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OCEANOGRAPHIC OBSERVATIONS NORTH PACIFIC OCEAN STATION NOVEMBER

July 1966–February 1967

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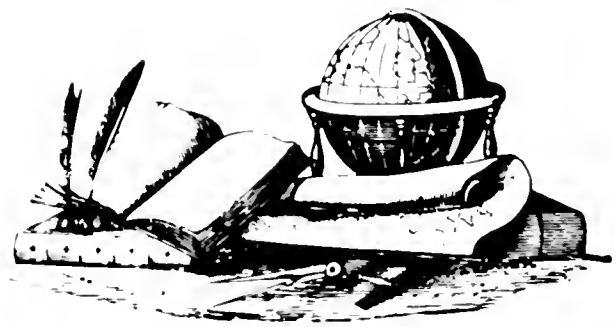

UNITED STATES COAST GUARD OCEANOGRAPHIC UNIT

REPORT No. 18

CG 373-18

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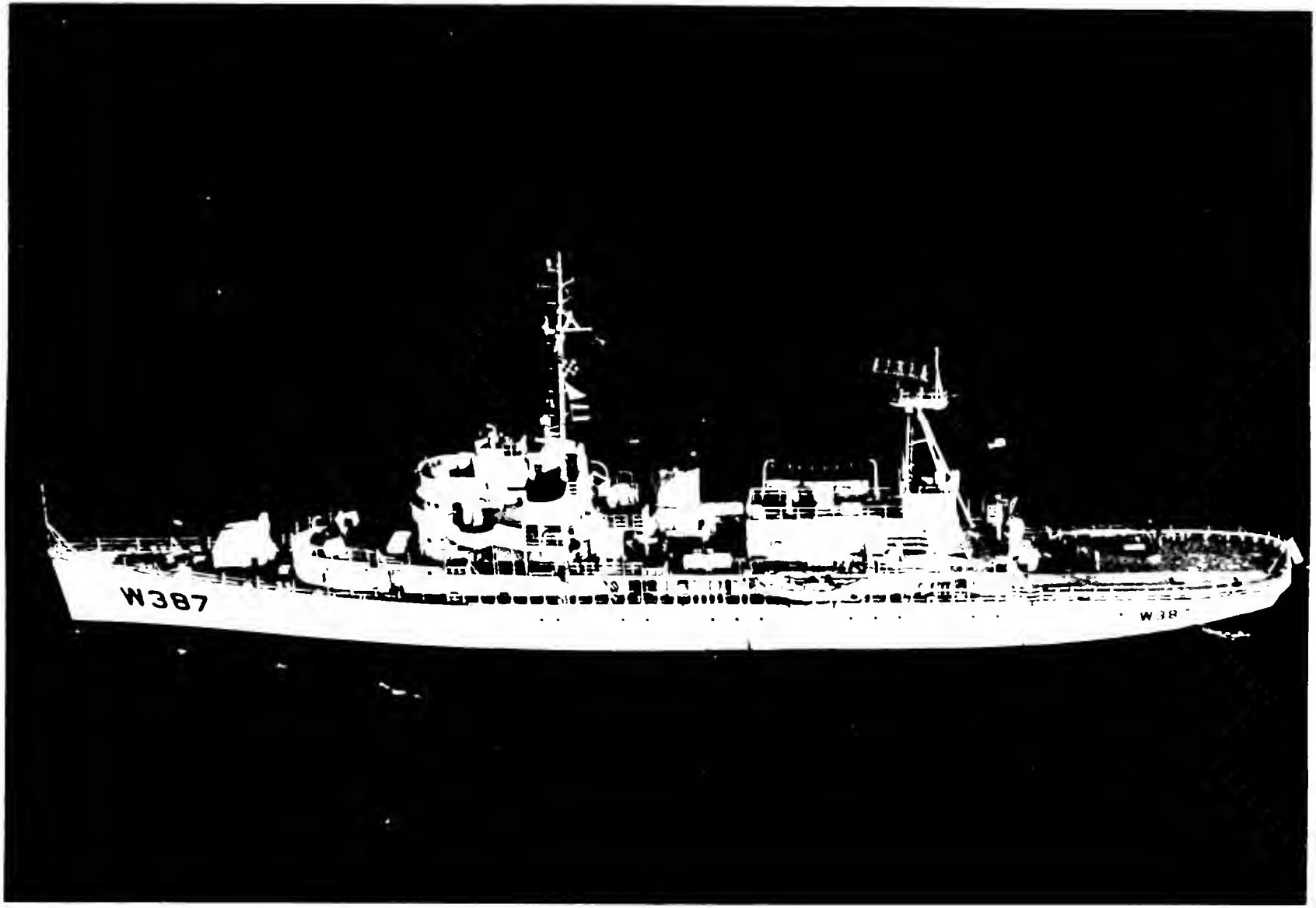
OCEANOGRAPHIC OBSERVATIONS NORTH PACIFIC OCEAN STATION NOVEMBER 30°00′ N., 140°00′ W.

July 1966–February 1967

By David M. Husby

WASHINGTON, D.C. FEBRUARY 1968



USCGC GRESHAM, a 311 Ft. High Endurance Cutter. Homeport; Alameda, California.

CONTENTS

	Page
Introduction	1
Procedures	1
Discussion	2
Summary	3
Literature Cited	3

ILLUSTRATIONS

Figure

Frontispiece: USCGC GRESHAM (WHEC 387)

1. Chart of World Ocean Stations — 5
2. Position of USCGC GRESHAM Oceanographic Stations, 31 July–24 August 1966 — 6
3. Positions of USCGC KLAMATH Oceanographic Stations, 11 September–1 October 1966 — 7
4. Positions of USCGC WACHUSETT Oceanographic Stations, 19 November–3 December 1966 — 8
5. Positions of USCGC GRESHAM Oceanographic Stations, 10–28 February 1967 — 9
6. Bathymetry in the Vicinity of Ocean Station NOVEMBER — 10
7. Envelope of Temperature Versus Depth, USCGC GRESHAM, 31 July–24 August 1966 — 11
8. Envelope of Temperature Versus Depth, USCGC KLAMATH, 11 September–1 October 1966 — 12
9. Envelope of Temperature Versus Depth, USCGC WACHUSETT, 19 November–3 December 1966 — 13
10. Envelope of Temperature Versus Depth, USCGC GRESHAM, 10–28 February 1967 — 14
11. Envelope of Salinity Versus Depth, USCGC GRESHAM, 31 July–24 August 1966 — 15
12. Envelope of Salinity Versus Depth, USCGC KLAMATH, 11 September–1 October 1966 — 16
13. Envelope of Salinity Versus Depth, USCGC WACHUSETT, 19 November–3 December 1966 — 17

Figure Page

14. Envelope of Salinity Versus Depth, USCGC GRESHAM, 10–28 February 1967 18
15. Water Temperature Versus Time at Selected Depths, 31 July 1966 —28 February 1967 19
16. Salinity Versus Time at Selected Depths, 31 July 1966–28 February 1967 20
17. Mean Temperature Versus Mean Salinity at Standard Depths to 3000 Meters, USCGC GRESHAM, 31 July–24 August 1966 21
18. Mean Temperature Versus Mean Salinity at Standard Depths to 3000 Meters, USCGC KLAMATH, 11 September–1 October 1966 22
19. Mean Temperature Versus Mean Salinity at Standard Depths to 3000 Meters, USCGC WACHUSETT, 19 November–3 December 1966 23
20. Mean Temperature Versus Mean Salinity at Standard Depths to 3000 Meters, USCGC GRESHAM, 10–28 February 1967 24

TABLES

I. USCGC GRESHAM July–August 1966 Data 28
II. USCGC KLAMATH September–October 1966 Data 53
III. USCGC WACHUSETT November–December 1966 Data 74
IV. USCGC GRESHAM February 1967 Data 86

ABSTRACT

This report contains the observed and interpolated temperature and salinity data plus the computed sigma-t, geopotential anomalies and sound velocities for 76 oceanographic stations occupied by three U. S. Coast Guard Cutters at Ocean Station NOVEMBER (centered at 30°00′N, 140°00′W) during July 1966–February 1967. They were the CGC GRESHAM, 31 July–24 August 1966; CGC KLAMATH, 11 September–1 October; CGC WACHUSETT, 19 November–3 December 1966; and CGC GRESHAM, 10–28 February 1967. Daily casts of 13–14 Nansen bottles were made to 1500 meters when weather conditions permitted. In addition, sampling was successfully extended to near the bottom on at least one station during each patrol.

INTRODUCTION

The data contained in this report represents the beginning of the time-series study by the U. S. Coast Guard of the oceanographic environment at Ocean Station NOVEMBER (30°00'N, 140°00'W). The location of NOVEMBER in relation to the other Ocean Stations of the world is shown in Figure 1. The Ocean Station vessels presently make daily Nansen bottle casts to 1500 meters on alternate 21 day patrols. Serial observations of temperature and salinity are made at all stations. This report contains the data for 76 oceanographic stations at NOVEMBER during July 1966–February 1967, taken by three U. S. Coast Guard cutters. They were the CGC GRESHAM, 31 July–24 August 1966; CGC KLAMATH, 11 September–1 October; CGC WACHUSETT, 19 November–3 December 1966; and the CGC GRESHAM, 10–28 February 1967.

PROCEDURES

For daily casts the prescribed sample depths are 0, 10, 30, 50, 75, 100, 150, 200, 300, 400, 600, 800, 1000, and 1500 meters. For deep casts they are 2000, 2500, 3000, 4000, 4500, and 4600 meters (near bottom). A pair of deep-sea reversing thermometers is fitted to each Nansen bottle, and in addition, on five bottles from 200 to 1500 meters, an unprotected thermometer is paired with the two protected ones for the thermometric determination of the sampling depths. Depths which are determined thermometrically are preceded by a "T" in the station data. Field observations are transmitted via radio teletype to the Coast Guard Oceanographic Unit (CGOU) for real-time quality control and data processing. Procedures used in recording and processing the temperature data essentially follow those outlined in U.S.-N.H.O. Pub. No. 607 (1955) and LaFond (1951). CGOU uses a Digital Equipment Corporation PDP–5 computer to process the temperature data.

Salinity samples are drawn from each Nansen bottle, and the salinity is determined aboard ship using inductive salinometers. Duplicate samples are drawn from the top and bottom bottle at each station and delivered to CGOU for quality control when the vessel returns to port.

Processed temperature and salinity were recorded on form NHO/NODC 3167/(1–61), Physical and Chemical Data form for oceanographic stations and delivered to the National Oceanographic Data Center (NODC). The interpolated temperatures and salinities for standard depths, sigma-t, specific volume anomalies (ΔD), and sound velocities were computed by NODC and listings provided for the preparation of Tables I–IV.

On the first Coast Guard Oceanographic patrol at NOVEMBER during 31 July–24 August 1966, the CGC GRESHAM successfully occupied 25 stations. The U.S. Naval Oceanographic Office and the Scripps Institute of Oceanography had made previous investigations.[1] Twenty-three stations had maximum useful depths between 1350 and 1800 meters. One station had a maximum sample depth of 1009 meters due to a malfunction of the bottom bottle. One deep cast was made to a depth of 3696 meters in a water depth of 4389 meters. Salinity samples were not taken on station 16 and 21–25 due to a breakdown of the salinometer and a shortage of sample bottles. The distribution of the stations about the center of NOVEMBER is shown in Figure 2. The data is carried by NODC as Ref. No. 31–749GH and listed in Table I of this report.

On the 11 September–1 October 1966 patrol of the CGC KLAMATH, twenty-one oceanographic stations were occupied. Nineteen stations had maximum useful depths between 1350 and 1700 meters. One station had a maximum depth of 1015 meters due again to a malfunction of the 1500 meter bottle. One deep cast was made to a depth of 4422 meters in an estimated depth of water of 4500 meters. The distribution of the stations about the center of November is shown in Figure 3. The data is listed by NODC as Ref. No. 31–768KL and as Table II of this report.

The CGC WACHUSETT occupied 12 oceanographic stations on the 19 November–3 December 1966 patrol. Eleven stations were routine shallow casts with maximum useful depth between 1350 and 1800 meters. One deep-cast was accomplished to a depth of 4399 meters in a water depth of 4481 meters. The distribution

[1] U.S. Naval Oceanographic Office, 1966, Oceanographic Station Data, AGOR Cruise No. 056510, USNS CHARLES H. DAVIS (T–AGOR–5), IM NO. 66–2.

Cochrane, J. D. 1950. Average Annual Heat Budget at 30°N, 140°W Scripps Institute of Oceanography, Univ. of Calif., Progress Report No. 16.

of the stations about the center of NOVEMBER is shown in Figure 4. The data is listed by NODC as Ref. No. 31–833WC and as Table III of this report.

On the 10–28 February 1967 patrol of the CGC GRESHAM, 18 oceanographic stations were successfully occupied. Seventeen stations had maximum useful depths between 1300 and 1700 meters. The distribution of the stations about the center of NOVEMBER is shown in Figure 5. The data is listed by NODC as Ref. No. 31–862GH and as Table IV of this report.

DISCUSSION

Tully (1955) described the region between 10°N and 40°N in the Pacific Ocean as the "Subtropics." The region is characterized by a heating and cooling cycle which occurs at a high temperature level and the dominant process determining the salinity and temperature structure is evaporation. He stated that there is no permanent halocline in this region; rather, the salinity of the water is greatest at the surface and decreases to a minimum between 200 and 800 meters depth. Hence, the stability of the density structure is solely dependent on the temperature structure. Also, excess evaporation in this region increases the density of the surface water and promotes a salinity-driven convection which is the dominant mixing process.

Ocean Station NOVEMBER (30°00'N, 140°00'W) is located in this subtropical region of the North Pacific Ocean and further is located in the eastern gyral in the North Pacific which is characterized by a salinity minimum at about 500 meters (Sverdrup, et al. 1962). This region to the east of the Hawaiian Islands between long. 130° and 150°W. also encompasses the boundary between the warm water of the eastern North Pacific and the cold Subarctic water, which flows south along the west coast of America. The bathymetry in the vicinity of NOVEMBER is shown in Figure 6. The U.S. Naval Oceanographic Office made prior oceanographic observations in the vicinity of NOVEMBER in August 1965 aboard the USNS CHARLES H. DAVIS (T-AGOR 5). A total of 32 stations were occupied including observations of temperature, salinity, nutrients (PO_4-P and SiO_4-S), currents, biology and continuous records of sea surface temperature, bathymetry and incident solar radiation. The data were published as Informal Manuscript No. 66–2, U.S. Naval Oceanographic Office, Washington, D.C. The data collected on the first four Coast Guard Oceanographic patrols were examined to determine the vertical distribution of water mass properties and gross seasonal changes in the water column. Figures 7–10 and 11–14, the envelopes of temperature versus depth and salinity versus depth, respectively, were constructed to study the vertical structure and its changes between July 1966 and February 1967.

During the heating season between July and October a warm, high salinity water mass was present in the upper 200 meters with a marked seasonal thermocline. Negative gradients of up to 4.0°C in the first 100 meters were present during the July–August and September–October patrols. These large gradients created a very stable density structure. The surface temperature reached a maximum of about 22.80°C in September and a minimum of about 18.20°C in February. The envelopes of salinity versus depth show the presence of a near-surface salinity maximum during the entire period and also the increase of the surface salinity from the range of 34.68–34.90‰ in July–August to the range of 35.10–35.28‰ in November–December. This increase was very likely the cause of convective mixing resulting in the mixed layer which was present in the upper 75 meters in November–December. Small instabilities were found in this mixed layer which could show the presence of convective mixing. The mixed layer had increased in extent to the 100 meter depth in February 1967. The most prominent feature of the salinity distribution was the salinity minimum of 33.95–34.00‰ which was found at about 500 meters on all patrols except in February when it was located between 200 and 600 meters. Below the minimum layer the salinity increased uniformly to a value of about 34.55‰ at 1500 meters.

Figures 15 and 16, the plots of temperature versus time and salinity versus time, respectively, at selected levels in the upper 1500 meters were constructed to determine the magnitude of temporal variations in the water column. It appears that there were large daily fluctuations in the temperature and salinity at the 100 and 200 meter levels. Since spatial

variations among the stations were small, these fluctuations may be the result of horizontal advection or fronts passing through the area, however, more frequent sampling is needed to clearly define the process. Below 200 meters the temperature and salinity appear to have remained essentially uniform.

To describe the water mass or masses present at NOVEMBER, Figures 17–20, the temperature versus salinity curves for each patrol, were constructed using the mean values at each standard depth down to 3000 meters. Examination of these curves reveals the warm, high salinity water in the upper 200 meters which underwent a cooling process and an increase in salinity at the temperature range of 18.00–23.00°C. Between 200 and 400 meters the water mass closely approaches that of the eastern North Pacific Central water described by Sverdrup, et al (1942) with a temperature of 10–16° and the salinity decreasing with depth from 34.50 to 34.00‰. The salinity minimum located between 400 and 600 meters with a temperature between 5.00 and 9.00° identifies the Subarctic intermediate water mass of the North Pacific. Below 600 meters the water column shows a very stable density structure with a uniform decrease of temperature and increase of salinity down to 3000 meters.

SUMMARY

The initial oceanographic observations at Ocean Station NOVEMBER by the U.S. Coast Guard between July 1966 and February 1967 reveal a stable density structure during the summer months caused by a warm, surface layer and then convective mixing occurring in the upper 100 meters between November and February with an increase in the surface salinity being the most probable cause. There was a salinity minimum of 33.95–34.00‰ located at about 500 meters which is a characteristic of the eastern North Pacific Ocean.

The seasonal heating and cooling appeared to be effective to a depth of about 200 meters and occurred at a high temperature level (18–23°). The data indicate that a salinity-driven convection probably is the dominant mixing process in this area. Analysis of the data revealed a water mass below the seasonal zone, between 200 and 400 meters, which was similar to the eastern North Pacific Central water (Sverdrup, et al, 1942), t = 10–16° SC = 34.00–34.50‰. Beneath this Central water was a Subarctic water mass characterized by a salinity between 34.00 and 34.10‰. The deep water below 600 meters was essentially uniform during the entire observational period and showed a gradual increase of salinity and decrease of temperature with depth.

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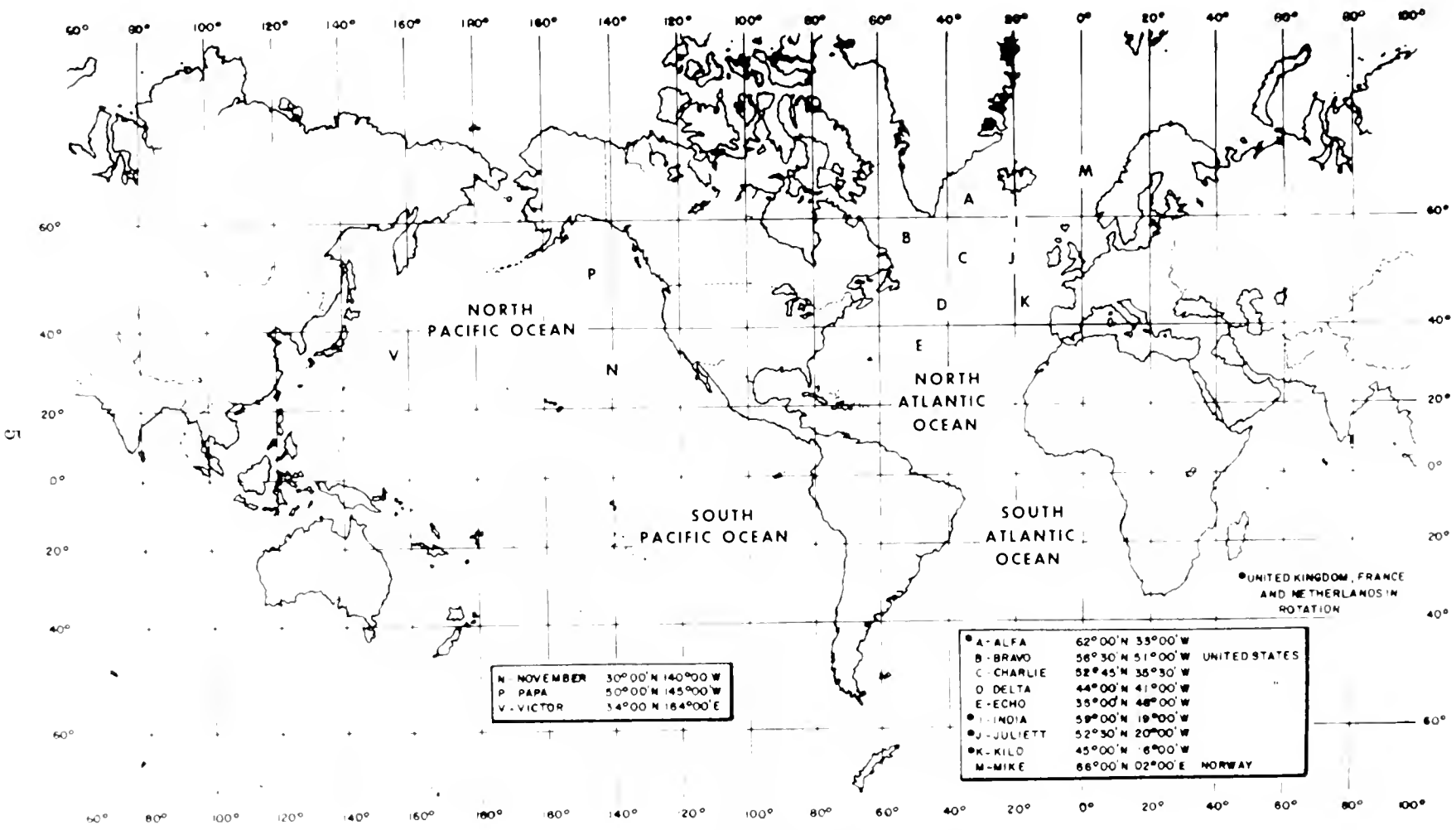

FIGURE 1. Chart of all Ocean Stations in the world.

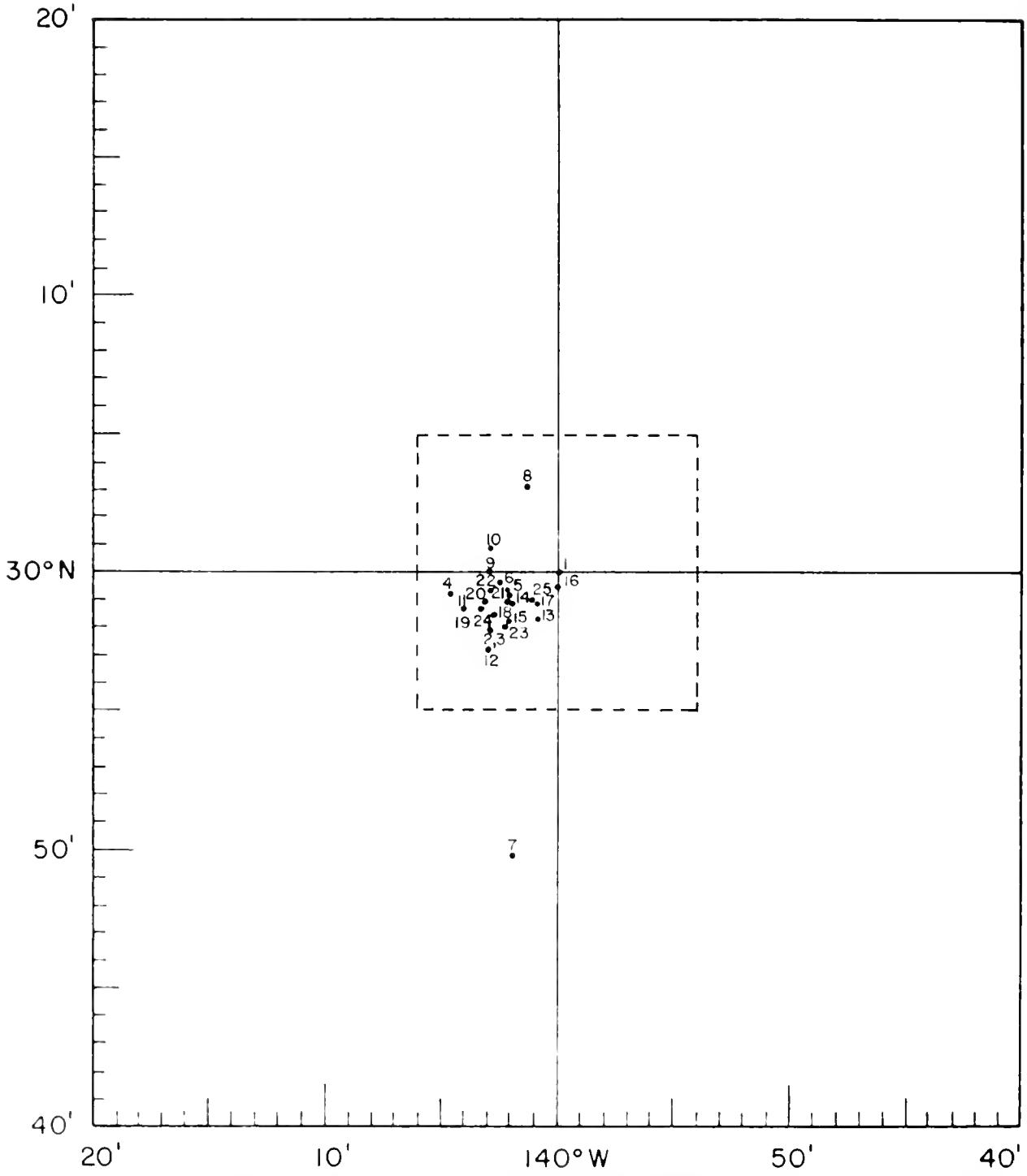

FIGURE 2. Positions of oceanographic stations taken by USCGC GRESHAM during 31 July–24 August 1966 at Ocean Station NOVEMBER.

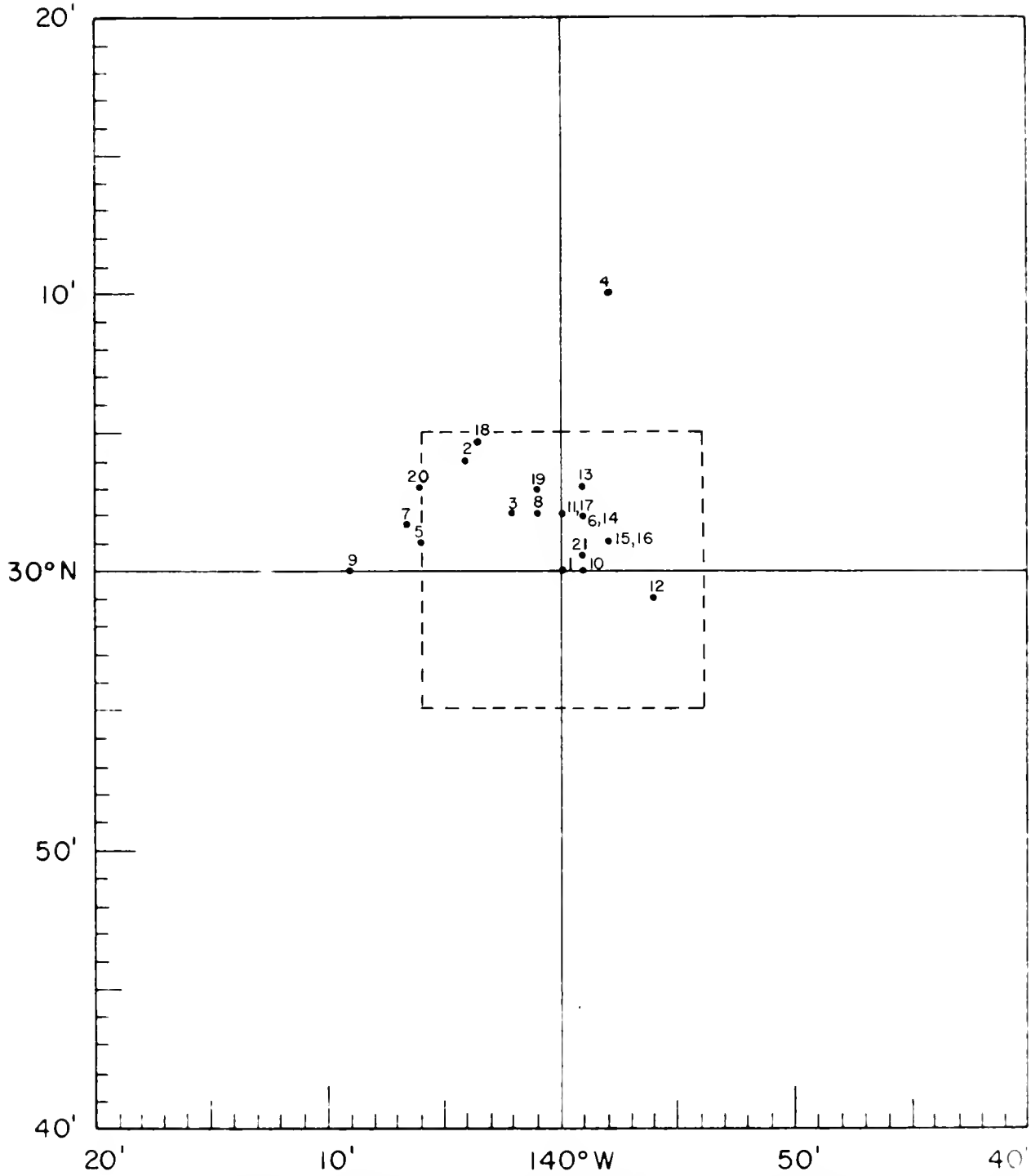

FIGURE 3. Positions of oceanographic stations taken by USCGC KLAMATH during 11 September–1 October 1966 at Ocean Station NOVEMBER.

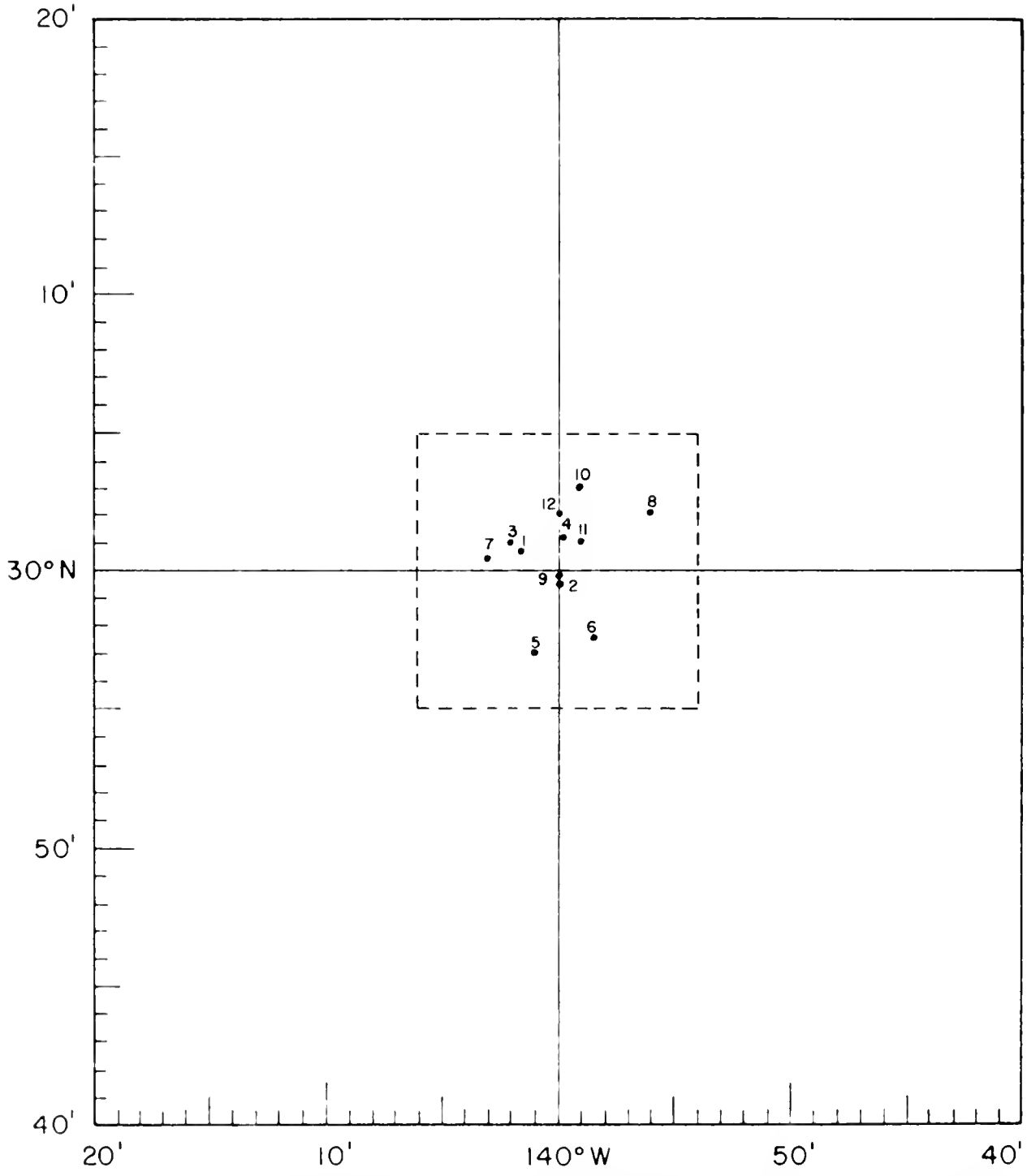

FIGURE 4. Positions of oceanographic stations taken by USCGC WACHUSETT during 19 November–3 December 1966 at Ocean Station NOVEMBER.

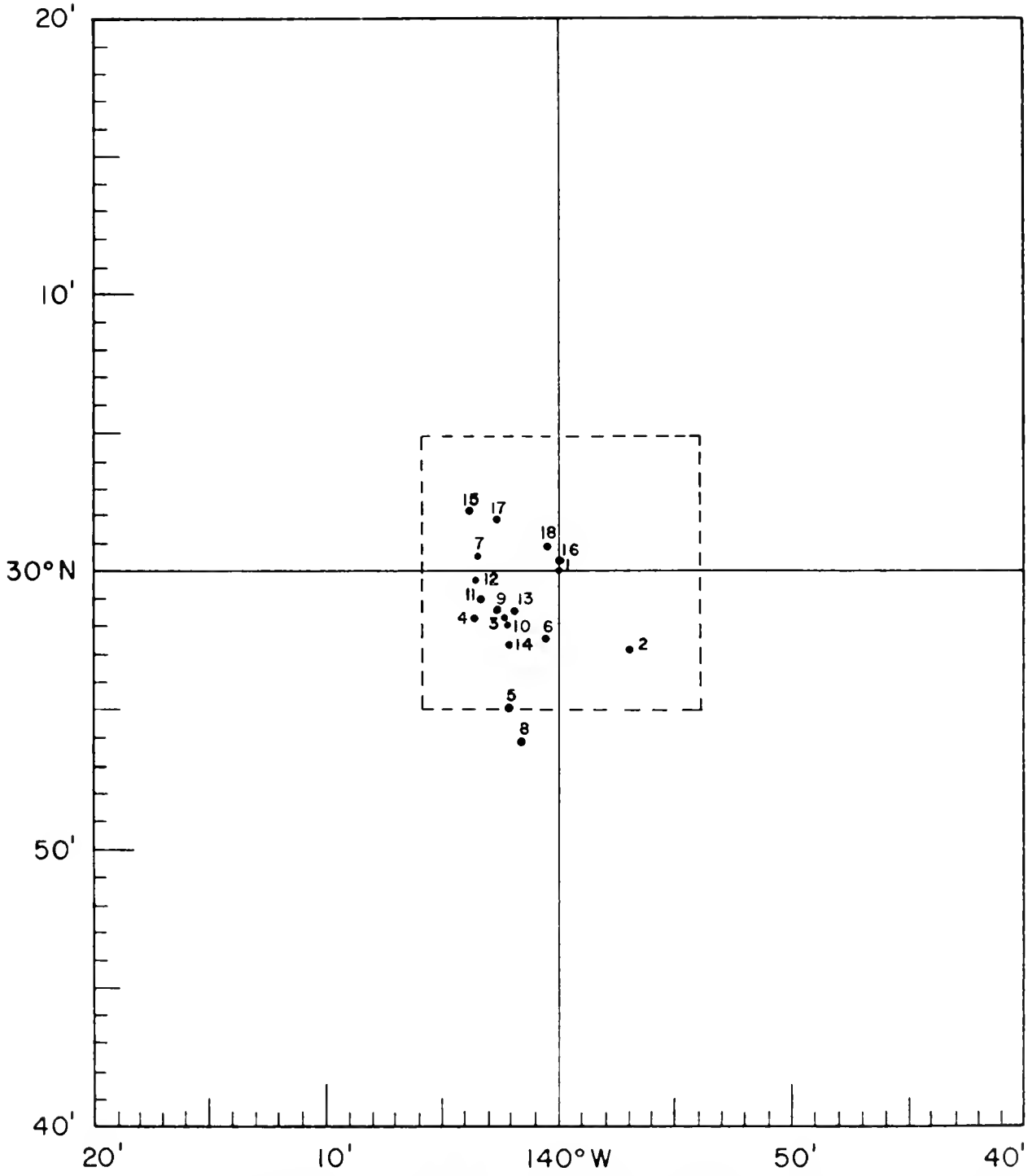

FIGURE 5. Positions of oceanographic stations taken by USCGC GRESHAM during 10–28 February 1967 at Ocean Station NOVEMBER.

