



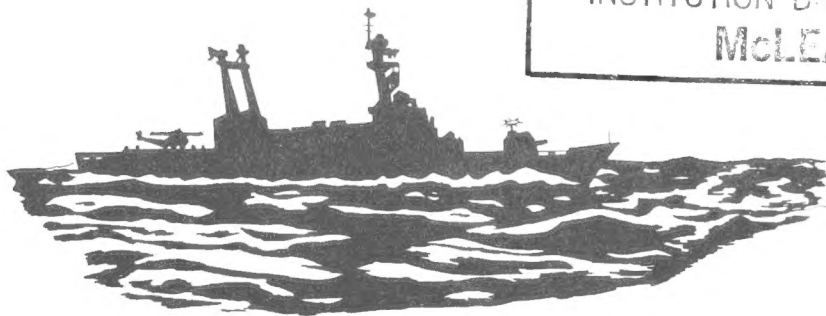
**COAST GUARD**

**OCEANOGRAPHIC OBSERVATIONS  
NORTH ATLANTIC  
OCEAN STATION CHARLIE**

**April 1967 - April 1968**

Woods Hole Oceanographic Institution  
ATLAS - GAZETTEER COLLECTION

PLEASE RETURN  
TO  
INSTITUTION DATA LIBRARY  
McLEAN



~~Atlas~~  
~~52-4~~  
~~CG-373-61~~

**OCEANOGRAPHIC REPORT No. CG 373-61**

GC  
3  
.U7  
A3  
no-61





# OCEANOGRAPHIC REPORT

No. CG 373-61

## NORTH ATLANTIC OCEAN STATION CHARLIE

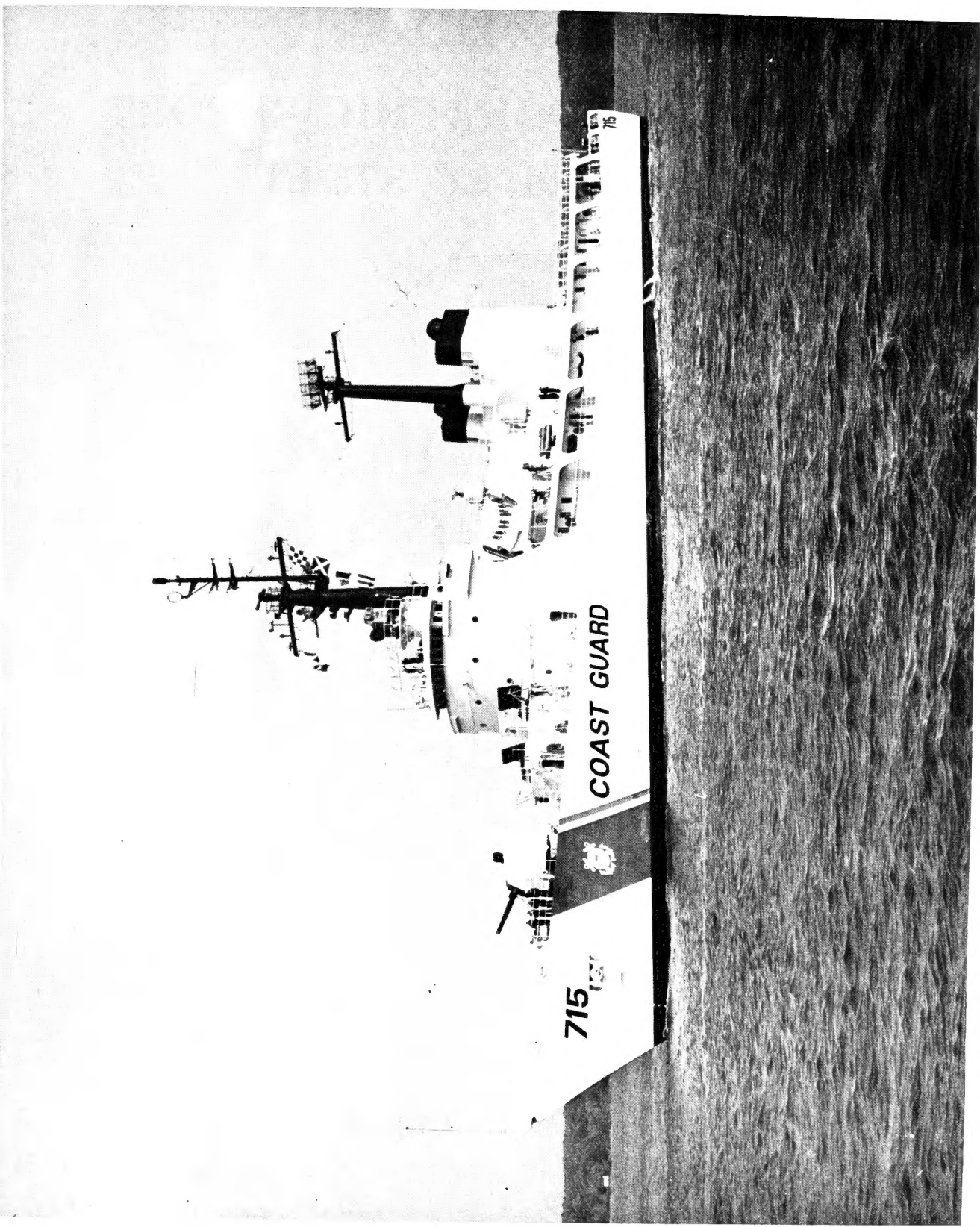
April 1967 - April 1968

*Lawrence J. Hannon*

April 1974

United States Coast Guard  
Oceanographic Unit  
Washington, D.C.





715

COAST GUARD

715

USCGC HAMILTON (WHEC 715)

# ABSTRACT

Oceanographic data from ten cruises on Ocean Station CHARLIE (52°45'N, 35°30'W) during the period April 1967 to April 1968 are presented. These data consist of observed and interpolated temperature and salinity data from 187 shallow ( $\leq 1500$  meters) and 7 deep ( $> 1500$  meters) casts. Temperature-depth and salinity-depth distribution plots show that the temperature distribution follows a seasonal trend, but the salinity distribution is more diverse. Temperature-salinity plots for the deep casts indicate the presence of Labrador Sea Water and Northeast Atlantic Deep Water. The thermohaline characteristics of the -20 salinity anomaly (Bubnov, 1967) indicate water of Subarctic Intermediate Water characteristics at Ocean Station CHARLIE. Examination of the sea surface temperature and salinity shows that Subarctic Intermediate Water was formed in the area of Ocean Station CHARLIE from January to April 1968 but not from June to November 1967.

Editor's note: Reference to a product or comment with respect to it in this publication does not indicate, or permit any person to hold out by republication in whole, or in part or otherwise, that the product has been endorsed, authorized, or approved by the Coast Guard.



# TABLE OF CONTENTS

	<i>Page</i>
Title Page -----	i
Abstract -----	iii
Table of Contents -----	v
List of Illustrations -----	v
List of Tables -----	vi
Introduction -----	1
Data Acquisition and Processing -----	1
Interpretation of Results -----	2
Temperature and Salinity Distributions -----	2
Labrador Sea Water (LS) and Northeast Atlantic Deep Water (NEAD) -----	2
Subarctic Intermediate Water (SAI) -----	3
References -----	4
Illustrations -----	5
Appendix A—Oceanographic Data -----	20

## LIST OF ILLUSTRATIONS

<i>Figure</i>	<i>Page</i>
1. Positions of USCGC INGHAM oceanographic stations, 12–30 April 1967 -----	5
2. Positions of USCGC CASTLE ROCK oceanographic stations, 25 May to 14 June 1967 -----	5
3. Positions of USCGC MENDOTA oceanographic stations, 9 July to 1 August 1967 -----	5
4. Positions of USCGC CHINCOTEAGUE oceanographic stations, 2–24 August 1967 -----	5
5. Positions of USCGC BIBB oceanographic stations, 26 August to 16 September 1967 -----	6
6. Positions of USCGC OWASCO oceanographic stations, 15 October to 2 November 1967 -----	6
7. Positions of USCGC SEBAGO oceanographic stations, 28–30 November 1967 -----	6
8. Positions of USCGC ESCANABA oceanographic stations, 11–31 January 1968 -----	6
9. Positions of USCGC SPENCER oceanographic stations, 28 February to 14 March 1968 -----	7
10. Positions of USCGC HAMILTON oceanographic stations, 10 April to 1 May 1968 -----	7
11. Vertical distributions of temperature versus depth, USCGC INGHAM, 12–30 April 1967 -----	7
12. Vertical distributions of temperature versus depth, USCGC CASTLE ROCK, 25 May to 14 June 1967 -----	8
13. Vertical distributions of temperature versus depth, USCGC MENDOTA, 9 July to 1 August 1967 -----	8
14. Vertical distributions of temperature versus depth, USCGC CHINCOTEAGUE, 2–24 August 1967 -----	9

<i>Figure</i>	<i>Page</i>
15. Vertical distributions of temperature versus depth, USCGC BIBB, 26 August to 16 September 1967 -----	9
16. Vertical distributions of temperature versus depth, USCGC OWASCO, 15 October to 2 November 1967 -----	10
17. Vertical distributions of temperature versus depth, USCGC SEBAGO, 28-30 November 1967 -----	10
18. Vertical distributions of temperature versus depth, USCGC ESCANABA, 11-31 January 1968 -----	11
19. Vertical distributions of temperature versus depth, USCGC SPENCER, 28 February to 14 March 1968 -----	11
20. Vertical distributions of temperature versus depth, USCGC HAMILTON, 10 April to 1 May 1968 -----	12
21. Vertical distributions of salinity versus depth, USCGC INGHAM, 12-30 April 1967 -----	12
22. Vertical distributions of salinity versus depth, USCGC CASTLE ROCK, 25 May to 14 June 1967 -----	13
23. Vertical distributions of salinity versus depth, USCGC MENDOTA, 9 July to 1 August 1967 -----	13
24. Vertical distributions of salinity versus depth, USCGC CHINCO-TEAGUE, 2-24 August 1967 -----	14
25. Vertical distributions of salinity versus depth, USCGC BIBB, 26 August to 16 September 1967 -----	14
26. Vertical distributions of salinity versus depth, USCGC OWASCO, 15 October to 2 November 1967 -----	15
27. Vertical distributions of salinity versus depth, USCGC SEBAGO, 28-30 November 1967 -----	15
28. Vertical distributions of salinity versus depth, USCGC ESCANABA, 11-31 January 1968 -----	16
29. Vertical distributions of salinity versus depth, USCGC HAMILTON, 10 April to 1 May 1968 -----	16
30. Temperature (potential temperature for all temperatures less than 4° C) versus salinity for all deep stations greater than 1500 meters -----	17
31. Iselin (1936) temperature-salinity correlation at all "Atlantis" stations within the Sargasso Sea -----	18
32. Bubnov (1968) scheme of the subarctic frontal zone on the surface of the ocean in the spring and in the autumn of 1958 -----	19

## LIST OF TABLES

<i>Table</i>	<i>Page</i>
1. Oceanographic cruises on Ocean Station CHARLIE, April 1967 to April 1968 -----	2
2. Deep Water Masses of Ocean Station CHARLIE -----	3
3. The Mean and Standard Deviations of the Depth, Temperature, Salinity, and Sigma-t of the -20 Salinity Anomaly on Ocean Station CHARLIE, April 1967 to April 1968 -----	3
4. Comparison of Bubnov's Characteristics of Subarctic Intermediate Water with the Characteristics of the -20 Salinity Anomaly on Ocean Station CHARLIE, April 1967 to April 1968 -----	4
5. The Means and Standard Deviations of the Sea Surface Temperature and Salinity on Ocean Station CHARLIE, April 1967 to April 1968 -----	4



OCEANOGRAPHIC OBSERVATIONS  
NORTH ATLANTIC OCEAN STATION CHARLIE

52°45'N, 35°30'W

April 1967–April 1968

by

Lawrence J. Hannon<sup>1</sup>

## INTRODUCTION

Ocean Station CHARLIE is one of several ocean stations in the North Atlantic Ocean at which U.S. Coast Guard cutters regularly collect meteorological and oceanographical data. This report is the third United States Coast Guard Oceanographic Report (CG 373 Series) on Ocean Station CHARLIE. The two previous reports cover the periods June 1964 to January 1965 (Husby, 1966) and May 1966 to March 1967 (Husby, 1968).

## DATA ACQUISITION AND PROCESSING

This report contains time series oceanographic data that were collected by the U.S. Coast Guard ocean station vessels at Ocean Station CHARLIE (52°45'N, 35°30'W) during the period April 1967 to April 1968 (Table 1).

Ocean station vessels normally maintain position within a ten mile square grid centered on the nominal station, operations and weather permitting. Actual positions of the stations taken during each patrol are presented in figures 1–10. Only those stations taken outside the ten mile square grid have been plotted.

The observational program consisted of daily Nansen casts with sampling depths of 0, 10, 30, 50, 75, 100, 150, 200, 400, 500, 600, 800, 1000, and 1500 meters. For deep casts, sampling depths were 2000, 2500, 3000, and 150 and 50 meters above the bottom as indicated by the vessels' fathometer. In April 1968 the USCGC HAM-

ILTON was one of the first ocean station vessels on an ocean station to use the Bissett-Berman Model 9006-N Salinity/Temperature/Depth Measuring System (STD). The STD casts were taken to a depth of 1500 meters each day at 0000, 0600, 1200, and 1800 GMT, weather and other operations permitting.

Each Nansen bottle was equipped with two protected deep-sea reversing thermometers. In addition five Nansen bottles, used at 200 meters and below, were fitted with an unprotected thermometer to allow determination of thermometric depths. Uncorrected main and auxiliary temperatures were transmitted via radio teletype to the Coast Guard Oceanographic Unit for real-time data processing and quality control.

Corrected temperatures and thermometric depths were computed with a Digital Equipment Corp. PDP-5 computer. After being quality controlled, these data were relayed to Fleet Weather Center, Norfolk, Va., and to Fleet Numerical Weather Central, Monterey, Calif., for use in forecasting synoptic oceanic conditions.

Salinities were determined aboard ship using an inductive salinometer. The conductivity values obtained were converted to salinities using the International Oceanographic Tables published jointly in 1966 by UNESCO and the National Institute of Oceanography of Great Britain. The results were sent to the Coast Guard Oceanographic Unit by radio teletype at intervals of 3–5 days. A second water sample was collected from the top and bottom Nansen bottles; these samples were processed at the Coast Guard Oceanographic Unit as a quality control.

<sup>1</sup>U.S. Coast Guard Oceanographic Unit, Bldg. 159-E, Navy Yard Annex, Washington, D.C. 20390.

TABLE 1.—Oceanographic cruises on Ocean Station CHARLIE, April 1967 to April 1968.

Cruise No.	Vessel	Dates	Number of Casts		NODC Reference Number
			Shallow	Deep	
*C-11-----	USCGC INGHAM	12-30 Apr 67	14	1 (3099m)	31-886
C-12-----	USCGC CASTLE ROCK	25 May-14 Jun 67	21	1 (3391m)	31-1081
C-13-----	USCGC MENDOTA	9 Jul-1 Aug 67	24	1 (3453m)	31-1138
C-14-----	USCGC CHINCOTEAGUE	2-24 Aug 67	21	1 (3350m)	31-1143
C-15-----	USCGC BIBB	26 Aug-16 Sep 67	21	1 (3527m)	31-1159
C-16-----	USCGC OWASCO	15 Oct-2 Nov 67	11	1 (3457m)	31-1172
C-17-----	USCGC SEBAGO	28-30 Nov 67	2	1 (3500m)	31-1186
C-18-----	USCGC ESCANABA	11-31 Jan 68	17	0	31-1201
**C-19-----	USCGC SPENCER	28 Feb-14 Mar 68	8	0	31-1253
C-20-----	USCGC HAMILTON	10 Apr-1 May 68	55 STD	0	31-8043

\*The C in the cruise number indicates Ocean Station CHARLIE. The number is the occupation number.

\*\*No salinity data.

Data (STD) taken by the HAMILTON were relayed directly to Fleet Weather Center, Norfolk, Va. for use in forecasting synoptic oceanic conditions. In addition, all the data were returned to the Coast Guard Oceanographic Unit for quality control prior to submission to the National Oceanographic Data Center (NODC). The interpolated temperatures and salinities for standard depths, sigma-t values, specific volume anomalies, and sound velocities were computed by NODC and are presented in Appendix A.

Analysis of the oceanographic data was based on the distribution of temperature versus depth (figs. 11-20) and salinity versus depth (figs. 21-29). Temperature-salinity curves for all stations deeper than 1500 meters are shown in figure 30. The method of salinity anomalies from Helland-Hansen and Nansen (1926) was applied to the data for analysis of the presence of Subarctic Intermediate Water.

## INTERPRETATION OF RESULTS

### *Temperature and Salinity Distributions*

The maximum temperatures, which ranged from 11.80° C. to 12.20° C., occurred at the surface during August 1967 (fig. 14). The isothermal layer reached its greatest depth of about 200 meters in February and March 1968 (fig. 19) as a result of increased mixing due to wind and low surface temperatures.

The minimum salinities, which ranged from 34.67‰ to 34.81‰, occurred near the surface during January 1968 (fig. 28). Although the

range of the salinity minimum varied, there was a constant renewal of low salinity water at the surface during the year. (This low salinity intrusion will be discussed under Subarctic Intermediate Water.) The salinity maximum of 35.10‰ occurred in July 1967 at a depth of about 200 meters (fig. 23).

### *Labrador Sea Water (LS) and Northeast Atlantic Deep Water (NEAD)*

Temperature-salinity plots (potential temperature was used for temperatures below 4° C) were constructed for all seven deep casts at Ocean Station CHARLIE (fig. 30). The points characteristic of the deep water masses in the area of Ocean Station CHARLIE are indicated on the T-S plots. These deep water masses and their acronyms are listed in Table 2 along with the scientists who defined them. Hereafter the acronyms in Table 2 will be used.

The most striking features of these deep T-S relationships are the salinity minimum at about 1000 meters depth and the increasing salinity values below 1000 meters. The salinity minimum is the result of the influence of LS. The increasing salinities below 1000 meters tend toward water of NEAD origin. According to Lee and Ellett (1967), NEAD is Scotland-Iceland overflow from the Norwegian Sea while NWAB is Greenland-Iceland overflow from the Norwegian Sea. They further theorized that NAD was formed by the mixing of NEAD with NWAB. Note that no NWAB or NAD is indicated by the T-S diagrams. It appears that Ocean Station CHAR-

TABLE 2.—Deep water masses of Ocean Station CHARLIE.

Water Mass	Acronyms	Defined By
Labrador Sea Water.....	LS	Worthington and Metcalf (1961)
North Atlantic Deep Water.....	NAD	Worthington and Metcalf (1961)
Northeast Atlantic Deep Water.....	NEAD	Worthington and Metcalf (1961) and by Lee and Ellett (1967)
Northwest Atlantic Bottom Water.....	NWAB	Lee and Ellett (1967)

LIE is too far southeast to be influenced by NWAB; thus, no NAD is formed.

#### *Subarctic Intermediate Water (SAI)*

The method of salinity anomalies from Heland-Hansen and Nansen (1926) was applied to the data collected on Ocean Station CHARLIE, April 1967 to April 1968. This method requires the determination of a T-S curve which is not influenced by the water mass or area to be studied. Using the Sargasso Sea T-S curve (Iselin, 1936) as a standard (fig. 31), observed T-S values from Ocean Station CHARLIE were compared, and the salinity anomalies (differences) were determined.

The results indicated a high negative salinity anomaly in the upper 200 meters at Ocean Station CHARLIE. A negative salinity anomaly value defines a salinity which is less than the salinity of the standard curve at a given temperature. A value of  $-20$ , for example, means that the observed value is  $.200\%$  less than the standard curve at the corresponding temperature.

Bubnov (1967) stated that the  $-20$  salinity anomaly outlined the area of formation of SAI. The mean and the standard deviation of the depth, temperature, salinity, and sigma-t of the  $-20$  salinity anomaly at O.S. CHARLIE (Table 3) for the period, April 1967 to April 1968, and their ranges were compared with the characteristics of SAI (Bubnov, 1968). This comparison between Bubnov's characteristics and O.S. CHARLIE'S characteristics is presented in Table 4 and shows a very good correlation. This close correlation, then, justified the use of the  $-20$  salinity anomaly at O.S. CHARLIE as an indicator of the presence of SAI.

A comparison of the characteristics of SAI found in Table 4 with those of individual cruises in Table 3 would seem to indicate that water characteristic of SAI is present at Ocean Station CHARLIE during the entire year. However, to consider O.S. CHARLIE to be in the area of formation of SAI, the temperatures and salinities at the surface must also be characteristic

TABLE 3.—The mean and standard deviations of the depth, temperature, salinity, and sigma-t of the  $-20$  salinity anomaly on Ocean Station CHARLIE, April 1967 to April 1968.

Date	Number of Stations*	Depth (m)	Temperature (°C)	Salinity (‰)	Sigma-t
Apr 67.....	14**	52±29	6.24±.40	34.84±.01	27.42±.04
May-Jun 67.....	21**	78±44	6.69±1.0	34.86±.05	27.37±.11
Jul-Aug 67.....	24	63±18	7.86±.50	34.92±.03	27.25±.05
Aug 67.....	21	78±26	7.53±.66	34.90±.03	27.28±.07
Aug-Sep 67.....	21	71±09	8.15±.37	34.94±.03	27.22±.04
Oct-Nov 67.....	11	115±27	6.83±.77	34.87±.04	27.35±.08
Nov 67.....	2	125±06	7.20±.11	34.88±.00	27.31±.01
Jan 68.....	16**	115±31	6.62±.33	34.85±.02	27.38±.04
Apr 68.....	54 STD	129±28	6.20±.13	34.84±.005	27.42±.02

\*Not all stations on every cruise had salinity data.

\*\*No  $-20$  salinity anomaly was observed for 7 of 14 stations in April 67, 12 of 21 in May-June 67, and 1 of 16 in January 68.

TABLE 4.—Comparison of Bubnov's characteristics of Subarctic Intermediate Water with the characteristics of the -20 salinity anomaly on Ocean Station CHARLIE, April 1967 to April 1968.

	T°C	Salinity (‰)	Sigma-t	Vertical Thickness (m)
Bubnov's Southern Area of Formation.....	4.5-7.0	34.70-35.00	27.40-27.70	150-200
-20 Salinity.....	6-8	34.83-34.92	27.25-27.43	100-160

of SAI. The means and standard deviations of the sea surface temperatures and salinities were computed for all cruises on Ocean Station CHARLIE (Table 5). Table 5 and the characteristics of the -20 salinity anomaly (Table 4) show that Ocean Station CHARLIE was in the area of formation of SAI during April 1967 to June 1967 and January 1968 to April 1968.

Bubnov (1968) proposed two areas of formation of SAI. Ocean Station CHARLIE is near Bubnov's southern area of formation (fig. 32).

Although he admitted the lack of winter and summer data, Bubnov believed that SAI was formed during the entire year in both the northern and the southern areas. Due to the close proximity and similar climatological conditions in the area of Ocean Station CHARLIE and the southern area of formation, it is unlikely that SAI was formed from July to November 1967 in the southern area. No conclusions can be made for the northern area of formation based on Ocean Station CHARLIE data.

TABLE 5.—The means and standard deviations of the sea surface temperature and salinity on Ocean Station CHARLIE April 1967 to April 1968.

Month	Number of Stations	Sea Surface Temperature (°C)	Sea Surface Salinity (‰)
Apr 67.....	14	6.59 ± .20	34.84 ± .03
May-Jun 67.....	21	8.22 ± .61	34.88 ± .07
Jul-Aug 67.....	24	10.88 ± .55	34.83 ± .04
Aug 67.....	21	11.50 ± .34	34.76 ± .04
Aug-Sep 67.....	21	11.08 ± .31	34.81 ± .05
Oct-Nov 67.....	11	9.20 ± .30	34.77 ± .04
Nov 67.....	2	8.30 ± .10	34.78 ± .02
Jan 68.....	17	7.00 ± .19	34.75 ± .07
Feb-Mar 68.....	8	6.78 ± .55	NONE
Apr 68.....	55 STD	6.51 ± .25	34.77 ± .04

## REFERENCES

- Bubnov, V. A. (1967). Boundaries of Intermediate Water Masses in the North Atlantic, *Oceanology (USSR)*, 8(3), p. 322-326.
- Bubnov, V. A. (1968). The Intermediate Subarctic Waters in the northern part of the Atlantic Ocean: *Okeanol*, v. 19, p. 136-153 (translated from Russian as *Naval Oceano. Off. Transl. no. 545*, 1971).
- Helland-Hansen, B. and F. Nansen (1926). The eastern North Atlantic. *Geophys. Publ.*, 4, no. 2.
- Husby, D. M. (1966). Oceanographic Observations at North Atlantic Ocean Station CHARLIE, June 1964-January 1965, U.S. Coast Guard Oceanographic Report No. 8, CG 373-8.
- Husby, D. M. (1968). Oceanographic Observations at North Atlantic Ocean Station CHARLIE, May 1966-March 1967, U.S. Coast Guard Oceanographic Report No. 17, CG 373-17.
- Iselin, C. O'D. (1936). A study of the circulation of the western North Atlantic, *Papers in Phys. Oceanogr. and Meteor.*, v. 4, no. 4.
- Lee, A. J. and D. J. Ellett (1967). On the water masses of the Northwest Atlantic Ocean, *Deep Sea Research*, v. 14, p. 183-190.
- Worthington, L. V. and W. G. Metcalf (1961). The relationship between potential temperature and salinity in deeper Atlantic Water. *Rapp. et P.-V. Reun. Cons. Perm. Int. Explor. Mer.*, v. 149, p. 122-128.

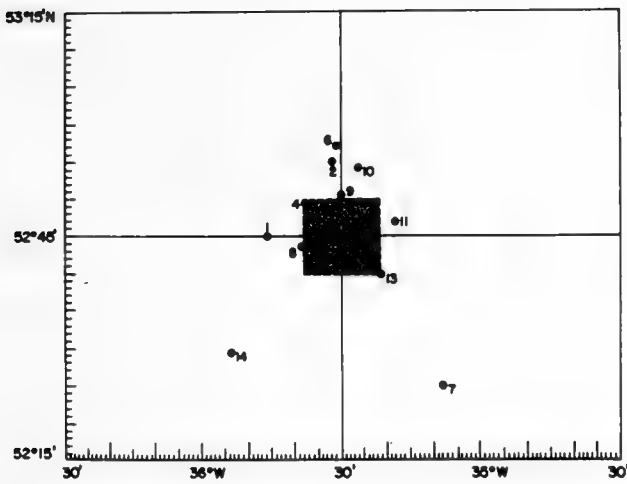


FIGURE 1. Positions of oceanographic stations taken by USCGC INGHAM at Ocean Station CHARLIE, 12-30 April 1967.

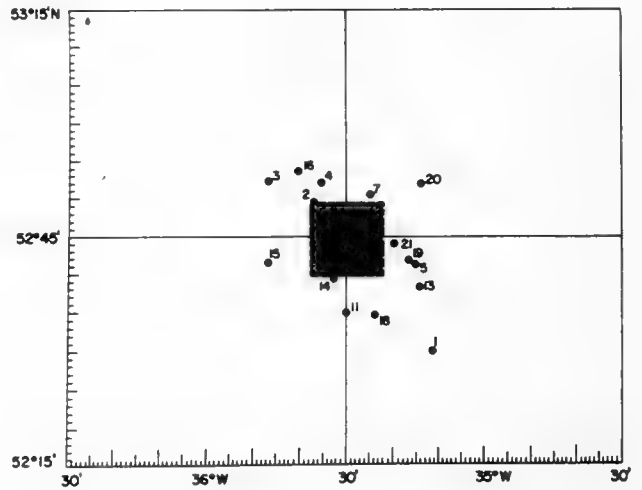


FIGURE 2. Positions of oceanographic stations taken by USCGC CASTLE ROCK at Ocean Station CHARLIE, 25 May to 14 June 1967.

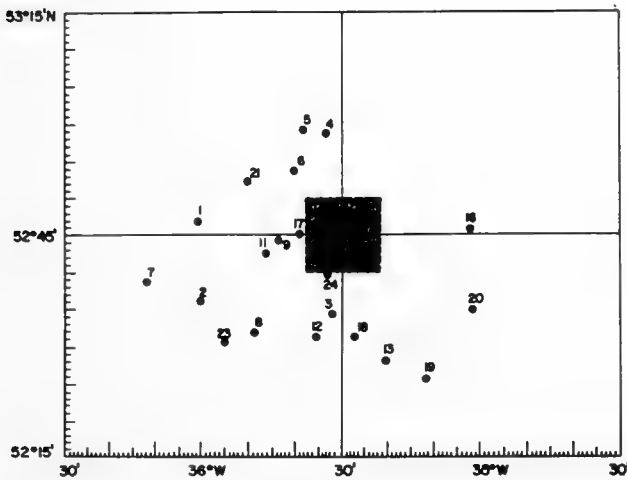


FIGURE 3. Positions of oceanographic stations taken by USCGC MENDOTA at Ocean Station CHARLIE, 9 July to 1 August 1967.

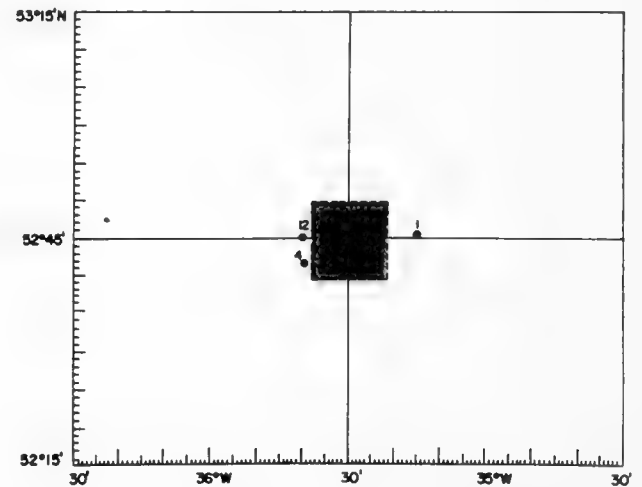


FIGURE 4. Positions of oceanographic stations taken by USCGC CHINCOTEAGUE at Ocean Station CHARLIE, 2-24 August 1967.

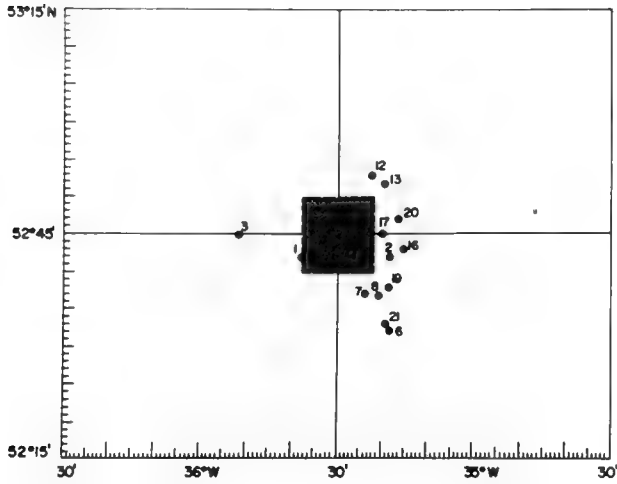


FIGURE 5. Positions of oceanographic stations taken by USCGC BIBB at Ocean Station CHARLIE, 26 August to 16 September 1967.

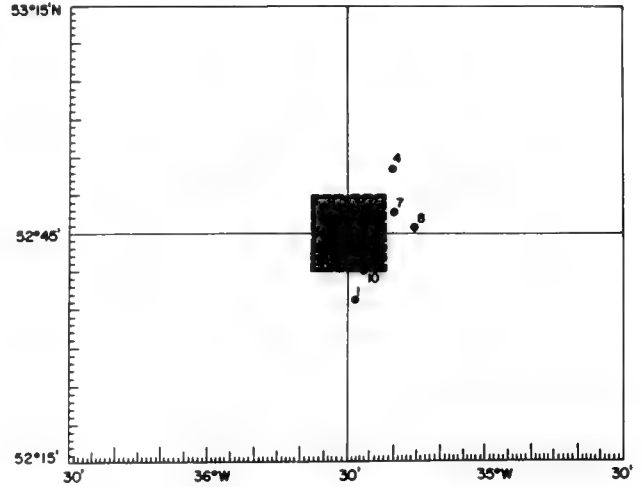


FIGURE 6. Positions of oceanographic stations taken by USCGC OWASCO at Ocean Station CHARLIE, 15 October to 2 November 1967.

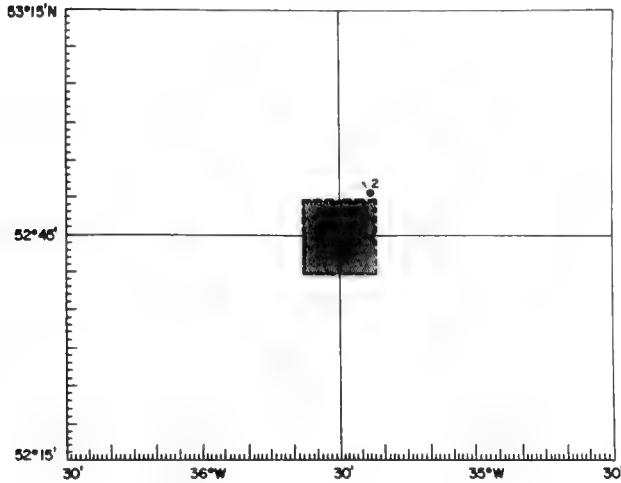


FIGURE 7. Positions of oceanographic stations taken by USCGC SEBAGO at Ocean Station CHARLIE, 28-30 November 1967.

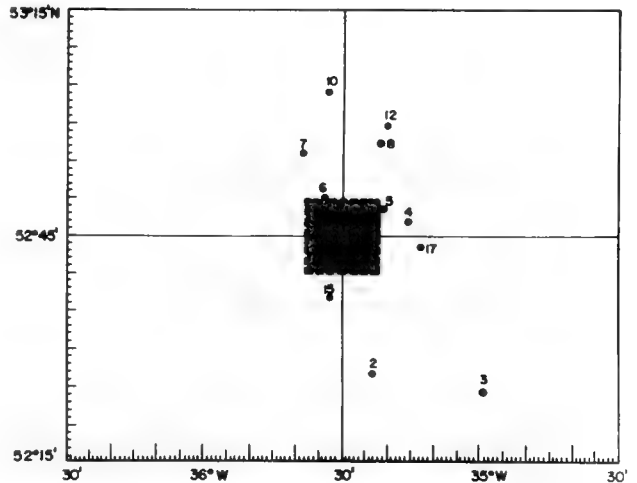


FIGURE 8. Positions of oceanographic stations taken by USCGC ESCANABA at Ocean Station CHARLIE, 11-31 January 1968.

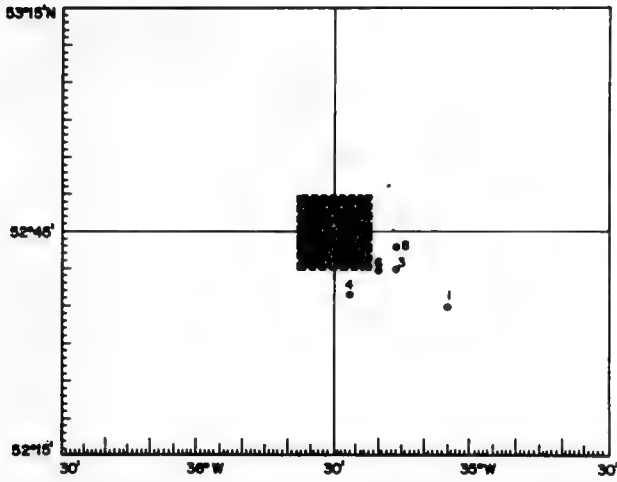


FIGURE 9. Positions of oceanographic stations taken by USCGC SPENCER at Ocean Station CHARLIE, 28 February to 14 March 1968.

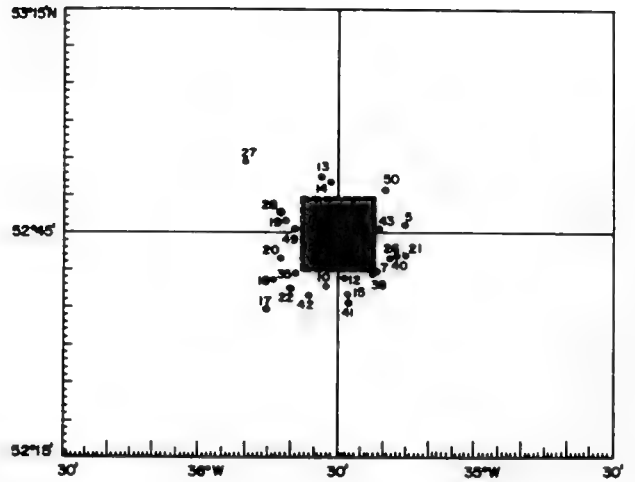


FIGURE 10. Positions of oceanographic stations taken by USCGC HAMILTON at Ocean Station CHARLIE, 10 April to 1 May 1968.

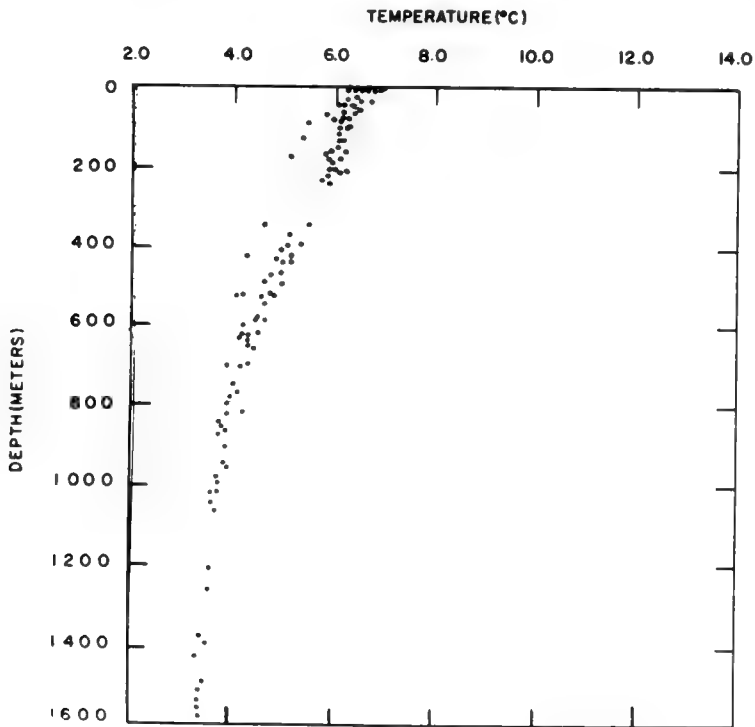


FIGURE 11. Vertical distributions of temperature versus depth at oceanographic stations taken by USCGC INGHAM at Ocean Station CHARLIE, 12-30 April 1967.

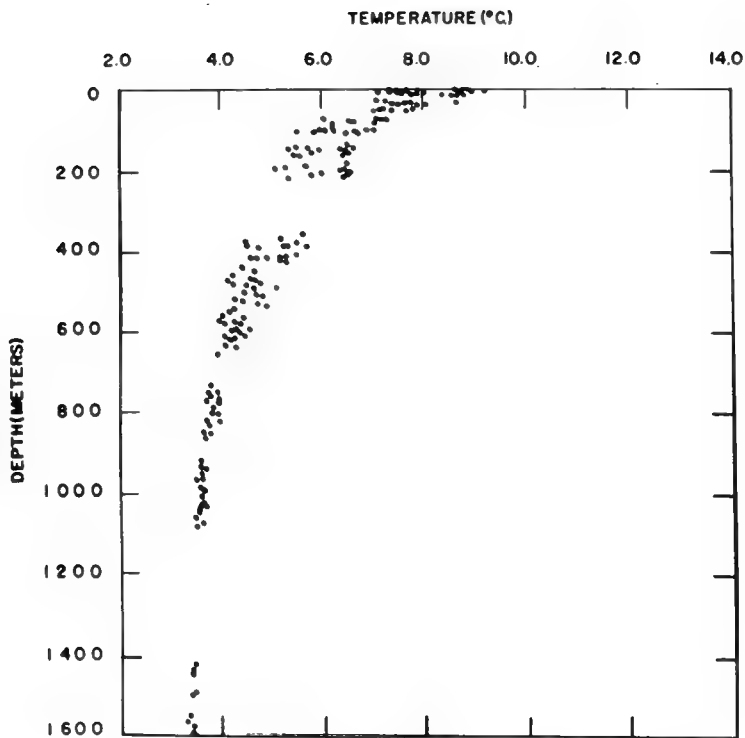


FIGURE 12. Vertical distributions of temperature versus depth at oceanographic stations taken by USCGC CASTLE ROCK at Ocean Station CHARLIE, 25 May to 14 June 1967.

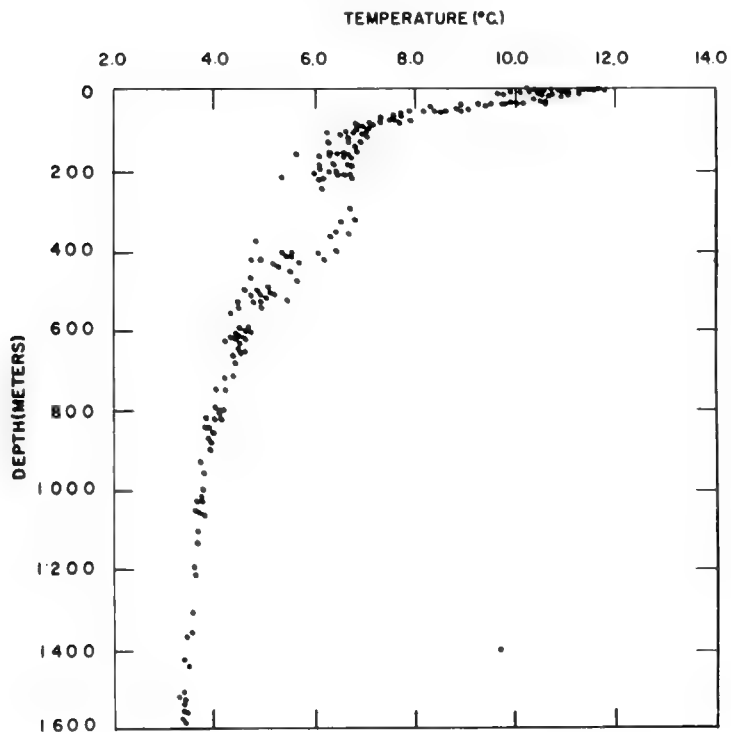


FIGURE 13. Vertical distributions of temperature versus depth at oceanographic stations taken by USCGC MENDOTA at Ocean Station CHARLIE, 9 July to 1 August 1967.



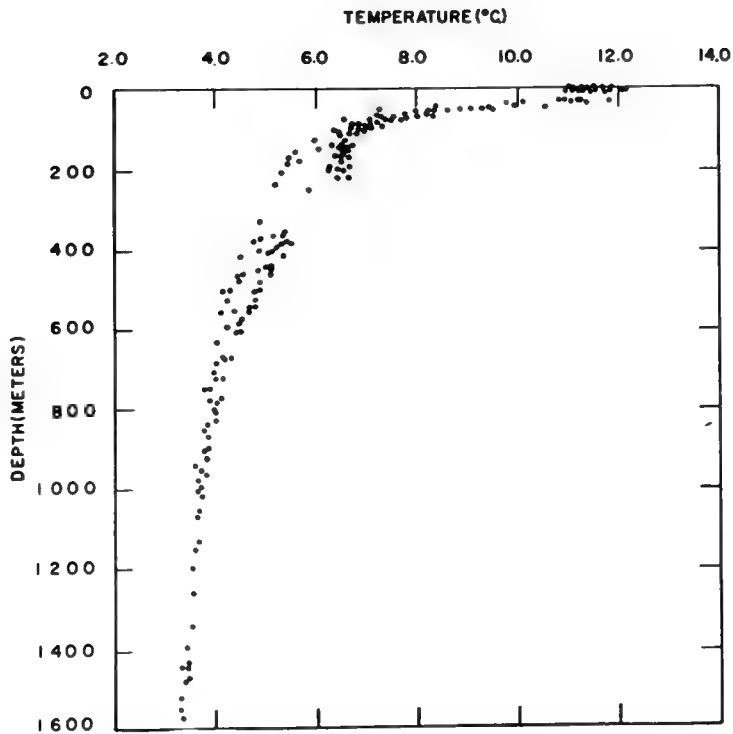


FIGURE 14. Vertical distributions of temperature versus depth at oceanographic stations taken by USCGC CHINCOTEAGUE at Ocean Station CHARLIE, 2-24 August 1967.

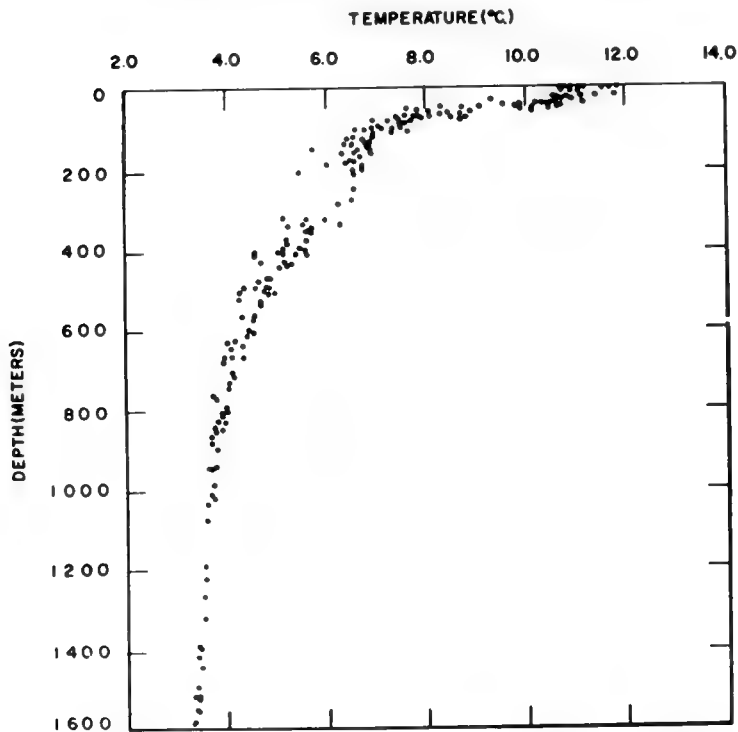


FIGURE 15. Vertical distributions of temperature versus depth at oceanographic stations taken by USCGC BIBB at Ocean Station CHARLIE, 26 August to 16 September 1967.

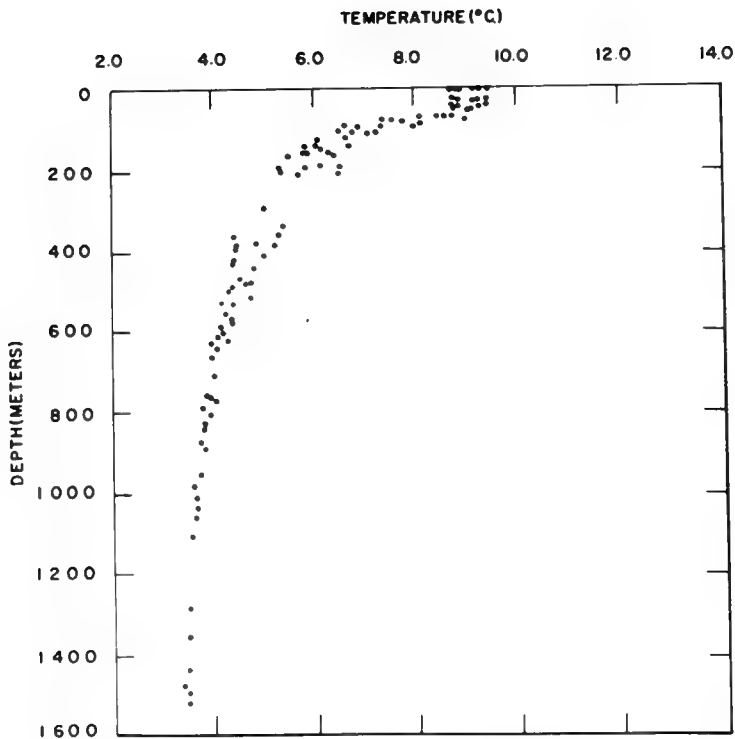


FIGURE 16. Vertical distributions of temperature versus depth at oceanographic stations taken by USCGC OWASCO at Ocean Station CHARLIE, 15 October to 2 November 1967.

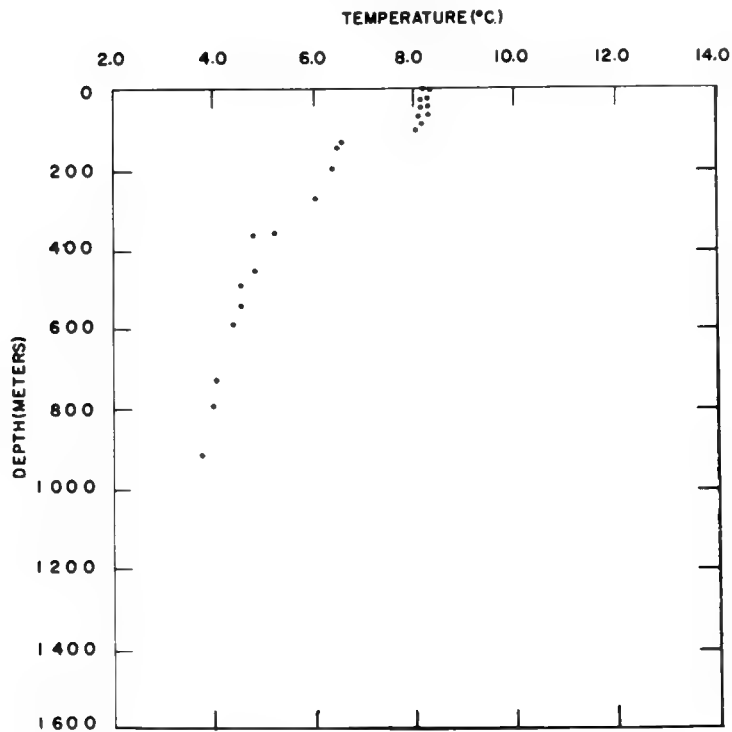


FIGURE 17. Vertical distributions of temperature versus depth at oceanographic stations taken by USCGC SEBAGO at Ocean Station CHARLIE, 28-30 November 1967.

