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UNITED STATES COAST GUARD

OCEANOGRAPHIC REPORT No. 40

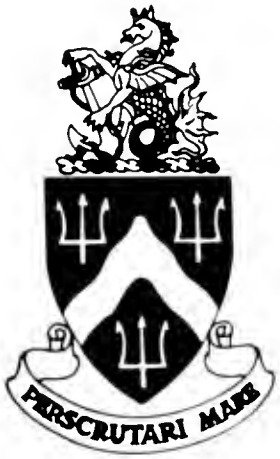
CG 373-40

OCEANOGRAPHIC INVESTIGATIONS IN THE NORTHERN BERING SEA AND BERING STRAIT

June-July 1968

UNITED STATES COAST GUARD

OCEANOGRAPHIC



UNITED STATES COAST GUARD OCEANOGRAPHIC UNIT

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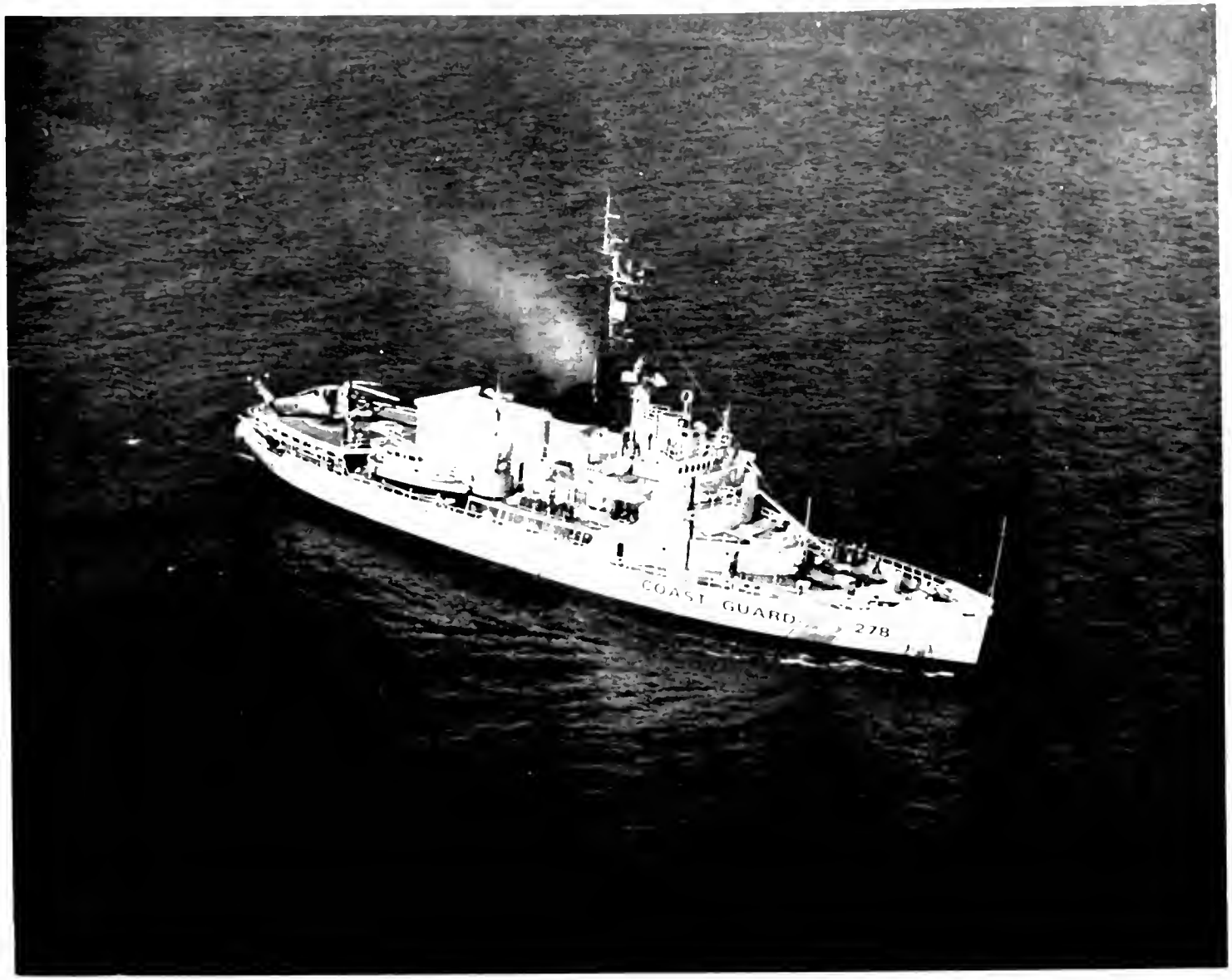
NORTHERN BERING SEA AND BERING STRAIT

June–July 1968

By David M. Husby

WASHINGTON, D.C.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ABSTRACT

Oceanographic data collected on 79 stations in the northern Bering Sea and Bering Strait during 8–19 July 1968 are presented and interpreted. The data include observations of temperature, salinity, dissolved oxygen, and current velocity made at 5-meter intervals from sea surface to the bottom. Contoured sections of the data are also presented.

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June–July 1968

David M. Husby [1]

INTRODUCTION

Results of past investigations in the Bering Sea and Bering Strait (Aagaard, 1964; Coachman and Aagaard, 1966; Coachman and Rankin, 1968; Husby, 1969) have shown four problem areas: (1) turbulent mixing and transfer processes, (2) time-dependence of the velocity field, (3) the role of atmospheric circulation in driving or modifying oceanic circulation, and (4) general physical oceanography of the northern Bering Sea. A cooperative cruise with the U.S. Coast Guard Oceanographic Unit and University of Washington was conducted on the USCGC STATEN ISLAND (WAGB–278) during June–July 1968 to investigate the general physical oceanography of the northern Bering Sea and Bering Strait, current flow through the Bering Strait, and transport of suspended sediments by currents.

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DATA COLLECTION AND PROCESSING

Cruise Chronology

1968 25 June	Departed Kodiak, Alaska en route to northern Bering Sea.
1 July	Moored current meter arrays and temperature-pressure recorders at 64°00′N, 171°55′W and 65°37.9′N, 168°30′W.
4 July	Moored temperature-pressure recorder at 65°00′N, 170°20′W. Vessel anchored nearby for period of 26 hours while hourly current meter lowerings and two-hourly Nansen casts made for time-series study.
6 July	Vessel anchored at 63°20′N, 168°29′W for 30 hours for time-series observations.
9 July	Completed third time-series study at 64°00′N, 172°00′W with total of 31 hours spent on this station. Arrived at first oceanographic station at 2100 hours (GMT).
16 July	Completed station number 55, but then operations halted due to fog and reports of heavy concentrations of Soviet vessels in the western channel of the Bering Strait.
17 July	Survey resumed at 1000 hours on station 56.
19 July	Completed station 76 at 0400 hours. Reoccupied stations 56–58, to verify the strong (180 cm/sec) current and marked temperature inversions. Initiated search for current meter array originally moored at 65°37.9′N, 168°30′W.
20 July	Continued search for current meter array with no success. Abandoned search and proceeded to Norton Sound to begin a study of suspended sediments.
21 July	Completed suspended sediment study and en route Nome, Alaska.
22 July	Disembarked scientific party at Nome with the exception of Mr. P. Joppa who remained aboard to assist in search for anchored instrument packages. Instruments anchored at 65°37.9′N, 168°20′W never located; one of orange surface floats was observed in fisherman's boat. Temperature-pressure recorder anchored at 65°00′N, 170°20′W was retrieved.
23 July	Instruments anchored at 64°00′N, 171°55′W were located but lost during retrieval.

Anchored Instrument Packages

To determine the tidal wave pattern in the northern Bering Sea and to continuously monitor the flow through the Bering Strait, three instrument arrays were anchored (fig. 1). The basic configuration of the arrays is shown in figure 2. At the 64 00′N, 171°55′W location, the instrument array was placed at a depth of approximately 28 meters in water depth of 48 meters. The second instrument array, anchored at 65 37.9′N, 168 30.2′W in 55 meters of water, was suspended at a depth of approximately 25 meters. The third, consisting of only a temperature-pressure recorder, was placed near the bottom in 40 meters of water at 65°00′N, 170°20′W. Unfortunately, neither of the current meters was retrieved and no useable data were obtained from the one temperature-pressure recorder which was retrieved.

Direct Measurements of Current on Station

At each of the 79 oceanographic stations, the ship was anchored and allowed to swing on the anchor until it achieved a fairly stable heading. A current meter was then lowered and raised through the water column stopping at 5-meter intervals to record current velocity for about 15 minutes. The deflection of the cable from the vertical was measured at each current reading along with the length of cable paid out to determine actual depth of the meter. The current meter used was the "Magnesyn" current meter, designed and built at the Department of Oceanography, University of Washington. It combined a Hydro Products Model 460 current speed sensor and Model 451 current speed readout module with a Marine Remote Compass system for measuring magnetic direction. The current velocity data are retained by the Department of Oceanography, University of Washington, for later transfer to the National Oceanographic Data Center, Washington, D.C. (NODC).

Time-Series Current Measurements

At three locations (fig. 1), the ship was anchored and hourly current meter lowerings were made over periods of 26, 30, and 31 hours to measure the time-dependent variation of the velocity field. Nansen bottle casts were made approximately every two hours to measure temperature, salinity, and dissolved oxygen content at 5-meter intervals. The current and physical oceanographic data from these three stations are retained by the Department of Oceanography, University of Washington, for later transfer to NODC.

Oceanographic Stations

At each of the 79 oceanographic stations, a Nansen bottle cast was accomplished by personnel from the U.S. Coast Guard Oceanographic Unit. Observations of temperature, salinity, and dissolved oxygen were made at 5-meter intervals from the surface to near the bottom. Water temperatures were measured by a pair of deep-sea reversing thermometers in each Nansen bottle. The salinities were determined using an inductive salinometer. Conductivity values obtained were converted to salinity by use of the International Oceanographic Tables published jointly by UNESCO and the National Institute of Oceanography of Great Britain (UNESCO, 1966). Methods of collecting and processing the temperature and salinity data essentially followed those outlined in H.O. Pub. 607 (U.S. Naval Oceanographic Office, 1968). Upon retrieval of each cast, water samples were drawn immediately for the determination of dissolved oxygen content. The method used was a modified Winkler determination involving the titration of a 50 ml aliquot of the treated sample with a 0.01 normal sodium thiosulfate solution using starch as the end point indicator. The temperature, salinity, and dissolved oxygen data were forwarded to NODC and are listed as Ref. No. 31–1270.

Suspended Sediment Study

To determine the transport of material of fluviatile origin through Norton Sound and the northern Bering Sea, Mr. Stephen Smyth (Univ. of Washington) conducted an investigation during the occupation of the 79 oceanographic stations. A Hydro Products Model 412T Towable One Meter Transmissometer was lowered into the water at 53 stations until contact was made with the bottom. Water depth and transmissivity were recorded on a strip chart recorder in the oceanographic laboratory. When the transmissometer recordings indicated unusual optical characteristics, water samples were obtained from the Nansen casts for later

analysis of suspended sediment concentration. A total of 62 transmissometer lowerings were accomplished and 142 water samples were collected.

During the Norton Sound operations on 21 July, four stations were occupied. At each station a Nansen bottle cast was made to obtain water samples at 5 meter intervals from the surface to near the bottom, current speed and direction were measured at 5-meter intervals to near the bottom, a gravity core sample was obtained, a Van Veen grab sample was obtained, and a transmissometer lowering was accomplished. These data and samples are retained by the Department of Oceanography, University of Washington.

RESULTS

Water Masses

Hydrographic conditions in the northern Bering Sea and Bering Strait in July 1968 closely paralleled the summer regime observed in previous surveys, showing a relatively warm (>5°C), low salinity (<32.5‰) water mass in the upper 10 meters and a layer of gradients between 10 and 15 meters overlying a colder (<3°C), more saline (>32.5‰) water mass (figs. 3–14). Large zonal gradients of temperature and salinity were observed at the surface in the eastern portion of the survey area (figs. 15 and 16). The warm (>7.0 C), low salinity (<31.0‰) water mass which extended along the Alaskan coast in the surface layer corresponded closely with the Alaskan Coastal Water (8–10°C, 20–30‰) first defined by Saur, et al. (1954). The low salinity of this water mass is attributed to dilution by the effluents of the Yukon and Kuskokwim rivers. The isolated parcel of warm, low salinity water found at the surface northwest of St. Lawrence Island (figs. 15 and 16) may be the result of the advection of some river runoff through the Strait of Anadyr, possibly from the Anadyr River to the southwest.

The distribution of properties at 20 meters revealed two distinct deeper water masses (figs. 17 and 18). One, in the western half of the survey area, was characterized by a temperature range of 1.0 to 3.0°C and a salinity greater than 33.0‰. This mass was definitely the Modified Shelf Water (1.0 to 4.0°C, 32.0 to 33.0‰) described by Saur, et al. (1954) which usually has been found over the bottom in the northern Bering Sea in the late summer. The second water mass was found close to the northern coast of St. Lawrence Island and was characterized by temperatures less than 1.0 C and salinities between 32.7 and 32.8‰ (figs. 17 and 18). This water mass is the Deep Shelf Water, described by Saur, et al. (1954) and Barnes and Thompson (1938) which attains its low temperatures from ice formation in the winter. The source of this water mass has been hypothesized to be the Gulf of Anadyr. The northeastward flow of water in the Strait of Anadyr observed in July 1968 would tend to confirm this hypothesis. Goodman, et al. (1942) reported an eddy of this water mass in the summers of 1937 and 1938 between St. Lawrence Island and St. Matthew Island with a temperature in the bottom water of −1.6°C. They suggested this water was a remnant of winter conditions when ice formation was occurring.

Currents

The current meter data were analyzed in an unpublished research paper (Grider, 1969) at the University of Washington. The direct measusements of currents on station were resolved into north and east components, which were averaged over two depth layers. The upper layer contained the average of all measured currents between the surface and the 10 meter depth; the lower layer averaged all measurements from 15 meters and deeper. The choice of those layers was based on the fact that the pycnocline in the northern Bering Sea is normally located between 10 and 15 meters in the summer.

Results of observations at the three time-series current stations revealed semi-diurnal fluctuations in the current records which were of a tidal nature with a 12.4 hour period. This tidal species was then subtracted from the current records obtained at stations 1 to 28 which had obvious semi-diurnal oscillations. The current records for stations 29 through 76 were not corrected because there were no obvious periodic fluctuations and the time difference between the occupation of these stations and the first time-series current station was too

large. Transport calculations were then made for the lines of stations and the most interesting result of those calculations was the net southward transport of 0.1 Sv (Sverdrup= $10^6 m^3/sec$) through section G–G′. This section was occupied during a period of average wind speed of 18 knots from the north. A southerly transport had been observed in this area only once before, in July 1967, aboard the CGC NORTHWIND. The net transport through section D–D′ and C–C′, 1.6 Sv to the north, showed good correlation with the net transport through section H–H′, 1.7 Sv to the north. The current regime in the Bering Strait showed the usual summer conditions of greatest flow in the eastern half of the Strait. The highest speed, 180 cm/sec (3.6 knots), was measured in the lower layer at station 56 (figs. 19 and 20).

There was good correlation between the net transport through the four southernmost sections computed from the current meter data and the average wind components normal to each section. However, Grider stated that the wind probably does not have a casual effect on the change in net transport, but is more symptomatic of atmospheric pressure zones which exert pressure differentials on the sea surface over a large distance.

Dissolved Oxygen Distribution

Measurements of dissolved oxygen concentrations revealed that the surface layer in the entire survey area was supersaturated or nearly supersaturated with oxygen at the temperatures which were observed. The Modified Shelf Water and Deep Shelf Water masses were about 90% saturated, indicating recent contact with the surface and low oxygen utilization.

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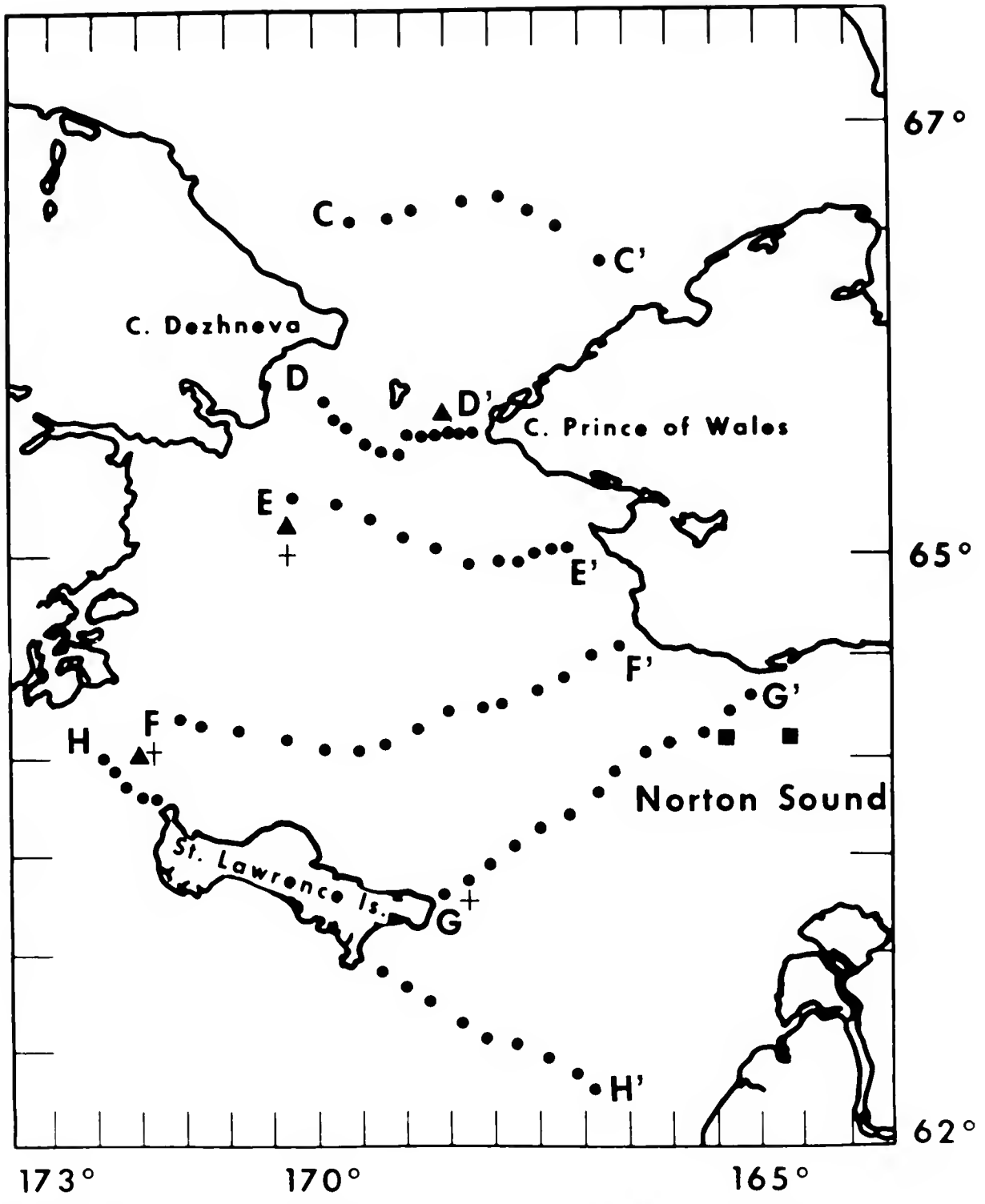

Figure 1. Location of anchored sensing systems and oceanographic stations occupied by USCGC STATEN ISLAND, 1–21 July 1968. ●=oceanographic stations, ▲=anchored instrument package, +=time-series current station, ■=*Norton* Sound station.