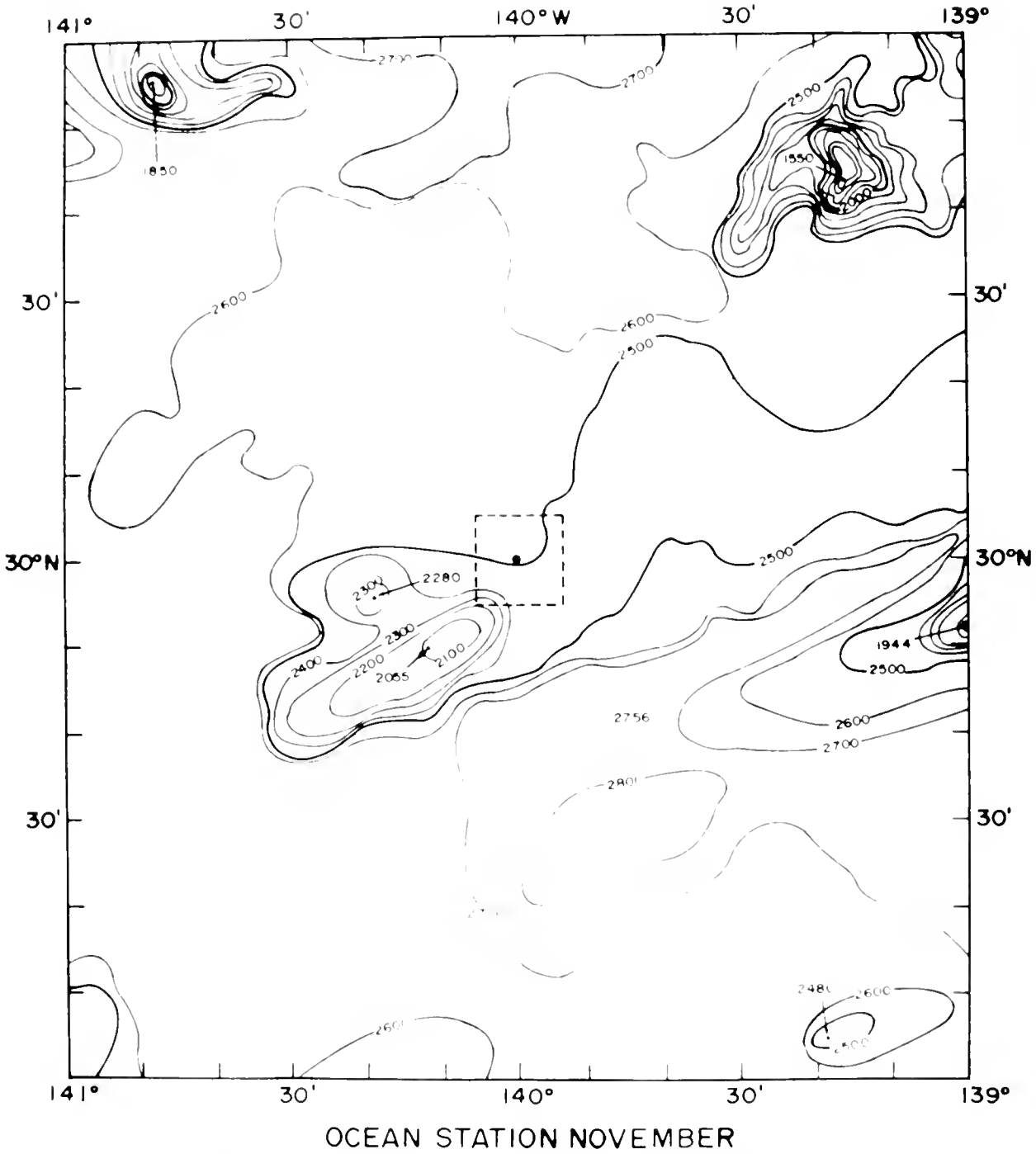

FIGURE 6. Bathymetry in the vicinity of Ocean Station NOVEMBER (taken from H.O.)

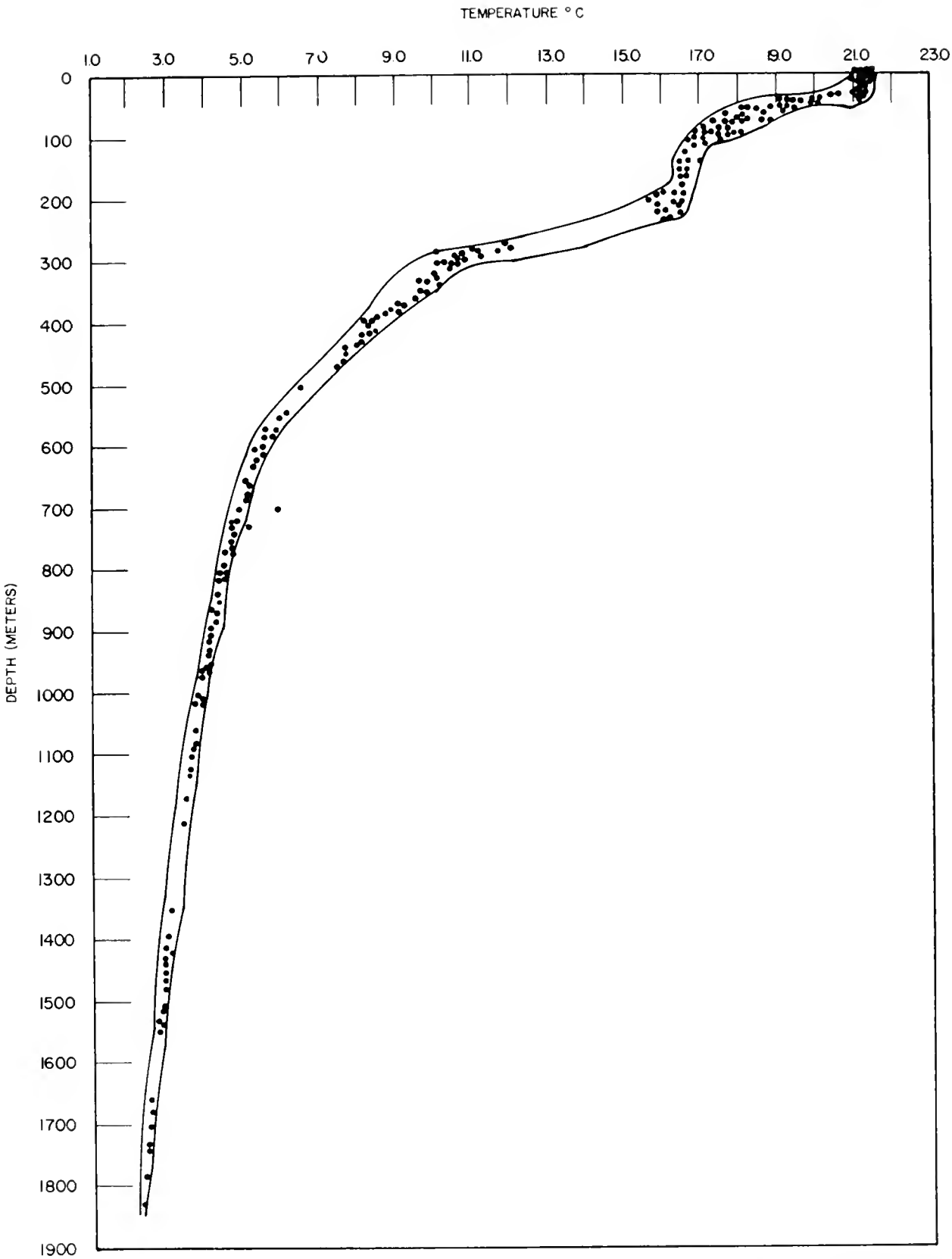

FIGURE 7. Envelope of temperature versus depth at oceanographic stations taken by USCGC GRESHAM at Ocean Station NOVEMBER, 31 July–24 August 1966.

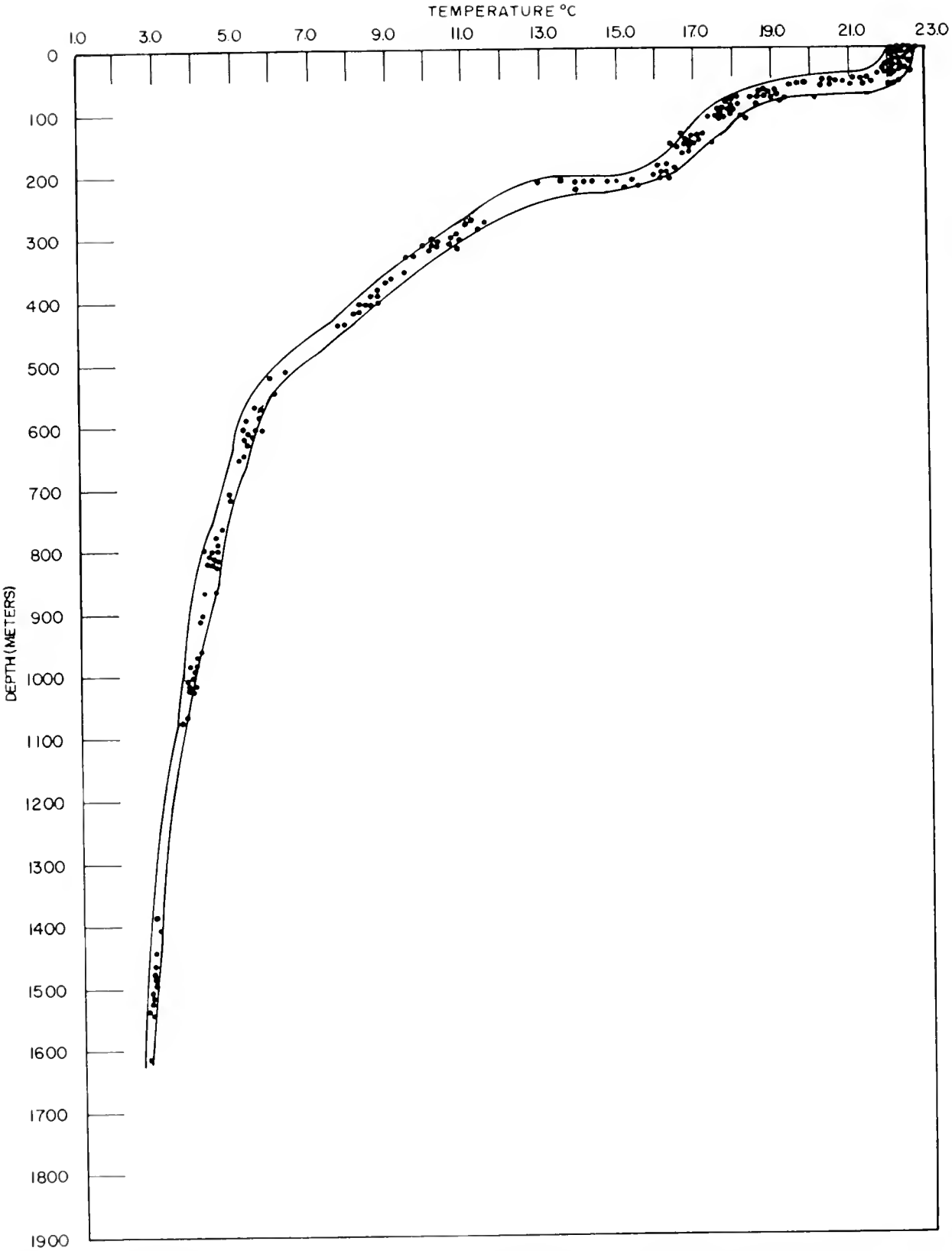

FIGURE 8. Envelope of temperature versus depth as oceanographic stations taken by USCGC KLAMATH at Ocean Station NOVEMBER, 11 September–1 October 1966.

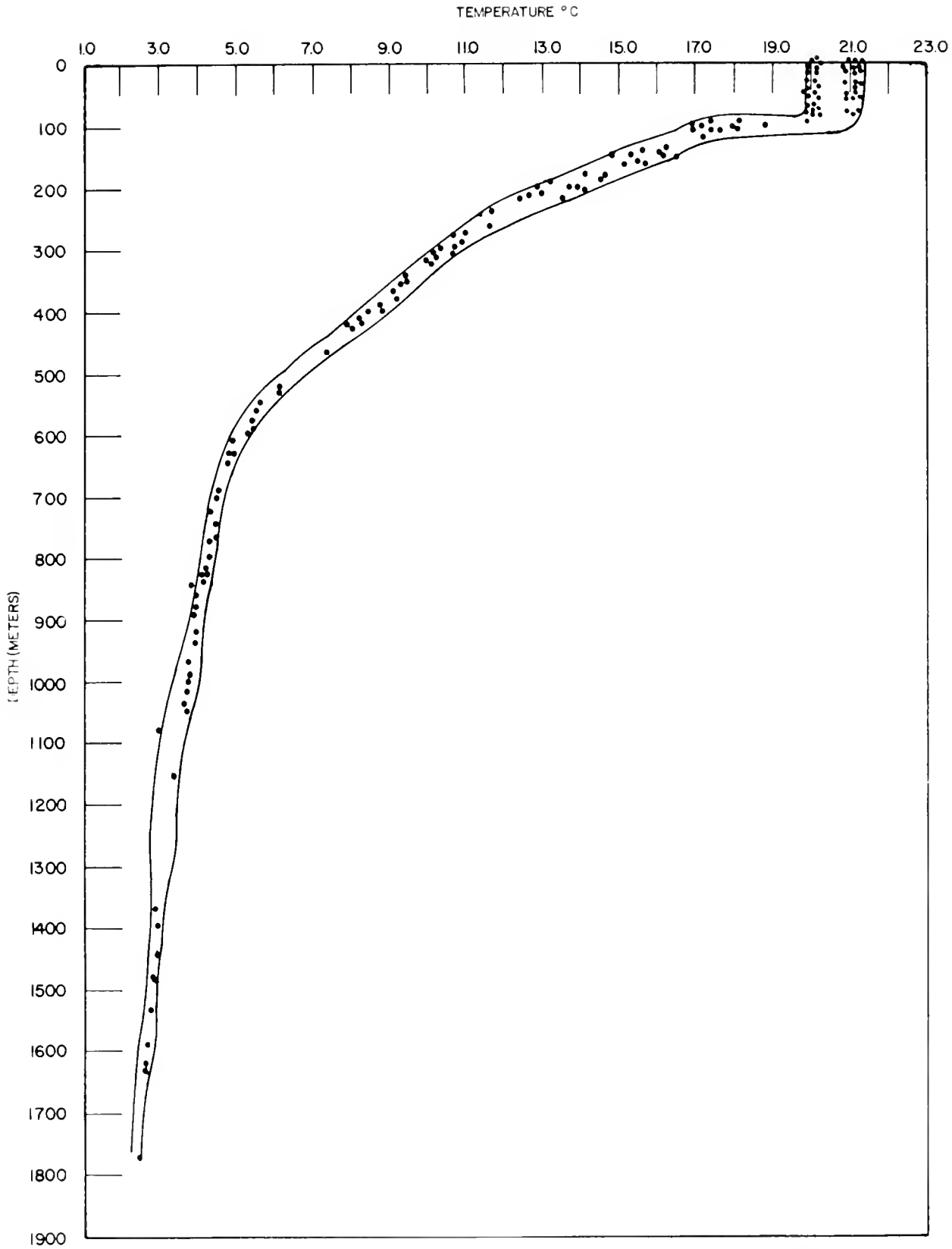

FIGURE 9. Envelope of temperature versus depth at oceanographic stations taken by USCGC WACHUSETT at Ocean Station NOVEMBER, 19 November–3 December 1966.

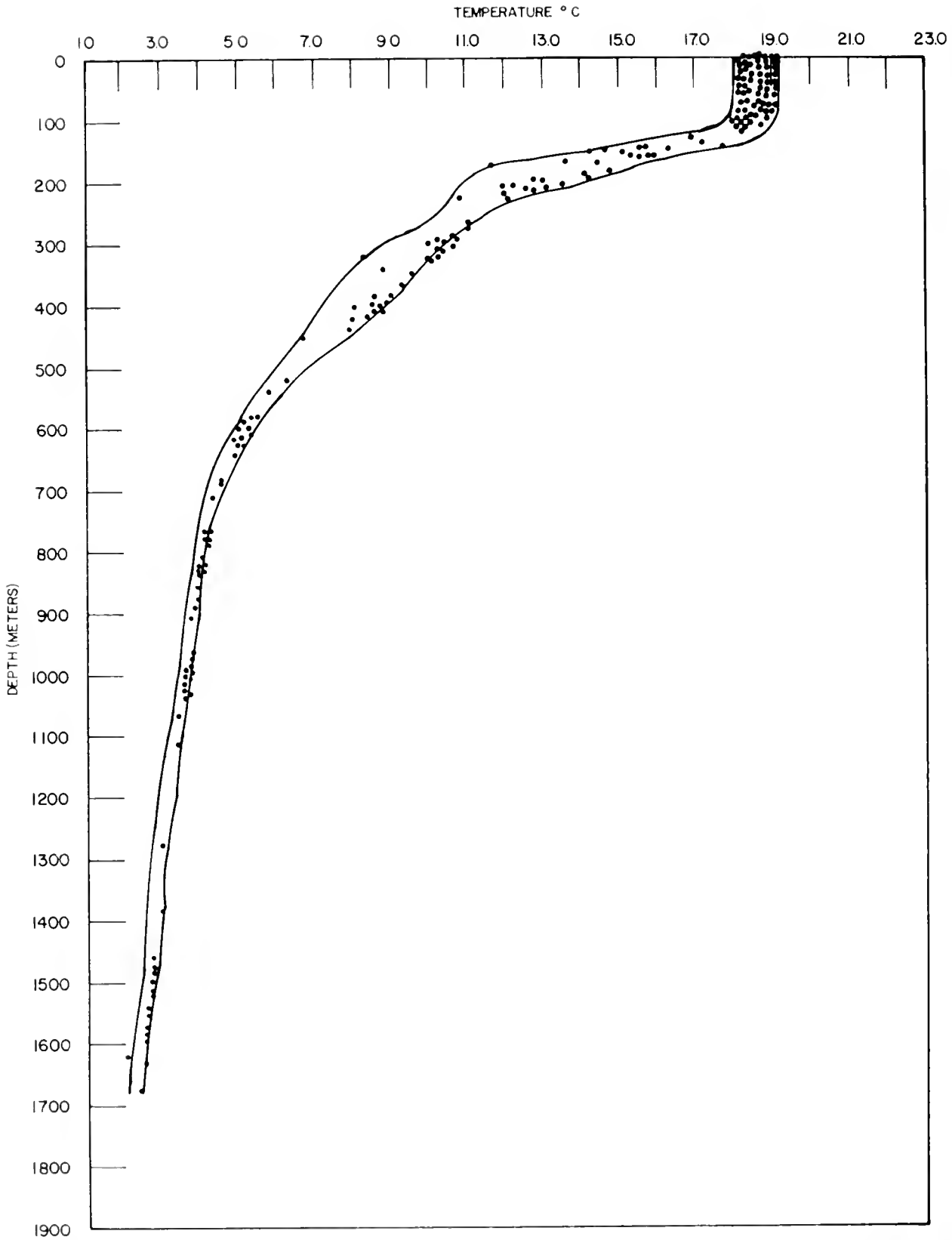

FIGURE 10. Envelope of temperature versus depth at oceanographic stations taken by USCGC GRESHAM at Ocean Station NOVEMBER, 10–28 February 1967.

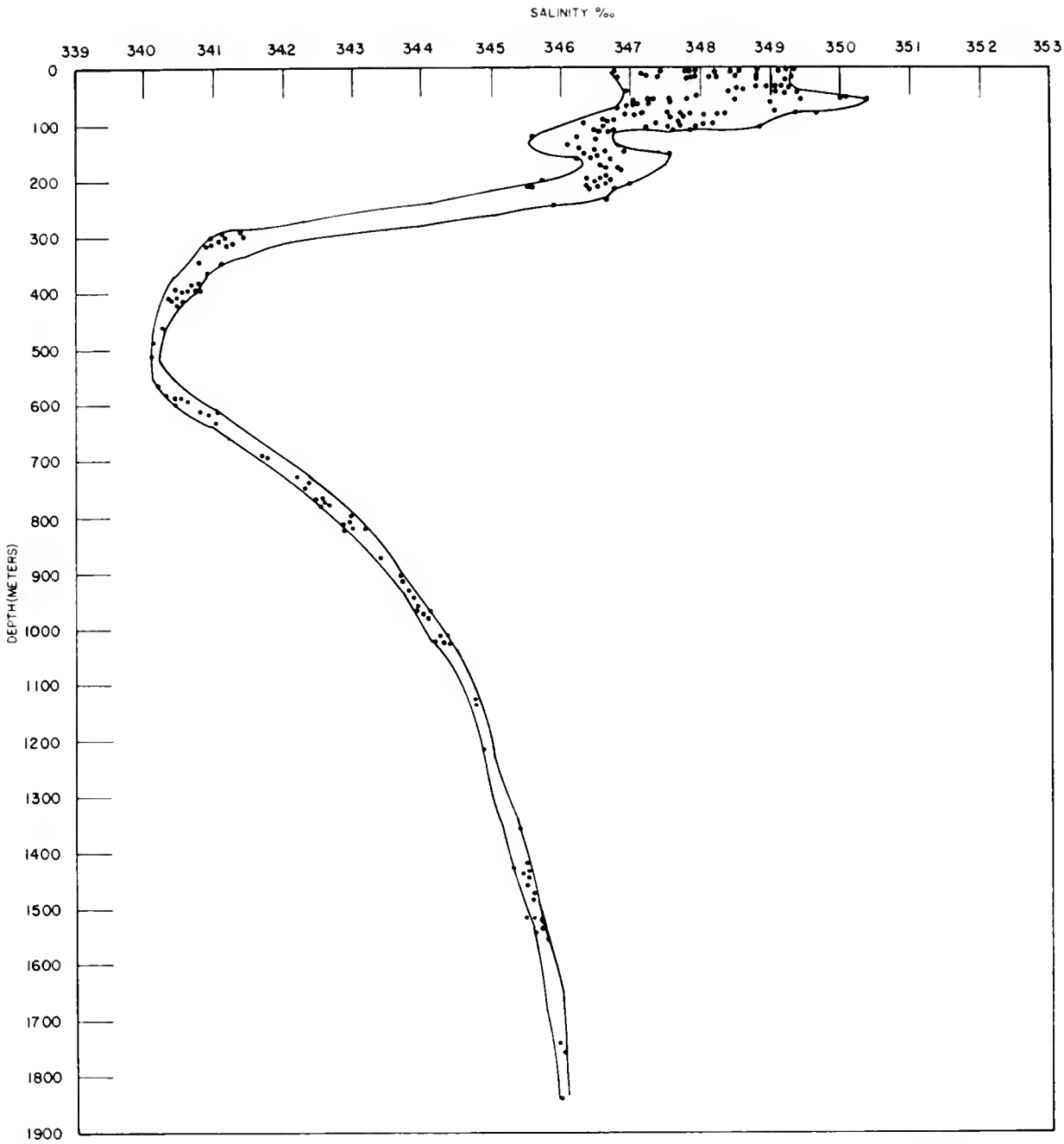

FIGURE 11. Envelope of salinity versus depth at oceanographic stations taken by USCGC GRESHAM at Ocean Station NOVEMBER, 31 July–24 August 1966.

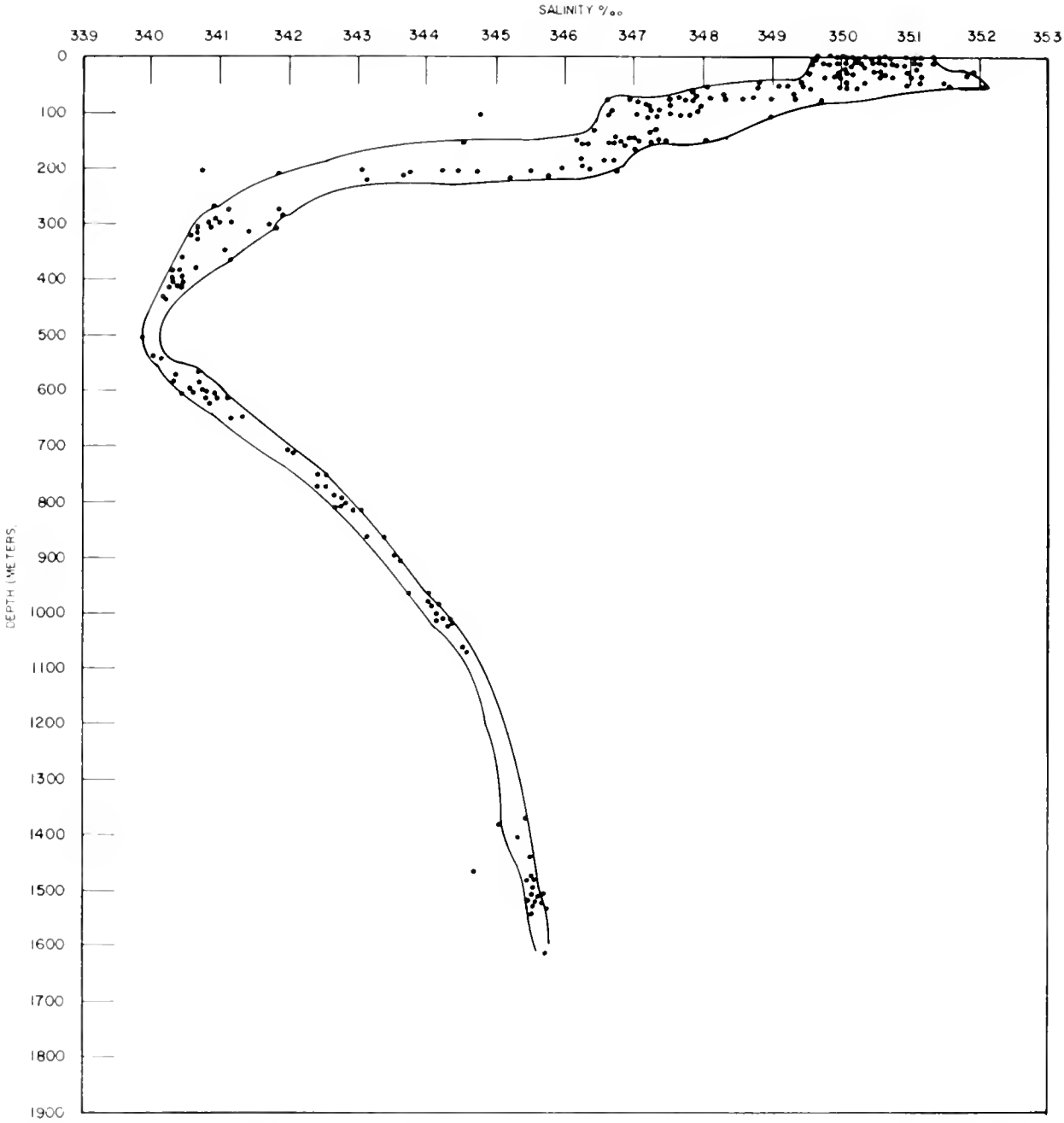

FIGURE 12. Envelope of salinity versus depth at oceanographic stations taken by USCGC KLAMATH at Ocean Station NOVEMBER, 11 September–1 October 1966.

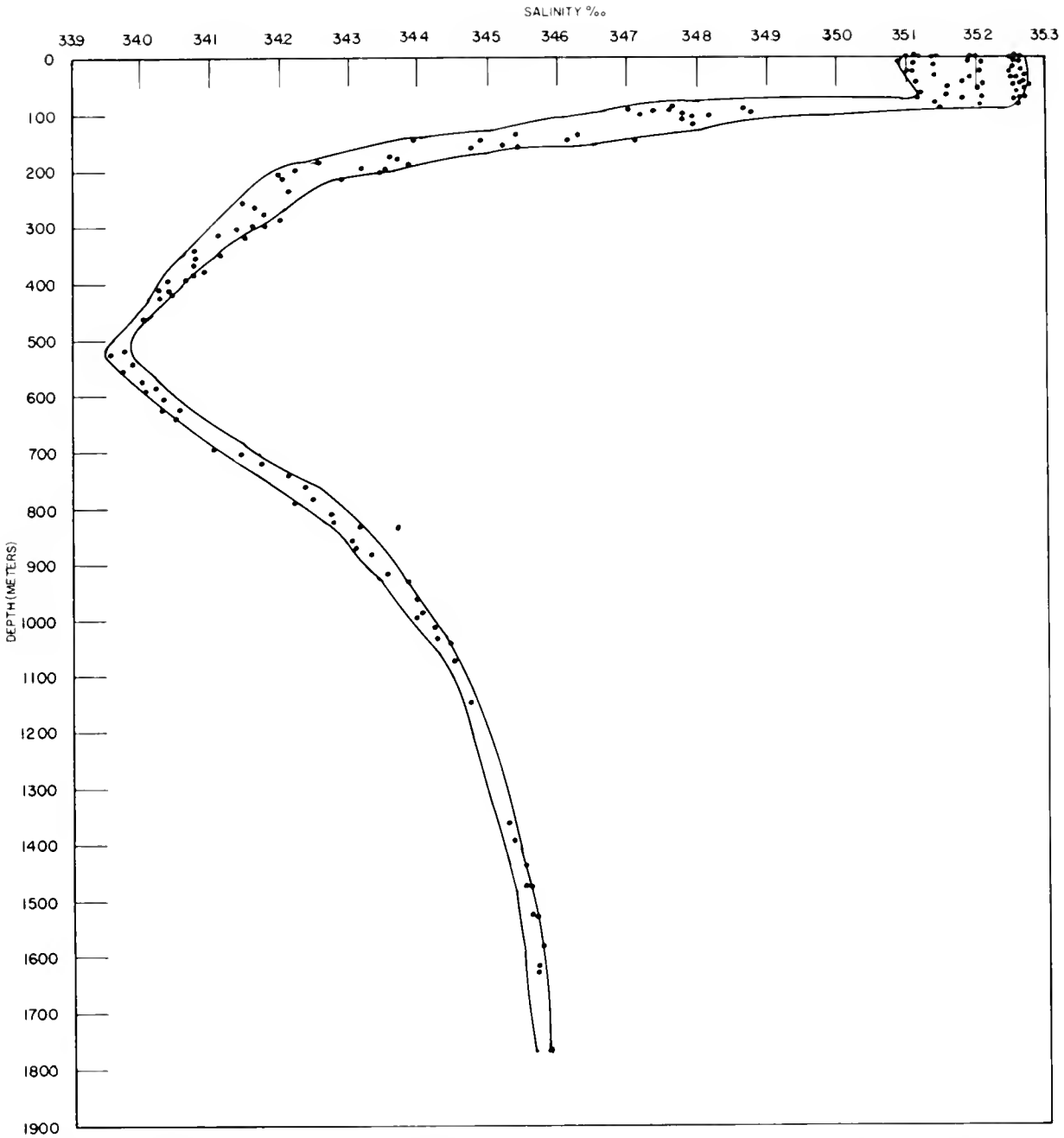

FIGURE 13. Envelope of salinity versus depth at oceanographic stations taken by USCGC WACHUSETT at Ocean Station NOVEMBER, 19 November–3 December 1966.

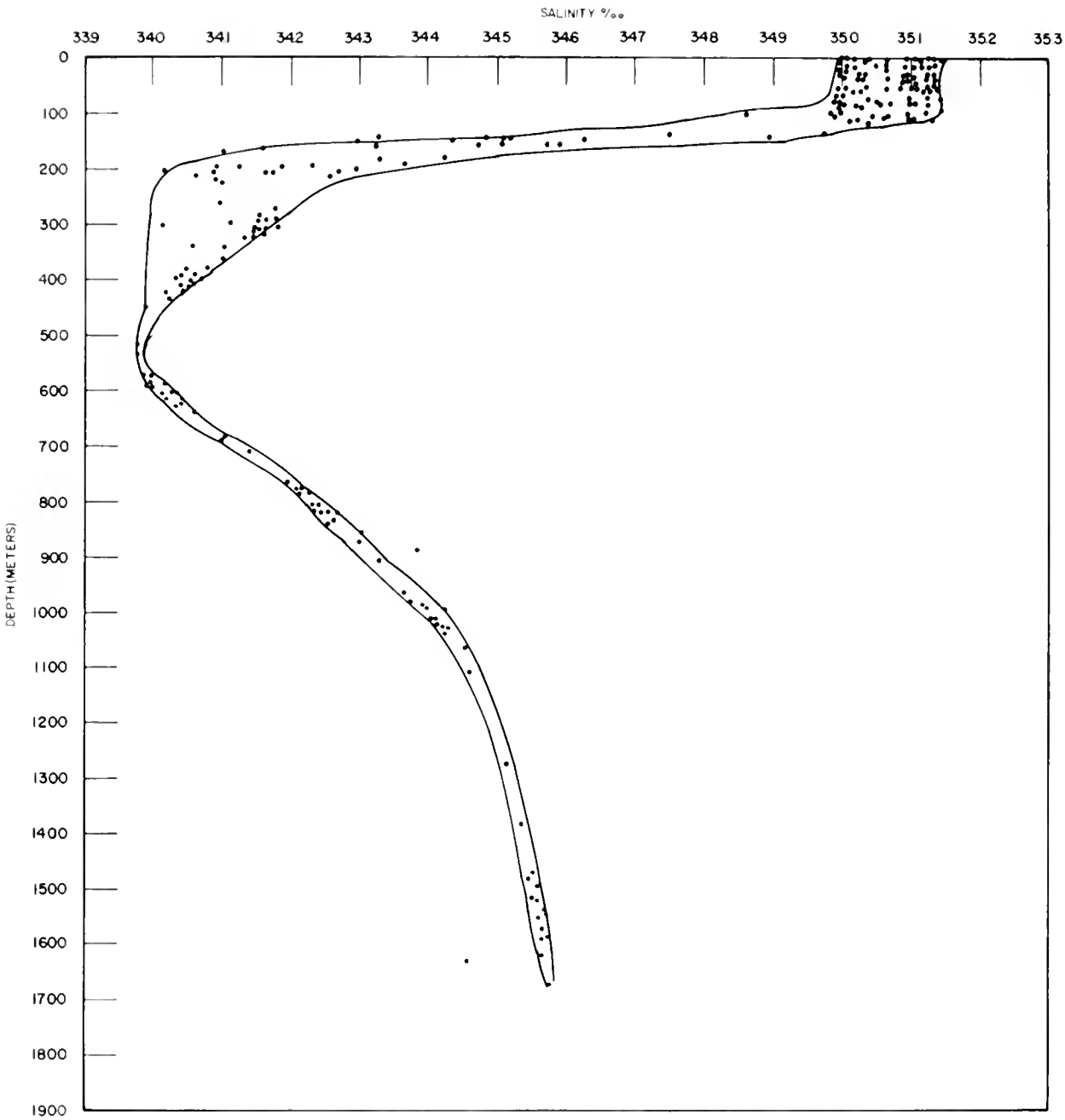

FIGURE 14. Envelope of salinity versus depth at oceanographic stations taken by USCGC GRESHAM at Ocean Station NOVEMBER, 10–28 February 1967.

