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REPORT OF OCEANOGRAPHIC CRUISE
USCGC NORTHWIND
NORTHERN BERING SEA-BERING STRAIT—
CHUCKCHI SEA

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July 1967

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UNITED STATES COAST GUARD
OCEANOGRAPHIC

UNITED STATES COAST GUARD OCEANOGRAPHIC UNIT

REPORT No. 24 CG 373-24

REPORT OF OCEANOGRAPHIC CRUISE
USCGC NORTHWIND
NORTHERN BERING SEA-BERING STRAIT—
CHUCKCHI SEA

July 1967

By David M. Husby

WASHINGTON, D.C.

JUNE 1969

ABSTRACT

This report contains the observed and interpolated temperature, salinity and dissolved oxygen data plus the computed sigma-t, geopotential anomalies and sound velocities for 83 oceanographic stations occupied by the USCGC NORTHWIND (WAGB 282) in the Bering and Chukchi Seas during 12-23 July 1967. Also included are the direct current observations made at 66 of the oceanographic stations. Serial observations were made of temperature, salinity, oxygen and water flow at 5-meter intervals from the surface to near the bottom. This survey was a cooperative effort by the U.S. Coast Guard Oceanographic Unit, Washington, D.C. and the University of Washington, Seattle, Washington.

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Oceanographic Cruise of USCGC NORTHWIND, Northern Bering Sea-Bering Strait—Chukchi Sea

By David M. Husby

Introduction

This report contains the oceanographic data obtained on the cruise of the USCGC NORTHWIND (WAGB 282) from 8–30 July 1967 in the northern Bering Sea-Bering Strait-Chukchi Sea area. The oceanographic survey was a joint U.S. Coast Guard-University of Washington project with the purpose of providing information on: (1) the circulation and interaction of the water masses of the northern Bering and Chukchi Seas for the peak summer period; (2) the flow regime in Bering Strait, its short-term variations and possible causes; (3) the exchange of water, salt and heat between the Bering and Chukchi Seas during summer, and (4) the tidal wave pattern in the northern Bering and Chukchi Seas.

All physical and chemical data collected aboard the USCGC NORTHWIND during the 8–30 July 1967 period are contained in this report as well as all the direct current observations made by the University of Washington personnel on the 83 oceanographic stations. This report also includes a discussion of methods used in collecting and processing the data, plots of vertical and horizontal distribution of the various water properties measured and a tabulation of the physical and chemical data.

Personnel

CAPTAIN J.F. PHAIR, U.S. Coast Guard, Commanding Officer, USCGC NORTHWIND (WAGB 282).

The following personnel were associated with the data collected aboard the USCGC NORTHWIND:

U.S. Coast Guard Oceanographic Unit:

DAVID M. HUSBY, Field Party Chief.
DONALD A. HAAGENSEN, Oceanographer.
PETER SAN JULE, Aerographer Second Class.

University of Washington:

JERRY A. GALT, Senior Scientist.
J. ROSENBERG.
L. LAYMAN.
P. JOPPA.

Military (stationed aboard USCGC NORTHWIND):

CDR S. S. BECKWITH, U.S. Coast Guard, Executive Officer and Scientific Coordinator.

ENS A. W. LONGACRE, U.S. Coast Guard, Oceanography Officer.
SEAMAN R. EDWARDS.

Chronology of Events

The events listed below were taken from the ship's cruise report. The locations of the oceanographic stations are shown in figure 1.

<i>Date 1967</i>	<i>Event</i>
15 June	USCGC NORTHWIND (WAGB 282) departed Seattle, Wash. enroute Bering Sea on 1967 Arctic West Patrol.
8 July	Arrived U.S. Coast Guard LORAN Station, Port Clarence, Alaska, embarked scientific party.
10 July	Placed water level pressure gauge on bottom at position 67°04'N, 171°12'W.
11 July	Anchored first current meter array in position 66°36'N, 168°15'W.
12 July	Anchored second current meter array in position 64°55'N, 168°39'W.

<i>Date 1967</i>	<i>Event</i>
12 July	Arrived at first oceanographic station in position 65°01'N, 171°34'W.
17 July	Completed station 42 and first occupation of sections E-E', D-D', C-C' and B-B'. Enroute section E-E' for re-occupation.
19 July	Completed re-occupation of section E-E'.
23 July	Completed re-occupation of section B-B' with the exception of one station; ship at position 67°15'N, 170°48'W. Enroute Point Barrow to assist CSS RICHARDSON, trapped in 10/10 concentration of thick winter ice.
26 July	Completed RICHARDSON SAR case. Enroute southern Chukchi Sea to recover tidal gauge.
28 July	Retrieved tidal gauge and two anchored current meter arrays with little difficulty. Enroute Port Clarence, Alaska.
29 July	Arrived Port Clarence and disembarked scientific party.

Cruise Narrative

The oceanographic phase of the USCGC NORTHWIND 1967 Arctic West Patrol began with the embarkation of seven scientific personnel at the U.S. Coast Guard LORAN Station, Port Clarence, Alaska on 8 July 1967. The ship then steamed north to the position 67°04'N, 171°12'W off the northern Siberian coast to install a recording water level gauge on the sea bottom. This gauge was one of six such instruments anchored by the University of Washington during the survey period at various locations in the Chukchi Sea-Bering Sea area to monitor the tidal oscillations. On 11 and 12 July two buoys with current meter arrays attached were anchored in the positions 66°36'N, 168°15'W and 64°55'N, 168°39'W. Each buoy marked the location of two Braincon Type 316 Histogram Current Meters at depths of about 13 and 25 meters. These meters utilize a Savonius Rotor as a current speed sensor and current direction is sensed by complete instrument pressure case orientation to flow. Three of the four meters recorded continuously over the entire observational period from 12 July to 29 July.

Between 12 July and 23 July the USCGC NORTHWIND occupied 83 oceanographic stations comprising two occupations of the four sections shown in figure 1. The ship anchored at each of these stations and the water properties of temperature, salinity, and dissolved

oxygen were measured as well as making direct current measurements. The oxygen data are incomplete for section D-D' due to a shortage of sample bottles and the close station spacing.

On 23 July the USCGC NORTHWIND was diverted from the survey to assist in the rescue of the CSS RICHARDSON trapped in thick winter ice five miles northwest of Point Barrow. After the rescue mission the USCGC NORTHWIND returned to the survey area on 28 July and recovered the water level gauges and the two current meter arrays. The oceanographic field party was disembarked at Port Clarence on 29 July completing one of the most successful surveys of the Bering Strait current regime to date.

Data Collection

Personnel from the U.S. Coast Guard Oceanographic Unit (CG Oceanographic Unit) conducted Nansen bottle casts at each station, taking observations from the surface to near the bottom at 5-meter intervals. A total of 83 oceanographic stations were occupied. The Nansen bottles were equipped with two protected reversing thermometers, mainly of Yoshino Keike manufacture. Shoal water in the Bering Sea area precluded the use of unprotected thermometers. Water depth rarely exceeded 50 meters. The Nansen bottles were allowed to sit at the desired depths for a minimum of six minutes before being reversed.

Upon retrieval of the cast, water samples were drawn immediately for the dissolved oxygen analyses. The method used was a modified Winkler determination involving the titration of an aliquot portion of the treated sample with sodium thiosulfate using starch as an endpoint indicator.

Salinity samples were drawn from each Nansen bottle and determinations run at least every fourth station. Salinities were determined using the Model 6220 inductive salinometer manufactured by the Bissett-Berman Corporation. This instrument has an accuracy stated by the manufacturer of $\pm .003\%$. At least two determinations were made on each sample.

Temperature, salinity and oxygen data were processed by personnel at CG Oceanographic Unit, Washington, D.C. Corrected data were recorded on form NHO/NODC-3167/1(1-61),

Physical and Chemical Data form for oceanographic stations, and delivered to the National Oceanographic Data Center (NODC). These data are listed by NODC as Ref. No. 31-1089 NW.

The field party from the University of Washington made direct measurements of currents from 5 meters to near the bottom at 5-meter intervals at each station. Current velocity and direction were measured by the Kelvin-Hughes Direct Reading Current Meter. The ship was anchored at each station when the meter was operating and the ship's magnetic heading was recorded. The meter was inoperative on the first line of stations due to a faulty termination between the conducting cables and the deck read-out. Current measurements were made on a total of 66 stations. All current data were processed at the University of Washington Department of Oceanography.

Mechanical bathythermograph lowerings were made on all 83 oceanographic stations by the ship's personnel. The slides and completed logs were submitted to the NODC for final processing.

A continuous sounding program was undertaken during the survey utilizing an AN/UQN-1C echo sounder. However, routine electronic failures hampered full-time use of the echo sounder, along with several instances when the instrument was needed on the bridge for navigation purposes and no soundings were obtained. The bottom profiles are included in the vertical profiles of temperature, salinity, oxygen, and current velocity.

Weather and Ice Observations

Weather

Surface observations were taken at the rate of four per day at 0000, 0600, 1200 and 1800 hrs. GMT. These regular surface observations were transmitted to the appropriate weather stations. No upper air observations were taken during the survey. Four bathythermograph observations were taken daily in conjunction with the six-hourly surface observations. In addition, bathythermograph observations were taken on each oceanographic station.

Sea surface temperature observations were taken on the odd hours, 24 hours per day, in support of the Antisubmarine Warfare Environmental Prediction System (ASWEPS).

One collective sea surface temperature message was transmitted daily after the 2300 GMT observation to Fleet Weather Central, Pearl Harbor. A summary of the 147 recorded and transmitted surface observations is given in Table 1.

In general, in summer when low pressure cells move into the Bering Sea, they occasionally continue northward, then eastward following the coast of Alaska. The air which moves in from the northeast is relatively moist having picked up some moisture from the Arctic Ocean. This airflow frequently causes widespread low level cloudiness. During the survey period this cloudiness was very prevalent, nearly 90% of the time. Fog was also very common with a 35% occurrence. In general there was good visibility with light winds and calm seas despite the low level cloudiness. The average air temperature on station for the first occupation of the four sections was 46°F. For the second occupation the average air temperature on station was 45°F. The lowest air temperature recorded during the survey was 39°F on the second occupation of section E-E'.

Ice Conditions

No ice was encountered in the survey area since the southern boundary of the ice pack during the entire period was about 70°N (figure 2). Figure 2 is a reproduction of a U.S. Navy Ice forecast received by facsimile from Fleet Weather Central, Kodiak, Alaska. The USCGC NORTHWIND encountered the first ice of the cruise off Wainwright, Alaska on 23 July while on the rescue mission to save the Canadian vessel CSS RICHARDSON trapped north of Point Barrow. Scattered brash ice increased in concentration becoming 10/10 coverage of thick winter ice by midnight. Some young polar ice was observed from time to time. Figure 3 shows the ice conditions from Point Barrow to approximately 80°N on 24 July as a result of a U.S. Navy ice observer flight from the Arctic Research Laboratory, Point Barrow, Alaska.

Ice observations were made at six-hourly intervals when the USCGC NORTHWIND was in sight of or operating in ice. Ice observations were taken at 0000, 0600, 1200 and 1800 hrs. GMT in conjunction with the surface weather observations. Several ice reconnaissance flights

were flown by the ship's helicopters with R. A. LINDSAY, AGC, as ice observer. The observations during these flights together with the ice observations made during U.S. Navy flights were used to prepare the chart of figure 4 showing the ice conditions of 26-30 July from Point Barrow eastward to Barter Island.

Field Data Disposition

1. U.S. Coast Guard Oceanographic Unit, Washington, D.C.
 - (a) Temperature
 - (b) Salinity
 - (c) Oxygen
2. University of Washington, Seattle, Washington
 - (a) Direct current measurements
 - (b) Water level measurements
3. U.S. Naval Oceanographic Office, Washington, D.C.

- (a) Fathometer traces
4. National Oceanographic Data Center, Washington, D.C.
 - (a) Mechanical BT logs and slides

Data Presentation

The temperature and salinity distributions at the surface for the two occupations of the sections are shown in figures 5-8. These figures were prepared making the assumption of quasi-synoptic observations. Figure 9 and 10 are representations of the mean current vectors at 5 meters from direct measurement at each oceanographic station taken nearly simultaneously with the physical and chemical observations. Vertical profiles of temperature, salinity, oxygen and current speed for each section are included in this report along with the bottom profiles (figures 11-18). The vertical exaggeration for these cross sections is 1798:1.

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EXPLANATION OF OCEANOGRAPHIC STATION DATA

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

1. Surface Observations

<i>Entry</i>	<i>Description of Field</i>
NODC REF. ID. NO.	NODC reference identity number.
COUNTRY CODE	Indicates nationality of the institute or agency conducting the survey or expedition.
CRUISE NUMBER	A reference number assigned by NODC for storage-retrieval purposes. NODC Publication C-1, <i>Reference Sources of Oceanographic Station Data</i> , gives complete bibliographic and other pertinent information for each cruise.
SHIP CODE	Alphabetic representation of ship's name (or ICES numeric ship code).
LATITUDE	Degrees, minutes, and tenths of minutes, N. or S.
LONGITUDE	Degrees, minutes, and tenths of minutes, E. or W.
DRIFT INDICATOR	The letter D appears in this column if extensive drift occurred while on station.
MARSDEN SQUARE:	
10°	Marsden square number according to the Marsden square system.
1°	The one-degree square number according to the Marsden square system.
STATION TIME:	
(GMT)	Date and time given by the originator. (GMT).
MONTH	Month (GMT)
DAY	Day (GMT).
HR. 1/10	GMT to nearest tenth of an hour.
YEAR	Year.
ORIGINATOR'S CRUISE NUMBER	Alphabetic or alpha-numeric designator as assigned by the originator. If the year of the cruise forms part of the cruise numbering system, the year digits are found in preceding field.
STATION NUMBER	Originator's station number or designator.
DEPTH TO BOTTOM	Corrected or uncorrected sounding depth in meters.
MAX. DEPTH OF SAMPLES	Depth of deepest sample in hundreds of meters to nearest hundred-meter interval.
WAVE OBSERVATIONS:	
DIR.	Direction from which the dominant waves are coming, in tens of degrees, according to WMO Code 0885.
HGT.	Height of dominant waves according to WMO Code 1555.
PER.	Period of dominant waves according to WMO Code 3155.
SEA AMT.	Sea amount (sea state) according to WMO Code 3700 (preceded by the letter A).
WEATHER CODE	If preceded by the letter X, weather according to WMO Code 4501. A numeric two-digit entry indicates weather according to WMO Code 4677.
*INSTR./CLOUD	This field is used either for recording instrument code when electronically obtained data are being reported, or for reporting cloud type and cloud amount when conventional Nansen cast data are being reported.
*INSTR.	A two character code representing instrument package of system.
TYPE	Cloud type according to WMO Code 0500.
AMT.	Cloud amount according to WMO Code 2700.
NODC STATION NUMBER	Assigned by NODC for data storage and retrieval purposes. The NODC Reference Identity and Station numbers combined, uniquely define each station in the NODC archives.
*DT/*SU/D	This indicator specifies that the reported data have been obtained electronically rather than by Nansen-type casts. U (up) and D (down) are cast indicators for electronically obtained serial data and specify that the data were taken while hoisting or lowering respectively.
WATER COLOR	Water color according to Forel-Ule Code.

<i>Entry</i>	<i>Description of Field</i>
TRANS. (m)	Water transparency in meters as determined by Secchi disc.
WIND:	
DIR.	Direction from which wind is blowing in tens of degrees, according to WMO Code 0877.
SPEED OR FORCE	If preceded by letter S, wind speed in knots; if preceded by letter F, wind force in Beaufort code.
BAROMETER (mbs)	Barometric pressure in millibars; tens, units, and tenths places only.
AIR TEMPERATURE	
°C:	
DRY BULB	Dry bulb air temperature in degrees centigrade, to tenths.
WET BULB	Wet bulb air temperature in degrees centigrade, to tenths.
VIS CODE	Visibility according to WMO Code 4300
NUMBER OBS. LEVEL	The number of observed levels associated with the station.
SPECIAL	Entries in this space vary with individual cruises or stations. Information concerning
OBSERVATIONS	entries in this field can be requested from the NODC.

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

Publications of U.S. Coast Guard Oceanographic Unit Relating to Arctic Research

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CG 373-5—Franceschetti, A. P., D. A. McGill, N. Corwin and Elazar Uchupi (1964) Oceanographic Observations, Kennedy Channel, Kane Basin, Smith Sound and Baffin Bay, Summer 1963.

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East Siberian, and Laptev Seas, August–September 1963.

