

U.S. Coast Guard Oceanographic Report

UNITED STATES COAST GUARD

OCEANOGRAPHIC

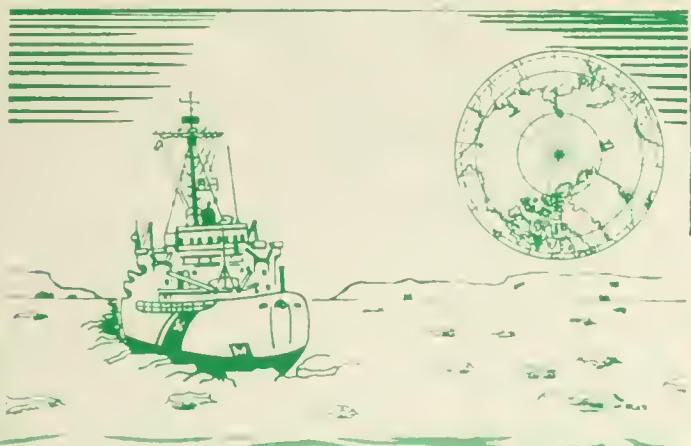
REPORT No. 40

CG 373-40

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OCEANOGRAPHIC INVESTIGATIONS
IN THE
NORTHERN BERING SEA AND BERING STRAIT

June-July 1968



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REPORT No. 40 ^{CG 373-40}

OCEANOGRAPHIC INVESTIGATIONS IN THE NORTHERN BERING SEA AND BERING STRAIT

June-July 1968

By David M. Husby



WASHINGTON, D.C.





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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Oceanographic Investigations in the Northern Bering Sea and Bering Strait

June–July 1968

David M. Husby¹

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. Re-occupied 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 tem-

perature, 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 thio-sulfate 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 fluvial 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 ($>5^{\circ}\text{C}$), low salinity ($<32.5\%$) water mass in the upper 10 meters and a layer of gradients between 10 and 15 meters overlying a colder ($<3^{\circ}\text{C}$), 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 ($>7.0^{\circ}\text{C}$), low salinity ($<31.0\%$) water mass which extended along the Alaskan coast in the surface layer corresponded closely with the Alaskan Coastal Water ($8-10^{\circ}\text{C}$, $20-30\%$) 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 north-eastward 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 measurements 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= $10^6\text{m}^3/\text{sec}$) 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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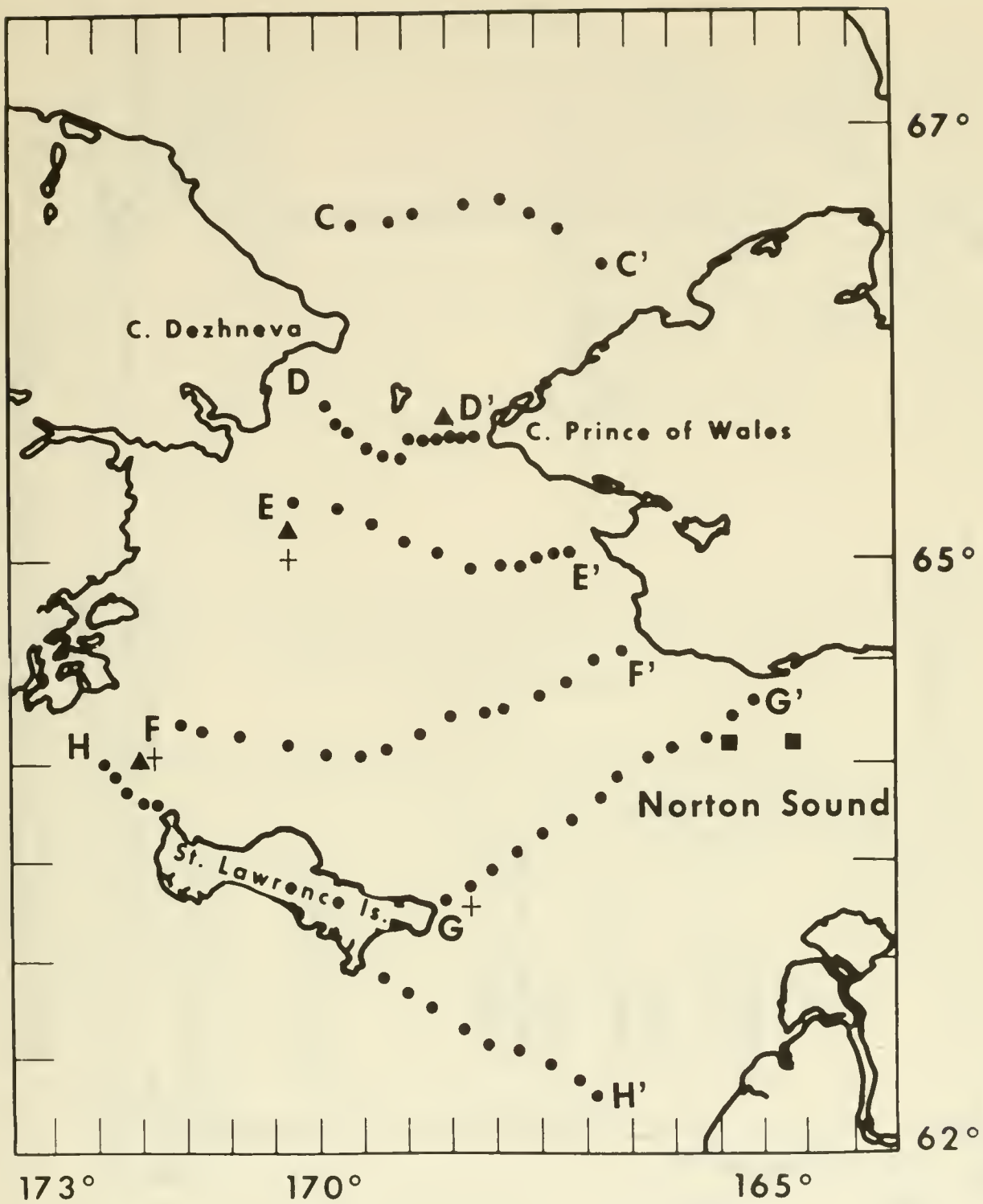


Figure 1. Location of anchored sensing systems and oceanographic stations occupied by USCGC STATEN ISLAND, 1-21 July 1968. ●=oceanographic stations, ▲=anchored instrument package, +=time-series current station, ■=Norton Sound station.

CURRENT METER ARRAY

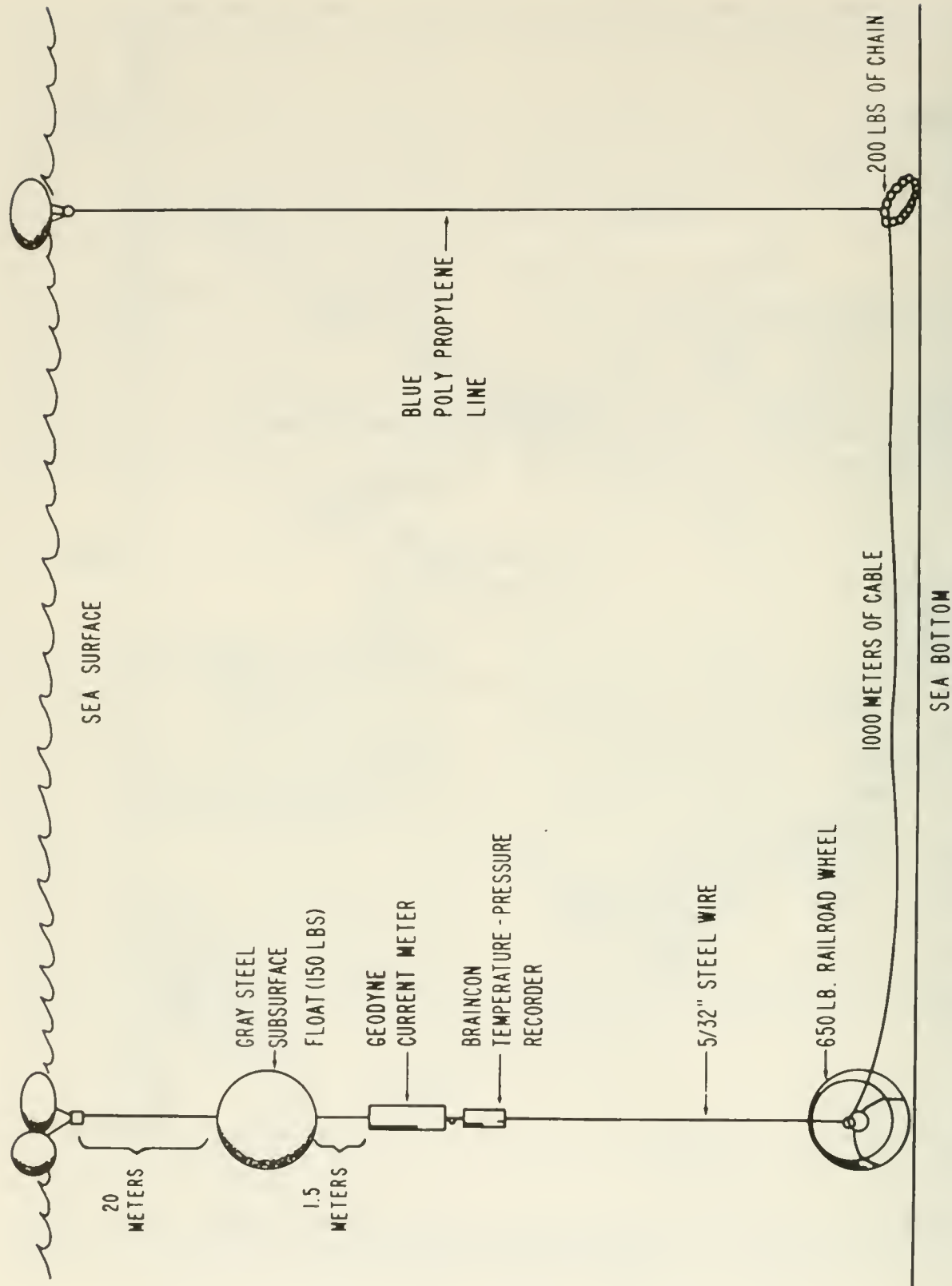


Figure 2. Configuration of current meter and pressure-temperature recorder arrays anchored by USCGC STATEN ISLAND in Bering Strait and Strait of Anadyr, 30 June-1 July 1968.

STATION NUMBER

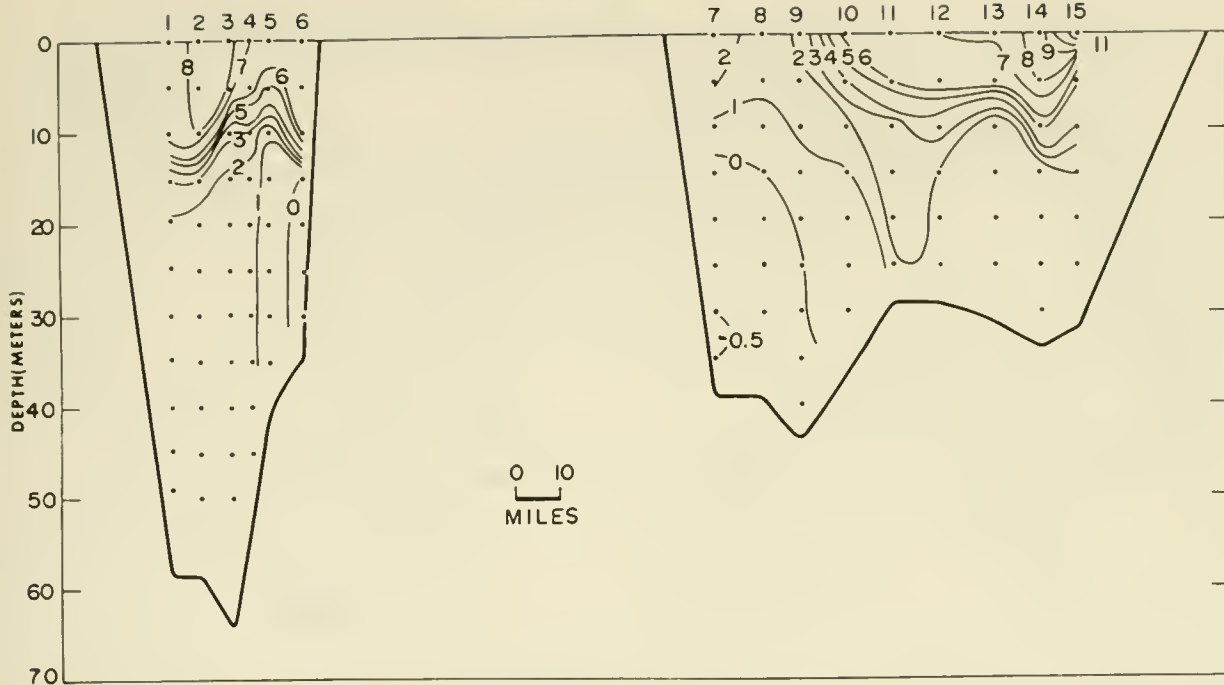


Figure 3. Distribution of temperature ($^{\circ}\text{C}$) along section H-H', from USCGC STATEN ISLAND 8-11 July 1968. Contour interval 1.0°C except for -0.5°C contour.

STATION NUMBER

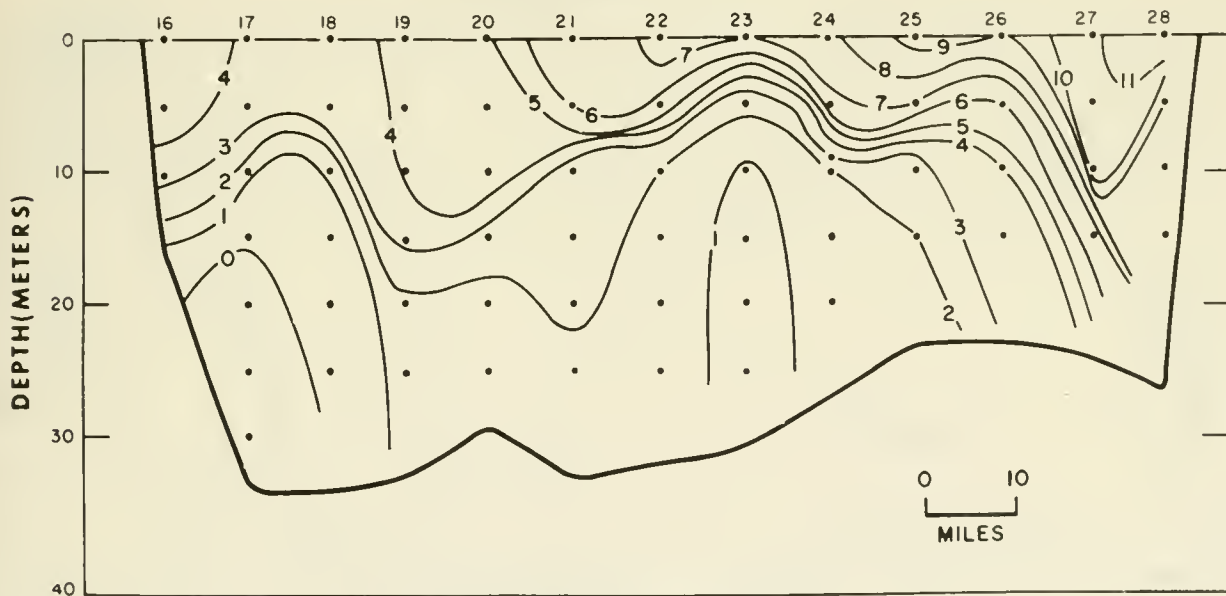


Figure 4. Distribution of temperature ($^{\circ}\text{C}$) along section G-G', from USCGC STATEN ISLAND 11-12 July 1968. Contour interval 1.0°C .