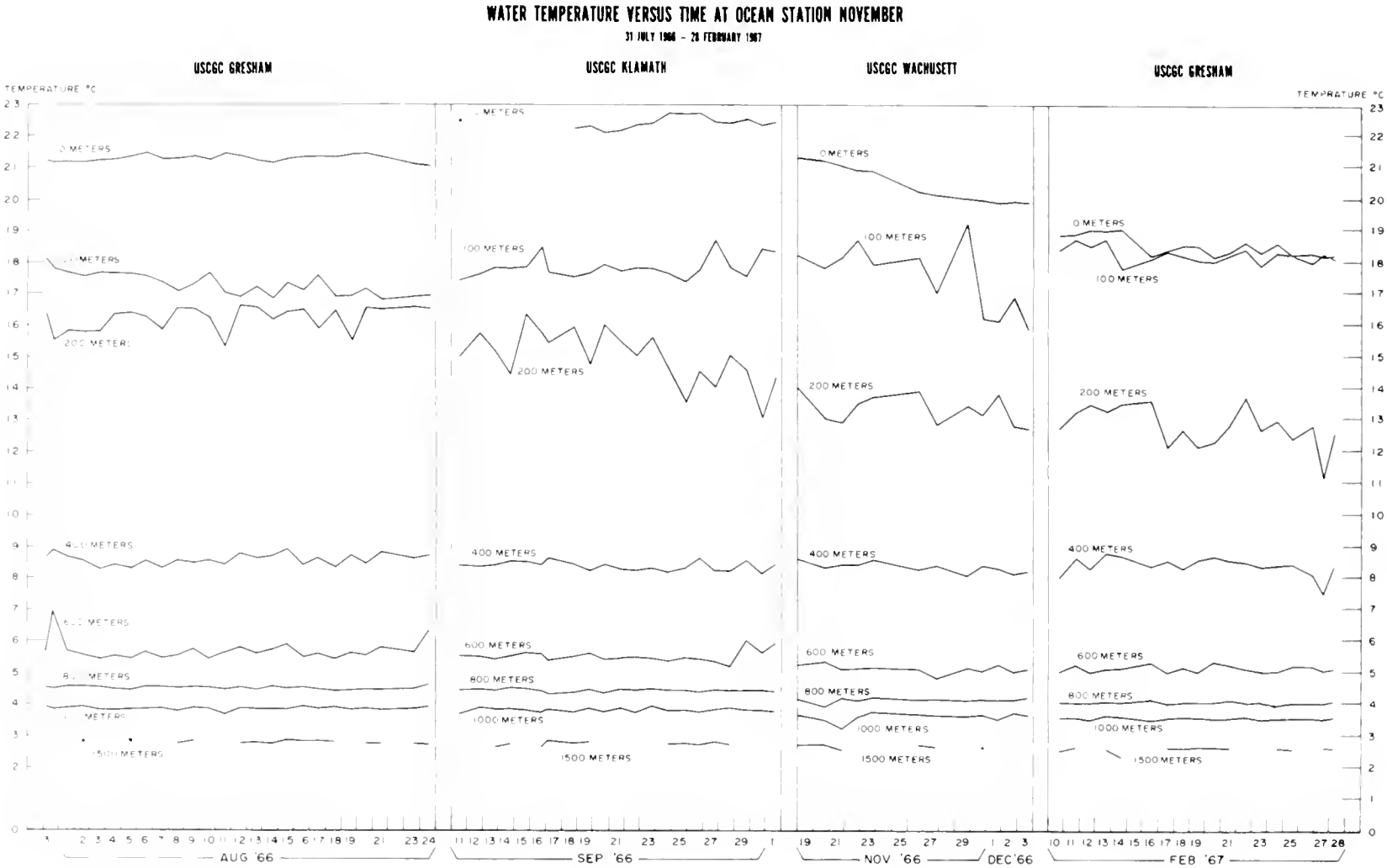

FIGURE 15. WATER TEMPERATURE VERSUS TIME AT OCEAN STATION NOVEMBER, 31 July 1966–28 February 1967.

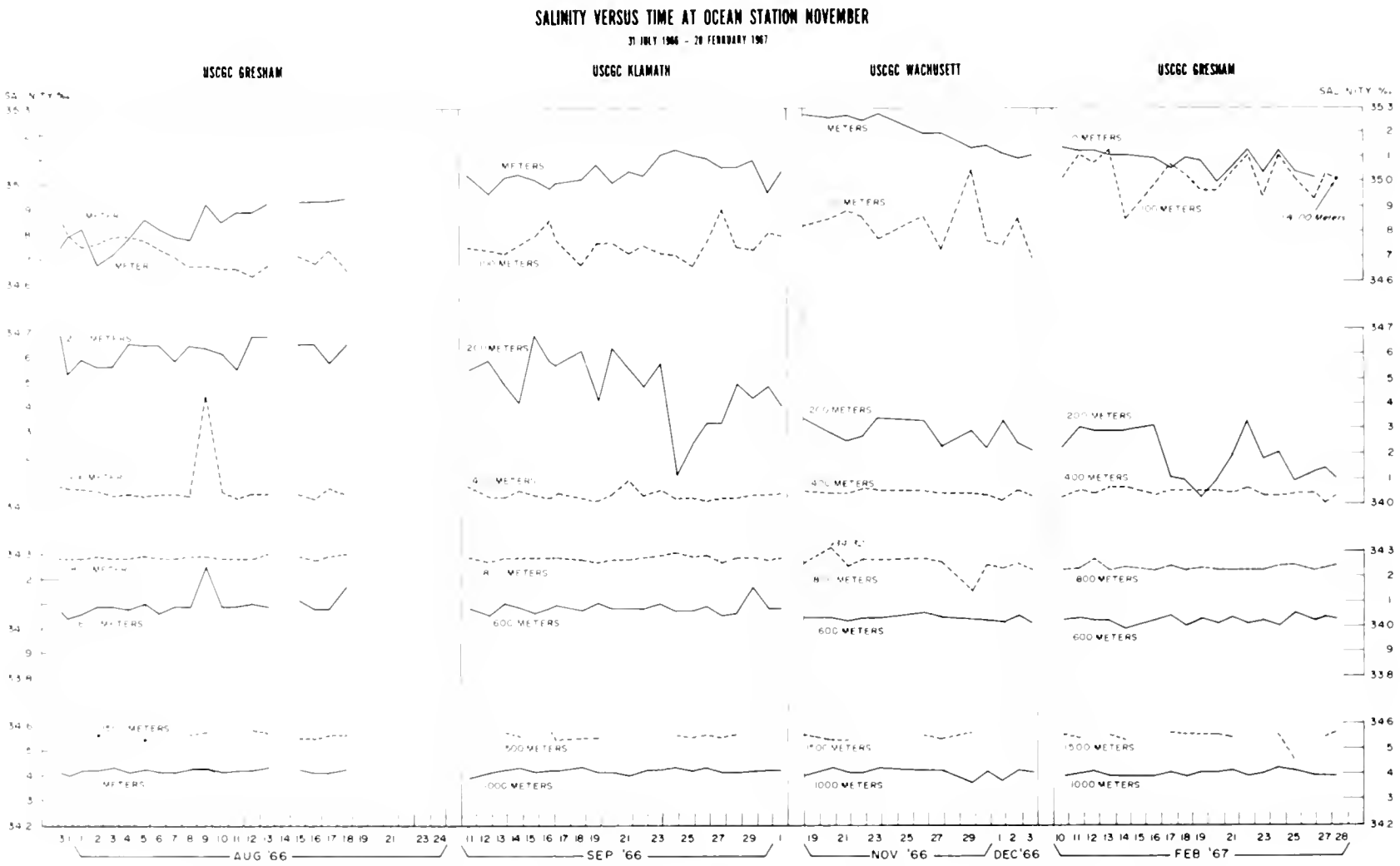

FIGURE 16. SALINITY VERSUS TIME AT OCEAN STATION NOVEMBER, 31 July 1966–28 February 1967.

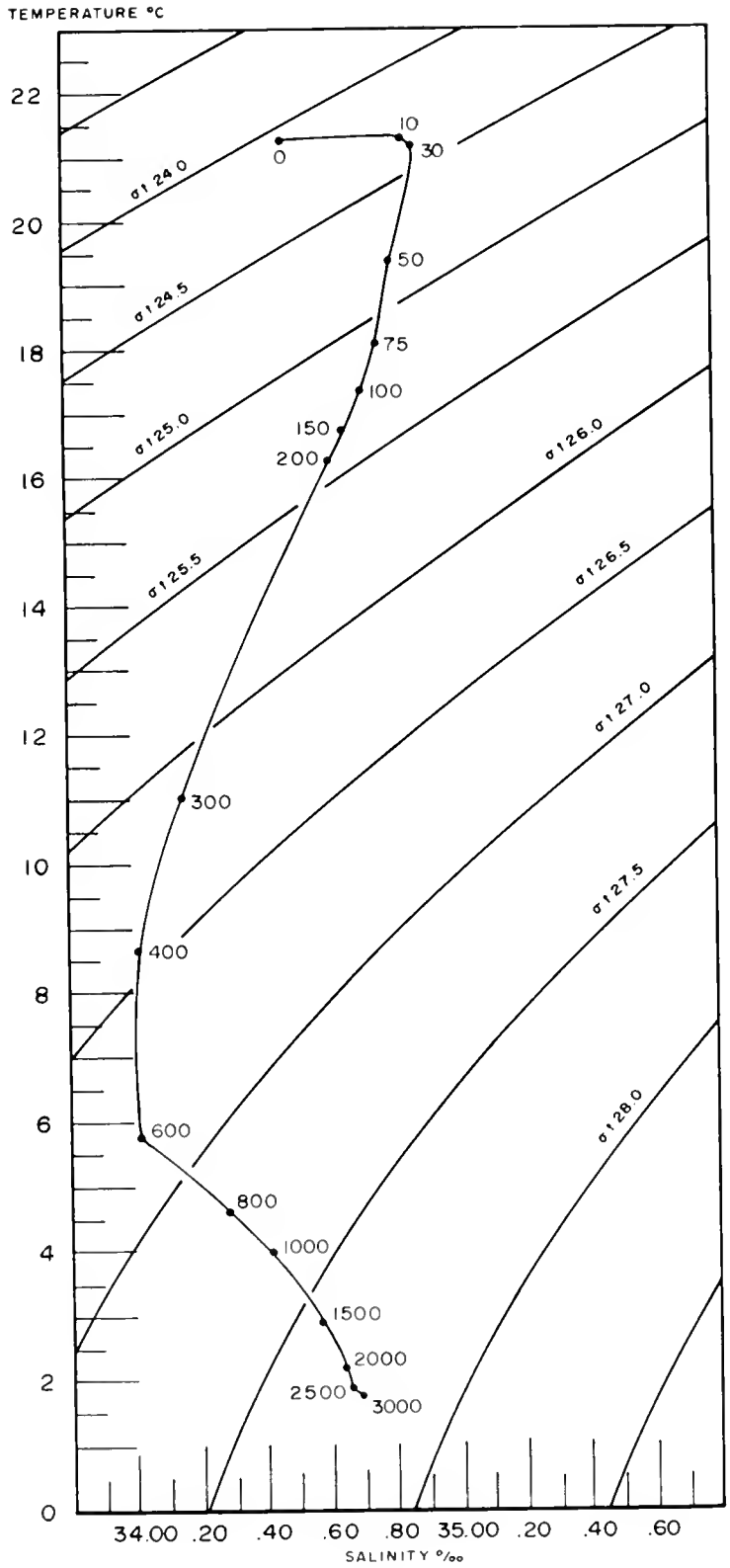

FIGURE 17. Mean temperature versus mean salinity at standard depth at oceanographic stations taken by USCGC GRESHAM at Ocean Station NOVEMBER, 31 July–24 August 1966.

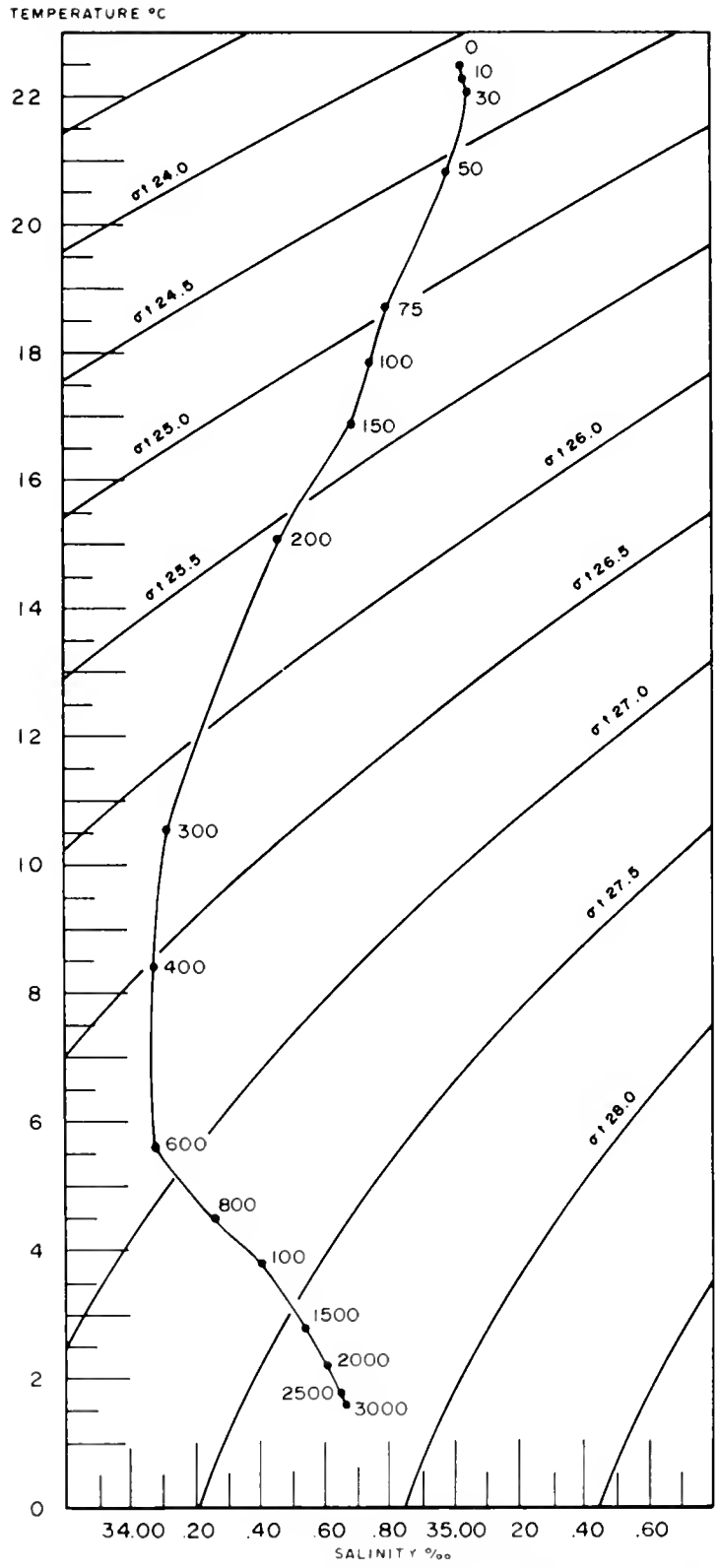

FIGURE 18. Mean temperature versus mean salinity at standard depths at Oceanographic stations taken by USCGC KLAMATH at Ocean Station NOVEMBER, 11 September–1 October 1966.

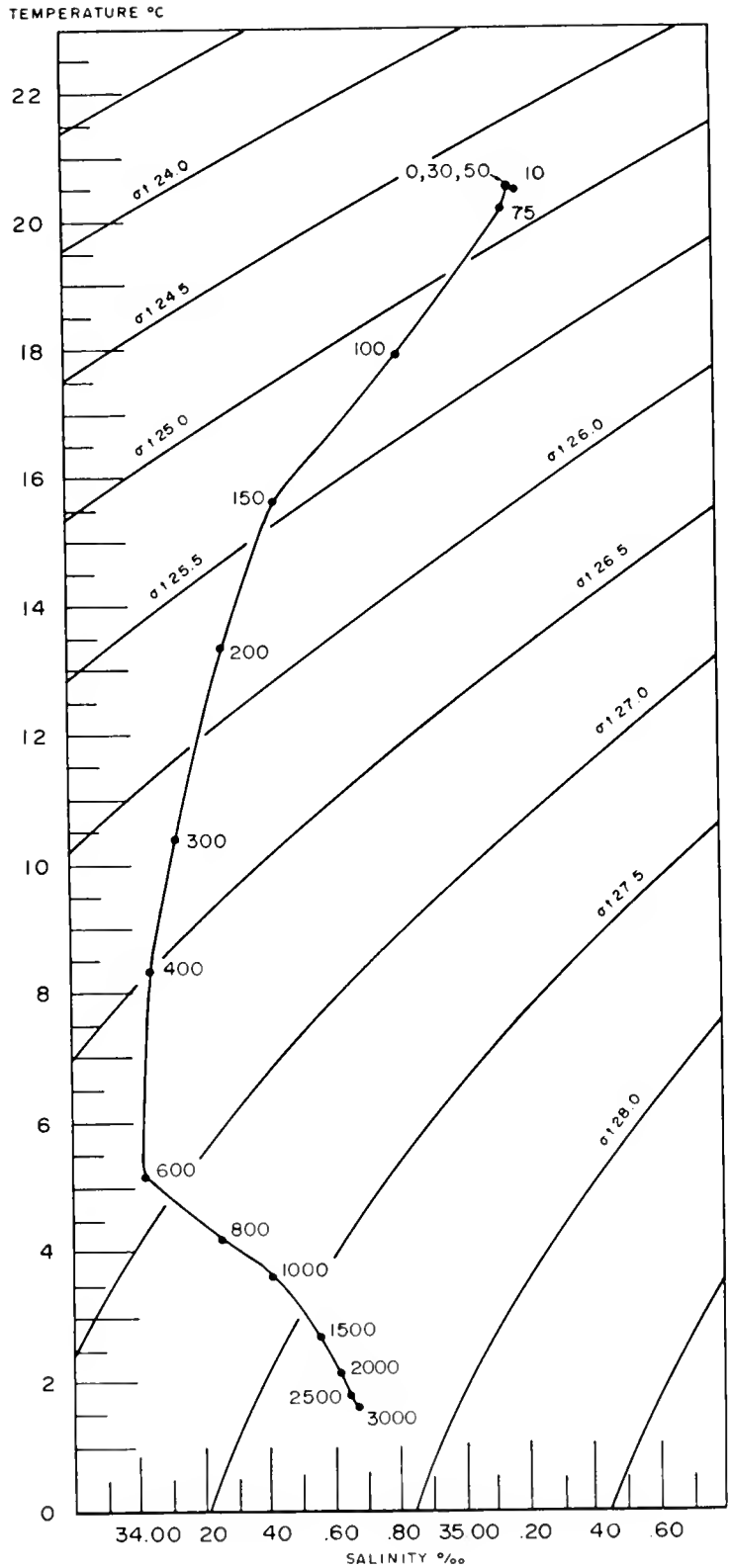

FIGURE 19. Mean temperature versus mean salinity at standard depths at oceanographic stations taken by USCGC WACHUSETT at Ocean Station NOVEMBER, 19 November–3 December 1966.

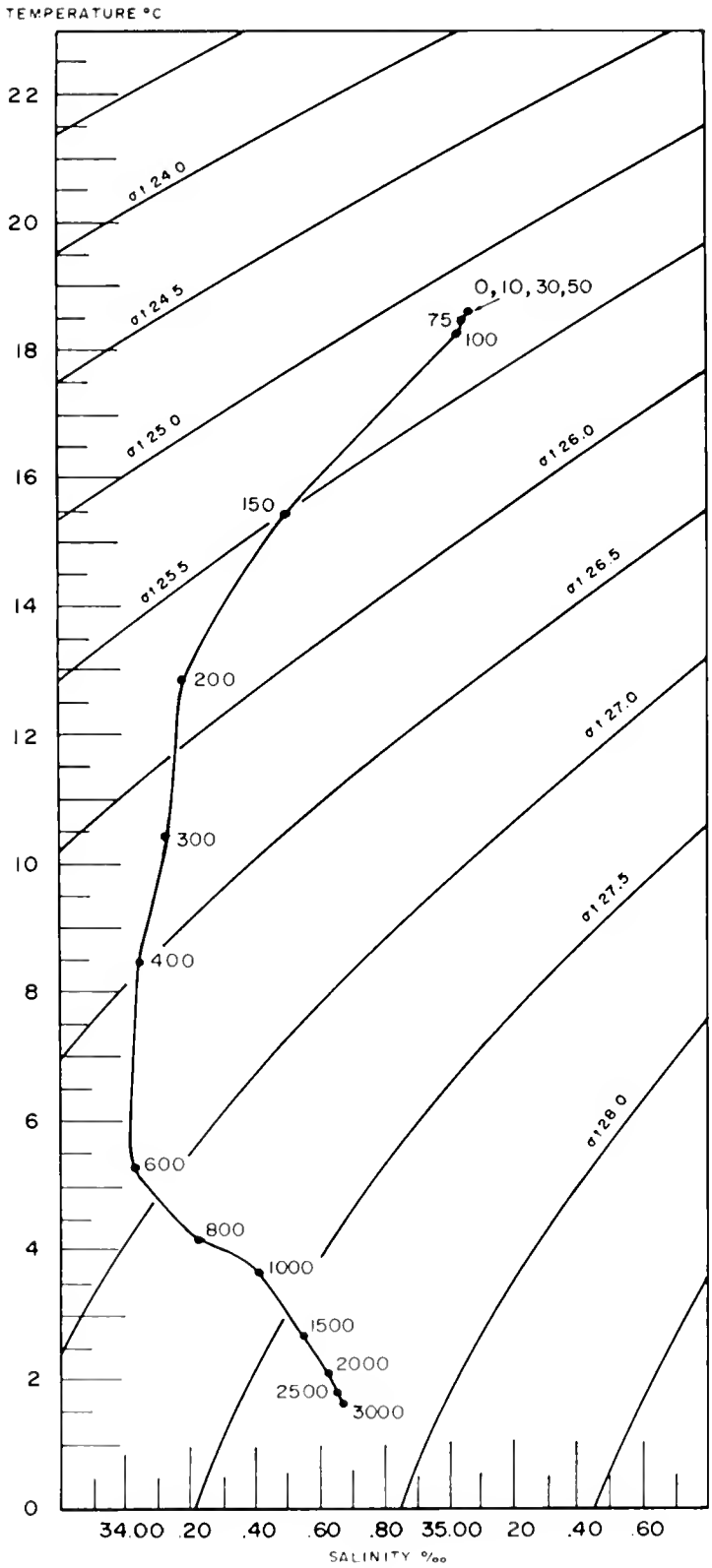

FIGURE 20. Mean temperature versus mean salinity at standard depths at oceanographic stations taken by USCGC GRESHAM at Ocean Station NOVEMBER, 10–28 February 1967.

Oceanographic Station Data

(76 Stations)

GH = USCGC GRESHAM
KL = USCGC KLAMATH
WC = USCGC WACHUSETT

Explanation of Oceanographic Station Data

A. Description of Entries, Units and Codes on NODC Station Listing

1. Surface Observations

Entry	*Description of Field*
NODC REF. ID. NO.	NODC reference identity number.
COUNTRY CODE	Indicates nationality of the institute or agency conducting the survey or expedition.
CRUISE NUMBER	A reference number assigned by NODC for storage-retrieval purposes. NODC Publication C–1, *Reference Sources of Oceanographic Station Data*, gives complete bibliographic and other pertinent information for each cruise.
SHIP CODE	Alphabetic representation of ship's name (or ICES numeric ship code).
LATITUDE	Degrees, minutes, and tenths of minutes, N or S.
LONGITUDE	Degrees, minutes, and tenths of minutes, E or W.
DRIFT INDICATOR	The letter D appears in this column if extensive drift occurred while on station.
MARSDEN SQUARE	
10°	Marsden square number according to the Marsden square system.
1°	The one-degree square number according to the Marsden square system.
STATION TIME (GMT)	Date and time given by the originator (GMT).
MONTH	Month (GMT).
DAY	Day (GMT).
HR. 1/10	GMT to nearest tenth of an hour.
YEAR	Year.
ORIGINATOR'S CRUISE NUMBER	Alphabetic or alpha-numeric designator as assigned by the originator. If the year of the cruise forms part of the cruise numbering system, the year digits are found in preceding field.
STATION NUMBER	Originator's station number or designator.
DEPTH TO BOTTOM	Corrected or uncorrected sounding depth in meters.
MAX. DEPTH OF SAMPLES	Depth of deepest sample in hundreds of meters to nearest hundred-meter interval.
WAVE OBSERVATIONS	
DIR.	Direction from which the dominant waves are coming, in tens of degrees, according to WMO Code 0885.
HGT.	Height of dominant waves according to WMO Code 1555.
PER.	Period of dominant waves according to WMO Code 3155.
SEA AMT.	Sea amount (sea state) according to WMO Code 3700 (preceded by the letter A).
WEATHER CODE	If preceded by the letter X, weather according to WMO Code 4501. A numeric two-digit entry indicates weather according to WMO Code 4677.
*INSTR./CLOUD	This field is used either for recording instrument code when electronically obtained data are being reported, or for reporting cloud type and cloud amount when conventional Nansen cast data are being reported.
*INSTR.	A two character code representing instrument package of system.
TYPE	Cloud type according to WMO Code 0500.

Entry	*Description of Field*
AMT.	Cloud amount according to WMO Code 2700.
NODC STATION NUMBER	Assigned by NODC for data storage and retrieval purposes. The NODC Reference Identity and Station numbers combined, uniquely define each station in the NODC archives.
*DT/*SU/D	This indicator specifies that the reported data have been obtained electronically rather than by Nansen-type casts. U (up) and D (down) are cast indicators for electronically obtained serial data and specify that the data were taken while hoisting or lowering respectively.
WATER COLOR	Water color according to Forel-Ule Code.
TRANS. (m)	Water transparency in meters as determined by Secchi disc.
WIND	
DIR.	Direction from which wind is blowing in tens of degrees, according to WMO Code 0877.
SPEED OR FORCE	If preceded by letter S, wind speed in knots; if preceded by letter F, wind force in Beaufort code.
BAROMETER (mbs)	Barometric pressure in millibars; tens, units, and tenths places only.
AIR TEMPERATURE °C	
DRY BULB	Dry bulb air temperature in degrees centigrade, to tenths.
WET BULB	Wet bulb air temperature in degrees centigrade, to tenths.
VIS. CODE	Visibility according to WMO Code 4300.
NUMBER OBS. LEVEL	The number of observed levels associated with the station.
SPECIAL OBSERVATIONS	Entries in this space vary with individual cruises or stations. Information concerning entries in this field can be requested from the NODC.

2. A complete description of the codes can be found in NODC publication M–2 (Rev. August 1964), "Processing Physical and Chemical Data Data From Oceanographic Stations."

TABLE I. Observed and interpolated oceanographic data for stations taken by USCGC GRESHAM at Ocean Station NOVEMBER, 31 July–24 August 1966, prepared from NODC listing No. 31–749 GH.

REFERENCE CRUISE NO.	REFERENCE STATION NO.	SHIP CODE	LATITUDE	LONGITUDE	MARSDEN SQUARE	STATION TIME (GMT) MO	DAY	HR	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	HGT	PER	SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	749	GH	3000 N	14000 W	123	00	07	31	032	1966	OSN	001		4389	14	04	1	4	X6	7	7	0018

WATER COLOR CODE	WATER TRANS. m	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbar)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	SIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	506	220	194	178	7	14	

MESSENGER TIME OF DAY HR	CAST NO.	BOTTLE TYPE	DEPTH m	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY $\times 10^7$	DYN. M. $\times 10^3$	SOUND VELOCITY	O2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2121	3474	2426	0036699	0000	15251								
032		OBS	0000	2121	34744	2426			15251								
		STD	0010	2121	3474	2426	0036764	0037	15252								
032		OBS	0010	2121	34740	2426			15252								
		STD	0020	2112	3483	2435	0035902	0073	15253								
032		OBS	0029	2103	34903	2443			15253								
		STD	0030	2096	3491	2446	0034957	0108	15251								
032		OBS	0049	1985	35004	2482			15225								
		STD	0050	1981	3500	2483	0031454	0175	15224								
032		OBS	0073	1894	34969	2503			15203								
		STD	0075	1887	3496	2504	0029519	0251	15202								
032		OBS	0098	1812	34886	2518			15183								
		STD	0100	1808	3488	2518	0028294	0323	15182								
		STD	0125	1759	3481	2525	0027737	0393	15171								
032		OBS	0149	1717	34756	2531			15162								
		STD	0150	1717	3476	2530	0027249	0462	15162								
032		OBS	T0199	1646	34699	2543			15148								
		STD	0200	1638	3469	2544	0026093	0596	15146								
		STD	0250	1293	3432	2590	0021756	0715	15039								
032		OBS	0295	1076	34117	2615			14968								
		STD	0300	1066	3411	2616	0019262	0818	14965								
032		OBS	T0385	0907	34077	2641			14921								
		STD	0400	0875	3408	2645	0016580	0997	14911								
		STD	0500	0691	3406	2671	0014156	1151	14857								
032		OBS	0582	0581	34043	2684			14826								
		STD	0600	0567	3407	2688	0012529	1284	14824								
		STD	0700	0499	3419	2706	0010893	1401	14814								
032		OBS	T0762	0466	34253	2714			14812								
		STD	0800	0453	3428	2718	0009763	1504	14813								
		STD	0900	0421	3435	2727	0008952	1598	14817								
032		OBS	T0964	0402	34388	2732			14820								
		STD	1000	0392	3441	2735	0008247	1684	14822								
		STD	1100	0365	3446	2741	0007637	1763	14828								
		STD	1200	0341	3449	2746	0007206	1838	14835								
		STD	1300	0319	3452	2751	0006795	1908	14843								
		STD	1400	0300	3454	2754	0006488	1974	14852								
032		OBS	T1441	0293	34547	2755			14856								

TABLE I.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH (HUNDREDS)	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	749	GH	2958 N	14003 W		087	90	07	31	165	1966	QSN	002	4572	14	03	2	5		X1	7	6	0019

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		09	S02	224	200	183	8	14	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S °/₀₀	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ△D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	CODE
		STD	0000	2114	3479	2431	0036205	0000	15249								
165		OBS	0000	2114	34787	2431			15249								
165		OBS	0009	2113	34794	2432			15251								
		STD	0010	2113	3480	2432	0036141	0036	15251								
		STD	0020	2112	3483	2435	0035919	0072	15253								
165		OBS	0028	2111	34855	2437			15254								
		STD	0030	2099	3488	2443	0035252	0108	15251								
165		OBS	0047	2002	35009	2478			15230								
		STD	0050	1984	3499	2482	0031602	0175	15225								
165		OBS	0070	1880	34907	2502			15198								
		STD	0075	1858	3489	2506	0029327	0251	15193								
165		OBS	0093	1792	34818	2517			15176								
		STD	0100	1779	3480	2519	0028194	0323	15173								
		STD	0125	1733	3473	2525	0027718	0393	15162								
165		OBS	0142	1701	34691	2529			15155								
		STD	0150	1694	3468	2530	0027270	0461	15154								
165		OBS	T0193	1601	34572	2544			15132								
		STD	0200	1552	3453	2551	0025374	0593	15117								
		STD	0250	1253	3426	2593	0021430	0710	15024								
165		OBS	0284	1103	34137	2612			14976								
		STD	0300	1066	3412	2617	0019189	0811	14966								
165		OBS	T0373	0915	34069	2639			14922								
		STD	0400	0889	3407	2642	0016870	0992	14916								
		STD	0500	0792	3405	2656	0015659	1154	14896								
		STD	0600	0695	3404	2669	0014504	1305	14874								
		STD	0700	0598	3402	2680	0013412	1445	14852								
165		OBS	0701	0597	34022	2681			14852								
165		OBS	T0746	0471	34229	2712			14811								
		STD	0800	0450	3428	2718	0009727	1561	14812								
		STD	0900	0414	3436	2728	0008794	1653	14814								
165		OBS	0939	0401	34383	2732			14816								
		STD	1000	0382	3440	2735	0008195	1738	14818								
		STD	1100	0356	3443	2740	0007745	1818	14824								
		STD	1200	0334	3446	2745	0007337	1893	14832								
		STD	1300	0316	3449	2749	0006973	1965	14841								
		STD	1400	0304	3452	2752	0006675	2033	14854								
165		OBS	T1426	0301	34529	2753			14857								

TABLE I.—Continued

REFERENCE: CARD CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	DATE CHANGE INDIC	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	749	GH	29580N	140030W		087	90	08	01	160	1966	05N	003	4023	14	09	2	5		X1	3	6		0020

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		08	S07	220	206	183	8	14	

MESSENGR TIME (HR 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{\Sigma \Delta O}{DTN \cdot M} \times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	DUC
		STD	0000	2116	3482	2433	0036026	0000	15250								
160		OBS	0000	2116	34819	2433			15250								
160		OBS	0009	2119	34815	2432			15253								
		STD	0010	2119	3482	2433	0036128	0036	15253								
		STD	0020	2117	3486	2436	0035820	0072	15254								
160		OBS	0028	2115	34901	2440			15256								
		STD	0030	2101	3493	2446	0034942	0107	15253								
160		OBS	0047	1998	35041	2482			15229								
		STD	0050	1986	3503	2484	0031362	0174	15226								
160		OBS	0070	1900	34941	2499			15204								
		STD	0075	1871	3490	2504	0029567	0250	15196								
160		OBS	0094	1779	34771	2517			15171								
		STD	0100	1763	3475	2519	0028185	0322	15167								
		STD	0125	1705	3468	2528	0027441	0392	15154								
160		OBS	0142	1676	34657	2533			15147								
		STD	0150	1670	3466	2534	0026897	0460	15147								
160		OBS	T0192	1639	34657	2541			15144								
		STD	0200	1582	3459	2549	0025587	0591	15127								
		STD	0250	1277	3428	2590	0021741	0709	15033								
160		OBS	0297	1072	34100	2614			14967								
		STD	0300	1066	3410	2616	0019336	0812	14965								
160		OBS	T0382	0905	34072	2640			14919								
		STD	0400	0868	3407	2646	0016522	0991	14908								
		STD	0500	0690	3405	2670	0014224	1145	14856								
160		OBS	0575	0591	34029	2682			14829								
		STD	0600	0571	3406	2687	0012654	1279	14825								
		STD	0700	0503	3418	2704	0011017	1398	14816								
160		OBS	0763	0468	34245	2714			14813								
		STD	0800	0454	3428	2718	0009775	1501	14813								
		STD	0900	0420	3435	2727	0008940	1595	14817								
160		OBS	T0956	0402	34389	2732			14819								
		STD	1000	0389	3442	2736	0008138	1680	14821								
		STD	1100	0361	3447	2743	0007516	1759	14827								
		STD	1200	0337	3450	2747	0007085	1832	14834								
		STD	1300	0317	3453	2752	0006697	1901	14842								
		STD	1400	0300	3454	2754	0006488	1967	14852								
160		OBS	T1436	0295	34542	2755			14856								

TABLE I.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	QUADRANT	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.	CODE	° ' 1/10	° ' 1/10		10°	1°	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	749	GH	29595N	140048W		087	90	08	02	161	1966	0SN	004	4480	15	07	2	5		X6	4	8		0021

WATER		WIND		BAROMETER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		06	S06	227	206	183	7	14	

MESSENGR TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY $=10^7$	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	SIC
		STD	0000	2116	3468	2423	0037046	0000	15249								
161		OBS	0000	2116	34678	2423			15249								
		STD	0010	2116	3468	2423	0037053	0037	15250								
161		OBS	0010	2116	34682	2423			15250								
		STD	0020	2113	3483	2435	0035941	0074	15253								
		STD	0030	2110	3492	2443	0035219	0109	15255								
161		OBS	0030	2110	34924	2443			15255								
161		OBS	0049	1932	34946	2492			15210								
		STD	0050	1926	3494	2493	0030529	0175	15208								
161		OBS	0074	1818	34829	2512			15180								
		STD	0075	1815	3483	2512	0028761	0249	15179								
161		OBS	0099	1754	34766	2522			15165								
		STD	0100	1752	3476	2523	0027828	0320	15164								
		STD	0125	1709	3471	2529	0027285	0389	15155								
		STD	0150	1665	3466	2536	0026732	0456	15145								
161		OBS	0151	1663	34662	2536			15145								
		STD	0200	1579	3456	2548	0025740	0587	15126								
161		OBS	T0203	1570	34553	2549			15124								
		STD	0250	1277	3430	2592	0021594	0706	15033								
		STD	0300	1049	3413	2621	0018823	0807	14960								
161		OBS	0304	1034	34118	2623			14955								
		STD	0400	0853	3406	2648	0016350	0983	14903								
161		OBS	T0404	0846	34054	2648			14901								
		STD	0500	0681	3407	2673	0013914	1134	14853								
		STD	0600	0556	3409	2691	0012247	1265	14820								
161		OBS	0608	0548	34090	2692			14818								
		STD	0700	0499	3419	2706	0010893	1380	14814								
		STD	0800	0454	3429	2719	0009701	1483	14813								
161		OBS	0806	0452	34292	2719			14814								
		STD	0900	0422	3436	2728	0008890	1576	14818								
		STD	1000	0392	3442	2736	0008174	1662	14823								
161		OBS	T1010	0389	34425	2736			14823								
		STD	1100	0365	3445	2741	0007711	1741	14828								
		STD	1200	0341	3448	2745	0007295	1816	14835								
		STD	1300	0320	3451	2749	0006910	1887	14843								
		STD	1400	0301	3453	2753	0006544	1954	14852								
		STD	1500	0286	3456	2757	0006221	2018	14863								
161		OBS	1513	0284	34566	2758			14865								