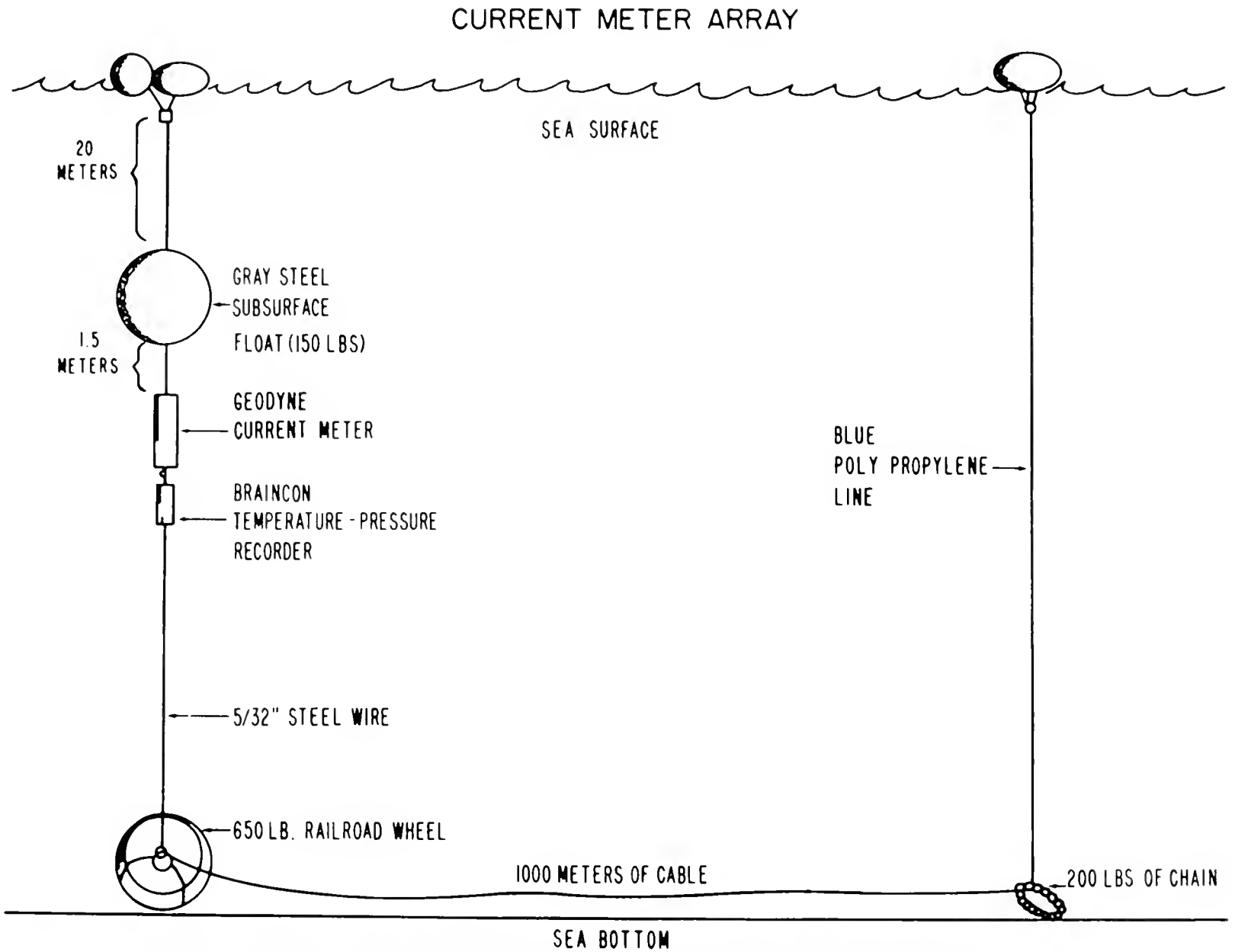

Figure 2. Configuration of current meter and pressure-temperature recorder arrays anchored by USCGC STATEN ISLAND in Bering Strait and Strait of Anadyr, 30 June–1 July 1968.

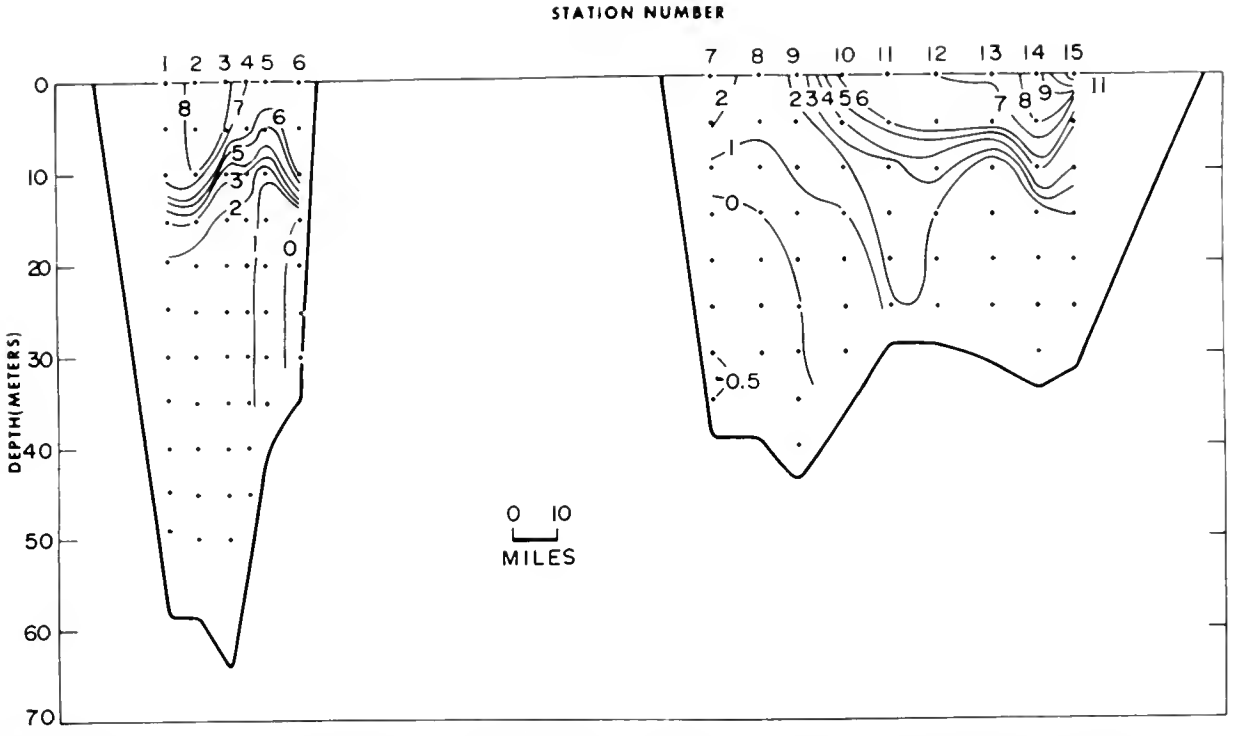

Figure 3. Distribution of temperature (°C) along section H–H', from USCGC STATEN ISLAND 8–11 July 1968. Contour interval 1.0°C except for —0.5°C contour.

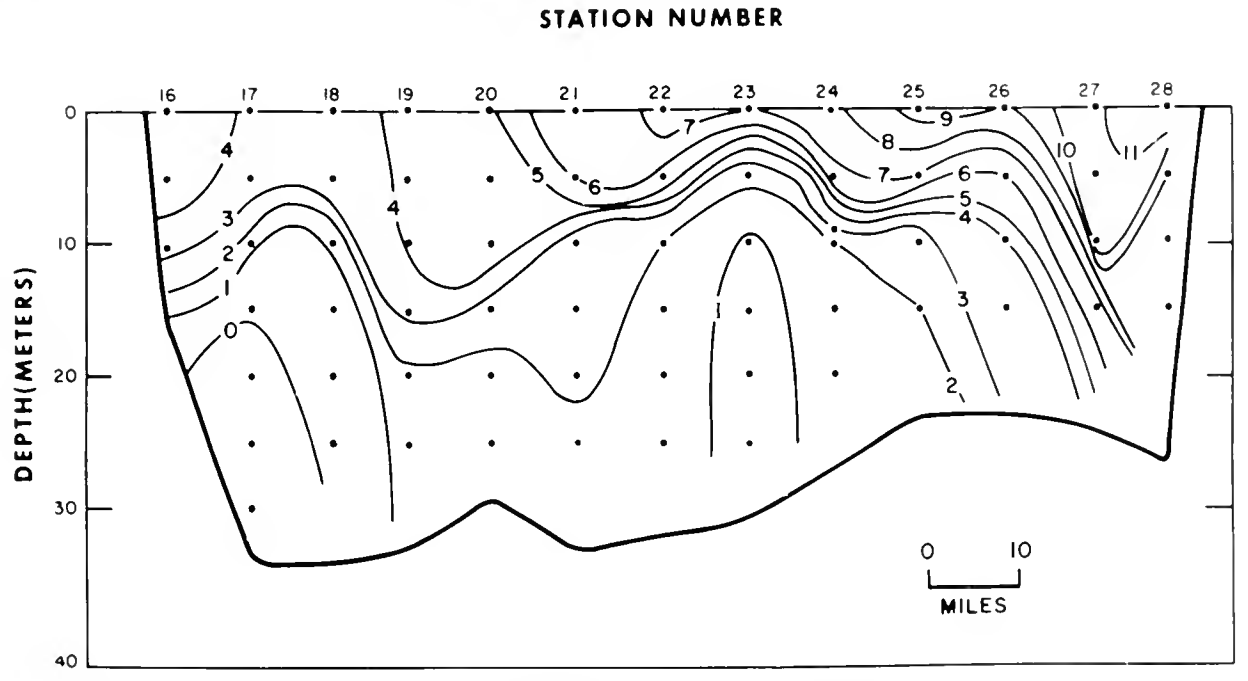

Figure 4. Distribution of temperature (°C) along section G–G', from USCGC STATEN ISLAND 11–12 July 1968. Contour interval 1.0°C.

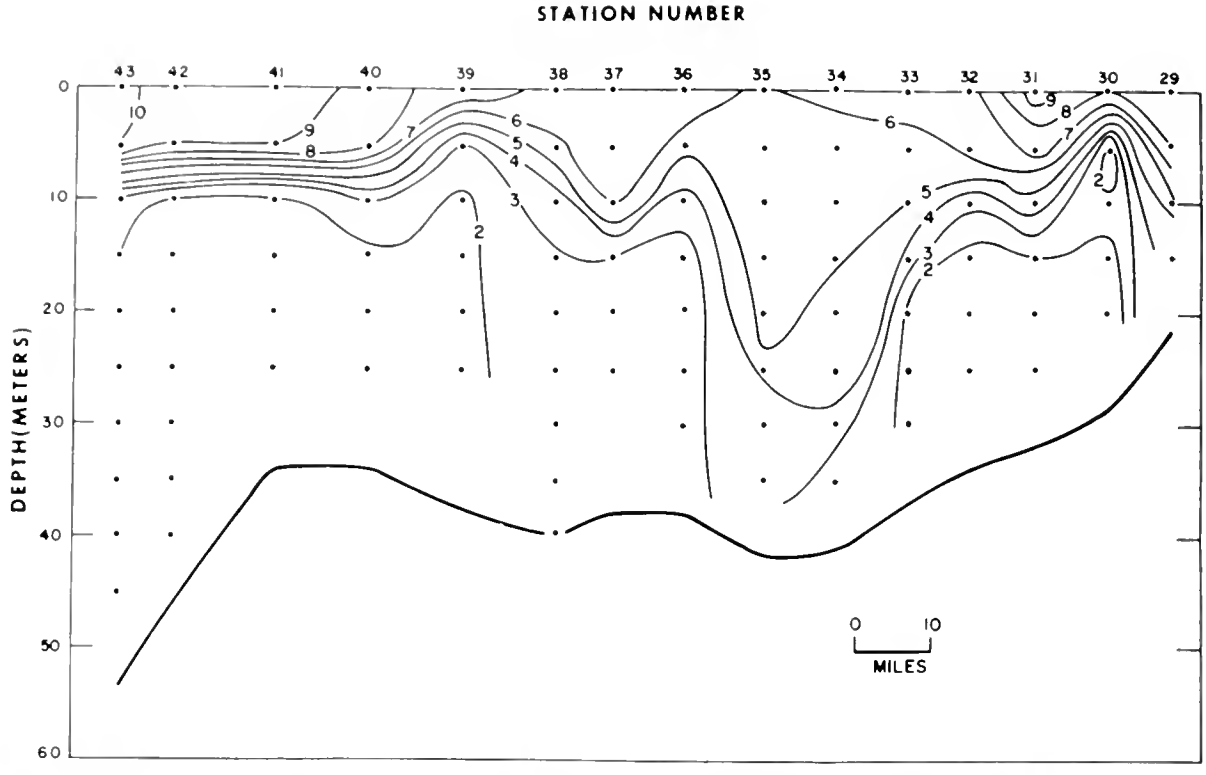

Figure 5. Distribution of temperature (°C) along section F–F', from USCGC STATEN ISLAND data of 13–14 July 1968. Contour interval 1.0°C.

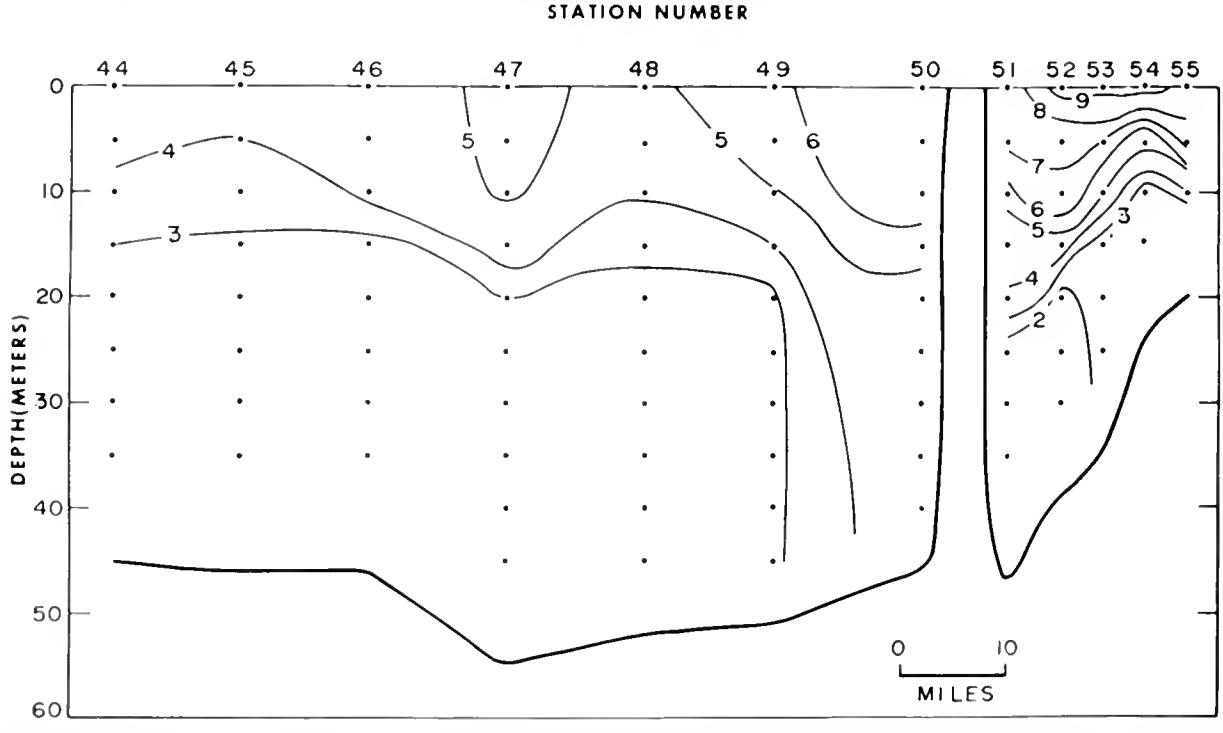

Figure 6. Distribution of temperature (°C) along section E–E', from USCGC STATEN ISLAND data of 15–16 July 1968. Contour interval 1.0°C.

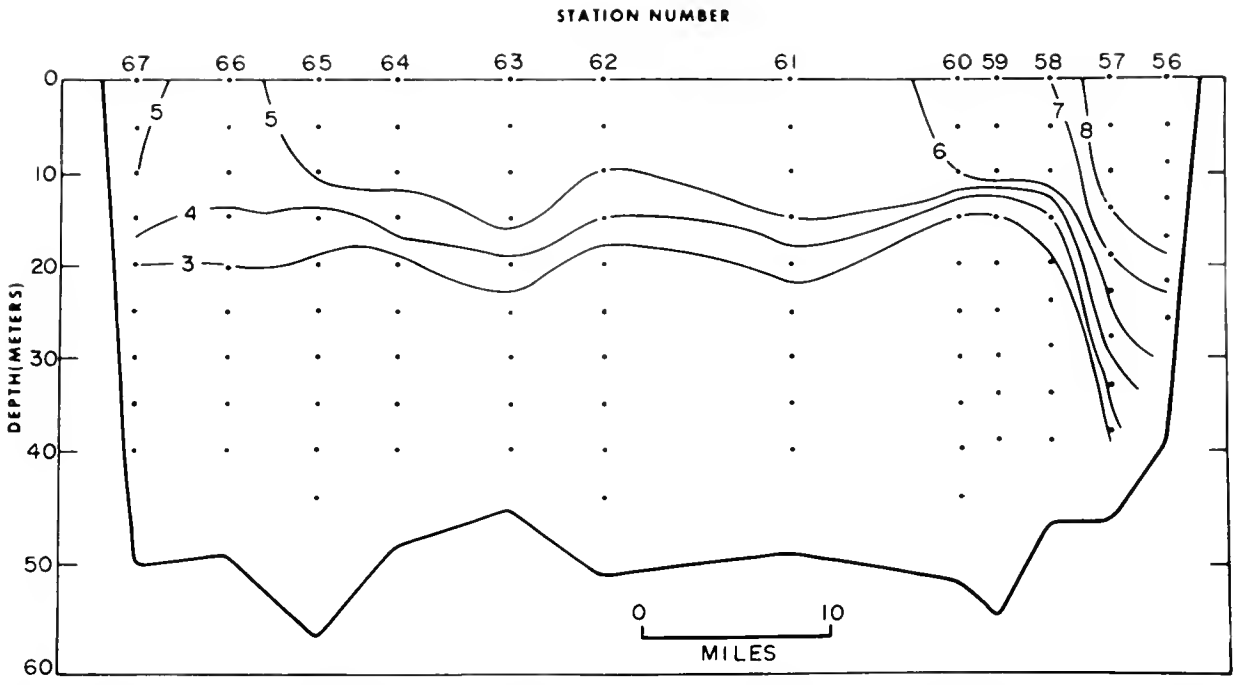

Figure 7. Distribution of temperature (°C) along section D–D', from USCGC STATEN ISLAND data of 17–18 July 1968. Contour interval 1.0°C.

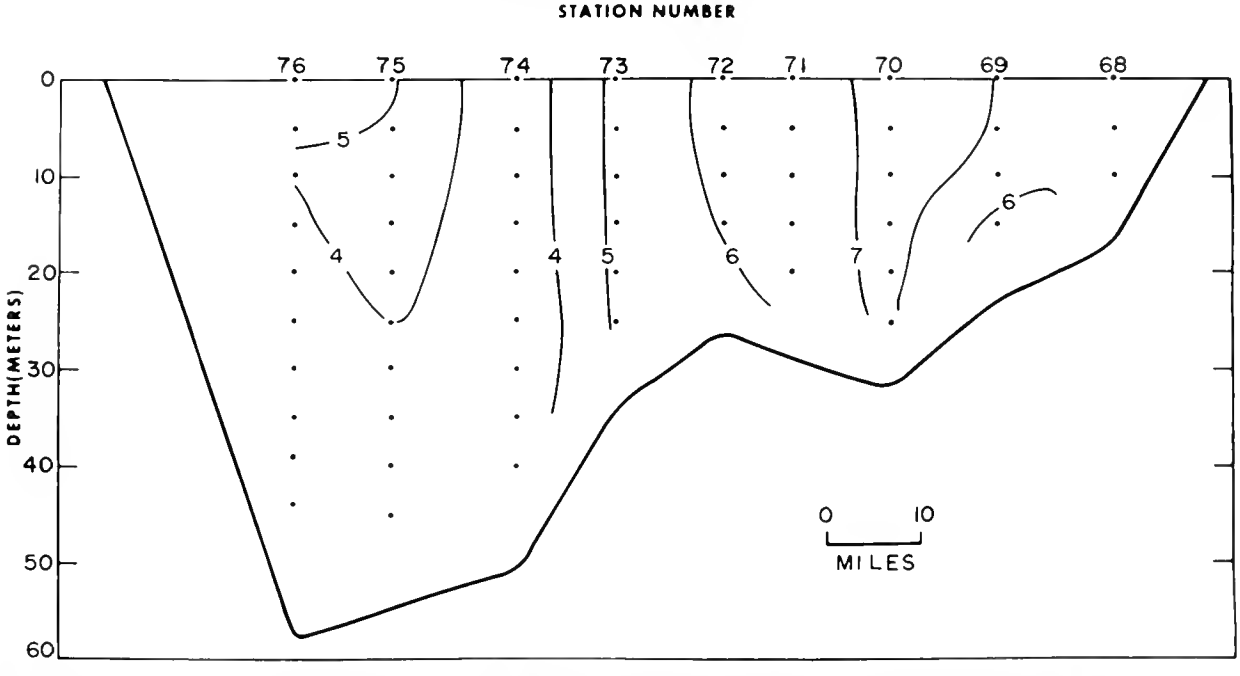

Figure 8. Distribution of temperature (°C) along section C–C', from USCGC STATEN ISLAND data of 18–19 July 1968. Contour interval 1.0°C.