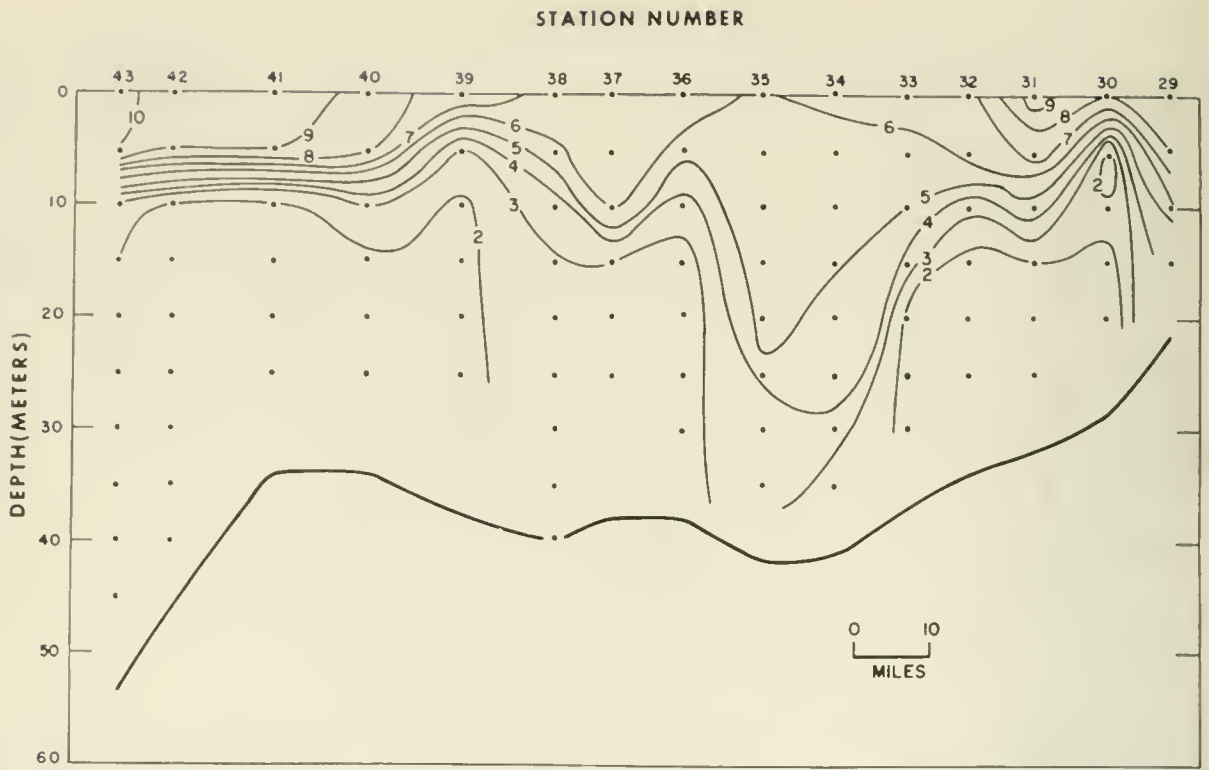


Figure 5. Distribution of temperature ($^{\circ}\text{C}$) along section F-F', from USCGC STATEN ISLAND data of 13-14 July 1968. Contour interval 1.0°C .

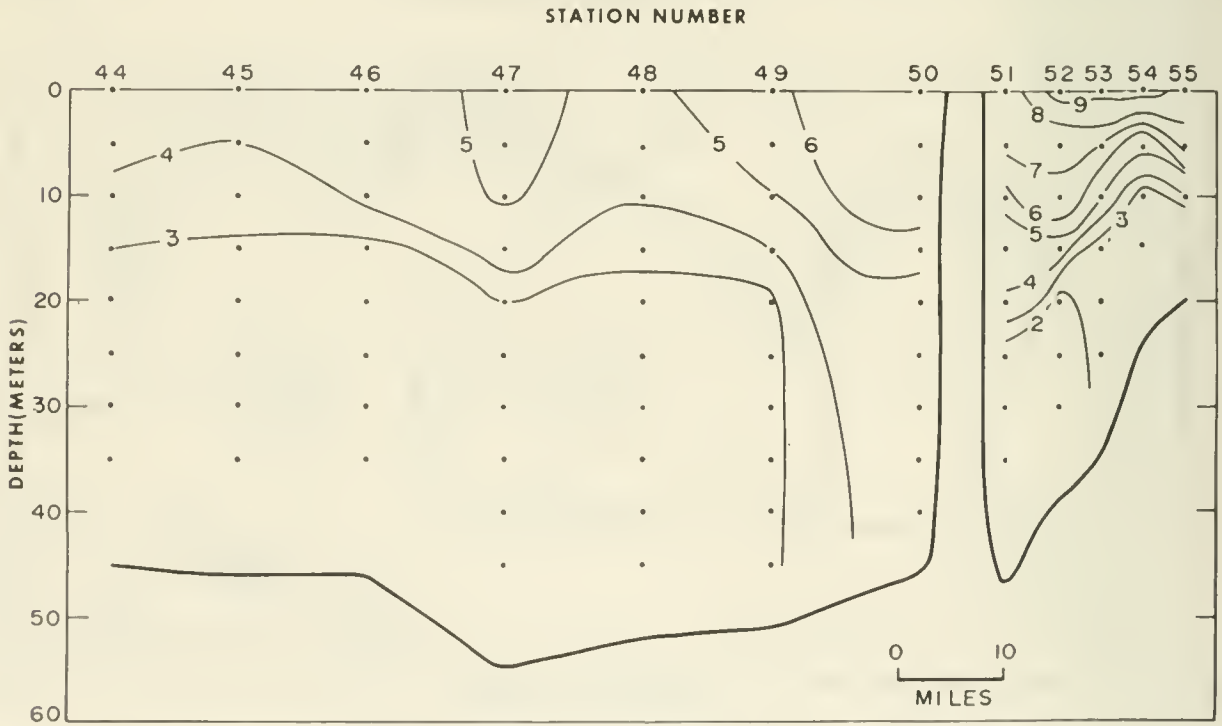


Figure 6. Distribution of temperature ($^{\circ}\text{C}$) along section E-E', from USCGC STATEN ISLAND data of 15-16 July 1968. Contour interval 1.0°C .

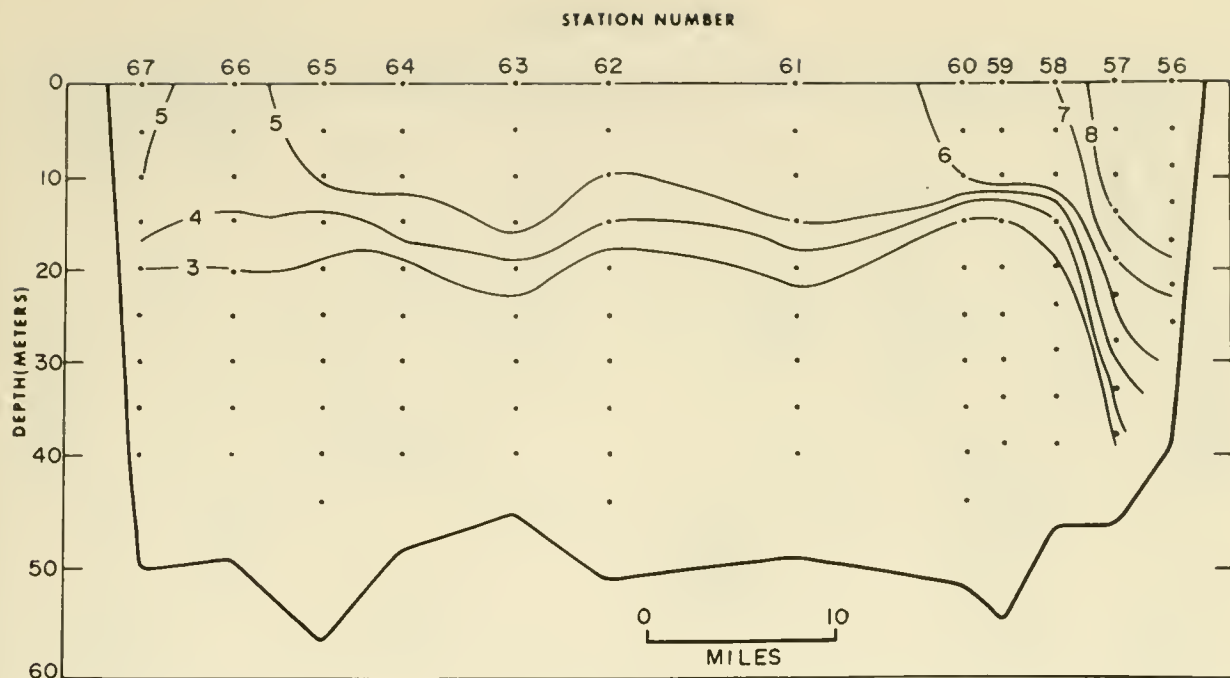


Figure 7. Distribution of temperature ($^{\circ}\text{C}$) along section D-D', from USC GC STATEN ISLAND data of 17-18 July 1968. Contour interval 1.0°C .

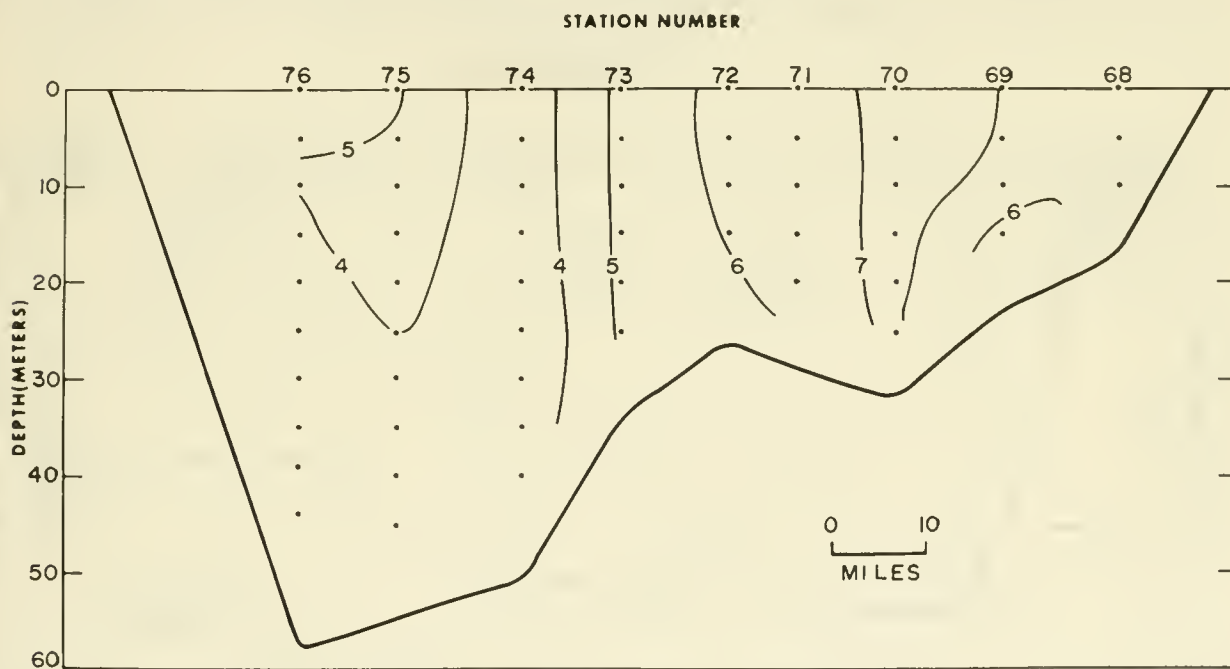


Figure 8. Distribution of temperature ($^{\circ}\text{C}$) along section C-C', from USC GC STATEN ISLAND data of 18-19 July 1968. Contour interval 1.0°C .