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CG 373-24—Husby, D. M. (1969) Report of Oceanographic Cruise, USCGC NORTHWIND, Northern Bering Sea-Bering Strait-Chukchi Sea, July 1967.

Figure 1. Oceanographic stations occupied by the USCGC NORTHWIND in the Bering and Chukchi Seas, 12-23 July 1967.

Figure 2. U. S. Navy Ice Chart from Fleet Weather Central, Kodiak, Alaska, 5 July 1967, NAVOCEANO 15-30 day forecast (boundary for 20 July and 5 August 1967.)

Figure 4. NAVOCEANO Ice Chart, 26-30 July 1967 from Icy Cape, Alaska to Barter Island (conditions along coastline).

Figure 5. Horizontal distribution of surface water temperature ($^{\circ}\text{C}$) on first occupation of the four oceanographic sections, 12-17 July 1967.

Figure 6. Horizontal distribution of surface salinity (‰) in first occupation of the four oceanographic sections, 12-17 July 1967.

Figure 7. Horizontal distribution of surface water temperature ($^{\circ}\text{C}$) on second occupation of the four oceanographic sections, 18-23 July 1967.

Figure 8. Horizontal distribution of surface salinity (‰) on second occupation of the four oceanographic sections, 18-23 July 1967.

Figure 9. Mean current vectors, direction in degrees true and magnitude in centimeters per second, at depth of 5 meters, based on average of two readings taken on oceanographic stations occupied between 12-17 July 1967. Numerals indicate magnitude of current.

Figure 10. Mean current vectors, direction in degrees true and magnitude in centimeters per second, at depth of 5 meters; based on average of two readings taken on oceanographic stations occupied between 18-23 July 1967. Numerals indicate magnitude of current.

Figure 11. Cross-sections of (a) temperature (b) salinity and (c) oxygen on section E-E' from USCGC NORTHWIND data of 12-13 July 1967. Points indicate observed values. Distances between Cape Nygigan and station 1 and between station 10 and Point Spencer have been exaggerated.

Figure 12 (a) (b). Cross-sections of temperature and salinity on section D-D' from USCGC NORTHWIND data of 13-14 July 1967. Points indicate observed values. Distances between Cape Litke and station 11 and between station 22 and Cape Prince of Wales have been exaggerated.

Figure 12 (c), (d). Cross-sections of oxygen and current speed on section D-D' from USCGC NORTHWIND data of 13-14 July 1967. Points indicate observed values. Distances between Cape Litke and station 11 and between station 22 and Cape Prince of Wales have been exaggerated.

Figure 13 (a), (b). Cross-sections of temperature and salinity on section C-C' from USCGC NORTHWIND data of 15 July 1967. Points indicate observed values. Distances between Cape Uelen and station 32 and between station 23 and Cape Lowenstern have been exaggerated.

Figure 13 (c), (d). Cross-sections of oxygen and current speed on section C-C' from USCGC NORTHWIND data of 15 July 1967. Points indicate observed values. Distances between Cape Uelen and station 32 and between station 23 and Cape Lowenstern have been exaggerated.

Figure 14 (a), (b). Cross-sections of temperature and salinity on section B-B' from USCGC NORTHWIND data of 16-17 July 1967. Points indicate observed values. Distances between Cape Serdtse-Kamen and station 33 and between station 42 and Point Hope have been exaggerated.

Figure 14 (c), (d). Cross-sections of oxygen and current speed on section B-B' from USCGC NORTHWIND data of 16-17 July 1967. Points indicate observed values. Distances between Cape Serdtse-Kamen and station 33 and between station 42 and Point Hope have been exaggerated.

Figure 15 (a), (b). Cross-sections of temperature and salinity on section E-E' from USCGC NORTHWIND data of 18-19 July 1967. Points indicate observed values. Distances between Cape Nygligan and station 52 and between station 43 and Point Spencer have been exaggerated.

Figure 15 (c). (d). Cross-sections of oxygen and current speed on section E-E' from USCGC NORTHWIND data of 18-19 July 1967. Points indicate observed values. Distances between Cape Nygligan and station 52 and between station 43 and Point Spencer have been exaggerated.

Figure 16 (a), (b). Cross-sections of temperature and salinity on section D-D' from USCGC NORTHWIND data of 19-20 July 1967. Points indicate observed values. Distances between Cape Litke and station 53 and between station 64 and Cape Prince of Wales have been exaggerated.

Figure 16 (c). (d). Cross-sections of oxygen and current speed on section D-D' from USCGC NORTHWIND data of 19-20 July 1967. Points indicate observed values. Distances between Cape Litke and station 53 and between station 64 and Cape Prince of Wales have been exaggerated.

Figure 17 (a), (b). Cross-sections of temperature and salinity on section C-C' from USCGC NORTH-WIND data of 20-21 July 1967. Points indicate observed values. Distances between Cape Uelen and station 65 and between station 74 and Cape Lowenstern have been exaggerated.

Figure 17 (c), (d). Cross-sections of oxygen and current speed on section C-C' from USGCG NORTH-WIND data of 20-21 July 1967. Points indicate observed values. Distances between Cape Uelen and station 65 and between station 74 and Cape Lowenstern have been exaggerated.

Figure 18 (a), (b). Cross-sections of temperature and salinity on section B-B' from USCGC NORTHWIND data of 22-23 July 1967. Points indicate observed values. Distances between Cape Serdtse-Kamen and station 83 and between station 75 and Point Hope have been exaggerated.

Table I.—Weather observations given in percentage occurrence in Cape Prince of Wales to Point Barrow area.

Total obs: 147	%
Sky Coverage:	
Clear to few scattered	12
Cloudy	88
Visibility:	
$\frac{1}{4}$ mile or less	16
$\frac{1}{2}$ mile or less	10
1 mile	0
2 miles	4
5 miles	21
10 miles	50
Weather:	
No weather or obstructions to vision	54
Fog	35
Rain or drizzle	11
Snow or snow showers	0
Wind Direction:	
N	20
NE	12
E	10
SE	5
S	28
SW	8
W	9
NW	8
Wind Speed:	
0-5 knots	14
6-10 knots	27
11-15 knots	22
16-20 knots	14
21-25 knots	13
26-30 knots	5
31-35 knots	5

Average Barometric Pressure 29.698 inches

All physical and chemical data are presented in Table II. This tabulation is accompanied with an explanation of codes used for the

environmental data. The direct current measurements made at each oceanographic station are tabulated in Table III.

Table II.—Observed and interpolated oceanographic data for stations taken by USCGC NORTH-WIND, 12–23 July 1967, prepared from NODC listing No. 31-1089 NW.

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARS SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER																									
CTRY CODE	ID. NO.					10"	1"	MO DAY HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT																								
31	1089	NW	65510N	171345W	234	31	07	12 174	1967	EE1	001	0036	07				X4	X8		0001																									
<table><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">VIS. CODE</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>DIR.</th><th>SPEED OR FORCE</th><th>DRY BULB</th><th>WET BULB</th></tr><tr><td></td><td></td><td></td><td>20</td><td>510</td><td>188</td><td>074</td><td>778</td><td>7</td><td></td></tr></table>																				WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB				20	510	188	074	778	7	
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																				
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																							
			20	510	188	074	778	7																																					
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ O DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl/l}$	TOTAL-P $\mu\text{g} \cdot \text{dl/l}$	NO ₂ -N $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl/l}$	pH	STATION NUMBER																												
		STD	0000			3066				771																																			
174	OBS	0000		0781	3064	2392				771																																			
174	OBS	0005		0787	30654	2391			14769	768																																			
	STD	0010		0169	3316	2654	0015010			14545	826																																		
174	OBS	0010		0169	33157	2654				14545	826																																		
174	OBS	0016		0159	33196	2658				14542	762																																		
	STD	0020		0155	3321	2654	0014522			14541	738																																		
174	OBS	0021		0154	33214	2660				14541	735																																		
174	OBS	0026		0147	33226	2661				14539	714																																		
	STD	0030		0136	3329	2667	0013742			14536	700																																		
174	OBS	0031		0133	33318	2670				14535	696																																		

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARS SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER																									
CTRY CODE	ID. NO.					10"	1"	MO DAY HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT																								
31	1089	NW	64540N	171060W	234	44	07	12 197	1967	EE1	002	0040	07	15	1		X4	X8		0002																									
<table><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">VIS. CODE</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>DIR.</th><th>SPEED OR FORCE</th><th>DRY BULB</th><th>WET BULB</th></tr><tr><td></td><td></td><td></td><td>18</td><td>506</td><td>194</td><td>078</td><td>772</td><td>2</td><td></td></tr></table>																				WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB				18	506	194	078	772	2	
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																				
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																							
			18	506	194	078	772	2																																					
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ O DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl/l}$	TOTAL-P $\mu\text{g} \cdot \text{dl/l}$	NO ₂ -N $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl/l}$	pH	STATION NUMBER																												
		STD	0000	0475	3246	2572	0024845	0000	14666																																				
	OBS	0000		0475	32464	2572			14666	1008																																			
197	OBS	0005		0397					868																																				
	STD	0010		0325	3286	2616	0018496	0021	14609	790																																			
197	OBS	0010		0325	32855	2616			14609	740																																			
197	OBS	0016		0309	32925	2625			14604	735																																			
	STD	0020		0235	3314	2648	0015019	0038	14570	634																																			
197	OBS	0021		0225	33175	2651			14572	820																																			
197	OBS	0026		0226	33176	2651			14573	615																																			
	STD	0030		0220	3316	2641	0015283	0053	14574	633																																			
197	OBS	0031		0220	33175	2651			14574	634																																			
197	OBS	0037		0226	33170	2651			14576	614																																			

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARS SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER																									
CTRY CODE	ID. NO.					10"	1"	MO DAY HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT																								
31	1089	NW	64540N	170120W	234	40	07	12 218	1967	EE1	003	0040	00	15	1		X2	78		0003																									
<table><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">VIS. CODE</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>DIR.</th><th>SPEED OR FORCE</th><th>DRY BULB</th><th>WET BULB</th></tr><tr><td></td><td></td><td></td><td>18</td><td>510</td><td>190</td><td>067</td><td>050</td><td>7</td><td></td></tr></table>																				WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB				18	510	190	067	050	7	
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																				
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																							
			18	510	190	067	050	7																																					
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ O DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl/l}$	TOTAL-P $\mu\text{g} \cdot \text{dl/l}$	NO ₂ -N $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl/l}$	pH	STATION NUMBER																												
		STD	0000			3305				666																																			
218	OBS	0000		0327	33053	26334				666																																			
218	OBS	0005		0343	33044	2631				14619	642																																		
	STD	0010		0266	3307	2640	0016400			14587	639																																		
218	OBS	0010		0266	33068	2640				14587	639																																		
218	OBS	0016		0235	33073	2645				14573	685																																		
	STD	0020		0223	3308	2644	0016021			14570	653																																		
218	OBS	0021		0220	33044	26414				650																																			
218	OBS	0026		0208	33077	2645				14564	671																																		
	STD	0030		0208	3308	2645	0015879			14565	671																																		
218	OBS	0031		0208	33052	26434				676																																			
218	OBS	0037		0206	33077	2645				14566																																			

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH INCLIN	MARSDEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.						10"	1"	MO	DAY		HR. 1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA	
111084	NW	64480N	167060W	234	49	07	12	230	1967	EE1	004	0049	00	18	1			x1	6	5		0004
							WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB															
							14	515	194	072	050	7										
MESSNGR TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH					
		STD	0000	0385	3306	2628	0017472		0000	14636	771											
238		OBS	0000	0385	33061	2628				14636	771											
238		OBS	0005	0400	33070	2628				14643	778											
		STD	0010	0249	3306	2647	0016358		0017	14579	665											
238		OBS	0010	0249	33056	2640				14579	665											
238		OBS	0016	0233	33058	2641				14573	652											
		STD	0020	0232	3307	2642	0016158		0033	14574	651											
238		OBS	0021	0232	33068	2642				14574	650											
238		OBS	0026	0231	33062	2642				14574	645											
		STD	0030	0230	3307	2642	0016139		0049	14574	651											
238		OBS	0031	0230	33068	2643				14574	653											
238		OBS	0037	0230	33077	2643				14576	639											
238		OBS	0042	0230	33075	2643				14576	654											
238		OBS	0047	0231	33072	2643				14578	640											

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH INCLIN	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA	
311089	NW	64480N	167300W	233	49	07	13	018	1967	EE1	005		0044	00	18	1		X1	5	4	0005
		WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB		DRY BULB	WET BULB													
			18	516	190		074	061	7												
MESSNGR TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta$ O DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH				
		STD	0000	0348	3301	2623	0017985		0000	14641	712										
018		OBS	0000	0390	33039	2623				14641	712										
018		OBS	0005	0346	33003	2627				14620	710										
		STD	0010	0275	3300	2633	0016993		0017	14590	698										
018		OBS	0010	0275	32999	2633				14590	698										
018		OBS	0016	0202	32975	2637				14558	695										
		STD	0020	0182	3297	2636	0016525		0034	14550	694										
018		OBS	0021	0179	32968	2638				14549	693										
018		OBS	0026	0178	32959	2636				14549	680										
		STD	0030	0141	3293	2638	0016559		0051	14533	682										
018		OBS	0031	0136	32922	2638				14531	682										
018		OBS	0037	0135	32933	2639				14532	671										

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INCLIN	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	IO. NO.					10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TYPE
311089	NW	64480N	169000W	235	49	07	13	037	1967	EE1	006	0040	00	12	1			X1	6	3	0006	
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB		WET BULB														
						18		515		191	106	061	7									
MESSNGR TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH				
		STD	0000		3274							762										
037		OBS	0000	08360	32742	25470						762										
043		OBS	0005	0845	32738	2545					14818	778										
		STD	0010	0828	3275	2549	0025026				14812	805										
043		OBS	0010	0828	32750	2549					14812	805										
043		OBS	0016	0733	32841	2570					14778	831										
		STD	0020	0477	3283	2598	0020325				14683	744										
043		OBS	0021	0448	32830	2604					14663	733										
043		OBS	0026	0259	32816	2620					14583	743										
		STD	0030	0255	3282	2621	0018221				14582	751										
043		OBS	0031	0254	32817	2621					14582	752										
043		OBS	0037	0254	32827	2621					14583	745										

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	ORBIT INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE	
311089	NW		04540N	168360W	233	46	07	13	060		1967	EE1	007	0040	00	17	1		X1	0	3	00071
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB										
								16	513	187		089	083	7								
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}		$\Sigma \Delta \rho$ DYN. M. x 10 ³		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - dl/l	TOTAL-P µg - dl/l	NO ₂ -N µg - dl/l	NO ₃ -N µg - dl/l	SiO ₄ -Si µg - dl/l	pH	S CC			
		STD	0000	0729	3206	2571	0022881		0000		14774	837										
	060	OBS	0000	0729	32855	2571					14774	837										
	060	OBS	0005	0740	32654	2570					14773	831										
		STD	0010	0493	3281	2597	0020462		0022		14680	814										
	060	OBS	0010	0493	32807	2597					14680	814										
	060	OBS	0016	0425	32807	2604					14652	810										
		STD	0020	0402	3281	2607	0019552		0042		14643	789										
	060	OBS	0021	0390	32808	2608					14638	781										
	060	OBS	0026	0298	32834	2618					14600	730										
		STD	0030	0296	3282	2617	0018526		0061		14600	729										
	060	OBS	0031	0295	32818	2617					14599	729										
	060	OBS	0037	0293	32830	2618					14600	732										

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	ORBIT INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE	
311089	NW		64550N	168077W		233	46	07	13	076	1967	EE1	008	0037	00	14	1		X1	0	2	0008
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. mm	DIR.	SPEED OF FORCE	meter (mb)	DRY BULB	WET BULB										
									16	510	188	089	078	8								
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}		$\Sigma \Delta \rho$ DYN. M. x 10 ³		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - dl/l	TOTAL-P µg - dl/l	NO ₂ -N µg - dl/l	NO ₃ -N µg - dl/l	SiO ₄ -Si µg - dl/l	pH	S CC			
		STD	0000		3265							760										
	076	OBS	0000	06730	32647	25630						760										
	076	OBS	0005	0700	32642	2559					14760	771										
		STD	0010	0700	3265	2559	0024087				14761	764										
	076	OBS	0010	0700	32645	2559					14761	764										
	076	OBS	0016	0585	32652	2574					14716	760										
		STD	0020	0525	3265	2579	0022142				14692	737										
	076	OBS	0021	0517	32621	2580					14689	732										
	076	OBS	0026	0513	32617	2580					14680	716										
		STD	0030	0513	3262	2580	0022112				14689	714										
	076	OBS	0031	0513	32618	2580					14689	714										
	076	OBS	0037	0512	32615	2580					14689	719										

