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OCEANOGRAPHY OF THE MID-ATLANTIC BIGHT IN SUPPORT OF ICNAF

September-December 1967

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UNITED STATES COAST GUARD
OCEANOGRAPHIC

UNITED STATES COAST GUARD OCEANOGRAPHIC UNIT

REPORT No. 35

CG 373-35

OCEANOGRAPHY OF THE MID-ATLANTIC BIGHT IN SUPPORT OF ICNAF

September-December 1967

By Vincent L. Whitcomb

WASHINGTON, D.C.

OCTOBER 1970

Abstract

The physical oceanography of the shelf and slope waters of the Mid-Atlantic Bight (Cape Cod to Cape Hatteras) in September and December of 1967 is described. Temperature, salinity, density, dissolved oxygen, and chlorophyll data are presented in surface contours and section profiles. The seasonal cycle of temperature and salinity over the continental shelf is discussed and geostrophic currents in the slope water are inferred from the density structure.

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Oceanography of the Mid-Atlantic Bight in Support of ICNAF September–December 1967

Vincent L. Whitcomb¹

INTRODUCTION

The northwest Atlantic is one of the most important commercial fishing areas in the world. Fishing fleets of many nations return annually to this region to harvest almost 4 billion pounds of fish and mollusks. The catches of these fleets contribute significantly to their nations' economy. These extensive fishing operations cannot, however, continue indefinitely without some management to protect against a depletion of resources. Recognizing the need for such management, 15 nations that fish in the northwest Atlantic have formed the International Commission for the Northwest Atlantic Fisheries (ICNAF). The goals of ICNAF are to understand the natural fluctuations in abundance of fish stocks, to assess the effects of commercial fishing, and to devise guidelines for the international management of fishing operations. The member nations include Canada, Denmark, France, Federal Republic of Germany, Iceland, Italy, Japan, Norway, Poland, Portugal, Romania, Spain, United States, Union of Soviet Socialist Republics, and the United Kingdom.

A primary area for ICNAF investigation is Georges Bank. This area supports one of the richest and most highly exploited fisheries in the world. The fish species of greatest interest in this area are haddock, herring, and silver hake. To understand the ecology of these species, a detailed investigation of their distribution, relative abundance, and growth and mortality rate in relation to environmental conditions is required. Such an investigation entails frequent measurements over the life cycle of each species and requires a multi-ship

operation. The ICNAF members recommended that the USA and the USSR devise a plan for investigating the area, and indicate the resources that could be made available for the project. The plan was submitted in 1966, and after revision, accepted in 1967. The area of coverage was expanded to include the Mid-Atlantic Bight to the south (to 35°00'N) and the Gulf of Maine to the north of Georges Bank (to 41°31'N).

The Bureau of Commercial Fisheries is the United States representative agency to ICNAF. Under the Northwest Atlantic Fisheries Act of 1950 (16USC981) the United States Coast Guard is charged with cooperating with BCF in matters relating to ICNAF. The role of the Coast Guard in the ICNAF program is to collect and process data on the seasonal variations of the physical and chemical oceanography of the area being studied. The initial cruise performed in February 1967 (ICNAF 67-1) was to test various types of equipment for measuring currents on the Georges Bank. The results of this cruise were inconclusive due to the severe environmental conditions encountered. The first Coast Guard ICNAF survey cruise was made in September 1967 (ICNAF 67-2, fig. 1) by the USCGC EVERGREEN (WAGO 295) in conjunction with a groundfish survey conducted in the same area by the U.S. R/V ALBATROSS IV (of BCF) and the USSR's R/V ALBATROSS. A second cruise the area was conducted by USCGC EVERGREEN in December 1967 (ICNAF 67-3, fig. 2). The purpose of the two Coast Guard cruises was to obtain data on the vertical and horizontal distribution of temperature, salinity, dissolved oxygen and chlorophyll. The results are presented in this report.

1. U.S. Coast Guard Oceanographic Unit, Washington, D.C. 20390.

PROCEDURES

Oceanographic Sampling

Temperature and Salinity

At each station an STD (Salinity-Temperature-Depth system) cast was taken to the bottom or to the maximum STD operating depth of 1,500 meters, yielding a continuous trace of temperature and salinity as a function of depth. In shoal waters where there was danger of losing the STD "fish" on the bottom, or when the seas were too rough to permit safe shipboard handling of the STD, a standard Nansen cast with reversing thermometers was taken to determine the temperature and salinity profiles (computation of salinity from conductivity based on tables published by UNESCO/NIO, 1966). A Nansen cast to collect water samples at standard depths of 1, 10, 20, 30, 40, 50, 75, 100, 200, and 250 meters (as depths permitted) was also taken for each station. Midway between stations expendable bathythermograph (XBT) casts were made. The positions at which the XBT's were dropped are indicated on the cruise tracks for September and December (figs. 1 and 2). On the return leg of the December cruise, XBT's were dropped every 3 hours.

Chemical Analyses

Water samples were analyzed for dissolved oxygen using the modified Winkler method (Carpenter, 1965). Aliquots of 125 ml of sea water were taken from water samples collected at the standard depths down to 100 meters for a determination of the chlorophyll content. The aliquots were filtered and the filters were frozen and stored in the ship's freezer. The filters were later analyzed ashore at the BCF Biological Laboratory, Woods Hole, Mass. Chlorophyll (total pigment) determinations were made according to the method of Yentsch and Menzel (1963) as modified by Yentsch (1965).

Bathymetry and Meteorology

A continuous sonic sounding program was carried out by bridge personnel, and LORAN C was used for navigation. Meteorological and sea surface conditions were likewise recorded at each station by bridge personnel. These data included cloud type and coverage, wind speed

and direction, air temperature, barometric pressure, wave height, wave direction, and wave period. The weather data were combined with the water temperature data and sent by radio message to the Fleet Numerical Weather Facility, Monterey, Calif., after completion of each station deeper than 100 fathoms.

Operational Summary

	September	December
Hydrographic stations		
occupied	61	34
STD casts	58	32
XBT casts	34	35
Nansen casts	48	31
Dissolved oxygen analyses	350	220
Chlorophyll (total pigment)		
analyses	286	183

Quality Control

Every 24 hours a complete Nansen cast, with reversing thermometers, was made in conjunction with an STD cast. Water samples were drawn for a determination of salinity by shipboard salinometers. The control salinities and the corrected thermometer temperatures were then compared with the STD readings at corresponding depths. Attempts were made to take the quality control Nansen casts at the deeper stations in order to obtain comparisons over the widest range possible. The disadvantage of this method is that the STD and Nansen casts cannot be made simultaneously. Changes in the water column between casts and error in determining sampling depth limit the value of quality control data acquired by this technique in the thermocline and halocline. A Nansen bottle was hung directly above the STD during the December cruise, and data from this single bottle were used on each STD cast, along with the 24-hour quality control Nansen cast data, for calibration.

All STD traces were read twice by different personnel to reduce the possibility of reading errors. Sigma-t values were determined by computer to indicate the existence of density inversions. The salinity and temperature data which produced these inversions were then rechecked for reading errors. When the existence of density inversions could not be resolved, the data were marked as questionable. The Coast Guard Field Party maintained a time adjusted

position and depth log for all hydrographic and XBT stations. This log was periodically reviewed by USCGC EVERGREEN personnel.

