatures.

14th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.		Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.			Upper.	Lower.		
				Dry.	Wet.		P. tube, see p. 2.						
2	29.543	—	-24.0	-23.8	-24.0	-24.0		ESE, 1-2	8	12-15	bc		
4	29.533	—	-24.0	-23.0	-23.0	-24.0		Lt. SE airs	1	0-8	b		
6	29.514	—	-26.0	-24.8	-24.8	-24.0		SE, 1-2	18	12-15	b		
8	29.490	—	-27.0	-23.0	-23.0	-23.2		NE, 1-2	10	10-15	b ↗		
10	29.483	—	-33.0	-33.0	-32.0	-35.0		Calm	4	0	b		
Noon	29.460	-55.0	-41.5	-40.0	-40.0	-41.5		Calm	0	0	b		
2	29.408	—	-41.8	-38.0	-38.0	-37.7		Calm	0	0	b		
4	29.388	—	-40.0	-40.0	-40.0	-41.0		Calm	0	0	b		
6	29.330	—	-41.2	-40.0	-40.0	-41.3		Calm	0	0	b		
8	29.313	—	-45.5	-45.0	-44.8	-46.8		Calm	0	0	b		
10	29.284	—	-47.0	-43.0*	-42.0	-43.0		Calm	0	0	b		
Midt.	29.257	—	-45.2	-44.0*	-42.8	-44.0		Calm	0	0	b		
Mean	29.417	—	—	-34.8	—	—		—	—	—	—	—	
Max. therm. read at		8 a. -20° 5.		8 p. -23° 0.		Solar radiation		black bulb —, bright bulb —,		Evapn. { 1. 0.2 } grammes in { 11. 0.8 } 24 hours.		Precipn. — in.	

to stop on being handled; it stopped last night. Fine and calm all day. Barometer falling all day. Temperature low and falling in evening. \* Readings of spirit thermometer at times of observation.

15th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.		Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.			Upper.	Lower.		
				Dry.	Wet.		P. tube, see p. 2.						
2	29.241	—	-46.2	-41.0*	-42.0	-40.6							
4	29.221	—	-43.8	-41.0*	-39.8	-38.8							
6	29.214	—	-44.8	-43.6*	-42.0	-41.5							
8	29.200	—	-43.0	-28.0	-28.0	-29.0		Lt. E airs	3	10-12	b U		
10	29.202	—	-29.5	-29.0	-29.0	-29.5		SE, 1	2	0	b U		
Noon	29.196	—	-34.0	-34.0	-33.8	-35.2		Calm	6	0	b		
2	29.186	—	-40.5	-40.0	-39.7	-41.3		Calm	1	0	b		
4	29.188	—	-43.5	-41.0	-41.0	-43.4		Calm	0	0	b		
6	29.176	—	-46.0	-46.0	-45.0	-47.0		Calm	0	0	b U →		
8	29.165	—	-50.0	-50.0*	-49.2	Frozen		Calm	0	0	bm U U		
10	29.130	—	-51.2	-46.2*	-45.0	Frozen		Calm	0	0	b U		
Midt.	29.121	—	-49.0	-47.2*	-47.0	Frozen		Calm	0	0	b		
Mean	29.187	—	—	-40.8	—	—		—	—	—	—	—	
Max. therm. read at		8 a. -27° 0.		8 p. -28° 0.		Solar radiation		black bulb —, bright bulb —,		Evapn. — grammes.		Precipn. — in.	

whd. Barometer falling rapidly. Temperature very low. \* Readings of spirit thermometer at time of observation.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.114	—	-49.0	-49.0*	-48.0	Frozen	Calm	0 0	b	—	—	—	<p>16th.</p> <p>Three mock moons, very faint; no halo, but faint corona; faint auroral streamers in NE, alt. 60°; cluster of streamers in zenith; mock moons distant from moon 23° 40'.</p> <p>10 a.m. A few stars visible; low mist on floe.</p> <p>Noon. Min. temp. at Cape Armitage, -67° 7. WNWly alrs. Erebus smoke going to NW.</p> <p>2 p.m. Str. on western mountains.</p> <p>4 p.m. S.-cu. to N and W.</p> <p>6 p.m. Break in clouds to S.</p> <p>8 p.m. Temperature falling rapidly whilst observation was being taken.</p> <p>10 p.m. No land visible to S and W.</p> <p>Midt. No land visible; snow-flakes small.</p> <p>Fine early, but becoming overcast, with snow. Light</p>	
4	29.122	—	-50.5	-50.5*	-50.0	Frozen	Calm	0 0	b	—	—	2 to 6 a.m., Mercury below scale		
6	29.126	—	-51.0	-49.0*	-48.0	Frozen	Calm	0 0	b	—	—	Mercury below scale from 10 a.m. to Noon		
8	29.126	—	-50.2	-47.0*	-46.0	Frozen	Calm	0 0	b	—	—	-23.1		
10	29.128	—	-50.2	-48.5*	-47.4	Frozen	Calm	0 0	c	A.-s. 8, SE	—	-24.0		
Noon	29.110	-57.0	-48.6	-39.4*	-39.0	Frozen	Lt. NW alrs	1 0	c	A.-s. 8, SE	—	-21.6		
2	29.107	—	-43.2	-25.0	-25.0	—	NNW, 1	6 10-15	b	—	—	-21.8		
4	29.086	—	-26.0	-21.0	-21.5	-21.3	—	NNW, 1	6 10-15	bc	Cl.-cu. 2, W	—		-21.8
6	29.055	—	-21.2	-18.0	-18.0	-18.0	—	N, 2-3	6 18-25	oc	—	Thin S.-cu. 10		-18.2
8	29.041	—	-28.0	-25.0	-25.0	-25.0	—	Lt. SW alrs	5 0-8	o	—	S. 10		-18.2
10	29.031	—	-24.8	-23.6	-23.2	-23.0	—	Lt. SW alrs	7 0-8	oc*	—	S.-cu. 8, W		Mercury below scale
Midt.	29.034	—	-24.0	-21.8	-21.9	-22.2	—	Calm	1 0	oc*	—	N. 10		—
Mean	29.090	—	—	-34.8	—	—	—	—	—	—	—	—		—

Max. therm. read at { 8 a. Frozen. 8 p. — } Solar radiation { black bulb —, bright bulb —. } Evapn. — grammes. Precipn. — in.

alrs or calms all day. Barometer rose a little until noon, and then fell. Temperature very low early, rising towards evening. \* Readings of spirit thermometer at time of observation.

2	29.035	—	-22.2	-21.5	-21.5	-20.5	ENE, 2-4	7 18-27	oq	+	*	—	N. 10	—	<p>17th.</p> <p>Snowing slightly.</p> <p>12.45 p.m. Temp. at Cape Armitage, -27° 0; min., -53° 8. Wind E by N, 1. of. * Erebus obscured.</p> <p>Sky showing signs of clearing.</p> <p>Overcast and snowing most of the day, with fresh variable winds. Barometer unsteady and inclined to fall. Temperature rising rapidly all day.</p>	
4	29.016	—	-22.6	-16.8	-16.8	-16.0	Var. E, 3-4	17 20-34	o	+	—	—	N. 10	—		
6	29.034	—	-18.0	-13.5	-13.5	-13.2	ENE, 2-4	17 18-35	oq	+	*	—	N. 10	—		
8	28.933	—	-19.0	-11.0	-11.0	-11.0	E by S, 3-4	19 20-25	oc	+	—	—	N. 10	—		
10	29.002	—	-15.0	-8.0	-8.0	-6.0	E, 1	13 10	o	*	—	—	N. 10	-5.1		
Noon	28.995	—	-17.0	-15.5	-15.5	-15.0	Calm	4 0	o	*	—	—	N. 10	-6.2		
2	28.987	—	-15.4	-12.0	-12.0	-12.8	N, 1-2	4 10-20	oq	+	*	—	—	N. 10		-15.2
4	28.978	—	-14.5	-11.8	-11.8	-11.8	N by W, 1	8 8-12	o	+	*	—	—	N. 10		-15.5
6	28.973	—	-12.1	-8.5	-8.8	-8.5	NNW, 1-2	10 10-15	o	*	—	—	N. 10	-13.0		
8	28.947	—	-10.3	1.5	1.2	2.0	NE, 1	7 10-12	o	*	—	—	N. 10	-13.2		
10	28.910	—	0.0	2.0	1.8	2.0	ESE, 1	9 0-5	o	*	—	—	N. 10	-11.9		
Midt.	28.905	—	-5.7	-2.0	-2.4	-1.2	E, 1	4 0-5	o	*	—	—	N. 10	-11.9		
Mean	28.981	—	—	-9.8	-9.9	—	—	—	—	—	—	—	—	N. 10		-6.2

Max. therm. { 8 a. -11° 0. 8 p. — } Solar radiation { black bulb —, bright bulb —. } Evapn. { I. 0.3 } grammes in { II. 0.5 } 24 hours. Precipn. 0.02 in. since 8 p.m. 1st.

2	28.883	—	-3.8	4.2	3.8	6.2	E, 0-1	3 0	o	—	—	—	N. 10	5.7	<p>18th.</p> <p>Wind squally and variable.</p> <p>Clearing overhead and to NE; very threatening to S.</p> <p>12.15 p.m. Temp. at Cape Armitage, 1° 2; min., -27° 0. Wind SSW, 1-2. of. * Erebus obscured.</p> <p>2 p.m. Soft snow falling in rather large flakes.</p> <p>4 p.m. Cloudless from zenith to N; snowing large soft flakes.</p> <p>8 p.m. Entirely overcast; heavy and damp flakes.</p> <p>Overcast and snowing nearly all day, with wind very variable, both in direction and force. Barometer fell until 6 a.m., and then rose steadily. Temperature high, and still rising.</p>
4	28.865	—	-5.5	-2.0	-1.3	-1.6	NW by N, 1	5 5-10	o	—	—	—	N. 10	4.6	
6	28.819	—	-3.0	2.7	2.3	2.3	N, 2-4	10 15-25	c	—	—	—	N. 7	-0.8	
8	28.854	—	1.0	4.0	3.8	4.2	Calm	7 0	oc	—	—	—	S. 10	-1.3	
10	28.890	—	3.0	6.0	6.0	6.2	Var. S, 1-5	11 12-33	oq	+	—	—	S. 10	1.8	
Noon	28.901	—	5.0	6.8	6.2	7.5	Calm	7 0	o	*	—	—	N. 10	—	
2	28.894	—	6.6	7.5	7.0	8.0	ENE, 1-2	8 5-15	oq	*	—	—	N. 10	7.9	
4	28.912	—	6.7	7.8	7.8	8.0	ENE, 1-3	5 10-23	ocq	+	—	—	N. 7, NE	7.2	
6	28.938	—	7.5	8.6	8.6	10.0	NE, 1-2	13 5-12	oc	*	—	—	N. 10	7.0	
8	28.985	—	8.0	8.2	8.0	9.0	N, 1	6 0-8	o	*	—	—	N. 10	6.6	
10	29.028	—	8.0	9.2	8.2	9.0	NNE, 1-2	13 10	om	—	—	—	N. 10	9.7	
Midt.	29.074	—	7.0	8.2	7.0	7.5	Lt. NE alrs	7 0	o	*	—	—	N. 10	9.3	
Mean	28.920	—	—	5.9	5.6	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. 7° 2. 8 p. 9° 2. } Solar radiation { black bulb —, bright bulb —. } Evapn. { I. 1.2 } grammes in { II. 1.0 } 24 hours. Precipn. 0.03 in. since 6 p.m. 17th.

1903—May.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Sunshine.	Clouds, Amount and movement.			Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.			Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.		Upper.	Lower.	Aspirator.		
				Dry.	Wet.	Unscreened.										
19th.	2	29.135	—	5.5	7.0	6.8	6.4	Lt. SE ahrs	4	0	o*	—	—	N. 10	—	
	4	29.213	—	6.5	8.0	7.8	7.2	E, 2	10	10-15	o*	—	—	N. 10	—	
	6	29.215	—	5.5	6.5	6.2	6.0	E by N, 1-2	8	10	bc	—	—	S. cu. 2	—	
	8	29.266	—	3.0	0.0	0.0	0.0	N, 0-1	11	8-10	b	—	—	—	—	
	10	29.319	—	10.5	4.8	4.8	5.0	Calm	1	0	b	—	—	—	—	
	Noon	29.316	-28.9	6.5	3.2	2.8	3.0	N, 1-2	8	10	b	—	—	—	—	Min. temp. at Cape Armitage, -28.9. Wind SW, 1. b.
	2	29.351	—	7.5	1.2	1.0	0.8	N, 0-1	7	0	b	—	—	—	—	Erebus smoke going NNE.
	4	29.369	—	3.8	0.0	0.0	0.0	N, 1	6	10	b	—	—	—	—	Foggy to S and E.
	6	29.363	—	2.2	0.0	0.0	1.0	N by W, 1	6	10	b	—	—	—	—	Meteor from zenith eastwards.
	8	29.367	—	4.0	0.0	0.2	0.2	Lt. N ahrs	7	0	b	—	—	—	—	
	10	29.368	—	18.2	15.0	—	17.7	Calm	1	0	b	—	—	—	—	Deposition of fairly large sparkling plate-like ice crystals.
	Midt.	29.364	—	15.2	6.0	6.5	5.0	Lt. NE ahrs	2	0	b	—	—	—	—	Further deposit.
	Mean	29.304	—	—	0.0	—	—	—	—	—	—	—	—	—	—	Snow early, clearing, and remaining clear all day, with light to fresh Nly ahrs. Barometer rising steadily all day. Temperature very unsteady and inclined to fall.
Max. therm. read at { 8 a. 9° 0. / 8 p. 5° 0. } Solar radiation { black bulb — / bright bulb —. } Evapn. { I. 2.4 / II. 2.3 } grammes in 24 hours. Precipn. 0.02 in. since 6 p.m. 18th.																

20th.	2	29.356	—	18.0	17.2	17.0	18.2	Calm	4	0	b	—	—	—	—	—	Time all disappeared from glass since last observation.
	4	29.354	—	19.0	5.0	5.8	4.6	Lt. N ahrs	2	0	b	—	—	—	—	—	
	6	29.347	—	26.9	20.6	21.0	17.0	Calm	3	0	b	—	—	—	—	—	Some more rime deposited.
	8	29.339	—	32.8	30.2	30.5	31.0	Calm	0	0	b	—	—	—	—	—	Slight auroral streamers SE to W, 25° to 45°.
	10	29.327	—	31.0	15.0	15.0	14.0	Calm	0	0	b	—	—	—	—	—	Aspirator falling too rapidly for an observation.
	Noon	29.307	-41.0	21.0	8.0	8.0	7.0	ESE, 1	3	10-12	b	—	—	—	—	—	Wind very puffy, and from various directions; temperature varying according to direction of wind.
	2	29.275	—	9.0	0.0	1.0	1.2	Var., 0-2	10	0-20	bq	+	—	—	—	—	Noon. Min. Temp. at Cape Armitage, -43° 6'. Wind E by S, 1-2. bf. Foggy to W; Erebus smoke going NNE.
	4	29.269	—	8.8	2.0	2.3	4.0	SE, 3-6	18	23-25	bq	+	—	—	—	—	2 p.m. Calm on going out, and then a squall from S, and so it continued; calms and squalls from N and various directions.
	6	29.276	—	8.5	7.5	7.5	8.2	Var. E, 5-7	21	28-40	bq	+	—	—	—	—	6 p.m. Foggy all round.
	8	29.309	—	11.5	11.5	11.5	12.2	Calm	7	0	b	—	—	—	—	—	10 p.m. Low mist obscuring land to S and W; rime on anemometer glass.
	10	29.298	—	21.5	19.0	18.5	19.1	Lt. NW ahrs	6	5-10	bm	—	—	—	—	—	Midt. No more rime fallen.
	Midt.	29.289	—	20.5	15.5	15.2	15.9	Calm	7	0	bm	—	—	—	—	—	Fine and clear all day, with little wind except at Noon, but in afternoon it blew up pretty strong and variable from E.
	Mean	29.312	—	—	12.6	12.8	—	—	—	—	—	—	—	—	—	—	NOTE.—The temperature varied considerably all day, accordingly as the wind blew from N or S.
Max. therm. read at { 8 a. — / 8 p. 0° 5. } Solar radiation { black bulb — / bright bulb —. } Evapn. { I. 0.0 / II. 0.0 } grammes in 24 hours. Precipn. — in.																	

21st.	2	29.290	—	19.2	11.1	11.8	11.1	Calm	4	0	b	—	—	—	—	—	Light gusts at frequent intervals during the night; wind very variable in direction.
	4	29.273	—	17.6	15.8	15.0	13.5	Lt. E ahrs	7	0	bc	—	—	Ci.-s. 1	—	—	
	6	29.242	—	23.2	21.5	22.0	17.0	Lt. var. ahrs	4	0	bc	—	—	Ci.-s. 2	—	—	
	8	29.193	—	22.0	9.5	10.0	10.0	Calm	2	0	bc	—	—	S. cu. 1	—	—	Faint aurora streamers in SE.
	10	29.151	—	14.2	10.2	10.5	12.0	Calm	3	0	bc	—	—	Ci.-s. 3	—	—	Temperature dropping too quickly to read aspirator; Ci.-s. radiating E and W very distinct.
	Noon	29.107	-26.6	21.0	18.0	19.0	17.0	Var. ahrs	2	0	bc	—	—	A.-s. 4, N	—	—	Noon. A.-s. radiating WNW and ESE very distinct; wind all round the compass; temperature rising and falling as wind is N or S respectively.
	2	29.047	—	23.2	0.4	0.0	2.0	Var. E, 0-1	4	0-12	bc	—	—	A.-s. 2, N	—	—	Noon. Min. temp. at Cape Armitage, -42° 8'. Wind SSW, 1. bc. Erebus smoke going Nly.
	4	28.996	—	4.7	3.0	3.0	3.0	Var. E, 4-7	15	25-40	bq	+	—	—	—	—	2 p.m. Foggy to S and E.
	6	28.922	—	6.5	4.8	4.8	4.5	Var. E, 7-10	30	35-53	bq	+	—	—	—	—	6 p.m. Wind squally and shifty, with heavy surface drift.
	8	28.868	—	6.5	4.2	4.5	3.0	Var. E, 6-9	34	35-52	bq	+	—	—	—	—	8 p.m. Wind very squally; very little drift, and stars all visible above drift.
	10	28.865	—	10.5	6.4	7.0	6.2	E by S, 3-5	33	28-36	b	+	—	—	—	—	Fine, but with very strong variable Ely wind springing up about 2 p.m., and with heavy surface drift. Barometer fell all day. Temperature rose quickly, but was unsteady.
	Midt.	28.826	—	8.1	7.0	7.2	6.8	E, 4-6	20	29-41	o	+	—	—	A.-s. 10	—	
	Mean	29.065	—	—	9.3	9.6	—	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. -5° 0. / 8 p. 4° 2. } Solar radiation { black bulb — / bright bulb —. } Evapn. { I. 0.8 / II. 1.0 / III. 1.1 } grammes in 24 hours. Precipn. — in.																	

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

[1903—May.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	28.828	—	-8.4	-7.9	-8.0	-8.0	E by N, 4-5	24	27-35	oc	—	A. s. 8	-8.1	22nd.  Heavy fog in Strait to W, clearing to S.  Wind very squally and variable; drift from surrounding hills. Drift as at 10 a.m. and wind much the same. Noon. Min. temp. at Cape Armitage, -28° 7'. Wind E by N, 4, ocf. fog. Mt. Erebus obscured. 2 p.m. Foggy all round; Str. to N. 4 p.m. No drift in gauge.  Thermometers covered in snow; screen full. Screens full of snow; thermometers covered.  Fine, but cloudy and misty, until it became overcast about 8 p.m. Wind strong and variable from E all day. Barometer falling, but inclined to rise about Mtd. Temperature falling steadily all day.
4	28.816	—	-8.3	-5.0	-5.6	-4.6	E by S, 1-3	20	8-20	oc	—	A. s. 8	-5.3	
6	28.797	—	-6.4	-4.6	-5.1	-4.6	E, 1-2	9	8-14	bc	—	A. s. 3	-6.0	
8	28.770	—	-5.7	-5.2	-5.5	-4.5	SE, 2-3	12	15-22	bc	—	A. s. 3	-4.5	
10	28.752	—	-11.5	-12.0	-12.0	-12.0	Var. E, 5-7	22	25-40	bmq fog	—	—	-11.9	
Noon	28.747	-12.9	-12.7	-11.0	-11.0	-11.0	Var. E, 5-6	29	25-36	bmq fog	—	—	-12.3	
2	28.756	—	-15.2	-10.3	-10.5	-10.5	Var. E, 3-5	23	20-30	bmq fog	—	—	-11.6	
4	28.752	—	-12.3	-11.2	-11.2	-11.2	Var. E, 4-6	22	23-33	bmq fog	—	—	-10.8	
6	28.746	—	-11.5	-10.0	-10.0	-10.2	Var. E, 3-6	22	20-35	ocq fog	—	Thin S. cu. 10	-11.2	
8	28.746	—	-12.5	-12.2	-12.0	-12.5	ENE, 5-6	24	25-35	ocq fog	—	S. 10	-10.8	
10	28.749	—	-17.0	-15.5	-15.4	-15.8	ENE, 4-5	29	25-30	ocq fog	—	S. 10	-13.5	
Midd.	28.767	—	-17.9	-17.2	-17.2	-17.8	ENE, 5-6	36	32-38	ocq fog	—	S. 10	-16.2	
Mean	28.769	—	—	-10.2	-10.3	—	—	—	—	—	—	—	-17.3	
Max. therm. read at		{ 8 a. -4° 0. 8 p. -4° 0.		Solar radiation { black bulb — bright bulb —.		Evapn. { 1. 5.8 11. 5.0 111. 9.1 } grammes in 24 hours.		Precipn. — in.						

2	28.791	—	-18.6	-18.0	-18.0	-18.0	ENE, 5-6	31	32-38	bcq fog	—	Misty	-18.4	23rd.  2, 4, and 6 a.m. Stars visible in zenith, but misty all round. Thermometers covered in drift at every observation up to 2 p.m.  Min. temp. at Cape Armitage, -24° 5'. Wind ESE, 3. ocf. fog. Erebus obscured. 2 p.m. Wind very gusty and variable, W to S, and SW. 4 p.m. Detached portions of auroral streamers in zenith.  Mercury below scale  Cloudy and misty most of the day, clearing about 4 p.m. Wind strong early, falling calm at 4 p.m. and remaining so. Barometer rising steadily all day. Temperature falling steadily all day.
4	28.805	—	-19.5	-17.8	-17.8	-17.4	ENE, 5-6	30	30-40	bcq fog	—	Misty	-17.5	
6	28.810	—	-19.3	-17.2	-17.2	-17.8	E by N, 5-6	26	30-40	bmq fog	—	—	-17.7	
8	28.825	—	-18.0	-18.0	-18.0	-19.0	E, 4-5	24	20-25	bc	—	S. 5	-18.0	
10	28.849	—	-21.2	-19.8	-19.8	-20.0	NE, 5-6	32	20-28	ocq fog	—	S. 10	-18.0	
Noon	28.877	-21.8	-20.0	-17.8	-17.8	-18.0	ENE, 4	22	18-24	o fog	—	S. 10	-18.0	
2	28.914	—	-23.5	-22.0	-22.0	-22.3	SW, 0-2	12	0-20	ocq	—	S. 10	-23.8	
4	28.931	—	-24.5	-22.2	-22.2	-22.0	SE, 0-2	9	0-5	bq	—	—	-23.2	
6	28.947	—	-22.0	-21.0	-21.0	-22.7	Calm	1	0	b	—	—	-23.4	
8	28.961	—	-28.0	-28.0	-28.0	-30.0	Calm	0	0	b	—	—	-22.0	
10	28.985	—	-29.0	-25.8	-26.0	-26.0	Calm	0	0	b	—	—	-22.2	
Midd.	28.985	—	-26.0	-23.5	-23.5	-23.0	Calm	0	0	bm	—	—	—	
Mean	28.890	—	—	-20.9	-20.9	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. -12° 0. 8 p. -12° 0.		Solar radiation { black bulb — bright bulb —.		Evapn. { 1. 1.5 11. 1.8 111. Blown away. } grammes in 24 hours.		Precipn. — in.						

2	29.019	—	-22.5	-13.5	-13.5	-14.0	E, 1-2	8	5-10	bm	—	—	—	24th.  Instruments continually being covered in drift and wind vanes choked. 12.45 p.m. Temp. at Cape Armitage, -13° 8'; min., -34° 5'. Wind E by N, 4-6. ocf. fog. Erebus obscured. 4 p.m. Stars dimly gleaming in zenith. 6 p.m. Cloudless in zenith, scud passing at times. 8 p.m. Stars visible, but misty; no land visible.  Overcast and cloudy until 2 p.m., when it cleared, but still remained misty. Wind strong, variable E by all day. Barometer unsteady. Temperature steady.
4	29.016	—	-14.3	-10.8	-10.5	-11.0	E, 2-4	8	10-20	ocq fog	—	S. 8	—	
6	29.016	—	-11.5	-9.0	-9.0	-9.2	SE, 4-6	21	20-30	ocq fog	—	S. 10	—	
8	29.023	—	-13.5	-8.0	-8.0	-7.0	S, 5-7	20	30-40	ocq fog	—	S. 10	—	
10	29.043	—	-10.5	-10.0	-10.0	-10.0	E by S, 3-4	20	20-25	oqm fog	—	S. 10	-9.8	
Noon	29.006	—	-10.5	-9.0	-9.0	-9.2	Var. E, 4-5	20	20-28	oqm fog	—	S. 10	-9.9	
2	28.993	—	-13.5	-11.0	-11.0	-11.5	ENE, 3-5	25	20-32	oqm fog	—	S. 10	-11.6	
4	28.977	—	-15.0	-12.8	-12.8	-12.8	E by N, 4-6	25	23-33	bqm fog	—	Thin mist	-11.9	
6	28.962	—	-14.0	-14.0	-14.0	-14.4	E, 4-6	23	25-35	bqm fog	—	Thin high mist	-13.0	
8	28.984	—	-17.5	-17.0	-17.0	-17.0	ENE, 5-6	27	25-38	bmq fog	—	—	-13.2	
10	28.983	—	-17.0	-17.0	-17.0	-17.0	E, 4-5	24	25-30	bm fog	—	—	-14.1	
Midd.	28.989	—	-17.0	-12.0	-12.0	-12.5	E, 3-4	20	15-20	bm fog	—	—	-14.4	
Mean	29.001	—	—	-12.0	-12.0	—	—	—	—	—	—	—	-17.0	
Max. therm. read at		{ 8 a. -7° 0. 8 p. -7° 0.		Solar radiation { black bulb — bright bulb —.		Evapn. { 1. 0.2 11. 0.1 } grammes in 24 hours.		Precipn. — in.						

1903—May.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

25th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.		Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.			P. tube, see p. 2.	Upper.			Lower.
				Dry.	Wet.									
2	29.001	—	-14.5	-13.0	-13.0	E, 3-4	17	15-20	b	—	—	—	4 and 6 a.m. Faint aurora from N to ESE.  Min. temp. at Cape Armitage, -31° 8. Wind E, 1-2. bf. Erebus clear, smoke not visible. 2 p.m. Thin A.s. from zenith eastwards; detached Cu. to N; foggy to S. 4 p.m. Very dull, only the brightest stars visible. Stars very misty.  Fine and clear nearly all day, with strong and rising E <sup>by</sup> wind. Barometer steady most of the day, but rising in evening. Temperature steady.	
4	28.991	—	-14.5	-14.0	-14.0	ENE, 4-5	18	20-25	b	—	—	—		
6	28.991	—	-15.0	-15.0	-15.5	ENE, 3-4	17	15-20	b	—	—	—		
8	28.989	—	-21.0	-16.0	-17.0	Lt. ESE airs	15	0	b	—	—	—		
10	28.996	—	-17.0	-12.0	-12.0	E, 1	12	10-12	b	—	—	-10.8		
Noon	28.995	-25.0	-13.5	-11.5	-11.2	E, 1	9	10-12	b	—	—	-11.9		
2	28.997	—	-13.3	-10.0	-10.0	E by N, 2-3	16	15-25	bc	—	A.s. 4, E	-11.6		
4	28.997	—	-11.5	-5.2	-5.4	E, 1-2	9	10-20	bq	—	S. 2, E	-12.5		
6	29.001	—	-8.5	-7.0	-7.2	E, 1-3	14	10-25	bq	—	—	-10.7		
8	29.037	—	-15.0	-15.0	-15.5	NE, 4-5	14	23-32	bm	—	—	-10.8		
10	29.035	—	-20.0	-15.0	-16.0	E, 5-9	27	25-50	bq	—	—	-6.5		
Midt.	29.039	—	-20.8	-16.0	-17.0	E by N, 5-8	27	25-45	bq	—	—	-7.2		
Mean	29.006	—	—	-12.5	-12.6	—	—	—	—	—	—	-7.6		
Max. therm. read at		{ 8 a. -12° 0. 8 p. -4° 2.		Solar radiation { black bulb — bright bulb —.		Evapn. { I. 2.5 } grammes in II. 2.8 } 24 hours.		Precipn. —.						

26th.

2	29.043	—	-13.2	-14.0	-14.0	NE, 5-7	27	25-38	bq	—	—	—	2, 4 and 6 a.m. Faint aurora in SE.  Very dark and threatening to S and SW. Min. temp. at Cape Armitage, -28° 0. Wind SE, 2. oct. Erebus obscured. 4, 6, 8 p.m. and Midt. Stars gleaming faintly through mist or Str. clouds. Wind squally and variable.  Cloudy, overcast, and misty nearly all day, with strong E <sup>by</sup> variable winds. Barometer rising steadily all day. Temperature rose at 4 p.m., and then fell.
4	29.049	—	-15.2	-14.0	-14.8	NE, 4-6	21	25-35	bq	—	—	—	
6	29.056	—	-14.8	-10.0	-10.0	NE, 2-3	17	15-18	b	—	—	—	
8	29.057	—	-12.0	-12.0	-12.0	ESE, 4-5	13	20-25	bm	—	—	—	
10	29.105	—	-17.5	-11.5	-11.8	SE, 1	10	8-12	o	—	S. 10	-11.7	
Noon	29.121	-9.8	-12.0	-8.0	-8.0	SE, 2-3	9	10-20	o	—	S. 10	-12.1	
2	29.129	—	-11.3	-7.7	-7.7	SSE, 2-3	12	10-20	o	—	S. 10	-8.3	
4	29.138	—	-8.5	-1.2	-2.2	SE, 1-3	8	5-22	ocq	—	Thin S. 6	-8.7	
6	29.147	—	-4.8	-4.0	-4.5	ESE, 1-2	11	5-15	o	—	S. 10	-8.7	
8	29.204	—	-8.5	-8.2	-8.2	Var. E. 2-4	17	15-28	bmq	—	—	-9.0	
10	29.215	—	-13.0	-12.5	-13.0	E, 3-4	16	20-24	om	—	S. 10	-2.2	
Midt.	29.252	—	-13.0	-10.0	-10.5	ESE, 2-4	15	15-25	omq	—	S. 10	-3.3	
Mean	29.126	—	—	-9.4	-9.6	—	—	—	—	—	—	-4.0	
Max. therm. read at		{ 8 a. -6° 0. 8 p. —.		Solar radiation { black bulb — bright bulb —.		Evapn. { I. 5.2 } grammes in II. 5.4 } 24 hours. III. 9.7 }		Precipn. — in.					

27th.

2	29.253	—	-11.0	-8.0	-8.2	E by S, 2-3	14	10-16	bm	—	—	-8.3	Faint auroral streamers due E, alt. 25°.  Wind very gusty. Noon. Min. temp. at Cape Armitage, -19° 6. Wind E by N, 2. bc. Erebus obscured. 2 p.m. Wind gusty and variable; western mountains clear. 4 p.m. Wind gusty and variable. 6 p.m. Faint auroral streamers in zenith and N.  Fine and clear all day, with strong E <sup>by</sup> wind during the afternoon, falling towards evening. Barometer rose until 10 a.m. and then fell slightly. Temperature falling slowly.
4	29.261	—	-10.0	-8.0	-8.2	E by N, 2-3	9	10-15	bm	—	—	-8.3	
6	29.259	—	-9.5	-8.0	-8.2	E, 1-2	9	8-10	bm	—	—	-8.3	
8	29.202	—	-10.7	-9.8	-9.8	Calm	7	0	b	—	—	-8.7	
10	29.311	—	-14.5	-13.8	-13.2	Calm	1	0	b	—	—	-8.0	
Noon	29.309	-18.6	-14.5	-13.0	-13.2	Lt. E airs	3	0	b	—	—	-8.3	
2	29.283	—	-15.0	-12.5	-12.7	ENE, 2-3	12	15-25	b	—	—	-13.0	
4	29.279	—	-20.0	-20.0	-20.0	E, 5-8	26	30-48	bq	—	—	-13.4	
6	29.276	—	-20.0	-16.8	-16.5	NE, 3-6	26	25-37	bq	—	—	-13.5	
8	29.284	—	-17.5	-14.0	-14.0	NE, 2-3	19	10-18	b	—	—	-12.6	
10	29.284	—	-21.0	-21.0	-23.0	Calm	6	0	b	—	—	-13.0	
Midt.	29.283	—	-30.0	-21.0	-21.2	NNE, 0-1	1	0	b	—	—	-20.2	
Mean	29.281	—	—	-13.8	-13.9	—	—	—	—	—	—	-20.6	
Max. therm. read at		{ 8 a. -6° 5. 8 p. -10° 0.		Solar radiation { black bulb — bright bulb —.		Evapn. { I. 2.4 } grammes in II. 2.4 } 24 hours. III. 5.2 }		Precipn. — in.					

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.285	—	-28.2	-25.7	-25.0	-27.0	Calm	5	0	b	—	—	—	<p>28th.</p> <p>Faint streamers N to SW through E, 10° to 45° alt. Fine auroral display, corona in zenith and streamers to horizon; rapid movement.</p> <p>Long streak of Str. in SW lying NW and SE; fine colouring low down to N.</p> <p>Noon. Min. temp. at Cape Armitage, -44° 0. Wind NE by E, 4. b. ↗. Erebus smoke going NE or SE, dark shadow of hill not allowing one to distinguish; beautiful shades of dawn in N.</p> <p>Auroral band in S to SE, alt. 7° to 10°.</p> <p>Fine and clear all day. Not much wind except for a few hours at midday. Barometer falling steadily all day. Temperature lower, and rising towards evening.</p>
4	29.273	—	-27.5	-27.0	-27.0	-28.5	Calm	1	0	b	—	—	—	
6	29.263	—	-35.0	-31.0	-31.0	-30.0	Calm	0	0	b	—	—	—	
8	29.261	—	-32.0	-25.0	-25.0	-26.0	Calm	2	0	h	—	—	—	
10	29.255	—	-26.0	-20.2	-20.8	-21.0	NE, 4-6	20	24-32	b	—	—	-21.3 -21.3 -20.9 -18.4 -18.8 -16.6 -17.0	
Noon	29.249	-25.0	-22.0	-20.0	-20.2	-20.5	NE, 5-6	21	24-35	b	—	—	—	
2	29.243	—	-20.7	-18.2	-18.2	-19.0	SE, 0-1	17	0-10	b	—	—	—	
4	29.241	—	-21.8	-17.6	-17.6	-16.5	Lt. N airs	4	0	b	—	—	—	
6	29.232	—	-26.0	-26.0	-25.5	-26.0	Lt. NW airs	2	0	b	—	—	—	
8	29.215	—	-36.0	-30.0	-30.0	-30.0	NNW, 2-3	4	15-20	b	—	—	Mercury below scale -14.1 -15.2 -13.4 -14.1	
10	29.193	—	-31.0	-15.2	-16.0	-15.8	N by E, 0-1	4	0-10	b	—	—	—	
Midt.	29.149	—	-18.0	-14.0	-14.5	-14.5	N by E, 0-1	7	0-10	b	—	—	—	
Mean	29.238	—	—	-22.5	-22.6	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -13° 5.		8 p. -15° 0.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 1.7 11. 1.5 111. 2.9 } grammes in 24 hours.		Precipn. — in.		

2	29.124	—	-29.6	-29.5	-29.0	-30.0	Calm	0	0	b	—	—	Mercury below scale -20.6 -22.7	<p>29th.</p> <p>Auroral streamers to NE and N; glow to S. Faint auroral streamers in N and S. Patches of faint aurora in N and NE.</p> <p>Fr.-s. to N and E low down.</p> <p>Low bank of Str. to N and extending to W.</p> <p>Noon. Min. temp. at Cape Armitage, -41° 4. Wind ENE, 1-2. b. Large column of Erebus smoke forming mushroom (low) and then going NW; low bank of Str. to NW.</p> <p>2 p.m. Fine colouring on NW horizon.</p> <p>4 and 6 p.m. Bright aurora low down SE.</p> <p>Midt. Auroral arch extending from NE to SW through E, alt. 7° to 20°, movement to W. Fine and clear all day. Wind strong during the forenoon, but calm for the remainder of the day. Barometer falling slightly all day. Temperature low and steady.</p>
4	29.110	—	-30.2	-23.2	-23.4	-22.1	Calm	0	0	b	—	—	—	
6	29.104	—	-24.8	-18.8	-19.0	-18.8	ENE, 2-3	8	15-20	bq	—	—	—	
8	29.096	—	-18.0	-18.0	-18.0	-18.0	ENE, 2-3	21	15-20	b	—	—	—	
10	29.096	—	-19.5	-19.5	-19.8	-20.0	Var. E, 2-4	7	15-25	b	—	—	-19.8 -20.2 -23.6 -23.6 -22.0 -22.4	
Noon	29.096	-33.8	-23.5	-23.0	-23.0	-23.0	ENE, 4-6	18	20-30	b ↗	—	—	—	
2	29.092	—	-27.0	-22.6	-22.0	-22.0	ENE, 2-3	18	15-23	b	—	—	—	
4	29.096	—	-25.0	-24.0	-24.0	-24.0	E, 0-1	8	0-5	b	—	—	—	
6	29.107	—	-34.0	-32.5	-32.5	-37.4	Calm	2	0	b	—	—	—	
8	29.099	—	-32.8	-32.0	-31.0	-33.8	Calm	2	0	b	—	—	—	
10	29.101	—	-37.0	-32.2	-32.0	-33.0	Calm	0	0	b	—	—	6 p.m. to Midt. Mercury below scale	
Midt.	29.085	—	-34.5	-28.5	-29.0	-30.0	Calm	0	0	b	—	—	—	
Mean	29.101	—	—	-25.3	-25.3	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -14° 0.		8 p. -19° 0.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 0.6 11. 0.5 111. 0.8 } grammes in 24 hours.		Precipn. — in.		

2	29.052	—	-36.0	-29.0	-29.0	-29.0	NW, 1	4	8-12	b	—	—	Mercury below scale -14.4 -15.2 -16.2 -17.3	<p>30th.</p> <p>Bright aurora N, E, and S, alt. 60°, rapid movement to W, brightness of dim stars of 2nd magnitude.</p> <p>4 a.m. All deposit on anemometer glass gone.</p> <p>6 a.m. Stars dimly visible in zenith.</p> <p>No stars visible; snow falling pretty fast in small feathery flakes.</p> <p>Noon. Still misty all round, but clear stars overhead; broken clouds to N.</p> <p>Noon. Min. temp. at Cape Armitage, -49° 8. Wind E, 2. bef. Erebus obscured.</p> <p>2 p.m. Large portion of Cu. along N horizon.</p> <p>2, 4, and 6 p.m. Bright aurora in SE low down.</p> <p>6 p.m. Clear, with good visibility.</p> <p>8 p.m. Overcast and misty to W.</p> <p>Midt. Faint auroral arch and patches in S.</p> <p>Fine most of the day, but some snow. Fresh E-W wind. Barometer fell to 2 p.m. and then rose slowly. Temperature rose rapidly and remained high.</p>
4	29.028	—	-32.5	-14.0	-15.0	-14.0	Lt. N airs	6	0	im	—	—	—	
6	28.982	—	-16.5	-16.2	-17.0	-16.0	Calm	9	0	o	—	—	Thin S. 10	
8	28.963	—	-18.5	-18.0	-18.0	-18.0	Calm	6	0	bm *	—	—	—	
10	28.952	—	-17.6	-13.2	-13.2	-14.0	Calm	0	0	o *	—	—	N. 10	
Noon	28.925	-3.5	-13.5	1.8	1.0	1.8	E, 1-2	9	5-15	bc *	—	—	Fr.-s. 3, S	
2	28.927	—	-2.2	0.0	0.0	0.8	E, 1-2	11	10-18	b	—	—	—	
4	28.946	—	-3.8	-1.0	-1.0	-0.5	ESE, 1-3	9	10-23	b	—	—	—	
6	28.946	—	-3.0	-1.8	-1.8	0.0	ESE, 0-1	11	0-10	b	—	—	—	
8	28.942	—	-1.8	1.8	1.2	-0.5	ENE, 0-1	9	0-10	b	—	—	—	
10	28.989	—	-9.7	-5.5	-5.5	-6.0	ESE, 1-3	8	10-15	b	—	—	—	
Midt.	29.028	—	-6.7	-3.0	-4.0	-3.8	E by S, 2-4	15	20-32	oq ↗	—	—	N. 10	
Mean	28.973	—	—	-8.2	-8.4	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -9° 0.		8 p. 4° 0.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 0.6 11. 0.5 111. 0.6 } grammes in 24 hours.		Precipn. — in.		

1903—May.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

31st.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.						
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.			P. tube, see p. 2.	Upper.			Lower.					
				Dry.	Wet.															
2	29.053	—	—	9.7	8.0	—	8.5	—	7.8	E, 3-4	20	20-33	o	—	—	N. 10	—	8.0		
4	29.090	—	—	8.7	5.0	—	6.0	—	5.0	E by S, 1-3	17	10-20	oq	—	—	N. 10	—	8.7		
6	29.096	—	—	6.5	5.8	—	6.5	—	4.8	E, 3-4	15	18-35	o	—	—	S. 10	—	5.6		
8	29.128	—	—	16.0	11.8	—	12.0	—	11.8	E by N, 5-6	24	25-30	b	—	—	—	—	6.5		
10	29.150	—	—	15.0	11.0	—	11.8	—	11.0	ENE, 4-5	21	20-28	b	—	—	—	—	5.4		
Noon	29.164	—	—	13.5	9.0	—	10.0	—	9.8	E, 1-2	18	8-14	b	—	—	—	—	6.5		
2	29.163	—	—	9.5	9.0	—	9.4	—	9.5	E, 1-3	10	5-18	bq	—	—	—	—	8.0		
4	29.172	—	—	14.5	13.0	—	13.4	—	13.2	E, 3-6	17	20-35	bq w	—	—	—	—	9.4		
6	29.203	—	—	15.0	13.0	—	13.3	—	13.5	E by N, 4-6	17	22-35	bq	—	—	—	—	10.1		
8	29.208	—	—	14.5	14.0	—	15.0	—	14.5	NE, 6-7	27	30-44	bq	—	—	—	—	13.4		
10	29.254	—	—	17.5	16.8	—	17.0	—	17.0	NE by E, 4-5	27	25-35	b	—	—	—	—	13.7		
Midt.	29.305	—	—	18.1	15.5	—	16.0	—	16.7	E by N, 4	23	20-25	b	—	—	—	—	13.4		
Mean	29.166	—	—	—	11.0	—	11.6	—	—	—	—	—	—	—	—	—	—	14.1		
Max. therm. read at { 8 a. 1° 0. / 8 p. -5° 0. }													Solar radiation { black bulb — / bright bulb —. }		Evapn. { I. 5.3 / II. 6.0 / III. 9.7 } grammes in 24 hours.		Preclpn. — in.		Fine and clear, with very strong Ely wind, all day. Barometer rising. Temperature falling steadily.	

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

[1903—June.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.										Unscreened.
2	29.325	—	-20.8	-14.6	-15.0	-15.0	E, 4-5	15	25-30	b	—	—	-14.3	1st. Very faint aurora in SE, alt. 15°. Faint streamers from zenith to N horizon. Wind variable, between NE and ESE. Wind variable, ENE to E by S; A.s. radiating NW and SE low down on N and NE horizon. Noon. Min. temp. at Cape Armitage, -35° 8; wind E, 4; A.s. 2. Mt. Erebus smoke going W <sup>b</sup> . 2 p.m. Thin Str. from NE to zenith. Fine early, but becoming overcast later and remaining so. Very strong E wind all day. Barometer rising all day. Temperature steady and low.	
4	29.372	—	-20.0	-19.0	-19.3	-19.0	E by N, 5-6	30	30-35	b	—	—	-14.8		
6	29.425	—	-19.5	-18.9	-19.1	-19.0	E by N, 5-6	22	25-35	h	—	—	-19.5		
8	29.516	—	-25.5	-24.8	-24.8	-25.3	ENE, 5-6	24	30-40	bq	—	—	-19.8		
10	29.513	—	-26.0	-23.0	-23.0	-23.3	Var. E, 4-6	29	25-35	bq	—	—	-20.0		
Noon	29.558	-31.8	-24.0	-21.0	-21.0	-21.2	Var. E, 4-6	21	20-32	bq	—	—	-23.1		
2	29.583	—	-23.3	-18.2	-18.6	-18.5	Var. E, 3-5	20	20-30	bcq	—	S. 3, NE	-23.4		
4	29.615	—	-19.0	-19.0	-19.0	-19.0	E by N, 4-6	23	25-35	ocq	—	S. 10	-21.6		
6	29.641	—	-19.0	-16.2	-16.6	-16.0	ENE, 3-6	21	20-35	ocq	—	S. 10	-21.6		
8	29.661	—	-19.0	-19.0	-19.0	-19.5	NE, 5-6	22	23-38	oq	—	S. 10	-15.9		
10	29.673	—	-23.0	-22.0	-22.0	-21.4	NNE, 5-6	28	30-40	oq	—	S. 10	-16.6		
Midt.	29.686	—	-22.0	-18.5	-19.8	-19.0	E by N, 6-7	26	25-35	oq	—	S. 10	-20.6		
Mean	29.547	—	—	-19.5	-19.8	—	—	—	—	—	—	—	-21.8		
Max. therm. read at { 8 a. -10° 0. 8 p. -16° 0.		Solar radiation { black bulb — bright bulb —.				Evapn. { 1. 3.5 11. 3.5 } grammes in 24 hours.		Precipn. — in.							

2	29.709	—	-21.0	-20.5	-20.8	-20.5	E by N, 6-7	22	30-40	oq	—	S. 10	-20.9	2nd. Fine aurora NE to SW, rapidly fluctuating curtain and isolated streamers. Fr.-s. to E and NE. A few stars visible about zenith. Noon. Min. temp. at Cape Armitage, -31° 3. Wind E, 4. Oct. Fog or high drift. Erebus obscured. Temperature very unsteady. Brilliant greenish aurora low in N and NE. Overcast most of the day, clearing for a few hours in the forenoon and also in the evening. Wind still strong from E, falling in evening. Barometer continued to rise all day. Temperature lower and steady.	
4	29.729	—	-23.0	-22.5	-22.5	-23.0	E, 7-8	31	30-46	oq	—	S. 10	-21.1		
6	29.775	—	-24.0	-23.0	-23.0	-23.0	E by N, 5-6	12	25-30	b +	—	—	-22.7		
8	29.792	—	-25.0	-21.0	-21.0	-21.0	E, 4-5	21	20-25	b	—	—	-22.4		
10	29.824	—	-23.0	-23.0	-23.0	-23.2	Var. E, 4-5	19	15-28	h	—	—	-22.7		
Noon	29.847	-28.0	-25.5	-22.8	-22.8	-23.0	Var. E, 4-6	19	20-30	bc	—	S. 4, E	-23.8		
2	29.864	—	-24.0	-22.0	-22.0	-22.3	Var. E, 3-5	23	15-28	ocq +	—	S. 10	-23.3		
4	29.888	—	-22.2	-21.6	-21.6	-21.8	Var. E, 4-6	21	20-30	ocq	—	S. 10	-23.4		
6	29.913	—	-22.8	-22.5	-22.5	-22.8	Var. E, 3-5	20	20-28	ocq	—	S. 10	-22.7		
8	29.931	—	-24.0	-21.0	-21.0	-21.0	Var. E, 4-5	23	20-28	b	—	—	-21.6		
10	29.951	—	-31.2	-23.2	-23.2	-23.8	SE, 2-4	14	10-15	bq ☉	—	—	-22.0		
Midt.	29.966	—	-33.7	-23.6	-23.9	-23.3	E, 1-2	10	10-15	b	—	—	-23.4		
Mean	29.849	—	—	-22.2	-22.3	—	—	—	—	—	—	—	-21.3		
Max. therm. read at { 8 a. -18° 0. 8 p. -21° 0.		Solar radiation { black bulb — bright bulb —.				Evapn. { 1. 2.9 11. 2.8 } grammes in 24 hours.		Precipn. — in.							

2	29.964	—	-24.8	-20.2	-20.4	-20.7	E, 2-3	12	15-20	b	—	—	-20.2	3rd. Aurora of extensive and brilliant arches of diffused light, stretching from N to S. 4 a.m. Faint aurora in E and N, alt. 10°. 6 a.m. Low aurora in E. Faint aurora in E and N, and a bright arch from NW to SE through E. 10 a.m. Faint but extensive aurora in E and S, alt. from 10° to 60°. Noon. Temperature varying as wind varies. Noon. Min. temp. at Cape Armitage, -45° 6. Wind WNW, 2. Mt. Erebus' smoke going E <sup>b</sup> . Aurora all round, faint and disconnected; moonlight bright; all the afternoon auroral arches and streamers were waxing and waning in the SE, at times very bright; alt. 5° to 10°. 10 p.m. Faint auroral arches E to S and SE, alt. 8° to 15°. Midt. Faint aurora in NE and zenith, alt. 10° to 15°. Light variable all day, with cloudless sky. Barometer rose until 2 p.m., and then fell quickly. Temperature low, but not so steady.	
4	29.980	—	-24.0	-21.6	-21.9	-22.0	NE, 2-3	7	15-20	b	—	—	-20.6		
6	29.993	—	-22.8	-19.1	-19.2	-19.1	Lt. N airs	5	0-8	b	—	—	-21.5		
8	30.020	—	-30.0	-29.2	-20.2	-31.0	Calm	1	0	h	—	—	-21.8		
10	30.026	—	-38.0	-36.0	-36.0	-36.2	Calm	0	0	b	—	—	-20.2		
Noon	30.032	-33.2	-36.5	-24.0	-23.5	-25.0	Lt. N aira	5	0	b ☉	—	—	-20.2		
2	30.037	—	-23.8	-17.0	-17.0	-17.2	Lt. N airs	5	0	h ☉	—	—	-24.5		
4	30.021	—	-24.0	-21.2	-21.2	-22.0	Lt. N aira	4	0	b ☉	—	—	-24.2		
6	29.990	—	-22.2	-20.0	-20.0	-20.2	Calm	4	0	b	—	—	-17.1		
8	29.942	—	-21.7	-19.1	-19.1	-19.9	Lt. N by W airs	5	0	b ☉	—	—	-17.0		
10	29.876	—	-23.4	-23.1	-23.0	-24.0	Lt. W airs	3	0	b	—	—	-22.4		
Midt.	29.788	—	-29.5	-29.0	-28.9	-30.1	Calm	1	0	b	—	—	-22.4		
Mean	29.972	—	—	-23.3	-23.3	—	—	—	—	—	—	—	-18.4		
Max. therm. read at { 8 a. -18° 0. 8 p. -17° 0.		Solar radiation { black bulb — bright bulb —.				Evapn. { 1. 0.7 11. 0.7 } grammes in 24 hours.		Precipn. — in.							

1903—June.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.				
				Dry.	Wet.										Unscreened.	
4th. 2	29.708	—	-29.5	-23.0	-23.0	-21.0	Calm	1	0	b	—	—	-19.8	Very faint aurora to E, alt. 10°.		
4	29.612	—	-26.9	-22.1	-22.1	-22.5	Calm	2	0	b	—	—	-19.3	Faint band of aurora E to SE, alt. 10°.		
6	29.501	—	-23.5	-19.0	-19.1	-19.1	E, 0-1	4	8-12	b	—	—	-22.0	Auroral streamers from NNW to S, alt. 10° to 20°.		
8	29.406	—	-18.0	-17.0	-17.0	-17.0	E, 2-3	15	15-20	b	—	—	-20.6	Auroral streamers from N to SW; brightest in E.		
10	29.372	—	-24.0	-23.8	-23.2	-23.3	S by E, 1	11	5-12	b	—	—	-18.4	Faint irregular streamers to S, alt. 50° to 80°; arch from SE to SW, alt. 30°; Erebus smoke visible from ship going S; thick bank of cloud to SE and S.		
Noon	29.356	-28.0	-30.0	-25.0	-25.0	-25.5	S by E, 1-4	9	8-25	bqf	—	Fog 8, S	-24.2	Noon. Thick fog on first going out, passing quickly to N; clear overhead; fog deposit on instruments.		
2	29.326	—	-32.0	-16.0	-16.0	-15.8	ESE, 1-3	17	5-23	ocqf	+	*	N. 10	-15.2	Noon. Min. temp. at Cape Armitage, -42° 1. Wind S by E, 4. b. + high. Erebus partially obscured, smoke in torn cloud, but direction uncertain.	
4	29.350	—	-20.8	-15.7	-15.7	-15.7	E by S, 1-5	13	5-20	ocq	+	*	N. 10	-16.2	2 p.m. Snow falling in dry hard flakes.	
6	29.377	—	-23.8	-17.0	-17.0	-17.3	E, 1-5	13	5-30	ocq	+	*	N. 10	-14.4	4 p.m. Heavy drift, with squalls every few minutes, force 1-5, of a few seconds' duration.	
8	29.381	—	-19.0	-19.0	-19.0	-19.5	SE, 1-6	17	10-30	ocq	+	*	N. 10	-15.2	8 and 10 p.m. Wind squally	
10	29.394	—	-22.1	-21.3	-21.3	-21.5	SE, 3-9	16	28-52	ocq	+	2	*	N. 10	-17.3	2 p.m. Snow falling in dry hard flakes.
Midt.	29.423	—	-25.4	-25.3	-25.3	-25.7	SE, 2-5	18	18-36	ocq	+	2	*	N. 10	-19.5	4 p.m. Heavy drift, with squalls every few minutes, force 1-5, of a few seconds' duration.
Mean	29.434	—	—	-20.4	-20.3	—	—	—	—	—	—	—	—	-25.2	8 and 10 p.m. Wind squally	

Max. therm. read at { 8 a. -17° 0. / 8 p. — } Solar radiation { black bulb — / bright bulb — } Evapn. — grammes. Precipn. — ln.

and variable. Midt. Wind squally and variable; weather clearing. Clear all the forenoon, becoming overcast later, and remaining so. Wind sprang up and was very strong from SE, with heavy gusts and drift. Barometer fell until 2 p.m., and then rose slowly. Temperature not so steady.

5th. 2	29.426	—	-25.9	-23.6	-23.8	-23.4	SE, 5-9	20	36-54	ocq	+	2	*	—	N. 10	-23.1	A moderately brilliant auroral glow, probably upper edge of curtain; two streamers to zenith in N and NW.
4	29.413	—	-26.0	-23.0	-23.1	-23.7	SE, 4-9	24	33-53	bq	+	—	—	—	—	-23.4	6 a.m. Very faint aurora to NNW.
6	29.419	—	-25.6	-24.6	-24.6	-24.7	SE, 3-5	25	27-35	bq	+	—	—	—	—	-23.6	Very squally and thick; brought in aspirator.
8	29.438	—	-25.0	-20.8	-20.8	-21.0	SE, 3-5	21	20-30	ocq	+	—	—	—	S. 10	-24.7	Wind varying from S to E in gusts; snowflakes small and hard.
10	29.452	—	-21.0	-19.0	-19.0	-19.5	SE, 5-7	19	30-40	ocq	+	—	—	—	N. 10	—	Noon. Min. temp. at Cape Armitage, -36° 8. Wind S by E, 3-4. oc. +. Erebus obscured.
Noon	29.476	-28.0	-19.5	-19.2	-19.5	-19.5	Var., 0-1	20	0-12	ocq	+	—	—	—	N. 10	—	2 p.m. Wind variable; small collection of snow in gauge, not measurable.
2	29.490	—	-20.0	-19.6	-19.6	-20.0	Var. E, 1-3	9	8-20	ocq	+	—	—	—	N. 10	—	6 p.m. Appearance of clearing in N.
4	29.472	—	-20.2	-20.0	-20.0	-20.0	Var. E, 2-4	19	10-22	ocq	+	—	—	—	N. 10	—	8 p.m. Stars dimly visible in zenith; moon gleaming through mist, NNE.
6	29.458	—	-19.6	-18.5	-18.5	-18.8	ENE, 1-3	20	7-18	ocq	+	—	—	—	N. 10	—	10 p.m. Stars visible in zenith; faint halo.
8	29.435	—	-19.0	-18.0	-18.0	-18.0	NE, 1-2	15	8-15	o	*	—	—	—	Thin N. 10	—	Midt. Faint halo, and slight tendency to paraselene; stars visible in zenith and to 30°
10	29.415	—	-18.0	-17.2	-17.3	-17.2	E by N, 1-2	15	20-25	bm	—	—	—	—	—	—	
Midt.	29.393	—	-18.2	-18.0	-18.0	-18.0	E, 0-1	15	10-15	bm	—	—	—	—	—	—	
Mean	29.440	—	—	-20.1	-22.2	—	—	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. -10° 0. / 8 p. -18° 0. } Solar radiation { black bulb — / bright bulb — } Evapn. { 1.04 / 11.06 / 111.05 } grammes in 24 hours. Precipn. — ln.

alt. all round. Overcast most of the day, with some snowfall. Wind very strong from SE early, falling, and remaining light breeze. Barometer rose until 2 p.m., and then fell. Temperature steady.

6th. 2	29.366	—	-24.2	-23.0	-23.0	-23.1	Lt. S airs	9	0	bc	—	—	—	—	Fr. N. 1	—	Faint corona and halo; dull round horizon.
4	29.333	—	-24.0	-19.5	-19.9	-19.6	Lt. var. airs	2	0	bc	—	—	—	—	Fr. S. 1	—	Airs from N and E; moon obscured.
6	29.313	—	-20.8	-20.0	-28.8	-30.3	Calm	1	0	b	—	—	—	—	—	—	Faint aurora in NE and S, alt. 40°.
8	29.281	—	-30.0	-28.0	-28.0	-29.0	Calm	3	0	b	—	—	—	—	—	—	
10	29.271	—	-27.0	-21.0	-21.0	-21.2	E, 1-2	6	10-15	b	—	—	—	—	—	—	
Noon	29.259	-34.8	-23.0	-21.2	-21.6	-21.5	NE, 2-3	13	15-20	b	—	—	—	—	—	—	Min. temp. at Cape Armitage, -45° 4. Wind E. 2. bf. +. Erebus summit dark, direction of smoke not discernible.
2	29.242	—	-23.4	-23.0	-23.0	-23.5	Calm	14	0	b	—	—	—	—	—	—	
4	29.228	—	-25.8	-21.0	-21.0	-21.2	Calm	1	0	b	—	—	—	—	—	—	
6	29.203	—	-34.2	-28.2	-28.2	-28.0	Lt. E airs	1	0-5	b	—	—	—	—	—	—	Very clear, western mountains visible.
8	29.179	—	-29.0	-26.0	-26.0	-25.2	Calm	4	0	bc	—	—	—	—	A.s. 4, SW	—	Type of cloud doubtful, resembles Cu. lying in streaks N and S, movement distinct across moon.
10	29.164	—	-28.5	-28.0	-28.0	-30.0	Calm	1	0	bc	—	—	—	—	A.s. 4, SW	—	10 p.m. Strong halo, but quickly faded; radius 23° 0. Clear and fine most of the day, with light variable airs. Became misty in the evening. Barometer fell all day. Temperature steady and lower.
Midt.	29.137	—	-32.0	-32.0	-32.0	-34.0	Calm	0	0	bc	—	—	—	—	A.s. 2, SW	—	
Mean	29.248	—	—	-25.0	-25.0	—	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -17° 0. / 8 p. -20° 2. } Solar radiation { black bulb — / bright bulb — } Evapn. { 1.02 / 11.02 / 111.02 } grammes in 24 hours. Precipn. — ln.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
				Dry.	Wet.										
2	29.125	—	-37.0	-37.0	-37.0	-39.0	Calm	0	0	bc	☐	—	A.-s. 5	—	7th. Very broad halo, very distinct. Stars visible through mist. 1 p.m. Temp. at Cape Armitage, -8°·5; min., -46°·5. Wind S, 3, oc. †. Erebus obscured. 2 p.m. Wind variable; very threatening appearance. 4 p.m. Wind very squally; Dines' anemometer very active and difficult to read. 6 p.m. Wind very squally and variable; drift in thermometer box. Overcast most of the day. Calm all the morning; wind rising about noon and blowing very strong, very variable from SE to SW, with heavy squalls and drift. Barometer fell until 2 p.m. and then commenced to rise quickly. Temperature rose quickly in forenoon.
4	29.107	—	-39.5	-28.0	-28.0	-29.0	Calm	0	0	b	☐	—	—	—	
6	29.091	—	-30.2	-30.0	-30.0	-29.8	Calm	0	0	bc	—	—	S.-cu. 4, SW	—	
8	29.054	—	-32.0	-27.0	-27.0	-26.5	Calm	0	0	bc	—	—	S. 4, W	—	
10	29.049	—	-27.5	-14.0	-15.0	-10.5	Calm	1	0	oc	—	—	Thin S. 8	—	
Noon	29.040	—	-16.8	9.5	-10.0	9.2	SE, 1-2	14	8-15	o	—	—	S. 10	-11.6 -13.2 -9.4 -10.5	
2	29.033	—	-11.0	7.3	7.6	6.5	Var. SW, 0-1	12	0-10	oc	—	—	S. 10	-6.5 -7.2	
4	29.121	—	-15.0	-11.5	-12.0	-12.0	Var. SE, 5-9	32	25-55	ocq	+	—	S. 10	-11.2 -12.3	
6	29.133	—	-15.8	-15.0	-15.0	-15.2	Var. E, 3-6	22	22-35	ocq	+	—	S. 10	-15.2 -15.5	
8	29.137	—	-17.8	-16.0	-16.0	-17.0	Var. SW, 5-7	20	28-38	oc	+	—	S. 10	-17.0 -17.0	
10	29.146	—	-16.0	-11.0	-11.0	-11.0	Var. E, 5-6	21	20-30	ocq	+	—	S. 10	—	
Midt.	29.163	—	-12.5	9.0	9.0	9.0	ESE, 3-4	11	15-20	oc	—	—	S. 10	—	
Mean	29.100	—	—	-17.9	-18.1	—	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. -22°·2. 8 p. —.		Solar radiation { black bulb — bright bulb —.		Evapn. { I. 0.8 II. 0.8 III. 1.3 } grammes in 24 hours.		Precipn. — in.							

2	29.167	—	-8.5	-6.0	-6.0	-6.0	ESE, 4-6	18	20-35	ocq	+	—	S. 10	—	8th. Wind shifting from N to S in squalls. Noon. Mlu. temp. at Cape Armitage, -19°·5. Wind ENE to NE, 2-3, oc. †. Erebus obscured. 2 p.m. Heavy drift and doubtful snow falling. Wind variable from S to SE; weather inclined to clear a little. Very doubtful about nature of cloud, and also as to whether it is snowing or not, drift very heavy.
4	29.171	—	-11.5	-10.0	-10.0	-10.0	Var. E, 3-5	20	20-30	ocq	+	*	N. 10	—	
6	29.171	—	-12.5	-10.0	-10.0	-10.0	Var. E, 4-5	20	25-30	oc	+	*	N. 10	—	
8	29.188	—	-18.0	9.0	8.8	9.0	SE, 4-5	24	20-25	ocm	+	—	S.-cu. 10	—	
10	29.138	—	-10.5	9.0	9.0	9.0	Var. E, 3-6	14	20-36	oc	+	—	S. 10	—	
Noon	29.090	-7.5	-10.5	3.2	4.0	3.0	Var., 1	17	10-12	o	*	—	S. 10	-2.9 -3.6	
2	29.085	—	-5.7	5.2	5.5	5.5	S by E, 3-4	20	15-25	of	+	*	N. 10	-5.8 -6.2	
4	29.073	—	-7.5	2.0	2.3	2.0	S, 2-4	17	10-20	ofq	+	—	S. 10	-2.2 -2.9	
6	29.108	—	-6.0	4.8	4.8	5.0	S, 3-5	12	15-30	ofq	+	—	N. 10	-5.1 -5.1	
8	29.116	—	-6.5	2.0	2.0	2.0	SW, 5-8	27	29-40	oc	+	2	N. 10	-2.2 -2.2	
10	29.160	—	-3.8	2.0	2.0	2.0	S by W, 7-10	25	45-68	oc	+	*	N. 10	—	
Midt.	29.250	—	-8.7	7.0	7.0	7.0	Var. SE, 3-6	28	20-38	oc	+	—	N. 10	—	
Mean	29.141	—	—	-5.9	-6.0	—	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. -6°·0. 8 p. -2°·0.		Solar radiation { black bulb — bright bulb —.		Evapn. { I. 2.0 II. 1.7 III. 3.0 } grammes in 24 hours.		Precipn. — in.							
Overcast, with heavy wind, variable in direction and force. In the evening the wind veered to SW and blew a hard blizzard; heavy squalls, and enormous amount of snow drift. Barometer unsteady, inclined to rise towards evening. Temperature much higher, and fluctuating.															

2	29.328	—	-11.0	9.8	9.8	9.8	Var. SE, 2-4	18	15-30	oc	+	2	N. 10	—	9th. Small Dines' anemometer observed to be leaking. The fluid had run out of the Dines' anemometer. Wind very squally and variable between E and SSE. Drift exceedingly thick; squalls exceptionally heavy and variable from S to SW. Very thick drift and snowing (?); wind shifting from S by E to S by W; squalls very heavy. 10 p.m. Overcast all day. Wind blowing a strong gale most of the day from very variable directions between SSW and E, accompanied by exceptionally heavy drift or falling snow, and very squally. Barometer rose until 10 a.m., and then fell quickly for rest of day. Temperature rose rapidly towards evening as wind went to S.
4	29.370	—	-10.0	9.0	9.0	9.0	Var. E, 2-5	17	18-35	oc	+	—	N. 10	—	
6	29.409	—	-10.0	9.2	9.2	9.2	Var. E, 2-6	17	—	oc	+	—	N. 10	—	
8	29.434	—	-11.7	6.0	6.0	6.0	Var. E, 4-6	23	—	oc	+	—	N. 10	—	
10	29.476	—	-7.5	4.0	4.0	4.0	Var. SE, 5-8	22	—	oc	+	2	N. 10	—	
Noon	29.434	—	-4.5	0.0	0.0	0.2	Var. SSW, 8-10	32	—	oc	+	2	N. 10	—	
2	29.443	—	-1.0	4.0	3.6	3.8	S, 2-4	21	—	oc	+	2	N. 10	—	
4	29.401	—	2.0	7.0	7.0	7.0	S by E, 3-5	21	—	oc	+	2	N. 10	—	
6	29.368	—	6.0	8.8	8.8	9.0	S by E, 4-5	21	—	oc	+	2	N. 10	—	
8	29.317	—	7.0	8.0	8.0	8.0	S by E, 6-8	26	—	oc	+	2	N. 10	—	
10	29.237	—	7.0	8.0	8.0	8.0	SSE, 4-5	20	—	oc	+	2	N. 10	—	
Midt.	29.158	—	7.5	11.2	11.2	11.5	S, 4-5	25	—	oc	+	2	N. 10	—	
Mean	29.365	—	—	0.8	0.7	—	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. —. 8 p. —.		Solar radiation { black bulb — bright bulb —.		Evapn. { I. 1.0 II. 1.4 III. 1.6 } grammes in 24 hours.		Precipn. 0.29 in. since 6 p.m. 19th ult.							

1903—June.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

10th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.092	—	11.0	12.0	12.0	SSW, 7-10	33	—	og † <sup>2</sup> *	—	—	N. 10	—	—	Blowing in furious gusts; air so thick with snow that it was impossible to see one's hand at arm's length; screen not visited.  Min. temp. at Cape Armitage, -12° 2'. Wind SE by S, 2-5. Clearing between E and NW; meteor leaving NNE, alt. 13°, appeared to travel N to 10°.  4 p.m. Min. temp. at Cape Armitage, -5° 5'. Wind E by S, 2-4. occq. * †. Erebus obscured.  Similar conditions as yesterday. Impossible to say whether it is snow or only drift, but I presume there is a certain amount of actual snow fall. Barometer fell until 6 a.m., then rose until 10 p.m., and fell again. Temperature high all day, and above zero.	
4	29.045	—	11.5	12.0	12.0	S by W, 7-10	40	—	og † <sup>2</sup> *	—	—	N. 10	—			
6	29.042	—	—	—	—	S, 8-11	48	—	og † <sup>2</sup> *	—	—	N. 10	—			
8	29.142	—	7.0	9.0	9.0	S, 6-7	40	—	o † <sup>2</sup> *	—	—	N. 10	—			
10	29.239	—	4.0	4.6	4.4	S, 3-5	21	—	og	—	—	N. 10	—			
Noon	29.304	0.2	0.0	1.0	1.0	SE, 3-5	12	—	bcq †	—	—	Fr.-s. 5, SE (fast)	—			
2	29.392	—	1.3	0.0	0.0	E, 2-3	13	—	of	—	—	S. 10	—			
4	29.422	0.6	3.6	2.0	2.0	Var. E, 2-4	13	—	og	—	—	N. 10	—			
6	29.420	—	0.8	2.8	2.8	E by N, 3-5	17	—	og *	—	—	N. 10	—			
8	29.453	—	1.0	2.0	2.0	E, 2-3	14	—	og *	—	—	N. 10	—			
10	29.459	—	1.0	4.0	4.0	ENE, 3	14	—	og	—	—	S.-cu. 10	—			
Midt.	29.445	—	3.0	8.0	7.0	ENE, 3	12	—	og	—	—	S.-cu. 10	—			
Mean	29.288	—	—	5.2	5.1	—	—	—	—	—	—	—	—	—		

Max. therm. { 8 a. 12° 0.  
read at { 8 p. 8° 0. Solar radiation { black bulb —,  
bright bulb —. Evapn. { I. 1.3 } grammes in  
11. 0.8 } 24 hours. Precipn. 0.02 in. since 4 p.m. 9th.

11th.

2	29.428	—	6.5	10.8	10.5	10.8	E by N, 2	10	—	og	—	—	S. cu. 10	—	Midt. to 6 a.m. Very gloomy and threatening, but clear, western range being visible.  Fine hard snow falling.  Suowing very hard; flakes large, soft and damp. Noon. Min. temp. at Cape Armitage, -0° 6'. N. 10. † *. Snowflakes hard and small. Wind ESE, 1-2. 2 p.m. Snow gauge completely buried, raised and cleared it. Snow falling thickly in hard flakes. Between 4 and 6 p.m. wind fell to force 1, then veering to SE came up in strong squalls. 8 p.m. A gust on going out; there was an exceptionally heavy squall from SE, force 9-10, with dense drift; on reaching screw wind was 2-4, and shortly afterwards another very heavy squall from SE. Temperature was 15°.
4	29.382	—	10.5	15.0	14.0	15.0	E, 3	4	—	og	—	—	S.-cu. 10	—	
6	29.355	—	13.5	17.0	16.0	17.0	E, 1-2	14	—	og *	—	—	N. 10	—	
8	29.390	—	5.0	9.0	8.8	9.0	E by N, 2-4	19	—	o †	—	—	N. 10	—	
10	29.434	—	5.0	5.8	5.2	5.5	E, 2-3	9	—	om † *	—	—	N. 10	—	
Noon	29.486	8.5	4.0	8.0	8.0	8.0	E, 1-2	18	—	om † *	—	—	N. 10	—	
2	29.562	—	4.8	9.0	9.0	9.3	E by N, 2-3	18	—	of † *	—	—	N. 10	—	
4	29.600	—	6.0	9.8	9.8	10.2	Var. E, 2-3	10	—	of † *	—	—	N. 10	—	
6	29.611	—	8.7	11.6	11.6	12.0	SE, 4-6	16	—	ocf † <sup>2</sup> *	—	—	N. 10	—	
8	29.613	—	10.0	15.0	14.0	14.2	Var. E, 4-9	17	—	og † <sup>2</sup> *	—	—	N. 10	—	
10	29.620	—	11.0	13.0	12.9	13.0	S, 5-7	25	—	ocf † <sup>2</sup> *	—	—	N. 10	—	
Midt.	29.713	—	8.5	9.1	9.0	9.0	Var. E, 3-5	20	—	ocqf † *	—	—	S. 10	—	
Mean	29.516	—	—	11.1	10.7	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 17° 0.  
8 p. —. Solar radiation { black bulb —,  
bright bulb —. Evapn. { I. 2.1 } grammes in  
11. 3.4 } 24 hours. Precipn. — in.

dropped to 14° as wind dropped, and then rose to 15° again as wind rose. Midt. Clearing a good deal, and less drift and fog. Very similar conditions as for the last two days. Wind fell slightly during the early morning, but rose again strong from various SW and SE points in the evening. Barometer fell until 6 a.m., and then rose for rest of day. Temperature remained above zero all day.

12th.

2	29.752	—	—	4.8	4.2	6.3	ESE, 3-4	16	—	ocq †	—	—	S. 10	—	Clearing generally.  Clearing rapidly; heavy Str. to W; moon misty. Str. to W and SW moving in a W by direction. Noon. Min. temp. at Cape Armitage, -9° 7'. Wind E by S, 1. Erebus' summit obscured. 2 p.m. Str. on S horizon; snow gauge choked. 4 p.m. Faint aurora, only visible now and then. 4 p.m. Min. temp. at Cape Armitage, -14° 2'. Wind E by N, 2-3. Erebus obscured in mist; dark water sky cloud to N. †. Small corona. 7 p.m. - Observed bright and large flame rise up high from Erebus, followed by a glow, and then a thick column of smoke; smoke going NE. Wind remained strong until about 10 a.m., then it gradually fell and sky cleared. Barometer rose until 4 p.m., and then fell slowly. Temperature fell gradually as wind dropped.
4	29.748	—	5.2	6.2	5.8	6.5	E by N, 5-6	8	—	ocq †	—	—	S. 10	—	
6	29.760	—	0.4	0.5	0.2	0.2	E by N, 7-8	19	—	ocq †	—	—	S. 10	—	
8	29.795	—	4.0	2.0	2.0	2.0	E, 4-5	21	—	oc	—	—	S. 10	—	
10	29.825	—	4.5	3.8	4.0	4.0	E, 2-3	13	—	bm	—	—	—	—	
Noon	29.836	8.5	4.7	0.0	1.0	0.0	E, 2	12	—	b ☉	—	—	—	0.0	
2	29.838	—	3.2	1.6	1.6	1.5	ENE, 1-2	15	—	b	—	—	—	-1.1	
4	29.838	4.2	2.0	1.8	0.5	2.3	ENE, 2	16	—	b ☉	—	—	—	-1.8	
6	29.837	—	2.0	1.0	1.0	1.5	Lt. E airs, 0-1	8	—	b ☉	—	—	—	-2.6	
8	29.835	—	6.5	4.0	5.0	3.0	ESE, 1	6	12	b	—	—	—	-0.7	
10	29.823	—	5.5	1.8	2.2	2.0	Lt. NE airs	5	5-7	b	—	—	—	-2.2	
Midt.	29.793	—	22.0	15.0	15.2	15.5	Calm	0	0	b	—	—	—	-2.9	
Mean	29.807	—	—	1.3	1.8	—	—	—	—	—	—	—	—	-4.2	

Max. therm. read at { 8 a. 14° 0.  
8 p. —. Solar radiation { black bulb —,  
bright bulb —. Evapn. { I. 7.1 } grammes in  
11. 5.6 } 24 hours. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, sec p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.760	—	-24.5	-23.0	-23.0	-23.5	Calm	0	0	b	—	—	—	<p>13th.</p> <p>Anemometer glass covered with fern-like structures. Outside thermometer coated with rime. All rime gone; very faint corona.</p> <p>9 a.m. Nly breeze blowing, force 1-2.</p> <p>Visiblity markedly good.</p> <p>Noon. Min. temp. at Cape Armitage, -32° 5. Calm. ob. Low fog between W and S close to land; rime on thermometer.</p> <p>2 p.m. Bank of Str. on S and SW horizon.</p> <p>4 p.m. Min. temp. at Cape Armitage, -29° 5. Wind E, 1. bn. Mt. Erebus obscured by haze; frost rime on thermometer.</p> <p>6 p.m. Heavy surface drift running from Cape Armitage towards W.</p> <p>10 p.m. Western mountains faintly visible; low drift in Strait; small detached clouds to S.</p> <p>Midt. All distant land very distinct; no drift. Calm most of the day and clear. Wind sprang up in the evening from a easterly direction and blew very fresh. Barometer rising and falling in regular waves. Temperature very unsteady.</p>	
4	29.707	—	-24.5	-17.0	-18.0	-13.0	Calm	0	0	b	—	—	—		
6	29.662	—	-18.0	4.5	3.5	3.8	Lt. N alra	4	0-8	b	—	—	—		
8	29.631	—	-4.8	-4.0	-4.0	-5.0	Calm	3	0	b	—	—	—		
10	29.613	—	-4.8	2.2	1.8	1.3	Calm	8	0	b	—	—	—		
Noon	29.610	-11.6	-5.0	-3.0	-2.5	-3.1	Calm	1	0	b	—	—	—		
2	29.618	—	-5.0	-1.0	-1.6	-1.0	Calm	1	0	b	—	—	—		
4	29.636	-25.5	-4.5	-3.0	-3.4	-4.0	Lt. E airs	5	0	b	—	—	—		
6	29.651	—	-8.5	-1.0	-1.6	0.0	Var., 1-3	3	10-23	bq	—	—	-2.2		
8	29.659	—	-4.5	-2.8	-3.0	-4.0	E, 3-4	13	12-25	b	—	—	-3.8		
10	29.651	—	-4.8	-2.2	-2.8	-3.0	E by N, 2-4	17	15-25	bq	—	—	-4.2		
Midt.	29.655	—	-7.5	-4.0	-4.2	-3.6	SE, 2-3	16	12-17	b	—	—	-2.6		
Mean	29.654	—	—	-4.5	-4.9	—	—	—	—	—	—	—	-3.6		
<p>Max. therm. read at { 8 a. 49° 0. / 8 p. 59° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { 1. 2.4 / 11. 3.4 / 111. 5.2 } grammes in 24 hours. Precipn. — in.</p>															

2	29.661	—	-11.5	-3.6	-4.2	-2.0	SE, 1-2	8	10-15	b	—	—	-6.5	<p>14th.</p> <p>One bright aurora streamer passing through zenith N by E to S by W.</p> <p>Drifting heavily; land obscured except close to ship. Heavy Cu. to N.</p> <p>Detached Cu. to W passing to S fast; drift from hill-tops. S.-cu. radiating NW and SE. 1.20 p.m. Temp. at Cape Armitage, -15° 5; min., -33° 0. Wind ENE, 3-4. A.-fr.-str. 7. oc. Cloud 9000 ft. obscuring Erebus' summit; rime on thermometer.</p> <p>2 p.m. Heavy bank of S.-cu. over western mountains.</p> <p>4 p.m. Min. temp. at Cape Armitage, -19° 2. Wind E by S, 1. oc. Erebus obscured.</p> <p>6 p.m. Wind varying from SE to W, and calm at times.</p> <p>Midt. Sky clearing to S and SW.</p> <p>Fresh Ely wind all day, falling in evening. Clear until 2 p.m., and then overcast. Barometer rising all day. Temperature steady, but still remaining high.</p>
4	29.659	—	-10.5	-5.2	-5.8	-5.8	E, 2-3	15	12-17	b	—	—	-6.7	
6	29.663	—	-11.7	-10.5	-10.0	-11.0	E, 5-6	17	25-38	b	—	—	-5.1	
8	29.685	—	-11.5	-5.0	-4.5	-5.0	E, 4-5	26	25-30	bc	—	A.-cu. 3, N (fast)	-5.8	
10	29.717	—	-8.0	-7.8	-8.0	-8.0	E, 4-6	15	20-35	b	—	—	-8.0	
Noon	29.759	—	-14.0	-9.0	-10.0	-9.4	E, 5-6	19	25-36	bc	—	Fr.-a.-cu.-s. 4, N (fast)	-8.3	
2	29.814	—	-10.0	-6.0	-6.2	-5.5	E, 1-3	18	10-25	bcq	—	Fr.-s.-cu. 4, NE	-9.4	
4	29.842	-12.6	-8.5	-7.4	-7.4	-7.6	ESE, 2-3	9	10-20	oc	—	S.-cu. 10	-9.8	
6	29.897	—	-7.7	-4.5	-5.0	-4.5	Var., 1-2	10	5-12	o	—	S.-cu. 10	-6.5	
8	29.932	—	-6.5	-4.0	-4.8	-4.2	SE, 2-3	8	12-20	o	—	S. 10	-7.2	
10	29.982	—	-5.8	-5.0	-5.3	-4.5	SSW, 1-2	14	5-10	o	—	S. 10	-7.6	
Midt.	30.002	—	-0.3	-6.0	-6.3	-6.0	Lt. SE by S airs	5	0	oc	—	—	-8.3	
Mean	29.801	—	—	-6.2	-6.5	—	—	—	—	—	—	—	-3.6	
<p>Max. therm. read at { 8 a. 09° 2. / 8 p. -4° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { 1. 2.1 / 11. 2.2 / 111. 3.6 } grammes in 24 hours. Precipn. — in.</p>														

2	30.002	—	-9.5	-9.0	-9.2	-9.6	Calm	0	0	bc	—	S. 6	-8.7	<p>15th.</p> <p>Narrow layer of Str. lying to W and SW; Fr.-s. to S.</p> <p>Heavy bank of clouds to S and SW; Fr.-s. to W.</p> <p>Noon. Min. temp. at Cape Armitage, -26° 2. Wind NW, 1. b. Erebus smoke going NEly.</p> <p>4 p.m. Faint aurora to SE.</p> <p>4 p.m. Min. temp. at Cape Armitage, -27° 0.</p> <p>6 p.m. Faint streamers in E and ESE.</p> <p>8 p.m. Heavy bank of clouds SE to NW through S; temperature falling quickly during observation.</p> <p>Calm and clear most of the day. Barometer falling steadily. Temperature decreasing slowly.</p>
4	30.006	—	-12.7	-9.8	-10.0	-10.0	Calm	0	0	bc	—	S. 4	-9.0	
6	30.003	—	-10.5	-9.0	-9.2	-10.0	Calm	0	0	bc	—	Fr.-s. 3	-10.7	
8	29.988	—	-14.5	-6.0	-6.0	-7.8	N, 1-2	4	10-12	b	—	—	-11.0	
10	29.971	—	-7.5	-3.0	-3.8	-3.0	N, 1-2	6	8-12	b	—	—	-9.4	
Noon	29.963	-11.2	-6.0	-5.5	-6.0	-6.2	N, 1	6	0-10	b	—	—	-9.9	
2	29.931	—	-9.8	-6.0	-6.5	-7.0	Lt. N airs	0	0	b	—	—	-3.3	
4	29.909	-23.7	-17.0	-17.0	-17.0	-17.5	Calm	3	0	b	—	—	-4.2	
6	29.887	—	-19.8	-19.0	-19.0	-19.3	Calm	0	0	b	—	—	-6.0	
8	29.877	—	-27.0	-23.2	-24.0	-23.0	Calm	0	0	b	—	—	-6.9	
10	29.851	—	-25.5	-10.0	-10.2	-10.0	E by S, 1	5	0-5	bc	—	Fr.-a.-s. 4	-7.2	
Midt.	29.868	—	-26.0	-10.2	-10.6	-11.0	E by S, 2	5	5-15	bq	—	—	-8.3	
Mean	29.938	—	—	-10.6	-11.0	—	—	—	—	—	—	—	-15.5	
<p>Max. therm. read at { 8 a. -4° 0. / 8 p. -32° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { 1. 3.0 / 11. 3.1 / 111. 5.6 } grammes in 24 hours. Precipn. — in.</p>														

1903—June.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

16th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.					
			Spirit minimum.	Dry.									Wet.				
2	29.868	—	-23.0	-11.0	-11.0	-12.0	E by N, 4-5	17	10-25	b	—	—	—	—	—		
4	29.854	—	-22.0	-11.0	-11.0	-12.0	E by N, 6-7	18	20-40	b ↗	—	—	—	—	—		
6	29.873	—	-22.0	-10.8	-10.8	-11.0	E, 6-7	23	30-50	b ↗	—	—	—	—	Faint auroral streamers in SE.		
8	29.881	—	-8.0	-6.0	-6.2	-7.0	SE, 2-3	16	10-15	b	—	—	—	—	—		
10	29.955	—	-10.5	-7.0	-8.0	-7.0	E, 2-3	12	10-20	b ↗	—	Det. Fr.-s. 2, S (mod.)	-7.6	—	Heavy bank of clouds to N moving slowly to N.		
Noon	29.967	-13.0	-8.7	-7.5	-8.0	-7.8	ESE, 1-2	9	8-14	b	—	—	-8.0	—	Detached Str. to W moving to N (mod.); bank to NW extending to NE; western mountains seem clear of cloud.		
2	29.983	—	-9.5	-8.2	-9.0	-10.5	Calm	7	0	b	—	—	-8.7	—	Noon. Min. temp. at Cape Armitage, -37° 0. Wind E, 1, bc. Mt. Erebus obscured; clouds to N.		
4	29.989	-25.0	-11.7	-8.5	-9.0	-8.5	E, 0-1	5	0-10	b ↘	—	—	-10.5	—	2 p.m. Fr.-s. to S and detached Cu. to N.		
6	29.999	—	-13.3	-9.0	-9.0	-8.6	ESE, 1	9	5-10	b ↘	—	—	-11.6	—	4 p.m. Min. temp. at Cape Armitage, -31° 0.		
8	30.007	—	-11.5	-10.2	-10.8	-10.8	NE, 1-2	5	10-15	b	—	—	-10.8	—	8 p.m. Faint arch of streamers SE to SW through S, alt. 40°.		
10	30.007	—	-12.9	-11.2	-11.7	-11.6	NE, 3	16	10-20	b ↘	Fr.-ci.-s. 4	—	-11.4	—	Midt. Ci.-s. spreading up from the E.		
Midt.	30.006	—	-19.2	-11.0	-11.5	-11.5	Lt. NE airs	5	0	b ↘	Fr.-ci. s. 5	—	-12.3	—	—		
Mean	29.949	—	—	-9.3	-9.7	—	—	—	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. -2° 0. / 8 p. -6° 0. }												Solar radiation { black bulb — / bright bulb — }		Evapn. { I. 2.2 / II. 2.3 / III. 3.7 } grammes in 24 hours.		Precipn. — in.	

Strong Ely wind early, falling later. Sky remaining clear most of the day. Barometer steady and inclined to rise. Temperature steady.

17th

2	30.002	—	-20.2	-14.7	-15.0	-15.0	NE, 2-3	5	15	b	—	—	—	—	—	Extensive arch from N to S across zenith plainly visible in brilliant moonlight for about 3 minutes.	
4	29.994	—	-16.1	-15.2	-15.3	-15.6	NE, 3-4	18	20-25	b	—	—	—	—	—		
6	29.972	—	-18.0	-17.3	-17.5	-17.6	NE, 4-5	21	30-33	b ↗	—	—	—	—	—		
8	29.951	—	-20.5	-17.0	-17.0	-17.0	NE, 4-7	29	25-42	ocq	—	S.-cu. 8	—	—	—		
10	29.946	—	-18.0	-17.2	-17.6	-17.5	NE, 5-7	21	25-40	ocq ↗	—	S. 10	-17.9	—	Min. temp. at Cape Armitage, -30° 2. Wind E by N, 3-4. ocq. ↗. Erebus obscured.		
Noon	29.935	-24.5	-18.0	-16.0	-16.2	-16.2	NE, 5-6	21	25-35	ocq	—	S. 10	-18.0	—	—		
2	29.911	—	-16.0	-14.4	-15.0	-14.0	E by N, 3-4	19	20-30	o	—	S. 10	-16.6	—	—		
4	29.906	-23.4	-15.0	-10.0	-10.5	-9.8	E by N, 2-3	18	12-20	o	—	Thin S. 10	-16.8	—	Min. temp. at Cape Armitage, -24° 3. Wind SE by E, 1. Str. 10. Fine crystals falling. 4, 6, 8 p.m. and Midt. Suow crystals falling.		
6	29.901	—	-10.5	-9.5	-9.5	-10.0	Lt. NE airs	10	0	oc *	—	Very thin S. 10	-14.1	—	—		
8	29.897	—	-18.0	-17.6	-17.6	-18.0	Calm	1	0	bm *	—	—	-14.8	—	—		
10	29.884	—	-20.6	-19.7	-19.5	-20.0	Lt. NW airs	1	0	bm *	—	—	-7.6	—	—		
Midt.	29.886	—	-23.4	-22.9	-23.0	-24.0	Calm	2	0	oc *	—	Lt. A.-cu. 8	-9.0	—	Faint aurora ESE, alt. 6° to 10°.		
Mean	29.932	—	—	-16.0	-16.1	—	—	—	—	—	—	—	-7.2	—	—		
Max. therm. read at { 8 a. -10° 5. / 8 p. -9° 0. }												Solar radiation { black bulb — / bright bulb — }		Evapn. { I. 2.4 / II. 2.5 / III. 4.5 } grammes in 24 hours.		Precipn. — in.	

Very strong NEly wind up to noon, when it fell and gradually became calm. Overcast most of the day, but clear early and clearing again later. Barometer falling steadily all day. Temperature lower, and inclined to fall.

18th.

2	29.885	—	-23.5	-18.8	-18.9	-18.8	Lt. NE airs	2	0	oc	—	Lt. Cu. 10	-18.0	—	Faint arch from E, alt. 3°, to S, alt. 6°; apex ESE, 11°.		
4	29.877	—	-19.1	-13.9	-14.0	-14.1	Lt. NE airs	4	0	oc	—	Lt. Cu. 10	-17.9	—	Faint patches of aurora, NE to E, 8° to 20°.		
6	29.871	—	-15.8	-15.2	-15.3	-15.7	E, 1	6	8-10	oc *	—	Det. Cu. 7	-15.5	—	Very fine snow crystals falling.		
8	29.870	—	-19.0	-19.0	-19.0	-19.0	ESE, 1	3	8-10	b ↘	—	Cu. 2	-15.2	—	—		
10	29.870	—	-21.0	-20.0	-20.0	-21.0	Calm	3	0	b ↘	—	—	-20.9	—	Bright aurora streamers in SE, NE, and N; part of coroua near zenith.		
Noon	29.873	-41.5	-29.5	-18.1	-18.2	-19.0	Lt. E airs	4	0	b ↘	—	—	-20.9	—	Noon. Min. temp. at Cape Armitage, -43° 0. Wind ESE, 0-1. b. Erebus smoke going NEly, small quantity.		
2	29.883	—	-21.0	-18.0	-18.0	-17.5	ESE, 0-1	7	0	b	—	—	-19.8	—	4 p.m. Min. temp. at Cape Armitage, -47° 3.		
4	29.885	-46.4	-33.0	-21.4	-21.2	-22.0	Lt. E airs	4	0	b ↘	—	—	-19.8	—	—		
6	29.901	—	-30.8	-21.0	-21.0	-22.5	S, 0-1	4	5-10	b ↘	—	—	-22.0	—	—		
8	29.917	—	-28.0	-24.2	-25.0	-24.8	Calm	1	0	b	—	—	-23.4	—	Temperature was very "jumpy" during the observation, and a few minutes afterwards the mercury in the aspirator was below the scale. Practically during all the afternoon there was a bright and extensive aurora low down extending from behind Mt. T error to the N end of White Island; at times streamers rose to 5° alt. and were very bright; movement laterally, very rapid in		
10	29.958	—	-35.0	-34.8	-34.7	-36.0	Calm	1	0	b	—	—	-23.8	—	—		
Midt.	29.956	—	-42.0	-36.2	-36.2	-37.0	Calm	1	0	b	—	—	-22.7	—	Mercury below scale from 10 p.m. to midt.		
Mean	29.896	—	—	-21.7	-21.8	—	—	—	—	—	—	—	-22.7	—	—		
Max. therm. read at { 8 a. -13° 0. / 8 p. — }												Solar radiation { black bulb — / bright bulb — }		Evapn. { I. 0.8 / II. 0.7 / III. 1.4 } grammes in 24 hours.		Precipn. — in.	

both directions. 10 p.m. Bright and extensive aurora and rapid movement. Midt. Bright and extensive aurora, extending from ENE to SSW; fine arch from ESE to SSE, 8° alt. in centre. Light airs and calms all day; overcast early, then clearing and remaining clear. Barometer fell a little, and, after being steady for 8 hours, rose quickly. Temperature lower, and falling unsteadily.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.932	—	-41.5	-41.0	-40.7	-42.1	Calm	1	0	b	—	—	—	Extensive aurora ENE to SSW. 19th. Faint streamers N by E to NNW. Faint aurora SE to SSE. Faint aurora SE to ESE. Temperature very jumpy; a few minutes after taking observation the aspirator mercury was below the scale and temperature was -29°; the N by air, which blew at times, seemed to raise the temperature instantaneously. Noon. Min. temp. at Cape Armitage, -51°5. Calm. bn. Erebus smoke going Ely. 2 p.m. Temperature very changeable. 4 p.m. Brilliant auroral display rising in perpendicular streamers low to southwards, and extending to E in horizontal streak of faint greenish tint. 4 p.m. Min. temp. at Cape Armitage, -46°6. Extensive
4	29.967	—	-41.0	-37.7	-37.7	-39.0	Calm	0	0	b	—	—	2 to 6 a.m. Mercury below scale	
6	29.973	—	-39.0	-28.0	-28.2	-28.0	Very lt. var. alrs	2	0-5	b-l	—	—	Mercury below scale	
8	29.981	—	-41.8	-41.2	-41.2	-42.0	Calm	1	0	b-l	—	—	Mercury below scale	
10	29.989	—	-40.8	-32.2	-32.5	-33.0	Calm	1	0	b-l	—	—	Mercury below scale	
Noon	29.991	-46.5	-33.2	-18.0	-17.0	-17.5	Lt. N alrs	1	0-8	b-l	—	—	Mercury below scale	
2	29.990	—	-35.2	-33.0	-33.0	-24.0	Lt. N alrs	6	0-8	b-l	—	—	Mercury below scale	
4	29.986	-32.5	-33.0	-11.2	-12.0	-11.5	N, 1-2	6	10-15	b-l	—	—	Mercury below scale	
6	29.982	—	-33.6	-23.8	-23.8	-24.0	Lt. NW alrs	5	10-13	b-l	—	—	Mercury below scale	
8	29.979	—	-24.0	-12.0	-13.0	-13.8	Lt. N alrs	4	0-10	b	—	—	Mercury below scale	
10	29.979	—	-16.6	-15.9	-16.0	-17.0	Lt. N alrs	8	0-5	b	—	—	Mercury below scale	
Midt.	29.962	—	-19.5	-11.2	-12.0	-11.9	Lt. N alrs	7	4-8	b	—	—	Mercury below scale	
Mean	29.976	—	—	-25.3	-25.6	—	—	—	—	—	—	—	Mercury below scale	

Max. therm. read at { 8 a. —, 8 p. —. Solar radiation { black bulb —, bright bulb —. Evapn. — grammes. Precipn. — in.

aurora from E to S, alt. 10° to 20°. 8 p.m. Bright arch of streamers NE to SE, alt. 9° to 15°. 10 p.m. Disconnected auroral curtain in S and SE, alt. 30° to 40°. Midt. Auroral glow persistent on the N side of Crater Hill. Faint glow in S. Calms and light alrs, and a perfectly clear sky all day. Barometer rose until 2 p.m., and then commenced to fall. Temperature very unsteady.

2	29.946	—	-22.2	-12.0	-12.5	-12.5	N, 1	6	10-15	b	—	—	—	Bright aurora from E to SE. 20th. Extensive aurora in E, very diffused. Faint aurora from E to SE. Min. temp. at Cape Armitage, -45°0. Calm. bn. Smoke from Erebus going NW after rising in thick column 2000 feet. 4 p.m. Min. temp. at Cape Armitage, -45°0. Much rime on thermometer, post, &c. 6 p.m. Auroral display in E horizon. 10.30 p.m. Extremely bright auroral arch extending from ENE to WSW right through the zenith, of greenish tint, very broad in zenith, narrowing at the extremes. Calm all day, with the same clear sky. Barometer falling all day. Temperature still very unsteady and low.
4	29.931	—	-22.0	-19.2	-20.0	-19.0	Calm	4	0	b	—	—	—	
6	29.915	—	-28.2	-25.0	-25.0	-26.2	Calm	1	0	b-l	—	—	—	
8	29.899	—	-28.2	-13.0	-13.0	-14.0	N by E, 1-2	6	5-10	b	—	—	—	
10	29.883	—	-26.0	-21.0	-21.0	-21.8	Calm	1	0	b	—	—	—	
Noon	29.875	-35.0	-28.5	-14.2	-15.2	-15.0	Lt. N alrs	2	0-10	b-l	—	—	—	
2	29.859	—	-33.2	-33.0	-33.0	-31.0	Calm	1	0	b-l	—	—	—	
4	29.826	-38.0	-40.5	-40.0	-39.0	-42.0	Calm	0	0	b-l	—	—	Mercury below scale from 2 to 8 p.m.	
6	29.800	—	-43.5	-34.0	-36.0	-33.0	Calm	0	0	b-l	—	—	Mercury below scale	
8	29.784	—	-40.5	-38.0	-37.5	-40.0	Calm	0	0	b-l	—	—	Mercury below scale	
10	29.744	—	-40.0	-36.0	-35.5	-38.0	Calm	0	0	b-l	—	—	Mercury below scale	
Midt.	29.727	—	-41.2	-37.8	-37.8	-39.0	Calm	0	0	b-l	—	—	Mercury below scale	
Mean	29.849	—	—	-26.9	-27.1	—	—	—	—	—	—	—	Mercury below scale	

Max. therm. read at { 8 a. -10°0, 8 p. -13°8. Solar radiation { black bulb —, bright bulb —. Evapn. { 1. 1'2, 11. 1'4, 111. 2'2 } grammes in 24 hours. Precipn. — in.

2	29.681	—	-38.5	-34.8	-34.8	-35.0	Calm	0	0	b-l	—	—	—	Very bright arch from S to NNW, alt. 30°. 21st. Unscreened thermometer thickly coated with rime. 12.45 p.m. Temp. at Cape Armitage, -43°0; min. -48°2. ENEly alrs. Erebus smoke going Nly in very small quantity. 4 p.m. Aurora in SE, very frequent. 4 p.m. Min. temp. at Cape Armitage, -43°0. Calm. b. Erebus clear, but too dark to see smoke. Fine in SE. 6 p.m. All rime disappeared from instruments. 8 p.m. Bright streamer rising to zenith from E, and very broad; faint arch to S. Midt. Streamers from N to S, brightest to N.
4	29.649	—	-35.0	-30.0	-30.0	-28.8	Calm	0	0	b-l	—	—	—	
6	29.619	—	-32.0	-28.0	-28.0	-28.0	Calm	0	0	b-l	—	—	—	
8	29.578	—	-33.0	-26.0	-26.0	-26.0	Calm	3	0	b-l	—	—	—	
10	29.578	—	-30.0	-26.5	-26.2	-28.0	Calm	1	0	b-l	—	—	Mercury below scale	
Noon	29.586	—	-28.0	-21.0	-21.0	-20.5	Lt. NE alrs	2	0	b-l	—	—	Mercury below scale	
2	29.556	—	-25.4	-25.0	-25.0	-27.0	Lt. N alrs	4	0	b-l	—	—	Mercury below scale	
4	29.554	-39.0	-34.3	-23.6	-23.0	-23.3	Calm	2	0	b-l	—	—	Mercury below scale	
6	29.550	—	-23.4	-13.5	-14.0	-14.5	E, 1-2	4	10-20	b	—	—	Mercury below scale	
8	29.548	—	-17.5	-12.0	-13.0	-12.0	E, 1	10	10-12	b	—	—	Mercury below scale	
10	29.518	—	-14.5	-11.0	-11.0	-11.0	E by N, 2-3	9	10-18	b	—	—	Mercury below scale	
Midt.	29.488	—	-17.0	-15.0	-15.0	-15.0	E, 4-5	17	30-35	b	—	—	Mercury below scale	
Mean	29.575	—	—	-22.2	-22.3	—	—	—	—	—	—	—	Mercury below scale	

Max. therm. read at { 8 a. -16°0, 8 p. -12°0. Solar radiation { black bulb —, bright bulb —. Evapn. — grammes. Precipn. — in.

Calm most of the day, but towards midnight wind sprang up strong and freshened from E. Sky still persistently clear. Barometer falling all day. Temperature rose with the wind.

1903—June.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Spirit minimum.		Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.			Upper.	Lower.
			Dry.	Wet.	Unscreened.										
22nd.	2	29.485	—	-19.0	-19.0	-19.0	-19.0	E, 6-7	23	35-40	b ↗	—	—	—	—
	4	29.483	—	-20.0	-17.0	-17.0	-17.0	E, 3-4	13	15-20	b ↗	—	—	—	—
	6	29.447	—	-17.0	-15.0	-15.0	-15.0	E, 0-1	11	0-5	b	—	—	—	—
	8	29.445	—	-23.0	-23.0	-21.8	-24.0	Lt. SE airs	9	0-5	b	—	—	—	—
	10	29.402	—	-28.0	-27.5	-27.5	-28.0	Calm	3	0	b	—	—	—	—
	Noon	29.331	-41.4	-41.0	-40.5	-40.5	-42.0	Calm	1	0	b	—	—	—	—
	2	29.326	—	-41.0	-38.0	-38.0	-37.0	Calm	0	0	b	—	—	—	Mercury below scale from 10 a.m. to 8 p.m.
	4	29.312	-48.2	-41.8	-34.5	-34.5	-35.0	Calm	0	0	b ↓	—	—	—	2 p.m. Brilliant aurora to SE; streamers to 20° (alt.) and bright glow below hills; splendid curtain to 40° alt.
	6	29.267	—	-43.5	-43.0	-43.0	-44.0	Calm	0	0	b ↓	—	—	—	4 p.m. Min. temp. at Cape Armitage, -50° 5. Light SW airs. Very bright NE to SE; too dark to see smoke from Erebus.
	8	29.247	—	-43.8	-35.0	-35.0	-37.3	Lt. SE airs	2	0-8	b ↓	—	—	—	—
	10	29.238	—	-47.0	-46.8*	Frozen	-46.0	Calm	0	0	b ↓	—	—	—	—
	Midt.	29.210	—	-43.0	-38.0	-38.0	-38.0	Calm	0	0	b ↓	—	—	—	—
	Mean	29.354	—	—	-31.2	—	—	—	—	—	—	—	—	—	4 and 6 p.m. Faint aurora in NE.

Max. therm. read at { 8 a. —, 8 p. -18° 8. Solar radiation { black bulb —, bright bulb —. Evapn. { I. 1.6, 11. 1.5, 111. 2.4 } grammes in 24 hours. Precipn. — in.

early, falling quickly and remaining calm, with bright clear sky all day. Barometer continued to fall all day. Temperature much lower and steadier. \* Mercury frozen, reading is from spirit minimum thermometer.

23rd.	2	29.189	—	-44.0	-43.0	-43.0	-43.0	Calm	1	0	b ↓	—	—	—	—
	4	29.168	—	-44.0	-31.0	-31.0	-31.0	Calm	0	0	b ↓	—	—	—	—
	6	29.148	—	-43.0	-42.8	-42.8	-42.8	Calm	0	0	b ↓	—	—	—	Very faint aurora ESE to E.
	8	29.122	—	-43.0	-42.0	-42.0	-42.0	Calm	0	0	b ↓	—	—	—	—
	10	29.116	—	-44.0	-32.5	-34.0	-34.0	Calm	0	0	b ↓	—	—	—	—
	Noon	29.110	-48.9	-41.0	-40.0	-40.0	-40.0	Calm	1	0	b ↓	—	—	—	Mercury below scale from 10 a.m. to 4 p.m.
	2	29.108	—	-42.5	-31.0	-32.0	-30.0	Calm	0	0	b ↓	—	—	—	Min. temp. at Cape Armitage, -50° 5. Wind E, 3. Frost rime on thermometer.
	4	29.128	-35.5	-32.2	-25.2	-26.0	-24.5	NNE, 1-2	4	15-23	b ↓	—	—	—	Min. temp. at Cape Armitage, -50° 5. Wind E, 3. Frost rime on thermometer.
	6	29.163	—	-25.0	-16.3	-16.6	-15.0	NE, 1-3	11	15-28	bq	—	—	—	6 p.m. Time disappeared.
	8	29.192	—	-30.0	-25.0	-26.0	-26.0	Lt. var. airs	12	0-8	b	—	—	—	8 p.m. Temp. very jumpy, being -16° 0 when first seeing thermometer, then falling to -30° 0, then rising again. Took thermometer observation after the others and when temperature was steadier. The wet bulb was at times higher than the dry, and the mercury thermometer showed a lower temperature than
	10	29.195	—	-30.5	-22.2	-23.0	-22.0	ENE, 1	5	2-5	b	—	—	—	others and when temperature was steadier. The wet bulb was at times higher than the dry, and the mercury thermometer showed a lower temperature than
	Midt.	29.245	—	-35.5	-34.0	-33.5	-34.0	Lt. var. airs	2	0	b	—	—	—	Mercury below scale
	Mean	29.157	—	—	-32.1	-32.5	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. -21° 0, 8 p. -14° 5. Solar radiation { black bulb —, bright bulb —. Evapn. — grammes. Precipn. — in.

the spirit. 10 p.m. Aurora in S and E. Midt. Extensive aurora; bright patches reaching to zenith, arising from N, W and S. Brilliant arc in S. Calm all day, with clear sky. Barometer fell until 2 p.m., and then rose quickly. Temperature lower and unsteady.

24th.	2	29.288	—	-40.5	-18.2	-17.8	-18.2	Calm	2	0	b	—	—	—	-18.4
	4	29.308	—	-41.0	-28.2	-28.2	-29.0	Calm	2	0	b	—	—	—	-19.5
	6	29.297	—	-38.0	-17.2	-18.0	-19.0	E, 2	3	10-12	b	—	—	—	Mercury below scale -19.8
	8	29.325	—	-33.0	-23.2	-24.0	-23.8	Calm	4	0	b	—	—	—	-20.6
	10	29.325	—	-29.0	-27.0	-27.0	-28.0	Calm	0	0	b	—	—	—	—
	Noon	29.311	-28.8	-33.5	-24.0	-24.2	-25.0	Lt. ENE airs	2	5-12	b	—	—	—	Mercury below scale from 10 a.m. to noon
	2	29.308	—	-29.0	-14.8	-15.0	-16.0	Lt. NE airs	2	0-5	oc *	—	S. 6, E.	—	Fr. s. to E, apparently approaching.
	4	29.291	-2.8	-15.4	-2.0	-2.5	-2.0	SE, 1-2	10	10-18	of ↗	—	N. 10	-18.0	Noon. Min. temp. at Cape Armitage, -50° 5. Wind NNW, 1. Heavy bank of cloud to NE; clouded to S and SW.
	6	29.282	—	-4.0	-1.0	-1.0	0.0	SE, 2-4	17	10-25	ofq ↗ *	—	N. 10	-18.4	2 p.m. Fine powdery snow falling; thin haze; stars visible in zenith.
	8	29.310	—	-3.0	1.0	1.0	1.0	S, 1-4	20	10-22	oq ↗ *	—	N. 10	-1.8	4 p.m. Entirely overcast; very threatening appearance.
	10	29.304	—	-2.0	-0.5	-1.0	-1.0	ESE, 3-4	12	10-22	oq	—	S. 10	-0.7	—
	Midt.	29.288	—	-3.0	-2.0	-2.2	-2.0	SE, 4	14	10-30	oq ↗	—	S. 10	-0.8	4 p.m. Min. temp. at Cape Armitage, -33° 2. Wind SE, 4-5. oq. * ↗.
	Mean	29.304	—	—	-13.1	-13.3	—	—	—	—	—	—	—	—	6 p.m. Snow falling in small hard flakes; wind squally.

Max. therm. read at { 8 a. -15° 5, 8 p. 2° 0. Solar radiation { black bulb —, bright bulb —. Evapn. { 1. 0.5, 11. 0.5, 111. 0.8 } gramme in 24 hours. Precipn. — in.

gradually became overcast about midday, and wind rose fresh from E in evening. Barometer rose until 10 a.m., and then became unsteady. Temperature rising rapidly towards the evening.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.308	—	-11.5	-11.0	-11.0	E, 5	22	10-30	oq † * *	—	N. 10	—	3 a.m. Furious squall, force 8-9.  Break in clouds in S and in N. Dines' small anemometer was not working properly, so was brought on board. Noon. Min. temp. at Cape Armitage, -14.2°. Wind E by S, 1-3. Str. 8. bc. †. Erebus obscured. 2 p.m. Detached Str. on N and E horizon. 4 p.m. Foggy to S. 4 p.m. Min. temp. at Cape Armitage, -21.2°. Wind ENE, 2-5. bc. †. ☽° in S and SSE. Midt. Patches of streamers to E, alt. 10°. Strong E by wind all day. Overcast early, but clearing and remaining clear. Barometer falling all day. Temperature steadier and higher.	
4	29.314	—	-12.5	-12.0	-12.0	E, 5	27	20-30	oq † * *	—	N. 10	—		
6	29.313	—	-13.5	-13.0	-13.0	E by N, 6	24	20-36	oq †	—	S. cu. 7	—		
8	29.294	—	-13.5	-10.0	-10.0	E, 5-6	22	35-40	b †	—	—	—		
10	29.264	—	-12.5	-10.2	-10.5	NE, 5-7	32	25-48	bcm	—	Fr.-s. 5, E	—		
Noon	29.272	-11.6	-11.0	-4.2	-5.0	-4.2	NE, 3-5	20	—	oc	—	Fr.-s. 7, E		-4.7
2	29.245	—	-10.5	-9.2	-9.2	-9.0	ENE, 3-4	17	—	bc	—	Fr.-s. 3, E		-5.8
4	29.251	-19.8	-13.5	-10.5	-10.5	-11.0	ENE, 4-6	18	—	bq ⊥	—	—		-9.8
6	29.253	—	-13.3	-7.0	-7.2	-6.5	E by N, 2-4	23	—	bq ⊥	—	—		-11.6
8	29.206	—	-8.5	-6.0	-6.6	-6.6	E, 3-5	18	—	bq	—	—		-12.6
10	29.195	—	-12.0	-12.0	-12.2	-10.5	E, 5-6	16	—	bq †	—	—		-5.8
Midt.	29.167	—	-14.5	-14.0	-14.5	-14.5	ENE, 6-8	21	—	bq † ⊥	—	—		-6.9
Mean	29.259	—	—	-9.9	-10.2	—	—	—	—	—	—	—		-11.6

25th.

Max. therm. read at { 8 a. 1.0°. 8 p. —.	Solar radiation { black bulb —. bright bulb —.	Evapn. { 1. 2.0 11. 1.9 111. 3.0 } grammes in 24 hours.	Precipn. — in.
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2	29.162	—	-15.8	-11.8	-12.2	-12.5	ENE, 6-8	22	—	bq † * *	—	—	-12.1	Band of aurora running across sky a little E of zenith from N to S; odd patches in E. 4 a.m. Aurora streamers from NE to S. 6 a.m. Irregular streamers from NE to S, and in SW.  Very faint aurora arch from E to SE. Erebus smoke visible from ship going SW. Bank of Fr.-s. to N. Noon. Movement of clouds very doubtful. Noon. Min. temp. at Cape Armitage, -40.1°. Wind ESE, 1. oc. Erebus obscured. 4 p.m. Min. temp. at Cape Armitage, -33.5°. Wind ENE, 1-2. h. Erebus smoke not visible, too dark. 6 p.m. Very fine snow falling; Str. to E. 8 p.m. Very fine snow falling; stars dimly visible in zenith. 10 p.m. Snow crystals falling, very small; stars dimly visible in zenith. Midt. Very misty all round; snow crystals falling; rime deposit on anemometer glass.
4	29.119	—	-12.7	-11.9	-12.2	-12.8	ENE, 6-7	23	—	bq † * *	—	—	-13.0	
6	29.115	—	-13.5	-12.5	-13.0	-13.5	NE, 3-4	18	—	bq † * *	—	—	-13.0	
8	29.089	—	-18.0	-16.0	-16.0	-16.0	E, 1-2	8	—	b	—	—	-13.7	
10	29.070	—	-22.0	-12.0	-12.0	-13.0	NE, 1-2	13	—	b	—	—	-13.4	
Noon	29.051	-33.3	-26.2	-10.0	-10.8	-10.5	NE, 2	3	—	oc	—	Fr.-s. 6, NE	-13.5	
2	29.028	—	-13.1	-11.5	-11.8	-12.3	NE, 2	15	—	b	—	—	-10.7	
4	29.021	-20.5	-21.2	-20.0	-20.0	-20.0	Calm	9	—	b	—	—	-11.4	
6	28.985	—	-22.0	-16.2	-16.2	-16.4	N, 0-1	4	—	bc *	—	S. cu. 3, E	-13.0	
8	28.979	—	-25.0	-23.0	-23.0	-23.0	Calm	0	—	o *	—	Thin S. 8	-13.4	
10	28.971	—	-23.0	-18.8	-18.8	-19.0	Calm	1	—	o *	—	Thin S. 8	-16.2	
Midt.	28.963	—	-19.0	-19.0	-19.0	-19.5	Calm	1	—	bm * ⊥	—	—	-17.0	
Mean	29.046	—	—	-15.2	-15.1	—	—	—	—	—	—	—	-23.4	

26th.

Max. therm. read at { 8 a. -5.0°. 8 p. -9.0°.	Solar radiation { black bulb —. bright bulb —.	Evapn. { 1. 4.7 11. 4.5 111. 8.2 } grammes in 24 hours.	Precipn. — in.
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Very strong E by wind early, gradually falling calm. Sky clear generally. Barometer continued to fall all day. Temperature steady and lower.

2	28.953	—	-20.0	-10.2	-19.2	-19.5	Calm	0	—	bm *	—	—	-19.7	Snow crystals falling; stars very misty. Snow crystals falling; stars more dim. Snow crystals falling; stars perfectly clear overhead, but dim to N and NW.  Min. temp. at Cape Armitage, -43.0°. Light E by airs. Erebus smoke going vertically, then breaking away to E by. Rime on thermometer, &c. 2 p.m. Heavy rime on exposed thermometer. 4 p.m. Snow fall too small to be measured. Three meteorites fell between 4.30 and 4.45 in NW and NE. The two which fell in NW passed from near zenith, nearly touched head of Canis Major, and were lost before reaching horizon. The meteorite which fell to NE seemed to originate near Canis Major. 4 p.m. Min. temp. at Cape Armitage, -43.2°. Light E by airs. Frost rime on thermometer.
4	28.953	—	-23.5	-23.0	-23.0	-23.2	Calm	0	—	bm *	—	—	-14.1	
6	28.957	—	-23.5	-18.0	-18.2	-19.0	Calm	0	—	b ⊥ *	—	—	-18.8	
8	28.959	—	-32.2	-27.5	-27.8	-28.5	Calm	0	—	b ⊥	—	—	-18.6	
10	28.971	—	-30.0	-19.9	-20.0	-20.8	Calm	0	—	b ⊥	—	—	-20.6	
Noon	28.976	-37.3	-25.8	-25.0	-24.3	-26.8	Calm	1	—	b ⊥	—	—	-20.2	
2	28.993	—	-30.6	-30.3	-30.3	-30.0	Calm	2	—	b ⊥	—	—	-20.7	
4	29.000	-39.5	-33.8	-32.0	-32.0	-32.0	Calm	2	—	b	—	—	Mercury below scale from Noon to 4 p.m.	
6	28.985	—	-32.0	-14.2	-15.0	-12.0	N, 1-2	6	—	bc	—	S. 2, E	-13.0	
8	29.003	—	-21.0	-18.0	-18.0	-18.5	NNW, 1	9	—	o *	—	N. 10	-14.1	
10	28.999	—	-20.0	-17.0	-17.0	-18.2	S, 0-1	6	—	o *	—	N. 10	-18.6	
Midt.	29.003	—	-20.6	-5.8	-6.2	-6.0	N by W, 2-3	6	—	b	—	—	-18.6	
Mean	28.979	—	—	-20.8	-20.9	—	—	—	—	—	—	—	-6.5	

27th.

Max. therm. read at { 8 a. -17.5°. 8 p. -9.8°.	Solar radiation { black bulb —. bright bulb —.	Evapn. { 1. 0.4 11. 0.4 111. 0.7 } gramme in 24 hours.	Precipn.—snowfall too small to measure.
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meter. Str. to S and SW. 6 p.m. Thin Str. approaching from E and NE. 8 p.m. Snow flakes soft and large. 10 p.m. Very fine snow falling; stars visible overhead; obscured below alt. 60°. Fresh N by breeze sprang up. Strong to light winds all day; sky clear nearly all day. Barometer rose slightly. Temperature lower, but rose quickly in evening.

1903—June.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

28th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
					Dry.	Wet.										Unscreened.
	2	29.011	—	-7.3	-6.0	-6.0	-6.8	Lt. N airs	9	—	o*	—	N. 10	-6.2	Fine snow falling; stars faintly visible overhead. Snowing heavily, small flakes; squalls from E and S.  Snow falling in small hard flakes; stars dimly visible in zenith. Stars dimly visible; snowing slightly. 1 p.m. Temp. at Cape Armitage, -2° 2'; min., -43° 5'. Wind ENE, 1-2. oc. ♀. Erebus obscured. 4 p.m. Min. temp. at Cape Armitage, -3° 2'; light NW by airs; snowing and foggy. 6 p.m. Snow falling thickly in softer and larger flakes. 8 p.m. Drift very thick indeed; wind squally and variable, S to SSW. Drift not so dense as at 10 p.m.; land visible. Wind gradually rose all day, and blew strong in evening. Snowing and overcast all day.	
	4	29.032	—	-10.0	-3.5	-3.8	-3.4	E, 0-2	4	—	oq*	—	N. 10	-6.5		
	6	29.027	—	-4.7	-2.4	-3.0	-2.5	E, 1	7	—	o*	—	N. 10	-4.0		
	8	29.043	—	-4.0	-2.0	-2.0	-2.0	E by N, 1-2	10	—	o*	—	N. 10	-2.9		
	10	29.046	—	-3.0	0.0	0.0	0.0	E, 2-3	14	—	o*	—	Thin N. 10	-3.6		
	Noon	29.037	—	-0.8	1.8	1.0	1.0	NE, 1-3	6	—	o*	—	Thin N. 10	0.7		
	2	29.033	—	-0.2	3.2	3.0	4.0	ESE, 1	15	—	o* <sup>0</sup>	—	N. 10	0.3		
	4	29.017	-2.8	-2.5	-2.0	-2.0	-2.0	NW, 1-2	7	—	o*	—	N. 10	2.2		
	6	28.987	—	-2.8	2.0	1.5	2.6	Calm	6	—	o* <sup>2</sup>	—	N. 10	1.5		
	8	28.986	—	-1.0	5.5	5.5	5.5	S, 5-7	9	—	oq + <sup>2</sup> *	—	N. 10	2.5		
	10	29.007	—	-5.0	-5.0	-5.0	-5.0	E, 7	23	—	oq + <sup>2</sup> *	—	N. 10	1.8		
	Midt.	29.055	—	-8.5	-6.5	-6.5	-6.8	E, 5-7	23	—	oq + *	—	N. 10	5.1		
	Mean	29.023	—	—	-1.2	-1.4	—	—	—	—	—	—	—	5.1		
		Max. therm. read at { 8 a. -2° 0. / 8 p. —.		Solar radiation { black bulb — / bright bulb —.		Evapn. { 1. 0.4 / 11. 0.4 / 111. 0.5 } grammes in 24 hours.		Precipn. 0.02 in. since 4 p.m. 10th.								

29th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
					Dry.	Wet.										Unscreened.
	2	29.063	—	-7.9	-1.0	-1.0	-1.0	Var. ESE, 5-6	21	—	oq + <sup>1</sup> *	—	N. 10	—	Wind rather squally; very thick again. Wind squally and rather variable; very thick drift in squalls.  Wind rising quickly in strong squalls. Furious squalls; observer blown from screen whilst taking observations. 2 p.m. Wind squally and variable; heavy drift. 4 p.m. Wind very squally; drift or snow very moist. 4 p.m. Min. temp. at Cape Armitage, -16° 6'. Wind SSE, 2-4. oc. ♀ +. Erebus obscured. 6 p.m. Anemometer unclogged; thermometer coated in drift. 8 p.m. Stars visible in zenith; thick all round.  Very strong variable S by wind, accompanied by heavy drift and snowfall. Overcast all day. Barometer rose unsteadily. Temperature steady and high.	
	4	29.062	—	-2.0	2.1	2.1	2.0	Var. SE, 5-7	15	—	oq + <sup>1</sup> *	—	N. 10	—		
	6	29.089	—	-1.0	0.4	0.3	0.3	SE, 5-6	26	—	oq + *	—	N. 10	—		
	8	29.116	—	-0.5	1.0	1.0	0.5	Var. E, 3-5	20	—	oq	—	N. 10	—		
	10	29.119	—	-4.5	2.2	1.8	2.0	E, 4-6	18	—	oq + *	—	N. 10	2.1		
	Noon	29.125	—	0.0	5.0	5.0	5.0	S, 8-10	26	—	oq + <sup>2</sup> *	—	N. 10	1.8		
	2	29.196	—	-13.8	-13.5	-13.0	-14.0	Var. E, 6-8	26	—	oq + <sup>2</sup> *	—	N. 10	—		
	4	29.205	-7.3	-15.2	-6.8	-7.0	-6.0	ESE, 2-5	23	—	oq + *	—	N. 10	—		
	6	29.205	—	-8.0	-3.5	-3.5	-3.0	ESE, 2-4	17	—	oq + *	—	N. 10	—		
	8	29.211	—	-7.5	-4.0	-4.0	-4.0	E, 3-5	23	—	bq +	—	—	—		
	10	29.196	—	-11.0	-1.8	-2.0	-2.0	E, 3	22	—	bmq +	—	—	—		
	Midt.	29.199	—	-3.0	2.8	2.0	3.5	SE, 1-2	12	—	oq *	—	N. 10	—		
	Mean	29.149	—	—	-1.4	-1.5	—	—	—	—	—	—	—	—		
		Max. therm. read at { 8 a. 6° 5. / 8 p. —.		Solar radiation { black bulb — / bright bulb —.		Evapn. — grammes.		Precipn. — in.								

30th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
					Dry.	Wet.										Unscreened.
	2	29.185	—	-5.0	-5.0	-5.0	-5.0	Calm	3	—	b	—	—	—	Stars visible in and about zenith; thick low down all round; land only visible near ship. Noon. Put out the recording instruments; snowflakes hard and small. Noon. Min. temp. at Cape Armitage, -15° 5'. Wind E by N, 2-3. Foggy and drifting; Erebus obscured. 2 p.m. Bank of Str. or fog low down to E and SE. 4 p.m. Min. temp. at Cape Armitage, -14° 9'. 8 p.m. Very bright auroral streamers NE to SE; alt. 10°. 10 p.m. Stars misty overhead; none visible below 30° alt. Clear moonlight. N by horizon under bank of heavy Str. to NW. Ice crystals falling and forming on anemometer glass and on outside thermometer.  Midt. Stars all obscured by thick mist; Observatory Hill only just visible; deposition gone from anemometer glass. Wind strong E by early, gradually falling and remaining calm. Sky cleared, but became thick and foggy in evening. Barometer rising. Temperature gradually falling.	
	4	29.208	—	-6.5	-2.4	-2.4	-7.0	NE, 1-2	7	—	oq	—	N. 10	—		
	6	29.190	—	-11.5	-10.0	-10.0	-10.0	E, 3-5	20	—	oq	—	N. 10	—		
	8	29.193	—	-10.5	-4.0	-4.0	-4.0	E, 1-3	18	—	bqm	—	—	—		
	10	29.212	—	-11.5	-5.2	-5.8	-5.5	NE, 2-3	13	—	bm	—	—	—		
	Noon	29.215	-12.2	-7.5	-2.0	-2.0	-3.0	Calm	10	—	o*	—	N. 10	—		
	2	29.217	—	-6.0	-5.3	-5.3	-6.0	NE, 1-2	4	—	oc	—	S. 10	-4.0		
	4	29.215	-14.9	-7.0	-6.5	-6.5	-5.5	NE, 0-1	7	—	b	—	—	-4.7		
	6	29.216	—	-14.3	-7.0	-7.0	-7.5	Lt. SE airs	5	0-8	b	—	—	-5.8		
	8	29.240	—	-20.0	-17.0	-17.0	-17.5	Calm	2	0	b	—	—	-5.4		
	10	29.248	—	-16.4	-16.0	-15.6	-16.5	Lt. SE airs	5	0	bm →	—	—	-5.8		
	Midt.	29.265	—	-20.7	-13.2	-13.5	-12.5	Calm	0	0	m	—	Foggy, 10	-17.3		
	Mean	29.217	—	—	-7.8	-7.8	—	—	—	—	—	—	—	-17.1		
		Max. therm. read at { 8 a. 3° 0. / 8 p. -2° 0.		Solar radiation { black bulb — / bright bulb —.		Evapn. { 1. 3.2 / 11. 3.2 / 111. 6.0 } grammes in 48 hours.		Precipn. — in.								

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

[1903—July.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	F. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.	
				Dry.	Wet.											
2	29.279	—	-14.1	-10.9	-10.9	-11.0	Lt. SE airs	1	0	m	—	—	—	-11.0	<p><b>1st.</b></p> <p>Thick mist; stars all obscured; no precipitation.</p> <p>Thick mist; no stars or land visible; no precipitation.</p> <p>Thick mist; no stars or land visible; ice crystals precipitated.</p> <p>Fog crystals forming thickly on everything.</p> <p>11.30 a.m. Quite clear sky; foggy all round.</p> <p>Noon. Shortly after taking the observation a slight N breeze sprang up and the fog cleared; sky quite clear of cloud; fog crystals falling and rime forming on everything.</p> <p>Noon. Min. temp. at Cape Armitage, -34°0. Thick fog; particles of frozen fog falling.</p> <p>2 p.m. Heavy coating of fog crystals and rime; low fog banks from N by E to S.</p> <p>3 p.m. Temp. at Cape Armitage, -23°5; min. not read.</p> <p>4 p.m. Foggy to E, with double corona, clearing away in a few seconds and showing Cl.-s. clouds all along horizon.</p> <p>5 p.m. Temp. at Cape Armitage, -25°5; min., 27°1. 6 p.m. Cl.-s. to E; heavy fog bank to S. 8 p.m. A.-s. radiating E and W; screen and instruments thickly coated with fog crystals; very bright aurora glow in E and SE. 10 p.m. A few bright stars visible in zenith; misty; much hoar frost and hard rime on thermometer; very faint streamers in SE in arches. Calm all day, with thick fog and large deposition and precipitation. Barometer rising unsteadily all day. Temperature lower and unsteady.</p>	
4	29.287	—	-14.0	-8.3	-8.4	-8.1	Calm	1	0	m	—	—	—	-11.0		
0	29.298	—	-9.6	-7.0	-7.1	-6.9	Calm	0	0	m →	—	—	—	-8.0		
8	29.319	—	-8.5	-7.0	-7.0	-7.1	Calm	0	0	→	—	—	—	-8.3		
10	29.343	—	-8.5	-8.0	-8.0	-8.0	Calm	3	0	⊥	—	Thick fog, 10	—	-7.2		
Noon	29.355	-12.8	-12.5	-11.0	-11.0	-11.0	Calm	1	0	—	—	Thick fog, 10	—	-7.2		
2	29.348	—	-13.5	-11.3	-11.3	-11.0	Calm	3	0	f ⊥	—	—	—	-8.3		
4	29.352	—	-24.2	-22.0	-22.0	-23.0	Lt. E airs	2	0	bf ⊥	—	Foggy, 10	—	-11.6		
6	29.355	—	-22.2	-15.6	-15.6	-15.0	Calm	0	0	b ⊥	—	—	—	-12.3		
8	29.374	—	-24.5	-23.0	-23.0	-23.5	Calm	0	0	bc ⊥	—	A.-s. 4, SW (slow)	—	-12.6		
10	29.396	—	-24.0	-20.0	-19.9	-20.8	Calm	1	0	bcm ⊥	—	A.-s. 8	—	-23.8		
Midt.	29.390	—	-22.0	-15.0	-14.7	-15.2	Lt. S airs	0	0	bc ⊥	—	S.-cu. 2	—	-21.6		
Mean	29.341	—	—	-13.3	-13.2	—	—	—	—	—	—	—	—	-17.0		
Max. therm. read at		8 a. -7°0.		8 p. -8°0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.		

2	29.394	—	-24.2	-21.0	-21.0	-22.3	Lt. S airs	1	0	bc ⊥	—	—	S.-cu. 2	-21.1	<p><b>2nd.</b></p> <p>Auroral bands to ENE and ESE, alt. 8° to 15°.</p> <p>Bright patches (aurora) between SW and NNE, alt. 10° to 20°; very misty to S; rime on thermometers all night.</p> <p>8 a.m. Arches and streamers S to NW, bright.</p> <p>10 a.m. Precipitation has apparently ceased.</p> <p>Noon. Some detached Str. to N.</p> <p>Noon. Min. temp. at Cape Armitage, -33°5. Wind ENE, 4. b. ⊥. — on thermometer. Erebus obscured.</p> <p>2 p.m. Cl.-cu. along E horizon; foggy to S.</p> <p>4 p.m. Min. temp. at Cape Armitage, -30°2. Wind E by S, 2-3. b. ⊥.</p> <p>6 p.m. A meteor from zenith, northwards, very bright. Wind sprang up about 8 a.m., and gradually freshened until it blew very strong from E, variable. Sky pretty clear of cloud all day. Barometer unsteady. Thermometer falling towards the evening.</p>	
4	29.390	—	-24.1	-12.6	-12.4	-12.1	Lt. E airs	2	0	bc ⊥	—	—	Cu. 3	-21.1		
6	29.386	—	-18.8	-18.0	-17.7	-18.7	Lt. var. airs	3	0	bcm ⊥	—	—	Cu. 4	-14.4		
8	29.375	—	-21.0	-18.0	-18.0	-18.0	ESE, 1-2	3	5-10	b	—	—	—	-14.8		
10	29.385	—	-19.0	-7.5	-7.8	-7.8	E, 2-3	9	12-18	b	—	—	—	-16.6		
Noon	29.372	-26.3	-10.5	-8.5	-8.5	-8.8	E, 3-4	13	18-25	b ⊥	—	—	—	-16.2		
2	29.368	—	-15.2	-10.0	-11.0	-10.5	Var. E, 2-4	14	15-25	bq ⊥	—	Cl.-cu. 1, E	—	-8.0		
4	29.363	-27.8	-16.5	-15.0	-15.0	-16.0	Var. E, 3-6	18	20-30	bq ⊥	—	Cl.-cu. 2, E	—	-8.0		
6	29.369	—	-22.4	-20.2	-20.2	-21.5	Var. E, 3-6	18	22-30	bq ⊥	—	—	—	-9.0		
8	29.388	—	-24.0	-19.5	-19.5	-19.8	NE, 4-6	29	25-30	bq ⊥	—	A.-s. 3	—	-10.1		
10	29.386	—	-21.1	-20.0	-20.0	-20.0	ENE, 5-6	24	30-37	bc ⊥	—	A.-s. 2	—	-10.5		
Midt.	29.396	—	-21.9	-21.9	-22.0	-21.9	ENE, 4-6	20	29-37	bc ⊥	—	A.-s. 1	—	-17.0		
Mean	29.381	—	—	-16.0	-16.1	—	—	—	—	—	—	—	—	-22.0		
Max. therm. read at		8 a. -12°2.		8 p. -7°0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. — grammes.		Precipn. — in.		

2	29.407	—	-22.9	-22.8	-22.9	-22.9	E by N, 3	18	22-26	b	—	—	—	-22.9	<p><b>3rd.</b></p> <p>A bank of Str. over western mountains.</p> <p>Rapidly changing, but generally faint, aurora, NE to SSE.</p> <p>Faint arch NNE to SSE, alt. 10°; streamers in N.</p> <p>Temperature falling quickly during observation.</p> <p>Noon. Min. temp. at Cape Armitage, -34°5. Wind ENE, 4-5. b. ⊥. Erebus smoke going in E by direction.</p> <p>2 p.m. Very clear; western range quite visible (moonlight).</p> <p>4 p.m. Bright auroral arch from S to NE through E.</p> <p>4 p.m. Min. temp. at Cape Armitage, -33°5. Wind E by S, 1. b. ⊥ to E and SSE. Erebus smoke going ENE.</p> <p>6 p.m. Faint auroral arch from ESE.</p> <p>Midt. Snow drifting on surface of floe.</p> <p>Very strong to fresh NE wind all day, with perfectly clear sky. Barometer falling steadily. Temperature low and steady.</p>	
4	29.405	—	-24.0	-23.2	-23.0	-23.0	E by N, 4-5	13	27-33	b	—	—	—	-22.9		
6	29.385	—	-26.2	-23.5	-23.7	-24.1	E by N, 6-7	25	35-45	b	—	—	—	-23.1		
8	29.368	—	-24.0	-21.0	-21.0	-21.5	ENE, 5-6	20	30-35	b	—	—	—	-23.8		
10	29.363	—	-22.0	-21.2	-21.5	-21.8	Var. NE, 5-7	24	25-40	bq	—	—	—	-23.8		
Noon	29.343	-32.2	-25.0	-23.0	-23.0	-23.8	Var. E, 6-8	26	30-48	bq	—	—	—	-21.3		
2	29.353	—	-26.2	-24.8	-24.8	-25.0	Var. E, 5-7	33	30-42	bq	—	—	—	-21.5		
4	29.355	-31.7	-25.2	-24.6	-24.0	-24.6	Var. E, 2-4	20	15-25	bq	—	—	—	-23.4		
6	29.354	—	-25.5	-24.4	-24.4	-24.0	ENE, 2-4	15	15-22	bq	—	—	—	-24.2		
8	29.349	—	-25.0	-24.0	-24.0	-24.8	ENE, 3-4	13	20-28	bq	—	—	—	-24.2		
10	29.325	—	-25.1	-23.9	-24.0	-24.2	ENE, 3	15	25-30	b	—	—	—	-24.9		
Midt.	29.296	—	-28.5	-28.0	-28.0	-28.2	ENE, 6-7	30	38-45	b ⊥	—	—	—	-24.3		
Mean	29.359	—	—	-23.7	-23.7	—	—	—	—	—	—	—	—	-24.2		
Max. therm. read at		8 a. -15°0.		8 p. -21°0.		Solar radiation		black bulb —.		bright bulb —.		Evapn. { I. 1.3 } grammes in { II. 1.3 } 24 hours. { III. 2.2 }		Precipn. — in.		

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4th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
					Dry.	Wet.									
	2	29.271	—	-29.5	-27.0	-27.0	-27.8	E, 5-6	28	30-35	b ↗	—	—	From 2 to 6 a.m. mercury below scale	Faint streamers in N, alt. 40°.
	4	29.273	—	-29.5	-27.0	-27.2	-27.8	ENE, 4-6	18	25-32	b	—	—	—	Very faint auroral band in E, alt. 10°.
	6	29.229	—	-31.0	-29.8	-30.0	-30.2	ENE, 6-7	26	35-45	b	—	—	—	Faint streamers in S, alt. 10°.
	8	29.202	—	-31.0	-30.0	-30.0	-30.5	ENE, 7-8	32	40-48	b	—	—	—	—
	10	29.203	—	-31.0	-30.0	-30.0	-30.5	ENE, 6-7	26	35-44	b	—	—	—	—
	Noon	29.195	-37.0	-34.0	-33.0	-33.0	-33.5	NE, 5-6	17	25-35	b	—	—	—	Min. temp. at Cape Armitage, -39° 5'. Wind E by N, 2. b. Erebus smoke going E.
	2	29.165	—	-32.0	-31.2	-31.2	-31.5	E by N, 7-9	28	35-50	bq ↗	—	—	From 10 a.m. to 8 p.m. mercury below scale	Min. temp. at Cape Armitage, -38° 6'. Wind ENE, 3. b. ↗. Erebus obscured.
	4	29.142	-35.5	-32.5	-31.0	-31.0	-31.0	Var. E, 5-7	28	30-43	bq	—	—	—	—
	6	29.140	—	-33.0	-32.5	-32.5	-33.0	E by N, 5-7	26	30-40	bq	—	—	—	—
	8	29.134	—	-33.0	-32.0	-32.0	-33.2	NE, 6-7	24	34-42	bq	—	—	—	—
	10	29.112	—	-32.2	-30.0	-30.0	-31.2	ENE, 5-6	28	28-35	bq	—	—	—	—
	Midt.	29.094	—	-31.0	-28.0	-28.0	-29.0	NE, 4-5	20	25-30	b	—	—	—	Faint auroral arch, SE to E. The low temperature and the exceedingly strong wind made it quite one of the coldest days we have experienced down here as yet.
	Mean	29.180	—	—	-30.1	-30.2	—	—	—	—	—	—	—	—	Wind still very strong indeed from the E and NE, with same clear sky. Barometer continued to fall steadily. Temperature lower and very steady.
		Max. therm. read at { 8 a. -18° 2. / 8 p. -24° 0.		Solar radiation { black bulb — / bright bulb —.		Evapn. { I. 1.1 / II. 1.1 / III. 1.8 } grammes in 24 hours.		Precipn. — in.							

5th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
					Dry.	Wet.									
	2	29.092	—	-33.2	-26.0	-26.0	-27.0	NE, 3-4	11	20-25	b	—	—	—	—
	4	29.054	—	-30.2	-24.5	-24.5	-25.0	NE, 2-3	9	15-20	b	—	—	—	—
	6	29.054	—	-40.5	-31.0	-30.0	-30.0	NNE, 1-2	6	5-10	h	—	—	—	Str. on western mountains.
	8	29.044	—	-40.8	-35.0	-35.0	-34.8	Calm	1	0	h	—	—	—	Faint auroral arch from NE to SE, alt. 10°; a small bank of Str. to the SW.
	10	29.028	—	-41.0	-35.0	-36.0	-35.5	Calm	0	0	b	—	—	From 10 a.m. to 2 p.m. mercury below scale	10 a.m. Some detached Str. low down to S; very faint auroral arch extending from N to SE.
	Noon	29.006	-55.1	-44.5	-43.0	-43.0	-43.0	Calm	0	0	lh	—	—	—	Noon. Min. temp. at Cape Armitage, -55° 1. Calm. b. Erebus smoke ascending 2000 ft. in large column, and then breaking away to WNW.
	2	28.993	—	-47.8	-27.5	-28.0	-27.0	N, 1	3	10-15	b	—	—	—	1 p.m. Erebus smoke ascending in thick column, and breaking away to S <sup>W</sup> direction; apparently variable winds up there.
	4	28.978	-31.5	-41.5	-24.2	-24.5	-24.6	N, 1-2	9	10-18	bef U	—	Thin S. 2, SE	-24.9	2 p.m. Fr.-s. on E and SE horizon.
	6	28.968	—	-28.2	-21.0	-21.3	-21.2	N, 0-1	4	0-10	bf	—	Foggy	-25.2	4 p.m. Lunar halo, radius 22° 20'; foggy to S and SE; Str. to E, very clear to W.
	8	28.942	—	-21.8	-20.8	-21.0	-21.0	N, 1	7	10-12	b	—	—	-21.6	4 p.m. Min. temp. at Cape Armitage, -58° 0. Wind horizon.
	10	28.918	—	-30.0	-25.0	-25.0	-25.0	Lt. NNW airs	7	0-8	b	—	—	-22.0	6 p.m. Thin Str. to E and foggy to S. Light airs to calm, with the same clear sky, except for about 5 hours in afternoon, when it became foggy. Barometer still continued to fall slowly.
	Midt.	28.896	—	-27.0	-21.0	-21.0	-21.0	(N, 1	7	8-10	b	—	—	—	Temperature lower and not so steady.
	Mean	28.998	—	—	-27.8	-27.9	—	—	—	—	—	—	—	—	—
		Max. therm. read at { 8 a. -22° 5. / 8 p. —		Solar radiation { black bulb — / bright bulb —.		Evapn. { I. 0.7 / II. 0.7 / III. 1.2 } grammes in 24 hours.		Precipn. — in.							

6th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
			Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
					Dry.	Wet.									
	2	28.894	—	-27.5	-21.0	-21.0	-21.0	N, 1	6	10-12	b	—	—	—	—
	4	28.844	—	-21.0	-20.5	-20.5	-21.0	N, 1-2	7	10-14	b	—	—	—	—
	6	28.814	—	-21.0	-21.0	-21.0	-21.0	N, 1-2	8	10-15	b	—	—	—	—
	8	28.793	—	-30.2	-20.5	-20.5	-21.0	N, 1-2	6	5-10	b	—	—	—	—
	10	28.786	—	-34.5	-29.0	-29.0	-29.8	Calm	3	0	b	—	—	From 10 a.m. to noon mercury below scale	Light airs, variable between NW and NNE.
	Noon	28.755	-36.4	-31.0	-29.8	-29.8	-30.0	Lt. NW airs	3	0	b ↘	—	—	-19.5	Noon. Min. temp. at Cape Armitage, -47° 2. Light NNW airs. b. Erebus smoke going E in thick column.
	2	28.729	—	-31.0	-19.0	-19.5	-20.0	N, 0-1	7	0-10	b ↘	—	—	-19.8	2 p.m. Auroral arch from SSE to NNE through zenith; very zigzag streamers.
	4	28.708	-45.5	-37.8	-35.2	-35.2	-36.0	Calm	1	0	b	—	—	—	4 p.m. Min. temp. at Cape Armitage, -47° 0. Calm. b. Erebus smoke going E in long streamer; light ↘.
	6	28.701	—	-36.2	-33.2	-33.2	-34.2	Calm	0	0	b	—	—	—	7 p.m. Temp. at Cape Armitage, -44° 8; min., -47° 5. Calm. b. Erebus smoke going NNE in thick column; thick ↘.
	8	28.699	—	-36.0	-32.0	-32.2	-33.0	Calm	0	0	b	—	—	—	Light breeze to calm all day, with perfectly clear sky. Barometer continued to fall very slowly. Temperature very unsteady.
	10	28.699	—	-42.2	-41.8	-41.8	-41.9	Calm	0	0	b ↘	—	—	—	—
	Midt.	28.699	—	-46.5	-44.2	-44.2	-44.8	{Calm	0	0	b ↘	—	—	—	—
	Mean	28.760	—	—	-28.9	-29.0	—	—	—	—	—	—	—	—	—
		Max. therm. read at { 8 a. -20° 0. / 8 p. —		Solar radiation { black bulb — / bright bulb —.		Evapn. { I. 0.6 / II. 0.5 / III. 0.9 } grammes in 24 hours.		Precipn. — in.							

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	28.708	—	-47.0	-38.0*	—	-38.0	Calm	0	0	b	—	—	—	7th. Dry-bulb mercury down in bulb. Rime on anemometer glass and thermometer; detached Str. half-way up western mountains; a little mist rising all round. 6 a.m. Heavy S.-cn. on western mountains, extending to Bluff; tops visible. 8 a.m. Heavy bank of fog to SE to W; faint streamers shooting from lt. 10 a.m. Heavy bank of fog or cloud low down to S and SW. Noon. Heavy clouds to S, banked up; detached Fr.-s. to N. Noon. Min. temp. at Cape Armitage, -59° 1; light S by air. b. Erebus smoke going NW by ⌊ on thermometer. 2 p.m. Str. to S and SE; foggy to W; rime on instruments. 4 p.m. Str. approaching from SE. 4 p.m. Min. temp. at Cape Armitage, -52° 2; light NW by air. Cl.-s. 5. bc. ⊕ ⊕. Erebus smoke not discernible.
4	28.712	—	-45.2	-44.5	-44.5	-44.5	Calm	1	0	b	—	—	—	
6	28.716	—	-46.0	-44.2	-44.2	-44.8	Calm	0	0	b	—	—	—	
8	28.716	—	-43.5	-39.8	-39.8	-39.0	Calm	0	0	b	—	—	—	
10	28.738	—	-40.8	-34.0	-35.0	-34.0	Lt. WNW, airs	0	0-8	b ⊕	—	—	—	
Noon	28.752	-39.8	-42.2	-41.8	-41.8	-43.0	Calm	0	0	b ⊕	—	—	—	
2	28.761	—	-42.8	-38.2	-38.2	-39.5	Calm	0	0	b	—	—	—	
4	28.780	-41.2	-40.2	-35.5	-35.5	-36.0	Calm	0	0	bc ⊕	—	Thin S. 2, SE	From 10 a.m. to midt. mercury below scale	
6	28.790	—	-35.5	-34.0	-34.0	-33.6	Calm	0	0	bc	—	Thin S. 4, SE	—	
8	28.828	—	-38.0	-33.0	-33.0	-33.0	Calm	0	0	b	—	—	—	
10	28.838	—	-36.5	-31.0	-32.0	-30.0	Calm	1	0	bc ⊕	Thin Cl.-s. 3	—	—	
Midt.	28.838	—	-38.5	-37.0	-37.0	-39.0	Calm	0	0	b	—	—	—	
Mean	28.765	—	—	-37.6	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -32° 8. / 8 p. -30° 0. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. — in.

6 p.m. Thin Str. in detached banks across zenith. 7 p.m. Temp. at Cape Armitage, -51° 0; min., -51° 0. Calm all day, and clear sky except for some thin stratus in the afternoon. Barometer rising steadily all day. Temperature lower and steady. \* Reading of spirit minimum thermometer at time of observation.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	28.877	—	-38.5	-38.0	-38.0	-38.0	Calm	0	0	bc	Thin Cl.-s. 3	—	—	8th. From 2 to 6 a.m., mercury below scale Very misty and cloudy low down to S and SW; rime thick on instruments. Noon. Apparently clouding over from SE; very misty to S; detached Fr.-s. to N. Noon. Min. temp. at Cape Armitage, -54° 2. Calm. Erebus smoke indiscernible. ⊊ on thermometer. 2 p.m. Snow falling in small hard flakes; misty all round; stars visible through thin Nim. 3 p.m. ⊕ radius 22° 25, and ⊕. 4 p.m. Low fog banks to S and SW. 4 p.m. Min. temp. at Cape Armitage, -48° 5. Calm. o. Mt. Erebus covered in thin mist. 6 p.m. Str. to E and marked visibility.
4	28.917	—	-45.5	-45.0	-45.0	-46.0	Calm	0	0	bc ⊕	Thin Cl.-s. 8	—	—	
6	28.944	—	-46.0	-43.0	-43.0	-43.0	Calm	0	0	bc	Thin Cl.-s. 5	—	—	
8	29.003	—	-43.0	-26.0	-26.0	-26.0	Calm	2	0	bm	—	—	—	
10	29.024	—	-33.0	-24.0	-24.0	-23.8	Lt. B airs	2	0-8	b ⊕	—	—	-24.0 -24.0	
Noon	29.053	-45.2	-39.0	-38.5	-38.5	-40.0	Calm	2	0	bc ⊕	—	Thin S.-cn. 4, SE?	—	
2	29.060	—	-42.5	-37.8	-38.0	-37.5	Calm	1	0	bc ⊕ ⊕ *	—	Thin N. 8, SE	From noon to 6 p.m. mercury below scale	
4	29.082	-44.0	-38.2	-35.0	-35.2	-35.0	Calm	0	0	bf	—	Misty	—	
6	29.076	—	-38.0	-30.0	-30.0	-30.5	Lt. SW airs	2	0-5	bv	—	—	—	
8	29.088	—	-38.0	-20.8	-21.0	-21.0	SE, 1	6	10-14	b	—	—	-22.0 -22.2	
10	29.102	—	-39.0	-21.0	-21.2	-21.0	SE, 1-2	10	15-20	bv	—	—	-20.9 -21.6	
Midt.	29.124	—	-22.0	-20.8	-21.0	-20.0	ESE, 1-2	9	15-20	bv	—	—	-21.3 -21.6	
Mean	29.029	—	—	-31.7	-31.7	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -24° 0. / 8 p. -18° 0. Solar radiation { black bulb — / bright bulb —. Evapn. — grammes. Precipn. — in.

Remaining calm, but wind springing up in evening. Clear generally, but misty at times. Barometer continued to rise. Temperature more unsteady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.111	—	-21.5	-20.8	-21.0	-21.0	SE, 2	11	15-22	bv	—	—	-21.3 -22.0 -22.7	9th. Clouds covering western range. Misty to S; dark and heavy looking Str. covering western mountains and extending to SW. Noon. Some mist to S, and dark and cloudy to W. Fr.-s. to N. Noon. Min. temp. at Cape Armitage, -51° 5. Calm. Direction of Erebus smoke uncertain. ⊊ on thermometer. 2 p.m. Fr.-s. in long streaks from SE towards zenith. 4 p.m. Fr.-s. on SE horizon and near moon. 4 p.m. Min. temp. at Cape Armitage, -49° 0. Calm. ⊊ on thermometer. Str. all round, low down. 6 p.m. Low fog bank in bay to SW, summit of Discovery
4	29.148	—	-23.5	-22.8	-23.0	-23.0	ESE, 1-2	10	12-18	bv	—	—	-23.1 -22.7 -23.1	
6	29.160	—	-34.0	-22.8	-23.0	-23.0	E, 1-2	6	12-18	bv	—	—	—	
8	29.198	—	-29.0	-28.0	-28.0	-28.0	Calm	5	0	bm	—	—	—	
10	29.229	—	-34.0	-29.0	-29.0	-30.0	Calm	2	0	b ⊕	—	—	—	
Noon	29.235	-34.5	-32.2	-30.0	-30.0	-31.0	Calm	1	0	b ⊕	—	—	—	
2	29.244	—	-31.8	-30.5	-31.0	-31.2	Lt. S air	0	0	bc ⊕	—	Fr.-s. 2, SE	From 10 a.m. to midt. mercury below scale	
4	29.243	-44.8	-32.5	-31.0	-31.0	-31.0	Calm	2	0	b	—	—	—	
6	29.247	—	-41.3	-41.0	-41.0	-42.5	Calm	0	0	b ⊕	—	—	—	
8	29.246	—	-42.5	-42.0	-42.0	-44.0	Calm	0	0	b	—	—	—	
10	29.242	—	-43.2	-41.0	-41.0	-42.8	Calm	0	0	bc	Cl. 1	—	—	
Midt.	29.232	—	-48.0	-41.4	-41.6	-43.0	Calm	0	0	bcv ⊕	Cl. 2	—	—	
Mean	29.214	—	—	-31.7	-31.8	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -15° 0. / 8 p. -22° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { 1.06 / 11.07 } grammes in 24 hours. Precipn. — in.

clearly visible; unusually clear to S. 7.45 p.m. Temp. at Cape Armitage, -53° 0; min., -55° 0. 8 p.m. Very clear all round; a slight precipitation of minute snow crystals has fallen since 6 p.m. 10 p.m. Low Str. to W and S. Calm and fine day; a little cirrus cloud late in evening. Barometer rose until 6 p.m., and then fell slowly. Temperature low and steady.

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10th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.										Unscreened.
2	29.226	—	-41.5	-32.0	-32.1	-32.5	NE by E, 3-4	15	18-22	bv	☉+	—	—	—	—
4	29.217	—	-32.5	-29.2	-28.8	-30.0	ENE, 3	15	18-22	bv	☉+	—	—	—	Some Cirrus to N and W.
6	29.211	—	-31.5	-31.2	-31.5	-30.5	NE by E, 2-3	15	10-21	bv	☉+	—	—	—	From 2 to 6 a.m. mercury below scale
8	29.210	—	-35.8	-35.0	-35.0	-36.0	Calm	2	0	b	☉	—	—	—	—
10	29.217	—	-43.5	-43.0	-43.0	-44.0	Calm	1	0	b	☉	—	—	—	Misty all along surface of floe.
Noon	29.220	-53.5	-48.0	-48.0*	-47.8	-49.0	Calm	0	0	bn	☉	—	—	—	Thin mist apparently rising from all over floe.
2	29.211	—	-49.0	-46.0*	-45.3	-48.0	Calm	0	0	bm	☉	—	—	—	Noon. Min. temp. at Cape Armitage, -58° 5'. Erebus smoke going E in heavy column; misty all round.
4	29.218	-56.0	-51.2	-51.2*	-50.0	Frozen	Calm	0	0	bm	☉	—	—	—	2 p.m. Surface drift in bay; foggy to E and SE.
6	29.216	—	-52.4	-52.2*	Frozen	Frozen	Calm	0	0	bm	☉	—	—	—	4 p.m. Fog running along surface of floe, and dense all along tide crack.
8	29.230	—	-52.4	-50.2*	Frozen	Frozen	Calm	0	0	bm	☉	—	—	—	4 p.m. Min. temp. at Cape Armitage, -60° 5'; light N by airs. b. Erebus smoke going E in large volume.
10	29.235	—	-52.5	-50.0*	Frozen	Frozen	Calm	0	0	bm	☉	—	—	—	6 p.m. All mercury thermometers frozen; low fog rising from floe and land.
Midt.	29.237	—	-52.5	-51.2*	Frozen	Frozen	Calm	0	0	bm	☉	—	—	—	7 p.m. Temp. at Cape Armitage, -61° 8, min., -61° 8. Erebus' smoke going ESE. 8 p.m. Very misty all along surface of floe, and all land astern of ship. 10 p.m. Similar conditions as at 8 p.m.; western mountains visible. Midt. Similar conditions as at 8 and 10 p.m., with some slight deposition on anemometer glass. Early morning wind fresh from E, falling calm and remaining so, with clear sky, but low mist banging over land and floe. Barometer steady and inclined to rise in evening. Temperature very much lower and steady.
Mean	29.221	—	—	-43.3	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -29° 0. 8 p. -31° 2. Solar radiation { black bulb —. bright bulb —. Evapn. { I. 0.2 II. 0.2 III. 0.2 } grammes in 24 hours. Precipn. — in.

tage, -61° 8, min., -61° 8. Erebus' smoke going ESE. 8 p.m. Very misty all along surface of floe, and all land astern of ship. 10 p.m. Similar conditions as at 8 p.m.; western mountains visible. Midt. Similar conditions as at 8 and 10 p.m., with some slight deposition on anemometer glass. Early morning wind fresh from E, falling calm and remaining so, with clear sky, but low mist banging over land and floe. Barometer steady and inclined to rise in evening. Temperature very much lower and steady. \* Readings of spirit minimum thermometer at time of observation.

11th.

2	29.234	—	-53.0	-46.0*	-46.0	-47.0	Calm	4	0	bm	☉	—	—	—	Mercury below scale	1 a.m. Slight N by breeze sprang up, and temperature rose at once to -26° 0, falling as soon as wind died away. The dry bulb remained frozen, but the other mercurial thermometers thawed out.
4	29.215	—	-52.0	-24.5	-24.5	-25.0	N, 1-2	6	10-15	bv	—	—	—	—	2 a.m. Not so misty in Bay, but thick fog all round outside.	
6	29.185	—	-27.5	-21.0	-24.0	-24.0	N, 2-3	10	12-18	bv	—	—	—	-24.3	3 a.m. N by breeze, force 1; remarkably clear all round; all distant land visible, no mist anywhere. Temperature, -28° 2.	
8	29.138	—	-23.5	-23.0	-23.0	-23.8	N, 1-2	14	5-10	oc	—	—	S. 10	-24.5	4 a.m. Visibility very marked. Some detached Str. to SW above Mt. Discovery.	
10	29.136	—	-23.8	-23.0	-23.0	-23.2	N, 1-2	12	5-10	o	—	—	S. 10	-23.3	6 a.m. A.-s. to S and extending to NW; above western range detached Str. to E.	
Noon	29.083	-25.3	-29.8	-24.0	-24.0	-24.0	N, 0-1	6	0-5	oc	—	—	Fr.-s. 8, N	-23.4	10 a.m. Streak of light only on the W and SW horizon.	
2	29.064	—	-30.5	-26.0	-26.0	-26.5	E, 0-1	1	0-8	oc	—	—	Thin S, 10	-21.0	Noon. Breaking from N; some stars visible overhead.	
4	29.025	-32.0	-27.2	-26.5	-26.5	-26.5	Lt. S airs	2	0	oc	—	—	Thin S. 8, SE	-21.2	Noon. Min. temp. at Cape Armitage, -62° 2; NW by N, 2. bc. Erebus observed.	
6	29.003	—	-30.0	-15.8	-16.0	-14.8	E by N, 1-3	5	5-20	ocq	—	—	Tbln S. 5, SE	-14.8	2 p.m. Stars gleaming in zenith; break in clouds to S and NW. 4 p.m. Min. temp. at Cape Armitage, -34° 0. Calm. bc. Erebus not discernible. 6 p.m. Clouds heavy and black to S; very faint halo and corona. 8 p.m. ☉ with radius 22' 30", very faint; dark and cloudy to S; clear to W. 10 p.m. Land clear all round; a few Ci clouds to S. Midt. Sky rapidly clouding over with thin Ci.-s. from S. Light to fresh N by breeze, changing to E later. Overcast most of the afternoon, but clearing in evening. Barometer falling steadily all day. Temperature not so steady.	
8	28.988	—	-23.0	-14.0	-14.8	-14.5	Lt. E airs	6	0-8	bc	☉	—	Thin S. 4, S	-13.7	* Reading of spirit minimum thermometer at time of observation.	
10	28.970	—	-20.0	-14.0	-14.6	-15.0	ESE, 1-3	7	10-15	bq	—	—	—	-14.8		
Midt.	28.968	—	-17.5	-17.0	-17.2	-16.5	S by E, 1-3	14	10-20	bcq	☉☉+	—	—	-15.9		
Mean	29.081	—	—	-23.2	-23.3	—	—	—	—	—	—	—	—	-16.2		

Max. therm. read at { 8 a. -22° 5. 8 p. -12° 0. Solar radiation { black bulb —. bright bulb —. Evapn. { I. 0.3 II. 0.2 III. 0.3 } grammes in 24 hours. Precipn. — in.

zenith; break in clouds to S and NW. 4 p.m. Min. temp. at Cape Armitage, -34° 0. Calm. bc. Erebus not discernible. 6 p.m. Clouds heavy and black to S; very faint halo and corona. 8 p.m. ☉ with radius 22' 30", very faint; dark and cloudy to S; clear to W. 10 p.m. Land clear all round; a few Ci clouds to S. Midt. Sky rapidly clouding over with thin Ci.-s. from S. Light to fresh N by breeze, changing to E later. Overcast most of the afternoon, but clearing in evening. Barometer falling steadily all day. Temperature not so steady. \* Reading of spirit minimum thermometer at time of observation.

12th.

2	28.954	—	-20.0	-19.5	-19.5	-18.8	E, 1-2	16	10-15	oc	+	—	—	—	-18.3	Stars in zenith faintly visible.
4	28.893	—	-20.0	-16.0	-16.8	-16.5	ENE, 2-3	17	18-22	oc	+	—	—	—	-19.1	Stars in zenith faintly visible.
6	28.861	—	-30.0	-29.0	-29.0	-29.2	Calm	9	0	b	—	—	—	-16.8	Cloudless; distant land very distinct.	
8	28.815	—	-35.0	-25.5	-25.5	-26.0	Calm	3	0	bc	—	—	S.-cu. 4	-17.0		
10	28.803	—	-28.0	-25.5	-25.5	-26.0	Lt. NW airs	2	0-8	b	—	—	—	—	Mercury below scale	Str. to W and E moving from S.
Noon	28.764	—	-27.3	-24.8	-23.8	-27.0	Lt. NE airs	8	0-5	b	—	—	—	—	—	Moon on southern horizon much refracted; some Str. clouds over S and SW hills.
2	28.729	—	-25.3	-13.0	-13.5	-13.5	N, 2-5	9	15-40	bq	—	—	—	5.0	12.30 p.m. Temp. at Cape Armitage, -31° 0, min., -39° 2. Wind WNW, 1.	
4	28.701	-29.9	-27.0	-26.2	-26.2	-27.8	Calm	9	0	b	—	—	—	4.3	b. Misty to E. Mt. Erebus' summit obscured; peculiar cloud been hanging to N of Mt. Discovery all forenoon.	
6	28.672	—	-29.5	-27.0	-27.3	-28.0	Calm	0	0	b	—	—	—	—	From 6 to 10 p.m. mercury below scale	
8	28.643	—	-31.0	-29.0	-29.0	-31.0	Calm	0	0	b	—	—	—	—	2 p.m. Str. on southern horizon; moon dipping behind bluff.	
10	28.624	—	-39.4	-30.4	-30.6	-30.8	Calm	0	0	b	—	—	—	—	4 p.m. Heavy Cu. to S and SE; extensive faint aurora to N up to 10° and 20°.	
Midt.	28.608	—	-35.8	-25.6	-27.0	-23.0	Lt. NE airs	0	0	b	—	—	—	-22.0	4 p.m. Min. temp. at Cape Armitage, -36° 1. Wind NW, 1. Erebus not discernible, but bright orange-red glow on Erebus smoke, lasting several seconds—long enough to show that the smoke was going Ely fast. 6 p.m. Rime on anemometer glass. 8 p.m. Very small corona; some Str. to E. Midt. The difference between dry and wet bulbs most conspicuous. Clear sky most of the day, with little or no wind. Barometer fell steadily all day. Temperature low, but not so steady.	
Mean	28.756	—	—	-24.3	-24.5	—	—	—	—	—	—	—	—	-23.8		

Max. therm. read at { 8 a. -11° 0. 8 p. -11° 2. Solar radiation { black bulb —. bright bulb —. Evapn. { I. 2.1 II. 2.0 III. 3.5 } grammes in 24 hours. Precipn. — in.

red glow on Erebus smoke, lasting several seconds—long enough to show that the smoke was going Ely fast. 6 p.m. Rime on anemometer glass. 8 p.m. Very small corona; some Str. to E. Midt. The difference between dry and wet bulbs most conspicuous. Clear sky most of the day, with little or no wind. Barometer fell steadily all day. Temperature low, but not so steady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.			
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.					
				Dry.	Wet.										Unscreened.		
2	28.597	—	-31.8	-31.2	-31.3	-32.0	Calm	1 0	b	—	—	Mercury below scale	<p>13th.</p> <p>Temperature seems to be fluctuating considerably. Cl. clouds radiating from ENE.</p> <p>Dark and gloomy to S and SW.; detached A.-s. to W, and also to E; misty to W.</p> <p>Noon. Apparently clouded over to W and along to S; very dark to S.</p> <p>Noon. Min. temp. at Cape Armitage, -51°0. Calm. b. Erebus smoke going NW(?)</p> <p>2 p.m. Temperature very unsteady and rising rapidly.</p> <p>4 p.m. Temperature fell 1° whilst observing.</p> <p>4 p.m. Min. temp. at Cape Armitage, -45°1; light NW by N<sup>W</sup> airs. bef. Low clouds to N and SW.</p> <p>6 p.m. Dark and threatening.</p> <p>8 p.m. Wind feels remarkably dry; break in clouds to S; stars visible in zenith.</p> <p>10 p.m. No stars visible; considerable drift, obscuring about 2 p.m. and remained so. Barometer rising unsteadily.</p>				
4	28.603	—	-39.0	-22.0	-22.5	-22.8	NE, 1	1 0	b	—	—	Mercury below scale					
6	28.607	—	-37.8	-31.8	-32.2	-32.0	Lt. NE airs	0 0	bc	Cl. 2	—	Mercury below scale					
8	28.617	—	-36.8	-26.2	-26.2	-26.5	Var. SE, 2-3	2 10-18	bc	Cl. 4	—	From 10 a.m. to noon mercury below scale					
10	28.631	—	-32.8	-32.2	-32.2	-34.0	Calm	3 0	b	—	—	—					
Noon	28.631	-41.5	-37.5	-29.2	-30.0	-28.8	Calm	1 0	b	—	—	—					
2	28.623	—	-31.5	-17.0	-17.5	-20.0	Lt. S airs	4 0	oc	—	Thin S. 6, S	-21.6					
4	28.621	-30.2	-35.8	-19.5	-19.5	-18.0	Calm	0 0	oc	—	Thin S, 8, S	-21.6					
6	28.672	—	-28.0	-16.5	-16.5	-16.5	Lt. var. airs	1 0	oc	—	Thin S. 10, S	-19.8					
8	28.651	—	-23.0	-8.0	-9.0	-8.8	ENE, 2-4	9 10-22	oc	—	Thin S. 8	-20.6					
10	28.679	—	-11.4	-9.8	-10.0	-10.0	SE, 3-5	18 28-43	o+	—	Thin S. 10	-17.3					
Midt.	28.695	—	-10.6	-8.0	-8.0	-8.2	ESE, 2-5	15 20-38	o+	—	S. 10	-18.0					
Mean	28.636	—	—	-21.0	-21.2	—	—	—	—	—	—	—					
Max. therm. read at		8 a. -21°5.		8 p. -7°8.		Solar radiation		black bulb —, bright bulb—.		Evapn.		I. 0.3 II. 0.3 III. 0.5		grammes in 24 hours.		Precipn.—in.	

Observation Hill. Midt. No stars visible; considerable drift, obscuring Observation Hill. Became overcast all day. Light winds all day up to about 8 p.m., when a breeze sprang up from SE and blew very strongly. Temperature rose rapidly in evening.

2	28.720	—	-13.1	-12.8	-12.8	-12.9	E, 3-5	19 25-38	o+	—	—	S. 10	-13.7	<p>14th.</p> <p>2, 4, and 6 a.m. Weather remained as at 10 p.m. yesterday.</p> <p>Str. to W, moving to N. Erebus smoke visible to E.</p> <p>Very dark to S; Fr.-s. to E; misty to W.</p> <p>Noon. Min. temp. at Cape Armitage, -32°0; light ESE by airs. Erebus smoke going NW(?)</p> <p>2 p.m. Str. passing from S and SE.</p> <p>4 p.m. Dull Cu. on NW horizon.</p> <p>4 p.m. Min. temp. at Cape Armitage, -30°8.</p> <p>6 p.m. Snow crystals falling; foggy.</p> <p>8 p.m. Some Str. to S; misty overhead generally.</p> <p>10 p.m. Cl.-s. only in the E and S.</p> <p>Midt. Stars and moon visible through haze.</p> <p>Overcast early, clearing, but cloudy off and on all day. Barometer rose until noon, and then fell. Temperature higher and unsteady.</p>			
4	28.780	—	-19.3	-19.2	-19.2	-19.6	E, 3-5	21 25-38	o+	—	—	S. 10	-13.7				
6	28.792	—	-19.4	-11.0	-11.3	-12.0	E, 3-6	23 25-45	o+	—	—	S. 10	-19.5				
8	28.788	—	-16.0	-9.0	-9.0	-9.0	ENE, 3-4	20 20-25	b	—	—	—	-16.6				
10	28.798	—	-17.0	-14.0	-14.0	-14.5	Calm	2 0	b	—	—	—	-16.6				
Noon	28.800	-30.6	-20.0	-16.5	-16.8	-17.0	Lt. E airs	2 0-8	b	—	—	—	-17.0				
2	28.792	—	-25.8	-25.3	-25.3	-26.0	Calm	2 0	oc	—	—	Thin S. 6, S	—				
4	28.782	-24.1	-25.5	-14.0	-14.0	-14.2	Lt. NE airs	1 0	b	—	—	—	-13.4				
6	28.763	—	-22.5	-19.0	-19.5	-19.5	Calm	1 0	oc	—	—	Thin S. 8	-14.1				
8	28.741	—	-20.2	-12.2	-13.0	-12.5	ESE, 1	2 10-15	bm	—	—	—	-18.8				
10	28.727	—	-13.1	-9.7	-10.0	-10.5	NE, 2-3	10 20-25	bc	—	—	—	-19.1				
Midt.	28.715	—	-12.1	-8.5	-9.0	-10.0	E by N, 5-6	20 30-40	oc	—	—	—	-13.0				
Mean	28.767	—	—	-14.3	-14.5	—	—	—	—	—	—	—	-13.5				
Max. therm. read at		8 a. -8°0.		8 p. -9°8.		Solar radiation		black bulb —, bright bulb—.		Evapn.		I. 1.9 II. 2.0 III. 2.7		grammes in 24 hours.		Precipn.—in.	

Wind remained strong all night, falling during the day, and again rising from NE in evening, when it commenced to blow very fresh. Barometer rose until noon, and then fell. Temperature higher and unsteady.

2	28.705	—	-16.2	-14.9	-15.2	-15.2	E by N, 5-6	23 35-40	oc	—	—	Cl.-s. 8	-14.8	<p>15th.</p> <p>Stars and moon hazy, no definite corona; clouds in long, indefinite rows, radiating E and W, looking like Cl.-cu., movement indistinguishable.</p> <p>4 a.m. Aurora faint in E, alt. 15°.</p> <p>6 a.m. Moon and stars very bright and clear.</p> <p>Min. temp. at Cape Armitage, -28°5. Wind NE, 4-6. bq. Str. to NE.</p> <p>2 p.m. Str. to N and NW; very dull, with low visibility.</p> <p>4 p.m. Min. temp. at Cape Armitage, -32°9. Wind E by S, 2. b. Erebus obscured; aurora in ESE.</p> <p>4 and 6 p.m. Sky much clearer, and wind less gusty.</p> <p>A few stars visible through cloud.</p> <p>Very strong E by N and NE by wind, falling in the evening. Sky clear all day. Barometer inclined to fall. Temperature low and unsteady.</p>			
4	28.701	—	-15.2	-10.0	-10.9	-10.0	E by S, 2-4	20 20-25	b	—	—	—	-15.5				
6	28.691	—	-23.3	-21.6	-22.0	-21.8	NE, 7-8	22 40-45	b	—	—	—	-9.8				
8	28.693	—	-25.2	-20.0	-20.0	-21.0	ENE, 5-8	29 32-45	bq	—	—	—	-10.8				
10	28.700	—	-23.8	-23.5	-23.5	-23.8	NE, 6-7	28 35-42	bq	—	—	—	-20.7				
Noon	28.698	-28.2	-25.0	-23.5	-24.0	-24.0	NE, 6-8	28 35-48	bq	—	—	—	-21.1				
2	28.703	—	-28.3	-27.0	-27.0	-27.5	E, 5-7	23 30-45	bq	—	—	—	—				
4	28.699	-32.4	-30.5	-26.5	-26.5	-26.5	E by N, 5-6	26 25-35	b	—	—	—	-23.8				
6	28.682	—	-28.0	-26.8	-26.8	-27.0	E by N, 4-6	19 22-32	bq	—	—	—	-23.8				
8	28.671	—	-28.0	-25.0	-25.0	-25.0	Var. E, 1-2	14 10-15	b	—	—	—	-24.0				
10	28.643	—	-31.0	-23.2	-23.8	-24.0	Lt. var. airs	7 0	b	—	—	—	-24.3				
Midt.	28.622	—	-37.5	-24.5	-25.0	-24.0	Calm	1 0	o	—	—	S. 10	-25.2				
Mean	28.684	—	—	-22.2	-22.5	—	—	—	—	—	—	—	-25.4				
Max. therm. read at		8 a. -7°0.		8 p. -20°0.		Solar radiation		black bulb —, bright bulb—.		Evapn.		I. 1.9 II. 1.9 III. 3.3		grammes in 24 hours.		Precipn.—in.	

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16th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.										Unscreened.
2	28.578	—	-37.5	-28.5	-28.8	-28.5	ENE, 5-6	10	15-20	bmq ↗	—	—	Mercury below scale from 2 to 6 a.m., and 10 a.m. to Midt.	Bank of Str. like fog to E and SE; also bank of Str. all along western horizon. Noon. Apparently thick to W, SW, and S. Noon. Min. temp. at Cape Armitage, -46° 5'. Wind NE, 2-3. b. Erebus smoke first rising in column from 2000 ft. to 3000 ft. in large volume, and then going E; Str. low down all round horizon, and to 15° above it in NE. 4 p.m. Min. temp. at Cape Armitage, -43° 4'. Wind E by S, 1. b. Erebus indistinct; S. cu. to alt. 10° from NW to E by S; an auroral arch to 20° extended from E by S to NW by W. 6 p.m. General foggy appearance S to E and SE; snow falling in small and very hard flakes.	
4	28.510	—	-30.0	-29.2	-29.5	-29.0	ENE, 6-7	25	20-30	bq	—	—			
6	28.455	—	-30.0	-27.0	-27.8	-29.0	ENE, 6-7	21	20-30	bq	—	—			
8	28.433	—	-29.0	-26.0	-26.0	-27.0	ENE, 4-5	23	20-25	b	—	—			
10	28.421	—	-29.0	-27.0	-27.0	-27.2	ENE, 2-4	14	15-26	b	—	—			
Noon	28.419	-34.0	-31.0	-30.5	-30.8	-31.0	NE, 4-5	16	20-28	b	—	—			
2	28.443	—	-31.5	-31.0	-31.2	-31.0	ENE, 3-5	14	20-30	bq	—	—			
4	28.506	-42.5	-32.5	-30.0	-30.0	-31.0	E by N, 2-3	15	15-23	bq	—	—			
6	28.500	—	-30.8	-28.2	-28.2	-27.5	Var. E, 2-3	12	10-20	bf *	—	—			
8	28.654	—	-34.5	-33.8	-34.0	-34.0	ESE, 4	12	20-23	bm	—	—			
10	28.749	—	-34.3	-27.0	-27.0	-27.1	ENE, 1-2	10	10-14	bm	—	—			
Midt.	28.823	—	-33.9	-32.0	-32.2	-32.5	Calm	5	0	b	—	—			
Mean	28.548	—	—	-29.2	-29.4	—	—	—	—	—	—	—			—

Max. therm. read at { 8 a. -23° 0.  
8 p. -26° 5. Solar radiation { black bulb —  
bright bulb —. Evapn. { I. 0.8 } grammes in  
II. 0.8 } 24 hours. Precipn. — in.

8 p.m. Stars clearly visible, but none visible below 20° alt.; apparently foggy all round and very dark indeed. Midt. Paint, though extensive, auroral glow from N to SE, rising to 40° alt. Clear, and fine sky all day, with very strong NE<sup>y</sup> wind, falling in evening. Barometer fell until 10 a.m., and then rose quickly. Temperature lower and steadier.

17th.

2	28.843	—	-32.9	-28.1	-28.2	-29.1	Calm	2	0	bc	—	S. 2	Mercury below scale -25.2	Thin Str. clouds, detached to NE and E.  Wind sprang up from N just before 10 a.m., and temperature rose immediately. Noon. Sky overcast, with stars dimly visible. Shortly after observation the sky in zenith was quite clear again; dark to S and SW. Noon. Min. temp. at Cape Armitage, -44° 8'. Wind S by W, 1. bc. Erebus obscured, A.-s. 8, going to NE. 2 p.m. Dark S. cu. to N and W. 4 p.m. Foggy to S. 4 p.m. Min. temp. at Cape Armitage, -37° 0'. Wind NNW, 3. Erebus smoke not distinguishable. 6 p.m. Stars visible only in zenith. 8 p.m. Stars all visible, but dim. 10 p.m. Stars visible overhead; slight snow falling. Midt. Stars visible overhead; snow falling more thickly. Cloudy frequently during the day, with fresh N <sup>y</sup> wind all midday. Barometer rising slowly and rather unsteadily. Temperature rose quickly before 10 a.m.
4	28.867	—	-34.7	-24.0	-24.1	-24.5	Lt. E airs	4	0	bc	—	Thin S. 3	Mercury below scale -25.2	
6	28.892	—	-27.7	-26.1	-26.4	-26.5	E, 1	3	5	b	—	—	Mercury below scale —	
8	28.886	—	-34.0	-34.0	-34.0	-36.0	Calm	2	0	b	—	—	—	
10	28.888	—	-34.5	-19.4	-19.8	-19.8	N, 2	3	10-15	b	—	—	-19.8	
Noon	28.883	-35.0	-21.8	-16.0	-16.6	-16.8	N, 1-2	10	10-12	oc	—	Thin S. 8, SW	-20.4	
2	28.879	—	-20.5	-17.0	-17.2	-16.0	N, 3-4	14	20-28	bc	—	Thin S. 2, W	-16.8	
4	28.883	-37.0	-19.0	-12.0	-12.5	-12.0	N, 3-4	15	20-30	bc	—	Thin S. 4	-17.3	
6	28.950	—	-20.5	-20.0	-20.0	-20.8	ESE, 0-1	10	0-5	bef	—	Thin S. 6	-17.3	
8	29.000	—	-21.0	-18.2	-18.5	-19.0	Calm	1	0	bm	—	—	-18.0	
10	29.039	—	-19.0	-15.0	-15.4	-15.2	NE airs	1	0	bcm *	—	S. 5	-12.6	
Midt.	29.059	—	-17.2	-15.0	-15.0	-15.0	Lt. S airs	1	0	bcm *	—	S. 6	-13.4	
Mean	28.922	—	—	-20.4	-20.6	—	—	—	—	—	—	—	-20.2	

Max. therm. read at { 8 a. -21° 8.  
8 p. -10° 5. Solar radiation { black bulb —  
bright bulb —. Evapn. { I. 0.7 } grammes in  
II. 0.7 } 24 hours. Precipn. — in.

18th.

2	29.099	—	-17.2	-12.0	-12.1	-12.0	Calm	1	0	bc *	—	S. 5	-11.6	Stars visible from 20° alt. to zenith. Snowflakes, very minute and hard, falling thickly. Snowflakes falling thickly. Very thick all round; sky black and threatening; every appearance of a blizzard; wind light and shifty, inclined towards the S. 10 a.m. Str. along to E, passing to N rapidly; drift very thick; wind variable, ESE to SSE in squalls. Noon. Heavy bank of Str. to N, and along E, moving to N; clear overhead; thick all round; drift very thick in squalls. Noon. Min. temp. at Cape Armitage, -36° 5'. Wind SE, 4-6. ↗. Erebus obscured; very stormy looking. 2 p.m. Wind squally and variable, heavy bank of Str. on N horizon. 4 p.m. Foggy all round. 4 p.m. Min. temp. at Cape Armitage, -5° 4'. Wind E, 1-3. b. ↗. Erebus obscured; cou-
4	29.102	—	-15.2	-7.0	-8.0	-6.9	NE, 1	1	0-5	o *	—	N. 10	-11.9	
6	29.151	—	-9.0	-2.0	-2.5	-2.5	E by N, 0-1	6	0	o *	—	N. 10	-6.9	
8	29.203	—	-3.0	-1.0	-1.0	0.0	SE, 1-2	7	5-10	om *	—	N. 10	-7.6	
10	29.296	—	-2.5	0.0	0.5	-0.8	Var. SE, 4-7	24	25-45	bq ↗	—	—	-2.4	
Noon	29.370	-4.0	-3.8	-2.6	-2.8	-3.0	Var. E, 4-7	13	20-46	bq ↗	—	—	-2.9	
2	29.424	—	-4.0	2.4	2.4	3.0	Var. E, 4-7	36	25-40	bq ↗	—	—	-2.9	
4	29.490	-2.1	0.0	4.0	3.5	4.2	Var. E, 4-6	18	25-38	bq ↗ ↗	—	—	1.8	
6	29.501	—	2.5	10.5	9.0	11.0	E by N, 3-5	22	15-28	ocqf	—	Thin S. 8	1.8	
8	29.500	—	7.0	8.0	7.2	8.0	NE, 1	13	8-10	bm	—	—	9.0	
10	29.511	—	2.0	3.0	2.2	4.0	N, 1-2	6	5-10	bm	—	—	7.5	
Midt.	29.459	—	0.5	5.5	4.8	8.0	N, 3-6	11	15-35	bq	—	—	7.5	
Mean	29.342	—	—	0.7	0.2	—	—	—	—	—	—	—	6.1	

Max. therm. read at { 8 a. 1° 0.  
8 p. 12° 0. Solar radiation { black bulb —  
bright bulb —. Evapn. { I. 1.9  
II. 2.0  
III. 3.5 } grammes in 24 hours. Precipn. — in.

fused ↗ SE, alt. 8°. 6 p.m. Stars dimly visible. 8 p.m. Stars all dimly visible. Cloudy and overcast early; clearing and remaining clear for rest of day. Wind strong all midday from E and SE, with drift. Barometer rose until 10 p.m., and then commenced to fall quickly. Temperature rose to above zero and remained above.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.403	—	5.0	10.0	8.8	9.0	N, 5-8	13	25-40	bq	—	—	7.7	<p>19th.</p> <p>Very pink colouring on clouds; wind sprang up from S just after 10 a.m., and blew strong, with surface drift.</p> <p>Noon. Colouring very brilliant on clouds and just touching the highest western peaks; Cirrus very torn and shred-like form.</p> <p>1 p.m. Temp. at Cape Armitage, -3° 8'; min., -8° 5'. Calm. Erebus smoke going NE; fine rose tint in sky.</p> <p>2 p.m. Ci.-s. on horizon from W to E by N, fringed with brilliant colouring.</p> <p>4 p.m. Str. low on N horizon; brilliant auroral display sprang up in SW, and running by S to NE; unusually bright and active, with green colouring; horizontal and lateral movement apparent. 4 p.m. Min. temp. at Cape Armitage, -18° 5'. Wind E by N, 3-4. Erebus smoke indistinguishable; fine auroral display extending from NE to SSW, alt. 50° to 70°, of green colour, and with rapid movement. 8 p.m. Very bright aurora from N to SSE; 4 arches; streamers to 50° alt.; very rapid lateral movement; green colouring; wind very strong. Fine and clear most of the day. Wind blew up very strong from NE, with heavy surface drift. Barometer fell until about 4 p.m., and then rose. Temperature gradually fell during the day.</p>	
4	29.395	—	7.0	8.8	7.0	6.2	NE, 1-2	10	5-10	b	—	—	6.4		
6	29.354	—	3.0	3.0	3.0	2.0	Calm	5	0	b	—	—	8.2		
8	29.318	—	3.0	3.0	3.0	2.0	Lt. NE alrs	3	0	b	—	—	5.4		
10	29.297	—	2.5	2.0	1.0	1.0	Calm	2	0	bc	—	—	1.8		
Noon	29.305	—	1.5	1.2	0.5	1.0	Lt. var. alrs	8	0-8	bc	—	—	1.0		
2	29.294	—	5.7	1.5	0.0	1.2	NNW, 0-1	5	0-8	bc	—	—	1.4		
4	29.291	-16.9	5.5	3.2	4.0	4.0	ENE, 2-4	8	20-30	b	—	—	0.0		
6	29.297	—	-13.0	-11.8	-12.0	-11.5	E by N, 6-8	24	32-45	b	—	—	1.8		
8	29.326	—	-14.5	-12.8	-13.0	-13.0	NE, 7-9	32	40-56	bq	—	—	0.0		
10	29.370	—	-18.0	-16.0	-16.0	-16.0	NE, 8-10	33	40-50	bq	—	—	0.0		
Midt.	29.399	—	-17.0	-16.0	-16.0	-16.0	ENE, 6-8	29	30-40	bq	—	—	0.0		
Mean	29.337	—	—	2.5	3.1	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 12° 0. / 8 p. 5° 8. Solar radiation { black bulb — / bright bulb —. Evapn. { I. 10.1 / II. 10.0 / III. 18.9 } grammes in 24 hours. Precipn. — in.

Hour.	Barometer	Cape Armitage	Spirit minimum	Mercurial (Dry/Wet)	Unscreened	Wind (Dir/Force)	Anemometer	P. tube	Weather	Sunshine	Clouds	Aspirator	Remarks
2	29.494	—	-18.0	-17.0	-17.0	-17.0	ENE, 8-10	29	40-50	bq	—	—	<p>20th.</p> <p>Brilliant pink glow to NE, colouring ship, doe, and all objects with same colour; further land also touched with same tint.</p> <p>Noon. Some Str. to N; pink glow continues.</p> <p>Noon. Min. temp. at Cape Armitage, -33° 1. Wind ENE, 1-2. Erebus smoke going NE in small volume.</p> <p>2 p.m. Ci.-s. approaching from N in long streaks.</p> <p>4 p.m. Str. to N; wind more gusty and veering to E.</p> <p>4 p.m. Min. temp. at Cape Armitage, -32° 5. Wind ENE, 3-4. b. S.-cu. N and NW. Erebus indistinguishable.</p> <p>8 p.m. Faint colouring on NW horizon.</p> <p>8 p.m. Faint auroral glow behind hills to NE. Fine and clear sky all day. Wind very strong NE<sup>ly</sup>, falling towards evening. Barometer falling pretty steadily since 6 a.m. Temperature lower and steady.</p>
4	29.564	—	-18.0	-13.0	-13.0	-13.0	E, 4-5	24	25-30	b	—	—	
6	29.556	—	-15.0	-14.0	-14.0	-14.0	Lt. E alrs	9	0	b	—	—	
8	29.542	—	-22.8	-16.0	-15.5	-16.5	Lt. E alrs	0	0-5	b	—	—	
10	29.527	—	-17.5	-15.5	-16.0	-15.5	NE, 4-6	18	20-35	b	—	—	
Noon	29.500	-30.5	-19.0	-18.0	-18.5	-18.0	NE, 5-6	18	25-35	b	—	—	
2	29.488	—	-19.0	-18.0	-18.3	-17.5	NE, 5-6	14	25-35	bc	—	—	
4	29.452	-24.8	-20.5	-20.0	-20.0	-20.0	ENE, 6-7	17	25-40	bq	—	—	
6	29.438	—	-22.8	-21.8	-22.0	-22.3	ENE, 6-7	27	25-40	bq	—	—	
8	29.429	—	-23.0	-21.6	-21.8	-22.0	NE, 5-8	20	25-32	b	—	—	
10	29.402	—	-22.5	-19.0	-19.0	-20.0	NE, 2-3	18	15-18	b	—	—	
Midt.	29.374	—	-21.2	-18.0	-18.2	-19.2	NE, 2-3	13	15-20	b	—	—	
Mean	29.481	—	—	-17.7	-17.8	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. — / 8 p. -13° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { I. 3.1 / II. 3.0 / III. 5.2 } grammes in 24 hours. Precipn. — in.

Hour.	Barometer	Cape Armitage	Spirit minimum	Mercurial (Dry/Wet)	Unscreened	Wind (Dir/Force)	Anemometer	P. tube	Weather	Sunshine	Clouds	Aspirator	Remarks
2	29.350	—	-20.0	-18.0	-18.5	-18.2	NE, 2-3	10	15-18	b	—	—	<p>21st.</p> <p>Very fine ice crystals falling; sky quite clear.</p> <p>A.-s. radiating NNW, and well visible up to zenith.</p> <p>A.-s. radiating NNW; pink glow on clouds all along to N; clear all round; temperature falling rapidly during observation.</p> <p>Noon. Min. temp. at Cape Armitage, -39° 1. Wind WNW, 1. Cir. 8. ocv. Erebus smoke going ENE in small volume.</p> <p>2 p.m. Heavy rime on exposed instruments.</p> <p>4 p.m. Brilliant auroral display in E; meteor in ENE, very bright.</p> <p>4 p.m. Min. temp. at Cape Armitage, -40° 0. Wind NNW, 1. b. A.-s. to N. SE to E. Erebus indistinguishable.</p> <p>8 p.m. Str. to N and NW.</p> <p>8 p.m. A good large deposit of rime on everything. Fine and clear generally, with hardly any wind all day. Barometer falling steadily all day. Temperature in steady.</p>
4	29.337	—	-19.0	-16.0	-18.2	-16.5	NE, 1-2	8	10-12	bc	—	—	
8	29.331	—	-19.0	-18.8	-19.0	-20.0	Calm	5	0	b	—	—	
8	29.311	—	-29.0	-26.0	-26.0	-26.0	Calm	1	0	b	—	—	
10	29.302	—	-29.2	-29.0	-29.0	-30.0	Calm	0	0	bc	—	—	
Noon	29.292	-34.0	-29.2	-18.0	-18.2	-18.0	Lt. NW alrs	4	0	bc	—	—	
2	29.282	—	-32.6	-31.0	-31.0	-30.5	Calm	3	0	bc	—	—	
4	29.267	-34.8	-31.8	-24.2	-24.2	-24.0	Lt. SW alrs	2	0	bc	—	—	
6	29.267	—	-30.2	-23.0	-23.0	-24.0	Calm	6	0	bc	—	—	
8	29.263	—	-25.2	-19.0	-19.0	-19.0	NE, 2-3	5	12-20	bc	—	—	
10	29.262	—	-19.2	-16.0	-16.0	-16.5	Lt. var. alrs	5	0	b	—	—	
Midt.	29.225	—	-29.0	-18.2	-19.5	-17.0	E by N, 1	5	5-8	b	—	—	
Mean	29.291	—	—	-21.4	-21.6	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -14° 0. / 8 p. -11° 5. Solar radiation { black bulb — / bright bulb —. Evapn. { I. 1.4 / II. 1.4 / III. 2.2 } grammes in 24 hours. Precipn. — in.

1903—July.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

22nd.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.				
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.		Upper.	Lower.						
				Dry.	Wet.										Unscreened.			
2	29.237	—	-33.2	-30.0	-29.2	-31.0	Calm	4	0	b	—	—	From 2 to 6 a.m., mercury below scale					
4	29.257	—	-36.0	-35.0	-35.0	-36.0	Calm	0	0	b	—	—						
6	29.233	—	-33.4	-30.5	-30.5	-30.0	S, 1	1	5	b	—	—						
8	29.244	—	-32.0	-12.0	-11.5	-13.0	N, 1-2	7	5-10	b	—	—						
10	29.221	—	-25.0	-23.8	-23.8	-23.8	Lt NW ahrs	4	0	bc	Ci.-s, 2, SW (slow)	S, 1, S (slow)	-23.8 -23.8	Dark to S.				
Noon	29.201	-35.3	-26.5	-26.2	-26.0	-28.0	Calm	6	0	bc	—	S, 5, S	—	Dark to S and SW; Str. all round, low down.				
2	29.153	—	-29.0	-18.8	-18.5	-20.5	Calm	1	0	oc	—	S, 10	-20.6 -19.5	Noon. Min. temp. at Cape Armitage, -46° 5'. Calm. Cir. 7.				
4	29.112	-25.5	-22.6	-13.5	-14.5	-14.0	Calm	1	0	o	—	Thin S, 10	-13.0 -13.7	S.-cu. all round, 10°. —. Erebus obscured.				
6	29.076	—	-16.0	-10.2	-11.0	-11.0	Calm	0	0	b	—	—	-11.2 -11.6	2 p.m. Break in clouds to NW; temperature falling rapidly.				
8	29.025	—	-18.0	-15.8	-16.0	-16.2	Calm	1	0	bm	—	—	-16.8 -17.0	4 p.m. Stars gleaming faintly in zenith.				
10	28.975	—	-19.0	0.0	-2.0	0.0	NE, 1	2	5	b	—	—	0.3 0.0	4 p.m. Min. temp. at Cape Armitage, -35° 2'. SSE <sup>3</sup> ahrs. Str. 10. Stars dimly visible.				
Midt.	28.955	—	-19.0	-19.8	-19.8	-19.0	Calm	2	0	b	—	—	-17.0 -17.0	—. Erebus obscured.				
Mean	29.141	—	—	-19.6	-19.8	—	—	—	—	—	—	—	—	6 p.m. Very dark. 8 p.m. Stars visible, but dim.				
Max. therm. read at { 8 a. -8° 0. 8 p. -9° 0.											Solar radiation { black bulb — bright bulb —.		Evapn. — grammes.		Precipn. — in.		Overcast during the afternoon, otherwise fine and clear, with no wind. Barometer falling all day, but unsteadily early. Temperature rose rapidly in the evening.	

23rd.

2	28.961	—	-20.0	2.0	0.5	2.0	E, 1-2	6	5-12	b	—	—	1.8 0.3	Faint auroral streamers N to E, alt. 50°.				
4	28.959	—	-4.0	1.5	0.0	1.5	E by S, 2	18	10-15	o	—	S, 10	2.8 1.8					
6	28.944	—	-0.5	3.5	2.0	3.5	E, 1-2	5	5-12	og	—	S, 10	3.2 3.2					
8	28.950	—	3.4	4.2	2.4	5.5	NE, 2-3	19	10-15	o	—	S, 10	5.0 3.6					
10	28.963	—	4.0	7.8	5.8	6.5	SE, 2-4	13	15-22	o	—	S, 10	6.4 5.0	Very dark and threatening all round.				
Noon	28.936	1.8	4.0	6.0	4.5	6.0	NE, 2-3	8	10-14	oc	—	S, 8, S (slow)	5.0 3.2	Dark to S; break in clouds to N; Str. clouds covering western hills to alt. of 10,000 feet.				
2	28.908	—	3.8	9.0	8.2	8.0	NE, 1-2	12	5-15	oc	Ci.-cu. 2	S, 6, S (slow)	8.2 6.1	Noon. Min. temp. at Cape Armitage, -26° 5'. Wind ENE, 1. Str. 9. Rose glow to N. Erebus obscured.				
4	29.008	-3.5	-3.0	-2.5	-2.5	-3.0	SSE, 2-4	12	20-30	oq	—	S, 10	-2.6 -2.6	2 p.m. Ci.-cu. all along N horizon, and Str. to S, approaching; dark and foggy to S and E.				
6	29.003	—	-4.0	0.2	-0.2	0.0	SE, 2-4	13	15-20	oq †	—	S, 10	0.0 -0.8	4 p.m. Dark and threatening in S.				
8	29.010	—	-4.0	0.0	-0.2	0.0	S, 4-6	20	20-30	oq † *	—	N, 10	-0.4 -0.8	4 p.m. Min. temp. at Cape Armitage, -3° 5'. Wind SE, 1. Str. 10. Erebus obscured.				
10	29.049	—	-1.5	2.0	1.0	1.5	E by N, 1-3	16	0-10	oq † *	—	N, 10	2.5 0.7	6 p.m. Stars visible to S.				
Midt.	29.051	—	-0.2	3.0	2.0	3.0	E by N, 2-3	8	5-15	bcq	—	S, 5	2.5 1.4	Overcast nearly all day, with fresh variable Ely wind. Barometer inclined to rise unsteadily. Temperature remained above zero nearly all day, with extraordinary differences between the dry and wet bulbs.				
Mean	28.979	—	—	3.1	2.0	—	—	—	—	—	—	—	—					
Max. therm. read at { 8 a. 8° 0. 8 p. 9° 0.											Solar radiation { black bulb — bright bulb —.		Evapn. { I. 7.9 II. 7.8 III. 13.8 } grammes in 24 hours.		Precipn. — in.			

24th.

2	29.046	—	-2.0	-0.8	-1.5	-0.8	ENE, 1-4	12	5-17	bq	—	—	0.0 -1.5	Diffused aurora in SE and S.				
4	29.023	—	-1.2	5.5	4.0	5.3	ENE, 1-4	11	10-20	bcq	—	S, 1	5.0 3.2	Slight trace of aurora in SE.				
6	29.034	—	-1.6	2.8	2.0	2.6	Calm	8	0	bm	—	—	0.0 -1.8					
8	29.022	—	-3.0	2.0	2.0	2.0	Calm	3	0	bc	—	S, 6	—					
10	29.018	—	-0.2	8.0	6.8	8.0	Lt. N ahrs	4	0	o	—	S, 10	7.9 5.5	Very dull and heavy-looking weather.				
Noon	29.056	1.5	-4.5	3.0	2.2	3.0	S, 1	9	8-10	o	—	S, 10	2.8 1.0	Similar weather as at 10 a.m.				
2	29.051	—	1.0	4.8	3.2	4.8	E by S, 1-2	8	5-15	o	—	S, 10	2.8 1.0	Noon. Min. temp. at Cape Armitage, -12° 6'. Wind SSW, 0-1. Str. 9. Erebus obscured.				
4	29.053	0.6	2.5	6.8	5.0	6.6	ENE, 2-3	8	12-23	bc	—	S, 2, SE	6.8 4.6	2 p.m. Break in sky to S.				
6	29.054	—	0.0	5.0	3.4	4.8	E, 1-2	12	5-12	b	—	—	3.9 2.1	4 p.m. Clearing rapidly; Str. to N.				
8	29.023	—	3.5	6.8	4.8	6.2	ENE, 1-2	8	10-15	b	—	—	5.9 3.9	4 p.m. Min. temp. at Cape Armitage, -4° 0'. Wind E by N, 2-3. Str. 4, moving to NNW. Erebus obscured.				
10	28.999	—	4.8	7.4	5.0	7.2	E, 1	10	10-12	b	—	—	6.8 4.6	7.30 p.m. Flanes, followed by a deep red glow, were seen on summit of Erebus.				
Midt.	28.976	—	-9.5	-8.0	-8.0	-8.0	Calm	5	0	b	—	—	9.4 9.4	Midt. Very faint aurora band from NE to SW through zenith.				
Mean	29.030	—	—	3.6	2.4	—	—	—	—	—	—	—	—	Overcast in the afternoon, otherwise fine, with fresh Ely wind. Barometer unsteady all day.				
Max. therm. read at { 8 a. 7° 0. 8 p. 9° 8.											Solar radiation { black bulb — bright bulb —.		Evapn. { I. 7.9 II. 8.0 III. was blown off box, and lay in snow all night. } grammes in 24 hours.		Precipn. — in.		Temperature remained high, with the same extraordinary differences between the dry and wet bulbs.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	28.934	—	9.5	1.5	3.0	1.5	Lt. N airs	2	0-5	b	—	—	—	0.4	<p>25th.</p> <p>Remarkably clear, with bright starlight.</p> <p>Very disconnected auroral arch of streamers N to SW, alt. 40°.</p> <p>Very disconnected and faint arch of aurora extending from N to SE, alt. 30°.</p> <p>8 a.m. Very faint auroral streamers SE and E.</p> <p>10 a.m. A few patches of cloud visible to NE, otherwise bright starlight.</p> <p>Noon. Patches of Cl. wherever the sunlight reaches, bright pink; probably thin Cl.-s. all over the sky, but stars are visible.</p> <p>Noon. Min. temp. at Cape Armitage, -30°5. Wind ENE, 2-3. b. Str. NNW. Erebus smoke going ENE in small volume. Lower crater smoking.</p> <p>2 p.m. Fr.-cn. to N, with red glow on them.</p> <p>4 p.m. Light surface drift on hills.</p> <p>4 p.m. Min. temp. at Cape Armitage, -20°0. Wind ENE, 2-3. b. Str. NNW. Erebus indistinguishable.</p>
4	28.839	—	5.5	9.2	7.0	8.8	N, 1	4	10	b	—	—	—	3.6	
6	28.763	—	7.0	10.0	7.0	9.2	N, 1-2	8	10-18	b	—	—	—	8.8	
8	28.734	—	12.5	2.0	3.0	3.0	NE, 2-3	7	20-25	b	—	—	—	9.3	
10	28.700	—	11.7	10.2	10.0	10.0	E by N, 4-6	12	30-38	bcq	Cl.-s. 2	—	—	6.3	
Noon	28.638	-18.0	-14.3	-12.1	-12.4	-13.3	E by N, 6-8	32	40-48	bcq	Cl.-s. 3	—	—	1.0	
2	28.639	—	14.5	11.0	11.5	12.0	NE, 5-7	24	28-40	bq	—	—	—	2.2	
4	28.664	-14.6	-14.0	-5.0	-6.0	-4.8	NE, 3-4	26	20-30	bq	—	—	—	11.6	
6	28.675	—	14.3	12.2	12.4	13.0	ENE, 5-7	17	20-42	bq	—	—	—	10.7	
8	28.714	—	18.0	14.0	15.0	15.0	Calm	9	0	b	—	—	—	12.8	
10	28.725	—	12.1	9.2	9.8	9.5	ENE, 3-4	16	25-35	b	—	—	—	13.2	
Midt.	28.751	—	17.0	14.2	14.8	16.0	NE, 1-3	19	10-23	b	—	—	—	9.4	
Mean	28.731	—	—	6.0	7.0	—	—	—	—	—	—	—	—	10.3	

Max. therm. read at { 8 a. 11°0. / 8 p. -2°0. } Solar radiation { black bulb — / bright bulb — } Evapn. { I. 8.2 / II. 8.2 / III. 14.3 } grammes in 24 hours. Precipn. — in.

6 p.m. Meteor in NE. 8 p.m. Wind squally to calm; temperature rising rapidly during observation. 10 p.m. Stars brilliant; low Str. to W. Midt. Faint aurora streamers in SE. Fine and clear most of the day. Wind gradually rose from N, and, hauling round to NE, blew up very strong. Barometer fell until noon, and then commenced to rise. Temperature falling all day.

2	28.793	—	18.0	11.2	12.0	12.2	NE, 1-3	12	10-25	bq	—	—	—	11.2	<p>26th.</p> <p>Clear all round; faint aurora in ENE.</p> <p>Faint aurora to SE.</p> <p>Cloudless sky; fine colouring in N.</p> <p>12.45 p.m. Temp. at Cape Armitage, -30°0; min., -40°0. Calm. b. Erebus smoke in small volume going NNE. Rose glow in sky to E as well as all along N horizon.</p> <p>2 p.m. Colouring on NW horizon.</p> <p>4 p.m. Min. temp. at Cape Armitage, -42°8. Lt. E by airs. Erebus smoke going E by; a bright high flame, afterwards driven towards the E, was seen coming out of Erebus' crater.</p> <p>6 p.m. Auroral display in E and NE; low banks of Cu. to S.</p> <p>8 p.m. Diffusive and extensive aurora extending from E to S to SW, very faint.</p>
4	28.816	—	14.3	10.0	11.0	11.0	E by N, 1-3	15	10-22	b	—	—	—	11.9	
6	28.839	—	16.6	16.0	16.0	17.0	ENE, 2-4	15	15-36	b	—	—	—	10.5	
8	28.933	—	18.0	15.0	14.8	15.0	ENE, 5-6	16	30-35	b	—	—	—	11.2	
10	28.958	—	15.0	11.2	12.0	12.0	NE, 2-4	14	15-20	b	—	—	—	16.2	
Noon	28.994	—	33.0	21.0	21.2	21.0	E, 3-4	9	18-20	b	—	—	—	15.2	
2	29.037	—	20.8	13.0	14.2	13.5	E, 1	7	0-8	b	—	—	—	16.2	
4	29.085	-35.0	-28.5	-20.0	-20.0	-21.0	E, 1-2	7	10-18	b	—	—	—	11.6	
6	29.118	—	20.0	19.2	19.8	20.0	ENE, 5-6	20	22-30	b	—	—	—	12.6	
8	29.160	—	19.5	14.0	14.8	14.4	NE, 3-4	21	15-22	b	—	—	—	21.3	
10	29.194	—	35.0	35.0	35.1	35.0	Calm	9	0	b	—	—	—	21.8	
Midt.	29.240	—	36.2	27.1	27.7	26.2	Calm	0	0	b	—	—	—	14.4	
Mean	29.014	—	—	17.7	18.2	—	—	—	—	—	—	—	—	15.2	

Max. therm. read at { 8 a. -8°0. / 8 p. -10°0. } Solar radiation { black bulb — / bright bulb — } Evapn. { I. 3.9 / II. 4.1 / III. 7.0 } grammes in 24 hours. Precipn. — in.

10 p.m. Aurora light just showing above hills, extending from Observation Hill to a little E of N. Midt. Aurora light just showing above hills due N to NE; beams extending to about S; nebulous glow over Observation Hill. Clear sky all day, with strong to fresh E by wind. Barometer rising steadily all day. Temperature falling all day and remaining low.

2	29.279	—	31.5	24.5	25.0	25.0	Lt. NE airs	1	0	b	—	—	—	From 2 to 4 a.m. mercury below scale	<p>27th.</p> <p>Isolated patches of diffused aurora from N to SE, alt. 10° to 30°; a few bright beams to SSW, alt. 50°.</p> <p>4 a.m. Beam of aurora from N to SE; various heights.</p> <p>Only a few stars visible in sky; can read the outside thermometer without the lamp; visibility good; low fog to S.</p> <p>Noon. Min. temp. at Cape Armitage, -43°0. Wind ENE, 2. b. Erebus smoke going NW; lower crater smoking also; refraction to N.</p> <p>2 p.m. Rime forming on anemometer glass in small star-shaped particles.</p> <p>4 p.m. Temperature very unsteady.</p> <p>4 p.m. Min. temp. at Cape Armitage, -46°7. Wind E by N, 1-2. b. Mt. Erebus indistinguishable.</p> <p>6 p.m. Auroral display along E horizon.</p> <p>10 p.m. Diffused aurora, streamers and clouds, from NNW to SE, brightest in NW. Midt. Faint aurora to SE, a segment of a low arch over gap; bright for a short time. Calm nearly all day, with fine clear sky. Barometer rising all day. Temperature low and steady.</p>
4	29.301	—	30.0	27.3	27.4	27.0	Calm	0	0	b	—	—	—	—	
6	29.331	—	29.0	17.0	17.5	17.6	NE, 1	1	0	b	—	—	—	—	
8	29.374	—	21.0	21.0	21.0	22.0	Calm	3	0	bc	—	S.-cn. 2	—	—	
10	29.422	—	25.5	25.0	25.0	26.0	Calm	4	0	b	—	—	—	—	
Noon	29.442	-39.5	-27.5	-26.0	-25.5	-26.5	Calm	0	0	b	—	—	—	Mercury below scale	
2	29.475	—	33.2	31.5	31.5	32.0	Calm	0	0	b	—	—	—	—	
4	29.508	-34.5	-32.0	-21.2	-21.5	-21.5	NE, 2-3	3	15-25	b	—	—	—	22.0	
6	29.548	—	25.8	25.5	25.5	27.0	Calm	6	0	h	—	—	—	22.4	
8	29.573	—	29.8	19.0	19.5	19.2	NE, 2-3	2	15-17	b	—	—	—	19.8	
10	29.575	—	19.0	14.8	15.2	15.0	E, 1-2	13	20	b	—	—	—	20.0	
Midt.	29.620	—	19.8	17.2	18.0	20.0	E by N, 1-2	7	20	b	—	—	—	15.2	
Mean	29.454	—	—	22.5	22.7	—	—	—	—	—	—	—	—	17.7	

Max. therm. read at { 8 a. -11°5. / 8 p. -13°0. } Solar radiation { black bulb — / bright bulb — } Evapn. { I. 1.3 / II. 1.3 / III. 2.4 } grammes in 24 hours. Precipn. — in.

streamers and clouds, from NNW to SE, brightest in NW. Midt. Faint aurora to SE, a segment of a low arch over gap; bright for a short time. Calm nearly all day, with fine clear sky. Barometer rising all day. Temperature low and steady.

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METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

28th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.665	—	-23.0	-18.0	-18.2	-19.5	E, 2-3	10	20	bq	—	—	—	—	—	Faint aurora diffused over E, narrow curtain with short streamers.
4	29.695	—	-23.0	-18.0	-18.8	-19.5	ESE, 1-3	10	15-20	bq	—	—	—	—	—	4 a.m. Wind variable; aurora NW to S, bright in N, variable curtains; remains of 3 a.m. display.
6	29.702	—	-23.0	-17.0	-17.5	-17.0	E, 1-2	10	15-25	bq	—	—	—	—	—	6 a.m. Faint auroral streamers to NE, fainter in SE, and auroral glow over White Island.
8	29.740	—	-20.0	-18.2	-19.0	-18.0	Var. E, 2-3	10	10-20	b w	—	—	—	—	—	6 a.m. Clear all round; sky cloudless.
10	29.736	—	-23.0	-28.0	-28.0	-20.0	Calm	6	0	b	—	—	—	—	—	Noon. Misty on summit of western mountains.
Noon	29.735	-41.8	-36.0	-28.5	-28.5	-29.0	Calm	1	0	b	—	—	—	—	—	Noon. Min. temp. at Cape Armitage, -48° 5'. Calm. ob. Erebus smoke going E.
2	29.732	—	-29.2	-23.8	-24.0	-23.8	E, 1	8	7-10	b	—	—	—	—	—	2 p.m. Cl. s. to N and NW; thin Str. near moon; summits of western mountains obscured.
4	29.729	-35.5	-21.0	-19.0	-20.0	-20.0	E, 1	0	5-10	bc w	—	—	S. 3, N	—	—	4 p.m. Clouds difficult to define; apparently Str. approaching from N.
6	29.685	—	-29.2	-29.2	-29.2	-31.5	Calm	2	0	b	—	—	—	—	—	4 p.m. Min. temp. at Cape Armitage, -50° 4'. Light ENE airs. Cl. 3. beam. Erebus obscured. w faint SSE.
8	29.665	—	-32.2	-25.5	-26.0	-26.0	Calm	1	0	bm	—	—	—	—	—	6 p.m. Rise on instruments up to the zenith, in the E and S.
10	29.633	—	-27.4	-23.5	-23.9	-25.0	Calm	1	0	b	—	—	—	—	—	4 a.m. Wide curtain from N to zenith and portions of arch all over the sky from E and S.
Midd.	29.593	—	-31.2	-31.2	-30.6	-33.0	Calm	0	0	b	—	—	—	—	—	6 a.m. Faint arches S and E to 10°; stars brilliant all night.
Mean	29.693	—	-23.3	-23.6	—	—	—	—	—	—	—	—	—	—	—	Sky cloudless; visibility good; rime on outside instruments.

Max. therm. read at { 8 a. -13° 5. / 8 p. -17° 5. Solar radiation { black bulb — / bright bulb —. Evapn. { I. 1.8 / II. 1.7 / III. 3.1 } grammes in 24 hours. Precipn. — in.

ments; Str. to N and W; foggy to S. 8 p.m. Some Str. to N extending along W side of Strait to S; stars visible, but dim; aurora glow with a few faint streamers in SE, alt. 10°. 10 p.m. Stars clear; aurora in well-defined arch S about 5°. Midd. Brilliant starlight; the light airs since 10 p.m. have been Nly. Fresh Ely wind early, falling to calm, and remaining so all day. Sky still remains clear and cloudless. Barometer rose until 8 a.m., and then fell quickly. Temperature lower and inclined to fall.

29th.

2	29.538	—	-42.6	-41.5†	-40.5†	-42.6†	Calm	0	0	b	—	—	—	—	—	Portions of arches at all elevations up to the zenith, in the E and S.
4	29.487	—	-43.2	-38.5	-38.0	-39.5†	Calm	0	0	b	—	—	—	—	—	4 a.m. Wide curtain from N to zenith and portions of arch all over the sky from E and S.
6	29.434	—	-42.2	-37.0	-36.4	-38.0	Calm	1	0	b	—	—	—	—	—	6 a.m. Faint arches S and E to 10°; stars brilliant all night.
8	29.352	—	-43.8	-35.2	-35.0	-36.0	Calm	0	0	b	—	—	—	—	—	Sky cloudless; visibility good; rime on outside instruments.
10	29.300	—	-36.5	-28.0	-28.2	-28.5	Calm	0	0	b	—	—	—	—	—	Noon. Min. temp. at Cape Armitage, -51° 0'. Wind E by N, 2. b. Erebus smoke going towards E.
Noon	29.230	-46.8	-33.0	-31.5	-31.2	-32.0	Calm	0	0	b ↓	—	—	—	—	—	2 p.m. Clearing on tops of western mountains; detached Cu. on Mt. Discovery summit.
2	29.172	—	-34.2	-33.3	-33.3	-34.0	Calm	0	0	b	—	—	—	—	—	4 p.m. Min. temp. at Cape Armitage, -53° 0'. Light Sly airs. w to SE. Erebus smoke indistinguishable.
4	29.118	-53.0	-42.0	-29.5	-29.5	-30.0	Calm	0	0	b w ↓	—	—	—	—	—	6 p.m. Heavy rime on all exposed instruments.
6	29.069	—	-43.6	-43.0†	-43.0†	-43.0†	Lt. S airs	0	0	b ↓	—	—	—	—	—	8 p.m. Bright auroral arch of streamers, N to ESE, alt. 10°; patches of streamers
8	29.040	—	-43.8	-40.0†	-40.0†	-41.0†	Calm	0	0	b ↓	—	—	—	—	—	† As given in register.
10	29.017	—	-43.5	-45.5*	Frozen	Frozen	Calm	1	0	bm	—	—	—	—	—	
Midd.	28.990	—	-46.0	-31.2	-30.9	-33.8	Calm	1	0	bm	—	—	—	—	—	
Mean	29.228	—	-36.2	—	—	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -22° 8. / 8 p. -28° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { I. 0.4 / II. 0.4 / III. 0.8 } grammes in 24 hours. Precipn. — in.

below it to N; very clear and bright star and moonlight. 10 p.m. Misty over the floe and all land. Midd. Bright band of auroral light E by S to SSW, apex SE by S, alt. 9°; misty to W low down. Fine and clear all day, with no wind; became misty in the evening as the temperature fell. Barometer fell quickly all day. Temperature lower, and remained low all day. \* Readings of spirit minimum thermometer at time of observation. † As given in register.

30th.

2	28.949	—	-43.0	-36.8	-37.0	-38.6	Calm	2	0	b	—	—	—	—	—	Short arches of auroral light, from 8° to 30° alt., between ENE and SE, very variable in strength and position.
4	28.958	—	-41.5	-27.3	-27.0	-28.2	Calm	2	0	b	—	—	—	—	—	6 a.m. Faint arches of auroral streamers, NE to S, alt. 8° to 60°, very variable in strength and position; marked visibility in direction of Black Island all night.
6	28.936	—	-42.3	-23.2	-23.6	-23.3	Lt. ESE airs	4	0	b	—	—	—	—	—	8 a.m. A bank of fog all round horizon.
8	28.922	—	-46.0	-41.0*	-44.0†	Frozen	Calm	0	0	bm	—	—	—	—	—	10 a.m. There has been an apparent precipitation of ice crystals, as well as deposition, on anemometer glass during the night; during the observation a very light Wly air sprang up.
10	28.918	—	-44.0	-41.0*	-41.0†	-41.2†	Calm	0	0	bm ↓	—	—	—	—	—	Noon. Heavy mist rising up from the floe; light airs coming from all quarters.
Noon	28.910	-60.5	-54.0	-52.5*	Frozen	Frozen	Calm	0	0	bm ↓ U	—	—	—	—	—	Noon. Min. temp. at Cape Armitage, -60° 5'. Light Sly airs. b. Str. low to N. —. Erebus smoke going E.
2	28.916	—	-52.8	-49.0*	-48.0†	-51.0†	Lt. N airs	0	0	bm ↓	—	—	—	—	—	
4	28.923	-58.0	-54.2	-51.2*	Frozen	Frozen	Calm	0	0	bm ↓ U	—	—	—	—	—	
6	28.955	—	-52.3	-45.5*	-45.5†	Frozen	Calm	0	0	bm ↓ U	—	—	—	—	—	
8	28.995	—	-45.5	-40.0†	-40.0†	-41.0†	Calm	2	0	bm ↓ U	—	—	—	—	—	
10	29.051	—	-41.0	-36.0	-35.9	-37.0	Lt. NE airs	0	0	b	—	—	—	—	—	
Midd.	29.121	—	-36.0	-31.0	-31.0	-31.0	Calm	0	0	bc	—	—	Cl. s., W	—	—	
Mean	28.963	—	-39.8	—	—	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -20° 0. / 8 p. -22° 0. Solar radiation { black bulb — / bright bulb —. Evapn. — gramme. Precipn. — in.

2 p.m. Dry, misty vapour rising from the floe; low bank of Cu. on western mountains; temperature rising with Nly airs, and then falling again. 4 p.m. Min. temp. at Cape Armitage, -60° 5'. Calm. b. Low Str. W to NNE. Erebus indistinguishable. 5 p.m. Halo and paraselene, the latter very bright. 6 p.m. Corona faint, but of large radius; Str. to N and NE. 8 p.m. Mist not so thick; temperature becoming unsteady. 11 p.m. Very clear and bright; mist high up on eastern hills. Fine clear sky, but misty most of the day whilst the temperatures were low. No wind all day. Barometer fell until noon, and then rose. Temperature very low all day. \* Readings of spirit minimum thermometer at time of observation. † As given in register.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Spirit minimum.	Dry.							Wet.	Mercury below scale			
2	29.209	—	-36.1	-30.6	-30.9	-30.5	Calm	0	0	bc	—	Cl. s. 3, W	—	Mercury below scale	<p>31st.</p> <p>Moon setting SW by W, very much distorted by refraction and very red.</p> <p>[Weather was too bad to go out to Cape Armitage.]</p> <p>Thick all round.</p> <p>Wind varying between SSE and SSW, and very squally; air choked with drift and falling snow, no land visible.</p> <p>2 p.m. Wind very gusty; drift not so thick; snow in face of the Robinson anemometer.</p> <p>4 p.m. Squalls at intervals, with heavy drift.</p> <p>4.30 p.m. Temp. at Cape Armitage, -11° 7'; min., -48° 5.</p> <p>Wind SSE, 2-4. Nim. 10. †*.</p> <p>Erebus obscured.</p> <p>6 p.m. Moon gleaming faintly; large accumulation of drift in gauge.</p> <p>8 p.m. Stars visible, but dim; moon gleaming in NNW. Wind variable between E and SSE, and squally; foggy all round.</p>
4	29.282	—	-32.0	-19.1	-19.3	-19.3	E, 2	5	22-24	oc	—	—	S. 7	-19.7	
6	29.381	—	-24.5	-17.9	-18.2	-18.0	E, 1-2	10	15-20	o	—	—	S. 10	-20.2	
8	29.534	—	-20.0	-19.0	-19.0	-20.0	Var. S, 6-7	17	35-42	oc †	—	—	S. 10	-18.2	
10	29.660	—	-20.5	-15.0	-15.0	-15.0	SSE, 5-6	22	20-30	o †	—	—	S. 10	-18.8	
Noon	29.729	—	-17.0	-16.0	-16.0	-16.0	Var. S, 6-9	18	30-52	oq †* †*	—	—	N. 10	-15.2	
2	29.820	—	-16.2	-13.0	-13.2	-13.5	S, 4-6	31	15-30	ofq †* †*	—	—	N. 10	-15.5	
4	29.913	—	-14.3	-11.3	-11.3	-12.5	SE, 3-5	19	20-30	ofq †* †*	—	—	N. 10	—	
6	29.997	—	-13.5	-12.0	-12.0	-12.5	SE, 3-5	14	15-28	oq †* †*	—	—	N. 10	—	
8	30.033	—	-12.5	-11.0	-11.0	-11.2	Var. SE, 1-5	15	12-30	bcqf † †	—	—	S. 4	-11.7	
10	30.061	—	-13.1	-12.0	-12.2	-12.8	E by S, 3-6	18	20-30	bcqf †	—	—	S. 8	-11.9	
Midt.	30.057	—	-13.0	-12.0	-12.4	-12.6	E, 3	19	25-30	bc †	—	—	S. 2	—	
Mean	29.723	—	—	-15.7	-15.9	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -16° 2.  
8 p. -10° 5. Solar radiation { black bulb —  
bright bulb —. Evapn. { I. 0.2  
II. 0.2 } gramme in  
III. 0.4 } 24 hours. Precipn. — in.

10 p.m. Wind very unsteady; a few stars visible in E; moon dim. Midt. Sky cleared; Str. clouds gathered about western mountains to 40° alt. Overcast all day. Wind sprang up early and blew very strong from the S, accompanied by heavy drift or snowfall, and by heavy squalls. Barometer rose rapidly until 10 p.m., and then commenced to fall. Temperature rose quickly, and remained fairly steady.

1903—August.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Asphator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cupanometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.										
1st. 2	30.027	—	-13.7	-11.0	-11.0	-11.5	E by N, 1-3	16 22-26	bq ↗	—	—	—	Bank of Str. in W, stars very bright.	
4	29.983	—	-12.7	-12.0	-12.2	-12.4	ENE, 2-3	15 22-26	b	—	—	—	Dull round the horizon, and lower stars dim.	
6	29.950	—	-13.7	- 8.8	- 9.5	- 9.0	NE, 3-4	18 25-30	oc ↗ *	—	N 10	—	Snowing very slightly.	
8	29.898	—	- 9.5	- 9.0	- 9.0	-10.0	NE, 4-5	23 30-35	bc	—	S.-cu. 4	—	—	
10	29.848	—	-11.7	-10.0	-10.2	-11.0	Lt. var. airs	10 0-8	oc	—	S. 9	—	—	
Noon	29.765	-18.0	-17.0	-17.0	-17.2	-17.2	Lt. var. airs	3 0-8	bc ☽	A.-s. 5, ? direction	Fr.-s. 2, NW (rapid)	—	—	
2	29.642	—	-23.5	-16.8	-17.0	-16.5	Lt. var. airs	4 0-5	bc ☽	Cl.-cu. 2, W	S. 2, N	—	—	
4	29.515	-11.5	-20.0	- 8.5	- 9.0	- 8.0	N by E, 1-3	3 5-20	bq	—	—	—	—	
6	29.354	—	- 9.0	- 4.2	- 5.2	- 4.0	N by E, 2-3	10 10-25	b	—	—	—	—	
8	29.295	—	-17.8	-15.0	-15.0	-15.5	E, 1-2	7 10-15	b	—	—	—	—	
10	29.254	—	-24.0	-22.0	-22.0	-23.0	ESE, 5-7	9 30-40	bq ↗	—	—	—	—	
Midt.	29.199	—	-26.0	-25.0	-25.0	-24.0	Var E, 7-8	20 33-45	b ↗	—	—	—	—	
Mean	29.644	—	-13.3	-13.5	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. -4° 0. Solar radiation { black bulb —, Evapn. { 1. 2.1 } grammes in Precipn. 0.42 in. since 4 p.m. 28th June.														
-24° 6. Wind NNW, 2. b. ↗. Two small wisps of Str. to N; Erebus indistinguishable. 5 p.m. Wind very variable for about 3 minutes; wind blew in small squalls from N, NE, S, W and NW, and then back to N by E, backing to NW every now and then; drift came with E and NE puffs, and fog with N and NW. 6 p.m. Same as at 4 p.m.; foggy and clear at intervals; excessive drop in barometer. 8 p.m. Wind inclined to be variable. Fine generally, but dull weather, with strong and rising Ely wind. Barometer falling steadily all day. Temperature falling rather low.														

2nd. 2	29.141	—	-28.0	-24.8	-24.8	-25.0	ESE, 7-8	29 35-45	bcq ↗	—	Fr.-s. 3	—	—	
4	29.109	—	-26.0	-25.0	-25.0	-25.0	ESE, 5-6	26 30-35	bc ↗	—	Fr.-s. 3	—	—	
6	29.113	—	-27.5	-27.0	-27.0	-26.0	NE, 5-6	21 30-35	bc ↗	—	Fr.-s. 3	—	—	
8	29.072	—	-27.0	-19.2	-19.2	-20.0	Calm	14 0	bc	—	Fr.-s. 5	—	—	
10	29.051	—	-21.0	-18.0	-17.0	-19.5	Calm	4 0	oc	—	S. 9, NW (fast)	—	—	
Noon	29.001	—	-22.8	-21.0	-21.0	-21.0	NE, 4-5	8 20-35	o	—	S. 10, ? direction	—	—	
2	28.966	—	-23.2	-23.0	-23.0	-22.8	ENE, 3-4	15 20-30	o ☽	—	Thin S. 10, NE	—	—	
4	28.909	-28.8	-25.6	-25.3	-25.3	-25.5	NE, 3-5	16 20-35	oq ☽ ↗	—	Thin S. 10, NE	—	—	
6	28.842	—	-26.0	-21.6	-21.6	-22.0	ENE, 2-3	14 15-25	o ☽	—	Thin S. 10, NE	—	—	
8	28.794	—	-23.0	-21.8	-21.8	-21.8	NE, 3-4	15 15-20	o ☽	—	S. 10, ? direction	—	—	
10	28.688	—	-22.0	-21.0	-21.0	-21.5	ENE, 3-4	14 20-25	o ☽	—	S. 10	—	—	
Midt.	28.643	—	-24.0	-24.0	-24.0	-25.0	E by N, 4-5	15 25-30	o ☽	—	S. 10	—	—	
Mean	28.944	—	-22.6	-22.6	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. -12° 0. Solar radiation { black bulb —, Evapn. { 1. 0.3 } grammes in Precipn. — in.														
8 p. -15° 4. Solar radiation { bright bulb —, Evapn. { 11. 0.8 } grammes in 24 hours. Precipn. — in.														
cernible; faint corona. 10 p.m. Thin Str. with a few stars visible at zenith; moon gleaming through clouds. Dull and overcast most of the day, with strong to fresh variable E and NE winds. Barometer falling steadily all day. Temperature steady and fairly low.														

3rd. 2	28.607	—	-24.0	-24.0	-24.0	-25.0	ENE, 3-4	17 20-25	bc ☽	—	S.-cu. 8	—	—	
4	28.569	—	-23.0	-18.0	-18.0	-19.0	Calm	7 0	bc ☽	—	Cu. 2	—	—	
6	28.532	—	-28.0	-25.0	-25.0	-25.0	Calm	0 0	bc	—	S. 2	—	—	
8	28.584	—	-31.0	-27.2	-27.2	-28.2	ESE, 4-5	15 22-27	bc	—	S.-cu. 3	—	—	
10	28.614	—	-29.5	-22.3	-22.6	-23.0	E, 3-5	20 15-25	b	—	—	—	—	
Noon	28.633	-26.7	-23.0	-18.5	-19.0	-19.0	E, 4-5	14 20-25	b	—	—	—	—	
2	28.691	—	-22.6	-20.0	-20.0	-19.7	E, 2-3	14 10-20	b	—	—	-20.6	—	
4	28.738	-39.0	-21.4	-22.2	-22.2	-23.0	E, 2-3	7 10-20	bc ☽	—	Cu. 2, E	-20.9	—	
6	28.784	—	-22.5	-18.6	-18.8	-19.0	E, 1-2	10 8-18	bc ☽	—	Cu. 4, E	-23.1	—	
8	28.810	—	-21.8	-21.0	-21.0	-21.0	NE, 4-5	10 20-25	bem ☽	—	—	-18.0	—	
10	28.834	—	-23.8	-23.8	-23.8	-24.0	NE, 4-5	13 20-25	bem	—	A.-s. 3, ? direction	-20.9	—	
Midt.	28.877	—	-24.2	-20.5	-20.5	-21.2	NE, 2-3	16 10-15	bem	—	A.-s. 3	-22.7	—	
Mean	28.689	—	-21.8	-21.8	—	—	—	—	—	—	—	-20.9	—	
Max. therm. read at { 8 a. -17° 0. Solar radiation { black bulb —, Evapn. { 1. 0.5 } grammes in Precipn. — in.														
8 p. -15° 8. Solar radiation { bright bulb —, Evapn. { 11. 0.6 } grammes in 24 hours. Precipn. — in.														
distinguishable. 6 p.m. Double corona with thin Cu. 8 p.m. Thick all round to S and SW. Cloudy and dull generally after the forenoon, with fresh Ely winds. The barometer fell until 6 a.m., then rose steadily for rest of day. Temperature very steady all day and low.														

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cupanometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
				Dry.	Wet.										
2	28.917	—	-29.0	-28.0	-27.5	-28.2	S, 1-2	8	8-12	bc	U	—	A.s. 3	Mercury below scale	Moon gleaming through the clouds, and faint corona.
4	28.947	—	-29.0	-23.2	-23.2	-24.5	Var. NE, 1	3	0-5	bc	—	—	A.s. 2	-24.2	
6	28.973	—	-26.0	-23.0	-23.0	-24.0	E by S, 1	5	5-7	bc	—	—	A.s. 2	-24.5	
8	28.991	—	-26.0	-26.0	-26.0	-27.0	Lt. E airs	3	5	bc	—	—	A.s. 2	-22.0	Very thick to the west.
10	28.991	—	-27.0	-23.2	-23.5	-24.2	NE, 4-6	9	20-30	b	†	—	—	-24.2	
Noon	28.996	-26.6	-23.8	-21.8	-21.8	-22.2	NE, 4-5	13	20-25	oc	†	U	A.s. 6, NW	-24.3	Misty along western shore; a few detached Str. to N.
2	28.995	—	-23.0	-22.5	-22.5	-22.0	ENE, 2-3	19	20-28	bc	†	U	—	-21.6	Whilst out for observation, a thick mist came in from N,
4	28.999	-41.8	-24.0	-23.0	-23.0	-23.3	NE, 1-2	10	16-18	bc	†	U	—	-22.0	obscuring western mountains, which were very clear just before; the upper Str. appears to be moving in a SEly direction. Fr.-s. to N and NE; this may possibly be Erebus smoke.
6	28.991	—	-25.2	-24.5	-24.5	-25.0	NE, 2-3	14	18-25	bc	†	U	—	-22.7	Noon. Min. temp. at Cape Armitage, -46° 6'. Wind NE, 1-2. Ci.-cu. 8, going to SSE. bc. †. Erebus smoke going to ENE low down. Adherent — on thermometer.
8	28.989	—	-26.0	-25.0	-25.0	-25.2	NE, 4-6	15	20-32	bc	†	U	—	-23.8	2 p.m. Clouds of thin mist coming from N at times.
10	28.959	—	-28.5	-28.2	-28.0	-29.0	NE by E, 4-5	18	15-18	ocm	—	—	?	-24.2	4 p.m. Thin Str. driving rapidly westwards; threatening.
Midt.	28.958	—	-28.8	-25.0	-25.0	-25.5	ENE, 3	11	18	ocm	2	→	S. 10	From 10 p.m. to Midt. mercury below scale	
Mean	28.976	—	—	-24.5	-24.4	—	—	—	—	—	—	—	—	—	

4th.

Max. therm. read at { 8 a. -15° 8. } Solar radiation { black bulb —, } Evapn. { 1. 0.5 } grammes in Precipn. — in.

4 p.m. Min. temp. at Cape Armitage, -42° 8. Wind ESE, 2. Ci. 5. bc. †. Erebus indistinguishable. Str. to N and E. 6 p.m. Aspirator dry bulb mercury did not show; faint U, only visible at times. 8 p.m. Thick all round; stars visible, but dim; ugly looking generally. Midt. Thickness much increased, Observation III obscured. Cloudy most of the day, with fresh NEly wind. Barometer rose until 4 p.m., and then fell. Temperature very steady all day.

2	28.922	—	-27.0	-26.5	-26.5	-27.0	ENE, 3	11	20	ocm	†	→	—	S. 10	
4	28.888	—	-30.2	-30.0	-30.0	-30.0	ENE, 4-5	18	20-25	ocm	†	→	—	S. 10	
6	28.871	—	-31.8	-31.0	-31.0	-31.5	ENE, 5	28	18-25	bc	†	U	Cl.-s. 4	—	
8	28.842	—	-34.0	-27.0	-27.0	-28.0	E, 3-4	21	15-20	o	†	—	—	S. 10	
10	28.816	—	-28.5	-28.0	-28.0	-28.2	ENE, 3-5	15	18-25	ocm	†	U	A.s. 8	—	Thick all round; moon gleaming through Str. to SSE; thick Str. overhead.
Noon	28.776	-35.0	-29.0	-28.0	-28.0	-28.0	ENE, 2-3	15	10-20	ocm	—	—	A.s. 6	—	Noon. Thick all round, foggy to N, moon faintly visible in SE, dull and nasty looking generally.
2	28.758	—	-29.2	-28.3	-28.3	-29.0	NE, 2	12	15-20	ocf	U	—	A.s. 8	—	Noon. Min. temp. at Cape Armitage, -44° 0. Wind ENE, 1-2. oc. Erebus obscured.
4	28.740	-37.5	-29.3	-27.0	-27.0	-26.5	Calm	8	0	bc	U	—	A.s. 5, N (mod.)	—	2 p.m. Very thin cloud, unable to discern movement; stars gleaming in zenith.
6	28.720	—	-32.2	-31.5	-31.5	-34.0	Calm	1	0	bf	—	—	—	—	4 p.m. Cloudless in zenith.
8	28.720	—	-42.0	-41.2†	-40.8†	-44.0†	Calm	0	0	bm	U	—	—	—	4 p.m. Min. temp. at Cape Armitage, -36° 0. Wind E, 2. bc. Ci. 5. Erebus obscured. Str. to N and E.
10	28.713	—	-47.0	-47.0†	-46.5†	-47.0†	Calm	0	0	b	—	—	—	—	5 p.m. Radius of U 22° 25', very faint.
Midt.	28.702	—	-49.0	-48.0*	-48.5†	-48.5†	Calm	0	0	b	—	—	—	—	
Mean	28.789	—	—	-32.8	-32.8	—	—	—	—	—	—	—	—	—	

5th.

Max. therm. read at { 8 a. -24.0. } Solar radiation { black bulb —, } Evapn. { 1. 0.9 } grammes in Precipn. — in.

6 p.m. Large quantities of small ice needles floating in the air; faint U. 7 p.m. Temp. at Cape Armitage, -48° 0; min., -48° 0. Calm; foggy, but clear sky. 8 p.m. A large precipitation of minute ice needles has fallen during the interval of observations; deposit on anemometer glass. 11 p.m. Mist apparently low, with faint corona. Misty and cloudy most of the day. Wind strong early, falling to calm about 4 p.m., and remaining so. Barometer falling steadily all day. Temperature low and falling. \* Reading of spirit minimum thermometer at time of observation. † As given in register.

2	28.699	—	-52.2	-47.0*	-45.0†	Frozen	Calm	0	0	h	—	—	—	—	
4	28.704	—	-51.7	-50.5*	-49.5†	Frozen	Calm	0	0	b	—	—	—	—	
6	28.695	—	-53.0	-51.0*	-50.0†	Frozen	Calm	0	0	b	U	—	—	—	
8	28.698	—	-51.2	-46.5*	-45.5†	Frozen	Calm	0	0	b	—	—	—	—	
10	28.701	—	-45.0	-41.0*	-40.0†	Frozen	Calm	0	0	b	—	—	—	—	
Noon	28.703	-62.0	-53.0	-53.0*	Frozen	Frozen	Calm	0	0	bm	U	—	—	—	Cl.-s. across the moon in S, moving very slowly from SW; some Cl.-s. to E; slight mist along western shore.
2	28.703	—	-53.2	-47.0*	Frozen	Frozen	Calm	0	0	bm	U	—	—	—	Noon. Misty all over floe; Ci.-a. across moon moving from SW slowly; strong corona; at 11.45 mercury in wet bulb was just showing, but by noon it had all gone into the bulb; wet bulb about -53° 0; min., -53° 5.
4	28.705	-55.0	-48.2	-42.8*	Frozen	Frozen	Calm	0	0	b	—	—	—	—	Noon. Min. temp. at Cape Armitage, -62° 0. Calm. Ci. 1. bc. Mt. Erebus' smoke going NE in large volume; four shafts of blue light proceeding from N almost across the zenith and radiating to S and SW.
6	28.721	—	-50.5	-45.3*	Frozen	Frozen	Calm	0	0	b	—	—	—	—	
8	28.746	—	-45.0	-42.2*	Frozen	Frozen	Calm	1	0	b	—	—	—	—	
10	28.772	—	-46.5	-43.6*	Frozen	Frozen	Lt. E airs	2	0	o	—	—	Cl.-s. 10	—	
Midt.	28.789	—	—	-29.0	-31.5	-26.8	E by N, 1	1	10-14	o	—	—	Cl.-s. 10	—	
Mean	28.720	—	—	-44.9	—	—	—	—	—	—	—	—	—	—	

6th.