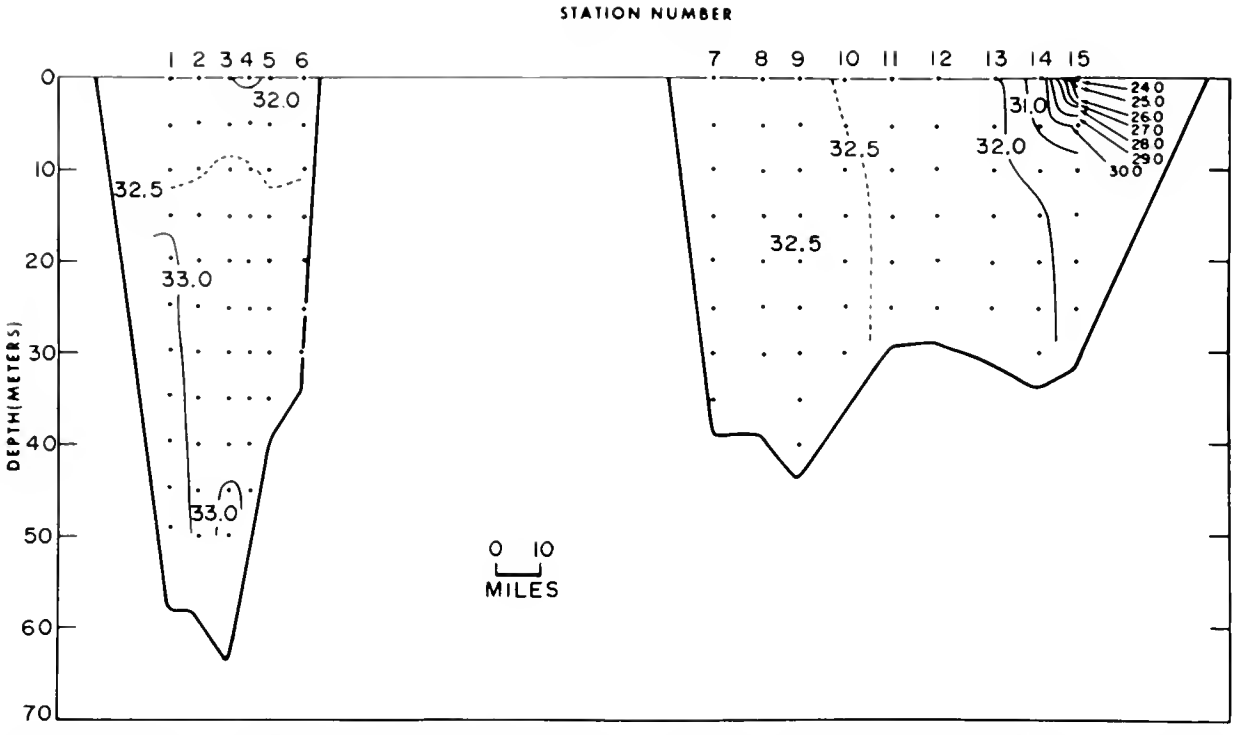

Figure 9. Distribution of salinity (‰) along section H–H', from USCGC STATEN ISLAND data of 8–11 July 1968. Contour interval 0.5‰, except for 24.0–32.0‰ contours.

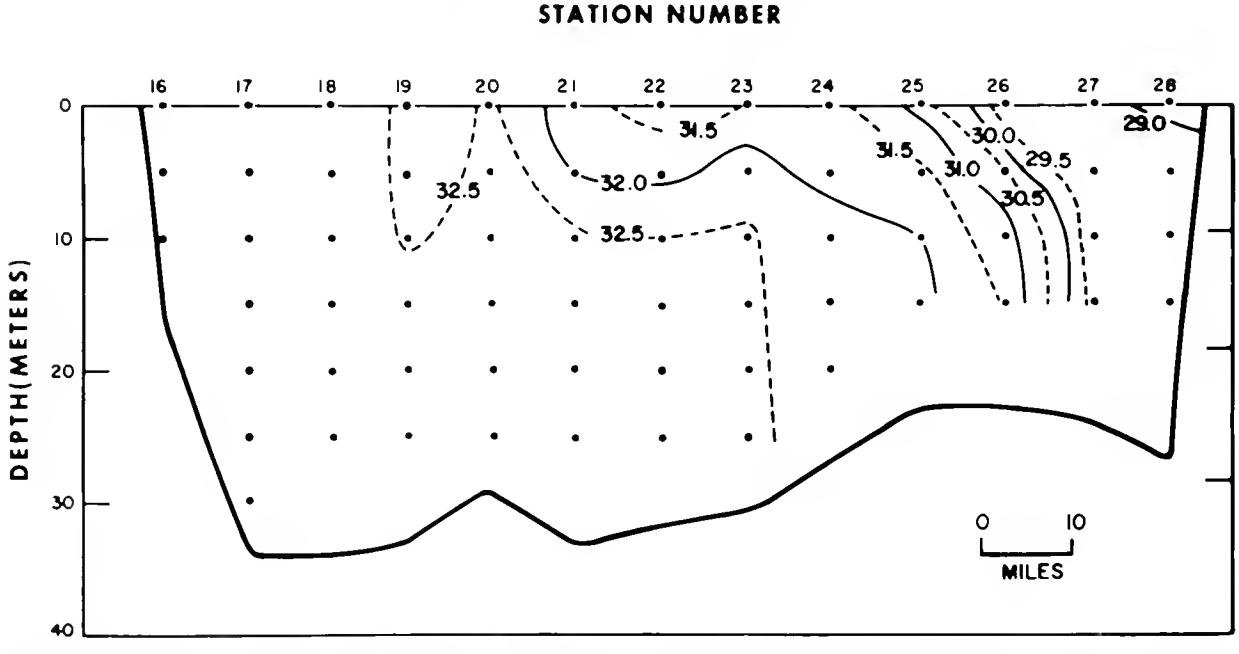

Figure 10. Distribution of salinity (‰) along section G–G', from USCGC STATEN ISLAND data of 11–12 July 1968. Contour interval 0.5‰.

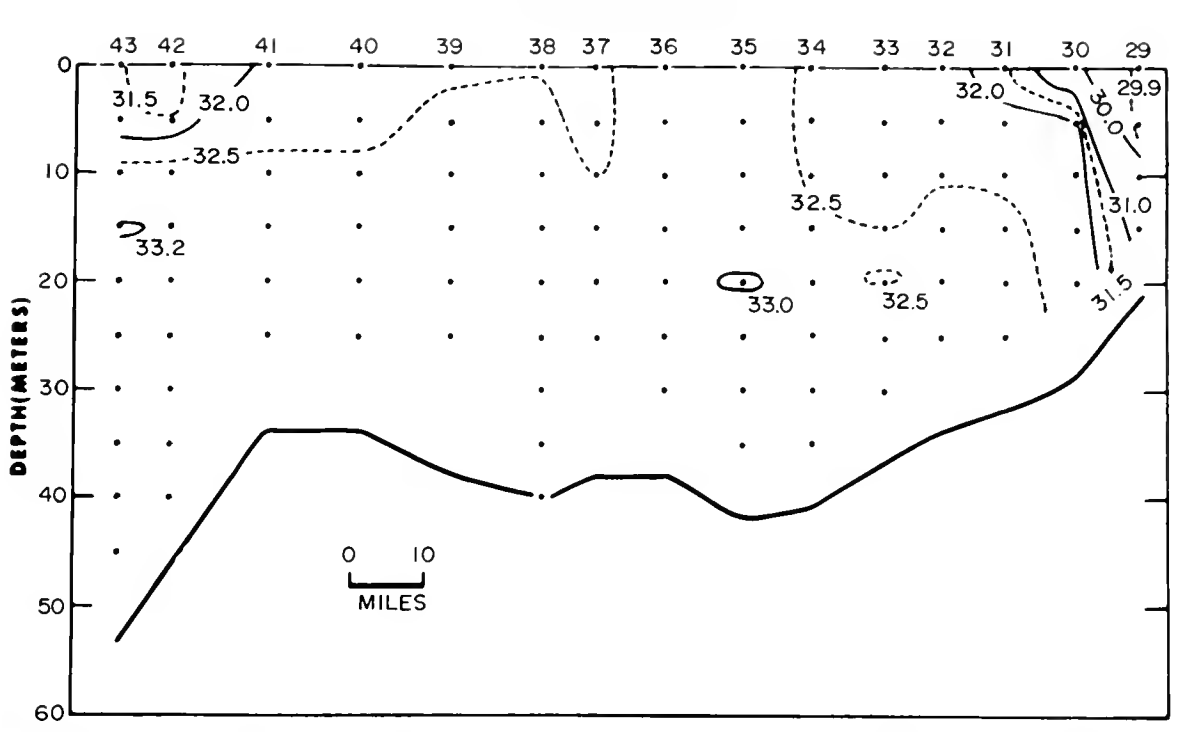

Figure 11. Distribution of salinity (‰) along section F–F', from USCGC STATEN ISLAND data of 13–14 July 1968. Contour interval 0.5‰.

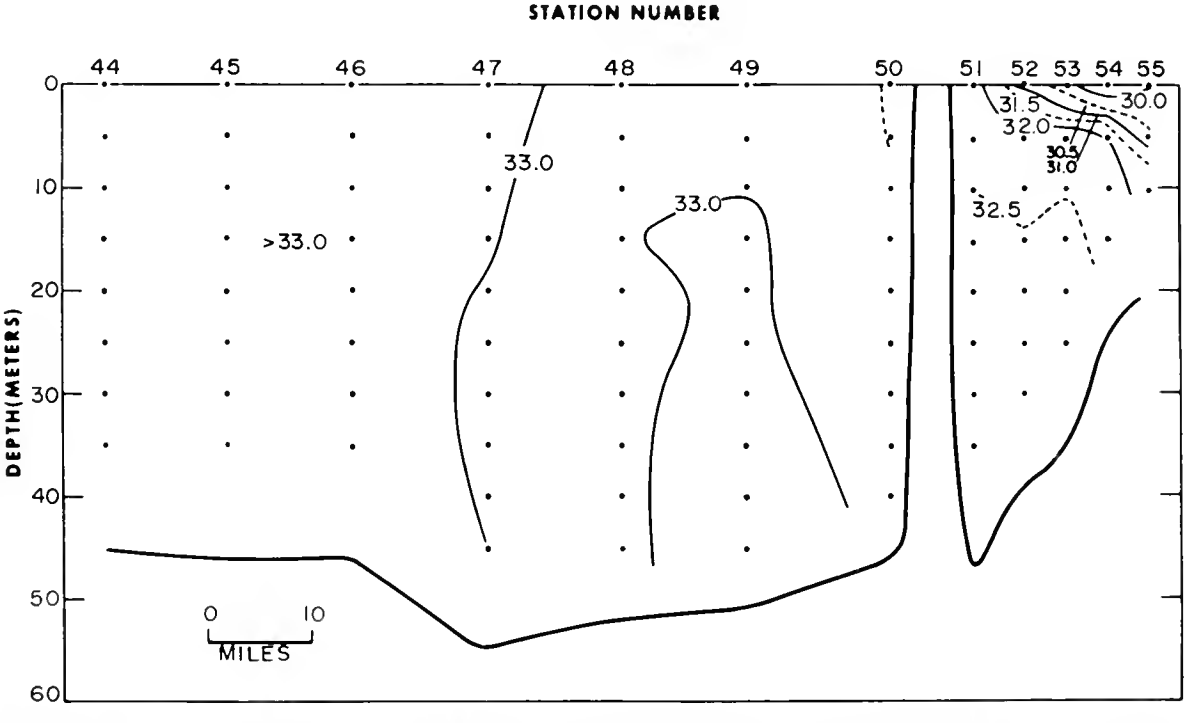

Figure 12. Distribution of salinity (‰) along section E–E', from USCGC STATEN ISLAND data of 15–16 July 1968. Contour interval 0.5‰.

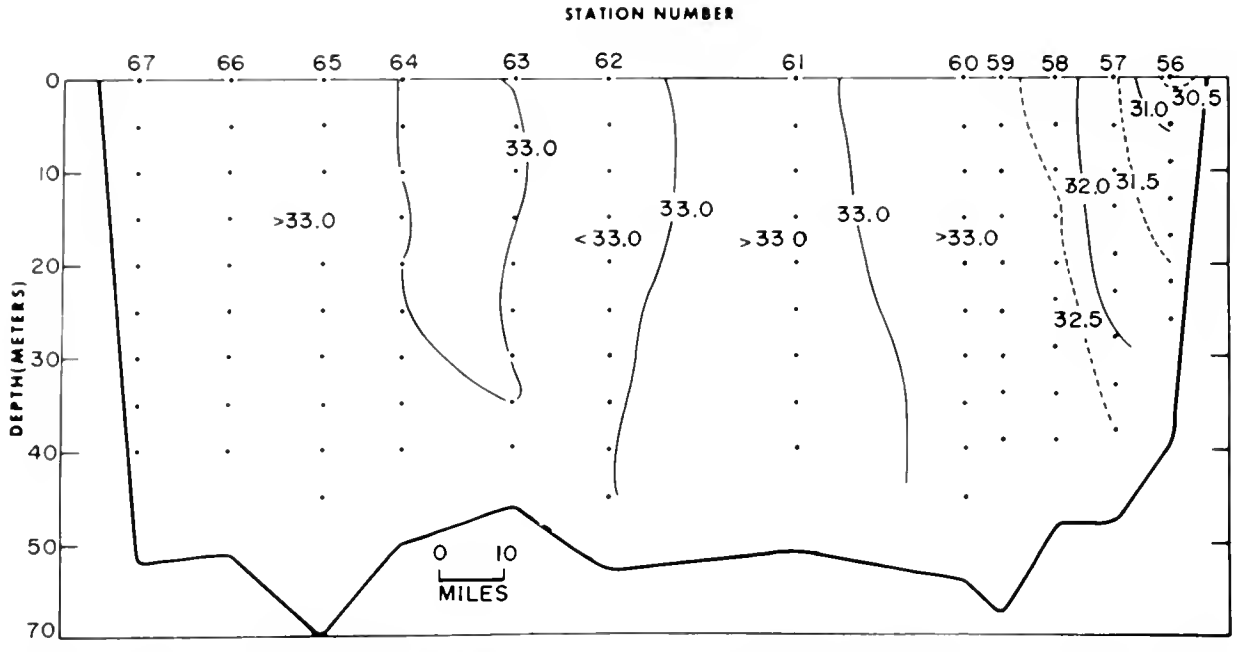

Figure 13. Distribution of salinity (‰) along section D–D', from USCGC STATEN ISLAND data of 17–18 July 1968. Contour interval 0.5‰.

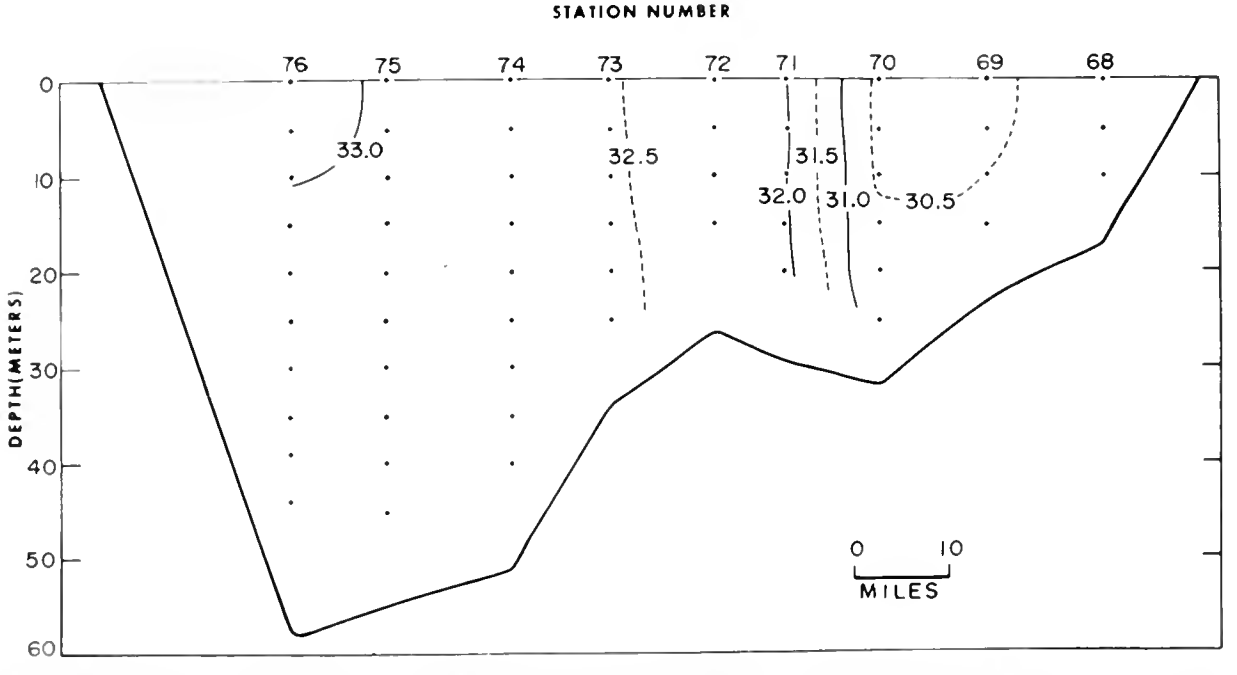

Figure 14. Distribution of salinity (‰) along section C–C', from USCGC STATEN ISLAND data of 18–19 July 1968. Contour interval 0.5‰.

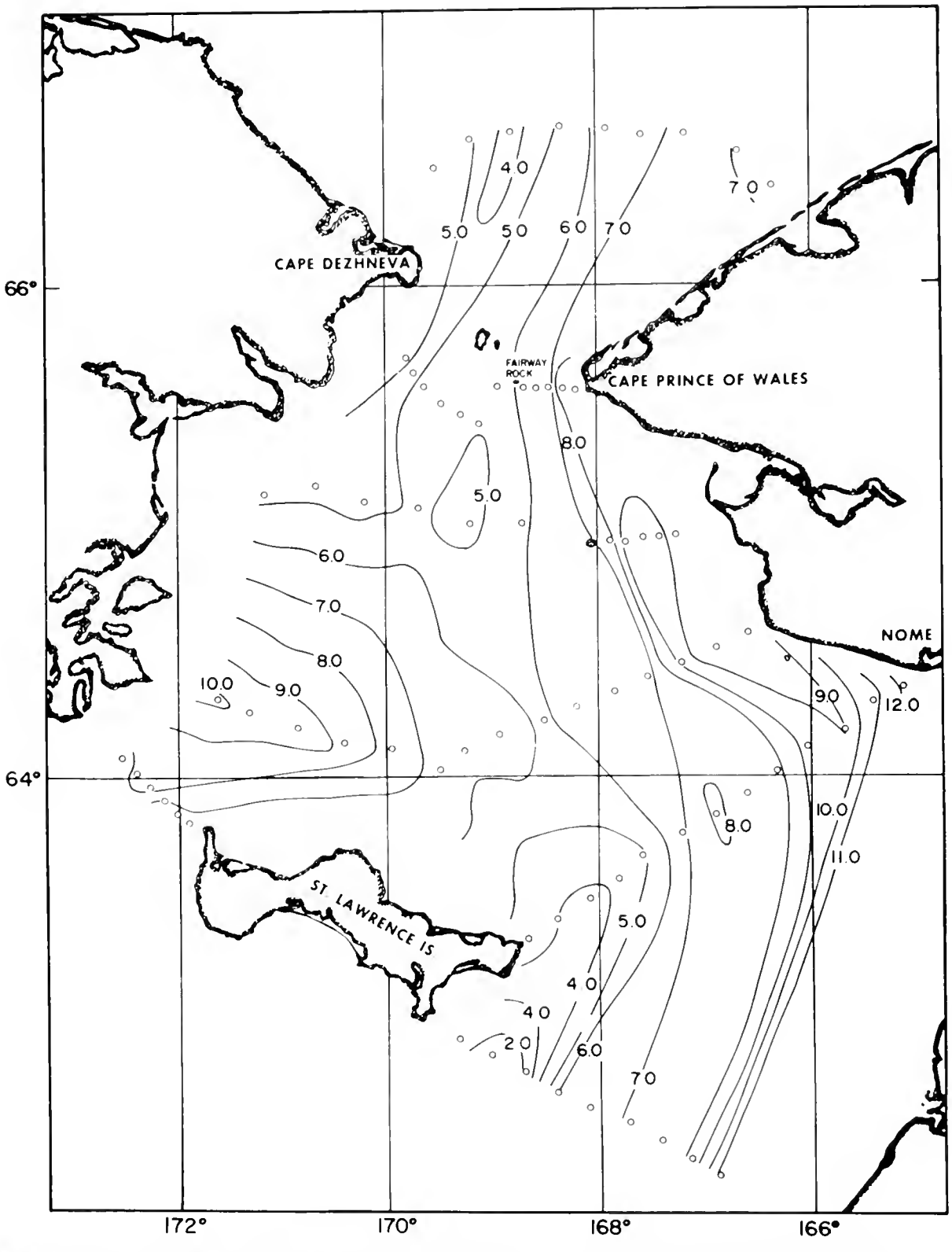

Figure 15. Horizontal distribution of sea surface temperature (°C) from USCGC STATEN ISLAND data of 8–19 July 1968.