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	ORBIT INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
311089	NW	65000N	167480W	233	57	07	13	096	1967	EE1	009	0040	00	27	2			X4	A	9	0009		
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. mm	DIR.	SPEED OF FORCE	meter (mb)	DRY BULB	WET BULB											
								23	505	196	094	083	3										
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}		$\Sigma \Delta \rho$ DYN. M. x 10 ³		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P µg - dl/l	TOTAL-P µg - dl/l	NO ₂ -N µg - dl/l	NO ₃ -N µg - dl/l	SiO ₄ -Si µg - dl/l	pH	S CC				
		STD	0000	0936	2994	2313	0047483		0000		14815	703											
	096	OBS	0000	0936	29938	2313					14815	703											
	096	OBS	0005	0888	30029	2328					14799	703											
		STD	0010	0796	3027	2360	0043036		0045		14766	706											
	096	OBS	0010	0796	30274	2360					14768	708											
	096	OBS	0016	0544	31698	2504					14687	710											
		STD	0020	0509	3205	2535	0026326		0080		14678	793											
	096	OBS	0021	0473	32115	2544					14664	806											
	096	OBS	0026	0133	32250	2584					14519	827											
		STD	0030	0120	3225	2585	0021600		0104		14514	830											
	096	OBS	0031	0116	32249	2585					14514	831											
	096	OBS	0037	0117	32251	2585					14514	830											

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARS SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER			
CTRY CODE	ID. NO.					10"	1"		MO	DAY			HR./10	CRUISE NO.	STATION NUMBER	DIR.		HGT	PER		SEA	TYPE	AMT
311089	NW		65020N	167350W	233	57	07	13	107	1967	EE1	010	002	1	00	22	2				0010		
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER		
CTRY CODE	ID. NO.					10"	1"	MO		DAY	HR./10			CRUISE NO.	STATION NUMBER	DIR.				HGT	PER
311	089	NW	65360N	169420W	233	59	07	14	053	1967	DD1	013	0053	00	21	0		X4	7	8	0013
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB									
								20	S18	164	094	072	4								
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ σ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH			
		STD	0000	0760	3107	2427		0036578		0000	14763	791									
	053	OBS	0000	0760	31074	2427					14763	791									
	053	OBS	0005	0406	33134	2632					14647	10570									
		STD	0010	0318	3313	2640		0016536		0026	14610	754									
	053	OBS	0010	0318	33133	2640					14610	754									
	053	OBS	0016	0306	33157	2643					14606	714									
		STD	0020	0257	3319	2650		0015410		0042	14586	615									
	053	OBS	0021	0250	33193	2651					14583	605									
	053	OBS	0026	0251	33183	2650					14584	639									
		STD	0030	0249	3319	2651		0015354		0058	14584	611									
	053	OBS	0031	0249	33280	26580						607									
	053	OBS	0037	0248	33213	2653					14585	603									
	053	OBS	0042	0246	33230	2654					14586	607									

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	UNIT MO/HR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER				
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER				SEA	TYPE	AMT	
311	089	NW	65380N	169360W	233	59	07	14	068	1967	DD1	014	0055	00	21	0			X4	X	9	0014			
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE			DRY BULB	WET BULB																
								20	S15	164	078	078	5												
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	Si O ₄ -Si $\mu\text{g} - \text{dl/l}$	pH								
		STD	0000	0807	3173	2472	0032306		0000	14789															
	068	OBS	0000	0807	31731	2472				14789	9920														
	068	OBS	0005	0452	32899	2609				14663	773														
		STD	0010	0331	3317	2642	0016169		0024	14616	663														
	068	OBS	0010	0331	33170	2642				14616	663														
	068	OBS	0016	0294	33164	2645				14601	638														
		STD	0020	0294	3316	2645	0015935		0040	14602	646														
	068	OBS	0021	0294	33153	2644				14602	646														
	068	OBS	0026	0293	33144	2643				14602	638														
		STD	0030	0291	3314	2643	0016047		0056	14602	633														
	068	OBS	0031	0291	33143	2643				14602	632														
	068	OBS	0037	0292	33156	2644				14604	641														
	068	OBS	0042	0291	33165	2645				14604	632														

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	UNIT MO/HR	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER			
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER				SEA	TYPE	AMT
311	089	NW	65340N	169250W	233	59	07	14	087	1967	DD1	015	0055	00	17	0			X4	X	9	0015		
		WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS													
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB																
					17	S10	158	056	056	1														
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	Si O ₄ -Si $\mu\text{g} - \text{dl/l}$	pH							
		STD	0000	0397	3306	2627	0017569		0000	14641	719													
	087	OBS	0000	0397	33063	2627				14641	719													
	087	OBS	0005	0394	33066	2628				14641	723													
		STD	0010	0270	3305	2638	0016583		0017	14588	680													
	087	OBS	0010	0270	33048	2638				14588	680													
	087	OBS	0016	0269	33047	2638				14589	669													
		STD	0020	0268	3305	2638	0016580		0034	14589	672													
	087	OBS	0021	0266	33047	2638				14589	675													
	087	OBS	0026	0270	33040	2637				14591	681													
		STD	0030	0269	3305	2638	0016600		0050	14591	686													
	087	OBS	0031	0269	33048	2638				14591	689													
	087	OBS	0037	0270	33050	2638				14593	685													
	087	OBS	0042	0268	33050	2638				14593	666													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH INDIC	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER				SEA
31	1089	NW	65323N	167162W		233	59	07	14	112	1967	DD1	016	0051	00	18	1		A4	A	9	0010
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB										
								18	520	156	061	061	3									
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	S C C					
		STD	0000	0473	3303	2617	0018569	0000	14673	745												
	102	OBS	0000	0473	33030	2617			14673	745												
	102	OBS	0005	0469	33042	2618			14672	739												
		STD	0010	0288	3300	2632	0017121	0018	14595	741												
	102	OBS	0010	0288	32996	2632			14595	741												
	102	OBS	0016	0237	32959	2633			14574	702												
		STD	0020	0232	3295	2633	0017005	0035	14572	701												
	102	OBS	0021	0231	32953	2633			14572	700												
	102	OBS	0026	0228	32952	2633			14571	694												
		STD	0030	0226	3295	2633	0016996	0052	14571	690												
	102	OBS	0031	0226	32950	2633			14571	689												
	102	OBS	0037	0225	32948	2633			14572	713												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH INDIC	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER				SEA
31	1089	NW	65322N	169019W		233	59	07	14	116	1967	DD1	017	0055	00	18	1		X4	X	9	0017
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB										
								18	515	157	061	061	2									
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	S C C					
		STD	0000	0462	3293	2610	0019223	0000	14667													
	116	OBS	0000	0462	32928	2610			14667	7550												
	116	OBS	0005	0466	32936	2610			14669	7620												
		STD	0010	0467	3293	2609	0019275	0019	14670													
	116	OBS	0010	0467	32929	2609			14670	7620												
	116	OBS	0016	0314	32924	2624			14607	764												
		STD	0020	0268	3292	2628	0017509	0036	14587	744												
	116	OBS	0021	0256	32924	2629			14583	739												
	116	OBS	0026	0218	32931	2633			14567	712												
		STD	0030	0214	3293	2633	0017026	0055	14565	702												
	116	OBS	0031	0213	32935	2633			14565	700												
	116	OBS	0037	0214	32937	2633			14567	700												
	116	OBS	0042	0215	32933	2633			14568	707												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH INDIC	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER		
						10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER				SEA	
31	1089	NW	65380N	168500W		233	58	07	14	133	1967	DD1	018	0055	00	18	1		X4	X	9	0018	
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
									20	516	155	061	061	2									
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \sigma$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	S C C						
		STD	0000	0513	3280	2594	0020732	0000	14686														
	133	OBS	0000	0513	32798	2594			14686														
	133	OBS	0005	0507	32843	2598			14685														
		STD	0010	0495	3286	2601	0020092	0020	14681														
	133	OBS	0010	0495	32859	2601			14681														
	133	OBS	0016	0462	32859	2604			14668														
		STD	0020	0367	3289	2616	0018608	0040	14629														
	133	OBS	0021	0354	32894	2618			14624														
	133	OBS	0026	0349	32894	2618			14623														
		STD	0030	0345	3289	2619	0018417	0058	14622														
	133	OBS	0031	0344	32888	2618			14621														
	133	OBS	0037	0342	32878	2618			14521														
	133	OBS	0042	0340	32874	2618			14621														

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT MOUSE	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA		TYPE	AMT	
311089	NW		65380N	168400W	233	58	07	14	155	1967	DD1	019		0053	00	14	2			X4	X	9	0010
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB											
									17		S13	158					078	061	3				
MESSNGR TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S %.	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - \text{dl/l}$	TOTAL-P $\mu g - \text{dl/l}$	NO ₂ -N $\mu g - \text{dl/l}$	NO ₃ -N $\mu g - \text{dl/l}$	SiO ₄ -Si $\mu g - \text{dl/l}$	pH	S C						
		STD	0000	0480	3252	2576	0022475	0000	14669	757													
155		OBS	0000	0480	32520	2576			14669	757													
155		OBS	0005	0487	32555	2578			14673	773													
		STD	0010	0494	3260	2581	0022005	0022	14677	781													
155		OBS	0010	0494	32603	2581			14677	781													
155		OBS	0016	0491	32617	2582			14677	771													
		STD	0020	0486	3263	2583	0021757	0044	14676	781													
155		OBS	0021	0485	32628	2584			14676	782													
155		OBS	0026	0477	32631	2585			14673	777													
		STD	0030	0475	3264	2585	0021572	0066	14673														
155		OBS	0031	0474	32637	2586			14673	7760													
155		OBS	0037	0475	32638	2586			14674	7770													
155		OBS	0042	0475	32639	2586			14675	7710													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT MOUSE	MARSDEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CTRY CODE	ID. NO.						10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR	HGT	PER		SEA	TYPE		AMT	
311089	NW		65370N	168034W		233	58	07	14	180	1967	DD1	020		0057	00	15	2			X4	X	9		0020
							WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
							COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB												
										16		S15	160					078	067	3					
MESSENGER TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S %.	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta D$ DYN. M. $\times 10^3$		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - \text{dl/l}$	TOTAL-P $\mu g - \text{dl/l}$	NO ₂ -N $\mu g - \text{dl/l}$	NO ₃ -N $\mu g - \text{dl/l}$	SiO ₄ -Si $\mu g - \text{dl/l}$	pH	S C						
		STD	0000	0625	3236	2546	0025319		0000		14726														
180		OBS	0000	0625	32355	2546					14726														
180		OBS	0005	0624	32358	2546					14726														
		STD	0010	0577	3242	2557	0024292		0025		14709														
180		OBS	0010	0577	32419	2557					14709														
180		OBS	0016	0567	32441	2560					14706														
		STD	0020	0346	3236	2576	0022420		0048		14613														
180		OBS	0021	0311	32348	2578					14598														
180		OBS	0026	0255	32316	2581					14574														
		STD	0030	0246	3231	2581	0021960		0070		14571														
180		OBS	0031	0245	32314	2581					14571														
180		OBS	0037	0243	32311	2581					14571														
180		OBS	0042	0241	32313	2581					14571														
180		OBS	0047	0242	32324	2582					14572														

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT MOUSE	MARSDEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER							
CTRY CODE	ID. NO.						10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER		DIR.	HGT		PER	SEA		TYPE	AMT					
	WATER															WIND										BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS
		COLOR CODE		TRANS. IMT	DIR.	SPEED OR FORCE			DRY BULB	WET BULB																				
						21	S18	166	083	072	7																			
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - \text{dl/l}$	TOTAL-P $\mu g - \text{dl/l}$	NO ₂ -N $\mu g - \text{dl/l}$	NO ₃ -N $\mu g - \text{dl/l}$	SiO ₄ -Si $\mu g - \text{dl/l}$	pH	S C												
		STD	0000	0576	3240	2555	0024421		0000	14707	830																			
212		OBS	0000	0576	32399	2555				14707	830																			
212		OBS	0005	0580	32396	2554				14709	829																			
		STD	0010	0563	3239	2556	0024344		0024	14703	830																			
212		OBS	0010	0563	32391	2556				14703	830																			
212		OBS	0016	0505	32326	2558				14679	821																			
		STD	0020	0346	3219	2563	0023704		0048	14611	809																			
212		OBS	0021	0323	32175	2564				14601	807																			
212		OBS	0026	0313	32165	2564				14598	807																			
		STD	0030	0313	3218	2565	0023504		0072	14598	814																			
212		OBS	0031	0313	32182	2565				14599	815																			
212		OBS	0037	0313	32185	2565				14600	812																			
212		OBS	0042	0312	32202	2567				14600	794																			

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DAFT INDIC	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	10 TYPE		AMT
311	089	NW	65360N	168180W	233	58	07	14	223	1967	DD1	022	0046	00	23	2			X1	3 6		0022	
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
								23	S15		178	078					061	7					
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - dl/l$	TOTAL-P $\mu g - dl/l$	NO ₂ -N $\mu g - dl/l$	NO ₃ -N $\mu g - dl/l$	SiO ₄ -Si $\mu g - dl/l$	pH	S C C					
		STD	0000	0707	3092	2423	0037038		0000	14740													
	223	OBS	0000	0707	30922	2423				14740	7160												
	223	OBS	0005	0697	30939	2425				14737	716												
		STD	0010	0663	3102	2436	0035800		0036	14725	716												
	223	OBS	0010	0663	31017	2436				14725	716												
	223	OBS	0016	0548	31230	2466				14682	723												
		STD	0020	0416	3148	2500	0029710		0069	14632	745												
	223	OBS	0021	0394	31517	2505				14623	752												
	223	OBS	0026	04100	31513	25030																	
		STD	0030	0329	3159	2517	0028097		0098	14597													
	223	OBS	0031	0326	31601	2518				14596													
	223	OBS	0037	0322	31613	2519				14596													

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DAFT INDIC	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR, 1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE	AMT
311	089	NW	66240N	166240W		233	06	07	15	062	1967	CC1	023	0024	00	15	1			X1	0 6	0023	
						WATER		WIND				AIR TEMP. °C											
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mbs)	DRY BULB		WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
											111	100						8					
									24	S21	168												
MESSNGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - \text{ml/l}$	TOTAL-P $\mu g - \text{ml/l}$	NO ₂ -N $\mu g - \text{ml/l}$	NO ₃ -N $\mu g - \text{ml/l}$	SiO ₄ -Si $\mu g - \text{ml/l}$	pH	S C C					
		STD	0000	0950	3004	2319	0046961		0000	14822													
	062	OBS	0000	0950	30036	2319				14822													
	062	OBS	0005	0953	30032	2318				14824													
		STD	0010	0923	3008	2326	0046243		0047	14814													
	062	OBS	0010	0923	30081	2326				14814													