Max. therm. read at { 8 a. -41° 8. } Solar radiation { black bulb —, } Evapn. { 11. 0.1 } grammes in Precipn. — in.

U. Refraction in SSE and E. Adherent — on thermometer. 2, 4, and 6 p.m. All mercurial instruments remained frozen. 4 p.m. Min. temp. at Cape Armitage, -63° 2. Calm. bn. Erebus smoke indistinguishable; bright rose and orange glow in NW. — on thermometer. 8 p.m. Str. apparently approaching from S; Ci.-s. to E apparently spreading; light puffs of S<sup>y</sup> and E<sup>y</sup> airs at times. 10 p.m. Lunar corona and halo; sky clear to NW. 11 p.m. U radius 22° 28'. Midt. Lunar corona and halo. Calm and clear all day generally, but misty at times. Barometer steady till 4 p.m., and then commenced to rise. Temperature very low all day; all mercurial instruments frozen. \* Readings of spirit minimum thermometer at time of observation. † As given in register.

1903—August.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
				Dry.	Wet.										Unscreened.
7th.	2	28.788	—	-29.0	-27.0	-27.5	ENE, 3-4	14	15-28	o ☐ ☐	—	—	Mercury out of sight until Midt.	Cl. of only the lightest description. Dawu light showing in SE. Very dull to the W. Some Cl.-s. to S, apparently approaching and collecting from SW across the moon; temperature very unsteady. Noon. Cl.-s. all over the sky, movement imperceptible; alrs variable, more especially from SW to N; read observations without light, but it is not easy to read thermometer in box. Noon. Min. temp. at Cape Armitage, -61° 6'. NNWly alrs. Cir. 5. bc. Erebus smoke going NE. 2 p.m. Cl. and Ci.-cu. on N horizon; foggy in S. 4 p.m. Temperature very unsteady; wind shifted to, and remained, N. 4 p.m. Min. temp. at Cape Armitage, -50° 6'. Calm. Cir. 5. A.-s. 1. bc. Erebus	
	4	28.809	—	-29.0	-27.0	-27.5	E by N, 3	20	15-20	bc ☐ ☐	—	—			
	6	28.854	—	-29.9	-29.1	-29.5	ENE, 0-1	4	0	bc ☐ ☐	—	—			
	8	28.899	—	-40.0	-39.0	-39.0	Calm	2	0	b	—	—			
	10	28.939	—	-44.0	-34.0	-34.5	Calm	0	0	b ☐	—	—			
	Noon	28.947	-39.5	-38.0	-33.5	-33.0	Lt. var. alrs	3	0-8	bc ☐	—	—			
	2	28.980	—	-37.2	-32.2	-32.8	E, 1-2	3	5-12	bc	—	—			
	4	28.960	-50.6	-35.5	-31.2	-31.2	N, 1-2	2	5-15	b	—	—			
	6	28.964	—	-39.5	-37.0	-37.0	NNE, 0-1	7	5-10	o	—	S. 10			
	8	28.960	—	-36.0	-22.6	-22.8	NNW, 1	5	5-12	o	—	S. 10			
	10	28.946	—	-31.0	-27.5	-27.8	Calm	2	0	o	—	S. 10			
	Midt.	28.957	—	-28.3	-16.8	-17.0	Lt. SE alrs	1	0-8	o	—	S. 10			
	Mean	28.917	—	—	-29.7	-30.0	—	—	—	—	—	—			-17.3 -17.7

Max. therm. read at { 8 a. -25° 0.  
8 p. -21° 0. Solar radiation { black bulb —  
bright bulb —. Evapn. { 11. 0.2 } grammes in  
111. 0.3 } 24 hours. Precipn. — in.

observed. ☐ ☐. Low Str. to NE and S. 6 p.m. Thin Str. with moon gleaming faintly; calm on going out, but wind sprang up before reaching screen. 8 p.m. Str. apparently about 3000 feet above us. 10 p.m. Str. apparently descended to about 2000 feet, as very little of Black Island is visible. Midt. Wind freshened considerably after taking observations. Overcast and cloudy the greater part of the day, but at times a clear sky. Light winds from various quarters. Barometer rose until after noon, and then fell and became unsteady. Temperature low all day, but rose quickly in the evening.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
8th.	2	28.975	—	-22.0	-23.0	-22.0	E, 4	10	23-25	o	—	—	—	Wind inclined to be variable and gusty. Wind inclined to haul to S of E, and be squally; Str. apparently lifting to S and SW, Black Island visible to alt. of about 2000 feet. Min. temp. at Cape Armitage, -51° 2'. Wind ENE, 1-2. Str. 10. oc. +. Erebus obscured. 2 p.m. Break in clouds to N; mltsty to S. 4 p.m. Coating of drift on thermometers. 4 p.m. Min. temp. at Cape Armitage, -38° 5'. Wind E, 4-5. Str. 10. ocfq. +. Erebus obscured. 6 p.m. Wind very squally and variable; fine snow falling. 8 p.m. This is the first occasion that I remember a WSW wind being recorded; light snow falling, snow hard and small; foggy all round; just before 8 p.m. it was reported calm. 10 p.m. No land visible. Overcast all day; foggy and snowing in the evening. Wind strong Ely and variable Ely all day. Barometer falling nearly all day. Temperature not so steady, and higher.
	4	28.946	—	-22.0	-19.2	-19.6	NE, 4-5	14	23-27	o	—	—	—	
	6	28.931	—	-20.0	-19.0	-19.2	ENE, 1-2	10	12-15	o	—	—	—	
	8	28.939	—	-24.0	-20.5	-20.2	ESE, 4-5	17	20-25	om + *	—	—	—	
	10	28.940	—	-22.8	-22.0	-21.8	E, 1	12	5-10	o *	—	—	—	
	Noon	28.881	-22.0	-22.9	-19.7	-19.9	E, 1-3	14	10-23	o + *	—	—	—	
	2	28.849	—	-23.0	-22.0	-23.0	E, 1-3	20	10-20	ocfq +	—	—	—	
	4	28.805	-31.2	-26.5	-25.6	-25.2	ENE, 3-4	17	15-25	of +	—	—	—	
	6	28.747	—	-24.3	-16.3	-17.0	Var. E, 1-3	14	8-15	ocfq + *	—	—	—	
	8	28.651	—	-21.2	-20.8	-21.0	WSW, 1-3	16	10-15	ocfq *	—	—	—	
	10	28.663	—	-21.8	-20.5	-20.5	Lt. E alrs	1	0	o *	—	—	—	
	Midt.	28.658	—	-22.0	-21.8	-22.5	E, 2-3	14	10-20	o + *	—	—	—	
	Mean	28.832	—	—	-20.8	-20.8	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. —  
8 p. -12° 5. Solar radiation { black bulb —  
bright bulb —. Evapn. { 1. 0.8 } grammes in  
111. 1.6 } 24 hours. Precipn. — in.

observed. ☐ ☐. Low Str. to NE and S. 6 p.m. Thin Str. with moon gleaming faintly; calm on going out, but wind sprang up before reaching screen. 8 p.m. Str. apparently about 3000 feet above us. 10 p.m. Str. apparently descended to about 2000 feet, as very little of Black Island is visible. Midt. Wind freshened considerably after taking observations. Overcast and cloudy the greater part of the day, but at times a clear sky. Light winds from various quarters. Barometer rose until after noon, and then fell and became unsteady. Temperature low all day, but rose quickly in the evening.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
9th.	2	28.706	—	-31.2	-27.9	-28.0	E, 3	18	24-30	oc + *	—	—	—	Surface drift and snow; land obscured. Drifting and snowing heavily; land obscured. Snow in Robinson's anemometer. Squalls up to force 9 and 10 at times; wind variable from ENE to SE; temperature falls rapidly in the fells, generally to -40°, and rises at once with squall; drift very thick during the squalls. Noon. Similar weather as at 10 a.m.; wind from NE to SE; temperature as variable. 1 p.m. Clouds inclined to break to N, alt. 30°; Str. very thin overhead. 1 p.m. Temp. at Cape Armitage, -45° 5'; min., -46° 5'. Wind E, 6-7. bcfq. +. Erebus obscured. Str. to N and E. 2 p.m. Break in clouds to N and NW; appearance of clearing overhead. 4 p.m. Str. all round horizon. 4 p.m. Min. temp. at Cape
	4	28.727	—	-36.8	-36.5	-36.5	E, 13-5	20	28-40	oc +	—	—	—	
	6	28.739	—	-41.0	-39.9	-40.2	E by N, 5-6	23	32-42	o +	—	—	—	
	8	28.721	—	-42.0	-39.0	-39.0	Var. E, 6-8	32	35-45	ocfq +	—	—	—	
	10	28.685	—	-42.0	-35.0	-37.0	Var. E, 4-8	23	20-50	ocfq +	—	—	—	
	Noon	28.711	—	-39.2	-39.0	-38.8	Var. E, 4-9	33	20-51	ocfq +	—	—	—	
	2	28.691	—	-42.8	-33.0	-34.0	Var. E, 2-6	27	10-25	oq	—	—	—	
	4	28.652	-46.5	-39.2	-27.5	-29.0	Var. E, 2-5	4	10-25	bq	—	—	—	
	6	28.627	—	-29.0	-23.2	-23.5	Var. E, 1-3	14	8-15	bq ☐	—	—	—	
	8	28.578	—	-23.8	-22.0	-22.5	E, 1	10	8-10	bc ☐	—	—	—	
	10	28.548	—	-42.0	-37.9	-38.0	NNE, 0-1	2	0-8	oc	—	—	—	
	Midt.	28.456	—	-38.3	-27.8	-28.0	Lt. S. alrs	1	0-8	o *	—	—	—	
	Mean	28.653	—	—	-32.4	-32.5	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -16° 0.  
8 p. —. Solar radiation { black bulb —  
bright bulb —. Evapn. — grammes. Precipn. — in.

Armitage, -46° 5'. Wind E by N, 2-3. bq. +. Erebus obscured. Str. low to NW. 8 p.m. Wind seems to be falling; corona faint. Midt. Commenced to snow lightly; clouds becoming denser. Overcast most of the day, with strong variable Ely winds and squalls. Barometer unsteady early, settling down to a steady fall. Temperature low and steady all day. N.B.—All the evaporation dishes were knocked down after yesterday's observation, and Nos. 1 and 111. had to be mended, leaking.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	28.415	—	-28.1	-24.0	-24.0	-24.0	E, 0-1	1	0-8	o*	—	N. 10	—	[No observations were taken off Cape Armitage.] 2 a.m. Weather thickening; very threatening appearance. 4 a.m. Heavy squalls during intervals; force of wind very variable. 6 a.m. Wind variable in force and direction. 8 a.m. Very heavy squalls; cannot see anything from ship. 10 a.m. Drift very thick; wind steady in S, but squally. Noon. Blowing very much harder in the squalls; wind shifting to SSW and back to S; drift extremely thick; barometer not pumping in the squalls; wind increasing in force and frequency of squalls. 2 p.m. Wind swung from W to S and steadied in SSW; blinding drift with the squalls. 6 p.m. No outside observation taken; unable to stand at bottom of gangway. The observation for 6 p.m. was not taken, by captain's orders; CLARKE, the observer, affirms that the force 11-12 is not exaggerated in his opinion. Several of the officers were on deck shortly before 6, and they give 11 as the force, and even higher in the squalls	
4	28.368	—	-24.2	-8.0	-8.0	-8.0	SSE, 2-4	13	10-25	o*	—	N. 10	—		
6	28.314	—	-8.5	0.0	0.0	0.0	SE, 4-5	16	15-25	o†	—	N. 10	—		
8	28.301	—	-2.0	3.0	3.0	3.0	S by E, 5-10	30	30-58	og †²*	—	N. 10	—		
10	28.311	—	1.8	4.0	4.0	3.6	S, 6-8	20	30-48	og †²*	—	N. 10	—		
Noon	28.303	—	3.5	5.0	5.0	5.0	Var. S, 6-10	26	30-61	og †²*	—	N. 10	—		
2	28.300	—	4.5	6.0	5.0	6.5	SSW, 4-9	29	20-50	og †²*	—	N. 10	—		
4	28.325	—	4.0	6.5	6.0	6.5	Var. S, 6-10	43	35-55	og †²*	—	N. 10	—		
6	28.344	—	—	—	—	—	Var. SW, 11-12	41	—	og †²*	—	N. 10	—		
8	28.385	—	5.8	7.8	7.8	7.8	S, 6-10	41	30-55	og †²*	—	N. 10	—		
10	28.411	—	7.0	9.0	9.0	8.5	S, 7-8	31	30	og †²*	—	N. 10	—		
Midt.	28.380	—	9.0	9.5	9.5	9.5	S, 7-9	28	30-50	og †²*	—	N. 10	—		
Mean	28.346	—	—	1.7	1.6	—	—	—	—	—	—	—	—		

10th.

Max. therm. read at { 8 a. 32°0.  
8 p. 7°8. Solar radiation { black bulb —,  
bright bulb —. Evapn. — grammes. Precipn. — in.

which followed shortly after 6 p.m. 8 p.m. It appeared to lull, and observations were taken, but shortly afterwards it came on with increased violence; squalls seem less frequent, but very violent; wind keeps steady in S, only veering to SW in the squalls. Considerable quantity of drift has got into the anemometer, which may be probably affecting the readings. 10 p.m. Wind steady in S. The observer during the night of the 9th to 6 a.m. 10th remarks on the barometer having fallen 0.2 in., and the temperature risen 40° F. during his hours of observation. Overcast; squally, and very heavy SW and S by gale, accompanied by smothering drift and snow-fall continuing all day, gradually increasing up to about 6.30 p.m., when it commenced to ease a little. Barometer fell rapidly until 8 a.m., when the wind shifted to the S quarter. It rose for the remainder of the day, but was most "jumpy" in the evening. Thermometer rose rapidly as storm approached, and continued to rise steadily all day.

2	28.459	—	8.0	9.0	0.0	9.0	S by W, 6-8	31	20-50	og †²*	—	N. 10	—	Land visible. Land plainly visible, but not Observation Hill; snow hard and falling sharply. Land plainly visible; Observation Hill only seen at times. Appears to be clearing; very squally; land visible at times; all thermometers covered with drift. 10 a.m. Weather similar to yesterday; wind variable from SSW to WSW. Noon. Weather seemed better at the actual time of observation, but shortly afterwards came on as bad as ever; wind was steadier from 11 a.m. to Noon, but very gusty, reaching force 9 at times; after Noon it became more variable, S to SW. 2 p.m. Wind steadier and less gusty. 4 p.m. Breaking to the E, with less drift. 6 p.m. Remarkable rise in barometer; wind veering from E to W by S. 8 p.m. Raised thermometer box another 2 ft. above snow. 10 p.m. Clearing rapidly; heavy banks of Str. W and S along the mountains; stars rapidly clearing overhead and moon shining mistily in NE with an ill-defined halo. 11 p.m. A.-s. coming from S direction, the moon alone shows it up. No observations taken off Cape Armitage. Overcast; squally, and heavy S by gale blowing, accompanied by the same smothering drift and snowfall. Barometer very unsteady early, and then rose rapidly to 10 p.m., when it fell again. Temperature high all day until between 6 and 8 p.m., when it dropped quickly.	
4	28.490	—	7.5	8.0	8.0	8.0	SE, 2-4	24	12-20	og †²*	—	N. 10	—		
6	28.473	—	7.0	9.2	9.0	8.5	SE, 2-4	9	14-22	og †*	—	N. 10	—		
8	28.470	—	8.0	10.0	10.0	9.5	Var. S, 6-8	16	25-40	og †*	—	N. 10	—		
10	28.412	—	8.2	10.8	10.8	10.5	Var. SW, 7-9	35	35-48	og †²*	—	N. 10	—		
Noon	28.531	—	10.0	11.2	11.2	11.2	Var. S, 5-7	38	25-41	og †²*	—	N. 10	—		
2	28.507	—	8.0	8.5	8.5	8.5	SSW, 8-10	22	33-55	og †²*	—	N. 10	—		
4	28.707	—	6.5	6.5	6.5	6.0	Var. SSE, 6-8	43	25-40	og †²*	—	N. 10	—		
6	28.949	—	5.5	6.0	6.0	6.0	Var. S, 8-10	38	44-56	og †²*	—	N. 10	—		
8	29.146	—	-13.5	-13.0	-13.0	-13.0	S, 6-9	29	30-46	og †²*	—	N. 10	—		
10	29.206	—	-17.5	-17.0	-17.0	-17.5	SE, 2-4	25	30-33	bcn	—	S. 4	—		
Midt.	29.154	—	-20.5	-16.0	-16.2	-14.4	E by N, 4-6	24	38-42	bc	Cl.-s. 4, ? direction	—	—		—
Mean	28.711	—	—	2.8	2.7	—	—	—	—	—	—	—	—		

11th.

Max. therm. { 8 a. 10°0.  
read at { 8 p. 11°5. Solar radiation { black bulb —,  
bright bulb —. Evapn. 11. 1.2 grammes in 48 hours. Precipn. — in.

at moderate speed. Midt. There may be more Cl.-s. or A.-s., but it must be thin, as the stars can be seen clearly through, the moon alone shows it up. No observations taken off Cape Armitage. Overcast; squally, and heavy S by gale blowing, accompanied by the same smothering drift and snowfall. Barometer very unsteady early, and then rose rapidly to 10 p.m., when it fell again. Temperature high all day until between 6 and 8 p.m., when it dropped quickly.

2	29.106	—	-18.2	-3.8	-4.2	-2.7	Var. E, 2-6	20	20	bcq	Cl.-s. 5, ? direction	—	—	Very strong gusts of wind; there is thin Cl.-s. visible as far as the moonlight reaches, but I think there is much more than can be definitely seen; aurora faint in E, alt. 10°; outlines of western range can now be seen. 4 a.m. Completely overcast, neither stars nor moon visible. 5 a.m. Westerly wind, force 2. 6 a.m. Thick snowfall. 10 a.m. Apparently there is a clear sky, only hidden by drift; wind variable from S to SE. Noon. Very similar weather to 10 a.m.; wind stronger if anything, and changing from SE to S. 2 to 6 p.m. Weather during the afternoon much the same as yesterday; squalls of about one minute's duration with heavy drift; wind backing slowly to N; temperature varied about 2° to 3° during the squalls; barometers "pumping" at 4 p.m. 8 p.m. Aurora to N and S, extending to E and W in parallel bands across the zenith, alt. about 20°; perfectly clear, bright starlight. 10 p.m. Perfectly clear; light drift. Midt. As at 10 p.m.; two vertical curtains of auroral light N by W and N by
4	29.061	—	—	-6.3	-7.2	-8.4	SW, 1	11	5	o*	—	N. 10	—	
6	29.010	—	-8.7	-4.0	-4.0	-4.0	N, 1-2	5	0-5	o*	—	N. 10	—	
8	28.990	—	-5.5	7.0	7.0	6.0	SW, 4-6	15	20-30	og †*	—	N. 10	—	
10	29.003	—	0.0	0.0	0.0	0.0	Var. S, 6-10	15	35-50	bq †²	—	—	—	
Noon	29.157	—	-17.0	-17.0	-17.0	-17.0	Var. S, 7-10	48	40-55	bq †²	—	—	—	
2	29.297	—	-24.0	-23.5	-23.5	-23.0	Var. S, 7-9	34	40-50	og †²*	—	N. 10	—	
4	29.399	—	-24.0	-24.0	-24.0	-24.5	ESE, 3-7	22	15-35	og †	—	S. 10	—	
6	29.451	—	-24.2	-23.0	-23.0	-22.8	ENE, 3-7	21	15-35	og †	—	Thin S. 10	—	
8	29.470	—	-24.5	-21.0	-21.0	-21.0	NE, 5-7	22	25-32	bq	—	—	—	
10	29.418	—	-24.7	-19.1	-19.1	-21.0	E by N, 5-7	23	15-24	bq	—	—	—	
Midt.	29.394	—	-21.2	-12.0	-12.2	-17.5	ENE, 2-4	22	6-13	bq	—	—	—	
Mean	29.230	—	—	-12.2	-12.4	—	—	—	—	—	—	—	—	

12th.

Max. therm. read at { 8 a. 8°0.  
8 p. 10°0. Solar radiation { black bulb —,  
bright bulb —. Evapn. — grammes. Precipn. — in.

E, alt. 8° to 20°. No observations were taken off Cape Armitage. Overcast and snowing, with heavy drift. Wind springing up about 8 a.m., as strong as ever, from the S, but this soon drifted to the E, and fell towards midnight. Barometer fell until 8 a.m., then rose until 8 p.m., and then fell again. Temperature rose suddenly about 8 a.m. and then fell again. NOTE.—I believe when the sky was logged as overcast it was only the drift, as when this was not so thick there appeared to be blue sky.

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
13th.	2	29.362	—	—	-30.2	-29.6	-32.0	Lt. S airs	9	0	b	—	—	Faint auroral arch between E by S and SE; alt. 8° to 12°. Cleared snow off thermometer (inside screen); the minimum thermometer was thickly coated with snow, as was also the wet bulb thermometer. 4 a.m. Faint auroral streamers N and NE; alt. 10° to 20°. 6 a.m. Clear overhead and all round, except low Cu. clouds to S to an alt. of 3°; wind very variable in direction. 8 a.m. Very thick all round, no land visible; very heavy surface drift, and foggy. 10 a.m. Wind variable between NW and NE, shifting quickly in gusts; frost smoke apparently pouring in from N; fine colouring in sky. Shifted screen to new position and cleaned boxes and instruments. Snow gauge buried 20 inches under the snow. Noon. Fine colouring in sky. Noon. Min. temp. at Cape Armitage, -38°5'. Calm. Ev. Erebus smoke going NE, flowing close down slope; 2 inches to 3 inches snow deposit in
	4	29.263	—	—	-29.5	-10.5	-11.0	NE by N, 2-4	5	15-24	bq	—	—	
	6	29.155	—	—	-11.1	-6.2	-6.4	N and E, 2-3	15	7-13	bq	—	—	
	8	29.006	—	—	-11.5	-6.0	-6.2	N by E, 1-6	14	5-35	bqf	—	Fog 10	
	10	28.964	—	—	-7.0	-7.0	-7.0	Var. N, 1-4	10	5-25	bqm +	—	—	
	Noon	28.901	-18.0	-16.0	-16.0	-16.0	-17.0	Calm	3	0	b	—	—	
	2	28.845	—	—	-19.0	-12.8	-13.0	Lt. E airs	—	0	b	—	—	
	4	28.793	-24.2	-13.5	-8.0	-9.0	-7.5	ENE, 0-1	0	—	b	—	—	
	6	28.769	—	—	-14.5	-12.2	-13.0	E, 0-1	3	0-10	h	—	—	
	8	28.757	—	—	-18.0	-8.8	-8.8	NE, 1	6	10	b	—	—	
	10	28.773	—	—	-16.0	-13.2	-13.0	SE, 2-3	13	16-26	b +	—	—	
	Midt.	28.813	—	—	-14.4	-12.0	-12.0	E by S, 3-4	18	25-35	b	—	—	
	Mean	28.950	—	—	-11.9	-12.1	—	—	—	—	—	—	—	
		Max. therm. read at { 8 a. -6°0. / 8 p. -5°5. }		Solar radiation { black bulb — / bright bulb — }		Evapn. { 1. 1.8 / 11. 1.6 / 111. 2.1 } grammes in 48 hours.		Precipn. — in.						

the open, about lane 2 feet or more. 4 p.m. Faintly coloured Cl. to W. 4 p.m. Min. temp. at Cape Armitage, -28°2'. Wind ESE, 1. b. Erebus indistinct; — on thermometer. 6 p.m. Snow gauge placed 7 paces N of the screen. 8 p.m. Some Cl.-s. to E low down, apparently moving to NE. 10 p.m. Fairly brilliant auroral display; a complete arch extending from N to S, highest point of arch in E at an alt. of 15°; at the ESE the arch was distorted by a brilliant spot with streamers rising from it; very rapid movement; arch disappeared and was replaced by a series of streamers rising to 30° alt. Midt. Very faint and incomplete auroral arch E to W; greatest alt. 8° S. Clear sky all day, but squally early, afterwards falling calm. In the evening the wind again sprang up from E and blew fresh. Barometer fell until 10 p.m., and then commenced to rise. Temperature unsteady and high.

14th.	2	28.811	—	—	-14.2	-8.8	-9.1	SE, 3-8	19	25-54	bq	—	—	Very faint but extensive aurora extending in odd patches from N to SSW, rapidly changing. 4 a.m. Extremely faint aurora, N, NNE, and E; Str. cloud to S, alt. 8°. 6 a.m. Two very faint auroral streamers to the E, rising to 15° alt. 10 a.m. Temperature falling rapidly during observation; aspirator below scale; extensive refraction all round; Cl.-s. to W, and all along to SW and S; visibility marked; fine red glow in clouds; Fr.-cl.-s. to N, very wind blown. Noon. Refraction all cleared away; visibility still marked; wind-blown Cl.-s. to N and NW; western mountains clear; a thin streak of Str. about 1200 feet alt.; fine deep colouring, violet and reddish glow to S; wind was calm at noon, and then rose from E. Noon. Min. temp. at Cape Armitage, -38°5'; light ESE air. b. Erebus smoke going NE; some Cl.-s., Fr.-s.,
	4	28.882	—	—	-16.2	-15.9	-15.6	SE, 0-2	18	0-20	b	—	—	
	6	28.915	—	—	-21.0	-13.0	-13.2	NE by N, 2-3	13	15-24	b	—	—	
	8	28.935	—	—	-13.5	-10.0	-9.2	NE, 2-3	13	15-18	b	—	—	
	10	28.961	—	—	-25.0	—	-28.2	S, 1	6	10	bcv	Cl.-s. 4, SW (slow)	—	
	Noon	28.993	-27.5	-28.0	-14.9	-15.0	-14.9	E, 2	4	14	bcv	Cl.-s. 5, SW (slow)	—	
	2	29.015	—	—	-22.5	-13.0	-14.0	N, 0-1	3	0-10	b	—	—	
	4	29.027	-20.4	-18.5	-13.0	-14.2	-15.0	NW, 1	7	8-10	oc	—	Cu. 9, N (fast)	
	6	29.030	—	—	-17.4	-6.0	-7.0	N, 2-3	9	15-25	b	—	—	
	8	29.035	—	—	-7.0	-4.2	-5.0	N, 3-4	9	18-24	o	—	S. 10	
	10	29.065	—	—	-5.5	-3.0	-3.8	N, 0-1	11	0-5	o	—	S. 10	
	Midt.	29.073	—	—	-4.9	-3.8	-4.0	N, 1-2	4	8-10	o	—	S. 10	
	Mean	28.981	—	—	-10.9	—	—	—	—	—	—	—	—	
		Max. therm. read at { 8 a. -6°0. / 8 p. — }		Solar radiation { black bulb — / bright bulb — }		Evapn. { 1. 2.9 / 11. 3.1 / 111. 4.7 } grammes in 24 hours.		Precipn. — in.						

and Str. in N and NE. 2 p.m. Cl. to NW. 4 p.m. Temperature fell a degree whilst reading thermometers. 4 p.m. Min. temp. at Cape Armitage, -32°1'. NW'y airs; clouds travelling S by fast; read without a lamp. 8 p.m. Completely overcast. 10 p.m. Completely overcast. Midt. Stars dimly visible in zenith. Fine most of the day, but became overcast in the evening. Wind very variable and fresh at times from N. Barometer rising steadily all day. Temperature unsteady and still high.

15th.	2	29.111	—	—	-4.6	-3.2	-3.6	Lt. S airs	4	0-2	o *	—	N. 10	-4.4	Snow in very small flakes, falling fast. Snow ceasing; wind gusty and unsteady. Slight snow; stars visible in zenith. Str. all along, about 8° broad, from SE to WSW; some peculiar curved Cl.-s. in SW, Fr.-s. and detached Str. in various parts of the heavens below 20° alt.; fine colouring in sky to N and S; read observations without lamp. Noon. Cl.-s. clouds disappearing; also Str. in S appears to be fading out. Noon. Min. temp. at Cape Armitage, -23°5'. Calm. bev. Cl.-s. 1. Erebus smoke going NNW. 2 p.m. Cl. to NW. 4 p.m. Detached Cl.-cu. on E horizon. 4 p.m. Min. temp. at Cape Armitage, -25°2'. Wind ENE, 1. b. Cl. 1. Erebus smoke indistinct, seems to be going N by and 13°.
	4	29.131	—	—	-6.0	-3.2	-3.9	Var. E, 1-2	5	10-15	o *	—	N. 10	-4.7	
	6	29.137	—	—	-4.5	-3.2	-3.8	Var. E, 2-3	13	10-20	bm *	—	—	-3.6	
	8	29.149	—	—	-9.5	-9.0	-9.0	ENE, 3-4	17	15-20	bc	—	S.-cu. 2	-4.0	
	10	29.197	—	—	-9.5	-3.6	-4.1	Lt. var. E airs	13	0-8	bc	—	—	-4.4	
	Noon	29.209	-17.5	-13.7	-6.8	-7.0	-6.5	Very lt. E airs	5	0	bc	Fr.-a.-s. 3, SW (mod.)	—	-4.7	
	2	29.213	—	—	-10.0	-6.0	-7.0	Lt. var. E airs	10	0-5	b	—	—	-6.9	
	4	29.219	-18.8	-19.0	-7.2	-8.0	-7.2	ENE, 2-3	3	20-25	b	—	—	-8.0	
	6	29.231	—	—	-15.2	-12.5	-13.0	E, 0-1	8	5-12	b	—	—	-7.6	
	8	29.228	—	—	-13.5	-5.0	-6.2	Lt. N airs	3	5-8	b	—	—	-8.5	
	10	29.239	—	—	-16.0	-12.0	-12.0	Calm	1	0	h	—	—	-13.7	
	Midt.	29.229	—	—	-11.5	-3.0	-2.8	N, 2-3	4	12-16	b	—	—	-14.1	
	Mean	29.191	—	—	-6.2	-6.7	—	—	—	—	—	—	—	-5.8	
		Max. therm. read at { 8 a. -1°0. / 8 p. -3°6. }		Solar radiation { black bulb — / bright bulb — }		Evapn. { 1. 2.9 / 11. 3.2 / 111. 5.1 } grammes in 24 hours.		Precipn. — in.							

6 p.m. Meteor, from near zenith, fell southwards. Light variable airs to a fresh breeze all day; cloudy early, but clearing later. Barometer rose most of the day, unsteady in evening. Temperature high and still very fluctuating.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.229	—	-18.0	-12.0	-12.0	-10.8	Lt. N airs	5	0-5	h	—	—	—	<p>16th.</p> <p>Faint auroral streamers and arches NE to S.</p> <p>Whilst out at the screen, the wind went round to S, and the temperature went down, thus:—outside thermometer, -29°0; Asp. wet, -33°0; dry bulb, -27°0; wet bulb, -24°0; spirit min. thermometer, -24°0; spirit min. (present time), -24°0.</p> <p>10 a.m. Low Str. about 2000 ft. alt. from SE to NW; mother-of-pearl clouds to E.</p> <p>Noon. Very fine prismatic (coloured) clouds to NE; Str. only to S; western mountains quite clear.</p> <p>Noon. Min. temp. at Cape Armitage, -42°3. Wind SE. bc. Thin Cl. 5. Erebus smoke going NE. ⚡.</p> <p>2 p.m. Cl. and Cl.-s. to N and NW, brightly coloured.</p> <p>4 p.m. Min. temp. at Cape Armitage, -43°1; variable</p>
4	29.217	—	-15.0	-8.0	-8.0	-9.0	E by S, 2-3	4	10-15	b w	—	—	—	
6	29.219	—	-13.5	-9.8	-9.8	-9.0	Lt. N airs	5	0-5	b	—	—	—	
8	29.209	—	-18.8	-3.2	-3.0	-3.2	Lt. N airs	7	0-5	b	—	—	—	
10	29.189	—	-32.5	-28.2	-28.0	-29.5	Calm	1	0	b ⚡	—	—	—	
Noon	29.129	-39.5	-30.0	-16.8	-17.0	-17.0	Calm	0	0	b ⚡	—	—	—	
2	29.080	—	-30.5	-26.8	-26.6	-27.5	Calm	0	0	bc ⚡	Cl. 2, NE	—	—	
4	28.990	-20.4	-31.0	-4.0	-4.2	-4.0	N, 1	2	8-10	b	—	—	—	
6	28.891	—	-21.0	-5.2	-5.8	-6.0	N, 0-1	4	0-10	b	—	—	—	
8	28.816	—	-19.0	-13.2	-13.2	-13.0	Lt. NE airs	2	0	b †	—	—	—	
10	28.768	—	-15.0	-15.0	-15.0	-18.0	Calm	2	0	b	—	—	—	
Midt.	28.839	—	-15.6	-9.0	-9.0	-9.0	E, 4-5	13	25-30	b †	—	—	—	
Mean	29.048	—	—	-12.6	-12.6	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -2°5, 8 p. 2°5. Solar radiation { black bulb —, bright bulb —. Evapn. { I. 1.0, II. 0.9, III. 1.0 } grammes in 24 hours. Precipn. — in.

airs; thin web of Cl.; Erebus smoke going in Ely direction; ⚡; drift on western mountains. 6 p.m. Detached Cu. approaching from N. 8 p.m. Some Str. to W low down; very slight and faint aurora to SE. Midt. Faint aurora to SE. Calm to light airs all day, but wind sprang up strong from E at midnight. Sky clear all day. Barometer fell until 10 p.m., and then rose. Temperature very unsteady and "jumpy."

2	28.907	—	-11.5	-7.0	-7.0	-7.0	SSE, 5-7	18	30-40	bq †	—	—	—	<p>17th.</p> <p>Some fine colouring on clouds to W; they look like S.-cu.</p> <p>11 a.m. Fine prismatic colouring on clouds to NE.</p> <p>Noon. Very fine prismatic colouring in Cl.-s. clouds; heavy surface drift in Strait; western mountains quite clear; slight A.-s. to W and SW.</p> <p>Noon. Min. temp. at Cape Armitage, -34°4. Wind NE by E, 2-3. Cl.-s. 5. bc. Fine prismatic colouring. Erebus smoke going to ENE (shadow, &amp;c.). †.</p> <p>2 p.m. Wind-blown Cl.-s. to N; thin Cu.-s. to S; read observations without lamp.</p> <p>4 p.m. Wind less squally; A.-s. to N.</p> <p>4 p.m. Min. temp. at Cape Armitage, -25°0. Wind E.</p>
4	28.947	—	-11.5	-9.0	-9.0	-9.0	ESE, 5-6	22	30-35	b † w	—	—	—	
6	28.951	—	-15.0	-13.0	-13.0	-13.5	ENE, 4-5	18	25-30	b †	—	—	—	
8	29.015	—	-13.5	-10.0	-10.0	-10.0	ENE, 4-6	23	25-35	bc †	Cl.-s. 4	—	—	
10	29.049	—	-18.2	-16.0	-16.2	-16.0	E, 4-6	17	25-33	bc	Cl.-s. 3 (? dir.)	—	-16.1	
Noon	29.075	-25.8	-20.0	-19.5	-19.5	-19.8	ENE, 6-7	19	30-42	bcq	Cl.-s. 5, SW (very slow)	—	-16.6	
2	29.107	—	-20.2	-15.3	-16.0	-16.0	Var. E, 3-6	31	25-40	bcq	Cl.-s. 3, W	—	-19.8	
4	29.137	-23.5	-16.2	-14.5	-15.0	-13.8	Var. E, 3-4	20	20-30	bc	Cl.-s. 2 (? dir.)	—	-19.8	
6	29.153	—	-16.3	-15.0	-15.5	-16.0	Var. E, 4-6	23	28-42	bq	—	—	-16.2	
8	29.220	—	-19.5	-19.0	-19.0	-19.6	NE, 2-5	20	10-25	bq	—	—	-14.4	
10	29.220	—	-20.0	-11.8	-12.0	-13.2	NNE, 4-5	15	20-25	b	—	—	-15.5	
Midt.	29.249	—	-21.2	-15.2	-16.0	-16.2	NE, 4-5	13	20-25	b	—	—	-16.2	
Mean	29.086	—	—	-13.8	-14.0	—	—	—	—	—	—	—	-15.5	

Max. therm. read at { 8 a. -8°0, 8 p. -9°0. Solar radiation { black bulb —, bright bulb —. Evapn. { I. 2.4, II. 2.5, III. 3.3 } grammes in 24 hours. Precipn. — in.

2-3. Film of Cl.-s. all over sky, 5. bc. Erebus smoke going to N by E. 6 p.m. Dark and threatening in S. 8 p.m. Some Str. to NW and W. 10 p.m. Very faint aurora to SE. Midt. Very faint auroral streamers over Crater Hill; a bright to brilliant arch from E to SE, alt. 25°; faint display SW to S, which kept on changing; extensive patches from S to NW, which rapidly disappeared. Clear sky more or less all day, with strong ENE wind. Barometer rising all day. Temperature steadier.

2	29.273	—	-18.8	-16.0	-16.0	-16.0	NE, 3-4	10	15-20	b	—	—	—	<p>18th.</p> <p>Very bright streamers of irregular alt. from SSE to NNW, being 25° at the highest, which gradually disappeared.</p> <p>Western mountains obscured above foot hills; refraction from S all along foot of land; dark and ugly to W and SW.</p> <p>Noon. Much refraction all round horizon; western mountains obscured above 10,000 ft.</p> <p>Noon. Min. temp. at Cape Armitage, -37°6. Light variable airs. bc. Erebus obscured. Str. to W, N, and NE; a SEly air sent the temperature down to -24°8, whilst observing.</p> <p>2 p.m. Bank of Str. on western mountains; Cl. on northern horizon.</p> <p>4 p.m. Faint colouring to NW; read outside instruments without lamp.</p> <p>4 p.m. Min. temp. at Cape Armitage, -36°4. Wind NE.</p>
4	29.308	—	-18.2	-13.2	-13.5	-13.2	NNE, 1-2	10	5-10	b	—	—	—	
6	29.370	—	-24.0	-23.2	-22.0	-23.2	NE, 1	4	5	b	—	—	—	
8	29.402	—	-29.0	-25.0	-25.0	-26.0	Calm	3	0	oc	—	S.-cu. 6	—	
10	29.404	—	-25.2	-14.2	-14.4	-14.2	NW, 1-2	4	10-15	ocv	Cl.-s. 2 (? dir.)	Thin S. 6, S (mod.)	-14.4	
Noon	29.379	-18.5	-18.0	-6.0	-7.2	-6.0	NNW, 1-2	7	10-16	bc	Cl.-s. 2, SW (mod.)	S. 2, S (mod.)	-14.8	
2	29.361	—	-11.0	-9.8	-10.0	-11.0	Calm	9	0	b	—	—	-5.8	
4	29.415	-24.0	-10.5	-5.2	-6.0	-5.5	NE, 2-4	4	20-30	bq	—	—	-7.2	
6	29.446	—	-7.0	-0.8	-2.0	-1.2	E by N, 1-3	14	10-23	bq	—	—	-9.4	
8	29.464	—	-7.5	-5.0	-6.0	-5.5	NE, 4	14	20-25	b	—	—	-10.5	
10	29.430	—	-5.5	-4.0	-5.0	-5.0	ENE, 3-4	16	18-20	b	—	—	-6.2	
Midt.	29.431	—	-15.5	-14.2	-14.2	-14.2	ENE, 6-7	26	35-45	b	—	—	-6.2	
Mean	29.390	—	—	-11.4	-11.8	—	—	—	—	—	—	—	-14.4	

Max. therm. read at { 8 a. -4°0, 8 p. 2°2. Solar radiation { black bulb —, bright bulb —. Evapn. { I. 3.6, II. 3.7 } grammes in 24 hours. Precipn. — in.

4-5. †. Detached Cu. here and there. Erebus smoke going NNE in very small quantity. 6 p.m. Air apparently very dry, with good visibility. 8 p.m. Apparently a cloudless sky. Clear sky nearly all day, with light variable breezes, freshening in evening. Barometer rose until 10 a.m., and then became unsteady. Temperature very unsteady. Evaporation dish No. III. was blown off screen and some ice fell out.

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19th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Spirit minimum.	Dry.											Wet.
2	29.461	—	-15.5	-11.0	-11.8	-11.0	ENE, 5-8	29	30-42	b	—	—	-10.1	Cloudless sky, with very fine colouring; western mountains clear; refraction all along western shore. Noon. Shadow to S very marked to an angle of 17°. Noon. Min. temp. at Cape Armitage, -32° 4. Calm. b. Erebus smoke going to ENE or NE by S, first rising in small column 500 to 1000 feet. (Earth shadow to S, also angular shadow rising to E from it at angle of 17°.) 2 p.m. Rime forming in small irregular patches. 4 p.m. Outside thermometer much affected by solar radiation. Could read outside thermometer and anemometer without lamp. 4 p.m. Min. temp. at Cape Armitage, -37° 0. Wind ENE, Barometer rose until 6 p.m., and	
4	29.478	—	-13.5	-8.2	-9.0	-8.8	Calm	17	0	b	—	—	-11.6		
6	29.484	—	-13.7	-11.5	-12.0	-12.0	N, 2-3	8	10	b	—	—	-10.8		
8	29.528	—	-13.7	-9.0	-8.5	-6.2	NE, 1-2	7	8-12	b	—	—	-11.2		
10	29.548	—	-13.5	-9.2	-9.2	-10.0	N, 1	8	8-10	b	—	—	-8.0		
Noon	29.583	-24.2	-22.0	-20.2	-20.2	-21.2	Calm	2	0	b	—	—	-9.4		
2	29.565	—	-26.6	-18.8	-19.5	-19.0	Calm	2	0	b	—	—	-10.1		
4	29.568	-31.0	-26.0	-23.0	-22.8	-24.2	Calm	0	0	b	—	—	-10.1		
6	29.574	—	-25.5	-24.0	-21.0	-26.5	Calm	0	0	b	—	—	-22.4		
8	29.568	—	-29.2	-26.0	-26.0	-26.0	Calm	0	0	b	—	—	-22.4		
10	29.562	—	-37.2	-36.0	-35.0	-34.0	Calm	0	0	b	—	—	-19.5		
Midt.	29.553	—	-35.0	-33.0	-32.7	-34.0	Calm	0	0	b	—	—	-24.2		
Mean	29.538	—	—	-19.2	-19.2	—	—	—	—	—	—	—	-24.5		
Max. therm. read at		8 a. -3° 5.		8 p. -7° 0.		Solar radiation		black bulb — bright bulb —		Evapn. { I. 5.8 II. 5.8 III. 6.0 } grammes in 24 hours.		Precipn. — in.			

1-2. b. Erebus smoke going NE; refraction to NW. 6 p.m. Colouring in western sky; temperature fell 2° whilst observing. 8 p.m. Heavy deposit of rime on thermometer. Midt. Faint auroral streamers to SW. Windy early, but soon dropped to calm and remained so, with a clear sky. Barometer rose until 6 p.m., and then fell. Temperature fell quickly towards the evening.

20th.

2	29.534	—	-38.0	-34.0	-34.0	-34.0	Calm	0	0	b	—	—	—	Everything covered with rime; took the observations without the lamp.  Str. on western mountains and to S at various altitudes. Noon. Min. temp. at Cape Armitage, -50° 2. Calm. Erebus smoke going ENE. —. Refraction to N. 2 p.m. Str. on western mountains, about 6000 feet up, and all to S. 4 p.m. Accumulation of fog crystals, fern shaped, forming on E and N side of thlgs; very misty to E; large sheet of Str. to W; base and summits of mountains visible. 4 p.m. Min. temp. at Cape Armitage, -50° 4. Calm. hm. Erebus smoke going N; foggy all round. 6 p.m. Still very misty and
4	29.530	—	-35.0	-34.0	-34.5	-34.0	Calm	0	0	b	—	—	—	
6	29.499	—	-37.5	-30.0	-30.0	-29.5	Calm	0	0	b	—	—	—	
8	29.465	—	-46.0	-35.0	-34.5	-36.8	Calm	0	0	b	—	—	—	
10	29.443	—	-39.0	-33.0	-33.0	-35.0	Calm	0	0	b	—	—	—	
Noon	29.398	-45.6	-39.2	-37.8	-37.0	-39.0	Calm	0	0	b	—	—	—	
2	29.396	—	-44.0	-32.0	-31.6	-34.5	Calm	0	0	b	—	—	—	
4	29.352	-49.8	-46.5	-46.0	-45.0	-47.0	Calm	0	0	bm	—	—	—	
6	29.315	—	-46.6	-39.0	-38.2	-42.0	Calm	0	0	bm	—	—	—	
8	29.293	—	-42.5	-39.0	-38.0	-41.0	Calm	2	0	bm	—	—	—	
10	29.291	—	-42.5	-21.2	—	-21.8	Very lt. N airs	0	0	bm	—	—	—	
Midt.	29.290	—	-30.5	-20.2	-20.4	-21.8	Calm	2	0	b	—	—	—	
Mean	29.398	—	—	-33.4	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. -22° 0.		8 p. -21° 0.		Solar radiation		black bulb — bright bulb —		Evapn. — grammes.		Precipn. — in.		

dark; western mountains dimly visible; heavy rime. 8 p.m. Misty look in air; stars have small coronae round them; heavy deposit of rime on everything. 10 p.m. Some auroral light (diffuse) in S. Midt. Filmy evanescent streamers on hills in E., also film low down in S. Calm and fine all day, but came on misty as usual with the colder temperature. Barometer falling all day. Temperature much lower, but rose quickly in the evening.

21st.

2	29.283	—	-29.5	-2.5	-3.5	-1.1	E by N, 3	2	10-15	of	—	Thin S. 10	-1.8	Patch of aurora in S, extending along horizon and 2° above it. 11. defined and evanescent streamers and films of light extending above hills from NE to SE and also in S. 6 a.m. Some low Str. to W and S. Dull look to S and SW, and visibility marked. 11.45 a.m. Temp. at Cape Armitage, -19° 5; min., -50° 5. Wind NE, 2-3. f. Erebus smoke going NE. Noon. Wind very variable in force and direction, at times falling calm, and then springing from E, S or N, and blowing strongly; temperature fell 4° whilst observing; Str. to S and E. 12.50 p.m. Temp. at Cape Armitage, -18° 2; min., -20° 5. Wind ENE, 2-3. Ci.-s. 1. bc. Refraction. Erebus smoke going N and variable. 2 p.m. Faintly coloured Ci. to S, detached portions overhead; temperature fell 2° whilst observing. 4 p.m. Faint colouring on	
4	29.263	—	-3.0	0.2	-1.0	-0.3	NE, 2-4	9	8-18	bq	—	—	-3.6		
6	29.242	—	-2.8	3.2	0.2	3.0	NE, 3-5	9	15-25	bcq	—	S. 1, E	-2.5		
8	29.232	—	-10.5	3.0	2.5	2.3	NE, 1-2	9	8-10	oc	—	S. 8, E by S	-1.1		
10	29.205	—	-14.5	-14.5	-14.5	-15.5	Calm	6	0	bc	Ci.-s. 2 (2 dir.)	—	0.1		
Noon	29.180	—	-14.8	-1.2	-1.8	-1.5	Var. N, 2-4	7	15-25	bq	—	—	1.4		
2	29.171	—	-20.0	-14.8	-14.8	-17.7	Calm	3	0	bc	Ci. 2, SW (slow)	—	1.0		
4	29.157	-25.0	-18.2	-14.0	-14.0	-15.2	Calm	0	0	bc	Ci. 3, SW	—	-15.2		
6	29.123	—	-15.0	-0.8	-1.6	-1.0	ESE, 1	4	5-10	bc	Ci.-s. 2	—	-15.5		
8	29.087	—	-11.0	-3.0	-4.0	3.0	Calm	5	0	o	—	S. 7, SW (fast)	-2.4		
10	29.064	—	-14.5	-10.0	-10.2	-11.0	Calm	1	0	b	—	—	-2.9		
Midt.	29.009	—	-13.7	9.0	6.5	9.2	N, 2-3	5	15-20	o	—	—	-17.3		
Mean	29.168	—	—	-3.8	-4.7	—	—	—	—	—	—	—	-12.6		
Max. therm. read at		8 a. 5° 0.		8 p. 6° 0.		Solar radiation		black bulb — bright bulb —		Evapn. { I. 3.6 II. 3.8 III. 5.9 } grammes in 24 hours.		Precipn. — in.			

western horizon. 4 p.m. Min. temp. at Cape Armitage, -27° 5. Wind E by N, 1. Ci.-s. 1. bc. Erebus smoke going NNE. 6 p.m. Bank of Str. half way up western mountains. 8 p.m. Extraordinary difference between dry bulb and outside thermometer; took observations again before leaving screen; dry bulb 0° 0, wet bulb -1° 5, outside thermometer 5° 0. 10 p.m. Heavy Str. extending from NW to S, alt. about 10°; some detached Str. to W moving to NE. 11 p.m. Entirely overcast; a few stars dimly visible in and about zenith. Midt. Very black to S and SW and along western side of Strait. Wind blew up strong from NE during the early morning, but fell later to calm. Sky more or less cloudy. Barometer falling slowly all day. Temperature very unsteady and higher.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	28.992	—	6.5	11.8	10.0	10.0	Calm	3	0	o	—	S. 10	—	Very black to W; appearance of clearing to S.	
4	28.980	—	8.0	10.5	10.0	10.5	Var. S, 2-7	15	12-44	bq †	—	—	—	2.45. Heavy gusts from S and SW; variable.	
6	28.955	—	9.0	10.5	10.2	10.5	S, 2-5	14	10-28	bq †	—	Ci.-s. 2 (? dlr.)	—	3 a.m. Strong wind from S, with heavy drift; sky clearing rapidly.	
8	28.970	—	10.0	11.0	11.0	11.0	SW, 4-5	19	25-30	oc † *	—	N. 10	—	4 a.m. Very bright auroral streamers to SE, showing through and between Str. clouds, alt. 20°; patch of streamers in S about 60°; heavy Str. to W, SW, S, and E; wind variable, SE to WSW, and very squally.	
10	29.003	—	9.9	11.0	11.0	11.0	S, 2	17	12-15	o *	—	N. 10	—	6 a.m. Very thick to W and S; heavy Str. from E to SE, about 7° alt.; drift very thick in squalls.	
Noon	29.054	—	1.0	0.0	0.0	0.0	SE, 2-4	11	15-20	oc †	—	S. 9, S (slow)	—	10 a.m. Anemometer and aspirator choked; land only just visible; no clouds can be made out.	
2	29.132	—	4.6	2.0	2.0	1.5	Var. E, 2-4	17	20-30	ocq †	—	S.-cu. 10	—	11.45 a.m. Temp. at Cape Armitage, -0° 5'; min., -27° 0'. Var. SE wind, 1-3. †. oc. Clearing to S. Erebus obscured.	
4	29.178	-3.5	5.0	2.3	2.3	2.8	Var. E, 2-6	22	20-30	ocq †	—	S.-cu. 10	—	Noon. Looks like clearing overhead; clear sky showing S and SW. The wind at 11.30 was NE, coming in squalls thick with snow drift.	
6	29.210	—	5.5	3.6	3.0	5.0	Var. E, 2-6	24	15-40	ocq † *	—	S.-cu. 10	—	2 p.m. Coating of drift on thermometer; clouds broken and wind blown to S.	
8	29.230	—	4.5	0.2	0.0	0.2	Var. E, 5-8	24	35-50	ocq †	—	S. 8	—	4 p.m. Min. temp. at Cape Armitage, -4° 8'. Wind E by S, 2-4. Erebus obscured. Clouds going to NE. bcq. †. 6 p.m. Wind very squally; small hard flakes of snow falling. 8 p.m. Squalls very heavy and variable from E to NE, and at times going to SE; drift very thick in squalls; stars dim overhead. 10 p.m. Squalls very heavy; stars dim overhead. Overcast all day, with strong variable Ely winds. Barometer rising all day. Temperature high all day.	
10	29.261	—	2.5	0.6	0.2	1.6	NE, 3-5	28	15-28	ocq	—	S. 10	—		
Midt.	29.320	—	1.0	3.0	2.6	2.5	E by N, 1-3	17	5-15	ocq	—	S. 10	—		
Mean	29.107	—	4.8	4.5	—	—	—	—	—	—	—	—	—		

22nd.

Max. therm. read at { 8 a. 11° 0. / 8 p. 11° 8. Solar radiation { black bulb — / bright bulb —. Evapn. { I. 3.9 / II. 3.8 / III. 6.3 } grammes in 24 hours. Precipn. — in.

4 p.m. Min. temp. at Cape Armitage, -4° 8'. Wind E by S, 2-4. Erebus obscured. Clouds going to NE. bcq. †. 6 p.m. Wind very squally; small hard flakes of snow falling. 8 p.m. Squalls very heavy and variable from E to NE, and at times going to SE; drift very thick in squalls; stars dim overhead. 10 p.m. Squalls very heavy; stars dim overhead. Overcast all day, with strong variable Ely winds. Barometer rising all day. Temperature high all day.

2	29.342	—	0.4	4.0	3.8	4.2	NE, 1-2	9	5-10	bq	—	S. 6, SW	—	Arch of aurora N by E to SE, alt. 60°; luminous patches in zenith; sky clearing from SW.
4	29.364	—	2.0	3.0	2.8	3.0	E by N, 1-3	14	10-22	ocq	—	S. 9	—	4 a.m. Sky overcast, with exception of small patches to S.
6	29.409	—	0.0	1.3	1.0	2.0	NE, 1-3	15	10-23	ocq	—	S. 9	—	
8	29.445	—	0.5	5.0	4.4	5.2	E, 4-5	13	20-25	oc	—	S. 10	—	
10	29.463	—	3.0	3.8	3.2	3.8	E, 3-4	9	10-20	oc †	—	S.-cu. 9	—	Thick all round.
Noon	29.491	—	1.0	2.1	1.9	2.0	SE, 2-4	11	15-20	oc	—	S.-cu. 8	2.1	Clouds breaking to S, and thin in zenith.
2	29.516	—	1.3	1.5	1.0	1.6	E, 2-4	15	15-25	ocq	—	S.-cu. 10	0.7	12.45 p.m. Temp. at Cape Armitage, 1° 5'; min., -8° 6'. Wind SE, 3-6.
4	29.501	—	1.8	0.4	0.0	0.2	SE, 3-5	19	12-28	ocq	—	S.-cu. 9, E	0.0	ocq. †. Erebus obscured.
6	29.493	—	1.8	0.0	0.5	0.0	E, 2-3	12	15-22	b	—	S.-cu. 3, NE	-0.4	2 p.m. Thin Str. with faint colouring to westwards.
8	29.523	—	1.0	0.0	0.1	0.0	E, 1-2	10	10-12	o	—	S. 10	-1.1	4 p.m. Clouds broken on horizon to N and W; able to read minimum thermometer in screen without lamp.
10	29.529	—	14.9	14.0	14.0	13.0	ENE, 3-4	22	33-38	b	—	—	-0.2	6 p.m. Clear to N; heavy bank of Nim. to W.
Midt.	29.533	—	19.6	17.5	17.7	18.0	E by N, 5-6	28	38-44	b	—	—	-0.8	8 p.m. Clear all round below 1° alt. from S to W.
Mean	29.468	—	0.9	1.2	—	—	—	—	—	—	—	—	-11.2	10 p.m. Aurora light showing above hills to E.

23rd.

Max. therm. read at { 8 a. 6° 0. / 8 p. 5° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { I. 4.2 / II. 3.9 / III. 7.2 } grammes in 24 hours. Precipn. — in.

Barometer rising, and very steady in evening. Temperature above zero all day until 10 p.m., when it had dropped considerably.

2	29.542	—	13.2	15.2	15.2	15.0	ENE, 7-8	45	40-45	bq	—	—	—	Bright aurora beams to NE over hill-tops.
4	29.534	—	16.5	15.3	15.3	17.0	ENE, 7	20	40-48	b	—	—	—	
6	29.545	—	16.0	14.0	14.0	14.0	NE, 6-7	23	30-35	b	—	—	-13.7	Perceptible amount of daylight.
8	29.554	—	15.0	11.5	12.0	12.8	NE, 3-4	26	20-25	b	—	—	-14.1	
10	29.541	—	12.5	9.8	10.0	9.8	E, 1-2	13	10-15	bv	—	—	-11.6	Cloudless sky; much refraction to W.
Noon	29.537	-29.0	18.0	12.0	12.2	12.2	NE, 3-4	10	20-28	bv †	—	—	-11.9	Refraction all along horizon.
2	29.526	—	12.0	11.0	11.5	11.3	NE, 3-4	23	20-30	bc †	—	Cu. 2, N	-12.3	Noon. Min. temp. at Cape Armitage, -33° 4'. Wind ESE, 2. b. †.
4	29.525	-17.2	13.5	13.0	13.0	13.0	NE, 4-7	17	23-40	oq †	—	S. 10	-11.6	Erebus smoke going NW; refraction in W, E, and S.
6	29.523	—	14.3	11.2	11.2	11.5	NE, 3-5	22	20-32	oq	—	S.-cu. 10	-11.0	2 p.m. Detached Cu. approaching from N.
8	29.527	—	12.0	8.8	9.2	8.2	NE, 2-4	17	10-20	o	—	S. 10	-13.7	4 p.m. Able to read observations without lamp.
10	29.527	—	11.5	11.0	11.0	11.0	Lt. NW ahrs	8	0	bm	—	—	-11.9	4 p.m. Min. temp. at Cape Armitage, -32° 5'. Wind ENE, 4. Cu. 9, N by †. Erebus obscured.
Midt.	29.537	—	17.8	11.5	11.2	11.5	Calm	1	0	b	—	—	-11.2	6 p.m. Clouds broken all along western horizon.
Mean	29.535	—	12.0	12.2	—	—	—	—	—	—	—	—	-11.2	8 p.m. Clouds broken to W. 10 p.m. Clear to S and W.

24th.

Max. therm. read at { 8 a. 6° 0. / 8 p. -9° 0. Solar radiation { black bulb — / bright bulb —. Evapn. { I. 2.5 / II. 3.1 / III. blown away } grammes in 24 hours. Precipn. — in.

Midt. Faint aurora to SE and E. Clear sky, occasionally overcast and cloudy, with strong NE wind, falling calm in the evening. Barometer very steady all day. Temperature lower and steady.

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25th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.536	—	-17.0	-11.0	-11.5	ENE, 1	1	0	bm	—	—	—	Faint aurora to S, alt. 40°.	
4	29.545	—	-22.0	-14.4	-14.5	E by S, 0-1	3	0	bc	—	S. 4	-13.0	Only a few stars visible.	
8	29.551	—	-16.0	-11.0	-11.5	Lt. var. airs	2	0	oc	—	S. 10	-9.4	Overcast, except low down to W and S.	
8	29.577	—	-23.0	-18.2	-18.0	Calm	0	0	oc	—	S.-cu. 8, N	-10.5		
10	29.585	—	-20.5	-18.0	-18.0	Calm	0	0	oc	—	S. 7, N (mod.)	-15.2		
Noon	29.592	-34.5	-18.0	-18.0	-17.8	Calm	1	0	b—	—	—	-16.2	Low Str. on Crater Hill and on Black and White Islands; clear to W.	
2	29.610	—	-24.5	-21.5	-20.5	Lt. S airs	0	0	bc	—	Ci.-s. 2, ? E	-18.4	Noon. Some detached Str. to E and NE; cloudless to W.	
4	29.621	-42.2	-32.0	-32.0	-31.0	Calm	1	0	bc—	—	Cl. 2 (? dir.)	-18.8	Noon. Min. temp. at Cape Armitage, -34.5. Light E by airs to calm. b. Refraction all round. Erebus smoke going in N and E by direction; lump of cloud over Erebus; 2 p.m. Temperature falling rapidly.	
6	29.635	—	-37.3	-32.0	-32.0	Calm	0	0	b	—	—	-18.8		
8	29.650	—	-33.2	-31.0	-31.5	Lt. NW airs	1	0	b—	—	—	-18.8	Mercury below scale between 2 and 10 p.m.	
10	29.659	—	-34.1	-29.7	-29.3	Calm	3	0	b—	—	—	-24.9		
Midt.	29.662	—	-29.4	-11.5	-11.0	Lt. N airs	2	0	b	—	—	-24.2	4 p.m. Ci.-cu. to ESE and S; rime on outside thermometer.	
Mean	29.602	—	—	-20.7	-20.6	—	—	—	—	—	—	—	4 p.m. Min. temp. at Cape Armitage, -42.2. Calm. Erebus obscured by detached cloud. Ci.-s. 2, E by.	

Max. therm. read at { 8 a. - 9.0. } Solar radiation { black bulb — } Evapn. 1. 1.7 grammes in 24 hours. Precipn. — in.

greenish colour. 10 p.m. Brilliant starlight; no clouds on the horizon; light westerly airs sprang up as I came in. Overcast early, but clearing later, and hardly any wind all day. Barometer rising slowly all day. Temperature lower, but not at all steady.

26th.

2	29.677	—	-33.4	-32.0	-31.9	-34.1	Calm	2	0	b	—	—	—	Low arches to E and S.
4	29.678	—	-36.5	-26.0	-26.0	-25.0	Lt. SW airs	0	0	b—	—	—	—	Curtain rising to zenith from N, also beams and portions of arches in all parts of E, S, SW, and NE, at all altitudes.
6	29.693	—	-29.8	-28.8	-28.3	-30.0	Calm	1	0	b—	—	—	—	
8	29.692	—	-29.0	-28.0	-28.0	-28.0	Lt. SW airs	3	0	b—	—	—	—	
10	29.705	—	-31.2	-25.2	-24.5	-26.0	Lt. NW airs	2	0	by—	—	—	—	Much refraction all round horizon to W and S; visibility very marked.
Noon	29.706	-41.7	-26.2	-22.2	-21.8	-25.0	Lt. var. airs	8	5	by	—	—	-25.1	Noon. Temperature falling rapidly; much refraction; visibility very marked.
2	29.714	—	-31.8	-24.8	-24.8	-21.6	Lt. S airs	1	0	b	—	—	-23.8	Noon. Min. temp. at Cape Armitage, -45.2. Light E by airs. b. Refraction all round. Erebus smoke, in large volume, rising some 1000 to 2000 feet, and then going in E by direction.
4	29.712	-25.0	-24.6	-17.2	-17.4	-16.0	Calm	1	0	b	—	—	-24.9	
6	29.724	—	-26.6	-25.0	-25.0	-25.5	Calm	1	0	b	—	—	-24.5	Mercury below scale
8	29.729	—	-24.8	1.0	0.0	2.5	Lt. E airs	4	0-8	b	—	—	2.5	
10	29.735	—	-10.4	4.5	4.2	4.0	E by N, 1	9	20-24	b	—	—	0.5	
Midt.	29.710	—	2.5	4.0	2.8	4.8	NE, 1-2	7	20-26	bc	—	—	2.8	2 p.m. Brilliant colouring on western and southern horizons and in sky.
Mean	29.706	—	—	-18.3	-18.4	—	—	—	—	—	—	—	2.1	4 p.m. Solar thermometer read for first time since placed.

Max. therm. read at { 8 a. - 9.0. } Solar radiation { black bulb 9.5. } Evapn. 11. 0.2 gramme in 24 hours. Precipn. — in.

deal of refraction all round, and mirage to S, the Bluff being inverted; some heavy Str. low down to SW, and A.-s. to E and SE. 6 p.m. Colouring to W and NW; Fr.-cu. to N and NW. 8 p.m. Temperature of outside thermometer run up to 5° whilst I was at the screen; a few faint streamers to E and SE to alt. 8°; layer of Str. appears to be over Discovery and extends to WSW. 10 p.m. Clear overhead. Midt. Low Str. to an alt. of 8° between SSE and SW; bright stars to an alt. of 60° between NE and W appeared to be shining through a mist — ? Ci. 3. Clear sky all day, with no wind. Barometer rising slowly nearly all day. Temperature lower early, rising up suddenly in the evening.

27th.

2	29.693	—	-2.0	-0.3	-1.0	0.5	NE, 3	21	25-40	bc W →	—	—	0.0	Str. clouds to an alt. of 15° all round; light clouds overhead as at midnight.
4	29.681	—	-2.7	1.1	0.1	1.5	NE, 2-3	24	25-28	bc →	—	—	-0.9	
6	29.673	—	-0.2	0.2	-0.1	0.0	NE, 3-4	15	25-30	oc	—	—	1.8	4 a.m. No stars visible between SSE and NW to an alt. of 60°; light clouds in zenith; faint patches of auroral light between NE and SSE during night; brilliancy and shape appeared to be dulled by clouds.
8	29.664	—	-6.5	-8.0	-6.0	-8.0	Var. 2-5	12	10-35	ocq	—	—	0.5	
10	29.844	—	-9.5	-7.8	-8.0	-7.8	NE, 5-6	21	28-40	ocq	—	—	-0.4	
Noon	29.844	-11.5	-8.5	-2.5	-3.0	-2.0	NE, 3-4	13	15-20	bc	—	—	-0.9	
2	29.846	—	-10.0	-8.8	-9.0	-8.0	E, 2	4	12-15	bc	—	—	-7.8	8 a.m. Wind very variable, going all round the compass.
4	29.619	-21.0	-9.7	-5.0	-5.2	-5.8	NE, 2-3	8	18-28	bc	—	—	-9.0	10 a.m. Cloudless low down to S and on western mountains; visibility marked.
6	29.582	—	-12.5	-11.7	-12.0	-12.7	NE, 3-6	10	30-40	bq	—	—	-5.1	Noon. Sky clearing rapidly; Ci.-cu. dissolving; visibility marked.
8	29.580	—	-14.8	-10.8	-12.0	-8.0	NE, 1-4	17	10-20	bq	—	—	-5.8	
10	29.579	—	-15.1	-12.0	-12.2	-9.8	Lt. N airs	2	0-10	b	—	—	-12.8	Noon. Min. temp. at Cape Armitage, -33.5. Wind E by N, 3. Ci.-cu. 4. bc. Erebus smoke rising 3000 to 4000 feet, and then going to WNW.
Midt.	29.548	—	-19.2	-18.0	-17.8	-18.0	Calm	1	0	b	—	—	-8.0	2 p.m. Fr.-cu. to S.
Mean	29.629	—	—	-6.8	-7.2	—	—	—	—	—	—	—	-8.7	4 p.m. Meteor on eastern horizon.

Max. therm. read at { 8 a. 6.5. } Solar radiation { black bulb 9.0. } Evapn. { 1. 4.0 } grammes in 24 hours. Precipn. — in.

going NW by. 6 p.m. Wind gusty and variable; auroral arc in SE, alt. 7°; very active and of yellowish tint, with blue fringe. 8 p.m. Wind very gusty; faint patch of aurora to S, alt. 20°; temperature was dropping by outside thermometer and rising by thermometer inside screen. 10 p.m. While taking observations outside thermometer rose from below -10° to -8° 2. Midt. Two incomplete auroral arches SE and SSW, one above another, alt. 20° and 12°. Overcast during early part of day, but clearing later; wind strong from NE, but fell towards the evening. Barometer fell throughout the day. Temperature fell towards evening.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Dry.	Wet.	Unscreened.									
2	29.526	—	-25.0	-24.7	-24.1	-24.8	Calm	0	0	b	—	—	-19.7	<p>28th.</p> <p>Extensive, faint, disconnected aurora extending NNE to SSE, an incomplete curtain rising from NE to 70° alt.</p> <p>4 a.m. Extensive though faint aurora from NNE to S; frost rime to a slight extent.</p> <p>6 a.m. Temperature very variable, altering with every puff of wind, dropping fast as I left the screen.</p> <p>10 a.m. Some detached A.-s. to SSW and W.</p> <p>Noon. Clouds seen to be collecting to the SW, and Cl. are appearing in the E and NE.</p> <p>Noon. Mlu. temp. at Cape Armitage, -32° 2. Wind ENE, 3. bc. Erebus smoke just forming a big clump or button upon summit and then going N by W; slight refraction all round.</p> <p>2 p.m. Detached Str. to S; air seems very dry; visibility good.</p> <p>4 p.m. Cl.-s. to S low down on horizon.</p> <p>4 p.m. Min. temp. at Cape Armitage, -21° 3. Wind E, 1. Erebus smoke going NE by N.</p> <p>10 p.m. Small wisps of cloud</p>
4	29.496	—	-26.8	-20.6	-20.5	-20.0	Lt. E airs	1	0-10	b	—	—	-19.7	
6	29.470	—	-21.1	-11.0	-12.0	-10.8	Lt. var. airs	2	0-10	b	—	—	-19.7	
8	29.467	—	-20.0	-10.5	-11.2	-10.0	ESE, 4	7	20-22	b	—	—	-13.9	
10	29.454	—	-20.0	-9.0	-10.0	-8.8	ENE, 3-4	15	18-24	b	—	—	-14.3	
Noon	29.440	-20.8	-9.5	-7.2	-8.2	-7.3	ENE, 4-5	12	20-28	b	—	—	-10.3	
2	29.446	—	-10.8	-10.0	-10.8	-10.5	ESE, 3-4	15	18-25	b	—	—	-9.0	
4	29.445	-17.5	-13.0	-11.5	-12.0	-12.0	SE, 4	11	15-20	b	—	—	-10.1	
6	29.443	—	-14.1	-11.5	-12.2	-11.6	SE, 2-3	10	15-20	b	—	—	-7.4	
8	29.409	—	-16.5	-14.2	-14.4	-14.6	NE, 5-6	15	25-32	bc	—	—	-8.7	
10	29.386	—	-17.0	-15.5	-16.0	-15.0	NE, 3-4	25	30-35	b	—	—	-10.8	
Midt.	29.386	—	-20.2	-20.1	-20.0	-23.0	Calm	7	0	b	—	—	-12.3	
Mean	29.443	—	—	-13.8	-14.3	—	—	—	—	—	—	—	-11.6	

Max. therm. read at { 8 a. -7° 0, 8 p. -6° 8. Solar radiation { black bulb 0° 2, bright bulb 16° 0. Evapn. { 1. 2.8 } grammes in 11. 2.8 } 24 hours. Precipn. — in.

8 p.m. S.-cu. approaching from S and W. 8 p.m. Clouds moving very slowly indeed, and they are thin to NW. Clear all day, with strong variable Ely winds falling in evening. Barometer falling all day. Temperature lower and unsteady.

2	29.348	—	-20.2	-14.0	-14.0	-14.0	Var. N airs	1	0	b	—	—	-14.4	<p>29th.</p> <p>Faint auroral display in E; rime in small stellate groups.</p> <p>Dawn appearing in the E.</p> <p>Clouds banking in S and W, but are light overhead; horizon clear in S, but is decreasing in size.</p> <p>Western mountains covered in cloud, much wind blown.</p> <p>Cloud conditions very similar, occasional breaks overhead.</p> <p>Noon. Mlu. temp. at Cape Armitage, -42° 0. Wind E, 3. S.-cu. 7, N by W. bc. Erebus obscured.</p> <p>2 p.m. Fr.-cu. moving rapidly to S; mirage along foot of western hills.</p> <p>4 p.m. Mlu. temp. at Cape Armitage, -35° 2. Wind NE, 3-4; Str. 10. Erebus obscured above 2000 feet.</p> <p>Overcast most of the day, with strong NEly wind. Falling barometer all day, became steady in evening. Temperature lower and still very unsteady.</p>
4	29.300	—	-32.5	-19.0	-19.5	-17.0	Lt. E airs	3	0-5	b	—	—	-14.8	
6	29.264	—	-19.4	-15.9	-16.0	-16.0	NNE, 3-4	7	20-25	bc	—	—	-17.5	
8	29.230	—	-17.0	-16.0	-16.0	-17.0	ENE, 3-4	14	20-25	b	—	—	-17.7	
10	29.191	—	-18.5	-16.8	-17.0	-17.0	NE, 4-6	13	25-30	oc	—	—	-16.2	
Noon	29.173	-22.8	-17.0	-15.2	-15.8	-15.2	NE, 2-3	12	18-20	oc	—	—	-16.6	
2	29.130	—	-16.0	-14.5	-15.0	-15.0	NE, 1-2	10	8-15	oc	—	—	-17.0	
4	29.103	-33.5	-17.8	-15.0	-15.3	-15.0	NE, 4-5	11	22-28	oc	—	—	-17.3	
6	29.085	—	-19.0	-17.8	-18.4	-17.0	NE, 3-4	18	22-28	oc	—	—	-15.5	
8	29.077	—	-20.5	-20.2	-20.2	-20.8	NE, 4-5	17	24-30	o	—	—	-15.9	
10	29.073	—	-22.0	-19.0	-18.8	-18.2	NE, 4-5	16	25	om	*	—	-13.4	
Midt.	29.079	—	-21.0	-20.5	-20.5	-21.8	NE, 4-5	15	20-25	oc	*	—	-17.7	
Mean	29.171	—	—	-17.0	-17.2	—	—	—	—	—	—	—	-18.0	

Max. therm. read at { 8 a. -6° 0, 8 p. -15° 0. Solar radiation { black bulb —, bright bulb —. Evapn. { 1. 4.0 } grammes in 11. 4.0 } 24 hours. Precipn. — in.

2	29.079	—	-20.0	-19.0	-19.0	-19.0	NE, 3-4	15	18-20	oc	+	—	—	<p>30th.</p> <p>Very thick all round from NW to SSW up to 4° alt., sky otherwise cloudless.</p> <p>Noon. Ice crystals falling thickly; fog all round W coast.</p> <p>12.45 p.m. Temp. at Cape Armitage, -32° 0; mln., -38° 3. Ely airs. bc. Erebus smoke going Ely; foggy to W.</p> <p>2 p.m. Cl.-cu. low down on N and W horizons; much mirage on Bluff.</p> <p>4 p.m. Mlu. temp. at Cape Armitage, -47° 2. Wind SE, 1-2. Erebus obscured; Cu. 1, N.</p> <p>8 p.m. There has been a considerable fall of ice crystals during the interval of observations.</p> <p>Cloudy generally, but fine, with very little wind. Barometer rising throughout the day. Temperature very much lower all day.</p>
4	29.079	—	-20.0	-20.0	-20.0	-21.0	NE, 1-2	7	5-10	b	—	—	—	
6	29.119	—	-22.0	-22.0	-22.0	-23.0	Lt. var. airs	8	0-5	bc	—	—	—	
8	29.137	—	-24.2	-22.0	-22.0	-23.5	NE, 2-3	15	10-18	bcm	—	—	-22.0	
10	29.155	—	-23.2	-22.4	-22.6	-22.8	NE, 2-3	10	18-20	b	—	—	-21.8	
Noon	29.156	—	-23.5	-21.6	-21.8	-21.5	Lt. NE airs	10	0-8	bm	→	—	-22.7	
2	29.155	—	-30.3	-29.5	-29.5	-29.7	Calm	2	0	b	—	—	-22.9	
4	29.157	-40.0	-30.0	-29.8	-29.1	-31.2	Calm	1	0	bcm	—	—	-21.3	
6	29.185	—	-29.2	-27.4	-27.4	-28.0	Calm	5	0	bc	U	—	-21.6	
8	29.205	—	-37.0	-30.6	-30.5	-30.8	Calm	5	0	bc	U	—	—	
10	29.209	—	-33.0	-33.0	-33.0	-34.0	Calm	5	0	bc	U	—	—	
Midt.	29.233	—	-33.0	-28.0	-28.0	-29.0	Calm	0	0	bc	U	—	—	
Mean	29.156	—	—	-25.4	-25.4	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -16° 0, 8 p. -21° 5. Solar radiation { black bulb —, bright bulb —. Evapn. { 1. 1.2 } grammes in 11. 1.2 } 24 hours. Precipn. 0.03 in. since 6 p.m. 1st.

1903—August.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

31st.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	29.257	—	-27.0	-26.0	-26.0	-27.0	ESE, 2-3	5	15-18	bc U	—	S.-cu. 4	—	Western mountains covered with heavy Nim. all night. Heavy drifft blowing off Crater Hill.  Cloudless sky, some fog at base of land at various points. Conditions similar to those at 10 a.m.  Noon. Min. temp. at Cape Armitage, -55° 5'. Wind E by N, 2-3. Im. Foggy in Erebus light and over Barrier E and SE; icy spicules falling. Mother-of-pearl wisps of Ci. to N. Erebus smoke rising 3000 to 4000 feet in height, forming a torn mushroom, and then going to E.  2 p.m. Small detached portions of Ci. on N horizon.  4 p.m. Mother-of-pearl wisps of Ci. to NW; Ci. low in W and S; outside thermometer fell during time I was at screen to -41° 5'.  4 p.m. Mln. temp. at Cape Armitage, -55° 0'. Wind W, 1. Erebus smoke going NEly. Small detached Ci.-s., brilliantly coloured, to N. 6 p.m. Thermometer heavily coated in rime. 8 p.m. Misty appearance generally. Clear most of the day, with fresh variable Ely winds early, falling calm about midday, and remaining so. Barometer rising until late, when it began to fall. Temperature remaining low and very fluctuating.	
4	29.297	—	-25.0	-23.0	-23.0	-23.0	Calm	4	0	bc U	—	S. 8	—		
6	29.349	—	-35.0	-28.0	-28.0	-27.0	Var. ESE, 3-4	9	20-25	b †	—	—	—		
8	29.406	—	-32.0	-24.0	-24.0	-24.2	NE, 2-3	15	10-15	bc †	—	S.-cu. 2	—		
10	29.452	—	-25.8	-21.2	-24.2	-24.2	SE, 3-4	14	15-20	b	—	—	—		
Noon	29.493	-52.8	-24.8	-22.0	-22.0	-22.0	E, 2-3	9	15-18	b	—	—	—		
2	29.541	—	-28.8	-22.0	-22.2	-21.2	Lt. N airs	5	0-8	b	—	—	—		
4	29.576	-55.0	-39.8	-38.9	-37.9	-39.9	Calm to lt. S airs	1	0	b	—	—	—		
6	29.592	—	-41.0	-26.5	-26.5	-24.5	N by W, 0-1	3	0-10	b L	—	—	Mercury below scale from 4 p.m. to Midt.		
8	29.627	—	-42.0	-41.0	-40.0	-42.2	Calm	2	0	bm U L	—	—	—		
10	29.637	—	-42.0	-40.0	-40.0	-42.5	Calm	1	0	bm U L	—	—	—		
Midt.	29.618	—	-41.0	-30.0	-30.0	-31.2	Calm	1	0	b U L	—	—	—		
Mean	29.487	—	—	-28.8	-28.7	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. -18° 0.		8 p. -17° 0.		Solar radiation		black bulb —		bright bulb —		Evapn. — grammes.		Precipn. — in.	

Armitage, -55° 0'. Wind W, 1. Erebus smoke going NEly. Small detached Ci.-s., brilliantly coloured, to N. 6 p.m. Thermometer heavily coated in rime. 8 p.m. Misty appearance generally. Clear most of the day, with fresh variable Ely winds early, falling calm about midday, and remaining so. Barometer rising until late, when it began to fall. Temperature remaining low and very fluctuating.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, sec p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.586	—	-33.0	-20.0	-21.5	-19.0	Calm	0	0	b	—	—	-25.2	<p>1st.</p> <p>Very heavy squalls, with much drift.</p> <p>S.-cu. to S and SE; Cl.-S. to N and NE.</p> <p>Conditions similar to those at 10 a.m.; much refraction all round; wind falling light.</p> <p>Noon. Min. temp. at Cape Armitage -55° 2. Wind NW, 2. b. Erebus smoke going N by E. —</p> <p>2 p.m. Detached Cl. on N horizon; mirage to W; portions of Cl.-s. passing from a W by direction.</p> <p>4 p.m. Beautiful iridescent clouds to N and NW; Cl.-s. in NW and W.</p> <p>4 p.m. Min. temp. at Cape Armitage, -47° 2. Wind NW, 1-2. Erebus smoke going N by E. —. Typical pearly Cl. to NW.</p> <p>6 p.m. Detached Str. hanging on lower summits of western</p>
4	29.526	—	-26.0	-20.0	-20.0	-20.0	ENE, 1	5	8	b	—	—	-24.5 } (sic)	
6	29.534	—	-26.0	-25.0	-25.0	-26.2	NE, 4-8	16	20-48	bq	—	—	-20.9	
8	29.514	—	-28.0	-19.8	-19.2	-19.0	ENE, 5-6	22	25-30	b	—	—	-24.3	
10	29.494	—	-21.5	-21.0	-21.1	-21.0	NE, 4-5	21	24-28	b	—	—	-24.3	
Noon	29.460	-35.5	-34.0	-33.8	-32.9	-34.2	N, 1	7	10	b	—	—	-21.3	
2	29.433	—	-35.0	-17.4	-17.8	-18.0	N, 2-4	6	15-30	bq	—	—	-21.5	
4	29.403	-23.5	-19.0	-18.6	-18.8	-19.1	N, 1-3	11	2-20	bq	—	—	-17.3	
6	29.399	—	-23.3	-22.0	-22.0	-23.0	Lt. NW alrs	0	0-5	b	—	—	-18.0	
8	29.360	—	-34.0	-28.5	-29.0	-28.2	Calm	1	0	b	—	—	-18.8	
10	29.308	—	-30.0	-15.0	-15.0	-15.5	NNW, 1-2	6	1-7	b	—	—	-13.9	
Midt.	29.288	—	-32.5	-30.5	-30.0	-32.0	Calm	0	0	b	—	—	-22.4	
Mean	29.442	—	-22.6	-22.7	—	—	—	—	—	—	—	—	-23.4	

Max. therm. read at { 8 a. -17° 8. } Solar radiation { black bulb —, } Evapn. { 1.03 } grammes in Precipn. — in.  
 { 8 p. -17° 0. } { bright bulb —. } { 11.02 } 24 hours.

range. 10 p.m. Faint aurora patch to E. Fine, clear day, with strong wind early, going round from NE to N and gradually falling. Barometer falling all day. Temperature very unsteady.

2	29.275	—	-34.0	-32.5	-32.0	-33.0	Calm	0	0	b	—	—	Mercury below scale	<p>2nd.</p> <p>Cloudless; visibility very marked.</p> <p>A thin layer of A.-s. to SW above western mountains, the only cloud visible.</p> <p>Noon. Min. temp. at Cape Armitage, -55° 2. Wind E, 1-2. —. Erebus smoke going a little N of E.</p> <p>2 p.m. Thin bands of Str. above western mountains.</p> <p>4 p.m. Cl.-s. in NW, W and SW.</p> <p>4 p.m. Min. temp. at Cape Armitage, -45° 3. Wind E, 3-4. b. Erebus smoke going E. —. Str. on NW horizon; rich colouring to N and NW low down.</p> <p>6 p.m. Cl. approaching from W by direction.</p> <p>Fine, clear day, with strong NE by wind most of the day. Barometer falling all day. Temperature still very unsteady.</p>
4	29.214	—	-34.0	-25.0	-25.0	-25.0	Lt. S alrs	3	0	b	—	—	2 to 4 a.m.	
6	29.209	—	-25.0	-22.0	-22.0	-23.2	SE, 0-1	4	0	bc	Cl. 2	—	-19.8	
8	29.193	—	-22.0	-17.8	-18.0	-18.5	ESE, 5-6	16	30-35	b	—	—	-22.0	
10	29.177	—	-18.8	-18.5	-18.8	-19.0	E, 4-6	18	22-32	bv	—	—	-18.0	
Noon	29.169	-35.8	-32.0	-27.0	-26.8	-28.0	SE, 3-4	15	18-24	bv	—	—	-18.4	
2	29.145	—	-27.6	-19.0	-19.5	-19.7	ENE, 4-6	19	25-38	bq	—	—	-19.1	
4	29.139	-31.2	-19.5	-18.0	-18.8	-18.0	NE, 3-5	18	23-32	bq	—	—	-19.5	
6	29.131	—	-18.5	-15.0	-16.0	-15.7	NE, 2-3	13	12-22	b	—	—	-19.8	
8	29.127	—	-31.6	-22.0	-22.0	-22.2	N, 1	3	8-10	b	—	—	-18.0	
10	29.111	—	-25.0	-24.2	-24.5	-24.5	NE, 4	6	28-35	b	—	—	-19.1	
Midt.	29.089	—	-25.0	-23.2	-23.8	-24.0	NE, 4-5	33	30-37	b	—	—	-14.8	
Mean	29.165	—	-22.0	-22.3	—	—	—	—	—	—	—	—	-15.9	

Max. therm. read at { 8 a. -15° 0. } Solar radiation { black bulb 15° 8. } Evapn. { 1.06 } grammes in Precipn. — in.  
 { 8 p. -15° 0. } { bright bulb 0° 0. } { 11.06 } 24 hours.

2	29.077	—	-28.0	-25.5	-26.0	-26.0	NE, 5	23	35-42	b	—	—	—	<p>3rd.</p> <p>Found aspirator blown down and broken.</p> <p>Str. over western mountains and to SW, covering Discovery and western mountains' summits.</p> <p>Noon. Str. still obscuring Discovery and western mountains' peaks.</p> <p>Noon. Min. temp. at Cape Armitage, -46° 0. Wind E, 1. b. Erebus smoke first rising in large column, 2000 to 3000 ft., then going W by; refraction in NNW.</p> <p>2 p.m. Str. on western mountains; Cu. to S.</p> <p>4 p.m. Cl. and Cl.-s. all round extending to 20° above horizon.</p> <p>4 p.m. Min. temp. at Cape Armitage, -50° 2. Wind E, 2-3. Erebus smoke going N by; Str. all round.</p> <p>6 p.m. Cl.-s. collecting in N and W; Str. all round horizon. 8 p.m. Fine, hard, and small flakes falling; stars visible through Str.; wind went to SE during observation. Fine, clear day, with strong NE by wind early, and remaining fresh from E all day. Barometer rising throughout. Temperature rose slowly all day.</p>
4	29.073	—	-26.0	-24.5	-25.0	-25.0	ENE, 5-6	28	32-43	bq	—	—	—	
6	29.076	—	-28.0	-27.0	-27.0	-27.0	ENE, 5	23	32-40	bq	—	—	—	
8	29.086	—	-27.0	-27.0	-27.0	-27.0	ENE, 5-6	28	35-40	b	—	—	—	
10	29.110	—	-29.0	-28.5	-28.5	-29.0	NE, 5-6	16	20-30	bv	—	—	—	
Noon	29.127	-36.2	-29.4	-22.2	-22.9	-21.9	ENE, 1	13	10	bv	—	—	—	
2	29.149	—	-27.7	-23.5	-24.0	-24.8	Var. E, 1-2	8	8-15	b	—	—	—	
4	29.176	-43.5	-38.5	-25.6	-25.8	-25.8	E, 3-4	5	20-26	b	—	—	—	
6	29.206	—	-20.5	-12.5	-13.2	-12.0	E, 1-2	12	10-18	b	—	—	—	
8	29.242	—	-22.0	-13.0	-13.2	-12.2	E, 1	6	10	oc *	—	—	Thin S. 8, S	
10	29.252	—	-14.5	-12.5	-12.8	-12.5	E, 2-3	11	18-20	bc	—	—	Lt. det. Cu. 2, S	
Midt.	29.255	—	-14.5	-11.5	-14.5	-14.5	ESE, 3-4	10	20-28	bc	—	—	Lt. Fr.-cu. 2, S	
Mean	29.152	—	-21.4	-21.7	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -20° 0. } Solar radiation { black bulb 17° 8. } Evapn. { 1.21 } grammes in Precipn. — in.  
 { 8 p. -13° 0. } { bright bulb 6° 0. } { 11.21 } 24 hours.

1903—September.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cupanemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
4th. 2	29.239	—	-21.0	-18.6	-18.8	-19.0	E, 3-4	11	18-26	bc U	—	—	—	—	—
4	29.211	—	-19.0	-14.5	-15.0	-14.3	E, 0-1	11	0-5	bm U	—	—	—	—	Some Str. to S and NW, also a bank of Str. to S and SE.
6	29.178	—	-17.8	-17.8	-18.2	-18.4	Lt. S by E airs	8	0	b	—	—	—	—	Str. to S and SE, Cl.-s. to W.
8	29.112	—	-32.0	-26.0	-26.0	-26.8	Calm	0	0	bc	—	—	S. 4	—	—
10	29.065	—	-26.8	-21.2	-21.5	-21.2	Lt. NE airs	1	5-8	bv	—	—	—	—	Cloudless except for bank of Str. to S and SE; wind sprang up fresh from NE and temperature rose quickly.
Noon	29.023	-35.3	-26.0	-24.0	-24.0	-24.2	NE, 4	10	20-23	bv †	—	—	—	—	Noon. Cloudless except to SE; low drift in Strait.
2	28.950	—	-27.6	-27.0	-27.0	-27.5	NE, 5-6	22	28-35	b †	—	—	—	—	Noon. Min. temp. at Cape Armitage, -50.0. Wind NE, 3. b. Lines of Str. low on S and SE horizon, no clouds elsewhere; mirage slight to E; Erebus smoke going first downwards and then E in a long pendant as far as Mt. Terror. — on thermometer.
4	28.927	-36.0	-29.2	-28.2	-28.2	-29.2	NE, 5-6	19	25-33	b †	—	—	—	—	2 p.m. Str. on lower peaks of western mountains, and Str. on S horizon.
6	28.875	—	-29.2	-26.5	-26.5	-27.0	NE, 3-5	18	20-30	bq †	—	—	—	—	3 p.m. Rain band, 3.
8	28.836	—	-28.5	-28.2	-28.0	-29.0	NE, 1-2	14	10-18	b	—	—	—	—	4 p.m. S.-cu. passing over, and on, western mountains, and passing at a rapid pace in S by direction; misty, with surface drift in Strait.
10	28.809	—	-33.2	-32.2	-32.0	-33.0	SSE, 1	9	8-10	b	—	—	—	—	4 p.m. Min. temp. at Cape Armitage, -38.0. Wind NE, 3-4. Erebus obscured.
Midt.	28.777	—	-34.8	-32.0	-32.0	-32.6	SE, 1	7	10	b	—	—	—	—	2 p.m. Str. on lower peaks of western mountains, and Str. on S horizon.
Mean	29.000	—	—	-24.7	-24.8	—	—	—	—	—	—	—	—	—	3 p.m. Rain band, 3.

Max. therm. read at { 8 a. -13.2. } Solar radiation { black bulb 12.0. } Evapn. { I. 2.3 } grammes in Precipn. — in. { 8 p. -20.8. } { bright bulb 0.0. } { II. 2.4 } 24 hours.

smoke going NE. † on western side of Strait. 5 p.m. Temp. at Cape Armitage, -43.0. 6 p.m. Heavy bank of dark Str. obscuring western mountains. 8 p.m. Highest peaks of western mountains appearing above heavy bank of Str., which extends to S. 10 p.m. Western mountains appear to be clear of cloud. Midt. Auroral streamers in NE and SE, alt. 20°; faint on account of moonlight, which is very bright. Fine and clear all day, with strong NE wind in afternoon. Barometer falling all day. Temperature falling continuously.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cupanemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
5th. 2	28.743	—	-33.0	-33.0	-32.8	-33.8	Calm	5	0	bm U	—	—	—	—	Two bright streamers and several fainter ones in NE and E, streamers extending to zenith, faint patch a little E of zenith, very faint arch to SE, with streamers; moonlight very bright.
4	28.724	—	-41.0	-40.2	-39.8	-40.2	Calm	0	0	bm U	—	—	—	—	4 a.m. Very faint but extensive display of streamers from N to SW through E, alt. 40° to 70°; layers of mist rising from floor and crossing moon at intervals; layers of Str. on peaks of western mountains.
6.	28.706	—	-48.0	-47.0*	-45.5	-47.0	Calm	0	0	bm U	—	—	—	—	6 a.m. Same peculiar layers of mist rising apparently from tide cracks all round; heavy Str. to S and SE; foggy in Strait and to S.
8	28.688	—	-47.2	-38.0*	-37.0	-38.0	Calm	0	0	bc —	—	—	S. 3	—	10 a.m. Mixture of blue sky and white A.-s. which appears to be rising and taking on Cl.-s. forms, but evidently at several different elevations; thick low down to S, SW, and W, obscuring the land considerably.
10	28.696	—	-37.9	-37.6	-36.7	-39.1	Calm	0	0	c	—	—	A.-s. 8, SW	—	Noon. Land to SSW and W obscured by mist or low Str.
Noon	28.696	-41.2	-45.6	-38.0	-37.6	-38.0	Calm	0	0	cm ⊕ →	—	—	Ci.-s. 8, S	—	Noon. Min. temp. at Cape Armitage, -57.0. Calm. Ci.-cn. and Ci. 5. hem. Fog crystals falling, Erebus obscured. Str. all round up to 10° or 15° above horizon; parhelion on W side of sun.
2	28.684	—	-38.2	-32.0	-32.0	-32.2	Calm	0	0	om	—	—	S.-cu. 8, S	—	2 p.m. Wall of fog about 10 miles to westward obscuring mountains and horizon. 3 p.m. Rain band, 5. 4 p.m. Min. temp. at Cape Armitage, -42.0. Wind E, 2-3. S.-cu. 10. Erebus obscured; moon gleaming; clouds very low, and scarcely any land visible. 6 p.m. Wind very squally; foggy all round; ice crystals falling; refraction all round. 8 p.m. Wind strong and squally; stars visible through kind of mist in zenith; (?) drift or snowfall. 10 p.m. Low and very thin Str. covering sky, slightly thicker to S and W than elsewhere; all distant land obscured. Midt. Stars visible overhead; distant land visible below Str. Fine early, but misty, becoming overcast and remaining so. Wind sprang up very strong for an hour or two between 4 and 8 p.m., and then fell. Barometer fell until about 8 a.m., and rose quickly after 2 p.m. for remainder of the day. Temperature low early, rising towards evening.
4	28.723	-31.2	-36.2	-26.5	-27.0	-26.1	Lt. ESE airs	1	0	ocm	—	—	S.-cu. 10	—	* Readings of spirit minimum thermometer at time of observation.
6	28.751	—	-26.6	-24.8	-24.8	-25.0	ENE, 3-5	11	20-30	ofq † →	—	—	S.-cu. 10	—	
8	28.789	—	-25.2	-23.0	-23.0	-23.0	NE, 5-6	23	30-36	oqm †	—	—	S. 10	—	
10	28.812	—	-23.0	-17.2	-17.6	-17.0	NE, 1	18	8-12	bmc	—	—	S. 6	—	
Midt.	28.839	—	-19.8	-17.2	-17.5	-17.5	E, 0-1	10	0-12	bc	—	—	Ci.-s. 5, S by W	—	
Mean	28.738	—	—	-31.2	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -28.0. } Solar radiation { black bulb —. } Evapn. { I. 0.2 } gramme in Precipn. — in. { 8 p. -20.0. } { bright bulb —. } { II. 0.2 } 24 hours.

2 p.m. Wall of fog about 10 miles to westward obscuring mountains and horizon. 3 p.m. Rain band, 5. 4 p.m. Min. temp. at Cape Armitage, -42.0. Wind E, 2-3. S.-cu. 10. Erebus obscured; moon gleaming; clouds very low, and scarcely any land visible. 6 p.m. Wind very squally; foggy all round; ice crystals falling; refraction all round. 8 p.m. Wind strong and squally; stars visible through kind of mist in zenith; (?) drift or snowfall. 10 p.m. Low and very thin Str. covering sky, slightly thicker to S and W than elsewhere; all distant land obscured. Midt. Stars visible overhead; distant land visible below Str. Fine early, but misty, becoming overcast and remaining so. Wind sprang up very strong for an hour or two between 4 and 8 p.m., and then fell. Barometer fell until about 8 a.m., and rose quickly after 2 p.m. for remainder of the day. Temperature low early, rising towards evening.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cupanemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
6th. 2	28.859	—	-18.0	-14.2	-14.8	-14.0	Lt. S by W airs	9	0-10	oc	—	—	S. 10	—	Moon dimly visible; stars obscured.
4	28.845	—	-16.6	-13.8	-14.2	-14.0	E, 2-3	7	15-23	oc †	—	—	S. 10	—	
6	28.898	—	-15.0	-14.0	-14.2	-12.2	E by N, 3-4	10	22-35	ocq †	—	—	S. 10	—	Dark sky to S and SW; no land visible except that close to.
8	28.888	—	-13.5	-11.0	-11.0	-11.0	Var. ESE, 5-7	15	20-35	ocq †	—	—	S. 10	—	Sky breaking to S and SE.
10	28.881	—	-12.7	-10.8	-11.2	-10.8	SE, 2-4	13	10-20	beq	—	—	Ci.-s. 3, SW	Fr.-s. 4, S	Very windy looking all round; western mountains clear, but thick to S and SE.
Noon	28.883	-17.2	-17.0	-15.6	-15.9	-16.0	Var. E, 4-5	14	18-24	ocq †	—	—	Ci.-s. 4, SW	S. 5, S	Noon. Conditions very similar; movements of clouds are fast and direct; drift in Strait, and to S and SE on land.
2	28.855	—	-16.5	-11.3	-12.0	-11.2	E, 2-3	15	12-25	bc	—	—	Ci.-s. 2, SW	Cu. 2, S	Noon. Min. temp. at Cape Armitage, -37.8. Wind E, 4. Ci.-cn. 7. †. Erebus obscured. Str. all round horizon.
4	28.855	-11.1	-12.6	- 8.8	- 9.5	- 8.8	ESE, 2-5	11	20-30	ocq	—	—	S. 10	—	2 p.m. Heavy Str. along S horizon; small detached Cn. passing in zenith from SE.
6	28.839	—	-10.1	- 9.0	- 9.5	- 8.8	SE, 1-2	10	8-15	o	—	—	S. 10	—	3 p.m. Rain band, 3.
8	28.802	—	-10.0	- 7.0	- 8.0	- 6.8	Lt. E airs	5	0	oc	—	—	S.-cu. 10, S (slow)	—	4 p.m. Some break in clouds to W and NW.
10	28.798	—	-14.3	-14.1	-14.2	-15.2	Lt. E airs	6	0	bc U U	—	—	Ci.-s. 4	—	4 p.m. Min. temp. at Cape Armitage, -17.0. Wind SE, 1-2. Clouds of drift to SE all going to NE. oc. Str. 10. Tops of Black and White Islands and all behind them up to Erebus and Terror obscured. 6 p.m. Clouds broken along NW horizon. 11.30 p.m. Halo with two mock moons; the one very bright, red inside and blue out, the other faint; bright streak above moon; the two streaks crossing the moon also bright; diameter 22' 20"; Cl. passing slowly to NE. Midt. Fairly bright halo with mock moons; side ones bright, upper one faint. Overcast and cloudy most of the day, with strong variable E by winds. Barometer very unsteady. Temperature much higher and steady.
Midt.	28.815	—	-15.0	-12.8	-13.0	-13.2	Lt. var. airs	3	0	c U	—	—	Ci. 8	—	
Mean	28.853	—	—	-11.9	-12.3	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -11.0. } Solar radiation { black bulb —. } Evapn. { I. 1.8 } grammes in Precipn. — in. { 8 p. - 6.8. } { bright bulb —. } { II. 2.0 } 24 hours.

western range obscured by low Str. or fog; heavy mist to S side of Mt. Discovery; horizon clear to N and NW; Erebus and Terror obscured. 6 p.m. Clouds broken along NW horizon. 11.30 p.m. Halo with two mock moons; the one very bright, red inside and blue out, the other faint; bright streak above moon; the two streaks crossing the moon also bright; diameter 22' 20"; Cl. passing slowly to NE. Midt. Fairly bright halo with mock moons; side ones bright, upper one faint. Overcast and cloudy most of the day, with strong variable E by winds. Barometer very unsteady. Temperature much higher and steady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles num.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	28.807	—	-14.5	-4.0	-5.5	-4.4	N, 1-2	4	7-15	bc	—	—	—	7th.	
4	28.806	—	-18.7	-4.8	-5.4	-4.8	N, 2-3	5	15-26	bc	—	—	—		
6	28.820	—	-5.1	-2.1	-3.0	-2.0	N, 1-2	10	7-16	oc	—	S. 10	—		
8	28.885	—	-7.5	-2.8	-2.8	-2.2	SE, 2-3	4	10-15	oc	—	S. 10	—		
10	28.928	—	-4.2	-1.0	-1.2	-1.0	SE, 3-4	9	25-30	ocq	—	S. 10	—		
Noon	28.988	-5.8	-7.3	-4.0	-4.3	-4.0	SE, 3	11	15-18	ocq ↗	—	S. 9	—		
2	29.055	—	-5.5	-5.0	-5.0	-5.0	SE, 3-4	17	20-28	of ↗	—	S. 10	—		
4	29.130	—	-7.5	-7.2	-7.2	-6.8	SE, 3-5	15	20-30	ofq ↗	—	S.-cu. 10	—		
6	29.142	—	-8.9	-7.0	-7.2	-7.0	ESE, 2-3	12	12-18	o ↗	—	S. 10	—		
8	29.148	—	-7.5	-4.9	-5.0	-4.9	E by N, 0-1	10	0	bmc	—	S. 2	—		
10	29.142	—	-7.8	-3.5	-4.5	-3.0	NNE, 0-1	5	5-6	bc	Cl.-s. 8	—	—		
Midlt.	29.141	—	-10.7	-5.0	-5.4	-5.0	NNE, 2-3	7	15-21	bc	Cl.-s. 6	—	—		
Mean	28.999	—	—	-4.3	-4.7	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. -2° 0. / 8 p. 4° 0. } Solar radiation { black bulb 8° 0. / bright bulb — } Evapn. { I. 4.4 / 11. 4.5 } grammes in 26 hours. Precipn. { 0.020 in. since 4 p.m. / 30th August. }

8 p.m. Dull all round; stars dimly visible, moon watery in NE. 10 p.m. Light Cl.-s. clouds all round to alt. of 70°, and, in places, obscuring all but brightest stars; heavy looking low down between SE and W by N. Midlt. Clouds as at 10 p.m.; a greater number of stars visible between SW and ESE to an alt. of 50°; clouds appear to be less heavy low down. Overcast and cloudy all day, with fresh SE wind. Barometer rose until 8 p.m., and then began to fall. Temperature high, but steady.

2	29.130	—	-5.9	-2.0	-2.1	-2.2	N, 2-3	16	24-28	bc	—	S. 1, W	8th.	
4	29.136	—	-6.9	-0.6	-1.2	-1.0	N, 2-3	18	22-32	bc	—	S. 2		—
6	29.157	—	-2.0	0.1	-0.4	0.0	N, 1-2	9	20-25	bc	—	S. 2		—
8	29.195	—	-6.5	-6.2	-6.2	-8.0	N, 0-1	9	0-5	bc	—	S. 1		—
10	29.201	—	-7.4	-2.0	-2.8	-2.3	N, 1-2	8	15-20	bc	Cl.-s. 1, NW	—		—
Noon	29.217	-7.4	-9.5	-2.5	-3.0	-2.4	N by W, 2-3	9	20-25	bc	Cl. 2	—		—
2	29.246	—	-10.3	-10.0	-10.2	-11.0	Calm	8	0	bc	Cl.-s. 6, NW	—		—
4	29.273	-20.0	-12.4	-10.1	-10.5	-10.2	Calm	0	0	bc	Cl.-s. 6	—		—
6	29.290	—	-13.8	-10.5	-11.0	-10.0	Calm	0	0	oc	—	S.-cu. 10		—
8	29.313	—	-13.5	-13.1	-13.0	-15.0	Calm	2	0	oc	—	S. 10		—
10	29.326	—	-14.9	-4.2	-5.0	-5.0	NE, 2-3	6	15-20	o	—	S. 10		—
Midlt.	29.372	—	-5.4	-1.7	-2.8	-2.2	NE, 2-3	11	15-20	o	—	S. 10		—
Mean	29.238	—	—	-5.2	-5.7	—	—	—	—	—	—	—		—

Max. therm. read at { 8 a. 3° 0. / 8 p. -1° 0. } Solar radiation { black bulb 9° 5. / bright bulb 0° 0. } Evapn. { I. 5.6 / 11. 5.5 } grammes in 24 hours. Precipn. — in.

Cloudy most of the day, with fresh Nly wind, calm all afternoon. Barometer rose steadily all day. Temperature not so steady, but still high.

2	29.378	—	-3.0	-0.8	-1.5	0.0	E, 2	5	10-15	o	—	S. 10	9th.	
4	29.387	—	-4.2	-2.0	-3.0	-2.1	E, 3-4	11	20-25	o	—	S. 10		—
6	29.412	—	-12.4	-11.2	-11.4	-11.9	NE, 5-6	20	30-40	bc	—	S. 9		—
8	29.478	—	-11.3	-11.2	-11.8	-11.5	Var. E, 5-6	24	25-35	bc	—	S. 8		—
10	29.503	—	-14.5	-11.0	-11.0	-11.3	E, 3-4	23	25-35	bc	Cl. 1, S	S. 1		—
Noon	29.507	-16.3	-11.1	-12.0	-12.2	-12.0	E, 4-5	20	30-40	bc	Cl.-s. 5	—		—
2	29.524	—	-16.0	-14.6	-15.0	-16.0	ENE, 3-6	23	20-35	bq	—	—		—
4	29.531	—	-19.0	-16.0	-16.3	-16.2	E, 3-4	17	20-28	b	—	—		—
6	29.539	—	-16.5	-16.0	-16.2	-16.2	E, 3-5	17	22-30	bq	—	—		—
8	29.543	—	-16.0	-14.0	-14.2	-14.2	E, 2-3	16	20-25	b	—	—		—
10	29.507	—	-16.0	-15.9	-16.0	-16.0	ENE, 3	13	20-25	b	—	—		—
Midlt.	29.496	—	-11.5	-11.2	-11.2	-12.0	N by W, 1-2	10	5-15	ocq	Cl.-s. 1	S. 10		—
Mean	29.484	—	—	-11.3	-11.7	—	—	—	—	—	—	—		—

Max. therm. read at { 8 a. -1° 3. / 8 p. -3° 0. } Solar radiation { black bulb 26° 8. / bright bulb — } Evapn. { I. 2.5 / 11. 2.0 } grammes in 24 hours. Precipn. — in.

Midlt. Auroral lights in NE and streamers from NE to zenith. Cloudy early, clearing in afternoon. Barometer rose until 8 p.m., and then began to fall. Temperature falling and lower.

1903—September.]

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10th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
			Dry.	Wet.										
2	29.468	—	-13.5	-12.5	-13.0	-13.9	Lt. NW ahrs	2	5	oc	—	S. 10	—	Faint auroral arch SE to SW, but very faint, alt. 40°; a few stars visible on going out; clearing rapidly.
4	29.456	—	-19.5	-18.8	-18.0	-20.0	SSE ahrs	2	5	b	—	—	—	4 a.m. Ci.-s. clouds all round horizon, with heavy bank to westward.
6	29.442	—	-21.0	-20.8	-20.8	-21.0	Calm	3	0	o	—	S. 10	—	6 a.m. Clouds only forming a very thin film, especially near zenith; distant land over 1000 ft. obscured.
8	29.425	—	-21.0	-13.0	-13.0	-14.0	Calm	0	0	oc	—	S. 10	—	Dull to horizon all round; snowing slightly; no land to W visible.
10	29.411	—	-14.5	-11.0	-11.0	-11.0	Calm	0	0	oc *	—	S. 10	—	Min. temp. at Cape Armitage, -27° 5. Wind E, 1. Str. 10, NNW. Refraction to W. Most distant land obscured. Erebus obscured.
Noon	29.393	-18.5	-11.7	-10.0	-10.1	-10.0	NE, 1	0	5	oc *	—	N. 9, NW	—	1 p.m. Erebus' summit cleared, smoke going SSE.
2	29.383	—	-12.5	-12.2	-12.2	-12.0	NE, 2	7	12-15	ocf	—	S. 10, NE	—	2 p.m. Low banks of sand passing over eastern hills; summits of Observation and Crater Hills obscured. Rain band, 3.
4	29.380	—	-14.1	-12.0	-12.2	-12.0	ESE, 2-3	13	12-20	of —	—	S. 10	—	4 p.m. Heavy coating of fog crystals on N, NE, and E sides of exposed objects.
6	29.350	—	-17.5	-17.0	-17.0	-17.0	E, 2-4	10	15-25	ocf † →	—	S. 10	—	6 p.m. Excessive coating of rime on anemometer glass, also on thermometers inside screen; clouds broken and thin along N horizon.
8	29.346	—	-17.8	-16.4	-16.4	-17.8	NE, 2-3	13	10-20	bqf * —	—	S. 10	—	8 p.m. Rime on everything; snow falling; stars dim overhead; Str. at an altitude of 700 ft.
10	29.324	—	-21.0	-20.0	-20.1	-20.1	E, 4-6	15	30-40	bqm * —	—	S. 10	—	
Midt.	29.299	—	-21.0	-18.9	-18.9	-19.0	E, 4-7	20	30-45	ocq <sup>2</sup> † * —	—	S. 10	—	
Mean	29.390	—	-15.2	-15.2	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. -6° 0. read at { 8 p. -8° 5. Solar radiation { black bulb 17° 5. bright bulb —. Evapn. { 1. 1.3 } grammes in { 11. 1.9 } 24 hours. Precipn. { 0.007 in. since 8 p.m. 7th.

10 p.m. Stars dim overhead; snow and drift; fog seems to be lifting. Midt. No stars; ? drift or snow; fresh deposit of rime; very squally. Overcast, dull, and foggy day. Calm all the forenoon, wind rising up about noon and blowing up very strong from an Ely direction. Barometer falling all day. Temperature very steady.

11th.

2	29.289	—	-22.0	-21.0	-21.0	-21.5	E, 4-5	20	25-35	oc † * —	—	S. 10	—	No stars; wind steadier.
4	29.286	—	-25.0	-24.8	-25.0	-25.0	NE, 4-5	15	30-35	oc † *	—	S. 10	—	No stars; wind in heavy gusts; thicker than at 2 a.m.; no rime, but loose snow on instruments.
6	29.243	—	-26.6	-25.2	-25.2	-26.0	E by N, 7-9	21	30-40	oc † 2 *	—	S. 10	—	6 a.m. No stars; wind stronger than ever; drift lying over the ship.
8	29.205	—	-26.0	-25.0	-25.0	-25.0	ESE, 4-5	35	30-35	oc †	—	S. 10	—	No indication of sky clearing.
10	29.188	—	-26.0	-22.3	-22.3	-22.4	Var. E, 3-4	18	25-30	oc †	—	S. 10	—	Min. temp. at Cape Armitage, -27° 2. Nim. 10. oc *; Wind E, 4-5. † 2. Erebus obscured; all land obscured.
Noon	29.174	-25.2	-25.1	-23.8	-23.8	-23.8	Var. NNE, 4-5	26	25-30	oc † 2	—	S. 10	—	2 p.m. Rain band, 4. Thermometers coated in drift.
2	29.192	—	-25.2	-21.8	-21.8	-21.6	E, 4-6	26	25-33	ocq †	—	N. 10	—	4 p.m. Min. temp. at Cape Armitage, -26° 0. Wind E, 3-4. Str. 10. oc * †. Erebus obscured; clouds moving to S; direction; clouds thinning in zenith; Black and Brown Islands appearing.
4	29.193	-23.0	-22.7	-22.0	-22.0	-22.2	E, 3-4	15	15-25	oc †	—	N. 10	—	6 p.m. Clouds thin and breaking in NW.
6	29.194	—	-22.0	-21.5	-21.5	-22.0	ESE, 3-4	14	10-20	oc †	—	S.-cu. 10	—	8 p.m. Snow falling; stars visible overhead, but dull from horizon up to 30°.
8	29.196	—	-23.1	-23.0	-23.0	-22.0	E, 2-4	16	10-20	bef *	—	S. 10	—	
10	29.174	—	-23.0	-21.2	-21.2	-22.1	ESE, 2-4	15	10-20	be	—	S. 5	—	
Midt.	29.164	—	-22.0	-20.5	-20.5	-21.0	SE, 2-3	13	10-15	be	—	S. 4	—	
Mean	29.208	—	-22.7	-22.7	—	—	—	—	—	—	—	—	—	Overcast all day, with strong variable Ely wind. Barometer falling all day. Temperature lower and steady.

Max. therm. { 8 a. -7° 0. read at { 8 p. -16° 1. Solar radiation { black bulb —. bright bulb —. Evapn. { 1. 0.7 } grammes in { 11. 0.3 } 24 hours. Precipn. { 0.007 in. since 4 p.m. 10th.

12th.

2	29.117	—	-22.0	-21.5	-21.5	-23.0	ESE, 2-5	17	10-25	bq	—	S.-cu. 4	—	Faint aurora to NE showing through Cu.; wind very squally and varying to S; stars visible.
4	29.115	—	-21.0	-20.0	-20.0	-22.0	SE, 2-3	13	10-15	bq	—	S. 4	—	
6	29.105	—	-25.0	-24.0	-24.0	-24.0	ESE, 1-2	13	5-10	be	—	S. 4	—	
8	29.080	—	-29.3	-26.7	-27.0	-25.0	ESE, 0-1	7	0-5	be	Ci.-s. 1	—	—	Thin A.-s. to E.
10	29.047	—	-27.1	-25.5	-25.5	-25.5	NE, 3-4	14	20-25	b †	—	—	—	Min. temp. at Cape Armitage, -38° 2. Wind E, 1. b. Erebus smoke going E by N. Ci.-s. to E and W. Cu.-s. to NW and N. Refraction. †.
Noon	29.046	-31.8	-26.0	-21.3	-21.8	-21.5	NE, 3	15	15-20	b	—	—	—	2 p.m. Ci.-cu. passing from NW; mirage to W. Rain band, 0.
2	29.031	—	-22.2	-21.2	-21.4	-22.0	NE, 2-3	13	12-22	bc	Ci.-cu. 5, NW	—	—	4 p.m. Min. temp. at Cape Armitage, -38° 5. Wind S, 1. b. Refraction in E. Erebus smoke going NE. Diffused Ci.-s. in NW, and dark wisps of cloud to S.
4	29.021	-36.5	-22.8	-21.0	-21.3	-21.0	N, 2	9	10-15	bc	Ci.-cu. 2, NW	—	—	6 p.m. Able to read observations without lamp; low bank of Str. along northern and western horizon.
6	29.011	—	-34.0	-32.6	-32.6	-31.3	Calm	4	0	b	—	—	—	8 p.m. S.-cu., level with True Bearing Peak, moving to S along western side of Strait.
8	29.010	—	-33.5	-25.0	-25.0	-25.5	Calm	2	0	bc	—	S.-cu. 1, N	—	Cloudy all day, with fresh Ely winds early, falling calm in evening. Barometer falling all day. Temperature low and steady.
10	28.981	—	-25.0	-24.0	-24.0	-24.0	Calm	0	0	b	—	—	—	
Midt.	28.980	—	-31.0	-30.0	-30.0	-30.0	Calm	4	0	b	—	—	—	
Mean	29.045	—	-24.4	-24.5	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -20° 2. 8 p. -17° 1. Solar radiation { black bulb 32° 7. bright bulb 0° 0. Evapn. { 1. 2.0 } grammes in { 11. 2.5 } 24 hours. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.			Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.	Lower.		Aspirator.
				Dry.	Wet.									
2	28.972	—	-34.0	-24.0	-24.0	-24.0	Calm	1	0	b	—	—	—	13th.  Mirage to SW; thin film of cloud over the sky; two streamers pointing NW and SE. Noon. Min. temp. at Cape Armitage, -43° 9'. Wind E, 2-3. Str. S, NW. bc. †. Erebus obscured, but about 20 minutes earlier it was clear and no smoke was visible; weather threatening generally. 1.30 p.m. Aurora in E and NNW. 2 p.m. Rain band, 3. 4 p.m. Appearance of clearing in N; clouds thin and broken. 6 p.m. Base of western range dimly visible. 6.30 p.m. Temp. at Cape Armitage, -32° 0'; min., -36° 0'. Wind SE, 3-4. Str. 10. †. Dark and threatening in S. Erebus and Terror obscured above 6000 feet; base of western mountain visible; colouring to N. 8 p.m. Stars visible overhead; dull all day.
4	28.972	—	-26.0	-23.0	-23.0	-23.0	E, 0-1	3	0	b	—	—	—	
6	28.916	—	-27.0	-23.5	-23.0	-23.0	E, 1-2	9	10-15	oc	—	S. 10	—	
8	28.947	—	-26.0	-25.5	-25.0	-26.0	E by S, 2-3	9	20-22	bc	—	S. 2	—	
10	28.980	—	-30.0	-29.8	-29.9	-30.0	E by S, 1-3	11	20-22	bc	Cl.-s. 3	—	—	
Noon	28.990	-35.6	-32.0	-30.7	-30.8	-30.1	ENE, 3-4	16	20-23	bc	—	S. 8	—	
2	28.987	—	-33.0	-31.5	-31.5	-31.0	Var. E, 5-6	16	30-38	ocf	—	S.-cu. 10	—	
4	28.999	—	-32.5	-30.0	-30.0	-30.0	Var. E, 5-6	14	30-35	ocf	—	S.-cu. 10	—	
6	29.005	—	-32.2	-28.2	-28.2	-28.5	Var. E, 3-4	21	23-32	oc	—	S.-cu. 10	—	
8	29.021	—	-29.5	-28.9	-29.0	-29.0	E by N, 4-5	11	32-36	bcm	—	S. 5	—	
10	29.037	—	-30.3	-28.0	-28.0	-28.2	E, 5-7	25	30-40	b †	—	—	—	
Midt.	29.035	—	-29.5	-28.0	-28.0	-28.0	E by N, 5-7	22	32-40	b †	—	—	—	
Mean	28.988	—	-27.6	-27.5	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -21° 0. / 8 p. -24° 8. Solar radiation { black bulb — / bright bulb —. Evapu. { I. 2.1 / II. 2.0 } grammes in 24 hours. Precipn. — in.

round horizon. 10 p.m. Low mist from W to S; light auroral streamers NE. Midt. Fair auroral streamers SE to ENE, 30° to 50° alt. Cloudy generally all day, with strong variable Ely winds, rising in evening. Barometer showed a slight rise during the day. Temperature low and steady.

2	29.041	—	-29.6	-26.6	-26.7	-27.0	ENE, 4-6	21	25-32	b †	—	—	—	14th.  1.30 a.m. Aurora in S and SE, alt. 40°.  Wisp of Str. radiating out from a point in NW across the zenith to SE; dull, with much drift in SW; indefinite Str. in N up to 40° alt. Noon. Min. temp. at Cape Armitage -44° 8'. Wind E, 2-3. Cl.-s. 4. bc. †. Erebus smoke varying N to NE, in small quantity; Str. to N and NE; Fr.-s. ENB and W. 2 p.m. Banks of Str. on western mountains; bands of Cl. running from NW to SE; sun visible from deck at 2.30 p.m. Rain band, 4. 4 p.m. Banks of Str. on western range about 6000 feet alt. Min. temp. at Cape Armitage, -43° 0'. Wind NE, 2. Cl. and Cl.-s. 5. bc. Erebus smoke going NE, smoke in small volume. Cl.-s. clouds. † SE. Low Str. in NE, refraction in E. 6 p.m. Marked visibility all round. 6.30 p.m. Temp. at Cape Armitage, -42° 0'; min., -47° 0'. 8 p.m. Heavy Str. in SW, falling away to E, and sky in E very dull. Sky still remained cloudy, but cleared in evening. Wind NE, strong, falling in evening. Barometer fairly steady, falling after 8 p.m. Temperature low and steady.
4	29.070	—	-27.8	-26.0	-26.0	-26.6	ENE, 4-6	23	25-34	bc †	—	Cu. 8	—	
6	29.063	—	-26.8	-26.3	-26.4	-26.7	ENE, 3-5	18	20-23	bc †	—	S.-cu. 9	—	
8	29.064	—	-27.0	-26.0	-26.0	-26.5	E, 3-4	16	20-25	bc	—	S. 4	—	
10	29.090	—	-27.0	-26.2	-26.3	-26.6	ENE, 3-4	18	25-34	bc †	—	S. 4, N	—	
Noon	29.087	-43.0	-27.1	-26.3	-26.4	-26.5	Var. NE, 4-5	16	25-30	bc	Cl. 3	—	—	
2	29.087	—	-28.8	-27.3	-27.3	-27.6	NE, 3-4	23	25-30	bc	Cl. 6, NW	—	—	
4	29.075	-39.8	-28.0	-26.0	-26.0	-26.4	NE, 3-4	14	20-28	b	Cl. 4, NW	—	—	
6	29.071	—	-27.0	-26.2	-26.2	-27.6	NE, 2-3	14	15-23	b	—	—	—	
8	29.082	—	-29.0	-27.0	-27.1	-27.6	NE, 2-3	13	15-20	b	—	—	—	
10	29.058	—	-32.2	-32.0	-32.0	-33.2	E by N, 0-1	9	0	b	—	—	—	
Midt.	29.015	—	-35.7	-33.0	-33.2	-34.0	Calm	0	0	b	—	—	—	
Mean	29.067	—	-27.4	-27.5	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -25° 0. / 8 p. -22° 5. Solar radiation { black bulb 21° 2. / bright bulb —. Evapu. { I. 0.5 / II. 0.7 } grammes in 24 hours. Precipn. { 0.003 in. since 2 p.m. 11th. / —. —42° 0'; min., -47° 0'. 8 p.m. Heavy Str. in SW, falling away to E, and sky in E very dull. Sky still remained cloudy, but cleared in evening. Wind NE, strong, falling in evening. Barometer fairly steady, falling after 8 p.m. Temperature low and steady.

2	28.985	—	-36.8	-33.0	-33.1	-33.3	Calm	0	0	bm	—	—	—	15th.  Stars shining dimly through mist.  Very fine falling snow.  The fog or mist seems thin overhead; it is lifting, for base of Black Island can now be seen. Noon. Western hills, Mt. Discovery, &c., are hidden by a pall of Str. cloud. Min. temp. at Cape Armitage, -48° 5'. Wind E, 3. ocm. Str. 10. †. Fog spicules falling; Mt. Erebus obscured; clouds thin in zenith; clear sky apparently to E. 2 p.m. Foggy appearance all round. Rain band, 2. 4.20 p.m. Temp. at Cape Armitage, -35° 4'; min., -41° 4'. Wind E, 2. Str. 9. Erebus obscured; low part of Erebus and Terror visible; blue sky to E. 6 p.m. Base of western range visible; colouring on horizon. 7 p.m. Temp. at Cape Armitage, -40° 0'; min., -40° 0'. 8 p.m. Heavy Str. creeping N along the western side of Strait. 10 p.m. Fr.-s. in W. Midt. Auroral bands of streamers extending from NE across zenith. Cloudy most of the day. Calm up to 10 a.m., then fresh Ely variable winds. Barometer falling all day. Temperature very steady and low.
4	28.966	—	-34.0	-31.2	-31.2	-31.9	NE, 0-1	0	0	o	—	S. 10	—	
6	28.950	—	-32.0	-30.0	-30.0	-30.0	Calm	0	0	og *	—	N. 10	—	
8	28.928	—	-30.3	-24.8	-25.0	-24.9	ESE, 0-1	1	0-3	o *	—	N. 10	—	
10	28.900	—	-25.4	-22.0	-22.1	-22.0	E by S, 0-1	7	0	bm	—	Misty, 10	—	
Noon	28.874	-36.1	-27.6	-22.0	-22.1	-22.0	NE, 1-2	5	10-15	o	—	S. 10	—	
2	28.852	—	-22.6	-20.5	-20.5	-20.2	ENE, 1-2	14	10-15	o	—	S. 10	—	
4	28.835	—	-23.2	-21.0	-21.0	-20.8	ENE, 2-3	13	10-18	oc	—	S. 10	—	
6	28.819	—	-25.0	-23.5	-23.5	-23.8	E, 2-3	9	12-18	of	—	S. 10	—	
8	28.778	—	-24.0	-23.1	-23.2	-24.0	NE, 1-2	10	10-15	bc	—	S. 1, SE	—	
10	28.728	—	-36.0	-31.8	-32.0	-32.5	E by S, 3-5	14	20-30	b	—	—	—	
Midt.	28.728	—	-33.5	-30.0	-30.1	-30.5	E, 3-5	10	15-33	bq †	—	—	—	
Mean	28.862	—	-26.1	-26.2	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -25° 1. / 8 p. -20° 0. Solar radiation { black bulb — / bright bulb —. Evapu. { I. 0.8 / II. 0.7 } grammes in 24 hours. Precipn. — in.

1903—September.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

16th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 5.			Upper.	Lower.		
				Dry.	Wet.									
2	28.675	—	-30.5	-26.2	-26.8	-27.0	Var. E, 4-7	24	25-40	bcq	+	—	Det. S. 1, 2 SE	2, 4, and 6 a.m. Detached Str. all round horizon.
4	28.683	—	-28.5	-28.2	-28.2	-28.2	E, 3-4	15	15-30	bcq	+	—	S. 3	—
6	28.671	—	-28.5	-28.1	-28.1	-28.9	Var. E, 4-7	26	25-42	bcq	+	—	Fr.-s. 2	—
8	28.692	—	-31.4	-30.5	-30.6	-30.2	E, 4-6	22	25-32	bc	—	—	Fr.-s. 3, E	—
10	28.704	—	-32.4	-31.1	-31.4	-31.9	E by N, 4-7	25	30-40	bc	—	—	S.-cu. 1, SE	S.-cu. in SE, S, and SW, moving from S <sup>W</sup> and covering the sky.
Noon	28.710	—	-35.0	-34.0	-34.0	-34.0	NE, 4-5	23	30-35	bc	—	—	S.-cu. 2, SE	S.-cu. not moving so fast, alt. of upper edge 40°.
2	28.782	—	-35.2	-34.0	-34.0	-34.2	ENE, 6-8	29	30-40	bq	+	—	S. 2, SE	0.15 p.m. Temp. at Cape Armitage, -34.6; min., -36.1. Wind NE, 2-4. Str. 5 in SW to SE, moving with wind; clear sky from SE through N to SW; Erebus smoke going to NE; heavy drift on Erebus' slopes.
4	28.819	—	-37.2	-31.5	-31.5	-31.0	ENE, 6-7	26	25-35	b+	+	—	—	2 p.m. Str. all round horizon. Rain band, 1.
6	28.893	—	-37.0	-31.2	-31.2	-31.2	NE, 6-7	28	25-35	b+	+	—	—	6 p.m. Dark Str. on western mountains down to 2000 feet; threatening appearance; foggy in E.
8	28.950	—	-32.6	-30.9	-30.9	-31.0	NE, 7-8	32	40-45	b+	+	—	—	8 p.m. Wind very steady; drift over ship; very dull to S, SW, and W.
10	28.973	—	-34.0	-32.1	-32.1	-32.8	NE, 7-8	33	40-45	b	—	—	—	10 p.m. Heavy squalls; no drift; wisps of cloud to S.
Midt.	29.022	—	-35.4	-34.8	-34.8	-33.7	NE, 6-7	24	35-42	bc	—	—	S. 2	Midt. Squally; a little cloud in S. stars appear rather misty. Cloudy most of day, clearing in evening. Wind very strong NE all day. Barometer rising nearly all day. Temperature lower and steady.
Mean	28.800	—	—	-31.1	-31.1	—	—	—	—	—	—	—	—	—
Max. therm. read at		{ 8 a. -22.2. 8 p. -28.5.		Solar radiation { black bulb 25.5. bright bulb —.			Evapn. { 1. 0.7 } gramme in 11. 0.5 } 24 hours.		Precipn. — in.					

17th.

2	29.058	—	-34.4	-29.8	-29.8	-28.9	NE, 4-5	19	20-25	bc	—	—	S. 2	—
4	29.115	—	-31.3	-29.9	-29.9	-29.8	Var. NE, 2-3	21	15-20	bc	—	Cl.-s. 3	S. 2	Wind rather variable, inclined to haul to N.
6	29.136	—	-30.5	-26.0	-26.0	-26.0	NE, 1-2	10	5-10	bc	—	Cl.-s. 5	S. 2	Read instruments without lamp.
8	29.150	—	-29.0	-29.0	-29.0	-29.5	NE, 3-4	6	20-25	bc	—	Cl.-s. 1	—	Calm on going out; but very gusty.
10	29.158	—	-35.5	-32.2	-32.5	-32.5	NNE, 3-4	20	20-30	bc	+	Cl.-s. 6, SW	—	Dull; clouds moving very slowly; misty.
Noon	29.167	-31.6	-34.1	-32.9	-32.8	-33.0	NE, 3-4	17	20-25	bc	+	Cl.-s. 9	—	Sky partially overcast; dull and drifting, one can see no land except close round ship.
2	29.165	—	-35.5	-35.0	-35.0	-35.0	Var. E, 4-5	26	22-32	of	+	—	S.-cu. 10	Min. temp. at Cape Armitage, -45.5. Wind NE, 3-4. Str. 10, from NE. ocq. Erebus obscured; foggy to N and W; lower slopes of Erebus and Terior to 4000 feet clear; sun gleaming.
4	29.164	—	-36.6	-35.5	-35.5	-35.5	ENE, 4-5	21	22-28	o	+	—	S. 10	2 p.m. Rain band, 4.
6	29.169	—	-37.0	-34.6	-34.6	-34.2	ENE, 3-4	22	20-25	o	+	—	S. 10	4 p.m. Foggy all round; drift on thermometer.
8	29.166	—	-37.0	-35.0	-35.0	-36.0	NE, 3-4	25	25-30	b	—	—	—	6 p.m. Clouds breaking in W; base of western range visible.
10	29.152	—	-36.0	-33.8	-34.0	-34.0	NE, 3-4	20	15-25	ocq	—	—	S. 10	8 p.m. Sky clear; Str. to W, alt. 2°; wind unsteady.
Midt.	29.113	—	-35.5	-34.8	-35.0	-35.0	NE, 5-6	20	25-37	ocq	—	—	S. 10	Cloudy, with same strong NE wind all day. Barometer rose to 6 p.m., and then fell. Temperature lower and steady.
Mean	29.143	—	—	-32.4	-32.4	—	—	—	—	—	—	—	—	—
Max. therm. read at		{ 8 a. -26.0. 8 p. -28.0.		Solar radiation { black bulb —. bright bulb —.			Evapn. { 1. 0.3 } gramme in 11. 0.5 } 24 hours.		Precipn. — in.					

18th.

2	29.110	—	-35.5	-31.2	-34.2	-34.8	NE, 4-5	26	15-28	bcq	—	Cl.-s. 2	—	Bank of Cl.-s. clouds to S low down; stars visible, but misty.
4	29.098	—	-35.5	-33.1	-33.5	-33.0	NE, 1-2	6	5-15	bq	—	—	S. 1	A few Str. clouds to S; lower half of Black Island and all western hills hidden by mist.
6	29.081	—	-36.5	-35.0	-35.2	-35.0	NE, 0-1	8	5-10	b	—	—	S. 1	6 a.m. A few detached clouds among western mountains.
8	29.045	—	-41.0	-39.0	-39.0	-39.0	Calm	4	0	b	—	—	—	Str. or fog to W being dispersed by sun.
10	29.021	—	-47.9	-47.0	—	-48.0	Calm	0	0	b	—	—	—	All mercurial thermometers frozen.
Noon	28.987	-46.5	-47.5	-43.0*	Frozen	Frozen	Lt. N airs	2	0	b	—	—	—	Min. temp. at Cape Armitage, -51.0. Light NE winds. bn. Refraction all round. Mt. Erebus' smoke going to NE.
2	28.927	—	-47.5	-40.0*	-41.6	-41.3	Calm	0	0	b	—	—	—	2 p.m. Rain band, 2.
4	28.872	—	-47.2	-46.5*	-46.0	-46.5	Calm	0	0	bf	—	—	—	3.45 p.m. Temp. at Cape Armitage, -48.0; min., -49.3. Light airs. Erebus smoke going to NE. Low mist in Erebus Bay and over Barrier surface.
6	28.817	—	-49.2	-48.2*	-47.0	-47.0	Calm	0	0	bf	—	—	—	4 p.m. Foggy all round.
8	28.785	—	-47.5	-36.5*	-37.0	-34.2	Lt. N airs	1	0	b	—	—	—	6 p.m. Clouds of foggy vapour apparently moving S <sup>W</sup> ; Str. to N and W.
10	28.756	—	-47.2	-34.0*	-34.0	-34.0	Lt. N airs	1	0	bm	—	—	—	8 p.m. Temperature very unsteady; low Str. from N round by W to SE, moving from N.
Midt.	28.740	—	-37.0	-34.1	-34.0	-35.0	Calm	2	0	bm	—	—	—	10 p.m. Dull up to 30° alt., and misty generally.
Mean	28.937	—	—	-39.2	—	—	—	—	—	—	—	—	—	Midt. Dull up to 30° alt.; very slight snow falling; stars visible overhead. Fine and clear day, with very little wind. Barometer falling all day. Temperature lower and remaining steady.
Max. therm. read at		{ 8 a. -32.0. 8 p. -35.5.		Solar radiation { black bulb 22.0. bright bulb —.			Evapn. { 1. 0.3 } gramme in 11. 0.3 } 24 hours.		Precipn. — in.					

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Dry.	Wct.											
2	28.721	—	-35.4	-32.9	-33.0	-33.0	NE, 1-2	8	10-15	b	—	—	—	Low Str. to S.	
4	28.705	—	-34.0	-32.6	-33.0	-33.0	NE, 0-2	6	10-15	bq	—	—	—	Misly in Strait to S.	
6	28.701	—	-33.9	-32.0	-32.0	-32.9	NE, 1-2	6	8-10	b	—	—	—	Cloudless sky.	
8	28.709	—	-48.6	-46.4*	Frozen	Frozen	E, 0-1	11	0-5	b	—	—	—	—	
10	28.716	—	-44.2	-37.0	-37.0	-37.0	NW, 1	14	10	bv	—	—	—	Visibility very marked; cloudless sky.	
Noon	28.720	-51.6	-41.2	-35.0	-35.5	-34.2	Calm	0	0	bv	—	—	—	Similar weather to 10 a.m.; large deposit of crystals on evaporation dishes.	
2	28.720	—	-35.2	-32.0	-32.2	-30.5	NE, 2-3	10	10-18	b	—	—	—	Min. temp. at Cape Armitage, -61°5.	
4	28.732	-56.5	-47.0	-45.5*	-42.8	-42.5	Calm	2	0	b	—	—	—	Wind E, 2. bn. Erebus smoke going W; low mist about Mt. Terror and Barrier surface.	
6	28.743	—	-44.8	-39.0*	-38.0	-36.5	Calm	0	0	b	—	—	—	2 p.m. Mirage to W; low fog in Strait. Rain band, 0.	
8	28.747	—	-45.1	-45.1*	-44.0	-46.8	Calm	1	0	b	—	—	—	4 p.m. Min. temp. at Cape Armitage, -56°5. Light E by airs. bn. Erebus smoke going NE; mist all round, especially over Barrier.	
10	28.746	—	-55.5	-41.0*	Frozen	Frozen	Lt. var. alrs	0	0	b	—	—	—	6 p.m. Shine on black bulb, but on no other instrument.	
Midt.	28.746	—	-48.0	-46.0*	-45.0	-49.0	Calm	0	0	b	—	—	—	8 p.m. Misty round ship; thin attenuated Str. in SW, alt. 2°.	
Mean	28.726	—	—	-38.7	—	—	—	—	—	—	—	—	—	Midt. Faint aurora E to NE. Fine and clear all day, with hardly any wind. Barometer very steady. Temperature low all day. * Readings of spirit minimum thermometer at time of observation.	
Max. therm. read at		8 a. -31°0.		8 p. -31°0.		Solar radiation		black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.			

19th.

2	28.751	—	-58.5	-52.0*	Frozen	Frozen	Calm	0	0	b	—	—	—	All thermometers except the minimum frozen since midnight.
4	28.753	—	-55.0	-54.0*	Frozen	Frozen	Calm	0	0	bm	—	—	—	Thermometers remained frozen.
6	28.808	—	-51.8	-52.0*	Frozen	Frozen	Calm	2	0	b	—	—	—	—
8	28.845	—	-54.0	-47.0*	Frozen	Frozen	Calm	0	0	b	—	—	—	—
10	28.888	—	-48.8	-45.2*	Frozen	Frozen	Calm	0	0	bcm	⊕	Ci. 3, Ci.-s. 4	A.-s. 5	Very faint halo; misly generally; fog or cloud bank to SSW.
Noon	28.921	-47.8	-45.0	-40.5*	Frozen	Frozen	Calm	0	0	bcm	⊕	Ci.-s. 5	—	Halo, radius 22' 26'; more misly; refraction excessive.
2	28.942	—	-45.0	-39.0*	Frozen	Frozen	Calm	0	0	oc	(?)	—	Thin S. 10	Min. temp. at Cape Armitage, -64°6. Calm. Ci.-s. 4, bc. Erebus obscured; refraction all round; ⊕ and slight parhelia; foggy to NE and E.
4	28.990	-43.7	-41.0	-38.5*	-40.0	-40.0	Calm	0	0	oc	—	—	Thin S. 10	2 p.m. Thin Str. down to 4000 feet. Rain band, 3.
6	29.014	—	-39.0	-38.0	-37.8	-40.0	Calm	1	0	oc	—	—	Thin S. 10	4 p.m. Min. temp. at Cape Armitage, -50°0; light E by airs; Str. 10. oc. Erebus obscured; low Str.; no land visible to S.
8	29.041	—	-40.0	-35.0	-35.0	-33.0	Calm	0	0	bcm	—	—	Thin S. 5	6 p.m. Clouds broken to W.
10	29.049	—	-36.0	-36.0	-36.0	-36.0	Calm	0	0	b	—	—	—	8 p.m. Clouds appear broken as if by wind to W and SW.
Midt.	29.055	—	-42.0	-36.0	-36.0	-36.0	Calm	0	0	b	—	—	—	10 p.m. Bank of Nim. all round horizon.
Mean	28.922	—	—	-42.8	—	—	—	—	—	—	—	—	—	Cloudy during the day, and misty generally. No wind at all. Barometer rising slowly. Temperature still remains very low. * Readings of spirit minimum thermometer at time of observation.
Max. therm. read at		8 a. -35°0.		8 p. -32°0.		Solar radiation		black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.		

20th.

2	29.055	—	-39.0	-31.0	-31.0	-33.0	Calm	0	0	b	—	—	—	Day break to S and SW.
4	29.056	—	-39.5	-39.0	-39.0	-40.0	Lt. S airs	0	0	b	—	—	—	—
6	29.045	—	-43.0	-41.0	-41.0	-43.0	Calm	0	0	bc	—	Ci.-s. 7	—	Low bank of fog all round horizon.
8	29.052	—	-50.5	-46.2*	-45.0	Frozen	Calm	0	0	bcm	—	Ci.-s. 6	S. 3	Misty generally; Ci.-s. radiating N; summits of western mountains obscured; low fog all round.
10	29.044	—	-48.0	-44.0*	-43.0	Frozen	Calm	0	0	bcm	⊕	Ci.-s. 5	—	10 a.m. Similar conditions to those at 8 a.m., but mist thinner; Ci.-s. radiating NW; refraction, and low-lying fog all round; visibility marked to S.
Noon	29.021	-47.0	-44.0	-28.8	-29.0	-28.8	E, 1-2	2	10-18	bcm	⊕	Ci.-s. 6	—	Noon. Very much refraction; clouding over, apparently from E.
2	29.004	—	-31.2	-27.0	-27.2	-27.2	SSE, 1-2	8	8-12	oc	—	—	Thin S. 10	Min. temp. at Cape Armitage, -54°6. Wind ESE, 1. Ci.-s. and Ci. 4, Str. 2. bc. Erebus obscured; refraction all round, especially S and W; Str. moving from NE.
4	28.983	-40.6	-29.4	-21.0	-21.4	-20.8	E by S, 2-3	6	10-15	o	—	—	S. 10	2 p.m. Thin Str. about 2000 feet; mirage to W. Rain band, 5.
6	29.000	—	-23.0	-20.5	-20.9	-20.6	E by S, 3-4	8	18-23	o	—	—	S. 10	4 p.m. Min. temp. at Cape Armitage, -47°0. Wind SE, 1-2. Str. 10. oc. Mt. Erebus obscured; refraction excessive; — on thermometer.
8	28.942	—	-26.8	-22.0	-22.0	-22.0	E, 3-4	13	20-25	o	—	—	S. 10	6 p.m. Mirage to W all afternoon.
10	28.920	—	-22.3	-21.0	-21.0	-21.2	ESE, 2-3	11	12-17	bc	—	—	Fr.-s. 8	8 p.m. Thick all round; no land visible.
Midt.	28.901	—	-27.3	-22.0	-22.7	-20.6	E, 2-4	8	15-24	bc	—	—	Fr.-s. 8	* Readings of spirit minimum thermometer at time of observation.
Mean	29.002	—	—	-30.3	—	—	—	—	—	—	—	—	—	—
Max. therm. read at		8 a. -30°0.		8 p. -29°0.		Solar radiation		black bulb —, bright bulb —.		Evapn. { 1. 0.1 } grammes in { 11. 0.1 } 24 hours.		Precipn. — in.		

21st.

visible except close to ship. Cloudy all day; overcast in evening, with rising E variable wind. Barometer inclined to fall throughout the day. Temperature higher and rising. \* Readings of spirit minimum thermometer at time of observation.

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22nd.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale.)	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	28.883	—	-23.7	-23.0	-23.0	-23.2	E by S, 4-5	9	20-30	bc +	—	—	Cu. 2	—		
4	28.847	—	-25.2	-25.0	-25.0	-25.3	ESE, 5-6	15	28-37	o +	—	—	S. 10	—		
6	28.816	—	-27.0	-27.2	-27.0	-27.7	E, 4-5	14	22-28	o +	—	—	S. 10	—		
8	28.800	—	-28.0	-25.0	-25.0	-24.2	SE, 4-5	16	20-25	om +	—	—	S. 10	—	No land visible from SE to W.	
10	28.757	—	-25.5	-18.6	-19.0	-18.1	E, 3-4	14	18-23	om	—	—	S. 10	—	Clearing; Str. thin overhead; Brown Island and western foot hills visible up to 6000 ft.; very thick still to S; visibility very marked; sun gleaming.	
Noon	28.744	-33.8	-29.2	-29.0	—	-28.0	ESE, 4	8	20-22	om	—	—	S. 10	—	Noon. Brown Island again obscured, and thick to S; Str. more dense; western mountains clear up to 9000 to 12,000 ft. from their northern end to half-way along range.	
2	28.738	—	-30.0	-19.0	-19.6	-28.8	Calm	3	0	of	—	—	S. 10	—	Min. temp. at Cape Armitage, -41° 8. Wind SE by E, 2-3. Str. 10. oc. Erebus obscured; thick to S and SE.	
4	28.692	—	-20.5	-19.8	-19.2	-20.0	E, 2-3	7	10-20	oc	—	—	Cu. 9, SE	—	3 p.m. Rain band, 3.	
6	28.653	—	-22.3	-22.0	-21.8	-22.0	Calm	6	0	o	—	—	S. 10	—	4 p.m. Wet bulb reads higher than dry; clouds broken.	
8	28.616	—	-27.0	-26.0	-25.2	-25.8	N, 1	3	10	o	—	—	S. 10	—	6 p.m. Wet bulb reads too high, temperature falling at time of observation.	
10	28.579	—	-27.2	-23.8	-23.2	-23.2	WNW, 1-2	1	10	ocg	—	—	S. 8	—	8 p.m. Heavy clouds to S and SW; bright and angry looking clouds to SW; thick to S, and dark and thick to E.	
Midt.	28.548	—	-23.8	-23.7	-23.0	-24.0	Calm	4	0	ocg	—	—	S. 8	—	10 p.m. A few stars dimly showing.	
Mean	28.723	—	—	-23.5	—	—	—	—	—	—	—	—	—	—	Midt. A few stars dimly showing; wind vane pointing to NE. Overcast all day; strong SEly wind early, falling in evening. Barometer falling all day. Temperature very steady all day.	
Max. therm. read at { 8 a. -20° 2. 8 p. -17° 0. Solar radiation { black bulb 6° 0. bright bulb 0° 0. Evapn. { 1.1 3 } grammes in 11.1 2 } 24 hours. Precipn. — in.																

23rd.

2	28.475	—	-25.0	-20.0	-20.0	-20.0	N by W, 0-1	1	0	og	—	—	S. 10	—		
4	28.430	—	-20.2	-18.8	-18.3	-19.1	Calm	1	0	og	—	—	S. 10	—	Wind vane pointing SE by S; very black on western mountains.	
6	28.369	—	-23.0	-23.0	-22.8	-23.0	Var. airs	3	0	og *	—	—	N. 10	—	All land, except that close to, obscured.	
8	28.351	—	-23.2	-18.0	-17.8	-17.5	Calm	3	0	o *	—	—	N. 10	—	Snowflakes falling fast, very small and dry; no land visible except that near to.	
10	28.322	—	-18.0	-5.8	-6.0	-5.5	E, 4	4	18-22	o + *	—	—	N. 10	—	Wind has been very gusty and variable during the interval of observations, at times being calm, and then blowing up fresh; very thick all round.	
Noon	28.303	-4.8	-6.5	-3.8	-4.0	-3.5	S, 4-5	9	20-25	o + *	—	—	N. 10	—	Min. temp. at Cape Armitage, -34° 8; variable SW wind, 4-6; Nim. 10. ocg. * +. Mt. Erebus and all distant land obscured.	
2	28.363	—	-4.8	-2.0	-2.2	-2.2	S, 4-6	24	20-30	oq + *	—	—	N. 10	—	2 p.m. Wind squally and swinging to E; drift soft and heavy; all thermometers coated in drift.	
4	28.371	-2.2	-3.8	-1.8	-2.0	-1.5	SSE, 2-3	11	10-18	o	—	—	S. 10	—	4 p.m. Clear on horizon all round; typical Nim. on western mountains.	
6	28.404	—	-3.0	0.0	0.8	0.7	SE, 3-5	15	20-32	oq	—	—	N. 10	—	Min. temp. at Cape Armitage, -4° 8. Wind S, 1-2. Str. 9. oc. Erebus obscured; clearing to S.	
8	28.490	—	-9.0	-8.8	-8.8	-8.5	Var. E, 5-7	20	25-35	ocq +	—	—	S. 10	—	8 p.m. Very gusty; heavy detached clouds to S and SW, and all along and hiding the western range; base land very visible.	
10	28.534	—	-12.6	-11.5	-12.0	-12.0	E by S, 4-6	23	28-40	ocq +	—	—	S. 8	—	Overcast all day, with snowfall and drift; wind very strong and variable, Sly and Ely. Barometer fell until noon, and then rose quickly. Temperature showed a rapid rise until 6 p.m., and then fell again.	
Midt.	28.600	—	-13.0	-10.6	-10.4	-10.6	ESE, 3-8	20	15-58	ocq + *	—	—	N. 10	—		
Mean	28.418	—	—	-10.3	-10.4	—	—	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. -16° 0. 8 p. —. Solar radiation { black bulb 13° 8. bright bulb —. Evapn. { 1.0 7 } grammes in 11.0 6 } 24 hours. Precipn. { 0.056 in. since 2 p.m. 14th.																

24th.

2	28.686	—	-11.9	-5.0	-5.8	-5.0	ESE, 2-4	22	5-30	bcq	—	—	S. 4	—		
4	28.750	—	-8.9	-8.0	-8.5	-8.5	SE, 3-7	18	20-50	bcq	—	—	Fr.-s. 1, S. 1	—	Took observation without lamp.	
6	28.812	—	-11.0	-10.6	-10.4	-10.8	Var. S, 5-7	14	30-47	bcq +	—	—	Ci.-cu. 1	—	Very thick in squalls.	
8	28.907	—	-13.5	-12.2	-12.1	-11.8	Var. E, 5-7	27	25-42	oq +	—	—	S. 9	—	Wind variable, E to SE; very squally; clouds breaking in W and S, alt. 20°.	
10	28.901	—	-13.5	-10.8	-11.0	-10.8	E, 5-6	18	28-32	ocq	—	—	S. 8	—	Very much clearer; visibility very marked; stormy look to S and SW.	
Noon	28.890	—	-11.5	-7.8	-8.2	-8.5	E, 5-6	20	25-34	ocq	?	—	S.-cu. 8	—	Weather similar to that at 10 a.m.; clearer generally, but stormy looking to S and SW.	
2	28.903	—	-8.0	-5.3	-6.0	-5.2	E, 4-6	16	25-35	ocq	—	—	Cu. 9, S	—	2 p.m. Broken wind-blown Cu. moving rapidly to N; Str. along western horizon; mfrage to W; drift on thermometer. Rain band, 1.	
4	28.930	-5.5	-6.5	-4.0	-5.0	-4.0	E, 1-2	12	8-12	oq	—	—	S. 10	—	4 p.m. Min. temp. at Cape Armitage, -22° 0. Calm. Str. 10. Erebus obscured; sky clear to SE, and clear all round.	
6	28.935	—	-7.5	-4.0	-5.0	-4.5	E, 1-3	7	10-22	ocq	—	—	Ci.-s. 2, W	—	6 p.m. Sky broken, with brightly coloured Ci.-s. along tops of western mountains.	
8	28.961	—	-10.7	-6.2	-7.0	-6.5	NE, 3	6	15-18	bc	—	—	Ci.-s. 2, SW	—	8 p.m. Heavy Str. to S, western range clear; Str. above; fine sunset glow in SW.	
10	28.971	—	-7.5	-1.0	-2.0	-1.2	SE, 2-4	11	10-20	bc	—	—	Ci.-s. 2	—	10 p.m. Detached heavy patches of	
Midt.	28.959	—	-10.5	-9.0	-9.0	-9.8	Lt. NW alrs	5	0-5	bc	—	—	Thin S. 5, S	—		
Mean	28.884	—	—	-7.0	-7.5	—	—	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. -5° 5. 8 p. -3° 8. Solar radiation { black bulb 21° 0. bright bulb —. Evapn. { 1.4 0 } grammes in 11.4 1 } 24 hours. Precipn. — in.																

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	28.949	—	-10.5	-4.0	-4.5	-4.5	N, 2-3	6	12-18	bc	—	S. 4	—	<p>25th.</p> <p>Cloudless except for some low Str. to S and SE.</p> <p>Visibility very marked; low Str. has approached from S; visibility very marked; low Str. from S has disappeared.</p> <p>8 a.m. Read observations without lamp.</p> <p>10 a.m. Sky cloudless except for a limited streak in SSW, about 30° alt.; from 10 a.m. until noon this gradually increased as a Fr.-cl.-s. spreading over the whole upper sky, but leaving the horizon quite clear all round up to 30° alt.</p> <p>Noon. At about 11 or 11.30 this was moving fast from nearer S than SW, but at noon it had so thinned out and broken up as to be Fr.-cl.-s. 6, though fragments were thicker in the N and NE than in the SW; the same limited streak hangs in the same place in the SSW as is mentioned above at 10 a.m.</p> <p>Noon. Min. temp. at Cape Armitage, -22° 1. Wind NNW, 2. Str. 5, S. Erebus obscured, 3 p.m. Rain band, 1.</p> <p>4 p.m. Min. temp. at Cape Armitage, 0° 6. Wind N, 2-3. Thin A.-s. 2. bc. †. Erebus smoke going Ely; mirage to S; clouds of drift in valleys to W. 6 p.m. Heavy drift on western side of Strait and on summits of smaller hills, driving southerly. 8 p.m. Str. low down to S; much drift in Strait going in SW direction; read observations without lamp. 10 p.m. Wind very squally; Str. clouds in SW in form of bands. Midt. Cloud in the S and SW, not more than 40°; faint patches of aurora in E, alt. 15°, and also a little to W of zenith. Sky very much clearer, but wind remaining very strong from N, and variable. Barometer unsteady and inclined to fall. Temperature unsteady and higher.</p>
4	28.961	—	-14.0	-11.0	-11.8	-14.0	Calm	4	0	b	—	—	—	
6	28.947	—	-13.4	-6.8	-7.5	-7.0	NNW, 1	5	8-10	bcv	Cl.-s. 3, SW (fast)	S. 2, S	—	
8	28.896	—	-10.5	-5.0	-5.8	-5.5	Var. N, 4-5	10	25-32	b	—	—	—	
10	28.886	—	-6.4	1.7	0.3	3.4	N, 1-2	12	0-5	b	—	—	—	
Noon	28.877	0.9	-2.2	3.5	2.1	3.9	Var. N, 1-3	8	15-20	bc	Cl.-s. 6, SSW (fast)	—	—	
2	28.818	—	0.3	4.0	3.0	4.5	N, 4-6	14	23-35	bq	—	—	—	
4	28.756	9.0	2.3	6.4	5.8	6.0	N, 3-4	18	18-26	b	—	—	—	
6	28.771	—	-11.1	-7.0	-7.8	-8.0	NE, 3-4	19	20-28	b	—	—	—	
8	28.773	—	-11.0	-9.0	-9.2	-3.8	ESE, 7-8	20	35-48	bq †	—	—	—	
10	28.820	—	-11.5	-0.1	-1.8	-1.2	ESE, 2-4	21	15-25	bcq	—	S. 7	—	
Midt.	28.814	—	-6.0	-4.2	-5.0	-4.1	Lt. N airs	7	0	bc	—	S. 4	—	
Mean	28.850	—	—	-2.6	-3.5	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 0° 0. / 8 p. 7° 2. Solar radiation { black bulb 66° 4. / bright bulb 23° 7. Evapn. — grammes. Precipn. — in.

4 p.m. Min. temp. at Cape Armitage, 0° 6. Wind N, 2-3. Thin A.-s. 2. bc. †. Erebus smoke going Ely; mirage to S; clouds of drift in valleys to W. 6 p.m. Heavy drift on western side of Strait and on summits of smaller hills, driving southerly. 8 p.m. Str. low down to S; much drift in Strait going in SW direction; read observations without lamp. 10 p.m. Wind very squally; Str. clouds in SW in form of bands. Midt. Cloud in the S and SW, not more than 40°; faint patches of aurora in E, alt. 15°, and also a little to W of zenith. Sky very much clearer, but wind remaining very strong from N, and variable. Barometer unsteady and inclined to fall. Temperature unsteady and higher.

2	28.773	—	-6.5	6.2	4.0	8.0	Lt. NW airs	7	0	bc	—	S. 9	—	<p>26th.</p> <p>Commenced to blow hard at 4.45 a.m. from SSW, with much drift; sky clearing in S and SE.</p> <p>8 a.m. Heavy clouds in S; parts of western mountains visible; thick drift in Strait.</p> <p>10 a.m. Wind very gusty and variable between S and SE; clearer to S and round to W; no drift in Strait.</p> <p>10.30 a.m. Wind shifted from S to W through N, and blew very squally from W, with drift.</p> <p>Noon. Clearing rapidly all round.</p> <p>Min. temp. at Cape Armitage, -22° 5. Wind S, 3-5. S.-cu. and Fr.-s. 3. bcg. †. Mt. Erebus obscured; peculiar thick S.-cu. cloud obscuring Bluff range and assuming roughly the same shape; high drifts in SE.</p> <p>2 p.m. Hazy in S; marked visibility to W; heavy drift on surface.</p> <p>3 p.m. Rain band, 0.</p> <p>4 p.m. Min. temp. at Cape Armitage, 4° 1. Light Ely airs. Erebus smoke going Nly. Cl.-s. 3. bc.</p>
4	28.771	—	-0.2	2.1	0.8	2.5	Very var. gusts	5	0-5	bc	—	S. 9	—	
6	28.820	—	-0.1	5.2	5.0	5.2	Var. SSW, 3-5	15	20-30	bcq †	—	S. 9	—	
8	28.808	—	5.0	7.8	7.2	8.0	S, 4-7	14	20-35	ocq †	—	S. 8, S	—	
10	28.851	—	7.0	7.5	6.9	7.8	Var. SE, 1-5	17	10-25	ocq †	—	S. 8	—	
Noon	28.831	6.1	6.0	7.1	6.1	7.0	SSE, 2-4	10	15-20	bcq †	—	S.-cu. 2, SW (mod.)	—	
2	28.818	—	4.0	7.2	6.0	8.2	S by E, 2-4	11	18-25	bcq †	—	Cu. 2, SW	—	
4	28.789	6.5	4.0	7.5	6.2	7.8	Lt. SW airs	9	0	bc	Cl.-s. 5, SW	—	—	
6	28.755	—	4.5	11.0	8.3	10.3	N, 1	5	0-8	b	—	—	—	
8	28.738	—	5.8	10.0	8.0	9.5	Lt. N airs	4	0-8	b	—	—	—	
10	28.709	—	3.3	3.7	2.5	3.0	Calm	4	0	b	—	—	—	
Midt.	28.669	—	-3.7	2.0	0.9	2.1	NE, 1-3	9	5-15	b	—	—	—	
Mean	28.778	—	—	6.4	5.2	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 8° 0. / 8 p. 11° 0. Solar radiation { black bulb 67° 0. / bright bulb 25° 7. Evapn. { 1. 18.8 / 11. 18.9 } grammes in 48 hours. Precipn. — in.

8 p.m. Some Cl.-s. to S and over western mountains; very gorgeous sunset colouring in SW. 10 p.m. Some Str. on the S, SW, and W horizon, below 30° in alt. Midt. Some Str. still on S horizon; clear to W and SW. Cloudy until 4 p.m., when it cleared. Wind strong early, falling in evening. Barometer very steady and inclined to fall. Temperature high and fairly steady.

2	28.625	—	-7.7	-6.2	-6.3	-6.7	NE, 5-6	15	25-40	b	—	—	-5.8	<p>27th.</p> <p>The same streaks of Str. in S and some in SE low down on horizon; some A.-s. to N and NW.</p> <p>4 a.m. Similar conditions to those at 2 a.m.</p> <p>6 a.m. Cl.-s. radiating E and W. A.-s. chiefly W over the mountains; no drift all night.</p> <p>8 a.m. Visibility marked; S.-cu. in no general formation.</p> <p>10 a.m. Much refraction low down all round, except in S.</p> <p>Noon. Much refraction, as at 10 a.m.; clouded over considerably; visibility very marked over to the W; Cu. to N low down.</p> <p>Min. temp. at Cape Armitage, -23° 6. Light SE to SSE airs. Mt. Erebus smoke going in Nly direction. Refraction in W.</p> <p>2 p.m. Distant movement of clouds visible in zenith; deep mirage at base of western mountains.</p> <p>3 p.m. Rain band, 1.</p> <p>4 p.m. Cl.-cu. in detached masses running from SW to NE.</p> <p>Min. temp. at Cape Armitage, -14° 3. Light NE airs. Mt. Erebus smoke ascending vertically in thin column only.</p> <p>8 p.m. Summits of western peaks obscured; heavy looking Str. from S to SW. Cloudy most of the day, with strong NE wind early, falling in afternoon. Barometer fell until 8 a.m., and then rose slowly. Temperature lower and unsteady.</p>
4	28.589	—	-10.6	-9.5	-9.5	-9.9	NE, 7-8	30	30-47	bc	—	A.-s. 2	-6.5	
6	28.582	—	-11.1	-9.9	-10.0	-9.9	NE, 6-7	34	35-45	bc	Cl.-s. 6, W	—	-8.9	
8	28.581	—	-11.5	-5.2	-6.0	-5.0	NE, 6-7	32	30-42	bcv	Cl.-s. 5	—	-9.8	
10	28.602	—	-8.3	-5.2	-6.0	-4.8	NE, 4-5	24	18-25	bcv	Cl.-s. 6	—	-10.1	
Noon	28.623	-12.6	-13.3	-2.0	-3.2	-1.5	NE, 3-5	20	15-25	ocvq	Cl.-s. 4	A.-s. 5	-4.9	
2	28.655	—	-3.2	-1.0	-2.0	-1.0	Lt. N airs	7	0-5	oc	Cl.-cu. 3, SW	S.-cu. 6	-5.8	
4	28.663	-8.0	-7.7	-4.5	-5.3	-5.2	Lt. SW airs	3	0	oc	Cl.-cu. 6, SW	—	-5.8	
6	28.683	—	-12.1	-9.0	-9.4	-10.0	Calm	1	0	bc	Cl.-cu. 4, SW	—	-4.9	
8	28.689	—	-11.0	-10.5	-10.8	-10.0	Calm	0	0	oc	—	High S.-cu. 7, S	-5.4	
10	28.689	—	-10.5	-2.2	-2.8	-3.0	Calm	2	0	o	—	S. 10	-5.4	
Midt.	28.688	—	-5.5	9.5	7.5	9.0	SSE, 1-3	2	5-20	oq	—	S. 10	-5.4	
Mean	28.639	—	—	-4.6	-5.3	—	—	—	—	—	—	—	-8.1	

Max. therm. read at { 8 a. 12° 0. / 8 p. 19° 6. Solar radiation { black bulb 53° 5. / bright bulb 16° 6. Evapn. { 1. 8.5 / 11. 8.0 } grammes in 24 hours. Precipn. — in.

8 p.m. Summits of western peaks obscured; heavy looking Str. from S to SW. Cloudy most of the day, with strong NE wind early, falling in afternoon. Barometer fell until 8 a.m., and then rose slowly. Temperature lower and unsteady.

1903—September.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

28th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.		Aspator.	Remarks.		
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.			Upper.	Lower.
				Dry.	Wet.										
2	28.708	—	5.8	8.0	6.8	7.9	SE, 0-1	11	0-5	o	—	S. 10, S	8.2	Clouds dark over western mountains.	
4	28.714	—	6.5	11.2	11.0	11.0	S by E, 4-6	9	20-40	bcq +	Cl.-s. 5	S. 7	6.4	Thick to N and W; brighter to S and E.	
6	28.746	—	6.8	12.0	10.9	12.0	SE, 2-6	19	5-40	bcq	Ci.-s.	Cu., S	9.7	Dense clouds to N; Cu. travelling very rapidly; curious Str. clouds over western mountains.	
8	28.746	—	8.0	9.8	9.5	9.8	S, 4-7	17	20-38	bcq + <sup>2</sup>	Ci.-s. 2	S.-cu. 1	10.8	8 a.m. Drift too thick to see clouds around; blue sky overhead.	
10	28.766	—	8.5	12.0	11.8	13.8	Var. S, 5-9	24	25-56	ocq + <sup>2</sup>	—	High S. 9, S (slow)	12.9	10 a.m. Wind variable between SSE and SW; very gusty; no land visible through drift.	
Noon	28.785	—	11.0	12.8	12.5	12.8	S, 6-9	26	35-58	ocq + <sup>2</sup>	—	S. 10	13.1	Noon. Very squally and heavy drift; no land visible; evaporation observation not taken.	
2	28.824	—	10.2	12.0	11.5	12.2	SSE, 4-6	29	20-35	ocq + <sup>2</sup>	—	S. 10	12.2	2 p.m. Wind squally and variable; heavy drift on surface.	
4	28.879	8.0	9.0	10.2	10.0	10.4	SE, 4-6	18	20-33	ocq +	—	S. 10	11.5	4 p.m. Min. temp. at Cape Armitage, -18° 5. Wind SSE, 3-5. Nim. 10.	
6	28.931	—	7.3	8.0	8.0	7.5	E, 4-6	28	20-32	ocq +	—	N. 10	9.4	6 p.m. Stand with black and bright bulbs blown over, bulbs broken.	
8	28.993	—	9.5	9.5	9.0	9.8	E, 6	22	28-36	bcq	A.-s. 4, SSW (slow)	Fr.-n. 3, S (rapid)	9.8	10 p.m. Heavy band of Str. low down, from S to W, obscuring land; much drift during squalls.	
10	29.088	—	11.5	9.8	9.2	10.2	E by N, 4-6	24	31-45	bcq +	—	S.-cu. 6, S (fast)	10.1	Overcast and cloudy most of the day, with very strong variable E and S'ly wind. Barometer rising all day. Temperature high, but fell quickly in evening.	
Midt.	29.229	—	10.0	10.0	10.0	10.6	E, 3-5	21	23-36	bcq +	—	S. 5, SSW	10.3		
Mean	28.868	—	—	5.6	5.3	—	—	—	—	—	—	—	—	—	
Max. therm. read at { 8 a. 12° 0. 8 p. 13° 2.		Solar radiation { black bulb —, bright bulb —.				Evapn. — grammes.				Precipn. — in.					

29th.

2	29.297	—	11.5	9.2	9.2	9.4	ESE, 2-4	20	19-35	oc +	—	S. 10	8.7	Drifting heavily at times; land only visible close to.
4	29.313	—	12.5	12.2	12.2	12.0	E by N, 2-4	14	16-32	bc +	—	S. 2, E	9.0	Very low Str. having appearance of fog pouring over hills and through gap; surface drift.
6	29.314	—	12.5	12.0	11.8	12.0	ENE, 3-4	24	22-36	bc	—	S. 1, SE	12.6	6 a.m. Low Str. to S and SW; small detached Str. clouds having peculiar way shape over western mountains.
8	29.358	—	14.0	13.2	13.0	13.0	ENE, 4-5	22	28-30	bc	Cl.-s. 5, SE (mod.)	S. 2	11.9	8 a.m. Clearing generally; misty over land to S, SW, and W.
10	29.331	—	13.7	9.0	9.5	5.2	Lt. E airs	9	0	bc	Ci.-s. 2, E	—	10.3	10 a.m. Misty over land all round.
Noon	29.299	12.6	10.7	9.0	9.0	4.2	Calm	2	0	bcm	Ci.-s. 2, E	—	10.3	Noon. Misty all round.
2	29.215	—	13.8	10.2	10.5	6.2	Lt. N airs	3	0	b	—	—	10.3	Min. temp. at Cape Armitage, -18° 9.
4	29.207	15.8	14.0	13.0	13.0	13.0	NW, 1-2	6	8-12	b	—	—	13.0	Calm. Fr.-ci.-s. 3. Erebus smoke going to NW.
6	29.175	—	15.0	13.5	13.2	14.8	Calm	4	0	bc	Ci.-s. 2	—	13.4	3 p.m. Rain band, 1.
8	29.139	—	14.0	4.0	4.5	4.0	Lt. N airs	2	0	bc U	Ci.-s. 3	—	13.7	4 p.m. Ci. on N horizon.
10	29.114	—	14.4	4.8	5.1	4.4	NNE, 2-3	2	15-20	b +	—	—	3.6	Min. temp. at Cape Armitage, -18° 1.
Midt.	29.092	—	5.7	1.0	1.9	0.5	NE, 4-5	18	20-30	b + <sup>2</sup>	—	—	4.2	Wind NW, 2. Erebus smoke going to NW.
Mean	29.240	—	—	9.3	9.4	—	—	—	—	—	—	—	3.3	6 p.m. Coloured Str. in W.
Max. therm. read at { 8 a. -8° 0. 8 p. -4° 0.		Solar radiation { small black bulb 59° 5. small bright bulb 18° 5.				Evapn. { 1. 6.9 } grammes in { 11. 5.9 } 48 hours.				Precipn. — in.				
centrated in the SW and SSW, and appear to lie E and W. Fine generally and with less wind. Barometer rose until 8 a.m., and then fell for rest of day. Temperature very unsteady.												A NE wind freshened up in evening.		

30th.

2	29.078	—	4.5	1.2	0.1	1.0	NE, 4-5	17	24-28	b +	—	—	1.4	Ci. in SW near moon; Str. or Ci.-s. in S in bands up to alt. 11°.
4	29.078	—	0.0	2.0	0.9	1.2	NE, 5-6	23	25-30	b	—	—	0.0	A.-s. or Ci.-s. from SE round by S to NW at alt. 10°.
6	29.076	—	0.7	4.1	2.9	4.3	ESE, 5-6	21	25-30	bc	Ci.-s. 1	—	0.9	Ci.-s. radiating NE and SW. The Ci.-s. of 4 a.m. seems to have moved N parallel to themselves, so as to form a band of Ci.-s. from NE to SW through the zenith.
8	29.091	—	1.0	2.2	1.1	2.8	NE, 3-4	14	18-23	b	—	—	2.8	8 a.m. Ci.-s. low down in E; much refraction all round low down.
10	29.111	—	11.3	6.8	7.0	5.8	Calm	4	0	b	—	—	3.2	10 a.m. W'y breeze sprang up just after observing, veering to N and blowing in strong gusts; misty all round.
Noon	29.113	4.8	7.3	0.2	0.5	1.2	NNW, 4	10	20-25	b	—	—	1.4	Noon. Misty all round; S.-cu. low down to N, and frost-smoke.
2	29.117	—	1.4	1.5	0.5	8.0	Calm	4	0	b	—	—	4.0	Min. temp. at Cape Armitage, -19° 6.
4	29.118	12.3	3.5	1.0	0.0	2.2	Calm	0	0	b	—	—	9.0	Light W'y airs. b. Erebus smoke going to NE.
6	29.117	—	3.0	5.0	3.8	4.7	N, 1-2	4	8-12	b	—	—	9.2	2 p.m. Temperature falling at time of observation; dull hazy appearance.
8	29.127	—	9.0	9.0	8.0	10.5	Calm	6	0	b	—	—	2.4	3 p.m. Rain band, 3.
10	29.131	—	11.3	2.0	1.1	1.0	N, 1	8	10-13	b	—	—	3.3	4 p.m. Min. temp. at Cape Armitage, -14° 5. Light W'y airs. Erebus smoke going to NE in small volume only.
Midt.	29.132	—	2.8	2.2	2.3	3.0	Lt. NNW airs	7	0	b	—	—	—	6 p.m. Dark cloud low on N horizon; Ci.-s. to W.
Mean	29.107	—	—	0.1	0.6	—	—	—	—	—	—	—	—	8 p.m. Temperature falling during observation; S.-cu. over western mountains in detached portions; dark S.-cu. low down in N. 10 p.m. Str. cloud over True Bearing Point and High Peak, and bank of S.-cu. at an alt. of 3° behind Discovery; bank of Str. three-quarter way up Black Island, and stretching the length of the island; bank of Str. over White Island and Bluff to 2° alt. Midt. Low bank of cloud obscuring western mountains, otherwise as at 10 p.m. Clear and fine all day, with strong NE wind early, falling calm. Barometer rising very slowly. Temperature very unsteady.
Max. therm. read at { 8 a. 4° 5. 8 p. 5° 0.		Solar radiation { small black bulb 74° 0. small bright bulb 30° 2.				Evapn. — grammes.				Precipn. — in.				

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.										
2	29.129	—	-5.0	-4.9	-5.0	-5.4	NE, 1	3	8-12	b	—	—	-4.4	<p>Western mountains clear; complete bank of Str. from SSE to SW at 2° alt.</p> <p>4 a.m. Western mountains obscured by drift; considerable surface and high drift.</p> <p>6 a.m. All high land between W and SSE obscured by clouds; only lower parts of Black, Brown, and White Islands visible.</p> <p>8 a.m. Temperature falling during observation; Str. obscuring all land above 2000 feet.</p> <p>10 a.m. All land obscured above 1500 feet.</p> <p>Noon. Entirely overcast; land below 1500 feet showing.</p> <p>Min. temp. at Cape Armitage, -24° 1.</p> <p>Wind NE, 2. Str. 10. Erebus obscured; clouds down to 2000 feet.</p> <p>2 p.m. Appearance of drift in Strait.</p> <p>3 p.m. Rain band, 2.</p> <p>4 p.m. Min. temp. at Cape Armitage, -14° 3. Wind NE, 3. Erebus obscured; Str. 1500 feet in alt.</p> <p>6 p.m. Dark blue break (water sky) at entrance to Bay; break in clouds to W.</p> <p>8 p.m. Land only visible below 2000 feet; drift in Strait to S; wind variable, NE to E by S.</p>
4	29.126	—	-11.0	-10.1	-10.0	-10.5	NE by E, 5-6	15	25-31	b ↗	—	—	-5.4	
6	29.130	—	-13.5	-11.0	-11.0	-11.1	NE, 5-6	22	28-33	b ↗	—	—	-9.4	
8	29.133	—	-13.0	-10.2	-10.5	-10.2	NE, 5-6	23	30-35	bc	—	—	-10.8	
10	29.139	—	-11.5	-8.8	-9.0	-8.5	NE, 4-5	21	20-30	oc	—	—	-10.8	
Noon	29.121	-12.0	-11.0	-9.5	-9.8	-9.2	NE, 4-5	19	20-30	oc	—	—	-9.4	
2	29.097	—	-13.0	-12.0	-12.2	-11.8	NE, 4-6	23	25-35	oq	—	S. 10	-9.9	
4	29.093	-14.0	-13.3	-12.0	-12.0	-12.0	ENE, 5-6	22	28-33	o	—	S. 10	-12.3	
6	29.079	—	-13.5	-12.0	-12.4	-12.3	NE, 5-6	22	25-32	o	—	S. 10	-12.3	
8	29.065	—	-14.2	-14.0	-14.0	-14.0	Var. E, 5-7	22	20-40	oq	—	S. 10	-11.9	
10	29.051	—	-14.2	-14.0	-14.0	-14.0	NE, 5-6	19	25-30	o	—	S. 10	-14.1	
Midt.	29.015	—	-14.5	-13.8	-14.0	-13.8	NE, 4-5	21	20-25	o	—	S. 10	-15.2	
Mean	29.098	—	—	-11.0	-11.2	—	—	—	—	—	—	—	-14.8	

Max. therm. read at { 8 a. 3° 5. / 8 p. —. Solar radiation { small black bulb 23° 5. / small bright bulb 5° 5. Evapn. — grammes. Precipn. — in.

Clear early, but becoming overcast about 10 a.m., and remaining so. Wind very strong from NE all day. Barometer falling all day. Temperature very steady.

1st.

2	29.003	—	-15.2	-13.0	-12.5	-13.0	NE, 4-5	18	20-25	o	—	S. 10	-14.1	<p>No distant land visible; blue sky in patches in and about zenith; dark to S and W.</p> <p>10 a.m. Clouds more dense; no distant land visible.</p> <p>Noon. Black and White Islands visible to 2000 feet alt.</p> <p>Min. temp. at Cape Armitage, -19° 5.</p> <p>Wind NE, 2-3. oc. Erebus obscured; Str. 2000 feet in alt.</p> <p>2 p.m. Wind squally at times and swinging towards N.</p> <p>3 p.m. Rain band, 4.</p> <p>4 p.m. Land visible along W and SW. Min. temp. at Cape Armitage, -19° 4. Wind ENE, 4. Erebus obscured.</p> <p>6 p.m. Clouds thin and broken in zenith; heavy drift at mouth of Strait.</p> <p>Overcast all day, with very strong Ely wind. Barometer falling all day, with a rise at midnight. Temperature lower and very steady.</p>
4	28.988	—	-14.8	-14.0	-14.0	-14.0	ENE, 5-6	18	25-30	o	—	S. 10	-14.8	
6	28.969	—	-15.2	-15.0	-15.0	-15.0	ENE, 5-6	20	25-30	o	—	S. 10	-14.4	
8	28.975	—	-17.8	-17.0	-17.0	-17.0	E, 4-5	26	20-28	oc	—	S. cu. 9, SE (quickly)	-17.3	
10	28.956	—	-18.5	-18.2	-17.8	-18.3	E, 4-6	19	20-30	ocq	—	S. cu. 10	-18.4	
Noon	28.836	-18.9	-18.8	-17.2	-17.0	-17.0	E, 5-6	22	25-30	oc	—	S. cu. 10	-18.6	
2	28.922	—	-19.5	-16.2	-16.4	-16.5	E, 6-8	24	28-40	oq	—	S. cu. 10	-17.1	
4	28.903	-19.4	-18.8	-17.0	-17.3	-18.0	E, 5-6	21	25-32	o	—	S. cu. 10	-17.5	
6	28.906	—	-19.8	-18.5	-18.5	-18.6	E, 6-7	26	30-38	o	—	S. cu. 10	-16.2	
8	28.906	—	-18.9	-17.0	-17.0	-17.0	E, 6-7	26	30-38	o	—	S. 10	-18.0	
10	28.886	—	-18.0	-18.0	-18.0	-18.0	Var. E, 6-7	23	30-38	oc	—	S. 10	-18.4	
Midt.	28.906	—	-18.0	-18.0	-18.0	-18.0	Var. E, 4-6	24	20-35	ocq	—	S. 10	-19.1	
Mean	28.938	—	-16.6	-16.5	—	—	—	—	—	—	—	—	-17.6	

Max. therm. read at { 8 a. -12° 5. / 8 p. —. Solar radiation { small black bulb 4° 0. / small bright bulb —. Evapn. { 1. 3.1 / 11. 3.0 } grammes in 24 hours. Precipn. — in.

2nd.

2	28.908	—	-21.0	-21.0	-21.0	-21.0	Var. E, 7-9	28	30-45	ocq	—	S. 10	—	<p>No land visible except that close to.</p> <p>Clearing generally; dark all along western shore.</p> <p>Still clearing; less dark to W, but very thick.</p> <p>Min. temp. at Cape Armitage, -27° 6.</p> <p>Wind NE, 4. Str. 2. Cl. 6 from W by direction; Erebus smoke going in Ely direction; Str. hanging over land 3000 to 4000 feet in alt.; western land and Mt. Discovery obscured by mist.</p> <p>2 p.m. Detached Cu. passing in zenith rapidly from E.</p> <p>4 p.m. Min. temp. at Cape Armitage, -31° 6. Wind NE, 3. Erebus smoke going to NE; Ci. and low Str. 5.</p> <p>6 p.m. Parhelion with prismatic colouring.</p> <p>8 p.m. Banks of Str. to S; summits of western mountains just visible, Str. below.</p> <p>10 p.m. Heavy Ni. to the W, obscuring the mountains.</p>
4	28.911	—	-21.0	-21.0	-21.0	-21.0	Var. E, 6-8	28	30-40	ocq	—	S. 10	—	
6	28.912	—	-23.0	-22.0	-22.0	-22.0	E, 6-8	28	30-40	ocq *	—	S. 10	—	
8	28.931	—	-23.2	-22.2	-22.0	-22.0	E, 6-7	29	30-40	oqf ↗	—	S. 10	-22.0	
10	28.949	—	-23.6	-22.0	-22.0	-21.0	E, 5-7	27	28-38	bcq	—	Fr.-s. 1, Str. 8, NW	-22.2	
Noon	28.943	-25.9	-24.8	-22.9	-22.6	-22.0	E, 6-7	26	30-40	bc	—	Fr.-a.-s. 4, NW (slow)	-21.6	
2	28.948	—	-23.6	-22.0	-22.0	-20.2	ENE, 6-7	26	28-35	bc	—	Cl.-s. 4	-22.0	
4	28.945	-27.6	-25.5	-23.8	-23.8	-23.0	E, 5-6	24	20-32	bc	—	Cl.-s. 4	-21.1	
6	28.945	—	-26.6	-25.0	-25.0	-25.0	E, 5-6	21	25-32	bc	—	Cl.-s. 3	-26.3	
8	28.948	—	-26.8	-25.5	-25.5	-26.0	NE, 5-6	23	28-34	bc	—	Cl.-s. 2	-23.8	
10	28.960	—	-27.0	-25.2	-25.2	-26.0	NE, 5-6	26	28-35	bc	—	Cl.-s. 2	-26.7	
Midt.	28.974	—	-27.0	-25.8	-25.8	-26.0	NE, 5-6	20	25-32	bc	—	Cl.-s. 2	-26.0	
Mean	28.910	—	-23.2	-23.2	—	—	—	—	—	—	—	—	-26.3	

Max. therm. read at { 8 a. -17° 2. / 8 p. -22° 0. Solar radiation { small black bulb 49° 2. / small bright bulb 3° 8. Evapn. { 1. 4.1 / 11. 3.7 } grammes in 24 hours. Precipn. — in.

Cloudy all day, with the same strong Ely wind. Barometer very steady, with a slight rise during the day. Temperature lower and steady.

3rd.

1903—October.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

4th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
			Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.		Weather.	Upper.			Lower.
					Dry.	Wet.										
	2	28.983	—	-30.8	-29.8	-29.8	-30.2	NE, 5-6	26	25-30	bc		Ci.-s. 2	Det. Fr.-s. 4, NW (fast)	From 2 to 6 a.m. mercury below scale	
	4	28.987	—	-30.8	-30.0	-30.0	-30.8	NE, 5-6	24	25-34	bc		Ci.-s. 2	Det. Fr.-s. 5, NW		
	6	28.990	—	-31.0	-28.0	-28.0	-28.8	NE, 5-6	22	25-32	bc		—	Det. Fr.-s. 5		
	8	28.990	—	-29.0	-26.0	-26.0	-25.9	NE, 4-6	20	20-30	ocq		Ci.-s. 2	S. 6	-25.6	
	10	29.002	—	-27.2	-26.3	-26.3	-26.0	NE, 5-6	29	25-30	oc		Ci.-s. 3, NW	A.-s. 7	-26.0	Western mountains visible below 5000 feet; thin Str. obscuring all land above; visibility very marked.
	Noon	29.016	—	-29.0	-26.0	-26.0	-26.0	NE, 4-6	21	20-34	ocq ⊕		Ci.-s. 4, W	A.-s. 3	-26.3	Noon. Similar weather; radius of halo 22° 30'.
	2	29.023	—	-28.0	-26.0	-26.0	-23.0	NE, 3-4	27	15-23	bc		Ci.-s. 4, W	—	-25.6	12.30 p.m. Temp. at Cape Armitage, -29° 6'; min. -30° 5.
	4	29.017	-32.9	-27.6	-26.8	-26.8	-25.2	NE, 3-4	20	13-20	bc		Ci.-s. 4, W	—	-24.9	Wind ENE, 5. Thin Fr.-s. 3, ait. 3000 to 4000 feet. Ci. 2. ↯.
	6	29.022	—	-27.5	-26.2	-26.3	-26.5	NE, 3-4	18	12-18	bc		Ci.-s. 3, W	—	-22.9	Erebus obscured; halo with prismatic colours.
	8	29.012	—	-26.8	-23.0	-23.2	-23.0	NE, 2-3	16	12-18	bc		—	A.-s. 2, NNW	-23.4	2 p.m. Str. all round northern horizon in lough, detached streaks.
	10	29.017	—	-24.9	-22.0	-22.3	-21.8	N, 0-1	9	0	b		—	—	-24.3	3 p.m. Rain band, 4.
	Midt.	29.015	—	-40.6	-40.0	-39.2	-41.5	Calm	1	0	b		—	—	-24.9	4 p.m. Deep mirage to west ward; drift out in Strait.
	Mean	29.006	—	—	-27.5	-27.5	—	—	—	—	—		—	—	—	Mln. temp. at Cape Armitage, -32° 9. Wind Ely, 2. Erebus smoke going E. bc. Mirage in N and W.

Max. therm. read at { 8 a. —, -24° 2. }  
 Solar radiation { small black bulb 45° 0. }  
 { small bright bulb 0° 0. }  
 Evapn. { 1. 2. 9 } grammes in  
 { 11. 2. 6 } 24 hours. Precipn. — in.

dimly visible and apparently very high. 8 p.m. Western mountains quite clear; some Str. to SW behind Mt. Discovery, and also to N and E. 10 p.m. Low Str. clouds to N, moving to SE. More or less cloudy all day, but cleared late in evening. Wind strong NE all day, falling towards evening. Barometer very steady all day. Temperature very steady all day, with a sudden drop at midnight.

5th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
			Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.		Weather.	Upper.			Lower.
					Dry.	Wet.										
	2	29.008	—	-42.8	-26.1	-26.3	-26.6	NNW, 0-1	2	0	b		—	—	-25.2	
	4	29.001	—	—	-35.0	-34.0	-37.0	Calm	1	0	b		—	—	-26.0	
	6	28.996	—	-42.1	-38.6	-38.0	-39.0	Calm	0	0	b		—	—	—	From 4 to 8 a.m. mercury below scale
	8	28.985	—	-39.5	-30.0	-30.0	-25.0	Calm	0	0	b		—	—	—	Cloudless except for line of Str. from S to SW in detached portions.
	10	28.977	—	-30.0	-17.0	-17.6	-13.2	N, 1	3	10	b		—	—	-14.1	10 a.m. Cloudless except for some Str. low down to S.
	Noon	28.974	-26.5	-22.0	-15.2	-15.8	-12.5	N, 1-2	4	10-15	b		—	—	-13.7	Noon. Cloudless; Erebus smoke visible going to WSW.
	2	28.972	—	-22.0	-18.2	-18.5	-12.5	Calm	1	0	b		—	—	-14.3	Min. temp. at Cape Armitage, -48° 5. Erebus smoke going to WSW in large volume and from many orifices on northern side; smoke looked like Ci.-s. as it streamed away to W.
	4	28.971	—	-20.0	-15.0	-15.5	-12.5	N, 0-1	9	0	b		—	—	-13.4	2 p.m. Air appears dense, with low visibility.
	6	28.967	—	-16.6	-14.0	-14.5	-14.0	N, 2-4	9	12-18	bcq →		Ci.-cu. 3	S. 3	-13.7	3 p.m. Rain band, 5.
	8	28.960	—	-14.5	-13.1	-13.4	-13.2	N, 3-5	12	18-25	ocq U		—	Thin A.-s. 9	-13.0	4 p.m. Ci. in N and E; Str. to S and W; Mt. Discovery obscured at summit.
	10	28.950	—	-13.5	-13.5	-13.5	-14.0	Lt. NW alrs	11	0	oc		—	Thin A.-s. 10	-13.7	Sun was on thermometer at Cape Armitage, so observations were not taken.
	Midt.	28.969	—	-17.0	-10.5	-11.0	-11.0	N, 2-4	6	17-22	ocq		—	Very thin A.-s. 10	-13.4	6 p.m. Temperature falling at time of observation; threatening appearance to W; ice
	Mean	28.978	—	—	-20.5	-20.7	—	—	—	—	—		—	—	—	very steady. Temperature rising all day.

Max. therm. read at { 8 a. —, }  
 Solar radiation { small black bulb 55° 0. }  
 { small bright bulb 11° 5. }  
 Evapn. { 1. 1. 7 } grammes in  
 { 11. 1. 9 } 24 hours. Precipn. — in.

crystals falling. 8 p.m. Very faint corona; dark and threatening all round. 10 p.m. All distant land obscured. Midt. All distant land obscured. Fine and clear up to between 4 and 6 p.m., when it became cloudy and remained so. Calm up to about the same time; now and then fresh N<sup>b</sup> breezes springing up. Barometer very steady. Temperature rising all day.

6th.	Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
			Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.		Weather.	Upper.			Lower.
					Dry.	Wet.										
	2	28.990	—	-13.5	- 8.0	- 9.0	-11.0	N, 1	5	0	e		A.-s. 3, S (rapid)	S. 2	- 8.1	Islands and western land clear; fragments of Str. to SE, 3000 feet alt., travelling rapidly to northwards; clear overhead.
	4	28.969	—	-14.5	-11.8	-12.0	- 9.0	Lt. var. alrs	4	0	e		A.-s. 3, S (rapid)	S. 3	-10.1	4 a.m. Islands nearly obscured; Str. descending on western hills.
	6	28.963	—	-14.5	-13.5	-13.2	-11.5	Calm	2	0	e		A.-s. 6, S	S. 4	-11.4	6 a.m. Str. very low on western mountains, and land obscured.
	8	28.997	—	-14.0	- 6.4	- 6.8	- 6.5	NE, 3-4	2	18-23	o † *		—	S. 10	- 6.3	8 a.m. Only land close to visible; there has been a slight deposit of snow crystals between 6 and 8 a.m.
	10	29.005	—	-10.0	- 5.2	- 5.4	- 5.0	NE, 1-2	13	10-15	o † *		—	N. 10	- 5.1	10 a.m. Flakes small and hard, and not falling thickly; no land visible except close to.
	Noon	28.999	- 8.6	- 5.5	- 0.2	- 0.6	0.8	NE, 1	7	8-10	of *		—	N. 10	- 0.9	Noon. Snowflakes small and hard, and very thin; foggy or misty.
	2	28.997	—	- 7.5	- 7.0	- 7.0	- 5.5	Lt. S alrs	5	0-5	of *		—	N. 10	- 6.7	Min. temp. at Cape Armitage, -21° 1. Wind SE, 1. Erebus obscured. Nin. 10, oc. * †.
	4	29.006	- 6.6	- 9.5	- 6.2	- 6.2	- 6.0	Calm	1	0	of *		—	N. 10	- 6.5	3 p.m. Rain band, 7.
	6	29.005	—	- 7.5	4.0	3.6	4.0	NE, 1	3	8-10	of *		—	N. 10	- 6.5	4 p.m. Min. temp. at Cape Armitage, -10° 6. Calm.
	8	29.014	—	- 5.5	- 5.2	- 5.0	- 6.8	Calm	4	0	of *		—	Very thin N. 10, scnd, 1, SSW (fast)	3.9	Erebus obscured. Nin. 10, oc.
	10	29.016	—	- 7.7	- 5.0	- 5.0	- 5.0	E, 0-1	1	0	b		—	—	- 4.0	6 p.m. Snow fell continuously during the afternoon, and feels hard and crisp when trodden on; and clouds thin to 12.
	Midt.	29.022	—	- 5.7	- 1.0	- 1.0	- 0.8	Calm	4	0	bc		Ci.-s. 3	—	- 1.8	with every appearance of breaking; temperature very unsteady, at 3.40 it was -2° 0, and at 3.50 it was -4° 0. 8 p.m. Nin. very thin overhead, and scud passing over fast from SSW, with heavy bank of fog or Str. all round below 40° alt.; snowing very slightly, flakes very small, hard, and dry. 10 p.m. Read observations without imp. Midt. Low fog at foot of land to S, SW, and WSW. Overcast and cloudy all day, with snowfall; clearing in evening late. Wind more or less gusty from the NE. Barometer inclined to rise slowly. Temperature made a quick rise, and was then fairly steady.
	Mean	28.999	—	—	- 5.5	- 5.6	—	—	—	—	—		—	—	—	

Max. therm. { 8 a. —, }  
 read at { 8 p. 5° 0. }  
 Solar radiation { small black bulb 21° 2. }  
 { small bright bulb 10° 5. }  
 Evapn. { 1. 2. 6 } grammes in  
 { 11. 2. 6 } 24 hours. Precipn. 0.175 in. since 6 p.m. 23 Sept.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Split minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.								Unscreened.		
2	29.045	—	-9.5	-7.0	-7.0	-5.2	NE, 0-1	1	0	b	—	—	-6.2	Read observations without lamp.	
4	29.034	—	-8.9	-7.0	-7.0	-6.8	NE, 3-4	13	15-28	bq +	—	—	-6.9	4 and 6 a.m. Considerable drift.	
6	29.063	—	-10.5	-9.0	-9.0	-8.2	NE, 3-4	21	20-27	b +	—	—	—	—	
8	29.062	—	-10.5	-6.0	-6.5	-3.8	NE, 5-6	22	25-30	b +	—	—	-3.3	Cloudless; low drift in Strait all round.	
10	29.063	—	-9.5	-7.0	-7.4	-4.8	NE, 4-5	19	20-28	b +	—	—	-4.7	Cloudless; less drift in Strait.	
Noon	29.111	-14.2	-7.5	-1.2	-1.6	4.0	Calm	10	0	b	—	—	-5.8	Cloudless; refraction all round low down.	
2	29.102	—	-2.5	0.0	-0.8	4.5	Lt. N airs	3	0	b	—	—	-1.4	Noon. Min. temp. at Cape Armitage, -24°2. Wind ENE, 1. b. Erebus smoke going NE; refraction in S, SW, and W.	
4	29.100	—	-12.7	-8.5	-9.0	1.0	Calm	0	0	b	—	—	-0.3	2 p.m. Much refraction along base of western mountains.	
6	29.087	—	-9.0	-8.0	-8.0	-5.0	Calm	1	0	b	—	—	-8.0	3 p.m. Rain band, 1.	
8	29.081	—	-14.8	-9.0	-8.5	-10.2	Lt. N airs	3	0	b	—	—	-10.3	4 p.m. Sun shining full on screen; rather hazy, with low visibility.	
10	29.100	—	-22.9	-10.0	-10.1	-10.0	NE, 1	3	7	b	—	—	-10.5	6 p.m. Small fern-shaped fog crystals on solar thermometer; foggy to N.	
Midt.	29.109	—	-11.9	-7.1	-7.4	-7.0	ENE, 0-3	7	0-21	bq +	—	—	-8.7	8 p.m. Cloudless sky; fine sunset glow all round to S and SW; much refraction all round.	
Mean	29.080	—	—	-6.7	-6.9	—	—	—	—	—	—	—	-9.0	10 p.m. Cloudless sky; refraction to SW, low down.	

7th.

Max. therm. read at { 8 a. 0°0. / 8 p. 0°0. Solar radiation { small black bulb 66°8. / small bright bulb 24°5. Evapn. { I. 1.9 / II. 1.7 } grammes in 24 hours. Precipn. — in.

drift in squalls; refraction to S. Fine and clear all day, with strong NE wind early, falling and Temperature unsteady.

2	29.125	—	-10.2	-7.2	-7.6	-7.0	E by N, 2-3	13	15-23	b +	—	—	-6.9	Absolutely cloudless.
4	29.150	—	-11.6	-11.0	-10.6	-12.0	E by N, 0-1	12	0-5	b	—	—	-7.6	Small wisps of Cl. just over Discovery; much refraction from S to E. At 4 and 6 a.m. temperature was dropping at time of each observation.
6	29.175	—	-24.4	-23.8	-23.2	-25.0	Calm	1	0	bc —	Cl.-s. 1	—	-13.0	
8	29.176	—	-24.5	-13.0	-13.3	-8.8	Calm	3	0	b	—	—	-24.7	6 a.m. A few small wisps of Cl. and Cl.-s. to N and NW; intense refraction from S to E; some frost rime.
10	29.208	—	-17.0	-14.0	-13.8	-12.0	E, 1-2	3	10-15	bc +	Cl.-s. 1	—	-10.3	8 a.m. Cloudless; temperature rising during observation; light Ey' airs sprang up after taking observation.
Noon	29.217	-19.5	-14.2	-7.8	-8.0	-5.2	NE, 4-6	13	20-30	bq +	—	—	-10.7	
2	29.225	—	-9.5	-6.5	-7.0	-3.4	NE, 2-3	16	10-18	bc	Cl.-s. 3, W (slow)	—	-11.9	10 a.m. Temperature falling during observation; thick low mist in Strait all round, and refraction to S and W.
4	29.227	—	-14.0	-11.0	-11.0	-2.5	Calm	3	0	bc	Cl.-s. 5, W (slow)	—	-5.4	Noon. Surface drift in Strait; misty generally.
6	29.230	—	-20.5	-20.5	-20.0	-20.0	NW, 1-2	1	8-12	bc	Cl.-s. 2, W (slow)	—	-10.3	Noon. Min. temp. at Cape Armitage, -39°8. Wind ENE, 3. bc. —.
8	29.235	—	-25.5	-25.0	-24.0	-26.2	Calm	0	0	bc	Cl.-s. 1, NW (mod.)	—	-19.5	Erebus smoke going NNE; thin Str. in NW, and Cl.-s. to W and SW.
10	29.248	—	-27.5	-25.0	-24.9	-24.4	Lt. N airs	0	0	bc	Cl.-s. 1	—	-24.3	2 p.m. Cl.-s. to W and S. S.-cu. on western mountains; dull generally.
Midt.	29.255	—	-25.1	-17.5	-17.7	-16.0	Calm	0	0	oc	Cl.-s. 10	—	-24.5	3 p.m. Rain band, 3.
Mean	29.204	—	—	-15.2	-15.1	—	—	—	—	—	—	—	-16.6	4 p.m. Cl.-s. running in veins from about W by S to N, thin in appearance.

8th.

Max. therm. read at { 8 a. -4°8. / 8 p. -5°0. Solar radiation { small black bulb 65°0. / small bright bulb 24°0. Evapn. { I. 1.8 / II. 2.0 } grammes in 24 hours. Precipn. — in.

detached lines; refraction all round low down. Ozone since 11 a.m., 5 (hung in open air). 10 p.m. Cl.-s. in E and NE; heavy Str. in W down to horizon and tailing off to SE, where it is about 1° broad and 1° above the horizon. Midt. Thin clouds overhead; thick Str. in the W. Fine and clear early, but becoming cloudy in afternoon. Gusty all day. Barometer rising slowly all day. Temperature unsteady and lower.

2	29.251	—	-17.3	-13.6	-13.2	-13.0	Calm	0	0	oc	—	S. 10	-13.5	Str., alt. 600 feet, from zenith to horizon.
4	29.230	—	-15.1	-12.0	-12.2	-11.0	Calm	1	0	ocf —	—	S. 10	-13.7	Thick fog; soft rime falling.
6	29.217	—	-13.7	-13.0	-13.0	-12.2	Lt. N airs	2	0	bcf —	—	S. 5 N	-12.1	Thick on going out, but clearing rapidly; rime 1/2 in. thick.
8	29.211	—	-15.0	-14.2	-13.8	-10.0	Calm	0	0	bc — ⊕	Cl.-s. 2	—	-11.9	
10	29.199	—	-16.5	-10.0	-10.0	-8.0	NE, 3-4	1	18-24	bc +	Cl.-s. 5	A.-s. 2	-13.0	Low fog all round; heavy rime on N side of all objects; very faint halo with two mock suns. Ozone, 8.
Noon	29.178	-12.3	-10.3	-7.0	-7.3	-6.5	NNE, 4	13	20-24	oe +	Cl.-s. 6	A.-s. 5	-13.4	10 a.m. Cl.-s. radiating SE and NW; fog has greatly diminished; rime is all falling off; A.-s. collecting to N and E; radiating point in NW very marked.
2	29.155	—	-10.7	-10.0	-10.0	-7.6	NNE, 1-2	12	8-12	oc	Cl.-s. 4	A.-s. 5	-16.6	Noon. Cl.-s. radiating NW and SE; sky becoming more and more overcast; much refraction low down all round.
4	29.143	-16.3	-15.5	-14.5	-14.5	-13.2	Calm	8	0	oc	—	A.-s. 10	-15.9	Noon. Min. temp. at Cape Armitage, -35°5. Wind NE, 2. Erebus smoke going NE.
6	29.139	—	-16.2	-15.0	-15.0	-15.0	Calm	1	0	oc	—	A.-s. 10	-14.8	2 p.m. A.-s. overspreading sky. Ozone, 4.
8	29.114	—	-15.2	-15.1	-15.1	-15.2	Calm	0	0	o	—	A.-s. 9	-14.8	2.30 p.m. Radius of halo 22° 30'.
10	29.080	—	-15.7	-14.7	-14.7	-14.7	Calm	2	0	o	—	S. 10	-14.8	3 p.m. Rain band, 5.
Midt.	29.080	—	-14.9	-10.2	-10.2	-10.0	Lt. SE airs	0	0-3	o	—	S. 10	-13.9	4 p.m. Much refraction; patches of Cl. visible near zenith.
Mean	29.165	—	—	-12.4	-12.4	—	—	—	—	—	—	—	-14.1	4 p.m. Min. temp. at Cape Armitage, -19°9. Light NE'y airs. Str. from NW. Erebus smoke going Ey.

9th.

Max. therm. read at { 8 a. -11°0. / 8 p. -5°0. Solar radiation { small black bulb 32°0. / small bright bulb 11°0. Evapn. { I. 1.4 / II. 1.6 } grammes in 24 hours. Precipn. — in.

-15°5; min., -16°3. Light Ey' airs. Erebus smoke going Ey' in thick volume. 5 p.m. Deep mirage to W and N; cloudless on horizon. 8 p.m. Very brilliant sunset colouring to SW and S; Str. on western mountains. 10 p.m. Clear on horizon to S and W. Midt. Western range clear, except for a few streaks of low Str.; Discovery and southern land obscured. Cloudy most of the day, with strong NE wind at midday, then falling calm. Barometer falling steadily all day. Temperature fairly steady.

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10th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	29.038	—	-12.6	-8.4	-9.0	-8.3	NE, 2	11 15-20	oc	—	A.-s. 10	—	-8.5	Western range and upper third of Black Island clear; middle third of Black Island and corresponding heights all along WSW and S obscured by Str.; A.-s. broken and radiating from SSE.
4	29.025	—	-10.9	-10.5	-11.0	-10.8	E by N, 3-4	11 18-23	c	—	Fr.-cl.-s. 8, NW (slow)	—	-10.5	4 a.m. Looks very stormy at the Bluff, clearing elsewhere; clouds all tending to rise; bands of low Str. to W.
6	29.012	—	-13.3	-12.8	-13.2	-13.2	NE, 3-4	21 20-22	bc	—	Cl. 5	—	-11.6	4 a.m. Cl. radiating N and S; long band of low Str. along western mountains about half height of Discovery; clearing at Bluff.
8	29.012	—	-15.0	-12.5	-13.0	-10.2	NE, 4-5	19 20-28	bc	—	Cl.-s. 4, N (slow)	—	-12.5	8 a.m. Heavy bank of Str. extending from W to SSW, alt. 1°.
10	29.014	—	-13.5	-12.6	-13.0	-10.8	NE, 3-4	20 18-24	bc	—	Cl.-s. 1, N (slow)	—	-10.5	10 a.m. Str. to W and SSW, rising and dissolving; detached patches of cloud in E and SE.
Noon	29.018	-14.6	-13.5	-9.2	-10.2	-6.5	NE, 2-3	16 18-22	b	—	—	—	-11.2	Noon. Cloudless in zenith; some patches of cloud to S and SE. Ozone, 6.
2	29.012	—	-11.9	-11.5	-11.5	-4.8	Calm	4 0	b	—	—	—	-6.5	2 p.m. Cl. to S, appears to be approaching. Ozone, 4.
4	29.013	—	-12.5	-9.0	-9.2	-5.5	Calm	1 0	b	—	—	—	-7.4	3 p.m. Rain band, 3.
6	29.018	—	-17.3	-16.0	-16.0	-13.5	Lt. N airs	2 0	b	—	—	—	-9.4	4 p.m. Temperature fell rapidly.
8	29.014	—	-19.1	-17.9	-17.9	-18.9	Calm	1 0	bc	—	—	—	-9.8	4.23 p.m. Temp. at Cape Armitage, -14° 9'; min., -22° 9'. Light Ely airs.
10	29.008	—	-19.2	-14.0	-13.8	-13.0	Lt. NNW airs	1 0	oc	—	—	S. 10, SW (slow)	-15.7	Light NWly airs. Erebus smoke rising perpendicular in small volume. 8 p.m. Heavy bank of Str. all round SE, S, and SW, alt. 4°. Ozone, 6. 10 p.m. Break in clouds to SW. Midt. Break in clouds in zenith. Read observation without a lamp. Cloudy early, but clearing in afternoon, though again clouding over in the evening. Wind strong NEly early, falling and remaining calm. Barometer steady. Temperature fairly steady.
Midt.	28.988	—	-13.5	-11.0	-11.0	-11.0	Calm	2 0	bc	—	—	S. 8, SW (slow)	-19.7	Midt. Break in clouds in remaining calm. Barometer steady. Temperature fairly steady.
Mean	29.014	—	—	-12.1	-12.4	—	—	—	—	—	—	—	-10.8	

Max. therm. read at { 8 a. -7° 8. / 8 p. -4° 5. Solar radiation { small black bulb 70° 0. / small bright bulb 23° 5. Evapn. { 1. 4' 4 / 11. 4' 6 } grammes in 24 hours. Precipn. — in.

11th.

2	28.955	—	-11.5	-7.0	-7.8	-7.0	Lt. SW airs	1 0	oc	—	—	S. 10	-6.7	Break in clouds in SW and W; Black Island and White Island partially obscured by fog or cloud.
4	28.955	—	-9.3	-7.0	-6.0	-7.1	SE, 0-3	4 0-15	ocqfg	—	—	S. 10	-8.0	4 a.m. Dark in W and gloomy looking; Black and White Islands totally obscured; western foot hills and Brown Island visible.
6	28.940	—	-5.0	-7.0	-6.4	-7.0	S by W, 1-4	8 5-29	ocq *	—	—	N. 10	-5.4	6 a.m. All distant land obscured; base of western foot hills indistinctly visible.
8	28.940	—	-5.5	-7.8	-7.5	-8.0	Var. S, 7-9	31 40-56	ocq + 2 *	—	—	N. 10	-7.2	8 a.m. No land visible; wind variable, S to SSW. Ozone, 10.
10	28.956	—	-6.8	-7.2	-7.2	-7.8	S, 8-9	35 48-60	ocq + 2 *	—	—	N. 10	-7.0	10 a.m. Found aspirator support and wet bulb broken; wind steady. Ozone, 6.
Noon	28.998	—	-5.8	-7.0	-6.2	-7.5	Var. SE, 7-8	27 36-55	ocq	—	—	S. 10	-6.4	Noon. Clearing to S; sun gleaming through Str. which appears to be going NW; heavy drift in Strait; sunshine card blown away. Ozone, 7.
2	29.032	—	-4.6	-7.0	-6.5	-8.0	SE, 4-8	26 25-55	ocq +	—	—	S. 6, S	—	2 p.m. Extremely squally; clearing in E and S; very thick in W; barometer pumping.
4	29.051	5.2	-4.6	-7.0	-6.3	-7.5	ESE, 4-9	22 25-28	ocq +	—	—	Cu. 5, S	—	3 p.m. Rain band, 4.
6	29.068	—	-2.8	-7.0	-6.0	-7.6	Var. SE, 4-7	24 20-40	ocq	—	—	Cu. 2, S	—	4 p.m. Heavy drift in Strait obscuring base of western mountains; detached Cu. driving rapidly northwards.
8	29.081	—	-5.8	-7.0	-6.0	-7.1	Var. E, 4-6	17 20-36	bcq	—	—	S.-cu. 2, S (fast)	—	4 p.m. Min. temp. at Cape Armitage, -32° 5. Wind SE, 4-6. Erebus obscured. +.
10	29.080	—	—	-5.8	-4.5	-6.0	E, 4-6	23 25-35	bcq	—	—	Cu. 4	—	6 p.m. Frost smoke rising in clouds at entrance to Strait; Cl.-s. on horizon to N and E. 8 p.m. Sand passing over rapidly to N; bases of western mountains visible; all clouds heavy and stormy looking. Ozone, 10. 10 p.m. and Midt. Gloomy to W. 11 p.m. Overcast and cloudy all day, with very heavy blizzard early in forenoon, wind shifting to SE just before noon and remaining very strong all day. Barometer rising steadily since 6 a.m. Temperature rose to above zero and remained very steady.
Midt.	29.089	—	-3.0	-4.4	-3.2	-4.0	E, 3-5	19 15-30	bcq	—	—	S.-cu. 2	—	
Mean	29.010	—	—	-5.6	-4.8	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 8° 2. / 8 p. 8° 0. Solar radiation { small black bulb 38° 6. / small bright bulb 19° 0. Evapn. { 1. 2' 8 / 11. 2' 8 } grammes in 24 hours. Precipn. — in.

12th.

2	29.078	—	-3.0	-4.1	-3.0	-4.8	E by S, 3-6	10 20-35	bc	—	—	S.-cu. 2	—	Dark clouds in W; broad bands of cloud, more or less detached, extending to SE.
4	29.064	—	-3.2	-5.0	-4.0	-5.2	E by N, 4-6	22 20-30	bc	—	—	S.-cu. 2	—	
6	29.056	—	-0.0	-2.0	-1.5	-2.0	E by N, 4-7	18 23-35	bcq	—	—	—	—	
8	29.047	—	-3.0	-0.1	-0.8	-2.2	E by N, 4-6	24 20-30	bcq	—	—	—	—	Ozone, 7.
10	29.024	—	-1.0	-4.0	-2.8	-4.5	ENE, 4-5	18 20-25	bc	—	—	—	—	Clouds clearing, and weather finer generally.
Noon	28.997	-0.2	-1.0	-3.0	-1.5	-4.0	ENE, 5-6	22 25-32	b	—	—	—	—	Min. temp. at Cape Armitage, -5° 1. Wind ENE, 3. Erebus smoke going Wly; drift on Erebus slopes.
2	28.974	—	-0.2	-2.0	-0.6	-3.0	ENE, 3-4	20 18-25	bv	—	—	—	—	2 p.m. Cl.-s. to W; Str. on western mountains.
4	28.954	-2.0	-1.0	-3.5	-2.0	-6.8	E, 1-2	14 8-15	bc	—	—	—	—	3 p.m. Rain band, 1.
6	28.920	—	-2.2	-1.7	-0.5	-2.0	Var. E, 3-4	7 18-27	bc +	—	—	—	—	4 p.m. Cl.-s. on western horizon; Str. on western mountains; marked visibility.
8	28.902	—	-7.0	-7.0	-7.0	-7.0	NE, 6-7	23 30-45	bq +	—	—	—	—	4 p.m. Min. temp. at Cape Armitage, -4° 0. Wind NE, 1-2. Erebus smoke invisible.
10	28.902	—	-8.5	-7.2	-7.5	-8.0	NE, 5-7	29 28-40	bq +	—	—	—	—	5 p.m. Cl.-s. running SW and NE, very thin and indistinct; refraction slight to W.
Midt.	28.913	—	-12.5	-5.5	-6.0	-6.0	NE, 6-7	26 30-40	bq	—	—	—	—	6 p.m. Low fog at base of mountains in NW; wind very variable.
Mean	28.986	—	—	-0.5	-0.5	—	—	—	—	—	—	—	—	8 p.m. Hardly a cloud visible; visibility low; surface drift in Strait. Ozone, 4.

Max. therm. read at { 8 a. 7° 0. / 8 p. 5° 0. Solar radiation { small black bulb 72° 5. / small bright bulb 30° 0. Evapn. { 1. 17' 3 / 11. 16' 7 } grammes in 24 hours. Precipn. — in.

10 a.m. Fine sunset glow all round S horizon; detached clouds, looking like Cl.-s., low down S and SW. Midt. More detached clouds in S; thin layer of Str. on western mountains, 8000 ft. alt.; no surface drift, although wind is just as strong. More or less cloudy, with light upper clouds, and with very strong NEly wind all day. Barometer fell until 10 p.m., and then commenced to rise. Temperature falling towards the evening.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.			Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Aspirator.	Upper.	Lower.		Aspirator.
				Dry.	Wet.											
2	28.911	—	9.0	6.5	7.0	6.2	NE, 5-6	27	28-36	bq	—	—	—	Str. low down to S and SE; Str. on western mountains has thickened.		
4	28.948	—	10.5	8.0	8.0	9.0	NE, 3-5	19	18-28	bcq	Cl.-s. 2	—	—	Heavy bank of S.-cu. in N, alt. 8°; Str. in same place in S and on western mountains; visibility marked.		
6	28.992	—	9.5	2.0	3.2	0.0	ESE, 2-4	17	12-22	bc	Cl.-s. 2	S.-cu. 3, E (very slow)	—	6 a.m. Cl.-s. radiating SE in very thin and indistinct lines; S.-cu. very slowly coming over from E; very clear to S; visibility marked all round.		
8	29.034	—	5.0	4.2	5.0	2.0	ESE, 2-4	11	12-20	bc	Cl.-2; Cl.-s. 2, SW	—	—	8 a.m. S.-cu. has gone back towards the N, and is now about 2° above the horizon from NW to Erebus' slope; bank of Str. to S. Ozone, 7.		
10	29.070	—	5.0	1.0	2.3	2.0	E, 1-2	9	10-18	bc	Cl.-a. 1, SW (slow)	—	—	10 a.m. Bank of Str. to S is disappearing; detached portions of Cl.-s. in S and at various points; thin strip of Str. across centre of western range.		
Noon	29.096	5.1	4.5	2.0	3.0	0.2	SE, 1	12	5-12	bc	Cl.-s. 1	A.-s. 3, SW (mod.)	—	Noon. Western mountains partially obscured down to 8000 feet by thin layers of detached Str.		
2	29.113	—	5.5	0.3	1.5	2.5	SE, 2-3	13	15-22	bc	—	Cu. 8, SE (mod.)	—	Noon. Min. temp. at Cape Armitage, -19°2. Wind S by E, 3. Erebus smoke going NE.		
4	29.135	1.6	2.5	0.0	1.0	2.5	E, 0-1	9	0	oc	—	Cu. 10, SE (mod.)	—	2 p.m. Snow crystals falling; clouds moving moderately; Discovery summit obscured.		
6	29.156	—	4.0	1.0	0.3	2.3	Calm	5	0	bc	Cl.-cu. 5	—	—	3 p.m. Rain band, 3.		
8	29.164	—	4.5	1.0	0.8	0.8	Lt. S airs	5	0-8	oc	—	Fr.-a.-s. 7, S (slow)	—	4 p.m. Completely overcast; alt. of clouds about 5000 feet.		
10	29.180	—	0.5	2.5	1.0	0.5	Var. SE, 2-3	9	15-20	bc	—	A.-s. 5	—	4 p.m. Min. temp. at Cape Armitage, -19°2. Wind S by E, 3. Erebus smoke going NE.		
Midt.	29.200	—	1.0	4.0	2.0	3.3	Var. SSE, 1-2	9	10-15	bc	—	A.-s. 8	—	2 p.m. Snow crystals falling; clouds moving moderately; Discovery summit obscured.		
Mean	29.083	—	—	1.3	2.4	—	—	—	—	—	—	—	—	3 p.m. Rain band, 3.		

13th.

Max. therm. read at { 8 a. -1°0. / 8 p. 2°9. Solar radiation { small black bulb 75°5. / small bright bulb 28°2. Evapn. { 11. 9.8 grammes in 24 hours. Precipn. — in.

-8°7. Wind NE, 1. Erebus obscured. bc. 6 p.m. Cloudless in zenith; Str. on western mountains. 8 p.m. Western mountains obscured above 6000 feet; visibility marked all round. Ozone, 4. 10 p.m. Clouds clearing overhead; dark bands in SW and W. Midt. Wind very variable; clouds moving from a southerly direction. Cloudy all day, with strong wind early, and variable during day. Barometer rising all day. Temperature rising towards evening.

2	29.195	—	2.5	0.5	1.4	1.0	Var. NE, 3-4	16	20-25	bc	—	A.-s. 5, S	—	Heavy squalls of wind about 1 a.m., force 8-9; wind very variable.
4	29.168	—	0.9	4.5	3.0	3.2	Calm	8	0	bc	—	A.-s. 6	—	Wind died away shortly before 4 a.m.; dark clouds over summits of western range.
6	29.221	—	4.7	0.0	1.3	2.0	Lt. SE airs	2	0-5	bc	—	A.-s. 5	—	6 a.m. Clearing over western range.
8	29.234	—	1.2	3.0	2.0	3.6	Var. SE, 4-6	14	18-30	oc +	—	S.-cu. 8, SW (slow)	—	Western range nearly obscured; wind squally and variable, S to SE.
10	29.240	—	0.2	4.0	2.8	4.6	S, 1-3	15	10-18	oc	—	S. 7, SW (slow)	—	Ozone, 3.
Noon	29.242	2.9	1.0	3.0	3.0	4.0	SW, 1-7	14	10-42	ocq +	—	S. 8	—	10 a.m. Western mountains obscured above 8000 feet; heavy drift in Strait; wind variable, blowing from E, 3-4, at 10.15 a.m.
2	29.313	—	1.5	0.0	0.5	2.0	SE, 4-6	22	20-30	ocq +	—	S. 9, SE	—	Noon. Very squally, with heavy drift, but looks like clearing. Ozone, 7.
4	29.331	—	3.0	0.0	1.0	0.3	SE, 4-6	21	22-30	ocq +	—	S.-cu. 10	—	Noon. Min. temp. at Cape Armitage, -8°6. Wind S, 3-7. ocq. +. Erebus obscured. Str. 10.
6	29.328	—	2.2	1.0	1.4	1.0	E, 2-3	18	10-18	bc	—	Fr.-cu. 2, SE	—	2 p.m. Sun gleaming; clouds breaking in W, only summits of western mountains obscured.
8	29.323	—	3.2	0.5	1.5	0.0	E, 1-2	10	10-18	b	—	—	—	3 p.m. Rain band, 2.
10	29.315	—	7.7	2.0	3.0	3.0	E, 2-3	16	18-22	bv	—	—	—	6 p.m. Wind-blown detached Cu. in S and approaching; Str. on summits of western mountains; dark cloud in N.
Midt.	29.318	—	5.3	3.0	4.0	3.2	E, 1	10	0	bv	—	—	—	8 p.m. Ozone, 9.
Mean	29.269	—	—	0.6	0.3	—	—	—	—	—	—	—	—	Overcast, more or less, early and during forenoon, with a short attempt at a S by blizzard, but later it cleared; wind remaining still strong from E. Barometer rose during the day, with occasional dips. Temperature fairly steady.

14th.

Max. therm. read at { 8 a. 5°4. / 8 p. 4°2. Solar radiation { small black bulb 47°3. / small bright bulb 18°5. Evapn. { 1. 13.1 grammes in 24 hours. Precipn. — in.

2	29.296	—	4.5	3.0	4.0	3.7	Calm	7	0	bv	—	—	—	—
4	29.283	—	19.8	11.3	11.8	11.2	ENE, 3-4	7	25-30	bv	—	—	—	—
6	29.260	—	14.0	10.0	11.0	10.0	ENE, 4	12	28-33	bv	—	—	—	—
8	29.235	—	10.5	6.5	7.2	4.0	NE, 3-5	35	15-28	bcv	Cl.-s. 1	—	—	Cloudless all round, except for layers of Cl.-s. in zenith, lying E and W.
10	29.225	—	7.5	6.8	7.2	4.2	ENE, 4-6	17	20-30	bcv	Cl.-s. 2	—	—	Ozone, 4.
Noon	29.197	16.0	10.5	10.3	10.5	10.0	NE, 4-6	16	18-30	bc	Cl.-s. 2	Cu. 2, N (fast)	—	10 a.m. More Cl.-s. has collected, and points of radiation are very marked E and W.
2	29.186	—	13.0	5.0	6.0	4.2	NE, 4-5	18	18-28	oc	—	Cu. 8, N (fast)	—	Noon. Cu. pouring over from N very suddenly; drift in Strait; Cl.-s. radiating E and W.
4	29.163	—	7.7	3.8	4.2	3.5	NE, 2-3	15	0-5	oc	—	S. 10	—	Noon. Min. temp. at Cape Armitage, -26°0. Wind NE, 4. Erebus smoke going NE, but soon obscured.
6	29.141	—	15.3	11.0	11.0	11.0	E, 2-3	10	0-10	oc *	—	N. 10	—	2 p.m. Deep mirage at base of western mountains; sun gleaming at times.
8	29.124	—	12.0	2.2	3.0	1.8	NE, 1-3	7	0-12	o	—	S. 10	—	3 p.m. Rain band, 5.
10	29.128	—	14.2	13.5	13.2	13.2	SE, 3-6	13	20-35	ocq	—	S. 10	—	4 p.m. Thin Str.; drift in Strait.
Midt.	29.127	—	15.0	10.2	10.2	10.2	SE, 0-5	15	0-28	ocq	—	S. 10	—	6 p.m. Break in clouds in S and SW; Min. on western mountains and in N. Ozone, 6.
Mean	29.197	—	—	7.8	8.3	—	—	—	—	—	—	—	—	8 p.m. Appearance of snowing all round; red glow visible about 30° alt. in SW.

15th.

Max. therm. read at { 8 a. 0°0. / 8 p. -2°2. Solar radiation { small black bulb 68°0. / small bright bulb 21°0. Evapn. { 1. 10.2 grammes in 24 hours. Precipn. — in.

WSW, with red glow. Clear and fine early, but clouding over suddenly just about noon, and remaining so, with very fresh NE wind. Barometer falling all day. Temperature not so steady.

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.			Remarks.		
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.	Lower.		Aspirator.	
				Dry.	Wet.										Unscreened.
16th.	2	29.127	—	-14.1	-10.4	-10.6	-10.5	E, 0-4	15	0-20	ocq + *	—	N. 10	—	The break in clouds low down near horizon in SSW and WSW still remains. Clouds are breaking and sky apparently clearing.
	4	29.120	—	-14.5	-11.0	-11.1	-10.8	ENE, 3-5	16	10-26	bcq	—	Fr.-s.-cu. 2, WNW	—	Distant land becoming visible through cloud.
	6	29.118	—	-18.2	-14.0	-14.2	-13.9	ENE, 4-7	22	20-30	bcq	A.-s. 5	S. 2	—	Distant land becoming visible through cloud.
	8	29.127	—	-15.8	-10.0	-10.8	-8.0	E, 4-5	21	20-28	bc	Ci.-s. 3	Det. S. 2, SW	—	Distant land to S visible, but misty; western mountains quite obscured. Ozone, 4.
	10	29.127	—	-11.7	-8.1	-8.8	-7.0	ENE, 2-4	13	10-24	bc	Ci.-s. 2	Det. A.-s. 2, W	—	10 a.m. Mist clearing from land; western mountains visible, but misty; parhelia visible to W of sun, very brightly coloured.
	Noon	29.122	-17.3	-9.0	-5.0	-6.2	-3.0	ENE, 1-2	15	10-14	bc	—	A.-cu. 4, NW (slow)	—	Noon. Very dark sky to N, and bank of A.-cu. all round from NNE to E, up to 40°.
	2	29.108	—	-7.3	-3.0	-3.6	0.5	E, 1-2	13	0-8	bc	Ci.-s. 2, SW	—	2 p.m. Detached portions of Ci.-s. on horizon all round; foggy to W.	
	4	29.092	-17.0	-6.5	-3.7	-4.0	-1.0	NE, 2-3	8	0-10	bc	—	A.-cu. 4, N	—	3 p.m. Rain band, 2.
	6	29.064	—	-7.0	-6.2	-6.4	0.0	Calm	5	0	oc	—	A.-cu. 8, NW	—	4 p.m. A.-cu. overspreading sky from NW.
	8	29.066	—	-16.0	-15.9	-15.2	-14.2	Calm	0	0	b	—	—	—	4 p.m. Min. temp. at Cape Armitage, -19° 1. Wind SE, 2. Erebus obscured. A.-cu. 3.
	10	29.039	—	-20.2	-17.6	-17.6	-19.0	Calm	0	0	b	—	—	—	6 p.m. Clearer, with more visibility.
	Midt.	29.027	—	-20.6	-19.9	-19.2	-20.0	Calm	0	0	oc	—	Cu. 7, NW (mod.)	—	8 p.m. A.-cu. low down in E, passing to S; sun not yet set. Ozone, 4.
	Mean	29.095	—	—	-10.4	-10.6	—	—	—	—	—	—	—	—	10 p.m. Cloudless, except for Ci.-s. in SW in very faint lines; very minute fern-like crystals on anemometer glass. Midt. West side of Strait quite clear of cloud, and low down to S the sky is quite clear; very much refraction all round low down, and mirage on Bluff and its range, the former being inverted in the air. Cloudy, more or less, all day, with strong NE wind early, gradually falling calm towards evening. Barometer falling all day. Temperature very unsteady, falling lower in evening.

Max. therm. { 8 a. -2° 9. Solar { small black bulb 77° 8. Evapn. { 1. 6.3 } grammes in Precipn. 0.042 in, since 8 p.m. 6th.  
 read at { 8 p. -2° 2. radiation { small bright bulb 28° 2. { II. 6.4 } 24 hours.

17th.	2	29.004	—	-20.0	-19.3	-19.0	-19.5	Calm	0	0	oc →	—	Cu. 8, NW (mod.)	—	A slight deposit of ice crystals between observations; clouds thinning; excessive refraction.
	4	28.979	—	-19.2	-10.0	-10.0	-9.4	Lt. NW airs	1	0-5	oc *	—	Cu. 8, NW (mod.)	—	4 a.m. Very minute ice crystals falling; excessive refraction.
	6	28.967	—	-18.5	-16.0	-16.0	-14.5	Calm	0	0	oc *	—	Cu. 8, NW (mod.)	—	6 a.m. Conditions similar to 4 a.m.; misty appearance over White Island; very excessive refraction.
	8	28.949	—	-16.0	-7.2	-7.6	-6.5	Calm	0	0	oc	—	Cu. 9, NW (slow)	—	8 a.m. Ozone, 3.
	10	28.934	—	-10.0	-3.2	-4.0	0.0	Calm	0	0	oc	—	Cu. 9, NW (slow)	—	8 to 10 a.m. Extensive refraction; clouds and conditions similar.
	Noon	28.923	-14.4	-11.3	-6.0	-6.5	-5.0	E, 2-3	8	10-18	oc	—	S.-cu. 9, W (slow)	—	Noon. Clouds now touching summits of western mountains.
	2	28.919	—	-12.2	-5.0	-6.0	-2.5	E, 2-3	12	12-18	oc	—	Cu. 9, NW (slow)	—	Noon. Min. temp. at Cape Armitage, -35° 0. Wind NE, 2. Erebus obscured; refraction to W.
	4	28.911	-12.2	-10.7	-8.0	-8.3	-7.5	E, 3-4	11	22-28	oc	—	Cu. 9, N (slow)	—	2 p.m. Large masses of detached Cu., apparently low and very white.
	6	28.905	—	-13.1	-11.4	-11.6	-12.0	ENE, 3-4	15	18-25	bc	—	Det. Cu. 5, N (fast)	—	3 p.m. Sun gleaming faintly; mirage all round to westward.
	8	28.899	—	-12.5	-11.0	-11.2	-11.2	NE, 3-4	10	18-22	bc	—	A.-cu. 3, var.	—	4 p.m. Min. temp. at Cape Armitage, -15° 0. Wind NE, 2. Erebus obscured.
	10	28.875	—	-12.5	-12.0	-12.0	-12.0	NE, 2-3	14	15-20	b	—	—	—	4 p.m. Mammillated clouds in W and NW.
	Midt.	28.875	—	-14.5	-12.2	-12.5	-12.4	NE, 2-3	13	18-22	b	—	—	—	6 p.m. Cloudless in zenith and in N; sun obscured.
	Mean	28.928	—	—	-10.1	-10.4	—	—	—	—	—	—	—	—	8 p.m. Clouds moving in various directions. Ozone, 7.

Max. therm. read at { 8 a. -5° 0. Solar radiation { small black bulb 38° 8. Evapn. { I. 2.6 } grammes in Precipn. — in.  
 { 8 p. -1° 3. { small bright bulb 12° 2. { II. 2.9 } 24 hours.

rising as it reaches to S. S.-cu. to S and E, moving slowly from a W by direction. Midt. Western mountains obscured by Str. from 3000 feet alt., summit of Black Island just clear; Brown Island clear; upper half of Discovery concealed; S.-cu. clouds in S and E, they appear to be moving from an E by direction. Overcast and cloudy all day, with fresh NE by wind after noon. Barometer falling all day. Temperature unsteady.

18th.	2	28.874	—	-14.0	-12.2	-12.8	-12.8	ENE, 2-3	14	15-22	b	—	—	—	Western mountains obscured by Str. from 3000 feet alt.; a thin band of S.-cu. extending to Bluff, and some thin S.-cu. in NW.
	4	28.873	—	-13.5	-10.9	-11.0	-11.0	ENE, 1-2	11	5-15	b	—	—	—	4 a.m. Foot hills visible; summits of western mountains hidden by S.-cu., a band of which extends across centre of Discovery; a patch of same cloud in NW.
	6	28.879	—	-16.0	-11.0	-11.5	-11.0	E, 1-2	7	5-10	bc	—	A.-cu. 3, N	—	6 a.m. S.-cu. obscuring summits of western mountains, and a narrow band extending beyond Mt. Discovery. S.-cu. and A.-s. in NW.
	8	28.888	—	-11.5	-9.5	-10.0	-8.8	NE, 3-4	8	18-24	bc	—	A.-cu. 5, NW (mod.)	—	8 a.m. Appearance of snowing in W and SW. Ozone, 6.
	10	28.893	—	-15.0	-13.8	-13.8	-13.0	NE, 4-5	16	20-28	oc + *	—	S.-cu. 9, NW (slow)	—	10 a.m. Snowing very slightly; no land visible except close to ship.
	Noon	28.894	—	-15.7	-14.0	-14.0	-13.4	NE, 4-5	20	25-32	o + *	—	N. 10	—	2 p.m. Detached Cu. passing from about ENE.
	2	28.912	—	-15.3	-11.5	-11.8	-10.0	NE, 3-4	18	25-30	o	—	Cu. 9, E	—	3 p.m. Rain band, 4.
	4	28.919	-20.6	-16.0	-11.0	-11.5	-8.8	NE, 3-4	14	20-28	b	—	—	—	4 p.m. Ci. on eastern horizon; Cu. to N and W.
	6	28.922	—	-16.3	-9.0	-9.6	-8.0	NE, 1-2	14	10-16	o	—	Cu. 9, N	—	4 p.m. Min. temp. at Cape Armitage, -34° 4. Wind NE by E, 2-3. Erebus smoke going NE.
	8	28.928	—	-11.3	-9.0	-9.5	-8.2	N, 1	4	8-10	b	—	—	—	6 p.m. Summits of western range obscured; excessive mirage at base.
	10	28.932	—	-15.8	-15.2	-15.2	-16.2	Calm	5	0	b	—	—	—	8 p.m. Detached Str. to SE, S, and SW. Ozone, 8.
	Midt.	28.944	—	-21.4	-15.9	-16.2	-17.8	Calm	0	0	b	—	—	—	Fine day, with a little snow in forenoon and a fresh NE wind, which fell to calm in evening. Barometer rising all day. Temperature lower and steady.
	Mean	28.905	—	—	-11.9	-12.2	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. -6° 8. Solar radiation { small black bulb 55° 0. Evapn. { I. 4.5 } grammes in Precipn. — in.  
 { 8 p. -4° 4. { small bright bulb 17° 5. { II. 4.4 } 24 hours.

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale.)	Cup anemometer, miles per hour.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.							Wet.			
2	28.957	—	-23.2	-19.0	-19.0	-19.1	Calm	0	0	b	—	—	—	19th.
4	28.983	—	-27.2	-22.5	-22.6	-23.0	Calm	0	0	b	—	—	—	
6	28.998	—	-23.4	-16.2	-16.6	-14.3	Calm	1	0	b	—	—	—	
8	29.037	—	-25.2	-21.8	-21.5	-9.0	Calm	0	0	b	—	—	—	
10	29.062	—	-22.8	-20.0	-20.0	-6.0	Calm	1	0	b	—	—	—	
Noon	29.084	-22.0	-19.8	-15.0	-15.0	-8.0	Calm	0	0	b	—	—	—	
2	29.102	—	-23.2	-18.8	-18.8	-5.0	Calm	0	0	b	—	—	—	
4	29.126	—	-18.0	-16.0	-16.0	-3.2	Calm	0	0	b	—	—	—	
6	29.129	—	-17.2	-15.2	-15.5	-6.0	Calm	0	0	b	—	—	—	
8	29.142	—	-18.0	-14.0	-14.0	-8.0	Calm	0	0	b	—	—	—	
10	29.164	—	-18.2	-13.2	-13.4	-14.0	Calm	0	0	bv	—	—	—	
Midd.	29.191	—	-23.0	-16.8	-17.8	-16.0	Calm	0	0	bv	—	—	—	
Mean	29.081	—	—	-17.4	-17.5	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. - 9° 0. / 8 p. - 11° 0. } Solar radiation { small black bulb 68° 0. / small bright bulb 21° 5. } Evapn. { I. 2.3 / 11.2.5 } grammes in 24 hours. Precipn. — in.

2	29.200	—	-18.0	-3.8	-4.2	-4.0	N, 1-2	6	10	bv	—	—	—	2 to 6 a.m. Much refraction in W.	20th.
4	29.223	—	-4.5	-2.2	-3.0	-2.0	NNW, 0-1	5	0	bv	—	—	—		
6	29.232	—	-25.2	-18.2	-18.0	-18.0	NW, 0-1	2	0	bv	—	—	—		
8	29.286	—	-22.8	-22.5	-21.5	-11.2	Lt. SW airs	4	0	bv	—	—	—		
10	29.292	—	-22.5	0.8	-1.8	7.5	Var. lt. N airs	1	0	bv	—	—	—		
Noon	29.326	-3.4	-8.5	0.0	-1.0	3.8	Calm	2	0	bv	—	—	—		
2	29.330	—	-2.8	5.0	4.0	7.5	NW, 1-2	8	5-12	b	—	—	—		
4	29.320	—	2.8	5.0	4.0	9.3	NNW, 2-3	8	10-15	b	—	—	—		
6	29.311	—	-1.0	-0.2	-1.0	5.0	Calm	4	.0	bc	Ci. 2	—	—		
8	29.313	—	-11.7	-10.2	-10.0	-9.2	Calm	1	0	benv	Ci. 4, Ci.-s. 2, W (mod.)	—	—		
10	29.315	—	-9.7	-4.8	-5.0	-5.6	Lt. E airs	0	0	bc	Ci.-s. 1	—	—		
Midd.	29.314	—	-7.3	-3.8	-4.5	-4.2	Calm	3	0	bc	Ci.-s. 5	—	—		
Mean	29.288	—	—	-4.6	-5.2	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. - 1° 2. / 8 p. 8° 0. } Solar radiation { small black bulb 75° 5. / small bright bulb 39° 0. } Evapn. { II. 3.7 grammes in 24 hours. } Precipn. — in.

2	29.313	—	-6.0	5.8	4.2	4.8	Lt. NNE airs	3	0	bc	Ci.-s. 5	—	—	The clouds are spread over the sky in light film.	21st.
4	29.309	—	-12.6	-12.2	-12.4	-13.2	Calm	1	0	bc	Ci.-s. 6, N	—	—		
6	29.311	—	-14.5	1.5	0.0	2.2	Lt. N airs	0	0-4	bc	—	A.-s. 8, W	—		
8	29.307	—	-8.2	-7.9	-7.5	-3.0	Calm	1	0	b	—	—	—		
10	29.296	—	-11.7	-3.0	-3.5	14.0	Calm	0	0	b	—	—	—		
Noon	29.290	-10.0	-8.3	-3.0	-4.1	7.2	Calm	2	0	bc	Ci.-s. 1	—	—		
2	29.227	—	-6.0	-5.3	-5.0	1.7	Calm	0	0	bc	Ci.-s. 1	—	—		
4	29.211	-6.2	—	-6.3	-6.0	1.5	Calm	1	0	bc ⊕	—	Thin A.-s. 8, N (mod.)	—		
6	29.155	—	-6.5	-2.2	-2.4	-1.0	Calm	1	0	oc	—	A.-s. 10	—		
8	29.128	—	-7.5	-7.2	-7.0	-7.2	Calm	0	0	og	—	A.-s. 10	—		
10	29.107	—	-9.6	3.0	2.1	3.5	Calm	1	0	og	—	A.-s. 10	—		
Midd.	29.090	—	-4.6	-0.6	-0.8	-1.0	SE, 0-4	7	0-22	ogq	—	S. 10	—		
Mean	29.223	—	—	-3.1	-3.5	—	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 5° 6. / 8 p. 6° 0. } Solar radiation { small black bulb 77° 8. / small bright bulb 33° 2. } Evapn. { I. 7.3 grammes in 24 hours. } Precipn. — in.

round. Ozone, 3. 10 p.m. Summits of western mountains obscured; Str. about 10,000 ft. alt.; much refraction and mirage to W. Ozone, 5. Midd. Str. about 5000 ft. alt.; excessive mirage and refraction; wind gusty. Very fine day, but gradually clouded over. Wind remained calm all day, but sprang up about midnight and blew squally from variable SE. Barometer falling all day. Temperature fairly unsteady.