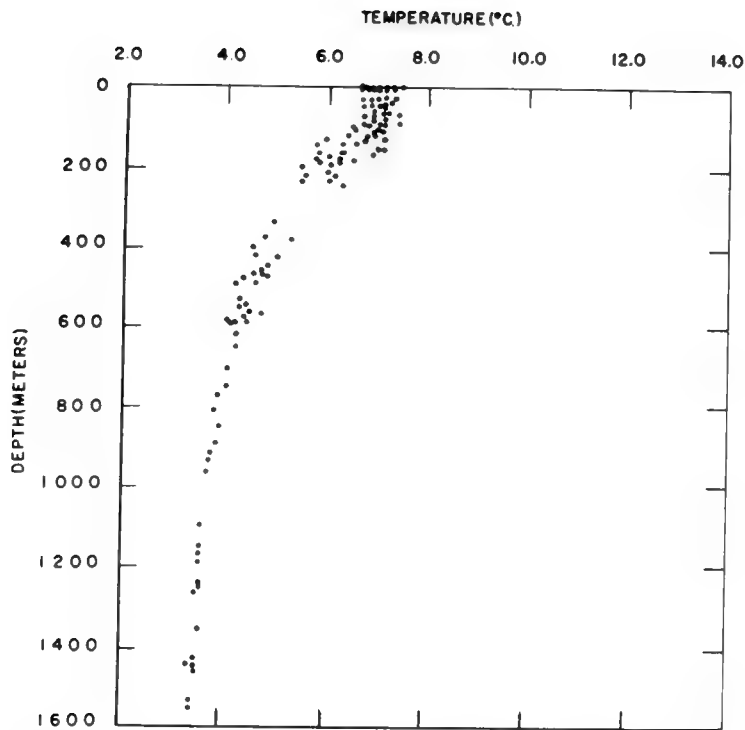


FIGURE 18. Vertical distributions of temperature versus depth at oceanographic stations taken by USCGC ESCANABA at Ocean Station CHARLIE, 11-31 January 1968.

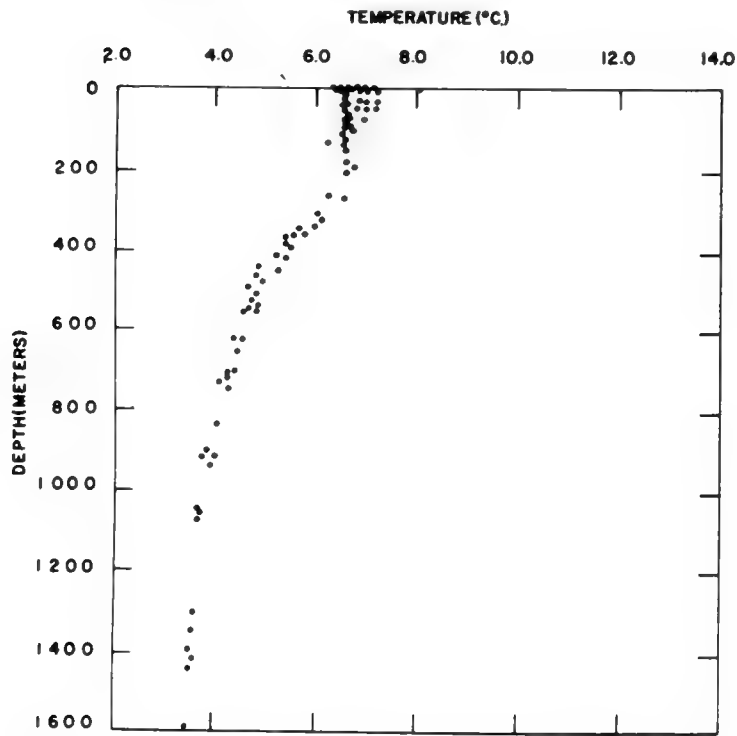


FIGURE 19. Vertical distributions of temperature versus depth at oceanographic stations taken by USCGC SPENCER at Ocean Station CHARLIE, 28 February to 14 March 1968.

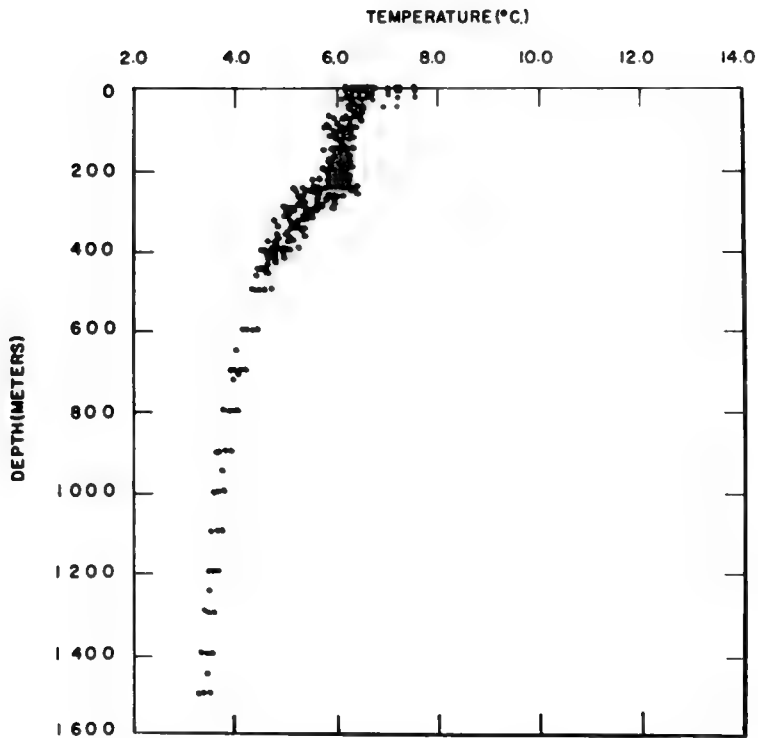


FIGURE 20. Vertical distributions of temperature versus depth at oceanographic stations taken by USCGC HAMILTON, with a Salinity-Temperature-Depth (STD) sensor, at Ocean Station CHARLIE, 10 April to 1 May 1968.

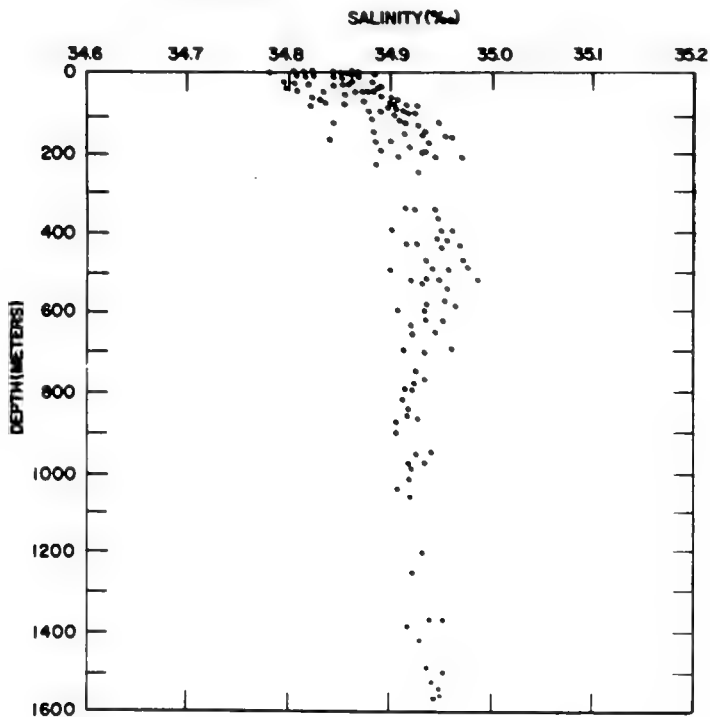


FIGURE 21. Vertical distributions of salinity versus depth at oceanographic stations taken by USCGC INGHAM at Ocean Station CHARLIE, 12-30 April 1967.

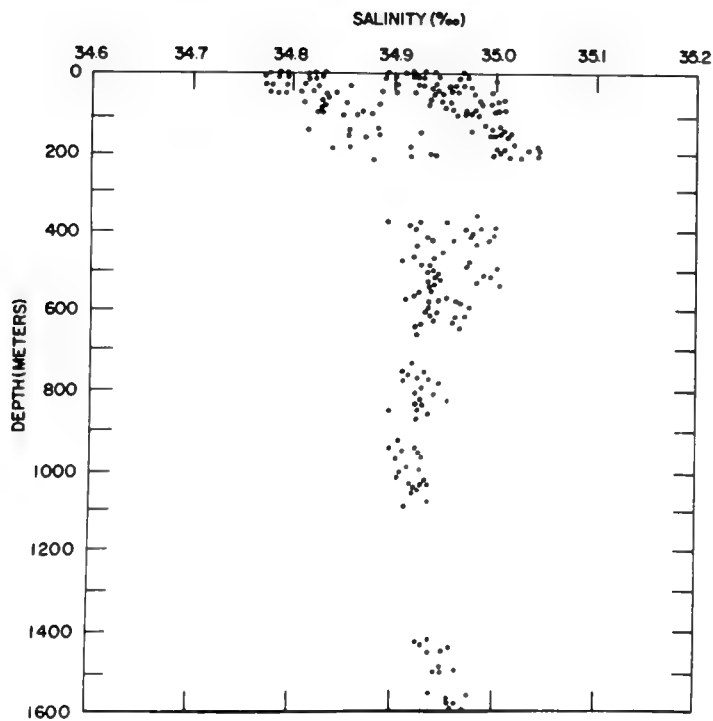


FIGURE 22. Vertical distributions of salinity versus depth at oceanographic stations taken by USCGC CASTLE ROCK at Ocean Station CHARLIE, 25 May to 14 June 1967.

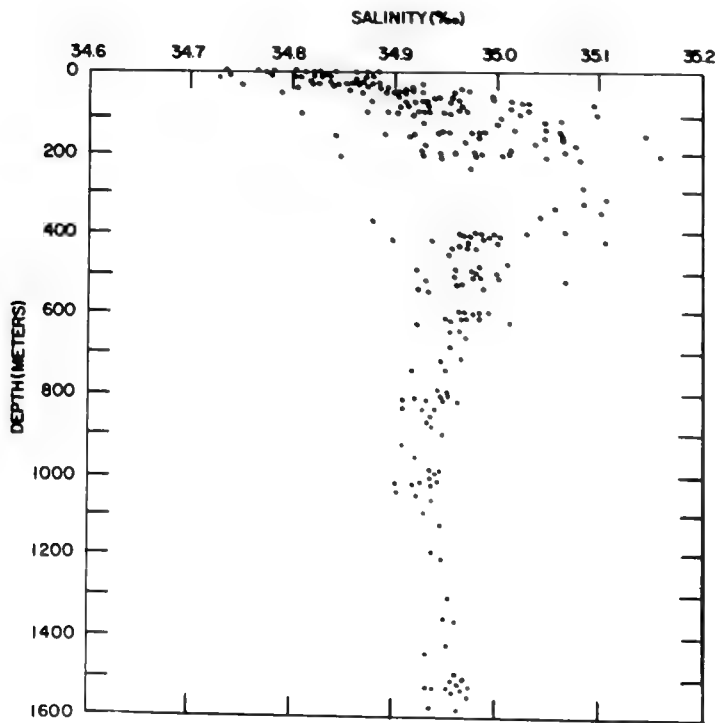


FIGURE 23. Vertical distributions of salinity versus depth at oceanographic stations taken by USCGC MENDOTA at Ocean Station CHARLIE, 9 July to 1 August 1967.

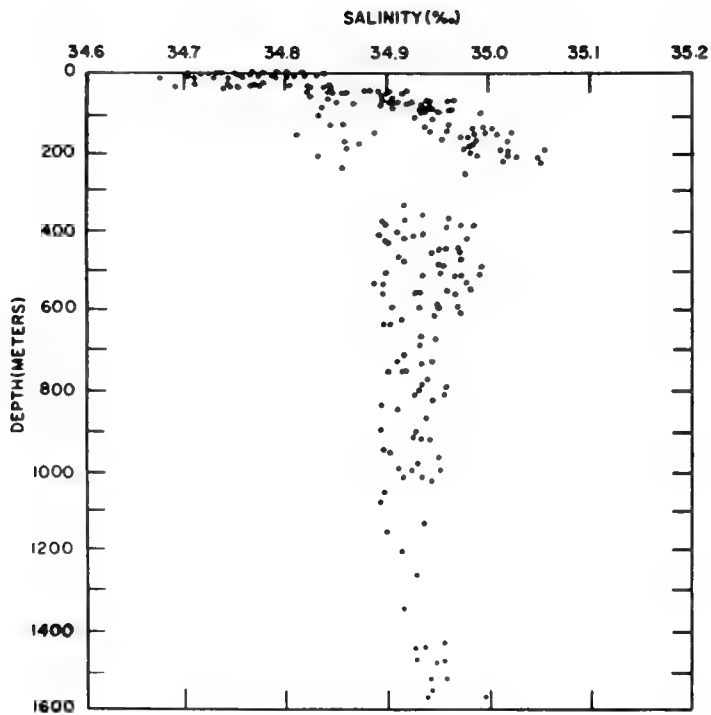


FIGURE 24. Vertical distributions of salinity versus depth at oceanographic stations taken by USCGC CHINCOTEAGUE at Ocean Station CHARLIE, 2-24 August 1967.

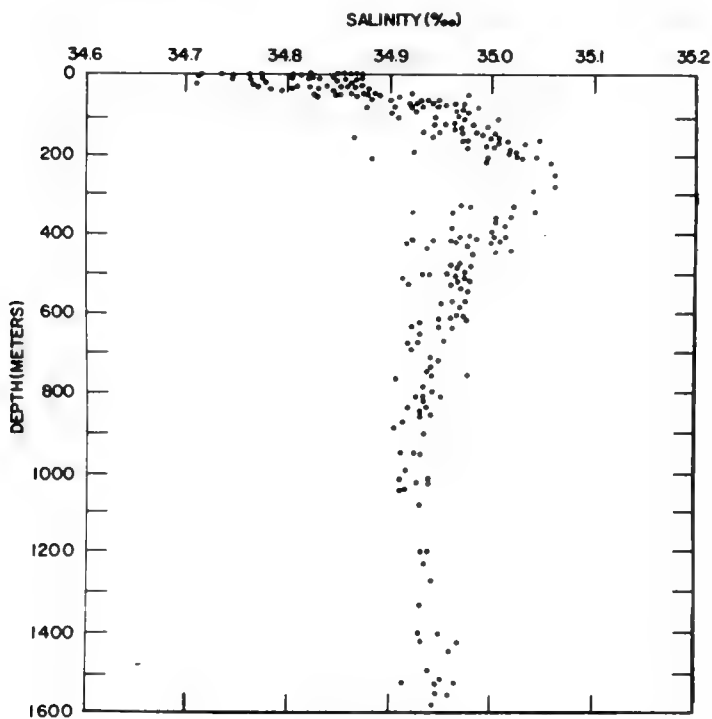


FIGURE 25. Vertical distributions of salinity versus depth at oceanographic stations taken by USCGC BIBB at Ocean Station CHARLIE, 26 August to 16 September 1967.

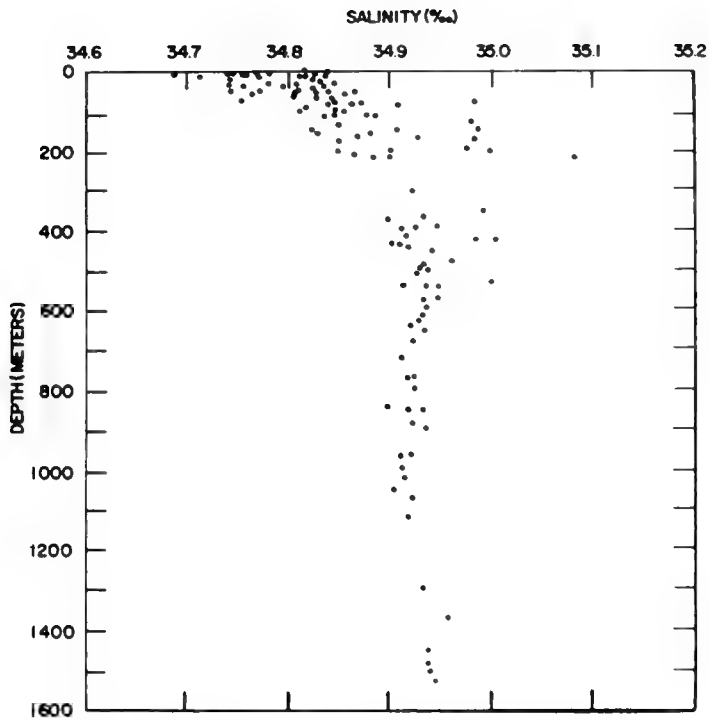


FIGURE 26. Vertical distributions of salinity versus depth at oceanographic stations taken by USCGC OWASCO at Ocean Station CHARLIE, 15 October to 2 November 1967.

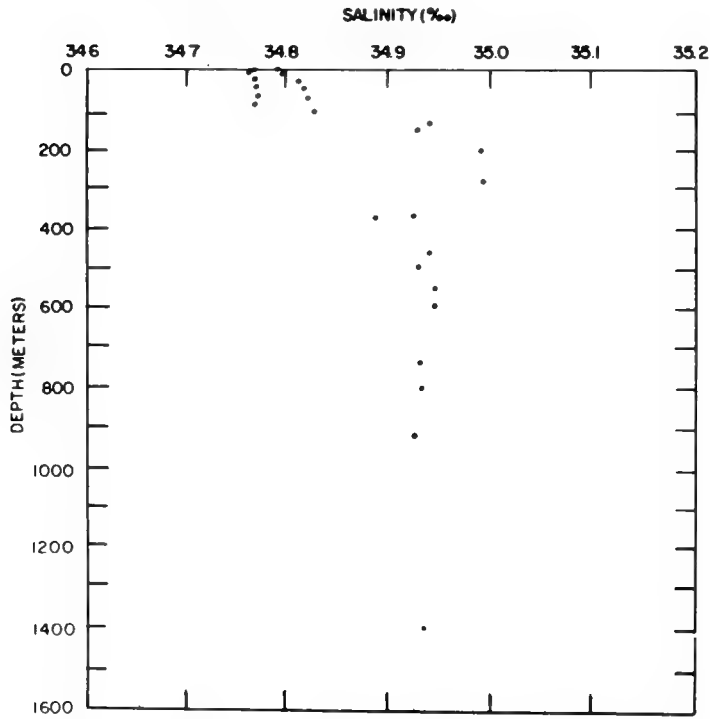


FIGURE 27. Vertical distributions of salinity versus depth at oceanographic stations taken by USCGC SEBAGO at Ocean Station CHARLIE, 28-30 November 1967.

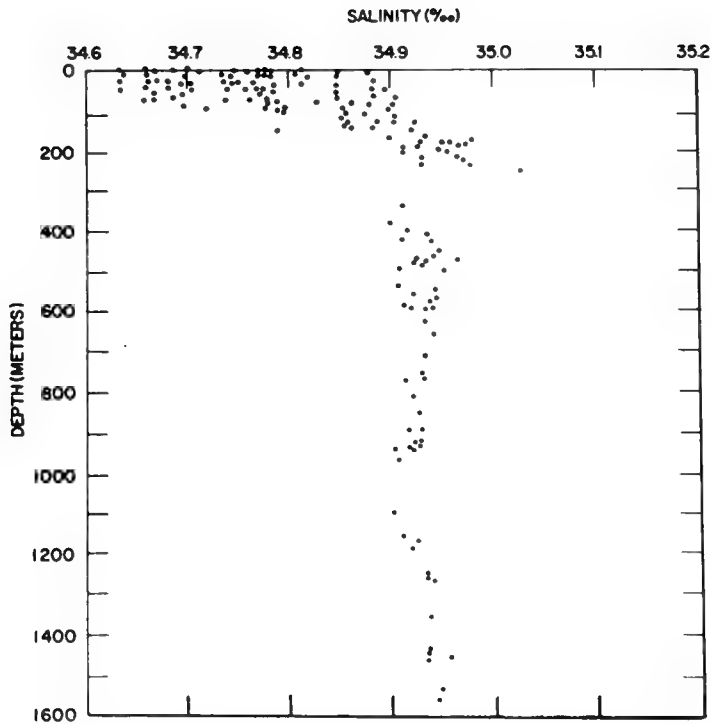


FIGURE 28. Vertical distributions of salinity versus depth at oceanographic stations taken by USCGC ESCANABA at Ocean Station CHARLIE, 11-31 January 1968.

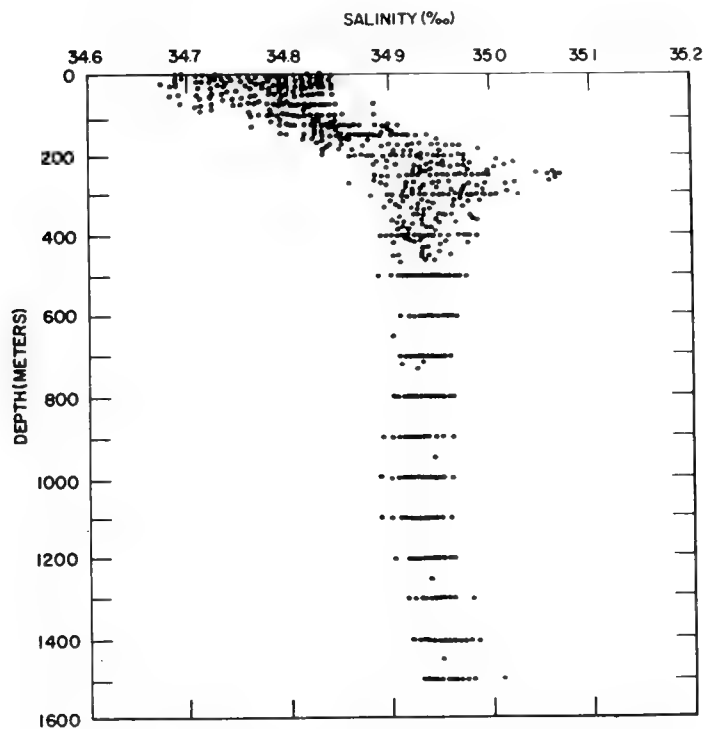


FIGURE 29. Vertical distributions of salinity versus depth at oceanographic stations taken by USCGC HAMILTON, with a Salinity-Temperature-Depth (STD) sensor at Ocean Station CHARLIE, 10 April to 1 May 1968.



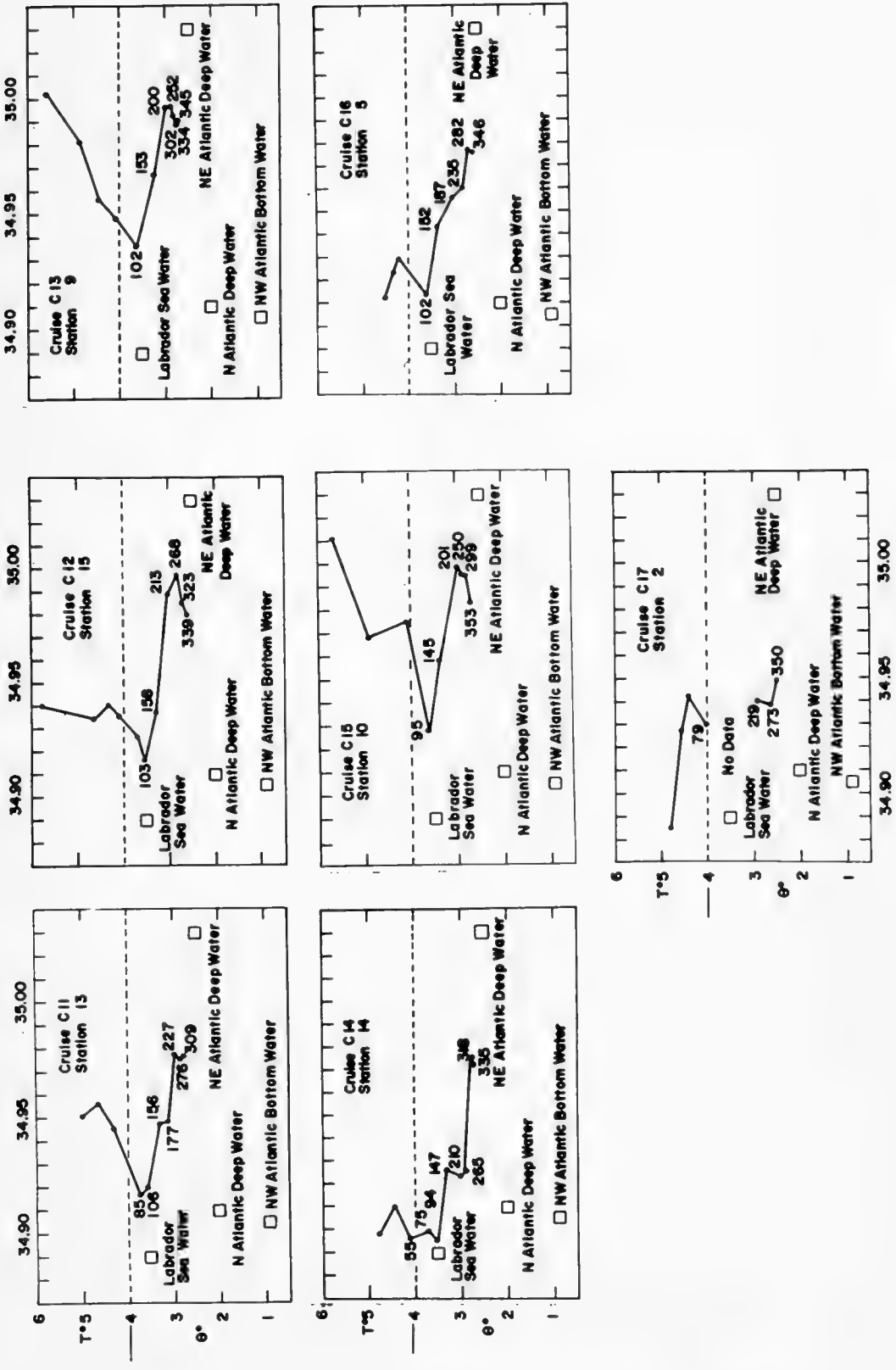


FIGURE 30. Temperature versus salinity diagrams for all deep stations greater than 1500 meters. For temperatures below 4° C potential temperatures have been used. Depth given in decameters.

NAD—North Atlantic Deep Water

LS—Labrador Sea Water

NWAB—Northwest Atlantic Bottom Water

NEAD—Northeast Atlantic Deep Water

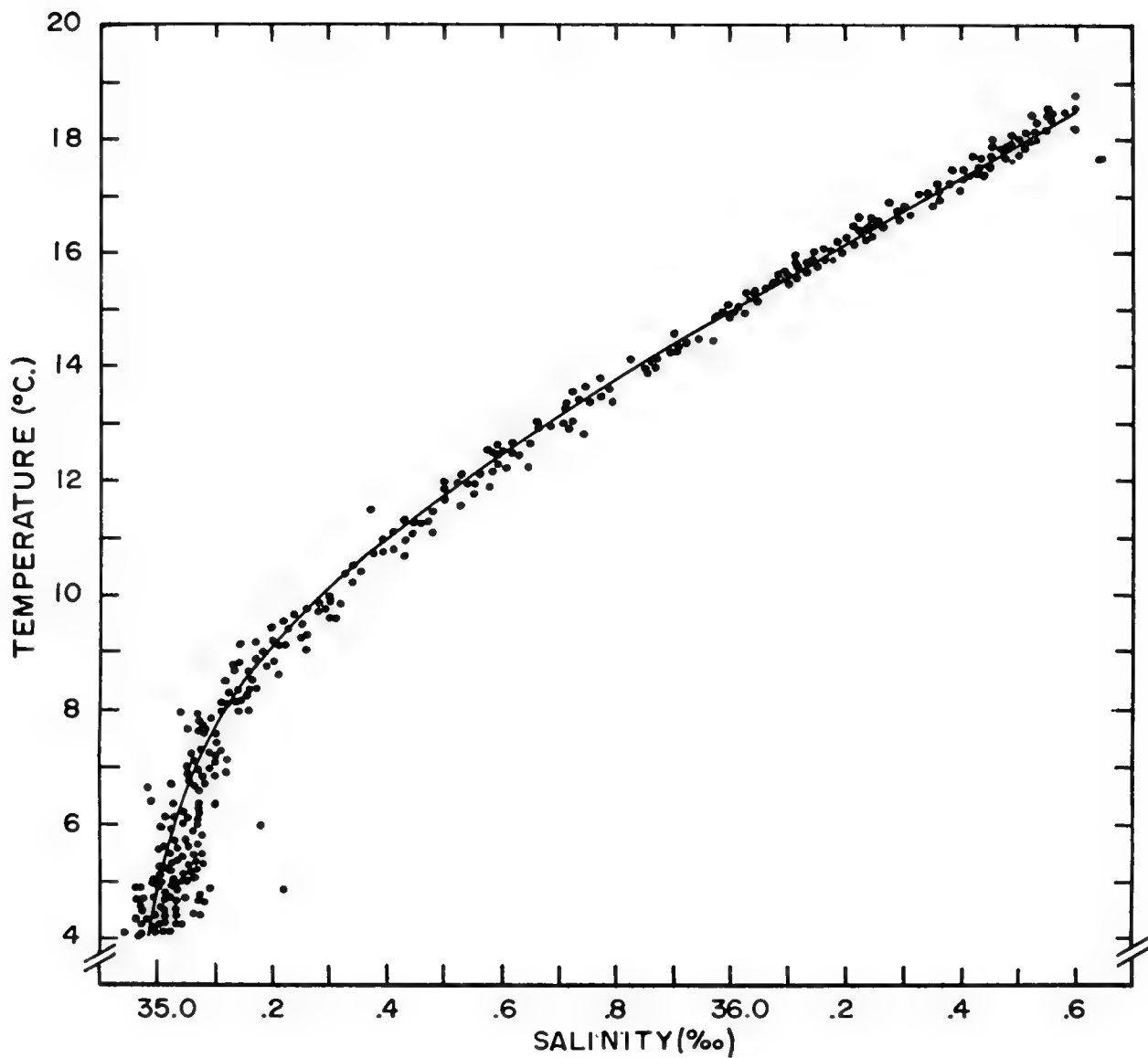


FIGURE 31. Iselin's 1936 temperature versus salinity correlation at all "Atlantis" stations within the Sargasso Sea.

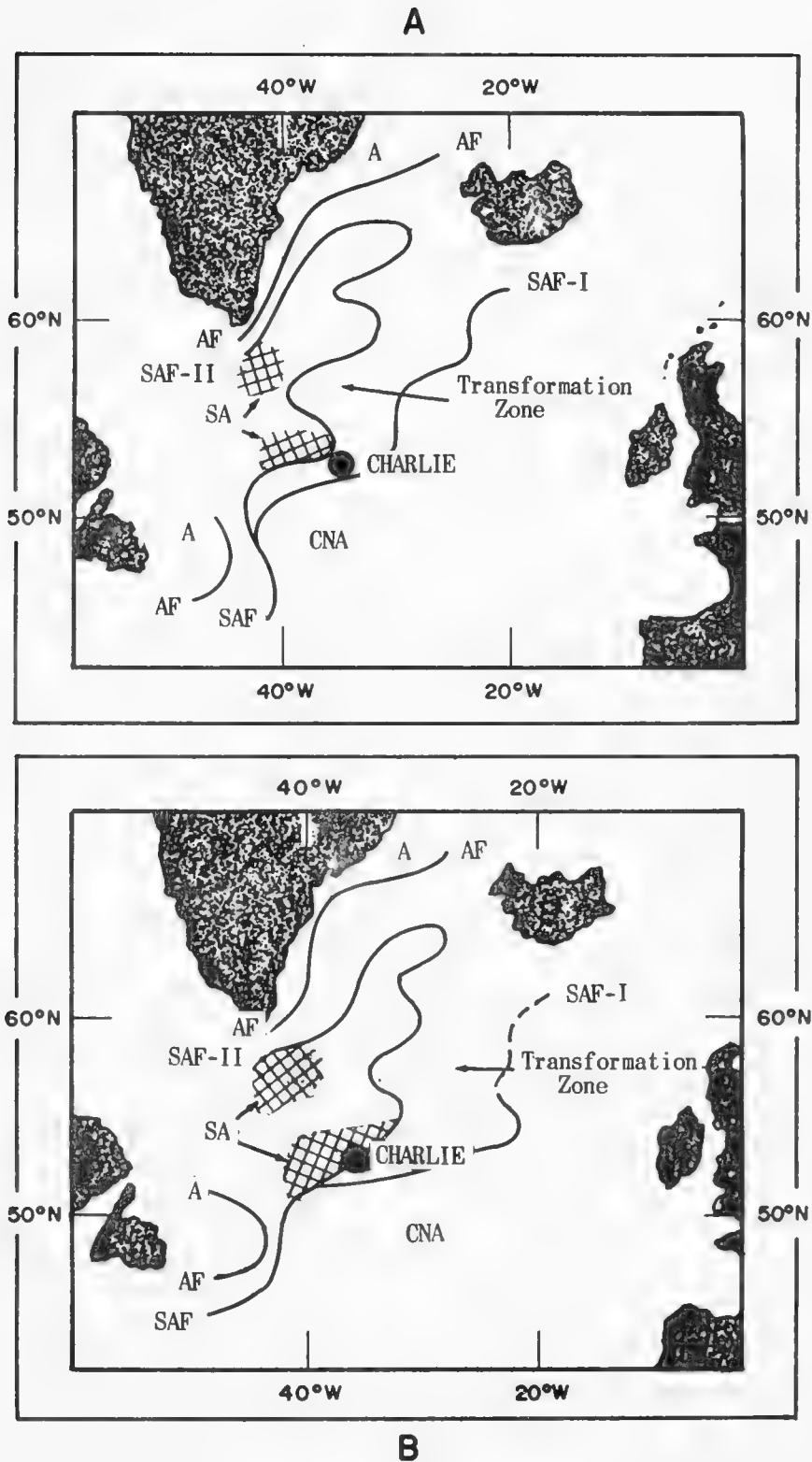


FIGURE 32. Bubnov's 1968 scheme of the subarctic frontal zone on the surface of the ocean in the spring (A) and in the autumn (B) of 1958.

Water masses: A—Arctic; SA—Subarctic; CNA—Central North Atlantic  
 Fronts: AF—Arctic; SAF-I—Primary Subarctic; SAF-II—Secondary Subarctic

Formation centers of the Subarctic Intermediate Waters are cross-hatched.

# APPENDIX A

## OCEANOGRAPHIC DATA

### Cruises Listed

<i>Table</i>	<i>Page</i>
I. USCGC INGHAM, April 1967 -----	22
II. USCGC CASTLE ROCK, May to June 1967 -----	30
III. USCGC MENDOTA, July to August 1967 -----	41
IV. USCGC CHINCOTEAGUE, August 1967 -----	54
V. USCGC BIBB, August to September 1967 -----	66
VI. USCGC OWASCO, October to November 1967 -----	78
VII. USCGC SEBAGO, November 1967 -----	84
VIII. USCGC ESCANABA, January 1968 -----	85
IX. USCGC SPENCER, February to March 1968 -----	94
X. USCGC HAMILTON, April to May 1968 -----	98

### Codes Utilized

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

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

Depth to Bottom -----	Uncorrected sounding in meters.
Max. Depth of Samples --	Depth of deepest sample to nearest multiple of one hundred meters.
Wave observations	
DIR. -----	Rounded to nearest multiple of 10 degrees.
HGT. -----	Increments of ½ m. Sum of 5 meters plus increments of ½ m if 50 is added to direction.
PER. -----	If numerals 2 through 9 are entered, periods in seconds is twice the numeric entry or 2X (numeric entry) +1. For other entries see WMO Code 3155.
SEA. -----	Sea state according to WMO Code 3700.
Weather Code -----	If preceded by X, weather according to WMO Code 4501. If a two-digit entry, weather according to WMO Code 4677.
Cloud Code	
Type -----	Cloud type according to WMO Code 0500.
Amount -----	Cloud amount in eighths. Entry of the numeral 9 indicates cloud amount could not be estimated.
Water	
Color Code -----	Color according to Forel-Ule scale.
Trans. -----	Transparency in whole meters as determined by Secchi disc.
Wind	
Dir. -----	Rounded to nearest multiple of 10 degrees.
Speed -----	Letter S indicates wind speed in knots.
Barometer -----	Barometric pressure given in tens, units, and tenths of millibars.
Air Temp. ° C -----	Air temperature to tenths of a degree Celsius.

Vis. Code -----	Visibility according to WMO Code 4300.
No. obs. depths -----	Number of observed levels associated with the station.
Messenger time -----	Entered in hours and tenths of an hour GMT. For Nansen casts, indicates time of release of messenger applicable to the observational level. For STD casts, indicates the starting time of lowering the sensor.
Card type -----	OBS designates observed levels. STD indicates the values at this standard level were interpolated by a modified 3-point LaGrange formula.
Depth (m) -----	Depth to nearest meter. A postscript T indicates depth was obtained thermometrically; Z indicates uncorrected "wire out" depth. Postscript Q indicates value was marked doubtful by originator; P indicates value was considered doubtful by NODC. Postscripts P and Q retain this meaning throughout the following entries.
T ° C -----	Temperature to hundredths of a degree Celsius.
S ‰ -----	Salinity in parts-per-thousand.
SIGMA-T -----	Entered to hundredths.
Specific-volume -----	Multiply entry by $10^{-7}$ to obtain specific-volume anomaly in cubic centimeters per gram.
$\Sigma\Delta D$ Dyn. $M \times 10^3$ -----	Multiply entry by $10^{-3}$ to obtain anomaly of dynamic depth in dynamic meters referenced to the seasurface.
Sound Velocity -----	Sound velocity according to Wilson's formula entered to tenths of a meter per second.



TABLE I.—Continued

OBSERVATION DATE	OBSERVATION TIME	OBSERVATION NUMBER	SHIP CODE	LATITUDE N S	LONGITUDE E W	SOUNDING METER	STATION TIME				YEAR	OBSERVER'S		DEPTH TO BOTTOM	SAL TEMP	WAVE OBSERVATIONS			WEATHER CODE	* WIND		OBSERVATION NUMBER																																																											
							DAY	MONTH	YEAR	HR		MIN	SEC			CRUISE NUMBER	STATION NUMBER	DIR		VELOCITY	TYPE		DIR	VELOCITY																																																									
310996	18	0000	IN	5245 N	03523 W	184	25	04	15	180	1967	C11	003	3475	1	18	5	5	X6	5	8	0003																																																											
<p>* NOTE: THIS FORM TEMPLATE FOR MANUAL ELECTRICALLY OBSERVED DATA. DATA NOTED ON THIS FORM SHOULD BE APPROVED BY THE OFFICE.</p>																																																																																	
<table border="1"> <thead> <tr> <th rowspan="2">OBSERVATION DATE</th> <th rowspan="2">OBSERVATION TIME</th> <th rowspan="2">OBSERVATION NUMBER</th> <th rowspan="2">SHIP CODE</th> <th rowspan="2">LATITUDE N S</th> <th rowspan="2">LONGITUDE E W</th> <th rowspan="2">SOUNDING METER</th> <th colspan="4">STATION TIME</th> <th rowspan="2">YEAR</th> <th colspan="2">OBSERVER'S</th> <th rowspan="2">DEPTH TO BOTTOM</th> <th rowspan="2">SAL TEMP</th> <th colspan="3">WAVE OBSERVATIONS</th> <th rowspan="2">WEATHER CODE</th> <th colspan="2">* WIND</th> <th rowspan="2">OBSERVATION NUMBER</th> </tr> <tr> <th>DAY</th> <th>MONTH</th> <th>YEAR</th> <th>HR</th> <th>MIN</th> <th>SEC</th> <th>CRUISE NUMBER</th> <th>STATION NUMBER</th> <th>DIR</th> <th>VELOCITY</th> <th>TYPE</th> <th>DIR</th> <th>VELOCITY</th> </tr> </thead> <tbody> <tr> <td>310996</td> <td>18</td> <td>0000</td> <td>IN</td> <td>5245 N</td> <td>03523 W</td> <td>184</td> <td>25</td> <td>04</td> <td>15</td> <td>180</td> <td>1967</td> <td>C11</td> <td>003</td> <td>3475</td> <td>1</td> <td>18</td> <td>5</td> <td>5</td> <td>X6</td> <td>5</td> <td>8</td> <td>0003</td> </tr> </tbody> </table>																							OBSERVATION DATE	OBSERVATION TIME	OBSERVATION NUMBER	SHIP CODE	LATITUDE N S	LONGITUDE E W	SOUNDING METER	STATION TIME				YEAR	OBSERVER'S		DEPTH TO BOTTOM	SAL TEMP	WAVE OBSERVATIONS			WEATHER CODE	* WIND		OBSERVATION NUMBER	DAY	MONTH	YEAR	HR	MIN	SEC	CRUISE NUMBER	STATION NUMBER	DIR	VELOCITY	TYPE	DIR	VELOCITY	310996	18	0000	IN	5245 N	03523 W	184	25	04	15	180	1967	C11	003	3475	1	18	5	5	X6	5	8	0003
OBSERVATION DATE	OBSERVATION TIME	OBSERVATION NUMBER	SHIP CODE	LATITUDE N S	LONGITUDE E W	SOUNDING METER	STATION TIME				YEAR	OBSERVER'S		DEPTH TO BOTTOM	SAL TEMP	WAVE OBSERVATIONS			WEATHER CODE	* WIND		OBSERVATION NUMBER																																																											
							DAY	MONTH	YEAR	HR		MIN	SEC			CRUISE NUMBER	STATION NUMBER	DIR		VELOCITY	TYPE		DIR	VELOCITY																																																									
310996	18	0000	IN	5245 N	03523 W	184	25	04	15	180	1967	C11	003	3475	1	18	5	5	X6	5	8	0003																																																											

OBSERVATION DATE	OBSERVATION TIME	OBSERVATION NUMBER	SHIP CODE	LATITUDE N S	LONGITUDE E W	SOUNDING METER	STATION TIME				YEAR	OBSERVER'S		DEPTH TO BOTTOM	SAL TEMP	WAVE OBSERVATIONS			WEATHER CODE	* WIND		OBSERVATION NUMBER																																																											
							DAY	MONTH	YEAR	HR		MIN	SEC			CRUISE NUMBER	STATION NUMBER	DIR		VELOCITY	TYPE		DIR	VELOCITY																																																									
310996	18	0000	IN	52495 N	03537 W	184	25	04	16	125	1967	C11	004	3350	1	21	3	3	X4	7	8	0004																																																											
<p>* NOTE: THIS FORM TEMPLATE FOR MANUAL ELECTRICALLY OBSERVED DATA. DATA NOTED ON THIS FORM SHOULD BE APPROVED BY THE OFFICE.</p>																																																																																	
<table border="1"> <thead> <tr> <th rowspan="2">OBSERVATION DATE</th> <th rowspan="2">OBSERVATION TIME</th> <th rowspan="2">OBSERVATION NUMBER</th> <th rowspan="2">SHIP CODE</th> <th rowspan="2">LATITUDE N S</th> <th rowspan="2">LONGITUDE E W</th> <th rowspan="2">SOUNDING METER</th> <th colspan="4">STATION TIME</th> <th rowspan="2">YEAR</th> <th colspan="2">OBSERVER'S</th> <th rowspan="2">DEPTH TO BOTTOM</th> <th rowspan="2">SAL TEMP</th> <th colspan="3">WAVE OBSERVATIONS</th> <th rowspan="2">WEATHER CODE</th> <th colspan="2">* WIND</th> <th rowspan="2">OBSERVATION NUMBER</th> </tr> <tr> <th>DAY</th> <th>MONTH</th> <th>YEAR</th> <th>HR</th> <th>MIN</th> <th>SEC</th> <th>CRUISE NUMBER</th> <th>STATION NUMBER</th> <th>DIR</th> <th>VELOCITY</th> <th>TYPE</th> <th>DIR</th> <th>VELOCITY</th> </tr> </thead> <tbody> <tr> <td>310996</td> <td>18</td> <td>0000</td> <td>IN</td> <td>52495 N</td> <td>03537 W</td> <td>184</td> <td>25</td> <td>04</td> <td>16</td> <td>125</td> <td>1967</td> <td>C11</td> <td>004</td> <td>3350</td> <td>1</td> <td>21</td> <td>3</td> <td>3</td> <td>X4</td> <td>7</td> <td>8</td> <td>0004</td> </tr> </tbody> </table>																							OBSERVATION DATE	OBSERVATION TIME	OBSERVATION NUMBER	SHIP CODE	LATITUDE N S	LONGITUDE E W	SOUNDING METER	STATION TIME				YEAR	OBSERVER'S		DEPTH TO BOTTOM	SAL TEMP	WAVE OBSERVATIONS			WEATHER CODE	* WIND		OBSERVATION NUMBER	DAY	MONTH	YEAR	HR	MIN	SEC	CRUISE NUMBER	STATION NUMBER	DIR	VELOCITY	TYPE	DIR	VELOCITY	310996	18	0000	IN	52495 N	03537 W	184	25	04	16	125	1967	C11	004	3350	1	21	3	3	X4	7	8	0004
OBSERVATION DATE	OBSERVATION TIME	OBSERVATION NUMBER	SHIP CODE	LATITUDE N S	LONGITUDE E W	SOUNDING METER	STATION TIME				YEAR	OBSERVER'S		DEPTH TO BOTTOM	SAL TEMP	WAVE OBSERVATIONS			WEATHER CODE	* WIND		OBSERVATION NUMBER																																																											
							DAY	MONTH	YEAR	HR		MIN	SEC			CRUISE NUMBER	STATION NUMBER	DIR		VELOCITY	TYPE		DIR	VELOCITY																																																									
310996	18	0000	IN	52495 N	03537 W	184	25	04	16	125	1967	C11	004	3350	1	21	3	3	X4	7	8	0004																																																											











TABLE I.—Continued

REFERENCE SHIP CODE	SHIP NO.	LATITUDE 1/18	LONGITUDE 7/18	C D S	HAERDEN SQUARE	STATION TIME GMT			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF THERM.	WAVE OBSERVATIONS			WEA- THIR CODE	CLOUD CODES	WDC STATION NUMBER		
						MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR.	NO	PER				SEA	
31	886	IM	5240 N	03522 W	184	25	04	29	121	1967	C11	013	3475	31	16	2	6	X4	5	18	0013
WATER		WIND		BARO-		AIR TEMP. °C		NO. OBL.		SPECIAL											
COLOR		SPEED		METER		DRY		WET		DEFINIS											
CODE	TRANS.	DIR.	OR	DRY	WET	DRY	WET	DRY	WET	DRY	WET										
MESSAGE TIME HE 1/18	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	DOMA-T	SPECIFIC VOLUME ANOMALY-107	S Δ D DTM. M. S 107	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>4</sub> -S pg - ml/l	pH	S CC				
		STD	0000	0696	3482	2730	0007794	0000	14787												
		OBS	0000	0696	34820	2730			14787												
		STD	0010	0681	3482	2732	0007643	0008	14782												
		OBS	0010	0681	34816	2732			14782												
		STD	0020	0681	3482	2732	0007651	0015	14784												
		STD	0030	0677	3482	2733	0007600	0023	14784												
		OBS	0032	0675	34819	2733			14784												
		STD	0050	0651	3483	2737	0007213	0038	14777												
		OBS	0053	0646	34833	2738			14776												
		STD	0075	0600	3483	2744	0006580	0055	14761												
		OBS	0079	0597	34834	2745			14760												
		STD	0100	0621	3491	2748	0006310	0071	14775												
		OBS	0105	0625	34925	2748			14777												
		STD	0125	0624	3493	2749	0006236	0087	14780												
		STD	0150	0621	3493	2749	0006235	0102	14783												
		OBS	0159	0620	34932	2749			14784												
		STD	0200	0614	3494	2751	0006144	0133	14789												
		OBS	T0214	0611	34945	2752			14790												
		STD	0250	0590	3495	2755	0005836	0163	14787												
		STD	0300	0562	3495	2758	0005554	0192	14784												
		STD	0400	0514	3495	2764	0005094	0245	14781												
		OBS	T0437	0499	34951	2766			14781												
		STD	0500	0477	3495	2769	0004738	0294	14783												
		OBS	0543	0463	34956	2770			14784												
		STD	0600	0445	3495	2772	0004498	0340	14786												
		OBS	T0650	0430	34945	2773			14788												
		STD	0700	0415	3494	2774	0004322	0384	14790												
		STD	0800	0391	3492	2775	0004286	0428	14796												
		OBS	0858	0380	34917	2776			14801												
		STD	0900	0376	3492	2777	0004216	0470	14806												
		STD	1000	0368	3492	2778	0004202	0512	14820												
		OBS	T1042	0363	34920	2778			14828												
		STD	1100	0362	3492	2778	0004193	0554	14834												
		STD	1200	0360	3493	2779	0004215	0596	14850												
		STD	1300	0357	3493	2780	0004217	0638	14866												
		-STD	1400	0352	3494	2781	0004199	0680	14880												
		STD	1500	0347	3494	2782	0004179	0722	14895												
		OBS	T1566	0342	34947	2782			14904												
		STD	1750	0326	3495	2784	0004062	0825	14929												
		OBS	T1777	0324	34948	2784			14932												
		STD	2000	0318	3496	2786	0004048	0927	14968												
		OBS	T2277	0312	34977	2788			15013												
		STD	2500	0309	3498	2788	0004148	1132	15050												
		OBS	T2761	0306	34975	2788			15093												
		STD	3000	0303	3498	2788	0004380	1345	15133												
		OBS	T3099	0302	34976	2789			15150												