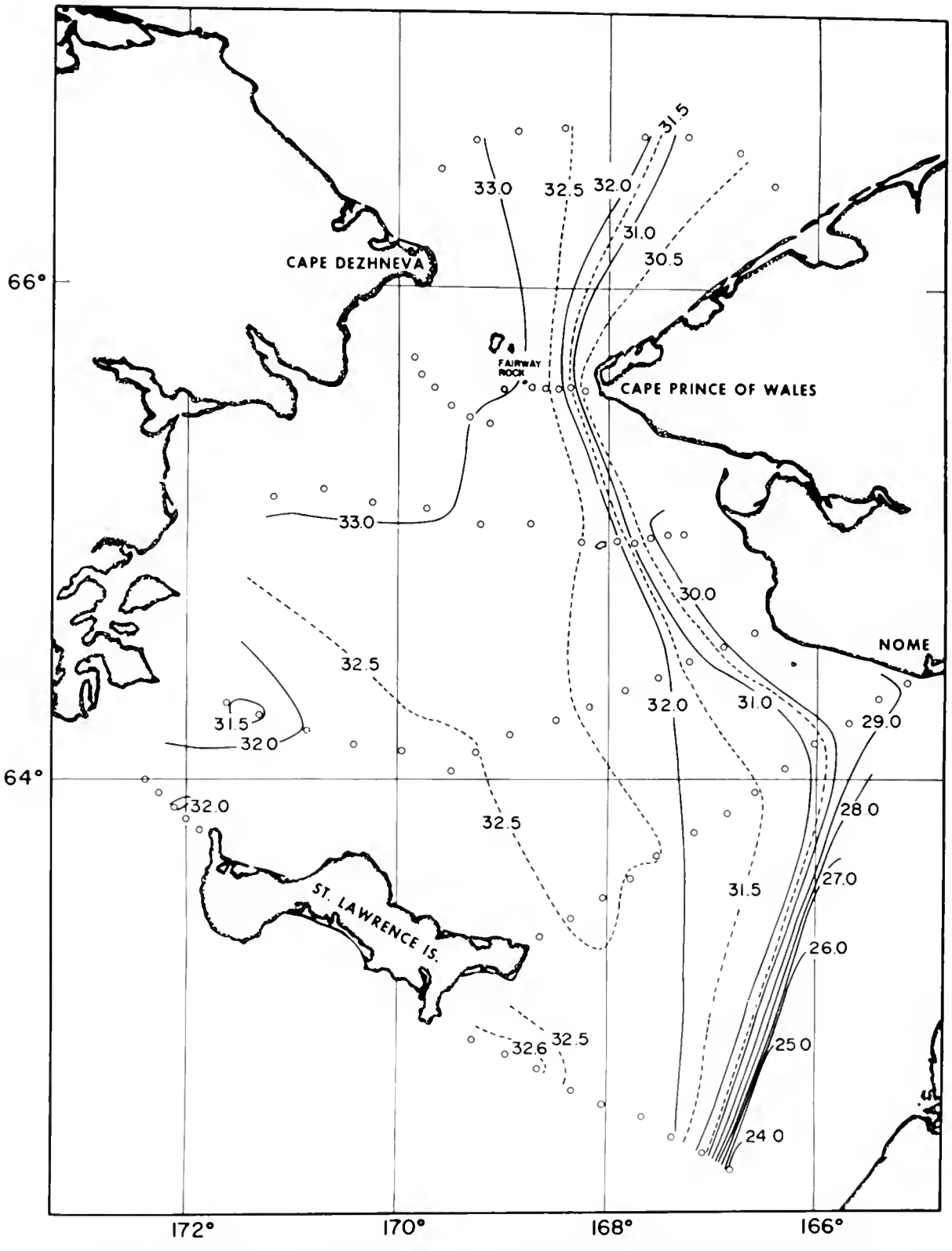

Figure 16. Horizontal distribution of surface salinity (‰) from USCGC STATEN ISLAND data of 8–19 July 1968.

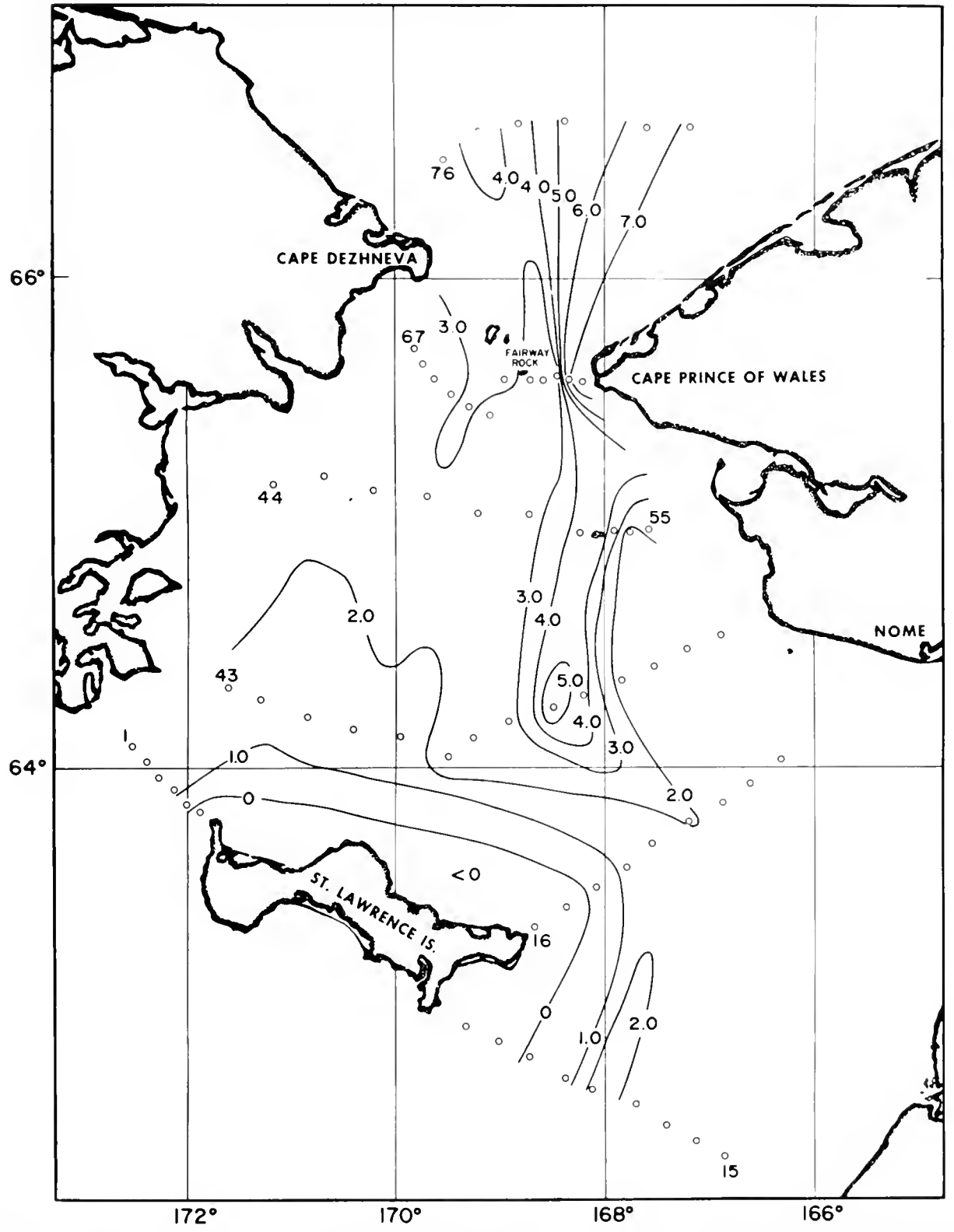

Figure 17. Horizontal distribution of temperature (°C) at depth of 20 meters from USCGC STATEN ISLAND data of 8–19 July 1968.

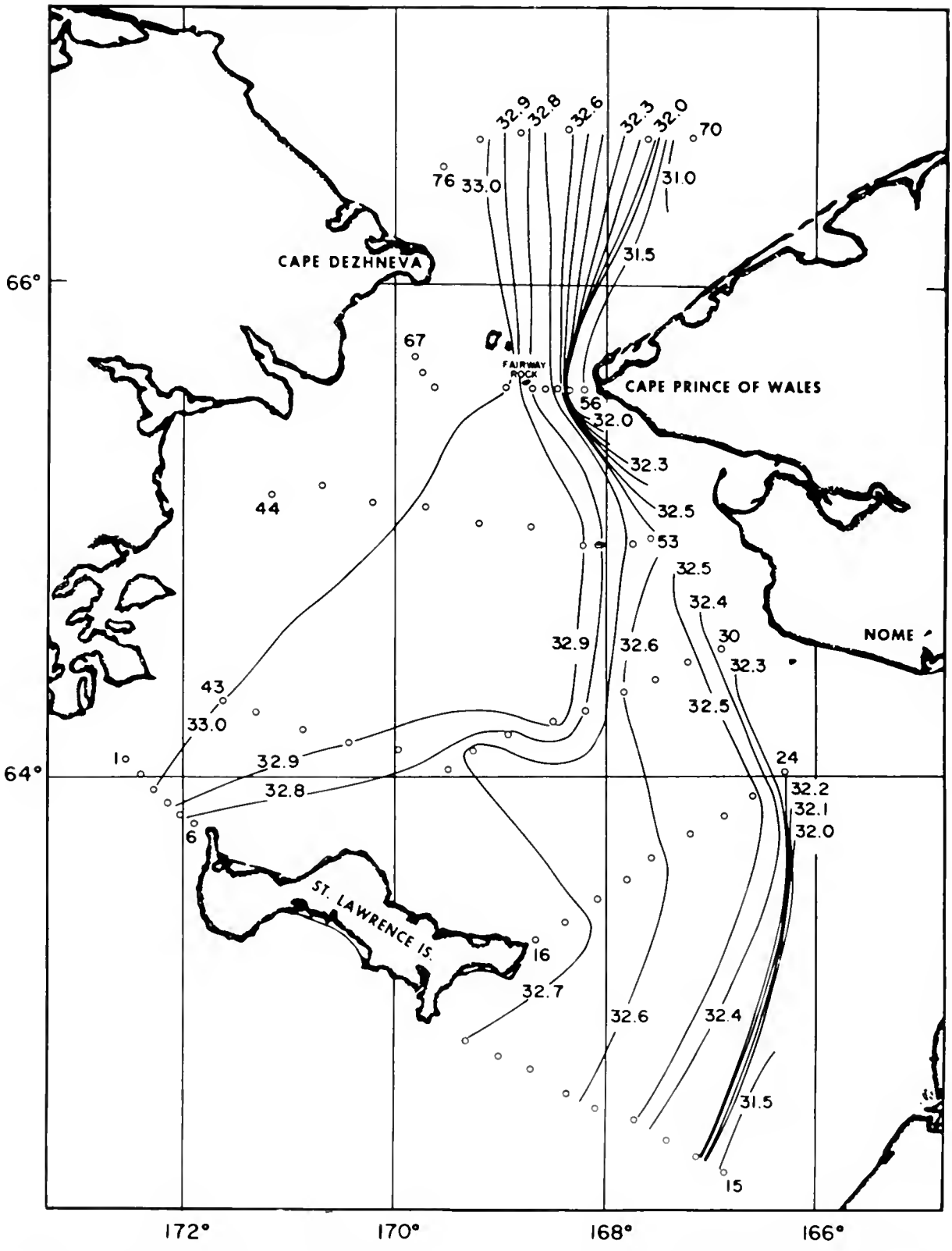

Figure 18. Horizontal distribution of salinity (‰) at depth of 20 meters from USCGC STATEN ISLAND data of 8–19 July 1968.

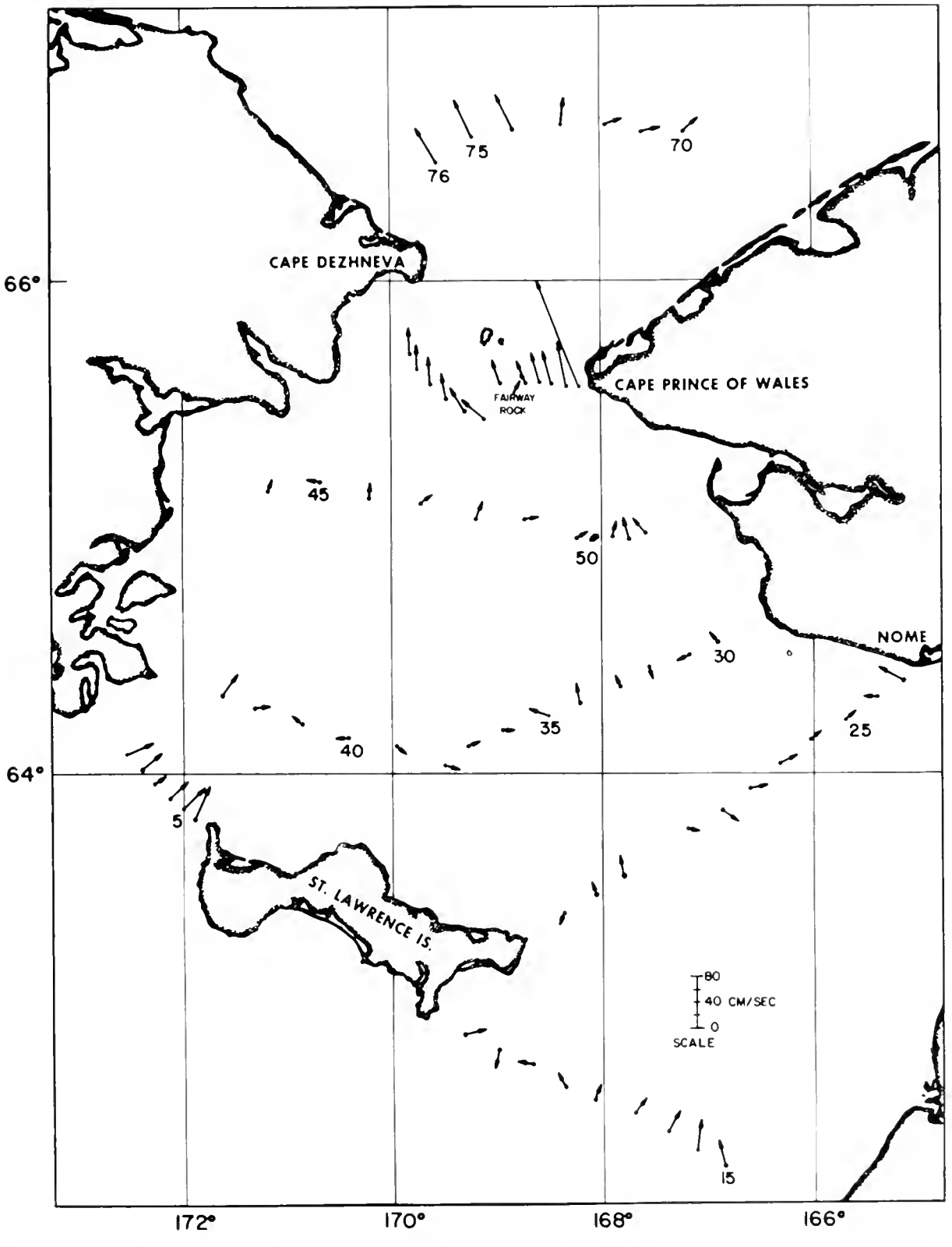

Figure 19. Current velocity at a depth of 5 meters at stations occupied by USCGC STATEN ISLAND, 8–19 July 1968.

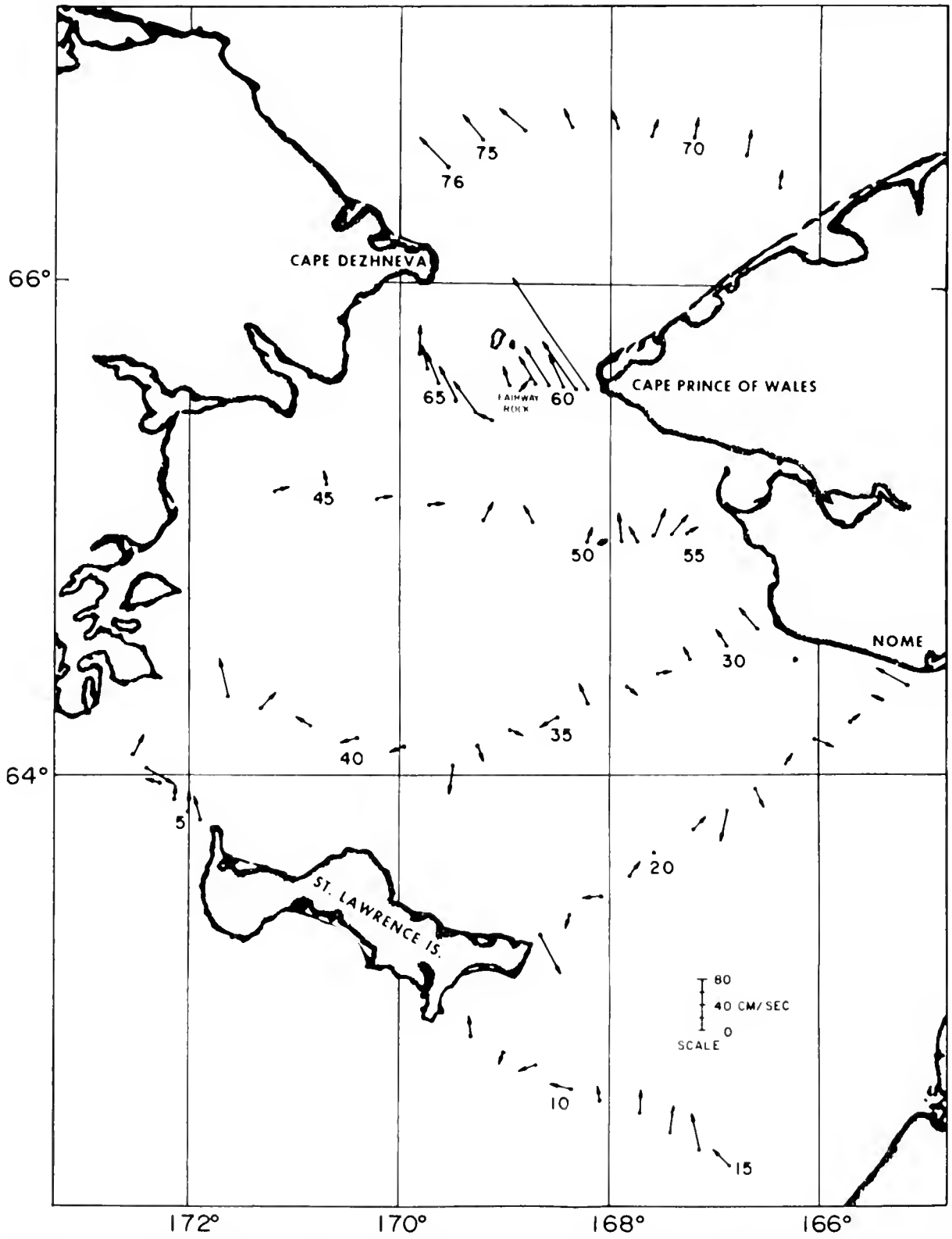

Figure 20. Current velocity at a depth of 20 meters at stations occupied by USCGC STATEN ISLAND, 8–19 July 1968.

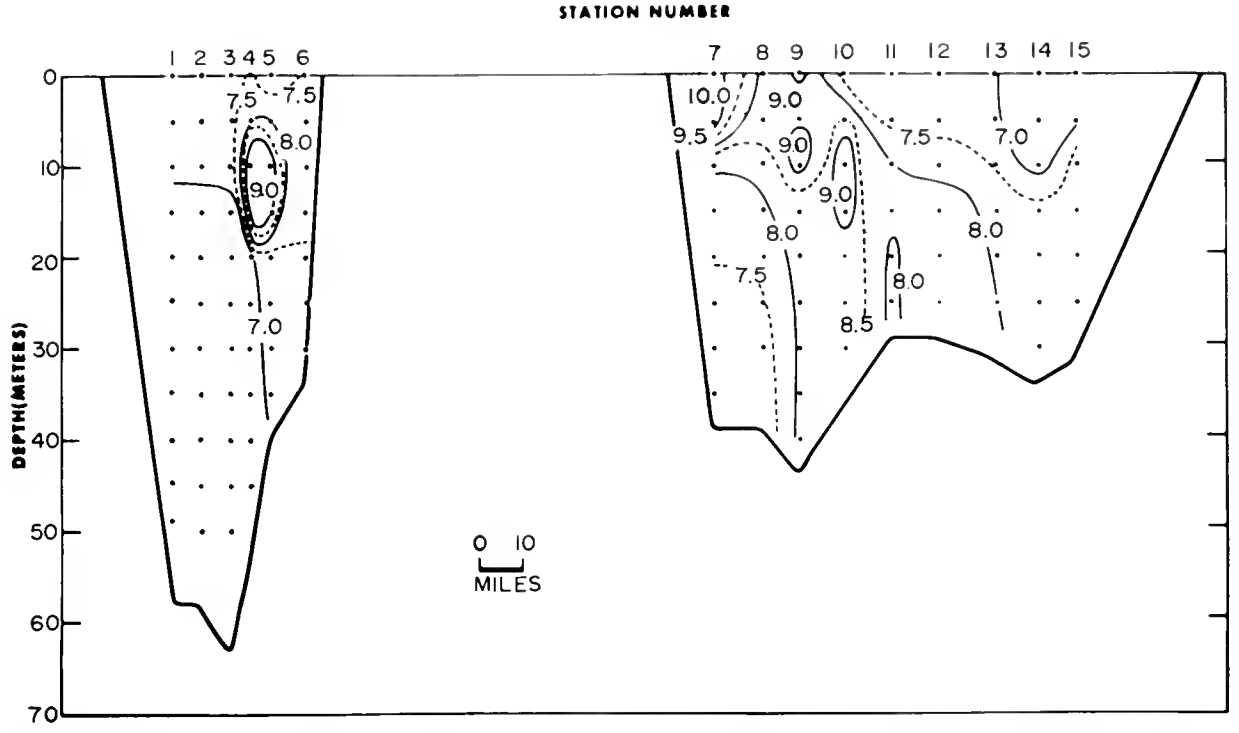

Figure 21. Distribution of dissolved oxygen (ml/l) along section H–H', from USCGC STATEN ISLAND data of 8–11 July 1968. Contour interval 0.5 ml/l.