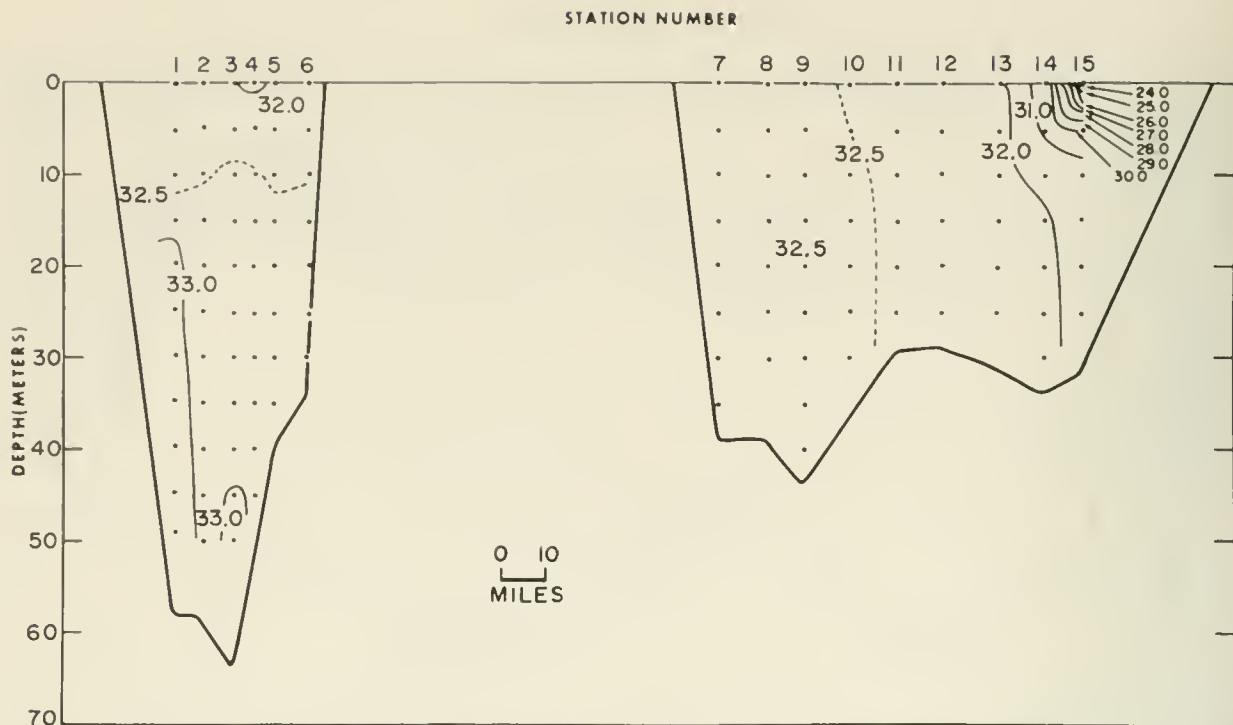


Figure 9. Distribution of salinity (‰) along section H-H', from USCGC STATEN ISLAND data of 8-11 July 1968. Contour interval 0.5‰, except for 24.0-32.0‰ contours.

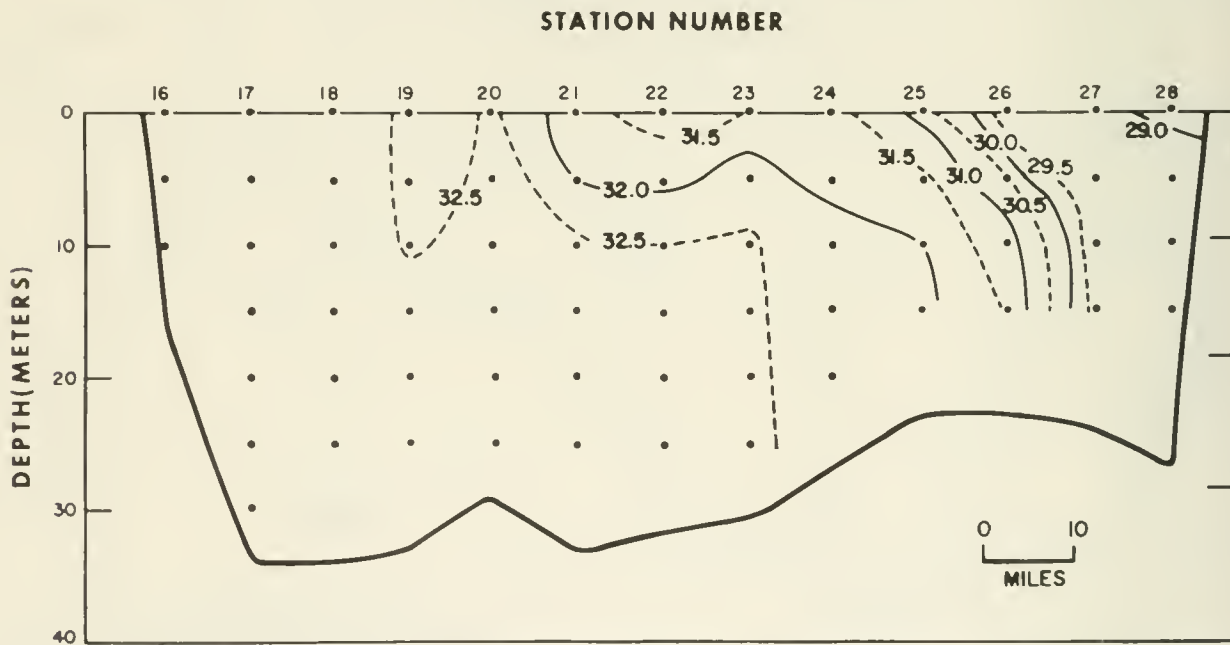


Figure 10. Distribution of salinity (‰) along section G-G', from USCGC STATEN ISLAND data of 11-12 July 1968. Contour interval 0.5‰.

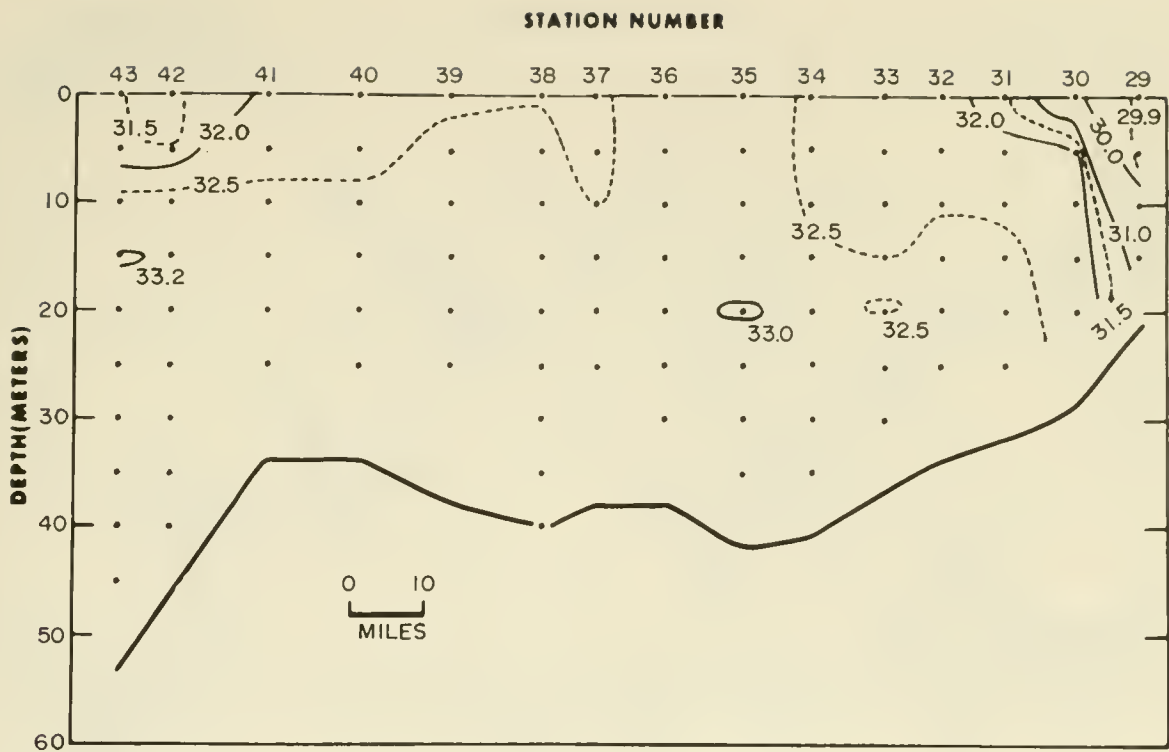


Figure 11. Distribution of salinity (‰) along section F-F', from USCGC STATEN ISLAND data of 13-14 July 1968. Contour interval 0.5‰.

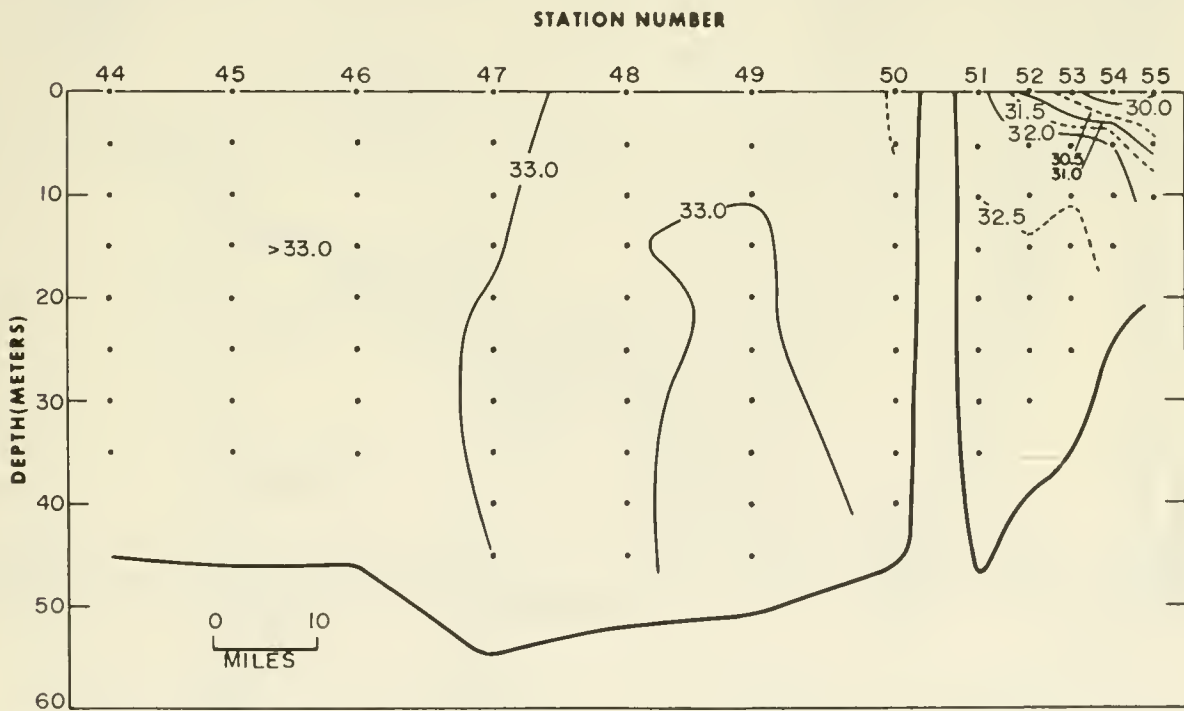


Figure 12. Distribution of salinity (‰) along section E-E', from USCGC STATEN ISLAND data of 15-16 July 1968. Contour interval 0.5‰.

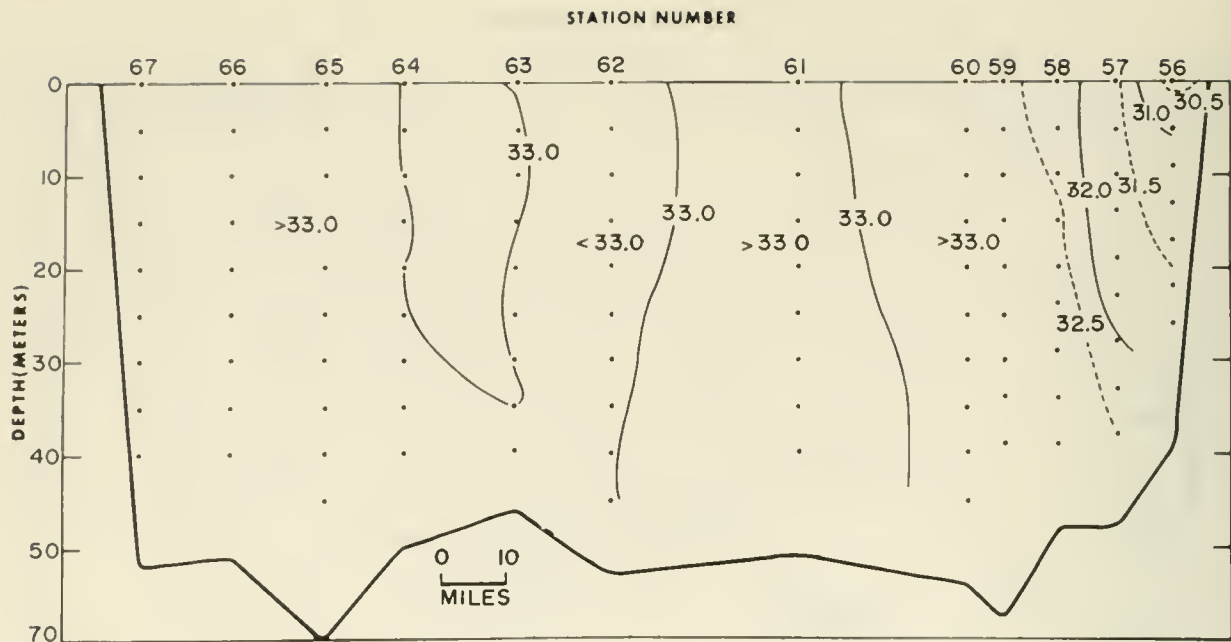


Figure 13. Distribution of salinity (%) along section D-D', from USCGC STATEN ISLAND data of 17-18 July 1968. Contour interval 0.5%.

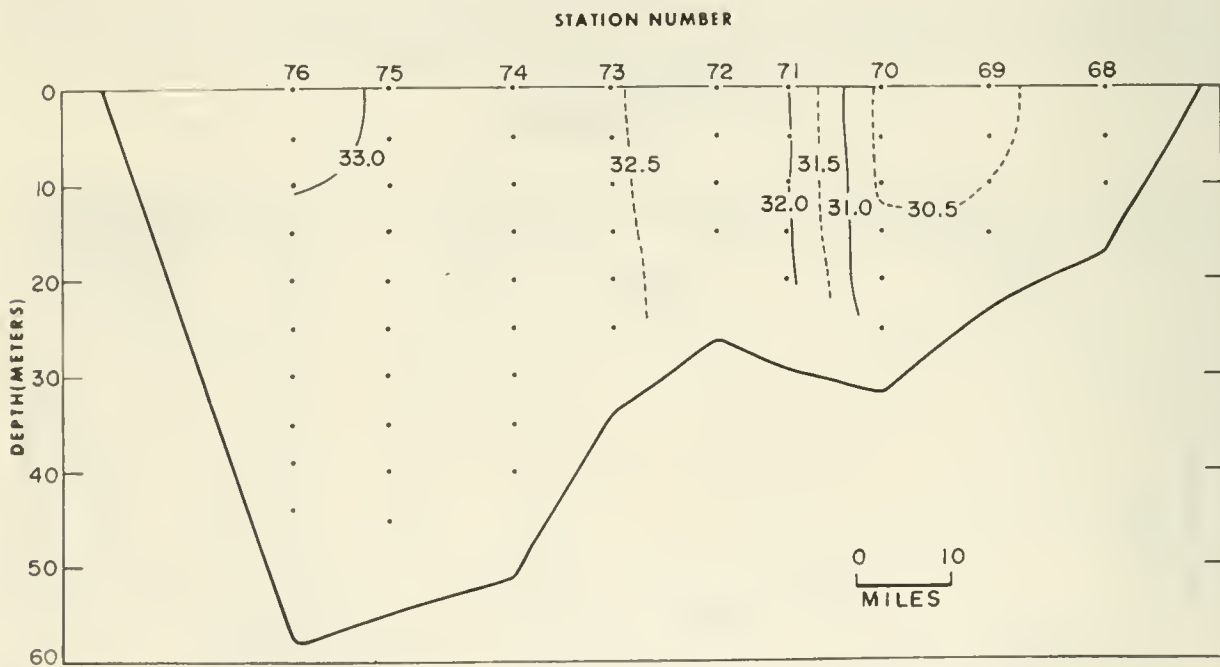


Figure 14. Distribution of salinity (%) along section C-C', from USCGC STATEN ISLAND data of 18-19 July 1968. Contour interval 0.5%.