TABLE I.—Continued

REFERENCE CTRY CODE	SHIP ID. NO.	LATITUDE 1/16	LONGITUDE 7/16	E W	MARSDEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES	MODC STATION NUMBER	
					16'	1"	MO	DAT	HR	MIN		SEC	CRUISE NO.			STATION NUMBER	DR.	HG	PER				SEA
31	886	IM	5229	N	03553	W	184	25	04	30	126	1967	C11	014	2926	15	06	1	5	22	7	8	0014
				WATER		WIND	BARO- METER	AIR TEMP. °C		WET BULB	NO. OBS. DEPTH	SPECIAL OBSERVATIONS											
				COLOR		DIR.	READ OR FORCE	DRY BULB	WET BULB	WET BULB	NO. OBS. DEPTH												
				09		508	440	072	061	14													
MEASURE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ <sub>t</sub>	Σ Δ D DTM, M. ± 1σ	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - μl/l	TOTAL-P pg - μl/l	NO <sub>3</sub> -N pg - μl/l	NO <sub>3</sub> -N pg - μl/l	Si O <sub>4</sub> -S pg - μl/l	pH	CO <sub>2</sub>						
		STD	0000	0669	3480	2733	0007569	0000	14776														
125		OBS	0000	0669	34803	2733			14776														
		STD	0010	0670	3481	2733	0007575	0008	14778														
125		OBS	0010	0670	34806	2733			14778														
		STD	0020	0668	3481	2733	0007567	0015	14779														
		STD	0030	0666	3481	2733	0007560	0023	14780														
125		OBS	0032	0666	34806	2733			14780														
		STD	0050	0647	3481	2736	0007326	0038	14775														
125		OBS	0050	0647	34808	2736			14775														
		STD	0075	0630	3483	2740	0006987	0055	14773														
125		OBS	0076	0629	34830	2740			14773														
		STD	0100	0630	3489	2745	0006573	0072	14778														
125		OBS	0100	0630	34890	2745			14778														
		STD	0125	0615	3492	2749	0006197	0088	14776														
		STD	0150	0604	3493	2752	0005990	0104	14776														
125		OBS	0150	0604	34934	2752			14776														
		STD	0200	0596	3493	2752	0005986	0134	14781														
125		OBS	T0201	0596	34931	2752			14781														
		STD	0250	0582	3494	2755	0005810	0163	14784														
		STD	0300	0567	3495	2758	0005617	0192	14786														
125		OBS	0396	0533	34962	2763			14788														
		STD	0400	0531	3496	2763	0005205	0246	14788														
125		OBS	0490	0495	34977	2768			14789														
		STD	0500	0491	3498	2769	0004742	0295	14789														
125		OBS	T0583	0461	34965	2771			14790														
		STD	0600	0455	3496	2772	0004542	0342	14790														
		STD	0700	0422	3494	2774	0004404	0387	14793														
125		OBS	0768	0406	34934	2775			14797														
		STD	0800	0402	3493	2775	0004341	0430	14801														
		STD	0900	0390	3493	2776	0004292	0474	14812														
125		OBS	T0959	0384	34926	2777			14820														
		STD	1000	0380	3493	2777	0004285	0516	14825														
		STD	1100	0371	3493	2778	0004257	0559	14838														
		STD	1200	0363	3493	2779	0004230	0602	14851														
		STD	1300	0357	3493	2780	0004224	0644	14866														
		STD	1400	0352	3493	2780	0004235	0686	14880														
125		OBS	T1489	0349	34935	2781			14894														

















TABLE II.—Continued

SHIP NAME	SHIP CODE	LATITUDE	LONGITUDE	M/S DEPTH	STATION TIME	YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS	WEA- THER CODE	CLOUD CODES	NGDC STATION NUMBER					
							CRUISE NUMBER	STATION NUMBER										
311081	CK	5242 N	03547 W	184	25 06 08 202	1967	C12	D15	3731	1	18	3	2	X2	2	9	0015	
<small>WATER COLOR</small> 21 <small>WIND</small> 10 <small>WIND</small> 176 <small>SIGMA-T</small> 100 <small>SPECIFIC VOLUME</small> 094 <small>NO. OBS. DEPTHS</small> 14																		
CAST NO.	CAST TYPE	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY - σ <sub>t</sub>		SOUND VELOCITY	D <sub>20</sub> μS/cm	PO <sub>2</sub> μM	TOTAL-P μM	NO <sub>3</sub> -P μM	NO <sub>3</sub> -N μM	NO <sub>2</sub> -N μM	SiO <sub>2</sub> -Si μM	pH	σ <sub>t</sub> °C
170	STD	0000	0000	0875	3479	2702	0010520		0000	14855								
	OBS	0000	0000	0875	34793	2702				14855								
	STD	0010	0010	0872	3479	2702	0010503		0010	14855								
170	OBS	0010	0010	0872	34792	2702				14856								
	STD	0020	0020	0850	3479	2705	0010196		0020	14849								
	STD	0030	0030	0822	3479	2710	0009207		0030	14840								
170	OBS	0033	0033	0812	34791	2711				14837								
	STD	0050	0050	0746	3479	2721	0008770		0049	14814								
170	OBS	0051	0051	0742	34790	2721				14813								
	STD	0075	0075	0670	3483	2734	0007527		0060	14789								
170	OBS	0078	0078	0661	34828	2736				14786								
	STD	0100	0100	0600	3483	2744	0006666		0097	14765								
170	OBS	0104	0104	0591	34827	2745				14762								
	STD	0125	0125	0566	3483	2748	0006268		0103	14755								
	STD	0150	0150	0551	3485	2751	0005999		0119	14754								
170	OBS	0155	0155	0550	34852	2752				14754								
	STD	0200	0200	0577	3493	2755	0005769		0148	14773								
170	OBS	T0209	0209	0580	34940	2755				14776								
	STD	0250	0250	0551	3494	2759	0005445		0176	14771								
	STD	0300	0300	0520	3474	2762	0005137		0203	14767								
	STD	0400	0400	0470	3493	2768	0004693		0252	14763								
170	OBS	T0412	0412	0465	34934	2768				14763								
	STD	0500	0500	0438	3494	2772	0004390		0297	14766								
170	OBS	0519	0519	0433	34940	2772				14767								
	STD	0600	0600	0413	3494	2774	0004234		0340	14772								
170	OBS	T0612	0612	0410	34935	2775				14773								
	STD	0700	0700	0394	3493	2776	0004138		0392	14791								
	STD	0800	0800	0379	3493	2777	0004094		0423	14791								
170	OBS	0825	0825	0376	34926	2777				14794								
	STD	0900	0900	0370	3492	2778	0004129		0464	14804								
	STD	1000	1000	0363	3492	2778	0004153		0506	14818								
170	OBS	T1034	1034	0361	34916	2778				14822								
	STD	1100	1100	0359	3492	2779	0004173		0547	14833								
	STD	1200	1200	0355	3492	2779	0004175		0589	14848								
	STD	1300	1300	0352	3493	2780	0004175		0631	14863								
	STD	1400	1400	0348	3494	2781	0004172		0673	14879								
	STD	1500	1500	0345	3494	2782	0004159		0714	14894								
170	OBS	T1540	1540	0342	34947	2782				14907								
	STD	1750	1750	0335	3496	2784	0004065		0817	14933								
	STD	2000	2000	0326	3498	2787	0003988		0918	14971								
202	OBS	T2134	2134	0321	34989	2788				14992								
	STD	2500	2500	0310	3500	2789	0004008		1118	15050								
202	OBS	T2683	2683	0306	34997	2790				15080								
	STD	3000	3000	0304	3499	2790	0004271		1325	15134								
202	OBS	T3233	3233	0299	34985	2790				15172								
202	OBS	T3391	3391	0292	34980	2790				15197								





TABLE II.—Continued

REFERENCE CIR- NO.	SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	TIME ZONE	WIND SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER
					10'	1'	NO	DIR	HR	10'		CRUISE NO.	STATION NUMBER			DR.	HGT	PER	STA			
311081	CK	5244 N	03520 W		184	25	06	14	193	1967	C12	021	3201	16	30	2	4		X2	6	8	0021
					WATER		WIND		BARO-		AIR TEMP °C		NO. OBS.		SPECIAL							
					COLOR	TRANS	DR.	TRID	METER	DIR	WET	WET	VIL	NO.	SPECIAL							
					CODE	MET		OF	UNIT	BULB	BULB	BULB	CODE	DEPTHS	OBSERVATIONS							
MEASUREMENT TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D DYN. M. Σ 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg - ml/l	TOTAL-P μg - ml/l	NO <sub>2</sub> -N μg - ml/l	NO <sub>3</sub> -N μg - ml/l	SiO <sub>2</sub> -S μg - ml/l	pH	U C C					
		STD	0000	0883	3488	2707	0009971	0000	14859													
193		OBS	0000	0883	34883	2707			14859													
		STD	0010	0883	3489	2708	0009946	0010	14861													
193		OBS	0011	0883	34890	2708			14861													
		STD	0020	0831	3491	2718	0009036	0019	14843													
		STD	0030	0787	3492	2725	0008346	0028	14828													
193		OBS	0034	0774	34928	2728			14824													
		STD	0050	0748	3494	2732	0007686	0044	14817													
193		OBS	0054	0743	34941	2733			14815													
		STD	0075	0734	3498	2738	0007239	0063	14816													
193		OBS	0081	0727	34986	2739			14814													
		STD	0100	0687	3498	2744	0006614	0080	14802													
193		OBS	0108	0674	34983	2746			14798													
		STD	0125	0662	3499	2748	0006279	0096	14796													
		STD	0150	0651	3501	2751	0006025	0112	14796													
193		OBS	0162	0647	35013	2752			14796													
		STD	0200	0648	3503	2753	0005919	0142	14803													
193		OBS	T0217	0649	35042	2754			14807													
		STD	0250	0628	3503	2756	0005705	0171	14804													
		STD	0300	0598	3502	2759	0005502	0199	14800													
		STD	0400	0547	3499	2763	0005202	0252	14795													
193		OBS	0430	0534	34981	2764			14795													
		STD	0500	0512	3500	2768	0004820	0302	14798													
193		OBS	0536	0497	35004	2770			14797													
		STD	0600	0457	3498	2773	0004417	0348	14791													
193		OBS	T0642	0435	34965	2774			14789													
		STD	0700	0419	3495	2775	0004295	0392	14792													
		STD	0800	0396	3494	2776	0004196	0434	14798													
193		OBS	0859	0385	34933	2777			14804													
		STD	0900	0381	3493	2777	0004164	0476	14809													
		STD	1000	0372	3493	2778	0004138	0518	14822													
193		OBS	T1076	0366	34934	2779			14832													
		STD	1100	0364	3494	2779	0004114	0559	14835													
		STD	1200	0356	3494	2781	0004049	0600	14848													
		STD	1300	0349	3495	2782	0003993	0640	14862													
		STD	1400	0343	3496	2783	0003947	0680	14877													
		STD	1500	0337	3496	2784	0003898	0719	14891													
193		OBS	T1630	0330	34973	2786			14910													











TABLE III.—Continued

REFERENCE CITY ID. NO.	SHIP CODE	LATITUDE 1/18	LONGITUDE 1/18	L E S	MAGNITUDE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	REAL DEPTH OF SAMPL.	WAVE OBSERVATIONS					WEA- THEr CODE	CLOUD CODES TYP (AM)	MOOD STATION NUMBER
					1'	1"	MO	DAT	HR	MIN		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA				
311138	ME	52442N	03540W	184	25	07	17	163	1967	C13	009	3475	35	06	2	5	X	2	7	8	0009		
				WATER		WIND		BAROM		AIR TEMP. °C		SPECIAL											
				COLOR		DIR.		METER		DRY		WET		NO. OBS.									
				CODE		SPEED		INCHES		BULB		BULB		DEPTH									
				00		500		179		122		117		6		19							
REFERENCE NO	CAST NO.	CARD TYPE	DEPTH M	T °C	S ‰	SGMA-T	SPECIFIC VOLUME ANOMALY (δt)	Σ Δ D DYN. M. ± 10'	SOUND VELOCITY	O <sub>2</sub> M/L	PO <sub>4</sub> -P μg - M/L	TOTAL-P μg - M/L	NO <sub>3</sub> -N μg - M/L	NO <sub>2</sub> -N μg - M/L	Si O <sub>2</sub> -S μg - M/L	pH	STATION NO.						
130		STD	0000	1089	3486	2671	0013432	0000	14934														
		OBS	0000	1089	34864	2671			14934														
		STD	0010	1068	3486	2674	0013135	0013	14928														
130		OBS	0010	1068	34859	2674			14928														
		STD	0020	0998	3484	2685	0012135	0026	14904														
		STD	0030	0932	3484	2696	0011104	0038	14882														
130		OBS	0031	0926	34836	2697			14880														
		STD	0050	0817	3485	2715	0009334	0058	14842														
130		OBS	0051	0812	34855	2716			14840														
		STD	0075	0735	3488	2729	0008026	0080	14815														
130		OBS	0076	0733	34877	2730			14814														
		STD	0100	0705	3495	2739	0007146	0099	14808														
130		OBS	0101	0704	34948	2739			14808														
		STD	0125	0677	3496	2744	0006700	0116	14801														
		STD	0150	0656	3498	2748	0006314	0132	14798														
130		OBS	0152	0655	34981	2749			14798														
		STD	0200	0640	3501	2753	0005980	0163	14800														
130		OBS	0205	0638	35010	2753			14800														
		STD	0250	0628	3501	2754	0005891	0193	14803														
		STD	0300	0611	3501	2756	0005758	0222	14805														
		STD	0400	0563	3500	2762	0005306	0277	14802														
130		OBS	T0411	0556	35002	2763			14801														
		STD	0500	0490	3498	2769	0004678	0327	14788														
130		OBS	0511	0484	34981	2770			14788														
		STD	0600	0447	3496	2773	0004447	0373	14787														
130		OBS	T0613	0443	34956	2773			14787														
		STD	0700	0428	3495	2774	0004401	0417	14795														
		STD	0800	0410	3495	2776	0004287	0460	14804														
130		OBS	0818	0407	34948	2776			14806														
		STD	0900	0391	3494	2777	0004230	0503	14813														
		STD	1000	0374	3494	2779	0004117	0545	14823														
130		OBS	T1023	0371	34936	2779			14825														
		STD	1100	0365	3494	2780	0004089	0586	14835														
		STD	1200	0357	3495	2781	0004031	0626	14849														
		STD	1300	0350	3495	2782	0003983	0666	14863														
		STD	1400	0343	3496	2783	0003932	0706	14877														
		STD	1500	0337	3497	2784	0003891	0745	14891														
130		OBS	T1531	0335	34967	2785			14896														
		STD	1750	0324	3498	2787	0003806	0841	14928														
		STD	2000	0312	3500	2789	0003707	0935	14966														
163		OBS	T2002	0312	34996	2789			14966														
		STD	2500	0308	3500	2790	0003991	1128	15050														
163		OBS	T2517	0308	34996	2790			15052														
		STD	3000	0306	3499	2789	0004314	1335	15135														
163		OBS	T3025	0306	34992	2789			15139														
163		OBS	T3338	0303	34988	2789			15192														
163		OBS	3453	0305	34989	2789			15213														

TABLE III.—Continued

REFERENCE SHIP CODE	SHIP ID. NO.	LATITUDE 1/10	LONGITUDE 1/10	ASSIGN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR		DEPTH TO BOTTOM	MAX. DEPTH OF THERM.	WAVE OBSERVATIONS				WEA- THEN CODE	CLOUD CODES	MODE STATION NUMBER	
					MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR	HGT	PER	PER				
				WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS								
WATER COLOR CODE		TRANS MIS	DIR.	SPED OR FORCE	METER READING	DRY BULB	WET BULB													
311138	ME	52417N	035335W	184	25	07	18	182	1967	C13	010	3612	15	03	2	4	X1	8	2	0010
					36	506		210		117	106	7	14							
MESSAGE TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	EMPIRICAL VOLUME ANOMALY-σ <sub>t</sub>	Σ Δ D DYN. M. x 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>4</sub> -Si pg - ml/l	pH	CCC			
		STD	0000	1143	3484	2659	0014547	0000	14953											
	182	OBS	0000	1143	34840	2659			14953											
		STD	0010	1076	3483	2671	0013455	0014	14931											
	182	OBS	0010	1076	34834	2671			14931											
		STD	0020	1037	3484	2678	0012777	0027	14919											
		STD	0030	0986	3486	2688	0011837	0039	14902											
	182	OBS	0030	0986	34857	2688			14902											
	182	OBS	0049	0854	34905	2714			14857											
		STD	0050	0847	3491	2715	0009329	0061	14854											
	182	OBS	0074	0723	34917	2734			14811											
		STD	0075	0722	3492	2735	0007521	0082	14810											
	182	OBS	0099	0691	34928	2740			14802											
		STD	0100	0690	3493	2740	0007056	0100	14802											
		STD	0125	0669	3495	2744	0006669	0117	14798											
		STD	0150	0649	3495	2747	0006423	0133	14794											
	182	OBS	0150	0649	34953	2747			14794											
	182	OBS	0199	0614	34926	2750			14788											
		STD	0200	0614	3493	2750	0006218	0165	14788											
		STD	0250	0597	3494	2753	0005999	0196	14790											
		STD	0300	0579	3495	2756	0005767	0225	14791											
		STD	0400	0537	3496	2762	0005301	0280	14791											
	182	OBS	T0402	0536	34963	2762			14791											
	182	OBS	T0498	0488	34974	2769			14787											
		STD	0500	0487	3497	2769	0004709	0330	14787											
	182	OBS	T0596	0460	34977	2772			14792											
		STD	0600	0459	3498	2773	0004464	0376	14792											
		STD	0700	0433	3496	2774	0004356	0420	14798											
	182	OBS	0797	0411	34951	2776			14804											
		STD	0800	0410	3495	2776	0004287	0464	14804											
		STD	0900	0392	3494	2777	0004242	0506	14813											
	182	OBS	T0990	0378	34934	2778			14822											
		STD	1000	0377	3493	2778	0004197	0548	14824											
		STD	1100	0364	3494	2780	0004091	0590	14835											
		STD	1200	0353	3494	2781	0004005	0630	14847											
		STD	1300	0345	3495	2782	0003952	0670	14861											
		STD	1400	0340	3495	2783	0003932	0709	14875											
	182	OBS	T1494	0338	34959	2784			14891											

















TABLE IV.—Observed and interpolated oceanographic data from stations taken by USCGC CHINCOTEAGUE, at Ocean Station CHARLIE, 2 August—24 August 1967, prepared from NODC Listing No. 31-1143.

NODC REF. ID. NO.	SHIP CODE	LATITUDE	LONGITUDE	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	OBSERVATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODE	NODC STATION NUMBER
					MO	DAY	HEUR		CAUSE NO.	STATION NUMBER			DIR.	HGT.	PER.			
311143	CC	52455N	035150W	184 25	08	02	1226	1967	C14	001	3260	1	12	1			0091	
<small>NOTE: THIS FORM IS FOR PLACING ELECTRONICALLY OBSERVED SERIAL DATA (PTD) HERE  <small>AS INDICATED BY APOSTROPHES WHERE THEY APPLY</small></small>																		
CAST NO.	TIME OF CAST	CARD TYPE	DEPTH (m)	TEMP.	SAL.	SIGMA-T	SPECIFIC VOLUME (ANOMALY -20°)	SOUND VELOCITY (m/sec)	O <sub>2</sub> (ml/l)	PO <sub>4</sub> -P (µg-at/l)	TOTAL-P (µg-at/l)	NO <sub>3</sub> -N (µg-at/l)	NO <sub>2</sub> -N (µg-at/l)	SiO <sub>2</sub> -S (µg-at/l)	PH	S. COND.		
																	WATER COLOR	TRANSL. NO.

REFERENCE ID. NO.	SHIP CODE	LATITUDE	LONGITUDE	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	OBSERVATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODE	NODC STATION NUMBER
					MO	DAY	HEUR		CAUSE NO.	STATION NUMBER			DIR.	HGT.	PER.			
311143	CC	52435N	035252W	184 25	08	03	159	1967	C14	002	3566	16	18	4			0002	
<small>NOTE: THIS FORM IS FOR PLACING ELECTRONICALLY OBSERVED SERIAL DATA (PTD) HERE  <small>AS INDICATED BY APOSTROPHES WHERE THEY APPLY</small></small>																		
MISSING TIME HEUR	CAST NO.	CARD TYPE	DEPTH (m)	TEMP.	SAL.	SIGMA-T	SPECIFIC VOLUME (ANOMALY -20°)	SOUND VELOCITY (m/sec)	O <sub>2</sub> (ml/l)	PO <sub>4</sub> -P (µg-at/l)	TOTAL-P (µg-at/l)	NO <sub>3</sub> -N (µg-at/l)	NO <sub>2</sub> -N (µg-at/l)	SiO <sub>2</sub> -S (µg-at/l)	PH	S. COND.		
																	WATER COLOR	TRANSL. NO.

MISSING TIME HEUR	CAST NO.	CARD TYPE	DEPTH (m)	TEMP.	SAL.	SIGMA-T	SPECIFIC VOLUME (ANOMALY -20°)	SOUND VELOCITY (m/sec)	O <sub>2</sub> (ml/l)	PO <sub>4</sub> -P (µg-at/l)	TOTAL-P (µg-at/l)	NO <sub>3</sub> -N (µg-at/l)	NO <sub>2</sub> -N (µg-at/l)	SiO <sub>2</sub> -S (µg-at/l)	PH	S. COND.
		STD	0000	1141	3475	2652	0015175	0000	14951							
		OBS	0000	1141	34750	2652			14951							
		STD	0010	1138	3476	2654	0015050	0015	14952							
		OBS	0010	1138	34763	2654			14952							
		STD	0020	1122	3477	2658	0014744	0030	14948							
		STD	0030	1106	3479	2662	0014344	0045	14944							
		OBS	0032	1103	34802	2664			14944							
		OBS	0049	0888	34902	2708			14869							
		STD	0050	0881	3490	2709	0009884	0069	14867							
		STD	0075	0749	3494	2732	0007729	0091	14821							
		OBS	0075	0749	34942	2732			14821							
		STD	0100	0698	3495	2740	0007014	0109	14806							
		OBS	0101	0696	34952	2741			14805							
		STD	0125	0675	3497	2745	0006599	0126	14801							
		STD	0150	0658	3499	2749	0006295	0142	14798							
		OBS	0150	0658	34986	2749			14798							
		STD	0200	0640	3499	2751	0006134	0173	14800							
		OBS	T0201	0640												
		STD	0250	0602	3499	2756	0005705	0203	14793							
		STD	0300	0569	3499	2760	0005351	0231	14788							
		OBS	T0394	0522												
		STD	0400	0521	3499	2766	0004882	0282	14785							
		OBS	0488	0496	34992	2769			14789							
		STD	0500	0489	3499	2770	0004614	0329	14788							
		OBS	T0586	0449	34968	2773			14785							
		STD	0600	0445	3497	2773	0004372	0374	14786							
		STD	0700	0422	3496	2775	0004241	0417	14793							
		OBS	0784	0405	34957	2777			14800							
		STD	0800	0402	3496	2777	0004148	0459	14801							
		STD	0900	0386	3495	2778	0004074	0500	14811							
		OBS	T0993	0373	34949	2780			14821							
		STD	1000	0372	3495	2780	0004020	0541	14822							
		STD	1100	0360	3495	2781	0003962	0581	14833							
		STD	1200	0350	3495	2782	0003925	0620	14846							
		STD	1300	0343	3496	2783	0003846	0659	14860							
		STD	1400	0337	3497	2785	0003777	0697	14874							
		STD	1500	0334	3498	2786	0003743	0735	14890							
		OBS	T1563	0333	34993	2787			14900							













TABLE IV—Continued

REFERENCE CIR NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	# OBS	MARENG SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THES CODE	CLOUD CODES	NODC STATION NUMBER		
					16'	1'	MO	DAY	HR.		1/10	CAUSE NO.			STATION NUMBER	DR.	HGT.				PER.	SEA
311143	CC	52461N	035301W	184	25	08	16	129	1967	C14	013	3200	18	24	1		53	7	6	0013		
				WATER		WIND		BARO-		AIR TEMP. °C		NO. OBL.		SPECIAL								
				COLOR		DIR.		METER		DRY		OBL.		OBSERVATIONS								
				CODE		DL.		MM)		BULB		DEPTHS										
				11		S18		976		122		122		6		14						
MEASUREMENT NO. 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	ROMA-T	PRECIP VOLUME ANOMALY-10 <sup>3</sup>	Σ Δ D DTN. M. S. 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>2</sub> -Si pg - ml/l	pH	S CL					
		STD	0000	1130	3473	2653	0015100	0000	14947													
		OBS	0000	1130	34734	2653			14947													
		STD	0010	1128	3473	2653	0015123	0015	14948													
129		OBS	0012	1128	34727	2653			14948													
		STD	0020	1126	3473	2654	0015105	0030	14949													
		STD	0030	1123	3473	2655	0015054	0045	14950													
129		OBS	0035	1122	34736	2655			14950													
		STD	0050	0889	3486	2705	0010332	0071	14869													
129		OBS	0055	0832	34892	2716			14849													
		STD	0075	0739	3493	2733	0007679	0093	14817													
129		OBS	0084	0709	34933	2737			14807													
		STD	0100	0681	3493	2741	0006937	0111	14799													
129		OBS	0111	0666	34926	2743			14794													
		STD	0125	0662	3494	2744	0006651	0128	14795													
		STD	0150	0657	3497	2747	0006401	0145	14798													
129		OBS	0167	0653	34987	2749			14799													
		STD	0200	0648	3501	2752	0006062	0176	14803													
129		OBS	T0222	0643	35014	2753			14805													
		STD	0250	0628	3501	2755	0005876	0206	14803													
		STD	0300	0601	3500	2757	0005674	0235	14801													
		STD	0400	0543	3498	2763	0005226	0289	14793													
129		OBS	T0441	0517	34970	2765			14789													
		STD	0500	0471	3494	2768	0004771	0339	14780													
129		OBS	0553	0442	34926	2770			14776													
		STD	0600	0430	3493	2772	0004471	0385	14779													
129		OBS	T0665	0416	34931	2774			14784													
		STD	0700	0410	3493	2774	0004343	0429	14788													
		STD	0800	0395	3493	2776	0004253	0472	14798													
		STD	0900	0379	3493	2777	0004158	0514	14808													
129		OBS	0904	0378	34927	2777			14808													
		STD	1000	0370	3491	2777	0004292	0557	14820													
		STD	1100	0362	3490	2777	0004355	0600	14834													
129		OBS	T1147	0358	34898	2777			14840													
		STD	1200	0354	3490	2778	0004334	0643	14847													
		STD	1300	0347	3491	2779	0004277	0686	14861													
		STD	1400	0341	3491	2780	0004238	0729	14875													
		STD	1500	0335	3492	2781	0004188	0771	14890													
		STD	1750	0322	3494	2783	0004098	0875	14927													
129		OBS	T1758	0322	34937	2784			14928													

TABLE IV—Continued

REFERENCE SHIP CODE	ID. NO.	SHIP CODE	LATITUDE ° ' 1/18	LONGITUDE ° ' 1/18	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	MOOD STATION NUMBER	
						MO	DAY	HR. 1/18		CRUISE NO.	STATION NUMBER			DIR.	HGT.	PER.				SEA
311143	CC		52440N	035270W	184	25	08	17	119	1967	C14	014	3658	33	5	0	46	7	6	0014
					WATER	WIND	BARO-		AIR TEMP. °C		NO. OBS. DEPTH	SPECIAL OBSERVATIONS								
					COLOR CODE	DIR. OF FORCE	METER (mm)		DRY BULB	WET BULB				HC CODE						
					32	S12	105		117	111	6	18								
MESSAGE TIME HR 1/18	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY (δ <sub>s</sub> )	Δ D DYN. M. 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> (ml/l)	PO <sub>4</sub> -P pg - ml/l	TOTAL P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>4</sub> -S pg - ml/l	pH	SC			
		STD	0000	1175	3473	2644	0015948	0000	14963											
		OBS	0000	1175	34727	2644			14963											
		STD	0010	1172	3473	2645	0015933	0016	14963											
		OBS	0010	1172	34725	2645			14963											
		STD	0020	1161	3474	2648	0015651	0032	14961											
		STD	0030	1102	3477	2661	0014419	0047	14942											
		OBS	0031	1094	34772	2663			14940											
		OBS	0048	0880	34882	2708			14866											
		STD	0050	0861	3488	2711	0009731	0071	14859											
		OBS	0072	0711	34911	2735			14806											
		STD	0075	0704	3492	2737	0007277	0092	14803											
		OBS	0096	0666	34959	2745			14792											
		STD	0100	0662	3496	2746	0006471	0109	14791											
		STD	0125	0642	3496	2749	0006250	0125	14788											
		OBS	0144	0634	34959	2750			14788											
		STD	0150	0636	3497	2750	0006128	0141	14789											
		OBS	T0194	0644	35012	2753			14800											
		STD	0200	0637	3501	2753	0005919	0171	14799											
		STD	0250	0581	3496	2757	0005649	0200	14784											
		STD	0300	0534	3492	2759	0005435	0227	14772											
		OBS	T0378	0479	34898	2764			14762											
		STD	0400	0470	3490	2765	0004945	0279	14762											
		OBS	0466	0444	34910	2769			14763											
		STD	0500	0431	3490	2770	0004604	0327	14763											
		OBS	T0555	0413	34896	2771			14764											
		STD	0600	0404	3490	2772	0004418	0372	14768											
		STD	0700	0387	3490	2774	0004312	0416	14777											
		OBS	0751	0380	34899	2775			14783											
		STD	0800	0374	3490	2775	0004253	0459	14789											
		STD	0900	0364	3490	2776	0004240	0501	14801											
		OBS	T0941	0361	34895	2776			14807											
		STD	1000	0360	3490	2777	0004248	0544	14816											
		STD	1100	0359	3491	2778	0004245	0586	14833											
		STD	1200	0357	3491	2778	0004304	0629	14848											
		STD	1300	0354	3492	2779	0004275	0672	14864											
		STD	1400	0351	3492	2779	0004318	0715	14880											
		OBS	T1469	0349	34926	2780			14890											
		STD	1500	0347	3493	2780	0004303	0758	14895											
		STD	1750	0330	3493	2782	0004282	0865	14930											
		STD	2000	0319	3492	2783	0004323	0973	14968											
		OBS	T2104	0315	34923	2783			14984											
		STD	2500	0311	3492	2784	0004551	1195	15050											
		OBS	T2649	0309	34925	2784			15075											
		STD	3000	0302	3497	2788	0004408	1418	15133											
		OBS	3183	0300	34975	2789			15164											
		OBS	T3350	0300	34972	2788			15193											









TABLE IV—Continued

REFERENCE CTM NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MAGNETIC CORRECTION		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS	WAVE DIRECTION	WAVE PERIOD	WAVE SEA	WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER																														
				10"	1'	MO	DAY	HR		MIN	CRUISE NO.									STATION NUMBER																													
311143	CC	52468N	035232W	184	25	08	24	127	1967	C14	021	3109	17	20	2		50	516	0021																														
<table border="1"> <thead> <tr> <th colspan="4">WATER</th> <th colspan="2">WIND</th> <th colspan="3">AIR TEMP. °C</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANSP. (m)</th> <th>DIR.</th> <th>SPEED OF WIND (knots)</th> <th>BARO-METER (mb)</th> <th>DRY BULB</th> <th>WET BULB</th> <th>WIND CODE</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>31</td> <td>520</td> <td>044</td> <td>111</td> <td>106</td> <td>7</td> <td>14</td> <td></td> </tr> </tbody> </table>																				WATER				WIND		AIR TEMP. °C			NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANSP. (m)	DIR.	SPEED OF WIND (knots)	BARO-METER (mb)	DRY BULB	WET BULB	WIND CODE				31	520	044	111	106	7	14	
WATER				WIND		AIR TEMP. °C			NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																							
COLOR CODE	TRANSP. (m)	DIR.	SPEED OF WIND (knots)	BARO-METER (mb)	DRY BULB	WET BULB	WIND CODE																																										
			31	520	044	111	106	7	14																																								
MESSENGER TIME 1/10	CASE NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	$\frac{\Delta \sigma}{\sigma}$ DYN. M. 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> (ml/l)	PO <sub>4</sub> -P µg - ml/l	TOTAL-P µg - ml/l	NO <sub>3</sub> -N µg - ml/l	NO <sub>2</sub> -N µg - ml/l	SiO <sub>2</sub> -S µg - ml/l	pH	S C																																
		STD	0000	1147	3474	2650	0015369	0000	14953																																								
		OBS	0000	1147	34738	2650			14953																																								
		STD	0010	1146	3477	2653	0015147	0015	14955																																								
		OBS	0010	1146	34769	2653			14955																																								
		STD	0020	1143	3477	2654	0015120	0030	14955																																								
		STD	0030	1139	3477	2654	0015092	0045	14956																																								
		OBS	0034	1138	34767	2654			14956																																								
		STD	0050	0986	3483	2686	0012080	0073	14905																																								
		OBS	0054	0951	34846	2693			14893																																								
		STD	0075	0788	3488	2722	0008739	0099	14835																																								
		OBS	0082	0750	34893	2728			14822																																								
		STD	0100	0703	3492	2737	0007305	0119	14807																																								
		OBS	0111	0680	34927	2741			14800																																								
		STD	0125	0663	3493	2744	0006739	0136	14796																																								
		STD	0150	0644	3494	2747	0006455	0153	14792																																								
		OBS	0166	0639	34956	2749			14793																																								
		STD	0200	0660	3502	2751	0006146	0184	14808																																								
		OBS	T0223	0668	35051	2752			14815																																								
		STD	0250	0641	3503	2754	0005898	0214	14809																																								
		STD	0300	0595	3500	2758	0005598	0243	14798																																								
		STD	0400	0524	3496	2764	0005141	0297	14785																																								
		OBS	T0443	0502	34956	2766			14783																																								
		STD	0500	0485	3496	2768	0004781	0346	14786																																								
		OBS	0556	0468	34965	2771			14788																																								
		STD	0600	0454	3495	2771	0004604	0393	14790																																								
		OBS	T0670	0434	34933	2772			14793																																								
		STD	0700	0426	3492	2772	0004600	0439	14794																																								
		STD	0800	0404	3490	2772	0004586	0485	14801																																								
		OBS	0899	0387	34892	2774			14810																																								
		STD	0900	0387	3489	2774	0004538	0531	14811																																								
		STD	1000	0377	3491	2776	0004375	0576	14823																																								
		STD	1100	0368	3493	2778	0004213	0618	14837																																								
		OBS	T1129	0366	34934	2779			14841																																								
		STD	1200	0361	3494	2780	0004146	0660	14850																																								
		STD	1300	0354	3494	2781	0004099	0701	14864																																								
		STD	1400	0348	3495	2782	0004061	0742	14879																																								
		STD	1500	0343	3496	2783	0004040	0783	14894																																								
		OBS	T1736	0335	34969	2785			14930																																								

TABLE V.—Observed and interpolated oceanographic data from stations taken by USCGC BIBB, at Ocean Station CHARLIE, 26 August—16 September 1967, prepared from NODC Listing No. 31-1159.

REFERENCE SHIP CODE	SHIP ID. NO.	LATITUDE	LONGITUDE	STATION SQUARE	STATION TIME (GMT)	YEAR	ORIGINATOR'S CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS	WEATHER CODE	CLOUD CODES	NODC STATION NUMBER
311159 BX	5242 N	03538 W	184 25 08 26 133	1967	C15 001		3566	15	26	2		8	4	0001

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPENCER VOLUME ANOM. 1/1000	Δ D DYN. M. 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg - ml/l	TOTAL-P μg - ml/l	NO <sub>2</sub> -N μg - ml/l	NO <sub>3</sub> -N μg - ml/l	SiO <sub>4</sub> -Si μg - ml/l	pH	S.C.C.
		STD	0000	1103	3485	2667	0013754	0000	14939								
133		OBS	0000	1103	34853	2667			14939								
		STD	0010	1093	3487	2671	0013465	0014	14937								
133		OBS	0010	1093	34872	2671			14937								
		STD	0020	1089	3487	2671	0013471	0027	14938								
		STD	0030	1086	3486	2671	0013483	0041	14938								
133		OBS	0032	1085	34858	2671			14938								
		STD	0050	0850	3497	2719	0008929	0063	14856								
133		OBS	0052	0832	34976	2723			14850								
		STD	0075	0758	3497	2734	0007616	0084	14825								
133		OBS	0078	0750	34974	2735			14822								
		STD	0100	0701	3497	2742	0006884	0102	14807								
133		OBS	0103	0696	34973	2742			14806								
		STD	0125	0681	3498	2745	0006575	0119	14803								
		STD	0150	0668	3500	2748	0006345	0135	14803								
133		OBS	0155	0666	35000	2749			14803								
		STD	0200	0660	3502	2751	0006146	0166	14808								
133		OBS	T0208	0658	35024	2752			14808								
		STD	0250	0617	3501	2756	0005756	0196	14799								
		STD	0300	0575	3499	2760	0005441	0224	14790								
		STD	0400	0515	3495	2764	0005129	0277	14782								
133		OBS	T0415	0509	34941	2764			14781								
		STD	0500	0490	3497	2768	0004775	0326	14788								
133		OBS	0517	0486	34978	2770			14789								
		STD	0600	0466	3498	2772	0004562	0373	14795								
133		OBS	T0617	0461	34974	2772			14796								
		STD	0700	0428	3496	2774	0004349	0417	14795								
		STD	0800	0400	3494	2776	0004273	0460	14800								
133		OBS	0824	0395	34931	2776			14802								
		STD	0900	0390	3493	2776	0004270	0503	14812								
		STD	1000	0382	3494	2778	0004242	0546	14826								
133		OBS	T1031	0380	34937	2778			14830								
		STD	1100	0375	3494	2779	0004217	0588	14840								
		STD	1200	0367	3494	2779	0004205	0630	14853								
		STD	1300	0360	3495	2781	0004129	0672	14867								
		STD	1400	0352	3495	2782	0004111	0713	14880								
		STD	1500	0344	3496	2783	0004016	0754	14894								
133		OBS	T1529	0342	34962	2784			14898								

REFERENCE SHIP CODE	SHIP ID. NO.	LATITUDE	LONGITUDE	STATION SQUARE	STATION TIME (GMT)	YEAR	ORIGINATOR'S CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS	WEATHER CODE	CLOUD CODES	NODC STATION NUMBER	
311159 BX	5242 N	03518 W	184 25 08 27 137	1967	C15 002		3292	12	26	2		10	6	8	0002

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPENCER VOLUME ANOM. 1/1000	Δ D DYN. M. 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg - ml/l	TOTAL-P μg - ml/l	NO <sub>2</sub> -N μg - ml/l	NO <sub>3</sub> -N μg - ml/l	SiO <sub>4</sub> -Si μg - ml/l	pH	S.C.C.
		STD	0000	1117	3482	2662	0014232	0000	14944								
137		OBS	0000	1117	34821	2662			14944								
		OBS	0008	1117	34820	2662			14945								
		STD	0010	1117	3482	2662	0014261	0014	14945								
		STD	0020	1116	3482	2662	0014277	0029	14947								
137		OBS	0027	1116	34820	2663			14948								
		STD	0030	1102	3483	2665	0014014	0043	14943								
137		OBS	0042	1022	34844	2681			14917								
		STD	0050	0919	3487	2701	0010720	0067	14881								
137		OBS	0064	0786	34900	2724			14833								
		STD	0075	0732	3491	2732	0007732	0090	14814								
137		OBS	0084	0698	34921	2738			14803								
		STD	0100	0681	3493	2741	0006930	0109	14798								
		STD	0125	0653	3495	2746	0006461	0126	14792								
137		OBS	0126	0652	34953	2747			14792								
		STD	0150	0658	3499	2749	0006266	0141	14798								
137		OBS	T0168	0660	35016	2751			14803								
		STD	0200	0641	3500	2752	0006045	0172	14800								
		STD	0250	0610	3499	2755	0005793	0202	14796								
		STD	0300	0580	3498	2758	0005556	0230	14792								
137		OBS	T0330	0562	34977	2760			14790								
		STD	0400	0520	3498	2766	0004951	0283	14784								
137		OBS	0407	0516	34979	2766			14784								
		OBS	0484	0470	34964	2770			14777								
		STD	0500	0464	3496	2771	0004539	0330	14777								
		STD	0600	0431	3495	2773	0004334	0375	14780								
137		OBS	0637	0420	34947	2774			14781								
		STD	0700	0404	3494	2776	0004194	0417	14785								
137		OBS	T0789	0385	34931	2777			14792								
		STD	0800	0384	3493	2777	0004127	0459	14793								
		STD	0900	0378	3493	2778	0004132	0500	14807								
		STD	1000	0371	3493	2778	0004135	0541	14821								
		STD	1100	0365	3493	2779	0004134	0583	14835								
137		OBS	T1198	0358	34935	2780			14849								







TABLE V.—Continued

REFERENCE SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	L S S	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODIS	NODC STATION NUMBER
					10'	1'	MO	DAY	HR.		MIN.	CRUISE NO.			STATION NUMBER	DR	HG			
311159	BX	5241 N	03522 W		184	25	09	04	150	1967	C15	009	2195	15	29	5		6	6	0009
				WATER		WIND		BARO-		AIR TEMP., °C		VIS CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS						
				COLOR CODE		TRAIL MI		DBL. OR FOUR		METER DIRT BULE					WET BULE					
				29		S30		129		128		122		7		14				
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°C	S Δ DYN. M. 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg - ml/l	TOTAL-P μg - ml/l	NO <sub>2</sub> -N μg - ml/l	NO <sub>3</sub> -N μg - ml/l	SiO <sub>4</sub> -S μg - ml/l	pH	SI CODE			
		STD	0000	1084	3485	2671	0013428	0000	14932											
150		OBS	0000	1084	34853	2671			14932											
		STD	0010	1084	3485	2670	0013510	0013	14934											
150		OBS	0010	1084	34845	2670			14934											
		STD	0020	1083	3485	2671	0013503	0027	14935											
		STD	0030	1082	3485	2671	0013487	0040	14936											
150		OBS	0031	1082	34850	2671			14937											
150		OBS	0048	0992	34850	2687			14907											
		STD	0050	0970	3486	2691	0011600	0066	14899											
150		OBS	0073	0777	34919	2726			14831											
		STD	0075	0771	3492	2727	0008200	0090	14829											
		STD	0100	0709	3494	2738	0007237	0110	14810											
150		OBS	0108	0693	34942	2740			14805											
		STD	0125	0663	3495	2745	0006627	0127	14796											
150		OBS	0145	0640	34948	2748			14790											
		STD	0150	0641	3496	2749	0006267	0143	14791											
150		OBS	T0193	0644	35018	2753			14800											
		STD	0200	0640	3502	2753	0005906	0173	14800											
		STD	0250	0612	3501	2757	0005647	0202	14797											
		STD	0300	0583	3501	2760	0005378	0230	14793											
150		OBS	T0394	0525	35000	2767			14785											
		STD	0400	0520	3500	2767	0004795	0281	14784											
150		OBS	0481	0468	34980	2772			14776											
		STD	0500	0461	3497	2772	0004430	0327	14776											
150		OBS	T0577	0435	34949	2773			14778											
		STD	0600	0425	3494	2773	0004339	0371	14777											
		STD	0700	0392	3492	2775	0004205	0413	14780											
150		OBS	0768	0376	34905	2776			14784											
		STD	0800	0374	3491	2776	0004194	0455	14789											
		STD	0900	0367	3491	2777	0004185	0497	14802											
150		OBS	T0953	0364	34909	2777			14810											
		STD	1000	0361	3491	2778	0004186	0539	14817											
		STD	1100	0356	3491	2778	0004210	0581	14831											
		STD	1200	0352	3492	2779	0004170	0623	14846											
		STD	1300	0348	3492	2780	0004202	0665	14862											
		STD	1400	0344	3493	2781	0004158	0707	14877											
150		OBS	T1496	0342	34936	2782			14892											

TABLE V.—Continued

REFERENCE CIP CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	W. E. S. E.	WASDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NOO. STATION NUMBER	
						10'	1"	MO	DAY	HR		MIN	SEC			CRUISE NO.	STATION NUMBER	DM				HGT
311159	BX		5249 N	03531 W		184	25	09	05	136	1967	C15	010	3530	35	30	1			6	7	0010
						WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
						COLOR	NAME	DR.	PRD OR FORCE	NO. METER	DRY BULB	WET BULB	WV. CODE									
						30	S05	213		111	106	7	19									
MESSAGE TIME 1/10	CAST NO.	CARD TYPE	DEPTH M	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Δ D DIN. IN ± 10 <sup>-3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg - ml/l	TOTAL-P µg - ml/l	NO <sub>2</sub> -N µg - ml/l	NO <sub>3</sub> -N µg - ml/l	SiO <sub>4</sub> -S µg - ml/l	pH	σ <sub>t</sub>	σ <sub>θ</sub>				
		STD	0000	1081	3487	2672	0013281	0000	14931													
136		OBS	0000	1081	34866	2672			14931													
		STD	0010	1076	3486	2673	0013248	0013	14931													
136		OBS	0010	1076	34862	2673			14931													
		STD	0020	1075	3486	2673	0013254	0027	14932													
		STD	0030	1074	3486	2673	0013261	0040	14934													
136		OBS	0030	1074	34862	2673			14934													
136		OBS	0049	1072	34866	2674			14936													
		STD	0050	1058	3487	2677	0012976	0066	14931													
136		OBS	0074	0812	34973	2725			14846													
		STD	0075	0809	3497	2726	0008351	0093	14845													
136		OBS	0097	0752	34970	2734			14826													
		STD	0100	0746	3497	2735	0007515	0113	14825													
		STD	0125	0706	3498	2741	0006948	0131	14813													
136		OBS.	0146	0684	34986	2745			14808													
		STD	0150	0684	3499	2745	0006610	0148	14809													
136		OBS	T0195	0677	35023	2749			14814													
		STD	0200	0675	3502	2749	0006324	0180	14814													
		STD	0250	0650	3502	2752	0006090	0211	14812													
		STD	0300	0622	3502	2756	0005827	0241	14809													
136		OBS	T0383	0567	35011	2762			14801													
		STD	0400	0551	3500	2764	0005177	0296	14797													
136		OBS	0476	0494	34968	2768			14786													
		STD	0500	0486	3497	2769	0004727	0345	14786													
136		OBS	T0571	0463	34971	2772			14789													
		STD	0600	0454	3497	2773	0004441	0391	14790													
		STD	0700	0424	3497	2776	0004176	0434	14794													
136		OBS	0760	0409	34975	2778			14798													
		STD	0800	0400	3496	2778	0004095	0476	14800													
		STD	0900	0381	3494	2778	0004112	0517	14809													
136		OBS	T0953	0372	34928	2778			14814													
		STD	1000	0370	3493	2778	0004137	0558	14821													
		STD	1100	0367	3494	2779	0004142	0599	14836													
		STD	1200	0362	3494	2780	0004122	0640	14851													
		STD	1300	0358	3495	2781	0004111	0682	14866													
		STD	1400	0353	3496	2782	0004087	0723	14881													
136		OBS	T1450	0350	34958	2783			14888													
		STD	1500	0347	3496	2783	0004043	0763	14895													
		STD	1750	0330	3498	2786	0003920	0863	14931													
		STD	2000	0314	3499	2789	0003779	0959	14966													
170		OBS	2010	0313	34990	2789			14968													
170		OBS	2498	0307	34995	2790			15049													
		STD	2500	0307	3500	2790	0003982	1153	15049													
170		OBS	T2994	0308	34995	2790			15135													
		STD	3000	0308	3499	2789	0004357	1362	15136													
170		OBS	T3427	0300	34983	2789			15207													
170		OBS	3527	0302																		













TABLE V.—Continued

OBS. NO.	SHIP NAME	SHIP CODE	LATITUDE	LONGITUDE	BASED ON SQUARE	STATION TIME (LOCAL)	YEAR	OBSERVATIONS				DEPTH TO BOTTOM	SEA SURFACE TEMPERATURE	WIND			WEATHER		VISIBILITY		WIND DIRECTION	WIND FORCE	SEA STATE	WAVE PERIOD	SWELL PERIOD	SWELL DIRECTION	SWELL FORCE	SWELL PERIOD	SWELL DIRECTION	SWELL FORCE						
								CRUISE NUMBER	STATION NUMBER	SPEED	DIRECTION			STATE	CODE	VIS. CODE	SPECIAL OBSERVATIONS																			
																		DRIFT	DRIFT DIRECTION	DRIFT FORCE																
311159	8X	5233 N	03519 W	18425	0916	137	1967	C15	021	2834	1	32	2			6	6															0021				
CAS. TIME	DATE	CASE	TYPE	DEPTH	TEMP.	TEMP.	TEMP.	SPEC. VOL.	WIND	WIND	WIND	WIND	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.	TEMP.				
132	OBS	0000		1080	3482	2669	0013604	0000	14930																											
	STD	0000		1090	34820	2669			14930																											
	STD	0010		1070	3482	2669	0013618	0013	14932																											
132	OBS	0012		1079	34819	2669			14932																											
	STD	0020		1080	3482	2669	0013659	0027	14934																											
	STD	0030		1081	3482	2669	0013692	0040	14936																											
132	OBS	0030		1081	34820	2669			14936																											
132	OBS	0045		1060	34846	2674			14931																											
	STD	0050		0996	3487	2688	0011940	0065	14979																											
132	OBS	0067		0931	34938	2770			14951																											
	STD	0075		0791	3495	2727	0008242	0091	14938																											
132	OBS	0084		0747	34972	2735			14923																											
	STD	0100		0727	3498	2738	0007200	0111	14817																											
	STD	0125		0698	3499	2744	0006756	0128	14810																											
132	OBS	0131		0693	34994	2745			14809																											
	STD	0150		0684	3502	2747	0006432	0145	14809																											
132	OBS	0173		0672	35032	2750			14808																											
	STD	0200		0646	3500	2752	0006098	0176	14802																											
	STD	0250		0601	3496	2754	0005995	0206	14792																											
	STD	0300		0560	3493	2757	0005669	0235	14783																											
132	OBS	0347		0526	34921	2760			14777																											
	STD	0400		0492	3493	2765	0004956	0289	14772																											
132	OBS	0433		0473	34935	2768			14770																											
	STD	0500		0436	3491	2770	0004558	0336	14765																											
132	OBS	0514		0430	34911	2770			14765																											
	STD	0600		0413	3492	2773	0004359	0380	14772																											
132	OBS	0690		0397	34921	2775			14780																											
	STD	0700		0396	3492	2775	0004249	0423	14781																											
	STD	0800		0382	3491	2776	0004226	0466	14792																											
132	OBS	0875		0373	34911	2776			14901																											
	STD	0900		0372	3491	2777	0004213	0508	14804																											
	STD	1000		0367	3492	2777	0004216	0550	14919																											
	STD	1100		0362	3492	2778	0004217	0592	14934																											
	STD	1200		0357	3492	2779	0004215	0634	14949																											
	STD	1300		0352	3493	2780	0004210	0676	14963																											
	STD	1400		0347	3493	2780	0004203	0718	14878																											
132	OBS	1420		0346	34929	2781			14981																											