TABLE I.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO.	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S.	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.		NODC STATION NUMBER
31	749	GH	29596N	140022W		087	90	08	03	161	1966	QSN	005	4206	10	06	2	3		X2	6	8		0022

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		07	S09	230	200	183	7	13	

MESSENGR TIME or HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E8	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	2121	3472	2424	0036879	0000	15251								
161		OBS	0000	2121	34719	2424			15251								
161		OBS	0008	2120	34721	2425			15252								
		STD	0010	2119	3475	2427	0036637	0037	15252								
		STD	0020	2114	3487	2438	0035664	0073	15254								
		STD	0030	2108	3494	2445	0035054	0108	15255								
161		OBS	0032	2107	34944	2445			15255								
		STD	0050	1950	3491	2484	0031337	0175	15215								
161		OBS	0051	1943	34907	2486			15213								
		STD	0075	1830	3481	2507	0029240	0250	15184								
161		OBS	0078	1819	34808	2510			15181								
		STD	0100	1766	3479	2521	0027949	0322	15169								
161		OBS	0101	1764	34791	2522			15168								
		STD	0125	1720	3473	2528	0027420	0391	15159								
		STD	0150	1673	3467	2534	0026868	0459	15148								
161		OBS	0151	1671	34668	2535			15147								
		STD	0200	1580	3456	2547	0025762	0591	15126								
161		OBS	T0202	1574	34558	2549			15125								
		STD	0250	1266	3429	2593	0021458	0709	15029								
		STD	0300	1032	3410	2621	0018754	0809	14953								
161		OBS	0302	1024	34099	2623			14950								
		STD	0400	0829	3404	2650	0016116	0983	14893								
161		OBS	T0403	0824	34040	2651			14892								
		STD	0500	0665	3405	2674	0013849	1133	14846								
		STD	0600	0547	3409	2692	0012125	1263	14816								
161		OBS	0602	0545	34092	2692			14815								
		STD	0700	0496	3419	2706	0010856	1378	14813								
		STD	0800	0453	3428	2718	0009763	1481	14813								
161		OBS	T0804	0451	34288	2719			14813								
		STD	0900	0415	3436	2728	0008806	1574	14815								
		STD	1000	0384	3443	2737	0008004	1658	14819								
161		OBS	T1009	0382	34432	2737			14820								

TABLE I.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPT INDEX	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS STA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	749	GH	29598N	140025W		087	90	08	04	161	1966	OSN	006	4206	15	07	3	4		X2	6	8	0023

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		10	509	220	206	189	7	14	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at l	NO₃-N µg-at/l	SiO₄-Si µg-at.l	pH	SCC
		STD	0000	2123	3478	2429	0036468	0000	15252								
161		OBS	0000	2123	34783	2429			15252								
		STD	0010	2123	3479	2429	0036490	0036	15253								
161		OBS	0010	2123	34785	2429			15253								
		STD	0020	2121	3489	2437	0035725	0073	15256								
161		OBS	0029	2120	34917	2440			15257								
		STD	0030	2106	3490	2442	0035289	0108	15254								
161		OBS	0048	1904	34755	2484			15200								
		STD	0050	1894	3476	2487	0031054	0174	15197								
161		OBS	0073	1805	34771	2510			15176								
		STD	0075	1803	3478	2512	0028820	0249	15175								
161		OBS	0097	1772	34801	2521			15170								
		STD	0100	1763	3479	2522	0027894	0320	15168								
		STD	0125	1700	3469	2530	0027254	0389	15152								
161		OBS	0149	1659	34636	2535			15143								
		STD	0150	1659	3464	2535	0026775	0457	15143								
		STD	0200	1633	3465	2542	0026284	0589	15144								
161		OBS	T0201	1632	34647	2542			15144								
		STD	0250	1289	3430	2589	0021825	0710	15037								
161		OBS	0295	1062	34097	2616			14963								
		STD	0300	1050	3409	2618	0019134	0812	14959								
161		OBS	T0392	0857	34048	2646			14903								
		STD	0400	0841	3405	2649	0016247	0989	14898								
		STD	0500	0669	3406	2674	0013859	1139	14848								
161		OBS	0588	0560	34062	2688			14819								
		STD	0600	0552	3408	2691	0012262	1270	14818								
		STD	0700	0495	3419	2706	0010843	1386	14812								
161		OBS	T0778	0457	34265	2716			14811								
		STD	0800	0448	3428	2718	0009703	1488	14811								
		STD	0900	0412	3436	2729	0008770	1581	14813								
161		OBS	0975	0388	34407	2735			14817								
		STD	1000	0380	3441	2736	0008075	1665	14817								
		STD	1100	0353	3444	2741	0007621	1743	14823								
		STD	1200	0329	3447	2746	0007198	1817	14830								
		STD	1300	0310	3450	2750	0006828	1888	14839								
		STD	1400	0295	3453	2754	0006509	1954	14850								
161		OBS	T1458	0288	34546	2756			14857								

TABLE I.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	749	GH	29500N	140020W		087	90	08	05	161	1966	05N	007	4206	15	08	2	3		X1	3	7		0024

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		05	S02	217	200	183	7	14	

MESSENGR TIME OR HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	ΔD DYN M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P μg-at/l	TOTAL-P μg-at/l	NO₂-N μg-at/l	NO₃-N μg-at/l	SiO₄-Si μg-at/l	pH	ICC
		STD	0000	2135	3486	2431	0036253	0000	15256								
161		OBS	0000	2135	34856	2431			15256								
161		OBS	0009	2138	34853	2430			15258								
		STD	0010	2137	3486	2431	0036324	0036	15258								
		STD	0020	2131	3490	2435	0035901	0072	15258								
161		OBS	0029	2125	34902	2437			15258								
		STD	0030	2115	3489	2439	0035595	0108	15256								
161		OBS	0049	1966	34783	2470			15217								
		STD	0050	1962	3479	2472	0032503	0176	15217								
161		OBS	0074	1861	34837	2501			15193								
		STD	0075	1856	3483	2502	0029715	0254	15191								
161		OBS	0099	1763	34772	2521			15168								
		STD	0100	1760	3477	2521	0027970	0326	15167								
		STD	0125	1703	3468	2528	0027395	0395	15153								
		STD	0150	1662	3463	2534	0026912	0463	15144								
161		OBS	0151	1661	34627	2534			15144								
		STD	0200	1638	3464	2540	0026442	0597	15145								
161		OBS	T0203	1631	34643	2542			15143								
		STD	0250	1291	3432	2590	0021717	0717	15038								
		STD	0300	1030	3410	2622	0018721	0818	14952								
161		OBS	0303	1018	34088	2623			14948								
		STD	0400	0830	3404	2649	0016183	0993	14894								
161		OBS	T0403	0825	34033	2650			14892								
		STD	0500	0665	3405	2674	0013849	1143	14846								
		STD	0600	0545	3410	2693	0012025	1272	14815								
161		OBS	0607	0538	34103	2694			14814								
		STD	0700	0488	3420	2708	0010683	1386	14810								
		STD	0800	0443	3429	2720	0009568	1487	14809								
161		OBS	T0803	0442	34297	2720			14809								
		STD	0900	0411	3436	2729	0008758	1579	14813								
		STD	1000	0383	3442	2736	0008066	1663	14819								
161		OBS	T1010	0380	34426	2737			14819								
		STD	1100	0357	3445	2741	0007638	1741	14825								
		STD	1200	0334	3447	2745	0007264	1816	14832								
		STD	1300	0314	3450	2749	0006920	1887	14841								
		STD	1400	0297	3452	2753	0006607	1954	14851								
		STD	1500	0283	3454	2756	0006332	2019	14862								
161		OBS	1511	0282	34545	2756			14863								

TABLE I.—Continued

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	QUAD	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.		° ' 1/10	° ' 1/10		10°	1°	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	STA		TYPE	AMT		
31	749	GH	30035N	140015W		123	00	08	06	140	1966	05N	008	4389	14	07	2	4		X1	6	7		0025

WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		07	S06	217	206	183	8	14	

MESSENGR TIME OR HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S °/..	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2145	3482	2426	0036747	0000	15258								
140		OBS	0000	2145	34824	2426			15258								
140		OBS	0009	2144	34827	2426			15259								
		STD	0010	2143	3483	2427	0036685	0037	15259								
		STD	0020	2132	3488	2434	0036071	0073	15259								
140		OBS	0029	2122	34893	2437			15258								
		STD	0030	2117	3489	2438	0035647	0109	15256								
140		OBS	0048	2010	34851	2464			15230								
		STD	0050	1987	3484	2469	0032763	0177	15224								
140		OBS	0072	1808	34752	2508			15176								
		STD	0075	1802	3475	2510	0029000	0255	15175								
140		OBS	0096	1763	34755	2519			15167								
		STD	0100	1753	3474	2521	0028026	0326	15164								
		STD	0125	1703	3469	2529	0027323	0395	15153								
140		OBS	0146	1673	34661	2534			15147								
		STD	0150	1671	3466	2534	0026886	0463	15147								
140		OBS	T0197	1646	34665	2540			15147								
		STD	0200	1626	3464	2543	0026190	0595	15141								
		STD	0250	1324	3430	2582	0022504	0717	15049								
140		OBS	0292	1128	34117	2606			14986								
		STD	0300	1105	3411	2609	0019942	0823	14979								
140		OBS	T0388	0879	34054	2643			14910								
		STD	0400	0855	3405	2647	0016432	1005	14903								
		STD	0500	0686	3405	2671	0014153	1158	14855								
140		OBS	0584	0580	34044	2684			14826								
		STD	0600	0569	3406	2687	0012628	1292	14824								
		STD	0700	0505	3418	2704	0011042	1410	14816								
140		OBS	0773	0466	34252	2714			14813								
		STD	0800	0455	3428	2718	0009788	1515	14814								
		STD	0900	0418	3436	2728	0008842	1608	14816								
140		OBS	T0967	0395	34402	2734			14818								
		STD	1000	0385	3441	2736	0008149	1693	14820								
		STD	1100	0356	3444	2741	0007656	1772	14824								
		STD	1200	0331	3448	2746	0007199	1846	14831								
		STD	1300	0310	3451	2750	0006792	1916	14839								
		STD	1400	0294	3454	2754	0006439	1982	14850								
140		OBS	T1439	0289	34549	2756			14854								

TABLE I.—Continued

REFERENCE: CRUISE CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	QUAD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	749	GH	30000N	140030W		123	00	08	07	162	1966	05N	009	4206	15	08	3	3		X1	3	7		0026

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OF FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		06	S10	220	222	194	8	14	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	Σ Δ D DYN. M x 10^3	SOUND VELOCITY	O2 ml/l	PO4-P µg-at/l	TOTAL-P µg-at/l	NO2-N µg-at/l	NO3-N µg-at/l	SiO4-Si µg-at/l	pH	SSCO
		STD	0000	2126	3479	2429	0036474	0000	15253								
162		OBS	0000	2126	34793	2429			15253								
162		OBS	0009	2126	34798	2429			15254								
		STD	0010	2125	3481	2430	0036372	0036	15254								
		STD	0020	2119	3489	2438	0035668	0072	15255								
		STD	0030	2113	3492	2442	0035326	0108	15256								
162		OBS	0030	2113	34920	2442			15256								
162		OBS	0046	1946	34849	2481			15212								
		STD	0050	1935	3484	2483	0031474	0175	15210								
162		OBS	0074	1817	34788	2509			15179								
		STD	0075	1813	3478	2509	0029055	0250	15178								
162		OBS	0096	1741	34725	2522			15160								
		STD	0100	1732	3471	2523	0027760	0321	15158								
		STD	0125	1684	3465	2530	0027183	0390	15147								
162		OBS	0144	1659	34628	2534			15142								
		STD	0150	1657	3463	2535	0026798	0458	15143								
162		OBS	0192	1642	34640	2539			15145								
		STD	0200	1588	3458	2547	0025790	0589	15129								
		STD	0250	1293	3429	2588	0021975	0708	15038								
162		OBS	0288	1118	34142	2610			14982								
		STD	0300	1082	3413	2615	0019393	0812	14971								
162		OBS	T0384	0864	34046	2645			14904								
		STD	0400	0832	3405	2650	0016125	0989	14895								
		STD	0500	0660	3406	2675	0013743	1139	14844								
162		OBS	0579	0562	34061	2688			14818								
162		*STD	0600	0549	3409	2692	0012150	1268	14817								
		STD	0700	0495	3419	2706	0010843	1383	14812								
		OBS	0773	0462	34261	2715			14812								
		STD	0800	0453	3428	2718	0009763	1486	14813								
		STD	0900	0419	3435	2727	0008928	1580	14816								
162		OBS	T0967	0399	34396	2733			14820								
		STD	1000	0389	3441	2735	0008212	1665	14821								
		STD	1100	0362	3446	2742	0007602	1744	14827								
		STD	1200	0338	3450	2747	0007097	1818	14834								
		STD	1300	0317	3453	2752	0006697	1887	14842								
		STD	1400	0299	3455	2755	0006403	1952	14852								
162		OBS	T1469	0288	34554	2756			14859								

TABLE I.—Continued

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPL. INDCTR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	749	GH	30010N	140030W		123	00	08	08	162	1966	05N	010	4572	15	07	3	3		x1	3	6	0027

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		06	S21	210	211	200	7	14	

MISSING TIME OF CAST HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	QUAL CODE
		STD	0000	2126	3478	2428	0036539	0000	15253								
162		OBS	0000	2126	34784	2428			15253								
162		OBS	0009	2128	34790	2428			15255								
		STD	0010	2125	3479	2429	0036499	0037	15254								
		STD	0020	2098	3481	2438	0035670	0073	15249								
		STD	0030	2070	3484	2447	0034838	0108	15243								
162		OBS	0033	2062	34841	2450			15242								
		STD	0050	1864	3471	2491	0030693	0173	15188								
162		OBS	0051	1856	34707	2493			15186								
		STD	0075	1786	3476	2514	0028545	0247	15170								
162		OBS	0079	1774	34772	2518			15168								
		STD	0100	1708	3467	2526	0027503	0317	15150								
162		OBS	0102	1703	34659	2526			15149								
		STD	0125	1679	3465	2531	0027063	0386	15145								
		STD	0150	1660	3464	2535	0026772	0453	15144								
162		OBS	0152	1659	34642	2535			15144								
		STD	0200	1653	3464	2537	0026763	0587	15150								
162		OBS	T0204	1645	34644	2539			15148								
		STD	0250	1327	3433	2584	0022344	0710	15050								
		STD	0300	1071	3411	2615	0019349	0814	14967								
162		OBS	0305	1051	34097	2618			14961								
		STD	0400	0854	3404	2646	0016512	0993	14903								
162		OBS	T0406	0843	34038	2647			14900								
		STD	0500	0681	3404	2671	0014143	1146	14852								
		STD	0600	0555	3409	2691	0012227	1278	14819								
162		OBS	0608	0547	34091	2692			14817								
		STD	0700	0497	3419	2706	0010868	1394	14813								
		STD	0800	0450	3429	2719	0009653	1496	14812								
162		OBS	T0813	0444	34297	2720			14812								
		STD	0900	0412	3436	2729	0008770	1588	14813								
		STD	1000	0380	3443	2738	0007957	1672	14818								
162		OBS	T1020	0374	34439	2739			14819								
		STD	1100	0352	3446	2743	0007491	1749	14823								
		STD	1200	0327	3448	2747	0007086	1822	14829								
		STD	1300	0307	3451	2751	0006734	1891	14838								
		STD	1400	0290	3453	2754	0006421	1957	14848								
		STD	1500	0277	3456	2758	0006143	2020	14859								
162		OBS	T1535	0274	34567	2758			14864								

TABLE I.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE (1/10)	LONGITUDE (1/10)	QUADR.	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.		NODC STATION NUMBER
31	749	GH	29589N	140042W		087	90	08	09	162	1966	05N	011	4480	17	06	4	4		X2	6	8		0028

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	S18	230	206	189	7	14	

MESSENGR TIME (HR. 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-10^5	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2132	3492	2437	0035683	0000	15256								
162		OBS	0000	2132	34924	2437			15256								
		STD	0010	2135	3492	2436	0035801	0036	15258								
162		OBS	0013	2136	34924	2436			15259								
		STD	0020	2116	3482	2433	0036091	0072	15254								
		STD	0030	2074	3472	2437	0035765	0108	15243								
162		OBS	0034	2054	34695	2441			15238								
		STD	0050	1940	3470	2471	0032590	0176	15209								
162		OBS	0056	1902	34706	2481			15200								
		STD	0075	1795	3469	2507	0029285	0253	15172								
162		OBS	0087	1750	34675	2516			15161								
		STD	0100	1730	3467	2521	0028005	0325	15157								
162		OBS	0112	1713	3456Q	2516Q											
		STD	0125	1701	3467	2528	0027423	0394	15152								
		STD	0150	1678	3467	2533	0026980	0462	15149								
162		OBS	0168	1660	34661	2537			15147								
		STD	0200	1650	3463	2537	0026797	0597	15149								
162		OBS	T0227	1598													
		STD	0250	1434	3458	2581	0022654	0720	15088								
		STD	0300	1140	3453	2636	0017456	0821	14997								
162		OBS	0338	0973													
		STD	0400	0848	3444	2678	0013486	0975	14906								
162		OBS	T0446	0767													
		STD	0500	0693	3434	2693	0012078	1103	14861								
		STD	0600	0579	3425	2701	0011381	1220	14831								
162		OBS	0682	0508	34167	2703			14815								
		STD	0700	0499	3419	2706	0010893	1332	14814								
		STD	0800	0453	3429	2719	0009689	1435	14813								
162		OBS	T0899	0416	34366	2729			14815								
		STD	0900	0416	3437	2729	0008744	1527	14815								
		STD	1000	0390	3442	2736	0008150	1611	14822								
		STD	1100	0366	3446	2741	0007649	1690	14829								
162		OBS	T1129	0359	34472	2743			14831								
		STD	1200	0343	3450	2747	0007157	1764	14836								
		STD	1300	0321	3453	2751	0006745	1834	14844								
		STD	1400	0301	3456	2756	0006353	1899	14853								
		STD	1500	0282	3457	2758	0006115	1962	14862								
162		OBS	T1745	0241	34596	2764			14886								

TABLE I.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DRIFT INDEX	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	NO.	CODE	° 1/10	° 1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
31	749	GH	29574N	140032W		087	90	08	10	162	1966	OSN	012	4206	15	04	3	4		X1	6	7		0029

WATER			WIND		BARO-METER (mbar)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB			
		04	S15		224	211	194	7	14	

MESSENGR TIME OF CAST HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta O$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2121	3485	2434	0035946	0000	15252								
162		OBS	0000	2121	34848	2434			15252								
162		OBS	0008	2123	34847	2433			15254								
		STD	0010	2123	3485	2434	0036032	0036	15254								
		STD	0020	2123	3485	2434	0036043	0072	15256								
		STD	0030	2122	3485	2434	0036047	0108	15257								
162		OBS	0031	2122	34853	2434			15257								
162		OBS	0049	1936	34754	2476			15209								
		STD	0050	1928	3475	2478	0031940	0176	15207								
		STD	0075	1788	3470	2509	0029085	0252	15170								
162		OBS	0076	1785	34693	2509			15169								
162		OBS	0097	1774	34664	2510			15169								
		STD	0100	1764	3466	2512	0028840	0325	15167								
		STD	0125	1695	3466	2528	0027388	0395	15150								
162		OBS	0145	1662	34650	2535			15144								
		STD	0150	1662	3466	2536	0026689	0463	15144								
162		OBS	T0192	1660	34675	2538			15151								
		STD	0200	1612	3461	2544	0026099	0595	15137								
		STD	0250	1344	3428	2577	0023044	0717	15055								
162		OBS	0289	1173	34120	2598			15001								
		STD	0300	1137	3411	2604	0020511	0826	14991								
162		OBS	T0384	0894	34061	2641			14916								
		STD	0400	0857	3406	2647	0016404	1011	14904								
		STD	0500	0663	3406	2675	0013725	1162	14846								
162		OBS	0576	0559	34064	2689			14816								
		STD	0600	0545	3409	2692	0012100	1291	14815								
		STD	0700	0493	3420	2707	0010745	1405	14812								
162		OBS	0771	0462	34261	2715			14812								
		STD	0800	0452	3428	2718	0009751	1507	14812								
		STD	0900	0419	3435	2727	0008928	1601	14816								
162		OBS	T0970	0398	34397	2733			14820								
		STD	1000	0389	3441	2735	0008212	1686	14821								
		STD	1100	0362	3446	2742	0007602	1766	14827								
		STD	1200	0338	3450	2747	0007097	1839	14834								
		STD	1300	0317	3453	2752	0006697	1908	14842								
		STD	1400	0298	3455	2755	0006391	1973	14851								
162		OBS	T1481	0285	34555	2757			14860								

TABLE I.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DUPLICATE	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CRUISE CODE	CRUISE NO.	CODE	° ′ 1/10	° ′ 1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	749	GH	29585N	140010W		087	90	08	11	161	1966	QSN	013	4297	14	06	3	3		X2	6	8		0030

WATER		WIND			BARO-METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. cm	DIR.	SPEED OR FORCE			DRY BULB	WET BULB			
		03	S16		217	211	169	7	13	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY $\times 10^7$	$\Sigma\Delta$ DYN M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2144	3489	2431	0036272	0000	15258								
161		OBS	0000	2144	34886	2431			15258								
161		OBS	0008	2129	34882	2434			15256								
		STD	0010	2129	3488	2435	0035937	0036	15256								
		STD	0020	2127	3488	2435	0035925	0072	15257								
161		OBS	0027	2126	34884	2435			15258								
		STD	0030	2107	3487	2440	0035532	0108	15253								
161		OBS	0043	2016	34794	2458			15230								
		STD	0050	1943	3475	2474	0032324	0176	15211								
161		OBS	0067	1808	34681	2503			15174								
		STD	0075	1771	3467	2511	0028871	0252	15165								
161		OBS	0088	1723	34664	2522			15153								
		STD	0100	1700	3466	2527	0027372	0322	15148								
		STD	0125	1667	3466	2535	0026721	0390	15142								
161		OBS	0130	1663	34660	2536			15141								
		STD	0150	1664	3468	2537	0026582	0457	15145								
161		OBS	T0174	1664	34686	2538			15149								
		STD	0200	1533	3455	2557	0024821	0585	15111								
		STD	0250	1306	3434	2589	0021861	0702	15043								
		STD	0300	1112	3417	2613	0019626	0806	14983								
161		OBS	T0338	0986	34078	2628			14942								
		STD	0400	0845	3403	2647	0016448	0986	14899								
		STD	0500	0668	3401	2670	0014186	1139	14847								
161		OBS	0508	0656	34008	2672			14843								
		STD	0600	0568	3409	2690	0012393	1272	14824								
161		OBS	T0686	0502	34173	2704			14813								
		STD	0700	0495	3419	2706	0010843	1388	14812								
		STD	0800	0445	3428	2719	0009667	1491	14810								
161		OBS	0868	0416	34336	2726			14810								
		STD	0900	0403	3436	2730	0008663	1582	14810								
		STD	1000	0369	3442	2738	0007901	1665	14813								
		STD	1100	0341	3447	2745	0007281	1741	14818								
		STD	1200	0322	3451	2750	0006835	1812	14828								
		STD	1300	0309	3453	2752	0006603	1879	14839								
161		OBS	T1355	0305	34534	2753			14847								

TABLE I.—Continued

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD INDEX	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	749	GH	29590N	140020W		087	90	08	12	162	1966	QSN	014	4572	17	05	4	3		X2	6	8		0031

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		05	S18	213	211	194	8	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY $\times 10^7$	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at l	pH	SCC
		STD	0000	2137	3489	2433	0036096	0000	15257								
162		OBS	0000	2137	34885	2433			15257								
		STD	0010	2132	3489	2434	0036002	0036	15257								
162		OBS	0013	2130	34885	2434			15257								
		STD	0020	2126	3489	2436	0035853	0072	15257								
		STD	0030	2121	3490	2438	0035696	0108	15258								
162		OBS	0034	2119	34901	2439			15258								
		STD	0050	1901	3475	2485	0031296	0175	15199								
162		OBS	0057	1831	34706	2499			15180								
		STD	0075	1751	3466	2515	0028480	0249	15159								
162		OBS	0088	1710	34635	2523			15148								
		STD	0100	1690	3463	2527	0027386	0319	15144								
162		OBS	0114	1672	34624	2531			15141								
		STD	0125	1671	3464	2533	0026963	0387	15143								
		STD	0150	1668	3467	2536	0026755	0454	15146								
162		OBS	0171	1665	34684	2537			15149								
		STD	0200	1661	3468	2538	0026714	0588	15152								
162		OBS	0228	1657	34666	2538			15156								
		STD	0250	1502	3452	2562	0024525	0716	15110								
		STD	0300	1206	3425	2601	0020744	0829	15016								
162		OBS	0341	1020	34103	2624			14955								
		STD	0400	0880	3405	2643	0016842	1017	14913								
162		OBS	T0452	0774	34024	2657			14881								
		STD	0500	0703	3405	2669	0014376	1173	14861								
		STD	0600	0581	3410	2689	0012488	1308	14830								
162		OBS	0681	0506	34162	2703			14813								
		STD	0700	0497	3418	2705	0010942	1425	14813								
		STD	0800	0453	3428	2718	0009763	1528	14813								
		STD	0900	0416	3436	2728	0008818	1621	14815								
162		OBS	T0906	0414	34368	2729			14815								
		STD	1000	0388	3442	2736	0008126	1706	14821								
		STD	1100	0362	3446	2742	0007602	1785	14827								
162		OBS	T1134	0354	34477	2744			14830								
		STD	1200	0338	3450	2747	0007097	1858	14834								
		STD	1300	0316	3453	2752	0006686	1927	14842								
		STD	1400	0296	3456	2756	0006293	1992	14851								
		STD	1500	0278	3458	2759	0005994	2053	14860								
162		OBS	T1739	0241	34591	2763			14885								

TABLE I.—Continued

REFERENCE CTRY CODE	REFERENCE NO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	749	GH	29583N	140021W		087	90	08	13	162	1966	05N	015	4480	16	05	4	4		X6	6	8		0032

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		05	S14	224	211	183	7	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2121	3492	2439	0035440	0000	15253								
162		OBS	0000	2121	34918	2439			15253								
		STD	0010	2124	3494	2440	0035431	0035	15255								
162		OBS	0010	2124	34935	2440			15255								
		STD	0020	2123	3493	2440	0035497	0071	15257								
		STD	0030	2122	3492	2439	0035554	0106	15258								
162		OBS	0034	2122	34919	2439			15259								
		STD	0050	1948	3475	2473	0032447	0174	15212								
162		OBS	0053	1922	34729	2478			15205								
		STD	0075	1810	3467	2501	0029783	0252	15176								
162		OBS	0083	1777	34665	2509			15168								
		STD	0100	1720	3467	2523	0027776	0324	15154								
162		OBS	0104	1709	34672	2526			15151								
		STD	0125	1686	3467	2531	0027068	0393	15148								
		STD	0150	1667	3467	2536	0026726	0460	15146								
162		OBS	0156	1664	34671	2537			15146								
		STD	0200	1657	3468	2538	0026629	0593	15151								
162		OBS	T0209	1656	34677	2539			15152								
		STD	0250	1366	3439	2581	0022677	0717	15064								
		STD	0300	1099	3415	2614	0019543	0822	14978								
162		OBS	0310	1057	34115	2618			14964								
		STD	0400	0866	3405	2645	0016624	1003	14907								
162		OBS	T0411	0845	34045	2648			14901								
		STD	0500	0691	3405	2670	0014208	1157	14856								
		STD	0600	0562	3409	2690	0012316	1290	14822								
162		OBS	0623	0539	34101	2694			14817								
		STD	0700	0495	3420	2707	0010769	1405	14813								
		STD	0800	0447	3430	2720	0009543	1507	14811								
162		OBS	T0816	0440	34313	2722			14811								
		STD	0900	0413	3437	2729	0008708	1598	14814								
		STD	1000	0383	3443	2737	0007992	1682	14819								
162		OBS	T1018	0378	34438	2738			14820								
		STD	1100	0356	3448	2744	0007383	1758	14825								
		STD	1200	0332	3452	2749	0006879	1830	14832								
		STD	1300	0312	3454	2753	0006565	1897	14840								
		STD	1400	0294	3456	2756	0006270	1961	14850								
		STD	1500	0279	3457	2758	0006079	2023	14860								
162		OBS	T1552	0272	34572	2759			14866								

TABLE I.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BDTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	749	GH	29597N	140000W		087	90	08	14	165	1966	QSN	016	4389	17	05	4	4		X5	6	5		0033

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		06	S15	220	217	200	7	14	

MISSENGR TIME OF DAY HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2116													
165		OBS	0000	2116													
		STD	0010	2118													
165		OBS	0013	2119													
		STD	0020	2119													
		STD	0030	2118													
165		OBS	0041	2117													
		STD	0050	1926													
165		OBS	0055	1846													
		STD	0075	1759													
165		OBS	0083	1731													
		STD	0100	1685													
165		OBS	0109	1667													
		STD	0125	1666													
		STD	0150	1663													
165		OBS	0163	1662													
		STD	0200	1629													
165		OBS	T0218	1590													
		STD	0250	1387													
		STD	0300	1130													
165		OBS	0330	1012													
		STD	0400	0873													
165		OBS	T0435	0811													
		STD	0500	0706													
		STD	0600	0576													
165		OBS	0667	0512													
		STD	0700	0497													
		STD	0800	0454													
165		OBS	T0874	0426													
		STD	0900	0418													
		STD	1000	0387													
165		OBS	T1090	0362													
		STD	1100	0359													
		STD	1200	0334													
		STD	1300	0312													
		STD	1400	0292													
		STD	1500	0275													
165		OBS	T1682	0251													

TABLE I.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° '1/10	DATE MARSDEN SQUARE 10°	DATE MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	749	GH	29590N	140010W	087	90	08	15	162	1966	QSN	017	4297	18	06	3	4		X5	6	8	0034

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		05	S15	200	211	194	7	14	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	S Δ D DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2126	3493	2439	0035505	0000	15254								
162		OBS	0000	2126	34927	2439			15254								
		STD	0010	2127	3493	2438	0035567	0036	15256								
162		OBS	0014	2127	34926	2438			15257								
		STD	0020	2127	3493	2438	0035598	0071	15258								
		STD	0030	2126	3493	2439	0035613	0107	15259								
162		OBS	0038	2125	34926	2439			15260								
		STD	0050	1976	3478	2468	0032924	0175	15220								
162		OBS	0061	1873	34693	2487			15192								
		STD	0075	1818	3473	2504	0029536	0253	15179								
162		OBS	0092	1759	34738	2519			15165								
		STD	0100	1733	3471	2523	0027783	0325	15158								
162		OBS	0120	1683	34650	2530			15146								
		STD	0125	1682	3465	2531	0027131	0394	15146								
		STD	0150	1674	3466	2533	0026985	0461	15148								
162		OBS	0179	1660	34663	2537			15149								
		STD	0200	1644	3465	2540	0026509	0595	15147								
162		OBS	T0238	1614	34590	2542			15143								
		STD	0250	1534	3452	2555	0025206	0724	15120								
		STD	0300	1242	3428	2597	0021199	0840	15029								
162		OBS	0358	0987	34090	2628			14946								
		STD	0400	0892	3405	2641	0017031	1031	14917								
162		OBS	T0478	0742	34012	2660			14872								
		STD	0500	0712	3403	2666	0014651	1190	14864								
		STD	0600	0591	3411	2688	0012545	1326	14834								
		STD	0700	0499	3420	2706	0010819	1443	14814								
162		OBS	0725	0480	34217	2710			14811								
		STD	0800	0449	3429	2719	0009641	1545	14811								
		STD	0900	0412	3437	2729	0008696	1637	14814								
162		OBS	T0966	0392	34409	2735			14817								
		STD	1000	0385	3442	2736	0008090	1721	14820								
		STD	1100	0363	3445	2741	0007687	1799	14827								
		STD	1200	0343	3448	2745	0007304	1874	14836								
162		OBS	T1213	0340	34487	2746			14837								
		STD	1300	0323	3451	2749	0006916	1946	14845								
		STD	1400	0304	3453	2753	0006609	2013	14854								
		STD	1500	0287	3455	2756	0006321	2078	14864								
		STD	1750	0246	3459	2763	0005674	2228	14889								
162		OBS	T1833	0234	34595	2764			14898								

TABLE I.—Continued

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH INDICA	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR, 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.		NODC STATION NUMBER
31	749	GH	2959°0N	140022W		087	90	08	16	162	1966	05N	018	4297	15	01	3	6		X5	6	7		0035

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		05	S14	217	217	200	7	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—10^5	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2134	3493	2437	0035706	0000	15256								
162		OBS	0000	2134	34928	2437			15256								
162		OBS	0009	2135	34929	2436			15258								
		STD	0010	2135	3493	2436	0035762	0036	15258								
		STD	0020	2136	3493	2436	0035811	0072	15260								
		STD	0030	2136	3493	2436	0035858	0107	15262								
162		OBS	0032	2136	34929	2436			15262								
		STD	0050	1948	3474	2472	0032519	0176	15212								
162		OBS	0051	1939	34730	2473			15210								
		STD	0075	1796	3475	2511	0028873	0252	15173								
162		OBS	0078	1782	34753	2515			15169								
		STD	0100	1710	3468	2526	0027475	0323	15151								
162		OBS	0101	1707	34676	2527			15150								
		STD	0125	1681	3466	2532	0027043	0391	15146								
		STD	0150	1662	3466	2536	0026694	0458	15144								
162		OBS	0151	1661	34655	2536			15144								
		STD	0200	1649	3465	2539	0026622	0592	15149								
162		OBS	T0200	1649	34651	2539			15149								
		STD	0250	1304	3432	2588	0021969	0713	15042								
		STD	0300	1054	3411	2618	0019056	0816	14961								
162		OBS	0303	1042	34098	2620			14957								
		STD	0400	0841	3403	2647	0016358	0993	14898								
162		OBS	T0403	0835	34032	2648			14896								
		STD	0500	0673	3405	2673	0013936	1144	14849								
		STD	0600	0552	3408	2690	0012299	1275	14818								
162		OBS	0607	0545	34077	2691			14816								
		STD	0700	0498	3418	2705	0010955	1392	14814								
		STD	0800	0455	3427	2717	0009862	1496	14814								
162		OBS	T0813	0450	34284	2719			14814								
		STD	0900	0422	3435	2727	0008964	1590	14818								
		STD	1000	0392	3441	2735	0008247	1676	14822								
162		OBS	1018	0387	34416	2736			14823								
		STD	1100	0365	3444	2740	0007800	1756	14828								
		STD	1200	0341	3447	2744	0007383	1832	14835								
		STD	1300	0319	3449	2748	0006994	1904	14843								
		STD	1400	0300	3452	2752	0006635	1972	14852								
		STD	1500	0284	3455	2756	0006308	2037	14862								
162		OBS	T1540	0278	34558	2757			14866								

TABLE I.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT OF GLOBE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	749	GH	29588N	140035W		087	90	08	17	155	1966	OSN	019	4389	37	05	3	4		X1	6	7	0036