DATA PRESENTATION

Data Listings

The STD traces were read at the standard depths of 0, 10, 20, 30, 40, 50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800, 1,000, 1,100, 1,200, 1,300, 1,400 and 1,500 meters, and at all inflection points. These data, along with the dissolved oxygen, chlorophyll, time, position, meteorological, and sea surface data were entered on the NODC Form for Reporting Electronically Obtained Serial Data. These forms were submitted to the National Oceanographic Data Center, which later provided printed data listings. In addition to the data submitted, the printed listings also contain values for Sigma-t, specific volume anomaly, dynamic height, and sound velocity computed at NODC. The printed data listings for the September and December cruise are contained in Tables I and II of Appendix A.

Surface Contours

Surface values of temperature, salinity and Sigma-t were plotted along the cruise track, and surface contours were produced from these values. Surface isotherms, isohalines and isopycnals for September and December are presented in Figures 3 through 8.

Vertical Sections

Vertical sections for temperature, salinity, Sigma-t, oxygen, and chlorophyll were drawn for both cruises. The sections were drawn for those legs of the cruise track which were approximately normal to the coastline (figs. 1 and 2). For a meaningful presentation of vertical section contours, the vertical distance scale has been greatly exaggerated in comparison to horizontal distance scale (135:1). Sections of temperature, salinity and Sigma-t were drawn to a maximum depth of 500 meters. Temperature contours for the September and December cruises (figs. 9-24) were constructed using all of the sources of temperature data (STD, reversing thermometers and XBT's) collected on these cruises. Salinity sections (figs. 25-40) and Sigma-t sections (figs. 41-56) were also drawn to a maximum

depth of 500 meters. The sections of dissolved oxygen (figs. 57-71) were drawn to a maximum depth of 250 meters and those of chlorophyll (figs. 72-86) were drawn to a maximum depth of 100 meters.

Water Masses

Vertical sections of temperature and salinity were inspected to determine the existence of water masses having characteristic properties of temperature or salinity. Isotherms and isohalines which tended to form closed loops on the vertical section contours were considered to be the boundaries of water masses. When "closed loop" isotherms (or isohalines) of identical value appear on successive sections, they were joined together by smooth lines to give a three dimensional perspective of the water masses (figs. 87-90). These figures are not a synoptic portrayal of the shape of the boundaries, but rather represent the extent of the boundaries over the time period of the cruise.

RESULTS

Temperature Distribution

The physical properties of coastal waters of the Mid-Atlantic Bight are subject to large seasonal variations. In September surface waters over the shelf ranged from 17°C to 20°C and subsurface waters were 2°C to 4°C cooler. In December the shelf water was essentially vertically isothermal and ranged from 6°C to 10°C.

Using data from various sources, Bigelow (1933) gave a description of the temperature cycle for the Mid-Atlantic Bight waters. Surface cooling and intense mixing of the vertical column occur over the shelf during the winter months. Shelf water temperatures reach a minimum during February and March. This minimum is followed by vernal warming occurring more rapidly inshore and at the surface. A thermocline of increasing steepness is developed as the warming season progresses. The thermocline is steepest in mid-September, after which autumnal cooling begins and the cycle is repeated. Daily water temperature and salinity at 13 locations along the Atlantic seaboard were tabulated for 1966 and 1967 by Chase (1969). The temperature cycles are depicted graphically in an atlas of monthly

sea temperatures from the Florida Keys to Cape Cod (Walford and Wickland, 1968).

Low Temperature Core

Vernal warming forms a layer of warm water overlying a pool of relatively cool water lying over the shelf. This pool gradually diminishes as vernal warming progresses. The remains of this cool water pool were found in September 1967 (fig. 87). It appears as a core of cool water (less than 8°C) from Cape Cod to the offing of Chesapeake Bay. Ketchum and Corwin (1969) studied the persistence of "winter" water on the continental shelf for a period of 3 years. They concluded that the pool of cool water is warmed by both vertical mixing with less saline surface water and horizontal mixing with more saline slope water. The type of mixing was related to the heat budget along the shelf.

One of the processes by which the pool of cool water is dissipated was described as "calving" (Cresswell 1967). In this process, large bubbles of cold water break off and move seaward as they mix with the slope water. The primary cause of calving was ascribed to the shoaling of internal waves. Tidal agitations were described as a secondary cause. The density structure of the water over the shelf edge in September 1967 (figs. 41–50) included a sharp vertical gradient 20 to 30 meters below the surface and either riding over or impinging upon the shelf edge. Thus, conditions for the propagation of internal waves existed in September 1967. They did not, however, exist during December 1967 (figs. 51–56).

Evidence of the calving process was found in September 1967 (fig. 10). A relatively small cold bubble (11°C) was found 30 miles seaward of the cold water on the shelf edge in section 2. This bubble appeared to be in the final stages of separation from the parent water mass. It is interesting to note that in this instance and in the examples presented by Cresswell, the bubbles are closer to the surface than their parent water masses.

The dissolved oxygen content of the cold water bubble (fig. 58) discussed above was higher than that of the surrounding warmer water, as expected, but it was also higher than that of the parent water mass. This high oxygen content may have been the result of

photosynthetic activity in the bubble after its detachment and rise into the photic zone. The relatively higher chlorophyll content of the bubble (fig. 73) supports this contention.

Salinity Distribution

In September and December, the water over the shelf generally showed weak vertical salinity gradients approaching isohaline conditions on some stations (figs. 25–40). The horizontal gradients were relatively strong, however, and reached a maximum near the shelf edge. In September surface salinity increased gradually from less than 31‰ near the coastline to greater than 35‰ beyond the continental shelf (fig. 5). The same general gradient of surface salinity occurred in December with an inshore salinity of less than 32‰ (fig. 6). The increase in salinity during December reflects high evaporation rates and low river discharges during winter months. The river discharges of the northern half of the Mid-Atlantic Bight are highest in March, April, and May. Inshore salinity reaches a minimum during this period (Ketchum and Keen, 1955). Bumpus (1969) has associated low river runoffs along the Mid-Atlantic Bight with reversals in the surface drift over the continental shelf.

A layer of high salinity was found during both cruises (figs. 89 and 90) in the same general location. The salinity values of the layer decreased slightly from September (35.75‰) to December (35.50‰). There was a surfacing of the high salinity layer along section 4 in September (fig. 28). It appears that this was the result of current induced upwelling associated with cyclonic water motion. Assuming geostrophic conditions, the density structure of the water along section 4 (fig. 44) depicts a local cyclonic eddy limited to the upper 50 meters.

Gulf Stream Counterflow

Stommel (1957) proposed that a barotropic flow opposite to the Gulf Stream could be maintained by the sinking of polar water. Swallow and Worthington (1957) observed a deep western boundary current opposite to the Gulf Stream off the Blake Plateau, south of Cape Hatteras. This current was below 2,000 meters and ranged from 9 to 18 cm/sec. Volkmann

(1962) computed a western boundary current flowing opposite the Gulf Stream in an area south of Cape Cod in 1959 to 1960. The geostrophic flow below 1,400 meters was determined using a 2,000-meter reference level. Volkmann concluded that the westward flow of water may not be continuous but may consist of a series of eddies or transients. He also concluded from transport calculations that large amounts of water flowing westward between Cape Cod and Cape Hatteras are recirculated by the Gulf Stream, and that the amount of water recirculated can be influenced by large-scale transients. Direct measurements of subsurface currents were made by Barrett (1955) off of Cape Hatteras in 1962. He found that the inshore westward flowing current appeared to be continuous along the steep continental slope from depths of several hundred meters to depths greater than 2,500 meters.