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22nd.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
				Dry.	Wet.										
2	29.034	—	4.5	3.3	3.4	3.0	E, 5-6	17	28-36	og	—	S. 10	—	Str. down to 1500 feet. Ozone, 8.	
4	29.032	—	5.5	2.0	2.5	1.3	Var. E, 1-5	17	10-28	og + *	—	N. 10	—	Snowing thickly, flakes hard and small; wind variable between NE and SE, and very gusty. Ozone, 4.	
6	29.027	—	8.3	1.9	2.0	1.2	Var. E, 1-5	18	10-25	og +	—	S. 10	—	6 a.m. Wind variable NE to E; brighter look generally; snow ceased about 5 a.m. Ozone, 7.	
8	29.037	—	4.0	1.0	1.0	0.0	ENE, 1-3	13	10-20	og + * ⊙	—	N. 10	—	8 a.m. Flakes very small and hard; very faint halo. Ozone, 9.	
10	29.027	—	2.2	0.9	0.5	3.0	ENE, 3-5	16	18-26	icq +	Cl.-s. 3, NE	A.-cu. 3, S (mod.) A.-s. 1, E (fast) Cu. 8, SE (fast)	—	10 a.m. Thick all round; heavy bank of Cu. to E and S.	
Noon	29.025	2.1	4.0	1.2	1.8	0.0	NE, 4-5	16	20-28	oc +	—	—	—	Noon. Min. temp. at Cape Armitage, -13° 9'. Wind ENE, 3. †. Erebus obscured.	
2	28.988	—	4.9	1.0	1.2	0.3	NE, 5-6	23	28-35	oc +	—	—	—	Noon. Min. temp. at Cape Armitage, -13° 9'. Wind ENE, 3. †. Erebus obscured.	
4	28.971	—	3.2	2.0	2.0	1.5	Var. E, 4-5	18	23-30	bc +	—	—	—	2 p.m. Clear on horizon all round; summits of western mountains obscured.	
6	28.966	—	4.2	3.3	3.6	3.0	Var. E, 3-4	18	20-28	oc	—	—	—	3 p.m. Rain band, 2.	
8	28.951	—	5.0	5.0	5.0	5.0	Var. E, 4-5	14	20-28	oc	Cl.-s. 5	S. 5	—	4 p.m. Clouds of drift rising in patches and curling for some distance northwards.	
10	28.921	—	6.3	3.5	3.8	3.2	ENE, 4-5	21	20-33	oc +	A.-s. 10	S.-cu. 6	—	6 p.m. Quite clear in S and SW; dark and threatening to N.	
Midt.	28.899	—	6.3	2.2	2.8	3.0	E, 5-6	21	25-37	ocq	—	S.-cu. 2, S. 9	—	8 p.m. Wind variable from ENE to ESE; visibility very marked; threatening look to S and SW. Ozone, 10.	
Mean	28.990	—	—	2.1	2.4	—	—	—	—	—	—	—	—	10 p.m. Foot hills visible; western mountains and also summit of Discovery hidden by Str.; islands are clear of cloud. Overcast and cloudy most of the day, with snow early, and drifting. Very strong E and NE wind all day. Barometer falling throughout the day. Temperature fairly steady all day.	

Max. therm. read at { 8 a. 5° 0.  
8 p. 1° 0. Solar radiation { small black bulb 92° 0.  
small bright bulb 38° 2. Evapn. { 1. 5.7 } grammes in  
11. 5.9 } 24 hours. Precipn. — in.

23rd.

2	28.903	—	5.0	2.5	2.9	3.0	ENE, 4-6	20	23-35	ocq	—	S. 10	—	Bands of S.-cu. over western mountains and to SW.
4	28.903	—	6.0	2.6	3.0	2.8	E, 4-6	24	25-37	oq	—	S. 10	—	Getting thick all round.
6	28.905	—	12.5	4.4	4.5	3.0	E by N, 5-7	26	27-44	og +	—	S. 10	—	Came over very thick whilst observing.
8	28.915	—	7.3	4.0	4.0	3.2	NE, 6-7	27	30-42	og + *	—	N. 10	—	Very thick all round. Ozone, 9.
10	28.907	—	4.7	3.5	3.5	2.3	NE, 5-6	21	26-36	og + * ⊕	—	N. 10	—	Snowing slightly; very thick all round; very faint halo, radius 22° 27'.
Noon	28.881	3.4	5.0	3.0	3.0	1.9	NE, 5-6	22	26-36	og + * ⊕ *	—	N. 10	—	Similar conditions.
2	28.862	—	4.5	4.2	4.2	2.0	Var. E, 5-6	26	25-32	og +	—	S. 10	—	Noon. Min. temp. at Cape Armitage, -7° 6'. Wind NE, 3-4. Erebus obscured. o. †.
4	28.813	—	5.1	4.0	4.0	3.8	Var. E, 4-5	21	20-30	og +	—	S. 10	—	3 p.m. Rain band, 5.
6	28.769	—	5.5	4.5	4.5	4.5	Var. E, 3-4	18	15-23	oc +	—	Fr.-cu. 7, NE	—	4 p.m. Appearance of clearing in S and W.
8	28.726	—	5.7	4.0	4.2	3.9	Var. E, 2-5	15	10-26	o + *	—	N. 10	—	6 p.m. Clearing all round; sun gleaming; drift on thermometer; temperature extremely steady.
10	28.668	—	4.9	4.2	4.3	4.2	Var. ESE, 3-4	13	20-25	o + *	—	N. 10	—	8 p.m. Thick all round; snowing and drifting; wind variable E by N to E by S. Ozone, 10.
Midt.	28.625	—	5.3	4.7	4.9	4.9	Var. E, 3-4	14	15-25	o + *	—	N. 10	—	10 p.m. Wind very variable; thick all round, with surface drift.
Mean	28.823	—	—	3.8	3.9	—	—	—	—	—	—	—	—	Midt. Conditions similar to those at 10 p.m.

Max. therm. read at { 8 a. -2° 0.  
8 p. -3° 0. Solar radiation { black bulb 58° 5.  
bright bulb —. Evapn. { 1. 4.2 } grammes in  
11. 3.9 } 24 hours. Precipn. — in.

24th.

2	28.567	—	8.8	7.8	7.8	7.9	Var. NE, 4-5	15	20-30	o + *	—	N. 10	—	Wind very variable and gusty; slight drift.
4	28.559	—	8.5	6.5	6.5	6.6	Var. NE, 4-5	18	25-35	o + *	—	N. 10	—	Drift increased; wind very variable and gusty.
6	28.557	—	8.4	5.0	5.0	3.0	Calm	17	0	o *	—	N. 10	—	Appears to be clearing all round; sun showing through clouds; snowing rather heavily.
8	28.559	—	5.5	5.0	5.0	4.0	SSE, 2-4	7	10-20	oc *	A.-cu. 5	N., Fr.-n. 9, S (fast)	—	8 a.m. Snowing slightly; sun visible through thin clouds overhead. Ozone, 10.
10	28.569	—	7.5	7.2	7.2	5.5	Var. E, 0-1	8	0-12	of *	—	N. 10	—	10 a.m. Wind variable between E by S and ENE; snowing thickly, very small hard flakes; thick fog. Ozone, 6.
Noon	28.581	8.2	10.0	9.8	9.4	8.0	Var. E, 2-4	11	15-22	ofq *	—	N. 10	—	Noon. Conditions similar, but fog thicker. Ozone, 8.
2	28.599	—	10.5	8.5	8.5	7.0	Var. SE, 3-4	15	20-28	ofq *	—	N. 10	—	Noon. Min. temp. at Cape Armitage, -10° 0'. Wind E by N, 3. Erebus obscured; thick all round. oc. †.
4	28.590	—	8.5	7.2	7.2	6.0	Var. SE, 3-4	22	20-27	ofq + *	—	N. 10	—	4 p.m. Appearance of clearing overhead; sun gleaming.
6	28.592	—	9.3	7.0	7.0	6.5	Var. SE, 3-4	15	18-25	ocf +	—	Thin S. 10	—	6 p.m. Deposit of drift on thermometer; clouds detached in zenith; sun gleaming; wind variable from ENE to S.
8	28.601	—	8.0	7.3	7.3	7.2	SE, 2-4	13	10-20	oc +	—	Thin S. 10	—	8 p.m. Land showing up all round; very windy look in SW; drift in Strait. Ozone, 10.
10	28.591	—	7.5	4.8	5.0	5.0	E by S, 2-4	14	15-30	ogq +	—	S. 10	—	10 a.m. and Midt. Slight drift.
Midt.	28.580	—	5.3	4.0	4.5	4.0	E, 2-4	15	15-30	ogq +	—	S. 10	—	Overcast and cloudy all day, with snowfall and strong SE wind. Barometer pretty steady all day. Temperature very steady all day.
Mean	28.579	—	—	6.7	6.7	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -3° 0.  
8 p. -5° 4. Solar radiation { small black bulb 53° 0.  
small bright bulb 12° 0. Evapn. { 1. 2.7 } grammes in  
11. 2.6 } 24 hours. Precipn. { 0.038 in.  
since 8 a.m. 16th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Clouds, Amount and movement.		Remarks.		
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.		Lower.	Aspirator.
				Dry.	Wet.									
2	28.571	—	—	4.5	4.0	4.2	4.0	E, 1-2	8	5-15	og	—	S. 10	<p><b>25th.</b></p> <p>Very clear to the southern extreme of western mountains.</p> <p>Sun shining dimly through clouds; very fine snow falling.</p> <p>Very thick to S; land visible above 6000 feet. Ozone, 8.</p> <p>Appearance of snowing to W and SW; misty appearance generally; ice crystals falling.</p> <p>Noon. Thick all round; foggy generally; ice crystals falling. Ozone, 4.</p> <p>Noon. Min. temp. at Cape Armitage, -9° 8. Wind ENE, 1. ocf. Erebus obscured; temperature falling.</p> <p>2 p.m. Low fog or Str. clouds; sun gleaming faintly; thin formation of fog crystals.</p> <p>4 p.m. Snow or ice crystals falling; western foot hills visible; sun gleaming.</p> <p>4 p.m. Min. temp. at Cape Armitage, -11° 3. Calm. bc. Erebus obscured.</p> <p>6 p.m. Clear to N, with Ci.; very foggy in S and SW.</p> <p>8 p.m. Radius of halo, 22° 4'; clearing generally; ice crystals falling. Ozone, 2.</p>
4	28.565	—	—	4.5	3.8	4.1	3.8	E, 0-1	6	0	og	—	S. 10	
6	28.552	—	—	5.0	4.9	5.0	4.2	ENE, 1-2	9	5-12	o *	—	N. 10	
8	28.550	—	—	5.3	2.0	2.5	0.5	Lt. E airs	7	0	oc	—	A.-s. 9, SW	
10	28.541	—	—	3.0	0.0	0.8	2.6	Calm	4	0	oc →	—	A.-cu. 9, S	
Noon	28.522	4.0	—	2.0	0.2	0.6	3.2	Lt. E airs	3	0	ocf →	—	Thin S. 10	
2	28.503	—	—	2.2	0.5	1.0	3.0	Calm	4	0	ocf	—	Thin S. 10	
4	28.501	1.2	—	2.0	0.4	0.0	11.0	Calm	0	0	ocf ⊕ →	—	Thin S. 10	
6	28.497	—	—	3.2	3.0	3.2	1.5	Calm	0	0	ocf ⊕ →	—	Thin S. 10	
8	28.483	—	—	7.0	7.0	6.5	7.8	Calm	0	0	bc ⊕ →	Ci., Ci.-s. 5, E	S. 8	
10	28.473	—	—	7.7	4.9	5.0	5.1	Calm	0	0	bc	Cl.-s. 4	S. 3	
Midt.	28.459	—	—	7.3	7.0	7.0	7.9	Calm	1	0	bc	Cl.-s. 5	—	
Mean	28.518	—	—	3.1	3.3	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. -1° 5. / 8 p. 2° 0. Solar radiation { small black bulb 72° 0. / small bright bulb 25° 2. Evapn. { 1. 5.0 / 11. 5.0 } grammes in 24 hours. Precipn. — in.

Midt. Some Str. cloud in N; Ci.-s. film over sky; midnight sun visible. Overcast and dull day, with no wind; clearing in evening. Barometer falling steadily all day. Temperature very steady.

2	28.442	—	—	8.7	5.0	5.8	6.0	Lt. E airs	1	0	bc	Ci.-s., A.-s., 4, SE	—	<p><b>26th.</b></p> <p>Some refraction in WSW and WNW.</p> <p>Some Str. in NW, W, SW, and S low down on horizon; slight refraction to SW.</p> <p>8 a.m. Slight refraction; visibility very marked. Ozone, 3.</p> <p>10 a.m. Thickening all round; dark and threatening to S and SW; western mountains becoming obscured in heavy mist.</p> <p>Noon. Very light snow falling; flakes very minute and hard. Ozone, 1.</p> <p>Noon. Min. temp. at Cape Armitage, -23° 8. Wind NE, 1. Erebus obscured.</p> <p>2 p.m. Wind variable E in gusts, and swinging southwards.</p> <p>3 p.m. Rain band, 5.</p> <p>4 p.m. Snow falling; Nim. or high S.-cu. of light colour, detached, in N.</p> <p>5 p.m. Temp. at Cape Armitage, 6° 0; min. -2° 0. Wind SSE, 1. Erebus obscured. ocm. Misty in SSE and S.</p> <p>6 p.m. Foot hills to W visible; sky clear in NW; flakes appear small and hard.</p> <p>8 p.m. All land obscured; wind very squally, but steady in S; drift very squally.</p>
4	28.414	—	—	12.3	9.8	10.0	8.8	Calm	1	0	bc	Ci.-s. 1, A.-s. 4, SE	—	
6	28.401	—	—	10.5	1.0	2.0	0.1	Lt. ESE airs	0	0	bc	Ci.-cu., Ci. 3, SSE	S.-cu., NW (?)	
8	28.381	—	—	7.5	3.0	3.8	1.0	Calm	1	0	oc	Ci.-cu., Ci.-s. 6, SW	S. 2, N	
10	28.371	—	—	4.0	0.0	1.0	8.9	Calm	2	0	oc	Ci.-cu., A.-s. 6	S. 4	
Noon	28.347	6.8	—	4.0	7.2	5.8	10.0	Lt. E airs	6	8-10	o *	—	N. 10	
2	28.364	—	—	3.6	8.0	7.0	10.5	E, 0-1	2	6-12	o *	—	N. 10	
4	28.390	—	—	2.8	7.2	6.4	8.0	SE, 2-3	8	20-25	o ⊕ *	—	N. 10	
6	28.338	—	—	5.5	8.2	7.4	8.8	SE, 3-6	13	20-33	og ⊕ *	—	N. 10	
8	28.345	—	—	6.2	8.0	6.6	7.0	S, 6-7	17	30-40	og ⊕ *	—	S. 10	
10	28.355	—	—	5.0	5.8	5.2	5.8	ENE, 3-4	14	18-20	o	—	S. 10	
Midt.	28.358	—	—	5.0	8.0	7.0	8.0	SE, 3-4	12	18-22	o	—	S. 10	
Mean	28.373	—	—	2.8	1.9	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 0° 0. / 8 p. —. Solar radiation { small black bulb 67° 0. / small bright bulb 27° 2. Evapn. { 1. 4.8 / 11. 4.6 } grammes in 24 hours. Precipn. — in.

thick. Ozone, 4. 10 p.m. Clearing; western mountains visible to 9000 feet alt., Discovery 7000 feet, Black Island about 2000 feet; drift in Strait blowing to N. Ozone, 3. Midt. The Bluff and White Island now visible; Str. as before; appearance of snowing all round; visibility marked. Ozone, 2. Overcast most of the day, with snowfall in afternoon. Wind, calm early, freshening up and blowing strong from Var. SE. Barometer falling to noon, and then remaining more or less steady. Temperature rose and remained steady.

2	28.333	—	—	6.0	8.9	7.0	9.0	E, 3-4	10	18-22	o	—	S. 10	<p><b>27th.</b></p> <p>Similar conditions as at midnight. Ozone, 2.</p> <p>Clearing slightly; break in clouds to NW, SW, and S. Ozone, 4.</p> <p>Clearing overhead; very stormy looking to S and SW. Ozone, 1.</p> <p>Clear to SE; heavy drift in Strait; wind variable E to S and very squally. Ozone, 1.</p> <p>10 a.m. Heavy drift in Strait; very whinly to S and on White Island; wind variable between E and SSE. Ozone, 2.</p> <p>Noon. Heavy squall at noon, and then flat calm; very windy looking to S, SE, and SW. Ozone, 2.</p> <p>Noon. Min. temp. at Cape Armitage, 3° 4. Calm. Str. 10. Erebus obscured; a slight SE breeze before taking observation.</p> <p>4 p.m. Clearer to S, with detached Str. and lumps of Cu. detached. Rain band, 1.</p> <p>6 p.m. Cu. in valleys to W and NW; base and summits of western mountains visible.</p> <p>8 p.m. Western mountains' summits obscured by S.-cu.; Fr.-cu. to S, and some Nim. over and round Discovery.</p>
4	28.322	—	—	7.5	8.0	6.8	8.0	SE, 2-3	10	12-18	o	—	S. 10	
6	28.325	—	—	6.0	9.6	8.0	10.6	NE, 1	7	8-12	oc	—	A.-cu.-s. 10, S (mod.) S. 5	
8	28.345	—	—	6.0	6.9	6.1	7.9	Var. SE, 3-6	6	18-30	ocq ⊕	A.-s. 5	—	
10	28.363	—	—	5.0	0.1	5.6	7.3	Var. E, 3-5	13	20-26	ocq ⊕	—	S. 8, Fr.-n. 4, S (mod.) S. 8, Fr.-n. 2, SW (fast)	
Noon	28.380	10.5	—	5.0	10.0	9.0	11.2	Var. SE, 0-7	9	0-43	ocq ⊕	—	Thin S. 10	
2	28.397	—	—	5.0	8.2	7.5	9.0	SE, 2-3	12	15-23	of	—	Thin S. 10	
4	28.389	—	—	7.3	9.4	8.0	10.8	ESE, 2-3	10	15-25	o	—	Thin S. 10	
6	28.388	—	—	7.0	9.0	7.5	10.0	Var. E, 2-3	11	18-23	o	—	S.-cu. 10	
8	28.393	—	—	6.0	8.2	6.8	8.0	E, 2	11	15-20	oc	—	S.-cu. 10	
10	28.431	—	—	4.5	6.2	5.2	6.0	SE, 2-4	14	20-30	ocq	—	S. 10	
Midt.	28.433	—	—	1.8	3.2	3.0	3.0	E, 2-4	15	20-33	ocq ⊕	—	S. 10	
Mean	28.375	—	—	7.8	6.8	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 10° 5. / 8 p. 12° 0. Solar radiation { small black bulb 56° 0. / small bright bulb 27° 5. Evapn. { 1. 12.2 / 11. 11.7 } grammes in 24 hours. Precipn. — in.

10 p.m. Brown Island clear; masses of Cu. cloud obscuring western mountains; Black Island partially obscured; a dark line of cloud extending from NW to SSW, about 20° alt. Overcast and cloudy all day, with strong to fresh SE winds. Barometer rising most of the day. Temperature higher and steady, falling in evening.

1903—October.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

28th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	28.446	—	2.0	5.0	4.2	4.5	E, 1-3	9	10-25	ocq + *	—	N. 10	—		
4	28.477	—	0.0	2.0	1.5	2.0	E, 2-4	17	15-30	ocq + *	—	N. 10	—		
6	28.510	—	-1.5	0.0	-0.5	0.0	Var. SE, 2-7	18	15-45	ocq +	—	S. 10	—		
8	28.528	—	-1.8	1.6	1.6	2.0	Var. SE, 5-7	19	28-42	oqf +	—	S. 10	—	Thick all round; wind variable from SE to S, and squally. Ozone, 7.	
10	28.552	—	-3.0	0.0	0.0	1.1	Var. ESE, 4-7	19	23-45	ocqf +	Ci.-s. 5	S.-cu. 4, SW (fast)	—	Very squally, wind variable E to SE; sky clearing overhead; no distant land visible.	
Noon	28.582	—	-5.5	-3.1	-3.6	-2.0	NE, 4-5	19	20-27	ocq	Ci.-cu. 6, SW	Cu. 4, det. Cu. 2, SW (fast)	—	Noon. Clearing to SE and generally; drift in Strait; western mountains obscured. Ozone, 4.	
2	28.577	—	-5.5	-1.6	-1.6	1.0	ENE, 4-5	18	20-28	oq	—	A.-cu. 10	—	2 p.m. Detached Cu. passing from SW rapidly.	
4	28.561	-0.1	-4.9	1.3	0.8	4.5	Var. E, 4-6	21	25-33	oq	—	A.-cu. 10	—	3 p.m. Rain band, 1.	
6	28.517	—	-0.2	5.0	4.0	5.2	Var. E, 4-5	20	20-25	o	—	A.-cu. 10	—	4 p.m. Alt. of clouds about 9000 feet; all highest summits to W obscured.	
8	28.511	—	2.2	6.2	5.6	6.5	Lt. E airs	9	5-8	oc	—	S. 8, Fr.-s. 4, S (mod.)	—	4 p.m. Min. temp. at Cape Armitage, -7.4. Wind E, 3-4. Erebus obscured. +. Str. 10.	
10	28.511	—	0.9	2.1	1.2	2.0	SE, 4-5	8	20-30	oc	Ci., Ci.-cu. 1	S. 7	—	6 p.m. Drift on surface of western side of Strait, obscuring bases of western mountains.	
Midt.	28.492	—	-0.2	2.0	1.0	1.7	Var. ESE, 4-5	11	20-25	oc	—	S. 9	—	8 p.m. Clearing to SE; clouds torn and heavy looking generally. Ozone, 2.	
Mean	28.522	—	—	1.7	1.2	—	—	—	—	—	—	—	—	10 p.m. Very ragged Str. over western range; patches of Ci. and Ci.-cu. showing here and there through Str.	

Max. therm. read at { 8 a. 8° 0. / 8 p. 8° 0. Solar radiation { small black bulb 50° 0. / small bright bulb 20° 0. Evapn. { I. 10.9 / II. 10.7 } grammes in 24 hours. Precipn. — in.

Overcast all day, with strong to fresh winds. Barometer rose until noon and then fell again for remainder of day. Temperature fairly steady all day.

29th.

2	28.493	—	0.0	1.6	0.9	1.8	Var. E, 3-4	8	15-20	bc	Ci. 1	S. 8	—	
4	28.453	—	1.0	3.8	2.7	4.6	Var. SE, 4-5	15	20-30	bc +	—	S., S.-cu. 8	—	Heavy gusts intermittently; very ragged appearance of clouds to W; clear to S and SE up to 10° alt.
6	28.450	—	-2.2	-1.2	-1.8	-1.1	ENE, 3-4	16	20-22	bc	Ci., Ci.-cu. 3	S., S.-cu. 4	—	6 a.m. Ci. and Ci.-cu. radiating from N; Str. much broken over western hills.
8	28.460	—	-6.3	-4.8	-5.0	-4.0	ENE, 4-5	15	20-26	bc	Ci.-cu. 5, SW	S. 3, SW	—	8 a.m. Western mountains' summits obscured; clouds look heavy and stormy. Ozone, 6.
10	28.460	—	-8.5	-6.0	-6.2	-5.0	ENE, 5-6	16	28-35	bc	Ci.-s. 5, S	A.-s. 3, S	—	10 a.m. Drift in Strait; sky of very torn and ragged appearance; very white S.-cu. to SE; western mountains' summits obscured.
Noon	28.445	-2.6	-7.4	-2.0	-2.8	0.0	NE, 5-6	21	24-30	bc	Ci.-s. 6, SW	A.-s. 2, SW	—	Noon. Weather is clearing generally; western mountains' summits still obscured; very windy look in sky.
2	28.450	—	-8.0	-0.5	-1.2	2.5	E, 15	20	23-25	oc	Ci.-cu. 7, SW	A.-s. 2, SE	—	2 p.m. Banks of Cu. on western mountains; sun gleaming.
4	28.448	-3.0	-4.0	-1.2	-2.0	-1.0	E by N, 4-5	15	20-25	oc	Ci.-s. 5, SW	A.-s. 4, SE	—	4 p.m. Mantle of Cu. on western mountains; highest peak visible.
6	28.446	—	-4.5	-3.2	-4.0	-3.0	E by N, 3-4	14	18-25	oc	Ci.-s. 6, SW	A.-s. 3, SE	—	4 p.m. Min. temp. at Cape Armitage, -3.0. Wind ENE, 2-3. +. Erebus obscured. bc.
8	28.446	—	-4.6	-1.0	-2.0	-0.8	NE, 1-2	10	10-18	oo	—	A.-s. 8, S	—	6 p.m. Moon visible high in NE.
10	28.453	—	-2.0	1.0	0.0	1.0	NE, 1-2	8	5-10	o	—	S. 10	—	8 p.m. Western mountains obscured
Midt.	28.453	—	0.0	1.0	0.5	1.0	E, 2	7	12	bc	Ci.-s. 3, E	S. 5, E	—	6 p.m. Clearing on horizon all round, fog in valleys and amongst the hills to W and NW.
Mean	28.455	—	—	-1.0	-1.7	—	—	—	—	—	—	—	—	8 p.m. Very windy looking in SW and S; sky breaking in SE. Ozone, 3.

Max. therm. read at { 8 a. 6° 5. / 8 p. 0° 2. Solar radiation { small black bulb 84° 5. / small bright bulb 34° 0. Evapn. II. 10.6 grammes in 24 hours. Precipn. — in.

above 7000 feet; stormy look to SE and S. Ozone, 3. 10 p.m. With exception of upper part of western mountains, land is clear; windy look to S. Midt. Very windy appearance to E. Cloudy and practically overcast all day, with fresh Ely and NEly wind. Barometer steady. Temperature fairly steady.

30th.

2	28.459	—	0.0	4.0	2.2	4.0	E by S, 1-2	8	6-12	bc	Ci.-s. 3	S. 6	—	Much refraction to S.
4	28.468	—	-1.4	3.0	1.4	3.0	Calm	4	0	o	—	S. 10	—	Whirls of driving snow visible to S in Strait; White Island, Bluff, and western mountains obscured.
6	28.489	—	-2.9	-0.5	-1.4	-1.0	SSE, 1	1	0	og	—	S. 10	—	No land visible; drift very thick in squalls. Ozone, 7.
8	28.549	—	-4.5	-3.0	-3.0	-2.2	SE, 5-6	14	20-35	oqf + *	—	N. 10	—	Wind variable, SSE to E, and very squally, there being a heavy squall at time of observation; weather not so thick, sun gleaming.
10	28.615	—	-4.9	-1.0	-1.4	0.0	Var. SE, 2-7	19	10-40	oqm + *	—	S. 10	—	Noon. Brighter appearance generally. Ozone, 6.
Noon	28.651	—	-5.7	-5.0	-5.0	-3.5	SE, 3-5	17	18-28	oqf + *	—	N. 10	—	2 p.m. Dark bank of Cu. in S, SW and W; some clear patches to W.
2	28.693	—	-5.5	-2.0	-2.5	-1.0	E, 3-4	13	20-28	of +	—	Thin S. 10	—	3 p.m. Rain band, 4.
4	28.699	-2.8	-4.5	-2.6	-3.0	-1.8	E, 3-4	14	15-23	og +	—	Thin S. 10	—	4 p.m. Heavy banks of wind-blown Cu. all along to westward; clear patches to SW.
6	28.722	—	-4.2	-2.0	-2.3	-1.5	E, 2-3	15	12-20	og	—	S. 10	—	4 p.m. Min. temp. at Cape Armitage, -9.6. Wind E by S, 4-5; Erebus obscured. Whirlwind clouds to W on mountains. +.
8	28.732	—	-4.0	-1.0	-1.8	-0.8	E, 2-3	11	12-18	o	—	N. 10, S	—	6 p.m. Clearing on horizon all round, fog in valleys and amongst the hills to W and NW.
10	28.746	—	-2.3	-0.8	-1.0	-0.9	Var. E, 2-3	9	9-14	om + *	—	N. 10	—	8 p.m. Overcast and dull, with strong winds all day. Barometer rising all day. Temperature steady.
Midt.	28.761	—	-1.9	-1.0	-1.0	-1.0	Var. SE, 2-3	6	8-20	omq + *	—	N. 10	—	
Mean	28.632	—	—	-1.0	-1.6	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 4° 8. / 8 p. 0° 0. Solar radiation { small black bulb 47° 0. / small bright bulb 16° 0. Evapn. I. 8.7 grammes in 24 hours. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Dry.	Wet.										
2	28.819	—	3.5	2.9	3.0	2.8	ESE, 1-3	12	0-18	bcmq ↗ *	Det. A.-s. 1	Det. S. 1, S. 6, S	—	<p>31st.</p> <p>There has been considerable drift and wind since Midt.; clouds breaking to SW, dark to S.</p> <p>Very squally and variable wind from ESE to S; no land visible during squalls; heavy drift in Strait. Ozone, 7.</p> <p>10 a.m. Surface drift at times; clearing; western mountains visible up to 8000 feet; detached heavy Cu. to SW moving from SE slowly; dark and threatening to S and SW.</p> <p>Noon. Nothing visible; furious squalls and excessive drift and thick fog. Ozone, 7.</p> <p>2 p.m. Appearance of clearing in SW; wind gusty and inclined to shift E<sup>ly</sup>; sun gleaming.</p> <p>4 p.m. Much thicker than at 2 p.m.; thermometers coated in drift. Rain band, 7.</p> <p>6 p.m. Land close to only visible at times; drift soft and cloggy; wind variable, SW to SE.</p> <p>8 p.m. Wind variable, S to WSW; excessive drift; no land visible. Ozone, 10.</p> <p>10 p.m. Wind very variable, S to WSW, and very squally; conditions similar to those at 8 p.m. Ozone, 6.</p> <p>Midt. Wind variable, S to W, and very squally, but not so heavy; clearer generally and inclined to break in S. Ozone, 6. Overcast and blowing a heavy S<sup>ly</sup> blizzard all day. Barometer rising all day. Temperature rising and high.</p>
4	28.821	—	4.2	0.8	1.0	0.4	E by N, 2-3	12	10-20	oemq ↗ *	—	N. 10	—	
6	28.854	—	1.5	1.8	1.4	2.8	Var. SE, 2-3	10	10-22	oemq ↗ *	—	N. 10	—	
8	28.852	—	0.0	3.8	3.0	5.0	Var. SE, 2-6	11	15-30	omq ↗ *	—	N. 10	—	
10	28.853	—	3.0	7.2	6.2	8.2	Var. S, 1	12	8-12	ou	—	S. 10	—	
Noon	28.882	—	2.8	5.0	5.8	5.5	S, 6-8	10	30-52	ogf ↗ *	—	N. 10	—	
2	28.932	—	2.8	5.0	5.0	6.0	Var. S, 4-5	21	20-25	ogf ↗ *	—	S. 10	—	
4	28.943	—	4.2	7.3	7.0	8.0	Var. S, 4-6	16	20-28	ogf ↗ *	—	N. 10	—	
6	28.947	—	7.0	9.0	8.8	9.0	Var. S, 5-7	22	25-38	ogf ↗ *	—	N. 10	—	
8	28.970	—	7.8	8.2	8.2	8.2	Var. SW, 4-7	24	20-40	ogf ↗ *	—	N. 10	—	
10	28.997	—	6.8	11.0	11.0	11.0	Var. SW, 7-10	24	36-58	ogf ↗ *	—	N. 10	—	
Midt.	29.001	—	8.0	9.8	9.8	10.0	Var. SW, 2-7	26	12-40	ogf ↗ *	—	N. 10	—	
Mean	28.906	—	—	5.4	5.2	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 4° 0. / 8 p. 9° 0. } Solar radiation { small black bulb 46° 0. / small bright bulb 22° 0. } Evapn. { I. 5.8 / II. 6.1 } grammes in 24 hours. Precipn. — in.

squally, but not so heavy; clearer generally and inclined to break in S. Ozone, 6. Overcast and blowing a heavy S<sup>ly</sup> blizzard all day. Barometer rising all day. Temperature rising and high.

1903—November.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

1st.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	29.097	—	9.0	11.2	11.2	11.2	Var. SW, 7-9	28	35-50	oqf +2 *	—	—	—	—	—	Wind variable between S and WSW; no land visible; drift excessive; Dines' anemometer more or less choked.
4	29.009	—	10.2	13.0	13.0	13.2	Var. S, 5-8	25	25-50	oqf +2	—	—	—	—	—	Ozone, 7.
6	29.036	—	11.8	13.2	13.0	14.0	SE, 4-7	19	20-40	oqin +	—	—	—	—	—	4 a.m. Wind variable between S and SSW; squalls not so heavy; less drift and no snow falling. Ozone, 8.
8	29.052	—	12.0	13.8	13.1	14.6	SE, 3-5	14	15-28	oq +	—	—	—	—	—	6 a.m. Wind shifted just after 5 a.m.; clearing generally; Brown Island visible at times; drift in Strait. Ozone, 4.
10	29.070	—	12.5	14.0	13.8	15.0	SE, 3-4	17	15-30	oqf +	—	—	—	—	—	8 a.m. Brighter generally; drift in Strait; Brown Island visible; black to S and W. Ozone, 4.
Noon	29.080	13.3	12.8	13.8	13.2	15.0	SE, 3-4	16	20-27	oqf +	—	—	—	—	—	10 a.m. Black and Brown Islands clear; slight drift only.
2	29.083	—	12.3	13.5	13.0	15.0	Var. SE, 3-5	14	20-30	oqf + *0	—	—	—	—	—	Noon. Only near land visible, except at intervals, when portions of Black and Brown Islands showed up; considerable + (snow falling); sun dimly visible at times. Ozone, 6.
4	29.083	—	12.4	13.7	13.0	14.8	Var. SE, 3-4	18	18-23	oqf +	—	—	—	—	—	Noon. Min. temp. at Cape Armitage, -10° 5. Wind SSE, 5. Nim. 10. Erebus obscured. +.
6	29.075	—	12.8	16.0	15.0	16.6	Var. SE, 2-3	9	12-18	of *0	—	—	—	—	—	2 p.m. Land to W and SW visible at times. Wind squally and variable.
8	29.063	—	14.0	15.1	14.3	15.8	Lt. E airs	4	0-5	og	—	—	—	—	—	3 p.m. Rain band, 5.
10	29.044	—	13.5	14.2	13.8	14.0	SSE, 1-3	7	10-22	ocq +	—	—	—	—	—	4 p.m. Land visible all round.
Midt.	29.047	—	11.0	13.2	12.8	12.2	SE, 1-3	15	12-25	ocq	—	—	—	—	—	6 p.m. Appearance of clearing all round; alt. of clouds, 3000 feet.
Mean	29.053	—	—	13.7	13.3	—	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. —, Solar radiation { small black bulb 48° 8. alt. 16° 2. } small bright bulb 30° 0. Evapn. { 1. 5.9 } grammes. Precipn. { 0.180 in. since 10 a.m. 24th ult. }

8 p.m. Low land visible all round up to 3000 feet; gloomy and threatening look generally. Ozone, 9. Midt. Only a very thin film of cloud in zenith; banks of S.-cu. to W and S, with Ci.-s. radiating therefrom. Overcast and foggy most of the day, with strong variable S and SE winds, and drift. Barometer rose until 2 p.m., and then commenced to fall. Temperature high and steady.

2nd.

2	29.026	—	10.0	12.2	11.8	12.0	E by N, 1-3	9	10-23	bcq	—	—	—	—	—	—	Ci. radiating from ENE and WSW; clouds banked to W and S.
4	29.026	—	11.0	17.0	15.3	17.0	E, 1	12	5-10	oc ⊕	—	—	Thin A.-s. 10	—	—	Banks of Ci.-cu. from W to NNW.	
6	29.018	—	10.0	10.9	10.2	11.9	Calm	5	0	o	—	—	A.-s. 10	—	—	S.-cu. above western mountains and to NW.	
8	29.023	—	10.0	15.0	14.0	19.0	Calm	1	0	oc ⊕	—	—	A.-s. 10	—	—	Western mountains quite clear; radius of halo, 22° 3' 30"; clear sky to NW. Ozone, 5.	
10	29.021	—	12.5	17.2	15.5	26.2	Calm	0	0	bc	—	—	Ci.-s. 6	—	—	10 a.m. Slight refraction low down; Erebus smoke working round from NW; Ci.-s. lying NNE and SSW; bank of A.-s. to SE.	
Noon	29.015	23.0	16.0	20.6	18.0	31.8	Calm	3	0	bem	—	—	Ci. 1; Ci.-s. 2	—	—	Noon. Misty generally, but good visibility; some slight Ci. to N, moving slowly to W. Erebus smoke going SSE. Ozone, 3.	
2	29.013	—	16.6	20.8	18.0	35.5	Calm	0	0	b	—	—	—	—	—	Noon. Min. temp. at Cape Armitage, 5° 2. Calm. bc. Erebus smoke going E and then turned S after some distance.	
4	29.006	—	15.0	15.8	14.3	19.2	NE, 3-4	3	25-30	b	—	—	—	—	—	2 p.m. Good visibility; thin Str. to SE.	
6	29.006	—	12.8	14.0	12.5	16.5	NE, 4-5	17	28-35	bc	—	—	—	—	—	3 p.m. Rain band, 1.	
8	28.989	—	12.2	13.8	12.2	14.2	ENE, 3-4	14	28-30	oc	—	—	—	—	—	4 p.m. Bank of Str. in western valleys; considerable refraction.	
10	28.967	—	10.0	13.3	12.2	14.2	NE, 2-3	15	20-25	bc	—	—	—	—	—	6 p.m. Cu. passing; dark and threatening in SE.	
Midt.	28.951	—	8.9	9.1	8.8	10.0	N, 2-3	10	10-15	bc	—	—	—	—	—	8 p.m. Fine Cu. on land to S and SW; cloudy to SE; clear below 1°; misty to W. Ozone, 5.	
Mean	29.005	—	—	15.0	13.6	—	—	—	—	—	—	—	—	—	—	10 p.m. Cu. banked to S and SE;	

Max. therm. read at { 8 a. —, Solar radiation { small black bulb 106° 8. alt. 24° 5. } small bright bulb 56° 5. Evapn. { 1. (melted). } grammes in 24 hours. Precipn.—in.

summit of Black Island obscured; clear sky to N and W. Midt. S.-cu. low down to S and SW, not more than 2° above horizon; a very thin patch of Ci. to NW, alt. 40°. Dull early, but cleared; became again overcast in evening, when a strong NEly wind sprang up. Barometer very steady until 6 p.m., when it fell slightly. Temperature very high, falling towards evening.

3rd.

2	28.937	—	0.2	5.8	5.0	7.2	N, 1-2	7	10-15	bc	—	—	—	—	—	—	Wisps of thin Ci. to N, and some Ci.-s. to S as at Midnight.
4	28.930	—	-5.5	-2.8	-3.0	1.1	N, 1	4	10	bc	—	—	—	—	—	—	Cloud in S almost dispersed.
6	28.921	—	-4.5	4.0	3.5	4.2	N, 3-4	4	25-30	b	—	—	—	—	—	—	—
8	28.926	—	-0.2	3.0	2.1	5.5	E, 4-6	23	22-30	bc	—	—	—	—	—	—	Ci.-s. radiating NW and SE; misty generally. Ozone, 5.
10	28.929	—	1.1	4.2	3.1	7.0	ENE, 4-5	17	28-30	bc	—	—	—	—	—	—	Ci.-s. radiating NW and SE; clouds inclined to bank in NE; land entirely clear of cloud; detached pieces of Ci.-s. to SW.
Noon	28.920	5.2	3.0	7.0	6.0	10.0	ENE, 4-5	15	20-26	bc	—	—	—	—	—	—	Noon. Ci.-s. radiating NW and SE; Cu. on horizon to N; all land clear of clouds. Ozone, 3.
2	28.914	—	6.5	10.7	8.8	15.0	E, 3-1	15	18-25	bc	—	—	—	—	—	—	Noon. Min. temp. at Cape Armitage, -8° 6. Wind NE, 3. Erebus smoke going NNE. Ci. 1, Ci.-s. 1, NWly.
4	28.899	—	7.2	10.5	9.0	18.0	Var. E, 1-2	5	8-12	oc	—	—	—	—	—	—	2 p.m. Ci.-s. running in veins from NW to SE and overspreading sky; detached Cu. on western mountains.
6	28.876	—	6.2	7.2	6.0	9.3	ESE, 1-2	6	10-15	oc	—	—	—	—	—	—	3 p.m. Rain band, 0.
8	28.872	—	—	5.9	5.4	5.8	Calm	2	0	ocv	—	—	—	—	—	—	4 p.m. Thin film of Ci.-s. overspreading the sky, except to S; clear on horizon all round.
10	28.847	—	1.0	10.2	8.8	14.2	Calm	0	0	oc ⊕	—	—	—	—	—	—	6 p.m. Hazy appearance all round; bright blue sky to N.
Midt.	28.810	—	0.0	1.0	1.0	3.0	Calm	1	0	oc ⊕	—	—	—	—	—	—	8 p.m. Very marked visibility, except on western mountains; Ci.-s. rather more NNW and SSE. Ozone, 8.
Mean	28.901	—	—	5.6	4.6	—	—	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. —, Solar radiation { small black bulb 88° 2. alt. 12° 0. } small bright bulb 41° 0. Evapn. 11. 20.4 grammes in 24 hours. Precipn.—in.

10 p.m. Dark to N, E, and SE; misty to W; very clear to S; slight refraction; visibility good; very faint halo. Ozone, 1. Midt. Banks of S.-cu. extending from SE to SW about 1° above horizon; slight refraction; very faint halo. Ozone, 0. Cloudy all day, with fresh ENEly winds, falling calm in evening. Barometer fell slightly. Temperature less steady.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	28.817	—	1.2	3.0	2.8	3.0	Calm	0	0	bc	—	—	—	—	<p>4th.</p> <p>Much clearer overhead; more S.-cu. to S; visibility very good; refraction slight all round. Ozone, 0.</p> <p>4 a.m. Dark and gloomy to S and SW and behind White Island; southern end of western mountains obscured; clear and fine to NW. Ozone, 3.</p> <p>6 a.m. Western mountains obscured down to 5000 ft.; windy looking to SW; dark and threatening to S and SE. Ozone, 3.</p> <p>8 a.m. Foggy over White Island; windy looking to SW; western mountains clearing. Ozone, 3.</p> <p>10 a.m. All clouds appear to have risen. Ozone, 3.</p> <p>Noon. Fine prismatic colour on clouds as they pass sun; A.-s. to SE and E, with very frayed edges. Ozone, 4.</p> <p>Noon. Min. temp. at Cape Armitage, -9° 6. Erebus smoke going NE. Wind NW, 1-2. bc.</p> <p>2 p.m. Ci.-cu. in zenith; Str. all round. Ozone, 3.</p> <p>4 p.m. Ci.-cu. in zenith; western mountains obscured above 6000 ft.</p> <p>6 p.m. Clouds thin, with sun gleaming.</p> <p>8 p.m. All distant land obscured down to about 2000 feet; appearance of snowing in SW, S, and W. Ozone, 5.</p> <p>10 p.m. Str. in S; sun gleaming.</p> <p>Midt. Str. in S, W, and N. Temperature continued to fall all day. Temperature</p>
4	28.801	—	2.0	7.0	6.0	8.8	Lt. N alrs	5	0-8	bc	—	—	—	—	
6	28.783	—	5.9	10.9	9.0	11.8	N, 1	5	10	oc	—	—	—	—	
8	28.758	—	10.0	12.2	11.0	13.5	N, 1	7	10	oc	—	—	—	—	
10	28.727	—	12.2	15.0	13.8	18.8	N, 1-2	7	10-15	bc	—	—	—	—	
Noon	28.708	22.9	14.2	15.4	14.0	18.0	N, 2-3	8	12-18	bc	—	—	—	—	
2	28.680	—	14.8	16.0	14.8	18.0	N, 1-2	5	10-15	bc	—	—	—	—	
4	28.671	—	13.0	14.6	13.5	16.2	NNW, 1-3	3	12-18	oc	—	—	—	—	
6	28.653	—	13.3	15.0	13.5	16.0	N by W, 2-3	6	13-20	o	—	—	—	—	
8	28.639	—	14.0	15.0	13.3	15.0	N, 1-2	7	10-15	o	—	—	—	—	
10	28.610	—	14.0	15.0	13.0	15.0	N, 1-2	7	10-16	bc	—	—	—	—	
Midt.	28.585	—	13.8	14.5	12.9	14.8	N, 0-1	6	5-10	bc	—	—	—	—	
Mean	28.703	—	—	12.8	11.5	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. 12° 9. read at { 8 p. 16° 7. Solar radiation { small black bulb 108° 0. { small bright bulb 49° 8. Evapn. { I. 6.1 } grammes in { II. 10.5 } 22 hours. Precipn. — in.

Very fine clouds all the forenoon; sky gradually clouded over. Fresh Nly breezes. Barometer high and steady.

2	28.583	—	14.0	15.2	13.8	15.8	Calm	3	0	ocg	—	—	—	—	<p>5th.</p> <p>Breaks in clouds to SE; sun gleaming; summits of Black and White Islands obscured, also upper half of western mountains.</p> <p>4 a.m. Break in clouds to S and SSW; very threatening to SW and W; very dark clouds, apparently Nim.</p> <p>6 a.m. Still very dark to W and NW.</p> <p>8 a.m. Dark and threatening to S and SW; drift in Strait; foot hills to W alone visible. Ozone, 5.</p> <p>10 a.m. Clouds thinned shortly after 10 a.m., and Ci.-cu. and A.-cu. were visible through thin Str.; by 10.15 it was again thickly overcast and snowing, flakes small and hard; wind shifted to SE and blew fresh, with surface drift.</p> <p>Noon. No land visible; snow lightly falling. Ozone, 6.</p> <p>2 p.m. Foggy all round; thin hard snow falling.</p> <p>3 p.m. Rain band, 3.</p> <p>4 p.m. Wind gusty, with drift; considerable interval between gusts.</p> <p>4 p.m. Min. temp. at Cape Armitage, -1° 0. Wind ESE, 2-4. Erebus obscured. Str. 10.</p> <p>6 p.m. Appearance of clearing in W and N; wind very squally.</p> <p>8 p.m. Thick all round; no distant land visible. Ozone, 6. Overcast, dull, and foggy, with strong to fresh SEly winds. Barometer unsteady, inclined to rise later. Temperature falling most of the day.</p>
4	28.567	—	13.2	14.2	13.0	15.5	Lt. SE alrs	2	0-3	oc	—	—	—	—	
6	28.569	—	6.9	8.2	7.9	9.0	E by S, 4	5	18-24	bc	—	—	—	—	
8	28.550	—	0.8	2.0	1.8	5.0	E, 3-4	16	18-23	oc	—	—	—	—	
10	28.566	—	0.7	5.0	4.2	7.0	E, 3-4	12	18-22	of	—	—	—	—	
Noon	28.558	—	4.0	5.5	5.0	7.5	SE, 2-3	12	15-20	of*	—	—	—	—	
2	28.576	—	4.2	5.0	4.3	6.5	SE, 1-2	9	10-15	of*	—	—	—	—	
4	28.595	0.5	3.0	0.0	0.0	0.5	ESE, 2-4	8	15-25	ofq + *	—	—	—	—	
6	28.624	—	3.2	1.5	1.7	1.2	ESE, 3-6	15	20-30	ofq +	—	—	—	—	
8	23.649	—	4.5	0.0	0.0	0.2	E, 3-6	16	20-30	ofq +	—	—	—	—	
10	28.664	—	2.3	2.1	2.0	2.0	SE, 3-6	18	25-42	ofq +	—	—	—	—	
Midt.	28.655	—	1.0	3.4	3.4	3.4	S, 3-6	19	25-40	oq + 2	—	—	—	—	
Mean	28.599	—	—	4.9	4.5	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. 15° 2. read at { 8 p. 6° 8. Solar radiation { small black bulb 67° 5. { small bright bulb 30° 0. Evapn. I. 5.9 grammes in 24 hours. Precipn. — in.

visible. Ozone, 6. Overcast, dull, and foggy, with strong to fresh SEly winds. Barometer unsteady, inclined to rise later. Temperature falling most of the day.

2	28.660	—	2.5	4.5	4.5	4.5	SE, 3-6	21	15-40	oqf +	—	—	—	—	<p>6th.</p> <p>Dark looking clouds over western mountains, obscuring them.</p> <p>Heavy drift; whilst taking observations drift stopped for 2 or 3 minutes, and a small portion of sky was visible in S; Ci.-s., but no movement seen.</p> <p>10 a.m. Land beginning to show up all round; dull and stormy look generally. Ozone, 6.</p> <p>Noon. White Island beginning to show up; other land as before, and conditions similar.</p> <p>Noon. Min. temp. at Cape Armitage, -3° 8. Wind ENE, 3. Erebus obscured.</p> <p>2 p.m. Dark and threatening in S; thin soft snow falling.</p> <p>3 p.m. Rain band, 2.</p> <p>4 p.m. Western foot hills visible.</p> <p>6 p.m. Sky cloudless low down on WSW horizon; detached clouds in S and SW.</p> <p>8 p.m. Snow falling; flakes small and soft; no distant land visible. Ozone, 4.</p> <p>10 p.m. Wind shifting from SE to N; at times blowing strong, and then falling calm. Ozone, 4.</p> <p>Midt. Very gusty, but wind steady in direction; snow falling thickly in</p>
4	28.690	—	4.0	6.1	6.0	6.5	SE, 3-6	19	15-35	oqf +	—	—	—	—	
6	28.714	—	5.5	6.8	6.5	7.0	SE, 3-6	17	15-35	oqf +	—	—	—	—	
8	28.739	—	4.0	7.5	7.2	8.0	SSE, 3-5	23	25-30	oqf +	—	—	—	—	
10	28.748	—	6.0	7.8	7.2	9.5	Var. SE, 4-5	13	20-25	omg +	—	—	—	—	
Noon	28.758	9.8	6.5	9.8	8.8	11.2	E, 2-3	14	15-23	og	—	—	—	—	
2	28.753	—	8.2	9.5	8.0	10.8	Var. E, 2-3	13	18-25	o + *	—	—	—	—	
4	28.746	—	4.6	6.6	6.0	8.2	Var. E, 2-4	14	15-25	o + *	—	—	—	—	
6	28.737	—	3.7	8.2	7.5	10.0	Var. E, 3-6	16	25-35	o +	—	—	—	—	
8	28.723	—	6.0	9.8	9.0	10.0	E, 3-4	13	15-22	of + *	—	—	—	—	
10	28.683	—	4.0	9.0	7.0	10.0	Var., 0-6	19	0-32	ofq + 2°	—	—	—	—	
Midt.	28.685	—	6.0	9.5	9.4	10.0	S, 1-6	12	10-30	ofq + 2 *	—	—	—	—	
Mean	28.720	—	—	7.9	7.3	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. —. read at { 8 p. 10° 0. Solar radiation { small black bulb 50° 3. { small bright bulb 31° 2. Evapn. { I. 1.1 } grammes in { II. 6.9 } 24 hours. Precipn. — in.

soft, medium-sized flakes. Ozone, 5. Overcast, dull, foggy, and snowing, with strong to fresh Ely winds. Barometer rose until noon and then fell until midnight. Temperature steady.

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7th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.								Unscreened.		
2	28.673	—	6.0	7.8	7.8	8.0	ESE, 4-7	15	20-45	oqf + <sup>2</sup> * <sup>2</sup>	—	—	N. 10	—	No land visible anywhere; drift excessive; wind very squally. Ozone, 7.
4	28.657	—	2.9	3.2	3.2	3.5	ENE, 5-7	15	28-42	oqf + <sup>2</sup> * <sup>2</sup>	—	—	N. 10	—	Land dimly visible, close to ship; snow soft and very wet. Ozone, 6.
6	28.664	—	1.5	2.2	2.2	2.9	E, 5-6	21	25-32	of + <sup>2</sup> * <sup>2</sup>	—	—	N. 10	—	Wind steadier; snowing more heavily. Ozone, 7.
8	28.689	—	0.5	1.5	1.5	2.5	E, 4-6	17	25-30	of + * *	—	—	N. 10	—	No land visible, except close to; much drift. Ozone, 5.
10	28.700	—	1.5	3.5	3.5	4.5	ENE, 4-6	21	18-25	oq + * *	—	—	N. 10	—	Land clearer close to ship, no distant land visible. Ozone, 5.
Noon	28.707	4.5	2.5	4.5	4.5	5.5	ENE, 4-5	15	22-28	oqf + * *	—	—	N. 10	—	Ozone, 4.
2	28.717	—	3.2	4.5	4.2	5.0	ENE, 4-5	18	20-27	o + *	—	—	S. 10	—	Noon. Min. temp. at Cape Armitage, 1° 8. Wind ESE, 1-2. Erebus obscured. Fog. + * *
4	28.714	—	3.5	5.0	4.7	5.2	ENE, 4-6	15	20-30	oqf + *	—	—	S. 10	—	2 p.m. Black, Brown, and White Islands visible between squalls.
6	28.701	—	3.6	7.8	7.0	7.0	NE, 4-7	20	25-33	oq + <sup>2</sup> * *	—	—	N. 10	—	3 p.m. Rain band, 5.
8	28.687	—	3.2	10.0	8.2	10.5	E, 3-4	12	18-24	oc + * *	Cl.-cu. 2, SW	—	N. 9, SW	—	4 p.m. Dark and foggy in S and E. Ozone, 7.
10	28.678	—	5.0	6.2	6.1	6.2	NE, 4-5	18	25-32	oc + *	—	Cl. 5	S. 4, SW	—	6 p.m. Soft wet snow falling in large flakes. 8 p.m. Sky breaking in zenith; sun gleaming; brighter generally. Ozone, 6.
Midt.	28.677	—	5.5	9.8	9.8	9.8	E, 2-3	15	20-25	bc	—	Cl. 2	S. 4, SW	—	10 p.m. Heavy and dark still to S, SE, E, and SW, but White Island can be seen; overhead sky is clearing to blue, flecked with very finely divided feathery Cl. Ozone, 5.
Mean	28.689	—	—	5.5	5.2	—	—	—	—	—	—	—	—	—	Midt. Clear now on southern horizon, and can see Bluff, White Island, and all the nearer western hills and islands; dark sky overhead; Str. still a bit to N; dark over SE, E, and western mountains, but breaking everywhere; drift almost stopped. Ozone, 4.

Max. therm. { 8 a. 9° 5. Solar radiation { small black bulb 60° 5. Evapn. { 1. 2.4 } grammes in Precipn. 0.045 in. since read at { 8 p. 10° 0. { small bright bulb 27° 2. { 11. 7.5 } 20 hours. 6 p.m. 1st.

8th.

2	28.677	—	5.2	9.9	8.9	10.4	E by N, 2-3	19	15-25	oc *	Fr.-cl.-s. 4	—	N. 6	—	Still clear on horizon S of the Bluff, but heavy clouds obscure all the western mountains.
4	28.686	—	7.0	11.0	10.0	12.0	E by S, 1-2	13	8-20	o *	—	—	N. 10	—	4 a.m. No land visible, except that near ship.
6	28.695	—	10.0	10.9	10.1	12.2	E by S, 1-2	8	5-10	o	—	—	S. 10	—	6 a.m. White Island and Bluff clear again, the former with the sun on it; no more snow falling.
8	28.692	—	10.0	13.2	12.2	15.0	Var. E, 0-4	2	8-20	oc	—	—	S.-cu. 9, SW (fast)	—	8 a.m. Western mountains' foot hills and Brown Island the only distant land visible. Ozone, 3.
10	28.688	—	11.5	13.4	13.0	15.5	ENE, 1-2	10	10-18	of *	—	—	N. 10	—	10 a.m. No distant land visible; snowing thickly, flakes small and soft; foggy generally.
Noon	28.687	—	11.2	16.0	15.2	17.5	E, 1-2	10	10-15	of *	—	—	N. 10	—	Noon. Weather similar; sun shining through.
2	28.680	—	14.4	15.8	15.2	17.5	E, 2-3	7	8-15	of + * *	—	—	N. 10	—	2 p.m. Snow falling thickly in soft flakes. 3 p.m. Rain band, 7.
4	28.671	—	14.5	16.8	16.0	18.0	E by N, 2-3	10	12-18	of + * *	—	—	N. 10	—	6 p.m. Wind vane was pointing northwards on going out, and went by eastwards to southwards and then westwards, finally stopping in SE.
6	28.668	—	13.7	17.5	16.8	18.5	Var. 0-2	7	8-12	ofq + <sup>2</sup> * <sup>2</sup>	—	—	N. 10	—	8 p.m. Very thick indeed; drift excessive; no land visible. Ozone, 6.
8	28.651	—	16.0	17.0	17.0	17.2	S, 5-8	13	28-45	ofq + <sup>2</sup> * <sup>2</sup>	—	—	N. 10	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	28.680	—	—	14.2	13.4	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. 13° 2. Solar radiation { small black bulb 67° 5. Evapn. { I. 4.1 } grammes in Precipn. 0.024 in. since read at { 8 p. — { small bright bulb 36° 2. { II. 8.3 } 22 hours. 4 p.m. 7th.

9th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	28.693	—	11.8	12.8	12.2	13.5	SE, 2-7	23	10-47	bc + <sup>2</sup>	—	—	S. 9	—	Average velocity of wind since 8 p.m. yesterday.
10	28.704	—	11.2	13.0	12.0	16.0	SE, 2-6	23	20-25	oq + *	—	—	S. 9	—	Very squally, wind seems inclined to shift more E by; much drift; White Island and parts of western mountains visible; heavy banks of clouds in W, apparently Nim. Ozone, 6.
Noon	28.678	—	9.8	15.0	14.0	17.1	E, 4-6	17	20-32	ocq + *	—	—	S. 6, A.-s. 2, SSW	—	Noon. Clearing generally, blue sky and broken clouds to S, SE, and SW; land becoming visible; drift in Strait.
2	28.685	—	11.2	13.0	12.2	13.5	ESE, 2-6	18	15-30	ocq + *	—	—	S. 0	—	2 p.m. Not so much drift; White Island only partly visible; Brown Island and Mt. Discovery visible, both having detached Str. hanging over them; not so bright; wind inclined to go S. Ozone, 5.
4	28.678	—	10.8	12.2	11.5	12.5	ESE, 5-8	19	28-45	ocq + *	—	—	S. 9	—	4 p.m. Very heavy drift, no land visible, except that close to. Ozone, 6.
6	28.671	—	9.6	12.2	11.5	12.2	E, 2-4	21	18-23	ocq + *	Cl.-cu. 3	—	Cu. 5	—	6 p.m. Weather brightening generally; all land visible, except small upper portion of western mountains; a few small pieces of detached Cl. in S and SW.
8	28.671	—	11.5	14.5	14.0	10.0	ENE, 3-4	12	18-23	bc + *	Cl.-cu. 2, S	—	A.-s. 4, S.-cu. 1, S	—	8 p.m. Convex "mare's tail" Cu. clouds in SW; clouds windy looking and ragged
10	28.661	—	7.5	8.0	7.5	8.5	ENE, 3-4	14	18-24	bc	Cl.-cu. 1, S	—	A.-s. 3, S	—	10 p.m. Weather much brighter and more promising; sun shining; all land except small upper portion of western mountains visible. Ozone, 5.
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	28.680	—	—	12.6	11.0	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. 22° 4. Solar radiation { small black bulb 64° 0. Evapn. { I. 4.5 } grammes in Precipn. 0.03 in. since read at { 8 p. 15° 6. { small bright bulb 34° 2. { 11. 5.4 } 24 hours. 4 p.m. 8th.

in W; western mountain range above 8000 feet obscured in A.-s. cloud. 10 p.m. Weather much brighter and more promising; sun shining; all land except small upper portion of western mountains visible. Ozone, 5.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	28°612	—	2·4	10·1	10·0	10·4	Calm	—	0	b	—	—	—	Ozone, 5.	
8	28°603	—	11·4	11·4	11·2	21·8	Calm	2	0	b	—	—	—	Weather during night seems to have remained calm and fine; light Cl.-s. over western mountains.	
10	28°603	—	8·5	15·5	13·5	17·5	Lt. var. airs	1	0	b	—	—	—	10 a.m. Good visibility; slight refraction to S.	
Noon	28°594	—	10·1	15·0	13·5	24·0	Calm	1	0	b	—	—	—	—	
2	28°583	—	12·5	17·0	14·2	21·5	Calm	6	0	b	—	—	—	—	
4	28°583	—	8·5	15·5	13·2	21·5	SE, 1-2	1	—	b	—	—	—	2.30 p.m. Visibility good; refraction to W; small detached Cu. in Strait, also on the Bluff, and White Island.	
6	28°577	—	13·0	14·2	13·2	18·0	SE, 1-3	10	—	b	—	—	—	3.30 p.m. Temp. at Cape Armitage, 12°·1; min., -1°·2. Erebus smoke going N <sup>y</sup> . b. SE <sup>y</sup> airs, 1-2. Mist clouds hanging over the western glaciers.	
8	28°575	—	10·8	12·2	11·2	14·6	N, 2	4	—	b	—	—	—	—	
10	28°568	—	7·4	14·2	13·2	15·5	N, 1-4	6	—	oc	A.-s. 5, SW	S. 3, NE (?)	—	4 p.m. Very small pieces of detached Cu. over western mountains and the Bluff.	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	28°589	—	—	13·9	12·6	—	—	—	—	—	—	—	—	6 p.m. Very thin layer of detached Str. between White Island and the Bluff, and very small detached Cu. or Str. on western mountains. Ozone, 2.	

Max. therm. read at { 8 a. 13°·9, 8 p. 21°·2. Solar radiation { small black bulb 102°·0, small bright bulb 53°·0. Evapn. { 1. 5·9 } grammes in 11. 17·1 } 24 hours. Precipn. — in.

10th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	28°601	—	13·8	18·0	17·8	19·0	NE, 3-4	—	—	o*	—	N. 10	—	Very little land visible, even close at hand. Part of the Robinson anemometer found worn right through; took head off for repairs.
8	28°624	—	11·8	12·0	11·8	18·0	S, 3-5	—	—	o†*	—	N. 10, S	—	8 a.m. Slight break in Str. to S; sun gleaming; all distant land obscured; sky totally overcast, and some N <sup>y</sup> wind, which appears to have continued during the night, but in no great force, and some drift; later, snow began to fall, but not much before 6 a.m.
10	28°681	—	15·8	18·0	17·5	—	SSE, 3-6	—	28-38	oc†*	—	N. 9	—	10 a.m. Sky showing from S to SE; all land obscured, except that close to; sun gleaming through clouds.
Noon	28°711	—	12·0	19·8	19·0	21·0	S, 4-8	—	25-47	bcq†*	Cl.-s. 4	A.-s. 5, S	—	Noon. Sun gleaming brightly; clouds breaking in S and SE; very dark and stormy looking low down in N.
2	28°779	—	18·6	21·2	19·2	23·0	Var. SE, 2-4	—	23-28	ocq	—	S. 9, S	—	2 p.m. Sky again overcast, and appearance threatening generally; some scud moving rapidly from S; western foot hills, Discovery (except summit), and Brown Island visible; White Island only partially visible; no drift. Ozone, 6.
4	—	20·5	—	—	—	—	—	—	—	—	—	—	—	4 p.m. Min. temp. at Cape Armitage, 2°·0. Wind Ely, 2-3. o. * Nim. 10. Clear only on SE horizon. 6 p.m. All distant land visible, except one or two peaks in western mountains; very ragged clouds; Fr.-s. hanging over summit of Mt. Discovery; dark cloud over Bluff; small detached Cl.-cu. about in W. Ozone, 3. 8 p.m. Detached ragged Cu. and Str. in NW round to SW and S; Discovery bathed in sharply defined convex Cu. cloud and ragged Str. about summit. 10 p.m. White Island obscured; heavy bank of Str. coming up from S. Ozone, 6.
6	28°773	—	13·0	21·0	19·0	22·2	Var. E, 0-3	—	15-25	ocq	Cl.-s. 3, W	A.-s. 5	—	—
8	28°784	—	18·5	21·0	19·1	23·2	E, 2-3	—	12-23	bcq	Cl.-s. 2	A.-s. 5	—	—
10	28°809	—	15·0	15·8	15·2	17·5	S, 2-3	—	20-25	bcq†*	Cl.-s. 3	A.-s. 3, S (slow)	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	28°720	—	—	18·4	17·3	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 20°·0, 8 p. —. Solar radiation { small black bulb 107°·0, small bright bulb 55°·0. Evapn. { 1. 10·1 } grammes in 24 hours. Precipn. — in.

11th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6, 15	28°807	—	14·5	19·9	18·4	20·5	SE, 2-3	12	20-25	b	Cl. 1	—	—	Rolling masses of Str. still hanging on Bluff and parts of western mountains, also in the direction of Erebus; very little Cl. to NW. Average wind velocity since 10 p.m. yesterday, 12 miles per hour.
8	28°812	—	12·0	18·0	17·3	20·5	S, 0-1	6	0-8	bc	—	Det. Fr.-cu.-s. 3, SW (rapid)	—	8 a.m. Cl.-s. and Str. in SE and S—the latter covers the upper levels of White Island—also in SW and W, obscuring upper half of Mt. Discovery and all but the foot hills of western mountains.
10	28°841	—	16·8	20·0	19·0	21·0	S, 1-3	6	23-27	ocq†*	Cl.-s. 3	A.-s. 6, S (rapid)	—	10 a.m. Western foot hills and parts of White Island and Brown Island visible; Bluff obscured in heavy dark rolling mass of Str. Ozone, 6.
Noon	28°855	—	19·0	24·8	22·3	24·0	Var. SE, 2-4	12	22-32	bcq†*	—	A.-s. 9, SW	—	Noon. Ragged Cu. and S.-cu. to S; upper parts of White Island and Black Island obscured; Mt. Discovery obscured also; western mountains' foot hills visible; Bluff dimly visible.
2	28°872	—	20·6	23·2	21·2	24·2	Var. SE, 2-4	13	23-30	ocq	—	A.-s. 9, SW	—	2 p.m. Western foot hills, bases of White and Brown Island, and lower part of Discovery visible; Bluff obscured, but outlined by heavy mass of dark cloud; some Fr.-s. moving SW rapidly.
4	28°843	—	21·2	23·5	21·2	24·0	ESE, 2-4	11	21-29	ocq	—	A.-s. 10, SW	—	—
6	28°823	—	20·0	20·2	20·0	25·0	Var. S, 5-0	15	35-57	ocq†*	—	N. 10	—	—
8	28°853	—	19·0	21·5	20·2	22·4	S, 3	16	20-24	bc†*	—	Det. A.-s. 2; A.-s. 2; S.-cu. 2, SW	—	—
10	28°844	—	18·8	22·0	20·5	21·8	SE, 1	7	15-18	oc	—	A.-s. 8; S.-cu. 1	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	28°839	—	—	21·5	20·0	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 21°·0, 8 p. —. Solar radiation { small black bulb 97°·1, small bright bulb 54°·0. Evapn. — grammes. Precipn. — in.

12th.

4 p.m. Str. touches and obscures summit of White Island; obscures also Bluff, upper half of Discovery, and all but foot hills of western mountains; clouds in SW and W broken and ragged, as well as windy looking; breaks in sky to W and S, and there the sun is shining. 6 p.m. All land obscured, except that close to, and that at times during squalls is only dimly visible; excessive drift prevents cloud movement being seen. Ozone, 8. 8 p.m. Black Island enveloped in dense Cu. storm-cloud; nearly the whole of White Island in Str.; Mt. Discovery also wrapped in a dense convex storm-cloud; upper elevation of western mountains also obscured. 10 p.m. Conditions similar to those at 8 p.m. Ozone, 7.

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13th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.								Unscreened.		
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6.15	28.881	—	14.5	15.2	14.8	16.3	SE, 3-4	13	25-28	bc ↗	—	—	—	—	—
8	28.882	—	12.5	15.0	14.0	17.5	Var. NE, 3-6	16	20-38	bcq ↗	—	—	—	—	—
10	28.876	—	13.8	20.0	19.2	—	Var. S, 4-7	15	33-43	bcq ↗	—	—	—	—	—
Noon	28.876	—	18.8	21.0	20.0	24.6	S, 4-7	23	25-42	bcq ↗	—	—	—	—	—
2	28.895	—	19.6	22.2	20.5	25.0	S, 1-4	25	23	bcq ↗	—	—	—	—	—
4	28.893	21.5	20.0	26.0	24.2	25.0	Var. SE, 4-7	8	25-42	bcq ↗	—	—	—	—	—
6	28.899	—	17.8	19.5	17.5	21.5	E, 1-3	19	27-30	ocq	—	—	—	—	—
8	28.922	—	16.8	19.0	17.0	20.0	Var. SE, 3-5	20	18-30	bcq	—	—	—	—	—
10	28.926	—	9.0	9.8	9.2	9.8	Var. E, 4-7	19	33-43	ocq ↗	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	28.894	—	—	18.6	17.4	—	—	—	—	—	—	—	—	—	—
Max. therm. read at		{ 8 a. 22°·8. 8 p. —.		Solar radiation		{ small black bulb 103°·5. small bright bulb 54°·8.		Evapn. — grammes.		Precipn. — in.					

and western range; rolling masses of Cu. obscuring two-thirds of Erebus and Terror. 6 p.m. Scud apparently coming from W rapidly; Bluff visible, also islands; much clearer to S, but part of western range still obscured. Ozone, 6. 10 p.m. Heavy surface drift; Bluff enveloped in mass of white cloud; detached Cu. in SW; distant land partially obscured. Ozone, 4.

14th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	28.966	—	5.2	18.8	17.8	21.0	E, 0-2	17	0-15	bc	—	—	—	—	—
10	28.975	—	16.5	19.8	16.5	28.4	Lt. E airs	5	0-4	bc	—	—	—	—	—
Noon	28.972	—	16.0	20.8	18.0	27.5	Calm	0	0	bc	—	—	—	—	—
2	28.962	—	20.0	22.2	19.5	30.5	Lt. E airs	3	10-12	bc	—	—	—	—	—
4	28.958	—	17.0	18.0	16.2	21.5	E, 0-1	2	15-18	bc	—	—	—	—	—
6	28.960	—	16.8	21.2	19.2	26.5	E, 0-1	5	10-15	bc	—	—	—	—	—
9	28.966	—	18.0	19.0	18.0	21.4	E, 1-2	5	5-14	b	—	—	—	—	—
10	28.964	—	12.8	18.0	15.6	20.6	E, 1-2	10	18-20	b	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	28.965	—	—	19.7	17.6	—	—	—	—	—	—	—	—	—	—
Max. therm. read at		{ 8 a. 19°·6. 8 p. —.		Solar radiation		{ small black bulb 112°·3. small bright bulb 62°·0.		Evapn. I. { 26.1 grammes in 24 hours.		Precipn. — in.					

other land clear; roll Cu. on northern horizon. 2 p.m. Refraction W and SW; visibility good; Cu. hanging about Discovery, but less cloud elsewhere; all distant land clear. Ozone, 5. 4 p.m. Refraction as at 2 p.m.; A.-cu. radiating SW and NE; tufts arranged in parallel lines. Ozone, 1. Erebus smoke going NE. 6 p.m. Refraction as at 2 p.m. and in S; Ci.-s. radiating N to zenith; a few rolling white clouds and detached Fr.-s. hanging about western mountains, and thin layer of light Str. in S, low down. Ozone, 2. 9 p.m. A.-s. and Cu. (windy and broken) about southern end of western mountains and Mt. Discovery; A.-s. in SW, S, and SE. 10 p.m. Some Ci.-s. about 15° above horizon all round from S to NW, no other clouds about; all land clear; refraction from SW to NW. Ozone, 3. [No observation at 8 p.m.]

15th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	29.020	—	4.1	13.0	12.2	11.9	Calm	3	0	bc	—	—	—	—	—
8	29.019	—	7.7	10.5	10.0	14.0	Calm	0	0	bc	—	—	—	—	—
10	29.012	—	9.9	18.0	17.0	21.0	Calm	0	0	c	—	—	—	—	—
Noon	29.003	—	12.0	20.8	19.4	23.6	Lt. N airs	2	0-3	bc	—	—	—	—	—
2	28.985	—	20.0	21.5	20.0	25.0	Calm	2	0	oc	—	—	—	—	—
4	28.959	—	18.5	19.5	18.2	22.2	Lt. E airs	2	0-3	oc	—	—	—	—	—
6	28.952	—	17.5	18.2	17.2	23.0	Calm	1	0	c	—	—	—	—	—
8	28.944	—	14.5	15.5	15.2	15.8	Lt. S airs	1	0-2	ocq *	—	—	—	—	—
10	28.939	—	11.0	12.5	12.0	13.5	Calm	0	0	oc *	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	28.981	—	—	16.6	15.7	—	—	—	—	—	—	—	—	—	—
Max. therm. read at		{ 8 a. 19°·6. 8 p. 23°·8.		Solar radiation		{ small black bulb 100°·2. small bright bulb 53°·2.		Evapn. — grammes.		Precipn. — in.					

4 p.m. Thin Str. now obscuring upper part of Bluff; dark S.-cu. to W; land visible as at 2 p.m. Ozone, 4. 6 p.m. Clouds rapidly changing in form from S.-cu. to Ci.-cu. and Fr.-cu., and then back again to S.-cu., heavy, dark, compact masses of S.-cu. extending from SW to NE in arc; Bluff obscured. Ozone, 4. 8 p.m. The clouds have very much the appearance of S.-cu., but a little snow is falling in fair sized flakes, and it is therefore called Niimi. 10 p.m. Ozone, 3.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, sec p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16th.
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.009	—	11.2	12.3	11.5	15.0	ESE, 1-2	7	5-14	bc	—	—	A.-cu. 5, N	—	Thin A.-s. lines along and in front of western mountains, above Brown Island, and across Discovery; slight smoky cloud over Bluff; Str. just showing up behind White Island. Average wind velocity since 10 p.m. yesterday, 7 miles per hour.	
10	29.029	—	11.5	13.0	11.5	17.4	SE, 2-4	12	5-22	bq →	—	—	—	—	10 a.m. Slight surface drift; lines of thin Str. and A.-s. still hanging about western mountains and over Bluff; all the rest of sky clear. Ozone, 4.	
Noon	29.041	—	12.2	13.2	12.0	17.5	Var. SE, 2-4	12	5-20	bq →	—	—	—	—	Noon. Str. obscuring middle third of western mountains; thin A.-s. in SW across front of Mt. Discovery.	
2	29.061	—	12.5	14.5	12.8	19.5	E, 1-2	8	5-10	b	—	—	—	—	2 p.m. Line of Str. just above western foot hills, and crossing Mt. Discovery about its centre; heavy mass of clouds to N. Ozone, 5.	
4	29.069	—	12.2	13.2	12.2	17.5	ESE, 1-3	12	8-15	bc →	Ci.-s. and Cu. 1	—	—	—	4 p.m. Lines of Str. still about western range; very slight surface drift.	
6	29.084	—	9.0	16.0	15.0	15.0	ENE, 1-3	18	10-20	bc →	Ci.-cu. 1	A. and S.-cu. 3, NW	—	—	6 p.m. The dark mass of S.-cu. slowly coming up from NW can now be seen from the screen.	
8	29.102	—	8.5	10.1	8.8	10.5	ENE, 2-4	11	5-23	bcq →	Ci.-cu. 1, (?) NW	A. and S.-cu. 6, NW	—	—	8 p.m. Weather much the same; clouds all appear to be moving in the same direction, i.e., from NW, very slowly; a little Ci.-cu. near the sun showed iridescent colouring, but only faintly; the surface drift is only slight; the clouds appear to be all the same down to the horizon. 10 p.m. Bluff and all islands clear; summit of Discovery obscured, and all western mountains, except foot hills; clouds very compact in N and NW, but appear to be the same down to the horizon. Ozone, 6.	
10	29.110	—	9.2	11.5	9.5	11.5	ENE, 1-2	19	5-15	eq	Ci.-cu. 1, (?) NW	A.-s.-cu. 7, NE	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.063	—	—	13.0	11.7	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 14° 9. / 8 p. —. Solar radiation { small black bulb 97° 0. / small bright bulb 47° 4. Evapn. — grammes. Precipn. — in.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17th.
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.188	—	0.7	6.5	6.2	7.0	NE by E, 3-4	17	15-23	ocg	—	—	S., A.-s. 10, NNE	—	Clouds touch summit of Bluff, and just obscure summit of Mt. Discovery and upper portions of western mountains. Average wind velocity since 10 p.m. yesterday, 17 miles per hour.	
10	29.214	—	5.1	8.2	8.0	10.0	E by S, 3-4	16	15-24	ocqg	—	—	S. 10, NE	—	10 a.m. Ozone, 4.	
Noon	29.228	—	7.4	9.3	9.0	10.8	ENE, 3-4	14	16-25	ocqg → *	—	—	N. 10	—	Noon. All land to W, NW, and N obscured; in SW, S, and SE it is imperfectly visible.	
2	29.234	—	7.2	8.2	8.0	9.8	ENE, 1-3	13	10-17	ocq → *	—	—	N. 10	—	2 p.m. No distant land visible; sun gleaming through clouds faintly; no movement of clouds can be seen; snow falling in small hard flakes. Ozone, 5.	
4	29.241	—	7.0	9.0	8.0	10.5	ENE, 1-3	15	13-18	ocq	—	—	S. 10	—	4 p.m. White Island and base of Bluff and Black Island visible; sun gleaming brighter through clouds. Ozone, 7.	
6	29.248	—	7.2	8.5	7.8	9.5	ENE, 1-3	18	10-20	ocq →	—	—	S. 10	—	6 p.m. Clearing all round; all islands, base of Mt. Discovery, western foot hills, and some parts of western range visible. Ozone, 6.	
8	29.250	—	7.0	8.0	7.0	9.0	E by N, 3-4	17	15-24	bc →	Ci.-s. 7	—	—	—	8 p.m. Clouds look stormy and windy about Discovery; middle third of western mountains wrapped in dark Str.; Fr.-a.-s. in SW and SE; thin film of A.-s. over sky.	
10	29.246	—	6.2	7.2	6.2	7.5	ENE, 1-3	12	10-15	eq	Ci.-s. 9	—	—	—	10 p.m. Weather improving; thin film of Ci.-s. all over sky; all distant land visible; lines of Str. still at middle height of western mountains; some detached Fr.-s. about SW and W. Ozone, 4.	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.231	—	—	8.1	7.5	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 11° 6. / 8 p. 9° 5. Solar radiation { small black bulb 51° 1. / small bright bulb 27° 7. Evapn. — grammes. Precipn. — in.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18th.
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.199	—	5.2	15.6	14.8	20.0	Calm	7	0	bc	—	—	Ci.-s. 5	—	The Ci.-s. is spread as an exceedingly thin film all over the sky, being thinner than last night; a thin band of Str. can be seen among the western mountains above foot hills; there are also two or three streaks of it in N; considerable refraction in SW, also in S and SE; average wind velocity since 10 p.m. yesterday, 7 miles per hour.	
10	29.201	—	13.0	17.0	14.8	26.6	Calm	0	0	bc ⊕	—	—	Ci.-s. 4	—	10 a.m. The film of Ci.-s. does not so cover the sky as at 8 a.m.; the layers on the western mountains have increased to some extent, and intersect the range in the middle; Fr.-s. to SW; much refraction to SW.	
Noon	29.196	—	17.0	17.2	14.5	27.0	Lt. E airs	0	0	bc ⊕ ○	—	—	Ci.-s. 3	—	Noon. Solar corona and halo; refraction everywhere.	
2	29.192	—	15.5	18.2	16.0	25.0	Calm	1	0	bc	—	—	Ci.-s. 2	—	2 p.m. Good visibility; no refraction. Ozone, 7.	
4	29.188	—	15.8	18.0	15.5	25.0	Calm	0	0	bc	—	—	Ci.-s. 2	—	4 p.m. Good visibility; no refraction; detached Cu. over Black Island; line of Str. over western foot hills. Ozone, 6.	
6	29.192	—	17.2	19.0	17.2	32.0	Calm	0	0	bc	—	—	Ci.-s. 2	—	6 p.m. Ozone, 3.	
8	29.188	—	12.8	15.3	13.0	19.4	E, 1-2	3	10-16	bc ⊕	—	—	Ci.-s. 2	—	8 p.m. The Ci.-s. most of the day has radiated in lines from the N; some layers of Str. about western mountains; odd Fr.-s. in SW; solar halo.	
10	29.184	—	12.0	14.2	11.5	17.5	E, 0-1	9	10-15	bc	—	—	Ci.-s. 2	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.193	—	—	16.8	14.7	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. — / 8 p. 19° 0. Solar radiation { small black bulb 100° 8. / small bright bulb 51° 0. Evapn. — grammes. Precipn. — in.

1903—November.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

19th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.		Upper.	Lower.		
				Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.167	—	-2.2	17.8	15.8	—	SE, 1-2	3	10-16	bcv ⊕	—	—	—	—	There appears to have been no change in the weather during the night; all distant land clear. Average wind velocity since 10 p.m. yesterday, 3 miles per hour.
10	29.161	—	16.8	18.0	14.6	22.2	E by S, 2-3	7	12-20	bcvq	—	—	—	—	10 a.m. Ci.-s. radiating WNW and ESE; very light → in gusts.
Noon	29.150	—	12.1	19.0	16.2	—	E by S, 2-3	7	15-24	bcvq	—	—	—	—	Noon. Some Str. on western mountains below summit.
2	29.156	—	17.4	20.0	17.2	23.5	E by S, 1-3	7	10-28	bcq ⊕	—	—	—	—	2 p.m. Ci.-s. radiating WNW and ESE; line of Str. in middle portion of western mountains.
4	29.161	—	17.8	19.0	17.4	24.0	SE, 2-3	3	10-20	bcqv	—	—	—	—	4 p.m. A.-s. obscuring summits of western mountains; there has been some drift since last observation.
6	29.164	—	15.8	18.2	15.2	22.5	Var. E, 0-2	15	10-13	bcq ⊕	—	—	—	—	6 p.m. Mock sun at N side and upper edge, the latter not so clear as the former; upper half of western mountains and Discovery obscured in Str.
8	29.171	—	16.4	17.0	14.5	19.9	ENE, 2-3	8	10-15	bc ⊕	—	—	—	—	8 p.m. A.-s. spreading over from WNW in SW towards SE; Ci. radiating from NW; sky dull and smoky looking to northward.
10	29.169	—	15.5	17.2	14.0	19.0	E, 0-1	5	0-5	bc	—	—	—	—	10 p.m. Ci.-s. radiating NW and SE; some dark lines of Str. about in W and SW; all high peaks to N of south peak of western mountains obscured. Ozone, 7.
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.164	—	—	18.3	15.6	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 18°·5.  
8 p. 20°·1. Solar radiation { small black bulb 97°·1.  
small bright bulb 51°·0. Evapn. — grammes. Precipn. — in.

20th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.150	—	-0.6	14.0	13.2	17.0	ESE, 3-5	0	15-28	bcq →	—	—	—	—	A little A.-s. obscured high peaks of western mountains; all other land clear. Average wind velocity since 10 p.m. yesterday, 6 miles per hour.
10	29.145	—	12.2	16.3	14.0	20.0	SE by E, 2-4	15	8-20	bcq	—	—	—	—	10 a.m. Some A.-fr.-cu. here and there about sky; upper parts of western range more obscured by windy-looking A.-s.; all other distant land quite clear. Ozone, 3.
Noon	29.120	—	13.8	17.4	14.9	21.3	E by S, 2-5	10	12-24	bcq ⊕ →	—	—	—	—	Noon. Windy A.-s. about western mountain tops; Fr.-s. over Saddle and Mt. Discovery; all other land clear.
2	29.098	—	15.8	18.2	16.0	23.8	Var. E, 1-3	9	12-18	bcq	—	—	—	—	2 p.m. Cap on Discovery summit; detached Str. on western mountains. Ozone, 3.
4	29.070	—	17.0	18.2	16.2	22.4	ENE, 2-4	15	15-23	bcq	—	—	—	—	4 p.m. Windy A.-s. on summits of western mountains; the cap of cloud above Discovery has increased and now obscures the summit; all other land clear. Ozone, 4.
6	29.054	—	17.2	18.0	16.4	21.5	ENE, 2-4	10	15-23	bcq	—	—	—	—	6 p.m. Detached Str. above western foot hills, looking very windy. Ozone, 1.
8	29.041	—	17.0	18.0	13.8	22.0	ENE, 1-2	12	2-10	bq	—	—	—	—	8 p.m. Some refraction to S; long lines of S.-cu. in N and SW; in the latter direction five lines can be counted, one above another; some Ci.-s. to N and NE.
10	29.023	—	15.0	15.2	12.5	18.0	NE, 0-2	6	0-10	b	—	—	—	—	10 p.m. Thin lines of Str. at middle altitude of western mountains; no other cloud.
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.088	—	—	16.9	14.6	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 19°·8.  
8 p. 16°·4. Solar radiation { small black bulb 101°·2.  
small bright bulb 51°·6. Evapn. — grammes. Precipn. — in.

21st.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.006	—	2.8	14.4	14.0	22.0	Calm	1	0	b	—	—	—	—	Light Str. and S.-cu. to S, and a little darker coloured cloud also in extreme N and NW; land clear. Average wind velocity since 10 p.m. yesterday, 1 mile per hour.
10	29.011	—	13.8	18.0	16.8	24.0	Calm	0	0	b	—	—	—	—	10 a.m. The clouds in S have moved somewhat to N, apparently from SW; very slight refraction to W and SW.
Noon	29.004	—	17.5	19.0	17.9	26.6	Lt. N airs	2	0	b	—	—	—	—	Noon. The Str. in S is much the same; in SW there is rather more; slight S.-cu. to N; refraction in SE.
2	28.996	—	18.5	20.0	18.5	25.2	Lt. NW airs	1	0-3	b	—	—	—	—	2 p.m. Str. to S and SW moving to N; land clear. Ozone, 4.
4	28.990	—	18.2	20.0	18.5	26.5	NNW, 0-2	7	0-10	bc	—	—	—	—	4 p.m. Land all clear; clouds rapidly moving from SW. Ozone, 4.
6	28.990	—	18.5	19.2	18.0	20.8	Lt. NNW airs	5	0	c	—	—	—	—	8 p.m. The Bluff, upper third of White Island and Black Island, also upper half of Mt. Discovery, obscured by smoky-looking Str.; western mountains above foot hills also obscured by same; above these is a broken mass of S.-cu., convex topped; to northward, except for lines of S.-cu., sky is clear.
8	28.996	—	18.8	20.4	18.6	21.2	N, 1-2	4	0-10	c	—	—	—	—	9.30 p.m. Bases only of all islands and of Mt. Discovery visible; all western range obscured, except foot hills. Ozone, 4.
9.30	28.995	—	19.5	21.2	19.0	21.5	Lt. NNW airs	4	0	oc	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	28.999	—	—	19.0	17.7	—	—	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 19°·6.  
8 p. 24°·8. Solar radiation { small black bulb 112°·0.  
small bright bulb 58°·5. Evapn. { 1. 18.6 } grammes in  
{ 11. 19.0 } 24 hours. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
				Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	22nd.	
4	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.013	—	18.6	25.4	23.6	24.6	ESE, 1-4	7	10-20	bcq	—	—	—		
10	29.039	—	20.2	25.0	22.2	33.0	Lt. W ahrs	5	0	bc ⊕	—	—	—		
Noon	29.052	—	24.5	31.1	27.4	32.2	Calm	0	0	bc ⊕	—	—	—		
2	29.075	—	25.2	26.0	22.0	29.2	Lt. E ahrs	4	0-3	c	—	—	—		
4	29.090	—	24.0	25.0	22.2	29.0	Var. E, 1-2	5	10-20	c ⊕	—	—	—		
6	29.122	—	23.0	24.0	22.0	25.0	E, 1-2	12	10-15	c	—	—	—		
8	29.151	—	23.0	24.2	22.5	25.0	ESE, 1-3	7	0-17	bc	—	—	—		
10	29.173	—	20.0	20.1	18.3	20.5	Lt. N ahrs	6	0	oc	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.089	—	—	25.1	22.5	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 25°.9. 8 p. 34°.0.		Solar radiation		small black bulb 121°-4. small bright bulb 69°-2.		Evapn. { 1. 13.2 } grammes in { 11. 32.3 } 24 hours.		Precipn. — in.					
S: A.-cu. thinly spread about zenith; Str. more to W and N; upper half of Discovery and all except low parts of western land obscured. 10 p.m. Heavy low Str. in W and SW. Ozone, 2 to 3.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
				Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	23rd.	
4	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.290	—	14.6	18.2	17.0	19.5	SE, 4-7	5	20-36	bcq ⊕	—	—	—		
10	29.322	—	13.4	15.0	13.4	16.3	E, 3-5	18	20-27	bcq ⊕	—	—	—		
Noon	29.332	—	12.0	13.0	12.0	14.2	Var. 3-8	21	22-52	cq ⊕	—	—	—		
2	29.337	—	11.0	12.0	11.2	13.0	Var. E, 4-7	16	20-38	cq ⊕	—	—	—		
4	29.345	—	10.0	12.0	11.2	13.0	E, 4-7	19	20-30	cq ⊕	—	—	—		
6	29.331	—	9.0	11.0	10.0	12.0	SE, 4-6	17	23-33	cq ⊕	—	—	—		
8	29.324	—	9.5	11.6	11.0	12.0	Var. SE, 2-7	18	10-48	bcq ⊕	—	—	—		
10	29.297	—	10.6	13.2	12.2	14.8	SE, 3-6	16	15-37	ocq ⊕	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.322	—	—	13.3	12.3	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 24°-5. 8 p. 17°-8.		Solar radiation		small black bulb 108°-8. small bright bulb 56°-3.		Evapn. { 1. 13.0 } grammes in 24 hours.		Precipn. — in.					
and Brown Island; Bluff obscured, also upper part of White Island; all western mountains, except foot hills, obscured. 10 p.m. Very cloudy and windy over Bluff and western range. Ozone, 6.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.	Sunshine.	Upper.			Lower.
				Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	24th.	
4	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.103	—	8.2	13.0	12.3	19.5	SSE, 2-6	17	10-34	cq	—	—	—		
10	29.047	—	12.0	14.0	13.0	18.8	SSE, 2-4	12	10-22	ocq	—	—	—		
Noon	28.979	—	13.2	16.0	14.2	20.0	E by N, 3-6	11	15-28	bc	—	—	—		
2	28.932	—	12.6	13.5	12.8	18.0	Var. E, 4-8	14	20-30	bqc	—	—	—		
4	28.895	—	12.2	13.5	12.2	18.0	Var. E, 3-6	15	18-28	bq	—	—	—		
6	28.857	—	13.0	13.0	12.0	16.8	Var. E, 3-5	15	15-25	bq	—	—	—		
8	28.814	—	11.2	12.0	10.8	15.0	Var. E, 3-6	16	12-26	bq	—	—	—		
10	28.781	—	10.0	10.8	9.2	11.2	NE, 2-3	13	20-23	b	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	28.926	—	—	13.2	12.1	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 15°-8. 8 p. 17°-0.		Solar radiation		small black bulb 100°-2. small bright bulb 52°-0.		Evapn. { 1. 8.2 } grammes in 24 hours.		Precipn. — in.					
of western range. Ozone, 5. 6 p.m. Only a few clouds; detached S.-cu. in SW and a little detached Str. amongst western range. Ozone, 5. 8 p.m. A.-cu.-s. in long thin lines to SW and S, also Fr.-s.-cu.; a Cu. cloud is pouring over the Bluff range; high drift apparently everywhere in distance; all land clear; some S.-cu. in SE. Ozone, 3.															

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
25th.															
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	28°55	—	5°0	19°0	16°0	20°8	Lt. S airs.	12	0	bv	—	—	—	—	Some Cl.-s. in SE; small Fr.-s. to N, all low down; a small flock of A.-cu. just above summit of high western peak; refraction considerable in W and SW and thins down to S and SE; weather during night has remained settled; wind seems to have decreased gradually, and there has been continuous sunshine. Mirage. Average wind velocity since 10 p.m. yesterday, 12 miles per hour.
10	28°628	—	14°0	20°0	16°8	26°5	Var. E, 0-1	1	0-10	bv	—	—	—	—	10 a.m. Refraction the same as at 8 a.m.; Cl.-s. in SE has extended a little to northward; the only other cloud is a small Cu. about the southern peak of the main western range. Mirage.
Noon	28°593	—	18°2	22°6	18°2	27°0	Var. SE, 0-2	11	0-15	bv	—	—	—	—	Noon. Refraction has almost disappeared everywhere; there is a little in SW which loses itself W and NW. The Cl.-s. in SE is about the same, and the small cloud remains stationary upon the peak. Mirage.
2	28°580	—	21°5	23°0	19°0	29°0	Var. SE, 0-1	9	0-10	bv	—	—	—	—	2 p.m. Very little thin Cl.-s. low down in S and SE. Ozone, 3.
4	28°564	—	22°0	23°0	20°2	28°2	Var. E, 0-2	4	0-15	bv	—	—	—	—	3.30 p.m. Temp. at Cape Armitage, 23°8; min., —7°0. Erebus smoke going NE.
6	28°548	—	22°5	24°5	22°0	29°5	SE, 0-1	9	0-8	bv	—	—	—	—	Wind E by N, 1-2; some streaks of A.-s. in the S and E. 4 p.m. Cl.-s. in S and SE about the same as at 2 p.m.; very small detached Fr.-s. showing from behind Discovery. Ozone, 1. 5 p.m. Cl.-s. in SE only, and less in amount than at 4 p.m.; it is hardly visible; no other clouds about. Ozone, 1. 8 p.m. Cl.-s. in SE is still there and has spread to S; it extends therefore from S <sup>W</sup> horizon to 8° above SE horizon; not another cloud in sight. 9.30 p.m. Cl.-s. in S and SE, same as at 8 p.m. Ozone, 0 to 1.
8	28°538	—	23°4	24°0	22°2	27°2	Lt. SE by E airs	4	0-10	bv	—	—	—	—	
9.30	28°528	—	19°8	21°2	17°5	26°8	SE by E, 0-1	3	0-3	bv	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	28°579	—	—	22°2	19°0	—	—	—	—	—	—	—	—	—	—
Max. therm. read at { 8 a. 19°·2. 8 p. 25°·6. Solar radiation { small black bulb 106°·5. small bright bulb 57°·5. Evapn. { 1. 18·1 grammes in 24 hours. Precipn. — in.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
26th.															
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	28°512	—	7°9	23°4	21°6	28°5	Lt. NE airs	1	0	bev	—	—	—	—	Cl.-s. in W and N, which radiates N and S; A.-s. and Cl.-s. in S and SW, which radiates E and W; convex windy cloud over Bluff (2000 feet above), and similar cloud on summit of Discovery; windy-looking, torn Str. are hanging about the southern parts of western mountains. Average wind velocity since 9.30 p.m. yesterday, 1 mile per hour.
10	28°508	—	20°6	25°0	20°2	27°8	Lt. S airs, 0-2	2	0-20	bevq ↗	—	—	—	—	10 a.m. The same Cl.-s.; like conditions occur with Cu. and Fr.-cu. as above described, radiating N and S; roll Cu. in S to SSE; Bluff almost obscured by windy, smoky-looking torn Str.; upper third of Mt. Discovery and southern third of western range also obscured; in front of the cloud obscuring Mt. Discovery are some darker looking Fr.-s.
Noon	28°538	—	22°1	23°2	22°0	24°8	S by W, 1-4	12	5-25	bevq ↗	—	—	—	—	Noon. Cl.-s. in W, where the lower clouds are broken into Fr.-cu., Fr.-s., and windy Str., gradually covering the western mountain range and western land generally. White and Black Islands are partially obscured in windy, torn Str.; Bluff is quite obscured; all islands and western range visible in places; drift at times. Ozone, 4. 4 p.m. All distant land, except parts of northern half of main western range, obscured in drift, which is very heavy at times. Ozone, 4 to 5. 6 p.m. All high peaks of western range visible, all other land obscured; sun gleaming through clouds faintly; much drift. 8 p.m. Near the thermometers on Hut Point the wind in fierce squalls blew quite force 9 to 10; all distant land invisible, and during squalls Observation Hill is quite obscured.
2	28°528	—	21°4	22°5	21°5	23°0	Var. S, 2-4	14	20-32	cq ↗	—	—	—	—	
4	28°520	—	21°4	22°2	21°8	23°0	Var. S, 2-6	22	15-48	cq ↗	—	—	—	—	
6	28°526	—	21°0	22°2	21°8	22°5	Var. S, 2-6	31	15-40	cq ↗	—	—	—	—	
8	28°547	—	20°2	21°0	21°0	21°5	S by W, 4-8	23	25-52	ocqf ↗*	—	—	—	—	
10	28°574	—	18°5	19°7	19°2	20°2	S, 3-5	19	25-33	o ↗*	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	28°532	—	—	22°4	21°1	—	—	—	—	—	—	—	—	—	—
Max. therm. read at { 8 a. 26°·1. 8 p. 27°·5. Solar radiation { small black bulb 113°·5. small bright bulb 62°·0. Evapn. { 1. 12·6 grammes in 24 hours. Precipn. — in.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
27th.															
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	28°636	—	18°5	22°0	21°6	22°8	Var. S, 3-7	21	15-38	ocqf ↗*	—	—	—	—	Much snow has fallen and drifted during the night; the weather all through has remained much the same apparently; Brown Island and foot hills of western land visible; all other distant land invisible; signs of breaking to S; dark in W. Average wind velocity since 10 p.m. yesterday, 21 miles per hour.
10	28°668	—	21°2	23°0	22°2	24°2	Var. S, 1-7	18	0-42	ocqf ↗	—	—	—	—	10 a.m. The sky has almost broken to S; still very dark in W, where the foot hills of western land are again scarcely discernible; Brown Island still visible; all other distant land hidden; squally, after light airs.
Noon	28°683	—	22°0	23°8	23°0	25°2	Var. SE, 2-7	20	15-35	ocqf ↗	—	—	—	—	Noon. There has been no sunshine since yesterday afternoon; weather now seems inclined to break; there is a break in sky to SE and S; the Bluff is beginning to be dimly visible in the hills; White Island is still obscured, but Black Island and lower third of Discovery are becoming visible, so also the foot hills of western land; Brown Island is wholly unobscured.
2	28°689	—	22°5	24°5	23°2	24°5	Var. S, 1-4	18	10-30	ocqf ↗	—	—	—	—	2 p.m. Black Island and western foot hills visible; all other distant land, except Bluff, partially visible. Ozone, 6. 4 p.m. Land visible as at 2 p.m.; heavy, torn cloud over Brown Island. 6 p.m. Land visible as at 2 p.m. Ozone, 5. 8 p.m. Sun is gleaming through clouds in W; all higher land still obscured; all lower land up to 2000 feet can be seen, except Bluff; clouds much broken in W and SW; Fr.-s. and S.-cu. as well as dark Str., with sun shining through in rays. 10 p.m. No drift now; sky more covered with cloud; conditions otherwise much the same as at 8 p.m.
4	28°691	—	22°8	24°5	23°5	25°0	SSE, 1-4	19	10-30	ocqf ↗	—	—	—	—	
6	28°692	—	23°5	26°0	24°5	26°0	SSE, 0-2	17	0-15	oc ↗	—	—	—	—	
8	28°694	—	23°4	25°0	23°6	26°8	Var. SE, 2-6	10	15-42	cq ↗	—	—	—	—	
10	28°694	—	23°8	24°5	23°4	25°0	SE, 2-5	14	10-28	oq	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	28°681	—	—	24°2	23°1	—	—	—	—	—	—	—	—	—	—
Max. therm. read at { 8 a. 22°·5. 8 p. —. Solar radiation { small black bulb 70°·0. small bright bulb 42°·0. Evapn. { I. 0·7 grammes in 24 hours. Precipn. — in.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	—	—	—	—	—	—	—	—	—	—	—	—	<p>28th.</p> <p>Windy-looking A.-cu., with sharp upper edges, often convex, in W and SW; A.-s. obscuring summits of western mountains; torn, smoky-looking Str. about Mt. Discovery; Str. clouds upon Black and White Islands; Bluff invisible. Average wind velocity since 10 p.m. yesterday, 14 miles per hour.</p> <p>10 a.m. There are more clouds, windy-looking Str., about all the higher land all round, obscuring it; Bluff still quite obscured; Brown Island alone is free from cloud; clouds everywhere dense; every appearance of worse weather coming on.</p> <p>Noon. Sun gleaming brightly at intervals; gloomy looking in W and SW; a Str. cloud covers summit of Brown Island; the clouds about the zenith are of a windy kind, as at 10 a.m.</p> <p>2 p.m. Islands and western foot hills visible; surface drift. Ozone, 3.</p> <p>4 p.m. Black and Brown Islands and western foot hills only partially visible</p>	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	28° 875	—	22° 6	25° 0	24° 0	26° 4	ESE, 1-5	14	5-25	ocq	—	A.-cu. 8, SSE (slow); Fr.-s. 2, S (fast)		
10	28° 854	—	24° 8	26° 2	24° 7	26° 0	Var. SE, 1-5	13	5-28	ocq	—	A.-s.-cu. 9, SE (slow); S 1, S (fast)		
Noon	28° 639	—	25° 8	28° 2	26° 6	30° 5	Var. S, 1-6	11	5-27	cq +	—	A.-cu. and S 3, Fr.-a.-cu. and S, 3, S		
2	28° 820	—	27° 5	28° 2	26° 2	29° 0	Var. S, 1-3	10	10-28	cq +	—	S. 10		
4	28° 614	—	24° 8	25° 2	25° 0	27° 0	Var. S, 2-5	8	10-38	cq +	—	S. 10		
6	28° 620	—	23° 2	25° 0	24° 0	25° 0	Var. S, 2-6	17	10-40	cq +	—	S. 10		
8	28° 621	—	23° 5	25° 4	24° 0	25° 5	Var. S, 2-6	19	10-35	ocq +	—	A.-s. 10, S		
10	28° 623	—	24° 6	26° 0	24° 8	26° 0	S, 2-8	15	10-48	ocq + <sup>2</sup>	—	S. 10		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	28° 634	—	—	26° 2	24° 9	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 25°-2. / 8 p. 31°-0. Solar radiation { small black bulb 111°-0. / small bright bulb 62°-0. Evapn. { 1. 6.9 grammes / in 24 hours. Precipn. — in.

at intervals through drift (heavy); all other land obscured; sun gleaming through clouds. 6 p.m. Land visible as at 4 p.m.; very heavy drift. 8 p.m. All land except Bluff visible; upper portions, except Brown Island, obscured; sun gleaming. 10 p.m. White Island and Bluff quite obscured; Black Island to W dimly visible, only lower fourth of Mt. Discovery not obscured; Brown Island visible, also foot hills of western land; sky lighter in S and SW.

Hour.	Barometer	Cape Armitage	Spirit minimum	Mercurial (Dry/Wet)	Unscreened	Wind (Dir/Force)	Anemometer	P. tube	Weather	Sunshine	Clouds (Upper/Lower)	Aspirator	Remarks
2	—	—	—	—	—	—	—	—	—	—	—	—	<p>29th.</p> <p>Brown Island wholly visible, White and Black Islands obscured; lower slopes of Discovery and lower foot hills of western land only dimly visible; a lower scud Str. cloud is moving rapidly, about 900 feet in alt., from the SE; the weather during the night appears to have remained the same; a small break in sky to S. Average wind velocity since 10 p.m. yesterday, 16 miles per hour.</p> <p>10 a.m. Very dark and threatening to W and SW; all distant land obscured by dark clouds; foot hills to W just visible. Noon. White and Black Islands are beginning to show up; the Bluff seems to be clearing; very dark and threatening in SW, and the blackness extends to S and W; other land as before.</p> <p>2 p.m. Bases of White and Brown Islands visible; over them is a very heavy dark cloud, obscuring upper part; Black Island, western foot hills, and base of Discovery visible; little sky showing in S; some Fr.-n. in W, moving slowly</p>
4	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	
8	28° 750	—	20° 5	24° 5	24° 0	26° 0	SSE, 2-6	18	10-30	ocq +	—	S. 10, S	
10	28° 770	—	24° 0	26° 2	25° 0	28° 2	Var. SE, 2-5	15	5-20	ocq +	—	S. 10	
Noon	28° 788	—	25° 2	26° 0	25° 0	28° 2	SE, 2-6	12	10-35	ocq + *	—	N. 10, S	
2	28° 802	—	24° 0	25° 0	24° 0	25° 8	Var. SE, 1-4	14	8-30	ocq +	—	S. 10	
4	28° 820	—	24° 0	25° 0	24° 0	26° 0	Var. SE, 1-3	15	0-20	ocq	—	A.-cu. and S. 10	
6	28° 840	—	24° 0	25° 0	24° 0	25° 2	Var. SE, 1-2	16	0-15	oc	—	A.-s. 8	
8	28° 846	—	23° 6	24° 1	23° 2	24° 6	SE, 2-6	13	10-30	ocq +	—	S. 10, S	
10	28° 865	—	22° 9	25° 0	24° 0	25° 0	Var. SE, 2-7	15	10-40	ocq +	—	S. 10, S	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	28° 810	—	—	25° 1	24° 2	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 26°-8. / 8 p. 26°-8. Solar radiation { small black bulb 80°-5. / small bright bulb 42°-6. Evapn. { 1. 7.9 grammes / in 24 hours. Precipn. — in.

to S. Ozone, 5. 4 p.m. Land visible as at 4 p.m.; cloud over White Island is now much lighter in colour, but over Brown Island is just as dark as at 2 p.m.; it still looks very gloomy and stormy in W, but appears to be breaking up in S. Ozone, 4. 6 p.m. Land visible as at 4 p.m.; Discovery's summit obscured in torn masses of white cloud, overhanging this is a very dark cloud with sharply defined horizontal base; in the W the edge of the A.-s. becomes S.-cu., and is extremely dark in colour; some scud coming rapidly from SE, passing across summit of Crater Hill; in W and SW all clouds are very much torn and windy looking. Ozone, 6. 8 p.m. Sky is lighter in S and SW; sun shining in NW among the mountains; dark to N; a low scud moving rapidly from S. 10 p.m. Same gloomy weather; worse if anything; dark in W; brighter sky in S and SW, White and Black Islands and Bluff obscured.

Hour.	Barometer	Cape Armitage	Spirit minimum	Mercurial (Dry/Wet)	Unscreened	Wind (Dir/Force)	Anemometer	P. tube	Weather	Sunshine	Clouds (Upper/Lower)	Aspirator	Remarks
2	—	—	—	—	—	—	—	—	—	—	—	—	<p>30th.</p> <p>8 a.m. Weather seems to have been the same all through the night; overcast gloomy and squally, with snowfall and drift, the latter being very great on board; occasionally no land, except lower parts, visible; dark in W and SW; Nim. is low, about 1000 ft. alt. Average wind velocity since 10 p.m. yesterday, 14 miles per hour.</p> <p>10 a.m. Distant land showing up a bit clearer, but only the lower portions; not so dark in SW.</p> <p>Noon. Break in sky to SW; dark to W, all that land obscured; all land more or less obscured still; Fr.-s. about Brown Island, and some travelling N from there.</p> <p>2 p.m. Very small amount of sky showing in SW; White Island base partly visible; Brown Island obscured, except S corner; Black Island visible, with some Fr.-s. above it; outline of land visible, from Bluff to S end of Brown Island, but enveloped in dark cloud;</p>
4	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	
8	28° 964	—	22° 2	25° 5	24° 5	26° 5	Var. SE, 2-6	14	15-30	ofq + *	—	N. 10	
10	28° 994	—	22° 8	24° 2	23° 9	26° 3	Var. SE, 2-7	9	15-35	ofq + *	—	N. 10	
Noon	29° 008	—	23° 2	25° 9	25° 0	27° 5	Var. E, 1-4	13	15-20	ocq + *	—	S., N., Fr.-s. 10, S	
2	29° 030	—	22° 8	23° 5	22° 5	24° 5	Var. E, 0-4	12	0-24	ocq +	—	S. 10	
4	29° 038	—	21° 0	22° 5	22° 2	23° 5	Var. E, 0-2	11	0-10	ocq + *	—	N. 10	
6	29° 073	—	20° 5	21° 5	20° 0	22° 5	Var. E, 0-2	12	0-10	oc	—	S. 10	
8	29° 086	—	20° 9	22° 0	20° 4	23° 0	Lt. Var. E airs	4	0	oc	—	S., Fr.-s. 10, S	
10	29° 102	—	18° 6	10° 2	18° 0	19° 5	NE by E, 1-3	9	5-20	ocq	—	S. 10	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29° 037	—	—	23° 0	22° 1	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 25°-8. / 8 p. 26°-2. Solar radiation { small black bulb 83°-2. / small bright bulb 49°-1. Evapn. { 1. 4.7 grammes / in 24 hours. Precipn. — in.

base of Discovery visible; western range and foot hills entirely obscured in dark mass of cloud, apparently Nim. Ozone, 5. 4 p.m. All islands visible; summit of Discovery and all western range obscured; some Fr.-n. to W. Ozone, 6. 8 p.m. All islands, Discovery, and western foot hills visible; still very threatening appearance in W and SW. Ozone, 4. 8 p.m. All land, except western land, behind Discovery and Brown Island, below alt. of 3000 ft., visible; dark in W; dark water sky in NNW; lighter sky in S and SW. 10 p.m. Brighter (or lighter) sky in S and SW, increasing in this direction; Mt. Discovery more hidden in cloud mantle; Saddle Mountains behind quite obscured; all other land the same as at 8 p.m.

1903—December.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

1st.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
				Dry.	Wet.											
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.125	—	18.5	21.4	20.5	22.5	Var. SE, 2-4	5	10-20	ocq †	—	—	S. 10	—	—	There appears to have been little change in the night, the wind began to increase and change in direction soon after 5 a.m.; there are sharp-upper-edged long clouds in S to SE and SW, with two or three small breaks in sky there also; land to S covered; foot hills to W visible; Discovery nearly clear of cloud, with white Cu. on its summit; Brown Island quite clear. Average wind velocity since 10 p.m. yesterday, 5 miles per hour.
10	29.143	—	20.4	24.0	22.4	25.5	Var. ESE, 0-5	12	0-27	ocq †	—	—	S. 10	—	—	
Noon	29.182	—	19.4	21.0	20.2	22.0	S by E, 3-7	16	15-35	bcq †	—	—	A.-s. 4, S. 1, Fr.-a.-s. 1, S A.-cu. 2, A.-s. 4, SW A. and S.-cu. 7, SW	—	—	
2	29.208	—	20.2	23.5	21.5	25.0	Var. E, 0-2	14	0-10	ocq	—	Ci.-s. 2	A. and S.-cu. 4, SW	—	—	
4	29.228	—	22.8	24.0	22.2	25.5	Var. E, 0-3	9	0-10	ocq	—	Ci.-s. 2	A.-cu. and S. 7, S	—	—	
6	29.234	—	23.0	24.5	23.0	26.0	Var. E, 0-1	6	0-15	oc	—	Ci.-s. 1, Ci.-cu. 2	A.-cu. and S. 7, S	—	—	
8	29.237	—	22.5	23.0	22.5	23.5	Var. SE, 0-7	12	0-35	cq †	—	Ci.-s. 1	N. 10, S	—	—	
10	29.281	—	19.8	20.8	19.9	21.0	SSE, 2-7	15	10-30	ocq † *	—	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.205	—	—	22.8	21.5	—	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. 26° 2. read at { 8 p. 25° 2. Solar radiation { small black bulb 104° 8. { small bright bulb 55° 8. Evapn. { 1. 11.4 grammes in 24 hours. Precipn. 0.02 in. for the previous 5 days.

2 p.m. Bluff is enveloped in a mass of smoky cloud; layers of Str. obscure two-thirds of western range; sun gleaming through clouds; deeply coloured sky to N; deep orange on horizon, and purple above. Ozone, 6. 4 p.m. Western mountains visible, except the higher peaks; Bluff as at 2 p.m. Ozone, 5. 8 p.m. Bluff as at 2 p.m.; higher peaks of western range obscured; sky clear SE and S; signs of improvement in weather; mare's tails over Discovery. Ozone, 5. 8 p.m. In SW and W are stormy-looking clouds, convex, with straight, sharp upper edges; Mt. Discovery, the Saddle, and Bluff are bathed in similar clouds. 10 p.m. All distant land obscured, except that dimly visible in W and SW.

2nd.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.404	—	13.5	18.1	17.8	20.0	Var. SE, 2-7	18	10-30	cq †	—	—	A.-cu. 6, S. 1, S	—	—	Distant land nearly all obscured. Average wind velocity since 10 p.m. yesterday, 18 miles per hour.
10	29.452	—	16.8	19.4	18.4	22.0	Var. SE, 1-7	17	5-30	ocq † *	—	—	N. 10	—	—	
Noon	29.467	—	18.1	20.4	20.0	22.5	SSE, 1-5	15	5-20	ocq † *	—	—	N. 10	—	—	10 a.m. All land but Brown Island obscured. Clouds breaking in S and SSE, and White Island becoming visible; all other land obscured; some scud is passing from S and touching summit of Crater Hill.
2	29.479	—	20.0	21.5	20.5	23.2	Var. S, 0-2	12	0-10	oc † *	—	—	N. 10, S	—	—	2 p.m. Land becoming more visible; heavy storm clouds hanging over it. Ozone, 9.
4	29.477	—	20.4	22.0	21.2	23.5	Var. SE, 0-3	10	0-20	ocq †	—	—	A.-s. 7, S.-cu. 2	—	—	4 p.m. Conditions similar; Bluff obscured by blanket of cloud, taking same shape as land. Ozone, 5.
6	29.480	—	20.8	23.0	21.8	23.8	Var. SE, 0-4	12	0-25	cq	—	—	A.-s. 4, A.-cu. 1, Ci.-s. 2, S	—	—	6 p.m. All land visible; Bluff still enveloped in cloud, but it is not so torn and ragged; generally the clouds in S, SW, and W look less windy than they have for the past few days; some lines of Str. about western range, and summit of Discovery is covered with a mass of cloud.
8	29.470	—	21.4	23.4	21.4	24.0	E by N, 2-4	16	5-15	bcq †	—	—	A. and Fr.-cu. 5, S	—	—	8 p.m. All land, except summit of Discovery, Saddle, and western mountains now clear; S.-cu. cover tops.
10	29.451	—	21.9	23.0	21.2	25.2	E by N, 2-5	11	10-24	bc †	—	—	Fr.-a.-cu. 1, S	—	—	10 p.m. Much fiercer; brilliant sunshine, odd Str. like Ci.-s. in W and SW.
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.460	—	—	21.4	20.3	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 23° 0. { 8 p. 24° 8. Solar radiation { small black bulb 101° 0. { small bright bulb 52° 5. Evapn. { 1. 8.8 grammes in 24 hours. Precipn. — in.

with very little cloud, except about SW and W; western mountains now nearly clear of clouds, thin lines of A.-s. over them;

3rd.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.414	—	19.0	22.2	22.0	29.8	Lt. SE airs	11	0	bc	—	—	A. and Fr.-cu. 4, W	—	—	The Bluff has a sharp-upper-edged curved Cu. cloud cap; the centre third of western mountains obscured by S.-cu.; some Cu. about Discovery, and A.-s. about Saddle Mountain. Average wind velocity since 10 p.m. yesterday, 11 miles per hour.
10	29.418	—	20.7	22.2	20.0	29.0	Var. SSE, 1-4	7	5-20	bcq †	—	—	Ci.-s. 1	A.-fr.-cu. 1	—	
Noon	29.406	—	20.2	22.0	19.8	26.8	Var. E, 1-5	10	10-32	bcq †	—	—	Ci., Ci.-s. 1	Det. Fr.-a.-cu. 1, W	—	
2	29.402	—	20.6	21.2	19.8	24.6	Var. SE, 1-4	5	10-30	bcq	—	—	Ci.-cu. 1	—	—	10 a.m. The cloud cap on Bluff has risen some 2000 feet, and is in form of Str.; other clouds the same.
4	29.390	—	20.5	22.0	20.0	27.5	Var. E, 1-4	17	10-30	bcq	—	—	Ci.-cu. 1, S	—	—	Noon. A.-cu.-s. in E and SE, similar clouds hide centre third of western mountains and upper third of Discovery; stormy cap on Bluff, and sharp-topped Cu. cloud pouring over it. Ozone, 4.
6	29.381	—	20.4	22.5	21.0	27.5	E, 0-1	8	0-5	bc	—	—	Fr.-ci., 1	—	—	2 p.m. Very stormy cloud above Discovery, obscuring its summit; some layers of Str. above the Bluff. Ozone, 7 to 8.
8	29.373	—	20.5	22.5	18.5	23.2	S, 0-2	7	0-20	bcq	—	—	—	—	—	4 p.m. Storm cloud still above Discovery; mare's tails above Bluff; some Cu. over Brown Island; stormy-looking clouds about western mountains, obscuring them.
10	29.368	—	—	21.4	19.0	22.0	Var. SE, 1-4	8	10-16	ocq	—	—	—	A.-s. 10, SSE	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.394	—	—	22.0	20.0	—	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 24° 0. { 8 p. 25° 5. Solar radiation { black bulb —. { bright bulb —. Evapn. — grammes. Precipn. — in.

clouds in lines; S.-cu. about western mountains and over Discovery; bank of A.-cu. between Discovery and southern peak of western mountains; all high peaks obscured; cloud about Discovery has decreased and is less stormy in appearance. Ozone, 4. 8 p.m. Bluff bathed in Cu. storm cloud, also upper third of Mt. Discovery; cloud on latter has ragged fringes; smoky Str. cloud about Saddle Mountain; roll Cu. in SW; lines of S.-cu., 8 in all, obscuring western upper range; bank of cloud in S horizon. 10 p.m. Cu. and Str. in lines and ragged, windy-looking masses in W, SW, and S; the Bluff is bathed in a huge mass of cloud; upper half of Mt. Discovery is also bathed in stormy-looking cloud.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.										
2	—	—	—	—	—	—	—	—	—	—	—	—	4th.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.347	—	16.8	20.8	20.0	22.0	S by E, 2-4	12	10-20	oq ⇄	—	S. 10		Bluff mantled in close-wrapping cloud; Str. on higher parts of White and Black Islands and on Discovery; western foot hills visible; patch of blue sky to S; sun gleaming. Average wind velocity since 10 p.m. yesterday, 12 miles per hour.
10	29.355	—	18.2	21.0	19.7	23.6	SSE, 3-6	14	10-30	oq ⇄	—	S. 10		
Noon	29.362	—	19.0	21.2	19.8	24.6	S by E, 3-6	10	15-25	oecq ⇄	—	A.-s.-cu. 10, S		
2	29.364	—	19.8	21.0	19.5	24.5	Var. SE, 1-3	13	10-22	oecq	—	S. 10		
4	29.348	—	20.5	21.2	19.2	23.2	Var. NE, 1-3	10	10-22	oecq	—	A.-s.-cu. 10		
6	29.334	—	20.4	24.0	21.2	25.2	NNE, 0-1	6	0-5	oc	—	A.-s. 10		
8	29.241	—	22.2	23.0	21.8	25.0	S, 2-6	3	15-31	oq ⇄	—	S. 10		
10	29.244	—	19.4	20.0	19.5	20.4	Var. E, 2-5	12	10-20	oqf ⇄ *	—	N. 10		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.325	—	—	21.5	20.1	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 24° 8. / 8 p. 26° 0. Solar radiation { small black bulb 91° 2. / small bright bulb 48° 0. Evapn. — grammes. Precipn. — in.

horizon in SE and E. Wind SE, 1-2. 4 p.m. Land visible as at 2 p.m.; less cloud about the Bluff; a very little more sky showing in S; sun gleaming through clouds. Ozone, 6. 6 p.m. Land visible as at 2 p.m., but less of western foot hills; looks very dark and threatening to W; still a little blue sky showing in S. Ozone, 4 to 5. 8 p.m. Wind just come on suddenly in a squall; Bluff, and nearly all Black Island, obscured; very black to W, only lower land visible; upper half of Mt. Discovery and Saddle Mountain quite obscured. 10 p.m. The clouds are lower and reach the summits of Crater and Observation Hills; White Island and Bluff are totally obscured, Black Island is almost so, and upper half of Discovery is hidden; all distant land is seen through fog; foot hills of western land only visible, also Brown Island; the sun is shining on SE base of Mt. Discovery and on Saddle Mountain.

2	—	—	—	—	—	—	—	—	—	—	—	—	5th.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.371	—	18.4	19.2	19.0	20.6	SSE, 2-5	12	20-23	oqf ⇄ *	—	N. 10		Snow falling thickly; there is every appearance of this having been more or less continuous all night. Average wind velocity since 10 p.m. yesterday, 12 miles per hour.
10	29.393	—	18.2	19.2	19.0	21.2	SSE, 2-5	14	10-32	oqf ⇄ *	—	N. 10		
Noon	29.415	—	17.9	21.2	19.0	21.8	Var. SSE, 3-6	20	15-35	oecq ⇄	—	S. 10, S (rapid)		
2	29.396	—	18.8	21.4	19.8	23.0	E, 2-5	12	15-32	oecq ⇄	—	S. 10, S (rapid)		
4	29.412	—	17.6	19.0	19.0	25.5	SSE, 4-8	26	25-50	oq ⇄ *	—	N. 10		
6	29.433	—	16.0	19.0	18.2	19.2	Var. E, 2-7	14	15-42	oq ⇄	Cl.-s. 1	A.-cu. 4, S.-cu. 3, S (rapid)		
8	29.453	—	15.1	16.2	15.6	17.0	Var. E, 3-6	18	15-31	oqf ⇄ *	—	N. 7, SSW		
10	29.478	—	10.9	12.0	11.7	12.2	E by N, 5-7	20	25-45	bcf ⇄ *	Cl. 1	N. 2, S		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.419	—	—	18.4	17.7	—	—	—	—	—	—	—		

Max. therm. { 8 a. 26° 0. / 8 p. 22° 2. Solar radiation { black bulb 93° 5. / bright bulb 50° 7. Evapn. { I. 5.2 / II. 19.0 } grammes in 24 hours. Precipn. — in.

sight; furious squalls. 10 p.m. Furious squalls; snow is falling in rather large flakes; the Nim. is all to the S and E, while blue sky is to N, and to well over the zenith.

2	—	—	—	—	—	—	—	—	—	—	—	—	6th.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.533	—	7.6	14.0	13.1	17.0	Var. E, 3-6	19	15-30	bcq ⇄	Cl.-s. 2, S	Fr.-cu. 1, S		The Cl.-s. does not appear to be high enough for Ci. clouds, they may be torn, thickly dispersed Cu. clouds; summits of islands to S, and all high land, obscured by Cu. and Str.; western mountains clear, but foot-hills obscured. Average wind velocity since 10 p.m. yesterday, 19 miles per hour.
10	29.540	—	12.9	15.8	14.9	17.0	Var. E, 3-6	15	15-28	bcq	Cl., Cl.-s. 3, S	—		
Noon	29.550	—	14.2	17.0	15.8	20.0	Var. E, 2-5	15	10-23	bcq ⇄	Cl., Cl.-s. 3, S	—		
2	29.541	—	15.5	13.2	17.0	20.0	Var. E, 2-5	13	15-25	cq	Cl., Cl.-s. 2	A. and S.-cu. 7, S		
4	29.531	—	17.5	20.0	18.5	25.5	Var. E, 2-4	13	10-20	cq	Cl., Cl.-cu. 4	A.-cu. 2, S		
6	29.534	—	17.5	20.4	19.2	25.0	E, 0-2	11	0-15	bcq	Cl.-s. 2	—		
8	29.532	—	19.5	21.9	18.0	20.4	E by N, 1-2	6	0-10	bcqv	Cl., Cl.-s. 1	—		
10	29.525	—	21.0	23.0	19.0	27.0	NE by E, 0-1	6	0-3	bv	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.536	—	—	18.8	16.9	—	—	—	—	—	—	—		

Max. therm. { 8 a. 17° 5. / 8 p. 23° 1. Solar radiation { small black bulb 114° 0. / small bright bulb 57° 4. Evapn. { I. 6.9 / II. 13.3 } grammes in 24 hours. Precipn. — in.

4 p.m. A little Fr.-s. about W and SW. 6 p.m. Some detached Fr.-s. about western mountains and Discovery. Ozone, 7. 8 p.m. Thin A.-s. in W; one cannot be sure that the Cl. and Cl.-s. are not thin wind-blown Cu. and S.-cu., for the clouds appear to be too low for Cl. clouds. 10 p.m. Some A.-s. in W and SW; some very light cloud, Cl.-s. and A.-s., in S and SE, and also in NW.

1903—December.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

7th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 1.			Upper.	Lower.		
				Dry.	Wet.									
2	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.497	—	12.0	24.2	23.0	28.4	N, 0-1	4	0-10	bv	—	—	Weather appears to have been fine all night, with only slight breezes; a few layers of Str. in W and NW. Average wind velocity since 10 p.m. yesterday, 4 miles per hour.	
10	29.510	—	23.4	25.5	23.6	33.0	N airs	3	0-5	bv	—	1A.-cu. 1, NNW	10 a.m. Light Cu. clouds in SW travelling rapidly from N; S.-cu. in layers about western range and Discovery; detached Cu. in N and NW.	
Noon	29.518	—	24.6	26.3	24.4	32.0	N airs	5	0	bv	—	—	Noon. S.-cu. on western mountains, extending to Black Island, and just touching the summit; Fr.-cu. to SE.	
2	29.526	—	25.2	27.0	24.8	32.5	Lt. W airs	2	0	bv	—	—	2 p.m. Cu. to SW and W; western mountains obscured by Cu., except high southern peak. Ozone, 7.	
4	29.531	—	26.2	26.8	24.2	34.0	Lt. NW airs	2	0	bv	—	—	4 p.m. Some Cu. and S.-cu. in SW and W; more of western mountains visible than at 2 p.m.; but on the whole there is more cloud in SW and W. Ozone, 2 to 3.	
6	29.543	—	25.8	26.2	24.2	35.2	Lt. NW airs	2	0	bv	—	—	6 p.m. Very small amount of Str. in SE; Str. obscures the summit of Discovery and main western range. Ozone, 3.	
8	29.562	—	24.9	26.0	24.9	31.0	Calm	2	0	bv	—	—	8 p.m. Some Cu. and S.-cu., also Str., in NW, W, SW, and S, obscuring upper western mountains and upper half of Discovery; dark Str. and S.-cu. in N. 10 p.m. Same condition of clouds as at 8 p.m., but extended to SSE; the peaks of western high range are showing above clouds.	
10	29.569	—	23.2	24.0	22.8	26.0	Lt. NW airs	3	0	bv	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.532	—	—	25.8	24.0	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 24° 8. 8 p. 27° 6.		Solar radiation		{ black bulb 110° 0. bright bulb 59° 8.		Evapn. { I. 12.9 grammes in 24 hours.		Precipn. — in.				

8th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.598	—	20.5	24.5	23.8	30.0	Lt. NNW airs	2	0	bv	—	Fr.-a.-cu. 2, SW; (slow)	S.-cu. to S and to N; upper half of Discovery and western mountain range obscured by Cu. Average wind velocity since 10 p.m. yesterday, 2 miles per hour.
10	29.592	—	23.6	25.4	23.9	30.8	N, 0-1	5	0-10	bv	—	Fr.-a.-cu. 1, SW	10 a.m. Clouds much the same; A.-cu. has moved to NE; Str. in NW.
Noon	29.585	—	24.0	25.2	23.5	29.0	NNW, 0-1	4	0	bv	—	A.-cu. & Fr.-a.-cu. 1, SW	Noon. Cu. to SE, S, SW, W, and NW; Str. in NW.
2	29.580	—	24.8	26.5	24.2	32.0	Lt. N airs	3	0	cv	—	A.-cu., Fr.-a.-cu. 3, A.-s. 2, SW	2 p.m. Some torn Str. to S, SW, and W; very stormy appearance to W. Ozone, 7.
4	29.587	—	22.8	24.6	22.2	34.0	E, 0-1	4	0-5	c	—	A.-s., A.-cu. 7, SW	4 p.m. Summit of Discovery and higher peaks of western range obscured, also Bluff; other land clear. Ozone, 3.
6	29.572	—	23.8	26.0	24.2	27.0	N, 0-1	5	0-5	oc	—	A.-cu. 9, SW	6 p.m. Summit of Discovery, higher peaks of western range, and Bluff obscured; looks very dark and threatening to SW. Ozone, 3.
8	29.569	—	23.8	25.4	23.6	29.8	Lt. N airs	3	0	bc	—	A.-cu., Fr.-a.-cu., A.-s.-cu. 4, SW	8 p.m. Clouds moving fairly rapidly from SW; upper half of Mt. Discovery and middle third of western mountains obscured.
10	29.572	—	18.4	22.5	21.0	26.4	Calm	3	0	bc	—	Fr.-a.-cu. & A.-cu. 3, SW	10 p.m. The tops of Mt. Discovery, Saddle Mountain, the Bluff, and Black Island obscured by Cu.; western mountains' upper range hidden by S.-cu.; refraction in SW.
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	Midt. Mirage.
Mean	29.582	—	—	25.0	23.3	—	—	—	—	—	—	—	—
Max. therm. read at		{ 8 a. 27° 0. 8 p. 27° 9.		Solar radiation		{ small black bulb 133° 5. small bright bulb 71° 0.		Evapn. { I. 7.4 grammes in 24 hours.		Precipn. — in.			

9th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.542	—	11.6	24.0	22.0	26.8	ESE, 2-4	10	10-20	bv	—	—	Some refraction in SW and S; a little thin Str. to S; some small Cu. above foot hills of western mountains, and slight S.-cu. to N; average wind velocity since 10 p.m. yesterday, 10 miles per hour.
10	29.528	—	23.2	26.0	22.9	31.2	E by N, 1-2	8	10-20	bv	—	—	Mirage.
Noon	—	—	—	—	—	—	—	—	—	—	—	—	10 a.m. Much refraction all round; layers of Cu. on western mountains, and obscuring centre third. Mirage.
2	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—
10	29.452	—	22.0	23.0	22.0	25.0	Calm	—	0	bv	—	—	Layers of Cu. and Str. to W, SW, and S; some Cl.-s. in SE.
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.507	—	—	24.3	22.3	—	—	—	—	—	—	—	—
Max. therm. read at		{ 8 a. 26° 2. 8 p. 31° 0.		Solar radiation		{ small black bulb 115° 5. small bright bulb 66° 4.		Evapn. — grammes.		Precipn. — in.			

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.			Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.	Aspirator.		
				Dry.	Wet.									Unscreened.	
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10th.  Some refraction all round horizon to W and E; thin line of Cl.-s. in S and SE; long line of Str. dividing middle third of western range horizontally; Fr.-cu. to SE. Mirage. 10 a.m. Clouds much the same in W and SE; Cu. has formed in horizontal line over Black Island. Mirage. Noon. Ozone, 8. 2 p.m. Some Str. obscures centre third of western mountains; a line of Str. divides Discovery; the Cl.-s. lie in long thin lines from E to W; no movement discernible. Ozone, 3. 4 p.m. Str. as at 2 p.m. in W. 6 p.m. Some Cu. and Str. in W appears to be moving to the N, as Discovery is now quite clear. Mirage. Ozone, 4. 8 p.m. Some Cl.-s. in SE, S, and SW; Brown Island summit obscured by Cu.; Cl.-s., Cu., and A.-s. in W; dark S.-cu. and Str. low down NNW. 10 p.m. Cl.-s. in SE, S, and SW; thin lines of A.-s. and odd Fr.-s. in W obscure middle third of western mountain range.
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.399	—	15.5	23.0	22.2	28.0	Calm	0	0	bv	—	—	—	—	
10	29.383	—	20.6	22.2	21.2	34.4	Calm	0	0	bv	—	—	—	—	
Noon	29.362	—	22.2	24.8	23.2	30.0	NW, 0-2	0	0	bv	—	—	—	—	
2	29.333	—	24.0	24.5	23.0	29.0	Lt. NW airs	4	0-5	bv	—	—	—	—	
4	29.328	—	24.0	27.2	25.5	34.6	Calm	2	0	bv	—	—	—	—	
6	29.313	—	26.4	27.0	25.0	32.5	Lt. NW airs	1	0	bv	—	—	—	—	
8	29.305	—	—	25.4	24.4	31.0	Lt. NE airs	1	0	bv	—	—	—	—	
10	29.287	—	23.8	26.8	25.0	30.8	Calm	1	0	bv	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.339	—	—	25.1	23.7	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 27° 0, 8 p. 32° 2. Solar radiation { small black bulb 110° 8, small bright bulb 62° 0. Evapn. — grammes. Precipn. — in.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11th.  Ci.-s. to S; Cu. to W obscuring centre third of western mountains; refraction all round to W and S. Mirage. 10 a.m. Lines of Cl.-s. in S and SE; the Cu. to W has changed into smoky-edged Str., and obscures middle third of western mountain range; mirage in S and SW. Noon. Clouds much the same; Cu. on N horizon; a white haze like Str. cloud in SW low down and rising towards S; no mirage. 2 p.m. Some detached Cl.-s. low down to SE, S, and SW; Str. about centre of western range. Ozone, 6. 4 p.m. Some Str. about Discovery and western range. Ozone, 3. 6 p.m. Str. obscures higher peaks of western range. Ozone, 2-3. 8 p.m. The Cu. clouds are very light and Cirrus-like; some A.-s. in S and SW and W, obscuring the higher peaks of western land; there is a small Cu. cloud-cap upon summit of Mt. Discovery. 10 p.m. In the NW, W, SW, and S are A.-s. fringed with Cl.-cu.; Cu. cap is still upon Mt. Discovery; it is the lower of two layers of Cl.-cu. clouds that is moving from SE.
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.238	—	13.0	25.0	24.0	31.0	Calm	0	0	bv	—	—	—	—	
10	29.233	—	24.2	26.0	24.0	33.2	Lt. NW airs	1	0	bv	—	—	—	—	
Noon	29.225	—	25.2	26.2	25.0	31.0	Lt. NW airs	4	0-2	bv	—	—	—	—	
2	29.217	—	26.0	27.5	24.2	33.0	Lt. NW airs	2	0	bv	—	—	—	—	
4	29.214	—	27.0	29.0	25.5	36.0	Calm	1	0	bvc	Cl.	—	—	—	
6	29.217	—	28.5	28.6	27.0	35.0	Calm	0	0	bvc	Cl.-s.	—	—	—	
8	29.218	—	26.0	26.0	25.0	28.0	Calm	0	0	bvc	—	A.-cu. 3, SE	—	—	
10	29.225	—	22.8	28.0	26.0	27.5	Calm	1	0	bvc	Ci.-cu. 2, SE	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.223	—	—	27.0	25.1	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 30° 2, 8 p. 34° 0. Solar radiation { small black bulb 110° 2, small bright bulb 60° 0. Evapn. — grammes. Precipn. — in.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12th.  Weather during the night seems to have been much the same as at 8 a.m.  A.-s. in W spreading to NW, SW, and S; it obscures upper parts of western mountains. Average wind velocity since 10 p.m. yesterday, 9 miles per hour. 10 a.m. The above-mentioned A.-s., which was in W, has spread to E; the western peaks are still obscured. Noon. Ci. and Cl.-s. radiating W; western peaks now clear. 4 p.m. Lovely pearly Cl. in zenith; small detached portions of Cu. over western mountains; visibility marked. 6 p.m. Dark Nim. over mountains to WNW; A.-cu. much wind blown and detached. 8 p.m. The A.-s. clouds are fringed with Cl.-s. and Cl.-cu.; a band of Cu. in S is moving from NW; A.-s. and Cu. obscure peaks; Str. in W; close windy Cu. cap on Mt. Discovery; small A.-s. cloud coming over Bluff range from W. 10 p.m. Cu. and A.-s., windy looking, in W, obscuring eight western peaks; Cu. wind cloud-caps over highest western peaks, also enveloping Mt. Discovery's summit and summit of Bluff range.
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.245	—	22.8	28.5	28.0	35.0	Var. SE, 1-3	9	10-20	bvcq	Ci.-cu. 3	—	—	—	
10	29.243	—	27.5	28.6	23.4	34.8	Var. SE, 0-3	7	0-20	bvcq	Ci.-s. 1, Ci.-cu. 1	A.-s. 1	—	—	
Noon	29.236	—	27.8	30.8	26.2	36.0	E, 0-4	7	0-23	bvcq	Cl.-s., Cl. 2	—	—	—	
2	29.231	—	30.2	30.6	27.0	36.0	Var. SE, 1-2	7	8-12	bvcq	Cl.-s. 4, W	—	—	—	
4	29.218	—	30.5	31.5	28.8	35.7	Var. SE, 2-4	7	15-25	bvcq	Cl. 2	—	—	—	
6	29.206	—	30.0	31.0	29.0	36.0	SE, 1-3	10	10-20	bvcq	—	A.-cu. 4	—	—	
8	29.202	—	28.4	29.5	27.2	32.9	S by E, 0-3	14	0-15	bvcq	—	A.-s. 1, E	—	—	
10	29.203	—	26.0	26.4	24.0	28.8	Var. SE, 0-4	6	0-23	bvcq	Cl. 1	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.223	—	—	29.6	26.7	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 30° 5, 8 p. 32° 8. Solar radiation { small black bulb 125° 0, small bright bulb 69° 5. Evapn. — grammes. Precipn. — in.

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13th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Spirit minimum.	Dry.											Wet.
2	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.193	—	19.5	25.0	24.8	28.2	Var. ESE, 2-5	11	15-27	bevq	Cl.-cu. 1	—	—		
10	29.218	—	21.5	22.8	21.5	25.5	Var. ESE, 4-6	15	20-34	bevq	Cl.	—	—		
Noon	29.221	—	20.2	22.2	20.8	24.2	Var. ENB, 3-6	12	18-34	bevq	—	A.-fr.-s. 1	—		
2	29.208	—	20.0	21.3	20.5	24.5	Var. ENB, 4-6	23	28-38	bq	—	—	—		
4	29.217	—	20.5	26.5	24.0	30.0	Var. E, 3-6	18	20-35	bq	—	—	—		
6	29.230	—	—	23.5	22.8	27.5	Var. ENB, 3-5	13	20-30	bq	—	—	—		
8	29.229	—	21.6	23.8	22.0	27.0	Var. E, 2-6	13	10-30	bqv	—	—	—		
10	29.231	—	22.6	24.0	22.0	25.0	Var. E, 1-5	11	0-28	bqv	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.218	—	—	23.6	22.3	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 30°.6.		8 p. 26°.8.		Solar radiation		small black bulb 106°.5.		small bright bulb 57°.0.		Evapn. — grammes.		Precipn. — in.	

Ci.-s. in SW; Ci.-cu. in NW; all distant land clear. Average wind velocity since 10 p.m. yesterday, 11 miles per hour.  
 10 a.m. Windy clouds (Cu.) about summits of White and Black Islands; Bluff closely wrapped in cloud; summit of Discovery thinly cloud covered.  
 Noon. Cloud disappearing from Bluff and Discovery.  
 2 p.m. Very small detached Cl. in NNW; Bluff blanketed.  
 4 p.m. Small detached Ci.-s. in SW; Cl. to NW; Bluff clear.  
 6 p.m. Clouds as at 4 p.m.; Bluff again enveloped in cloud; Fr.-s. detached in SE; one small Fr.-s.-cu. in S, others in SW; Cu. in N; Bluff and Mt. Discovery's summit storm-cloud capped (Cu.).  
 10 p.m. Small fragments of Ci.-cu. and Ci.-s. in S and SW; the Bluff and summit of Mt. Discovery still cloud-capped.

14th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.264	—	19.2	25.2	24.8	29.0	SE, 1-3	13	10-22	bqv	—	—	—	—	
10	29.269	—	19.0	27.2	24.0	30.8	E, 1-3	11	0-15	bqv	—	—	—	—	
Noon	29.259	—	26.6	30.8	27.9	33.9	E by N, 1-4	13	2-23	bqv	—	—	—	—	
2	29.255	—	26.5	33.0	28.5	37.5	E by N, 1-3	9	0-15	bvq	—	—	—	—	
4	29.249	—	31.0	32.0	30.0	37.8	E by N, 1-3	5	0-15	bvq	—	—	—	—	
6	29.255	—	30.8	31.5	30.0	36.0	SE, 0-3	6	0-15	bvq	—	—	—	—	
8	29.262	—	27.6	28.2	27.5	30.7	Var. SE, 2-5	11	10-27	bvq	—	—	—	—	
10	29.279	—	26.2	28.0	24.2	31.5	E, 1-4	10	2-20	bvq	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.262	—	—	29.5	27.1	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 28°.0.		8 p. —.		Solar radiation		small black bulb 113°.5.		small bright bulb 64°.9.		Evapn. — grammes.		Precipn. — in.	

Very clear and brig some detached clouds to S. Average wind velocity since 10 p.m. yesterday, 13 miles per hour.  
 10 a.m. Some Cl.-s. in SW and Ci.-s. and A.-s. to W.  
 Noon. Ci.-s. and Cl.-cu. extend from NW through W to S; a haze or thin film of Cl.-s. can be seen low down to S; light Str. low down in N.  
 2 p.m. Very small detached Cl. and Ci.-s. to W. Ozone, 4.  
 4 p.m. Clouds as at 2 p.m., moved further N. Ozone, 3.  
 6 p.m. Rather less cloud than at 2 p.m. Ozone, 3.  
 8 p.m. Some Cl.-s. in WSW; Cu. whid cloud pouring over Bluff and on top of Discovery; one or two fragments of Fr.-s. cloud appear and disappear in SW.  
 10 p.m. Cl., Cl.-cu., and Cl.-s. in SW; the Bluff and Mt. Discovery are clear of clouds.

15th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.270	—	23.4	30.2	29.0	35.2	E, 0-1	7	0-10	bv	—	—	—	—	
10	29.262	—	29.1	30.4	26.0	35.2	Var. E, 1-3	6	2-15	bvq	—	—	—	—	
Noon	29.241	—	28.0	30.0	27.0	35.0	E, 1-2	8	2-10	bvq	—	—	—	—	
2	29.236	—	29.2	30.0	26.5	35.5	N, 0-1	3	0	bv	—	—	—	—	
4	29.234	—	24.8	25.5	24.0	29.5	NE, 1-2	7	0-15	bvc	—	—	—	—	
6	29.223	—	24.0	26.5	23.5	31.0	NE, 1-2	11	0-10	bvc	—	—	—	—	
8	29.216	—	26.2	29.0	26.5	34.8	N, 0-1	4	0	bvc	—	—	—	—	
10	29.210	—	—	27.0	24.2	37.0	Calm	1	0	bm	—	—	—	—	
Midt.	29.207	—	—	23.0	22.0	27.0	Calm	0	0	bm	—	—	—	—	
Mean	29.233	—	—	28.0	25.4	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 31°.5.		8 p. 32°.6.		Solar radiation		small black bulb 115°.1.		small bright bulb 68°.2.		Evapn. — grammes.		Precipn. — in.	

Some refraction all round. Average wind velocity since 10 p.m. yesterday, 7 miles per hour.  
 10 a.m. Some windy-looking Cu. is coming over higher peaks of southern and western ranges.  
 Noon. Fr.-cu. about summit of Discovery; Cu. lying in amongst southern and western mountains.  
 2 p.m. Layer of Str. to W. Ozone, 9.  
 4 p.m. Layer of Str. in W has increased to SW. Ozone 4.  
 6 p.m. Layer of Str. in W and SW; Cu. to W obscuring centre third of western range. Ozone, 4.  
 8 p.m. Cu., S.-cu., and Str. in N, stretching round to W and SW, obscuring much of western land and lower portions of hills.  
 10 p.m. Clouds much the same in N to W, and SW.  
 Midt. Misty all round on distant land; fine roll Cu. on foot of Discovery, and between western mountains and western foot hills; thin layer of S.-cu. apparently hanging over Strait.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	F. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.172	—	19.0	29.0	27.5	34.5	Lt. SE	airs	0	0	bcv	Cl. 1	Fr.-a.-cu. 1, NNE	—	16th. The Cl. radiating NW; Cu. and S.-cu. in W and NW hiding summits of lower hills; refraction to S. Mirage. 10 a.m. Windy-looking, dark S.-cu. in NW, W, and SW, obscuring western land and centre third of Discovery; Fr.-cu. over Black Island; refraction in S. Noon. Western mountains and land nearly obscured by S.-cu.; refraction to S; clouds over Black Island and Discovery the same as at 10 a.m. 2 p.m. Western range obscured by S.-cu., except the highest peaks; Cu. about Discovery. Ozone, 8. 4 p.m. Western range entirely obscured by dark cloud; some Cu. and S.-cu. about Discovery; little torn cloud over Black Island. Ozone, 4.
10	29.164	—	22.8	27.2	35.0	31.0	ENE, 1-2	4	2-15	bcq	Cl., Cl.-s. 2	Fr.-a.-cu. 1, NE	—		
Noon	29.158	—	23.2	24.0	22.0	29.0	ENE, 2-3	10	10-15	bcq	Cl., Cl.-s. 1	—	—		
2	29.146	—	22.0	23.5	21.5	28.0	Var. E, 1-4	10	5-20	bcq	Cl., Cl.-s. 1	—	—		
4	29.136	—	22.0	25.0	23.2	31.0	ENE, 0-2	11	0-10	bcq	Cl.-s. 1	—	—		
6.35	29.125	—	21.8	23.5	21.5	28.0	Var. E, 1-3	15	0-18	bcq	Cl.-s. 1	—	—		
8	29.115	—	21.9	24.0	21.0	27.6	Var. E, 2-4	7	10-23	bcq	Cl. 1	—	—		
10	29.111	—	22.6	24.5	21.0	26.4	E, 1-3	11	10-20	bq	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.141	—	—	25.1	22.8	—	—	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 33°.5. 6 p. 30°-1.		Solar radiation		{ small black bulb 106°-6. small bright bulb 59°-4.		Evapn. — grammes.		Precipn. — in.					

6.35 p.m. Western range entirely obscured; dark and stormy appearance in W; some Cu. and Str. about Discovery. Ozone, 4. 8 p.m. A.-s., Cu., and Str. in W extending to NW and SW as well as far N, obscuring middle half of mountain. 10 p.m. The clouds in W are very much the same as at 8 p.m., but extend rather further to the SSE by S.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	F. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.073	—	14.5	17.6	17.2	20.5	E by N, 3-6	12	20-38	bcq	Cl., Cl.-s. 3	—	—	17th. Some scud is moving rapidly in E from SE; A.-s. clouds stretch along W to S and obscure higher peaks of western mountains and summit of Discovery; White Island and Bluff obscured; high drift in Strait. Average wind velocity since 10 p.m. yesterday, 12 miles per hour. 10 a.m. Drift obscuring Black and White Islands, lower parts of Discovery, western mountains, and Bluff. Noon. Clouds for most part the same as at 8 a.m.; Bluff and White Island now clear; A.-s. in N down to horizon and apparently approaching; drift in Strait. 2 p.m. Upper half of western mountains obscured by dark Str.; S.-cu. on Discovery. Ozone, 8. 4 p.m. Ozone, 3. 6 p.m. Bank of heavy dark Cu. and S.-cu. clouds to the W and SW. Ozone, 3. 6 p.m. A.-s., A.-cu., and Str. in W, where it is dark and gloomy; all upper range of western mountains obscured; A.-s. extends to S as well as NW and N. 11.30 p.m. Cl. clouds (?) travelling over from SSE very fast.	
10	29.066	—	14.8	17.4	17.2	17.6	ENE, 3-4	16	15-24	bcq	Cl., Cl.-s. 4	—	—		
Noon	29.061	—	15.5	16.6	16.0	20.0	E, 3-5	16	15-30	bcq	Cl., Cl.-s. 3	—	—		
2	29.054	—	15.4	19.5	18.5	24.5	E, 1-3	11	0-15	bcq	Cl., Cl.-s. 4	—	—		
4	29.044	—	16.5	21.0	20.0	26.0	E, 1-3	11	0-15	bcq	Cl., Cl.-s. 4	—	—		
6	29.053	—	20.3	22.5	21.6	27.4	ENE, 1-3	12	7-18	bc	Cl. 3	—	—		
8	29.016	—	21.6	23.0	21.0	25.4	SSE, 0-2	9	0-15	bc	Cl.-cu. 2, SE	A.-cu., A.-s., Fr.-a.-cu. 3, SE	—		
10	28.997	—	19.8	21.7	19.2	26.0	NE by E, 0-1	9	0-8	bc	Cl. 5	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Mean	29.046	—	—	19.9	18.8	—	—	—	—	—	—	—	—		—
Max. therm. read at		{ 8 a. 25°-2. 6 p. 24°-7.		Solar radiation		{ small black bulb 108°-2. small bright bulb 55°-9.		Evapn. — grammes.		Precipn. — in.					

4 p.m. Ozone, 3. 6 p.m. Bank of heavy dark Cu. and S.-cu. clouds to the W and SW. Ozone, 3. 6 p.m. A.-s., A.-cu., and Str. in W, where it is dark and gloomy; all upper range of western mountains obscured; A.-s. extends to S as well as NW and N. 11.30 p.m. Cl. clouds (?) travelling over from SSE very fast.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	F. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	28.910	—	17.8	21.2	20.4	22.5	E by S, 2-5	11	15-25	eq ⊕	—	A.-s., A.-cu. 1	—	18th. Sun gleaming; higher parts of western mountains obscured; Bluff covered with blanket of cloud. Average wind velocity since 10 p.m. yesterday, 11 miles per hour. 10 a.m. All high land obscured, patches of Bluff only visible. Noon. All high land obscured, and lower land obscured by drift; Bluff obscured. 2 p.m. All distant land obscured; much drift in Strait. Ozone, 8. 4 p.m. All high land obscured. Ozone, 3. 6 p.m. All but high peaks of western mountains and summit of Discovery partly visible; much drift in Strait. Ozone, 4. 8 p.m. Bluff is visible, but covered in Cu.; White and Black Islands much cloud covered; Mt. Discovery practically clear; all western land above foot hills obscured. 10 p.m. Weather as at 8 p.m.	
10	28.911	—	19.5	21.5	19.6	23.2	SE by E, 2-4	15	17-23	eq	Cl. 2	A.-cu. 6	—		
Noon	28.914	—	16.0	16.5	16.0	19.0	Var. SE, 2-7	15	15-43	eq	Cl. 1	A.-cu. 4, S; S 2, SSE	—		
2	28.924	—	14.8	16.0	15.2	17.6	Var. SE, 2-7	16	0-35	eq ⊕	Cl., Cl.-s. 3	A.-cu. 3, A.-s. 4, S and SE	—		
4	28.927	—	14.6	17.5	16.5	20.0	SE by E, 2-7	15	10-40	eq	Cl., Cl.-s. 4	A.-cu. 5, S; A.-s., SE (rapidly)	—		
6	28.926	—	16.5	19.0	17.5	23.0	Var. E, 1-4	18	10-25	eq	Cl., Cl.-s., Cl.-cu. 5	A.-cu., Fr.-a.-cu. 2, S (rapidly); A.-s. 1, S (rapidly)	—		
8	28.930	—	17.8	18.5	17.2	20.1	ESSE, 2-6	10	10-35	bcq	Cl. 2	A.-s., A.-cu. 2, SE (rapidly); Light Cu. 5, SE (rapidly); Light Cu. 2, S (rapidly)	—		
10	28.944	—	16.1	17.2	16.0	18.0	E, 2-4	14	15-30	bcq	Cl. 4, W	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Mean	28.923	—	—	18.4	17.3	—	—	—	—	—	—	—	—		—
Max. therm. read at		{ 8 a. 23°-2. 8 p. 21°-8.		Solar radiation		{ small black bulb 95°-2. small bright bulb 50°-0.		Evapn. — grammes.		Precipn. — in.					

covered; Mt. Discovery practically clear; all western land above foot hills obscured. 10 p.m. Weather as at 8 p.m.

1903—December.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

19th.

Hour.	Barometer, reduced to 32° F., and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	28.945	—	16.2	25.0	23.6	34.4	Calm	6	0	by	—	—	Some refraction all round; Cu. obscures the upper third of Mt. Discovery; Fr.-s. over Bluff; A.-s. and Cu. in W—obscuring middle third of western mountains; A.-s. in NW and N with some Cu. Average wind velocity since 10 p.m. yesterday, 6 miles per hour.	
10	28.936	—	20.5	24.4	21.5	38.0	Calm	1	0	by	—	—	10 a.m. Weather as at 8 a.m.	
Noon	28.921	—	24.0	26.8	24.1	30.0	N, 1-3	2	5-20	bcq	—	Fr.-a.-cu. 1, N	Noon. Fr.-cu. and Cu. in NE and SE moving rapidly from N; Fr.-cu. in SW and over Bluff; Cu. to W obscuring all high land; Discovery obscured by Cu.	
2	28.904	—	25.8	26.5	25.0	29.0	SE, 0-1	3	0	c	—	A.-cu. 8, N	2 p.m. All high land obscured. Ozone, 7.	
4	28.889	—	25.5	26.5	23.0	28.5	NE, 0-1	3	0	c	—	A.-cu. 8, N	4 p.m. All high land obscured. Ozone, 3.	
6	28.893	—	25.8	29.5	26.2	37.0	Calm	1	0	c	Ci., Cl.-cu. 2	A.-cu., Fr.-a.-cu. 3, SE	6 p.m. Very dark and threatening appearance in the W.	
8	28.892	—	25.6	26.0	23.3	26.9	Lt. SW airs	0	0	c	—	A.-cu. 8	8 p.m. Land in W obscured, upper three-fourths of Mt. Discovery and summits of Black and Brown Islands also obscured by S.-cu.; Bluff only dimly visible.	
10	28.895	—	23.5	24.3	22.0	29.0	Lt. N airs	2	10-13	bc	Ci. 4	—	10.30 p.m. All high land obscured in clouds.	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	28.909	—	—	26.1	23.6	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 25°·2. 8 p. 31°·5. Solar radiation { small black bulb 115°·5. small bright bulb 63°·9. Evapn. — grammes. Precipn. — in.

20th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.014	—	22.1	27.0	25.0	32.0	Lt. E airs	2	0	bc	Ci.-cu. 1, S	Fr.-cu., E	Ci.-s., Ci.-cu., and Cu. in SW; A.-s. in S; A.-s. and dark S.-cu. hiding land to W; slight refraction to S; upper three-fourths of Discovery obscured by Cu. Average wind velocity since 10 p.m. yesterday, 2 miles per hour.
10	29.034	—	25.4	27.0	24.1	35.0	Lt. SE airs	2	0-8	bc	Ci. 3, NE (very slow)	Fr.-a.-cu. 1, E	10 a.m. Clouds lifting generally, and all low land visible.
Noon	29.065	—	24.1	25.0	22.9	29.5	Var. E, 0-2	6	0-16	bcq	Ci. 1	—	Noon. Conditions similar to 10 a.m.
2	29.125	—	23.5	24.5	22.8	30.0	Var. E, 0-2	6	0-10	bcq	Ci., Ci.-cu. 2	—	2 p.m. Ozone, 6.
4	29.123	—	23.0	24.5	22.8	30.8	ESE, 2	9	18-21	bc	—	Cu. 3, SSE	4 p.m. Ozone, 4.
6	29.128	—	22.8	24.0	22.5	29.0	E, 0-1	5	0-5	bc	—	A.-s.-cu. 3, SW	6 p.m. Bluff enveloped in dark cloud, except its base; Discovery obscured, except base; western mountains hidden; foot hills visible; dark and threatening appearance to W. Ozone, 4.
8	29.137	—	22.5	23.8	22.0	29.1	E by N, 0-1	8	0-10	bc	Ci.-cu. 1	—	8 p.m. Dark S.-cu. in SW and W coming from the SW; upper half of Bluff obscured by Str.; the Str. in SW extends to the S and SSE.
10	29.142	—	20.6	21.1	20.0	29.1	ENE, 1-2	8	0-10	bc	—	A.-cu., Fr.-a.-cu. 4, SW	10 p.m. Cu., stormy-looking clouds are upon Bluff summit; Cu. in W and SW obscuring the upper mountains; it is not so dark there, the clouds are breaking.
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.096	—	—	24.6	22.8	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 32°·4. 8 p. 28°·0. Solar radiation { small black bulb 109°·2. small bright bulb 61°·5. Evapn. — grammes. Precipn. — in.

21st.

2	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.098	—	20.0	27.0	25.8	—	Lt. N airs, 0-1	5	0	bv	—	—	Some light Ci.-s. to S; Fr.-cu. in SW and W. Average wind velocity since 10 p.m. yesterday, 5 miles per hour.
10	29.072	—	24.0	27.8	25.4	33.0	Lt. N by W airs	4	0-10	bv	—	—	10 a.m. Some Fr.-cu. in W; A.-s. in SW and S, also Cu., which extends to SE.
Noon	29.046	—	26.4	28.0	25.5	31.5	N by W, 0-1	4	5-12	bvcq	—	A.-cu., Fr.-a.-cu. 3, SW	Noon. Str. and Cu. in SE, S, SW and W. Sky nearly overcast; Bluff cloud topped.
2	29.016	—	27.0	28.0	26.0	30.5	N by W, 0-1	7	5-12	cq	—	A.-cu. 9, SW	Bluff, western range, and Discovery obscured, except lower parts of mountains. Ozone, 7.
4	28.994	—	26.8	27.0	25.5	29.0	NW, 0-1	3	0-5	oc	—	A.-cu. 10, SW	6 p.m. Cloud now touching summit of White Island; other clouds as before. Ozone, 2.
6	28.989	—	26.8	27.0	25.8	28.5	Calm	0	0	oc	—	S.-cu. 10	8 p.m. Universally overcast; sun shining through clouds in W, SW and S.
8	28.969	—	26.0	26.6	24.2	27.8	Lt. NNW airs	2	0	c	—	S. 10	10 p.m. Clouds appear to be breaking in SSE; all land above 3000 feet obscured, except to W, where the foot hills are visible; dark in SW.
10	28.941	—	25.0	25.4	24.0	26.0	Lt. NW airs	5	2-9	oc	—	S. 10	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.016	—	—	27.1	25.3	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 27°·4. 8 p. 29°·1. Solar radiation { small black bulb 122°·8. small bright bulb 66°·2. Evapn. — grammes. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.				
			Spirit minimum.	Dry.									Wet.			
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	<p>22nd.</p> <p>Upper portions of Black, White, and Brown Islands obscured; Bluff entirely obscured; upper three-fourths of Discovery covered, except towards the N; the summits of foot hills to W are obscured; fine snow falling, but in no quantity. Average wind velocity since 10 p.m. yesterday, 3 miles per hour.</p> <p>10 a.m. Fine snow still falling; clouds low everywhere, but inclined to lift; very dark in SW.</p> <p>Noon. Conditions much the same; no snow falling; Brown Island summit visible through thin cloud.</p> <p>2 p.m. Base only of Discovery visible; western mountains obscured; tops of Islands to S dimly seen through cloud. Ozone, 6.</p> <p>4 p.m. Appears to be lifting all round; Discovery clear, except for line of Str.; western mountains beginning to show; some small breaks in clouds in E. Ozone, 2.</p> <p>6 p.m. Still appearance of improvement Cu. and Str. NNW to W and S; western Mt. Discovery partially obscured; middle third of western range obscured; peaks clear; Bluff bathed in close Cu. cloud; some Cl. and Cl.-cu. in ESE.</p>	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	28.891	—	24.2	28.0	26.8	30.0	Lt. N airs	3	0	o *	—	—	N. 10	—		
10	28.886	—	27.0	28.0	25.6	30.1	Lt. N airs	4	0	o *	—	—	N. 10	—		
Noon	28.878	—	27.5	29.0	25.8	31.9	Lt. N airs	2	0	o	—	—	S. 10	—		
2	28.868	—	28.0	29.0	25.5	30.5	Lt. N airs	2	0	oc	—	—	S. 10	—		
4	28.862	—	26.8	28.2	25.6	30.0	Lt. NW airs	4	0	oc	—	—	S.-cu., A.-s.-cu. 10	—		
6	28.864	—	26.5	28.2	26.0	30.5	Lt. N airs, 0-2	4	0-10	c	—	—	A.-cu., S.-cu. 8, NW (very slow) A.-cu. 1	—		
8	28.865	—	27.1	27.5	25.6	31.5	N, 1-3	8	10-24	bcq	—	—	—	—		
10	28.872	—	26.0	27.2	25.0	30.0	N, 1-4	8	10-25	bq	—	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	28.873	—	—	28.1	25.7	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 28° 1.		8 p. 29° 6.		Solar radiation		small black bulb 94° 0.		small bright bulb 51° 5.		Evapn. — grammes.		Precipn. — in.		

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	<p>23rd.</p> <p>Cl. radiating NNE and SSW; some S.-cu. obscures middle third of western range; Cu. and Fr.-cu. to SW. Average wind velocity since 10 p.m. yesterday, 6 miles per hour.</p> <p>10 a.m. Cl.-s. radiating NNE, SSW; some Cl.-cu. in SSW; a line of Cu. over Black Island and across Discovery, also in same position as before on western mountains; slight refraction to SW.</p> <p>Noon. A.-s. is passing over to W; about 10 minutes ago the sky was overcast with it; Cu. in same position in W.</p> <p>2 p.m. Ozone, 6.</p> <p>4 p.m. Dark cloud over Bluff; upper half of Discovery and western range obscured.</p> <p>6 p.m. Bluff obscured; White Island and Brown Island partly obscured. Ozone, 4.</p> <p>8 p.m. Scud flying over Crater and Harbour Hills from SSE; all distant land obscured.</p> <p>10 p.m. Very thick; snow falling and driving thickly; scud still flying over Crater and Harbour Hills; now also over Observation Hill.</p>	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.054	—	23.8	28.1	27.5	34.8	Lt. NNW airs	6	0	bc	—	—	Cl., Cl.-s., Cl.-cu. 3, NNE (fairly fast) Cl.-s. 2, NNE	—		
10	29.090	—	27.8	29.2	26.1	37.5	Calm	0	0	bc	—	—	—	—		
Noon	29.124	—	29.2	29.2	25.8	32.8	Lt. SSE airs	1	0-10	bc	—	—	Cl., Cl.-s. 3, NNE	A.-s. 1, E		
2	29.161	—	26.5	27.5	25.0	30.0	Var. SE, 0-2	5	0-10	ocqv	—	—	S. 10	—		
4	29.192	—	26.5	27.0	25.0	29.0	SE, 0-3	8	0-15	ocqv	—	—	S. 10	—		
6	29.233	—	—	25.5	25.0	26.0	Var. SE, 2-5	14	15-32	ocq	—	—	N. 10	—		
8	29.258	—	24.0	25.0	24.1	25.5	Var. S, 2-5	15	20-30	ocqf †	—	—	N. 10, SSE	—		
10	29.277	—	23.0	24.0	23.4	24.0	Var. S, 2-6	15	15-35	ocqf † * †	—	—	N. 10, SSE	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.174	—	—	26.9	25.2	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 28° 4.		8 p. 32° 5.		Solar radiation		small black bulb 109° 5.		small bright bulb 63° 0.		Evapn. — grammes.		Precipn. — in.		

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	<p>24th.</p> <p>Black and Brown Islands, Discovery (lower slopes) and foot hills of western land dimly visible; snow falling thickly. Average wind velocity since 10 p.m. yesterday, 15 miles per hour.</p> <p>10 a.m. Clouds breaking in W and SW, showing blue sky; Discovery nearly clear of cloud; lighter sky to S; high peaks to S end of western range quite clear; White Island becoming visible; snow falling thickly.</p> <p>Noon. Western mountains are entirely clear; A.-cu. and S.-cu. hanging over them; blue sky to SW, W, NW, and N.</p> <p>2 p.m. All land clear except summit of Discovery and highest peaks of western mountains. Ozone, 10.</p> <p>4 p.m. Land as at 2 p.m.; very clear in the W, but foggy in the N and NE. Ozone, 3.</p> <p>6 p.m. Bluff, White, and Brown Islands, and upper three-fourths of Discovery entirely obscured; all other distant land only visible (dimly) through drift; soft snow falling in small flakes. Ozone, 4. 8 p.m. Sun gleaming; sun shining upon western mountains; upper parts of Black and White Islands, also Mt. Discovery, obscured; Bluff dimly discernible. 10 p.m. Scud passing more slowly over Crater Hill, apparently from S and SE; sun shining about Saddle Mountain in SW; Brown Island unclouded; all other land cloud covered in upper parts.</p>	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.309	—	19.1	27.2	26.4	28.4	Var. SE, 3-5	15	15-28	ocq † *	—	—	N. 10	—		
10	29.324	—	26.0	28.8	27.0	29.4	Var. SE, 4-6	15	20-44	ocq † *	—	—	N. 10	—		
Noon	29.321	—	27.0	29.8	28.0	31.0	Var. SE, 4-8	21	20-50	ocq †	—	—	S. 10	—		
2	29.322	—	27.0	30.0	28.5	31.0	SE, 2-6	18	15-40	ocq	—	—	S. 10	—		
4	29.313	—	29.0	30.5	28.5	32.0	E, 1-5	8	10-35	ocq	—	—	S. 10	—		
6	29.309	—	28.6	30.0	28.6	31.5	ESE, 1-3	11	10-20	ocq †	—	—	N. 10	—		
8	29.305	—	29.0	30.4	29.2	31.5	E by N, 2-4	7	15-25	ocq † *	—	—	N. 10	—		
10	29.288	—	29.0	30.0	29.0	30.2	E by N, 3-4	13	15-25	ocq † *	—	—	N. 10	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.311	—	—	29.6	28.2	—	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 27° 6.		8 p. 30° 8.		Solar radiation		small black bulb 83° 0.		small bright bulb 45° 2.		Evapn. — grammes.		Precipn. — in.		

1903—December.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

25th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.			P. tube, see p. 2.	Upper.			Lower.
				Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	—	—	—	—	—	—	—	—	—	—	—	—	Much drift during the night.		
6	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.279	—	27.0	32.0	31.0	28.8	E, 3-4	15	15-23	oq	—	S. 10	—		
10	29.271	—	26.8	33.0	30.8	29.9	E, 2-3	14	10-20	oeq	—	S. 10, SE	—		
Noon	29.253	—	32.6	35.0	32.0	31.0	ENE, 3-5	7	18-25	beq	—	A.-cu., Fr.-a.-cu 2, SE (fast)	—		
2	29.229	—	33.5	36.0	33.2	40.0	Var. E, 2-5	13	15-28	bqv	—	A.-cu. 1, SE	—		
4	29.217	—	35.0	36.0	34.5	40.4	Var. E, 2-t	13	15-25	bqv	—	—	—		
6	29.207	—	35.5	37.2	32.5	41.0	ENE, 2-4	18	15-25	bqv	—	—	—		
8	29.182	—	35.6	37.0	33.0	41.0	NE, 3-4	15	15-22	bqv	—	—	—		
10	29.184	—	34.2	34.8	32.0	37.8	NNW, 0-2	8	0-15	bvmq	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.228	—	—	35.1	32.4	—	—	—	—	—	—	—	—		
Max. therm. read at		8 a. 32°·2. 8 p. 38°·5.		Solar radiation		small black bulb 124°·0. small bright bulb 71°·0.		Evapn. — grammes.		Precipn. 0.12 in. since 10 a.m. 1st.					

26th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.163	—	29.7	33.8	33.0	41.2	Calm	2	0	bev	—	Cl., Cl.-s. 1	—
10	29.141	—	31.0	33.0	30.8	43.8	Calm	0	0	bev	—	Cl., Cl.-s. 1	—
Noon	29.141	—	32.9	34.4	32.5	44.2	Calm	2	0	bev	—	Cl., Cl.-s. 1	—
2	29.136	—	33.8	36.2	33.2	44.5	Calm	1	0	bv	—	Cl.-s.	—
4	29.127	—	34.0	36.0	33.2	55.0	Calm	1	0	bvc	—	Cl.-s.	—
6	29.112	—	34.0	35.2	31.8	38.5	NW, 1-2	4	0-10	bvc	—	Cl. 1	—
8	29.098	—	33.0	34.0	31.9	37.0	NNW, 0-1	7	0-10	bv	—	—	—
10	29.089	—	32.4	33.6	31.2	37.0	Lt. NW airs	5	0	bv	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.128	—	—	34.5	32.2	—	—	—	—	—	—	—	—
Max. therm. read at		8 a. 36°·6. 8 p. 42°·0.		Solar radiation		small black bulb 122°·0. small bright bulb 78°·5.		Evapn. — grammes.		Precipn. — in.			

27th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.074	—	26.2	38.0	32.6	42.8	ENE, 1-2	7	2-15	bev	—	Cl.-s., Cl.-cu. 1, W	—
10	29.068	—	28.9	33.5	31.2	37.0	N by W, 1-3	5	12-20	bevq	—	Cl.-s., Cl.-cu. 2, W	—
Noon	29.078	—	32.8	34.4	32.1	35.4	NNW, 1-2	9	2-10	bevq	—	Cl.-s., Cl.-cu. 3, W	—
2	29.078	—	32.5	33.5	32.0	36.0	NW, 0-1	7	0	cv	—	A.-s. 1, W	—
4	29.074	—	32.5	35.0	32.0	40.0	Calm	2	0	cv	—	Cl.-s., Cl.-cu. 8	—
6	29.079	—	34.5	36.0	34.5	46.5	Calm	0	0	bev	—	Cl.-s., Cl.-cu. 3	—
8	29.088	—	34.3	35.2	31.0	39.0	NNE, 1-2	3	5-15	bv	—	—	—
10	29.090	—	35.8	35.8	31.9	46.0	Calm	2	0	bev	—	Cl.-s., Cl.-cu. 1	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.079	—	—	35.2	32.2	—	—	—	—	—	—	—	—
Max. therm. read at		8 a. 38°·0. 8 p. 41°·4.		Solar radiation		small black bulb 108°·8. small bright bulb 65°·5.		Evapn. — grammes.		Precipn. — in.			

Hour.	Thermometers.						Wind.				Clouds, Amount and movement.		Remarks.	
	Barometer, reduced to 32° F. and sea level.	Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 21	Weather.	Sunshine.	Upper.	Lower.		Aspirator.
			Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	<p>28th.</p> <p>Weather during night has apparently been fine and calm; wind rising about 6 a.m.</p> <p>Slight refraction to S. Mirage. Average wind velocity since 10 p.m. yesterday, 4 miles per hour.</p> <p>10 a.m. Rather more refraction in S. Mirage.</p> <p>Noon. Some Fr.-cu. over Black Island; Cu. to WNW.</p> <p>2 p.m. All land clear; 2.30, a bank of fog advancing rapidly from NW had reached Hut Point; by 3.10 it had reached and obscured Discovery; it then appeared to rise and form Fr.-s. clouds; by 3.30 Bluff and White Island were obscured. Ozone, 8.</p> <p>4 p.m. All distant land, Cape Armitage, and Hut Point obscured in dense fog; other land close to dimly visible. Ozone, 2.</p> <p>6 p.m. Land visible as at 4 p.m.; air full of minute fog crystals. Ozone, 4.</p> <p>6.30 p.m. All land clear, except base of western hills N of Discovery.</p> <p>8 p.m. Low mist moving rapidly in W to S; A.-s. and Fr.-cu. in SW; odd Fr.-cu. among hills of western range.</p> <p>10 p.m. Cl.-s. in W and SW; odd Cu. (weird looking) about western peaks as well as about Saddle Mountain.</p>
4	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.189	—	23.8	32.8	30.0	36.6	E, 4	(?)	15-23	bv	—	—	—	
10	29.197	—	32.6	37.0	34.0	42.0	E by N, 2-3	15	10-17	bv	—	—	—	
Noon	29.223	—	34.6	35.1	32.2	38.5	ENE, 3-4	10	10-20	bv	—	—	—	
2	29.245	—	33.5	34.0	32.0	38.0	N, 0-3	14	0-15	bf	—	—	—	
4	29.267	—	28.5	29.5	29.5	33.5	NW, 0-1	4	0	bf	—	Det. Fr.-s.	—	
6	29.283	—	28.5	30.5	29.0	37.5	Calm	3	0	bf	—	—	—	
8	29.293	—	28.2	32.2	31.2	36.5	NNW, 0-1	0	2-10	bmv	—	—	—	
10	29.301	—	30.6	31.4	29.2	35.5	Lt. NNW airs	2	0	b	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.250	—	—	32.8	30.9	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 40°·2, 8 p. 38°·2. Solar radiation { small black bulb 111°·5, small bright bulb 67°·0. Evapn. — grammes. Precipn. — in.

Hour.	Thermometers.						Wind.				Clouds, Amount and movement.		Remarks.	
	Barometer, reduced to 32° F. and sea level.	Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 21	Weather.	Sunshine.	Upper.	Lower.		Aspirator.
			Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	<p>29th.</p> <p>Fine, with apparently little wind during the night.</p> <p>Cu. and Fr.-cu. in SW over Brown Island. Mirage. Average wind velocity since 10 p.m. yesterday, 3 miles per hour.</p> <p>10 a.m. Very slight refraction; Cu. to SW has gone. Mirage.</p> <p>Noon. Cl.-s. in SW; slight refraction all round; the Cu. in SW appears and disappears frequently.</p> <p>2 p.m. All land clear; some Cl.-s. in SW; 2.30, fog bank advancing up Strait rapidly from NW; at 3.15 it reached the ship, and the temperature fell immediately, dry and wet bulb showed the same readings, and the hygograph jumped to above 100. Ozone, 8.</p> <p>4 p.m. White Island and Bluff the only land visible; ozone 4, and showed no difference on being placed in water; at 4.30 no distant land was visible, and summits of land close to only dimly visible.</p> <p>6 p.m. No distant land visible; Observation and Crater Hills and other land close to visible only up to a height of about 250 feet; fog has lifted; sky is obscured entirely, except one small patch visible in gap. 8 p.m. Clouds radiating from SW; A.-s. and dark Str. in SW; low mist along in W from S to N, beginning at open water apparently; windy Cu. conv. clouds in W; surface sea-water temperature, 31°·5. Ozone, 5. 10 p.m. The clouds are still radiating from the SW; there are some windy Cu. in SW, W, and NW; a Cu.-like mist is moving from N in W, and hides the foot hills of western land as well as the lower two-thirds of Brown Island, then thins to the southward; except for odd small Cu. clouds, mentioned above, the sky is clear in NW.</p>
4	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.344	—	27.9	34.8	32.0	40.0	E by N, 1-2	3	2-12	bv	—	—	—	
10	29.351	—	33.8	36.8	32.0	42.0	ENE, 0-1	7	2-10	b	—	—	—	
Noon	29.347	—	36.0	39.0	33.8	45.0	E by N, 0-1	2	0	b	—	—	—	
2	29.329	—	35.5	38.4	33.4	45.0	E, 0-1	4	0	b	—	—	—	
4	29.303	—	29.0	29.0	29.0	32.5	NW, 0-2	6	0-10	bf	—	—	—	
6	29.304	—	27.5	28.0	27.5	28.5	NNW, 0-1	6	0-5	f	—	—	—	
8	29.256	—	27.5	29.2	28.2	37.0	Calm	0	0	bc	Cl., Cl.-cu. 3, SW	—	—	
10	29.243	—	27.0	27.4	26.4	27.8	Calm	1	0	c	—	A.-cu. 9, SW	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.310	—	—	32.8	30.3	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 35°·1, 8 p. 40°·2. Solar radiation { small black bulb 115°·0, small bright bulb 71°·0. Evapn. — grammes. Precipn. — in.

Hour.	Thermometers.						Wind.				Clouds, Amount and movement.		Remarks.	
	Barometer, reduced to 32° F. and sea level.	Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 21	Weather.	Sunshine.	Upper.	Lower.		Aspirator.
			Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	<p>30th.</p> <p>Refraction all round; some A.-s. in S, and Fr.-cu. to SW; some Cu. among western mountains. Mirage.</p> <p>10 a.m. A.-s. and Cu. to W obscuring part of western mountains; thin A.-s. in S, SE, and SW; clouds passing to NE.</p> <p>Noon. A.-s. and Cu. extend from NW through W, S, and SE; Cu. on the Bluff; summit of Discovery obscured.</p> <p>1.30 p.m. Temp. at Cape Armitage, 34°·5, min., 72°·0. Erebus smoke forming a mushroom (2000 feet). o. A.-s. 10. Wind NE, 3.</p> <p>2 p.m. High peaks of western mountains and summit of Discovery obscured; Bluff has heavy cloud on it. Ozone, 8.</p> <p>4 p.m. Clouds as at 2 p.m. Ozone, 4.</p> <p>6 p.m. All high land obscured; western foot hills and all islands visible; Bluff clear; heavy dark clouds, apparently Nim., in W and SW. Ozone, 3.</p> <p>8 p.m. Very dark in W and SW, obscuring western land and all but very lowest slopes of Brown Island and Mt. Discovery. 10 p.m. Sky is clearing in W, the foot hills, Brown Island, and lower half of Mt. Discovery are clear; there is some Fr.-cu. in SW; Bluff is closely capped with Cu. wind cloud; a prismatic zenith circle (not parheliion) can be seen, apparently 45° from sun; a third of circle is visible only, that portion nearest to sun.</p>
4	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	28.977	—	24.8	32.0	30.0	36.0	Calm	0	0	bc	Cl.-cu. 4, SW	—	—	
10	28.971	—	31.5	36.0	32.5	43.5	Calm	1	0	bcv	Cl.-s., Cl.-cu. 2, SW	—	—	
Noon	28.968	—	34.1	34.9	31.8	42.2	Calm	0	0	bc	Cl.-cu. 4 (higher NW, lower SW)	—	—	
2	28.974	—	—	31.0	29.0	32.0	SSE, 0-2	3	0-15	ocq	Cl.-cu. 3, NW	A.-cu., A.-s. 7, SW	—	
4	28.982	—	29.0	29.5	27.5	30.8	Var. E, 1-4	11	0-20	ocq	—	S. 10	—	
6	28.994	—	26.0	27.5	25.0	28.0	ESE, 2-7	12	0-35	ocq	—	S., S.-cu. 10	—	
8	29.010	—	25.2	27.0	24.6	27.5	E, 1-4	11	0-20	ocq	—	S. 10, N	—	
10	29.026	—	24.5	25.0	24.0	25.6	SE, 2-4	12	10-25	eq	Cl.-s. 1, SW	A.-cu. 2, A.-s. 1, S. 1	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	28.988	—	—	30.4	28.1	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 34°·5, 8 p. 37°·2. Solar radiation { small black bulb 121°·5, small bright bulb 70°·8. Evapn. — grammes. Precipn. — in.

1903—December.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

31st.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Anemograph.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Dry.	Wet.											
2	—	—	—	—	—	—	—	—	—	—	—	—	—	Weather during the night seems to have remained much the same as at 10 p.m.	
4	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.002	—	22.9	26.2	25.8	29.0	Var. E, 1-2	12	8-15	e	—	Cl.-cu. 2	A.-s. 5	The sky appears to be clearing; still dark to SW and W, where only the foot hills and foot of Discovery are visible; Bluff has no blanket of cloud. Average wind velocity since 10 p.m. yesterday, 12 miles per hour. 10 a.m. Sky has cleared considerably; Bluff covered in mass of Cu.; a smoky-looking, torn Str. hides most of western mountains and Discovery, their lower parts alone showing; a line of heavy Cu. over Brown and Black Islands. Noon. Bluff almost completely obscured by Str., of which there is a good deal in S and SW, also Cu.; some of the upper peaks of western mountain range are becoming visible; intermediate heights above foot hills are hidden; Mt. Discovery almost completely hidden in torn, smoke-like Str. cloud; line of detached Cu. over Brown Island. 2 p.m. Bluff and main range and Discovery obscured. Ozone, 7. 4 p.m. Base of Bluff visible; Discovery, main western range, and Brown Island obscured. Ozone, 3. 6 p.m. Base of Bluff more visible than at 4 p.m.; Brown and Black Islands partly visible; main western range still obscured. Ozone, 4. 8 p.m. Peaks of western mountains are hidden behind Cu.; a cap of wind clouds and other Cu. clouds in W.; the Bluff is clear; Mt. Discovery is obscured by a series of dark, wind-torn Str. clouds; some Str. in SE. 10 p.m. Cu. in W; upper peaks of western mountains becoming clear; Cu. in SW; all except lowest slope of Mt. Discovery obscured by dark Cu; Bluff clear; thin S.-cu. in S to SE.	
10	29.075	—	24.5	27.8	25.2	34.0	SSE, 1-2	10	8-15	bc	—	Cl.-cu., Cl.-s. 3, SW	—		
Noon	29.086	—	26.8	29.2	27.0	33.0	S, 0-1	6	0-15	bc	—	Cl.-cu., Cl.-s. 2, SW	A.-s. 1, SW		
2	29.084	—	27.5	28.0	25.5	34.0	SE, 1-3	8	0-20	eq	—	Cl., Cl.-s. 2	A.-s. 5, SW (slow)		
4	29.073	—	27.5	28.0	26.5	34.0	SE, 0-2	11	0-20	eq	—	Cl., Cl.-s. 6	A.-s. 3, SW (slow)		
6	29.068	—	26.5	26.5	24.5	32.0	Var. SE, 0-2	11	0-10	eq	—	Cl., Cl.-s. 3	A.-s. and A.-cu. 4, SW (slow)		
8	29.066	—	26.9	28.1	25.0	33.0	Var. E, 1-2	8	8-12	bc	—	—	A.-cu. 5, SW		
10	29.049	—	27.2	28.0	25.8	34.8	NE, 2-3	7	10-18	bc	—	Cl. 1, SW	A.-cu. 2, SW		
Mldt.	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Mean	29.070	—	—	27.7	25.7	—	—	—	—	—	—	—	—		—

Max. therm. read at { 8 a. 27°·4.  
8 p. 30°·5. Solar radiation { small black bulb 113°·0.  
small bright bulb 65°·0. Evapn. — grammes. Preclpn. — in.

main western range, and Brown Island obscured. Ozone, 3. 6 p.m. Base of Bluff more visible than at 4 p.m.; Brown and Black Islands partly visible; main western range still obscured. Ozone, 4. 8 p.m. Peaks of western mountains are hidden behind Cu.; a cap of wind clouds and other Cu. clouds in W.; the Bluff is clear; Mt. Discovery is obscured by a series of dark, wind-torn Str. clouds; some Str. in SE. 10 p.m. Cu. in W; upper peaks of western mountains becoming clear; Cu. in SW; all except lowest slope of Mt. Discovery obscured by dark Cu; Bluff clear; thin S.-cu. in S to SE.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	F. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	—	—	—	—	—	—	—	—	—	—	—	—	1st. The weather during the night seems to have remained very much the same; very little wind.  Some A.-s. in NW and W; Cu. in W, obscuring western mountains, foot hills visible; Fr.-cu. and Cu. over Brown and Black Islands; a light mass of Cu. stretches from Bluff and touches tops of White Island. Average wind velocity since 10 p.m. yesterday, 3 miles per hour. 10 a.m. A.-cu. in NE, SE, and S; Cu. on upper peaks of Black and Brown Islands; and Cu. is hanging over dirty ice in centre of Strait. Noon. A.-s. and Cu. in SE and S; Cu. SW and W, obscuring Mt. Discovery and western higher mountains. 2 p.m. S.-cu. in W obscures western range; Fr.-cu. and Cu. over Black and Brown Islands; and Bluff, White Island, and western summits obscured. Ozone, 7. 4 p.m. Dark S.-cu. obscures the western range; windy Cu. over White Island; Discovery obscured in dark windy Cu. 6 p.m. White and Brown Island clear; Discovery obscured by Fr.-cu. of very windy appearance; Black Island almost obscured by dark cloud; Bluff clear except for cap of cloud; very dark appearance in SW. Ozone, 6. 8 p.m. Cu. in SE, S, SW, and W obscuring middle third of Mt. Discovery and western mountains; A.-s. in S, SW, and W, obscuring tops of western range; A.-s. also in NW. 10 p.m. Western mountains nearly clear, windy Cu. above them; Cu. in SE to S and SW in lines; Fr.-cu. in W.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	28.987	—	21.6	28.0	27.0	31.5	Lt. N by W airs	3 0	bc	—	—	—		
10	28.978	—	27.9	29.9	28.0	34.8	N by W, 0-1	3 0-8	bc	—	—	—		
Noon	28.965	—	29.0	30.0	28.8	32.5	Var. NW, 1-2	6 2-12	bc	—	—	—		
2	28.962	—	29.0	30.5	28.5	36.0	Var. NW, 0-1	6 0-10	c	—	—	—		
4	28.950	—	29.5	30.0	28.5	33.5	NW, 0-1	5 0-5	c	—	—	—		
6	28.944	—	29.5	29.5	28.0	31.5	NW, 0-1	4 0	o	—	—	—		
8	28.931	—	29.2	30.0	28.2	30.7	N, 0-1	4 0-10	bc	—	—	—		
10	28.921	—	28.4	28.8	27.0	29.5	N, 0-1	5 2-10	bc	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	28.955	—	—	29.6	28.0	—	—	—	—	—	—	—		

Max. therm. read at { 8 a. 30°-5. 8 p. 31°-1. Solar radiation { small black bulb 114°-2. small bright bulb 63°-4. Evapn. — grammes. Precipn. — in.

windy appearance; Black Island almost obscured by dark cloud; Bluff clear except for cap of cloud; very dark appearance in SW. Ozone, 6. 8 p.m. Cu. in SE, S, SW, and W obscuring middle third of Mt. Discovery and western mountains; A.-s. in S, SW, and W, obscuring tops of western range; A.-s. also in NW. 10 p.m. Western mountains nearly clear, windy Cu. above them; Cu. in SE to S and SW in lines; Fr.-cu. in W.

2	—	—	—	—	—	—	—	—	—	—	—	—	2nd. Dark to SW; no land visible to S and SE; Black Island nearly obscured, also Discovery; foot hills to W visible. Average wind velocity since 10 p.m. yesterday, 3 miles per hour. 10 a.m. Cu. in W; darker all round than at 8 a.m. Noon. Foot hills nearly obscured; low land visible to SW. 2 p.m. Only low land visible to SW. Ozone, 8. 4 p.m. Clouds lifting. Ozone, 4. 6 p.m. Clouds continue to lift; foot hills to W visible. Ozone, 4. 8 p.m. Str. passing over Crater Hill from E. 10 p.m. Clearing generally; Cu. and S.-cu. lie in lines; some refraction to SW.
4	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	
8	28.864	—	27.6	29.2	28.4	30.0	N by E, 1-3	8 10-18	oq	—	S. 10	—	
10	28.864	—	28.9	31.0	28.3	32.8	N, 0-1	6 2-10	o	—	S. 10	—	
Noon	28.855	—	27.2	28.0	26.4	31.0	SE, 1-2	4 10-15	oq	—	S. 10	—	
2	28.891	—	26.8	27.8	25.8	29.5	Var. E, 1-2	7 10-15	ocq	—	S. 10	—	
4	28.899	—	26.5	27.0	25.0	28.5	E, 1-2	6 10-15	ocq	—	S. 10	—	
6	28.921	—	26.5	28.0	26.0	28.5	E, 0-1	10 0-10	oc	—	S. 10	—	
8	28.935	—	24.8	25.1	24.6	25.8	NE, 2-3	7 10-20	oc	—	S. 10	—	
10	28.932	—	24.6	27.0	25.2	28.0	NE by N, 0-1	9 2-10	oc	—	S. 10	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	28.899	—	—	27.9	26.2	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 30°-0. 8 p. 31°-0. Solar radiation { small black bulb 68°-1. small bright bulb 44°-8. Evapn. — grammes. Precipn. — in.

2	—	—	—	—	—	—	—	—	—	—	—	—	3rd. All distant land obscured. Average wind velocity since 10 p.m. yesterday, 4 miles per hour. 10 a.m. Western mountains entirely obscured in dark, heavy-looking N.-cu.; breaks to S with heavy Cu. over Black Island and Discovery. Noon. The thermometer screen shifted 100 yards to S and re-set up; still thick to W; sun inclined to come out; clouds breaking in N and NW. 2 p.m. Clouds similar to noon; breaks in E, and Cl.-cu. visible in breaks; thick to W, with appearance of snowing, and to NW. Ozone, 8. 4 p.m. Bases of islands and distant land visible. Ozone, 3. 6 p.m. All distant land obscured. Ozone, 3 to 4. 8 p.m. Cu. and S.-cu. in NW to S; all distant land, except Brown Island, obscured.
4	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	
8	28.928	—	26.4	28.4	27.6	31.0	Calm	4 0	of*	—	N. 10	—	
10	28.966	—	25.5	26.0	24.8	28.0	SE, 1-2	2 10-15	o	—	S. 10	—	
Noon	28.983	—	22.5	23.8	23.0	27.0	SE, 2-3	9 12-18	oc†	—	Cl.-s. 3, SW; A.-cu. 4, SW A.-cu. 5, SW (fast)	Scud 1, S (rapid)	
2	29.001	—	23.0	26.0	24.2	28.0	E, 2-3	10 12-16	oc	—	Cu. 3, SE (fast)	—	
4	28.997	—	24.0	24.8	23.2	25.0	ENE, 3-4	10 18-25	oc	—	S. 10	—	
6	29.001	—	24.0	27.2	24.0	28.0	ENE, 0-1	9 0-5	oc	—	S. 10	—	
8	29.034	—	24.2	24.9	23.5	26.0	Calm	7 0	ef*	—	N. 6, S.-cu. 3, S	—	
10	29.060	—	23.2	24.0	23.4	29.2	SE, 4	11 22-28	oc*	—	N. 10	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	28.996	—	—	25.6	24.2	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 29°-6. 8 p. 29°-8. Solar radiation { small black bulb 116°-8. small bright bulb 62°-2. Evapn. — grammes. Precipn. — in.

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.		
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.				
			Spirit minimum.	Dry.											Wet.	
4th.	2	—	—	—	—	—	—	—	—	—	—	—	—			
	4	—	—	—	—	—	—	—	—	—	—	—	—			
	6	—	—	—	—	—	—	—	—	—	—	—	—			
	8	29.095	—	22.2	26.0	24.8	28.2	Calm	7	0	o	—	S.-cu. 10	—	Sky clear over western mountains, and appearance of clearing to S. Average wind velocity since 10 p.m. yesterday, 7 miles per hour.	
	10	29.099	—	24.0	26.0	24.8	27.0	Calm	2	0	oc	—	A.-cu. 8, SW (slow)	—	10 a.m. Layers of Str. on western mountains clearing generally; very much smaller Cu. than proper A.-cu., but not small enough or high enough for Ci.-cu.	
	Noon	29.090	—	25.6	30.0	28.0	35.0	Calm	0	0	oc	—	A.-cu. 7, SW (slow)	—	Noon. A.-cu. apparently ascending and looking more like Ci.-cu. Some Str. to W on mountains and on Discovery.	
	2	29.082	—	30.0	31.5	29.5	37.2	Calm	0	0	b	—	—	—	2 p.m. Ci.-s. in SE; S.-cu. obscures centre third of Discovery and western range. Ozone, 8.	
	4	29.061	—	30.2	33.8	30.8	40.0	Lt. NW airs	1	0-5	b	—	—	—	4 p.m. Ci. quickly disappearing; heavy roll Cu. on western mountains, obscuring centre portion.	
	6	29.070	—	31.0	32.5	29.2	41.0	Calm	2	0	b	—	—	—	6 p.m. Bluff obscured in Str.; heavy Str. and S.-cu. obscure Discovery and all western main range. Ozone, 4.	
	8	29.072	—	32.2	34.0	29.8	37.0	Lt. N airs	1	0	b	—	—	—	8 p.m. Western mountains and all distant land obscured by a heavy bank of roll Cu. and S.-cu., with very massive rolls; otherwise cloudless.	
	10	29.080	—	28.8	28.8	26.4	29.0	ESE, 1-2	6	7-14	bc	—	—	—	10 p.m. Refraction to the SW.	
	Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Mean	29.082	—	—	30.3	27.9	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. 29° 6.		8 p. 37° 5.		Solar radiation			small black bulb 124° 0.		small bright bulb 70° 0.		Evapn. — grammes.		Precipn. — in.	

5th.	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	6	29.100	—	21.0	23.2	22.5	23.8	ESE, 3-4	12	15-20	oc	—	A.-cu. 9, N (slow)	—	Very black-looking Str. over to W and SW, with grey Str. over it; A.-cu. very like Ci.-cu., but hardly high enough; stormy look generally. Average wind velocity since 10 p.m. yesterday, 12 miles per hour.	
	8	29.126	—	22.6	24.2	23.0	24.5	E, 3-4	13	18-25	oc	—	A.-cu.-s. 10	—	8 a.m. No land in distance visible; dark grey and black-looking clouds all round.	
	10	29.142	—	23.0	25.2	24.0	26.0	E, 1-2	13	10-18	oc *	—	Ci.-cu. 6	N. 4	10 a.m. Sky looks inclined to break; just commenced to snow, very small dry flakes; White Island only dimly visible; drift to S in Strait.	
	Noon	29.152	—	23.2	26.0	25.0	26.8	E, 2-3	10	10-18	oc	—	Ci.-s. and Cu. 5	A.-s. 5	Noon. White Island and western mountains still obscured; land visible to S and SW; stormy looking to SW; heavy Cu. on Black Island.	
	2	29.168	—	25.0	26.0	25.0	27.5	E, 1-2	12	10-18	oc	—	Ci.-s. and Cu. 1	A.-s. 8	2 p.m. All distant land, except small islet N of Black Island, obscured; a small amount of scud in E moving fast from SE. Ozone, 8.	
	4	29.168	—	25.0	25.8	24.9	26.0	E, 1-2	13	10-17	oc *	—	—	S.-cu. 10	4 p.m. Very minute and hard snowflakes falling; no distant land visible; clouds are not Nim., but there is some scud passing over at times from SE at a rapid rate, from which snow might be falling.	
	6	29.183	—	25.0	25.2	24.0	25.5	ESE, 1-4	12	8-22	ocq	—	Ci.-s. 1	A.-s. 9	6 p.m. White Island clear; summit of Brown Island obscured in heavy Cu., summit of Black Island in Str.; Discovery obscured in dark Str., also western range; some breaks in clouds from SE to SW, through which the sky can be seen. Ozone, 5.	
	8	29.190	—	25.0	27.4	25.0	28.0	Calm	10	0	oc	—	—	A.-cu. 8	10 p.m. All distant land obscured in heavy misty cloud.	
	10	29.202	—	27.0	29.6	26.4	29.0	E by N, 0-1	3	0	bc	—	—	A.-cu. 8	—	
	Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Mean	29.159	—	—	25.8	24.4	—	—	—	—	—	—	—	—	—	
Max. therm. read at		8 a. —.		8 p. 28° 0.		Solar radiation			small black bulb 92° 0.		small bright bulb 40° 0.		Evapn. — grammes.		Precipn. — in.	

6th.	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	6	29.206	—	21.2	25.8	24.8	27.0	Lt. SE airs	1	0	bc *	—	Ci.-s. 2	A.-cu. 5, SW (mod.)	—	Very thick as through fog or falling snow all round, and no distant land visible; very small snowflakes falling and very few. Average wind velocity since 10 p.m. yesterday, 1 mile per hour.
	8	29.217	—	25.0	27.0	25.6	31.0	Calm	0	0	oc	—	A.-s. 8	Cu. 2, N	—	8 a.m. Still thick to S; clearing to W; sky covered with thin A.-s.; heavy S.-cu. to W and SW. Ozone, 8.
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10 a.m. Mail arrived; no observations taken.
	Noon	29.217	—	26.8	28.0	26.6	31.2	Calm	2	0	oc *	—	—	N. 10	—	2 p.m. Scud from SE, passing rapidly.
	2	29.210	—	28.2	30.4	28.5	31.5	NE, 0-1	1	0-5	oc *	—	—	N. 10	—	4 and 6 p.m. Very thick; no distant land visible.
	4	29.210	—	28.2	30.0	28.0	31.0	Lt. var. airs	5	0	o *	—	—	N. 10	—	—
	6	29.206	—	26.0	27.2	26.0	27.5	NE, 1-2	6	0-10	oc *	—	—	N. 10	—	—
	8	29.202	—	25.0	27.5	26.2	28.8	Calm	7	0	o *	—	—	N. 10	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Mean	29.210	—	—	28.0	26.5	—	—	—	—	—	—	—	—	—	—
Max. therm. read at		8 a. 33° 0.		8 p. 32° 5.		Solar radiation			black bulb 102° 5.		bright bulb 61° 2.		Evapn. — grammes.		Precipn. — in.	

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	—	—	—	—	—	—	—	—	—	—	—	—	7th.  Str. appears thin; sun gleaming; no distant land visible. Ozone, 10. Average wind velocity since 8 p.m. yesterday, 3 miles per hour. 10 a.m. Clearing to S, up to 2000 feet; very faint halo. Noon. Similar weather; a bit clearer to W and SW. 2 p.m. White Island clear; summits of Black and Brown Islands obscured in dark coloured S.-cu.; main western range and upper two-thirds of Discovery obscured; breaking to SW. 4 p.m. Conditions similar; Str. thinning and Cl.-s. seen through. 6 p.m. White and Brown Islands and Bluff quite clear; S.-cu. on summit of Black Island; two-thirds of Discovery and western mountains obscured. 8 p.m. Heavy Cu. to W and SW, and lying low on Black and Brown Islands; there has been a considerable snowfall on Black Island and the Bluff. 10 p.m. Blue sky visible between clouds; dark mass of cloud over western mountains.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.207	—	24.8	26.1	25.1	27.0	NE, 1-2	3	10-12	o	—	S. 10		
10	29.219	—	24.5	26.0	25.0	27.5	NE, 1-2	13	10-15	o ⊕	—	Thin A.-s. 10		
Noon	29.223	—	25.0	26.5	25.2	27.0	NE, 1-2	11	10-15	o	—	Thin A.-s. 10		
2	29.219	—	26.5	27.0	26.2	28.5	NE, 1-2	7	5-15	o	—	Thin A.-s. 10		
4	29.211	—	27.0	29.1	26.1	38.5	Calm	10	0	o	—	Cl.-s. 5		Thin A.-s. 10
6	29.209	—	—	27.0	25.2	30.2	Lt. S airs	0	0	e	—	Cl., Cl.-cu. 3		A. and S.-cu. 4
8	29.202	—	27.0	29.8	27.0	31.0	Calm	0	0	oc	—	—		A.-cu. 8, SW
10	29.216	—	—	28.2	25.9	36.0	Calm	1	0	e	—	Cl.-cu. 8, S		—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		—
Mean	29.213	—	—	27.5	25.7	—	—	—	—	—	—	—		—
Max. therm. read at		{ 8 a. 30°·8, 8 p. 36°·9.		Solar radiation		{ small black bulb 110°·0, small bright bulb 63°·0.		Evapn. — grammes.		Precipn. — in.				

2	—	—	—	—	—	—	—	—	—	—	—	—	8th.  Snowing thickly in small wet flakes; no distant land visible; appearance of having snowed much in night. Average wind velocity since 10 p.m. yesterday, 2 miles per hour. 10 a.m. Snowing heavily, large soft flakes. Noon. Conditions similar; not snowing so thickly. 2 p.m. Conditions similar. 4 p.m. Clouds inclined to break, and thinning. 6 p.m. Signs of improvement; bit of Black Island visible. 8 p.m. Clearing to N and NW; no distant land visible. 10 p.m. Snowing thickly, flakes small and soft, and melt on touching anything.
4	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.172	—	22.0	30.2	28.2	31.0	Calm	2	0	o*	—	N. 10	
10	29.169	—	28.0	29.0	28.0	32.2	Calm	1	0	o*	—	N. 10	
Noon	29.166	—	—	27.0	26.0	32.2	Lt. S airs	2	0	o*	—	N. 10	
2	29.160	—	26.5	27.0	25.5	29.5	Lt. SE airs	4	0	o*	—	N. 10	
4	29.152	—	26.0	27.0	26.0	28.8	Lt. E airs	4	0	o*	—	N. 10	
6	29.133	—	26.2	30.0	27.5	32.5	NE, 0-2	8	0-15	ocq	—	Cl.-cu. 1	
8	29.119	—	28.0	28.0	26.0	28.8	Lt. SE airs	5	0	o	—	A.-s. and Cu. 5, SW	
10	29.127	—	25.5	26.0	25.0	27.0	Lt. S airs	2	0	o*	—	S. 10, SW	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.150	—	—	28.0	26.5	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 32°·0, 8 p. 33°·8.		Solar radiation		{ black bulb —, bright bulb —.		Evapn. — grammes.		Precipn. — in.			

2	—	—	—	—	—	—	—	—	—	—	—	—	9th.  Snowing heavily, and there has been a very heavy fall during the night. Average wind velocity since 10 p.m. yesterday, 2 miles per hour. Noon. Snow falling very heavily; small, wet, soft flakes, melting almost immediately. 2 p.m. Conditions similar. 4 and 6 p.m. Snow falling; almost rain.
4	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	
8	—	—	—	—	—	—	—	—	—	—	—	—	
10	29.035	—	25.2	28.0	27.2	30.0	Calm	2	0	o*	—	N. 10	
Noon	29.035	—	27.2	32.2	30.6	34.0	Calm	1	0	o*	—	N. 10	
2	29.081	—	—	29.0	28.0	33.5	Lt. var. airs	1	0	o*	—	N. 10	
4	29.069	—	28.5	29.9	28.5	32.0	Lt. SE airs	4	0	o*	—	N. 10	
6	29.069	—	28.5	29.0	28.0	29.5	Lt. E airs	2	0	o*	—	N. 10	
8	29.075	—	28.2	28.2	27.8	30.0	Lt. S airs	4	0	o*	—	N. 10	
10	—	—	—	—	—	—	—	—	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.061	—	—	29.4	28.4	—	—	—	—	—	—	—	
Max. therm. read at		{ 10 a. 30°·8, 8 p. 37°·1.		Solar radiation		{ small black bulb 87°·0, small bright bulb 53°·0.		Evapn. — grammes.		Precipn. 0.24 in. since 10 a.m. 25th nit.			

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10th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.					Wind.				Sunshine.	Clouds, Amount and movement.			Remarks.	
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Weather.		Upper.	Lower.	Aspirator.		
				Dry.	Wet.											
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29·102	—	23·8	24·0	23·2	25·5	SE, 1	2	10-12	oc	—	Cl-s. 4, SW	S. 4, S	—	Heavy fall of snow during night, and all land thickly coated; clearing generally. Average wind velocity since 8 p.m. yesterday, 2 miles per hour. Snow falling; very near to rain.	
10	29·112	—	23·8	29·0	27·0	30·0	E, 0-1	7	8-10	oc	—	Cl-cu. 3, SW	Fr-cu. 4, SW	—		
Noon	29·125	—	27·2	27·5	26·0	28·0	Lt. NE airs	5	0	o*	—	—	N. 10	—		
2	29·124	—	28·0	28·5	27·5	29·5	Calm	3	0	o*	—	—	N. 10	—		
4	29·127	—	27·0	30·2	28·6	35·5	Lt. E airs	3	0	c	—	Cl. 3, W by S	N. 4	—		
6	29·127	—	—	30·2	28·0	29·8	Lt. NE airs	3	0	oc	—	Cl-s. 4	A-s. 6	—		
8	29·131	—	26·8	27·3	26·8	31·0	Lt. E airs	1	0	c	—	—	A-s. 5	—		
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—		Sky visible in SW through breaks in clouds; sun gleaming through A-s.; White Island partly visible; summit of Brown Island obscured by dark Cu.; base and summit of Discovery visible; western range beginning to show up.
Mldt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29·121	—	—	28·1	26·7	—	—	—	—	—	—	—	—	—		—
Max. therm. read at		8 a. 29°·0.		8 p. 34°·8.		Solar radiation		small black bulb 123°·5.		small bright bulb 66°·9.		Evapn. — grammes.		Precipn. 0·41 in. since 10 a.m. 9th.		

11th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29·152	—	16·5	27·0	26·2	30·0	Calm	3	0	bc	—	—	Cu. 5, NW (mod.)	—	Heavy low fog obscuring all distant land, and S-cu. on western mountains obscuring them. Average wind velocity since 8 p.m. yesterday, 3 miles per hour. 10 a.m. Fog lifting a little, but no distant land visible. Noon. Appearance of clearing to N and NW; heavy Cu. hanging over western mountains and also on land to S; all visible land shows there has been heavy snowfall. 2 p.m. Discovery and western mountains nearly totally obscured in dark looking S-cu. and Str. 4 p.m. Heavy S-cu. on western mountains, obscuring them; clear to S. 6 p.m. Some Cu. about centre of Discovery and over Black Island; S-cu. still obscures the greater part of western range. 8 p.m. Low Cu. clouds obscuring summit of Brown Island and all land behind to an alt. of 1° 30' between S to W and W by S; light Cu. clouds forming over Black Island; bank of S-cu. over White Island. 10 p.m. Ci-s. clouds radiating from E by N; all land except Bluff and White Island obscured in the clouds; very marked refraction between SSE and W by S. N.B.—Dines' small anemometer not used after 10 a.m. this day.	
10	29·153	—	25·8	33·0	30·6	40·1	Calm	0	0	oc	—	—	S-cu. 10	—		
Noon	29·141	—	30·0	30·5	28·0	30·5	NE, 1	0	—	oc	—	—	S-cu. 10	—		
2	29·122	—	27·5	28·5	27·5	30·8	NE, 1-2	8	—	bcq	—	—	A-cu., S-cu. 2, NW	—		
4	29·101	—	28·0	29·0	26·5	31·2	NE, 1	13	—	bc	—	—	A-s. 1, NW (mod.)	—		
6	29·091	—	29·5	31·4	28·5	32·0	Lt. SW airs	3	—	bc	—	—	Fr.-a-s, A-cu. 1, NW	—		
8	29·070	—	29·5	31·0	28·3	46·1	Calm	2	—	bc	—	—	A-cu. 1, NW	—		
10	29·035	—	22·0	23·7	22·2	26·2	Lt. E by N airs	0	—	bc	—	—	Cl-s. 3	A-cu. 6		—
Mldt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Mean	29·108	—	—	29·3	27·2	—	—	—	—	—	—	—	—	—		—
Max. therm. read at		8 a. 31°·1.		8 p. 28°·8.		Solar radiation		small black bulb 111°·3.		small bright bulb 60°·7.		Evapn. — grammes.		Precipn. — in.		

12th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	28·880	—	16·8	29·0	26·2	32·0	Lt. E airs	2	—	bc	—	—	Cl-s. 2	—	Excessive mirage all round low down; heavy bank of Cu. to N and extending across Strait, also to S behind Black Island; detached Cu. on western mountains; Ci-s. very wind torn and ragged. Average wind velocity since 10 p.m. yesterday, 2 miles per hour. 10 a.m. Heavy Cu., flat under surface, hanging over Black and Brown Islands and low down in valleys of western mountains; rolls exceedingly massive; Ci-s. very faint. Noon. Heavy Cu. over Brown Island and on western mountains between valleys; visibility good; refraction to N. 2 p.m. Bluff closely wrapped in cloud; Cu. over Black and Brown Islands and a little S-cu. crosses centre of western range; the Ci-s. radiates from E and W, and is only a thin film. 4 p.m. Fine roll Cu. in detached lumps on all land, alt. about 2000 feet. 6 p.m. All distant land and upper two-thirds of Crater and Observation Hills obscured in dense fog, which is coming up rapidly from SE. 8 p.m. Fog on Crater Hill; fine roll Cu. to W amongst mountains, and to S over land. 10 p.m. Low clouds or scud passing over, obscuring land above 200 feet; upper clouds visible at intervals.	
10	28·846	—	25·0	28·0	26·0	31·5	SE, 1	6	—	bc	—	—	Cl-s. 1	A-cu. 2, NE (slow)		—
Noon	28·822	—	27·2	30·5	28·1	32·6	E, 2	6	—	b	—	—	—	—		—
2	28·783	—	29·5	31·0	28·2	35·5	E, 1-2	7	—	bc	—	—	Cl-s. 4	—		—
4	28·757	—	29·5	29·9	27·0	35·2	E, 1-2	6	—	bc	—	—	A-cu. 4, NNW (slow)	—		—
6	28·733	—	26·0	26·0	25·5	28·0	E, 2-3	8	—	f	—	—	—	—		—
8	28·712	—	25·8	27·2	25·8	29·0	E, 2	10	—	bc	—	—	Cl-s. 2, N (fast)	—		—
10	28·688	—	23·2	24·0	23·6	24·2	ESE, 1-2	9	—	bc	—	—	Cl-s. 1, N	S-cu. 4, ESE		—
Mldt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Mean	28·778	—	—	28·2	26·3	—	—	—	—	—	—	—	—	—		—
Max. therm. read at		8 a. 37°·0.		8 p. 31°·8.		Solar radiation		small black bulb 110°·0.		small bright bulb 64°·0.		Evapn. — grammes.		Precipn. — in.		

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.			
			Dry.	Wet.											
2	—	—	—	—	—	—	—	—	—	—	—	—	<p>13th.</p> <p>Bluff covered with blanket; some Str. on western mountains; visibility very marked; wind squally and shifty E to SE. Average wind velocity, since 10 p.m. yesterday, 2 miles per hour.</p> <p>10 p.m. Bank of A.-cu. to E and SE, apparently approaching; heavy cap on Bluff and Discovery; Cu. on western mountains in layers; detached clouds in SW and W.</p> <p>Noon. Conditions similar.</p> <p>2 p.m. Conditions similar.</p> <p>6 p.m. Bluff obscured; summits of White, Brown, and Black Islands obscured; some layers of S.-cu. are about Discovery and western range; the bank of A.-s. is moving very slowly from SE.</p> <p>8 p.m. Very stormy look to S and SW; drift in Strait to S; scud flying rapidly to N; land to S covered with storm clouds; heavy massive roll Cu. to W and SW; drift in squalls.</p>		
4	—	—	—	—	—	—	—	—	—	—	—	—			
6	—	—	—	—	—	—	—	—	—	—	—	—			
8	28.680	—	19.6	22.2	20.8	24.0	Var. E, 1-5	2	bq	+	—	—			
10	28.680	—	21.5	22.5	21.0	24.0	E, 3-5	12	bq	+	—	—			
Noon	28.699	—	19.0	21.2	19.8	24.0	E, 3-5	13	bq	+	—	Fr.-a.-cu. 2, E			
2	28.703	—	20.5	22.5	21.0	26.0	E, 3-5	10	bq	—	—	Fr.-a.-cu. 1			
4	—	—	—	—	—	—	—	—	—	—	—	—		—	
6	28.733	—	18.5	19.0	18.5	24.0	SE, 3-5	13	bq	+	—	A.-cu. 2, SE			
8	28.744	—	18.5	20.1	19.1	20.5	Var. E, 1-5	10	oc	+	—	A.-cu. 7			
10	—	—	—	—	—	—	—	—	—	—	—	—		—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		—	
Mean	28.708	—	—	21.3	20.0	—	—	—	—	—	—	—		—	
Max. therm. read at		8 a. 28° 1.		8 p. 23° 0.		Solar radiation		small black bulb 107° 0.		small bright bulb 54° 5.		Evapn. — grammes.		Precipn. — in.	

2	—	—	—	—	—	—	—	—	—	—	—	—	<p>14th.</p> <p>Appearance of strong wind to S; only lower parts of distant land visible; stormy look generally. Average wind velocity since 8 p.m. yesterday, 12 miles per hour.</p> <p>Noon. Bluff and White Island, also SE end and higher parts of Black Island obscured; lower half alone of Discovery visible, also Brown Island and foot hills to W.</p> <p>4 p.m. Snow falling in large soft flakes; wind squally and variable.</p> <p>Break in the sky between NE and NW to an alt. of 10°.</p>		
4	—	—	—	—	—	—	—	—	—	—	—	—			
6	—	—	—	—	—	—	—	—	—	—	—	—			
8	28.816	—	19.2	24.0	23.0	25.0	SSE, 2-4	12	oc	+	—	S.-cu. 10			
10	—	—	—	—	—	—	—	—	—	—	—	—		—	
Noon	28.859	—	21.0	23.1	21.8	26.1	Var. SE, 2-7	15	oc	+	—	S. 10			
2	—	—	—	—	—	—	—	—	—	—	—	—		—	
4	28.878	—	21.0	23.5	22.5	24.6	E, 3-4	11	oc	+	*	N. 10			
6	—	—	—	—	—	—	—	—	—	—	—	—		—	
8	28.898	—	20.9	21.6	21.2	22.0	ENE, 1-2	10	oc	+	—	N. 10, SSE			
10	—	—	—	—	—	—	—	—	—	—	—	—		—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		—	
Mean	28.863	—	—	23.1	22.1	—	—	—	—	—	—	—		—	
Max. therm. read at		8 a. 24° 0.		8 p. 25° 3.		Solar radiation		black bulb —		bright bulb —		Evapn. — grammes.		Precipn. — in.	

2	—	—	—	—	—	—	—	—	—	—	—	—	<p>15th.</p> <p>Upper parts of all islands and land to SW and W obscured; slight drift in Strait, but none in our bay. Average wind velocity since 8 p.m. yesterday, 12 miles per hour.</p> <p>Noon. Bluff obscured; tops of Black and Brown Islands, also western foot hills partially visible; western high land quite obscured, upper two-thirds of Discovery also.</p> <p>4 p.m. Soft snow falling in large flakes; foggy all round.</p> <p>Distant land obscured all round.</p>		
4	—	—	—	—	—	—	—	—	—	—	—	—			
6	—	—	—	—	—	—	—	—	—	—	—	—			
8	28.902	—	18.6	21.0	20.8	21.5	ENE, 2-3	12	oc	—	—	S. 10			
10	—	—	—	—	—	—	—	—	—	—	—	—		—	
Noon	28.919	—	20.2	24.0	23.9	26.0	ENE, 2	12	oc	+	*	N. 10, SE			
2	—	—	—	—	—	—	—	—	—	—	—	—		—	
4	28.943	—	22.6	26.5	25.4	—	Calm	8	of	*	—	N. 10			
6	—	—	—	—	—	—	—	—	—	—	—	—		—	
9	28.992	—	24.6	25.2	25.0	28.0	Lt. S airs	3	oc	*	—	N. 10, S			
10	—	—	—	—	—	—	—	—	—	—	—	—		—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		—	
Mean	28.939	—	—	24.2	23.8	—	—	—	—	—	—	—		—	
Max. therm. read at		8 a. 24° 3.		8 p. 25° 5.		Solar radiation		small black bulb 99° 5.		small bright bulb 50° 8.		Evapn. — grammes.		Precipn. — in.	

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Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armfage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Dry.	Wet.										
16th.														
2	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.098	—	17.8	18.8	18.5	19.5	ENE, 3-4	7	—	e †	—	Cu. 5, ESE	—	Very slight surface drift. Average wind velocity since 9 p.m. yesterday, 7 miles per hour.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Noon	29.098	—	17.0	19.0	19.0	22.0	E, 5-7	21	—	bc †	Cl.-cu. 1, SW (slow)	S.-cu., ENE (fast)	—	Land to W quite obscured by drift, that in SW and S partially so.
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	29.078	—	18.0	20.0	19.5	24.6	E, 4-7	17	—	bq †	—	—	—	Detached Cu. passing rapidly from W; heavy drift.
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.063	—	17.7	20.0	19.0	26.3	E, 4	19	—	bc †	Cl.-cu. 2	Cu. 5, NNW	—	Low bank of Cu. behind Brown Island, and obscuring western mountains and parts of Discovery; refraction to S and SW; drift in Strait.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.084	—	—	19.5	19.0	—	—	—	—	—	—	—	—	—
Max. therm. read at		{ 8 a. 26°.8. 8 p. 24°.8.		Solar radiation		{ small black bulb 105°.1. small bright bulb 59°.0.		Evapn. — grammes.		Precipn. — in.				

17th.														
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.048	—	20.1	28.2	27.8	28.5	Lt. var. E alrs	4	—	ocf *	—	N. 10	—	Average wind velocity since 8 p.m. yesterday, 4 miles per hour.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Noon	29.058	—	24.5	25.0	24.6	27.2	ESE, 1-2	1	—	ocf *	—	N. 10, NW (slow)	—	All distant land obscured, sun gleaming.
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	29.073	—	23.0	24.5	23.2	25.3	E, 2-3	5	—	o	—	S. 10	—	Heavy banks of Cu. to W; sun gleaming.
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.078	—	18.7	19.6	18.6	19.0	E by N, 5	17	—	bc †	—	Cu. 8, N by W	—	All land obscured, except lower parts of Brown and Black Islands, White Island and Bluff; considerable drift in Strait.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.064	—	—	24.3	23.6	—	—	—	—	—	—	—	—	—
Max. therm. read at		{ 8 a. 29°.2. 8 p. 30°.8.		Solar radiation		{ black bulb —. bright bulb —.		Evapn. — grammes.		Precipn. — in.				

18th.														
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.106	—	10.9	12.1	11.9	12.0	E, 3-4	18	—	e †	—	Cu. 5, ESE	—	Average wind velocity since 8 p.m. yesterday, 18 miles per hour.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Noon	29.102	—	10.6	18.8	17.8	20.6	Var. E, 3-4	15	—	e †	—	S.-cu. 8	—	Sun gleaming brightly; tops of islands to S, upper two-thirds of Discovery, and all but foot hills of western land obscured.
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	29.094	—	16.2	20.0	18.3	22.0	E by S, 3	12	—	of †	—	S. 10	—	Sun gleaming; slight surface drift.
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8.30	29.100	—	18.5	20.2	19.4	21.0	ENE, 1-3	14	—	ocf †	—	S.-cu. 10	—	White Island and all distant land above alt. of 1° 30' obscured; summit of Crater Hill also obscured.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.101	—	—	17.8	16.9	—	—	—	—	—	—	—	—	—
Max. therm. read at		{ 8 a. 25°.5. 8.30 p. 22°.2.		Solar radiation		{ small black bulb 105°.8. small bright bulb 53°.0.		Evapn. — grammes.		Precipn. — in.				

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.	
		Cape Amritage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles per hour.	P. tube, see p. 2.	Weather.		Upper.	Lower.			
			Dry.	Wet.											
2	—	—	—	—	—	—	—	—	—	—	—	—	—	19th.	
4	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.035	—	17.5	19.7	18.0	19.5	E, 3-4	11	—	c	—	Cn. 6	—		Land to W obscured by cloud, above 4,000 feet. Average wind velocity since 8 p.m. yesterday, 11 miles per hour.
10	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Noon	29.062	—	17.2	20.0	18.0	20.2	E by N, 4	12	—	c†	—	A. s., A. cu. 9, NE	—		Sun gleaming; Str. in SW and W obscuring upper half of Discovery and western range.
2	—	—	—	—	—	—	—	—	—	—	—	—	—		—
4	29.053	—	18.0	20.0	18.2	21.0	E, 3-4	13	—	o†	—	S, 10	—		Low fog banks approaching from W.
6	—	—	—	—	—	—	—	—	—	—	—	—	—		—
8	28.965	—	—	19.0	17.2	19.3	E, 3-4	13	—	bc†	—	Cl. 4	—		Discovery summit obscured in light Str.; moderate drift in Strait.
10	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Midn.	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Mean	29.029	—	—	19.7	17.9	—	—	—	—	—	—	—	—		—
Max. therm. read at		{ 8 a. 26° 8. 8 p. 22° 3.		Solar radiation		{ small black bulb 92° 0. small bright bulb 48° 0.		Evapn. — grammes.		Precipn. — in.					

2	—	—	—	—	—	—	—	—	—	—	—	—	—	20th.	
4	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	28.991	—	13.0	17.6	17.2	18.8	S by E, 2	6	—	oc† *2	—	N, 10	—		Very thick snow falling; limit of vision 1 mile. Average wind velocity since 8 p.m. yesterday, 6 miles per hour.
10	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Noon	29.001	—	16.9	18.2	18.0	20.9	Var. SSE, 3-4	5	—	of† *2	—	N, 10	—		Very thick, no distant land visible, and near land also obscured; snowing in large flakes and thickly.
2	—	—	—	—	—	—	—	—	—	—	—	—	—		—
4	29.012	—	16.5	17.0	17.0	—	SE, 2-3	10	—	of† *	—	N, 10	—		Snow falling, soft and large flakes.
6	—	—	—	—	—	—	—	—	—	—	—	—	—		—
8	29.024	—	16.5	16.5	16.5	17.2	E by N, 2-3	10	—	o*	—	N, 10	—		Thick snow falling, obscuring all land but Hut Point.
10	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Midn.	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Mean	29.007	—	—	17.3	17.2	—	—	—	—	—	—	—	—		—
Max. therm. read at		{ 8 a. 24° 4. 8 p. 21° 6.		Solar radiation		{ small black bulb 75° 8. small bright bulb 41° 2.		Evapn. — grammes.		Precipn. 0.32 in. since 8 a.m. 10th.					

2	—	—	—	—	—	—	—	—	—	—	—	—	—	21st.	
4	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.013	—	14.0	14.8	14.5	16.0	E by N, 4	16	—	o†	—	Cu. 10	—		Average wind velocity since 8 p.m. yesterday, 16 miles per hour.
10	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Noon	29.021	—	14.0	16.2	15.0	17.6	E by N, 4-5	14	—	ocq†	—	S. cu. 10, SE	—		Western mountains clearing; all distant land visible; upper third of Discovery obscured; clouds broken in W.
2	—	—	—	—	—	—	—	—	—	—	—	—	—		—
4	29.010	—	14.0	17.0	16.8	17.2	E, 4-5	18	—	oc† *	—	N, 10	—		Land visible to W; foggy to S; wind gusty and changeable.
6	—	—	—	—	—	—	—	—	—	—	—	—	—		—
8	29.004	—	14.2	17.6	17.0	18.0	E, 2-4	8	—	oc† *	—	N, 10	—		Lower part of land visible all round.
10	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Midn.	—	—	—	—	—	—	—	—	—	—	—	—	—		—
Mean	29.012	—	—	16.4	15.8	—	—	—	—	—	—	—	—		—
Max. therm. read at		{ 8 a. 22° 2. 8 p. 21° 9.		Solar radiation		{ small black bulb 82° 5. small bright bulb 44° 6.		Evapn. — grammes.		Precipn. — in.					

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Hqar.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Noon	29.032	—	9.0	13.0	13.0	14.2	E by N, 4-5	16	—	oc + *	—	—	N. 7, S. 3, E	—	Sun gleaming; the Nim. is in the E and stretches well past the zenith; Str. is in W; nearly all distant land obscured. Average wind velocity since 8 p.m. yesterday, 16 miles per hour.
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4 p.m. Very thick all round; snow harder and more compressed than yesterday.
4	29.056	—	11.0	13.8	13.4	14.2	NE, 3-4	15	—	of + *	—	—	N. 10	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.062	—	13.3	15.9	15.6	13.3	ENE, 2-4	15	—	oc + *	—	—	N. 10	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.050	—	—	14.2	14.0	—	—	—	—	—	—	—	—	—	

Max. therm. read at { Noon 19°·8.  
8 p. 21°·7. Solar radiation { small black bulb 87°·8.  
small bright bulb 41°·5. Evapn. — grammes. Precipn. — in.

23rd.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.109	—	14.8	18.2	18.0	19.1	Var. NE, 4	9	—	of + *	—	—	N. 10	—	No distant land visible; snow in small flakes like sand. Average wind velocity since 8 p.m. yesterday, 9 miles per hour.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Noon	29.137	—	11.0	21.0	19.2	22.2	ENE, 2-3	10	—	e +	—	—	A.-cu. 3, S. 6, W (slow)	—	Lower two-thirds of western land and Mt. Discovery visible; all other land clear; Str. touching summit of Black Island.
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Sky broken, and Ci. visible to W; surface much harder, with well defined sastrugi.
4	29.146	—	18.2	22.3	20.0	23.5	E, 2-4	13	—	ocq	—	—	Cu. 10, SW (slow)	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.171	—	20.5	21.0	18.8	22.0	E, 1-2	5	—	oc	—	—	Cu. 10, SW	—	Land clearly visible all round.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.141	—	—	20.6	19.0	—	—	—	—	—	—	—	—	—	

Max. therm. { 8 a. 22°·1.  
read at { 8 p. —. Solar radiation { small black bulb 111°·5.  
small bright bulb 57°·0. Evapn. — grammes. Precipn. 0.29 in. since 8 p.m. 20th.

24th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.221	—	16.0	16.8	15.8	16.5	Calm	4	—	bc	—	—	A.-cu. 1, N (mod.)	—	Heavy Str. on summit of western mountains; bank of A.-cu. to E; clear to S and SW. Average wind velocity since 8 p.m. yesterday, 4 miles per hour.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Clearer generally; bank of A.-s. low down in E.
Noon	29.249	—	13.2	20.0	19.4	22.0	E, 1	4	—	b	—	—	—	—	
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	29.298	—	19.5	20.2	18.0	23.5	NE, 2-3	10	—	b	—	—	—	—	Str. all round horizon; low fog in W.
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.301	—	13.0	17.6	16.8	20.0	NE, 2-3	12	—	bc	—	—	A.-cu. 3, NW	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.260	—	—	18.7	17.5	—	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 22°·2.  
8 p. 27°·2. Solar radiation { small black bulb 100°·5.  
small bright bulb 59°·0. Evapn. — grammes. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.			Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.	Aspirator.	
				Dry.	Wet.									
2	—	—	—	—	—	—	—	—	—	—	—	—	25th.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29·391	—	14·5	15·8	15·8	16·0	Var. E, 2-6	12	—	cq	—	—		
10	29·406	—	14·8	15·5	15·5	18·0	ENE, 4-6	10	—	bcq +	—	—		
Noon	29·399	—	13·2	14·0	14·0	14·8	ENE, 4-6	7	—	bcq +	—	—		
2	—	—	—	—	—	—	—	—	—	—	—	—		
4	29·386	—	13·5	19·3	19·0	21·0	NE, 3-4	15	—	ocq +	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29·370	—	18·1	21·2	21·2	22·0	NE, 1-2	10	—	bcq	—	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29·390	—	—	17·2	17·1	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. 21°·5. 8 p. 21°·4.		Solar radiation { small black bulb 112°·0. small bright bulb 55°·5.			Evapn. — grammes.		Precipn. — in.					

2	—	—	—	—	—	—	—	—	—	—	—	—	26th.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29·310	—	10·3	12·2	12·2	12·2	Var. E, 4-5	—	—	of + *	—	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Noon	29·271	—	11·2	15·5	15·5	16·5	E, 3-5	14	—	ocq +	—	—		
2	—	—	—	—	—	—	—	—	—	—	—	—		
4	29·237	—	11·5	18·8	18·0	20·4	ENE, 2-3	13	—	oc	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29·206	—	17·0	20·8	19·2	22·2	NE, 2-3	10	—	bc	—	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29·256	—	—	16·8	16·2	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. 23°·2. 8 p. 22°·2.		Solar radiation { small black bulb 65°·0. small bright bulb 36°·4.			Evapn. — grammes.		Precipn. — in.					

2	—	—	—	—	—	—	—	—	—	—	—	—	27th.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29·121	—	4·0	11·1	9·0	23·0	Calm	4	—	b	—	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Noon	29·067	9·0	11·0	24·8	22·0	26·5	Lt. NE airs	2	—	b	—	—		
2	—	—	—	—	—	—	—	—	—	—	—	—		
4	29·022	—	16·2	17·3	15·3	21·5	E, 3	10	—	b	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29·006	—	14·0	15·0	14·0	16·0	ENE, 2-3	14	—	b	—	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29·054	—	—	17·1	15·1	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. 22°·8. 8 p. 25°·5.		Solar radiation { small black bulb 103°·0. small bright bulb 56°·0.			Evapn. — grammes.		Precipn. — in.		Min. temp. at Cape Armitage, -14°·2. Wind NE, 1-2. b. Erebus smoke going to ENE; Cl.-s. in E and NE; Cu. in NW; Cl.-s. to W; some refraction to W and SW. (Thermometer brought on board.) 8 p.m. Some thin layers of S.-cu. on western mountains, otherwise cloudless.			

1904—January.]

METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.				Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.	Upper.			Lower.			
			Spirit minimum.	Dry.									Wet.		
28th.															
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.144	—	8.8	22.0	21.0	20.0	Calm	8	—	bc	—	—	Fr.-cu. 4, NW	—	Fr.-cu. and A.-cu. approaching from NW. Average wind velocity since 8 p.m. yesterday, 8 miles per hour.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Noon	29.153	—	17.2	25.0	23.0	34.2	Calm	0	—	bc	—	—	A.-cu. 4, NW (mod.)	—	Excessive mirage all round; dark roll Cu. on western mountains.
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	29.154	—	21.5	25.0	24.0	30.0	E by N, 1	2	—	of ↗	—	—	S. 10	—	Base of mountains to W visible; snow falling lightly in large flakes.
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.154	—	24.0	27.1	26.4	30.8	NE, 0-1	5	—	bc	—	—	Fr.-cu. 8, NNW	—	S.-cu. in SW to 2000 feet alt.; Ci.-cu. to N; S.-cu., 8000 feet alt., in W.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.151	—	—	24.8	23.6	—	—	—	—	—	—	—	—	—	—
Max. therm. read at $\begin{cases} 8 \text{ a. } — \\ 8 \text{ p. } 30^{\circ}1. \end{cases}$ Solar radiation $\begin{cases} \text{small black bulb } 93^{\circ}7. \\ \text{small bright bulb } 51^{\circ}0. \end{cases}$ Evapn. — grammes.      Precipn. — in.															

29th.															
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.228	—	14.0	16.8	15.8	16.8	NE, 3-4	—	—	oc ↗	—	—	S.-cu. 7, N (slow)	—	Snow has fallen heavily during the night; clear now to W and S, but heavy banks of clouds to NE and E.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Noon	29.252	—	15.2	18.0	16.5	17.8	NE, 4-5	12	—	bc ↗	—	—	A.-cu. 5, NE (slow)	—	Cu. on western mountains and on Discovery; low drift in Strait.
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	29.254	—	16.3	20.0	18.8	24.4	NE, 3-4	12	—	bc ↗	—	—	Cu. 1, NE	—	Cu. approaching from N and NE.
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.238	—	13.2	17.8	17.0	20.6	SE, 2-3	10	—	b ↗	—	—	—	—	Cloudless overhead; heavy Cu. and Str. to N. low down.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.243	—	—	18.2	17.0	—	—	—	—	—	—	—	—	—	—
Max. therm. read at $\begin{cases} 8 \text{ a. } 24^{\circ}0. \\ 8 \text{ p. } 22^{\circ}5. \end{cases}$ Solar radiation $\begin{cases} \text{small black bulb } 106^{\circ}0. \\ \text{small bright bulb } 55^{\circ}0. \end{cases}$ Evapn. — grammes.      Precipn. — in.															

30th.															
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.122	—	13.2	15.5	14.5	19.5	NE, 2-3	10	—	bv	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Noon	29.080	—	13.0	22.0	18.0	25.0	NE, 1-2	10	—	bv ⊕	—	—	Ci.-s. 3	A.-s. 4	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	29.015	—	22.0	28.2	24.2	36.0	Calm	7	—	oc ⊕	—	—	Thin S. 10	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	28.952	—	22.0	23.0	21.0	23.8	Calm	2	—	oc	—	—	S.-cu. 10	—	Str. down to 3000 feet; mirage and refraction.
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.042	—	—	22.2	19.4	—	—	—	—	—	—	—	—	—	—
Max. therm. read at $\begin{cases} 8 \text{ a. } 24^{\circ}0. \\ 8 \text{ p. } 31^{\circ}2. \end{cases}$ Solar radiation $\begin{cases} \text{small black bulb } 124^{\circ}0. \\ \text{small bright bulb } 64^{\circ}2. \end{cases}$ Evapn. — grammes.      Precipn. — in.															

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Spirit minimum.	Dry.							Wet.			
2.30	—	—	—	—	—	SW, 1	—	—	o *	—	N. 10	—	Wind SW, 1; anowing in heavy flakes.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	28.822	—	16.8	19.0	18.0	25.5	Calm	2	—	of *	N. 10	—	Snowing heavily; no distant land visible; flakes large and soft. Average wind velocity since 8 p.m. yesterday, 2 miles per hour.	
10	—	—	—	—	—	—	—	—	—	—	—	—		
Noon	28.796	—	17.8	24.0	23.2	25.8	SE, 1-2	2	—	of *	N. 10	—	Snowing very heavily; flakes smaller and very soft, melting on touching anything on board; no land visible.	
2	—	—	—	—	—	—	—	—	—	—	—	—		
4	28.767	—	20.0	21.5	21.0	22.0	ESE, 2-3	10	—	of † *	N. 10	—	Snowing; flakes very soft and falling thickly; only near land visible.	
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	28.760	—	20.8	21.1	20.8	22.1	SE, 1-3	12	—	of † *	N. 10	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Midd.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	28.786	—	—	21.4	20.8	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. 23°·4, 8 p. 25°·0.      Solar radiation { small black bulb 72°·0, small bright bulb 43°·0.      Evapn. — grammes.      Precipn. — in.														

31st.



Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	—	—	—	—	—	—	—	—	—	—	—	—	4th.  Cl.-s. radiating Wand E; much refraction; heavy roll Cu. on western mountains, and Cl.-s. very much torn and wind blown; heavy roll Cu. to N and NW, low down. Noon. Cl.-s. as at 8 o'clock; detached Cu. on summits of western mountains; heavy roll Cu. to N; excessive mlrage to N. 4 p.m. Thin A.-s. with Cl. in SE and Cu. to W. Str. about 3000 feet alt.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	28.714	—	7.5	17.0	16.0	30.0	Calm	—	bc	Cl.-s. 2, SE (very slow); Cl. 3	—	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Noon	28.735	—	16.8	30.5	30.0	28.0	Calm	2	bc	Cl.-s. 5, SE (very slow)	—	—		
2	—	—	—	—	—	—	—	—	—	—	—	—		
4	28.765	—	22.5	25.0	22.3	28.5	NE, 1	2	oc	—	A.-s. 8, N (fast)	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	—	—	23.0	24.2	23.0	24.8	Calm	2	ov	—	S. 10	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	28.738	—	—	24.2	22.8	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. 23° 0. 8 p. —.		Solar radiation		{ small black bulb 114° 0. small bright bulb 61° 5.		Evapn. — grammes.		Precipn. — in.				

2	—	—	—	—	—	—	—	—	—	—	—	—	5th.  Slight snowfall during night. Some torn S.-cu. and Cu. obscure Bluff and summit of Discovery, and hang over Brown Island. Extremely hazy; heavy Cu. to W. Cl. clouds radiating NNW.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	28.898	—	22.8	25.4	24.8	27.5	Calm	—	c	Ci., Cl.-s. 3	A.-s., A.-cu. 4, SW	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Noon	28.950	—	25.0	30.0	26.5	31.5	Lt. NE airs	2	bc	Ci., Cl.-s. 1	—	—		
2	—	—	—	—	—	—	—	—	—	—	—	—		
4	29.009	—	27.0	30.8	27.2	34.2	NNE, 0-1	4	b	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.063	—	—	27.2	25.6	29.6	NE, 0-1	1	bc	Cl.-s. 4	—	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	28.980	—	—	28.4	26.0	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. 23° 0. 8 p. 38° 5.		Solar radiation		{ small black bulb 106° 0. small bright bulb 61° 2.		Evapn. — grammes.		Precipn. — in.				

2	—	—	—	—	—	—	—	—	—	—	—	—	6th.  Heavy Str. and S.-cu. in SE, S, and SW; some few pieces of detached Str. over western mountains. Average wind velocity since 8 p.m. yesterday, 12 miles per hour. Band of Str. running from W to SE; gloomy to S. Very peculiar detached lump of Cu. with curved edges and looking windy.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.293	—	15.8	24.0	22.4	24.5	Lt. NE airs	12	bc	—	A.-cu. 2	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Noon	29.257	—	23.6	28.8	26.7	29.0	N by E, 1-2	6	bv	—	—	—		
2	—	—	—	—	—	—	—	—	—	—	—	—		
4	29.212	—	23.6	24.0	23.8	26.3	ENE, 2-3	7	bv	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.180	—	9.0	20.5	19.5	—	—	—	—	—	—	—		
10	—	—	20.4	25.5	24.5	27.0	Lt. ENE airs	7	bc	Cl.-s. 1	Fr.-s.-cu. 1, NE	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.237	—	—	24.6	23.4	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. 30° 8. 8 p. 21° 5.		Solar radiation		{ small black bulb 105° 0. small bright bulb 58° 0.		Evapn. — grammes.		Precipn. — in.				

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METEOROLOGICAL JOURNAL OF THE "DISCOVERY."