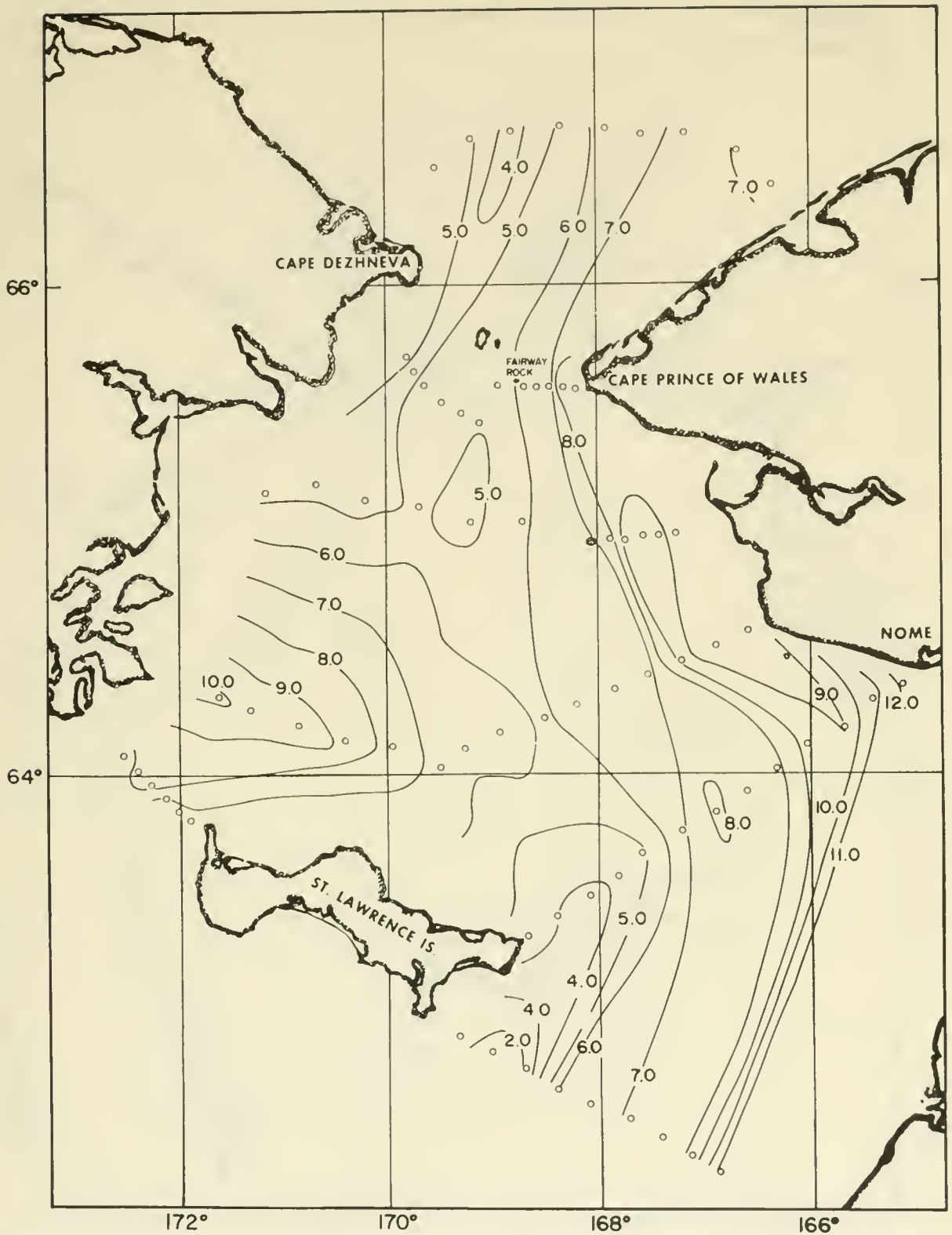


Figure 15. Horizontal distribution of sea surface temperature ($^{\circ}\text{C}$) from USCGC STATEN ISLAND data of 8-19 July 1968.

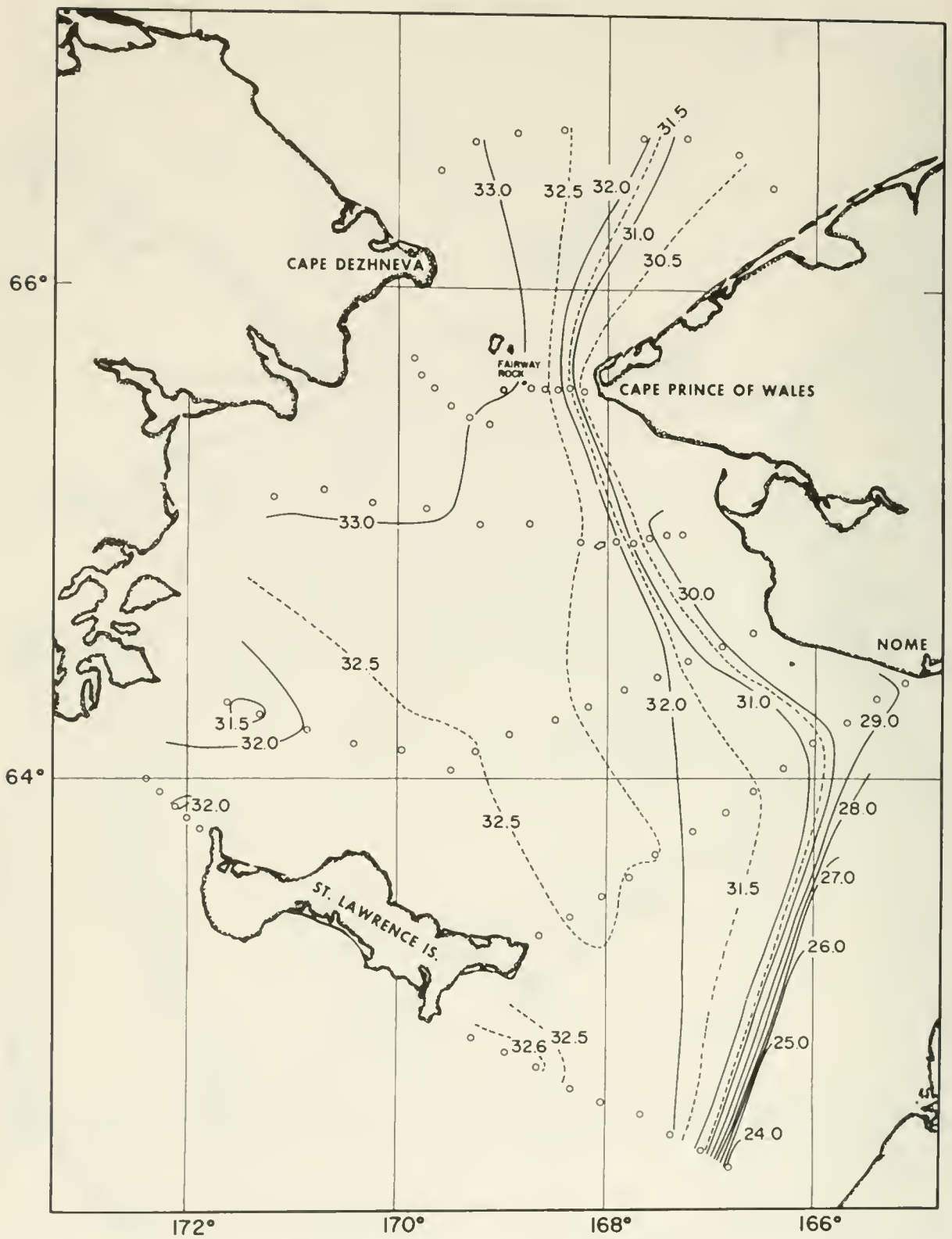


Figure 16. Horizontal distribution of surface salinity (‰) from USCGC STATEN ISLAND data of 8-19 July 1968.



Figure 17. Horizontal distribution of temperature ($^{\circ}\text{C}$) 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.

STATION NUMBER

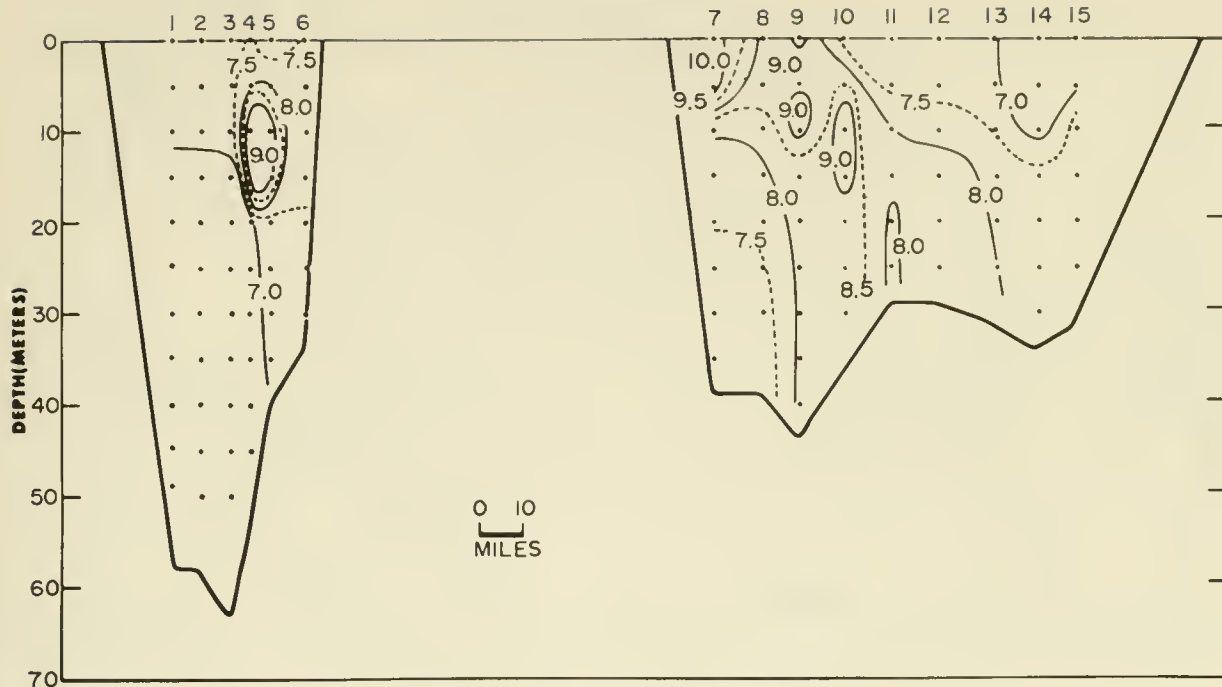


Figure 21. Distribution of dissolved oxygen (ml/l) along section II-II', from USCGC STATEN ISLAND data of 8-11 July 1968. Contour interval 0.5 ml/l.

STATION NUMBER

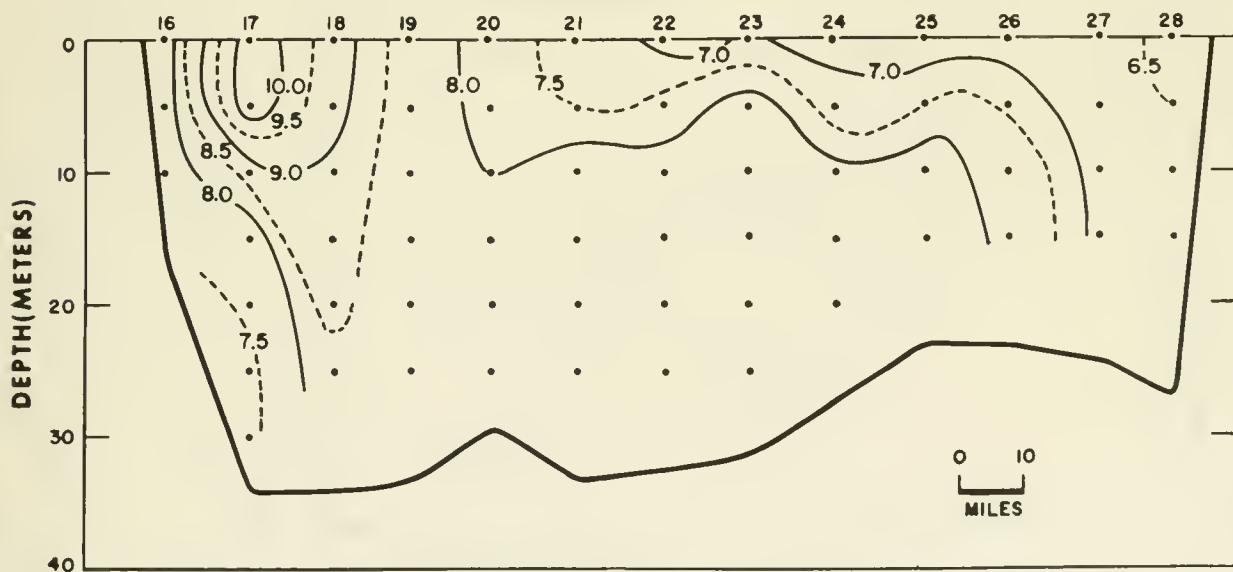


Figure 22. Distribution of dissolved oxygen (ml/l) along section G-G', from USCGC STATEN ISLAND data of 11-12 July 1968. Contour interval 0.5 ml/l.