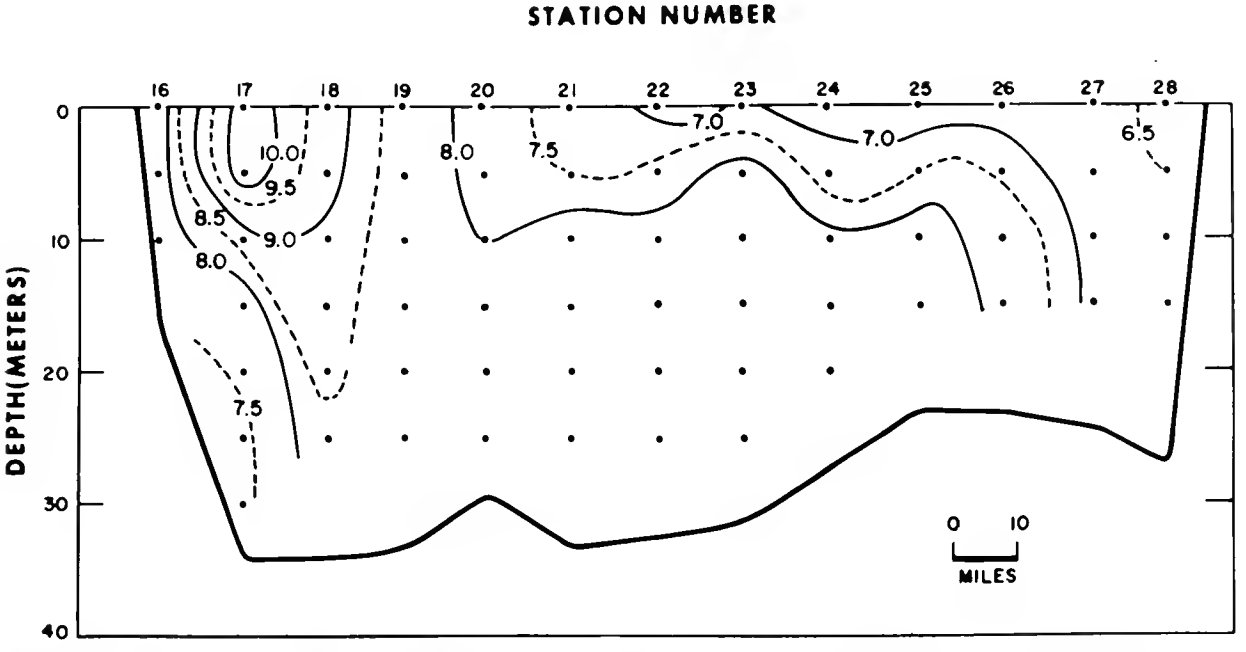

Figure 22. Distribution of dissolved oxygen (ml/l) along section G–G', from USCGC STATEN ISLAND data of 11–12 July 1968. Contour interval 0.5 ml/l.

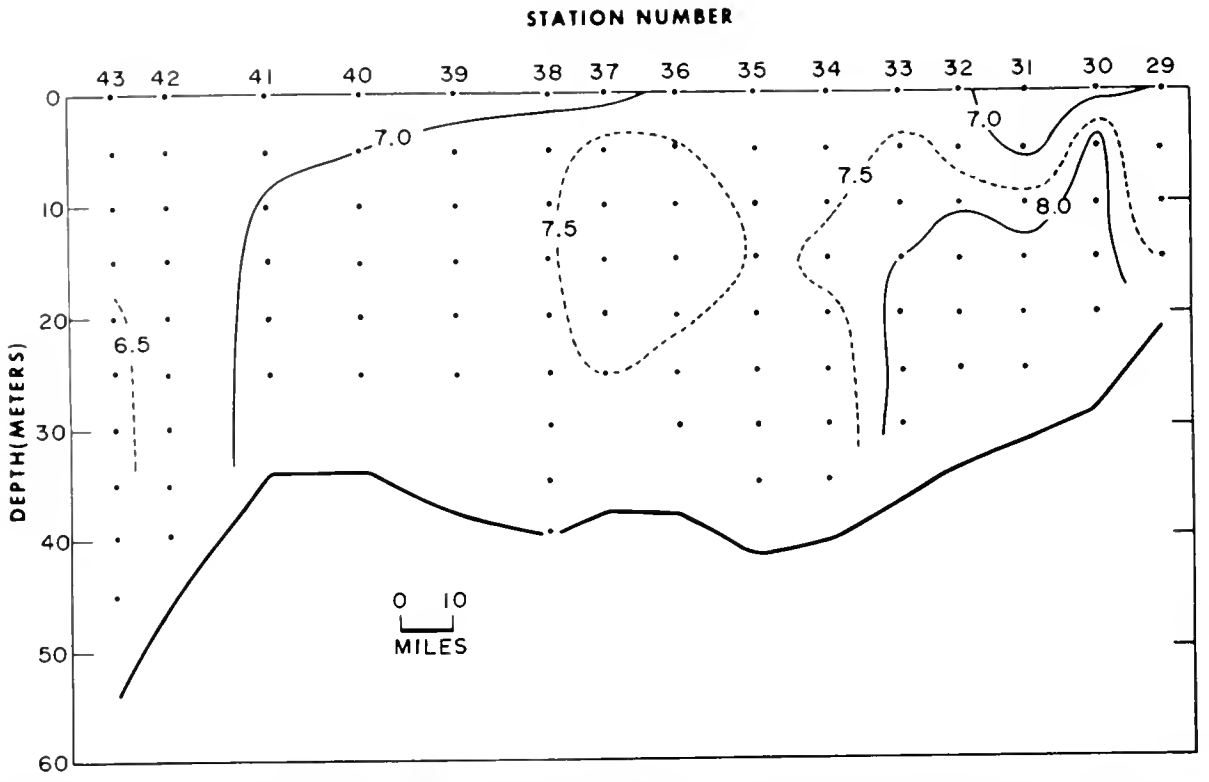

Figure 23. Distribution of dissolved oxygen (ml/l) along section F–F', from USCGC STATEN ISLAND data of 13–14 July 1968. Contour interval 0.5 ml/l.

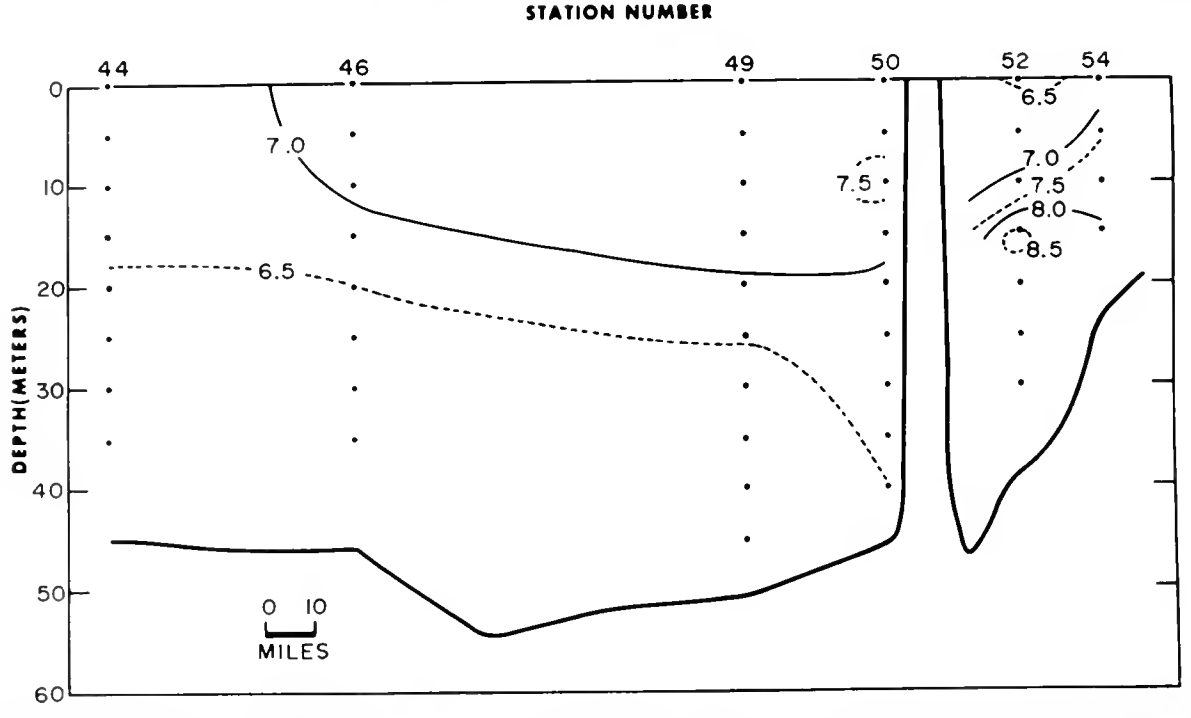

Figure 24. Distribution of dissolved oxygen (ml/l) along section E–E', from USCGC STATEN ISLAND data of 15–16 July 1968. Contour interval 0.5 ml/l.

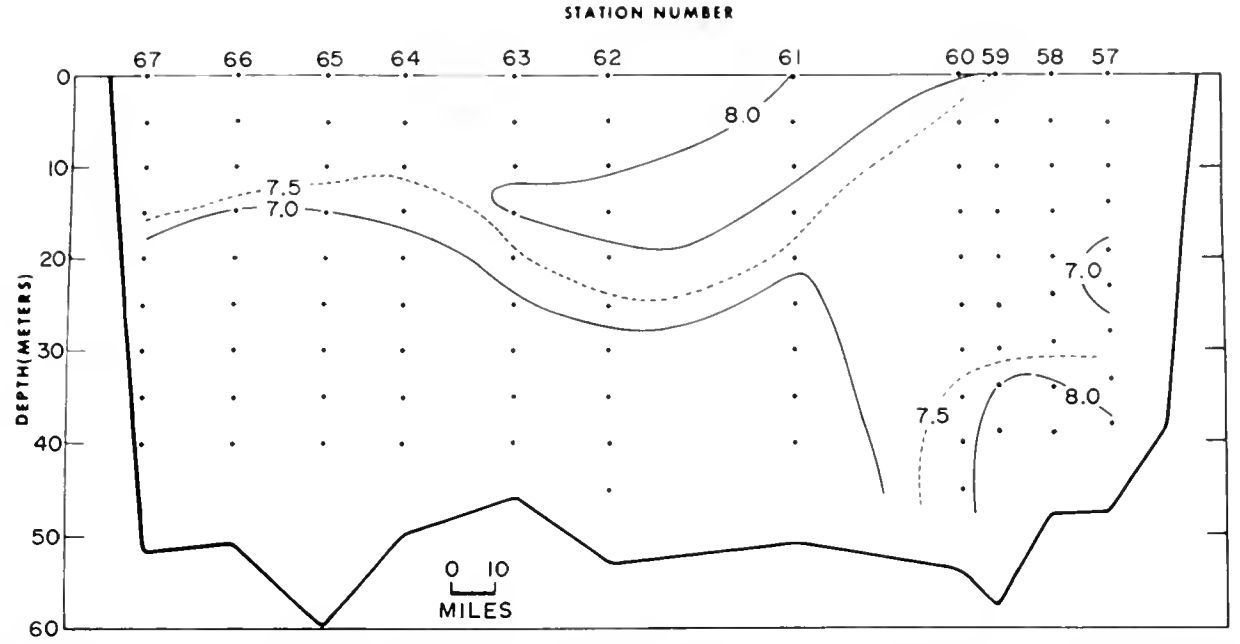

Figure 25. Distribution of dissolved oxygen (ml/l) along section D–D', from USCGC STATEN ISLAND data of 17–18 July 1968. Contour interval 0.5 ml/l.

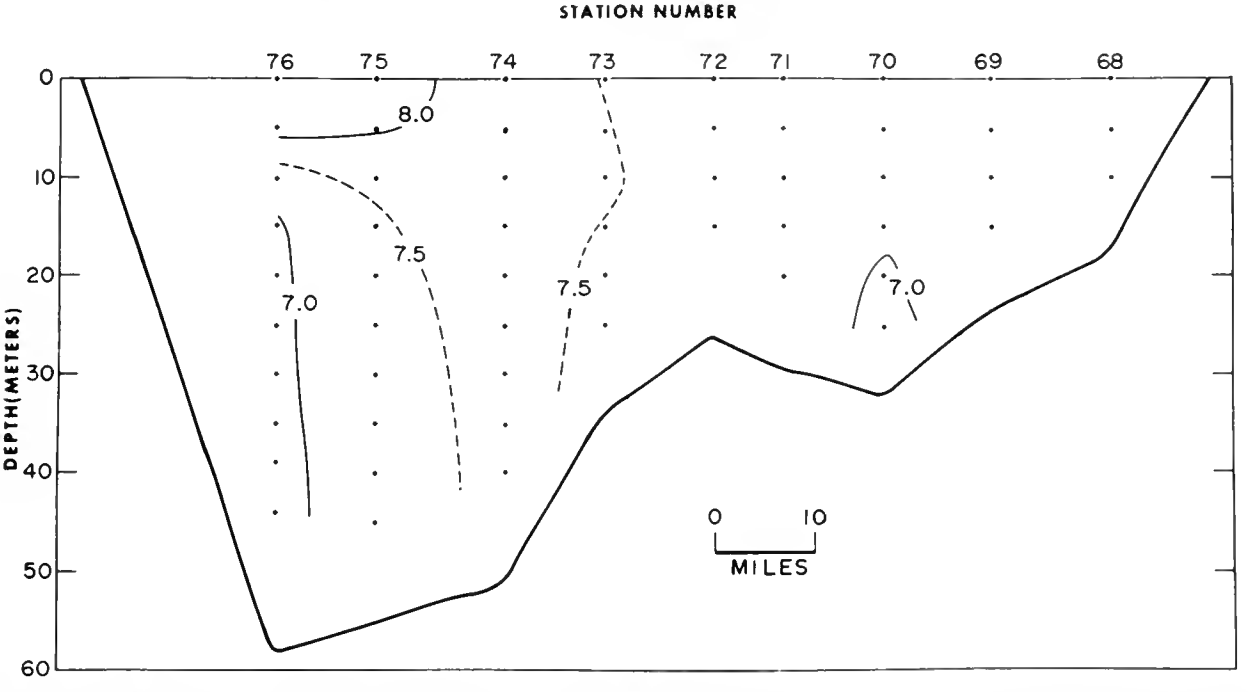

Figure 26. Distribution of dissolved oxygen (ml/l) along section C–C', from USCGC STATEN ISLAND data of 18–19 July 1968. Contour interval 0.5 ml/l.

APPENDIX A

OCEANOGRAPHIC DATA

A complete description of the codes utilized in the tabulation of oceanographic station data can be found in National Oceanographic Data Center publication M–2, *Processing Physical and Chemical Data from Oceanographic Stations.* (Rev. August 1964, supplement issued May 1966.)

To facilitate use of the oceanographic station data listing, entry headings which are not self-explanatory are described below.

Depth to Bottom	Corrected or uncorrected sounding in meters.
Max. Depth of Samples	Depth of deepest sample to nearest multiple of one hundred meters.
Wave observations:	
DIR	Rounded to nearest multiple of ten degrees.
HGT	In increments of ½ m. Sum of 5 meters plus increments of ½ m if 50 is added to direction.
PER	If numerals 2 through 9 are entered, period in seconds is twice the numeric entry or 2× (numeric entry) + 1. For other entries see WMO Code 3155.
SEA	Sea state according to WMO Code 3700.
Weather Code	If preceded by X, weather according to WMO Code 4501. If a two-digit entry, weather according to WMO Code 4677.
Cloud Code	
Type	Cloud type according to WMO Code 0500.
Amount	Cloud amount in eights. Entry of the numeral 9 indicates cloud amount could not be estimated.
Water	
Color Code	Color according to Forel-Ule scale.
Trans	Transparency in whole meters as determined by Secchi disc.
Wind	
Dir	Rounded to nearest multiple of ten degrees.
Speed or Force	If preceded by letter S, wind speed in knots; if preceded by letter F, wind force according to Beaufort scale.
Barometer	Barometric pressure given in tens, units and tenths of millibars.
Air Temp. °C	Air temperature to tenths of a degree centigrade.
Vis. Code	Visibility according to WMO Code 4300.
No obs. depths	Number of observed levels associated with the station.
Messenger time	Entered in hours and tenths of an hour GMT. For Nansen casts, indicates time of release of messenger applicable to the observational level. For STD casts, indicates the starting time of lowering the sensor.
Card type	OBS designates observed levels. STD indicates the values at this standard level were interpolated by a modified 3-point LaGrange formula.

Depth (m)	Depth to nearest meter. A postscript T indicates depth was obtained thermometrically; Σ indicates uncorrected "wire out" depth. Postscript Q indicates value was marked doubtful by originator; P indicates value was considered doubtful by NODC. Postscripts P and Q retain this meaning throughout the following entries.
T °C	Temperature to hundredths of a degree Centigrade.
S ‰	Salinity in parts-per-thousand.
SIGMA-T	Entered to hundredths.
Specific-volume Anomaly — × 10^7	Multiply entry by 10^{-7} to obtain specific-volume anomaly in cubic centimeters per gram.
ΣΔDyn. M × 10^3	Multiply entry by 10^{-3} to obtain anomaly of dynamic height in dynamic meters referenced to the sea surface.
Sound Velocity	Sound velocity according to Wilson's formula entered to tenths of a meter per second.
O_2 ml/l	Dissolved oxygen in milliliters per liter entered to hundredths.
PO_4-P μg-at/l	Inorganic phosphate in microgram-atoms per liter entered to hundredths.
Total-P μg-at/l	Total phosphorus in microgram-atoms per liter entered to hundredths.
NO_2-N μg-at/l	Nitrite-nitrogen in microgram-atoms per liter entered to hundredths.
NO_3-N μg-at/l	Nitrate-nitrogen in microgram-atoms per liter entered to tenths.
SiO_4-Si μg-at/l	Silicate-silicon in microgram-atoms per liter entered to whole units.
pH	Entered to hundredths.

Table 1.—Observed and interpolated oceanographic data from stations taken by USCGC STATEN ISLAND, 8–19 July 1968, prepared from NODC Listing No. 31–1270.

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
311270		SI	6405 N	172300W		234	42	07	08	210	1968	BS2	001	0058	00	29	0	2		X1	0	1	0001

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		29	S15	055	069	062	8	11	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0779	3225	2517	0028035	0000	14785	719							
212		OBS	0000	0779	32253	2517			14785	719							
212		OBS	0005	0775	32253	2518			14785	719							
		STD	0010	0759	3226	2521	0027699	0028	14779	721							
212		OBS	0010	0759	32264	2521			14779	721							
212		OBS	0015	0255	32975	2633			14582	676							
212		OBS	0019	0196	33031	2642			14557	673							
		STD	0020	0194	3303	2642	0016130	0050	14556	676							
212		OBS	0024	0189	33040	2643			14555	680							
212		OBS	0029	0189	33042	2644			14556	670							
		STD	0030	0189	3304	2643	0016044	0066	14556	671							
212		OBS	0034	0189	33033	2643			14556	674							
212		OBS	0039	0190	33036	2643			14558	680							
212		OBS	0044	0189	33046	2644			14558	670							
212		OBS	0048	0186	33042	2644			14558	671							

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
311270		SI	64012N	17222 W		234	42	07	08	230	1968	BS2	002	0058	00	29	0	2		X1	0	2	0002

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		29	S15	060	086	077	8	11	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0811	3237	2522	0027586	0000	14799	708							
228		OBS	0000	0811	32372	2522			14799	708							
228		OBS	0005	0810	32374	2522			14800	706							
		STD	0010	0803	3237	2523	0027483	0028	14798	708							
228		OBS	0010	0803	32373	2523			14798	708							
228		OBS	0015	0248	32867	2625			14577	685							
		STD	0020	0152	3299	2642	0016188	0049	14537	670							
228		OBS	0020	0152	32988	2642			14537	670							
228		OBS	0025	0148	32992	2642			14536	660							
		STD	0030	0149	3299	2642	0016147	0066	14537	667							
228		OBS	0030	0149	32991	2642			14537	667							
228		OBS	0035	0147	32991	2642			14537	667							
228		OBS	0040	0147	32993	2643			14538	664							
228		OBS	0045	0147	32989	2642			14539	668							
		STD	0050	0149	3299	2642	0016149	0098	14541	665							
228		OBS	0050	0149	32991	2642			14541	665							

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
311270		SI	63578N	172136W		234	32	07	10	000	1968	BS2	003	0064	00	29	1	2		X1	3	2	0003

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		31	S14	055	090	090	8	11	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0822	3205	2495	0030107	0000	14799	705							
008		OBS	0000	0822	32054	2495			14799	705							
008		OBS	0005	0820	32063	2496			14800	707							
		STD	0010	0352	3268	2602	0020022	0025	14619	736							
008		OBS	0010	0352	32684	2602			14619	736							
008		OBS	0015	0138	32988	2643			14530	673							
		STD	0020	0134	3300	2644	0015990	0043	14529	663							
008		OBS	0020	0134	32999	2644			14529	663							
008		OBS	0025	0130	32998	2644			14528								
		STD	0030	0131	3300	2644	0015979	0059	14529	667							
008		OBS	0030	0131	32998	2644			14529	667							
008		OBS	0035	0130	32998	2644			14530	667							
008		OBS	0040	0133	32991	2643			14532	656							
008		OBS	0045	0129	33002	2644			14531	664							
		STD	0050	0126	3300	2645	0015911	0091	14531	660							
008		OBS	0050	0126	33003	2645			14531	660							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	6354 N	17206 W		234	32	07	10	020	1968	BS2	004		0053	00	28	1	3		X1	3	2	0004