Assuming geostrophic conditions were dominant in the water column over a depth of 500 meters or greater, several inferences concerning a counterflow west of the Gulf Stream can be drawn from the density profiles. East of 73°W longitude, counterflow was as shallow as 100 meters and within 40 miles of the edge (100 meters depth) of the continental shelf (figs. 41, 42, 44, and 53). Through sections 4 and 7 in September and section 2 in December a northeastward flow below 150 meters was indicated between the counterflow and the continental slope (figs. 44, 47, and 52). Since this flow was not indicated through adjacent sections, it may represent an eddy in the counterflow. No counterflow was indicated in the upper 500 meters along section 9 in September. It is possible that a counterflow may have existed deeper than 500 meters along this section, or it may have been entrained in the Gulf Stream.

Niiler and Spiegel (1968) presented a numerical treatment of formation of a quasi-geostrophic jet along a shoaling coast. They assume coastal regions to be shallow on a scale comparable to the width of the boundary current and the current is assumed to be of constant potential vorticity. The significant features of the numerical solution are "(i) the appearance of a countercurrent, (ii) a pocket of warm water above the ledge where the shelf drops off into the deep ocean, and (iii) a pocket of cold water on the ledge." These features ap-

pear to be generally in good agreement with the conditions found during September.

Niiler and Spiegel's numerical treatment indicates the dependence of the current upon the topographical features of the shelf edge. As the shelf edge changes from a sharp ledge to a gradual rise, the countercurrent amplitude is decreased and the width is increased. They noted that the numerical analysis is valid only for a limited distance downstream of where the countercurrent begins. This is because the influx of water increases the horizontal density gradient to a point where the quasigeostrophic approximation is invalidated. This phenomena may explain the apparent discontinuity of the countercurrent indicated by the ICNAF data.

Shelfwater—Slope Water Boundary

A striking feature of the data collected during September and December 1967 was the evidence of dynamic processes occurring at the shelf water-slope water interface. This interface represents a boundary between markedly different temperatures and salinities, and between deep and shallow water regimes. This boundary is subject to the dynamic processes of wind mixing, tides, internal waves and currents which may be strongly influenced by transients. Due to these conditions and shallowness of the shelf edge, the assumptions of geostrophic flow were not applied to infer water motion in this area.

The physical properties of the shelf water-slope water boundary were strongly influenced by seasonal variations in 1967. The marked change in the density structure between 30 and 50 meters depth over the shelf edge from September to December indicated a strong seasonal variation in vertical mixing. The vertical lines of constant σ_t in December (figs. 51 through 56) suggest intense mixing, probably due to strong wind mixing and convection resulting from surface cooling. In September, these mixing processes were absent and the density of this layer is well stratified (figs. 41–50).

CONCLUSIONS

A continuous core of relatively cold water existed in September along the shelf edge from Cape Cod to the offing of the Chesapeake Bay. Evidence of "calving" in which a large bubble of cold water separates from the core and

moves seaward was found. Oxygen and chlorophyll concentrations were relatively high within this bubble suggesting increased photosynthetic activity.

In general, surface salinity increased gradually from the shore to the shelf edge. Layers of high salinity water were found in the slope water off the Mid-Atlantic Bight in September and December. Upwelling of this high salinity layer appears to have been caused by a local cyclonic eddy in September.

A counterflow inshore of the Gulf Stream was inferred from the slope water density. This flow may have been discontinuous in the upper 500 meters and may have reversed direction.

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Figure 1. Station and section locations ICNAF 67-2—18-29 September 1967.

Figure 2. Station and section locations ICNAF 67-3—11-23 December 1967.

Figure 3. Sea surface temperature (°C) ICNAF 67-2—18-29 September 1967.

Figure 4. See surface temperature (°C) ICNAF 67-3—11-23 December 1967.

Figure 5. Surface salinity (‰) ICNAF 67-2—18-29 September 1967.

Figure 6. Surface salinity (‰) ICNAF 67-3—11-23 December 1967.

Figure 7. Surface density (σ_t in g/l) ICNAF 67-2—18-29 September 1967.

Figure 8. Surface density (σ_t in g/l) ICNAF 67-3—11-23 December 1967.

ICNAF 67-2 SECTION 1

Figure 9. Vertical distribution of temperature (°C)—Section 1 ICNAF 67-2, 18-29 September 1967. 16, 17, 18, 19 and 21°C contours omitted to preserve clarity.

ICNAF 67-2 SECTION 2

Figure 10. Vertical distribution of temperature (°C)—Section 2 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 3

Figure 11. Vertical distribution of temperature (°C)—Section 3 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 4

Figure 12. Vertical distribution of temperature (°C)—Section 4 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 (SECTION 5)

Figure 13. Vertical distribution of temperature (°C)—Section 5 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 6

Figure 14. Vertical distribution of temperature (°C)—Section 6 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 7

Figure 15. Vertical distribution of temperature (°C)—Section 7 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 8

Figure 16. Vertical distribution of temperature (°C)—Section 8 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 9

Figure 17. Vertical distribution of temperature (°C)—Section 9 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 10

Figure 18. Vertical distribution of temperature (°C)—Section 10 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-3 SECTION 1

Figure 19. Vertical distribution of temperature (°C)—Section 1 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 2

Figure 20. Vertical distribution of temperature (°C)—Section 2 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 3

Figure 21. Vertical distribution of temperature (°C)—Section 3 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 4

Figure 22. Vertical distribution of temperature (°C)—Section 4 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 5

Figure 23. Vertical distribution of temperature (°C)—Section 5 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 6

Figure 24. Vertical distribution of temperature (°C)—Section 6 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-2 SECTION 1

Figure 25. Vertical distribution of salinity (‰)—Section 1 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 2

Figure 26. Vertical distribution of salinity (‰)—Section 2 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 3

Figure 27. Vertical distribution of salinity (‰)—Section 3 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 4

Figure 28. Vertical distribution of salinity (‰)—Section 4 ICNAF 67-2, 18-29 September 1967.

Figure 29. Vertical distribution of salinity (‰)—Section 5 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 6

Figure 30. Vertical distribution of salinity (‰)—Section 6 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 7

Figure 31. Vertical distribution of salinity (‰)—Section 7 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 8

Figure 32. Vertical distribution of salinity (‰)—Section 8 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 9

Figure 33. Vertical distribution of salinity (‰)—Section 9 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 10

Figure 34. Vertical distribution of salinity (‰)—Section 10 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-3 SECTION 1

Figure 35. Vertical distribution of salinity (‰)—Section 1 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 2

Figure 36. Vertical distribution of salinity (‰)—Section 2 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 3

Figure 37. Vertical distribution of salinity (‰)—Section 3 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 4

Figure 38. Vertical distribution of salinity (‰)—Section 4 ICNAF 67-3, 11-23 December 1967.