### TABLE VI.—Continued

REF ID NO	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	M/R	M/R SIDEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEA-THER CODE	CLOUD CODES	NODC STATION NUMBER		
					10'	1"		MO	DAY	HR		MIN	SEC			CRUISE NO.	STATION NUMBER	DR.	INC				PER	SEA
					WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
COLOR CODE	TRANL (m)	DIR.	SPED OF FORCE	DRY BULB	WET BULB	VS CODE																		
311172	OW	52443N	035302W	184	25	10	17	128	1967	C16	003	3566	15	24	2					6	4	0003		
MESSAGE NO NR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-σ <sub>t</sub>	SOUND VELOCITY	PO <sub>2</sub> -P μg - μl/l	TOTAL-P μg - μl/l	NO <sub>3</sub> -N μg - μl/l	NO <sub>3</sub> -N μg - μl/l	SiO <sub>2</sub> -S μg - μl/l	pH	C									
		STD	0000	0933	3481	2694	0011250	0000	14877															
128		OBS	0000	0933	34814	2694			14877															
		STD	0010	0930	3481	2694	0011231	0011	14877															
128		OBS	0010	0930	34813	2694			14877															
		STD	0020	0930	3483	2696	0011120	0022	14879															
		STD	0030	0929	3484	2697	0011058	0034	14881															
128		OBS	0032	0929	34842	2697			14881															
		STD	0050	0919	3486	2700	0010772	0055	14881															
128		OBS	0050	0919	34863	2700			14881															
		STD	0075	0853	3498	2719	0008977	0080	14861															
128		OBS	0076	0848	34980	2720			14860															
		STD	0100	0693	3485	2733	0007729	0101	14802															
128		OBS	0100	0693	34845	2733			14802															
		STD	0125	0645	3486	2740	0007026	0119	14788															
		STD	0150	0612	3488	2746	0006501	0136	14779															
128		OBS	0150	0612	34879	2746			14779															
		STD	0200	0589	3490	2751	0006135	0168	14778															
128		OBS T0201	0201	0588	34898	2751			14778															
		STD	0250	0558	3491	2756	0005737	0198	14774															
		STD	0300	0531	3491	2759	0005473	0226	14771															
128		OBS	0391	0492	34922	2764			14770															
		STD	0400	0489	3492	2765	0004996	0278	14771															
128		OBS	0486	0464	34930	2768			14775															
		STD	0500	0460	3493	2769	0004715	0326	14775															
128		OBS T0575	0575	0440	34930	2771			14779															
		STD	0600	0433	3493	2772	0004506	0373	14781															
		STD	0700	0409	3492	2773	0004401	0417	14787															
128		OBS	0767	0397	34916	2774			14793															
		STD	0800	0393	3492	2775	0004332	0461	14797															
		STD	0900	0383	3492	2776	0004298	0504	14809															
128		OBS T0959	0959	0377	34919	2777			14817															
		STD	1000	0373	3492	2777	0004253	0547	14822															
		STD	1100	0364	3492	2778	0004232	0589	14835															
		STD	1200	0356	3493	2780	0004145	0631	14848															
		STD	1300	0349	3493	2780	0004140	0672	14862															
		STD	1400	0343	3493	2781	0004145	0714	14876															
128		OBS T1481	1481	0339	34936	2782			14888															

REF ID NO	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	M/R	M/R SIDEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEA-THER CODE	CLOUD CODES	NODC STATION NUMBER		
					10'	1"		MO	DAY	HR		MIN	SEC			CRUISE NO.	STATION NUMBER	DR.	INC				PER	SEA
					WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
COLOR CODE	TRANL (m)	DIR.	SPED OF FORCE	DRY BULB	WET BULB	VS CODE																		
311172	OW	52539N	035209W	184	25	10	18	127	1967	C16	004	2926	16	19	3				20	5	8	0004		
MESSAGE NO NR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-σ <sub>t</sub>	SOUND VELOCITY	PO <sub>2</sub> -P μg - μl/l	TOTAL-P μg - μl/l	NO <sub>3</sub> -N μg - μl/l	NO <sub>3</sub> -N μg - μl/l	SiO <sub>2</sub> -S μg - μl/l	pH	C									
		STD	0000	0946	3478	2689	0011713	0000	14881															
127		OBS	0000	0946	34779	2689			14881															
		STD	0010	0941	3478	2690	0011649	0012	14881															
127		OBS	0011	0940	34779	2690			14881															
		STD	0020	0940	3478	2690	0011652	0023	14882															
		STD	0030	0940	3479	2691	0011599	0035	14884															
127		OBS	0034	0940	34792	2691			14885															
		STD	0050	0934	3482	2694	0011324	0058	14886															
127		OBS	0053	0926	34824	2696			14883															
		STD	0075	0782	3484	2720	0008950	0083	14833															
127		OBS	0080	0758	34842	2723			14824															
		STD	0100	0703	3486	2732	0007751	0104	14806															
127		OBS	0109	0683	34874	2736			14800															
		STD	0125	0661	3488	2740	0007085	0123	14794															
		STD	0150	0638	3490	2745	0006676	0140	14789															
127		OBS	0162	0633	34925	2747			14790															
		STD	0200	0650	3504	2754	0005866	0171	14804															
127		OBS T0216	0216	0653	35081	2757			14809															
		STD	0250	0620	3507	2760	0005341	0199	14801															
		STD	0300	0579	3505	2764	0005038	0225	14792															
		STD	0400	0516	3501	2768	0004679	0274	14783															
127		OBS T0419	0419	0507	35001	2769			14782															
		STD	0500	0485	3500	2771	0004492	0320	14786															
127		OBS	0524	0477	34998	2772			14787															
		STD	0600	0443	3494	2771	0004549	0365	14785															
127		OBS T0629	0629	0432	34926	2771			14785															
		STD	0700	0413	3491	2772	0004522	0410	14789															
		STD	0800	0392	3490	2774	0004446	0455	14796															
127		OBS	0839	0385	34896	2774			14800															
		STD	0900	0379	3490	2775	0004407	0499	14807															
		STD	1000	0371	3490	2776	0004392	0543	14821															
127		OBS T1047	1047	0367	34899	2776			14827															
		STD	1100	0363	3490	2777	0004367	0587	14834															
		STD	1200	0356	3491	2778	0004292	0630	14848															
		STD	1300	0350	3492	2780	0004226	0673	14862															
		STD	1400	0345	3493	2781	0004170	0715	14877															
		STD	1500	0341	3494	2782	0004125	0756	14893															
127		OBS T1622	1622	0337	34964	2784			14912															

TABLE VI.—Continued

REFERENCE CTD NO.	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	W. B. S. S.	WADSWORTH SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES TYPE (AMT)	NODC STATION NUMBER
						10'	3"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA			
311172	OW		52430N	035320W		184	25	10	20	184	1967	C16	005	3841	35	31	31			6	8	0005
						WATER COLOR CODE		WIND DIR.		SPEED OR FORCE		BARO- METER (MM)		AIR TEMP. °C DRY WET		VIL CODE		NO. OBS. DEPTH		SPECIAL OBSERVATIONS		
						00		500		220		083 072		7 18								
MESSING TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-σ <sub>t</sub>		Σ Δ D DYN. M. x 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> (M/L)	PO <sub>4</sub> -P μg - ml/l	TOTAL-P μg - ml/l	NO <sub>2</sub> -N μg - ml/l	NO <sub>3</sub> -N μg - ml/l	SiO <sub>4</sub> -Si μg - ml/l	pH	S CT				
		STD	0000	0968	3468	2678	0012764		0000	14888												
		OBS	0000	0968	34684	2678				14888												
		STD	0010	0933	3471	2686	0012026		0012	14877												
		OBS	0010	0933	34712	2686				14877												
		STD	0020	0933	3475	2689	0011757		0024	14879												
		STD	0030	0932	3477	2691	0011623		0036	14881												
		OBS	0031	0932	34777	2691				14881												
		STD	0050	0927	3480	2694	0011363		0059	14883												
		OBS	0052	0921	34804	2695				14881												
		STD	0075	0774	3486	2722	0008673		0084	14830												
		OBS	0078	0760	34870	2725				14825												
		STD	0100	0694	3485	2733	0007683		0104	14803												
		OBS	0103	0687	34851	2734				14800												
		STD	0125	0660	3486	2739	0007206		0123	14793												
		STD	0150	0627	3488	2744	0006721		0140	14785												
		OBS	0155	0620	34877	2745				14783												
		STD	0200	0551	3486	2753	0005929		0172	14762												
		OBS	T0208	0541	34862	2754				14759												
		STD	0250	0516	3488	2758	0005456		0201	14756												
		STD	0300	0489	3489	2762	0005126		0227	14754												
		STD	0400	0451	3491	2768	0004652		0276	14755												
		OBS	T0408	0449	34912	2768				14755												
		STD	0500	0432	3492	2771	0004466		0321	14763												
		OBS	0507	0431	34923	2771				14764												
		STD	0600	0422	3493	2773	0004393		0366	14776												
		OBS	T0612	0421	34929	2773				14777												
		STD	0700	0411	3493	2774	0004380		0410	14788												
		STD	0800	0399	3492	2775	0004365		0453	14799												
		OBS	0812	0397																		
		STD	0900	0383	3492	2776	0004298		0497	14809												
		STD	1000	0370	3491	2777	0004262		0539	14820												
		OBS	T1020	0368	34913	2777				14823												
		STD	1100	0367	3492	2778	0004268		0582	14836												
		STD	1200	0365	3493	2779	0004254		0625	14852												
		STD	1300	0362	3493	2779	0004301		0668	14868												
		STD	1400	0357	3494	2780	0004247		0710	14882												
		STD	1500	0351	3494	2781	0004251		0753	14897												
		OBS	T1523	0350	34943	2781				14900												
		STD	1750	0329	3495	2784	0004086		0857	14930												
		OBS	T1874	0320	34956	2785				14947												
		STD	2000	0313	3496	2786	0004003		0958	14966												
		OBS	T2355	0300	34960	2787				15021												
		STD	2500	0298	3497	2788	0004033		1159	15045												
		OBS	2825	0295	34977	2789				15100												
		STD	3000	0294	3498	2789	0004236		1366	15130												
		OBS	T3457	0293	34976	2789				15209												

















TABLE VIII.—Continued

REFERENCE CRUISE ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER	
					10'	1'	MO		DAY	HR:1/10			CRUISE NO.	STATION NUMBER	DR.				HGT
311201	EM	52565N	035380W	184	25	01	20	125	1968	C18	007	2686	06	23	2	X1	6	5	0007
				WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS					
				COLOR	TRANL	DIR.	SPED OR FORCE	DRY BULB	WET BULB	VIS CODE									
				22	523	186	078	061	7	11									
MESSING TIME HR 1/10	CAS- T NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20P	Σ Δ D DTN. M. ± 10'	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	Si O <sub>4</sub> -Si pg - ml/l	pH	S C C		
		STD	0000	0708															
125		OBS	0000	0708															
		STD	0010	0708															
125		OBS	0010	0708															
		STD	0020	0708															
		STD	0030	0708															
125		OBS	0031	0708															
125		OBS	0047	0706															
		STD	0050	0707															
125		OBS	0071	0711															
		STD	0075	0711															
125		OBS	0097	0710															
		STD	0100	0710															
		STD	0125	0710															
		STD	0150	0710															
125		OBS	0157	0710															
125		OBS	T0187	0650															
		STD	0200	0641															
		STD	0250	0608															
		STD	0300	0577															
125		OBS	T0387	0528															
		STD	0400	0520															
125		OBS	0476	0485															
		STD	0500	0479															
125		OBS	T0570	0472															

REFERENCE CRUISE ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER	
					10'	1'	MO		DAY	HR:1/10			CRUISE NO.	STATION NUMBER	DR.				HGT
311201	EN	5257 N	03522 W	184	25	01	21	165	1968	C18	008	2368	14	21	2	X3	3	7	0008
				WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS					
				COLOR	TRANL	DIR.	SPED OR FORCE	DRY BULB	WET BULB	VIS CODE									
				19	520	230	100	089	6	11									
MESSING TIME HR 1/10	CAS- T NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20P	Σ Δ D DTN. M. ± 10'	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	Si O <sub>4</sub> -Si pg - ml/l	pH	S C C		
		STD	0000	0699	3477	2726	0008221	0000	14787										
		OBS	0000	0699	34768	2726			14787										
		STD	0010	0699	3477	2726	0008237	0008	14789										
165		OBS	0011	0699	34768	2726			14789										
		STD	0020	0699	3477	2726	0008263	0016	14790										
		STD	0030	0698	3476	2726	0008287	0025	14792										
		STD	0030	0698	3476	2726			14792										
165		OBS	0031	0698	34764	2726			14794										
165		OBS	0047	0697	34768	2726			14794										
		STD	0050	0698	3477	2726	0008273	0041	14795										
165		OBS	0070	0704	34778	2726			14801										
		STD	0075	0703	3478	2726	0008311	0062	14801										
		STD	0095	0701	34796	2728			14804										
		STD	0100	0695	3480	2729	0008090	0083	14802										
		STD	0125	0667	3483	2735	0007536	0102	14796										
165		OBS	0141	0653	34854	2739			14793										
		STD	0150	0648	3487	2741	0007028	0120	14793										
		STD	T0192	0623	34929	2749			14791										
165		OBS	0200	0618	3493	2750	0006269	0154	14790										
		STD	0250	0585	3493	2754	0005922	0184	14785										
		STD	0300	0554	3494	2758	0005530	0213	14781										
		STD	0400	0500	3494	2765	0005000	0265	14775										
165		OBS	0463	0471	34944	2769			14774										
		STD	0500	0461	3494	2770	0004631	0313	14776										
		STD	0600	0435	3494	2772	0004455	0359	14781										
		STD	0700	0413	3494	2774	0004321	0403	14789										
		STD	0800	0393	3493	2776	0004206	0445	14797										
		STD	0900	0377	3493	2778	0004132	0487	14807										
165		OBS	T0926	0373	34930	2778			14810										
		STD	1000	0363	3493	2779	0004054	0528	14818										
		STD	1100	0353	3493	2780	0004004	0568	14830										
		STD	1200	0345	3493	2781	0003982	0608	14844										
		STD	1300	0340	3494	2782	0003986	0648	14858										
		STD	1400	0339	3494	2782	0004044	0688	14875										
165		OBS	T1444	0339	34938	2782			14882										











TABLE VIII.—Continued

REFERENCE CROSS NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	E W	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	OBSERVATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		WODC STATION NUMBER
					10"	1"	MO	DAY	HR		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	1/10	
311201	EN	52437N	035125W		184	25	01	31	119	1968	C18	017	3658	09	27	3	3	X1	3	4	0017
					WATER		WIND		BARO- METER			AIR TEMP. °C		NO. OBS. DEPTH		SPECIAL OBSERVATIONS					
					COLOR CODE	TRANS. M	DIR.	SPEED OR FORCE	BARO- METER (mm)	DRY BULB	WET BULB	VEL CODE									
								27	519	274	050	039	7	10							
MESSAGE TIME 1/10	CAST NO.	CARD TYPE	DEPTH m	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ <sub>t</sub>	Σ Δ D DYN. M. Σ 10 <sup>3</sup>	SOUND VELOCITY	D <sub>2</sub> m/s	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>4</sub> -Si pg - ml/l	pH	σ <sub>t</sub> C				
		STD	0000	0665	3476	2730	0007868	0000	14774												
119		OBS	0000	0665	34756	2730			14774												
119		OBS	0009	0662	34756	2730			14774												
		STD	0010	0662	3476	2730	0007846	0008	14774												
		STD	0020	0663	3475	2730	0007896	0016	14776												
		STD	0030	0664	3475	2729	0007946	0024	14778												
119		OBS	0030	0664	34750	2729			14778												
119		OBS	0045	0664	34756	2730			14781												
		STD	0050	0665	3476	2730	0007915	0040	14782												
119		OBS	0072	0668	34761	2730			14787												
		STD	0075	0669	3476	2730	0007983	0059	14788												
119		OBS	0093	0671	34777	2730			14791												
		STD	0100	0671	3479	2731	0007852	0079	14793												
		STD	0125	0673	3484	2735	0007535	0098	14798												
119		OBS	0133	0673	34857	2736			14800												
		STD	0150	0640	3489	2743	0006776	0116	14790												
119		OBS	T0173	0599	34931	2752			14778												
		STD	0200	0586	3493	2754	0005843	0148	14777												
		STD	0250	0562	3494	2757	0005592	0176	14776												
		STD	0300	0540	3494	2760	0005366	0204	14775												
		STD	0400	0500	3495	2765	0004963	0255	14775												
119		OBS	0450	0482	34948	2768			14776												
		STD	0500	0465	3495	2769	0004655	0304	14777												
		STD	0600	0437	3494	2772	0004464	0349	14782												
		STD	0700	0414	3494	2774	0004325	0393	14789												
		STD	0800	0396	3494	2776	0004233	0436	14798												
119		OBS	T0890	0385	34931	2777			14809												





TABLE IX.—Continued

OBSERVATION NUMBER	OBSERVATION CODE	DEPTH IN METERS	TEMPERATURE IN °C	SALINITY	SIGMA-T	SPECIFIC VOLUME ANOMALY - 1/10 <sup>3</sup>	SOUND VELOCITY IN M/S	C <sub>g</sub> IN 1	* AMBIENT LIGHT IN Lux	* MEASURED SOUND VELOCITY IN M/S			
										HO <sub>1</sub> IN M/S	HO <sub>2</sub> IN M/S	HO <sub>3</sub> IN M/S	HO <sub>4</sub> IN M/S
093	STS	0000	0666										
	OBS	0000	0666										
	STS	0010	0661										
	OBS	0010	0661										
	STS	0020	0661										
	OBS	0030	0661										
	STS	0033	0661										
	OBS	0050	0660										
	STS	0052	0660										
	OBS	0075	0660										
	STS	0078	0660										
	OBS	0100	0651										
	STS	0103	0650										
	OBS	0125	0651										
	STS	0150	0654										
	OBS	0154	0654										
	STS	0200	0659										
	OBS	0206	0660										
	STS	0250	0623										
	OBS	0300	0585										
	STS	0400	0525										
	OBS	0412	0519										
	STS	0500	0485										
	OBS	0515	0480										
	STS	0600	0459										
	OBS	T0620	0454										
	STS	0700	0432										
	OBS	0800	0409										
	STS	0832	0403										
	OBS	0900	0392										
	STS	1000	0379										
	OBS	T1056	0372										
	STS	1100	0370										
	OBS	1200	0365										
	STS	1300	0360										
	OBS	1400	0356										
	STS	1500	0351										
	OBS	T1581	0347										

OBSERVATION NUMBER	OBSERVATION CODE	DEPTH IN METERS	TEMPERATURE IN °C	SALINITY	SIGMA-T	SPECIFIC VOLUME ANOMALY - 1/10 <sup>3</sup>	SOUND VELOCITY IN M/S	C <sub>g</sub> IN 1	* AMBIENT LIGHT IN Lux	* MEASURED SOUND VELOCITY IN M/S			
										HO <sub>1</sub> IN M/S	HO <sub>2</sub> IN M/S	HO <sub>3</sub> IN M/S	HO <sub>4</sub> IN M/S
169	STS	0000	0705										
	OBS	0000	0705										
	STS	0009	0698										
	OBS	0009	0698										
	STS	0010	0698										
	OBS	0020	0696										
	STS	0028	0696										
	OBS	0030	0696										
	STS	0046	0697										
	OBS	0050	0689										
	STS	0069	0666										
	OBS	0092	0667										
	STS	0100	0665										
	OBS	0125	0660										
	STS	0137	0659										
	OBS	0150	0658										
	STS	0183	0657										
	OBS	0200	0647										
	STS	0250	0616										
	OBS	0300	0585										
	STS	T0365	0543										
	OBS	0400	0514										
	STS	0456	0492										
	OBS	0500	0475										
	STS	0547	0466										
	OBS	0600	0447										
	STS	0700	0416										
	OBS	0732	0407										
	STS	0800	0392										
	OBS	0900	0373										
	STS	T0918	0370										
	OBS	1000	0367										
	STS	1100	0363										
	OBS	1200	0359										
	STS	1300	0355										
	OBS	T1391	0352										





TABLE X.—Observed and interpolated oceanographic data from stations taken by USCGC HAMILTON, at Ocean Station CHARLIE, 10 April—1 May 1968, prepared from NODC Listing No. 31-8043.

REFERENCE SHIP NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MAGNETIC CORRECTION	WGS 84 COORDINATE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER			
					10'	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	SEA						
318043	HT	5244 N	03533 W		184	25	04	10	119	1968	C20	001	3658	15	19		3	X6	0	3	0001		
		WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTH		SPECIAL OBSERVATIONS											
		COLOR CODE		TRANL (m)		DIR.		SPEED OR FORCE		DRY BULB		WET BULB		VOL. CODE									
		DT		SD		15		S30		909		072		072		6		23					
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-1000	Σ Δ D DIN. M. x 10 <sup>2</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg - ml/l	TOTAL-P µg - ml/l	NO <sub>3</sub> -N µg - ml/l	NO <sub>2</sub> -N µg - ml/l	SiO <sub>4</sub> -S µg - ml/l	pH	S CC						
	119	STD	0000	0649	3482	2736	0007224	0000	14768														
		OBS	0000	0649	34815	2736			14768														
		STD	0010	0649	3482	2736	0007239	0007	14770														
		OBS	0010	0649	34815	2736			14770														
		STD	0020	0647	3481	2737	0007236	0014	14770														
	007	OBS	0020	0647	34814	2737			14770														
		STD	0030	0647	3481	2737	0007251	0022	14772														
		OBS	0030	0647	34814	2737			14772														
		STD	0050	0647	3482	2737	0007259	0036	14775														
		OBS	0050	0647	34817	2737			14775														
		STD	0075	0642	3483	2738	0007136	0054	14778														
		OBS	0100	0639	3484	2740	0007038	0072	14781														
		STD	0100	0639	34843	2740			14781														
		OBS	0125	0639	3486	2741	0006956	0089	14785														
		STD	0125	0639	34859	2741			14785														
		OBS	0150	0635	3487	2742	0006868	0107	14788														
		STD	0150	0635	34869	2742			14788														
		OBS	0200	0634	3492	2747	0006535	0140	14796														
		STD	0200	0634	34922	2747			14796														
		OBS	0250	0601	3494	2752	0006050	0172	14792														
		STD	0250	0601	34940	2752			14792														
		OBS	0300	0558	3493	2757	0005646	0201	14782														
		STD	0300	0558	34931	2757			14782														
		OBS	0400	0503	3492	2763	0005170	0255	14776														
		STD	0400	0503	34922	2763			14776														
		OBS	0500	0469	3493	2768	0004814	0305	14779														
		STD	0500	0469	34931	2768			14779														
		OBS	0600	0450	3494	2771	0004639	0352	14788														
		STD	0600	0450	34939	2771			14788														
		OBS	0700	0428	3493	2772	0004527	0398	14795														
		STD	0700	0428	34933	2772			14795														
		OBS	0800	0409	3493	2774	0004401	0443	14804														
		STD	0800	0409	34933	2774			14804														
		OBS	0900	0397	3493	2776	0004360	0486	14815														
		STD	0900	0397	34932	2776			14815														
		OBS	1000	0383	3493	2777	0004284	0530	14826														
		STD	1000	0383	34932	2777			14826														
		OBS	1100	0376	3493	2778	0004288	0573	14840														
		STD	1100	0376	34932	2778			14840														
		OBS	1200	0369	3493	2779	0004281	0615	14854														
		STD	1200	0369	34933	2779			14854														
		OBS	1300	0362	3493	2779	0004278	0658	14868														
		STD	1300	0362	34933	2779			14868														
		OBS	1400	0360	3494	2780	0004277	0701	14884														
		STD	1400	0360	34941	2780			14884														
		OBS	1500	0357	3495	2781	0004255	0744	14899														
		STD	1500	0357	34950	2781			14899														

TABLE X.—Continued

REFERENCE CITE NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MILES EAST OR WEST	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLING	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER		
					16°	'	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DR.	HG	PER				SEA	
318043	HT	5245 N	03530 W		184	25	04 10 156	1968	C20	002	3585	15	18			3	X2	0 3	0002	
				WATER		WIND		AIR TEMP °C		NO. OF DEPTHS		SPECIAL OBSERVATIONS								
				COLOR	TRANSP.	DIR.	SPEED OF WIND	BARO- METER (mmHg)	DRY BULB	WET BULB	VIS CODE									
				DT	SD	18	526	905	088	078	6	30								
MESSAGE TIME HR. 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-310°	S.D. D.W. SA. x 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg - dl/l	TOTAL-P µg - dl/l	NO <sub>2</sub> -N µg - dl/l	NO <sub>3</sub> -N µg - dl/l	SiO <sub>4</sub> -Si µg - dl/l	pH	SEC			
		STD	0000	0759	3473	2714	0009337	0000	14810											
	156	OBS	0000	0759	34727	2714			14810											
		STD	0010	0759	3473	2714	0009369	0009	14812											
		OBS	0010	0759	34725	2714			14812											
		STD	0020	0759	3473	2714	0009386	0019	14813											
	008	OBS	0020	0759	34725	2714			14813											
		STD	0030	0759	3473	2714	0009403	0028	14815											
		OBS	0030	0759	34725	2714			14815											
		STD	0050	0701	3473	2723	0008596	0046	14796											
		OBS	0050	0701	34732	2723			14796											
		OBS	0060	0628	34752	2734			14769											
		STD	0075	0624	3479	2738	0007192	0066	14770											
		OBS	0075	0624	34792	2738			14770											
		STD	0100	0608	3481	2741	0006879	0083	14768											
		OBS	0100	0608	34812	2741			14768											
		STD	0125	0618	3483	2742	0006891	0101	14776											
		OBS	0125	0618	34832	2742			14776											
		STD	0150	0623	3485	2743	0006841	0118	14783											
		OBS	0150	0623	34852	2743			14783											
		OBS	0160	0623	34852	2743			14784											
		STD	0200	0618	3495	2751	0006105	0150	14790											
		OBS	0200	0618	34952	2751			14790											
		OBS	0220	0618	34952	2751			14794											
		STD	0250	0577	3495	2757	0005659	0180	14782											
		OBS	0250	0577	34952	2757			14782											
		OBS	0275	0563	34946	2758			14780											
		OBS	0285	0533	34912	2759			14769											
		OBS	0295	0533	34912	2759			14771											
		STD	0300	0542	3493	2759	0005480	0207	14776											
		OBS	0300	0542	34927	2759			14776											
		STD	0400	0504	3491	2762	0005249	0261	14777											
		OBS	0406	0502	34912	2762			14777											
		STD	0500	0476	3491	2765	0005038	0313	14782											
		OBS	0500	0476	34912	2765			14782											
		STD	0600	0445	3493	2770	0004669	0361	14785											
		OBS	0600	0445	34927	2770			14785											
		STD	0700	0426	3492	2772	0004585	0407	14794											
		OBS	0700	0426	34922	2772			14794											
		STD	0800	0412	3491	2773	0004592	0453	14805											
		OBS	0800	0412	34912	2773			14805											
		STD	0900	0394	3489	2773	0004635	0499	14814											
		OBS	0900	0394	34890	2773			14814											
		STD	1000	0381	3489	2774	0004592	0545	14825											
		OBS	1000	0381	34887	2774			14825											
		STD	1100	0374	3489	2774	0004595	0591	14839											
		OBS	1100	0374	34887	2774			14839											
		STD	1200	0370	3490	2776	0004521	0637	14854											
		OBS	1200	0370	34902	2776			14854											
		STD	1300	0365	3492	2778	0004397	0682	14869											
		OBS	1300	0365	34922	2778			14869											
		STD	1400	0361	3493	2779	0004356	0725	14884											
		OBS	1400	0361	34932	2779			14884											
		STD	1500	0355	3493	2780	0004376	0769	14898											
		OBS	1500	0355	34930	2780			14898											





TABLE X.—Continued

REFERENCE CIR CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL.	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES TPT AMT	NODC STATION NUMBER			
						MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA						
318043	HT		5246 N	03515 W	184	25	04	11	174	1968	C20	005	3182	15	26			5	X1	0	3		0005
					WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTH		SPECIAL OBSERVATIONS								
					COLOR CODE	TEMP. °C	DIR.	SPEED OR FORCE	METER UNITS	DRY BULB	WET BULB	WIL CODE											
					DT	SD	26	520	983	066	056	7	25										
MISSING TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ <sub>T</sub>	Σ Δ D DYN. M. × 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg - ml/l	TOTAL-P μg - ml/l	NO <sub>2</sub> -N μg - ml/l	NO <sub>3</sub> -N μg - ml/l	SiO <sub>4</sub> -S μg - ml/l	pH	1 C C						
	174	STD	0000	0646	3482	2737	0007156	0000	14767														
		OBS	0000	0646	34819	2737			14767														
		STD	0010	0646	3482	2737	0007171	0007	14768														
		OBS	0010	0646	34819	2737			14768														
	004	STD	0020	0646	3482	2737	0007186	0014	14770														
		OBS	0020	0646	34819	2737			14770														
		STD	0030	0646	3482	2737	0007201	0022	14772														
		OBS	0030	0646	34819	2737			14772														
		STD	0050	0645	3482	2737	0007219	0036	14775														
		OBS	0050	0645	34819	2737			14775														
		STD	0075	0644	3481	2737	0007296	0054	14778														
		OBS	0075	0644	34812	2737			14778														
		STD	0100	0637	3484	2740	0007035	0072	14780														
		OBS	0100	0637	34840	2740			14780														
		STD	0125	0632	3488	2744	0006695	0089	14783														
		OBS	0125	0632	34882	2744			14783														
		STD	0150	0628	3491	2747	0006473	0106	14786														
		OBS	0150	0628	34910	2747			14786														
		STD	0200	0614	3493	2750	0006233	0137	14788														
		OBS	0200	0614	34928	2750			14788														
		STD	0250	0599	3496	2754	0005868	0168	14791														
		OBS	0250	0599	34961	2754			14791														
		STD	0300	0569	3495	2758	0005612	0196	14787														
		OBS	0300	0569	34954	2758			14787														
		STD	0350	0530	34933	2761			14779														
		OBS	0350	0530	34933	2761			14779														
		STD	0400	0503	3492	2763	0005170	0250	14776														
		OBS	0400	0503	34922	2763			14776														
		STD	0500	0463	3494	2769	0004714	0300	14776														
		OBS	0500	0463	34935	2769			14776														
		STD	0600	0441	3494	2772	0004533	0346	14784														
		OBS	0600	0441	34939	2772			14784														
		STD	0700	0420	3494	2774	0004403	0391	14792														
		OBS	0700	0420	34937	2774			14792														
		STD	0800	0400	3493	2775	0004325	0434	14800														
		OBS	0800	0400	34929	2775			14800														
		STD	0900	0385	3492	2776	0004299	0477	14810														
		OBS	0900	0385	34921	2776			14810														
		STD	1000	0374	3492	2777	0004258	0520	14827														
		OBS	1000	0374	34921	2777			14827														
		STD	1100	0367	3492	2778	0004253	0563	14834														
		OBS	1100	0367	34922	2778			14834														
		STD	1200	0362	3492	2779	0004262	0605	14851														
		OBS	1200	0362	34924	2779			14851														
		STD	1300	0358	3493	2780	0004251	0648	14866														
		OBS	1300	0358	34930	2780			14866														
		STD	1400	0355	3494	2781	0004222	0690	14882														
		OBS	1400	0355	34940	2781			14882														
		STD	1500	0350	3495	2782	0004158	0732	14896														
		OBS	1500	0350	34951	2782			14896														

TABLE X.—Continued

REFERENCE CRUISE NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	STATION NO.	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLING	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODIS	NODC STATION NUMBER
					10"	1'	MO DAT HR.1/10		CRUISE NO.	STATION NUMBER			DR	HG	PER			
318043	HT	5248 N	03536 W	184	25	04 11 233	1968	C20	006	3566	15	29		2	X1	03	0006	
				WATER		WIND		BARO- METER		AIR TEMP. °C		VIS		NO. OBS. DEPTH		SPECIAL OBSERVATIONS		
				COLOR	TRANSP.	DIR.	SPEED	OR	FORCE	DRY	WET	DRY	WET	DRY	WET			
				DT	SD	32	510	328	044	033	7	26						
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	SOUND VELOCITY	σ <sub>t</sub> (kg/m <sup>3</sup> )	PO <sub>4</sub> -P μg - ml/l	TOTAL-P μg - ml/l	NO <sub>3</sub> -N μg - ml/l	NO <sub>2</sub> -N μg - ml/l	SiO <sub>4</sub> -S μg - ml/l	pH	σ <sub>t</sub> C		
233		STD	0000	0647	3484	2739	0007019	0000	14768									
		OBS	0000	0647	34839	2739			14768									
		STD	0010	0647	3484	2739	0007035	0007	14769									
		OBS	0010	0647	34839	2739			14769									
		STD	0020	0647	3484	2739	0007050	0014	14771									
004		OBS	0020	0647	34839	2739			14771									
		STD	0030	0647	3484	2739	0007057	0021	14772									
		OBS	0030	0647	34840	2739			14772									
		STD	0050	0647	3484	2739	0007080	0035	14776									
		OBS	0050	0647	34841	2739			14776									
		STD	0075	0646	3484	2739	0007083	0053	14779									
		OBS	0075	0646	34844	2739			14779									
		STD	0100	0641	3485	2740	0007034	0071	14782									
		OBS	0100	0641	34847	2740			14782									
		STD	0125	0629	3485	2742	0006866	0088	14781									
		OBS	0125	0629	34854	2742			14781									
		STD	0150	0630	3490	2746	0006573	0105	14786									
		OBS	0150	0630	34900	2746			14786									
		STD	0200	0626	3495	2750	0006193	0137	14794									
		OBS	0200	0626	34954	2750			14794									
		OBS	0225	0601	34954	2754			14788									
		STD	0250	0570	3494	2757	0005631	0166	14779									
		OBS	0250	0570	34944	2757			14779									
		STD	0300	0530	3494	2761	0005268	0194	14771									
		OBS	0300	0530	34936	2761			14771									
		STD	0400	0485	3495	2767	0004778	0244	14769									
		OBS	0400	0485	34946	2767			14769									
		STD	0500	0457	3494	2770	0004584	0291	14774									
		OBS	0500	0457	34943	2770			14774									
		STD	0600	0439	3494	2772	0004479	0336	14783									
		OBS	0600	0439	34943	2772			14783									
		STD	0700	0418	3494	2774	0004335	0380	14791									
		OBS	0700	0418	34943	2774			14791									
		STD	0800	0396	3494	2776	0004226	0423	14798									
		OBS	0800	0396	34936	2776			14798									
		STD	0900	0384	3493	2777	0004251	0465	14810									
		OBS	0900	0384	34926	2777			14810									
		STD	1000	0368	3492	2778	0004165	0507	14820									
		OBS	1000	0368	34924	2778			14820									
		STD	1100	0365	3494	2779	0004118	0549	14835									
		OBS	1100	0365	34937	2779			14835									
		STD	1200	0360	3494	2780	0004134	0590	14850									
		OBS	1200	0360	34938	2780			14850									
		STD	1300	0357	3494	2781	0004151	0631	14866									
		OBS	1300	0357	34942	2781			14866									
		STD	1400	0354	3495	2781	0004158	0673	14881									
		OBS	1400	0354	34947	2781			14881									
		OBS	1450	0351	34948	2782			14888									
		STD	1500	0349	3495	2782	0004153	0714	14896									
		OBS	1500	0349	34950	2782			14896									

TABLE X.—Continued

REFERENCE CIR CODE	SHIP CODE	LATITUDE 1/18	LONGITUDE 1/18	MARSDEN SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES	MODC STATION NUMBER		
					MO	DAY		HR	1/10			CRUISE NO.	STATION NUMBER	DR	HC				RE	SEA
318043	HT	5240 N	03521 W	184	25	04	13	052	1968	C20	007	3658	15	24	3	4	X1	0	3	0007
		WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
		COLOR CODE	TRABL M	DIR	SPEED OR FORCE	METER	DRY BULB	WET BULB	WET CODE											
		DT	SD	00	S00	169	050	033	7	34										
MESSING TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	PRESSURE AND SALINITY	σ <sub>t</sub>	Δ D DTN. M. 3 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>2</sub> -N pg - ml/l	SiO <sub>4</sub> -S pg - ml/l	pH	CHLOROPHYLL		
		STD	0000	0707	3472	2721	0008662	0000		14790										
052		OBS	0000	0707	34723	2721				14790										
		STD	0010	0707	3472	2721	0008678	0009		14791										
		OBS	0010	0707	34723	2721				14791										
		STD	0020	0704	3472	2722	0008655	0017		14792										
001		OBS	0020	0704	34723	2722				14792										
		STD	0030	0677	3472	2725	0008316	0026		14783										
		OBS	0030	0677	34723	2725				14783										
		OBS	0040	0642	34746	2732				14771										
		STD	0050	0636	3476	2734	0007545	0042		14770										
		OBS	0050	0636	34760	2734				14770										
		STD	0075	0621	3476	2736	0007408	0060		14768										
		OBS	0075	0621	34758	2736				14768										
		OBS	0090	0599	34759	2738				14762										
		STD	0100	0593	3477	2740	0007022	0078		14761										
		OBS	0100	0593	34768	2740				14761										
		OBS	0110	0596	34777	2740				14764										
		OBS	0120	0607	34795	2740				14771										
		STD	0125	0609	3482	2742	0006882	0096		14773										
		OBS	0125	0609	34818	2742				14773										
		STD	0150	0611	3482	2742	0006928	0113		14778										
		OBS	0150	0611	34820	2742				14778										
		OBS	0190	0604	34846	2745				14782										
		STD	0200	0610	3486	2745	0006703	0147		14786										
		OBS	0200	0610	34858	2745				14786										
		OBS	0225	0620	34948	2751				14795										
		OBS	0240	0603	34938	2752				14791										
		STD	0250	0578	3491	2753	0005984	0179		14782										
		OBS	0250	0578	34910	2753				14782										
		STD	0300	0505	3490	2761	0005253	0207		14760										
		OBS	0300	0505	34898	2761				14760										
		OBS	0315	0500	34898	2762				14761										
		OBS	0330	0509	34918	2762				14767										
		STD	0400	0488	3494	2766	0004888	0258		14770										
		OBS	0400	0488	34936	2766				14770										
		OBS	0440	0485	34947	2767				14776										
		STD	0500	0459	3495	2770	0004577	0305		14775										
		OBS	0500	0459	34947	2770				14775										
		STD	0600	0433	3494	2772	0004447	0350		14781										
		OBS	0600	0433	34938	2772				14781										
		STD	0700	0425	3494	2773	0004454	0395		14794										
		OBS	0700	0425	34938	2773				14794										
		STD	0800	0394	3493	2776	0004277	0438		14797										
		OBS	0800	0394	34926	2776				14797										
		STD	0900	0379	3492	2777	0004244	0481		14808										
		OBS	0900	0379	34919	2777				14808										
		STD	1000	0369	3492	2778	0004213	0523		14820										
		OBS	1000	0369	34919	2778				14820										
		STD	1100	0360	3492	2778	0004191	0565		14833										
		OBS	1100	0360	34919	2778				14833										
		STD	1200	0355	3493	2780	0004140	0607		14848										
		OBS	1200	0355	34929	2780				14848										
		STD	1300	0350	3494	2781	0004101	0648		14863										
		OBS	1300	0350	34937	2781				14863										
		STD	1400	0345	3494	2782	0004104	0689		14877										
		OBS	1400	0345	34939	2782				14877										
		STD	1500	0343	3495	2783	0004069	0730		14894										
		OBS	1500	0343	34951	2783				14894										



TABLE X.—Continued

REFERENCE CRUISE CODE	SHIP ID. NO. CODE	LATITUDE 1/16	LONGITUDE 1/16	STATION SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MALL DEPTH OF SAMPLER	WAVE OBSERVATIONS			WEA- -THEE CODE	CLOUD CODES	WDC STATION NUMBER
				18°	'	"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DR	HGT	PER			
318043	HT	5242 N	03526 W	184	25	04	13	115	1968	C20	008	3566	15	29	3	3	X1	0 3	0008	
				WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
				COLOR CODE	TRANL M	DR	SPED OR FORCE	DIR	METER	DRY BULB	WET BULB	VS CODE								
				DT	SD	00	S00	152	072	044	7	31								
REFERENCE TIME HR. 1/16	CASE NO.	CARD TYPE	DEPTH M	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- ST	S.D. DTN. M. ± 1σ	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>2</sub> -N pg - ml/l	SiO <sub>4</sub> -Si pg - ml/l	PH	SIC			
		STD	0000	0724	3474	2720	0008800	0000	14796											
115		OBS	0000	0724	34735	2720			14796											
		STD	0010	0724	3474	2720	0008817	0009	14798											
		OBS	0010	0724	34735	2720			14798											
		STD	0020	0725	3474	2720	0008847	0018	14800											
005		OBS	0020	0725	34735	2720			14800											
		STD	0030	0725	3474	2720	0008863	0026	14802											
		OBS	0030	0725	34735	2720			14802											
		OBS	0045	0722	34722	2719			14803											
		STD	0050	0696	3473	2723	0008537	0044	14794											
		OBS	0050	0696	34731	2723			14794											
		OBS	0060	0625	34743	2734			14767											
		STD	0075	0593	3478	2741	0006927	0063	14757											
		OBS	0075	0593	34776	2741			14757											
		STD	0100	0603	3483	2743	0006697	0080	14766											
		OBS	0100	0603	34828	2743			14766											
		STD	0125	0619	3483	2742	0006896	0097	14777											
		OBS	0125	0619	34833	2742			14777											
		STD	0150	0617	3483	2742	0006906	0114	14780											
		OBS	0150	0617	34833	2742			14780											
		STD	0200	0617	3489	2747	0006547	0148	14789											
		OBS	0200	0617	34891	2747			14789											
		OBS	0225	0618	34932	2750			14794											
		OBS	0230	0602	34934	2752			14789											
		STD	0250	0592	3492	2752	0006085	0180	14788											
		OBS	0250	0592	34920	2752			14788											
		OBS	0275	0541	34892	2756			14771											
		STD	0300	0519	3490	2759	0005434	0209	14766											
		OBS	0300	0519	34896	2759			14766											
		OBS	0310	0509	34912	2762			14764											
		OBS	0315	0517	34962	2765			14769											
		STD	0400	0490	3494	2766	0004874	0260	14771											
		OBS	0400	0490	34941	2766			14771											
		STD	0500	0461	3495	2770	0004564	0307	14776											
		OBS	0500	0461	34952	2770			14776											
		STD	0600	0431	3494	2773	0004379	0352	14780											
		OBS	0600	0431	34944	2773			14780											
		STD	0700	0408	3494	2775	0004219	0395	14787											
		OBS	0700	0408	34943	2775			14787											
		STD	0800	0392	3493	2776	0004194	0437	14797											
		OBS	0800	0392	34934	2776			14797											
		STD	0900	0378	3493	2778	0004136	0479	14807											
		OBS	0900	0378	34932	2778			14807											
		STD	1000	0369	3493	2779	0004117	0520	14820											
		OBS	1000	0369	34932	2779			14820											
		STD	1100	0361	3493	2779	0004100	0561	14834											
		OBS	1100	0361	34933	2779			14834											
		STD	1200	0358	3494	2781	0004066	0602	14849											
		OBS	1200	0358	34944	2781			14849											
		STD	1300	0353	3495	2781	0004072	0643	14864											
		OBS	1300	0353	34946	2781			14864											
		STD	1400	0349	3495	2782	0004058	0683	14879											
		OBS	1400	0349	34952	2782			14879											
		STD	1500	0345	3495	2782	0004124	0724	14894											
		OBS	1500	0345	34947	2782			14894											

TABLE X.—Continued

REFERENCE		SHIP CODE	LATITUDE 1° 10'	LONGITUDE 1° 10'	L 10'	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLING				WAVE OBSERVATIONS				WEA- TYPE CODE	CLOUD CODES (TYP. HGT)	NODC STATION NUMBER
SYN CODE	ID. NO.						MO	DAY	HR		MIN	CRUISE NO.		STATION NUMBER	DR	HGT	PER	PER	PER	PER	PER			
318043		HT	5247 N	03538 W		184	25	04	13	178	1968	C20	009	3526	15	35	2	12			X1	03	0009	
		WATER		WIND		BARO- METER (INCH)		AIR TEMP °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS										
		COLOR CODE	TRANS. NO.	DIR.	SPED. OF FORCE			DRY BULB	WET BULB															
		DT	SD	36	S09	152		072	050	7	28													
MESSAGE TIME HR 1/10	CAST NO	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME (ANOMALY-20°)	Σ Δ D DTM, M. S. 10'	SOUND VELOCITY	O <sub>2</sub> M/L	PO <sub>4</sub> -P μg - μl/l	TOTAL-P μg - μl/l	NO <sub>3</sub> -N μg - μl/l	NO <sub>2</sub> -N μg - μl/l	SiO <sub>4</sub> -Si μg - μl/l	pH	S C							
	178	STD	0000	0662	3482	2735	0007337	0000	14773															
		OBS	0000	0662	34822	2735			14773															
		STD	0010	0648	3483	2738	0007114	0007	14769															
		OBS	0010	0648	34830	2738			14769															
		STD	0020	0646	3483	2738	0007104	0014	14770															
	004	OBS	0020	0646	34830	2738			14770															
		STD	0030	0644	3483	2738	0007094	0021	14771															
		OBS	0030	0644	34830	2738			14771															
		STD	0050	0644	3483	2738	0007124	0036	14774															
		OBS	0050	0644	34830	2738			14774															
		STD	0075	0644	3483	2738	0007162	0054	14779															
		OBS	0075	0644	34830	2738			14779															
		STD	0100	0643	3483	2738	0007186	0071	14782															
		OBS	0100	0643	34830	2738			14782															
		OBS	0120	0633	34850	2741			14782															
		STD	0125	0633	3485	2741	0006947	0089	14783															
		OBS	0125	0633	34850	2741			14783															
		STD	0150	0641	3489	2743	0006789	0106	14790															
		OBS	0150	0641	34890	2743			14790															
		STD	0200	0641	3494	2747	0006477	0139	14799															
		OBS	0200	0641	34942	2747			14799															
		OBS	0230	0605	34970	2754			14790															
		STD	0250	0589	3496	2756	0005749	0170	14787															
		OBS	0250	0589	34960	2756			14787															
		OBS	0275	0568	34944	2757			14782															
		STD	0300	0542	3493	2759	0005473	0198	14776															
		OBS	0300	0542	34928	2759			14776															
		OBS	0350	0529	34930	2761			14779															
		STD	0400	0494	3493	2765	0005003	0250	14773															
		OBS	0400	0494	34930	2765			14773															
		STD	0500	0469	3494	2769	0004725	0299	14779															
		OBS	0500	0469	34943	2769			14779															
		STD	0600	0443	3495	2772	0004474	0345	14785															
		OBS	0600	0443	34950	2772			14785															
		STD	0700	0428	3495	2774	0004401	0389	14795															
		OBS	0700	0428	34950	2774			14795															
		STD	0800	0400	3495	2776	0004206	0432	14800															
		OBS	0800	0400	34945	2776			14800															
		STD	0900	0382	3493	2777	0004198	0475	14809															
		OBS	0900	0382	34930	2777			14809															
		STD	1000	0374	3493	2778	0004177	0516	14822															
		OBS	1000	0374	34932	2778			14822															
		STD	1100	0363	3493	2779	0004131	0558	14835															
		OBS	1100	0363	34932	2779			14835															
		STD	1200	0359	3494	2780	0004107	0599	14850															
		OBS	1200	0359	34940	2780			14850															
		STD	1300	0357	3495	2781	0004106	0640	14866															
		OBS	1300	0357	34948	2781			14866															
		STD	1400	0352	3495	2782	0004096	0681	14880															
		OBS	1400	0352	34952	2782			14880															
		STD	1500	0347	3496	2783	0004039	0722	14895															
		OBS	1500	0347	34962	2783			14895															

TABLE X.—Continued

REFERENCE CIRCUIT ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	HARDEN SQUARE 10' 1'	STATION TIME (GMT)			YEAR	ORIGINATOR'S STATION NUMBER		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES TYPE (amt)	WDDC STATION NUMBER
					MO	DAY	HR		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER			
318043	HT	5238 N	03532 W	184	25	04	13	235	1968	C20 010	3182	15	34	3	3	X1	0 3	0010
				WATER		WIND		BARO-		AIR TEMP. °C		NO. OBS.		SPECIAL				
				COLOR	TRANS	DR.	DIRS.	METER	DRY	WET	VTL	NO.	DEPTHS	OBSERVATIONS				
				CODE	MI		OR	(MM)	BULB	BULB	CODE							
				DT	SD	35	S08	195	050	038	7	28						
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-30	$\frac{\Delta \sigma}{\sigma}$ DTN. M. $\times 10^3$	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg - ml/l	TOTAL-P µg - ml/l	NO <sub>2</sub> -N µg - ml/l	NO <sub>3</sub> -N µg - ml/l	SiO <sub>4</sub> -Si µg - ml/l	pH	S C	
	235	STD	0000	0733	3473	2718	0008974	0000	14800									
		OBS	0000	0733	34728	2718			14800									
		STD	0010	0733	3473	2718	0008990	0009	14802									
		OBS	0010	0733	34728	2718			14802									
		STD	0020	0658	3474	2729	0007943	0017	14774									
		OBS	0020	0658	34738	2729			14774									
		STD	0030	0652	3479	2734	0007516	0025	14774									
		OBS	0030	0652	34787	2734			14774									
		OBS	0040	0632	34789	2737			14767									
		STD	0050	0630	3479	2737	0007253	0040	14768									
		OBS	0050	0630	34789	2737			14768									
		STD	0075	0630	3479	2737	0007290	0058	14772									
		OBS	0075	0630	34789	2737			14772									
		STD	0100	0602	3479	2741	0006938	0076	14765									
		OBS	0100	0602	34794	2741			14765									
		STD	0125	0606	3481	2741	0006941	0093	14771									
		OBS	0125	0606	34805	2741			14771									
		STD	0150	0612	3483	2742	0006896	0111	14778									
		OBS	0150	0612	34826	2742			14778									
		OBS	0170	0612	34826	2742			14781									
		STD	0200	0612	3487	2746	0006610	0144	14787									
		OBS	0200	0612	34874	2746			14787									
		OBS	0230	0611	34925	2750			14792									
		STD	0250	0580	3488	2751	0006210	0176	14782									
		OBS	0250	0580	34883	2751			14782									
		OBS	0270	0594	34914	2751			14792									
		STD	0300	0598	3493	2752	0006193	0207	14798									
		OBS	0300	0598	34925	2752			14798									
		STD	0400	0534	3494	2761	0005390	0265	14789									
		OBS	0400	0534	34943	2761			14789									
		STD	0500	0456	3495	2771	0004512	0315	14774									
		OBS	0500	0456	34951	2771			14774									
		STD	0600	0439	3495	2773	0004405	0359	14783									
		OBS	0600	0439	34953	2773			14783									
		STD	0700	0413	3495	2776	0004210	0402	14789									
		OBS	0700	0413	34952	2776			14789									
		STD	0800	0400	3494	2776	0004213	0445	14800									
		OBS	0800	0400	34944	2776			14800									
		STD	0900	0387	3494	2777	0004212	0487	14811									
		OBS	0900	0387	34936	2777			14811									
		STD	1000	0378	3494	2778	0004195	0529	14824									
		OBS	1000	0378	34936	2778			14824									
		STD	1100	0367	3494	2779	0004150	0570	14836									
		OBS	1100	0367	34936	2779			14836									
		STD	1200	0361	3494	2780	0004154	0612	14850									
		OBS	1200	0361	34937	2780			14850									
		STD	1300	0358	3494	2781	0004156	0654	14866									
		OBS	1300	0358	34943	2781			14866									
		STD	1400	0355	3495	2782	0004134	0695	14882									
		OBS	1400	0355	34952	2782			14882									
		STD	1500	0350	3495	2782	0004165	0736	14896									
		OBS	1500	0350	34950	2782			14896									