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		05	S24	220	217	189	7	18	

MESSENGER TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	pH	NODC
		STD	0000	2135	3493	2436	0035754	0000	15257								
132		OBS	0000	2135	34925	2436			15257								
132		OBS	0009	2137	34926	2436			15259								
		STD	0010	2137	3493	2436	0035836	0036	15259								
		STD	0020	2137	3493	2436	0035852	0072	15260								
		STD	0030	2136	3493	2436	0035868	0107	15262								
132		OBS	0030	2136	34928	2436			15262								
132		OBS	0047	2006													
		STD	0050	1977	3478	2467	0032948	0176	15221								
132		OBS	0073	1821	34718	2502			15180								
		STD	0075	1817	3472	2503	0029585	0454	15179								
132		OBS	0095	1777	34754	2516			15171								
		STD	0100	1759	3473	2518	0028237	0527	15166								
		STD	0125	1691	3466	2529	0027269	0396	15149								
132		OBS	0141	1663	34636	2534			15143								
		STD	0150	1662	3466	2536	0026691	0464	15144								
132		OBS	0188	1657	34663	2538			15149								
		STD	0200	1590	3457	2546	0025907	0595	15130								
		STD	0250	1341	3427	2576	0023057	0717	15054								
132		OBS	0282	1206	34140	2593			15012								
		STD	0300	1145	3413	2604	0020508	0826	14994								
132		OBS	T0375	0924	34077	2638			14925								
		STD	0400	0868	3407	2646	0016515	1012	14908								
		STD	0500	0680	3404	2671	0014166	1165	14852								
132		OBS	0558	0598	34016	2680			14829								
		STD	0600	0561	3408	2690	0012377	1298	14821								
		STD	0700	0490	3420	2707	0010708	1413	14811								
132		OBS	T0733	0471	34235	2712			14809								
		STD	0800	0448	3429	2719	0009629	1515	14811								
		STD	0900	0415	3436	2728	0008806	1607	14815								
132		OBS	T0924	0408	34376	2730			14816								
		STD	1000	0389	3441	2735	0008212	1692	14821								
		STD	1100	0365	3444	2740	0007785	1772	14828								
		STD	1200	0342	3448	2745	0007292	1847	14836								
		STD	1300	0321	3451	2750	0006892	1918	14844								
		STD	1400	0301	3454	2754	0006500	1985	14853								
132		OBS	T1417	0298	34542	2754			14854								
		STD	1500	0282	3456	2757	0006188	2049	14861								
		STD	1750	0241	3460	2764	0005541	2195	14887								
		STD	2000	0209	3463	2769	0005048	2328	14916								
155		OBS	2032	0206	34632	2769			14920								
		STD	2500	0174	3465	2773	0004652	2570	14986								
155		OBS	T2595	0170	34652	2774			15001								
		STD	3000	0165	3467	2776	0004549	2800	15069								
155		OBS	T3137	0163	34672	2776			15092								
155		OBS	T3696	0149	34689	2778			15184								

TABLE I.—Continued

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	DEPTH BLOCK	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	NO.		° 1/10	° 1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
31	749	GH	29590N	140033W		087	90	08	18	163	1966	OSN	020	4572	15	06	3	4		X5	6	7		0037

WATER		WIND		BAROMETER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		04	S10	203	206	183	7	14	

MESSENGER TIME OF (HR 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10^7	$\frac{1}{2}\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2131	3494	2438	0035548	0000	15256								
163		OBS	0000	2131	34939	2438			15256								
163		OBS	0008	2134	34937	2437			15258								
		STD	0010	2134	3494	2437	0035678	0036	15258								
		STD	0020	2134	3494	2437	0035714	0071	15260								
		STD	0030	2134	3494	2437	0035758	0107	15261								
163		OBS	0032	2134	34936	2437			15262								
		STD	0050	1895	3473	2484	0031332	0174	15197								
163		OBS	0050	1895	34725	2484			15197								
		STD	0075	1747	3471	2520	0028025	0248	15158								
163		OBS	0077	1739	34706	2521			15156								
		STD	0100	1692	3465	2528	0027293	0317	15145								
163		OBS	0100	1692	34649	2528			15145								
		STD	0125	1672	3466	2534	0026840	0385	15143								
		STD	0150	1659	3466	2537	0026597	0452	15144								
163		OBS	0150	1659	34664	2537			15144								
163		OBS	T0199	1654	34662	2538			15150								
		STD	0200	1647	3465	2539	0026585	0585	15148								
		STD	0250	1327	3433	2584	0022344	0707	15050								
		STD	0300	1086	3412	2614	0019506	0812	14973								
163		OBS	0300	1086	34124	2614			14973								
163		OBS	T0398	0840	34045	2648			14897								
		STD	0400	0836	3405	2649	0016163	0990	14896								
		STD	0500	0666	3411	2679	0013419	1138	14847								
		STD	0600	0545	3417	2699	0011507	1263	14816								
163		OBS	0602	0543													
		STD	0700	0489	3424	2711	0010399	1372	14811								
163		OBS	T0794	0447	34294	2720			14810								
		STD	0800	0445	3430	2720	0009518	1472	14810								
		STD	0900	0417	3436	2728	0008830	1564	14816								
		STD	1000	0390	3442	2736	0008150	1648	14822								
163		OBS	T1006	0388	34423	2736			14822								
		STD	1100	0364	3447	2742	0007552	1727	14828								
		STD	1200	0341	3450	2747	0007133	1800	14836								
		STD	1300	0319	3453	2751	0006721	1870	14843								
		STD	1400	0299	3455	2755	0006403	1935	14852								
		STD	1500	0281	3456	2757	0006176	1998	14861								
163		OBS	T1519	0278	34563	2758			14863								

TABLE I.—Continued

REFERENCE: CTBY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	LAT. SQUARE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	749	GH	29593N	140021W		087	90	08	19	165	1966	05N	021	4576	14	06	3	5		X1	6	6		0038

WATER: COLOR CODE	WATER: TRANS. cm	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		06	S15	217	211	189	7	14	

MESSENGER TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	2141													
165		OBS	0000	2141													
165		OBS	0008	2141													
		STD	0010	2141													
		STD	0020	2140													
165		OBS	0026	2139													
		STD	0030	2078													
165		OBS	0044	1906													
		STD	0050	1861													
165		OBS	0067	1765													
		STD	0075	1745													
165		OBS	0090	1714													
		STD	0100	1698													
		STD	0125	1669													
165		OBS	0137	1660													
		STD	0150	1660													
165		OBS	T0183	1659													
		STD	0200	1554													
		STD	0250	1293													
165		OBS	0274	1193													
		STD	0300	1121													
165		OBS	T0364	0960													
		STD	0400	0875													
		STD	0500	0682													
165		OBS	0547	0613													
		STD	0600	0565													
		STD	0700	0491													
165		OBS	T0727	0475													
		STD	0800	0447													
		STD	0900	0412													
165		OBS	T0920	0406													
		STD	1000	0382													
		STD	1100	0355													
		STD	1200	0333													
		STD	1300	0314													
165		OBS	1397	0300													

TABLE I.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DRIFT INDICTR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.	CODE	° ' 1/10	° ' 1/10		10°	1°	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
31	749	GH	29594N	140027W		087	90	08	20	162	1966	QSN	022	4480	15	05	5	4		X1	6	6		0039

WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		05	508	230	206	189	8	14	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	S C
		STD	0000	2142													
162		OBS	0000	2142													
		STD	0010	2143													
162		OBS	0010	2143													
		STD	0020	2141													
		STD	0030	2139													
162		OBS	0034	2138													
		STD	0050	1881													
162		OBS	0053	1848													
		STD	0075	1786													
162		OBS	0082	1767													
		STD	0100	1716													
162		OBS	0106	1702													
		STD	0125	1683													
		STD	0150	1666													
162		OBS	0160	1661													
		STD	0200	1657													
162		OBS	T0212	1656													
		STD	0250	1286													
162		OBS	0288	1011													
		STD	0300	0993													
		STD	0400	0848													
162		OBS	T0425	0812													
		STD	0500	0687													
		STD	0600	0559													
162		OBS	0636	0524													
		STD	0700	0492													
		STD	0800	0449													
162		OBS	T0844	0432													
		STD	0900	0416													
		STD	1000	0389													
162		OBS	T1062	0373													
		STD	1100	0363													
		STD	1200	0339													
		STD	1300	0317													
		STD	1400	0296													
		STD	1500	0276													
162		OBS	T1544	0268													

TABLE I.—Continued

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	DRIFT INDICTR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.		° 1/10	° 1/10		10°	1°	MO.	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	749	GH	29581N	140024W		087	90	08	21	163	1960	QSN	023	4206	18	06	3	4		X2	6	8		0040

WATER		WIND		BAROMETER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANSL. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		03	S18	227	206	183	7	14	

MESSENGER TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2133													
163		OBS	0000	2133													
		STD	0010	2134													
163		OBS	0014	2134													
		STD	0020	2134													
		STD	0030	2133													
163		OBS	0036	2132													
		STD	0050	1943													
163		OBS	0059	1849													
		STD	0075	1754													
163		OBS	0092	1690													
		STD	0100	1682													
163		OBS	0119	1667													
		STD	0125	1667													
		STD	0150	1667													
163		OBS	0178	1666													
		STD	0200	1650													
163		OBS	T0237	1623													
		STD	0250	1530													
		STD	0300	1221													
163		OBS	0353	0979													
		STD	0400	0883													
163		OBS	T0468	0760													
		STD	0500	0712													
		STD	0600	0584													
		STD	0700	0490													
163		OBS	0702	0488													
		STD	0800	0448													
		STD	0900	0412													
163		OBS	T0931	0402													
		STD	1000	0384													
		STD	1100	0359													
163		OBS	T1176	0341													
		STD	1200	0336													
		STD	1300	0315													
		STD	1400	0295													
		STD	1500	0278													
		STD	1750	0243													
163		OBS	T1789	0239													

TABLE I.—Continued

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	DECK	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.		° 1/10	° '1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	STA		TYPE	AMT		
31	749	GH	29585N	140029W		087	90	08	23	165	1966	05N	024	4572	17	06	4	4		X5	6	6		0041

WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		05	S19	220	211	189	7	14	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-BTB?	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2111													
165		OBS	0000	2111													
		STD	0010	2114													
165		OBS	0012	2114													
		STD	0020	2113													
		STD	0030	2112													
165		OBS	0034	2112													
		STD	0050	1896													
165		OBS	0055	1847													
		STD	0075	1769													
165		OBS	0084	1739													
		STD	0100	1691													
165		OBS	0109	1671													
		STD	0125	1669													
		STD	0150	1667													
165		OBS	0164	1665													
		STD	0200	1660													
165		OBS	0223	1616													
		STD	0250	1419													
		STD	0300	1126													
165		OBS	0328	1003													
		STD	0400	0867													
165		OBS	T0439	0800													
		STD	0500	0698													
		STD	0600	0565													
165		OBS	0660	0506													
		STD	0700	0489													
		STD	0800	0449													
165		OBS	T0881	0421													
		STD	0900	0415													
		STD	1000	0387													
		STD	1100	0361													
165		OBS	T1104	0360													
		STD	1200	0337													
		STD	1300	0315													
		STD	1400	0295													
		STD	1500	0277													
165		OBS	T1703	0247													

TABLE I.—Continued

REFERENCE: CTRY. CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	749	GH	29590N	140012W		087	90	08	24	165	1966	OSN	025	4526	17	06	5	5		X1	6	6		0042

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		06	S24	237	200	183	7	14	

MESSENGER TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2106													
165		OBS	0000	2106													
		STD	0010	2108													
165		OBS	0013	2109													
		STD	0020	2108													
		STD	0030	2107													
165		OBS	0034	2107													
		STD	0050	1864													
165		OBS	0054	1822													
		STD	0075	1773													
165		OBS	0084	1749													
		STD	0100	1695													
165		OBS	0108	1675													
		STD	0125	1672													
		STD	0150	1668													
165		OBS	0161	1665													
		STD	0200	1653													
165		OBS	T0213	1649													
		STD	0250	1388													
		STD	0300	1115													
165		OBS	0317	1043													
		STD	0400	0873													
165		OBS	T0420	0837													
		STD	0500	0739													
		STD	0600	0632													
		STD	0700	0541													
165		OBS	0735	0513													
		STD	0800	0466													
165		OBS	T0852	0435													
		STD	0900	0420													
		STD	1000	0391													
165		OBS	T1082	0368													
		STD	1100	0363													
		STD	1200	0338													
		STD	1300	0315													
		STD	1400	0294													
		STD	1500	0276													
165		OBS	T1666	0250													

TABLE II. Observed and interpolated oceanographic data for stations taken by USCGC KLAMATH at Ocean Station NOVEMBER, 11 September–1 October 1966, prepared from NODC listing No. 31–768 KL.

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	768	KL	3000 N	14000 W		123	00	09	11	107	1966	OSN	001	4554	14	06	3	2		x1	6	3	0001

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		06	S11	207	217	200	8	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2248	3503	2413	0037994	0000	15287								
107		OBS	0000	2248	35031	2413			15287								
107		OBS	0008	2236	35030	2416			15285								
		STD	0010	2233	3504	2418	0037561	0038	15285								
		STD	0020	2213	3509	2427	0036700	0075	15282								
107		OBS	0026	2197	35098	2432			15279								
		STD	0030	2194	3509	2432	0036230	0111	15279								
107		OBS	0044	2130	35038	2446			15264								
		STD	0050	2040	3501	2468	0032869	0180	15240								
107		OBS	0065	1872	34930	2506			15195								
		STD	0075	1827	3487	2512	0028733	0257	15183								
107		OBS	0088	1776	34797	2519			15170								
		STD	0100	1742	3474	2523	0027772	0328	15161								
		STD	0125	1683	3466	2531	0027088	0397	15147								
107		OBS	0135	1664	34643	2534			15142								
		STD	0150	1658	3465	2536	0026698	0464	15143								
107		OBS	T0183	1603	34657	2550			15132								
		STD	0200	1500	3454	2564	0024194	0591	15101								
		STD	0250	1245	3427	2596	0021206	0705	15022								
107		OBS	0273	1152	34185	2607			14992								
		STD	0300	1077	3415	2617	0019159	0806	14970								
107		OBS	T0352	0946	34105	2636			14930								
		STD	0400	0840	3408	2651	0015988	0981	14898								
		STD	0500	0662	3403	2673	0013934	1131	14845								
107		OBS	0542	0605	34013	2679			14829								
		STD	0600	0555	3408	2690	0012301	1262	14819								
		STD	0700	0486	3419	2707	0010733	1377	14809								
107		OBS	T0708	0481	34199	2708			14808								
		STD	0800	0446	3428	2719	0009679	1479	14810								
107		OBS	T0899	0412	34353	2728			14813								
		STD	0900	0412	3435	2728	0008822	1572	14813								
		STD	1000	0380	3439	2734	0008275	1657	14817								
		STD	1100	0352	3442	2740	0007772	1738	14822								
		STD	1200	0327	3446	2745	0007299	1813	14829								
		STD	1300	0305	3449	2749	0006858	1884	14837								
107		OBS	1381	0289	34516	2753			14844								

TABLE II.—Continued

REFERENCE: CRUT CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD SQUARE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	768	KL	3004 N	14004 W		123	00	09	12	204	1966	OSN	002	4499	15	07	3	4		X1	6	5		0002

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		05	S14	224	228	200	8	14	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SEC
		STD	0000		34960												
	204	OBS	0000		34959												
	204	OBS	0009	2216	34960	2416			15279								
		STD	0010	2215	3496	2417	0037619		15279								
		STD	0020	2202	3501	2424	0037015		15278								
		STD	0030	2190	3505	2430	0036413		15277								
	204	OBS	0032	2187	35056	2432			15277								
		STD	0050	1987	3492	2475	0032177		15225								
	204	OBS	0050	1987	34921	2475			15225								
		STD	0075	1871	3487	2501	0029785		15196								
	204	OBS	0077	1862	34857	2503			15194								
	204	OBS	0099	1769	34730	2516			15169								
		STD	0100	1768	3473	2516	0028441		15169								
		STD	0125	1754	3477	2523	0027916		15169								
	204	OBS	0148	1741	34806	2529			15170								
		STD	0150	1736	3480	2529	0027358		15168								
	204	OBS	T0198	1589	34598	2548			15129								
		STD	0200	1576	3458	2550	0025529		15125								
		STD	0250	1278	3427	2589	0021833		15033								
	204	OBS	0294	1081	34100	2613			14970								
		STD	0300	1065	3409	2615	0019392		14965								
	204	OBS	T0388	0860	34029	2644			14903								
		STD	0400	0836	3403	2648	0016318		14896								
		STD	0500	0666	3403	2672	0014010		14846								
	204	OBS	0584	0561	34030	2686			14818								
		STD	0600	0550	3405	2689	0012459		14817								
		STD	0700	0491	3416	2704	0011016		14810								
	204	OBS	T0777	0454	34240	2715			14809								
		STD	0800	0447	3426	2717	0009839		14810								
		STD	0900	0418	3435	2727	0008916		14816								
	204	OBS	0985	0394	34411	2735			14821								
		STD	1000	0390	3441	2735	0008201		14822								
		STD	1100	0364	3443	2739	0007884		14828								
		STD	1200	0339	3444	2742	0007566		14834								
		STD	1300	0316	3445	2745	0007275		14841								
		STD	1400	0295	3446	2748	0006995		14849								
	204	OBS	1465	0282	34471	2750			14854								

TABLE II.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DRIFT	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.	CODE	° 1/10	° '1/10	INDEX	10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	768	KL	3002 N	14002 W		123	00	09	13	203	1966	OSN	003	4572	15	09	3	2		X1	6	2		0003

WATER		WIND		BAROMETER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		10	S12	230	233	194	8	14	

MESSENGER TIME OF CAST HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S °/₀₀	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. X 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000		35.02												
203		OBS	0000		35.016												
203		OBS	0009	22.18	35.015	24.20			1528.1								
		STD	0010	22.18	35.01	24.19	0.037375		1528.1								
		STD	0020	22.09	35.01	24.22	0.037171		1528.0								
		STD	0030	21.94	35.00	24.25	0.036880		1527.8								
203		OBS	0033	21.88	34.999	24.27			1527.7								
		STD	0050	21.46	35.00	24.39	0.035690		1526.9								
203		OBS	0052	21.35	34.999	24.42			1526.6								
		STD	0075	18.93	34.78	24.89	0.030969		1520.1								
203		OBS	0080	18.57	34.750	24.96			1519.1								
		STD	0100	17.82	34.72	25.12	0.028816		1517.3								
203		OBS	0103	17.72	34.720	25.15			1517.0								
		STD	0125	17.34	34.69	25.21	0.028031		1516.2								
		STD	0150	16.77	34.64	25.31	0.027176		1514.9								
203		OBS	0155	16.64	34.633	25.34			1514.6								
		STD	0200	15.14	34.49	25.57	0.024854		1510.5								
203		OBS	T0206	14.93	34.472	25.60			1509.9								
		STD	0250	13.00	34.33	25.89	0.021818		1504.1								
		STD	0300	11.13	34.20	26.15	0.019423		1498.3								
203		OBS	0310	10.79	34.181	26.20			1497.3								
		STD	0400	08.41	34.03	26.47	0.016387		1489.8								
203		OBS	0413	08.12	34.019	26.51			1488.9								
		STD	0500	06.66	34.05	26.74	0.013862		1484.7								
		STD	0600	05.42	34.10	26.93	0.011987		1481.4								
203		OBS	0616	05.27	34.109	26.96			1481.1								
		STD	0700	04.87	34.19	27.07	0.010745		1480.9								
		STD	0800	04.45	34.28	27.19	0.009667		1481.0								
203		OBS	T0819	04.38	34.295	27.21			1481.0								
		STD	0900	04.13	34.35	27.28	0.008856		1481.4								
		STD	1000	03.85	34.42	27.36	0.008090		1482.0								
203		OBS	T1020	03.79	34.429	27.38			1482.1								
		STD	1100	03.58	34.47	27.43	0.007481		1482.6								
		STD	1200	03.32	34.51	27.49	0.006953		1483.2								
		STD	1300	03.09	34.54	27.53	0.006529		1483.9								
		STD	1400	02.88	34.56	27.57	0.006199		1484.7								
		STD	1500	02.68	34.57	27.59	0.005949		1485.6								
203		OBS	T1505	02.67	34.571	27.59			1485.6								

TABLE II.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DUPLICATE	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CNTY. CODE	ID. NO.	CODE	° ′ 1/10	° ′ 1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
31	768	KL	3010 N	13958 W		122	09	09	14	193	1966	QSN	004	4572	15	08	3	2		X1	6	6		0004

WATER		WIND		BAROMETER (mbs)	AIR TEMP °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		13	S07	207	222	200	8	14	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄–P µg-at/l	TOTAL–P µg-at/l	NO₂–N µg-at/l	NO₃–N µg-at/l	SiO₄–Si µg-at/l	pH	SCC
		STD	0000		3503												
193		OBS	0000		35025												
		STD	0010	2208	3502	2423	0037035		15278								
193		OBS	0010	2208	35020	2423			15278								
		STD	0020	2193	3499	2425	0036888		15276								
		STD	0030	2178	3495	2426	0036787		15273								
193		OBS	0030	2178	34954	2426			15273								
		STD	0050	1977	3489	2475	0032188		15222								
193		OBS	0051	1969	34881	2477			15220								
		STD	0075	1850	3477	2499	0030007		15189								
193		OBS	0076	1846	34766	2500			15188								
		STD	0100	1781	3475	2515	0028604		15173								
193		OBS	0102	1776	34744	2515			15172								
		STD	0125	1738	3471	2522	0027978		15164								
		STD	0150	1671	3464	2533	0027041		15147								
193		OBS	0155	1654	34627	2536			15142								
		STD	0200	1443	3441	2566	0023955		15081								
193		OBS	T0208	1408	34377	2571			15071								
		STD	0250	1242	3429	2598	0021003		15021								
		STD	0300	1077	3419	2621	0018865		14970								
193		OBS	0311	1045	34174	2625			14960								
		STD	0400	0857	3406	2647	0016411		14904								
193		OBS	T0415	0828	34044	2650			14895								
		STD	0500	0681	3406	2673	0013980		14853								
		STD	0600	0553	3408	2691	0012253		14818								
193		OBS	0619	0534	34087	2693			14814								
		STD	0700	0494	3418	2705	0010905		14812								
		STD	0800	0451	3428	2718	0009739		14812								
193		OBS	T0819	0444	34292	2720			14812								
		STD	0900	0416	3436	2728	0008818		14815								
		STD	1000	0385	3443	2737	0008016		14820								
193		OBS	T1021	0379	34440	2738			14821								
		STD	1100	0357	3446	2742	0007557		14825								
		STD	1200	0332	3448	2746	0007159		14831								
		STD	1300	0311	3451	2750	0006811		14840								
		STD	1400	0292	3453	2754	0006474		14849								
		STD	1500	0277	3455	2757	0006188		14859								
193		OBS	1521	0274	34557	2758			14862								

TABLE II.—Continued

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD INDEX	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR, 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	768	KL	3001 N	14006 W		123	00	09	15	194	1966	OSN	005	4023	15	30	4	5		X1	6	1		0005

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		20	S02	190	222	200	8	14	

MESSENGER TIME OF DAY HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY $\times 10^7$	$\frac{1}{2}\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	CODE
		STD	0000		3501												
194		OBS	0000		35009												
		STD	0010	2215	3501	2420	0037316		15280								
194		OBS	0010	2215	35007	2420			15280								
		STD	0020	2209	3501	2422	0037162		15280								
194		OBS	0029	2204	35016	2424			15280								
		STD	0030	2196	3501	2426	0036861		15278								
194		OBS	0048	2053	34881	2455			15242								
		STD	0050	2034	3488	2460	0033658		15237								
194		OBS	0072	1873	34835	2498			15196								
		STD	0075	1862	3483	2501	0029859		15193								
194		OBS	0097	1793	34794	2515			15176								
		STD	0100	1786	3479	2516	0028430		15175								
		STD	0125	1733	3473	2525	0027718		15162								
194		OBS	0148	1693	34692	2531			15154								
		STD	0150	1691	3469	2532	0027112		15154								
		STD	0200	1638	3468	2543	0026192		15146								
194		OBS	T0204	1634	34676	2544			15145								
		STD	0250	1322	3434	2586	0022173		15049								
194		OBS	0299	1077	34115	2615			14969								
		STD	0300	1075	3411	2615	0019418		14969								
194		OBS	T0398	0858	34042	2645			14904								
		STD	0400	0854	3404	2646	0016498		14903								
		STD	0500	0688	3405	2671	0014159		14855								
		STD	0600	0565	3406	2688	0012577		14823								
194		OBS	0602	0563	34060	2688			14822								
		STD	0700	0501	3418	2705	0010992		14815								
		STD	0800	0449	3428	2718	0009737		14811								
194		OBS	0800	0449	34277	2718			14811								
		STD	0900	0416	3435	2727	0008888		14815								
		STD	1000	0382	3441	2736	0008132		14818								
194		OBS	T1001	0382	34415	2736			14818								
		STD	1100	0354	3447	2743	0007433		14824								
		STD	1200	0330	3451	2749	0006929		14831								
		STD	1300	0309	3453	2752	0006603		14839								
		STD	1400	0292	3455	2756	0006320		14849								
194		OBS	T1482	0280	34556	2757			14858								

TABLE II.—Continued

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	766	KL	3002 N	13959 W		122	09	09	16	191	1966	OSN	006		4304	15	32	4	5	X1	8	3		0006

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		22	508	190	222	169	8	14	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000		3498												
191		OBS	0000		34981												
		STD	0010	2205	3498	2421	0037236		15277								
191		OBS	0010	2205	34981	2421			15277								
		STD	0020	2204	3498	2421	0037254		15278								
		STD	0030	2202	3498	2422	0037245		15280								
191		OBS	0035	2201	34979	2422			15280								
		STD	0050	2196	3519	2439	0035622		15284								
191		OBS	0054	2194	35208	2441			15284								
		STD	0075	1925	3478	2481	0031750		15210								
191		OBS	0084	1860	34717	2493			15193								
		STD	0100	1849	3485	2505	0029486		15194								
191		OBS	0109	1837	34896	2512			15192								
		STD	0125	1785	3484	2521	0028126		15179								
		STD	0150	1707	3475	2532	0027057		15159								
191		OBS	0163	1668	34701	2538			15149								
		STD	0200	1574	3458	2550	0025486		15125								
191		OBS	T0217	1518	34521	2558			15109								
		STD	0250	1315	3434	2587	0022036		15046								
		STD	0300	1069	3414	2618	0019094		14967								
191		OBS	0326	0972	34065	2629			14935								
		STD	0400	0843	3403	2647	0016418		14899								
191		OBS	T0435	0787	34019	2654			14883								
		STD	0500	0685	3403	2670	0014272		14854								
		STD	0600	0560	3408	2690	0012365		14821								
191		OBS	0652	0510	34115	2698			14810								
		STD	0700	0486	3417	2706	0010881		14808								
		STD	0800	0441	3428	2719	0009618		14808								
191		OBS	T0865	0416	34340	2727			14809								
		STD	0900	0405	3436	2729	0008687		14811								
		STD	1000	0376	3442	2737	0007984		14816								
191		OBS	T1072	0356	34460	2742			14820								
		STD	1100	0349	3447	2744	0007375		14822								
		STD	1200	0325	3451	2749	0006870		14829								
		STD	1300	0303	3454	2754	0006459		14837								
		STD	1400	0285	3456	2757	0006164		14846								
		STD	1500	0269	3457	2759	0005961		14856								
191		OBS	T1537	0264	34575	2760			14860								

TABLE II.—Continued

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	DEPTH UNCER.	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.		° 1/10	° '1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
31	768	KL	30016N	140066W		123	00	09	17	027	1966	OSN	007	4092	44	31	5	4		X1	8	4		0007

WATER		WIND		BARO-METER (mbs)	AIR TEMP °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		23	506	200	228	214	8	20	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY (1-E10⁷)	Σ Δ D DYN. M X 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000		3500												
027		OBS	0000		34999												
027		OBS	0009	2219	35009	2419			15281								
		STD	0010	2218	3501	2419	0037389		15281								
		STD	0020	2206	3499	2422	0037213		15279								
		STD	0030	2183	3498	2427	0036746		15275								
027		OBS	0033	2174	34974	2429			15273								
		STD	0050	2107	3502	2451	0034512		15259								
027		OBS	0051	2100	35024	2453			15257								
		STD	0075	1817	3468	2500	0029876		15178								
027		OBS	0079	1792	34660	2505			15171								
		STD	0100	1769	3477	2519	0028179		15169								
027		OBS	0102	1766	34778	2520			15169								
		STD	0125	1732	3477	2528	0027433		15163								
		STD	0150	1682	3475	2539	0026467		15152								
027		OBS	0152	1678	34752	2539			15151								
		STD	0200	1548	3456	2555	0025070		15116								
027		OBS	T0203	1538	34550	2556			15114								
		STD	0250	1291	3435	2593	0021498		15038								
		STD	0300	1087	3419	2619	0019039		14974								
027		OBS	0305	1070	34179	2621			14968								
		STD	0400	0866	3405	2645	0016624		14907								
027		OBS	T0405	0856	34045	2646			14904								
		STD	0500	0676	3405	2672	0014000		14851								
		STD	0600	0539	3409	2693	0012024		14813								
027		OBS	0605	0534	34093	2694			14811								
		STD	0700	0485	3419	2707	0010716		14808								
		STD	0800	0433	3428	2720	0009517		14804								
027		OBS	T0801	0432	34281	2720			14804								
		STD	0900	0409	3435	2728	0008808		14812								
		STD	1000	0386	3442	2736	0008102		14820								
027		OBS	T1008	0384	34422	2736			14821								
		STD	1100	0363	3445	2741	0007687		14827								
		STD	1200	0342	3447	2744	0007366		14836								
		STD	1300	0322	3450	2749	0006976		14844								
		STD	1400	0303	3452	2752	0006671		14853								
		STD	1500	0285	3454	2755	0006371		14863								
027		OBS	1543	0278	34552	2757			14867								
		STD	1750	0247	3458	2762	0005759		14889								
		STD	2000	0216	3461	2767	0005280		14918								
196		OBS	T2424	0179	34647	2773			14975								
		STD	2500	0176	3465	2773	0004678		14987								
196		OBS	2912	0162	34672	2776			15052								
		STD	3000	0159	3467	2776	0004444		15066								
196		OBS	3406	0151	34680	2777			15134								
196		OBS	T3896	0150	34686	2778			15219								
		STD	4000	0150	3469	2778	0004489		15237								
196		OBS	4325	0148	34687	2778			15294								
196		OBS	4422	0143	34687	2779			15309								

TABLE II.—Continued

REFERENCE: CARD CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	788 RL	3002 N	14001 W		123	00	09	18	198		1966	05N	008	2960	15	32	4	5		X5	8	8	0008

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		05	S12	234	217	217	5	14	

MESSENGER TIME OF (HR 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁸	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	2228	3501	2417	0037599	0000	15282								
198		OBS	0000	2228	35011	2417			15282								
		STD	0010	2220	3501	2419	0037407	0038	15281								
198		OBS	0010	2220	35013	2419			15281								
		STD	0020	2214	3501	2420	0037326	0075	15281								
		STD	0030	2208	3500	2422	0037254	0112	15281								
198		OBS	0030	2208	35000	2422			15281								
		STD	0050	2026	3491	2464	0033238	0183	15235								
198		OBS	0050	2026	34910	2464			15235								
198		OBS	0074	1803	34690	2505			15174								
		STD	0075	1801	3469	2505	0029426	0261	15174								
198		OBS	0099	1752	34667	2515			15163								
		STD	0100	1751	3467	2516	0028488	0333	15163								
		STD	0125	1727	3475	2526	0027580	0403	15161								
		STD	0150	1692	3475	2536	0026752	0471	15155								
198		OBS	0150	1692	34745	2536			15155								
		STD	0200	1598	3462	2548	0025718	0603	15133								
198		OBS	T0213	1554	34577	2555			15121								
		STD	0250	1297	3432	2589	0021833	0721	15040								
		STD	0300	1040	3409	2619	0018964	0823	14956								
198		OBS	0301	1036	34087	2620			14954								
		STD	0400	0848	3403	2646	0016479	1001	14900								
198		OBS	T0404	0841	34030	2647			14898								
		STD	0500	0677	3405	2672	0014014	1153	14851								
		STD	0600	0551	3407	2690	0012324	1285	14817								
198		OBS	0603	0548	34071	2690			14817								
		STD	0700	0492	3417	2705	0010966	1401	14811								
		STD	0800	0434	3427	2719	0009626	1504	14805								
198		OBS	T0801	0433	34268	2719			14805								
		STD	0900	0406	3435	2728	0008792	1596	14811								
		STD	1000	0378	3443	2737	0007966	1680	14817								
198		OBS	T1001	0378	34427	2738			14817								
		STD	1100	0354	3445	2742	0007566	1758	14824								
		STD	1200	0332	3448	2746	0007196	1832	14831								
		STD	1300	0312	3450	2750	0006845	1902	14840								
		STD	1400	0294	3453	2754	0006512	1969	14849								
		STD	1500	0279	3455	2757	0006211	2032	14860								
198		OBS	1505	0278	34553	2757			14861								

TABLE II.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	CARTN INDCTR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR, 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	768	KL	3000 N	14009 W		123	00	09	19	206	1966	QSN	009	2514	16	05	5	6		X1	8	3	0009

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		08	S18	244	217	200	8	14	

MESSENGR TIME OF HR, 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2231	3507	2421	0037231	0000	15283								
206		OBS	0000	2231	35073	2421			15283								
		STD	0010	2225	3508	2423	0037079	0037	15283								
206		OBS	0010	2225	35077	2423			15283								
		STD	0020	2210	3508	2427	0036708	0074	15281								
		STD	0030	2195	3508	2431	0036347	0111	15279								
206		OBS	0033	2190	35076	2432			15278								
		STD	0050	1966	3483	2474	0032313	0179	15218								
206		OBS	0052	1945	34808	2478			15212								
		STD	0075	1805	3471	2506	0029375	0256	15175								
206		OBS	0080	1787	34707	2510			15171								
		STD	0100	1767	3476	2519	0028205	0328	15169								
206		OBS	0104	1762	34766	2520			15168								
		STD	0125	1744	3476	2524	0027753	0398	15166								
		STD	0150	1695	3471	2532	0027074	0467	15155								
206		OBS	0158	1672	34687	2536			15149								
		STD	0200	1477	3442	2559	0024586	0596	15092								
206		OBS	T0220	1388	34314	2570			15065								
		STD	0250	1239	3422	2593	0021459	0711	15019								
		STD	0300	1036	3410	2621	0018822	0812	14954								
206		OBS	0327	0950	34055	2632			14927								
		STD	0400	0825	3402	2649	0016218	0987	14892								
206		OBS	T0435	0771	34016	2657			14877								
		STD	0500	0677	3404	2672	0014088	1138	14851								
		STD	0600	0561	3410	2691	0012229	1270	14822								
206		OBS	0650	0516	34130	2699			14812								
		STD	0700	0492	3418	2706	0010880	1386	14811								
		STD	0800	0449	3426	2717	0009863	1489	14811								
206		OBS	T0864	0425	34314	2724			14812								
		STD	0900	0414	3434	2727	0008942	1583	14814								
		STD	1000	0387	3441	2735	0008188	1669	14820								
206		OBS	T1064	0370	34453	2740			14824								
		STD	1100	0361	3446	2742	0007582	1748	14827								
		STD	1200	0338	3448	2746	0007223	1822	14834								
		STD	1300	0316	3450	2750	0006877	1892	14842								
		STD	1400	0297	3453	2753	0006555	1960	14851								
		STD	1500	0281	3455	2756	0006264	2024	14861								
206		OBS	T1614	0264	34573	2760			14873								

TABLE II.—Continued

REFERENCE: CTRY CODE	REFERENCE: NO. NO.	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	QUADRANT	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	768	KL	3000 N	13959 W		122	09	09	20	186	1966	05N	010	4938	15	05	3	3		X2	8	8		0010