Figure 39. Vertical distribution of salinity (‰)—Section 5 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 6

Figure 40. Vertical distribution of salinity (‰)—Section 6 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-2 SECTION 1

Figure 41. Vertical distribution of density (σ_t in g/l)—Section 1 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 2

Figure 42. Vertical distribution of density (σ_t in g/l)—Section 2 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 3

Figure 43. Vertical distribution of density (σ_t in g/l)—Section 3 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 4

Figure 44. Vertical distribution of density (σ_t in g/l)—Section 4 ICNAF 67-2, 18-29 September 1967.

Figure 45. Vertical distribution of density (σ_t in g/l)—Section 5 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 6

Figure 46. Vertical distribution of density (σ_t in g/l)—Section 6 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 7

Figure 47. Vertical distribution of density (σ_t in g/l)—Section 7 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 8

Figure 48. Vertical distribution of density (σ_t in g/l)—Section 8 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 9

Figure 49. Vertical distribution of density (σ_t in g/l)—Section 9 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 10

Figure 50. Vertical distribution of density (σ_t in g/l)—Section 10 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-3 SECTION 1

Figure 51. Vertical distribution of density (σ_t in g/l)—Section 1 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 2

Figure 52. Vertical distribution of density (σ_t in g/l)—Section 2 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 3

Figure 53. Vertical distribution of density (σ_t in g/l)—Section 3 ICNAF 67-3, 11-23 December 1967.

INCAF 67-3 SECTION 4

Figure 54. Vertical distribution of density (σ_t in g/l)—Section 4 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 5

Figure 55. Vertical distribution of density (σ_t in g/l)—Section 5 ICNAF 67-3, 11-23 December 1967

INCAF 67-3 SECTION 6

Figure 56. Vertical distribution of density (σ_t in g/l)—Section 6 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-2 SECTION 1

Figure 57. Vertical distribution of dissolved oxygen (ml/l)—Section 1 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 2

Figure 58. Vertical distribution of dissolved oxygen (ml/l)—Section 2 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 3

Figure 59. Vertical distribution of dissolved oxygen (ml/l)—Section 3 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 4

Figure 60. Vertical distribution of dissolved oxygen (ml/l)—Section 4 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 5

Figure 61. Vertical distribution of dissolved oxygen (ml/l)—Section 5 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 6

Figure 62. Vertical distribution of dissolved oxygen (ml/l)—Section 6 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 7

Figure 63. Vertical distribution of dissolved oxygen (ml/l)—Section 7 ICNAF 67-2, 18-29 September 1967.

DISSOLVED OXYGEN

ICNAF 67-2 SECTION 9

Figure 65. Vertical distribution of dissolved oxygen (ml/l)—Section 9 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-3 SECTION 1

Figure 66. Vertical distribution of dissolved oxygen (ml/l)—Section 1 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 2

Figure 67. Vertical distribution of dissolved oxygen (ml/l)—Section 2 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 3

Figure 68. Vertical distribution of dissolved oxygen (ml/l)—Section 3 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 4

Figure 69. Vertical distribution of dissolved oxygen (ml/l)—Section 4 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 5

Figure 70. Vertical distribution of dissolved oxygen (ml/l)—Section 5 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 6

Figure 71. Vertical distribution of dissolved oxygen (ml/l)—Section 6 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-2 SECTION 1

Figure 72. Vertical distribution of chlorophyll (mg/m³)—Section 1 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 2

Figure 73. Vertical distribution of chlorophyll (mg/m^3)—Section 2 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 3

Figure 74. Vertical distribution of chlorophyll (mg/m^3)—Section 3 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 4

Figure 75. Vertical distribution of chlorophyll (mg/m^3)—Section 4 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 5

Figure 76. Vertical distribution of chlorophyll (mg/m³)—Section 5 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 6

Figure 77. Vertical distribution of chlorophyll (mg/m^3)—Section 6 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 7

Figure 78. Vertical distribution of chlorophyll (mg/m^3)—Section 7 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 8

Figure 79. Vertical distribution of chlorophyll (mg/m^3)—Section 9 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 9

Figure 80. Vertical distribution of chlorophyll (mg/m^3)—Section 9 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-2 SECTION 10

Figure 81. Vertical distribution of chlorophyll (mg/m³)—Section 10 ICNAF 67-2, 18-29 September 1967.

ICNAF 67-3 SECTION 1

Figure 82. Vertical distribution of chlorophyll (mg/m^3)—Section 1 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 2

Figure 83. Vertical distribution of chlorophyll (mg/m³)—Section 2 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 3

Figure 84. Vertical distribution of chlorophyll (mg/m³)—Section 3 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 4

Figure 85. Vertical distribution of chlorophyll (mg/m^3)—Section 4 ICNAF 67-3, 11-23 December 1967.

ICNAF 67-3 SECTION 6

Figure 86. Vertical distribution of chlorophyll (mg/m^3)—Section 5 ICNAF 67-3, 11-23 December 1967.

Figure 87. Cold water core (temperatures less than 8°C)—ICNAF 67-2-18-29 September 1967.

Figure 88. Warm water layer (temperatures greater than 14°C)—ICNAF 67-3—11-23 December 1967.

Figure 89. High salinity layer (salinity greater than 35.75‰) ICNAF 67-2 18-29 September 1967.

Figure 90. High salinity layer (salinity greater than 35.5‰) ICNAF 67-3, 11-23 December 1967.

APPENDIX A

OCEANOGRAPHIC DATA

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

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

Depth to Bottom ----- Corrected or uncorrected sounding in meter.

Max. Depth of Samples ----- Depth of deepest sample to nearest multiple of one hundred meters.

Wave observations

DIR. ----- Rounded to nearest multiple of 10 degrees.

HGT. ----- In increments of $\frac{1}{2}$ m. Sum of 5 meters plus increments of $\frac{1}{2}$ m if 50 is added to direction.

PER. ----- If numerals 2 through 9 are entered, period in seconds is twice the numeric entry or 2X (numeric entry) + 1. For other entries see WMO Code 3155.

SEA ----- Sea state according to WMO Code 3700

Weather Code ----- If preceded by X, weather according to WMO Code 4501. If a two-digit entry, weather according to WMO Code 4677.

Cloud Code

Type ----- Cloud type according to WMO Code 0500.

Amount ----- Cloud amount in eights. Entry of the numeral 9 indicates cloud amount could not be estimated.

Water

Color Code ----- Color according to Forel-Ule scale.

Trans. ----- Transparency in whole meters as determined by Secchi disc.

Wind

Dir. ----- Rounded to nearest multiple of 10 degrees.

Speed or Force ----- If preceded by letter S, wind speed in knots; if preceded by letter F, wind force according to Beaufort scale.

Barometer ----- Barometric pressure given in 10, units and tenths of millibars.

Air Temp. °C. ----- Air temperature to tenths of a degree centigrade.

Vis. Code ----- Visibility according to WMO Code 4300.

No obs. depths ----- Number of observed levels associated with the station.

Messenger time ----- Entered in hours and tenths of an hour GMT. For Nansen casts, indicates time of release of messenger applicable to the observational level. For STD casts, indicates the starting time of lowering the sensor.