TABLE X.—Continued

REFERENCE CENTER NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARSden SQUARE	STATION TIME			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS	WEA- THER CODE	CLOUD CODES	MDDC STATION NUMBER				
					18°	'	"		MO	DAY							HEL/10	CRUISE NO.	STATION NUMBER	
318043	HT	5241 N	03537 W	184	25	04	14	051	1968	C20	011	3566	15	29	3	3	X2	0	3	0011
				WATER		WIND		BARO- METER		AIR TEMP. °C		NO. - OBS. DEPTH		SPECIAL OBSERVATIONS						
				COLOR	TRANSP.	DIR.	SPED DIR	DIR	DRY	WET	VEL CODE									
				DT	SD	31	S09	203	044	033	7									
MISSING TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D DYN. M. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>2</sub> -S pg - ml/l	pH	1 CC			
	051	STD	0000	0646	3481	2737	0007208	0000	14767											
		OBS	0000	0646	34812	2737			14767											
		STD	0010	0646	3481	2737	0007223	0007	14768											
		OBS	0010	0646	34812	2737			14768											
		STD	0020	0646	3481	2737	0007238	0014	14770											
	005	OBS	0020	0646	34812	2737			14770											
		STD	0030	0646	3482	2737	0007179	0022	14772											
		OBS	0030	0646	34822	2737			14772											
		STD	0050	0643	3482	2738	0007171	0036	14774											
		OBS	0050	0643	34822	2738			14774											
		STD	0075	0643	3482	2738	0007209	0054	14778											
		OBS	0075	0643	34822	2738			14778											
		STD	0100	0642	3481	2737	0007315	0072	14782											
		OBS	0100	0642	34811	2737			14782											
		OBS	0120	0613	34813	2741			14773											
		STD	0125	0615	3481	2741	0006994	0090	14775											
		OBS	0125	0615	34813	2741			14775											
		STD	0150	0620	3485	2743	0006840	0107	14781											
		OBS	0150	0620	34847	2743			14781											
		OBS	0165	0630	34876	2744			14788											
		STD	0200	0631	3493	2748	0006444	0141	14795											
		OBS	0200	0631	34929	2748			14795											
		OBS	0225	0629	34938	2749			14799											
		STD	0250	0606	3496	2753	0006002	0172	14794											
		OBS	0250	0606	34955	2753			14794											
		STD	0300	0556	3492	2757	0005704	0201	14781											
		OBS	0300	0556	34920	2757			14781											
		STD	0400	0493	3492	2764	0005081	0255	14772											
		OBS	0400	0493	34918	2764			14772											
		STD	0500	0458	3493	2769	0004714	0304	14774											
		OBS	0500	0458	34927	2769			14774											
		STD	0600	0435	3494	2772	0004470	0350	14781											
		OBS	0600	0435	34938	2772			14781											
		STD	0700	0421	3493	2773	0004474	0394	14792											
		OBS	0700	0421	34929	2773			14792											
		STD	0800	0396	3493	2775	0004292	0438	14798											
		OBS	0800	0396	34927	2775			14798											
		STD	0900	0381	3492	2776	0004260	0481	14809											
		OBS	0900	0381	34920	2776			14809											
		STD	1000	0372	3492	2777	0004242	0524	14821											
		OBS	1000	0372	34920	2777			14821											
		STD	1100	0365	3492	2778	0004236	0566	14835											
		OBS	1100	0365	34921	2778			14835											
		STD	1200	0359	3493	2779	0004218	0608	14849											
		OBS	1200	0359	34925	2779			14849											
		STD	1300	0354	3493	2780	0004202	0650	14864											
		OBS	1300	0354	34930	2780			14864											
		STD	1400	0353	3494	2781	0004189	0692	14881											
		OBS	1400	0353	34941	2781			14881											
		STD	1500	0347	3494	2781	0004230	0734	14895											
		OBS	1500	0347	34936	2781			14895											

TABLE X.—Continued

REFERENCE CITY CODE	SHIP ID. NO. CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	MAGNETIC SQUARE		STATION TIME IGMT		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODE	HODC STATION NUMBER	
				10'	1"	MO	DAY		HR	MIN			CRUISE NO.	STATION NUMBER	DIR.				PER
318043	HT	5239 N	03528 W	184	25	04	14	1117	1968	C20	012	3567	15	31	2	2	X2	03	0012
				WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OF DIRL DEPTH			SPECIAL OBSERVATIONS				
				COLOR CODE	TRANSP. M	DIR.	SPEED OR FORCE	METER	DEF BULB	WET BULB	WIL CODE								
				DT	SD	27	S08	200	056	039	7								
MISSING TIME HR 1/10	CAS NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPHC VOLUME ANOMALY-30P	± Δ D DTN. M. ± 10P	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg - ml/l	TOTAL-P µg - ml/l	NO <sub>3</sub> -N µg - ml/l	NO <sub>2</sub> -N µg - ml/l	SiO <sub>2</sub> -S µg - ml/l	pH	CL		
		STD	0000	0624	3474	2734	0007456	0000	14757										
117		OBS	0000	0624	34742	2734			14757										
		STD	0010	0624	3475	2735	0007396	0007	14759										
		OBS	0010	0624	34752	2735			14759										
		STD	0020	0624	3475	2735	0007410	0015	14760										
005		OBS	0020	0624	34752	2735			14760										
		STD	0030	0616	3478	2738	0007101	0022	14759										
		OBS	0030	0616	34782	2738			14759										
		OBS	0040	0629	34802	2738			14766										
		STD	0050	0633	3481	2738	0007149	0036	14770										
		OBS	0050	0633	34808	2738			14770										
		STD	0075	0634	3481	2738	0007169	0054	14774										
		OBS	0075	0634	34812	2738			14774										
		STD	0100	0625	3482	2740	0007054	0072	14775										
		OBS	0100	0625	34817	2740			14775										
		OBS	0115	0619	34828	2741			14775										
		STD	0125	0623	3484	2742	0006894	0089	14778										
		OBS	0125	0623	34840	2742			14778										
		STD	0150	0623	3484	2742	0006930	0107	14783										
		OBS	0150	0623	34840	2742			14783										
		OBS	0160	0619	34855	2743			14783										
		STD	0200	0631	3492	2747	0006496	0140	14795										
		OBS	0200	0631	34922	2747			14795										
		OBS	0230	0623	34922	2748			14797										
		STD	0250	0593	3494	2754	0005934	0171	14788										
		OBS	0250	0593	34942	2754			14788										
		OBS	0255	0588	34972	2757			14788										
		OBS	0275	0583	34972	2757			14789										
		STD	0300	0547	3494	2759	0005429	0200	14778										
		OBS	0300	0547	34942	2759			14778										
		OBS	0350	0512	34922	2762			14772										
		STD	0400	0487	3491	2764	0005055	0252	14770										
		OBS	0400	0487	34912	2764			14770										
		STD	0500	0459	3492	2768	0004763	0301	14775										
		OBS	0500	0459	34922	2768			14775										
		STD	0600	0443	3493	2770	0004645	0348	14785										
		OBS	0600	0443	34927	2770			14785										
		STD	0700	0418	3492	2773	0004476	0394	14791										
		OBS	0700	0418	34924	2773			14791										
		STD	0800	0400	3492	2774	0004391	0438	14800										
		OBS	0800	0400	34920	2774			14800										
		STD	0900	0386	3491	2775	0004378	0482	14811										
		OBS	0900	0386	34912	2775			14811										
		STD	1000	0374	3492	2777	0004250	0525	14822										
		OBS	1000	0374	34922	2777			14822										
		STD	1100	0368	3491	2777	0004339	0568	14836										
		OBS	1100	0368	34912	2777			14836										
		STD	1200	0362	3493	2779	0004240	0611	14851										
		OBS	1200	0362	34927	2779			14851										
		STD	1300	0357	3494	2781	0004151	0653	14866										
		OBS	1300	0357	34942	2781			14866										
		STD	1400	0355	3495	2781	0004178	0695	14882										
		OBS	1400	0355	34946	2781			14882										
		STD	1500	0349	3496	2783	0004079	0736	14896										
		OBS	1500	0349	34960	2783			14896										

TABLE X.—Continued

REFERENCE CIP CODE	SHIP ID. NO. CODE	LATITUDE 1/10	LONGITUDE 1/10	MARSDFN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAL. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER	
					MO	DAY	HR:1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA
318043	HT	52525N	03533 W	184	25	04	14	173	1968	C20	013	2578	15	23	1	X2	0	3	0013
				WATER		WIND		BARO-		AIR TEMP. °C		NO. OBS.		SPECIAL					
				COLOR	TRABL	DIR	SPED	METER	DRY	WET	VEL	OBS. DEPTHS		OBSERVATIONS					
				CODE	IN1		OF	(mb)	BULB	BULB	CODE								
				DT	SD	22	S20	122	067	061	7	27							
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SICHC VOLUME AND WALT-SHIP	Σ Δ D DTN. M. x 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>4</sub> -S pg - ml/l	pH	CHL		
		STD	0000	0642	3478	2735	0007367	0000	14765										
173		OBS	0000	0642	34784	2735			14765										
		STD	0010	0642	3478	2735	0007382	0007	14766										
		OBS	0010	0642	34784	2735			14766										
		STD	0020	0641	3478	2735	0007384	0015	14768										
006		OBS	0020	0641	34784	2735			14768										
		STD	0030	0641	3478	2735	0007399	0022	14769										
		OBS	0030	0641	34784	2735			14769										
		STD	0050	0640	3478	2735	0007416	0037	14772										
		OBS	0050	0640	34784	2735			14772										
		STD	0075	0638	3478	2735	0007428	0056	14776										
		OBS	0075	0638	34784	2735			14776										
		STD	0100	0636	3482	2738	0007171	0074	14779										
		OBS	0100	0636	34820	2738			14779										
		STD	0125	0632	3485	2741	0006949	0091	14782										
		OBS	0125	0632	34848	2741			14782										
		STD	0150	0632	3487	2743	0006792	0109	14787										
		OBS	0150	0632	34874	2743			14787										
		OBS	0185	0631	34701	2746			14792										
		STD	0200	0620	3492	2748	0006377	0142	14791										
		OBS	0200	0620	34919	2748			14791										
		STD	0250	0607	3495	2752	0006089	0173	14794										
		OBS	0250	0607	34945	2752			14794										
		STD	0300	0583	3495	2756	0005787	0202	14793										
		OBS	0300	0583	34954	2756			14793										
		OBS	0325	0558	34925	2757			14786										
		OBS	0370	0544	34905	2757			14788										
		STD	0400	0511	3489	2760	0005489	0259	14779										
		OBS	0400	0511	34892	2760			14779										
		STD	0500	0462	3489	2765	0005074	0312	14775										
		OBS	0500	0462	34885	2765			14775										
		STD	0600	0429	3491	2770	0004616	0360	14779										
		OBS	0600	0429	34909	2770			14779										
		STD	0700	0405	3491	2773	0004451	0405	14785										
		OBS	0700	0405	34907	2773			14785										
		STD	0800	0389	3490	2774	0004381	0450	14795										
		OBS	0800	0389	34904	2774			14795										
		STD	0900	0375	3490	2775	0004330	0493	14806										
		OBS	0900	0375	34901	2775			14806										
		STD	1000	0368	3492	2778	0004194	0536	14820										
		OBS	1000	0368	34920	2778			14820										
		STD	1100	0360	3493	2779	0004139	0577	14833										
		OBS	1100	0360	34926	2779			14833										
		STD	1200	0359	3493	2779	0004181	0619	14850										
		OBS	1200	0359	34930	2779			14850										
		STD	1300	0355	3493	2780	0004221	0661	14865										
		OBS	1300	0355	34929	2780			14865										
		STD	1400	0348	3494	2781	0004141	0703	14879										
		OBS	1400	0348	34939	2781			14879										
		STD	1500	0343	3495	2782	0004099	0744	14893										
		OBS	1500	0343	34947	2782			14893										

TABLE X.—Continued

REFERENCE STATION CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL.	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER																																		
						MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	PER	SEA		TYPE	AMT																																			
318043	HT		5252 N	03531 W	184	25	06	14	234	1968	C20	014	3365	15	31	3	3	X1	03	0014																																		
<table border="1"> <thead> <tr> <th colspan="3">WATER</th> <th colspan="3">WIND</th> <th colspan="3">BARO-</th> <th colspan="3">AIR TEMP. °C</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (m)</th> <th>DIL.</th> <th>SPEED OR FORCE</th> <th>BARO- METER</th> <th>DIR</th> <th>WET BULB</th> <th>DRY BULB</th> <th>WET BULB</th> <th>VEL CODE</th> </tr> </thead> <tbody> <tr> <td>DT</td> <td>SD</td> <td>31</td> <td>S33</td> <td>122</td> <td>050</td> <td>039</td> <td>7</td> <td>27</td> <td></td> </tr> </tbody> </table>																					WATER			WIND			BARO-			AIR TEMP. °C			NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (m)	DIL.	SPEED OR FORCE	BARO- METER	DIR	WET BULB	DRY BULB	WET BULB	VEL CODE	DT	SD	31	S33	122	050	039	7	27	
WATER			WIND			BARO-			AIR TEMP. °C			NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																									
COLOR CODE	TRANS (m)	DIL.	SPEED OR FORCE	BARO- METER	DIR	WET BULB	DRY BULB	WET BULB	VEL CODE																																													
DT	SD	31	S33	122	050	039	7	27																																														
MESSING TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STP	S & D DYN. AL. E 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg - ml/l	TOTAL-P µg - ml/l	NO <sub>3</sub> -N µg - ml/l	NO <sub>2</sub> -N µg - ml/l	SiO <sub>4</sub> -Si µg - ml/l	pH	SEC																																					
	234	STD	0000	0624	3479	2738	0007097	0000	14758																																													
		OBS	0000	0624	34790	2738			14758																																													
		STD	0010	0624	3479	2738	0007112	0007	14759																																													
		OBS	0010	0624	34790	2738			14759																																													
	005	STD	0020	0624	3479	2738	0007126	0014	14761																																													
		OBS	0020	0624	34790	2738			14761																																													
		STD	0030	0624	3479	2738	0007141	0021	14763																																													
		OBS	0030	0624	34790	2738			14763																																													
		STD	0050	0624	3479	2738	0007170	0036	14766																																													
		OBS	0050	0624	34790	2738			14766																																													
		STD	0075	0624	3479	2738	0007207	0054	14770																																													
		OBS	0075	0624	34790	2738			14770																																													
		STD	0100	0623	3479	2738	0007230	0072	14774																																													
		OBS	0100	0623	34790	2738			14774																																													
		STD	0125	0625	3479	2738	0007292	0090	14779																																													
		OBS	0125	0625	34790	2738			14779																																													
		STD	0150	0638	3489	2744	0006750	0107	14789																																													
		OBS	0150	0638	34890	2744			14789																																													
		STD	0200	0628	3494	2749	0006323	0140	14794																																													
		OBS	0200	0628	34940	2749			14794																																													
		STD	0250	0623	3499	2754	0005960	0171	14801																																													
		OBS	0250	0623	34990	2754			14801																																													
		OBS	0275	0598	34985	2756			14795																																													
		STD	0300	0572	3496	2758	0005590	0200	14788																																													
		OBS	0300	0572	34962	2758			14788																																													
		OBS	0325	0539	34940	2760			14779																																													
		OBS	0375	0517	34930	2762			14778																																													
		STD	0400	0497	3493	2764	0005039	0253	14774																																													
		OBS	0400	0497	34930	2764			14774																																													
		STD	0500	0461	3493	2769	0004727	0302	14776																																													
		OBS	0500	0461	34930	2769			14776																																													
		STD	0600	0431	3493	2772	0004483	0348	14780																																													
		OBS	0600	0431	34930	2772			14780																																													
		STD	0700	0415	3493	2774	0004396	0392	14790																																													
		OBS	0700	0415	34930	2774			14790																																													
		STD	0800	0400	3493	2775	0004317	0436	14800																																													
		OBS	0800	0400	34930	2775			14800																																													
		STD	0900	0383	3493	2777	0004209	0478	14809																																													
		OBS	0900	0383	34930	2777			14809																																													
		STD	1000	0369	3493	2778	0004132	0520	14820																																													
		OBS	1000	0369	34930	2778			14820																																													
		STD	1100	0366	3493	2779	0004182	0562	14836																																													
		OBS	1100	0366	34930	2779			14836																																													
		STD	1200	0358	3493	2780	0004169	0603	14849																																													
		OBS	1200	0358	34930	2780			14849																																													
		STD	1300	0352	3493	2780	0004148	0645	14863																																													
		OBS	1300	0352	34934	2780			14863																																													
		STD	1400	0347	3494	2781	0004122	0686	14878																																													
		OBS	1400	0347	34940	2781			14878																																													
		STD	1500	0346	3495	2782	0004115	0727	14895																																													
		OBS	1500	0346	34950	2782			14895																																													

TABLE X.—Continued

REFERENCE SHIP CODE	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	M 1/10	SEEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER			
					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER		DR	HGT	PER				SEA		
318043	HT	5237 N	03527 W		184	25	04	16	173	1968	C20	015	2889	15	35	5	3	X2	0	3	0015	
				WATER		WIND		BARO- METER		AIR TEMP °C		VIS		NO. OBS. DEPTH		SPECIAL OBSERVATIONS						
				COLOR	WAVE	DIR.	SPED	OR	FORCE	DRY	WET	CODE										
				DT	SD	01	S20	164	083	072	7	27										
MISSING TIME HR. 1/10	CASE NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SOUND VELOCITY M/S	Δ D DTN. M. ± 1g <sup>2</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>4</sub> -Si pg - ml/l	pH	SEC					
	173	STD	0000	0627	3478	2737	0007209	0000	14759													
		OBS	0000	0627	34780	2737			14759													
		STD	0010	0627	3478	2737	0007224	0007	14760													
		OBS	0010	0627	34780	2737			14760													
		STD	0020	0627	3478	2737	0007238	0014	14762													
		OBS	0020	0627	34780	2737			14762													
	005	STD	0030	0622	3478	2737	0007191	0022	14762													
		OBS	0030	0622	34780	2737			14762													
		STD	0050	0622	3478	2737	0007220	0036	14765													
		OBS	0050	0622	34780	2737			14765													
		STD	0075	0621	3478	2737	0007244	0054	14769													
		OBS	0075	0621	34780	2737			14769													
		STD	0100	0619	3478	2738	0007255	0072	14772													
		OBS	0100	0619	34780	2738			14772													
		STD	0125	0618	3478	2738	0007278	0090	14776													
		OBS	0125	0618	34780	2738			14776													
		STD	0135	0598	34760	2739			14769													
		OBS	0135	0598	3480	2742	0006912	0108	14771													
		STD	0150	0596	34797	2742			14771													
		OBS	0150	0596	34835	2745			14776													
		STD	0178	0595	34830	2748			14768													
		OBS	0190	0570	34830	2748	0005970	0140	14778													
		STD	0200	0589	3492	2753			14778													
		OBS	0200	0589	34921	2753			14778													
		STD	0250	0569	3494	2757	0005634	0169	14779													
		OBS	0250	0569	34942	2757			14779													
		STD	0300	0529	3493	2761	0005293	0197	14771													
		OBS	0300	0529	34931	2761			14771													
		STD	0400	0470	3492	2767	0004811	0247	14763													
		OBS	0400	0470	34918	2767			14763													
		STD	0500	0447	3494	2771	0004490	0294	14770													
		OBS	0500	0447	34940	2771			14770													
		STD	0600	0426	3494	2773	0004350	0338	14778													
		OBS	0600	0426	34940	2773			14778													
		STD	0700	0404	3493	2775	0004246	0381	14785													
		OBS	0700	0404	34933	2775			14785													
		STD	0800	0391	3493	2776	0004197	0423	14796													
		OBS	0800	0391	34932	2776			14796													
		STD	0900	0377	3493	2778	0004132	0465	14807													
		OBS	0900	0377	34931	2778			14807													
		STD	1000	0368	3492	2778	0004179	0506	14820													
		OBS	1000	0368	34922	2778			14820													
		STD	1100	0360	3492	2779	0004162	0548	14833													
		OBS	1100	0360	34923	2779			14833													
		STD	1200	0356	3493	2780	0004122	0589	14848													
		OBS	1200	0356	34933	2780			14848													
		STD	1300	0351	3494	2781	0004077	0630	14863													
		OBS	1300	0351	34942	2781			14863													
		STD	1400	0347	3495	2782	0004034	0671	14878													
		OBS	1400	0347	34952	2782			14878													
		STD	1500	0340	3495	2783	0004009	0711	14892													
		OBS	1500	0340	34954	2783			14892													



TABLE X.—Continued

REFERENCE CITY CODE	SHIP CODE	LATITUDE 1/16	LONGITUDE 1/16	S E S	HAZARD SQUARE	STATION TIME 16 HR				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SOUNDING	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODE TFR (amt)	HODC STATION NUMBER
						16	1	MO	DAY		MLT/16	CRUISE NO.			STATION NUMBER	3475	15	39			
					WATER		WIND		BARO-		AIR TEMP. °C		NO. OBS. DEPTH		SPECIAL OBSERVATIONS						
					COLOR CODE	TRANSL. M	DIR.	SPEED OR FORCE	BARO- METER (mm)	DRY BULB	WET BULB	VS. CODE	NO. OBS. DEPTH								
					DT	SD	01	525	086	067	061	6	30								
MESSAGE TIME 1/16	CAST NO.	CARD TYPE	DEPTH M	T °C	S ‰	SGMA-T	SPECIFIC VOLUME ANOMALY- $\sigma_{\theta}$	$\Sigma$ Δ D DTM. M. 1/16	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>2</sub> -S pg - ml/l	pH	S C C				
		STD	0000	0632	3481	2738	0007085	0000	14761												
237		OBS	0000	0632	34805	2738			14761												
		STD	0010	0632	3481	2738	0007099	0007	14763												
		OBS	0010	0632	34805	2738			14763												
		STD	0020	0632	3481	2738	0007114	0014	14764												
005		OBS	0020	0632	34805	2738			14764												
		STD	0030	0632	3481	2738	0007129	0021	14766												
		OBS	0030	0632	34805	2738			14766												
		STD	0050	0632	3481	2738	0007121	0036	14769												
		OBS	0050	0632	34810	2738			14769												
		STD	0075	0630	3481	2738	0007133	0053	14773												
		OBS	0075	0630	34810	2738			14773												
		STD	0100	0629	3481	2739	0007127	0071	14776												
		OBS	0100	0629	34814	2739			14776												
		STD	0125	0629	3481	2739	0007164	0089	14781												
		OBS	0125	0629	34814	2739			14781												
		STD	0150	0629	3481	2739	0007201	0107	14785												
		OBS	0150	0629	34814	2739			14785												
		OBS	0160	0623	34850	2743			14784												
		STD	0200	0629	3491	2746	0006559	0141	14794												
		OBS	0200	0629	34910	2746			14794												
		STD	0250	0600	3494	2753	0006037	0173	14791												
		OBS	0250	0600	34940	2753			14791												
		OBS	0285	0573	34970	2758			14786												
		STD	0300	0542	3493	2759	0005458	0202	14776												
		OBS	0300	0542	34930	2759			14776												
		OBS	0317	0545	34940	2760			14780												
		OBS	0332	0510	34890	2760			14767												
		OBS	0338	0520	34930	2762			14773												
		OBS	0350	0521	34930	2762			14776												
		STD	0400	0484	3493	2766	0004885	0253	14769												
		OBS	0400	0484	34930	2766			14769												
		STD	0500	0461	3493	2769	0004727	0301	14776												
		OBS	0500	0461	34930	2769			14776												
		STD	0600	0431	3493	2772	0004483	0347	14780												
		OBS	0600	0431	34930	2772			14780												
		STD	0700	0418	3493	2773	0004431	0392	14791												
		OBS	0700	0418	34930	2773			14791												
		STD	0800	0398	3493	2775	0004294	0436	14799												
		OBS	0800	0398	34930	2775			14799												
		STD	0900	0382	3492	2776	0004272	0479	14809												
		OBS	0900	0382	34920	2776			14809												
		STD	1000	0370	3492	2778	0004218	0521	14821												
		OBS	1000	0370	34920	2778			14821												
		STD	1100	0364	3492	2778	0004232	0563	14835												
		OBS	1100	0364	34920	2778			14835												
		STD	1200	0362	3493	2779	0004217	0605	14851												
		OBS	1200	0362	34930	2779			14851												
		STD	1300	0350	3494	2781	0004079	0647	14863												
		OBS	1300	0350	34940	2781			14863												
		STD	1400	0355	3495	2781	0004148	0688	14882												
		OBS	1400	0355	34950	2781			14882												
		STD	1500	0349	3495	2782	0004131	0729	14896												
		OBS	1500	0349	34953	2782			14896												

TABLE X.—Continued

REFERENCE CIRY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/18	LONGITUDE 1/18	MARS SQR	MARS SQR	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF TEMP.	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER
							MO	DAY	HR/10		CRUISE NO.	STATION NUMBER			DIR	PER	SEA			
318043 HT			5235 N	03545 W	184	25	04	17	050	1968	C20	017	3117	15	01	2	X2	03	0017	
WATER		WIND		BARO-		AIR TEMP. °C		NO.		SPECIAL										
COLOR	TRANSP.	DIR.	SPEED	METER	DRY	WET	VEG.	NO.	OBS.	OBSERVATIONS										
CODE	NO.	OR	(KNOTS)	(MB)	BULB	BULB	CODE	DEPTHS												
DT	SD	01	S14	180	072	056	6	27												
WISSENZ TIME HE 1/18	CAST NO.	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-26T	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>2</sub> -N pg - ml/l	SI O <sub>4</sub> -S pg - ml/l	pH					
050		STD	0000	0626	3476	2735	0007368	0000	14758											
		OBS	0000	0626	34757	2735			14758											
		STD	0010	0626	3476	2735	0007338	0007	14760											
		OBS	0010	0626	34763	2735			14760											
		STD	0020	0626	3476	2735	0007353	0015	14761											
		OBS	0020	0626	34763	2735			14761											
005		STD	0030	0626	3477	2736	0007323	0022	14763											
		OBS	0030	0626	34769	2736			14763											
		STD	0050	0626	3479	2737	0007203	0037	14767											
		OBS	0050	0626	34789	2737			14767											
		STD	0075	0625	3481	2739	0007055	0054	14771											
		OBS	0075	0625	34812	2739			14771											
		STD	0100	0623	3482	2740	0007007	0072	14774											
		OBS	0100	0623	34820	2740			14774											
		STD	0125	0620	3482	2741	0007005	0089	14777											
		OBS	0125	0620	34820	2741			14777											
		STD	0150	0621	3483	2741	0006972	0107	14782											
		OBS	0150	0621	34831	2741			14782											
		STD	0200	0615	3490	2748	0006439	0140	14788											
		OBS	0200	0615	34902	2748			14788											
		STD	0215	0616	34940	2751			14792											
		OBS	0215	0616	34940	2751	0005760	0171	14782											
		STD	0250	0578	3494	2755			14782											
		OBS	0250	0578	34940	2755			14782											
		STD	0275	0534	34931	2760			14768											
		OBS	0275	0534	34931	2760			14768											
		STD	0290	0543	34958	2761			14775											
		OBS	0290	0543	34958	2761			14775											
		STD	0300	0540	3496	2762	0005225	0198	14775											
		OBS	0300	0540	34958	2762			14775											
		STD	0400	0484	3494	2767	0004811	0249	14769											
		OBS	0400	0484	34940	2767			14769											
		STD	0500	0451	3495	2771	0004477	0295	14772											
		OBS	0500	0451	34948	2771			14772											
		STD	0600	0430	3495	2773	0004352	0339	14779											
		OBS	0600	0430	34946	2773			14779											
		STD	0700	0411	3494	2775	0004268	0382	14788											
		OBS	0700	0411	34941	2775			14788											
		STD	0800	0395	3494	2777	0004184	0425	14798											
		OBS	0800	0395	34940	2777			14798											
		STD	0900	0378	3493	2777	0004158	0466	14807											
		OBS	0900	0378	34929	2777			14807											
		STD	1000	0370	3493	2779	0004122	0508	14821											
		OBS	1000	0370	34933	2779			14821											
		STD	1100	0361	3494	2780	0004055	0549	14834											
		OBS	1100	0361	34939	2780			14834											
		STD	1200	0354	3494	2781	0004047	0589	14848											
		OBS	1200	0354	34940	2781			14848											
		STD	1300	0351	3495	2782	0004010	0629	14863											
		OBS	1300	0351	34951	2782			14863											
		STD	1400	0346	3495	2782	0004028	0670	14878											
		OBS	1400	0346	34951	2782			14878											
		STD	1500	0345	3496	2783	0004051	0710	14894											
		OBS	1500	0345	34957	2783			14894											

TABLE X.—Continued

REFERENCE CITE CODE	SHIP ID. NO.	SHIP CODE	LATITUDE ° ' 10"	LONGITUDE ° ' 10"	E 0 0 S	MERIDIAN S	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF TEMP.	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER		
							MO	DAY	HR/10		CRUISE NO.	STATION NUMBER			DR.	HGT	PER				SEA	
318043	HT		5239 N	035435 W	D	184	25	04	17	115	1968	C20	018	3430	15	36		3	X1	03	0018	
WATER		WIND		BARO-		AIR TEMP. °C		NO. OBS.		SPECIAL												
COLOR CODE	TRANL. M	DIR.	SPED. OF FORCE	BARO- METER (mb)	DIR BULB	WET BULB	WV CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS													
DT	SD	35	520	159	081	067	6	25														
REFERENCE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH M	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- $\sigma_{\theta}$	S.D. DTN. M. 10 <sup>3</sup>	S.C. ID VEL. CITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>4</sub> -Si pg - ml/l	pH	S	C				
		STD	0000	0629	3478	2736	0007234	0000	14760													
115		OBS	0000	0629	34780	2736			14760													
		STD	0010	0628	3478	2736	0007236	0007	14761													
		OBS	0010	0628	34780	2736			14761													
		STD	0020	0628	3478	2736	0007258	0014	14762													
004		OBS	0020	0628	34779	2736			14762													
		STD	0030	0628	3478	2736	0007273	0022	14764													
		OBS	0030	0628	34779	2736			14764													
		STD	0050	0624	3478	2737	0007260	0036	14766													
		OBS	0050	0624	34778	2737			14766													
		STD	0075	0623	3479	2738	0007202	0054	14770													
		OBS	0075	0623	34789	2738			14770													
		STD	0100	0623	3479	2738	0007230	0072	14774													
		OBS	0100	0623	34790	2738			14774													
		STD	0125	0624	3479	2738	0007279	0091	14778													
		OBS	0125	0624	34790	2738			14778													
		STD	0150	0622	3481	2740	0007126	0109	14782													
		OBS	0150	0622	34812	2740			14782													
		STD	0200	0619	3483	2741	0007026	0144	14789													
		OBS	0200	0619	34830	2741			14789													
		STD	0240	0630	34932	2748			14801													
		OBS	0250	0598	3492	2751	0006146	0177	14790													
		STD	0300	0582	3497	2757			14790													
		OBS	0300	0582	34968	2757	0005671	0206	14793													
		STD	0300	0582	34968	2757			14793													
		OBS	0400	0491	3493	2765	0004968	0260	14771													
		STD	0400	0491	3493	2765			14771													
		OBS	0400	0491	34930	2765			14771													
		STD	0500	0460	3494	2769	0004641	0308	14775													
		OBS	0500	0460	34940	2769			14775													
		STD	0600	0436	3495	2773	0004392	0353	14782													
		OBS	0600	0436	34950	2773			14782													
		STD	0700	0413	3494	2775	0004299	0396	14789													
		OBS	0700	0413	34940	2775			14789													
		STD	0800	0396	3494	2776	0004211	0439	14798													
		OBS	0800	0396	34938	2776			14798													
		STD	0900	0380	3493	2777	0004174	0481	14808													
		OBS	0900	0380	34930	2777			14808													
		STD	1000	0373	3493	2778	0004180	0522	14822													
		OBS	1000	0373	34930	2778			14822													
		STD	1100	0363	3493	2779	0004146	0564	14834													
		OBS	1100	0363	34930	2 79			14834													
		STD	1200	0359	3494	2780	0004129	0606	14850													
		OBS	1200	0359	34937	2780			14850													
		STD	1300	0355	3494	2781	0004126	0647	14865													
		OBS	1300	0355	34942	2781			14865													
		STD	1400	0354	3495	2781	0004143	0688	14881													
		OBS	1400	0354	34949	2781			14881													
		STD	1500	0352	3495	2782	0004191	0730	14897													
		OBS	1500	0352	34950	2782			14897													

TABLE X.—Continued

REFERENCE CTR CODE	SHIP ID. NO.	SHIP CODE	LATITUDE °	LONGITUDE °	E W	MAGNETIC SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES	WDC STATION NUMBER	
							MO	DAY	HR:10		CRUISE NO.	STATION NUMBER			DR	HGT	PER	RA				
318043	HT		5247 N	03541 W	D	184	25	04	17	174	1968	C20	019	3658	15	36	2	2	X2	0	3	0019
WATER		WIND		AIR TEMP. °C		SPECIAL OBSERVATIONS																
COLOR CODE	TRANS. M	DIR. M	SPD. M	DIR. M	WET BULB	DRY BULB	WET BULB	VEL CODE	NO. OF DEPTHS													
DT	SD	35	S20	137	067	067	6	30														
MESSAGE NO.	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	SOUND VELOCITY M/S	O <sub>2</sub> (ml/l)	PO <sub>4</sub> -P μg - ml/l	TOTAL-P μg - ml/l	NO <sub>3</sub> -N μg - ml/l	NO <sub>2</sub> -N μg - ml/l	SiO <sub>2</sub> -S μg - ml/l	pH	S CG						
																	174	OBS	0000	0654	3476	2731
		STD	0000	0654 <td>3476 <td>2731 <td>0007728 <td>0008 <td>14771 </td></td></td></td></td>	3476 <td>2731 <td>0007728 <td>0008 <td>14771 </td></td></td></td>	2731 <td>0007728 <td>0008 <td>14771 </td></td></td>	0007728 <td>0008 <td>14771 </td></td>	0008 <td>14771 </td>	14771													
		OBS	0000	0654 <td>3476 <td>2731 <td>0007728 <td>0015 <td>14773 </td></td></td></td></td>	3476 <td>2731 <td>0007728 <td>0015 <td>14773 </td></td></td></td>	2731 <td>0007728 <td>0015 <td>14773 </td></td></td>	0007728 <td>0015 <td>14773 </td></td>	0015 <td>14773 </td>	14773													
		STD	0010	0654 <td>3476 <td>2731 <td></td> <td></td> <td>14777 </td></td></td>	3476 <td>2731 <td></td> <td></td> <td>14777 </td></td>	2731 <td></td> <td></td> <td>14777 </td>			14777													
		OBS	0010	0654 <td>3476 <td>2731 <td></td> <td></td> <td>14773 </td></td></td>	3476 <td>2731 <td></td> <td></td> <td>14773 </td></td>	2731 <td></td> <td></td> <td>14773 </td>			14773													
	005	STD	0020	0654 <td>3476 <td>2731 <td></td> <td></td> <td>14774 </td></td></td>	3476 <td>2731 <td></td> <td></td> <td>14774 </td></td>	2731 <td></td> <td></td> <td>14774 </td>			14774													
		OBS	0020	0654 <td>3476 <td>2731 <td></td> <td></td> <td>14774 </td></td></td>	3476 <td>2731 <td></td> <td></td> <td>14774 </td></td>	2731 <td></td> <td></td> <td>14774 </td>			14774													
		STD	0030	0653 <td>3477 <td>2732 <td></td> <td></td> <td>14775 </td></td></td>	3477 <td>2732 <td></td> <td></td> <td>14775 </td></td>	2732 <td></td> <td></td> <td>14775 </td>			14775													
		OBS	0030	0653 <td>34765 <td>2732 <td></td> <td></td> <td>14775 </td></td></td>	34765 <td>2732 <td></td> <td></td> <td>14775 </td></td>	2732 <td></td> <td></td> <td>14775 </td>			14775													
		STD	0035	0653 <td>34812 <td>2736 <td></td> <td></td> <td>14769 </td></td></td>	34812 <td>2736 <td></td> <td></td> <td>14769 </td></td>	2736 <td></td> <td></td> <td>14769 </td>			14769													
		OBS	0035	0653 <td>34812 <td>2738 <td></td> <td></td> <td>14772 </td></td></td>	34812 <td>2738 <td></td> <td></td> <td>14772 </td></td>	2738 <td></td> <td></td> <td>14772 </td>			14772													
		STD	0045	0631 <td>3481 <td>2738 <td>0007094 <td>0038</td> <td>14772 </td></td></td></td>	3481 <td>2738 <td>0007094 <td>0038</td> <td>14772 </td></td></td>	2738 <td>0007094 <td>0038</td> <td>14772 </td></td>	0007094 <td>0038</td> <td>14772 </td>	0038	14772													
		OBS	0045	0631 <td>34812 <td>2738 <td>0007105 <td>0056</td> <td>14772 </td></td></td></td>	34812 <td>2738 <td>0007105 <td>0056</td> <td>14772 </td></td></td>	2738 <td>0007105 <td>0056</td> <td>14772 </td></td>	0007105 <td>0056</td> <td>14772 </td>	0056	14772													
		STD	0050	0629 <td>3481 <td>2739 <td>0007109 <td>0073</td> <td>14776 </td></td></td></td>	3481 <td>2739 <td>0007109 <td>0073</td> <td>14776 </td></td></td>	2739 <td>0007109 <td>0073</td> <td>14776 </td></td>	0007109 <td>0073</td> <td>14776 </td>	0073	14776													
		OBS	0050	0629 <td>34812 <td>2739 <td></td> <td></td> <td>14776 </td></td></td>	34812 <td>2739 <td></td> <td></td> <td>14776 </td></td>	2739 <td></td> <td></td> <td>14776 </td>			14776													
		STD	0075	0627 <td>3481 <td>2739 <td></td> <td></td> <td>14780 </td></td></td>	3481 <td>2739 <td></td> <td></td> <td>14780 </td></td>	2739 <td></td> <td></td> <td>14780 </td>			14780													
		OBS	0075	0627 <td>34813 <td>2739 <td></td> <td></td> <td>14780 </td></td></td>	34813 <td>2739 <td></td> <td></td> <td>14780 </td></td>	2739 <td></td> <td></td> <td>14780 </td>			14780													
		STD	0100	0627 <td>3482 <td>2740 <td>0007083 <td>0109</td> <td>14783 </td></td></td></td>	3482 <td>2740 <td>0007083 <td>0109</td> <td>14783 </td></td></td>	2740 <td>0007083 <td>0109</td> <td>14783 </td></td>	0007083 <td>0109</td> <td>14783 </td>	0109	14783													
		OBS	0100	0627 <td>3482 <td>2740 <td></td> <td></td> <td>14784 </td></td></td>	3482 <td>2740 <td></td> <td></td> <td>14784 </td></td>	2740 <td></td> <td></td> <td>14784 </td>			14784													
		STD	0125	0627 <td>3482 <td>2740 <td></td> <td></td> <td>14782 </td></td></td>	3482 <td>2740 <td></td> <td></td> <td>14782 </td></td>	2740 <td></td> <td></td> <td>14782 </td>			14782													
		OBS	0125	0627 <td>3482 <td>2740 <td></td> <td></td> <td>14788 </td></td></td>	3482 <td>2740 <td></td> <td></td> <td>14788 </td></td>	2740 <td></td> <td></td> <td>14788 </td>			14788													
		STD	0150	0625 <td>3482 <td>2740 <td></td> <td></td> <td>14793 </td></td></td>	3482 <td>2740 <td></td> <td></td> <td>14793 </td></td>	2740 <td></td> <td></td> <td>14793 </td>			14793													
		OBS	0150	0625 <td>34823 <td>2740 <td></td> <td></td> <td>14791 </td></td></td>	34823 <td>2740 <td></td> <td></td> <td>14791 </td></td>	2740 <td></td> <td></td> <td>14791 </td>			14791													
		STD	0160	0623 <td>34831 <td>2741 <td>0006501 <td>0143</td> <td>14788 </td></td></td></td>	34831 <td>2741 <td>0006501 <td>0143</td> <td>14788 </td></td></td>	2741 <td>0006501 <td>0143</td> <td>14788 </td></td>	0006501 <td>0143</td> <td>14788 </td>	0143	14788													
		OBS	0160	0623 <td>34831 <td>2742</td> <td></td> <td></td> <td>14791 </td></td>	34831 <td>2742</td> <td></td> <td></td> <td>14791 </td>	2742			14791													
		STD	0200	0614 <td>3489</td> <td>2747</td> <td></td> <td></td> <td>14768 </td>	3489	2747			14768													
		OBS	0200	0614 <td>34892 <td>2747</td> <td></td> <td></td> <td>14766 </td></td>	34892 <td>2747</td> <td></td> <td></td> <td>14766 </td>	2747			14766													
		STD	0230	0614 <td>34938 <td>2751</td> <td>0004861 <td>0253</td> <td>14770 </td></td></td>	34938 <td>2751</td> <td>0004861 <td>0253</td> <td>14770 </td></td>	2751	0004861 <td>0253</td> <td>14770 </td>	0253	14770													
		OBS	0230	0614 <td>34938 <td>2766</td> <td></td> <td></td> <td>14772 </td></td>	34938 <td>2766</td> <td></td> <td></td> <td>14772 </td>	2766			14772													
		STD	0250	0599 <td>3497 <td>2755</td> <td>0004544 <td>0300</td> <td>14772 </td></td></td>	3497 <td>2755</td> <td>0004544 <td>0300</td> <td>14772 </td></td>	2755	0004544 <td>0300</td> <td>14772 </td>	0300	14772													
		OBS	0250	0599 <td>3497 <td>2773</td> <td></td> <td></td> <td>14782 </td></td>	3497 <td>2773</td> <td></td> <td></td> <td>14782 </td>	2773			14782													
		STD	0275	0533 <td>34892 <td>2757</td> <td>0004403 <td>0345</td> <td>14782 </td></td></td>	34892 <td>2757</td> <td>0004403 <td>0345</td> <td>14782 </td></td>	2757	0004403 <td>0345</td> <td>14782 </td>	0345	14782													
		OBS	0275	0533 <td>34892 <td>2773</td> <td></td> <td></td> <td>14788 </td></td>	34892 <td>2773</td> <td></td> <td></td> <td>14788 </td>	2773			14788													
		STD	0300	0518 <td>3490 <td>2760</td> <td>0004350 <td>0389</td> <td>14788 </td></td></td>	3490 <td>2760</td> <td>0004350 <td>0389</td> <td>14788 </td></td>	2760	0004350 <td>0389</td> <td>14788 </td>	0389	14788													
		OBS	0300	0518 <td>34900 <td>2760</td> <td></td> <td></td> <td>14798 </td></td>	34900 <td>2760</td> <td></td> <td></td> <td>14798 </td>	2760			14798													
		STD	0400	0487 <td>3494 <td>2766</td> <td>0004270 <td>0432</td> <td>14798 </td></td></td>	3494 <td>2766</td> <td>0004270 <td>0432</td> <td>14798 </td></td>	2766	0004270 <td>0432</td> <td>14798 </td>	0432	14798													
		OBS	0400	0487 <td>34938 <td>2766</td> <td></td> <td></td> <td>14798 </td></td>	34938 <td>2766</td> <td></td> <td></td> <td>14798 </td>	2766			14798													
		STD	0500	0453 <td>3494 <td>2770</td> <td>0004233 <td>0474</td> <td>14808 </td></td></td>	3494 <td>2770</td> <td>0004233 <td>0474</td> <td>14808 </td></td>	2770	0004233 <td>0474</td> <td>14808 </td>	0474	14808													
		OBS	0500	0453 <td>34942 <td>2770</td> <td></td> <td></td> <td>14808 </td></td>	34942 <td>2770</td> <td></td> <td></td> <td>14808 </td>	2770			14808													
		STD	0600	0435 <td>3495 <td>2773</td> <td>0004234 <td>0516</td> <td>14821 </td></td></td>	3495 <td>2773</td> <td>0004234 <td>0516</td> <td>14821 </td></td>	2773	0004234 <td>0516</td> <td>14821 </td>	0516	14821													
		OBS	0600	0435 <td>34947 <td>2773</td> <td></td> <td></td> <td>14821 </td></td>	34947 <td>2773</td> <td></td> <td></td> <td>14821 </td>	2773			14821													
		STD	0700	0411 <td>3493 <td>2774</td> <td>0004165 <td>0558</td> <td>14835 </td></td></td>	3493 <td>2774</td> <td>0004165 <td>0558</td> <td>14835 </td></td>	2774	0004165 <td>0558</td> <td>14835 </td>	0558	14835													
		OBS	0700	0411 <td>34930 <td>2774</td> <td></td> <td></td> <td>14835 </td></td>	34930 <td>2774</td> <td></td> <td></td> <td>14835 </td>	2774			14835													
		STD	0800	0396 <td>3493 <td>2776</td> <td>0004200 <td>0400</td> <td>14850 </td></td></td>	3493 <td>2776</td> <td>0004200 <td>0400</td> <td>14850 </td></td>	2776	0004200 <td>0400</td> <td>14850 </td>	0400	14850													
		OBS	0800	0396 <td>34930 <td>2776</td> <td></td> <td></td> <td>14850 </td></td>	34930 <td>2776</td> <td></td> <td></td> <td>14850 </td>	2776			14850													
		STD	0900	0380 <td>3492 <td>2777</td> <td>0004173 <td>0642</td> <td>14866 </td></td></td>	3492 <td>2777</td> <td>0004173 <td>0642</td> <td>14866 </td></td>	2777	0004173 <td>0642</td> <td>14866 </td>	0642	14866													
		OBS	0900	0380 <td>34922 <td>2777</td> <td></td> <td></td> <td>14866 </td></td>	34922 <td>2777</td> <td></td> <td></td> <td>14866 </td>	2777			14866													
		STD	1000	0372 <td>3492 <td>2777</td> <td>0004093 <td>0684</td> <td>14880 </td></td></td>	3492 <td>2777</td> <td>0004093 <td>0684</td> <td>14880 </td></td>	2777	0004093 <td>0684</td> <td>14880 </td>	0684	14880													
		OBS	1000	0372 <td>34921 <td>2777</td> <td></td> <td></td> <td>14880 </td></td>	34921 <td>2777</td> <td></td> <td></td> <td>14880 </td>	2777			14880													
		STD	1100	0364 <td>3493 <td>2779</td> <td>0004153 <td>0725</td> <td>14896 </td></td></td>	3493 <td>2779</td> <td>0004153 <td>0725</td> <td>14896 </td></td>	2779	0004153 <td>0725</td> <td>14896 </td>	0725	14896													
		OBS	1100	0364 <td>34929 <td>2779</td> <td></td> <td></td> <td>14896 </td></td>	34929 <td>2779</td> <td></td> <td></td> <td>14896 </td>	2779			14896													
		STD	1200	0360 <td>3493 <td>2779</td> <td></td> <td></td> <td></td> </td>	3493 <td>2779</td> <td></td> <td></td> <td></td>	2779																
		OBS	1200	0360 <td>34929 <td>2779</td> <td></td> <td></td> <td></td> </td>	34929 <td>2779</td> <td></td> <td></td> <td></td>	2779																
		STD	1300	0357 <td>3494 <td>2780</td> <td></td> <td></td> <td></td> </td>	3494 <td>2780</td> <td></td> <td></td> <td></td>	2780																
		OBS	1300	0357 <td>34939 <td>2780</td> <td></td> <td></td> <td></td> </td>	34939 <td>2780</td> <td></td> <td></td> <td></td>	2780																
		STD	1400	0350 <td>3495 <td>2782</td> <td></td> <td></td> <td></td> </td>	3495 <td>2782</td> <td></td> <td></td> <td></td>	2782																
		OBS	1400	0350 <td>34949 <td>2782</td> <td></td> <td></td> <td></td> </td>	34949 <td>2782</td> <td></td> <td></td> <td></td>	2782																
		STD	1500	0349 <td>3495 <td>2782</td> <td></td> <td></td> <td></td> </td>	3495 <td>2782</td> <td></td> <td></td> <td></td>	2782																
		OBS	1500	0349 <td>34950 <td>2782</td> <td></td> <td></td> <td></td> </td>	34950 <td>2782</td> <td></td> <td></td> <td></td>	2782																