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DAFT INDIC	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR, 1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE	AMT
311	089	NW	66320N	166580W		233	66	07	15	086	1967	CC1	024	0038	00	22	2			X2	7 8		0024
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
									22	S27	164	083	072	7									
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - dl/l$	TOTAL-P $\mu g - dl/l$	NO ₂ -N $\mu g - dl/l$	NO ₃ -N $\mu g - dl/l$	SiO ₄ -Si $\mu g - dl/l$	pH	S C C					
		STD	0000	0745	3096	2421	0037227		0000	14755	722												
	086	OBS	0000	0745	30961	2421				14755	722												
	086	OBS	0005	0746	30961	2421				14757	718												
		STD	0010	0739	3099	2424	0036946		0037	14755	732												
	086	OBS	0010	0739	30990	2424				14755	732												
	086	OBS	0016	0659	31203	2451				14727	751												
		STD	0020	0635	3123	2456	0033882		0073	14718	728												
	086	OBS	0021	0626	31256	2459				14715	726												
	086	OBS	0026	0566	31502	2486				14695	737												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE	
31	1289	NW	6635'N	16714'W	233	67	17	15	100	1967		CC1	025	0032	00	22	3		X2	7	8	0025
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mb)	DRY BULB	WET BULB										
									22	529	163	078	061	7								
MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY- $\times 10^3$	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S C					
		STD	0000	0551	3155	2491	0030506	0000	14685	751												
	100	OBS	0000	0551	31551	2491			14685	751												
	100	OBS	0005	0552	31536	2490			14686	762												
		STD	0010	0550	3154	2490	0030624	0031	14686	781												
	100	OBS	0010	0550	31535	2490			14686	781												
	100	OBS	0016	0547	31603	2496			14687	756												
		STD	0020	0504	3175	2512	0028528	0060	14672	751												
	100	OBS	0021	0488	31802	2518			14666	751												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPT INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE	
31	1089	NW	6635'N	167382'W	233	67	07	15	122	1967		CC1	026	0031	00	18	3		X2	7	8	0026
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB										
									22	523	151	083	061	7								
MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-3107	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S C					
		STD	0000	0491	3183	2519	0027814	0000	14664	755												
	122	OBS	0000	0491	31825	2519			14664	755												
	122	OBS	0005	0491	31818	2519			14665	782												
		STD	0010	0489	3182	2519	0027824	0028	14665	789												
	122	OBS	0010	0489	31822	2519			14665	789												
	122	OBS	0016	0488	31826	2520			14665	796												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPT INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
31	1089	NW	66362N	167550W	233	67	07	15	148	1967	CC1	027	0047	00	18	3		X2	7	8	0027		
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	METER (mb)	DRY BULB	WET BULB											
									21	527	137	067	050	7									
MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- $\times 10^3$	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S C						
		STD	0000	0519	3155	2495	0030142	0000	14672	757													
	149	OBS	0000	0519	31554	2495			14672	757													
	148	OBS	0005	0520	31542	24940			14674	766													
		STD	0010	0519	3155	2494	0030217	0030	14674	769													
	148	OBS	0010	0519	31545	2494			14674	764													
	148	OBS	0016	0517	31559	2496			14674	782													
		STD	0020	0505	3165	2504	0029290	0060	14671	773													
	148	OBS	0021	0501	31682	2507			14670	769													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER	
CTRY CODE	IO. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TYPE
311	089	NW	66350N	168200W		243	68	17	15	150	1967	CC1	028	0042	00	15	2		X4	X	9	0028
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB										
									19 <td>521</td> <td>120</td> <td>072</td> <td>056</td> <td>3</td> <td colspan="6"></td>		521	120					072	056	3			
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-X10 ³		Σ Δ σ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH					
		STD	0000	0393	3238	2574	0022658		0000	14630	785											
160		OBS	0000	0393	32383	2574				14630	785											
160		OBS	0005	0393	32380	2573				14631	785											
		STD	0010	0391	3237	2573	0022713		0023	14631	794											
160		OBS	0010	0391	32374	2573				14631	794											
160		OBS	0016	0390	32376	2573				14632	807											
		STD	0020	0388	3238	2574	0022680		0045	14631	792											
160		OBS	0021	0387	32375	2574				14631	791											
160		OBS	0026	0387	32384	2574				14632	795											
		STD	0030	0388	3238	2574	0022622		0068	14633	786											
160		OBS	0031	0388	32384	2574				14633	781											

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER			
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT		
311089		NW	66360N	168490W		233	68	07	15	180	1967	CC1	029	0048	00	22	2		X4	X	9	0029			
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB													
									21	513	104	067	056	2											
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-X10 ³		Σ Δ σ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S C C							
		STD	0000	0470	3265	2587	0021417		0000	14666	731														
180		OBS	0000	0470	32647	2587				14666	731														
180		OBS	0005	0470	32667	2589				14667	726														
		STD	0010	0420	3284	2607	0019476		0020	14650	730														
180		OBS	0010	0420	32840	2607				14650	730														
180		OBS	0016	041	32868	2611				14643	737														
		STD	0020	0385	3288	2614	0018849		0040	14637	734														
180		OBS	0021	0384	32881	2614				14637	733														
180		OBS	0026	0393	32926	2617				14642	735														
		STD	0030	0392	3291	2616	0018673		0058	14642	730														
180		OBS	0031	0391	32910	2616				14642	729														
180		OBS	0037	0378	32921	2618				14637	732														

REFERENCE CTRY CODE	ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER		
						10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT	
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO- METER (mbs)														AIR TEMP. °C
311089		NW	66300N	169120W		233	69	07	15	202	1967	CC1	030		0055	00	16	1		X4	X	9		0030

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER				
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT			
311084		NW	6624' N	169300'W		233	69	07	15	219	1967	CC1	031		0058	00	10	1			X4	X 9		0031		
						WATER		WIND		BARO- METER (mb)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB														
								12		520	043		067	061	5											
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta$ DYN. M. x 10 ³		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S CODE							
		STD	0000	0474	3271	2591	0021000		0000		14669	748														
	219	OBS	0000	0474	32708	2591					14669	748														
	219	OBS	0005	0473	32720	2592					14669	758														
		STD	0010	0471	3275	2595	0020684		0021		14670	755														
	219	OBS	0010	0471	32747	2595					14670	755														
	219	OBS	0016	0287	33025	2634					14596	669														
		STD	0020	0283	3303	2635	0016828		0040		14595	667														
	219	OBS	0021	0282	33033	2635					14595	666														
	219	OBS	0026	0281	33034	2636					14595	679														
		STD	0030	0280	3303	2635	0016809		0056		14596	688														
	219	OBS	0031	0280	33028	2635					14596	690														
	219	OBS	0037	0280	33026	2635					14597	666														
	219	OBS	0041	0279	33037	2636					14597	662														

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
311089	NW	66240N	169420W	233	69	07	15	235	1967	CC1	032		0055	00	12	2			X4	X 9			0032
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
								10	524	004	061	061	5										
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	3 CC					
		STD	0000	0312	3304	2634	0016960		0000	14605													
	235	OBS	0000	0312	33043	2634				14605													
	235	OBS	0005	0312	33043	2634				14606													
		STD	0010	0309	3306	2635	0016842		0017	14605													
	235	OBS	0010	0309	33056	2635				14605													
	235	OBS	0016	0309	33087	2637				14607													
		STD	0020	0310	3307	2636	0016725		0034	14607													
	235	OBS	0021	0310	33070	2636				14608													
	235	OBS	0026	0309	33083	2637				14608													
		STD	0030	0308	3308	2637	0016641		0050	14609													
	235	OBS	0031	0308	33083	2637				14609													
	235	OBS	0037	0308	33086	2637				14610													
	235	OBS	0042	0308	33089	2638				14610													

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER									
CTRY CODE	ID. NO.						10"	1"	MO		DAY	HR./10			CRUISE NO.	STATION NUMBER		DIR.		HGT	PER		SEA	TYPE	AMT						
							10"	1"	MO		DAY	HR./10																			
311089	NW	67050N	171110W		234	71	07	16	062	1967	BB1	033		0046	00	05	2				X4	X 9		0033							
								WATER		WIND		BARO- METER (mb)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS													
								COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	ORY BULB		WET BULB																	
											35	521	950	061	056					2											
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	3 CC													
		STD	0000	0609	3173	2499	0029783		0000	14711																					
	062	OBS	0000	0609	31734	2499				14711	8540																				
	062	OBS	0005	0608	31736	2499				14712	8480																				
		STD	0010	0559	3246	2562	0023820		0027	14702	8470																				
	062	OBS	0010	0559	32455	2562				14702	847																				
	062	OBS	0016	0261	33068	2640				14586	799																				
		STD	0020	0250	3309	2643	0016112		0047	14582	646																				
	062	OBS	0021	0247	33095	2643				14581	628																				
	062	OBS	0026	0234	33113	2646				14576	664																				
		STD	0030	0233	3311	2646	0015834		0063	14576	663																				
	062	OBS	0031	0232	33104	2645				14576	660																				
	062	OBS	0037	0222	33093	2645				14572	617																				

REFERENCE		SHIP CODE	LATITUDE ° ' / 10	LONGITUDE ° ' / 10	DRAFT INCHES	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER		
CITY CODE	ID. NO.					10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR.	HGT PER				SEA	TYPE
31	1089	NW	67306N	169540W		235	79	07	16	132	1967	BB1	036	0051	00	00	0		X4	X 19		0036
						WATER		WIND		BARO- METER	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbars)	DRY BULB	WET BULB										
								13	506	955	067	056	1									
MESSAGE TIME OF HR / 10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY - σ _t ^o	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SIO ₄ -Si μg - at/l	pH	COND.					
		STD	0000	0442	3266	2591	0021039	0000	14655	812												
132		OBS	0000	0442	32660	2591			14655	812												
132		OBS	0005	0446	32652	2590			14657	807												
		STD	0010	0437	3266	2591	0020982	0021	14654	796												
132		OBS	0010	0437	32662	2591			14654	796												
132		OBS	0016	0425	32666	2593			14650	790												
		STD	0020	0427	3270	2595	0020609	0042	14652	794												
132		OBS	0021	0428	32703	2596			14653	795												
132		OBS	0026	0418	32727	2599			14650	795												
		STD	0030	0384	3273	2602	0019985	0062	14636	777												
132		OBS	0031	0378	32729	2603			14634	774												
132		OBS	0037	0365	32751	2606			14630	774												
132		OBS	0042	0325	32830	2616			14614	684												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	PORT MOORING	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR. WGT PER SEA				TYPE	AMT		
31	1089	NW	67540N	168060W		233	78	07	16	220	1967	BB1	039	0062	00	03	2		X4	X	9		0039
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB											
																	03	509	944	083	078	2	
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND SALTY × 10 ³		Σ Δ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₃ -N μg - at/l	NO ₃ -N μg - at/l	SI O ₄ -Si μg - at/l	pH	S CC					
		STD	0000	0605	3266	2572	0022822		0000	14722													
220		OBS	0000	0605	32657	2572				14722													
220		OBS	0005	0578	32786	2585				14713													
		STD	0010	0552	3284	2592	0020884		0022	14704													
220		OBS	0010	0552	32836	2592				14704													
		STD	0020	0546	3284	2594	0020780		0043	14703													
220		OBS	0026	0542	32846	2594				14703													
		STD	0030	0525	3286	2598	0020426		0063	14697													
220		OBS	0031	0521	32863	2598				14695													
220		OBS	0037	0492	32857	2601				14684													
220		OBS	0042	0388	32831	2610				14641													
220		OBS	0047	0336	32830	2615				14620													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DATE MO DAY	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
311	089	NW	68300N	167360W	233	87	07	17	002	1967	681	040	0049	00	01	5			X4	X	9	0040	
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS.		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS									
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB																
					04	522	998	083	078	2													
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	S CODE						
		STD	0000	0755	3151	2462	0033258	0000	14766														
002		OBS	0000	0755	31510	2462			14766														
002		OBS	0005	0757	31509	2462			14768														
		STD	0010	0753	3151	2463	0033244	0033	14767														
002		OBS	0010	0753	31510	2463			14767														
002		OBS	0016	0726	31636	2476			14759														
		STD	0020	0676	3199	2511	0028691	0064	14745														
002		OBS	0021	0638	32053	2520			14731														
002		OBS	0026	0293	32178	2566			14589														
		STD	0030	0235	3231	2582	0021909	0090	14566														
002		OBS	0031	0225	32332	2584			14562														
002		OBS	0037	0209	32376	2589			14557														
002		OBS	0042	0209	32360	2588			14557														

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPT INCH	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER			
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT		
311	089	NW	68060N	167180W		233	87	07	17	025	1967	681	041	0049	00	00	0			X4	4	6	0041		
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB													
								03	515		945	072	067	2											
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	S CODE								
		STD	0000	0787	3102	2420	0037307	0000	14773																
025		OBS	0000	0787	31024	2420			14773																
025		OBS	0005	0789	31042	2421			14774																
		STD	0010	0783	3116	2431	0036237	0037	14774																
025		OBS	0010	0783	31162	2431			14774																
025		OBS	0016	0279	31876	2544			14577																
		STD	0020	0245	3210	2564	0023572	0067	14566																
025		OBS	0021	0241	32127	2567			14565																
025		OBS	0026	0242	32130	2567			14566																
		STD	0030	0241	3213	2567	0023319	0090	14566																
025		OBS	0031	0241	32125	2566			14566																
025		OBS	0037	0242	32132	2567			14568																

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DATE MO DAY	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER			
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT				
311	089	NW	68120N	167180W	233	87	07	17	044	1967	681	042	0053	00	32	3			X2	7	8		0042			
						WATER		WIND		BARO- METER (lbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB														
								36	520		944	078					067	7								
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH									
		STD	0000	0779	3106	2424			0036940	0000	14770	699														
044		OBS	0000	0779	31059	2424					14770	699														
044		OBS	0005	0780	31061	2424					14771	706														
		STD	0010	0777	3107	2425			0036836	0037	14771	703														
044		OBS	0010	0777	31071	2425					14771	703														
044		OBS	0016	0721	31402	2458					14754	717														
		STD	0020	0432	3152	2501			0029541	0070	14639	735														
044		OBS	0021	0392	31537	2507					14622	739														
044		OBS	0026	0382	31524	2507					14618	754														
		STD	0030	0381	3153	2507			0029001	0099	14619	748														
044		OBS	0031	0381	31532	2507					14619	747														
044		OBS	0037	0381	31535	2508					14620	747														

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	UNIT INCHES	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
						10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
31	1089	NW	6500'N	167310'W		233	57	07	18	043	1967	EE2	043	0031	00	17	1			X4	4	6	0043
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mb)	DRY BULB	WET BULB											
								17	51R	944	106	089	2										
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S C						
		STD	0000	0785	3049	2378	0041303	0000	14765	663													
	043	OBS	0000	0785	30485	2378			14765	663													
	043	OBS	0005	0785	30486	2378			14766	674													
		STD	0010	0781	3049	2379	0041195	0041	14765	676													
	043	OBS	0010	0781	30494	2379			14765	676													
	043	OBS	0016	0782	30498	2379			14766	665													
		STD	0020	0782	3051	2380	0041123	0082	14767	667													
	043	OBS	0021	0782	30509	2380			14767	669													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INCHES	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
31	1089	NW	65000N	167480W		233	57	07	18	059	1967	EE2	044	0045	00	12	1			X3	X	9	0044
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	METER (mb)	DRY BULB	WET BULB											
								16	513	938	094	083	6										
MESSAGE TIME HR 1/10			CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta$ D DYN. M. $\times 10^3$		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C			
			STD	0000	0725	3166	2478	0031764		0000		14757	713										
	050		OBS	0000	0725	31658	2478					14757	713										
	059		OBS	0005	0712	31816	2492					14754	713										
			STD	0010	0661	3194	2509	0028869		0030		14737	719										
	059		OBS	0010	0661	31940	2509					14737	719										
	059		OBS	0016	0387	31651	2532					14623	748										
			STD	0020	0328	3180	2533	0026497		0058		14598	742										
	050		OBS	0021	0320	31792	2533					14595	741										
	059		OBS	0026	0321	31792	2533					14596	736										
			STD	0030	0321	3180	2534	0026473		0084		14597	740										
	059		OBS	0031	0321	31797	2534					14597	741										
	059		OBS	0037	0325	31798	2534					14600	745										

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	UNIT INCHES	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
31	1089	NW	64540N	168180W		233	48	07	18	083	1967	EE2	045	0051	00	18	2			X4	X	9	0045
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	METER (mb)	DRY BULB	WET BULB											
								18	514	925	078	072	6										
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C					
		STD	0000	0686	3247	2547	0025189		0000	14752	725												
	083	OBS	0000	0686	32472	2547				14752	725												
	083	OBS	0005	0684	32476	2548				14752	721												
		STD	0010	0680	3248	2548	0025089		0025	14751	724												
	083	OBS	0010	0680	32477	2548				14751	724												
	083	OBS	0016	0619	32422	2552				14727	719												
		STD	0020	0485	3235	2562	0023821		0050	14672	709												
	083	OBS	0021	0456	32333	2563				14660	707												
	083	OBS	0026	0337	32307	2573				14610	696												
		STD	0030	0334	3229	2572	0022650		0073	14609	700												
	083	OBS	0031	0333	32282	2571				14609	701												
	083	OBS	0037	0332	32276	2571				14609	695												
	083	OBS	0042	0331	32277	2571				14609	692												

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	ORIP INSTR	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CITY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
311	184	NW	6444 N	16846 W		233	48	07	18	101	1967	EE2	046	0051	00	17	2			X4	X19		0046
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
								19	507	915	072	072	-										
MISSING TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	S C						
		STD	0000	0610	3266	2572	0022858	0000	14724	689													
	101	OBS	0000	0610	32662	2572			14724	689													
	101	OBS	0005	0609	32667	2572			14724	689													
		STD	0010	0603	3267	2573	0022705	0023	14723	698													
	101	OBS	0010	0605	32671	2573			14723	698													
	101	OBS	0016	0601	32660	2573			14725	693													
		STD	0020	0601	3267	2573	0022700	0045	14724	690													
	101	OBS	0021	0601	32671	2574			14724	689													
	101	OBS	0026	0600	32683	2575			14724	697													
		STD	0030	0599	3268	2575	0022615	0068	14725	692													
	101	OBS	0031	0599	32676	2574			14725	691													
	101	OBS	0037	0596	32678	2574			14725	683													
	101	OBS	0042	0587	32681	2576			14722	688													