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	S13	196	222	189	8	14	

MESSENGER TIME BY HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁵	ΣΔO DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	
		STD	0000	2212	3500	2420	0037271	0000	15277								
186		OBS	0000	2212	34997	2420			15277								
		STD	0010	2212	3500	2420	0037308	0037	15279								
186		OBS	0010	2212	34997	2420			15279								
		STD	0020	2212	3500	2420	0037332	0075	15281								
186		OBS	0029	2211	34997	2420			15282								
		STD	0030	2211	3500	2420	0037370	0112	15282								
186		OBS	0048	2159	34948	2431			15271								
		STD	0050	2133	3494	2438	0035776	0185	15264								
186		OBS	0073	1903	34835	2491			15204								
		STD	0075	1894	3483	2493	0030631	0268	15202								
186		OBS	0097	1804	34765	2510			15179								
		STD	0100	1797	3476	2511	0028906	0343	15178								
		STD	0125	1738	3473	2524	0027833	0413	15164								
186		OBS	0147	1693	34700	2532			15154								
		STD	0150	1692	3470	2532	0027079	0482	15154								
186		OBS	T0199	1608	34638	2547			15136								
		STD	0200	1601	3463	2548	0025711	0614	15134								
		STD	0250	1291	3429	2588	0021937	0733	15038								
186		OBS	0295	1084	34093	2612			14971								
		STD	0300	1072	3409	2614	0019513	0837	14967								
186		OBS	T0390	0867	34041	2644			14906								
		STD	0400	0846	3404	2647	0016375	1016	14900								
		STD	0500	0666	3406	2674	0013811	1167	14847								
186		OBS	0587	0552	34069	2690			14815								
		STD	0600	0543	3408	2692	0012148	1297	14814								
		STD	0700	0482	3418	2707	0010758	1412	14807								
186		OBS	T0779	0443	34253	2717			14805								
		STD	0800	0436	3427	2719	0009632	1513	14806								
		STD	0900	0405	3435	2729	0008761	1605	14810								
186		OBS	0979	0382	34405	2735			14815								
		STD	1000	0376	3441	2736	0008050	1689	14816								
		STD	1100	0351	3444	2741	0007627	1768	14822								
		STD	1200	0329	3447	2745	0007234	1842	14830								
		STD	1300	0310	3450	2749	0006873	1913	14839								
		STD	1400	0295	3452	2753	0006554	1980	14850								
186		OBS	T1482	0284	34546	2756			14859								

TABLE II.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DRIFT INDEX	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	NO.	CODE	° 1/10	° 1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT.	PER.	SEA		TYPE	AMT		
31	768	KL	3002 N	14000 W		123	00	09	21	195	1966	05N	011	4389	15	01	4	4		X5	8	7		0011

WATER		WIND		BAROMETER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		31	S08	132	220	220	6	14	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—10^7	$\Sigma\Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	100
		STD	0000	2220	3504	2421	0037167	0000	15280								
195		OBS	0000	2220	35041	2421			15280								
195		OBS	0009	2214	35045	2423			15280								
		STD	0010	2214	3505	2424	0036979	0037	15280								
		STD	0020	2213	3509	2427	0036711	0074	15282								
195		OBS	0026	2213	35095	2427			15283								
		STD	0030	2201	3509	2430	0036416	0110	15281								
195		OBS	0044	2129	35035	2446			15263								
		STD	0050	2059	3497	2460	0033643	0181	15245								
195		OBS	0067	1902	34832	2491			15203								
		STD	0075	1853	3478	2499	0030006	0260	15190								
195		OBS	0088	1790	34721	2510			15173								
		STD	0100	1772	3472	2515	0028597	0333	15170								
		STD	0125	1735	3472	2524	0027814	0404	15163								
195		OBS	0135	1720	34723	2527			15160								
		STD	0150	1718	3471	2527	0027613	0473	15162								
195		OBS	T0187	1648	34671	2540			15146								
		STD	0200	1546	3455	2554	0025099	0605	15116								
		STD	0250	1223	3421	2595	0021233	0721	15014								
195		OBS	0275	1102	34110	2610			14974								
		STD	0300	1043	3411	2620	0018860	0821	14957								
195		OBS	T0369	0893	34115	2646			14913								
		STD	0400	0829	3410	2655	0015673	0994	14894								
		STD	0500	0657	3406	2676	0013651	1140	14843								
195		OBS	0565	0574	34035	2684			14820								
		STD	0600	0549	3408	2691	0012224	1270	14817								
		STD	0700	0488	3419	2707	0010757	1385	14810								
195		OBS	T0757	0460	34242	2714			14808								
		STD	0800	0447	3427	2718	0009765	1487	14810								
		STD	0900	0417	3434	2727	0008978	1581	14815								
195		OBS	T0967	0398	34378	2732			14819								
		STD	1000	0389	3440	2734	0008286	1667	14821								
		STD	1100	0363	3444	2740	0007761	1747	14827								
		STD	1200	0339	3448	2746	0007256	1823	14834								
		STD	1300	0317	3451	2750	0006845	1893	14842								
		STD	1400	0296	3454	2754	0006440	1959	14850								
195		OBS	1472	0283	34546	2756			14857								

TABLE II.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DUPLICATE	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY. CODE	ID. NO.	CODE	° 1/10	° 1/10	CODE	10°	1°	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	768	KL	2959 N	13956 W		086	99	09	22	193	1966	OSN	012	3840	14	06	4	4		X1	8	3		0012

WATER		WIND		BAROMETER (mbs)	AIR TEMP °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. m	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		24	S10	166	228	222	8	14	

MESSENGER TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY $\times 10^7$	$\Sigma \Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	NODC
		STD	0000	2234	3503	2416	0037652	0000	15283								
193		OBS	0000	2234	35026	2416			15283								
193		OBS	0009	2224	35021	2419			15282								
		STD	0010	2223	3502	2419	0037434	0038	15282								
		STD	0020	2212	3502	2422	0037171	0075	15281								
193		OBS	0026	2205	35009	2423			15280								
		STD	0030	2190	3500	2427	0036773	0112	15277								
193		OBS	0044	2107	34945	2445			15257								
		STD	0050	2034	3489	2461	0033585	0182	15237								
193		OBS	0066	1888	34787	2491			15198								
		STD	0075	1853	3477	2498	0030078	0262	15190								
193		OBS	0089	1806	34751	2509			15178								
		STD	0100	1783	3475	2514	0028651	0335	15173								
		STD	0125	1733	3474	2525	0027645	0406	15163								
193		OBS	0135	1713	34730	2529			15158								
		STD	0150	1700	3471	2531	0027188	0474	15156								
193		OBS	T0183	1624	34625	2542			15138								
		STD	0200	1501	3448	2559	0024652	0604	15101								
		STD	0250	1206	3417	2595	0021210	0718	15007								
193		OBS	0270	1116	34090	2606			14978								
		STD	0300	1046	3407	2617	0019213	0819	14958								
193		OBS	T0362	0911	34044	2637			14918								
		STD	0400	0825	3404	2650	0016100	0996	14892								
		STD	0500	0646	3401	2674	0013864	1146	14838								
193		OBS	0540	0592	34004	2680			14823								
		STD	0600	0550	3408	2691	0012237	1276	14817								
		STD	0700	0489	3419	2707	0010769	1391	14810								
193		OBS	T0713	0482	34206	2709			14809								
		STD	0800	0444	3428	2719	0009654	1493	14809								
		STD	0900	0406	3436	2729	0008699	1585	14811								
193		OBS	T0907	0404	34361	2730			14811								
		STD	1000	0374	3442	2737	0007960	1668	14815								
		STD	1100	0347	3447	2744	0007351	1745	14821								
		STD	1200	0325	3450	2748	0006944	1817	14829								
		STD	1300	0309	3452	2752	0006677	1885	14839								
		STD	1400	0296	3453	2753	0006538	1951	14851								
193		OBS	1405	0298	34533	2754			14852								

TABLE II.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DECIM. INDICTR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	NO.	CODE	° 1/10	° '1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	768	KL	3003 N	13959 W		122	09	04	23	190	1966	05N	013	3840	14	33	3	3		x1	2	6		0013

WATER		WIND		BARO-METER (mbs)	AIR TEMP °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		36	S05	213	228	217	8	14	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁷	ΣΔ DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	2245	3511	2419	0037356	0000	15287								
190		OBS	0000	2245	35108	2419			15287								
190		OBS	0009	2238	35105	2421			15287								
		STD	0010	2238	3511	2421	0037226	0037	15287								
		STD	0020	2235	3511	2422	0037169	0074	15288								
190		OBS	0028	2221	35109	2426			15286								
		STD	0030	2219	3511	2427	0036754	0111	15285								
190		OBS	0046	2156	35115	2445			15272								
		STD	0050	2103	3504	2454	0034271	0182	15258								
190		OBS	0070	1902	34790	2487			15203								
		STD	0075	1877	3477	2492	0030655	0264	15197								
190		OBS	0094	1796	34722	2509			15176								
		STD	0100	1780	3472	2513	0028798	0338	15172								
		STD	0125	1720	3469	2525	0027710	0409	15158								
190		OBS	0142	1686	34673	2532			15151								
		STD	0150	1685	3467	2532	0027139	0477	15152								
190		OBS	T0191	1622	34626	2543			15139								
		STD	0200	1565	3457	2552	0025363	0608	15122								
		STD	0250	1286	3432	2591	0021621	0726	15036								
190		OBS	0285	1130	34190	2611			14987								
		STD	0300	1085	3416	2617	0019225	0828	14973								
190		OBS	T0380	0873	34063	2645			14907								
		STD	0400	0832	3406	2651	0015999	1004	14895								
		STD	0500	0659	3407	2676	0013641	1152	14844								
190		OBS	T0570	0570	34069	2688			14820								
		STD	0600	0549	3410	2693	0012076	1281	14817								
		STD	0700	0490	3420	2707	0010708	1395	14811								
190		OBS	T0756	0463	34255	2715			14809								
		STD	0800	0450	3429	2719	0009653	1497	14812								
		STD	0900	0421	3436	2728	0008878	1589	14817								
190		OBS	T0963	0404	34402	2733			14821								
		STD	1000	0394	3442	2735	0008198	1675	14823								
		STD	1100	0368	3447	2742	0007599	1754	14830								
		STD	1200	0343	3451	2748	0007083	1827	14836								
		STD	1300	0319	3453	2751	0006721	1896	14843								
		STD	1400	0297	3455	2755	0006379	1962	14851								
190		OBS	T1444	0287	34551	2756			14854								

TABLE II.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DEPTH	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.	CODE	° 1/10	° 1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
31	768	KL	3002 N	13959 W		122	09	09	24	224	1966	OSN	014	4389	15	36	4	2		X1	6	2		0014

WATER		WIND		BARO-METER (mbs)	AIR TEMP °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		06	506	200	239	206	8	14	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	NODC
		STD	0000	2272	3513	2413	0037909	0000	15294								
224		OBS	0000	2272	35133	2413			15294								
		STD	0010	2251	3514	2420	0037361	0038	15291								
224		OBS	0010	2251	35135	2420			15291								
		STD	0020	2251	3512	2418	0037522	0075	15292								
		STD	0030	2219	3510	2426	0036812	0112	15285								
224		OBS	0031	2214	35100	2427			15284								
		STD	0050	2059	3497	2460	0033643	0183	15245								
224		OBS	0051	2051	34959	2461			15243								
		STD	0075	1856	3479	2499	0030005	0262	15191								
224		OBS	0076	1850	34789	2501			15189								
		STD	0100	1766	3471	2515	0028545	0335	15168								
224		OBS	0102	1760	34701	2516			15166								
		STD	0125	1744	3469	2519	0028290	0406	15165								
		STD	0150	1691	3467	2530	0027274	0476	15153								
224		OBS	0154	1679	34667	2533			15150								
		STD	0200	1462	3412	2540	0026462	0610	15084								
224		OBS	T0206	1434	34073	2542			15075								
		STD	0250	1214	3407	2586	0022084	0732	15009								
		STD	0300	1020	3407	2621	0018780	0834	14948								
224		OBS	0309	0991	34068	2626			14939								
		STD	0400	0820	3403	2650	0016069	1008	14890								
224		OBS	T0415	0795	34023	2654			14883								
		STD	0500	0659	3403	2673	0013915	1158	14844								
		STD	0600	0540	3407	2691	0012185	1288	14813								
224		OBS	0615	0526	34080	2694			14810								
		STD	0700	0485	3419	2707	0010720	1403	14808								
		STD	0800	0443	3430	2721	0009494	1504	14809								
224		OBS	T0815	0437	34309	2722			14809								
		STD	0900	0410	3437	2730	0008672	1595	14813								
		STD	1000	0380	3443	2738	0007957	1678	14818								
224		OBS	T1016	0376	34440	2739			14819								
		STD	1100	0354	3448	2744	0007360	1755	14824								
		STD	1200	0330	3452	2750	0006855	1826	14831								
		STD	1300	0308	3454	2753	0006518	1893	14839								
		STD	1400	0290	3456	2757	0006223	1956	14848								
		STD	1500	0274	3456	2758	0006093	2018	14858								
224		OBS	1513	0272	34562	2758			14859								

TABLE II.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	768	KL	3001 N	13958 W		122	09	09	25	206	1966	QSN	015	3848	15	16	8	2		X1	8	2		0015

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		10	S05	210	228	200	8	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10^5	$\Sigma\Delta D$ DYN. M. X 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2270	3511	2412	0038006	0000	15293								
206		OBS	0000	2270	35112	2412			15293								
		STD	0010	2253	3511	2417	0037582	0038	15291								
206		OBS	0010	2253	35112	2417			15291								
		STD	0020	2234	3511	2423	0037091	0075	15288								
		STD	0030	2215	3512	2428	0036593	0112	15284								
206		OBS	0031	2213	35117	2429			15284								
		STD	0050	1971	3483	2473	0032437	0181	15220								
206		OBS	0052	1951	34808	2476			15214								
		STD	0075	1810	3470	2504	0029565	0259	15177								
206		OBS	0078	1797	34693	2506			15173								
		STD	0100	1739	3467	2519	0028212	0331	15159								
206		OBS	0103	1733	34664	2520			15158								
		STD	0125	1709	3467	2526	0027581	0400	15155								
		STD	0150	1681	3468	2533	0026964	0469	15150								
206		OBS	0157	1673	34683	2535			15149								
		STD	0200	1354	3425	2572	0023329	0794	15050								
206		OBS	T0210	1294	34183	2579			15031								
		STD	0250	1161	3413	2601	0020681	0704	14991								
		STD	0300	1020	3408	2622	0018699	0803	14948								
206		OBS	0314	0986	34066	2627			14938								
		STD	0400	0834	3403	2648	0016280	0978	14895								
206		OBS	T0418	0805	34022	2652			14887								
		STD	0500	0672	3403	2671	0014093	1130	14849								
		STD	0600	0550	3407	2690	0012311	1262	14817								
206		OBS	0623	0528	34087	2694			14812								
		STD	0700	0487	3418	2706	0010819	1377	14809								
		STD	0800	0443	3428	2719	0009642	1480	14809								
206		OBS	T0817	0436	34292	2721			14809								
		STD	0900	0411	3435	2728	0008832	1572	14813								
		STD	1000	0382	3442	2737	0008055	1656	14818								
206		OBS	T1022	0376	34431	2738			14820								
		STD	1100	0356	3445	2742	0007597	1735	14824								
		STD	1200	0332	3448	2746	0007203	1809	14831								
		STD	1300	0310	3450	2750	0006828	1879	14839								
		STD	1400	0290	3453	2754	0006465	1945	14848								
		STD	1500	0273	3455	2757	0006140	2008	14858								
206		OBS	T1524	0269	34558	2758			14860								

TABLE II.—Continued

REFERENCE: CRUISE CODE	REFERENCE: IO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUALITY INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO.	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.	NODC STATION NUMBER
31	768	KL	3001 N	13958 W		122	09	09	26	193	1966	OSN	016	3848	15	14	0	2		X1	8	5	0016

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		10	S06	227	228	206	8	14	

MESSENGR TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$O DYN. M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	CODE
		STD	0000	2272	3510	2411	0038154	0000	15294								
193		OBS	0000	2272	35099	2411			15294								
		STD	0010	2251	3509	2416	0037672	0038	15290								
193		OBS	0010	2251	35092	2416			15290								
		STD	0020	2232	3508	2421	0037283	0075	15287								
		STD	0030	2198	3507	2429	0036510	0112	15280								
193		OBS	0030	2198	35066	2429			15280								
		STD	0050	2083	3501	2457	0033978	0183	15252								
193		OBS	0050	2083	35009	2457			15252								
		STD	0075	1845	3478	2501	0029829	0263	15188								
193		OBS	0075	1845	34778	2501			15188								
		STD	0100	1779	3476	2516	0028499	0335	15172								
193		OBS	0100	1779	34758	2516			15172								
		STD	0125	1757	3474	2520	0028170	0406	15170								
		STD	0150	1698	3473	2533	0026997	0475	15156								
193		OBS	0152	1692	34729	2534			15155								
		STD	0200	1459	3433	2556	0024668	0605	15085								
193		OBS	T0205	1436	34302	2559			15078								
		STD	0250	1209	3417	2595	0021266	0720	15008								
		STD	0300	1023	3407	2621	0018823	0820	14949								
193		OBS	0305	1008	34066	2623			14945								
		STD	0400	0865	3402	2643	0016800	0999	14907								
193		OBS	0406	0856	34021	2644			14904								
		STD	0500	0682	3404	2671	0014157	1153	14853								
		STD	0600	0548	3409	2692	0012138	1285	14816								
193		OBS	0612	0535	34096	2694			14813								
		STD	0700	0486	3420	2708	0010659	1399	14809								
		STD	0800	0440	3429	2720	0009532	1500	14808								
193		OBS	T0814	0434	34306	2722			14808								
		STD	0900	0407	3437	2730	0008636	1591	14812								
		STD	1000	0378	3443	2738	0007933	1673	14817								
193		OBS	T1013	0374	34435	2739			14817								
		STD	1100	0351	3446	2743	0007494	1751	14822								
		STD	1200	0328	3448	2747	0007105	1824	14830								
		STD	1300	0307	3451	2751	0006742	1893	14838								
		STD	1400	0289	3453	2755	0006402	1959	14847								
		STD	1500	0273	3456	2758	0006089	2021	14858								
193		OBS	1523	0270	34565	2759			14860								

TABLE II.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR, I. 10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	768	KL	3002 N	14000 W		123	00	09	27	185	1966	05N	017	3868	15	14	3	4		X1	8	7	0017

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		06	S11	234	206	206	7	13	

MESSENGER TIME OF HR I/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2247	3506	2415	0037728	0000	15287								
185		OBS	0000	2247	35064	2415			15287								
		STD	0010	2245	3506	2416	0037726	0038	15288								
185		OBS	0010	2245	35062	2416			15288								
		STD	0020	2244	3506	2416	0037738	0075	15289								
		STD	0030	2242	3506	2416	0037742	0113	15291								
185		OBS	0030	2242	35059	2416			15291								
		STD	0050	2158	3510	2443	0035284	0186	15273								
185		OBS	0050	2158	35099	2443			15273								
		STD	0075	1937	3493	2489	0030929	0269	15215								
185		OBS	0075	1937	34934	2489			15215								
		STD	0100	1871	3490	2504	0029652	0345	15200								
		STD	0125	1785	3483	2520	0028198	0417	15179								
		STD	0150	1680	3471	2536	0026735	0486	15150								
185		OBS	0151	1675	34705	2537			15149								
		STD	0200	1403	3433	2568	0023724	0612	15067								
185		OBS	T0204	1383	34307	2571			15061								
		STD	0250	1193	3417	2598	0020971	0724	15003								
		STD	0300	1028	3407	2620	0018907	0823	14951								
185		OBS	0304	1017	34066	2621			14948								
		STD	0400	0829	3403	2649	0016205	0999	14893								
185		OBS	T0404	0822	34025	2650			14891								
		STD	0500	0660	3404	2674	0013884	1149	14844								
		STD	0600	0539	3405	2690	0012343	1280	14812								
185		OBS	0609	0531	34048	2691			14810								
		STD	0700	0488	3416	2705	0010979	1397	14809								
		STD	0800	0448	3426	2717	0009851	1501	14811								
185		OBS	T0810	0444	34269	2718			14811								
		STD	0900	0416	3434	2727	0008966	1595	14815								
		STD	1000	0387	3441	2735	0008188	1681	14820								
185		OBS	T1013	0383	34416	2736			14821								
		STD	1100	0360	3446	2742	0007578	1760	14826								
		STD	1200	0336	3450	2747	0007074	1833	14833								
		STD	1300	0315	3453	2752	0006674	1902	14842								
		STD	1400	0296	3455	2755	0006367	1967	14851								
		STD	1500	0280	3455	2757	0006238	2030	14861								
185		OBS	1518	0277	34550	2757			14862								

TABLE II.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	768	KL	30045N	140036W		123	00	09	28	190	1966	05N	018	4041	15	14	4	4		X1	d	5		0018

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		09	S12	200	228	206	8	14	

MESSENGR TIME or HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY (10^7)	Δ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	NOTE
		STD	0000	2244	3506	2416	0037676	0000	15286								
190		OBS	0000	2244	35060	2416			15286								
		STD	0010	2241	3506	2416	0037661	0038	15287								
190		OBS	0010	2241	35056	2416			15287								
		STD	0020	2238	3505	2417	0037658	0075	15288								
190		OBS	0029	2236	35048	2417			15289								
		STD	0030	2224	3504	2420	0037394	0113	15286								
190		OBS	0049	2031	34944	2466			15237								
		STD	0050	2023	3494	2467	0032945	0183	15235								
190		OBS	0074	1867	34815	2498			15194								
		STD	0075	1863	3481	2499	0030028	0262	15193								
190		OBS	0096	1784	34736	2513			15173								
		STD	0100	1782	3474	2513	0028729	0335	15173								
		STD	0125	1741	3474	2523	0027858	0406	15165								
		STD	0150	1681	3474	2538	0026568	0474	15151								
190		OBS	0150	1681	34736	2538			15151								
		STD	0200	1504	3449	2559	0024642	0602	15102								
190		OBS	0202	1496	34478	2560			15099								
		STD	0250	1218	3424	2598	0020920	0716	15012								
		STD	0300	1007	3409	2625	0018444	0814	14944								
190		OBS	0300	1007	34085	2625			14944								
190		OBS	T0399	0826	34028	2649			14892								
		STD	0400	0824	3403	2650	0016144	0987	14891								
		STD	0500	0644	3404	2676	0013615	1136	14838								
		STD	0600	0521	3406	2693	0012036	1264	14805								
190		OBS	0600	0521	34058	2693			14805								
		STD	0700	0479	3418	2707	0010721	1378	14806								
190		OBS	T0798	0444	34278	2719			14809								
		STD	0800	0443	3428	2719	0009642	1480	14809								
		STD	0900	0416	3435	2727	0008892	1573	14815								
		STD	1000	0390	3441	2735	0008224	1658	14822								
190		OBS	T1011	0387	34415	2736			14822								
		STD	1100	0365	3444	2740	0007785	1738	14828								
		STD	1200	0341	3447	2744	0007361	1814	14835								
		STD	1300	0318	3450	2749	0006945	1886	14842								
		STD	1400	0296	3453	2753	0006543	1953	14850								
		STD	1500	0275	3456	2757	0006142	2016	14858								
190		OBS	T1511	0273	34558	2758			14859								

TABLE II.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR, 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	768	KL	3003 N	14001 W		123	00	09	29	189	1966	OSN	019	3842	15	09	4	3		x2	8	7		0019

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		03	S08	149	222	217	7	13	

MESSENGR TIME OR T HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\delta\triangle D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	QUAL
		STD	0000	2257	3509	2415	0037804	0000	15290								
189		OBS	0000	2257	35091	2415			15290								
		STD	0010	2252	3508	2415	0037778	0038	15290								
189		OBS	0010	2252	35081	2415			15290								
		STD	0020	2254	3516	2421	0037303	0075	15293								
189		OBS	0029	2256	35194	2423			15296								
		STD	0030	2255	3519	2423	0037134	0113	15296								
189		OBS	0049	2167	35149	2444			15276								
		STD	0050	2152	3514	2448	0034829	0185	15272								
189		OBS	0074	1874	34872	2501			15197								
		STD	0075	1869	3487	2502	0029737	0265	15195								
189		OBS	0098	1760	34738	2519			15166								
		STD	0100	1756	3473	2519	0028168	0338	15165								
		STD	0125	1704	3468	2528	0027418	0407	15153								
		STD	0150	1637	3462	2539	0026456	0474	15136								
189		OBS	0150	1637	34616	2539			15136								
		STD	0200	1460	3443	2564	0024160	0601	15087								
189		OBS	T0202	1453	34421	2565			15085								
		STD	0250	1256	3429	2595	0021268	0715	15026								
		STD	0300	1088	3418	2617	0019167	0816	14974								
189		OBS	0300	1088	34175	2617			14974								
189		OBS	T0398	0872	34042	2643			14909								
		STD	0400	0869	3404	2644	0016722	0995	14909								
		STD	0500	0722	3410	2670	0014269	1150	14869								
		STD	0600	0602	3416	2691	0012327	1283	14839								
		STD	0700	0509	3422	2707	0010818	1399	14819								
189		OBS	T0790	0447	34269	2718			14809								
		STD	0800	0444	3428	2719	0009654	1501	14809								
		STD	0900	0412	3436	2729	0008770	1593	14813								
189		OBS	T0987	0387	34417	2736			14818								
		STD	1000	0383	3442	2736	0008066	1677	14819								
		STD	1100	0357	3448	2744	0007395	1755	14825								
		STD	1200	0333	3452	2749	0006891	1826	14832								
		STD	1300	0312	3454	2753	0006565	1893	14840								
		STD	1400	0293	3455	2755	0006331	1958	14849								
189		OBS	T1478	0280	34552	2757			14857								

TABLE II.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR.1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	768	KL	3003 N	14006 W		123	00	09	30	187	1966	05N	020	4023	15	03	2	3		X1	8	2	0020

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		01	S03	163	228	228	8	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁷	Σ△D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	2236	3496	2411	0038175	0000	15283								
187		OBS	0000	2236	34961	2411			15283								
		STD	0010	2235	3498	2412	0038056	0038	15285								
187		OBS	0010	2235	34979	2412			15285								
		STD	0020	2238	3502	2415	0037875	0076	15288								
		STD	0030	2241	3506	2417	0037700	0114	15290								
187		OBS	0031	2241	35067	2417			15291								
		STD	0050	2231	3515	2426	0036877	0188	15292								
187		OBS	0052	2223	35157	2429			15291								
		STD	0075	2026	3499	2470	0032747	0275	15241								
187		OBS	0077	2010	34971	2473			15236								
		STD	0100	1846	3480	2502	0029777	0354	15192								
187		OBS	0104	1823	34781	2507			15186								
		STD	0125	1774	3475	2516	0028522	0427	15175								
		STD	0150	1702	3469	2529	0027379	0496	15157								
187		OBS	0156	1682	34672	2532			15152								
		STD	0200	1508	3448	2557	0024800	0627	15103								
187		OBS	T0209	1471	34446	2563			15092								
		STD	0250	1261	3427	2592	0021509	0743	15027								
		STD	0300	1046	3411	2620	0018919	0844	14958								
187		OBS	0307	1020	34088	2623			14950								
		STD	0400	0818	3404	2652	0015950	1018	14889								
		STD	0500	0649	3399	2672	0014060	1168	14839								
187		OBS	T0508	0638	33988	2673			14836								
		STD	0600	0565	3408	2689	0012458	1301	14823								
187		OBS	0603		34079												
		STD	0700	0499	3418	2705	0010967	1418	14814								
		STD	0800	0446	3427	2718	0009753	1521	14810								
187		OBS	T0805	0444	34279	2719			14810								
		STD	0900	0412	3436	2729	0008770	1614	14813								
		STD	1000	0381	3442	2737	0008043	1698	14818								
187		OBS	T1005	0380	34425	2737			14818								
		STD	1100	0354	3445	2742	0007574	1776	14824								
		STD	1200	0331	3448	2746	0007184	1850	14831								
		STD	1300	0310	3450	2750	0006806	1920	14839								
		STD	1400	0294	3453	2754	0006483	1986	14849								
187		OBS	T1493	0281	34556	2757			14860								

TABLE II.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	QUADR.	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES		NODC STATION NUMBER
CERT. CODE	ID. NO.	CODE	° ′ 1/10	° ′ 1/10	NO.	10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	
31	768	KL	3005 N	13959 W		122	09	10	01	156	1966	05N	021	4389	10	02	1	3		X1	6	6	0021

WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB			
			S00	169	222	217	8	13	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY×10⁷	Δ D DYN. M × 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	
		STD	0000	2246	3504	2413	0037957	0000	15287								
156		OBS	0000	2248	35036	2413			15287								
		STD	0010	2244	3503	2414	0037909	0038	15288								
156		OBS	0010	2244	35033	2414			15288								
		STD	0020	2252	3512	2418	0037524	0076	15292								
		STD	0030	2259	3518	2421	0037335	0113	15296								
156		OBS	0031	2260	35181	2421			15297								
		STD	0050	2228	3520	2431	0036392	0187	15292								
156		OBS	0052	2217	35206	2435			15290								
		STD	0075	1959	3493	2483	0031501	0272	15221								
156		OBS	0078	1929	34900	2489			15213								
		STD	0100	1836	3479	2504	0029611	0348	15189								
		STD	0125	1731	3468	2521	0028035	0420	15161								
		STD	0150	1630	3458	2537	0026563	0488	15134								
		STD	0200	1432	3440	2568	0023802	0614	15077								
156		OBS	T0210	1394	34370	2573			15066								
		STD	0250	1228	3427	2599	0020887	0726	15016								
		STD	0300	1058	3416	2622	0018757	0825	14963								
156		OBS	0312	1023	34141	2626			14952								
		STD	0400	0846	3405	2648	0016316	1000	14900								
156		OBS	T0412	0824	34038	2650			14893								
		STD	0500	0709	3406	2668	0014416	1154	14864								
		STD	0600	0598	3408	2685	0012888	1291	14836								
156		OBS	0617		34079												
		STD	0700	0510	3418	2704	0011104	1411	14819								
		STD	0800	0444	3428	2719	0009654	1514	14809								
156		OBS	T0816	0436	34295	2721			14809								
		STD	0900	0401	3436	2730	0008639	1606	14809								
		STD	1000	0379	3442	2737	0008019	1689	14817								
156		OBS	T1015	0378	34425	2737			14819								

TABLE III. Observed and interpolated oceanographic data for stations taken by USCGC WACHUSETT at Ocean Station NOVEMBER, 19 November–3 December 1966, prepared from NODC listing No. 31–833 WC.

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	PART	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.		° ' 1/10	° ' 1/10	NODC	10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
31	833	WC	30007N	140015W		123	00	11	19	002	1966	N03	001	2286	15	33	4			X1	6	5		0001

WATER		WIND		BAROMETER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		33	S09	190	206	166	7	14	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	2130	3527	2464	0033135	0000	15259								
002		OBS	0000	2130	35269	2464			15259								
002		OBS	0009	2126	35271	2465			15260								
		STD	0010	2126	3527	2465	0033060	0033	15260								
		STD	0020	2126	3527	2465	0033084	0066	15261								
		STD	0030	2125	3527	2465	0033110	0099	15263								
002		OBS	0032	2125	35269	2465			15263								
		STD	0050	2124	3528	2466	0033105	0165	15266								
002		OBS	0050	2124	35277	2466			15266								
		STD	0075	2120	3526	2466	0033196	0248	15269								
002		OBS	0078	2120	35262	2466			15269								
		STD	0100	1821	3483	2511	0028964	0326	15185								
002		OBS	0101	1811	34821	2513			15182								
		STD	0125	1741	3480	2528	0027393	0397	15166								
		STD	0150	1648	3472	2544	0025966	0463	15141								
002		OBS	0150	1648	34717	2544			15141								
		STD	0200	1404	3435	2569	0023605	0587	15068								
002		OBS	T0200	1404	34349	2569			15068								
		STD	0250	1213	3426	2601	0020681	0698	15011								
002		OBS	0298	1065	34181	2622			14966								
		STD	0300	1061	3418	2623	0018662	0796	14964								
002		OBS	T0394	0875	34062	2644			14910								
		STD	0400	0861	3406	2647	0016466	0972	14906								
		STD	0500	0659	3404	2674	0013833	1123	14844								
002		OBS	0588	0532	34023	2689			14807								
		STD	0600	0524	3404	2691	0012207	1254	14806								
		STD	0700	0462	3416	2707	0010664	1368	14798								
002		OBS	T0787	0421	34250	2719			14797								
		STD	0800	0417	3426	2720	0009481	1469	14798								
		STD	0900	0391	3434	2729	0008670	1559	14804								
002		OBS	T0994	0368	34398	2736			14811								
		STD	1000	0367	3440	2736	0008026	1643	14812								
		STD	1100	0344	3446	2743	0007390	1720	14820								
		STD	1200	0323	3450	2749	0006921	1791	14828								
		STD	1300	0305	3453	2753	0006556	1859	14837								
		STD	1400	0288	3455	2756	0006273	1923	14847								
		STD	1500	0273	3456	2758	0006081	1985	14858								
002		OBS	1531	0269	34562	2759			14861								

TABLE III.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR, 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS STA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	833	WC	29595N	14000 W		087	90	11	20	192	1966	N03	002	4424	18	34	4			X1	6	2	0002

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		35	515	240	178	144	7	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2120	3526	2466	0032947	0000	15257								
192		OBS	0000	2120	35259	2466			15257								
		STD	0010	2117	3526	2466	0032912	0033	15257								
192		OBS	0014	2116	35257	2467			15258								
		STD	0020	2116	3526	2466	0032937	0066	15259								
		STD	0030	2116	3526	2466	0032981	0099	15260								
192		OBS	0036	2116	35254	2466			15261								
		STD	0050	2115	3526	2467	0033010	0165	15263								
192		OBS	0059	2115	35262	2467			15265								
		STD	0075	1935	3502	2497	0030256	0444	15216								
192		OBS	0090	1816	34872	2515			15183								
		STD	0100	1786	3486	2522	0027922	0317	15170								
192		OBS	0118	1720	34800	2533			15158								
		STD	0125	1679	3473	2538	0026489	0385	15146								
		STD	0150	1540	3452	2553	0025043	0449	15105								
192		OBS	0176	1410	34361	2569			15066								
		STD	0200	1303	3429	2586	0022040	0567	15034								
192		OBS	T0235	1172	34216	2605			14994								
		STD	0250	1143	3420	2609	0019844	0671	14986								
		STD	0300	1044	3416	2624	0018517	0767	14958								
192		OBS	0350	0945	34117	2637			14930								
		STD	0400	0836	3405	2649	0016163	0941	14896								
192		OBS	0463	0716	34006	2664			14860								
		STD	0500	0662	3401	2671	0014104	1092	14845								
		STD	0600	0538	3404	2689	0012382	1425	14814								
		STD	0700	0448	3414	2707	0010645	1340	14792								
192		OBS	0706	0444	34148	2708			14792								
		STD	0800	0395	3432	2727	0008780	1437	14789								
192		OBS	0838	0379	34371	2733			14789								
		STD	0900	0368	3439	2736	0008033	1521	14795								
		STD	1000	0351	3443	2740	0007618	1599	14805								
		STD	1100	0334	3446	2744	0007274	1674	14815								
192		OBS	T1151	0326	34476	2746			14821								
		STD	1200	0318	3449	2748	0006973	1745	14826								
		STD	1300	0302	3450	2751	0006720	1813	14836								
		STD	1400	0286	3452	2754	0006462	1879	14846								
		STD	1500	0271	3454	2757	0006212	1943	14857								
		STD	1750	0234	3458	2763	0005581	2090	14883								
192		OBS	T1770	0231	34587	2764			14886								

TABLE III.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE	LONGITUDE	DEPTH SOURCE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO.	STATION TIME (GMT): DAY	STATION TIME (GMT): HR.	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	833	WC	3001 N	14002 W		123	00	11	21	189	1966	N03	003		4112	16	34			X1	8	6		0003

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OF FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		09	504	261	189	161	7	14	

MESSENGER TIME OF DAY HR. * 10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	ICC
		STD	0000	2109	3527	2469	0032595	0000	15254								
189		OBS	0000	2109	35268	2469			15254								
189		OBS	0009	2105	35269	2470			15254								
		STD	0010	2105	3527	2470	0032516	0033	15254								
		STD	0020	2103	3527	2471	0032532	0065	15255								
		STD	0030	2102	3526	2471	0032549	0098	15257								
189		OBS	0034	2101	35262	2471			15257								
		STD	0050	2102	3527	2471	0032584	0163	15260								
189		OBS	0053	2102	35270	2471			15261								
		STD	0075	2102	3527	2471	0032702	0244	15264								
189		OBS	0082	2102	35265	2471			15265								
		STD	0100	1815	3489	2517	0028387	0321	15184								
189		OBS	0106	1740	34797	2528			15162								
		STD	0125	1663	3468	2537	0026493	0389	15141								
		STD	0150	1554	3453	2551	0025270	0454	15110								
189		OBS	0159	1512	34483	2557			15097								
		STD	0200	1295	3426	2585	0022106	0572	15030								
189		OBS	T0213	1239	34208	2592			15013								
		STD	0250	1154	3420	2607	0020042	0678	14989								
		STD	0300	1046	3417	2625	0018478	0774	14959								
189		OBS	0320	1004	34152	2630			14947								
		STD	0400	0847	3405	2648	0016331	0948	14900								
189		OBS	T0428	0796	34028	2654			14885								
		STD	0500	0658	3404	2674	0013857	1099	14843								
		STD	0600	0513	3405	2693	0012012	1228	14801								
189		OBS	0642	0469	34053	2698			14790								
		STD	0700	0453	3413	2706	0010779	1342	14794								
		STD	0800	0419	3425	2719	0009579	1444	14798								
189		OBS	T0858	0397	34302	2726			14799								
		STD	0900	0373	3434	2731	0008461	1534	14797								
		STD	1000	0323	3441	2742	0007448	1614	14793								
189		OBS	1074	0293	34450	2747			14793								
		STD	1100	0291	3446	2748	0006815	1685	14797								
		STD	1200	0283	3448	2751	0006631	1752	14810								
		STD	1300	0275	3450	2753	0006437	1818	14824								
		STD	1400	0267	3452	2755	0006240	1881	14838								
		STD	1500	0259	3454	2758	0006041	1943	14851								
189		OBS	1624	0249	34570	2761			14868								