TABLE X.—Continued

REFERENCE CIPF NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	E W	MAGNETIC CORRECTION			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE DIRECTION	WAVE PERIOD	WAVE HEIGHT	WEA- THER CODE	CLOUD CODES	WIND DIR	WIND SPEED	NO. DC STATION NUMBER	NO. DC STATION NUMBER	NO. DC STATION NUMBER
					1'	1'	10'	10'	MO	DAY		HR	MIN											
318043	HT	5242 N	03542 W	D	184	25	04	17	233	1968	C20	020	3566	15	01		2	X2	0 3					0020
MISSENGER TIME NO.	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SOUND VELOCITY		SOUND VELOCITY	OBS. DEPTH	SPECIAL OBSERVATIONS													
							1000	2000																
		STD	0000	0647	3475	2731	0007684	0000	14766															
233		OBS	0000	0647	34750	2731			14766															
		STD	0010	0647	3475	2731	0007699	0008	14768															
		OBS	0010	0647	34750	2731			14768															
		STD	0020	0647	3475	2732	0007684	0015	14770															
004		OBS	0020	0647	34754	2732			14770															
		STD	0030	0646	3476	2732	0007671	0023	14771															
		OBS	0030	0646	34756	2732			14771															
		STD	0050	0633	3477	2735	0007470	0038	14769															
		OBS	0050	0633	34765	2735			14769															
		STD	0075	0631	3477	2736	0007408	0057	14772															
		OBS	0075	0631	34780	2736			14772															
		STD	0090	0629	3478	2739	0007105	0075	14767															
		OBS	0090	0607	34780	2739			14767															
		STD	0105	0603	34778	2739			14766															
		OBS	0105	0603	34778	2739			14766															
		STD	0125	0605	3479	2740	0007041	0093	14771															
		OBS	0125	0605	34790	2740			14771															
		STD	0130	0617	34805	2740			14776															
		OBS	0130	0617	34805	2740			14776															
		STD	0150	0597	3479	2741	0006976	0110	14772															
		OBS	0150	0597	34790	2741			14772															
		STD	0160	0599	34820	2743			14774															
		OBS	0160	0599	34820	2743			14774															
		STD	0175	0593	34838	2745			14775															
		OBS	0175	0593	34838	2745			14775															
		STD	0200	0580	3486	2749	0006298	0143	14774															
		OBS	0200	0580	34862	2749			14774															
		STD	0250	0535	3489	2757	0005622	0173	14764															
		OBS	0250	0535	3489	2757			14764															
		STD	0300	0510	3493	2763	0005059	0200	14763															
		OBS	0300	0510	3493	2763			14763															
		STD	0400	0463	3492	2768	0004693	0249	14760															
		OBS	0400	0463	3492	2768			14760															
		STD	0500	0463	34923	2768	0004511	0295	14769															
		OBS	0500	0463	3493	2771			14769															
		STD	0600	0428	3495	2774	0004322	0339	14779															
		OBS	0600	0428	3495	2774			14779															
		STD	0700	0405	3494	2775	0004243	0382	14785															
		OBS	0700	0405	3494	2775			14785															
		STD	0800	0390	3493	2777	0004171	0424	14796															
		OBS	0800	0390	3493	2777			14796															
		STD	0900	0377	3493	2778	0004146	0465	14807															
		OBS	0900	0377	3493	2778			14807															
		STD	1000	0366	3493	2779	0004089	0506	14819															
		OBS	1000	0366	3493	2779			14819															
		STD	1100	0361	3493	2780	0004092	0547	14834															
		OBS	1100	0361	3493	2780			14834															
		STD	1200	0357	3494	2780	0004120	0588	14849															
		OBS	1200	0357	3494	2780			14849															
		STD	1250	0355	34937	2780			14854															
		OBS	1250	0355	34937	2780			14854															
		STD	1300	0354																				
		OBS	1300	0354																				
		STD	1400	0353																				
		OBS	1400	0353																				
		STD	1500	0351																				
		OBS	1500	0351																				

TABLE X.—Continued

REFERENCE CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE ° /10	LONGITUDE ° /10	E S	MARSSEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF FATHOMS	WAVE OBSERVATIONS			WEA- THES CODE	CLOUD CODES TYP (AMT)	MOOD STATION NUMBER		
						1°	1'	MO	DAT	HR	MIN		SEC	CRUISE NO.			STATION NUMBER	DIR.	PER				SEA	
318043	HT		5242 N	03515 W	D	184	25	04	18	112	1968	C20	021	3566	15	36				3	X2	0	3	0021
						WATER		WIND		AIR TEMP. °C			NO. OBS. DEPTHS			SPECIAL OBSERVATIONS								
						COLOR CODE	TRAIL (m)	DIR.	SPED OR FORCE	BAROMETER (mb)	DRY SULE	WET SULE	VE. CODE											
						DT	SD	35	S29	081	067	067	6	33										
REFERENCE TIME HR /10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SGMA-T	SPECIFIC VOLUME ANOMALY-20°	S. Δ D. DTH. M. S 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>4</sub> -Si pg - ml/l	pH	S °C							
	112	STD	0000	0656	3476	2731	0007708	0000	14770															
		OBS	0000	0656	3476	2731			14770															
		STD	0010	0656	3476	2731	0007724	0008	14772															
		OBS	0010	0656	3476	2731			14772															
		STD	0020	0655	3476	2731	0007726	0015	14773															
	003	OBS	0020	0655	3476	2731			14773															
		STD	0030	0654	3476	2732	0007728	0023	14774															
		OBS	0030	0654	3476	2732			14774															
		OBS	0040	0654	3476	2732			14776															
		STD	0050	0644	3479	2735	0007407	0038	14774															
		OBS	0050	0644	3479	2735			14774															
		OBS	0055	0629	3478	2736			14769															
		STD	0075	0626	3480	2738	0007157	0057	14771															
		OBS	0075	0626	3480	2738			14771															
		OBS	0080	0625	3481	2740			14772															
		STD	0100	0613	3481	2741	0006963	0074	14770															
		OBS	0100	0613	3480	2741			14770															
		OBS	0110	0601	3478	2741			14767															
		OBS	0120	0589	3478	2741			14763															
		STD	0125	0595	3480	2742	0006842	0091	14767															
		OBS	0125	0595	3480	2742			14767															
		STD	0150	0583	3480	2744	0006751	0108	14766															
		OBS	0150	0583	3479	2744			14766															
		OBS	0160	0576	3481	2746			14765															
		STD	0200	0582	3488	2750	0006189	0141	14775															
		OBS	0200	0582	3488	2750			14775															
		STD	0250	0561	3491	2755	0005803	0171	14775															
		OBS	0250	0561	3490	2755			14775															
		STD	0300	0514	3492	2762	0005203	0198	14764															
		OBS	0300	0514	3491	2762			14764															
		OBS	0330	0482	3490	2764			14756															
		OBS	0380	0469	3490	2766			14759															
		OBS	0390	0479	3493	2768			14765															
		STD	0400	0474	3494	2768	0004671	0248	14765															
		OBS	0400	0474	3493	2768			14765															
		STD	0500	0445	3494	2771	0004437	0293	14769															
		OBS	0500	0445	3494	2771			14769															
		STD	0600	0426	3494	2774	0004321	0337	14778															
		OBS	0600	0426	3494	2774			14778															
		STD	0700	0409	3494	2775	0004252	0380	14787															
		OBS	0700	0409	3494	2775			14787															
		STD	0800	0391	3494	2777	0004153	0422	14796															
		OBS	0800	0391	3493	2777			14796															
		STD	0900	0378	3493	2778	0004128	0463	14807															
		OBS	0900	0378	3493	2778			14807															
		STD	1000	0369	3493	2778	0004132	0505	14820															
		OBS	1000	0369	3493	2778			14820															
		STD	1100	0362	3494	2780	0004067	0546	14834															
		OBS	1100	0362	3493	2780			14834															
		STD	1200	0357	3494	2780	0004090	0586	14849															
		OBS	1200	0357	3493	2780			14849															
		STD	1300	0355	3495	2781	0004104	0627	14865															
		OBS	1300	0355	3494	2781			14865															
		STD	1400	0348	3495	2782	0004097	0668	14879															
		OBS	1400	0348	3494	2782			14879															
		STD	1500	0345	3496	2783	0004051	0709	14894															
		OBS	1500	0345	3495	2783			14894															

TABLE X.—Continued

REFERENCE		SHIP CODE	LATITUDE ° ' /18	LONGITUDE ° ' /18	MARSSEN SQUARE	STATION TIME (GMT)			YEAR	OBSERVATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SMLPLY	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TNN AMT	MOOD STATION NUMBER
CTRY CODE	IO. NO.					CRUISE NO.	STATION NUMBER	MO		DAY	HR. /10			DR.	HGT	PER			
318043	HT	5238 N	03540 W	184 25 04 19 172	1968	C20	022	3072	15	32				3	XZ	0 3		0022	
WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTH	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER	DRY BULB	WET BULB	VEL. CODE												
DT	SD	34	S20	088	061	096	7	32											
MESSAGE TIME HR /10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D DTR. AL. E TP	SOUND VELOCITY	O <sub>2</sub> %/1	PO <sub>2</sub> -P pg - 474	TOTAL-P pg - 474	NO <sub>3</sub> -N pg - 467	NO <sub>2</sub> -N pg - 467	SiO <sub>2</sub> -S pg - 467	pH	ST. C.		
	172	STD	0000	0633	3480	2738	0007105	0000	14761										
		OBS	0000	0633	34804	2738			14761										
		STD	0010	0632	3480	2738	0007107	0007	14763										
		OBS	0010	0632	34804	2738			14763										
		STD	0020	0632	3480	2738	0007122	0014	14764										
	005	OBS	0020	0632	34804	2738			14764										
		STD	0030	0632	3480	2738	0007136	0021	14766										
		OBS	0030	0632	34804	2738			14766										
		STD	0050	0630	3480	2738	0007141	0036	14768										
		OBS	0050	0630	34804	2738			14768										
		STD	0075	0629	3480	2738	0007165	0054	14772										
		OBS	0075	0629	34804	2738			14772										
		STD	0100	0626	3481	2739	0007156	0071	14775										
		OBS	0100	0626	34805	2739			14775										
		OBS	0124	0625	34805	2739			14779										
		STD	0125	0625	3481	2739	0007143	0089	14779										
		STD	0150	0620	3482	2741	0007019	0107	14781										
		OBS	0150	0620	34823	2741			14781										
		OBS	0190	0608	34860	2745			14783										
		STD	0200	0599	3487	2747	0006475	0141	14782										
		OBS	0200	0599	34870	2747			14782										
		OBS	0230	0556	34893	2754			14769										
		STD	0250	0551	3489	2755	0005771	0171	14771										
		OBS	0250	0551	34894	2755			14771										
		OBS	0255	0542	34895	2756			14768										
		OBS	0260	0548	34918	2757			14772										
		OBS	0285	0533	34927	2760			14770										
		OBS	0285	0524	34930	2761			14767										
		OBS	0290	0529	3494	2761	0005248	0199	14771										
		STD	0300	0529	34937	2761			14771										
		OBS	0300	0480	3492	2766	0004913	0250	14767										
		STD	0400	0480	34920	2766			14767										
		OBS	0400	0480	34930	2766			14772										
		OBS	0430	0480	34930	2766			14768										
		OBS	0445	0465	34928	2768			14772										
		STD	0500	0451	3494	2770	0004544	0297	14772										
		OBS	0500	0451	34939	2770			14772										
		STD	0600	0425	3494	2773	0004339	0341	14777										
		OBS	0600	0425	34940	2773			14777										
		STD	0700	0406	3494	2775	0004233	0384	14786										
		OBS	0700	0406	34938	2775			14786										
		STD	0800	0390	3493	2776	0004193	0426	14796										
		OBS	0800	0390	34931	2776			14796										
		STD	0900	0379	3493	2777	0004177	0468	14808										
		OBS	0900	0379	34928	2777			14808										
		STD	1000	0368	3492	2778	0004194	0510	14820										
		OBS	1000	0368	34920	2778			14820										
		STD	1100	0359	3492	2779	0004150	0552	14833										
		OBS	1100	0359	34923	2779			14833										
		STD	1200	0356	3494	2780	0004078	0593	14848										
		OBS	1200	0356	34939	2780			14848										
		STD	1300	0353	3494	2781	0004101	0634	14864										
		OBS	1300	0353	34942	2781			14864										
		STD	1400	0350	3496	2782	0004049	0675	14880										
		OBS	1400	0350	34955	2782			14880										
		STD	1500	0348	3497	2784	0004008	0715	14896										
		OBS	1500	0348	34968	2784			14896										

TABLE X.—Continued

REFERENCE	SHIP CODE	LATITUDE ° ' /18	LONGITUDE ° ' /18	SECTION	MAGNETIC SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		MOSC STATION NUMBER					
					10'	1'	MO	DAY	HR/10		CRUISE NO.	STATION NUMBER			DR.	HGT	SEA		TR	AMT						
318043	HT	52465N	03532 W	184	25	04	20	050	1968	C20	023	3302	15	34			3	X2	0	3	0023					
					WATER		WIND		BARO-METER (mb)		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS											
					COLOR CODE	TRANS. DIR.	DIR. OF FORCE	DIR. HUB	WET BULB	VIS. CODE																
					DT	SD	34	S17	119	067	056	6	30													
MESSAGE TIME ME 1/18	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-26T	∆ D DYN. M. S. 10 <sup>2</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg - ml/l	TOTAL-P µg - ml/l	NO <sub>3</sub> -N µg - ml/l	NO <sub>2</sub> -N µg - ml/l	SiO <sub>4</sub> -Si µg - ml/l	pH	SIC									
		STD	0000	0633	3482	2739	0007000	0000	14762																	
	050	OBS	0000	0633	34818	2739			14762																	
		STD	0010	0633	3482	2739	0007015	0007	14763																	
		OBS	0010	0633	34818	2739			14763																	
		STD	0020	0633	3482	2739	0007030	0014	14765																	
	005	OBS	0020	0633	34818	2739			14765																	
		STD	0030	0633	3482	2739	0007045	0021	14767																	
		OBS	0030	0633	34818	2739			14767																	
		STD	0050	0634	3482	2739	0007087	0035	14770																	
		OBS	0050	0634	34818	2739			14770																	
		STD	0075	0634	3482	2739	0007124	0053	14774																	
		OBS	0075	0634	34818	2739			14774																	
		STD	0100	0633	3482	2739	0007156	0071	14778																	
		OBS	0100	0633	34817	2739			14778																	
		STD	0125	0630	3481	2739	0007177	0089	14781																	
		OBS	0125	0630	34814	2739			14781																	
		STD	0150	0627	3488	2744	0006706	0106	14785																	
		OBS	0150	0627	34877	2744			14785																	
		OBS	0190	0621	34946	2750			14790																	
		STD	0200	0608	3495	2752	0006023	0138	14786																	
		OBS	0200	0608	34946	2752			14786																	
		STD	0250	0568	3495	2757	0005592	0167	14778																	
		OBS	0250	0568	34946	2757			14778																	
		OBS	0265	0561	34956	2759			14778																	
		STD	0300	0530	3494	2761	0005268	0194	14771																	
		OBS	0300	0530	34936	2761			14771																	
		OBS	0315	0518	34911	2760			14768																	
		OBS	0325	0498	34901	2762			14762																	
		STD	0400	0460	3490	2766	0004844	0245	14758																	
		OBS	0400	0460	34898	2766			14758																	
		OBS	0410	0459	34915	2768			14760																	
		OBS	0415	0466	34926	2768			14764																	
		STD	0500	0450	3494	2770	0004554	0292	14771																	
		OBS	0500	0450	34936	2770			14771																	
		STD	0600	0422	3494	2773	0004341	0336	14776																	
		OBS	0600	0422	34935	2773			14776																	
		STD	0700	0401	3495	2775	0004256	0379	14784																	
		OBS	0700	0401	34927	2775			14784																	
		STD	0800	0389	3495	2776	0004211	0421	14795																	
		OBS	0800	0389	34927	2776			14795																	
		STD	0900	0378	3495	2777	0004188	0463	14807																	
		OBS	0900	0378	34925	2777			14807																	
		STD	1000	0369	3492	2778	0004213	0505	14820																	
		OBS	1000	0369	34919	2778			14820																	
		STD	1100	0359	3492	2778	0004187	0547	14833																	
		OBS	1100	0359	34918	2778			14833																	
		STD	1200	0356	3493	2780	0004159	0589	14848																	
		OBS	1200	0356	34928	2780			14848																	
		STD	1300	0348	3494	2781	0004084	0630	14862																	
		OBS	1300	0348	34936	2781			14862																	
		STD	1400	0344	3494	2782	0004077	0671	14877																	
		OBS	1400	0344	34941	2782			14877																	
		STD	1500	0342	3495	2782	0004101	0712	14893																	
		OBS	1500	0342	34945	2782			14893																	



TABLE X.—Continued

REFERENCE CTD NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	WATER SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'G	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER			
					MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT.	PER.	SEA						
318043	HT	52415N	03531 W	184	25	04	20	114	1968	C20	024	3566	15	35			2	X2	0	3		0024
				WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTH		SPECIAL OBSERVATIONS								
				COLOR CODE	TRANL. M	DIR.	SPEED OR FORCE	UNBO.	DRY BULB	WET BULB	WIL CODE											
				DT	SD	34	525	142	072	056	7											
MEASURED TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20	$\Sigma \Delta$ DTN M $\times 10^3$	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg - ml/l	TOTAL-P µg - ml/l	NO <sub>3</sub> -N µg - ml/l	NO <sub>2</sub> -N µg - ml/l	SiO <sub>4</sub> -S µg - ml/l	pH	1 C C					
	114	STD	0000	0635	3481	2738	0007100	0000	14762													
		OBS	0000	0635	34808	2738			14762													
		STD	0010	0635	3481	2738	0007115	0007	14764													
		OBS	0010	0635	34808	2738			14764													
		STD	0020	0635	3481	2738	0007129	0014	14766													
	002	OBS	0020	0635	34808	2738			14766													
		STD	0030	0635	3481	2738	0007144	0021	14767													
		OBS	0030	0635	34808	2738			14767													
		STD	0050	0635	3481	2738	0007174	0036	14771													
		OBS	0050	0635	34808	2738			14771													
		OBS	0060	0635	34808	2738			14772													
		STD	0075	0635	3481	2738	0007211	0054	14775													
		OBS	0075	0635	34808	2738			14775													
		STD	0100	0632	3481	2738	0007210	0072	14778													
		OBS	0100	0632	34808	2738			14778													
		STD	0125	0621	3481	2739	0007107	0090	14777													
		OBS	0125	0621	34808	2739			14777													
		STD	0150	0617	3483	2742	0006944	0107	14780													
		OBS	0150	0617	34828	2742			14780													
		STD	0200	0613	3488	2746	0006593	0141	14787													
		OBS	0200	0613	34878	2746			14787													
		OBS	0220	0582	34882	2750			14778													
		STD	0250	0543	3488	2755	0005763	0172	14767													
		OBS	0250	0543	34882	2755			14767													
		OBS	0260	0522	34882	2758			14760													
		STD	0300	0511	3488	2759	0005443	0200	14763													
		OBS	0300	0511	34882	2759			14763													
		STD	0400	0480	3491	2765	0005002	0252	14767													
		OBS	0400	0480	34908	2765			14767													
		OBS	0450	0470	34928	2767			14771													
		STD	0500	0453	3493	2769	0004649	0300	14772													
		OBS	0500	0453	34928	2769			14772													
		STD	0600	0435	3493	2771	0004544	0346	14781													
		OBS	0600	0435	34928	2771			14781													
		STD	0700	0408	3492	2773	0004404	0391	14787													
		OBS	0700	0408	34918	2773			14787													
		STD	0800	0392	3492	2775	0004313	0435	14796													
		OBS	0800	0392	34918	2775			14796													
		STD	0900	0379	3491	2776	0004325	0478	14808													
		OBS	0900	0379	34908	2776			14808													
		STD	1000	0372	3491	2776	0004330	0521	14821													
		OBS	1000	0372	34908	2776			14821													
		STD	1100	0364	3491	2777	0004320	0564	14835													
		OBS	1100	0364	34908	2777			14835													
		STD	1200	0358	3492	2779	0004257	0607	14849													
		OBS	1200	0358	34918	2779			14849													
		STD	1300	0355	3494	2780	0004155	0649	14865													
		OBS	1300	0355	34938	2780			14865													
		STD	1400	0355	3494	2780	0004236	0691	14882													
		OBS	1400	0355	34938	2780			14882													
		STD	1500	0344	3494	2782	0004177	0733	14894													
		OBS	1500	0344	34938	2782			14894													

TABLE X.—Continued

REFERENCE CITE CODE	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	L S Z	POSITION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAR. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA. THEE CODE	CLOUD CODES	WDC STATION NUMBER				
					MO	DAT	HR, 1/10		CRUISE NO.	STATION NUMBER			DR.	HGT	PER				SEA			
318043	HT	5245 N	03530 W	184	25	04	20	173	1968	C20	025	3603	15	33			3	X2	0	3		0025
WATER		WIND		BARO-		AIR TEMP. °C		NO. OBS.		SPECIAL												
COLOR CODE	TEMP. °C	DR.	DIR.	WIND SPEED	WIND DIRECTION	METER	DRY BULB	WET BULB	VIS. CODE	NO. DEPTHS	OBSERVATIONS											
DT	SD	32	S17	149	056	050	7	29														
MESSAGE TIME HR 1/10	CASE NO.	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°C	$\Sigma \Delta D$ DTM, M. S 1/2	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P µg - ml/l	TOTAL-P µg - ml/l	NO <sub>2</sub> -N µg - ml/l	NO <sub>3</sub> -N µg - ml/l	SI O <sub>2</sub> -S µg - ml/l	pH	S C					
	173	STD	0000	0638	3480	2736	0007234	0000	14763													
		OBS	0000	0636	34795	2736			14763													
		STD	0010	0637	3480	2737	0007222	0007	14765													
		OBS	0010	0637	34797	2737			14765													
		STD	0020	0637	3480	2737	0007229	0014	14766													
	005	OBS	0020	0637	34798	2737			14766													
		STD	0030	0637	3480	2737	0007244	0022	14768													
		OBS	0030	0637	34798	2737			14768													
		STD	0050	0634	3480	2737	0007236	0036	14770													
		OBS	0050	0634	34798	2737			14770													
		STD	0075	0633	3480	2737	0007260	0054	14774													
		OBS	0075	0633	34798	2737			14774													
		STD	0100	0631	3480	2737	0007264	0072	14777													
		OBS	0100	0631	34799	2737			14777													
		STD	0125	0628	3480	2738	0007256	0091	14780													
		OBS	0125	0628	34800	2738			14780													
		OBS	0140	0614	34822	2742			14777													
		STD	0150	0613	3485	2743	0006767	0108	14779													
		OBS	0150	0613	34845	2743			14779													
		OBS	0165	0611	34850	2744			14780													
		OBS	0175	0591	34850	2747			14774													
		OBS	0190	0589	34899	2751			14776													
		STD	0200	0581	3490	2752	0006050	0140	14775													
		OBS	0200	0581	34897	2752			14775													
		STD	0250	0533	3489	2757	0005598	0169	14763													
		OBS	0250	0533	34888	2757			14763													
		OBS	0270	0529	34889	2757			14765													
		STD	0300	0500	3488	2760	0005336	0197	14758													
		OBS	0300	0500	34879	2760			14758													
		STD	0400	0459	3489	2765	0004907	0248	14758													
		OBS	0400	0459	34888	2765			14758													
		STD	0500	0438	3490	2769	0004691	0296	14766													
		OBS	0500	0438	34899	2769			14766													
		STD	0600	0425	3491	2771	0004577	0342	14777													
		OBS	0600	0425	34908	2771			14777													
		STD	0700	0406	3491	2773	0004463	0387	14786													
		OBS	0700	0406	34907	2773			14786													
		STD	0800	0392	3490	2774	0004446	0432	14796													
		OBS	0800	0392	34900	2774			14796													
		STD	0900	0378	3490	2775	0004373	0476	14807													
		OBS	0900	0378	34900	2775			14807													
		STD	1000	0369	3491	2777	0004302	0519	14820													
		OBS	1000	0369	34907	2777			14820													
		STD	1100	0361	3491	2778	0004277	0562	14833													
		OBS	1100	0361	34909	2778			14833													
		STD	1200	0357	3492	2779	0004216	0605	14849													
		OBS	1200	0357	34922	2779			14849													
		STD	1300	0352	3492	2779	0004236	0647	14863													
		OBS	1300	0352	34922	2779			14863													
		STD	1400	0348	3492	2780	0004252	0689	14878													
		OBS	1400	0348	34924	2780			14878													
		STD	1500	0346	3493	2781	0004276	0732	14894													
		OBS	1500	0346	34928	2781			14894													

TABLE X.—Continued

REFERENCE SHIP NO.	SHIP CODE	LATITUDE 1/18	LONGITUDE 1/18	E 30 D	STATION TIME (GMT)			YEAR	ORIGINATOR'S STATION NUMBER		DEPTH TO BOTTOM	WAVE OBSERVATIONS	WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER		
					MO	DAY	HR:1/18		CRUISE NO.	STATION NUMBER							
318043	HT	5242 N	035165W	D	184	25	04 20 233	1968	C20 026	3383	15 33		3	X2	0 3	0026	
		WATER		WIND		SAND- METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS					
		COLOR		DIR.		SPEED OF FORCE		DRY BULB		WET BULB							
		DT		SD		S20		152		061		044		7		25	
MESSAGE TIME HR 1/18	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SOUND VELOCITY (M/S)	Δ D DTN. M. X 10 <sup>3</sup>	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>4</sub> -Si pg - ml/l	pH	CO <sub>2</sub>		
		STD	0000	0637	3483	2739	0006975	0000								14763	
	233	OBS	0000	0637	34828	2739										14763	
		STD	0010	0637	3483	2739	0006990	0007								14765	
		OBS	0010	0637	34828	2739										14765	
		STD	0020	0637	3483	2739	0007005	0014								14767	
	005	OBS	0020	0637	34828	2739										14767	
		STD	0030	0637	3483	2739	0007005	0021								14768	
		OBS	0030	0637	34830	2739										14768	
		STD	0050	0637	3483	2739	0007020	0035								14772	
		OBS	0050	0637	34832	2739										14772	
		STD	0075	0637	3483	2739	0007050	0053								14776	
		OBS	0075	0637	34833	2739										14776	
		STD	0100	0631	3484	2741	0006959	0070								14778	
		OBS	0100	0631	34840	2741										14778	
		STD	0125	0627	3485	2742	0006908	0087								14780	
		OBS	0150	0623	3485	2743	0006856	0105								14783	
		STD	0150	0623	34850	2743										14783	
		OBS	0200	0615	3494	2751	0006156	0137								14789	
		STD	0200	0615	34940	2751										14789	
		OBS	0240	0565	34920	2755										14775	
		STD	0250	0570	3493	2755	0005773	0167								14779	
		OBS	0250	0570	34925	2755										14779	
		STD	0270	0536	34940	2761										14769	
		OBS	0300	0505	3492	2763	0005089	0194								14761	
		STD	0300	0505	34920	2763										14761	
		OBS	0400	0477	3494	2768	0004699	0243								14766	
		STD	0400	0477	34944	2768										14766	
		OBS	0500	0452	3496	2772	0004399	0289								14772	
		STD	0500	0452	34960	2772										14772	
		OBS	0600	0427	3496	2775	0004213	0332								14778	
		STD	0600	0427	34960	2775										14778	
		OBS	0700	0408	3496	2777	0004092	0373								14787	
		STD	0700	0408	34960	2777										14787	
		OBS	0800	0390	3496	2779	0003978	0414								14796	
		STD	0800	0390	34960	2779										14796	
		OBS	0900	0379	3496	2780	0003940	0453								14808	
		STD	0900	0379	34960	2780										14808	
		OBS	1000	0369	3496	2781	0003910	0492								14821	
		STD	1000	0369	34960	2781										14821	
		OBS	1100	0362	3496	2781	0003913	0531								14834	
		STD	1100	0362	34960	2781										14834	
		OBS	1200	0358	3496	2782	0003948	0571								14850	
		STD	1200	0358	34960	2782										14850	
		OBS	1300	0354	3498	2784	0003834	0610								14865	
		STD	1300	0354	34980	2784										14865	
		OBS	1400	0347	3499	2785	0003755	0648								14879	
		STD	1400	0347	34990	2785										14879	
		OBS	1500	0340	3501	2788	0003599	0684								14893	
		STD	1500	0340	35010	2788										14893	

TABLE X.—Continued

REFERENCE CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	S E E S	W/3325N SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR		DEPTH TO BOTTOM	MAX. DEPTH OF FATHOMS	WAVE OBSERVATIONS			WEA- THIR CODE	CLOUD CODE	MDDC STATION NUMBER																															
						16'	1'	MO	DAT		HR	1/10			CAUSE NO.	STATION NUMBER	DR				HG	PER	SEA																												
318043	HT		5255 N	03550 W	D	184	25 04 21	052	1968		C20 027	3199	15	31			2	X2	0 3		0027																														
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th colspan="2">BARO- METER</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIL CODE</th> <th rowspan="2">NO. OBS. DEFNS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS MM</th> <th>DR.</th> <th>SPEED OR FORCE</th> <th>BARO- METER MMHG</th> <th>DRY BULB</th> <th>WET BULB</th> <th>NO.</th> </tr> <tr> <th>DT</th> <th>SD</th> <th>30</th> <th>S20</th> <th>139</th> <th>056</th> <th>050</th> <th>7</th> <th>31</th> <th colspan="2"></th> </tr> </thead> </table>																						WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEFNS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS MM	DR.	SPEED OR FORCE	BARO- METER MMHG	DRY BULB	WET BULB	NO.	DT	SD	30	S20	139	056	050	7	31		
WATER		WIND		BARO- METER		AIR TEMP. °C		VIL CODE	NO. OBS. DEFNS	SPECIAL OBSERVATIONS																																									
COLOR CODE	TRANS MM	DR.	SPEED OR FORCE	BARO- METER MMHG	DRY BULB	WET BULB	NO.																																												
DT	SD	30	S20	139	056	050	7	31																																											
MESSAGE NO. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	Sigma-t	SPECIFIC VOLUME ANOMALY -210°	Σ Δ D DYN. M. Σ 10°	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>2</sub> -N pg - ml/l	SiO <sub>4</sub> -Si pg - ml/l	pH	3 C C																																		
		STD	0000	0628	3481	2739	0006982	0000	14760																																										
	052	OBS	0000	0628	34812	2739			14760																																										
		STD	0010	0628	3481	2739	0006997	0007	14761																																										
		OBS	0010	0628	34812	2739			14761																																										
		STD	0020	0628	3481	2739	0007012	0014	14763																																										
	004	OBS	0020	0628	34812	2739			14763																																										
		STD	0030	0629	3481	2739	0007039	0021	14765																																										
		OBS	0030	0629	34812	2739			14765																																										
		STD	0050	0629	3481	2739	0007069	0035	14768																																										
		OBS	0050	0629	34812	2739			14768																																										
		STD	0075	0630	3481	2739	0007118	0053	14773																																										
		OBS	0075	0630	34812	2739			14773																																										
		STD	0100	0634	3483	2740	0007071	0071	14779																																										
		OBS	0100	0634	34830	2740			14779																																										
		STD	0125	0634	3485	2741	0006959	0088	14783																																										
		OBS	0125	0634	34850	2741			14783																																										
		STD	0140	0633	34890	2744			14786																																										
		OBS	0140	0633	34890	2744			14786																																										
		STD	0150	0632	3492	2747	0006464	0105	14787																																										
		OBS	0150	0632	34918	2747			14787																																										
		STD	0200	0629	3495	2749	0006299	0137	14795																																										
		OBS	0200	0629	34945	2749			14795																																										
		STD	0250	0629	3496	2751	0006239	0168	14803																																										
		OBS	0250	0629	34963	2751			14803																																										
		STD	0300	0572	3496	2758	0005612	0198	14788																																										
		OBS	0300	0572	34959	2758			14788																																										
		STD	0370	0524	34949	2763			14780																																										
		OBS	0370	0524	34949	2763			14780																																										
		STD	0380	0506	34937	2764			14774																																										
		OBS	0400	0501	3494	2765	0005012	0251	14776																																										
		STD	0400	0501	34940	2765			14776																																										
		OBS	0410	0486	34930	2766			14771																																										
		STD	0425	0484	34948	2767			14773																																										
		OBS	0435	0470	34930	2768			14769																																										
		STD	0500	0459	3494	2770	0004637	0299	14775																																										
		OBS	0500	0459	34939	2770			14775																																										
		STD	0600	0433	3494	2772	0004439	0345	14781																																										
		OBS	0600	0433	34939	2772			14781																																										
		STD	0700	0409	3493	2774	0004327	0388	14787																																										
		OBS	0700	0409	34930	2774			14787																																										
		STD	0800	0391	3492	2775	0004279	0431	14796																																										
		OBS	0800	0391	34921	2775			14796																																										
		STD	0900	0379	3492	2777	0004236	0474	14808																																										
		OBS	0900	0379	34920	2777			14808																																										
		STD	1000	0370	3493	2778	0004166	0516	14821																																										
		OBS	1000	0370	34927	2778			14821																																										
		STD	1100	0364	3493	2779	0004180	0558	14835																																										
		OBS	1100	0364	34927	2779			14835																																										
		STD	1200	0356	3493	2780	0004145	0599	14848																																										
		OBS	1200	0356	34930	2780			14848																																										
		STD	1300	0351	3494	2781	0004106	0641	14863																																										
		OBS	1300	0351	34938	2781			14863																																										
		STD	1400	0347	3494	2781	0004114	0682	14878																																										
		OBS	1400	0347	34941	2781			14878																																										
		STD	1500	0347	3495	2782	0004127	0723	14895																																										
		OBS	1500	0347	34950	2782			14895																																										

TABLE X.—Continued

REFERENCE CIP CODE	SHIP CODE	LATITUDE ° 1/18	LONGITUDE ° 1/18	E W	SECTION SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS	WAVE CODE	CLOUD CODES	NODC STATION NUMBER			
					10'	1'	MO	DAY	HR:1/10	CRUISE NO.		STATION NUMBER									
318043	HT	5248 N	03542 W	D	184	25	04	21	117	1968	C20	028	3292	15	33		2	X2	0	3	0028
				WATER		WIND		SARDO- METER		AIR TEMP. °C		NO. OIL DEPTHS		SPECIAL OBSERVATIONS							
				COLON CODE	THAL M	DEL.	SPEED OR FORCE	DIR	DRY BULB	WET BULB	VEL CODE										
				DT	SD	33	S11	159	044	028	7	32									
ADDRESS NO. 1/18	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPPIC VOLUME ANOMALY- $\sigma_{\theta}$	$\Sigma \Delta D$ DYN. AL. 1/10	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>2</sub> -N pg - ml/l	SiO <sub>4</sub> -S pg - ml/l	PH	SIC CODE				
		STD	0000	0636	3482	2738	0007023	0000	14763												
114		OBS	0000	0636	34820	2738			14763												
		STD	0010	0636	3482	2738	0007038	0007	14765												
		OBS	0010	0636	34820	2738			14765												
		STD	0020	0636	3482	2738	0007052	0014	14766												
004		OBS	0020	0636	34820	2738			14766												
		STD	0030	0636	3482	2738	0007067	0021	14768												
		OBS	0030	0636	34820	2738			14768												
		STD	0050	0636	3483	2739	0007060	0035	14771												
		OBS	0050	0636	34825	2739			14771												
		STD	0075	0636	3483	2739	0007097	0053	14775												
		OBS	0075	0636	34825	2739			14775												
		STD	0100	0635	3483	2739	0007121	0071	14779												
		OBS	0100	0635	34825	2739			14779												
		STD	0125	0628	3483	2740	0007032	0088	14780												
		OBS	0125	0628	34830	2740			14780												
		STD	0150	0625	3485	2742	0006881	0106	14784												
		OBS	0150	0625	34850	2742			14784												
		STD	0200	0617	3489	2746	0006554	0139	14789												
		OBS	0200	0617	34890	2746			14789												
		STD	0215	0613	34894	2747			14790												
		OBS	0225	0622	34950	2751			14796												
		STD	0250	0615	3497	2753	0006006	0171	14798												
		OBS	0250	0615	34970	2753			14798												
		STD	0270	0607	34992	2756			14798												
		OBS	0300	0567	3496	2758	0005542	0200	14786												
		STD	0300	0567	34960	2758			14786												
		OBS	0315	0549	34934	2759			14781												
		STD	0330	0549	34960	2761			14784												
		OBS	0365	0487	34900	2763			14764												
		STD	0400	0474	3490	2765	0004992	0252	14764												
		OBS	0400	0474	34900	2765			14764												
		STD	0420	0472	34900	2765			14767												
		OBS	0460	0472	34932	2767			14774												
		STD	0500	0459	3493	2769	0004704	0301	14775												
		OBS	0500	0459	34930	2769			14775												
		STD	0600	0435	3493	2771	0004529	0347	14781												
		OBS	0600	0435	34930	2771			14781												
		STD	0700	0412	3493	2774	0004361	0391	14788												
		OBS	0700	0412	34930	2774			14788												
		STD	0800	0393	3493	2776	0004235	0434	14797												
		OBS	0800	0393	34930	2776			14797												
		STD	0900	0379	3493	2777	0004162	0476	14808												
		OBS	0900	0379	34930	2777			14808												
		STD	1000	0367	3493	2779	0004109	0518	14819												
		OBS	1000	0367	34930	2779			14819												
		STD	1100	0359	3493	2779	0004098	0559	14833												
		OBS	1100	0359	34930	2779			14833												
		STD	1200	0355	3493	2780	0004132	0600	14848												
		OBS	1200	0355	34930	2780			14848												
		STD	1300	0350	3493	2781	0004123	0641	14863												
		OBS	1300	0350	34934	2781			14863												
		STD	1400	0345	3495	2782	0004045	0682	14877												
		OBS	1400	0345	34947	2782			14877												
		STD	1500	0340	3495	2783	0004039	0722	14892												
		OBS	1500	0340	34950	2783			14892												

TABLE X.—Continued

REFERENCE CTRY ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 7/10	E ZONE	GRID SQUARE			STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES	MDC STATION NUMBER			
					10'	1'	MO	DAY	HELIOT		NO.	STATION NUMBER			DIR.	PER	SEA							
318043	HT	5241 N	03532 W		184	25	04	21	172	1968	C20	029	3658	15	34				2	X1	0	3		0029
		WATER		WIND		LABO- METER		AIR TEMP. °C		NO. OF OBS. DEPTH		SPECIAL OBSERVATIONS												
		COLOR CODE	TRAN- SPAR- ENCY	DIR. OR FORCE	DIR. OR FORCE	DIR. OR FORCE	DIR. OR FORCE	DIR. OR FORCE	DIR. OR FORCE	DIR. OR FORCE	DIR. OR FORCE	DIR. OR FORCE	DIR. OR FORCE	DIR. OR FORCE										
		DT	SD	34	517	166	056	028	7	30														
INTER- VAL HR	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SGMA-T	SPECIFIC VOLUME ANOMALY-TEMP	Σ Δ D DYN. M. Σ 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>4</sub> -S pg - ml/l	pH	CTD							
		STD	0000	0637	3481	2738	0007102	0000	14763															
172		OBS	0000	0637	34811	2738			14763															
		STD	0010	0636	3481	2738	0007097	0007	14764															
		OBS	0010	0636	34812	2738			14764															
		STD	0020	0635	3481	2738	0007100	0014	14766															
005		OBS	0020	0635	34812	2738			14766															
		STD	0030	0633	3481	2738	0007089	0021	14767															
		OBS	0030	0633	34812	2738			14767															
		STD	0050	0632	3481	2738	0007106	0035	14769															
		OBS	0050	0632	34812	2738			14769															
		STD	0075	0631	3481	2739	0007116	0053	14773															
		OBS	0075	0631	34814	2739			14773															
		STD	0100	0626	3481	2739	0007089	0071	14775															
		OBS	0100	0626	34814	2739			14775															
		STD	0125	0623	3482	2740	0007028	0089	14778															
		OBS	0125	0623	34822	2740			14778															
		STD	0150	0620	3483	2741	0006974	0106	14781															
		OBS	0150	0620	34829	2741			14781															
		OBS	0160	0615	34830	2742			14781															
		STD	0200	0618	3488	2745	0006679	0140	14789															
		OBS	0200	0618	34875	2745			14789															
		OBS	0220	0593	34902	2751			14783															
		OBS	0240	0591	34928	2753			14786															
		STD	0250	0572	3492	2754	0005865	0172	14780															
		OBS	0250	0572	34916	2754			14780															
		OBS	0270	0525	34856	2755			14763															
		OBS	0275	0528	34913	2759			14766															
		STD	0300	0519	3492	2761	0005240	0199	14766															
		OBS	0300	0519	34922	2761			14766															
		OBS	0310	0510	34910	2761			14764															
		STD	0400	0470	3491	2766	0004841	0250	14763															
		OBS	0400	0470	34914	2766			14763															
		STD	0500	0446	3494	2771	0004508	0297	14769															
		OBS	0500	0446	34936	2771			14769															
		STD	0600	0424	3493	2773	0004379	0341	14777															
		OBS	0600	0424	34933	2773			14777															
		STD	0700	0404	3493	2775	0004254	0384	14785															
		OBS	0700	0404	34932	2775			14785															
		STD	0800	0387	3491	2775	0004284	0427	14794															
		OBS	0800	0387	34914	2775			14794															
		STD	0900	0377	3491	2776	0004257	0470	14807															
		OBS	0900	0377	34914	2776			14807															
		STD	1000	0364	3491	2778	0004199	0512	14818															
		OBS	1000	0364	34913	2778			14818															
		STD	1100	0357	3491	2778	0004192	0554	14832															
		OBS	1100	0357	34914	2778			14832															
		STD	1200	0354	3492	2779	0004172	0596	14847															
		OBS	1200	0354	34923	2779			14847															
		STD	1300	0351	3493	2780	0004143	0637	14863															
		OBS	1300	0351	34933	2780			14863															
		STD	1400	0347	3494	2782	0004100	0678	14878															
		OBS	1400	0347	34943	2782			14878															
		STD	1500	0344	3494	2782	0004133	0720	14894															
		OBS	1500	0344	34944	2782			14894															

TABLE X.—Continued

REFERENCE CTP CODE	NO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	Z NO.	MARDEN SQUARE			STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS	WEA- THER CODE	CLOUD CODES	MOOC STATION NUMBER			
						1°	'	10"	MO	DAY	HR.	1/10		NO.	STATION NUMBER								
318043	HT		5245 N	03530 W		186	25	04	21	237	1968	C20	030	3383	15	01	3	2	X2	0	3	0030	
						WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DEPTH		SPECIAL OBSERVATIONS							
						TEMP. °C	DRY BULB	WET BULB	WIND SPEED (knots)	NO. OF CORRECTIONS													
						DT	SD	SS	S10	186	050	033	7	27									
REFERENCE TIME HR 1/10	CASST NO.	CASD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SALINITY ANOMALY-σ <sub>t</sub>	S Δ D DIN. M. ± 10'	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - 0.1/1	TOTAL-P pg - 0.1/1	NO <sub>2</sub> -N pg - 0.1/1	NO <sub>3</sub> -N pg - 0.1/1	SiO <sub>2</sub> -S pg - 0.1/1	pH	CHLOR PROM						
		STD	0000	0634	3480	2737	0007184	0000	14762														
233		OBS	0000	0634	34795	2737			14762														
		STD	0010	0634	3480	2737	0007199	0007	14763														
		OBS	0010	0634	34795	2737			14763														
		STD	0020	0634	3480	2737	0007214	0014	14765														
004		OBS	0020	0634	34795	2737			14765														
		STD	0030	0634	3480	2737	0007229	0022	14767														
		OBS	0030	0634	34795	2737			14767														
		STD	0050	0634	3480	2737	0007258	0036	14770														
		OBS	0050	0634	34795	2737			14770														
		STD	0075	0634	3480	2737	0007295	0054	14774														
		OBS	0075	0634	34795	2737			14774														
		STD	0100	0633	3483	2739	0007096	0072	14778														
		OBS	0100	0633	34825	2739			14778														
		OBS	0115	0631	34825	2740			14780														
		STD	0125	0628	3486	2742	0006890	0090	14781														
		OBS	0125	0628	34849	2742			14781														
		STD	0150	0628	3489	2745	0006659	0107	14785														
		OBS	0150	0628	34885	2745			14785														
		OBS	0190	0615	34945	2751			14787														
		STD	0200	0614	3495	2751	0006106	0139	14789														
		OBS	0200	0614	34945	2751			14789														
		STD	0250	0573	3495	2756	0005661	0168	14780														
		OBS	0250	0573	34945	2756			14780														
		OBS	0260	0568	34945	2757			14780														
		STD	0300	0502	3490	2761	0005240	0195	14759														
		OBS	0300	0502	34895	2761			14759														
		STD	0400	0460	3491	2767	0004792	0245	14758														
		OBS	0400	0460	34905	2767			14758														
		STD	0500	0431	3491	2770	0004566	0292	14763														
		OBS	0500	0431	34905	2770			14763														
		STD	0600	0421	3493	2773	0004404	0337	14775														
		OBS	0600	0421	34925	2773			14775														
		STD	0700	0402	3493	2775	0004283	0381	14784														
		OBS	0700	0402	34925	2775			14784														
		STD	0800	0392	3493	2776	0004261	0423	14797														
		OBS	0800	0392	34925	2776			14797														
		STD	0900	0379	3493	2777	0004199	0466	14808														
		OBS	0900	0379	34925	2777			14808														
		STD	1000	0367	3493	2778	0004145	0507	14819														
		OBS	1000	0367	34925	2778			14819														
		STD	1100	0364	3493	2779	0004195	0549	14835														
		OBS	1100	0364	34925	2779			14835														
		STD	1200	0353	3494	2780	0004071	0590	14847														
		OBS	1200	0353	34935	2780			14847														
		STD	1300	0347	3495	2782	0004005	0631	14861														
		OBS	1300	0347	34945	2782			14861														
		STD	1400	0342	3495	2782	0004023	0671	14876														
		OBS	1400	0342	34945	2782			14876														
		STD	1500	0339	3496	2783	0003989	0711	14892														
		OBS	1500	0339	34955	2783			14892														

TABLE X.—Continued

REFERENCE CTRY CODE	ID. NO.	SHIP CODE	LATITUDE * 1-18	LONGITUDE * 7-18	MAGNETIC CORRECTION	MAGNETIC SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS	WEA- THER CODE	CLOUD CODES	MDC STATION NUMBER				
						1°	'	"	MO	DAY	HR:10		CRUISE NO.	STATION NUMBER									
318043	HT		5248 N	03531 W		184	25	04	22	114	1968		C20	031	3199	15	29	2	2	X2	0	3	0031
						WATER		WIND		SARCO- METER		AIR TEMP. °C		NO. OBS. DEPTH		SPECIAL OBSERVATIONS							
						COLOR CODE	TRANSP (m)	DIR.	SPED OF FORCE	METER	DRY BULS	WET BULS	REL CODE										
						DT	SD	23	509	149	056	028	7	30									
MEASURING TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10°	S Δ D DYN. M. 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>2</sub> -N pg - ml/l	SiO <sub>4</sub> -S pg - ml/l	pH	U m/s	V m/s					
		STD	0000	0639	3480	2736	0007247	0000	14764														
	114	OBS	0000	0639	34795	2736			14764														
		STD	0010	0639	3480	2736	0007262	0007	14765														
		OBS	0010	0639	34795	2736			14765														
		STD	0020	0639	3480	2736	0007277	0015	14767														
	005	OBS	0020	0639	34795	2736			14767														
		STD	0030	0639	3480	2736	0007292	0022	14769														
		OBS	0030	0639	34795	2736			14769														
		STD	0050	0639	3480	2736	0007322	0036	14772														
		OBS	0050	0639	34795	2736			14772														
		OBS	0060	0639	34795	2736			14774														
		STD	0075	0636	3483	2739	0007097	0054	14775														
		OBS	0075	0636	34825	2739			14775														
		STD	0100	0628	3483	2740	0006980	0072	14776														
		OBS	0100	0628	34832	2740			14776														
		STD	0125	0621	3491	2747	0006384	0089	14779														
		OBS	0125	0621	34905	2747			14779														
		STD	0150	0628	3493	2748	0006361	0105	14786														
		OBS	0150	0628	34925	2748			14786														
		STD	0200	0631	3496	2750	0006220	0136	14796														
		OBS	0200	0631	34959	2750			14796														
		STD	0250	0591	3496	2755	0005812	0166	14788														
		OBS	0250	0591	34955	2755			14788														
		STD	0300	0552	3495	2759	0005468	0194	14780														
		OBS	0300	0552	34945	2759			14780														
		OBS	0350	0517	34945	2763			14774														
		STD	0400	0482	3492	2765	0004958	0247	14768														
		OBS	0400	0482	34917	2765			14768														
		OBS	0450	0450	34900	2767			14762														
		STD	0500	0437	3491	2770	0004605	0294	14765														
		OBS	0500	0437	34909	2770			14765														
		STD	0600	0423	3492	2772	0004487	0340	14776														
		OBS	0600	0423	34917	2772			14776														
		STD	0700	0410	3493	2774	0004375	0384	14787														
		OBS	0700	0410	34925	2774			14787														
		OBS	0710	0410	34930	2774			14789														
		OBS	0720	0399	34910	2774			14786														
		OBS	0730	0400	34925	2775			14788														
		STD	0800	0390	3492	2775	0004297	0427	14796														
		OBS	0800	0390	34917	2775			14796														
		STD	0900	0373	3492	2777	0004188	0470	14805														
		OBS	0900	0373	34917	2777			14805														
		STD	1000	0367	3492	2778	0004205	0512	14819														
		OBS	1000	0367	34917	2778			14819														
		STD	1100	0356	3492	2779	0004158	0554	14831														
		OBS	1100	0356	34917	2779			14831														
		STD	1200	0352	3492	2779	0004192	0595	14846														
		OBS	1200	0352	34917	2779			14846														
		STD	1300	0350	3493	2780	0004189	0637	14862														
		OBS	1300	0350	34925	2780			14862														
		STD	1400	0346	3493	2781	0004183	0679	14878														
		OBS	1400	0346	34930	2781			14878														
		STD	1500	0343	3494	2781	0004187	0721	14893														
		OBS	1500	0343	34935	2781			14893														