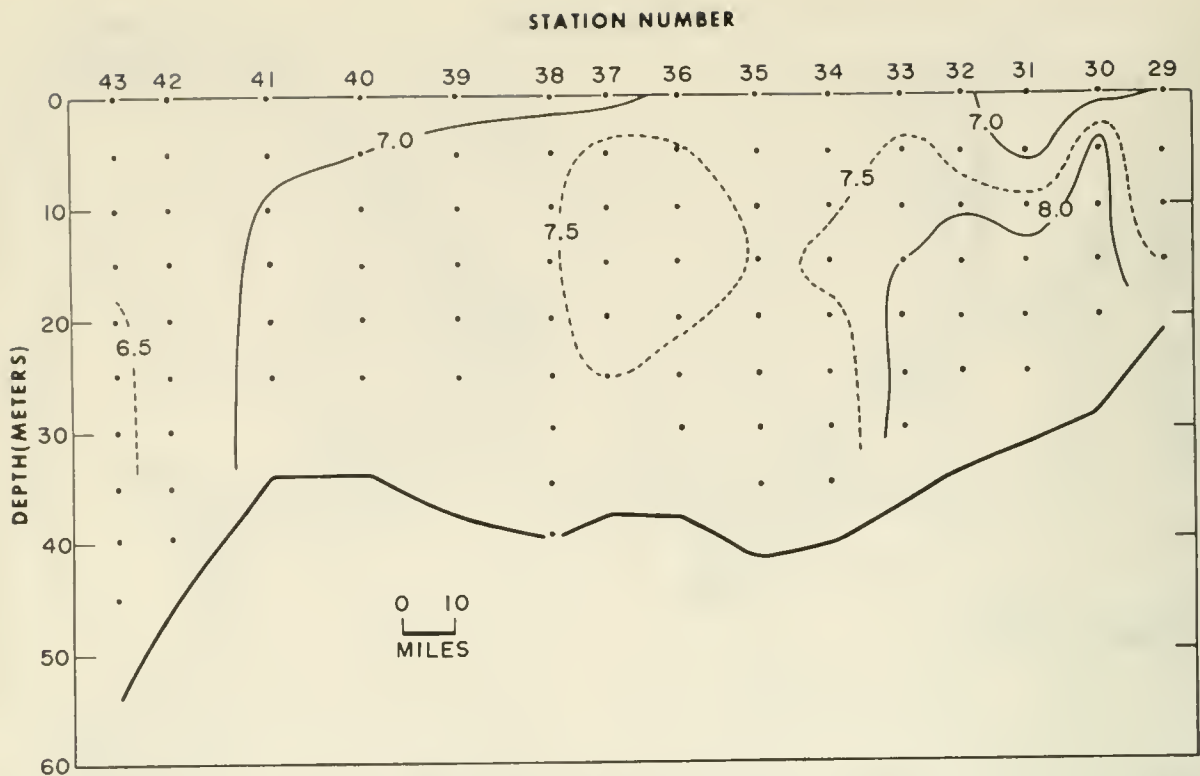


Figure 23. Distribution of dissolved oxygen (ml/l) along section F-F', from USC GC STATEN ISLAND data of 13-14 July 1968. Contour interval 0.5 ml/l.

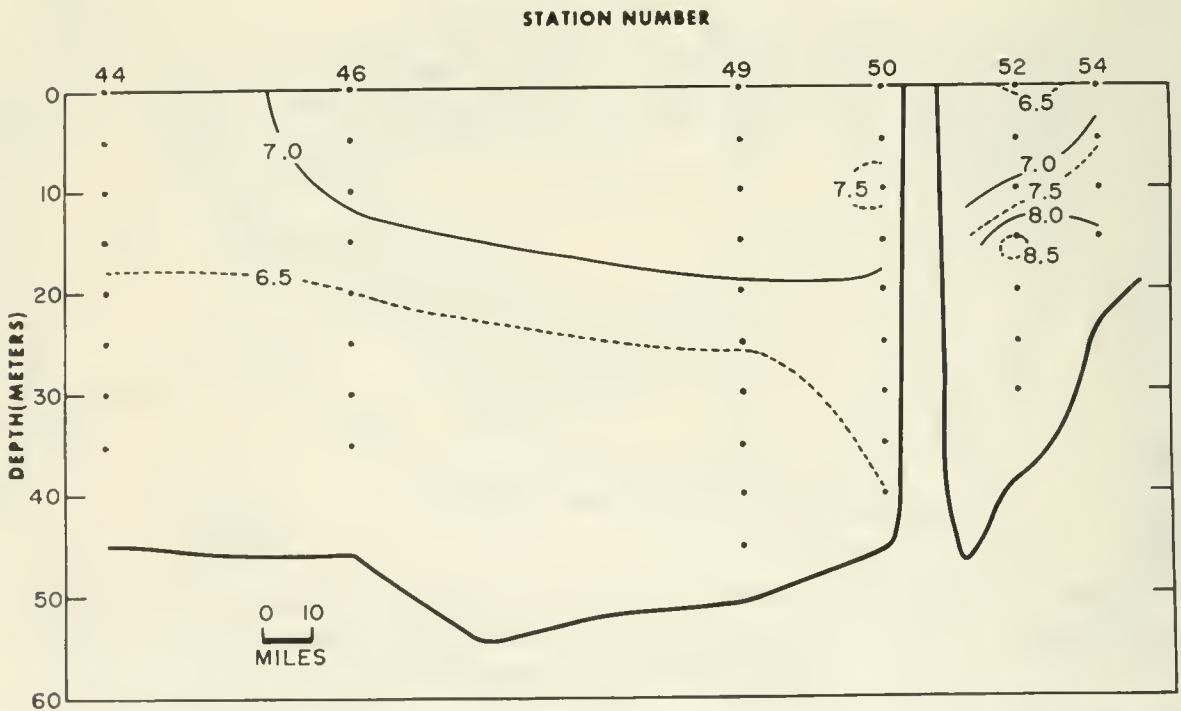


Figure 24. Distribution of dissolved oxygen (ml/l) along section E-E', from USC GC STATEN ISLAND data of 15-16 July 1968. Contour interval 0.5 ml/l.

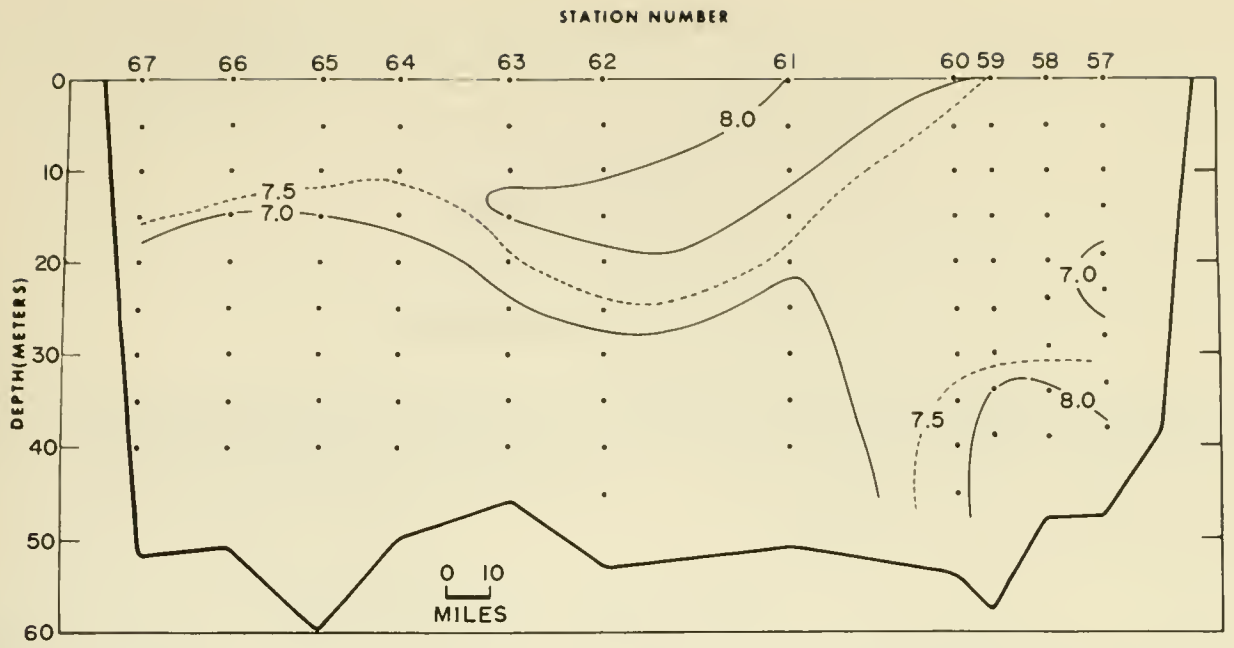


Figure 25. Distribution of dissolved oxygen (ml/l) along section D-D', from USCGC STATEN ISLAND data of 17-18 July 1968. Contour interval 0.5 ml/l.

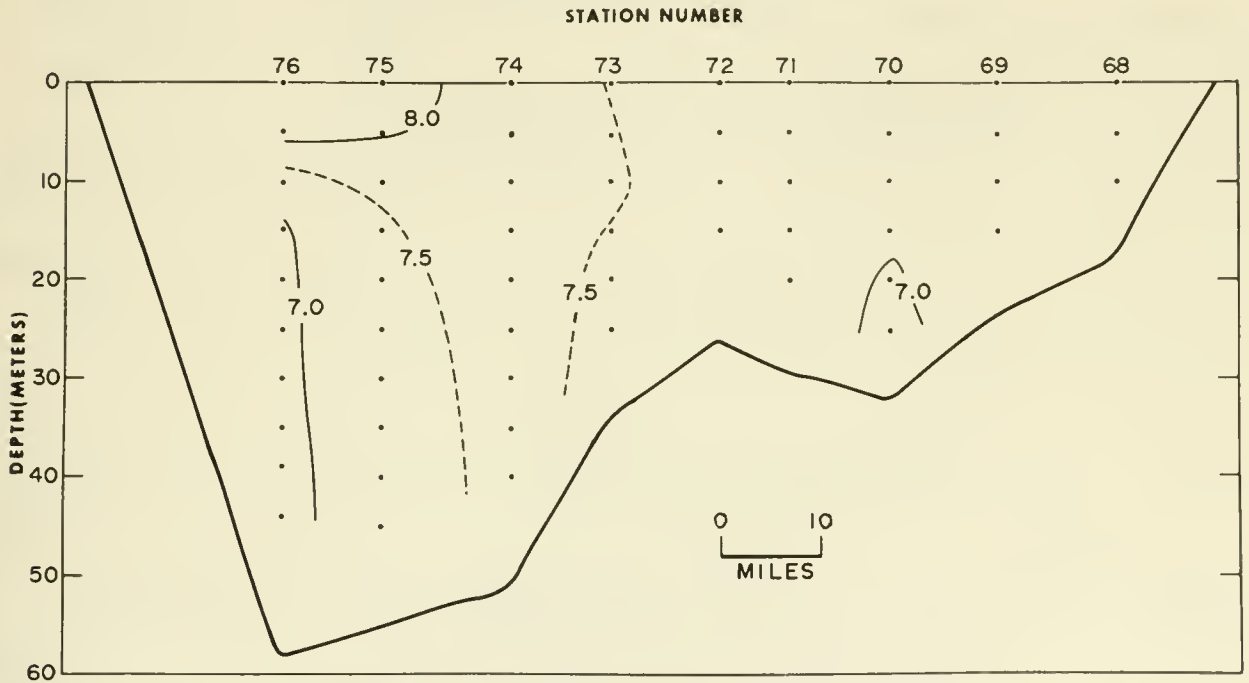


Figure 26. Distribution of dissolved oxygen (ml/l) along section C-C', from USCGC STATEN ISLAND data of 18-19 July 1968. Contour interval 0.5 ml/l.

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	Multiply entry by 10^{-7} to obtain specific-volume anomaly in cubic centimeters per gram.
Anomaly — $\times 10^7$	
$\Sigma\Delta$ Dyn. M $\times 10^3$	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 μ g-at/l	Inorganic phosphate in microgram-atoms per liter entered to hundredths.
Total-P μ g-at/l	Total phosphorus in microgram-atoms per liter entered to hundredths.
NO ₂ -N μ g-at/l	Nitrite-nitrogen in microgram-atoms per liter entered to hundredths.
NO ₃ -N μ g-at/l	Nitrate-nitrogen in microgram-atoms per liter entered to tenths.
SiO ₄ -Si μ g-at/l	Silicate-silicon in microgram-atoms per liter entered to whole units.
pH	Entered to hundredths.

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MO 10	DAY 1	YEAR 1968	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NOCC STATION NUMBER			
CRUISE NO.	STATION NUMBER							DR	HGT			PER	SEA							
CTRY CODE	ID. NO.																			
311270	51	6354 N	17206 W	23	07	10	020	1968	BS2	004	0053	00	28	1	3	X1	3	2	0004	
				WATER		WIND		BARO-METER		AIR TEMP. °C				SPECIAL OBSERVATIONS						
				COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mbs)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS								
				00			30	S14	056	094	083	8	10							
MISSING TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	S.C.C.			
		STD	0000	0694	3198	2508	0028951	0000	14749	758										
024		OBS	0000	0694	3198.2	2508			14749	758										
024		OBS	0005	0632	32068	2522			14726	796										
		STD	0010	0311	3261	2600	0020206	0025	14600	987										
024		OBS	0010	0311	3261.3	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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MO 10	DAY 1	YEAR 1968	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NOCC STATION NUMBER		
CRUISE NO.	STATION NUMBER							DR	HGT			PER	SEA						
CTRY CODE	ID. NO.																		
311270	51	6351 N	17150 W	23	07	10	040	1968	BS2	005	0040	00	33	1	2	X1	3	3	0005
				WATER		WIND		BARO-METER		AIR TEMP. °C				SPECIAL OBSERVATIONS					
				COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mbs)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS							
				35	S15		050	095	086	8	08								
MISSING TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	S.C.C.		
		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	26340			14476	705									
039		OBS	0035	0018	32830	2637			14477	706									