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		30	S14	056	094	083	8	10	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁷	ΣΔD DYN. M. E 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	QCC
		STD	0000	0694	3198	2508	0028951	0000	14749	758							
024		OBS	0000	0694	31982	2508			14749	758							
024		OBS	0005	0632	32068	2522			14726	796							
		STD	0010	0311	3261	2600	0020206	0025	14600	987							
024		OBS	0010	0311	32613	2600			14600	987							
024		OBS	0015	0134	32718	2621			14525	975							
		STD	0020	0109	3299	2644	0015936	0043	14518	660							
024		OBS	0020	0109	32986	2644			14518	660							
024		OBS	0025	0104	32999	2646			14517	652							
		STD	0030	0103	3300	2646	0015802	0059	14517	648							
024		OBS	0030	0103	32999	2646			14517								
024		OBS	0035	0103	32997	2646			14518	646							
024		OBS	0040	0104	32998	2646			14519	646							
024		OBS	0045	0104	32995	2645			14520	649							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	6351 N	17159 W		234	31	07	10	040	1968	BS2	005		0040	00	33	1	2		X1	3	3	0005

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		35	S15	050	095	086	8	08	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁷	ΣΔD DYN. M. E 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	QCC
		STD	0000	0683	3214	2521	0027670	0000	14746	705							
039		OBS	0000	0683	32135	2521			14746	705							
039		OBS	0005	0527	32383	2560			14687	797							
		STD	0010	0123	3248	2603	0019908	0024	14515	940							
039		OBS	0010	0123	32475	2603			14515	940							
039		OBS	0015	0028	32550	2614			14474	909							
		STD	0020	0018	3282	2636	0016717	0042	14474	713							
039		OBS	0020	0018	32820	2636			14474	713							
039		OBS	0025	0018	32832	2637			14475	708							
		STD	0030	0017	3283	2637	0016626	0059	14476	705							
039		OBS	0030	0017	32790	26342				705							
039		OBS	0035	0018	32830	2637			14477	706							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	6348 N	17152 W		234	31	07	10	050	1968	BS2	006		0034	00	29	1	2		X1	3	4	0006

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	052	092	083	8	07	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁷	ΣΔD DYN. M. E 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	QCC
		STD	0000	0667	3242	2546	0025333	0000	14744	754							
053		OBS	0000	0667	32421	2546			14744	754							
053		OBS	0005	0669	32421	2545			14745	749							
		STD	0010	0596	3243	2555	0024406	0025	14717	794							
053		OBS	0010	0596	32433	2555			14717	794							
053		OBS	0015	-0002	32718	2629			14463	785							
		STD	0020	-0022	3273	2631	0017213	0046	14455	735							
053		OBS	0020	-0022	32732	2631			14455	735							
053		OBS	0025	-0026	32740	2632			14454	721							
		STD	0030	-0025	3274	2632	0017136	0063	14455	724							
053		OBS	0030	-0025	32740	2632			14455	724							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	62531N	169183W		233	29	07	10	197	1968	BS2	007		0039	00	00	0	X		X4	X	9	0007

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		19	S15	065	064	058	1	08	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	I C C
		STD	0000	0275	3264	2605	0019714	0000	14583	1038							
197		OBS	0000	0275	32639	2605			14583	1038							
197		OBS	0005	0254	32633	2606			14575	1028							
		STD	0010	0035	3268	2624	0017908	0019	14478	814							
197		OBS	0010	0035	32675	2624			14478	814							
197		OBS	0015	-0018	32693	2628			14455	757							
		STD	0020	-0037	3270	2629	0017413	0036	14447	754							
197		OBS	0020	-0037	32698	2629			14447	754							
197		OBS	0025	-0045	32698	2629			14444	720							
		STD	0030	-0050	3270	2630	0017335	0054	14443	715							
197		OBS	0030	-0050	32701	2630			14443	715							
197		OBS	0035	-0050	32705	2630			14444	716							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	6249 N	16858 W		233	28	07	10	217	1968	BS2	008		0039	00	00	0	X		X4	X	9	0008

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		20	S12	075	077	057	1	07	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	I C C
		STD	0000	0138	3266	2616	0018606	0000	14523	882							
221		OBS	0000	0138	32658	2616			14523	882							
221		OBS	0005	0143	32658	2616			14526	888							
		STD	0010	0033	3267	2623	0017975	0018	14477	826							
221		OBS	0010	0033	32665	2623			14477	826							
221		OBS	0015	-0003	32669	2625			14462	777							
		STD	0020	-0009	3267	2625	0017780	0036	14460	758							
221		OBS	0020	-0009	32665	2625			14460	758							
221		OBS	0025	-0019	32672	2626			14456	747							
		STD	0030	-0035	3268	2627	0017577	0054	14449	735							
221		OBS	0030	-0035	32677	2627			14449	735							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	6245 N	16841 W		233	28	07	10	236	1968	BS2	009		0044	00	18	1	2		X1	3	1	0009

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		17	S08	076	061	055	7	09	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	I C C
		STD	0000	0205	3264	2610	0019177	0000	14553	901							
239		OBS	0000	0205	32641	2610			14553	901							
239		OBS	0005	0196	32640	2611			14549	896							
		STD	0010	0180	3264	2612	0019007	0019	14543	926							
239		OBS	0010	0180	32641	2612			14543	926							
239		OBS	0015	0017	32647	2622			14471	816							
		STD	0020	0003	3265	2623	0017962	0038	14465	823							
239		OBS	0020	0003	32648	2623			14465	823							
239		OBS	0025	-0001	32648	2623			14464	814							
		STD	0030	0000	3265	2623	0017930	0056	14465	811							
239		OBS	0030	0000	32650	2623			14465	811							
239		OBS	0035	-0002	32654	2624			14465	806							
239		OBS	0040	-0003	32654	2624			14466	801							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	1270	SI	6240 N	16821 W		23	3	07	11	015	1968	852	010	0037	00	18	1	2		X4	X	9		0010

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		17	S07	083	075	072	0	07	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	0624	3245	2554	0024566	0000	14727	704							
018		OBS	0000	0624	32454	2554			14727	704							
018		OBS	0005	0424	32503	2580			14646	865							
		STD	0010	0153	3260	2610	0019172	0022	14531	942							
018		OBS	0010	0153	32596	2610			14531	942							
018		OBS	0015	0098	32618	2616			14507	917							
		STD	0020	0085	3263	2617	0018524	0041	14502	880							
018		OBS	0020	0085	32628	2617			14502	880							
018		OBS	0025	0082	32626	2617			14501	878							
		STD	0030	0081													
018		OBS	0030	0081													

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	1270	SI	6234 N	16804 W		23	3	07	11	037	1968	852	011	0029	00	19	1	2		X4	X	9		0011

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	087	072	071	0	06	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	0670	3228	2534	0026454	0000	14743	725							
042		OBS	0000	0670	32276	2534			14743	725							
042		OBS	0005	0609	32277	2542			14719	734							
		STD	0010	0245	3239	2587	0021387	0024	14568	800							
042		OBS	0010	0245	32388	2587			14568	800							
042		OBS	0015	0227	32392	2589			14561	802							
		STD	0020	0226	3239	2589	0021234	0045	14562	799							
042		OBS	0020	0226	32390	2589			14562	799							
042		OBS	0025	0224	32393	2589			14562								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	1270	SI	6232 N	16742 W		23	3	07	11	070	1968	852	012	0029	00	23	0	2		X4	X	9		0012

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	093	083	073	1	06	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	0708	3231	2531	0026707	0000	14758	713							
067		OBS	0000	0708	32306	2531			14758	713							
067		OBS	0005	0628	32349	2545			14728	715							
		STD	0010	0350	3241	2580	0022065	0024	14614	786							
067		OBS	0010	0350	32411	2580			14614	786							
067		OBS	0015	0190	32499	2600			14546	822							
		STD	0020	0189	3250	2600	0020140	0045	14547	826							
067		OBS	0020	0189	32500	2600			14547	826							
067		OBS	0025	0187	32494	2600			14547	824							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	6226 N	16726 W		233	27	07	11	090	1968	BS2	013		0031	00	00	0	X		X4	X	9	0013

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	100	083	072	0	06	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0719	3202	2508	0028954	0000	14759								
087		OBS	0000	0719	32024	2508			14759								
087		OBS	0005	0652	32026	2516			14733								
		STD	0010	0139	3232	2589	0021206	0025	14520								
087		OBS	0010	0139	32317	2589			14520								
087		OBS	0015	0125	32321	2590			14515								
		STD	0020	0124	3232	2590	0021077	0046	14515								
087		OBS	0020	0124	32322	2590			14515								
087		OBS	0025	0122	32325	2591			14515								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	6222 N	16707 W		233	27	07	11	105	1968	BS2	014		0034	00	00	0	X		X4	X	9	0014

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	095	069	064	0	07	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0829	3071	2389	0040239	0000	14785	692							
110		OBS	0000	0829	30707	2389			14785	692							
110		OBS	0005	0814	30831	2401			14781	690							
		STD	0010	0519	3162	2500	0029669	0035	14675	686							
110		OBS	0010	0519	31618	2500			14675	686							
110		OBS	0015	0142	32345	2591			14523	776							
		STD	0020	0139	3236	2592	0020909	0060	14523	785							
110		OBS	0020	0139	32356	2592			14523	785							
110		OBS	0025	0137	32359	2592			14523	774							
		STD	0030	0137	3236	2592	0020874	0081	14523	767							
110		OBS	0030	0137	32359	2592			14523	767							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	6218 N	16651 W		233	26	07	11	127	1968	BS2	015		0032	00	36	0	2		X4	X	9	0015

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		33	S05	091	083	080	5	06	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	1122	2370	1801	0096702	0000	14806	649							
129		OBS	0000	1122	23703	1801			14806	649							
129		OBS	0005	0434	30094	2388			14618	689							
		STD	0010	0410	3140	2494	0030271	0063	14626	783							
129		OBS	0010	0410	31395	2494			14626	783							
129		OBS	0015	0179						784							
		STD	0020	0178	3140	2513	0028460	0093	14527	784							
129		OBS	0020	0178	31395	2513			14527	784							
129		OBS	0025	0173	31392	2513			14525	788							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT SQUARE	STATION TIME (GMT) 10°	1°	MO	DAY	HR. 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	HGT.	PER.	SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.	NODC STATION NUMBER
311270		SI	63185N	16838 W	233	38	07	11	221		1968	BS2	016	0016	00				1	X4	X	9	0016

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	S20	085	067	061	1	03	

MESSENGR TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10⁷	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SEC
		STD	0000	0467	3223	2554	0024561	0000	14659	763							
	223	OBS	0000	0467	32225	2554			14659	763							
	223	OBS	0005	0437	32288	2562			14649	770							
		STD	0010	0372	3235	2573	0022691	0024	14623	773							
	223	OBS	0010	0372	32354	2573			14623	773							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT SQUARE	STATION TIME (GMT) 10°	1°	MO	DAY	HR. 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	HGT.	PER.	SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.	NODC STATION NUMBER
311270		SI	6324 N	16820 W	233	38	07	12	000		1968	BS2	017	0034	00	32	1	1		X4	X	9	0017

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	S12	085	055	047	6	07	

MESSENGR TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10⁷	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SEC
		STD	0000	0394	3257	2588	0021257	0000	14633	1032							
	002	OBS	0000	0394	32570	2588			14633	1032							
	002	OBS	0005	0389	32572	2589			14632	1033							
		STD	0010	0138	3263	2614	0018827	0020	14524	862							
	002	OBS	0010	0138	32629	2614			14524	862							
	002	OBS	0015	0009	32696	2627			14468	767							
		STD	0020	-0022	3271	2629	0017358	0038	14454	751							
	002	OBS	0020	-0022	32713	2629			14454	751							
	002	OBS	0025	-0026	32721	2630			14453	749							
		STD	0030	-0026	3271	2629	0017346	0055	14454	744							
	002	OBS	0030	-0026	32712	2629			14454	744							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT SQUARE	STATION TIME (GMT) 10°	1°	MO	DAY	HR. 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	HGT.	PER.	SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.	NODC STATION NUMBER
311270		SI	63293N	16802 W	233	38	07	12	020		1968	BS2	018	0034	00	35	2	2		X4	4	8	0018

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		01	S18	075	060	060	7	06	

MESSENGR TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10⁷	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SEC
		STD	0000	0382	3258	2591	0021048	0000	14628	919							
	022	OBS	0000	0382	32583	2591			14628	919							
	022	OBS	0005	0382	32593	2591			14629	916							
		STD	0010	0117	3262	2615	0018746	0020	14515	890							
	022	OBS	0010	0117	32623	2615			14515	890							
	022	OBS	0015	0028	32669	2624			14476	858							
		STD	0020	0005	3265	2623	0017933	0038	14466	851							
	022	OBS	0020	0005	32653	2623			14466	851							
	022	OBS	0025	0001	32678	2626			14465	849							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.	NODC STATION NUMBER
311270		SI	6334 N	16747 W		233	37	07	12	050	1968	BS2	019	0033	00	33	2	2		X2	7	8	0019

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	S15	065	067	056	7	06	

MESSENGR. TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0411	3248	2580	0022087	0000	14639	815							
052		OBS	0000	0411	32481	2580			14639	815							
052		OBS	0005	0411	32498	2581			14640								
		STD	0010	0408	3250	2581	0021937	0022	14640	827							
052		OBS	0010	0408	32498	2581			14640	827							
052		OBS	0015	0353	32513	2588			14618	828							
		STD	0020	0172	3262	2611	0019107	0043	14541	847							
052		OBS	0020	0172	32621	2611			14541	847							
052		OBS	0025	0116	32651	2617			14517	834							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.	NODC STATION NUMBER
311270		SI	6340 N	167275W		233	37	07	12	072	1968	BS2	020	0029	00	33	2	2		X2	7	8	0020

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		33	S23	060	069	055	5	06	

MESSENGR. TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0493	3250	2573	0022745	0000	14674	792							
072		OBS	0000	0493	32502	2573			14674	792							
072		OBS	0005	0482	32509	2575			14670	799							
		STD	0010	0475	3251	2575	0022537	0023	14668	797							
072		OBS	0010	0475	32506	2575			14668	797							
072		OBS	0015	0226	32567	2603			14563	836							
		STD	0020	0180	3258	2607	0019479	0044	14544	839							
072		OBS	0020	0180													
072		OBS	0025	0175	32590	2608			14543	842							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.	NODC STATION NUMBER
311270		SI	63457N	167105W		233	37	07	12	090	1968	BS2	021	0033	00	34	5	4		X2	7	8	0021

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		34	S25	045	061	056	5	06	

MESSENGR. TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0691	3179	2493	0030334	0000	14745	722							
090		OBS	0000	0691	31792	2493			14745	722							
090		OBS	0005	0635	31935	2511			14725	748							
		STD	0010	0214	3260	2606	0019577	0025	14558	849							
090		OBS	0010	0214	32597	2606			14558	849							
090		OBS	0015	0202	32615	2608			14553	842							
		STD	0020	0201	3262	2609	0019342	0044	14554	840							
090		OBS	0020	0201	32616	2609			14554	840							
090		OBS	0025	0198	32618	2609			14553	835							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270		SI	63512N	166520W		233	36	07	12	107	1968	BS2	022	0032	00	01	4	4		X4	X	9	0022

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		01	S25	040	064	058	0	06	

MESSENGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0815	3114	2425	0036842	0000	14785	690							
109		OBS	0000	0815	31137	2425			14785	690							
109		OBS	0005	0540	31904	2520			14686	771							
		STD	0010	0175	3251	2602	0019999	0028	14539	822							
109		OBS	0010	0175	32506	2602			14539	822							
109		OBS	0015	0156	32525	2605			14532	819							
		STD	0020	0154	3253	2605	0019688	0048	14532	819							
109		OBS	0020	0154	32529	2605			14532	819							
109		OBS	0025	0151	32531	2605			14531	819							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270		SI	6356 N	166355W		233	36	07	12	126	1968	BS2	023	0031	00	34	2	2		X4	X	9	0023

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	S23	025	062	058	5	06	

MESSENGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0746	3146	2460	0033514	0000	14762	702							
129		OBS	0000	0746	31460	2460			14762	702							
129		OBS	0005	0223	32380	2588			14558	840							
		STD	0010	0083	3254	2610	0019207	0026	14498	857							
129		OBS	0010	0083	32537	2610			14498	857							
129		OBS	0015	0077	32543	2611			14496	855							
		STD	0020	0073	3254	2611	0019106	0046	14495	849							
129		OBS	0020	0073	32543	2611			14495	849							
129		OBS	0025	0073	32542	2611			14496	844							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270		SI	6402 N	16618 W		233	46	07	12	147	1968	BS2	024	0027	00	35	2	2		X4	X	9	0024

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	S22	025	075	067	6	05	

MESSENGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0772	3178	2481	0031483	0000	14776	692							
150		OBS	0000	0772	31778	2481			14776	692							
150		OBS	0005	0679	31830	2498			14741	713							
		STD	0010	0190	3221	2577	0022316	0027	14542	826							
150		OBS	0010	0190	32214	2577			14542	826							
150		OBS	0015	0183	32233	2579			14540	826							
		STD	0020	0182	3222	2579	0022188	0049	14540	833							
150		OBS	0020	0182	32224	2579			14540	833							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	64078N	16600 W		233	46	07	12	170	1968	BS2	025		0023	00	30	2	2		X1	6	7	0025

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		31	S20	000	097	087	7	04	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta\Phi$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	
		STD	0000	0934	3075	2376	0041445	0000	14825	667							
170		OBS	0000	0934	30746	2376			14825	667							
170		OBS	0005	0702	31677	2483			14749								
		STD	0010	0202	3201	2560	0023985	0033	14544	840							
170		OBS	0010	0202	32005	2560			14544	840							
170		OBS	0015	0200	32008	2560			14544	840							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	64134N	165411W		233	45	07	19	190	1968	BS2	026		0023	00	32	2	2		X4	X	9	0026

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	S22	997	076	072	3	04	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta\Phi$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	
		STD	0000	0898	2923	2264	0052222	0000	14792	670							
190		OBS	0000	0898	29228	2264			14792	670							
190		OBS	0005	0613	30355	2390			14696	733							
		STD	0010	0395	3148	2502	0029523	0041	14621	790							
190		OBS	0010	0395	31476	2502			14621	790							
190		OBS	0015	0394	31497	2503			14621	793							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	6419 N	165227W		233	45	07	12	210	1968	BS2	027		0024	00	31	2	2		X1	8	1	0027

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		31	S10	995	104	094	7	04	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta\Phi$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	
		STD	0000	1074	2930	2241	0054341	0000	14858	656							
211		OBS	0000	1074	29299	2241			14858	656							
211		OBS	0005	1070	29292	2242			14858	658							
		STD	0010	1056	2930	2244	0054079	0054	14853	693							
211		OBS	0010	1056	29298	2244			14853	693							
211		OBS	0015	0634						660							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	64235N	165073W		233	45	07	12	226	1968	BS2	028		0027	00	13	0	2		X1	7	2	0028

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		13	S10	995			6	04	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta\Phi$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	
		STD	0000	1214	2889	2185	0059724	0000	14903	647							
227		OBS	0000	1214	28886	2185			14903	647							
227		OBS	0005	0900	29365	2274			14795	681							
		STD	0010	0794	2957	2305	0048295	0054	14758	688							
227		OBS	0010	0794	29566	2305			14758	688							
227		OBS	0015	0725	29693	2324			14733	688							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC.	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	64368N	166335W		233	46	07	13	183	1968	BS2	029		0022	00	32	1	1		X4	9	9	0029

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		13	S11	010	084	084	1	04	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	0825	2949	2295	0049248	0000	14767	703							
183		OBS	0000	0825	29492	2295			14767	703							
183		OBS	0005	0807	29502	2298			14761	703							
		STD	0010	0517	3029	2396	0039613	0044	14656	728							
183		OBS	0010	0517	30293	2396			14656	728							
183		OBS	0015	0446	30673	2433			14632	741							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC.	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	6433 N	16652 W		233	46	07	13	200	1968	BS2	030		0029	00				1	X4	X	9	0030

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		13	S10	012	086	082	0	05	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	0839	3005	2336	0045311	0000	14780	679							
204		OBS	0000	0839	30045	2336			14780	679							
204		OBS	0005	0188	32174	2574			14539	814							
		STD	0010	0202	3233	2586	0021495	0033	14549	819							
204		OBS	0010	0202	32333	2586			14549	819							
204		OBS	0015	0199	32339	2587			14548	822							
		STD	0020	0197	3234	2587	0021378	0055	14548	819							
204		OBS	0020	0197	32344	2587			14548	819							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC.	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	64287N	16712 W		233	47	07	13	220	1968	BS2	031		0032	00				1	X4	X	9	0031

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	010	111	097	0	06	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	0919	3158	2444	0035003	0000	14830	652							
222		OBS	0000	0919	31583	2444			14830	652							
222		OBS	0005	0745	32218	2519			14773	688							
		STD	0010	0435	3244	2574	0022664	0029	14650	759							
222		OBS	0010	0435	32436	2574			14650	759							
222		OBS	0015	0178	32584	2608			14542	834							
		STD	0020	0174	3259	2609	0019332	0050	14541	828							
222		OBS	0020	0174	32593	2609			14541	828							
222		OBS	0025	0177	32592	2608			14544	883							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR,1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	64255N	16731 W		233	47	07	13	239	1968	BS2	032	0034	00	27	1	2		X4	X	9	0032