Card type ----- OBS designates observed levels. STD indicates the values at this standard level were interpolated by a modified 3-point LaGrange formula.

Depth(m) -----	Depth to nearest meter. A postscript T indicates depth was obtained thermometrically; Z indicates uncorrected "wire out" depth. Postscript Q indicates value was marked doubtful by originator; P indicates value was considered doubtful by NODC. Postscripts P and Q retain this meaning throughout the following entries.
T °C. -----	Temperature to hundredths of a degree Centigrade
S ‰ -----	Salinity in parts-per-thousand.
SIGMA-T -----	Entered to hundredths.
Specific-volume -----	Multiply entry by 10^{-7} to obtain specific-volume anomaly in cubic centimeters per gram.
Anomaly-x 10^7	
$\Sigma \Delta$ Dyn. M. x 10^3 -----	Multiply entry by 10^{-3} to obtain anomaly of dynamic height in dynamic meters referenced to the sea surface.
Sound Velocity -----	Sound velocity according to Wilson's formula entered to tenths of a meter per second.
O ₂ ml/l -----	Dissolved oxygen in milliliters per liter entered to hundredths.
PO ₄ -P ug-at/l -----	Inorganic phosphate in microgram-atoms per liter entered to hundredths.
Total-P ug-at/l -----	Total phosphorus in microgram-atoms per liter entered to hundredths.
NO ₂ -N ug-at/l -----	Nitrite-nitrogen in microgram-atmos per liter entered to hundredths.
NO ₃ -N ug-at/l -----	Nitrate-nitrogen in microgram-atmos per liter entered to tenths.
SiO ₄ -Si ug-at/l -----	Silicate-silicon in microgram-atmos per liter entered to whole units.
pH -----	Entered to hundredths.

TABLE I.—Observed and interpolated oceanographic data taken by USCGC Evergreen, 19-29 September 1970, on ICNAF Cruise 67-2; prepared from NoDC Listing No. 31-8023.

REFERENCE		SHIP CODE	LATITUDE " 1/10	LONGITUDE " 1/10	UNIT NO.	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NO. DC STATION NUMBER
CITY CODE	ID. NO.					10"	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT.	PER	SEA		TYPE	AMT.	
318023	EV		4130 N	06900 W	151	19	09	19	020	1967	102	001		0151	01	21	0	2		X0			0001
						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											
						DT	SD	24	S10	142	155	144	7	09									
MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-310°		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	CHL-A	SI O ₄ -S μg - dl/l	pH	°C					
		STD	0000	1145	3187	2428	0036525		0000	14916	683												
	020	OBS	0000	1145	31865	2428				14916	683					114							
		STD	0010	0850	3201	2488	0030858		0034	14811	686												
		OBS	0010	0850	32008	2488				14811	686					143							
	000	STD	0020	0579	3226	2544	0025525		0062	14709	667												
		OBS	0020	0579	32259	2544				14709	667					035							
		STD	0030	0490	3232	2559	0024106		0087	14675	666												
		OBS	0030	0490	32320	2559				14675	666					023							
		OBS	0040	0430	32505	2579				14658	663					011							
		STD	0050	0435	3250	2579	0022211		0133	14658	655												
		OBS	0050	0435	32500	2579				14658	655					005							
		STD	0075	0410	3276	2602	0020028		0186	14655	608												
		OBS	0075	0410	32760	2602				14655	608					000							
		STD	0100	0410	3298	2619	0018384		0234	14662	577												
		OBS	0100	0410	32981	2619				14662	577					000							
		STD	0125	0410	3299	2620	0018350		0280	14666													
		OBS	0140	0410	32992	2620				14669													

REFERENCE		SHIP CODE	LATITUDE " 1/10	LONGITUDE " 1/10	UNIT NO.	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NO. DC STATION NUMBER
CITY CODE	ID. NO.					10"	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT.	PER	SEA		TYPE	AMT.	
318023	EV		4100 N	06900 W	151	19	09	19	050	1967	102	002		0078	01	21	0	2		X0			0002
						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											
						DT	SD	28	S15	139	150	144	7	07									
MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-310°		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	CHL-A	SI O ₄ -S μg - dl/l	pH	°C					
		STD	0000	1290	3196	2408	0038394		0000	14967	599												
	050	OBS	0000	1290	31962	2408				14967	599					082							
		STD	0010	1290	3197	2409	0038394		0038	14969	599												
		OBS	0010	1290	31965	2409				14969	599					081							
		STD	0020	1290	3197	2409	0038417		0077	14971	604												
		OBS	0020	1290	31965	2409				14971	604					093							
		STD	0030	1290	3197	2409	0038440		0115	14972	605												
		OBS	0030	1290	31965	2409				14972	605					079							
		OBS	0040	1290	31965	2409				14974	605					078							
		STD	0050	1290	3197	2409	0038486		0192	14976	606												
		OBS	0050	1290	31965	2409				14976	606					088							
		STD	0075	1290	3197	2409	0038543		0288	14980	606												
		OBS	0075	1290	31965	2409				14980	606					085							

REFERENCE		SHIP CODE	LATITUDE " 1/10	LONGITUDE " 1/10	UNIT NO.	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NO. DC STATION NUMBER													
CITY CODE	ID. NO.					10"	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA			TYPE	AMT.											
318023	EV		4100 N	06900 W		151	19	09	19	050	1967	102	002		0078	01	21	0	2		X0				0002										
						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																							
																									DT	SD	28	S15	139	150	144	7	07		
MESSENGER TIME OF HR 1/10		CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-310°		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	CHL-A	SI O ₄ -S μg - dl/l	pH	°C																
			STD	0000	1290	3196	2408	0038394		0000	14967	599																							
050		OBS	0000	1290	31962	2408					14967	599						082																	
		STD	0010	1290	3197	2409		0038394		0038	14969	599																							
		OBS	0010	1290	31965	2409					14969	599						081																	
		STD	0020	1290	3197	2409		0038417		0077	14971	604																							
000		OBS	0020	1290	31965	2409					14971	604						093																	
		STD	0030	1290	3197	2409		0038440		0115	14972	605																							
		OBS	0030	1290	31965	2409					14972	605						079																	
		OBS	0040	1290	31965	2409					14974	605						078																	
		STD	0050	1290	3197	2409		0038486		0192	14976	606																							
		OBS	0050	1290	31965	2409					14976	606						088																	
		STD	0075	1290	3197	2409		0038543		0288	14980	606																							
		OBS	0075	1290	31965	2409					14980	606						085																	