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MO 10	DAY 1	YEAR 1968	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NOCC STATION NUMBER		
CRUISE NO.	STATION NUMBER							DR	HGT			PER	SEA						
CTRY CODE	ID. NO.																		
311270	51	6348 N	17152 W	23	07	10	050	1968	BS2	006	0034	00	29	1	2	X1	3	4	0006
				WATER		WIND		BARO-METER		AIR TEMP. °C				SPECIAL OBSERVATIONS					
				COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mbs)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS							
				00	S00		052	092	083	8	07								
MISSING TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	S.C.C.		
		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	SHIP	LATITUDE	LONGITUDE	DEPTH	W. 250EN	STATION TIME			YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE			WEA-	CLOUD	NODC		
						CRUISE	STATION	TO		NO.	NUMBER			OBSERVATIONS	THER	CODES				STATION	
CTRY	IQ.			INSTR.	SQUARE	MO	DAY	HR./10				BOTTOM	OF	DR.	HGT	PER	SEA	TYPE	AMT	NUMBER	
311270	SI	62531N	169183W	233	29	07	10	197	1968	B52	007	0039	00	00	0	X		X4	X	9	0007
					WATER		WIND		BARO-		AIR TEMP. °C		NO. OBS.		SPECIAL						
					COLOR	TRANS.	DIR.	SPEED	BARO-	DRY	WET	VIS.	NO.	OBSERVATIONS							
					CODE	(m)		OR FORCE	METER	BULB	BULB	CODE	DEPTHS								
								(mb)													
									065	064	058	1	08								
MESSAGE	CAS	CARD	DEPTH	T	S	SIGMA-T	SPECIFIC VOLUME	Δ D	SOUND	O ₂	PO ₄ -P	TOTAL-P	NO ₂ -N	NO ₃ -N	SiO ₂ -Si	pH	S				
TIME	NO.	TYPE	(m)	°C	‰		ANOMALY-σ _T	(10 ³)	VELOCITY	(ml/l)	(μg-at/l)	(μg-at/l)	(μg-at/l)	(μg-at/l)	(μg-at/l)		CTD				
		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	SHIP	LATITUDE	LONGITUDE	DEPTH	W. 250EN	STATION TIME			YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE			WEA-	CLOUD	NODC		
						CRUISE	STATION	TO		NO.	NUMBER			OBSERVATIONS	THER	CODES				STATION	
CTRY	IQ.			INSTR.	SQUARE	MO	DAY	HR./10				BOTTOM	OF	DR.	HGT	PER	SEA	TYPE	AMT	NUMBER	
311270	SI	6249 N	16858 W	233	28	07	10	217	1968	B52	008	0039	00	00	X		X4	X	9	0008	
					WATER		WIND		BARO-		AIR TEMP. °C		NO. OBS.		SPECIAL						
					COLOR	TRANS.	DIR.	SPEED	BARO-	DRY	WET	VIS.	NO.	OBSERVATIONS							
					CODE	(m)		OR FORCE	METER	BULB	BULB	CODE	DEPTHS								
									075	077	057	1	07								
MESSAGE	CAS	CARD	DEPTH	T	S	SIGMA-T	SPECIFIC VOLUME	Δ D	SOUND	O ₂	PO ₄ -P	TOTAL-P	NO ₂ -N	NO ₃ -N	SiO ₂ -Si	pH	S				
TIME	NO.	TYPE	(m)	°C	‰		ANOMALY-σ _T	(10 ³)	VELOCITY	(ml/l)	(μg-at/l)	(μg-at/l)	(μg-at/l)	(μg-at/l)	(μg-at/l)		CTD				
		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	SHIP	LATITUDE	LONGITUDE	DEPTH	W. 250EN	STATION TIME			YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE			WEA-	CLOUD	NODC		
						CRUISE	STATION	TO		NO.	NUMBER			OBSERVATIONS	THER	CODES				STATION	
CTRY	IQ.			INSTR.	SQUARE	MO	DAY	HR./10				BOTTOM	OF	DR.	HGT	PER	SEA	TYPE	AMT	NUMBER	
311270	SI	6245 N	16841 W	233	28	07	10	236	1968	B52	009	0044	00	18	1	2		X1	3	1	0009
					WATER		WIND		BARO-		AIR TEMP. °C		NO. OBS.		SPECIAL						
					COLOR	TRANS.	DIR.	SPEED	BARO-	DRY	WET	VIS.	NO.	OBSERVATIONS							
					CODE	(m)		OR FORCE	METER	BULB	BULB	CODE	DEPTHS								
									076	061	055	7	09								
MESSAGE	CAS	CARD	DEPTH	T	S	SIGMA-T	SPECIFIC VOLUME	Δ D	SOUND	O ₂	PO ₄ -P	TOTAL-P	NO ₂ -N	NO ₃ -N	SiO ₂ -Si	pH	S				
TIME	NO.	TYPE	(m)	°C	‰		ANOMALY-σ _T	(10 ³)	VELOCITY	(ml/l)	(μg-at/l)	(μg-at/l)	(μg-at/l)	(μg-at/l)	(μg-at/l)		CTD				
		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 CRUISE CODE	SHIP ID. NO.	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NDDC STATION NUMBER				
					10"	1"	MO		DAY	HR./10			CRUISE NO.	STATION NUMBER	DR.				HGT	PER	SEA	
311270	SI	6240 N	16821 W	233	28	07	11	015	1968	BS2	010	0037	00	18	1	2	X4	X	9	0010		
					WATER		WIND		AIR TEMP. °C													
					COLOR	TRANSL	DIR.	SPEED	BARO-	AIR TEMP. °C		VIL	NO.	OBS.	DEPTHS	SPECIAL		OBSERVATIONS				
					CODE	(m)	(m)	METER	DRY	WET	CODE											DEPTHS
								17	S07	083	075	072	0	07								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	$\Sigma \Delta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - ml/l	TOTAL-P µg - ml/l	NO ₂ -N µg - ml/l	NO ₃ -N µg - ml/l	SI O ₂ -S µg - ml/l	pH	3 CLC
		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 CRUISE CODE	SHIP ID. NO.	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NDDC STATION NUMBER				
					10"	1"	MO		DAY	HR./10			CRUISE NO.	STATION NUMBER	DR.				HGT	PER	SEA	
311270	SI	6234 N	16804 W	233	28	07	11	037	1968	BS2	011	0029	00	19	1	2	X4	X	9	0011		
					WATER		WIND		AIR TEMP. °C													
					COLOR	TRANSL	DIR.	SPEED	BARO-	AIR TEMP. °C		VIL	NO.	OBS.	DEPTHS	SPECIAL		OBSERVATIONS				
					CODE	(m)	(m)	METER	DRY	WET	CODE											DEPTHS
								00	S00	087	072	071	0	06								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	$\Sigma \Delta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - ml/l	TOTAL-P µg - ml/l	NO ₂ -N µg - ml/l	NO ₃ -N µg - ml/l	SI O ₂ -S µg - ml/l	pH	3 CLC
		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 CRUISE CODE	SHIP ID. NO.	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NDDC STATION NUMBER				
					10"	1"	MO		DAY	HR./10			CRUISE NO.	STATION NUMBER	DR.				HGT	PER	SEA	
311270	SI	6232 N	16742 W	233	27	07	11	070	1968	BS2	012	0029	00	23	0	2	X4	X	9	0012		
					WATER		WIND		AIR TEMP. °C													
					COLOR	TRANSL	DIR.	SPEED	BARO-	AIR TEMP. °C		VIL	NO.	OBS.	DEPTHS	SPECIAL		OBSERVATIONS				
					CODE	(m)	(m)	METER	DRY	WET	CODE											DEPTHS
								00	S00	093	083	073	1	06								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	$\Sigma \Delta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - ml/l	TOTAL-P µg - ml/l	NO ₂ -N µg - ml/l	NO ₃ -N µg - ml/l	SI O ₂ -S µg - ml/l	pH	3 CLC
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPT METER	W/2SDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER			
311270	SI	6226 N	16726 W	233	27	07	11	090	1968	852	013	0031	00	00	0	X	X4	X	9	0013	
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANSL (m)	DIR	SPEED OR FORCE	BARO-METER (mba)	DRY BULB	WET BULB	VIS. CODE								
									00	S00	100	083	072	0	06						
MISSING TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210?	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - 01/l	TOTAL-P μg - 01/l	NO ₂ -N μg - 01/l	NO ₃ -N μg - 01/l	SiO ₄ -Si μg - 01/l	pH	S C C				
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPT METER	W/2SDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER			
311270	SI	6222 N	16707 W	233	27	07	11	105	1968	852	014	0034	00	00	0	X	X4	X	9	0014	
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANSL (m)	DIR	SPEED OR FORCE	BARO-METER (mba)	DRY BULB	WET BULB	VIS. CODE								
									00	S00	095	069	064	0	07						
MISSING TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210?	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - 01/l	TOTAL-P μg - 01/l	NO ₂ -N μg - 01/l	NO ₃ -N μg - 01/l	SiO ₄ -Si μg - 01/l	pH	S C C				
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPT METER	W/2SDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER			
311270	SI	6218 N	16651 W	233	26	07	11	127	1968	852	015	0032	00	36	0	2	X4	X	9	0015	
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANSL (m)	DIR	SPEED OR FORCE	BARO-METER (mba)	DRY BULB	WET BULB	VIS. CODE								
									33	S05	091	083	080	5	06						
MISSING TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210?	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - 01/l	TOTAL-P μg - 01/l	NO ₂ -N μg - 01/l	NO ₃ -N μg - 01/l	SiO ₄ -Si μg - 01/l	pH	S C C				
		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 CITY CODE	SHIP NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MILES FROM PORT	W/250EN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	MOOC STATION NUMBER	
						10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR.	HGT				PER
311270	S1		63185N	16838 W		233	38 07	11 221	1968	B52	016	0016	00					X4	X9	0016	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. M	DIR.	SPEED OR FORCE	METER (mbars)	DRY BULB	WET BULB									
									32	S20	085	067	061	1	03						
MESSAGE TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₂ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	ST C				
		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 CITY CODE	SHIP NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MILES FROM PORT	W/250EN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	MOOC STATION NUMBER	
						10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR.	HGT				PER
311270	S1		6324 N	16820 W		233	38 07	12 000	1968	B52	017	0034	00	32	1	1		X4	X9	0017	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. M	DIR.	SPEED OR FORCE	METER (mbars)	DRY BULB	WET BULB									
									32	S12	085	055	047	6	07						
MESSAGE TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₂ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	ST C				
		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 CITY CODE	SHIP NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MILES FROM PORT	W/250EN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	MOOC STATION NUMBER	
						10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR.	HGT				PER
311270	S1		63293N	16802 W		233	38 07	12 020	1968	B52	018	0034	00	35	2	2		X4	4 8	0018	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. M	DIR.	SPEED OR FORCE	METER (mbars)	DRY BULB	WET BULB									
									01	S18	075	060	060	7	06						
MESSAGE TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	NO ₂ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	ST C				
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WAVE INDICATOR	% SQUARED SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES (TYPE AMT)	NOOC STATION NUMBER
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER			
311270	SI	6334 N	16747 W	233	37	07	12	050	1968	BS2	019	0033	00	33	2	2		X2	7	8	0019
						WATER		WIND		BARO-METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	DIR. BULB	WET BULB	DRY BULB	WET BULB								
								32	S15	065	067	056	7	06							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ OYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -S $\mu\text{g} - \text{dl/l}$	pH	S.C.C.				
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WAVE INDICATOR	% SQUARED SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES (TYPE AMT)	NOOC STATION NUMBER
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER			
311270	SI	6340 N	167275 W	233	37	07	12	072	1968	BS2	020	0029	00	33	2	2		X2	7	8	0020
						WATER		WIND		BARO-METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	DIR. BULB	WET BULB	DRY BULB	WET BULB								
								33	S23	060	069	055	5	06							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ OYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -S $\mu\text{g} - \text{dl/l}$	pH	S.C.C.				
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WAVE INDICATOR	% SQUARED SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES (TYPE AMT)	NOOC STATION NUMBER
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER			
311270	SI	63457N	167105W	233	37	07	12	090	1968	BS2	021	0033	00	34	5	4		X2	7	8	0021
						WATER		WIND		BARO-METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	DIR. BULB	WET BULB	DRY BULB	WET BULB								
								34	S25	045	061	056	5	06							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ OYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -S $\mu\text{g} - \text{dl/l}$	pH	S.C.C.				
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	W. SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES (TYPE AMT)	NODC STATION NUMBER								
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR	HGT PER	SEA				TYPE	AMT						
311270	SI	63512N	166520W	233	36	07	12	107	1968	BS2	022	0032	00	01	4	4		X4	X	9	0022								
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS													
						COLOR CODE	TRANSL. UNIT	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	VIS. CODE																	
									01	525	040	064	058	0	06														
MISSING TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ C DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₂ -Si μg - ml/l	pH	ST. C. C.												
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	W. SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES (TYPE AMT)	NODC STATION NUMBER								
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR	HGT PER	SEA				TYPE	AMT						
311270	SI	6356 N	166355W	233	36	07	12	126	1968	BS2	023	0031	00	34	2	2		X4	X	9	0023								
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS													
						COLOR CODE	TRANSL. UNIT	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	VIS. CODE																	
									32	523	025	062	058	5	06														
MISSING TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ C DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₂ -Si μg - ml/l	pH	ST. C. C.												
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	W. SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES (TYPE AMT)	NODC STATION NUMBER								
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR	HGT PER	SEA				TYPE	AMT						
311270	SI	6402 N	16618 W	233	46	07	12	147	1968	BS2	024	0027	00	35	2	2		X4	X	9	0024								
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS													
						COLOR CODE	TRANSL. UNIT	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	VIS. CODE																	
									32	522	025	075	067	6	05														
MISSING TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ C DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₂ -Si μg - ml/l	pH	ST. C. C.												
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	W/SZDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NOCC STATION NUMBER
CRUISE CODE	ID. NO.					10°	1°	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR.	HGT	PER		SEA	TYPE	
311270	SI	64078N	16600 W		233	46	07	12	170	1968	BS2	025	0023	00	30	2	2		X1	6	7	0025
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE									
								31		S20	000	097	087	7	04							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ σ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S.C.C.					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	W/SZDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NOCC STATION NUMBER
CRUISE CODE	ID. NO.					10°	1°	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR.	HGT	PER		SEA	TYPE	
311270	SI	64134N	165411W		233	45	07	12	190	1968	BS2	026	0023	00	32	2	2		X4	X	9	0026
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE									
								32		S22	997	076	072	3	04							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ σ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S.C.C.					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	W/SZDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NOCC STATION NUMBER
CRUISE CODE	ID. NO.					10°	1°	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR.	HGT	PER		SEA	TYPE	
311270	SI	6419 N	165227W		233	45	07	12	210	1968	BS2	027	0024	00	31	2	2		X1	8	1	0027
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE									
								31		S10	995	104	094	7	04							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ σ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S.C.C.					
		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					14853	660												

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	W/SZDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NOCC STATION NUMBER
CRUISE CODE	ID. NO.					10°	1°	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR.	HGT	PER		SEA	TYPE	
311270	SI	64235N	165073W		233	45	07	12	226	1968	BS2	028	0027	00	13	0	2		X1	7	2	0028
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE									
								13		S10	995		6	04								
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ σ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S.C.C.					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	4. 25 DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES (TYPE & AMT)	NODC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER			
311270	SI	64368N	166335W	233	46	07	13	183	1968	852	029	0022	00	32	1	1		X4	9	9	0029
						WATER		WIND		BARO- METER		AIR TEMP. °C		VSL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. M	DIR.	SPEED OF FORCE	METER (mbal)	DRY BULB	WET BULB									
								13		S11		010		084		084		1		04	