7th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
				Dry.	Wet.						Unscreened.			
2	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.087	—	6.4	26.8	25.8	28.5	N, 1-2	—	—	e	Cl., Cl.-s. 4	A.-cu., A.-s. 3, N	A line of heavy S.-cu. runs from SE to W through S, obscuring summits of Discovery and upper half of main western mountains.	
10	—	—	—	—	—	—	—	—	—	—	—	—	Hazy in S; Bluff more or less hidden; some refraction SW.	
Noon	29.042	—	26.2	28.1	27.3	29.2	ENE, 2-3	—	—	bv	—	—	—	
2	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	29.046	—	21.0	21.5	20.5	24.0	E, 3-4	12	—	b	—	—	Fr.-s. in lines in SW, S, and SSE.	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.044	—	19.6	20.2	18.9	21.2	ENE, 5-6	15	—	b+	—	—	Cu. on western mountains and to SW; otherwise clear.	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.055	—	—	24.2	23.1	—	—	—	—	—	—	—	—	

Max. therm. read at { 8 a. 29°·8, 8 p. 30°·8. Solar radiation { small black bulb 102°·8, small bright bulb 58°·0. Evapn. — grammes. Precipn. — in.

8th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.142	—	13.4	23.4	23.4	27.0	E by S, 0-1	8	—	bv	—	—	All distant land clear; some detached Fr.-s. in SW, S, and SE. Average wind velocity since 8 p.m. yesterday, 8 miles per hour.
10	29.168	—	22.2	23.0	22.2	27.6	SE, 1	6	—	b	—	—	—
Noon	29.173	—	22.5	24.0	23.5	26.5	ESE, 1	5	—	b	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—
4	29.191	—	24.0	25.0	21.3	33.2	Lt. SE airs	3	—	b	—	—	Detached Cu. in S and E.
6	—	—	—	—	—	—	—	—	—	—	—	—	Clouding over from SW.
8	29.214	—	18.6	19.2	18.2	20.0	Calm	1	—	oc	—	S.-cu. 10, SW	Western mountains obscured down to 5000 feet.
10	—	—	—	—	—	—	—	—	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.178	—	—	22.9	21.7	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 23°·5, 8 p. 29°·2. Solar radiation { small black bulb 57°·1, small bright bulb 40°·3. Evapn. — grammes. Precipn. — in.

9th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.291	—	7.0	16.0	15.2	15.0	ENE, 3-5	10	—	e	—	A.-cu., S.-cu. 9	All distant land visible. Average wind velocity since 8 p.m. yesterday, 10 miles per hour.
10	—	—	—	—	—	—	—	—	—	—	—	—	—
Noon	29.276	—	13.3	16.0	16.0	20.0	Var. E, 2-5	10	—	b	—	—	Some refraction in SW.
2	—	—	—	—	—	—	—	—	—	—	—	—	—
4	29.249	—	14.3	25.5	24.0	28.3	E by N, 0-1	9	—	bc	Cl. 5, SW (slow)	—	Very high thin Cl.
6	—	—	—	—	—	—	—	—	—	—	—	—	—
8	29.226	—	17.4	20.6	19.8	23.0	Var. E, 1-2	3	—	bc	Cl.-s. 3	—	Refraction to W and SW.
10	—	—	—	—	—	—	—	—	—	—	—	—	—
Midt.	—	—	—	—	—	—	—	—	—	—	—	—	—
Mean	29.261	—	—	19.5	18.8	—	—	—	—	—	—	—	—

Max. therm. read at { 8 a. 24°·0, 8 p. 30°·3. Solar radiation { small black bulb 103°·5, small bright bulb 56°·5. Evapn. — grammes. Precipn. — in.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Spirit minimum.	Mercurial.		Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, sec p. 2.			Upper.	Lower.		
				Dry.	Wet.									
2	—	—	—	—	—	—	—	—	—	—	—	—	10th.  Very small amount of detached Str. in W, otherwise cloudless. Average wind velocity since 8 p.m. yesterday, 14 miles per hour.  Small detached Cu. over Discovery; wind backing to S.	
4	—	—	—	—	—	—	—	—	—	—	—			
6	—	—	—	—	—	—	—	—	—	—	—			
8	29.268	—	11.5	17.5	17.2	18.8	E, 2-5	14	—	bv	—	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Noon	29.252	—	16.7	22.0	21.4	25.1	ENE, 2-4	11	—	bvq	—	—		
2	—	—	—	—	—	—	—	—	—	—	—	—		
4	29.259	—	20.5	21.0	20.6	23.5	ESE, 3-4	10	—	bv	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.278	—	17.6	20.0	20.2	21.2	E, 2	14	—	bev	Cl. 1	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Mldt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.264	—	—	20.1	19.9	—	—	—	—	—	—	—		
Max. therm. read at		{ 8 a. 22° 8. 8 p. 24° 4.		Solar radiation		{ small black bulb 102° 0. small bright bulb 52° 6.		Evapn. — grammes.		Precipn. — in.				

2	—	—	—	—	—	—	—	—	—	—	—	—	11th.  Bluff obscured; all other distant land partially visible; much surface drift. Average wind velocity since 8 p.m. yesterday, 14 miles per hour. Clearing generally; windy-looking curved Cu., detached, to S and SW; land clear; slight drift in Strait.  Clear on horizon all round; sun gleaming.  Upper half of Erebus obscured by a white, heavy Ci.-s. cloud; similar clouds between S and SSW, falling off to Ci. clouds in zenith.
4	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.399	—	15.0	17.5	17.0	18.0	SSE to SE, 5-8	14	—	cq+	S. 10	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	
Noon	29.461	—	15.6	20.6	20.5	21.2	E, 4-7	17	—	ocq+	S. 9	—	
2	—	—	—	—	—	—	—	—	—	—	—	—	
4	29.479	—	16.7	19.0	18.8	20.2	Var. E, 3-5	15	—	ocq+	S.-cu. 10	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.459	—	18.7	20.0	19.9	20.8	SE, 2-3	5	—	bcq	Ci.-s. 5	—	
10	29.459	—	17.5	18.0	17.8	18.4	ENE, 1-2	0	—	bc	S.-cu. 3	—	
Mldt.	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.451	—	—	19.0	18.8	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 23° 8. 8 p. 23° 8.		Solar radiation		{ small black bulb 110° 9. small bright bulb 59° 6.		Evapn. — grammes.		Precipn. — in.			

2	—	—	—	—	—	—	—	—	—	—	—	—	12th.  All land visible; some Ci.-s. in layers from SW to N; open water less than 3 miles distant. Average wind velocity since 10 p.m. yesterday, 12 miles per hour. Noon. Mirage.  Wavy sheet of thin Ci.-s. in SSW. Hazy.
4	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.449	—	9.5	17.2	17.2	19.5	E, 1-3	12	—	bv	Ci., Ci.-s. 1	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	
Noon	29.416	—	17.2	21.5	21.5	24.0	Lt. E airs	6	—	bv	—	—	
2	—	—	—	—	—	—	—	—	—	—	—	—	
4	9.363	—	21.0	23.5	23.2	26.0	E by N, 2-3	10	—	b	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.334	—	21.8	22.9	22.5	23.4	E, 2-3	11	—	b	Ci.-s.	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	
Mldt.	—	—	—	—	—	—	—	—	—	—	—	—	
Mean	29.391	—	—	21.3	21.1	—	—	—	—	—	—	—	
Max. therm. read at		{ 8 a. 25° 0. 8 p. 25° 0.		Solar radiation		{ small black bulb 100° 0 small bright bulb 53° 0.		Evapn. — grammes.		Precipn. — in.			

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13th.

Hour.	Barometer, reduced to 32° F. and sea level.	Thermometers.				Wind.			Weather.	Sunshine.	Clouds, Amount and movement.		Aspirator.	Remarks.
		Cape Armitage.	Mercurial.		Unscreened.	Direction and force (Beaufort scale).	Cup anemometer, miles run.	P. tube, see p. 2.			Upper.	Lower.		
			Dry.	Wet.										
2	—	—	—	—	—	—	—	—	—	—	—	—	All land visible; some Fr.-s., detached, in S and SW, no other cloud about. Average wind velocity since 8 p.m. yesterday, 12 miles per hour. Clouding over rather quickly, and western peaks are now obscured. The wet bulb has not been wet to-day.  Cu. to SW; blue sky to S.  Heavy Nim. to N; Bluff has blanket of cloud; western mountains obscured to 6000 feet.	
4	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.387	—	10.5	17.0	17.0	19.5	ESE, 0-1	12	—	bv	—	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Noon	29.419	—	15.0	19.2	19.2	22.0	SE, 3-4	11	—	bc ⊕	Cl.-s. 2, SW	A.-s. 4		
2	—	—	—	—	—	—	—	—	—	—	—	—		
4	29.453	—	16.2	20.0	20.0	20.8	Var. SSE, 2-4	10	—	oq	—	Thin S. 10		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.465	—	18.0	19.2	19.2	20.0	Calm	4	—	oc	—	A.-s. 10		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.431	—	—	18.9	18.9	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. 23° 0. / 8 p. 21° 8.      Solar radiation { small black bulb 90° 0. / small bright bulb 46° 0.      Evapu. — grammes.      Precipn. — in.														

14th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	Bluff has a blanket of cloud on it; highest peak of western mountains obscured; all other distant land visible. Average wind velocity since 8 p.m. yesterday, 10 miles per hour. Noon. Drift in Strait; clear sky to S; Bluff heavily blanketed with Cu. cloud; western mountains clear. Cu. to W and SW, becoming detached.  Ships arrived in bay; ice broke up generally.
4	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.506	—	14.5	17.5	16.2	17.5	E by N, 2-4	10	—	cq	—	S. 10		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Noon	29.511	—	16.8	18.8	17.0	21.0	Var. SE, 2-5	10	—	bcq	Cl.-s. 2, SW	A.-s. 3, SW		
2	—	—	—	—	—	—	—	—	—	—	—	—		
4	29.477	—	15.0	17.0	15.2	20.0	Var. SE, 3-6	18	—	bcq	—	Fr.-cu. 1, SW		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	29.469	—	16.7	19.0	17.9	21.3	SE, 2-4	12	—	bc	Cl.-s. 5	A.-s. 1		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.491	—	—	18.1	16.6	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. 21° 2. / 8 p. 22° 4.      Solar radiation { black bulb — / bright bulb —      Evapu. — grammes.      Precipn. — in.														

15th.

2	—	—	—	—	—	—	—	—	—	—	—	—	—	Average wind velocity since 8 p.m. yesterday, 7 miles per hour.  Thermometer screen was unrigged, and instruments taken on board after 4 p.m.
4	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	29.401	—	14.0	20.8	20.0	21.0	E, 1-2	7	—	oc	—	S. 9		
10	29.352	—	20.0	23.2	22.8	24.5	Var. S and SW	4	—	oc	—	A.-s. 8		
Noon	29.371	—	22.5	24.0	23.5	24.5	gusts E, 1-2	5	—	oc	—	A.-s. 8		
2	—	—	—	—	—	—	—	—	—	—	—	—		
4	29.310	—	23.0	25.0	23.8	26.0	E, 3-5	—	—	oc	—	A.-s. 10		
6	—	—	—	—	—	—	—	—	—	—	—	—		
8	—	—	—	—	—	—	—	—	—	—	—	—		
10	—	—	—	—	—	—	—	—	—	—	—	—		
Midt.	—	—	—	—	—	—	—	—	—	—	—	—		
Mean	29.350	—	—	23.3	22.5	—	—	—	—	—	—	—		
Max. therm. read at { 8 a. 23° 5. / 8 p. —      Solar radiation (noon) { small black bulb 99° 7. / small bright bulb 55° 0.      Evapu. — grammes.      Precipn. — in.														

METEOROLOGICAL OBSERVATIONS

MADE AT

EREBUS ISLAND CAMP

(LAT.  $77^{\circ} 51' S.$ ; LONG.  $166^{\circ} 45' W.$ )

AND ON THE

SLEDGE JOURNEYS FROM WINTER QUARTERS.

TABLE I.—METEOROLOGICAL REGISTER KEPT AT THE EREBUS

Date.	Time.	Pressure. in.	Temperature.					Hypsometer and equivalent pressure.	Wind.		Weather.	Cloud.				Sunshine.	Ozone.	
			Dry bulb.	Wet bulb.	Spirit minimum.	Mercury maximum.	Snow surface minimum.		Direction.	Force (Beaufort).		Upper.		Lower.			No. on scale.	No. of hours exposed.
												Description.	Direction (moving from).	Description.	Direction (moving from).			
1903. Dec. 16	8 p.m.	29.100	29.5	26.8	20.6	30.5	—	—	Calm	0	b	—	—	—	—	Very bright	—	—
	10 "	29.110	26.0	23.8	26.0	—	21.0	—	Calm	0	b	—	—	—	—	Very bright	5	4
Dec. 17	2 a.m.	29.065	17.2	16.8	17.0	—	—	—	SE	1-2	bc	Cl. 2	—	—	—	Very bright	7	4
	6 "	29.075	18.2	17.8	16.2	—	19.5	—	E	2-3	bc	Cl.-s. 6	—	—	—	Very bright	—	—
	8 "	29.060	17.0	16.8	14.8	31.2	—	—	E	3	bc	Cl.-s. 4	—	—	—	Bright	9	6
	10 "	29.062	30.0	19.2	17.0	—	—	—	E	2-3	bc	Cl.-s. 3	—	—	—	Very bright	—	—
	2 p.m.	29.032	19.2	18.6	17.0	—	—	210.8 20.215	E	2-3	bc	Cl.-s. 4	—	—	—	Bright	9	6
	4 "	29.012	21.0	19.5	18.5	—	—	—	E	3-4	bc	Cl.-s. 5	W	—	—	Bright	—	—
	6 "	29.005	20.5	19.0	19.0	—	—	—	E	3-4	bc	Cl.-s. 4	W	—	—	Bright	—	—
	8 "	29.000	19.1	18.1	18.2	21.0	15.2	—	E	3	bc	Cl.-s. 4	—	—	—	Very bright	10	6
Dec. 18	4 a.m.	28.908	19.0	18.0	17.8	—	—	—	SE	2	o	—	—	S. 10	—	None	8	8
	8 "	28.900	20.0	19.0	18.2	20.8	17.5	—	SE	2-4	oq ○ ⊕	—	—	S.-cu. 10	—	Gleam	8	4
	10 "	28.905	20.0	18.6	18.2	—	—	210.4 28.98	E	2-4	oqc ○ ⊕ ⊕ ⊕	Cl.-s. 2	—	S.-cu. 5	S	Gleam	7	2
	Noon	28.908	19.8	19.0	19.0	—	—	—	E	2-3	oq †	Cl.-s. 4	—	S.-cu. 4	—	Gleam	—	—
	2 p.m.	28.922	18.2	17.6	16.8	—	—	—	E	3-4	oq †	Cl.-s. 6	—	S.-cu. 3	—	Gleam	—	—
	4 "	28.938	18.2	17.9	16.5	—	—	—	E	4-6	oqc → †	Cl.-s. 5	—	A.-cu. 2	SE	Gleam	9	6
	6 "	28.936	17.7	17.4	16.6	—	—	—	ESSE	4-5	bc †	Cl.-s. 1-2	—	A.-cu. 6	SE	Gleam	—	—
	8 "	28.952	18.0	17.6	16.6	21.0	—	—	E	3-4	bc	Cl.-s. 2	—	A.-cu. 4	SE	Bright	7	4
	10 "	28.975	17.9	17.4	17.4	—	—	—	E	3-4	bc	Cl.-s. 2	—	A.-cu. 5	SE	Gleam	5	2
	Midt.	—	—	—	—	—	—	—	SE airs	—	bc	Cl.-s. 3	—	—	—	Very bright	—	—
Dec. 19	2 a.m.	—	—	—	—	—	—	—	Lt. E airs	—	bc	Cl. 2	—	—	—	Very bright	—	—
	4 "	28.958	22.5	21.2	16.5	—	—	—	Calm	0	b	—	—	—	—	Very bright	5	6
	6 "	28.955	23.9	22.0	23.8	—	—	—	Calm	0	b	—	—	—	—	Very bright	—	—
	10 "	28.930	24.0	23.0	21.2	21.2	15.2	—	Calm	0	b	—	—	—	—	Very bright	5	6
	Noon	28.912	30.0	27.6	25.5	—	—	—	N	0-1	bc	Cl. 1	—	—	—	Very bright	—	—
	4 p.m.	28.902	27.0	25.2	27.0	—	—	—	NE	1	bc	Cl.-s. 6	—	—	—	Very bright	—	—
	8 "	28.905	28.2	26.2	25.8	36.2	—	—	N	1-2	bc	Cl.-s. 5	—	—	—	Bright	7	10
	10 "	28.915	—	—	—	—	—	—	Lt. N breezes	—	bc	Cl.-s. 6	—	—	—	Very bright	—	—
Dec. 20	5 a.m.	28.970	25.0	23.5	21.0	—	—	—	Calm	0	bc	Cl. 1	—	—	—	Very bright	7	6
	8 "	29.020	31.0	27.3	21.0	35.2	23.0	210.8 29.215	Calm	0	bc	Cl.-s. 2	—	—	—	Very bright	3	4
	10 "	29.050	27.2	24.8	24.8	—	—	—	Lt. E airs	—	bc	Cl.-s. 3	—	—	—	Bright	—	—
	Noon	29.062	28.5	25.8	25.0	—	—	—	E	0-1	bc	Cl.-s. 1	—	A.-cu.	SE	Very bright	—	—
	4.30 p.m.	29.115	23.6	22.0	22.8	—	—	—	SE	1-2	bc	Cl.-s. 3	NW	A.-cu. 1	SE	Very bright	2	8.5
	6 "	29.135	23.0	22.2	22.8	—	—	—	SE	1-2	bc	—	—	A.-cu. 2	—	Very bright	—	—
	8 "	29.145	21.5	20.8	21.2	34.1	—	—	SE	1	bc	Cl. 1	—	—	—	Very bright	—	—
	10 "	29.148	20.8	19.9	20.0	—	—	—	SE airs	—	bc	—	—	S.-cu. 1	—	Very bright	—	—
	Midt.	29.140	17.2	16.8	17.2	—	—	—	Lt. SE airs	—	bc	—	—	A.-cu. 4	—	Obscured	—	—
Dec. 21	2 a.m.	—	—	—	—	—	—	—	Calm	0	bcv	—	—	A.-cu. 2	SW	Very bright	—	—
	4.30 "	29.118	22.8	21.2	17.1	—	—	—	Lt. S airs	—	bcv	—	—	—	—	Very bright	6	12
	6 "	29.122	20.5	19.9	21.0	—	—	—	Lt. S airs	—	bcv	—	—	—	—	Very bright	—	—
	8 "	29.070	31.0	28.1	21.0	—	—	—	Calm	0	b	—	—	—	—	Very bright	4	4

## ISLAND CAMP, DECEMBER 16, 1903, TO JANUARY 9, 1904.

Direction in which Erebus smoke is going.	Remarks.	Date.
<p>Extreme summit obscured, SE, long stream</p> <p>E in big volume NE, small volume Upright, small quantity Vertically 1000 ft., then NE Vertically 3000 ft., then NE Vertically 2000 ft., then NE Not visible Not visible</p>	<p>8 p.m. Heavy roll Cu. on western range, obscuring all but extreme summits. Some light cloud on Erebus summit.</p> <p>10 p.m. Snow temp. at depth of 6 ins., 22° 0. Similar clouds as at 8 a.m. Erebus summit nearly clear. Fine S.-cu. over western mountains.</p> <p>2 a.m. Heavy cloud obscuring western mountains. Ci. and Ci.-s. forming overhead. Strong wind blowing over neck of peninsula.</p> <p>6 a.m. Str. covering Castle Rock promontory. A bank of A.-s. in South. Very wind-blown Ci.-s. Foggy over all land. Western mountains obscured. Ci.-s. radiating E and W.</p> <p>8 a.m. Foggy.</p> <p>10 a.m. Apparently blowing very hard on peninsula. Str. over and on western mountains. Ci.-s. very wind blown and torn.</p> <p>2 p.m. Cloud over Castle Rock. Western mountains obscured, except foot hills. Fine prismatic colouring on clouds near sun.</p> <p>4 p.m. Ci.-s. E and W in shattered bands. Very little smoke from Erebus.</p> <p>8 p.m. Ci.-s. wind blown and torn, in most extraordinary shapes, all the afternoon, movement not discernible, but changing formation rapidly. Western mountains all obscured, only foot hills visible. Heavy S.-cu. and roll Cu. has been hanging over the open water all the afternoon. Ci.-s. radiating NW and SE. Very fine prismatic colouring on Ci.-s. near the sun all day.</p>	<p>1903. Dec. 16</p> <p>Dec. 17</p>
<p>Obscured Obscured Obscured Obscured Obscured Obscured Obscured Thick column, NW Thick column, NE Thick column, N</p>	<p>4 a.m. Western mountains clear; patches of detached Cu. hanging in E and S. Erebus summit just hidden in cloud, clear below.</p> <p>8 a.m. Sky clearing. Low S.-cu. in detached pieces coming up fast from S. Bluff entirely obscured; western mountains clear. Wind squally.</p> <p>10 a.m. Ci.-s. very wind torn. Western mountains obscured. Sky more or less covered with thin sheet of A.-s.</p> <p>4 p.m. Stormy and windy looking generally. Halo and corona most of afternoon. Ice crystals falling all afternoon.</p> <p>6 p.m. Becoming thickly overcast by A.-cu. from NE and SE. A.-s. on all southern and western hills.</p> <p>8 p.m. Ci.-s. very wind blown and torn. Cu. and A.-cu. moving fast from SE. Erebus only visible at times. Western mountains clearing and a finer look all round generally.</p> <p>10 p.m. Mountains S and W all clearing on summits.</p> <p>Weather quickly cleared after Midt., and Ci.-s. gradually disappeared. All land clear of cloud except Terror, which had some Str. below summit. Heavy roll Cu. on N side of Erebus, extending a little way across the Bay.</p>	<p>Dec. 18</p> <p>Dec. 19</p>
<p>Thick column, NE Thick column, SE SE Thick streamer, E SE Obscured Not visible Not visible</p>	<p>4 a.m. Erebus smoke has been gradually hauling round all the watch, and is now going to SE in long thick streamer. Heavy roll Cu. over to N side of Erebus Island; fine rolls on top, and flat below. Some Ci.-s. in various parts, but fast dispersing.</p> <p>6 a.m. Very fine Ci.-s. across foot of western mountains. Cu. over Black Island. Ci.-s. over Winter Quarters.</p> <p>10 a.m. Layer of Str. below summits of western mountains. Heavy roll Cu. to N of Erebus Island. Visibility not good, but clear.</p> <p>8 p.m. Ci.-s. very wind blown and torn. Western mountains entirely obscured. Erebus clear, but no smoke visible.</p> <p>10 p.m. Erebus quite clear. Western mountains and all land over there obscured. Ci.-s. in most extraordinary wind-blown and torn shapes.</p>	<p>Dec. 20</p>
<p>Small quantity, E Vertical, then S Vertical, then S Zig-zag to SW Thick streamer, SE Long column, SE Vertical, then SE in dense column SE Thick streamer, E Thick volume, NE Thick volume, NE Fair volume, E —</p>	<p>5 a.m. Erebus smoke is apparently shifting, as some can be seen going to SE in form of thin vapour. Very little wind apparently up there. Ci. appear very wind torn. Heavy banks of Cu. and S.-cu. obscuring western mountains, and extending to over Bluff. Cu. on Black and Brown Islands.</p> <p>8 a.m. Heavy roll Cu. on western mountains and to Black Island, with bank of thick Str. behind them. Very white S.-cu., possibly A.-s., banging high above, and to N and S of Erebus summit. Smoke going vertically for 6000 or 7000 ft. and then inclined easterly from two distinct outputs on summit; very small quantity and coming out in puffs.</p> <p>10 a.m. S.-cu. half-way up Erebus' south side. Cloudy and overcast S and W.</p> <p>Noon. Heavy Cu., Nhn., and S.-cu. in SW. Str. (?) hanging on Erebus at alt. of 700 ft. Erebus smoke gradually shifting round and rising very high in thin vapour.</p> <p>4.30 p.m. Heavy banks of S.-cu. to SE.</p> <p>6 p.m. Erebus clear. Western mountains nearly obscured. A.-cu. and Str. in various directions in detached form. Ci. to W and SW. Erebus smoke going S most of afternoon, in thick column, rising 1000 ft. before breaking off. Very fine prismatic colouring of Ci. clouds near sun during afternoon. Heavy roll Cu. to N of Erebus Island.</p> <p>8 p.m. Heavy Cu. and S.-cu. over to SW, W, and NW, clear to S and E, only a few patches of Ci. overhead.</p> <p>10 p.m. Heavy dark clouds to SW.</p> <p>Midt. Western mountains clearing. Heavy S.-cu. to S, SW, and W.</p> <p>4.30 a.m. Heavy roll Cu. and S.-cu. to N side of Erebus Island all the watch. A.-cu. (8000 ft.) passed over from SW. Clouds dispersing generally. Visibility very marked.</p> <p>6 a.m. A few wisps of A.-s. hanging round Erebus and Terror slopes.</p> <p>8 a.m. Cu. clouds above western mountains and Mt. Discovery, also some smaller clouds hanging over Black Island. Sky clouding over from SW in forenoon.</p>	<p>Dec. 21</p>

TABLE I.—METEOROLOGICAL REGISTER KEPT AT THE EREBUS

Date.	Time.	Pressure.	Temperature.					Hypsometer and equivalent pressure.	Wind.		Weather.	Cloud.				Ozone.			
			Dry bulb.	Wet bulb.	Spirit minimum.	Mercury maximum.	Snow surface minimum.		Direction.	Force (Beaufort).		Upper.	Lower.	Sunshine.	No. on scale.	No. of hours exposed.			
												Description.	Direction (moving from).	Description.	Direction (moving from).				
1903. Dec. 21 (contd.)	10 a.m.	ins. 29.065	30.7	28.0	30.9	—	—	—	Lt. S airs	—	b	—	—	—	—	—	Very bright	2	2-3
	0.30 p.m.	29.042	33.2	29.5	31.6	—	—	—	Lt. S airs	—	bc	—	—	A.-cu. 2	—	—	Very bright	2	1-2
	2 ..	29.010	32.2	28.8	31.9	—	—	—	Lt. S airs	—	c	—	—	A.-cu. 9	S by W	—	Very bright	2	2
	4 ..	28.980	30.7	27.4	31.2	—	—	—	Lt var. airs	—	cg	—	—	S.-cu. 10	SW	—	Obscured	2	2
	6 ..	28.980	30.0	26.8	29.2	—	—	—	Calm	0	oeg	—	—	Cu. 10	SW	—	Obscured	4	2
	8 ..	28.962	25.0	23.9	25.2	37.0	—	—	Lt. S airs	—	oeg	—	—	S. 10	—	—	Obscured	—	—
	10 ..	28.935	25.8	24.4	25.0	—	—	—	Calm	0	oe	—	—	S. 10	—	—	Obscured	—	—
	11.30 ..	28.922	26.5	24.2	25.3	—	—	—	Lt. NW airs	—	o	—	—	S. 10	—	—	Obscured	4	6
Dec. 22	3.30 a.m.	28.900	24.5	23.7	24.2	—	—	—	Calm	0	o*	—	—	N. 10	—	—	Obscured	—	—
	6 ..	28.895	25.6	24.0	24.2	—	—	—	Calm	0	o	—	—	S. 10	—	—	Obscured	3	6
	8 ..	28.885	27.0	25.2	25.2	32.0	—	—	Lt. S airs	—	o*	—	—	N. 10	—	—	Obscured	—	—
	10 ..	28.880	30.8	28.6	25.0	—	—	—	Calm	0	o	—	—	S.-cu. 10	—	—	Obscured	—	—
	Noon	28.875	30.9	28.2	31.2	—	—	—	Calm	0	o	—	—	S.-cu. 10	—	—	Obscured	5-6	6
	2 p.m.	28.832	31.7	28.2	30.8	—	—	—	Calm	0	o	—	—	A.-cu. 9	—	—	Obscured	—	—
	4 ..	28.855	30.4	27.3	30.4	—	—	—	Lt. airs	1	oc	—	—	A.-cu. 7	S	—	Obscured	—	4
	6 ..	28.868	30.5	27.2	28.2	—	—	—	Lt. N airs	0-1	bc	—	—	A.-cu. 4	S	—	Very bright	—	—
	8 ..	28.865	29.0	26.5	29.6	35.5	210.4	28.98	N	1-2	bc	—	—	S.-cu. 1	N	—	—	—	—
11.30 ..	28.890	26.6	26.5	24.5	—	—	—	N	1	bc	Ci.-s. 1	—	—	—	—	Very bright	5	8	
Dec. 23	4 a.m.	28.948	25.8	23.0	23.9	—	—	—	N by E	1-2	bcq	Ci. 5	NNE	—	—	—	Gleam	5	4
	6 ..	28.990	29.1	24.8	25.2	—	—	—	Lt. N airs	—	bc	Ci.-s.	NE	—	—	—	Very bright	—	—
	8.20 ..	29.072	30.6	28.3	28.2	33.8	—	—	Lt. S airs	—	bc	Ci. 4	NW	—	—	—	Very bright	—	—
	10 ..	29.098	34.2	30.6	31.0	—	—	210.9	E airs	—	bc	A.-s. 2	N	—	—	—	Very bright	6	6
	Noon	—	—	—	—	—	—	20.27	—	—	bc ⊙ ⊕	A.-s. 4	—	S. 2	S	—	Gleam	—	—
	2 p.m.	—	—	—	—	—	—	—	E	1	bc ⊕	—	—	S. 6	S (fast)	—	Gleam	—	—
	4.30 ..	29.195	25.0	25.0	24.2	—	—	—	E	4-5	o*	—	—	N. 10	—	—	Obscured	7	6
	6 ..	29.228	24.2	24.2	24.4	36.0	—	—	E	3-4	o*	—	—	N. 10	—	—	Obscured	—	—
	11.30 ..	29.262	23.6	23.6	23.0	—	—	—	E	3-4	o*² †	—	—	N. 10	—	—	Obscured	10	8
Dec. 24	3 a.m.	29.290	25.0	25.0	23.0	—	—	—	E	4-5	o*² †	—	—	N. 10	—	—	Obscured	—	—
	2 p.m.	29.292	28.0	27.8	23.8	28.2	—	—	E	3-4	oc †	—	—	S. 9	S	—	Obscured	10	13
	4 ..	29.292	28.0	28.0	27.0	—	—	—	E	3	o*	—	—	N. 10	—	—	Gleam	—	—
	6 ..	29.295	23.5	28.9	27.6	—	—	—	E	2-3	o*	—	—	N. 10	—	—	Obscured	—	—
	8 ..	29.282	28.0	28.0	27.2	30.2	—	—	E	2-3	o*	—	—	N. 10	—	—	Obscured	8	6
	10 ..	29.270	30.6	29.9	28.5	—	—	—	E	2-3	o*	—	—	N. 10	—	—	Obscured	—	—
	Dec. 25	2 a.m.	29.270	—	—	—	—	—	—	NE	2-3	o*	—	—	N. 10	—	—	Obscured	—
4 ..	29.270	—	—	—	—	—	—	—	NE	2-4	oqg	—	—	S. 10	—	—	Obscured	—	—
6 ..	29.258	30.2	29.3	28.3	—	—	—	E	3-4	oc	A.-cu. 3	—	S. 7	SE	—	Obscured	6	10	
8 ..	29.248	31.3	30.0	28.2	32.0	211.2	20.45	E	2-3	oc	—	—	A.-cu. 9	—	—	Gleam	—	—	
2 p.m.	29.200	33.2	31.3	31.5	—	—	—	SE	1	bv	—	—	—	—	—	Very bright	5	8	
4 ..	29.185	33.5	31.5	33.0	—	—	—	E	1	bv	—	—	—	—	—	Very bright	—	—	
6 ..	29.176	33.8	31.5	33.5	—	—	—	Lt. E airs	—	bv	—	—	—	—	—	Very bright	4	4	
8 ..	29.181	34.8	32.7	33.2	39.3	—	—	NW by N	1-2	bv	—	—	—	—	—	Very bright	—	—	
10 ..	29.175	35.4	33.6	34.0	—	—	—	Calm	0	bv	—	—	—	—	—	Very bright	—	—	
11.30 ..	29.170	32.0	30.2	33.8	—	—	—	Lt. NE airs	—	bm	—	—	—	—	—	Very bright	4	6	

## ISLAND CAMP, DECEMBER 16, 1903, TO JANUARY 9, 1904 (continued).

Direction in which Erebus smoke is going.	Remarks.	Date.
NE		1903. Dec. 21 (contd.)
Fair volume, NE	Noon. Thick white cloud enveloping N shoulder and slope of Erebus.	
Thin streamer, NE	2 p.m. Dark bank of cloud obscuring high land to S and SW.	
Obscured	4 p.m. Very dark, threatening appearance in S and SSW. Blue sky to E and SE to alt. of 10°.	
Obscured	6 p.m. Weather looks threatening to S and SW, land gradually becoming obscured. Str. on Erebus, and Cu. and S.-cu. overhead.	
Obscured	8 p.m. Height of Str. 10,000 ft. about.	
Obscured	10 p.m. Western mountains obscured by dense black bank of Str. Str. dropped to 5000 ft.	
Obscured	11.30 p.m. Heavy dark clouds to S and SW; Str. on Erebus, about 4000 ft. up. Only foot hills visible.	
Obscured		Dec. 22
Obscured	6 a.m. Str. about 2000 ft. alt. Heavy S.-cu. over Black Island and Discovery. Western mountains obscured, except foot hills. Nim. to N and NW. Str. overhead without a break or shadow. Snowed very slightly during the watch.	
Obscured	8 a.m. Conditions similar to 6 a.m. Fine snow falling.	
Obscured		
Obscured	Noon. Small shaded rolls of A.-cu. in, and to E of, zenith. Blue sky visible above the land to E, dark sky W to SSW obscuring all but the low-lying land. Patches of sunlight on Mt. Terror.	
Obscured		
Thin volume, NE		
Obscured	6 p.m. Umbrella of cloud on Erebus summit, quite clear to E, NE, and in zenith. Heavy Str. to S and SW with fine roll Cu. on western mountains. Gleaming generally. Prismatic colouring on clouds near sun.	
Thin, NE		
Low down, NE	11.30 p.m. Cl.-s. radiating N and S. Detached Cu. over Discovery and western range. Fine, settled look generally.	
Low down, S	4 a.m. Thin stratum of cloud across land W side of Strait.	Dec. 23
Low down, S	6 a.m. Peculiar humps of cloud hanging to S and just higher than Erebus and Terror summits, with curved under surface of a Cu. type. Cl.-s. radiating N and S, with very marked radiant points. Erebus smoke gradually hauled round from NE to S, keeping very low on the side of the mountain. Clearing generally.	
Small column, NE	8 a.m. Cl. clouds, in parallel lines, converging N and S, moving slightly sideways from NW.	
Obscured	10 a.m. A.-s. just level with top of Erebus. Heavy Str. along western mountains at alt. of 4000 ft. N.-cu. in SW. Foggy appearance on Erebus and Terror Islands. A.-cu. radiating SSW, NNE, 10° from zenith.	
Obscured		
Obscured		
Obscured	3 p.m. The land began to be obscured by falling snow. The A.-s. radiated very markedly N and S until sky became nearly overcast.	
Obscured	4 p.m. Scud passing rapidly over from S.	
Obscured	4.30 p.m. Nearly all land obscured by falling snow. During the afternoon watch the wind slowly rose from E and sky became more and more overcast, the clouds descending.	
Obscured	3 a.m. Blowing hard, with very thick snowfall of large, damp flakes. No land visible.	Dec. 24
Low down, NW	2 p.m. Clear over to western mountains and Erebus, but the latter was quickly covered over again. Dark and threatening to SE and E. Clouds broken, and blue sky visible to N and NW.	
Obscured	4 p.m. Similar weather, but every appearance of more snow and wind to E and SE. Sun gleaming at intervals. Scud passing up from S very rapidly.	
Obscured		
Obscured	8 p.m. Sun just visible. Snowing, and dull generally.	
Obscured		
Obscured	2 a.m. No land visible anywhere. Flakes large and damp.	Dec. 25
Obscured	4 a.m. Wind very squally. Very black and threatening to E and SE.	
Obscured	6 a.m. Erebus nearly clear; land visible all round.	
N (?)	8 a.m. Very fine and typical A.-cu. clouds, movement uncertain. Heavy dark Str. to S, SW, and on western mountains, obscuring land above 3000 ft. Erebus quite clear, but direction of smoke not certain.	
Long thin streamer, NW	2 p.m. Detached white lump of cloud hanging round Erebus. Lines of Str. to W and SW. Cu. on summit of Discovery.	
Thin streamer, W		
Very thin streamer, W	6 p.m. A.-s. above western mountains, otherwise cloudless sky. Temperature in sun, 43°0.	
In puffs and streamers, N by E	8 p.m. Cloudless, except for Cl.-s. between NW and SE, at alt. of 10° in NW down to 5° in SE.	
NE	10 p.m. Cl.-s. clouds between NW by W and SE, at alt. of 25° in NW to 3° in SE.	
In puffs low down, NE	11.30 p.m. Very fine feathery Cl. passing over slowly from S. Misty on floe. Temperature in sun, 40°0. Erebus as seen from floe smoking in heavy volume, which slowly diminished until only just a very faint vapour was visible.	

TABLE I.—METEOROLOGICAL REGISTER KEPT AT THE EREBUS

Date.	Time.	Pressure.	Temperature.					Hypsometer and equivalent pressure.	Wind.		Weather.	Cloud.				Sunshine.	Ozone.	
			Dry bulb.	Wet bulb.	Spirit minimum.	Mercury maximum.	Unscreened thermometer.		Direction.	Force (Beaufort).		Upper.		Lower.			No. on scale.	No. of hours exposed.
												Description.	Direction (moving from).	Description.	Direction (moving from).			
1903. Dec. 26	3.30 a.m.	ins. 29.154	33.4	30.5	32.4	—	—	—	NNW	1-2	ben	Ci. s. 2	—	—	—	Very bright	—	—
	4.30 "	29.150	30.6	29.0	33.0	—	45.8	—	Calm	0	ben	Ci. s. 2	—	—	—	Very bright	—	—
	6 "	29.150	33.0	30.8	32.2	40.0	57.0	—	Calm	0	ben	Ci. s. 2	—	—	—	Very bright	3	8
	10 "	29.130	37.1	32.3	33.8	—	64.5	211.0 29.33	Calm	0	be	Ci. 2	—	—	—	Very bright	—	—
	11.30 "	29.130	36.6	34.0	38.5	—	87.0	—	Calm	0	be	Ci. 2	—	—	—	Very bright	3	6
	4.30 p.m.	29.108	36.2	34.0	33.5	—	51.0	—	Calm	0	b	—	—	—	—	Very bright	—	—
	8 "	29.100	37.0	34.0	38.0	45.8	43.0	—	Lt. NW airs	—	be	Ci. 1	—	—	—	Very bright	3	6
	8.30 "	29.070	35.2	32.6	30.4	—	46.5	—	—	—	—	—	—	—	—	—	—	—
	10 "	29.082	33.2	31.2	30.8	—	35.0	—	Lt. N airs	—	b	—	—	—	—	Very bright	—	—
	11.30 "	29.070	29.0	27.5	29.5	—	32.6	—	Calm	0	b	—	—	—	—	Very bright	2	6
Dec. 27	3.30 a.m.	29.048	31.9	28.9	29.8	—	—	—	Lt. var. airs	—	b	—	—	—	—	Very bright	—	—
	4.30 "	29.048	32.3	31.5	30.0	—	42.2	—	Calm	0	b	—	—	—	—	Very bright	—	—
	8 "	29.060	34.1	30.8	32.8	—	55.4	—	Lt. N airs	—	b	—	—	—	—	Very bright	—	—
	8 "	29.062	33.3	31.1	28.9	42.5	—	—	N by W	1-2	be	Ci. 3	—	—	—	Bright	—	—
	10 "	29.075	36.5	32.2	33.6	—	44.8	—	NNE	1-2	be	Ci. 3	—	—	—	Bright	4	10
	11.30 "	29.076	36.2	33.8	36.0	—	45.0	—	NNE	1	bev	Ci. s. 5	—	—	—	Bright	—	—
	4.30 p.m.	29.065	32.8	31.8	32.5	—	39.0	—	Lt. SE airs	—	be	Ci. s. 6	—	—	—	Bright	—	—
	6 "	29.080	34.7	32.5	31.9	—	47.5	—	Calm	0	be	Ci. s. 7	—	—	—	Bright	4	8
	8 "	29.070	37.8	33.8	33.0	43.2	44.0	210.8 29.215	Calm	0	be	Ci. s. 2	—	—	—	Very bright	—	—
	8.30 "	29.080	34.9	32.2	34.5	—	36.0	—	Lt. S airs	—	be	Ci. s. 2	—	—	—	—	—	—
	11.30 "	29.100	34.0	30.0	30.1	—	35.0	—	W	1-2	be	Ci. s. 4	—	—	—	Very bright	4	6
Dec. 28	3.30 a.m.	29.135	28.5	30.5	28.0	—	—	—	Calm	0	b	—	—	—	—	Very bright	—	—
	4.30 "	29.140	30.0	27.2	28.0	—	46.5	—	Calm	0	b	—	—	—	—	Very bright	3	4
	6 "	29.145	31.8	29.5	30.0	40.2	48.0	—	Calm	0	b	—	—	—	—	Very bright	—	—
	8.30 "	29.180	34.4	32.6	32.2	—	57.0	—	Lt. S airs	—	b	—	—	—	—	Very bright	—	—
	10 "	29.190	36.6	31.2	31.2	—	48.0	211.0 29.33	Lt. N airs	—	b	—	—	—	—	Very bright	4	6
	11.30 "	29.205	33.2	31.6	33.0	—	47.0	—	Lt. var. airs	—	b	—	—	—	—	Very bright	—	—
	4.30 p.m.	29.260	37.2	33.6	33.0	—	42.0	—	Calm	0	bf	—	—	—	—	Bright	—	—
	6 "	29.275	36.2	33.0	34.5	39.8	43.0	—	Calm	0	b	—	—	—	—	Very bright	5	8
	8.30 "	—	33.5	31.4	32.2	—	36.0	—	Calm	0	b	—	—	—	—	Very bright	—	—
	10 "	29.290	32.0	31.3	31.0	—	39.0	—	Calm	0	b	—	—	—	—	Very bright	3	4
	11.30 "	29.295	32.0	30.2	31.0	—	41.0	—	Calm	0	b	—	—	—	—	Very bright	—	—
Dec. 29	4.30 a.m.	29.310	27.8	26.0	27.2	—	38.0	—	Calm	0	b	—	—	—	—	Very bright	—	—
	8 "	29.318	30.8	28.5	27.5	37.5	40.0	—	Calm	0	b	—	—	—	—	Very bright	4	8
	8.30 "	29.325	32.7	29.8	27.5	—	67.0	—	Calm	0	b	—	—	—	—	Very bright	—	—
	11.30 "	29.328	36.2	32.0	33.0	—	71.0	—	Calm	0	b	—	—	—	—	Very bright	6	6
	4.30 p.m.	29.270	30.2	29.2	30.0	—	31.0	—	NW	3-4	bf	—	—	Fog, 2	NW, rapid	Bright	—	—
	8 "	29.234	34.9	31.8	29.9	44.2	—	—	Calm	0	bef	Ci. 3	—	—	—	Bright	—	—
	8.30 "	29.229	29.8	26.2	29.8	—	31.0	—	N	1-2	bf	—	—	Fog, 1	NW, rapid	Very bright	—	—
	11.30 "	29.140	33.0	28.2	29.0	—	33.0	—	N	2-3	be	Ci. 4	SW	—	—	Dull	5	10

## ISLAND CAMP, DECEMBER 16, 1903, TO JANUARY 9, 1904 (continued).

Direction in which Erebus smoke is going.	Remarks.	Date.
<p>Not visible</p> <p>NE or NNE</p> <p>Very small column, N</p> <p>Not visible</p> <p>Smoke just visible</p> <p>None visible</p> <p>None visible</p> <p>—</p> <p>None visible</p> <p>None visible</p>	<p>4.30 a.m. Cloudless, except just above Erebus, where some Ci.-s. has collected. Misty low down on floe, and land also misty. Erebus smoke only barely visible.</p> <p>6 a.m. Some faint Ci. and Ci.-s. dotted about the zenith and over Erebus. Otherwise cloudless. Misty generally.</p> <p>10 a.m. Ci. over summit of Erebus, hiding direction of smoke.</p> <p>11.30 a.m. Ci. in feathery detached forms all over sky. Erebus smoke visible, but direction or quantity impossible to tell.</p> <p>6 p.m. Feathery Ci. to S. No smoke visible from Erebus, but mountain quite clear.</p> <p>10 p.m. Absolutely no cloud, and no smoke visible from Erebus.</p> <p>11.30 p.m. Absolutely cloudless.</p>	<p>1903. Dec. 26</p>
<p>None visible</p> <p>None visible</p> <p>None visible</p> <p>In small volume, E</p> <p>In small volume, E</p> <p>In very small volume, E</p> <p>None visible</p> <p>None visible</p> <p>None visible</p> <p>None visible</p> <p>None visible</p>	<p>4.30 a.m. A good deal of refraction and mirage low down all round. Cloudless sky.</p> <p>8 a.m. Bank of Ci.-s. at alt. of 25° between NW and SE through SW. Light Ci. between E and NW to an alt. of 50°.</p> <p>11.30 a.m. Ci.-s. appears to be collecting. All land clear of cloud. During the afternoon Ci.-s. collected and spread, and gradually formed into very irregular lines radiating NW and SE, the NW point being very marked. All land remains clear, but has a misty look.</p> <p>8 p.m. Ci.-s. clouds seem to be gradually disappearing.</p> <p>11.30 p.m. Ci.-s. seems again to be forming, and passing up from SW very slowly.</p>	<p>Dec. 27</p>
<p>None visible</p> <p>None visible</p> <p>None visible</p> <p>None visible</p> <p>None visible</p> <p>Slight vapour, E</p> <p>None visible</p> <p>None visible</p> <p>None visible</p> <p>None visible</p> <p>None visible</p>	<p>Throughout night all Ci.-s. gradually passed away to NE, leaving clear sky. A good deal of refraction and mirage. Lumps of very white Cu. clouds to NW, which slowly disappeared. Only slight vapour from Erebus.</p> <p>6 a.m. Cloudless. Land misty to W.</p> <p>10 a.m. Absolutely cloudless.</p> <p>2 p.m. Heavy fog came over from NW at a very rapid pace, and a slight NW wind with it. Fog crystals formed.</p> <p>2.30 p.m. White bank of fog in Strait; top of land visible.</p> <p>2.45 p.m. Land, W of Strait, obscured; small white clouds coming over rapidly from NE.</p> <p>4.30 p.m. Fog still hanging about, but quite clear close round here.</p> <p>6 p.m. Low fog still hanging about land to S and SE.</p> <p>8.30 p.m. Low bank of vapour on horizon at foot of Discovery.</p> <p>10 p.m. Some slight mist all over floe. Cloudless.</p> <p>11.30 p.m. Misty on floe. Cu. and Str. above western mountains and behind them.</p>	<p>Dec. 28</p>
<p>Very little, NW</p> <p>Very little (? direction)</p> <p>—</p> <p>Low down, NW</p> <p>None visible</p> <p>None visible</p> <p>None visible</p> <p>None visible</p>	<p>4.30 a.m. Peculiar lumps of mist over peninsula, with curved upper and lower surfaces, otherwise cloudless.</p> <p>6.30 a.m. Similar mist forming on W side of Erebus, 1000 feet high.</p> <p>11.30 a.m. Cloudless sky.</p> <p>Throughout the afternoon the wind was E, and for about an hour, noon to 1 p.m., blew fresh. To N and NW was a heavy fog bank low down. About 2.30 p.m., wind shifted to NW, fog came in rapidly, but remained more over the floe and was never thick. Erebus smoke was going NW low down, but was not visible from the screen at 4.30 p.m.</p> <p>8 p.m. Ci.-s. clouds between SE and NW through S to an alt. of 20°. Heavy Str. clouds to an alt. of 6°, SW and W. Low fog bank between S and SW, obscuring lower parts of land to an alt. of 1°.</p>	<p>Dec. 29</p>

TABLE I.—METEOROLOGICAL REGISTER KEPT AT THE EREBUS

Date.	Time.	Pressure.	Temperature.					Hygrometer and equivalent pressure.	Wind.		Weather.	Cloud.				Sunshine.	Ozone.	
			Dry bulb.	Wet bulb.	Spirit minimum.	Mercury maximum.	Unscreened thermometer.		Direction.	Force (Beaufort).		Upper.		Lower.			No. on scale.	No. of hours exposed.
												Description.	Direction (moving from).	Description.	Direction (moving from).			
1903, Dec. 30	4.30 a.m.	28.975	31.5	28.0	28.0	—	40.0	—	Calm	0	b	—	—	—	—	Very bright	—	—
	6 "	28.960	29.0	27.2	28.0	—	49.0	—	Calm	0	b	—	—	—	—	Very bright	5	8
	8.30 "	28.960	31.4	29.6	25.0	—	61.0	—	Calm	0	bc	Cl.-s. 4	S	—	—	Very bright	—	—
	Noon	28.959	37.5	33.5	32.0	—	72.0	—	Calm	0	bc	Cl.-cu., Cl.-s.	SW	S.-cu. 10	—	Very bright	5	6
	2 p.m.	28.948	32.5	30.0	32.6	—	—	—	ESE	0-1	oc	—	—	—	—	Obscured	—	—
	4.30 "	28.978	24.2	28.2	28.0	—	31.0	—	SSE	1-2	oc	—	—	S.-cu. 10	SW	Obscured	—	—
	6 "	28.980	28.0	26.0	27.1	53.1	30.0	—	SE	1-2	oc	—	—	A.-s. 10	—	Obscured	6	6
	8.30 "	29.002	23.7	23.0	23.5	—	31.0	—	SE	1-2	oc	—	—	A.-s. 10	—	Obscured	—	—
	11.30 "	29.030	23.9	22.5	23.0	—	25.0	—	Lt. SE airs	—	oc	—	—	A.-s. 8	—	Gleam	5	6
Dec. 31	2 a.m.	—	—	—	—	—	—	—	SE	3-4	oc	—	—	—	—	—	—	—
	4.30 "	29.068	23.8	22.2	22.0	—	24.0	—	SE	1	oc	Cl.-s. 2	—	S. 2, A.-cu. 6	N	Obscured	—	—
	6 "	29.070	24.0	22.8	23.1	28.5	—	—	SE	1-2	bc	Cl.-s.	—	A.-cu.	—	Obscured	6	6
	8.30 "	29.079	25.6	23.6	23.4	—	33.0	—	SE	1-2	ocq	—	—	S. 10	—	Obscured	—	—
	10 "	29.085	24.2	23.0	24.0	—	29.0	—	E	1-2	bc	Cl.-s. 3	—	A.-s. 2	—	Gleam	—	—
	11.30 "	29.080	26.4	24.8	24.0	—	33.0	—	E	1	bc	Cl.-s. 5	—	A.-s. 5	—	Gleam	7	6
	4.30 p.m.	29.060	27.2	25.5	25.8	—	33.0	—	E	1	bc	Cl.-s. 5	—	—	—	Gleam	—	—
	6 "	29.060	26.6	25.4	25.2	—	29.0	—	E	1	bc	Cl.-s. 4	—	—	—	Bright	4	6
	8 "	29.050	26.5	24.8	25.2	28.2	34.0	—	Calm	0	bc	Cl.-s. 2	—	—	—	Very bright	—	—
1904, Jan. 1	8 a.m.	28.972	32.2	31.2	26.0	38.2	44.0	—	N	1	bc	Cl. 2	—	A.-cu. 2	W	Very bright	8	12
	10 "	28.970	32.0	30.2	30.0	—	42.0	210.8 29.215	NW	1	bc	Cl.-cu. 2	—	Cu. 1	NW	Bright	3	2
	2 p.m.	28.942	34.0	30.8	31.5	—	—	—	NW	1	bc	Cl.-cu. 1	—	Cu. 3	—	Bright	—	—
	4 "	28.928	35.5	37.2	33.4	—	—	—	NW	1-2	bc	Cl.-cu. 1	E	Cu. 2	—	Bright	—	—
	6 "	28.925	33.8	30.2	33.5	—	—	—	NW	1	bc	A.-cu.	NW	—	—	Bright	—	—
	8 "	28.916	31.4	28.8	30.8	37.5	—	—	N airs	0-1	bc	Cl.-cu. 4	—	Cu. 3	—	Bright	—	—
	10 "	28.908	36.0	30.8	31.0	—	39.0	—	Lt. N airs	—	bc	Cl.-cu. 3	SW	A.-cu. 2	NW	Bright	—	—
Jan. 2	8 a.m.	28.852	31.2	30.0	28.5	33.2	—	—	N	1-2	oc	—	—	S. 10	—	Obscured	—	—
	11 "	28.881	32.2	31.1	31.2	—	—	—	N	1	oc	—	—	S. 10	—	Obscured	—	—
	Noon	28.885	28.8	27.2	28.0	—	—	—	Lt. N airs	0-1	oc	—	—	S. 10	—	Obscured	—	—
	2 p.m.	28.885	28.8	27.5	26.6	—	—	—	Lt. N airs	—	oc	—	—	S. 10	—	Obscured	—	—
	4 "	28.922	26.8	25.2	26.8	—	—	—	NE airs	—	oc *	—	—	N. 10	—	Obscured	—	—
	6 "	28.925	28.5	27.5	27.2	—	—	—	Lt. E airs	—	oc	—	—	S. 10	—	Obscured	—	—
	8 "	28.924	29.0	27.5	26.3	34.2	—	—	Calm	0	oc * <sup>0</sup>	—	—	S. 10	—	Obscured	6	4
Jan. 3	6 a.m.	28.900	29.0	28.0	27.6	—	—	—	E	1-2	oc * <sup>0</sup>	—	—	N. 10	—	Obscured	10	12
	8 "	28.925	28.0	27.0	28.3	31.4	—	—	E	0-1	ocf * <sup>0</sup>	—	—	N. 10	—	Obscured	—	—
	10 "	28.964	26.8	26.5	26.5	—	—	—	ESE	1-2	of * <sup>2</sup>	—	—	N. 10	—	Obscured	8	4
	Noon	28.983	25.0	24.0	23.2	—	—	—	ESE	1-2	ocf	—	—	S. 10	—	Obscured	5	2
	2 p.m.	28.985	26.0	24.2	24.0	—	—	—	SE	1-2	oc	—	—	S. 10	—	Gleam	—	—
	4 "	28.984	25.0	24.1	23.8	—	—	—	SE	1-2	oc	—	—	S. 10	—	Dull	—	—
	6 "	28.988	28.0	26.5	26.8	—	—	—	SE	0-1	oc	—	—	S. 10	—	—	—	—
	8 "	28.900	26.2	24.6	25.0	32.2	—	—	SE	1-2	oc	—	—	S. 9	—	Obscured	7	8

## ISLAND CAMP, DECEMBER 16, 1903, TO JANUARY 9, 1904 (continued).

Direction in which Erebus smoke is going.	Remarks.	Date.
Heavy column, NE Large quantity, NE Large quantity, NE Large quantity, NE Partially obscuring summit Obscured Obscured Obscured Obscured	6 a.m. Dense bank of A.-s. fringed with Cl., Cl.-s., and Cl.-cu., extending from E to SW. Cl.-s. passed overhead from SW during watch at moderate speed. Wind fell about 3 a.m., having been fresh N <sup>W</sup> and gusty up to then. Noon. Western mountains almost entirely obscured by heavy S.-cu., which also obscures summit of Discovery. Fine Cl.-cu. overhead, and very fine Cl.-s. in lines running E and W. 2 p.m. All high lands between SW by S and NW obscured in heavy S.-cu. clouds. Sky very quickly became overcast, at first with Cl.-s., then A.-s., then S.-cu. Dark and threatening to S and SW, and western mountains obscured, only foot hills visible. Erebus smoke was going N <sup>W</sup> when last seen. 6 p.m. Instrument screen was shifted 100 yards NE, and facing same way as before, SW. 8.30 p.m. Alt. of Str. equals that of top of Erebus. 11.30 p.m. Dark and stormy looking to S, and on western mountains. Cl. and Cl.-s. visible through thin A.-s., very wind blown and torn.	1903. Dec. 30
Obscured Obscured Obscured Obscured Obscured Obscured Obscured	4.30 a.m. Heavy and dark Str. to S, SW, and on western mountains. Very fine A.-cu. and Cl.-cu. Erebus nearly clear; only summit obscured. Dark to N, with heavy Cu. and water sky. 6 a.m. Clouds similar to those at 4.30 a.m. 10 a.m. Clouds appear to be breaking up; Cl.-s. very torn and ragged. Western mountains obscured. Summit of Erebus covered with thin cloud, probably A.-s. During the afternoon Cl.-s. more or less covered the sky, very wind blown and torn, but no direction of movement visible. Very fine prismatic colouring near suu. Erebus smoke going in heavy column all day to NE.	Dec. 31
Thick volume, NE Thick volume, E Thick volume, NE NE NE Obscured	8 p.m. A.-s. about 1000 feet below summit of Erebus. Heavy bank of cloud from E to S. Very fine roll Cu. on western mountains. Dark and threatening to N and NW. 8 a.m. Very fine massive banks of roll Cu. to the N, hanging round Erebus slopes. Heavy roll Cu. on western mountains, nearly obscuring them. A.-cu. overhead. 10 a.m. Clouds similar to those at 8 a.m., moving fast.	1904. Jan. 1
Considerable volume NE, then N Rising high, NE Obscured Obscured Obscured Obscured Obscured Obscured	8 p.m. Low Cu. clouds to an alt. of 3° between SSE and SW, clinging to the land, with Str. upper clouds. All but foot hills of western range obscured in heavy Cu. clouds. Throughout the day the Cu. clouds have been exceptionally massive and fine, especially to N low down, and over all land to SW and in S. The Cl.-s. and Cl.-cu. have also been very fine, and of most delicate forms. Erebus smoke has been pouring out in a very heavy volume, and going NE. 8 p.m. Sky broken on horizon to W and NW. Fog bank on Erebus. 10 p.m. Sky clearing on horizon all round. Snow falling lightly in hard flakes.	Jan. 2
Obscured Obscured Obscured Obscured Obscured Obscured Obscured Obscured Obscured	6 a.m. Very hard round snow flakes falling. 10 a.m. Snow falling thickly in large soft flakes. Very foggy. Noon. Sky broken to SW on horizon. 2 p.m. Sky broken in N and E; appearance of clearing. 4 p.m. Dull all over. Str. at alt. of 4000 feet probably. 10 p.m. Sky broken in the west.	Jan. 3

TABLE I.—METEOROLOGICAL REGISTER KEPT AT THE EREBUS

Date.	Time.	Pressure.	Temperature.					Hypsometer and equivalent pressure.	Wind.			Cloud.				Ozone.		
			Dry bulb.	Wet bulb.	Spirit minimum.	Mercury maximum.	Unscreened thermometer.		Direction.	Force (Beaufort).	Weather.	Upper.		Lower.		Sunshine.	No. on scale.	No. of hours exposed.
												Description.	Direction (moving from).	Description.	Direction (moving from).			
1904.		Ins.	°	°	°	°	°	°										
Jan. 4	8 a.m.	29.085	28.8	26.8	21.5	30.0	—	—	NE	0-1	oc	—	—	S.-cu. 10	—	Obscured	7	10
	Noon.	29.069	35.0	32.0	26.5	—	—	—	Calm	0	bc	—	—	Cu. 3	E	Very bright	4	4
	4 p.m.	29.045	35.0	33.2	35.0	—	—	—	NE	0-1	bc	—	—	—	—	Very bright	5	4
	8 ..	29.063	38.5	33.6	32.5	49.3	—	—	Calm	0	b	—	—	—	—	Very bright	3	4
Jan. 5	8 a.m.	29.108	26.2	25.2	18.8	41.7	—	—	SE	2-3	oc	—	—	S. 10	—	Gleam	7	—
	10 ..	29.121	26.5	25.0	24.5	—	—	—	SE	2-4	bc	—	—	S.-cu.	—	Gleam	—	—
	Noon.	29.142	28.2	27.2	25.5	—	—	—	SE	1-2	bc	—	—	S.-cu.	—	Gleam	—	—
	2 p.m.	29.160	27.0	26.2	24.5	—	—	—	SE	2-3	—	—	—	—	—	Gleam	—	—
	4 ..	29.162	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	6 ..	29.165	25.5	24.0	24.2	—	—	—	S	1-2	oc	—	—	S. 10	—	Obscured	8	10
	8 ..	29.182	25.8	24.2	24.0	31.2	—	—	Calm	0	oc	—	—	S. 10	—	Obscured	—	—
	10 ..	29.195	28.2	26.3	25.0	—	—	—	Calm	0	oc	—	—	S. 10	—	Obscured	4	4
Jan. 6	Noon.	29.200	29.0	30.0	24.0	—	—	—	SE	1-2	—	—	—	N. 10	—	Dull	—	—
	2 p.m.	29.200	28.0	29.0	24.0	—	—	—	SE	1-2	—	—	—	N. 10	—	—	—	—
	4 ..	29.109	23.0	29.0	24.0	—	—	—	S	0-1	bc	—	—	—	—	—	—	—
	6 ..	29.200	26.0	27.0	26.5	—	—	—	SW	0-1	—	—	—	—	—	—	—	—
	8 ..	29.200	31.0	28.0	26.0	—	—	—	Calm	0	—	—	—	—	—	—	—	—
	10 ..	29.109	28.0	26.5	27.0	—	—	—	NW	0-1	—	—	—	—	—	—	—	—
Jan. 7	8 p.m.	29.109	34.5	34.0	22.8	42.0	—	—	Calm	0	ocf	—	—	S. 10	—	1 hour	—	—
	10 ..	29.108	26.2	25.0	25.2	—	—	—	SE	—	ocf	—	—	S. 10	—	Obscured	5	10
Jan. 9	8 a.m.	29.082	35.0	33.4	25.0	39.0	—	—	Calm	0	ocf	—	—	S. 10	—	Obscured	—	—
	6 p.m.	29.072	30.2	30.2	30.0	—	—	—	Calm	0	of *	—	—	N. 10	—	Obscured	—	—
	8 ..	29.068	28.0	28.0	27.6	36.8	—	—	ESE	1	of *	—	—	N. 10	—	Obscured	—	—
	10 ..	29.068	27.5	27.3	27.0	—	—	—	SE	0-1	ocf *	—	—	N. 10	—	Obscured	10	—

ISLAND CAMP, DECEMBER 16, 1903, TO JANUARY 9, 1904 (continued).

Direction in which Erebus smoke is going.	Remarks.	Date.
Obscured		1904.
Obscured		Jan. 4
None visible		
Obscured	Erebus summit obscured in detached Cu. Heavy Cu. over western mountain range. Wind, out in open, in forenoon from N and NW. Ozone papers exposed in sun.	
SE		Jan. 5
Obscured		
Obscured		
Obscured		
—		
Obscured	6 p.m. Dull and threatening all round. Wind, out in open, blowing S to SW, force 2-4.	
Obscured	8 p.m. Sky broken in the west.	
Obscured	Sky broken at times during day, and Erebus clear up to 8000 feet. Snow fell lightly about 5 p.m. Refraction in S and SW. Heavy banks of Cu. on Erebus summit.	
—		Jan. 6
—		
—		
—		
—		
Obscured	8 p.m. Foggy. Sun gleaming.	Jan. 7
Obscured		
Obscured	8 a.m. Very thick all round. Snow fell lightly during night.	Jan. 9
Obscured		
Obscured	Snow fell continuously during day in small soft flakes.	
Obscured		

## SLEDGE JOURNEYS

TABLE II.—MR. BERNACCHI'S TRIP ON GREAT ICE BARRIER TO 15 MILES SOUTH OF SHIP, FEBRUARY 3 AND 4, 1902.

Date.	Time.	Position.	Temperature.	Wind.		Weather.	Remarks.
				Direction.	Force (Beaufort).		
1902. Feb. 3	Noon	Lat. 78° 13 S Long. 163° 36 W	—	—	—	—	
	8 p.m.		10·5	Calm	0	oc	
	Midt.		5·0	NW	1-2	oc	
Feb. 4	3.30 a.m.	Lat. 78° 29 S Long. 163° 45 W	0·0	Calm	0	bc	3.30 a.m. Sastrugi lay SE and NW on surface.
	4 „		2·0	Calm	0	bc	
	Noon		30·0 (in sun)	Calm	0	b	

TABLE III.—JOURNEY OF CAPTAIN SCOTT, R.N., TO LAY OUT DEPÔT TO SOUTH, MARCH 31 TO APRIL 3, 1902.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Dry bulb thermometer.	Wind.		Weather.	Miscellaneous phenomena.	Remarks.
				Direction.	Force (Beaufort).			
1902. March 31	5.30 p.m.		° F. -37·0	—	—	—	—	
	9 „		-42·0	—	—	—	—	
April 1	7 a.m.		-26·0	ESE	4-5	oc	†	
	2 p.m.	S 47° E, 4 m.	-30·0	—	—	—	—	Remained blowing all day. Clearing later.
	8 „		-42·0	—	—	—	—	
April 2	11 a.m.	S 45° E, 9 m.	-40·0	—	—	—	—	Throughout the day the thermometer did not rise above -35° 0.
	5 p.m.		-42·0	—	—	—	—	
	9 „		-47·0	—	—	—	—	
April 3	7.30 a.m.		-40·0	Lt. E airs	—	ocg	—	Very threatening appearance.
	10 „		-27·0	—	—	—	—	
	2 p.m.		-25·0	—	—	—	—	

TABLE IV.—FIRST JOURNEY OF LIEUTENANT ROYDS, R.N., TO CAPE CROZIER, MARCH 4 TO 19, 1902.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Temperature.				Wind.		Weather.	Miscellaneous phenomena.	Remarks.
			Alr.	In sunshine.	With tent.	Minimum during night.	Direction.	Force (Beaufort).			
1902. March 4	4 p.m.		0°0	—	—	—	S (true)	3-4	oc	—	
	6 "		0°0	—	—	—	W (mag.)	3	oc	—	
	8.15 "		2°0	—	—	—	W (mag.)	3	bc	†	
	11 "		4°0	—	9°0	—	Lt. W ahrs (mag.)	—	bc	—	
March 5	2 a.m.		-4°0	—	5°0	—	Lt. W ahrs (mag.)	—	bc	—	
	7 "		-5°0	—	9°0	—	Calm	0	b	—	Lovely morning, hot in sun.
	10.15 "		-5°0	—	—	—	Lt. W ahrs (mag.)	—	b	—	
	Noon	N 55° E, 7 m.	7°0	—	—	—	NE (mag.)	2	bc	—	12.5 p.m. Snow very soft.
	4 p.m.		4°0	—	—	—	Calm	0	b	—	
	8 "		-23°0	—	-10°0	—	Calm	0	b	—	
	9.30 "		-21°0	—	-3°0	—	Calm	0	b	—	
Midt.		-24°0	—	-10°0	—	Calm	0	b	—		
March 6	2 a.m.		-15°0	—	-10°0	—	Calm	0	oc	—	
	4 "		-18°0	—	-8°0	—	Calm	0	—	—	
	9 "		-7°0	—	—	-26°0	W (mag.)	1	oc	—	10.15 a.m. Snow softer.
	10.40 "		—	-3°0	—	—	Lt. var. ahrs	—	bem	⊕	10.40 a.m. Observed double parhelia, each red inside and blue out.
	11.50 "	N 46° E, 13 m.	—	-3°0	—	—	Calm	0	b	—	
	1.45 p.m.		-3°0	3°0	—	—	SSW (mag.)	1-2	bc	—	
	3.15 "		3°0	—	—	—	Calm	0	bc	—	
	4 "		12°0	—	—	—	Calm	0	oc	⊕	4 p.m. Thick mist on summits of Erebus and Terror.
	7 "		12°0	—	—	—	SW (mag.)	1	ocm	—	7 p.m. Depth of snow, with single thrust, 3 ft. 6 ins.
	11 "		11°0	—	22°0	—	Calm	0	ocf	*	9 p.m. Fine snow fell for an hour.
March 7	3 a.m.		5°0	—	—	2°0	Calm	0	om	—	
	8 "		9°0	—	—	—	Calm	0	oc	—	
	10.30 "		14°0	—	—	—	Calm	0	oc	—	
	Noon	N 49° E, 22 m.	19°0	—	—	—	Calm	0	oc	—	8 a.m. Misty over Erebus and Terror. Snow very soft and deep, and apparently quite undisturbed by anything more than variable breezes.
	1 p.m.		22°0	—	—	—	Calm	0	oc	—	
	2 "		16°0	—	—	—	Calm	0	bc	—	
	4 "		9°0	—	—	—	Calm	0	bc	—	
	8 "		-2°0	—	—	—	Calm	0	bc	—	
	10 "		-11°0	—	—	—	Calm	0	oc	—	
	March 8	7 a.m.		—	11°0	—	-11°0	Calm	0	bc	⊕
10 "			—	18°0	—	—	Calm	0	oc	⊕	11 a.m. Observed fall of ice over cliffs.
Noon		N 59° E, 26 m.	—	20°0	—	—	Calm	0	bem	⊕	Parhelia visible all the morning, Terror observed; top of Erebus clearing at intervals.
1 p.m.			—	22°5	—	—	Calm	0	bc	—	
4 "			4°0	—	—	—	Calm	0	bc	—	Observed ice fall from the cliffs on several occasions.
6 "			-5°0	—	—	—	Calm	0	bc	—	
8 "			-11°0	—	—	—	Calm	0	bc	—	
11 "			-7°0	—	—	—	Calm	0	oc	—	

TABLE IV.—FIRST JOURNEY OF LIEUTENANT ROYDS, R.N., TO CAPE CROZIER, MARCH 4 TO 19, 1902  
(continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Temperature.				Wind.		Weather.	Miscellaneous phenomena.	Remarks.
			Air.	In sunshine.	Within tent.	Minimum during night.	Direction.	Force (Beaufort).			
1902. March 9	8 a.m.		6.0	—	—	0.0	Calm	0	oc	—	7 a.m. Snow surface getting harder.
	11.30 "		—	20.0	—	—	Calm	0	oc	*	
	Noon	N 66° E, 32 m.	—	15.0	—	—	Calm	0	oc	—	
	2.30 p.m.		9.5	—	—	—	Calm	0	bc	—	
	3 "		9.0	—	—	—	Calm	0	bc	—	
	3.30 "		0.0	—	—	—	Calm	0	b	—	
	4.30 "		5.0	—	—	—	Calm	0	b	—	
	6.25 "		-5.0	—	—	—	Calm	0	bc	—	
	10 "		4.0	—	—	—	Calm	0	oc	*	
March 10	6 a.m.		0.0	—	—	-11.0	Calm	0	ocm	*	
	8 "		—	—	—	—	Calm	0	b	—	
	10 "		—	10.0	—	—	NW (mag.)	1	b	—	
	11.50 "	N 65° E, 40 m.	—	3.0	—	—	NW (mag.)	1	b	—	
	4.15 p.m.		-2.0	—	—	—	SE (true)	1	b	—	
	6 "		-6.0	—	—	—	SE (true)	1	b	—	
	8 "		0.0	—	—	—	N (true)	1	b	—	
March 11	6 a.m.		-5.0	—	—	-11.0	Lt. var. airs	—	bc	—	
	9.40 "		0.0	—	—	—	Lt. var. airs	—	oc	*	
	11 "		0.0	—	—	—	Calm	0	oef	—	
	Noon	N 58° E, 44 m.	1.0	—	—	—	Calm	0	oef	*	Noon. Excellent travelling, snow surface hard. Light very bad.
	12.30 p.m.		2.0	—	—	—	Calm	0	oef	*	
	2.15 "		1.0	—	—	—	Calm	0	oef	*	
	3.10 "		0.0	—	—	—	NW (mag.)	2	oef	*	
	6 "		-5.0	—	—	—	NW (mag.)	4	oef	* †	
	8 "		-5.0	—	—	—	NW (mag.)	4	oef	* †	
March 12	7 a.m.		0.0	—	—	0.0	NE (mag.)	4	oef	*	Blew hard all night, with much drift.
	Noon	N 52° E, 42 m.	-2.0	—	—	—	NE (mag.)	3-4	ocm	—	Noon. Very soft sticky snow, clogging skis and runners.
	9 p.m.		-2.0	—	—	—	NE (mag.)	3	ocm	—	
March 13	7 a.m.		-2.0	—	—	-3.0	NE (mag.)	4-5	bc	—	High wind all night.
	12.30 p.m.	N 60° E, 45 m.	-10.0	—	—	—	NE (mag.)	6-7	bq	† <sup>2</sup>	
	4 "		-3.0	—	—	—	NE (mag.)	4-5	b	† <sup>2</sup>	
	8 "		-5.0	—	—	—	NE (mag.)	6-7	b	† <sup>2</sup>	Very heavy drift all day.
March 14	6 a.m.	N 67° E, 42 m.	-3.0	—	—	-10.0	NE (mag.)	2	b	†	
	6 p.m.		-10.0	—	—	—	NE (mag.)	6	oc	* † <sup>2</sup>	Heavy wind rose about 10.0 a.m. (?), accompanied by considerable drift.
	8 "		-3.0	—	—	—	NE (mag.)	3	oc	†	
March 15	5 a.m.		-15.0	—	—	-16.0	NE (mag.)	2	bc	—	
	11.30 "	N 63° E, 32 m.	0.0	—	—	—	Calm	0	oc	—	Noon. Good travelling; snow surface hard.
	1.30 p.m.		—	12.0	—	—	Calm	0	b	—	
	2.20 "		—	9.0	—	—	Calm	0	b	—	
	4 "		-6.0	—	—	—	Calm	0	b	—	
	6 "		-19.0	—	—	—	Lt. N airs (mag.)	—	b	—	
	8 "		-15.0	—	—	—	NE (mag.)	1-2	b	—	

TABLE IV.—FIRST JOURNEY OF LIEUTENANT ROYDS, R.N., TO CAPE CROZIER, MARCH 4 TO 19, 1902  
(continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Temperature.				Wind.		Weather.	Miscellaneous phenomena.	Remarks.
			Air.	In sunshine.	Within tent.	Minimum during night.	Direction.	Force (Beaufort).			
1902. March 16	2 a.m.		° -32.0	° —	° —	° -42.0	Calm	0	b	—	
	4 "		-33.0	—	—	—	Calm	0	b	—	
	8 "		-14.0	—	—	—	Calm	0	b	—	Surface of snow getting softer.
	11.25 "		-19.0	—	—	—	Calm	0	b	—	Strong mirage in W (true) all day.
	Noon	N 67° E, 23 m.	-19.0	—	—	—	Calm	0	b	—	
	2.30 p.m.		-19.0	—	—	—	Calm	0	b	—	
	3.25 "		-16.5	—	—	—	Calm	0	b	—	
	5.15 "		-10.0	—	—	—	Calm	0	oc	—	
	6 "		-5.0	—	—	—	Calm	0	oc	—	6 p.m. Very soft snow.
8 "		-5.0	—	—	—	Calm	0	of	—		
March 17	4 a.m.		10.0	—	—	-5.0	Calm	0	omf	—	
	8 "		10.0	—	—	—	Calm	0	ocf	*	
	11 "		11.0	—	—	—	Lt. var. airs	—	ocf	*	11 a.m. Very heavy going; snow soft and sticky. Very bad light; no land visible.
	Noon	N 67° E, 15 m.	12.0	—	—	—	Calm	0	ocf	*	
	2 p.m.		12.0	—	—	—	Calm	0	ocf	*	Same heavy going all the afternoon; snow clogging badly.
	3.30 "		9.0	—	—	—	Var.	1-2	ocf	—	
	6.30 "		8.0	—	—	—	Var.	1-3	ocfq	*	
	8 "		7.0	—	—	—	Calm	0	ocf	*	
March 18	7 a.m.		9.0	—	—	7.0	Lt. var. airs	—	ocf	—	Snowed during the night.
	10 "		15.0	—	—	—	Calm	0	ocf	—	10.45 a.m. Surface getting harder.
	Noon	N 68° E, 7 m.	17.0	—	—	—	Lt. var. airs	—	ocm	—	
	2 p.m.		15.0	—	—	—	Lt. var. airs	—	ocm	—	
	3.20 "		12.5	—	—	—	Var. gusts	1-3	ocmq	—	3.20 p.m. Very stormy appearance all round.
	6.30 "		7.0	—	—	—	W by N (mag.)	3	ocm	*	
March 19	5 a.m.		0.0	—	—	—	Calm	0	bc	—	Blew hard during the night, with heavy gusts and a good deal of drift.
	8 "		-5.0	—	—	—	Calm	0	bc	—	10 a.m. Excellent travelling.
	2.30 p.m.		-3.0	—	—	—	Lt. var. airs	—	bc	—	Temperature rose as we approached the land, and wind freshened SE (true).

TABLE V.—JOURNEY OF LIEUTENANT ARMITAGE, R.N.R., TO BRING IN DEPÔT. SEPTEMBER 4 AND 5, 1902.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Temperature.		Wind.		Weather.	Cloud.	Remarks.
			Air.	Minimum during night.	Direction.	Force.			
Sept. 4	11 a.m.		° -12.0	° —	E	1-2	oc	S. 10	As the party cleared the land the temperature fell. Off Cape Armitage it was -18°.0, at edge of old ice -22°.0, and at 4.30 p.m., on arrival at the depôt, -31°.0. Overcast all day, with light E <sup>2</sup> breezes, now and then rising to force 2. About 4 p.m. the party passed through a layer or area of very damp air, with thick mist. The precipitation was large on everything, and frost bites were very common. The minimum thermometer at the depôt when raised from about 2 ft. below the snow read -45°.0. The thermometer was in a wooden box with the lid closed. After being dug out it showed 1° higher than the sledge thermometer, but later read the same.
	10 p.m.		-37.0	—	Lt. E airs	—	b	—	
	Mid.		-42.0	—	Lt. E airs	—	b	—	
Sept. 5	7.30 a.m.	S 45° E, 7 m.	—	-42.0	Calm	0	oc	—	At 7.30 a.m. the summits of Erebus and Terror were covered with wind-driven Str. Very dark and black low down in SE and E, with patches of wind-driven Str. On the return journey the temperature rose as the party approached the land. At the edge of the old ice at 1 p.m. it was -30°.0, and about halfway between Cape Armitage and the old ice it was -18°.0. Distance of old ice edge from Cape Armitage 3½ miles.

TABLE VI.—JOURNEY OF LIEUTENANT ROYDS, R.N., TO THE SOUTH-WEST, SEPTEMBER 10 TO 19, 1902.

Date.	Time.	Noon bearing and distance in miles from Whiter Quarters.	Pressure (Aneroid).	Temperature.				Wind.		Weather.	Miscellaneous phenomena.	Cloud.	Remarks.
				Air.	Spirit minimum.	Within tent.	Minimum during night.	Direction.	Force (Beaufort).				
1902. Sept. 10	11 a.m.		ins.	°	°	°	°	SE	2	b	—	—	Thermometer in screen, $-28^{\circ}$ °. Barometer on leaving ship, 28°919; aneroid on leaving ship, 28°700. 1 p.m. Erebus smoke going NE. 3 p.m. Very strong mirage all round.
	12.30 p.m.		—	$-28^{\circ}4$	$-31^{\circ}2$	—	—	SE	3-4	b	†	—	
	2.30 "		—	$-33^{\circ}0$	$-35^{\circ}5$	—	—	Calm	0	b	—	—	
	3 "		—	$-34^{\circ}0$	$-37^{\circ}5$	—	—	Calm	0	b	—	—	
	3.30 "		—	$-36^{\circ}0$	$-37^{\circ}4$	—	—	—	—	—	—	—	
	4 "		—	$-37^{\circ}2$	$-38^{\circ}7$	—	—	Calm	0	bm	—	—	
	4.30 "		—	$-38^{\circ}0$	$-39^{\circ}2$	—	—	Calm	0	bm	—	—	
	6 "		—	$-39^{\circ}5$	—	—	—	Calm	0	om	—	—	
	7 "		28°620	—	—	$-14^{\circ}0$	—	—	—	—	—	—	
Sept. 11	8 a.m.		—	$-34^{\circ}0$	$-39^{\circ}5$	$-12^{\circ}0$	$-41^{\circ}5$	SE	3	b	—	—	Wind gusty during the night. Very little smoke from Erebus.
	Noon	S 36° W, 8 m.	28°300	$-27^{\circ}0$	$-34^{\circ}0$	—	—	Calm	0	b	—	—	
	3.30 p.m.		—	$-26^{\circ}0$	$-30^{\circ}0$	—	—	Calm	0	of	—	Fog 10	3.30 p.m. Heavy deposit of rime on everything.
	5 "		—	$-26^{\circ}0$	$-30^{\circ}0$	—	—	Calm	0	of	—	Fog 10	5 p.m. Very heavy rime deposit.
	6 "		28°160	$-26^{\circ}0$	$-32^{\circ}0$	$-6^{\circ}0$	—	Calm	0	of	—	Fog 10	
Sept. 12	6.30 a.m.		—	$-26^{\circ}0$	$-32^{\circ}0$	—	$-32^{\circ}0$	Calm	0	of	—	Fog 10	
	8 "		28°140	$-24^{\circ}0$	$-20^{\circ}0$	—	—	Calm	0	of	—	Fog 10	8 a.m. Very heavy deposit of rime on everything.
	11 "		—	$-22^{\circ}0$	$-26^{\circ}0$	—	—	Calm	0	of	*	Fog, N 10	11 a.m. Minimum thermometer broken by sledge capsizing.
	0.45 p.m.	S 33° W, 14 m.	—	$-24^{\circ}0$	—	—	—	Calm	0	of	—	Fog 10	
	5 "		28°300	$-24^{\circ}0$	—	—	—	Calm	0	of	—	Fog 10	
	8 "		—	$-23^{\circ}0$	—	$-7^{\circ}0$	—	Calm	0	of	—	Fog 10	
Sept. 13	6 a.m.		28°300	—	—	—	—	—	—	—	—	—	6.30 a.m. Tent temperature, $-23^{\circ}0$ .
	8 "		—	$-33^{\circ}5$	—	—	—	Calm	0	b	—	—	
	10 "		—	$-39^{\circ}2$	—	—	—	Calm	0	b	—	—	10 a.m. Erebus smoke going NE.
	Noon	S 35° W, 21 m.	—	$-38^{\circ}5$	—	—	—	Calm	0	b	—	—	Noon. Misty on western mountains.
	1 p.m.		—	$-35^{\circ}0$	—	—	—	Calm	0	b	—	—	
	2 "		—	$-42^{\circ}5$	—	—	—	Calm	0	bm	—	—	2 p.m. Very misty on hill tops.
	4 "		—	$-40^{\circ}0$	—	—	—	Calm	0	bc	—	Cn. 3	4 p.m. All western hills covered. Erebus and Terror clear; smoke going NE.
	6 "		—	$-41^{\circ}0$	—	—	—	Calm	0	bc	—	Cn. 4	
	8 "		28°350	$-44^{\circ}0$	—	$-26^{\circ}0$	—	Calm	0	bc	U	Cu. 3	8 p.m. Mirage to E.
Sept. 14	8 a.m.		—	$-49^{\circ}8$	—	—	—	Calm	0	b	—	—	6.30 a.m. Temperature in tent, $-27^{\circ}0$ .
	10 "		—	$-44^{\circ}0$	—	—	—	Calm	0	b	—	—	8 a.m. Oil in lamp frozen solid.
	1.30 p.m.	S 35° W, 27 m.	—	$-40^{\circ}0$	—	—	—	Calm	0	b	—	—	
	4.45 "		—	$-45^{\circ}0$	—	—	—	N	1-2	b	†	—	
	8 "		28°620	$-41^{\circ}0$	—	$-22^{\circ}0$	—	N	1	b	—	—	
Sept. 15	8 a.m.		28°500	$-28^{\circ}0$	—	—	—	SW	2-3	om	—	—	6.30 a.m. Tent temperature, $-16^{\circ}0$ .
	12.45 p.m.	S 37° W, 33 m.	—	$-22^{\circ}0$	—	—	—	W	1	om	—	—	1.20 p.m. Blizzard came on suddenly from SW. Very heavy drift.
	4 "		—	—	—	$-14^{\circ}0$	—	SW	7-8	o	† <sup>2</sup>	—	

TABLE VI.—JOURNEY OF LIEUTENANT ROYDS, R.N., TO THE SOUTH-WEST, SEPTEMBER 10 TO 19, 1902  
(continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Temperature.				Wind.		Weather.	Miscellaneous phenomena.	Cloud.	Remarks.
				Air.	Spirit minimum.	Within tent.	Minimum during night.	Direction.	Force (Beaufort).				
1902. Sept. 16	3 a.m.		ins.	°	°	°	°	SW	1	ocm	UD	—	Wind fell quickly.
	8 "		28.360	-27.0	—	—	—	Calm	0	b	—	—	8.30 a.m. Tent temperature, -20° 0.
	2 p.m.	S 42° W, 27 m.	—	-38.0	—	—	—	SW	1	b	—	—	
	6 "		—	-34.5	—	—	—	S	1	bc	—	Send, NW (rapid)	
	8 "		28.450	-46.5	—	-32.0	—	S	1	bc	—	—	
Sept. 17	8 a.m.		—	-43.0	—	—	—	Calm	0	b	—	—	6.30 a.m. Tent temperature -28° 0.
	10 "		—	-40.0	—	—	—	SE	1	bm	—	—	
	Noon	S 38° W, 19 m.	—	-44.0	—	—	—	Lt. var. airs	—	bm	—	—	
	4 p.m.		—	-45.0	—	—	—	Calm	0	bm	—	—	
	7 "		—	-49.0	—	-29.0	—	NNW	1-2	b	—	—	
Sept. 18	2.30 a.m.		—	—	—	-28.0	—	S	7-8	o	† <sup>2</sup>	—	A blizzard sprang up from southwards, and blew in hard gusts, with tremendous drift.
	9.30 "	S 38° W, 11 m.	—	—	—	-27.0	—	S	8-9	o	† <sup>2</sup>	—	3 p.m. A slight lull, but came on again with increased force.
	8 p.m.		—	—	—	-28.0	—	S	7-8	o	† <sup>2</sup>	—	8 p.m. Wind as strong as ever.
Sept. 19	12.15 a.m.		—	-53.0	—	—	—	Calm	0	b	—	—	At midnight, or just afterwards, the tent temperature was -35° 0.
	8 "		—	-27.0	—	—	—	Calm	0	b	—	—	Arrived on board about 8.10 a.m.

TABLE VII.—JOURNEY OF LIEUTENANT ARMITAGE, R.N.R., TO THE WEST, SEPTEMBER 11 TO 26, 1902.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (aneroid).	Height above sea level.	Temperature, air.	Wind.		Weather.	Miscellaneous phenomena.	Cloud.	Remarks.
						Direction.	Force (Beaufort).				
1902. Sept. 11	10.30 a.m.		ins. 29·02	ft. —	° — 8·0	Lt. to fresh	—	—	—	—	Left ship at 10.30 a.m. Barometer (corrected), 28·531 ins.  8 p.m. Clearing slightly.
	1.15 p.m.		—	—	—20·0	Var. E winds and calms	—	—	—	—	
	2.15 "		—	—	—	—	—	om	—	—	
	8 "		28·92	—	—23·0	—	—	—	—	—	
Sept. 13	8 a.m.	N 65° W, 6 m.	28·82	—	—15·0	Var. W, with occasional calms	2-4	om	—	Clouds passing overhead from NE	
	8 p.m.		28·97	—	—19·0	—	—	om	—	—	
Sept. 13	7.30 a.m.	N 65° W, 10 m.	29·02	20	—38·0	Lt. E alra	—	c	—	—	
	7.30 p.m.		29·17	—	—32·0	—	—	c	—	—	
Sept. 14	8 a.m.	N 68° W, 16 m.	29·35	20	—45·0	Calm	0	b	—	—	
	8 p.m.		29·40	—	—40·0	NW	0-1	b	—	—	
Sept. 15	7 a.m.	N 68° W, 21 m.	29·30	20	—23·0	ESE	2-4	o	*	—	7 a.m. Temperature rose to —15°·0, keeping steady. Weather cleared for half-an-hour, but again came on thick.
Sept. 16	9.30 a.m.	N 69° W, 25 m.	29·50	20	—25·0	—	—	—	—	—	9.30 a.m. Fine and clear generally.
	6.15 p.m.		29·42	—	—36·0	—	—	—	—	—	6.15 p.m. Heavy cloud over Erebus' side.
Sept. 17	9 a.m.	N 70° W, 32 m.	29·60	10	—36·0	Calms and E	—	q	—	—	Temperature remained steady all day. Fine and clear.
Sept. 18	5.30 a.m.		—	—	—23·0	Calms and Lt. NE winds with squalls of force 4-5	—	om	—	—	Cleared for a bit at noon, but again came on thick until 5 p.m.
	Noon	N 71° W, 36 m.	29·40	500	—		—	om	—	—	
	6 p.m.		—	—	—35·0		—	om	—	—	
	7 "		29·54	—	—41·0		—	om	—	—	
Sept. 19	—	N 70° W, 40 m.	—	—	—	Calm	0	—	—	—	Low temperature all day, being —45°·0 several times. Fine and clear.
Sept. 20	5 a.m.		29·30	500	—45·0	—	—	—	—	—	
	10 "	N 71° W, 36 m.	—	—	—25·0	Calm	0	b	—	—	
	Midd.		—	—	—	E	1-2	—	—	—	
Sept. 21	—	N 69° W, 30 m.	—	—	—	Lt. NW airs and calms	—	ogu	—	—	Temperature remained at about —35°·0 all day.
Sept. 22	Noon	N 72° W, 25 m.	30·00	—	—36·0	—	—	—	—	—	
	4.30 p.m.		—	—	—25·0	—	—	—	—	—	
	9.30 "		—	—	—36·0	—	—	—	—	—	
Sept. 23	—	N 68° W, 19 m.	—	—	—	—	—	—	—	—	Barometer steady all day, 30·12 ins. Thermometer ranged —10°·0 to —26°·0 in evening. Light NWly winds and calms all day. Very thick mist all day.
Sept. 24	7 a.m.	N 67° W, 12 m.	30·30	—	—30·0	Calm	0	oc	—	—	
	6.30 p.m.		29·98	—	—15·0	W	3	ocm	*	—	
Sept. 25	10 a.m.	N 66° W, 6 m.	29·98	—	—19·0	ESE	3	—	—	—	
	2 p.m.		—	—	—30·0	ESE	4	—	†	—	
	4 "		—	—	—32·0	ESE	5	—	†	—	Overcast and thick.
	Midd.		—	—	—36·0	Blizzard	8-9	—	† <sup>2</sup>	—	
Sept. 26	6 a.m.		30·01	—	—27·0	—	—	—	—	—	Arrived on board about 7·0 a.m. Temperature, —27°·5; barometer (corrected), 29·479 ins.

TABLE VIII.—DR. KOETTLITZ'S TRIP ROUND BLACK ISLAND, SEPTEMBER 24 TO OCTOBER 2, 1902.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Temperature.		Remarks.
			Air.	Minimum during night.	
1902. Sept. 24	10 a.m. Noon 6 p.m.		— — -22°0	— — —	10 a.m. Easterly breeze and overcast. Noon. Threatening sky with fog, very variable winds and squally. Wind from all round the compass. 6 p.m. Calm.
Sept. 25	7 a.m. 8 " 10 " 8 p.m.	S 54° W, 15 m.	— — — —	-29°0 — — —	7 a.m. Thick weather. 8 a.m. Easterly wind, 3; weather otherwise the same. 10 a.m. Clouds not so dense, and the light became better. Distant land to NE visible. Later in afternoon, land to E visible. Squalls of force 5-6 from SE and S by directions. Temperature ranged during day from -21°0 to -31°0 at 9 p.m. Variable E by breezes all day of force 2-3.
Sept. 26	4 a.m. 7 " 6 p.m.	S 27° W, 20 m.	— -25°0 -32°0	-35°0 — —	Calm and fine. Temperature ranged from -25°0 to -28°0 during day. Mostly calm or light S by airs, the latter most pronounced towards evening. 6 p.m. Calm and fine.
Sept. 27	7 a.m. 6 p.m. 9 "	S 27° W, 20 m.	— — —	-40°0 — —	Calm all night; fine all forenoon. Thermometer out of order; no temperatures were taken after this. 6 p.m. Weather threatening. Cl.-cu. clouds rapidly spreading over sky. 9 p.m. Squalls of wind from S by W.
Sept. 28	—	S 27° W, 20 m.	—	—	Overcast, with fresh gale and driving snow all day from S by W.
Sept. 29	9 a.m. 2 p.m. 4 " 8 "	S 27° W, 20 m.	— — — —	— — — —	9 a.m. Fine, but unsettled looking. Cu. 4, Cl. 1. bc. Gusty S by wind. 2 p.m. Windy sky and threatening appearance. 4 p.m. Sky cleared. 8 p.m. Fine and calm.
Sept. 30	7 a.m. 8 p.m.	S 12° W, 32 m.	— —	— —	7 a.m. Fine day, sky more or less clear of cloud. Detached Cl.-cu. to S. 8 p.m. Temperature seemed below -40°0 (position S of Black Island). Fine and calm. Much refraction and mirage on barrier about Bluff all afternoon.
Oct. 1	7 a.m. Noon 2 p.m. 4 " 8 "	S 6° E, 18 m.	— — — — —	— — — — —	7 a.m. Thick fog, calm. Thick frost rime on everything. Noon. Fog cleared; weather threatening; squally. Cu. and Str. clouds. 2 p.m. Weather looking worse. Cu. and Str. clouds coming over rapidly from SW. 4 p.m. Weather improving, but strong S by breeze, force 3. 8 p.m. Sky overcast; calm and foggy.
Oct. 2	7 a.m. 2 p.m. 5 "		— — —	— — —	Fine and calm. Foggy in distance, and remained foggy all the forenoon. 2 p.m. Fog thicker, obscuring all land. 5 p.m. Fog lifted slightly, land to N just visible.



TABLE IX.—SECOND JOURNEY OF LIEUTENANT ROYDS, R.N., TO CAPE CROZIER, OCTOBER 4 TO 24, 1902  
(continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Height above sea level.		Temperature.			Wind.		Weather.	Miscellaneous phenomena.	Clouds.		Remarks.
				ins.	ft.	Air.	Spirit minimum.	Within tent.	Direction.	Force (Beaufort).			Upper.	Lower.	
1902, Oct. 10	3 a.m.		—	—	—	—57.0	—53.0	—	—	—	—	—	—	—	
	6.30 "		—	—	—	—	—	—33.0	—	—	—	—	—	—	
	8 "		28.39	—	—	—44.0	—58.5	—	Calm	0	bc	—	Cl.-s. 4	—	8 a.m. Summit of Terror very misty.
	10 "		—	—	—	—41.0	—	—	Calm	0	bc	—	Cl.-s. 5	—	10 a.m. Sastrugi very deep, and surface of snow very hard and slippery.
	Noon	N 64° E, 45 m.	28.18	—	—	—24.0	—44.0	—	SW	2	oc	—	Cl.-s. 7	—	
	2 p.m.		—	—	—	—28.0	—	—	SW	2	oc	+	—	—	
	8 "		27.78	940	—	—31.0	—31.0	—	SW	4-5	oc	+	—	—	8 p.m. Arrived at furthest camp.
	9 "		—	—	—	—	—	—18.0	—	—	—	—	—	—	
Oct. 11	Noon	N 64° E, 45 m.	27.815	940	—	—26.0	—	—12.0	SW	1-2	bc	⊙ ⊕	Cl.-s. 3	—	
	2 p.m.		—	—	—	—25.5	—	—7.0	Calm	0	b	—	—	—	
	4 "		27.83	—	—	—25.0	—31.0	—11.0	Lt. NE airs	—	b	—	—	—	
	6 "		—	—	—	—28.0	—	—10.0	Calm	0	b	—	—	—	
	8 "		27.85	—	—	—35.5	—35.5	—12.0	Calm	0	b	—	—	—	8 p.m. Record was deposited at Cape Crozier.
Oct. 12	7 a.m.		—	—	—	—	—	—13.0	—	—	—	—	—	—	
	8 "		27.82	940	—	—30.0	—40.0	—	Calm	0	oem	—	A.-s. 8	—	
	10 "		—	—	—	—29.0	—	—	SW	1-2	oc	—	A.-s. 8	—	
	Noon	N 64° E, 45 m.	27.80	—	—	—26.0	—30.0	—	SW	2	oem	⊕ ⊙ ⊕	A.-s. 9	—	Noon. Very fine solar halo and corona, prismatic colouring.
	2 p.m.		—	—	—	—27.0	—	—	SW	3	oem	⊕ ⊙ ⊕	A.-s. 8	—	
	4 "		—	—	—	—27.0	—29.5	—17.0	SW	2-3	oem	⊕ ⊙ ⊕	A.-s. 10	—	
	8 "		27.75	—	—	—29.5	—30.0	—19.5	SW	3-4	oem	+	A.-s. 10	—	8 p.m. Wind rose gradually all day. Ugly appearance of weather to S.
Oct. 13	Noon	N 50° E, 43 m.	27.60	940	—	—	—	—	SW	7-8	o	⊕ <sup>2</sup>	—	—	Wind sprang up very strong during the night and blew hard all day, with a short lull at 4 p.m. Enormous quantity of drift collecting round tents. Overcast all day.
	4 p.m.		—	—	—	—18.5	—30.0	—	SW	8	o	⊕ <sup>2</sup>	—	—	
	8 "		27.55	—	—	—	—	—	SW	8-9	o	⊕ <sup>2</sup>	—	—	
Oct. 14	—	N 64° E, 45 m.	—	—	—	—	—	—	—	—	—	—	—	—	Exactly similar weather to yesterday's. Wind lulled for about half an hour at 4 a.m., but again came on with increasing heavy gusts. Drift very thick and tents nearly buried. Barometer fell all day.
Oct. 15	—	N 62° E, 36 m.	—	—	—	—	—	—	—	—	—	—	—	—	Wind about the same, blowing a whole gale, accompanied by heavy drift. Barometer started to rise. Temperature in tent keeping between 0° and -5°.
Oct. 16	—	N 62° E, 36 m.	—	—	—	—	—	—	—	—	—	—	—	—	Similar conditions to yesterday's. Wind still a strong SW gale with heavy drift. In the afternoon the sun shone out a bit and the wind began to lull. Barometer rising steadily, temperature in tent about the same.
Oct. 17	8 p.m.	N 62° E, 36 m.	28.115	940	—	—11.0	—13.0	—	SW	5-6	b	—	—	—	8 p.m. Wind still remained strong, about force 7, but sky was cloudless and wind gradually fell towards evening.
Oct. 18	1.30 a.m.		—	—	—	—	—	—9.0	—	—	—	—	—	—	
	Noon	N 62° E, 36 m.	29.038	—	—	—8.0	—11.0	—	Lt. ENE airs	—	b	—	—	—	
	2 p.m.		—	—	—	—8.0	—10.0	—	Calm	0	b	—	—	—	2 p.m. Glorious day, sky cloudless.
	4 "		29.00	—	—	—8.0	—9.0	—	Calm	0	b	—	—	—	
	6 "		—	—	—	—12.0	—	—	Calm	0	b	—	—	—	
	8 "		28.94	—	—	—18.0	—18.0	—1.0	Calm	0	b	—	—	—	
Oct. 19	10 a.m.		28.84	—	—	—4.0	—20.0	—	Calm	0	b	—	—	—	10 a.m. Foggy early, but gradually cleared.
	Noon	N 62° E, 36 m.	—	—	—	—6.0	—10.0	—	Calm	0	b	—	—	—	
	2 p.m.		—	—	—	—9.0	—	—	Calm	0	b	—	—	—	Sun shining brightly all day.
	8 "		29.00	—	—	—22.0	—22.0	—10.0	Calm	0	b	—	—	—	

TABLE IX.—SECOND JOURNEY OF LIEUTENANT ROYDS, R.N., TO CAPE CROZIER, OCTOBER 4 TO 24, 1902  
(continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).		Temperature.			Wind.			Miscellaneous phenomena.	Clouds.		Remarks.
			ins.	ft.	Air.	Spit minimum.	Within tent.	Direction.	Force (Beaufort).	Weather.		Upper.	Lower.	
1902. Oct. 20	6 a.m.		—	—	°	°	°	—	—	—	—	—	—	
	8 "		29.092	—	-23.0	-30.2	—	Calm	0	b	—	—	—	10 a.m. Frost smoke rising from Ross' Sea along Barrier edge.
	10 "		—	—	-13.5	—	—	Calm	0	b	—	—	—	10.30 a.m. Erebus smoke going N of W in very small quantity.
	Noon	N 69° E, 35 m.	29.078	—	-11.0	-25.2	—	Lt. var. airs	—	b	—	—	—	
	2 p.m.		—	—	-10.0	—	—	Calm	0	oe	⊕ ⊙	A.-s. 10	—	2 p.m. Very threatening appearance to N, and misty all round.
	4 "		29.052	—	-12.0	-15.5	—	Calm	0	oe	⊕ ⊙	A.-s. 10	—	
	8 "		29.062	—	-20.0	-20.0	-8.0	Calm	0	oe	⊕ ⊙	A.-s. 10	—	
Oct. 21	6 a.m.		—	—	—	—	-5.0	—	—	—	—	—	—	
	8 "		29.07	—	-20.0	-31.5	—	Calm	0	om	—	Ci.-cu. 9	—	
	10 "		—	—	-8.5	—	—	Calm	0	oe	—	A.-s. 8	—	
	Noon	N 72° E, 26 m.	29.04	—	-2.5	-20.0	—	Calm	0	oe	—	A.-s. 8	—	Noon. Erebus smoke going SE <sup>ly</sup> in very small quantity.
	4 p.m.		29.01	—	-17.0	-17.0	—	Calm	0	oe	—	Thin A.-s. 7	—	2 p.m. Erebus smoke going S <sup>ly</sup> . Peculiar cloud hung over Erebus and Terror craters all day. ⊕ ⊙; very windy look.
	6 "		—	—	-19.0	—	—	Calm	0	be	—	Ci.-s. 5	—	6 p.m. Ci.-s. radiating N and S.
	8 "		28.98	—	-34.0	-34.0	-13.0	Calm	0	be	—	Ci.-s. 3	—	
Oct. 22	8 a.m.		28.993	—	-22.0	-39.2	-8.0	Calm	0	be	—	Ci.-s. 4	—	8 a.m. Same cloud over Erebus and Terror.
	10 "		—	—	-17.0	—	—	Calm	0	be	—	Ci.-s. 4	—	10 a.m. Ci.-s. radiating NE and SW.
	Noon	N 71° E, 17 m.	29.02	—	-9.0	-22.0	—	Calm	0	b	—	—	—	4.40 p.m. Erebus smoke going SE in very small quantity. Very strong mirage all round.
	4 p.m.		29.062	—	-20.0	-20.0	—	Calm	0	b	—	—	—	6 p.m. Fog coming up from S, gradually covering Erebus and Terror.
	6 "		—	—	-24.0	—	—	Calm	0	bm	—	—	—	7 p.m. No land in sight; thick fog.
	8 "		29.138	—	-32.0	-32.0	-10.0	Calm	0	f	—	—	Fog 10	
Oct. 23	8 a.m.		29.372	—	-16.0	-35.0	-8.0	Calm	0	of	—	—	Fog 10	8 a.m. Thick fog; no land visible.
	10 "		—	—	-10.0	—	—	Calm	0	of	—	—	Fog 10	
	Noon	N 70° E, 8 m.	29.424	—	-12.0	-16.0	—	Calm	0	b	—	—	—	11.30 a.m. Fog lifting and clearing away towards NW; wind gradually freshened from SE.
	2 p.m.		—	—	-18.0	—	—	SE	1	be	—	Ci.-s. 5	—	2 p.m. Erebus smoke going W <sup>ly</sup> .
	4 "		29.462	—	-15.0	-18.0	—	SE	2-3	be	—	Ci.-s. 6	—	
	8 "		29.510	—	-23.0	-23.5	-15.0	SE	2	be	—	Ci.-s. 4	—	
Oct. 24	6 a.m.		29.500	—	-17.0	-26.0	-10.0	ESE	2-3	be	⊕ ⊕ ⊙	Ci.-s. 4	—	
	10 "		29.384	—	-13.0	—	—	ESE	5	b	⊕	—	—	10 a.m. Wind freshened as we approached the land, and blew very strong after rounding Cape Armitage.
	Noon		29.350	—	-10.0	-17.0	—	ESE	6-7	b	⊕	—	—	

TABLE X.—DR. KOETTLITZ'S TRIP TO EREBUS BAY, NOVEMBER 3 TO 5, 1902.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Remarks.
1902. Nov. 3	9 a.m.		9 a.m. Fine, with fresh E <sup>ly</sup> breeze.
	2 p.m.		2 p.m. Fine, with stronger E <sup>ly</sup> breeze; snow driving; unsettled looking; Cu., 3-5.
	3 "		3 p.m. Sky clearing.
	7 "		7 p.m. Fine and calm under Razor-back Island, but still blowing fresh all round.
	10.30 "		10.30 p.m. Furlous gusts blowing round us; temperature mild; Aneroid 29.28 ins.
Nov. 4	10 a.m.	N 20° W, 13 m.	10 a.m. Fine; wind SE <sup>ly</sup> , force 3-4 and 5.
	7 p.m.		7 p.m. Sky more or less overcast; Cu.-s.; SE <sup>ly</sup> breeze still blowing, force 4-5; barometer 29.23 ins.
Nov. 5	7 a.m.		7 a.m. Fine; SE <sup>ly</sup> breeze still blowing with same force.
	1 p.m.		1 p.m. Sky becoming overcast; very bad light; snow driving; wind force 5-6.
	6 "		6 p.m. Wind gradually lessening as we approached Winter Quarters.

TABLE XI.—THIRD JOURNEY OF LIEUTENANT ROYDS, R.N., TO CAPE CROZIER, NOVEMBER 3 TO 17, 1902.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Temperature.		Wind.		Weather.	Miscellaneous phenomena.	Clouds.		Remarks.	
				Air.	Spirit minimum.	Direction.	Force (Beaufort).			Upper.	Lower.		
1902. Nov. 3	Noon	—	ins.	10°0	10°0	SE	2	bc	—	—	—	Noon. Ship's barometer (corrected) 29°465 ins.; Aneroid 29°450 ins.; ship's thermometer 10°°0.	
	2 p.m.	—	—	7°0	—	SE	2	bc	—	—	—		
	8 "	—	29°30	5°0	5°0	SE	1-2	bc	—	—	—		8 p.m. Weather clearing all round, but summits of Erebus and Terror still covered.
Nov. 4	8 a.m.	—	29°21	10°0	-11°0	ENE	1	bc	—	Cl.-s. 4, SW (slow)	—	8 a.m. Beautifully clear to S and SW. Summits of Erebus and Terror obscured. 10 a.m. Erebus smoke going to NE, but changing to SE now and then.	
	10 "	—	—	15°0	—	ENE	1	bc	—	Cl.-s. 4, SW (slow)	—		
	Noon	N 58° E, 8 m.	29°20	17°0	10°0	Lt. NNE ahrs	—	bc	—	Cl.-s. 4	—		
	4 p.m.	—	29°20	7°0	7°0	SE	2	bc	—	Cl.-s. 3	—		4 p.m. Erebus smoke going NE. Terror obscured.
	6 "	—	—	5°0	—	SE	1-2	bc	—	Cl.-s. 3	—		
	8 "	—	29°20	-4°0	-4°0	Calm	0	bc	—	Cl.-s. 4	—		8 p.m. Erebus smoke going N <sup>W</sup> . Terror obscured.
Nov. 5	8 a.m.	—	29°10	0°0	-13°0	Calm	0	—	—	—	—	8 a.m. Erebus smoke going N <sup>W</sup> . Terror clear.	
	10 "	—	—	8°0	—	Calm	0	bc	—	—	—		
	Noon	N 47° E, 17 m.	29°00	11°0	0°0	NE (mag.)	2-3	bc	—	—	—		
	4 p.m.	—	29°075	8°0	4°0	NE (mag.)	2-3	ocf	—	—	Fog 10		4 p.m. Thick fog gradually rolled up from S until we were entirely surrounded.
	6 "	—	—	8°0	—	Calm	0	ocf	—	—	Fog 10		
Nov. 6	8 a.m.	—	28°875	5°0	-18°0	NE (mag.)	1-2	bc	—	Ci.-cu. 6	—	8 a.m. Very fine day; snow surface getting harder as we rounded Terror Point. 10 a.m. Erebus smoke going NE. Noon. Mt. Erebus out of sight.	
	10 "	—	—	17°0	—	NE (mag.)	2	bc	—	Ci.-cu. 5	—		
	Noon	N 57° E, 24 m.	28°875	12°0	6°0	Lt. SW (mag.) ahrs	—	bc	—	Ci. 2	—		
	4 p.m.	—	29°00	12°0	6°0	Calm	0	bc	—	Ci.-cu. 3	—		
	6 "	—	—	8°0	—	Calm	0	bc	—	Ci.-cu. 3	—		
	8 "	—	29°00	4°0	4°0	Calm	0	bc	—	Ci.-cu. 4	—		
Nov. 7	8 a.m.	—	29°125	—	—	NE (mag.)	5-6	—	—	—	—	Wind sprang up strong about 4 a.m. and blew hard all day, with thick drift.	
	10 "	—	—	13°0	-2°0	NE (mag.)	6-7	o	†* * *	—	N. 10		
	Noon	N 65° E, 32 m.	29°10	—	—	ENE (mag.)	7	o	†* * *	—	N. 10		
	4 p.m.	—	29°15	—	—	ENE (mag.)	6-7	o	†* *	—	N. 10		
	6 "	—	29°20	10°0	10°0	ENE (mag.)	2-3	bc	†	Ci.-s. 5	—		In the evening Ross' Sea was clear of ice.
	8 "	—	29°20	8°0	6°0	ENE (mag.)	0-1	bc	—	Ci. 2, Ci.-s. 3	—		
Nov. 8	6 a.m.	—	—	10°0	-8°0	Calm	0	b	—	—	—	A very fine day throughout.	
	8 "	N 65° E, 41 m.	29°05	12°0	—	ENE (mag.)	1	b	—	—	—		
	4 p.m.	—	29°30	—	—	Calm	0	b	—	—	—		The 4 p.m. Aneroid reading was taken on the sea level, down on the Emperor Penguin Rookery.
	8 "	—	—	—	—	ENE (mag.)	1-3	b	—	—	—		
	10 "	—	29°15	-2°0	-2°0	ENE (mag.)	2-3	b	—	—	—		
Nov. 9	8 a.m.	N 56° E, 45 m.	29°32	10°0	-8°0	ENE (mag.)	2	b	—	—	—	Much frost smoke over Ross' Sea at 8 a.m. and hanging Cu. clouds to the N side of hills. Glorious day.	
	8.50 p.m.	—	29°40	5°0	5°0	Calm	0	b	—	—	—		
Nov. 10	8 a.m.	—	29°25	15°0	-5°0	Calm	0	b	—	—	—	Another magnificent day. Pressure observation at 9.45 a.m. was made at sea level, and at 3.10 p.m. at camp level—height 200 ft. 2.30 p.m. Wind rising. 4 p.m. Prismatic colouring in clouds round the sun.	
	9.45 "	N 47° E, 43 m.	29°49	—	—	Calm	0	b	—	—	—		
	3.10 p.m.	—	29°25	—	—	Calm	0	b	—	—	—		
	4 "	—	29°25	12°0	12°0	ENE (mag.)	1-2	bc	○	Ci.-cu. 2, SW	—		
	8 "	—	29°25	6°0	6°0	Calm	0	b	—	—	—		

TABLE XI.—THIRD JOURNEY OF LIEUTENANT ROYDS, R.N., TO CAPE CROZIER, NOVEMBER 3 TO 17, 1902  
(continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Temperature.		Wind.		Weather.	Miscellaneous phenomena.	Clouds.		Remarks.
				Air.	Spirt minimum.	Direction.	Force (Beaufort).			Upper.	Lower.	
1902. Nov. 11	6 a.m.		Ins.	°	°							
	8 "		29.15	6.0	-10.0	ENE (mag.)	4	o	+	—	A.-s. 10	Wind sprang up in heavy gusts at 3 a.m., and at 4 a.m. it was blowing very hard indeed.
	Noon	N 59° E, 45 m.	29.10	—	—	ENE (mag.)	4-6	q	—	—	—	
	4 p.m.		29.20	—	—	ENE (mag.)	6-7	q	—	—	—	3 p.m. Wind lulled, but came on worse shortly afterwards.
	6 "		29.22	—	—	ENE (mag.)	6	q	—	—	—	
	8 "		29.25	—	—	ENE (mag.)	6-8	q	—	—	—	8 p.m. Drift excessive all day.
Nov. 12	8 a.m.		29.32	—	—	ENE (mag.)	4-5	of	—	—	—	8 a.m. Still blowing and drifting, with dense fog.
	10 "		29.35	—	—	ENE (mag.)	4-5	of	—	—	—	4 p.m. Wind rose in heavy squalls, with short lulls. Nothing visible. Sky showing signs of breaking, and sun gleaming. No temperatures taken all day; thermometer buried.
	Noon	N 65° E, 41 m.	29.38	—	—	ENE (mag.)	4-5	of	—	—	—	6 p.m. Blowing very hard, with heavy squalls.
	4 p.m.		29.30	—	—	ENE (mag.)	6-7	oq	—	—	—	9 p.m. Wind lulled considerably, and by 10 p.m. it was dead calm.
	6 "		29.25	—	—	ENE (mag.)	7-8	g	—	—	—	11 p.m. Wind sprang up in heavy gusts, lasting for about half an hour, and then fell to dead calm.
	8 "		29.25	—	—	ENE (mag.)	2-3	—	—	—	—	
Nov. 13	8 a.m.		29.30	15.0	-8.0	Calm	0	bc	—	Ci.-s. 4	—	8 a.m. Ci.-s. radiating W.
	10 "		—	13.0	—	Calm	0	bc	—	Ci.-s. 5	—	10 a.m. Ci.-s. radiating W.
	Noon	N 66° E, 32 m.	29.30	11.0	8.0	Calm	0	bcm	—	Ci.-s. 6	—	Noon. Ci.-s. radiating W. From 1.30 p.m. to 3 p.m., ⊕, ○, and parhelia visible.
	4 p.m.		29.40	6.0	6.0	SE (mag.)	2-3	bc	—	Ci.-s. 5	—	4 p.m. Land to SW much miraged. Summit of Terror very misty. Ci.-s. radiating W.
	6 "		—	5.0	—	SE (mag.)	3	bc	—	Ci.-s. 6	—	8 p.m. Very threatening appearance to S. Tops of Erebus and Terror clearing. Erebus smoke going Nv.
	8 "		29.40	4.0	4.0	Calm	0	b	—	—	—	
Nov. 14	8 a.m.		29.40	12.0	-2.0	SE (mag.)	3-4	oq	+	—	A.-s. 10	Wind sprang up about 5 a.m., and blew in strong gusts, with much drift.
	10 "		—	13.0	—	ESE (mag.)	3	oq	+	—	A.-s. 10	10 a.m. Wind very gusty.
	Noon	N 67° E, 23 m.	29.30	—	—	ESE (mag.)	1-2	o	⊕ ○	—	A.-s. 10	4 p.m. Prismatic coloured clouds.
	4 p.m.		29.28	12.0	10.0	Calm	0	bc	⊕ ○	Ci.-cu. 5, SW (slow)	—	6 p.m. All upper clouds (appeared) mother-of-pearl near sun. Erebus smoke going NE; second crater smoking, smoke going NE. Stormy appearance to S and SW.
	6 "		—	11.0	—	Calm	0	oc	—	Ci.-cu. 5, Ci.-s. 4	—	8 p.m. Mountains obscured, but clearing.
	8 "		29.30	9.0	9.0	Calm	0	bc	—	Ci.-s. 5	—	
Nov. 15	8 a.m.		29.30	10.0	2.0	Calm	0	b	—	—	—	8 a.m. Erebus smoking in big quantity. Smoke going Ev, rising in high vertical column before breaking away.
	10 "		—	13.0	—	Calm	0	b	—	—	—	
	Noon	N 67° E, 15 m.	29.30	14.0	10.0	Calm	0	b	—	—	—	
	4 p.m.		29.32	13.0	11.0	Calm	0	b	—	—	—	A very glorious day. Erebus smoke was going in any direction up to about noon, but then it settled, going Sv; apparently little wind up there.
	6 "		—	8.0	—	Calm	0	b	—	—	—	
	8 "		29.48	2.0	2.0	Calm	0	b	—	—	—	
Nov. 16	8 a.m.		29.90	8.0	-6.0	Calm	0	b	—	—	—	
	10 "		—	14.0	—	Calm	0	bc	—	Cl.-cu. 4	—	10 a.m. Erebus smoke going Ev.
	Noon	N 68° E, 7 m.	29.95	15.0	8.0	Calm	0	b	—	—	—	Noon. Very little smoke from Erebus; smoke going Ev. Much mirage all round.
	4 p.m.		30.00	12.0	12.0	Calm	0	b	—	—	—	4 p.m. Erebus smoke going NEv.
	6 "		—	12.0	—	Calm	0	b	—	—	—	
	8 "		29.90	12.0	9.0	Calm	0	b	—	—	—	
Nov. 17	8 a.m.		29.88	14.0	-10.0	Calm	0	oc	+	A.-s. 10	—	
	10 "		—	—	—	Lt. SE airs	—	o	—	—	S. 10	
	Noon		29.80	14.0	14.0	SE	1	o	—	—	S. 10	
	2 p.m.		—	14.0	—	SE	3-4	o	+	—	S. 10	
	4 "		29.76	15.0	14.0	SE	3	o	+	—	S. 10	Arrived on board ship at 5.10 p.m. (Ship's barometer, 29.90 ins.; Aneroid, 29.82 ins.)

TABLE XII.—JOURNEY OF DR. KOETTLITZ TO THE WESTERN MOUNTAINS, NOVEMBER 29 TO DECEMBER 17, 1902.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Temperature.		Wind.			Clouds.		Remarks.
				Air.	Minimum during night.	Direction.	Force (Beaufort).	Weather.	Upper.	Lower.	
1902. Nov. 29	2 p.m.		ins.	°	°	—	—	—	—	—	2 p.m. Fine, with strong E <sup>W</sup> wind and surface drift.
	9 "		29.650	4.7	—	SE	1-2	bc	Ci.-s. 2	Cu. 3	
Nov. 30	8 a.m.		—	17.2	—	—	—	oc	—	S.-cu. 8	
	Noon	N 59° W, 6 m.	—	—	—	—	—	—	—	—	Noon. Fine iridescent round sun in Ci.-cu. cloud, like prismatic corona.
	9 p.m.		29.612	20.0	—	E by S	1	bc	Ci. 5	—	
Dec. 1	9 p.m.	N 67° W, 10 m.	29.610	—	—	S	0-1	bc	—	Cu. 6	9 p.m. Temperature ranged from 12°.4 to 22° 0.
Dec. 2	9 p.m.	N 71° W, 15 m.	29.608	7.4	—	S	2-3	of	—	—	9 p.m. Temperature ranged from 7° 4 to 11° 0 during day. In the afternoon there was some slight snowfall.
Dec. 3	7.30 a.m.	N 77° W, 20 m.	—	—	—	—	—	—	—	—	Overcast early, clearing and remaining brilliantly fine all day.
	9 p.m.		—	7.8	—	Calm	0	b	—	—	9 p.m. Temperature was up to 12° 4 during day.
Dec. 4	8 a.m.	N 80° W, 25 m.	—	18.0	—	—	—	—	—	—	
	10 p.m.		—	7.6	—	SW	3	—	—	—	10 p.m. Very fine day, quite cloudless.
Dec. 5	9 p.m.	N 85° W, 30 m.	27.250	0.8	—	—	—	—	—	—	9 p.m. Height above sea level 2580 ft. Temperature up to 12° 0 during day. Brilliant sunshine and no clouds.
Dec. 6	8 a.m.	N 89° W, 35 m.	—	10.8	—	—	—	—	—	—	Brilliantly fine and almost cloudless, and remained so all day.
	9 p.m.		—	2.0	—	W	1-2	bc	Ci. 4	—	
Dec. 7	8 a.m.	W, 40 m.	—	—	2.5	—	—	—	—	—	8 a.m. Dull weather with southerly squalls, barometer apparently rising.
	9 p.m.		—	11.0	—	NW	1-2	bc	Ci.-s. 3	Cu. 3	9 p.m. During the day the wind squalls reached force 5-6, with maximum temperature 23° 0.
Dec. 8	9 p.m.	N 89° W, 45 m.	—	15.8	—	Calm	0	oc	—	S.-cu. 8	9 p.m. Temperature up to 20° 0 during the day.
Dec. 9	9 p.m.	W, 40 m.	—	11.0	—	SW	2	bc	Ci.-4	—	9 p.m. Fine and calm, with odd puffs of wind.
Dec. 10	8 a.m.		—	23.0	—	—	—	—	—	—	8 a.m. Very fine morning. Considerable breeze and drift during the night. Cloudless sky.
	Noon	N 89° W, 35 m.	—	25.5	—	Calm	0	b	—	—	
	8 p.m.		—	20.2	—	Calm to lt. W breezes	—	bc	—	Cu. 5	
Dec. 11	8 a.m.		—	25.0	—	—	—	—	—	—	Calm all night, and remained calm, with nearly cloudless sky.
	Noon	N 85° W, 30 m.	—	—	—	S	2-3	bc	—	Cu. 1	
	9 p.m.		—	20.6	—	W	1-2	bc	—	S. 4	
Dec. 12	8 a.m.		—	30.0	—	—	—	—	—	—	8 a.m. Overcast and dull.
	2 p.m.	N 80° W, 25 m.	—	31.6	—	—	—	—	—	—	2 p.m. Continued overcast and dull weather.
	9 "		—	32.0	—	SW	2-3	oc	—	Cu. 9	
Dec. 13	8.30 a.m.		—	31.0	—	SW	1-5	of *	—	—	
	3 p.m.	N 77° W, 20 m.	—	31.2	—	—	—	—	—	—	
	9 "		28.295	28.0	—	—	—	—	—	—	
Dec. 14	8 a.m.		—	35.0	—	Calm	0	—	—	—	
	2 p.m.	N 71° W, 15 m.	—	32.0	—	NE breeze	1-2	o	—	—	
	9 "		29.250	31.7	—	NE	1-2	oc	—	Cu. 6	
Dec. 15	8 a.m.		—	27.0	—	N	2	of *	—	—	
	2 p.m.	N 67° W, 10 m.	—	29.0	—	—	—	—	—	—	
	8 "		29.262	23.8	—	N	2	bc	—	Cu. 4	
Dec. 16	8 a.m.		—	30.5	—	—	—	of *	—	—	
	2 p.m.	N 59° W, 6 m.	—	26.8	—	—	—	o	—	—	
	9 "		29.675	23.2	—	NNE	1	oc	—	S.-cu. 10	
Dec. 17	8 a.m.		29.250	29.7	—	—	—	—	—	—	
	2 p.m.		—	29.0	—	—	—	—	—	—	
	8 "		—	26.1	—	N	1	oc	—	S.-cu. 9	

TABLE XIII.—FIRST JOURNEY OF MR. SKELTON, R.N., AND LIEUTENANT ARMITAGE, R.N.R., TO THE WEST, NOVEMBER 29, 1902, TO JANUARY 19, 1903.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Height of station above mean sea level, in feet.	Temperature.		Wind.		Weather.	Miscellaneous phenomena.	Number of hours of sunshine.	Clouds.				Remarks.	
					Air.	Spire minimum.	Minimum during night.	Direction.				Force (Beaufort).	Upper.	Lower.	Direction.		Description and amount.
Nov. 29	Noon		29.480	—	15.0	12.0	0	E by S	3	b	—	—	—	—	—	Barometer observations taken with an Aneroid. (J. Coombes, Devonport.) At start, ship's barometer read 29.600 ins.; large Aneroid (Coombes) 29.450 ins.; small Aneroid (M.O.) 29.500 ins. (Note.—At Noon on 29th ship's barometer corrected read 29.545 ins.) Left ship at 10.45 a.m. Breeze 3-4, B by S; weather b. Noon. S-cu. by western mountains, 6 p.m. Heavy S-cu. obscuring western mountain tops, 9 p.m. S-cu. over western mountains; strong mirage to W and S. 10 p.m. Slight mirage to S. Estimated height of Cu. clouds during day, 6000 ft. lower edge, to 12,000 ft. upper edge. Calm all night, but cloudy.	
	2 p.m.		29.485	—	11.5	11.0	—	E by S	3	b	—	—	—	—	—		
	4 "		29.510	—	12.0	11.8	—	E by S	2-3	b	—	—	—	—	—		
	6 "		29.562	—	19.0	14.0	—	Calm	0	b	—	—	—	—	—		
	8 "		29.598	—	4.9	4.9	—	Calm	0	bc	—	—	—	—	—		
	10 "		29.598	—	5.0	4.7	—	Calm	0	bc	—	24.0	—	SE	—		—
	8 a.m.		29.755	—	17.0	0.5	-0.5	Lt. S airs	—	c	—	—	—	—	—		—
	10 "		29.748	—	18.8	14.0	—	Lt. S airs	—	c	—	—	—	—	—		—
	Noon		29.759	—	25.2	19.1	—	Calm	0	bc	—	—	—	—	—		—
	4 p.m.		29.728	—	27.8	15.9	—	NNE	1	c	*	—	—	—	—		—
Nov. 30	6 "		29.753	—	19.8	19.8	—	N by E	1	c	—	—	—	—	—	S-cu. obscuring tops of western mountains, and Mts. Erebus and Terror. From Noon to 3.30 beautiful prismatic colouring and iridescence round sun. 4 p.m. Heavy Cu.-n. clouds from NE, travelling rapidly; just started to snow. 9 p.m. Threatening look to N.	
	8 "		29.736	—	17.2	17.0	—	NNE	1	c	—	5.5	—	—	—		
	8 a.m.		29.651	—	19.8	14.9	14.9	N	0-1	c	—	—	—	—	—		
	Noon		29.635	—	24.1	24.0	—	Lt. NW airs	—	bc	—	—	—	—	—		
Dec. 1	4 p.m.		29.609	—	22.9	22.0	—	Lt. NW airs	—	b	—	—	—	—	—	S-cu. clouds all round western mountains, some not more than 500 ft. high, others up to 5000 ft. A streak of S-cu. running from Mt. Discovery, 150° to the eastward, very marked. Clear above and below. Night camp protected amongst the eskers at foot of glacier.	
	8 "		29.632	—	13.5	13.0	—	Lt. NW airs	—	b	—	15.0	—	—	—		
	8 a.m.		29.727	—	10.6	9.6	9.6	Calm	0	c	—	—	—	—	—		
	10 "		29.736	—	14.1	9.8	—	Calm	0	bc	—	—	—	—	—		
Dec. 2	Noon		29.736	—	14.9	14.6	—	S	1-2	oc	*	—	—	—	—	Overcast over the glacier.	
	2 p.m.		29.716	—	22.1	15.1	—	S	1-2	c	—	—	—	—	—		
	4 "		29.735	—	14.8	14.8	—	S	1-2	o	—	—	—	—	—		
	8 "		29.069	600	12.6	12.6	—	S by E	1	oc	*	—	—	—	—		
	10 "		29.051	—	11.0	11.0	—	S by E	1	ocf	*	3.5	—	—	—		
	8 a.m.		29.028	—	14.8	9.0	—	S	1	ocf	*	—	—	—	—		
Dec. 3	10 "		29.018	—	21.0	20.0	—	S	0-1	c	—	—	—	—	—	Signs of weather clearing to W. Weather clearing rapidly. Weather b by Noon and quite calm. A few banks of S-cu. by western foot hills at 1500 ft. Camped for night on glacier 1080 ft. above sea level. Detached Cu. near western mountains and S-cu. in front of Erebus, Terror, and Cape Bird, 3000 ft. high, and stretching W 150°. (-Aneroid M.O. 4 read 28.860 at 8 p.m.)	
	2 p.m.		28.791	800	23.0	17.8	—	Calm	0	b	—	—	—	—	—		
	6 "		28.487	1080	10.1	10.1	—	Lt. WSW airs	—	b	—	—	—	—	—		
	8 "		28.490	1080	7.9	7.6	—	Calm	0	b	—	—	—	—	—		



TABLE XIII.—FIRST JOURNEY OF MR. SKELTON, R.N., AND LIEUTENANT ARMITAGE, R.N.R., TO THE WEST, NOVEMBER 29, 1902, TO JANUARY 19, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Height of station above mean sea level, in feet.	Temperature.			Wind.		Miscellaneous phenomena.	Number of hours of sunshine.	Clouds.		Remarks.
					Air.	Soil minimum.	Minimum during night.	Direction.	Force (Beaufort).			Upper.	Lower.	
1902. Dec. 11	8 a.m.		ins. 24.140	—	° 19.2	° 10.6	° 10.6	SSW	1-2	bc	—	Cl. 1	—	Gassy in the early part of the morning watch, and a little low drift during the night.
	10 "		24.120	—	22.0	19.2	—	Lt. SW airs	—	bc	—	Cl. 1	—	Hazy to the eastward. 10 p.m. In camp for the night.
	Noon	N 88° W, 35 m.	24.030	—	27.5 (by sling therm.)	—	—	Calm	0	bc	—	Cl. 2	—	During the day we have come up a sharp ascent, baulding sedges with block and tackle. The distance from camp to camp is a little over half a mile, the average incline is a little under 1 in 5, and the height by Aneroid is 480 ft.
	2 p.m.		25.830	—	18.0	—	—	S	2	bc	—	Cl. 2	Cu. 1	The total height from sea level by two Aneroids is 4700 ft. and 4800 ft., but the barometer has certainly risen in the meantime, so I think we are probably over 5000 ft. up. A few detached Cu. clouds coming down the Glacier Valley 1000 ft. below us, direction WNW. Hazy to the eastward.
	6 "		25.460	—	17.2	—	—	Lt. S airs	—	b	—	—	—	
	8 "		25.300	—	15.5	—	—	Lt. S airs	—	b	—	—	—	
	10 "		25.310	4800	10.5	8.6	—	Lt. S airs	—	bc	—	Cl. 1	—	
											24.0	—	—	
Dec. 12	8 a.m.		25.490	—	20.1	10.5	10.5	SE	1-2	cc	—	—	Cu.-n. 10	All observations this day made after getting into camp.
	10 "		25.500	—	16.3	15.5	—	Lt. SE airs	—	cc	—	—	Cu.-n. 8	8 a.m. Overcast weather, snowing lightly. Sky just fast rising barometer during night. The Glacier Valley below us is filled with a Cu.-n. cloud, 1300 ft. to 2000 ft. beneath us. Occasional patches of blue sky appear; cloud movement very rapid.
	Noon	W, 38 m.	25.520	—	23.0	16.3	—	SE	1-2	c	—	Cl. 2	Cu.-n. 6	
	2 p.m.		25.540	—	24.5	21.0	—	Calm	0	c	—	Cl. 2	Cu.-n. 5	Detached Cu. clouds have been floating up the Glacier Valley all day, following the curves between the mountains. They are at various heights—500 ft., 1000 ft., and 2000 ft. below us—and rising.
	4 "		25.550	—	22.5	19.1	—	Very lt. SSE airs	—	c	—	—	Cu.-n. 5	Large masses of Cu. cloud floating up the Glacier Valley from sea, 2000 ft. below us. At 8 p.m. as at 6 p.m.
	6 "		25.530	—	28.3	22.5	—	Calm	0	c	—	—	Cu.-n. 4	About 11 p.m. weather became very overcast; snowing hard, and wind sprang up S by E of force 3-6.
	8 "		25.550	—	20.8	19.5	—	Very lt. SSE airs	—	ocf	—	—	Cu.-n. 4	
	10 "		25.540	—	20.0	20.0	—	Very lt. SSE airs	—	ocf	—	—	N. 10	
Dec. 13	Noon	W, 41 m.	25.470	—	19.8	15.5	—	S by E	3-5	of	—	—	N. 10	All observations this day in one camp. Very thick weather, snowing and drifting; wind very variable in force.
	2 p.m.		25.460	—	20.5	18.8	—	S by E	2-3	of	—	—	N. 10	6 p.m. Occasional lulls in the wind, and then rising again to force 5. No lull in the snowing, which falls heavily all the time.
	6 "		25.460	—	20.5	16.8	—	S by E	2-3	of	—	—	N. 10	8 p.m. The wind increased to 5 and 6, but lulled again. Steady snowfall set in, very heavy. Wind force, 3-4. Very thick.
	10 "		25.400	—	19.2	15.1	—	S by E	3-4	of	—	—	N. 10	
Dec. 14	10 a.m.		25.390	—	31.0	15.5	—	Calm	0	em	—	—	N. 8	The wind died away completely at 4 a.m., but snowing continued. From 7 to 9 a.m. there were light NNW airs. The snow stopped at 9.45 a.m. 10 a.m. Weather clearing rapidly. Clouds rolled away, but were immediately succeeded by a thick mist, through which we could see clear blue sky; mist rolling across rapidly from SW. 2 p.m. Wind has changed round to W, and the temperature dropping. Still very thick, but clear blue sky can be seen overhead. 8 p.m. Fog passing very rapidly past us, but still thick. 10 p.m. The weather cleared about 9 p.m. At 10 p.m. all the peaks on a level and above us were quite clear. The fog below us still very thick and rolling away fast from the W.
	Noon	S 89° W, 43 m.	25.400	—	28.0	28.0	—	Calm	0	bn	—	—	—	8 a.m. Beautiful clear morning. The whole of McMurdo Strait is covered in cloud 3000 to 3000 ft. below us; looks like Cu.-n.
	2 p.m.		25.370	—	22.0	22.0	—	W	1-2	bf	—	—	—	10 a.m. A peculiar wavy Cl.-s. cloud over Terror. Masses of Cu. clouds, 1000 ft. below us, totally obscuring the lower land.
	8 "		25.370	—	20.5	18.2	—	W	1	bf	—	—	—	4 p.m. Cu. clouds still the same. There have been peculiar wavy Cl.-s. clouds over Terror all day.
	10 "		25.350	—	14.0 (by sling therm.)	—	—	W	1-2	b	—	—	—	The 8 p.m. observations were made in a new camp, 900 ft. below the former.
Dec. 15	6 a.m.		25.320	—	14.0	10.1	10.1	W	1-2	b	—	—	—	
	8 "		25.310	—	14.5	13.2	—	W	1	b	—	—	—	
	10 "	S 85° W, 46 m.	25.290	—	16.0	14.0	—	W	1-2	b	—	—	—	
	4 p.m.		25.280	—	16.5	16.0	—	Calm	0	bc	—	Cl.-s. 2	—	
	8 "		26.120	—	14.0	11.8	—	Calm	0	bc	—	Cl.-s. 2	—	



TABLE XIII.—FIRST JOURNEY OF MR. SKELTON, R.N., AND LIEUTENANT ARMSTRONG, R.N.R., TO THE WEST, NOVEMBER 29, 1902, TO JANUARY 19, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Height of station above mean sea level, in feet.	Temperature.			Wind.		Weather.	Miscellaneous phenomena.	Number of hours of sunshine.	Clouds.				Remarks.
					Air.	Surface minimum.	Minimum during night.	Direction.	Force (Beaufort).				Upper.	Lower.			
1902. Dec. 23	8 a.m.		ins. 26.610	—	°	°	°	W by S	4-8	lv	—	—	—	—	—	The wind and drift continued through the night, with an occasional lull of a quarter of an hour, but only to come on again in fierce gusts. Calm at 6 a.m., but wind suddenly increased to 4-5 grains at 7.30.	
	Noon	S 87° W, 60 m.	26.610	—	10.9	5.2	—	W by S	3-8	bv	—	—	—	—	Noon. No abatement in the gusts; temperature much lower during the forenoon, 12.36 p.m. A calm lull for an hour, but wind came on again before 2 p.m. The gusts gradually became less severe during the afternoon and suddenly ceased altogether at 4 p.m. Heavy Cir.-h. clouds ascending up from SSW. Erebus smoke can be seen ascending straight up. A lot of open water to S of Cape Bird.		
	4 p.m.		26.600	—	17.1	10.5	—	W by S	1-6	bv	—	—	—	—			
	8 "		26.625	—	15.1	13.9	—	Calm	0	ocv	—	20.0	—	—	—		
Dec. 24	8 a.m.		26.660	—	17.8	15.0	—	Calm	0	bc	—	—	—	—	—	During the morning and forenoon the weather was perfectly calm and clear; we travelled over perfectly bare ice. During the gale of yesterday almost the entire covering of snow, over 6 inches thick, was blown away. The bare ice surface is in ripples, somewhat larger than the ripples on a sandy beach at low tide. They appear to be caused by wind, and give the impression that the prevailing wind here is about SW. We have to-day travelled 5 miles of this surface. At 5 p.m. there were several very wavy white-brown Cir.-s. clouds about, especially inland; those about 20° below the sun had at one edge a most marked (blue, yellow, red) colouring. The wind has gradually increased since 2 p.m. It is blowing off the inland ice down the passes between the mountains, and the temperature keeping high. It looks as if it were a typical foehn wind.	
	Noon	S 88° W, 72 m.	26.340	—	20.5	17.8	—	Calm	0	hc	—	—	—	—	—		
	2 p.m.		26.340	—	21.9	20.5	—	W	2	hc	—	—	—	—	—		
	6 "		26.450	—	19.0	19.0	—	W by S	4-5	hc	—	—	—	—	—		
Dec. 25	8 "		26.480	—	20.8	19.0	—	W by S	4-6	hc	—	21.0	—	—	—		
	8 a.m.		26.600	—	23.0	20.0	—	W by S	5-8	oc	—	—	—	—	—		
	10 "		26.610	—	24.2	23.0	—	W by S	6-8	oc	—	—	—	—	—		
	Noon	S 87° W, 75 m.	26.580	—	23.4	23.4	—	W	7-9	ocf	*	—	—	—	—		
Dec. 26	4 p.m.		26.650	—	26.5	23.4	—	W by S	4-6	hc	—	—	—	—	—		
	8 "		26.700	—	25.4	25.4	—	W by S	2-5	hc	—	—	—	—	—		
	10 "		26.750	—	23.5	23.5	—	W by S	0-3	bc	—	14.0	—	—	—		
	6 a.m.		26.860	—	24.5	22.3	—	Calm	0	bv <sup>2</sup>	—	—	—	—	—	Weather fell calm at 12.45 a.m. and remained so all the morning.	
Dec. 27	8 "		26.820	—	27.4	24.5	—	Lt. WSW alrs	—	bv <sup>2</sup>	—	—	—	—	—	4 p.m. Haze inland.	
	Noon	S 87° W, 78 m.	26.580	—	29.1	27.4	—	Lt. S alrs	—	bv <sup>2</sup>	—	—	—	—	—	8 p.m. Haze inland. Have risen 900 ft. and travelled 7 1/2 miles during the day. Sun very powerful all day. All the hollows of the ripples in the glacier surface have been filled with water, and a constant buzzing has been going on as the air confined in the ice has been liberated. Round some of the boulders in the medial moraine as much as a foot of water has collected.	
	4 p.m.		26.250	—	27.1	27.1	—	Lt. var. alrs	—	bv <sup>2</sup>	—	—	—	—	—		
	8 "		25.950	—	21.6	21.6	—	Lt. var. alrs	—	bv <sup>2</sup>	—	23.5	—	—	—		
Dec. 27	8 a.m.		25.970	—	22.6	19.5	—	WSW	0-3	bv <sup>2</sup>	—	—	—	—	—	Early in the morning watch some wind from WSW up to force 5; gusty. A few Cu. clouds hanging over the inland peaks to the SW, about 7000 ft. high.	
	10 "		25.930	—	26.8	25.9	—	W by S	1-4	bv <sup>2</sup>	—	—	—	—	—		
	2 p.m.		25.560	—	27.3	25.4	—	W by S	1-3	bv <sup>2</sup>	—	—	—	—	—	4 p.m. Visibility very marked. Erebus perfectly clear and visible, though 90 to 100 miles off.	
	4 "		25.300	—	22.4	22.4	—	W	2-5	bv <sup>2</sup>	—	—	—	—	—	8 p.m. Have risen 680 ft. and travelled 7 1/2 miles during the day. During the afternoon there have been a few strong westerly gusts, accompanied by surface drift. All sastrugi seen during the last 3 days point to the prevailing winds being Wv.	
Dec. 27	6 "		25.280	—	24.1	21.1	—	W by S	0-3	bv <sup>2</sup>	—	—	—	—	—		
	8 "		25.280	—	19.7	19.7	—	W by S	1-3	bv <sup>2</sup>	—	24.0	—	—	—		



TABLE XIII.—FIRST JOURNEY OF MR. SKELTON, R.N., AND LIEUTENANT ARMITAGE, R.N.R., TO THE WEST, NOVEMBER 29, 1902, TO JANUARY 19, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Height of station above mean sea level, in feet.	Temperature.		Wind.		Weather.	Miscellaneous phenomena.	Number of hours of sunshine.	Clouds.				Remarks.	
					Air.	Soil minimum.	Minimum during night.	Direction.				Force (Beaufort).	Upper.	Lower.	Direction.		Description and amount.
1903. Jan. 4	8 a.m.		Ins. 21·880	—	°	— 9·5	0	Calm	0	—	—	—	—	Cu-n. 9	—	—	Wind dropping during the night, fell calm at 8:30 a.m. It then became cloudy, and was almost completely clouded over by 7:30 a.m.
	10 "		21·860	—	8·4	7·0	—	Lt. E airs	—	—	—	—	—	Cu-n. 10	N	N	11:30 a.m. Snow falling in small flakes fairly thickly. Cu-n. clouds moving rapidly from the N.
	Noon	S 89° W, 106 m.	21·750	—	9·0	8·4	1-2	E by S	1-2	*	—	—	—	Cu-n. 10	N	N	Noon. We are in the clouds. Clear blue sky can occasionally be seen through.
	2 p.m.		21·760	—	5·8	5·6	—	Lt. SE airs	—	⊕	—	—	—	Cu-n. 5	N	N	1:30 p.m. Fine halo; angle of diameter, 45° 38'. Prismatic colouring very marked at the top.
	4 "		21·790	—	3·0	1·9	—	Calm	0	⊕	—	—	—	Cu. 7	N	N	2 p.m. Cleared considerably; horizon visible all round except from SE; more exactly, I should call them icy spicules. By Aneroid, we have risen 120 ft. this morning, and advanced 3½ miles.
	6 "		21·790	—	0·5	0·5	—	Lt. ESE airs	—	—	—	—	—	—	—	—	7 p.m. Clear all round; western mountains visible.
	8 "		21·790	—	6·3	6·3	—	Calm	0	—	13·0	—	—	—	—	—	10 p.m. Very heavy bank of cloud to S. Mfrage to E.
		8 a.m.		21·780	—	1·5	—11·0	0	Calm	0	—	—	—	—	—	—	A calm night. Deposition of snow crystals during the night, 10 a.m. Cloudy low down to N and E, and drift going on to the NE of us.
Jan. 5	10 "		21·770	—	1·6	1·5	2	SSW	2	—	—	—	—	—	—	—	Noon. Very heavy banks of Nim. and Cu-n. clouds over Glacier Valley, E to NE of us.
	Noon	S 86° W, 111 m.	21·760	—	1·4	1·4	1-2	SSW	1-2	—	—	—	—	—	—	—	10 p.m. Since Noon we have been on an expedition of 7 miles to SW by W. The weather has been clear; blue sky all day; cold, with light breezes from WSW, of force 1-3. At 5:30 p.m. and over since there has been a fine halo round sun. At 6 p.m. it developed into a double parhelia, with some mock suns and good prismatic colouring. At the same time there were fine icy spicules driving through the air. The drift has all been very low surface drift, and runs in patches, with very marked edges. Between the patches there is no drift at all, much less wind, and the surface is quite undisturbed. The barometer has been steady all day. We rose 70 ft. from camp in the first two miles and during the remainder of the journey we descended 90 ft. The surface has been soft snow, with a fairly hard crust, but a pole can easily be pushed down 3 ft. A very light frost night, all from WSW. From 6 p.m. there has been a thick haze all round the horizon.
	8 p.m.		21·760	—	4·1	4·1	2-3	WSW	2-3	⊕	—	—	—	—	—	—	
	10 "		21·750	—	9·8	9·8	2-3	WSW	2-3	⊕	22·0	—	—	—	—	—	

THE RETURN JOURNEY.

Jan. 6	8 a.m.		21·760	—	7·5	—15	—	Lt. SW airs	—	b	—	—	—	—	—	—	Light SW by breezes during the night, and a little low surface drift. Thick haze all round the horizon this morning.	
	10 "		21·760	—	4·2	7·	2	WSW	2	b	—	—	—	—	—	—	10 a.m. Haze cleared away.	
	Noon	N 89° W, 103 m.	21·820	—	1·6	— 4·2	1-2	WSW	1-2	bv	—	—	—	—	—	—	Noon. Clear on returning from the summit of the ice cap. The surface gradually shows more sky, of wind; it gets harder, and the sastrugi very large. We have returned 12 miles and descended 950 ft. to-day. At Allen's camp, during our absence on Jan. 2, it blew 2-3 all night, with drift. On Jan. 3 wind 3-4 all forenoon; drift and light snow; wind increasing to force 5 at 4 p.m.; all wind SW.	
	2 p.m.		22·000	—	1·0	— 1·6	2-3	SW by W	2-3	bv	—	—	—	—	—	—	—	On Jan. 4 NE wind, force 1-2; very hazy and overcast; cleared at 4 p.m.; at 6 p.m. b. On Jan. 5 up to 2 p.m. wind SW, 2; at 4 p.m. wind SW, 4-5; during night wind increased to 6-9, but on Jan. 6 moderated at 4 a.m. and came down to 3 during forenoon, with drift; very clear day; weather br.
	4 "		22·110	—	1·0	—	2-3	SW by W	2-3	bv	—	—	—	—	—	—	—	
	6 "		22·560	—	1·0	—	3-4	SW	3-4	bv	—	—	—	—	—	—		
	8 "		22·560	—	1·2	— 1·	3-4	SW	3-4	bv	—	—	—	—	—	—		
											21·0	—	—	—	—	—	—	



TABLE XIII.—FIRST JOURNEY OF MR. SKELTON, R.N., AND LIEUTENANT ARMITAGE, R.N.R., TO THE WEST, NOVEMBER 29, 1902, TO JANUARY 19, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Height of station above mean sea level, in feet.	Temperature.			Wind.		Weather.	Miscellaneous phenomena.	Number of hours of sunshine.	Clouds.				Remarks.
					Air.	Spirit minimum.	Minimum during night.	Direction.	Force (Beaufort).				Upper.	Lower.	Direction.	Description and amount.	
1903 Jan. 13	8 a.m.		ins. 27.450	—	°	°	0	Calm	0	om	*	—	—	—	—	—	Foggy and snowing during the night.
	10 "		27.000	—	28.2	22.0	0	Calm	0	om	*	—	—	—	—	—	Very thick and snowing fine flakes.
	Noon	S 80° W, 48 m.	27.080	—	27.5	27.5	0	Calm	0	om	*	—	—	—	—	—	Rose 350 ft. and advanced half a mile in forenoon. Had to camp at 11.30 a.m. in thick weather. Snow ceased at 6.30 p.m., but weather remained very thick.
	4 p.m.		27.110	—	31.0	30.0	0	Calm	0	om	*	—	—	—	—	—	
	8 "		27.110	—	25.5	23.9	0	Calm	0	om	—	—	0.0	—	—	—	
	8 a.m.		27.110	—	28.0	22.5	0	Calm	0	om	*	—	—	—	—	—	Weather remained thick all night. Clearing started about 7 a.m.
	10 "		27.000	—	29.1	28.0	0	Calm	0	om	*	—	—	—	—	—	Have risen above mist.
	Noon	W, 40 m.	26.900	—	36.6	29.1	0	Calm	0	bc	—	—	—	S by E	—	—	Ascending through Nim. clouds.
Jan. 14	2 p.m.		26.920	—	31.8	30.0	0	Calm	0	om	*	—	—	—	—	—	
	4 "		26.730	—	29.5	28.6	—	Lt. SE airs	—	om	*	—	—	—	—	—	
	6 "		26.620	—	20.0	19.8	1-2	S	1-2	bc	*	—	—	—	—	—	
	8 "		26.410	—	16.9	16.0	1-2	S	1-2	c	—	—	—	—	—	—	
	10 "		26.300	—	15.8	15.8	1-2	S	1-2	bc	—	—	11.5	—	—	—	Returned three quarters of a mile, and ascended 830 ft.
	8 a.m.		26.300	—	19.0	10.1	0	Calm	0	bc	—	—	—	—	—	—	Have returned 7 miles, and descended 730 ft. during the day.
	Noon	N 84° W, 32 m.	26.300	—	28.5	19.0	0	Calm	0	bc	—	—	—	—	—	—	Since we were on this spot, early in December, there appear to have been heavy snowfalls and no wind.
	2 p.m.		26.670	—	27.3	27.3	0	Calm	0	bc	—	—	—	—	—	—	Sun's rays very powerful early in the day, have made it very likely travelling for wood runners.
Jan. 15	4 "		26.770	—	23.6	23.6	0	Calm	0	oe	—	—	—	—	—	—	After 4 p.m. the temperature went down, and travelling improved greatly.
	8 "		26.950	—	8.5	8.5	—	Lt. var. airs	—	b	—	—	22.0	—	—	—	Heavy Cu. clouds hanging about the valleys.
	8 a.m.		26.970	—	18.5	3.4	0	Calm	0	e	—	—	—	—	—	Light variable airs during the night.	
	10 "		26.950	—	25.5	18.5	0	Calm	0	e	—	—	—	—	—	—	
	Noon	N 80° W, 25 m.	27.020	—	31.2	25.5	0	Calm	0	c	—	—	—	—	—	—	Sun's rays very powerful.
	2 p.m.		27.200	—	27.0	26.3	0	Calm	0	bc	—	—	—	—	—	—	Heavy Cu. clouds rising from various valleys.
	4 "		27.600	—	21.0	21.0	0	Calm	0	bc	—	—	—	—	—	—	Heavy Cu. and some Cu-n. clouds hanging about valley.
	6 "		27.700	—	15.3	15.3	0	Calm	0	e	—	—	—	—	—	—	
8 "		28.130	—	18.9	15.3	0	Calm	0	bc	—	—	—	—	—	—	Have returned 8 miles and descended 1250 ft. during the day. Thick fog overlying McMurdo Strait.	
10 "		28.150	—	10.3	10.3	0	Calm	0	bc	—	—	—	—	—	—		



TABLE XIV.—JOURNEY OF CAPTAIN SCOTT, R.N., AND LIEUTENANT SHACKLETON, R.N.R., TO THE SOUTH, NOVEMBER 2, 1902, TO FEBRUARY 3, 1903.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Temperature.		Wind.		Miscellaneous phenomena.	Clouds.		Remarks.	
				Air.	Spit minimum.	Direction.	Force (Beaufort).		Upper, moving to	Lower, moving to		
1902. Nov. 2	10 a.m.		ins.	°	°	SW to SE	2-3	+		N. 10	Snow soft, no sastrugi. 2 p.m. Soft, with alternate hard places. 9 p.m. Hard sastrugi. Weather from start until 2 p.m. squally, with drift in small whirlwinds. Wind all round compass almost, from SW to E. Stray and jagged fr.-s. passing to the N from over the Bluff. Erebus slope to N visible. In afternoon weather gradually cleared and sun appeared from behind bank of Nim. at 8 p.m.	
	2 p.m.		—	—	—	SW to E	1-0	—	—	N. 10		
	9 "		29.42 (No. 1) 29.31 (No. 2)	8.5	5.0	S	0-1	bc	—	—	S. 6 (to NW)	
Nov. 3	1 a.m.		—	10.0	0.5	SW	1	bc	—	—	—	Clear to S and SW. Between 4 and 8 a.m. it blew hard from SW, with drift. At 9.30 it cleared. Occasional squalls, with drift, until 2 p.m., then clear. 4.30 p.m. Sun appeared, clouds moving to N or NW slowly. SW to NE horizon clear. Sun has evident effect on surface of snow, especially in places where there is dust, blown from White Island.
	10 "	S 88° E, 11 m.	29.55 (No. 1) 29.42 (No. 2) 29.38 (No. 2)	15.0	6.5	S	1	bcq	+	—	S.	
	4 p.m.		—	10.0	5.0	Var. S to SE	0-1	bc	+	—	S. 6 (to W)	
	8 "		29.36 (No. 2)	10.0	—	Var. airs	—	bc	—	—	Cu. 6 (to NW)	4 p.m. Snow soft, with alternate hard places.
	9 "		29.50 (No. 1) 29.38 (No. 2)	7.5	4.9	Calm	0	bc	—	—	Cu. 4 (to NW)	Similar conditions of snow surface.
Nov. 4	3.50 a.m.		—	1.0	- 2.5	Lt. SE airs	—	bc	—	Cl. 8 (N)	—	10 a.m. Small patches of hard snow in places. 2 p.m. Alternate hard and soft snow. Temperature was 8°-5 in wind and shadow; temperature of other instruments in sun, 16°-0.
	10 "	S 50° E, 16 m.	29.47 (No. 1) 29.29 (No. 2)	10.0	- 1.0	SSE to S	1	bc	—	Cl. 6	—	9 p.m. Slight sastrugi. Alternate hard and soft snow.
	2 p.m.		29.43 (No. 1) 29.36 (No. 2) 29.40 (No. 1) 29.23 (No. 2)	8.5	8.5	SE	1-2	bc	—	Cl. 3 (N)	—	During the afternoon there was a slight breeze from S to SSW, with slight drift. Whirling drift was to be seen on southern horizon. Erebus smoke at 3 p.m. was going NE by E. Erebus was visible for the greater part of the day.
	9 "		—	7.5	5.0	S by W	1-2	bc	+	Cl. 4	—	
	3 a.m.		—	10.8	- 5.5	Calm	0	—	—	Cl. 7	—	Erebus smoke going NE.
Nov. 5	10.30 "	S 48° E, 25 m.	29.32 (No. 1) 29.17 (No. 2) 29.22 (No. 1) 29.11 (No. 2)	9.5	- 10.0	Lt. S airs	—	bc	—	Cl.-cu. 9 (NE)	—	9 a.m. ⊕. About 11.30 a fresh wind from S commenced to blow, with gradually increasing drift. Snow soft, with no sastrugi. From 1 p.m. to 8 p.m. wind blew with force 6-7. Afterwards wind gradually dropped to force 1 at 7.30. Bluff summit obscured with cloud curtain.
	7.30 p.m.		—	8.5	5.0	S	1	oc	+	—	S. 10	
	9 a.m.		(H.O. 4) 29.07	8.5	- 2.0	S	0-1	bc	—	Cl. 2 (NE)	—	NOTE.—From this date Aneroid No. 2 alone was used. For comparison with ship's barometer see Feb. 3, 1903.
	2 p.m.	S 34° E, 32 m.	29.10	10.5	5.2	NW	1	bc	—	Cl. 2	—	2 p.m. Hard high sastrugi. About 3 p.m. slight mirage to NE.
	9 "		29.10	10.5	5.0	Calm	0	bc	—	Cl. 2	—	9 p.m. Hard high sastrugi. The weather throughout the day beautifully fine. About 3 p.m. we began to encounter high sastrugi from SSW to NNE, the surface of the snow being in many places polished by wind and drift. After about 6 miles of such surface it gradually became better. Passed many crevasses.
Nov. 7	2.30 a.m.		—	7.5	3.0	SW	4	bc	+	—	S. 2	Blowing a hard blizzard from 10 p.m. on 6th till 4 p.m. on 7th, with one lull at 2.30 a.m. Erebus smoke observed coming SW. Wind at camp SW during the day. Much drift. Wind force 4-7 from 5 p.m. on 7th. Wind and weather improved at 8 p.m. Light airs with mirage in N. Surface of snow very hard, wind-swept sastrugi and sun-melting patches being frequent.
	6 p.m.	S 38° E, 41 m.	29.08	5.5	- 1.0	NW	1	bm	+	—	—	
	9 "		29.06	- 4.0	- 4.0	NW	1-2	b	—	—	—	
Nov. 8	4 a.m.		29.06	- 3.0	- 8.5	NW	1	b	—	—	—	Snow surface, hard sastrugi. Blowing a blizzard from 6 a.m. throughout the day, force 2-5.
	2 p.m.	S 28° E, 48 m.	29.10	0.0	- 4.0	SSW	3-4	bm	+	—	—	Heavy drift all day. Wind fell towards 8 p.m., but increased at 10 p.m. Heavy and dark low down to S horizon.
	10 "		29.31	1.0	- 2.5	S	2-3	bm	+	—	—	
Nov. 9	4.30 a.m.		29.15	- 2.0	- 7.0	SSW	3-4	b	+	—	—	Blowing all day till 3 p.m., then light winds. Drift continued till 5 p.m. No clouds visible except on western mountains. Erebus smoke going to NE and E.
	Noon	S 18° E, 55 m.	29.30	4.0	- 3.0	SSW	2	b	+	—	—	
	8.30 p.m.		29.46	6.0	3.0	S	1	b	—	—	—	

Date	Time	Wind	Force	Temp	Humidity	Pressure	Clouds	Visibility	Remarks
Nov. 10	6 a.m.	SSW	3-0	-10.5	—	—	—	—	During the morning passed over high sastrugi, SSW, until just clear of Bluff; sastrugi then moderate, with patches of soft snow.
	2 p.m.	Calm	0-0	5.0	—	—	—	—	About 8 a.m. slight breeze, force 0-2, from SSW, with $\frac{1}{4}$ Erebus smoke going NW. Hazy, with mirage to N. One peculiar Ci cloud over Discovery at Noon.
	7 "	—	—	0.0	Hypsometer 210.83 29.23	—	—	—	—
Nov. 11	4 a.m.	SW airs	0-0	0.0	—	—	—	—	Fine and clear all night. From 8 a.m. slight breeze from SSW, with drift. Over the Bluff was low increasing Str. Towards 3 p.m. wind dropped to calm and sky gradually became overcast. Slight drift 4 to 8 p.m. Horizon clearing to S, Bluff still enveloped in heavy cloud.
	2 p.m.	SSW	3-0	-3.0	—	—	A.-s. 2	—	—
	8 "	SSW	3-0	-3.0	—	—	—	S. 10	—
	8 a.m.	SSW	8-0	-5.0	—	—	—	N. 10	Surface alternately hard and soft all day; the sastrugi ran SSW. Noon. Upper clouds travelling fast to NE, 5 p.m. Clearing; Bluff and Discovery in sight, also Black Island. Very thick to N, snow surface has lost the wind polish it had off Bluff.
Nov. 12	2 p.m.	SSW	3-0	3.0	—	—	—	—	—
	8 "	SSW	2-0	-2.0	—	—	Ci. 7 (NE)	—	—
	8 a.m.	SSW	3-5	-1.0	—	—	—	—	—
	2 p.m.	SSW	2-0	2.0	—	—	Ci. 3 (NE)	—	—
Nov. 13	8 "	SSW	2-0	-1.0	—	—	—	—	—
	2 p.m.	SSW	4-0	4.0	—	—	Ci.-eu. 6 (NE)	—	—
	8 "	SSW	2-0	-1.0	—	—	—	S. 10	—
	8 a.m.	SSW	5-6	-5.6	—	—	—	S. 10	Snow surface alternately hard and soft, with high mounds of sastrugi. Towards 10 a.m. slight breeze from SSW sprang up. Noon. Rolled Ci.-eu. clouds to SSW driving rapidly to NE; slight drift with wind occasionally. Mt. Discovery clear of cloud at Noon. Towards 4 p.m. sky became overcast and at 5 p.m. wind increased, with drift from SSW. Sastrugi all day from SSW, with high mounds and occasional undercut parts; mounds or slopes up to 6 ft. high and 30 to 100 ft. in length.
Nov. 14	2 p.m.	SSW	6-0	6.0	—	—	—	S. 10	—
	8 "	SSW	10-0	10.0	—	—	—	S. 10	—
	8 a.m.	SSW	2-0	-2.0	—	—	—	S. 10	—
	2 p.m.	SSW	12-0	12.0	—	—	Ci. 2 (NE)	—	—
Nov. 15	6 p.m.	Calm	0-0	20.0	—	—	—	—	—
	9 "	Calm	0-0	0.0	—	—	—	S. 2 (NE)	—
	8 a.m.	SSW	2-0	-2.0	—	—	—	—	—
	Noon	SSW	12-0	12.0	—	—	Ci. 3 (SE)	—	—
Nov. 16	6 p.m.	Calm	0-0	20.0	—	—	—	—	—
	9 "	Calm	0-0	0.0	—	—	—	—	—
	8 a.m.	SSW	10-0	10.0	—	—	—	—	—
	Noon	SSW	12-0	12.0	—	—	Ci. 2 (SE)	—	—
Nov. 17	8 a.m.	SSW	10-0	10.0	—	—	—	—	—
	Noon	SSW	12-0	12.0	—	—	Ci. 2 (SE)	—	—
	6 p.m.	Calm	0-0	20.0	—	—	—	—	—
	9 "	Calm	0-0	0.0	—	—	—	S. 2 (NE)	—
Nov. 18	8 a.m.	SSW	12-0	12.0	—	—	—	—	—
	Noon	SSW	12-0	12.0	—	—	Ci. 2 (NE)	—	—
	6 p.m.	Calm	0-0	20.0	—	—	—	—	—
	9 "	Calm	0-0	0.0	—	—	—	—	—
Nov. 19	8 a.m.	SSW	10-0	10.0	—	—	—	—	—
	Noon	SSW	12-0	12.0	—	—	Ci. 2 (NE)	—	—
	6 p.m.	Calm	0-0	20.0	—	—	—	—	—
	9 "	Calm	0-0	0.0	—	—	—	—	—
Nov. 20	8 a.m.	SSW	10-0	10.0	—	—	—	—	—
	Noon	SSW	12-0	12.0	—	—	Ci. 2 (NE)	—	—
	6 p.m.	Calm	0-0	20.0	—	—	—	—	—
	9 "	Calm	0-0	0.0	—	—	—	—	—

Surface of snow alternately hard and soft, with high mounds of sastrugi. Towards 10 a.m. slight breeze from SSW sprang up. Noon. Rolled Ci.-eu. clouds to SSW driving rapidly to NE; slight drift with wind occasionally. Mt. Discovery clear of cloud at Noon. Towards 4 p.m. sky became overcast and at 5 p.m. wind increased, with drift from SSW. Sastrugi all day from SSW, with high mounds and occasional undercut parts; mounds or slopes up to 6 ft. high and 30 to 100 ft. in length.

Snow surface alternately hard and soft, but gradually softening. About 11 a.m. the sun appeared throughout the day generally thick and snowing. In the afternoon it cleared to the westward for a short time. The snow surface is gradually becoming softer, but there are large lumps and blown and hard patches of crust which give way under the weight of sledges, though not exactly at the spot of contact. Temperature throughout greater part of day was 10°-0. Barometer steady until 3 p.m., then falling.

Soft light snow surface.

Weather generally fine and clear. Slight SSW breeze in early morning until Noon, then calm. Sun shining all day. Temperature 20°-0 generally throughout. Towards evening observed Str. travelling from SW, upper clouds moving to SE. Erebus smoke going E. Barometer rising all day. Snow surface very soft and powdery, sun taking effect on crust also.

Surface of snow alternately soft and hard, tending to hard crust. Calm day. Clear till 10 a.m., overcast till 1 p.m., then gradually lifted in SW. At 2 p.m. b. Surface of snow during day very soft at times, with fine crystalline covering; in other places the hard crust gave way owing to sun's heat. From 9 to 10 p.m., although clear overhead, there was a fall of minute crystals of snow. Towards evening surface of snow was better. 11.30 p.m. Thick fog, with fog-bow to N, very distinct. Temperature, -4°-0. Calm.

Fine and clear at first. Towards 2 p.m. clouds from the N covered all the sky, and it remained overcast. Snow surface soft and hard alternately. Sastrugi not well defined, but SSW generally, although occasional signs of variable winds were evident. 8 p.m. Temperature of air, 2°-0; temperature of snow (soft surface), -2°-0.

Overcast until 1.30 p.m. Light airs from S. Barometer steady all day. Maximum temperature in sun, 2°-0 at 4.30 p.m. Surface of snow very soft from falling crystals; these fell more profusely towards 9 p.m.

Weather in morning misty, sun shining through, could see Ci. clouds. As day went on mist gradually increased and ice crystals were continually falling. 4.30 p.m. Fine double solar halo. 4.30 to 9 p.m. Barrella. At 9.30 p.m. came a SSW breeze, force 1-11 p.m. Mist driving with breeze, crystals falling rapidly. Surface of snow very soft from falling crystals, and effect of sun on crystals was beautiful. Few sastrugi, and these variable, from S to SW. 9 a.m. Temperature of snow (thermometer buried), -1°-0; surface, 2°-0; air, 10°-0. 11 p.m. Temperature of snow, -4°-0; surface, -4°-0; air, -2°-0.

10 a.m. Temperature of snow, -1°-0; surface, 4°-0. Wind throughout the day calm or force 1. Fine. During the forenoon ice crystals falling, ceased at 2 p.m. Sky cloudy until 2 p.m., then almost clear. Surface of snow very soft from fall of ice crystals, but lined beneath. Barometer slowly dropping all day. Towards evening it was clear on horizon to NW and NNW. Bluff could be seen.

TABLE XIV.—JOURNEY OF CAPTAIN SCOTT, R.N., AND LIEUTENANT SHACKLETON, R.N.R., TO THE SOUTH, NOVEMBER 2, 1902, TO FEBRUARY 3, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Thermometers.			Wind.		Miscellaneous phenomena.	Clouds.		Remarks.
				In shade.	Freely exposed.	Spirit minimum.	Direction.	Force (Beaufort).		Upper, moving to	Lower, moving to	
Nov. 21	9 a.m.		Ins. 29.66	6.0	—	— 8.5	Calm	0	—	—	—	Calm all day. Clear over land to W during forenoon. In afternoon Mt. Discovery only plainly seen. Towards evening low fog bank all round. At 10 p.m. slight fog-bank, or rather ends of the arc. Surface of snow exceedingly soft, covering sastrugi, which were variable, the large ones directed to SW. There were also rounded banks running ESE and WNW, with soft snow in between the ridges; these were sometimes 5 yards apart.
	2 p.m.	S 3° E, 123 m.	29.61	10.0	31.0	6.0	Calm	0	—	—	—	
	10 "		29.63	1.0	23.0	—	Calm	0	—	—	—	
Nov. 22	10 a.m.		29.65	8.0	—	— 4.0	N	2	bc	—	—	10 a.m. Temperature of snow, —1.0°; surface, 1.0°. Light N breeze all day, increasing slightly towards 11 p.m. Sky gradually becoming overcast, from bc at 9 a.m. to o at 11 p.m. Surface of snow soft but hard in places. The breeze has blown a certain amount of the fine snow off. Sastrugi running SW and banks ESE. Hazy over land. Barometer steady all day. At 8 p.m. noticed clouds radiating NE and SW.
	2 p.m.	S 2° E, 128 m.	29.55	2.0	20.0	8.0	N	2-3	bc	A.-s. 4	—	
	11 "		29.54	5.0	—	— 2.0	N	2-3	oc	A.-s. 9	—	
Nov. 23	10 a.m.		29.56	5.0	15.0	— 2.0	N	1	bc	Cl. 4	—	10 a.m. Temperature of snow, 3.0°; surface, 7.0°. Fine weather all day. Snow surface wind blown and harder. Clouds travelling very quickly to NNE. Land occasionally obscured by low cloud. Mirage over land.
	2 p.m.	S 2° E, 133 m.	29.75	—	15.0	—	N	1	bc	Cl. 5 (NNE)	—	
	11.30 "		29.70	—	5.0	5.0	Lt. N airs	—	bc	Cl. 6 (NNE)	—	8 p.m. ⊕.
Nov. 24	10 a.m.		29.62	12.0	35.0	— 1.0	Calm	0	b	—	—	10 a.m. Temperature of snow, 3.0°; surface, 5.0°; sling thermometer, 7.0°. Almost calm all day. Barometer gradually dropping. Slight low cloud to SE. Snow surface hard in many places. Hazy over western hills. Soft snow had thin crust on it.
	4.30 p.m.	S 1° E, 137 m.	29.58	9.0	30.0	—	SSW	1-2	b	—	—	
	10.30 "		29.50	2.0	15.0	2.0	Calm	0	b	—	—	
Nov. 25	10.30 a.m.		29.45	—	20.0	— 7.0	S	1	c	A.-s. 6	S. 4	10 a.m. Temperature of snow, 0.0°; surface, 0.0°; sling thermometer at 10 a.m. (0.0°) at 11 p.m., —1.0°. Overcast in early morning, cloudy to NE and SW at 11 a.m. then gradually cleared. From Noon to 4 p.m. high Cl. moving rapidly to NNE, Str. rising in S which gradually covered the sky. At 8 p.m. sun was obscured. 11 p.m. Entirely overcast with low Str. Barometer steady all day. Snow surface alternately soft and hard, with slight sastrugi pointing from SSW or W, very variable.
	4 p.m.	S 1° W, 141 m.	29.50	—	20.0	5.0	SSW	1	bc	Cl. 4 (NNE)	—	
	11 "		29.50	—	10.0	—	SSW	1	o	—	S. 10	—
Nov. 26	10 a.m.		29.53	—	10.0	—	SSW	2-3	o	—	N. 10	The greater part of the day it was snowing and drifting, with breeze from SSW to SW. Towards evening it cleared somewhat, and rolled Cl.-cu. clouds could be seen travelling fast to NE. Camp was not struck, so no change of snow surface was noted. Barometer steady all day. Land visible at 6 p.m., with Str. above. Sling thermometer at 8 p.m., —1.0°.
	4 p.m.	S 1° W, 145 m.	29.55	—	14.0	9.0	SSW	1-2	o	—	S. 10	
	8 "		29.55	1.0	8.0	—	SW	1	c	Cl.-cu. 6 (NE)	—	—
Nov. 27	10 a.m.		29.52	4.0	20.0	— 7.0	Calm	0	b	—	—	10 a.m. Temperature of snow, —1.0°; surface, 4.0°; sling thermometer, 4.0°. 10 p.m. Temperature of snow, 0.0°; surface, 1.0°; sling thermometer, 0.0°. Almost calm all day, except slight occasional gusts from NE. No clouds in sky. Surface of snow fairly hard; in some places soft, with a weak crust; patches of soft snow occasionally. Barometer fairly steady all day.
	4 p.m.	S 3° W, 145 m.	29.53	—	29.0	20.0	NE	0-1	b	—	—	
	10 "		29.50	0.0	2.0	—	NE	0-1	b	—	—	—
Nov. 28	Noon		29.40	1.0	15.0	— 7.0	Lt. S airs	—	b	—	—	Sling thermometer, 1.0° at Noon; 2.0° at 4 p.m. Well-defined sastrugi, SW and WNW. Barometer rising from 4 p.m. to Midd. Clear and fine in morning. A little Str. on horizon, which gradually rose from S. This cloud turned out to be heavy mist which continued to rise, and towards 8 p.m. covered the sun, driving rapidly from S to N. From 4 p.m. heavy deposit of rime, making surface of snow hard. Surface soft in places.
	4 p.m.	S 4° W, 146 m.	29.32	2.0	9.0	—	Calm	0	bm	—	—	
	10 "		29.40	—	—	—	S	1	m	—	—	—
	Midd.		29.45	—	—	—	S	1	m	—	—	

Nov. 29	Noon	S 5° W, 148 m.	29-51	2-0	14-0	—	SSW	0-1	oc	→	—	S. 8 (NE)	Noon	Temperature of snow, 1°-0; surface (in sun), 5°-0; sling thermometer, 1°-5.
	6 p.m.		29-53	—	15-0	—	SSW	—	bc	→	A.-s. 3 (NNE)	S. 2 (NNE)		Light wind all day, with drifting ice crystals. Sun obscured at times by Str., and again by Cl.-cu. clouds. Snow surface soft in places, but at times with 2-inch crust which gave way with loud reports under weights of sledges. Sastrugi slight, running from SW or SSW. A description, with illustration, of a remarkable solar phenomenon observed here at 4 p.m. is given on p. 13 of Lieut. Kopp's Memoir, "Notes on Instruments with Illustrations of Solar Phenomena and Cloud Observations."
	Midd.		29-55	—	1-0	1-0	SW by S	1-2	oc	→	Cl.-cu. 6 (NNE)	S. 4 (NNE)		4 p.m. Temperature of snow, 5°-0; surface, 12°-5; loose snowfall, 12°-5; sling thermometer, 12°-5.
Nov. 30	4 p.m.	S 6° W, 151 m.	29-68	15-0	31-0	5-0	SSW	2	o	*	—	N. 10		Heavy snowfall of fine feathery crystals, very lovely. Surface of snow very soft and heavy for travelling, the crystals being affected towards Midd. by the sun. Sky cleared gradually to be at 8 p.m. and b at Midd. Fog rose at Midd. and obscured the land. Fog low, with angle of 45° at base, observed at Midd. Sastrugi all covered by snowfall.
	"		29-65	—	19-0	19-0	SSW	1	bc	—	Cl.-cu. 6 (NNE)	S. 3 (NNE)		4 a.m. Temperature of snow crystals, -2°-0; sling thermometer, -5°-5.
	Midd.		29-60	—	8-0	—	NNE	0-1	b	—	—	—		5 p.m. Temperature of snow, 4°-0; surface, 8°-0; air, 8°-5; sling thermometer, 8°-5 at 5 p.m., 6°-5 at 8 p.m.
Dec. 1	4 a.m.		29-58	-5-0	10-0	—	NNE	0-1	bc	—	Cl.-s. 3 (NNE)	S. 2 (NNE)		Fog from Midd. to 4 a.m., but clearing occasionally. Weather from Noon to 8 p.m. overcast, with driving light snow. From 8 p.m. to Midd. similar weather. Barometer steady. Continued snowing. Sastrugi when seen, WSW to SSW. Snow at 8 p.m., with 2-in. crust, then 1-in. space, then 1½ ft. soft, then hard. Top surface fine snow.
	"	S 7° W, 154 m.	29-55	—	9-0	—	Calm	0	b	—	—	—		3 a.m. Temperature of snow, -3°-0; surface, 0°-0; sling thermometer, 5°-0.
	5 p.m.		29-58	—	9-0	9-0	SSW	1-2	o	*	—	N. 10 (N)		5 p.m. Sling thermometer, 6°-0.
	"		29-50	—	10-0	7-0	S	2	o	*	Cl.-cu. 8 (NE)	—		Midd. to 4.30 a.m. snowing. Barometer steady. Snow similar to last night. Surface of snow from 5 p.m. to Midd. fairly hard, with 2-in. crust. Slight patches encountered at times. Weather clearing to be at Midd. Sastrugi SW. Barometer dropping all evening.
Dec. 2	3 a.m.	S 8° W, 157 m.	29-56	7-0	10-0	—	SSE	1-2	o	*	—	N. 10		6 a.m. Temperature of snow, -3°-0; surface, 0°-0; sling thermometer, 4°-5.
	5 p.m.		29-64	6-0	12-0	—	SW	1	oc	—	—	S. 10		5 p.m. Temperature of snow, -2°-0; surface, 0°-0; sling thermometer, 4°-5.
	Midd.		29-60	—	10-0	—	SW	1	bc	—	—	—		11 p.m. Sling thermometer, -1°-0.
Dec. 3	6 a.m.	S 9° W, 160 m.	29-55	6-0	18-0	—	NW	1-2	b	→	—	—		From Noon to 11 p.m. clear and fine, with light wind from NW or NNW. Barometer dropping slowly. Snow surface soft in many places, with hard crust in others. Sastrugi running NW or W, slight. Similar conditions to Midd., except barometer rising to 29-42 ins.
	5 p.m.		29-45	5-0	20-0	—	NW	1	b	→	—	—		6 a.m. Temperature of snow, -2°-0; surface, 2°-0; sling thermometer, -2°-0.
	"		29-39	-1-0	20-0	—	NNW	1	b	—	—	—		Weather from Midd. to 6 a.m. fine; slight mirage to W; hazy to N. 6 p.m. to Midd. snow surface very soft and heavy. Sastrugi NW, not well defined but for occasional pieces. Land clear; no clouds at all around. No crust on snow.
Dec. 4	6 a.m.	S 10° W, 162 m.	29-45	-2-0	20-0	-4-0	NW airs	—	b	—	—	—		4 a.m. Temperature of snow, -8°-0; surface, -8°-0; sling thermometer, -8°-0.
	6 p.m.		29-30	—	35-0	—	Calm	0	b	—	—	—		5 a.m. Sling thermometer, -8°-0.
	"		29-29	—	—	—	Calm	0	b	—	—	—		6 a.m. Fog low, angle of about 50°.
	Midd.		29-28	—	—	—	Calm	0	b	—	—	—		7 p.m. Temperature of snow, -2°-0; surface, 2°-0; sling thermometer, 5°-8.
Dec. 5	5 a.m.		29-25	-7-0	35-0	—	Calm	0	b	—	—	—		From Midd. to 4 a.m. fine, clear, and calm. From 7 p.m. to Midd. calm, with slight NWy airs occasionally. Mirage to SW at Midd. Snow surface generally soft; occasional large lumps on otherwise smooth surface. Few patches of hard crusted snow. Barometer dropping slowly.
	6 p.m.	S 11° W, 164 m.	29-15	—	36-0	—	Calm	0	b	—	—	—		4 a.m. Sling thermometer, -4°-0.
	"		29-10	—	—	—	NW airs	—	b	—	—	—		5 p.m. Temperature of snow, 3°-0; surface, 4°-0; sling thermometer, 19°-0.
	Midd.		29-08	—	—	—	Calm	0	b	—	—	—		Midd. to 5 a.m. calm and clear, with mirage to SW. Land clear, but slight mirage on foot hills. Weather b all the time. 4 p.m. Nim. rapidly covering western mountains and approaching from SW. 6 p.m. Started drifting and snowing. Wind 2-3. 8 p.m. to Midd. Wind 4-5, with heavy drift. Barometer dropping.
Dec. 6	5 a.m.		29-02	-2-0	30-0	-8-0	Calm	0	b	—	—	—		6 p.m. Sling thermometer, 19°-0.
	4 p.m.	S 12° W, 167 m.	28-80	19-0	—	—	SW	2-3	o	—	—	N. 10 (NE)		4 p.m. Temperature of snow, 3°-0; surface, 4°-0; sling thermometer, 19°-0.
	"		28-83	—	28-0	—	SW	4-5	o	* →	—	N. 10		Midd. to 5 a.m. calm and clear, with mirage to SW. Land clear, but slight mirage on foot hills. Weather b all the time. 4 p.m. Nim. rapidly covering western mountains and approaching from SW. 6 p.m. Started drifting and snowing. Wind 2-3. 8 p.m. to Midd. Wind 4-5, with heavy drift. Barometer dropping.
	Midd.		28-79	—	—	—	SW	4-5	o	* →	—	—		5 a.m. Sling thermometer, -4°-0.
Dec. 7	4 a.m.		28-85	19-0	19-0	—	S	5-6	oc	* →	—	N. 10 (NE)		4 p.m. Temperature of snow, 3°-0; surface, 4°-0; sling thermometer, 19°-0.
	"	S 13° W, 170 m.	28-85	—	—	—	S	3	o	* →	—	N. 10		Midd. to 5 a.m. calm and clear, with mirage to SW. Land clear, but slight mirage on foot hills. Weather b all the time. 4 p.m. Nim. rapidly covering western mountains and approaching from SW. 6 p.m. Started drifting and snowing. Wind 2-3. 8 p.m. to Midd. Wind 4-5, with heavy drift. Barometer dropping.
	6 p.m.		29-40	19-0	29-0	—	SSW	2	o	—	—	S. 10		6 p.m. Sling thermometer, 19°-0.
	Midd.		29-50	—	—	—	SW	1-0	oc	→	—	S. 8 (NE)		Surface of snow exceedingly soft from snowfall. In some places undercrust gave way for considerable distance round, with loud report. Top layer of snow 6 to 7 ins., then 2-in. crust, then 3 ins. soft again. No sastrugi. Midd. to 4 a.m. Blowing from SW, gradually shifting to S. Barometer rising. Heavy drift. At 4 a.m. slight break in Nim. to S, showing Fr.-s, moving rapidly to NE. During the day the barometer gradually rose and the wind dropped, coming in squalls from S. Barometer rose to 29-50 ins., and then was steady at Midd. Str. clouds lifted over land to SW at 9 p.m., then closed down again.

TABLE XIV.—JOURNEY OF CAPTAIN SCOTT, R.N., AND LIEUTENANT SHACKLETON, R.N.R., TO THE SOUTH, NOVEMBER 2, 1902, TO FEBRUARY 3, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).		Thermometers.			Wind.		Miscellaneous phenomena.	Clouds.		Remarks.
			ins.	Pressure (Aneroid).	In shade.	Freely exposed.	Spirit minimum.	Direction.	Force (Beaufort).		Upper, moving to	Lower, moving to	
1902. Dec. 8	5 a.m.		29.50	18.0	29.0	8.0		SW by S	1	—		S. 10 (NE)	
	5 p.m.	S 14° W, 173 m.	29.40	19.0	32.0	—		SW	1-2	—	Cl. 4 (ENE)	S. 3 (ENE)	
	8 "		29.39	—	—	—		SW	1-2	—	Cl. 4 (ENE) rapid	—	
	Midt.		29.39	20.0	—	—		SSW	0-1	—	Cl. 5 (ENE)	—	
Dec. 9	3 a.m.		29.38	25.0	32.0	10.0		SW	1	—	Cl. 2 (ENE)	—	Sling thermometer, 19°-0; surface, 17°-0; surface, 20°-0; sling thermometer, 20°-0, 5 p.m. Temperature of snow, 12°-5; surface, 23°-0; sling thermometer, 25°-0, 10 a.m. Overcast generally, with falling ice crystals; wind shifting from SSW to SW, light, and calm at times. Close weather. Surface of snow similar to previous evening. Barometer dropping slowly to Midt. Weather clear. Cl. clouds gradually disappearing, also the Str. from mountains to westward. No sastrugi. Very soft snow; no crust on top, but underneath giving way as before.
	10 "		29.42	25.0	50.0	30.0		SW	1	—	Cl. 1 (NE)	—	3 a.m. Temperature of snow, 17°-0; surface, 20°-0; sling thermometer, 20°-0, 10 a.m. Temperature of snow, 12°-5; surface, 23°-0; sling thermometer, 25°-0, 6 p.m. Temperature of snow, 11°-0; surface, 14°-0; sling thermometer, 20°-0, Midt. to 3 a.m. Light SW wind, force 1. Snow surface similar. Sky almost clear of cloud. Weather till Midt. calm, with slight variable air from SSE to SW. Mirage to S to SW. Snow extremely soft, with 1½-in. crust in low spots. At camp, at depth of 4 ft. snow is as soft. No sastrugi. Barometer steady.
	6 p.m.	S 14° W, 176 m.	29.45	20.0	45.0	—		Calm	0	—	—	—	3 a.m. Temperature of snow, 12°-0; surface, 15°-0; sling thermometer, 16°-0, 4 p.m. Temperature of snow, 12°-0; surface, 16°-0; sling thermometer, 16°-0, Midt. to 3 a.m. Fine, clear, and slight mirage to W. Surface similar to last night; no sastrugi. Weather fine and clear from 4 p.m. to Midt., and during various hours when awake in day from 3 a.m. to 4 p.m. Same calm all the day. Surface of snow very soft in places, hard crust in others. Surface generally is hardening, with slight sastrugi from S to SSW. Crust of snow gave way under party as before. Barometer was slowly dropping at 8 p.m. Cracks appeared in many places at Midt.
	Midt.		29.45	—	—	—		SSE	0-1	—	—	—	5 a.m. Temperature of snow, 10°-0; surface, 10°-0; sling thermometer, 12°-5 and 27°-5 at 11 a.m.
Dec. 10	4 a.m.		29.42	20.0	32.0	17.0		SW	0-1	—	—	—	6 p.m. Temperature of snow, 14°-0; surface, 17°-0; sling thermometer, 17°-0, At 2 a.m. Str. clouds rapidly came up from SSE and passed away to N.W., covering three-fourths of the sky, then began to clear. Wind SSW at times. Cl. to 5 a.m. similar snow. Slight mirage to N at 5 a.m. Toward 6 p.m. Cl. started from SSW and gradually followed by Str., overspread the sky. Wind 2-3 at times. Continuous low drift. Surface of snow extremely soft, no crust, no permanent sastrugi. Snow same to Midt.
	8 "		29.35	—	—	—		SW	1	—	—	—	4 a.m. Temperature of snow, 14°-0; surface, 16°-0; sling thermometer, 20°-0, 6 p.m. Temperature of snow, 20°-0; surface, 22°-0; sling thermometer, 20°-0, Midt. Temperature of snow, 15°-0; surface, 16°-0; sling thermometer, 24°-0. Similar weather to 4 a.m. Wind fresh at times, low drift. Same snow surface. Barometer slowly. Str. clouds at 6 p.m. inclined to lift in SSW. From 6 p.m. to Midt. overcast and calm; no sastrugi; snow extremely soft; no crust. Barometer steady.
	Midt.		29.30	—	—	—		SSW	1	—	—	—	5.30 a.m. Temperature of snow, 16°-0; surface, 17°-0; sling thermometer, 23°-0.
	8 "		29.40	—	—	—		SSW	2-3	—	—	—	6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 30°-0. Weather from Midt. to 6 a.m. calm, overcast. Barometer fairly steady. Snow surface to Midt. extremely soft; no crust; no sastrugi, snow very sticky. Sky entirely overcast with Str.; barometer steady; wind light. Some patches of snow more sticky than others.
Dec. 11	5 a.m.		29.30	13.0	32.0	—		SSW	1-2	—	—	—	3 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 27°-0, 6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 27°-0; Midt. Similar weather, but wind inclined to squalls. Snow surface generally very soft, slight crust apparent in places. Barometer slowly falling.
	11 "		29.20	29.0	52.0	—		WSW	2	—	—	—	3 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 27°-0, 6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 27°-0; Midt. Similar weather, but wind inclined to squalls. Snow surface generally very soft, slight crust apparent in places. Barometer slowly falling.
	6 p.m.	S 16° W, 179 m.	29.35	25.0	50.0	—		SW	2	—	A.-s. 4 (WNW)	S. 3 (N)	4 a.m. Temperature of snow, 14°-0; surface, 16°-0; sling thermometer, 20°-0, 6 p.m. Temperature of snow, 20°-0; surface, 22°-0; sling thermometer, 20°-0, Midt. Temperature of snow, 15°-0; surface, 16°-0; sling thermometer, 24°-0. Similar weather to 4 a.m. Wind fresh at times, low drift. Same snow surface. Barometer slowly. Str. clouds at 6 p.m. inclined to lift in SSW. From 6 p.m. to Midt. overcast and calm; no sastrugi; snow extremely soft; no crust. Barometer steady.
	11 "		29.40	—	—	—		SSW	2-3	—	—	—	5 a.m. Temperature of snow, 16°-0; surface, 17°-0; sling thermometer, 23°-0.
Dec. 12	5 a.m.		29.45	20.0	20.0	20.0		SW	2	—	—	—	4 a.m. Temperature of snow, 14°-0; surface, 16°-0; sling thermometer, 20°-0, 6 p.m. Temperature of snow, 20°-0; surface, 22°-0; sling thermometer, 20°-0, Midt. Temperature of snow, 15°-0; surface, 16°-0; sling thermometer, 24°-0. Similar weather to 4 a.m. Wind fresh at times, low drift. Same snow surface. Barometer slowly. Str. clouds at 6 p.m. inclined to lift in SSW. From 6 p.m. to Midt. overcast and calm; no sastrugi; snow extremely soft; no crust. Barometer steady.
	11 "		29.55	—	32.0	—		SSW	2-3	—	—	—	5.30 a.m. Temperature of snow, 16°-0; surface, 17°-0; sling thermometer, 23°-0.
	6 p.m.	S 16° W, 181 m.	29.63	27.0	—	—		SSW	1-2	—	—	—	6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 30°-0. Weather from Midt. to 6 a.m. calm, overcast. Barometer fairly steady. Snow surface to Midt. extremely soft; no crust; no sastrugi, snow very sticky. Sky entirely overcast with Str.; barometer steady; wind light. Some patches of snow more sticky than others.
	11 "		29.61	25.0	—	—		Calm	0	—	—	—	3 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 27°-0, 6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 27°-0; Midt. Similar weather, but wind inclined to squalls. Snow surface generally very soft, slight crust apparent in places. Barometer slowly falling.
Dec. 13	5.30 a.m.		29.56	25.0	—	15.0		Calm	0	—	—	—	3 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 27°-0, 6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 27°-0; Midt. Similar weather, but wind inclined to squalls. Snow surface generally very soft, slight crust apparent in places. Barometer slowly falling.
	6 p.m.	S 17° W, 182 m.	29.53	29.0	—	—		SSW	1	—	—	—	3 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 27°-0, 6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 27°-0; Midt. Similar weather, but wind inclined to squalls. Snow surface generally very soft, slight crust apparent in places. Barometer slowly falling.
	10 "		29.55	—	—	—		SSW	1-2	—	—	—	3 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 27°-0, 6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 27°-0; Midt. Similar weather, but wind inclined to squalls. Snow surface generally very soft, slight crust apparent in places. Barometer slowly falling.
	Midt.		29.55	—	—	—		SSW	2	—	—	—	3 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 27°-0, 6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 27°-0; Midt. Similar weather, but wind inclined to squalls. Snow surface generally very soft, slight crust apparent in places. Barometer slowly falling.
Dec. 14	3 a.m.		29.50	23.0	30.0	20.0		SSW	1-2	—	—	—	3 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 27°-0, 6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 27°-0; Midt. Similar weather, but wind inclined to squalls. Snow surface generally very soft, slight crust apparent in places. Barometer slowly falling.
	6 p.m.	S 18° W, 184 m.	29.40	27.0	30.0	—		SSW	1	—	—	—	3 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 27°-0, 6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 27°-0; Midt. Similar weather, but wind inclined to squalls. Snow surface generally very soft, slight crust apparent in places. Barometer slowly falling.
	8 "		29.35	29.0	29.0	—		SSW	1	—	—	—	3 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 27°-0, 6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 27°-0; Midt. Similar weather, but wind inclined to squalls. Snow surface generally very soft, slight crust apparent in places. Barometer slowly falling.
	8 "		29.35	29.0	29.0	—		SSW	1	—	—	—	3 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 27°-0, 6 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 27°-0; Midt. Similar weather, but wind inclined to squalls. Snow surface generally very soft, slight crust apparent in places. Barometer slowly falling.



TABLE XIV.—JOURNEY OF CAPTAIN SCOTT, R.N., AND LIEUTENANT SHACKLETON, R.N.R., TO THE SOUTH, NOVEMBER 2, 1902, TO FEBRUARY 3, 1903 (continued).

Date.	Time.	Neon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Thermometers.			Wind.		Miscellaneous phenomena.	Clouds.		Remarks.
				In shade.	Freely exposed.	Split minimum.	Direction.	Force (Beaufort).		Upper, moving to	Lower, moving to	
1902. Dec. 24	10 a.m.		Ins. 29.63	° 16.0	° 40.0	° —	N	1	—	Fr.-cl.-s. 7 (ENE)	—	10 a.m. Temperature of snow, 15°-0; surface, 15°-0; sling thermometer, 15°-0, 10 p.m. Temperature of snow, 20°-0; surface, 20°-0; sling thermometer, 22°-0. Cloudy; high Cl.-s. moving ENE and NE during the morning and early afternoon, then shifting directly to SSE. Snow surface somewhat hard with 24-in. crust soft below that, and on top of crust light snow crystals. Sastrugi S to SSE, not well defined. Weather from 5 p.m. to Midt. bc, clouds travelling fast to NNE. Much mirage to S at 6 p.m. Surface of snow harder, sastrugi well defined, SSE.
	Noon	S 8° W, 254 m.	29.00	—	—	—	N	1	—	Fr.-cl.-s. 7 (NE)	—	
	6 p.m.		29.01	—	—	—	N	1	—	Fr.-cl.-s. 6 (SSE)	—	
Dec. 25	10 "		29.01	° 22.0	° 30.0	° —	SW	1	—	Cl. 8 (NNE)	—	
	9 a.m.		29.15	° 30.0	° 62.0	° —	Calm	0	b	—	—	9 a.m. Temperature of snow, 22°-0; surface, 26°-0; sling thermometer, 30°-0, 4 p.m. Temperature of snow, 31°-0; surface, 31°-0; sling thermometer, 32°-0, and at Midt. 24°-0.
	4 p.m.	S 7° W, 264 m. (p.m.)	29.20	° 32.0	° 60.0	° —	Calm	0	b	—	—	Weather all day clear and line, intensely hot; snow surface towards evening melting under sun's rays.
Dec. 26	6 "		29.30	—	° 52.0	° —	Calm	0	b	—	—	Weather similar up to Midt. Sastrugi SE to SSE, well defined, but not high; soft patches in places. Barometer rising slowly all day. At 11 p.m. put out evaporation dish, full, and in the morning at 6 a.m. it was quite empty.
	Midt.		29.35	° 24.0	° 50.0	° —	N ahrs.	0-1	b	—	—	
	8 a.m.		29.40	° 22.0	° 40.0	° 17.0	N	1	b	—	—	8 a.m. Temperature of snow, 20°-0; surface, 21°-0; sling thermometer, 22°-0; and 29°-0 at Noon.
Dec. 27	Noon	S 7° W, 271 m. (a.m.)	29.38	° 25.0	° 65.0	° —	N	1-2	b	—	—	10 p.m. Temperature of snow, 22°-0; surface, 22°-0; sling thermometer, 26°-0; and 24°-0 at 6 p.m.
	6 p.m.		29.35	° 25.0	° 55.0	° —	S	0-1	b	—	—	Weather from 8 a.m. to 4 p.m. fine and clear. Light N7 wind until 2 p.m., then calm. Weather clear from 2 p.m.; light puffs of wind, variable from S to N, shifting to W in circuit. Sastrugi SSE, sharp, but low, covered with snow, which is slowly hardening.
	10 "		29.35	° 20.0	° 49.0	° —	S	1	b	—	—	
Dec. 28	8 a.m.		29.39	° 23.0	° 48.0	° 19.0	Var.	0-1	b	—	—	8 a.m. Temperature of snow, 16°-0; surface, 18°-0; sling thermometer, 22°-0. Noon. Sling thermometer, 26°-0.
	Noon	S 6° W, 273 m.	29.40	—	—	—	Var.	1-0	b	—	—	Temperature of snow, 30°-0; surface, 31°-0; sling thermometer, 32°-0.
	6 p.m.		29.40	—	—	—	N	2	b	—	—	Weather all day, from 8 a.m. to 10 p.m., fine and clear. Slight mirage on land to S and W. Wind very variable and light, shifting all round the compass; within 20 minutes noted change from S to N, N to W, W to E, force never exceeding 2. Snow surface gradually improved, the light snow evidently evaporating off. Sastrugi SSE, parallel to land, not large, but numerous small flecks. Suddenly the surface was noted to be quite clear of snow crystals. 4 p.m. Travelling better.
Dec. 29	10 "		29.40	° 28.0	° 50.0	° —	Var.	1	b	—	—	
	8 a.m.		29.40	° 22.0	° 17.0	° 17.0	N	1	b	—	—	8 a.m. Temperature of snow, 17°-0; surface, 18°-0; sling thermometer, 22°-0. Noon. Sling thermometer, 26°-0.
	Noon	S 5° W, 285 m. (p.m.)	29.41	° 29.0	° 55.0	° —	N	2	b	—	—	Temperature of snow, 23°-0; surface, 23°-0; sling thermometer, 25°-0. Weather from 8 a.m. to 10 p.m. line and clear, with light N7 wind all day, not exceeding force 2. Mirage occasionally over the land. Snow surface much harder, with sastrugi clearly defined SSE parallel to land, but towards p.m. erratic, main direction SSE. 6 p.m. Barometer commenced to fall slowly.
Dec. 29	8 p.m.		29.35	° 26.0	° 45.0	° —	N	2	b	—	—	
	10 "		29.32	—	—	—	N	1	b	—	—	
	8 a.m.		29.23	° 17.0	° 40.0	° 16.0	SSW	4	bn	—	—	8 a.m. Temperature of snow, 15°-0; surface, 16°-0; sling thermometer, 17°-0. 2 p.m. Sling thermometer, 15°-0.
Dec. 30	Noon	S 5° W, 291 m. (p.m.)	29.28	—	—	—	SSW	4	bn	—	—	8 p.m. Temperature of snow, 19°-0; surface, 20°-0; sling thermometer, 22°-0. At 4.30 a.m. wind started from SSW and increased to force 4 at 8 a.m., with drift.
	2 p.m.		29.30	° 15.0	° 45.0	° —	SSW	3-4	bn	—	—	2 p.m. Observed phenomenon described on p. 13 of Lieutenant Royns' Memor. Wind decreased from 2 p.m. to force 1 at 8 p.m. 5.30 p.m. Sky became entirely overcast with Str. moving NNE. At 8 p.m. snowing slightly. Wind constant in direction all day. Drift ceased at 4 p.m. Barometer steady from 2 p.m. to 7.30 p.m., then rising steadily.
	8 "		29.32	° 22.0	° 26.0	° —	SSW	1	o	—	N 10	
Dec. 30	8 a.m.		29.25	° 5.0	° 30.0	° 10.0	NNE	1	bn	—	—	8 a.m. Temperature of snow, 17°-0; surface, 17°-0; sling thermometer, 15°-0. Noon. Temperature of snow, 15°-0; surface, 15°-0; sling thermometer, 17°-0.
	Noon	S 5° W, 296 m.	29.19	—	—	—	N	1-2	bn	—	—	Weather foggy all the morning, with sun shining through. Same weather till 4 p.m., then low 7 and 8 and 9, wind increasing to SSE, force 3 at 8 p.m., shifting from N round by E. Barometer dropped till 7 p.m., then rose slightly. Sastrugi SSE slight, but surface conditions quite exceptional, as party is moving over glacier floor with various cracks, &c. — at 8 a.m. and generally through day.
	4 p.m.		29.18	—	—	—	NE	2	bn	—	—	
8 "			29.25	° 7.0	° 25.0	° —	SSE	2-3	bn	—	—	

Dec. 31	8 a.m.	29.35	15.0	20.0	—	SSE	2	bc	—	Cl. 2 (NNW)	S 6 (NNW)	8 a.m.
	Noon	29.45	—	40.0	—	Calm	0	bc	—	Cl.-cu. 3 (NNW)	—	Temperature of snow, 15.0; surface, 15.0; sling thermometer, 15.0. Weather gradually clearing from 8 a.m., and barometer rising till 8 p.m., then falling. From 1 p.m. sky was b. with light N <sup>y</sup> airs. Surface of snow heavy, being covered with a light powdery stuff from drift, and in afternoon, near coast, covered with thick hoar frost. Noon. Sky was a quarter covered with fine Cl.-cu., moving NNW. Barometer at Midd., 29.35 ins.
	11 p.m.	29.38	15.0	28.0	—	N	1	b	—	—	—	
1903.	8 a.m.	29.30	17.0	50.0	16.0	S	0-1	bc	—	Cl. 5 (NNW)	—	8 a.m. Temperature of snow, 15.0; surface, 17.0; sling thermometer, 17.0. 9.30 p.m. Slug thermometer, 17.0.
Jan. 1	Noon	29.28	—	60.0	—	S	1	bc	—	Fr.-cl.-s. 3 (NNW)	—	Snow surface harder as day progressed, but some large patches of same powdery snow remaining. Sastrugi SSE. Sky half covered with Cl. till 10.30 a.m., giving place to b. then to X; general direction of cloud NNW, very broken. Wind increased at 4 p.m. to force 3. Barometer steady all day.
	4 p.m.	29.28	20.0	45.0	—	S	2-3	bc	—	Fr.-cl.-s. 6 (NNW)	—	
	9.30 "	29.29	17.0	39.0	Hypsometer 2110 29.33	S	2-1	bc	—	Fr.-cl.-s. 2 (NNW)	—	
Jan. 2	7 a.m.	29.34	18.0	30.0	15.0	SSE	2	bc	—	Cl. 5 (N)	—	7 a.m. Temperature of snow, 15.0; surface, 15.0; sling thermometer, 15.0. 8 p.m. Temperature of snow, 20.0; surface, 20.0; sling thermometer, 20.0. Breeze from SSE all morning, dying away about 3 p.m.; then variable air, N, S, E, and W, to 10 p.m. Main direction of clouds NNW and N. Snow surface very soft, being covered also with — and —, falling from 6 p.m. Sky to SSE cleared from 5 a.m. to 7 p.m., then Cl.-cu. worked up again moving NNW rapidly. Sastrugi SSE.
	2 p.m.	29.36	—	42.0	—	SSE	2-1	bc	—	Cl.-cu. 7 (N)	—	
	8 "	29.36	27.0	34.0	—	Var.	0-1	bc	→	Cl.-cu. 6 (NNW)	—	
	10 "	29.38	—	—	—	Var.	0-1	bc	→	Cl.-cu. 7 (NNW)	—	
Jan. 3	8 a.m.	29.40	22.0	40.0	20.0	Calm	0	bc	—	Cl.-cu. 4 (NW)	—	8 a.m. Temperature of snow, 17.0; surface, 20.0; sling thermometer, 20.0. and at 1 p.m., 20.0.
	1 p.m.	29.40	29.0	50.0	—	S	1-2	bc	—	Cl.-s. 5 (NW)	—	7 p.m. Temperature of snow, 27.0; surface, 27.0; sling thermometer, 27.0. Weather fine all day. Southerly wind started 10 a.m., never increasing above force 3; after 4 p.m. SSE, force 3. Large amount of Cl.-cu. came up about 7 to 8 a.m. in ENE. General direction of all clouds to NW. Bow of Cl.-cu. radiating N and S. Low Fr.-s. to S and SW, moving to N. From 6 p.m. snow surface soft, but easy travelling. Barometer steady all day. Sastrugi SSE.
	7 "	29.40	28.0	40.0	—	SSE	2-3	bc	—	Cl.-cu. 5 (NW)	Fr.-s. 3 (N)	
Jan. 4	7 a.m.	29.50	24.0	40.0	20.0	SSE	1	bc	—	A.-cl.-s. 4 (NW)	S. 2 (NW)	7 a.m. Temperature of snow, 20.0; surface, 21.0; sling thermometer, 20.0. Noon. Temperature of snow, 27.0; surface, 28.0; sling thermometer, 28.0. and at 5 p.m., 30.0.
	Noon	29.55	30.0	62.0	—	NE to NNE	1-2	bc	—	Cl.-s. 3 (WNW)	—	7 p.m. Temperature of snow, 27.0; surface, 27.0; sling thermometer, 27.0. Weather fine all day. Southerly wind started 10 a.m., never increasing above force 3; after 4 p.m. SSE, force 3. Large amount of Cl.-cu. came up about 7 to 8 a.m. in ENE. General direction of all clouds to NW. Bow of Cl.-cu. radiating N and S. Low Fr.-s. to S and SW, moving to N. From 6 p.m. snow surface soft, but easy travelling. Barometer steady all day. Sastrugi SSE.
	5 p.m.	29.60	30.0	50.0	—	N	2-3	bc	—	Cl.-s. 3 (WNW)	S. 2 (NW)	7 p.m. Sling thermometer, 30.0. Snow surface during day soft, being covered with crystals to a depth of 6 to 10 ins. Clouds travelling very fast all day to WNW and NW. Wind from SSE to N in afternoon. Low Str. over western land most of the day. Cl.-s. radiating N and S at 6 p.m. Barometer gradually rose till 5 p.m., and then dropped. Sastrugi SSE.
	7 "	29.50	30.0	40.0	Hypsometer 2110-25 29.48	N	3	bc	—	Cl.-s. 4 (WNW)	—	
Jan. 5	8 a.m.	29.45	23.0	41.0	21.0	NNE	1	bc	—	Cl.-s. 3 (NW)	—	8 a.m. Temperature of snow, 20.0; surface, 21.0; sling thermometer, 20.0. 1.30 p.m. Temperature of snow, 29.0; surface, 31.0; sling thermometer, 29.0. 7 p.m. Temperature of snow, 27.0; surface, 28.0; sling thermometer, 28.0. Snow surface very soft all day, with loose crystals, which were greatly affected by sun's rays. Wind, never more than force 2, from NNE to N during day. Sun clear generally. Clouds all day moving NW. Cl.-s. at 5 p.m. radiating N and S. Clouds travelling fast. Sastrugi SSE, mostly hidden by snow crystals. Barometer dropping slowly.
	1.30 p.m.	29.40	—	57.0	—	NNE	2	bc	—	Cl.-s. 4 (NW)	—	
	7 "	29.35	—	—	—	N	2-1	bc	—	Cl.-s. 4 (NW)	—	
Jan. 6	8 a.m.	29.40	29.0	49.0	—	Var.	0-1	bc	—	Cl.-s. 3 (N)	S. 3 (N)	8 a.m. Temperature of snow, 27.0; surface, 28.0; sling thermometer, 28.0. 1 p.m. Sling thermometer, 31.0. 6 p.m. Sling thermometer, 30.0.
	1 p.m.	29.42	35.0	45.0	—	SSW	2-3	o	*	—	N. 10	Snow extremely soft, and as day went on became sodden. Snow temperature at 1 p.m., 32.0. Weather changed from bc at 8 a.m. to o at 10 a.m., then o * at Noon. Snow driving from SSW and SW; the high temperature prevailing turned it to water on sledge-gear immediately. Weather continued the same throughout the afternoon. Wind shifting sometimes to SW. Sastrugi SSE, slight. Barometer rising slowly.
	6 "	29.48	33.0	43.0	—	SSW	2-1	o	*	—	N. 10 (N)	8 a.m. Temperature of snow, 20.0; surface, 20.0; sling thermometer, 20.0. 7 p.m. Temperature of snow, 20.0; surface, 20.0. 0 percent till 3 p.m., then bc for 3 hours. Wind throughout day variable from S to N; strongest force 2, from S. Clouds during day travelling mainly to SSE fairly rapidly. Occasional sight of high Cl.-cu. going NW. Low Cu. and Str., which lifted to E over western mountains. Surface snow crisp crust till 4 p.m., then continued moist from sun till 7 p.m., then crisp again. Sastrugi S to SW, slight. Barometer slowly dropping.
Jan. 7	8 a.m.	29.45	30.0	50.0	21.0	NW	1	o	—	—	S. 10 (ESE)	8 a.m. Temperature of snow, 20.0; surface, 30.0. 7 p.m. Temperature of snow, 20.0; surface, 28.0.
	1 p.m.	29.44	36.0	63.0	—	Var.	0-2	oc	—	A.-cl. 2 (N)	Cu. 8 (SE)	0 percent till 3 p.m., then bc for 3 hours. Wind throughout day variable from S to N; strongest force 2, from S. Clouds during day travelling mainly to SSE fairly rapidly. Occasional sight of high Cl.-cu. going NW. Low Cu. and Str., which lifted to E over western mountains. Surface snow crisp crust till 4 p.m., then continued moist from sun till 7 p.m., then crisp again. Sastrugi S to SW, slight. Barometer slowly dropping.
	7 "	29.40	29.0	45.0	—	Var.	0-1	oc	—	—	Cu. 9 (E)	8 a.m. Temperature of snow, 20.0; surface, 20.0; sling thermometer, 20.0. 7 p.m. Temperature of snow, 20.0; surface, 28.0.
Jan. 8	8 a.m.	—	—	—	—	N	2	bf	—	Cl. 1	—	8 a.m. Temperature of snow, 20.0; surface, 20.0.
	Noon	29.20	—	—	—	N	2	b	—	Cl. 1	—	Soft wet snow fell most of the night in drift powder, 8 a.m. Fog banks coming up one after another from the N, alternating with clear blue sky; fog bow visible when land was obliterated; fog ceased about 10 a.m., and sky cleared. Strong N <sup>y</sup> breeze blowing drift powder along the ground. Breeze dropped about 2 p.m., and for the rest of the day the sun shone in a cloudless sky. Dead calm and very hot.
	6 p.m.	29.15	27.0	—	—	Calm	0	b	—	—	—	

TABLE XIV.—JOURNEY OF CAPTAIN SCOTT, R.N., AND LIEUTENANT SHACKLETON, R.N.R., TO THE SOUTH, NOVEMBER 2, 1902, TO FEBRUARY 3, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Thermometers.			Wind.		Miscellaneous phenomena.	Clouds.		Remarks.
				In shade.	Freely exposed.	Spirit minimum.	Direction.	Force (Beaufort).		Upper, moving to	Lower, moving to	
1903. Jan. 9	6 a.m.		ins. 29.08	19.6	—	—	S	1-2	—	—	—	6 a.m. Temperature of snow, 21°-0; surface, 21°-0. 6 p.m. Temperature of snow, 24°-5; surface, 32°-5. 6 p.m. Temperature of snow, 27°-8.
	Noon	S 13° W, 227 m.	29.18	30.0	—	—	S	1-2	—	—	—	6 a.m. Calm; clear; no clouds. Snow all day much the same; surface alternately crystalline with ice crystals, then crusted from sun's action, then very fine powdery drift, with no crust. Sastrugi merely ripple marks, those formed by yesterday's N breeze now being obliterated and replaced by others formed by S breeze. 7 p.m. Low clouds formed, just capping the tops of the western range. Excessive mirage all the morning.
	6 p.m.		29.22	27.0	—	—	S	1-2	—	—	—	7 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 19°-0. Snow surface during morning fairly soft, with hard patches, and again powdery patches, which made heavy travelling. At Noon sky became overcast from S, and snow fell with drift, which increased rapidly, with wind force 4-5. This continued all afternoon, easing a little at 7 p.m. Barometer steady all day; started rising about 6 p.m. Between Midt. and 7 a.m. barometer was steady at 29.20 ins. Sastrugi indistinguishable.
Jan. 10	7 a.m.		29.22	20.0	20.0	S	0-1	bc	—	Cl. 4 (N)	Cu. 3 (N)	
	Noon		29.20	29.0	—	S by E	2-3	o	*†	—	N. 10	
Jan. 11	7 p.m.	S 14° W, 223 m. (p.m.)	29.30	—	—	SSW	3-5	o	*	—	N. 10 (N)	
	8 a.m.		29.25	25.0	20.0	SSW	4-6	o	*	—	N. 10	8 a.m. Temperature of snow, 22°-0; surface, 23°-0. Barometer slowly rising all day. Wind, force 4-5, with hills occasionally in morning early, easing slowly towards Noon. Clouds travelling fast to N, and sun occasionally seen. During the afternoon wind went to S, and snow ceased. Sun visible at times. Upper clouds travelling quickly, likewise the lower. Snow surface very soft and powdery; heavy for sledges; with occasionally hard blown patches. All snow showing slight sastrugi SSW to S.
Jan. 12	8 a.m.		29.45	27.0	19.0	Calm	0	oc	—	—	S. 8 (N)	8 a.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer at Noon, 29°-0.
	Noon	S 16° W, 203 m.	29.35	—	—	SSW	4-5	o	*	Fr.-ci.-s. 2 (N)	S. 8 (N)	6 p.m. Temperature of snow, 27°-0; surface, 28°-0. Weather during the forenoon overcast, but inclined to clear from S. At Noon, however, wind increased from SSE and S, with snow and drift, which continued during afternoon. Sun obscured. All clouds travelling N and N.W. very rapidly. Barometer fairly steady all day. Snow surface soft from sun's heat; snow composed of large crystals which fell during the early morning, 1 to 4 a.m. During the afternoon the snow was wetter and drift powdery.
Jan. 13	6 p.m.		29.48	—	—	S	2	oc	—	—	N. 10	6 p.m. Temperature of snow, 24°-0; surface, 25°-0; sling thermometer, 26°-0. Weather till Noon misty, snowing, overcast. Just after Noon sun appeared, and Cl.-ci., travelling to N, were observed. From that time on to 8 p.m. weather was clearing, but large masses of Str. were travelling N. 5 p.m. Wind shifted to N round by E. Snow surface very soft, with hard 1-in. crust below 4 ins. of soft snow. No marked sastrugi, only flecks from SSW wind. Barometer rising slowly.
	8 p.m.	S 18° W, 185 m.	29.55	—	—	N	1	oc	—	—	S. 8 (N)	6 a.m. Temperature of snow, 21°-0; surface, 22°-0; sling thermometer, 22°-0. Weather till Noon misty, snowing, overcast. Just after Noon sun appeared, and Cl.-ci., travelling to N, were observed. From that time on to 8 p.m. weather was clearing, but large masses of Str. were travelling N. 5 p.m. Wind shifted to N round by E. Snow surface very soft, with hard 1-in. crust below 4 ins. of soft snow. No marked sastrugi, only flecks from SSW wind. Barometer rising slowly.
Jan. 14	7 a.m.		29.50	28.0	21.0	NE	1	oc	—	—	S. 8 (N)	7 a.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 36°-0, and at Noon, 23°-0.
	Noon	S 18° W, 177 m.	29.65	29.0	—	SE	1	oc	*→	—	S. 8 (N)	6 p.m. Temperature of snow, 26°-0; surface, 27°-0; sling thermometer, 26°-0. Snow very soft, with covering of crystals which had fallen during the night. Weather dull, overcast, and cloudy all day, with occasional slight showers through Str. clouds, which were travelling N all day. Surface of snow generally crusted. Sastrugi marked sometimes N and S. Barometer fairly steady all day. Light wind. Misty over the land.
Jan. 15	6 p.m.		29.69	—	—	SE	1-0	oc	*→	—	S. 8 (N)	8 a.m. Temperature of snow, 17°-0; surface, 18°-0; sling thermometer, 15°-0. Noon. Temperature of snow, 20°-0; surface, 22°-0; sling thermometer, 32°-0.
	8 "		29.55	—	—	—	—	—	—	—	—	6 p.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 25°-0. In surface at 10 a.m. Fog came up from S. Weather fine all day, with light S airs and a breeze, force 1, in afternoon. Surface of snow soft on top, with large crystals. Later much harder, with well marked sastrugi, variable in direction, from SW to SSE. Crevasses of unknown depth, covered with snow, were noted by our party falling through the snow, but not going down.
Jan. 15	8 a.m.		29.49	—	17.0	S airs	—	b	—	—	—	8 a.m. Temperature of snow, 17°-0; surface, 18°-0; sling thermometer, 15°-0. Noon. Temperature of snow, 20°-0; surface, 22°-0; sling thermometer, 32°-0.
	Noon	S 17° W, 170 m.	29.46	—	—	S	0-1	hmf	—	—	S. 2	6 p.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 25°-0. In surface at 10 a.m. Fog came up from S. Weather fine all day, with light S airs and a breeze, force 1, in afternoon. Surface of snow soft on top, with large crystals. Later much harder, with well marked sastrugi, variable in direction, from SW to SSE. Crevasses of unknown depth, covered with snow, were noted by our party falling through the snow, but not going down.
Jan. 15	6 p.m.		29.48	—	—	S	1	hmf	—	—	—	6 p.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 25°-0. In surface at 10 a.m. Fog came up from S. Weather fine all day, with light S airs and a breeze, force 1, in afternoon. Surface of snow soft on top, with large crystals. Later much harder, with well marked sastrugi, variable in direction, from SW to SSE. Crevasses of unknown depth, covered with snow, were noted by our party falling through the snow, but not going down.
	8 "		29.45	—	—	S	0-1	hmf	—	—	—	6 p.m. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 25°-0. In surface at 10 a.m. Fog came up from S. Weather fine all day, with light S airs and a breeze, force 1, in afternoon. Surface of snow soft on top, with large crystals. Later much harder, with well marked sastrugi, variable in direction, from SW to SSE. Crevasses of unknown depth, covered with snow, were noted by our party falling through the snow, but not going down.

Date	Time	Wind	Wind Dir	Wind Spd	Temp	Humidity	Pressure	Clouds	Remarks
Jan. 16	8 a.m.	NNE		0-1	17.0	32.0			S. 10
	1 p.m.	N		1		40.0			S. 10 (S)
	6 "	NW		0-1		45.0			S. 7 (S)
	8 "	N airs				50.0			S. 2 (S) A.-cl. 4 (S)
Jan. 17	6 a.m.	N		0-1	15.0	30.0			S. 10
	1 p.m.	N to NNE		1		40.0			S. 10
	6 "	Var. NE to NW		1					S. 7 (S)
	7.30 "								S. 2 (S) Cl. 4 (S)
Jan. 18	7 a.m.	Var. NW to W		0-1	16.0	35.0			S. 10
	Noon	E to NE		0-1					S. 10
	9 p.m.	Calm		0		25.0			S. 10
	11.30 "	WNW		0-1					S. 8 (S)
Jan. 19	10 a.m.	NW		1	14.0	35.0			S. 10 (SE)
	2 p.m.	NW to N		1		35.0			S. 10 (SE)
	7 "	NW to N		2		30.0			S. 10 (SE)
	Jan. 20	8 a.m.	NW airs		0-1	5.0	30.0		
1 p.m.		W		1		36.0			S. 6 (N)
6 "		SW		0-1					S. 4 (N)
9 "		Calm		0		20.0			S. 1 (N) Cl. cu. 4 (N)
Jan. 21	8 a.m.	SSW		4-5	7.0	30.0			S. 2 (NNE)
	1 p.m.	SSW		4					Cl. cu. 7 (NNE)
	6 "	SSW		4-3		35.0			Fr.-cl.-s. 4 (NNE)
	9 "	Calm		0					Cl. cu. 5 (NNE)
Jan. 22	8 a.m.	SSW		5-6	4.0	20.0			S. 2 (NNE)
	Noon	SSW		4-3					S. 3 (NNE)
	8 p.m.	SSW		3-2		35.0			S. 1 (NNE)
	10 "	SSW		2-3		30.0			S. 8 (N)
Jan. 23	8 a.m.	SW by S		0-1		33.0			S. 10 (NNE)
	1 p.m.	SW by S		1		35.0			S. 10 (NNE)
	6 "	SW by S		2		36.0			S. 6 (NNE)
	9 "	SW by S		2					S. 7 (NNE)

8 a.m. Temperature of snow, 18°-0; surface, 20°-0; sling thermometer, 28°-0, and at 6 p.m., 25°-0.  
 1 p.m. Temperature of snow, 19°-0; surface, 20°-0; sling thermometer, 22°-0, and at 6 p.m., 25°-0.  
 8 p.m. Temperature of snow, 25°-0; surface, 25°-0.  
 Dull, overcast, with light NNE to N breeze all morning. Inclined to lift over western mountains. During afternoon the Str. cloud lifted, fell at 2.30 p.m., sun appeared. At 8 p.m. Cl. clouds travelling S slowly, and Str. in same direction quickly. Weather at 8 p.m., fine and clear. Snow surface hard, and soft sastrugi very irregular. Surface broken and crevassed.  
 6 a.m. Temperature of snow, 18°-5; surface, 17°-0; sling thermometer, 16°-0.  
 1 p.m. Temperature of snow, 22°-0; surface, 24°-0; sling thermometer, 22°-0.  
 6 p.m. Sling thermometer, 20°-0.  
 Overcast all day until 7.30 p.m., then Str. breaking from N. Snow surface alternately hard and soft with crust. Sastrugi very irregular. General surface split into mounds and cracks, and covered with large sastrugi, all due to local influence of strait at Cape Armitag. Occasional flakes of snow fall throughout day. Wind variable, NW to NE, force not more than 1. Barometer steady.  
 7 a.m. Temperature of snow, 20°-0; surface, 21°-0; sling thermometer, 15°-0.  
 Noon. Temperature of snow, 22°-0; surface, 23°-0; sling thermometer, 15°-0, at 9 p.m., 17°-0.  
 11.30 p.m. Temperature of snow, 19°-0; surface, 19°-0; sling thermometer, 12°-0. Weather throughout the day overcast with Str. Towards noon clouds must have been fairly thin, for great radiation of sun was felt. Wind variable all day, sometimes calm. Sastrugi, when seen, variable; very large at times. Light very hard. Snow surface very cracked in places. Occasional flakes of snow falling in afternoon. Barometer slowly dropping.  
 10 a.m. Temperature of snow, 19°-0; surface, 21°-0; sling thermometer, 15°-0.  
 2 p.m. Temperature of snow, 21°-0; surface, 23°-0; sling thermometer, 13°-0.  
 7 p.m. Temperature of snow, 19°-0; surface, 23°-0; sling thermometer, 13°-0.  
 Weather throughout the day entirely overcast. Occasional glimpses of sun, showing clouds travelling to SE. Flakes of snow falling all day. Snow surface with 14-in. crust, which gave way with loud report, very often for some distance. Snow below extremely soft. Sastrugi large, irregular, and often covered by snow. Barometer dropping all day.  
 8 a.m. Temperature of snow, 16°-0; surface, 16°-0; sling thermometer, 6°-0.  
 1 p.m. Temperature of snow, 16°-0; sling thermometer, 12°-0, and at 6 p.m., 5°-0.  
 9 p.m. Temperature of snow, 6°-0; surface, 7°-0; sling thermometer, 10°-0.  
 Well marked hexagonal snow crystals, very flocculent, had been falling all night and throughout the day; surface of snow under this loose stuff, a 4-in. crust, then very soft. Sastrugi large, and occasionally SW in direction. Barometer dropped during night to 28.85 ins. at 4 a.m., then slowly rose. Weather gradually clearing; Str. cloud, driving N, coming up in banks from S. 9 p.m. Bank of Cl.-cu. rising over sky from SSE to NNW.  
 8 a.m. Temperature of snow, 12°-0; surface, 14°-0; sling thermometer, 10°-0 at 8 a.m., 17°-0 at 1 p.m., and 20°-0 at 9 p.m.  
 Strong wind from SSW, with driving fine drift for the greater part of day; drift forming into high soft banks; rest of snow surface covered with hard 4-in. crust. Sastrugi taking direction of present wind. Barometer, which was 28.76 ins. at 4 a.m., gradually rose to 28.91 ins. at 2 p.m., then slowly dropped to 28.74 ins. at 9 p.m. Upper and lower clouds travelling very fast to NNE all day, some Str. going N. Cl.-cu. and Fr.-cl.-s. were main upper clouds, sun shining brightly through rifts.  
 8 a.m. Temperature of snow, 16°-0; surface, 17°-0; sling thermometer, 15°-0.  
 Noon. Temperature of snow, 17°-0; surface, 18°-0; sling thermometer, 20°-0.  
 10 p.m. Temperature of snow, 16°-0; surface, 17°-0; sling thermometer, 12°-0.  
 At 4 a.m. barometer read 28.60 ins. Wind strong SSW, force 6-7, with heavy drift. Wind ceased towards 7 a.m.; barometer rose slowly all day. Wind decreasing in squalls, sky becoming clearer, clouds both upper and lower, travelling fast NNE. At 8 p.m. Cl.-cu. bank radiating NNE and SSW, wind blowing in into small mounds of sticky snow, otherwise snow surface hard, 4-in. crust with soft teneath. Crust of snow gave way beneath feet with loud report and cracks. Sastrugi slight, SSW.  
 8 a.m. Temperature of snow, 17°-0; surface, 18°-0; sling thermometer, 20°-0.  
 1 p.m. Temperature of snow, 16°-0; surface, 20°-0; sling thermometer, 20°-0.  
 6 p.m. Temperature of snow, 17°-0; surface, 18°-0; sling thermometer, 20°-0; and at 9 p.m., 18°-0.  
 Snow surface uniformly hard with 1-in. crust all day. Sastrugi slight, from SSE owing to late gale. Light to moderate wind from SW by S during day. Mainly overcast; occasional glimpses of sun showing that clouds were travelling NNE quickly. Str. cloud lifted over land at 4 p.m. and weather cleared a bit.

TABLE XIV.—JOURNEY OF CAPTAIN SCOTT, R.N., AND LIEUTENANT SHACKLETON, R.N.R., TO THE SOUTH, NOVEMBER 2, 1902.  
TO FEBRUARY 3, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Thermometers.			Wind.		Miscellaneous phenomena.	Clouds.		Remarks.
				In shade.	Freely exposed.	Spirit minimum.	Direction.	Force (Beaufort).		Upper, moving to	Lower, moving to	
1903. Jan. 24	8 a.m.		ins. 29.30	°	°	°						8 a.m. Temperature of snow, 16°-0; surface, 17°-0; sling thermometer, 19°-0.
	1 p.m.	S 9° W, 93 m.	29.35	33.0	40.0	—	SSW	2	—	—	S. 10	1 p.m. Temperature of snow, 20°-0; surface, 21°-0; sling thermometer, 25°-0; and at 6 p.m. 29°-0.
	6 "	"	29.40	33.0	—	—	SSW	1	—	—	S. 9 (NNE)	9 p.m. Temperature of snow, 26°-0; surface, 21°-0; sling thermometer, 20°-0.
	9 "	"	29.36	—	—	Hygrometer 21.0 29.33	Calm	0	—	—	S. 10	Snow surface with slight crust during forenoon and up to 4 p.m., then crust disappeared. Snow was very soft, feet sinking in 10 to 12 ins. Weather cleared all day. Sun seen at 6 p.m. Str. cloud travelling NNE fast. Wind fairly moderate at 5 a.m. Had been blowing force 4 at 3 a.m., then decreased to 2, until 1 p.m.; calm at 9 p.m.
Jan. 25	8 a.m.		29.30	32.0	4.0	—	N	1	bc	—	—	8 a.m. Temperature of snow, 15°-0; surface, 17°-0; sling thermometer, 12°-0.
	Noon	S 6° W, 84 m.	29.23	39.0	—	—	N to NNE	0-1	bc	Fr.-cl.-s. 2 (N to NNE)	—	Noon. Temperature of snow, 18°-0; surface, 17°-0; sling thermometer, 20°-0, and at 5.30 p.m. 17°-0.
	8.30 p.m.		29.16	45.0	—	—	Calm	0	bc	Fr.-cl.-s. 1 (NNE)	S. 1 (N)	10 p.m. Temperature of snow, 26°-0; surface, 20°-0; sling thermometer, 13°-0.
	10 "	"	29.10	—	—	—	S	0-1	bc	Fr.-cl.-s. 3 (NNE)	—	Snow surface all day very soft, feet sinking in 12 ins. Sastugi irregular; some old in various directions from W to SE, but main portion cut by last SSW winds. Weather beautifully clear all day. Light N to NE wind, force 1, during forenoon. Clouds, Fr.-cl.-s., few, moving NNE. Calm during the afternoon. Light S by airs at 10 p.m., with haze in S and mirage to E and NNE; land miraged up all the afternoon.
Jan. 26	8 a.m.		29.10	30.0	3.0	—	SW by S	1	b	—	—	8 a.m. Temperature of snow, 14°-0; surface, 15°-0; sling thermometer, 13°-0.
	Noon	S 2° W, 77 m.	29.05	45.0	—	—	SW by S airs and calm	0-1	—	—	—	Noon. Temperature of snow, 15°-0; surface, 17°-0; sling thermometer, 13°-0, and at 6 p.m. 15°-0.
	6 p.m.		29.10	45.0	—	—	Calm	0	—	—	—	8 p.m. Temperature of snow, 15°-0; surface, 15°-0; sling thermometer, 12°-0.
	8 "	"	29.08	—	—	—	Calm	0	—	—	—	Snow extremely soft all day, feet sinking in 12 ins. Sastugi variable, SSW mainly. Slight crust above snow surface which sinks as sledge advances, occasionally for a distance of 50 yards in front of sledge; but on tracks of a previous sledge party no sinking noticed. Weather b all day. Mirage to N, W, and E. Erebus smoke going NNE.
Jan. 27	6 a.m.		29.10	20.0	—	—	Calm	0	b	—	—	6 a.m. Temperature of snow, 4°-0; surface, 6°-0; sling thermometer, —1°-0.
	Noon	S 5° E, 67 m.	29.10	25.0	—	—	Calm	0	—	—	—	Noon. Temperature of snow, 12°-0; surface, 14°-0; sling thermometer, 11°-0, and at 6 p.m. 12°-0.
	6 p.m.		29.08	29.0	—	—	W airs	0-1	—	—	—	8 p.m. Temperature of snow, 13°-0; surface, 13°-0; sling thermometer, 12°-0.
	8 "	"	29.15	25.0	—	—	Lt. SE airs	—	bc	Cl. 3 (NW)	S. 3 (NW)	Snow surface fairly hard with crust till towards Noon, then sun's action softened it considerably, and towards 3 p.m. it was generally crustless, but a few hard patches. Sastugi variable, but mainly SW by S to S. Weather fine and clear all day. Constant mirage to NW on land, and to N. Towards 8 p.m. Cl. clouds, light, going NW, and large bank of Str. rising in SE. Discovery Peak occasionally covered with low Cu.
Jan. 28	6 a.m.		29.15	—	—	—	SW by S	3-4	bc	+	S. 2	8 a.m. Temperature of snow, 6°-0; surface, 8°-0.
	Noon	S 14° E, 63 m.	29.10	—	—	—	WSW	3	bc	Cl. 1 (NE)	—	Sling thermometer at 6 a.m. read 4°-0; at Noon 14°-0; at 5 p.m. 15°-0; and at 8 p.m. 15°-0.
	5 p.m.		29.15	—	—	—	W	2	bc	Cl. 3 (NE)	—	Weather throughout the day clear, with fresh wind, unsteady and gusty. Snow surface soft, but with slight crust in places. Sastugi very irregular and in all directions. Clouds travelling fast N by.
	8 "	"	29.06	—	—	—	SSW	1	bc	Cl.-s. 1 (NE)	—	Strong wind all day, with heavy drift. Wind towards evening lessened. No temperature taken to-day, but it was evidently high. Sastugi as yesterday.
Jan. 29	8 a.m.		28.80	—	—	—	SW	4-5	0	* + <sup>2</sup>	N. 10	
	Noon	S 18° E, 55 m.	28.75	—	—	—	SW by W	5	0	* + <sup>2</sup>	N. 10	
	6 p.m.		28.79	—	—	—	WSW	5	0	* + <sup>2</sup>	N. 10	
	10 "	"	28.80	—	—	—	WSW	4-3	0	*	N. 10	

Jan. 30	8 a.m.																			8 a.m. Temperature of snow, 11°-0; surface, 12°-0; sling thermometer, 13°-0.
	Noon	S 23° E, 50 m.																		10 p.m. Temperature of snow, 11°-0; surface, 11°-4; sling thermometer, 14°-0.
	6 p.m.																			Fine weather, with moderate following wind all day. Snow surface, generally hard, with sastrugi SW and W.
	10 "																			
Jan. 31	9 a.m.																			8 a.m. Temperature of snow, 10°-0; air, 11°-0.
	Noon	S 34° E, 38 m.																		Sling thermometer at 9 a.m. read 11°-0; at 6 p.m. 14°-5; and at 10 p.m. 6°-0.
	6 p.m.																			Weather throughout the day calm and clear. Snow fairly hard and even, but occasional soft patches. Sastrugi variable.
	10 "																			
Feb. 1	8 a.m.																			8 a.m. Temperature of snow, 11°-0.
	Noon	S 48° E, 25 m.																		Sling thermometer read at 8 a.m. 11°-0; at Noon 14°-0; and at 10 p.m. 9°-0.
	6 p.m.																			Weather fine all day. Light airs throughout the day. Ci.-cu., direction not noted.
	10 "																			
Feb. 2	8 a.m.																			9 a.m. Temperature of snow, 11°-0.
	Noon	S 56° E, 11 m.																		Sling thermometer read at 8 a.m. 11°-0, and at 10 p.m. 9°-0.
	6 p.m.																			Weather fine all day. Slight occasional fine flakes of snow fell from 2 to 6 p.m. The upper clouds were travelling to E and NE, and low Str. to NE. Sastrugi variable and slight SW wind ripples.
	10 "																			
Feb. 3	8 a.m.																			Barometer at ship (corrected) 29.401 ins., Aneroid 29.40 ins.