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DATE DD-MO-YY	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	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	8023	EV	4032 N	06856 W	151	08	09	19	080	1967		104	003		0070	00	27	0	2		X0		0003
		CDLR CODE	WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
TRANSM. (m)	DIR.		SPEED OR FORCE	DRY BULB	WET BULB																		
									DT			SD	27	S10	142	161	156	6	06				
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	D ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{ml/l}$	TOTAL-P $\mu\text{g} - \text{ml/l}$	NO ₂ -N $\mu\text{g} - \text{ml/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{ml/l}$	pH	S CD						
		STD	0000	1422	3197	2382	0040896	0000	15012	631													
	080	OBS	0000	1422	31965	2382			15012	631					056								
		STD	0010	1340	3204	2405	0038774	0040	14987	654													
		OBS	0010	1340	32041	2405			14987	654					078								
		STD	0020	1321	3210	2413	0038019	0078	14983	627													
	000	OBS	0020	1321	32098	2413			14983	627					136								
		STD	0030	1145	3215	2450	0034469	0114	14925	604													
		OBS	0030	1145	32152	2450			14925	604					047								
		OBS	0040	1043	32209	2473			14890	596					031								
		STD	0050	0921	3233	2502	0029571	0179	14849	592													
		OBS	0050	0921	32330	2502			14849	592					024								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DATE MO DAY	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			DIR	HGT PER	SEA		TYPE	AMT	
318023	EV		4000 N	06856 W	151 08 09 19	115 1967	102	004	1097	11	25	1	1		X 1		0004
		WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY RULE	WET RULE									
		DT	SD	31	512	156	200	183	6	20							
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	S A 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	CHL-A	SiO ₄ -Si μg · dl/l	pH	CO ₂
		STD	0000	2205	3538	2451	0034352	0000	15280	452							
	115	OBS	0000	2205	35375	2451			15280	452							
		STD	0010	2198	3537	2452	0034275	0034	15260	450						018	
		OBS	0010	2198	35365	2452			15280								
		STD	0020	1250	3479	2635	0016905	0060	14992	448						020	
	003	OBS	0020	1250	34790	2635			14992	448							
		STD	0030	1180	3490	2657	0014838	0076	14971	469						032	
		OBS	0030	1180	34900	2657			14971								
		OBS	0040	1287	35250	2663			15014	486						032	
		STD	0050	1327	3537	2664	0014197	0105	15031	476						069	
		OBS	0050	1327	35370	2664			15031								
		STD	0075	1310	3541	2670	0013679	0140	15029	449						028	
		OBS	0075	1310	35405	2670			15029								
		STD	0100	1252	3544	2685	0012366	0172	15014	422						009	
		OBS	0100	1252	35442	2685			15014								
		STD	0125	1239	3546	2689	0012085	0203	15014	393						001	
		STD	0150	1198	3547	2699	0011283	0232	15005	363							
		OBS	0150	1198	35470	2698			15005	363							
		STD	0200	1036	3524	2710	0010218	0286	14953	300							
		OBS	0200	1036	35240	2710			14953	300							
		STD	0250	0892	3512	2724	0008854	0333	14907	289							
		OBS	0250	0892	35120	2724			14907	289							
		STD	0300	0795	3504	2733	0008097	0376	14877								
		OBS	0300	0795	35035	2733			14877								
		STD	0400	0578	3494	2755	0006001	0446	14807								
		OBS	0400	0578	34935	2755			14807								
		STD	0500	0521	3494	2762	0005391	0503	14800								
		OBS	0500	0521	34938	2762			14800								
		STD	0600	0498	3494	2765	0005234	0556	14807								
		OBS	0600	0498	34937	2765			14807								
		STD	0700	0485	3494	2766	0005180	0608	14819								
		OBS	0700	0485	34938	2766			14819								
		STD	0800	0464	3494	2769	0005015	0659	14827								
		OBS	0800	0464	34940	2769			14827								
		STD	0900	0461	3495	2770	0005048	0710	14842								
		OBS	0900	0461	34945	2770			14842								
		STD	1000	0455	3495	2771	0005056	0760	14856								
		OBS	1000	0455	34948	2771			14856								
		OBS	1065	0444	34958	2773			14863								

REF CODE	IO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	UNIT INCHES	MARSOEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER	
						10"	1"	MO	DAY	HR.1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT PER	SEA	TYPE		AMT			
318023		EV	3930 N	06900 W		115	99	09	19	147	1967	102	005		2650	15	29	1	2		X1		0005	
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
						COLOR CODE	TRANS. INT.	DIR.	SPEED OF FORCE		DRY BULB	WET BULB												
						DT	SD	31	S10		159	267					256	7	20					
MESSNGR TIME OF HR 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S %.	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°		Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTA -P μg - at/l	NO ₂ -N μg - at/l	CHL -A	SiO ₄ -Si μg - at/l	pH	Σ C C						
		STD	0000	2510	3602	2410	0038226	0000	15362	484														
147		OBS	0000	2510	36020	2410			15362	484								015						
		STD	0010	1695	3566	2605	0019715	0029	15144	487														
		OBS	0010	1695	35660	2605			15144	487								020						
		STD	0020	1314	3534	2665	0014082	0046	15021	488														
		STD	0030	1180	3533	2690	0011675	0059	14977	488														
003		OBS	0030	1180	35330	2690			14977	488								065						
		OBS	0040	1292	35620	2691			15020	502								018						
		STD	0050	1325	3572	2692	0011594	0082	15034	547														
		OBS	0050	1325	35720	2692			15034	547								017						
		STD	0075	1330	3575	2693	0011542	0111	15040	474														
		OBS	0075	1330	35750	2693			15040	474								011						
		STD	0100	1225	3575	2714	0009578	0137	15009	413														
		OBS	0100	1225	35753	2714			15009									003						
		STD	0125	1144	3559	2717	0009355	0161	14983	365														
		STD	0150	1075	3546	2720	0009168	0184	14961	329														
		OBS	0150	1075	35458	2720			14961	329														
		STD	0200	0975	3530	2725	0008756	0229	14931															
		OBS	0200	0975	35300	2725			14931															
		STD	0250	0862	3524	2738	0007523	0270	14897															
		OBS	0250	0862	35237	2738			14897															
		STD	0300	0762	3506	2740	0007414	0307	14865															
		OBS	0300	0762	35062	2740			14865															
		STD	0400	0584	3497	2757	0005818	0373	14810															
		OBS	0400	0584	34970	2757			14810															
		STD	0500	0518	3499	2767	0004953	0427	14800															
		OBS	0500	0518	34992	2767			14800															
		STD	0600	0478	3498	2771	0004670	0475	14800															
		OBS	0600	0478	34980	2771			14800															
		STD	0700	0464	3501	2775	0004359	0520	14811															
		OBS	0700	0464	35014	2775			14811															
		STD	0800	0450	3501	2776	0004354	0564	14822															
		OBS	0800	0450	35006	2776			14822															
		STD	0900	0438	3500	2777	0004326	0607	14833															
		OBS	0900	0438	35004	2777			14833															
		STD	1000	0421	3500	2779	0004245	0650	14843															
		OBS	1000	0421	35000	2779			14843															
		STD	1100	0410	3500	2780	0004205	0692	14855															
		STD	1200	0397	3500	2781	0004143	0734	14866															
		OBS	1200	0397	34999	2781			14866															
		STD	1300	0383	3500	2782	0004056	0775	14877															
		STD	1400	0368	3500	2784	0003953	0815	14888															
		STD	1500	0352	3500	2786	0003832	0854	14898															
		OBS	1500	0352	34999	2786			14898															