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	ORBIT INSTR	MARS DEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER																													
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT																															
31	1089	NW	6454 N	16900 W		233	49	07	18	122	1967	EE2	047	0053	00	23	2			X4	X19		0047																														
<table><tr><th colspan="3">WATER</th><th colspan="2">WIND</th><th rowspan="2">BARO- METER (mbs)</th><th colspan="2">AIR TEMP. °C</th><th rowspan="2">VIS. CODE</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>DIR.</th><th>SPEED OR FORCE</th><th>DRY BULB</th><th>WET BULB</th></tr><tr><td></td><td></td><td></td><td>26</td><td>506</td><td>907</td><td>078</td><td>078</td><td>1</td><td></td><td></td></tr></table>																										WATER			WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB				26	506	907	078	078	1		
WATER			WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																											
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB		WET BULB																																															
			26	506	907	078	078	1																																													
MESSNGR TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	S/C																																				
		STD	0000	0308	3278	2613	0018929	0000	14599	744																																											
	122	OBS	0000	0308	32778	2613			14599	744																																											
	122	OBS	0005	0304	32796	2615			14599	755																																											
		STD	0010	0300	3280	2615	0018694	0019	14598	752																																											
	122	OBS	0010	0300	32801	2615			14598	752																																											
	122	OBS	0016	0269	32814	2619			14586	731																																											
		STD	0020	0249	3282	2621	0018148	0037	14578	723																																											
	122	OBS	0021	0245	32824	2622			14576	721																																											
	122	OBS	0026	0227	32835	2624			14569	714																																											
		STD	0030	0225	3285	2625	0017746	0055	14569	714																																											
	122	OBS	0031	0225	32851	2626			14569	714																																											
	122	OBS	0037	0225	32843	2625			14570	705																																											
	122	OBS	0042	0225	32840	2625			14571	711																																											

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DA	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
311	1089	NW	64460N	169360W	233	49	07	18	147	1967	EE2	048	0053	00	23	2			X4	X19		0048	
		WATER			WIND			BARO-METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	DRY BULB	WET BULB																
					36	510	906	039	039	1													
MESSNGR TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₃ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	S/C						
		STD	0000	0258	3284	2622	0018090	0000	14578	721													
	147	OBS	0000	0258	32836	2622			14578	721													
	147	OBS	0005	0258	32839	2622			14579	721													
		STD	0010	0258	3284	2622	0018085	0018	14580	739													
	147	OBS	0010	0258	32837	2622			14580	734													
	147	OBS	0016	0259	32840	2622			14582	740													
		STD	0020	0260	3284	2622	0018065	0036	14583	732													
	147	OBS	0021	0260	32843	2622			14583	730													
	147	OBS	0026	0249	32843	2623			14579	751													
		STD	0030	0210	3285	2627	0017642	0054	14563	722													
	147	OBS	0031	0203	32850	2627			14560	717													
	147	OBS	0037	0190	32854	2628			14555	712													
	147	OBS	0042	0178	32859	2630			14551	705													

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARSSEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
31	175	44	44.5 N	171.10 W	254	41	17	13	171	1967	EE2	054	0053	00	21	1		X4	X19		0044
		WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	DRY BULB	WET BULB																
			32	510	912		24.4	039	5												
MESSAGE TIME HR. 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - at/l$	TOTAL-P $\mu g - at/l$	NO ₃ -N $\mu g - at/l$	NO ₃ -N $\mu g - at/l$	SIO ₄ -Si $\mu g - at/l$	pH	CTD				
		STD	0000	0278	3292	2627	0017611	0000	14588	698											
	171	OBS	0000	0278	3292	2627			14588	698											
	171	OBS	0005	0280	3292	2627			14540	689											
		STD	0010	0297	3292	2628	0017481	0018	14581	688											
	171	OBS	0010	0257	3291	2628			14581	688											
	171	OBS	0016	0255	3293	2630			14581	716											
		STD	0021	0261	3295	2630	0017205	0035	14585	713											
	171	OBS	0021	0262	3294	2630			14585	712											
	171	OBS	0026	0265	3296	2631			14587	711											
		STD	0030	0261	3297	2632	0017110	0052	14587	699											
	171	OBS	0031	0260	3297	2632			14586	695											
	171	OBS	0037	0261	3299	2634			14588	559											
	171	OBS	0042	0262	3299	2634			14589	669											

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.						10"	1"	MO DAY HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
31	176	44	45.4 N	171.30 W	254	40	7	18	197	1967	EE2	050	0046	00	32	2		X2	X19		0050
							WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	DRY BULB		WET BULB													
					32	516	920		061	126	5										
MESSAGE TIME HR. 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - at/l$	TOTAL-P $\mu g - at/l$	NO ₃ -N $\mu g - at/l$	NO ₃ -N $\mu g - at/l$	SIO ₄ -Si $\mu g - at/l$	pH	CTD				
		STD	0000	0326	3320	2645	0015886	0000	14613	623											
	197	OBS	0000	0326	3320	2645			14613	623											
	197	OBS	0005	0321	3319	2645			14611	627											
		STD	0010	0318	3319	2645	0015894	0016	14611	620											
	197	OBS	0010	0318	3319	2645			14611	620											
	197	OBS	0016	0309	3320	2647			14608	607											
		STD	0020	0307	3322	2648	0015621	0032	14608	603											
	197	OBS	0021	0305	3321	2648			14608	602											
	197	OBS	0026	0292	3322	2650			14603	600											
		STD	0030	0272	3323	2652	0015231	0047	14595	598											
	197	OBS	0031	0268	3323	2653			14593	597											
	197	OBS	0037	0253	3324	2655			14588	586											

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARSSEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
31	177	44	45.4 N	171.20 W	254	41	17	18	203	1967	EE2	051	0047	00	34	2		X2	X19		0051	
		WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	DRY BULB	WET BULB																	
			34	512	935		078	007	5													
MESSAGE TIME HR. 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - at/l$	TOTAL-P $\mu g - at/l$	NO ₃ -N $\mu g - at/l$	NO ₃ -N $\mu g - at/l$	SIO ₄ -Si $\mu g - at/l$	pH						
		STD	0000	0441	3260	2586	0021518	0000	14653	783												
	203	OBS	0000	0441	3259	2586			14653	783												
	203	OBS	0005	0308	3305	2635			14604	629												
		STD	0010	0274	3313	2644	0016032	0019	14591	610												
	203	OBS	0010	0274	3312	2644			14591	610												
	203	OBS	0016	0273	3316	2647			14592	582												
		STD	0020	0271	3319	2644	0015551	0035	14592	579												
	203	OBS	0021	0270	3319	2649			14592	578												
	203	OBS	0026	0268	3320	2650			14592	569												
		STD	0030	0268	3320	2650	0015426	0050	14593	581												
	203	OBS	0031	0268	3319	2650			14593	582												
	203	OBS	0037	0264	3319	2650			14592	574												
	203	OBS	0042	0256	3323	2652			14590	569												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INCHES	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA	TYPE	AMT	

MESSNGR TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	COND.
		STD	0000	0457	3260	2584	0021602	0000	14660								
001		OBS	0000	0457	32547	2584			14660	9200							
002		OBS	0005	0456	32600	2585			14661	9870							
		STD	0010	0379	3271	2601	0020009	0021	14631								
003		OBS	0010	0379	32710	2601			14631	9670							
004		OBS	0016	0170	33220	2659			14548	763							
		STD	0020	0090	3331	2672	0013360	0038	14514	719							
005		OBS	0021	0078	33326	2674			14509	712							
		OBS	0026	0067	33356	2677			14505	697							
		STD	0030	0069	3342	2682	0014405	0050	14508	700							
006		OBS	0031	0070	33426	2682			14508	701							
007		OBS	0037	0051	33458	2686			14501	701							

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INCHES	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA	TYPE	AMT	

MESSNGR TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH
		STD	0000	0530	3264	2579	0022125	0000	14691							
199		OBS	0000	0530	32637	2579			14691	8770						
099		OBS	0005	0530	32637	2579			14692	8902						
		STD	0010	0229	3311	2646	0015175	0019	14571	674						
199		OBS	0010	0229	33113	2646			14571	674						
099		OBS	0016	0222	33151	2650			14570	619						
		STD	0020	0222	3315	2650	0015432	0035	14570	619						
099		OBS	0021	0222	33152	2650			14570	618						
099		OBS	0026	0222	33146	2649			14571	604						
		STD	0030	0221	3315	2650	0015443	0050	14572	598						
199		OBS	0031	0221	33154	2650			14572	596						
199		OBS	0037	0220	33155	2650			14572	576						

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INCHES	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA	TYPE	AMT	

MESSNGR TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- $\times 10^3$	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₂ -N $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	COND.
		STD	0000	0483	3283	2600	0020183	0000	14674								
113		OBS	0000	0483	32829	2600			14674								
113		OBS	0005	0471	32837	2602			14670								
		STD	0010	0453	3288	2607	0019501	0020	14664								
113		OBS	0010	0453	32880	2607			14664								
113		OBS	0016	0293	33095	2639			14500								
		STD	0020	0245	3313	2646	0015771	0037	14580								
113		OBS	0021	0238	33138	2647			14577								
113		OBS	0026	0234	33150	2649			14577								
		STD	0030	0231	3316	2649	0015471	0053	14576								
113		OBS	0031	0230	33158	2650			14576								
113		OBS	0037	0228	33166	2651			14576								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	UNIT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE	
31	1089	NW	0530N	169420W		233	59	07	19	127	1967	DD2 055	0053	00	35	2			X2	0 8		0055
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. mm	DIR.	SPEED OR FORCE	mmHg	DRY BULB	WET BULB										
									35	526	042	056	044	7								
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _θ	Σ Δ ρ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg · dl/l	TOTAL-P μg · dl/l	NO ₂ -N μg · dl/l	NO ₃ -N μg · dl/l	SIO ₄ -Si μg · dl/l	pH	S °C					
		STD	0000	0434	3291	2611	0019086	0000	14655													
	127	OBS	0000	0434	32909	2611			14655	925.4												
	127	OBS	0005	0435	32903	2611			14655	925.4												
		STD	0010	0247	3311	2640	0010348	0018	14601	688												
	127	OBS	0010	0247	33104	2640			14601	688												
	127	OBS	0016	0248	33156	2648			14581	623												
		STD	0020	0236	3317	265	0015422	0034	14577	610												
	127	OBS	0021	0234	33170	2650			14576	607												
	127	OBS	0025	0234	33165	2650			14577	628												
		STD	0030	0233	3317	2650	0015381	0049	14577	617												
	127	OBS	0031	0233	33175	2651			14577	615												
	127	OBS	0037	0233	33170	2650			14578	612												
	127	OBS	0042	0233	33174	2651			14579	605												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	UNIT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
311089		NW	6036CN	169360W		233	59	07	19	143	1967	DD2 056	0055	00	35	3			X2	6 8		0056	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. mm	DIR.	SPEED OR FORCE	mmHg	DRY BULB	WET BULB											
									36	520	987	056	044	7									
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _θ	Σ Δ ρ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg · dl/l	TOTAL-P μg · dl/l	NO ₂ -N μg · dl/l	NO ₃ -N μg · dl/l	SIO ₄ -Si μg · dl/l	pH	S °C						
		STD	0000	0411	3293	2616	0018682	0000	14645														
	143	OBS	0000	0411	32933	2616			14645	8650													
	143	OBS	0005	0410	32933	2616			14646	8733													
		STD	0010	0408	3293	2616	0018653	0019	14646														
	143	OBS	0010	0408	32934	2616			14646	8821													
	143	OBS	0016	0315	33021	2630			14608	722													
		STD	0020	0221	3300	2638	0016575	0036	14568	700													
	143	OBS	0021	0206	32998	2639			14561	696													
	143	OBS	0026	0188	32992	2640			14554	689													
		STD	0030	0187	33001	2640	0016350	0053	14555	692													
	143	OBS	0031	0187	32995	2640			14555	693													
	143	OBS	0037	0188	33000	2640			14556	686													
	143	OBS	0042	0191	33011	2641			14558	678													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	UNIT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
311089		NW	0530N	169240W		233	59	07	19	158	1967	DD2 057	0053	00	10	2			X2	7 8		0057	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. mm	DIR.	SPEED OR FORCE	mmHg	DRY BULB	WET BULB											
									36	523	074	067	056	7									
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _θ		Σ Δ ρ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	S °C					
		STD	0000	0446	3276	2598	0020326		0000	14658													
	158	OBS	0000	0446	32760	2598				14658													
	158	OBS	0005	0443	32758	2598				14657													
		STD	0010	0425	3277	2601	0020044		0020	14651													
	158	OBS	0010	0425	32771	2601				14651													
	158	OBS	0016	0380	32815	2609				14633													
		STD	0020	0305	3284	2613	0018967		0040	14628													
	158	OBS	0021	0362	32841	2613				14627													
	158	OBS	0026	0351	32852	2615				14623													
		STD	0030	0260	3287	2624	0017851		0058	14585													
	158	OBS	0031	0242	32876	2626				14577													
	158	OBS	0037	0181	32840	2628				14551													
	158	OBS	0042	0175	32846	2629				14549													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
						COLOR CODE	TRANS. mm	DIR.	SPEED OR FORCE	BARO- METER (mb)													
31	1084	NW	65 20'N	169 12'W	233	54	J7	19	170	1967	DD2	055	0046	00	1	2		X2	6	8	0058		
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. mm	DIR.	SPEED OR FORCE	DRY BULB	WET BULB												
									35	526	998	072	050	7									
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - dl/l$	TOTAL-P $\mu g - dl/l$	NO ₂ -N $\mu g - dl/l$	NO ₃ -N $\mu g - dl/l$	SIO ₄ -Si $\mu g - dl/l$	pH	S CODE					
		STD	0030	0627	3256	2561	0023623		0000	14724	714												
170		OBS	0030	0627	32558	2561				14729	714												
170		OBS	0005	0627	32555	2561				14730	716												
		STD	0010	0627	3256	2561	0023857		0024	14731	724												
170		OBS	0010	0627	32555	2561				14731	724												
170		OBS	0016	0620	32557	2562				14729	719												
		STD	0020	0602	3261	2569	0023161		0047	14723	703												
170		OBS	0021	0594	32618	2570				14722	702												
170		OBS	0026	0597	32655	2573				14723	717												
		STD	0030	0564	3270	2577	0022346		0070	14721	724												
170		OBS	0031	0586	32702	2578				14720	725												
170		OBS	0037	0558	32691	2580				14709	717												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
31	1084	NW	65 32'N	169 02'W		233	59	07	19	186	1967	DD2	059	0055	00	33	2		X2	4	9	0059
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. mm	DIR.	SPEED OR FORCE	DRY BULB		WET BULB										
									35 <td>525</td> <td>004</td> <td>067</td> <td>056</td> <td>7</td> <th colspan="5"></th>	525	004	067	056	7								
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta D$ DYN. M. $\times 10^3$		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - dl/l$	TOTAL-P $\mu g - dl/l$	NO ₂ -N $\mu g - dl/l$	NO ₃ -N $\mu g - dl/l$	SIO ₄ -Si $\mu g - dl/l$	pH	S CODE			
		STD	0000	0730	3264	2554	0024505		0000		14771											
186		OBS	0000	0730	32639	2554					14771											
186		OBS	0005	0733	32640	2554					14773											
		STD	0010	0726	3263	2554	0024549		0025		14771											
186		OBS	0010	0726	32628	2554					14771											
186		OBS	0016	0690	32614	2558					14758											
		STD	0020	0585	3252	2564	0023638		0049		14715											
166		OBS	0021	0571	32506	2564					14709											
186		OBS	0026	0575	32517	2565					14712											
		STD	0030	0571	3251	2565	0023563		0072		14711											
186		OBS	0031	0553	32492	2565					14704											
186		OBS	0037	0301	32247	2571					14595											
186		OBS	0042	0299	32255	2572					14595											
186		OBS	0047	0303																		