TABLE XV.—JOURNEY OF DR. KOETTLITZ TO BROWN ISLAND, DECEMBER 29, 1902, TO JANUARY 8, 1903.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Temperature.	Wind.		Weather.	Cloud.		Remarks.
					Direction.	Force (Beaufort).		Upper.	Lower.	
1902. Dec. 29	3 p.m.		ins. 29.205 (K)	26.0	Calm	0	b	—	—	NOTE.—Two Aneroids were used on this journey, distinguished as "K" and "P" respectively. Where both instruments were read the reading first given is that of "K"; where only one was read the distinguishing letter is added to the reading. 9.30 p.m. Minute ice particles falling.
	9.30 "		29.990 (F) 29.220 29.980	—	Calm	0	of	—	Fog	
Dec. 30	8 a.m.		—	—	—	—	o	—	—	Sun gleaming through faintly.
	9 "	S 23° W, 7 m.	29.120 29.940	25.8	Calm	0	bef	—	—	Sky clearing. Low fog about horizon.
	3 p.m.		—	31.8	Calm	0	b	—	—	
	9 "		29.135 29.940	28.0	Calm	0	of	—	—	
Dec. 31	8.30 a.m.	S 21° W, 14 m.	29.310 30.070	28.5	SW	3	bc	Ci.-cu. 2	S.-cu. 3	Sun shining fitfully through clouds. Low Str. to N and W.
	10.30 p.m.		29.310 30.110	17.0	SW airs	—	bc	—	—	Sky similar to this morning.
1903. Jan. 1	10.15 a.m.		—	31.0	—	—	—	—	—	Northerly light breezes and airs most of the day. Light Ci. clouds, with some S.-cu. about horizon most of the day. Str. coming over from southwards, in evening on Black Island, Mt. Discovery, and the western range. Mts. Erebus and Terror now clear of cloud, but hazy.
	Noon	S 19° W, 20 m.	—	34.0	—	—	—	—	—	
	10.15 p.m.		—	25.0	—	—	—	—	—	
	11.30 "		29.140 29.920	—	—	—	—	—	—	
Jan. 2	8 a.m.		29.230 29.920	32.0	Calm	0	bc	—	—	Ci. 2 and Cu. clouds about horizon.
	2 p.m.	S 29° W, 18 m.	—	—	—	—	bc	—	—	S.-cu. over Mts. Erebus and Terror.
	3 "		—	34.0	—	—	—	—	S.-cu. 9-10	
	10.30 "		29.320 30.040	31.3	—	—	—	—	—	
	Midt.		—	31.0	Calm	0	o	—	—	
Jan. 3	8.30 a.m.		—	32.5	S	2	oc	—	S. 9	A little blue sky to S, W, and N.
	9 "		29.310 30.080	—	—	—	—	—	—	
	2 p.m.	S 33° W, 22 m.	—	—	NE	3	—	—	—	Sky much clearer; bright sunshine. Peculiar Mare's Tails.
	11 "		29.250 30.020	—	NE	3-4	b	—	—	Ci. clouds are hanging over all the higher mountains.
Jan. 4	8 a.m.		—	—	N	4	o	—	—	Low Str. clouds obscuring all land.
	11 "	S 36° W, 26 m.	29.350 30.140	34.0	N	4-5	o	—	S. 10	
	7.35 p.m.		29.460 30.120	35.0	—	—	—	—	—	
Jan. 5	1 a.m.		—	—	N	3	bc	—	—	Wind Nly at base of Brown Island, force 3; at 1000 ft. higher, wind was Sly 2-3; at summit, 2700 ft. high, wind was Nly again. 10.30 p.m. Clouds were S.-cu. 10, the sky overcast and threatening looking, and the wind NNW, 2-3.
	9 "	S 46° W, 27 m.	—	36.0	—	—	b	—	—	
	3.30 p.m.		29.240 (K)	34.0	—	—	—	—	—	
Jan. 8	6.30 p.m.	S 27° W, 26 m.	29.250 30.050	30.0	N	2	bc	Ci. 1	S.-cu. 2; A.-s. 1;	
	Midt.		—	—	—	—	bc	Ci.-cu. 1	Cu. 1 A.-s. 2	
Jan. 7	2 a.m.		29.210 29.990	26.0	Calm	0	b	—	—	
	Noon	S 12° W, 32 m.	—	35.8	—	—	—	—	—	
	7 p.m.		29.350 30.100	30.8	—	—	—	—	—	
Jan. 8	5 a.m.		29.280 30.050	25.5	Calm	0	bc	—	Cu. 4	
	Noon		—	—	—	—	oc	—	S. 8	

TABLE XVI.—JOURNEY OF DR. KOETTLITZ TO THE BLUFF, JANUARY 14 TO 26, 1903.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid).	Temperature, air.	Wind.		Weather.	Clouds.		Remarks.
					Direction.	Force (Beaufort).		Upper.	Lower.	
1903. Jan. 14	4 p.m.		ins. —	—	S by E	2-3	oq †	Cl.-cu.	S.-cu. 6	NOTE.—Two Aneroids were used on this journey also, distinguished as "K" and "F" respectively. Where both instruments were read, the reading first given is that of "K"; where only one was read, the distinguishing letter is added to the reading.
	8 ..		29.740 30.100	26.6	S by E	2-4	of	—	—	
Jan. 15	6.40 a.m.		—	—	Calm	0	∞	—	—	Erebus smoke rising in high column, and then going W or NW.
	Noon	S 10° E, 4 m.	29.780 30.200	31.1	Calm	0	oe	—	S. 8	
	0.30 p.m.		—	32.0	Calm	0	bc	Cl. 3	Cu. 2	
	10 ..		—	—	Calm	0	b	—	—	
Jan. 16	5 a.m.		29.630 30.020	18.8	Calm	0	bf	Cl., Cl.-s., Cl.-cu., low S. 7	—	Mt. Erebus smoke still rising in column, and then going NW.
	Noon	S 2° E, 14 m.	29.530 29.900	25.0	Calm	0	bc	Cl. 2, Cl.-cu. 2	—	
	2.30 p.m.		—	—	S	2	f	Cl.-cu.	Low S.-cu.	an umbrella-like cloud.
	3.30 ..		29.695 30.070	—	S (?)	3-4	oq	—	—	
	6.30 ..		—	—	Lt. N airs	—	b	—	—	
Jan. 17	5.30 a.m.		29.785 30.160	20.3	Calm	0	o	—	—	Very thick and overcast.
	10.5 ..		—	—	Calm	0	o	—	—	Less thick; lowest part of land visible.
	Noon	S 5° E, 19 m.	—	26.5	Calm	0	o	—	—	
	7 p.m.		29.795 30.200	24.4	Calm	0	of	—	—	
Jan. 18	6.30 a.m.		30.150 (F)	27.5	Calm	0	bc	—	Cu. 6, S. 1	
	10 ..		29.700 (K)	—	Calm	0	bc	Cl.-s. 2	Cu. 2	
	Noon	S 7° E, 24 m.	—	—	Calm	0	b	—	—	
	4 p.m.		—	19.4	Calm	0	b	—	—	
Jan. 19	7.45 ..		29.500 29.950	15.6	Calm	0	b	—	—	Very thick and overcast.
	5 a.m.		—	12.2	—	—	o	—	—	
	10 ..	S 4° E, 29 m.	29.495 29.830	17.6	SE	1-2	of	—	—	
	3 p.m.		29.325 29.680	24.0	—	—	of	—	—	
	7.15 ..		29.265 29.600	18.6	—	—	o	—	—	
	8 ..		—	17.6	—	—	—	—	—	
Jan. 20	6 a.m.		—	15.8	—	—	—	—	—	Lower edge of land in sight.
	8.30 ..		29.175 (K)	17.6	—	—	—	—	—	
	9 ..		—	18.5	—	—	of	—	—	
	10 ..	S 2° E, 34 m.	29.540 (F)	—	Lt. SE airs	—	o*	—	—	
	2 p.m.		29.150 (K)	17.6	SE	1-2	bc	—	—	
	8.30 ..		29.095 29.470	23.0	W	—	bcq	—	—	
Jan. 21	8 a.m.		—	23.0	—	—	—	—	—	A very stormy night. Stormy all day. Hard snow falling, like hailstones. Snow intermittent, and driving all day.
	3 p.m.	S 2° E, 40 m.	29.050 (K)	27.5	—	—	—	—	—	
	8 ..		—	32.0	W by N	8-10	oq	—	—	
	9 ..		28.990 (K)	—	—	—	—	—	—	
Jan. 22	3 a.m.		—	—	—	—	—	—	—	Wind lulling; comes in furious gusts every few minutes. Sky more or less overcast, with patches of blue occasionally.
	5 ..		—	—	W by N	9-10	*	—	—	
	9 ..		28.820 (K)	—	—	—	—	—	—	
	Noon	S 2° E, 44 m.	—	27.5	—	—	—	—	—	
	1.15 p.m.		28.990 (K)	26.6	—	—	—	—	—	
5.30 ..		29.110 (K)	28.4	W by N	2-5	bc	—	S.-cu. 7	1.15 p.m. Lull still continuing. Squalls blow over fiercely every minute or two. Thick and foggy all round. Snow driving over tops of mountains. 5.30 p.m. Sky very stormy and unsettled looking.	

TABLE XVI.—JOURNEY OF DR. KOETTLITZ TO THE BLUFF, JANUARY 14 TO 26, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aueroid).	Temperature, air.	Wind.		Weather.	Clouds.		Remarks.
					Direction.	Force (Beaufort).		Upper.	Lower.	
1903. Jan. 23	2 a.m.		ins. 29.120 (K)	° —	W by N	5-9	q	—	—	
	6 "		—	—	W by N	0-3	bc	—	S.-cu. 3	Threatening looking weather.
	9 "		—	—	W by N	2-5	oq †	—	S.-cu. 9	Sky more threatening and dark-looking.
	11 "	S 2° E, 34 m.	—	—	—	—	—	—	—	Snow falling and driving, with lulls occasionally.
	3 p.m.		—	—	W by S	4-7	ofq * †	—	—	Foggy, thick, snowing and drifting.
	8 "		29.405 (K)	28.7	W by S	2-5	—	—	—	Cu. 2 over Erebus and to NW; Str. 2 and † over Bluff. High drift and whirlwinds about Barrier surface here and there.
Jan. 24	7.45 a.m.		29.550 29.940	32.0	W by S	3-6	ofq *	—	—	Lowest edge of Black Island just visible.
	9.30 "		—	—	—	—	—	—	—	Weather remaining the same. No land visible.
	1 p.m.	S 7° E, 24 m.	—	—	—	—	—	—	—	Clouds beginning to break.
	1.30 "		29.630 (K)	—	W by S	3-7	bc	Cl.-cu.	Cu., N., S.	Blue sky began to appear. Cu. and Nim. moving swiftly from W.
	10 "		29.695 30.090	26.2	Calm	0	bcm	Cl., Cl.-cu.	Cu.	Erebus smoke going NNE. Very hazy. Odd Str. on western hills.
Jan. 25	2 a.m.		—	—	—	—	—	—	—	Calm all night.
	6.30 "		—	—	N	1-2	o	—	—	Sky overcast, except small blue patches to S.
	9.40 "		29.580 (K)	—	Calm	0	bc	—	S. 8	Blue patches to S and NW.
	Noon	S 2° E, 14 m.	—	32.0	N	1-2	bc	—	S.-cu. 6	Erebus smoke going E. Sun breaking through clouds.
	9 p.m.		29.440 (K)	19.4	N	1-2	—	—	—	Erebus smoke going E. Hazy.
Jan. 26	2 a.m.		—	—	—	—	—	—	—	Night quite calm.
	7 "		29.450 (K)	32.0	SE to ESE	—	bc	Cl.-cu. 1	S. 5	Str. 5 rolling away to NW before a SE breeze. Dark to W. Erebus obscured.
	8 "		—	24.8	—	—	m	—	—	Clouds almost all gone away to NW. Bright warm sun. Hazy. Erebus smoke going E. Erebus and Terror clear.

TABLE XVII.—FOURTH JOURNEY OF LIEUTENANT ROYDS, R.N., TO CAPE CROZIER, SEPTEMBER 7 TO 17, 1903.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid), M.O. 6.	Temperature.			Hypsometer and equivalent	Wind.		Weather.	Miscellaneous phenomena.	Clouds.		Remarks.	
				Air.	Spirit minimum.	Snow.		Surface.	Direction.			Force (Beaufort).	Upper.		Lower.
1903. Sept. 7	Noon	—	ins.	° 5.0	° 7.0	° —	° —	SE	4-5	of	+	—	S.	At starting—Aneroid, 29.22 ins.; ship's barometer (corrected), 29.92 ins. Thermometer, -1° 0; ship's thermometer, -1° 0.	
	2 p.m.		29.24	° 6.0	—	-22.0	210.4 29.98	SSE	4	of	+	—	S.	Noon. Weather very thick all round, but looking like clearing. No wind until rounding Cape Armitage, when it came on very fresh from SE, with heavy surface drift.	
	7.30 "		29.35	° 15.0	-15.0	—	—	Calm	0	0	—	—	S. 10	Wind fell to nearly calm from Noon to 1.20 p.m., but after that again came on strong, with heavy drift, which obscured all land.	
														Wind continued strong all the afternoon, lulling at 5 p.m. and then gradually died away. Sky remained entirely overcast and no land visible.	
Sept. 8	8 a.m.		29.38	° 26.0	-28.0	-22.0	-28.0	Calm	0	bc	—	Cl-s. 4	—	At 8 a.m. Erebus was obscured, but summit of Terror was visible. Several times during the night the wind was inclined to blow up strong, but only lasted for a short while. Erebus cleared about 8.30 a.m., smoke going in EY direction.	
	Noon	N 68° E, 11 m.	29.38	° 26.0	-23.0	—	—	Lt. var. airs	—	bc	—	Cl-s. 5	—	Noon. Clear all round. Cl.-s. radiating NW and SE, and the strata lying N and S.	
	2 p.m.		29.32	° 31.0	—	-32.0	-31.0	Calm	0	bc	—	Cl.-s.	S. 4	Clouds have gradually gone to NE and disappeared.	
	4 "		29.30	° 28.0	-31.0	—	—	Calm	0	bc	—	Cl.-s.	S. 2	2 p.m. Cl.-s. radiating NW and SE in very distinct lines, with the points of radiation very apparent. Very little wind on Erebus summit, as smoke out of six vents seems to be passing directly upwards.	
	6 "		—	° 28.0	-34.0	—	—	Calm	0	0	—	—	S. 6	5 p.m. Very stormy look all round, especially to SE. Snow surface a hard 2-in. crust and then soft, sastrugi very ill defined. Large spaces without any sign of sastrugi. At times large parts of the surface would give way, under the weight of men and sledges, with a loud report.	
	8 "		29.45	—	—	—	—	Calm	0	0	—	—	S. 8		
Sept. 9	8 a.m.		29.69	° 28.0	-28.0	—	—	Lt. E airs	—	oc	—	—	—	Very ugly looking weather generally on turning out, but gradually cleared. Every appearance of heavy wind at ship. Noon. Sky clearing quickly, clouds going to NE.	
	Noon	N 68° E, 24 m.	29.68	° 25.0	-27.0	—	—	NE	2	bc	—	—	—	About 12.30 p.m. Erebus and Terror showed through; heavy clouds remained below the summits, but these gradually faded away. Clouds took a peculiar curved form like rowlocks. Erebus smoke going EY in thick column, and rising after leaving edge of crater.	
	1.15 p.m.		29.72	° 25.0	-25.0	-25.0	211.2 29.45	—	—	—	—	—	—	Beautifully clear all round. Erebus smoking well from two craters, smoke 4 p.m. going in EY direction.	
	4 "		29.71	° 29.0	-30.0	—	—	Calm	0	b	—	—	—	Fog came on thick about 5 p.m. and obscured everything.	
	5 "		—	° 35.0	-38.0	-26.0	-38.0	—	—	—	—	—	—		
	6 "		29.71	° 39.0	-39.0	—	—	Calm	0	of	—	—	—		
Sept. 10	8 a.m.		29.55	° 30.0	-43.0	-26.0	-32.0	Calm	0	of	—	—	—	Very dull and foggy morning, no land in sight. Fog passing to the N fast.	
	Noon	N 67° E, 35 m.	29.55	° 28.0	-32.0	—	—	Calm	0	of	—	—	—	Very thick indeed all round, no land visible. Fog clearing away to the W, but came on again later and very thick indeed. Smoke of Erebus, when seen, was going in an EY direction and rolling down the slope.	
	1.10 p.m.		29.55	° 18.0	—	-26.0	210.82 29.225	Lt. NE airs	—	of	—	—	—	1.10 p.m. Just round Terror Point.	
	4 "		29.51	° 19.0	-20.0	—	—	Calm	0	bf	—	—	—	Surface of snow good; sastrugi becoming more marked from a WNW direction.	
	6 "		—	° 26.0	-29.0	—	—	Calm	0	of	—	—	—		
7 "		29.53	—	—	—	—	—	—	—	—	—	—			
Sept. 11	Noon	N 64° E, 46 m.	29.47	° 38.0	-47.0	—	210.9 29.27	SW	4-5	of	+	—	—	Weather on turning out was very thick, with strong SWly wind and drift. No land visible, except at intervals. Temperature kept below -35° all the forenoon. Wind increased after midday and we remained camped. Sastrugi getting very much more defined, and surface hard and slippery.	

TABLE XVII.—FOURTH JOURNEY OF LIEUTENANT ROYDS, R.N., TO CAPE CROZIER, SEPTEMBER 7 TO 17, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid), M.O. 6.	Temperature.			Hypometer and equivalent	Wind.		Miscellaneous phenomena.	Clouds.		Remarks.
				Air.	Spilt minimum.	Snow.		Surface.	Direction.		Force (Beaufort).	Upper.	
1903. Sept. 12	8 a.m.		ins.	-37°0	-48°0	°	°	Calm	0	b	—	—	Very fine morning, but extremely foggy all round, especially over the open water.
	Noon	N 48° E, 43 m.	29.18	-35°0	-42°0	-28°0	210.4 29.68	Calm	0	b	—	—	Fog seemed to approach the land towards the evening and eventually covered everything. Heavy and dark looking clouds to S and SW.
	6 p.m.		29.10	-38°0	-46°0	-28°0	—	Calm	0	b	—	—	
Sept. 13	8 a.m.	N 66° E, 45 m.	29.07	-42°0	-49°0	—	—	Calm	0	bcm	—	—	A dull day generally, gradually becoming more and more overcast and foggy. Over the open water the fog was very dense. Wind began to freshen from SW towards Noon and there was a thick mist and surface drift lying low over the ice. About 6 p.m. the wind was fresh and extremely cold.
	6 p.m.		—	-45°0	-47°0	—	—	SW	1-2	om	+	—	
Sept. 14	8 a.m.		—	-40°0	-48°0	—	—	Calm	0	ocm	—	—	Another dull day generally. Clear on Erebus which opened up from behind Terror slope in the evening, smoke going in small quantity to NE. Surface good for travelling, sastrugi becoming less marked as we drew away from the land. All day the clouds were fluctuating in very marked lines NW and SE, the points of radiation being very marked.
	Noon	N 66° E, 34 m.	29.27	-46°0	-46°0	—	210.6 29.70	Lt. var. airs	—	ocm	—	—	
	4 p.m.		—	-48°0	-50°0	—	—	Lt. E airs	—	bcm	—	—	
6 "	"		—	-55°0	-55°0	—	—	Lt. E airs	—	bcm	—	—	
Sept. 15	8 a.m.		28.99	-53°0	-57°5	—	—	Calm	0	bcm	—	—	Very fine morning, with low fog all round. Erebus smoke in small quantity going NNE all day. Surface covered with heavy fall of crystals, which make travelling very heavy. Have ceased taking snow temperatures, as the mercury remains frozen in the thermometer and will not thaw when left in the snow. Very heavy and thick clouds to W all day, only the extreme summits of the western mountain peaks visible at times.
	Noon	N 61° E, 24 m.	29.02	-49°0	-54°0	—	210.15 28.835	Calm	0	bcm	—	—	Very foggy all round.
	4 p.m.		29.07	-53°0	-55°0	—	—	Lt. var. airs	—	b	—	—	
6 "	"		28.95	-53.7	-60.2	—	—	Calm	0	b	—	—	
Sept. 16	8 a.m.		28.85	-54°0	-61.2	—	—	Calm	0	bc	—	—	Very foggy on turning out, but cleared quickly. Towards 11 a.m. it came on very foggy again, and then gradually cleared again. Erebus smoke going in small quantity to NE. Surface good, but rather soft. Very stormy looking towards and over White Island and also over the ship. Western mountains have been entirely obscured all day. Surface towards the evening became most excellent, hard and smooth with little sastrugi. Sastrugi towards NE. During the afternoon the Str., which was low on Erebus, formed very deep mammillated humps on western side of mountain, helling down in four or five curves. They were most marked, and considerably larger than mammillated forms of Cu.
	Noon	N 79° E, 13 m.	28.94	-45°5	-55°0	—	210.0 28.75	Calm	0	bcm	—	—	
	4 p.m.		—	-46°0	-46°0	—	—	NE	3	bc	+	—	
6 "	"		28.02	-50°0	-51°5	—	—	NE	3-4	b	+	—	
Sept. 17	8 a.m.		29.32	-52°0	-56°0	—	—	Calm	0	bf	—	—	Very foggy on turning out, but cleared quickly. Erebus smoke going in NE by direction. Towards 10 a.m. it came on very thick and foggy, and wind freshened considerably, with drift. By Noon there was very little land visible. Wind increased as we neared the land, and after rounding Cape Armitage it blew very hard.
	Noon	—	29.44	-48°0	-56°0	—	210.8 28.795	NE	1-2	bcm	—	—	
	1 p.m.		—	-56°0	-56°0	—	—	NE	1-2	bcm	+	—	Aneroid (M.O. 6) 29.44 ins.; ship's barometer (corrected) 29.16 ins. Thermometer 36° 5; ship's thermometer 36° 5.
4 "	"		—	-38°0	-48°0	—	—	NE	5-6	bcm	+	—	

TABLE XVIII.—SECOND JOURNEY OF MR. SKELTON, R.N., TO THE WEST, SEPTEMBER 9 TO 20, 1903.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Temperature.			Hygrometer and equivalent pressure.	Wind.		Miscellaneous phenomena.	Clouds.				Remarks.
			Aneroid M.O. 2.	Aneroid M.O. 1 (second instrument).	Dry bulb.	Shad.	Wet minimum.		Snow.	Direction.		Force (Beaufort).	Weather.	Upper.	Lower.	
1903 Sept. 9	2 p.m.		ins. 29.66	ins. —	° —	° —	° —	° —	Lt. E airs	0	b	—	—	—	—	Comparison of instruments made on September 8, 1903:— Ship's dry bulb thermometer = -11° 9; sledging thermometer = -11° 8. Aneroid M.O. 1 = 29.490 ins. Aneroid M.O. 2 = 29.320 ins.; ship's barometer (corrected) = 29.239 ins. Blowing ESE, force 4-6, from 11 a.m. to 2 p.m., when it died away to a calm at 2.30. Very heavy surface drift, otherwise quite clear. Strongly marked water sky to N of Cape Bird; low bank of Str. to N. 10 p.m. Auroral curtain ascending from W to zenith, fairly bright. A few other auroral lights to S, SW, and SE. A bank of fog coming over from the S side of Winter Harbour peninsula. Erebus smoke going to E in a long streamer all day. Very dull and overcast all day. Completely overcast by very low Str. under 1000 ft. in height. No land visible above 2° to 3° alt., and what was visible very much refracted.
	8 "		29.66	29.76	° —	° —	° —	° —	Calm	0	b	—	—	—	—	
	8 a.m.		29.54	29.66	° —	° —	° —	° —	Calm	0	oc	—	—	—	—	
	1 p.m.		29.47	—	° —	° —	° —	° —	Lt. var. airs	—	oc	—	—	—	—	
Sept. 10	6 "		29.47	—	° —	° —	° —	° —	Calm	0	oc	—	—	—	—	
	8 "		29.48	29.61	° —	° —	° —	° —	Calm	0	oc	—	—	—	—	
	8 a.m.		29.34	29.48	° —	° —	° —	° —	E	2-3	ocf	+	+	—	—	
	Noon		29.28	—	° —	° —	° —	° —	ESE	4-5	ocf	+	+	—	—	
Sept. 11	8 a.m.		29.23	29.38	° —	° —	° —	° —	Calm	—	bv	—	—	—	—	
	1 p.m.		29.16	29.27	° —	° —	° —	° —	Calm	0	bv	—	—	—	—	
	8 "		29.09	29.22	° —	° —	° —	° —	Lt. SW airs	—	oc	—	—	—	—	
	6 a.m.		29.08	29.22	° —	° —	° —	° —	S by W	2	bc	—	—	—	—	
Sept. 12	8 "		29.09	29.22	° —	° —	° —	° —	S by W	1-2	bc	—	—	—	—	
	2 p.m.		29.11	—	° —	° —	° —	° —	Lt. S airs	—	bc	—	—	—	—	
	6 "		29.15	—	° —	° —	° —	° —	Calm	0	bc	—	—	—	—	
	8 "		29.18	29.32	° —	° —	° —	° —	Calm	0	oc	—	—	—	—	
Sept. 13	6 a.m.		29.25	29.36	° —	° —	° —	° —	Calm	0	bef	—	—	—	—	
	8 "		29.24	29.36	° —	° —	° —	° —	Lt. var. airs	—	bc	—	—	—	—	
	11 "		—	—	° —	° —	° —	° —	Calm	0	bc	—	—	—	—	
	2 p.m.		29.21	—	° —	° —	° —	° —	Calm	0	bc	—	—	—	—	
Sept. 14	6 a.m.		29.18	—	° —	° —	° —	° —	Calm	0	bc	—	—	—	—	
	8 "		29.14	—	° —	° —	° —	° —	Calm	0	bc	—	—	—	—	
	2 p.m.		29.04	—	° —	° —	° —	° —	Calm	0	bef	—	—	—	—	
	6 "		29.03	29.16	° —	° —	° —	° —	Calm	0	bef	—	—	—	—	
Sept. 15	2 p.m.		28.98	—	° —	° —	° —	° —	Calm	0	bef	—	—	—	—	
	6 "		28.90	—	° —	° —	° —	° —	Calm	0	cf	—	—	—	—	
	8 "		28.89	29.01	° —	° —	° —	° —	Calm	0	ocf	—	—	—	—	
	8 a.m.		29.04	—	° —	° —	° —	° —	Calm	0	bef	—	—	—	—	

No positions given.

The sun was obscured most of the day by a bank of Str. to N. Fog to S increasing during the day and extending over Erebus. Clear to W all day, with a few wisps of Str. low in the Glacier Valley. A few Str. clouds over Glacier Valley very highly coloured at sunset. A calm night. Frost rime.

Frost rime heavy during the night. Fog to E and N. A few wisps of low Str. up Glacier Valley. Erebus and everything to E obscured until 10 a.m. by Str., fog, and open water cloud.

The top half of Erebus visible for rest of day, but the lower half and all land to E continued obscured in fog. At 2 and 6 p.m. Cl-s. radiating NW.

A heavy deposit of rime over all the surface travelled over to-day. Brilliant sunset. A few small lines of Str. up the Glacier Valley to W, being coloured a deep red.

A perfectly calm day. Heavy frost rime falling. Bank of fog to eastward at the entrance of the valley all day, and some fog occasionally in the higher reaches. Halo in the forenoon from 8 to 11 a.m. on the left side only of sun, and in the valley between us and rocks is fog.

TABLE XVIII.—SECOND JOURNEY OF MR. SKELTON, R.N., TO THE WEST, SEPTEMBER 9 TO 20, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Temperature.			Hypsometer and equivalent pressure.	Wind.		Miscellaneous phenomena.	Clouds.				Remarks.
			Aneroid M.O. 2.	Aneroid M.O. 1 (second instrument).	Dry bulb.	Sting.	Wet bulb.		Direction.	Force (Beaufort).		Weather.	Upper.	Lower.	Description.	
Sept. 16	6 a.m.		ins.	ins.	—	—	—	—	Calm	0	bcf	—	Cl-s. 4	—	—	Broke hypsometer thermometer. Heavy frost rime driving slowly through air. Bank of fog to eastward at entrance of valley. Various small banks of fog floating about in several parts of Glacier Valley. Halo on left side of sun only from 9 to 11 a.m. Not more than 2 miles from us is a bank of fog beautifully coloured. During the afternoon variable SW and W breezes of force 1-2, with intervening calms. Calm night, with occasional SWy puffs. Moderately brilliant auroral arch right over zenith from NE to SW about 10.30 p.m.
	8 "		28.89	28.98	—	-41.2	—	—	Calm	0	bc	—	Cl-s. 2	—	—	
	2 p.m.		28.80	—	—	-42.5	—	210°-19 28.86 at Noon	Calm	0	bcf	—	Cl-s. 2	—	—	
	6 "		28.12	—	—	-43.0	—	—	Var. W airs	1-2	bf	—	—	—	—	
Sept. 17	8 "		28.11	28.22	-45.5	—	—	—	Var. W airs	1	bf	—	—	—	—	
	6 a.m.		28.26	—	-42.5	—	—	—	Calm	0	b	—	—	—	Clear sunrise. Directly afterwards fog commenced to collect in the lower parts of the valley. At 9 a.m. fog collected in valley about 5 miles along, occasionally dispersing and collecting again. Sometimes wisps of fog looking exactly like Cl-s. could be seen only a few feet above our heads, and a few feet above each other, moving in opposite directions. Some whirlwinds of fog noticed, rising quickly from the glacier surface 1000 to 2000 ft. and dispersing. Thick fog in the valley all the afternoon, blue sky overhead. 8 p.m. Clear in the valley, low Str. and water cloud to E in McMurdo Bay. Frost rime falling all day.	
	8 "		28.30	28.41	—	-42.0	—	—	Calm	0	bf	—	—	—		
	1 p.m.		27.44	—	—	-38.5	—	—	Calm	0	bf	—	—	—		
6 "		—	—	—	-45.5	—	—	Calm	0	bf	—	—	—			
Sept. 18	8 "		29.24	29.34	-50.2	—	—	—	Calm	0	bf	—	—	—	A clear sunrise. No clouds above 10° alt. to be seen all day until after sunset, when some Cl-s. came up from SE. Refraction to the E all the afternoon, very marked. Calm all day, with occasional light variable airs. Slightly hazy to E all day.	
	6 a.m.		29.15	—	-54.0	—	—	—	Calm	0	b	—	—	—		
	8 "		29.14	29.23	—	-52.6	—	—	Calm	0	b	—	—	—		
	2 p.m.		29.02	—	—	-49.5	—	—	Calm	0	b	—	—	—		
Sept. 19	8 "		28.99	—	-50.1	—	—	—	SSW	1-2	bc	—	Cl-s. 2	SE	—	A clear sunrise. No clouds to be seen all day above 5° alt. A long low line of fog apparently frost smoke, extending from NW of Cape Bird into Erebus Island, visible all day. Extreme refraction all round all day and occasional looming. Generally light variable SWy airs all day. A clear sunset. A few lines of Str. over the western mountains after 8 p.m. A calm night. Slightly hazy to E all day.
	6 a.m.		28.87	—	-50.2	—	—	—	SW	1-2	h	—	—	—		
	8 "		28.86	28.98	-48.2	—	—	—	Lt. SW airs	—	h	—	—	—		
	2 p.m.		28.84	—	-43.3	—	—	—	SW	1	h	—	—	—		
Sept. 20	8 "		28.88	—	-49.5	—	—	—	Lt. S airs	—	b	—	—	—	Low Str. overlying McMurdo Bay all day, obscuring all land above 2000 ft. to SW and nearly always all land to W. Very marked refraction all day, with occasional looming and extraordinary distortion of land objects. Refraction seemed to take place below 1000 ft. above sea level, as Castle Rock, 1400 ft. high was never observed to be distorted. After sunset the sky cleared in places, and patches of auroral lights were visible to E between 9 and 11 p.m.	
	6 a.m.		28.97	29.11	-43.5	—	—	—	Calm	0	bc	—	Cl-s. 2	—		S. 2
	8 "		28.98	29.11	-40.4	—	—	—	Lt. var. airs	—	oc	—	—	—		S. 8
	1 p.m.		29.08	—	-43.5	—	—	—	Very light airs	—	ocf	—	—	—		S. 9
7 "		29.14	—	-44.6	—	—	—	Lt. S airs	—	ocf	—	—	—	S. 10		

Compared barometers:—  
Aneroid M.O. 2 = 29.100 ins.  
Aneroid M.O. 1 = 29.250 ins.; ship's barometer (corrected) = 29.021 ins.

TABLE XIX.—JOURNEY OF LIEUTENANT BARNE, R.N., TO SOUTH, SEPTEMBER 13 TO 20, 1903.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroïd) M.O. 4.	Temperature.		Wind.			Miscellaneous phenomena.	Cloud.		Remarks.
				Thermometers used not specified.		Direction.	Force (Beaufort).	Weather.		Upper.	Lower.	
				Air.	Spirit minimum.							
1903. Sept. 13	6.30 a.m.		ins. 29.50	° -59.2	° -59.2	Lt. SW airs	—	bc	—	—	S. 6, SW	Compared barometers (? time): Aneroid, 29.32 ins.; ship's barometer (corrected), 28.926 ins.  Altitude of Str. during the day about 1000 ft.
	1 p.m.		29.48	-56.0	-64.0	Lt. SE airs	—	c	—	—	S. 10, SW	
	4 ..		29.40	-36.5	-56.0	Lt. SW airs	—	c	—	—	S. 6, SW	
	8 ..		29.39	-38.0	-38.5	Lt. SE airs	—	c	—	—	S. 10	
Sept. 14	8 a.m.		29.37	-46.0	-46.5	SSE	1	bef	—	Ci. 4	—	At 1 p.m. Ci. clouds, radiating SSE and NNW, in long streamers. Low fog obscuring all low land. 6 p.m. Thin filmy Ci. covering greater part of sky, and some heavy low Cu. to N moving to E. At Noon and 1 p.m. sky clearing from SW. During afternoon and evening heavy low fog bank in N and NE, apparently from surface to 5000 ft.
	1 p.m.		29.35	-46.5	-53.0	Calm	0	bef	—	Ci. 4	—	
	7.30 ..		29.30	-55.6	-61.6	Calm	0	bc	→	Ci. 8	Cu. 2	
Sept. 15	6 a.m.		—	-42.0	-53.0	Calm	0	c	—	—	S. 10	Lower part of Terror visible. Land near by obscured at 7.30 p.m.
	8 ..		29.18	-39.0	-42.0	Calm	0	c	→	—	S. 10	
	1 p.m.		29.04	-38.2	-42.8	Lt. SW airs	—	of	→	—	S. 10	
	7.30 ..		29.00	-59.0	-66.8	Lt. SW airs	—	b	→	—	—	
Sept. 16	8.30 a.m.	No positions given.	28.87	-38.2	-53.0	S by W	1-3	oc	‡	—	S. 8, S	At 1 p.m. Bluff almost obscured by drift. Bank of cloud at foot of Erebus and Terror. Wind dropped about 1.30 p.m. At 3 p.m. light S by breeze which shifted to S by W and increased rapidly with heavy drifting snow. Land visible at intervals. Thick fog driving rapidly to SE over White Island. At Midt. there was a brilliant band of aurora, which separated out into streamers radiating from zenith.
	1 p.m.		28.90	-40.2	-42.0	S by W	2-3	h	‡	—	—	
	7.30 ..		29.08	-40.0	-45.6	S by W	2-4	oc	‡	—	S. 8, S	
Sept. 17	8.45 a.m.	No positions given.	29.40	-50.5	-64.6	Calm	0	b	—	—	—	a.m. Clear sky. Bluff obscured by heavy Str. clouds.
	10 ..		29.46	-47.0	-53.2	Lt. S by W airs	—	h	—	—	—	1 p.m. Sky covered with Ci. clouds from zenith to a few degrees above horizon, where they appeared to be Str. with even lower edge; land below very distinct and clear.
	Noon		29.39	-45.0	-47.0	Calm	0	bc	—	Ci. 9	S. 5	
	1 p.m.		29.40	-48.2	-51.6	Calm	0	bc	—	—	S. 8, S	2 p.m. Thick fog, nothing visible. During afternoon fog lifted in S. Erebus and Terror obscured.
	7 ..		29.45	-49.6	-52.8	S by W	1	bc	—	—	—	
Sept. 18	8 a.m.		29.28	—	-52.0	Lt. N airs	—	h	—	—	—	Dry hull thermometer showed broken column, and reading too high. At 1 and 6 p.m. toluol in minimum thermometer was down in bulb. 6.20 a.m. Clear all round, bright sunshine. 1 p.m. Clear all round. During the afternoon a N by breeze sprang up between 1 and 3.30 p.m. No clouds except low Str. in Erebus Bay. 4 p.m. A thick dark Str. driving in clouds over White Island and Bluff to S. Curious whirlwinds all along coast line of White Island.
	1 p.m.		29.10	—	—	N	1-3	b	—	—	—	
	6 ..		28.96	—	—	Calm	0	b	—	—	—	
Sept. 19	8 a.m.		28.98	—	—	Calm	0	h	—	—	—	No temperature observations taken.
	1 p.m.		29.00	—	—	Calm	0	h	—	—	—	Mock sun visible on E side of sun all afternoon.
	7 ..		29.02	—	—	Calm	0	h	—	—	—	5 p.m. Observed phenomenon of green ray at sunset, and again whilst sun dipped behind some intervening hills.
Sept. 20	8 a.m.		29.18	—	—	Calm	0	b	—	—	—	Compared barometers (? time): Aneroid, 29.370 ins.; ship's barometer (corrected), 28.845 ins.

TABLE XX.—THIRD JOURNEY OF MR. SKELTON, R.N., TO THE WEST, OCTOBER 12 TO 21, 1 903.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Temperature.			Hygrometer and equivalent	Wind.		Miscellaneous phenomena.	Clouds.				Remarks.	
			Aneroïd M.O. 2.	Aneroïd M.O. 1 (second instrument).	Sling thermometer.	Reading at time of observation.	Spirit minimum thermometer H.O. 2.		Direction.	Force (Beaufort).		Weather.	Upper.	Lower.	Direction.		Description.
1903 Oct. 12	2 p.m.		Ins. 29.06	Ins. —	—	—	—	—	ESE	4-5	bc	—	—	—	—	—	Aneroïd M.O. 2 = 29.320 ins.; Aneroïd M.O. 1 = 29.490 ins.; ship's barometer (corrected) = 29.238 ins.
	7 "		29.02	—	7.8	—	—	—	ESE	2-3	bc	+	—	—	—	—	Left ship at 10.30 a.m. in a strong E by S breeze, force 5-6, which kept steady, increasing to 7-8 occasionally, until 1.30 p.m., when it gradually began to fall. The breeze fell to force 2 for a short time during the afternoon, but increased again to 4-5 in evening. Sunshine all day. Some refraction to the W in afternoon. Somewhat hazy to W, but clear to E all day. Erebus smoke in small quantity going to N all day. A small Cu. cloud to N all day, about 2° to 3° alt., as if over open water. Heavy surface drift all day; also on the western slopes of Erebus in forenoon, but not in afternoon. During the night there was a fairly constant breeze of force 3-4, with a lot of surface drift.
	9 "		29.00	29.05	—	-10.0	-10.0	—	ESE	4-5	bc	+	—	—	—	—	
Oct. 13	6 a.m.		29.14	—	—	-10.0	-13.0	—	ESE	1-2	cc	+	—	—	—	—	Sky became overcast from N in early morning, but as the sun rose the clouds dispersed away to the N again. Very heavy open water cloud to W of Cape Bird, and extending for some distance along Erebus shore and across the Strait. Some fine mother-of-pearl Ci. clouds directly under the sun at about 25° alt., between Noon and 1 p.m. Some refraction to W in afternoon. Erebus and western mountains obscured most of the day by low Str., which cleared in evening. Low Cu. coming over from S very fast between 4.30 and 7 p.m. Sunshine all day. A calm night.
	8 "		29.18	29.20	—	6.5	—	—	ESE	2-3	bc	—	—	—	—	—	
	2 p.m.		29.21	—	—	4.0	—	—	ESE	1-2	bc	—	—	—	—	—	
	6 "		29.27	—	-12.2	—	—	—	Lt. S airs	—	bc	—	—	—	—	—	
	8 "		29.27	29.31	-13.1	-13.0	-15.0	—	Calm	0	c	—	—	—	—	—	
Oct. 14	6 a.m.		29.30	—	—	-10.8	-16.0	—	Lt. S. airs	—	c	—	—	—	—	—	8 a.m. Erebus and western mountains obscured by Str. Stormy looking to S and SW.
	8 "		29.35	29.41	—	8.2	-12.0	—	Lt. var. airs	—	c	—	—	—	—	—	1 p.m. Ci.-cu. clouds passing over from S all forenoon. Sun shining through clouds. Str. overhauling most of the land. Erebus obscured.
	1 p.m.		29.36	—	0.8	—	—	—	S by E	1	c	—	—	—	—	—	About 2.30 p.m. a breeze, force 2-3, with surface drift, sprang up from B, veering to N.E. and backing again to ESE quickly, and dying away altogether at 3.30. It has been very hazy over western side of Strait and up the Glacier Valley all day.
	2 "		29.40	—	—	1.2	-1.0	—	S by E	1-2	c	—	—	—	—	—	Very gloomy to S. Clouds all cleared away just before 6 p.m., leaving Mt. Erebus quite clear, smoke going NE in medium quantity. Persistent water cloud over neighbourhood of Cape Bird. Refraction, especially in the evening, to W and N.
	4 "		29.43	29.44	-2.0	—	—	211.10 29.39	Lt. var. airs	—	c	—	—	—	—	—	
	8 "		29.47	29.46	-13.6	-13.8	-13.8	—	Lt. var. airs	—	h	—	—	—	—	—	
	6 a.m.		29.40	—	—	-15.2	-29.0	—	Calm	0	bc	—	—	—	—	—	To-day has been clear weather; sunshine all day. Thick to E; Erebus obscured, except in the early morning, when the smoke was going E. Sun halo from 11 a.m. until 5 p.m. Occasional puffs of wind from various quarters, but generally calm. After 5 p.m. Str. cloud collected on the tops of the mountains at the sides of Glacier Valley in the lower reaches. Very marked open water cloud from Cape Bird across the Strait. Some refraction in the afternoon to W.
	8 "		29.39	29.43	—	-11.0	-15.2	—	Lt. var. airs	—	bc	—	—	—	—	—	
Oct. 15	1 p.m.		29.28	—	9.2	—	—	—	Calm	0	c	⊕	—	—	—	—	
	2 "		29.27	—	—	-10.0	-10.8	—	Lt. E airs	—	c	⊕	—	—	—	—	
	6 "		29.18	—	7.2	—	—	210.65 29.125	Calm	0	c	⊕	—	—	—	—	
	8 "		29.17	29.23	—	-17.0	-17.0	—	Calm	0	c	—	—	—	—	—	
	6 a.m.		29.21	—	—	-24.2	-26.0	—	Calm	0	b	—	—	—	—	—	Very fine morning; calm; blue sky; almost cloudless; the entrance of the Glacier Valley blocked by a bank of fog obscuring Erebus and the Strait. At 1 p.m. fog cleared away from entrance of valley; heavy open water cloud in neighbourhood of Cape Bird, obscuring land there, otherwise clear all round.
	8 "		29.20	29.21	—	-18.5	-24.2	—	Calm	0	bc	—	—	—	—	—	After 8 p.m. we had some light N.E. breezes. At 9 p.m. noticed two remarkably clear dark shadows at entrance of the valley, evidently caused by the slopes of some mountain. They gradually decreased their angle of ascension and rapidly moved northwards as the sun moved southwards.
Oct. 16	1 p.m.		27.94	—	8.2	—	—	—	Lt. var. airs	—	bc	—	—	—	—	—	
	6 "		—	—	9.2	—	—	—	Calm	0	bc	—	—	—	—	—	
	8 "		27.03	27.07	—	-9.5	-9.5	206.9 27.01	Calm	0	b	—	—	—	—	—	



TABLE XXI.—JOURNEY OF DR. WILSON TO CAPE CROZIER, OCTOBER 12 TO NOVEMBER 5, 1903.

Date.	Time.	Noon bearing and distance from Whiter Quarters.	Pressure (Aneroid).	Temperature.		Wind.		Weather.	Miscellaneous phenomena.	Direction in which the smoke of Mt. Erebus is going.	Clouds.				Remarks.
				Dry bulb.	Wet bulb.	Direction.	Force (Beaufort).				Upper.	Lower.	Upper.	Lower.	
1903. Oct. 12	4 p.m.		Ins. 28.82	° -7.0	° -210.65	E	3-4	b	—	N	Cl.	—	—	—	Wind dropping as we get out clear of land. Surface of snow giving way frequently with extensive subsidence the whole day, wherever there was a sheet of freshly fallen, partly drifted, powdery snow, with ripple marks indicating southerly breezes. This was the only kind of surface that subsided.
	9 "		28.77	-15.3	210.90 29.27	E	2-3	bc	—	N	Cl. 4	S	—	—	
Oct. 13	9 a.m.		28.96	-20.0	210.9	Lt. E airs	—	bc	—	E	Cl. 3	—	—	—	2 a.m. Very heavy cumuloform clouds obscuring the whole of Erebus. 9.45 a.m. Bank of fog beyond the Bluff to S. Frequent subsidence of the softer surface all the forenoon; none later, when we get on to uniformly soft snow.
	Noon	S 81° E, 10 m.	28.89	-3.7	—	Lt. E airs	—	bc	—	—	Cl. 4	SW	—	—	2 p.m. Erebus and Terror both obscured by Str. of 9000 to 12,000 ft. altitude. Calm all the afternoon.
	1 p.m.		28.86	-6.6	211.1 29.39	SE	2-3	bc	+	N	Cl. 6	SW	—	—	4 p.m. Now almost overcast with Cl.-s. 9, SW. Light W'y airs, but variable. Erebus and Terror tops obscured.
	6 "		28.93	-10.2	211.2 29.45	Calm	0	bc	—	—	A.-s. 8	—	—	—	6 p.m. Tops of Mt. Erebus, Terror and Discovery obscured. Much Str. or A.-str. over western mountains.
Oct. 11	7 a.m.		29.08	-2.6	211.6	SW	2	oc	—	—	—	—	S. 10	—	Mild. Stormy looking over SW. Variable squalls of wind of force from 3-4 and flat calm.
	Noon	N 76° E, 13 m.	29.14	-0.2	211.4 29.685	Lt. SW airs	—	o	—	—	—	—	S. 10	—	7 a.m. Stormy looking SW and W. Erebus, Terror, Discovery and the Bluff all cloud capped. Surface very deep soft snow, very slaky.
	6 p.m.		29.12	-2.8	211.6 29.685	Calm	0	o	*	—	—	—	N. 10	—	10 a.m. Flat calm here, but high drift visible coming round White Island from SSW. Very stormy round White Island and Bluff. Clear to NW, but to NE and N all land marks gradually disappearing. Squalls S from SW.
Oct. 16	8 a.m.	N 72° E, 25 m.	28.97	-28.5	211.4 29.595	Calm	0	bc	—	SW	Fr.-cl.-s. 3	—	—	—	Noon. Str. reaching summit of Discovery to the W, but down so low over us here as to obscure the cliffs at the foot of Erebus. After Noon snow began to fall.
	5 p.m.		28.96	-22.5	211.6 29.685	Calm	0	oc	—	SE	Cl.-s. 10	—	—	—	6 p.m. White Island clear and top of Discovery. Clear now to S and SW. Erebus and Terror obscured to the foot, also nothing visible E.
	10 "		—	-29.0	—	SE	1	o	*	—	—	—	N. 10	—	Calm all the forenoon, except for an occasional E' breeze, of force 1-2.
Oct. 16	10 a.m.	N 70° E, 33 m.	29.00	-15.7	211.0	Calm	0	bc	—	—	Fr.-cl.-s. 6	—	—	—	At Noon Erebus smoke was going in a S' direction, but at 3 p.m. it was going first N'y and rising into an upper current which carried it in a W'y direction. Str. over Erebus and Terror. — now and again during day. At 10 p.m. heavy clouds hanging over Erebus and Terror.
	3 p.m.		28.79	-26.8	210.33 210.85 29.30	Calm	0	bc	—	—	A.-s. 4	—	—	—	
	10 "		—	-33.0	—	Lt. SE airs	—	bc	—	—	A.-s. 8	—	—	—	
Oct. 17	9 a.m.	N 68° E, 40 m.	28.77	-12.2	—	Calm	0	om	*	—	—	—	N. 10	—	Clear only to SW and S on the horizon. Erebus and Terror obscured; continued so all the forenoon. Surface—very deep soft snow, making very heavy travelling, even with half loads.
	3 p.m.		28.68	-12.8	210.3 28.925 210.5	Var. E and S airs	—	o	*	—	—	—	N. 10	—	After 3 p.m. breeze sprang up from SW, force 2-3.
	9 "		28.71	-15.0	210.5 29.04	Lt. S airs	—	om	—	—	—	—	S. 10, very low	—	
Oct. 18	5 a.m.		28.73	-27.0	210.7	Lt. NE airs	—	b	—	—	—	—	—	—	Reached Cape Crozier, final camp, and went down on the bay ice. There was much fog or low Str. over Ross' Sea, which, however, was ice-covered from the Barrier face to the horizon, hardly a lane of water showing anywhere. On the E side of each projecting part of the Barrier, however, and on E side of the high Crozier cliffs, were patches of open water showing a drift from W to E, but no wind.
	Noon	N 58° E, 46 m.	28.81	-23.0	210.5 29.04	Calm	0	b	—	—	—	—	—	—	Noon. A.-s. low on horizon in N and SW.
	10 "		28.56	-15.2	—	Calm to N airs	—	bc	—	—	—	—	—	—	10 p.m. A.-s. over White Island.
Oct. 19	Noon	N 64° E, 46 m.	28.75	-16.7	210.35 28.95	Calm	0	b	—	—	—	—	—	—	Clear day. No lane of water along the Barrier face; sea frozen as far as the horizon. Some Cu. cloud hanging over where I suspected Beaufort Island lay. Patches of open water on E lee of points of coast and Barrier. Frost, smoke rising in places, but no wind. Sastrugi in Cape Crozier, gut between Terror and Pressure Ridges, all strongly marking a SW wind exactly, but in the last neck leading from the Knoll to the Adèle Rookery the sastrugi marked a NW'y wind of some strength.



TABLE XXI.—JOURNEY OF DR. WILSON TO CAPE CROZIER, OCTOBER 12 TO NOVEMBER 5, 1903 (continued).

Date.	Time.	Noon bearing and distance from Winter Quarters.	Temperature.		Hypometer and equivalent pressure.	Wind.		Weather.	Miscellaneous phenomena.	Direction in which the smoke of Mt. Erebus is going.	Clouds.				Remarks.
			Dry bulb.	Wet bulb.		Direction.	Force (Beaufort).				Upper.	Lower.	Description.	Direction.	
1903. Oct. 30	10 a.m.	N 64° E, 46 m.	7.7	9.0	209.5 28.46	SW	6-8	o	* <sup>+</sup> <sub>2</sub>	—	—	—	—	—	Wind dropped to force 1-2 in the evening, but at mid. the sky was overcast, and shortly after the SW wind rose to force 4-8, with snow falling as well as drifting. This continued uninterruptedly all day. Terror is now covered by enormous masses of heavy A.-s. obscuring the sun.
	6 p.m.		—	—	209.6 28.52	SW	5-6	bc	+	—	—	A.-s. 8	—	—	
Oct. 31	10 a.m.	N 64° E, 46 m.	2.0	9.0	209.8 28.625	SW	6-8	bc	+ <sub>2</sub>	—	—	—	—	—	Blew all night, force 6-9. Nothing to be seen for drift; fine snow falling as well. Sun broke through in the morning, but wind did not drop. Continued uninterruptedly with excessive drift till 6 p.m., when there were short lulls occasionally.
	6 p.m.		—	—	209.95 28.72	SW	6-8	—	+ <sub>2</sub>	—	—	—	—	—	
Nov. 1	8 a.m.	N 61° E, 46 m.	12.5	2.0	210.35 28.95	SW	1-3	om	* <sup>+</sup>	—	—	—	—	—	Blew force 4-6 from SW all night, dropping towards morning to force 2 or 3. Snowing and drifting all night. No land visible even when the wind dropped. Same all the forenoon. Thick white snowstorm, wind SW, force 2-3. Same on till 6.30 p.m., when the wind, which had been up to force 6 in the afternoon, at times dropped to force 1 or 2. Drift excessive all day.
	6 p.m.		—	—	210.4 28.98	SW	2-3	om	* <sup>+</sup>	—	—	—	—	—	
Nov. 2	6 a.m.		6.0	14.9	—	SW airs	—	om	—	—	—	A.-s. 10	—	—	Snowfall and wind stopped during the night. Land came in sight all round. Heavy roll Cu. over Ross' Sea, stretching E from Cape Bird. Looks dark and threatening every where, but during forenoon cleared to a light A.-s. from having been om. All the forenoon Terror top was partly visible, snow falling up there. All the rocky parts now white. Left Cape Crozier at 4 p.m.
	2 p.m. 10.30 "	N 62° E, 36 m.	16.0	—	210.6 29.10	Calm	0	b	—	—	—	A.-s.	SE (fast)	—	
Nov. 3	7.30 a.m.		5.0	4.4	210.6 29.10	NE	1-2	oc	—	—	—	—	—	—	Hss been snowing soft flakes all night (an inch of soft fall), with a breeze of force 1-2 shifting between N and NE. Terror is now at 6.30 a.m. overcast down to 3000 or 4000 ft. Clear horizon E, S and W. Looks very dark over Cape Crozier, as though threatening snowfall. Dark open water-sky. During the forenoon the clouds gradually thinned and got higher, till at 1 p.m. only Ci.-s. radiating NW and SE, remained. Erebus smoke—very little to be seen—going NW. At 7 p.m. the A.-s. were radiating NW and SE. All the ripple marks we crossed to-day pointed to a prevailing SW wind. Excessive mirage to S.
	1 p.m. 7 "	N 70° E, 27 m.	1.2	—	210.5 28.81	Calm	0	b	—	NW	—	Ci.-s.	—	—	
Nov. 4	7.30 a.m.		6.0	10.6	210.5 29.04	SW airs	—	1c	—	—	—	—	—	—	6 a.m. Erebus smoke coming from NW. 7.30 a.m. Fr.-s. down to 9800 ft. obscuring Erebus and Terror tops. Looks dark and stormy over S and SW. Bluff very dark. Horizon cloudy all round, but overcast clear and sunny. Rapidly became overcast with Str. from SW. At 10 a.m. had again cleared to a very cloud-hanging over Erebus and Terror. At 10.30 a.m. a very heavy-looking unsharpened radiating A.-s. cloud came rapidly from SE beneath a quantity of Ci.-cu., which is going fast to the SE. By 11.30 a.m. the unsharpened A.-s. had gone round partly to Cape Crozier and partly to the Bluff, White Island, and the western mountains, leaving the bay waters in with only Ci.-cu., blue sky and sunshine overhead. The tops of Erebus and Terror are hidden by the A.-s. for 1000 ft. or so. The surface here is uniform, soft smooth snow, and on highing 2 ft. one finds coarse-grained crusty layers with spaces. Light airs during the night, either SE or NW, with snow fall. Sky overcast. Erebus and Terror obscured down to the cliffs. At 6 a.m. sent was passing rapidly from SE to NW. It became misty and thick with falling snow, and all land became obscured. NW airs with snowfall all day, even the sun disappearing entirely. The straggled, or rather ripple marks, have gradually changed in crossing the bay during the last two days, from indicating SWy winds to SEy. Wind at 1 p.m. very shifty. At 7.30 we reached the new ice, and met squalls of high drift with SEy wind, which obscured everything from time to time.
	2 p.m. 7 "	S 80° E, 13 m.	29.5	—	210.0 28.75	Calm	0	bc	—	—	SW	—	Ci. 5	—	
Nov. 5	6 a.m.		0.7	0.7	210.4 29.98	La. E airs	—	oc	—	—	—	Ci. 3	—	SE	
	1 p.m.		10.0	23.0	210.1 28.81	SW airs N airs	—	om	*	—	—	—	—	—	

TABLE XXII.—JOURNEY OF LIEUTENANT BARNE, R.N., TO SOUTH-WEST, OCTOBER 7 TO DECEMBER 12, 1903.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid) M.O. 4.		Temperature.		Wind.		Miscellaneous phenomena.	Clouds.				Remarks.
			ins.	M.O. 4.	Dry bulb.	Spirit minimum.	Direction.	Force (Beaufort).		Weather.	Upper.		Lower.	
										Description.	Direction.	Description.	Direction.	
1903. Oct. 7	8 p.m.		29.32	—	—41.2	—41.2	Calm	0	b	—	—	—	—	(At 8 p.m. ship's barometer corrected = 29.081 ins.; temperature, -9°-0.)
Oct. 8	8 a.m.		29.40	—	-40.2	-48.0	SE	0-1	b	—	SW	A.-cl. 6	—	During the night stiff SE breeze, with considerable drift.
	1 p.m.	S 45° E, 5 m.	29.47	—	-30.0	-50.5	Lt. S airs	—	bc	—	SW	Cl. 6	—	Very high Cl. clouds, radiating E by N and W by S. Mackerel markings.
	6 "	"	29.50	—	-26.4	-32.5	—	—	—	—	SW	Cl. 6	—	Visibility small. Considerable mirage at times.
	8 "	"	29.50	—	-30.0	-30.0	—	—	—	—	—	Cl. 8	—	
Oct. 9	9 a.m.		29.35	—	-29.2	-49.6	Calm	0	—	—	SW	Cl. 8	—	Heavy low bank of fog extending from N point of White Island to about 3 miles W of Cape Armitage.
	1 p.m.	S 40° E, 10 m.	29.37	—	-19.2	-27.0	Lt. N airs	—	—	—	—	Cl.-s.	S. 3	Str. cutting off tops of western mountains. Erebus smoke going NE. Light variable airs in afternoon.
	8 "	"	29.18	—	-18.0	-27.0	Calm	0	—	—	—	—	S. 10	6 p.m. Observed Discovery's shadow on sky, and sky shadow E to E by N. Pink glow all round horizon.
Oct. 10	8 a.m.		29.16	—	-26.2	-31.0	Lt. S airs	—	bc	—	E by N	Cl. 2	—	Very high mackerel Cl. moving from E by N all day.
	Noon	S 45° E, 16 m.	29.19	—	-21.6	-26.5	Lt. var. air	—	bc	—	E by N	Cl. 3	—	At 5 p.m. dark mass of Str. came up from S. Strong mirage. Threatening appearance.
	1 p.m.	"	29.13	—	-29.8	-29.8	Lt. S airs	—	bc	—	E by N	Cl. 2	—	About Mt. a blizzard began from SSW, lasting all through morning and forenoon of the 11th, but moderating in the afternoon to a strong breeze with surface drift. Upper part of land visible.
	6 "	"	29.12	—	—	—	Lt. NE airs	—	bc	—	E by N	Cl. 2	—	
	8 "	"	29.10	—	-28.5	-33.0	Lt. S air	—	bc	—	E by N	Cl. 4	S. 5	
Oct. 11	4 p.m.	S 42° E, 21 m.	29.15	—	-3.0	-33.8	—	—	—	—	—	—	—	Bluff covered with low clinging white cloud. Cl.-s. moving very slowly from S, and sky clearing from that direction. Erebus and Terror distinct.
	8 "	"	29.30	—	-8.6	-8.6	—	—	—	—	—	—	—	
	10 "	"	—	—	-4.0	-23.4	SSW	1-3	—	—	—	—	—	
Oct. 12	8 a.m.		29.23	—	-9.0	-13.5	—	—	bc	—	—	—	—	Off E side of White Island.
	Noon	S 45° E, 23 m.	29.15	—	-4.0	-23.4	SSW	1-3	bc	—	—	—	—	Sky clear, except for thin Cl.-s. over Erebus. Slight drift on part of S horizon.
	1 p.m.	"	29.18	—	-5.0	—	Calm	—	v	—	—	S. 5	—	
	6 "	"	29.15	—	-13.5	-18.0	Lt. SSW airs	—	bc	—	—	Cl. 3	—	
	8 "	"	29.06	—	-18.6	-18.6	SSW	1-2	bc	—	—	Cl. 2	—	Sky almost clear; thin fleecy Cl. to SW. Breeze sprang up SSW, with surface drift.
Oct. 13	8 a.m.		29.35	—	-21.5	-26.5	—	—	—	—	—	—	—	Lt. SW breezes during forenoon. Curious thin very narrow bands of Str. cutting off tops of Erebus and Terror. Low Cu. over northern slope of Erebus. Discovery capped by a small cloud.
	Noon	S 40° E, 28 m.	29.33	—	-11.6	-21.5	SW	1-2	bc	—	—	Cl. 2	—	Noon. Cloud forming above Mt. Bluff. In afternoon heavy clouds formed and hung over the Bluff, Black Island and Mt. Discovery; weather looking stormy in that quarter.
	2 p.m.	"	29.38	—	-10.0	-13.2	SW	2-3	bc	+	—	Cl. 3	—	6 p.m. SSW breeze freshening fast. Thick clouds of drift off the Bluff.
	8 "	"	29.28	—	-9.5	-10.5	SSW	2-4	bc	—	S	Cl. 5	S. cu. 2	8 p.m. Heavy dark Str. to SW. Sky overhead clearing.
	10 "	"	29.26	—	-8.0	-9.8	SSW	4-6	bc	+	S	Cl. 2	S. cu. 3	
Oct. 14	10 a.m.		29.40	—	—	—	SSW	3-7	og	+	—	—	S. 10	On waking up found it blowing a blizzard, which eased up slightly at Noon.
	Noon	S 38° E, 30 m.	29.45	—	-10.0	-11.6	SSW	3-6	og	+	—	—	S. 10	Sun visible through clouds, and upper part of land visible.
	6 p.m.	"	29.46	—	-11.0	-15.0	SSW	2	b	+	—	—	—	Clearing all round.
	8 "	"	29.45	—	-18.6	-18.6	Calm	0	b	—	—	—	—	

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroid) M.O. 4.		Temperature.		Wind.		Miscellaneous phenomena.	Clouds.				Remarks.	
			Ins.	Sp. min.	Dry bulb.	Wet bulb.	Direction.	Force (Beaufort).		Weather.	Upper.		Lower.		
											Description.	Direction.	Description.		Direction.
1903. Oct. 15	8 a.m.		29.48	-30.2	-13.6		Calm	0	b	—	—	—	—	Ci. streamers running W by N and E by S during the day. Str. formed over the western mountains, the Bluff, Erebus and Terror, but lifted to A.-s. to W between 2 and 6 p.m. The temperature dropped to -28.5 at 4 p.m. Minimum not registering correctly at 2 and 6 p.m., having been shifted by falling off the sledge.	
	Noon	S 38° E, 34 m.	29.43	-13.6	-13.2		Calm	0	b	—	—	—	—		
	2 p.m.		29.40	-10.5	-10.5		Calm	0	bc	—	—	—	—		
	6 "		29.35	-20.6	-20.6		SSW	1	bc	—	—	—	—		
8 "		29.30	-26.0	-26.5		Calm	0	bc	—	—	—	ENE			
Oct. 16	8 a.m.		29.27	-3.0	-26.2		Calm	0	bc	—	—	—	—	Ci. clouds apparently crossing one another, those from the SW being the highest. Land all round very distinct. Temperature dropping steadily in forenoon.	
	Noon	S 32° E, 42 m.	29.30	-14.5	-14.5		Lt. N airs	—	bc	—	—	—	—		
	2 p.m.		29.17	-16.2	-16.2		Lt. N airs	—	—	—	—	—	—		
	6 "		29.14	-23.2	-23.2		Calm	0	—	—	—	—	—		
8 "		29.14	-34.7	-34.7		Lt. N airs	—	b	—	—	—	—	—		
Oct. 17	8 a.m.		29.03	-27.4	-42.2		Lt. NE airs	—	bc	—	—	—	—	Erebus and Terror obscured by low Str. Low Str. cutting off tops of Bluff. Discovery, western mountains, Erebus and Terror obscured. 4 p.m. Clearing from SW. Very dark and thick N to E. Low Cu. coming from ENE. Thin Str. over western mountains.	
	Noon		29.09	-17.6	-27.4		SSW	0-1	c	—	—	—	—		
	6 p.m.	S 26° E, 50 m. (p.m.)	29.04	-17.8	-19.6		Calm	0	bc	—	—	—	—		
	8 "		28.93	-24.9	-24.9		Calm	0	bc	—	—	—	—		
Oct. 18	8 a.m.		28.93	-31.0	-40.2		Lt. SW airs	—	b	—	—	—	—	Thermometer out of order all day. Bubble shaken down and thermometer found correct at 8 p.m. by total thermometer. At Depot B, cloudless all day till 4 p.m., when clouds began to gather in the S and move up from that direction in long wisps of Ci. One of these was particularly noticeable, having the appearance of a 'ferring' bone and extending from the horizon SW, passing 20° W of zenith, and vanishing at an alt. of 50' in the NE. It gradually turned with the sun. 8 p.m. Thin vaporous Str. towards Erebus and Terror, through which these mountains were faintly visible. Fresh SW breeze, with surface drift during middle of day. Bright and clear all forenoon. Noon. Str. forming about N to NE. 2 p.m. Thin Str. formed about half-way up the end of the Bluff, and fog, at that height, came at great speed from WNW (true), covering the sky to about half an hour. Calm on the surface. Blue sky visible overhead. During afternoon fog dropped to surface (high land visible over it) causing frost rime on sledge gear. 3 p.m. Observed fog how, which remained opposite sun. After this the fog cleared to the S. Blue sky with Ci. running E and W, direction of movement indiscernible. Fog on horizon to S and E.	
	Noon	S 23° E, 56 m.	29.06	-26.2	-31.5		Calm	0	bc	—	—	—	—		
	2 p.m.		29.09	-16.7	-26.2		Calm	0	bc	—	—	—	—		
	6 "		29.04	-27.2	-30.2		Lt. NE airs	—	bc	—	—	—	—		
8 "		28.93	-38.4	-38.4		Lt. NE airs	—	b	—	—	—	—	—		
Oct. 19	8 a.m.		29.07	-38.2	-48.6		Lt. N airs	—	b	—	—	—	—	Clear all round. During forenoon Str. gathered over all the land, obscuring Erebus and Terror. Thin Str. cutting off centre of Discovery and western mountains. Str. forming over Bluff. Ci. moving from NW. Dark low Str. over McMurdo Island. Top of Erebus visible; clearing to N. 4 p.m. Mare's tails coming from SW. Thermometer out of order all day. Bubble shaken down and thermometer found correct at 8 p.m. by total thermometer. At Depot B, cloudless all day till 4 p.m., when clouds began to gather in the S and move up from that direction in long wisps of Ci. One of these was particularly noticeable, having the appearance of a 'ferring' bone and extending from the horizon SW, passing 20° W of zenith, and vanishing at an alt. of 50' in the NE. It gradually turned with the sun. 8 p.m. Thin vaporous Str. towards Erebus and Terror, through which these mountains were faintly visible. Fresh SW breeze, with surface drift during middle of day. Bright and clear all forenoon. Noon. Str. forming about N to NE. 2 p.m. Thin Str. formed about half-way up the end of the Bluff, and fog, at that height, came at great speed from WNW (true), covering the sky to about half an hour. Calm on the surface. Blue sky visible overhead. During afternoon fog dropped to surface (high land visible over it) causing frost rime on sledge gear. 3 p.m. Observed fog how, which remained opposite sun. After this the fog cleared to the S. Blue sky with Ci. running E and W, direction of movement indiscernible. Fog on horizon to S and E.	
	Noon	S 16° E, 60 m.	29.17	-23.0	-38.2		Calm	0	b	—	—	—	—		
	2 p.m.		29.23	-28.1	-28.1		Lt. NE airs	—	b	—	—	—	—		
	8 a.m.		29.28	—	—		WSW	1-2	—	—	—	—	—		
Oct. 20	10 "		29.30	—	—		—	—	—	—	—	—	—	Thermometer out of order all day. Bubble shaken down and thermometer found correct at 8 p.m. by total thermometer. At Depot B, cloudless all day till 4 p.m., when clouds began to gather in the S and move up from that direction in long wisps of Ci. One of these was particularly noticeable, having the appearance of a 'ferring' bone and extending from the horizon SW, passing 20° W of zenith, and vanishing at an alt. of 50' in the NE. It gradually turned with the sun. 8 p.m. Thin vaporous Str. towards Erebus and Terror, through which these mountains were faintly visible. Fresh SW breeze, with surface drift during middle of day. Bright and clear all forenoon. Noon. Str. forming about N to NE. 2 p.m. Thin Str. formed about half-way up the end of the Bluff, and fog, at that height, came at great speed from WNW (true), covering the sky to about half an hour. Calm on the surface. Blue sky visible overhead. During afternoon fog dropped to surface (high land visible over it) causing frost rime on sledge gear. 3 p.m. Observed fog how, which remained opposite sun. After this the fog cleared to the S. Blue sky with Ci. running E and W, direction of movement indiscernible. Fog on horizon to S and E.	
	8 p.m.	S 15° E, 62 m.	—	-23.2	-23.2		—	—	—	—	—	—	—		
	8 a.m.		29.28	-23.5	-40.7		Lt. ENE airs	—	—	—	—	—	—		
	10 "		29.32	-12.6	-16.4		ENE	2-3	—	—	—	—	—		
Oct. 21	Noon	S 9° E, 72 m.	29.27	-10.8	-11.2		ENE	1-2	—	—	—	—	—	Thermometer out of order all day. Bubble shaken down and thermometer found correct at 8 p.m. by total thermometer. At Depot B, cloudless all day till 4 p.m., when clouds began to gather in the S and move up from that direction in long wisps of Ci. One of these was particularly noticeable, having the appearance of a 'ferring' bone and extending from the horizon SW, passing 20° W of zenith, and vanishing at an alt. of 50' in the NE. It gradually turned with the sun. 8 p.m. Thin vaporous Str. towards Erebus and Terror, through which these mountains were faintly visible. Fresh SW breeze, with surface drift during middle of day. Bright and clear all forenoon. Noon. Str. forming about N to NE. 2 p.m. Thin Str. formed about half-way up the end of the Bluff, and fog, at that height, came at great speed from WNW (true), covering the sky to about half an hour. Calm on the surface. Blue sky visible overhead. During afternoon fog dropped to surface (high land visible over it) causing frost rime on sledge gear. 3 p.m. Observed fog how, which remained opposite sun. After this the fog cleared to the S. Blue sky with Ci. running E and W, direction of movement indiscernible. Fog on horizon to S and E.	
	2 p.m.		29.35	-13.6	-13.6		—	—	—	—	—	S	—		
	6 "		29.19	-17.3	-17.3		Calm	0	bcf	—	—	—	—		
	Midt.		29.15	-26.5	-26.5		Calm	0	bc	—	—	—	—		



TABLE XXII.—JOURNEY OF LIEUTENANT BARNE, R.N., TO SOUTH-WEST, OCTOBER 7 TO DECEMBER 12, 1903 (continued).

Date.	Time	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroïd) M.O. 4.		Temperature.		Wind.		Miscellaneous phenomena.	Clouds.				Remarks.
			Dry bulb.	Wet minimum.	Direction.	Force (Beaufort).	Upper.	Lower.		Upper.	Lower.	Upper.	Lower.	
1903. Oct. 31	8 a.m.		Ins. 28.34	—	—	—	—	—	+	—	—	—	—	No land visible. Sun showing through clouds.
	Noon	S 7° W, 96 m.	28.89	—	SW	2-5	—	—	+	—	S. 10	—	S by W	End of Bluff visible. Clear gap to S. Heavy drift during squalls.
	2 p.m.		28.00	3.7	SSW	2-5	—	—	+	—	S. 10	—	S by W	
	4 "		29.02	4.5	S by E	1-2	3.7	—	+	—	S. 10	—	S by W	
	6 "		29.05	0.2	SW	3-5	8.8	—	+	—	Cl.	—	SW	4.30 p.m. Wind dropped, then sprang up from NW and veered to SW. Upper clouds visible between over ones, with patches of blue sky. Clear to S.
	8 "		29.06	0.2	SW	2-5	1.0	—	*+	—	S. cu. 8	—	—	Snow fine and damp.
	8 a.m.		29.03	5.3	SSW	0-1	0.2	—	*+	—	S. 10	—	—	Fine snow falling fast, all day.
	Noon	S 9° W, 103 m.	29.22	8.6	SSW	1	—	—	*+	—	N. 10	—	—	
Nov. 1	2 p.m.		29.26	9.8	SSW	1	8.2	—	*+	—	N. 10	—	—	
	4 "		29.20	9.8	SSW	1-2	9.8	—	*+	—	N. 10	—	—	5.30 p.m. Thicket and snowing hard. Sun dimly visible all day; surface drift and snow.
	6 "		29.18	5.8	SSW	2-3	5.8	—	*+	—	N. 10	—	—	The horizon became visible to the S, general appearance brighter.
	8 "		29.14	7.4	SSW	1-3	5.8	—	*+	—	N. 10	—	—	Horizon visible all round, except to NW.
	7 a.m.		29.07	8.2	SSW	1-2	3.2	—	—	—	—	—	—	5.30 a.m. Lower part of land clear from N to SW.
	Noon	S 10° W, 108 m.	29.09	9.8	W by S	1-3	3.2	—	+	—	Cl. 2	N by W	—	Cl. clouds converging to S by E and N by W.
	2 p.m.		29.10	8.6	—	—	—	—	+	—	—	—	—	0.30 p.m. Stiff breeze sprang up from W by S. Surface drift most of forenoon. Land clearing rapidly.
	4 "		29.08	4.0	W by S	4-5	—	—	+	—	Cl.-s. 3	N by W	—	Observed clouds of drift on slopes of land to W by N.
Nov. 3	8 "		29.07	2.5	W by S	3-5	2.5	—	+	—	Cl.-s. 2	N by W	—	4.30 p.m. Strong breeze with heavy drift, continuing at intervals for rest of the day.
	2 p.m.	S 11° W, 110 m.	29.96	—	W by S	3-5	—	—	+	—	Cl.-cu. 9	W by S	—	Heavy squalls during the night. First observation taken at 2 p.m. on account of weather.
	4 "		29.93	3.2	W by S	2-5	—	—	+	—	Cl.-cu. 8	W by S	—	During afternoon clouds passing over rapidly. Land clear from N to SW. Blue sky visible from horizon to 20°, except from SW to SE. Land visible except in same direction.
	6 "		29.90	1.0	W by S	2-3	—	—	+	—	—	—	—	Cleared from W and N. Str. clouds above horizon S to W.
	8 "		29.93	0.2	W by S	3-6	—	—	+	—	—	—	—	
	8 a.m.		29.75	4.2	W by S	2-3	—	—	+	—	Cl.-cu.	W by S	—	Squally, with surface drift. Dark and threatening to N and W.
	Noon	S 12° W, 112 m.	29.80	6.3	WSW	1-2	—	—	+	—	Cl. 2	NW	—	Cl. clouds converging W by S and E by N. Drift at times.
	2 p.m.		29.76	4.4	WSW	3-5	4.2	—	+	—	—	—	—	0.20 p.m. Weather dark and threatening all over the land, and from S to NW. Clouds are apparently lowering. Tops of mountains are becoming obscured.
Nov. 4	6 "		29.70	8.6	SW	3-6	5.3	—	*+	—	—	—	—	Very dark N.m. clouds to NNW. Wind squally.
	8 "		29.68	9.8	SW	4-6	8.4	—	*+	—	—	—	—	Very thick all afternoon and evening. Sun faintly visible. Snowing and drifting hard.
	6 a.m.		29.64	5.8	WSW	1-2	—	—	*	—	—	—	—	Snow hard, with surface drift.
	8 "		29.61	2.8	S by W	1	—	—	*+	—	—	—	—	11 a.m. Sky clearing from the S, but thick all over the land, obscuring it completely.
	Noon	S 14° W, 118 m.	29.62	—	S by E	1-3	—	—	*+	—	Cl. 5	S by E	—	Patches of blue sky visible S by W to S by E between Str., which appeared to lift. Sky clearing from S; roll of white fleecy small Cu. cloud passing very quickly over from the SW. Cl. clouds, having the appearance of being wind blown (mare's tails), with dark blue sky between them.
	2 p.m.		29.66	—	S by E	3-5	—	—	*+	—	—	—	—	2 p.m. Sky completely overcast again; snowing and drifting.
	4 "		29.71	—	S by E	3-5	—	—	*+	—	—	—	—	4 and 6 p.m. Same weather.
	"		29.75	—	S by E	2-4	—	—	*+	—	—	—	—	

Nov. 6	6 a.m.	28-82	- 1-2	- 1-6	Lt. S airs	—	oc	*	—	—	—	S. 10	—
8	"	28-86	2-8	- 1-2	SSW	1-2	oc	*†	—	—	—	S. 10	—
Noon	S 15° W, 121 m.	28-89	6-7	2-2	SSW	1	oc	*†	—	—	—	S. 10	—
2 p.m.	"	28-90	6-0	5-0	SSW	1-2	oc	*†⊕	—	—	—	S. 10	—
4 "	"	28-87	4-2	3-8	WSW	1	oc	*†⊕	—	—	—	S. 10	SSW
6 "	"	28-82	9-0	3-7	WSW	1	oc	*†	—	—	—	S. 10	SSW
8 "	"	28-80	6-8	6-8	S by E	1-3	ocq	*†	—	—	—	S. 10	SSW (last)
Nov. 7	6 a.m.	28-79	5-6	4-8	S by E	2-4	c	†	—	—	—	—	—
8 "	"	28-79	5-6	5-6	S by E	1-3	c	†	—	—	—	A.-cu. 9; S. 2	—
Noon	S 15° W, 125 m.	28-86	2-9	1-2	S by E	1-3	c	†	—	—	—	A.-cu. 9; S. 6	—
2 p.m.	"	28-87	5-2	2-5	SSW	1-2	bc	†	—	—	—	—	—
4 "	"	28-89	7-7	3-8	SSW	2-3	bc	†	—	—	—	—	—
8 "	"	28-83	3-0	3-0	Lt. SSW airs	—	bc	†	—	—	—	—	—
Nov. 8	6 a.m.	28-88	7-0	2-5	SSW	1	c	—	—	—	—	S. 10	—
8 "	"	28-89	10-8	7-0	SW by S	1-3	cq	†	—	—	—	S. 10	—
Noon	S 16° W, 129 m.	28-91	12-2	—	SW by S	3-5	cq	†	—	—	—	S. 10	—
2 p.m.	"	28-89	—	—	SW by S	4-6	cq	† <sup>2</sup>	—	—	—	S. 10	—
4 "	"	28-86	12-0	—	SW by S	5-6	cq	† <sup>2</sup>	—	—	—	S. 10	—
8 "	"	28-82	12-2	10-0	SW by S	5-7	cq	†	—	—	—	S. 10	—
Nov. 9	8 a.m.	28-80	12-5	12-0	SW by S	4-6	bcq	† <sup>2</sup>	—	—	—	Cu. 8	SW by S
10 "	"	28-86	—	—	SW by S	4-6	bcq	† <sup>2</sup>	—	—	—	Cu. 6	—
Noon	S 16° W, 129 m.	28-87	11-2	10-0	SW by S	4-6	bcq	†	—	—	—	—	—
2 p.m.	"	28-92	10-5	10-5	SW by S	1-3	bcq	†	—	—	—	—	—
6 "	"	28-93	5-0	0-8	Lt. SW airs	—	bc	—	—	—	—	—	—
8 "	"	28-91	- 2-6	- 2-6	Calm	0	b	—	—	—	—	—	—
Nov. 10	2 p.m.	28-77	6-0	- 2-6	SSW	3-5	oo	†	—	—	—	S. 10	—
4 "	"	28-70	—	—	SSW	4-6	oc	†	—	—	—	S. 10	—
8 "	"	28-87	3-4	- 1-2	SSW	5-8	oc	*† <sup>2</sup>	—	—	—	S. 10	—
Nov. 11	10 a.m.	28-85	6-5	3-5	SSW	2-4	bc	†	—	—	—	—	—
Noon	S 17° W, 131 m.	28-92	7-2	6-5	SSW	3-4	bc	†	—	—	—	—	—
2 p.m.	"	28-99	—	—	SSW.	2-3	bc	†	—	—	—	—	—
4 "	"	28-98	12-5	8-2	SSW	2-3	bc	†	—	—	—	S.-cu. 5	SSW
6 "	"	29-00	14-7	11-4	SSW	1-3	c	†	—	—	—	S.-cu. 5	SSW
9 "	"	29-00	11-0	11-9	SW	1-3	bc	†	—	—	—	Cu. 2	WSW
Nov. 12	9:30 a.m.	29-01	16-8	11-9	SSW	3-5	c	†	—	—	—	S.-cu. 10	WSW
Noon	S 17° W, 134 m.	29-04	14-1	14-1	SSW	2-3	c	†	—	—	—	S. 8	WSW
2 p.m.	"	29-05	20-0	14-0	SSW	1-2	bcq	†	—	—	—	S. 6	SW
4 "	"	29-05	20-6	20-0	SSW	2-4	bcq	†⊕	—	—	—	S.-cu. 6	SW
6 "	"	29-03	18-6	14-1	SSW	2-4	cq	†*⊕	—	—	—	N. 2; S.-cu. 8	SW
8 "	"	29-03	18-1	18-1	SW	2-5	cq	†*⊕	—	—	—	S. 10	—

Weather similar to yesterday's; no land visible.

1 p.m. Complete parhellow, diameter 44°.

Thick above horizon. Later clear all round, except to windward. Dark appearance in direction of exposed land, which was faintly visible by 8 a.m. 9 a.m. Break in sky to SSE; long line of A.-cu. coming from SSE.

Heavy bank of cloud, lately overhead, now to the NW. Thin streaks of Ci.-s. passing quickly over to SW. Land mostly covered in cloud, lower part faintly visible.

Low Str. covering the sky during the night.

Noticed that the sun shines on sides of the hills which we can see, W to SW, at some distance back from the coast. Lower part of these only visible.

Heavy surface drift, gradually diminishing during the forenoon.

Great heat in the sun, more than hitherto.

Ci. clouds passing over from the SE, leaving clear sky. Observed mirage (considerable) for first time since October 21. 10 p.m. Drift snow on mountains and snow slopes to NW. 11 p.m. and Mitt. Sky clear, with exception of white hazy mist over North Gap, and a cloud resembling smoke over Mt. Discovery.

6 p.m. Land became obscured; wind freshening; very heavy squalls.

Blowing a blizzard; very heavy drift.

3 p.m. Ci.-s. cloud to SSW apparently coming over. Low Str. clouds gathering over the land. A dark mass of Nim. cloud, from which snow appeared to be falling, passed to the northward. Lower part of land visible from SSW to W by N.

9 p.m. Small low Cu. clouds passing over quickly. Upper clouds appear much distorted by wind.

Break in sky to southward, with Ci. clouds curving to NE as if their course had been suddenly changed by a different current of air.

4 p.m. A mock sun visible against an apparently blue sky; prismatic coloured clouds below the sun. Short lasting snow storm passing over and between us and the land, pouring from the mouth of the Gap. Low Str. cloud obscuring all the land, except the dark patches. Complete parhellow.

Nothing visible; a low Str. or Nim. and fine falling snow.

TABLE XXII.—JOURNEY OF LIEUTENANT BARNE, R.N., TO SOUTH-WEST, OCTOBER 7 TO DECEMBER 12, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure (Aneroïd) M.O. f.	Temperature.		Wind.		Miscellaneous phenomena.	Clouds.				Remarks.	
				Dry bulb.	Wet minimum.	Direction.	Force (Beaufort).		Weather.	Upper.	Lower.	Description.		Direction.
1903. Nov. 13	8 a.m.		hgs. 29.08	° 5.6		S by W	3-4	bc	Cl.-s. 3	S by W				3.45 p.m. Observed a ring of prismatic colours round the sun, diameter about 5°
	10 "	S 17° W, 137 m.	29.15	11.6		S by W	2-4	b	Cl.-s. 2	S by W				4 p.m. Passed a pressure ridge, 100 yards long by 3 ft., direction E by N and W by S, narrow cracks running about N and S from horizon clear sky, except for long thin lines of Cl. from S by W, nearest land faintly visible. Considerable surface drift in forenoon. Dark and stormy in the Gap. Most of the mountains covered with woolly Cu. The Cl. clouds, N by W, passing below the sun, became iridescent.
	2.30 p.m.		29.23	15.0		S by W	1-2	b	Cl.-s. 3	S				6 p.m. Observed a dark shadow of N by W against a blue sky, with several fainter ones to the S of it. To-day, as usual, thick Str. and Cl. clouds coming up from the northward, but keeping over the land.
	4 "		29.23	13.6		S by W	1-2	bc	Cl.-s. 4	S				
	6 "		29.18	16.8		Lt. S airs	—	bc	Cl.-s. 5	S				
	8 "		29.16	4.2	4.2	Lt. S airs	—	bc	Cl.-s. 5	S				
	6 a.m.		29.15	3.7	5.0	Calm	0	b	Cl.-s. 2	SW				
	8 "		29.14	4.0	1.0	Lt. S airs	—	bc	A.-cu. 5	S by W				
Nov. 14	Noon	S 18° W, 144 m.	29.16	4.0		Lt. S airs	—	bc	A.-cu. 6	S by W				In NNW, patch of very small mackerel Cl. Mt. Discovery and the Hump covered in close fitting cap of woolly cloud. Long tongue of cloud in single ridges, showing clearly against the sun, running in towards end of slope.
	2 p.m.		29.20	29.0	14.6	Calm	0	bc	Cl. 3	SW				2 p.m. Temperature in the sun, 37.8 (toluol thermometer).
	4 "		29.15	19.0	15.2	SW	1	—	A.-cu. 2	S				Cl. in long lines from 10° above horizon each end, converging ENE and WSW.
	6 "		29.10	—	14.1	—	—	—	Cl. 2	—				Mirage all day.
	8 a.m.		29.14	3.4	3.6	Lt. N airs	—	b	—	—				7 to 8 a.m. Clear all round except for thin Cl. clouds to S and SSE.
	Noon	S 19° W, 148 m.	29.22	11.2	2.9	Lt. SW airs	—	b	—	—				Sky and land absolutely clear. Slight mirage to S and SW.
Nov. 15	4 p.m.		29.13	9.0	6.8	Lt. SW airs	—	b	—	—				1.15 p.m. SW breeze sprang up and freshened quickly to force 3-4 in the squalls.
	6 "		29.13	12.2	8.7	Lt. SW airs	—	b	—	—				3 p.m. SW breeze 2-3, sky still cloudless, surface drift.
	8 "		29.12	4.2	2.6	Lt. SW airs	—	b	—	—				4 p.m. Very small Cl. in NE horizon. Slight mirage. Undulations (of lee) W by S and E by N. Line of pressures seen yesterday afternoon, probably in same direction.
	8 a.m.		29.18	2.4	8.0	Lt. SW airs	—	b	—	—				6 a.m. A low bank of Str. cloud along Barrier horizon.
	Noon	S 21° W, 149 m.	29.29	3.5	4.8	S by W	1-2	b	—	—				Low bank of Str. over horizon SE and S.
	4 p.m.		29.20	0.6	0.6	S by W	1-3	b	+	—				2 p.m. Str. clouds forming all over the land and over the Strait. Stiff S by W breezes, with surface drift.
	6 "		29.27	2.2	0.2	S by W	1-2	oc	*	—				2.30 p.m. Low Str., which came over at a great rate, completely obscuring all the land. Fine snow falling.
	8 "		29.24	1.0	2.7	S by W	1	oc	*	—				4 p.m. Observed large mock sun (prismatic) below the true sun, and a brilliant one on each side against a blue sky.
Nov. 16	6 a.m.		29.32	6.5	2.5	Calm	0	oc	—	—				6-8 p.m. On the summit of an undulation (of lee).
	Noon	S 22° W, 160 m.	29.36	10.0	2.3	Lt. SW airs	—	oc	—	—				Low Str., land clearly visible below it.
	4 p.m.		29.45	14.6	9.2	Lt. N airs	—	oc	—	—				Clear sky to S below Str.
	6 "		29.40	8.6	6.4	Lt. N airs	—	oc	—	—				Clear blue sky E to SSW from horizon to alt. 10°.
	8 "		29.30	9.4	7.6	Lt. W airs	—	bc	—	—				6 p.m. Sky clearing from the westward.
	8 "		29.42	4.2	4.2	Lt. SW airs	—	bc	—	—				6 p.m. Mountains all clear.
	1 p.m.	S 22° W, 162 m.	29.18	5.2	4.2	SW	4-6	bq	+	—				9 p.m. Light SW breeze sprang up. The sastrugi are here SW.
	4 "		29.22	10.0	4.8	SW	2-6	bq	+	—				Very heavy squalls, the wind falling to force 2 sometimes between them.
6 "		29.23	7.7	7.7	SW	2-6	bq	+	—				Considerable drift all day and following night.	



TABLE XXII.—JOURNEY OF LIEUTENANT BARNE, R.N., TO SOUTH-WEST, OCTOBER 7 TO DECEMBER 12, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Temperature.		Wind.		Miscellaneous phenomena.	Clouds.				Remarks.	
			Dry bulb.	Spirit minimum.	Direction.	Force (Beaufort).		Weather.	Upper.	Lower.	Direction.		
1903. Nov. 28	6 a.m.		23.9	21.6	S by W	1-2	c	—	—	—	ESE	S.-cu. 8, N. 2	Patches of rock occasionally visible. During forenoon, break in sky to SE.
	8 "		24.2	24.0	S by W	1-3	c	+	—	—	ESE	S.-cu. 10	
	Noon	S 23° W, 127 m.	28.2	25.0	S by W	3-4	c	+	—	—	ESE	S.-cu. 10	4 p.m. Sky clearing to SE, strip of blue sky visible, also more patches of rock. Sun shining through Str. clouds.
	6 p.m.		22.7	22.7	S by W	3-6	bc	+	—	—	—	S.-cu. 10	Sky apparently clearing from SE. Long strip of large cirrus (mackerel sky) coming up from ESE.
	8 "		22.7	22.7	S by W	2-4	c	+	—	—	—	Roll Cu.	Squalls, drift, and snow all day, except for a short time in afternoon, when the sun shone out.
	2 a.m.		24.9	21.6	SSW	1-2	oc	+	—	—	—	N. 10	Break in sky overhead, low white clouds passing over to S fast from ESE. Remainder of sky with Nim. or S.-cu. all day. No land visible.
	8 "		22.6	22.6	SSW	3-5	oc	+	—	—	—	N. 10	Lower part of land visible from SSW to NW; appearance of clearing.
	Noon	S 21° W, 117 m.	—	—	SSW	3-6	oc	+	—	—	—	N. 10	Same as at 8 a.m. Wind dropping during forenoon. Sky clearing from SE. Very dark sky over McMurdo Strait. Bluff showing after 4 p.m. Mt. Discovery obscured, also mountains from Discovery to Western Gap.
Nov. 30	4 p.m.		23.2	10.5	S by W	3-5	oc	+	—	—	—	N. 10	Same land visible.
	6 "		22.0	20.8	S by W	2-4	oc	+	—	—	—	N. 10	
	8 "		22.5	22.0	S by W	2-3	oc	+	—	—	—	N. 10	
	8 a.m.		18.4	7.8	S by W	2-3	c	+	—	—	—	S.-cu. 10	
	Noon	S 19° W, 110 m.	20.0	17.0	S	1-2	c	+	—	—	—	S.-cu. 9	
	4 p.m.		26.5	24.2	Lt. var. airs	—	bc	—	—	—	—	S.-cu. 6	
	6 "		31.2	(3) 10.8	Calm	0	bc	—	—	—	—	S. 5	
	8 "		29.27	18.6	Calm	0	c	—	—	—	—	S. 10	
Dec. 1	6 a.m.		13.0	10.0	S by E	1-2	c	—	—	—	—	—	9 a.m. Observed to NNE curious long rows of shaded Str. clouds running parallel to one another, in direction E and W. Clear sky to S. Close-fitting clouds over Discovery and the Bluff.
	8 "		15.7	11.9	S by E	1-2	c	—	—	—	—	—	Heavy banks of Str. clouds on southern horizon, with curious, very dark patches in them. Dark sky over McMurdo Strait. Summits of mountains, except Discovery, obscured; Bluff clear.
	Noon	S 14° W, 96 m.	23.8	15.3	SW by W	2-3	c	+	—	—	—	—	Clouds travelling SE all day.
	2 p.m.		23.8	23.2	WSW	1-3	c	+	—	—	—	—	
	6 "		20.0	18.5	—	—	bc	+	—	—	—	—	
	7 "		18.5	16.6	—	—	c	+	—	—	—	—	
	2 a.m.		13.2	11.7	Lt. S airs	—	oc	*	—	—	—	N. 10	Heavy surface drift and snow fall during the night.
Dec. 2	4 "		13.8	12.5	S by W	1	oc	+	—	—	—	N. 10	Thick all round, with passing snow showers till 0.30 p.m., when a break in the sky from E to SSE (true) appeared, extending down to the horizon. Sky clearing rapidly from the S by E.
	Noon	S 9° W, 87 m.	20.1	18.8	S by W	1-2	c	+	—	—	—	S. 8	10 p.m. Sky practically cloudless, except for a few small Str. clouds to S and SW. Those near the sun brilliantly coloured.
	2 p.m.		20.8	20.1	S by W	2-3	bc	—	—	—	—	S.-cu. 6	
	6 "		27.0	18.9	S by W	1	bc	—	—	—	—	—	
	8 a.m.		11.2	7.0	W by N	2-3	bc	+	—	—	—	—	Fresh breeze all day, varying in the afternoon from W by N to WSW. Clouds over western mountains, and at 6 p.m. low S.-cu. clouds came over at great speed from the S.
	1.30 p.m.	S 4° W, 79 m.	16.5	11.0	W by N	1-3	bc	+	—	—	—	—	Very dark from SW to W.
7 "		14.7	12.5	W by N	2-4	bc	+	—	—	—	S.-cu.		

Dec. 4	6 a.m.	29-45	13-1	10-0	WSW	2-3	oc	+	—	—	S.-cu. 10	ESE	Low S.-cu. in small rolls of cloud overhead, flat over the land. 9 a.m. Observed two "mackerel skies" crossing one another, one E to W, and one NE and SW. 10 a.m. Sky partially covered by fine cobweb-like clouds.
	10 "	29-56	12-9	—	W	2-4	bc	—	—	—	—	—	
	Noon	29-55	19-0	13-8	W	2-3	c	—	—	—	Roll Cu. 10	SW	
	2 p.m.	29-54	18-6	18-6	W	2-4	cq	—	—	—	—	—	
	6 "	29-52	15-2	15-2	W by S	2-3	cq	—	—	—	—	—	6.30 p.m. Thick fog came over from the southward, lifting occasionally and showing the end of the Bluff. Sky remained clear on the horizon to SE.
	8 "	29-50	16-6	16-6	WSW	2-3	cq	—	—	—	—	—	
Dec. 5	9 a.m.	29-53	15-6	13-2	SSW	2-3	oc	+	—	—	S.-cu. 10	S by W	a.m. Showers of driving snow.
	Noon	29-54	15-8	14-3	SSW	3-4	oc	+	—	—	S.-cu. 6	S by W	Break in the sky for short time. Lower clouds passing rapidly from S by W, with occasional patches of blue sky. End of Bluff visible at intervals.
	2 p.m.	29-58	15-4	15-4	S by W	2-3	oc	+	—	—	S. 10	S by W	
	4 "	29-62	13-6	13-6	S by W	3-4	oc	+	—	—	S. 10	S by W	
	6 "	29-68	10-2	10-2	S by W	3-4	oc	+	—	—	S. 10	S by W	
Dec. 6	6 a.m.	29-54	12-2	10-2	S by W	1-3	c	+	—	—	S. 10	S by W	Appearance of clearing, lower part of Bluff visible.
	8 "	29-60	—	—	S by W	1-3	bc	—	—	—	—	—	Sky cleared from the SSW in forenoon.
	Noon	29-68	16-8	13-0	S by W	1-2	bc	—	—	—	—	—	
	2 p.m.	29-77	15-4	15-4	WSW	1	bc	—	—	—	—	—	
	4 "	29-78	18-0	—	W by S	1	b	—	—	—	—	—	Str. clouds over the land; tops of Erebus and Terror visible.
	8 "	29-75	20-0	18-6	Calm	0	b	—	—	—	—	—	A few Cl. clouds, parallel, converging E and W (true). Land clear.
Dec. 7	8 a.m.	29-65	18-0	3-8	Lt. SW airs	—	b	—	—	—	—	—	a.m. Clear all round.
	Noon	29-70	—	—	SW	1-2	b	—	—	—	—	—	Noon and p.m. Clouds forming on Discovery's hump and western mountains.
	2 p.m.	29-78	18-5	6-8	SW	1	b	—	—	—	—	—	3 p.m. Narrow crack, very straight, NW, SE, true, straight for visible Bluff.
	4 "	29-76	17-8	16-9	SW	1	b	—	—	—	—	—	3.15 p.m. Straight thin crevasse, 7 ins. wide, N and S; sounded 19 ft.
	6 "	29-77	17-0	15-1	SW	1	b	—	—	—	—	—	3 p.m. Very peculiar clouds passing over Black Island from the SW. Small flecks of Cl. near the sun.
	8 "	29-77	18-8	15-5	SW	1-3	bq	+	—	—	—	—	
Dec. 8	6 a.m.	29-75	15-8	13-4	SW	1-4	bq	+	—	—	—	—	11 a.m. Low clouds passing rapidly over from SW.
	8 "	29-73	16-2	14-5	SW	2-3	bq	+	—	—	—	—	
	0.30 p.m.	29-74	17-2	13-8	SW	2-4	bq	+	—	—	—	—	
	2 "	29-78	17-0	16-5	S	1-3	bq	+	—	—	—	—	Clouds forming and passing over the Bluff at a great rate. Masses of Cu. clouds over McMurdo Strait, moving slowly from W. Heavy bank of Str. NE to SE, obscuring Erebus and Terror, and casting a shadow on the sky.
	6 "	29-82	11-0	—	S by E	1-2	bc	—	—	—	—	—	
	8 "	29-86	12-8	10-0	S by E	1-2	bc	—	—	—	—	—	
Dec. 9	6 a.m.	29-73	6-0	3-4	Lt. SW airs	—	b	—	—	—	—	—	Barometer readings not reliable; crossing undulations all day.
	8 "	29-70	16-3	6-0	Lt. SW airs	—	b	—	—	—	—	—	a.m. No clouds at all. On opening up western mountains and Discovery, observed Str. clouds on them.
	10 "	29-84	25-0	21-2	Lt. NE airs	—	b	—	—	—	—	—	
	Noon	29-77	18-7	18-7	Lt. NE airs	—	b	—	—	—	—	—	
	2 p.m.	29-77	19-2	18-5	Lt. NE airs	—	b	—	—	—	—	—	
	4 "	29-79	21-6	18-8	Lt. NE airs	—	b	—	—	—	—	—	
	6 "	29-73	30-2	19-0	Lt. NE airs	—	b	—	—	—	—	—	
	8 "	29-72	17-8	17-8	Calm	0	b	—	—	—	—	—	Small white clouds forming over Black Island.
Dec. 10	6 a.m.	29-57	10-0	9-2	Calm	0	b	—	—	—	—	—	Str. low on horizon E and NE, rising during forenoon and veering ENE.
	8 "	29-66	10-7	9-8	Lt. W airs	—	b	—	—	—	—	—	p.m. A few Cl. clouds, 2, converging ENE and WSW.
	Noon	29-65	21-0	19-0	—	—	b	—	—	—	—	—	4 p.m. Str. clouds between here and western mountains, tops visible above them.
	6 p.m.	29-64	20-5	20-2	—	—	b	—	—	—	—	—	
	8 "	29-60	20-9	19-2	—	—	b	—	—	—	—	—	

TABLE XXII.—JOURNEY OF LIEUTENANT BARNE, R.N., TO SOUTH-WEST, OCTOBER 7 TO DECEMBER 12, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Temperature.		Wind.		Miscellaneous phenomena.	Clouds.				Remarks.	
			Dry bulb.	Spirit minimum.	Direction.	Force (Beaufort).		Upper.	Lower.	Direction.	Direction.		
1903. Dec. 11	6 a.m.		Ins. 29.46	5.0	Calm	0							Off White Island. Str. clouds above horizon NE to S. 8 to 10 a.m. Mirage and refraction on White Island. Erebus smoke ascending to a height of 2000 ft., and then going generally N and W. No smoke from W crater of Erebus. 4.30 p.m. Freshening W and SW breezes. Dark Str. obscuring western mountains and over Mt. Discovery. Cloud forming on top of Terror.  Long wavy lines of white clouds running E and W, also N and S. Dark sky to northward.  Ci. ENE and WSW being blown sideways to northward.
	8 "		29.55	13.6	Calm	0							
	10 "		29.54	21.8	Calm	0							
	Noon	S 48° E, 15 m.	29.52	29.5	Calm	0	ENE						
	4 p.m.		29.49	26.5	W by S	1		S-cu. 2			WSW		
	6 "		29.45	23.2	WSW	1-3		S-cu. 3			WSW		
	8 "		29.46	20.3	WSW	1-3		S-cu. 2			WSW		
	6 a.m.		29.49	20.0	Lt. WSW airs	—	N by E	A-cu. 7					
8 "		29.50	20.2	WSW	1								
10 "		29.53	23.8	WSW	—								
Noon		29.46	23.9	WSW	—								
6 p.m.		29.57	24.7	WSW	—								
8 "		29.48	21.0	—	—								

TABLE XXIII.—JOURNEY OF CAPTAIN SCOTT, R.N., AND MR. SKELTON, R.N., UP THE WESTERN MOUNTAINS, OCTOBER 26 TO DECEMBER 16, 1903.

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Temperature.			Hygrometer and equivalent pressure.	Wind.		Miscellaneous phenomena.	Clouds.				Remarks.		
			Aneroid M.O. 2.	Aneroid M.O. 1.	Sling thermometer.	Reading at time of observation.	Spirit minimum thermometer.		Minimum read.	Direction.		Force (Beaufort).	Weather.	Upper.	Lower.		Direction.	Description.
1903. Oct. 26	8 a.m.		Ins. 28.41	Ins. 28.61	—	—	—	—	Calm	0	oc	—	—	—	—	—	—	Ship's dry bulb thermometer = -3° 0. Ship's barometer (corrected) 28.381 ins. 2 p.m. Very thick and foggy all round the land in every direction. Clear low down and horizon clear to the N. Str. clouds very low. Clouds to the N, coloured very deep blue, right across the Strait as if over open water. 7.30 p.m. Barometer started to rise, having been down to 28.300 ins. 8 p.m. At 2.30 p.m. wind sprang up from ESE, increasing gradually up to force 4 by 3 p.m. At first with a little snowfall, and later with heavy surface drift. Very threatening appearance all round. At 3.30 p.m. the clouds lifted considerably, so that tops of western mountains were visible, and wind and drift lightened. Some very heavy dark detached Cu-n. clouds came over very fast from the WSW. Soon after 4 p.m. it fell calm again and became very warm, with still threatening appearance. Between 5 and 6.15 p.m. we had some very strong puffs from NW, N and NE, settling down by 7 o'clock to gusty breezes up to force 3 from ENE. Extremely dark clouds over Cape Bird and Erebus shores. Threatening appearance to E. Intense re-fraction in the forenoon.
	2 p.m.		28.34	—	3.4	—	—	Lt. S airs	—	oc	—	—	—	—	S. 2	—	—	
	8 "		28.37	28.54	6.0	—	—	Var. E	0-4	ocu	—	—	—	—	S. 10	—	—	
															S. 8, Cu.-n. 2	WSW (fast)	—	
Oct. 27	6 a.m.		28.35	—	1.5	—	—	Lt. NE airs	—	oc	—	—	—	—	—	—	—	During the day frequent strong puffs of wind from various directions, chiefly SE, up to force 5, lasting 5 to 45 minutes, and accompanied by surface drift. Frequent calms. Sky clearing gradually all day. Since last Wednesday surface of Strait has received a deposit of snow 2 to 3 ins. in depth; much more in drifts. Low clouds over Cape Bird, coloured deeply blue, as if over open water. Detached fog clouds in Glacier Valley.
	8 "		28.36	28.54	7.2	—	—	NE	0-2	oc	—	—	—	S. 7	—	—		
	1 p.m.	N 64° W, 7 m.	28.35	—	10.2	—	—	Var.	0-2	oc	—	—	—	S. 3	—	—		
	8 "		28.41	28.60	1.0	—	—	Lt. var. airs	0-1	oc	—	—	—	S. 3	—	—		
Oct. 28	6 a.m.		28.53	—	1.1	—	—	Calm	—	oc	—	—	—	S.-cu. 2, S. 8	—	—	Dark open water cloud over Cape Bird direction. Patches of detached fog clouds in Glacier Valley; thick in Strait. No rain to E visible. A little clearer low down to E. patches of blue sky can be seen up the glacier. Str. all round at about 150 ft. alt. 1 p.m. On glacier. Weather cleared between 8 and 10 a.m.; that came out thick, with light snowfall. Nimbus in Glacier Valley, 800 ft. alt.	
	8 "		28.56	28.72	1.2	—	—	Lt. SE airs	—	oc	—	—	—	S. 10	—	—		
	1 p.m.	N 71° W, 14 m.	28.55	—	0.9	—	—	Lt. N airs	—	ocf	*	—	—	N. 7	—	—		
	6 "		27.45	—	4.8	—	—	Lt. WSW airs	—	oc	—	—	—	S. 2, N. 2	—	—		
8 "		27.45	27.60	2.9	—	—	Lt. WSW airs	—	oc	*	—	—	S. 2, N. 4	—	—			
Oct. 29	6 a.m.		27.34	—	4.9	—	—	SW	0-1	c	—	—	—	S. 2, Cu.-n. 1	SE (fast)	—	1 p.m. Fine clear morning. Especially clear inland, but cloudy in zenith and to seaward. Fog began to collect in fiftal patches at 1 p.m. Sky cleared during afternoon, except to seaward, where there is dense Str. Apparently very high W wind, with drift, coming off inland lee. A single detached mother-o-pearl coloured Cu.-cu. cloud in WNW at 4 p.m. and again at 5.30 p.m. Several new patches of snow in valley since October 19.	
	8 "		27.35	27.56	1.5	—	—	Lighte airs	—	c	—	—	—	—	—	—		
	1 p.m.	N 72° W, 19 m.	26.95	—	4.5	—	—	Light W airs	—	c	—	—	—	S. 1	—	—		
	8 "		25.43	25.66	9.8	—	—	Calm	0	bcv	—	—	—	S. 1	—	—		

TABLE XXIII.—JOURNEY OF CAPTAIN SCOTT, R.N., AND MR. SKELTON, R.N., UP THE WESTERN MOUNTAINS, OCTOBER 26 TO DECEMBER 16, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Temperature.		Hygrometer and equivalent pressure.	Wind.		Miscellaneous phenomena.	Clouds.				Remarks.		
			Aneroïd M.O. 2.	Aneroïd M.O. 1.	Sling thermometer.	Reading at time of observation.		Spirit minimum thermometer.	Direction.		Force (Beaufort).	Weather.	Upper.	Lower.		Direction.	
1903. Oct. 30	6 a.m.		ins. 25.43	—	—	—	—	—	S by W	0-2	ocq	—	—	—	—	Calms and light airs during night. At 6 a.m. came on to blow very suddenly in squalls from S by W, increasing very rapidly to force 3-5. At 9 a.m. shifted camp to within ½ mile of mountain, but even then had very high winds all day. Str. to seaward, low down all day. Threatening looking weather over western mountains. Temperature and barometer rose as wind came on, probably Föhn wind. Clouds of drift coming through various gullies and off mountain tops. Occasional dark N and Cu-u. over western mountains and to seaward. No drift in our part of valley. In camp all day.	
	8 "		25.42	25.66	1.5	—	—	—	S by W	3-8	bcq	—	—	—	—		
	11 "		25.63	—	2.0	—	—	—	S by W	3-9	bcq	—	—	—	—		
	Noon	N 72° W, 26 m.	25.72	—	0.8	—	—	—	S by W	2-8	bcq	—	—	—	—		
	4 p.m.		25.74	—	0.0	—	—	—	S by W	1-7	bc	—	—	—	—		
	6 "		25.75	25.94	0.5	—	—	—	S by W	2-6	bc	—	—	—	—		
Oct. 31	6 a.m.		25.92	26.15	1.0	—	—	—	WSW	2-7	cq	—	—	—	—	Bad weather continued all night; very gusty, occasional lulls.	
	8 "		26.01	—	1.0	—	—	—	SW	2-7	cq	+	+	—	—	Noon. Clouds very much split up by wind, blue sky seen between; thicker inland and to seaward. A few heavy looking Cu-u. to N and NE, low down.	
	Noon	N 72° W, 32 m.	26.00	—	0.0	—	—	—	SW	1-7	cq	+	+	—	—		
	4 p.m.		26.05	—	4.5	—	—	—	WSW	2-7	gocq	—	—	—	—	6 p.m. Sky became completely overcast soon after 3 p.m., and remained so. Occasional small patches of upper cloud can be seen through the general veil of S-cu. Dark to seaward. Heavy drift and thick further inland. No abatement, but occasional changes in direction of wind from W to S.	
	6 "		26.08	26.30	5.6	—	—	—	WSW	2-7	gocq	—	—	—	—		
																	Wind died away at camp about 2 a.m., but was still very strong in most parts of valley. Got under way at 7.10 a.m. and, crossing same gully noted on October 18, experienced similar drift and high wind, force 3-5. At midday camped to leeward of a mountain, but, during afternoon's march, experienced wind generally of force 2-7. Wind died away in evening, but weather still thick and gloomy looking all round. Tops of western mountains obscured all day in Str.
Nov. 1	6 a.m.		26.15	26.36	6.0	—	—	—	Calm	0	goc	—	—	—	—		
	7 "		26.15	—	7.0	—	204.0 25.465	—	Lt. var. airs	—	oc	—	—	—	—		
	1 p.m.	N 72° W, 39 m.	25.41	25.62	8.0	—	—	—	S	0-3	ocq	—	—	—	—		
	6 "		24.99	—	2.0	—	203.05 24.975	—	Lt. var. airs	—	oc	—	—	—	—		
	8 "		24.98	25.17	0.9	—	—	—	Lt. var. airs	—	oc	+	+	—	—		
																	Calm morning, but during forenoon could see wind and surface drift coming off inland snow in increasing quantity, and at Noon we began to get into the wind. At 1 p.m. wind increased in gusts and during afternoon march we experienced very high winds indeed, some gusts reaching force 10. Surface drift very slight. Since 8 p.m. wind has been shifting one or two points either side of W, with some lulls and heavy gusts. Perfectly cloudless sky all day except from 6 to 7.30 a.m., when there was some Cl. radiating S by E and N by W. Sunshine all day.
Nov. 2	6 a.m.		24.91	—	1.5	—	—	—	Calm	0	bc	—	—	—	—		
	8 "		24.89	25.07	2.0	—	—	—	Lt. var. airs	—	b	—	—	—	—		
	1 p.m.	N 77° W, 44 m.	24.15	—	2.8	—	—	—	WNW	2-6	bq	+	+	—	—		
	6 "		23.91	24.14	11.0	—	—	—	W	7-9	bc	+	+	—	—		
																	Calm throughout Glacier Valley, but at 6 a.m. it appeared to be more local, especially the drift.
																	8 p.m. We have passed through some remarkable changes of weather. All the forenoon we were travelling across a zone swept with wind of force 5 to 9, with very heavy surface drift. At 1 p.m. came into a zone of light air, but during the afternoon it has been calm, with intensely hot sun. Cl. radiating N and S. Drift still coming off a few peaks.
Nov. 3	8 a.m.		23.72	24.07	10.2	—	—	—	W	5-7	bcq	+	+	—	—		
	1 p.m.	N 80° W, 48 m.	23.46	—	4.9	—	—	—	W	2-5	bcq	+	+	—	—		
	6 "		23.04	—	3.8	—	—	—	Calm	0	bc	+	+	—	—		
	8 "		23.02	23.21	12.6	—	—	—	Lt. W airs	—	bc	—	—	—	—		

Nov. 4	8 a.m.	23:06	23:17	-5.8	-	-16.6	199.05 22.605	W by N	1	bc	+	Ci. 2	NW	-	Light W. breezes up to force 2 during the night, with sunshine and blue sky. At 9 a.m. wind began to increase and between 10 and 11 a.m. it blew 5-6, with surface drift. At 1 p.m. it was blowing 7-8. At times sky was very overcast, and at times there were large patches of blue sky. Solar halo during forenoon.	
	3 p.m.	22:27	-	-19.8	-	-	-	W by S	5-6	oc	+	Ci.-s. 6	NNW (fast)	S.-cu. 2	SE	
	8 "	22:33	22:57	-24.5	-	-	-	W by S	6-7	e	+	Ci.-s. 5	NNW	-	-	
Nov. 5	8 a.m.	22:25	22:48	-	-	-	-	WSW	3-4	c	+	Ci.-s. 5	NNW	-	-	Strong WSW wind, force 4-6, and heavy surface drift all night. At 7 a.m. there was a lull, but at 7.30 p.m. wind and drift increased. At 8 a.m. Ci.-s. melting from ESE. Weather came on very thick, with snow falling and surface drift.
	2 p.m.	22:21	-	-14.0	-	-	-	WSW	4-5	oc	+	Ci.-s. 5	NNW	S. 3	-	
	8 "	22:22	22:47	-15.2	-	-	-	SSW	1-3	ocf	+	-	-	S. 4, N. 6	-	A steady blizzard all day from S by E.
Nov. 6	8 a.m.	22:29	22:55	-16.0	-	-	-	S by W	5-6	ocf	+	-	-	S. 4, N. 6	-	Blowing hard all night, force 5-6, with heavy drift, snow and thick weather all round. Wind occasionally veered E or S.
	Noon	22:28	-	-12.2	-	-	-	S	3-5	ocf	+	-	-	S. 6, N. 4	-	
	8 p.m.	22:29	22:56	-10.5	-	-	-	S	4-5	of	+	-	-	N. 10	-	
Nov. 7	Noon	22:25	22:50	-15.0	-	-	-	S	6-7	ocf	+	Ci. 2	-	S.-cu. 2, N. 5	-	The blizzard has continued without lull. During early morning wind increased up to force 6, but has since steadied down. No change in direction. Snow has become less thick and shortly before noon some breaks in cloud allowed sun to shine through. Later wind increased in force and remained steady all night.
	8 p.m.	22:21	22:49	-11.5	-	-	-	S	5-6	of	+	-	-	-	-	
Nov. 8	Noon	22:25	22:53	-8.5	-	-	-	S	6-7	of	+	-	-	N. 10	-	Blizzard continues with hardly any change, force of wind varying occasionally.
	8 p.m.	22:29	22:56	-8.0	-	-	-	S by W	3-4	nf	+	-	-	N. 10	-	A distinct easing of the wind at 7 p.m., but snow and drift, if anything, thicker. Wind again increased after 9 p.m.
Nov. 9	Noon	22:22	22:48	-8.5	-	-	-	S by W	5-6	c	+	A.-cu. 4	WSW	Cu. 3	SW	About 2 a.m. wind increased to force 7-8, eased away at 6 a.m., and during forenoon eased still more to force 3-4.
	8 p.m.	22:25	22:53	-14.0	-	-	-	SW	5-6	bc	+	-	-	Cu. 3	SW	Drift became very much lower, and patches of blue sky with large amount of Ci. could be seen. At 3 p.m. there were a few short lulls, and then wind changed to SW and increased to 5-6. Clouds have been clearing all afternoon and by 5 p.m. land, 4 miles off, could be seen.
Nov. 10	Noon	22:25	22:52	-14.5	-	-	-	S by W	7-8	e	+	A.-cu. 5	WSW (fast)	-	-	Weather appeared to be clearing at 7 a.m. and wind and drift eased, but very soon came on again harder than ever. At times objects were visible 2 or 3 miles off, but as a rule limit of vision was not more than a few hundred yards, or even less.
	8 p.m.	22:19	22:46	-18.2	-	-	-	SSW	6-7	oc	+	A.-cu. 3	WSW	S.-cu. 5	-	
Nov.	6 a.m.	22:25	21:53	-8.5	-	-	-	SSW	5-6	ocf	+	A.-cu. 3	WSW	S.-cu.	SSW	8 p.m. Weather very thick all the forenoon, but cleared considerably between noon and 4 p.m., when, being 700 ft. higher than at 6 a.m., we could see most of the land all round. Weather got thicker again later: very heavy black clouds low down to E, probably over sea, and also in parts of Glacier Valley. The older sastrugi point to prevalent winds being WSW.
	Noon	21:91	-	-9.2	-	-	196.55 21.83	SW	3-5	oc	+	A.-cu. 4	W	S.-cu. 4	SW	Strong SSW breezes during night, with drift. Both increased considerably after 7 a.m. During forenoon wind reached force 8, and limit of vision was about 1/2 mile. After noon, wind and drift died away considerably. Cu. clouds low down, probably over sea, also in Glacier Valley.
	8 p.m.	21:68	21:96	-10.0	-	-	-	SW	2-4	bc	+	A.-cu. 2	W	-	-	8 p.m. Wind and drift increased considerably after 3 p.m., wind rising to force 6-7, but died away again at 6 p.m. Weather cleared considerably at 6.30 p.m., but land hidden by low S.-cu. High winds to-day have been mostly S, occasionally S by W, and the new sastrugi point to S by W wind, but the older sastrugi—and they are very big—point to prevalent SW wind. Halo formed in the higher level of the drift, quite close to us, this forenoon. Drift, after striking mountain, rises in a great white cloud.
Nov. 12	6 a.m.	21:68	21:97	-9.2	-	-	-	SSW	2-3	oc	+	-	-	Cu. 6	SSW	
	8 "	21:68	21:97	-7.5	-	-	-	S by W	3-4	b	+	-	-	-	-	
	2 p.m.	21:55	-	-9.0	-	-	-	S	1-2	bc	+	A.-cu. 2	WSW	-	-	
	6 "	21:11	-	-15.2	-	-	195.4 21.306	SSW	4-5	bc	+	A.-cu. 1	SSW (very fast)	-	-	
	8 "	21:11	21:46	-17.5	-	-	-	SW	3-4	bc	+	A.-cu. 2	SSW (very fast)	-	-	

TABLE XXIII.—JOURNEY OF CAPTAIN SCOTT, R.N., AND MR. SKELTON, R.N., UP THE WESTERN MOUNTAINS, OCTOBER 26 TO DECEMBER 16, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Temperature.		Hygrometer and equivalent	Wind.		Miscellaneous phenomena.	Clouds.				Remarks.
			Aneroid M.O. 2.	Aneroid M.O. 1.	Sling thermometer.	Reading at time of observation.		Split minimum thermometer.	Minimum reading.		Direction.	Force (Beaufort).	Weather.	Upper.	
			ins.	ins.							Description.	Direction.	Description.	Direction.	
1903, Nov. 13	8 a.m.		21.09	21.44	—9.5	—	—	S by W	5-6	bf	—	—	—	—	Last night fine and calm until 2 a.m., with sunshiny, but low cloud and drift all round. After 2 a.m. wind and drift sprang up, and forenoon was thick, though blue sky could be seen. A double halo was observed in upper drift at noon. From 2 to 6 p.m. sky completely overcast, sun obscured most of time. Heavy masses of cloud flying across from S at a tremendous speed. From 8 a.m. to 6 p.m. limit of vision rarely exceeded ½ mile. Weather cleared since 6 p.m. Parbelton between 6 and 8 p.m. Sasstrugi, passed to-day in a journey of 6 miles, have decreased greatly in size and hardness and point to a prevalent SW wind.
	1 p.m.	N 89° W, 108 m.	21.01	—	—9.0	—	S	S	5-6	bef	—	—	Fr-n. 3	—	
	6 "	"	20.94	—	—11.8	—	—	S	3-4	ocf	—	—	Fr-n. and S-cu. 7	(very fast) S	
	8 "	"	20.93	21.28	—14.7	—	—	S by W	2-3	bef	+	Fr-cl-cu. 2	—	(very fast) S	
Nov. 14	8 a.m.		20.94	21.28	—19.5	—	—	SSW	3-4	bc	+	A-cu. 3	WSW	—	Clear, sunshiny day. Sasstrugi run SW.
	1 p.m.	N 89° W, 113 m. (p.m.)	20.93	—	—18.2	—	SW	SW	2-3	b	+	—	—	—	
	6 "	"	20.93	—	—21.0	—	SW	SW	1-2	b	—	—	—	—	
	8 "	"	20.94	21.27	—24.0	—	SW	SW	1-2	b	—	—	—	—	
Nov. 15	6 a.m.		20.94	—	—33.0	—	194.75 21.02	SW	1-2	b	—	—	—	—	9 p.m. A very fine and absolutely cloudless day. Slight drift haze to N and E, and in evening haze under the sun. Since 6 p.m. it has been a dead calm. over to-day had small sasstrugi on it and a winter's crust of soft snow. There does not appear to be evermuch wind here. Although temperature is low, dryness of air is extraordinary; wet socks, &c., dry during day.
	8 "		20.94	21.24	—32.0	—	—	SW	1-2	b	—	—	—	—	
	1 p.m.	N 86° W, 116 m.	20.88	—	—29.5	—	—	SW	1-2	b	—	—	—	—	
	8 "	"	20.81	21.19	—35.6	—	194.70 21.00	Lt. SW airs	0-1	b	—	—	—	—	
Nov. 16	2 a.m.		—	—	—41.5	—	—	—	—	—	—	—	—	—	Perfectly calm and cloudless all night, and up to 8 a.m. Some long low lines of Str., altitude 1° to 3°, to W. During afternoon fog banks collected at round horizon low down, and just after 3 p.m. low Cu. came over from NW, but dispersed on nearly reaching zenith. After 4.30 p.m. fog rose and sky became completely overcast; a lot of → flying through air. Incomplete parbelton with 3 mock suns, at sides and bottom. Surface passed over to-day, 64 miles, has become smoother, softer surface crust and very small sasstrugi. Powdery deposit. Since 8 p.m. sky clearing.
	4 "		—	—	—44.3	—	—	—	—	—	—	—	—	—	
	6 "		20.81	—	—35.0	—	—	Calm	0	b	—	—	—	—	
	8 "		20.82	—	—27.5	—	—	Calm	0	b	—	—	—	—	
Nov. 17	1 p.m.	W, 125 m.	20.87	—	—18.0	—	—	ENE airs	1	b	—	—	—	—	Soon after 8 a.m. sky became completely overcast. Light snow crystals falling all day, making surface very hard to drag sledges over. Just after 6 p.m. sky cleared considerably, crystals ceased falling, and patches of blue sky could be seen. Light S and SE airs during day, but generally calm. Sasstrugi appear only occasionally, formed by SW winds. The foot sinks in 4 ins. on the march.
	8 "		20.96	—	—22.5	—	195.25 21.240	Calm	0	ocf	*	—	N. 10	—	
	2.30 a.m.		20.97	—	—33.5	—	—	Calm	0	o	—	Cl-s, radiating SE and NW Cl-s.	—	—	
	6 "		21.02	—	—28.0	—	—	Calm	0	c	—	—	—	—	
8 "		21.05	21.35	—23.5	—	—	Calm	0	c	—	—	—	—		
2 p.m.	S 89° W, 133 m.	21.10	—	—15.8	—	—	Lt. S airs	—	ocf	* O	—	—	N. 10		
6 "		21.15	—	—25.0	—	195.6 21.39	Calm	0	ocf	*	—	—	N. 10		
8 "		21.16	21.51	—27.5	—	—	Calm	0	oc	+	A-s 8	—	—		



TABLE XXIII.—JOURNEY OF CAPTAIN SCOTT, R.N., AND MR. SKELTON, R.N., UP THE WESTERN MOUNTAINS, OCTOBER 26 TO DECEMBER 16, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Temperature.		Barometer and equivalent.	Wind.		Miscellaneous phenomena.	Clouds.				Remarks.	
			Aneroïd M. O. 2	Sling thermometer.	Sling thermometer.	Spirit minimum thermometer.		Direction.	Force (Beaufort).		Weather.	Upper.	Lower.	Direction.		Description.
1903. Nov. 25	3 a.m.		ins. 20.99	-34.2	°	°	°	WSW	1	bv <sub>2</sub>	—	—	—	—	Absolutely cloudless sky up to 9 a.m., when thick weather came on. Detached masses of cloud passing overhead very rapidly, and ice crystals also flying past very quickly. Remarkable parheliion just after Noon, continuing up to 6 p.m. Limit of vision during forenoon about ½ mile.	
	8 "		20.95	-26.8	—	Snow at 3-in. depth -25.5	—	WSW	1	bv <sub>2</sub>	—	—	—	—		
	Noon	S 84° W, 219 m.	20.90	-20.0	—	—	—	WSW	1-2	bef	→ ⊕	A.-cu. 2	W by S (fast)	—	—	
	6 p.m.		20.85	-22.8	—	—	—	WSW	1	bf	→ ⊕	—	—	—	—	
8 "		20.84	-24.9	—	—	194.8 21.04	Lt. WSW airs	—	—	bv <sub>2</sub>	—	—	—	—		
Nov. 26	1 a.m.		20.79	-39.2	—	—	Very lt. airs	—	—	bv <sub>2</sub>	—	—	—	—	Cloudless overhead all night, up to 7 a.m. marked visibility. Between 8 and 10 a.m. incomplete parheliion, ice crystals driving through the air. At 3 p.m. weather threatening and snow flying overhead very fast. At 5 p.m. S by blizzard started, wind got up very suddenly, and temperature rose.	
	6 "		20.81	-31.5	—	—	WSW	1	bv <sub>2</sub>	—	—	—	—	—		
	8 "		20.83	-23.0	—	Snow at 3-in. depth -23.5	—	SW by W	1-2	b	→ ⊕	—	—	—		
	1 p.m.	S 83° W, 228 m. (p.m.)	20.85	-19.8	—	—	—	SW	1-2	ocf	—	Cl.-s. 2 radiating WSW and ENE	—	—	—	
"		20.84	-14.0	—	—	194.8 21.04	S	3-4	ocf <sub>2</sub>	* ⊕	—	—	—	—		
8 "		20.86	-15.2	—	—	—	S by E	2-3	of <sub>2</sub>	* ⊕	—	—	—	—	Blizzard continues; weather very thick, limit of vision 20 yards.	
Nov. 27	6 a.m.		20.89	-12.9	—	—	SSE	4-5	of <sub>2</sub>	* ⊕ <sup>2</sup>	—	—	—	—	S by E wind all night, force 2-3, with snow and drift. Sudden change just before 6 a.m.; wind increasing and working round to ESE.	
	8 "		20.95	-12.0	—	—	ESE	5-6	of <sub>2</sub>	* ⊕ <sup>2</sup>	—	—	—	—		
	1 p.m.	S 82° W, 235 m.	20.96	-10.5	—	Snow at 3-in. depth -15.0	—	SE	4-5	of <sub>2</sub>	* ⊕ <sup>2</sup>	—	—	—		
	4 "		20.90	-6.9	—	—	—	SSE	2-3	of <sub>2</sub>	* ⊕ <sup>2</sup>	—	—	—	—	Weather cleared considerably after 6 p.m., can see ½ mile. Parheliion.
8 "		20.85	-9.2	—	—	—	S by E	2-3	cf <sub>2</sub>	⊕	Cl. 3	—	—	—		
Nov. 28	8 a.m.		20.90	-12.5	—	Snow at 3-in. depth -18.8	—	S by W	1-2	ocf <sub>2</sub>	* ⊕	—	—	—	Thick all day. During forenoon limit of vision never exceeded ¼ mile, generally it was only a few yards. In the afternoon the clouds broke a little and sun cast a shadow at times. At 4 p.m. came on thick again; cleared a little after 6 p.m.	
	Noon	S 81° W, 250 m.	20.90	-9.0	—	—	SSW	2-3	ocf <sub>2</sub>	* ⊕	—	—	—	—		
	6 p.m.		20.88	-11.0	—	—	S by E	2-3	ocf	⊕	—	—	—	—		
Nov. 29	8 a.m.		20.88	-12.8	—	Snow at 3-in. depth -17.8	—	S by E	2-3	ocf <sub>2</sub>	* ⊕	—	—	—	Much the same weather all night, no lifting of fog at all. Sun occasionally shows sufficiently to cast a faint shadow. Commenced snowing again at 6 a.m. with S by E breezes. At 3 p.m. wind suddenly increased to force 5 and clouds broke. Came over thick again at 6 p.m.	
	Noon	S 80° W, 260 m.	20.86	-6.5	—	—	S by E	2-3	ocf <sub>2</sub>	* ⊕	—	—	—	—		
	8 p.m.		20.90	-8.8	—	—	SSE	1-2	ocf <sub>2</sub>	→ ⊕	—	—	—	—		
Nov. 30	6 a.m.		21.00	-12.0	—	—	S by E	1-2	cf <sub>2</sub>	⊕	Cl.-s. 4	—	—	—	Weather cleared considerably at times during the night, being ice at 1 a.m., but quite thick again at 6 a.m., with bad light all forenoon.	
	8 "		21.04	-8.4	—	—	S by E	1-2	ef <sub>2</sub>	⊕	Cl.-s. 4	—	—	—		
	1 p.m.	S 79° W, 272 m.	21.02	-9.0	—	Snow at 3-in. depth -14.5	—	S by E	1-2	ef	⊕	Cl.-s. 3	—	—	Weather cleared considerably, patches of blue sky being visible after 1 p.m., but at 5 p.m. it began snowing and became extremely thick.	
	8 "		21.01	-11.0	—	—	S	1-2	ocf <sub>2</sub>	* ⊕	Cl.-s. 2	—	—	—		



TABLE XXIII.—JOURNEY OF CAPTAIN SCOTT, R.N., AND MR. SKELTON, R.N., UP THE WESTERN MOUNTAINS, OCTOBER 26 TO DECEMBER 16, 1903 (continued).

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Temperature.			Hypometer and equivalent	Wind.		Miscellaneous phenomena.	Clouds.				Remarks.
			Aneroid M.O. 2		Sling thermometer.	Reading at time of observation.	Spirit minimum thermometer.		Direction.	Force (Beaufort).		Upper.	Lower.	Direction.	Direction.	
1903. Dec. 8	6 a.m.		ins. 24.48	5.8	—	—	—	—	W by N	1						Calm up to Midt., when a W by N breeze sprang up, driving all the clouds in the valley down-wards and leaving blue sky overhead. Breeze reached force 3-4, with $\frac{1}{2}$ at 4 a.m., but died away to light airs at 6 a.m. Noon. Cu clouds have collected to NE, ENE and over mountain peaks. At 12.30 p.m. strong gusts of wind from W sprang up and continued throughout afternoon, reaching force 6 at times.  Between 5 and 7 p.m. we crossed in front of the mountain gorge, noted on October 18 and November, and experienced the same blast of westerly winds, reaching force 18 in the gusts. During the night the wind died away gradually.
	8 "		24.49	1.2	—	—	—	Calm and lt. NW airs								
	Noon	S 82° W, 175 m.	24.86	5.0	—	—	—	Lt. NNW airs				Fr.-cu. 1				
	8 p.m.		23.30	6.3	—	—	—	WNW	1-5			Fr.-cu. 2			W (fast)	
Dec. 9	6 a.m.		26.33	8.8	—	—	—	Calm	0	bv <sub>2</sub>						All observations made in Knot Head Moraine Camp.
	8 "		26.32	11.0	—	—	208.15 26.60	Lt. W airs	0-2	bv <sub>2</sub>						Cu. clouds occasionally over various mountain peaks, but none above 15° alt.
	10 "		26.31	15.2	—	—	—	Lt. W airs	0-1	bv <sub>2</sub>						Dark clouds low down to seaward during day.
	Noon	S 83° W, 181 m.	26.30	11.8	—	—	—	Lt. var. airs	0-1	bv <sub>2</sub>						Between Noon and 6 p.m. light NEy airs.
	8 p.m.		26.27	10.8	—	—	—	Calm	0	bv <sub>2</sub>						
	8 "		26.25	10.0	—	—	—	Calm	0	bv <sub>2</sub>						
Dec. 10	8 a.m.		26.20	7.0	—	—	—	Lt. var. airs	0-1	bv <sub>2</sub>						1 p.m. Sky absolutely cloudless overhead. A few detached Cl. low down to N and NE during forenoon.
	8 "		26.19	12.5	—	—	—	Lt. W airs	0-1	bv <sub>2</sub>						During afternoon there have been continuous light Ey airs. The visibility has been most marked, especially to eastward, and that of Erebus extraordinarily marked.
	11 "		26.18	19.2	—	—	—	Calm	0	bv <sub>2</sub>						Heavy banks of Cu. low down to N and over inland ice. Detached Cl. over various mountains' peaks. Str. low down over McMurdo Bay all day. In last mile travelled a thin deposit of what I take to be fog crystals on surface, consisting of long thin prismatic coloured prisms.
	1 p.m.	S 85° W, 143 m. (p.m.)	26.0	18.0	—	—	—	E by N	1-2	bv <sub>2</sub>						
	6 "		26.40	18.1	—	—	—	Calm	0	bv <sub>2</sub>						
Dec. 11	8 "		26.41	15.2	—	—	206.35 26.71	Calm	0	bv <sub>2</sub>						
	1 a.m.		26.37	12.8	—	—	—	Calm	0	bv <sub>2</sub>						8 a.m. Calm, bv <sub>2</sub> , all night. Erebus smoke rising 2000 ft. to a mushroom, and apparently going northwards.
	6 "		26.35	14.0	—	—	—	Calm	0	bv <sub>2</sub>						8 p.m. Extraordinary visibility to eastward all day. Erebus smoke rising to a good height (2000 ft.) all day, and moving off apparently northwards. Cu. came up from W by S at 1.30 p.m. and remained overhead for rest of day. Considerable S-cu. over most of mountains up the glacier and to W.
	2 p.m.	S 86° W, 133 m.	27.30	24.3	—	—	—	Lt. E airs	0	cv <sub>2</sub>		Cu. 5 (at Depôt A)			W by S (fast)	Generally calm throughout day, with various light airs occasionally. Surface travelled over covered with crystals similar to those noted last night. Some snow collected in the valley in this neighbourhood since end of October.
8 "		23.05	19.0	—	—	209.2 28.20	Lt. SW airs	—	cv <sub>2</sub>		Cu. 5, S.-cu. 2			W by S (slow)		



TABLE XXIV.—JOURNEY OF LIEUTENANT ROYDS, R.N., AND MR. CLARKE TO THE

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Air temperature.			Snow temperature.		Hypsometer and equivalent pressure.	Wind.		Weather.	Miscellaneous phenomena.	Clouds.			
			Aneroid M.O. 6.	Aneroid A. 1182.	Sling thermometer.	Spirit minimum thermometer.		Surface.	At 6-in. depth.		Direction.	Force (Beaufort).			Upper.		Lower.	
						Reading at time of observation.	Minimum reading.								Description.	Direction.	Description.	Direction.
1903. Nov. 10	2 p.m.		ins. 28.90	ins. 28.598	° 6.4	° 6.5	° 5.0	° —	° 5.0	210.0 28.75	Lt. N airs	—	b	—	—	—	—	—
	4 "		28.85	—	6.5	6.5	5.5	—	—	—	Calm	0	b	—	—	—	—	—
	6 "		28.82	28.590	10.0	10.5	6.0	—	6.0	—	Calm	0	b	—	—	—	—	—
	8 "		28.85	28.522	1.0	0.5	— 4.0	—	0.8	—	Lt. N airs	—	b	—	—	—	—	—
Nov. 11	8 a.m.		28.92	28.608	16.8	16.5	— 3.3	16.0	0.5	—	SW	5-7	oq	† <sup>3</sup> *	—	—	N. 10	—
	10 "		28.95	28.615	17.5	17.2	15.3	16.8	10.0	—	SW	6-7	o	† <sup>2</sup> *	—	—	N. 10	—
	Noon	S 53° E, 7 m.	—	28.683	19.8	19.2	15.2	13.0	10.0	—	SW	5-6.	oc	†	Ci.-s. 3	—	S. 6	S
	3.30 p.m.		29.05	28.722	16.0	16.5	15.0	—	—	210.2 28.80	S	2-3	o	—	—	—	S. 10	—
	4 "		29.03	—	16.0	17.3	15.7	—	—	—	Var. airs	—	o	—	—	—	S. 10	—
	6 "		29.02	—	24.8	25.5	17.2	—	—	—	Calm	0	o	—	—	—	S. 10	—
	8 "		29.01	28.720	16.2	16.5	13.2	13.2	9.0	—	SE	1	oc	—	Ci.-cu. 9	SW	—	—
Nov. 12	6 a.m.		29.06	28.712	19.0	19.3	14.5	19.0	9.0	—	SW	4-5	bc	*† <sup>2</sup>	—	—	Cu. 2	SW
	8 "		28.96	28.702	19.5	19.3	16.0	18.5	8.6	210.13 28.85	SW	5-6	bc	† <sup>2</sup>	—	—	Cu. 5	SW
	10 "		—	—	—	—	—	—	—	—	SW	7	ocq	† <sup>2</sup>	—	—	S. 10	—
	Noon	S 46° E, 13 m.	29.03	—	21.0	21.2	19.5	—	—	—	S	3-4	ocq	†	—	—	S. 10	—
	2.30 p.m.		29.01	28.700	20.8	20.6	17.5	—	—	—	S	2-4	ocq	†	—	—	S. 10	—
	4.20 "		28.98	—	21.5	21.5	19.0	—	—	—	S	1-3	ocq	—	—	—	S.-cu. 10	—
	6.30 "		29.00	28.720	18.8	19.0	15.0	—	—	—	S	1-3	ocq	†	—	—	Cu. 9	S
	8 "		29.04	28.735	21.0	20.0	13.5	19.0	9.8	—	Calm	0	oc	—	—	—	Cu. 9	S
Nov. 13	6.30 a.m.		29.10	28.790	11.5	12.0	7.0	9.0	7.8	—	S	2	oc	—	Ci.-s. 2	—	Cu. 6	S
	8 "		28.96	28.672	16.0	16.0	10.5	9.0	8.5	210.2 28.80	SSW	1-2	oc	† <sup>0</sup>	Ci.-s. 5	—	Cu. 2	S
	10 "		—	—	—	17.0	—	—	—	—	SW	5-7	ocq	† <sup>2</sup>	Ci.-s. 5	—	A.-s. 2	SE
	Noon		—	—	18.3	18.0	0.5	—	—	—	SW	4-6	ocq	† <sup>2</sup>	Ci.-s. 6	NW	—	—
	2 p.m.	S 45° E, 20 m. (p.m.)	29.04	28.700	17.2	18.0	12.6	9.5	15.0	—	SW	5	oc	†	Ci.-s. 4	NW	A.-s. 3	S
	3.30 "		29.05	—	14.2	15.0	12.0	—	—	—	SW	2-3	oc	† <sup>0</sup>	Ci.-s. 6	NW	A.-s. 3	S
	6 "		29.08	28.708	11.0	12.0	7.5	—	—	—	SW	1-2	oc	—	Ci.-s. 7	NW	—	—
	8 "		29.14	28.815	4.5	5.0	2.0	6.0	8.0	—	SW	1	bc	—	—	—	A.-s. 3	—
Nov. 14	6 a.m.		29.20	28.876	— 3.0	— 3.2	— 9.5	— 5.0	0.0	—	Calm	0	bc	—	Ci.-s. 2	W	—	—
	8 "		29.17	28.878	6.5	7.5	— 5.0	2.0	0.5	210.4 28.98	Calm	0	bc	—	Ci.-s. 3	SW	—	—
	10 "		29.18	—	11.5	12.0	6.3	—	—	—	Calm	0	b	—	—	—	—	—
	Noon	S 41° E, 34 m.	29.19	28.866	11.8	12.0	0.0	—	—	—	Calm	0	b	—	—	—	—	—
	2 p.m.		29.18	28.875	9.0	10.0	9.0	6.0	1.0	—	Calm	0	b	—	—	—	—	—
	4 "		29.20	—	7.2	9.0	6.5	—	—	—	Calm	0	b	—	—	—	—	—
	6 "		29.17	28.870	4.5	6.0	3.5	—	—	—	Calm	0	b	—	—	—	—	—
	8 "		29.18	28.862	— 3.0	— 3.6	— 5.0	0.8	0.2	—	Calm	0	b	—	—	—	—	—
Nov. 15	6 a.m.		29.22	28.886	— 7.5	— 7.5	— 12.6	— 4.0	— 1.2	—	Calm	0	b	—	—	—	—	—
	8 "		29.22	28.893	— 2.5	— 2.0	— 8.0	— 2.0	— 1.0	210.4 28.98	Lt. E airs	—	b	∞	—	—	—	—
	10 "		29.15	—	7.2	8.0	— 4.5	—	—	—	Lt. NE airs	—	b	—	—	—	—	—
	Noon	S 44° E, 46 m.	29.13	28.865	8.8	9.5	6.0	—	—	—	Calm	0	b	—	—	—	—	—
	2 p.m.		29.14	28.866	11.6	12.0	8.0	1.3	0.0	—	Lt. E airs	—	b	—	—	—	—	—
	4 "		29.12	—	17.0	17.0	11.6	—	—	—	Lt. NE airs	—	oc	→	—	—	S.-cu. 10	—
	6 "		29.07	—	14.0	14.6	13.0	—	—	—	Lt. NE airs	—	oc	→	—	—	S.-cu. 10	—
	8 "		29.09	28.767	11.8	11.8	11.5	5.7	3.0	—	SE	1	oc	→	—	—	S.-cu. 10	—

## SOUTH-EAST ACROSS THE ICE BARRIER, NOVEMBER 10 TO DECEMBER 10, 1903.

Ozone.		Sunshine.	Description and direction of Erebus smoke.	Remarks.	Date.
Number on scale.	Number of hours exposed.				
—	—	Sun shining all day	Going E during day, not showing in evening	Detached portions of Cu. and Str. appeared and disappeared during afternoon. Surface soft, with thin crust and occasional hard patches. Occasional patches of recently formed sastrugi, having been formed by S and SE winds.	1903. Nov. 10
—	—	—	—	8 p.m. Cu. approaching from S and W.	
—	—	Gleam	Erebus and Terror obscured over 5000 feet during the afternoon	8 a.m. Heavy drift, no land visible. Snow soft and flakes small and round.	Nov. 11
—	—	Gleam	—	10 a.m. Sun gleaming. Castle Rock and Observation Hill visible at times.	
—	—	Gleam	—	Very fine fleecy Cu. in westward. Between 4 and 8 p.m. variable airs were met. The islands and most of the western range have been partly obscured. Surface much the same as yesterday—until 2 p.m., when it became harder generally, and hard icy patches frequent.	
10	—	Bright	—	—	
—	—	Gleam	—	—	
—	—	Gleam	—	8 p.m. Very windy appearance, any little sastrugi passed indicated SE wind.	
—	—	Bright	—	—	Nov. 12
10	12	Bright	—	8 a.m. Sastrugi more pronounced; indicate SW and S <sup>w</sup> winds.	
—	—	Gleam	—	10 a.m. Blowing a blizzard, unable to take observation. Heavy banks of Cu. and Nim. on mountains to W and SW. Horizon clear in E and SE. Castle Rock and Crater Hill visible most of day.	
—	—	Gleam	—	—	
—	—	—	—	4.30 p.m. Small portions of detached Cu. passing rapidly from S.	
—	—	—	—	—	
—	—	Gleam	—	8 p.m. Large portions of sand on western mountains and to southwards. Dark and threatening in N and NW. Surface much harder than yesterday and crust not so rough, nor icy patches so frequent.	
—	—	Bright	—	—	Nov. 13
—	—	Gleam	—	8 a.m. Banks of Cu. approaching from SW. Highest peaks capped. Strong squally wind from SW, with clouds of surface drift.	
—	—	Gleam	—	10 a.m. All land obscured. Surface mostly hard, the crust covered with rough snow. Occasional soft patches where footprints sink 6 to 9 ins.	
—	—	Bright	—	—	
—	—	Bright	—	—	
—	—	Bright	Summit clear, E	3.30 p.m. Lovely Cl. overhead; consecutive layers of lovely white Cu. on Mt. Erebus.	
—	—	Bright	—	—	
—	—	Bright	—	8 p.m. Mt. Discovery visible; Str. approaching from SE. General appearance threatening. Sastrugi SW <sup>w</sup> . Surface more level, and more rough snow.	
—	—	Bright all day	—	—	Nov. 14
—	—	—	Obscured, E	8 a.m. Morning bright and promising. Terror obscured at summit. Mt. Discovery clear. Dark foggy appearance in SW.	
3	1	—	—	10 a.m. Thin streaks of Str. approaching from S and SE. Banks of Cu. on Erebus; summit visible.	
—	—	—	—	Noon. Detached portions of Cu. over western mountains. Screen of Str. on E and NE. Surface more uniform, snow not so rough and icy patches more polished. Passed several crevasses. Sounded one; it was 16 fathoms deep and 1 <sup>2</sup> ins. wide, covered with hard icy crystals and very thin crust. It appeared to have several smaller connections.	
—	—	—	—	—	
3	1.5	—	—	—	
—	—	—	—	8 p.m. Sheet of Str. approaching from S and SW. Sastrugi much the same and lie SW. Fine wavy Str. over western mountains.	
—	—	Bright	NE in early part of day	—	Nov. 15
7	9	Bright	—	8 a.m. Hazy appearance all round.	
—	—	Bright	—	—	
6	4	Bright	E	—	
—	—	Bright	—	2 p.m. Str. on horizon in E and on Erebus and Terror. Mt. Terror capped by detached Cu. resembling smoke. Between 2 and 3 p.m. sky became overcast with Str. from E and N, low horizon clear all round. In afternoon sastrugi became larger and more frequent and surface crust much harder and more polished.	
4	4	Gleam	—	—	
—	—	Obscured	—	—	
7	4	Obscured	—	8 p.m. All high land obscured. Fine hard crystals falling. Clear on low horizon.	

TABLE XXIV.—JOURNEY OF LIEUTENANT ROYDS, R.N., AND MR. CLARKE TO THE

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Air temperature.			Snow temperature.		Hypsometer and equivalent pressure.	Wind.		Weather.	Miscellaneous phenomena.	Clouds.			
			Aneroid M.O. 6.	Aneroid A. 1182.	Sling thermometer.	Spirit minimum thermometer.		Surface.	At 6-in. depth.		Direction.	Force (Beaufort).			Upper.		Lower.	
						Reading at time of observation.	Minimum reading.								Description.	Direction.	Description.	Direction.
1903. Nov. 16	6 a.m.	S 46° E, 55 m.	ins. 29.14	ins. 28.804	6.0	6.5	- 1.0	3.0	2.0	—	SW	3-4	of	† <sup>0</sup>	—	—	S. 10	—
	8 "		29.14	28.816	4.0	4.8	1.5	2.8	2.0	210.4 28.98	SW	4-5	oc	† <sup>0</sup>	—	—	Cu. 10	SW
	10 "		29.10	—	6.6	6.6	4.0	—	—	—	SW	4-5	oc	—	—	—	Cu. 10	SW
	Noon		29.14	28.818	7.8	8.0	5.5	—	—	—	SW	3-5	ocq	—	—	—	Cu. 10	SW
	2 p.m.		29.17	28.848	6.6	7.2	3.3	—	—	—	SW	3-4	oc	—	—	—	Cu. 9	SW
	4 "		29.17	—	4.0	4.6	4.0	—	—	—	SW	2-3	oc	—	—	—	Fr.-cu. 8	SW
	6 "		29.17	28.910	2.6	3.3	2.0	—	—	—	SW	2-3	oc	—	—	—	S.-cu. 10	—
	8 "		29.22	28.928	4.9	4.6	2.0	3.0	1.0	—	SW	2-3	oc	—	—	—	S.-cu. 10	—
Nov. 17	6 a.m.	S 46° E, 68 m. (p.m.)	29.30	29.010	4.0	4.0	- 4.0	2.5	1.8	—	SW	3-4	of	†	—	—	A.-s. 10	—
	8 "		29.31	29.020	3.0	3.3	1.6	2.5	2.0	210.4 28.98	SW	3	of	—	—	—	A.-s. 10	—
	10 "		29.32	—	5.5	5.5	2.0	—	—	—	SW	3	o	—	—	—	A.-s. 10	E
	Noon		29.33	29.024	5.8	6.0	5.0	—	—	—	SW	3	o	—	—	—	A.-s. 10	NE
	2 p.m.		29.35	29.026	5.0	5.0	4.0	—	—	—	SW	2-3	o	☉☽☽→	—	—	A.-s. 10	NE
	4 "		29.34	—	5.3	6.0	5.0	—	—	—	SW	2	oc	☉☽	—	—	A.-s. 10	—
	6 "		—	29.016	4.0	5.0	1.0	—	—	—	SW	1	oc	—	—	—	S.-cu. 10	—
	8 "		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nov. 18	6 a.m.	S 47° E, 76 m.	29.30	28.980	- 1.2	- 0.3	- 7.0	1.0	- 1.0	—	Calm	0	b	—	—	—	Ci.-s. 4	—
	8 "		29.30	28.983	0.0	0.8	- 2.4	1.2	- 0.8	210.6 29.10	Lt. SW airs	—	bc	—	—	—	Ci.-s. 3	W
	10 "		29.28	—	3.8	4.2	- 1.5	—	—	—	SW	1	bc	—	—	—	Ci.-s. 3	W
	Noon		29.26	28.966	3.0	3.5	2.0	—	—	—	SW	1	bc	—	—	—	Ci.-s. 2	W
	2 p.m.		29.26	28.982	8.8	9.0	3.0	0.8	2.5	—	SW	1-2	bc	—	—	—	Ci.-s. 1	W
	4 "		29.22	—	6.0	7.2	6.0	—	—	—	SW	2	bc	—	—	—	—	—
	6 "		29.20	28.914	5.5	6.0	3.2	—	—	—	SW	1-2	bc	—	—	—	—	—
	8 "		29.24	28.916	4.0	4.0	2.2	0.5	1.0	—	SW	2	b	—	—	—	—	—
Nov. 19	6 a.m.	S 46° E, 84 m.	29.22	28.906	- 1.0	- 1.0	- 3.0	- 1.0	0.0	—	SW	3	bc	† <sup>0</sup>	Ci.-s. 4	SW	—	—
	8 "		29.20	28.894	2.3	3.0	- 3.0	- 0.2	0.2	—	SW	3	bc	† <sup>0</sup>	Ci.-s. 3	SW	—	—
	10 "		29.20	—	4.8	5.0	0.0	—	—	—	SW	2-3	bc	† <sup>0</sup>	Ci.-s. 2	SW	—	—
	Noon		29.23	28.900	5.0	6.0	3.0	—	—	—	SW	3	bc	†	Ci.-s. 4	SW	—	—
	2 p.m.		29.24	28.910	6.8	7.0	4.6	3.0	1.3	—	SW	3	bc	† <sup>0</sup>	Ci.-s. 3	SW	—	—
	4 "		29.22	—	7.0	7.2	5.5	—	—	—	SW	3	bc	† <sup>0</sup>	Ci.-s. 2	SW	—	—
	6 "		29.22	28.906	4.3	5.0	4.0	—	—	—	SW	2	b	† <sup>0</sup>	Ci.-s. 1	SW	—	—
	8 "		29.23	28.900	4.0	4.3	2.0	2.0	1.0	—	SW	3	b	—	Ci.-s. 1	SW	—	—
Nov. 20	6 a.m.	S 46° E, 94 m.	29.21	28.900	- 1.0	- 1.0	- 8.0	- 2.0	- 2.0	—	SW	2	b	† <sup>0</sup>	—	—	—	—
	8 "		29.20	28.886	1.0	1.5	- 4.6	- 1.2	- 0.8	—	SW	2	b	† <sup>0</sup>	—	—	—	—
	10 "		29.20	—	5.8	6.0	1.0	—	—	—	SW	3	b	†	—	—	—	—
	Noon		29.17	28.860	8.2	9.0	3.0	—	—	210.4 28.98	SW	3	b	—	—	—	—	—
	2 p.m.		29.16	28.850	11.2	12.0	6.5	1.0	0.0	—	SW	2	b	—	—	—	—	—
	4 "		29.16	—	10.6	10.6	10.3	—	—	—	SW	1-2	b	—	—	—	—	—
	6 "		29.15	28.846	6.4	6.5	6.0	—	—	—	Calm	0	—	—	—	—	—	—
	8 "		29.14	28.842	2.0	2.5	0.0	- 2.0	- 1.8	—	Calm	0	b	—	—	—	—	—

## SOUTHEAST ACROSS THE ICE BARRIER, NOVEMBER 10 TO DECEMBER 10, 1903 (continued).

Ozone.		Sunshine.	Description and direction of Erebus smoke.	Remarks.	Date.
Number on scale.	Number of hours exposed.				
—	—	Gleam	Obscured	6 a.m. Foggy and threatening. Summits of Erebus and Terror obscured; also True Bearing Peak and Mt. Discovery.	1903. Nov. 16
8	12	Gleam	Large volume, SE	8 a.m. Summits of highest mountains clear.	
—	—	Gleam	—		
—	—	Gleam	—	Noon. Sun gleaming. Clouds thin in detached banks of Str. all round.	
7	6	Gleam	—		
—	—	Bright	—	4 p.m. Clouds became detached and appeared as Cl.-cu. between 3 and 4 p.m. Again overspreading sky from SW.	
—	—	Obscured	SE	6 p.m. All highest peaks visible. Str. on Erebus and Terror. Summits clear. Surface rougher; sastrugi larger and more frequent than any met so far.	
9	6	Obscured	—	8 p.m. Highest summits still clear. Dark in N and E. Horizon clear in S and SW.	
—	—	Gleam	—		Nov. 17
7	12	Gleam	—	8 a.m. Dull and foggy. Blowing strong from SW, with light surface drift.	
4	2	Gleam	—	Continued the same during early part of forenoon. All highest land obscured. Surface much the same as yesterday, but crust thicker and more polished, with slippery ridges in sastrugi.	
—	—	Gleam	—		
6	4	Gleam	—		
—	—	—	—		
—	—	—	—	8 p.m. Clearing on horizon all round. Colouring on southern horizon.	
—	—	Bright	—		Nov. 18
—	—	Bright	—	8 a.m. Bright morning; Cl.-s. all round northern horizon. Erebus and Terror visible during day. Although foggy, Discovery and Bluff clearer, with small detached Cu. under highest summits.	
—	—	Bright	—		
—	—	Bright	—		
—	—	Bright	—	4 p.m. Dark bands of Str. rising in SE and S and moving from SW. Surface softer than any yet covered. Hard brittle crust which breaks in large slabs under foot. Foot prints sink 8 to 9 ins. Sastrugi much the same. High polished knolls met with frequently.	
—	—	Bright	—		
4	6	Bright	—	8 p.m. Snow rough and tough in texture. Occasional loud reports with distinct vibration and hollow sound generally.	
—	—	Bright	—		Nov. 19
4	12	Bright	NE, later N	8 a.m. Cold, windy morning. Erebus and Terror visible during day, although foggy and indistinct at times. Thin Cl.-s. coming up in SW and passing to E in thin streaks.	
—	—	Bright	—		
—	—	Bright	—		
3	6	Bright	—		
—	—	Bright	—		
3	4	Bright	—		
—	—	Bright	Uncertain	8 p.m. Mts. Erebus, Terror, and Discovery, and the Bluff, are all visible, although foggy and indistinct. Surface crossed in forenoon was much the same as yesterday, but in afternoon more icy, and crust stronger. When broken with spade, top layer comes up in large slabs about 4 ins. thick and reveals hard, rough and tightly packed snow, which is dry and light, but more compressed than any yet found at that depth. Sastrugi are smaller and run in the same direction, with sharp-edged cornices overhanging, and with very thin zig-zag edges.	
—	—	Bright	—	8 a.m. Bright morning; cold SW wind. Erebus, Terror, and Discovery visible.	Nov. 20
4	12	Bright	—		
—	—	Bright	—		
2	4	Bright	NW	Noon. Several balls of detached Cu. over Bluff and Discovery on NE side. Cl.-s. has appeared during day on E and NE horizon. General appearance extremely hazy. Surface much improved, sastrugi smaller and not so much pronounced. Snow hard, rough and brittle, but more solid and compressed. The hollow sound has almost gone. Sun has shone continually for 3 days.	
—	—	Bright	—		
—	—	—	—		
8 (2)	6 (2)	—	—		
—	—	—	—	8 p.m. Ozone paper has been exposed in sun.	

TABLE XXIV.—JOURNEY OF LIEUTENANT ROYDS, R.N., AND MR. CLARKE TO THE

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Air temperature.			Snow temperature.		Hypsometer and equivalent pressure.	Wind.		Weather.	Miscellaneous phenomena.	Clouds.			
			Aneroïd M.O. 6.	Aneroïd A. 1182.	Sling thermometer.	Spirit minimum thermometer.		Surface.	At 6-in. depth.		Direction.	Force (Beaufort).			Upper.		Lower.	
						Reading at time of observation.	Minimum reading.								Description.	Direction.	Description.	Direction.
1903. Nov. 21	8 a.m.		ins. 29.02	ins. 28.700	° 2.0	° 2.2	° 1.2	- 2.0	- 3.0	210.05 28.78	SW	4	oc	+	Ci.-cu. 5	W	S. 3	SW
	10 "		29.00	—	9.0	9.5	1.0	—	—	—	SW	4	oc	+	Ci.-cu. 8	W	—	—
	Noon	S 45° E, 106 m.	29.03	28.710	10.0	10.2	8.5	—	—	—	SW	4	oc	+	—	—	A.s. 10	—
	2 p.m.		29.00	28.706	11.0	11.0	10.0	0.0	- 2.6	—	SW	3-4	oc	+	Ci.-cu. 3	—	S. 7	SW
	4 "		29.00	—	12.2	12.5	9.6	—	—	—	SW	3-4	bc	+	Ci.-cu. 8	—	—	—
	6 "		28.98	28.686	11.0	11.0	10.2	—	—	—	SW	3	oc	+	Ci.-cu. 6	WSW	S.-cu. 2	SW
	8 "		28.97	28.647	7.6	7.6	6.0	- 1.0	- 2.0	—	SW	3	oc	+	Ci.-cu. 6	WSW	A.s. 3	SW
	Nov. 22	6 a.m.		29.05	28.735	4.5	6.0	- 1.5	- 0.5	- 1.3	—	SW	1	bc	—	Ci.-s. 2	SW (slow)	Cu. 2
8 "			29.10	28.762	7.0	7.6	3.0	0.0	- 0.5	210.4 28.68	SW	0-1	bc	—	Ci.-s. 3	SW (slow)	—	—
10 "			29.12	—	7.3	7.5	5.0	—	—	—	Lt. SW airs	—	oc	—	Ci.-cu. 9	—	—	—
Noon		S 45° E, 116 m.	29.14	28.802	8.0	8.5	0.3	2.0	0.0	—	Lt. SW airs	—	oc	—	Ci.-s. 6	SW	A.s. 3	—
2 p.m.			29.16	28.826	12.0	12.0	7.5	—	—	—	SW	1	oc	—	Ci.-s. 7	SW	—	—
4 "			29.18	—	10.5	11.0	9.6	—	—	—	Lt. SW airs	—	oc	—	Ci.-s. 5	SW	—	—
6 "			29.20	28.842	10.0	10.0	9.0	—	—	—	Lt. SW airs	—	oc	—	Ci.-s. 5	SW	—	—
8 "			29.23	28.870	5.5	5.5	5.0	1.0	0.5	—	SW	1	oc	—	Ci.-s. 3	SW	—	—
Nov. 23	6 a.m.		29.31	28.980	0.0	0.0	- 6.6	- 2.0	- 3.0	—	SW	2	oc	+	Ci.-s. 2	SW	—	—
	8 "		29.34	29.015	- 1.0	- 1.0	- 3.0	- 2.0	- 3.0	210.62 29.11	SW	2	oc	+	Ci.-s. 2	SW	S. 2	—
	10 "		29.36	—	3.5	4.0	- 3.0	—	—	—	SW	2	oc	+	—	—	Fog 10	—
	Noon	S 43° E, 127 m.	29.37	—	6.3	6.5	3.0	—	—	—	SW	2-3	oc	+	+	+	Fog 10	—
	2 p.m.		29.35	29.020	10.0	10.2	6.0	- 1.6	- 2.2	—	SW	2	oc	+	+	+	Fog 10	—
	4 "		29.36	—	9.8	9.8	9.0	—	—	—	SW	2	oc	+	+	+	N. 10	—
	6 "		29.35	29.030	10.0	10.0	9.0	- 1.0	- 1.5	—	SW	2	oc	+	—	—	S. 10	—
	8 "		29.32	29.008	12.0	12.2	10.0	- 1.2	- 1.5	—	SW	2	oc	+	—	—	S. 10	—
Nov. 24	6 a.m.		29.15	28.844	12.0	12.0	3.0	1.5	0.0	—	SW	2	of	+	+	+	S. 10	—
	8 "		29.14	28.830	14.0	14.3	10.5	2.0	1.0	210.02 28.76	SW	1-2	of	+	+	+	Thin fog 10	—
	10 "		29.13	—	14.5	15.0	12.0	—	—	—	S	1-2	of	+	+	+	Thin fog 10	—
	Noon	S 44° E, 137 m.	29.05	—	17.0	17.6	12.6	—	—	—	Var. S	1	of	+	+	+	S. 10	—
	2 p.m.		29.03	28.700	18.5	18.8	17.0	2.0	1.8	—	SSW	1-2	o	+	+	+	Cu. 9	—
	4 "		28.95	—	12.7	12.7	12.5	—	—	—	Var. SW	1-2	of	+	+	+	N. 10	—
	6 "		28.91	28.608	12.0	12.0	10.0	—	—	—	SW	2	o	+	—	—	S. 10	—
	8 "		28.89	28.560	5.0	5.0	5.0	1.5	1.0	—	SW	2-3	bc	+	+	+	Ci.-s. 7	SW
Nov. 25	6 a.m.		28.67	28.375	0.0	0.0	- 10.5	- 1.5	- 1.8	—	SW	3	oc	+	Ci.-s. 9	S (slow)	—	—
	8 "		28.66	28.360	0.0	0.5	- 3.5	- 1.3	- 1.8	209.4 28.40	SW	3	oc	+	—	—	A.s. 10	S
	10 "		28.65	—	7.0	7.5	- 1.0	—	—	—	SW	2-3	oc	+	—	—	A.s. 10	S
	Noon	S 44° E, 142 m.	28.56	28.261	9.0	9.8	5.6	—	—	—	SW	2	oc	+	—	—	A.s. 10	S
	2 p.m.		28.56	28.265	11.0	11.6	8.3	0.0	- 1.0	—	SW	2	oc	+	—	—	A.s. 10	S
	4 "		28.57	—	14.8	15.0	10.0	—	—	—	SW	1-2	oc	+	—	—	A.s. 10	S
	6 "		28.53	28.220	12.0	12.0	12.0	0.0	- 1.2	—	SW	1	oc	+	—	—	A.s. 9	S
	8 "		28.55	28.215	12.2	13.0	11.5	0.5	- 0.8	—	SW	1-2	oc	—	Ci.-cu. 10	S	—	—

## SOUTH-EAST ACROSS THE ICE BARRIER, NOVEMBER 10 TO DECEMBER 10, 1903 (continued).

Ozone.		Sunshine.	Description and direction of Erebus smoke.	Remarks.	Date.
Number on scale.	Number of hours exposed.				
6	12	Gleam	—	8 a.m. All land obscured. Ci-cu. and Fr-cu. with Str. on horizon. Sky has been overcast at times, but always broke in W. Lovely Ci-cu. in zenith most of day, and in evening running in ridges from SW and WSW. Banks of Str. in southwards, casting dark shadows on ice. Surface much improved in forenoon, more level and harder. Sastrugi small. Marked absence of ley knolls.	1903, Nov. 21
—	—	Obscured	—		
4	4	Gleam	—		
—	—	Gleam	—		
—	—	Bright	—	8 p.m. In afternoon, deeper and softer snow was passed, being rough with little or no crust, and no hollow sound audible.	Nov. 22
6	6	Gleam	—		
—	—	Gleam	—		
—	—	Bright	—		
8	12	Bright	—		
—	—	Bright	—		
5	4	Bright	—	No land visible. Fine streaky Ci-s., much wind blown and changing formation rapidly. Occasional banks of Str. have appeared in W, SW, and S during day. Surface much the same as latter part of yesterday, mostly soft snow, footprints sinking 6 to 9 ins. About 1 ft. down much harder, and rounder, more crystalline snow is found. There is very little sastrugi, surface being mostly flat, with little appearance of wind.	Nov. 23
—	—	Bright	—		
6	6	Bright	—		
—	—	—	—		
—	—	—	—		
—	—	—	—		
—	—	—	—		
—	—	—	—		
—	—	—	—		
—	—	—	—		
—	—	Bright	—	8 p.m. Ozone paper damaged.	Nov. 24
7	12	Bright	—		
—	—	Obscured	—	8 a.m. Wind-blown Ci-s. in zenith; bank of Str. all round. Shortly after 8 a.m. it became overcast and remained so until after 4 p.m., when small breaks in clouds appeared in eastward.	Nov. 25
—	—	Obscured	—		
5	6	Obscured	—		
—	—	Obscured	—		
—	—	—	—	6 p.m. Ci-cu. on eastern horizon; small break in sky in S and SE. Surface same as yesterday, soft, with crust brittle, but unbreakable under ski. Footprints sinking about 8 ins.	Nov. 24
3	6	—	—		
—	—	Obscured	—	8 a.m. Dull and foggy, with light snow falling; occasional streak of blue sky visible in S and SW. 10 a.m. Thin fog, with snow falling in soft, nicely shaped hexagonal flakes. It continued the same until 2 p.m., when the sun broke through strong enough to cast shadow. Again, about 3 p.m., it became obscured and remained so until after 6 p.m., when it shone brightly. Surface very soft, and only crusted in small patches, footprints sinking 10 to 12 ins. at times. Snow appeared soft and cloggy, with scarcely any sastrugi, and continual little ripples of surface drift.	Nov. 25
8	12	Obscured	—		
—	—	Obscured	—		
3	4	Obscured	—		
—	—	Gleam	—		
4	4	Obscured	—		
—	—	Gleam	—		
3	4	Bright	—		
—	—	Bright	—		
—	—	Bright	—		
6	12	Gleam	—	8 p.m. Ci-s. running in same shaped bands from SW to NE, tapering at ends and thicker in zenith. 8 a.m. Sun shining brightly. Clear on low horizon all round. A-s. running in streaks from S to N. Surface soft and tough. Occasional reports heard in forenoon of ice cracking. Little or no sastrugi, and of no defined shape, lying SW where visible. Blue sky on horizon most of day. Strie SW, radiating N and S, all day.	Nov. 25
—	—	Gleam	—		
2	4	Gleam	—		
—	—	Gleam	—		
4	4	Gleam	—		
—	—	Gleam	—		
—	—	Gleam	—		
3	4	Bright	—		

TABLE XXIV.—JOURNEY OF LIEUTENANT ROYDS, R.N., AND MR. CLARKE TO THE

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Air temperature.			Snow temperature.		Hypsometer and equivalent pressure.	Wind.		Weather.	Miscellaneous phenomena.	Clouds.			
			Aneroid M.O. 6.	Aneroid A. 1182.	Sling thermometer.	Spirit minimum thermometer.		Surface.	At 6-in. depth.		Direction.	Force (Beaufort).			Upper.		Lower.	
						Reading at time of observation.	Minimum reading.								Description.	Direction.	Description.	Direction.
1903. Nov. 26	6 a.m.		ins. 28.45	ins. 28.122	12.6	12.6	3.0	1.6	1.0	—	SW	1-2	ocf	—	—	S. 10	—	
	8 "		28.46	28.150	18.0	18.0	10.0	2.0	1.3	—	SW	2	ocf	†°	—	S. 10	—	
	10 "		28.49	—	20.5	20.8	16.5	—	—	—	SW	2	ocf	†°*	—	N. 10	—	
	Noon	S 43° E, 153 m.	28.50	28.190	18.7	18.7	18.7	—	—	—	Var. SW	1-2	oe	†°*⊕	—	N. 10	—	
	2 p.m.		28.51	28.200(?)	15.0	15.6	15.0	2.5	2.0	—	Var. SW	2-3	oe	†°*→	—	N. 10	—	
	4 "		—	—	15.0	—	—	—	—	—	SW	2	oe	†*	—	N. 10	—	
	6 "		28.53	28.220	15.0	15.0	14.5	—	—	—	SW	2	oe	†*	—	N. 10	—	
	8 "		28.56	28.245	21.0	21.7	12.6	3.0	2.5	—	SW	2	ocf	*	—	N. 10	—	
Nov. 27	6 a.m.		28.65	28.341	18.5	19.0	0.0	4.5	4.0	—	SSE	2	oe	†°	—	A.-cu. 10	S	
	8 "		28.70	28.382	22.0	23.0	18.5	6.0	5.6	209.6 28.52	SSE	2-3	of	†°*	—	N. 10	—	
	10 "		28.73	—	20.6	20.6	20.0	—	—	—	SSE	2	of	†°*	—	N. 10	—	
	Noon	S 43° E, 160 m.	28.74	28.410	23.5	23.5	20.0	—	—	—	SSE	2	of	†°*	—	N. 10	—	
	2 p.m.		28.76	28.410	23.0	23.0	22.5	9.8	7.6	—	SSE	2	of	†°*	—	N. 10	—	
	4 "		28.75	—	22.5	22.5	21.6	—	—	—	SSE	1-2	of	*	—	N. 10	—	
	6 "		28.75	28.404	24.0	24.5	20.8	—	—	—	SSE	1-2	of	*°	—	N. 10	—	
	8 "		28.75	28.421	22.5	23.0	21.6	12.0	10.0	—	SSW	1	oe	⊕⊕*	—	A.-s. 10	—	
Nov. 28	6 a.m.		28.68	28.248	16.5	16.8	5.0	6.5	3.0	—	SW	1	oe	*°	—	S. 10	—	
	8 "		28.64	28.322(?)	18.0	18.0	12.6	7.0	4.0	—	SSW	1-2	oe	—	Cl.-s. 3	S	S. 6	—
	10 "		28.65	—	16.8	17.0	10.0	—	—	—	SSW	1	oe	—	Cl. 4	S	A.-s. 6	—
	Noon	S 42° E, 167 m. (furthest camp)	28.63	28.320(?)	16.0	16.0	13.0	—	—	—	SSW	1-2	bc	—	Ci. 4	S	—	—
	2 p.m.		28.62	28.313(?)	17.6	17.6	12.4	10.6	8.4	—	S	1-2	bc	—	Ci. 6	S	—	—
	4 "		28.63	28.318	18.0	18.5	15.3	—	—	—	S	1-2	bc	—	Ci. 5	S	Cu. 4	—
	6 "		28.64	28.320	16.3	16.3	15.0	—	—	—	S	1-2	bc	—	Cl. 4	S	Cn. 5	SW
	8 "		28.66	28.346	15.0	15.0	10.6	9.0	8.0	—	S	1	bc	*°	Ci.-cu. 3	S	S. 7	SW
Nov. 29	6 a.m.		28.75	28.460	13.0	13.5	6.7	9.0	8.0	—	SSW	2	o	†°	—	S. 10	—	
	8 "		28.76	28.462	16.0	17.0	12.5	8.8	8.0	209.8 28.63	S	1-2	o	†°	—	S. 10	—	
	10 "		28.80	28.500	20.5	20.6	12.0	—	—	—	S	1-2	oe	†°	A.-cu. 9	S	—	—
	Noon	S 43° E, 155 m.	28.84	—	15.5	16.0	15.0	—	—	—	S	2	oe	†°⊕	A.-s. 9	S	—	—
	2 p.m.		28.85	28.540	16.6	17.0	13.5	8.0	7.5	—	S	1-2	oe	†°⊕	A.-s. 10	S	—	—
	4 "		28.87	—	20.0	20.0	16.0	—	—	—	S	1-2	oe	†°	A.-s. 10	S	—	—
	6 "		28.88	28.516	17.3	17.3	17.3	—	—	—	S	0-1	oe	†°	Cl.-s. 6	S	—	—
	8 "		28.90	28.565	15.0	15.0	14.3	8.0	7.0	—	S	0-1	oe	—	Ci.-cu. 5	S	S. 5	SW
Nov. 30	6 a.m.		28.97	28.662	8.0	8.5	2.5	7.5	6.0	—	Lt. S air	—	oe	—	Cl.-s. 8	S	—	—
	8 "		29.00	28.672	10.6	11.0	6.0	7.6	6.0	210.2 28.66	SSE	1	oe	⊕†°	—	A.-s. 10	—	—
	10 "		29.05	—	14.8	15.0	10.0	—	—	—	SSE	1-2	oe	⊕†°	—	A.-s. 10	—	—
	Noon	S 43° E, 144 m.	29.07	—	17.0	17.0	14.5	—	—	—	SSE	2	oe	⊕†°	—	A.-s. 10	—	—
	2 p.m.		29.07	28.742	17.5	18.0	16.5	8.0	5.8	—	S	1-3	ocq	†°	—	A.-s. 10	—	—
	4 "		29.10	—	18.3	18.5	16.0	—	—	—	S	3	ocq	†°	—	A.-s. 10	—	—
	6 "		29.10	28.786	16.0	16.6	16.0	—	—	—	S	2	oe	†°	—	A.-s. 10	—	—
	8 "		29.12	28.788	14.0	14.0	12.3	—	—	—	SW	3	oe	†	—	A.-s. 8	S	—

## SOUTH-EAST ACROSS THE ICE BARRIER, NOVEMBER 10 TO DECEMBER 10, 1903 (continued).

Ozone.		Sunshine.	Description and direction of Erebus smoke.	Remarks.	Date.
Number on scale.	Number of hours exposed.				
—	—	Obscured	—		1903, Nov. 26
9	12	Obscured	—	8 a.m. Very foggy. Thin soft snow falling, with continual ripples of surface drift.	
—	—	Obscured	—		
—	—	Obscured	—		
6	6	Gleam	—	About half-past twelve sun broke through and shone for about half an hour.	
—	—	Obscured	—	In afternoon snow fell thicker, very soft, resembling sleet, and continued falling until 6 p.m. Surface very soft, and every few yards small drifts of newly fallen snow were crossed. It was soft, loose, and somewhat cloggy. The old snow was soft, with thin icy crust.	
8	4	Obscured	—		
—	—	Obscured	—	8 p.m. Thick wet mist, with snow, soft and sleety, falling thickly.	
—	—	Obscured	—		
6	12	Obscured	—	8 a.m. Small dull patches of blue sky visible on W horizon.	Nov. 27
—	—	Obscured	—		
5	4	Obscured	—	Soft sleety snow fell continually during day. At times sun gleaming faintly. Surface much the same as yesterday; snow soft, cloggy, and wet, and more evenly distributed. There was scarcely any crust, and no hollow sound. Any little sastrugi visible is lying SE.	
—	—	Gleam	—		
—	—	Obscured	—		
6	6	Gleam	—		
—	—	Bright	—	8 p.m. A.-s. radiating S and N. Solar halo and corona, with parhelia.	
—	—	Gleam	—		
8	12	Bright	—	Arrived at our farthest camp.	Nov. 28
—	—	Bright	—	8 a.m. Cloudy, but clearing on horizon all round. Surface same as yesterday.	
—	—	Bright	—	10 a.m. and Noon. Lovely pearly Ci. in zenith and near sun, but at 2 p.m. and 4 p.m. Ci. much shattered and spread, with Cu. rising in S.	
—	—	Bright	—		
4	6	Bright	—	2 p.m. Ci. clouds radiate N and S, but change formation rapidly.	
—	—	Bright	—		
—	—	Bright	—		
3	6	Gleam	—	8 p.m. Ci.-cu. in zenith, with Str. approaching all round. Threatening appearance.	
—	—	Obscured	—		
8	12	Gleam	—	8 a.m. Dull foggy morning. Clouds broken on E and NE horizon.	Nov. 29
—	—	Bright	—	10 a.m. A.-cu. changing rapidly to Ci.-cu.	
8	4	Bright	—	Noon. Ci.-cu. in N, Str. in SE. Clear on W horizon. Surface soft, with very thin crust, foot prints sink 8 to 12 ins. Snow tough and cloggy. Sastrugi small and lying S and SSW. Occasional icy patches.	
—	—	Bright	—		
—	—	Bright	—		
6	6	Bright	—		
—	—	Bright	—	8 p.m. Ci.-cu. in zenith. Clouds broken to southwards, with wind-blown Str.	
—	—	Bright	—		
7	12	Gleam	—	6 a.m. Ci.-s. running in thin bands from S to N, and overspreading sky.	Nov. 30
—	—	Gleam	—	8 a.m. A.-s., with faint halo.	
—	—	Gleam	—		
—	—	Gleam	—	Noon. Halo since 8 a.m.; appears of large radius.	
5	6	Bright	—	2 p.m. Surface much the same as yesterday. Icy patches larger and more frequent. Sastrugi a little more pronounced and S'ly.	
—	—	Bright	—		
7	4	Bright	—		
—	—	Bright	—	8 p.m. Clouds broken in zenith. Ci.-s. in S; bank of Str. rising in NW.	

TABLE XXIV.—JOURNEY OF LIEUTENANT ROYDS, R.N., AND MR. CLARKE TO THE

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Air temperature.			Snow temperature.		Hypsometer and equivalent pressure.	Wind.		Weather.	Miscellaneous phenomena.	Clouds.			
			Aneroid M.O. ft.	Aneroid A. 1182.	Sling thermometer.	Spirit minimum thermometer.		Surface.	At 6-in. depth.		Direction.	Force (Beaufort).			Upper.		Lower.	
						Reading at time of observation.	Minimum reading.								Description.	Direction.	Description.	Direction.
1903. Dec. 1	6 a.m.		ins. 29.10	ins. 28.800	° 12.0	° 12.5	° 5.0	° 9.0	° 7.0	—	SSW	3-4	bc	+	Ci.-s. 10	SW	—	—
	8 "		29.12	28.816	14.2	14.5	10.6	9.0	7.0	210.6 29.10	S	4	oc	+*	—	—	N. 10	—
	10 "		29.14	—	15.5	16.0	12.0	—	—	—	S	4-5	oc	+*	—	—	N. 10	—
	Noon	S 43° E, 131 m.	29.16	28.846	19.0	20.0	15.0	—	—	—	S	4-5	oc	+*	—	—	N. 10	—
	2 p.m.		29.18	28.866	18.0	18.0	16.3	10.0	6.3	—	S	4-6	oc	+*	—	—	N. 10	—
	4 "		29.21	28.899	12.5	12.5	12.0	—	—	—	S	2	ocf	+*	—	—	N. 10	—
	6 "		29.23	28.930	12.0	12.0	10.0	—	—	—	S	2	of	+*	—	—	Fog 10	—
	8 "		29.26	28.942	10.0	10.0	8.4	9.0	6.0	—	S	2	of	+*	—	—	N. 10	—
Dec. 2	6 a.m.		29.40	29.100	16.3	16.6	2.0	9.2	7.0	—	S	1	oc	—	—	—	S. 10	—
	8 "		29.45	29.150	22.5	23.0	14.5	10.0	7.3	211.0 29.33	SSW	1	oc	—	—	—	S. 10	—
	10 "		29.50	—	24.3	24.5	20.0	—	—	—	SW	1-2	oc	—	—	—	8. 10	—
	Noon		29.53	29.222	21.0	21.5	20.5	—	—	—	SW	1-2	oc	—	—	—	8. 10	S
	2 p.m.	S 42° E, 112 m. (p.m.)	29.53	29.224	18.0	18.0	17.0	12.0	8.0	—	SW	2-3	bc	+ <sup>o</sup>	Ci. 1	(?)	—	—
	4 "		29.52	—	19.0	19.2	17.6	—	—	—	SW	2-3	bc	+ <sup>o</sup>	Ci. 4	SW	—	—
	6 "		29.52	29.188	17.0	17.0	13.0	—	—	—	SW	2	bc	+ <sup>o</sup>	—	—	—	—
	8 "		29.52	29.165	16.3	16.5	12.1	12.0	9.0	—	SW	2	b	+ <sup>o</sup>	—	—	—	—
Dec. 3	6 a.m.		29.47	29.143	12.0	12.0	6.0	10.0	9.5	—	SW	3	b	+ <sup>o</sup>	Ci.-s. 10	—	—	—
	8 "		29.45	29.130	12.0	12.0	10.5	10.2	9.8	210.9 29.27	SW	3	b	+	—	—	—	—
	10 "		29.43	—	13.5	14.0	12.0	—	—	—	SW	3	bc	+ <sup>o</sup>	Ci.-cu. 6	SW	—	—
	Noon	S 41° E, 110 m.	29.40	29.080	13.0	13.0	9.4	—	—	—	SW	3-4	bc	+ <sup>o</sup>	Ci.-cu. 1	—	—	—
	2 p.m.		29.37	29.060	12.4	12.8	10.0	11.0	10.0	—	SW	3	bc	+ <sup>o</sup>	Ci.-cu. 4	—	—	—
	4 "		29.36	—	16.0	16.5	10.0	—	—	—	SW	3-4	bc	+ <sup>o</sup>	—	—	—	—
	6 "		29.38	29.044	13.2	13.2	12.6	—	—	—	SW	3-4	o	+*	—	—	N. 10	—
	8 "		29.38	29.040	13.0	13.0	10.0	11.5	10.5	—	SW	2	oc	+* <sup>o</sup>	—	—	S. 10	—
Dec. 4	6 a.m.		29.40	29.072(?)	10.0	10.0	— 3.0	10.0	9.5	—	SW	3	o	+* <sup>o</sup>	—	—	N. 10	—
	8 "		29.42	29.065(?)	7.8	8.0	5.5	10.3	10.0	210.8 29.21	SW	4	o	+* <sup>o</sup>	—	—	N. 10	—
	10 "		29.43	—	8.5	9.0	5.0	—	—	—	SW	5-6	bq	+	Ci.-s. 5	—	—	—
	Noon	S 43° E, 89 m.	29.45	29.108(?)	13.5	14.0	7.6	—	—	—	SW	4-5	bq	+	Ci.-s. 3	—	—	—
	2 p.m.		29.43	29.110(?)	15.0	15.0	11.5	12.5	10.5	—	SW	3-4	bq	+	Ci.-cu. 7	W	—	—
	4 "		29.39	—	18.0	18.6	14.3	—	—	—	SW	2	b	+	—	—	—	—
	6 "		29.35	29.040	17.5	17.5	16.0	—	—	—	SW	2-3	oc	+* <sup>o</sup>	—	—	Cu. 9	(?)
	8 "		29.36	29.032	15.3	15.3	12.4	13.0	11.0	—	SW	3	ocf	+* <sup>o</sup>	—	—	N. 10	(?)
Dec. 5	6 a.m.		29.42	29.048	16.8	17.0	6.0	13.0	12.0	—	SSW	2	ocf	+	—	—	S. 10	(?)
	8 "		29.43	29.086	17.0	17.5	14.6	13.2	12.0	211.0 29.23	S	2	of	+* <sup>o</sup>	—	—	N. 10	(?)
	10 "		29.45	—	17.0	17.5	13.2	—	—	—	S	2	oc	+	—	—	Cu. 9	S
	1 p.m.	S 44° E, 72 m.	29.47	29.125	16.0	16.0	14.0	—	—	—	S	1	ocf	+*	—	—	Thick fog 10	—
	2 "		29.45	29.138	18.0	18.4	16.0	14.0	12.5	—	S	1	of	+* <sup>o</sup>	—	—	N. 10	—
	4 "		29.50	—	14.5	14.6	14.0	—	—	—	S	3-4	ofq	+* <sup>o</sup>	—	—	N. 10	—
	6 "		29.55	29.190	12.6	12.6	12.0	—	—	—	Var.	1-3	ofq	+	—	—	S. 10	—
	8 "		29.55	29.200	11.0	11.0	9.5	14.0	13.0	—	SW	2	of	+	—	—	S. 10	—

## SOUTH-EAST ACROSS THE ICE BARRIER, NOVEMBER 10 TO DECEMBER 10, 1903 (continued).

Ozone.		Sunshine.	Description and direction of Erebus smoke.	Remarks.	Date.
Number on scale.	Number of hours exposed.				
—	—	Bright	—		1903. Dec. 1
9	12	Gleam	—	8 a.m. Dull, threatening morning. Heavy drift during night.	
—	—	Gleam	—	Snow began to fall about 8 a.m. in large soft flakes, and continued most of day. Surface very soft and cloggy; crusted in small patches, with occasional icy patches. Hollow sound, with occasional reports, heard during forenoon.	
—	—	Obscured	—	Sastrugi run S and SW. Hard in SW and soft in eastwards. It partly cleared on lower horizon at intervals during day.	
8	6	Obscured	—		
—	—	Obscured	—		
—	—	Obscured	—		
4	2	Obscured	—	8 p.m. Snow falling thickly, with heavy drift.	
—	—	Gleam	—		
10	12	Obscured	—	8 a.m. Dull and overcast sky, broken in S.	
—	—	Obscured	—	10 a.m. Clear on lower horizon all round.	
—	—	Obscured	—	Noon. It cleared shortly after Noon, with Cu. and lovely Ci.-cu. in zenith.	
7	6	Bright	—		
—	—	Bright	—	4 p.m. Ci. all round on horizon.	
5	4	Bright	—	6 p.m. Cloudless except in N and NW, where banks of Str. have been hanging most of day.	
3	2	Bright	—	The nature of the surface is much the same as yesterday; soft, cloggy snow, but sastrugi larger and more pronounced. Occasional patches very thinly crusted, and no hollow reports.	
—	—	Bright	—		
10	12	Bright	—	8 a.m. Clear, bright morning, with banks of Str. all round.	
—	—	Bright	—	10 a.m. Clouds broken in S and SE; Ci.-cu. in zenith.	Dec. 3
3	4	Bright	—	Noon. Cloudless, except small detached portions of Ci.-cu. passing from SW.	
—	—	Bright	—	It cleared about 3 p.m., when Erebus, Terror, and Bluff became visible; Erebus smoke appeared to be going eastward.	
—	—	Bright	—	Banks of Cu. over western mountains and on Terror.	
—	—	Bright	—	Surface much harder, but snow very rough and cloggy. Sastrugi larger and more frequent, with occasional polished icy mounds. Sastrugi run SW.	
7	6	Bright	—		
—	—	Bright	—		
—	—	Obscured	—		
10	12	Obscured	—	8 a.m. Dull and threatening; clouds breaking in S.	
—	—	Bright	—	10 a.m. Thin bands of fibrous Ci. radiating E and W. High wall of surface drift all round.	
—	—	Bright	—	Noon. Hazy, with no land visible. Ci.-s. radiating E and W.	
7	6	Bright	—	2 p.m. No land visible. Banks of Str. along S horizon. Wind squally.	
—	—	Bright	—	4 p.m. Bluff and Mt. Discovery visible, with banks of Cu. on high peaks. Erebus and Terror have been visible at times, but too hazy to see smoke.	
6	4	Gleam	—	Surface harder. Sastrugi higher and formed in long ridges. Snow very rough and cloggy in patches; makes rough, rasping sound under ski. Little or no crust, occasional reports of cracking. The snow that fell during the day was hard, and flakes large.	
—	—	Obscured	—	8 p.m. Very thick fog.	
—	—	Obscured	—		
—	—	Obscured	—		
—	—	Obscured	—		
10	10	Obscured	—	8 a.m. Thick foggy morning, with snow falling in large, hard flakes.	Dec. 5
—	—	Obscured	—	10 a.m. Clearing somewhat in S. Between 10 and 11 a.m. clouds became detached and lower portions of Cu. passed rapidly from S to N.	
—	—	Obscured	—	Noon. All land obscured and no observations taken.	
8	6	Obscured	—	Sun remained obscured during day, but between Noon and 1 p.m. occasional glimpses were got. Surface much the same, snow rough and cloggy. Sastrugi rough and unpolished and running SW. Occasional patches were thinly crusted.	
—	—	Obscured	—		
—	—	Obscured	—		
10	6	Obscured	—		
6	2	Obscured	—	8 p.m. No land visible; very foggy.	

TABLE XXIV.—JOURNEY OF LIEUTENANT ROYDS, R.N., AND MR. CLARKE TO THE

Date.	Time.	Noon bearing and distance in miles from Winter Quarters.	Pressure.		Air temperature.			Snow temperature.		Hypsometer and equivalent pressure.	Wind.		Miscellaneous phenomena.	Clouds.				
			Aneroid M.O. 6.	Aneroid A. 1182.	Sling thermometer.	Spirit minimum thermometer.		Surface.	At 6-in. depth.		Direction.	Force (Beaufort).		Weather.	Upper.		Lower.	
						Reading at time of observation.	Minimum reading.								Description.	Direction.	Description.	Direction.
1903. Dec. 6	6 a.m.		Ins. 29.65	Ins. 29.285	10.0	10.5	- 3.0	12.0	12.0	—	SW	2-3	o	+	—	—	S. 10	—
	8 "		29.66	29.332	8.0	8.0	7.4	11.8	11.8	211.38 29.555	SW	3-4	ocf	+ *	—	—	S. 10	—
	10 "		29.66	—	15.2	15.5	7.0	—	—	—	SW	3-4	ocf	+ * <sup>o</sup>	—	—	S. 10	—
	1 p.m.	S 45° E, 54 m.	29.67	29.340	14.0	14.0	11.3	—	—	—	SW	2-3	bc	+	Ci.-s. 6	SW	—	—
	2 "		29.70	29.342	14.5	15.0	12.6	12.0	11.8	—	SW	2	bc	+ <sup>o</sup>	Ci.-s. 2	W	—	—
	4 "		29.70	—	15.0	15.0	14.0	—	—	—	SW	1-2	b	—	—	—	—	—
	6 "		29.70	29.340	15.5	15.8	14.2	—	—	—	SW	1-2	b	—	—	—	—	—
	8 "		29.67	29.325	13.0	13.0	12.3	12.0	12.0	—	Lt. SW airs	—	b	—	—	—	—	—
Dec. 7	6 a.m.		29.62	29.310	13.0	14.0	6.0	12.4	12.0	—	Calm	0	b	—	—	—	—	—
	8 "		29.65	29.300	16.5	17.0	12.0	12.5	12.0	211.38 29.555	Calm	0	b	—	—	—	—	—
	10 "		29.66	—	16.6	17.0	15.3	—	—	—	Calm	0	b	—	—	—	—	—
	Noon	S 45° E, 40 m.	29.70	—	19.0	20.0	16.5	—	—	—	Calm	0	b	—	—	—	—	—
	2 p.m.		29.69	29.345	21.5	21.8	19.0	13.5	13.0	—	Calm	0	b	—	—	—	—	—
	4 "		29.68	29.369	23.0	23.5	21.0	—	—	—	Lt. var. airs	—	b	—	—	—	—	—
	6 "		29.75	29.420(?)	22.0	22.3	21.6	—	—	—	Calm	0	b	—	—	—	—	—
	8 "		29.78	29.430	17.0	17.5	16.0	13.3	14.0	—	Calm	0	b	—	—	—	—	—
Dec. 8	6 a.m.		29.77	29.442	21.5	22.0	10.4	13.5	13.0	—	Calm	0	bc	—	Ci.-cu. 1	—	—	—
	8 "		29.78	29.445	18.6	17.0	16.7	14.3	13.2	211.6 29.68	Lt. var. airs	—	bc	—	Ci.-cu. 1	S	—	—
	10 "		29.83	—	20.0	—	18.4	—	—	—	Lt. N airs	—	b	—	—	—	—	—
	1 p.m.	S 45° E, 27 m.	29.82	29.448	22.4	23.0	19.5	—	—	—	Calm	0	b	—	—	—	—	—
	2 "		29.81	29.446	20.6	21.0	15.0	15.0	14.0	—	Lt. SW airs	—	b	—	—	—	—	—
	4 "		29.80	29.444	17.5	17.5	15.5	—	—	—	Lt. SW airs	—	bc	—	—	—	Cu. 2	SW
	6 "		29.78	29.436	23.5	23.5	16.3	—	—	—	Calm	0	b	—	—	—	—	—
	8 "		29.80	29.442	12.0	12.6	9.5	14.5	13.5	—	Lt. var. airs	—	b	—	—	—	—	—
Dec. 9	6 a.m.		29.78	29.436	10.0	10.0	3.0	14.0	14.0	—	Calm	0	b	—	—	—	—	—
	8 "		29.77	29.425	8.5	9.0	8.0	14.3	14.0	211.4 29.56	Calm	0	b	—	—	—	—	—
	10 "		29.75	29.416	16.6	17.0	8.0	—	—	—	Calm	0	b	—	—	—	—	—
	Noon	S 47° E, 12 m.	29.76	—	16.0	17.0	12.4	—	—	—	Lt. NE airs	—	b	—	—	—	—	—
	2 p.m.		29.76	29.400	19.0	19.3	16.0	15.5	(?)	—	Lt. var. airs	—	b	—	—	—	—	—
	4 "		29.75	—	23.4	24.0	19.0	—	—	—	Calm	0	b	—	—	—	—	—
	6 "		29.74	29.390	24.0	24.0	22.0	—	—	—	Calm	0	b	—	—	—	—	—
	8 "		29.73	29.384	23.0	23.0	19.5	16.0	—	—	Calm	0	b	—	—	—	—	—
Dec. 10	5 a.m.		29.68	29.320	17.0	17.5	6.0	15.0	14.5	—	Calm	0	b	—	—	—	—	—
	7 "		29.67	29.335(?)	15.3	16.0	12.2	15.0	15.0	—	Lt. var. airs	—	b	—	—	—	—	—
	9 "		29.66	29.326(?)	19.5	20.0	14.3	—	—	—	Lt. E airs	—	b	—	—	—	—	—

## SOUTH-EAST ACROSS THE ICE BARRIER, NOVEMBER 10 TO DECEMBER 10, 1903 (continued).

Ozone.		Sunshine.	Description and direction of Erebus smoke.	Remarks.	Date.	
Number on scale.	Number of hours exposed.					
—	—	Obscured	—	—	1903. Dec. 6	
9	12	Obscured	—	8 a.m. Dull and foggy, with strong SW winds and heavy surface drift.		
—	—	Obscured	—	10 a.m. Appearance of clearing in S and SE. Between 10 and 11 a.m. sun broke through, with detached Cu. moving rapidly from SW.		
—	—	Bright	N and NW	1 p.m. Discovery, Bluff and Black and White Islands visible. Between 2 and 3 p.m. Erebus and Terror summits became visible, lower parts being obscured in thin Str. Erebus smoke rising in volume and going in column to N and NW.		
6	6	Bright	—	Surface much harder, and that covered in forenoon rough and unpolished, with appearance of recent heavy fall of snow. Sastrugi large and hard, but of no definite shape. The softer patches have no crust, although snow on surface is more icy.		
—	—	Bright	—	—		
5	4	Bright	—	—	Dec. 7	
3	2	Bright	N and then NW	8 p.m. All N horizon hazy, with detached Str. and Cu. Discovery, Bluff, Black and White Islands, Erebus and Terror visible.		
—	—	Bright	Rising 1000 ft., E	6 a.m. Lovely clear morning, all surrounding land visible. Considerable refraction in W.		
8	12	Bright	In long column, E	8 a.m. Erebus smoke going E in long column across Terror summit. Refraction at base of Bluff.		
—	—	Bright	—	10 a.m. Massive detached Cu. hanging on N end of Black Island; fleecy cloud with dark and bright patches.		
—	—	Bright	—	Noon. Ci.-s. in N., Cu. over western mountains. Erebus smoke going as at 10 a.m.		
5	6	Bright	—	—		
—	—	Bright	—	—		
4	4	Bright	—	—		
—	—	Bright	—	8 p.m. Surface crossed in morning was hard and footprints made scarcely any impression; but, after 11 a.m., all polished patches disappeared, the surface generally became slushy and wet, and small patches were very thinly crusted. Sastrugi all lie S and SW in small shapeless ridges.		
—	—	Bright	—	—		Dec. 8
6	12	Bright	Small quantity, E	8 a.m. Bright, but rather hazy, morning. Ci.-cu. and Cu. in E. All the highest summits remained clear during forenoon, although massive detached Cu. have been hanging on slopes of Discovery and Black Island.		
—	—	—	—	—		
—	—	Bright	—	—		
4	6	Bright	—	2 p.m. Str. appeared in N and NE, and about 3 p.m. summits of Erebus and Terror were obscured. It has been clear in NW for the last two days, with Castle Rock standing out prominently.		
—	—	Bright	—	Surface soft, although crust strong enough to be crossed without breaking in several patches. Several crevasses were crossed before Noon, and deep hollow sounds, with loud reports, were heard at times. Surface crossed in afternoon was very wet and slushy.		
—	—	—	—	—	Dec. 9	
3	6	—	Obscured	8 p.m. Bluff and range covered by massed Cu. Heavy Cu. and Str. on Erebus and Terror. Low bank of heavy cloud all round SE and E. Sastrugi SW, well defined until 11 o'clock, then becoming more S <sup>y</sup> and less definite, merely ripples.		
—	—	Bright	—	—		
6	12	Bright	Small puffs, E then N	8 a.m. Calm, cloudless morning.		
—	—	Bright	—	It remained almost calm during day, although light variable airs were met at intervals. The surface crossed before 2 p.m. was composed of large icy crystals, distributed about 3 in. deep, and reflecting lovely prismatic colouring. The crystals were thin, large and scaly, but wet and slushy, with no sastrugi. After lunch large, rough, hard sastrugi were crossed, with deep snow between. The snow was rough and resembled soft (?) hail, but before 6 p.m. they became more even, with large polished patches of old ice.		
—	—	Bright	—	—		
—	—	Bright	—	—	Dec. 10	
—	—	Bright	—	—		
3	6	Bright	N	Detached Cu. have been hanging in northern horizon during afternoon and on western mountains in evening.		
—	—	Bright	In puffs, E	5 a.m. Str. on horizon all round. Refraction in W.		
5	12	Bright	—	7 a.m. Wall of fog in N, E, and NW, up to 2000 ft. Detached portions of Cu. over Bluff.		
—	—	—	In puffs, E (slowly)	9 a.m. Clear, all low fog disappeared. Erebus smoking from both craters. Surface hard and slippery and well polished, with occasional small patches of rough soft snow. Sastrugi large and well defined, all trending S and SW.		
				Ship's barometer corrected = 29.238 in. Aneroid barometer M.O. 6 = 29.550 in. Aneroid barometer A. 1182 = 29.200 in.		
				Sling thermometer = 26°·2. Ship's thermometer = 26°·2.		



V. TWO-HOURLY OBSERVATIONS

OF

PRESSURE,

TEMPERATURE, WIND DIRECTION AND FORCE,

AND OF

SUNSHINE, AT WINTER QUARTERS.



TABLE I.

PRESSURE IN ENGLISH INCHES, FIRST FIGURE OMITTED.

The Readings are Corrected for Temperature, and Reduced to Mean Sea Level, but are not Corrected for Variation of Gravity.

February, 1902.

March, 1902.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	
	ins.		ins.																									
1														1	9.463	9.445	9.451	9.448	9.456	9.449	9.449	9.454	9.447	9.421	9.410	9.446		
2														2	9.416	9.400	9.386	9.361	9.355	9.352	9.350	9.346	9.346	9.343	9.338	9.334	9.361	
3														3	9.330	9.329	9.323	9.320	9.320	9.289	9.290	9.298	9.291	9.298	9.305	9.296	9.364	
4														4	9.288	9.272	9.261	9.214	9.240	9.190	9.204	9.211	9.218	9.201	9.177	9.197	9.223	
5														5	9.195	9.192	9.142	9.143	9.090	9.085	9.058	9.047	9.037	9.040	9.014	9.066	9.084	
6														6	8.993	9.010	9.002	9.051	9.077	9.085	9.083	9.115	9.085	9.084	9.038	9.054	9.056	
7														7	9.025	8.993	8.990	8.967	8.944	8.929	8.928	8.929	8.935	8.928	8.932	8.948	8.949	
8														8	8.944	8.978	8.938	8.998	8.955	8.999	8.974	8.961	8.976	8.968	8.976	8.977	8.972	
9	8.862	8.867	8.891	8.891	8.895	8.899	8.903	8.911	8.928	8.911	8.932	8.943	8.903	9	8.971	8.958	8.967	9.007	9.014	9.011	9.044	9.036	9.044	9.045	9.101	9.158	9.031	
10	8.954	8.967	9.004	9.005	9.051	9.084	9.116	9.127	9.138	9.165	9.215	9.287	9.093	10	9.195	9.205	9.209	9.216	9.167	9.180	9.134	9.093	9.060	9.077	9.001	9.125		
11	9.289	9.324	9.362	9.389	9.414	9.418	9.396	9.384	9.364	9.307	9.301	9.263	9.351	11	8.986	8.991	9.013	9.015	9.129	9.168	9.215	9.247	9.305	9.376	9.311	9.427	9.184	
12	9.247	9.230	9.223	9.189	9.170	9.160	9.136	9.115	9.101	9.091	9.060	9.030	9.146	12	9.392	9.415	9.500	9.511	9.496	9.473	9.572	9.595	9.612	9.669	9.677	9.691	9.550	
13	9.016	9.006	8.990	8.950	8.951	8.946	8.951	8.965	8.976	8.965	8.992	9.035	8.979	13	9.072	9.063	9.081	9.098	9.063	9.083	9.096	9.102	9.090	9.115	9.085	9.106	9.690	
14	9.041	9.069	9.086	9.116	9.133	9.137	9.145	9.146	9.158	9.159	9.179	9.159	9.128	14	9.782	9.761	9.714	9.722	9.770	9.731	9.741	9.753	9.743	9.719	9.752	9.742	9.741	
15	9.172	9.180	9.194	9.216	9.245	9.256	9.273	9.280	9.310	9.374	9.344	9.382	9.269	15	9.723	9.683	9.618	9.656	9.631	9.614	9.588	9.570	9.558	9.522	9.540	9.562	9.696	
16	9.402	9.409	9.434	9.460	9.463	9.448	9.434	9.500	9.486	9.474	9.461	9.462	9.453	16	9.398	9.374	9.383	9.374	9.347	9.323	9.274	9.310	9.335	9.310	9.335	9.322	9.341	9.311
17	9.442	9.446	9.403	9.353	9.356	9.330	9.313	9.291	9.286	9.323	9.352	9.360	9.355	17	9.328	9.301	9.326	9.426	9.460	9.490	9.495	9.534	9.567	9.595	9.601	9.607	9.479	
18	9.383	9.364	9.394	9.421	9.402	9.354	9.294	9.204	9.161	9.079	9.008	8.973	9.256	18	9.679	9.636	9.679	9.719	9.732	9.780	9.800	9.752	9.792	9.746	9.808	9.796	9.738	
19	8.980	8.992	9.027	9.064	9.062	9.056	9.089	9.102	9.132	9.164	9.242	9.235	9.095	19	9.762	9.732	9.761	9.735	9.735	9.642	9.672	9.662	9.603	9.714	9.705	9.696	9.709	
20	9.245	9.246	9.244	9.240	9.238	9.217	9.180	9.186	9.170	9.161	9.154	9.151	9.203	20	9.686	9.672	9.607	9.674	9.608	9.531	9.544	9.569	9.587	9.632	9.601	9.630	9.612	
21	9.153	9.153	9.166	9.184	9.209	9.224	9.228	9.261	9.292	9.304	9.366	9.378	9.243	21	9.650	9.639	9.591	9.603	9.603	9.608	9.608	9.608	9.606	9.606	9.606	9.549	9.530	9.597
22	9.430	9.468	9.511	9.552	9.572	9.566	9.563	9.589	9.559	9.574	9.582	9.545	9.540	22	9.477	9.483	9.506	9.504	9.504	9.508	9.472	9.431	9.420	9.401	9.322	9.262	9.441	
23	9.550	9.537	9.492	9.458	9.434	9.402	9.354	9.339	9.322	9.297	9.257	9.221	9.389	23	9.184	9.132	9.113	9.085	9.054	9.032	9.018	9.035	9.070	9.082	9.169	9.150	9.092	
24	9.213	9.200	9.204	9.214	9.214	9.214	9.252	9.277	9.306	9.318	9.346	9.351	9.260	24	9.197	9.159	9.241	9.300	9.348	9.373	9.392	9.407	9.422	9.452	9.451	9.418	9.349	
25	9.373	9.389	9.408	9.416	9.409	9.424	9.439	9.452	9.453	9.452	9.427	9.410	9.421	25	9.417	9.395	9.402	9.395	9.391	9.370	9.336	9.299	9.240	9.216	9.304	9.334	9.346	
26	9.385	9.352	9.333	9.328	9.309	9.265	9.242	9.221	9.201	9.233	9.240	9.264	9.281	26	9.322	9.318	9.361	9.381	9.350	9.364	9.336	9.374	9.325	9.316	9.312	9.307	9.339	
27	9.272	9.276	9.274	9.278	9.305	9.326	9.338	9.375	9.392	9.387	9.382	9.364	9.331	27	9.287	9.287	9.277	9.284	9.290	9.304	9.306	9.298	9.264	9.302	9.300	9.300	9.292	
28	9.432	9.428	9.440	9.447	9.451	9.451	9.444	9.437	9.428	9.441	9.441	9.457	9.442	28	9.288	9.284	9.284	9.254	9.266	9.260	9.244	9.258	9.248	9.264	9.237	9.235	9.260	
														29	9.218	9.215	9.213	9.228	9.190	9.204	9.183	9.160	9.155	9.097	9.140	9.135	9.178	
														30	9.152	9.088	9.140	9.138	9.136	9.096	9.060	9.016	9.033	8.998	8.989	9.002	9.071	
														31	8.976	8.976	8.985	9.013	9.030	9.004	9.016	9.020	9.036	9.045	9.072	9.069	9.019	
Mean	9.242	9.247	9.254	9.259	9.264	9.259	9.255	9.257	9.257	9.259	9.263	9.265	9.257	Mean	9.334	9.320	9.323	9.310	9.335	9.327	9.325	9.324	9.327	9.329	9.328	9.332	9.329	

April, 1902.

May, 1902.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.
	ins.		ins.																								
1	9.007	9.112	9.121	9.196	9.213	9.251	9.267	9.257	9.272	9.299	9.315	9.305	9.225	1	9.265	9.256	9.258	9.263	9.249	9.233	9.190	9.166	9.153	9.147	9.143	9.149	9.206
2	9.310	9.330	9.343	9.355	9.374	9.373	9.369	9.363	9.354	9.355	9.346	9.366	9.353	2	9.164	9.150	9.139	9.119	9.089	9.057	9.028	8.952	8.890	8.928	8.911	8.999	9.036
3	9.322	9.313	9.296	9.286	9.273	9.247	9.227	9.212	9.198	9.175	9.153	9.154	9.238	3	8.978	8.932	8.900	8.887	8.876	8.859	8.881	8.914	8.926	8.939	8.933	8.888	8.906
4	9.163	9.130	9.056	8.979	8.987	8.972	8.980	8.961	8.942	8.927	8.921	8.921	8.995	4	8.919	8.946	8.974	8.972	8.961	8.959	8.974	8.993	9.009	9.013	9.145	9.157	9.019
5	8.887	8.898	8.850	8.855	8.852	8.887	8.863	8.854	8.856	8.869	8.863	8.864	8.869	5	9.198	9.186	9.199	9.191	9.196	9.190	9.194	9.138	9.120	9.097	9.069	9.021	9.147
6	9.918	8.964	8.943	9.018	9.106	9.163	9.153	9.145	9.141	9.130	9.170	9.161	9.082	6	8.981	8.958	8.944	8.921	8.820	8.810	8.731	8.669	8.639	8.634	8.692	8.667	8.792
7	9.147	9.095	9.094	9.083	9.061	9.061	9.069	9.119	9.133	9.147	9.154	9.170	9.111	7	8.698	8.715	8.706	8.759	8.760	8.760	8.765	8.789	8.811	8.845	8.874	8.880	8.780
8	9.156	9.157	9.092	9.061	9.049	9.173	9.177	9.198	9.200	9.207	9.208	9.202	9.157	8	8.884	8.929	9.072	9.035	9.056	9.076	9.096	9.114	9.122	9.102	9.102	9.090	9.047
9	9.186	9.193	9.172	9.165	9.164	9.190	9.190	9.204	9.212	9.233	9.241	9.241	9.198	9	9.100	9.116	9.150	9.142	9.206	9.208	9.212	9.212	9.230	9.216	9.209	9.202	9.186
10	9.242	9.269	9.218	9.242	9.237	9.220	9.240	9.242	9.234	9.243	9.253	9.241	9.237	10	9.200	9.194	9.181	9.175	9.168	9.152	9.135	9.122	9.108	9.100	9.095	9.089	9.144
11	9.239	9.185	9.241	9.283	9.269	9.271	9.249	9.253	9.218	9.206	9.143	9.099	9.221	11	9.089	9.104	9.106	9.079	9.103	9.134	9.153	9.164	9.172	9.187	9.191	9.175	9.138
12	9.111	9.087	9.083	9.119	9.121	9.110	9.131																				

TABLE I. (continued).

PRESSURE IN ENGLISH INCHES, FIRST FIGURE OMITTED.

The Readings are Corrected for Temperature, and Reduced to Mean Sea Level, but are not Corrected for Variation of Gravity.

June, 1902.

July, 1902.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	
1	ins.	1	ins.																									
2	9.063	9.103	9.130	9.151	9.168	9.189	9.162	9.158	9.141	9.143	9.131	9.117	9.136	2	8.759	8.722	8.722	8.714	8.714	8.709	8.709	8.708	8.746	8.792	8.808	8.756	8.741	
3	9.105	9.091	9.090	9.078	9.049	9.025	9.001	9.025	9.054	9.136	9.221	9.232	9.096	3	8.788	8.776	8.772	8.796	8.797	8.810	8.841	8.867	8.877	8.875	8.876	8.849	8.827	
4	9.296	9.383	9.407	9.432	9.456	9.462	9.494	9.505	9.535	9.579	9.632	9.607	9.482	4	8.828	8.814	8.779	8.751	8.740	8.717	8.691	8.672	8.616	8.556	8.518	8.450	8.678	
5	9.601	9.584	9.560	9.536	9.535	9.501	9.499	9.517	9.533	9.606	9.595	9.601	9.556	5	8.401	8.331	8.296	8.304	8.338	8.343	8.353	8.294	8.257	8.226	8.177	8.167	8.291	
6	9.618	9.630	9.652	9.649	9.646	9.655	9.685	9.689	9.699	9.715	9.738	9.747	9.677	6	8.199	8.289	8.306	8.536	8.689	8.798	8.928	9.037	9.170	9.251	9.297	9.298	8.824	
7	9.753	9.745	9.762	9.767	9.763	9.753	9.710	9.675	9.613	9.544	9.488	9.497	9.673	7	9.325	9.367	9.407	9.463	9.491	9.501	9.509	9.487	9.479	9.470	9.461	9.427	9.449	
8	9.515	9.475	9.451	9.449	9.449	9.463	9.510	9.575	9.647	9.706	9.696	9.701	9.553	8	9.442	9.423	9.397	9.397	9.371	9.346	9.343	9.317	9.277	9.245	9.231	9.218	9.334	
9	9.720	9.729	9.737	9.735	9.737	9.753	9.803	9.931	9.944	9.931	9.929	9.888	9.841	9	9.183	9.159	9.134	9.129	9.121	9.135	9.139	9.155	9.161	9.209	9.215	9.203	9.164	
10	9.830	9.855	9.836	9.846	9.814	9.841	9.841	9.822	9.831	9.825	9.816	9.792	9.829	10	9.183	9.206	9.231	9.261	9.245	9.213	9.180	9.156	9.135	9.080	9.028	9.086	9.159	
11	9.793	9.781	9.729	9.676	9.604	9.590	9.551	9.501	9.460	9.426	9.408	9.382	9.575	11	8.949	8.909	8.869	8.834	8.818	8.806	8.808	8.836	8.859	8.946	9.007	9.103	8.895	
12	9.363	9.349	9.332	9.317	9.338	9.344	9.335	9.345	9.352	9.363	9.347	9.398	9.453	12	9.188	9.260	9.342	9.415	9.463	9.515	9.559	9.603	9.652	9.698	9.721	9.706	9.510	
13	9.793	9.824	9.838	9.812	9.749	9.719	9.699	9.681	9.679	9.683	9.657	9.656	9.731	13	9.713	9.764	9.805	9.818	9.838	9.862	9.876	9.873	9.889	9.897	9.903	9.879	9.843	
14	9.606	9.621	9.622	9.657	9.665	9.652	9.609	9.546	9.554	9.504	9.462	9.393	9.574	14	9.877	9.877	9.877	9.907	9.889	9.893	9.887	9.877	9.879	9.850	9.834	9.830	9.873	
15	9.836	9.856	9.847	9.846	9.814	9.841	9.841	9.822	9.831	9.825	9.816	9.792	9.829	15	9.815	9.802	9.798	9.765	9.751	9.750	9.726	9.688	9.666	9.659	9.627	9.604	9.723	
16	8.921	8.921	8.916	8.922	8.938	8.956	8.972	9.013	9.047	9.068	9.054	9.011	8.978	16	9.586	9.592	9.576	9.551	9.523	9.513	9.506	9.510	9.504	9.487	9.468	9.446	9.522	
17	8.959	8.985	8.903	8.753	8.653	8.571	8.543	8.509	8.487	8.566	8.730	8.868	8.695	17	9.445	9.445	9.454	9.506	9.533	9.544	9.564	9.596	9.626	9.642	9.652	9.662	9.556	
18	9.950	9.956	9.949	9.979	9.917	9.147	9.179	9.165	9.165	9.161	9.145	9.125	9.095	18	9.663	9.658	9.650	9.649	9.666	9.667	9.671	9.672	9.671	9.705	9.691	9.700	9.676	
19	9.111	9.126	9.107	9.139	9.157	9.151	9.223	9.247	9.277	9.301	9.319	9.335	9.211	19	9.695	9.707	9.701	9.656	9.603	9.571	9.598	9.492	9.495	9.509	9.529	9.524	9.590	
20	9.856	9.856	9.847	9.832	9.830	9.833	9.841	9.821	9.827	9.824	9.829	9.827	9.829	20	9.640	9.660	9.620	9.563	9.548	9.545	9.541	9.541	9.541	9.541	9.541	9.541	9.541	
21	9.280	9.297	9.311	9.354	9.385	9.373	9.353	9.303	9.282	9.225	9.194	9.134	9.291	21	9.839	9.827	9.805	9.779	9.758	9.691	9.639	9.583	9.543	9.528	9.493	9.485	9.664	
22	9.164	9.177	9.145	9.175	9.189	9.191	9.177	9.157	9.155	9.110	9.102	9.143	9.157	22	9.487	9.471	9.482	9.484	9.495	9.495	9.501	9.507	9.525	9.534	9.542	9.565	9.507	
23	9.167	9.193	9.222	9.250	9.274	9.300	9.311	9.309	9.313	9.304	9.316	9.305	9.272	23	9.562	9.579	9.601	9.611	9.619	9.617	9.624	9.626	9.628	9.621	9.614	9.598	9.608	
24	9.287	9.295	9.233	9.181	9.156	9.143	9.121	9.097	9.055	9.021	8.987	8.943	9.124	24	9.593	9.583	9.586	9.621	9.614	9.603	9.593	9.591	9.583	9.579	9.575	9.571	9.591	
25	8.933	8.937	8.935	8.991	9.013	9.043	9.073	9.083	9.086	9.092	9.095	9.073	9.030	25	9.569	9.545	9.563	9.563	9.568	9.568	9.545	9.541	9.541	9.541	9.541	9.541	9.541	
26	9.069	9.083	9.086	9.107	9.117	9.135	9.140	9.156	9.141	9.132	9.123	9.096	9.115	26	9.519	9.523	9.577	9.513	9.522	9.573	9.570	9.519	9.510	9.506	9.512	9.525	9.531	
27	9.068	9.039	9.011	8.957	8.925	8.897	8.841	8.788	8.761	8.763	8.699	8.696	8.870	27	9.522	9.509	9.504	9.490	9.498	9.490	9.489	9.482	9.467	9.459	9.441	9.428	9.482	
28	8.665	8.700	8.699	8.609	8.627	8.640	8.658	8.628	8.609	8.541	8.499	8.454	8.611	28	9.414	9.397	9.365	9.351	9.318	9.300	9.270	9.239	9.224	9.192	9.180	9.122	9.281	
29	8.439	8.357	8.258	8.248	8.192	8.140	8.206	8.197	8.283	8.406	8.558	8.632	8.330	29	9.113	9.108	9.083	9.130	9.137	9.136	9.154	9.167	9.170	9.187	9.190	9.173	9.146	
30	8.690	8.741	8.839	8.901	8.963	9.039	9.094	9.113	9.122	9.146	9.126	9.082	9.213	30	9.176	9.191	9.194	9.213	9.218	9.209	9.198	9.188	9.187	9.172	9.151	9.140	9.119	9.181
31	9.162	9.151	9.141	9.112	9.102	9.042	9.032	9.002	8.932	8.888	8.856	8.803	9.019	31	9.103	9.093	9.075	9.067	9.070	9.064	9.065	9.079	9.091	9.135	9.163	9.190	9.100	
Mean	9.254	9.255	9.250	9.247	9.244	9.239	9.242	9.239	9.239	9.243	9.248	9.243	9.245	Mean	9.315	9.316	9.319	9.325	9.331	9.331	9.337	9.336	9.336	9.338	9.335	9.325	9.328	

August, 1902.

September, 1902.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.
1	ins.	1	ins.																								
2	9.128	9.136	9.106	9.132	9.179	9.171	9.173	9.155	9.117	9.091	9.055	8.990	9.119	2	9.124	9.125	9.114	9.120	9.109	9.120	9.143	9.197	9.259	9.310	9.329	9.355	9.193
3	8.908	8.824	8.775	8.732	8.746	8.669	8.634	8.596	8.592	8.597	8.613	8.612	8.632	3	9.412	9.470	9.504	9.512	9.524	9.503	9.484	9.478	9.455	9.474	9.492	9.482	9.482
4	8.640	8.636	8.662	8.741	8.765	8.813	8.858	8.880	8.879	8.849	8.804	8.720	8.771	4	9.461	9.455	9.453	9.456	9.472	9.475	9.494	9.506	9.524	9.527	9.560	9.588	9.498
5	8.658	8.605	8.496	8.496	8.496	8.521	8.580	8.579	8.639	8.683	8.764	8.803	8.805	5	9.603	9.604	9.610	9.612	9.632	9.617	9.650	9.654	9.651	9.616	9.640	9.641	9.633
6	8.827	8.818	8.788	8.778	8.757	8.784	8.795	8.685	8.681	8.679	8.677	8.659	8.731	6	9.630	9.630	9.628	9.623	9.606	9.590	9.574	9.564	9.550	9.538	9.509	9.528	9.633
7	8.957	8.949	8.963	8.962	8.971	8.953	8.939	8.935	8.922	8.908	8.869	8.857	8.640	7	9.521	9.518	9.516	9.539	9.539	9.542	9.551	9.563	9.575	9.604	9.626	9.654	9.562
8	8.596	8.613	8.619	8.648	8.668	8.704	8.735	8.745	8.762	8.790	8.807	8.801	8.706	8	9.670	9.690	9.706	9.698	9.700	9.688	9.674	9.658	9.652	9.611	9.624	9.609	9.665
9	8.827	8.851	8.857	8.970	8.981	9.014	9.033	9.047	9.041	9.059	9.085	9.090	8.988	9	9.575	9.577	9.567	9.549	9.584	9.559	9.548	9.556	9.550	9.539	9.515	9.515	9.550
10	9.113	9.069	9.018	8.990	8.940	8.876	8.861	8.838	8.807	8.781	8.766	8.726	8.899	10	9.527	9.529	9.492	9.477	9.452	9.439	9.423	9.393	9.361	9.325	9.287	9.212	9.409
11	8.7																										

TABLE I. (continued).

PRESSURE IN ENGLISH INCHES, FIRST FIGURE OMITTED.

The Readings are Corrected for Temperature, and Reduced to Mean Sea Level, but are not Corrected for Variation of Gravity.

October, 1902.

November, 1902.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	
1	ins.	1	ins.																									
2	9.385	9.359	9.333	9.314	9.282	9.234	9.249	9.251	9.243	9.249	9.244	9.232	9.282	2	9.849	9.847	9.829	9.808	9.820	9.867	9.855	9.869	9.891	9.939	9.945	9.990	9.870	
3	9.259	9.261	9.254	9.234	9.229	9.223	9.213	9.195	9.167	9.161	9.163	9.152	9.209	3	9.013	9.025	9.069	9.101	9.141	9.277	9.332	9.274	9.278	9.331	9.338	9.352	9.211	
4	9.129	9.126	9.098	9.100	9.087	9.075	9.069	9.067	9.071	9.049	9.061	9.071	9.084	4	9.341	9.349	9.344	9.333	9.389	9.381	9.367	9.352	9.351	9.344	9.341	9.360	9.260	
5	9.095	9.125	9.131	9.159	9.185	9.187	9.241	9.259	9.285	9.306	9.307	9.318	9.216	5	9.293	9.284	9.269	9.267	9.259	9.235	9.210	9.208	9.201	9.196	9.168	9.149	9.228	
6	9.357	9.361	9.372	9.371	9.369	9.369	9.353	9.329	9.334	9.315	9.287	9.266	9.340	6	9.183	9.186	9.133	9.079	9.087	9.081	9.078	9.101	9.133	9.171	9.231	9.290	9.146	
7	9.214	9.192	9.179	9.144	9.146	9.118	9.118	9.115	9.095	9.113	9.113	9.106	9.138	7	9.302	9.326	9.368	9.344	9.428	9.435	9.440	9.427	9.401	9.399	9.359	9.328	9.375	
8	9.102	9.102	9.081	9.071	9.069	9.049	9.025	8.994	8.976	8.929	8.895	8.864	9.013	8	9.296	9.267	9.252	9.245	9.261	9.263	9.263	9.324	9.367	9.413	9.373	9.452	9.318	
9	8.831	8.785	8.774	8.758	8.718	8.701	8.641	8.679	8.660	8.653	8.601	8.583	8.699	9	9.498	9.521	9.569	9.547	9.545	9.564	9.588	9.584	9.586	9.590	9.590	9.564	9.500	
10	8.577	8.611	8.561	8.576	8.567	8.575	8.545	8.596	8.636	8.670	8.661	8.711	8.607	10	9.566	9.539	9.533	9.523	9.506	9.499	9.474	9.461	9.442	9.429	9.380	9.371	9.478	
11	8.732	8.734	8.766	8.800	8.824	8.855	8.847	8.854	8.870	8.844	8.916	8.918	8.830	11	9.377	9.365	9.365	9.365	9.336	9.355	9.378	9.413	9.415	9.431	9.416	9.428	9.389	
12	8.920	8.922	8.888	8.873	8.864	8.860	8.853	8.835	8.829	8.827	8.827	8.828	8.861	12	9.430	9.458	9.501	9.524	9.522	9.524	9.510	9.494	9.504	9.505	9.468	9.477	9.493	
13	8.827	8.834	8.815	8.787	8.725	8.676	8.650	8.649	8.542	8.529	8.505	8.479	8.668	13	9.448	9.443	9.449	9.459	9.498	9.519	9.523	9.536	9.553	9.558	9.548	9.571	9.574	9.510
14	8.479	8.451	8.449	8.421	8.412	8.393	8.371	8.366	8.338	8.329	8.319	8.331	8.388	14	9.576	9.576	9.584	9.551	9.541	9.523	9.506	9.483	9.460	9.441	9.451	9.461	9.513	
15	8.334	8.322	8.376	8.434	8.478	8.486	8.492	8.493	8.509	8.495	8.492	8.502	8.502	15	9.413	9.436	9.457	9.454	9.451	9.471	9.515	9.584	9.583	9.637	9.635	9.723	9.537	
16	8.515	8.505	8.486	8.499	8.543	8.578	8.599	8.637	8.680	8.717	8.748	8.806	8.615	16	9.545	9.579	9.588	9.527	9.568	9.971	9.970	9.968	9.961	9.937	9.937	9.905	9.912	
17	8.897	8.938	8.973	9.036	9.057	9.097	9.161	9.209	9.251	9.298	9.317	9.324	9.130	17	9.868	9.848	9.832	9.828	9.832	9.818	9.807	9.810	9.809	9.799	9.818	9.813	9.824	
18	9.352	9.378	9.382	9.388	9.387	9.383	9.369	9.354	9.337	9.330	9.294	9.279	9.353	18	9.820	9.823	9.807	9.807	9.774	9.768	9.776	9.813	9.798	9.779	9.774	9.767	9.792	
19	9.219	9.197	9.207	9.166	9.159	9.149	9.143	9.138	9.150	9.147	9.163	9.165	9.167	19	9.772	9.766	9.768	9.775	9.752	9.760	9.799	9.806	9.810	9.814	9.808	9.780	9.785	
20	9.173	9.195	9.203	9.209	9.243	9.245	9.253	9.263	9.275	9.275	9.307	9.297	9.245	20	9.759	9.756	9.756	9.743	9.723	9.820	9.830	9.832	9.820	9.824	9.828	9.824	9.815	
21	9.291	9.290	9.285	9.277	9.257	9.245	9.240	9.241	9.233	9.231	9.217	9.211	9.251	21	9.810	9.796	9.753	9.744	9.790	9.797	9.800	9.807	9.810	9.804	9.801	9.806	9.816	
22	9.231	9.227	9.233	9.251	9.268	9.269	9.279	9.295	9.322	9.356	9.381	9.411	9.294	22	9.912	9.935	9.943	9.973	9.948	0.018	0.052	0.057	0.061	0.071	0.108	0.112	0.016	
23	9.414	9.442	9.506	9.524	9.580	9.604	9.613	9.636	9.654	9.663	9.669	9.653	9.580	23	9.103	9.099	9.097	9.084	9.057	0.045	0.029	9.995	9.971	9.940	9.905	9.866	0.010	
24	9.639	9.630	9.600	9.600	9.548	9.485	9.437	9.351	9.329	9.335	9.338	9.265	9.463	24	9.845	9.818	9.806	9.780	9.766	9.735	9.696	9.668	9.656	9.631	9.609	9.603	9.718	
25	9.226	9.203	9.167	9.125	9.067	9.043	9.024	8.991	8.964	8.963	8.914	8.891	9.048	25	9.549	9.541	9.555	9.563	9.563	9.552	9.551	9.558	9.559	9.556	9.579	9.589	9.690	
26	8.886	8.864	8.854	8.842	8.817	8.789	8.764	8.759	8.743	8.743	8.712	8.718	8.793	26	9.596	9.594	9.596	9.622	9.636	9.607	9.708	9.719	9.729	9.707	9.719	9.768	9.674	
27	8.709	8.689	8.687	8.673	8.682	8.694	8.691	8.696	8.701	8.708	8.729	8.737	8.700	27	9.766	9.769	9.765	9.780	9.727	9.691	9.698	9.690	9.674	9.666	9.663	9.635	9.709	
28	8.785	8.749	8.724	8.722	8.786	8.852	8.893	8.898	8.920	8.906	8.916	8.928	8.840	28	9.609	9.579	9.571	9.556	9.523	9.506	9.480	9.459	9.451	9.451	9.443	9.449	9.506	
29	8.972	8.979	8.980	8.984	8.964	8.961	8.960	8.935	8.926	8.911	8.911	8.928	9.046	29	9.411	9.458	9.485	9.517	9.536	9.545	9.556	9.577	9.594	9.629	9.661	9.685	9.555	
30	8.867	8.878	8.889	8.891	8.870	8.880	8.867	8.880	8.881	8.883	8.883	8.893	8.876	30	9.706	9.730	9.751	9.781	9.814	9.822	9.817	9.815	9.813	9.805	9.797	9.727	9.782	
31	8.868	8.870	8.877	8.883	8.895	8.879	8.845	8.840	8.848	8.849	8.829	8.842	8.860	Mean	9.541	9.543	9.552	9.556	9.559	9.567	9.570	9.571	9.572	9.572	9.575	9.579	9.584	

December, 1902.

January, 1903.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	
1	ins.	1	ins.																									
2	9.749	9.732	9.721	9.708	9.699	9.693	9.682	9.667	9.659	9.665	9.665	9.669	9.692	2	9.521	9.504	9.490	9.485	9.479	9.468	9.448	9.432	9.428	9.420	9.417	9.415	9.459	
3	9.672	9.678	9.696	9.737	9.753	9.759	9.768	9.775	9.775	9.769	9.760	9.756	9.742	3	9.418	9.407	9.407	9.429	9.452	9.456	9.448	9.439	9.435	9.420	9.410	9.558	9.571	9.479
4	9.636	9.634	9.626	9.603	9.568	9.554	9.502	9.463	9.449	9.427	9.407	9.386	9.521	4	9.578	9.585	9.612	9.626	9.620	9.611	9.582	9.570	9.555	9.542	9.539	9.538	9.581	
5	9.376	9.311	9.367	9.367	9.376	9.363	9.361	9.353	9.335	9.312	9.281	9.273	9.340	5	9.664	9.647	9.641	9.644	9.636	9.622	9.616	9.601	9.593	9.585	9.580	9.571	9.617	
6	9.237	9.197	9.173	9.141	9.106	9.067	9.025	8.996	8.988	8.979	8.967	8.949	9.069	6	9.558	9.557	9.553	9.564	9.564	9.565	9.573	9.580	9.586	9.597	9.600	9.600	9.575	
7	8.951	8.962	8.980	9.080	9.167	9.218	9.261	9.311	9.372	9.415	9.462	9.481	9.222	7	9.602	9.601	9.601	9.600	9.613	9.596	9.584	9.573	9.556	9.554	9.540	9.533	9.579	
8	9.521	9.535	9.599	9.658	9.661	9.636	9.627	9.605	9.583	9.555	9.521	9.483	9.582	8	9.562	9.482	9.472	9.473	9.454	9.430	9.412	9.401	9.389	9.370	9.364	9.351	9.425	
9	9.159	9.143	9.156	9.188	9.182	9.173	9.163	9.165	9.167	9.166	9.169	9.165	9.166	9	9.336	9.327	9.327	9.318	9.315	9.315	9.307	9.307	9.317	9.327	9.332	9.341	9.322	
10	9.463	9.473	9.477	9.506	9.507	9.500	9.496	9.478	9.470	9.448	9.437	9.413	9.472	10	9.331	9.329	9.332	9.351	9.358	9.359	9.366	9.382	9.405	9.399	9.417	9.417	9.371	
11	9.401	9.383	9.468	9.387	9.384	9.371	9.372	9.370	9.367	9.384	9.401	9.429	9.393	11	9.419	9.446	9.456	9.476	9.485	9.489	9.500	9.513	9.526	9.535	9.550	9.561	9.496	

TABLE I. (continued).

PRESSURE IN ENGLISH INCHES, FIRST FIGURE OMITTED.

The Readings are Corrected for Temperature, and Reduced to Mean Sea Level, but are not Corrected for Variation of Gravity.

February, 1)

March, 1903.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.
	ins.		ins.																								
1	9.193	9.211	9.211	9.211	9.219	9.229	9.231	9.228	9.226	9.223	9.235	9.243	9.223	1	9.706	9.687	9.650	9.596	9.559	9.503	9.445	9.435	9.341	9.292	9.247	9.203	9.472
2	9.216	9.248	9.254	9.264	9.284	9.289	9.299	9.307	9.320	9.334	9.348	9.369	9.297	2	9.154	9.126	9.104	9.101	9.109	9.107	9.105	9.107	9.123	9.121	9.158	9.188	9.125
3	9.373	9.377	9.384	9.401	9.405	9.409	9.401	9.391	9.395	9.417	9.379	9.381	9.393	3	9.206	9.242	9.288	9.290	9.332	9.372	9.344	9.403	9.473	9.529	9.530	9.518	9.379
4	9.382	9.360	9.352	9.350	9.348	9.332	9.306	9.283	9.267	9.249	9.251	9.244	9.310	4	9.518	9.514	9.498	9.504	9.516	9.513	9.503	9.493	9.487	9.476	9.462	9.470	9.496
5	9.240	9.240	9.242	9.236	9.237	9.231	9.225	9.223	9.215	9.213	9.213	9.213	9.227	5	9.476	9.472	9.483	9.483	9.494	9.489	9.487	9.492	9.455	9.437	9.443	9.469	9.473
6	9.216	9.206	9.222	9.222	9.246	9.265	9.272	9.275	9.279	9.293	9.303	9.307	9.259	6	9.469	9.432	9.427	9.420	9.408	9.401	9.401	9.445	9.490	9.502	9.504	9.560	9.458
7	9.307	9.305	9.304	9.306	9.313	9.311	9.292	9.285	9.275	9.267	9.290	9.246	9.289	7	9.518	9.502	9.463	9.415	9.414	9.423	9.425	9.451	9.642	9.648	9.640	9.637	9.618
8	9.228	9.216	9.203	9.184	9.181	9.174	9.168	9.164	9.162	9.156	9.158	9.139	9.178	8	9.640	9.644	9.649	9.647	9.648	9.645	9.637	9.638	9.640	9.617	9.610	9.598	9.634
9	9.111	9.099	9.063	9.047	9.034	9.008	8.985	8.968	8.952	8.946	8.948	8.951	9.009	9	9.572	9.569	9.550	9.552	9.547	9.537	9.521	9.495	9.482	9.477	9.452	9.431	9.516
10	8.958	8.962	8.961	8.996	9.032	9.062	9.100	9.146	9.178	9.195	9.192	9.229	9.086	10	9.402	9.406	9.385	9.382	9.373	9.360	9.343	9.323	9.317	9.316	9.320	9.341	9.356
11	9.216	9.228	9.241	9.273	9.312	9.320	9.362	9.377	9.393	9.426	9.446	9.457	9.341	11	9.357	9.373	9.414	9.428	9.455	9.466	9.466	9.462	9.459	9.479	9.464	9.469	9.441
12	9.450	9.468	9.475	9.469	9.473	9.477	9.463	9.433	9.405	9.400	9.362	9.362	9.436	12	9.468	9.467	9.472	9.454	9.452	9.452	9.446	9.433	9.421	9.410	9.396	9.387	9.438
13	9.330	9.324	9.330	9.330	9.334	9.324	9.312	9.293	9.292	9.291	9.281	9.281	9.313	13	9.345	9.324	9.309	9.293	9.273	9.258	9.245	9.226	9.207	9.195	9.197	9.180	9.255
14	9.266	9.264	9.251	9.261	9.256	9.250	9.244	9.230	9.227	9.220	9.209	9.205	9.240	14	9.170	9.152	9.158	9.149	9.148	9.146	9.141	9.127	9.111	9.088	9.078	9.078	9.128
15	9.197	9.165	9.153	9.137	9.100	9.065	9.034	9.014	8.986	8.974	8.960	8.931	9.060	15	9.071	9.069	9.045	9.043	9.027	9.006	9.000	8.989	8.990	8.998	8.997	9.021	9.021
16	8.910	8.911	8.892	8.889	8.896	8.899	8.901	8.918	8.932	8.942	8.944	8.943	8.915	16	9.027	9.055	9.072	9.112	9.124	9.148	9.187	9.201	9.227	9.258	9.304	9.335	9.171
17	8.939	8.939	8.962	8.992	9.067	9.020	9.026	9.031	9.052	9.070	9.088	9.107	9.019	17	9.383	9.387	9.444	9.476	9.513	9.529	9.528	9.543	9.570	9.588	9.544	9.549	9.510
18	9.234	9.207	9.196	9.178	9.161	9.132	9.116	9.104	9.096	9.107	9.107	9.051	9.141	18	9.635	9.638	9.650	9.678	9.718	9.720	9.714	9.709	9.708	9.701	9.696	9.695	9.689
19	9.234	9.207	9.196	9.178	9.161	9.132	9.116	9.104	9.096	9.107	9.107	9.051	9.141	19	9.692	9.679	9.659	9.658	9.615	9.599	9.576	9.568	9.545	9.538	9.524	9.502	9.595
20	9.053	9.052	9.091	9.087	9.079	9.069	9.061	9.091	9.131	9.146	9.171	9.183	9.101	20	9.503	9.515	9.522	9.529	9.534	9.532	9.526	9.509	9.504	9.493	9.477	9.469	9.509
21	9.210	9.223	9.239	9.239	9.289	9.289	9.271	9.265	9.261	9.247	9.229	9.165	9.243	21	9.458	9.452	9.435	9.437	9.462	9.482	9.518	9.524	9.550	9.568	9.594	9.518	9.497
22	9.161	9.145	9.117	9.095	9.055	9.011	9.000	8.982	8.932	8.922	8.904	8.896	9.018	22	9.182	9.426	9.393	9.343	9.324	9.302	9.279	9.284	9.283	9.289	9.294	9.305	9.331
23	8.887	8.881	8.863	8.845	8.837	8.822	8.803	8.774	8.758	8.763	8.771	8.776	8.815	23	9.306	9.312	9.333	9.366	9.415	9.434	9.462	9.487	9.502	9.525	9.509	9.532	9.432
24	8.791	8.811	8.832	8.852	8.922	8.976	9.018	9.095	9.155	9.221	9.264	9.306	9.020	24	9.557	9.567	9.588	9.612	9.618	9.608	9.672	9.663	9.673	9.677	9.687	9.692	9.642
25	9.340	9.384	9.413	9.438	9.490	9.525	9.580	9.594	9.605	9.610	9.610	9.598	9.516	25	9.715	9.770	9.780	9.782	9.775	9.775	9.762	9.748	9.704	9.687	9.669	9.655	9.735
26	9.584	9.558	9.530	9.498	9.464	9.430	9.421	9.416	9.114	9.394	9.419	9.466	9.467	26	9.623	9.601	9.559	9.555	9.564	9.556	9.540	9.508	9.481	9.473	9.457	9.443	9.540
27	9.466	9.474	9.491	9.497	9.540	9.542	9.534	9.531	9.537	9.542	9.558	9.571	9.524	27	9.426	9.401	9.392	9.376	9.335	9.326	9.244	9.187	9.151	9.097	9.098	9.053	9.051
28	9.591	9.643	9.671	9.645	9.681	9.697	9.705	9.721	9.725	9.739	9.751	9.731	9.692	28	9.051	9.052	9.075	9.121	9.129	9.131	9.146	9.118	9.111	9.119	9.106	9.112	9.106
29	9.466	9.474	9.491	9.497	9.540	9.542	9.534	9.531	9.537	9.542	9.558	9.571	9.524	29	9.107	9.151	9.193	9.206	9.259	9.291	9.298	9.298	9.304	9.325	9.313	9.356	9.260
30	9.466	9.474	9.491	9.497	9.540	9.542	9.534	9.531	9.537	9.542	9.558	9.571	9.524	30	9.358	9.396	9.391	9.430	9.456	9.499	9.504	9.511	9.510	9.517	9.487	9.488	9.463
31	9.466	9.474	9.491	9.497	9.540	9.542	9.534	9.531	9.537	9.542	9.558	9.571	9.524	31	9.474	9.445	9.411	9.433	9.428	9.420	9.417	9.406	9.402	9.450	9.447	9.451	9.435
Mean	9.215	9.217	9.221	9.221	9.231	9.231	9.229	9.230	9.231	9.235	9.237	9.236	9.228	Mean	9.416	9.416	9.419	9.421	9.427	9.427	9.423	9.419	9.415	9.416	9.411	9.412	9.418

April, 1903.