REFERENCE	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH FOOT	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NDOC STATION NUMBER
					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)		AIR TEMP. °C	DRY BULB			WET BULB	VIL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS				
DT	SD	31	S10	176	256	222	7															
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-3107	Σ Δ O 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	CHL-A	SiO ₄ -Si μg - dl/l	pH	S C C					
		STD	0000	2495	3596	2410		0038258	0000	15358	549											
183		OBS	0000	2495	35955	2410				15358	549											
		STD	0010	2490	3599	2414		0037937	0038	15359	550					015						
		OBS	0010	2490	35985	2414				15359	550											
003		OBS	0018	2452	36160	2438				15353						012						
		STD	0020	2409	3608	2445		0034969	0075	15342	533											
		OBS	0020	2409	36080	2445				15342	533					067						
		STD	0030	2011	3546	2510		0028813	0106	15235	552											
		OBS	0030	2011	35459	2510				15235	552					071						
		OBS	0040	1566	35085	2591				15102	543					036						
		OBS	0047	1313	35090	2645				15022												
		STD	0050	1420	3543	2649		0015608	0151	15062	527											
		OBS	0050	1420	35437	2649				15062	527					013						
		OBS	0059	1540	35860	2656				15107												
		STD	0075	1313	3540	2670		0013759	0188	15030	470											
		OBS	0075	1313	35402	2670				15030	470					003						
		OBS	0080	1305	35548	2682				15030												
		STD	0100	1300	3561	2688		0012074	0220	15033	402											
		OBS	0100	1400	35607	2688				15033	402					002						
		STD	0125	1197	3549	2699		0011053	0249	15000	414											
		STD	0150	1108	3539	2708		0010260	0275	14972	426											
		OBS	0150	1108	35388	2708				14972	426											
		STD	0200	0970	3523	2720		0009197	0324	14929												
		OBS	0200	0970	35229	2720				14929												
		STD	0250	0870	3512	2728		0008526	0368	14898												
		OBS	0250	0870	35118	2728				14898												
		STD	0300	0800	3510	2737		0007691	0409	14880												
		OBS	0300	0800	35100	2737				14880												
		STD	0430	0556	3496	2760		0005522	0475	14798												
		OBS	0400	0556	34962	2760				14798												
		STD	0500	0501	3500	2770		0004685	0526	14793												
		OBS	0500	0501	35000	2770				14793												
		STD	0600	0458	3498	2773		0004422	0572	14791												
		OBS	0600	0458	34981	2773				14791												
		STD	0700	0445	3499	2775		0004307	0615	14803												
		OBS	0700	0445	34990	2775				14803												
		STD	0800	0427	3499	2777		0004201	0658	14812												
		OBS	0800	0427	34989	2777				14812												
		STD	0900	0415	3499	2779		0004125	0699	14824												
		OBS	0900	0415	34993	2779				14824												
		STD	1000	0406	3499	2779		0004171	0741	14836												
		OBS	1000	0406	34985	2779				14836												
		STD	1100	0399	3499	2780		0004142	0782	14850												
		STD	1200	0392	3499	2781		0004139	0824	14864												
		OBS	1200	0392	34991	2781				14864												
		STD	1300	0386	3499	2782		0004146	0865	14878												
		STD	1400	0380	3499	2782		0004143	0907	14893												
		STD	1500	0375	3500	2783		0004157	0948	14907												
		OBS	1500	0375	34995	2783				14907												

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	SHEET INDIC	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
318023	EV		3900 N	07000 W		116	90	09	19	237	1967	102	007	2834	15	27	012		X0			0007
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. mm	DIR.	SPEED OF FORCE		(mba)	DRY BULB	WET BULB									
						DT	SD	32	S05	186		228	211	7	19							
MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ D. OYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₃ -N μg - at/l	CHL-A	Si O ₄ -Si μg - at/l	pH	S CCT			
		STD	0000	2112	3530	2471		0032442	0000	15255	531											
237		OBS	0000	2112	35300	2471				15255	531					013						
		STD	0010	2088	3528	2476		0032008	0032	15250	539											
		OBS	0010	2088	35279	2476				15250	539					014						
		STD	0020	2060	3525	2481		0031571	0064	15244	538											
003		OBS	0020	2060	35245	2481				15244	538					021						
		STD	0030	2040	3525	2487		0031053	0095	15240	538											
		OBS	0030	2040	35251	2487				15240	538					025						
		OBS	0040	1675	35185	2573				15137	530					054						
		STD	0050	1592	3557	2622		0018217	0145	15118	465											
		OBS	0050	1592	35569	2622				15118	465					023						
		STD	0075	1340	3568	2685		0012258	0183	15043	347											
		OBS	0075	1340	35679	2685				15043	347					018						
		STD	0100	1112	3542	2710		0009981	0210	14966	337											
		OBS	0100	1112	35419	2710				14966	337					000						
		STD	0125	0972	3525	2721		0008913	0234	14917	347											
		STD	0150	0869	3514	2730		0008151	0255	14882	354											
		OBS	0150	0869	35140	2730				14882	354											
		STD	0200	0775	3508	2739		0007322	0294	14853	363											
		OBS	0200	0775	35076	2739				14853	363											
		STD	0250	0696	3504	2747		0006577	0329	14830	411											
		OBS	0250	0696	35038	2747				14830	411											
		STD	0300	0590	3501	2760		0005452	0359	14796												
		OBS	0300	0590	35011	2760				14796												
		STD	0400	0518	3500	2768		0004763	0410	14783												
		OBS	0400	0518	35001	2768				14783												
		STD	0500	0474	3499	2771		0004472	0456	14782												
		OBS	0500	0474	34985	2771				14782												
		STD	0600	0457	3499	2773		0004380	0500	14791												
		OBS	0600	0457	34985	2773				14791												
		STD	0700	0440	3498	2775		0004321	0544	14801												
		STD	0800	0423	3498	2777		0004227	0587	14810												
		OBS	0800	0423	34979	2777				14810												
		STD	0900	0406	3497	2778		0004187	0629	14819												
		STD	1000	0393	3496	2779		0004168	0671	14831												
		OBS	1000	0393	34964	2779				14831												
		STD	1100	0386	3497	2779		0004166	0712	14844												
		STD	1200	0380	3497	2780		0004181	0754	14859												
		OBS	1200	0380	34965	2780				14859												
		STD	1300	0375	3497	2781		0004169	0796	14873												
		STD	1400	0370	3497	2781		0004191	0837	14888												
		STD	1500	0366	3497	2782		0004216	0880	14903												
		OBS	1500	0366	34971	2782				14903												

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

318023	EV	3930 N	07000 W	116	90	09	20	034	1967	102	008	2560	15	00	0	X	X0	0008
WATER				WIND		BARO-METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
COLOR CODE	TRANS. IMI	DIR.	SPEED OR FORCE	(mb)		DRY BULB	WET BULB											
DT	50	03	508	207	228	200	7	19										