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
						10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
31	1089	NW	65370N	168490W		233	58	07	19	208	1967	DD2	060	0053	00	35	2		X2	7	8	0060
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. mm	DIR.	SPEED OR FORCE	DRY BULB	WET BULB											
									35	515	013	072	056	7								
MESSAGE TIME HR 1/10	CAS NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - dl/l$	TOTAL-P $\mu g - dl/l$	NO ₂ -N $\mu g - dl/l$	NO ₃ -N $\mu g - dl/l$	SIO ₄ -Si $\mu g - dl/l$	pH	S CODE					
		STD	0000	0488	3211	2542	0025662	0000	14667	752												
208		OBS	0000	0488	32107	2542			14667	752												
208		OBS	0005	0483	32117	2543			14665	752												
		STD	0010	0468	3219	2551	0024850	0025	14661	756												
208		OBS	0010	0468	32189	2551			14661	756												
208		OBS	0016	0483	32252	2554			14669	755												
		STD	0020	0501	3233	2558	0024142	0050	14678	736												
208		OBS	0021	0506	32332	2558			14680	731												
208		OBS	0026	0392	32252	2563			14632	766												
		STD	0030	0387	3224	2563	0023676	0074	14631	761												
208		OBS	0031	0386	32241	2563			14631	760												
208		OBS	0037	0377	32241	2564			14628	761												
208		OBS	0042	0369	32237	2564			14625	759												

REFERENCE	SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DRIFT INDICATOR	MARS DEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT		
311089	NW	65380N	168400W		233	58	07	19	223	1967	DD2	061	0051	00	35	3			X2	7	18		0061
					WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB		WET BULB												
							35	S10	016	061	050	7											
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_{θ}		$\Sigma \Delta \rho$ DYN. M. K 10 ³		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH				
		STD	0000	0463	3128	2479		0031629		0000		14645											
223		OBS	0000	0463	31281	2479						14645											
223		OBS	0005	0462	31280	2479						14646											
		STD	0010	0433	3131	2485		0031127		0031		14635											
223		OBS	0010	0433	31310	2485						14635											
223		OBS	0016	0414	31443	2497						14629											
		STD	0020	0351	3150	2508		0028959		0061		14604											
223		OBS	0021	0344	31540	2511						14602											
223		OBS	0026	0359	31894	2538						14614											
		STD	0030	0343	3190	2540		0025873		0089		14607											
223		OBS	0031	0339	31909	2541						14606											
223		OBS	0037	0430	32029	2542						14647											
223		OBS	0042	0501	32160	2545						14680											
223		OBS	0047	0450	32155	2550						14659											

REFERENCE CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARS DEN SQUARE	STATION TIME IGMT					YEAR	ORIGINATOR'S			DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER					
							10°		1°		MO		DAY		HR.1/10			CRUISE NO.	STATION NUMBER	DIR.		HGT	PER		SEA	TYPE	AMT		
							10°	1°	MO	DAY	HR.1/10		HR.1/10																
311089		NW	65380N	168340W		233	58	07	19	235	1967	DD2	062		0055	00	31	3		X4	X	9		0062					
						WATER		WIND		AIR TEMP. °C				VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS													
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mbars)	DRY BULB	WET BULB																	
								35	S14	022	067	057	1																
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}		$\Sigma \Delta \rho$ DYN. M. $\times 10^3$		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	STATION NUMBER										
		STD	0000	0743	3053	2387	0040400		0000		14749	675																	
235		OBS	0000	0743	30533	2387					14749	675																	
235		OBS	0005	0744	30531	2387					14750	685																	
		STD	0010	0502	3119	2468	0032080		0037		14662	715																	
235		OBS	0010	0502	31194	2468					14662	715																	
235		OBS	0016	0454	31250	2478					14644	724																	
		STD	0020	0424	3132	2486	0030972		0068		14633	718																	
235		OBS	0021	0415	31336	2489					14629	717																	
235		OBS	0026	0363	31431	2501					14609	740																	
		STD	0030	0350	3154	2511	0028652		0098		14606	745																	
235		OBS	0031	0345	31555	2512					14604	747																	
235		OBS	0037	0308	31612	2520					14590	769																	
235		OBS	0042	0285	31716	2530					14582	771																	

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR.	1/10			CRUISE NO.	STATION NUMBER	DIR.	HGT		PER	SEA		TYPE
31	1089	NW	65380N	168260W		233	58	07	20	008	1967	DD2	063	0053	00	31	3			X2	7	18	0063
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mbars)	DRY BULB	WET BULB											
								35	S17	024	078	044	7										
MESSAGE OF HR 1/10	TIME	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_{θ}		$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	STATION NUMBER			
			STD	0000	0876	2976	2308		0047985		0000	14790											
	008		OBS	0000	0876	29755	2308					14790											
	008		OBS	0005	0878	29767	2309					14792											
			STD	0010	0849	2987	2321		0046758		0047	14783											
	008		OBS	0010	0849	29871	2321					14783											
	008		OBS	0016	0779	30276	2362					14762											
			STD	0020	0753	3047	2381		0041021		0091	14755											
	008		OBS	0021	0741	30526	2387					14752											
	008		OBS	0026	0646	30816	2422					14718											
			STD	0030	0594	3097	2440		0035368		0129	14700											
	008		OBS	0031	0584	30992	2443					14696											
	008		OBS	0037	0550	31061	2453					14684											
	008		OBS	0042	0529	31114	2459					14677											

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
31	1089	NW	65380N	168180W		233	58	07	20	040	1967	002	064	0051	00	34	3		X1	7	8	0064
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mbs)	(mbs)	DRY BULB	WET BULB									
								33	520	024	078	056	7									
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10 ³	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	SC					
		STD	0000	0931	2936	2264	0051681	0000	14806	653												
	020	OBS	0000	0931	29364	2269			14806	653												
	020	OBS	0005	0930	29364	2265			14807	659												
		STD	0010	0901	2947	2282	005484	0051	14798	667												
	020	OBS	0010	0901	29468	2282			14798	667												
	020	OBS	0016	0888	29588	2293			14795	678												
		STD	0020	0889	2961	2295	0049271	0101	14797	663												
	020	OBS	0021	0889	29613	2295			14797	661												
	020	OBS	0026	0890	29637	2297			14798	658												
		STD	0030	0887	2964	2301	0048663	0150	14799	659												
	020	OBS	0031	0886	29702	2302			14799	659												
	020	OBS	0037	0879	29771	2309			14798	661												
	020	OBS	0042	0717	30624	2398			14747	684												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
31	1089	NW	66250N	169450W		233	69	07	20	191	1967	CC2	065	0053	00	30	3		X2	7	8	0065
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mbs)	(mbs)	DRY BULB	WET BULB									
								05	507	037	056	044	7									
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10 ³	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	SC					
		STD	0000	0604	3201	2521	0027634	0000	14713	807												
	191	OBS	0000	0604	32013	2521			14713	807												
	191	OBS	0005	0497	32172	2546			14672	796												
		STD	0010	0277	3242	2627	0017637	0023	14589	702												
	191	OBS	0010	0277	32915	2627			14589	702												
	191	OBS	0016	0252	33072	2640			14586	669												
		STD	0020	0264	3308	2641	0016309	0040	14587	644												
	191	OBS	0021	0264	33080	2641			14588	640												
	191	OBS	0026	0267	33086	2641			14588	635												
		STD	0030	0261	3309	2641	0016241	0056	14588	648												
	191	OBS	0031	0261	33085	2641			14588	650												
	191	OBS	0037	0261	33096	2641			14589	647												
	191	OBS	0042	0256	33090	2642			14589	635												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
31	1089	NW	66270N	169320W		233	69	07	20	216	1967	CC2	066	0057	00	31	3		X2	7	8	0066
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mbs)	(mbs)	DRY BULB	WET BULB									
								11	506	037	072	050	7									
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-x10 ³	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - dl/l	TOTAL-P μg - dl/l	NO ₂ -N μg - dl/l	NO ₃ -N μg - dl/l	SiO ₄ -Si μg - dl/l	pH	SC					
		STD	0000	0572	3234	2551	0024788	0000	14704													
	216	OBS	0000	0572	32344	2551			14704													
	216	OBS	0005	0545	32430	2561			14695													
		STD	0010	0282	3293	2627	0017579	0021	14592													
	216	OBS	0010	0282	32924	2627			14592													
	216	OBS	0016	0277	32936	2628			14591													
		STD	0020	0277	3294	2628	0017467	0039	14591													
	216	OBS	0021	0277	32940	2629			14592													
	216	OBS	0026	0275	32943	2629			14592													
		STD	0030	0269	3294	2629	0017400	0056	14590													
	216	OBS	0031	0268	32935	2629			14589													
	216	OBS	0037	0268	32935	2629			14590													
	216	OBS	0042	0266	32940	2629			14590													
	216	OBS	0047	0266	32944	2630			14591													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO DAY HR, 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT PER	SEA		TYPE	AMT	

WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		08	506	096	067	044	7		

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10 ³	Σ Δ ρ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S CC
		STD	0000	0544	3248	2566	0023433	0000	14695	831							
237		OBS	0000	0544	3248	2566			14695	831							
237		OBS	0005	0480	3250	2573			14672	768							
		STD	0010	0483	3250	2574	0022057	0023	14671	760							
237		OBS	0010	0483	3250	2574			14671	760							
237		OBS	0016	0483	3250	2574			14672	750							
		STD	0020	0488	3255	2577	0022347	0046	14670	748							
237		OBS	0021	0489	3256	2578			14677	747							
237		OBS	0026	0462	3266	2589			14668	744							
		STD	0030	0461	3274	2595	0020653	0067	14669	754							
237		OBS	0031	0461	3275	2596			14669	757							
237		OBS	0037	0410	3281	2606			14649	712							
237		OBS	0042	0387	3283	2610			14641	718							
237		OBS	0047	0351	3260	2616			14627	703							

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO DAY HR, 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT PER	SEA		TYPE	AMT	

WATER		WIND		BARO- METER	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		00	500	031	067	061	7		

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10 ³	Σ Δ ρ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S CC
		STD	0000	0522	3188	2521	0027701	0000	14678	770							
035		OBS	0000	0522	3188	2521			14678	770							
035		OBS	0005	0463	3230	2560			14650	769							
		STD	0010	0423	3241	2573	0022713	0025	14645	755							
035		OBS	0010	0423	3241	2573			14645	755							
035		OBS	0016	0433	3243	2574			14651	750							
		STD	0020	0420	3244	2575	0022527	0045	14646	744							
035		OBS	0021	0417	3243	2575			14645	745							
035		OBS	0026	0440	3248	2577			14656	745							
		STD	0030	0451	3253	2580	0022129	0070	14664	731							
035		OBS	0031	0454	3252	2581			14663	727							
035		OBS	0037	0468	3267	2591			14672	706							
035		OBS	0042	0466	3278	2590			14672	685							

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO DAY HR, 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT PER	SEA		TYPE	AMT	

WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
		19	504	019	078	067	7		

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10 ³	Σ Δ ρ DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S CC
		STD	0000	0867	3013	2338	0045073	0000	14792	683							
057		OBS	0000	0567	30129	2338			14792	583							
057		OBS	0005	0868	30126	2338			14793	686							
		STD	0010	0839	3026	2352	0043758	0044	14784	667							
057		OBS	0010	0839	30255	2352			14784	667							
057		OBS	0016	0809	30348	2364			14775	667							
		STD	0020	0801	3037	2367	0042398	0087	14773	675							
057		OBS	0021	0800	30374	2367			14773	676							
057		OBS	0026	0800	30377	2367			14773	674							

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DRIFT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CTRY CODE	ID. NO.					10°	1°	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT			
31	1089	NW	66360N	167540W		233	67	07	21	078	1967	CC2	070	0031	00	31	2			X2	6	18	0070		
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB													
									31	509	018	089	078												
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- $\times 10^3$	$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S C								
		STD	0000	0785	3047	2377	0041408	0000	14765	696															
078		OBS	0000	0785	30471	2377			14765	696															
078		OBS	0005	0763	30564	2387			14758	692															
		STD	0010	0733	3065	2398	0039439	0040	14748	713															
078		OBS	0010	0733	30646	2398			14748	713															
078		OBS	0016	0728	30685	2401			14748	700															
		STD	0020	0719	3072	2405	0038721	0080	14745	704															
078		OBS	0021	0717	30727	2406			14745	706															
078		OBS	0026	0713	30750	2408			14744	716															

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DRIFT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	ID. NO.					10°	1°	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	
31	1089	NW	66360N	167360W		233	67	07	21	091	1967	CC2	071	0026	00	31	2			X2	5	18	0071
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mbs)	(mbs)	DRY BULB	WET BULB										
									25	505	121	083	078	6									
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- $\times 10^3$		$\Sigma \Delta$ D DYN. M. $\times 10^3$		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH					
		STD	0000	0738	3068	2399	0039275		0000		14749	708											
091		OBS	0000	0738	30675	2399					14749	708											
091		OBS	0005	0717	30742	2407					14742	710											
		STD	0010	0696	3084	2418	0037511		0038		14736	704											
091		OBS	0010	0696	30842	2418					14736	704											
091		OBS	0016	0632	30986	2437					14713	718											
		STD	0020	0592	3116	2456	0033912		0074		14700	725											
091		OBS	0021	0586	31187	2458					14698	727											
091		OBS	0026	0574	31269	2466					14695	718											

REFERENCE		SHIP SQUARE	LATITUDE * 1/10	LONGITUDE * 1/10	DRIFT INDICATOR	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER			
CTRY CODE	IO. NO.					10°	1°	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT				
31	1089	NW	66300N	167120W		233	67	07	21	111	1967	CC2	072	0033	00	31	3			X2	5	8		0072		
		WATER			WIND			BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS												
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbs)	(mbs)	DRY BULB	WET BULB																	
					03	505	120	089	072	5																
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- $\times 10^3$		$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH									
		STD	0000	0587	3121	2460	0033470		0000	14695	726															
	111	OBS	0000	0587	31209	2460				14695	726															
	111	OBS	0005	0577	31260	2465				14693	727															
		STD	0010	0573	3128	2467	0032798		0033	14692	724															
	111	OBS	0010	0573	31279	2467				14692	724															
	111	OBS	0016	0568	31332	2472				14692	729															
		STD	0020	0569	3139	2476	0031927		0065	14694	729															
	111	OBS	0021	0569	31400	2477				14694	729															
	111	OBS	0026	0570	31436	2480				14696	732															

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10°	1°	MO	DAY	HR, 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
31	1089	NW	66300N	167000W		233	67	07	21	126	1967	CC2	073	0040	00	31	1			X1	6	6	0073
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	DRY BULB		WET BULB															
								31		503	306	089	078	7									
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ D DYN. M. x 10 ³		SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH				
		STD	0000	0642	3111	2445		0034681		0000		14716	713										
	126	OBS	0000	0642	31105	2445						14716	713										
	126	OBS	0005	0635	31128	2448						14715	718										
		STD	0010	0621	3115	2451		0034324		0035		14710	715										
	126	OBS	0010	0621	31148	2451						14710	715										
	126	OBS	0016	0600	31208	2458						14703	715										
		STD	0020	0582	3129	2467		0032824		0068		14698	715										
	126	OBS	0021	0579	31307	2469						14697	715										
	126	OBS	0026	0577	31319	2470						14697	711										

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10°	1°	MO	DAY	HR, 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
311	1089	NW	66240N	166240W		233	66	07	21	149	1967	CC2	074	0026	00	31	3		X1	6	6	0074	
		WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS												
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB															
					01	505	014	094	078	7													
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SI O ₄ -Si μg - ml/l	pH	S C						
		STD	0000	0848	3052	2372	0041865	0000	14790	682													
	149	OBS	0000	0848	30524	2372			14790	682													
	149	OBS	0005	0838	30519	2373			14787	682													
		STD	0010	0831	3052	2374	0041666	0042	14785	681													
	149	OBS	0010	0831	30521	2374			14785	681													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARS SQUARE	STATION TIME IGMT				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	10. NO.						10°	1°	MO	DAY		HR, 1/10	CRUISE NO.			STATION NUMBER	DIR	HGT	PER		SEA	TYPE		AMT
31	1089	NW	68100N	167020W		233	87	07	22	041	1967	BB2	075	0058	01	09	3			X2	7	18		0075
		WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS													
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB																
				09	514		096	078				032	7											
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₂ -N μg - ml/l	NO ₃ -N μg - ml/l	SiO ₄ -Si μg - ml/l	pH	S C							
		STD	0000	1005	2371	1819	0094906	0000	14763	654														
	038	OBS	0000	1005	23712	1819			14763	654														
	038	OBS	0005	0757	30735	2401			14758	709														
		STD	0010	0476	3125	2475	0032012	0063	14652	712														
	038	OBS	0010	0476	31248	2475			14652	712														
	038	OBS	0016	0434	31228	2478			14635	718														
		STD	0020	0421	3127	2483	0031321	0095	14631	713														
	038	OBS	0021	0420	31292	2485			14631	712														
	038	OBS	0026	0428	31445	2496			14637	730														
		STD	0030	0547	3184	2514	0028319	0125	14692	725														
	038	OBS	0031	0558	31895	2518			14698	724														
	038	OBS	0037	0469	31870	2525			14662	739														
	038	OBS	0042	0408	31881	2532			14637	739														
	038	OBS	0047	0410	31874	2532			14638	727														
		STD	0050	0411	3188	2532	0026647	0180	14639	734														
	038	OBS	0053	0413	31883	2532			14641	751														