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		21	S09	011	089	084	1	06	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0673	3228	2533	0026499	0000	14744	714							
240		OBS	0000	0673	32275	2533			14744	714							
240		OBS	0005	0657	32294	2537			14739	722							
		STD	0010	0351	3244	2582	0021840	0024	14615	781							
240		OBS	0010	0351	32442	2582			14615	781							
240		OBS	0015	0178	32640	2612			14543	853							
		STD	0020	0178	3263	2612	0019063	0045	14544	841							
240		OBS	0020	0178	32632	2612			14544	841							
240		OBS	0025	0180	32634	2612			14546	841							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR,1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	64215N	167495W		233	47	07	14	020	1968	BS2	033	0037	00	25	1	2		X4	X	9	0033

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		02	S04	010	075	072	0	07	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0645	3233	2541	0025775	0000	14734	739							
022		OBS	0000	0645	32326	2541			14734	739							
022		OBS	0005	0559	32308	2550			14699	752							
		STD	0010	0504	3232	2557	0024259	0025	14678	770							
022		OBS	0010	0504	32317	2557			14678	770							
022		OBS	0015	0325	32504	2590			14605	803							
		STD	0020	0129	3260	2612	0019000	0047	14521	806							
022		OBS	0020	0129	32599	2612			14521	806							
022		OBS	0025	0111	32633	2616			14515	804							
		STD	0030	0091	3263	2617	0018518	0065	14506	803							
022		OBS	0030	0091	32633	2617			14506	803							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR,1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	64179N	168100W		233	48	07	14	040	1968	BS2	034	0040	00	01	1	2		X1	3	6	0034

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		33	S10	020	078	072	7	08	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0694	3228	2531	0026701	0000	14752	712							
043		OBS	0000	0694	32283	2531			14752	712							
043		OBS	0005	0691	32289	2532			14752	712							
		STD	0010	0637	3237	2545	0025369	0026	14733	734							
043		OBS	0010	0637	32369	2545			14733	734							
043		OBS	0015	0529	32663	2581			14693	768							
		STD	0020	0424	3280	2603	0019846	0049	14652	733							
043		OBS	0020	0424	32797	2603			14652	733							
043		OBS	0025	0411	32791	2604			14648	732							
		STD	0030	0364	3277	2607	0019530	0068	14628	726							
043		OBS	0030	0364	32765	2607			14628	726							
043		OBS	0035	0232	32675	2611			14571	736							

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRFT IND	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR.1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	1270	SI	64144N	168289W		23	3	48	07	14	060	1968	BS2	035		0042	00	32	1	2	X2	7	8	0035

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		36	S09	023	067	061	7	08	

MESSENGR TIME OF T HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY ×10⁷	Σ△D DYN. M × 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	QUAL CODE
		STD	0000	0574	3295	2598	0020305	0000	14713	741							
063		OBS	0000	0574	32945	2598			14713	741							
063		OBS	0005	0572	32952	2599			14713	746							
		STD	0010	0572	3295	2599	0020248	0020	14714	748							
063		OBS	0010	0572	32951	2599			14714	748							
063		OBS	0015	0569	32952	2600			14714	748							
		STD	0020	0522	3300	2609	0019325	0040	14696	750							
063		OBS	0020	0522	33001	2609			14696	750							
063		OBS	0025	0362	32944	2621			14629	717							
		STD	0030	0370	3297	2622	0018077	0059	14633	712							
063		OBS	0030	0370	32965	2622			14633	712							
063		OBS	0035	0370	32973	2623			14634	720							

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRFT IND	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR.1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	1270	SI	6410 N	168545W		23	3	48	07	14	083	1968	BS2	036		0038	00	35	1	2	X2	7	8	0036

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		35	S12	035	069	063	6	07	

MESSENGR TIME OF T HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY ×10⁷	Σ△D DYN. M × 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	QUAL CODE
		STD	0000	0677	3266	2563	0023686	0000	14751								
085		OBS	0000	0677	32658	2563			14751								
085		OBS	0005	0562	32672	2578			14705								
		STD	0010	0333	3271	2605	0019645	0022	14611								
085		OBS	0010	0333	32712	2605			14611								
085		OBS	0015	0284	32716	2610			14591								
		STD	0020	0282	3274	2612	0019043	0041	14591								
085		OBS	0020	0282	32736	2612			14591								
085		OBS	0025	0280	32732	2612			14591								
		STD	0030	0282	3273	2612	0019077	0060	14592								
085		OBS	0030	0282	32732	2612			14592								

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRFT IND	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR.1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	1270	SI	64065N	16714 W		23	3	49	07	14	100	1968	BS2	037		0038	00	34		1	X2	7	8	0037

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		34	S11	040	056	053	6	06	

MESSENGR TIME OF T HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY ×10⁷	Σ△D DYN. M × 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	QUAL CODE
		STD	0000	0636	3248	2554	0024529	0000	14732	680							
102		OBS	0000	0636	32478	2554			14732	680							
102		OBS	0005	0634	32482	2555			14732	758							
		STD	0010	0623	3248	2556	0024363	0024	14728	768							
102		OBS	0010	0623	32481	2556			14728	768							
102		OBS	0015	0288	32671	2606			14592	774							
		STD	0020	0282	3267	2607	0019527	0046	14590	758							
102		OBS	0020	0282	32672	2607			14590	758							
102		OBS	0025	0280	32672	2607			14590	750							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.		NODC STATION NUMBER
	311270	SI	6402 N	16928 W		233	49	07	14	119	1968	BS2	038	0040	00	34	2	2		X4	X	9		0038

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		34	S14	040	057	056	6	09	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S °/₀₀	SIGMA-T	SPECIFIC VOLUME ANOMALY $\times 10^7$	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	QUAL CODE
		STD	0000	0672	3249	2550	0024879	0000	14746								
119		OBS	0000	0672	32490	2550			14746								
119		OBS	0005	0592	32580	2568			14716								
		STD	0010	0334	3276	2609	0019313	0022	14612								
119		OBS	0010	0334	32757	2609			14612								
119		OBS	0015	0295	32758	2612			14596								
		STD	0020	0272	3276	2614	0018797	0041	14587								
119		OBS	0020	0272	32758	2614			14587								
119		OBS	0025	0271	32759	2615			14587								
		STD	0030	0271	3275	2614	0018823	0060	14588								
119		OBS	0030	0271	32754	2614			14588								
119		OBS	0035	0271	32753	2614			14589								
119		OBS	0040	03390	32751	26080											

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.		NODC STATION NUMBER
	311270	SI	64065N	169565W		233	49	07	14	144	1968	BS2	039	0038	00	34	2	2		X2	7	8		0039

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		31	S10	049	064	058	7	06	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S °/₀₀	SIGMA-T	SPECIFIC VOLUME ANOMALY $\times 10^7$	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	QUAL CODE
		STD	0000	0762	3241	2532	0026666	0000	14781	652							
144		OBS	0000	0762	32406	2532			14781	652							
144		OBS	0005	0271	32718	2611			14583	721							
		STD	0010	0174	3282	2627	0017577	0022	14543	712							
144		OBS	0010	0174	32824	2627			14543	712							
144		OBS	0015	0172	32860	26300				707							
		STD	0020	0169	3284	2629	0017416	0040	14543	709							
144		OBS	0020	0169	32841	2629			14543	709							
144		OBS	0025	0169	32837	2629			14543	701							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.		NODC STATION NUMBER
	311270	SI	64096N	17024 W		234	40	07	14	160	1968	BS2	040	0034	00	02	1	2		X5	6	8		0040

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		35	S10	055	064	060	7	06	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S °/₀₀	SIGMA-T	SPECIFIC VOLUME ANOMALY $\times 10^7$	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	QUAL CODE
		STD	0000	0880	3212	2492	0030455	0000	14822								
163		OBS	0000	0880	32118	2492			14822								
163		OBS	0005	0881	32118	2492			14824								
		STD	0010	0252	3285	2623	0017979	0024	14578								
163		OBS	0010	0252	32845	2623			14578								
163		OBS	0015	0185	32902	2633			14550								
		STD	0020	0182	3290	2633	0017033	0042	14549								
163		OBS	0020	0182	32903	2633			14549								
163		OBS	0025	0182	32903	2633			14550								

REFERENCE CRUISE CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° '1/10	LONGITUDE ° '1/10	DRIFT PROCTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	DAY	HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270	SI	64124N	17050 W		234	40	07	14	180	1968	BS2	041		0034	00	35	1	2		X2	6	8		0041

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		01	S11	064	070	066	7	06	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$ O DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	DCC
		STD	0000	0960	3209	2477	0031887	0000	14852	655							
184		OBS	0000	0960	32086	2477			14852	655							
184		OBS	0005	0958	32097	2478			14852	656							
		STD	0010	0121	3281	2630	0017324	0025	14519	705							
184		OBS	0010	0121	32813	2630			14519	705							
184		OBS	0015	0116	32817	2630			14518	701							
		STD	0020	0114	3282	2630	0017267	0042	14518	701							
184		OBS	0020	0114	32815	2630			14518	701							
184		OBS	0025	0114	32817	2631			14519	701							

REFERENCE CRUISE CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° '1/10	LONGITUDE ° '1/10	DRIFT PROCTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	DAY	HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270	SI	64167N	171175W		234	41	07	14	205	1968	BS2	042		0046	00	02	2	2		X1	4	5		0042

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		02	S11	070	071	061	7	09	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$ O DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	DCC
		STD	0000	0956	3145	2428	0036538	0000	14842								
208		OBS	0000	0956	31451	2428			14842								
208		OBS	0005	0951	31464	2430			14841								
		STD	0010	0140	3286	2632	0017076	0027	14528								
208		OBS	0010	0140	32861	2632			14528								
208		OBS	0015	0126	32851	2633			14523								
		STD	0020	0122	3285	2633	0017041	0044	14522								
208		OBS	0020	0122	32851	2633			14522								
208		OBS	0025	0122	32856	2633			14523								
		STD	0030	0124	3286	2633	0016985	0061	14524								
208		OBS	0030	0124	32860	2633			14524								
208		OBS	0035	0124	32856	2633			14525								
208		OBS	0040	0125	32857	2633			14527								

REFERENCE CRUISE CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° '1/10	LONGITUDE ° '1/10	DRIFT PROCTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	DAY	HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270	SI	64192N	171350W		234	41	07	14	220	1968	BS2	043		0054	00	01	1	2		X1	3	3		0043

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		01	S08	075	099	078	8	10	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$ O DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	DCC
		STD	0000	1023	3151	2421	0037170	0000	14868	654							
223		OBS	0000	1023	31506	2421			14868	654							
223		OBS	0005	1016	31508	2423			14866	656							
		STD	0010	0271	3292	2627	0017574	0027	14587	668							
223		OBS	0010	0271	32918	2627			14587	668							
223		OBS	0015	0200	33001	2639			14558	656							
		STD	0020	0191	3300	2640	0016390	0044	14555	646							
223		OBS	0020	0191	32996	2640			14555	646							
223		OBS	0025	0182	32984	2639			14551	645							
		STD	0030	0181	3299	2640	0016361	0061	14552	643							
223		OBS	0030	0181	32991	2640			14552	643							
223		OBS	0035	0180	32986	2640			14552	641							
223		OBS	0040	0181	32992	2640			14553	641							
223		OBS	0045	0178	32986	2640			14553	643							

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICES	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR,1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
311270	SI	6510 N	171085W		234	51	07	15	030	1968	BS2	044		0045	00				1	X1	7	1	0044

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		16	S05	075	055	050	8	08	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	QUAL
		STD	0000	0482	3314	2624	0017858	0000	14678	659							
035		OBS	0000	0482	33137	2624			14678	659							
035		OBS	0005	0449	33135	2628			14665	661							
		STD	0010	0356	3314	2637	0016640	0017	14626	656							
035		OBS	0010	0356	33137	2637			14626	656							
035		OBS	0015	0301	33144	2643			14604	661							
		STD	0020	0295	3315	2644	0016019	0034	14602	640							
035		OBS	0020	0295						640							
035		OBS	0025	0277						621							
		STD	0030	0277	3315	2645	0015876	0050	14596	621							
035		OBS	0030	0277						621							
035		OBS	0035	0278	33151	2645			14597	619							

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICES	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR,1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
311270	SI	6512 N	170405W		234	50	07	15	050	1968	BS2	045		0046	00				1	X1	2	4	0045

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	080	072	061	8	08	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	QUAL
		STD	0000	0465	3307	2621	0018156	0000	14670								
052		OBS	0000	0465	33074	2621			14670								
052		OBS	0005	0396	33092	2630			14642								
		STD	0010	0319	3312	2639	0016420	0017	14610								
052		OBS	0010	0319	33123	2639			14610								
052		OBS	0015	0295	33109	2640			14601								
		STD	0020	0292	3311	2641	0016274	0034	14600								
052		OBS	0020	0292	33113	2641			14600								
052		OBS	0025	0289	33116	2642			14600								
		STD	0030	0290	3312	2642	0016232	0050	14601								
052		OBS	0030	0290	33117	2642			14601								
052		OBS	0035	0289	33119	2642			14602								

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICES	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR,1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
311270	SI	6509 N	17011 W		234	50	07	15	070	1968	BS2	046		0046	00	02	1	2		X1	7	3	0046

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	085	067	058	6	08	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	QUAL
		STD	0000	0463	3302	2617	0018579	0000	14668	723							
072		OBS	0000	0463	33015	2617			14668	723							
072		OBS	0005	0462	33010	2616			14669	730							
		STD	0010	0437	3302	2619	0018318	0018	14659	723							
072		OBS	0010	0437	33016	2619			14659	723							
072		OBS	0015	0280	33032	2636			14593	655							
		STD	0020	0278	3304	2636	0016749	0036	14593	650							
072		OBS	0020	0278	33035	2636			14593	650							
072		OBS	0025	0276	33052	2638			14593	639							
		STD	0030	0279	3306	2638	0016580	0053	14596	642							
072		OBS	0030	0279	33059	2638			14596	642							
072		OBS	0035	0279	33063	2638			14596	638							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT (KNOTS)	W/SQUARE 10°	W/SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	1270	SI	65065N	16941 W		233	59	07	15	095	1968	BS2	047	0055	00				1	X4	X	9		0047

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	095	053	050	0	10	

MESSENGER TIME OF (HR 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$D DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	SOUCAST
		STD	0000	0514	3301	2611	0019129	0000	14689								
097		OBS	0000	0514	33013	2611			14689								
097		OBS	0005	0511	33009	2611			14689								
		STD	0010	0511	3302	2611	0019084	0019	14690								
097		OBS	0010	0511	33016	2611			14690								
097		OBS	0015	0468	33023	2617			14673								
		STD	0020	0298	3298	2630	0017314	0037	14601								
097		OBS	0020	0298	32982	2630			14601								
097		OBS	0025	0279	32984	2632			14594								
		STD	0030	0265	3299	2633	0017020	0054	14588								
097		OBS	0030	0265	32986	2633			14588								
097		OBS	0035	0258	32989	2634			14586								
097		OBS	0040	0260	32989	2634			14588								
097		OBS	0045	0262	33000	2635			14590								

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT (KNOTS)	W/SQUARE 10°	W/SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	1270	SI	6504 N	16911 W		233	59	07	15	121	1968	BS2	048	0052	00				0	X4	X	9		0048

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	095	050	047	0	10	

MESSENGER TIME OF (HR 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$D DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	SOUCAST
		STD	0000	0465	3298	2614	0018855	0000	14669								
121		OBS	0000	0465	32981	2614			14669								
121		OBS	0005	0466	32977	2613			14670								
		STD	0010	0421	3299	2619	0018387	0019	14652								
121		OBS	0010	0421	32986	2619			14652								
121		OBS	0015	0333	32995	2628			14616								
		STD	0020	0264	3299	2634	0016978	0036	14586								
121		OBS	0020	0264													
121		OBS	0025	0235	32983	2635			14575								
		STD	0030	0224	3298	2636	0016766	0053	14570								
121		OBS	0030	0224	32978	2636			14570								
121		OBS	0035	0224	32979	2636			14571								
121		OBS	0040	0224	32976	2636			14572								
121		OBS	0045	0222	32979	2636			14572								

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT (KNOTS)	W/SQUARE 10°	W/SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	1270	SI	65031N	168417W		233	58	07	15	146	1968	BS2	049	0051	00				0	X4	X	9		0049

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	095	060	053	0	10	

MESSENGER TIME OF (HR 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$D DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	SOUCAST
		STD	0000	0588	3299	2601	0020099	0000	14719	737							
146		OBS	0000	0588	32994	2601			14719	737							
146		OBS	0005	0587	32998	2601			14720	740							
		STD	0010	0586	3300	2601	0020073	0020	14720	733							
146		OBS	0010	0586	32996	2601			14720	733							
146		OBS	0015	0411	33027	2623			14649	718							
		STD	0020	0284	3301	2634	0016979	0039	14595	694							
146		OBS	0020	0284	33011	2634			14595	694							
146		OBS	0025	0271	33019	2635			14591	655							
		STD	0030	0280	3305	2637	0016657	0055	14596	636							
146		OBS	0030	0280	33050	2637			14596	636							
146		OBS	0035	0285	33070	2638			14599	628							
146		OBS	0040	0286	33075	2639			14600	628							
146		OBS	0045	0284	33069	2638			14600	628							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR,1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	64584N	168115W		233	48	07	15	170	1968	BS2	050		0046	00				1	X4	X	9	0050

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	100	042	042	0	09	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0672	3249	2550	0024902	0000	14746	719							
172		OBS	0000	0672	32487	2550			14746	719							
172		OBS	0005	0672	32484	2550			14747	717							
		STD	0010	0666	3254	2555	0024444	0025	14746	769							
172		OBS	0010	0666	32540	2555			14746	769							
172		OBS	0015	0545	32868	2596			14703	723							
		STD	0020	0450	3292	2610	0019216	0047	14665	679							
172		OBS	0020	0450	32915	2610			14665	679							
172		OBS	0025	0438	32920	2612			14661	679							
		STD	0030	0436	3292	2612	0019054	0066	14661	676							
172		OBS	0030	0436	32919	2612			14661	676							
172		OBS	0035	0436	32931	2613			14662	665							
172		OBS	0040	0435	32928	2613			14662	659							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR,1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	64587N	167535W		233	47	07	15	190	1968	BS2	051		0047	00				2	X4	X	9	0051

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	105	066	055	1	08	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000		3219												
196		OBS	0000	07210	32191	25200											
196		OBS	0005	0735	32180	2518			14768								
		STD	0010	0557	3253	2567	0023265		14702								
196		OBS	0010	0557	32526	2567			14702								
196		OBS	0015	0417	32746	2600			14648								
		STD	0020	0396	3273	2601	0020083		14640								
196		OBS	0020	0396	32730	2601			14640								
196		OBS	0025	0156	32653	2615			14535								
		STD	0030	0147	3266	2616	0018679		14532								
196		OBS	0030	0147	32656	2616			14532								
196		OBS	0035	0145	32653	2615			14532								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR,1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	64588N	16743 W		233	47	07	15	205	1968	BS2	052		0039	00				2	X4	X	7	0052

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	104	053	050	1	07	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0927	3099	2397	0039528	0000	14826	640							
207		OBS	0000	0927	30990	2397			14826	640							
207		OBS	0005	0713	32204	2522			14760	692							
		STD	0010	0688	3228	2532	0026676	0033	14752	701							
207		OBS	0010	0688	32278	2532			14752	701							
207		OBS	0015	0436	32539	2582			14653	862							
		STD	0020	0113	3267	2619	0018349	0056	14515	828							
207		OBS	0020	0113	32672	2619			14515	828							
207		OBS	0025	0109	32667	2619			14514	830							
		STD	0030	0109	3268	2620	0018302	0074	14515	830							
207		OBS	0030	0109	32675	2620			14515	830							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DECK	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	1270	SI	64595N	16734 W		233	47	07	15	215	1968	BS2	053	0035	00				1	X4	X	9	0053

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	118	056	055	1	06	

MESSENGR TIME OF CAST HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁷	Σ△D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	NODC
		STD	0000	0923	3013	2330	0045894	0000	14813								
218		OBS	0000	0923	30126	2330			14813								
218		OBS	0005	0688	32358	2538			14752								
		STD	0010	0490	3249	2572	0022842	0034	14674								
218		OBS	0010	0490	32486	2572			14674								
218		OBS	0015	0222	32619	2607			14562								
		STD	0020	0218	3262	2607	0019463	0056	14561								
218		OBS	0020	0218	32616	2607			14561								
218		OBS	0025	0216	32622	2608			14561								

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DECK	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	1270	SI	65005N	16725 W		233	57	07	15	231	1968	BS2	054	0024	00				1	X4	7	8	0054

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	117	064	060	7	04	

MESSENGR TIME OF CAST HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁷	Σ△D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	NODC
		STD	0000	0922	2952	2283	0050397	0000	14805	656							
231		OBS	0000	0922	29519	2283			14805	656							
231		OBS	0005	0551	32233	2545			14695	740							
		STD	0010	0264	3236	2583	0021736	0036	14576	796							
231		OBS	0010	0264	32361	2583			14576	796							
231		OBS	0015	0258	32369	2585			14575	801							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DECK	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	1270	SI	6501 N	16715 W		233	57	07	16	006	1968	BS2	055	0020	00				1	X2	7	8	0055

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		24	S06	119	073	069	7	03	

MESSENGR TIME OF CAST HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁷	Σ△D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	NODC
		STD	0000	0885	2994	2321	0046756	0000	14796								
007		OBS	0000	0885	29937	2321			14796								
007		OBS	0005	0749	30809	2408			14756								
		STD	0010	0393	3168	2518	0027958	0037	14623								
007		OBS	0010	0393	31681	2518			14623								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.	NODC STATION NUMBER
311270	SI	65351N	168105W		233	58	07	17	100	1968	BS2	056		0039	00	18			3	X2	7	8	00561