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107	Σ Δ σ DTN, M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -S μg - ml/l	pH	T C C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	4. 25 DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES (TYPE & AMT)	NODC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER			
311270	SI	6433 N	16652 W	233	46	07	13	200	1968	852	030	0029	00				1	X4	X	9	0030
						WATER		WIND		BARO- METER		AIR TEMP. °C		VSL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. M	DIR.	SPEED OF FORCE	METER (mbal)	DRY BULB	WET BULB									
								13		S10		012		086		082		0		05	

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107	Σ Δ σ DTN, M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -S μg - ml/l	pH	T C C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	4. 25 DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES (TYPE & AMT)	NODC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER			
311270	SI	64287N	16712 W	233	47	07	13	220	1968	852	031	0032	00				1	X4	X	9	0031
						WATER		WIND		BARO- METER		AIR TEMP. °C		VSL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. M	DIR.	SPEED OF FORCE	METER (mbal)	DRY BULB	WET BULB									
								00		S00		010		111		097		0		06	

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107	Σ Δ σ DTN, M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -S μg - ml/l	pH	T C C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	W/ASSEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODE TYPE AMT	NODC STATION NUMBER	
CRUISE CODE	ID. NO.					10"	1'	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA
311270	SI	64255N	16731 W	233	47	07	13	239	1968	B52	032	0034	00	27	1	2		X4	X	9	0032	
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE									
									21	S09	011	089	084	1	06							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210?	$\Sigma \Delta$ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - dl/l	TOTAL-P µg - dl/l	NO ₂ -N µg - dl/l	NO ₃ -N µg - dl/l	SiO ₄ -Si µg - dl/l	pH	S.C.C.					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	W/ASSEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODE TYPE AMT	NODC STATION NUMBER	
CRUISE CODE	ID. NO.					10"	1'	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA
311270	SI	64215N	167495W	233	47	07	14	020	1968	B52	033	0037	00	25	1	2		X4	X	9	0033	
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE									
									02	S04	010	075	072	0	07							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210?	$\Sigma \Delta$ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - dl/l	TOTAL-P µg - dl/l	NO ₂ -N µg - dl/l	NO ₃ -N µg - dl/l	SiO ₄ -Si µg - dl/l	pH	S.C.C.					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	W/ASSEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODE TYPE AMT	NODC STATION NUMBER	
CRUISE CODE	ID. NO.					10"	1'	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA
311270	SI	64179N	168100W	233	48	07	14	040	1968	B52	034	0040	00	01	1	2		X1	3	6	0034	
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE									
									33	S10	020	078	072	7	08							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210?	$\Sigma \Delta$ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - dl/l	TOTAL-P µg - dl/l	NO ₂ -N µg - dl/l	NO ₃ -N µg - dl/l	SiO ₄ -Si µg - dl/l	pH	S.C.C.					
		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 CITY ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	STATION SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES (TYPE & AMT)	NODC STATION NUMBER
					10'	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR	HGT	PER			
311270	51	64144N	168289W	233	48	07	14	060	1968	B52	035	0042	00	32	1	2	X2	7	8	0035
				WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
				COLOR CODE	TRANSL UNIT	DIR.	SPEED OF FORCE	METER UNITS	DRY BULB	WET BULB	VIS CODE									
						36		509	023	067	061	7	08							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. ± 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S CC			
		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 CITY ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	STATION SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES (TYPE & AMT)	NODC STATION NUMBER
					10'	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR	HGT	PER			
311270	51	6410 N	168545W	233	48	07	14	083	1968	B52	036	0038	00	35	1	2	X2	7	8	0036
				WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
				COLOR CODE	TRANSL UNIT	DIR.	SPEED OF FORCE	METER UNITS	DRY BULB	WET BULB	VIS CODE									
						35		512	035	069	063	6	07							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. ± 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S CC			
		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 CITY ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	STATION SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES (TYPE & AMT)	NODC STATION NUMBER	
					10'	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR	HGT	PER				SEA
311270	51	64065N	16914 W	233	49	07	14	100	1968	B52	037	0038	00	34			1	X2	7	8	0037
				WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
				COLOR CODE	TRANSL UNIT	DIR.	SPEED OF FORCE	METER UNITS	DRY BULB	WET BULB	VIS CODE										
						34		511	040	056	053	6	06								
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. ± 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S CC				
		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 CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	NODC STATION NUMBER	W. SQEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
						10"	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE
311270	SI		6402 N	16928 W		233	49	07	14	119	1968	BS2	038	0040	00	34	2	2		X4	X	9	0038
						WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (ml)	DIR.	SPEED OR FORCE	BARO- METER (mbal)	DRY BULB	WET BULB	VIL CODE										
									34	S14	040	057	056	6	09								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-2107	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₃ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	S C C
		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 CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	NODC STATION NUMBER	W. SQEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
						10"	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE
311270	SI		64065N	169565W		233	49	07	14	144	1968	BS2	039	0038	00	34	2	2		X2	7	8	0039
						WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (ml)	DIR.	SPEED OR FORCE	BARO- METER (mbal)	DRY BULB	WET BULB	VIL CODE										
									31	S10	049	064	058	7	06								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-2107	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₃ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	S C C
		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 CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	NODC STATION NUMBER	W. SQEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
						10"	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE
311270	SI		64096N	17024 W		234	40	07	14	160	1968	BS2	040	0034	00	02	1	2		X5	6	8	0040
						WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (ml)	DIR.	SPEED OR FORCE	BARO- METER (mbal)	DRY BULB	WET BULB	VIL CODE										
									35	S10	055	064	060	7	06								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-2107	Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₃ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	S C C
		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 CITE CODE	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MILES OFF SHORE	W. 15 DEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER
					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DR.			HGT	PER	SEA		TYPE	AMT	
					10"	1"	MO	DAY	HR./10													
311270	SI	64124N	17050 W		234	40	07	14	180	1968	BS2	041	0034	00	35	1	2		X2	6	8	0041
					WATER		WIND		AIR TEMP. °C			NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO-METER (mbars)	DRY BULB	WET BULB	VIS. CODE										
								01	S11	064	070	066	7	06								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?	Σ Δ D OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P pg - ml/l	TOTAL-P pg - ml/l	NO ₃ -N pg - ml/l	NO ₂ -N pg - ml/l	Si O ₄ -S pg - ml/l	pH	S C C
		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 CITE CODE	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MILES OFF SHORE	W. 15 DEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER
					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DR.			HGT	PER	SEA		TYPE	AMT	
					10"	1"	MO	DAY	HR./10													
311270	SI	64167N	171175W		234	41	07	14	205	1968	BS2	042	0046	00	02	2	2		X1	4	5	0042
					WATER		WIND		AIR TEMP. °C			NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO-METER (mbars)	DRY BULB	WET BULB	VIS. CODE										
								02	S11	070	071	061	7	09								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?	Σ Δ D OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P pg - ml/l	TOTAL-P pg - ml/l	NO ₃ -N pg - ml/l	NO ₂ -N pg - ml/l	Si O ₄ -S pg - ml/l	pH	S C C
		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 CITE CODE	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MILES OFF SHORE	W. 15 DEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER
					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DR.			HGT	PER	SEA		TYPE	AMT	
					10"	1"	MO	DAY	HR./10													
311270	SI	64192N	171350W		234	41	07	14	220	1968	BS2	043	0054	00	01	1	2		X1	3	3	0043
					WATER		WIND		AIR TEMP. °C			NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO-METER (mbars)	DRY BULB	WET BULB	VIS. CODE										
								01	S08	075	099	078	8	10								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?	Σ Δ D OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P pg - ml/l	TOTAL-P pg - ml/l	NO ₃ -N pg - ml/l	NO ₂ -N pg - ml/l	Si O ₄ -S pg - ml/l	pH	S C C
		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 CITY CODE	SNIP NO.	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	STATION TIME (GMT)					YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER			
					10'	1'	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER				SEA	TYPE	A.M.T
					WATER	WIND		AIR TEMP. °C			BARO- METER (mba)	NO. OBS. DEPTHS			SPECIAL OBSERVATIONS								
311270	SI	6510 N	171085W	234	51	07	15	030	1968	BS2		044	0045	00				1	X1	7	1	0044	
					COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB	VIS. CODE											
								16	S05	075	055	050	B	08									

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \theta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	S C C
		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					14600	640							
035		OBS	0025	0277					14621	621							
		STD	0030	0277	3315	2645	0015876	0050	14596	621							
035		OBS	0030	0277					14597	619							
035		OBS	0035	0278	33151	2645											

REFERENCE CITY CODE	SNIP NO.	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	STATION TIME (GMT)					YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER			
					10'	1'	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER				SEA	TYPE	A.M.T
					WATER	WIND		AIR TEMP. °C			BARO- METER (mba)	NO. OBS. DEPTHS			SPECIAL OBSERVATIONS								
311270	SI	6512 N	170405W	234	50	07	15	050	1968	BS2		045	0046	00				1	X1	2	4	0045	
					COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB	VIS. CODE											
								00	S00	080	072	061	8	08									

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \theta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	S C C
		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 CITY CODE	SNIP NO.	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	STATION TIME (GMT)					YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER			
					10'	1'	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER				SEA	TYPE	A.M.T
					WATER	WIND		AIR TEMP. °C			BARO- METER (mba)	NO. OBS. DEPTHS			SPECIAL OBSERVATIONS								
311270	SI	6509 N	17011 W	234	50	07	15	070	1968	BS2		046	0046	00		02	1	2	X1	7	3	0046	
					COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB	VIS. CODE											
								00	S00	085	067	058	6	08									

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \theta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	S C C
		STD	0000	0463	3302	2617	0018579	0000	14668	723							
		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		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	W/35DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	HDDC STATION NUMBER					
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR		MIN	SEC			CRUISE NO.	STATION NUMBER	DR				HGT	PER	SEA	TRF	AMT
311270	SI	65065N	16941 W	233	59	07	15	095	1968	852	047	0055	00			1	X4	X19	0047							
						WATER		WIND		AIR TEMP. °C			NO. OBS. DEPTHS		SPECIAL OBSERVATIONS											
						COLOR CODE	TRANSL. (mm)	DIR.	SPEED OF FORCE	BARO-METER (mbars)	DRY BULB	WET BULB	VIS. CODE													
							00	500	095	053	050	0	10													
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ D DYN. M. × 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₂ -S μg - ml/l	PH	S.C.C.									
		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		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	W/35DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	HDDC STATION NUMBER					
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR		MIN	SEC			CRUISE NO.	STATION NUMBER	DR				HGT	PER	SEA	TRF	AMT
311270	SI	6504 N	16911 W	233	59	07	15	121	1968	852	048	0052	00			0	X4	X19	0048							
						WATER		WIND		AIR TEMP. °C			NO. OBS. DEPTHS		SPECIAL OBSERVATIONS											
						COLOR CODE	TRANSL. (mm)	DIR.	SPEED OF FORCE	BARO-METER (mbars)	DRY BULB	WET BULB	VIS. CODE													
							00	500	095	050	047	0	10													
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ D DYN. M. × 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₂ -S μg - ml/l	PH	S.C.C.									
		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		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METER	W/35DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	HDDC STATION NUMBER					
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR		MIN	SEC			CRUISE NO.	STATION NUMBER	DR				HGT	PER	SEA	TRF	AMT
311270	SI	65031N	168417W	233	58	07	15	146	1968	852	049	0051	00			0	X4	X19	0049							
						WATER		WIND		AIR TEMP. °C			NO. OBS. DEPTHS		SPECIAL OBSERVATIONS											
						COLOR CODE	TRANSL. (mm)	DIR.	SPEED OF FORCE	BARO-METER (mbars)	DRY BULB	WET BULB	VIS. CODE													
							00	500	095	060	053	0	10													
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ D DYN. M. × 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₂ -S μg - ml/l	PH	S.C.C.									
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	W/SIDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES (TYPE AMT)	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER			
311270	SI	64584N	168115W	233	48	07	15	170	1968	B52	050	0046	00				1	X4	X	9	0050
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. UNIT	DIR.	SPEED OR FORCE	METER (mbars)	DRY BULB	WET BULB	VIS. CODE								
									00	S00	100	042	042	0	09						

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ D OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S C C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	W/SIDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES (TYPE AMT)	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER			
311270	SI	64587N	167535W	233	47	07	15	190	1968	B52	051	0047	00				2	X4	X	9	0051
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. UNIT	DIR.	SPEED OR FORCE	METER (mbars)	DRY BULB	WET BULB	VIS. CODE								
									00	S00	105	066	055	1	08						

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ D OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S C C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	W/SIDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES (TYPE AMT)	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER			
311270	SI	64588N	16743 W	233	47	07	15	205	1968	B52	052	0039	00				2	X4	X	7	0052
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. UNIT	DIR.	SPEED OR FORCE	METER (mbars)	DRY BULB	WET BULB	VIS. CODE								
									00	S00	104	053	050	1	07						

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ D OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S C C
		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 CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INDEX	W/25DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NDDC STATION NUMBER							
						10'	1"	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DR.	HGT				PER	SEA	TYPE	AMT			
311270	SI		64595N	16734 W	233	47	07	15	215	1968	B52	053	0035	00			1	X4	X	9	0053							
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS														
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE															
									00	S00	118	056	055	1	06													
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	pH	S C C											
		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 CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INDEX	W/25DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NDDC STATION NUMBER							
						10'	1"	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DR.	HGT				PER	SEA	TYPE	AMT			
311270	SI		65005N	16725 W	233	57	07	15	231	1968	B52	054	0024	00			1	X4	7	8	0054							
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS														
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE															
									00	S00	117	064	060	7	04													
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	pH	S C C											
		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 CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INDEX	W/25DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NDDC STATION NUMBER							
						10'	1"	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DR.	HGT				PER	SEA	TYPE	AMT			
311270	SI		6501 N	16715 W	233	57	07	16	006	1968	B52	055	0020	00			1	X2	7	8	0055							
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS														
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE															
									24	S06	119	073	069	7	03													
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SIO ₄ -Si μg - ml/l	pH	S C C											
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	M/25DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE	
311270	SI	65351N	168105W	233	58	07	17	100	1968	B52	056	0039	00	18			3	X2	7	8	0056	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANL UN	DIR	SPEED OR FORCE	METER	DRY BULB	WET BULB	NO. OBS. DEPTHS									
									18	S20	125	080	078	6	07							