TABLE III.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DUPE INDEX	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	NO.	CODE	° ′1/10	° ′1/10		10°	1°	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	833	WC	30011N	139598W		122	09	11	22	193	1966	N03	004	4115	15	36	4			x1	4	7		0004

WATER		WIND		BARO-METER (mbs)	AIR TEMP. ℃		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		06	S12	271	189	156	7	14	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T ℃	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10^7	$\frac{1}{2}\Delta O$ OXYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at	pH	SCC
		STD	0000	2096	3525	2472	0032360	0000	15250								
193		OBS	0000	2096	35254	2472			15250								
193		OBS	0009	2093	35254	2473			15251								
		STD	0010	2093	3525	2473	0032318	0032	15251								
		STD	0020	2093	3525	2473	0032342	0065	15252								
		STD	0030	2092	3525	2473	0032375	0097	15254								
193		OBS	0031	2092	35253	2473			15254								
193		OBS	0049	2092	35257	2473			15257								
		STD	0050	2092	3526	2473	0032419	0162	15257								
		STD	0075	2096	3526	2472	0032602	0243	15262								
193		OBS	0076	2096	35258	2472			15263								
193		OBS	0098	1884	34885	2499			15204								
		STD	0100	1872	3487	2501	0029893	0321	15200								
		STD	0125	1728	3474	2527	0027530	0393	15161								
193		OBS	0146	1613	34619	2544			15128								
		STD	0150	1591	3459	2547	0025633	0459	15122								
193		OBS	T0194	1375	34322	2573			15057								
		STD	0200	1353	3428	2575	0023090	0581	15050								
		STD	0250	1187	3401	2586	0022034	0694	14999								
193		OBS	0291	1072	33909	2600			14963								
		STD	0300	1054	3393	2604	0020379	0800	14959								
193		OBS	T0386	0883	34077	2644			14912								
		STD	0400	0849	3407	2649	0016200	0983	14901								
		STD	0500	0643	3403	2675	0013683	1132	14837								
193		OBS	0575	0533	34002	2687			14805								
		STD	0600	0515	3404	2692	0012096	1261	14802								
		STD	0700	0452	3417	2709	0010470	1374	14794								
193		OBS	T0764	0421	34238	2718			14793								
		STD	0800	0411	3427	2722	0009337	1473	14795								
		STD	0900	0384	3435	2731	0008514	1562	14802								
193		OBS	T0963	0368	34397	2736			14806								
		STD	1000	0359	3441	2738	0007873	1644	14808								
		STD	1100	0337	3444	2743	0007456	1721	14816								
		STD	1200	0317	3447	2747	0007065	1794	14825								
		STD	1300	0299	3450	2751	0006692	1862	14834								
		STD	1400	0283	3453	2755	0006339	1928	14845								
193		OBS	T1478	0273	34557	2758			14854								

TABLE III.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	EAST INDICTR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	833	WC	2957 N	14001 W		087	90	11	23	186	1966	N03	005	4709	14	03	4			X1	4	6	0005

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		05	S17	278	183	144	7	14	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2094	3528	2474	0032149	0000	15250								
186		OBS	0000	2094	35276	2474			15250								
186		OBS	0009	2088	35273	2475			15250								
		STD	0010	2088	3527	2475	0032074	0032	15250								
		STD	0020	2089	3527	2475	0032123	0064	15252								
		STD	0030	2089	3527	2475	0032180	0096	15253								
186		OBS	0030	2089	35269	2475			15253								
186		OBS	0048	2087	35271	2475			15256								
		STD	0050	2087	3527	2475	0032189	0161	15256								
		STD	0075	2088	3527	2475	0032308	0241	15260								
186		OBS	0077	2088	35270	2475			15261								
		STD	0100	1795	3478	2514	0028685	0318	15177								
186		OBS	0100	1795	34784	2514			15177								
		STD	0125	1700	3471	2531	0027109	0387	15152								
186		OBS	0146	1606	34619	2546			15127								
		STD	0150	1596	3461	2548	0025597	0453	15124								
186		OBS	T0197	1388	34353	2573			15062								
		STD	0200	1376	3435	2575	0023035	0575	15059								
		STD	0250	1196	3426	2604	0020366	0683	15005								
186		OBS	0286	1091	34204	2619			14973								
		STD	0300	1066	3419	2623	0018675	0781	14966								
186		OBS	T0379	0919	34095	2640			14924								
		STD	0400	0862	3406	2646	0016488	0957	14906								
		STD	0500	0638	3398	2672	0014001	1109	14835								
186		OBS	0558	0546	33978	2683			14807								
		STD	0600	0516	3404	2692	0012108	1240	14803								
		STD	0700	0458	3416	2708	0010616	1353	14797								
186		OBS	T0744	0438	34214	2714			14796								
		STD	0800	0423	3427	2720	0009478	1454	14800								
		STD	0900	0398	3436	2730	0008604	1544	14808								
186		OBS	T0935	0390	34385	2733			14810								
		STD	1000	0375	3443	2738	0007898	1627	14816								
		STD	1100	0352	3449	2745	0007262	1703	14823								
		STD	1200	0331	3452	2750	0006867	1773	14832								
		STD	1300	0311	3455	2754	0006479	1840	14840								
		STD	1400	0292	3455	2756	0006320	1904	14849								
186		OBS	T1442	0285	34552	2756			14853								

TABLE III.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DRIFT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.	CODE	° 1/10	° 1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	833	WC	29575N	139585W		086	99	11	26	199	1966	N03	006	4590	16	07	3			X1	6	4		0006

WATER		WIND		BAROMETER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		09	514	254	189	178	7	14	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY 10^7	$\Sigma\Delta$ O DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2027	3520	2486	0031021	0000	15231								
199		OBS	0000	2027	35195	2486			15231								
199		OBS	0009	2023	35195	2487			15231								
		STD	0010	2023	3520	2487	0030953	0031	15231								
		STD	0020	2022	3520	2487	0030969	0062	15233								
		STD	0030	2021	3520	2487	0030977	0093	15234								
199		OBS	0034	2021	35196	2487			15235								
		STD	0050	2023	3520	2487	0031055	0155	15238								
199		OBS	0053	2023	35205	2488			15239								
		STD	0075	2024	3521	2488	0031114	0233	15242								
199		OBS	0082	2024	35209	2488			15244								
		STD	0100	1817	3487	2515	0028579	0307	15185								
199		OBS	0106	1761	34788	2522			15168								
		STD	0125	1693	3470	2532	0027023	0377	15150								
		STD	0150	1599	3459	2545	0025808	0443	15124								
199		OBS	0159	1564	34548	2550			15114								
		STD	0200	1395	3434	2571	0023489	0566	15065								
199		OBS	T0212	1348	34293	2577			15051								
		STD	0250	1198	3422	2601	0020696	0677	15005								
		STD	0300	1034	3414	2624	0018494	0775	14954								
199		OBS	0316	0990	34116	2630			14941								
		STD	0400	0834	3406	2651	0016059	0947	14896								
199		OBS	T0420	0799	34048	2655			14885								
		STD	0500	0648	3405	2676	0013603	1096	14840								
		STD	0600	0510	3406	2694	0011908	1223	14800								
199		OBS	0626	0483	34058	2697			14794								
		STD	0700	0451	3416	2709	0010533	1335	14794								
		STD	0800	0415	3428	2722	0009309	1435	14797								
199		OBS	T0834	0405	34316	2726			14799								
		STD	0900	0391	3436	2731	0008522	1524	14805								
		STD	1000	0370	3442	2738	0007913	1606	14813								
199		OBS	1046	0360	34447	2741			14817								
		STD	1100	0349	3446	2743	0007448	1683	14822								
		STD	1200	0329	3448	2747	0007109	1755	14830								
		STD	1300	0310	3451	2751	0006769	1825	14839								
		STD	1400	0291	3453	2754	0006433	1891	14848								
		STD	1500	0273	3456	2758	0006103	1954	14858								
199		OBS	T1587	0258	34578	2761			14866								

TABLE III.—Continued

REFERENCE CTRY. CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	SHEET INCR.	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR. 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.		NODC STATION NUMBER
31	833	WC	3004 N	14003 W		123	00	11	27	220	1966	N03	007	4481	44	11	2			X1	3	3		0007

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	S01	132	194	150	7	20	

MESSENGER TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10⁷	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SOC
		STD	0000	2017	3520	2489	0030718	0000	15228								
186		OBS	0000	2017	35202	2489			15228								
		STD	0010	2014	3521	2490	0030613	0031	15229								
186		OBS	0010	2014	35211	2490			15229								
		STD	0020	2014	3521	2490	0030655	0061	15231								
186		OBS	0029	2014	35208	2490			15232								
		STD	0030	2014	3521	2490	0030691	0092	15232								
186		OBS	0049	2014	35212	2491			15236								
		STD	0050	2014	3521	2491	0030748	0153	15236								
186		OBS	0074	2015	35210	2490			15240								
		STD	0075	2000	3519	2493	0030643	0230	15236								
186		OBS	0098	1713	34744	2531			15152								
		STD	0100	1703	3473	2532	0026953	0302	15149								
		STD	0125	1585	3454	2545	0025792	0368	15115								
186		OBS	0149	1480	34397	2557			15084								
		STD	0150	1476	3439	2557	0024643	0431	15083								
		STD	0200	1288	3423	2584	0022191	0548	15028								
186		OBS	T0208	1261	34211	2588			15020								
		STD	0250	1136	3418	2609	0019866	0653	14983								
		STD	0300	1011	3414	2629	0018077	0748	14946								
186		OBS	0301	1009	34143	2629			14945								
		STD	0400	0846	3405	2648	0016316	0920	14900								
186		OBS	T0414	0822	34043	2651			14893								
		STD	0500	0636	3404	2677	0013538	1069	14835								
		STD	0600	0487	3404	2695	0011792	1196	14791								
186		OBS	0604	0483	34035	2695			14790								
		STD	0700	0449	3415	2708	0010583	1308	14793								
		STD	0800	0417	3426	2720	0009481	1408	14798								
186		OBS	T0817	0412	34276	2722			14799								
		STD	0900	0390	3435	2730	0008584	1499	14804								
		STD	1000	0366	3442	2738	0007866	1581	14812								
186		OBS	T1015	0362	34426	2739			14813								
		STD	1100	0343	3445	2743	0007452	1657	14819								
		STD	1200	0322	3448	2747	0007057	1730	14827								
		STD	1300	0303	3451	2751	0006680	1799	14836								
		STD	1400	0285	3453	2755	0006384	1864	14846								
		STD	1500	0269	3455	2758	0006108	1926	14856								
186		OBS	T1532	0264	34560	2759			14859								
		STD	1750	0239	3459	2763	0005586	2073	14885								
		STD	2000	0210	3461	2767	0005201	2207	14916								
220		OBS	T2005	0209	34615	2768			14916								
		STD	2500	0173	3464	2773	0004707	2455	14985								
220		OBS	2509	0172	34643	2773			14987								
		STD	3000	0155	3466	2776	0004487	2685	15065								
220		OBS	3013	0155	34664	2776			15067								
220		OBS	T3516	0149	34675	2777			15152								
		STD	4000	0150	3467	2777	0004589	3139	15237								
220		OBS	4047	0150	34670	2777			15299								
220		OBS	T4349	0152	34680	2777			15309								

TABLE III.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	833	WC	3002 N	13956 W		122	09	11	29	193	1966	N03	008		4481	14	24	4		A6	5	8		0008

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		24	S18	179	206	172	6	12	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2004	35514	2488	0030818	0000	15224								
193		OBS	0000	2004	35143	2488			15224								
		STD	0010	2001	3515	2489	0030742	0031	15225								
193		OBS	0010	2001	35148	2489			15225								
		STD	0020	2002	3516	2490	0030716	0062	15227								
		STD	0030	2003	3517	2490	0030704	0092	15229								
193		OBS	0046	2004	35184	2491			15232								
		STD	0050	2004	3518	2491	0030704	0154	15233								
193		OBS	0071	2005	35186	2491			15236								
		STD	0075	2005	3518	2490	0030841	0231	15237								
193		OBS	0091	1991	35153	2492			15236								
		STD	0100	1927	3505	2501	0029928	0307	15218								
		STD	0125	1760	3478	2522	0027978	0379	15171								
		STD	0150	1609	3456	2541	0026246	0447	15127								
193		OBS	T0178	1459	34371	2560			15082								
		STD	0200	1358	3430	2575	0023043	0570	15052								
		STD	0250	1165	3417	2603	0020460	0679	14993								
193		OBS	0260	1132	34150	2608			14983								
		STD	0300	1036	3411	2622	0018749	0777	14955								
193		OBS	T0343	0938	34080	2636			14925								
		STD	0400	0811	3405	2653	0015786	0949	14887								
		STD	0500	0633	3400	2674	0013786	1097	14833								
193		OBS	0520	0604	33982	2677			14824								
		STD	0600	0519	3385	2676	0013554	1234	14801								
193		OBS	T0689	0450	33841	2683			14787								
		STD	0700	0446	3387	2686	0012625	1365	14788								
		STD	0800	0415	3415	2712	0010273	1479	14795								
193		OBS	T0873	0394	34310	2727			14801								
		STD	0900	0387	3432	2728	0008756	1574	14802								
		STD	1000	0361	3437	2734	0008207	1659	14809								
		STD	1100	0338	3441	2740	0007697	1739	14816								
		STD	1200	0318	3445	2745	0007209	1813	14825								
		STD	1300	0301	3450	2750	0006752	1883	14835								
193		OBS	T1394	0287	34538	2755			14846								

TABLE III.—Continued

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE RECORD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	833	wC	2958eN	14000 w		087	90	11	30	187	1966	N03	009	4572	16	31	4			x1	9	5	0009

WATER: COLOR CODE	WATER: TRANS. m	WIND: DIR.	WIND: SPEED OF FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		25	S15	186	211	189	7	14	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH m	t °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-10⁸	Σ△D DYN. M x 10³	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	2000	3515	2489	0030681	0000	15223								
187		OBS	0000	2000	35148	2489			15223								
		STD	0010	1999	3515	2489	0030718	0031	15224								
187		OBS	0012	1999	35144	2489			15225								
		STD	0020	1999	3514	2489	0030756	0061	15226								
		STD	0030	1999	3514	2489	0030792	0092	15228								
187		OBS	0032	1999	35144	2489			15228								
		STD	0050	2000	3516	2490	0030769	0154	15231								
187		OBS	0053	2000	35162	2490			15232								
		STD	0075	2000	3515	2490	0030925	0231	15235								
187		OBS	0080	2000	35148	2489			15236								
		STD	0100	1722	3477	2530	0027095	0303	15156								
187		OBS	0103	1690	34724	2534			15146								
		STD	0125	1646	3466	2540	0026259	0370	15136								
		STD	0150	1569	3455	2549	0025447	0435	15115								
187		OBS	0155	1550	34527	2552			15109								
		STD	0200	1318	3423	2578	0022770	0555	15038								
187		OBS	T0205	1296	34203	2580			15031								
		STD	0250	1166	3418	2604	0020405	0663	14993								
		STD	0300	1039	3415	2624	0018506	0760	14956								
187		OBS	0309	1018	34142	2627			14950								
		STD	0400	0841	3404	2648	0016313	0935	14898								
187		OBS	T0412	0819	34029	2650			14891								
		STD	0500	0649	3403	2675	0013779	1085	14840								
		STD	0600	0510	3403	2692	0012093	1214	14800								
187		OBS	0624	0485	34032	2695			14794								
		STD	0700	0453	3414	2707	0010705	1328	14794								
		STD	0800	0416	3425	2720	0009544	1430	14797								
187		OBS	T0827	0407	34280	2723			14798								
		STD	0900	0388	3434	2730	0008635	1521	14803								
		STD	1000	0364	3441	2738	0007917	1603	14811								
187		OBS	T1034	0356	34428	2740			14813								
		STD	1100	0341	3446	2744	0007355	1680	14818								
		STD	1200	0320	3451	2750	0006812	1750	14827								
		STD	1300	0301	3454	2754	0006436	1817	14836								
		STD	1400	0284	3457	2758	0006078	1879	14846								
		STD	1500	0268	3457	2759	0005949	1939	14856								
187		OBS	T1630	0250	34570	2761			14870								

TABLE III.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	QUAD	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	NO.	CODE	° 1/10	° 1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
31	833	WC	3003 N	13959 W		122	09	12	01	191	1966	N03	010	4389	14	31	3			X1	8	5		0010

WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		22	S11	193	211	200	7	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY $\times 10^7$	$\Sigma\Delta$ O DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	pH	I C C
		STD	0000	1992	3512	2489	0030669	0000	15221								
191		OBS	0000	1992	35122	2489			15221								
191		OBS	0008	1988	35117	2490			15221								
		STD	0010	1988	3512	2490	0030643	0031	15221								
		STD	0020	1989	3512	2490	0030698	0061	15223								
191		OBS	0028	1989	35116	2490			15224								
		STD	0030	1989	3512	2490	0030744	0092	15225								
191		OBS	0044	1988	35114	2490			15227								
		STD	0050	1989	3512	2490	0030807	0154	15228								
191		OBS	0069	1992	35128	2490			15232								
		STD	0075	1906	3501	2503	0029618	0229	15208								
191		OBS	0090	1737	34769	2527			15158								
		STD	0100	1714	3475	2531	0027058	0300	15153								
		STD	0125	1649	3467	2540	0026253	0367	15137								
191		OBS	0135	1621	34635	2544			15129								
		STD	0150	1576	3456	2548	0025526	0431	15117								
191		OBS	T0187	1450	34389	2563			15081								
		STD	0200	1382	3434	2573	0023228	0553	15060								
		STD	0250	1164	3420	2606	0020222	0862	14993								
191		OBS	0269	1099	34165	2615			14973								
		STD	0300	1037	3413	2623	0018619	0759	14955								
191		OBS	T0355	0929	34081	2637			14924								
		STD	0400	0831	3402	2648	0016309	0934	14894								
		STD	0500	0651	3396	2669	0014324	1087	14840								
191		OBS	0528	0610	33958	2674			14828								
		STD	0600	0529	3402	2689	0012417	1220	14808								
191		OBS	T0698	0448	34108	2705			14792								
		STD	0700	0447	3411	2705	0010856	1337	14792								
		STD	0800	0413	3424	2719	0009582	1439	14796								
191		OBS	T0884	0386	34332	2729			14800								
		STD	0900	0381	3434	2730	0008568	1530	14800								
		STD	1000	0353	3438	2736	0008019	1613	14806								
		STD	1100	0329	3442	2742	0007511	1690	14813								
		STD	1200	0308	3446	2747	0007042	1763	14821								
		STD	1300	0290	3450	2752	0006595	1831	14831								
191		OBS	T1367	0280	34528	2755			14838								

TABLE III.—Continued

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	QUCN	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.		° ' 1/10	° ' 1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	833	ec	3001 N	13959 W		122	09	12	02	188	1966	N03	011	4481	14	31	3			X8	4	6		0011

WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		36	507	159	194	183	6	13	

MESSENGR. TIME BT HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY $\times 10^7$	$\Sigma \Delta D$ DYN M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	QUAL
		STD	0000	1999	3510	2486	0030982	0000	15222								
188		OBS	0000	1999	35103	2486			15222								
188		OBS	0009	1992	35092	2487			15222								
		STD	0010	1992	3509	2487	0030915	0031	15222								
		STD	0020	1992	3510	2488	0030885	0062	15224								
188		OBS	0027	1992	35108	2488			15225								
		STD	0030	1993	3511	2488	0030877	0093	15225								
188		OBS	0046	1996	35119	2488			15229								
		STD	0050	2003	3514	2488	0030992	0155	15232								
188		OBS	0068	2004	35162	2489			15235								
		STD	0075	1956	3509	2496	0030268	0231	15223								
		STD	0100	1791	3486	2521	0028039	0304	15177								
		STD	0125	1640	3465	2541	0026199	0372	15134								
188		OBS	0139	1561	34546	2551			15110								
		STD	0150	1499	3447	2558	0024539	0435	15092								
188		OBS	T0187	1321	34261	2580			15037								
		STD	0200	1280	3425	2587	0021892	0551	15025								
		STD	0250	1137	3420	2611	0019737	0655	14984								
188		OBS	0276	1073	34179	2620			14965								
		STD	0300	1027	3415	2626	0018302	0751	14952								
188		OBS	T0364	0905	34080	2641			14917								
		STD	0400	0816	3406	2654	0015765	0921	14889								
		STD	0500	0619	3401	2677	0013497	1067	14827								
188		OBS	0544	0554	33992	2684			14808								
		STD	0600	0508	3405	2694	0011935	1194	14799								
		STD	0700	0444	3415	2709	0010524	1307	14791								
188		OBS	0724	0432	34177	2712			14790								
		STD	0800	0415	3426	2720	0009458	1407	14797								
		STD	0900	0393	3435	2730	0008619	1497	14805								
188		OBS	T0917	0389	34359	2731			14807								
		STD	1000	0371	3442	2738	0007925	1580	14814								
		STD	1100	0350	3447	2744	0007386	1656	14822								
		STD	1200	0330	3451	2749	0006929	1728	14831								
		STD	1300	0310	3453	2752	0006615	1795	14839								
188		OBS	T1393	0292	34536	2754			14847								

TABLE III.—Continued

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	DECK	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	NO.		° 1/10	° 1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	833	WC	3002 N	14000 W		123	00	12	03	183	1966	N03	012		4424	15	32	3		X1	3	7		0012

WATER		WIND		BAROMETER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB			
		28	505	173	189	178	6	14	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY=10⁷	ΔD DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	REC
		STD	0000	1996	3511	2488	0030627	0000	15222								
183		OBS	0000	1996	35114	2488			15222								
		STD	0010	1991	3511	2489	0030738	0031	15222								
183		OBS	0010	1991	35114	2489			15222								
		STD	0020	1992	3511	2489	0030827	0062	15224								
183		OBS	0029	1993	35108	2488			15225								
		STD	0030	1993	3511	2488	0030882	0092	15226								
183		OBS	0049	1999Q	35116	2487Q											
		STD	0050	1989	3512	2490	0030790	0154	15228								
183		OBS	0073	1985	35121	2491			15231								
		STD	0075	1956	3508	2496	0030340	0231	15222								
183		OBS	0098	1692	34703	2532			15146								
		STD	0100	1687	3470	2533	0026809	0302	15144								
		STD	0125	1616	3460	2542	0026032	0368	15126								
183		OBS	0148	1531	34497	2553			15102								
		STD	0150	1519	3448	2555	0024888	0432	15098								
183		OBS	T0197	1285	34224	2584			15026								
		STD	0200	1277	3422	2585	0022054	0549	15024								
		STD	0250	1144	3420	2609	0019862	0654	14986								
183		OBS	0295	1036	34165	2626			14954								
		STD	0300	1025	3416	2627	0018195	0749	14951								
183		OBS	T0394	0839	34042	2648			14896								
		STD	0400	0826	3404	2650	0016078	0920	14892								
		STD	0500	0640	3402	2675	0013702	1069	14836								
183		OBS	0592	0520	34008	2689			14802								
		STD	0600	0515	3402	2690	0012244	1199	14802								
		STD	0700	0464	3413	2705	0010910	1315	14799								
183		OBS	0791	0425	34221	2716			14799								
		STD	0800	0422	3423	2717	0009762	1418	14799								
		STD	0900	0393	3433	2728	0008767	1511	14805								
183		OBS	T0988	0369	34409	2737			14811								
		STD	1000	0366	3441	2738	0007918	1594	14812								
		STD	1100	0342	3444	2742	0007499	1671	14818								
		STD	1200	0320	3447	2747	0007100	1744	14826								
		STD	1300	0301	3450	2751	0006730	1813	14835								
		STD	1400	0284	3453	2755	0006380	1879	14845								
183		OBS	T1477	0273	34552	2757			14854								

TABLE IV. Observed and interpolated oceanographic data for stations taken by USCGC GRESHAM at Ocean Station NOVEMBER, 10–28 February 1967, prepared from NODC listing No. 31–862 GH.

REFERENCE: CNTY CODE	REFERENCE: ID NO.	SHIP CODE	LATITUDE (1/10)	LONGITUDE (1/10)	QUAD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR (1/10)	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	862	GH	3000 N	14000 W		123	00	02	10	159	1967	N04	001		4206	16	30	2	3	X1	3	7		0001

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		08	S12	240	178	161	8	14	

MESSENGER TIME (HR 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S °/₀₀	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁵	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	SCC
		STD	0000	1890	3514	2517	0028007	0000	15192								
159		OBS	0000	1890	35143	2517			15192								
159		OBS	0009	1890	35142	2517			15194								
		STD	0010	1890	3514	2517	0028044	0028	15194								
		STD	0020	1888	3514	2518	0028047	0056	15195								
		STD	0030	1887	3514	2518	0028055	0084	15196								
159		OBS	0033	1886	35139	2518			15197								
		STD	0050	1866	3509	2519	0028006	0140	15193								
159		OBS	0050	1866	35087	2519			15193								
		STD	0075	1856	3506	2519	0028078	0210	15194								
159		OBS	0077	1855	35052	2519			15194								
159		OBS	0099	1853	35046	2519			15197								
		STD	0100	1843	3502	2520	0028109	0281	15194								
		STD	0125	1614	3458	2541	0026134	0348	15125								
159		OBS	0147	1462	34326	2555			15078								
		STD	0150	1451	3432	2557	0024637	0412	15074								
159		OBS	T0197	1284	34231	2585			15026								
		STD	0200	1274	3423	2587	0021924	0528	15023								
		STD	0250	1125	3419	2612	0019596	0632	14979								
159		OBS	0297	1004	34150	2630			14943								
		STD	0300	0998	3415	2631	0017816	0726	14941								
159		OBS	0398	0811	34034	2652			14886								
		STD	0400	0807	3403	2653	0015845	0894	14885								
		STD	0500	0633	3403	2677	0013557	1041	14833								
		STD	0600	0507	3403	2692	0012086	1169	14799								
159		OBS	0603	0504	34028	2692			14798								
		STD	0700	0451	3413	2706	0010755	1283	14793								
		STD	0800	0408	3423	2719	0009598	1385	14793								
159		OBS	T0816	0402	34249	2721			14794								
		STD	0900	0381	3433	2729	0008627	1476	14800								
		STD	1000	0358	3440	2737	0007921	1559	14808								
159		OBS	1029	0351	34425	2740			14810								
		STD	1100	0335	3445	2743	0007396	1635	14816								
		STD	1200	0314	3447	2747	0007015	1708	14824								
		STD	1300	0294	3450	2751	0006642	1776	14832								
		STD	1400	0274	3453	2755	0006263	1840	14841								
		STD	1500	0256	3456	2759	0005904	1901	14850								
159		OBS	T1579	0243	34579	2762			14858								

TABLE IV.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DRIFT INDEX	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.	CODE	° 1/10	° '1/10		10°	1°	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYP	AMT		
31	862	GH	2957 N	13957 W		086	99	02	11	181	1967	N04	002	4075	15	30	2	4		X5	6	8		0002

WATER		WIND		BARO-METER (mbs)	AIR TEMP °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		08	S09	271	167	161	7	14	

MESSENGR TIME OF T HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	1892	3513	2516	0028164	0000	15193								
181		OBS	0000	1892	35128	2516			15193								
		STD	0010	1892	3513	2516	0028206	0028	15194								
181		OBS	0010	1892	35127	2516			15194								
		STD	0020	1891	3513	2516	0028209	0056	15196								
		STD	0030	1889	3513	2516	0028205	0085	15197								
181		OBS	0033	1889	35128	2517			15197								
		STD	0050	1888	3514	2518	0028162	0141	15200								
181		OBS	0052	1888	35140	2518			15200								
		STD	0075	1884	3513	2518	0028213	0211	15203								
181		OBS	0081	1882	35126	2518			15203								
		STD	0100	1878	3511	2518	0028298	0282	15205								
181		OBS	0105	1868	35097	2520			15203								
		STD	0125	1744	3487	2533	0026954	0351	15167								
		STD	0150	1597	3464	2550	0025400	0417	15124								
181		OBS	0158	1552	34572	2555			15111								
		STD	0200	1328	3431	2582	0022380	0536	15042								
181		OBS	T0211	1279	34260	2588			15027								
		STD	0250	1181	3423	2605	0020311	0643	14999								
		STD	0300	1065	3418	2622	0018731	0740	14966								
181		OBS	0317	1028	34164	2627			14955								
		STD	0400	0869	3406	2645	0016597	0917	14909								
181		OBS	T0420	0833	34045	2650			14898								
		STD	0500	0676	3404	2672	0014066	1070	14850								
		STD	0600	0529	3404	2690	0012299	1202	14808								
181		OBS	0627	0498	34034	2693			14800								
		STD	0700	0453	3413	2706	0010779	1318	14794								
		STD	0800	0405	3424	2720	0009489	1419	14792								
181		OBS	T0830	0394	34267	2723			14793								
		STD	0900	0379	3433	2730	0008604	1509	14799								
		STD	1000	0358	3441	2738	0007847	1592	14808								
181		OBS	T1026	0353	34431	2740			14811								
		STD	1100	0338	3445	2743	0007394	1668	14817								
		STD	1200	0319	3448	2747	0007051	1740	14826								
		STD	1300	0301	3450	2751	0006723	1809	14835								
		STD	1400	0283	3453	2754	0006383	1874	14845								
		STD	1500	0266	3455	2758	0006058	1937	14855								
181		OBS	1549	0258	34565	2760			14860								

TABLE IV.—Continued

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	QUAD	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.		° ' 1/10	° ' 1/10		10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
31	862	GH	29582N	140022W		087	90	02	12	158	1967	N04	003		4572	14	30	4	4		X1	2	2	0003

WATER		WIND		BARO-METER (mbst)	AIR TEMP °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		03	522	247	178	161	8	14	

MESSENGER TIME OF HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	pH	QUAL
		STD	0000	1905	3513	2513	0028436	0000	15197								
158		OBS	0000	1905	35134	2513			15197								
158		OBS	0006	1904	35136	2513			15197								
		STD	0010	1902	3514	2514	0028391	0028	15197								
		STD	0020	1899	3513	2514	0028359	0057	15198								
		STD	0030	1898	3513	2515	0028384	0085	15199								
158		OBS	0030	1898	35132	2515			15199								
158		OBS	0046	1900	35133	2514			15203								
		STD	0050	1899	3514	2515	0028419	0142	15203								
158		OBS	0071	1893	35145	2517			15205								
		STD	0075	1892	3515	2517	0028287	0413	15205								
158		OBS	0092	1885	35146	2519			15206								
		STD	0100	1856	3508	2521	0027986	0683	15198								
		STD	0125	1750	3486	2531	0027165	0352	15169								
158		OBS	0138	1687	34750	2537			15151								
		STD	0150	1609	3462	2545	0025809	0418	15128								
158		OBS	T0185	1412	34329	2566			15068								
		STD	0200	1350	3430	2577	0022885	0540	15049								
		STD	0250	1173	3421	2605	0020312	0648	14996								
158		OBS	0273	1106	34179	2615			14976								
		STD	0300	1056	3416	2622	0018723	0746	14962								
158		OBS	T0364	0932	34105	2639			14927								
		STD	0400	0834	3405	2650	0016133	0920	14895								
		STD	0500	0618	3398	2675	0013736	1069	14827								
158		OBS	0535	0562	33976	2681			14810								
		STD	0600	0504	3403	2692	0012035	1198	14798								
		STD	0700	0437	3413	2708	0010590	1311	14788								
158		OBS	T0709	0432	34143	2709			14787								
		STD	0800	0404	3428	2723	0009181	1410	14792								
158		OBS	0884	0380	34386	2734			14798								
		STD	0900	0376	3439	2735	0008118	1497	14799								
		STD	1000	0352	3442	2740	0007689	1576	14806								
		STD	1100	0332	3445	2744	0007295	1651	14814								
		STD	1200	0316	3449	2748	0006950	1722	14825								
		STD	1300	0303	3452	2752	0006636	1790	14836								
158		OBS	T1376	0296	34540	2754			14846								

TABLE IV.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DEPTH INDEX	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY CODE	ID. NO.	CODE	° 1/10	° 1/10		10°	1°	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	862	GH	29582N	140035W		087	90	02	13	158	1967	N04	004	3932	15	30	5	3		X2	6	8		0004

WATER		WIND		BAROMETER (mbs)	AIR TEMP °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		04	S20	247	172	156	8	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY 10^7	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	NOCC
		STD	0000	1902	3511	2512	0028523	0000	15195								
158		OBS	0000	1902	35112	2512			15195								
		STD	0010	1904	3512	2512	0028558	0029	15198								
158		OBS	0013	1904	35119	2512			15198								
		STD	0020	1903	3512	2513	0028546	0057	15199								
		STD	0030	1900	3512	2513	0028529	0086	15200								
158		OBS	0032	1900	35122	2513			15200								
		STD	0050	1897	3512	2514	0028501	0143	15202								
158		OBS	0053	1896	35122	2514			15203								
		STD	0075	1882	3513	2518	0028201	0214	15202								
158		OBS	0080	1880	35126	2519			15202								
		STD	0100	1878	3513	2520	0028149	0284	15205								
158		OBS	0105	1878	35134	2520			15206								
		STD	0125	1757	3490	2532	0027037	0353	15172								
		STD	0150	1611	3465	2547	0025634	0419	15129								
158		OBS	0156	1577	34593	2551			15119								
		STD	0200	1330	3430	2581	0022492	0539	15043								
158		OBS	T0206	1302	34271	2584			15034								
		STD	0250	1177	3422	2605	0020312	0646	14998								
		STD	0300	1055	3417	2623	0018632	0743	14962								
158		OBS	0307	1040	34159	2625			14958								
		STD	0400	0881	3407	2644	0016710	0920	14913								
158		OBS	T0404	0874	34064	2645			14911								
		STD	0500	0667	3405	2673	0013913	1073	14847								
		STD	0600	0515	3403	2691	0012207	1204	14802								
158		OBS	0612	0501	34022	2692			14798								
		STD	0700	0452	3412	2705	0010841	1319	14794								
		STD	0800	0409	3423	2719	0009610	1421	14794								
158		OBS	T0813	0404	34238	2720			14794								
		STD	0900	0386	3432	2728	0008759	1513	14802								
		STD	1000	0365	3440	2737	0008002	1597	14811								
158		OBS	T1008	0363	34405	2737			14811								
		STD	1100	0344	3444	2741	0007574	1675	14819								
		STD	1200	0323	3447	2746	0007164	1749	14827								
		STD	1300	0302	3450	2751	0006749	1818	14836								
		STD	1400	0281	3453	2755	0006330	1884	14844								
		STD	1500	0260	3456	2759	0005907	1945	14852								
158		OBS	T1534	0253	34574	2761			14855								

TABLE IV.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR.1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	862	GH	2955 N	14002 W		087	90	02	14	169	1967	N04	005	4572	16	04	5	3		X2	6	8		0005