TABLE X.—Continued

REFERENCE		SHIP	LATITUDE	LONGITUDE	STATION TIME		YEAR	ORIGINATOR'S		DEPTH	MAX. DEPTH	WAVE		WEA-	CLOUD	MOOD	
STN	ID.	CODE	1° 10'	1° 10'	MO	DAY	HR	CRUISE	STATION	TO	OF	DR.	HGT	THR	CODES	STATION	
CODE	NO.							NO.	NUMBER	BOTTOM	SAMPLES	PER	PER	CODE		NUMBER	
318043		HT	5244 N	03536 W	184	25	04 22 177	1968	C20	032	3622	15	29	1	XZ	0 3	0032
		WATER		WIND		BARO-		AIR TEMP. °C		NO. OBS.		SPECIAL					
		COLOR		DIR.		METER		DRY		DEPTHS		OBSERVATIONS					
		CODE		SPEED		UNSAT		WET									
		SD		25		503		122		050		038		6		24	
MESSNGR	CAJ	CARD	DEPTH	T	S	SIGMA-T	SPECIFIC	Δ Δ	SOUND	O <sub>2</sub>	PO <sub>2</sub>	TOTAL	NO <sub>3</sub>	NO <sub>3</sub>	SiO <sub>2</sub>	pH	
TIME	NO.	TYPE	(m)	(°C)	(‰)		VOLUME	DYN. AL.	VELOCITY	(ml/l)	(µg-at/l)	(µg-at/l)	(µg-at/l)	(µg-at/l)	(µg-at/l)		
HR	1/10						ANOMALY-REF	± 10 <sup>3</sup>									
		STD	0000	0647	3482	2737	0007154	0000	14767								
177		OBS	0000	0647	34821	2737			14767								
		STD	0010	0646	3482	2737	0007141	0007	14769								
		OBS	0010	0646	34823	2737			14769								
		STD	0020	0646	3483	2738	0007104	0014	14770								
005		OBS	0020	0646	34830	2738			14770								
		STD	0030	0646	3483	2738	0007119	0021	14772								
		OBS	0030	0646	34830	2738			14772								
		STD	0050	0634	3484	2740	0006923	0035	14771								
		OBS	0050	0634	34840	2740			14771								
		STD	0075	0612	3488	2746	0006385	0052	14766								
		OBS	0075	0612	34880	2746			14766								
		STD	0100	0579	3484	2747	0006313	0068	14757								
		OBS	0100	0579	34840	2747			14757								
		STD	0125	0588	3486	2748	0006308	0084	14765								
		OBS	0125	0588	34860	2748			14765								
		STD	0150	0601	3489	2749	0006281	0099	14774								
		OBS	0150	0601	34890	2749			14774								
		STD	0200	0579	3496	2757	0005555	0129	14775								
		OBS	0200	0579	34960	2757			14775								
		STD	0250	0517	3491	2761	0005229	0156	14757								
		OBS	0250	0517	34912	2761			14757								
		STD	0300	0492	3491	2763	0005012	0182	14755								
		OBS	0300	0492	34910	2763			14755								
		STD	0400	0469	3493	2768	0004680	0230	14762								
		OBS	0400	0469	34934	2768			14762								
		STD	0500	0439	3494	2772	0004397	0275	14767								
		OBS	0500	0439	34940	2772			14767								
		STD	0600	0421	34939	2774	0004300	0319	14776								
		OBS	0600	0421	34939	2774			14776								
		STD	0700	0404	3494	2775	0004224	0362	14785								
		OBS	0700	0404	34936	2775			14785								
		STD	0800	0387	3493	2777	0004158	0403	14795								
		OBS	0800	0387	34931	2777			14795								
		STD	0900	0374	3492	2777	0004215	0445	14806								
		OBS	0900	0374	34915	2777			14806								
		STD	1000	0363	3492	2778	0004172	0487	14818								
		OBS	1000	0363	34915	2778			14818								
		STD	1100	0357	3492	2779	0004148	0529	14832								
		OBS	1100	0357	34920	2779			14832								
		STD	1200	0355	3492	2779	0004199	0571	14848								
		OBS	1200	0355	34921	2779			14848								
		STD	1300	0351	3493	2780	0004143	0612	14863								
		OBS	1300	0351	34933	2780			14863								
		STD	1400	0349	3494	2781	0004147	0654	14879								
		OBS	1400	0349	34940	2781			14879								
		STD	1500	0345	3494	2782	0004175	0695	14894								
		OBS	1500	0345	34940	2782			14894								

TABLE X.—Continued

REFERENCE CRUISE CODE	SHIP CODE	LATITUDE 1°/10	LONGITUDE 1°/10	W. 10' E. 10'	W. 10' E. 10'		STATION TIME (GMT)			YEAR	ORIGINATOR'S			DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLING	WAVE OBSERVATIONS			WEA- TH CODE	CLOUD CODES (T/M)	MDDC STATION NUMBER																															
					MO	DAY	HR./10	CRUISE NO.	STATION NUMBER		DR	HGT	PER			SEA																																				
318043	HT	5247 N	03527 W	184	25	04	23	000	1968	C20	033		3402	15	00	0	X	X2	0	3	0033																															
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th colspan="2">BARO-</th> <th colspan="3">AIR TEMP. °C</th> <th rowspan="2">NO. OBS DEPTH</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS NO.</th> <th>DIR.</th> <th>SPEED OR FORCE</th> <th>METER</th> <th>DIRT BULB</th> <th>WET BULB</th> <th>WET BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td>DT</td> <td>SD</td> <td>05</td> <td>S07</td> <td>090</td> <td>046</td> <td>039</td> <td>6</td> <td>27</td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO-		AIR TEMP. °C			NO. OBS DEPTH	SPECIAL OBSERVATIONS	COLOR CODE	TRANS NO.	DIR.	SPEED OR FORCE	METER	DIRT BULB	WET BULB	WET BULB	WET BULB	DT	SD	05	S07	090	046	039	6	27		
WATER		WIND		BARO-		AIR TEMP. °C			NO. OBS DEPTH	SPECIAL OBSERVATIONS																																										
COLOR CODE	TRANS NO.	DIR.	SPEED OR FORCE	METER	DIRT BULB	WET BULB	WET BULB	WET BULB																																												
DT	SD	05	S07	090	046	039	6	27																																												
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (M)	T °C	S ‰	Sigma-t	SPECIFIC VOLUME ANOMALY-20°	S. Δ. D. DYN. M. S. 10'	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>2</sub> -N pg - ml/l	SiO <sub>4</sub> -S pg - ml/l	PH	SI CL																																			
		STD	0000	0646	3476	2732	0007596	0000	14766																																											
	000	OBS	0000	0646	34760	2732			14766																																											
		STD	0010	0646	3476	2732	0007612	0008	14768																																											
		OBS	0010	0646	34760	2732			14768																																											
		STD	0020	0644	3476	2733	0007571	0015	14769																																											
	004	OBS	0020	0644	34764	2733			14769																																											
		STD	0030	0639	3476	2734	0007523	0023	14768																																											
		OBS	0030	0639	34764	2734			14768																																											
		STD	0050	0639	3478	2735	0007433	0038	14772																																											
		OBS	0050	0639	34780	2735			14772																																											
		STD	0075	0635	3484	2740	0007010	0056	14775																																											
		OBS	0075	0635	34835	2740			14775																																											
		STD	0100	0631	3485	2741	0006921	0073	14778																																											
		OBS	0100	0631	34845	2741			14778																																											
		OBS	0112	0631	34845	2741			14780																																											
		STD	0125	0619	3484	2742	0006843	0090	14777																																											
		STD	0150	0594	3483	2745	0006641	0107	14771																																											
		OBS	0150	0594	34830	2745			14771																																											
		OBS	0160	0583	34850	2748			14768																																											
		OBS	0180	0583	34890	2751			14772																																											
		STD	0200	0578	3496	2757	0005543	0138	14774																																											
		OBS	0200	0578	34960	2757			14774																																											
		STD	0250	0563	3495	2758	0005500	0165	14776																																											
		OBS	0250	0563	34950	2758			14776																																											
		STD	0300	0527	3495	2762	0005127	0192	14770																																											
		OBS	0300	0527	34950	2762			14770																																											
		OBS	0350	0490	34925	2765			14763																																											
		STD	0400	0474	3493	2767	0004805	0242	14764																																											
		OBS	0400	0474	34925	2767			14764																																											
		STD	0500	0446	3494	2771	0004515	0288	14769																																											
		OBS	0500	0446	34935	2771			14769																																											
		STD	0600	0426	3494	2773	0004388	0333	14778																																											
		OBS	0600	0426	34935	2773			14778																																											
		STD	0700	0403	3493	2774	0004294	0376	14785																																											
		OBS	0700	0403	34925	2774			14785																																											
		STD	0800	0386	3494	2777	0004117	0418	14794																																											
		OBS	0800	0386	34935	2777			14794																																											
		STD	0900	0383	3495	2778	0004098	0459	14810																																											
		OBS	0900	0383	34945	2778			14810																																											
		STD	1000	0374	3495	2779	0004081	0500	14823																																											
		OBS	1000	0374	34945	2779			14823																																											
		STD	1100	0363	3495	2780	0004020	0541	14835																																											
		OBS	1100	0363	34947	2780			14835																																											
		STD	1200	0358	3496	2781	0003985	0581	14849																																											
		OBS	1200	0358	34955	2781			14849																																											
		STD	1300	0356	3496	2782	0004006	0621	14865																																											
		OBS	1300	0356	34960	2782			14865																																											
		STD	1400	0350	3496	2783	0004012	0661	14880																																											
		OBS	1400	0350	34960	2783			14880																																											
		STD	1500	0344	3496	2782	0004016	0701	14894																																											
		OBS	1500	0344	34960	2783			14894																																											

TABLE X.—Continued

REFERENCE CRIP CODE	SHIP CODE	LATITUDE 1/16	LONGITUDE 1/16	E W	MARDEN SQUARE		STATION TIME LGHT			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF THERM.	WAVE OBSERVATIONS			WEA- TYPE CODE	CLOUD CODES TSM AMT	PREDICTED STATION NUMBER																					
					1'	1'	MO	DAT	HR		MIN	CRUISE NO.			STATION NUMBER	DR.	NGR				SEA																				
318043	HT	5245 N	03530 W	E	184	25	04	23	051	1968	C20	034	3603	15	00	0	X	X6	0	3	0034																				
<table border="1"> <thead> <tr> <th rowspan="2">WATER COLOR CODE</th> <th rowspan="2">WIND DIRL MI</th> <th rowspan="2">WIND SPEED OR FORCE</th> <th rowspan="2">BARO- METER READ- ING</th> <th colspan="2">AIR TEMP., °C</th> <th rowspan="2">REL. HUMIDITY</th> <th rowspan="2">NO. OBS. DEPTH</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td>DT</td> <td>SD</td> <td>07</td> <td>S14</td> <td>051</td> <td>044</td> <td>044</td> <td>6</td> <td>35</td> </tr> </tbody> </table>																						WATER COLOR CODE	WIND DIRL MI	WIND SPEED OR FORCE	BARO- METER READ- ING	AIR TEMP., °C		REL. HUMIDITY	NO. OBS. DEPTH	SPECIAL OBSERVATIONS	DRY BULB	WET BULB	DT	SD	07	S14	051	044	044	6	35
WATER COLOR CODE	WIND DIRL MI	WIND SPEED OR FORCE	BARO- METER READ- ING	AIR TEMP., °C		REL. HUMIDITY	NO. OBS. DEPTH	SPECIAL OBSERVATIONS																																	
				DRY BULB	WET BULB																																				
DT	SD	07	S14	051	044	044	6	35																																	
REFERENCE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH MT	T °C	S ‰	SGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D DTM, M. ± 10'	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SI O <sub>2</sub> -S pg - ml/l	pH	σ <sub>t</sub>																								
	051	STD	0000	0635	3480	2737	0007130	0000	14762																																
		OBS	0000	0635	34804	2737			14762																																
		STD	0010	0635	3480	2737	0007144	0007	14764																																
		OBS	0010	0635	34804	2737			14764																																
		STD	0020	0634	3481	2738	0007087	0014	14765																																
		OBS	0020	0634	34812	2738			14765																																
		STD	0030	0633	3481	2738	0007074	0021	14767																																
		OBS	0030	0633	34814	2738			14767																																
		STD	0050	0632	3482	2739	0007032	0035	14770																																
		OBS	0050	0632	34822	2739			14770																																
		STD	0075	0632	3482	2739	0007069	0053	14774																																
		OBS	0075	0632	34822	2739			14774																																
		STD	0100	0630	3483	2740	0007021	0071	14777																																
		OBS	0100	0630	34830	2740			14777																																
		STD	0125	0630	3484	2741	0006998	0088	14781																																
		OBS	0125	0630	34838	2741			14781																																
		OBS	0130	0630	34838	2741			14782																																
		STD	0150	0615	3484	2743	0006837	0105	14779																																
		OBS	0150	0615	34839	2743			14779																																
		OBS	0165	0615	34878	2746			14782																																
		OBS	0175	0603	34897	2749			14779																																
		OBS	0180	0606	34898	2749			14781																																
		OBS	0190	0589	34912	2752			14776																																
		STD	0200	0588	3493	2753	0005913	0137	14778																																
		OBS	0200	0588	34927	2753			14778																																
		OBS	0205	0579	34929	2754			14775																																
		OBS	0230	0572	34958	2758			14777																																
		STD	0250	0541	3492	2759	0005434	0166	14767																																
		OBS	0250	0541	34923	2759			14767																																
		OBS	0280	0531	34929	2760			14768																																
		STD	0300	0519	3493	2762	0005188	0192	14766																																
		OBS	0300	0519	34929	2762			14766																																
		OBS	0315	0515	34927	2762			14767																																
		OBS	0350	0486	34930	2766			14761																																
		OBS	0380	0488	34937	2766			14767																																
		STD	0400	0479	3494	2767	0004774	0242	14767																																
		OBS	0400	0479	34937	2767			14767																																
		STD	0500	0454	3495	2771	0004534	0289	14773																																
		OBS	0500	0454	34945	2771			14773																																
		STD	0600	0430	3495	2773	0004360	0333	14779																																
		OBS	0600	0430	34945	2773			14779																																
		STD	0700	0406	3494	2775	0004233	0376	14786																																
		OBS	0700	0406	34938	2775			14786																																
		STD	0800	0389	3493	2777	0004159	0418	14795																																
		OBS	0800	0389	34934	2777			14795																																
		STD	0900	0381	3493	2777	0004171	0460	14809																																
		OBS	0900	0381	34932	2777			14809																																
		STD	1000	0368	3493	2778	0004128	0501	14820																																
		OBS	1000	0368	34929	2778			14820																																
		STD	1100	0360	3493	2779	0004117	0542	14833																																
		OBS	1100	0360	34929	2779			14833																																
		STD	1200	0355	3493	2780	0004110	0584	14848																																
		OBS	1200	0355	34933	2780			14848																																
		STD	1300	0351	3494	2781	0004077	0624	14863																																
		OBS	1300	0351	34942	2781			14863																																
		STD	1400	0346	3495	2782	0004058	0665	14878																																
		OBS	1400	0346	34947	2782			14878																																
		STD	1500	0344	3495	2782	0004097	0706	14894																																
		OBS	1500	0344	34949	2782			14894																																

TABLE X.—Continued

REFERENCE	SHIP CODE	LATITUDE	LONGITUDE	MAGNETIC CORRECTION	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA-THER CODE	CLOUD CODES	MOC STATION NUMBER	
					MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DR	HGT PER	SEA				
318043	HT	5240 N	035385 W	184	25	04	23	125	1968	C20	035	3383	15	06		2	X6	03	0035
		WATER		WIND		BARO-METER		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
		COLOR CODE	TRANS. DM.	DIR.	TRFD. OF FORCE	NO.	DT	WET BULB	VIL. CODE										
		DT	SD	07	525	959	067	061	25										
MESSNGR TIME 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D. D. DYN. M. L. 10 <sup>2</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO-p pg - 01/1	TOTAL-P pg - 01/1	NO <sub>2</sub> -N pg - 01/1	NO <sub>3</sub> -N pg - 01/1	SiO <sub>4</sub> -Si pg - 01/1	pH	OC		
	125	STD	0000	0634	3476	2734	0007423	0000	14761										
		OBS	0000	0634	34763	2734			14761										
		STD	0010	0633	3476	2734	0007426	0007	14763										
		OBS	0010	0633	34763	2734			14763										
		STD	0020	0628	3477	2736	0007311	0015	14762										
	005	OBS	0020	0628	34772	2736			14762										
		STD	0030	0627	3478	2736	0007275	0022	14764										
		OBS	0030	0627	34777	2736			14764										
		STD	0050	0605	3476	2738	0007136	0036	14758										
		OBS	0050	0605	34763	2738			14758										
		STD	0075	0589	3476	2740	0006975	0054	14756										
		OBS	0075	0589	34763	2740			14756										
		OBS	0090	0587	34778	2741			14757										
		STD	0100	0590	3478	2741	0006880	0071	14760										
		OBS	0100	0590	34782	2741			14760										
		STD	0125	0606	3482	2742	0006845	0089	14771										
		OBS	0125	0606	34818	2742			14771										
		STD	0150	0625	3486	2743	0006785	0106	14784										
		OBS	0150	0625	34863	2743			14784										
		STD	0200	0603	3495	2753	0005907	0137	14784										
		OBS	0200	0603	34953	2753			14784										
		STD	0250	0568	3497	2759	0005391	0166	14779										
		OBS	0250	0568	34973	2759			14779										
		STD	0300	0507	3493	2763	0005053	0192	14761										
		OBS	0300	0507	34928	2763			14761										
		STD	0400	0472	3493	2767	0004737	0241	14764										
		OBS	0400	0472	34931	2767			14764										
		STD	0500	0435	3492	2771	0004478	0287	14765										
		OBS	0500	0435	34923	2771			14765										
		STD	0600	0421	3493	2773	0004345	0331	14776										
		OBS	0600	0421	34933	2773			14776										
		STD	0700	0397	3492	2775	0004240	0374	14782										
		OBS	0700	0397	34923	2775			14782										
		STD	0800	0380	3492	2777	0004137	0416	14791										
		OBS	0800	0380	34923	2777			14791										
		STD	0900	0379	3492	2777	0004214	0457	14808										
		OBS	0900	0379	34923	2777			14808										
		STD	1000	0369	3492	2778	0004184	0499	14820										
		OBS	1000	0369	34923	2778			14820										
		STD	1100	0361	3492	2779	0004174	0541	14834										
		OBS	1100	0361	34923	2779			14834										
		STD	1200	0356	3492	2779	0004196	0583	14848										
		OBS	1200	0356	34923	2779			14848										
		STD	1300	0353	3494	2780	0004145	0625	14864										
		OBS	1300	0353	34936	2780			14864										
		STD	1400	0347	3494	2781	0004151	0666	14878										
		OBS	1400	0347	34936	2781			14878										
		STD	1500	0342	3494	2782	0004115	0708	14893										
		OBS	1500	0342	34943	2782			14893										

TABLE X.—Continued

REFERENCE CTRY CODE	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MAGNETIC SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	WDC STATION NUMBER	
				10'	1"	MO	DAY		HR	1/10			CRUISE NO.	STATION NUMBER	DR.				HC
318043	HT	52435N	03527 W	184	25	04	25	233	1968	C20	036	3383	15	02	4	2	X2	0 3	0036
				WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBL. DEPTHS		SPECIAL OBSERVATIONS					
				COLOR CODE	TRANSP. MT	DIR. OR FORCE	SPED. OR FORCE	BARO- METER (mbars)	DRY BULB	WET BULB	W. CODE								
				DT	SD	36	527	081	072	061	7	30							
WATERING Date HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME AND SALINITY	Σ Δ D DTN. M. ± 10 <sup>2</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg - ml/l	TOTAL-P μg - ml/l	NO <sub>3</sub> -N μg - ml/l	NO <sub>2</sub> -N μg - ml/l	SiO <sub>4</sub> -Si μg - ml/l	pH	C	O <sub>3</sub>	C <sub>3</sub>
		STD	0000	0633	3469	2728	0007993	0000	14760										
	233	OBS	0000	0633	34685	2728			14760										
		STD	0010	0633	3469	2728	0008008	0008	14762										
		OBS	0010	0633	34685	2728			14762										
		STD	0020	0633	3469	2728	0008023	0016	14763										
	005	OBS	0020	0633	34685	2728			14763										
		STD	0030	0633	3469	2728	0008037	0024	14765										
		OBS	0030	0633	34685	2728			14765										
		STD	0050	0633	3469	2728	0008044	0040	14768										
		OBS	0050	0633	34688	2728			14768										
		STD	0075	0633	3469	2729	0008066	0060	14772										
		OBS	0075	0633	34690	2729			14772										
		STD	0100	0609	3479	2739	0007092	0079	14768										
		OBS	0100	0609	34785	2739			14768										
		OBS	0110	0609	34845	2744			14770										
		STD	0125	0613	3486	2744	0006656	0096	14775										
		OBS	0125	0613	34855	2744			14775										
		STD	0150	0613	3488	2746	0006543	0113	14779										
		OBS	0150	0613	34875	2746			14779										
		OBS	0175	0621	34905	2747			14787										
		OBS	0190	0609	34918	2750			14785										
		STD	0200	0613	3494	2751	0006168	0145	14788										
		OBS	0200	0613	34935	2751			14788										
		OBS	0225	0627	34965	2751			14798										
		STD	0250	0610	3499	2755	0005830	0175	14796										
		OBS	0250	0610	34985	2755			14796										
		OBS	0290	0603	35015	2758			14800										
		STD	0300	0590	3503	2761	0005348	0203	14796										
		OBS	0300	0590	35025	2761			14796										
		STD	0400	0492	3494	2765	0004942	0254	14772										
		OBS	0400	0492	34935	2765			14772										
		OBS	0420	0502	34975	2767			14780										
		STD	0500	0461	3497	2771	0004467	0301	14776										
		OBS	0500	0461	34965	2771			14776										
		STD	0600	0427	3496	2774	0004251	0345	14778										
		OBS	0600	0427	34955	2774			14778										
		STD	0700	0401	3495	2776	0004123	0387	14784										
		OBS	0700	0401	34945	2776			14784										
		STD	0800	0390	3495	2777	0004089	0428	14796										
		OBS	0800	0390	34945	2777			14796										
		STD	0900	0379	3494	2778	0004125	0469	14808										
		OBS	0900	0379	34935	2778			14808										
		STD	1000	0369	3494	2779	0004095	0510	14820										
		OBS	1000	0369	34935	2779			14820										
		STD	1100	0358	3493	2779	0004123	0551	14832										
		OBS	1100	0358	34925	2779			14832										
		STD	1200	0357	3494	2780	0004120	0592	14849										
		OBS	1200	0357	34935	2780			14849										
		STD	1300	0353	3495	2781	0004079	0633	14864										
		OBS	1300	0353	34945	2781			14864										
		STD	1400	0347	3495	2782	0004056	0674	14878										
		OBS	1400	0347	34949	2782			14878										
		STD	1500	0345	3496	2783	0004065	0714	14894										
		OBS	1500	0345	34955	2783			14894										

TABLE X.—Continued

REFERENCE CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE ° T/10	LONGITUDE ° T/10	L S	MARS DEN RELEASE			STATION TIME (GMT)			YEAR	OBSERVATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL.	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES T/N (amt)	MDDC STATION NUMBER																												
						16'	1'	MO.	DAT	HR./10	CRUSH NO.		STATION NUMBER	DR.			HG	PER	SEA																															
318043	HT		5249 N	03524 W		184	25	04	26	113	1968	C20	037	3302	15	35	3	3	X2	0	3	0037																												
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th colspan="2">SABO-</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">NO. OBS. DEPTH</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS. NO.</th> <th>DIR.</th> <th>SPED OR FORC.</th> <th>METER</th> <th>DRY BULB</th> <th>WET BULB</th> <th>VEL CODE</th> </tr> </thead> <tbody> <tr> <td>DT</td> <td>SD</td> <td>33</td> <td>S18</td> <td>108</td> <td>067</td> <td>056</td> <td>7</td> <td>29</td> <td></td> </tr> </tbody> </table>																							WATER		WIND		SABO-		AIR TEMP. °C		NO. OBS. DEPTH	SPECIAL OBSERVATIONS	COLOR CODE	TRANS. NO.	DIR.	SPED OR FORC.	METER	DRY BULB	WET BULB	VEL CODE	DT	SD	33	S18	108	067	056	7	29	
WATER		WIND		SABO-		AIR TEMP. °C		NO. OBS. DEPTH	SPECIAL OBSERVATIONS																																									
COLOR CODE	TRANS. NO.	DIR.	SPED OR FORC.	METER	DRY BULB	WET BULB	VEL CODE																																											
DT	SD	33	S18	108	067	056	7	29																																										
MISSING TIME RE T/10	CALT NO.	CARD TYPE	DEPTH M	T °C	S ‰	SGMA-T	SPECIFIC VOLUME ANOMALY-20°	± Δ D DTM. AL. ± 10'	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	Si O <sub>4</sub> -S pg - ml/l	pH	S CODE																																	
		STD	0000	0644	3474	2731	0007750	0000	14765																																									
	113	OBS	0000	0644	34736	2731			14765																																									
		STD	0010	0644	3474	2731	0007765	0008	14767																																									
		OBS	0010	0644	34736	2731			14767																																									
		STD	0020	0644	3474	2731	0007780	0016	14768																																									
	006	OBS	0020	0644	34736	2731			14768																																									
		STD	0030	0644	3474	2731	0007795	0023	14770																																									
		OBS	0030	0644	34736	2731			14770																																									
		STD	0050	0644	3474	2731	0007825	0039	14773																																									
		OBS	0050	0644	34736	2731			14773																																									
		OBS	0070	0644	34796	2736			14777																																									
		STD	0075	0632	3483	2739	0007039	0058	14774																																									
		OBS	0075	0632	34826	2739			14774																																									
		STD	0100	0628	3482	2740	0007070	0075	14776																																									
		OBS	0100	0628	34820	2740			14776																																									
		STD	0125	0627	3485	2742	0006900	0093	14780																																									
		OBS	0125	0627	34846	2742			14780																																									
		OBS	0145	0597	34848	2746			14771																																									
		STD	0150	0603	3487	2747	0006455	0109	14775																																									
		OBS	0150	0603	34870	2747			14775																																									
		OBS	0170	0607	34946	2752			14781																																									
		OBS	0190	0591	34946	2754			14778																																									
		STD	0200	0600	3497	2755	0005773	0140	14783																																									
		OBS	0200	0600	34966	2755			14783																																									
		STD	0250	0569	3494	2756	0005679	0169	14779																																									
		OBS	0250	0569	34936	2756			14779																																									
		STD	0300	0521	3494	2762	0005160	0196	14767																																									
		OBS	0300	0521	34936	2762			14767																																									
		STD	0400	0480	3493	2766	0004868	0246	14767																																									
		OBS	0400	0480	34926	2766			14767																																									
		STD	0500	0441	3492	2770	0004599	0293	14767																																									
		OBS	0500	0441	34916	2770			14767																																									
		STD	0600	0420	3492	2772	0004430	0338	14775																																									
		OBS	0600	0420	34920	2772			14775																																									
		OBS	0650	0404	34900	2772			14776																																									
		STD	0700	0394	3492	2775	0004258	0382	14781																																									
		OBS	0700	0394	34916	2775			14781																																									
		STD	0800	0381	3492	2776	0004200	0424	14792																																									
		OBS	0800	0381	34916	2776			14792																																									
		STD	0900	0371	3492	2777	0004173	0466	14804																																									
		OBS	0900	0371	34916	2777			14804																																									
		STD	1000	0367	3492	2777	0004212	0508	14819																																									
		OBS	1000	0367	34916	2777			14819																																									
		STD	1100	0358	3492	2778	0004189	0550	14832																																									
		OBS	1100	0358	34916	2778			14832																																									
		STD	1200	0356	3493	2780	0004145	0591	14848																																									
		OBS	1200	0356	34930	2780			14848																																									
		STD	1300	0352	3494	2781	0004133	0633	14863																																									
		OBS	1300	0352	34936	2781			14863																																									
		STD	1400	0347	3494	2781	0004151	0674	14878																																									
		OBS	1400	0347	34936	2781			14878																																									
		STD	1500	0345	3495	2782	0004131	0716	14894																																									
		OBS	1500	0345	34946	2782			14894																																									



TABLE X.—Continued

REFERENCE SHIP CODE ID. NO.	SHIP CODE	LATITUDE 1°/10'	LONGITUDE 1°/10'	S	STATION TIME 10-MIN.			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODE	RDOC STATION NUMBER			
					18°	1'	MO		DAT	HR./10			CRUISE NO.	STATION NUMBER	DR.				HGT	PER SEC	SEA
				WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OF DEPTS		SPECIAL OBSERVATIONS							
				COLOR CODE		DRY BULB		WET BULB		VTL CODE											
				DT	SD	31	S18	135	050	033	7	28									
MISSION TIME HR 1/10	CASE NO.	CARD TYPE	DEPTH (M)	T °C	σ <sub>t</sub>	σ <sub>θ</sub> -t	SPECIFIC VOLUME ANOMALY-20°	Δ D DYN. M. ± 10'	SOUND VELOCITY	O <sub>2</sub> (M)	PO <sub>2</sub> -P μg - μ/l	TOTAL-P μg - μ/l	NO <sub>2</sub> -N μg - μ/l	NO <sub>3</sub> -N μg - μ/l	SiO <sub>2</sub> -Si μg - μ/l	pH	S C				
		STD	0000	0643	3472	2730	0007857	0000	14764												
	231	OBS	0000	0643	34720	2730			14764												
		STD	0010	0643	3472	2730	0007872	0008	14766												
		OBS	0010	0643	34720	2730			14766												
		STD	0020	0643	3472	2730	0007887	0016	14768												
	005	OBS	0020	0643	34720	2730			14768												
		STD	0030	0643	3472	2730	0007902	0024	14769												
		OBS	0030	0643	34720	2730			14769												
		STD	0050	0643	3472	2730	0007932	0039	14773												
		OBS	0050	0643	34720	2730			14773												
		STD	0075	0643	3472	2730	0007969	0059	14777												
		OBS	0075	0643	34720	2730			14777												
		STD	0100	0612	3479	2739	0007093	0078	14769												
		OBS	0100	0612	34790	2739			14769												
		OBS	0110	0611	34820	2742			14771												
		STD	0125	0607	3483	2743	0006782	0096	14772												
		OBS	0125	0607	34828	2743			14772												
		OBS	0140	0604	34830	2743			14773												
		STD	0150	0613	3487	2745	0006580	0112	14779												
		OBS	0150	0613	34870	2745			14779												
		OBS	0160	0604	34850	2745			14777												
		STD	0200	0631	3494	2749	0006362	0145	14795												
		OBS	0200	0631	34940	2749			14795												
		OBS	0222	0582	34880	2750			14779												
		STD	0250	0607	3499	2756	0005754	0175	14795												
		OBS	0250	0607	34990	2756			14795												
		STD	0300	0551	3495	2760	0005419	0203	14780												
		OBS	0300	0551	34950	2760			14780												
		STD	0400	0495	3494	2765	0004941	0255	14773												
		OBS	0400	0495	34940	2765			14773												
		STD	0500	0449	3492	2769	0004662	0303	14770												
		OBS	0500	0449	34920	2769			14770												
		STD	0600	0422	3492	2772	0004453	0348	14776												
		OBS	0600	0422	34920	2772			14776												
		STD	0700	0405	3492	2774	0004355	0392	14785												
		OBS	0700	0405	34920	2774			14785												
		STD	0800	0390	3491	2775	0004319	0436	14796												
		OBS	0800	0390	34914	2775			14796												
		STD	0900	0377	3491	2776	0004272	0479	14807												
		OBS	0900	0377	34912	2776			14807												
		STD	1000	0368	3491	2777	0004239	0521	14820												
		OBS	1000	0368	34914	2777			14820												
		STD	1100	0366	3491	2777	0004300	0564	14836												
		OBS	1100	0366	34914	2777			14836												
		STD	1200	0357	3492	2779	0004230	0606	14849												
		OBS	1200	0357	34920	2779			14849												
		STD	1300	0355	3493	2780	0004221	0649	14865												
		OBS	1300	0355	34929	2780			14865												
		STD	1400	0351	3493	2780	0004245	0691	14880												
		OBS	1400	0351	34930	2780			14880												
		STD	1500	0347	3494	2781	0004200	0733	14895												
		OBS	1500	0347	34940	2781			14895												



TABLE X.—Continued

REFERENCE		SHIP CODE	LATITUDE 1/18	LONGITUDE 1/18	E W	MAGNETIC SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S			DEPTH TO BOTTOM	SAL DPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	MOOD STATION NUMBER
CTRY CODE	ID. NO.						1P'	1"	NO		DAY	HR	1/18			CRUISE NO.	STATION NUMBER	DR			
318043		HT	52415N	03518 W	D	184	25	04	27	172	1968	C20	040	3292	15	33	7	X1	0	3	0040
						WATER		WIND		AIR TEMP. °C		NO. DR. DEPTHS		SPECIAL OBSERVATIONS							
						COLOR CODE	TRABL ml	DL	SPED OR FORCE	SAND-NETTER mmol	DET SLS	WET SLS	VEL CODE								
						DT	SD	33	524	195	078	050	7	26							
REFERENCE TIME HR 1/18	CARD NO.	CARD TYPE	DEPTH M	T °C	S ‰	SIGMA-T	SPPMC VOLUME ANOMALY-18P	S Δ D DTN. M. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>2</sub> -N pg - ml/l	SiO <sub>4</sub> -S pg - ml/l	PH	S CL				
		STD	0000	0642	3472	2730	0007830	0000	14764												
	172	OBS	0000	0642	34722	2730			14764												
		STD	0010	0642	3472	2730	0007845	0008	14766												
		OBS	0010	0642	34722	2730			14766												
		STD	0020	0642	3472	2730	0007860	0016	14767												
	005	OBS	0020	0642	34722	2730			14767												
		STD	0030	0643	3472	2730	0007895	0024	14769												
		OBS	0030	0643	34721	2730			14769												
		STD	0050	0640	3473	2731	0007804	0039	14772												
		OBS	0050	0640	34732	2731			14772												
		OBS	0060	0637	34732	2731			14772												
		STD	0075	0615	3476	2736	0007340	0058	14766												
		OBS	0075	0615	34757	2736			14766												
		OBS	0090	0605	34797	2741			14765												
		STD	0100	0610	3481	2741	0006889	0076	14769												
		OBS	0100	0610	34814	2741			14769												
		STD	0125	0608	3485	2744	0006668	0093	14773												
		OBS	0125	0608	34845	2744			14773												
		STD	0150	0612	3488	2746	0006516	0109	14779												
		OBS	0150	0612	34877	2746			14779												
		STD	0200	0628	3495	2750	0006271	0141	14794												
		OBS	0200	0628	34947	2750			14794												
		STD	0250	0621	3500	2754	0005882	0172	14800												
		OBS	0250	0621	34997	2754			14800												
		STD	0300	0574	3500	2760	0005354	0200	14790												
		OBS	0300	0574	34997	2760			14790												
		STD	0400	0480	3497	2769	0004563	0249	14767												
		OBS	0400	0480	34967	2769			14767												
		STD	0500	0436	3493	2771	0004452	0295	14765												
		OBS	0500	0436	34928	2771			14765												
		STD	0600	0417	3494	2774	0004284	0338	14774												
		OBS	0600	0417	34935	2774			14774												
		STD	0700	0399	3492	2774	0004300	0381	14783												
		OBS	0700	0399	34918	2774			14783												
		STD	0800	0383	3491	2775	0004268	0424	14793												
		OBS	0800	0383	34910	2775			14793												
		STD	0900	0375	3491	2776	0004301	0467	14806												
		OBS	0900	0375	34905	2776			14806												
		STD	1000	0366	3491	2777	0004281	0510	14819												
		OBS	1000	0366	34905	2777			14819												
		STD	1100	0363	3491	2778	0004279	0552	14834												
		OBS	1100	0363	34912	2778			14834												
		STD	1200	0357	3492	2779	0004252	0595	14849												
		OBS	1200	0357	34917	2779			14849												
		STD	1300	0355	3492	2779	0004265	0638	14865												
		OBS	1300	0355	34923	2779			14865												
		STD	1400	0352	3493	2780	0004257	0680	14880												
		OBS	1400	0352	34930	2780			14880												
		STD	1500	0349	3493	2780	0004299	0723	14896												
		OBS	1500	0349	34930	2780			14896												

TABLE X.—Continued

REFERENCE CTW CODE	SHIP NO.	SHIP CODE	LATITUDE L/18	LONGITUDE W/18	# BOBS	HARDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAL DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER			
						18"	1'	MO.	DAT		HR./18	CRUISE NO.			STATION NUMBER	DR.	HGT				PER	SEA	
318043	HT		5236 N	03527 W		184	25	04	27	232	1968	C20	041	2983	15	33		5	X1	0	3		0041
						WATER		WIND		SABO- METER		AS TEMP. °C		NO. OF DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	WAVE DIR	WAVE SPEED KNOTS	DIR BULB	WET BULB	VEL CODE												
						DT	SD	SI3	230	056	033	7	30										
MESSAGE NO. HE 1/18	CAST NO.	CARD TYPE	DEPTH M	T °C	S ‰	SIGMA-T	SPRINC VOLUME ANOMALY-218°	Σ Δ D DTM, M. ± 18"	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>2</sub> -N pg - ml/l	Si O <sub>2</sub> -S pg - ml/l	pH	SI CODE						
		STD	0000	0647	3476	2732	0007594	0000	14767														
	232	OBS	0000	0647	34762	2732			14767														
		STD	0010	0647	3476	2732	0007609	0008	14768														
		OBS	0010	0647	34762	2732			14768														
		STD	0020	0647	3476	2732	0007624	0015	14770														
	005	OBS	0020	0647	34762	2732			14770														
		STD	0030	0647	3476	2732	0007639	0023	14771														
		OBS	0030	0647	34762	2732			14771														
		STD	0050	0647	3476	2732	0007669	0038	14775														
		OBS	0050	0647	34762	2732			14775														
		OBS	0065	0626	34768	2736			14769														
		STD	0075	0619	3481	2740	0007032	0057	14768														
		OBS	0075	0619	34805	2740			14768														
		OBS	0080	0615	34830	2742			14768														
		STD	0100	0616	3485	2744	0006673	0074	14772														
		OBS	0100	0616	34853	2744			14772														
		OBS	0115	0605	34825	2743			14769														
		STD	0125	0619	3488	2745	0006545	0090	14777														
		OBS	0125	0619	34880	2745			14777														
		STD	0150	0623	3491	2747	0006409	0106	14784														
		OBS	0150	0623	34910	2747			14784														
		OBS	0170	0603	34920	2751			14779														
		OBS	0190	0629																			
		STD	0200	0623	3492	2748	0006400	0138	14792														
		OBS	0200	0623																			
		OBS	0245	0643																			
		STD	0250	0640	3492	2746	0006672	0171	14807														
		OBS	0250	0640																			
		STD	0300	0549	3493	2758	0005573	0202	14779														
		OBS	0300	0549																			
		STD	0400	0490	3493	2765	0004956	0254	14771														
		OBS	0400	0490																			
		STD	0500	0443	3494	2771	0004481	0302	14768														
		OBS	0500	0443	34935	2771			14768														
		STD	0600	0426	3494	2773	0004336	0346	14778														
		OBS	0600	0426	34942	2773			14778														
		STD	0730	0410	3493	2774	0004323	0389	14788														
		OBS	0700	0410	34932	2774			14788														
		STD	0800	0386	3491	2775	0004273	0432	14794														
		OBS	0800	0386	34914	2775			14794														
		STD	0900	0374	3491	2776	0004245	0474	14805														
		OBS	0900	0374	34911	2776			14805														
		STD	1000	0369	3491	2777	0004280	0517	14820														
		OBS	1000	0369	34910	2777			14820														
		STD	1100	0358	3491	2778	0004211	0560	14832														
		OBS	1100	0358	34913	2778			14832														
		STD	1200	0354	3492	2779	0004209	0602	14847														
		OBS	1200	0354	34918	2779			14847														
		STD	1300	0353	3493	2780	0004189	0644	14864														
		OBS	1300	0353	34930	2780			14864														
		STD	1400	0350	3493	2781	0004210	0686	14879														
		OBS	1400	0350	34933	2781			14879														
		STD	1500	0346	3494	2781	0004224	0728	14895														
		OBS	1500	0346	34935	2781			14895														

TABLE X.—Continued

REFERENCE STATION ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	L M S E	STATION SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF 'S.M.P.L.'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES TYP AMT	NODC STATION NUMBER					
					10'	1"	MO	DAY	HR 1/10		CRUISE NO.	STATION NUMBER			DR	HG	PER				SEA				
318043	HT	5237 N	03536 W		184	25	04	28	056	1968	C20	042	3383	15	32			3	X1	0	3		0042		
				WAVE		WIND		BARO- METER (mb)		AIR TEMP. °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS											
				COLOR CODE		TRANS- MITT		DIR.		SPEED OF FORCE		DRY BULB		WET BULB		VIL CODE									
				DT		SD		S13		245		050		033		7		30							
MESSAGE TIME HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- $\sigma_{\theta}$	S Δ D. DYN. M. ± 10'	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - dl/l	TOTAL-P pg - dl/l	NO <sub>3</sub> -N pg - dl/l	NO <sub>2</sub> -N pg - dl/l	Si O <sub>4</sub> -Si pg - dl/l	pH	S C C								
	056	STD	0000	0647	3476	2733	0007579	0000	14767																
		OBS	0000	0647	34764	2733			14767																
		STD	0010	0647	3476	2733	0007594	0008	14768																
		OBS	0010	0647	34764	2733			14768																
	005	STD	0020	0647	3476	2733	0007609	0015	14770																
		OBS	0020	0647	34764	2733			14770																
		STD	0030	0647	3477	2733	0007617	0023	14771																
		OBS	0030	0647	34765	2733			14771																
		STD	0050	0647	3477	2733	0007647	0038	14775																
		OBS	0050	0647	34765	2733			14775																
		OBS	0060	0647	34767	2733			14776																
		OBS	0070	0643	34769	2734			14776																
		STD	0075	0641	3481	2737	0007310	0057	14777																
		OBS	0075	0641	34805	2737			14777																
		OBS	0080	0624	34804	2739			14771																
		STD	0100	0611	3481	2741	0006908	0075	14769																
		OBS	0100	0611	34813	2741			14769																
		STD	0125	0602	3482	2743	0006817	0092	14770																
		OBS	0125	0602	34815	2743			14770																
		STD	0150	0618	3488	2745	0006606	0108	14781																
		OBS	0150	0618	34875	2745			14781																
		STD	0200	0627	3497	2751	0006124	0140	14794																
		OBS	0200	0627	34965	2751			14794																
		STD	0250	0611	3499	2755	0005835	0170	14796																
		OBS	0250	0611	34986	2755			14796																
		OBS	0280	0601	34984	2756			14797																
		STD	0300	0578	3498	2758	0005553	0199	14791																
		OBS	0300	0578	34977	2758			14791																
		OBS	0320	0547	34975	2762			14782																
		STD	0400	0509	3497	2766	0004907	0251	14779																
		OBS	0400	0509	34967	2766			14779																
		OBS	0450	0468	34928	2768			14770																
		STD	0500	0460	3493	2769	0004686	0299	14775																
		OBS	0500	0460	34934	2769			14775																
		STD	0600	0423	3494	2773	0004353	0344	14776																
		OBS	0600	0423	34935	2773			14776																
		STD	0700	0405	3492	2774	0004362	0388	14785																
		OBS	0700	0405	34919	2774			14785																
		STD	0800	0391	3490	2774	0004419	0432	14796																
		OBS	0800	0391	34902	2774			14796																
		STD	0900	0378	3490	2775	0004373	0476	14807																
		OBS	0900	0378	34900	2775			14807																
		STD	1000	0367	3490	2776	0004352	0519	14819																
		OBS	1000	0367	34897	2776			14819																
		STD	1100	0357	3490	2777	0004310	0563	14832																
		OBS	1100	0357	34898	2777			14832																
		STD	1200	0353	3490	2778	0004322	0606	14847																
		OBS	1200	0353	34901	2778			14847																
		STD	1300	0350	3491	2779	0004270	0649	14862																
		OBS	1300	0350	34914	2779			14862																
		STD	1400	0344	3492	2780	0004231	0691	14877																
		OBS	1400	0344	34920	2780			14877																
		STD	1500	0344	3493	2781	0004221	0733	14894																
		OBS	1500	0344	34932	2781			14894																

TABLE X.—Continued

FORM NO. 10	NAUTIC OFF. OR NO.	SHIP CODE	LATITUDE	LONGITUDE	DATE	STATION TIME			YEAR	OBSERVERS		DEPTH	SAL. TEMP.	WAVE OBSERVATIONS			WIND CODE	* WIND DIRECTION	* WIND VELOCITY	* WIND STATE	* WIND SPEED	* WIND TYPE	* WIND UNIT	* WIND CLASS	* WIND NUMBER				
						TIME				CRUISE NUMBER	STATION NUMBER			DIR	PER	SEA										HEI	PER	SEA	HEI
						HR	MIN	SEC																					
	118063	HT	52455N	035305W	184	25	04	28	113	1969	C20	043	3613		02	4	3	X1	0	0	0				0043				

\* NOTE: THESE VALUES COMPLETE FOR PLANNING ELECTRONICALLY OBSERVED DATA DATA SETS ARE PLANNED UNLESS OTHERWISE NOTED BY THE OBSERVER

* DT	* S	* U	* WIND		* WAVE PERIOD (SEC)	* AIR TEMPERATURE (°C)		* SURFACE WAVE PERIOD (SEC)	* SURFACE WAVE HEIGHT (M)	* SURFACE WAVE DIRECTION (°T)	* SURFACE WAVE STATE	* SURFACE WAVE SPEED (KNOTS)
			* DIR	* PER		* AIR SURFACE	* AIR SURFACE					
50	2R	510	254	056	033	7						

CAST NO.	STATION	SOUNDING TIME	CAST NO.	CAST ID	CARD TYPE	DEPTH (M)	°C	°	SIGMA-T	SPECIFIC VOLUME (ML/KG)	SOUND VELOCITY (M/SEC)	SOUND SPEED (M/SEC)	SOUND SPEED (M/SEC)	* AMBIENT LIGHT	* AMBIENT LIGHT (LUX)	* AMBIENT LIGHT (FOOT-CANDELS)	* AMBIENT SOUND	* AMBIENT SOUND (DB)	* AMBIENT SOUND (DB)
113	STD	0000				0639	3473	2731	0007736	0000	14763								
	OBS	0000				0639	34730	2731			14753								
	STD	0010				0639	3473	2731	0007751	0007	14765								
005	OBS	0010				0639	34730	2731			14765								
	STD	0020				0639	3473	2731	0007765	0015	14766								
	OBS	0020				0639	34730	2731			14766								
	STD	0030				0639	3473	2731	0007780	0023	14768								
	OBS	0030				0639	34730	2731			14768								
	STD	0050				0639	3473	2731	0007792	003R	14771								
	OBS	0050				0639	34733	2731			14771								
	STD	0075				0642	3475	2732	0007739	005R	14777								
	OBS	0075				0642	34750	2732			14777								
	STD	0100				0617	3476	2736	0007382	0077	14771								
	OBS	0100				0617	34760	2736			14771								
	STD	0105				0607	34830	2743			14769								
	OBS	0105				0615	3484	2743	0006769	0094	14775								
	STD	0125				0615	34844	2743			14775								
	OBS	0125				0617	3486	2744	0006706	0111	14780								
	STD	0150				0617	34860	2744			14780								
	OBS	0150				0629	3492	2748	0006459	0144	14794								
	STD	0200				0629	34924	2748			14794								
	OBS	0200				0627	34950	2750			14796								
	STD	021R				0637	35020	2754			14802								
OBS	021R				0609	3498	2755	0005856	0175	14795									
STD	0250				0609	34990	2755			14795									
OBS	0250				0570	34944	2757			14784									
STD	0290				0585	34990	2758			14792									
OBS	0290				0583	3499	2759	0005523	0203	14793									
STD	0300				0583	34990	2759			14793									
OBS	0300				0498	34920	2765			14765									
STD	0400				0497	3494	2765	0004970	0256	14774									
OBS	0400				0497	34940	2765			14774									
STD	0500				0459	3493	2769	0004710	0304	14775									
OBS	0500				0459	34929	2769			14775									
STD	0600				0421	3492	2772	0004442	0350	14775									
OBS	0600				0421	34920	2772			14775									
STD	0700				0403	3492	2774	0004333	0394	14784									
OBS	0700				0403	34920	2774			14784									
STD	0800				0383	3492	2776	0004192	0437	14793									
OBS	0800				0383	34920	2776			14793									
STD	0900				0370	3491	2777	0004165	0478	14804									
OBS	0900				0370	34915	2777			14804									
STD	1000				0366	3492	2778	0004170	0520	14819									
OBS	1000				0366	34920	2778			14819									
STD	1100				0359	3492	2779	0004174	0562	14833									
OBS	1100				0359	34920	2779			14833									
STD	1200				0356	3493	2780	0004141	0603	14848									
OBS	1200				0356	34930	2780			14848									
STD	1300				0352	3496	2782	0003981	0644	14864									
OBS	1300				0352	34956	2782			14864									
STD	1400				0347	3498	2785	0003925	0683	14879									
OBS	1400				0347	34980	2785			14879									
STD	1500				0345	3498	2785	0003879	0721	14895									
OBS	1500				0345	34980	2785			14895									