REFERENCE CTRY CODE	IO. NO.	SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DEPTH INCHES	MARSDEN SQUARE		STATION TIME IGMT			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
						10"	1"	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
						10"	1"	MO	DAY	HR./10													
311	089	NW	68110N	167270W		233	87	07	22	058	1967	882	076	0058	00	26	4			X2	7	18	0076
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. IMI	DIR.	SPEED OR FORCE	(mbars)	DRY BULB	WET BULB											
									26	520	096	072	039					8					
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C						
		STD	0000	0916	2730	2111	0066875	0000	14774														
	058	OBS	0000	0916	27297	2111			14774														
	058	OBS	0005	0850	30240	2350			14788														
		STD	0010	0776	3163	2469	0032638	0053	14778														
	058	OBS	0010	0776	31632	2469			14778														
	058	OBS	0016	0421	32278	2563			14643														
		STD	0020	0407	3231	2567	0023351	0078	14632														
	058	OBS	0021	0403	32312	2567			14637														
	058	OBS	0026	0383	32321	2570			14630														
		STD	0030	0382	3234	2571	0022900	0101	14630														
	058	OBS	0031	0382	32344	2572			14630														
	058	OBS	0037	0378	32366	2574			14630														
	058	OBS	0042	0380	32433	2579			14632														

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	IO. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT	PER		SEA	TYPE		AMT
311	1089	NW	68060N	167360W	233	87	07	22	075	1967	8B2	077	0057	00	29	4			X1	8	6	0077	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbars)	DRY BULB	WET BULB											
									29	528	106	067	011	8									
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _θ	Σ Δ ρ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	NO ₃ -N μg - at/l	SiO ₄ -Si μg - at/l	pH	S C						
		STD	0000	0814						709													
	075	OBS	0000	0814						709													
	075	OBS	0005	0781	31616	2467			14779	716													
		STD	0010	0758	3166	2474	0032191		14771	719													
	075	OBS	0010	0758	31660	2474			14771	719													
	075	OBS	0016	0583	32319	2548			14711	8432													
		STD	0020	0501	3260	2580	0022110		14682														
	075	OBS	0021	0479	32648	2586			14674	8700													
	075	OBS	0026	0355	32741	2606			14623	726													
		STD	0030	0331	3279	2612	0019049		14614	679													
	075	OBS	0031	0325	32805	2614			14612	667													
	075	OBS	0037	0468	32300	25600				829													
	075	OBS	0042	0388	32640	25950				879													

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA		TYPE	AMT	
311	089	NW	67540N	168000W		233	78	07	22	096	1967	BB2	078	0058	00	30	4			X2	6	8	0078
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mb)	DRY BULB	WET BULB											
									30	525	126	056	017	7									
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}		$\Sigma \Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C					
		STD	0000	0721	3182	2491	0030518		0000	14757	697												
	096	OBS	0000	0721	31818	2491				14757	697												
	096	OBS	0005	0723	31838	2492				14759	762												
		STD	0010	0585	3228	2544	0025463		0028	14710	753												
	096	OBS	0010	0585	32275	2544				14710	8670												
	096	OBS	0016	0453	32595	2584				14661	8630												
		STD	0020	0419	3262	2590	0021130		0051	14648	735												
	096	OBS	0021	0411	32623	2591				14645	733												
	096	OBS	0026	0377	32605	2593				14631	701												
		STD	0030	0389	3264	2594	0020702		0072	14637	685												
	096	OBS	0031	0390	32641	2594				14638	681												
	096	OBS	0037	0383	32638	2595				14636	662												
	096	OBS	0042	0374	32628	2595				14633	653												
	096	OBS	0047	0341	32608	2596				14619	615												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRAFT METER	MARS SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER						
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA		TYPE	AMT							
311089		NW	67200N	170200W		234	70	07	22	223	1967	882	083	0046	00	35				X1	6	6	0082						
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	ND. OBS. DEPTHS	SPECIAL OBSERVATIONS														
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																	
									22	506	198	083	044	8															
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S C												
		STD	0000	0633	3280	2580	0022092	0000	14735	760																			
223		OBS	0000	0633	32799	2580			14735	780																			
223		OBS	0005	0633	32798	2580			14736	789																			
		STD	0010	0630	3280	2580	0022075	0022	14735	769																			
223		OBS	0010	0630	32798	2580			14735	769																			
223		OBS	0016	0605	32796	2583			14726	794																			
		STD	0020	0397	3284	2610	0019263	0043	14642	834																			
223		OBS	0021	0367	32854	2614			14649	844																			
223		OBS	0026	0345	32942	2623			14622	701																			
		STD	0030	0344	3303	2630	0017555	0061	14645	674																			
223		OBS	0031	0344	33040	2631			14623	664																			
223		OBS	0037	0310	33068	2636			14611	584																			

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARS SQUARE	STATION TIME (GMT)					YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER								
CTRY CODE	ID. NO.											CRUISE NO.	STATION NUMBER								TYPE		AMT							
	10"					1"	MO	DAY	HR.1/10																					
311089		NW	67130N	170480W	234	70	07	23	014	1967	882	083	0055	00	31	1				X1	7	6	0083							
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS															
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																		
								36		506	212	089	056	8																
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S C											
		STD	0000	0710	3279	2569		0023149		0000	14765	776																		
014		OBS	0000	0710	32780	2569					14765	776																		
014		OBS	0005	0655	32794	2576					14745	784																		
		STD	0010	0639	3278	2578		0022288		0023	14739	784																		
014		OBS	0010	0639	32784	2578					14739	784																		
014		OBS	0016	0626	32810	2581					14735	816																		
		STD	0020	0440	3296	2615		0018777		0043	14661	838																		
014		OBS	0021	0409	32982	2620					14649	844																		
014		OBS	0026	0343	33048	2631					14622	660																		
		STD	0030	0291	3306	2637		0016571		0061	14601	556																		
014		OBS	0031	0274	33070	2639					14594	546																		
014		OBS	0037	0136	33238	2661					14536	619																		

Table III.—Direct current measurements, USCGC NORTHWIND (WAGB 282), 14–23 July 1967, prepared by University of Washington, Department of Oceanography. Figure in parentheses represents corresponding station number in Table II. Time is given in Greenwich Mean Time, Depth in meters, Speed in centimeters/second, and Direction in degrees true.

Station 1 (11) Date: 14–vii–67				Station 3 (12) Date: 14–vii–67			
Lat: 65°42.0'N Long: 169°54.0'W				Lat: 65°42.0'N Long: 169°48.0'W			
Time	m Depth	Speed	cm/sec Direction	Time	m Depth	Speed	cm/sec Direction
0235	5	30	328	0359	5	—	—
	10	8	352		10	11	344
	15	0			15	23	004
	20	0			20	29	015
	25	9	040		25	26	024
	30	18	039		30	20	039
	35	20	040		35	16	046
0243	39	17	045	0407	40	11	045
	35	15	045		35	21	038
	30	14	060		30	27	031
	25	15	055		25	25	025
	20	15	057		20	21	025
	15	16	031		15	17	007
	10	16	354		10	16	337
0250	5	22	317	0415	5	18	331

Station 3 (13) Date: 14–vii–67				Station 4 (14) Date: 14–vii–67			
Lat: 65°36.0'N Long: 169°42.0'W				Lat: 65°38.0'N Long: 169°36.0'W			
Time	m Depth	Speed	cm/sec Direction	Time	m Depth	Speed	cm/sec Direction
0505	5	34	042	0642	5	28	028
	10	31	025		10	34	028
	15	28	010		15	38	019
	20	29	005		20	39	009
	25	29	001		24	38	001
	29	30	354		29	34	357
	34	27	353		33	30	354
	38	27	350		39	25	348
	34	31	352		34	26	351
	29	33	350		29	—	354
	24	34	354		24	36	005
	20	33	009		19	—	353
	15	33	023		15	35	021
	10	29	046		10	29	028
0535	5	39	077	0656	5	33	033

Station 5 (15)
Date: 14-vii-67

Lat: 65°34.0'N
Long: 169°25.0'W

Time	m Depth	Speed cm/sec	Direction
0830	5	39	048
	10	40	031
	15	43	017
	19	44	360
	24	42	351
	28	38	342
	32	38	215
	37	41	350
	32	39	354
	28	45	354
	23	46	001
	19	45	005
	14	47	021
	10	44	043
0841	5	42	075

Station 7 (18)
Date: 14-vii-67

Lat: 65°38.0'N
Long: 168°50.0'W

Time	m Depth	Speed cm/sec	Direction
1335	5	56	201
	10	52	210
	14	51	031
	18	46	047
	23	39	051

Station 9 (23)
Date: 15-vii-67

Lat: 66°24.0'N
Long: 166°24.0'W

Time	m Depth	Speed cm/sec	Direction
0611	5	30	130
	9	22	146
0615	5	20	157

Station 6 (16)
Date: 14-vii-67

Lat: 65°32.3'N
Long: 169°16.2'W

Time	m Depth	Speed cm/sec	Direction
1012	5	44	037
	10	46	024
	14	45	013
	19	43	007
	24	41	358
	28	36	354
	33	28	354
	28	40	339
	23	37	348
	19	44	358
	14	45	013
	10	—	026
1024	5	51	070

Station 8 (19)
Date: 14-vii-67

Lat: 65°38.0'N
Long: 168°40.0'W

Time	m Depth	Speed cm/sec	Direction
1525	5	64	009
	19	62	079

Station 10 (24)
Date: 15-vii-67

Lat: 66°32.0'N
Long: 166°58.0'W

Time	m Depth	Speed cm/sec	Direction
0843	5	21	019
	10	27	330
	15	22	340
	20	28	342
	25	31	342
	30	33	043
	25	25	—
	19	31	344
	15	25	298
	10	16	282
0855	5	40	288

Station 11 (25)		Lat: 66°35.0'N	
Date: 15-vii-67		Long: 167°14.0'W	
Time	m Depth	Speed cm/sec	Direction
1003	5	25	094
	10	33	098
	15	33	098
	19	39	128
	15	39	104
	10	44	104
	5	28	—

Station 13 (27)		Lat: 66°36.2'N	
Date: 15-vii-67		Long: 167°56.0'W	
Time	m Depth	Speed cm/sec	Direction
1345	5	36	104
	10	46	106
	15	39	112
	20	21	120
	15	23	137
	10	27	127
	5	22	177
	2	24	—

Station 15 (29)		Lat: 66°36.0'N	
Date: 15-vii-67		Long: 168°49.0'W	
Time	m Depth	Speed cm/sec	Direction
1750	5	28	350
	10	23	084
	15	28	110
	20	33	114
	24	34	110
	29	33	109
	34	28	110
	30	29	096
	25	41	046
	19	47	037
	15	47	018
	10	45	306
	5	39	350
1802	2	21	215

Station 12 (26)		Lat: 66°35.0'N	
Date: 15-vii-67		Long: 167°38.2'W	
Time	m Depth	Speed cm/sec	Direction
1210	5	23	106
	10	26	109
	15	22	105
	10	27	—
	5	33	—

Station 14 (28)		Lat: 66°35.0'N	
Date: 15-vii-67		Long: 168°20.0'W	
Time	m Depth	Speed cm/sec	Direction
1555	5	24	341
	10	30	335
	15	18	059
	20	11	067
	25	13	063
	30	18	071
	25	19	044
	20	15	003
	15	16	313
	10	23	297
	5	27	349
	2	37	327

Station 16 (30)		Lat: 66°30.0'N	
Date: 15-vii-67		Long: 169°12.0'W	
Time	m Depth	Speed cm/sec	Direction
1900	5	20	321
	10	29	036
	15	28	073
	20	31	084
	25	31	102
	29	25	094
	34	27	098
	38	26	099
	43	23	099
	39	25	068
	34	26	088
	30	25	055
	25	24	047
	20	25	037
	15	25	031
	10	33	006
	5	31	349
	2	35	—

Station 17 (31)
Date: 15-vii-67

Lat: 66°24.0'N
Long: 169°30.0'W

Time	m Depth	Speed cm/sec	Direction
2140	5	38	306
	10	35	354
	15	31	021
	20	34	036
	25	32	040
	30	29	046
	35	25	051
	40	14	064
	45	14	098
	40	21	066
	35	27	091
	30	31	068
	25	32	091
	20	34	066
	15	31	051
	10	23	013
	5	25	344

Station 19 (33)
Date: 16-vii-67

Lat: 67°05.0'N
Long: 171°11.0'W

Time	m Depth	Speed cm/sec	Direction
0645	5	33	275
	10	27	253
	15	43	240
	20	44	253
	25	43	271
	30	38	297
	35	31	327
	40	24	354
	35	18	025
	30	18	012
	25	23	003
	20	24	348
	15	20	349
	10	37	301
	5	43	287

Station 18 (32)
Date: 15-vii-67

Lat: 66°24.0'N
Long: 169°42.0'W

Time	m Depth	Speed cm/sec	Direction
2319	5	39	290
	10	29	309
	15	20	065
	20	14	048
	25	16	049
	30	16	095
	35	14	095
	40	16	119
	35	25	119
	30	21	109
	25	20	090
	20	21	065
	15	18	033
	10	31	301
	5	41	290

Station 20 (35)
Date: 16-vii-67

Lat: 67°21.0'N
Long: 170°21.0'W

Time	m Depth	Speed cm/sec	Direction
1045	5	<5	317
	10	8	307
	15	9	335
	20	<5	008
	25	<5	055
	30	9	055
	25	7	047
	20	8	041
	15	11	—
	10	10	—
	5	12	—
	2	9	338

Station 21 (36)
Date: 16-vii-67

Lat: 67°30.6'N
Long: 169°54.0'W

Time	m Depth	Speed	cm/sec Direction
1310	5	21	
	10	22	
	15	20	
	20	14	
	25	11	
	30	13	
	35	14	ships
	40	13	heading
	35	15	155°
	30	15	
	25	5	
	20	9	
	15	11	
	10	14	
1325	5	16	

Station 23 (39)
Date: 16-vii-67

Lat: 67°54.0'N
Long: 168°06.0'W

Time	m Depth	Speed	cm/sec Direction
2100	5	26	239
	10	27	049
	15	29	047
	20	29	049
	24	25	037
	29	26	045
	34	22	039
	39	22	039
	43	22	039
	39	31	035
	34	31	041
	29	30	037
	24	31	035
	20	29	035
	15	28	034
	10	22	017
	5	21	207

Station 22 (38)
Date: 16-vii-67

Lat: 67°48.0'N
Long: 168°30.0'W

Time	m Depth	Speed	cm/sec Direction
1945	5	10	164
	10	12	131
	15	18	054
	20	13	044
	25	12	036
	30	12	036
	35	11	036
	40	16	034
	35	16	034
	30	19	032
	25	15	036
	20	15	041
	15	21	051
	10	18	146
1959	5	18	146

Station 24 (40)
Date: 17-vii-67

Lat: 68°30.0'N
Long: 167°36.0'W

Time	m Depth	Speed	cm/sec Direction
0006	5	25	252
	10	27	072
	15	29	072
	20	37	072
	25	36	047
	29	42	047
	34	39	077
	39	37	067
	34	47	059
	29	48	050
	24	49	051
	20	39	055
	15	23	052
	10	25	052
	5	15	207

Station 25 (41)
Date: 17-vii-67

Lat: 68°06.0'N
Long: 167°18.0'W

Time	m Depth	Speed cm/sec	Direction
0222	5	32	242
	10	23	221
	15	30	111
	20	36	041
	24	37	037
	29	32	043
	34	27	043
	29	30	037
	24	45	041
	20	39	030
	15	25	132
	10	23	217
0235	5	29	222