May, 1903.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.
	ins.		ins.																								
1	9.474	9.483	9.516	9.519	9.514	9.504	9.492	9.470	9.452	9.439	9.418	9.416	9.475	1	9.344	9.331	9.282	9.257	9.271	9.243	9.227	9.210	9.180	9.196	9.184	9.173	9.242
2	9.410	9.391	9.368	9.364	9.358	9.362	9.377	9.376	9.386	9.393	9.398	9.392	9.382	2	9.173	9.171	9.155	9.150	9.174	9.182	9.187	9.170	9.146	9.163	9.154	9.165	9.165
3	9.396	9.404	9.408	9.399	9.434	9.435	9.430	9.443	9.456	9.473	9.493	9.505	9.459	3	9.135	9.109	9.100	9.093	9.079	9.085	9.088	9.069	9.069	9.073	9.071	9.063	9.086
4	9.522	9.536	9.572	9.591	9.624	9.662	9.680	9.700	9.733	9.763	9.792	9.752	9.650	4	9.047	9.028	9.027	9.020	9.007	9.004	9.003	9.009	9.009	9.017	9.038	9.042	9.021
5	9.731	9.719	9.701	9.674	9.677	9.663	9.635	9.601	9.578	9.560	9.556	9.515	9.634	5	9.069	9.089	9.139	9.158	9.180	9.189	9.194	9.206	9.223	9.231	9.241	9.252	9.182
6	9.472	9.428	9.406	9.384	9.373	9.349	9.322	9.283	9.252	9.237	9.215	9.209	9.328	6	9.255	9.271	9.291	9.300	9.311	9.311	9.304	9.301	9.298	9.302	9.300	9.302	9.296
7	9.185	9.175	9.169	9.179	9.177	9.194	9.228	9.275	9.325	9.376	9.427	9.467	9.265	7	9.293	9.291	9.276	9.258	9.253	9.242	9.230	9.203	9.200	9.203	9.207	9.209	9.269
8	9.476	9.469	9.461	9.440	9.423	9.421	9.444	9.458	9.486	9.506	9.556	9.586	9.480	8	9.297	9.311	9.302	9.301	9.307	9.292	9.284	9.289	9.291	9.303	9.306	9.309	9.299
9	9.620	9.651	9.661	9.719																							

TABLE I. (continued).

PRESSURE IN ENGLISH INCHES, FIRST FIGURE OMITTED.

The Readings are Corrected for Temperature, and Reduced to Mean Sea Level, but are not Corrected for Variation of Gravity.

June, 1903.

July, 1903.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.
	ins.		ins.																								
1	9.325	9.372	9.425	9.516	9.513	9.558	9.583	9.615	9.641	9.661	9.673	9.686	9.547	1	9.279	9.287	9.296	9.319	9.343	9.355	9.348	9.352	9.355	9.374	9.396	9.390	9.311
2	9.709	9.729	9.775	9.792	9.824	9.847	9.864	9.848	9.913	9.931	9.951	9.966	9.849	2	9.394	9.390	9.386	9.375	9.385	9.372	9.368	9.363	9.369	9.388	9.386	9.396	9.381
3	9.961	9.980	9.993	0.020	0.026	0.032	0.037	0.021	0.090	0.042	0.076	0.078	0.072	3	9.407	9.405	9.385	9.368	9.363	9.343	9.353	9.355	9.354	9.349	9.325	9.286	9.359
4	9.708	9.612	9.501	9.406	9.372	9.356	9.326	9.350	9.377	9.381	9.394	9.423	9.434	4	9.271	9.273	9.229	9.202	9.203	9.195	9.165	9.142	9.140	9.134	9.122	9.094	9.180
5	9.426	9.413	9.419	9.438	9.452	9.476	9.490	9.472	9.456	9.435	9.415	9.393	9.440	5	9.092	9.054	9.054	9.044	9.028	9.006	8.993	8.978	8.968	8.942	8.918	8.896	8.996
6	9.366	9.333	9.313	9.281	9.271	9.259	9.242	9.228	9.203	9.179	9.164	9.137	9.248	6	8.804	8.844	8.814	8.793	8.789	8.755	8.729	8.708	8.701	8.699	8.699	8.699	8.700
7	9.125	9.107	9.091	9.054	9.049	9.040	9.033	9.121	9.133	9.137	9.146	9.166	9.100	7	8.708	8.712	8.716	8.716	8.738	8.752	8.761	8.780	8.790	8.828	8.838	8.838	8.765
8	9.167	9.171	9.171	9.188	9.138	9.090	9.085	9.073	9.108	9.116	9.160	9.159	9.144	8	8.877	8.917	8.944	9.003	9.024	0.053	0.040	9.082	9.076	9.088	9.102	9.124	9.029
9	9.328	9.370	9.409	9.434	9.476	9.494	9.443	9.401	9.368	9.317	9.237	9.258	9.395	9	9.141	9.148	9.160	9.198	9.229	9.235	9.244	9.243	9.247	9.246	9.242	9.232	9.219
10	9.092	9.045	9.042	9.142	9.239	9.304	9.392	9.422	9.420	9.453	9.459	9.445	9.288	10	9.226	9.217	9.211	9.210	9.217	9.220	9.211	9.218	9.216	9.230	9.235	9.237	9.221
11	9.428	9.382	9.355	9.390	9.434	9.486	9.562	9.600	9.611	9.613	9.620	9.713	9.516	11	9.234	9.215	9.185	9.138	9.136	0.083	9.084	9.025	9.003	8.988	8.970	8.968	9.084
12	9.752	9.748	9.760	9.795	9.825	9.836	9.838	9.838	9.837	9.835	9.823	9.793	9.807	12	8.954	8.993	8.861	8.815	8.803	8.764	8.729	8.701	8.672	8.643	8.624	8.608	8.756
13	9.760	9.707	9.662	9.631	9.613	9.610	9.618	9.636	9.651	9.659	9.651	9.655	9.654	13	8.597	8.603	8.607	8.617	8.631	8.631	8.623	8.621	8.672	8.651	8.679	8.696	8.636
14	9.661	9.659	9.663	9.685	9.717	9.719	9.814	9.842	9.897	9.932	9.982	9.002	9.654	14	8.720	8.780	8.792	8.788	8.798	8.800	8.792	8.782	8.763	8.741	8.727	8.715	8.767
15	0.602	0.006	0.003	9.988	9.071	9.963	9.934	9.909	9.887	9.877	9.851	9.868	9.938	15	8.705	8.701	8.691	8.693	8.700	8.698	8.703	8.699	8.682	8.671	8.648	8.622	8.684
16	9.868	9.854	9.873	9.881	9.955	9.967	9.983	9.989	9.999	0.007	0.007	0.006	9.949	16	8.578	8.510	8.455	8.433	8.421	8.419	8.443	8.506	8.590	8.654	8.749	8.823	8.542
17	0.002	9.994	9.972	9.951	9.946	9.935	9.911	9.906	9.901	9.897	9.884	9.886	9.932	17	8.843	8.867	8.892	8.886	8.888	8.883	8.879	8.883	8.950	9.000	9.039	9.059	8.928
18	9.885	9.877	9.871	9.870	9.870	9.873	9.893	9.885	9.901	9.917	9.958	9.956	9.896	18	9.069	9.102	9.151	9.203	9.296	9.370	9.424	9.490	9.501	9.500	9.511	9.459	9.337
19	9.932	9.967	9.973	9.981	9.989	9.993	9.990	9.986	9.982	9.979	9.979	9.962	9.916	19	9.403	9.395	9.354	9.318	9.297	9.305	9.294	9.291	9.267	9.266	9.300	9.307	9.342
20	9.946	9.931	9.915	9.899	9.883	9.875	9.859	9.826	9.800	9.784	9.744	9.727	9.849	20	9.494	9.564	9.556	9.542	9.527	9.500	9.488	9.452	9.438	9.429	9.402	9.374	9.481
21	9.681	9.649	9.619	9.578	9.578	9.586	9.556	9.554	9.550	9.548	9.518	9.486	9.575	21	9.350	9.337	9.331	9.311	9.302	9.292	9.282	9.267	9.267	9.263	9.262	9.240	9.414
22	9.485	9.483	9.447	9.445	9.402	9.381	9.336	9.312	9.287	9.247	9.238	9.210	9.354	22	9.207	9.257	9.233	9.244	9.221	9.201	9.153	9.112	9.076	9.025	8.975	8.955	9.191
23	9.189	9.168	9.148	9.122	9.116	9.110	9.108	9.128	9.163	9.192	9.195	9.245	9.157	23	8.961	8.959	8.944	8.950	8.963	8.936	8.908	9.008	9.003	9.010	9.049	9.051	8.979
24	9.288	9.308	9.297	9.325	9.311	9.310	9.308	9.291	9.282	9.282	9.310	9.304	9.296	24	9.046	9.023	9.034	9.022	9.018	9.056	9.051	9.053	9.054	9.023	8.999	8.976	9.030
25	9.308	9.314	9.313	9.294	9.264	9.272	9.265	9.251	9.253	9.206	9.195	9.167	9.259	25	8.934	8.839	8.763	8.734	8.700	8.638	8.639	8.664	8.675	8.714	8.725	8.751	8.731
26	9.162	9.119	9.115	9.089	9.070	9.051	9.028	9.021	8.985	8.979	8.971	8.963	9.046	26	8.793	8.816	8.839	8.933	8.958	8.994	9.037	9.085	9.118	9.160	9.240	9.014	9.154
27	9.953	9.953	9.957	9.959	9.971	9.976	9.993	9.990	9.985	9.993	9.999	9.993	9.979	27	9.279	9.301	9.331	9.374	9.422	9.442	9.475	9.508	9.548	9.573	9.575	9.620	9.544
28	9.011	9.032	9.027	9.043	9.046	9.037	9.033	9.017	9.987	9.986	9.907	9.955	9.023	28	9.665	9.695	9.702	9.740	9.736	9.735	9.732	9.729	9.685	9.665	9.633	9.593	9.698
29	9.063	9.062	9.089	9.116	9.119	9.125	9.106	9.205	9.205	9.211	9.196	9.199	9.149	29	9.538	9.487	9.434	9.352	9.300	9.230	9.172	9.118	9.069	9.040	9.017	8.980	9.283
30	9.185	9.208	9.199	9.193	9.212	9.215	9.217	9.215	9.216	9.240	9.248	9.265	9.217	30	8.949	8.958	8.936	8.922	8.918	8.910	8.916	8.923	8.955	8.995	9.051	9.121	8.963
31	9.209	9.282	9.381	9.534	9.660	9.729	9.820	9.913	9.997	0.033	0.061	0.057	9.723	31	9.209	9.282	9.381	9.534	9.660	9.729	9.820	9.913	9.997	0.033	0.061	0.057	9.723
Mean	9.492	9.485	9.480	9.484	9.480	9.492	9.498	9.501	9.499	9.499	9.495	9.496	9.492	Mean	9.093	9.091	9.086	9.090	9.097	9.094	9.092	9.098	9.104	9.109	9.113	9.113	9.099

August, 1903.

September, 1903.

Day.	2.	4.	6.	8.	10.	Noon.	11.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.
	ins.		ins.																								
1	0.027	9.983	9.950	9.898	9.848	9.765	9.642	9.515	9.354	9.295	9.254	9.109	9.644	1	9.586	9.526	9.534	9.514	9.494	9.460	9.433	9.403	9.399	9.390	9.368	9.288	9.442
2	9.141	9.108	9.113	9.072	9.051	9.001	8.966	8.909	8.842	8.794	8.688	8.643	8.944	2	9.275	9.214	9.209	9.193	9.177	9.169	9.145	9.139	9.131	9.127	9.111	9.089	9.165
3	8.607	8.569	8.532	8.584	8.614	8.633	8.691	8.738	8.784	8.810	8.831	8.877	8.659	3	9.077	9.073	9.076	9.086	9.110	9.127	9.149	9.176	9.206	9.242	9.252	9.255	9.150
4	8.917	8.947	8.973	8.991	8.991	8.996	8.995	8.999	8.991	8.989	8.959	8.958	8.976	4	9.239	9.271	9.178	9.178	9.112	9.065	9.023	8.959	8.927	8.875	8.899	8.777	9.000
5	8.922	8.888	8.871	8.842	8.816	8.776	8.758	8.740	8.720	8.713	8.702	8.789	9.046	5	8.743	8.724	8.706	8.688	8.696	8.696	8.684	8.723	8.751	8.789	8.812	8.839	8.738
6	8.699	8.704	8.695	8.698	8.701	8.703	8.703	8.705	8.721	8.746	8.772	8.789	8.720	6	8.859	8.865	8.898	8.888	8.881	8.883	8.854	8.855	8.839	8.802	8.798	8.815	8.853
7	8.784	8.809	8.854	8.899	8.939	8.947	8.980	8.960	8.964	8.960	8.946	8.957	8.917	7	8.807	8.806	8.820	8.885	8.928	8.988	9.055	9.130	9.142	9.148	9.142	9.141	8.999
8	8.706	8.727	8.739	8.721	8.685	8.711	8.691	8.652	8.627	8.578	8.548	8.456	8.653	8	9.130	9.136	9.157	9.195	9.201	9.217	9.246	9.273	9.290	9.313	9.326	9.372	9.238
9	8.415	8.368	8.314	8.301																							

TABLE I. (continued).

PRESSURE IN ENGLISH INCHES, FIRST FIGURE OMITTED.

The Readings are Corrected for Temperature, and Reduced to Mean Sea Level, but are not Corrected for Variation of Gravity.

October, 1903.

November, 1903.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	
1	ins.	1	ins.																									
2	9.129	9.126	9.130	9.133	9.139	9.121	9.097	9.093	9.079	9.065	9.051	9.015	9.098	2	9.026	9.026	9.018	9.023	9.021	9.015	9.013	9.006	9.006	8.989	8.967	8.951	9.005	
3	9.008	8.911	8.912	8.931	8.949	8.943	8.948	8.945	8.945	8.948	8.960	8.974	8.940	3	8.937	8.930	8.921	8.926	8.929	8.920	8.914	8.899	8.876	8.872	8.847	8.840	8.901	
4	8.983	8.987	8.990	8.990	9.002	9.016	9.023	9.017	9.022	9.012	9.017	9.015	9.006	4	8.817	8.801	8.783	8.758	8.727	8.708	8.680	8.671	8.653	8.639	8.610	8.585	8.703	
5	9.008	9.001	8.996	8.985	8.977	8.974	8.972	8.971	8.967	8.960	8.950	8.969	8.978	5	8.583	8.567	8.569	8.580	8.566	8.558	8.576	8.565	8.624	8.649	8.664	8.655	8.599	
6	8.990	8.969	8.963	8.997	9.005	8.999	8.997	9.006	9.005	9.014	9.016	9.022	9.007	6	8.690	8.690	8.714	8.739	8.748	8.758	8.753	8.746	8.737	8.723	8.688	8.685	8.720	
7	9.045	9.034	9.063	9.062	9.068	9.111	9.102	9.100	9.087	9.081	9.100	9.109	9.080	7	8.673	8.657	8.664	8.689	8.700	8.707	8.717	8.714	8.701	8.687	8.678	8.677	8.689	
8	9.125	9.150	9.175	9.176	9.208	9.217	9.225	9.227	9.230	9.235	9.248	9.255	9.206	8	8.677	8.686	8.695	8.692	8.688	8.687	8.680	8.671	8.668	8.651	8.650	8.660	8.675	
9	9.251	9.230	9.217	9.211	9.199	9.178	9.155	9.143	9.139	9.114	9.080	9.060	9.165	9	8.664	8.669	8.673	8.693	8.704	8.678	8.685	8.678	8.671	8.671	8.661	8.655	8.675	
10	9.038	9.025	9.012	9.012	9.014	9.018	9.012	9.013	9.018	9.014	9.008	9.088	9.014	10	8.639	8.638	8.612	8.603	8.603	8.594	8.594	8.583	8.577	8.575	8.568	8.576	8.594	
11	8.955	8.935	8.940	8.940	8.956	8.998	9.022	9.051	9.068	9.081	9.080	9.089	9.010	11	8.582	8.578	8.601	8.624	8.631	8.711	8.729	8.729	8.773	8.784	8.784	8.809	8.821	8.713
12	9.078	9.064	9.056	9.047	9.024	8.997	8.974	8.954	8.920	8.902	8.902	8.913	8.986	12	8.818	8.810	8.807	8.812	8.811	8.855	8.872	8.843	8.823	8.853	8.844	8.857	8.836	
13	8.911	8.948	8.992	9.034	9.070	9.096	9.113	9.135	9.156	9.164	9.180	9.200	9.083	13	8.870	8.858	8.881	8.882	8.876	8.876	8.895	8.893	8.899	8.922	8.926	8.941	8.893	
14	9.195	9.168	9.221	9.234	9.240	9.242	9.313	9.334	9.328	9.323	9.315	9.318	9.269	14	8.946	8.961	9.061	9.066	9.075	9.072	9.062	9.058	9.060	9.066	9.064	9.072	9.064	
15	9.296	9.283	9.266	9.235	9.225	9.197	9.186	9.163	9.141	9.124	9.128	9.127	9.197	15	8.990	8.997	9.020	9.019	9.012	9.003	9.085	9.059	9.052	9.044	9.039	9.043	8.980	
16	9.127	9.120	9.118	9.127	9.127	9.122	9.108	9.092	9.064	9.066	9.039	9.027	9.095	16	8.962	8.966	8.980	9.009	9.029	9.041	9.061	9.069	9.084	9.092	9.110	9.124	9.044	
17	9.004	8.979	8.967	8.949	8.934	8.923	8.919	8.911	8.905	8.899	8.875	8.875	8.928	17	9.132	9.156	9.179	9.188	9.214	9.228	9.234	9.241	9.248	9.250	9.246	9.232	9.212	
18	8.874	8.873	8.879	8.888	8.893	8.894	8.912	8.919	8.922	8.928	8.932	8.944	8.905	18	9.212	9.208	9.203	9.199	9.201	9.196	9.192	9.188	9.192	9.188	9.184	9.184	9.196	
19	8.957	8.983	8.998	8.998	9.037	9.062	9.084	9.102	9.126	9.142	9.164	9.191	9.018	19	9.173	9.173	9.172	9.167	9.161	9.159	9.156	9.161	9.164	9.171	9.169	9.168	9.166	
20	9.200	9.222	9.232	9.236	9.292	9.326	9.330	9.320	9.311	9.313	9.315	9.314	9.288	20	9.161	9.159	9.157	9.150	9.145	9.120	9.098	9.070	9.054	9.044	9.023	9.010	9.099	
21	9.313	9.309	9.311	9.307	9.286	9.266	9.227	9.211	9.155	9.128	9.107	9.060	9.236	21	9.003	9.000	9.003	9.006	9.011	9.004	9.096	9.090	9.096	9.094	9.096	9.095	9.099	
22	9.034	9.032	9.027	9.037	9.027	9.025	8.988	8.971	8.966	8.951	8.921	8.899	8.990	22	8.997	8.996	8.999	9.013	9.039	9.052	9.075	9.090	9.122	9.151	9.173	9.200	9.076	
23	8.903	8.903	8.905	8.915	8.907	8.881	8.862	8.813	8.769	8.726	8.668	8.625	8.823	23	9.230	9.200	9.200	9.200	9.322	9.332	9.337	9.345	9.331	9.324	9.297	9.257	9.300	
24	8.567	8.559	8.557	8.559	8.569	8.581	8.599	8.590	8.592	8.601	8.591	8.580	8.579	24	9.212	9.178	9.143	9.103	9.047	8.979	8.932	8.895	8.857	8.814	8.781	8.741	8.974	
25	8.571	8.565	8.552	8.556	8.541	8.522	8.503	8.501	8.497	8.483	8.473	8.459	8.518	25	8.712	8.683	8.669	8.655	8.628	8.593	8.580	8.564	8.548	8.538	8.528	8.519	8.601	
26	8.442	8.414	8.401	8.381	8.371	8.347	8.364	8.360	8.338	8.345	8.355	8.358	8.373	26	8.516	8.513	8.510	8.512	8.508	8.538	8.528	8.520	8.526	8.547	8.574	8.569	8.509	
27	8.333	8.322	8.325	8.315	8.363	8.380	8.397	8.386	8.388	8.393	8.431	8.433	8.375	27	8.573	8.600	8.611	8.636	8.668	8.683	8.689	8.691	8.692	8.694	8.694	8.688	8.660	
28	8.446	8.477	8.510	8.528	8.552	8.582	8.577	8.561	8.517	8.511	8.511	8.492	8.522	28	8.686	8.679	8.677	8.675	8.654	8.639	8.628	8.614	8.620	8.621	8.623	8.636	8.646	
29	8.493	8.453	8.456	8.460	8.460	8.445	8.450	8.448	8.446	8.446	8.453	8.453	8.455	29	8.663	8.666	8.723	8.750	8.770	8.788	8.802	8.820	8.840	8.846	8.865	8.879	8.787	
30	8.459	8.468	8.489	8.549	8.615	8.651	8.693	8.699	8.722	8.732	8.746	8.761	8.632	30	8.903	8.926	8.940	8.964	8.994	9.008	9.030	9.038	9.073	9.086	9.102	9.112	9.015	
31	8.819	8.821	8.854	8.852	8.853	8.882	8.932	8.943	8.947	8.970	8.997	9.001	8.906	Mean	8.867	8.869	8.873	8.879	8.884	8.883	8.884	8.880	8.878	8.879	8.874	8.873	8.877	
Mean	8.918	8.914	8.918	8.927	8.932	8.934	8.937	8.932	8.925	8.922	8.919	8.917	8.925	Mean	8.867	8.869	8.873	8.879	8.884	8.883	8.884	8.880	8.878	8.879	8.874	8.873	8.877	

December, 1903.

January, 1904.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.
1	ins.	1	ins.																								
2	9.208	9.100	9.110	9.125	9.143	9.182	9.208	9.226	9.234	9.237	9.281	9.304	9.189	2	9.917	9.906	9.894	9.887	9.878	9.865	9.862	9.850	9.844	9.831	9.821	9.810	9.804
3	9.321	9.330	9.371	9.404	9.452	9.467	9.479	9.477	9.480	9.470	9.451	9.433	9.429	3	8.930	8.924	8.924	8.928	8.966	8.983	9.001	9.007	9.001	9.034	9.060	9.076	8.985
4	9.356	9.355	9.354	9.347	9.355	9.362	9.364	9.348	9.334	9.244	9.244	9.262	9.327	4	9.077	9.073	9.084	9.095	9.099	9.090	9.082	9.064	9.070	9.072	9.080	9.082	9.081
5	9.270	9.283	9.332	9.371	9.393	9.412	9.396	9.412	9.433	9.453	9.478	9.484	9.393	5	9.085	9.092	9.100	9.126	9.142	9.152	9.168	9.168	9.183	9.190	9.202	9.207	9.151
6	9.490	9.506	9.517	9.533	9.540	9.550	9.541	9.531	9.534	9.532	9.525	9.523	9.527	6	9.297	9.296	9.296	9.217	9.222	9.217	9.210	9.210	9.206	9.202	9.204	9.206	9.209
7	9.688	9.695	9.697	9.698	9.592	9.585	9.580	9.587	9.572	9.569	9.572	9.572	9.584	7	9.208	9.211	9.204	9.204	9.207	9.219	9.223	9.219	9.209	9.202	9.216	9.203	9.211
8	9.667	9.557	9.552	9.542	9.528	9.521	9.514	9.493	9.476	9.463	9.452	9.433	9.508	8	9.194	9.190	9.186	9.172	9.169	9.166	9.160	9.152	9.133	9.119	9.127	9.115	9.157
9	9.430	9.411	9.407	9.399	9.383	9.362	9.333	9.328	9.313	9.305	9.287	9.275	9.353	9	9.102	9.089	9.076	9.058	9.035	9.035	9.081	9.069	9.069	9.075	9.084	9.088	9.072
10	9.268	9.256	9.244	9.238	9.233	9.225	9.217	9.214	9.217	9.218	9.225	9.227	9.232	10	9.002	9.096	9.094	9.102	9.112	9.125	9.124	9.127	9.127	9.131	9.133	9.130	9.116
11	9.220	9.236																									

TABLE II.

TEMPERATURE IN DEGREES FAHRENHEIT.

DRY BULB.

WET BULB.

February, 1902.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.
1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	6	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	—	—	7	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	8	—	—	—	—	—	—	—	—	—	—	—	—
9	10.8	13.2	14.0	14.5	14.5	14.0	12.5	12.0	10.8	9.8	11.5	10.8	12.4	9	9.5	12.2	12.8	13.0	13.2	12.8	11.5	10.8	10.0	9.0	10.5	9.9
10	11.0	11.2	13.1	13.8	15.0	16.0	17.0	18.5	17.5	17.2	18.5	18.5	15.6	10	10.5	10.5	12.1	13.0	14.2	15.2	16.5	18.0	17.5	17.0	18.2	18.2
11	20.0	19.0	19.8	20.5	20.8	21.5	24.0	19.8	21.1	24.8	24.5	23.8	21.6	11	19.5	18.6	19.5	20.0	20.2	21.0	23.8	18.4	19.2	23.0	23.0	22.0
12	21.0	21.5	24.5	24.0	16.0	15.6	17.6	19.5	20.9	22.2	17.0	16.5	19.7	12	19.8	19.8	23.0	22.8	15.2	15.5	—	16.8	—	20.8	16.5	15.8
13	19.0	20.0	21.0	22.0	23.8	24.4	22.2	23.0	18.6	16.8	14.6	11.5	19.7	13	18.2	19.2	20.2	21.0	23.0	23.5	22.0	22.2	17.2	16.5	14.0	11.5
14	10.5	11.2	11.2	12.8	15.0	17.0	17.4	17.2	17.2	17.0	14.8	14.0	14.6	14	10.4	11.0	11.0	12.5	15.0	15.2	15.8	15.8	15.8	15.8	13.6	13.2
15	14.5	13.0	12.2	12.0	13.5	11.8	11.5	11.4	11.0	12.8	14.1	13.9	12.6	15	13.5	12.3	12.0	11.6	12.3	11.2	10.8	10.5	10.0	11.5	12.5	12.5
16	14.6	15.2	14.3	16.6	19.0	17.0	17.0	23.0	17.2	13.5	13.0	16.5	16.6	16	13.2	14.0	13.2	14.5	—	—	16.1	16.0	21.0	16.8	13.0	12.5
17	13.5	14.2	15.8	15.0	20.0	19.8	19.9	20.5	11.5	10.5	10.2	12.8	15.3	17	13.0	14.0	15.5	14.8	19.0	17.5	—	18.2	9.3	8.5	8.6	11.2
18	12.8	12.8	3.1	2.8	9.2	17.0	18.4	19.5	23.2	25.0	24.8	23.0	16.0	18	—	—	2.8	2.0	8.1	15.5	16.6	18.0	21.4	23.0	23.0	21.5
19	17.8	16.5	20.4	15.2	14.8	14.5	14.0	15.8	15.2	13.5	8.8	10.0	14.7	19	17.0	15.0	19.2	14.4	—	13.2	—	14.0	13.0	13.0	8.4	9.2
20	13.0	14.2	15.7	17.2	19.4	19.9	22.2	20.0	22.5	19.5	14.5	14.6	17.7	20	11.8	13.6	—	15.0	17.0	17.2	20.5	17.2	19.2	17.2	13.2	12.6
21	15.5	14.2	13.5	13.0	10.9	11.4	15.0	16.0	17.2	17.8	15.2	13.0	14.4	21	14.8	13.6	12.0	11.5	10.0	9.0	12.5	13.8	15.1	16.0	13.0	11.5
22	12.2	12.2	12.2	0.8	2.8	5.2	6.1	7.0	6.8	7.0	9.5	6.2	7.3	22	12.0	—	11.6	0.6	2.2	5.0	5.2	5.8	5.9	6.2	8.4	6.0
23	3.5	2.2	4.6	8.2	9.8	11.6	12.2	11.5	10.8	9.6	6.2	4.2	7.9	23	3.2	2.0	3.0	7.8	8.6	10.2	10.1	9.8	9.2	8.2	5.5	3.9
24	3.0	5.0	5.5	6.5	7.4	8.2	9.0	10.0	10.0	11.0	11.0	13.2	8.3	24	2.2	4.2	5.0	6.1	7.2	8.2	8.6	9.8	9.6	10.2	10.1	12.3
25	14.0	15.5	15.8	16.2	17.5	16.0	19.5	21.0	20.0	19.0	18.2	19.0	17.6	25	13.0	14.0	14.0	15.8	15.0	14.0	16.2	18.4	18.2	17.0	16.5	17.0
26	19.0	19.0	18.8	17.5	15.2	14.8	17.6	22.0	21.5	20.5	21.2	21.2	19.0	26	—	—	17.8	16.5	15.0	14.0	16.2	15.4	19.2	18.2	19.0	18.6
27	21.2	22.2	23.0	24.0	26.0	25.2	26.5	26.8	27.8	26.2	22.8	21.0	24.4	27	—	21.0	21.6	22.5	24.2	24.8	25.2	25.8	25.8	24.5	20.8	20.0
28	22.0	22.2	22.2	20.0	22.6	27.0	26.5	26.1	22.0	22.0	25.0	23.0	23.4	28	20.5	—	20.5	—	21.0	25.0	24.3	24.2	21.0	19.6	21.8	20.0
Mean.	14.4	14.7	15.0	14.6	15.7	16.4	17.3	17.7	17.4	17.0	15.8	15.2	15.9	Mean.	—	—	—	—	—	—	—	—	—	—	—	—

DRY BULB.

WET BULB.

March, 1902.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.
1	21.0	21.8	23.0	24.0	22.8	22.0	21.2	21.0	21.8	23.0	22.0	22.1	22.1	1	18.6	19.4	20.2	21.8	21.2	20.6	20.0	20.2	20.2	21.8	20.8	21.2
2	20.0	15.8	14.2	13.0	12.5	15.5	15.5	12.5	11.0	15.2	12.5	12.6	14.2	2	19.2	15.0	13.5	12.8	—	13.6	14.0	—	—	14.0	—	12.0
3	11.2	11.0	10.6	10.0	11.8	12.8	12.4	13.0	14.0	14.0	14.2	14.8	12.5	3	10.5	10.2	9.8	9.4	10.0	11.1	11.6	11.2	—	12.2	13.0	13.2
4	19.0	16.5	17.0	18.5	16.5	15.5	15.8	14.5	13.0	13.4	12.4	12.0	15.3	4	—	—	15.0	17.0	15.0	14.5	14.8	14.0	12.0	12.8	11.9	11.8
5	12.5	10.6	11.6	15.8	16.0	16.5	16.0	16.0	15.0	13.6	14.0	14.4	—	5	12.0	10.0	11.0	15.0	15.0	15.5	14.0	—	—	13.0	11.5	12.0
6	13.5	13.3	13.6	15.5	17.9	16.8	19.2	20.5	18.5	20.0	21.5	21.2	17.6	6	—	12.0	12.0	13.8	15.8	15.2	17.5	18.8	17.0	18.8	20.0	20.2
7	21.5	19.4	20.5	21.8	22.0	22.8	21.5	19.8	18.8	11.9	12.3	13.1	18.8	7	—	18.9	19.5	20.8	21.5	22.0	21.0	19.0	15.0	11.9	12.2	13.0
8	17.8	16.6	14.8	16.6	19.5	19.5	22.5	18.5	17.5	16.8	21.0	18.0	18.3	8	16.8	16.5	14.4	16.0	—	16.5	19.5	16.5	15.8	15.5	19.9	17.1
9	16.8	17.0	20.8	22.0	27.0	27.5	20.8	21.0	21.0	20.4	17.9	14.0	20.5	9	16.0	16.0	19.3	20.5	24.8	25.0	19.7	19.8	20.0	19.9	17.2	14.0
10	10.0	8.4	9.5	12.0	13.0	17.8	15.5	15.0	15.0	15.1	19.0	17.1	14.0	10	10.0	8.1	9.0	11.5	12.5	16.5	14.8	14.5	14.5	14.9	—	16.2
11	18.0	17.0	14.0	10.5	8.5	3.5	3.5	3.0	3.5	4.0	6.0	5.0	8.0	11	16.5	16.0	13.0	10.0	8.3	3.5	3.5	3.0	3.5	—	5.0	5.0
12	9.0	3.5	4.0	5.0	4.6	4.6	4.5	5.5	4.0	2.2	1.2	1.0	4.1	12	9.0	3.5	3.6	5.0	4.6	4.6	4.5	5.5	4.2	2.2	1.0	0.8
13	0.5	0.2	0.0	3.5	4.0	5.0	4.5	4.5	3.5	3.5	0.5	0.2	2.3	13	0.0	0.0	1.4	3.5	4.5	5.2	4.8	4.5	3.5	4.0	1.0	0.2
14	2.0	0.4	1.0	2.0	2.5	2.6	1.0	1.2	2.5	1.2	3.0	3.8	0.4	14	3.0	1.0	1.5	1.0	1.5	1.5	0.5	1.6	—	1.6	3.2	4.2
15	4.5	5.0	5.0	3.0	1.0	1.0	1.5	0.5	0.5	1.8	4.0	1.8	1.2	15	5.0	6.0	6.5	5.5	3.0	1.0	1.5	1.8	1.2	1.0	—	1.2
16	5.6	1.0	1.0	1.5	6.0	3.5	6.2	8.8	5.5	5.8	7.0	9.5	4.0	16	5.6	1.3	0.0	1.0	—	3.0	5.8	7.6	5.0	5.0	—	—
17	11.5	11.0	8.0	10.8	14.5	14.0	14.0	14.5	15.0	16.0	17.8	17.2	13.7	17	11.0	10.5	7.5	10.0	12.8	13.8	13.5	14.0	15.0	15.0	14.8	16.8
18	17.5	17.0	15.4	15.1	17.0	16.0	15.8	16.5	14.8	13.0	11.5	14.0	15.3	18	—	16.0	15.4	15.0	16.3	16.0	14.8	15.4	13.8	12.1	11.0	13.0
19	14.0	14.0	14.3	17.0	18.5	18.0	14.8	21.8	22.0	18.5	20.3	22.8	18.0	19	—	14.5	13.7	16.0	17.5	17.0	14.0	19.8	—	18.0	19.8	22.4
20	20.4	21.2	19.5	21.8	20.5	21.5	20.5	19.8	14.5	14.0	17.0	18.2	19.1	20	20.0	21.2	19.3	21.5	20.0	21.2	20.2	19.5	13.8	13.9	17.0	18.0
21	13.0	13.1	13.0	12.5	13.0	17.5	19.0	16.5	18.0	12.5	10.0	14.2	—	21	13.0	13.1	13.0	—	—	—	—	—	—	17.9	12.2	9.9
22	10.2	3.0	3.5	12.2	11.0	11.2	13.0	12.0	10.0	7.0	5.4	8.0	8.9	22	10.0	3.0	4.0	12.0	11.0	11.0	—	10.5	8.8	6.1	4.4	7.2
23	6.8	6.5	0.8	4.2	3.6	0.0	0.0	4.0	4.5	4.2	3.2	1.0	0.4	23	6.5	5.5										

TABLE II. (continued).

TEMPERATURE IN DEGREES FAHRENHEIT.

DRY BULB.

WET BULB.

April, 1902.

Table with columns for Day, 2, 4, 6, 8, 10, Noon, 14, 16, 18, 20, 22, Midt., Mean. for DRY BULB. and Day, 2, 4, 6, 8, 10, Noon, 14, 16, 18, 20, 22, Midt. for WET BULB. Rows 1-30 and Mean.

DRY BULB.

WET BULB.

May, 1902.

Table with columns for Day, 2, 4, 6, 8, 10, Noon, 14, 16, 18, 20, 22, Midt., Mean. for DRY BULB. and Day, 2, 4, 6, 8, 10, Noon, 14, 16, 18, 20, 22, Midt. for WET BULB. Rows 1-31 and Mean. Includes note: No observations were taken.

Readings in italic type are interpolated values obtained from records of self-registering instruments.

TABLE II. (continued).

TEMPERATURE IN DEGREES FAHRENHEIT.

DRY BULB.

WET BULB.

June, 1902.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	8.	8.	10.	Noon.	14.	18.	18.	20.	22.	Midt.
1	0.0	2.2	2.0	2.9	1.5	2.0	2.8	4.5	5.5	4.5	4.2	3.0	2.9	1	-0.2	-2.5	-2.2	-3.4	-1.5	-2.0	2.8	4.5	5.5	5.0	4.5	3.1
2	1.8	0.0	2.9	2.5	8.5	7.0	14.8	17.5	18.0	18.0	15.0	10.0	9.7	2	-2.0	-0.2	-3.0	-2.5	-8.5	-7.0	-14.8					
3	9.2	11.4	15.5	10.2	5.0	3.8	3.8	2.2	2.0	3.0	3.0	5.2	6.2	3												
4	8.0	9.8	7.0	8.0	9.0	9.2	7.8	10.8	9.0	9.2	10.5	16.5	9.6	4												
5	16.5	15.0	16.6	14.8	11.2	6.0	12.8	11.5	17.2	20.0	16.0	21.5	14.9	5												
6	17.5	14.0	14.5	17.0	14.0	15.5	12.0	25.0	29.5	9.8	9.8	18.0	16.1	6												
7	16.2	19.0	15.0	17.0	25.5	30.0	29.5	26.2	25.2	22.0	16.8	21.0	22.0	7												
8	21.5	17.0	15.0	10.0	21.0	20.2	26.2	21.0	16.6	15.0	15.5	14.8	17.8	8												
9	16.8	20.5	19.5	20.0	26.6	26.2	23.0	20.2	22.0	20.2	24.2	22.0	21.8	9												
10	25.5	24.5	23.0	21.3	26.0	27.0	31.0	29.0	20.2	24.0	26.0	25.0	25.2	10												
11	24.5	26.0	30.5	22.0	28.5	30.8	30.2	24.0	15.8	15.8	17.0	16.0	23.4	11												
12	17.0	18.0	18.2	17.0	19.0	14.0	14.0	17.5	19.2	26.0	25.0	25.0	19.2	12												
13	24.0	28.0	28.0	31.2	32.0	33.0	29.0	28.0	27.5	36.0	29.5	27.8	29.0	13												
14	30.2	31.8	32.5	32.0	31.5	32.0	31.3	29.8	30.0	30.0	36.2	32.2	31.6	14												
15	38.8	34.5	24.8	36.6	37.0	34.0	25.0	20.5	23.5	29.0	35.2	22.9	30.2	15												
16	27.9	22.2	16.0	12.0	8.8	9.8	0.8	9.0	11.0	9.0	2.0	14.5	7.0	16												
17	16.0	14.0	17.5	19.0	18.8	20.0	15.0	13.0	10.2	23.0	7.5	10.8	15.4	17												
18	12.0	13.0	13.0	12.2	13.8	15.5	17.8	18.0	16.0	12.0	10.0	13.0	13.0	18												
19	15.2	18.0	18.5	16.8	17.0	12.8	16.2	18.0	10.8	14.0	14.8	15.5	15.6	19												
20	12.5	17.5	12.5	10.5	7.2	6.8	6.0	14.0	11.0	5.0	8.8	11.7	9.5	20												
21	13.5	16.4	11.5	18.0	20.2	17.5	19.0	15.8	19.0	25.5	21.0	35.0	19.4	21												
22	30.0	23.8	18.5	18.5	18.8	20.0	19.0	20.0	23.6	25.0	31.8	19.0	22.3	22												
23	18.8	22.0	20.0	26.0	26.0	25.8	23.0	20.0	29.2	33.0	30.8	27.8	25.2	23												
24	25.5	29.2	34.5	26.0	28.5	27.0	36.0	24.2	31.8	35.0	21.2	18.0	28.1	24												
25	21.0	20.2	21.3	12.0	15.0	16.0	19.0	21.0	21.8	24.5	23.2	15.0	19.2	25												
26	14.6	17.2	15.1	17.5	12.5	9.8	8.6	10.0	5.0	4.5	3.0	2.8	9.6	26												
27	3.5	9.8	4.0	4.0	8.0	5.0	8.0	8.0	7.0	2.8	1.0	2.0	3.1	27												
28	1.9	3.0	4.4	4.5	6.0	5.2	7.6	9.0	8.5	0.0	2.0	2.0	3.5	28	-1.9	3.0	4.2		6.0	5.0	6.2	8.2	8.2	0.0	2.0	2.0
29	3.0	3.0	4.0	4.0	5.0	9.0	7.5	9.0	8.8	6.0	6.0	7.0	6.0	29	-3.0	-3.0	-4.0	-4.0	-5.0	-9.0	-7.5	-9.0	-8.8	-6.0	-8.0	
30	7.5	7.0	8.0	9.0	5.2	7.0	6.0	9.0	7.0	11.0	14.0	14.0	8.7	30			-7.5	-9.0	-5.2	-7.0	-6.8	-9.8	-7.8	-11.8	-14.0	-14.5
Mean . .	16.1	16.4	15.6	15.5	16.5	16.3	16.2	15.7	15.3	16.0	16.0	16.1	16.0	Mean . .												

No observations were taken.

DRY BULB.

WET BULB.

July, 1902.

Day.	2.	4.	6.	8.	10.	Noon.	14.	18.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	8.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	
1	15.0	13.0	22.0	22.0	8.0	2.2	1.0	5.0	1.0	4.0	5.8	4.5	8.6	1						-3.0	-1.8				-8.0		
2	4.1	8.5	4.0	1.6	1.2	5.0	7.0	16.0	13.2	11.0	8.8	5.1	7.1	2													
3	3.8	4.6	4.9	5.0	6.0	3.8	6.0	6.5	8.0	5.0	11.0	8.0	6.1	3			-4.9	-5.1		-4.0							
4	7.0	9.2	9.0	8.0	14.0	9.0	6.0	11.0	7.0	12.0	7.0	6.0	8.8	4													
5	10.0	6.5	14.0	11.0	12.8	12.6	13.8	18.0	18.0	13.8	13.5	12.3	13.0	5													
6	10.0	10.5	9.0	8.5	12.0	14.2	17.5	15.2	16.0	16.6	17.5	15.5	13.5	6													
7	16.2	13.8	19.5	24.0	19.0	15.6	23.2	13.8	17.2	14.5	11.6	19.0	17.3	7													
8	25.5	20.2	12.5	23.5	23.5	15.0	17.0	35.0	18.0	22.4	20.2	16.2	21.2	8													
9	4.9	3.0	2.0	3.0	2.5	4.0	1.8	3.0	3.0	2.2	3.0	0.5	2.7	9	25.8												
10	3.0	4.0	4.0	8.8	1.0	5.0	2.5	4.0	5.0	7.0	9.3	11.5	3.0	10	2.0	3.0	3.0	-8.8	0.5	-5.0							
11	8.0	1.2	6.0	4.5	4.0	2.2	4.8	4.0	4.8	5.0	3.2	7.5	4.6	11													
12	8.0	8.0	12.0	11.2	9.0	15.0	13.0	18.5	18.8	17.6	15.0	14.6	13.4	12													
13	15.2	14.8	16.2	16.9	14.0	18.2	20.0	17.0	19.0	20.0	26.0	27.0	18.7	13													
14	26.5	27.0	26.0	27.0	26.2	28.0	29.6	26.0	28.0	27.2	24.2	26.0	26.8	14													
15	25.2	23.8	22.2	21.8	20.5	19.5	13.5	14.2	14.2	14.2	17.0	20.5	18.9	15													
16	22.2	20.0	17.8	21.0	24.8	24.2	24.2	23.8	20.0	15.0	10.0	9.9	19.4	16													
17	8.0	6.9	3.8	0.0	1.0	2.2	3.0	6.0	7.5	6.0	7.0	9.0	1.9	17													
18	7.0	8.0	10.0	10.2	11.2	11.2	12.0	12.0	12.0	12.2	11.6	11.8	10.7	18													
19	11.7	12.5	11.8	12.8	14.0	15.6	14.8	13.0	13.0	13.8	12.8	13.2	13.2	19													
20	12.8	13.0	9.5	7.0	5.0	3.0	4.8	2.0	7.0	11.5	10.0	7.5	1.8	20	12.9	13.0	8.8	6.5	4.5	3.0	4.2	2.0	-7.0				
21	8.3	4.5	8.0	11.2	7.0	8.5	7.8	9.0	7.5	9.2	11.0	9.0	8.4	21													
22	7.0	11.5	13.0	11.2	12.8	20.0	13.0	13.2	11.0	10.2	11.8	11.5	12.2	22													
23	10.5	7.5	8.5	10.0	10.0	15.0	12.0	11.2	10																		

TABLE II. (continued).

TEMPERATURE IN DEGREES FAHREHEIT.

DRY BULB.

WET BULB.

August, 1902.

Table with columns for Day, 2, 4, 6, 8, 10, Noon, 14, 16, 18, 20, 22, Mean, and Mean. It contains temperature data for August 1902, with a vertical note 'No observations were taken.' spanning from day 10 to 23.

DRY BULB.

WET BULB.

September, 1902.

Table with columns for Day, 2, 4, 6, 8, 10, Noon, 14, 16, 18, 20, 22, Mean, and Mean. It contains temperature data for September 1902, with a vertical note 'No observations were taken.' spanning from day 4 to 7.

Readings in Bold type are interpolated values obtained from records of self-registering instruments.

TABLE II. (continued).

TEMPERATURE IN DEGREES FAHRENHEIT.

Day Bull.

Wet Bull.

October, 1903.

Table with columns for Day, Bull, and Wet Bull, containing temperature data for October 1903. The table is organized into two main sections: Day Bull and Wet Bull, each with 24 rows of data and a summary row for the month.

Day Bull.

Wet Bull.

November, 1903.

Table with columns for Day, Bull, and Wet Bull, containing temperature data for November 1903. The table is organized into two main sections: Day Bull and Wet Bull, each with 24 rows of data and a summary row for the month.

Readings in bold type are interpolated values obtained from records of self-registering instruments.

TABLE II. (continued).

TEMPERATURE IN DEGREES FAHRENHEIT.

DRY BULB.

WET BULB.

December, 1902.

Table with 24 columns for DRY BULB and 24 columns for WET BULB, containing temperature readings for December 1902. Includes a 'Mean' row at the bottom of each section.

DRY BULB.

WET BULB.

January, 1903.

Table with 24 columns for DRY BULB and 24 columns for WET BULB, containing temperature readings for January 1903. Includes a 'Mean' row at the bottom of each section.

Readings in italic type are interpolated values obtained from records of self-registering instruments.

TABLE II. (continued).

TEMPERATURE IN DEGREES FAHRENHEIT.

DRY BULB.

WET BULB.

February, 1903.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.
1	13.0	17.8	21.0	22.0	23.5	25.0	26.6	28.0	25.0	20.2	22.0	10.0	21.7	1	12.0	16.0	19.8	21.0	22.3	23.0	21.8	25.8	22.4	18.0	20.0	13.5
2	20.0	21.0	19.2	27.2	25.2	27.2	30.2	26.7	27.0	26.2	23.8	22.0	24.6	2	17.0	17.2	17.0	25.0	24.0	25.2	26.0	23.5	22.7	23.1	22.2	20.8
3	24.0	26.0	26.2	26.6	27.0	27.5	27.6	27.6	28.0	29.2	26.0	23.0	20.6	3	21.5	24.0	24.0	24.0	24.8	25.2	25.8	25.2	26.0	24.8	23.0	20.8
4	16.0	14.0	18.0	20.2	24.8	27.5	27.0	27.8	27.5	26.0	22.2	23.0	22.8	4	15.0	12.8	16.8	19.0	22.8	25.5	24.8	25.0	25.2	25.0	21.8	22.0
5	19.8	19.0	18.0	18.0	18.5	20.0	20.0	20.0	20.8	20.0	19.5	21.5	19.6	5	18.0	17.8	16.2	16.0	17.0	17.0	17.6	17.8	18.0	17.0	16.8	19.2
6	17.0	17.5	20.5	22.0	11.8	16.0	15.2	14.7	14.0	14.2	14.0	14.0	15.9	6	15.8	16.0	18.8	20.0	11.0	14.2	13.8	13.2	12.7	12.2	13.5	12.5
7	14.0	12.8	13.0	15.1	16.2	14.5	15.7	15.8	18.0	16.0	13.5	12.0	14.7	7	13.6	12.2	12.8	12.5	14.5	14.1	14.6	14.3	15.8	15.4	12.6	11.2
8	8.5	13.8	14.0	15.0	14.4	13.0	13.2	13.4	13.7	15.0	16.2	16.0	13.9	8	6.2	13.2	12.8	14.0	13.0	11.0	11.0	11.6	11.9	13.0	14.0	13.5
9	12.0	11.0	13.0	16.2	15.5	21.5	22.0	19.6	20.5	19.1	12.0	12.2	16.2	9	11.0	10.5	11.0	15.2	14.0	19.0	20.0	17.4	19.0	17.8	12.0	11.8
10	13.0	12.8	14.0	14.0	15.0	16.0	17.9	15.2	14.3	12.6	15.0	12.0	14.3	10	12.0	12.0	13.0	13.0	14.0	14.8	16.6	13.7	13.0	11.0	12.2	10.8
11	12.5	11.2	13.2	12.8	12.0	13.0	14.5	15.0	15.3	14.8	13.6	13.8	13.5	11	11.2	10.8	14.0	12.0	11.2	11.5	13.0	13.4	13.8	12.6	11.8	12.0
12	4.2	8.5	8.1	9.8	8.8	10.0	10.0	12.8	11.4	10.8	10.6	9.6	9.6	12	4.0	7.8	7.6	8.8	7.0	9.0	11.0	10.0	9.8	9.4	8.8	8.8
13	7.0	6.2	5.8	8.8	8.8	8.0	7.8	7.8	9.0	10.0	9.0	6.0	7.9	13	6.4	6.0	5.2	8.0	8.0	7.5	7.0	6.8	7.8	8.5	8.0	4.8
14	4.2	2.0	4.0	4.0	0.0	0.0	1.0	2.2	2.4	2.2	4.2	5.0	1.3	14	3.5	1.5	4.0	4.0	0.5	0.0	0.8	1.8	2.0	2.0	3.2	3.8
15	1.0	1.0	0.2	4.2	6.0	6.8	5.6	6.2	5.0	4.0	3.0	3.0	3.8	15	0.0	1.0	0.0	2.0	4.8	5.6	4.0	5.0	3.2	2.9	1.5	2.0
16	4.0	3.0	3.0	7.2	6.0	7.0	6.0	4.2	5.0	7.0	5.0	3.5	5.1	16	3.0	2.8	2.2	6.8	5.0	5.2	4.6	3.0	3.6	5.8	3.8	2.0
17	3.0	1.8	2.2	1.8	1.8	2.0	2.5	5.0	6.2	5.5	5.0	4.5	3.4	17	2.8	1.5	2.0	1.5	1.0	1.5	2.0	4.0	4.8	5.0	3.8	3.0
18	2.5	1.5	5.0	5.0	3.5	5.2	7.8	7.0	8.1	5.2	4.8	4.0	4.3	18	2.8	1.5	4.8	4.0	3.0	4.8	6.6	6.0	6.6	5.0	4.2	3.2
19	2.6	4.2	5.0	9.0	11.0	11.5	3.2	0.6	1.0	2.5	4.0	5.0	5.0	19	2.4	3.8	4.2	7.0	9.6	10.2	3.2	0.4	1.0	2.5	3.8	5.0
20	2.0	1.0	4.0	1.0	9.0	9.8	11.3	10.2	8.8	7.5	8.0	7.0	6.6	20	2.0	1.0	4.0	1.0	8.0	8.8	10.0	8.4	7.0	0.2	6.8	6.2
21	6.0	8.0	9.0	10.8	8.6	10.8	14.0	14.2	10.5	10.0	12.0	12.0	10.5	21	5.2	7.2	8.0	9.3	7.3	9.8	12.5	12.6	9.0	8.9	11.0	11.8
22	5.0	4.2	9.2	8.8	11.8	6.0	4.0	3.5	4.2	4.8	2.0	7.0	5.9	22	4.0	3.0	8.0	7.8	10.2	5.5	3.0	2.7	3.0	3.7	1.6	4.9
23	6.5	5.5	8.2	3.8	11.0	14.0	15.3	15.8	10.4	10.1	9.0	2.2	9.3	23	4.8	4.0	6.6	3.0	10.0	12.4	14.0	14.0	9.2	9.2	7.6	2.0
24	5.0	0.6	4.6	3.8	9.5	8.2	9.5	15.0	1.0	3.5	6.0	8.2	6.1	24	4.2	2.0	4.0	3.0	9.0	8.0	9.0	13.6	0.5	3.0	5.2	7.1
25	9.4	8.4	11.9	13.0	9.0	15.0	10.2	10.0	9.8	14.0	14.0	14.5	11.6	25	9.0	7.1	10.0	11.8	8.2	13.0	9.8	9.2	9.0	13.0	13.0	13.0
26	12.0	11.5	16.0	13.5	17.2	17.2	13.4	13.6	9.3	7.2	8.0	8.2	12.3	26	12.0	11.0	15.0	13.0	16.8	16.2	13.0	13.0	9.0	7.0	7.0	7.0
27	7.0	4.0	5.8	7.0	7.8	3.2	3.6	3.6	4.7	6.0	5.0	5.0	5.2	27	6.8	3.8	4.8	6.0	6.8	2.7	2.8	3.0	3.8	5.0	4.0	4.0
28	6.0	7.0	8.0	6.0	3.2	2.0	2.0	1.8	2.3	4.0	1.9	2.8	3.1	28	5.0	6.0	7.0	4.5	2.8	1.2	1.0	0.6	1.5	3.5	2.0	3.0
Mean . .	9.0	9.0	10.4	11.4	12.0	12.8	12.8	11.9	11.7	10.9	10.3	11.2	Mean . .	8.1	8.1	9.5	10.2	10.9	11.5	11.4	11.3	10.4	10.4	9.7	9.1	

DRY BULB.

WET BULB.

March, 1903.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.
1	2.2	10.5	11.0	0.0	4.2	9.0	14.2	15.8	10.8	9.2	8.0	6.0	4.8	1	1.4	10.8	11.0	0.5	4.0	7.8	12.8	14.2	10.0	9.0	7.2	6.0
2	13.0	11.0	8.0	10.2	10.0	8.0	9.0	10.0	11.1	9.0	10.4	7.0	9.7	2	12.0	10.0	7.2	9.2	9.0	7.2	8.0	9.0	10.1	8.0	9.0	5.0
3	2.2	4.2	3.5	5.0	7.8	5.5	6.5	7.0	5.2	5.0	5.0	4.2	5.1	3	1.8	3.5	2.8	5.0	6.9	5.0	5.7	6.0	4.3	4.4	3.9	3.2
4	3.0	3.8	9.2	4.5	10.0	12.2	18.5	16.7	16.0	17.5	18.2	18.5	12.3	4	2.0	2.9	7.1	4.0	8.5	10.0	16.0	14.0	14.0	16.0	16.0	17.0
5	17.8	18.2	18.0	22.0	22.2	22.0	21.5	20.2	24.7	24.0	12.0	6.2	19.1	5	16.0	17.2	17.0	21.0	21.0	19.4	19.0	18.2	20.6	22.0	11.0	6.0
6	1.0	1.0	1.0	7.0	1.5	4.8	6.0	3.4	1.0	6.0	0.1	3.0	1.3	6	1.0	0.8	1.0	7.0	2.0	5.0	5.6	0.8	0.8	5.0	0.1	2.0
7	3.8	0.2	4.5	6.8	9.9	1.0	1.3	3.7	5.6	5.0	7.5	8.2	4.8	7	3.0	0.5	3.5	5.8	8.2	0.5	1.0	2.8	4.0	4.0	6.2	7.5
8	3.8	1.8	1.2	0.0	2.0	1.0	2.8	0.0	2.5	5.8	4.8	4.2	2.5	8	3.0	0.5	0.2	0.5	1.0	0.2	1.8	0.0	1.0	5.0	4.0	3.8
9	5.8	2.0	3.0	1.8	1.5	0.2	0.8	0.2	1.0	1.0	0.8	0.2	0.7	9	4.0	1.0	2.1	2.2	2.2	1.2	0.0	0.3	2.0	0.5	0.0	1.0
10	0.2	2.4	1.8	0.0	0.1	0.0	1.0	0.8	1.0	2.5	3.0	4.0	0.1	10	1.0	1.4	1.0	0.2	0.8	0.8	0.0	2.0	1.5	1.8	3.0	4.6
11	5.0	5.6	5.0	4.0	2.8	2.2	0.0	0.2	3.0	4.5	2.5	3.3	3.1	11	5.2	5.9	4.8	5.0	3.1	2.8	1.0	1.3	3.5	4.5	2.8	3.8
12	0.0	2.4	6.8	2.0	6.0	5.5	9.8	9.6	9.5	11.5	8.9	9.0	6.8	12	0.2	2.8	7.0	2.0	6.0	6.0	9.6	9.6	9.8	11.6	9.1	9.2
13	10.3	6.3	4.0	12.0	3.4	2.8	7.8	9.2	3.2	4.2	4.8	8.7	6.4	13	10.6	7.0	4.7	12.8	4.0	3.1	8.0	9.2	4.6	5.0	5.2	8.9
14	5.5	3.0	1.9	0.2	2.0	2.0	1.5	0.3	0.8	1.0	1.0	0.5	0.6	14	6.0	3.8	2.0	0.5	1.8	2.0	0.8	0.3	1.0	2.0	1.5	1.0
15	2.0	2.0	2.5	4.0	5.2	7.6	8.2	9.2	11.4	8.0	14.0	12.0	7.2	15	1.0	1.2	2.0	3.5	4.5	6.2	7.5	8.3	10.0	7.2	12.0	10.0
16	11.0	12.0	14.0	15.0	15.0	12.3	2.6	1.0	2.2	1.0	14.0	12.9	8.1	16	10.5	11.0	12.0	13.8	13.1	13.5	11.3	2.6	0.4	2.0	0.2	4.2
17	2.2	3.8	4.0	6.5	5.1	5.5	2.0	8.0	9.2	10.0	10.2	10.2	0.4	17	2.0	4.2	5.0	6.8	5.5	6.2	2.4	8.0	9.8	10.0	10.2	10.4
18	8.0	8.8	9.6	8.0	7.0	5.5	4.3	6.0	10.0	8.0	13.0	9.2	8.1	18	8.0	9.2	9.0	7.6	6.1	5.5	0.8	10.2	8.6	13.0	9.5	
19	7.8	8.0	8.5	6.0	4.8	7.0	7.0	10.7	11.2	13.0	14.0	15.0	9.3	19	8.2	8.0	7.0	7.0	5.1	7.8	7.5	11.0	12.0	13.2	14.0	15.0
20	11.0	9.0	7.8	10.0	15.0	13.2	8.8	9.0	13.0	8.0	1.0	0.2	8.8	20	11.5	9.5	8.0	10.5	15.0	13.2	9.5	9.4	13.4	8.2	1.8	1.2
21	9.8	10.2	5.5	4.0	10.2	7.1	4.5	8.8	3.2	14.2	9.5	8.2	8.3	21	9.8	10.2	5.5	4.8	10.1	7.1	4.6	8.4	8.0	14.0	9.2	8.0
22	6.0	10.0	9.2	3.0	12.0	11.2	10.6	11.5	12.0	14.8	11.0	8.0	9.9	22	6.5	9.8										

TABLE II. (continued).

TEMPERATURE IN DEGREES FAHRENHEIT.

DRY BULB.

WET BULB.

April, 1903.

Table with 26 columns for DRY BULB and 26 columns for WET BULB, showing temperature readings for each day of April 1903. Includes a 'Mean' row at the bottom of each section.

DRY BULB.

WET BULB.

May, 1903.

Table with 26 columns for DRY BULB and 26 columns for WET BULB, showing temperature readings for each day of May 1903. Includes a 'Mean' row at the bottom of each section.

Readings in italic type are interpolated values obtained from records of self-registering instruments.

TABLE II. (continued).

TEMPERATURE IN DEGREES FAHRENHEIT.

DRY BULB.

WET BULB.

June, 1903.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.
1 <sup>1</sup>	-14.6	-19.0	-18.9	-24.8	-23.0	-21.0	-18.2	-19.0	-16.2	-19.0	-22.0	-18.5	-19.5	1	-15.0	-19.3	-19.1	-24.6	-23.0	-21.0	-18.6	-19.0	-16.6	-19.0	-22.0	-19.8
2	-20.5	-22.5	-23.0	-21.0	-23.0	-22.8	-22.0	-21.6	-22.5	-21.0	-23.2	-23.0	-22.2	2	-20.8	-22.5	-23.0	-21.0	-23.0	-22.8	-22.0	-21.6	-22.5	-21.0	-23.2	-23.9
3	-20.2	-21.6	-19.1	-29.2	-36.0	-24.0	-17.0	-21.2	-20.0	-19.1	-23.1	-29.0	-23.3	3	-20.4	-21.9	-19.2	-29.2	-36.0	-23.5	-17.0	-21.2	-20.0	-19.1	-23.0	-23.9
4	-23.0	-22.1	-19.0	-17.0	-23.8	-25.0	-16.0	-15.7	-17.0	-19.0	-21.3	-25.3	-20.4	4	-23.0	-22.1	-19.1	-17.0	-23.2	-25.0	-16.0	-15.7	-17.0	-19.0	-21.3	-25.3
5	-23.6	-23.0	-24.6	-20.8	-19.0	-19.2	-19.6	-20.0	-18.5	-18.0	-17.2	-18.0	-20.1	5	-23.8	-23.1	-24.6	-20.8	-19.0	-19.5	-19.6	-20.0	-18.5	-18.0	-17.3	-18.0
6	-23.0	-19.5	-20.0	-28.0	-21.0	-21.2	-23.0	-21.0	-28.2	-26.0	-26.0	-32.0	-25.0	6	-23.0	-19.9	-23.8	-28.0	-21.0	-21.6	-23.0	-21.0	-28.2	-26.0	-26.0	-32.0
7	-37.0	-28.0	-30.0	-27.0	-14.0	-9.5	-7.3	-11.5	-15.0	-16.0	-11.0	-9.0	-17.9	7	-37.0	-28.0	-30.0	-27.0	-15.0	-10.0	-7.6	-12.0	-15.0	-16.0	-11.0	-9.0
8	-6.0	-10.0	-10.0	-9.0	-9.0	-3.2	-5.2	-2.0	-4.8	-2.0	-2.0	-7.0	-5.9	8	-6.0	-10.0	-10.0	-9.0	-9.0	-4.0	-5.5	-2.3	-4.8	-2.0	-2.0	-7.0
9	-9.8	0.0	0.2	-6.0	-4.0	0.0	4.0	7.0	8.8	8.0	8.0	11.2	0.8	9	-9.8	-9.0	-9.2	-6.0	-4.0	0.0	3.6	7.0	8.8	8.0	8.0	11.2
10	12.0	12.0	10.5	9.0	4.6	1.0	0.0	2.0	2.8	2.0	4.0	8.0	5.7	10	12.0	12.0	—	9.0	4.4	1.0	0.0	2.0	2.8	2.0	4.0	7.0
11	10.8	15.0	17.0	9.0	5.8	8.0	9.0	9.8	11.6	15.0	13.0	9.1	11.1	11	10.5	14.0	16.0	8.8	5.2	8.0	9.0	9.8	11.6	14.0	12.9	9.0
12	4.8	6.2	0.5	-2.0	-3.8	0.0	1.6	1.8	1.0	-4.0	-1.8	-15.0	-1.3	12	4.2	5.8	0.2	-2.0	-4.0	1.0	1.6	0.5	1.0	5.0	-2.2	-15.2
13	-23.0	-17.0	4.5	-4.0	2.2	-3.0	-1.0	-3.0	1.0	-2.8	-2.2	-4.0	-4.5	13	-23.0	-18.0	3.5	-4.0	1.8	-2.5	1.6	-3.4	1.6	-3.0	-2.8	-4.2
14	-3.6	-5.2	-10.5	-5.0	-7.8	-9.0	-0.0	-7.4	-4.5	-4.0	-5.0	-6.0	-6.2	14	-4.2	-5.8	-10.0	-4.5	-6.0	-10.0	-6.2	-7.4	-5.0	-4.8	-5.3	-6.3
15	-9.0	-9.8	-9.0	-6.0	-3.0	-5.5	-6.0	-17.0	-19.0	-23.2	-10.0	-10.2	-10.6	15	-9.2	-10.0	-9.2	-6.0	-3.8	-6.0	-6.5	-17.0	-19.0	-24.0	-10.2	-10.6
16	-11.0	-11.0	-10.8	-6.0	-7.0	-7.5	-8.2	-8.5	-9.0	-10.2	-11.2	-11.0	-9.3	16	-11.0	-11.0	-10.8	-6.2	-8.0	-8.0	-9.0	-9.0	-10.8	-11.7	-11.5	
17	-14.7	-15.2	-17.3	-17.0	-17.2	-16.0	-14.4	-10.0	-9.5	-17.6	-19.7	-22.9	-16.0	17	-15.0	-15.3	-17.5	-17.0	-17.6	-16.2	-15.0	-10.5	-9.5	-17.6	-19.5	-23.0
18	-18.8	-13.9	-15.2	-19.0	-20.0	-18.1	-18.0	-21.4	-21.0	-24.2	-34.8	-36.2	-21.7	18	-18.9	-14.0	-15.3	-19.0	-20.0	-18.2	-18.0	-21.2	-21.0	-25.0	-34.7	-36.2
19	-41.0	-37.7	-28.0	-41.2	-32.2	-16.0	-33.0	-11.2	-23.8	-12.0	-15.9	-11.2	-25.3	19	-40.7	-37.7	-28.2	-41.2	-32.5	-17.0	-33.0	-12.0	-23.8	-13.0	-16.0	-12.0
20	-12.0	-12.2	-25.0	-13.0	-21.0	-14.2	-33.0	-40.0	-34.0	-38.0	-36.0	-37.8	-26.9	20	-12.5	-20.0	-25.0	-13.0	-21.0	-15.2	-33.0	-39.0	-36.0	-37.5	-35.5	-37.6
21	-34.8	-30.0	-28.0	-26.0	-26.5	-21.0	-25.0	-23.6	-13.5	-12.0	-11.0	-15.0	-22.2	21	-34.8	-30.0	-28.0	-26.0	-26.2	-21.0	-25.0	-23.0	-14.0	-13.0	-11.0	-15.0
22	-19.0	-17.0	-15.0	-22.0	-27.5	-40.5	-36.0	-34.5	-43.0	-35.0	-46.8	-38.0	-31.2	22	-19.0	-17.0	-15.0	-21.8	-27.5	-40.5	-36.0	-34.5	-43.0	-35.0	—	-38.0
23	-43.0	-31.0	-42.8	-42.0	-32.5	-40.0	-31.0	-25.2	-16.3	-25.0	-22.2	-34.0	-32.1	23	-43.0	-31.0	-42.8	-42.0	-34.0	-40.0	-32.0	-26.0	-16.6	-26.0	-23.0	-33.5
24	-18.2	-28.2	-17.2	-23.2	-27.0	-24.0	-14.8	-2.0	-1.0	1.0	-0.5	-2.0	-13.1	24	-17.8	-28.2	-18.0	-24.0	-27.0	-24.2	-15.0	-2.5	-1.0	-1.0	-1.0	-2.2
25	-11.0	-12.0	-13.0	-10.0	-10.2	-4.2	-9.2	-10.5	-7.0	-6.0	-12.0	-14.0	-9.9	25	-11.0	-12.0	-13.0	-10.0	-11.0	-5.0	-9.2	-10.5	-7.2	-6.6	-12.2	-14.5
26	-11.6	-11.9	-12.5	-16.0	-12.0	-10.0	-11.5	-20.0	-16.2	-23.0	-18.8	-19.0	-15.2	26	-12.2	-12.2	-13.0	-10.0	-12.0	-10.8	-11.8	-20.0	-16.2	-23.0	-18.8	-19.0
27	-19.2	-23.0	-18.0	-27.5	-19.9	-25.0	-30.3	-32.0	-14.2	-12.0	-18.0	-17.0	-5.8	27	-19.2	-23.0	-18.0	-27.8	-20.0	-24.3	-30.3	-32.0	-15.0	-18.0	-17.0	-6.2
28	-6.0	-3.5	-2.4	-2.0	0.0	1.8	3.2	2.0	2.0	5.5	5.0	6.5	1.4	28	-6.0	-3.8	-3.0	-2.0	0.0	1.0	3.0	2.0	1.5	5.5	-5.0	-6.5
29	-1.0	2.1	0.4	1.0	2.2	5.0	-13.5	-6.8	-3.5	-4.0	-1.8	2.8	-1.2	29	-1.0	2.1	0.3	1.0	1.8	5.0	-13.0	-7.0	-3.5	-4.0	-2.0	-2.0
30	-5.0	-2.4	-10.0	-4.0	-5.2	2.0	-5.3	-6.5	-7.0	-17.0	-16.0	-13.2	-7.8	30	-5.0	-2.4	-10.0	-4.0	-5.8	-2.0	-5.3	-6.5	-7.0	-17.0	-15.6	-13.5
Mean . .	-15.1	-14.2	-14.2	-15.0	-14.4	-12.9	-13.7	-13.1	-12.1	-12.8	-13.7	-14.4	-13.8	Mean . .	-15.2	-14.4	—	-15.0	-14.6	-13.1	-13.8	-13.2	-12.2	-13.2	—	-14.7

DRY BULB.

WET BULB.

July, 1903.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	
1	-10.9	-8.3	-7.0	-7.0	-8.0	-11.0	-11.3	-22.0	-15.6	-23.0	-20.0	-15.0	-13.3	1	-10.9	-8.4	-7.1	-7.0	-8.0	-11.0	-11.3	-22.0	-15.6	-23.0	-20.0	-19.9	-14.7
2	-21.0	-12.6	-18.0	-18.0	-7.5	-8.5	-10.0	-15.0	-20.2	-19.5	-20.0	-21.9	-16.0	2	-21.0	-12.4	-17.7	-18.0	-7.8	-8.5	-11.0	-15.0	-20.2	-19.5	-20.0	-22.6	
3	-22.8	-23.2	-23.5	-21.0	-21.2	-23.0	-24.8	-24.6	-24.4	-24.0	-23.9	-28.0	-23.7	3	-22.9	-23.0	-23.7	-21.0	-21.5	-23.0	-24.8	-24.6	-24.4	-24.0	-24.0	-28.0	
4	-27.0	-27.0	-20.8	-30.0	-30.0	-33.0	-31.2	-31.0	-32.5	-32.0	-30.0	-28.0	-30.1	4	-27.0	-27.2	-30.0	-30.0	-30.0	-33.0	-31.2	-31.0	-32.5	-32.0	-30.0	-28.0	
5	-26.0	-24.5	-31.0	-35.0	-35.0	-43.0	-27.5	-24.2	-21.0	-20.8	-25.0	-21.0	-27.8	5	-26.0	-24.5	-30.0	-35.0	-36.0	-43.0	-28.0	-24.5	-21.3	-21.0	-25.0	-21.0	
6	-21.0	-20.5	-21.0	-20.5	-29.0	-29.8	-19.0	-35.2	-33.2	-32.0	-41.8	-41.2	-28.9	6	-21.0	-20.5	-21.0	-20.5	-29.0	-29.8	-19.5	-35.2	-33.2	-32.0	-41.8	-44.2	
7	-38.0	-44.5	-44.2	-39.8	-34.0	-41.8	-38.2	-35.5	-34.0	-33.0	-31.0	-37.0	-37.6	7	—	-44.5	-44.2	-39.8	-35.0	-41.8	-38.2	-35.5	-34.0	-33.0	-32.0	-37.0	
8	-38.0	-45.0	-43.0	-26.0	-24.0	-38.5	-37.8	-35.0	-30.0	-20.8	-21.0	-20.8	-31.7	8	-38.0	-45.0	-43.0	-26.0	-24.0	-38.5	-38.0	-35.2	-30.0	-21.0	-21.2	-21.0	
9	-20.8	-22.8	-22.8	-28.0	-29.0	-30.0	-30.5	-31.0	-41.0	-42.0	-41.0	-41.4	-31.7	9	-21.0	-23.0	-23.0	-28.0	-29.0	-30.0	-31.0	-41.0	-41.0	-42.0	-41.0	-31.7	
10	-32.0	-29.2	-31.2	-35.0	-43.0	-48.0	-46.0	-51.2	-52.2	-50.2	-50.0	-51.2	-43.3	10	-32.1	-28.8	-31.5	-35.0	-43.0	—	—	—	—	—	—	—	
11	-46.0	-24.5	-24.0	-23.0	-23.0	-24.0	-26.0	-26.5	-15.8	-14.0	-14.0	-17.0	-23.2	11	-46.0	-24.5	-24.0	-23.0	-23.0	-24.0	-26.0	-26.5	-16.0	-14.8	-14.6	-17.2	
12	-19.5	-16.0	-20.0	-25.5	-25.5	-24.8	-13.0	-26.2	-27.0	-29.0	-30.4	-25.6	-24.3	12	-19.5	-16.8	-29.0	-25.5	-25.5	-23.8	-13.5	-26.2	-27.3	-29.0	-30.6	-27.0	
13	-31.2	-23.0	-31.8	-26.2	-32.2	-29.2	-17.0	-19.5	-16.5	-8.0	-9.8	8.0	-21.0	13	-31.3	-22.5	-32.2	-26.2	-32.2	-30.0	-17.5	-19.5	-16.5	-9.0	-10.0	-8.0	
14	-12.8	-19.2	-11.0	-9.0	-14.0	-16.5	-25.3	-14.0	-19.0	-12.2	-9.7	-8.5	-14.3	14	-12.8	-19.2	-11.3	-9.0	-14.0	-16.8	-25.3	-14.0	-19.5	-13.0	-10.0	-9.0	
15	-14.9	-10.0	-21.6	-20.0	-23.5	-23.5	-27.0	-26.5	-26.8	-25.0	-23.2	-24.5	-22.2	15	-15.2	-10.9	-22.0	-20.0	-23.5	-24.0	-27.0	-20.5	-26.8	-25.0	-23.8	-25.0	
16	-28.5	-29.2	-27.0	-26.0	-27.0	-30.5	-31.0	-30.0	-28.2	-33.8	-27.0	-32.0	-29.2	16	-28.8	-29.5	-27.8	-26.0	-27.0	-30.8	-31.2	-30.0	-28.2	-34.0	-27.0	-32.2	
17	-28.1	-24.0	-26.1	-34.0	-19.4	-16.0	-17.0	-12.0	-20.0	-18.2	-15.0	-15.0	-20.4	17	-28.2	-24.1	-26.4	-34.0	-19.8	-16.6	-17.2	-12.5	-20.0	-18.5	-15.4	-15.0	
18	-12.0	-7.0	-2.0	-1.0	0.0	2.6	2.4	4.0	10.5	8.0	3.0	5.5	0.7														

TABLE II. (continued).

TEMPERATURE IN DEGREES FAHRENHEIT.

DRY BULB.

WET BULB.

August, 1903.

Table with two main sections: DRY BULB. and WET BULB. Each section contains a grid of temperature readings for August 1903, with columns for Day, 2, 4, 6, 8, 10, Noon, 14, 16, 18, 20, 22, Midt., and Mean. The data is organized into two columns of 31 rows each, with a 'Mean' row at the bottom of each section.

DRY BULB.

WET BULB.

September, 1903.

Table with two main sections: DRY BULB. and WET BULB. Each section contains a grid of temperature readings for September 1903, with columns for Day, 2, 4, 6, 8, 10, Noon, 14, 16, 18, 20, 22, Midt., and Mean. The data is organized into two columns of 31 rows each, with a 'Mean' row at the bottom of each section.

Readings in italic type are interpolated values obtained from records of self-registering instruments.

TABLE II. (continued).

TEMPERATURE IN DEGREES FAHRENHEIT.

DRY BULB.

WET BULB.

October, 1903.

Table with two main sections: DRY BULB and WET BULB. Each section contains a grid of temperature readings for days 1 through 31, with columns for specific times (2, 4, 6, 8, 10, Noon, 14, 16, 18, 20, 22, Midd., Mean.) and corresponding values.

DRY BULB.

WET BULB.

November, 1903.

Table with two main sections: DRY BULB and WET BULB. Each section contains a grid of temperature readings for days 1 through 30, with columns for specific times and corresponding values. Includes a vertical note: 'No observations were taken.' for days 17-26.

Readings in italic type are interpolated values obtained from records of self-registering instruments.

TABLE II. (continued).

TEMPERATURE IN DEGREES FAHRENHEIT.

DRY BULB.

WET BULB.

December, 1903.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.
1	23.0	20.8	25.5	21.4	24.0	21.0	23.5	24.0	21.5	23.0	20.8	22.6		1				20.5	22.4	20.2	21.5	22.2	23.0	22.5	19.9	
2	19.5	15.5	15.4	18.1	19.4	20.4	21.5	22.0	23.0	23.4	23.0	23.2	20.4	2				17.8	18.4	20.0	20.5	21.2	21.8	21.4	21.2	
3	—	—	—	22.2	22.2	22.0	21.2	22.0	22.5	22.5	21.4	20.0	21.8	3				22.0	20.0	19.8	19.8	20.0	21.0	18.5	19.0	
4	19.6	17.0	19.0	21.8	21.0	21.2	21.0	21.2	24.0	23.0	20.0	20.7	4				20.0	19.7	19.8	19.5	19.2	21.2	21.8	19.5	19.5	
5	27.2	21.0	18.4	19.2	19.2	21.2	21.4	19.0	19.0	16.2	12.0	12.9	18.3	5				19.0	19.0	19.0	19.8	19.0	18.2	15.6	11.7	
6	12.0	12.8	13.2	14.0	15.8	17.0	18.2	20.0	20.4	21.9	23.0	22.6	17.6	6				13.1	14.9	15.8	17.0	18.5	19.2	18.0	19.0	
7	22.0	19.8	23.8	21.2	25.5	26.3	27.0	26.8	26.2	26.0	24.0	22.0	24.5	7				23.0	23.6	24.4	21.8	24.2	24.2	24.9	22.8	
8	23.0	23.0	23.2	24.5	25.1	25.2	26.5	24.6	26.0	25.4	22.5	22.6	24.3	8				23.8	23.9	23.5	24.2	22.2	24.2	23.6	21.0	
9	12.0	21.0	23.0	21.0	26.0	32.0	26.0	24.6	24.6	24.0	23.0	22.5	23.5	9				22.0	22.9	—	—	—	—	—	22.0	
10	19.5	20.0	24.0	23.0	22.2	24.8	21.5	27.2	27.0	25.4	26.8	24.0	24.6	10				22.2	21.2	23.2	23.0	25.5	25.0	24.4	25.0	
11	37.0	19.0	22.0	25.0	26.0	26.2	27.5	29.0	28.6	26.0	28.0	27.0	25.4	11				24.0	24.0	25.0	24.2	25.5	27.0	25.0	26.0	
12	26.0	27.0	28.5	28.5	28.6	30.8	30.6	31.5	31.0	29.5	26.4	21.4	28.3	12				28.0	23.4	26.2	27.0	28.8	29.0	27.2	24.0	
13	20.0	20.0	23.0	25.0	22.8	22.2	21.3	26.5	23.5	23.8	24.0	22.5	22.9	13				24.8	21.5	20.8	20.5	24.0	22.8	22.0	22.0	
14	24.5	27.5	25.0	25.2	27.2	30.8	33.0	32.0	31.5	28.2	28.6	25.0	28.2	14				24.8	24.0	27.9	28.5	30.0	30.0	27.5	24.2	
15	29.0	32.0	33.0	30.2	30.4	30.0	30.0	25.5	26.5	29.0	27.0	23.0	28.8	15				29.0	26.0	27.0	26.5	24.0	23.5	26.5	24.2	
16	23.0	22.0	30.6	29.0	27.2	24.0	23.5	25.6	23.5	21.0	24.5	25.0	25.1	16				27.5	25.0	22.0	21.5	23.2	21.5	21.0	21.0	
17	21.5	21.0	18.0	17.6	17.4	16.6	19.5	21.0	22.5	23.0	21.7	20.0	20.0	17				17.2	17.2	16.0	18.5	20.0	21.6	21.0	19.2	
18	18.0	19.0	18.5	21.2	21.5	16.5	16.0	17.5	19.0	18.5	17.2	17.5	18.4	18				20.4	19.8	16.0	15.2	16.5	17.5	17.0	16.0	
19	19.0	21.0	25.0	25.0	24.4	26.8	26.5	26.5	29.5	26.0	24.3	22.5	24.8	19				23.6	21.5	24.1	25.0	23.0	26.2	23.3	22.0	
20	22.0	23.0	24.0	27.0	27.0	25.0	24.5	24.5	24.0	23.8	21.1	18.5	23.6	20				25.0	21.1	22.9	22.8	22.8	22.5	22.0	20.0	
21	19.5	20.2	24.0	27.0	27.8	28.0	28.0	27.0	26.6	25.4	25.4	25.4	25.5	21				25.8	25.4	25.5	26.0	25.5	25.8	24.2	21.0	
22	26.6	27.0	27.5	28.0	28.0	29.0	29.0	28.2	28.2	27.5	27.2	26.2	27.7	22				26.8	25.6	25.8	25.5	25.6	26.0	25.6	25.0	
23	25.8	26.1	28.0	28.1	29.2	29.2	27.5	27.0	25.5	25.0	21.0	24.0	26.6	23				27.5	26.1	25.8	25.0	25.0	25.0	24.1	23.4	
24	24.8	25.0	26.0	27.2	28.8	29.8	30.0	30.5	30.0	30.4	30.0	30.0	28.5	24				26.4	27.0	28.0	28.5	28.5	28.6	29.0	29.0	
25	28.5	28.5	30.0	32.0	33.0	35.0	36.0	36.0	37.2	37.0	34.8	31.5	33.3	25				31.0	30.8	32.0	33.2	34.5	32.5	33.6	32.0	
26	33.5	36.0	42.0	33.8	33.0	34.4	34.2	36.0	35.2	31.0	33.6	34.0	35.1	26				33.0	30.8	32.5	33.2	33.2	31.8	31.9	31.2	
27	35.0	33.5	35.0	38.0	33.5	34.4	33.5	35.0	36.0	35.2	35.8	33.8	34.9	27				32.6	31.2	32.1	32.0	32.0	34.5	31.0	31.9	
28	30.0	32.0	30.8	32.8	37.0	35.1	34.0	29.5	30.5	32.2	31.4	30.5	32.2	28				30.0	34.0	32.2	32.0	29.5	29.0	31.2	29.2	
29	30.0	30.5	31.5	34.8	36.8	39.0	38.4	29.0	28.0	29.2	27.4	28.5	31.9	29				32.0	32.0	33.8	33.4	29.0	27.5	28.2	26.4	
30	20.0	30.0	29.0	32.0	36.0	34.9	31.0	29.5	27.5	27.0	25.0	24.5	29.6	30				31.0	32.5	31.8	29.0	27.5	25.0	24.6	24.0	
31	24.0	24.6	24.0	26.2	27.8	29.2	28.0	28.0	26.5	28.1	28.0	25.0	26.7	31				25.8	25.2	27.0	25.5	26.5	24.5	25.0	25.8	
Mean . .	23.3	23.8	25.4	26.0	26.6	27.0	26.9	26.6	26.7	26.3	25.2	24.1	25.7	Mean . .	—	—	—	24.8	24.3	—	—	—	—	—	—	23.3

DRY BULB.

WET BULB.

January, 1904.

Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Mean.	Day.	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.
1	33.0	29.5	34.0	28.0	29.9	30.0	30.5	30.0	29.5	30.0	28.8	28.4	30.1	1				27.0	28.0	28.8	28.5	28.5	28.0	28.2	27.0	
2	28.4	28.4	28.4	29.2	31.0	28.0	27.8	27.0	28.0	25.1	27.0	28.5	28.1	2				28.4	28.3	26.4	25.8	25.0	26.0	24.6	25.2	
3	28.0	27.8	28.0	28.4	26.0	23.8	24.8	26.0	24.8	27.0	24.0	24.0	26.1	3				27.6	24.8	23.0	24.2	24.0	23.5	23.4	23.4	
4	24.0	23.0	25.0	26.0	26.0	30.0	31.5	33.8	32.5	34.0	28.8	28.0	28.6	4				24.8	24.8	28.0	29.5	30.8	29.2	29.8	26.4	
5	23.0	22.6	23.2	24.2	25.2	26.0	26.0	25.8	25.2	27.4	29.6	27.0	25.4	5				22.5	23.0	24.0	25.0	21.9	24.0	25.0	26.4	
6	23.0	25.0	25.8	27.0	30.0	28.0	27.5	30.4	30.0	27.2	27.5	25.5	26.0	6				24.8	25.6	26.6	26.6	28.0	26.0	26.2	—	
7	26.8	28.8	25.5	26.1	26.0	26.5	27.0	29.1	27.0	29.0	28.2	26.2	27.3	7				25.1	25.0	25.2	26.2	26.1	25.2	27.0	25.9	
8	26.0	27.8	27.2	30.2	27.0	27.0	27.0	27.0	30.0	28.0	26.0	25.6	27.6	8				28.2	28.6	26.0	25.5	26.0	27.5	26.0	25.0	
9	25.6	26.6	27.0	28.0	28.0	32.2	29.0	29.9	29.0	28.2	28.0	26.6	28.2	9				—	27.2	30.6	28.0	28.5	28.0	27.8	—	
10	25.8	26.2	20.0	21.0	29.0	27.5	28.5	30.2	30.2	30.2	27.3	28.0	27.6	10				23.2	27.0	26.0	27.5	28.6	28.0	26.8	—	
11	27.5	21.0	29.0	27.0	33.0	30.5	28.5	29.0	31.4	31.0	23.7	23.7	28.2	11				26.2	30.6	28.0	27.5	26.5	28.5	28.3	23.2	
12	28.2	28.2	22.4	29.0	28.0	30.5	31.0	29.9	26.0	27.2	24.0	23.0	27.3	12				26.2	26.0	28.1	28.2	27.0	25.5	25.8	23.6	
13	24.0	23.0	23.0	22.2	22.5	21.2	22.5	19.0	20.1	22.0	21.0	21.8	—	13				20.8	21.0	19.8	—	—	18.5	19.1	—	
14	21.0	22.8	23.4	24.0	22.0	23.1	24.0	23.5	23.5	21.6	20.0	20.0	22.2	14				23.0	—	—	—	22.5	—	21.2	—	
15	19.8	20.2	22.2	21.0	22.0	24.0	23.8	26.5	26.5	25.2	24.2	23.8	23.3	15				20.8	—	—	—	25.4	—	25.0	—	
16	20.8	20.5	20.0	18.8	19.2	19.0	19.0	20.0	19.0	20.0	24.5	25.0	20.5	16				18.5	—	—	—	19.0	—	19.0	—	
17	26.5	25.8	26.0	28.2	28.2	25.0	25.0	24.5	22.5	19.6	18.0	16.6	23.9	17				27.8	24.6	—	—	23.2	—	18.6	—	
18	14.6	13.0	14.0	12.1	12.4	18.8	16.8	20.0	21.0	20.2	21.0	20.0	17.1	18				11.9	—	—	—	17.8	—	19.1	—	
19	19.8	19.0	19.0	19.7	19.7	20.0	19.8	20.0	21.0	19.0	10.2	10.0	19.1	19				18.0	—	—	—	18.0	—	17.2	—	
20	15.0	15.4	17.0	17.6	18.0	18.2	18.5	17.0	17.5	16.5	16.0	14.5	16.8	20				17.2	—	—	—	18.0	—	16.5	—	
21	15.2	15.2	15.5	14.8	14.2	16.2	16.2	17.0	17.0	17.6	16.1	11.1	15.5	21				—	—	—	—	15.0	—	17.0	—	
22	14.0	13.3																								

TABLE III.  
DAILY EXTREMES OF TEMPERATURE.

IN DEGREES FAHRENHEIT.

February, 1902.

March, 1902.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.						
1	—	—	9	14.5	8.0	17	21.0	7.5	25	24.0	12.5	1	25.0	19.1	9	27.5	13.1	17	17.8	7.0	25	12.2	0.5						
2	—	—	10	19.0	9.5	18	25.0	0.8	26	24.0	13.6	2	23.0	12.0	10	17.8	7.2	18	17.0	10.5	26	5.0	-8.0						
3	—	—	11	24.8	13.0	19	20.8	7.5	27	27.8	19.0	3	16.0	9.0	11	18.0	2.0	19	22.8	12.0	27	-5.0	-9.8						
4	—	—	12	24.5	10.4	20	23.0	8.8	28	29.2	18.8	4	18.5	10.8	12	9.0	0.0	20	22.5	12.0	28	-3.5	-10.2						
5	—	—	13	25.0	10.8	21	20.0	8.7				5	18.5	10.0	13	0.5	-7.0	21	18.0	8.6	29	4.0	-13.2						
6	—	—	14	17.5	8.0	22	21.0	-0.8				6	21.5	11.8	14	3.0	-5.0	22	22.8	1.5	30	0.0	-12.0						
7	—	—	15	17.0	8.5	23	12.5	0.0				7	22.8	10.8	15	2.0	-8.5	23	14.0	-8.0	31	0.0	-9.8						
8	—	—	16	23.2	12.0	24	13.2	-0.6				8	22.5	8.8	16	8.8	-6.0	24	6.4	-3.0									
									Mean. . .	21.4	8.7										Mean. . .	13.1	2.3						
									(20 days)																				

April, 1902.

May, 1902.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.
1	—	-2.4	9	4.0	-8.0	17	8.2	-5.1	25	-15.2	-28.5	1	-8.5	-25.0	9	-8.5	-27.0	17	-23.0	-34.0	25	-13.9	-32.0
2	-5.0	-14.0	10	9.0	-2.0	18	7.3	-7.0	26	-4.0	-18.6	2	1.0*	-15.9	10	0.2	-15.0	18	-18.8	-26.2	26	-8.0	-24.0
3	-8.0	-14.2	11	15.0	4.5	19	0.1	-8.0	27	-10.0	-25.5	3	9.5*	—	11	-1.8	-26.0	19	-18.0	-23.0	27	-9.8	-20.0
4	-1.8	-14.5	12	14.9	-3.2	20	6.0	-8.2	28	-11.0	-23.0	4	19.0	—	12	-11.1	-39.0	20	-13.9	-21.5	28	-10.5	-31.0
5	1.0	-9.0	13	19.5	-5.0	21	0.0	-19.8	29	-13.5	-25.2	5	12.0	—	13	-13.0	-39.5	21	-17.0	-24.5	29	1.0	-29.0
6	2.0	-24.0	14	12.5	-15.0	22	-15.8	-25.6	30	-14.0	-26.5	6	17.0	-12.0	14	-13.3	-34.0	22	-18.0	-24.0	30	14.5	0.0
7	10.0	-10.4	15	1.0	-18.5	23	-16.0	-31.6				7	13.5	-7.0	15	-12.3	-29.5	23	-9.0	-28.1	31	15.3	1.0
8	13.0	-11.0	16	1.0	-8.0	24	-20.0	-26.1				8	-3.9	-22.5	16	-28.0	-36.0	24	-9.0	-24.7			
									Mean. . .	-0.4	-14.7										Mean. . .	-5.2	-23.9

\* From thermograph trace.

† For 28 days only.

June, 1902.

July, 1902.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.
1	7.5	-7.0	9	-13.2	-27.8	17	-7.5	-26.0	25	-12.0	-27.0	1	-1.0	-22.8	9	8.0	-16.5	17	9.0	-11.1	25	-4.0	-11.3
2	2.0	-19.0	10	-19.0	-36.8	18	-7.2	-20.0	26	2.8	-21.2	2	0.8	-17.0	10	8.0	-17.2	18	13.0	8.0	26	-3.0	-10.8
3	1.0	-18.0	11	-15.5	-34.2	19	-9.8	-22.0	27	4.0	-10.8	3	-3.5	-12.5	11	-1.2	-12.5	19	16.7*	9.8	27	-1.5	-12.5
4	-2.0	-18.0	12	-12.8	-29.0	20	5.0	-21.5	28	13.0	-4.5	4	-4.0	-24.0	12	-4.0	-20.0	20	14.2	-12.0	28	-4.4	-11.0
5	-5.2	-22.2	13	-18.9	-35.2	21	-11.5	-36.0	29	0.2	-10.0	5	-6.5	-20.5	13	-13.0	-27.5	21	-4.5	-13.0	29	-2.0	-9.0
6	-9.8	-28.0	14	-27.5	-43.0	22	-14.0	-36.5	30	-5.0	-15.5	6	-8.2	-31.0	14	-21.2	-31.0	22	-8.9	-22.0	30	1.1	-18.0
7	-15.0	-32.5	15	-20.0	-42.0	23	-18.0	-40.0				7	-11.6	-32.0	15	-13.0	-26.2	23	-3.2	-24.5	31	-3.0	-16.2
8	-9.4	-28.0	16	11.0	-30.0	24	-18.0	-47.0				8	-11.0	-38.0	16	-9.9	-26.5	24	-4.5	-13.0			
									Mean. . .	-7.8	-26.3										Mean. . .	-2.5	-17.5

\* From thermograph trace.

August, 1902.

September, 1902.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.
1	-4.0	-13.0	9	-24.9	-35.1	17	-10.5	-24.2	25	-8.0	-25.0	1	4.2	-8.1	9	2.0	-11.3	17	-21.0	-31.4	25	-5.0	-28.0
2	2.0	-21.1	10	-23.0	-39.1	18	-9.8	-30.0	26	-2.0	-9.7	2	2.2	-8.0	10	0.8	-26.2	18	-17.2	-30.5	26	-11.5	-33.0
3	-14.0	-28.6	11	-17.8	-37.8	19	4.0	-25.5	27	1.2	-8.3	3	-2.0	-15.0	11	3.5	-20.5	19	-16.0	-33.5	27	9.0	-35.5
4	-12.2	-28.5	12	-9.0	-20.2	20	1.4	-12.2	28	1.1	-14.5	4	-6.5	-18.0	12	-8.2	-22.0	20	-3.8	-43.5	28	14.0	-1.0
5	-22.8	-33.5	13	-11.5	-21.0	21	6.0	-2.0	29	-4.8	-25.0	5	-5.0	-21.0	13	-12.8	-35.2	21	-11.5	-23.8	29	15.0	-1.8
6	-31.5	-43.0	14	-8.3	-23.0	22	3.6	-12.5	30	-3.8	-25.0	6	-0.2	-9.5	14	-13.5	-36.2	22	-14.8	-36.9	30	7.5	-12.0
7	-29.1	-50.5	15	-15.0	-28.5	23	-4.1	-18.0	31	-4.4	-27.5	7	-4.5	-9.7	15	-12.0	-21.8	23	-9.5	-25.0			
8	-25.4	-40.5	16	-21.0	-32.0	24	-8.1	-19.8				8	-2.8	-11.0	16	-11.8	-27.8	24	-9.0	-26.8			
									Mean. . .	-9.8	-24.9										Mean. . .	-4.8	-22.1

TABLE III. (continued).  
DAILY EXTREMES OF TEMPERATURE.

IN DEGREES FAHRENHEIT.

October, 1902.

November, 1902.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.
1	3.6	-13.3	9	-13.5	-32.2	17	3.0	-9.1	25	-4.2	-16.5	1	13.0	5.8	9	14.5	5.0	17	22.2	5.5	25	20.5	2.6
2	0.2	-10.5	10	-21.0	-32.8	18	3.0	-19.0	26	-2.0	-14.3	2	13.8	8.8	10	26.5	5.0	18	14.1	2.2	26	8.0	1.0
3	-4.0	-23.8	11	-19.0	-40.8	19	3.8	-19.0	27	9.8	-12.5	3	15.1	8.0	11	18.5	0.0	19	8.5	3.8	27	18.8	6.2
4	-7.0	-26.0	12	-20.0	-37.2	20	-0.4	-11.5	28	11.5	-5.0	4	19.0	6.0	12	15.2	0.2	20	12.1	4.5	28	23.0	11.0
5	-10.0	-19.9	13	-9.0	-28.2	21	-2.5	-14.5	29	6.0	-4.0	5	14.0	4.4	13	19.0	5.0	21	14.6	6.5	29	16.0	5.0
6	-15.0	-30.5	14	0.0	-11.3	22	3.2	-14.5	30	11.4	0.8	6	16.0	4.0	14	22.8	9.0	22	15.6	8.5	30	22.8	6.2
7	-10.0	-21.5	15	3.8	-9.0	23	-5.8	-14.5	31	12.0	3.2	7	15.0	5.0	15	27.8	6.5	23	21.8	8.8			
8	-9.8	-32.0	16	4.0	-4.5	24	2.5	-15.8				8	14.6	4.7	16	20.6	5.8	24	23.4	17.5			
									Mean. . .	-2.4	-17.4										Mean. . .	17.6	5.8

December, 1902.

January, 1903.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.
1	26.0	14.8	9	37.2	30.0	17	27.2	20.0	25	37.8	22.0	1	29.5	18.8	9	27.8	23.2	17	23.5	18.0	25	34.0	23.0
2	17.8	5.0	10	36.5	25.0	18	35.2	20.8	26	39.0	21.0	2	36.0	14.8	10	29.5	22.0	18	31.6	21.0	26	28.2	17.0
3	17.0	4.2	11	35.0	21.8	19	25.0	19.8	27	38.0	17.0	3	32.0	25.5	11	32.2	24.0	19	29.0	13.2	27	31.0	12.0
4	17.2	9.0	12	29.5	21.8	20	27.0	18.0	28	36.8	23.0	4	36.8	23.0	12	32.0	25.0	20	25.2	14.2	28	30.2	12.6
5	20.1	9.0	13	29.0	25.0	21	24.2	11.8	29	36.0	22.0	5	35.0	25.0	13	31.5	24.0	21	29.0	14.0	29	35.0	9.0
6	18.5	13.2	14	33.6	26.0	22	22.0	10.5	30	36.8	18.0	6	32.5	22.0	14	29.5	20.0	22	31.2	18.0	30	31.0	12.5
7	23.5	12.0	15	30.5	21.5	23	27.0	15.0	31	33.0	15.5	7	38.0	19.8	15	29.0	22.0	23	31.0	14.5	31	30.5	13.2
8	33.0	16.0	16	25.8	20.2	24	32.0	13.0				8	39.0	19.8	16	27.0	19.8	24	34.0	26.0			
									Mean. . .	29.3	17.5										Mean. . .	31.6	18.9

February, 1903.

March, 1903.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.
1	31.0	13.0	9	23.0	10.0	17	7.0	-4.0	25	15.0	-4.8	1	17.8	-12.0	9	5.8	-4.2	17	2.0	-11.3	25	-7.5	-17.0
2	32.2	14.0	10	22.0	7.2	18	9.0	-6.0	26	18.5	5.2	2	13.0	-2.2	10	4.0	-5.4	18	-4.0	-14.5	26	-2.5	-17.6
3	30.0	17.2	11	17.0	9.0	19	12.0	0.0	27	11.0	0.0	3	8.0	-1.0	11	2.5	-11.3	19	-4.0	-15.5	27	7.0	-13.5
4	32.0	12.0	12	16.0	-1.0	20	17.0	-1.0	28	8.2	-5.1	4	20.5	-1.4	12	0.0	-12.8	20	-0.2	-16.2	28	10.0	-11.5
5	23.0	16.0	13	16.0	4.0	21	15.1	3.0	29	25.5	5.0	5	25.5	5.0	13	-1.5	-15.8	21	-2.8	-15.0	29	19.2	5.0
6	23.0	10.5	14	6.0	-7.3	22	16.1	-4.2	30	6.0	-7.5	14	3.0	-10.0	22	-3.0	-10.2	22	-3.0	-17.4	30	9.2	-2.0
7	22.2	9.5	15	7.0	-1.0	23	20.5	-0.8	31	12.0	-3.0	15	14.0	-5.7	23	-5.5	-20.0	23	-5.5	-20.0	31	2.0	-9.0
8	19.0	8.0	16	9.5	-2.8	24	15.0	-9.5				8	9.0	-1.7	16	16.0	-4.2	24	-9.0	-18.7			
									Mean. . .	17.6	3.3										Mean. . .	5.4	-9.1

April, 1903.

May, 1903.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.
1	-2.0	-10.7	9	-8.6	-31.0	17	-10.0	-27.9	25	-15.0	-33.2	1	-6.0	-30.6	9	-17.0	-24.1	17	2.0	-22.6	25	-4.2	-21.0
2	-0.5	-14.3	10	-7.0	-21.2	18	-13.8	-27.0	26	-19.5	-42.0	2	2.0	-9.5	10	-17.0	-30.0	18	9.2	-5.5	26	-1.2	-18.2
3	-4.8	-21.0	11	-14.0	-28.0	19	-12.8	-32.0	27	-21.0	-38.5	3	-2.0	-13.5	11	-22.2	-30.0	19	9.0	-18.2	27	-6.5	-30.0
4	-9.0	-17.6	12	-5.0	-30.0	20	-7.0	-32.0	28	-1.0	-32.0	4	-1.8	-15.0	12	-22.5	-48.0	20	0.5	-32.8	28	-13.5	-36.0
5	-10.0	-23.2	13	-6.0	-26.0	21	-10.0	-40.0	29	5.2	-21.0	5	-2.4	-14.5	13	-21.5	-48.2	21	4.2	-23.2	29	-14.0	-37.0
6	-13.0	-19.0	14	1.5	-19.2	22	-10.0	-40.1	30	-1.0	-29.0	6	-1.0	-11.3	14	-20.5	-47.0	22	-4.0	-17.9	30	4.0	-36.0
7	-12.0	-38.0	15	2.0	-14.5	23	-8.0	-25.9				7	-4.0	-19.0	15	-27.0	-51.2	23	-12.0	-29.0	31	-5.0	-18.1
8	-11.0	-33.2	16	-10.2	-28.8	24	-11.0	-26.0				8	-13.0	-28.0	16	-18.0	-51.0	24	-7.0	-22.5			
									Mean. . .	-8.3	-27.4										Mean. . .	-7.5	-27.1

TABLE III. (continued).  
DAILY EXTREMES OF TEMPERATURE.

IN DEGREES FAHRENHEIT.

June, 1903.

July, 1903.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.
1	-10.0	-26.0	9	11.2	-11.7	17	-9.0	-23.4	25	-2.0	-14.5	1	-17.0	-24.5	9	-15.0	-48.0	17	-10.5	-34.7	25	11.0	-18.0
2	-18.0	-33.7	10	12.0	-3.6	18	-13.0	-42.0	26	-9.0	-26.2	2	-7.0	-24.2	10	-29.0	-52.5	18	12.0	-17.2	26	-8.0	-26.2
3	-17.0	-38.0	11	17.0	4.0	19	-11.2	-41.8	27	-5.8	-33.8	3	-15.0	-28.5	11	-12.0	-53.0	19	12.0	-18.0	27	-11.5	-33.2
4	-15.7	-32.0	12	9.1	-22.0	20	-10.0	-43.5	28	5.5	-10.0	4	-18.2	-34.0	12	-11.0	-39.4	20	-13.0	-25.0	28	-17.0	-36.0
5	-10.0	-28.0	13	6.0	-24.5	21	-11.0	-38.5	29	6.5	-15.2	5	-20.8	-47.8	13	-7.8	-39.0	21	-11.5	-32.6	29	-28.0	-48.5
6	-17.0	-34.2	14	0.2	-14.0	22	-15.0	-47.0	30	3.0	-20.7	6	-19.0	-46.5	14	-8.0	-25.8	22	0.0	-36.0	30	-20.0	-54.2
7	-7.3	-39.5	15	-3.0	-27.0	23	-14.5	-44.0				7	-30.0	-47.0	15	-7.0	-37.5	23	9.0	-20.0	31	-10.5	-36.1
8	-2.0	-18.0	16	-2.0	-23.0	24	2.0	-41.0				8	-18.0	-46.0	16	-23.0	-37.5	24	9.8	-9.5			
Mean. . .									-4.3	-27.0	Mean. . .									-10.5	-35.0		

August, 1903.

September, 1903.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.
1	-3.8	-26.0	9	-16.0	-42.8	17	-7.0	-24.2	25	-9.0	-38.2	1	-15.0	-35.0	9	-0.8	-19.0	17	-26.0	-37.0	25	7.2	-14.0
2	-15.4	-28.0	10	9.5	-28.1	18	-2.2	-29.0	26	4.5	-36.5	2	-15.0	-34.6	10	-8.5	-21.0	18	-32.0	-49.2	26	11.0	-6.5
3	-15.8	-31.0	11	11.5	-20.5	19	-7.0	-37.2	27	6.5	-19.2	3	-12.5	-38.5	11	-7.0	-26.6	19	-31.0	-55.5	27	9.5	-13.3
4	-15.8	-29.0	12	10.0	-24.7	20	-20.2	-46.6	28	-6.8	-26.8	4	-13.2	-34.8	12	-17.1	-34.0	20	-32.0	-58.5	28	13.2	-11.5
5	-24.0	-48.0	13	-5.5	-29.5	21	9.0	-29.5	29	-6.0	-32.5	5	-17.2	-48.0	13	-21.0	-34.0	21	-20.0	-50.5	29	-1.0	-15.0
6	-29.0	-53.2	14	-3.0	-28.0	22	11.8	-5.5	30	-16.0	-37.0	6	-6.8	-18.0	14	-22.5	-35.7	22	-17.0	-30.0	30	5.0	-11.3
7	-16.8	-44.0	15	-1.0	-19.0	23	6.0	-19.6	31	-17.0	-44.0	7	4.0	-18.7	15	-20.0	-36.8	23	0.2	-25.0			
8	-12.5	-26.5	16	2.5	-32.5	24	-8.8	-18.2				8	3.0	-14.9	16	-26.2	-37.2	24	-1.0	-13.5			
Mean. . .									-5.9	-30.8	Mean. . .									-10.3	-29.3		

October, 1903.

November, 1903.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.
1	3.5	-14.5	9	-5.0	-17.3	17	-1.3	-20.0	25	2.0	-7.7	1	16.2	9.0	9	22.4	7.5	17	9.5	-0.7	25	25.6	5.0
2	-12.5	-19.8	10	-4.5	-19.2	18	-4.4	-21.4	26	8.2	-12.3	2	24.5	8.9	10	21.2	2.4	18	19.0	5.2	26	27.5	7.9
3	-17.2	-27.0	11	8.2	-11.5	19	-11.0	-27.2	27	12.0	1.8	3	12.0	-5.5	11	21.2	11.8	19	20.1	-2.2	27	26.0	18.5
4	-22.0	-40.6	12	5.0	-12.5	20	8.0	-25.2	28	8.0	-5.5	4	16.7	-2.0	12	24.8	12.0	20	19.8	-0.6	28	31.0	22.6
5	-10.5	-42.8	13	4.0	-10.5	21	6.0	-14.5	29	6.5	-8.5	5	15.2	-4.5	13	26.0	5.2	21	24.8	2.8	29	26.8	20.5
6	5.0	-14.5	14	5.4	-7.7	22	5.0	-8.3	30	4.8	-5.7	6	10.0	2.5	14	22.2	5.2	22	34.0	18.6	30	26.2	18.6
7	0.0	-22.9	15	0.0	-19.8	23	-2.0	-12.5	31	11.0	-4.2	7	10.0	0.5	15	23.8	4.1	23	24.5	9.0			
8	-4.8	-27.5	16	-2.2	-20.6	24	-3.0	-10.5				8	17.5	5.2	16	16.0	8.5	24	17.0	8.2			
Mean. . .									0.1	-16.5	Mean. . .									21.1	6.8		

December, 1903.

January, 1904.

Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.	Day.	Max.	Min.
1	26.2	18.5	9	31.0	11.6	17	25.2	14.5	25	38.5	26.8	1	31.1	21.6	9	37.1	25.2	17	30.8	15.0	25	24.4	13.2
2	24.8	13.5	10	32.2	15.5	18	21.8	14.6	26	42.0	29.7	2	31.0	24.6	10	34.8	23.8	18	25.5	10.6	26	23.2	10.3
3	25.5	19.0	11	34.0	13.0	19	31.5	16.2	27	41.4	26.2	3	29.8	22.5	11	36.8	16.5	19	26.8	16.0	27	25.5	4.0
4	26.0	16.8	12	32.8	22.8	20	32.4	20.6	28	40.2	23.8	4	37.5	22.2	12	31.8	16.8	20	24.4	13.0	28	30.1	8.8
5	22.2	7.6	13	26.8	19.5	21	29.1	20.0	29	40.2	27.0	5	29.6	21.0	13	28.1	18.5	21	22.2	9.0	29	24.0	13.2
6	23.1	7.6	14	33.0	19.0	22	29.6	24.2	30	37.2	24.5	6	33.0	21.2	14	25.3	10.2	22	21.7	9.0	30	31.2	13.0
7	27.6	12.0	15	32.6	23.4	23	32.5	23.0	31	30.5	22.9	7	36.9	24.5	15	29.5	18.6	23	22.3	11.0	31	25.0	16.8
8	27.9	18.4	16	33.5	19.0	24	30.8	19.1				8	33.8	22.0	16	26.8	17.0	24	27.2	13.0			
Mean. . .									31.0	19.0	Mean. . .									29.0	16.5		

TABLE IV.

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8=E, 16=S, 24=W, 32=N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

February, 1902.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	10	8	13	17	27	8	30	6	30	11	8	14	28	17	28	17	6	17	8	17	8	11	6	11
10	8	8	6	6	6	2	8	8	6	6	6	8	—	0	14	2	—	0	—	0	—	0	32	2
11	—	0	8	2	8	2	22	8	12	2	14	2	6	2	5	2	5	6	30	2	30	2	30	2
12	—	0	—	0	5	2	5	2	8	10	8	17	—	—	8	8	—	—	0	—	0	—	0	0
13	—	0	—	0	—	0	10	2	10	2	10	2	4	6	14	8	14	14	14	25	6	25	7	28
14	8	22	6	22	6	22	6	25	6	22	8	22	6	22	6	20	6	20	6	14	6	14	6	11
15	6	4	6	17	8	25	6	22	7	22	7	22	7	25	7	25	7	25	7	20	7	17	7	11
16	7	17	7	11	7	8	7	2	—	—	—	—	8	6	8	2	10	2	10	2	10	2	10	2
17	—	0	—	0	8	2	4	2	—	0	—	0	—	—	4	2	4	20	4	20	5	20	5	20
18	—	—	—	—	6	25	8	28	6	17	—	0	—	0	32	2	32	17	30	25	31	38	31	25
19	6	2	8	6	10	11	10	20	—	—	7	14	8	25	10	25	10	22	10	38	8	28	6	25
20	6	2	6	2	—	—	8	2	4	2	—	0	5	2	14	2	—	0	2	2	7	20	6	20
21	7	17	8	14	8	17	8	17	8	20	8	22	9	22	9	22	3	20	9	17	9	14	12	8
22	9	17	—	—	9	25	7	31	7	35	8	38	8	31	6	31	6	31	6	28	8	14	6	11
23	6	11	8	17	7	17	7	17	7	17	7	17	7	25	7	22	7	28	7	28	7	25	12	28
24	10	17	10	17	10	14	10	11	10	14	10	22	10	25	8	25	8	25	8	25	8	25	8	28
25	8	25	8	22	8	14	14	2	4	14	10	11	10	2	—	0	—	0	10	2	12	2	10	2
26	—	—	—	—	18	11	8	11	8	17	8	17	8	8	8	2	—	0	10	2	10	2	—	0
27	—	—	—	0	—	0	8	2	8	2	8	2	18	22	19	14	18	20	19	25	18	14	19	17
28	8	8	—	—	8	2	—	—	8	11	8	2	8	2	10	2	8	17	8	11	—	0	15	2
Mean . . .	9†		10*		11§		11§		12‡		13§		14‡		11		15§		15		14		13	

Throughout this month the velocities given are the Meteorological Office equivalents of the forces estimated by Beaufort scale.

\* For 16 days only.

† For 17 days only.

‡ For 18 days only.

§ For 19 days only.

March, 1902.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	13	2	12	6	15	8	8	6	14	11	14	20	13	14	13	11	7	17	7	11	7	14	7	17
2	7	6	—	0	—	0	6	25	—	—	6	22	6	28	—	—	—	—	6	11	—	—	6	22
3	6	17	8	20	8	25	8	28	6	28	4	31	6	35	6	35	—	—	6	20	6	2	—	0
4	—	—	—	—	0	—	0	—	4	11	2	11	2	11	2	17	2	17	2	22	9	11	10	2
5	8	8	10	6	10	8	6	6	2	6	2	6	2	6	6	2	8	2	10	2	12	2	14	2
6	—	—	10	2	10	2	10	8	10	8	10	6	—	0	—	0	—	0	—	0	8	2	14	2
7	—	—	13	2	12	2	10	2	10	2	—	0	14	6	14	8	8	14	8	17	8	17	6	11
8	—	6	10	2	10	2	12	2	12	2	10	6	10	6	14	6	14	6	14	6	30	2	—	0
9	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	14	6	8	11
10	10	17	14	22	6	6	14	11	14	6	14	2	14	2	14	2	—	0	—	0	—	—	—	0
11	—	0	—	0	10	2	12	6	12	25	12	38	12	38	8	38	10	38	—	—	10	35	10	35
12	8	35	8	28	7	25	8	22	8	25	8	22	8	28	8	38	8	38	8	35	8	42	8	35
13	8	28	8	25	8	25	8	25	8	22	8	20	8	20	8	22	8	11	10	2	14	11	29	17
14	12	8	12	6	18	17	18	11	18	11	18	11	12	6	10	17	—	—	6	42	6	42	6	42
15	10	38	10	31	10	28	10	22	10	22	10	20	10	17	10	14	10	14	—	0	—	—	14	2
16	14	2	12	2	14	2	18	6	14	2	10	2	10	2	12	8	—	0	—	0	—	—	—	—
17	2	2	2	2	2	2	2	6	2	2	14	8	14	25	14	31	18	42	18	42	18	42	18	50
18	—	—	18	11	18	11	18	14	18	20	18	11	18	20	14	11	14	11	12	11	12	17	7	8
19	—	—	18	2	14	2	—	0	14	6	14	8	10	11	10	2	—	—	14	1	14	2	19	11
20	18	11	20	2	14	2	16	8	16	6	16	2	18	6	16	20	16	11	12	4	18	35	18	8
21	18	8	10	6	18	8	—	—	—	—	—	—	—	—	—	—	—	—	12	2	8	11	10	17
22	10	8	10	17	10	17	10	6	10	2	10	2	—	0	—	0	—	0	10	8	10	2	—	0
23	10	6	10	6	4	6	7	11	7	14	7	14	7	17	7	31	7	35	10	42	10	42	10	17
24	10	8	10	6	8	2	8	6	8	2	8	2	—	0	—	0	—	0	—	0	10	2	—	0
25	10	1	—	0	2	2	32	2	32	4	—	0	—	0	8	—	0	8	2	10	2	10	14	14
26	10	14	10	8	14	2	7	6	7	6	7	11	7	22	7	28	7	31	7	42	7	35	7	42
27	12	38	12	28	10	11	10	8	11	8	11	8	8	4	8	2	—	0	—	0	—	0	—	0
28	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0
29	12	8	10	2	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0
30	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0
31	—	0	10	2	8	2	8	22	8	25	8	28	8	2	—	0	—	—	—	—	—	—	—	—
Mean . . .	10†		8‡		7		9‡		9§		10‡		11‡		12§		12*		11‡		14‡		12‡	

Throughout this month the velocities given are the Meteorological Office equivalents of the forces estimated by Beaufort scale.

\* For 25 days only.

† For 26 days only.

‡ For 27 days only.

§ For 29 days only.

|| For 30 days only.

TABLE IV. (continued)

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8 = E, 16 = S, 24 = W, 32 = N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

April, 1902.

Day.	2.		4.		6.		8.		10.		Noon.		14.		18.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	—	0	—	0	—	0	10	11	6	2	12	11	12	11	12	6	6	11	—	0	—	0	26	2
2	—	0	—	0	—	0	—	0	—	0	—	0	30	2	—	0	—	0	—	0	—	0	—	0
3	—	0	—	0	—	0	10	11	10	11	10	6	—	0	—	0	—	0	—	0	—	0	—	0
4	—	0	—	0	10	6	8	6	8	2	8	2	—	0	—	—	—	—	10	6	10	8	28	17
5	6	2	8	2	8	4	12	2	—	0	16	11	16	11	16	14	6	2	—	0	—	0	26	6
6	10	10	20	28	20	35	12	28	12	31	12	31	12	31	12	31	6	17	6	2	—	0	—	0
7	—	0	14	2	—	—	—	0	12	2	12	2	12	2	16	6	12	17	12	31	12	38	26	22
8	6	22	10	20	10	14	10	8	16	6	16	38	10	31	10	25	8	22	6	35	6	35	8	19
9	7	6	7	8	7	11	9	2	10	2	12	4	10	2	9	2	9	2	8	2	8	2	9	2
10	—	0	—	0	—	0	—	0	—	0	2	2	32	2	—	0	—	0	—	0	—	0	—	0
11	15	16	18	14	16	38	20	38	16	22	14	14	15	14	16	11	16	14	8	8	10	2	—	0
12	12	11	10	11	10	32	10	2	12	2	12	6	12	11	12	8	12	11	12	20	12	22	12	1
13	—	0	10	2	32	17	6	2	16	6	—	0	14	20	16	46	16	38	10	22	10	20	10	28
14	—	0	—	0	—	0	30	2	14	8	10	23	12	25	12	22	10	20	10	38	10	35	10	35
15	10	25	12	2	12	2	—	0	—	0	12	6	12	14	12	17	12	20	11	25	10	22	18	17
16	15	25	16	17	14	23	14	14	14	19	18	14	12	14	10	8	16	8	11	11	16	11	16	11
17	14	11	12	14	—	—	12	2	4	2	—	0	2	2	12	6	8	4	10	4	10	6	12	6
18	12	8	12	8	8	8	10	8	12	11	8	5	12	11	12	8	9	9	12	12	4	11	4	14
19	12	22	6	15	4	23	4	26	4	21	4	23	4	24	4	25	4	24	6	28	4	20	7	16
20	9	20	10	9	8	4	16	4	—	5	30	5	28	11	28	11	28	9	32	5	26	5	4	11
21	8	17	4	20	4	15	4	20	6	9	9	11	9	18	7	22	8	24	6	27	8	21	7	27
22	6	24	6	20	6	24	6	15	4	28	4	27	8	24	6	23	7	23	6	17	7	20	4	15
23	9	22	7	17	4	17	4	22	4	14	10	15	6	12	4	18	4	20	4	24	4	23	6	18
24	8	29	5	23	4	20	4	22	6	9	8	17	4	18	4	13	4	24	4	21	4	20	4	17
25	4	14	4	10	7	8	4	6	—	2	—	1	—	—	1	—	—	1	—	1	30	4	28	9
26	29	11	31	12	31	13	30	15	30	14	28	12	32	11	28	12	30	11	28	12	28	12	29	10
27	28	8	—	3	—	2	—	0	8	4	8	13	32	16	32	7	32	2	—	—	—	0	8	7
28	3	4	2	9	32	2	—	12	32	5	—	4	—	0	—	1	4	3	9	9	0	9	8	8
29	8	14	8	18	7	20	8	23	8	17	8	15	8	13	8	19	8	12	10	14	12	11	7	26
30	8	9	7	9	8	32	8	23	8	27	7	20	8	22	6	24	8	19	4	22	4	19	6	17
Mean . . .	11		10		13*		11		9		11		12		13		13†		13		12		12	

Until Midt. 17th the velocities given are the Meteorological Office equivalents of the forces estimated by Beaufort scale; subsequently they were obtained from the cup anemometer.

\* For 28 days only.

† For 29 days only.

May, 1902.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	8	17	6	15	9	15	9	23	9	13	8	11	6	21	8	15	8	8	8	9	8	12	4	15
2	7	14	4	15	4	18	12	17	10	17	10	23	9	20	16	42*	17	42*	17	34	20	38	17	39
3	17	30	20	35	20	44	20	33	20	41	20	28	18	35	17	39	16	25	16	34	16	28	15	36
4	15	36	16	35	16	35	12	30	12	22	12	18	12	17	12	23	12	22	12	24	9	22	8	17
5	8	26	9	18	15	23	12	19	8	18	7	15	8	8*	10	8*	0	8*	11*	7	14*	6	17*	
6	8	14*	8	6*	18	4*	7	4*	—	0	—	4	—	4	—	5	8	17	8	35	8	20	14	25
7	9	9	7	5	1	6	28	3	32	14	4	14	32	12	4	8	4	16	4	19	4	18	7	14
8	4	26	6	22	6	24	8	23	6	22	7	18	8	16	4	15	4	15	7	14	9	12	8	8
9	10	13	7	14	7	23	4	24	6	22	6	15	6	15	7	16	—	11	—	2	—	0	32	5
10	—	6	32	7	32	8	31	10	32	11	32	11	32	12	32	5	28	7	—	5	6	6	6	7
11	4	9	6	9	12	14	9	19	8	11	8	9	9	15	6	23	7	21	7	24	6	28	6	30
12	6	25	6	19	6	19	4	22	—	8	—	3	—	3	—	4	—	1	8	4	—	6	—	0
13	1	2	—	0	12	6	—	6	—	4	—	2	—	1	—	2	4	4	10	5	13	1	15	
14	6	11	9	5	2	—	1	—	1	4	3	—	2	4	5	8	12	8	13	8	12	8	12	8
15	7	18	8	27	6	24	6	22	6	37	6	26	6	18	8	21	8	25	8	25	8	22	8	31
16	8	24	8	33	8	30	4	31	4	34	4	27	6	24	6	30	6	24	6	26	4	18	8	14
17	8	4	—	0	1	—	2	—	2	5	4	3	8	10	8	9	12	15	8	18	8	19	6	21
18	7	7	7	20	7	23	6	22	8	24	8	26	7	22	6	18	6	22	4	25	4	22	6	21
19	7	22	7	19	7	25	7	19	8	22	8	17	8	20	8	20	8	18	8	24	7	22	8	27
20	7	32	7	20	2	30	8	23	12	16	12	14	14	18	8	21	8	13	6	23	6	21	8	18
21	8	17	7	26	7	23	7	32	7	37	7	28	7	23	7	47	7	38	6	44	4	27	8	31
22	6	27	6	27	4	29	4	23	4	27	4	22	4	20	4	17	8	21	8	17	32	12	9	5
23	—	2	30	4	4	1	9	1	—	4	—	3	—	1	30	2	10	5	6	14	6	11	8	13
24	17	9	8	4	—	1	—	1	—	1	28	1	—	2	28	1	32	6	—	3	—	5	—	1
25	10	3	10	5	10	10	10	10	—	5	—	3	8	2	8	6	Vble.	6	—	1	—	1	—	1
26	—	1	32	1	—	1	—	1	—	1	—	1	—	2	—	2	10	7	10	10	10	11	8	21
27	7	22	7	25	8	18	7	18	7	21	4	26	6	24	8	22	12	15	12	28	8	20	7	25
28	7	25	7	32	7	18	8	25	8	30	7	20	7	24	6	28	6	21	6	25	6	21	7	35
29	7	22	7	31	7	33	8	27	10	18	12	23	10	25	12	22	8	19	8	18	12	24	12	21
30	15	26	16	22	16	23	14	22	10	13	10	19	16	16	17	22	12	17	10	19	14	9	14	11
31	15	13	17	10	10	10	16	7	32	4	—	0	—	5	4	6	4	14	8	24	4	16	4	17
Mean . . .	17		10		17		17		16		14		14		16		16		19		16		18	

\* Equivalent velocity for Beaufort scale estimation.

TABLE IV. (continued).

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8 = E, 16 = S, 24 = W, 32 = N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

June, 1902.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	7	20	8	20	8	18	4	18	6	13	6	11	6	11	4	17	4	19	6	23	4	21	7	18
2	4	16	9	8	8	7	4	4	4	17	4	1	12	10	4	27	8	30	6	24	8	21	7	11
3	10	11	—	3	—	1	—	3	12	5	12	3	7	12	16	12	21	8	22	12	17	10	11	
4	10	7	6	7	7	24	8	20	8	19	6	22	4	17	4	18	4	12	6	14	4	14	4	21
5	7	21	8	18	4	10	4	21	4	16	2	13	4	11	4	14	4	18	8	21	8	8	4	13
6	32	4	4	9	6	4	4	13	32	12	—	2	32	2	—	1	—	0	30	3	28	10	9	7
7	8	5	4	7	4	10	7	7	18	8	26	8	24	8	26	8	13	9	12	4	6	32	10	7
8	10	2	7	3	16	4	12	3	8	12	8	16	7	22	8	18	9	13	4	16	7	13	7	7
9	6	13	9	7	8	6	4	7	6	25	6	22	8	14	8	10	8	13	12	13	8	11	12	11
10	10	11	11	11	11	7	4	7	—	2	32	4	—	1	—	1	—	2	—	1	—	0	—	0
11	—	1	—	0	—	1	—	1	—	0	—	10	—	0	—	0	8	2	10	19	16	15	18	13
12	16	12	16	20	14	19	8	10	4	17	4	12	—	7	—	1	6	8	8	10	8	13	9	4
13	8	11	8	6	9	21	8	21	7	26	6	23	6	23	7	19	6	18	6	13	4	15	6	17
14	6	12	6	11	6	15	4	13	32	12	—	6	—	2	4	7	4	4	8	—	—	2	—	3
15	—	1	28	1	32	7	—	2	—	1	—	0	12	3	12	4	15	16	7	26	6	26	4	26
16	24	13	30	1	32	13	28	19	28	13	—	8	16	7	18	13	18	20	16	33	14	23	9	17
17	8	13	7	26	4	23	6	15	4	14	8	19	8	26	6	13	8	13	20	5	8	7	10	12
18	6	15	7	18	6	16	4	22	8	18	8	20	8	14	8	18	6	20	8	15	12	9	14	7
19	10	15	7	34	4	22	7	13	4	14	4	11	—	7	—	1	28	1	2	1	—	2	—	0
20	—	2	—	2	—	2	1	2	32	7	32	7	32	10	—	7	—	2	32	7	25	10	—	2
21	5	10	8	18	8	21	8	22	8	24	7	22	8	19	8	11	—	11	—	3	—	1	—	0
22	—	0	6	9	8	16	12	15	—	10	32	5	4	4	—	2	—	2	—	3	—	0	8	8
23	8	7	—	4	8	4	4	25	7	28	4	24	4	18	4	7	—	7	—	0	—	4	4	4
24	32	2	1	6	8	3	8	12	7	4	10	—	3	12	2	—	1	—	0	8	4	4	32	3
25	31	5	—	2	17	2	9	4	10	12	8	9	8	11	7	20	8	17	8	29	8	23	7	23
26	12	7	14	12	6	10	12	11	—	4	—	3	—	3	—	2	9	7	12	23	8	14	16	27
27	17	26	12	21	12	13	12	13	12	13	8	21	12	14	12	11	8	18	8	13	4	11	6	9
28	9	2	4	10	—	8	—	2	4	3	—	7	—	2	—	2	16	13	16	29	20	16	19	15
29	19	7	19	29	16	17	12	10	16	16	18	23	12	13	20	18	20	13	20	24	18	21	17	16
30	12	33	14	32	15	22	14	16	8	13	12	10	12	7	8	8	4	10	—	3	—	0	—	0
Mean . . .		10		12		12		12		13		13		11		10		12		14		12		11

July, 1902.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.		
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
1	—	0	—	0	—	0	—	0	—	0	32	6	32	4	—	4	—	4	12	4	8	7	7	9	
2	32	5	—	0	—	0	8	4	8	15	9	15	9	16	8	21	8	19	8	21	8	15	12	12	
3	12	17	7	15	9	10	12	14	12	10	12	10	8	4*	8	8	8	2*	4	3	—	2	1	2	
4	32	7	—	0	—	2	4	1	4	10	8	12	12	9	4	7	4	7	—	5	32	2	4	7	
5	4	6	32	3	—	2	12	2	12	4	12	4	12	7	12	6	12	9	15	10	12	10	15	11	
6	12	8	10	5	12	6	12	4	12	12	8	15	10	10	8	4	6	7	6	7	—	7	10	2	
7	9	4	7	4	16	6	—	0	—	0	—	0	—	0	8	2	8	12	8	15	8	10	—	4	
8	—	0	—	0	—	0	—	0	—	0	—	2	—	0	—	0	—	0	—	0	—	0	—	0	0
9	15	4	8	7	8	14	12	15	12	18	9	12	8	12	8	13	10	8	6	5	8	2	—	1	
10	—	2	—	2	5	2	—	4	—	4	—	0	—	1	—	1	—	8	12	8	18	8	23	8	
11	7	15	12	8	16	11	20	17	12	10	12	11	12	13	18	16	12	10	12	12	12	10	7	11	
12	7	16	7	10	6	16	9	14	8	12	8	9	12	13	8	14	6	18	4	20	12	14	12	9	
13	13	12	8	19	7	13	8	9	12	12	8	5	8	10	8	8	4	4	4	22	4	26	6	28	
14	6	28	4	27	4	24	4	17	6	21	6	15	6	10	6	15	6	18	6	17	6	21	7	19	
15	6	20	6	15	8	15	4	21	7	18	7	13	12	6	12	2	10	4	6	4	7	13	7	18	
16	7	19	7	13	7	12	4	11	6	14	6	17	6	17	6	13	—	7	—	1	—	1	12	4	
17	12	5	9	4	9	2	8	3	8	7	12	7	17	5	16	10	16	14	8	18	8	17	16	28	
18	14	27	14	30	16	23	16	16	16	34	16	24	14	26	18	40	16	47	16	54	18	54	18	55*	
19	17	50*	17	59*	17	59*	16	64*	16	55*	16	55	12	46	12	35	10	28	12	26	10	21	10	18	
20	8	17	7	19	7	32	8	26	8	26	4	21	4	25	4	24	8	43	8	29	8	30	8	28	
21	8	15	8	10	7	12	7	17	4	7	12	9	8	9	8	8	—	8	12	8	8	8	12	8	
22	12	7	9	4	—	4	12	1	8	1	—	2	8	2	8	4	8	1	8	10	6	10	5	13	
23	5	13	6	10	5	17	7	4	8	12	8	15	8	17	6	15	8	14	8	18	8	15	8	17	
24	8	16	8	18	6	23	7	26	8	23	8	21	8	23	8	21	4	19	8	26	8	21	8	24	
25	8	20	8	17	8	15	8	22	8	10	8	8	7	8	8	8	8	7	12	8	14	8	10	9	
26	7	2	6	8	9	9	9	11	8	12	12	13	12	7	12	7	12	5	12	6	12	3	12	2	
27	4	2	4	4	—	0	8	1	—	0	4	5	4	4	4	11	4	8	7	10	4	7	4	14	
28	4	13	4	7	4	9	7	1	—	1	—	0	—	2	32	2	8	3	8	4	—	1	32	3	
29	4	4	2	2	32	4	32	2	32	4	—	7	—	4	—	3	32	1	—	0	—	2	—	2	
30	—	0	—	5	32	7	32	10	32	7	32	10	32	11	32	7	32	7	32	5	32	2	—	2	
31	32	1	32	0	9	1	8	7	8	13	8	12	8	18	12	18	12	16	20	24	20	25*	20	35*	
Mean . . .		11		10		11		11		12		11		11		11		12		13		12		13	

\* Equivalent velocity for Beaufort scale estimation

TABLE IV. (continued).

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8=E, 16=S, 24=W, 32=N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

August, 1902.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	12	28*	16	28*	12	42*	16	8*	10	15	14	15	10	10	6	10	4	16	4	13	4	13	31	5
2	31	2	12	2	31	9	24	6	4	4	4	4	4	32	6	7	7	4	16	8	19	8	19	7
3	7	20	8	30	7	10	4	38	6	16	4	18	7	42	7	24	8	15	7	10	2	5	—	6
4	—	0	4	2	7	7	7	7	15	6	20	7	18	7	34	7	22	7	23	7	21	9	10	7
5	14	11	14	10	6	18	4	25	4	23	4	21	4	18	7	19	8	17	4	17	4	15	8	13
6	6	17	6	11	6	5	4	26	4	26	4	17	4	16	7	23	7	23	7	19	6	18	4	10
7	—	1	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	6	6	6	6	4	7	4
8	4	4	4	9	6	10	4	16	6	21	9	16	7	11	9	18	9	15	12	19	8	18	12	23
9	16	26	9	15	8	18	9	15	9	18	9	23	4	13	4	13	4	11	4	13	6	14	4	7
10	4	2	—	0	—	0	—	0	—	0	8	2*	8	2*	10	2*	4	4*	6	1*	—	0	—	0
11	4	5*	4	4*	—	0	—	0	—	0	—	0	—	0	—	0	—	0	9	10	9	10	7	19
12	7	20	6	23	12	22	9	21	12	32	17	25*	14	31*	10	14*	12	8*	12	8*	10	4*	12	17*
13	7	8*	6	22*	6	17*	6	4*	8	11*	8	6*	8	6*	8	6*	8	4*	6	4*	6	4*	10	8*
14	12	4*	12	5*	12	6*	4	14*	6	17*	6	22*	6	17*	6	14*	4	17*	6	8*	6	8*	6	8*
15	6	14*	10	4*	6	8*	8	8*	—	0	8	2*	4	4*	4	8*	4	11*	4	17*	8	22*	8	17*
16	7	20*	4	4	4	14*	4	2*	—	0	—	0	—	0	—	0	—	0	10	8*	10	6*	9	14*
17	8	22*	9	22*	9	22*	12	20*	12	20*	16	35*	18	35*	18	35*	16	28*	18	22*	18	17*	9	17*
18	10	14*	15	6*	8	8*	12	14*	8	14*	14	8*	12	2*	8	6*	8	4*	6	17*	4	22*	10	6*
19	8	8*	10	6*	10	4*	15	4*	15	4*	15	2*	12	4*	14	11*	16	20*	16	22*	12	11*	14	17*
20	14	19*	12	11*	8	8*	7	4*	8	4*	16	20*	18	22*	18	22*	16	8*	12	4*	16	6*	14	1*
21	16	25*	16	2*	—	0	—	0	—	0	14	2*	16	21*	8	4*	14	8*	17*	10	8*	9	4*	1*
22	7	8*	8	2*	2	4*	2	2*	4	2*	4	4*	4	6*	8	11*	6	17*	6	6*	6	6*	8	6*
23	8	8	8	4*	6*	—	—	—	—	0	12	2*	8	2*	6	6*	6	11*	6	2*	6	2*	8	17*
24	4	17*	4	20*	7	17*	6	17*	4	11*	8	4*	6	11*	4	20*	6	14*	6	17*	6	8*	6	6*
25	9	6*	—	0	32	6*	32	6*	32	4*	30	6*	30	6*	32	2*	32	2*	31	4*	32	6*	30	8*
26	31	6*	23	8*	29	8*	28	4*	30	6*	30	2*	28	6*	28	6*	28	6*	30	4*	28	2*	30	2*
27	—	0	—	0	12	2*	—	0	6	6*	24	2*	—	0	—	0	—	0	—	0	10	2*	—	0
28	6	11*	6	20*	7	20*	4	14*	4	8*	8	2*	10	9	14	15	12	4	8	13	4	13	4	17
29	32	7	—	4	—	0	9	6	6	13	6	18	5	20	4	20	4	2	—	2	24	4	28	9
30	12	7	10	11	12	17	8	21	12	21	12	19	8	23	8	21	8	19	7	22	8	20	6	20
31	8	32	9	29	6	26	4	20	8	29	8	23	8	23	8	18	12	17	16	16	12	14	12	16
Mean . . .	12		11		11		11		11		11		13		12		11		12		10		11	

\* Equivalent velocity for Beaufort scale estimation.

September, 1902.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	15	13	12	13	8	10	10	13	10	13	8	13	8	13	12	13	10	16	8	20	14	18	16	18
2	15	28	12	13	10	18	12	21	10	15	6	16	8	23	8	26	7	26	6	25	4	26	9	19
3	4	14	4	21	4	23	8	18	6	19	6	23	6	19	8	22	8	24	7	24	7	22	4	20
4	8	18	8	10	8	10	12	5	8	7	10	8	8	10	8	19	8	18	4	16	—	10	8	2
5	4	7	4	2	—	0	—	0	—	0	—	0	—	0	—	0	32	6	—	0	32	2	16	6
6	—	0	28	4	32	9	1	8	4	7	8	4	10	8	12	7	—	7	7	7	8	13	7	15
7	8	14	12	17	12	22	12	22	12	18	—	13	8	1	10	8	12	13	8	13	12	12	15	15
8	15	18	15	13	14	18	12	18	16	16	12	13	12	13	10	22	8	21	12	20	16	15	9	13
9	8	9	12	6	—	0	4	2	—	2	—	0	10	7	12	8	8	2	1	1	—	3	2	4
10	—	4	8	3	6	8	12	14	9	7	12	11	12	4	—	5	4	2	—	2	12	2	8	4
11	7	7	7	7	8	10	8	13	10	11	4	15	6	11	4	21	4	12	—	4	4	13	6	9
12	7	9	8	13	1	8	4	4	9	7	7	13	6	15	6	14	8	14	4	11	8	1	4	1
13	—	2	10	2	6	4	4	6	—	7	—	0	12	2	4	6	—	7	4	8	1	8	1	3
14	4	4	4	5	4	2	—	2	—	2	—	0	—	0	—	0	—	0	0	0	—	0	—	0
15	—	0	8	2	8	7	12	10	4	15	7	18	8	16	16	20	16	25	14	21	14	21	8	13
16	8	11	8	15	8	20	8	18	8	20	7	18	4	13	10	7	—	1	—	0	10	2	8	10
17	—	1	—	0	8	1	6	9	8	7	7	13	7	16	8	20	8	18	8	20	8	15	8	15
18	8	17	12	17	12	27	8	23	16	26	16	24	12	19	12	21	8	25	10	16	8	7	9	11
19	8	4	—	2	—	0	—	0	8	1	12	2*	—	0	4	2*	4	4*	4	2*	2	2	—	0
20	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	8	3	8	8	4	13	8	19
21	4	14	4	20	8	13	4	15	4	23	4	23	8	26	7	22	4	18	7	20	12	18	8	21
22	8	13	8	13	10	11	—	0	—	2	—	5	—	0	—	2	—	0	8	4	9	13	8	17
23	8	24	8	14	7	19	7	21	8	19	6	19	8	20	8	20	8	17	8	16	12	11	12	15
24	10	13	8	23	8	20	8	9	10	5	8	3	12	2	—	0	—	1	—	0	—	0	32	1
25	—	0	—	0	9	5	9	8	12	7	12	4	8	16	8	18	9	23	12	16	4	4	12	7
26	8	5	8	1	—	1	—	0	—	1	—	0	—	0	—	1	4	4	3	—	0	—	—	0
27	—	0	—	0	—	1	32	2	32	6	—	3	32	4	—	2	4	1	8	4	12	7	12	7
28	16	7	8	10	12	12	4	14	12	15	12	4	14	4	12	10	18	15	9	12	12	7	8	4
29	12	1	4	6	2	7	9	2	8	3	12	4	10	7	8	7	6	14	4	24	4	21	—	9
30	—	0	—	0	—	0	6	3	—	4	—	0	—	0	—	1	—	1	—	4	28	1	—	0
Mean . . .	9		8		10		9		10		9		9		11		11		11		10		9	

\* Equivalent velocity for Beaufort scale estimation.

TABLE IV. (continued).

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8=E, 16=S, 24=W, 32=N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

October, 1902.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.							
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.						
1	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0						
2	8	10	8	5	12	13	10	12	10	15	10	8	9	12	8	6	9	12	18	8	13	8	6	10	8	10	8	5		
3	—	9	—	0	—	0	—	0	—	2	—	0	—	0	—	2	28	2	—	0	—	0	—	0	—	0	—	0		
4	—	0	4	4	4	16	—	0	—	0	—	0	—	0	—	0	—	0	12	3	12	1	—	0	—	0	—	0		
5	—	0	—	0	—	1	4	2	6	16	4	16	7	18	7	24	8	23	6	22	4	23	4	18	4	18	1			
6	6	19	7	20	4	18	4	21	4	18	4	15	4	13	6	17	7	10	8	14	32	5	—	1	—	1	—	1		
7	4	2	—	0	—	0	—	0	—	0	—	4	2	4	3	4	7	8	11	6	11	4	14	—	4	14	—	4		
8	4	21	4	20	4	7	4	11	—	0	6	2	—	1	—	0	—	2	4	1	—	0	—	0	—	0	—	0		
9	4	1	2	7	—	4	—	0	—	2	—	0	—	0	10	4	4	4	—	0	4	3	4	4	1	—	1	—	1	
10	—	1	4	4	4	10	8	10	8	7	8	15	8	16	8	19	8	17	8	20	8	18	8	18	8	20	0	—	0	
11	8	15	8	11	8	10	8	10	4	2	4	6	—	5	—	5	—	5	—	0	—	0	—	0	—	0	—	0		
12	—	0	12	5	12	5	12	12	6	6	8	4	4	8	—	8	12	8	10	10	10	9	6	7	17	17	17	17		
13	4	22	4	8	12	14	12	23	8	18	20	15	16	21	16	14	16	13	—	2	16	7	16	5	16	5	16	5		
14	—	0	—	0	20	4	20	26	16	27	16	25	16	26	16	13	16	15	16	20	16	34	12	18	18	18	18	18		
15	12	19	16	23	8	29	8	21	8	23	8	24	10	21	12	13	12	18	12	15	12	11	4	18	18	18	18	18		
16	4	12	7	21	8	28	8	24	8	20	7	17	6	18	5	18	6	13	8	18	8	13	12	9	12	9	12	9		
17	12	10	12	10	4	13	8	15	8	8	8	12	8	10	8	18	6	8	6	32	8	20	6	22	2	22	2	22	2	
18	6	21	4	14	4	13	—	10	32	1	4	7	6	10	—	1	—	0	—	0	—	4	—	0	—	0	—	0		
19	—	0	—	0	—	0	—	0	—	0	4	4	8	13	8	15	8	16	6	20	4	21	4	19	4	19	4	19		
20	4	18	4	15	4	10	4	10	6	8	7	21	6	28	8	23	9	17	4	12	4	2	—	0	—	0	—	0		
21	—	0	—	1	—	1	16	5	—	0	4	2	6	17	9	21	8	18	4	11	4	7	—	0	—	0	—	0		
22	—	0	—	1	—	0	—	1	12	2	12	7	12	4	10	7	10	11	12	7	12	18	11	13	11	13	11	13		
23	12	13	8	18	8	22	8	15	8	18	12	19	8	28	6	26	7	26	8	23	8	22	8	21	8	21	8	21		
24	8	17	8	19	8	23	8	21	8	21	9	26	8	35	8	46*	8	55*	8	55*	8	25*	6	25*	6	25*	6	25*		
25	4	25*	4	25*	4	8*	4	14*	4	14*	4	4*	7	4*	4	1*	6	4*	4	4*	12	4*	4	4	4	4	4	4	4	
26	—	0	—	0	—	0	—	0	—	0	—	0	—	0	30	1*	31	1*	32	2*	32	4*	3	4*	3	4*	3	4*	3	
27	4	2*	32	4*	32	8*	32	8*	32	8*	1	8*	31	1*	32	4*	32	4*	32	4*	32	2*	32	2*	32	2*	32	2*	32	
28	32	2*	20	2*	20	2*	—	0	8	14*	6	11*	12	8*	12	8*	7	14*	8	14*	8	14*	8	14*	8	14*	8	14*	8	
29	9	8*	10	11*	10	8*	8	8*	8	8	10	14*	8	6*	8	9	—	1	—	3	7	7	7	7	7	7	7	7	7	
30	7	18	—	0	17	16	15	18	8	11	12	6	10	5	12	9	12	11	12	10	12	14	8	16	16	16	16	16	16	
31	12	10	8	10	12	11	12	4	10	1	10	6	12	2	8	3	8	18	9	6	10	10	12	10	10	10	10	10	10	
Mean . . .		9		8		9		10		9		10		11		11		12		12		10		10		10		10		10

\* Equivalent velocity for Beaufort scale estimation.

November, 1902.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.						
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.					
1	14	12	14	10	12	10	20	19	16	22	8	18	12	13	12	18	16	27	12	21	8	15	16	19	16	19	16	19	
2	16	23	15	26	16	18	8	17	8	17	12	10	14	12	8	13	12	10	12	27	8	21	8	13	8	13	8	13	
3	8	18	9	10	10	12	10	11	8	12	8	10	7	11	12	10	8	13	7	11	10	1	10	2	10	2	10	2	
4	10	7	8	6	8	10	7	5	—	7	12	1	12	1	12	8	8	11	7	13	10	15	7	10	7	10	7	10	
5	6	13	6	7	11	2	10	8	16	8	12	4	12	12	15	8	13	12	6	10	9	12	9	12	9	12	9	12	
6	13	11	12	6	—	0	—	0	—	0	—	0	32	4	32	2	2	2	2	6	32	5	—	0	—	0	—	0	
7	4	3	—	0	—	0	—	0	4	6	4	17	4	14	10	9	6	7	6	7	—	2	—	0	—	0	—	0	
8	—	0	32	7	—	0	4	0	8	21	8	14	8	10	7	10	6	10	8	21	8	14	8	8	8	8	8	8	
9	9	4	12	10	8	7	8	7	12	11	12	7	9	7	10	6	—	0	—	0	—	0	—	0	—	0	—	0	
10	—	0	—	0	—	1	5	32	4	—	0	—	0	—	0	—	0	—	0	—	32	2	32	2	32	2	32	2	
11	—	0	—	0	—	0	—	2	12	7	12	10	—	12	15	12	14	8	14	8	11	8	15	8	23	8	23	8	
12	8	25	8	11	8	11	6	18	8	15	12	5	8	7	14	8	12	5	8	13	4	13	4	10	4	10	4	10	
13	12	7	6	7	6	17	7	19	6	14	7	17	8	10	5	8	7	—	0	—	1	—	4	4	4	4	4	4	
14	—	0	—	0	—	0	—	0	—	9	2	4	32	1	2	4	32	6	32	5	32	5	32	6	32	6	32	6	
15	2	8	32	7	32	3	32	1	—	1	—	0	—	0	—	0	—	0	—	32	2	0	32	7	32	7	32	7	
16	32	10	32	7	2	8	—	7	—	0	—	2	—	1	—	2	32	4	32	6	32	7	—	4	—	4	—	4	
17	4	4	—	0	32	11	32	2	—	0	—	0	6	6	8	12	10	17	8	24	6	16	8	24	6	16	8	24	
18	8	17	12	13	8	8	8	21	8	22	8	22	8	13	8	15	8	10	8	12	8	13	8	15	8	13	8	15	8
19	6	9	6	13	4	13	8	10	8	11	8	11	8	14	6	15	7	17	8	11	8	17	8	11	8	17	8	11	
20	8	17	8	5	12	7	10	7	10	7	10	7	4	13	2	12	6	13	9	5	8	6	8	6	8	6	8	6	
21	8	7	4	6	—	3	—	4	32	5	31	8	31	7	32	8	2	4	2	7	32	2	1	10	10	10	10	10	
22	32	4	4	13	32	7	32	5	2	12	32	3	30	4	32	3	31	5	—	0	32	9	—	7	—	7	—	7	
23	32	1	—	2	—	0	—	0	—	0	—	0	30	4	32	2	32	7	32	4	32	4	—	7	—	7	—	7	
24	32	8	32	6	2	4	32	5	32	4	—	0	31	6	31	2	30	4	32	5	32	6	32	6	32	6	32	6	
25	32	6	32	6	32	4	—	2	—	0	4	9	6	14	8	13	8	20	7	19	8	21	8	18	8	18	8	18	
26	8	21	8	21	8	21	8	23	8	20	8	20	8	17	8	17	8	15	4	7	6	15	32	3	32	3	32	3	
27	1	6	31	3	32	7	32	6	32	6	32	9	32	7	31	7	32	4	32	4	32	7	32	4	32	4	32	4	
28	32	5	32	2	—	0	—	1	—	0	2	1	—	1	30	2	30												

TABLE IV. (continued).

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8 = E, 16 = S, 24 = W, 32 = N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

December, 1902.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		16.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	32	4	32	5	32	4	4	5	4	4	4	6	4	6	4	7	—	1	4	4	—	4	—	1
2	8	10	8	10	4	15	6	34	6	18	6	21	7	20	7	15	7	18	6	18	6	13	6	17
3	6	15	8	14	8	13	4	12	4	6	—	4	—	2	4	4	32	4	32	4	32	5	1	6
4	1	9	1	7	32	5	1	11	32	6	31	7	31	8	31	8	31	7	31	5	32	4	—	4
5	—	1	16	2	6	3	16	1	8	4	8	18	8	15	7	16	7	14	7	14	4	15	4	2
6	32	4	32	2	32	5	32	7	31	6	30	7	30	7	30	7	31	10	32	3	1	11	1	9
7	32	7	32	7	8	6	16	9	16	14	20	18	17	12	17	21	17	18	17	13	15	16	15	7
8	18	18	16	18	16	13	16	20	6	14	8	7	8	9	8	8	17	11	16	13	12	8	12	7
9	9	9	10	14	16	13	16	11	12	13	9	11	12	16	12	15	9	14	9	11	9	8	9	10
10	8	20	7	11	7	7	7	21	8	13	7	18	7	19	7	16	8	12	32	12	—	2	—	0
11	—	1	10	2	8	12	15	14	12	4	12	10	12	10	12	14	12	10	8	19	8	14	12	16
12	12	15	12	14	12	18	12	19	10	10	6	12	8	14	8	10	12	12	12	16	12	14	12	11
13	15	11	16	14	16	10	12	13	16	18	16	16	15	15	14	13	14	17	12	12	12	9	12	10
4	12	7	12	4	12	4	8	6	8	5	8	5	4	4	32	5	32	5	31	6	2	4	1	7
	32	3	32	7	32	8	1	9	32	7	32	11	31	5	31	10	31	10	28	10	32	9	32	5
	32	8	32	4	24	4	32	4	32	3	—	2	32	3	—	2	32	3	28	3	28	4	28	3
7	28	4	28	6	28	3	28	5	32	5	32	4	30	9	31	7	1	7	31	8	28	7	—	3
8	—	0	—	0	—	0	—	0	0	0	16	3	12	7	16	6	14	8	8	7	13	8	7	7
19	8	10	8	12	8	10	15	8	12	13	12	9	12	13	14	15	15	13	14	11	14	5	15	15
20	16	8	16	7	15	10	15	7	8	6	8	5	10	10	8	8	11	12	7	10	10	8	10	10
21	8	13	7	11	8	16	8	14	8	14	8	15	9	19	10	13	8	19	Vble.	18	4	13	4	15
22	Vble.	7	4	8	12	9	—	4	—	2	—	4	2	3	32	4	28	4	28	6	28	5	28	4
23	32	4	32	4	32	2	32	5	Vble.	4	—	2	28	3	30	3	28	4	12	3	8	14	9	10
24	8	14	16	7	—	2	—	1	—	1	—	0	—	1	6	4	8	7	—	3	4	2	4	4
25	32	2	12	4	12	6	12	4	12	13	8	10	10	10	12	10	—	9	—	1	—	0	—	1
26	—	1	—	1	—	3	—	1	12	1	4	10	4	3	—	8	—	4	30	7	30	4	30	4
27	—	1	—	0	Vble.	2	—	3	—	1	26	1	28	7	30	7	—	7	—	1	—	3	28	2
28	28	4	32	6	32	7	32	5	32	7	32	5	31	6	30	6	31	7	31	9	31	9	32	9
29	32	8	32	4	28	7	28	4	32	1	—	2	—	3	12	4	12	5	8	10	8	10	8	10
30	28	8	31	10	32	7	32	1	—	2	30	4	30	4	31	4	32	7	32	7	32	5	32	4
31	—	2	8	5	13	8	20	12	20	8	12	6	12	6	8	—	4	—	4	1	—	1	16	3
Mean . . .		7		7		8		9		8		8		9		9		9		8		8		7

January, 1903.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	32	2	32	—	32	9	32	6	32	6	32	7	32	7	31	4	32	4	—	5	32	4	32	3
2	—	0	—	11	Vble.	2	—	2	—	3	—	2	—	0	—	0	—	5	4	—	5	4	—	4
3	4	4	4	5	—	4	28	2	32	6	32	7	32	9	1	8	1	10	32	8	32	12	2	10
4	28	4	28	5	Vble.	7	8	14	8	15	8	13	8	13	10	8	—	3	32	1	32	3	32	9
5	32	7	32	8	32	8	—	2	—	2	—	5	—	3	—	0	—	0	—	3	32	2	32	3
6	—	2	—	2	—	2	—	1	30	9	28	6	32	5	31	8	1	9	1	5	—	0	32	4
7	—	3	—	0	—	1	—	2	—	0	8	2	8	6	7	13	7	12	—	5	32	6	—	4
8	—	0	—	0	—	0	12	1	12	8	10	8	14	6	10	8	4	32	4	32	8	32	6	6
9	32	5	32	12	32	4	32	5	32	7	32	7	30	7	32	8	32	8	32	5	32	6	—	2
10	32	7	32	4	28	7	—	0	30	3	30	11	31	11	31	7	32	10	32	11	32	7	32	3
11	32	5	32	2	32	3	4	2	8	8	8	9	10	9	—	2	12	7	8	8	12	5	8	9
12	8	9	8	12	4	7	—	1	32	1	32	5	32	7	2	7	32	7	32	7	32	6	—	0
13	32	2	8	6	9	5	8	13	8	11	6	10	8	13	6	11	15	4	8	3	—	4	8	6
14	8	6	8	8	Vble.	3	15	3	14	9	15	10	14	13	15	11	15	10	16	9	14	10	12	8
15	12	7	12	9	12	7	12	4	8	11	8	8	12	13	8	9	8	11	8	9	10	9	12	4
16	32-16	9	12	6	12	8	8	10	8	10	8	13	8	15	8	13	8	11	8	9	4	10	—	10
17	—	1	—	0	—	0	4	8	4	7	4	2	—	5	—	—	1	—	—	2	—	3	—	3
18	32	5	32	7	32	2	32	1	—	0	—	0	—	2	—	2	—	1	—	0	32	2	32	2
19	32	3	32	4	32	3	—	1	—	1	4	5	6	5	12	3	10	3	—	4	—	1	Vble.	3
20	8	9	8	7	8	10	8	9	8	10	14	7	12	9	4	9	—	4	—	1	28	1	—	1
21	4	3	4	2	24	0	16	6	4	24	8	13	16	9	16	13	16	12	16	9	0	16	4	4
22	16	5	16	6	6	6	15	7	16	8	15	17	12	14	12	8	14	11	14	10	8	13	8	13
23	12	18	8	15	4	16	8	11	—	3	—	5	—	1	—	3	—	3	—	5	32	5	32	12
24	32	8	31	2	32	13	32	7	12	3	8	10	8	12	8	12	10	10	8	12	6	13	6	10
25	4	10	4	7	—	4	—	0	32	2	—	2	30	2	—	3	6	3	32	3	4	3	32	10
26	32	6	32	9	32	7	32	1	—	2	—	0	10	5	—	8	—	2	32	4	—	2	—	2
27	—	0	—	0	—	0	—	0	—	0	—	—	1	—	—	3	—	3	—	0	—	0	—	0
28	32	3	—	3	—	5	8	9	12	10	12	14	10	8	8	9	8	8	2	4	—	4	1	1
29	32	1	32	4	32	5	32	8	—	6	8	4	6	8	12	4	10	—	5	1	Vble.	5	12	2
30	32	5	—	6	—	2	8	6	4	6	4	16	6	20	6	18	6	15	6	13	6	14	6	11
31	12	7	—	3	—	3	—	2	—	0	—	0	—	3	—	3	—	0	—	0	—	0	—	0
Mean . . .		5		5		5		5		6		7		8		7		6		5		5		5

TABLE IV. (continued).

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8 = E, 16 = S, 24 = W, 32 = N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

February, 1903.

Day.	2.		4.		8.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	—	0	—	0	—	0	12	5	8	5	6	8	6	3	—	0	6	4	8	11	8	8	—	4
2	—	1	—	0	—	0	—	4	—	1	—	1	—	2	—	1	—	—	—	—	—	—	—	1
3	—	2	32	2	—	5	—	—	—	2	32	4	32	4	32	7	—	2	—	—	0	—	—	0
4	—	1	16	1	—	2	—	1	—	0	—	—	—	1	—	0	—	1	—	—	1	—	8	4
5	4	5	8	17	8	19	8	14	8	16	8	15	6	16	8	11	7	10	4	14	4	8	4	7
6	—	1	—	0	—	6	—	3	12	8	8	14	8	17	8	16	8	18	8	12	7	14	7	10
7	8	14	8	7	12	6	8	7	8	8	10	8	10	7	10	8	8	—	5	—	2	2	1	
8	—	0	32	2	—	0	—	0	4	7	4	13	4	16	7	23	7	14	4	15	8	9	Vble.	5
9	—	0	—	2	6	4	—	0	—	1	32	1	—	3	8	5	6	8	8	12	11	8	8	6
10	12	4	12	6	—	6	8	8	13	13	12	13	14	11	12	10	10	11	10	12	12	12	12	10
11	10	6	12	9	11	8	6	5	12	8	21	8	16	8	12	10	11	8	14	8	13	7	10	11
12	8	15	8	18	8	18	8	8	22	9	13	8	12	6	11	7	13	7	13	7	14	9	13	
13	8	17	9	15	9	13	9	17	8	19	8	15	8	21	8	19	9	18	8	17	8	15	8	18
14	8	17	8	20	8	24	8	27	8	26	8	18	8	20	8	18	8	18	8	13	7	13	12	9
15	15	7	15	13	12	7	Vble.	3	4	7	4	7	7	10	7	14	8	17	7	15	8	13	8	13
16	12	8	8	3	8	3	8	10	8	9	8	11	7	15	12	13	12	12	12	11	9	11	8	10
17	8	15	8	8	23	8	8	20	10	16	8	14	8	15	8	12	8	10	8	10	12	8	8	8
18	8	22	6	20	8	13	12	8	12	11	12	10	12	12	14	12	12	9	12	11	7	19	7	18
19	10	8	—	4	—	1	—	0	—	4	12	6	15	10	18	8	21	8	19	7	14	8	16	16
20	8	9	8	9	—	2	—	1	—	2	8	5	10	8	10	8	18	7	18	7	18	4	19	4
21	9	17	8	7	8	3	1	5	10	5	10	10	4	9	8	5	10	5	8	10	12	7	Vble.	1
22	8	3	4	4	32	4	—	3	2	8	6	20	4	21	4	21	6	26	7	21	6	22	8	21
23	4	12	4	19	4	17	12	0	—	4	—	1	—	2	—	0	—	0	—	1	1	5	—	1
24	32	2	—	5	32	1	8	4	—	8	12	7	31	8	8	4	4	12	8	16	8	15	4	15
25	6	13	8	8	8	8	12	8	8	12	8	12	10	12	8	12	7	22	7	13	7	12	8	11
26	32	11	—	2	24	2	12	2	12	8	7	8	7	16	7	12	8	4	4	15	4	13	4	13
27	8	14	8	15	8	25	8	12	8	16	4	17	8	24	6	20	8	21	8	20	8	11	8	14
28	10	11	8	17	10	13	12	13	4	21	6	23	6	23	4	17	4	—	—	2	—	0	—	0
Mean . . .	8	9	8	8	8	8	10	10	10	10	10	12	11	12	11	12	12	12	10	10	9	9	9	9

March, 1903.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	—	1	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	4	1	6	—	5
2	—	0	10	6	8	9	20	4	Vble.	17	6	7	6	11	7	15	7	15	4	15	12	10	12	11
3	14	17	12	13	12	9	18	11	12	15	12	11	14	15	12	13	14	13	12	16	8	10	6	13
4	8	6	—	0	—	2	—	1	—	1	32	2	—	2	5	1	7	32	8	32	7	—	9	9
5	—	3	8	1	32	4	—	5	8	3	—	3	8	3	6	9	1	9	1	9	4	9	4	15
6	8	24	6	28	6	24	8	28	8	32	8	26	8	29	8	26	9	14	12	11	—	4	—	4
7	—	3	—	3	12	3	12	13	7	7	4	22	2	20	7	26	2	21	4	19	6	17	6	8
8	9	13	6	10	6	17	5	20	8	18	8	16	7	17	2	18	8	18	8	17	4	16	10	9
9	9	3	12	7	7	14	4	24	4	26	4	18	1	21	6	20	6	19	8	13	6	12	6	23
10	4	18	4	12	6	12	4	12	4	15	4	10	4	11	6	14	4	15	8	15	7	20	7	23
11	7	24	7	27	7	20	8	11	4	20	4	19	7	15	6	14	4	11	4	13	6	12	7	12
12	8	7	6	9	7	8	7	24	4	15	4	12	6	17	7	22	7	20	6	19	5	11	8	7
13	8	17	6	12	8	9	4	8	8	10	8	5	—	3	—	1	—	2	8	5	8	4	6	5
14	1	4	12	3	2	2	4	7	—	11	6	5	4	8	—	6	—	3	4	4	32	1	32	1
15	32	4	32	9	32	6	32	8	32	9	2	12	32	12	32	11	1	13	2	4	32	5	—	5
16	32	4	32	6	6	10	4	8	7	4	8	10	10	4	8	18	4	26	7	24	4	21	4	22
17	8	27	8	14	8	23	8	22	8	27	4	23	8	23	8	22	8	23	8	25	8	23	8	24
18	8	22	8	20	8	20	8	17	7	15	7	12	8	12	8	11	8	17	8	11	7	16	9	20
19	7	11	7	15	9	9	8	9	8	10	8	12	8	15	7	12	6	17	4	24	7	26	6	23
20	4	24	11	8	6	5	4	1	—	1	—	0	—	0	—	0	—	0	—	0	32	9	32	8
21	—	1	—	0	—	1	4	7	9	10	12	8	12	6	8	6	8	13	10	10	2	7	4	3
22	—	2	12	3	10	3	6	8	12	7	12	17	12	15	10	16	9	22	8	20	7	24	8	9
23	—	1	—	0	8	1	12	8	12	7	12	10	12	9	9	10	9	9	8	9	4	21	4	25
24	6	19	4	23	6	20	6	20	8	25	8	24	8	16	6	19	6	18	12	12	10	17	9	12
25	8	8	8	17	8	10	16	9	—	0	—	0	—	1	—	0	—	0	—	0	—	0	8	2
26	8	3	6	5	6	13	12	12	8	12	8	18	8	13	7	20	6	18	—	8	8	3	8	6
27	8	8	10	8	10	9	8	8	12	12	12	9	—	3	—	0	1	1	32	4	2	7	4	9
28	4	12	4	15	8	4	10	28	5	—	2	4	3	4	4	2	7	1	2	1	10	1	1	5
29	1	11	32	10	10	15	—	0	8	14	8	17	4	14	2	7	32	8	32	6	—	6	—	3
30	—	1	—	1	10	5	4	7	4	11	4	17	4	21	6	23	7	22	8	18	7	17	8	14
31	8	14	8	20	28	10	6	7	4	14	—	4	—	0	—	0	—	0	12	0	8	17	8	18
Mean . . .	10	10	10	10	10	11	12	11	12	11	11	11	11	12	12	12	12	12	11	12	12	11	11	11

TABLE IV. (continued).

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8 = E, 16 = S, 24 = W, 32 = N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

April, 1903.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.		
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
1	7	22	16	11	8	6	—	0	—	1	—	1	—	—	1	8	4	6	11	6	21	6	11		
2	6	10	6	5	5	18	—	5	18	6	15	6	14	9	11	8	14	4	15	6	13	6	18		
3	6	18	6	10	6	7	—	8	—	1	—	0	—	2	10	5	4	8	4	10	4	15	4		
4	4	13	4	15	4	16	7	—	20	6	24	7	15	7	21	8	20	6	16	7	15	7	16		
5	8	20	8	15	8	11	4	18	8	17	8	19	8	24	8	23	8	23	8	22	7	20	8	27	
6	8	21	6	25	6	17	4	23	8	19	4	18	4	13	8	8	10	4	—	3	4	2	—	3	
7	20	2	—	2	8	4	8	4	4	5	—	5	—	2	2	1	—	0	10	7	7	5	4	11	
8	4	12	4	3	4	6	—	6	32	3	—	1	—	3	8	7	8	6	—	5	—	2	—	0	
9	—	0	—	0	2	2	—	8	5	4	6	4	10	5	12	6	—	3	—	0	—	2	—	2	
10	—	2	7	3	7	13	6	15	4	12	4	7	12	9	12	12	10	13	12	15	10	17	8	11	
11	9	16	8	20	8	17	8	15	6	12	16	5	2	9	10	5	—	1	—	1	—	0	—	0	
12	—	0	—	0	—	0	32	4	4	12	32	15	32	17	9	11	8	18	8	28	9	25	6	9	
13	—	6	—	4	—	0	6	9	12	14	8	22	8	31	6	26	7	31	Vble.	24	4	10	32	4	
14	—	2	—	2	—	1	—	0	—	1	—	0	—	0	—	0	31	1*	32	2*	6	4*	10	8*	
15	7	8*	6	6*	—	0	32	1*	—	0	—	0	—	4	3	6	12	4	10	10	7	6	18	5	15
16	6	19	6	17	6	20	8	22	4	17	4	15	—	9	2	7	—	3	—	0	—	0	—	0	
17	—	0	—	8	—	2	32	7	—	1	—	4	—	3	1	5	32	9	4	9	4	20	4	16	
18	4	17	4	18	4	18	4	21	7	16	7	19	7	18	10	10	8	10	12	6	8	8	8	12	
19	8	15	7	19	6	21	7	21	4	11	9	12	10	11	12	11	10	14	8	13	10	14	9	9	
20	8	10	6	16	6	16	6	8	16	9	—	1	—	1	—	0	1	2	—	7	6	1	32	2	
21	2	4	30	4	30	6	12	3	—	4	—	0	—	1	—	2	—	0	—	1	4	2	—	2	
22	—	0	—	1	12	7	—	2	8	3	—	4	—	1	—	1	8	4	8	13	8	13	7	26	
23	7	8*	7	16	7	15	10	21	6	15	8	2*	12	2*	10	8	8	4	17	7	23	8	8	20	
24	7	23	4	13	6	18	4	22	16	7	4	13	6	19	6	20	6	21	4	13	4	13	8	7	
25	7	17	4	15	9	7	8	—	—	7	—	0	—	0	—	4	2	6	3	—	5	8	1	8	
26	—	0	—	0	—	0	—	0	—	1	—	0	—	0	—	0	—	0	32	1	—	2	—	1	
27	—	0	—	0	—	0	—	0	—	0	—	0	—	20	1	—	0	—	0	—	0	—	0	0	
28	—	0	—	0	32	3	—	0	—	0	—	2	—	1	—	1	—	1	—	1	—	0	8	2	
29	2	2	—	2	—	2	—	0	—	0	—	0	—	1	—	8	4	9	4	16	4	17	6	16	
30	4	24	6	22	6	28	6	22	4	25	4	13	4	13	2	8	—	5	—	0	—	0	—	1	
Mean . . .		10		9		9		10		9		7		8		8		8		9		9		9	

\* Equivalent velocity for Beaufort scale estimatio

May, 1903.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	—	1	—	0	—	0	—	4	—	0	12	5	8	7	10	12	12	11	8	8	8	11	8	11
2	8	13	8	16	8	19	15	25	12	16	9	15	8	13	7	14	8	26	12	19	12	22	14	17
3	12	16	8	13	6	16	6	35	8	21	—	10	6	7	6	10	12	4	—	4	14	4	15	4
4	—	2	10	2	4	7	4	1	—	2	—	1	10	2	7	4	6	17	4	16	6	17	4	16
5	4	21	6	26	8	12	10	10	16	2	12	5	—	3	10	8	—	1	—	2	4	1	—	1
6	—	2	12	2	12	8	6	11	8	—	4	6	6	32	10	—	4	—	1	—	1	8	4	4
7	9	9	9	9	—	3	1	2	—	5	12	5	—	3	7	12	8	14	8	14	10	7	10	10
8	10	9	—	6	—	2	—	1	—	1	—	0	—	3	12	5	9	15	8	14	8	20	8	21
9	8	23	8	16	8	15	6	17	6	15	6	12	6	15	7	13	7	11	8	10	6	10	6	12
10	4	13	6	17	6	18	4	21	4	16	4	16	8	21	8	18	8	23	4	24	7	22	7	22
11	6	18	6	26	6	26	4	26	8	16	4	19	6	22	7	19	7	18	4	17	4	16	8	6
12	8	4	—	0	—	0	—	0	—	0	—	0	—	1	—	1	—	1	—	0	—	—	0	0
13	—	0	—	0	—	0	—	0	—	0	—	0	—	1	12	4	15	18	14	21	9	13	8	10
14	10	8	12	1	12	18	4	10	—	4	—	0	—	0	—	0	—	0	—	0	—	0	—	0
15	—	0	—	0	—	0	8	3	12	2	—	6	—	1	—	0	—	0	—	0	—	0	—	0
16	—	0	—	0	—	0	—	0	—	0	28	1	30	6	30	6	32	6	20	5	20	7	—	1
17	6	7	8	17	6	17	9	19	8	13	—	4	32	4	31	8	30	10	4	7	10	9	8	4
18	8	3	29	5	32	10	—	7	16	11	—	7	6	8	6	5	4	13	32	6	2	13	4	7
19	12	4	8	10	7	8	32	11	—	1	32	8	32	7	32	6	31	6	32	7	—	1	4	2
20	—	4	32	2	—	3	—	0	—	0	—	10	3	Vble.	10	12	18	8	21	—	7	28	6	7
21	—	4	8	7	Vble.	4	—	2	—	3	Vble.	2	8	4	8	15	8	30	8	34	9	33	8	20
22	7	24	9	20	8	9	12	12	8	22	8	29	8	23	8	22	8	22	6	24	6	29	6	36
23	6	31	6	30	7	26	8	24	4	32	6	22	20	12	12	9	—	1	—	0	—	0	—	0
24	8	8	8	8	12	21	16	20	9	20	8	20	6	25	7	25	8	23	6	27	8	24	8	20
25	8	17	6	18	6	17	10	15	8	12	8	9	7	16	8	9	8	14	4	14	8	27	7	27
26	4	27	4	21	4	17	10	13	12	10	12	9	14	12	12	8	10	11	8	17	8	16	10	15
27	9	14	7	9	8	9	—	7	—	1	8	3	6	12	8	26	4	28	4	19	—	6	2	1
28	—	5	—	0	—	0	—	2	4	20	4	21	12	17	32	4	28	—	2	30	4	1	4	7
29	—	0	—	0	6	8	6	21	8	7	6	18	6	18	8	8	—	2	—	2	—	0	—	0
30	28	4	32	6	—	9	—	6	—	0	8	9	8	11	10	9	10	11	6	9	10	8	9	15
31	8	20	9	17	8	15	7	24	6	21	8	18	8	10	8	17	7	17	4	27	5	27	7	23
Mean . . .		10		10		10		11		9		9		10		10		12		12		11		10

TABLE IV. (continued).

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8=E, 16=S, 24=W, 32=N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

June, 1903.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	8	15	7	30	7	22	6	24	8	29	8	21	8	20	7	23	6	21	4	23	2	28	7	26
2	7	22	8	31	7	12	8	21	8	19	8	19	8	23	8	21	8	20	8	23	12	14	8	10
3	8	12	4	7	32	5	—	1	—	0	32	5	32	5	32	4	—	31	5	24	3	—	1	
4	—	1	—	2	8	4	—	15	11	15	9	10	17	9	13	8	13	12	17	12	16	12	8	
5	12	20	12	24	12	25	12	21	12	19	Vble.	20	8	9	8	19	6	20	4	15	7	15	8	15
6	16	9	Vble.	2	—	1	—	3	8	6	4	13	—	14	—	1	8	1	—	4	—	1	0	0
7	—	0	—	0	—	0	—	0	—	1	12	14	20	12	12	32	8	22	20	20	8	21	10	11
8	10	18	8	20	8	20	12	24	8	14	Vble.	17	15	20	16	17	16	12	20	27	17	25	12	23
9	12	18	8	17	8	17	8	23	12	22	18	32	16	21	15	21	15	21	20	26	14	20	16	25
10	18	33	17	40	16	48	16	40	16	21	12	12	8	13	8	13	7	17	8	14	6	14	6	12
11	7	10	8	4	8	14	7	19	8	9	8	18	7	18	8	10	12	16	8	17	16	25	8	20
12	10	16	7	8	7	19	8	21	8	13	8	12	6	15	6	16	8	10	6	4	5	—	—	0
13	—	0	—	0	32	4	—	3	—	8	—	1	—	1	8	5	5	3	8	13	7	17	12	16
14	12	8	8	15	8	17	8	26	8	15	8	19	8	18	10	9	Vble.	Vble.	10	12	8	18	14	5
15	—	0	—	0	—	0	32	4	32	6	32	6	32	6	—	3	—	0	—	0	9	1	9	2
16	7	17	7	18	8	23	12	16	8	12	10	9	—	7	8	5	10	9	4	5	4	16	4	5
17	4	5	4	18	4	21	4	29	4	21	4	21	7	19	7	18	4	10	—	—	28	1	—	2
18	4	2	4	4	8	6	6	3	—	3	8	4	10	7	8	4	16	4	1	1	1	—	—	1
19	—	1	—	0	Vble.	2	—	1	—	1	32	1	32	6	32	6	28	5	32	4	32	8	32	7
20	32	6	—	4	—	1	1	6	—	1	32	2	—	1	—	0	—	0	—	0	—	0	—	0
21	—	0	—	0	—	0	0	3	—	1	4	2	32	4	—	2	8	4	8	10	7	9	8	17
22	8	28	8	13	8	11	12	9	—	3	—	1	—	0	—	0	0	—	12	2	—	0	—	0
23	—	1	—	0	—	0	—	0	—	0	—	0	—	0	2	4	4	11	Vble.	12	6	5	Vble.	2
24	—	2	—	2	8	3	—	4	—	0	—	6	2	4	2	12	10	12	17	20	10	12	12	14
25	8	22	8	27	7	24	8	22	4	32	4	20	6	17	6	18	7	23	8	18	8	16	6	21
26	6	22	6	22	4	18	8	8	4	13	4	3	4	15	—	9	32	4	—	0	—	6	—	1
27	—	0	—	0	—	0	—	0	—	0	—	1	—	2	—	2	32	6	30	9	16	6	31	6
28	32	9	8	4	8	7	7	10	8	14	4	6	6	15	28	7	—	6	16	9	8	23	8	23
29	10	21	12	15	12	26	8	20	8	18	16	26	8	26	10	23	10	17	8	23	8	23	12	12
30	—	3	4	7	8	20	8	18	4	13	—	10	4	4	4	7	12	5	—	2	12	5	—	0
Mean . . .		11		11		12		13		11		11		11		11		10		11		11		10

July, 1903.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.		
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
1	12	1	—	1	—	0	—	0	—	3	—	1	—	3	8	2	—	0	—	0	—	1	—	0	
2	16	1	8	2	Vble.	3	10	3	8	9	8	13	8	14	8	18	8	18	4	29	6	24	6	26	
3	7	18	7	13	7	25	6	26	4	24	8	26	8	33	8	20	6	15	6	13	6	15	6	30	
4	8	28	6	18	6	26	6	32	6	26	4	17	7	28	8	28	7	26	4	24	6	28	4	20	
5	4	11	4	9	2	6	—	1	—	0	—	0	32	3	32	9	32	4	32	7	30	7	32	7	
6	32	6	32	7	32	8	32	6	—	3	28	3	32	7	—	1	—	0	—	0	—	0	—	0	
7	—	0	—	1	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	—	0	
8	—	0	—	0	—	0	—	2	8	2	—	2	—	1	—	0	20	2	12	6	12	10	10	9	
9	12	11	10	10	8	6	—	5	—	2	—	1	—	0	—	2	—	0	—	0	—	0	—	0	
10	5	15	6	15	5	15	—	2	—	1	—	0	—	0	—	0	—	0	—	0	—	0	—	0	
11	—	4	32	6	32	10	32	14	32	12	32	6	8	1	16	2	7	5	8	6	10	7	15	14	
12	8	16	6	17	—	9	—	3	28	2	4	8	32	9	—	9	—	0	—	0	—	0	—	0	
13	—	1	4	1	—	0	12	2	—	3	—	1	16	4	—	0	0	Vble.	1	6	9	12	18	10	15
14	8	19	8	21	8	23	6	20	—	2	8	2	—	2	4	1	—	1	10	2	4	10	7	20	
15	7	23	9	20	4	22	6	29	4	28	4	28	32	23	7	26	7	19	8	14	Vble.	7	—	1	
16	6	10	6	25	6	21	6	23	6	14	4	16	6	14	7	15	8	12	10	12	6	10	—	5	
17	—	2	8	4	8	3	—	2	32	3	32	10	32	14	32	15	10	10	—	1	4	1	16	1	
18	—	1	4	1	7	6	12	7	12	24	8	13	8	36	8	18	7	22	4	13	32	6	32	11	
19	32	13	4	10	—	5	4	3	—	2	Vble.	8	30	5	6	6	7	24	4	32	4	33	6	29	
20	6	29	8	24	8	9	—	0	4	18	4	18	4	14	6	17	6	27	4	20	4	18	4	13	
21	4	10	4	8	—	5	—	1	—	0	0	28	4	3	20	2	6	4	5	Vble.	5	7	—	5	
22	—	4	—	0	16	1	32	7	28	4	—	6	—	1	—	1	—	0	—	1	4	2	—	2	
23	8	6	9	18	8	5	4	19	12	13	4	8	4	12	14	12	12	13	16	20	7	16	7	8	
24	6	12	6	11	—	8	—	3	32	4	16	9	9	8	6	8	8	12	6	8	8	10	—	5	
25	32	2	32	4	32	8	4	7	7	12	7	32	4	24	4	26	6	17	—	9	6	16	4	19	
26	4	12	7	15	6	15	6	16	4	14	8	9	8	7	7	6	20	4	21	—	9	—	—	0	
27	4	1	—	0	4	1	—	3	—	4	—	0	—	0	4	3	—	6	4	2	8	13	7	7	
28	8	10	10	10	8	10	8	10	—	6	—	1	8	8	—	0	—	2	—	1	—	1	—	0	
29	—	0	—	0	—	1	—	0	—	0	—	0	—	1	—	0	—	0	—	0	—	1	—	1	
30	—	2	—	2	10	4	—	0	—	0	—	0	—	0	—	0	—	0	—	2	—	0	—	0	
31	—	0	8	5	8	10	16	17	14	22	16	18	16	31	12	19	12	14	12	15	9	18	8	19	
Mean . . .		9		9		9		8		8		8		10		9		9		9		9		9	

TABLE IV. (continued).

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8 = E, 16 = S, 24 = W, 32 = N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

August, 1903.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.		
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	
1	7	16	6	15	4	18	4	23	Vble.	10	Vble.	3	Vble.	4	1	3	1	10	8	7	10	9	8	20	
2	10	29	10	26	4	21	4	14	—	4	4	8	6	15	4	16	6	14	4	15	6	14	7	15	
3	6	17	—	7	—	0	10	15	8	20	8	14	8	14	8	7	8	10	4	10	4	13	4	16	
4	16	8	4	3	9	5	8	3	4	9	6	13	6	19	4	10	4	14	4	15	5	18	6	11	
5	6	11	6	18	6	28	8	21	6	15	4	15	4	12	—	8	—	1	—	0	—	0	—	0	
6	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	8	2	7	1	
7	6	14	7	20	6	4	—	2	—	0	—	0	—	0	—	2	2	7	30	5	—	2	12	1	
8	8	10	4	14	6	10	10	17	8	12	8	14	8	20	6	17	8	14	22	16	8	1	8	14	
9	8	18	8	20	7	23	8	32	8	23	8	33	8	24	8	27	8	14	8	10	2	2	16	1	
10	8	1	14	13	12	16	15	30	16	29	16	26	18	29	16	43	20	41	16	41	16	31	16	26	
11	17	31	12	24	12	9	16	16	20	35	16	38	18	22	14	43	16	38	16	29	12	25	7	24	
12	8	20	20	11	32	5	20	15	16	15	16	48	16	34	10	22	6	21	4	22	7	23	6	22	
13	16	9	3	5	4	15	1	14	32	10	—	3	8	2	—	0	8	3	4	6	12	13	9	18	
14	12	19	12	18	3	13	4	13	16	6	8	4	32	3	28	7	32	9	32	9	32	11	32	4	
15	16	4	8	5	8	13	6	17	8	13	8	5	8	10	6	3	8	8	32	3	—	1	32	4	
16	32	5	9	4	32	5	32	7	—	1	—	0	—	0	32	2	32	4	4	2	2	2	8	13	
17	14	18	10	22	6	18	6	23	8	17	6	19	8	31	8	20	8	23	4	20	2	15	4	13	
18	4	10	2	10	4	4	—	3	28	4	30	7	—	9	4	4	7	14	4	14	6	16	6	26	
19	6	29	—	17	32	8	4	7	32	8	—	2	—	2	—	0	—	0	—	0	—	0	—	0	
20	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	
21	7	2	4	9	4	9	4	9	—	6	32	7	—	3	—	0	10	4	—	5	—	1	32	5	
22	—	3	16	15	16	14	20	19	16	17	12	11	8	17	8	22	8	24	8	24	4	28	7	17	
23	4	9	7	14	4	15	8	13	8	9	12	11	8	15	12	19	8	12	8	10	6	22	7	28	
24	6	45	6	20	4	23	4	26	8	13	4	10	4	23	4	17	4	22	4	17	28	8	—	1	
25	6	1	9	3	Vble.	2	—	0	—	0	—	1	—	0	—	1	—	0	28	1	—	3	32	2	
26	—	2	—	0	—	1	20	3	28	2	Vble.	6	16	1	—	1	—	1	8	4	7	9	4	7	
27	4	21	4	24	4	15	Vble.	12	4	21	4	13	8	4	4	8	4	10	4	17	32	2	9	1	
28	—	0	8	1	Vble.	2	Vble.	10	7	6	15	6	12	10	15	12	11	12	10	4	15	4	25	—	7
29	32	1	8	3	2	7	6	14	4	13	4	12	4	10	4	11	4	18	4	17	4	16	4	15	
30	4	15	4	7	Vble.	6	4	15	4	10	4	10	—	2	—	1	—	5	—	5	—	5	—	0	
31	10	5	—	4	10	9	4	15	12	14	8	9	32	5	16	1	31	3	—	—	—	—	—	1	
Mean . . .	12		11		10		13		11		12		11		11		11		11		10		10		

September, 1903.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	—	0	6	5	4	16	6	22	4	21	32	7	32	6	32	11	—	0	—	1	30	6	—	0
2	—	0	16	3	12	4	10	16	8	18	12	15	6	19	4	18	4	13	32	3	4	6	4	33
3	4	23	6	28	6	23	6	28	4	16	6	13	8	8	8	5	8	12	8	6	8	11	10	10
4	8	11	8	11	15	8	—	0	4	1	4	10	4	22	4	19	4	18	4	14	14	9	12	7
5	—	5	—	0	—	0	—	0	—	0	—	0	—	0	10	1	6	11	4	23	4	18	8	10
6	17	9	8	7	7	10	15	12	13	8	14	8	15	10	11	12	10	8	5	8	6	Vble.	3	10
7	32	4	32	5	32	10	12	4	12	9	12	11	12	17	12	15	10	12	7	10	2	5	2	7
8	32	16	32	18	32	9	32	9	32	8	31	9	—	8	—	0	—	0	—	2	4	6	4	11
9	8	5	8	11	4	20	8	24	8	23	8	20	6	23	8	17	8	17	8	16	6	13	31	10
10	28	2	14	2	4	3	—	0	—	0	—	0	4	7	6	13	8	10	4	13	8	15	8	20
11	8	20	4	15	7	21	6	35	8	18	2	26	8	26	8	15	10	14	8	16	10	15	12	13
12	10	17	12	13	10	13	10	7	4	14	4	15	4	13	32	9	—	4	—	2	—	0	—	4
13	—	1	8	3	8	9	9	9	11	6	16	8	16	8	14	8	21	7	7	11	8	25	7	22
14	6	21	6	23	6	18	8	16	6	18	4	16	4	23	4	14	4	14	4	13	7	9	—	0
15	—	0	—	0	—	0	10	1	9	7	4	5	6	14	6	13	8	9	4	10	9	14	8	10
16	8	24	8	15	8	26	8	22	7	25	4	23	6	29	6	26	4	28	4	32	4	53	4	24
17	4	19	4	21	4	10	4	6	2	20	4	17	8	26	6	21	6	22	4	25	4	20	4	20
18	4	26	4	6	4	8	4	—	0	—	0	32	2	—	0	—	0	32	1	32	1	—	—	2
19	4	8	4	6	4	6	8	11	28	14	—	0	4	10	—	2	—	0	—	1	—	0	—	0
20	—	0	—	0	—	2	—	0	—	0	—	0	—	0	—	0	—	0	—	—	—	—	—	0
21	—	0	—	0	—	0	—	0	—	0	—	8	2	14	8	9	8	8	8	13	6	11	8	8
22	9	9	10	15	8	14	12	16	8	14	10	8	—	8	8	7	—	6	32	3	26	1	—	4
23	31	1	—	1	Vble.	3	—	3	8	4	16	9	16	24	14	11	12	15	8	20	9	23	10	20
24	10	22	12	18	16	14	—	27	8	18	8	20	8	16	8	12	8	7	4	6	10	11	28	5
25	32	6	—	30	5	32	10	32	12	32	12	32	8	32	14	32	18	4	19	6	20	21	32	7
26	28	7	Vble.	18	15	16	14	12	17	14	10	15	11	20	15	11	9	32	5	32	4	—	4	9
27	4	15	4	30	4	34	4	32	4	24	4	20	32	7	20	3	—	1	—	0	—	2	14	2
28	13	11	15	9	12	19	16	17	16	24	16	26	14	29	12	18	8	28	8	22	7	24	8	21
29	10	20	7	14	6	24	6	22	8	9	—	2	32	3	28	6	—	4	32	2	2	2	4	18
30	4	17	4	23	6	21	4	14	—	4	2	10	—	4	—	0	32	4	—	6	32	8	30	7
Mean . . .	11		10		12		13		12		11		14		10		10		10		11		10	

TABLE IV. (continued).

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8=E, 16=S, 24=W, 32=N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

October, 1903.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	2	3	5	15	4	22	4	23	4	21	4	19	4	23	6	22	4	22	8	22	4	19	4	21
2	4	18	6	18	6	20	8	26	8	19	8	22	8	24	8	21	8	26	8	26	8	23	8	24
3	8	28	8	28	8	28	8	29	8	27	8	26	6	26	8	24	8	21	4	23	4	26	4	20
4	4	26	4	24	4	22	4	20	4	29	4	21	4	27	4	20	4	18	4	16	32	9	1	
5	30	2	—	1	—	0	—	0	32	3	32	4	—	1	32	9	32	9	32	12	28	11	32	
6	32	5	Vble.	4	—	2	4	2	4	13	4	7	16	5	—	1	4	3	—	4	8	1	—	
7	4	1	4	13	4	21	4	22	4	19	—	10	32	3	—	0	—	1	32	3	4	3	6	
8	7	13	7	12	—	1	—	3	8	3	4	13	4	16	—	3	28	1	—	0	—	0	—	
9	—	0	—	1	32	2	—	0	4	1	2	13	2	12	—	8	—	1	—	0	—	2	—	
10	4	11	7	11	4	21	4	19	4	20	4	16	—	4	—	1	32	2	—	1	30	1	—	
11	20	1	12	4	17	8	16	31	16	35	12	27	12	26	10	22	12	21	8	17	8	23	8	
12	9	10	7	22	7	18	7	24	6	18	8	22	8	20	8	24	8	7	4	23	4	29	4	
13	4	27	4	19	10	17	10	11	8	9	12	12	12	13	8	9	—	5	16	5	12	9	14	
14	4	16	—	8	12	2	12	14	16	15	20	14	12	22	12	21	8	18	8	10	8	16	8	
15	—	7	6	7	6	12	4	35	6	17	4	16	4	18	4	15	8	10	4	7	12	13	12	
16	8	15	6	16	8	22	8	21	6	13	6	15	8	13	4	8	—	5	—	0	—	0	—	
17	—	0	28	1	—	0	—	0	—	0	—	8	8	12	8	11	6	15	4	10	4	14	4	
18	6	14	6	11	8	7	4	8	4	16	4	20	4	18	4	14	4	14	32	4	—	5	—	
19	—	0	—	0	1	1	—	0	—	1	—	0	—	0	—	0	—	0	—	0	—	0	—	
20	32	8	30	5	28	2	20	4	32	1	—	2	—	28	8	30	8	—	4	—	—	0	—	
21	2	3	—	1	—	0	—	1	—	0	—	2	—	—	0	—	1	—	—	—	1	12	7	
22	8	17	8	17	8	18	6	13	8	16	4	16	4	23	8	18	8	18	8	14	8	21	8	
23	6	20	8	24	7	26	4	27	4	21	4	22	8	26	8	21	8	18	8	15	10	13	8	
24	4	15	4	18	—	17	14	7	8	8	8	11	12	15	12	22	12	15	12	13	9	14	8	
25	8	8	8	6	6	9	8	7	—	4	8	3	—	4	—	0	—	0	—	0	—	0	—	
26	8	1	—	1	—	0	—	1	—	2	—	8	6	8	2	12	8	12	13	16	17	6	14	
27	8	10	12	10	4	7	12	6	8	13	12	9	12	12	10	10	8	11	8	11	12	14	8	
28	8	9	8	17	12	18	12	19	10	19	4	19	6	18	8	21	8	20	8	9	12	8	10	
29	8	8	12	15	6	18	6	15	6	16	4	21	8	20	7	15	7	14	4	10	4	8	8	
30	9	8	—	4	14	1	12	14	12	19	12	17	8	13	8	14	8	15	8	11	8	9	12	
31	10	12	7	12	12	10	12	11	16	12	16	10	16	21	16	16	18	22	20	24	20	24	20	
Mean . . .	10	11	11	11	11	13	13	13	13	14	14	14	14	12	12	11	11	10	10	11	11	11	10	

November, 1903

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	20	28	16	25	12	19	12	14	12	17	12	18	12	14	12	18	12	9	8	4	14	7	12	15
2	7	9	8	12	—	5	—	1	—	0	—	3	—	0	4	3	4	17	6	14	4	15	32	10
3	32	7	32	4	4	4	8	23	6	17	6	15	8	15	8	5	10	6	2	—	0	—	1	—
4	—	0	32	5	32	5	32	7	32	7	32	8	32	5	30	3	31	6	32	7	32	7	32	
5	—	3	12	2	9	5	8	16	8	12	12	12	12	9	10	8	10	15	8	16	12	18	18	
6	12	21	12	19	12	17	14	23	12	13	8	14	8	13	8	14	8	16	8	13	Vble.	19	16	
7	10	15	6	15	8	21	8	17	6	21	8	15	6	18	6	15	4	20	8	12	4	18	8	
8	7	19	9	13	9	8	8	2	6	10	8	10	8	7	7	10	Vble.	7	16	13	—	—	—	
9	—	—	—	—	—	—	—	12	23	12	23	8	17	10	18	10	19	8	21	8	6	14	—	
10	—	—	—	—	—	0	—	2	—	Vble.	14	1	—	8	12	1	12	10	32	4	32	6	—	
11	—	—	—	—	4	14*	16	17*	19*	18	28*	12	11*	—	—	—	8	5*	8	8*	16	8*	—	
12	—	—	—	—	12	12	16	8	16	6	12	12	12	13	10	11	18	15	16	16	12	7	—	
13	—	—	—	—	12	13	4	16	16	15	10	23	18	25	12	8	8	19	12	20	8	19	—	
14	—	—	—	—	—	8	17	8	5	—	0	—	8	3	8	2	8	5	8	5	8	10	—	
15	—	—	—	—	—	3	—	0	—	—	0	32	2	—	2	8	2	32	1	16	1	0	—	
16	—	—	—	—	—	10	7	12	12	12	12	12	8	8	6	12	6	18	6	11	6	19	—	
17	—	—	—	—	—	5	17	9	16	6	14	6	13	6	15	6	18	7	17	6	12	—	—	
18	—	—	—	—	—	7	—	0	—	—	0	—	1	—	0	—	9	8	3	8	9	—	—	
19	—	—	—	—	—	12	3	9	7	9	7	9	7	12	3	8	15	6	8	8	5	—	—	
20	—	—	—	—	—	10	6	11	15	9	10	8	9	6	15	6	10	6	12	4	6	4	—	
21	—	—	—	—	—	—	1	—	0	—	32	2	28	1	30	7	30	5	32	4	30	4	—	
22	—	—	—	—	—	10	7	24	5	—	0	8	4	8	5	8	12	10	7	32	6	—	—	
23	—	—	—	—	—	12	5	8	18	Vble.	21	8	16	8	19	12	17	12	18	12	16	—	—	
24	—	—	—	—	—	14	17	14	12	7	11	8	14	8	15	8	15	8	16	4	13	—	—	
25	—	—	—	—	—	16	12	8	1	12	11	12	9	8	4	12	9	11	4	11	3	—	—	
26	—	—	—	—	—	4	1	16	2	17	12	16	14	18	22	16	31	17	23	16	19	—	—	
27	—	—	—	—	—	18	21	16	18	12	20	16	18	14	19	14	17	12	10	12	14	—	—	
28	—	—	—	—	—	10	14	12	13	16	11	18	10	16	8	16	17	16	19	16	15	—	—	
29	—	—	—	—	—	14	16	12	15	12	12	12	12	14	12	15	12	13	12	13	12	15	—	
30	—	—	—	—	—	12	14	12	9	8	13	8	12	8	11	8	12	8	4	5	9	—	—	
Mean . . .	—	—	—	—	—	11	10	11	10	11	10	10	10	10†	13	11	11	11	11	11	11	11	—	—

\* Equivalent velocity for Beaufort scale estimation.

† For 29 days only.

TABLE IV. (continued).

WIND—DIRECTION AND VELOCITY.

Direction (D) in Numbers (8 = E, 16 = S, 24 = W, 32 = N), and Velocity (V) in miles per hour as recorded by the Cup Anemometer.

December, 1903.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	—	—	—	—	—	—	12	5	10	12	15	16	8	14	8	9	8	8	12	12	14	15	—	—
2	—	—	—	—	—	—	12	18	12	17	14	15	16	12	12	10	12	12	7	16	7	11	—	—
3	—	—	—	—	—	—	12	11	14	7	8	10	12	5	8	17	8	16	7	12	8	—	—	
4	—	—	—	—	—	—	15	12	14	14	15	10	12	13	4	10	2	6	16	3	8	12	—	—
5	—	—	—	—	—	—	14	12	14	14	14	20	8	12	14	26	8	14	8	18	7	20	—	—
6	—	—	—	—	—	—	8	19	8	15	8	15	8	13	8	13	8	11	7	6	5	6	—	—
7	—	—	—	—	—	—	32	4	32	3	32	5	24	2	28	2	28	2	—	2	28	3	—	—
8	—	—	—	—	—	—	30	2	32	5	30	4	32	3	8	4	32	5	32	—	3	—	—	
9	—	—	—	—	—	—	10	10	7	8	—	—	—	—	—	2	28	1	4	1	0	—	—	
10	—	—	—	—	—	—	—	0	—	0	—	0	28	4	—	4	28	1	4	1	1	—	—	
11	—	—	—	—	—	—	—	0	28	1	28	4	28	2	—	1	—	0	—	0	—	1	—	—
12	—	—	—	—	—	—	12	9	12	7	8	7	12	7	12	7	12	10	15	14	12	8	—	—
13	—	—	—	—	—	—	10	11	10	15	6	12	8	23	8	18	8	13	8	13	8	11	—	—
14	—	—	—	—	—	—	12	13	8	11	7	13	7	9	7	12	8	12	11	8	10	—	—	
15	—	—	—	—	—	—	8	7	8	8	8	8	32	3	4	7	4	11	4	32	4	1	—	—
16	—	—	—	—	—	—	—	0	8	4	6	8	10	8	10	8	11	8	15	8	7	8	—	—
17	—	—	—	—	—	—	7	12	8	18	8	16	8	11	8	11	6	12	14	9	5	9	—	—
18	—	—	—	—	—	—	9	11	11	15	12	15	12	18	11	11	8	18	10	8	14	—	—	
19	—	—	—	—	—	—	—	6	—	1	32	2	12	3	4	3	—	1	0	0	22	2	—	—
20	—	—	—	—	—	—	8	2	12	2	8	6	8	8	10	9	8	5	7	8	6	8	—	—
21	—	—	—	—	—	—	32	5	28	4	31	4	31	7	28	3	—	0	30	2	28	5	—	—
22	—	—	—	—	—	—	32	3	32	4	32	2	32	2	28	4	32	4	32	8	32	8	—	—
23	—	—	—	—	—	—	30	6	—	0	14	1	12	5	12	8	12	14	16	15	16	15	—	—
24	—	—	—	—	—	—	12	15	12	15	12	21	12	18	8	10	11	7	7	7	13	—	—	
25	—	—	—	—	—	—	8	15	8	14	6	7	8	13	8	13	6	18	4	15	7	8	—	—
26	—	—	—	—	—	—	—	2	—	0	—	2	—	1	—	—	28	4	30	7	28	5	—	—
27	—	—	—	—	—	—	6	7	31	5	30	9	28	7	—	2	—	0	2	3	—	2	—	—
28	—	—	—	—	—	—	8	17*	7	15	6	10	32	14	28	4	—	3	—	0	0	2	—	—
29	—	—	—	—	—	—	7	3	6	7	7	2	8	4	28	6	30	8	—	—	1	—	—	—
30	—	—	—	—	—	—	—	0	—	1	0	0	14	3	8	11	10	12	8	11	12	12	—	—
31	—	—	—	—	—	—	8	12	14	10	18	6	12	8	12	11	12	11	8	8	4	7	—	—
Mean . . .	—	—	—	—	—	—	8	—	8	—	8†	—	8†	—	8†	—	8†	—	7†	—	7	—	—	—

\* Equivalent velocity for Beaufort scale estimation.

† For 30 days only.

January, 1904.

Day.	2.		4.		6.		8.		10.		Noon.		14.		16.		18.		20.		22.		Midt.	
	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.	D.	V.
1	—	—	—	—	—	—	31	3	31	3	28	6	28	6	28	5	28	4	32	4	32	5	—	—
2	—	—	—	—	—	—	1	8	32	6	12	4	8	7	8	6	8	10	4	7	3	9	—	—
3	—	—	—	—	—	—	—	4	12	2	12	9	8	10	8	10	6	9	7	12	11	—	—	
4	—	—	—	—	—	—	—	7	—	2	—	0	—	0	28	1	—	2	32	1	6	6	—	—
5	—	—	—	—	6	12	8	13	8	13	8	10	8	12	8	13	6	12	10	7	3	—	—	
8	—	—	—	—	12	1	—	0	—	—	—	2	4	1	Vble.	5	4	6	—	7	—	—	—	
7	—	—	—	—	—	—	4	3	4	13	4	11	4	7	7	10	—	0	0	0	1	—	—	
9	—	—	—	—	—	—	—	2	—	—	16	2	12	4	8	4	4	8	12	5	16	2	—	—
10	—	—	—	—	—	—	—	—	2	—	—	—	—	1	Vble.	1	12	4	8	2	16	4	—	—
11	—	—	—	—	—	—	—	—	8	—	4	5	3	8	3	4	3	8	8	1	—	—	—	—
12	—	—	—	—	—	—	—	3	—	0	—	0	4	8	4	13	20	3	—	2	—	0	—	—
13	—	—	—	—	—	—	8	2	12	6	8	8	8	7	8	6	8	8	8	10	10	9	—	—
14	—	—	—	—	—	—	8	2	8	12	8	13	8	10	—	—	12	13	8	10	—	—	—	—
15	—	—	—	—	—	—	14	12	—	—	12	15	—	—	8	11	—	—	6	10	—	—	—	—
16	—	—	—	—	—	—	6	7	—	—	8	21	—	—	8	17	—	—	8	7	19	—	—	—
17	—	—	—	—	—	—	8	—	—	—	10	1	—	—	8	—	—	—	7	—	—	—	—	—
18	—	—	—	—	—	—	8	18	—	—	8	15	—	—	9	12	—	—	8	—	—	—	—	—
19	—	—	—	—	—	—	8	11	—	—	7	12	—	—	8	13	—	—	8	13	—	—	—	—
20	—	—	—	—	—	—	15	6	—	—	14	5	—	—	12	10	—	—	7	10	—	—	—	—
21	—	—	—	—	—	—	7	16	—	—	7	14	—	—	8	18	—	—	8	18	—	—	—	—
22	—	—	—	—	—	—	—	—	—	—	7	16	—	—	4	15	—	—	8	15	—	—	—	—
23	—	—	—	—	—	—	4	9	—	—	6	10	—	—	8	13	—	—	8	5	—	—	—	—
24	—	—	—	—	—	—	—	4	—	—	8	4	—	—	4	10	—	—	4	12	—	—	—	—
25	—	—	—	—	—	—	8	12	6	10	6	7	—	—	4	15	—	—	4	10	—	—	—	—
26	—	—	—	—	—	—	8	20*	—	—	8	14	—	—	6	13	—	—	4	10	—	—	—	—
27	—	—	—	—	—	—	—	4	—	—	4	2	—	—	8	—	—	—	6	14	—	—	—	—
28	—	—	—	—	—	—	—	8	—	—	4	0	—	—	7	2	—	—	4	5	—	—	—	—
29	—	—	—	—	—	—	4	14*	—	—	4	12	—	—	4	—	—	—	12	10	—	—	—	—
30	—	—	—	—	—	—	4	10	—	—	4	10	—	—	7	—	—	—	—	2	—	—	—	—
31	20	2*	—	—	—	—	—	2	—	—	12	2	—	—	10	10	—	—	12	12	—	—	—	—
Mean . . .	—	—	—	—	—	—	8†	—	—	—	8	—	—	—	9†	—	—	—	9	—	—	—	—	—

\* Equivalent velocity for Beaufort scale estimation.

† For 29 days only.

‡ For 30 days only.

TABLE V.

DURATION OF BRIGHT SUNSHINE IN HOURS.

September, 1902.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midt.	Day.
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	—	—	—	—	—	—	—	—	—	—	—	—	0.8*	1.0	0.7	—	—	—	—	—	—	—	—	—	2.5
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0†
17	—	—	—	—	—	—	—	—	—	0.1	0.9	0.9	0.6	0.2	—	—	—	—	—	—	—	—	—	—	2.7
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.3
20	—	—	—	—	—	—	—	—	—	1.0	1.0	1.0	1.0	1.0	1.0	0.3	—	—	—	—	—	—	—	—	†
21	—	—	—	—	—	—	—	—	—	1.0	1.0	1.0	1.0	1.0	0.5	—	—	—	—	—	—	—	—	—	7.5
22	—	—	—	—	—	—	—	—	—	0.5	1.0	1.0	1.0	0.4	0.9	1.0	1.0	0.4	—	—	—	—	—	—	7.2
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.5
27	—	—	—	—	—	—	—	0.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	—	—	—	—	4.3
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8
30	—	—	—	—	—	—	—	0.3	1.0	1.0	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	5.1
31	—	—	—	—	—	—	—	0.2	1.0	0.3	1.0	0.7	0.8	—	—	—	—	—	—	—	—	—	—	—	—
Total . . .	—	—	—	—	—	—	0.5	3.7	5.8	5.9	6.7	5.5	7.1	5.4	4.2	2.4	0.7	—	—	—	—	—	—	—	51.9

\* Sunshine recorder erected this day.  
 † Card displaced—amount of sunshine estimated by observer.  
 ‡ Doubtful—card missing.

October, 1902.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midt.	Day.	
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*	
2	—	—	—	—	—	—	—	—	—	0.4	0.5	0.7	0.6	1.0	1.0	1.0	0.9	—	—	—	—	—	—	—	—	6.1
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	
6	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.5	1.0	0.3	—	—	—	—	—	—	—	—	0.0	
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.8	
9	—	—	—	—	0.7	1.0	0.2	—	—	—	—	—	—	—	0.7	0.2	0.5	1.0	0.4	0.1	—	—	—	—	15.8	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.5	
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.9	
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*	
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*	
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.9	
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.6	
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.5	
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.9	
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.7	
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*	
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.9	
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*	
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.8	
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
Total . . .	—	—	—	1.5	4.7	6.0	4.9	6.2	6.6	6.0	8.7	7.5	9.6	11.4	8.5	9.2	9.4	8.1	5.0	0.9	—	—	—	—	114.2	

\* Doubtful—card missing.

TABLE V. (continued).

## DURATION OF BRIGHT SUNSHINE IN HOURS.

November, 1902.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midt.	Day.	
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
3	—	—	—	—	—	—	—	—	—	0.3	0.8	0.4	0.5	0.0	1.0	1.0	1.0	1.0	1.0	0.5	—	—	—	—	0.0	
4	—	—	—	0.3	0.3	0.5	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.8	0.2	—	—	—	8.4	
5	—	—	—	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.8	0.2	—	—	—	15.7	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.4*	
7	0.3	1.0	1.0	0.6	0.2	—	0.1	—	—	—	—	—	—	—	—	—	0.6	1.0	0.7	—	0.8	0.3	—	—	9.7*	
8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	—	0.6	
9	0.9	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	0.7	1.0	
10	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.8	23.0	
11	0.2	0.5	1.0	1.0	0.3	—	—	—	—	—	—	—	—	—	—	—	0.1	—	—	—	—	—	—	—	3.1	
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
13	—	0.9	1.0	0.5	0.8	1.0	1.0	1.0	1.0	1.0	0.8	—	0.3	0.2	0.3	0.6	0.5	0.9	0.3	—	—	—	—	—	12.1	
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	1.0	0.1	0.3	0.1	—	—	—	3.8	
15	—	—	—	0.7	1.0	1.0	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	20.2	
16	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.8	0.8	23.3	
17	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	
18	—	—	—	—	—	—	—	—	—	—	—	—	0.8	—	0.2	1.0	1.0	0.3	—	—	—	—	—	—	—	3.3
19	—	—	—	—	—	0.6	0.1	—	0.4	0.5	0.4	0.2	—	—	—	—	—	—	—	—	—	—	—	—	2.2*	
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	—	—	—	—	—	—	—	—	—	—	—	0.5	1.0	0.9	1.0	1.0	1.0	0.6	—	0.2	0.2	0.4	1.0	1.0	—	8.8
22	0.8	1.0	1.0	1.0	1.0	0.9	0.1	0.5	0.8	—	0.7	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	8.3
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24	—	—	—	—	—	—	—	—	—	—	—	—	0.9	1.0	0.9	—	—	—	—	—	—	—	—	—	—	26.6*
25	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	9.4
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	—	—	—	—	—	—	—	—	—	—	—	0.8	1.0	0.8	—	0.5	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	—	10.9*
28	0.6	0.9	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	22.6
29	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	—	—	—	—	—	—	—	—	—	15.5*
30	—	—	—	—	—	—	—	—	—	—	—	0.2	0.8	1.0	0.3	0.3	1.0	1.0	1.0	0.8	1.0	0.5	—	—	—	7.9*
Total . . .	8.1	10.1	10.9	11.6	11.8	12.4	10.8	11.5	12.2	11.2	11.5	11.1	13.5	13.8	13.4	14.0	14.7	15.1	12.0	11.6	10.1	7.3	7.2	7.2	—	201.5

\* Doubtful—card for part of day missing.

December, 1902.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midt.	Day.	
1	—	—	—	—	—	—	—	—	—	—	0.5	0.7	—	0.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	11.5
2	0.8	—	—	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.4	0.1	—	—	—	—	—	—	—	—	—	—	11.2
3	—	—	—	—	—	—	—	—	—	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	15.5
4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	23.7
5	—	—	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	21.6
6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.1	—	—	—	20.1
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.3
9	0.7	0.1	0.9	0.5	1.0	0.8	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	21.9
10	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24.0
11	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.2	—	—	22.2
12	—	—	—	—	—	—	—	—	—	—	—	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
14	—	—	—	—	—	—	—	—	—	—	—	0.2	1.0	1.0	0.9	0.9	0.7	0.7	0.8	1.0	1.0	—	—	—	—	8.2
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
18	—	—	—	—	—	—	—	—	—	—	—	0.2	0.1	—	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	10.2
19	1.0	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
21	—	—	—	—	—	—	0.1	0.5	—	0.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	1.0	1.0	—	14.5
22	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.7	0.9	0.7	0.1	—	—	—	—	—	—	—	—	—	14.2
23	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.7	1.0	1.0	1.0	1.0	0.9	—	0.4	1.0	1.0	—	7.5
24	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	—	—	0.3	0.3	0.2	1.0	1.0	0.4	—	0.1	0.8	—	1.0	1.0	—	15.0
25	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	23.6
26	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	24.0
27	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24.0
28	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.1	0.5	0.5	0.5	—	—	—	18.3
29	—	0.2	—	—	—	—	—	—	—	—	—	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	13.8
30	1.0	0.7	0.5	0.7	0.9	0.4	—	—	—	—	—	0.7	1.0	0.2	—	—										

TABLE V. (continued).

DURATION OF BRIGHT SUNSHINE IN HOURS.

January, 1903.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midt.	Day.
1	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	23.9
2	1.0	1.0	1.0	1.0	0.7	1.0	1.0	1.0	1.0	0.7	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.2	—	—	—	—	—	—	15.5
3	—	—	—	—	0.5	—	—	0.9	0.4	1.0	0.3	—	0.3	0.5	—	0.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.1
4	1.0	0.4	—	—	—	0.9	1.0	—	—	—	—	—	0.1	—	—	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.1
5	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.4	—	—	0.4	0.5	0.5	0.5	0.5	1.0	1.0	1.0	—	—	1.0	1.0	1.0	1.0	10.7
6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	23.5
7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24.0
8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24.0
9	1.0	1.0	1.0	1.0	1.0	1.0	0.8	—	0.1	0.1	0.1	0.1	—	—	—	—	—	—	—	—	—	—	—	—	7.2
10	—	—	—	—	—	—	0.4	1.0	0.4	0.9	0.6	0.2	—	—	—	0.1	—	0.5	0.4	—	—	—	—	—	4.5
11	—	—	—	—	—	0.1	—	—	—	0.2	1.0	0.9	—	—	—	—	—	—	—	—	—	—	—	—	2.1
12	—	—	—	—	—	—	—	—	0.6	0.9	1.0	1.0	0.9	1.0	0.2	—	—	—	—	—	—	—	—	—	5.7
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5
14	1.0	0.7	1.0	1.0	1.0	0.9	0.9	1.0	0.7	1.0	0.6	0.6	0.5	0.8	0.4	—	—	—	—	—	—	—	—	—	12.1
15	—	—	—	—	—	0.1	—	0.1	0.1	0.7	—	0.1	0.9	1.0	0.9	0.5	1.0	0.8	1.0	0.7	—	—	—	—	7.9
16	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.2	11.0
17	0.1	0.5	0.6	0.1	—	—	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6
18	—	—	—	—	—	—	—	—	—	—	—	—	0.7	0.6	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	11.2
19	1.0	1.0	1.0	1.0	1.0	0.9	0.6	1.0	1.0	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.0
20	—	—	—	—	—	—	—	—	—	—	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	12.9
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
22	—	—	—	—	—	—	—	—	—	—	—	0.4	—	—	—	—	—	—	0.1	—	—	—	—	—	0.5
23	—	—	—	0.4	0.9	0.7	1.0	1.0	1.0	1.0	1.0	0.6	1.0	0.8	0.6	0.5	1.0	0.4	0.6	0.3	0.9	0.1	—	—	13.8
24	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	0.5
25	—	—	—	—	—	—	—	—	—	—	—	—	0.5	1.0	0.9	—	0.1	0.7	1.0	1.0	0.5	—	—	—	6.7
26	0.1	0.1	0.1	—	—	—	—	—	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	16.2
27	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24.0
28	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.4	0.1	22.4
29	1.0	0.9	—	—	—	0.3	—	—	—	—	—	—	—	—	—	—	—	0.4	1.0	1.0	—	—	—	—	5.9
30	1.0	0.7	0.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	—	—	—	—	—	17.8
31	—	—	—	—	—	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	18.8
Total . . .	14.2	13.2	12.0	12.5	13.1	14.7	14.9	14.4	14.3	16.0	14.9	15.9	17.7	18.1	15.6	16.2	18.3	18.1	17.9	16.0	15.7	13.4	13.1	14.9	365.1

February, 1903.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midt.	Day.
1	1.0	1.0	1.0	1.0	1.0	0.9	0.7	0.2	—	—	—	—	—	—	0.1	0.7	1.0	1.0	1.0	1.0	0.8	0.8	1.0	1.0	15.2
2	1.0	1.0	1.0	1.0	0.6	0.7	0.7	—	0.4	0.6	1.0	1.0	1.0	0.8	—	—	—	—	—	—	—	—	—	—	10.8
3	—	—	—	—	—	—	—	—	—	—	—	0.4	—	—	—	—	—	—	—	—	—	—	—	—	12.4
4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	—	—	—	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	—	—	17.7
5	—	—	—	—	—	0.2	0.1	0.9	0.1	0.1	0.1	—	—	0.3	0.7	0.1	—	0.3	0.6	0.2	0.1	—	—	—	3.8
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	0.8	0.7	0.1	—	—	—	1.9
8	0.3	1.0	1.0	—	—	—	—	—	0.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.2	—	—	—	—	—	—	10.6
9	—	—	—	0.2	1.0	1.0	1.0	1.0	0.9	0.8	1.0	1.0	1.0	0.4	0.0	0.5	1.0	0.2	—	—	—	—	—	0.2	11.8
10	0.1	—	—	—	0.1	0.6	1.0	1.0	0.5	1.0	1.0	1.0	0.6	—	—	—	0.4	1.0	0.4	1.0	0.8	—	—	—	10.5
11	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.6	1.0	0.7	—	0.7	1.0	21.7
12	0.6	—	—	—	—	—	—	—	—	—	—	—	—	0.0	1.0	0.1	—	0.7	1.0	1.0	1.0	1.0	—	—	7.3
13	—†	—	—‡	—	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	—	—	—	—	—	—	13.8
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
15	0.2	0.3	0.1	0.5	0.8	0.7	0.3	0.9	0.6	0.1	—	—	—	—	—	0.9	1.0	1.0	1.0	1.0	0.4	—	—	—	9.8
16	0.8	1.0	0.3	1.0	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.1	—	—	—	—	17.7
17	—	—	—	—	—	—	—	—	—	—	0.3	0.3	—	—	—	—	0.1	0.1	0.1	0.8	0.4	—	—	—	2.1
18	—	—	0.3	0.3	0.5	0.7	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.2	—	—	—	—	—	—	—	—	—	12.8
19	—	—	—	0.3	1.0	1.0	1.0	1.0	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.7*
20	—	—	—	—	—	—	—	—	—	—	—	0.7	0.8	0.7	0.8	0.5	1.0	1.0	1.0	0.3	—	—	—	—	6.8*
21	—	—	—	—	0.5	1.0	1.0	0.8	0.4	1.0	0.2	0.1	0.6	1.0	0.9	0.6	1.0	1.0	0.1	—	—	—	—	—	10.2
22	—	—	—	—	0.9	0.7	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.3	—	—	—	—	14.7
23	—	—	—	—	—	—	—	—	—	0.5	0.7	0.1	0.0	0.8	1.0	1.0	1.0	1.0	0.7	—	—	—	—	—	7.4
24	—	—	—	0.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	—	—	—	—	—	15.1
25	—	—	—	0.1	0.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
27	—	—	—	—	0.1	0.9	1.0	1.0	1.0	1.0	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	5.4
28	—	—	—	—	—	—	0.2	0.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	—	—	—	—	—	10.2
Total . . .	5.8	6.3	5.7	6.6	11.7	13.4	13.1	13.9	11.7	13.9	12.7	12.6	13.6	14.0	14.3	13.5	16.3	16.0	14.7	9.4	5.9	3.3	3.0	3.2	255.2

\* Doubtful—card for

TABLE V. (continued).

DURATION OF BRIGHT SUNSHINE IN HOURS.

March, 1903.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midt.	Day.	
1	—	—	—	0·2	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	0·4	—	—	—	—	—	—	—	12·6	
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
5	—	—	—	—	—	—	—	—	0·5	0·2	0·8	1·0	0·7	1·0	1·0	1·0	1·0	0·5	—	—	—	—	—	—	7·2*	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8·0	
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·2	
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9·3	
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5·3	
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·6	
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6·7	
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3·7	
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8·2	
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4·1	
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9·4	
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5·1	
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1·9	
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8·7	
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6·5	
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7·3	
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7·2	
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3·0	
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·9	
Total . . .	—	—	—	0·2	1·0	1·8	3·0	5·0	7·9	11·3	10·3	13·1	13·9	15·0	15·0	11·9	5·5	1·4	—	—	—	—	—	—	—	118·3

\* Doubtful—card for part of day missing.

April, 1903.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midt.	Day.	
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3·9	
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·6	
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1·2	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4·0	
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3·1	
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·2	
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·9	
Total . . .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13·9

\* Doubtful—sun did not appear from behind hills until 11.45 a.m. and remained clear until it set.

TABLE V. (continued).

DURATION OF BRIGHT SUNSHINE IN HOURS.

September, 1903.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midt.	Day.	
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0	
3	—	—	—	—	—	—	—	—	—	—	—	0·5	1·0	0·7	—	—	—	—	—	—	—	—	—	—	—	2·2
4	—	—	—	—	—	—	—	—	—	—	0·4	1·0	1·0	0·4	—	—	—	—	—	—	—	—	—	—	—	2·8†
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*
10	—	—	—	—	—	—	—	—	—	—	—	0·2	0·8	0·7	0·2	—	—	—	—	—	—	—	—	—	—	1·9
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
12	—	—	—	—	—	—	—	—	—	—	—	0·8	0·9	0·9	0·9	0·3	—	—	—	—	—	—	—	—	—	0·0
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
14	—	—	—	—	—	—	—	—	—	—	—	—	0·3	0·9	0·3	—	—	—	—	—	—	—	—	—	—	1·5
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4·1
17	—	—	—	—	—	—	—	—	—	—	—	0·6	0·9	1·0	1·0	0·6	—	—	—	—	—	—	—	—	—	0·0
18	—	—	—	—	—	—	—	—	—	—	—	1·0	1·0	1·0	1·0	1·0	1·0	—	—	—	—	—	—	—	—	6·0
19	—	—	—	—	—	—	—	—	—	—	—	1·0	1·0	1·0	1·0	1·0	1·0	—	—	—	—	—	—	—	—	7·5
20	—	—	—	—	—	—	—	—	—	—	—	0·7	1·0	1·0	1·0	1·0	1·0	—	—	—	—	—	—	—	—	0·0
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4·8
25	—	—	—	—	—	—	—	—	—	—	—	—	0·3	1·0	1·0	1·0	1·0	—	—	—	—	—	—	—	—	8·6*
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·9
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7·7
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10·0†
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total . . .	—	—	—	—	—	—	0·3	1·7	3·3	5·6	7·0	9·6	10·9	10·1	6·6	4·8	1·9	—	—	—	—	—	—	—	—	61·8

\* Doubtful—card for part of day missing.  
 † Sun obscured before 11 a.m. by Arrival Bay heights.  
 ‡ Instrument shadowed by hills until 7.15 a.m.

October, 1903.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midt.	Day.	
1	—	—	—	—	—	—	0·2	0·2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·4
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5·9
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4·9
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11·0
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12·5
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11·5
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·1*
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14·0
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14·3
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9·9
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2·7
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8·1
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11·2
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·1
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6·6
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14·1
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14·3
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8·1
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2·6
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—*
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1·3
26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2·4
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3·4
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0·0
Total . . .	—	—	—	0·5	7·0	8·5	11·0	11·9	11·5	12·6	13·7	11·7	12·5	12·5	11·8	11·2	9·5	7·9	4·6	1·0	—	—	—	—	—	159·4

\* Doubtful—card for part of day missing.

TABLE V. (continued).

DURATION OF BRIGHT SUNSHINE IN HOURS.

November, 1903.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midd.	Day.
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0*
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.9*
3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.2	—	—	—	0.2	0.7	0.1	17.5
4	0.8	0.3	0.7	0.3	0.6	—	0.4	0.4	1.0	1.0	0.9	1.0	0.7	0.1	0.3	0.1	—	—	—	—	—	—	—	—	8.6
5	—	—	—	—	—	—	—	0.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.7
10	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	—	—	—	20.8
11	—	—	—	—	—	—	—	—	—	—	0.1	—	0.4	—	—	—	—	—	—	0.7	1.0	1.0	0.2	0.2	3.6
12	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.9	0.9	—	0.1	—	—	—	—	—	—	—	—	—	—	—	—	—	8.4
13	—	—	—	—	0.4	0.7	1.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	—	—	—	—	0.4	0.6	0.7	13.0
14	0.8	—	0.4	0.6	1.0	0.7	—	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	0.3	1.0	19.1
15	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.1	0.3	0.1	—	0.1	0.1	—	0.2	0.1	—	0.2	—	—	—	—	—	—	7.7
16	—	—	—	—	—	—	—	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	—	0.4	—	—	—	—	—	9.8
17	—	—	—	—	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3
18	—	—	—	—	—	0.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	18.3
19	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.4	—	—	—	0.6	19.8
20	0.1	—	—	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	20.9
21	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	—	—	0.1	—	—	—	—	—	15.8
22	0.3	0.4	0.4	—	—	—	—	0.9	0.5	0.9	1.0	0.7	0.7	—	0.4	0.5	0.1	—	—	—	—	—	—	0.6	7.4
23	—	—	—	—	—	—	—	0.2	1.0	0.7	0.5	—	0.4	0.3	0.5	0.3	0.5	—	0.3	—	—	0.1	—	0.4	5.2
24	0.7	—	—	—	—	—	—	—	—	—	—	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	13.5
25	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24.0
26	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.7	0.7	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	9.3
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1
28	—	—	—	0.2	1.0	0.7	—	—	—	—	—	0.1	0.3	—	—	—	—	—	—	—	—	—	—	—	2.3
29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
Total . . .	10.7	8.7	9.5	9.9	12.3	11.4	11.3	12.9	14.4	13.4	13.1	12.9	13.3	11.4	12.4	11.6	10.0	7.4	7.6	7.1	6.8	6.4	6.0	9.3	262.8

\* Doubtful—card for part of day missing.

December, 1903.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midd.	Day.	
1	—	—	—	—	—	—	—	—	—	—	—	0.1	—	—	—	—	—	0.5	—	—	—	—	—	—	0.6	
2	—	—	—	—	—	0.2	1.0	—	—	—	—	—	—	—	—	0.1	—	0.2	0.5	0.2	0.6	1.0	1.0	1.0	5.8	
3	0.1	—	—	—	—	—	0.4	1.0	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.8	0.8	—	—	0.2	0.5	13.0	
4	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.4	0.5	—	—	—	—	—	1.4	
6	0.1	0.6	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	—	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	20.9	
7	0.9	0.8	0.9	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	23.1	
8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	1.0	1.0	1.0	1.0	1.0	1.0	0.5	—	0.3	1.0	0.9	0.9	0.9	1.0	1.0	20.2	
9	1.0	1.0	0.9	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	23.4	
10	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24.0	
11	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.9	1.0	1.0	1.0	23.7	
12	1.0	1.0	1.0	0.4	0.3	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	22.2	
13	1.0	1.0	0.8	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	23.3	
14	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24.0	
15	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24.0	
16	1.0	1.0	0.8	1.0	1.0	1.0	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	23.3	
17	1.0	1.0	0.8	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.0	1.0	0.1	—	21.0	
18	—	—	—	—	—	—	—	—	0.4	0.9	0.8	0.8	0.4	0.4	0.3	1.0	0.9	1.0	1.0	0.9	0.4	0.5	0.9	1.0	11.6	
19	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.4	0.1	—	0.5	0.1	—	0.9	1.0	1.0	18.9	
20	1.0	1.0	0.9	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	—	—	—	—	19.2	
21	0.8	1.0	0.9	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	—	—	—	—	—	—	—	—	—	—	—	11.6	
22	—	—	—	—	—	—	—	—	—	—	—	0.7	1.0	0.3	0.3	—	—	—	—	—	—	0.3	0.9	1.0	1.0	5.5
23	1.0	1.0	1.0	0.5	0.3	0.7	0.3	1.0	1.0	1.0	1.0	0.9	0.2	—	—	—	—	—	—	—	—	—	—	—	9.9	
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	
25	—	—	—	—	—	—	—	—	—	—	—	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	13.8	
26	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24.0	
27	1.0	1.0	1.0	0.5	0.9	1.0	1.0	1.0	1.0	1.0	1.0	—	—	—	0.4	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	19.7	
28	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	23.4	
29	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	—	0.1	1.0	1.0	0.1	—	—	1.0	19.1	
30	1.0	0.9	1.0	1.0	0.5	0.3	0.5																			

TABLE V. (continued).

## DURATION OF BRIGHT SUNSHINE IN HOURS.

January, 1904.

Day.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	Midt.	Day.
1	0.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.8	0.9	0.4	0.4	0.4	—	0.4	1.0	0.4	18.4
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.7
4	—	—	0.3	—	—	—	—	—	—	0.1	0.9	0.8	0.3	0.1	—	—	—	—	—	—	—	—	—	—	12.7
5	1.0	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.6	0.3	0.1	0.1	2.4
6	—	0.1	0.9	0.2	0.2	0.2	0.7	0.3	0.1	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.1
7	—	—	—	—	—	—	—	—	—	—	—	0.1	0.5	0.3	0.8	0.9	0.9	0.5	0.2	—	0.5	0.9	0.2	—	5.8
8	—	0.1	—	—	—	—	—	—	—	0.2	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5
10	—	—	—	—	—	—	—	0.1	0.3	0.6	—	—	—	0.3	0.7	0.5	0.3	—	—	—	1.0	1.0	0.9	1.0	6.7
11	1.0	0.7	0.8	0.5	1.0	1.0	0.8	0.5	0.4	—	—	—	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.4	—	0.2	0.2	15.1
12	—	—	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	—	0.6	0.9	0.5	19.6
13	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.4	—	—	—	—	17.8
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
16	—	—	—	—	—	—	—	0.5	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	1.0	0.7	0.2	—	—	12.9
17	—	—	—	0.1	—	—	—	—	—	—	—	—	0.4	0.1	—	—	—	—	—	—	—	—	—	—	0.6
18	—	—	—	—	—	—	0.4	—	—	0.1	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	3.8
19	0.3	0.8	—	—	0.2	0.2	0.9	0.2	0.3	0.1	0.3	—	—	—	—	0.1	0.5	0.4	0.9	0.9	0.4	—	—	—	6.5
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
22	—	—	—	—	—	0.1	—	—	—	—	—	—	—	—	—	—	—	—	0.2	—	—	—	—	—	0.3
23	—	—	—	—	—	—	—	—	0.1	0.8	—	—	0.3	0.8	0.9	—	—	—	—	—	—	—	—	—	2.9
24	—	—	0.7	0.3	—	—	0.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.1	—	—	0.2	14.4
25	0.8	—	0.2	0.5	0.6	—	0.5	—	0.8	1.0	0.8	0.2	0.4	0.7	0.7	0.1	—	0.6	0.8	0.1	—	0.1	0.2	—	9.1
26	0.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.9
27	1.0	1.0	1.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.1	0.8	1.0	1.0	1.0	0.9	1.0	23.6
28	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.3	—	—	—	—	0.5	1.0	1.0	1.0	0.2	0.1	—	—	15.1
29	—	—	—	—	—	—	0.5	—	—	0.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	14.7
30	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.4	0.3	0.6	0.9	—	—	—	—	—	—	—	—	14.0
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0
Total . . .	7.1	6.9	8.5	7.3	8.0	7.5	9.9	8.6	9.9	11.7	12.2	9.9	10.9	11.6	12.2	11.3	11.4	12.0	11.6	10.5	8.2	7.7	7.0	6.3	228.2

VI. SUMMARY TABLES OF OBSERVATIONS

OF THE

“DISCOVERY” EXPEDITION

AND

OTHER ANTARCTIC EXPEDITIONS.

TABLE 1.—MONTHLY AND YEARLY SUMMARY OF OBSERVATIONS AT THE "DISCOVERY'S" WINTER QUARTERS.  
Latitude 77° 50' 50" S, Longitude 166° 44' 45" E. 9th February, 1902, to 15th February, 1904 (inclusive).

Month.	Pressure.				Temperature.				Wind.										Weather.				Hours of sunshine.															
	Mean.		Range.		Mean.		Range.		Percentage of wind frequency referred to 8 points.		Days of strong winds.		Number of observations.		Mean force.		Days of gales.		Days on which the following phenomena occurred.																			
	ins.	ins.	ins.	ins.	°	°	°	°	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Calms.	Variables.	0 to 12	6 or 7	8 or above	b.		c.	d.	e.	f.	g.										
	Maximum.	Minimum.	Date.	Range.	Maximum.	Date.	Minimum.	Date.	Maximum.	Date.	Minimum.	Date.	Range.	Maximum.	Date.	Minimum.	Date.	Range.	Maximum.	Date.	Minimum.	Date.		Range.	Maximum.	Date.	Minimum.	Date.	Range.									
1902																																						
February (9th to 28th)	29.257	29.580	22nd	28.862	9th	0.718	15.9	29.2	28th	-0.8	22nd	30.0	4	20	45	10	2	2	2	2	2	2	2	4	10	6	5	—	—									
March	29.329	29.808	18th	28.928	7th	0.880	8.0	27.5	9th	-13.2	29th	40.7	5	7	30	20	10	3	—	—	—	—	—	8	17	6	7	—	—									
April	29.408	30.081	15th	28.850	5th	1.284	-7.1	19.5	13th	-31.6	23rd	51.1	2	17	23	20	7	—	—	—	—	—	—	6	14	10	12	1	—									
May	29.274	30.181	19th	28.465	30th	1.716	-12.5	19.0	4th	-39.5	13th	58.5	5	20	39	9	7	3	—	—	—	—	—	4	6	16	9	8	2	—								
June	29.245	29.944	8th	28.140	28th	1.894	-16.0	13.0	28th	-47.0	24th	60.0	5	21	32	12	6	2	—	—	—	—	—	2	12	13	5	13	10	2	—							
July	29.328	29.907	13th	28.167	4th	1.740	-8.1	16.7*	19th	-33.0	8th	54.7	5	15	35	17	7	2	—	—	—	—	—	3	11	13	7	11	17	—	—							
August	28.841	29.339	23rd	28.295	19th	1.044	-16.5	6.0	21st	-50.5	7th	56.5	4	27	30	14	7	1	—	—	—	—	—	3	5	16	10	17	14	5	—							
September	29.314	29.854	24th	28.381	11th	1.493	-12.0	15.0	29th	-43.5	20th	53.5	3	16	34	17	4	—	—	—	—	—	—	5	2.5	3.60	9	1	3	16	11	15	6	2	51.9†			
October	29.008	29.669	23rd	28.319	14th	1.350	-8.5	12.0	31st	-40.8	11th	52.8	4	21	32	13	4	1	—	—	—	—	—	6	2.5	3.72	6	2	3	13	15	13	3	6	114.2			
November	29.564	30.112	22nd	28.808	1st	1.334	12.0	27.8	15th	0.0	11th	27.8	23	8	31	13	3	—	—	—	—	—	—	4	2.0	3.30	4	—	8	11	11	9	1	—	291.5			
December	29.435	29.775	2nd	28.949	6th	0.826	23.1	39.0	26th	4.2	3rd	34.8	22	9	21	14	9	1	—	—	—	—	—	8	2.0	3.72	6	—	8	14	9	12	3	7	375.6			
1903																																						
January	29.391	29.689	4th	28.804	22nd	0.885	28.1	39.0	8th	9.0	29th	30.0	25	9	17	10	4	—	—	—	—	—	—	2	2.8	3.72	1	—	7	16	8	8	6	3	385.1			
February	29.228	29.751	28th	28.758	23rd	0.993	11.2	32.2	2nd	-9.5	24th	41.7	3	15	44	14	2	—	—	—	—	—	—	—	6	2.0	3.36	6	—	2	20	6	8	4	—	255.2		
March	29.418	29.782	28th	28.939	15th	0.798	-0.8	25.5	6th	-20.0	23rd	45.5	10	24	38	11	—	—	—	—	—	—	—	—	7	2.4	3.72	7	2	6	15	10	13	3	—	118.3		
April	29.289	29.772	9th	28.795	12th	0.977	-16.9	5.2	20th	-42.0	26th	47.2	5	23	30	6	1	—	—	—	—	—	—	—	8	2.0	3.60	8	—	11	15	4	12	7	—	13.9		
May	29.157	29.543	14th	28.746	22nd	0.797	-16.0	9.2	18th	-51.2	15th	60.4	6	13	32	12	6	1	—	—	—	—	—	—	2	2.0	3.72	14	2	12	14	5	13	16	3	—		
June	29.492	30.037	3rd	28.953	27th	1.084	-13.8	17.0	11th	-47.0	22nd	64.0	8	18	25	5	2	—	—	—	—	—	—	—	9	2.6	3.60	9	9	11	12	7	12	9	6	—		
July	29.039	30.061	31st	28.419	16th	1.642	-21.1	12.0	18th	-54.2	30th	65.2	8	15	36	11	—	—	—	—	—	—	—	—	6	2.0	3.72	7	6	19	10	2	6	15	8	—		
August	29.145	30.027	1st	28.300	10th	1.727	-16.5	11.8	22nd	-53.2	6th	65.0	9	25	24	4	8	2	—	—	—	—	—	—	10	2.7	3.72	10	7	10	16	5	9	14	5	—		
September	28.989	29.586	1st	28.303	23rd	1.283	-18.6	13.2	28th	-58.5	20th	71.7	11	23	28	10	4	1	—	—	—	—	—	—	3	2.8	3.60	16	5	10	15	5	6	11	9	61.8		
October	28.925	29.331	14th	28.332	27th	1.002	-6.8	12.0	27th	-42.8	5th	54.8	4	25	30	12	3	1	—	—	—	—	—	—	1	3.0	3.72	15	4	3	18	10	14	2	10	180.4		
November	28.877	29.345	23rd	28.508	26th	0.837	15.4	34.0	22nd	-5.5	3rd	39.5	8	10	33	23	11	—	—	—	—	—	—	—	3	2.8	2.74	10	1	4	15	11	12	3	7	262.8		
December	29.224	29.598	8th	28.862	22nd	0.736	25.7	42.0	26th	7.6	6th	34.4	11	6	32	19	6	—	—	—	—	—	—	—	4	2.0	2.44	3	—	9	14	8	7	2	7	480.1		
1904																																						
January	29.061	29.408	25th	28.671	13th	0.735	22.5	38.8	11th	4.0	27th	34.8	2	23	35	11	4	—	—	—	—	—	—	—	4	2.0	1.71	2	—	2	11	18	16	—	10	228.2		
February (to 15th day)	29.165	29.311	14th	28.714	4th	0.797	21.5	38.5	5th	6.4	7th	32.1	2	18	39	17	3	—	—	—	—	—	—	—	4	2.0	63	3	—	4	6	5	—	—	—			
The Year 1902-3 (Feb. 9th to Jan. 31st)	29.283	30.181	May 18th	28.140	June 28th	2.041	0.4	39.0	Dec. 26th and Jan. 8th	-50.5	Aug. 7th	89.5	9	16	31	14	6	1	0	2	19	2	2	2	2	2.5	4.241	75	32	81	169	107	133	93	29	1198.3		
The Year 1903-4 (Feb. 1st to Jan. 31st)	29.155	30.061	July 31st	28.300	Aug. 10th	1.761	-3.0	42.0	Dec. 28th	-58.5	Sept. 20th	100.5	7	18	32	11	4	1	—	—	2	22	3	2.4	3.865	107	36	99	175	91	128	86	65	1589.7				

† Sunline recorder erected 14th September, 1902.