TABLE X.—Continued

REFERENCE SHIP CODE	SHIP ID. NO.	LATITUDE " / 1/18	LONGITUDE " / 1/18	STATION NO.	STATION TIME				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS	WEA- THER CODE	CLOUD CODES	WIND CODE	WIND CODE	NO. OF STATIONS	NODC STATION NUMBER							
					MO	DAY	HR	MIN		CRUISE NO.	STATION NUMBER																
318043	HT	5244 N	03522 W	8	184	25	04	28	175	1968	C20	044	3566	15	36					3	X2	0	3			0044	
					WATER		WIND		BARO-	AIR TEMP. °C		NO. OF DEPTHS		SPECIAL OBSERVATIONS													
					COLOR CODE	TRANS. MIL	DIR.	FRIED OR FOCAL	METER (-99)	DRY BULB	WET BULB	VIS CODE															
					DT	SD	27	S06	247	061	044	7	31														
MESSAGE TIME NR 1/10	CAS NO.	CARD TYPE	DEPTH (M)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D DTN, M S 10 <sup>3</sup>	SOUND VELOCITY	D <sub>2</sub> (M/S)	NO <sub>2</sub> -P P8 - S1/1	TOTAL-P P8 - S1/1	NO <sub>3</sub> -N P8 - S1/1	NO <sub>3</sub> -N P8 - S1/1	SiO <sub>2</sub> -S P8 - S1/1	PH	S C C										
		STD	0000	0684	3478	2728	0007972	0000	14781																		
175		OBS	0000	0684	34775	2728			14781																		
		STD	0010	0661	3478	2732	0007690	0008	14774																		
		OBS	0010	0661	34775	2732			14774																		
		STD	0020	0659	3478	2732	0007680	0016	14775																		
004		OBS	0020	0659	34775	2732			14775																		
		STD	0030	0658	3478	2732	0007683	0023	14776																		
		OBS	0030	0658	34775	2732			14776																		
		STD	0050	0653	3478	2732	0007666	0039	14780																		
		OBS	0050	0659	34783	2732			14780																		
		OBS	0060	0656	34788	2733			14780																		
		STD	0075	0626	3480	2738	0007180	0057	14771																		
		OBS	0075	0626	34797	2738			14771																		
		STD	0100	0626	3483	2740	0007007	0075	14775																		
		OBS	0100	0626	34825	2740			14775																		
		STD	0125	0610	3482	2742	0006850	0092	14773																		
		OBS	0125	0610	34824	2742			14773																		
		STD	0150	0609	3485	2744	0006687	0109	14777																		
		OBS	0150	0609	34849	2744			14777																		
		OBS	0170	0617	34926	2749			14785																		
		STD	0200	0603	3495	2753	0005945	0141	14784																		
		OBS	0200	0603	34948	2753			14784																		
		OBS	0220	0588	34955	2755			14782																		
		OBS	0235	0591	34975	2757			14786																		
		STD	0250	0564	3495	2758	0005550	0169	14777																		
		OBS	0250	0564	34945	2758			14777																		
		STD	0300	0536	3494	2760	0005348	0197	14773																		
		OBS	0300	0536	34935	2760			14773																		
		OBS	0390	0480	34905	2764			14765																		
		STD	0400	0482	3491	2764	0005025	0249	14767																		
		OBS	0400	0482	34908	2764			14767																		
		OBS	0450	0463	34935	2769			14768																		
		OBS	0465	0442	34907	2769			14762																		
		STD	0500	0439	3491	2769	0004643	0297	14766																		
		OBS	0500	0439	34907	2769			14766																		
		STD	0600	0416	3492	2773	0004391	0342	14773																		
		OBS	0600	0416	34919	2773			14773																		
		STD	0700	0400	3492	2774	0004312	0386	14783																		
		OBS	0700	0400	34918	2774			14783																		
		STD	0800	0389	3493	2776	0004211	0428	14795																		
		OBS	0800	0389	34927	2776			14795																		
		STD	0900	0375	3492	2777	0004190	0470	14806																		
		OBS	0900	0375	34920	2777			14806																		
		STD	1000	0366	3492	2778	0004171	0512	14819																		
		OBS	1000	0366	34920	2778			14819																		
		STD	1100	0361	3493	2779	0004122	0553	14834																		
		OBS	1100	0361	34930	2779			14834																		
		STD	1200	0354	3493	2780	0004106	0595	14847																		
		OBS	1200	0354	34932	2780			14847																		
		STD	1300	0351	3494	2781	0004099	0636	14863																		
		OBS	1300	0351	34939	2781			14863																		
		STD	1400	0346	3495	2782	0004036	0676	14878																		
		OBS	1400	0346	34950	2782			14878																		
		STD	1500	0341	3495	2783	0004029	0717	14893																		
		OBS	1500	0341	34953	2783			14893																		

TABLE X.—Continued

REFERENCE CRUISE CODE	SHIP CODE NO.	LATITUDE 1/10	LONGITUDE 1/10	E 1/10	MARSDEN SQUARE			STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF FATHS.	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES 1/10	NODC STATION NUMBER	
					10'	1'	"	MO	DAY		HR:10	CRUISE NO.			STATION NUMBER	DR	HCK				PER
318043	HT	5243 N	03523 W		184	25	04	28	238	1968	C20	045	3658	15	35			X2	0	3	0045

MESSINGS TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH M	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME (ANOMALY-20)	Σ Δ D DYN. M. Σ 10'	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -M pg - ml/l	NO <sub>3</sub> -M pg - ml/l	SiO <sub>2</sub> -S pg - ml/l	PH	Σ
DT	SD	ZZ	SO9	254	072	056	7	30									
		STD	0000	0656	3478	2733	0007559	0000	14770								
238		OBS	0000	0656	34782	2733			14770								
		STD	0010	0656	3478	2733	0007574	0008	14772								
		OBS	0010	0656	34782	2733			14772								
		STD	0020	0663	3478	2732	0007679	0015	14776								
005		OBS	0020	0663	34782	2732			14776								
		STD	0030	0659	3478	2732	0007643	0023	14776								
		OBS	0030	0659	34782	2732			14776								
		STD	0050	0655	3478	2733	0007623	0038	14778								
		OBS	0050	0655	34782	2733			14778								
		STD	0075	0650	3478	2734	0007596	0057	14780								
		OBS	0075	0650	34782	2734			14780								
		OBS	0090	0612	34812	2741			14768								
		STD	0100	0611	3482	2742	0006841	0075	14769								
		OBS	0100	0611	34822	2742			14769								
		STD	0125	0613	3486	2745	0006619	0092	14775								
		OBS	0125	0613	34860	2745			14775								
		STD	0150	0623	3490	2747	0006469	0108	14783								
		OBS	0150	0623	34902	2747			14783								
		STD	0200	0623	3494	2750	0006244	0140	14792								
		OBS	0200	0623	34942	2750			14792								
		OBS	0210	0613	34972	2753			14790								
		OBS	0220	0613	34972	2753			14792								
		STD	0250	0633	3506	2758	0005555	0170	14806								
		OBS	0250	0633	35062	2758			14806								
		OBS	0260	0633	35062	2758			14808								
		OBS	0270	0595	35022	2760			14794								
		STD	0300	0566	3500	2762	0005217	0197	14787								
		OBS	0300	0566	35002	2762			14787								
		OBS	0360	0535	34982	2764			14784								
		STD	0400	0512	3498	2767	0004832	0247	14781								
		OBS	0400	0512	34982	2767			14781								
		STD	0500	0466	3497	2771	0004474	0293	14778								
		OBS	0500	0466	34972	2771			14778								
		STD	0600	0430	3496	2775	0004233	0337	14780								
		OBS	0600	0430	34962	2775			14780								
		STD	0700	0405	3494	2776	0004191	0379	14786								
		OBS	0700	0405	34942	2776			14786								
		STD	0800	0390	3494	2777	0004111	0421	14796								
		OBS	0800	0390	34942	2777			14796								
		STD	0900	0375	3493	2778	0004101	0462	14806								
		OBS	0900	0375	34932	2778			14806								
		STD	1000	0366	3494	2779	0004060	0502	14819								
		OBS	1000	0366	34935	2779			14819								
		STD	1100	0359	3494	2780	0004046	0543	14833								
		OBS	1100	0359	34937	2780			14833								
		STD	1200	0358	3494	2780	0004080	0584	14849								
		OBS	1200	0358	34942	2780			14849								
		STD	1300	0356	3495	2781	0004079	0624	14865								
		OBS	1300	0356	34950	2781			14865								
		STD	1400	0352	3496	2782	0004037	0665	14881								
		OBS	1400	0352	34960	2782			14881								
		STD	1500	0347	3496	2783	0004039	0705	14895								
		OBS	1500	0347	34962	2783			14895								

TABLE X.—Continued

REFERENCE SHIP CODE	SHIP NO.	LATITUDE U/V	LONGITUDE T/W	DATE MO DAY YR	STATION TIME MO DAY YR	YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLING	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER	
							CRUISE NO.	STATION NUMBER			DIR	PER	SEA				
318043	HT	5242 N	03529 W	184 25 04 29 052	1968	C20	046	3475	15	00	0	X	X0	0	3	0046	
				WATER	WIND	BARO- METER		AIR TEMP. °C		NO. OBS. DEPTH	SPECIAL OBSERVATIONS						
				COLOR CODE	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	VEL CODE								
				DT	SD	29	S07	228	072	067	6	35					
REFERENCE TIME MO YR	CASIT NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SGMA-T	SIGMA-T	SIGMA-T ANOMALY-‰	S & D DTR. M. ± 10'	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>2</sub> -Si pg - ml/l	pH
		STD	0000	0665	3474	2729		0007958	0000	14773							
	052	OBS	0000	0665	34744	2729				14773							
		STD	0010	0652	3474	2730		0007837	0008	14770							
		OBS	0010	0652	34740	2730				14770							
	005	OBS	0015	0643	34733	2731				14767							
		STD	0020	0642	3473	2731		0007777	0016	14767							
		OBS	0020	0642	34733	2731				14767							
		STD	0030	0642	3473	2731		0007792	0023	14769							
		OBS	0030	0642	34733	2731				14769							
		STD	0050	0644	3474	2731		0007773	0039	14773							
		OBS	0050	0644	34743	2731				14773							
		OBS	0060	0645	34757	2732				14775							
		STD	0075	0633	3483	2739		0007052	0058	14774							
		OBS	0075	0633	34826	2739				14774							
		OBS	0080	0628	34816	2739				14773							
		STD	0100	0616	3484	2742		0006792	0075	14772							
		OBS	0100	0616	34837	2742				14772							
		OBS	0115	0616	34839	2743				14774							
		STD	0125	0623	3489	2746		0006499	0092	14779							
		OBS	0125	0623	34893	2746				14779							
		STD	0150	0627	3491	2747		0006438	0108	14785							
		OBS	0150	0627	34913	2747				14785							
		OBS	0160	0630	34944	2749				14788							
		OBS	0175	0628	34965	2751				14790							
		STD	0200	0622	3497	2752		0005993	0139	14792							
		OBS	0200	0622	34974	2752				14792							
		OBS	0220	0617	34976	2753				14794							
		OBS	0245	0620	35044	2758				14800							
		STD	0250	0617	3507	2760		0005317	0167	14800							
		OBS	0250	0617	35066	2760				14800							
		STD	0300	0564	3498	2760		0005341	0194	14785							
		OBS	0300	0564	34982	2760				14785							
		OBS	0315	0562	34987	2761				14787							
		OBS	0335	0527	34936	2761				14776							
		OBS	0350	0527	34977	2765				14779							
		STD	0400	0497	3496	2767		0004845	0245	14774							
		OBS	0400	0497	34956	2767				14774							
		STD	0500	0459	3495	2770		0004592	0292	14775							
		OBS	0500	0459	34945	2770				14775							
		STD	0600	0431	3495	2773		0004371	0337	14780							
		OBS	0600	0431	34945	2773				14780							
		STD	0700	0401	3492	2774		0004294	0380	14784							
		OBS	0700	0401	34922	2774				14784							
		STD	0800	0388	3492	2776		0004259	0423	14795							
		OBS	0800	0388	34919	2776				14795							
		STD	0900	0376	3491	2776		0004253	0465	14806							
		OBS	0900	0376	34913	2776				14806							
		STD	1000	0368	3491	2777		0004246	0508	14820							
		OBS	1000	0368	34913	2777				14820							
		STD	1100	0362	3491	2778		0004259	0550	14834							
		OBS	1100	0362	34913	2778				14834							
		STD	1200	0359	3492	2779		0004233	0593	14849							
		OBS	1200	0359	34923	2779				14849							
		STD	1300	0354	3493	2780		0004194	0635	14864							
		OBS	1300	0354	34931	2780				14864							
		STD	1400	0350	3494	2781		0004144	0677	14880							
		OBS	1400	0350	34942	2781				14880							
		STD	1500	0344	3494	2782		0004133	0718	14894							
		OBS	1500	0344	34944	2782				14894							

TABLE X.—Continued

REFERENCE CITY CODE	SHIP ID. NO.	LATITUDE (79)	LONGITUDE 1/16	MAGNETIC SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF TEMP.	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER	
				10°	1'	MO	DAY	HR		MIN	SEC			CRUISE NO.	STATION NUMBER	DR				HGT
318043	HT	5246 N	03536 W	184	25	04	29	114	1968	C20	047	3658	15	34			1	X2	03	0047
				WATER		WIND		SABO-		AIR TEMP. °C		NO.		SPECIAL						
				COLOR	TEMP.	DIR.	SPED	WATER	DRY	WET	WET	NO.	NO.	OBSERVATIONS						
				CODE	(°C)	(°)	(MPS)	(MBS)	BULB	BULB	BULB	CODE	CODE							
				DT	SD	36	S11	227	067	050	7	29								
MESSAGE TIME MS 1/16	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-26T	SOUND VELOCITY	σ <sub>t</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>2</sub> -N pg - ml/l	SI O <sub>4</sub> -S pg - ml/l	pH	S C C				
	114	STD	0000	0649	3471	2728	0008030	0000	14767											
		OBS	0000	0649	34707	2728			14767											
		STD	0010	0649	3471	2728	0008045	0008	14768											
		OBS	0010	0649	34707	2728			14768											
	005	STD	0020	0647	3471	2728	0008035	0016	14769											
		OBS	0020	0647	34707	2728			14769											
		STD	0030	0639	3471	2729	0007949	0024	14768											
		OBS	0030	0639	34707	2729			14768											
		STD	0050	0637	3471	2729	0007953	0040	14770											
		OBS	0050	0637	34707	2729			14770											
		STD	0075	0637	3471	2729	0007990	0060	14774											
		OBS	0075	0637	34707	2729			14774											
		OBS	0080	0637	34707	2729			14775											
		STD	0100	0603	3480	2741	0006928	0079	14766											
		OBS	0100	0603	34797	2741			14766											
		STD	0125	0603	3484	2744	0006665	0096	14770											
		OBS	0125	0603	34837	2744			14770											
		STD	0150	0620	3487	2744	0006691	0112	14782											
		OBS	0150	0620	34867	2744			14782											
		STD	0200	0632	3491	2746	0006576	0145	14795											
		OBS	0200	0632	34913	2746			14795											
		OBS	0210	0621	34895	2746			14792											
		OBS	0225	0621	34944	2750			14796											
		STD	0250	0625	3498	2752	0006083	0177	14802											
		OBS	0250	0625	34977	2752			14802											
		OBS	0265	0646	35057	2756			14814											
		STD	0300	0562	3494	2757	0005651	0206	14784											
		OBS	0300	0562	34937	2757			14784											
		OBS	0350	0533	34907	2758			14780											
		STD	0400	0477	3491	2765	0004974	0260	14765											
		OBS	0400	0477	34907	2765			14765											
		STD	0500	0451	3493	2769	0004633	0308	14771											
		OBS	0500	0451	34927	2769			14771											
		STD	0600	0430	3493	2772	0004493	0353	14779											
		OBS	0600	0430	34927	2772			14779											
		STD	0700	0405	3493	2774	0004303	0397	14785											
		OBS	0700	0405	34927	2774			14785											
		STD	0800	0386	3493	2776	0004176	0440	14794											
		OBS	0800	0386	34927	2776			14794											
		STD	0900	0372	3492	2777	0004140	0481	14805											
		OBS	0900	0372	34922	2777			14805											
		STD	1000	0364	3493	2779	0004095	0522	14818											
		OBS	1000	0364	34927	2779			14818											
		STD	1100	0359	3493	2779	0004120	0563	14833											
		OBS	1100	0359	34927	2779			14833											
		STD	1200	0356	3493	2780	0004152	0605	14848											
		OBS	1200	0356	34929	2780			14848											
		STD	1300	0353	3494	2781	0004116	0646	14864											
		OBS	1300	0353	34940	2781			14864											
		STD	1400	0349	3495	2782	0004110	0687	14879											
		OBS	1400	0349	34945	2782			14879											
		STD	1500	0346	3495	2782	0004137	0728	14895											
		OBS	1500	0346	34947	2782			14895											



TABLE X.—Continued

REFERENCE CTRY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/18	LONGITUDE 1/18	E OR S	MARESDEN SQUARE		STATION TIME SIGNIFY		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	SAL DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	WODC STATION NUMBER				
						18°	1'	MO	DAY		HR./1/18	CRUISE NO.			STATION NUMBER	DIR.	PER				PER	PER	PER	
318043	MT		5242 N	03532 W		184	25	04	29	1968	C20	048	3566	15	02			1	X1	0	3		0048	
						WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBS. DIFFERS		SPECIAL OBSERVATIONS								
						COLOR	TRANSP.	DIR.	SPEED OR FORCE	METER	DIR	WET	WET	WET	WET	WET	WET	WET						
						DT	SD	OS	S06	220	067	050	7	30										
REFERENCE NO.	DATE 1/18	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	INCRIC VOLUME ANOMALY-σ <sub>t</sub>	S Δ D DTL. M. ± 1σ	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg - ml/l	TOTAL-P μg - ml/l	NO <sub>2</sub> -N μg - ml/l	NO <sub>3</sub> -N μg - ml/l	SiO <sub>2</sub> -S μg - ml/l	pH	ST CL.						
171			STD	0000	0656	3469	2726	0008246	0000	14769														
			OBS	0000	0656	34690	2726			14769														
			STD	0010	0656	3469	2726	0008261	0008	14771														
			OBS	0010	0656	34690	2726			14771														
			STD	0020	0644	3467	2726	0008273	0017	14767														
005			OBS	0020	0644	34670	2726			14767														
			STD	0030	0630	3468	2728	0008037	0025	14764														
			OBS	0030	0630	34680	2728			14764														
			STD	0050	0630	3468	2728	0008066	0041	14767														
			OBS	0050	0630	34680	2728			14767														
			OBS	0060	0635	34710	2730			14771														
			STD	0075	0635	3471	2730	0007942	0061	14773														
			OBS	0075	0635	34710	2730			14773														
			OBS	0090	0635	34710	2730			14776														
			STD	0100	0609	3477	2738	0007212	0080	14768														
			OBS	0100	0609	34769	2738			14768														
			STD	0125	0606	3483	2743	0006755	0097	14772														
			OBS	0125	0606	34830	2743			14772														
			STD	0150	0623	3488	2745	0006632	0114	14783														
			OBS	0150	0623	34880	2745			14783														
			STD	0200	0625	3490	2746	0006582	0147	14792														
			OBS	0200	0625	34900	2746			14792														
			OBS	0225	0630	34950	2750			14799														
			STD	0250	0620	3495	2751	0006219	0179	14799														
			OBS	0250	0620	34950	2751			14799														
			STD	0300	0569	3495	2757	0005641	0209	14787														
			OBS	0300	0569	34950	2757			14787														
			OBS	0350	0542	34950	2761			14784														
			OBS	0375	0512	34930	2763			14776														
			OBS	0380	0492	34910	2763			14768														
			STD	0400	0482	3491	2764	0005025	0262	14767														
			OBS	0400	0482	34908	2764			14767														
			STD	0500	0456	3492	2769	0004721	0311	14773														
			OBS	0500	0456	34923	2769			14773														
			STD	0600	0430	3493	2772	0004471	0357	14779														
			OBS	0600	0430	34930	2772			14779														
			STD	0700	0407	3493	2774	0004318	0401	14786														
			OBS	0700	0407	34928	2774			14786														
			STD	0800	0387	3492	2776	0004240	0443	14794														
			OBS	0800	0387	34920	2776			14794														
			STD	0900	0370	3491	2777	0004205	0486	14804														
			OBS	0900	0370	34910	2777			14804														
			STD	1000	0364	3491	2777	0004221	0528	14818														
			OBS	1000	0364	34910	2777			14818														
			STD	1100	0358	3492	2779	0004160	0570	14832														
			OBS	1100	0358	34920	2779			14832														
			STD	1200	0355	3493	2780	0004125	0611	14848														
			OBS	1200	0355	34931	2780			14848														
			STD	1300	0353	3493	2780	0004175	0653	14864														
			OBS	1300	0353	34932	2780			14864														
			STD	1400	0349	3493	2781	0004191	0694	14879														
			OBS	1400	0349	34934	2781			14879														
			STD	1500	0346	3494	2782	0004181	0736	14895														
			OBS	1500	0346	34941	2782			14895														

TABLE X.—Continued

REFERENCE CIP CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	E 10'	W 10'	SIDEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	HODC STATION NUMBER																								
							10'	1"	MO	DAY	HR	MIN		SEC	CRUISE NO.			STATION NUMBER	DR.	HGT				PER	SEA	TR	AMT																				
318043	HT		5246 N	035389 W	184	25	04	29	238	1968	C20	049		3200	15	06			1	X2	0	3	0049																								
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO- METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">NO. OBS. DEPTH</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TEMP (°C)</th> <th>DR.</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> <th>WIL CODE</th> </tr> </thead> <tbody> <tr> <td>DT</td> <td>SD</td> <td>06</td> <td>S10</td> <td>227</td> <td>067</td> <td>039</td> <td>7</td> <td>28</td> </tr> </tbody> </table>																							WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		NO. OBS. DEPTH	SPECIAL OBSERVATIONS	COLOR CODE	TEMP (°C)	DR.	SPEED OR FORCE	DRY BULB	WET BULB	WIL CODE	DT	SD	06	S10	227	067	039	7	28
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		NO. OBS. DEPTH	SPECIAL OBSERVATIONS																																							
COLOR CODE	TEMP (°C)	DR.	SPEED OR FORCE		DRY BULB	WET BULB			WIL CODE																																						
DT	SD	06	S10	227	067	039	7	28																																							
RESURVEY TIME HB 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	$\frac{\Delta \sigma}{\sigma}$ DW. M. E 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg - ml/l	TOTAL-P µg - ml/l	NO <sub>2</sub> -N µg - ml/l	NO <sub>3</sub> -N µg - ml/l	SiO <sub>2</sub> -S µg - ml/l	pH	3 C C																														
		STD	0000	0664	3471	2726	0008176	0000	14773																																						
	234	OBS	0000	0664	34713	2726			14773																																						
		STD	0010	0664	3471	2726	0008192	0008	14774																																						
		OBS	0010	0664	34713	2726			14774																																						
		STD	0020	0664	3471	2726	0008229	0016	14776																																						
	004	OBS	0020	0664	34710	2726			14776																																						
		STD	0030	0644	3470	2728	0008079	0025	14769																																						
		OBS	0030	0644	34698	2728			14769																																						
		STD	0050	0640	3471	2729	0007983	0041	14771																																						
		OBS	0050	0640	34708	2729			14771																																						
		STD	0075	0639	3474	2732	0007747	0060	14775																																						
		OBS	0075	0639	34743	2732			14775																																						
		STD	0100	0609	3483	2743	0006734	0078	14769																																						
		OBS	0100	0609	34833	2743			14769																																						
		STD	0110	0604	34843	2744			14768																																						
		OBS	0110	0604	34843	2744			14768																																						
		STD	0125	0605	3484	2744	0006648	0095	14771																																						
		OBS	0135	0606	34843	2744			14773																																						
		STD	0150	0613	3486	2745	0006632	0112	14779																																						
		OBS	0150	0613	34863	2745			14779																																						
		STD	0200	0632	3497	2751	0006129	0144	14796																																						
		OBS	0200	0632	34973	2751			14796																																						
		STD	0210	0616	34953	2752			14791																																						
		OBS	0225	0630	35013	2754			14800																																						
		STD	0250	0609	3500	2756	0005705	0173	14796																																						
		OBS	0250	0609	3599P	2834P																																									
		STD	0300	0567	3497	2759	0005445	0201	14787																																						
		OBS	0300	0567	34973	2759			14787																																						
		STD	0365	0507	34928	2763			14772																																						
		OBS	0400	0498	3493	2765	0005029	0253	14774																																						
		STD	0400	0498	34933	2765			14774																																						
		OBS	0500	0463	3496	2771	0004542	0301	14777																																						
		STD	0500	0463	34958	2771			14777																																						
		OBS	0600	0420	3493	2773	0004333	0346	14775																																						
		STD	0600	0420	34933	2773			14775																																						
		OBS	0700	0403	3493	2775	0004235	0389	14785																																						
		STD	0700	0403	34933	2775			14785																																						
		OBS	0800	0388	3493	2776	0004207	0431	14795																																						
		STD	0800	0388	34926	2776			14795																																						
		OBS	0900	0377	3493	2777	0004154	0473	14807																																						
		STD	0900	0377	34928	2777			14807																																						
		OBS	1000	0367	3493	2778	0004123	0514	14819																																						
		STD	1000	0367	34928	2778			14819																																						
		OBS	1100	0358	3493	2779	0004101	0555	14832																																						
		STD	1100	0358	34928	2779			14832																																						
		OBS	1200	0355	3493	2780	0004147	0596	14848																																						
		STD	1200	0355	34928	2780			14848																																						
		OBS	1300	0353	3494	2781	0004131	0638	14864																																						
		STD	1300	0353	34938	2781			14864																																						
		OBS	1400	0349	3495	2782	0004095	0679	14879																																						
		STD	1400	0349	34947	2782			14879																																						
		OBS	1500	0347	3495	2782	0004105	0720	14895																																						
		STD	1500	0347	34953	2782			14895																																						

TABLE X.—Continued

REFERENCE SHIP CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1°/10	LONGITUDE 1°/10	L S	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	HODC STATION NUMBER								
						1°	1'	MO	DAY	HR		MIN	SEC			CRUISE NO.	STATION NUMBER	DR.				HGT	PER	SEA	TYPE	AMT			
318043	HT		5251 N	03519 W	D	184	25	04	30	051	1968	C20	050	2631	15	06		2	X2	0	3		0050						
		WATER		WIND		SABO- METER		AIR TEMP. °C		NO. OBS. DEPTH		SPECIAL OBSERVATIONS																	
		COLOR CODE		TRANS MIS		DIR.		SPEED OR FORCE		DRY BULB		WET BULB		WV CODE															
		DT		SD		05		S07		213		061		028		6		28											
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D DYN. M. Σ 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> (μl/l)	PO <sub>4</sub> -P μg - μl/l	TOTAL-P μg - μl/l	NO <sub>3</sub> -N μg - μl/l	NO <sub>2</sub> -N μg - μl/l	SI O <sub>4</sub> -S μg - μl/l	pH	σ <sub>t</sub>	σ <sub>θ</sub>											
	051	STD	0000	0676	3477	2729	0007943	0000	14778																				
		OBS	0000	0676	34765	2729			14778																				
		STD	0010	0676	3477	2729	0007958	0008	14780																				
		OBS	0010	0676	34765	2729			14780																				
		STD	0020	0676	3477	2729	0007974	0016	14781																				
	004	OBS	0020	0676	34765	2729			14781																				
		STD	0030	0675	3477	2729	0007977	0024	14783																				
		OBS	0030	0675	34765	2729			14783																				
		OBS	0032	0674	34763	2729			14782																				
		OBS	0040	0658	34760	2731			14777																				
		STD	0050	0659	3476	2731	0007838	0040	14779																				
		OBS	0050	0659	34760	2731			14779																				
		STD	0075	0654	3479	2734	0007588	0059	14782																				
		OBS	0075	0654	34790	2734			14782																				
		STD	0100	0642	3484	2739	0007099	0077	14782																				
		OBS	0100	0642	34840	2739			14782																				
		STD	0125	0635	3486	2742	0006883	0095	14784																				
		OBS	0125	0635	34862	2742			14784																				
		STD	0150	0631	3489	2745	0006660	0112	14786																				
		OBS	0150	0631	34890	2745			14786																				
		OBS	0175	0630	34940	2749			14791																				
		STD	0200	0608	3495	2752	0005993	0143	14786																				
		OBS	0200	0608	34950	2752			14786																				
		STD	0250	0584	3497	2757	0005612	0172	14785																				
		OBS	0250	0584	34970	2757			14785																				
		STD	0300	0538	3495	2761	0005260	0200	14774																				
		OBS	0300	0538	34950	2761			14774																				
		OBS	0350	0513	34953	2764			14773																				
		STD	0400	0492	3494	2766	0004905	0250	14772																				
		OBS	0400	0492	34940	2766			14772																				
		STD	0500	0453	3495	2771	0004485	0297	14773																				
		OBS	0500	0453	34950	2771			14773																				
		STD	0600	0429	3495	2774	0004289	0341	14779																				
		OBS	0600	0429	34953	2774			14779																				
		STD	0700	0400	3495	2776	0004111	0383	14784																				
		OBS	0700	0400	34945	2776			14784																				
		STD	0800	0392	3494	2777	0004149	0425	14797																				
		OBS	0800	0392	34940	2777			14797																				
		STD	0900	0379	3494	2778	0004125	0466	14808																				
		OBS	0900	0379	34935	2778			14808																				
		STD	1000	0370	3494	2775	0004048	0507	14821																				
		OBS	1000	0370	34943	2779			14821																				
		STD	1100	0361	3495	2780	0004011	0547	14834																				
		OBS	1100	0361	34945	2780			14834																				
		STD	1200	0355	3496	2782	0003948	0587	14848																				
		OBS	1200	0355	34955	2782			14848																				
		STD	1300	0352	3496	2782	0003956	0626	14864																				
		OBS	1300	0352	34960	2782			14864																				
		STD	1400	0351	3497	2783	0003988	0666	14880																				
		OBS	1400	0351	34965	2783			14880																				
		STD	1500	0347	3497	2783	0004017	0706	14895																				
		OBS	1500	0347	34965	2783			14895																				

TABLE X.—Continued

REFERENCE CITE CODE	SHIP ID. NO.	LATITUDE 1/10	LONGITUDE 7/10	L S M	WARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THE R CODE	CLOUD CODES TR   AMT	MOOD STATION NUMBER		
					1'	1"	MO	DAY	HEL/10		CRUISE NO.	STATION NUMBER			DR	HGT	PER				SEA	
318043	HT	05246 N	03536 W		184	25	04	30	118	1968	C20	051	5292	15	04		2	X2	0	3		0051
					WATER		WIND		BARO- METER		AIR TEMP. °C		NO. OBL. DEPTHS		SPECIAL OBSERVATIONS							
					COLOR	TRBL	DIR.	SPED OR FORCE	BASE-	DIR	WET	NO.										
					DT	SD	05	S04	227	061	033	7	30									
REFERENCE TIME HE 1/10	CAST NO.	CARD TYPE	DEPTH M	T °C	S ‰	SGMA-T	SPECIFIC VOLUME ANOMALY-20°	Σ Δ D. DTR. M. S 10'	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>2</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	Si O <sub>4</sub> -S pg - ml/l	pH	LOG					
		STD	0000	0672	3478	2730	0007794	0000	14777													
114		OBS	0000	0672	34778	2730			14777													
		STD	0010	0672	3478	2730	0007810	0008	14778													
		OBS	0010	0672	34778	2730			14778													
		STD	0020	0672	3478	2730	0007825	0016	14780													
005		OBS	0020	0672	34778	2730			14780													
		STD	0030	0672	3478	2730	0007841	0023	14782													
		OBS	0030	0672	34778	2730			14782													
		OBS	0040	0656	34778	2732			14777													
		STD	0050	0656	3478	2732	0007665	0039	14778													
		OBS	0050	0656	34778	2732			14778													
		STD	0075	0656	3478	2732	0007703	0058	14783													
		OBS	0075	0656	34778	2732			14783													
		OBS	0085	0655	34778	2733			14784													
		STD	0100	0643	3482	2737	0007298	0077	14782													
		OBS	0100	0643	34815	2737			14782													
		STD	0125	0631	3484	2740	0007033	0095	14782													
		OBS	0125	0631	34835	2740			14782													
		STD	0150	0624	3486	2743	0006831	0112	14783													
		OBS	0150	0624	34855	2743			14783													
		STD	0200	0623	3494	2749	0006296	0145	14792													
		OBS	0200	0623	34935	2749			14792													
		STD	0250	0603	3497	2754	0005888	0175	14793													
		OBS	0250	0603	34965	2754			14793													
		STD	0300	0552	3496	2760	0005394	0204	14780													
		OBS	0300	0552	34955	2760			14780													
		OBS	0335	0510	34925	2763			14768													
		OBS	0350	0510	34945	2764			14771													
		OBS	0360	0502	34945	2765			14770													
		STD	0400	0480	3495	2768	0004727	0254	14767													
		OBS	0400	0480	34945	2768			14767													
		STD	0500	0445	3495	2772	0004429	0300	14769													
		OBS	0500	0445	34945	2772			14769													
		STD	0600	0430	3495	2773	0004360	0344	14779													
		OBS	0600	0430	34945	2773			14779													
		STD	0700	0411	3495	2775	0004239	0387	14788													
		OBS	0700	0411	34945	2775			14788													
		STD	0800	0393	3494	2776	0004198	0429	14797													
		OBS	0800	0393	34935	2776			14797													
		STD	0900	0382	3494	2777	0004161	0471	14809													
		OBS	0900	0382	34935	2777			14809													
		OBS	0950	0377	34941	2778			14815													
		STD	1000	0362	3494	2780	0003968	0512	14817													
		OBS	1000	0362	34941	2780			14817													
		STD	1100	0359	3494	2780	0004017	0552	14833													
		OBS	1100	0359	34941	2780			14833													
		STD	1200	0357	3495	2781	0004017	0592	14849													
		OBS	1200	0357	34949	2781			14849													
		STD	1300	0353	3495	2782	0004028	0632	14864													
		OBS	1300	0353	34952	2782			14864													
		STD	1400	0349	3496	2782	0004029	0672	14879													
		OBS	1400	0349	34956	2782			14879													
		STD	1500	0346	3496	2783	0004056	0713	14895													
		OBS	1500	0346	34958	2783			14895													

TABLE X.—Continued

REFERENCE CHIT CODE	SHIP CODE	LATITUDE ° ' 10"	LONGITUDE ° ' 10"	W. LONG.	W. GRID SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES TFR JAM	NODC STATION NUMBER		
					10"	'	MO	DAY	HR	10"		'	MO		CRUISE NO.	STATION NUMBER	DR.	HGT				PER	PER
					DT	SD	DA	S15	196	067		044	7		35	SPECIAL OBSERVATIONS							
318043	HT	5244 N	03534 W		184	25	04	30	172	1968	C20	052	3658	15	02	3	4	X2	0	3	0052		
MISSING	CAST	CARD	DEPTH	T	S	SIGMA-T	SPECIFIC VOLUME	$\Sigma \Delta$	SD	O <sub>2</sub>	PO <sub>4</sub> -P	TOTAL-P	NO <sub>2</sub> -N	NO <sub>3</sub> -N	SiO <sub>2</sub> -S	pH	RES.						
TIME	NO.	TYPE	(M)	(°C)	(‰)	(σ-t)	(ANOMALY-312) <sup>3</sup>	(DYN. M.)	(M)	(M/L)	(μM/L)	(μM/L)	(μM/L)	(μM/L)	(μM/L)								
HR. 1/10								$\Sigma$	NO	NO	NO	NO	NO	NO	NO								
	072	STD	0000	0652	3474	2730	0007859	0000	14768														
		OBS	0000	0652	34735	2730			14768														
		STD	0010	0652	3474	2730	0007874	0008	14770														
		OBS	0010	0652	34735	2730			14770														
	006	OBS	0015	0651	34735	2730			14770														
		STD	0020	0646	3474	2730	0007813	0016	14769														
		OBS	0020	0646	34735	2730			14769														
		STD	0030	0646	3474	2730	0007828	0024	14771														
		OBS	0030	0646	34735	2730			14771														
		OBS	0040	0646	34735	2730			14772														
		STD	0050	0640	3474	2731	0007774	0039	14772														
		OBS	0050	0640	34736	2731			14772														
		OBS	0060	0637	34760	2734			14772														
		OBS	0065	0650	34800	2735			14779														
		STD	0075	0634	3478	2736	0007407	0058	14774														
		OBS	0075	0634	34780	2736			14774														
		STD	0100	0631	3483	2740	0007011	0076	14777														
		OBS	0100	0631	34833	2740			14777														
		STD	0125	0612	3481	2740	0007076	0094	14774														
		OBS	0125	0612	34805	2740			14774														
		STD	0150	0611	3486	2745	0006637	0111	14778														
		OBS	0150	0611	34859	2745			14778														
		OBS	0175	0606	34870	2746			14780														
		OBS	0180	0602	34900	2749			14780														
		STD	0200	0620	3496	2752	0006049	0142	14791														
		OBS	0200	0620	34963	2752			14791														
		OBS	0245	0647	35060	2756			14811														
		STD	0250	0645	3506	2756	0005764	0172	14811														
		OBS	0250	0645	35055	2756			14811														
		STD	0300	0567	3498	2760	0005431	0200	14787														
		OBS	0300	0567	34975	2760			14787														
		OBS	0330	0533	34970	2763			14778														
		OBS	0355	0534	34979	2764			14782														
		STD	0400	0487	3493	2766	0004906	0252	14770														
		OBS	0400	0487	34932	2766			14770														
		OBS	0415	0480	34920	2766			14769														
		OBS	0430	0489	34935	2766			14776														
		STD	0500	0452	3495	2771	0004473	0299	14772														
		OBS	0500	0452	34950	2771			14772														
		STD	0600	0428	3494	2773	0004381	0343	14779														
		OBS	0600	0428	34939	2773			14779														
		STD	0700	0403	3491	2773	0004391	0387	14784														
		OBS	0700	0403	34912	2773			14784														
		STD	0800	0383	3492	2776	0004193	0430	14793														
		OBS	0800	0383	34920	2776			14793														
		STD	0900	0371	3491	2777	0004187	0472	14804														
		OBS	0900	0371	34914	2777			14804														
		STD	1000	0364	3492	2778	0004184	0513	14818														
		OBS	1000	0364	34915	2778			14818														
		STD	1100	0355	3492	2779	0004161	0555	14831														
		OBS	1100	0355	34915	2779			14831														
		STD	1200	0353	3492	2779	0004167	0597	14847														
		OBS	1200	0353	34922	2779			14847														
		STD	1300	0350	3493	2780	0004145	0638	14863														
		OBS	1300	0350	34931	2780			14863														
		STD	1400	0345	3493	2781	0004155	0680	14877														
		OBS	1400	0345	34932	2781			14877														
		STD	1500	0345	3494	2782	0004175	0721	14894														
		OBS	1500	0345	34940	2782			14894														

TABLE X.—Continued

REFERENCE CRUISE NO.	SHIP CODE	LATITUDE 1/18	LONGITUDE 1/18	OBS.	WASDEN SQUARE			STATION TIME (GMT)		YEAR	OBSERVER'S STATION NUMBER		DEPTH TO BOTTOM	MAL. DEPTH OF SAMPL.	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER
					18"	1'	MO	DAT	HR		1/10	CRUISE NO.			207	DR	HGT			
318043	HT	5242 N	03535 W		184	25	04	30	238	1968	C20	053	3658	15	04		3	X2	03	0053
					WATER		WIND	BARO-	AIR TEMP. °C		SPE. COND.	NO. OBS. DEPTH	SPECIAL OBSERVATIONS							
					COLOR	TURB. (m)	DIR.	SPEED OR FORCE	METER	DRY			WET	WET	WET	WET	WET			
					DT	SD	04	510	207	061	044	7	33							
MESSAGE TIME HR 1/18	CALT NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPICOR VOLUME ANOMALY-10 <sup>3</sup>	Σ Δ D DYN. AL. ± 10 <sup>2</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>3</sub> -N pg - ml/l	SiO <sub>4</sub> -Si pg - ml/l	pH				
		STD	0000	0649	3472	2729	0007940	0000	14767											
	233	OBS	0000	0649	34719	2729			14767											
		STD	0010	0649	3472	2729	0007955	0008	14768											
		OBS	0010	0649	34719	2729			14768											
		STD	0020	0649	3472	2729	0007970	0016	14770											
	005	OBS	0020	0649	34719	2729			14770											
		STD	0030	0649	3472	2729	0007986	0024	14772											
		OBS	0030	0649	34719	2729			14772											
		STD	0050	0644	3474	2731	0007825	0040	14773											
		OBS	0050	0644	34736	2731			14773											
		OBS	0060	0634	34720	2731			14771											
		STD	0075	0635	3472	2731	0007853	0059	14773											
		OBS	0075	0635	34722	2731			14773											
		OBS	0090	0636	34722	2731			14776											
		STD	0100	0636	3480	2737	0007306	0078	14779											
		OBS	0100	0636	34802	2737			14779											
		OBS	0110	0611	34819	2742			14771											
		STD	0125	0612	3485	2744	0006666	0096	14774											
		OBS	0125	0612	34852	2744			14774											
		STD	0150	0621	3488	2745	0006600	0112	14782											
		OBS	0150	0621	34881	2745			14782											
		STD	0200	0624	3490	2747	0006554	0145	14792											
		OBS	0200	0624	34902	2747			14792											
		OBS	0230	0628	34974	2752			14800											
		STD	0250	0613	3498	2754	0005935	0176	14797											
		OBS	0250	0613	34976	2754			14797											
		OBS	0270	0620	35012	2756			14803											
		STD	0300	0580	3498	2758	0005541	0205	14792											
		OBS	0300	0580	34982	2758			14792											
		OBS	0370	0514	34962	2765			14776											
		OBS	0380	0484	34915	2765			14765											
		STD	0400	0479	3492	2765	0004938	0257	14766											
		OBS	0400	0479	34915	2765			14766											
		OBS	0450	0452	34902	2767			14763											
		OBS	0465	0466	34942	2769			14772											
		STD	0500	0451	3494	2771	0004521	0305	14772											
		OBS	0500	0451	34942	2771			14772											
		STD	0600	0433	3494	2773	0004417	0349	14781											
		OBS	0600	0433	34942	2773			14781											
		STD	0700	0409	3493	2774	0004312	0393	14787											
		OBS	0700	0409	34932	2774			14787											
		STD	0800	0390	3493	2776	0004186	0436	14796											
		OBS	0800	0390	34932	2776			14796											
		STD	0900	0372	3493	2778	0004066	0477	14805											
		OBS	0900	0372	34932	2778			14805											
		STD	1000	0367	3492	2778	0004168	0518	14819											
		OBS	1000	0367	34922	2778			14819											
		STD	1100	0358	3492	2779	0004145	0560	14832											
		OBS	1100	0358	34922	2779			14832											
		STD	1200	0356	3493	2780	0004130	0601	14848											
		OBS	1200	0356	34932	2780			14848											
		STD	1300	0350	3494	2781	0004064	0642	14863											
		OBS	1300	0350	34942	2781			14863											
		STD	1400	0348	3494	2781	0004119	0683	14879											
		OBS	1400	0348	34942	2781			14879											
		STD	1500	0346	3494	2782	0004173	0724	14895											
		OBS	1500	0346	34942	2782			14895											

TABLE X.—Continued

REFERENCE CIR NO.	SHIP CODE	LATITUDE 1/18	LONGITUDE 1/18	MARSSEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLING	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES T/M AMT	HODC STATION NUMBER	
					MO	DAY	HR:1/10		CRUISE NO.	STATION NUMBER			DR	HGPR	SEA				
318043	HT	5247 N	03532 W	184	25	05	01	052	1968	C20	054	3292	15	04		3	X2	G 3	0054
				WATER		WIND		BARO-		AIR TEMP. °C		NO. OBS.		SPECIAL					
				COLOR	TRANSP.	DIR.	SPED	METER	DRY	WET	WET	WET	DEPTHS	OBSERVATIONS					
				CODE	NO.	OR	OR	FORCE	BULB	BULB	BULB	NO.							
				DT	SD	04	S15	196	056	039	7	28							
MESSING TIME 1/18	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20	S.D. DWT. M. ± 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P pg - ml/l	TOTAL-P pg - ml/l	NO <sub>3</sub> -N pg - ml/l	NO <sub>2</sub> -N pg - ml/l	SiO <sub>4</sub> -S ps - ml/l	pH	S C		
		STD	0000	0670	3478	2731	0007746	0000	14776										
	052	OBS	0000	0670	34781	2731			14776										
		STD	0010	0670	3478	2731	0007761	0008	14778										
		OBS	0010	0670	34781	2731			14778										
		STD	0020	0671	3478	2731	0007790	0016	14780										
	005	OBS	0020	0671	34781	2731			14780										
		STD	0030	0658	3478	2732	0007638	0023	14776										
		OBS	0030	0658	34781	2732			14776										
		OBS	0040	0655	34785	2733			14777										
		STD	0050	0655	34785	2733	0007600	0038	14778										
		OBS	0050	0655	34785	2733			14778										
		STD	0075	0634	3481	2738	0007213	0057	14774										
		OBS	0075	0634	34806	2738			14774										
		STD	0100	0633	3484	2740	0006984	0075	14778										
		OBS	0100	0633	34840	2740			14778										
		STD	0125	0632	3489	2744	0006638	0092	14783										
		OBS	0132	0632	34896	2745			14784										
		OBS	0140	0613	34900	2748			14778										
		STD	0150	0623	3489	2746	0006558	0108	14783										
		OBS	0150	0623	34890	2746			14783										
		OBS	0175	0633	34946	2749			14792										
		STD	0200	0637	3497	2750	0006246	0140	14798										
		OBS	0200	0637	34966	2750			14798										
		STD	0250	0609	3500	2756	0005735	0170	14796										
		OBS	0250	0609	34996	2756			14796										
		STD	0300	0564	3497	2759	0005453	0198	14785										
		OBS	0300	0564	34967	2759			14785										
		OBS	0310	0541	34967	2762			14778										
		STD	0400	0505	3498	2767	0004800	0249	14778										
		OBS	0400	0505	34975	2767			14778										
		STD	0500	0448	3494	2771	0004524	0296	14770										
		OBS	0500	0448	34937	2771			14770										
		STD	0600	0422	3495	2774	0004252	0340	14776										
		OBS	0600	0422	34947	2774			14776										
		STD	0700	0406	3494	2776	0004195	0382	14786										
		OBS	0700	0406	34943	2776			14786										
		STD	0800	0394	3494	2776	0004188	0424	14798										
		OBS	0800	0394	34938	2776			14798										
		STD	0900	0378	3493	2778	0004128	0466	14807										
		OBS	0900	0378	34933	2778			14807										
		STD	1000	0367	3493	2778	0004138	0507	14819										
		OBS	1000	0367	34926	2778			14819										
		STD	1100	0360	3493	2779	0004139	0548	14833										
		OBS	1100	0360	34926	2779			14833										
		STD	1200	0356	3493	2780	0004115	0590	14848										
		OBS	1200	0356	34934	2780			14848										
		STD	1300	0353	3494	2781	0004094	0631	14864										
		OBS	1300	0353	34943	2781			14864										
		STD	1400	0350	3495	2782	0004086	0672	14880										
		OBS	1400	0350	34950	2782			14880										
		STD	1500	0346	3496	2783	0004056	0712	14895										
		OBS	1500	0346	34958	2783			14895										

TABLE X.—Continued

REFERENCE CTRY CODE	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	19	STATION TIME (GMT)			YEAR	ORIGINATOR'S STATION NUMBER		DEPTH TO BOTTOM	WAVE OBSERVATIONS	WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER		
					10'	1'	MO		DAY	HR 1/10						NO.	STATION NUMBER
318043	HT	5249 N	03528 W	184	25	05	01	110	1968	C20 055	3383	15	04			0055	
				WATER		WIND		BARO- METER		AIR TEMP °C		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS			
				COLOR CODE		DIR. SPEED (kts)		DRY BULB		WET BULB		VIS CODE					
				DT		SD		04		S10		224		072		061 7 27	
MESSING TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°	S Δ D DYN. M. ± 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P pg - ppt	TOTAL-P pg - ppt	NO <sub>2</sub> -N pg - ppt	NO <sub>3</sub> -N pg - ppt	SiO <sub>4</sub> -S pg - ppt	pH	σ <sub>t</sub>
		STD	0000	0657	3479	2733	0007497	0000	14771								
113		OBS	0000	0657	34792	2733			14771								
		STD	0010	0657	3479	2733	0007512	0008	14773								
		OBS	0010	0657	34792	2733			14773								
		STD	0020	0657	3479	2733	0007528	0015	14774								
005		OBS	0020	0657	34792	2733			14774								
		STD	0030	0655	3475	2733	0007540	0023	14775								
		OBS	0030	0655	34789	2733			14775								
		OBS	0040	0655	34789	2733			14777								
		STD	0050	0653	3480	2735	0007433	0038	14778								
		OBS	0050	0653	34804	2735			14778								
		STD	0075	0644	3481	2737	0007281	0056	14778								
		OBS	0075	0644	34814	2737			14778								
		STD	0100	0633	3481	2738	0007178	0074	14778								
		OBS	0100	0633	34814	2738			14778								
		STD	0125	0628	3487	2743	0006741	0091	14781								
		OBS	0125	0628	34869	2743			14781								
		STD	0150	0621	3492	2748	0006339	0108	14783								
		OBS	0150	0621	34916	2748			14783								
		OBS	0175	0635	34954	2749			14793								
		STD	0200	0627	3497	2751	0006094	0139	14794								
		OBS	0200	0627	34969	2751			14794								
		OBS	0220	0630	34974	2751			14799								
		STD	0250	0593	3494	2753	0005956	0169	14788								
		OBS	0250	0593	34939	2753			14788								
		STD	0300	0560	3494	2758	0005612	0198	14783								
		OBS	0300	0560	34939	2758			14783								
		STD	0400	0499	3491	2763	0005182	0252	14775								
		OBS	0400	0499	34914	2763			14775								
		STD	0500	0456	3492	2768	0004751	0302	14773								
		OBS	0500	0456	34919	2768			14773								
		STD	0600	0421	3492	2772	0004449	0348	14775								
		OBS	0600	0421	34919	2772			14775								
		STD	0700	0400	3492	2774	0004334	0391	14783								
		OBS	0700	0400	34915	2774			14783								
		STD	0800	0388	3491	2775	0004296	0435	14795								
		OBS	0800	0388	34914	2775			14795								
		STD	0900	0381	3492	2776	0004267	0477	14809								
		OBS	0900	0381	34919	2776			14809								
		STD	1000	0373	3492	2777	0004246	0520	14822								
		OBS	1000	0373	34921	2777			14822								
		STD	1100	0363	3493	2779	0004175	0562	14834								
		OBS	1100	0363	34926	2779			14834								
		STD	1200	0358	3493	2779	0004184	0604	14849								
		OBS	1200	0358	34928	2779			14849								
		STD	1300	0355	3494	2781	0004111	0645	14865								
		OBS	1300	0355	34944	2781			14865								
		STD	1400	0351	3495	2782	0004120	0686	14880								
		OBS	1400	0351	34947	2782			14880								
		STD	1500	0347	3495	2782	0004120	0728	14895								
		OBS	1500	0347	34951	2782			14895								







532-AA

Woods Hole Oceanographic Institution  
ATLAS - GAZETTEER COLLECTION