Station 28 (44)
Date: 18-vii-67

Lat: 65°00.0'N
Long: 167°48.0'W

Time	m Depth	Speed cm/sec	Direction
0600	5	45	336
	10	33	340
	15	29	014
	20	28	029
	24	30	041
	29	31	041
	34	23	056
	29	32	049
	24	38	048
	19	39	036
	15	32	028
	10	34	350
0612	5	47	336

Station 26 (42)
Date: 17-vii-67

Lat: 68°12.0'N
Long: 167°18.0'W

Time	m Depth	Speed cm/sec	Direction
0400	5	26	147
	10	34	077

Station 27 (43)
Date: 18-vii-67

Lat: 65°5.00'N
Long: 167°31.0'W

Time	m Depth	Speed cm/sec	Direction
0410	5	36	335
	10	42	007
	14	43	013
	18	55	024
	14	57	011
	10	54	352
0416	5	41	332
	2	36	346

Station 29 (45)
Date: 18-vii-67

Lat: 64°54.0'N
Long: 168°18.0'W

Time	m Depth	Speed cm/sec	Direction
0810	5	6	145
	10	19	241
	15	16	349
	20	22	351
	25	21	016
	30	16	028
	35	12	048
	40	8	077
	35	7	054
	30	10	359
	25	14	353
	20	13	345
	15	13	332
	10	10	275
0846	5	8	215

Station 30 (46)
Date: 18-vii-67

Lat: 64°54.0'N
Long: 168°36.0'W

Time	m Depth	Speed cm/sec	Direction
1002	5	5	245
	10	15	240
	15	15	240
	20	8	285
	25	9	323
	30	9	005
	35	7	031
	40	12	037
	35	17	017
	30	22	009
	25	20	002
	20	18	355
	15	18	339
	10	9	325
	5	10	309

Station 32 (48)
Date: 18-vii-67

Lat: 64°48.0'N
Long: 169°36.0'W

Time	m Depth	Speed cm/sec	Direction
1425	5	7	344
	10	7	300
	15	8	354
	20	6	030
	25	<5	024
	30	<5	007
	35	5	007
	40	<5	009
	35	<5	029
	30	<5	029
	25	<5	039
	20	6	042
	15	5	044
	10	<5	044
1450	5	6	309

Station 31 (47)
Date: 18-vii-67

Lat: 64°54.0'N
Long: 169°00.0'W

Time	m Depth	Speed cm/sec	Direction
1207	5	0	—
	10	8	328
	15	13	334
	20	17	324
	25	19	310
	30	17	314
	35	18	310
	40	16	310
	35	22	308
	30	20	308
	25	18	308
	20	16	316
	15	6	344
	10	9	347
1219	5	13	324

Station 33 (49)
Date: 18-vii-67

Lat: 64°48.0'N
Long: 170°12.0'W

Time	m Depth	Speed cm/sec	Direction
1701	5	<5	—
	10	<5	—
	15	<5	—
	20	<5	—
	25	<5	—
	30	<5	—
	35	<5	—
	40	8	018
	35	10	350
	30	11	336
	25	10	326
	20	9	324
	15	8	319
	10	7	319
1714	5	7	314

Station 34 (50)
Date: 18-vii-67

Lat: 64°54.0'N
Long: 170°39.0'W

Time	m Depth	Speed cm/sec	Direction
1941	5	15	179
	10	8	017
	15	6	161
	20	<5	157
	25	5	154
	30	6	124
	25	10	244
	20	9	011
	15	7	011
	10	10	284
1952	5	13	284

Station 36 (52)
Date: 19-vii-67

Lat: 65°00.0'N
Long: 171°36.0'W

Time	m Depth	Speed cm/sec	Direction
~9010	5	21	232
	10	31	232
	15	21	201
	20	13	131
	25	11	121
	30	13	123
	35	14	117
	30	16	106
	25	16	121
	20	10	121
	15	15	151
	10	6	217
0019	5	7	223

Station 35 (51)
Date: 18-vii-67

Lat: 64°54.0'N
Long: 171°20.0'W

Time	m Depth	Speed cm/sec	Direction
2215	5	12	039
	10	10	210
	15	9	256
	20	10	334
	25	11	360
	30	11	008
	35	10	011
	30	15	360
	25	15	356
	20	14	356
	15	10	345
	10	5	341
2226	5	8	—

Station 37 (53)
Date: 19-vii-67

Lat: 65°42.0'N
Long: 169°54.0'W

Time	m Depth	Speed cm/sec	Direction
0955	5	7	280
	10	5	345
	15	9	331
	20	7	325
	25	6	295
	30	5	235
	35	6	235
	40	5	230
	35	14	190
	30	14	190
	25	10	198
	20	6	223
	15	7	230
	10	<5	275
1010	5	8	255

Station 38 (54)
Date: 19-vii-67

Lat: 65°42.0'N
Long: 169°48.0'W

Time	m Depth	Speed cm/sec	Direction
1116	5	19	240
	10	12	275
	15	5	330
	20	5	348
	25	7	348
	30	5	348
	35	0	269
	40	13	240
	35	8	219
	30	10	168
	25	15	205
	20	8	235
	15	6	263
	10	7	280
	5	7	265

Station 40 (56)
Date: 19-vii-67

Lat: 65°36.0'N
Long: 169°36.0'W

Time	m Depth	Speed cm/sec	Direction
1417	5	27	232
	10	39	219
	15	39	178
	20	29	159
	25	25	155
	30	21	155
	34	20	153
	39	18	146
	44	14	146
	39	15	151
	35	9	151
	30	8	165
	25	9	200
	20	<5	251
	15	<5	335
	10	6	320
1432	5	8	305

Station 39 (55)
Date: 19-vii-67

Lat: 65°36.0'N
Long: 169°42.0'W

Time	m Depth	Speed cm/sec	Direction
1250	5	10	285
	10	13	345
	15	5	333
	20	7	025
	25	31	131
	30	29	149
	34	25	149
	40	20	151
	35	14	149
	30	12	141
	25	7	130
	20	6	130
	15	5	200
	10	0	225
1305	5	7	325

Station 41 (57)
Date: 19-vii-67

Lat: 65°30.0'N
Long: 169°24.0'W

Time	m Depth	Speed cm/sec	Direction
1550	5	15	223
	10	16	195
	15	13	158
	20	8	145
	25	5	133
	30	6	148
	35	0	195
	40	5	093
	35	5	238
	30	5	222
	25	6	222
	20	7	222
	15	7	255
	10	5	230
1603	5	8	350

Station 42 (58)
Date: 19-vii-67

Lat: 65°30.0'N
Long: 169°12.0'W

Time	m Depth	Speed cm/sec	Direction
1708	5	10	234
	10	13	223
	15	28	163
	20	22	133
	25	15	129
	30	9	144
	35	7	143
	30	6	123
	25	9	115
	20	15	113
	15	15	148
	10	12	163
1722	5	10	197
	2	12	—

Station 43 (59)
Date: 19-vii-67

Lat: 65°32.0'N
Long: 169°02.0'W

Time	m Depth	Speed cm/sec	Direction
1932	5	23	256
	10	23	220
	15	25	192
	20	20	171
	25	18	159
	30	18	152
	35	17	152
	40	16	152
	45	15	152
	40	18	152
	35	20	153
	30	16	159
	25	8	173
	20	6	211
	15	0	—
	10	0	288
1948	5	6	240
	2	13	—

Station 44 (60)
Date: 19-vii-67

Lat: 65°37.0'N
Long: 168°49.0'W

Time	m Depth	Speed cm/sec	Direction
2045	5	26	242
	10	21	238
	15	15	181
	20	18	163
	25	15	163
	30	12	159
	35	11	163
	40	8	163
	45	11	174
	40	7	174
	35	7	166
	30	6	166
	25	7	180
	20	0	223
	15	6	135
	10	7	135
2100	5	6	—
	2	28	—

Station 45 (61)
Date: 19-vii-67

Lat: 65°38.0'N
Long: 168°40.0'W

Time	m Depth	Speed cm/sec	Direction
2211	5	29	261
	10	25	245
	15	22	137
	20	15	137
	25	24	144
	30	23	148
	35	20	159
	40	18	166
	45	17	166
	40	10	166
	35	7	155
	30	0	166
	25	0	152
	20	8	350
	15	8	339
	10	13	170
2226	5	11	174
	2	16	—

Station 46 (62)
Date: 19-vii-67

Lat: 65°38.0'N
Long: 168°34.0'W

Time	m Depth	Speed cm/sec	Direction
2330	5	26	336
	10	23	360
	15	15	358
	20	13	356
	25	8	100
	30	6	146
	35	7	146
	39	10	124
	45	13	146
	40	13	136
	35	13	131
	30	11	115
	25	9	077
	20	13	061
	15	15	033
	10	32	017
2345	5	42	339
	2	27	—

Station 48 (64)
Date: 20-vii-67

Lat: 65°38.0'N
Long: 168°18.0'W

Time	m Depth	Speed cm/sec	Direction
0155	5	26	110
	10	38	107
	15	42	096
	20	33	095
	25	38	088
	30	27	088
	35	28	099
	40	36	148
	35	30	104
	30	32	096
	25	36	088
	20	33	085
	15	39	077
	10	36	077
0210	5	25	065
	2	23	—

Station 47 (63)
Date: 20-vii-67

Lat: 65°38.0'N
Long: 168°26.0'W

Time	m Depth	Speed cm/sec	Direction
0130	5	24	306
	10	51	358
	14	47	017
	19	33	020
	24	23	028
	29	11	079
	34	8	134
	39	13	134
	44	21	168
	39	19	154
	34	11	153
	29	9	150
	25	14	074
	19	23	048
	15	36	032
0145	10	44	045
	5	26	321
	2	33	—

Station 49 (65)
Date: 20-vii-67

Lat: 66°25.0'N
Long: 169°45.0'W

Time	m Depth	Speed cm/sec	Direction
1910	5	26	117
	10	14	169
	15	21	189
	20	21	189
	25	18	199
	30	16	197
	35	15	201
	40	13	200
	45	8	211
	40	13	215
	35	14	201
	30	12	200
	25	14	199
	20	13	173
	15	18	173
1919	10	13	092
	5	8	052

Station 50 (66)
Date: 20-vii-67

Lat: 66°27.0'N
Long: 169°32.0'W

Time	m Depth	Speed	cm/sec Direction
2125	5	13	185
	10	9	211
	15	7	232
	20	5	155
	25	6	185
	30	7	195
	35	6	195
	40	6	215
	45	6	245
	40	9	205
	35	7	205
	30	8	195
	25	9	195
	20	6	165
	15	5	145
	10	8	125
2145	5	17	180
	2	13	—

Station 52 (68)
Date: 21-vii-67

Lat: 66°36.0'N
Long: 168°48.0'W

Time	m Depth	Speed	cm/sec Direction
0325	5	6	151
	10	9	226
	15	7	208
	20	7	261
	25	9	286
	30	8	286
	35	9	306
	40	9	316
	35	10	306
	30	14	286
	25	16	286
	20	16	281
	15	13	266
	10	13	296
0337	5	9	296
	2	9	—

Station 51 (67)
Date: 20-vii-67

Lat: 66°33.0'N
Long: 169°12.0'W

Time	m Depth	Speed	cm/sec Direction
2345	5	14	286
	10	12	286
	15	13	286
	20	10	256
	25	13	271
	30	10	271
	35	12	271
	40	12	271
	35	13	271
	30	7	271
	25	14	271
	20	10	266
	15	7	276
2357	10	9	276
	5	13	276
	2	26	—

Station 53 (69)
Date: 21-vii-67

Lat: 66°36.0'N
Long: 168°19.0'W

Time	m Depth	Speed	cm/sec Direction
0536	5	28	017
	10	39	007
	15	32	296
	19	32	367
	25	27	257
	20	27	267
	15	27	327
	10	25	022
	5	25	037

Station 54 (70)
Date: 21-vii-67

Lat: 66°36.0'N
Long: 167°54.0'W

Time	m Depth	Speed cm/sec	Direction
0740	5	7	017
	10	18	015
	15	19	005
	20	27	312
	25	15	312
	20	18	317
	15	16	322
	10	14	337
0754	5	14	052

Station 56 (72)
Date: 21-vii-67

Lat: 66°30.0'N
Long: 167°12.0'W

Time	m Depth	Speed cm/sec	Direction
1100	5	10	068
	10	9	011
	15	11	317
	20	14	328
	25	14	294
	20	14	302
	15	13	298
	10	12	338
1110	5	12	013

Station 58 (74)
Date: 21-vii-67

Lat: 66°24.0'N
Long: 166°24.0'W

Time	m Depth	Speed cm/sec	Direction
1446	5	14	223
	10	10	182
	5	13	288

Station 55 (71)
Date: 21-vii-67

Lat: 66°36.0'N
Long: 167°36.0'W

Time	m Depth	Speed cm/sec	Direction
0910	5	7	140
	10	7	140
	15	8	027
	20	21	027
	25	12	027
	20	34	062
	15	30	075
	10	24	102
0920	5	19	102

Station 57 (73)
Date: 21-vii-67

Lat: 66°30.0'N
Long: 167°00.0'W

Time	m Depth	Speed cm/sec	Direction
1228	5	16	020
	10	16	003
	15	5	328
	20	20	303
	25	18	273
	20	18	308
	15	12	321
	10	10	344
1242	5	9	052

Station 59 (75)
Date: 22-vii-67

Lat: 68°10.0'N
Long: 167°02.0'W

Time	m Depth	Speed cm/sec	Direction
0345	5	10	093
	10	15	093
	15	14	288
	20	12	338
	25	12	318
	30	8	068
	35	<5	258
	40	6	218
	44	<5	228
	40	9	263
	35	10	278
	30	8	268
	25	11	278
	20	18	283
	15	15	283
	10	14	308
	5	9	094
	2	7	—

Station 61 (77)
Date: 22-vii-67

Lat: 68°06.0'N
Long: 167°36.0'W

Time	m Depth	Speed cm/sec	Direction
0710	5	9	087
	10	6	087
	15	9	287
	20	9	297
	25	11	287
	30	8	287
	35	9	277
	40	7	275
	35	8	275
	30	10	277
	25	9	285
	20	12	287
	15	14	287
	10	10	102
0724	5	7	197

Station 60 (76)
Date: 22-vii-67

Lat: 68°11.0'N
Long: 167°27.0'W

Time	m Depth	Speed cm/sec	Direction
0530	5	10	057
	10	13	007
	15	14	305
	20	9	305
	25	9	282
	30	9	282
	35	8	282
	30	5	287
	25	0	—
	20	6	287
	15	0	—
	10	0	—
0546	5	7	087

Station 62 (78)
Date: 22-vii-67

Lat: 67°54.0'N
Long: 168°00.0'W

Time	m Depth	Speed cm/sec	Direction
0927	5	14	107
	10	20	112
	15	9	167
	20	7	217
	25	7	214
	30	8	262
	35	9	287
	40	8	277
	45	8	277
	40	10	287
	35	9	282
	30	8	287
	25	9	287
	20	10	287
	15	13	282
	10	6	102
0940	5	10	102

Station 63 (79)
Date: 22-vii-67

Lat: 67°48.0'N
Long: 168°30.0'W

Time	m Depth	Speed cm/sec	Direction
1135	5	11	026
	10	5	086
	15	12	106
	20	9	076
	25	7	086
	30	8	066
	35	6	016
	40	9	286
	45	7	286
	40	17	286
	35	10	286
	30	6	076
	25	8	076
	20	8	106
	15	10	106
	10	8	106
1150	5	9	096

Station 65 (82)
Date: 22-vii-67

Lat: 67°20.0'N
Long: 170°20.0'W

Time	m Depth	Speed cm/sec	Direction
2220	5	6	159
	10	0	
	15	0	
	20	6	145
	25	0	
	30	5	180
	35	0	
	30	0	
	25	0	
	20	5	065
	15	0	
	10	0	
2230	5	7	165
	2	8	—

Station 64 (81)
Date: 22-vii-67

Lat: 67°30.0'N
Long: 169°56.0'W

Time	m Depth	Speed cm/sec	Direction
1920	5	9	185
	10	10	185
	15	9	165
	20	7	165
	25	8	105
	30	6	080
	35	6	080
	40	5	065
	35	6	015
	30	<5	320
	25	<5	330
	20	<5	005
	15	<5	205
	10	5	165
1935	5	6	165

Station 66 (83)
Date: 23-vii-67

Lat: 67°13.0'N
Long: 170°48.0'W

Time	m Depth	Speed cm/sec	Direction
0120	5	8	195
	10	5	085
	15	6	065
	20	6	070
	25	8	095
	30	6	105
	35	0	
	30	0	
	25	0	
	20	0	
	15	0	
	10	5	039
	5	6	021
	2	7	—