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		18	S20	125	080	078	6	07	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0811	3031	2361	0042948	0000	14773								
	104	OBS	0000	0811	30311	2361			14773								
	104	OBS	0005	0844	30968	2407			14795								
	104	OBS	0009	0844	31162	2422			14798								
		STD	0010	0842	3121	2426	0036689	0040	14798								
	104	OBS	0013		31324												
	104	OBS	0017	0830	31427	2445			14797								
		STD	0020	0798	3150	2456	0033932	0075	14786								
	104	OBS	0022	0752	31564	2467			14770								
	104	OBS	0026	0603	31732	2499			14713								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.	NODC STATION NUMBER
311270	SI	65351N	168184W		233	58	07	17	111	1968	BS2	057		0048	00				2	X4	7	8	00571

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		20	S14	125	079	077	6	09	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0880	3152	2445	0034917	0000	14815	717							
	116	OBS	0000	0880	31518	2445			14815	717							
	116	OBS	0005	0877	31516	2445			14814	738							
		STD	0010	0876	3154	2447	0034733	0035	14815	735							
	116	OBS	0010	0876	31537	2447			14815	735							
	116	OBS	0014	0808	31522	2456			14789	754							
	116	OBS	0019	0701	32260	2528Q				680							
		STD	0020	0697	3155	2473	0032263	0068	14747	679							
	116	OBS	0023	0663	31560	2478			14734	675							
	116	OBS	0028	0528	32146	2541			14688	719							
		STD	0030	0496	3227	2554	0024545	0097	14677	742							
	116	OBS	0033	0446	32402	2570			14658	772							
	116	OBS	0038	0357	32514	2588			14623	809							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.	NODC STATION NUMBER
311270	SI	6535 N	16826 W		233	58	07	17	130	1968	BS2	058		0048	00	19	1	2		X2	7	8	00581

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		20	S15	125	078	072	7	09	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0692	3235	2536	0026206	0000	14753								
	130	OBS	0000	0692	32346	2536			14753								
	130	OBS	0005	0690	32354	2537			14753								
		STD	0010	0691	3236	2537	0026116	0026	14754								
	130	OBS	0010	0691	32358	2537			14754								
	130	OBS	0015	0387	32647	2595			14634								
		STD	0020	0267	3264	2605	0019688	0049	14583								
	130	OBS	0020	0267	32635	2605			14583								
	130	OBS	0024	0255	32639	2606			14578								
	130	OBS	0029	0251	32646	2607			14578								
		STD	0030	0250	3265	2607	0019477	0069	14577								
	130	OBS	0034	0248	32645	2607			14577								
	130	OBS	0039	0248	32644	2607			14578								

REFERENCE CITY CODE	REFERENCE IO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICES	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.		NODC STATION NUMBER
311270	SI	6535 N	168338W		233	58	07	17	140	1968	BS2	059		0058	00	21	2	3		X2	7	8		0059

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		23	S22		078	071	7	09	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	CODE
		STD	0000	0664	3258	2559	0024100	0000	14744	742							
143		OBS	0000	0664	32581	2559			14744	742							
143		OBS	0005	0663	32584	2559			14745	748							
		STD	0010	0646	3272	2571	0022890	0023	14741	767							
143		OBS	0010	0646	32715	2571			14741	767							
143		OBS	0015	0289	32751	2612			14593	765							
		STD	0020	0243	3274	2615	0018701	0044	14574	795							
143		OBS	0020	0243	32741	2615			14574	795							
143		OBS	0025	0238													
		STD	0030	0234	3273	2616	0018689	0063	14572	797							
143		OBS	0030	0234	32734	2616			14572	797							
143		OBS	0034	0226	32715	2615			14568	800							
143		OBS	0039	0226	32733	2616			14569	802							

REFERENCE CITY CODE	REFERENCE IO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICES	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.		NODC STATION NUMBER
311270	SI	6535 N	168410W		233	58	07	17	154	1968	BS2	060		0054	00	18	2	2		X2	7	8		0060

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		18	S20	125	078	072	7	10	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	CODE
		STD	0000	0625	3296	2593	0020813	0000	14734								
158		OBS	0000	0625	32957	2593			14734								
158		OBS	0005	0622	32959	2594			14733								
		STD	0010	0620	3296	2594	0020758	0021	14733								
158		OBS	0010	0620	32958	2594			14733								
158		OBS	0015	0287	32781	2615			14593								
		STD	0020	0266	3276	2615	0018712	0041	14584								
158		OBS	0020	0266	32763	2615			14584								
158		OBS	0025	0266	32756	2615			14585								
		STD	0030	0265	3276	2615	0018760	0059	14585								
158		OBS	0030	0265	32756	2615			14585								
158		OBS	0035	0262	32764	2616			14585								
158		OBS	0040	0259	32765	2616			14585								
158		OBS	0045	0262	32759	2615			14587								

REFERENCE CITY CODE	REFERENCE IO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICES	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.		NODC STATION NUMBER
311270	SI	65372N	16857 W		233	58	07	17	172	1968	BS2	061		0051	00	17	2	2		X4	X	9		0061

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		17	S14	125	078	075	2	09	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	CODE
		STD	0000	0536	3302	2609	0019294	0000	14699	802							
174		OBS	0000	0536	33023	2609			14699	802							
174		OBS	0005	0536	33019	2609			14699	813							
		STD	0010	0535	3302	2609	0019338	0019	14700	813							
174		OBS	0010	0535	33017	2609			14700	813							
174		OBS	0015	0512	33021	2612			14691	782							
		STD	0020	0318	3304	2633	0017067	0038	14610	718							
174		OBS	0020	0318	33037	2633			14610	718							
174		OBS	0025	0280	33064	2638			14595	664							
		STD	0030	0280	3306	2638	0016566	0054	14596	655							
174		OBS	0030	0280	33062	2638			14596	655							
174		OBS	0035	0277	33070	2639			14596	655							
174		OBS	0040	0266	33072	2640			14592	694							

REFERENCE CRUISE CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR,1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270	SI	65277N	169055W		233	59	07	17	197	1968	BS2	062		0053	00				3	X4	X	9		0062

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		17	S22	125	069	067	4	10	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\Sigma\Delta$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0504	3298	2609	0019284	0000	14685								
200		OBS	0000	0504	32978	2609			14685								
200		OBS	0005	0503	32968	2609			14685								
		STD	0010	0503	3298	2610	0019253	0019	14686								
200		OBS	0010	0503	32982	2610			14686								
200		OBS	0015	0411	32988	2620			14649								
		STD	0020	0249	3298	2634	0016937	0037	14580								
200		OBS	0020	0249	32980	2634			14580								
200		OBS	0025	0246	32998	2636			14580								
		STD	0030	0244	3299	2635	0016857	0054	14579								
200		OBS	0030	0244	32986	2635			14579								
200		OBS	0035	0241	32992	2636			14579								
200		OBS	0040	0240	32971	2634			14579								
200		OBS	0045	0241	32999	2636			14581								

REFERENCE CRUISE CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR,1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270	SI	65291N	169172W		233	59	07	17	211	1968	BS2	063		0046	00				3	X4	X	9		0063

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		18	S22	120	072	068	0	09	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\Sigma\Delta$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0540	3300	2607	0019503	0000	14700	782							
213		OBS	0000	0540	33001	2607			14700	782							
213		OBS	0005	0539	32997	2607			14700	793							
		STD	0010	0539	3300	2607	0019532	0020	14701	795							
213		OBS	0010	0539	32997	2607			14701	795							
213		OBS	0015	0539	32997	2607			14702	806							
		STD	0020	0342	3301	2628	0017464	0038	14620	740							
213		OBS	0020	0342	33012	2628			14620	740							
213		OBS	0025	0275	33004	2634			14592	683							
		STD	0030	0258	3300	2635	0016844	0055	14586	678							
213		OBS	0030	0258	33002	2635			14586	678							
213		OBS	0035	0254	32999	2635			14585	673							
213		OBS	0040	0255	33001	2635			14586	669							

REFERENCE CRUISE CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR,1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270	SI	65318N	169285W		233	59	07	17	227	1968	BS2	064		0050	00				3	X4	7	9		0064

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		16	S20	120	069	065	5	09	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\Sigma\Delta$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0519	3300	2609	0019288	0000	14691								
229		OBS	0000	0519	32999	2609			14691								
229		OBS	0005	0517	32997	2609			14691								
		STD	0010	0517	3300	2609	0019276	0019	14692								
229		OBS	0010	0517	32999	2609			14692								
229		OBS	0015	0477	33008	2615			14677								
		STD	0020	0270	3300	2634	0016950	0037	14589								
229		OBS	0020	0270	33000	2634			14589								
229		OBS	0025	0265	32988	2633			14588								
		STD	0030	0264	3298	2633	0017027	0054	14588								
229		OBS	0030	0264	32984	2633			14588								
229		OBS	0035	0261	32988	2634			14588								
229		OBS	0040	0259	32989	2634			14588								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT RECEIVED	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270		SI	65352N	169375W		233	59	07	18	009	1968	BS2	065	0060	00	20	2	2		X6	7	8		0065

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		18	S15	120	086	075	7	10	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S °/₀₀	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$ D DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0533	3307	2613	0018923	0000	14698	772							
009		OBS	0000	0533	33068	2613			14698	772							
009		OBS	0005	0531	33069	2613			14698	779							
		STD	0010	0524	3306	2613	0018887	0019	14696	772							
009		OBS	0010	0524	33061	2613			14696	772							
009		OBS	0015	0364	33054	2630			14630	703							
		STD	0020	0280	3305	2637	0016690	0037	14594	666							
009		OBS	0020	0280	33045	2637			14594	666							
009		OBS	0025	0287	33066	2638			14598	664							
		STD	0030	0289	3307	2638	0016579	0053	14600	666							
009		OBS	0030	0289	33070	2638			14600	666							
009		OBS	0035	0287	33068	2638			14600	666							
009		OBS	0040	0289	33074	2638			14602	662							
009		OBS	0045	0291	33076	2638			14603	662							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT RECEIVED	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270		SI	6539 N	16944 W		233	59	07	18	018	1968	BS2	066	0051	00	18	2	2		X6	7	8		0066

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		17	S23	115	071	068	6	09	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S °/₀₀	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$ D DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0478	3309	2621	0018184	0000	14676								
021		OBS	0000	0478	33088	2621			14676								
021		OBS	0005	0477	33088	2621			14676								
		STD	0010	0475	3309	2621	0018132	0018	14676								
021		OBS	0010	0475	33092	2621			14676								
021		OBS	0015	0375	33111	2633			14635								
		STD	0020	0294	3313	2642	0016154	0035	14601								
021		OBS	0020	0294	33131	2642			14601								
021		OBS	0025	0294	33134	2643			14602								
		STD	0030	0294	3313	2642	0016144	0051	14603								
021		OBS	0030	0294	33133	2642			14603								
021		OBS	0035	0292	33134	2643			14603								
021		OBS	0040	0291	33133	2643			14603								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT RECEIVED	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270		SI	65436N	16948 W		233	59	07	18	031	1968	BS2	067	0052	00	16	2	2		X5	7	8		0067

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		18	S24	110	073	066	3	09	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S °/₀₀	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$ D DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0513	3308	2616	0018653	0000	14690	834							
034		OBS	0000	0513	33075	2616			14690	834							
034		OBS	0005	0512	33081	2616			14690	836							
		STD	0010	0512	3308	2617	0018599	0019	14691	833							
034		OBS	0010	0512	33082	2617			14691	833							
034		OBS	0015	0472	33090	2622			14676	809							
		STD	0020	0295	3314	2643	0016095	0036	14602	597							
034		OBS	0020	0295	33140	2643			14602	597							
034		OBS	0025	0295	33142	2643			14603	650							
		STD	0030	0294	3314	2643	0016076	0052	14603	652							
034		OBS	0030	0294	33142	2643			14603	652							
034		OBS	0035	0292	33140	2643			14603	654							
034		OBS	0040	0293	33139	2643			14604	655							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270		SI	66235N	166205W		233	66	07	18	145	1968	BS2	068	0017	00	23	2	3		X2	6	8	0068

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	148	103	089	8	03	

MESSENGR TIME OF T HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SOO
		STD	0000	0689	3064	2403	0038926	0000	14729	731							
	146	OBS	0000	0689	30640	2403			14729	731							
	146	OBS	0005	0689	30647	2403			14730	740							
		STD	0010	0648	3077	2418	0037471	0038	14716	740							
	146	OBS	0010	0648	30770	2418			14716	740							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270		SI	6630 N	16641 W		233	66	07	18	162	1968	BS2	069	0023	00	15	1	2		X6	5	8	0069

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		15	S15	145	089	083	6	04	

MESSENGR TIME OF T HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SOO
		STD	0000	0699	3045	2387	0040471	0000	14730								
	165	OBS	0000	0699	30450	2387			14730								
	165	OBS	0005	0697	30452	2387			14731								
		STD	0010	0689	3049	2391	0040089	0040	14729								
	165	OBS	0010	0689	30486	2391			14729								
	165	OBS	0015	0578	30699	2421			14687								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270		SI	6633 N	16712 W		233	67	07	18	179	1968	BS2	070	0032	00	16	1	2		X6	5	8	0070

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		16	S12	140	096	086	6	06	

MESSENGR TIME OF T HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SOO
		STD	0000	0736	3046	2382	0040894	0000	14745	703							
	179	OBS	0000	0736	30455	2382			14745	703							
	179	OBS	0005	0735	30452	2382			14746	702							
		STD	0010	0736	3050	2386	0040546	0041	14747	702							
	179	OBS	0010	0736	30503	2386			14747	702							
	179	OBS	0015	0738	30625	2395			14751	702							
		STD	0020	0731	3076	2407	0038596	0080	14750	698							
	179	OBS	0020	0731	30757	2407			14750	698							
	179	OBS	0025	0710													

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270		SI	66341N	167360W		233	67	07	18	190	1968	BS2	071	0029	00				2	X2	6	8	0071

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		14	S15	137	089	083	7	05	

MESSENGR TIME OF T HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SOO
		STD	0000	0639	3205	2520	0027769	0000	14728								
	193	OBS	0000	0639	32050	2520			14728								
	193	OBS	0005	0628	32084	2524			14724								
		STD	0010	0626	3209	2525	0027326	0028	14724								
	193	OBS	0010	0626	32090	2525			14724								
	193	OBS	0015	0626	32093	2525			14725								
		STD	0020	0623	3216	2530	0026792	0055	14726								
	193	OBS	0020	0623	32158	2530			14726								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270	SI	66357N	167541W		233	67	07	18	205	1968	BS2	072		0026	00				2	X2	6	8		0072

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		14	S16	132	086	080	7	04	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	QQQ
		STD	0000	0642	3210	2523	0027438	0000	14729	721							
206		OBS	0000	0642	32099	2523			14729	721							
206		OBS	0005	0638	32121	2526			14729	728							
		STD	0010	0627	3221	2534	0026409	0027	14726	735							
206		OBS	0010	0627	32214	2534			14726	735							
206		OBS	0015	0608	32281	2542			14721	741							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270	SI	6636 N	16821 W		233	68	07	18	220	1968	BS2	073		0034	00	16	0	2		X4	7	8		0073

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		14	S16	128	094	088	6	06	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	QQQ
		STD	0000	0509	3258	2577	0022327	0000	14682								
222		OBS	0000	0509	32580	2577			14682								
222		OBS	0005	0508	32580	2577			14682								
		STD	0010	0504	3259	2578	0022238	0022	14681								
222		OBS	0010	0504	32586	2578			14681								
222		OBS	0015	0506	32597	2579			14683								
		STD	0020	0508	3261	2580	0022109	0044	14685								
222		OBS	0020	0508	32610	2580			14685								
222		OBS	0025	0502	32616	2581			14683								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
311270	SI	66355N	16848 W		233	68	07	18	239	1968	BS2	074		0051	00	18	2	2		X2	6	8		0074

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		17	S18	126	075	067	7	09	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	QQQ
		STD	0000	0357	3280	2610	0019163	0000	14621	778							
240		OBS	0000	0357	32803	2610			14621	778							
240		OBS	0005	0354	32801	2611			14620	781							
		STD	0010	0356	3281	2611	0019129	0019	14622	786							
240		OBS	0010	0356	32807	2611			14622	786							
240		OBS	0015	0359	32808	2611			14624	775							
		STD	0020	0359	3281	2611	0019139	0038	14625	776							
240		OBS	0020	0359	32810	2611			14625	776							
240		OBS	0025	0363	32814	2611			14628	771							
		STD	0030	0364	3282	2611	0019138	0057	14629	770							
240		OBS	0030	0364	32817	2611			14629	770							
240		OBS	0035	0362	32821	2611			14629	766							
24		OBS	0040	0364	32823	2611			14631	765							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	66325N	16911 W		233	69	07	19	018	1968	BS2	075	0055	00	18	2	2		X4	7	6	0075

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		18	S23	111	071	068	6	10	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	QQS
		STD	0000	0506	3304	2614	0018833	0000	14687								
018		OBS	0000	0506	33041	2614			14687								
018		OBS	0005	0495	33051	2616			14683								
		STD	0010	0486	3306	2618	0018487	0019	14680								
018		OBS	0010	0486	33060	2618			14680								
018		OBS	0015	0480	33061	2618			14678								
		STD	0020	0476	3306	2619	0018407	0037	14678								
018		OBS	0020	0476	33058	2619			14678								
018		OBS	0025	0396	33060	2627			14645								
		STD	0030	0377	3306	2629	0017425	0055	14638								
018		OBS	0030	0377	33060	2629			14638								
018		OBS	0035	0373	33060	2629			14637								
018		OBS	0040	0374	33060	2629			14638								
018		OBS	0045	0375	33064	2630			14639								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	66275N	169335W		233	69	07	19	038	1968	BS2	076	0058	00	16	2	2		X2	7	8	0076

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		16	S25	120	073	067	6	10	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	QQS
		STD	0000	0552	3289	2597	0020461	0000	14703	841							
040		OBS	0000	0552	32891	2597			14703	841							
040		OBS	0005	0549	32896	2598			14703	841							
		STD	0010	0415	3298	2619	0018381	0019	14649	728							
040		OBS	0010	0415	32979	2619			14649	728							
040		OBS	0015	0352	33068	2632			14625	694							
		STD	0020	0351	3307	2632	0017099	0037	14625	697							
040		OBS	0020	0351	33071	2632			14625	697							
040		OBS	0025	0352	33069	2632			14626	689							
		STD	0030	0352	3307	2632	0017152	0054	14627	694							
040		OBS	0030	0352	33066	2632			14627	694							
040		OBS	0035	0348	33069	2632			14626	687							
040		OBS	0039	0350	33076	2633			14628	694							
040		OBS	0044	0350	33069	2632			14629	689							

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
311270	SI	6534 N	16809 W		233	58	07	19	115	1968	BS2	077	0038	00	16	2	2		X2	7	8	0077

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		16	S21	140	073	070	7	07	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at	SiO_4-Si µg-at/l	pH	QQS
		STD	0000	0723	3016	2361	0042907	0000	14736								
115		OBS	0000	0723	30164	2361			14736								
115		OBS	0004	0722	30162	2361			14737								
115		OBS	0009	0722	30163	2361			14737								
		STD	0010	0722	3016	2361	0042920	0043	14738								
115		OBS	0013	0722	30160	2361			14738								
115		OBS	0017	0719	30168	2362			14738								
		STD	0020	0720	3017	2362	0042863	0086	14738								
115		OBS	0022	0720	30166	2362			14739								
115		OBS	0026	0718	30178	2363			14739								

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUALITY INDICES	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
	311270	SI	6535 N	16819 W		233	58	07	19	128	1968	BS2	078	0048	00	18	2	2		X2	7	8	0078

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		18	S23	143	071	066	6	09	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0599	3207	2526	0027172	0000	14716								
131		OBS	0000	0599	32067	2526			14712								
131		OBS	0005	0595	32094	2529			14711								
131		OBS	0009	0597	32110	2530			14713								
		STD	0010	0598	3211	2530	0026820	0027	14713								
131		OBS	0013	0599	32120	2530			14714								
131		OBS	0018	0607	32136	2531			14719								
		STD	0020	0612	3214	2530	0026797	0054	14721								
131		OBS	0023	0616	32150	2531			14723								
131		OBS	0027	0615	32155	2531			14724								
		STD	0030	0612	3216	2532	0026681	0081	14723								
131		OBS	0032	0611	32158	2532			14723								
131		OBS	0036	0611	32153	2532			14723								

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUALITY INDICES	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
	311270	SI	6535 N	16826 W		233	58	07	19	142	1968	BS2	079	0056	00	16	2	5		X4	7	8	0079

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		17	S20	145	064	061	6	10	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	0487	3268	2587	0021352	0000	14674								
145		OBS	0000	0487	32679	2587			14674								
145		OBS	0005	0477	32670	2588			14670								
		STD	0010	0460	3266	2589	0021226	0021	14664								
145		OBS	0010	0460	32660	2589			14664								
145		OBS	0015	0434	32640	2590			14654								
		STD	0020	0419	3263	2591	0021070	0042	14648								
145		OBS	0020	0419	32628	2591			14648								
145		OBS	0025	0411	32619	2591			14645								
		STD	0030	0406	3262	2591	0021043	0063	14644								
145		OBS	0030	0406	32616	2591			14644								
145		OBS	0035	0397	32609	2591			14641								
145		OBS	0039	0408	32616	2591			14646								
145		OBS	0044	0408	32612	2590			14647								

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