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DTN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \mu\text{l/l}$	TOTAL-P $\mu\text{g} - \mu\text{l/l}$	NO ₂ -N $\mu\text{g} - \mu\text{l/l}$	NO ₃ -N $\mu\text{g} - \mu\text{l/l}$	SiO ₄ -Si $\mu\text{g} - \mu\text{l/l}$	pH	S C C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	M/25DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE	
311270	SI	65351N	168184W	233	58	07	17	111	1968	B52	057	0048	00				2	X4	7	8	0057	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANL UN	DIR	SPEED OR FORCE	METER	DRY BULB	WET BULB	NO. OBS. DEPTHS									
									20	S14	125	079	077	6	09							

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DTN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \mu\text{l/l}$	TOTAL-P $\mu\text{g} - \mu\text{l/l}$	NO ₂ -N $\mu\text{g} - \mu\text{l/l}$	NO ₃ -N $\mu\text{g} - \mu\text{l/l}$	SiO ₄ -Si $\mu\text{g} - \mu\text{l/l}$	pH	S C C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	M/25DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE	
311270	SI	6535 N	16826 W	233	58	07	17	120	1968	B52	058	0048	00	19	1	2		X2	7	8	0058	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANL UN	DIR	SPEED OR FORCE	METER	DRY BULB	WET BULB	NO. OBS. DEPTHS									
									20	S15	125	078	072	7	09							

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DTN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \mu\text{l/l}$	TOTAL-P $\mu\text{g} - \mu\text{l/l}$	NO ₂ -N $\mu\text{g} - \mu\text{l/l}$	NO ₃ -N $\mu\text{g} - \mu\text{l/l}$	SiO ₄ -Si $\mu\text{g} - \mu\text{l/l}$	pH	S C C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	W. S/DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOQC STATION NUMBER
CTRY CODE	ID. NO.					10'	1"	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DR	HGT	PER		SEA	1/10	
311270	SI	6535 N	168338 W	233	58	07	17	140	1968	B52	059	0058	00	21	2	3		X2	7	8		0059	
						WATER		WIND		BARO- METER		AIR TEMP. °C		SPECIAL OBSERVATIONS									
						COLOR CODE	TRANSL UNIT	DIR.	SPEED OR FORCE	BARO- METER (mbal)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS									
									23	522	078	071	7	09									

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?	Σ Δ θ DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S C C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	W. S/DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOQC STATION NUMBER
CTRY CODE	ID. NO.					10'	1"	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DR	HGT	PER		SEA	1/10	
311270	SI	6535 N	168410 W	233	58	07	17	154	1968	B52	060	0054	00	18	2	2		X2	7	8		0060	
						WATER		WIND		BARO- METER		AIR TEMP. °C		SPECIAL OBSERVATIONS									
						COLOR CODE	TRANSL UNIT	DIR.	SPEED OR FORCE	BARO- METER (mbal)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS									
									18	520	125	078	072	7	10								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?	Σ Δ θ DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S C C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	W. S/DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOQC STATION NUMBER
CTRY CODE	ID. NO.					10'	1"	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DR	HGT	PER		SEA	1/10	
311270	SI	65372N	16857 W	233	58	07	17	172	1968	B52	061	0051	00	17	2	2		X4	X	9		0061	
						WATER		WIND		BARO- METER		AIR TEMP. °C		SPECIAL OBSERVATIONS									
						COLOR CODE	TRANSL UNIT	DIR.	SPEED OR FORCE	BARO- METER (mbal)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS									
									17	514	125	078	075	2	09								

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?	Σ Δ θ DTN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S C C
		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	913							
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	594							

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	PORT INDIC.	% OPEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1'	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DRY BULB	WET BULB	DIR.				HGT
311270	SI	65277N	169055W		233	59	07	17	197	1968	B52	062	0053	00			3	X4	X19		0062	
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mb)	DRY BULB	WET BULB	VIS. CODE									
									17	S22	125	069	067	4	10							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-310°	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - 01/l	TOTAL-P μg - 01/l	NO ₃ -N μg - 01/l	NO ₂ -N μg - 01/l	SiO ₄ -Si μg - 01/l	pH	S.C.C.					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	PORT INDIC.	% OPEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1'	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DRY BULB	WET BULB	DIR.				HGT
311270	SI	65291N	169172W		233	59	07	17	211	1968	B52	063	0046	00			3	X4	X9		0063	
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mb)	DRY BULB	WET BULB	VIS. CODE									
									18	S22	120	072	068	0	09							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-310°	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - 01/l	TOTAL-P μg - 01/l	NO ₃ -N μg - 01/l	NO ₂ -N μg - 01/l	SiO ₄ -Si μg - 01/l	pH	S.C.C.					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	PORT INDIC.	% OPEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1'	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DRY BULB	WET BULB	DIR.				HGT
311270	SI	65318N	169285W		233	59	07	17	227	1968	B52	064	0050	00			3	X4	79		0064	
						WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mb)	DRY BULB	WET BULB	VIS. CODE									
									16	S20	120	069	065	5	09							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-310°	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - 01/l	TOTAL-P μg - 01/l	NO ₃ -N μg - 01/l	NO ₂ -N μg - 01/l	SiO ₄ -Si μg - 01/l	pH	S.C.C.					
		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 CITE CODE	SHIP CODE	LATITUDE ° / 10'	LONGITUDE ° / 10'	STATION NO.	% SDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER		
					10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TYPE	AMT
					WATER		WIND			AIR TEMP. °C				SPECIAL OBSERVATIONS								
311270	S1	65352N	169375W	233	59	07	18	009	1968	BS2	065	0060	00	20	2	2		X6	7	8	0065	
					COLOR CODE	TRANS. M	DIR.	SPEED OF FORCE	BARO- METER (mbat)	DRY BULB	WET BULB	VTL CODE	NO. OBS. DEPTH									
					18	515		120		086	075	7	10									
MESSAGE TIME HR. / 10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - ml/l	TOTAL-P µg - ml/l	NO ₃ -N µg - ml/l	NO ₂ -N µg - ml/l	SiO ₄ -S µg - ml/l	pH	S CODE					
		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 CITE CODE	SHIP CODE	LATITUDE ° / 10'	LONGITUDE ° / 10'	STATION NO.	% SDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER		
					10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TYPE	AMT
					WATER		WIND			AIR TEMP. °C				SPECIAL OBSERVATIONS								
311270	S1	6539 N	16944 W	233	59	07	18	018	1968	BS2	066	0051	00	18	2	2		X6	7	8	0066	
					COLOR CODE	TRANS. M	DIR.	SPEED OF FORCE	BARO- METER (mbat)	DRY BULB	WET BULB	VTL CODE	NO. OBS. DEPTH									
					17	523		115		071	068	6	09									
MESSAGE TIME HR. / 10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - ml/l	TOTAL-P µg - ml/l	NO ₃ -N µg - ml/l	NO ₂ -N µg - ml/l	SiO ₄ -S µg - ml/l	pH	S CODE					
		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 CITE CODE	SHIP CODE	LATITUDE ° / 10'	LONGITUDE ° / 10'	STATION NO.	% SDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER		
					10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TYPE	AMT
					WATER		WIND			AIR TEMP. °C				SPECIAL OBSERVATIONS								
311270	S1	65436N	16948 W	233	59	07	18	031	1968	BS2	067	0052	00	16	2	2		X5	7	8	0067	
					COLOR CODE	TRANS. M	DIR.	SPEED OF FORCE	BARO- METER (mbat)	DRY BULB	WET BULB	VTL CODE	NO. OBS. DEPTH									
					18	524		110		073	066	3	09									
MESSAGE TIME HR. / 10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - ml/l	TOTAL-P µg - ml/l	NO ₃ -N µg - ml/l	NO ₂ -N µg - ml/l	SiO ₄ -S µg - ml/l	pH	S CODE					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	10° SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR	1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER			
311270	SI	66235N	166205W	233	66	07	18	145	1968	B52	068	0017	00	23	2	13	X2	6	8		0068	
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE									
									00	500	148	103	089	8	03							
MESSAGE TIME HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P $\mu g - \mu l/l$	TOTAL-P $\mu g - \mu l/l$	NO_2-N $\mu g - \mu l/l$	NO_3-N $\mu g - \mu l/l$	SiO_4-Si $\mu g - \mu l/l$	pH	STATION NUMBER					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	10° SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR	1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER			
311270	SI	6630 N	16641 W	233	66	07	18	162	1968	B52	069	0023	00	15	1	2	X6	5	8		0069	
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE									
									15	515	145	089	083	6	04							
MESSAGE TIME HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P $\mu g - \mu l/l$	TOTAL-P $\mu g - \mu l/l$	NO_2-N $\mu g - \mu l/l$	NO_3-N $\mu g - \mu l/l$	SiO_4-Si $\mu g - \mu l/l$	pH	STATION NUMBER					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	10° SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR	1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER			
311270	SI	6633 N	16712 W	233	67	07	18	179	1968	B52	070	0032	00	16	1	2	X6	5	8		0070	
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE									
									16	512	140	096	086	6	06							
MESSAGE TIME HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P $\mu g - \mu l/l$	TOTAL-P $\mu g - \mu l/l$	NO_2-N $\mu g - \mu l/l$	NO_3-N $\mu g - \mu l/l$	SiO_4-Si $\mu g - \mu l/l$	pH	STATION NUMBER					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	10° SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR	1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER			
311270	SI	66341N	167360W	233	67	07	18	190	1968	B52	071	0029	00			2	X2	6	8		0071	
						WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO-METER (mb)	DRY BULB	WET BULB	VIS. CODE									
									14	515	137	089	083	7	05							
MESSAGE TIME HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P $\mu g - \mu l/l$	TOTAL-P $\mu g - \mu l/l$	NO_2-N $\mu g - \mu l/l$	NO_3-N $\mu g - \mu l/l$	SiO_4-Si $\mu g - \mu l/l$	pH	STATION NUMBER					
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METERS	SQUARED SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NOOC STATION NUMBER
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DR.	HGT			
311270	SI	66357N	16754W	233	67	07	18	205	1968	BS2	072	0026	00				2	X2	6	8	0072
						WATER		WIND		BARO-METER		AIR TEMP. °C		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANSL. (mm)	DIR.	SPEED OF FORCE	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS								
									14	S16	132	086	080	7	04						

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ OYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	PH	S/C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METERS	SQUARED SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NOOC STATION NUMBER
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DR.	HGT			
311270	SI	6636 N	16821 W	233	68	07	18	220	1968	BS2	073	0034	00	16	0	2		X4	7	8	0073
						WATER		WIND		BARO-METER		AIR TEMP. °C		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANSL. (mm)	DIR.	SPEED OF FORCE	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS								
									14	S16	128	094	088	6	06						

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ OYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	PH	S/C
		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		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METERS	SQUARED SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NOOC STATION NUMBER
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DR.	HGT			
311270	SI	66355N	16848 W	233	68	07	18	239	1968	BS2	074	0051	00	18	2	2		X2	6	8	0074
						WATER		WIND		BARO-METER		AIR TEMP. °C		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANSL. (mm)	DIR.	SPEED OF FORCE	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS								
									17	S18	126	075	067	7	09						

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ OYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	PH	S/C
		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	3261	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	768							
240		OBS	0040	0364	32823	2611			14631	765							

REFERENCE CTRY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	% SQUAD SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NDDC STATION NUMBER		
						10'	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA	
311270	SI		66325N	16911 W		233	69	07	19	018	1968	BS2	075	0055	00	18	2	12		X4	7	6	0075
						WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	VIS. CODE											
									18	523	111		071	068	6	10							

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}^t	$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S CC
		STD	0000	0506	3304	2614	0018833	0000	14687								
018		OBS	0000	0506	33041	2614			14687								
018		OBS	0005	0495	33051	2616			14683								
		STO	0010	0486	3306	2618	0018487	0019	14680								
018		OBS	0010	0486	33060	2618			14680								
018		OBS	0015	0480	33061	2618			14678								
		STO	0020	0476	3306	2619	0018407	0037	14678								
018		OBS	0020	0476	33058	2619			14678								
018		OBS	0025	0396	33060	2627			14645								
		STO	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	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	% SQUAD SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NDDC STATION NUMBER		
						10'	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA	
311270	SI		66275N	169335W		233	69	07	19	038	1968	BS2	076	0058	00	16	2	2		X2	7	8	0076
						WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	VIS. CODE											
									16	525	120		073	067	6	10							

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}^t	$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S CC
		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							
		STO	0010	0415	3298	2619	0018381	0019	14649	728							
040		OBS	0010	0415	32979	2619			14649	728							
040		OBS	0015	0352	33068	2632			14625	694							
		STO	0020	0351	3307	2632	0017099	0037	14625	697							
040		OBS	0020	0351	33071	2632			14625	697							
040		OBS	0025	0352	33069	2632			14626	689							
		STO	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	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	% SQUAD SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NDDC STATION NUMBER		
						10'	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA	
311270	SI		6534 N	16809 W		233	58	07	19	115	1968	BS2	077	0038	00	16	12	2		X2	7	8	0077
						WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	VIS. CODE											
									16	521	140		073	070	7	07							

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}^t	$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S CC
		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								
		STO	0010	0722	3016	2361	0042920	0043	14738								
115		OBS	0013	0722	30160	2361			14738								
115		OBS	0017	0719	30168	2362			14738								
		STO	0020	0720	3017	2362	0042863	0086	14738								
115		OBS	0022	0720	30166	2362			14739								
115		OBS	0026	0718	30178	2363			14739								

REFERENCE CITE CODE	IO. NO.	SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	MO 10	DAY 11	HR. 12	YEAR 1968	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES TYPE AMT	NDDC STATION NUMBER		
									CRUISE NO.	STATION NUMBER			DIR.	HGT	PER				SEA	
311270	SI	6535 N	16819 W	233	58	07	19	128	1968	B52	078	0048	00	18	2	2	X2	7	8	0078
					WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS					
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS							
								18	S23	143	071	066	6	09						

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \sigma$ DTN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	PH	S C
		STD	0000	0599	3207	2526	0027172	0000	14712								
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 CITE CODE	IO. NO.	SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	MO 10	DAY 19	HR. 14	YEAR 1968	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES TYPE AMT	NDDC STATION NUMBER		
									CRUISE NO.	STATION NUMBER			DIR.	HGT	PER				SEA	
311270	SI	6535 N	16826 W	233	58	07	19	142	1968	B52	079	0056	00	16	2	5	X4	7	8	0079
					WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS					
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)	DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS							
								17	S20	145	064	061	6	10						

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \sigma$ DTN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	PH	S C
		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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