\* From thermograph trace.

TABLE 2.—GERMAN ANTARCTIC EXPEDITION. LED BY DR. ERICH VON DRYGALSKI.  
MONTHLY AND YEARLY SUMMARY OF OBSERVATIONS AT THE WINTER QUARTERS OF THE "GAUSS."  
(Latitude 65° 2' 9" S., Longitude 89° 38' 0" E.).

Month.	* Corrected for temperature and height above sea level, and for gravity to 45° latitude.				Air temperature.				Wind.		Weather.		Precipitation. Days with precipitation. ●, ✖, †.	
	Pressure.				Absolute.				Mean force.	Number of days with force		Clear days. < 2.		Cloudy days. > 8.
	Mean.	Maximum.	Minimum.	Date.	Range.	Mean.	Maximum.	Minimum.		Date.	Range.			
1902.	ins.	ins.	ins.	ins.	ins.	°	°	°	°	°	°	°	°	
March . . . . .	29.158	29.749	28.642	17th	1.107	16.9	31.1	10th	39.2	3.0	8	1	4	17
April . . . . .	29.217	29.591	28.434	27th	1.157	3.9	19.4	7th	41.8	3.4	9	5	3	15
May . . . . .	29.119	29.705	28.457	6th	1.208	6.8	23.9	7th	48.1	5.1	23	11	1	27
June . . . . .	29.241	29.922	28.634	2nd	1.238	0.5	20.3	13th	51.5	3.2	14	6	3	18
July . . . . .	29.209	29.642	28.414	6th	1.223	-0.6	23.7	19th	57.4	3.9	18	9	0	25
August . . . . .	28.835	29.387	27.808	24th	1.559	-7.4	13.1	30th	54.5	5.1	24	12	1	31
September . . . . .	28.855	29.634	28.201	28th	1.433	0.1	20.8	22nd	47.7	3.0	12	5	2	24
October . . . . .	28.945	29.378	27.922	21st	1.456	8.6	25.7	23rd	42.7	2.6	9	6	2	26
November . . . . .	29.371	29.800	28.705	24th	1.095	19.9	32.9	30th	50.6	3.0	10	1	2	21
December . . . . .	29.308	29.741	28.556	10th	1.185	30.0	40.8	22nd	30.4	2.9	4	4	2	14
1903.														
January . . . . .	29.201	29.619	28.390	4th	1.229	30.6	39.0	2nd	27.3	2.6	7	3	2	16
February† . . . . .	29.150	29.713	28.414	26th	1.269	25.9	38.0	26th	25.4	3.6	11	6	2	17
The Year . . . . . (February 19th, 1902, to February 18th, 1903)	29.134	29.922	27.808	June 16th	2.114	11.3	40.8	December 22nd	82.2	3.5	149 =12.4 per cent.	69 =5.8 per cent.	24	251

\* The correction applied for gravity, latitude 65° S., was +0.052 inch.  
† February 19th to 28th, 1902, February 1st to 18th, 1903.

TABLE 3.—PERCENTAGE OF WIND FREQUENCY AT THE WINTER QUARTERS OF THE GERMAN ANTARCTIC EXPEDITION.  
REFERRED TO 16 POINTS.

(Latitude 66° 2' S., Longitude 89° 38' W.)

Month.	N.	NNE.	NE.	ENE.	E.	ESE.	SE.	SSE.	S.	SSW.	SW.	WSW.	W.	WNW.	NW.	NNW.	Calm.	Prevailing direction. E by N.
1902																		
March . . . . .	—	—	—	1.6	47.1	7.0	6.2	15.3	4.8	2.2	1.1	7.5	—	0.5	—	—	6.7	15.6
April . . . . .	—	—	—	3.9	36.1	15.0	10.0	8.9	5.3	0.5	2.5	1.1	4.2	1.4	0.8	—	10.3	31.7
May . . . . .	—	—	—	—	60.2	11.0	4.6	9.1	—	0.1	0.1	4.9	3.8	—	—	—	6.2	51.1
June . . . . .	0.1	—	0.1	0.6	43.8	15.6	7.2	2.5	0.1	0.1	1.5	0.1	4.3	0.4	0.8	0.4	22.4	17.0
July . . . . .	0.1	—	—	0.7	60.1	6.2	2.4	0.1	0.8	0.7	1.1	1.1	4.5	3.1	0.8	0.5	17.8	45.8
August . . . . .	0.1	0.8	—	8.8	59.1	7.0	1.3	0.6	0.6	—	0.5	0.8	11.6	2.7	0.5	0.4	5.2	57.1
September . . . . .	0.3	0.1	0.2	1.3	28.5	17.6	7.2	8.9	0.6	1.5	1.5	5.1	13.2	1.3	1.5	0.1	11.1	2.6
October . . . . .	0.5	1.0	2.8	2.7	37.5	12.4	2.4	0.5	0.9	0.1	0.7	2.6	5.9	4.4	4.3	0.6	20.7	4.2
November . . . . .	—	—	0.4	2.9	74.2	3.7	3.0	0.4	0.3	—	1.9	0.4	2.5	1.5	—	—	8.8	14.0
December . . . . .	0.5	—	1.3	16.1	44.4	8.1	2.1	2.7	4.0	3.2	3.0	1.6	4.6	0.5	1.1	0.3	6.5	25.5
1903																		
January . . . . .	—	—	1.6	6.7	33.9	18.6	7.5	3.5	3.0	0.5	0.5	3.0	7.0	4.8	0.8	—	8.6	9.1
February* . . . . .	—	—	—	1.5	48.2	4.3	0.7	4.9	3.4	3.9	2.1	12.5	13.5	0.3	0.3	0.2	4.2	9.5
The Year . . . . . (February 18th, 1902, to February 18th, 1903)	0.1	0.2	0.5	3.9	47.8	10.5	4.5	4.8	2.0	1.1	1.4	3.4	6.3	1.7	0.9	0.2	10.7	23.7

\* February 19th to 28th, 1902, February 1st to 18th, 1903.

TABLE 4.—SWEDISH ANTARCTIC EXPEDITION. LED BY DR. OTTO NORDENSKIÖLD.  
MEAN RESULTS OF 8 A.M. OBSERVATIONS.  
Snow Hill Island (Latitude 64° 30' S., Longitude 56° 56' W.), March, 1902, to October, 1903.

Month.	Pressure.				Temperature.				Wind.				Cloud.	
	Mean.	Absolute.			Mean.	Absolute.			Average.	Strong winds, force 6-7.	Number of gales, force 8-10.	Average amount.		
		Maximum.	Date.	Minimum.		Date.	Range.	Direction.						Force.
1902														
March . . . . .	inches 29.27	inches 29.80	inches 28.24	29th	° 14.1	° 37	° -2	2nd	° 39	points S 2 W*	0 to 12 3.8*	6	1	4 (6 days)
April . . . . .	29.33	29.90	28.53	6th	6.3	35	-8	17th	43	S	2.7	6	1	6 (22 days)
May . . . . .	29.16	29.75	28.45	16th	1.7	36	-18	12th	54	S 2 W	4.3	4	7	6 (20 days)
June . . . . .	29.39	29.86	28.74	23rd	-0.4	34	-18	20th	52	S 1 E	4.1	5	7	5 (25 days)
July . . . . .	29.29	29.74	28.73	8th	-11.9	13	-29	5th	42	S 4 W	4.5	7	6	7 (23 days)
August . . . . .	29.00	30.01	28.54	4th	-9.7	32	-35	18th	67	S	3.3	4	4	6 (28 days)
September . . . . .	29.15	29.77	28.38	14th	5.3	33	-27	16th	65	S	3.4	5	4	7 (29 days)
October . . . . .	29.02	29.53	28.51	12th	8.9	34	-11	3rd	45	S 2 W	3.3	5	3	8
November . . . . .	29.32	29.83	28.58	8th	16.5	30	2	8th	28	S 2 W	3.1	8	0	8
December . . . . .	29.30	29.85	28.61	15th	23.1	33	21	30th	12	S 2 E	1.8	0	0	7
1903														
January . . . . .	29.32	29.84	28.72	25th	30.0	35	27	23rd	8	S 4 E	1.7	0	0	9
February . . . . .	29.10	29.63	28.56	14th	24.4	33	11	5th	22	S 1 E	2.8	6	0	8
March . . . . .	28.99	29.45	28.44	24th	11.0	36	0	5th	36	S 2 W	5.3	7	9	9
April . . . . .	29.10	29.53	28.49	26th	6.7	42	-13	18th	55	S 1 E	3.1	4	3	7
May . . . . .	29.22	30.01	28.51	22nd	-1.6	40	-23	31st	63	S 3 E	2.1	5	0	8
June . . . . .	29.16	29.81	28.25	3rd	-6.8	28	-32	1st	60	S 3 W	2.4	3	1	6
July . . . . .	28.98	29.70	28.39	27th	-0.2	33	-29	18th	62	S	3.0	5	2	7
August . . . . .	29.16	29.95	28.38	5th	3.8	37	-24	5th	61	S 2 E	3.3	5	2	6
September . . . . .	29.21	29.86	28.73	19th	0.3	36	-23	11th	59	S 1 E	2.6	4	2	7
October . . . . .	29.10	29.63	28.43	23rd	19.0	41	-14	27th	55	S 4 E	2.4	2	1	7

\* Mean for 10 days only.

TABLE 5.—RELIEF SHIP "MORNING."  
CAPTAIN WILLIAM COLBECK, LIEUT., R.N.R.

Period.	Position.		Pressure.				Temperature.				Wind.			Weather.							
	Latitude.	Longitude.	Absolute.				Maximum.	Date.	Minimum.	Date.	Absolute.			Mean force.	Strong winds.	Gales.	1.	2.	3.	4.	5.
			Mean.	Maximum.	Date.	Minimum.					Date.	Maximum.	Date.								
1902 December 25 to 31. . . . .	Between 66° 59' S and 70° 15' S	Between 179° 38' E and 175° 10' E	ins. 29.63	ins. 29.78	ins. 29.35	ins. 29.35	25th	° 31	° 36	23th	° 28	25th, 26th, 28th, 30th	0 to 12 3	2	1	3	3	3	5	5	
1903 January 1 to 15. . . . .	Between 70° 12' S and 76° 8' S	Between 175° 0' E and 168° 25' E	29.50	29.68	29.30	29.30	5th	30	33	12th and 13th	21	5th	5	3	5	—	—	9	7	—	
*January 16 to 31 . . . . .	Between 76° 52' S and 77° 18' S	Between 173° 12' E and 169° 32' E	29.27	29.70	28.75	28.75	22nd	26	35	26th	14	30th	3	6	2	—	—	2	3	—	
February 1 to 28 . . . . .	McMurdo Sound. 77° 7' S	166° 32' E	20.27	20.78	28.77	28.77	23rd	12	31	2nd and 4th	-13	24th	4	10	5	—	—	8	5	2	

\* Arrived at McMurdo Sound (77° 7' S, 166° 32' E) on January 24.

TABLE 6.—SLEDGE JOURNEY LED BY CAPTAIN SCOTT TO THE SOUTH, 2ND NOVEMBER, 1902, TO 3RD FEBRUARY, 1903,  
WITH CORRESPONDING VALUES AT WINTER QUARTERS.

Period.	Latitude		Longitude E.	Sledge journey.				Winter Quarters.																							
	S.	E.		Pressure.		Temperature.	Wind.	Weather. Number of days.	Pressure.		Temperature.	Wind.	Weather. Number of days.																		
				Mean by Kew correction.	Mean corrected by hypsometer.				Maximum.	Minimum.				Maximum.	Minimum.	Average direction.	Average force.														
November 2nd to 15th	77 51	166 45	167 45	ins. 29.47	ins. 29.41	ins. 29.70 on 15th	ins. 29.27 on 7th and 8th	Mean 4.9	Maximum 20.0 on 15th	Minimum -10.5 on 10th	points S 2 W	0 to 12 1.5	b. 4	c. 7	o. 3	s. 3	t. —	m. 2	ins. 29.72 on 15th	ins. 29.01 on 2nd	Mean 11.5	Maximum 27.8 on 15th	Minimum 0.0 on 11th	points N 7 E	0 to 12 1.6	b. 4	c. 5	o. 5	s. 4	t. —	m. 1
	79 11	167 45		29.81	29.79	30.06 on 23rd	29.52 on 28th	5.7	19.0 on 30th	-10.0 on 16th	S 1 W N*	0.9	5	7	3	2	—	2	29.41 on 22nd	29.41 on 26th	12.6	24.0 on 26th	1.0 on 26th	N 4 E	2.0	4	6	5	5	—	—
November 16th to 30th	79 16	167 43	165 21	29.57	29.49	29.84 on 2nd	29.00 on 6th	15.3	29.0 on 11th, 13th, and 14th	-8.0 on 6th	S 3 W	1.3	5	3	7	6	—	29.43 on 2nd	29.95 on 6th	21.5	37.8 on 9th	4.2 on 3rd	N 7 E	2.5	5	5	5	8	1	1	
	80 8	165 4		29.43	29.34	29.65 on 31st	29.10 on 23rd	21.3	33.0 on 19th	4.0 on 23rd	S 5 W	1.0	9	3	4	4	—	29.39	29.64 on 27th	24.6	39.0 on 26th	10.5 on 22nd	N 4 E	1.5	3	9	4	4	6	2	
December 1st to 15th	80 30 1/2	161 50	163 43	29.58	29.55	29.88 on 14th	29.28 on 9th	25.9	38.0 on 7th	15.0 on 2nd	S 3 E	1.7	3	5	7	6	2	29.53	29.69 on 4th	28.0	39.0 on 8th	14.8 on 2nd	N 4 E	1.3	4	7	4	5	3	3	
	80 15	162 20		29.29	29.24	29.65 on 16th	28.83 on 22nd	15.2	25.0 on 16th, 20th, 21st, and 24th	-2.0 on 27th	S 7 W	1.3	3	6	7	1	—	29.28	29.66 on 17th	24.3	35.0 on 26th	9.0 on 26th	N 6 E	1.4	3	9	4	3	—	2	
December 16th to 31st	80 9 1/2	162 37	168 15																												
	78 19	168 15																													

Barometer has been corrected for a mean height of 150 feet above M.S.L.  
\* On 3 days in this period the wind was N.

TABLE 7.—SCOTTISH NATIONAL ANTARCTIC EXPEDITION, LED BY WILLIAM S. BRUCE, F.R.S.G.S.  
ABSTRACT OF HOURLY OBSERVATIONS.

Period.	Position.		Pressure.				Temperature.				Cloud.		Wind.								Weather.										
	Mean S. latitude.	Mean W. longitude.	Mean.	Absolute.			Absolute.			Mean amount.	0 to 10	10 to 12	N.	N.E.	S.E.	S.	S.W.	W.	N.W.	Calms.	Variables.	s.	Steels.	r.	h.	m or f.	Gales.				
				Maximum.	Date.	Minimum.	Range.	Maximum.	Date.																			Minimum.	Range.	Direction referred to 8 points.	Number of observations under each point.
Steamship "Scotia," in the Weddell Sea, February 1 to March 20, 1903.																															
1903																															
February 1 to 14.	60 5	37 43	29.186	29.639	6th	1.210	14th	28.429	32.0	—	25.8	—	6.2	9.5	1.8	72	49	13	8	38	65	26	49	22	—	31	5	15	0	27	1
February 15 to 28	67 55	21 44	28.966	29.417	26th	0.944	15th	28.473	32.0	17th	13.4	22nd	19.6	8.5	1.9	47	31	56	55	31	60	15	20	21	—	34	0	0	0	2	10
March 1 to 10.	67 56	34 35	29.168	29.610	6th	1.243	9th	28.387	29.5	9th	20.8	6th	8.7	10.0	2.6	36	56	47	39	6	2	20	18	6	—	53	2	5	0	9	27
March 11 to 20	63 41	42 48	29.000	22.362	13th	0.966	20th	28.396	32.1	20th	6.9	13th	25.2	9.8	2.6	45	91	7	11	45	8	1	28	4	—	37	1	9	0	13	1
At Laurie Island, South Orkneys, April, 1903, to February 29, 1904.																															
1903																															
April . . . . .			29.204	29.859	2nd	1.580	24th	28.279	20.6	15th	— 8.1	28th	41.3	8.1	1.7	65	7	14	60	123	103	114	170	44	10	119	32	48	2	51	0
May . . . . .			29.329	30.013	13th	1.369	3rd	28.844	17.1	31st	— 15.7	7th	61.7	7.5	2.2	84	14	38	106	99	57	114	181	46	5	175	8	53	6	64	0
June . . . . .			29.266	29.792	8th	1.342	3rd	28.450	9.5	1st	— 26.0	19th	67.5	6.7	1.7	94	22	29	64	119	92	94	150	50	6	205	6	24	7	21	0
July . . . . .			29.160	29.845	19th	1.614	3rd	28.231	16.9	34.2	— 13.8	5th	48.0	7.5	2.4	72	5	15	34	106	87	164	223	28	10	167	7	26	5	25	33
August . . . . .			29.254	30.021	21st	1.518	6th	28.503	18.8	38.0	— 15.4	1st	53.4	8.1	2.1	142	48	27	53	81	72	91	178	48	4	218	8	49	3	34	38
September . . . . .	Laurie Island.		29.239	29.930	8th	1.477	28th	28.453	13.4	40.0	— 25.8	2nd	65.8	7.0	1.6	80	24	32	80	154	114	77	110	44	5	166	10	15	3	24	7
October . . . . .	60 41	41 50	29.337	30.113	3rd	1.669	24th	28.444	27.0	42.0	— 9.1	3rd	51.1	8.4	2.0	136	23	10	30	43	63	133	256	43	7	168	21	10	1	7	9
November . . . . .			29.119	29.885	18th	1.547	14th	28.338	29.3	41.6	14.9	2nd	28.5	8.4	1.7	84	12	21	135	28	5	89	329	14	3	124	13	37	5	23	4
December . . . . .			29.201	29.866	14th	1.421	21st	28.445	31.5	40.8	25.4	3rd	15.4	9.3	1.2	27	19	50	148	15	3	68	357	54	3	212	6	28	3	50	0
1904			29.158	29.554	16th	0.930	23rd	28.924	32.3	44.4	25.4	5th	19.0	9.6	1.1	41	25	68	217	16	5	56	266	43	7	133	17	87	3	33	0
February . . . . .			29.144	29.902	15th	1.371	20th	28.531	32.6	47.5	27.0	23rd and 24th	20.5	8.8	1.8	—	—	—	—	—	—	—	—	—	—	103	14	89	5	9	1





## VII. CLIMATOLOGY OF SOUTH VICTORIA LAND AND THE NEIGHBOURING SEAS.

BY

M. W. CAMPBELL HEPWORTH, C.B., COMMANDER R.N.R.

[SEE TABLES, Pp. 408-415.]

IN the following memoir all barometrical observations utilized have been corrected for instrumental error and reduced to sea-level and to 32° F. When a maximum or minimum pressure, or temperature, is mentioned, it is in all cases the absolute maximum, or the absolute minimum, that is referred to. The range of pressure, or temperature, given is the extreme range. Observations for temperature on the sledge journeys usually relate to readings of a thermometer exposed to the free air; occasionally to those of a sling thermometer. All wind directions are referred to the true meridian, and the wind force is estimated by the Beaufort scale.

Among the Expeditions taking part in International Antarctic Exploration during the years 1901-04, the British, in the "Discovery," under the command of Commander (now Captain) R. F. SCOTT, R.N., M.V.O., was the only one to reach high latitudes early in the year of 1902. The inquiry relating to the general meteorology of the Antarctic, so far as concerns the months of January and February of that year, is confined, therefore, to the comparatively limited regions visited by the "Discovery," and, from the 9th of February, to the locality chosen by Captain SCOTT for Winter Quarters.

But, although the inquiry is thus limited, as regards the area to be investigated in those months, the information available for discussion is nevertheless considerable, for not only are there at our disposal the meteorological observations referred to, made by Lieutenant C. W. R. ROYDS, R.N., and his assistants, during the first two months of 1902, but there are also, for comparison with them, a large number of data obtained, for the most part in the same localities as those visited by the "Discovery," by two former Expeditions.

The first of these Expeditions was made in H.M.S.'s "Erebus" and "Terror" in the years 1841-2, under the command of Captain Sir JAMES ROSS, R.N., F.R.S.; the second in the steam yacht "Southern Cross," in 1898-1900, led by Mr. C. E. BORCHGREVINK.

For a discussion relating to the general meteorology of the Antarctic, the information obtained by the National Antarctic Expedition may, perhaps, be considered the most important of any contributed in recent years, even if the data obtained by the Expeditions undertaken by other countries taking part in the International Antarctic Exploration of the years 1901-4 covered the same period, for, with the exception of the Scottish National Antarctic Expedition, under Mr. W. S. BRUCE, those of other countries were confined to latitudes merely on the fringe of Antarctica.

Mr. BRUCE, in the "Scotia," made two bold dashes to the southward, in the Weddell Sea, attaining during his second cruise the 74th parallel of south latitude, where uncharted land was discovered.

From the date on which the "Discovery" crossed the Antarctic Circle to the time of her arrival in McMurdo Sound the results of her observations dealt with in this memoir relate to areas over which she travelled during successive periods in the month of January and part of February, 1902. Results of observations obtained in former years (1) by the Expedition under Sir JAMES ROSS in 1841-2, (2) by the "Southern Cross" Expedition, under Mr. C. E. BORCHGREVINK, in 1899-1900, relating to the same areas, in the months of January and February, are then given consecutively for comparison.

The observations recorded by the "Discovery" Expedition, during the remainder of February, in McMurdo Sound, are afterwards discussed.

In the treatment of the records of the various Expeditions which took part in recent Antarctic

exploration during the remainder of the period, viz., from March, 1903, to March, 1904, inclusive, the months have been grouped into seasons for convenience, and the data available for each quadrant of the Antarctic have been dealt with in proper order, according to the season.

As regards three of these seasons, the results of observations obtained by the "Discovery" Expedition at McMurdo Sound, in 1902-3, have been compared with those recorded by the "Southern Cross" Expedition, at Cape Adare, in 1899-1900.

Referring to the grouping of the months into seasons, March and April have been considered as Autumn months; May to August, inclusive, as Winter; September and October as Spring; and November to February, inclusive, as Summer.

The two tables on page 419 are given to enable the reader to follow the narrative more easily.

Discovery,"  
January, 1902.

The "Discovery," proceeding southward, crossed the Antarctic Circle on the 2nd January at about the 178th meridian, with the wind from west-south-westward, moderate in force. The weather had been foggy that day until 1.30 p.m., and since 5.45 p.m. of the previous day.

Thence to a position, reached on the 9th January, about seven miles to the north-eastward of Cape Adare, South Victoria Land, in about 70° 10' S., and 170° 15' E., the winds mainly were from between north-north-east round by east to south-south-east, light to moderate in force. The mean pressure during the period, between the positions referred to, was 29.36 inches; a maximum pressure, 29.94 inches, was recorded on the 2nd of the month, with a gentle breeze from west by south, and the minimum pressure, 29.04 inches, on the 4th, during a calm, giving a range of 0.90 inch.

The temperature was very even during the period; a maximum of 33° F., which occurred on the 2nd, 6th and 8th, with gentle to light breezes from west, south-south-east, and south-east, respectively, was only 2° above the mean of 31° F.; and the minimum of 29° F., recorded on the 9th, only 2° below the mean.

Snow fell on six days; the weather was overcast throughout; and there was fog on two days.

The data relating to the voyage of the steam yacht "Southern Cross" have been taken from the work published by the Royal Society in 1903, entitled 'Magnetic and Meteorological Observations made by the "Southern Cross" Antarctic Expedition, 1898-1900.'

"Southern Cross,"  
January, 1899.

Traversing an area between 65° 43' S., 165° 47' E., and 66° 46' S., 165° 29' E., from January 19th to 31st, inclusive, 1899, on a course which lay to the westward of that covered by the "Discovery," the steam yacht "Southern Cross," in the Expedition organised at the expense of Sir GEORGE NEWNES, Bart., M.P., and led by Mr. C. E. BORCHGREVINK, experienced winds chiefly from between east-north-east and south-south-east, the predominating wind being the south-east.

The mean force of the wind was 2 of the Beaufort scale. The weather was overcast or cloudy; snow fell on four days; and fog was experienced on one.

Barometer observations showed a mean pressure of 29.65 inches; the highest reading, 29.79 inches, recorded on the 19th and again on the 30th, and the lowest reading, 29.43 inches, on the 22nd, show a range of 0.36 inch.

Observations for temperature give a mean of 29° F. for the period; a maximum of 35° F., registered on the 25th, and a minimum of 17° F., on the 29th and again on the 30th, show a range of 18° for the period.

"Erebus" and "Terror,"  
1841-3.

H.M.S. "Erebus" and "Terror" spent the summers of 1840-1, 2, and 3 in the far south, and the months of January and February entirely within the Antarctic Circle. In a work compiled by Mr. RICHARD STRACHAN, F.R.Met.Soc., formerly on the staff of the Meteorological Office, and published by the authority of the Meteorological Committee in 1873, entitled 'Contributions to our Knowledge of the Meteorology of the Antarctic Regions,' the meteorological observations obtained during Sir JAMES ROSS's voyages in high southern latitudes have been reduced and tabulated.

Some of the results, given in the following pages, may be considered apposite for comparison with more recent data. They relate to observations recorded on both ships at the hours of 4 and 8 a.m., noon, 4 and 8 p.m., and midnight.

In reference to those for pressure, Captain J. E. DAVIS, R.N., who was Second Master of the "Terror," supplied the Meteorological Office, in 1872, with a 'Table of the Joint Corrections to be Applied to the Observed Barometer.' For each instrument the neutral point was 29.922 inches, capacity correction  $\frac{1}{20}$  of the difference of height above this point, and capillarity correction + .012.

## OBSERVATIONS Recorded when Under Way.

Expedition.	Month.	Year.	Area traversed.
"Discovery"	January	1902	From Antarctic Circle in about 178° W. to near Cape Adare.
"Southern Cross"	"	1899	From 65½° S., 165¼° E. to 66¼° S., 165¼° E.
"Erebus" and "Terror"	"	1841	From 66° S., 170° E. to 72° S., 172° E., to near Cape Adare.
"Discovery"	"	1902	From Cape Adare to 75¼° S., 165° E.
"Erebus" and "Terror"	"	1841	From Cape Adare to 75¼° S., 169° E.
"Discovery"	"	1902	From 75¼° S., 165° E. to McMurdo Sound, and thence eastward to King Edward VII. Land, along ice barrier.
"Erebus" and "Terror"	"	1841	From 75¼° S., 169° E. southward and eastward to 77° S., 167° W.
"Discovery"	February	1902	From King Edward VII. Land to McMurdo Sound, along ice barrier.
"Southern Cross"	"	1900	From 77¼° S., 168¼° E. to 78¼° S., 164¼° W.
"Erebus" and "Terror"	"	1842	From 75° S., 165° E. to 77¼° S., 160° W.

## OBSERVATIONS Recorded at Winter Quarters, on Sledge Journeys, and Under Way.

Expedition.	Season.	Locality.
"Discovery"	Summer, 1902 (February 9 to 28)	McMurdo Sound.
"Discovery"	Autumn, 1902	McMurdo Sound.
"Southern Cross"	" 1899	Cape Adare.
"Gauss"	" 1902	Kaiser Wilhelm II. Land.
Swedish Station	" 1902	Snow Hill.
"Discovery"	Winter, 1902	McMurdo Sound.
"Southern Cross"	" 1899	Cape Adare.
"Gauss"	" 1902	Kaiser Wilhelm II. Land.
Swedish Station	" 1902	Snow Hill.
"Discovery"	Spring, 1902	McMurdo Sound.
"Southern Cross"	" 1899	Cape Adare.
"Discovery"	" 1902	Sledge journeys.
"Gauss"	" 1902	Kaiser Wilhelm II. Land.
Swedish Station	" 1902	Snow Hill.
"Discovery"	Summer, 1902-3	McMurdo Sound.
"Southern Cross"	Summer, 1899-1900	Cape Adare.
"Morning"	Summer (December, 1902, January and February, 1903)	Under way in Ross Sea and anchored in McMurdo Sound.
"Discovery"	Summer, 1902-3	Sledge journeys.
"Gauss"	" 1902-3	Kaiser Wilhelm II. Land.
Swedish Station	" 1902-3	Snow Hill.
"Scotia"	Summer, 1902-3 (February, 1903)	Under way in Weddell Sea.
"Discovery"	Autumn, 1903	McMurdo Sound.
"Morning"	Autumn, 1903 (March)	Under way in Ross Sea.
Swedish Station	Autumn, 1903	Snow Hill.
"Scotia"	Autumn, 1903 (March)	Weddell Sea.
"Scotia"	Autumn, 1903 (April)	Laurie Island, S. Orkneys.
"Discovery"	Winter, 1903	McMurdo Sound.
Swedish Station	" 1903	Snow Hill.
"Scotia"	" 1903	Laurie Island.
"Discovery"	Spring, 1903	McMurdo Sound.
"Discovery"	" 1903	Sledge journeys.
Swedish Station	" 1903	Snow Hill.
"Scotia"	" 1903	Laurie Island.
"Discovery"	Summer, 1903-4	McMurdo Sound.
"Discovery"	" 1903-4	Sledge journeys.
Scottish Station	" 1903-4	Laurie Island.
"Scotia"	February, 1904	Weddell Sea.
"Discovery"	1904 (February 19-March 3)	Under way homeward.
"Scotia"	Summer, 1904 (March and April)	Weddell Sea.
Scottish Station	Summer, 1904 (March)	Laurie Island.

"Erebus" and "Terror,"  
1841.

January,

The "Erebus" and "Terror" arrived at the edge of the ice pack in about  $171\frac{1}{2}^{\circ}$  E. longitude immediately after crossing the Antarctic Circle on 1st January, 1841, in thick weather, and soon after stood to the southward. In his 'Voyage to the Southern Seas' Sir JAMES ROSS wrote: "We had indeed met the pack in a much lower latitude than we anticipated, but from the little we had seen of it we were by no means dispirited by the early appearance of so serious an obstruction to our progress, for it presented none of those evidences of impenetrability we had been led to expect."

On 3rd January a strong easterly wind prevailed throughout the day, which, with the high sea, thick weather, and fast-falling barometer, rendered the situation critical and anxious. Ross therefore stood away from the pack, but towards midnight, as the barometer commenced to rise and there were other indications of improving weather, he again stood to the southward.

At noon on the 4th the ships were in latitude  $65^{\circ} 22' S.$ , longitude  $172^{\circ} 42' E.$ , and at 9 p.m. "the sun's radiation was measured by means of a thermometer whose bulb was blacked with Indian ink: it rose from  $33^{\circ}$  to  $40^{\circ} \cdot 2$ , the sun's altitude being at the time only four degrees."

A strong breeze from north-westward carried the ships rapidly southward, and at 8 a.m. on the 5th the main pack came again in sight. Choosing the clearest lead, and with no open water to be seen, the vessels forced their way to the south. On 6th January, at noon, they were in latitude  $68^{\circ} 17' S.$ , longitude  $175^{\circ} 21' E.$ , and found they had been set twenty-six miles to the S.E. by the current during the two previous days. Here the temperature of the water at 600 fathoms was found to be  $39^{\circ} \cdot 8$ ; at 450 fathoms  $39^{\circ} \cdot 2$ ; at 300 fathoms,  $38^{\circ} \cdot 2$ ; at 150 fathoms,  $37^{\circ} \cdot 5$ ; and at the surface,  $28^{\circ}$ .

On the 8th January the wind became very light and the weather foggy, and at noon it fell calm. "A great change," writes Sir JAMES ROSS, "was produced by the calm, opening it (the ice) out in all directions, as we always found to be the case in the Arctic Seas."

A northerly breeze sprang up on the 9th, increasing to a strong gale. The wind veered to the eastward and blew with great violence until 2 a.m. the next day, when the weather cleared, and "not a particle of ice could be seen in any direction from the masthead."

On the 11th Possession Island and the land about Cape Adare were discovered.

At noon on the 23rd the "Erebus" and "Terror" were in  $74^{\circ} 20' S.$ , a higher latitude than was attained by Captain JAMES WENTWORTH, who hitherto had penetrated farthest south.

On the following day the ships experienced a gale from eastward, which abated next day, and the barometer, which had been rising throughout the gale, "reached the unusual height of  $29 \cdot 33$  inches" at 4 a.m. of the 25th.

The results of 84 four-hourly observations obtained by the Ross Expedition in the month of January, 1841, between the 66th and 72nd parallels of south latitude and the 172nd and 170th meridians of east longitude showed a mean barometric pressure of  $28 \cdot 95$  inches, which is considerably lower than that obtained by either the "Discovery" or "Southern Cross" over somewhat the same area. Observation for temperature taken at the same hours gave a mean of  $29^{\circ} F.$ , not differing much from the "Discovery's" mean temperature in January, 1902, and the same as that of the "Southern Cross" in January, 1899. It should however be borne in mind that the observations obtained by the Ross Expedition, although for the same month of the year, covered a much longer period.

The mean force of the wind experienced by the Ross Expedition in this month was 4 of the Beaufort scale; the prevailing winds were from between south and north-west, but winds from between south and south-east were not infrequent. Twenty-two observations of snow were recorded among the 84 four-hourly observations for weather, and 4 of fog; the sky for the most part was overcast.

"Discovery,"  
January, 1902.

Jan-

To return to the "Discovery"; from the 9th January, 1902, when she passed Cape Adare, to the 19th, when her position at noon is given as  $75^{\circ} 33' S.$ ,  $164^{\circ} 52' E.$ , the four-hourly barometer observations gave a mean pressure of  $29 \cdot 61$  inches. The highest reading during this time,  $29 \cdot 87$  inches, was made on 15th in a calm; the lowest,  $29 \cdot 42$  inches, on the 11th, associated with a gentle breeze from south by west. Readings for temperature showed a mean of  $30^{\circ} F.$ . A maximum reading of  $36^{\circ} F.$  was recorded on 17th, with a light breeze from north-east by east; a minimum of  $19^{\circ} F.$  on the 16th during a calm. The prevailing winds were from south to west-south-west, the mean force 3. Gales occurred on three days; on two of these occasions the force of the wind is said to have reached 11. Snow fell on four days.

Between the same parallels and meridians as the above the mean of 36 four-hourly barometer observations recorded in the month of January by the Ross Expedition is found to be 29.19 inches, again considerably lower than the mean pressure result of the "Discovery"; but a mean temperature of 29° F., obtained from the same number of observations as those for pressure, differs only 1° from the "Discovery's" mean temperature.

Ross Expedition,  
January, 1841.

The prevailing winds experienced by the "Erebus" and "Terror" were from between south-south-east and south-west, but winds from between north-north-east and east-north-east were occasionally experienced. The mean force of the wind, 3 of the Beaufort scale, agrees with the mean of the "Discovery's" estimated force. Of 36 observations of weather, 6 are noted under the head snow, 1 under the head fog, 3 under the head mist, 14 under overcast, and the remainder under blue sky and passing clouds.

The "Discovery," during the remainder of January, 1902, progressed southward from 75° 33' S., 164° 52' E. to McMurdo Sound and subsequently eastward, almost as far east as the most easterly position she reached, in about 76° S., 152° W., near the land, which is claimed to have been discovered by the Expedition and was named King Edward VII. Land.

"Discovery," Jan-  
uary, 1902.

Over a considerable portion of this route data relating to the month of January, 1841, collated from records of the "Erebus" and "Terror," are available for comparison with those obtained by the "Discovery" at the close of January, 1902.

The results of the "Discovery's" observations during the remainder of January, *i.e.*, 20th to 31st, show a diminution of pressure, the mean for the period, 29.27 inches, being 0.34 inch lower than that of the previous period, 10th to 19th. The highest reading, 29.55 inches, was observed on the 20th, when there was a light air from west by north; the lowest, 28.97 inches, on the 31st, with a gentle breeze from west by north.

Observations for air temperature give a mean of 23° F. The maximum temperature was 35° F. and was registered on the 20th, a light breeze from north by east being recorded at the same time; a minimum of 9° F. occurred on the 23rd, with a light breeze from south, and again on the 29th, with a light air from south-east by south.

The prevailing winds were easterly, from between east-north-east and south-south-east, south-easterly winds predominating, and the mean force was as low as 2. One strong wind, force 7, was recorded, but no gales. Snow fell on five days and fog was experienced on four days. The weather appears to have been fairly bright, for the most part; it was overcast on two days only.

The area for which observations made on board the "Erebus" and "Terror," in January, 1841, are comparable with those of the "Discovery" lay between the 75th and 77th parallels of south latitude and the meridians of 167° E. and 170° W. longitude. The mean pressure obtained from 24 barometer observations, 28.95 inches, is 0.32 inch lower than that found from the "Discovery's" observations, the mean temperature, 26° F., 3° higher. Out of 24 observations of wind, 6 gave the direction as south, 5 as west-south-west, 3 as west, and the remaining observations were of winds from south-eastward and north-westward. The mean force of the wind, as estimated, is found to have been 4. Out of 24 observations of weather, "bc" was recorded 11 times, and "o" only twice; one observation came under the head snow.

Ross Expedition,  
January, 1841.

The track of the "Discovery," from her position furthest east, in the neighbourhood of King Edward VII. Land, *i.e.*, in latitude about 76° S., 152° W., back to McMurdo Sound, lay fairly close to the land for a time and afterwards nearly parallel to the ice barrier to about the 168th meridian of west longitude, whence she appears to have made a fairly direct course to a position about 25 miles north of Cape Crozier. During this passage, which occupied from the 1st to the 9th February, barometer observations gave a mean pressure of 28.90 inches. The highest barometer reading, 29.09 inches, was recorded on the 1st, when the wind was light from east-north-east, and again on the 3rd, when the wind was gentle from east by north. The lowest reading, 28.70 inches, occurred on the 2nd, with a gentle breeze from south-south-west.

"Discovery," Feb-  
ruary, 1902.

Mean temperature had decreased to 16° F.; a maximum temperature of 25° F. was observed on 7th, with a light air from north, and a minimum of 4° F. on the 4th, with a gentle breeze from south-east by south, and again next day, with a fresh breeze from south-south-east.

The directions of the wind lay between south by east and east; the predominating direction is found to

have been the south-easterly; the average force 3. On one day only a strong wind was recorded, and on that day the mean force was not higher than 4. Snow fell on 4 days, fog occurred on 2 days, and the weather was overcast on 4 days.

"Southern Cross,"  
February, 1900.

In the year 1900, from the 10th to the 20th February, the "Southern Cross" cruised in the Ross Sea in about the same latitudes and partly between the same meridians, viz., between 77° 17' S. and 78° 35' S. and between 168° 15' E. and 164° 10' W.

During this cruise she registered a higher mean pressure than that registered by the "Discovery," viz., 29·13 inches. Her highest barometer reading of 29·520 inches is entered against the 14th of the month; her lowest, 28·830 inches, against the 17th. The mean of her observations for temperature, 14° F., is 2° lower than that of the "Discovery." A maximum temperature of 30° F. is entered against the 20th; a minimum, -12·5° F., against the 19th. The prevailing wind appears to have been from southward, the average force 3, which is the same as that of the "Discovery"; but a gale, in which the extreme force was estimated as 10, was experienced on the 13th, and winds of force 6-7 were recorded on three other occasions. The weather was dull and overcast; snow fell on 6 days, fog occurred on 5 days.

Ross Expedition,  
February, 1842.

From 138 observations made in the month of February, 1842, on board the "Erebus" and "Terror," during the Expedition under Sir JAMES ROSS, between the parallels of 75° S. and 77° 30' S. and the meridians of 165° E. and 160° W., the following results are obtained:—Mean pressure, 28·87 inches; mean temperature, 25°; prevailing winds from between south-east and south-west, the predominating wind the south-easterly. The average force of the wind 4. Under the head "be," 21 observations were recorded; under "c," 49; under "o," 68. Snow was entered 33 times; fog 6 times.

"Discovery," 1902,  
McMurdo Sound.

The "Discovery" arrived in McMurdo Sound, as has already been mentioned, on 9th February, and between this date and the end of the month barometer observations showed a mean pressure of 29·257 inches. The highest barometer reading, 29·580 inches, is logged on the 22nd; the lowest, 28·862 inches, after noon on the 9th, giving a range of 0·718 inch (Table 1, p. 408).

From observations for temperature a mean of 15°·9 F. is obtained; the maximum, 29°·2 F., occurred on the 28th; the minimum, -0°·8 F., on the 22nd; a range of 30°.

Winds from between north-east and south-east were most frequent, but by far the largest percentage of wind observations out of 225, *i.e.*, 45 per cent., were of east winds, and 15 per cent. of all observations were of calms. The mean force of the wind is estimated at 3; but fresh gales were recorded on 3 occasions, and strong winds on 7. The weather was overcast or cloudy for the most part, and snow fell on 5 days.

The vessel was made snug in her Winter Quarters on 12th February, in latitude 77° 50' 30" S., longitude 166° 44' 45" E., and remained there until her release from the ice on the 16th February, 1904. Describing the position of the "Discovery's" Winter Quarters, Lieutenant C. W. R. ROYDS, R.N., in a paper read by him before the Royal Geographical Society on 27th February, 1905, said: "The ship was in a small bay of about a quarter of a mile in depth. All round from north-north-west through east to south-east there was land rising quickly to some height. In the north-north-west the hills were 400 feet high, and these extended to north-east, and there was a hill of 1000 feet in the east, and one of 700 feet in the south-east. Between the east and the south-east was a deep gully, or gap as we call it, which opened out to the ice barrier. From south-east through south and west to north-west we were entirely open, except for land 20 to 50 miles away. From north-west back to south-west was the Albert range, rising to peaks of 15,000 feet, and to the south were some islands 3000 feet and land rising to 8000 feet."

Lieutenant ROYDS mentions, in the paper from which I have quoted, that there was a pronounced local wind from an easterly direction in the bay in which the "Discovery" lay, frozen up; and that, not infrequently, when the wind was blowing a fresh gale at the ship a calm prevailed a little more than a mile and a half to the south of the ship, round Cape Armitage. This conclusion, however, is not apparent in the recorded observations. In commenting on the experiences of a sledge party, led by Lieutenant ROYDS, on a journey to Cape Crozier and back in March, 1902, to which reference will be made later on, Captain SCOTT, in his book, 'The Voyage of the "Discovery,"' writes as follows: "On comparing notes with this party we realised for the first time what a difference there might be in the

weather conditions of places within easy reach of the ship. It was not only in the matter of temperature, as I have already described, but also in the force and direction of the wind. On the 17th (March, 1902) at the ship we had a very strong blow from the south, at one time rising in force to a full gale, but the party, only some 12 miles to the eastward, had felt nothing of this; with them the day had been calm though overcast. This difference of weather conditions could be observed throughout the journey; neither those on board, nor those away could have told from their own meteorological conditions what the weather might have been with the others, and this fact was again and again impressed upon us throughout our stay in this region. Already we had learnt that the prevalent wind at our Winter Quarters blew from south-east through the gap, and that this wind was usually local, and frequently ceased within a mile or two of the ship. To this we could now add some further conclusions. It was evident that the eastern slopes of Terror were terribly wind swept, and that the prevailing direction was from south, while the deep bay immediately to the eastward of our peninsula was a particularly windless area, where the snow lay thick and soft and was only occasionally stirred by whirling squalls."

During the autumn months of March and April the mean height of the barometer on board the "Discovery," Autumn, 1902, Winter Quarters. "Discovery" was 29.369 inches; the highest reading, 30.081 inches, recorded on the 15th April, was associated with a fresh breeze from east-south-east; the lowest, 28.850 inches, on the 5th of that month, with a light air from east-north-east. This gives an absolute range of 1.231 inches.

The mean temperature during these 2 months is found to have been  $0^{\circ}5$  F.; the maximum reading,  $27^{\circ}5$  F., was made on the 9th March, during a calm; the minimum reading,  $-31^{\circ}6$  F., on the 23rd April, with a gentle breeze from east-north-east; showing a range of  $59^{\circ}1$  F. Out of 704 wind observations 59 per cent. were of winds from north-eastward, eastward and south-eastward; 26 per cent. were of calms. The mean force of the wind, as estimated, comes out at 2.8; but 14 gales, 12 of them of force 8 and 2 of them of force 9, were experienced and 12 strong winds. The weather was "o" or "e" on 47 days, "b" on 14. Snow fell on 19 days, "m" was recorded on 12 and "f" on 2 days. Aurora was seen on 11 days.

During Lieutenant ROYD'S sledge journey to Cape Crozier from March 4 to 19, already referred to, the mean of the temperature observations is found to have been  $-1^{\circ}4$  F. A maximum temperature of  $22^{\circ}5$  F. is given in the Register on the 8th, a minimum of  $-42^{\circ}$  F. on the 16th; a range of  $64^{\circ}5$  F. The mean force of the wind recorded is 1.4; from the 5th to the 9th inclusive, and again on the 16th and 17th, there appears to have been little or no wind, but on the 12th the following entry occurs in the Register: "Blew hard all night" (night of 11th-12th), and next day the entry is made: "High wind all night" (night of 12th-13th).

Lieutenant ROYD'S journey to Cape Crozier, March, 1902.

The wind blew hard during the night of the 18th-19th in heavy gusts, but at 5 a.m. "calm" is recorded, and again at 8 a.m.; at 2.30 p.m. the entry "light variable airs" occurs. As the party approached the land, on the afternoon of the 19th, the temperature rose and the wind freshened from south-east.

While the sledge party was experiencing the low temperatures given above, the mean of the observations for temperature in the screen near the ship was  $11^{\circ}1$  F., *i.e.*,  $12^{\circ}5$  higher than the mean of the temperatures observed by the sledge party. The absolute maximum of  $27^{\circ}5$  F., observed during the period at Winter Quarters, occurred on the 9th, a day after the sledge party's absolute maximum; the absolute minimum of  $-8^{\circ}5$ , on the 15th, or a day before the sledge party's minimum.

A sledge party led by Captain SCOTT, on a journey a few miles to the south, to a position half-way between the ship and White Island, for the purpose of laying out a depôt, left Winter Quarters on the 31st March and returned on the 3rd April.

Captain SCOTT'S journey towards White Island in March and April, 1902.

During this time, the mean of the temperatures observed is as low as  $-36^{\circ}$  F., while in the screen at the ship it is found to have been  $-8^{\circ}4$  F., or  $27^{\circ}7$  higher. Captain SCOTT recorded his maximum temperature,  $-25^{\circ}$  F., at 2 p.m. on the 3rd April, when the thermometer in the screen at the ship showed  $-7^{\circ}8$  F., and his minimum temperature,  $-47^{\circ}$  F., at 9 p.m. on the 2nd April, when the screened thermometer at the ship was not lower than  $-9^{\circ}2$  F.

The "Southern Cross" Expedition was in Winter Quarters at Cape Adare during March and April, 1899, and a comparison of the results of the observations obtained there in those months with those of the "Discovery" in McMurdo Sound in 1902 may be of interest.

"Southern Cross," Cape Adare, 1899, March and April.

In regard to the site of the station at Cape Adare, a headland at the extremity of a peninsula about

20 miles long, Mr. LOUIS BERNACCHI, magnetician and meteorologist to the Expedition, has made the following statement in his introduction to the meteorological portion of the work, entitled 'Magnetic and Meteorological Observations made by the "Southern Cross" Antarctic Expedition, 1898-1900,' published by the Royal Society and already alluded to: "The meteorological station was situated on a pebbly bank facing the open sea on the north and west, and Robertson Bay on the south and south-west. Behind, to the east and south-east, was a range of mountains averaging 3000 feet in height, the base of which was 1000 yards from the meteorological screen. The height of the station above mean sea-level was 19 feet."

Mr. BERNACCHI says that the coldest weather prevailed during calm, clear days, or with light south-west winds; and that the lowest pressures and highest temperatures were associated with winds from east-south-east; but that the barometer prior to these conditions fell with winds, as a rule, from north-westward. There appears some evidence for the assumption that the diminution of pressure and rise of temperature mentioned by Mr. BERNACCHI was intimately connected with the near approach and passage to eastward to the north of Cape Adare of a low-pressure system; for he states: "The prognostics of an approaching storm from a south-easterly direction were as follows: Generally, a gradual and simultaneous rise of temperature, a fall of the barometer some hours previous; frequently, however, only a rise in temperature with little warning from the barometer, a very rapid fall of the barometer about 30 minutes before the bursting of the storm, with light variable winds, and occasionally strong whirlwinds, loaded with drift-snow, then a dead calm for a few minutes, followed by a great rush of wind from the east-south-east having a velocity of about 60 miles an hour and bringing with it for the first few hours masses of drift-snow from the mountains. The sky above, however, was usually clear. During the course of the storm the wind frequently dropped quite suddenly and a perfect calm ensued which lasted a few seconds, then the rush of wind would come again with redoubled fury. During the winter months most of the storms ended as abruptly as they had commenced, and sometimes the minimum pressure occurred just as the storm ended, but the barometer would take nearly 24 hours to recover. The summer storms were less severe, but were of much longer duration, lasting on one occasion a whole week."

The rise of temperature in these gales from south-east and east-south-east, doubtless, is in some measure due to the Föhn effect produced dynamically by the descent of air from the mountain tops; and also to the check given, by wind in motion, to cooling by radiation. But may it not, to some extent at least, be attributed to the conveyance of warmer air drawn from lower latitudes, circulating about a low-pressure system and conveying to the locality the higher temperatures of the regions whence it originated?

It will be shown later that the increase of temperature with gales from eastward at the Winter Quarters of the German Expedition in the Antarctic was probably due to this cause.

The gustiness of the gales is characteristic of all winds which blow over mountain ridges.

During March and April, 1899, the mean pressure at Cape Adare is found to have been 29.161 inches, which is 0.208 inch lower than the mean pressure at the "Discovery's" Winter Quarters in March and April, 1902.

The mean temperature at Cape Adare during the months referred to, 13.9 F., is 13.4 higher than the "Discovery's" mean for the corresponding months in 1902. The absolute maximum temperature, 31.5, recorded on the 3rd April at Cape Adare, is 4° higher than the "Discovery's"; the absolute minimum, -10.3 F., recorded on 20th April, is 21.3 higher, and the extreme range for the period, 41.8, is 17.3 smaller.

The prevailing winds at Cape Adare, during the time, were from between north-east and south, but the commonest wind was the south-east; there was, however, a large percentage of calms. The mean force, as estimated, was 2.4. Ten gales were experienced. The weather for the greater portion of the time appears to have been overcast or cloudy; rain fell on 3 days, and snow on 9.

German Expedition,  
1902-3.

The German Antarctic Expedition, under the leadership of Dr. ERICH VON DRYGALSKI, left Kerguelen Island on the 3rd February, 1902, for the Antarctic Regions, and discovered land on the 21st of the month, near the Antarctic Circle, on, about, the 90th meridian of east longitude, between Knox Land and Kemp Land. On the following day the "Gauss" was frozen in and remained imprisoned in the ice for 12 months, in latitude 66° 2' 9" S., longitude 89° 38' E.

Describing the locality in which the "Gauss" was situated, Dr. HANS GAZERT, the meteorologist to the

Expedition, says in 'Veröffentlichungen des Instituts für Meereskunde, etc.,' Heft 5, 1903, published in Berlin: "The ship lay amongst pack and loose ice, the ice being 4 to 7 metres (13 to 23 feet) thick in Autumn, but increasing in thickness in parts, through snow-drifts, to over 11 metres (nearly 36 feet) in the Spring. The condition of the ice around was similar in character for a distance of 2 kilometres (2187 yards) on the north, 4-5 kilometres (4375-5468 yards) on the west, nearly 2 kilometres (2187 yards) on the east, and four kilometres (4375 yards) on the south, in which direction, beyond our icefields, lay an even expanse of older fixed ice; but in the other directions it consisted of open holes, until March, when they froze up. To the east, beyond a field of young ice, at a distance of 6-8 kilometres (6562-8749 yards) we frequently noticed, from September onwards, open water, in the shape of an extensive ice hole, which expanded and contracted according to the direction of the wind and current."

Dr. GAZERT goes on to say that numerous bergs surrounded the ship, and that south of the depôt the old solid ice, interspersed with bergs, stretched, without interruption, to the inland ice barrier 53 miles distant from the ship, the barrier having a general trend east and west.

At the barrier, rising abruptly out of the sea, to a height of 1200 feet, was the Gaussberg, in latitude  $66^{\circ} 48' S.$ , longitude  $89^{\circ} 30' E.$

The meteorological hut was at first situated from 44 to 55 yards to the south-south-east of the ship, but had to be moved several times during the year owing to snow-drifts in Winter and thawing in Summer. In January, 1903, it was moved to a position from 55 to 65 yards to the north-east of the ship.

Through the courtesy of Professor VON DRYGALSKI, important information relating to the meteorology of the region in which the "Gauss" was imprisoned can be employed in connexion with the present discussion.

Table 2, giving a Monthly Summary of observations taken at the Winter Quarters of the German Antarctic Expedition from March, 1902, to February, 1903, inclusive, has been kindly contributed by its distinguished leader for inclusion in this memoir. From this Summary we find that during March and April, 1902, the mean barometric pressure was 29.188 inches. This is 0.181 inch lower than that which obtained at the "Discovery's" Winter Quarters in latitude  $77^{\circ} 50' S.$ , for the same period. The highest pressure recorded during the two months, 29.749 inches, registered on 17th March, is 0.332 inch lower than the "Discovery's" highest during the same time; the lowest, 28.434 inches, which was registered on 27th April, is 0.416 inch lower than the "Discovery's" lowest during the same two months. The extreme range, 1.315 inches, is 0.084 inch larger than that shown by the British Expedition at McMurdo Sound, during March and April, 1902.

German Expedition,  
Winter Quarters,  
March and April,  
1902.

The mean temperature during these two months at the "Gauss" station comes out at  $10^{\circ} 4 F.$ , which is considerably higher than the "Discovery's" mean for the same months, as may be expected for a locality nearly  $14^{\circ}$  north of it.

The maximum temperature obtained by the German Expedition during the two months under notice was  $31^{\circ} 1 F.$  and was registered on the 10th March; the minimum,  $-22^{\circ} 4 F.$  on the 19th April, showing an extreme range for the period of  $53^{\circ} 5$  against the "Discovery's"  $59^{\circ} 1$  for the same period. The mean wind force during the two months is estimated at 3.2 of the Beaufort notation. The force of the wind was estimated at 6, and above, on 17 days, and on 6 of these days attained a force of 8, or above. There were 7 cloudless days during the two months, when the proportion of sky clouded was less than 2 in 10; and 27 cloudy days, when the proportion of cloudiness was more than 8 in 10. Precipitation, in the form of rain, snow, or snow-drift, occurred on 32 days.

As regards the direction of the wind, Dr. GAZERT has stated that it was usually easterly during the whole of the time the Expedition was in the Antarctic, and that during the frequent gales experienced was almost exclusively so. It was chiefly, he says, from between east and east by north from May to September, subsequently still more easterly or to the southward of east, between east and south.

In 'The Proceedings of the Fifteenth German Assembly of Geographers at Danzig in 1905' is published a lecture delivered by Dr. W. MEINARDUS, of Berlin, upon "Wind Conditions at the 'Gauss' Winter Quarters." In this paper valuable data relating to wind frequency are presented in two tables, one of which is here reproduced (Table 3, p. 410).

From these tables it is found that during March and April, 1902, no less than 46·5 per cent. of the winds were from eastward, *i.e.*, between east by north and east by south; and of these 23·6 per cent. were from east by north.

We are told by Dr. GAZERT that the wind in gales at the "Gauss" station in the Antarctic frequently reached 12 of the Beaufort scale; he mentions, however, that the greatest velocity measured by hand anemometer was 24·5 metres per second, or, say, 55 miles per hour, while the estimated force was given as 11 of the Beaufort scale; but that in the squalls the velocity of the wind, without doubt, frequently exceeded 24·5 metres per second.

Other winds than those from eastward were light and variable, except those from westward, from which direction they had winds force 3 to 5, nearly every month. Occasionally these westerly winds blew with greater strength, as on 23rd May, when force 6 was experienced, and on 25th of that month, when the wind attained force 8. On 3rd August a west-north-west wind force 5 to 6 was recorded, and on the 14th and 15th of that month force 6. These strong winds from westward were always associated with a clear, or nearly clear, sky, and low temperatures.

Referring to observations of precipitation, Dr. GAZERT says that measurements of snowfall were almost impossible, as during the gales the air was full of driving snow.

The same difficulty was experienced in measuring snowfall at the "Discovery's" Winter Quarters, and for the same reason.

Swedish Expedition.

The Swedish Antarctic Expedition, under the leadership of Dr. OTTO NORDENSKIÖLD, left Port Stanley, Falkland Islands, on 1st January, 1902, in the "Antarctic" for the far south. After cruising among the islands in the neighbourhood of Louis Philippe Land and Danco, Land where some important discoveries were made, a spot was selected by the leader, on the island of Snow Hill, in which to winter. Dr. GOSTE BODMAN, of Upsala, the meteorologist and magnetician to the Expedition, has kindly supplied 8 a.m. observations (about noon G.M.T., *i.e.*, 11.48 a.m.) taken at Snow Hill during the period March, 1902, to October, 1903, inclusive.

While recognising that the information relating to the meteorology of any region obtained from mean results of single daily observations is extremely limited, it is nevertheless considered that monthly means of 8 a.m. observations for pressure, temperature, and wind for so important an outpost of Antarctica as Snow Hill Island should furnish information of interest in connexion with the present inquiry.

The island is one of a group situated off the north-eastern extremity of Danco Land, which is a continuation north-eastward of Graham Land, and lies to the south of the Louis Philippe Peninsula and to the south-south-west of Joinville Island.

Ross Island, the largest of the group, is separated from the mainland by a channel discovered by Dr. NORDENSKIÖLD, and named by him "Crown Prince Gustav Channel." On Ross Island, and situated towards its western shore, rises Mount Haddington.

The spot chosen by the leader of the Expedition for Winter Quarters lies at the north-eastern extremity of the island, in latitude 64° 30' S., longitude 56° 56' W., named by Ross "Snow Hill," of which Dr. OTTO NORDENSKIÖLD has said that it consisted for the most part of an unbroken dome of ice.

It should be borne in mind that when mean results of observations relating to Snow Hill are given in this memoir, they refer to means of 8 a.m. observations only, and that maxima and minima values stated are also those for 8 a.m. only (Table 4).

Swedish Expedition,  
Snow Hill, March  
and April, 1902.

During March and April, 1902, the mean of the 8 a.m. observations recorded at Snow Hill is found to be 29·30 inches; the highest reading, 29·90 inches, was noted on the 5th March and again on the 12th April. At the time of the second maximum the wind came from south-east as a gentle breeze; the direction and force of the wind at the time of the first maximum is not known. The lowest reading, 28·24 inches, was taken on the 29th March, when a fresh gale was blowing from the south-west. These extremes of pressure show a range of 1·66 inches.

The mean temperature at 8 a.m. during the two months comes out as 10°·2 F. A maximum reading of 37° F. was recorded on the 2nd March, and a minimum of -8° F. on the 24th April, the latter associated with a fresh gale from west-south-west. The extreme range of temperature at 8 a.m. therefore was 45°.

The average direction of the wind at 8 a.m. during the period is found to have been south by west, and

the average force 3·3. The number of strong winds, 6-7, recorded at 8 a.m. is found to have been 12; the number of gales, 8-10, 2; the mean cloud amount, 5.

In a paper read by Dr. OTTO NORDENSKIÖLD before the Royal Geographical Society on the 21st March, 1904, the eminent explorer mentioned a violent hurricane experienced at Snow Hill Island in the middle of March, and spoke of the severe storms and great cold the Expedition was exposed to in far southern latitudes. "No words," he said, "can suffice adequately to describe the terrible violence of these south-west hurricanes, which are accompanied by the severest cold ever experienced where we were." He commented on "the frequent occurrence and protracted duration of the storms" at Snow Hill, which sometimes attained a velocity of 70 to 90 miles an hour. "The average velocity of the wind," he continued, "for the eight months (March to October) in 1902 was 31 feet per second, which is probably a record for so cold a climate."

At the "Discovery's" Winter Quarters the long polar night commenced on the 20th of April, when the sun disappeared from view for four months.

During the winter months of May to August, 1902, inclusive, the mean pressure at McMurdo Sound was 29·172 inches, and the extreme range of pressure 2·041 inches. The highest barometer, 30·181 inches, was recorded on the 19th of May, when a gentle breeze from east obtained; the lowest, 28·140 inches, on the 28th June, during a calm. "Discovery," May to August, 1902.

As regards temperature, the mean was  $-13\cdot3^{\circ}$  F., and the extreme range of temperature no less than  $69\cdot5$ . The maximum temperature,  $19^{\circ}$  F., occurred on the 4th of May, when a fresh south-easterly breeze was blowing; the minimum,  $-50\cdot5^{\circ}$  F., on the 7th of August, when there was no wind.

The prevailing winds were from between north-eastward and south-eastward, the predominating direction being easterly. Out of 1476 observations of wind direction, 15·3 per cent. fall under the head "calm," and only 0·7 per cent. under the head "variable." The mean force of the wind as estimated was 2·7, and, on 12 days, gales, varying in force from 8-11, were experienced. Strong winds, 6-7, were recorded on 30 days.

May appears to have been the stormiest month of the four, June the quietest. On 89 days the weather was overcast or cloudy, on 62 days misty, on 9 days foggy, and on 34 days the sky was clear. Snow fell on 49 days.

In July and August, 1902, observations of temperature were made, when possible, at Cape Armitage, Cape Armitage. from a spirit minimum thermometer, the readings at the time of observation being recorded, as well as the minimum temperature registered.

The observations for this period were made, generally, at or about noon, and 48 observations obtained during these two months give an average temperature for the period of  $-21\cdot7$  F., while at Winter Quarters the mean temperature in the screen was  $-12\cdot3$  F. The maximum temperature observed at Cape Armitage during the time,  $-1\cdot5$  F., was recorded on the 20th July, on which day the maximum temperature at the ship was  $14\cdot2$  F. The maximum in the screen near the ship for the whole period,  $16\cdot7$  F., was registered the day before. The minimum reading registered at Cape Armitage,  $-62^{\circ}$  F., was taken on the 7th August, and on the same day the minimum for the period at the ship,  $-50\cdot5$  F., was registered.

Observations made during the two months therefore showed a range of  $60\cdot5$  at the former station and  $67\cdot2$  at the latter.

The "Southern Cross" Expedition at Cape Adare during the 4 months, May to August, 1899, recorded "Southern Cross." a mean barometric pressure of 29·076 inches, or 0·096 inch lower than that recorded on board the "Discovery" at McMurdo Sound, from May to August, 1902, inclusive. A mean temperature of  $-9\cdot8$  F. obtained at Cape Adare during the period referred to, which is  $3\cdot5$  F. higher than the "Discovery's" computed mean for the corresponding 4 months in 1902. An absolute maximum temperature of  $23\cdot6$  F. was observed at Cape Adare on the 15th July, which is  $4\cdot6$  F. higher than the "Discovery's" absolute maximum, and an absolute minimum of  $-43\cdot5$  F. on the 5th and 6th August, which is  $7^{\circ}$  F. higher than the "Discovery's." The extreme range of temperature at Cape Adare in May-August, 1899, was therefore  $67\cdot1$  F., as against  $69\cdot5$  F., the extreme range of temperature at McMurdo Sound in May-August, 1902. At Cape Adare, during the period under notice, the wind came

chiefly from an easterly, south-easterly, or southerly direction, but the commonest winds were the south-easterly and southerly. Out of 244 observations of wind, 112 come under the head "Calm." The wind's mean force, as estimated, is computed as 1.4, yet gales occurred on 24 days. On 41 days the weather was noted as overcast, and on 22 days the sky was cloudless. Rain fell on 1 day, snow on 30.

"Discovery," May,  
1902.

At the "Discovery's" Winter Quarters, in McMurdo Sound, a severe gale was experienced in May, 1902, a gale which Captain SCOTT considered one of the heaviest, if not the heaviest, which visited the locality during the time the Expedition remained there.

On the 2nd of the month, at noon, the barometer stood at 29.057 inches, and the thermometer at  $-7.2$  F. Pressure was diminishing and temperature increasing. The wind, at east-south-east, was then estimated at force 6, and the weather was overcast and squally. Between 2 p.m. and 4 p.m. the wind veered and increased rapidly from southward. From 4 p.m. to 6 p.m., wind force was estimated at 8; and at 8 p.m. and 10 p.m., at 9. At midnight the wind's force was estimated at 10, but the Robinson anemometer recorded a velocity of only 39 miles an hour between 10 p.m. and midnight. The remark is made at 10 p.m., however, "furious gusts." At midnight the mercury had dropped to 28.999 inches, and the temperature commenced to rise slowly. The gale continued to blow until 6 a.m. of the 4th, with a velocity varying from 44 to 25 miles an hour, and with an estimated force of from 9 to 10; the temperature fluctuating between  $-7^{\circ}$  F. and  $18^{\circ}$  F., but rising steadily from 6 or 8 p.m. on the 3rd up to 8 a.m. on the 4th.

At 8 a.m. of the 4th the wind had backed to south-east, and moderated to a fresh breeze, while the temperature had risen to  $19^{\circ}$  F.

Of this gale Captain SCOTT says, in his 'Voyage of the "Discovery"':—"The wind swung round in a manner which gave all the indications of a revolving storm whose centre narrowly missed us; the temperature remained extraordinarily high for several days (with the wind between south and east, north-east, or calm, but principally at south-east) after the storm; and it was not until the 9th (? 6th) that it again fell below zero, and then it fell rapidly (the wind being from east). On other occasions the temperature rose regularly with a southerly wind, but fell when the wind dropped or changed direction."

Another notable gale, which may be regarded as typical of the gales experienced by the Expedition while in McMurdo Sound, occurred on the 18th and 19th of July, 1902. On this occasion the wind appears to have blown with greater violence, but for a shorter period, not lasting for more than 24 hours.

At 4 a.m. on the 18th the barometer, which gave a reading of 29.707 inches, commenced to fall slowly; and at the same time the thermometer, then reading  $8^{\circ}$  F., began to rise slightly. The wind, from south-south-east, was moderate in force, the sky overcast, and snow was falling. At 4 p.m. the mercury had fallen to 29.492 inches, and the temperature had risen to  $12^{\circ}$  F. The wind which since 8 a.m. had been moderate to fresh, but squally from between south and south-south-east, then commenced to freshen and the squalls to become more violent; snow was still falling, and continued to fall until the gale was over. At this time pressure began to increase slowly. Between 4 p.m. and 6 p.m. the anemometer showed a wind velocity of 47 miles an hour; and at 10 p.m. the wind was logged as a whole gale from south-south-west. Except for a few lulls, which occurred at 2 a.m. on the 19th, the wind continued to blow from between south-south-west and south with an estimated force varying from 10 to 11, until noon on the 19th. Between 10 a.m. and noon of that day the anemometer, records of which had not been entered since 6 p.m. of the 18th, showed a velocity of 55 miles an hour. The weather was squally throughout. At 4 a.m. pressure had increased to 29.660 inches and began to decline slightly; at 6 a.m. the gale increased and the mercury had fallen to 29.620 inches. At 8 a.m., the barometer, still at 29.620 inches, commenced to rise; the force of the wind was then estimated at 11. A lull took place at 11 a.m., lasting for three-quarters of an hour, "when the wind drew to west-south-west, but went back to south by west, and blew strong again in heavy gusts." At 2 p.m. the wind had backed to south-east, and the barometer was rising steadily; the temperature was then  $14.8$  F., no observation for temperature having been recorded between 10 p.m. of the 18th and 2 p.m. of the 19th. From 2 p.m. to 4 p.m. the wind velocity, by anemometer, had decreased to 35 miles per hour, between 4 and 8 p.m. to about 27 miles an hour, at 4 p.m. the gale was over, and at 10 p.m. the wind was from east-south-east, a moderate breeze.

In regard to these two gales, it will be seen that pressure decreased and temperature rose prior to the

freshening to gale force of the wind, while veering from east-south-east, or south-south-east to south-west, or south-south-west, pointing to the passage, seaward, of a low-pressure system across the Ross Sea. During these gales atmospheric pressure fluctuated slightly, but was for the most part steady, and temperature rose as the wind veered to southward and south-westward. When the barometer showed a decided rise the wind backed to the eastward of south and abated, temperature remaining relatively high for some time after the gale was over.

The rise of temperature associated with strong winds and gales from a polar quarter, at Victoria Land, has been freely commented on, and has, by some, been attributed to the Föhn effect, to the warming, dynamically, of the air in its descent after passing over the mountain ranges. There is considerable evidence, however, to show that these strong winds from southward had their origin in, and owed much of their relative warmth and their moisture to, lower and warmer latitudes over the ocean.

It seems probable that areas of low pressure, on their passage eastward north of Victoria Land, after passing the meridian of Cape Adare, not infrequently take a more southerly path, striking south-eastward and penetrating into, or skirting, the Ross Sea.

Circulating about an area of low pressure, situated over the Ross Sea, the winds would be northerly to north-easterly in the eastern segment of the system, to seaward; easterly to south-easterly in the southern segment, along and over the ice barrier; and southerly to south-westerly in the western segment immediately to the eastward of the mountain ranges.

Thus the southerly wind should be a relatively warm sea wind, coming from lower latitudes, circulating in the western segment of the ocean wind system.

McMurdo Sound, it is contended, is situated too far south of Cape North and Cape Adare to experience as strong winds the northerly and north-easterly winds blowing in front, *i.e.*, in the eastern segment of a low-pressure system travelling eastward to the north of these capes; and the locality, moreover, is protected somewhat from northerly winds by the high land to the northward.

At Snow Hill, the Winter Quarters of the Swedish Antarctic Expedition, conditions were somewhat similar.

Cyclonic wind systems, travelling eastward, after passing south of Cape Horn, apparently did not, as a rule, during Dr. NORDENSKIÖLD'S stay on the island, cause an increase of wind there until the system had passed the 56th meridian of west longitude and to the eastward of Joinville Island. Then the wind increased from southward, usually from south-south-west, taking the direction, roughly speaking, of Graham Land and Danco Land and blowing toward the low pressure, still retaining its southerly direction even when the central "low" of the system had passed south-eastward into the Weddell Sea.

To revert to Victoria Land; with the arrival of a depression over the Ross Sea the pressure gradients would become steeper, but a marked diminution of pressure over the land to the westward would not necessarily result, and, as observations show, rarely did result.

At the Winter Quarters of the German Expedition in the Antarctic, during the winter months of May to August, 1902, inclusive, observations for pressure showed a mean of 29.101 inches, which is 0.071 inch lower than the mean pressure during the same period which obtained at McMurdo Sound.

"Gauss," May to August, 1902.

The highest pressure for the period at the "Gauss" station, which was recorded on the 16th June, is given as 29.922 inches, and is 0.259 inch lower than the highest pressure recorded on board the "Discovery" for the same period.

The lowest pressure at the "Gauss" station during the four months referred to, which is as low as 27.808 inches, was recorded on the 1st August, and is 0.332 inch lower than the lowest pressure recorded on board the "Discovery" in those months.

The range of pressure therefore is found to have been 2.114 inches at the more northern station during the period as against 2.041 inches at McMurdo Sound.

The mean temperature at the "Gauss" station, from May to August, inclusive, was  $-0^{\circ} \cdot 2$  F.; the maximum temperature was  $23^{\circ} \cdot 9$  F. and was registered on the 7th May; the minimum temperature  $-41^{\circ} \cdot 4$  F. and was registered on the 14th August. These extremes give a range of  $65^{\circ} \cdot 3$  as against a range of  $69^{\circ} \cdot 5$  at the British station during the same period; the mean temperature at the British station was, however,  $13^{\circ} \cdot 1$  lower than the mean temperature at the German station.

The mean force of the wind during these four winter months at the German station comes out at 4.3 of the Beaufort scale. The prevailing wind was from east by north, the percentage of frequency of winds from that point being 43. But 12.6 per cent. of the winds were from east; 3.8 per cent. from east by south; 7.7 per cent. from east-south-east; and 12.9 per cent. of the observations for wind came under the head "calm."

On 79 days the force of the wind rose to 6 or 7, and on 38 of these days to 8, or above 8.

There were 5 days noted as cloudless, when the amount of cloud was less than 2, and 72 cloudy days, when the amount of cloud exceeded 8.

There were 101 days on which rain, snow, or snow drift, was entered.

In regard to the sequence of weather during the gales experienced at the German Antarctic station, Dr. GAZERT says:

"The course of the gales, especially the heavy Winter ones, was as follows:—With a falling barometer and a wind springing up, or freshening from east, we noticed in that direction a bank of dark clouds, from which fragments were given off, which soon covered the whole sky. The sun disappeared, often having previously been surrounded by halos and mock suns. The barometer fell slowly at first, then more rapidly, frequently with a sharp curve. Thus we observed from the beginning to the climax of a gale on the 30th July to the 1st August a fall of 35 millims. (1.378 inches) in 52 hours, when the minimum reading of 706.3 millims. (27.808 inches) was reached. The mercury fell almost as much in 30 hours, on August 9 to 10, on which occasion, in the middle of a fall, a pause of 4 hours took place. On the 22nd August it fell 16 millims. (0.630 inch) in 22 hours; and, on the 12th and 13th October, 27 millims. (1.063 inches) in 32 hours.

"As the storm progressed the wind increased more and more; driving snow filled the air, most thickly near the surface of the ground, and movement against the wind soon became a great effort; nothing could be seen for the driving snow from which we had to protect our faces. The ship was often invisible by day at a distance of 40 to 50 metres (44 to 55 yards), and in the worst storms at even a shorter distance.

"The gale reached its climax occasionally in a few hours, but usually in from 24 to 48 hours, and remained at its height for 12 to 24 hours, being of a squally character. In the quiet intervals the force was possibly 3, in the squalls 11. These squalls appeared on the barograph curve in the form of a saw-like jagged line.

"It was at this stage, as a rule, that the air pressure reached its maximum. With a decreasing but squally wind the barometer began to rise. A slow rise was a good sign, a quick rise a bad one, as it usually meant an equally quick fall and another gale. With the decrease of the wind the driving snow lessened and we frequently could see the sun, or stars, faintly shining.

"The storm was often followed by a period of bad weather which was a longer or shorter prelude to another gale, or to better weather.

"The temperature always began to rise with the beginning of the gale, and only reached its maximum, as a rule, when the gale commenced to moderate, or in the unsettled weather period which followed, and was also characterised by easterly winds. If the gales followed at short intervals, the temperature did not fall at all in the pauses; at times it even rose, the rise accompanied by a lighter east wind.

"The storms usually lasted 3 to 5 days, the intervals between the gales varied, sometimes being only 12 to 24 hours, with wind force 5 to 7; this was especially the case during August. The influence of the easterly wind upon the temperature was considerable; during easterly winds the temperature often rose to  $-14^{\circ}$  C.,  $-13^{\circ}$  C., and  $-11^{\circ}$  C. ( $6^{\circ}.8$  F.,  $8^{\circ}.6$  F., and  $12^{\circ}.2$  F.). An increase in the mean temperature of May, as compared with that of April, was attributed to the strong easterly gales which occurred in the former month."

Lying to the south of the westerly winds of the Southern Ocean, and at the extreme limits of the southern segment of those low-pressure areas which move from west to east with the westerly air current of the Southern Hemisphere, the Winter Quarters of the German Antarctic Expedition was exceptionally well situated as an observing station from a meteorological point of view.

It has been thought by meteorologists, who have attacked the problem, that, associated with the

depressions which traverse the Southern Oceans, depressions which are usually elliptical in shape and have their major axes extended in a northerly and southerly direction, the easterly winds in the southern segment of the system are almost always light or moderate in force. Ships running down the easting in high southern latitudes seldom experience strong winds or gales from eastward, even when there appears to be evidence to show that they are situated well to the south of the central "low" of a cyclonic wind system. It has, therefore, been assumed that in these systems the gradient polewards is normally slight and that on its southern side the low pressure dominates but a small area.

The results of observations obtained by the German Expedition at Kerguelen Island and at Kaiser Wilhelm II. Land go far to prove that depressions which traverse the Southern Ocean cover a much larger area on their southern side than was hitherto supposed; and that although easterly gales are seldom met with, on the trade routes referred to, nevertheless they occur—considerably further south, it is true, but still within the limits of the system and forming part of their circulation.

The rise of temperature which was associated with gales from eastward at the "Gauss" Winter station and which, as a rule, continued until the wind began to moderate, was, no doubt, due to the fact that the air, circulating about a minimum pressure far north of the station, was being drawn from lower and warmer latitudes.

Frequently the daily noon G.M.T. observations of barometer and wind recorded by the German Antarctic Expedition at Kerguelen Island and at the "Gauss" Winter Quarters respectively—the former supplemented and confirmed by similar observations made on board ships situated in the neighbourhood of the island—indicate a connection between the strong winds and gales from northward and westward associated with diminishing pressure at Kerguelen with strong winds and gales from eastward experienced at the "Gauss" station. The distance between the meridians of these two stations respectively, on a middle latitude of  $57^{\circ} 43' S.$ , is about 630 miles. The following are a few of the instances in which the common origin of these increases in wind force, experienced at the two stations, is shown. Doubtless the fuller data in the possession of the German meteorologists bring into greater prominence the connection referred to. It should be understood that noon G.M.T. observations only are cited.

At Kerguelen Island on the 18th February, 1902, at noon, G.M.T., the barometer stood at 29.75 inches, the thermometer at  $45^{\circ} F.$ ; the wind was from west, force 5. Next day the mercury had fallen to 29.43 inches, the temperature had risen  $1^{\circ}$ ; and the wind, still from west, had increased to a fresh gale, indicating a gradient to the south. On the 20th the barometer had risen to 29.80 inches, the thermometer showed a drop in the temperature to  $42^{\circ} F.$ , and the wind had backed to west-south-west. The depression was passing away to the eastward.

By this time, at noon, G.M.T., on the 20th, on board the "Gauss," in latitude  $65^{\circ} 55' S.$ , longitude  $90^{\circ} 20' E.$ , the barometer indicated a pressure of 29.55 inches which was diminishing, the thermometer marked  $28^{\circ} F.$ , and a fresh breeze was blowing from east. The mercury had fallen to 29.28 inches on the 21st, in latitude  $66^{\circ} 17' S.$ , longitude  $90^{\circ} 43' E.$ ; temperature had risen to  $31^{\circ} F.$ , and the direction and force of the wind were the same as on the previous day. On the 22nd, the "Gauss" being then in her Winter Quarters, the mercury had fallen but slightly: to 29.25 inches; the temperature had dropped to  $25^{\circ} F.$  and a strong gale was blowing from east by south. The gale had not abated at noon, G.M.T., on the day following, when the direction of the wind had changed to east. The barometer then stood at 29.23 inches, the thermometer at  $24^{\circ} F.$  The mercury had fallen to 29.14 inches on the 24th; temperature had risen to  $29^{\circ} F.$ , but the gale was abating.

On the 23rd April of the same year, at noon, G.M.T., pressure at Kerguelen Island had fallen 0.71 inch and temperature had risen  $8^{\circ} F.$  during the preceding 24 hours. The barometer then read 29.20 inches and the thermometer  $48^{\circ} F.$ ; the breeze blew freshly from west-north-west. At the same G.M.T. a barometer reading of 29.58 inches was recorded at the "Gauss" station; the temperature was  $9^{\circ} F.$  and the wind gentle from east-south-east. On the 24th the mercury had risen to 29.33 inches at Kerguelen Island, the temperature had dropped to  $34^{\circ} F.$ , and the wind had backed to south-west by west and moderated. The disturbance, with which the diminution of pressure at the island had been associated, was then passing away to the eastward. At the "Gauss" station the mercury had by this time fallen to 29.35 inches, the thermometer had risen to  $17^{\circ} F.$ , and a strong gale from east by north had set in. The

mercury continued to fall: on the 25th it had fallen to 29.11 inches and the thermometer marked 16° F.; the direction of the wind had not changed, but the force had increased to 10.

The barometer was down to 28.49 inches on the 26th; the thermometer had risen to 17° F. and the wind still blew with the force of a whole gale from east by north. On the day following the mercury had risen to 28.72 inches and was still rising; temperature had dropped to 16° F. and the gale continued, unabated, from the same point. The wind moderated on the 28th, when the mercury had risen to 29.23 inches.

Between the 2nd and 6th of May, 1902, pressure at Kerguelen Island diminished from 29.92 inches to 28.84 inches, and fresh winds were experienced from north-westward, backing to westward. The temperature between the 4th and 5th had risen from 34° F. to 42° F. From the 4th to the 7th of the month, inclusive, the "Gauss" station was visited by a strong to whole gale from east by north, pressure having diminished from 29.24 inches, on the 3rd, to 28.52 inches on the 6th, and temperature risen during that period from -4° F. to 23° F. Again, between the 15th and 17th of the same month, pressure at Kerguelen Island declined from 29.33 inches to 28.90 inches, and temperature rose from 30° F. to 42° F. Strong winds from between west-north-west and west-south-west were recorded at this time and also on the 18th at the island, and strong winds and gales on board ships in the neighbourhood of the island.

At the German station in the Antarctic the barometer showed a fall from 29.23 inches to 29.09 inches between the 17th and 18th, the thermometer a rise from 9° F. to 13° F., and the wind, from east by north, increased in force to a fresh gale. On the 19th the barometer had risen to 29.24 inches, and the wind increased from the same point to a whole gale. Next day the mercury had risen to 29.43 inches, temperature had dropped to 8° F., and the gale was over.

A rapid diminution of pressure, rise of temperature, and increase of wind to gale force which occurred from the 4th to the 6th June at the Antarctic station was evidently associated with a diminution of pressure and increase of wind to gale force previously recorded (between the 3rd and 5th of the month) at Kerguelen Island and on board the S.S. "Waimate" in a position, on the 4th, rather more than 100 miles south of the island.

Subsequently, between the 6th and 7th of June, the "Waimate," passing the meridian of the "Gauss" station in latitude 50½° S., experienced a fresh to strong gale from west-south-west, veering to north-west, while pressure increased at the Antarctic station, and the wind moderated from a whole gale to a strong breeze.

On the 5th July a rapid fall of the mercury recorded at Kerguelen Island and on board ships approaching the neighbourhood of the island resulted in an increase of wind on the 6th, which had backed from north-west to west, and blew a fresh gale from the latter direction. During these two days the mercury at the "Gauss" station fell 0.58 inch, and the thermometer rose 11°, and on the 7th an increasing wind attained the force of a fresh gale. The barometer then commenced to rise; the temperature had risen 5° since the preceding day, and marked 21° F. Next day the gale was over.

From the 12th to the 13th of the same month barometric pressure at Kerguelen Island declined from 29.82 inches to 28.84 inches, the wind at the same time backing from north-west to west, and freshening. Between the 11th and 12th the thermometer had risen 4°.

On the 13th a light south-west breeze obtained at the Antarctic station, pressure increasing, the temperature -11° F. On the 14th the barometer there read as high as 29.58 inches; the temperature had risen to -4° F., but the wind had backed to east by south, and was logged as a fresh breeze. On the 15th the mercury had fallen half an inch, the thermometer risen 19°, and the wind was blowing with storm force from east by north. With a slight recovery of pressure on the 16th, it moderated to a fresh gale, but subsequently increased to a strong gale, still from the same point, and this continued, pressure the while declining, until the 18th, when the barometer had fallen to 28.61 inches, and the thermometer marked 17° F. Pressure recovered next day and the wind moderated, but the temperature had risen to 20° F.; it fell, however, on the 20th to 1° F.

A rapid fall in the barometer from 30.37 inches to 29.62 inches occurred at Kerguelen Island between the 30th and 31st July, occasioning an increase of wind, and associated with a slight rise of temperature. On these days the mercury fell 0.4 inch at the "Gauss" station, and the direction of the wind changed

from west-north-west on the 30th to east by south on the 31st, increasing in force at the same time. On the 1st August the mercury had fallen as low as 27·82 inches, and a whole gale was blowing from east by north. The temperature had risen 10° since noon, G.M.T., of the preceding day.

A diminution of pressure and decrease in wind force recorded at Kerguelen Island and on board ships in the neighbourhood of the island, on the 6th and 7th August, appear to have been associated with a diminution of pressure, rise of temperature, and increase of wind from east by north to gale force, recorded on board the "Gauss" on the 7th and 8th of the month.

Reduction of pressure at the island, again, on the 15th to the 17th of the same month, was followed at the "Gauss" station by a rise of temperature between the 16th and 17th of 25°, and a fall in the barometer of 0·74 inch between the 17th and 18th, together with an increase of wind from east by north on the 18th to storm force.

Diminishing pressure, accompanied by increase of wind, recorded at Kerguelen Island and by ships in the neighbourhood of the island on the 11th and 12th October, and again on the 20th and 21st of that month, was followed at the German Antarctic station by decline of pressure, rise of temperature, and increase of wind to whole gale force.

On the 11th December a fall in the barometer of more than half an inch had been recorded at Kerguelen Island for the previous 24 hours, and the ship "Niagara," some 250 miles north-eastward of the island, was experiencing a strong gale from north-north-west. On the following day the centre of disturbance, progressing eastward, had passed the meridian of the station at Kerguelen, and the S.S. "Salamis," in the immediate neighbourhood of the island, had a strong wind from south by west. At the German station in the Antarctic pressure was then giving way, but the wind, from east-north-east, was light. About 1300 miles due north of the "Gauss" the "Loch Torridon" recorded a strong wind from north by west and a barometer reading of 29·56 inches, which was 0·28 inch higher than the reading recorded at the same time on board the "Gauss."

The "Niagara," then in about 45° S. latitude, 81¼° E. longitude, still had the wind from northward, and was therefore in front of the trough of the depression. On the 13th the "Loch Torridon" and the "Niagara" carried a westerly wind, and the latter, in about 45° S. latitude, 86½° E. longitude, was running before a fresh gale, with the central low to the southward of her.

The Antarctic station, where pressure had continued to give way, was now under the full influence of the disturbance, and a fresh easterly gale was blowing there, but the wind moderated next day. During this gale temperature appears to have changed very little.

A diminution of pressure recorded at Kerguelen Island and on board ships in the neighbourhood of the island between the 6th and 8th February, 1903, which was accompanied by an increase of wind, was followed on the 9th by a diminution of pressure and a strong gale from east, in 65° 53' S., 89° 21' E., the position in which the "Gauss" was situated.

Other instances furnished by synchronous G.M.T. observations could be cited to show how the gales experienced at Kaiser Wilhelm II. Land, during the sojourn there of the German Exploring Expedition, frequently owed their origin to systems of low pressure travelling eastward, which had previously affected the weather conditions of Kerguelen and ships in the neighbourhood of the island, giving rise to strong winds and gales in those localities.

At Snow Hill, during the four months May to August, 1902, the mean pressure at 8 a.m. was 29·21 inches. The highest 8 a.m. reading of the barometer during the time was taken on the 16th August, and was as high as 30·01 inches, which is the highest 8 a.m. barometer observation recorded by the Expedition in that year. There was no wind at the time of observation. The lowest 8 a.m. reading, 28·45 inches, was taken on the 16th May, when there was a moderate breeze from south-west.

Snow Hill, May-  
August, 1902.

The mean temperature at 8 a.m. was -5°·1 F., the lowest mean temperature for that hour experienced by the Expedition. The maximum 8 a.m. temperature, 36° F., registered on the 12th May, was associated with a moderate breeze from south-west; the minimum 8 a.m. temperature -35° F., registered on the 7th, with a light air from the same direction.

Dr. NORDENSKIÖLD has laid stress upon the severity of the weather in July and the first half of August, 1902, and states that the temperature fell as low as -42° F.

"Discovery," Sep-  
tember - October,  
1902.

At McMurdo Sound, during September and October, 1902, atmospheric pressure diminished, the mean for the two months being 29·161 inches, and the range of pressure 1·535 inches. The highest barometer reading, 29·854 inches, was recorded on 24th September, with a gentle breeze from east; the lowest, 28·319 inches, on the 14th October, with a moderate gale from south.

The observations for temperature, during the two months, give a mean of  $-10^{\circ}\cdot3$  F., and both the maximum and minimum temperatures occurred in September; the former,  $15^{\circ}$  F., on the 29th of the month, associated with a gentle south-easterly breeze; the latter,  $-43^{\circ}\cdot5$  F., on the 20th during a calm: a range of  $58^{\circ}\cdot5$  F.

The prevailing winds during the period were from eastward, between north-east and south-east; out of 732 observations of wind, the largest number for any point, 33 per cent. of the whole, were of winds from east, but 26 per cent. fall under the heads "calm" or "variable."

The mean force of the wind, as estimated, is found to have been 2·5; 3 gales, force 8 to 10, were recorded; and 15 strong winds, force 6 to 7.

Overcast or cloudy weather was noted during the greater part of the period, and snow fell on 28 days.

At Cape Armitage, during the same months, the mean of the temperatures observed comes out as low as  $-15^{\circ}\cdot9$  F.; the highest reading,  $10^{\circ}\cdot5$  F., was taken on the 28th September, the lowest,  $-57^{\circ}\cdot5$  F., was registered on the 12th October.

"Southern Cross"  
Expedition, Sep-  
tember - October,  
1899.

The "Southern Cross" Expedition, in 1899, had a lower mean pressure at Cape Adare during September and October—28·735 inches—than had the "Discovery" at McMurdo Sound in the corresponding months of 1902; but their mean temperature of  $-7^{\circ}\cdot2$  F., as might be expected, was rather higher than the "Discovery's." A maximum of  $19^{\circ}\cdot4$  F. was registered during the period, and a minimum of  $-36^{\circ}\cdot5$  F., giving a range of  $55^{\circ}\cdot9$  F.

"Discovery," Lie-  
utenant ROYDS to  
south-west.

Reverting to the National Antarctic Expedition; in September, Lieutenant ROYDS and party made a sledge journey south-westward, starting on the 10th and returning on the 19th, reaching a position on the 15th in latitude  $78^{\circ} 15\frac{1}{3}'$  S., longitude  $165^{\circ} 24'$  E. From observations taken during this journey the mean temperature was found to be  $-35^{\circ}\cdot1$  F. for the period, while the mean temperature at Winter Quarters was  $-18^{\circ}\cdot1$  F. The weather was calm during the greater portion of the journey, but a fresh gale was experienced on the 15th and again on the 18th.

Lieutenant ARMI-  
TAGE to west.

On a journey to the west, undertaken during the same month, between the 10th and 26th, led by Lieutenant ARMITAGE, on which the party attained a position on the 19th in latitude  $77^{\circ} 38\frac{1}{2}'$  S., longitude  $164^{\circ} 10'$  E., the mean temperature was  $-29^{\circ}\cdot1$  F., when it was  $-20^{\circ}\cdot1$  F. for the same period at Winter Quarters.

From the 18th to the 20th, inclusive, the sledge party, however, were travelling at an elevation estimated at 500 feet above sea-level. The weather remained fine for the greater part of the journey, and there was little wind; what little there was came from eastward, from some point between north-east and south-east.

A blizzard struck the camp at midnight on the 25th; the direction of the wind was not noted, but the force was registered as 9. The sledge party must have been not far from the ship when this occurred, and there a light south-east air was stirring. The lowest temperature registered during the journey,  $-45^{\circ}$  F., is entered against 8 a.m. on the 14th, in latitude  $77^{\circ} 46'$  S., longitude  $165^{\circ} 45'$  E., when there was no wind and the sky was clear; and also against 5 a.m. on the 20th, in latitude  $77^{\circ} 40'$  S., longitude  $164^{\circ} 27'$  E., when again there was no wind and the sky was clear. At this time, calm, clear weather obtained at the ship, but the temperature in the screen was not lower than  $-23^{\circ}$  F.

Lieutenant ROYDS to  
Cape Crozier.

A sledge journey to Cape Crozier from the 4th to the 24th October, led by Lieutenant ROYDS, again exhibited the great differences existing between the screen temperatures at Winter Quarters and the temperatures obtained at no great distance from the ship. For instance, on the 9th October, in latitude  $77^{\circ} 36'$  S., longitude  $169^{\circ} 10'$  E., the mean of the thermometer readings taken by the sledge party gave a temperature of  $-36^{\circ}\cdot4$  F., the minimum value being  $-50^{\circ}\cdot2$  F., while the mean temperature at the ship was  $-18^{\circ}\cdot7$  F. and the minimum  $-32^{\circ}\cdot2$  F. Again, on the 22nd, the sledge party's mean temperature comes out at  $-20^{\circ}\cdot7$  F., the minimum being  $-39^{\circ}\cdot2$  F., and at the same time at the ship a mean of  $-6^{\circ}\cdot7$  F. obtained and the minimum was  $-14^{\circ}\cdot5$  F. On both of these days the sledge party recorded a calm, and at the ship there was a light air from eastward. While camping in the neighbourhood of Cape

Crozier, from the 10th to the 18th of the month, during rough weather, Lieutenant ROYDS made the following entries in his journal:—

10th October.—“Height above sea-level 940 feet. Summit of Mount Terror very misty. Arrived at furthest camp.”

(The mean of the temperature observations on that day comes out as  $-33^{\circ}\cdot6$  F., as against  $-26^{\circ}\cdot2$  F. at Winter Quarters. The minimum temperature was  $-58^{\circ}\cdot5$  F., against  $-32^{\circ}\cdot8$  F. at Winter Quarters. The weather was cloudy and calm to commence with, at camp, and was followed by a gentle breeze from south-west; at Winter Quarters the weather was cloudy and the breeze gentle from east-south-east.)

11th October.—“Record was deposited at Cape Crozier.”

(Mean temperature on that day was  $-28^{\circ}\cdot0$  F.; minimum temperature  $-35^{\circ}\cdot5$  F.; sky blue; no wind. At Winter Quarters the mean temperature was  $-26^{\circ}\cdot8$  F.; the minimum temperature  $-40^{\circ}\cdot8$  F.; sky blue; wind light from east-north-east at first, then calm.)

12th October.—“Wind rose gradually all day, ugly appearance to south.”

(Mean temperature  $-28^{\circ}\cdot1$  F.; minimum  $-40^{\circ}$  F.; wind gentle from south-west; weather overcast, misty. At Winter Quarters mean temperature  $-27^{\circ}\cdot6$  F.; minimum  $-37^{\circ}\cdot2$  F.; breeze light from east-south-east; weather overcast.)

13th October.—“Wind sprang up very strong during night and blew hard all day, with a short lull at 4 p.m. Enormous quantities of drift collecting round tents.”

(Temperature  $-18^{\circ}\cdot5$  F. (one observation); minimum temperature during previous 24 hours  $-30^{\circ}$  F.; mean wind direction and force, south-west, 8; weather overcast.)

14th October.—“Exactly similar weather as yesterday. Wind lulled for about half an hour at 4 a.m., but again came on, with increasing heavy gusts. Drift very thick.”

(No instrumental observations are given on this day. The mean wind direction and force, at Winter Quarters, was south, 4; the weather was overcast and snow was falling.)

15th October.—“Wind about the same, blowing a whole gale, accompanied by heavy drift.”

(No instrumental observations given on this day. The mean wind direction and force at ship was east-south-east, 4; the weather was overcast and snow was falling.)

16th October.—“Similar conditions as yesterday, wind still a strong south-west gale, with heavy drift. In the afternoon the sun shone out a bit and the wind began to lull.”

(No instrumental observations given. Mean wind at Winter Quarters east by north, 3; weather overcast.)

17th October.—“Wind still remains strong, about force 7, but sky was cloudless and wind gradually fell towards evening.”

(Temperature, 8 p.m.,  $-11^{\circ}$  F.; mean wind south-west, 6; general weather “blue sky.” At Winter Quarters the mean temperature was  $-2^{\circ}\cdot2$  F.; the mean wind east, 3; the weather clear to cloudy.)

18th October.—“Glorious day; sky cloudless.”

(There was no wind.)

In his ‘Voyage of the “Discovery,”’ Captain SCOTT mentions that gales at Cape Crozier grow excessively violent towards the end of September and in October, and that the ice sheet by this time has probably commenced to weaken.

During the twenty days occupied by Lieutenant ROYDS on his journey to Cape Crozier, the mean of the temperatures observed is found to be  $-20^{\circ}$  F., and the mean minimum  $-34^{\circ}\cdot2$  F. During the same period the mean temperature at Winter Quarters is found to have been  $-11^{\circ}\cdot9$  F., and the mean minimum temperature  $-21^{\circ}\cdot2$  F.; but it must be mentioned that for five out of the twenty-one days Lieutenant ROYDS’s observations were made in camp, near Cape Crozier, at an elevation estimated at 940 feet above sea-level.

During the months of September and October, 1902, mean pressure at the Winter Quarters of the German Expedition is found to have been 28·900 inches, which is 0·261 inch lower than that which obtained at McMurdo Sound during the same period. The highest pressure during the two months—29·634 inches, recorded on the 28th September—is 0·220 inch lower than the “Discovery’s” for the same period; the lowest pressure—27·922 inches, recorded on the 13th October—is 0·397 inch lower than the

“Gauss,” September and October, 1902.

"Discovery's" for the same period. The extreme range of pressure, 1.712 inches, is 0.177 inch larger than that recorded on board the "Discovery."

The mean air temperature of 4°·4 F. is 14°·7 F. higher than the mean temperature at McMurdo Sound during September and October, 1902; the maximum of 25°·7 F., registered on the 23rd October, is 10°·7 F. higher than the maximum at McMurdo Sound in those months, and the minimum of -26°·9 F., registered on the 14th September, is no less than 16°·6 higher than the minimum of -43°·5 F. registered at McMurdo Sound six days later. The extreme range of temperature, 52°·6, is about 6° smaller than the extreme range at McMurdo Sound for the two months.

The mean of the observations for wind force at the German Antarctic Station in September and October, 1902, is found to be 2·8; on 21 days the wind's force was estimated at 6 or 7; on 11 of these days at 8 or above 8. The prevailing winds during this period were from eastward, 17·2 per cent. of the total observations of wind falling under the head "east," and 18·8 per cent. falling under the head "east by south," but 15·9 per cent. of the observations fall under the head "calm."

There were 4 cloudless days, when the proportion of cloud to blue sky was less than 2 in 10; and 31 cloudy days, when the proportion was more than 8 in 10. Entries of rain, snow, or snow-drift, occur on 50 days in the 2 months.

Gaussberg.

From a comparison of observations made at an observing station, situated on the ocean ice, at the foot of the Gaussberg, with those taken on board the "Gauss" at the same hours, it was found that both pressure and temperature were somewhat higher at the former station. On one of the sleighing expeditions to the Gaussberg, which took place from the 28th April to the 10th May, 1902, it was found that pressure was 1·7 millins. (0·067 inch) higher and the temperature 3°·1 C. (5°·6 F.) higher at the foot of the mountain than were pressure and temperature on board the "Gauss" at the same time. On another expedition made to the Gaussberg, from the 25th September to the 9th October, the pressure was found to be 0·8 millim. (0·032 inch) higher at the station at the foot of the mountain than that observed at the ship, and the temperature 1°·9 C. (3°·4 F.) higher. The range of temperature at the former station, moreover, was smaller. It is to the steepening of the pressure-gradient southward, over Kaiser Wilhelm II. Land, associated with the decrease of pressure during the passage eastward of cyclonic systems to the north of the station, that the violence of the easterly gales experienced at the Winter Quarters of the German Expedition must be attributed.

The prevalence of winds from eastward in Kaiser Wilhelm II. Land is probably due, not only to the increase of pressure landward, but also to the contour of the coast line.

The "Discovery" and the "Morning" in the Ross Sea had winds from eastward no more frequently than winds from other quarters, in parallels much further south than that on which the "Gauss" was situated during her stay in the Antarctic.

At the end of December, 1901, and in the beginning of January, 1902, the "Discovery," proceeding southward, had winds principally from east-north-eastward and west-south-westward, but mostly from the latter direction between the parallels of 50° S. and 60° S., and principally from west-south-west between the parallels of 60° S. and 67° S. Thence to 70° S. the winds were from between north-north-east and south-south-east round by east; but from that latitude to 75° S. she had winds from south to west-south-west.

In December, 1902, the "Morning," steaming southward, had winds chiefly from between south-south-east and west-north-west, round by south, between the parallels of 50° S. and 65° S.; and winds from between north-east and west-north-west, round by north, between the latter parallel and 70° S. Thence, to McMurdo Sound, in January, 1903, 1st to 22nd, she experienced winds from between south-east and south-south-west, the principal directions being south-south-east and south-south-west.

From the 1st to 10th of March, 1903, the "Morning," proceeding northward from McMurdo Sound, met with winds mainly from between north-west and south-south-west to latitude 65° S.; thence to latitude 50° S. winds from between west and north-north-west. During the period 13th December, 1903, to 5th January, 1904, the "Morning" and "Terra Nova," making for McMurdo Sound from the northward, had southerly and south-westerly winds for the most part from 50° S. to 65° S.; subsequently to 77° S. winds between east-south-east and south-west round by south.

From the 19th February to the 5th March, 1904, the "Discovery," homeward bound from McMurdo Sound, recorded winds from between east-south-east and west-north-west, round by south, but principally from between south-east and south-west to the 66th parallel. The "Morning," from the 1st to the 25th February of that year, while in McMurdo Sound and traversing the same route, had winds from between east-north-east and west-south-west round by south, but principally from east-south-east. Thence to the 50th parallel both vessels experienced westerly winds, chiefly from between west-south-west and north-west.

Cruising in the Weddell Sea, during February and March, 1903, between the parallels of 60° S. and 68° S., the Scottish National Antarctic Expedition in the "Scotia" recorded 427 observations of wind from north to north-east and 255 from south to south-west out of a total of 1142 wind observations; and from the 21st February to the 20th April, 1904, between the parallels of 45° S. and 72½° S., 767 south-west to north-west winds were recorded and 309 north to north-east winds out of a total of 1440 wind observations.

At Snow Hill, the mean of the barometer observations recorded in September and October, 1902, at 8 a.m., by the Swedish Expedition, is found to be 29·09 inches. The results for this period compared with those of the period May–August show a diminution of mean monthly pressure at this station of 0·37 inch from June to October, but a recovery of pressure of 0·15 inch from August to September. The highest 8 a.m. pressure, in September and October, was recorded on the 29th September and was 29·77 inches, a moderate breeze from south-south-west being noted at the time; the lowest pressure in the 2 months, 28·38 inches, was recorded on the 14th September and was associated with a gentle breeze from the same direction. These extremes show a range of pressure at 8 a.m. of 1·39 inches.

Snow Hill, September–October, 1902.

The mean of the 8 a.m. observations for temperature during these 2 months is 7°·1 F.; the maximum 8 a.m. temperature, 38° F., was registered on the 16th September, when there was a light air from north; the minimum, –27° F., on the 1st September, when there was no wind, and again on the 2nd September, when there was a light air from north-east. The range of temperature at 8 a.m. therefore was 65°.

The prevailing wind during this period was from south by west, and this was the prevailing wind in March and April and from May to August inclusive. The average force of the wind at 8 a.m. is found to have been 3·4; the number of strong winds recorded at 8 a.m. was 10; the number of gales 7. The mean amount of cloud was 8. Dr. NORDENSKIÖLD mentions that a strong, warm wind from north-west set in about the middle of September and lasted for a few days, and that it drove the ice from the land; but that gales and cold returned at the end of the month.

At the "Discovery's" Winter Quarters during the summer months November, 1902, to February, 1903, inclusive, a mean pressure of 29·405 inches obtained.

"Discovery," November, 1902, to February, 1903.

The highest barometer reading, 30·112 inches, was taken on the 22nd November during a calm; the lowest, 28·758 inches, on the 23rd February, also during a calm. A mean temperature of 18°·1 F. obtained during the period, and the range of temperature was 48°·5. The maximum temperature was 39° F., and it was registered on two occasions: on the 26th December, in a calm, and on the 8th January, with a light air from east-north-east. The minimum temperature, –9°·5 F., is entered against the 24th February, with a light air from north. The winds were principally from between north and south-east. Out of 1440 observations of wind recorded during the four months, when referred to 8 points of the compass, 18·3 per cent. come under the head "north," 28·3 per cent. under the head "east," 10·2 per cent. under "north-east," and 12·7 per cent. under "south-east." But 19·3 per cent. of the observations were under the head "calms" and 3·5 per cent. under "variable." The remaining 7·7 per cent. of the observations were of winds principally from south and north-west. The mean force of the wind as estimated was nearly 3, and no gales were recorded. Blue sky was noted on 25 days; the weather was cloudy on 61 days, overcast on 34, misty on 14, foggy on 10. Snow fell on 37 days.

At Cape Armitage only three observations for temperature were recorded during the four months November–February, 1902–3. On the 17th December a reading of 28° F. was noted, and the maximum temperature at Winter Quarters on that day was 27°·2 F.; on 5th November the minimum thermometer registered –14° F., and the minimum temperature in the screen at Winter Quarters registered on the same day was 4°·4 F.

Cape Armitage, December–February, 1902–3.

"Southern Cross"  
Expedition, No-  
vember - January,  
1899-1900.

From November to January, 1899-1900, inclusive, the "Southern Cross" Expedition had a mean pressure of 29.245 inches; a mean temperature of 27°.6 F.; a maximum temperature of 48°.7 F. (on the 24th January); a minimum temperature of -4°.3 F. on 2nd November; giving a range of 53°. The wind came, mainly, from south-east, but there was a fair proportion of winds from south and east, and a large proportion of calms. The mean force of the wind as estimated comes out at 2.2, although no less than 25 gales were experienced.

S.S. "Morning," De-  
cember - January,  
1902-3.

From the 25th December, 1902, to the 25th January, 1903, the relief ship "Morning," under the command of Lieutenant W. COLBECK, R.N.R., was making her way from the 67th parallel of south latitude, and about the 179th meridian of east longitude, to McMurdo Sound. During the remaining days of January, and during the whole of February, the ship was anchored in the Sound, not far from the "Discovery." Four-hourly observations were made on board the "Morning" throughout this period, and a brief summary of the results is given in Table 5.

Sledge journeys, No-  
vember - February,  
1902-3.

A comparison of the results of observations obtained during the sledge journeys undertaken by the National Antarctic Expedition during the Summer of 1902-3 with the corresponding results registered at the same time at their Winter Quarters shows in a marked degree how much lower were the temperatures experienced by the respective sledge parties, even at no great distance from the ship, than those experienced at Winter Quarters. The direction of the wind observed at Winter Quarters is also frequently in marked contrast with the wind observations recorded on these journeys. For instance: on a sledge journey, led by Lieutenant ROYDS, to Cape Crozier, from the 3rd to the 17th November, inclusive, the mean temperature was 9°.3 F., when the mean temperature at Winter Quarters was 12°.1 F. The highest reading of the thermometer was 17° F., but the maximum temperature at Winter Quarters during the period was 27°.8 F. The minimum temperature registered on the journey was -18° F., and the minimum at Winter Quarters, zero, F. The average direction of the wind was south by west on the journey, while it was east by north at Winter Quarters.

Sledge journey.

During a journey to the Western Mountains, led by Lieutenant ARMITAGE, from the 29th November, 1902, to the 19th January, 1903, inclusive, the contrasts in temperature between the localities visited by the sledge party and Winter Quarters are not so marked, considering the elevation at which the sledge party's observations were made during the greater part of the journey. The wind directions recorded by the travellers are, however, very different from those experienced at Winter Quarters, and correspond with those recorded on journeys to the south-east, south, and south-west of the ship.

In the four days 6th to 9th December, between 77° 47' S., 165° 21' E., and 77° 45½' S., 164° 45' E., at an average approximate elevation of 3600 feet above mean sea-level, the mean of the temperature observations noted by the sledge party was 16°.7 F., and the average direction of the wind south, while at the ship the mean temperature is found to have been 23° F., and the average wind direction east by south.

During the four days 11th to 14th December, between 77° 49½' S., 164° 21' E., and 77° 51' S., 163° 45' E., at an average elevation approximately of 3600 feet above sea-level, the sledge party had a mean temperature of 21°.1 F., and an average wind direction south by west. At the same time at the ship the mean temperature was 27°.7 F., and the average direction of the wind south-east by east.

From the 1st to the 6th January, inclusive, between 77° 42' S., 160° 9' E., and 77° 43' S., 159° 38' E., at an average elevation approximately of 7500 feet, a considerable fall in temperature was experienced by the travellers, and the mean temperature during the time is found to have been -0°.1 F., with an average wind direction south-west by south, while at the ship the mean temperature was 28°.3 F., and the average wind direction north by east.

On the return journey, from the 12th to the 15th January, between 77° 51' S., 162° 56' E., and 77° 48' S., 164° 34' E., the sledge party recorded temperatures giving a mean of 27°.3 F., at an average elevation approximately of 2840 feet, and calms, while at the ship the mean temperature was 27°.2 F., but the average wind direction was east.

Captain SCOTT'S  
journey south.

Table 6 gives some mean results of observations made during Captain SCOTT'S famous journey farthest south, with corresponding values at Winter Quarters for comparison.

Readings of aneroid barometers, for pressure, were supplemented during the journey by occasional

hypsometer observations. At first two aneroids were in use, differentiated in the Register by the numbers 1 and 2, but the readings of No. 1 have not here been used, as the error of the instrument was found to have varied more than  $\frac{1}{10}$  of an inch between the date of issue and the 2nd November. No. 2 (Aneroid, M.O. No. 2) agreed very nearly with the ship's standard—mercury—barometer at the beginning of November, and the correction then obtained was in good agreement with the Kew correction, at 29 inches, viz.,  $-0.02$ . After the 5th November the observations noted were of one aneroid only, and the instrument is distinguished in the Register as H.O. 4 and M.O. 3. The mean correction for this aneroid was found to be  $+0.01$  at 29 inches, when the returning sledge party was near to, or at, the ship from the 1st to the 3rd February, 1903, the error varying between  $-0.01$  and  $+0.03$ . The correction, when issued, was  $+0.02$  at 29 inches; it is fair, therefore, to consider  $+0.02$  as an approximate correction for this aneroid throughout the journey.

The results of the observations for pressure, to which the above corrections have been applied, are in fair agreement with the results of the same observations corrected by applying the errors obtained from time to time by comparisons of hypsometer observations with simultaneous reading of the aneroid. Both are here given.

As the height above sea-level was not known, it has been assumed that the area over which Captain SCOTT and his party travelled was not much higher during the greater portion of the journey than the height of the ice barrier at its edge, and in reducing the observations for pressure to mean sea-level a mean altitude of 150 feet has been assumed. It is recognised at the same time that the assumption of a mean altitude is scarcely admissible, as the whole mechanism of ice distribution implies some gradual elevation southward—how much is an open question.

In 'The Voyage of the "Discovery,"' Captain SCOTT states that on the 19th December "Everywhere apparently there is a sharp and definite line between the land and the level surface of the barrier as exists on an ordinary coastline between land and water." He was then in latitude  $81^{\circ} 5' S.$ ,  $162^{\circ} 6' E.$

If the barrier upon which the explorers were travelling did not rise with latitude to a much greater altitude than that which has been assumed here as the mean altitude during the journey, then the increase of pressure, with increase of latitude, confidently expected by former explorers of this quadrant of the Antarctic, did not obtain.

The results of observations show that the mean pressure to the south differed but little from the mean pressure at Winter Quarters during the same periods. The differences between the two means are curiously constant throughout, the average difference being about  $0.05$  inch, using the Kew correction, and nil using the correction obtained by hypsometer observations.

An increase in mean pressure between the first and second period of  $0.37$  inch is found at Winter Quarters, against  $0.34$  inch on the sledge journey, using the Kew correction; and a diminution of mean pressure between the second and third periods of  $0.29$  inch at Winter Quarters, against  $0.24$  inch on the journey. Again, a diminution is shown between the third and fourth periods, which is only  $0.09$  inch at Winter Quarters and  $0.14$  inch on the journey. An increase of mean pressure is shown between the fourth and fifth periods of  $0.14$  inch at Winter Quarters, against  $0.15$  inch on the journey, and a diminution between the fifth and sixth of  $0.27$  inch at the former and of  $0.29$  inch on the latter.

This similitude, in the rise and fall of mean pressure, between the Winter Quarters' pressure results on the one hand, and the pressure results of observations made on the southern journey during the same periods, suggests a mean distribution of pressure over the areas traversed to the eastward of the mountain ranges, represented by an isobar running about N.N.E. and S.S.W.

This supposition gains some confirmation by the fact that, during the journey to the south, the wind's direction was mainly from south-south-westward.

It seems not improbable, indeed, that from Cape Adare to Mount Longstaff, and even still farther to the south, the distribution of pressure conforms largely to the configuration of the high land, and that an area of relatively high pressure lies over the land to the westward of the coast ranges, and relatively low over the Ross Sea, giving gradients for southerly winds during the greater portion of the year.

The tendency for the formation of a pressure gradient, with isobars along the coastline is generally

noticeable wherever land meets sea and may probably be attributed to the temperature gradient between the land and the water.

On the coastlines of the great continents the phenomenon is for the most part marked by the tendency of the average wind to follow the direction of the littoral. This is well shown in the 'Wind Charts of the Coastal Regions of South America,' prepared in the Meteorological Office and published by the Admiralty. There is also evidence in favour of the existence of a similar state of things in high latitudes.

The point is strikingly illustrated in the pressure and temperature maps given in the 'Atlas Climatologique de l'Empire de Russie,' published in St. Petersburg, in 1900, by the Observatoire Physique Central Nicolai.

In this atlas the maps devoted to mean monthly temperature of the air show that during the four months December to March the isotherms along the eastern seaboard of Siberia and, to some extent, along the northern seaboard also, run almost parallel to the coast, and that the temperature gradient is inland towards a minimum situated on about the 135th meridian of east longitude, in the neighbourhood of the Arctic Circle.

The maps dealing with atmospheric pressure and wind resultants for the same months exhibit isobars which also run almost parallel to the northern and eastern seaboards, and the pressure gradient is seaward from a maximum situated over some locality in about the centre of Asia.

In the maps relating to the three months April to June, the temperature gradient is shown to be from the south towards a minimum over the Arctic Ocean; but in May and June a gradient is indicated towards the eastern seaboard as well.

In the maps for pressure for the three months the isobars display, by their tendency to turn northwards as they approach the Arctic Ocean, the transitional condition of the atmosphere characteristic of the season.

In July and August the conditions which obtained during the four months December to March are more or less completely inverted. Isotherms affect the contour of the northern seaboard, and incline coastwise on the eastern coast also, but the temperature gradient is from inland towards the sea. The isobars for these months outline roughly the trend of the littoral, but the pressure gradient is inland from the sea.

For the months of September to November, inclusive, the general distribution of temperature and pressure indicated differ but little from those which characterise December to March, but, while the relation between temperature and pressure is almost as clearly defined in the former period as it is in the latter, the September to November period is, in addition, marked by some features which appertain to the three transitional months April to June. Thus we should not be surprised to find some correspondence between the general run of the isobars and the coastline of the Antarctic Continent. The variation from Winter to Summer is less marked, possibly because the cold centre remains in approximately the same position in both seasons and the arrangement is subject only to variation of a local character.

From the 6th to the 9th November, between latitude  $78^{\circ} 15' S.$ , longitude  $168^{\circ} 10' E.$ , and latitude  $78^{\circ} 40' S.$ , longitude  $167^{\circ} 53' E.$ , there occurred a period of unsettled weather which may be touched on in order to illustrate conditions occasionally experienced by Captain SCOTT and his party during their southern journey.

At 2 p.m. on 6th November the barometer, corrected for an altitude of 150 feet to sea-level, stood at 29.30 inches, and the thermometer at  $10^{\circ} \cdot 5 F.$  There was a light air from north-west, and the "weather throughout the day beautifully fine." At 9 p.m. pressure and temperature had not changed, but the light air had died away. At 10 p.m. on the 6th to 4 p.m. on the 7th a hard blizzard was blowing from south-west, with exception of a lull at 2.30 a.m. The smoke from Mount Erebus was observed to be moving from south-west. The wind moderated and the weather improved at 5 p.m., and an hour after there was only a light air from north-west. The mercury had dropped very little, and at 9 p.m. stood at 29.27 inches, but the temperature had fallen to  $-4^{\circ} F.$  The weather was noted as "b."

A light air continued to come from north-west until after 4 a.m. on the 8th, and at 6 a.m. a blizzard was again experienced which lasted throughout the day, with the wind from south-south-west, force 2-5. The barometer was rising; temperature fluctuating, but higher. The snow drift is described as heavy all day. The wind dropped towards 6 p.m., but freshened at 10 p.m.

The blizzard did not moderate until 3 p.m. on the 9th, the wind continuing from south-south-west, and the barometer now rising. After that, although the breeze was light, the drift continued until 5 p.m., when the smoke from Mount Erebus was seen to be "going to north-east and east." The barometer then rose briskly and at 8 a.m. had risen to 29.66 inches; at the same time the thermometer marked 6° F.

At the Winter Quarters of the German Expedition in the Antarctic during the three months November to January, 1902-3, observations for pressure show a mean of 29.293 inches, which is 0.112 inch lower than the mean of the pressure observations taken at the Winter Quarters of the "Discovery" during the four months' period November to February, 1902-3.

"Gauss," November  
-January, 1902-3.

The highest barometer reading in the three months, 29.800 inches, was recorded on the 24th November. It is 0.312 inch lower than the highest barometer reading recorded by the British Expedition in the November to February period, and relates to a date two days later. The lowest reading recorded during the three months, 28.390 inches, observed on the 20th January, is 0.368 inch lower than the lowest at the "Discovery's" Winter Quarters for the four months November to February, which was observed on the 23rd February. The range of pressure, 1.410 inch, is 0.056 inch larger than the range of pressure which obtained at the "Discovery's" Winter Quarters.

The results of temperature observations at the German station give a mean of 26.8 F. for the three months, which is 8.7 higher than the mean temperature at the British station during the same period. The maximum temperature, 40.8 F., registered on the 22nd December, is 1.8 higher than the maximum temperature at the British station for the four months November to February, 1902-3; the minimum, -17.7 F., registered on the 1st November, is 8.2 lower than the lowest registered at the British station in the Summer of 1902-3. The range of temperature, 58.5, is 10° larger, for the three months' period, at the German station than it is for the four months' period at the British.

The average force of the wind at the German station, as estimated, was 2.8. On 21 days during the three months the wind rose to force 6 or 7, and on 8 of these days it attained to gale force. The direction of the wind, mainly, was from between east by north and east by south. 26.5 per cent. of the total wind observations made in the three months under notice were of winds from east; 16.2 per cent. of winds from east by north; 14.7 per cent. of winds from east by south; and 8 per cent. were of calms. There were 6 cloudless days, when the proportion of cloud to blue sky was less than 2, and 44 cloudy days, when the said proportion was more than 8. On 51 days rain, snow, or snow drift was recorded.

At Snow Hill, during the four summer months of November to February, 1902-3, the Swedish Antarctic Expedition recorded observations for pressure at 8 a.m. which give a mean of 29.26 inches. The highest 8 a.m. reading, 29.85 inches, relates to the 2nd December, when a gentle breeze from north-east was stirring; the lowest 8 a.m. reading, 28.56 inches, was noted on the 14th February, and was associated with a strong breeze from west-south-west—a range of 1.29 inches.

Swedish Expedition  
at Snow Hill, Nov-  
ember - February,  
1902-3.

The mean temperature at 8 a.m. in these months is found to have risen from 7.1 F., the mean for September and October, 1902, to 24.7 F. The maximum temperature, 35° F., occurred on the 23rd January, with a light breeze from south-south-west; the minimum, 2° F., on the 1st November, with a strong breeze from south-south-west. The range of the 8 a.m. temperatures was therefore 33°. The prevailing wind at 8 a.m. is found to have been south by east during these summer months; the average force, 2.3; the mean cloud amount, 8. Strong winds were noted on 14 occasions at 8 a.m.; no gales were recorded at that hour.

The information relating to the meteorology of the Weddell Sea and of Laurie Island, South Orkneys, incorporated, by permission of the author, in this memoir, is summarised from the Reports contributed by Mr. ROBERT C. MOSSMAN, F.R.S.E., the meteorologist of the Scottish National Antarctic Expedition, to 'The Scottish Geographical Magazine,' Tables VII. and VIII. The valuable information thus obtained has been supplemented by additional data, kindly supplied by Mr. MOSSMAN, whose generous assistance in this matter is greatly appreciated.

Scottish National  
Expedition, Feb-  
ruary, 1903.

Mr. MOSSMAN states that, after leaving Port Stanley, Falkland Islands, in the S.Y. "Scotia," the edge of the ice pack was reached on the 2nd February, 1903, in latitude 60° S. During the first half of February the mean position of the "Scotia" was latitude 60° 5' S., longitude 37° 45' W. The mean of the temperature observations recorded every hour during the first half of the month is found to be

30°·3 F. and the extreme range of temperature only 6°·2, viz., between a maximum of 32° F. and a minimum of 25°·8 F.

The mean pressure during the period is given as 29·186 inches. The prevailing winds were from between north-west and north-east, and south and west-south-west; the former, presumably, blowing in front of, and the latter in rear of, depressions travelling to the eastward and south-eastward and passing over the area of observation. Once only, on the 11th February, the wind attained to the force of a gale, and then for not more than an hour.

During the second half of February the ship's mean position being in latitude 67° 55' S., longitude 21° 45' W., the weather was considered by the explorers unusually cold for the season, the mean temperature being as low as 25°·4 F., with a range of temperature of 18°·6, *i.e.*, from a maximum of 32° F. to a minimum of 13°·4 F. In the second half of the month under notice, in the mean position referred to, the mean pressure declined to 28·966 inches. Mr. MOSSMAN states that during this time the most frequent wind was the south-west, which was closely followed by winds from east, south-east and north. The frequency of the south-west wind may have been due to a relatively high pressure over Graham Land, Danco Land, and the neighbouring islands, the north wind to the air circulation in front of approaching low-pressure systems, and the south-east wind to the circulation in the rear. "Winds from west-south-west and north-north-west were of rare occurrence," says Mr. MOSSMAN, and the reason seems obvious, for these winds belong to the northern segment of cyclonic systems in the southern hemisphere, and the "Scotia's" average position during the second half of February lay to the south of that part of the circulation and in the southern segment of the systems.

"Discovery," March and April, 1903.

During the autumn months of March and April, 1903, observations for pressure at the "Discovery's" Winter Quarters give a mean of 29·354 inches, which is 0·015 inch lower than the mean pressure of the corresponding month in the previous year. The range of pressure in March and April, 1903, 0·987 inch, is 0·244 inch smaller than the range in the corresponding two months of 1902. The highest barometer reading, 29·782 inches, was recorded on the 25th March, the lowest, 28·795 inches, on the 12th April.

The mean temperature during these two months was -8°·9 F. and is 9°·4 lower than the mean temperature of the corresponding period in 1902, and the range of temperatures, 67°·5, is 8°·4 larger. The maximum temperature was 25°·5 F. and is entered against the 6th March; the minimum, -42° F., against the 26th April.

Cape Armitage, March and April, 1903.

At Cape Armitage, 57 observations for temperature, taken between the hours of 10 a.m. and noon, give a mean of -18°·6 F.; the highest reading, 25°·5 F., was taken on the 5th March, the lowest, -56° F., registered on the 22nd April—showing a range of 81°·5.

"Discovery," Winter Quarters, March-April, 1903.

The prevailing winds at McMurdo Sound during March and April, 1903, were north-easterly or easterly, the percentage of frequency of the former being 23·5, and of the latter 34·0; but 24·5 per cent. of the total wind observations for the period were of calms.

Blue sky was recorded on 17 days, and cloudy, or overcast, sky on 44 days.

Snow fell on 25 days, and the weather was misty on 10 days.

Strong winds were recorded on 15 days, and gales on 2 days.

Relief Ship "Morning," March, 1903.

The Relief Ship "Morning," returning northward from McMurdo Sound between the 1st and 10th March, 1903, reached a position in latitude 65° 36' S., longitude 173° 57' E., on the latter date. She recorded a mean pressure of 29·41 inches during this time. Her highest barometer reading, taken on the 5th—29·69 inches—was associated with a fresh south-westerly breeze, her lowest of 28·99 inches on the 8th, with a strong northerly wind, which attained the force of a fresh gale.

Her mean temperature was 22° F.; mean wind force 5. Strong winds were experienced on 3 days, and gales on 3 days.

Swedish Expedition, Snow Hill, March-April, 1903.

At Snow Hill Island, the Swedish station, in March and April, 1903, the mean 8 a.m. pressure had declined from 29·26 inches, the mean pressure during the summer months of November to February, to 29·05 inches. The highest 8 a.m. reading was no higher than 29·58 inches, and this was noted on the 20th April during a calm; the lowest 8 a.m. reading, 28·44 inches, was noted on the 24th March, and a fresh gale was blowing from west-south-west at the time. The resultant range, 1·14 inches, is not large.

In these months Snow Hill Island had a mean temperature, at 8 a.m., of 8°·9 F., which is 15°·8 F. lower

than the mean 8 a.m. temperature of the four summer months of 1902-3. The maximum temperature, 42° F., was observed on the 18th April during a calm; the minimum, -13° F., on the 24th April, when a fresh gale was blowing from south-west. In the two months, therefore, the range of temperature was 55° F.

At 8 a.m. the prevailing wind during these autumn months proved to be from south, and the mean force 4.2, which shows an increase of 1.9 on the 8 a.m. Summer mean. The mean cloud amount was again 8. Strong winds were recorded at 8 a.m. 11 times during the period, gales 12 times.

From the 1st to the 20th March, 1903, the S.Y. "Scotia" was cruising in the Weddell Sea, and her average position, from the 1st to the 10th inclusive, is given as latitude 67° 55' S., longitude 34° 35' W. "Scotia," Scottish National Expedition, March, 1903.

Observations made during this ten-day period give the following results:—Mean pressure, 29.168 inches; highest barometer reading, 29.610 inches, taken on the 6th; lowest, 28.367 inches, on the 9th. Mean temperature, 27° F.; maximum temperature, 29.5 F., observed on the 9th; minimum, 20.8 F., on the 6th. The sky was overcast during the whole of the period; the average wind force was 2.6, and gales were experienced during 27 hours. The prevailing winds were from between north and south-east, north-easterly winds predominating. During 53 hours snow fell, and sleet was noted against 2 hours. Rain fell on 5 hours, and the weather was misty, or foggy, on 9 hours.

From the 11th to the 20th March the average position of the "Scotia" is given as latitude 63° 40' S., longitude 42° 50' W. Pressure diminished during this period, and the mean is found to have been 29.00 inches.

The highest barometer reading, 29.362 inches, was recorded on the 13th; the lowest, 28.396 inches, on the 20th. Temperature fell for the most part during this time, although the maximum temperature, 32.1 F., was registered on 20th, and the minimum, 6.9 F., 7 days before.

The total observations for temperature during the 9 days yield a mean of 24.4 F.

The sky was cloudy, or overcast, during the greater portion of this period, the average amount of cloud being 9.8.

The average force of the wind was the same as the average of the previous period, 2.6, but only one gale was experienced.

Out of 240 observations of wind direction, 91 were of winds from north-eastward; 45 of winds from northward; 45 from southward; and 28 from north-westward. Snow was recorded on 37 hours, sleet on 1 hour, and rain on 9 hours; the weather was misty or foggy on 13 hours.

Observations made at Laurie Island, South Orkneys, by the Scottish Expedition during the month of April, 1903, give the following results:—Mean pressure 29.204 inches; highest pressure 29.859 inches, observed on 2nd of the month; lowest 28.279 inches, on the 24th. Mean temperature 20.6 F.; maximum temperature 36.2 F., registered on the 15th; minimum -8.1 F., on the 29th. The weather was cloudy; snow was noted on 119 hours; sleet on 32 hours; rain on 48 hours; and hail on 2. Mist or fog was noted on 51 hours. The average force of the wind, as estimated, is found to have been 1.7, and no gales were recorded. Laurie Island, April, 1903.

Out of 710 observations of wind direction, 510 were of winds from between south and north-west, round by west, and the north-westerly wind predominated. Only 21 observations were of winds from eastward and north-eastward.

The north-westerly winds were doubtless occasioned by the approach of low-pressure systems, the wind shifting to the westward and southward as the trough of the depression neared, passed over, and receded from the station.

At the "Discovery's" Winter Quarters, in McMurdo Sound, from May to August, 1903, inclusive, the mean pressure was 29.223 inches, or 0.051 inch higher than the mean pressure in the corresponding months of 1902; and the range of pressure, 1.761 inches, 0.280 inch smaller. The highest pressure, 30.061 inches, noted on the 31st July, associated with a fresh breeze from east by south, is 0.120 inch lower than the highest recorded during the corresponding period of the previous year. Readings of 30.037 inches and 30.027 inches were also recorded, the first on the 3rd June and the second on the 1st August. The lowest pressure, 28.300 inches, recorded on the 10th August, associated with a strong south-south-west wind, is 0.160 inch higher than the lowest pressure noted in the four months May to "Discovery," May to August, 1903.

August, 1902, which was the lowest reading recorded during the "Discovery's" stay in the Antarctic regions.

As regards temperature, the Winter of 1903 was rather more severe than the Winter of the previous year. The mean temperature, for the four months under notice, is found to have been as low as  $-16^{\circ}\cdot9$  F., whereas the mean temperature of the winter months, May to August, 1902, was  $-13^{\circ}\cdot3$  F.

Cape Armitage.

The mean temperature at Cape Armitage during the months under notice, obtained from 203 observations, generally taken twice a day, *i.e.*, at about noon and 4 p.m., comes out as  $-28^{\circ}\cdot5$  F. The range of temperature during these months was  $71^{\circ}\cdot2$  F. at Winter Quarters and  $76^{\circ}\cdot2$  F. at Cape Armitage. The maximum temperature of  $17^{\circ}$  F. at Winter Quarters was registered on the 11th June, when there was a light breeze from east, and this is  $2^{\circ}$  F. lower than the maximum reading of the corresponding period of the previous year. The maximum temperature observed at Cape Armitage was not higher than  $8^{\circ}\cdot5$  F.

The minimum for the period,  $-54^{\circ}\cdot2$  F., registered on the 30th July at Winter Quarters, in a calm, is  $3^{\circ}\cdot7$  F. lower than that of the previous year. At Cape Armitage the minimum temperature of the four months,  $-67^{\circ}\cdot7$  F., registered on the 16th May, is as much as  $5^{\circ}\cdot7$  F. lower than the lowest registered in the two months July, August, 1902, which are the only months for which observations are available for comparison in that year at Cape Armitage.

As regards the weather experienced at Winter Quarters in the four winter months of 1903, 52 days were cloudy, 19 overcast; but blue sky was recorded on 52 days. Snow fell on 40 days; the weather was misty on 54, foggy on 21. Strong winds blew on 40 days, and attained force 8, and upward, on 24 days. Aurora was observed on 76 days.

Out of 1476 observations of wind direction,  $29\cdot2$  per cent. were of winds from an easterly direction,  $17\cdot8$  per cent. of winds from a north-easterly direction,  $27\cdot5$  per cent. were of calms; and  $4\cdot2$  per cent. of variables.

Snow Hill Island,  
May to August,  
1903.

At Snow Hill Island, during the four months May to August, 1903, the mean pressure at 8 a.m. increased to  $29\cdot13$  inches from  $29\cdot05$  inches, the mean for the two previous months. The maximum 8 a.m. pressure,  $30\cdot01$  inches, occurred on the 12th May, during a calm; the minimum 8 a.m. pressure,  $28\cdot25$  inches, on the 3rd June, when a strong south-west wind was blowing; thus a range of  $1\cdot76$  inches is shown for the period.

A mean temperature of  $-1^{\circ}\cdot2$  F. is found from the 8 a.m. observations. A maximum of  $40^{\circ}$  F. relating to the 31st May, and a minimum of  $-32^{\circ}$  F. to the 20th June, both associated with a calm, give  $72^{\circ}$  F. as the range of temperature at 8 a.m.—a large range.

The average direction and force of the wind, estimated at 8 a.m. during the four months, is found to have been south,  $2\cdot7$ ; the average amount of cloud 7.

On 18 occasions, at 8 a.m., the wind was estimated at force 6-7, and on 5 occasions as force 8-10.

Laurie Island, South  
Orkneys, May -  
August, 1903.

The results of observations made at Laurie Island during the four months May to August, 1903, exhibit a mean pressure of  $29\cdot250$  inches, being  $0\cdot027$  inch higher than the mean pressure at McMurdo Sound for the same months. The highest pressure during the period,  $30\cdot013$  inches, observed on the 13th May, is  $0\cdot048$  inch lower than the "Discovery's" lowest, covering the same months; the lowest pressure,  $28\cdot231$  inches, observed on the 3rd July, is  $0\cdot069$  inch lower than the "Discovery's" for the same months. The range of pressure during the period,  $1\cdot782$  inches, is  $0\cdot021$  inch larger than the range at McMurdo Sound during the same period.

The mean temperature in these months is found to have been  $15^{\circ}\cdot6$  F.; a maximum of  $46^{\circ}$  F., registered on 31st May, and a minimum of  $-26^{\circ}$  F. on the 19th June, show a range of  $72^{\circ}$ .

Cloudy weather appears to have prevailed during the four months, the mean amount of cloud being estimated at  $7\cdot5$ . Snow fell on 765 hours, sleet on 29 hours, rain on 152, and hail on 21.

Fog, or mist, is entered on 144 hours. The mean force of the wind, as estimated, is  $2\cdot1$ ; no gales were experienced in May or June, but in July and August winds of force 8, and above, are noted on 71 hours.

Out of 2952 observations of wind direction made during the period, 392 were of northerly winds, 732 of north-westerly, 463 of westerly, 308 of south-westerly, and 405 of southerly. There were 172 observations of calms, and 25 of variables; so that only 455 observations were of winds from the north-east, east, and south-east directions, and of these not more than 109 were of winds from eastward.

The South Orkneys, therefore, would appear to be within the region of the westerly winds. The centres of low-pressure systems, moving eastward over the islands, usually passed south of the station. Yet the Winter Quarters of the German exploring ship "Gauss," situated on a parallel only 318 miles south of the station on Laurie Island, lay for the most part well on the southern side of these eastward-moving depressions, and was visited by easterly gales associated with the passage eastward of cyclonic systems, the centres of which passed well to the north of the station.

Areas of low pressure, after passing south of Cape Horn, do not appear, as a rule, to have influenced the weather at Snow Hill during the sojourn there of the Swedish Expedition, until the trough of the depression had reached the 56th meridian of west longitude and had passed to the eastward of the mountains of Danco Land.

In September and October, 1903, mean pressure was at its lowest at McMurdo Sound, for the period during which the "Discovery" remained there. It was as low as 28·957 inches, which is 0·204 inch lower than the mean pressure of the corresponding months in 1902. The highest barometer reading, 29·586 inches, was taken on the 1st September, when there was no wind, and is 0·268 inch lower than the highest in September and October, 1902; the lowest, 28·303 inches, was observed on the 23rd of the same month, when there was a fresh breeze from south, and is 0·016 inch lower than the lowest in the corresponding period of the previous year. This range of 1·283 inches is 0·252 inch smaller than the range of pressure in the corresponding months of the previous year. The mean temperature in the two months,  $-12^{\circ}\cdot7$  F., is  $2^{\circ}\cdot4$  lower than the mean temperature of September and October, 1902. The maximum temperature,  $13^{\circ}\cdot2$  F., noted on the 28th September, with a fresh breeze from south-east, is  $1^{\circ}\cdot8$  lower than the maximum registered in the same months of the previous year, when the wind came from the same direction as a gentle breeze. The minimum,  $-58^{\circ}\cdot5$  F., registered on the 20th September and associated with a calm, is  $15^{\circ}$  lower than the minimum of September and October in the previous year, which occurred in a calm. The range of temperature,  $71^{\circ}\cdot7$ , is  $13^{\circ}\cdot2$  larger than the range in the same season of 1902.

"Discovery," Sep-  
tember - October,  
1903.

At Cape Armitage during these months the thermometers were read twice a day, usually at about noon and 4 p.m.; and these observations, 106 in all, give a mean of  $-18^{\circ}\cdot6$  F., or  $2^{\circ}\cdot7$  lower than the mean of 49 observations obtained at, or about, noon each day in September and October, 1902. The maximum temperature in these months at Cape Armitage,  $10^{\circ}\cdot5$  F., observed on the 27th October, is also the same as the maximum temperature in the same months of the previous year; the minimum temperature,  $-64^{\circ}\cdot6$  F., registered on the 20th September, is  $7^{\circ}\cdot1$  lower than the minimum in the corresponding months of 1902, and the range,  $75^{\circ}\cdot1$ , is  $7^{\circ}\cdot1$  larger.

Cape Armitage, Sep-  
tember - October,  
1903.

The weather at McMurdo Sound was characterised by blue sky on 13 days; by cloudy, or overcast, sky on 48 days; by snow on 20 days; by mist on 12 days; and by fog on 19 days. Aurora was observed on 12 days. Strong winds, force 6-7, were experienced on 31 days; and the wind attained gale force, 8-10, on 9 days. Out of 732 observations of wind direction, 24 per cent. were from north-eastward, 29 per cent. from eastward, 7·5 per cent. from northward, and 11 per cent. from south-eastward; 23 per cent. were of calms or variables; and the remainder were of winds from the remaining directions other than west.

On a sledge journey to Cape Crozier, undertaken by Lieutenant ROYDS and party, from the 7th to the 17th September, 1903, inclusive, a mean temperature of  $-37^{\circ}$  F. obtained. The mean temperature during the same time at Winter Quarters was  $-20^{\circ}\cdot7$  F. The maximum temperature recorded,  $-5^{\circ}$  F., on the 7th, when the wind was from south-east, force 5, is  $9^{\circ}$  lower than the maximum during the same time at Winter Quarters, registered on the same day, when the wind was from south-east, force 3; the minimum,  $-61^{\circ}\cdot2$  F., noted on the 16th, when there was no wind, is  $24^{\circ}$  lower than the lowest during the same period at Winter Quarters, which occurred on the same day, associated with a breeze from east-north-east, force 7.

Lieutenant ROYDS to  
Cape Crozier, Sep-  
tember, 1903.

On 5 days of the journey the sledge party had the wind from east by north; on 2 days the direction was south-west; and on 4 days there was no wind. At Winter Quarters during the whole of this time the wind came from east-north-east. The mean of observations for wind force, as estimated by the travellers, comes out at 1·4, while at Winter Quarters the mean force was 3.

As regards weather, the sledge party had less cloud and less fog than obtained at Winter Quarters, and no snow; at Winter Quarters snow fell on 3 days out of the 11 under notice.

Lieutenant BARNE to south, September, 1903.

Journeying to the south from the 13th to the 20th September, inclusive, Lieutenant BARNE and party obtained values for temperature from the 13th to the 17th which show a mean of  $-45^{\circ}\cdot 8$  F., against  $-28^{\circ}\cdot 9$  F., the mean of temperature observations at Winter Quarters. The maximum temperature,  $-36^{\circ}\cdot 5$  F., was registered on the 13th, with a light breeze from south-west; at Winter Quarters the maximum,  $-20^{\circ}$  F., occurred two days after, with a light breeze from east-north-east. During a light breeze from south-west, on the 15th, the minimum temperature,  $-66^{\circ}\cdot 8$  F., was registered, and a day later the minimum for the same period,  $-37^{\circ}\cdot 2$  F., was recorded at Winter Quarters, a wind from east-north-east, force 7, blowing at the time. The mean wind directions during the journey are found to have been 3 days south-south-west, 1 day north, and 4 days of calm; the force, 1. It was north-east by east,  $2\cdot 5$ , at Winter Quarters during the period. The atmosphere was clearer on the journey than at Winter Quarters, otherwise the weather appears to have been similar.

Dr. WILSON to Cape Crozier, 12th October to 4th November, 1903.

From the 12th October to the 4th November, 1903, inclusive, a sledge party made a journey to Cape Crozier and back, in charge of Dr. E. A. WILSON. From the time of starting to the end of the month the mean temperature was  $-8^{\circ}$  F., while it was  $-3^{\circ}\cdot 3$  F. at Winter Quarters. The maximum for the period,  $6^{\circ}\cdot 5$  F., occurred during a gale (force 8) from south-west on the 27th; the maximum at Winter Quarters,  $12^{\circ}$  F., registered on the same day, was associated with a moderate breeze from south-east. The lowest reading on this part of the journey,  $-33^{\circ}\cdot 4$  F., was noted on the 15th and again on the 17th, during calms; the lowest at Winter Quarters,  $-27^{\circ}\cdot 2$  F., registered on the 19th, was likewise noted in a calm.

The mean direction and force of the wind, as estimated by the travellers, is found to be south-west by south, 3, while at Winter Quarters it was east,  $2\cdot 6$ . The weather was overcast or cloudy, alike on the journey and at the ship, but rather less so on the journey. The travellers recorded snow on 7 days only, and no fog; while at the ship snow fell on 11 days, and the weather was foggy on 6.

From the 1st to the 4th November, inclusive, the difference between the temperature experienced by the sledge party and that which obtained at the ship was still more accentuated.

On the journey the mean temperature is found by the observations to have been  $5\cdot 3$  F., against  $11^{\circ}\cdot 8$  F. at the ship. The maximum,  $29^{\circ}\cdot 5$  F., noted on the 4th in a calm, may be placed against  $24^{\circ}\cdot 5$  F., the maximum at the ship, recorded on the 2nd, also in a calm. The minimum,  $-16^{\circ}$  F., noted on the 2nd by the travellers when a calm prevailed, is  $10^{\circ}\cdot 5$  lower than the minimum at the ship during the same period, which occurred on the 3rd, with a light air from north. The mean direction and force of the wind, as estimated by them, was west by south,  $1\cdot 3$ ; at the ship it was east-north-east,  $2\cdot 4$ . The weather experienced by the travellers was similar to that which obtained at the ship, except that the ship had fog on 1 day, while the travellers had no fog.

Lieutenant BARNE to south-west, 7th October to 12th December, 1903.

Between the 7th October and the 12th December a journey was undertaken to the south-west, led by Lieutenant BARNE. Lieutenant BARNE arrived in latitude  $79^{\circ} 16'$  S., longitude  $165^{\circ} 48'$  E. on the 31st of October. During this part of the journey the observations for temperature show a mean of  $-15^{\circ}\cdot 3$ , while the mean at the ship was  $-4^{\circ}\cdot 1$  F. The maximum temperature,  $4^{\circ}\cdot 5$  F., was observed by the sledge party on the 31st, with a light breeze from south by east, and the maximum at the ship for the 23 days,  $12^{\circ}$  F., occurred on the 27th, with the wind from east-south-east, force 3. The minimum temperature,  $-50^{\circ}\cdot 5$  F., entered in the Journal of the sledge party on the 8th, with the wind's direction south, force 2, is  $23^{\circ}\cdot 0$  lower than the minimum at the ship during the same time, which was associated with a light breeze from north. The average direction and force of the wind on this part of the journey is found to have been south-south-west, 2; at the ship it was east by north,  $2\cdot 6$ , during the time. Overcast or cloudy weather was experienced by the sledge party as well as at the ship; but while the former had snow on 6 days, at the latter there was snow on 12 days; and while the travellers had fog on 3 days, there was fog at the ship on 8. On the 20th November Lieutenant BARNE had reached a position in latitude  $80^{\circ} 7'$  S., longitude  $161^{\circ} 4\frac{1}{2}'$  E., and the return journey commenced. During November observations for temperature show a mean of  $11^{\circ}$  F., while the mean at McMurdo Sound was  $15^{\circ}\cdot 4$  F. The maximum temperature,  $31^{\circ}\cdot 2$  F., registered on the 30th in a calm, is only  $2^{\circ}\cdot 8$  lower than the maximum for the same period at the ship, registered on the 22nd, also in a calm. The minimum,

- 11°·2 F., registered on the 5th, with a light breeze from south by east, is 5°·7 lower than the minimum at the ship, noted with a light air from north. The mean wind direction and force is found to have been south-west by south, 2·6, while at the ship it was east by south, 2·8. The weather experienced by the travellers was similar to that recorded at the ship, except that at the latter fog was noted on 7 days and mist on 3; but the travellers recorded neither fog nor mist. From the 1st to the 12th December mean temperature on the sledge journey was 17°·6 F., 5°·0 lower than the mean in the same time at the ship. The maximum, 30°·2 F., recorded on the 9th, with a light breeze from north-east, is 3°·8 lower than the maximum at the ship, recorded on the 11th with the entry "calm." The minimum, 3°·4 F., also noted on the 9th, but with a light breeze from south-west, is 4°·2 lower than the minimum at the ship entered against the 6th, with a gentle breeze from east. The average wind direction and force comes out as south-west, 1·7; at the ship it was east, 2. Again there was but little difference between the weather on the journey in the last 12 days and that experienced at the ship, with the exception that on 3 days fog was noted at the ship, but no entry of fog occurs in the Journal of the sledge journey for those days.

At Snow Hill, during the months of September and October, 1903, mean pressure showed a slight increase on the mean of May-August, the result of the 8 a.m. observations giving 29·16 inches. This is 0·07 inch higher than the mean 8 a.m. pressure for the corresponding months of the previous year. The highest 8 a.m. reading, 29·86 inches, was taken on the 7th September, when the wind was moderate from south-south-west; the lowest, 28·43 inches, on the 23rd October, when there was a moderate breeze from the opposite point, north-north-east.

The mean of the 8 a.m. observations for temperature is 9°·7 F., in the two months; the maximum, 41° F., occurred on the 27th October, associated with a light air from north-east; the minimum, -23° F., on the 1st September, with a light breeze from south-south-west: a range of 64° F.

The wind's average direction was south-east by south, its average force 2·5. Strong winds were recorded at 8 a.m. on 6 occasions, gales on 3. The average cloud amount, 7, is the same as that which obtained during the period May-August.

At Laurie Island, in September and October, the mean of the observations taken by the Scottish Expedition for pressure is 29·288 inches, which is 0·331 inch higher than the mean pressure, during the same period, in McMurdo Sound. The highest reading, 30·113 inches, entered against the 3rd October, appears also to have been the highest recorded by the Swedish Expedition during Dr. NORDENSKIÖLD'S stay on Snow Hill Island; the lowest, 28·444 inches, is entered for the 24th of the same month. The range of pressure in October, 1·669 inches, is found to be the largest for any month at Snow Hill while the Expedition was stationed there.

The mean temperature, during September and October, was 20°·2 F.; a considerable rise of temperature occurred in October, and the mean for that month was 27° F. The maximum for the two months, 42° F., observed on the 28th October, and the minimum, -25°·8 F., on the 2nd September, show a range of 67°·8 F.

The mean amount of cloud is estimated as 7·7. The prevailing winds were westerly; out of 1464 entries of wind direction, 366 pertained to winds from north-westward, 216 to winds from northward, 210 to winds from westward, and 177 to those from south-westward. But 197 entries were of winds from southward, 110 from south-eastward, and 87 of calms. The average force of the wind is estimated to have been 1·8; gales were recorded on 16 hours. Entries were made of snow on 334 hours, sleet on 31 hours, rain on 25 hours, hail on 4, mist or fog on 31. The observations for wind, pressure, and temperature, obtained at Laurie Island and Snow Hill Island, respectively, appear to show that eastward-moving areas of low pressure, after passing Cape Horn, frequently take a path to the north of Joinville Island, and then strike to the south-east, to the westward of the South Orkneys.

For the summer months of November, December, January, 1903-4, and the first 15 days of February, 1904, the barometer observations taken at McMurdo Sound show a mean pressure of 29·082 inches, which is 0·323 inch lower than the mean pressure results for the four months November to February of the previous Summer.

The highest reading, 29·598 inches, was noted on the 8th December, with a light breeze from north-north-west; the lowest, 28·508 inches, on the 26th November, with a light air from south. The range of

Snow Hill Island,  
September - October,  
1903.

Laurie Island, South  
Orkneys, Septem-  
ber-October, 1903.

"Discovery," Nov-  
ember - February,  
1903-4.

pressure, during the period (1st November to 15th February), 1.090 inches, is 0.264 inch smaller than the range during the previous Summer (1st November to 28th February).

The mean temperature was  $21^{\circ}\cdot3$  F., or  $3^{\circ}\cdot2$  F. higher than that of the previous Summer, and the range of temperature,  $47^{\circ}\cdot5$  F.,  $1^{\circ}$  smaller. The maximum temperature for the period,  $42^{\circ}$  F., was registered on the 26th December, when there was no wind; the minimum,  $-5^{\circ}\cdot5$  F., on the 3rd November, when a light air came from north.

Cape Armitage, 1st  
November to 15th  
February, 1903-4.

At Cape Armitage the temperature was taken during the three months November to January on 13 occasions. The mean temperature was  $13^{\circ}\cdot8$  F.; a maximum temperature was recorded on the 25th November,  $23^{\circ}\cdot8$  F.; and the minimum,  $-14^{\circ}\cdot2$  F., on 27th January.

McMurdo Sound.

At McMurdo Sound the prevailing winds during the period 1st November to 15th February were from north-east to south-east, the percentage of frequency of the former being 34.5 and of the latter 14.2; but, out of 752 observations of wind direction, 17.5 per cent. were of winds from south-eastward; 3.7 per cent. were variable; and 15.0 per cent. of the observations were of calms.

The average force of the wind, throughout the period under notice, is found to have been 2.2; in the four months November to February, 1902-3, it was 2.9. The force of the wind rose to 7, or 8, on 18 occasions, and to 9 on one occasion.

In regard to the weather during the time, the sky was clear on 19 days; cloudy on 46; and overcast on 42. Snow fell on 35 days; mist was noted 5 days; and fog on 24. These conditions of weather closely resemble those of the four months of the previous Summer.

Captain SCOTT'S  
journey to west,  
26th October to  
16th December,  
1903.

On the journey made by Captain SCOTT to the westward, and while on the Western Mountains, the ship was left on the 26th October, 1903, and at the end of the month a position in latitude  $77^{\circ} 42' S.$ , longitude  $164^{\circ} 44' E.$  was reached.

During this portion of the journey the mean temperature,  $0^{\circ}\cdot6$  F., was  $2^{\circ}\cdot0$  F. lower than the mean temperature at the ship. The maximum and minimum temperatures, which will be referred to in connection with this journey, are the maximum and minimum observed by an ordinary thermometer.

The maximum,  $10^{\circ}\cdot2$  F., was observed on the 27th, when a light breeze was noted from north-east; the minimum,  $-9^{\circ}\cdot8$  F., on the 29th, and there was no wind at the time of observation. The maximum and minimum temperatures registered at the ship during the time were  $12^{\circ}$  F. (on the 27th) and  $-12^{\circ}\cdot3$  F. respectively (on the 26th). The results of observations of wind direction and force show that south-south-west was the predominating direction, and the average force 2.6. At the ship the average direction and force is found to have been east-south-east, 3.4. The sledge party recorded snow on 1 day, and fog on 1 day. At the ship snow fell on 4 days, and the weather was foggy on 4 days.

In November Captain SCOTT, pushing westward, and over a plateau more than 7000 feet above sea-level during the second half of the month, reached a position in  $77^{\circ} 59' S.$ ,  $146^{\circ} 31' E.$ , on the 30th—SCOTT'S furthest west—and during the time experienced a mean temperature of  $-16^{\circ}\cdot9$  F., while the mean temperature at the ship was  $15^{\circ}\cdot4$  F. The highest reading during the month,  $8^{\circ}$  F., was noted on the 1st, with a light breeze from south; the maximum registered at the ship during the month,  $34^{\circ}$  F., relates to the 22nd, when a light breeze was stirring from north-east by east. The lowest reading recorded by the travellers,  $-44^{\circ}\cdot3$  F., was entered on the 16th of the month, with the wind observation "calm"; at the ship the minimum,  $-5^{\circ}\cdot5$  F., registered on the 3rd, was associated with a light breeze from east-north-east.

On the Western Mountains the average direction and force of the wind during the month is found to have been south-west by south, 2.7; at the ship it was east by south, 2.8. Out of the 30 days, 23 were overcast, or cloudy, on the journey; 18 foggy. Snow fell on 12 days. At the ship the sky was overcast, or cloudy, on 26 days; fog was recorded on 7 days, and mist on 3. Snow fell on 12 days.

From the end of November to the 15th of December, when the party had reached latitude  $77^{\circ} 46' S.$ , longitude  $159^{\circ} 53' E.$ , on the homeward journey upon the plateau a mean temperature of  $3^{\circ}\cdot5$  F. was recorded, while the mean at the ship was  $23^{\circ}\cdot4$  F. The highest reading recorded by Captain SCOTT during these 15 days,  $28^{\circ}\cdot0$  F., was taken on the 15th, the wind being light from east-south-east at the time; the maximum at the ship,  $34^{\circ}\cdot0$  F., registered on the 11th, occurred in a calm. Captain SCOTT'S lowest for the 15 days,  $-27^{\circ}\cdot5$  F., was read on the 3rd, when the wind was blowing strongly from west-south-

west ; the minimum at the ship,  $7^{\circ} \cdot 6$  F., was registered on the 6th, when there was a gentle breeze from east. The average direction and force of the wind is found from Captain SCOTT'S observations to have been south-west by south, 1·7, while at the ship the prevailing direction and force was east, 2. The travellers had a clear sky on 8 days ; a cloudy, or overcast, sky on 7 ; snow on 3 days ; fog on 5. At the ship the sky was clear on 7 days ; cloudy, or overcast, on 8. Snow fell on 4 days, and the weather was foggy on 3 days.

Referring to the snowfall on the plateau in his book, 'The Voyage of the "Discovery,"' Captain SCOTT says :—"The layer—sandy layer of loose ice-crystals—grew heavier as we approached the edge of the plateau ; this was an interesting observation, for it shows that the plateau snowfall takes place in December and that it is far heavier on the edge than in the interior of the continent. Another interesting fact was observable, in this connexion, for while the light snow had been falling the wind had crept round to the south, sometimes to such an angle with our course that it was difficult to trim our sledge sail to derive any benefit from it. In the most southerly direction it brought a desirable increase of temperature, and on some days we had a fair imitation of the mild southerly blizzards which were such a conspicuous feature at the ship."

This rise of temperature with south winds and snowfall on the plateau appears to be connected with the passage eastward of low-pressure systems, having their centres over the sea, whence the milder air was drawn, and these concurrent conditions go far towards proving the truth of the surmise that the rise of temperature in the southerly gales experienced at Winter Quarters, usually associated with snow, was not due to Föhn effect, as has been generally supposed, but to the wind's origin in warmer latitudes. The southerly snow-bearing winds of the plateau and the ice barrier alike probably owed their relatively high temperature and humidity to their place of origin in lower latitudes and belonged to cyclonic wind systems that had their centres situated far out at sea.

A journey was made by Lieutenant ROYDS and party to the south-east, across the ice barrier, in November and December, 1903, which yielded interesting results for comparison with meteorological conditions at Winter Quarters. Lieutenant ROYDS left the "Discovery" on the 10th November, and between this date and the last day of the month, when he was in latitude  $79^{\circ} 20'$  S., longitude  $174^{\circ} 32'$  E., the mean of the observations for temperature is found to be  $11^{\circ} \cdot 1$  F., while that at Winter Quarters comes out as  $17^{\circ} \cdot 7$  F. The maximum temperature during these days,  $25^{\circ} \cdot 5$  F., was observed on the 11th, in a calm ; the maximum at Winter Quarters,  $34^{\circ}$  F., was registered on the 22nd, also in a calm. The minimum temperature,  $-12^{\circ} \cdot 6$  F., was observed on the 15th in a calm ; the minimum at Winter Quarters,  $-2^{\circ} \cdot 2$  F., occurred on the 19th, when there was a light breeze from south-east. The average wind direction and force, as recorded by Lieutenant ROYDS, is found to have been south-south-west, 2 ; at Winter Quarters it was east-south-east, 2·4. The sky was clear for 3 days on the barrier, for 4 days at the ship ; cloudy for 7 days on the barrier, for 11 days at the ship ; overcast for 11 days on the barrier, for 6 days at the ship. Snow fell on 4 days at the barrier, on 7 days at the ship ; fog was experienced on 5 days on the barrier, on 2 days at the ship.

Lieutenant ROYDS arrived at his most southerly and easterly position on the 28th, when he retraced his steps. From the 1st to the 10th of December, inclusive, between his position on the last day of November and that of the ship, the mean of the observations for temperature is  $16^{\circ} \cdot 4$  F., against  $21^{\circ} \cdot 8$  F., the mean temperature at the ship during the same time.

The maximum temperature of  $24^{\circ} \cdot 5$  F. was observed on the 2nd of the month, the wind being light from south-west at the time ; the maximum temperature at the ship during the same period,  $32^{\circ} \cdot 2$  F., was registered on the 10th, when there was no wind. The minimum reading taken on the barrier during these 10 days,  $-3^{\circ}$  F., is noted on the 4th, and again on the 6th, with gentle breezes from south-west ; the minimum at the ship,  $7^{\circ} \cdot 6$  F., was recorded on the 6th, with a moderate breeze from east.

The average wind direction and force, as estimated by Lieutenant ROYDS, was south-west by south, 1·7, on the barrier ; at the ship it was east by north, 2·3. During the period the sky was clear for 4 days, cloudy for 4 days, and overcast for 2 days on the barrier ; clear for 3 days, cloudy for 5 days, and overcast for 2 days at the ship. On the barrier, snow was experienced on 3 days, fog on 4 days ; while at the ship there was snow on 4 days and fog on 3.

Lieutenant ROYDS to  
south-east, Nov-  
ember and Dec-  
ember, 1903.

Scottish Expedition,  
Laurie Island,  
November to Feb-  
ruary, 1903-4.

At Laurie Island, South Orkneys, during the four months November to February, barometer observations showed a mean pressure of 29·150 inches. The highest pressure, 29·902 inches, was recorded on the 15th February; the lowest, 28·338 inches, on 14th November—a range of 1·564 inches.

The station on Laurie Island during this time had a mean temperature of 31°·4 F., the maximum temperature, 47°·5 F., occurring on the 11th February; the minimum, 14°·9 F., on the 2nd November—a range of 32°·6.

The prevailing winds appear to have been those from north-westward, but south-easterly winds were frequent, and there was a large percentage of calms. The average force of the wind, as estimated, may be given as 1·5, and there were 5 entries of gale force during the time. The weather was overcast or cloudy during the greater part of the period, the average amount of cloud being estimated at 9.

Under the hourly observations of weather, snow is noted on 572 hours, sleet on 50, rain on 241, hail on 16, fog or mist on 115.

Commenting on the wind observations during this period, Mr. MOSSMAN states that the position of the station was not a good one for such observations. The station was moved from the ship to the shore on the 1st November, 1903. The shore station was situated under the lee of a high cliff, and in this position the south-west wind of the island was deflected to south and south-east; north-west winds were not materially affected, but there was a tendency for west-north-west winds to be deflected to north-west.

“Scotia,” February,  
1904.

From the 21st to the 29th February the “Scotia” was cruising in the Weddell Sea, during which time her average geographical position is represented by the parallel of 64° S. and the meridian of 36¼° W. The mean of the barometer observations taken during this cruise, 29·030 inches, is 0·043 inch lower than the mean of similar observations taken at Laurie Island during the same time. The observations for temperature taken on board the “Scotia” give a mean of 29° F., which is 1·3 lower than the mean temperature at Laurie Island attained in the same period. The “Scotia’s” maximum reading was 31°·8 F., her minimum 25°·9 F.

Out of 216 observations of wind direction, 70 were of winds from south-westward, 53 from southward, and 38 from south-eastward. The average force of the wind was 1·7.

“Discovery,” Home-  
ward, 19th Feb-  
ruary to 3rd  
March, 1904.

The “Discovery” left McMurdo Sound, on her homeward voyage, on the 19th February, 1904, accompanied by the Relief Ships “Morning” and “Terra Nova.” From that date to the 25th, when she was in latitude 71° 2' S., longitude 169° 32' E., at noon, the four-hourly barometer observations taken on board show a mean pressure of 29·36 inches. The highest barometer reading recorded on these 7 days, 29·57 inches, relates to the 24th, and at the time of observation there was no wind; the lowest reading, 29·20 inches, noted on the 20th, was associated with a moderate breeze from west by north.

The mean of the temperature observations, taken at this period of the voyage, is 27° F.; the maximum temperature, 33° F., was noted on the 21st, a light air stirring at the time; the minimum, 22° F., on the 19th, with a fresh breeze from south-east by south, and again on the following day, with a gentle breeze from west by north.

The average direction and force of the wind is found to have been south-west by south, 1·6. The weather was noted as overcast on 1 day, and snow fell on 2 days.

During the next 7 days, while the “Discovery” was proceeding northward to a position in latitude 67° 35' S., longitude 159° 54' E., which she reached at noon on the 3rd March, observations for pressure were made which show a mean of 28·83 inches. The highest barometer reading recorded during these days, 29·47 inches, relates to the 26th February, and a light air from west-north-west was noted at the time; the lowest reading, 28·29 inches, to the 28th, and at the time of observation the wind blew strongly from south-east by south (force 7).

Of the observations for temperature, the mean is found to be 29° F. for the period; the maximum temperature, 32° F., was recorded on the 3rd March, with a light breeze from east by north, in latitude 67½° S.; the minimum, 26° F., on the 26th February, with a moderate breeze from north by west, in latitude 70½° S.

The average direction of the wind, on these days, was from between south-east and north-west, round by south, except on the 3rd March, when the average direction was north-north-east. The mean force is

found to have been 2·7. The weather was noted as "overcast" each day, and snow fell on 6 days out of the 7.

The "Scotia" was cruising in the Weddell Sea during March, 1904, between the parallels of 60° 37' S., and 74° 1' S., and the meridians of 10° 42' W. and 23° 53' W. She was in her most southerly position, in latitude 74° 1' S., longitude 22° 0' W., near the ice barrier of the land discovered by Mr. BRUCE and named by him Coat's Land, on the 7th of the month and remained in the locality until the 12th. "Scotia,"  
1904. March,

From the 7th to the 9th a hard easterly gale is said to have been experienced, accompanied by thick driving snow, and associated with a low temperature.

The hourly observations obtained during the month of March, 1904, on board the "Scotia" show a mean pressure of 29·007 inches, and at Laurie Island the mean pressure is found to have been 29·106 inches during the same time. The highest barometer reading recorded on board the "Scotia" during the month, 29·708 inches, was taken on the 12th in latitude 74° 1' S., longitude 22° 0' W., when near the ice barrier, a light air from south-south-west stirring at the time. The highest reading at Laurie Island during the month, 29·713 inches, was taken on the 11th.

The lowest reading noted on the "Scotia" during the month, 28·142 inches, was taken on the 27th, in latitude 66° 57' S., longitude 13° 13' W., with a moderate breeze from north; the lowest at Laurie Island, 28·280 inches, noted on the 8th, was associated with a light breeze from south-east. The "Scotia's" range of pressure, 1·566 inches, is therefore 0·133 inch larger than the range of pressure at Laurie Island in March, 1904.

It is worth noting that although the "Scotia's" highest barometer reading was observed when the vessel had reached her position farthest south, yet mean pressure in the Weddell Sea, between the 60th and 74th parallels of south latitude and the 10th and 28th meridians of west longitude during March, 1904, was nearly a tenth lower than the mean pressure at Laurie Island in that month. Moreover, from the 1st to the 10th of the month, when the "Scotia's" mean latitude was 72° 39' S., she recorded barometer readings which show a mean pressure of 28·789 inches, while pressure at Laurie Island was 29·075 inches, or 0·286 inch higher. Again, from the 11th to the 20th, the "Scotia," in an average latitude of 72° 22' S., recorded observations for pressure giving a mean of 29·200 inches against 29·181 inches, the mean of the barometer observations recorded at Laurie Island, which is only 0·019 inch lower than the "Scotia's" mean pressure for the period. There seems, therefore, no evidence to show that pressure decreased in the higher latitudes visited by the Scottish Expedition in the Weddell Sea; the reverse appears to have obtained.

Observations for temperature made on board the "Scotia" during the month of March, 1904, yield a mean of 24°·9 F. The maximum temperature, 32° F., was registered on the 31st, on which date at noon, G.M.T., she was in latitude 60° 37' S., longitude 12° 16' W., when the wind was blowing with fresh to strong gale force from north; the minimum, -0°·3 F., on the 12th, on which date at noon, G.M.T., she was in latitude 74° 1' S., longitude 22° 0' W., when there was no wind.

At Laurie Island the mean temperature is found to have been 32°·4 F. during the time; the maximum temperature recorded, 39°·9 F., relates to the 4th; the minimum, 20°·8 F., to the 31st.

The range of temperature exhibited by the observations of the "Scotia" in the Weddell Sea, 32°·3 F., is therefore, 13°·2 F. larger than the range shown by the observations taken at Laurie Island.

The "Scotia" had cloudy weather in the Weddell Sea; the average amount of cloud, as estimated, is found to have been 8·7.

The prevailing winds were from westward and north-westward. Out of 743 observations of wind, 142 were of those from north-westward and 136 of winds from westward. But 121 of the observations related to winds from northward, 96 to those from north-eastward, 92 from eastward, and 43 were of calms and variables. The mean force of the wind, as estimated, is found to have been 2·8.

June, 1907.



## VIII. NOTES ON THE OBSERVATIONS OF TEMPERATURE AT THE WINTER QUARTERS OF THE "DISCOVERY."

BY

DR. CHARLES CHREE, F.R.S.

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§ 1. Table I. gives the diurnal inequality of temperature in degrees Fahrenheit, as derived from the 2-hourly readings of the ordinary mercury thermometer, corrected for non-cyclic or a-periodic change. The non-cyclic element was eliminated in the usual way by the correction

$$+ \frac{1}{24} (r_0 - r_{24}) (n - 12),$$

where  $r_0$  and  $r_{24}$  are the mean readings answering to the first and second midnights of the day, while  $n$  is the hour interval since the first midnight.

TABLE I.—Diurnal Inequality of Temperature.

	Forenoon.						Afternoon.						Range.
	2.	4.	6.	8.	10.	12.	2.	4.	6.	8.	10.	12.	
	0	0	0	0	0	0	0	0	0	0	0	0	0
January . . .	-2·55	-2·27	-1·29	-0·22	+0·47	+1·10	+1·87	+2·16	+1·78	+0·81	-0·37	-1·43	4·71
February . . .	-2·00	-1·96	-0·90	-0·54	+0·19	+1·00	+1·47	+1·70	+1·14	+0·82	-0·15	-0·77	3·70
March . . .	-0·55	-1·16	-0·88	+0·10	+0·76	+0·69	+0·70	+0·43	+0·11	-0·18	+0·10	-0·15	1·92
April . . .	-0·21	+0·70	+0·87	+0·75	+0·54	-0·56	-0·30	-0·29	-0·64	-0·70	-0·23	+0·08	1·57
May . . .	-0·70	-0·35	-0·24	-0·05	+0·27	+0·68	+1·45	+1·63	+0·20	-1·08	-1·30	-0·50	2·93
June . . .	-0·83	-0·53	-0·05	-0·40	-0·58	+0·30	-0·04	+0·52	+1·23	+0·56	+0·12	-0·29	2·06
July . . .	-0·15	+1·64	+0·79	+0·37	+0·55	-0·87	+0·09	-0·67	-0·79	-0·27	-0·10	-0·60	2·51
August . . .	+0·04	+0·87	+0·85	+0·85	0·00	-0·06	-0·63	-0·65	+0·30	-0·28	-1·31	+0·08	2·18
September . . .	+0·20	+0·01	-0·95	-1·06	-0·35	+0·26	+0·82	+0·74	+0·50	-0·22	+0·33	-0·29	1·88
October . . .	-0·90	-0·99	-1·54	-0·75	+1·32	+1·44	+1·78	+1·45	+0·51	-0·15	-0·88	-1·30	3·32
November . . .	-0·96	-1·04	-0·66	-0·50	+0·60	+1·26	+2·20	+1·51	+0·90	-0·22	-1·22	-1·86	4·06
December . . .	-1·26	-1·00	-1·02	-0·83	+0·39	+0·77	+1·27	+1·20	+1·14	+0·40	-0·80	-0·24	2·53
Year . . .	-0·82	-0·51	-0·42	-0·19	+0·35	+0·50	+0·89	+0·81	+0·53	-0·04	-0·48	-0·61	1·71
Midsummer . . .	-1·59	-1·44	-0·99	-0·52	+0·49	+1·04	+1·78	+1·62	+1·27	+0·33	-0·80	-1·18	3·37
Equinox . . .	-0·37	-0·36	-0·62	-0·24	+0·57	+0·46	+0·75	+0·58	+0·12	-0·31	-0·17	-0·41	1·37
Midwinter . . .	-0·56	+0·25	+0·17	-0·03	+0·08	+0·04	+0·50	+0·49	+0·21	-0·26	-0·43	-0·46	1·06

In addition to data for single months of the year the table gives diurnal inequalities for the year as a whole, and for midwinter (May, June, July), equinox (March, April, September, October), and midsummer (November, December, January). Midwinter was limited to three months, so as to include only days in which the sun never rose, and a corresponding limitation was made to midsummer. In the three midsummer months the inequality for the month is based on only a single month's observations; in the other nine months the results are means from two years.

In the table "Range" denotes the difference between the algebraically greatest and least of the mean 2-hourly values.

§ 2. The data recorded in Table I. were employed for the calculation of Fourier coefficients. Even at a first class European station with hourly readings, two years is too short a period to furnish thoroughly representative values for Fourier coefficients, especially those for periods shorter than 12 hours. In the Antarctic the regular diurnal inequality is so small, and the irregular changes so large, that 2-hourly readings from two years seemed too slender a basis for the calculation of more than the 24- and 12-hour terms.

In Table II.  $c_1$  and  $c_2$  denote the amplitudes of the 24- and 12-hour terms, unity representing  $1^\circ$  F.;  $\alpha_1$  and  $\alpha_2$  are the corresponding phase angles. The series would run

$$c_1 \sin (t + \alpha_1) + c_2 \sin (2t + \alpha_2) + \dots,$$

$t$  being counted from (local) midnight, and 1 hour being taken as equivalent to  $15^\circ$ .

TABLE II.—Fourier Coefficients, Diurnal Inequality.

	$c_1$ .	$\alpha_1$ .	$c_2$ .	$\alpha_2$ .
January . . . . .	2.17	222	0.31	226
February . . . . .	1.68	218	0.17	195
March . . . . .	0.70	235	0.42	118
April . . . . .	0.68	357	0.19	249
May . . . . .	1.02	255	0.60	0
June . . . . .	0.64	191	0.33	255
July . . . . .	0.72	4	0.31	280
August . . . . .	0.64	357	0.42	277
September . . . . .	0.58	187	0.49	24
October . . . . .	1.55	238	0.43	53
November . . . . .	1.63	241	0.44	351
December . . . . .	1.25	219	0.16	20
Year . . . . .	0.786	235.7	0.117	335.8
Midsummer . . . . .	1.657	227.7	0.149	327.7
Equinox . . . . .	0.571	240.5	0.214	59.1
Midwinter . . . . .	0.353	261.0	0.281	312.8

In considering the results, it must be remembered that the existence of finite values for  $c_1$  and  $c_2$  is not by itself sufficient proof of the reality of a diurnal inequality. If, however, no real diurnal inequality existed, the values of  $c_1$  and  $c_2$  would most probably fluctuate in an erratic fashion from month to month, while the values of  $\alpha_1$  and  $\alpha_2$  would be quite irregular.

As compared to data for a temperate station, the phase angles for individual months in Table II. do unquestionably show large variations, and it can hardly be claimed that these variations are wholly free from quasi-accidental causes. In the case of  $\alpha_1$  the values for April, July,\* and August appear outstanding, but they agree closely amongst themselves.

Taking the seasons, the value of  $\alpha_1$  for midwinter differs sensibly from that for equinox, but the difference is in the same direction as that of equinox from midsummer, and is not so very much greater. In these three seasons the positive crest of the 24-hour wave is reached approximately at the hours 2h. 50m., 2h. 0m., and 0h. 35m. in the afternoon, being latest at midsummer. In the mean diurnal inequality for the year the crest of the 24-hour wave comes approximately at 2h. 20m. p.m.

\* The angles  $4^\circ$  and  $364^\circ$ , it should be noticed, are equivalent.

According to the table the amplitude  $e_1$  diminishes markedly as we pass from February to March, or from October to September. This we should of course expect, but it does appear a little curious that  $e_1$  shows no marked further tendency to reduction as we approach midwinter.

In the 12-hour wave the phase angle varies somewhat irregularly from month to month, but the irregularity is no greater from April to August than during the rest of the year. The times of occurrence of the positive crest (in either forenoon or afternoon) are approximately as follows:—

Year 3h. 50m., midsummer 4h. 0m., equinox 1h. 0m., midwinter 4h. 30m.

The amplitude  $e_2$  seems greatest in winter and least in summer.

The tendency in  $e_2/e_1$  to increase as we pass from summer to winter is even more marked than in temperate climates.

§ 3. In examining the data one could not but be impressed by the variability of the temperature, especially in winter. In the middle of an intensely cold period there would appear a sort of oasis of warmth. Table III. has been prepared with a view to bringing out this fact. It gives the mean temperature of the hottest and coldest days of each month, as derived from the 2-hourly readings. The days

TABLE III.—Hottest and Coldest Days.

	1902.			1903.			Mean from two years.		
	Hottest day.	Coldest day.	Difference.	Hottest day.	Coldest day.	Difference.	Hottest day.	Coldest day.	Difference.
January . . .	[ +28·6 ]	[ +12·9 ]	15·7	+30·5	+18·3	12·2	+29·6	+15·6	14·0
February . . .	+24·4	+7·6	16·8	+26·5	+1·3	25·2	+25·5	+4·5	21·0
March . . .	+22·3	-7·4	29·7	+19·6	-14·3	33·9	+21·0	-10·8	31·8
April . . .	+10·5	-23·5	34·0	-4·2	-32·7	28·5	+3·1	-28·1	31·2
May . . .	+10·8	-31·4	42·2	+5·5	-40·8	46·3	+8·1	-36·1	44·2
June . . .	+3·5	-31·4	34·9	+11·0	-32·3	43·3	+7·3	-31·8	39·1
July . . .	+10·4	-26·9	37·3	+4·1	-42·9	47·0	+7·2	-34·9	42·1
August . . .	+2·2	-36·4	38·6	+5·0	-45·7	50·7	+3·6	-41·0	44·6
September . . .	+10·1	-26·2	36·3	+6·4	-43·2	49·6	+8·2	-34·7	42·9
October . . .	+9·2	-28·0	37·2	+8·0	-26·9	34·9	+8·6	-27·5	36·1
November . . .	+19·6	+4·6	15·0	+25·6	+5·4	20·2	+22·6	+5·0	17·6
December . . .	+34·2	+8·2	26·0	+34·7	+18·0	16·7	+34·5	+13·1	21·4
Year . . . . .	+34·2	-36·4	70·6	+34·7	-45·7	80·4	+34·5	-41·0	75·5

were all taken from midnight to midnight. If one had interpreted a "day" as *any* 24 consecutive hours, the difference between the hottest and coldest "days" would, of course, have been in general slightly greater. The table gives results for each individual month from February, 1902, to January, 1904, and also the means from the two years. In November and December, 1903, and January, 1904, the number of observation hours was reduced during the night. Allowance was made for this in calculating the mean temperature, use being made of the diurnal changes of temperature observed in the corresponding midsummer months of 1902 and 1903.

April, 1903, was the only month in which no day had a mean temperature exceeding 0° F.

The difference between the hottest and coldest days of the month is much less in summer than in winter. There is not nearly so much difference between the temperatures of the hottest days of the different months as between the temperatures of the coldest days. In both years the absolutely coldest day occurred in August, and the hottest in December. The latter was the only month of the year in which the hottest day had a mean temperature in excess of the freezing-point.

§ 4. The minimum thermometer was read and reset every two hours. Each value recorded thus represents the lowest temperature during the previous two hours. Comparing each minimum reading with the mean of the two ordinary thermometer readings at the beginning and end of the 2-hour interval, one gets an idea of the variability—chiefly the a-periodic variability—of temperature throughout the day and throughout the year.

Table IV. shows the mean difference of the minimum from the arithmetic mean of adjacent ordinary readings, for each 2-hour interval, during each individual month from February, 1902, to October, 1903. Subsequent to the latter date the number of observation hours was reduced, and so the results ceased to be comparable. Table IV. shows also the mean of the twelve 2-hourly differences for each month.

TABLE IV.—Excess of Mean of Ordinary Readings at Beginning and End of 2-hour Interval over Corresponding Minimum Reading.

	Forenoon.						Afternoon.						Mean.
	0-2.	2-4.	4-6.	6-8.	8-10.	10-12.	0-2.	2-4.	4-6.	6-8.	8-10.	10-12.	
1902	o	o	o	o	o	o	o	o	o	o	o	o	o
February . . . . .	2·64	2·25	2·37	2·71	3·00	2·25	2·20	2·19	3·15	2·76	2·27	1·68	2·46
March . . . . .	1·96	1·64	1·53	2·07	2·10	2·06	2·05	1·59	1·51	2·02	1·77	2·26	1·88
April . . . . .	2·10	2·70	2·64	2·47	2·46	3·36	2·46	2·43	2·30	2·39	2·08	2·35	2·48
May . . . . .	3·08	2·53	2·51	3·25	2·21	2·57	3·34	2·83	3·02	2·70	1·92	2·95	2·74
June . . . . .	3·10	3·17	3·07	3·28	2·86	3·06	3·89	3·46	3·60	3·73	3·69	3·60	3·38
July . . . . .	2·89	2·67	3·76	2·93	3·34	2·86	2·66	3·40	2·45	2·15	2·70	3·13	2·91
August . . . . .	2·10	2·39	3·06	3·70	2·65	2·80	2·97	2·51	2·46	3·04	2·62	2·99	2·77
September . . . . .	3·14	3·22	2·89	4·01	2·70	3·15	3·12	2·35	3·25	2·81	3·37	2·67	3·06
October . . . . .	3·10	2·72	2·68	2·91	3·29	2·59	1·88	2·43	2·22	2·37	2·73	2·50	2·62
November . . . . .	1·82	2·55	2·59	1·88	2·19	1·92	1·58	1·71	1·81	2·14	2·54	2·05	2·06
December . . . . .	1·85	2·23	1·93	1·81	1·59	1·56	1·65	1·19	1·22	1·51	1·57	1·93	1·67
1903													
January . . . . .	2·80	2·34	2·28	2·13	1·93	1·59	1·27	1·24	1·25	1·49	1·65	1·97	1·83
February . . . . .	3·44	2·61	3·19	3·45	2·91	2·36	2·12	1·89	2·17	1·79	1·93	2·66	2·54
March . . . . .	3·79	3·18	3·11	3·31	2·99	2·42	2·69	2·67	2·51	3·48	3·37	3·11	3·05
April . . . . .	2·37	3·18	2·78	3·24	2·72	2·82	2·61	2·09	2·61	3·26	3·33	3·65	2·89
May . . . . .	2·55	2·59	2·35	3·03	2·83	3·01	3·47	2·74	1·85	2·01	2·77	2·21	2·62
June . . . . .	3·80	3·52	3·45	4·10	3·38	4·26	3·54	4·06	3·91	3·31	2·78	4·17	3·70
July . . . . .	4·37	4·57	4·87	4·88	3·71	4·05	3·96	5·09	3·75	3·60	3·97	4·23	4·25
August . . . . .	3·92	3·29	2·93	4·19	3·49	3·60	4·09	3·92	3·89	4·45	3·99	3·41	3·76
September . . . . .	3·29	2·74	2·05	2·99	2·42	3·57	2·68	2·80	2·50	3·64	3·82	2·22	2·89
October . . . . .	3·10	3·37	4·20	2·98	2·96	3·20	3·13	2·71	2·82	2·64	2·84	3·01	3·08

TABLE V.—Excess of Mean of Ordinary Readings at Beginning and End of 2-hour Interval over Corresponding Minimum Reading.

	Forenoon.						Afternoon.						Mean.
	0-2.	2-4.	4-6.	6-8.	8-10.	10-12.	0-2.	2-4.	4-6.	6-8.	8-10.	10-12.	
	o	o	o	o	o	o	o	o	o	o	o	o	o
January . . . . .	2·80	2·34	2·28	2·13	1·93	1·59	1·27	1·24	1·25	1·49	1·65	1·97	1·83
February . . . . .	3·04	2·43	2·78	3·08	2·95	2·31	2·16	2·04	2·66	2·28	2·10	2·17	2·50
March . . . . .	2·87	2·41	2·32	2·69	2·55	2·24	2·37	2·13	2·01	2·75	2·57	2·69	2·46
April . . . . .	2·24	2·94	2·71	2·85	2·59	3·09	2·54	2·26	2·45	2·82	2·71	3·00	2·68
May . . . . .	2·82	2·56	2·43	3·14	2·52	2·79	3·40	2·79	2·44	2·35	2·34	2·58	2·68
June . . . . .	3·45	3·35	3·26	3·69	3·12	3·71	3·72	3·76	3·75	3·52	3·24	3·93	3·54
July . . . . .	3·63	3·62	4·31	3·91	3·52	3·46	3·31	4·24	3·10	2·88	3·33	3·68	3·58
August . . . . .	3·01	2·84	3·00	3·94	3·07	3·20	3·53	3·22	3·17	3·74	3·31	3·20	3·27
September . . . . .	3·22	2·98	2·47	3·50	2·56	3·36	2·90	2·58	2·87	3·23	3·60	2·45	2·98
October . . . . .	3·10	3·05	3·44	2·95	3·12	2·90	2·51	2·57	2·52	2·50	2·78	2·76	2·85
November . . . . .	1·82	2·55	2·59	1·88	2·19	1·92	1·58	1·71	1·81	2·14	2·54	2·05	2·06
December . . . . .	1·85	2·23	1·93	1·81	1·59	1·56	1·65	1·19	1·22	1·51	1·57	1·93	1·67
Year . . . . .	2·82	2·77	2·79	2·96	2·64	2·68	2·58	2·48	2·44	2·60	2·64	2·70	2·68
Midsummer . . . . .	2·16	2·37	2·27	1·94	1·90	1·69	1·50	1·38	1·43	1·71	1·92	1·98	1·85
Equinox . . . . .	2·86	2·84	2·74	3·00	2·71	2·90	2·58	2·38	2·47	2·83	2·91	2·72	2·74
Midwinter . . . . .	3·30	3·18	3·33	3·58	3·05	3·32	3·48	3·60	3·10	2·92	2·97	3·40	3·27

Table V. contains similar data to Table IV., but gives the mean of the results from corresponding months of the two years. In Table V. we have the mean difference for the month, exhibiting a fairly

regular annual variation, with a minimum in the hottest months, December and January, and a maximum in July and June. The minimum thus occurs at a season when the periodic diurnal changes of temperature are greatest, the maximum when they are least; moreover, the maximum is fully double the minimum. The hours at which the difference between the ordinary and minimum readings is greatest and least vary a good deal from month to month, especially in winter. In summer the phenomena are fairly regular. From the three midsummer months, November to January, we get a very regular diurnal inequality in the difference, having a maximum for the 2-hour period 2 to 4 a.m., and a minimum for the period 2 to 4 p.m., the "range" amounting to 0°.99. These two periods immediately follow the hours of minimum and maximum respectively in the diurnal inequality of ordinary temperature for the season. This shows that if a diurnal inequality were formed from the minimum thermometer readings of the month, it would resemble that deduced from the ordinary thermometer; the two inequalities would show maxima and minima about the same hours, but the range from the minimum readings would be about 1° the larger.

In equinox the difference between the ordinary and minimum readings shows a less regular diurnal inequality, but there is a distinct maximum for the period 6 to 8 a.m., and a distinct minimum for the period 2 to 4 p.m. These periods again follow immediately the minimum and the maximum of the ordinary temperature. In these two seasons, then, the difference between the ordinary and minimum readings has a diurnal inequality resembling that of ordinary temperature, but having a smaller range. In the case of the ordinary temperature the diurnal inequality for midwinter differed from that for the two other seasons in showing very distinctly two maxima, the larger at from 2 to 4 p.m., the smaller from 4 to 6 a.m., with intervening minima. It is thus with considerable interest that one turns to the diurnal inequality obtained in Table V. for midwinter. Clearly a marked double period in that inequality would be evidence in favour of the reality of the diurnal inequality of ordinary temperature. On examining the figures assigned to midwinter in Table V. one sees traces of apparently *three* maxima; the two largest and best defined answer to the periods 2 to 4 p.m. and 6 to 8 a.m.

§ 5. The twelve 2-hourly readings of the minimum thermometer supply information as to the time at which the lowest temperature for the day is reached. Supposing that in a month of 30 days the lowest temperature occurred on 6 days between 0 and 2 a.m., then the percentage of occurrence of the minimum in this 2-hour period for the month in question is  $(6/30) \times 100$ , or 20.0.

Table VI. gives the percentage occurrence of the minimum throughout the 24 hours for each month of the year, for the year as a whole, and for three seasons made up as explained in describing Table I. The results, except in November, December, and January, are means from two years.

TABLE VI.—Percentage Occurrence of Minimum for the Day.

	Forenoon.						Afternoon.					
	0-2.	2-4.	4-6.	6-8.	8-10.	10-12.	0-2.	2-4.	4-6.	6-8.	8-10.	10-12.
January . . . . .	25.8	17.7	8.1	17.7	1.6	0.0	0.0	0.0	0.0	1.1	2.7	25.3
February . . . . .	26.0	11.2	9.0	7.0	9.0	7.5	2.6	1.8	3.5	3.1	3.7	15.6
March . . . . .	12.1	8.1	6.5	12.6	0.8	0.8	5.1	1.6	2.1	8.9	16.7	24.7
April . . . . .	17.5	10.9	1.7	1.6	5.0	8.3	5.8	5.0	13.3	6.7	12.5	11.7
May . . . . .	20.2	8.2	6.3	4.1	0.8	4.6	6.8	5.6	5.6	6.5	18.8	12.5
June . . . . .	11.4	12.3	0.9	5.0	3.9	11.6	11.6	9.2	5.9	6.6	5.8	15.8
July . . . . .	23.4	4.9	7.2	1.6	4.0	3.3	11.3	4.9	5.6	4.0	4.0	25.8
August . . . . .	10.5	12.1	1.6	9.7	7.3	4.5	4.8	4.8	8.1	10.5	7.0	19.1
September . . . . .	16.7	4.2	3.8	7.9	3.3	5.0	6.7	5.0	11.7	9.1	12.9	13.7
October . . . . .	21.0	14.5	11.3	3.3	4.8	4.0	2.5	1.6	1.6	1.6	10.5	23.3
November . . . . .	15.0	21.7	18.3	6.7	5.0	6.7	0.0	0.0	0.0	0.0	6.7	20.0
December . . . . .	23.4	14.5	15.3	11.3	7.3	0.8	3.2	0.0	3.2	0.0	0.0	21.0
Year . . . . .	18.6	11.7	7.5	7.4	4.4	4.8	5.0	3.3	5.1	4.8	8.4	19.0
Midsummer . . . . .	21.4	18.0	13.9	11.9	4.6	2.5	1.1	0.0	1.1	0.4	3.1	22.1
Equinox . . . . .	16.8	9.4	5.8	6.3	3.5	4.5	5.0	3.3	7.2	6.6	13.2	18.4
Midwinter . . . . .	18.3	8.5	4.8	3.5	2.9	6.5	9.9	6.5	5.7	5.7	9.6	18.1

Taking the year as a whole, we see a marked maximum frequency of occurrence between 10 p.m. and 2 a.m., the frequency being very nearly the same for the two hours before and the two hours after midnight. There is a slight indication of a double period in the frequency, with a secondary maximum near noon, the principal minimum occurring between 2 and 4 p.m. The number of occurrences of minimum in the 12 hours ending at 8 a.m. bears to the number in the 12 hours ending 8 p.m. the ratio of 8 : 3.

In the three midsummer months as a whole the occurrences between 8 a.m. and 8 p.m. form only 10 per cent. of the total number, and in no single occasion did the minimum occur between 2 and 4 p.m.

In the equinoctial season the occurrences between 8 a.m. and 8 p.m. rise to 30 per cent. of the whole, and a minimum appears between 8 and 10 a.m., which differs but little from the principal minimum between 2 and 4 p.m. While at midsummer only 28 per cent. of the minima occur in the afternoon, in the equinoctial season the afternoon occurrences are slightly more numerous than the forenoon occurrences.

Coming to midwinter, we find a most interesting and well-marked diurnal inequality in the frequency of occurrences. As at other seasons, the frequency of incidence between 10 p.m. and 2 a.m. is notably in excess of that at other hours. But there is a well marked secondary maximum of frequency from noon to 2 p.m., and the forenoon minimum is unmistakably the principal one of the day. Each of the midwinter months shows the double period very clearly. The phenomenon is perhaps the strongest evidence yet advanced that temperature in the Antarctic night is affected by decided diurnal and semi-diurnal influences.

§ 6. The maximum thermometer being read and reset only twice a day—at 8 a.m. and 8 p.m.—information as to maximum temperatures is much less extensive than that as to minimum temperatures, and it is affected in addition by several uncertainties. If the highest temperature of a particular day, say day  $n$ , occurred between 8 a.m. and 8 p.m., then it is given by the corresponding 8 p.m. reading of the maximum thermometer; but if it occurred before 8 a.m. or after 8 p.m. it may not be recorded at all. If

TABLE VII.—Means of Daily Maxima and Minima and of Daily Ranges.

	1902.			1903.			Two Years.		
	Maxima.	Minima.	Ranges.	Maxima.	Minima.	Ranges.	Maxima.	Minima.	Ranges.
	o	o	o	o	o	o	o	o	o
January . . . . .	[+29·2]	[+16·8]	[12·4]	+31·9	+18·9	13·0	+30·5	+17·9	12·6
February . . . . .	+21·4	+ 8·7	12·7	+17·8	+ 3·3	14·5	+19·6	+ 6·0	13·6
March . . . . .	+13·1	+ 2·3	10·8	+ 5·6	- 9·1	14·7	+ 9·3	- 3·4	12·7
April . . . . .	- 0·5	-14·7	14·2	- 9·0	-27·4	18·4	- 4·7	-21·0	16·3
May . . . . .	- 7·0	-23·0	16·0	- 7·7	-27·1	19·4	- 7·3	-25·0	17·7
June . . . . .	- 7·6	-26·3	18·7	- 4·4	-27·0	22·6	- 6·0	-26·7	20·7
July . . . . .	- 2·8	-17·5	14·7	-10·8	-34·8	24·0	- 6·8	-26·2	19·4
August . . . . .	- 9·9	-24·9	15·0	- 6·4	-30·8	24·4	- 8·2	-27·9	19·7
September . . . . .	- 4·6	-22·1	17·5	-10·3	-29·3	19·0	- 7·5	-25·7	18·2
October . . . . .	- 2·4	-17·4	15·0	- 0·1	-16·4	16·3	- 1·2	-16·9	15·7
November . . . . .	+17·7	+ 5·8	11·9	+21·1	+ 6·9	14·2	+19·4	+ 6·3	13·1
December . . . . .	+29·4	+17·5	11·9	+31·2	+19·2	12·0	+30·3	+18·3	12·0
Arithmetic Means—									
Year . . . . .	—	—	—	+ 4·9	-12·8	17·7	+ 5·6	-10·4	16·0
Midsummer . . . . .	—	—	—	+28·1	+15·0	13·1	+26·7	+14·2	12·5
Equinox . . . . .	+ 1·4	-13·0	14·4	- 3·5	-20·6	17·1	- 1·0	-16·7	15·7
Midwinter . . . . .	- 5·8	-22·3	16·5	- 7·6	-29·6	22·0	- 6·7	-26·0	19·3

it occurred before 8 a.m. it will be given by the 8 a.m. reading only if it exceeds the highest temperature occurring between 8 p.m. and midnight on day  $n-1$ . If it occurred after 8 p.m. it will be given by the 8 a.m. reading on day  $n+1$  only if no higher temperature occurred on that day before 8 a.m. One can be absolutely certain of having the true maximum reading for day  $n$  only when the 8 p.m. reading on that day exceeds the 8 a.m. readings both on day  $n$  and day  $n+1$ . In summer this was generally the

case, but in a great many days, especially in winter, it was otherwise. As the 8 a.m. reading applied to a period of which 8 hours belonged to day  $n$ , as against 4 belonging to day  $n-1$ , the reading was assigned to day  $n$  when the general trend of temperature was not sufficiently definite to settle the question. When temperature showed a general trend downwards after 8 p.m. on day  $n$ , the 8 a.m. reading on day  $n+1$  was assigned to day  $n$ ; in such a case, however, the maximum at 8 p.m. was practically certain to be the real maximum for day  $n$ . When temperature showed a general trend upwards after 8 p.m. on day  $n$ , the 8 a.m. reading next morning was assigned to day  $n+1$ , and the ordinary reading at 10 p.m. or midnight on day  $n$ , if greater than the 8 p.m. maximum, was accepted as the maximum for day  $n$ . In March, 1902, maximum thermometer readings were lacking in about half the days of the month; on these days the highest of the ordinary thermometer readings was taken as the maximum. There were very few other occasions throughout the two years when maximum readings were lacking, and the days when this occurred were left out of consideration.

When ordinary thermometer readings were accepted as maxima the consequence was, no doubt, as a rule, an underestimate of the maximum, and thence of the daily range (maximum less minimum); and the figures for March, 1902, probably are slightly affected by this cause. With the exception of this one month, whilst individual daily ranges were doubtless occasionally in appreciable error, there can be but little doubt of the substantial accuracy of the mean data given in Table VII.

It shows for each month of the two years the means of the daily maxima and of the daily minima, and the mean of the daily ranges (maximum less minimum).

Mean results are also given for the two years combined.

The seasons are taken as in the previous tables.

Data are omitted for the whole year and for midsummer in 1902, because January results were lacking for that year; those entered in brackets really belong to 1904.

Even at a temperate station the daily range from the maximum and minimum thermometers is considerably in excess of that derived from the highest and lowest of the hourly readings, and increasing the interval between readings from one hour to two naturally reduces the range. The differences, however, between the ranges in Tables VII. and I. are on an enormously enhanced scale as compared to the corresponding differences in a temperate climate.

The five months November to March—in all of which the mean maximum temperature for the day exceeds  $0^{\circ}$  F.—show ranges which differ comparatively little amongst themselves, but which are considerably less than those in the other months. On the average of the two years the range is largest in June, and only slightly less in July and August.

§ 7. In some places the mean of the daily maximum and minimum is on the average of the days of a month, a very close approach to the mean temperature of the 24 hours. Table VIII. gives, for each

TABLE VIII.

	Means from daily maxima and minima.		Excess of mean from twelve 2-hourly readings over mean from daily maxima and minima.		
	1902.	1903.	1902.	1903.	Two years.
	°	°	°	°	°
January*	[+23·0]	+25·4	[-1·0]	0·7	-0·2
February	+15·1	+10·5	0·8	0·8	+0·8
March	+7·7	-1·8	0·4	1·0	+0·7
April	-7·6	-18·2	0·6	1·3	+0·9
May	-15·0	-17·4	2·4	1·4	+1·9
June	-17·0	-15·7	1·0	1·9	+1·5
July	-10·2	-22·8	1·4	1·7	+1·5
August	-17·4	-18·6	0·9	2·1	+1·5
September	-13·3	-19·8	1·3	1·2	+1·2
October	-9·9	-8·2	1·4	1·4	+1·4
November	+11·7	+14·0	0·3	1·9	+1·1
December	+23·4	+25·2	-0·3	0·7	+0·2

\* The values entered under January, 1902, belong really to January, 1904.

month of the two years, the mean derived from the daily maxima and minima, and the amount by which it falls short of the corresponding mean derived from the 2-hourly readings. In two months, December, 1902, and January, 1904, the mean from the 2-hourly readings was the smaller. In the latter month the night readings were curtailed, and allowance had to be made for the fact, so that the result is exposed to greater uncertainty than in the other months. It is clear, however, from the table that, while the mean from the 2-hourly readings is in general decidedly the higher, its excess is decidedly less in the summer, and even in the equinoctial months, than in winter. Taking the two years, the mean from the daily maximum and minimum is on the average only  $1^{\circ}$  less than that from the 2-hourly readings. It would, in fact, form a not at all bad approximation to the true mean temperature, though somewhat over-estimating the cold of winter.

§ 8. The amplitude of the daily range as derived from the daily maximum and minimum is a quantity varying immensely from day to day. Table IX. is intended to give an idea of the extent of this variation. It records the greatest and the least daily range actually observed during each month of the two years.

TABLE IX.—Greatest and Least Daily Ranges.

	Greatest daily range.		Least daily range.	
	1902.	1903.	1902.	1903.
	0	0	0	0
January* . . . . .	[22·3]	26·0	[6·1]	6·5
February . . . . .	24·2	22·5	8·5	8·0
March . . . . .	21·3	29·8	4·8	9·0
April . . . . .	27·5	30·1	5·2	6·0
May . . . . .	30·0	40·0	5·0	7·1
June . . . . .	41·0	43·0	8·4	12·5
July . . . . .	27·0	41·0	5·2	10·0
August . . . . .	29·5	41·0	7·7	9·2
September . . . . .	44·5	30·8	5·2	11·0
October . . . . .	22·8	33·2	8·4	7·3
November . . . . .	21·5	22·3	4·7	6·3
December . . . . .	21·0	21·0	3·8	5·4

\* The values entered under January, 1902, belong really to January, 1904.

Very small ranges are occasionally met with at all seasons. On the whole, the smallest ranges of the year are encountered in the summer months. The largest ranges in winter are very considerably larger than those in summer. In five separate months there were daily ranges exceeding  $40^{\circ}$  F.

§ 9. Table X. does for individual hours what Table III. does for individual days. It gives the highest maximum and the lowest minimum readings recorded in each individual month and the difference between the two, which constitutes the extreme range of temperature for the month in question.

The highest temperature recorded throughout the month varied from  $+42^{\circ}\cdot 0$  in December, 1903, to  $+2^{\circ}\cdot 0$  in April, 1903, a range of  $40^{\circ}$ , there being no single month in which the temperature failed to reach  $0^{\circ}$  F.

The lowest temperature of the month varied from  $-58^{\circ}\cdot 5$  in September, 1903, to  $+9^{\circ}\cdot 0$  in January, 1903, the range being  $67^{\circ}\cdot 5$ , and so 69 per cent. larger than that of the highest temperature of the month.

The monthly range, *i.e.*, the difference between the highest and the lowest temperature of the month, shows a fairly regular annual variation, and is notably least at midsummer.

§ 10. The particular hour at which the highest maximum or the lowest minimum of a particular month occurs must be regarded as largely a matter of accident, and it cannot throw any certain light on the question whether there is a decided tendency for exceptionally high or exceptionally low temperatures to occur at one hour of the day rather than another.

To throw further light on this question, means were derived from the six lowest minima readings corresponding to each of the 2-hour intervals of which the day was composed. If in any particular month

there is a decided tendency for exceptionally low temperatures to occur between, say, 0 a.m. and 2 a.m., then we may reasonably expect a lower mean value for the six lowest readings during this interval than for the corresponding quantities for the other eleven 2-hour intervals. Table XI. shows the results thus obtained for the twelve months, the year, and the usual seasons; the data are means from two years.

TABLE X.—Extreme Monthly Temperatures and Monthly Ranges.

	Extreme temperatures of month.				Monthly range.		
	Highest.		Lowest.		1902.	1903.	Mean from two years.
	1902.	1903.	1902.	1903.			
	°	°	°	°	°	°	°
January*	[+38·8]	+39·0	[+4·0]	+9·0	[34·8]	30·0	32·4
February.	+29·2	+32·2	-0·8	-9·5	30·0	41·7	35·9
March . . . . .	+27·5	+25·5	-13·2	-20·0	40·7	45·5	43·1
April . . . . .	+19·5	+2·0	-31·6	-42·0	51·1	44·0	47·5
May . . . . .	+17·0	+9·2	-39·5	-51·2	56·5	60·4	58·5
June . . . . .	+13·0	+17·0	-47·0	-47·0	60·0	64·0	62·0
July . . . . .	+15·0	+12·0	-38·0	-54·2	53·0	66·2	59·6
August . . . . .	+6·0	+11·8	-50·5	-53·2	56·5	65·0	60·8
September . . . . .	+15·0	+13·2	-43·5	-58·5	58·5	71·7	65·1
October . . . . .	+11·8	+12·0	-40·8	-42·8	52·6	54·8	53·7
November . . . . .	+27·8	+34·0	0·0	-5·5	27·8	39·5	33·7
December . . . . .	+39·0	+42·0	+4·2	+7·6	34·8	34·4	34·6

\* The values entered under January, 1902, belong really to January, 1904.

TABLE XI.—Means from Six Lowest Minima at each 2-hour Interval.†

	Forenoon.						Afternoon.					
	0-2.	2-4.	4-6.	6-8.	8-10.	10-12.	0-2.	2-4.	4-6.	6-8.	8-10.	10-12.
	°	°	°	°	°	°	°	°	°	°	°	°
January . . . . .	+13·9	13·7	15·4	15·1	18·0	19·5	20·8	21·7	21·9	21·0	18·7	+16·0
February . . . . .	+1·9	2·3	1·1	1·4	2·5	3·8	4·2	4·7	3·7	4·5	4·2	+3·4
March . . . . .	-11·1	10·6	10·9	11·1	10·4	9·9	9·3	9·9	9·8	10·7	11·9	-11·1
April . . . . .	-28·2	28·2	27·2	28·3	27·7	29·5	29·7	28·0	29·3	29·0	29·4	-28·8
May . . . . .	-31·7	34·3	34·5	34·4	32·4	32·0	34·5	31·8	33·6	35·3	35·1	-34·9
June . . . . .	-35·6	35·4	33·9	34·8	33·5	35·7	36·1	34·8	34·1	33·5	35·5	-35·9
July . . . . .	-34·6	34·4	33·6	33·6	33·0	34·2	34·3	35·3	34·5	33·4	33·9	-35·4
August . . . . .	-34·6	35·4	36·2	39·0	38·5	38·2	38·9	37·0	38·0	38·0	38·6	-36·3
September . . . . .	-33·8	34·2	34·6	39·4	37·6	36·1	34·5	34·1	33·5	33·9	35·0	-33·3
October . . . . .	-28·0	26·6	28·1	27·4	24·7	22·0	22·2	23·0	22·8	23·5	26·2	-27·9
November . . . . .	+3·6	3·9	4·0	3·4	3·9	5·1	6·3	6·4	6·1	4·9	4·0	+3·4
December . . . . .	+10·1	9·7	10·2	9·8	10·9	12·2	11·8	13·1	13·2	12·7	11·6	+11·2
Year . . . . .	-17·6	17·5	17·4	18·2	16·9	16·5	16·4	15·7	15·9	16·2	17·3	-17·5
Midsummer . . . . .	+9·2	9·1	9·9	9·4	10·9	12·3	13·0	13·7	13·7	12·9	11·4	+10·2
Equinox . . . . .	-25·3	24·9	25·2	26·5	25·1	24·4	23·9	23·7	23·8	24·3	25·6	-25·3
Midwinter . . . . .	-35·0	34·7	34·0	34·3	33·0	34·3	35·0	34·0	34·1	34·1	34·8	-35·4

During the six months October to March, the data in Table XI. show a very distinct diurnal inequality, which resembles on the whole the inequality of the ordinary temperatures in these months. The lowest minima are met with on the whole at or near the hours when the regular diurnal inequality of temperature has its minima.

For midsummer, Table XI. shows a nearly steady rise from a minimum at 2 to 4 a.m. to a maximum at

† All the temperatures in any one line have the signs shown in the first and last columns.

4 p.m., the range being  $4^{\circ}6$ . In the corresponding inequality of ordinary temperature in Table I. the minimum and maximum appear at 2 a.m. and 2 p.m. respectively, the range being  $3^{\circ}4$ .

At equinox, the most prominent feature in Table XI., as in Table I., is the maximum in the early afternoon. The lowest value for the day occurs at 6 to 8 a.m. in Table XI. as compared to 6 a.m. in Table I.; in both tables the values from 8 p.m. to 8 a.m. are below the mean. The range is  $2^{\circ}8$  in Table XI. as against  $1^{\circ}4$  in Table I.

For midwinter, Tables XI. and I. both show lowest temperatures at or near midnight, and both show two fairly distinct maxima, one in the forenoon, the other in the afternoon. The difference between the extreme values is  $2^{\circ}4$  in Table XI. as against  $1^{\circ}1$  in Table I.

Thus, on the whole, exceptionally low minima follow much the same law as ordinary minima. Both show a diurnal inequality resembling that for ordinary temperature, but possessing in most months a decidedly larger range. On the average the diurnal range is larger for the extreme than for the ordinary minima.

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## IX. NOTES ON OPEN AIR TEMPERATURE, SCREEN TEMPERATURE, AND ON TERRESTRIAL RADIATION.

BY

W. H. DINES, F.R.S.

REGULAR 2-hour observations were commenced on February 9, 1902, and were continued until February 15, 1904. A few observations are missing between February and March, 1902, and only a few readings of the wet bulb were taken between May 6 and September 10, 1902. From this date until November, 1903, the observations are practically complete.

On November 9, 1903, the night observations from 10 p.m. to 6 a.m. inclusive ceased, and after the middle of January, 1904, four observations only—at 8 a.m., noon, 4 p.m., and 8 p.m.—were taken.

The information with regard to the thermometers is not as full as might be desired, and there are some points which have required investigation. The thermometers were mercury ones, and on several occasions the entry "Frozen" occurs. Many times the temperature given is below the freezing point of mercury; on some of these occasions the note "spirit thermometer" occurs, but temperatures of  $-45^{\circ}$  F. and even lower are frequent. In some of them the wet bulb is stated to be frozen, but it is not uncommon to find both wet and dry bulb thermometers agreeing well, and both below  $-40^{\circ}$  F. This question has been investigated at the National Physical Laboratory at Bushy (see p. 15), and it has been proved that mercury may remain unfrozen and contract at temperatures considerably below its freezing point. The whole question of these temperatures and of the corrections of the thermometer has been investigated by Dr. CHREE, and I have accepted the temperatures with which he has supplied me, feeling quite certain, in view of his experience and knowledge of the subject, that it would be superfluous for me to enter into any further investigation.

The period spent in the Antarctic region was just two years, and the annual temperature curve in fig. 1 is obtained from the daily observations. The 2-hourly observations were not maintained during

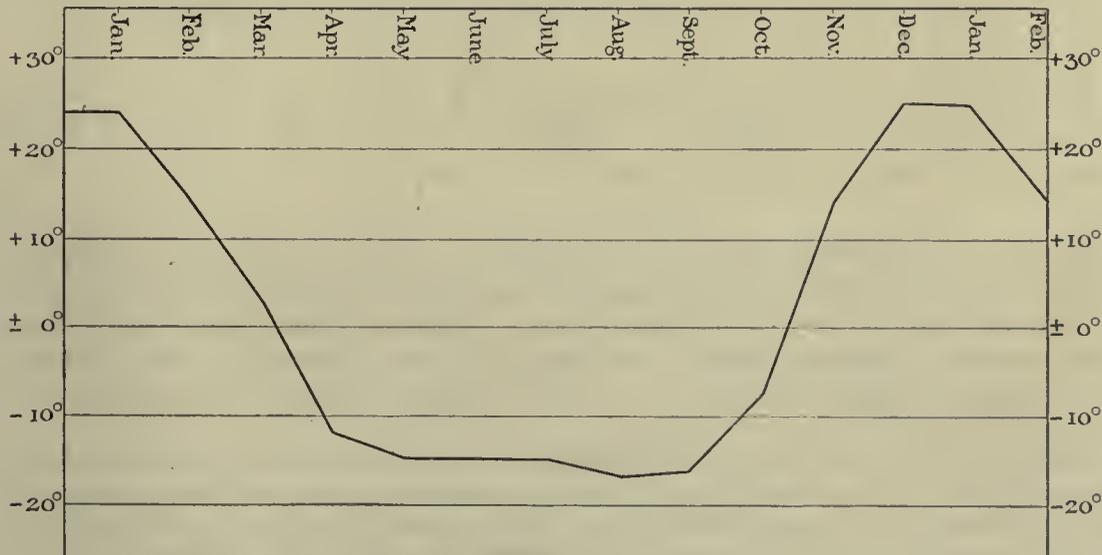


Fig. 1.

the last three months, the officers and crew being fully occupied with the more important work of extricating the ship from the ice. Two years are not enough to give a reliable curve of the monthly temperatures, and we have no knowledge whether the years in question were mild, average, or severe.

The results are shown in tabular form in Table I. Columns A and B give the mean of the 2-hourly observations of the dry and wet bulbs. Column C gives the mean of the warmest day, and column D of the coldest day in each month.

TABLE I.

	A.	B.	C.		D.		
1902	°	°	°	Day.	°	Day.	
February . . .	15·8	14·7	23·8	28th	6·9	22nd	From 9th.
March . . . .	7·7	—	22·1	1st	-7·2	31st	
April . . . .	-7·1	-7·2	10·8	11th	-23·1	30th	
May . . . . .	-12·9	—	11·3	30th	-31·4	16th	
June . . . . .	-16·0	—	3·5	28th	-28·1	24th	
July . . . . .	-8·5	—	10·4	18th	-26·8	14th	
August . . . .	-16·6	—	2·1	21st	-36·7	7th	
September . .	-12·0	—	10·5	28th	-26·4	18th	
October . . .	-8·5	-8·6	9·3	31st	-26·2	10th	
November . .	12·0	11·3	19·6	24th	6·2	19th	
December . .	23·1	21·6	34·2	9th	7·7	2nd	
1903							
January . . .	26·1	24·6	30·3	7th	18·1	20th	
February . .	11·2	10·0	26·6	3rd	1·3	14th	
March . . . .	-0·8	-1·4	19·1	5th	-9·9	22nd	
April . . . .	-16·9	-17·0	-4·5	15th	-32·6	27th	
May . . . . .	-16·3	—	0·0	18th	*	15th	
June . . . . .	-13·8	-13·9	11·1	11th	-32·1	23rd	
July . . . . .	-21·0	-21·3	3·6	24th	-38·0	30th	
August . . . .	-16·5	-16·7	2·8	11th	*	6th	
September . .	-18·7	—	6·4	26th	-40·0	20th	
October . . .	-6·8	-7·1	7·8	27th	-23·2	3rd	
November . .	15·0	13·9	26·2	28th	4·9	5th	
December . .	26·2	24·3	35·2	27th	18·4	5th and 18th	
1904							
January . . .	22·2	20·9	30·3	4th	14·2	22nd	
February . .	20·6	19·2	23·6	7th	15·9	2nd	To 15th.

\* Below the freezing point of mercury.

## MEAN for each Month.

January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
24·1	14·7	3·5	-12·0	-14·6	-14·9	-14·8	-16·5	-15·4	-7·7	13·5	24·6	-1·3

The low temperature of the summer and the uniform temperature from April to September are noteworthy. No great differences of the corresponding months of each year are shown, excepting in July, which had -21·0 in 1903, and -8·5 in 1902, but even this amount of difference (12·5) may be surpassed by two consecutive Januaries in England. Two years is too short a period to give a reliable average, but the consistency of the figures throughout leads to the conclusion that the mean of the whole period (-1·3) is not far from the right value.

It is curious that in each case December should have the only days showing temperatures above the freezing point and be the warmest month. It would be more natural to find the highest temperature in January or February, and possibly a longer series of observations might put January first. But the figures all show that solar radiation has the most important influence on the temperature. Indeed, the shape of the annual temperature curve is very striking; the rise from September to midsummer, and the fall back to April, is what might be expected, but the uniform temperature of the six months from April to September is quite exceptional.

In the latitude in which the ship was ice-bound for two years, namely 77° 51', the sun would be almost

without direct influence during that period, but in similar latitudes in the Arctic zone it is usual to find the lowest temperatures most decidedly at the end of the long winter.

The observations of the "Discovery" show a fall of temperature to  $-12^{\circ}$  in April, which should hardly be called a winter month, a mean through the winter of about  $-15^{\circ}$ . September, the month about equally distant on the other side from midwinter, has  $-15.4^{\circ}$ . If these results had been obtained from one year's observations only, it would be reasonable to think that the autumn had been unusually severe and the spring unusually mild; but the same peculiarity is observed in both years, and it is further borne out by the mildness of June when compared with July.

The low mean temperature of the summer is also strange, and very difficult to explain. In lower southern latitudes, in the neighbourhood of Cape Horn, for example, the summer is very cold compared with that of places with the same northern latitude, but in this case the explanation is simple. The annual change of temperature over the great oceans is small on account of the large thermal capacity of the water and the constant mixing together of the surface layers, and a small annual change produces a cool summer and a warm winter, as is notably the case in England.

The insolation in the Antarctic in summer is greater than the insolation on any other part of the earth at any other time, this being the date at which the sun is nearest to the earth, and if temperature depended only on solar radiation we should have the highest terrestrial temperatures occurring in December in the neighbourhood of the South Pole. A large mass of ice prevents the temperature from rising much above the freezing point, because the air, being nearly pervious to radiation, takes its temperature chiefly from the surface with which it is in contact, and if that surface be ice or snow it cannot be above  $32^{\circ}$  F. But ice, except in its power of evaporation, is in no way more efficacious than any other rock in checking a rise of temperature up to its own melting point. Why then does not the mean summer temperature at least reach the freezing point, as indeed it does in the North Polar regions, where the insolation is less intense? During the two years that the "Discovery" was in the Antarctic circle there were only five days with a mean temperature above the freezing point; the mean temperature of the warmest month was  $26.2^{\circ}$ , and the mean temperature of what in other localities would be called the six summer months (three each year), was  $20.7^{\circ}$ . In further proof of the lowness of the summer temperature, the fact that no rain ever fell may be cited, the precipitation always taking the form of snow.

These low summer temperatures in the Antarctic region are fully supported by the results of the Swedish expedition under Dr. OTTO NORDENSKJÖLD, and that of the "Southern Cross" under BORCHGREVINK.

The following figures are taken from the 'Meteorologische Zeitschrift' for July, 1905, p. 320:—

January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
"Belgica," $70^{\circ} \cdot 6$ S., $88^{\circ} \cdot 6$ W.												
$29^{\circ} \cdot 8$	$30^{\circ} \cdot 0$	$16^{\circ} \cdot 0$	$11^{\circ} \cdot 2$	$20^{\circ} \cdot 3$	$3^{\circ} \cdot 8$	$-11^{\circ} \cdot 3$	$11^{\circ} \cdot 3$	$-1^{\circ} \cdot 5$	$18^{\circ} \cdot 0$	$19^{\circ} \cdot 5$	$27^{\circ} \cdot 8$	$14^{\circ} \cdot 3$
"Southern Cross," $71^{\circ} \cdot 3$ S., $170^{\circ} \cdot 1$ E.												
$33^{\circ} \cdot 2$	—	$17^{\circ} \cdot 3$	$10^{\circ} \cdot 0$	$-3^{\circ} \cdot 9$	$-12^{\circ} \cdot 8$	$-9^{\circ} \cdot 0$	$-13^{\circ} \cdot 5$	$-12^{\circ} \cdot 5$	$-1^{\circ} \cdot 7$	$18^{\circ} \cdot 0$	$31^{\circ} \cdot 6$	$7^{\circ} \cdot 1$

The Arctic temperatures experienced by the "Fram" in a far higher latitude are shown below:—

January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
"Fram," $82^{\circ} \cdot 40'$ N.												
$-32^{\circ} \cdot 0$	$-32^{\circ} \cdot 4$	$-22^{\circ} \cdot 5$	$-9^{\circ} \cdot 0$	$12^{\circ} \cdot 0$	$28^{\circ} \cdot 8$	$32^{\circ} \cdot 9$	$29^{\circ} \cdot 0$	$15^{\circ} \cdot 8$	$-7^{\circ} \cdot 0$	$-19^{\circ} \cdot 6$	$-26^{\circ} \cdot 0$	$-2^{\circ} \cdot 5$

'Norwegian North Polar Expedition, 1893-96,' vol. vi.

The following figures taken from 'Davis' Elementary Meteorology' are of interest in this connection. Taking the amount of heat received from the sun in one day at the equinox on the equator as the unit, the amount received on December 21 at the South Pole is 1.284. This is greater than the amount received at the North Pole on June 21st by 0.082, owing to the greater proximity of the sun. So far as we know, in the North Polar regions the summer temperature rises to the freezing point, and a reason why it should not rise much beyond it has already been given, but in the Antarctic the summer temperature is far below freezing. The reason must, I think, be sought for in the dryness of the air. The question is discussed elsewhere; it will suffice here to say that the wet bulb readings indicate a relative humidity that may compare favourably with some of the driest regions of the earth. There can, I think, be no doubt that the presence of carbonic acid and aqueous vapour in the air tends to raise the mean annual temperature of the earth. Indeed, a change in the amount of carbonic acid has been suggested as a likely cause of the large alternations of temperature that geology shows to have occurred. This question has been very fully discussed by Dr. NILS EKHOLM ('Quarterly Journal of the Royal Meteorological Society,' Vol. XXVII, p. 1). The amount of carbonic acid is presumably much the same in all parts of the earth that are not near some large city, but the Antarctic regions probably possess the minimum of aqueous vapour. There would, therefore, be very little check to the free radiation of dark heat into space.

It would almost appear as though this must be the cause of the low temperature, for one cannot suppose that there is any colder part in the neighbourhood from which cold winds can blow, the whole region, except where there is open water, being subject to the same conditions, namely,—a snow-covered surface and intense insolation. Neither can it be supposed that the sun has no time to warm the surface of the snow and ice up to the freezing point after the winter's cold, since the months of March to April on the one side and October to November on the other show changes of nearly 20° F.

There appears to be no source, so to speak, from which the cold of July can be supplied, save that of radiation from the snow, but if the radiation of heat into space is active, the solar radiation should be equally so, and the more capable of raising the temperature to 32° F. and then supplying heat to melt the ice. That the solar insolation is extremely powerful was proved by the fact noted by the members of the expedition, that as soon as a slope of rock became bare, the sun melted the ice and snow near, and a pond was formed below it. This proves what was well known before, that snow is capable of reflecting the solar heat, but unless it be an exception to the common rule, which is hardly credible, this power of reflection implies a low power of radiation. The thermal capacity of the atmosphere as a whole is small, being equivalent to a depth of about 8 feet of water, but it is useless to look for an explanation in this direction, because similar conditions hold in the Arctic regions and do not produce the same effect. There is one other point which must be mentioned—not that it is a possible source of cold, but because it has sometimes in the past been fallaciously put forward as such—and that is the presence of a current of air descending from the upper and colder layers of the atmosphere. Such a current must, of course, in virtue of its dynamic warming as it experiences a higher pressure, be a source of heat and not of cold, and were it not that old fallacies die hard it would not be necessary to refer to it.

Whatever the cause of this low summer temperature may be, the fact is interesting and important, since it throws some light on the question of the glacial epochs of the northern hemisphere, and shows that an intense solar insolation may be so modified by other circumstances that it does not produce the effects which one would naturally expect.

From the fact that for long periods in each winter the mercury never rose much above 0° F., and yet winds from an equatorial point were frequent, it may be inferred that there was very little open water in the neighbourhood. The absence of fogs leads to the same conclusion. Lower mean temperatures from July to September might therefore have been expected, since in the northern hemisphere, in much lower latitudes, temperatures of -30° F. and less are not uncommon, and the mean temperature of the southern hemisphere, as a whole, is less than that of the northern. Perhaps an explanation may be sought for in the more active circulation of the southern hemisphere. As soon as the sun has nearly reached the horizon, the radiation of heat into space, intensified by the prevailing dryness, has full play, and since snow is a bad conductor of heat, the only source of heat is the supply by convection through the atmosphere. Owing to the absence of land, the temperature in the belt

between 40° and 60° S. Lat. is certainly higher in the winter than in the corresponding part of the northern hemisphere, and this may tend to prevent the occurrence of such low temperatures at the South as at the North Pole. Possibly, however, a greater supply of heat from the tropics may be carried by the upper currents to the south, but we are as yet so entirely ignorant of the movement of the layers of air which lie above the cirrus, that is to say roughly of half the atmosphere, that speculation on the subject is useless.

DAILY TEMPERATURE CURVES.

Professor MOHN, discussing the results obtained by the voyage of the "Fram," finds during the dark months in the Arctic circle a daily variation of temperature. It is of course obvious that, since the sun is far below the horizon, the effect must be an indirect one, and he considers that it is due to a diurnal change in the direction of the wind. Dr. CHREE has discussed the question with reference to the observations made by the "Discovery," but the matter is one of considerable interest, and hence I trust I may be pardoned for going over somewhat the same ground, and I have drawn the curves of fig. 2.

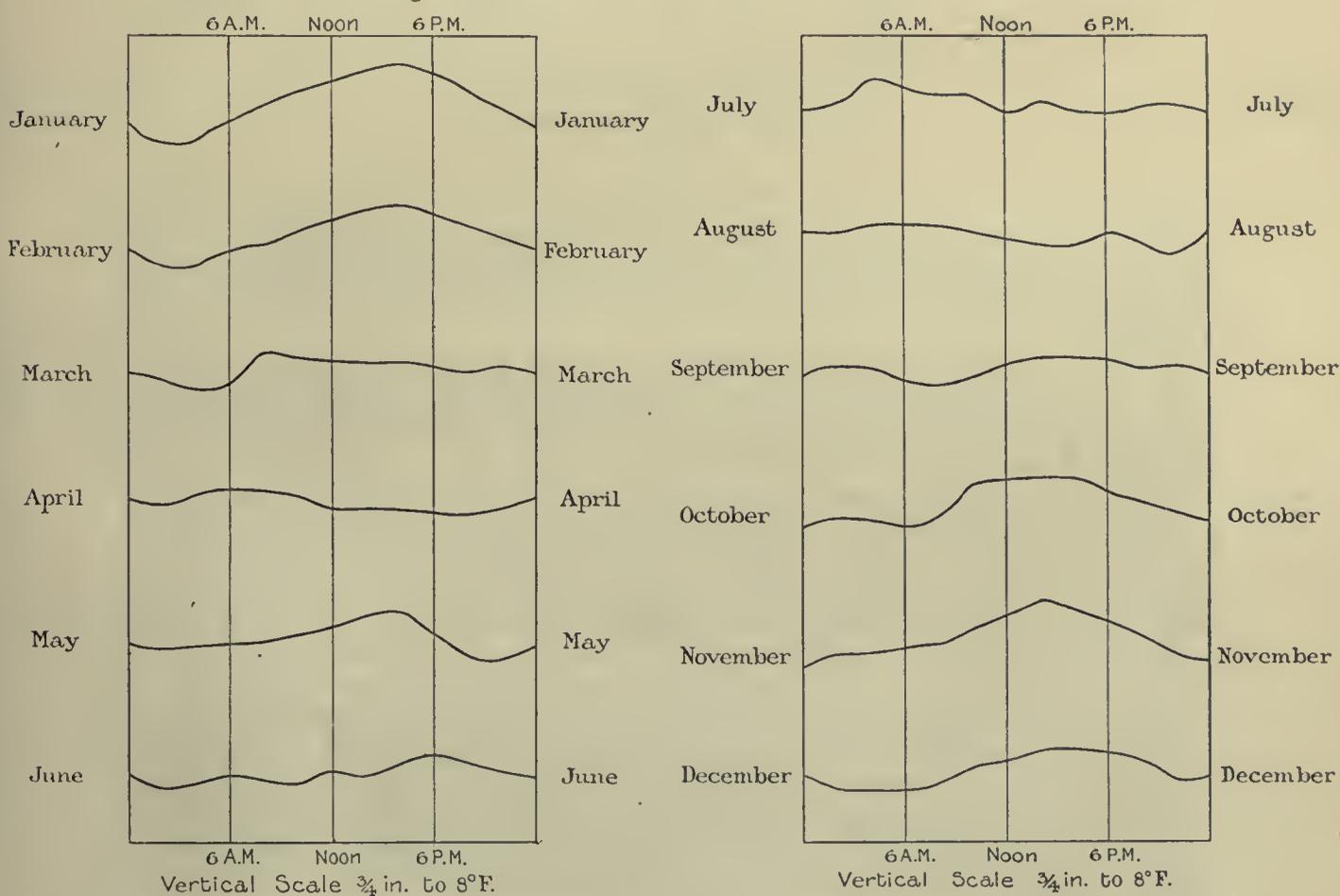


Fig. 2.

The amount of material hardly suffices to make these curves trustworthy, especially when the very rapid changes of temperature which the figures, and more particularly the self-recording instruments, show are taken into account. This is fairly obvious when we compare the daily course of the temperature in August, 1902, with a variation of barely 1° F., with that of August, 1903, showing a difference of 3° F. between 8 a.m. and 8 p.m. In the sunny months the oscillation is perfectly clear and distinct, although the amplitude is small, being less than 5° F. for January, 1902, the month in which it is most marked.

The warmest time in summer appears to be about 4 p.m., but the number of observations only allows

of a rough approximation to either the time of the maximum or minimum or to the amplitude. The rise during the day may be traced from October to February, perhaps to March.

The mean obtained from combining the eight dark months spent by the "Discovery" in the Antarctic regions is shown in the diagram, fig. 3.

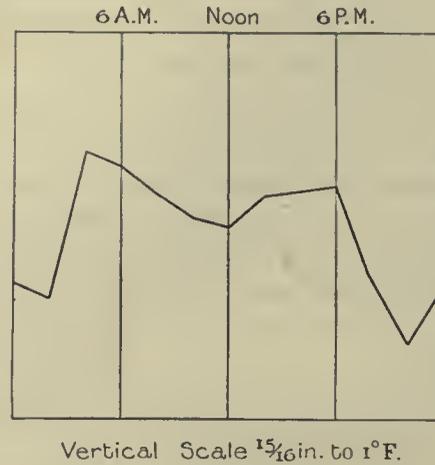


Fig. 3.

The maximum occurs at 4 a.m., the minimum at 10 p.m., but there is a secondary minimum at noon. The difference between the highest and lowest temperatures is considerable, amounting to about  $1^{\circ}$  F., but to what extent this curve is indebted to chance values and how far it represents a real phenomenon, it is difficult to say.

It is hard to believe that the rapid rise from 2 to 4 a.m. has any physical cause, but, on the other hand, one can hardly doubt that the temperature is generally lower in the evening, or, since the word can have no meaning in a place and time where the sun never appears, perhaps we should say lower from 8 p.m. to 2 a.m. than from 4 a.m. to 4 p.m.

Every change in the height of the barometer produces a change in the temperature, for dynamic heating or cooling of the air is produced by a change of pressure, no matter how that change is brought about. We are too apt to consider a rising or sinking air current as the only natural cause of dynamic cooling or heating, but, of course, the passage of air horizontally between two places under different pressure is equally efficacious. The daily oscillation of the barometer, whether we consider the 12- or the 24-hour period, inevitably produces a corresponding change in the temperature, although the converse of this is not necessarily true. It is of no consequence for this result how the barometric oscillation may be produced, *ceteris paribus*, a rise of temperature of  $0^{\circ} \cdot 5$  F. accompanies a rise of  $0 \cdot 10$  inch of pressure, and even though the actual rise may not occur, since some other more powerful cause may be producing a fall of temperature, yet it is safe to say that, given the barometric rise, the temperature must be higher than it would have been had no increase of barometric pressure occurred. Possibly, therefore, the 12-hour period of the temperature may be a consequence rather than a cause of the pressure variation, but in this particular instance I doubt the existence of any real temperature variation with the daily or half-daily period during the winter.

Observations with a black bulb thermometer *in vacuo* are, unfortunately, not of great scientific value, for it appears to be impossible to make two thermometers which will read alike, and it is most likely that the reading of the same thermometer will vary with age. Under these circumstances, readings are not comparable one with another. Indeed, this is evident from the above short table, for the size of the bulb has in general made a difference of  $20^{\circ}$  F. in the monthly averages. But notwithstanding this, the series of observations commencing on September 8 and ending in the beginning of April, 1903, are well worth all the trouble expended on taking them, for they show the great permeability of the air to radiation.

## RADIATION Thermometers.

Date.	Average maxima.			
	Large bulb.		Small bulb.	
	Black.	Bright.	Black.	Bright.
1902	0	0	0	0
September 8 to 30 . . .	40	14	—	—
October . . . . .	69	26	—	—
November . . . . .	103	47	—	—
December . . . . .	123	61	103	61
1903				
January . . . . .	120	62	99	58
February . . . . .	97	43	79	40
March . . . . .	53	20	40	21

The lowest maximum in December was 84°·2 on the 13th.  
 „ „ „ January „ 97°·7 „ 29th.  
 Absolute maximum 154°·0 on December 21st.

The actual maxima are in no way exceptional: a glance at the Climatological Tables published monthly by Dr. MILL in SYMONS' 'Meteorological Magazine' will show that higher values are by no means uncommon in various parts of the world, but if instead of taking the actual reading we consider the difference between the maximum temperature of the day and the maximum recorded by the black bulb thermometer, we find an amount that it would be very hard to match. Thus on December 21, the day which gives the absolute maximum, 154°·0 F., the mean temperature only reached 17°·8, and the maximum 24°·2, and during December, 1902, when the average was 123°, the mean temperature of the air was only 23°·1, the difference for 31 consecutive days reaching an average of just 100° F. The following month, January, 1903, has not quite so great an average difference, but on one day only during this month did the radiation thermometer fail to reach a temperature of 100° F.

It has been previously stated that the insolation during December and January at the South Pole is very great, but that is because the sun is continuously above the horizon. If the amount of heat received on a unit of surface during the midday hour be taken instead of the amount received during the 24 hours—and it is this which influences the maxima readings—and if this amount be compared with the corresponding amount received at the equator, the comparison, in so far as magnitude is concerned, is entirely in favour of the equatorial region. At the South Pole the insolation on December 21 is 0·4 of that of a place where the sun is in the zenith; at the Winter Quarters of the "Discovery" at midday it would be 0·58, a little over half. But the solar rays have also to pass through nearly twice the quantity of air, and were this air at all impervious, they would lose a considerable part of their heating effect. It follows that these black bulb readings show that the air of the Antarctic regions offers very little obstacle to solar radiation, and one can hardly doubt that the cause of this permeability must be the absence of aqueous vapour. Inasmuch, too, as the radiation maxima are high in the summer without exception, we must assume that no thick sheet of clouds ever remained for long over this station. It seems likely, therefore, that the Antarctic anticyclone is very active, and that there is a general and extensive settling down of air. Otherwise the dryness could not be maintained, for, the whole surface being ice, snow, or water, and therefore capable of giving off aqueous vapour, the air would of necessity soon be filled with moisture, since evaporation from the snow would soon saturate the surface layers and the vapour would diffuse upwards.

## CAPE ARMITAGE.

In addition to the regular observations made at the ship, observations of the temperature were made at Cape Armitage once at least on most days in the winter. No precise time was adhered to, but the

observations were mostly in the day, and often were taken several times in the same day. On each occasion the minimum since the last visit was observed.

The figures do not suffice to show the mean temperature in the light season, or, strictly, in the dark season, though in the absence of the sun a chance visit once a day at various times should give a fairly good average.

A glance at the figures shows at once very great discrepancies between the temperatures of the two places, both at sea level and not far apart, and it seems certain that the differences are not due to instrumental errors or to careless observations. Differences of even 25° F. between the two places occur at times, and differences of from 10° to 20° in the recorded minimum are quite common in the winter. The observations during the summer are very few, and some of those there are have a note attached 'in the sun,' but during the summer there does not seem to have been any striking difference. The winter differences invariably give the lower temperature to Cape Armitage, and there is little doubt that the mean at the ship during the dark months was quite 10° F. above the mean at Cape Armitage.

#### HIGH-LEVEL TEMPERATURES.

Some forty temperature observations were made at an elevation of 960 ft., about two miles to the eastward of the ship, during the winter of 1902. A comparison of these values with those observed at the "Discovery" is given below:—

1.	2.	3.	4.	Number of observations.
Date.	Ship.	High-level station.	Difference 3-2.	
1902	o	o	o	
April . . . . .	-14·9	-21·3	- 6·4	6
May . . . . .	-12·6	-18·9	- 6·3	6
June . . . . .	-11·4	-19·9	- 8·5	6
July . . . . .	- 9·6	-16·8	- 7·2	11
August . . . . .	-15·1	-27·7	-12·6	4
September . . . . .	-23·6	-23·7	- 0·1	3
Mean . . . . .	-14·5	-21·4	- 6·9	

In forming the above table, in cases where the temperature observation at the high-level station was not simultaneous with that at the ship the value at the ship has been obtained by interpolation from the nearest readings.

Even allowing for the ordinary fall of temperature with height, namely, 3° F. for the 960 ft. nearly, it will be seen that the temperature at the ship is much above that at the high-level station. The only exception is September, but this is not of much importance, since it depends on three observations only.

The differences are not so striking as at Cape Armitage, but they also point to a high local temperature at the position of the ship. I can give no certain explanation of these differences, but can only state that they do not seem to be due to any peculiarity in the weather at the times the observations were made. The proper form of screen was not used at Cape Armitage or on the hill, but the thermometers seem to have been at much the same height. The differences are roughly proportional to the depth of the temperature below the freezing point. The only suggestion I can make is that the thermometer screen at the "Discovery" was placed too near the tide crack, and that the temperatures are unduly high on account of the influence of the sea water in the crack. The thermometer at Cape Armitage was quite open to the sky during the winter, but I do not think this will account for the difference, provided it was about the same height above the surface of the snow.

X. NOTES ON THE READINGS OF THE ASPIRATION PSYCHROMETER,  
AND OF THE DRY AND WET BULB THERMOMETERS, AND ON  
THE OBSERVATIONS OF EVAPORATION AND PRECIPITATION,  
AND OF THE EVAPORATION OF ICE.

BY

W. H. DINES, F.R.S.

A CONSIDERABLE number of observations relating to humidity, precipitation and evaporation were made during the two years that the "Discovery" remained in the Antarctic regions.

These consist of two-hourly readings of the dry and wet bulb thermometers, of a large number of independent observations of the humidity taken with an ASSMANN'S aspirator, of measurements of snowfall (there was no rain) in a rain-gauge, of measurements of the depth of snow by means of stakes driven in to show the change of level, of evaporation from the surface of a frozen pond, from lumps of ice, and from ice exposed in shallow metal trays.

The value of the observations would have been greatly increased if more particulars had been given, and one cannot help feeling regret that the opportunity to revise the humidity tables at low temperatures could not have been utilised. On the other hand, the zeal shown, and the trouble taken by the officers of the ship in making the observations, deserves the highest praise.

The humidity observations consist of the readings of the dry and wet bulbs taken at the regular two-hourly intervals. Gaps in the series occur, most noticeably during the first winter, the observations being absent for the period May to September, 1902. During the second winter, many observations were made with an Assmann aspirator. Great care seems to have been bestowed on these, and they form a very useful check on the dry and wet bulb readings. The difficulty of obtaining accurate values of the humidity when the temperature is below the freezing-point is well known even in our mild climate, and it must be greatly increased when the temperature approaches the freezing-point of mercury. The general opinion of meteorologists seems to be that the tables by which the relative humidity is obtained from the wet and dry bulb readings are open to doubt at very low temperatures and very low values of the humidity, and hence it hardly seems worth while calculating the values of the humidity from these readings. It is, however, plain, from a study of the figures, that values of the humidity of less than 50 per cent. occur frequently, and, quite apart from any doubt of the tables, there are many instances of extremely low values. Hence one may say that whatever else the climate may be, it is certainly dry.