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		05	523	281	178	101	8	14	

MESSENGR TIME OR HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	Σ△O DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	1909	3511	2510	0028744	0000	15197								
169		OBS	0000	1909	35105	2510			15197								
		STD	0010	1906	3511	2510	0028713	0029	15198								
169		OBS	0011	1906	35105	2510			15198								
		STD	0020	1905	3511	2511	0028718	0057	15199								
		STD	0030	1904	3510	2511	0028733	0086	15201								
169		OBS	0030	1904	35104	2511			15201								
169		OBS	0049	1910	35106	2510			15206								
		STD	0050	1910	3511	2510	0028931	0144	15206								
		STD	0075	1908	3510	2510	0029014	0216	15209								
169		OBS	0075	1908	35100	2510			15209								
169		OBS	0098	1790	34864	2521			15176								
		STD	0100	1786	3486	2522	0027922	0287	15176								
		STD	0125	1718	3475	2530	0027228	0356	15158								
169		OBS	0149	1628	34628	2542			15134								
		STD	0150	1622	3462	2542	0026095	0423	15132								
		STD	0200	1352	3430	2576	0022953	0546	15050								
169		OBS	T0200	1352	34296	2576			15050								
		STD	0250	1196	3424	2603	0020513	0654	15005								
169		OBS	0299	1067	34186	2622			14967								
		STD	0300	1065	3418	2622	0018731	0752	14966								
169		OBS	T0395	0884	34071	2644			14914								
		STD	0400	0872	3407	2645	0016577	0929	14910								
		STD	0500	0662	3403	2673	0013963	1082	14845								
169		OBS	0594	0523	33991	2687			14804								
		STD	0600	0518	3400	2688	0012429	1214	14803								
		STD	0700	0451	3413	2706	0010755	1330	14793								
169		OBS	T0780	0411	34217	2717			14791								
		STD	0800	0407	3424	2720	0009512	1431	14793								
		STD	0900	0384	3433	2729	0008662	1522	14801								
169		OBS	T0985	0364	34398	2737			14808								
		STD	1000	0360	3440	2737	0007930	1605	14809								
		STD	1100	0337	3443	2742	0007537	1682	14816								
		STD	1200	0312	3446	2746	0007110	1755	14823								
		STD	1300	0287	3448	2751	0006666	1824	14829								
		STD	1400	0261	3451	2755	0006239	1889	14835								
		STD	1500	0235	3454	2760	0005794	1949	14841								
169		OBS	T1613	0204	34570	2765			14847								

TABLE IV.—Continued

REFERENCE: CTRY CODE	REFERENCE: IQ. NO.	SHIP CODE	LATITUDE ° '/10	LONGITUDE ° '/10	DRIFT INDICTR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR./10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	862	GH	29575N	140005W		087	90	02	16	156	1967	N04	006	4700	13	30	3	3		x1	6	6	0000

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		07	S20	295	167	144	8	14	

MESSENGR TIME OF DAY HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	T C C
		STD	0000	1824	3500	2523	0027482	0000	15172								
156		OBS	0000	1824	34998	2523			15172								
156		OBS	0006	18340	34999	25210											
		STD	0010	1823	3500	2523	0027494	0027	15173								
		STD	0020	1822	3500	2523	0027523	0055	15175								
156		OBS	0023	1822	34995	2523			15175								
		STD	0030	1823	3500	2523	0027573	0083	15176								
156		OBS	0044	1824	34997	2523			15179								
		STD	0050	1824	3500	2523	0027661	0138	15180								
156		OBS	0069	1825	34999	2523			15183								
		STD	0075	1824	3500	2523	0027735	0207	15184								
156		OBS	0090	1823	34997	2523			15186								
		STD	0100	1811	3499	2526	0027545	0276	15184								
		STD	0125	1751	3498	2540	0026295	0343	15171								
156		OBS	0135	1715	34979	2548			15162								
		STD	0150	1629	3476	2552	0025231	0408	15136								
156		OBS	T0180	1469	34423	2561			15086								
		STD	0200	1363	3432	2576	0022996	0528	15054								
		STD	0250	1153	3413	2602	0020537	0637	14988								
156		OBS	0265	1104	34100	2609			14973								
		STD	0300	1043	3410	2620	0018927	0736	14957								
156		OBS	T0347	0959	34105	2634			14934								
		STD	0400	0842	3404	2648	0016329	0912	14898								
		STD	0500	0660	3398	2669	0014298	1065	14843								
156		OBS	0518	0633	33979	2673			14836								
		STD	0600	0534	3403	2689	0012406	1199	14810								
156		OBS	T0686	0457	34102	2703			14793								
		STD	0700	0451	3412	2705	0010829	1315	14793								
		STD	0800	0412	3423	2718	0009645	1417	14795								
156		OBS	T0870	0388	34301	2726			14798								
		STD	0900	0378	3433	2730	0008592	1509	14799								
		STD	1000	0350	3440	2738	0007829	1591	14805								
		STD	1100	0326	3446	2745	0007181	1666	14812								
		STD	1200	0308	3450	2750	0006747	1735	14821								
156		OBS	T1270	0298	34519	2753			14829								

TABLE IV.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID NO	SHIP CODE	LATITUDE (°, ′/10)	LONGITUDE (°, ′/10)	CHART INDICES	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR, T/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAT. DEPTH OF SAMPLES	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	862	GH	30005N	140034W		12	30	02	17	156	1967	N04	007	4262	16	30	2	5		X2	3	8	0007

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		06	515	278	167	144	8	14	

MESSENGER TIME (GMT): HR, T/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY (10⁷)	Σ Δ Q DYN M (10³)	SOUND VELOCITY	O₂ (ml/l)	PO₄-P (µg-at/l)	TOTAL-P (µg-at/l)	NO₂-N (µg-at/l)	NO₃-N (µg-at/l)	SiO₄-Si (µg-at/l)	pH	SCC
		STD	0000	1841	35056	2524	0027405	0000	15178								
156		OBS	0000	1841	35064	2524			15178								
156		OBS	0009	1839	35065	2524			15178								
		STD	0010	1839	3507	2524	0027384	0027	15179								
		STD	0020	1839	3507	2524	0027411	0055	15180								
		STD	0030	1839	3507	2525	0027430	0082	15182								
156		OBS	0033	1839	35068	2525			15182								
		STD	0050	1842	3507	2524	0027564	0137	15186								
156		OBS	0051	1842	35068	2524			15186								
		STD	0075	1839	3507	2525	0027577	0206	15189								
156		OBS	0079	1839	35071	2525			15190								
		STD	0100	1839	3507	2525	0027651	0275	15193								
156		OBS	0102	1839	35068	2524			15194								
		STD	0125	1709	3480	2536	0026660	0343	15156								
		STD	0150	1559	3454	2551	0025304	0408	15111								
156		OBS	0153	1540	34509	2552			15106								
		STD	0200	1219	3411	2588	0021770	0526	15003								
156		OBS	0204	1198	34091	2591			14996								
		STD	0250	1120	3414	2609	0019875	0630	14977								
		STD	0300	1034	3415	2625	0018421	0726	14954								
156		OBS	0307	1022	34152	2627			14951								
		STD	0400	0860	3406	2647	0016456	0900	14905								
156		OBS	T0410	0843	34051	2649			14900								
		STD	0500	0655	3405	2675	0013727	1051	14842								
		STD	0600	0505	3405	2693	0011936	1179	14798								
156		OBS	0614	0489	34044	2695			14794								
		STD	0700	0443	3415	2709	0010512	1291	14790								
		STD	0800	0401	3425	2721	0009369	1391	14791								
156		OBS	T0818	0395	34270	2723			14792								
		STD	0900	0379	3434	2730	0008530	1480	14794								
		STD	1000	0359	3441	2738	0007859	1562	14804								
156		OBS	T1020	0355	34424	2740			14810								
		STD	1100	0340	3447	2745	0007269	1638	14818								
		STD	1200	0321	3452	2750	0006750	1708	14827								
		STD	1300	0302	3455	2755	0006374	1774	14836								
		STD	1400	0284	3457	2758	0006078	1836	14846								
		STD	1500	0266	3457	2759	0005925	1896	14855								
156		OBS	T1566	0254	34571	2761			14861								

TABLE IV.--Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT IND CTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	862	GH	29538N	140014W		087	90	02	18	155	1967	N04	008	4115	35	30	2	16		X2	6	8	0008

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbar)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		07	S08	268	156	150	8	20	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-$\times 10^7$	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	1859	3510	2522	0027602	0000	15183								
155		OBS	0000	1859	35096	2522			15183								
155		OBS	0009	1860	35096	2521			15185								
		STD	0010	1860	3510	2521	0027660	0028	15185								
		STD	0020	1857	3510	2522	0027623	0055	15186								
155		OBS	0028	1856	35095	2522			15187								
		STD	0030	1857	3510	2523	0027628	0083	15187								
155		OBS	0047	1860	35103	2522			15191								
		STD	0050	1859	3510	2522	0027722	0138	15191								
155		OBS	0071	1854	35100	2523			15193								
		STD	0075	1854	3510	2523	0027696	0408	15194								
155		OBS	0095	1851	35098	2524			15196								
		STD	0100	1821	3503	2526	0027513	0277	15188								
		STD	0125	1676	3474	2539	0026348	0344	15146								
155		OBS	0146	1557	34520	2549			15110								
		STD	0150	1532	3448	2552	0025164	0408	15102								
155		OBS	T0198	1278	34092	2575			15022								
		STD	0200	1273	3410	2577	0022857	0528	15021								
		STD	0250	1143	3415	2606	0020211	0636	14985								
155		OBS	0295	1039	34165	2625			14956								
		STD	0300	1029	3416	2627	0018262	0732	14953								
155		OBS	T0391	0856	34060	2647			14902								
		STD	0400	0837	3406	2650	0016127	0904	14897								
		STD	0500	0651	3403	2674	0013836	1054	14840								
155		OBS	0589	0530	33998	2687			14806								
		STD	0600	0521	3401	2689	0012392	1185	14804								
		STD	0700	0453	3413	2706	0010779	1301	14794								
155		OBS	0779	0413	34212	2717			14792								
		STD	0800	0407	3423	2719	0009587	1403	14793								
		STD	0900	0381	3431	2728	0008775	1495	14800								
155		OBS	T0974	0364	34376	2735			14806								
		STD	1000	0359	3440	2737	0007933	1578	14808								
200		OBS	T1033	0352	34432	2740			14811								
		STD	1100	0338	3446	2744	0007320	1654	14817								
		STD	1200	0317	3449	2748	0006925	1726	14825								
		STD	1300	0299	3452	2752	0006560	1793	14835								
		STD	1400	0281	3454	2756	0006264	1857	14844								
155		OBS	T1465	0270	34555	2758			14850								
		STD	1500	0264	3456	2759	0005975	1918	14854								
200		OBS	T1588	0251	34574	2761			14863								
		STD	1750	0228	3459	2764	0005458	2061	14881								
		STD	2000	0200	3462	2769	0005011	2192	14912								
200		OBS	2131	0188	34628	2770			14929								
		STD	2500	0170	3465	2774	0004600	2432	14984								
200		OBS	2709	0162	34656	2775			15017								
		STD	3000	0153	3467	2776	0004382	2657	15064								
200		OBS	3230	0149	34674	2777			15102								
200		OBS	T3451	0148	34680	2778			15140								

TABLE IV.—Continued

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD OR SQUARE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	862	GH	29585N	140023W		087	90	02	19	156	1967	N04	009		4481	15	30	2	5		X1	6	6		0009

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		09	506	234	167	156	8	14	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	
		STD	0000	1857	3509	2522	0027569	0000	15182								
	156	OBS	0000	1857	35094	2522			15182								
		STD	0010	1853	3509	2523	0027507	0028	15183								
	156	OBS	0010	1853	35094	2523			15183								
		STD	0020	1853	3509	2523	0027556	0055	15185								
		STD	0030	1853	3509	2523	0027604	0083	15186								
	156	OBS	0030	1853	35090	2523			15186								
	156	OBS	0049	1819	35001	2524			15178								
		STD	0050	1818	3500	2525	0027493	0138	15178								
	156	OBS	0074	1811	34982	2525			15180								
		STD	0075	1811	3498	2525	0027544	0207	15180								
	156	OBS	0099	1813	34987	2525			15185								
		STD	0100	1807	3497	2525	0027617	0275	15183								
		STD	0125	1656	3469	2540	0026264	0343	15139								
		STD	0150	1508	3444	2554	0024955	0407	15094								
	156	OBS	0150	1508	34439	2554			15094								
		STD	0200	1220	3403	2582	0022376	0525	15002								
	156	OBS	0202	1211	34016	2582			14999								
		STD	0250	1142	3402	2595	0021177	0634	14983								
		STD	0300	1059	3402	2610	0019832	0737	14962								
	156	OBS	0301	1057	34016	2611			14961								
		STD	0400	0861	3406	2646	0016473	0918	14906								
	156	OBS	T0400	0861	34060	2646			14906								
		STD	0500	0651	3405	2676	0013673	1069	14841								
		STD	0600	0505	3404	2693	0012002	1197	14798								
	156	OBS	0605	0499	34035	2693			14796								
		STD	0700	0446	3414	2708	0010622	1310	14792								
		STD	0800	0404	3424	2720	0009478	1411	14794								
	156	OBS	T0803	0403	34243	2720			14792								
		STD	0900	0383	3433	2729	0008650	1501	14801								
		STD	1000	0362	3441	2738	0007894	1584	14810								
	156	OBS	T1015	0359	34416	2739			14811								
		STD	1100	0342	3447	2744	0007293	1660	14819								
		STD	1200	0322	3451	2750	0006835	1731	14828								
		STD	1300	0303	3454	2754	0006459	1797	14837								
		STD	1400	0285	3456	2757	0006164	1860	14846								
		STD	1500	0267	3456	2759	0006011	1921	14855								
	156	OBS	1509	0265	34560	2759			14856								

TABLE IV.—Continued

REFERENCE: CYST CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	862	GH	2958 N	14002 W		087	90	02	20	155	1967	N04	010	4572	15	30	4	2		x1	6	5		0010

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		16	S10	176	178	167	8	14	

MESSENGER TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. X 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	STC
		STD	0000	1820	3500	2524	0027380	0000	15171								
155		OBS	0000	1820	34999	2524			15171								
		STD	0010	1820	3500	2524	0027377	0027	15172								
155		OBS	0010	1820	35004	2524			15172								
		STD	0020	1819	3500	2525	0027394	0055	15174								
		STD	0030	1818	3500	2525	0027412	0082	15175								
155		OBS	0030	1818	35002	2525			15175								
		STD	0050	1818	3500	2524	0027515	0137	15178								
155		OBS	0050	1818	34997	2524			15178								
155		OBS	0074	1812	34989	2525			15180								
		STD	0075	1812	3499	2525	0027514	0206	15181								
155		OBS	0099	1813	34989	2525			15185								
		STD	0100	1804	3497	2526	0027546	0275	15182								
		STD	0125	1592	3458	2546	0025653	0341	15118								
		STD	0150	1426	3431	2562	0024199	0404	15066								
155		OBS	0151	1420	34298	2562			15064								
		STD	0200	1232	3410	2585	0022085	0519	15007								
155		OBS	T0203	1223	34096	2586			15004								
		STD	0250	1150	3414	2603	0020447	0626	14987								
		STD	0300	1066	3418	2622	0018770	0724	14966								
155		OBS	0302	1062	34179	2622			14965								
		STD	0400	0872	3406	2645	0016621	0901	14910								
155		OBS	T0401	0870	34062	2645			14909								
		STD	0500	0678	3404	2671	0014102	1054	14851								
		STD	0600	0536	3402	2688	0012527	1187	14810								
155		OBS	0604	0531	34016	2688			14809								
		STD	0700	0459	3413	2705	0010850	1304	14797								
		STD	0800	0405	3423	2719	0009563	1406	14792								
155		OBS	T0802	0404	34235	2720			14792								
		STD	0900	0382	3433	2729	0008639	1497	14801								
		STD	1000	0360	3441	2738	0007870	1580	14809								
155		OBS	T1007	0358	34412	2738			14809								
		STD	1100	0338	3444	2742	0007468	1657	14817								
		STD	1200	0318	3447	2747	0007084	1729	14825								
		STD	1300	0299	3450	2751	0006707	1798	14834								
		STD	1400	0281	3453	2755	0006338	1863	14844								
		STD	1500	0264	3456	2759	0005975	1925	14854								
155		OBS	1512	0262	34564	2759			14855								

TABLE IV.—Continued

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° ′ 1/10	LONGITUDE °′1/10	QUAD + OR −	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	862	GH	29589N	140032W		087	90	02	21	155	1967	N04	011	3859	16	31	2	5		X1	3	6		0011

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		13	S11	196	178	167	8	14	

MESSEN-GER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E1B7	Σ Δ O DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	pH	SOO
		STD	0000	1839	35106	2524	0027358	0000	15177								
155		OBS	0000	1839	35064	2524			15177								
		STD	0010	1838	3507	2525	0027368	0027	15178								
155		OBS	0014	1838	35065	2525			15179								
		STD	0020	1837	3506	2525	0027371	0055	15180								
		STD	0030	1835	3506	2525	0027362	0082	15181								
155		OBS	0033	1834	35063	2525			15181								
		STD	0050	1835	3506	2525	0027443	0137	15184								
155		OBS	0052	1835	35062	2525			15184								
		STD	0075	1831	3505	2526	0027493	0206	15187								
155		OBS	0080	1830	35052	2526			15187								
		STD	0100	1828	3505	2526	0027534	0274	15190								
155		OBS	0104	1828	35051	2526			15191								
		STD	0125	1702	3478	2536	0026646	0342	15154								
		STD	0150	1558	3452	2549	0025429	0407	15111								
155		OBS	0155	1530	34477	2552			15102								
		STD	0200	1288	3420	2582	0022411	0527	15047								
155		OBS	T0207	1257	34173	2586			15018								
		STD	0250	1153	3417	2605	0020273	0633	14989								
		STD	0300	1044	3416	2624	0018525	0730	14958								
155		OBS	0310	1023	34157	2627			14952								
		STD	0400	0861	3405	2646	0016547	0906	14906								
155		OBS	T0413	0838	34043	2649			14899								
		STD	0500	0671	3404	2673	0013990	1059	14849								
		STD	0600	0528	3404	2690	0012249	1190	14808								
155		OBS	0621	0505	34041	2693			14802								
		STD	0700	0459	3413	2705	0010850	1305	14797								
		STD	0800	0411	3423	2718	0009633	1408	14795								
155		OBS	T0826	0401	34258	2722			14795								
		STD	0900	0382	3433	2729	0008639	1499	14801								
		STD	1000	0357	3442	2739	0007762	1581	14808								
155		OBS	T1025	0351	34434	2741			14810								
		STD	1100	0334	3445	2744	0007333	1656	14815								
		STD	1200	0313	3448	2748	0006974	1728	14823								
		STD	1300	0294	3450	2752	0006634	1796	14832								
		STD	1400	0276	3453	2755	0006309	1861	14842								
		STD	1500	0261	3455	2758	0006006	1922	14852								
155		OBS	1583	0249	34571	2761			14861								

TABLE IV.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	862	GH	29597N	140034W		087	90	02	22	155	1967	N24	012	4572	15	30	5	15		X1	5	3		0012

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		06	S15	217	172	161	8	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	1869	3513	2522	0027595	0000	15186								
155		OBS	0000	1869	35130	2522			15186								
		STD	0010	1866	3513	2523	0027557	0028	15187								
155		OBS	0010	1866	35130	2523			15187								
		STD	0020	1866	3513	2523	0027591	0055	15189								
155		OBS	0028	1866	35129	2522			15190								
		STD	0030	1866	3513	2522	0027635	0083	15190								
155		OBS	0047	1867	35130	2522			15193								
		STD	0050	1866	3513	2523	0027694	0138	15194								
155		OBS	0070	1860	35125	2524			15195								
		STD	0075	1860	3513	2524	0027661	0207	15196								
155		OBS	0093	1858	35123	2524			15198								
		STD	0100	1846	3511	2526	0027519	0276	15196								
		STD	0125	1801	3501	2530	0027273	0345	15186								
155		OBS	0142	1771	34896	2528			15178								
		STD	0150	1705	3479	2536	0026720	0412	15159								
155		OBS	T0191	1416	34367	2568			15070								
		STD	0200	1374	3434	2575	0023068	0537	15058								
		STD	0250	1174	3422	2605	0020257	0645	14997								
155		OBS	0285	1065	34155	2620			14963								
		STD	0300	1039	3414	2623	0018579	0742	14956								
155		OBS	T0380	0899	34079	2642			14917								
		STD	0400	0851	3407	2649	0016245	0916	14902								
		STD	0500	0647	3402	2674	0013811	1087	14839								
155		OBS	0575	0536	33986	2685			14806								
		STD	0600	0516	3402	2690	0012256	1197	14802								
		STD	0700	0447	3413	2707	0010708	1312	14792								
155		OBS	T0765	0414	34197	2716			14790								
		STD	0800	0405	3423	2719	0009563	1413	14792								
		STD	0900	0382	3433	2729	0008639	1504	14801								
155		OBS	T0964	0367	34376	2735			14805								
		STD	1000	0359	3440	2737	0007933	1587	14808								
		STD	1100	0337	3446	2744	0007308	1663	14817								
		STD	1200	0317	3451	2750	0006777	1734	14825								
		STD	1300	0298	3454	2754	0006401	1799	14834								
		STD	1400	0279	3455	2757	0006167	1862	14843								
155		OBS	T1454	0270	34551	2758			14848								

TABLE IV.—Continued

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	862	GH	29585N	140019W		087	90	02	23	154	1967	N04	013	4708	15	30	2	6		X1	6	7		0013

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	506	200	161	122	7	14	

MESSENGER TIME OR HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	TCO
		STD	0000	1833	3504	2524	0027404	0000	15175								
154		OBS	0000	1833	35038	2524			15175								
		STD	0010	1834	3504	2523	0027484	0027	15177								
154		OBS	0010	1834	35035	2523			15177								
		STD	0020	1832	3503	2524	0027477	0055	15178								
154		OBS	0029	1831	35033	2524			15179								
		STD	0030	1831	3503	2524	0027499	0082	15179								
154		OBS	0048	1834	35037	2523			15183								
		STD	0050	1835	3504	2523	0027627	0138	15184								
154		OBS	0072	1836	35039	2523			15188								
		STD	0075	1834	3503	2523	0027705	0207	15187								
154		OBS	0096	1818	34996	2524			15186								
		STD	0100	1796	3495	2526	0027503	0276	15180								
		STD	0125	1661	3470	2539	0026303	0343	15141								
154		OBS	0146	1549	34521	2551			15107								
		STD	0150	1525	3449	2554	0024942	0407	15100								
154		OBS	T0198	1279	34189	2583			15024								
		STD	0200	1273	3419	2584	0022212	0525	15022								
		STD	0250	1135	3417	2609	0019921	0630	14962								
154		OBS	0294	1030	34154	2626			14952								
		STD	0300	1019	3415	2628	0018167	0725	14949								
154		OBS	T0394	0853	34043	2646			14902								
		STD	0400	0839	3404	2648	0016268	0898	14897								
		STD	0500	0640	3403	2676	0013651	1047	14836								
154		OBS	0589	0514	34020	2690			14800								
		STD	0600	0506	3403	2692	0012059	1176	14798								
		STD	0700	0447	3413	2707	0010708	1290	14792								
154		OBS	T0782	0410	34213	2717			14791								
		STD	0800	0406	3423	2719	0009575	1391	14793								
		STD	0900	0382	3433	2729	0008639	1482	14801								
154		OBS	T0982	0364	34395	2736			14807								
		STD	1000	0360	3441	2738	0007870	1565	14809								
		STD	1100	0339	3447	2745	0007258	1640	14818								
		STD	1200	0318	3452	2751	0006715	1710	14826								
		STD	1300	0299	3454	2754	0006412	1776	14835								
		STD	1400	0281	3455	2757	0006190	1839	14844								
154		OBS	T1474	0268	34551	2758			14851								

TABLE IV.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DROGUE	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES			NODC STATION NUMBER
CTRY. CODE	ID. NO.	CODE	° 1/10	° '1/10		10°	1°	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT		
31	862	GH	29573N	140002W		087	90	02	24	157	1967	N04	014	4105	15	33	3	3		x1	6	6		0014

WATER		WIND		BAROMETER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		01	509	211	156	122	7	14	

MESSENGR. TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY $\times 10^7$	$\Sigma \Delta D$ DYN M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	1865	3513	2523	0027506	0000	15185								
157		OBS	0000	1865	35129	2523			15185								
157		OBS	0009	1866	35129	2522			15187								
		STD	0010	1866	3513	2522	0027562	0028	15187								
		STD	0020	1865	3513	2523	0027572	0055	15188								
		STD	0030	1863	3513	2523	0027585	0083	15190								
157		OBS	0033	1863	35127	2523			15190								
		STD	0050	1865	3513	2523	0027682	0138	15193								
157		OBS	0051	1865	35128	2523			15193								
		STD	0075	1860	3511	2523	0027780	0207	15196								
157		OBS	0080	1856	35106	2523			15195								
		STD	0100	1834	3511	2529	0027278	0476	15192								
157		OBS	0104	1826	35105	2531			15191								
		STD	0125	1742	3488	2534	0026835	0344	15167								
		STD	0150	1622	3463	2543	0026022	0410	15132								
157		OBS	0156	1590	34576	2546			15122								
		STD	0200	1300	3421	2580	0022568	0531	15032								
157		OBS	T0208	1259	34162	2584			15018								
		STD	0250	1156	3416	2604	0020356	0639	14990								
		STD	0300	1043	3416	2624	0018486	0736	14958								
157		OBS	0304	1034	34162	2626			14955								
		STD	0400	0844	3404	2648	0016330	0910	14899								
157		OBS	T0400	0844	34044	2648			14899								
		STD	0500	0643	3402	2675	0013765	1060	14837								
157		OBS	0592	0512	34000	2689			14799								
		STD	0600	0506	3401	2691	0012208	1190	14798								
		STD	0700	0445	3413	2707	0010684	1305	14791								
157		OBS	T0784	0405	34228	2719			14790								
		STD	0800	0401	3425	2721	0009369	1405	14791								
		STD	0900	0376	3435	2732	0008421	1494	14798								
157		OBS	0989	0355	34429	2740			14805								
		STD	1000	0353	3443	2740	0007627	1574	14806								
		STD	1100	0331	3446	2744	0007261	1648	14814								
		STD	1200	0312	3448	2748	0006933	1719	14823								
		STD	1300	0294	3451	2752	0006605	1787	14832								
		STD	1400	0278	3453	2755	0006295	1852	14843								
		STD	1500	0264	3456	2758	0006005	1913	14854								
157		OBS	T1505	0263	34557	2759			14854								

TABLE IV.—Continued

REFERENCE: CTRY. CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO.	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.		NODC STATION NUMBER
31	862	GM	30020N	140038■	1	23	00	02	25	156	1967	N04	015	4480		16	35	4	4	X1	6	6		0015

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		16	S10	224	156	128	7	14	

MESSENGER TIME OR HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{3}{4}\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	
		STD	0000	1829	3504	2525	0027302	0000	15174								
156		OBS	0000	1829	35039	2525			15174								
		STD	0010	1828	3504	2525	0027334	0027	15175								
156		OBS	0010	1828	3505Q	2526Q											
		STD	0020	1828	3503	2525	0027382	0055	15177								
		STD	0030	1828	3503	2524	0027438	0082	15178								
156		OBS	0034	1828	35030	2524			15179								
		STD	0050	1829	3503	2524	0027531	0137	15182								
156		OBS	0053	1829	35027	2524			15182								
		STD	0075	1828	3502	2524	0027654	0206	15186								
156		OBS	0082	1828	35022	2524			15187								
		STD	0100	1829	3502	2524	0027747	0275	15190								
156		OBS	0106	1829	35023	2524			15191								
		STD	0125	1673	3472	2538	0026426	0343	15144								
		STD	0150	1496	3441	2555	0024914	0407	15090								
156		OBS	0159	1440	34322	2560			15072								
		STD	0200	1244	3410	2583	0022309	0525	15011								
156		OBS	T0212	1198	34061	2588			14997								
		STD	0250	1130	3411	2605	0020273	0632	14980								
		STD	0300	1040	3414	2623	0018596	0729	14956								
156		OBS	0318	1007	34146	2629			14948								
		STD	0400	0850	3405	2647	0016377	0904	14901								
156		OBS	0435	0788	34024	2655			14883								
		STD	0500	0669	3404	2672	0014007	1056	14848								
		STD	0600	0528	3406	2692	0012138	1186	14808								
156		OBS	0638	0487	34063	2697			14797								
		STD	0700	0454	3414	2707	0010716	1301	14795								
		STD	0800	0409	3425	2720	0009462	1402	14794								
156		OBS	T0852	0390	34304	2727			14796								
		STD	0900	0378	3435	2731	0008444	1491	14799								
		STD	1000	0354	3442	2739	0007727	1572	14807								
156		OBS	T1060	0340	34459	2744			14811								
		STD	1100	0331	3446	2745	0007246	1647	14814								
		STD	1200	0311	3446	2747	0007076	1718	14822								
		STD	1300	0292	3446	2748	0006913	1788	14831								
		STD	1400	0275	3446	2750	0006775	1857	14840								
		STD	1500	0260	3446	2751	0006649	1924	14851								
156		OBS	T1625	0244	34463	2753			14865								

TABLE IV.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRFT IND CTN	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	862	GH	30002N	140000W		123	00	02	26	206	1967	N04	016	4683	15	35	6	5		X2	2	8	0016

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		19	S27	203	189	156	7	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	1833	3502	2522	0027535	0000	15175								
206		OBS	0000	1833	35020	2522			15175								
		STD	0010	1832	3502	2523	0027523	0028	15176								
206		OBS	0010	1832	35023	2523			15176								
		STD	0020	1831	3503	2523	0027519	0055	15177								
		STD	0030	1830	3503	2524	0027521	0083	15179								
206		OBS	0030	1830	35026	2524			15179								
		STD	0050	1830	3500	2522	0027755	0138	15182								
206		OBS	0050	1830	35003	2522			15182								
		STD	0075	1830	3500	2521	0027897	0207	15186								
206		OBS	0075	1830	34995	2521			15186								
206		OBS	0095	1828	34990	2521			15188								
		STD	0100	1801	3493	2523	0027766	0277	15181								
		STD	0125	1668	3467	2536	0026678	0345	15142								
206		OBS	0145	1562	34484	2546			15111								
		STD	0150	1531	3444	2549	0025434	0410	15101								
206		OBS	T0196	1296	34124	2574			15028								
		STD	0200	1286	3413	2576	0022914	0531	15026								
		STD	0250	1167	3416	2602	0020599	0640	14993								
206		OBS	0290	1072	34180	2621			14967								
		STD	0300	1046	3416	2624	0018552	0738	14959								
206		OBS	T0384	0850	34050	2647			14899								
		STD	0400	0818	3405	2652	0015921	0910	14889								
		STD	0500	0645	3402	2674	0013807	1059	14838								
206		OBS	0575	0547	33998	2685			14811								
		STD	0600	0526	3403	2690	0012306	1189	14807								
		STD	0700	0453	3413	2706	0010779	1305	14794								
206		OBS	T0763	0419	34197	2715			14791								
		STD	0800	0409	3423	2719	0009610	1407	14794								
		STD	0900	0383	3432	2728	0008724	1498	14801								
206		OBS	T0960	0368	34368	2734			14805								
		STD	1000	0358	3440	2737	0007921	1582	14808								
		STD	1100	0336	3446	2744	0007297	1658	14816								
		STD	1200	0314	3450	2750	0006816	1728	14824								
		STD	1300	0295	3454	2754	0006366	1794	14833								
		STD	1400	0277	3456	2758	0006070	1856	14843								
206		OBS	T1489	0262	34563	2759			14851								

TABLE IV.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	DEPTH	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS				WEATHER	CLOUD CODES			NODC STATION NUMBER
CRY CODE	ID. NO.	CODE	° ' 1/10	° ' 1/10	INDEX	10°	1°	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA	CODE	TYPE	AMT		
31	862	GH	30018N	140025W		123	00	02	27	157	1967	N04	017	4755	17	34	4	5		X1	3	5		0017

WATER		WIND		BARO-METER (mbs)	AIR TEMP °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		18	518	166	178	167	7	14	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	pH	SCC
		STD	0000	1825													
157		OBS	0000	1825													
		STD	0010	1826													
157		OBS	0013	1826	35015	2524			15175								
		STD	0020	1825	3502	2524	0027422		15176								
		STD	0030	1825	3502	2525	0027435		15177								
157		OBS	0035	1824	35024	2525			15178								
		STD	0050	1826	3502	2524	0027537		15181								
157		OBS	0057	1827	35017	2524			15182								
		STD	0075	1826	3502	2524	0027616		15185								
157		OBS	0088	1825	35029	2525			15187								
		STD	0100	1826	3503	2525	0027598		15189								
157		OBS	0114	1826	35038	2526			15192								
		STD	0125	1650	3478	2548	0025475		15138								
		STD	0150	1334	3432	2582	0022293		15036								
157		OBS	0170	1164	34104	2598			14979								
		STD	0200	1122	3415	2609	0019724		14969								
157		OBS	0226	1082	34170	2618			14960								
		STD	0250	1039	3414	2623	0018473		14948								
		STD	0300	0948	3409	2635	0017439		14922								
157		OBS	0340	0875	34059	2644			14901								
		STD	0400	0755	3401	2658	0015260		14865								
157		OBS	0452	0667	33989	2669			14838								
		STD	0500	0610	3400	2677	0013482		14824								
		STD	0600	0511	3405	2693	0011972		14801								
157		OBS	0681	0451	34105	2704			14790								
		STD	0700	0443	3413	2707	0010660		14790								
		STD	0800	0406	3424	2720	0009501		14793								
		STD	0900	0376	3433	2730	0008562		14798								
157		OBS	T0900	0376	34331	2730			14798								
		STD	1000	0356	3440	2738	0007898		14807								
		STD	1100	0336	3446	2744	0007297		14816								
157		OBS	T1106	0335	34465	2745			14817								
		STD	1200	0317	3449	2748	0006961		14825								
		STD	1300	0299	3451	2751	0006663		14834								
		STD	1400	0282	3453	2755	0006371		14844								
		STD	1500	0265	3455	2758	0006075		14854								
157		OBS	T1668	0238	34583	2763			14871								

TABLE IV.—Continued

REFERENCE: CITY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPE INDICTR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	862	GH	30008N	140003W		123	00	02	28	069	1967	N04	018	4481	15	14	2	4		X1	6	1		0018

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		00	S00	167	161	139	9	14	

MESSENGER TIME OF CAST HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA–T	SPECIFIC VOLUME ANOMALY–10^5	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_2–N µg-at/l	NO_3–N µg-at/l	SiO_4–Si µg-at/l	pH	NODC
		STD	0000	1826	3501	2523	0027478	0000	15173								
069		OBS	0000	1826	35005	2523			15173								
		STD	0010	1825	3500	2523	0027525	0028	15174								
069		OBS	0010	1825	35000	2523			15174								
		STD	0020	1823	3500	2523	0027511	0055	15175								
		STD	0030	1822	3500	2524	0027521	0083	15176								
069		OBS	0030	1822	35000	2524			15176								
		STD	0050	1825	3500	2523	0027637	0138	15180								
069		OBS	0050	1825	35003	2523			15180								
		STD	0075	1817	3500	2525	0027545	0207	15182								
069		OBS	0080	1816	35000	2525			15183								
		STD	0100	1814	3501	2526	0027507	0275	15185								
069		OBS	0110	1813	35012	2527			15187								
		STD	0125	1663	3471	2540	0026275	0343	15141								
		STD	0150	1459	3432	2556	0024802	0407	15077								
069		OBS	0166	1360	34158	2564			15045								
		STD	0200	1262	3411	2580	0022575	0525	15017								
069		OBS	T0223	1202	34090	2590			15000								
		STD	0250	1148	3410	2601	0020653	0633	14986								
		STD	0300	1047	3413	2621	0018826	0732	14959								
069		OBS	0324	0999	34136	2630			14945								
		STD	0400	0842	3404	2648	0016329	0908	14898								
069		OBS	T0425	0795	34020	2653			14884								
		STD	0500	0655	3403	2674	0013868	1059	14842								
		STD	0600	0516	3404	2692	0012108	1188	14803								
069		OBS	0617	0498	34042	2694			14798								
		STD	0700	0454	3414	2707	0010716	1303	14795								
		STD	0800	0411	3424	2719	0009559	1404	14795								
069		OBS	T0814	0406	34258	2721			14795								
		STD	0900	0384	3433	2729	0008662	1495	14801								
		STD	1000	0360	3440	2737	0007944	1578	14809								
069		OBS	T1024	0354	34420	2739			14811								
		STD	1100	0337	3446	2744	0007308	1654	14817								
		STD	1200	0316	3451	2750	0006765	1725	14825								
		STD	1300	0297	3455	2755	0006315	1790	14834								
		STD	1400	0279	3457	2758	0006020	1852	14844								
		STD	1500	0263	3457	2760	0005890	1911	14853								
069		OBS	T1536	0258	34573	2760			14857								

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UNITED STATES COAST GUARD
1790