The observations on precipitation were made with a rain-gauge, but there are no details given as to its size and position, or the height of its rim above the surface of the snow. Precise observations are utterly impossible in such a climate, indeed the observers state that during the blizzards they did not and could not know whether the snow was actually falling from the clouds, or whether it was merely drift from the surface of the snow. Often, too, the gauge had to be dug out of the drift. On calm days the amount of snow was measured, but what proportion the fall on such days bears to the total fall it is impossible to say. The whole precipitation took the form of snow, there being no record of rain, during the two years that the "Discovery" remained at her Winter Quarters.

An attempt was made, also, to measure, by means of stakes, the depth of snow that fell, the graduations on the stakes showing the level of the upper surface of the snow.

TABLE I.—Snow Gauges (Centimetres).

Date.	1.	2.	3.	4.	5.
1902					
March 24 . . . . .	36·5	51·0	67·5	63·0	76·0
„ 27 . . . . .	—	—	67·0	63·5	77·0
April 10 . . . . .	—	—	67·0	54·2	73·0
„ 12 . . . . .	—	—	67·0	57·0	71·6
„ 15 . . . . .	—	—	67·5	57·5	71·6
„ 20 . . . . .	—	—	67·6	57·1	62·5
„ 24 . . . . .	—	—	68·0	58·0	67·0
May 6 . . . . .	—	—	60·0	52·0	59·0
„ 12 . . . . .	40·0	44·0	55·0	54·0	66·0
„ 12 . . . . .	30	55	63	63	66
„ 17 . . . . .	32	55	64	65	73
„ 23 . . . . .	37	56	72	76	74
„ 31 . . . . .	37	56	72	76	74
June 6 . . . . .	35	58	72	76	75
„ 28 . . . . .	35	55	72	70	74
July 8 . . . . .	33	54	70	70	68
„ 20 . . . . .	35	56	71	75	74
August 7 . . . . .	35	56	72	76	74
„ 15 . . . . .	35	55	56	62	74
„ 27 . . . . .	30	53	57	62	74
September 1 . . . . .	31	53	59	63	74
„ 7 . . . . .	31	46	55	60	69
„ 10 . . . . .	31	48	57	61	66
„ 28 . . . . .	30	44	52	55	57
October 11 . . . . .	30	44	52	54	55
„ 17 . . . . .	31	45	52	56	57
„ 25 . . . . .	30	47	55	58	62
November 2 . . . . .	32	49	53	54	62
„ 21 . . . . .	32	50	54	56	62
„ 26 . . . . .	35	52	56	58	64
December 24 . . . . .	48	40	36	49	60
1903					
January 12 . . . . .	—	42	41	51	58
„ 29 . . . . .	—	40	39	48	56
February 18 . . . . .	—	44	45	56	62
March 10 . . . . .	—	51	50	60	65
„ 18 . . . . .	—	52	52	61	67
„ 25 . . . . .	—	52	52	61	67
April 3 . . . . .	—	52	54	61	67
„ 14 . . . . .	—	51	54	59	61
„ 26 . . . . .	—	50	52	59	61
May 3 . . . . .	—	46	42	58	61
„ 8 . . . . .	—	45	44	59	62
„ 22 . . . . .	—	42	54	58	52
June 12 . . . . .	—	32	34	38	30
„ 26 . . . . .	—	42	46	53	29
July 13 . . . . .	—	41	46	56	30
August 2 . . . . .	—	40	53	54	34
„ 14 . . . . .	—	42	42	56	40
September 3 . . . . .	—	41	43	56	41
„ 14 . . . . .	—	41	43	56	41
October 5 . . . . .	—	41	44	56	42
„ 25 . . . . .	—	41	45	56	42
November 15 . . . . .	—	45	43	47	33
December 12 . . . . .	—	47	46	55	50
1904					
January 5 . . . . .	—	52	55	66	44
„ 19 . . . . .	—	44	43	54	57
„ 27 . . . . .	38	38	27	37	36
February 4 . . . . .	—	40	27	38	41
„ 15 . . . . .	—	46	39	50	37

The distances are measured from the top of stakes driven vertically into the snow on the north side of Observation Hill, 50 ft. above mean sea level.

It will be seen that the change of level between March 24, 1902, and February 15, 1904, the time during which the observations were in progress, was small. The observer writes: "On the whole, the snow appears to have risen, but this is hardly the general result, for the rise was a ridge, the footpath, between the successive stakes." One must conclude from this that the locality was more windswept, on the average, than the surrounding district, for the continual use of a definite track in soft material leads to a sinking, and not a rising, of the track, and the only way to account for the "ridge" is to suppose that the freshly fallen, or drifted, snow was consolidated by the feet of those passing over it and, in consequence, was less liable to be blown off. The evidence tends to show that the amount of precipitation during the year was small, for if many heavy falls had occurred they could hardly have failed to have considerably altered the level at the stakes from day to day, and no such alteration seemed to have occurred.

It may also be noted that practically no thawing of the snow occurs, except here and there where the sun shines on a neighbouring exposed surface of rock, and, in general, the summer temperature is so low that the only appreciable loss is by evaporation.

The evaporation experiments give very interesting results. Shallow dishes were filled with water, which was allowed to freeze, and then the dish and ice were weighed day by day and the difference between two consecutive weights gave the loss by evaporation. Three dishes were used, two giving an area of 12 sq. inches (3 in. by 4 in.), and the third an area of 24 sq. inches. This latter was blown away before it had been very long in use and was not reinstated. As might be anticipated, the loss of weight from the two similar dishes was not invariably the same, but, on the whole, the agreement was very fair. The evaporation from the third and larger dish was less than double that from the smaller, this being in accordance with the result found in England when the evaporation from small surfaces of water of different areas is observed.

The observations were discontinued in the summer, because when any of the ice was melted it was difficult to avoid losing some of the water before or during the weighing.

The following table is formed from the mean of the two 4-in. by 3-in. dishes. In some cases one only was available, and in such cases the one was used. The figures do not give strictly the evaporation for the month, partly because here and there a day's record is missing, partly because the observations were taken once each day, generally between Noon and 4 p.m., and thus the record for June, say, omits 12 or 14 hours at the beginning of June and includes a similar period in July.

Occasionally a small increase of weight was noted. These increases have not been subtracted from the total.

The losses given in the observer's book are in grammes; these have been put into losses of thickness, expressed in inches by using the factor 0·051.

TABLE II.—Monthly Evaporation.

Date.		Maximum per day.	
1902	in.	in.	
June . . . . .	0·176	0·026	
July . . . . .	0·244	0·026	
October . . . . .	0·609	0·069	
November . . . . .	0·702	0·160	To 8th only.
1903			
March . . . . .	0·510	0·057	From 13th to end.
April . . . . .	0·182	0·029	
May . . . . .	0·249	0·031	
June . . . . .	0·230	0·028	
July . . . . .	0·309	0·042	
August . . . . .	0·274	0·029	
September . . . . .	0·366	0·095*	* For two days.
October . . . . .	0·790	0·085	

It is a pity that there are no figures available for the summer. The values for the winter, when we take into account the lowness of the temperature, seem to me very striking. In 'British Rainfall for 1905,' p. 41, a table is given showing the evaporation at Camden Square from 1885 to 1905. The monthly mean for the winter is there shown to be 0.14 in. The corresponding temperature mean is close to 40° F. The mean of the five winter months in the Antaretic is 0.25, which is nearly double that for Camden Square, London, and this excess of evaporation occurs notwithstanding the very low temperature. Many factors are required to make the conditions favourable for evaporation, but undoubtedly the capacity of the air for taking up moisture is the most important. A low relative humidity and a high temperature are necessary to ensure a high capacity, and how very important the temperature must be is shown by the following data. Equal quantities of perfectly dry air at 0° F., of air with a humidity of 83 per cent. at 40° F., and with a humidity of 91 per cent. at 60° F. are capable of taking up the same approximate amount of water before becoming saturated. This explains, to a great extent, how it is that though in England the summer and winter rainfall are much the same, yet in summer the ground is generally dry and in winter generally wet; but it also shows how very low the humidity of the air at the Winter Quarters of the "Discovery" must, in general, have been in order that, notwithstanding the prevalence of temperatures far below zero, it might be capable of absorbing such comparatively large amounts of water vapour. This is the more striking when it is remembered that the whole surface was covered with ice and snow, and was therefore capable of yielding an unlimited supply. The mystery is how, in the presence of such an extensive evaporating surface, any very dry air can be found.

Observations on evaporation were also made by driving nails into the surface of a frozen pond, and noting the difference of level between the surface and the top of the nails. The gradually increasing

TABLE III.—Measured Evaporation.

Nails driven into frozen pond. Measurement made from ice to top of nail.

Date.	Millims.	Difference.	Millims.	Difference.	Millims.	Difference.	Millims.	Difference.
1903								
March 10 .	0		0		0		0	
„ 21 .	6.0	6.0	2.0	2.0	1.0	1.0	—	—
April 3 .	7.0	1.0	5.0	3.0	3.0	2.0	—	—
„ 14 .	7.0	0	7.0	2.0	5.0	2.0	—	—
„ 27 .	7.5	0.5	5.0	2.0	5.0	0	—	—
May 8 .	8.0	0.5	7.0	2.0	5.0	0	—	—
„ 22 .	10.0	2.0	9.0	2.0	7.0	2.0	—	—
June 12 .	10.0	0	7.0	2.0	6.0	1.0	—	—
„ 26 .	11.0	1.0	10.0	3.0	9.0	3.0	9.0	0
July 13 .	12.0	1.0	11.0	1.0	10.0	1.0	9.0	0
August 2 .	12.0	0	11.0	0	10.0	0	9.0	0
„ 17 .	12.0	0	11.0	0	10.0	0	9.0	0
October 5 .	12.0	0	11.0	0	10.0	0	9.0	0
November 15 .	20.0	8.0	11.0	8.0	10.0	8.0	9.0	12.0
December 12 .	Nails gone.		19.0		18.0		21.0	

differences are attributed to the gradual evaporation of the ice surrounding the nails. The results are given in Table III. It will be seen that the figures do not agree among themselves or with the other results. There is no information as to what means were taken to keep the surface free from snow. Also

it is problematical to what extent the head of a nail driven into ice may be considered as a permanent level relatively to the ice. Most certainly with the prevalence of sunshine, and a temperature not too far below the freezing point, it would not be permanent, for any small black object which does not float on water sinks rapidly into ice under the influence of sunshine, even when the temperature is below the freezing point, the ice thawing underneath under the influence of radiation, but in the actual Antarctic winter this cause could not come into play.

The general evidence seems to show that the air was very dry. It must not be forgotten that for some unexplained cause the temperature at the "Discovery" was higher than at other places in the immediate neighbourhood; and greater dryness generally accompanies greater heat, but, notwithstanding this, it may, I think, be safely asserted that a low relative humidity prevailed generally in the district, and this conclusion is supported by the fact of the intense solar radiation shown by the temperatures of the black bulb *in vacuo*. In the free atmosphere the humidity is an unfailing test of the vertical circulation, a low humidity indicating a descending current and a high humidity an ascending one. Indeed, were it not for the formation of rain and the accompanying extraction of water vapour the laws of diffusion of gases must lead to the nearly complete saturation of the whole atmosphere. The humidity of the lower strata must be partly dependent on the dryness or wetness of the earth's surface, but not entirely, for it is notorious that the sea coast of England in the winter is dryer than the inland districts. Also the great deserts of the earth are situated in the anticyclonic belts, and are the consequence rather than the cause of the dry air that lies over them. It seems likely, therefore, that the Antarctic region, or at least that part which lies in the neighbourhood of Ross' Bay, is an anticyclonic region, and that there is a steady settling down of air. If this point can be established for the Antarctic regions as a whole, it is of great importance in regard to the question of the general circulation of the atmosphere.

There is one other matter of great interest in connection with these observations, and that is the formation of the Great Barrier. The temperature observations show that the loss of ice or snow from the surface by thawing is a negligible one, and the question is simply whether the snowfall exceeds the evaporation, or *vice versa*. If the snowfall be the greater the Barrier should be increasing in thickness. Unfortunately, precise observations on precipitation are impossible in such a climate, and in any case two years would not suffice to give a reliable average either of the snowfall or the evaporation, even if we had precise and exact observations of each. Hence nothing more than a guess can be made, but the evaporation, as judged by the winter observations, seems sufficiently large to more than balance the precipitation, and thus lead to a gradual decrease in the amount of ice and snow.

# XI. NOTES ON THE OBSERVATIONS OF BAROMETRIC PRESSURE.

BY

R. H. CURTIS.

## I. THE YEARLY MEAN PRESSURE.

NOTWITHSTANDING the great interest which attaches to the distribution of barometric pressure over the South Polar regions, our knowledge of the subject has hitherto been to a great extent hypothetical owing to the fewness of the observations we possessed. It is only quite recently that observations covering an entire year have become available. All those previously received were made by navigators (in most cases exploring the region) who passed quickly from point to point, so that their observations are a good deal scattered both as regards locality and time, although in every case they refer exclusively to the summer months of the year, in which alone the Antarctic seas are open to navigation.

It was not until the year 1898-9 that a series of observations embracing a complete year was made within the Antarctic circle, and the whole of the information we now possess, relative to the sequence of climate in the Antarctic throughout the year, from that time up to the return of the "Discovery," is set out in Table I. As regards the stations at which these four series of observations were made, it should be

TABLE I.—Mean Height of the Barometer reduced to Sea Level, to 32° F., and to Latitude 45°.

Ship or place.	Date.	Latitude.	Longitude.	Mean annual pressure.
"Discovery" (Ross Island)	February, 1902, to January, 1903	77 51 S.	166 45 E.	inches 29·352
	February, 1903, to January, 1904			29·228
	Two years, February, 1902, to January, 1904			29·290
Cape Adare (Victoria Land)	February, 1899, to January, 1900	71 18 S.	170 9 E.	29·134
"Belgica" (Drifting in ice pack)	March, 1898, to February, 1899	(Mean) 70 30 S.	(Mean) 88 30 W.	29·307
"Gauss"	March, 1902, to February, 1903	66 2 S.	89 38 E.	29·134

noted that whilst two of them—Cape Adare and the "Discovery's" Winter Quarters—are not very greatly separated as regards latitude, and are almost on the same meridian of longitude, the other two are remote both from Ross Island and from each other, their distance in longitude being roughly 90° from Ross Island and 180° from each other.

The barometers used on board the "Discovery" were verified at the Kew Observatory of the National Physical Laboratory both before the Expedition sailed and subsequently to its return. During the greater part of the sojourn at Winter Quarters they were read every second hour from midnight to midnight, but towards the close of the second year the number of eye observations became reduced and the omissions have been supplied from the records of one of the self-recording aneroids, after a suitable correction had been applied to bring them into accordance with the readings of the mercurial barometer when corrected and reduced to sea level and to temperature 32° F.

Each of the four series of observations given in the table began in February or the beginning of March, and the mean heights of the barometer for the ensuing twelve months at the places represented were as follows, the readings being in each case reduced to latitude 45°, as well as for temperature and to sea level.

We do not know how nearly the mean of one year's observations approximates to the true annual mean pressure for these regions, and it will be noticed that the individual means for the two years of the "Discovery's" stay differ by as much as 0·125 inch. A comparison of the mean annual pressure at

Valencia, in the south-west of Ireland, for each of 20 consecutive years with the mean for 35 years gave an average difference of  $\pm 0.03$  inch, and an extreme difference of 0.112 inch, whilst a similar comparison of mean values for Kew for the same period gave an average difference of  $\pm 0.025$  inch and an extreme difference of only 0.067 inch. Possibly in the Antarctic the variation of the mean pressure of any one year from the true mean may be liable to a greater error than either of these—we have no sure information upon the point, but probably we shall not greatly err if we assume for the values we are now dealing with a possible error of  $\pm 0.060$  inch.

The annual means for the four places named in the table confirm the inference which seems inevitable from the marked prevalence of easterly winds at three of them, that barometric pressure must be relatively high over the regions approximating to the Southern Pole.

Taking first for comparison the "Gauss" yearly mean for latitude  $66^\circ$  and the "Discovery's" mean for the same twelve months for latitude  $78^\circ$ , we find the mean pressure at the more southern station to be 0.219 inch higher than at the northern position, giving a gradient, if we may disregard longitude and consider the difference in latitude alone, of 0.018 inch for each degree of latitude. The Cape Adare mean for latitude  $71^\circ$ , dealt with in a similar way, but comparing it with the "Discovery" mean for the two years, gives a difference of 0.022 inch per degree of latitude, which is practically the same as that given by comparing the "Discovery" and "Gauss" values.

That the "Belgica's" average pressure for very nearly the same (mean) latitude as Cape Adare ( $71^\circ$ ) gives a somewhat different result is not very surprising when we remember that it is not only for a different twelve months from that of the "Discovery," but also for the somewhat extensive area covered by her drift during the time. Her mean pressure for the year is 0.173 inch *higher* than the Cape Adare mean, and only 0.046 inch lower than the mean for the "Discovery's" first year, which was considerably (0.125 inch) higher than that for her second year. This difference yields a gradient per degree of latitude less than half that obtained by comparing the means of the other stations.

The "Belgica's" high mean pressure for the year is, however, chiefly due to the relatively high means for the four winter months, which is a feature not exhibited at either of the other stations; indeed, at the "Gauss" the mean pressure for the winter was considerably lower than that for the summer. Assuming the seasonal march of pressure to have been approximately normal at each of the stations, it is conceivable that the higher winter pressure at the "Belgica" may have been related to a pole of cold caused by radiation from large land masses somewhere in her neighbourhood, leading to some dislocation of the isobars, and incidentally to the greater diversity of wind direction which she experienced. It has been pointed out that she was far to the eastward of the "Discovery," and as very little is known of the physical features of the intervening region, there is plenty of room for conjecture as to the distribution of land and sea areas within it.

Before leaving this part of the subject it may be well to refer to the results of the barometer observations made on the various sledge journeys which were undertaken by the Expedition during its stay at Ross Island.

These journeys varied both in direction and in duration, and barometric observations were made on nearly all of them. The instrument generally used was an aneroid, of which the Expedition possessed several, but on most of the journeys the readings of the aneroid were supplemented by hypsometric observations. Prior to leaving England the aneroids had been verified at the Kew Observatory, but when they were brought into use in the Antarctic it was found that each instrument had developed errors very different from those determined for it at Kew. This fact introduces an element of uncertainty into the observations which is not entirely eliminated by the comparisons which can be made of the aneroid readings with the readings of the ship's mercurial barometers at the starting and on the return of the party. But the greatest obstacle in the way of ascertaining the pressure gradient from the barometric observations made on the several journeys arises from the difficulty of deciding how far the differences observed between the observations made at the ship and those made simultaneously at a distance were due to change in height above sea level, and how far to purely meteorological causes; and in some instances, where the changes of level are known to have been very large from day to day, the difficulty becomes insuperable. In two or three journeys, however, the conditions were more favourable than in the others,

and particularly was this so in the journey made by Lieutenant ROYDS to the south-east across the open Ice Barrier. Throughout this journey the aneroid was read at frequent and regular intervals, and the observations have been dealt with in the following manner. The journey out and home was broken up into distance-intervals of 20 miles each, and all the barometric observations made whilst each distance-interval was being traversed were meaned and then compared with the mean of the corresponding readings of the barometer made at the ship. In this way it was sought to smooth out the casual fluctuations of pressure and to get an approximately correct mean barometric difference between the ship and the mean position of the travellers for the time occupied in traversing each 20-mile section of the journey.

The differences obtained from a comparison of the two sets of means when plotted in a curve\* exhibit a very uniform increase outwards to the furthest point reached, and a similarly uniform diminution on the return journey, the reading of the barometer at the ship being the higher one throughout. It is, however, tolerably certain, from various considerations, that the general level of the Barrier rises to the southward, and this in itself would of course account for a decrease of pressure in that direction and a consequent increase in the difference between the two means as the travellers increased their distance from the ship. The question then arises whether this steady increase of difference with distance is not wholly due to increase of height above sea level, and whether if it had been possible to reduce the readings made on the ice to sea level there would not have been shown an *increase* of pressure to the southward instead of a decrease?

If we may assume an average rise of surface level of the Barrier ice of about 2 feet per mile along the line followed by the travellers (which is probably well within the actual amount), and if we reduce the barometer readings in accordance with that assumption, such a sea-level increase of pressure is then found to exist, and not only does the decrease of a little less than three-tenths of an inch in the 170 miles then disappear, but an increase of over a tenth of an inch takes its place.

It has been elsewhere pointed out (p. 492) that this conclusion receives considerable support from the fact that it supplies the barometric gradient required to account for the persistent easterly wind which is so marked a feature of the air circulation of these high latitudes.

The track pursued in two other journeys similarly dealt with followed somewhat closely the line of high mountains which stretch away to the southward along the western boundary of the Ice Barrier, and it is probable that on those journeys greater and less regular differences of level were met with. At any rate, the observations made during those journeys do not yield results quite so uniform as that obtained from the observations on the journey across the open Barrier, quite away from the land, although in their main features they are very similar; and this may probably be due partly to the travellers having experienced on the southern journeys more abrupt change of level, and also to some extent to the fact that the readings of the aneroid were not made either so frequently or so regularly as on Lieutenant ROYDS' journey. It may, perhaps, be of interest to notice that at the 130-mile distance-interval of Lieutenant ROYDS' journey there is, both on the outward and the homeward journey, a decrease of the barometric difference amounting to 0·03 inch or 0·04 inch, indicating a slight decrease of about 30 feet in the height of the Barrier floor at that distance. The repetition of the irregularity in the curve on the return journey not only confirms the existence of a depression of ice level at that spot, but also seems to support the method adopted for dealing with the observations.

HANN, in his 'Handbook of Climatology' (English edition, translated by R. DE C. WARD, p. 217), refers to the distribution of mean pressure at different latitudes, and quotes FERREL'S value for each 10° down to latitude 70° S. These values indicate a progressive decrease of pressure with increase of latitude south of 30° S., the mean pressure at 70°, which is the highest latitude quoted in the table, being given as 29·056 inches.

Map No. 51, in the 'Report of the "Challenger" Expedition,' showing the isobaric lines of the globe for the year, exhibits a similar decrease of pressure down to latitude 60° S., which is the most southern position for which an isobar is given, and the value of the pressure for that parallel is 29·30 inches.

Compared with the values given in Table I., that quoted by HANN for latitude 70° is too low, and it is clear that the decrease of pressure does not continue southward so far. Dr. SHAW, from a discussion of

\* See fig. 1, p. 491, "Discussion of Wind Observations."

the general circulation of the atmosphere ('Proc. Roy. Soc.,' vol. 74, p. 20), based largely upon the difference between the distribution of pressure at the Earth's surface and the distribution at the 4000 metres level as computed by M. TEISSERENC DE BORT, came to the conclusion that a high-pressure area exists over the Antarctic, and he pointed out that "the pole of extreme cold, which in the southern hemisphere must be nearly coincident with the geographical pole, will have associated with it a component distribution for easterly (wind) circulation similar to the low-temperature pole of north-east Siberia in the northern hemisphere,"—a conclusion which seems to be completely justified by the mean pressure results shown in Table I., and also by the wind distribution recorded at the "Discovery's" Winter Quarters, as well as at Cape Adare and at the position at which the "Gauss" wintered in the ice. Dr. SHAW proceeds to say, "the intensity of the cold in the south polar regions is undoubted, and the existence of the distribution for an easterly circulation round a high-pressure centre due to the weight of the lower air follows directly therefrom."

#### THE SEASONAL VARIATION OF PRESSURE.

The observations for a single year, or even two years, are insufficient to yield true mean values for the individual months, and that this is so will be seen at once when the monthly means of pressure for the first year of the "Discovery's" stay at her Winter Quarters are compared with the means for the corresponding months of the second year; the mean for June, 1902, for example, is a quarter of an inch lower than the mean for June, 1903, and the means for the two months of July differ as greatly, but in the opposite way, the earlier value being in this case the higher of the two.

TABLE II.—Mean Monthly Pressure at the "Discovery's" Winter Quarters for the Years 1902-4.

1902	ins.		ins.		ins.
February . . . . .	29·257*	November . . . . .	29·564	June . . . . .	29·492
March . . . . .	29·329	December . . . . .	29·435	July . . . . .	29·099
April . . . . .	29·408			August . . . . .	29·145
May . . . . .	29·274	1903		September . . . . .	28·989
June . . . . .	29·245	January . . . . .	29·391	October . . . . .	28·925
July . . . . .	29·328	February . . . . .	29·228	November . . . . .	28·877
August . . . . .	28·841	March . . . . .	29·418	December . . . . .	29·224
September . . . . .	29·314	April . . . . .	29·289		
October . . . . .	29·008	May . . . . .	29·157	1904	
				January . . . . .	29·061

\* 20 days' observations only.

We must be careful, therefore, not to attach too much weight to the monthly means as such, but by grouping the months into seasons we double the number of observations available for the spring and autumn means and quadruple those for the summer and winter seasons, and with this augmented number of observations we may fairly expect the casual fluctuations of pressure to cancel each other sufficiently to yield a pretty close approximation to the true seasonal mean. Dealt with in this way, we get the mean values of pressure for the four seasons shown in the following table, in which is also given for comparison the corresponding means from Cape Adare, the "Belgica," and from the "Gauss."

TABLE III.—Seasonal Means of Pressure at the "Discovery's" Winter Quarters for the Years 1902-4; and at Cape Adare, the Winter Quarters of the "Gauss"; and the "Belgica," drifting in the Ice Pack. Corrected to Latitude 45°.

	Latitude S.	Longitude E.	Summer.	Winter.	Spring.	Autumn.
	°	°	ins.	ins.	ins.	ins.
"Discovery" . . . . .	78	167	29·325	29·267	29·128	29·431
Cape Adare . . . . .	71	170	29·245	29·076	28·760	29·161
"Gauss" . . . . .	66	90	29·258	29·101	28·900	29·188
"Belgica" . . . . .	69 and 71	between 80 and 96 W.	29·298	29·437	29·295	29·079

At the "Discovery's" Winter Quarters the highest mean pressure occurred in the autumn and the lowest in the spring, the means for the four seasons showing a very uniform progression from one to the other. At the "Gauss," the mean pressure was throughout lower than at the "Discovery," but higher in the summer than in either of the other seasons, the seasonal march of pressure being with this exception

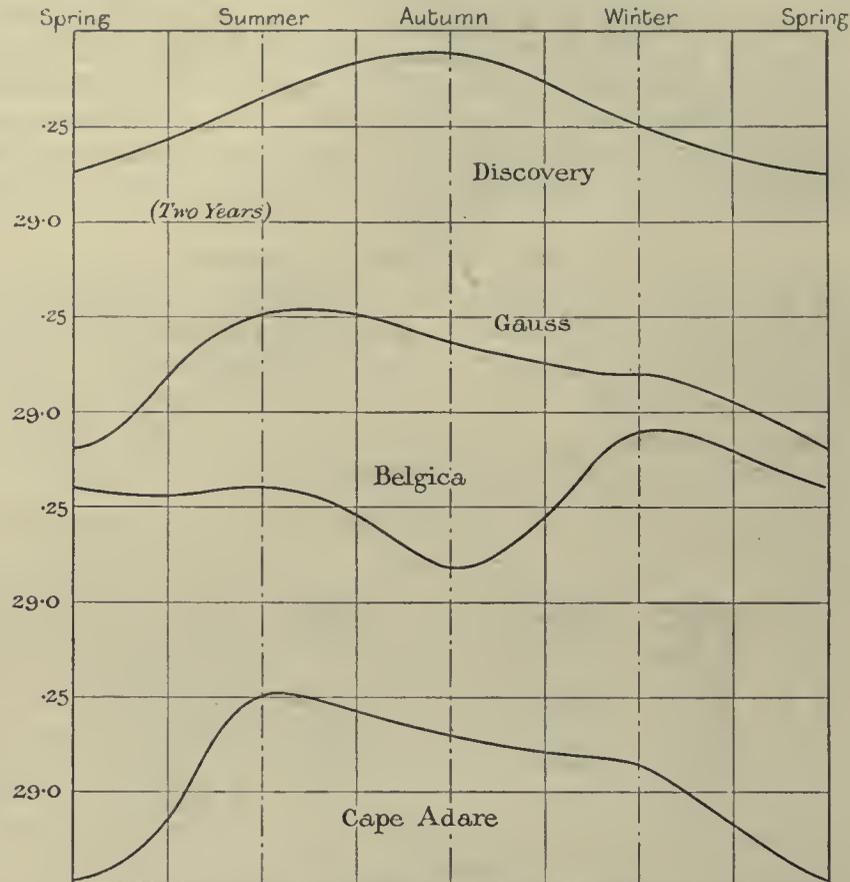


Fig. 1. Mean pressure for the four seasons.

similar to that at the "Discovery's" position. During the drift of the "Belgica," the highest mean pressure occurred in the winter and the lowest in the autumn, the mean in spring and summer being alike; the yearly march of pressure recorded was therefore very unlike that experienced at the other stations.

Only 11 months' observations are available for Cape Adare. The lowest mean pressure was reached there in the spring and the highest in the summer, the seasonal change being very similar to that experienced on board the "Gauss."

#### DIURNAL OSCILLATION OF PRESSURE AT WINTER QUARTERS.

The hourly means have also been combined for each of the four seasons in order to ascertain whether they exhibited a diurnal variation of pressure.

For this purpose mean values were computed for the initial as well as for the final midnights, and the difference between the two distributed proportionately over the day in order to eliminate the non-periodic variation. This was done by pivoting the correction, so to speak, upon the noon value, and applying to the initial and terminal values one-half of the difference between them, subtracting it from the higher of the two and adding it to the lower, the intermediate hourly values receiving a proportional amount of the difference, and the noon value, of course, remaining unchanged. The results are shown in fig. 2.

The diurnal variation, which is certainly very small, is nevertheless distinctly shown, and in each of the four seasons it appears as practically a single oscillation with only slight modifications.

In summer the total amplitude amounts to only 0·014 inch, with a minimum at about 3 a.m. and a maximum between 10 a.m. and 11 a.m., the afternoon decrease being slightly retarded between 5 p.m. and 9 p.m. The curve formed by the oscillation is, however, a very smooth one, and closely resembles in form the curve of diurnal temperature variation for the same season.

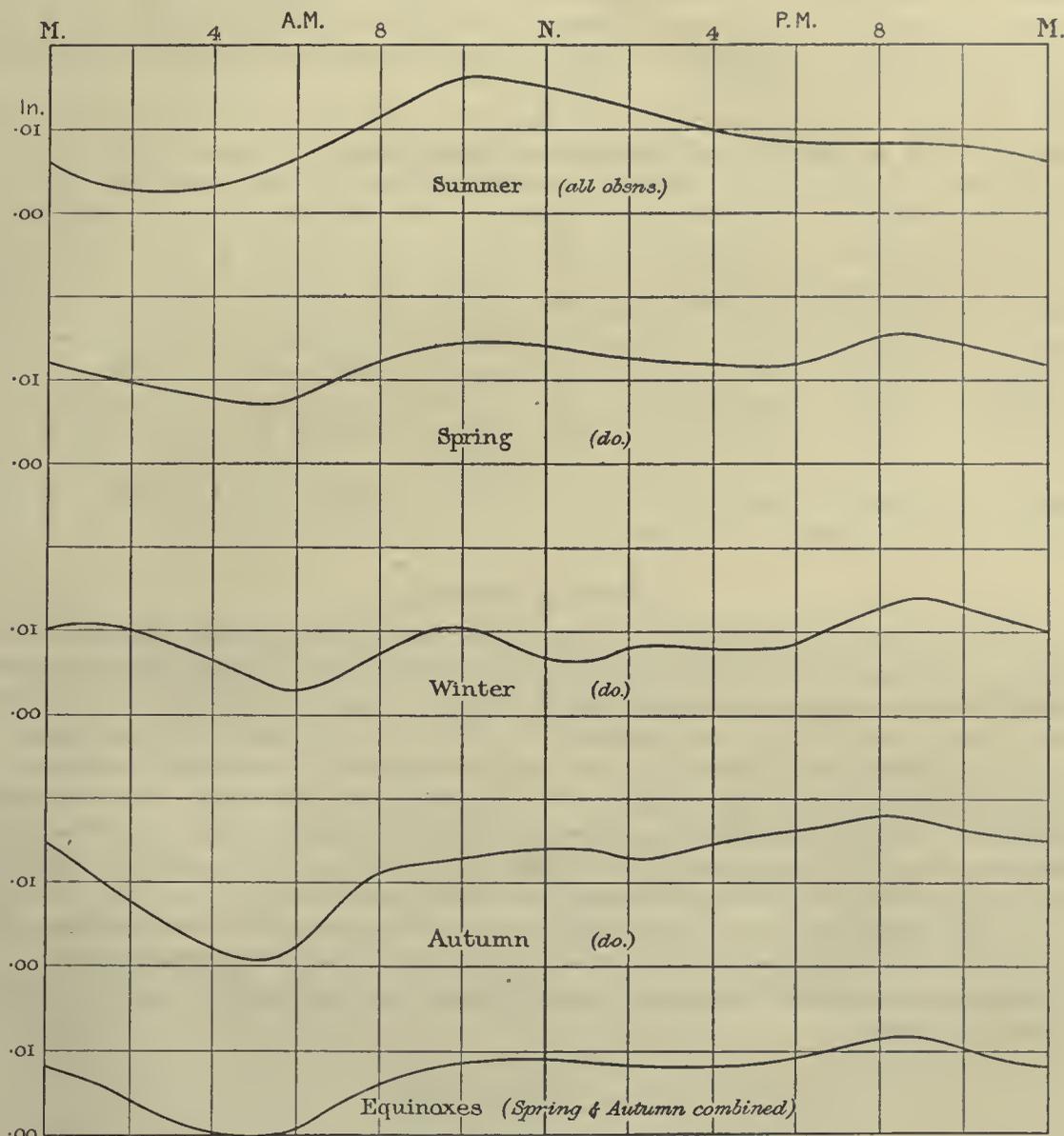


Fig. 2. Diurnal range of pressure ("Discovery").

The oscillation of greatest amplitude is that of the autumn, but even this does not amount to 0·02 inch. The principal feature of this curve is the well-marked minimum at 5 a.m., followed by a quick recovery up to 8 a.m., after which there follows a very gradual rise to the maximum twelve hours later.

The winter oscillation is more irregular, but it, too, has a distinctly marked morning minimum at 6 a.m., and evening maximum at 9 p.m., but the morning maximum, which is indicated more or less clearly in each of the other curves, is most prominently shown here at 10 a.m., after which there follows a very small afternoon minimum.

The spring curve is a very smooth one, and has also a smaller amplitude than the curve of any other season. It rises from a minimum at 5 a.m. to a maximum at 11 a.m., and then, after a slight fall for six or seven hours, it rises to the maximum of the day at 11 p.m.

The Fourier coefficients of the diurnal variation for the seasons, which are given in Table IV., differ from those of lower latitudes in the relatively large amplitude of the first component. The epochs of the maximum of this component in the different seasons become progressively earlier as the year grows, and then get later again through the autumn to the winter, which appears to indicate some relation to the Sun's declination. But the fact that in these latitudes a diurnal variation exists all the year through is a point of some interest, because it has hitherto been pretty generally assumed that it disappeared entirely at a much lower latitude than 70 degrees.

TABLE IV.—Fourier Coefficients of Diurnal Inequality of Pressure.

	Mean.	$P_1$ .	$\mu_1$ .	$P_2$ .	$\mu_2$ .	$P_3$ .	$\mu_3$ .	$P_4$ .	$\mu_4$ .
Spring . .	ins. 29·0578	0·0024	° / 253 4	0·0017	° / 151 22	0·0005	° / 42 17	0·0004	° / 41 30
Summer . .	29·2542	0·0045	187 36	0·0023	149 25	0·0003	15 0	0·0001	78 45
Autumn . .	29·3614	0·0056	262 53	0·0031	153 37	0·0009	17 43	0·0006	27 7
Winter . .	29·1972	0·0029	306 28	0·0017	159 53	0·0009	36 51	0·0010	46 26

#### RANGE OF PRESSURE.

The mean pressure in the Antarctic is low, and in every month of the two years during which the "Discovery" remained at Ross Island the minimum fell below 29 inches, whilst the maximum seldom reached 30 inches and never greatly exceeded it. The lowest point reached by the mercury was 28·140 inches in June, 1902, and the highest 30·181 inches in May of the same year, giving a maximum range of just over 2 inches. The largest range in any month occurred in June, 1902, and amounted to 1·804 inches, but on three other occasions—May and July, 1902, and August, 1903—it exceeded 1·7 inches. In 1902 the monthly range exceeded an inch in the eight consecutive months April to November, but in the following year so large a range occurred only in the five months June to October. The average monthly range for the two years amounted to 1·154 inches.

A quickly falling barometer was frequently, but not invariably, associated with relatively high temperature, and conversely an increase of pressure commonly brought with it an increase of cold.

The fall of the barometer which preceded many of the storms was not very large if judged by Western European experiences.

## XII. DISCUSSION OF THE OBSERVATIONS OF THE DIRECTION AND FORCE OF THE WIND AT WINTER QUARTERS AND ON THE SLEDGE JOURNEYS.

BY

R. H. CURTIS.

### THE STATION.

THE immediate surroundings of any place at which observations of wind were made is a matter of some importance when dealing with the observations themselves. The Winter Quarters of the "Discovery" were in a small bight, about a third of a mile deep, close to the south-western extremity of Ross Island, where the vessel lay east and west and fairly close to the shore. The neighbouring land was hilly, and extended from Hut Point, a low promontory less than a quarter of a mile to the westward, round through north and east to Observation Hill, a conical hill three-quarters of a mile to the south-south-east of the ship. The land, although hilly, did not rise very abruptly, and its highest point, which was much above the general level, was reached at Crater Hill, 1000 feet above the sea and between one and two miles to the eastward of the ship. Between this hill and Observation Hill there lay a wide gully, opening out to the south-east, and known as the Gap. The outlook from the ship to the south-westward, from Observation Hill in the south-south-east to Hut Point in the west was perfectly open and uninterrupted.

An additional series of observations of wind direction and force was made at a point upon the open ice about one-third of a mile to the south of Cape Armitage, the southernmost point of Ross Island. This spot was about two miles south of the ship and, except for Ross Island, there was nothing that could obstruct the wind coming from any direction.

### INSTRUMENTS.

The instrumental equipment of the expedition for making observations of the direction and force of the wind consisted of a non-registering vane of the ordinary type for observing the direction, and of three anemometers for obtaining the velocity. In addition to the instrumental records, the force was also estimated by the Beaufort scale.

One of the anemometers was a small cup instrument, made by CASELLA, which indicated upon a pair of dials the number of miles of wind which had passed over it since the last observation. The cups of this anemometer were 3 inches in diameter, and the distance from the centres of the cups to the spindle was  $6\frac{1}{2}$  inches. Before leaving England it had been compared with the large anemometer at the Kew Observatory, and within the limits of the wind velocities experienced during the time the trial lasted the indications of both instruments were found to be in fairly close agreement. The results shown by the larger instrument are, however, known to be too high, and have to be reduced in the ratio of 15 to 11 to obtain the true speed of the wind, and therefore the dial readings of the smaller instrument were all similarly reduced before they were dealt with in this discussion.

This cup anemometer was mounted upon an iron post, which was fastened to the wooden frame erected to carry the thermometer screens. The cups were 15 feet above the level of the snow and about 120 yards to the eastward of the ship.

The dials were read every two hours when making the other meteorological observations. The readings have been first corrected for the factor, as indicated above, and then divided by 2 in order to get the average hourly speed of the wind in statute miles since the last observation.

Both the other anemometers were pressure-tube instruments, but of different patterns, one being a self-recording instrument, made by MUNRO, and the other a non-recording, or "sight-indicating," instrument by CASELLA.

The latter is a small portable instrument, not intended to be permanently fixed, but to be held in the hand when making an observation. In the present case, however, it was attached to another upright of the stand to which the thermometer screens were fixed, and was connected by tubes with a duplicate vane

“head,” which had been supplied for the self-recording pressure-tube anemometer, the “head” being placed a few inches above the post and 10 feet above the snow. When the instrument is exposed to the wind, the coloured fluid—alcohol—in the glass tube oscillates with the fluctuations in the force of the wind, and the usual method of observation is to watch these oscillations for a few seconds and note what appears to the observer to be its average level, the corresponding velocity being then recorded as that of the wind at the time of the observation.

This method of observing was, however, slightly varied in this instance—the observer recorded the extremes of the oscillation instead of the mean. Such an entry as “16–26” in the Journal means, therefore, that the force of the wind varied from a minimum of 16 miles to a maximum of 26 miles during the time of observation. It does not follow, however, that the arithmetic mean of two such readings would fairly indicate the average force of the wind, even for the somewhat brief period such an observation might be supposed to represent. At times it would no doubt do so, but an examination of the automatic records of a self-registering pressure-tube anemometer would show that frequently it would not, owing to the fact that relatively strong, but very transient, gusts often occur which are not balanced by corresponding lulls, and therefore have a tendency, supposing such a gust to be included in the observation, to exaggerate the average force obtained.

It would have added to the value of the observation, therefore, if, in addition to giving the extreme limits of the excursions of the fluid, the observer had also recorded the velocity corresponding to the position upon the scale around which the fluid appeared most frequently to lie.

A difficulty in connection with the use of the instrument arose from the frequent choking of the “head” and the connecting pipes with drifting snow, necessitating its being frequently dismantled and cleaned. Possibly the small height above the snow at which the “head” was fixed may have been partly responsible for this; but the trouble would doubtless have been much diminished, and perhaps entirely obviated, if the instrument had been used in the way intended, and, instead of being fixed out of doors, had been taken out only when required for the purpose of an observation.

The self-recording pressure-tube anemometer was erected on board the ship, the “head” being placed on the mizzen cross-trees, on the southern side of the ship, 34 feet above the sea level, whilst the recording portion of the instrument was put in the signal locker, on the upper deck. The selection of this position for the recording apparatus was unfortunate, and was the proximate cause of the loss of many weeks’ records.

On account of the difficulty which would probably be experienced in keeping water unfrozen in the high latitudes in which the instrument was expected to work, a “non-freezing mixture” had been supplied for use in the anemometer cistern as a substitute for water. The “mixture” consisted simply of water and methylated spirit, to which a small quantity of glycerine was added to give the compound the specific gravity of water. Without much doubt, had the cistern containing this fluid been placed in a less exposed position below deck—and the instrument itself presented no difficulty to this being done—the fluid would have fulfilled its purpose; but under the influence of the extreme cold to which it was exposed in the locker it frequently got out of order, and on opening the cistern “ice was found on the top of the liquid, then the spirit, and below that a thick substance like condensed milk.” The “mixture” was therefore removed and the cistern “filled with spirit containing only a small amount of glycerine.” The result was a decided improvement in the action of the float, although in very low temperatures and calms “the piston was still inclined to work in thick liquid,” and “the whole lot had to be stirred up.” The extreme cold also affected the ink and the going of the clock; and, as a final result, there were many days on which no record at all was obtained, and many others when the record was of no use.

The vane for indicating the direction of the wind was placed at another angle of the frame for supporting the thermometer screens, at the height of 12 feet above the snow level.

#### OBSERVATIONS.

The observations relating to wind may be summarized as follows:—The direction, as shown by the vane, was recorded at every second hour, from the time of arrival in Winter Quarters till near the close of the vessel’s stay, when the hours of observation were reduced. The force of the wind, as estimated by

Beaufort's scale, was also recorded every two hours with each observation of direction. The record of mean wind velocity, in miles per hour, deduced from 2-hourly readings of the eup anemometer, is practically complete from April, 1902, till the end of the vessel's stay in Winter Quarters, the breaks in its continuity amounting altogether to only a few days, during which the instrument was disabled or under repair. The series of observations of velocity by the "sight-indicating" pressure tube is somewhat less complete, whilst the records of the recording pressure-tube anemometer exhibit frequent lacunæ, which in many instances extend over days and in several others over weeks.

## DIRECTION OF THE WIND.

The observations of wind direction, irrespective of force, were first dealt with.

All the observations for each month were first of all grouped under thirty-two points, and the percentage of their frequency of occurrence under each point determined. It was at once seen that this was a greater degree of refinement than the observations themselves would warrant, and it was evident from the infrequency with which observations were recorded under the intermediate points that the observers had practically limited themselves to sixteen points in making their observations. The observations under each intermediate point were therefore allocated to the points on either side in proportion to the number of observations already credited to them. Thus if five observations of E. by N. winds were to be distributed between E.N.E. and E., and there were already entered to E.N.E. ten observations and to E. fifteen, then two of the five would have been given to E.N.E. and three to E., raising the number of observations under the first-named point to twelve and that under the latter to eighteen.

The results of this grouping are shown in Table I.

TABLE I.—Distribution of Wind Direction under Sixteen Points in Percentages.

Month.	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Calm.	Number of observations.
	per cent.																	
1902																		
February . . .	2	2	5	29	23	13	3	2	—	2	1	—	—	—	1	2	15	225
March . . .	2	4	1	9	16	18	6	10	2	6	—	—	—	—	—	1	25	348
April . . .	1	1	11	11	11	12	12	3	6	—	—	—	—	1	3	2	26	356
May . . .	5	—	10	20	26	6	6	1	5	2	2	—	—	—	1	—	16	372
June . . .	4	—	15	12	23	5	9	2	4	2	1	—	—	—	1	1	21	360
July . . .	5	1	9	11	27	4	14	2	5	2	1	—	—	—	—	—	19	372
August . . .	3	1	17	18	17	8	4	2	—	—	—	—	1	—	2	2	13	372
September . .	3	1	11	9	25	7	13	2	3	—	—	—	—	—	—	—	26	360
October . . .	4	—	17	9	24	5	11	—	4	—	1	—	—	—	—	—	25	372
November . .	20	3	3	8	24	5	10	2	2	—	—	—	—	—	1	2	20	360
December . .	18	2	5	6	16	3	11	3	8	1	—	—	—	—	5	6	16	372
1903																		
January . . .	23	1	7	4	14	2	7	3	3	—	—	—	—	—	2	1	33	372
February . . .	3	1	9	10	36	5	11	1	2	—	—	—	—	—	—	—	22	336
March . . .	8	4	14	17	27	4	8	1	—	—	—	—	—	—	—	—	17	372
April . . .	3	3	14	15	19	6	3	—	1	—	—	—	—	—	—	1	35	360
May . . .	4	1	7	14	26	6	7	1	—	—	1	—	—	—	1	2	30	372
June . . .	6	1	9	6	27	4	9	1	5	1	1	—	—	—	1	—	29	360
July . . .	7	—	12	13	16	3	3	1	2	—	—	—	—	—	1	1	41	372
August . . .	7	2	19	10	17	3	3	1	6	1	2	—	—	—	1	1	27	372
September . .	9	2	18	9	20	6	6	2	3	—	1	—	—	—	1	1	22	360
October . . .	3	1	20	8	24	3	10	1	3	—	1	—	—	—	1	1	24	372
November . .	7	—	5	10	24	7	19	2	10	—	—	—	—	—	—	2	14	274
December . .	8	1	2	9	24	5	14	5	4	—	—	—	—	—	7	3	18	244
1904																		
January . . .	2	—	17	12	28	2	9	2	3	—	—	—	—	—	3	—	22	171
February . . .	1	3	8	16	27	8	12	2	2	—	—	—	—	—	—	—	21	63
Mean for whole period (25 months)	6.3	1.4	10.6	11.8	22.4	6.0	9.0	2.2	3.5	0.8	0.5	—	—	—	1.3	1.1	23.1	8269

The most conspicuous feature of the Antarctic wind which is exhibited by the figures in this table is the predominance of east winds throughout the two years over which the observations extended. East-north-east and north-east winds come next in frequency; but north winds were conspicuous only during the months of November and December, 1902, and January, 1903; south-easterly winds were, on the whole, less common than north-easterly winds; southerly winds were comparatively rarely felt; and west winds were never felt at all.

Generalizing the observations still further by grouping them under eight points only and omitting the calms, as in Table II., we get for the entire series 44 per cent. of easterly winds, 20 per cent. of north-

TABLE II.—Distribution of Observations of Wind Direction under Eight Points.

	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calms.	Gross total.
	per cent.									
Percentage of observations under each point, including calms . . . . .	8	15	34	12	5	1	—	2	23	
Percentage of observations of direction only, excluding calms . . . . .	11	20	44	16	6	1	—	2	—	
(6333 observations)			80							
Number of observations under each point . . . . .	701	1261	2771	990	389	87	12	122	1936	8269

easterly, and 16 per cent. of south-easterly winds; so that no less than 80 per cent. of all the winds observed blew from the quadrant between north-east and south-east. Of the remaining 20 per cent., 11 per cent. fall under north and 6 per cent. under south, leaving only 3 per cent. to be divided between all the westerly points.

An examination of the values for the individual months fails to show any clear indication of a monthly change in the distribution of wind frequency. The observations extended over two complete years, so that each month is twice represented; but a variation of frequency shown by the observations of one month is not, as a rule, supported by the observations made in the corresponding month of the other year. For example, in November and December, 1902, and January, 1903, one-fifth of all the winds observed were from north, but in the corresponding months of 1903-4 there was no such preponderance of winds from that point, December having but 8 per cent. and January only 2 per cent. of winds from north.

The observations were then combined, in order to see whether they indicated any distinctive seasonal distribution, and for this purpose they were arranged in four groups, as in Table III.

The first of these groups embraces the four consecutive months May-August during which the sun was continuously below the horizon; the second group the four months November-February, during which the sun was continuously above the horizon; the third and fourth groups comprise the autumnal and vernal equinoxes respectively, two months, March-April and September-October, in each group.

The table gives the mean percentage of frequency under each of sixteen points for the several seasons—first for each of the two years separately, and then for the two years combined.

In the winter and spring a somewhat marked frequency of north-east winds is shown in both years, and in the winter there was also a greater number of winds from the west of south than is shown by the figures for the other seasons.

In summer the average of northerly winds for the two years combined is rather large owing to the great frequency of those winds in the summer months of 1902-3. This frequency was not repeated in the following year, and whether the distribution observed in the first or that observed in the second summer most nearly indicates the normal for the season must remain a matter of doubt.

The distribution of winds in the spring months appears to approximate somewhat to that of the winter in the greater frequency of north-east winds and also of winds from points to the west of south; whilst in

the autumn months the relative frequency of winds from the west of north suggests that the effect of the warmer months of summer is prolonged in some degree into the autumn.

The changes are, however, all small, and in no season is the outstanding predominance of the easterly current destroyed or indeed greatly modified.

Another very remarkable feature of the South Polar wind which Table I. exhibits is the great frequency of calms and light airs. The smallest percentage of calms in any month was 13 per cent. in August, 1902, and the greatest 41 per cent. in July, 1903, both of them winter months; for the entire period calms averaged 23 per cent. of all the observations. Table III. gives 24 per cent. as the mean percentage of calms for all the winter months, and the same figure for all the equinoctial months combined, but in the summer months the percentage fell to 20 per cent.

TABLE III.—Seasonal Distribution of Wind Direction under Sixteen Points.

	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Calms.
	per cent.																
Sun continuously BELOW Horizon :—May–August.																	
1902 . . . . .	4	1	13	15	23	6	9	2	5	2	1	—	—	—	1	1	17
1903 . . . . .	6	1	12	11	21	4	5	1	3	1	1	—	—	—	1	1	32
Mean . . . . .	5	1	12	13	22	5	7	2	4	2	1	—	—	—	1	1	24
Sun continuously ABOVE Horizon :—November–February.																	
1902–3 (5 months)	13	2	6	11	23	6	8	2	3	1	—	—	—	—	2	2	21
1903–4 . . . . .	4	1	8	12	26	5	13	3	5	—	—	—	—	—	3	1	19
Mean . . . . .	8	2	7	12	24	6	10	3	4	—	—	—	—	—	2	2	20
Equinoxes :—AUTUMNAL, March–April.																	
1902 . . . . .	2	3	6	10	13	15	9	7	4	3	—	—	—	—	1	2	25
1903 . . . . .	5	4	14	16	23	5	5	1	—	—	—	—	—	—	—	1	26
Mean . . . . .	3	4	10	13	18	10	7	4	2	1	—	—	—	—	1	2	25
Equinoxes :—SPRING, September–October.																	
1902 . . . . .	3	1	14	9	25	6	12	1	3	—	1	—	—	—	—	—	25
1903 . . . . .	6	2	19	8	22	4	8	2	3	—	1	—	—	—	1	1	23
Mean . . . . .	4	2	16	9	23	5	10	2	3	—	1	—	—	—	—	1	24
Mean of both equinoxes .	4	3	13	11	21	8	8	3	3	—	—	—	—	—	—	2	24

At this point it is important to consider what effect, if any, the land surrounding the ship in her Winter Quarters could have had upon the direction of the winds experienced there.

From the description of the position already given it will be realized that the directions towards which

the ship was most open and exposed were precisely those from which the wind seldom or never blew, and therefore the absence of winds from westerly points could not have been due to the effect of the land in obstructing or deflecting a westerly current, supposing one to have existed.

On the other hand, the winds which were of most frequent occurrence reached the ship after crossing the southern spur of Ross Island, which at Discovery Bay is not more than a couple of miles in breadth from west to east, and on its eastern side is bounded by the open Barrier ice. In traversing the Barrier an easterly wind current would meet with no obstruction, and the land interposed between the Barrier and the ship, although hilly, was not of a character materially to affect its course.

It has been suggested that "The Gap," the valley which lay to the south-east between Crater Hill and Observation Hill, formed a kind of funnel which had an effect upon the direction of the wind at the ship. But in that case the predominant direction would have been south-easterly, and Table II. shows that south-east winds were less frequent than north-east winds, and less than half as frequent as winds from the east.

The effect of the surrounding land upon the direction of the winds observed at the ship's quarters can, however, be tested more directly, by comparing the results shown in Table I. with those given in Table IV., which are derived from observations of the direction and force of the wind made at a point

TABLE IV.—Distribution of Observations of Wind Direction made at a Point on the Ice Half a Mile to the South of Cape Armitage.

	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Calms.	
Percentage of observations under each of 16 points and of calms.	per cent.																	
	2	—	12	17	34	10	7	3	4	1	—	1	1	1	4	3	14*	
			80															

\* Percentage of total number (424) of wind observations. In calculating the relative distribution of directions the number of calms (60) was omitted.

about half a mile to the south of Cape Armitage, the southernmost point of Ross Island, where the exposure was perfectly open in every direction. These observations were made generally once a day, and they cover, with some breaks, a period of 16 months.

It should, however, be borne in mind that the observer at Cape Armitage had to observe the direction of the wind without the assistance of a wind vane, and probably this was at times a disadvantage; but whatever allowance should be made on this account, the distribution of wind directions is practically the same there as at the ship. Thirty-four per cent. of the winds were from east, 17 per cent. from east-north-east, 12 per cent. from north-east, and 7 per cent. from south-east; whilst grouping all the easterly points from north-east to south-east, we get a percentage of 80, which is precisely that obtained by similarly grouping the observations made at the ship, as shown in Table II. This result seems fully to justify the conclusion that the direction of the wind at Discovery Bay was not materially affected by the surrounding land, and that the relative distribution indicated by the percentages given in Table II. may be accepted as fairly representing the wind frequency of the district.

#### SLEDGE JOURNEYS.

Observations of the direction and force of the wind were made upon most of the sledge journeys undertaken at various times during the stay of the Expedition at Ross Island.

In dealing with these observations, not only has the varying position of the observer from day to day to be kept in mind, but in some instances the changes also which were constantly taking place in his height above sea level, and in the character of his surroundings; and particularly was this the case in the western journeys up the slopes of the mountain ranges lying in that direction. As might have been expected,

owing to the exigences of sledging the hours of observation were more or less irregular; and there was also the added difficulty of having to determine the wind direction without instrumental aid. On some of these points the information given in the Journal is less complete than could be desired, and fuller information respecting what was done in correcting the observations for the magnetic variation would have been especially useful. This last point is, of course, one of much importance, and, unfortunately, it is one respecting which little that is definite is said in the note books.

Dealing broadly with the observations, the most prominent feature of the wind which they reveal is the frequency with which light variable airs and calms occurred. Most of the journeys were made between the beginning of October and the end of January, and at Winter Quarters in those months calms were recorded in approximately 25 per cent. of the observations; but upon the whole their occurrence appears to have been much more common to the southward and westward of the ship, approaching 40 per cent. in the former direction and upwards of 50 per cent. in the latter. At the same time the gusty character of the wind is maintained by the observations, and occasionally the squalls were very sharp and severe.

From the observations made in the course of the journeys to the south and west, it would appear that in those directions the wind was more southerly than it was at Winter Quarters, but the uncertainty which exists respecting the correction of the records for magnetic variation makes it inexpedient to speak very definitely upon the point. On some of the western journeys, however, a considerable altitude was attained, certainly above 7000 feet, and the observations of the movements of the lower clouds made at the ship would lead us to expect at that height above the sea a southerly, or even a westerly, current such as is recorded in the logs.

Also it should be remembered that the southern journeys followed the line of lofty mountains which, stretching away to the southward, form the eastern boundary of Victoria Land; and it is quite conceivable that an easterly wind current sweeping across the Barrier would, on meeting this range, become deflected to the northward and would in consequence be felt by the sledging parties as a southerly or even a south-westerly wind.

One of the most important journeys considered with reference to the observations of wind direction was that of Lieutenant ROYDS, to a distance of 170 miles to the south-east across the Great Ice Barrier, made in November, 1903. Throughout this journey the party was far removed from any land, and there were absolutely no obstructions to the free movement of the air in any direction; and therefore the observations of wind direction should be valuable in relation to those made simultaneously at the ship. If we could assume that the observations were made by compass and entered in the note-book as made, without correction, we get, after applying a mean correction for variation, the following analysis of the observations:—

	per cent.
Observations of— N. by E. (true) . . . . .	4
N.E. „ N. ( „ ) . . . . .	15
N.E. „ E. ( „ ) . . . . .	5
E. „ N. ( „ ) . . . . .	51
Calms . . . . .	25
	100

If the assumption that the observations were not originally corrected for compass error is a correct one, the confirmation these results afford to the accuracy of the distribution of winds obtained from the observations made at the ship would be very great, more especially because of the very open character of the region in which the observations were made.

On the other hand, if we suppose the observations to have been corrected for variation before their entry in the log, we find ourselves confronted with a problem it is not easy to solve:—How are we to account for the existence of a steady south-westerly current within a few miles of the ship, whilst at Cape Armitage and at the ship herself, although quite open and unsheltered towards the south-west, easterly winds were experienced almost exclusively, a south-west wind being of extremely rare occurrence, and a westerly wind practically never felt at all?

TABLE V.—Summary of the Wind Observations made on some of the longer Sledge Journeys.

Journey of Lieutenant ARMITAGE, R.N.R., to the West, November 29, 1902, to January 19, 1903.									
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calms.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Percentage of observations under each point . . . . .	1	—	4	6	17	23	48	1	54
Total number of observations, 292. Greatest distance and bearing from ship, S. 86° W., 111 miles. Greatest altitude above sea, 7000 to 8000 ft.									
Journey of Captain SCOTT, R.N., to the South, November 2, 1902, to February 2, 1903.									
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calms.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Percentage of observations under each point . . . . .	18	3	—	4	37	30	2	6	37
Total number of observations, 322. Greatest distance and bearing from ship, S. 5° W., 296 miles.									
Journey of Lieutenant BARNE, R.N., to the South-west, October 7 to December 12, 1903.									
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calms.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Percentage of observations under each point . . . . .	—	1	—	—	37	48	13	1	35
Total number of observations, 306. Greatest distance and bearing from ship, S. 23° W., 168 miles.									
Journey of Captain SCOTT, R.N., to Western Mountains, October 26 to December 16, 1903.									
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calms.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Percentage of observations under each point . . . . .	—	1	3	4	39	32	20	1	49
Total number of observations, 230. Greatest distance and bearing from ship, S. 79° W., 272 miles. Greatest altitude above sea, 7000 to 8000 ft.									
Journey of Lieutenant ROYDS, R.N., to South-east across the Ice Barrier, November 10 to December 9, 1903.									
	S.E.	S.S.E.	S.	S.S.W.	S.W.	Calms.			
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.			
Percentage of observations under each point . . . . .	—	6	20	6	68	25			
	N. by E.	N.E. by N.	N.E. by E.	E. by N.					
	per cent.	per cent.	per cent.	per cent.					
Percentage after applying a mean correction for variation of 145° E . . . . .	6	20	6	68					
Total number of observations, 235. Greatest distance and bearing from the ship, S. 42° E., 167 miles.									

NOTE.—Calms were omitted in calculating the percentage frequency of wind directions.

In Table V. an analysis is given of the wind observations made on the more lengthy and representative sledge journeys.

#### THE DISTRIBUTION OF BAROMETRIC PRESSURE IN RELATION TO WIND.

The movement of atmospheric air currents as regards both direction and rate is, of course, governed by the distribution of barometric pressure, and in the southern hemisphere an easterly wind implies the existence of an area of relatively high pressure to the southward of the point at which the wind is observed. If, therefore, it could be shown that such an area of high pressure of a more or less permanent character existed over the Great Ice Barrier to the southward of Ross Island, the distribution of wind directions which was observed at the "Discovery's" Winter Quarters would be at once confirmed and explained.

A consideration of the problem of the general air circulation in the south polar region leads almost irresistibly to the conclusion that some such accumulation of air must take place in its higher latitudes, but unfortunately the data yielded by the expedition are not such as would justify us in saying that its existence is absolutely proved, although perhaps it goes a good way in that direction.

On most of the sledge journeys readings of aneroid barometers were made and recorded, although in some instances at somewhat irregular intervals. These readings were affected by two distinct causes,—the variations in level of the different places of observation, and the changes in pressure due to movements of the atmosphere, and it is difficult to say to what extent these may have severally contributed to bring about the difference in pressure observed between any two consecutive readings. On some journeys, in the neighbourhood of land, the effect due to the first named cause was so great as to render that due to the second quite inconspicuous; but the journey of Lieutenant ROYDS to the south-east to which reference has already been made was over the level ice quite away from the land, and therefore it seems fair to assume that any changes of level during that journey would be very slight and gradual and not such as would mask the true barometric oscillations.

The barometric observations made on that journey have therefore been dealt with as follows:—The journey out and home was divided into distance-intervals of twenty miles, and all the observations made between 0 and 20, 20-40, 40-60, &c., miles from the ship were meaned and the result compared with the

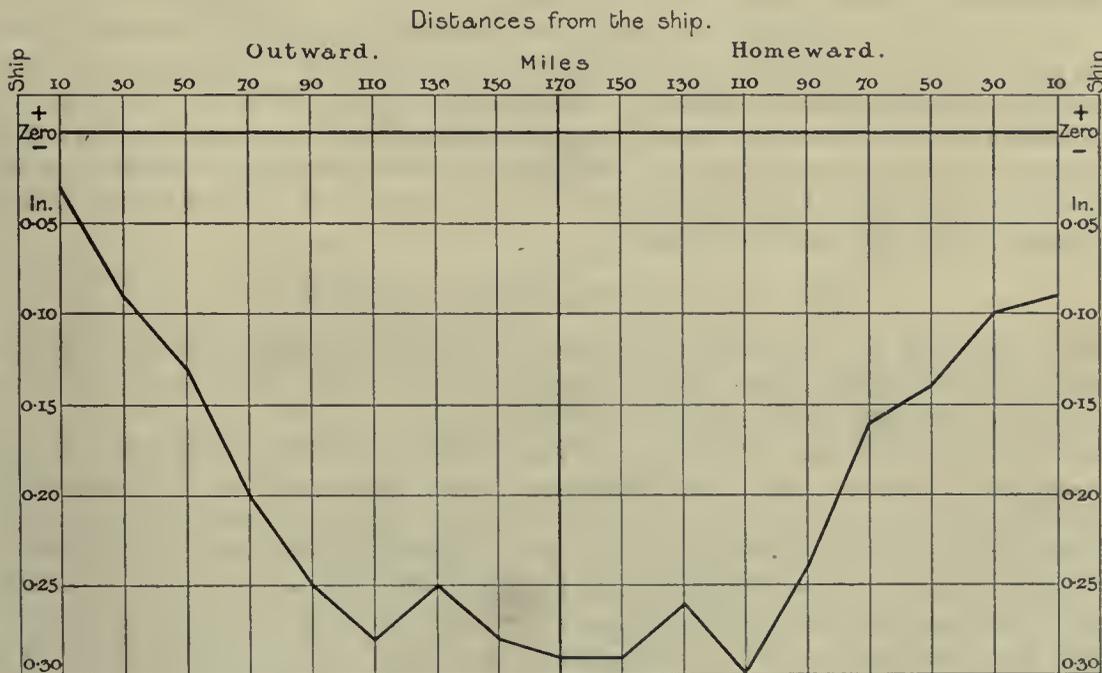


Fig. 1. Difference between the mean height of the barometer at Winter Quarters and on the sledge journey to the south-east across the Great Ice Barrier.

mean of the corresponding corrected readings of the barometer taken on board the ship. The differences between these two sets of mean values being then plotted to the corresponding mean distances were found to exhibit the fairly regular curve shown in fig. 1, the difference increasing from  $-0.03$  inch at 10 miles on the outward journey to  $-0.29$  inch at the extreme point reached, and then decreasing again to  $-0.09$  inch at 10 miles from the vessel on the return. The correction required to make the aneroid when read at the vessel agree with the ship's barometer, corrected for temperature and sea level, was applied throughout.

By meaning the observations in this way the *casual* fluctuations of pressure were to a great extent smoothed out, and probably sufficiently so to warrant us in regarding the mean for each distance-interval as the mean pressure for the time occupied by the party in traversing it. The differences, therefore, between those means and the means at the ship are due (1) to the difference in level between the two places, and (2) to the barometric gradient which may have existed at the time.

As regards (1), the distant barometer being always lower than that at the ship indicates that in so far as that fact represents change of level the travellers had been rising; whilst as regards (2), except so far as it is modified by (1), the differences point to the presence of an area of relatively *low* pressure in the region traversed. That the differences were chiefly due to change of level is, however, made clear by the fact that throughout the journey the winds were, with only a few brief exceptions, very light, with a large percentage of calms, and this would certainly not have been the case had the difference been to any marked extent due to barometric gradient. There was also evidence of very considerable ice pressure, and of a northerly movement of the Barrier ice-sheet, as to which Captain SCOTT remarks\*: "it is certain that there must be a supply of ice from some region to the south," which must necessarily have caused some gradient, if only a small one.

Some rise in level may therefore be safely assumed, and the question then arises whether its full extent is indicated by the differences shown in the diagram, or whether these should not be increased (or decreased) by an amount representing the barometric gradient.

As they stand, assuming there was no *barometric* gradient, the differences indicate a change of level in the ice of little more than 1 foot per mile,—a gradient which could hardly be reduced in view of the pressure phenomena which were observed upon the ice-sheet and of the remark of Captain SCOTT just quoted; and therefore the existence of an area of *low* pressure to the southward of Ross Island which would result from a reduction of the *ice* gradient appears to be very improbable.

On the other hand, if we may assume the existence of a relatively high pressure in the region traversed by the party, with a sea-level gradient of about  $0.1$  inch for the distance of 170 miles represented by the diagram, the corrected (augmented) differences would then give us a rise in level of the ice of about 2 feet per mile along the line traversed, and although this gradient is still very slight it accords better with the ice phenomena observed than does the smaller one, whilst at the same time we get a barometric gradient sufficient to account fully, both as regards direction and force, for the wind distribution observed at the "Discovery's" Winter Quarters at Ross Island.

#### RESULTS AT OTHER STATIONS IN THE ANTARCTIC.

Before leaving this part of the subject it may be well to refer to the results obtained in 1899 by the "Southern Cross" Expedition at their winter station at Cape Adare in Lat.  $71^{\circ}$  S., Long.  $170^{\circ}$  E., rather more than 400 miles north of the "Discovery's" position.

The exposure for wind observations was probably less satisfactory there than it was at Discovery Bay, as a range of high mountains rose abruptly to the south and west of the station; but to the eastward and round through north the exposure was open to the sea. It was from the south-east, however, that most of the winds blew, and although the distribution was not so exclusively confined to the easterly quarters as was the case at Discovery Bay, yet, as will be seen from the following Table VI., it was such as to lend considerable support to the suggestion that the easterly air current which the "Discovery" experienced at Ross Island extends, as the predominating current near the sea level, over a large extent of the surrounding region. Calms were of much more frequent occurrence at Cape Adare than at Discovery Bay.

\* 'Voyage of the "Discovery,"' vol. ii., p. 428.

TABLE VI.—Percentage Distribution of Wind Direction at Cape Adare during the Eleven Months  
March, 1899, to January, 1900.

(The observations were made every two hours from 9 a.m. to 9 p.m.)

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calms.
per cent. 3·6	per cent. 2·6	per cent. 9·1	per cent. 20·4	per cent. 13·9	per cent. 4·1	per cent. 3·1	per cent. 3·1	per cent. 40·1
		43·4						

From February, 1902, to February, 1903, the German Antarctic exploration vessel "Gauss" was imprisoned in the ice just within the Antarctic Circle in longitude 90° E. It will be noticed that her sojourn in the ice corresponds to the first half of the "Discovery's" stay at Ross Island, and although the two places are nearly 90° of longitude apart, yet the wind frequency experienced was strikingly similar at both places. The position of the "Gauss" was, from a meteorological point of view, entirely satisfactory, so that in her case, at any rate, there can be no question of purely local influences having affected the direction of the wind she experienced. The predominance of easterly winds was, however, most marked throughout the entire period of the vessel's stay, as was also the second striking feature of the "Discovery" observations—the frequency of calms; the number of calms was, however, slightly less, whilst the number of westerly winds was rather above the number observed at Discovery Bay.

The following table, summarizing the "Gauss" results for the seasons, is given by Dr. MEINARDUS:—

TABLE VII.—"Gauss" Winter Quarters, Latitude 66° 2' S., Longitude 89° 38' E.

February 19, 1902, to February 18, 1903.

	Percentage of winds observed during—				
	Autumn.	Winter.	Spring.	Summer.	Year.
Easterly winds . . . . .	81	73	69	70	73
Westerly winds. . . . .	11	12	17	24	16
Calms . . . . .	8	15	14	6	11

The results are given in greater detail in Table VIII.

It will be seen, therefore, that the suggestion of a wide distribution for the easterly wind current observed at the Winter Quarters of the "Discovery" finds support in the observations made at these two widely separated places in the Antarctic region, in both of which there was found the same marked persistence of winds from the east, comparative rarity of winds from the west, and noticeable frequency of calms.

Observations of the direction and force of the wind were also made on board the "Scotia," the vessel of the Scottish National Antarctic Expedition, during two summer cruises in the Weddell Sea, first in February and March, 1903, and again in March, 1904. The region covered on these cruises was roughly that between the meridians of 45° W. and 10° W., and the parallels of 60° S. and 73° S., and, therefore, it lay far to the north of Discovery Bay, and also about 160° to the westward, and at so great a distance the meteorological conditions governing the movements of the air may have differed materially from those at Ross Island. The short Table IX. of the relative frequency of the winds is obtained from a diagram given by Mr. MOSSMAN in a paper printed in the 'Scottish Geographical Magazine' for May, 1906.

TABLE VIII.—Percentage Distribution of Wind Direction under 16 Points at the Winter Quarters of the German Antarctic Exploration Vessel "Gauss," in Latitude 66° 2' S., Longitude 89° 38' E.

1902-3.	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Calms.
	per cent.																
March . . .	—	—	—	1.6	47.1	7.0	6.2	15.3	4.8	2.2	1.1	7.5	—	0.5	—	—	6.7
April . . .	—	—	—	3.9	36.1	15.0	10.0	8.9	5.3	0.5	2.5	1.1	4.2	1.4	0.8	—	10.3
May . . .	—	—	—	—	60.2	11.0	4.6	9.1	—	0.1	0.1	4.9	3.8	—	—	—	6.2
June . . .	0.1	—	0.1	0.6	43.8	15.6	7.2	2.5	0.1	0.1	1.5	0.1	4.3	0.4	0.8	0.4	22.4
July . . .	0.1	—	—	0.7	60.1	6.2	2.4	0.1	0.8	0.7	1.1	1.1	4.5	3.1	0.8	0.5	17.8
August . . .	0.1	0.8	—	8.8	59.1	7.0	1.3	0.6	0.6	—	0.5	0.8	11.6	2.7	0.5	0.4	5.2
September . . .	0.3	0.1	0.2	1.3	28.5	17.6	7.2	8.9	0.6	1.5	1.5	5.1	13.2	1.3	1.5	0.1	11.1
October . . .	0.5	1.0	2.8	2.7	37.5	12.4	2.4	0.5	0.9	0.1	0.7	2.6	5.9	4.4	4.3	0.6	20.7
November . . .	—	—	0.4	2.9	74.2	3.7	3.0	0.4	0.3	—	1.9	0.4	2.5	1.5	—	—	8.8
December . . .	0.5	—	1.3	16.1	44.4	8.1	2.1	2.7	4.0	3.2	3.0	1.6	4.6	0.5	1.1	0.3	6.5
January . . .	—	—	1.6	6.7	33.9	18.6	7.5	3.5	3.0	0.5	0.5	3.0	7.0	4.8	0.8	—	8.6
February . . .	—	—	—	1.5	48.2	4.3	0.7	4.9	3.4	3.9	2.1	12.5	13.5	0.3	0.3	0.2	4.2
Autumn . . .	—	—	—	1.8	47.8	11.0	6.9	11.1	3.4	1.0	1.2	4.5	2.7	0.6	0.3	—	7.7
Winter . . .	0.1	0.3	0.0	3.4	54.3	9.6	3.6	1.1	0.5	0.3	1.0	0.7	6.8	2.1	0.7	0.4	15.1
Spring . . .	0.3	0.4	1.1	2.3	46.8	11.2	4.2	3.3	0.6	0.5	1.4	2.7	7.2	2.4	1.9	0.2	13.5
Summer . . .	0.2	—	1.0	8.1	42.2	10.3	3.4	3.7	3.4	2.5	1.9	5.7	8.4	1.9	0.7	0.2	6.4
Year . . .	0.1	0.2	0.5	3.9	47.8	10.5	4.5	4.8	2.0	1.1	1.4	3.4	6.3	1.7	0.9	0.2	10.7

TABLE IX.—The Relative Frequency of Winds from each of Sixteen Points, and of Calms, observed during Two Cruises of the "Scotia" in the Weddell Sea, in February and March, 1903, and in March, 1904.

N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Calms.
per cent.																
10	6	11	5	6	3	5	3	5	3	9	3	8	3	9	5	6

From this table it will be seen that the winds blew chiefly from N.E., N., N.W., W. and S.W., and less frequently from S., S.E. and E., but it is pointed out by Mr. MOSSMAN, in the paper from which this table is derived, that "practically all the east winds recorded during the two cruises were experienced to the south of the Antarctic circle," and also that the east winds were stronger than those from any other quarter, from which it may be reasonably inferred that the wind distribution shown in the table was chiefly due to the comparatively low latitudes at which the bulk of the observations were made, and that had the vessel remained longer in the higher latitudes she occasionally reached, the easterly current would have been more prominently exhibited.

#### WIND CURRENTS AT HIGHER LEVELS.

In one respect the choice of the "Discovery's" Winter Quarters proved to be an exceptionally fortunate one, inasmuch as it afforded opportunities for obtaining information respecting the direction of motion of the upper air currents by observations of the smoke emitted from the crater of Mount Erebus, nearly 13,000 feet above the sea level.

Although the mountain was not visible from the ship it could always be seen, under normal conditions of weather, from a short distance to the westward, and also from the observing station off Cape Armitage.

On many of the sledge journeys, also, the smoke was visible, and it was the practice to include a note of the direction of its drift along with the other meteorological observations. These sledge journey records

of the drift of the smoke from Mount Erebus are of special value, because, owing to the distance from the mountain of the observer at Winter Quarters and also to his position relative to the line followed by the smoke, it was sometimes difficult for him to determine with precision the direction of the latter. Under these circumstances an independent set of observations, made sometimes at nearly the same instant, but always from a different point of view, becomes very useful. The two sets of observations were, therefore, in the first place dealt with separately, and then combined, and the results are given in Table X.

TABLE X.—Relative Distribution under Eight Points of the Direction of Movement of the Air Currents at High Levels, as obtained from Observations of (a) Lower Clouds, (b) Smoke from Mount Erebus, and (c) Upper Clouds.

	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
	per cent.							
(a) Observations of lower clouds . . . . . (1080 observations)	18	10	13	14	18	15	4	8
					47			
(b) Movement of Mount Erebus smoke—								
Observed at Winter Quarters . . . . . (226 observations)	4	4	4	8	10	36	31	3
Observed on sledge journeys . . . . . (142 observations)	4	1	3	9	14	35	24	10
Mean . . . . .	4	2	4	8	12	36	28	6
						76		
(c) Observations of upper clouds . . . . . (532 observations)	8	4	6	8	10	26	19	19
							64	

The same table also gives information respecting the movement of the upper air currents as shown by the directions in which clouds entered as "upper" and "lower" clouds respectively were observed to travel. It is, perhaps, fairly safe to assume that the clouds entered as lower clouds were correctly classified as such, but it may not be an equally safe assumption that all those entered as "upper" clouds really belonged to the highest cloud levels. Possibly the dividing line between the two classes of cloud may not always have been easy of recognition, and, in consequence, some of the so-called "upper" clouds, although doubtless *high* clouds, might, perhaps, with more accuracy have been assigned to the lower levels. The point is of some importance, in so far as it may have influenced the result obtained as regards the prevailing direction of movement, and it ought also to be kept in mind when attempting to assign an approximate average height for the strata dealt with. As regards the height to which the results given in the table may be considered to apply, we shall probably not be far wrong if we assume it to be from 5000 to 7000 feet for the lower clouds, and at least 20,000 feet for the upper clouds, in which case the drift of the Erebus smoke would represent the motion of the air at a level approximately midway between the two.

The figures in the table are very striking. It will be remembered that throughout the whole time the ship lay in Discovery Bay the dominant winds blew from the eastward, and that whilst 80 per cent. of all the winds observed blew from between north-east and south-east, the number of winds from west did not amount to even 1 per cent. But at the level of the lower clouds this distribution becomes materially changed and gives place to one which is far more equable, but which, nevertheless, shows a decided tendency for the air current to shift more to the southward and westward, nearly one half of all the observations being included between south-east and south-west. Of the individual points, north and south are those which have the largest percentages, each having 18 per cent. of the total number of observations, whilst the percentages under north-east, east, south-east and south-west vary from 10 per cent. to 15 per cent. West, which is still the least frequently observed direction, has a percentage of 4, and north-west 8 per cent., so that, even at this comparatively low level, a westerly current begins to show itself.

The two sets of observations of the drift of Mount Erebus smoke give slightly different percentages for each of the eight points, but the general agreement between them is surprisingly close considering the conditions under which they were made. Taking the mean of the two sets, we find that at the level of from 13,000 to 14,000 feet the change in the direction of movement of the air currents, which is indicated by the lower clouds, has become further developed, and that, at that height, the easterly current of the surface has become almost entirely superseded by another from between south-west and west. These two directions together account for no less than 64 per cent. of all the observations, south-west alone having 36 per cent. South has 12 per cent., north-east has only 2 per cent., and north and east have each but 4 per cent. At this level, therefore, the dominant air current is unmistakably from between south-west and west, and winds from between east and north, the quarter from which the surface winds chiefly came, are comparatively rare.

At the level of the upper clouds we find this progressive change in direction towards the westward carried still further, and a marked prevalence of north-westerly winds is shown for the first time. South-west, it is true, still remains the slightly dominant direction, but this may possibly be due to the inclusion

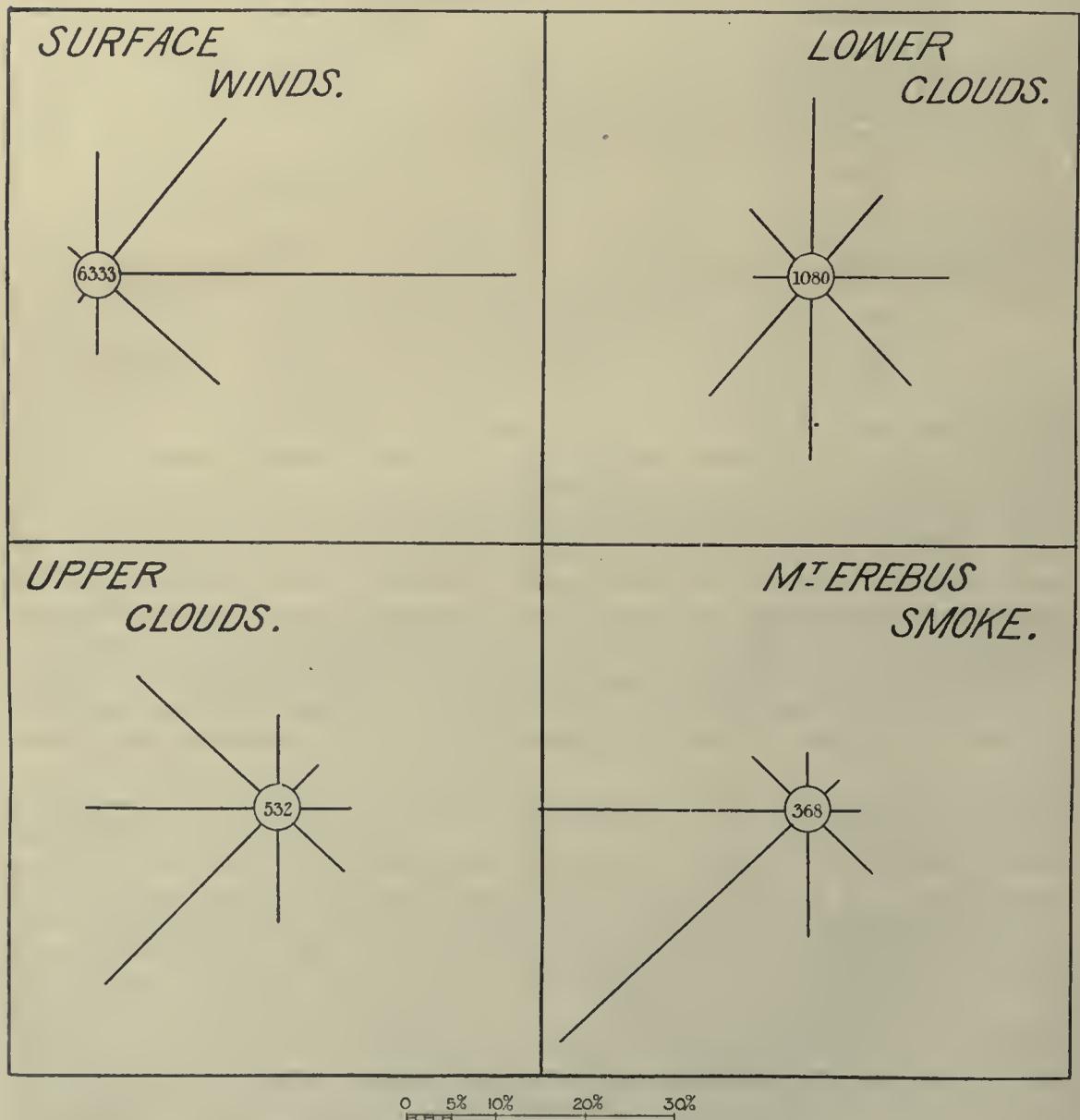


Fig. 2. Distribution of air currents at various levels.

of clouds moving at a lower level than that of the true upper clouds. If this surmise is correct, it is evident that had such clouds been grouped with the "lower" clouds, the change of the current towards the south-west, already shown by the lower cloud observations, would have been even more marked, and its further westerly development with height through the level of the Erebus smoke to that of the upper clouds would have been still more apparent. But the figures as they stand in the table are sufficiently striking: 64 per cent. of all the observations of upper clouds show a flow of air from between north-west and south-west. At the lower level of the Erebus smoke 76 per cent. of the observations are comprised between west and south, and, still lower, 47 per cent. of the lower clouds were found to move from between south-west and south-east, whilst at the level of the sea 80 per cent. of the winds came from between north-east and south-east. At the surface, east is the dominant wind direction, but at the level of the Erebus smoke, and of the upper clouds, the prevailing wind is from a westerly direction.

#### VELOCITY OF THE WIND.

The winds of that portion of the Antarctic region in which the "Discovery" wintered appear to possess two distinctive characteristics—exceptional gustiness and a great tendency to die away and give place to calm.

As regards the second of these characteristics, the observations of wind for the whole period of the vessel's stay in Winter Quarters show an average of 23 per cent. of calms, the monthly percentages varying from a minimum of 13 in August, 1892, to a maximum of 41 in July, 1903, both of them winter months. But the distribution of calms over the different months is very irregular and shows little indication of a seasonal variation.

Away from the ship, on the sledge journeys, calms were probably more frequent than at Discovery Bay, but the irregular intervals at which the wind observations were made on these journeys, probably owing to the exigencies of sledging, make it difficult to compare satisfactorily their relative percentage frequency. The figures in Table V. show a frequency of 54 per cent. and 49 per cent. for calms upon the two western journeys for which an analysis is given, and of 35 per cent. for the two journeys to the south. Each of these journeys was of several weeks' duration, the shortest covering about fifty days, and the longest three months.

As has already been mentioned, the frequent occurrence of calms was a conspicuous feature of the wind observations at Cape Adare and at the Winter Quarters of the "Gauss."

The gustiness of the wind can be inferred from the fact that two numbers are almost invariably used in the Journal to indicate the force as estimated by Beaufort's scale: *e.g.*, "SW, 1-6; S by W, 3-7." But the inference is amply confirmed by numerous notes by the observers, who call attention to squalliness as an especially characteristic feature of the gales and "blizzards" they experienced.

#### MEAN MONTHLY VELOCITY.

The mean hourly velocity of the wind for each month obtained from the readings of both the cup anemometer and the pressure-tube anemometer is shown in Table XI. to be 10·3 miles per hour by the former and 10·4 by the latter.

It has already been said that the pressure-tube records of wind velocity were frequently interrupted, and owing to that fact a satisfactory comparison cannot be made between the mean velocities for the individual months obtained from the two anemometers, because the occurrence in any month of an unusually windy period or of a long spell of very calm weather, during either of which the cup instrument alone was at work, would obviously cause the mean velocity for the month deduced from the readings of that instrument to be higher in the one case and lower in the other than the monthly mean obtained from the smaller available number of pressure-tube observations; and the rather large differences which the table shows in the mean velocities by the two instruments for certain months is explained in this way.

But as the length of the period covered by the records is increased the risk of error from this cause becomes diminished, since the lacunæ in the pressure-tube record extending over both calm and windy periods tend to balance one another, and therefore it is probable that the mean hourly velocity for the

TABLE XI.—Mean Hourly Velocity of the Wind for each Month, by Cup Anemometer and by Pressure-Tube Anemometer (Irrespective of Direction).

Date.	Velocity (miles per hour).	
	Cup.	Pressure tube.
1902		
May . . . . .	17	10·9
June . . . . .	12	9·0
July . . . . .	12	12·2
August . . . . .	14	12·3
September . . . . .	10	7·6
October . . . . .	10	8·6
November . . . . .	8	8·4
December . . . . .	8	7·3
1903		
January . . . . .	6	5·2
February . . . . .	10	8·3
March . . . . .	11	10·6
April . . . . .	9	9·4
May . . . . .	10	14·0
June . . . . .	11	12·0
July . . . . .	9	12·0
August . . . . .	11	12·0
September . . . . .	11	13·0
October . . . . .	12	15·0
November . . . . .	11	11·0
December . . . . .	8	10·0
1904		
January . . . . .	7	10·0
February . . . . .	—	—
21 months . . . . .	10·3	10·4
Beaufort scale estimations } = 2·4 = 9·5 miles per hour. (average of same 21 months)		

twenty-one months covered by the pressure-tube observations is fairly accurate. The mean hourly velocity so obtained is practically identical with that derived from the readings of the cup anemometer.

Bearing in mind how essentially different in principle are the two instruments, so close an agreement between them is very satisfactory, and it leaves little doubt that for the period covered by the stay of the expedition at Ross Island the mean velocity of the wind there was between 10 and 11 statute miles per hour.

This velocity is not remarkably high, and is one and a half miles per hour less than the mean hourly velocity of the wind shown by twenty-five years' observations at Valencia, in the south-west of Ireland, and 5 miles per hour less than the mean at the Scilly Islands; but its correctness is further confirmed by the fact that the mean force of the wind, as estimated by the numbers of Beaufort's scale, for the longer period of twenty-five months was 2·5, which is equal to a velocity of about nine and a half miles per hour, using for the conversion the velocity equivalents of the Beaufort scale numbers adopted by the Meteorological Office.

Speaking broadly, the variation in the mean velocity from month to month throughout the year indicates pretty clearly a seasonal variation, with a maximum in winter and a minimum in summer. The highest mean monthly velocity was 17 miles per hour in May, 1902,—the first complete month for which readings of the cup anemometer are available; but this was considerably above the mean velocity in any other month, and, disregarding small variations, there was from thence a steady decrease in strength to a minimum of 6 miles per hour in January, 1903; then the force rose again to 11 miles per hour in March and to 12 miles per hour in October, when it again fell away to another minimum of 7 miles per hour in the following January (fig. 3). There appears, therefore, to be a simple oscillation of force throughout the year from a maximum in winter to a minimum in summer; and, with the limited number of observations available, that is perhaps all we are justified in saying.

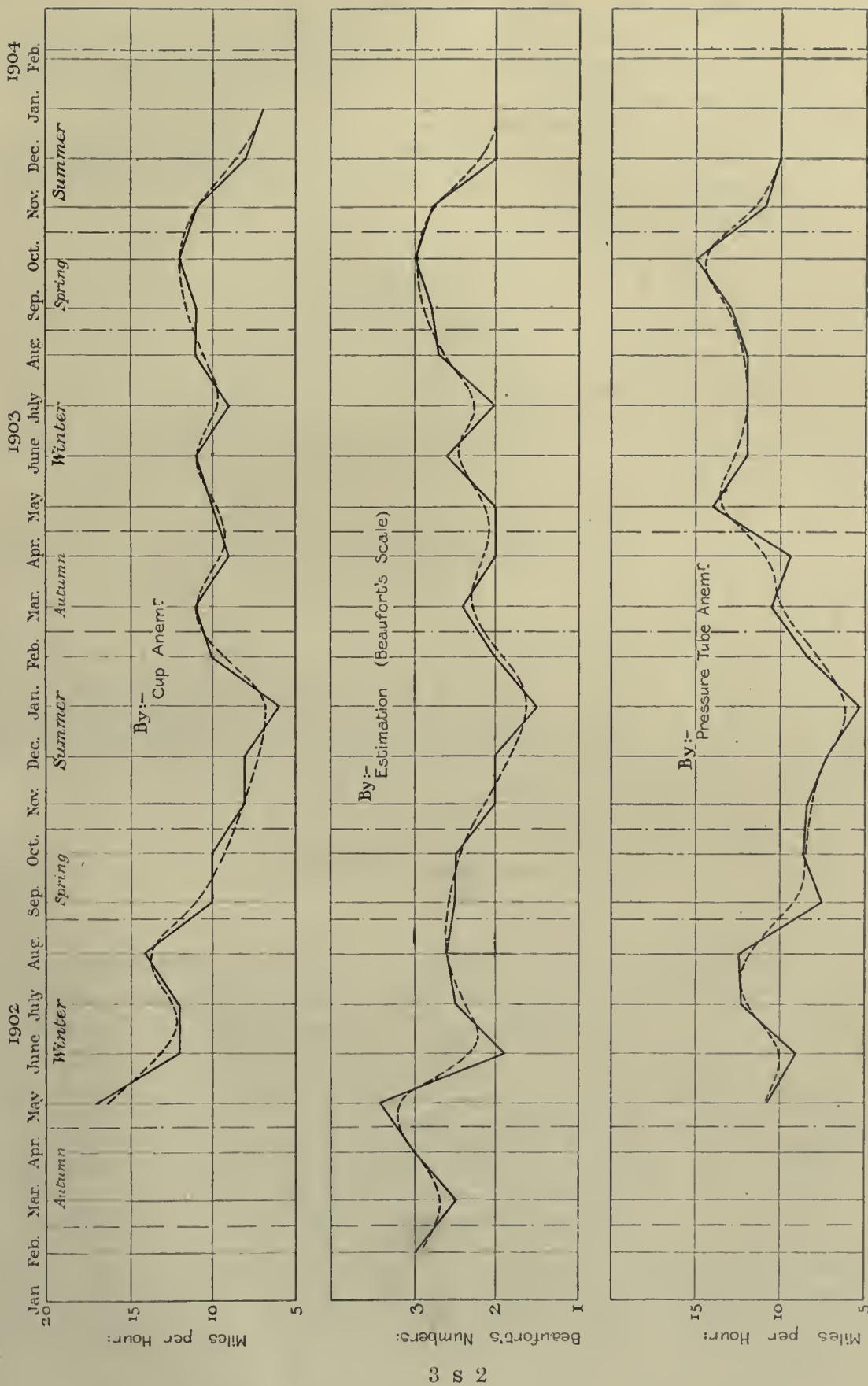


Fig. 3. Mean monthly velocity of the wind. By Cup anemometer, Estimation, and by Pressure-tube anemometer.

DIURNAL VARIATION OF WIND VELOCITY.

For the diurnal variation in wind force we have to rely chiefly upon the pressure-tube anemometer records, and, owing to their incompleteness for certain months, they have been grouped for the different seasons instead of months in order to obtain mean values.

The results of this grouping are given in Table XII., and they are also shown graphically in figs. 4, 5, 6, where the seasonal curves are shown for each year, and also for the two years combined, after the values have been smoothed by the formula  $\frac{a+2b+c}{4}$ .

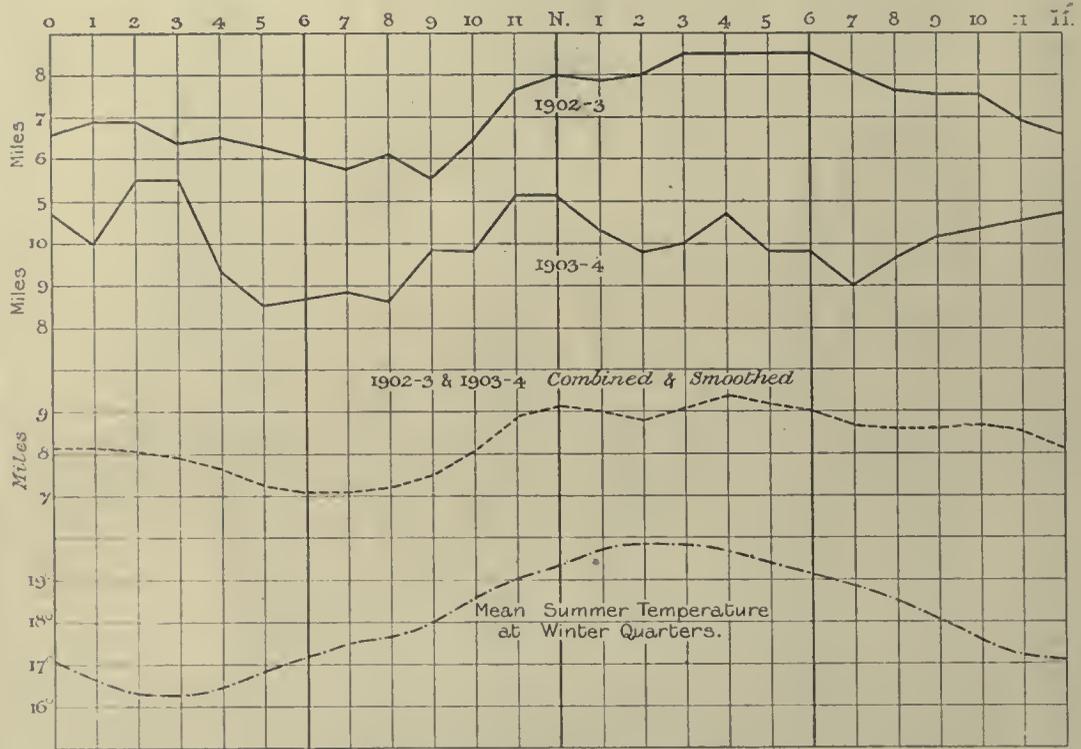


Fig. 4. Diurnal variation of wind velocity.  
Summer.

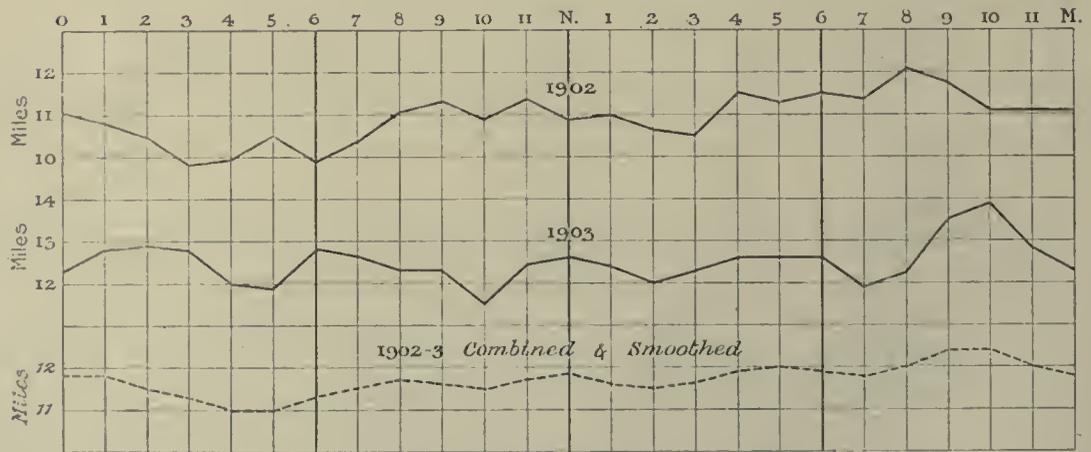


Fig. 5. Diurnal variation of wind velocity.  
Winter.

The smoothed curve for the summer four months shows a decrease of force from the maximum at 4 p.m. to a well-marked minimum between 6 a.m. and 7 a.m.; from 7 a.m. to noon it increases again steadily, but a slight inflexion is then shown in the curve to a small secondary minimum at 2 p.m., before the

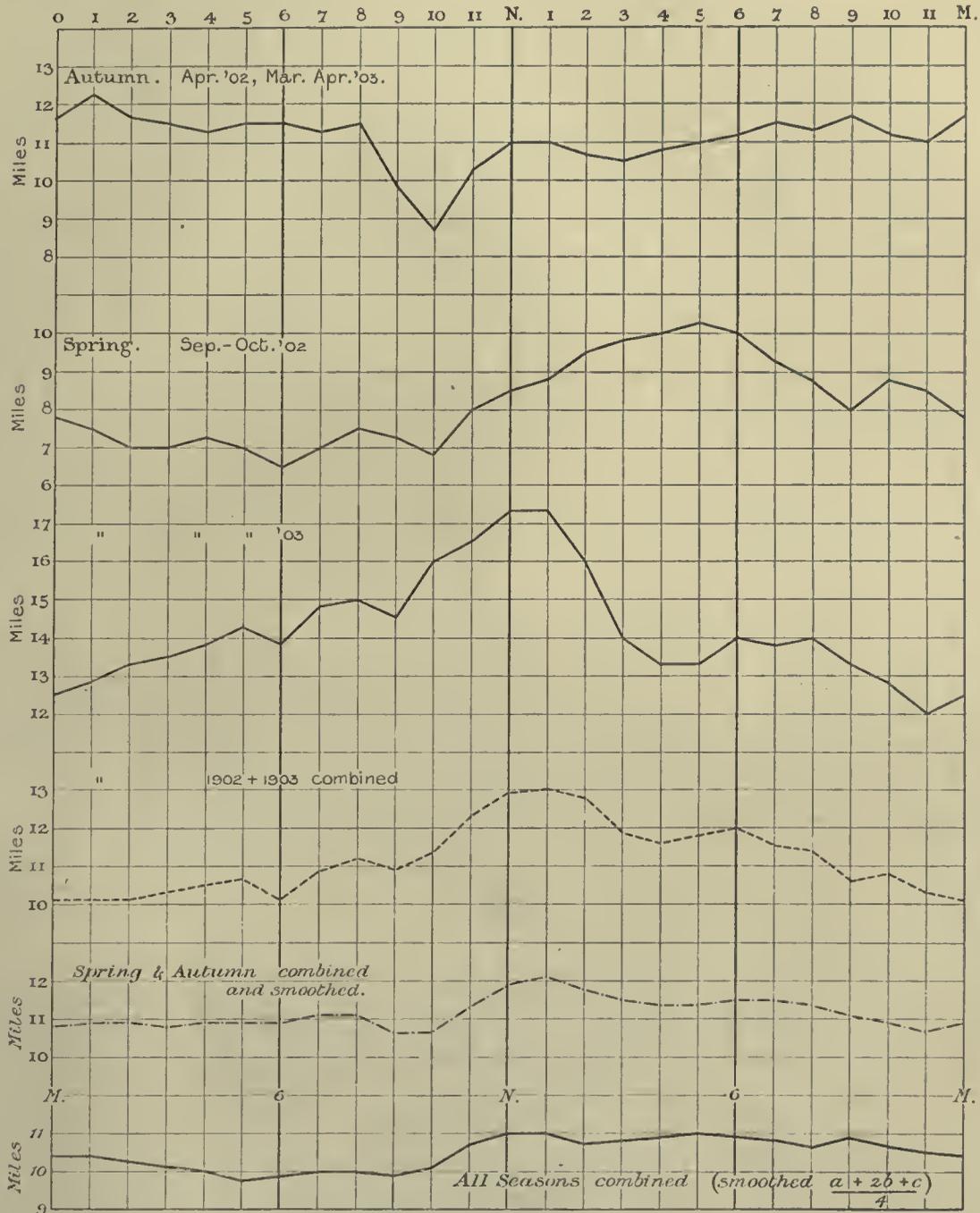


Fig. 6. Diurnal variation of wind velocity.  
Equinoxes.

maximum of the day is reached at 4 p.m. The smoothed curve approximates very closely to the summer curve for 1902-3, but is more divergent from that for 1903-4; in both years, however, confirmation is given, although in varying degrees, to the secondary minimum early in the afternoon. With the exception of this minimum the summer curve of wind force coincides fairly well with the diurnal march

TABLE XII.—Diurnal Range of Wind Velocity for each Season of the Year.  
From the Records of the Pressure-Tube Anemometer.  
In Miles per Hour.

	Hours.																							
	A.M.							P.M.																
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Midn.
SUMMER.																								
November-February	6.9	6.9	6.4	6.5	6.3	6.0	5.8	6.1	5.5	6.4	7.6	8.0	7.9	8.0	8.5	8.5	8.5	8.1	7.6	7.5	7.5	6.9	6.5	Summer
Mean	10.0	9.8	9.8	9.3	8.5	8.7	8.8	8.7	9.8	9.8	11.2	11.2	10.3	9.8	10.7	9.8	9.0	9.7	10.2	10.3	10.5	10.3		
Smoothed mean $\left(\frac{a+2b+c}{4}\right)$	8.2	8.1	7.9	7.7	7.2	7.1	7.1	7.2	7.4	7.9	9.1	9.4	9.0	8.7	9.1	9.4	9.1	8.5	8.5	8.7	8.4	8.1		
8.2	8.1	7.9	7.6	7.3	7.1	7.1	7.2	7.5	8.1	8.9	9.2	9.0	8.9	8.9	9.1	9.3	9.2	8.7	8.6	8.6	8.5	8.2		
WINTER.																								
1902	10.9	10.5	9.8	9.9	10.0	9.9	10.4	11.1	11.3	10.9	11.4	10.9	11.0	10.6	10.8	11.5	11.3	11.4	11.6	11.8	11.1	11.1	11.1	Winter
1903	12.8	12.9	12.8	12.0	11.9	12.8	12.6	12.3	12.3	11.5	12.4	12.6	12.4	12.0	12.3	12.6	12.6	11.9	12.3	13.5	13.9	12.8	12.3	
Mean	11.8	11.7	11.3	10.9	10.9	11.3	11.5	11.7	11.8	11.2	11.9	11.8	11.7	11.3	11.5	12.1	11.9	12.1	11.6	11.9	12.6	11.9	11.7	
Smoothed mean $\left(\frac{a+2b+c}{4}\right)$	11.8	11.5	11.3	11.0	11.0	11.3	11.5	11.7	11.6	11.5	11.7	11.8	11.6	11.5	11.6	11.9	12.0	11.8	12.0	12.4	12.4	12.0	11.8	
AUTUMN.																								
April, 1902; March-April, 1903	12.3	11.7	11.5	11.3	11.5	11.3	11.3	11.5	9.8	8.7	10.3	11.0	11.0	10.7	10.5	10.8	11.0	11.2	11.5	11.3	11.7	11.0	11.7	Autumn
SPRING.																								
1902	7.5	7.0	7.0	7.3	7.0	6.5	7.0	7.5	7.3	6.8	8.0	8.5	8.8	9.5	9.8	10.0	10.3	10.0	9.3	8.8	8.0	8.5	7.8	Spring
1903	12.8	13.3	13.5	13.8	14.3	13.8	14.8	15.0	14.5	16.0	16.5	17.3	17.3	16.0	14.0	13.3	13.3	14.0	13.8	14.0	13.3	12.8	12.5	
Mean	10.1	10.1	10.3	10.5	10.5	10.1	10.9	11.2	10.9	11.4	12.3	12.9	13.0	12.8	11.9	11.6	11.8	12.0	11.5	11.4	10.6	10.8	10.1	
Smoothed mean $\left(\frac{a+2b+c}{4}\right)$	11.1	10.8	10.8	10.9	11.0	10.7	11.1	11.4	10.4	10.2	11.4	12.1	12.1	11.9	11.3	11.3	11.4	11.6	11.5	11.4	11.1	10.6	10.8	
Mean of Spring and Autumn	10.9	10.9	10.8	10.9	10.9	10.9	11.1	11.1	10.6	10.6	11.3	11.9	12.1	11.8	11.5	11.4	11.4	11.5	11.5	11.4	11.1	10.9	10.8	Equinoxes combined
Smoothed mean $\left(\frac{a+2b+c}{4}\right)$	10.4	10.3	10.0	9.9	9.8	9.8	10.0	10.1	9.9	9.8	10.9	11.1	11.0	10.7	10.8	10.9	11.0	10.9	10.8	10.7	10.9	10.8	10.3	
Mean of all observations	10.4	10.3	10.1	9.9	9.8	9.9	10.0	10.0	9.9	10.1	10.7	11.0	11.0	10.7	10.8	10.9	11.0	10.9	10.8	10.7	10.9	10.8	10.4	All observations combined
Smoothed mean $\left(\frac{a+2b+c}{4}\right)$	10.4	10.3	10.1	9.9	9.8	9.9	10.0	10.0	9.9	10.1	10.7	11.0	11.0	10.7	10.8	10.9	11.0	10.9	10.8	10.7	10.9	10.5	10.4	

of temperature in summer, the main difference being that in the morning the wind force continues to decrease for some hours after the temperature has begun to rise, and that similarly a slight lag is shown in the commencement of the decrease in force in the afternoon, the maximum of temperature occurring at 2 p.m. and that of wind force at 4 p.m.

As might have been expected, the smoothed winter curve of diurnal variation shows a much smaller range of velocity, amounting to only 1.4 miles per hour. The minimum occurs in the morning, as in summer, but two hours earlier, and from 5 a.m., when the velocity is lowest, until the maximum is reached at 9 p.m. the velocity increases in a series of slight undulations, having maxima at 8 a.m., noon, 5 p.m., and 9 p.m., and minima at 10 a.m., 2 p.m., 7 p.m., and at midnight.

Only three months' observations are available for the autumn curve, the instrument not having been started until April, 1902. The maximum force occurs at 1 a.m., and not very much variation is shown throughout the day, except that in the forenoon there is an abrupt fall from eleven and a half miles per hour at 8 a.m. to the minimum of the day at 10 a.m., followed in the next two hours by an equally abrupt rise to about the average force at noon; other slight minima are also indicated at 3 p.m. and 11 p.m., but, if we omit the large decrease in the forenoon, the total amount of the oscillation is less than 2 miles per hour.

The diurnal range is greatest during the spring months, but, with the exception of that feature, the curves for the two years are very little alike. The combined curve indicates a fairly uniform simple oscillation from a minimum at midnight to a maximum between noon and 2 p.m., small secondary minima being shown at 6 a.m. and 9 a.m., and at 4 p.m. and 9 p.m.

Wind force is, however, so variable an element that care is required not to attach undue weight to the evidence of so limited a series of observations, and whilst we may perhaps safely accept the broader features of the curves of diurnal variation the smaller oscillations can only be accepted with reserve.

#### GALES.

Defining a "gale" as a wind of at least force 8 on Beaufort's scale, or one in which it attains a mean velocity of at least 38 statute miles per hour, the number of such gales which occurred during the "Discovery's" stay in Winter Quarters was not remarkably large.

The frequency of their occurrence as compared with that of more moderate winds may be shown by the percentage of the total number of observations of gale force in each month to the total number of observations in the month; the figures are as follows:—

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	per cent.	per cent.	per cent.	per cent.								
1902 . . . . .	—	2	6	1	6	—	4	—	—	1	—	—
1903 . . . . .	—	—	—	—	—	3	3	4	1	1	—	—

From this summary it would appear that most of the gales occur in the autumn or winter months, but at the same time it is noteworthy that July and October are the only months for which there are gales in both years.

These figures, however, do not indicate the number of distinct gales which occurred, regarding each gale as a separate phenomenon lasting for a longer or shorter period. The number of gales, during any part of which a velocity of at least 38 miles per hour was recorded by the cup anemometer was only eleven; but the number of distinct gales, in the course of which an estimated force of 8 or above by Beaufort's scale was logged, was much larger, as follows:—

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
1902 . . . . .	—	2	7	7	2	1	2	—	1	1	—	—	23
1903 . . . . .	—	—	12	—	1	7	6	5	6	3	3	—	33
													56

In many of these instances, however, the gale force lasted for only a short time, and was in fact the maximum force of the brief gusts which appear to have been a feature of every Antarctic gale. Owing to their brevity they did not add much to the mileage recorded by the cup anemometer, and therefore the anemometer total for the hour often fell short of the minimum of 38 miles per hour which was taken to indicate a gale in the preceding table. The second set of figures may therefore be regarded as giving an extreme view of the prevalence of gales, and by going a step further and assigning to each gale an average duration, we may get some idea of the prevalence of gales as compared with more moderate winds and calms. From an examination of the register it would appear that six hours as the *average* duration of each gale is likely to be an over, rather than an under, estimate, and this duration would give us, very nearly indeed, the same percentage of hours of gale force, as referred to the total number of observations for the whole period of two years, as is given in the first of the two tables.

The total number of hourly observations of wind in which the force exceeded a velocity of 38 miles per hour at Scilly, Fleetwood, and Deerness, in the British Isles, during the same two years, 1902 to 1903, was 442, 306, and 264 respectively, and these totals represent a percentage of duration of gale force to that of more moderate winds of 5 per cent., 3½ per cent., and 3 per cent. respectively, so that the frequency of gales appears to be greater on the western coasts of Great Britain than at Ross Island.

The percentage of moderate to strong winds, which did not reach gale force but were logged as ranging in force between 4 and 7 of Beaufort's scale, is shown in the following table:—

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	per cent.	per cent.	per cent.	per cent.								
1902 . . . . .	—	50	23	36	49	16	22	33	32	30	13	10
1903 . . . . .	6	21	27	16	24	46	23	31	40	43	38	23
1904 . . . . .	23	31	—	—	—	—	—	—	—	—	—	—

The direction from which gales most frequently blew was south, and this was especially the case in the winter months; but gales were also experienced from south-east, east, and north-east, and, in a few instances, from south-west. North winds and winds from the west of north did not attain gale force.

The highest recorded velocity of the wind was an average of 62 miles per hour for 12 consecutive hours on July 19th, 1902. Unfortunately, there was no record of this gale made by the pressure-tube anemometer, and therefore what the velocity was in the gusts cannot be known. The records of severe gales in the British Islands made by pressure-tube anemometers would justify us in expecting that with so high a mean velocity the gusts would not be far short of the rate of 100 miles per hour. On June 29, 1903, the observer was blown from the screen whilst attempting to read the thermometer, the squalls being described as "furious"; and again, on August 10 of that year, the force was logged as 12 in heavy squalls, and it was impossible to stand at the bottom of the gangway leading from the ship to the ice. On other occasions the force in the squalls was spoken of as severe, and more than once the anemometer became disabled, although, as the instrument was of somewhat slender build, too much stress must not be laid upon the significance of that fact. In every gale the squalls were a very notable feature, as was also the drifting snow, which occasionally quite filled the air. The low temperature and drifting snow

combined must have made the strong wind of the gales a very unpleasant experience, and it is quite possible that that fact may have led unconsciously to some amount of exaggeration in estimating the force of the wind at such times.

#### CHANGES OF TEMPERATURE AND OF WIND.

Sudden large changes of temperature were of frequent occurrence at the Winter Quarters, and an attempt has been made to correlate them with changes in the direction and velocity of the wind. It was found that in 17 per cent. of the instances in which such a sudden rise in the temperature occurred, and in 19 per cent. of those in which it as abruptly fell, the movement was not accompanied by any change either in the direction or force of the wind.

When the change of temperature coincided with the springing up of a wind after a calm, the temperature nearly always rose, and, indeed, the only exceptions to this rule occurred when the temperature change between the two observations amounted to less than ten degrees; in no case when the rise in temperature exceeded that amount did it accompany a falling away of the wind force to a calm. On the other hand, the large and sudden decreases of temperature almost as generally coincided with the dying away of the wind force to calm.

Table XIII. gives the number of instances in which these rapid changes of temperature were accompanied by a change from a wind to a calm, or *vice versa*, and also the direction of the wind when its force fell or when it sprang up. In both cases the direction was most frequently, but not invariably, northerly; several of the larger increases of temperature occurred with the advent of an easterly breeze, and in one or two cases the wind came from south.

TABLE XIII.—Number of Times in which the Falling Away of the Wind Force to a Calm, or *vice versa*, was accompanied by a Rise or by a Fall in Temperature.

	Direction of Wind Before or After Change, respectively.							
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Change in Temperature amounted to from 5° to 10°.								
<i>Temperature Rose.</i>								
Wind fell to calm . . . . .	3	11	5	3	1	—	1	1
Wind succeeded a calm . . . . .	25	22	21	8	5	4	1	5
<i>Temperature Fell.</i>								
Wind fell . . . . .	30	29	24	9	2	—	3	7
Wind rose . . . . .	2	5	11	7	2	—	—	3
Amount of Change in Temperature 11° to 15°.								
<i>Temperature Rose.</i>								
Wind fell . . . . .	—	—	—	—	—	—	—	—
Wind rose . . . . .	14	3	10	5	1	—	—	4
<i>Temperature Fell.</i>								
Wind fell . . . . .	18	4	5	1	—	—	—	1
Wind rose . . . . .	—	—	1	—	2	—	—	1
Amount of Change in Temperature 16° to 20°.								
<i>Temperature Rose.</i>								
Wind fell . . . . .	—	—	—	—	—	—	—	—
Wind rose . . . . .	8	2	3	—	—	—	—	—
<i>Temperature Fell.</i>								
Wind fell . . . . .	6	4	—	—	—	—	—	—
Wind rose . . . . .	—	—	—	—	—	—	—	—
Amount of Change in Temperature more than 20°.								
<i>Temperature Rose.</i>								
Wind fell . . . . .	—	—	—	—	—	—	—	—
Wind rose . . . . .	3	—	2	—	1	—	—	—
<i>Temperature Fell.</i>								
Wind fell . . . . .	—	—	—	—	—	—	—	—
Wind rose . . . . .	1	1	—	—	—	—	—	—
In 195 instances, or 17 per cent. of the total number, in which there was a sudden rise of temperature, and in 225, or 19 per cent., of those in which the temperature fell the wind force remained unchanged.								

RELATIVE FREQUENCY AND STRENGTH OF WINDS FROM VARIOUS POINTS.

Figs. 7 to 10 show the relative frequency of winds from each of sixteen points, combined with their strength. The length of the single line indicates the percentage of light winds (forces 1 to 3 of Beaufort's scale) observed from the point at which it is drawn; the length of the double line similarly indicates the percentage of moderate winds (forces 4 to 7 of Beaufort's scale), and that of the broad line that of gales (force 8 and above); the total length of the line thus showing the frequency of all winds, irrespective of force, from the point indicated. The figures are drawn for each month, and are grouped under the several seasons.

In the summer months light winds predominated, and gales are only shown in February, 1902, the month of arrival of the expedition at Winter Quarters. In the autumn months the wind force had decidedly increased, and winds of moderate strength were upon the whole more common than light winds; gales were somewhat frequent in March, 1902, but in that month only. Moderate forces were, upon the whole, more frequent than light winds in the winter months, and gale forces were comparatively frequent, especially from southerly points. In the spring months there were not many gales recorded, but winds of moderate force were very common.

TABLE XIV.—Mean Hourly Velocity of the Wind, for each Month, and for each of Sixteen Points, in Miles per Hour by the Cup Anemometer.

Month.	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Mean velocity irrespective of direction.	Total number of observations.
1902																		
May . . .	8	21	17	22	19	13	19	21	27	27	44	—	—	—	3	5	17	361
June . . .	7	7	14	16	15	12	11	18	17	19	14	—	13	—	9	4	12	360
July . . .	4	1.5	13	14	13	12	10	18	36	47	15	—	—	—	—	—	12	370
August . . .	5	5	14	16	19	14	15	14	21	—	—	—	5	—	9	7	14	158
September . . .	5	4	10	15	13	10	11	15	17	—	—	—	—	—	3	—	10	355
October . . .	2	4	10	17	15	9	10	18	17	—	15	—	—	—	2	—	10	312
November . . .	5	6	9	12	14	8	9	10	17	4	19	—	—	—	4	4	8	360
December . . .	6	7	7	15	12	10	10	11	11	15	18	—	4	1	4	6	8	372
1903																		
January . . .	6	8	7	12	10	9	7	10	8	—	—	—	6	—	4	7	6	371
February . . .	4	4	13	15	14	11	9	12	7	—	2	—	2	—	—	—	10	336
March . . .	7	10	14	15	15	10	10	15	10	—	4	—	—	—	7	—	11	372
April . . .	6	5	13	15	15	11	9	—	8	—	1.5	—	—	—	—	5	9	343
May . . .	7	5	17	18	15	13	10	14	13	—	8	—	—	—	4	6	10	372
June . . .	5	13	12	17	15	13	16	13	20	34	20	—	3	—	4	10	11	360
July . . .	8	6	14	19	14	9	12	15	8	—	2	—	—	—	4	7	9	372
August . . .	5	7	14	18	13	13	13	21	21	20	21	1.5	—	—	4	6	11	370
September . . .	7	11	16	19	15	13	13	10	15	15	7	—	—	1	7	6	11	360
October . . .	5	8	18	16	15	13	13	6	18	8	15	—	—	—	3	4	12	372
November . . .	6	—	12	14	11	11	13	15	15	23	28	—	5	—	1.5	4	11	246
December . . .	4	6	7	11	11	12	11	13	10	—	—	—	2	—	3	4	8	212
1904																		
January . . .	4	9	9	11	10	7	8	5	3	—	3	—	—	—	4	—	7	140
February . . .	6	13	3	10	11	7	10	10	4	—	1.5	—	—	—	—	—	8	47
Mean . . .	5.5	7.6	12.0	15.3	13.8	10.9	11.3	13.5	14.7	21.2	13.2	1.5	5.0	1.0	4.4	5.7	10.2	6921

From the figures given in Table XIV. it would appear that, on the whole, the southerly winds were stronger than those experienced from any other quarter, south-south-west winds giving for the whole

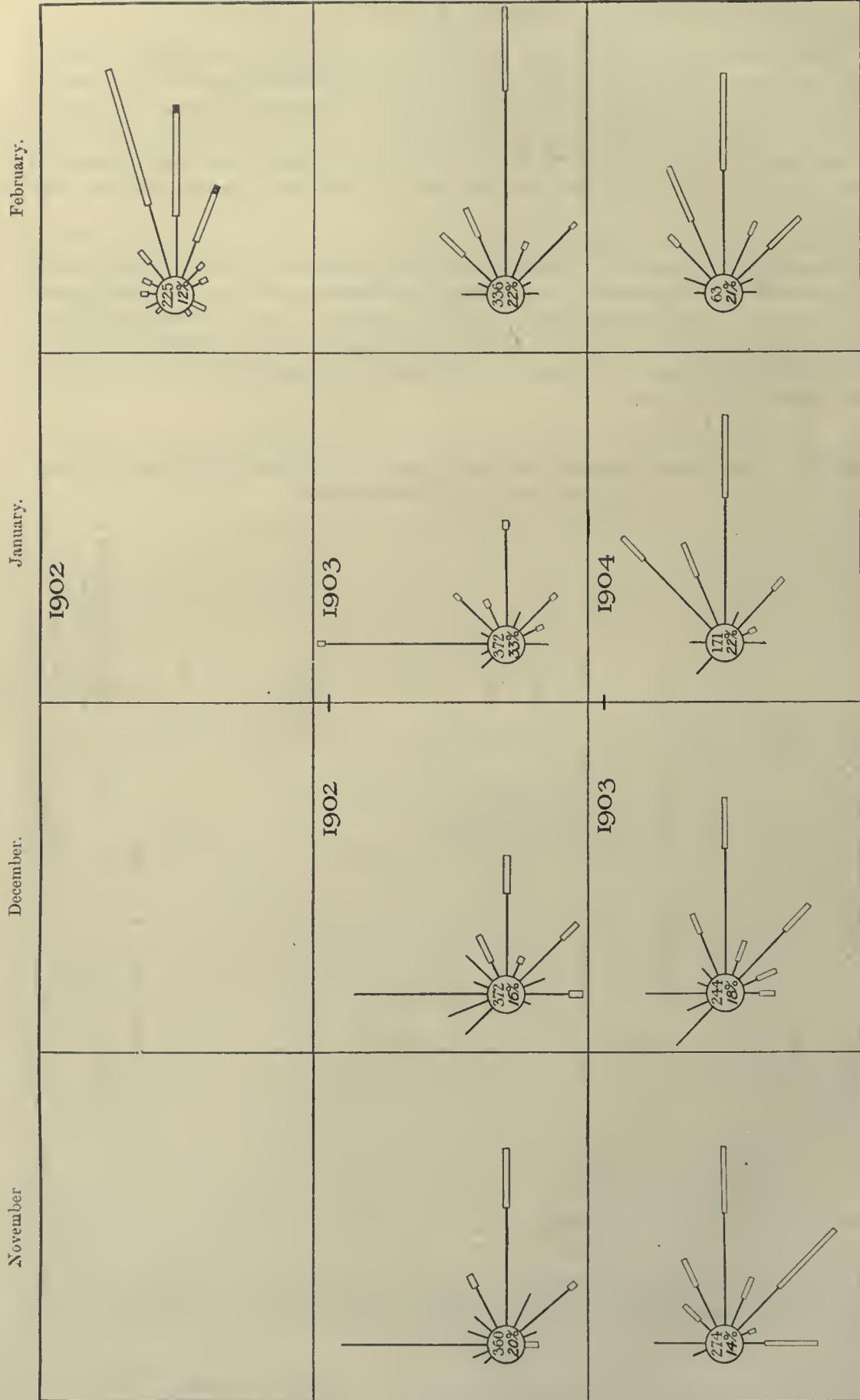


Fig. 7. Relative frequency of winds from each of sixteen points.  
*Summer.*

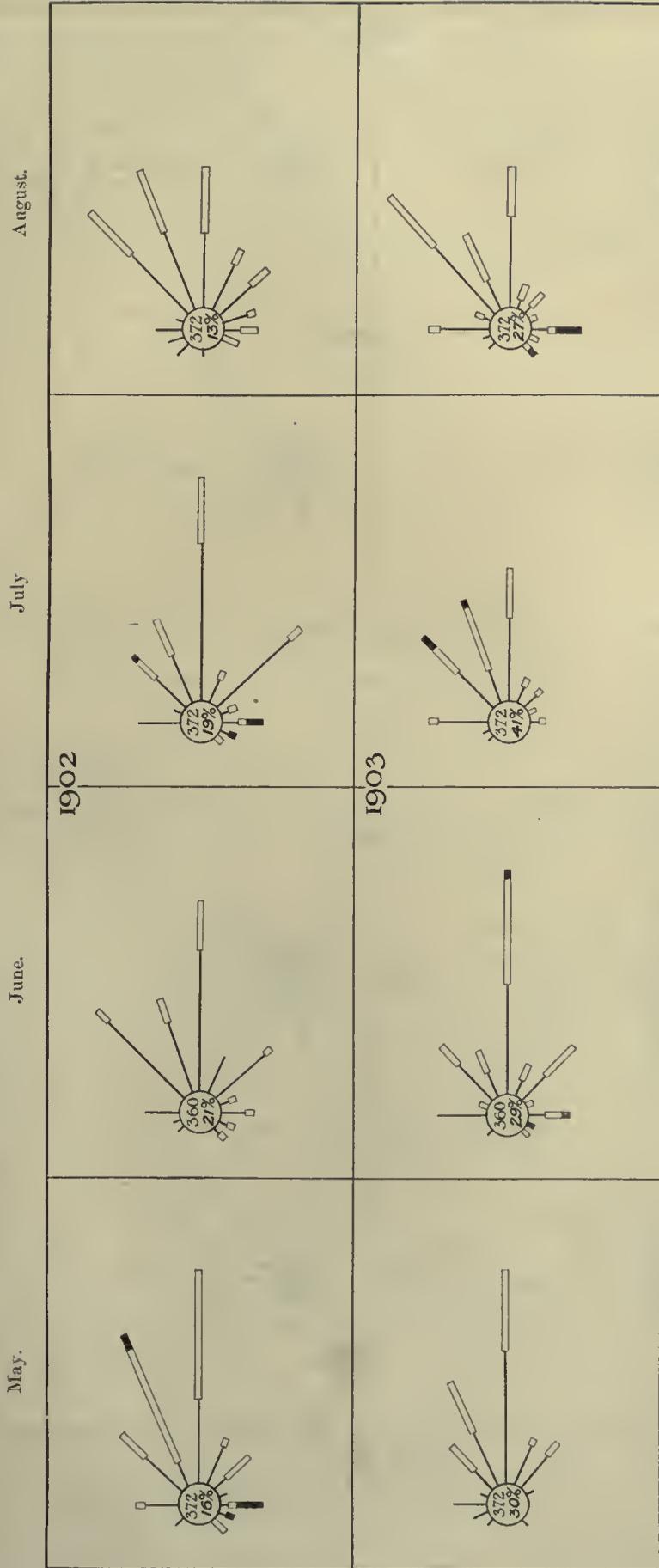


Fig. 8. Relative frequency of winds from each of sixteen points.  
Winter.



period a mean hourly velocity of 21 miles. It has to be remembered, however, that southerly winds were comparatively infrequent; and that fact is not clearly shown in the table.

There were many instances of strong winds from the more easterly points, and in some months mean velocities of 19 miles per hour are shown for east-north-east and east winds, and since these means are derived from a much larger number of observations they probably indicate a generally stronger air current; but in other months the lower mean velocity is due to the large preponderance of lighter winds rather than to the entire absence of strong ones.

In figs. 7 to 10, however, both frequency and strength are shown, and therefore a truer conception of the average character of the wind from the different points of the compass can be got from them than from the table.

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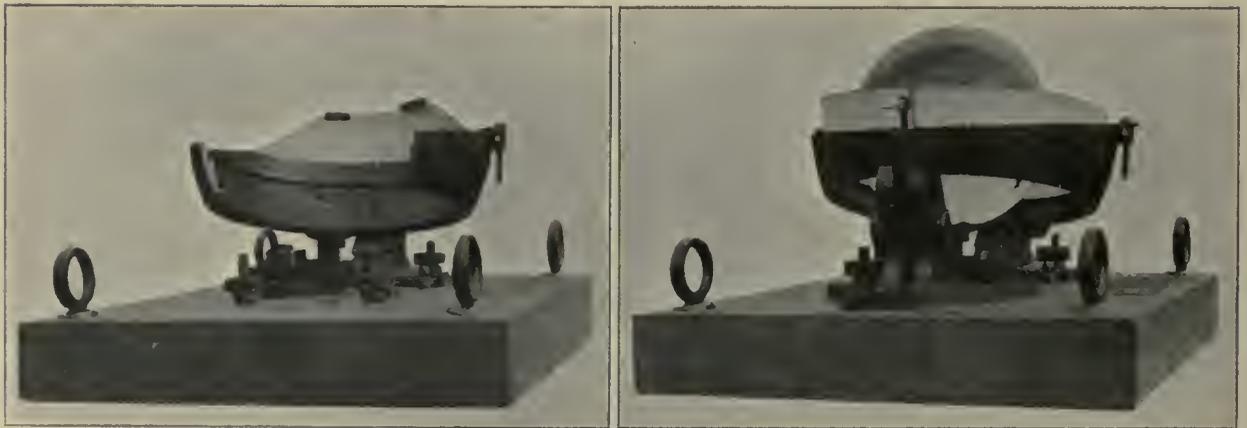
### XIII. NOTES ON THE RECORDS OF SUNSHINE AND ON THE OBSERVATIONS OF CLOUD.

BY  
R. H. CURTIS.

INSOLATION is a factor of the Antarctic climate to which very little attention has been paid by previous expeditions. A sunshine recorder formed part of the instrumental outfit of the "Southern Cross" Expedition which wintered at Cape Adare, but as the instrument was not adapted for use in high latitudes where in summer the sun is continuously above the horizon, the record obtained was necessarily very incomplete.

For the present Expedition a modification of the Campbell-Stokes burning recorder, enabling it to receive a continuous record of sunshine throughout the entire 24 hours, was designed at the Meteorological Office in consultation with Sir GEO. G. STOKES and constructed by Mr. HICKS. When this instrument was arranged for summer use, the bowl formed a complete circle, but in the spring and autumn months the northern half of the bowl could be removed in order to afford to the lens a perfectly unobstructed "view of the sun" when at its lower altitudes above the horizon (figs. 1, 2).

This recorder was not set up until September 14, 1902, by which date the sun had already attained a considerable meridian altitude, and it was finally dismantled at the middle of February, 1904. The record embraces therefore one complete spring, summer, and autumn; nearly the whole of a second spring; and



Sunshine recorder for use in Polar latitudes.

Fig. 1 Showing front portion of the bowl removed for use in spring and autumn. A short card is shown in position in the upper part of the belt.

Fig. 2. Showing the complete bowl with sphere and card in place, for recording sunshine throughout the 24 hours.

three and a half months out of the four comprising the second summer. Unfortunately, a total of 23 cards, representing 23 days' records, were missing when the Expedition reached England, and the total amounts of sunshine recorded for September, October, and November, 1902, and for September and October, 1903—the months to which most of the lost cards belonged—are in consequence probably somewhat smaller than they should have been.

The earliest date on which a record was obtained was September 3, and the latest April 14; but the sun appeared above the horizon on August 21, and did not finally disappear for the winter until about April 24; and it is not clear from the records whether the absence of cards for the days intervening

between those dates and the dates of the earliest records is due to there having been no sunshine to record, or to the recorder not having been in use.

The approximate duration of the sunshine, as recorded on the exposed cards, is shown in the tables on pp. 92, &c. by a thick vertical black line extending across the lines for the hours during which a recording burn was made.

The following table gives the total amounts of sunshine registered in each of the 14 months covered by the observations:—

TABLE I.—Total Number of Hours of Bright Sunshine Recorded in each of the Fourteen Months during which, or part of which, the Recorder was in use.

Month.	Total number of hours recorded.	Number of sunless days.	Number of days covered by the record.	Percentage* of total possible amount.	Notes.
1902	hours	days	days	per cent.	
September . . .	51·9	6	16	27	The record did not begin till September 14. One day's record lost.
October . . .	114·2	9	24	26	Seven days' record lost.
November . . .	291·5	3	25	45	Five days' record lost.
December . . .	375·6	6	31	51	
1903					
January . . .	365·1	1	31	49	
February . . .	255·2	3	27	42	One day's record lost.
March . . .	118·3	9	30	28	One day's record lost.
April . . .	13·9	6	13	13	Record ceased after April 14. One day's record lost.
September . . .	61·8	13	26	22	Record began September 1. Four days' record lost.
October . . .	159·4	7	28	29	Three days' record lost.
November . . .	262·8	5	29	37	One day's record lost.
December . . .	490·1	1	31	66	
1904					
January . . .	228·2	6	31	31	
February . . .	176·1	1	14	52	No record after February 15.

\* In calculating these percentages an allowance was made for those days for which no card was received.

There are two sets of records for each of the summer months of November, December, and January, during the whole of which the sun was continuously above the horizon; and for the first summer the three months' records combined give an average percentage of the greatest possible duration of 48 per cent., and for the second year an average of 45 per cent. December was in both years the most sunny month, the total of 376 hours recorded in 1902 being equivalent to 51 per cent. of the greatest possible amount, whilst the more remarkable total of 490 hours in the December of the following year is equal to 66 per cent. of the possible amount. In December, 1903, there was but one entirely sunless day, and the average daily duration of sunshine was 15·8 hours. In January of that year there was also only one quite sunless day, but the average daily duration in that month was four hours less than that reached in December.

In the summer months there were several long periods of continuous sunshine. In December, 1902, there were three such periods lasting for 38 hours, 41 hours, and 87 hours respectively. In January, 1903, there were two similar spells of 60 hours and of 66 hours; November of the same year also had two sunny periods of 36 hours and 43 hours respectively; and the following month, December, had three long intervals of 28 hours, 63 hours, and 70 hours respectively. In that month, too, there occurred a remarkably long spell of almost continuous sunshine which lasted twelve days, from the 6th to the 17th inclusive, during which period the sum of the sunless intervals amounted to less than 15 hours.

As a rule, the sunshine appears to have been distributed over the months in a fairly uniform way, but a marked exception to the rule occurred in December, 1902, when the total record throughout nine consecutive days in the middle of the month only amounted to 20 hours.

The hourly totals for the six months November, December, and January, 1902-3, and 1903-4, were combined and meaned, and the means smoothed by the formula  $\frac{a+2b+c}{4}$ , to see if they afforded any

evidence of a diurnal variation in the summer months. The results are given in Table II, and graphically in fig. 3. They show that the mean duration per hour is very uniform between 0 hours and 3 a.m., from which hour it increases steadily till noon; then it again remains without change for about 3 hours and steadily diminishes till 11 p.m., which is the least sunny hour of the twenty-four. The total range of the diurnal variation as shown by these monthly totals amounts to 4.1 hours.

TABLE II.—Diurnal Variation of Sunshine in Summer.  
(November, December, January, 1902-4.)

Hours.																								
A.M.												P.M.												
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Midd.	
(Average monthly duration (in hours) of sunshine for each hour of the day.)																								
12.1	12.0	12.0	12.2	12.8	13.4	13.7	14.1	14.6	15.1	15.5	15.6	15.5	15.5	15.5	15.5	15.3	15.1	14.9	14.4	13.4	12.4	11.6	11.5	12.0

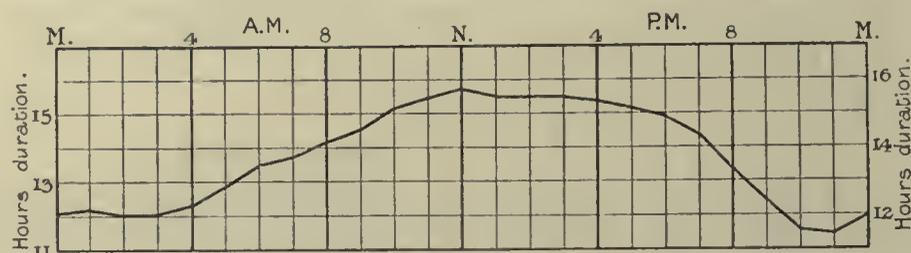


Fig. 3.

#### SOLAR RADIATION.

The record of the Campbell-Stokes' burning sunshine recorder is primarily one of duration, and the information it affords respecting the intensity of the solar radiation is only of a very general character, and is obtained from the character of the burn made on the card. A marked feature of the Antarctic records is the sharpness of the burn, which generally goes right through the card, and in not a few instances, where the record has continued throughout the entire day, it has severed the card longitudinally in two. This indicates a particularly strong solar action such as could have been expected only in an exceptionally dry and dust-free atmosphere.

The most direct measurement available of the intensity of the solar radiation is that afforded by the black-bulb thermometer *in vacuo*, and the readings of this instrument made at Winter Quarters are very remarkable. The observations made daily throughout the four months November to February, during nearly the whole of which time the sun was continuously above the horizon, have been measured, for each month separately, and the results are exhibited in Table III.

For purposes of comparison the results of similar observations made at Madras during the four summer months of May, June, July and August, 1890, are also given in the table, the year 1890 having been chosen only because it happened to be the one most easily available. It is obvious that the full significance of the figures given can only be appreciated when the difference between the sun's meridian altitude at the two places is taken into account.

At Discovery Bay, during the months of November and February, the daily change in the height of the sun above the horizon was considerable, but even when it had reached its highest altitude in December it was still more than 60° from the zenith. At Madras, on the other hand, a nearly vertical noon sun was experienced throughout the four months quoted. Yet under these very different conditions the mean solar temperatures at Discovery Bay in December and January were only 14° less than the similar means at Madras in June and July, and the maximum reading at Discovery Bay in December approached to within 3° of the June maximum at Madras.

TABLE III.—Comparison of Temperatures of the Solar Maximum Thermometers at Discovery Bay and at Madras.

Winter Quarters.				Madras.							
Date.	Solar maximum temperature.		Maximum air temperature.		Columns (A) — (C).	Solar maximum temperature.		Mean difference, Solar temperature and—		Columns (A) — (F).	Columns (B) — (G).
	Mean.	Extreme.	Mean.	Extreme.		Mean.	Extreme.	Maximum temperature in shade.	Grass minimum temperature.		
	(A).	(B).	(C).	(D).	(E).	(F).	(G).	(H).	(I).	(K).	(L).
November, 1902 . . .	107	147	18	28	+89	148	157	46	82	°	°
November, 1903 . . .	91	121	21	34	+70					°	°
December, 1902 . . .	123	154	29	39	+94	137	157	41	78	-41	-10
December, 1903 . . .	111	134	31	42	+80						
January, 1903 . . .	121	143	32	39	+89	135	147	42	75	-14	-4
January, 1904 . . .	101	124	29	39	+72						
February, 1903 . . .	100*	119	18	32	+82	137	152	46	75	-37	-33
February, 1904 . . .	100†	114	28	32	+72						

\* To February 20.

† To February 15.

Throughout the eight summer months' observations at Discovery Bay there occurred fifty-two instances in which the temperature recorded by the solar radiation thermometer amounted to or exceeded 120° F., and in the two months of December and January, 1902-3, there were but four instances in which the reading was below 100° F.

At Madras the difference between the maximum temperature in the sun and the maximum air temperature recorded in the screen varied from 41° F. to 46° F., and the difference between the solar and terrestrial radiation thermometers ranged from 75° F. to 82° F., but at Discovery Bay the difference between the maximum temperature of the air and the maximum temperature by the solar thermometer ranged from 85° F. to 119° F. These figures certainly show that the solar radiation in the Antarctic during the summer months is of unusual intensity, and indicate a condition of atmosphere peculiarly favourable for the transmission of the sun's heat rays.

#### AMOUNT OF CLOUD.

The mean proportion of clouded sky bears a close relation to the subject of both solar and terrestrial radiation, and must be taken into consideration when any attempt is made to estimate the total amount of either.

The mean cloud proportion for each month has been obtained from the daily observations, but from internal evidence it would seem that separate estimates were made of each kind of cloud, instead of the proportion of the sky expanse which was actually covered, and it is possible that this method of observing would give results slightly too high; in some instances, at any rate, it gives a total amount of clouded sky greater than 10, which is the number used to indicate a completely overcast sky.

The observations have been dealt with in two ways, and the results are shown in Tables IV. and V.

TABLE IV.—Mean Proportion of Clouded Sky at each Observing Hour of the Day, and for the Day.

(0 = cloudless sky; 10 = sky completely overcast.)

	2.	4.	6.	8.	10.	Noon.	14.	16.	18.	20.	22.	Midt.	Day.
1902													
February . .	5	6	5	5	4	5	6	7	6	6	6	6	6
March . . .	5	6	5	5	5	5	4	5	5	7	6	6	5
April . . .	7	6	7	8	7	7	7	6	5	5	5	4	6
May . . .	5	4	6	7	6	7	7	6	5	4	5	5	6
June . . .	4	4	3	4	3	4	4	4	2	3	4	3	3
July . . .	4	4	4	4	4	5	5	4	4	4	4	3	4
August . .	5	4	4	7	6	6	6	6	6	5	6	6	6
September .	4	6	6	6	6	6	7	7	6	5	5	4	6
October . .	8	7	7	7	7	7	7	7	7	8	7	7	7
November .	6	6	5	5	5	6	6	6	6	5	5	6	6
December .	6	6	6	5	5	4	4	4	5	5	5	5	5
1903													
January . .	6	6	6	6	5	6	5	5	4	4	5	5	5
February . .	6	5	5	6	5	5	5	5	5	5	5	5	5
March . . .	5	6	6	6	5	5	5	6	6	5	5	4	5
April . . .	2	3	4	4	3	4	5	4	4	3	3	2	3
May . . .	3	3	3	3	4	4	3	3	4	4	4	4	3
June . . .	4	4	3	3	3	4	5	5	5	4	4	4	4
July . . .	1	2	2	2	2	2	3	2	2	1	2	1	2
August . .	4	3	3	4	4	4	3	4	3	4	3	4	4
September .	3	3	5	4	4	5	5	5	5	4	3	3	4
October . .	6	6	6	6	6	6	6	7	7	6	6	7	6
November .	7	8	7	7	6	6	7	7	7	7	6	7	7
December .	No obsns.			3	4	3	5	5	4	4	3	No obsns. } 4	
1904													
January . .	} Observations made at irregular intervals. {												7
February . .													5
Mean . . .	4·8	4·9	4·9	5·1	4·7	5·0	5·2	5·2	4·9	4·7	4·7	4·6	5·0

In Table IV. the mean proportion of clouded sky is given for each hour of observation for each of the twenty-four months during which the "Discovery" remained at Ross Island. The figures show for every month a very uniform distribution throughout the day, and, speaking generally, it may be said that the sky was as a rule about half covered with cloud. The winter months, however, were the least cloudy, and in July, 1903, there was a particularly cloudless sky, the average daily amount of cloud being only two-tenths.

In Table V. the result of a different treatment of the observations is shown, the cloud amounts having been grouped to represent the sky conditions indicated by the letters of the Beaufort weather scale. In this scale "b" indicates blue sky, or that not more than one-tenth of the sky expanse was covered with cloud; "bc" denotes blue sky and detached cloud, not more than four-tenths of the sky being clouded;

TABLE V.—Cloud Distribution as Indicated by the Beaufort Weather Scale.

(The values given are percentages of the total number of observations made each month.)

Month.	b.	bc.	c.	o.	Month.	b.	bc.	c.	o.
	per cent.	per cent.	per cent.	per cent.		per cent.	per cent.	per cent.	per cent.
1902					1903				
February . . . . .	34	8	11	47	January . . . . .	34	9	8	49
March . . . . .	38	7	7	48	February . . . . .	31	17	11	41
April . . . . .	38	14	11	37	March . . . . .	36	12	7	45
May . . . . .	35	7	8	50	April . . . . .	54	14	4	28
June . . . . .	60	5	5	30	May . . . . .	55	10	6	29
July . . . . .	48	10	4	38	June . . . . .	55	5	3	37
August . . . . .	36	8	5	51	July . . . . .	63	15	4	18
September . . . . .	26	15	9	50	August . . . . .	47	16	5	32
October . . . . .	15	10	11	64	September . . . . .	40	14	10	36
November . . . . .	26	15	13	46	October . . . . .	24	12	11	53
December . . . . .	40	9	6	45	November . . . . .	16	14	13	57
					December . . . . .	43	20	9	28
					1904				
					January . . . . .	10	11	14	65
					February . . . . .	32	8	22	38
All observations.					Number of observations.				
	b.	bc.	c.	o.					
	per cent.	per cent.	per cent.	per cent.					
1902-4	37.5	11.5	8.0	43.0	7890				

"c" signifies a cloudy sky, where the expanse of sky covered may amount to seven-tenths; "o," or overcast, implies that from eight-tenths to the whole of the sky is clouded. The number of observations falling under each of these divisions in each month is expressed as a percentage of the total number for the month.

The unexpected result which the table exhibits is that in every month the great majority of the observations fall under one or other of the two extremes "b" or "o," and that as a rule, to which there are but few exceptions, the percentage frequency either of "blue sky" or of "overcast" sky exceeds that of the two intermediate stages combined. Put in another way, this apparently means that small quantities of detached clouds were relatively infrequent, and that when clouds were present they were usually present in quantity large enough to practically cover the entire sky expanse.

Comparing these results with the observed percentages of the total possible amount of sunshine given in Table I., a fairly close relation is seen to exist between the latter values and the combined percentages of "b" and "bc" sky in the months of October to February; the values are as follows:—

	1902.			1903.						1904.
	October.	November.	December.	January.	February.	March.	October.	November.	December.	January.
Observed percentage of possible sunshine . . .	per cent. 26	per cent. 45	per cent. 51	per cent. 49	per cent. 42	per cent. 28	per cent. 29	per cent. 37	per cent. 66	per cent. 31
Percentage of sky observations when not more than four-tenths covered by cloud	25	41	49	43	48	48	36	30	63	21

The cloud percentages refer to the entire day, but the percentages of sunshine refer only to that portion of the day during which the sun was above the horizon. Throughout November, December, and January the sun did not set, and for these months the two values are comparable because they refer to similar intervals of time. They do not differ very much in either of these months, but it will be noticed that the sunshine percentage always exceeds that of clear sky, the explanation of the difference being found in the fact that a record of sunshine was occasionally made when the sky was more than half covered with cloud.

The differences between the values for the other months given in the table are explained partly by the fact that they do not represent similar periods of time, and partly by the low altitude of the sun and the consequent weakening of its power to burn the card on which the record was obtained.

## XIV. DISCUSSION OF THE OBSERVATIONS OF ATMOSPHERIC ELECTRICITY.

BY

C. T. R. WILSON, F.R.S.

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### INTRODUCTORY NOTE BY L. C. BERNACCHI.

OBSERVATIONS of atmospheric electricity with the Kelvin portable electrometer were made during 1902 and 1903. During the winter months these observations were often very unpleasant to take on account of the small screws and bare parts of the small instrument, which could not be handled with mittened fingers. For a polar climate some larger instrument, which does not necessitate the observer being frost-bitten when using it in cold weather, should be employed, or some form of self-recording electrometer.

The observations were taken on a stand about 4 feet above the rock surface, and away from any buildings, erections, &c. During the dark months observations were taken at 11h. a.m. and 5h. p.m. every day, excepting when high winds with low temperatures made it impossible. After the return of the sun, observations were generally taken every two hours from 10h. a.m. to 10h. p.m. The direction of the wind, temperature, form of cloud, &c., was entered with the observation.

From 8h. a.m. on November 22 to 3h. a.m. on November 25, 1902, a series of hourly observations were carried out with the assistance of Engineer Commander R. W. SKELTON, R.N., chief engineer of the "Discovery," and again in 1903 two-hourly observations from noon on October 7 to noon on October 10.

Besides the two series of three days, observations were occasionally taken on individual days throughout the twenty-four hours in both winter and summer.

The observations during the second year are not so complete as during the first, but are supplemented by observations taken at 15 feet above the ground, immediately after the observations at 4 feet; an insulated wire from the burning match at the top of the pole to the instrument being employed for the purpose.

Whenever there was drifting snow in the air, or fine ice-needles, the difference of potential was very large and variable, and in many cases the electrical strain would discharge the electrometer.

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The observations were carried out by Mr. L. BERNACCHI, except during his absence on a sledging expedition from September 23 to October 2, 1902, when they were taken by Mr. R. W. SKELTON, R.N., Chief Engineer of the "Discovery," who also assisted with the continuous series of observations of November 22 to 25, 1902, and of October 7 to 10, 1903.

The observations consisted of measurements of the electric potential at a definite height above the ground. The electrometers originally supplied to the "Discovery" were two Thomson portable electrometers by White, and an Exner electroscopes. The last-named, however, met with an accident on the outward voyage and was never used. Of the portable electrometers one (No. 35) was only used on a very few occasions, practically all the observations discussed below being taken with the other portable electrometer (No. 81).

The scale values of this electrometer as determined by me after the return of the expedition were found to differ considerably from the values obtained at Cape Town on the outward voyage. The constant, by which the readings on the divided head of the instrument had to be multiplied to reduce them to volts, originally varied from 1.6 when the vertical scale reading was 0 to 2.0 when this reading was 30; whereas after the return of the expedition the constant varied from 2.6 for a vertical scale reading of 6 to 3.0 for a vertical scale reading of 20. This change of the constant of course introduces a serious uncertainty into the results, as it is impossible to say definitely when it took place. The change of constant is most probably due to injuries received on the outward or homeward voyage or during loading or unloading operations. Whether, however, the change of constant took place before or after the observations were taken it is impossible to determine. There is a record of an accident to the electrometer a month or two after observations at the Winter Quarters were begun. After the 5 p.m. observation on April 24, 1902, there is the following note:—"The observer (L. B.), immediately after taking the above observation, accidentally tilted the instrument while putting it back in its box, which loosened and shifted the guard plate and discharged the instrument, and necessitated its being taken to a warm room to be overhauled. The guard plate was gently pressed back into its place and the instrument thoroughly dried." It is just possible that the change of constant may have occurred at this time. No further accident appears to have happened to the electrometer while the observations continued. It is unlikely, therefore, that the relative values of potential recorded subsequently to this date were affected.

In the reduction of the results the scale values determined after the return of the expedition have been used, but the uncertainty resulting from the change in the constant of the electrometer must be borne in mind.

As "collectors" the ordinary electrometer match or fuze was used. The observations, except where otherwise described, were taken with the electrometer placed on a tripod stand, the table of which was about 4 feet above the surface of the ground. The match was attached to the end of a copper wire and was about 5 feet above the ground. The case of the instrument was connected to earth by means of a copper wire. The insulation appears to have been satisfactory, and the behaviour of the instrument as tested after the return of the expedition would lead one to expect no appreciable error from defective insulation. It is, however, not to be expected that the potential acquired by the match and indicated by the electrometer will give accurately the potential which would exist at the point now occupied by the match, if observer, electrometer, and match were absent. The equipotential surfaces even at the level of the match will be somewhat distorted by the presence of observer and apparatus. In taking the readings the observer always occupied approximately the same relative position, his head well below the level of the match; if the stand and observer could be simply regarded as earth-connected conductors, the relative values of potential obtained on different occasions would be unaffected, and the error in the absolute value of the potential at the given height would not be large. There is, however, the possibility of an irregularly varying error due to electrical charges on the clothing of the observer. The observer faced the wind while taking the observations, the wind blowing towards him from the instrument, so that his breath or any drifting snow which might have come in contact with him would not reach the immediate neighbourhood of the match. This does not, however, in any way diminish the error due to possible electrification of the observer's clothes.

For some months observations were also taken of the potential at a height of 15 feet, the match being placed at the end of a rubber-insulated copper wire supported on a pole. These observations were made within a few minutes of the ordinary 5-foot observations. While these observations would be free from the disturbing influence of the observer, one cannot feel the same confidence in the sufficiency of the insulation.

It was not found convenient to take all the observations at the same place throughout the year. The earlier systematic observations up to May 24, 1902, were taken on shore near "Hut" B (the "absolute" house); those of August 7, 1902, to March 15, 1903, were again taken at the same spot. The winter observations, May 24, to August 6, 1902, and from March 15, to May 8, 1903, were taken on the ice near the ship (about 100 yards away).

The apparatus not being self recording, it was of course impossible to obtain anything approaching a continuous record of the variations of the potential. An unbroken series of hourly observations was obtained extending over the three days from 8 a.m., November 22, to 8 a.m., November 25, 1902. These were taken at the ordinary position on shore at a height of five feet above the ground. A further series, in this case of 2-hourly observations, also extending over three days (noon, October 7, to noon, October 10, 1903), was also obtained. These were taken at the same place, but with the match at a height of 12 feet above the ground. A varying number of observations were taken daily throughout the rest of the time, except on days when observing was rendered impossible by blizzards. During the middle of the second winter, between May 8 and August 19, 1903, no observations were attempted owing to shortage of the supply of electrometer matches.

The difficulty and discomfort inseparable from meteorological observations in circumpolar regions are accentuated in the case of measurements made with the portable electrometer, owing to the fact that the instrument is not direct reading, the divided head having to be adjusted to bring the cross hair to its "sighted" or zero position. When the observations had to be taken with the aid of artificial light the difficulty must have been greatly increased. It is not surprising, therefore, that the number of observations per day was reduced in the winter months, and that continuous series of hourly observations extending over a day or more are lacking for these months.

#### RESULTS.

The more striking features which appear on an examination of the values obtained for the potential at the place of observation will be considered first. In what follows, the times throughout are mean local times.

##### 1. SIGN OF THE POTENTIAL.

The potential was almost invariably positive, as in temperate latitudes. Only on 11 days were negative values met with. Particulars of these occasions are given in the table which follows:—

Date.	Time.	Volts at 5 feet.	Volts at 15 feet.
1902			
February 28 . . .	10 a.m.	- 90	—
March 4 . . .	10 "	- 59	—
" 14 . . .	9.30 "	- 45	—
" 19 . . .	11.40 "	- 56	—
May 25 . . .	2 "	- 72	—
" 26 . . .	11 "	- 15	—
October 27 . . .	10 "	- 18	—
1903			
January 13 . . .	10 p.m.	- 38	+ 110
" 14 . . .	10 a.m.	- 81	- 218
" " . . .	4 p.m.	- 72	- 23
" 15 . . .	10 a.m.	- 17	+ 223
" " . . .	4 p.m.	- 9	+ 74
February 13 . . .	10 a.m.	- 223	—

In lower latitudes the occurrence of negative potentials is generally associated with precipitation. On only three of the days of the above table (October 27, 1902, and January 13 and 14, 1903) was there precipitation. On most of the days the sky was overcast for part of the day at least, but March 4, 1902, and February 13, 1903, were fine and clear nearly all day.

##### 2. INTENSITY OF THE NORMAL ELECTRIC FIELD.

The mean potential gradient under normal weather conditions is about 60 volts per metre (or about 40 volts per metre if the original constant of the instrument be used). It has of course to be borne in mind that, as pointed out above, the deformation of the equipotential surfaces by observer and apparatus may

have been considerable, and the number given can only be taken as giving a rough approximation to the absolute potential gradient. The potential gradient appears, then, to have a mean value somewhat less than that met with in Europe.\*

### 3. ABNORMALLY HIGH POTENTIALS ASSOCIATED WITH DRIFTING SNOW.

It was noticed by Mr. BERNACCHI that "as soon as the slightest amount of drifting snow appears in the air the difference of potential becomes large and fluctuating."

An analysis of all the occasions on which the potential at the ordinary height of about five feet exceeded 200 volts is contained in the table which follows:—

Volts.	Number of occasions.					
	Drift.	Snow.	Ice crystals.	Fog.	Other conditions.	Total.
200-300	3	1	1	1	15	21
300-400	1	0	1	0	7	9
400-500	2	1	0	0	0	3
500-1000	9	0	1	0	1	11
1000-	4	0	0	0	1	5
Above 200	19	2	3	1	24	49
„ 300	16	1	2	0	8	27
„ 400	15	1	1	0	2	19

In this table are recorded the number of cases in which potentials between the limits given in the first column were observed (1) when drifting snow is recorded; (2) when snow was falling; (3) with ice crystals in the air; (4) with fog; and (5) under other conditions.

Of the 19 occasions on which the potential exceeded 400 volts drift is recorded on 15. The total number of occasions on which drift is recorded in the journal of atmospheric electricity is 26. Of the seven occasions when the potential with drifting snow was below 200 volts, it lay between 150 and 200 on four, between 100 and 150 on two, and below 100 volts on only one occasion. The mean value of potential when the abnormally high values associated with drifting snow are excluded amounts to 92 volts; the mean for the 26 occasions on which drift is recorded is 668 volts.

Except when driven along by the wind, snow or ice crystals in the air do not give potentials which are in any way abnormal. The table which follows contains the results of all observations where there is a record of ice particles in the air (whether recorded as drift or snow, or ice crystals) classified according to wind strength.

Wind strength . . . .	0-1.	1-3.	3-4.	Exceeding 4.
Mean voltage . . . .	98	225	570	1018
Number of cases . . . .	16	10	18	7

The table gives for various wind strengths the number of cases on which there is a record of snow, drift or ice particles in the air, and the mean value of the voltage on such occasions. The classification is according to the maximum wind strength when that is entered as varying between two limits; *e.g.*, a wind recorded as of strength 3 to 5 would be entered in the last column.

\* The mean value of the potential gradient at Kew, from selected days during the seven years 1898 to 1904, is 159 volts per metre. (C. CHREE, 'Phil. Trans.,' A, vol. 206, p. 302.)

It will be seen that in calm weather the potential with snow or with ice crystals in the air did not sensibly exceed the mean for normal conditions, which amounted to 92 volts, while the potential with ice particles in the air increases continuously with the strength of the wind.

The connection between abnormally high potentials, when there were ice particles in the air, and wind is equally well shown in the next table, where, for the same limits of wind strength as in the previous table, is given in each case the number of occasions when the potential lay between given limits; as before, only those observations being included for which there is a record of drift, snow or ice particles in the air.

Wind strength.	0-1.	1-3.	3-4.	Exceeding 4.
Voltage—				
0-100	9	4	1	0
100-200	7	3	5	0
200-500	0	2	3	3
500-1000	0	1	7	2
1000-	0	0	2	2

Wind alone without ice particles in the air does not give abnormally high potentials.

The mean value of the potential on the occasions (of which there are 46) on which the wind strength exceeded 3 without any record of ice particles in any form in the air amounts to 93; or if we exclude three occasions when the potential was negative, to 109. These values do not differ to any appreciable extent from the mean for normal conditions. The absence of any connection between abnormally high potentials and wind unaccompanied by drift is equally well shown in the following table, in which the above-mentioned 42 cases of wind without drift are classified according to the potentials observed.

Voltage.	Negative.	0-100.	100-200.	200-300.	300-400.	Above 400.
Number of cases . . . . .	3	24	12	2	1	0

High positive readings of the electrometer are thus undoubtedly associated with drifting snow; snow unaccompanied by high wind, and high winds unaccompanied by drifting snow, do not give abnormally high values. With snow in the air the potential is higher the greater the wind velocity. Cases of high potential without drift or snow are comparatively rare; of the 19 occasions on which the potential exceeded 400 volts there was drift or snow on all except two.

It is not impossible that these high positive values of the potential associated with driving snow are in a sense spurious, that the potential indicated by the electrometer may not under such conditions be related in any immediate way to the undisturbed air potential at the level of the collector. With the air full of dry ice particles blown along by the wind there must be a certain amount of electrification by friction of the ice against the instrument and the observer's clothing. The high potential indicated by the electrometer might be due to electrification by friction of the ice against the collector, supporting wire or electrometer terminal, or again the potential in the neighbourhood of the observer might be raised by the acquisition of a positive charge by his clothing. It is improbable, however, that either of these processes is the cause of the high potentials observed, for the sign of the effect is the opposite of what such explanations would lead us to anticipate. According to SOHNCKE ('Wied. Ann.,' vol. 28, p. 550, 1886), ice appears to acquire a positive charge by friction against other substances. A negative charging up of the observer's clothing or of the electrometer terminal and its connections, and a consequent lowering of the potential readings, might therefore rather have been expected. The observer faced the wind in reading the instrument; ice particles which had become electrified by striking against his clothing would not therefore be blown in the direction of the instrument, and any effect of a charge acquired by the ice particles in this way would be slight.

On the whole, then, it is probable that the apparent raising of the potential at a given height in the air by drifting snow is real, and not a spurious effect due to the presence of the observer and his instrument. An additional argument in favour of this conclusion is afforded by the fact that in many cases where high potentials were observed the drift is recorded as being along the ground, in some cases entirely below the level of the instrument. Again, there is at least one case of abnormally high potential where the snow was observed to be drifting, but not in the immediate neighbourhood of the instrument (August 19, 1902, 4.30 p.m.). It is of course possible that even in these cases fine snow particles were being driven against the observer and instrument. It is more probable, however, that the high air potentials recorded are, in these cases at least, genuine, and the probability of the still higher potentials, observed when the drift was more pronounced, really indicating high air potentials is increased.

From December 3, 1902, till March 14, 1903, observations were taken with the collector at 15 feet above the ground as well as at the usual height, and after that date at 12 feet. With the collector at such heights the possibility of any charge on the observer's clothing influencing the potential taken up by the collector may be considered as excluded; the chance of electrification of the wire connecting the collector to the electrometer is, on the other hand, increased. While these high-level collectors were in use the number of occasions of drift at the time of the electrical observations was small (only six), but on all except one of these abnormally high values were observed. It is probable, then, that the high readings obtained with drifting snow really indicate high air potentials, but it has to be remembered that it is not altogether impossible that they may be due to electrification of the collector or its connecting wire by friction.

Assuming the high readings accompanying drifting snow to indicate abnormally high air potentials, we may perhaps most naturally conclude that the high potential is due to a positive charge acquired by the ice particles as a consequence of their friction against the ground. In many cases in which this abnormally high potential was observed the drift is described as being along the ground; sometimes it is definitely described as entirely below the level of the instrument. If the increased potential is entirely due to the charge carried by the ice particles, then the increase in the vertical electrical field or potential gradient will not extend above the level of the drifting snow, the vertical field within the drift-filled air (assumed to form a uniform layer in contact with the ground) diminishing from the ground upwards to the upper surface of the drift at a rate proportional to the density of the charge, the field above this level being unaffected by the drift. Under the simple conditions assumed (which may not differ much from the actual) we should everywhere have  $\frac{d^2V}{dh^2} = -4\pi\rho$ ,  $V$  being the potential in electrostatic measure, and  $\rho$  the charge per cubic centimetre.

One might hope to get some light thrown upon the nature and distribution of the charge carried by the lower layers by a comparison of the results obtained at 15 feet with those of the ordinary 5-foot observations. If the increased potential accompanying drifting snow were entirely due to charges below the 5-foot level, then the electric force above this level would be unaffected, or, in other words, the difference of potential between points at the 15- and 5-foot levels would be the same as under normal conditions. If, on the other hand, the charge causing the disturbance was entirely above the higher level, the increase in the electric force would be the same throughout the 15 feet (a horizontally stratified distribution being assumed); the ratio of the potential observed at the two points would remain constant if the charge in the air below the higher one were always negligible.

The data for such a comparison are, unfortunately, very scanty, but, so far as they go, the results show that with snow in the air accompanied by wind the difference of potential between the two levels was increased, the relative increase being, however, not so great as that of the potential at the lower level, *i.e.*, the ratio of the potential at 15 feet to that at 5 feet was on the whole diminished. This would indicate a positive charge neither entirely above the 15-foot level nor entirely below the 5-foot level. There is, unfortunately, no case (where the data for both levels are available) in which the drifting snow is recorded as being entirely below the 5-foot level. The results are, then, consistent with the view that the disturbance is entirely due to a positive charge carried by the drifting snow particles, but the data are insufficient to justify any more definite conclusion.

In the case of snow unaccompanied by any but inconsiderable winds, the readings at the lower level are, as we have seen, not sensibly increased; those at the upper level are, on the whole, diminished. In one case indeed, the 15-foot reading was actually less than the 5-foot reading, indicating an apparent reversal of the field above the 5-foot level. It must, however, be remembered that the observations at the two points were not simultaneous, the high-level observations being taken immediately after those at five feet. The possibility of defective insulation in the case of the high-level observations during a fall of snow must also be borne in mind.

#### 4. DAILY AND YEARLY VARIATIONS OF POTENTIAL.

Observations taken during the occurrence of drift must certainly be treated as abnormal, and are therefore excluded from the data used in the investigation of possible daily and annual variations of potential. The comparatively few other occasions when the potential exceeded 300 volts, as well as cases of zero or negative potential, have also been excluded.

##### *Daily Variation.*

Only during the summer months, November, December, and January, were the observations numerous enough to admit of the possibility of a daily variation being detected. These three months are alike in giving evidence of the existence of a minimum in the middle of the day or early afternoon. In December, 1902, and January, 1903, observations were taken at 10 a.m., 4 p.m., and 10 p.m.

Time.	December, 1902.		January, 1903.	
	Number of observations.	Mean voltage.	Number of observations.	Mean voltage.
10 a.m. . . . .	21	139	22	128
4 p.m. . . . .	21	110	21	96
10 ,, . . . . .	19	154	21	135

The observations for November were more numerous and were distributed over the 24 hours. The minimum occurs in the middle of the day, the maximum being in the early morning soon after midnight. Dividing the day into six equal periods of 4 hours, and taking the mean of the potentials observed during each of these periods, we obtain the results given in the following table:—

Time.	November, 1902.	
	Number of observations.	Mean voltage.
0 to 4 a.m. . . . .	12	161
4 ,, 8 ,, . . . . .	15	120
8 ,, 12 noon . . . . .	35	102
12 to 4 p.m. . . . .	27	104
4 ,, 8 ,, . . . . .	22	125
8 ,, 12 Midt. . . . .	23	138

The only continuous series of hourly observations extending over so much as 24 hours was one carried out in November, 1902. It extended over three days, from 8 a.m., November 22, to 8 a.m., November 25; the weather conditions were fairly satisfactory, with no snow or drift and little wind, but with a good deal of cloud.

## HOURLY values of potential in volts, November 22 to 25, 1902.

Time.	November 22-23.	November 23-24.	November 24-25.	Mean.
8 a.m. . . . .	129	126	81	112
9 " . . . . .	75	132	102	103
10 " . . . . .	108	120	84	104
11 " . . . . .	105	81	75	87
Noon . . . . .	90	84	48	74
1 p.m. . . . .	72	93	57	74
2 " . . . . .	78	132	78	96
3 " . . . . .	126	120	84	110
4 " . . . . .	135	165	117	139
5 " . . . . .	138	99	123	120
6 " . . . . .	141	108	117	122
7 " . . . . .	126	138	108	124
8 " . . . . .	120	159	108	129
9 " . . . . .	114	153	99	122
10 " . . . . .	132	144	102	126
11 " . . . . .	93	165	105	121
Midt. . . . .	117	177	96	130
1 a.m. . . . .	156	225	102	161
2 " . . . . .	99	165	120	128
3 " . . . . .	129	189	126	148
4 " . . . . .	273	213	141	209
5 " . . . . .	135	138	117	130
6 " . . . . .	102	126	111	113
7 " . . . . .	120	105	108	111
8 " . . . . .	126	81	93	100

This series shows a minimum on each day about noon, and a maximum in the early morning hours, the time of the maximum for the mean of the three days being 4 a.m.

During the summer months, when the sun is always above the horizon, there is evidence of a daily variation, the maximum being when the sun is low, the minimum in the middle of the day.

Mr. BERNACCHI remarks in a note added to the observations of November 15, 1902:—"There seems little doubt that atmospheric electricity is a maximum at midnight and a minimum at noon."

For the rest of the year the data are insufficient to establish any regular daily variation. There is one series of 2-hourly observations extending from noon on October 7 till noon on October 10, 1903. There was considerable disturbance due to drifting snow, and the observations were made with the collector at a height of 12 feet; the insulation in the high-level observations is not above suspicion. This series is, therefore, of little value for the purpose of studying the daily variation.

#### *Annual Variation.*

The fact that the observations were not taken at the same hours daily throughout the year makes it difficult to decide upon the best mode of treating the observations for the purpose of determining whether there is any regular annual variation. In the three tables which follow are given the mean potential at the point of observation (5 feet above the ground) for each month, the mean for each month being in the first table that of the forenoon observations (taken between 9.30 and 11 a.m.) of all the available days; in obtaining the values given in the second table the mean of the available values for each day was calculated, and the mean for the month is the mean of these means; in the last table the mean of all the available observations for each month is given. In all cases observations taken during snow or drift, as well as all giving negative or zero or abnormally high potentials (exceeding 300 volts) have been excluded. The period covered is from March, 1902, to April, 1903, inclusive.\*

\* Under March and April are given the means of the observations of both 1902 and 1903.

## I. FROM Forenoon Observations.

Month . . . . .	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	Year.
Volts . . . . .	76	73	86	60	68	96	88	106	106	139	128	78	92
Number of observations .	19	24	11	5	9	8	15	16	23	21	22	8	—

## II. FROM Means for each Day.

Month . . . . .	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	Year.
Volts . . . . .	69	83	91	79	59	83	87	94	119	134	122	91	92
Number of Days . . . . .	24	27	15	16	19	12	19	21	25	24	25	8	—

## III. FROM all available Observations.

Month . . . . .	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	Year.
Volts . . . . .	71	78	90	71	57	80	91	88	120	133	119	95	91
Number of observations .	38	36	16	23	38	19	59	67	134	62	65	22	—

The general character of the annual variation as deduced from any of the three tables is the same; there is a maximum in December, a minimum in June or July, and apparently a secondary minimum in March or April.

Table I. is unsatisfactory on account of the very small number of the forenoon observations in the winter months. To the use of the methods of Tables II. or III. in determining the annual variation it might be objected that when the observations are distributed irregularly over the 24 hours, there is a danger of an apparent annual variation arising from a variation in the hours of most frequent observation at different seasons of the year. In the summer months, for which alone the data are in any way sufficient to test the existence of a daily variation, the mean of the forenoon observations for each month does not differ to any serious extent from the means derived from all the observations as in Tables II. or III. Whether the method of Table II. or that of Table III. is the better it is not easy to decide. Table II. is not really derived from the values of the true mean potential for each day; the values used for the mean potential for each day being the mean of the results of the undisturbed observations for that day, the number of such observations varying for different days from 1 to 24. It would seem natural to attach more weight to the mean for a day the greater the number of observations from which such mean has been deduced. If we were to weight the means for the various days simply in proportion to the number of observations, we should arrive at the numbers given in Table III. On the other hand, it might be held

that all the results of a particular day are likely to have been similarly affected by the weather conditions prevailing on that day, and that it is fairer to proceed according to the method of Table II., and attach equal weight to the mean for each day, whatever the number of observations from which it has been derived. The difference in the actual results of the two methods is fortunately too small to be of importance.

There is still another difficulty to be considered. The place of observation was not the same in the winter months as during the rest of the year. From the 24th of May, 1902, till the beginning of August, and again during the latter half of March and in April, 1903, the observations were taken on the ice instead of at the usual place on shore. The height of the burning match above the ground or ice was the same at both places. The apparent winter minimum might, then, be held to be spurious and due to the change of the place of observation. Against this it is to be said that there is no obvious discontinuity in the record of potential readings when the place of observation is changed, and that the values of the potential for April, 1903, are greater than those of April, 1902, in spite of the fact that those of 1903, unlike those of the previous year, were taken on the ice. There is, then, no evidence that the potential above the ice was lower than that at the same height on shore. The change of place of observation, no doubt, however, does introduce a serious uncertainty.

Even, however, if we confine our attention to the observations taken under constant conditions from the beginning of August, 1902, to the end of February, 1903, the evidence of an annual variation of potential is very strong, the maximum occurring in December. The material for the rest of the year is much less satisfactory, on account of the less frequent observations, as well as of the changes in the place of observation.

To sum up, we may say that the observations made at the "Discovery's" Winter Quarters give evidence of the existence of an annual variation of the electric field, the maximum being in December (*i.e.*, midsummer), there being probably a minimum in June or July, and a secondary minimum in March or April. It has, of course, to be remembered that these conclusions rest on the results of observations extending over only one year. The midsummer maximum is very clearly indicated by the observations and is remarkable when we remember that in lower latitudes the electric field has its maximum strength in midwinter. Data for the study of any daily variation are practically wanting except for the month of November. Here there is evidence of a minimum in the middle of the day (and this is in agreement with the results of the December and January observations) and a maximum in the early morning hours. The early morning maximum is remarkable, the one point in which there is agreement in the curves of daily variation for different seasons and different localities in lower latitudes being the occurrence of an early morning *minimum*.

##### 5. POTENTIAL AT 15 FEET ABOVE THE GROUND.

During December, 1902, and January, 1903, in addition to the observations at the usual height, measurements of the potential at 15 feet above the ground were also made. For this purpose a collector match was attached to one end of a rubber-insulated wire, the other end being connected to the electrometer terminal. The match was lighted and then raised to a height of 15 feet with the help of a pole of that length, to which the insulated wire was attached.

The observations were taken about 3 minutes after those at the 5-foot level.

In the absence of special tests the insulation in such an arrangement is by no means above suspicion. Nor, even in the absence of error due to defective insulation, is it possible to deduce from the observations the true undisturbed potential at 5 feet and 15 feet, on account of the deformation of the potential surfaces by the observer and apparatus. But the results of the observations at the higher level are of value as confirming the results obtained for the variation of potential at the lower level. The observations at the two levels not being simultaneous, we cannot expect a constant ratio between the high- and low-level potentials for individual readings (even in the absence of volume electrification of the air in the immediate neighbourhood of the place of observation), but there appears to be a fairly constant ratio between the means at the two levels when we consider a reasonable number of observations.

In December, 1902, and January, 1903, observations were taken fairly regularly at the hours 10 a.m., 4 p.m., and 10 p.m. If we confine our attention to days on which observations at each of these hours were

obtained at both levels (observations disturbed by drift, &c., being excluded), we get the following results for the high-level potential at each of the hours mentioned, and its ratio to the low-level potential:—

Date.	Potential at 15 feet.			Potential at 15 feet. Potential at 5 feet.		
	10 a.m.	4 p.m.	10 p.m.	10 a.m.	4 p.m.	10 p.m.
1902						
December 5 . . . .	354	174	255	3·3	2·0	2·0
"   6 . . . .	186	131	215	1·7	1·75	2·7
"   14 . . . .	661	261	229	2·72	1·57	1·25
"   17 . . . .	189	142	177	2·42	2·32	1·22
"   18 . . . .	133	246	548	2·29	2·50	2·50
"   22 . . . .	336	174	232	2·19	2·33	1·64
"   24 . . . .	278	281	383	2·22	2·03	1·92
"   25 . . . .	551	516	383	2·44	3·35	1·95
"   26 . . . .	290	357	313	2·12	2·92	2·70
"   27 . . . .	342	342	505	1·81	3·30	2·93
"   28 . . . .	258	200	415	2·55	2·08	2·99
"   29 . . . .	319	345	505	1·71	2·44	2·45
Mean . . . .	325	264	347	2·29	2·38	2·10

Date.	Potential at 15 feet.			Potential at 15 feet. Potential at 5 feet.		
	10 a.m.	4 p.m.	10 p.m.	10 a.m.	4 p.m.	10 p.m.
1903						
January 1 . . . .	234	237	246	4·25	1·88	1·68
"   2 . . . .	231	258	252	1·84	3·07	1·75
"   3 . . . .	216	435	321	2·66	2·85	2·02
"   4 . . . .	357	244	148	1·95	1·64	1·16
"   5 . . . .	131	142	383	1·16	1·53	2·44
"   6 . . . .	247	209	247	3·05	2·49	2·45
"   8 . . . .	203	203	264	2·25	1·75	1·74
"   9 . . . .	249	131	221	2·15	1·51	1·66
"   10 . . . .	174	64	207	1·50	0·79	1·87
"   16 . . . .	313	316	496	2·35	3·30	3·01
"   18 . . . .	145	226	238	1·67	4·35	2·16
"   19 . . . .	568	160	278	2·97	1·62	2·04
"   20 . . . .	241	351	226	2·14	3·20	2·06
"   23 . . . .	313	162	160	1·86	1·47	1·35
"   27 . . . .	302	293	345	2·54	2·53	1·65
"   29 . . . .	160	226	212	1·67	2·90	1·73
Mean . . . .	255	229	265	2·19	2·30	1·92

There is evidence of a daily variation at the higher level in agreement with that shown at the lower level.

Again, at the higher level as at the lower level, the mean potential at each of the hours is less in January than in December. For the subsequent months the data are very scanty, but so far as they go they show agreement between the variations at the two levels.

#### 6. ATMOSPHERIC POTENTIAL AND THE AURORA.

The occurrence of auroral displays was without any obvious effect on the electrical field.

On several occasions during an aurora, additional observations of potential were made with an electrometer resting on the ship's rail. The actual values of the potential thus observed are, of course, of little

importance, but such observations would at least have shown if there were anything abnormal in the sign of the potential, or even if there were anything extraordinary in its magnitude during an aurora, or if there were fluctuations corresponding to changes in the appearance of the aurora. In all cases, however, the sign of the potential was apparently normal, and there was nothing remarkable in the values of the readings.

It is not easy to decide definitely from the ordinary series of potential readings whether auroras have any influence on the electrical field. It is only for about half the year that auroras could be observed, and it is just during this half of the year, *i.e.*, the winter months, that the observations of potential were fewest. Again, while the conditions were suitable for seeing them, auroras were of practically daily occurrence, so that possibly the potential, as it would be outside the influence of auroral disturbances, was never observed.

Perhaps all that can be done is to pick out the days on which auroras of abnormal brightness, extent, or duration occurred, and see if the potential on such days differs from the mean for the month. In the following table are given the days on which specially conspicuous auroras occurred, and the results of such observations of potential as were made on these days, the mean of the undisturbed potential readings for the month being also given.

Days of conspicuous auroras.		Potentials observed—		Mean for month.
1902			volts	volts
April	9 . . . . .	At 11 a.m.	11	78
	" 10 . . . . .	" 5 p.m.	39	
	" 15 . . . . .	" 11 a.m.	25	
		" 5 p.m.	39	
		" 11 a.m.	0	
May	7 . . . . .	At 11 a.m.	62	90
	" 9 . . . . .	" 11 "	131	
June	6 . . . . .	At 11 a.m.	52	71
	" 10 . . . . .	" 5 p.m.	0	
	" 14 . . . . .	" 11 a.m.	72	
		" Noon	24	
		" 6 p.m.	84	
July	4 . . . . .	At 4.25 a.m.	30	57
		" 4.33 "	36	
		" Noon	30	
		" 5.30 p.m.	57	
	" 5 . . . . .	" 1.5 a.m.	39	
		" 1.50 "	48	
		" Noon	57	
		" 9.40 p.m.	75	
August	11 . . . . .	At 11 a.m.	35	80
	" 29 . . . . .	" Noon	(168) drift	
1903				
April	8 . . . . .	At 10 a.m.	87	78
	" 19 . . . . .	—	—	
	" 20 . . . . .	—	—	
	" 21 . . . . .	" 10 a.m.	52	
		" 4 p.m.	122	
	" 22 . . . . .	" 10 a.m.	314	
		" 4 p.m.	59	

There is some indication of disturbance of the electrical field by these specially intense auroras, low values being apparently liable to occur. There is one case, April 22, 1903, of an exceptionally high value; this was not accompanied by drifting snow or other abnormal conditions.



OBSERVATIONS of Electrical Potential at "Discovery's" Winter Quarters. WHITE'S Portable Electro-meter No. 81. Height of Mast above the Ground, 5 feet. Local Time (continued).

Date.	Hour.	Volts.	Notes.	Date.	Hour.	Volts.	Notes.				
1902 June 14	6.0 p.	84		1902 July 17	4.5 a.	3					
15	10.30 p.	75			6.5 a.	57					
19	1.0 p.	720	Ice particles in air.	23	11.0 a.	70					
	5.0 p.	84		26	3.30 p.	41					
	8.30 p.	63	Heavy deposition of ice crystals.	27	11.0 a.	73					
	10.50 p.	72		28	11.0 a.	50					
20	11.0 a.	51			5.0 p.	55					
	8.30 p.	1125	Puffs of wind; ice particles in air.	29	10.0 a.	87					
	11.0 p.	300			10.0 p.	110					
21	5.0 p.	21		30	10.0 a.	35					
	11.0 p.	51			9.35 p.	15					
22	11.0 a.	72		Aug. 7	12.35 p.	119					
	10.0 p.	63		<i>Subsequent observations taken on shore at old position near Absolute House (Hut B).</i>							
23	10.35 p.	39		Aug. 10	11.0 a.	67					
25	10.35 p.	252		11	11.0 a.	35					
26	12.50 a.	153		15	11.0 a.	61					
28	Noon	26		16	11.0 a.	41					
30	12.45 p.	51			11.0 p.	23					
	10.10 p.	36		18	Noon	70					
July 1	1.20 p.	51			4.0 p.	20					
	9.40 p.	27		19	11.0 a.	41					
	11.50 p.	75			1.0 p.	52					
3	4.15 p.	42			4.30 p.	679	Drift in bay.				
4	4.25 a.	30	Aurora.	21	11.30 a.	629	Drift.				
	4.33 a.	36	Aurora.	22	Noon	78					
	Noon	30	Aurora.		5.0 p.	226	Drift.				
	5.30 p.	57		23	10.0 a.	46					
5	1.5 a.	39	Aurora.		Noon	58					
	1.50 a.	48	Aurora.		4.0 p.	35					
	Noon	57		24	11.0 a.	452	Snowing lightly, no drift.				
	9.40 p.	75		25	11.0 a.	226	No drift.				
6	10.50 p.	54			2.0 p.	116					
7	11.0 a.	54			5.0 p.	122					
	8.35 p.	102		26	Noon	128	Snowing lightly.				
8	11.0 a.	54			4.0 p.	128	Snowing.				
	8.0 p.	81		27	Noon	64					
9	10.0 a.	96			5.0 p.	107	Snowing.				
	5.0 p.	69		28	11.0 a.	252	No drift.				
10	11.0 a.	90		29	Noon	168	Little drift.				
	2.0 p.	51		Sept. 1	11.0 a.	70					
12	8.25 a.	63	Faint aurora.		1.0 p.	67					
13	12.20 p.	66	Faint aurora.		3.0 p.	41					
16	5.25 p.	84			5.0 p.	242	Puffs of wind, no drift.				
	7.5 p.	54		3	Noon	165					
	9.5 p.	69									
	Midt.	24									
17	2.0 a.	51									

## OBSERVATIONS of Electrical Potential at "Discovery's" Winter Quarters. WHITE'S Portable Electrometer No. 81. Height of Match above the Ground, 5 feet. Local Time (continued).

Date.	Hour.	Volts.	Notes.	Date.	Hour.	Volts.	Notes.
1902 Sept. 3	5.0 p.	128		1902 Sept. 22	10.0 a.	113	
4	10.0 a.	55			Noon	183	
	5.0 p.	157	Snowing lightly.		2.0 p.	128	
5	8.0 a.	148			4.0 p.	133	
	10.0 a.	64			0.0 p.	87	
	Noon	81		24	10.0 a.	57	
	2.0 p.	78			2.0 p.	49	
	4.0 p.	72			6.0 p.	86	Calm, misty and snowing.
	0.0 p.	70		20	10.0 a.	81	
6	11.0 a.	49	Snowing.		2.0 p.	78	
	5.0 p.	105	Little drift along ground.		6.0 p.	108	
9	10.0 a.	55		27	10.0 a.	76	
	Noon	142			2.0 p.	73	
	2.0 p.	29			6.0 p.	113	
	4.0 p.	20		28	2.0 p.	81	
	6.0 p.	61		29	10.0 a.	81	
10	10.0 a.	61		30	10.0 a.	167	
	Noon	128			2.0 p.	97	Snow crystals falling thickly.
	2.0 p.	58			6.0 p.	57	Heavy fog banks all round.
	4.0 p.	64		Oct. 1	10.0 a.	181	Fog, heavy deposit of ice crystals.
	6.0 p.	96		2	10.0 a.	216	Fog bank all round, slight drift.
	8.0 p.	99			2.0 p.	213	Dense fog all round.
11	8.0 a.	49		3	10.0 a.	181	Dense mist.
	10.0 a.	93			2.0 p.	95	
	4.0 p.	110			4.0 p.	105	
12	8.0 a.	116	Snowing lightly.	4	10.0 a.	78	Mist all round.
13	8.0 a.	81			Noon	119	Mist.
	10.0 a.	142			2.0 p.	59	Mist.
	Noon	136			4.0 p.	38	Dense mist.
	2.0 p.	99		7	10.0 a.	113	
	4.0 p.	200	Drift along surface.		2.0 p.	24	
14	10.0 a.	148			6.0 p.	32	
	2.0 p.	75		8	10.0 a.	70	
	4.0 p.	110			2.0 p.	70	
	8.0 p.	110			6.0 p.	62	
16	10.0 a.	55		9	10.0 a.	159	Snow crystals falling.
	5.0 p.	52	Snowing lightly.		Noon	57	
19	8.0 a.	78	Fine ice spicules in air.		2.0 p.	51	
	10.0 a.	55	Fewer ice spicules in air.		4.0 p.	59	
	Noon	73			0.0 p.	62	Snow crystals falling.
	2.0 p.	131		12	10.0 a.	87	
	4.0 p.	41		10	1.0 p.	54	
20	8.0 a.	73			6.0 p.	48	
	10.0 a.	754		17	10.0 a.	66	
	Noon	387			Noon	66	
	2.0 p.	104			2.0 p.	57	
	4.0 p.	122		18	8.0 a.	96	
22	8.0 a.	122					

## OBSERVATIONS of Electrical Potential at "Discovery's" Winter Quarters. WHITE'S Portable Electrometer No. 81. Height of Match above the Ground, 5 feet. Local Time (continued).

Date.	Hour.	Volts.	Notes.	Date.	Hour.	Volts.	Notes.
1902 Oct. 18	10.0 a.	60		1902 Nov. 3	Noon	87	
	Noon	36			2.0 p.	60	
	2.0 p.	63			8.0 p.	141	
	8.0 p.	132		4	8.0 a.	156	
19	8.0 a.	180			10.0 a.	117	
	10.0 a.	63			Noon	69	
	4.0 p.	48			2.0 p.	102	
20	10.0 a.	96			4.0 p.	93	
	Noon	60			6.0 p.	96	
	2.0 p.	66			8.0 p.	108	
	4.0 p.	84			10.0 p.	138	
	6.0 p.	96		5	10.0 a.	114	
	8.0 p.	129			Noon	84	
21	8.0 a.	186			2.0 p.	378	Squalls and drifting snow.
	10.0 a.	117			6.0 p.	162	Squally; no drift.
	Noon	84		6	10.0 a.	84	
	2.0 p.	78			Noon	93	
	6.0 p.	132			4.0 p.	114	
22	10.0 a.	147			6.0 p.	129	
	4.0 p.	54			8.0 p.	114	
25	10.0 a.	60		7	10.0 a.	291	Snowing heavily.
	6.0 p.	78			10.0 p.	141	
26	10.0 a.	135		8	10.0 a.	702	Blowing hard; drifting snow.
	Noon	72			10.0 p.	102	
	2.0 p.	51		9	Noon	111	
	4.0 p.	72			6.0 p.	84	
27	8.0 a.	348		10	8.0 a.	159	
	10.0 a.	- 18			10.0 a.	102	
	Noon	63			Noon	123	
	2.0 p.	63			2.0 p.	87	
	4.0 p.	63			4.0 p.	141	
	6.0 p.	63			6.0 p.	141	
	8.0 p.	117			8.0 p.	162	
	10.0 p.	87		11	10.0 a.	99	
29	10.0 a.	147	Snowing lightly, little drift on hills.	12	10.0 a.	108	
	2.0 p.	114			Noon	123	
	4.0 p.	108		13	10.0 a.	99	
	8.0 p.	144			4.0 p.	111	
30	10.0 a.	126			10.0 p.	147	
	Noon	72		14	10.0 a.	96	Snowing.
	2.0 p.	165	A little drifting snow in squalls.		4.0 p.	153	
	6.0 p.	99			10.0 p.	153	
31	10.0 a.	111		15	10.0 a.	141	
	Noon	48			4.0 p.	99	
	2.0 p.	72			Midt.	192	
Nov. 2	5.0 p.	129		16	10.0 a.	66	
3	10.0 a.	135			4.0 p.	120	
					10.0 p.	201	

## OBSERVATIONS of Electrical Potential at "Discovery's" Winter Quarters. WHITE'S Portable Electro-meter No. 81. Height of Match above the Ground, 5 feet. Local Time (continued).

Date.	Hour.	Volts.	Notes.	Date.	Hour.	Volts.	Notes.	
1902 Nov. 17	10.0 a.	138	Snowing during preceding hour.	1902 Nov. 21	4.0 a.	213		
19	10.0 a.	123				5.0 a.	138	
20	10.0 a.	87				6.0 a.	126	
	4.0 p.	99			7.0 a.	105		
22	8.0 a.	129	Hourly series begins.		8.0 a.	81		
	9.0 a.	75				9.0 a.	102	
	10.0 a.	108				10.0 a.	84	
	11.0 a.	105				11.0 a.	75	
	Noon	90				Noon	48	
	1.0 p.	72				1.0 p.	57	
	2.0 p.	78				2.0 p.	78	
	3.0 p.	126				3.0 p.	81	
	4.0 p.	135				4.0 p.	117	
	5.0 p.	138				5.0 p.	123	
	6.0 p.	141				6.0 p.	117	
	7.0 p.	126				7.0 p.	108	
	8.0 p.	120				8.0 p.	108	
	9.0 p.	114				9.0 p.	99	
	10.0 p.	132				10.0 p.	102	
	11.0 p.	93				11.0 p.	105	
	Midt.	117				Midt.	96	
23	1.0 a.	156		25	1.0 a.	102		
	2.0 a.	99			2.0 a.	120		
	3.0 a.	129			3.0 a.	126		
	4.0 a.	273			4.0 a.	141		
	5.0 a.	135			5.0 a.	117		
	6.0 a.	102			6.0 a.	111		
	7.0 a.	120			7.0 a.	108		
	8.0 a.	126			8.0 a.	93	End of hourly series.	
	9.0 a.	132			10.0 a.	78		
	10.0 a.	120			4.0 p.	911	Squalls with drift round instrument.	
	11.0 a.	81		26	10.0 a.	2021	Squalls with drift round instrument.	
	Noon	84		27	10.0 a.	96		
	1.0 p.	93			4.0 p.	87		
	2.0 p.	132			10.0 p.	148		
	3.0 p.	120		28	10.0 a.	122		
	4.0 p.	165			4.0 p.	93		
	5.0 p.	99			10.0 p.	160		
	6.0 p.	108		29	10.0 a.	171		
	7.0 p.	138			4.0 p.	87		
	8.0 p.	159			10.0 p.	115		
	9.0 p.	153		30	10.0 a.	99		
	10.0 p.	144			4.0 p.	93		
	11.0 p.	165			10.0 p.	155		
	Midt.	177						
24	1.0 a.	225		Dec. 1	10.0 a.	122	Snowing lightly.	
	2.0 a.	165			4.0 p.	110		
	3.0 a.	189			10.0 p.	148		

## OBSERVATIONS of Electrical Potential at "Discovery's" Winter Quarters. WHITE'S Portable Electrometer No. 81. Height of Match above the Ground, 5 feet. Local Time (continued).

Date.	Hour.	Volts.	Notes.	Date.	Hour.	Volts.	Notes.
1902 Dec. 2	10.0 a.	2300	Steady drift.	1902 Dec. 23	10.0 a.	136	Some drift.
3	10.0 a.	93		4.0 p.	128		
	Noon	64		10.0 p.	684		
	4.0 p.	84		24	10.0 a.	125	
	10.0 p.	122		4.0 p.	139		
4	10.0 a.	110		10.0 p.	200		
	4.0 p.	177		25	10.0 a.	226	
	10.0 p.	305		4.0 p.	154		
5	10.0 a.	107		10.0 p.	197		
	4.0 p.	87		26	10.0 a.	136	
	10.0 p.	128	4.0 p.	122			
6	10.0 a.	110	10.0 p.	116	Threatening appearance, no drifting snow.		
	4.0 p.	75	27	10.0 a.		189	
	10.0 p.	75	4.0 p.	104			
7	10.0 a.	2715	10.0 p.	172			
8	10.0 a.	107	28	10.0 a.		101	
	4.0 p.	78	4.0 p.	96			
	10.0 p.	305	10.0 p.	139			
9	10.0 a.	23	29	10.0 a.		186	
	4.0 p.	44	4.0 p.	142			
	10.0 p.	110	10.0 p.	205			
10	10.0 a.	108	30	10.0 a.	191		
	4.0 p.	73	10.0 p.	131			
	10.0 p.	128	31	10.0 a.	276		
11	10.0 a.	1311	Clear and fine, light breeze from E.	4.0 p.	124		
	10.0 p.	180					
12	10.0 a.	171		1903 Jan. 1	10.0 a.	54	
14	10.0 a.	244		4.0 p.	126		
	4.0 p.	168		10.0 p.	147		
	10.0 p.	183		2	10.0 a.	126	
15	10.0 a.	276	Dense mist on hill tops, snow in the air.	4.0 p.	84		
	4.0 p.	177		10.0 p.	144		
	10.0 p.	191		3	10.0 a.	81	
16	10.0 a.	122		4.0 p.	153		
	4.0 p.	102		10.0 p.	150		
	10.0 p.	125		4	10.0 a.	183	
17	10.0 a.	78		4.0 p.	148		
	4.0 p.	61		10.0 p.	128		
	10.0 p.	145		5	10.0 a.	113	
18	10.0 a.	59		4.0 p.	93		
	4.0 p.	99		10.0 p.	157		
	10.0 p.	213		6	10.0 a.	81	
19	10.0 a.	93	Few snowflakes falling.	4.0 p.	84		
20	10.0 a.	96	Snowing.	10.0 p.	101		
21	10.0 a.	537	Drifting snow in the air.	7	10.0 a.	168	
22	10.0 a.	154		10.0 p.	191		
	4.0 p.	75		8	10.0 a.	90	
	10.0 p.	142		4.0 p.	116		



OBSERVATIONS of Electrical Potential at "Discovery's" Winter Quarters. WHITE'S Portable Electro-meter No. 81. Height of Match above the Ground, 5 feet. Local Time (continued).

Date.	Hour.	Volts.	Notes.	Date.	Hour.	Volts.	Notes.
1903 April 1	10.0 a.	75		1903 May 7	11.0 a.	146	
3	10.0 a.	49		8	11.0 a.	96	
7	10.0 a.	107		<i>Subsequent observations on shore near Absolute House (Hut B).</i>			
8	10.0 a.	87		Aug. 20	10.0 a.	146	
9	10.0 a.	145		21	11.0 a.	103	
14	10.0 a.	41		25	11.0 a.	65	
17	10.0 a.	87		Sept. 21	3.10 p.	62	
21	10.0 a.	52		29	10.0 a.	67	
	4.0 p.	122		30	10.0 a.	87	
22	10.0 a.	314					
	4.0 p.	59					
25	10.0 a.	76					
27	11.0 a.	115					
28	10.0 a.	70					

## HIGH Level Observations of Potential.

Date.	Hour.	Volts.	Notes.	Date.	Hour.	Volts.	Notes.
1902				1902			
				Dec. 26	10.0 p.	313	
				27	10.0 a.	312	
					4.0 p.	312	
					10.0 p.	505	
				28	10.0 a.	258	
					4.0 p.	200	
					10.0 p.	415	
				29	10.0 a.	319	
					4.0 p.	345	
					10.0 p.	505	
				30	10.0 a.	435	
					10.0 p.	174	
				31	4.0 p.	195	
				1903			
				Jan. 1	10.0 a.	234	
					4.0 p.	237	
					10.0 p.	246	
				2	10.0 a.	231	
					4.0 p.	258	
					10.0 p.	252	
				3	10.0 a.	216	
					4.0 p.	435	
					10.0 p.	321	
				4	10.0 a.	357	
					4.0 p.	244	
					10.0 p.	148	
				5	10.0 a.	131	
					4.0 p.	142	
					10.0 p.	383	
				6	10.0 a.	247	
					4.0 p.	209	
					10.0 p.	247	
				7	10.0 a.	870	
					10.0 p.	244	
				8	10.0 a.	203	
					4.0 p.	203	
					10.0 p.	264	
				9	10.0 a.	219	
					4.0 p.	131	
					10.0 p.	221	
				10	10.0 a.	174	
					4.0 p.	64	
					10.0 p.	207	
				11	10.0 a.	258	
					10.0 p.	70	
				12	10.0 a.	267	
					4.0 p.	180	
					10.0 p.	44	
Dec. 3	Noon	90					
	4.0 p.	174					
	10.0 p.	144					
4	10.0 p.	821					
5	10.0 a.	354					
	4.0 p.	174					
	1.0 p.	255					
6	10.0 a.	186					
	4.0 p.	131					
	10.0 p.	215					
8	10.0 p.	319					
9	10.0 a.	177					
	10.0 p.	168					
10	10.0 a.	136					
	10.0 p.	389					
11	10.0 p.	322					
12	10.0 a.	249					
14	10.0 a.	661					
	4.0 p.	264					
	10.0 p.	229					
15	10.0 a.	481					
	10.0 p.	180					
16	10.0 a.	180					
	10.0 p.	151					
17	10.0 a.	189					
	4.0 p.	142					
	10.0 p.	177					
18	10.0 a.	133					
	4.0 p.	246					
	10.0 p.	548					
19	10.0 a.	151					
20	10.0 a.	194					
22	10.0 a.	336					
	4.0 p.	174					
	10.0 p.	232					
23	10.0 a.	284					
	4.0 p.	284					
	10.0 p.	1088					
24	10.0 a.	278					
	4.0 p.	281					
	10.0 p.	383					
25	10.0 a.	551					
	4.0 p.	516					
	10.0 p.	383					
26	10.0 a.	290					
	4.0 p.	357					

## HIGH Level Observations of Potential (continued).

Date.	Hour.	Volts.	Notes.	Date.	Hour.	Volts.	Notes.
1903 Jan 13	10.0 p.	110		1903 Feb. 1	3.0 p.	270	
14	10.0 a.	-218			4.0 p.	191	
	4.0 p.	- 23			5.0 p.	171	
	10.0 p.	139			6.0 p.	235	
15	10.0 a.	223			9.0 p.	197	
	4.0 p.	174		2	10.0 a.	180	
	10.0 p.	258		8	10.0 a.	267	
16	10.0 a.	313		9	10.0 a.	299	
	4.0 p.	316			4.0 p.	139	
	10.0 p.	496			10.0 p.	212	
17	Noon	252		10	10.0 a.	148	
	4.0 p.	145			Midt.	180	
	10.0 p.	354		15	10.0 a.	145	
18	10.0 a.	145.		19	10.0 a.	177	
	4.0 p.	226		20	10.0 a.	197	
	10.0 p.	238		24	4.0 p.	667	
19	10.0 a.	568					
	4.0 p.	160		March 4	10.0 a.	403	
	10.0 p.	278			4.0 p.	215	
20	10.0 a.	241		5	10.0 a.	180	
	4.0 p.	351		7	10.0 a.	215	
	10.0 p.	226		13	Noon	220	
22	10.0 a.	452			5.0 p.	160	
	4.0 p.	171		14	4.0 p.	157	
	10.0 p.	313					
23	10.0 a.	313					
	4.0 p.	162					
	10.0 p.	160					
27	10.0 a.	302		March 19	10.0 a.	129	
	4.0 p.	293			4.0 p.	60	
	10.0 p.	345		20	10.0 a.	183	
28	10.0 a.	1119			4.0 p.	44	
	4.0 p.	154		21	10.0 a.	67	
	10.0 p.	81		27	10.0 a.	180	New pole and wire.
29	10.0 a.	160		30	9.30 a.	191	
	4.0 p.	226		31	10.0 a.	180	
	10.0 p.	212					
30	10.0 a.	1702		April 1	10.0 a.	81	
31	10.0 a.	186		3	10.0 a.	107	
	4.0 p.	197		7	10.0 a.	255	
				8	10.0 a.	223	
				9	10.0 a.	522	
Feb. 1	8.0 a.	241		14	10.0 a.	110	
	9.0 a.	218		17	10.0 a.	122	
	10.0 a.	180		21	10.0 a.	81	
	11.0 a.	162			4.0 p.	185	
	Noon	171		22	10.0 a.	837	
	1.0 p.	238			4.0 p.	98	
	2.0 p.	278		25	10.0 a.	90	

Potential at height of 12 feet on ice about 100 yards from the ship.

## HIGH Level Observations of Potential (continued).

Date.	Hour.	Volts.	Notes.	Date.	Hour.	Volts.	Notes.
1903 April 27	11.0 a.	188		1903 Oct. 8	Noon	551	Drift along surface.
28	10.0 a.	143			2.0 p.	90	
May 8	11.0 a.	120			4.0 p.	58	
<i>Potential at height of 12 feet on shore, near Absolute House (Hut B).</i>					6.0 p.	48	
Aug. 20	10.0 a.	168			8.0 p.	64	
21	11.0 a.	157			10.0 p.	48	
25	11.0 a.	96			Midt.	62	
Sept. 29	10.0 a.	67		9	2.0 a.	76	
30	10.0 a.	107			4.0 a.	67	
Oct. 7	Noon	78			6.0 a.	62	
	2.0 p.	124			8.0 a.	14	Heavy deposit of rime on pole and wires.
	4.0 p.	87			10.0 a.	87	A little drift along surface
	6.0 p.	87			Noon	311	
	8.0 p.	50			2.0 p.	64	
	10.0 p.	48			4.0 p.	101	
	Midt.	162	Drift along surface.		6.0 p.	84	
8	2.0 a.	96			8.0 p.	67	
	4.0 a.	31			10.0 p.	67	
	6.0 a.	28			Midt.	84	
	8.0 a.	48		10	2.0 a.	109	
	10.0 a.	81			4.0 a.	132	
					6.0 a.	101	
					8.0 a.	1140	Surface drift and squally.
					10.0 a.	182	
					Noon	168	



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140°

132°

124°

EAST LONGITUDE

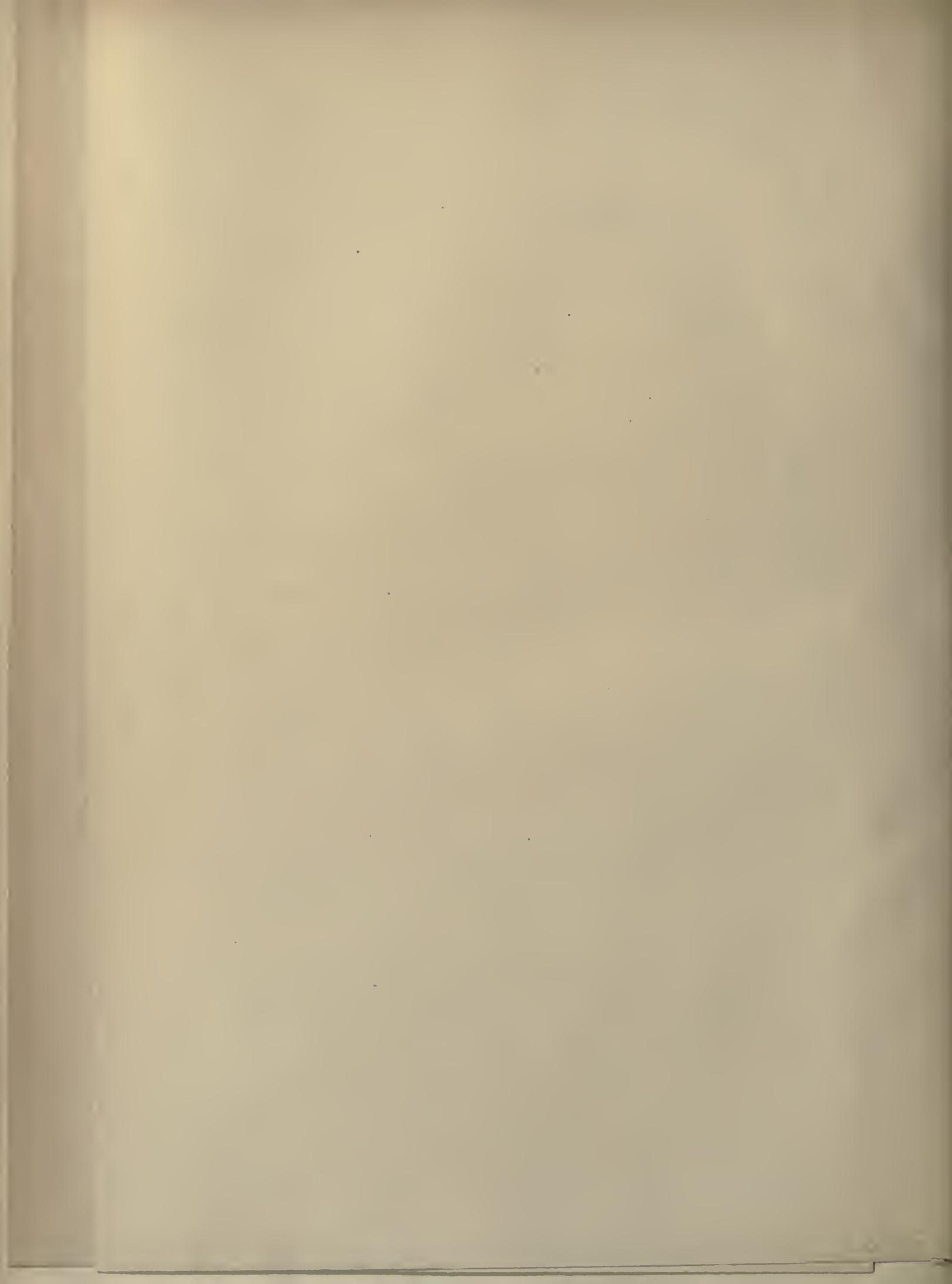
SOUTH

76°

75°

74°





# CHART OF THE ANTARCTIC OCEAN

BETWEEN LATITUDES 77° S. AND 83° 30' S.  
AND LONGITUDES 150° E AND 171° E.

## SHOWING SLEDGE JOURNEYS FROM "DISCOVERY"

IN WINTER QUARTERS  
LAT: 77° 50' 50" S - LONG: 166° 44' 45" E.

OF

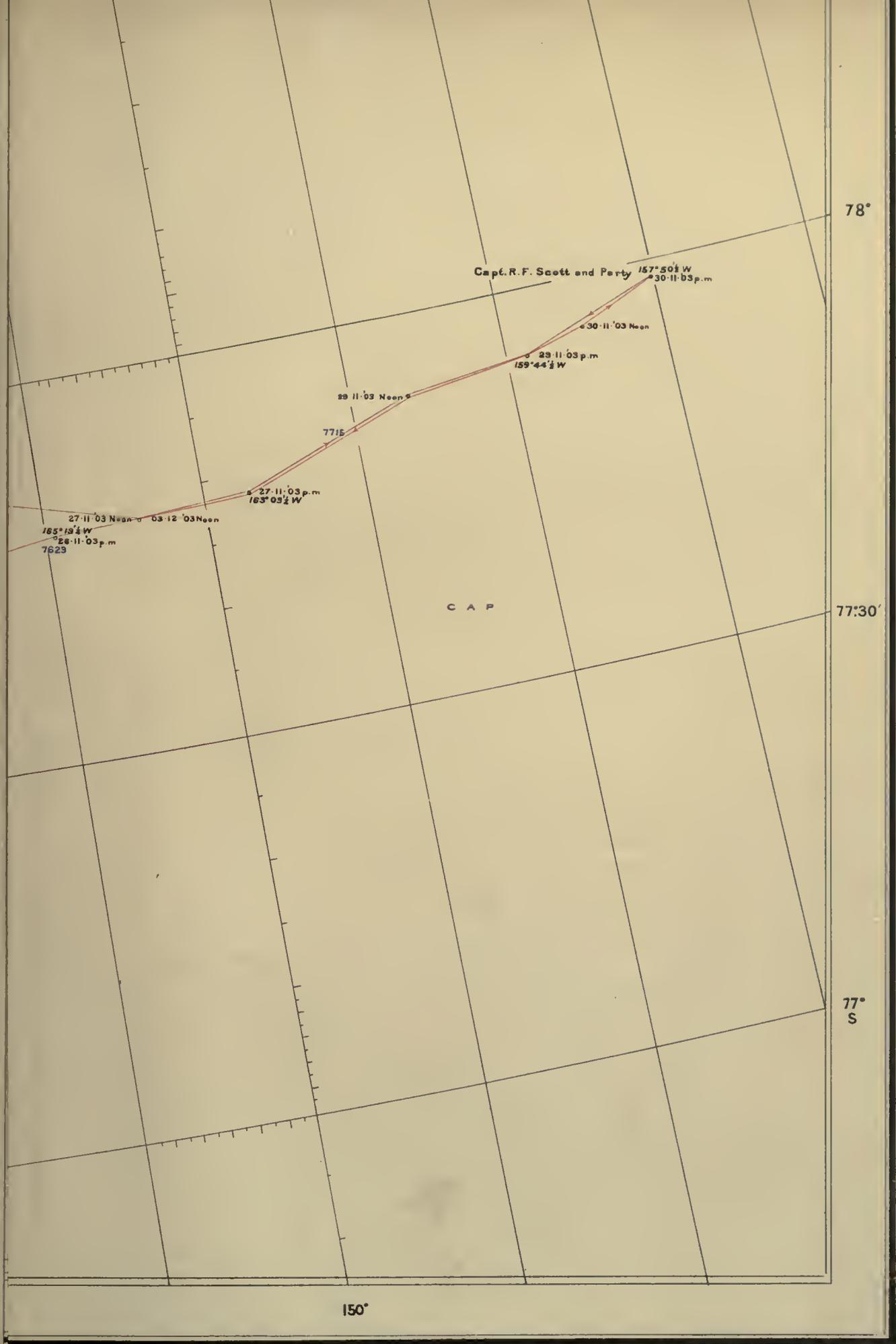
SEASONS		1901-02-03.
Capt. R.F. Scott, R.N. & Party	31-03-'02 to 03-04-'02	to Depot 6½ miles SE of ship.
do.	02-09-'02 - 05-09-'02	to Turtle Rock & Delbridge Id.
do.	17-09-'02 - 19-09-'02	Reconnaissance to SW.
do.	24-09-'02 - 03-10-'02	do. S.
do.	02-11-'02 - 02-02-'03	—————○—————○—————
Lieut. A.B. Armitage, R.N.R. do.	04-09-'02 - 05-09-'02	to Depot 6½ miles SE of ship.
do.	11-09-'02 - 26-09-'02	Reconnaissance to SW.
do.	29-11-'02 - 19-01-'02	—————○—————○—————
Lieut. C.R. Royds, R.N. do.	04-03-'02 - 19-03-'02	to Cape Crozier Rookery
do.	10-09-'02 - 19-09-'02	Reconnaissance to SW.
do.	04-10-'02 - 24-10-'02	to Cape Crozier Rookery
do.	04-11-'02 - 17-11-'02	—————do—————
Lieut. M. Barne, R.N. do.	20-12-'02 - 30-01-'03	—————○—————○—————
Lieut. E.H. Shackleton, R.N.R. do.	19-02-'02 - 22-02-'02	to White Id.
Dr. Koettlitz do.	24-09-'02 - 02-10-'02	△—————△—————△
do.	03-11-'02 - 06-11-'02	Reconnaissance to N.
do.	29-12-'02 - 08-01-'02	△—————△—————△
do.	14-01-'03 - 26-01-'03	△—————△—————△

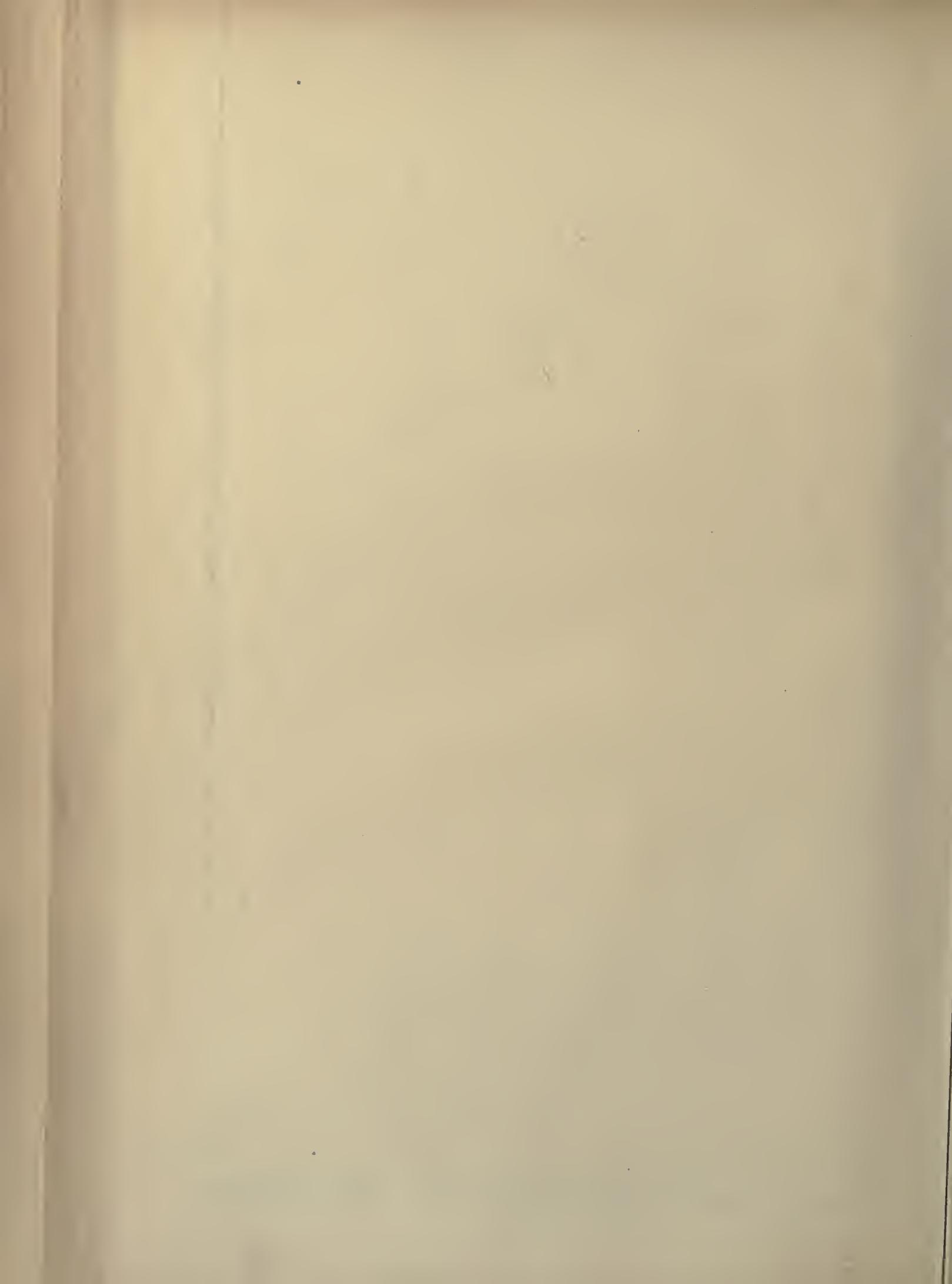
SEASONS		1903-04.
Capt. R.F. Scott, R.N. & Party	09-09-'03 - 20-09-'03	to Depot on Ferrar Glacier
do.	12-10-'03 - 21-10-'03	—————do—————
do.	26-10-'03 - 24-12-'03	—————○—————○—————
Lieut. A.B. Armitage, R.N.R. do.	28-11-'03 - 12-12-'03	—————○—————○—————
Lieut. C.R. Royds, R.N. do.	07-09-'03 - 17-09-'03	to Cape Crozier Rookery
do.	10-11-'03 - 10-12-'03	—————○—————○—————
Lieuts. M. Barne & G. Mulock, R.N.	12-09-'03 - 20-09-'03	to Depot off White Id.
do.	06-10-'03 - 13-12-'03	—————○—————○—————
Dr. E.A. Wilson	12-10-'03 - 05-11-'03	—————○—————○—————
do.	16-11-'03 - 23-11-'03	—————○—————○—————

EXPLANATION.

Ice-covered land shown in blue. Exposed rock in brown. Heights in feet above Barrier surface shown in red. Small black circles denote positions fixed by observations and bearings. Small red circles denote objects fixed by bearings. Heights of Barrier in feet shown in blue. Soundings in fathoms. Track of ship with noon positions. Magnetic Variation shown in sloping block type. Heights of Inland Ice Cap above sea level in blue figures.

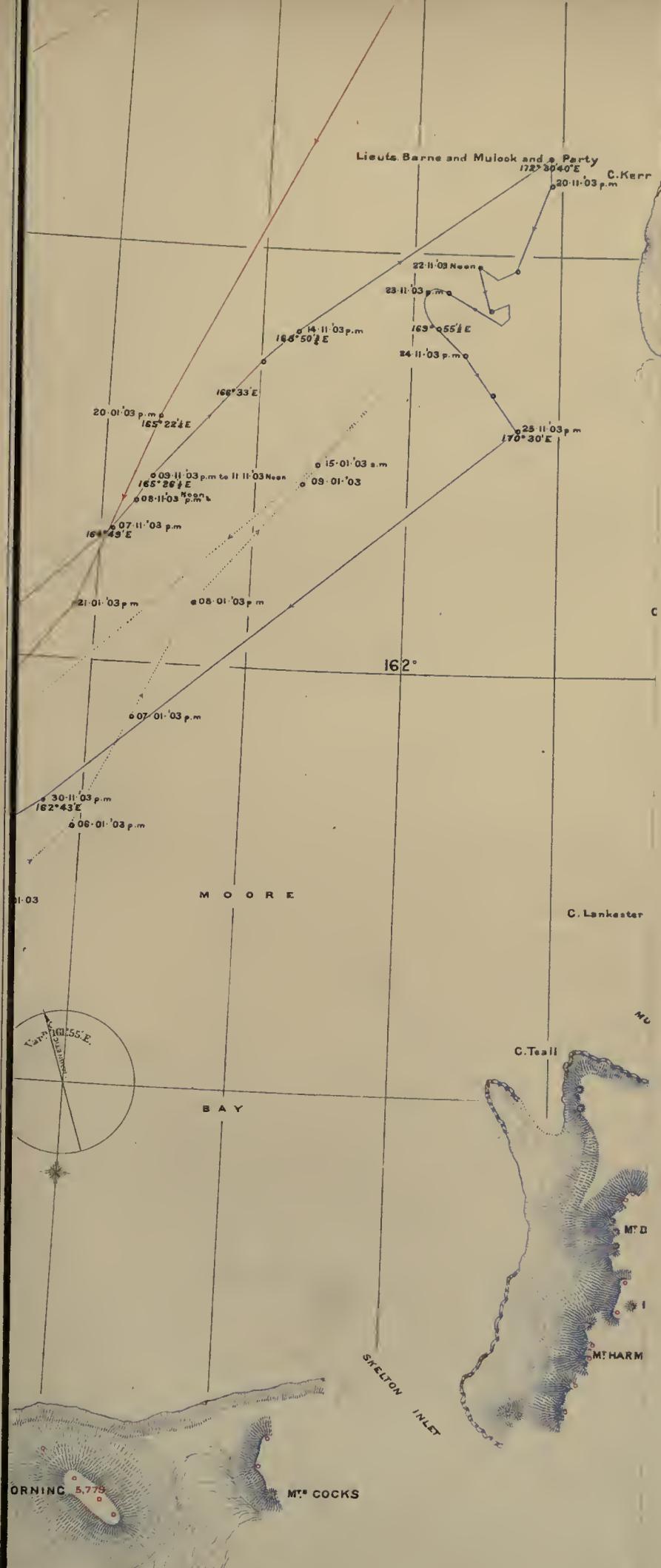














G

168°

B A



# CHART

## OF THE

# ANTARCTIC OCEAN

BETWEEN LATITUDES 77° S. AND 83° 30' S.  
AND LONGITUDES 150° E AND 171° E.

SHOWING

## SLEDGE JOURNEYS

FROM

### “DISCOVERY”

IN WINTER QUARTERS

LAT. 77° 50' 50" S - LONG. 166° 44' 45" E.

OF

	SEASONS	1901-02-03.	
Capt. R.F. Scott, R.N. & Party	31-03-'02 to	03-04-'02	to Depot 6½ miles SE of ship.
..... do.....	02-05-'02	05-09-'02	to Turtle Rock & Delbridge Id <sup>s</sup>
..... do.....	17-09-'02	19-09-'02	Reconnaissance to SW.
..... do.....	24-09-'02	03-10-'02	..... do..... S.
..... do.....	02-11-'02	02-02-'03	..... do.....
Lieut. A.B. Armitage, R.N.R. do.	04-09-'02	05-09-'02	to Depot 6½ miles SE of ship.
..... do.....	11-09-'02	26-09-'02	Reconnaissance to SW.
..... do.....	29-11-'02	19-01-'02	..... do.....
Lieut. C.R. Royds, R.N. do.	04-03-'02	19-03-'02	to Cape Crozier Rookery
..... do.....	10-09-'02	19-09-'02	Reconnaissance to SW.
..... do.....	04-10-'02	24-10-'02	to Cape Crozier Rookery
..... do.....	04-11-'02	17-11-'02	..... do.....
Lieut. M. Barne, R.N. do.	20-12-'02	30-01-'03	..... do.....
Lieut. E.H. Shackleton, R.N.R. do.	19-02-'02	22-02-'02	to White Id
Dr. Koettlitz	24-09-'02	02-10-'02	..... do.....
..... do.....	03-11-'02	06-11-'02	Reconnaissance to N.
..... do.....	29-12-'02	08-01-'02	..... do.....
..... do.....	14-01-'03	26-01-'03	..... do.....
SEASONS 1903-04.			
Capt. R.F. Scott, R.N. & Party	09-09-'03	20-09-'03	to Depot on Ferrar Glacier
..... do.....	12-10-'03	21-10-'03	..... do.....
..... do.....	26-10-'03	24-12-'03	..... do.....
Lieut. A.B. Armitage, R.N.R. do.	28-11-'03	12-12-'03	..... do.....
Lieut. C.R. Royds, R.N. do.	07-09-'03	17-09-'03	to Cape Crozier Rookery
..... do.....	10-11-'03	10-12-'03	..... do.....
Lieuts. M. Barne & G. Mulock, R.N.	12-09-'03	20-09-'03	to Depot off White Id
..... do.....	06-10-'03	13-12-'03	..... do.....
Dr. E.A. Wilson	12-10-'03	05-11-'03	..... do.....
..... do.....	16-11-'03	23-11-'03	..... do.....

#### EXPLANATION.

Ice-covered land shown in blue... exposed rock in brown... Heights in feet above Barrier surface shown in red... Small black circles denote positions fixed by observations and bearings... Small red circles denote objects fixed by bearings... Heights of Barrier in feet shown in blue... Soundings in fathoms... Track of ship with moon positions... Magnetic Variation shown in sloping block type... Heights of Inland Ice Cap above sea level in blue figures.



G

168°

B A



83°30'  
S

P.D.

Range of Mountains  
extending in a SSEly  
direction as far as  
visible

83° S.

C. Coldie

MT. LONGSTAFF

9,700

10,350

MT. MARKHAM

11,050

12,100

12,300

82°30'

C. Lyttelton

MT. CHRISTCHURCH

4,700

SNACKLETON INLET

H E

C. Wilson

Capt. R. F. Scott, R.N. and Party 82° 16' 33" S

30-12-'02 Noon

31-12-'02 Noon

22-12-'02 p.m. @ 170° 11' E

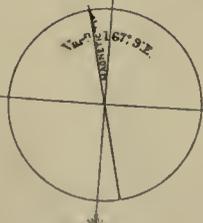
36-12-'02 a.m. @ 170° 32' E

27-12-'02 Noon

02-01-'03 p.m.

26-12-'02 a.m. @ 171° 37' E

82° S.



C. May

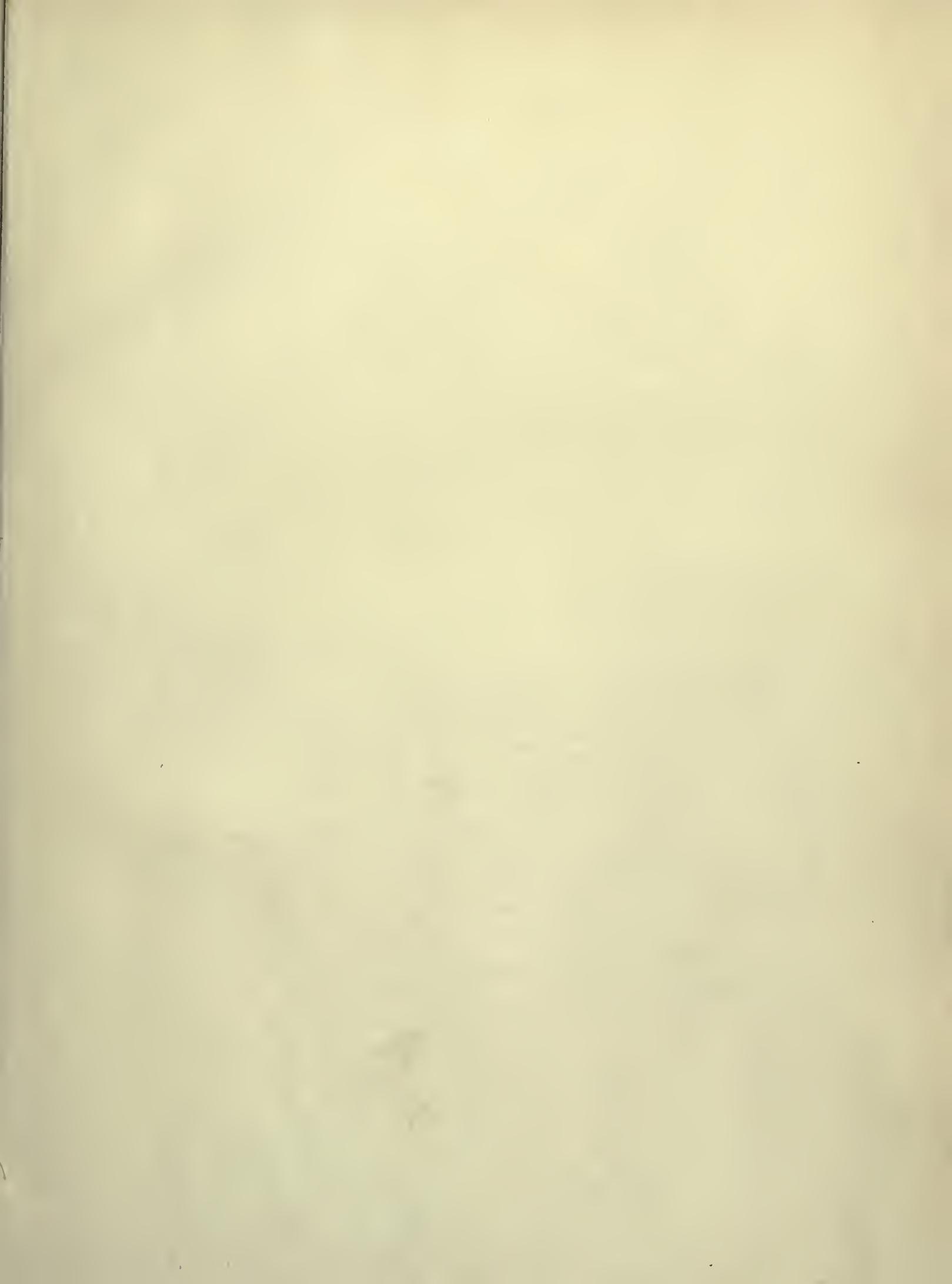
CHRISTMAS MT

6,200

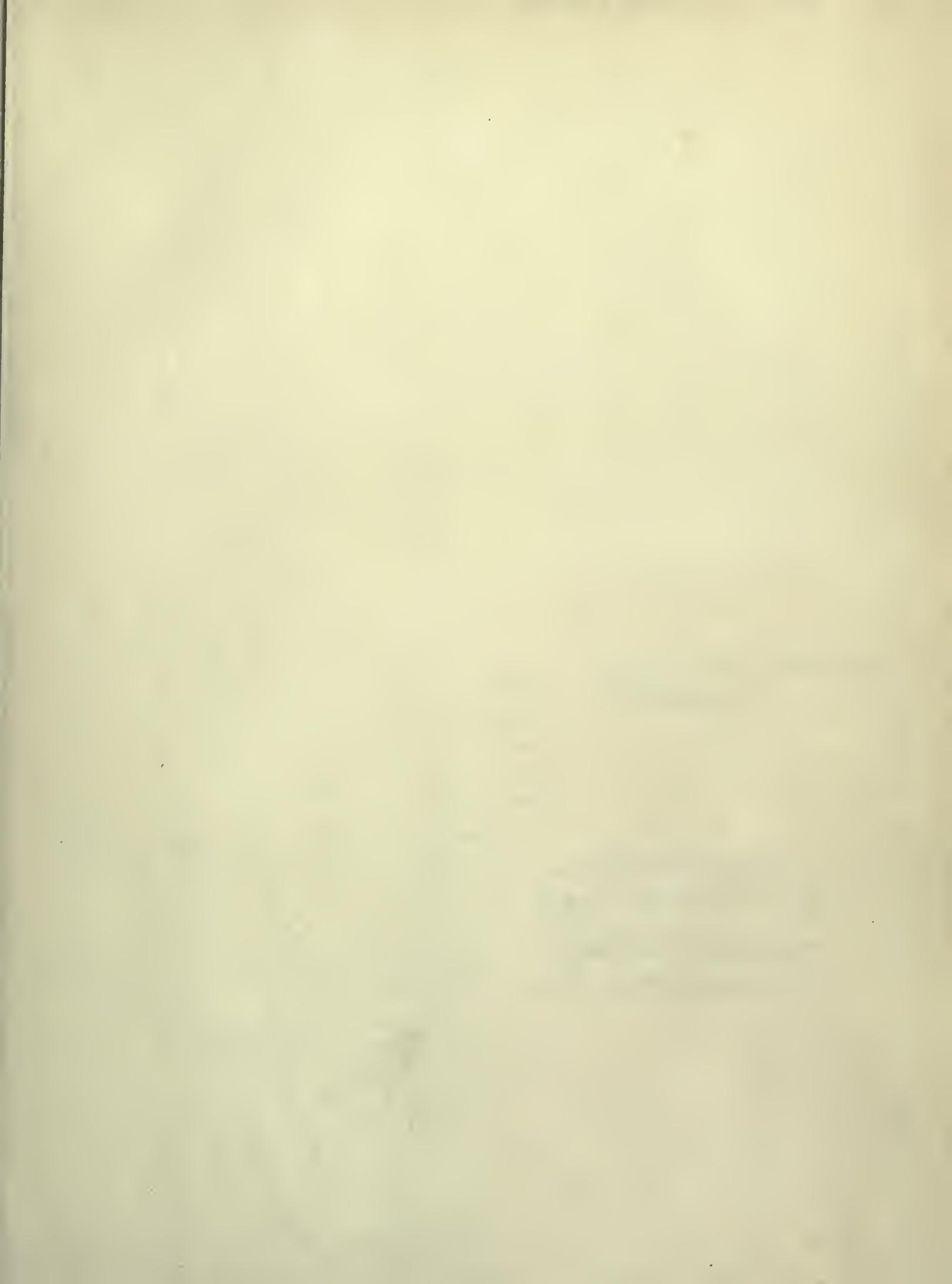
MT. HOSKINS

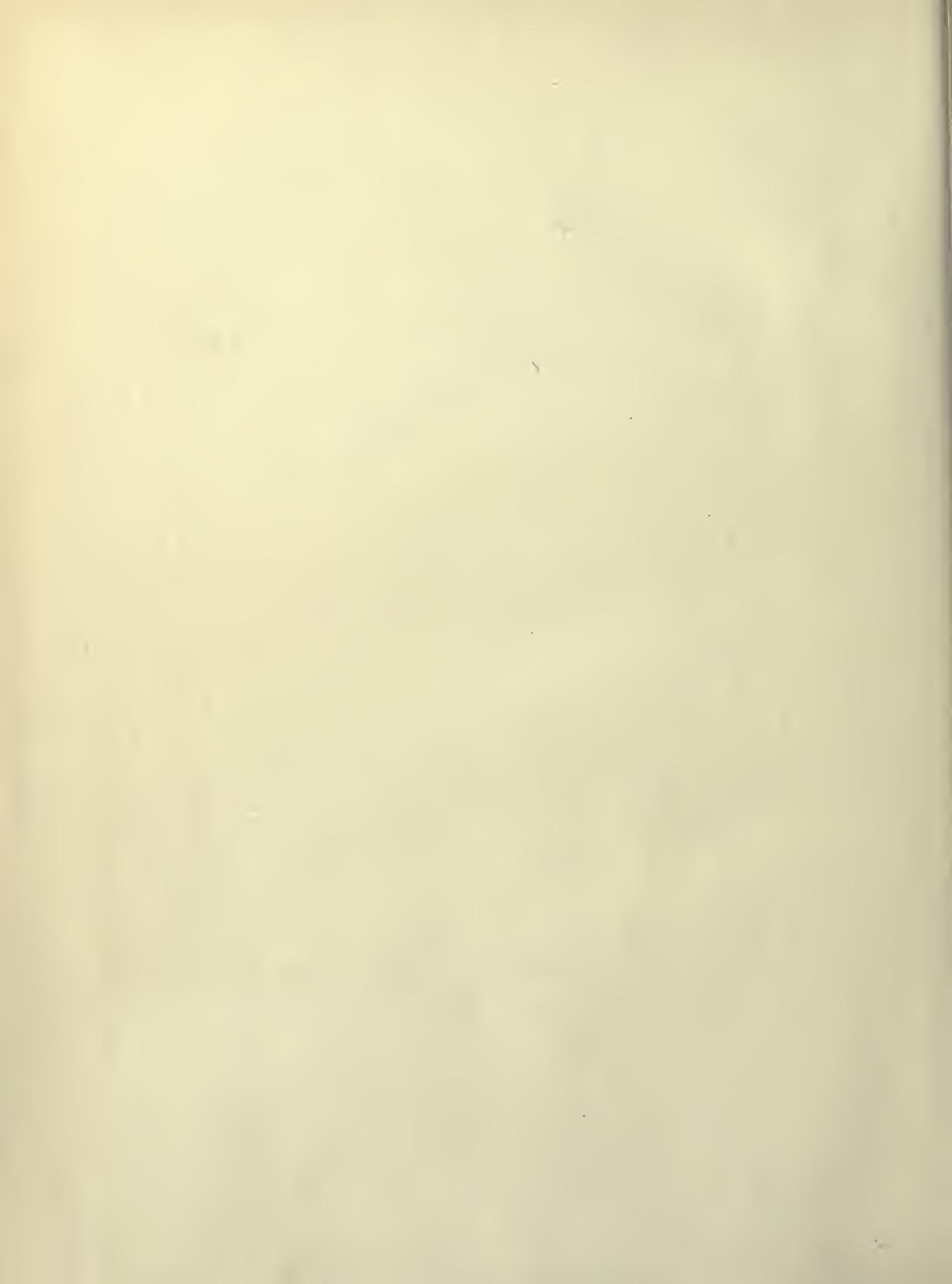
E A T











Q  
115  
N32  
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National Antarctic Expedition,  
1901-1904  
Meteorology

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