MESSINGP TIME HR 1/10	CASID NO.	CARD TYPE	DEPTH (m)	T °C	S %.	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	D ₂ ml/l	PD4-P μg - dl/l	TOTAL-P μg - dl/l	ND2-N μg - dl/l	CHL-A	SiO4-Si μg - dl/l	pH	S C
		STD	0000	2251	3505	2413		0037923	0000	15288	520						
034		OBS	0000	2251	35052	2413				15288	520						
		STD	0010	2135	3506	2446		0034829	0036	15260	515				011		
		OBS	0010	2135	35058	2446				15260	515						
		STD	0020	1774	3513	2545		0025417	0066	15162	527				016		
003		OBS	0020	1774	35130	2545				15162	527						
		STD	0030	1553	3515	2599		0020390	0089	15097	591				025		
		OBS	0030	0980P	3450P	2662P											
		OBS	0040	1110P	3526P	2698P					536				062		
		STD	0050	1285	3518	2658		0014781	0125	15014	615				054		
		OBS	0050	1285	35180	2658				15014	615						
		STD	0075	1275	3547	2683		0012530	0159	15018	450				031		
		OBS	0075	1275	35470	2683				15018	450						
		STD	0100	1205	3538	2689		0011944	0189	14998	454				009		
		OBS	0100	1205	35380	2689				14998	454						
		STD	0125	1129	3533	2700		0010997	0218	14975	400				000		
		STD	0150	1055	3526	2708		0010281	0245	14952	363						
		OBS	0150	1055	35260	2708				14952	363						
		STD	0200	0915	3509	2718		0009337	0294	14907	325						
		OBS	0200	0915	35090	2718				14907	325						
		STD	0250	0780	3497	2730		0008268	0338	14862	345						
		OBS	0250	0780	34970	2730				14862	345						
		STD	0300	0675	3495	2743		0007022	0376	14829							
		OBS	0300	0675	34950	2743				14829							
		STD	0400	0540	3487	2755		0006007	0441	14791							
		OBS	0400	0540	34870	2755				14791							
		STD	0500	0510	3494	2763		0005278	0497	14796							
		OBS	0500	0510	34935	2763				14796							
		STD	0600	0480	3495	2768		0004917	0548	14800							
		OBS	0600	0480	34950	2768				14800							
		STD	0700	0461	3496	2771		0004722	0597	14809							
		STD	0800	0445	3497	2774		0004559	0643	14819							
		OBS	0800	0445	34970	2774				14819							
		STD	0900	0435	3497	2775		0004540	0689	14832							
		STD	1000	0425	3497	2775		0004553	0734	14844							
		OBS	1000	0425	34965	2775				14844							
		STD	1100	0414	3497	2777		0004513	0779	14856							
		STD	1200	0405	3497	2777		0004494	0824	14869							
		OBS	1200	0405	34965	2777				14869							
		STD	1300	0397	3497	2778		0004484	0869	14882							
		STD	1400	0390	3497	2779		0004484	0914	14896							
		STD	1500	0385	3497	2780		0004507	0959	14911							
		OBS	1500	0385	34965	2780				14911							

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DEPTH METER	MARDEN 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
318023	EV		4000 N	07000 W		152	00	09	20	067	1967	102	009		0164	01	00	0		X0			0009
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS									
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbs)		DRY BULB	WET BULB	VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS									
		01	50	07	509	203		194	163	7		08											
MESSAGE TIME HR 1/10	CASE NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t °		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	CHL-A	SiO ₄ -Si μg - dl/l	pH	S CODE				
		STO	0000	2009	3453	2440		0035379		0000	15218												
	067	OBS	0000	2009	34531	2440					15218						008						
		STO	0010	2008	3452	2440		0035446		0035	15220	552											
		OBS	0010	2008	34523	2440					15220	552					006						
		STO	0020	1993	3471	2457		0033787		0070	15219	546											
	000	OBS	0020	1993	34705	2457					15219	546					008						
		STO	0030	2005	3482	2463		0033289		0104	15225	552											
		OBS	0030	2005	34820	2463					15225	552					027						
		OBS	0040	1745	34355	2493					15148	558					036						
		STO	0050	1025	3400	2615		0016885		0156	14908	570											
		OBS	0050	1025	33995	2615					14908	570					051						
		STO	0075	0985	3465	2672		0013447		0196	14906	506											
		OBS	0075	0985	34650	2672					14906	506					007						
		STO	0100	0998	3477	2679		0012863		0229	14917	476											
		OBS	0100	0998	34765	2679					14917	476					007						

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DEPTH METER	MARDEN 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
318023	EV		4029 N	07005 W		152	00	09	20	098	1967	102	010		0066	01	06	0 21		X0			0010
							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										
							01	50	10	510	220	167	144	7	07								
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t °		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	CHL-A	SiO ₄ -Si μg - dl/l	pH	S CODE					
		STO	0000	1480	3221	2388	0040296		0000	15033	617												
	098	OBS	0000	1480	32205	2388				15033	617					047							
		STO	0010	1565	3320	2446	0034805		0038	15074	619												
		OBS	0010	1565	33200	2446				15074	619					046							
		STO	0020	1681	3358	2449	0034590		0072	15116	613												
	000	OBS	0020	1681	33570	2449				15116	613					051							
		STO	0030	1725	3361	2441	0035376		0107	15131	604												
		OBS	0030	1725	33611	2441				15131	604					054							
		OBS	0040	1290	33680	2541				14995	579					040							
		STO	0050	0891	3400	2637	0016735		0159	14859	602												
		OBS	0050	0891	34000	2637				14859	602					034							
		OBS	0060	0816	34278	2670				14836													

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DEPTH METER	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		C-PTH DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'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	
318023	EV	4100 N	07000 W	152	10	09	20	130	1967	102	011	0047	00	06	1	2		X0				0011	
						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											
						DT	SO	07	SO		9	237					172	139	7	06			
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t °		Σ Δ 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	CHL-A	SiO ₄ -Si μg - dl/l	pH	S CODE					
		STD	0000	1459	3154	2342	0044764		0000	15018	603												
	130	OBS	0000	1459	31538	2342				15018	603					100							
		OBS	0004	1454	31530	2342				15017													
		STD	0010	1436	3154	2347	0044323		0045	15012	611												
	000	OBS	0010	1436	31539	2347				15012	611					094							
		OBS	0017	1410	31582	2355				15006													
		STD	0020	1409	3159	2356	0043471		0088	15006	624												
		OBS	0020	1409	31586	2356				15006	624					093							
		OBS	0026	1405	31591	2357				15006													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MAPSDEN 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	AMT				
318023	EV		41147N	071001W		152	11	09	20	178	1967	102	012		0042	00	00	0	X		X0		0012			
						WATER		WIND		BARO- METER (mba)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB													
						OT	SD	11	S06	251	228	172	8	06												
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta D$ DTN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g \cdot dl/l$	TOTAL-P $\mu g \cdot dl/l$	NO ₃ -N $\mu g \cdot dl/l$	CHL-A	SiO ₄ -Si $\mu g \cdot dl/l$	pH	S C C								
000	178	STD	0000	1620	3166	2316	0047186		0000	15071																
		OBS	0000	1620	31663	2316				15071																
		OBS	0001	1520	31689	2340				15040																
		STD	0010	1485	3172	2350	0043963		0046	15031																
		OBS	0010	1485	31722	2350				15031																
		STD	0020	1419	3177	2368	0042332		0089	15011																
		OBS	0020	1419	31768	2368				15011																
		OBS	0025	1390	31731	2371				15002																
		STD	0030	1257	3197	2416	0037774		0129	14961																
		OBS	0030	1257	31973	2416				14961																

REFERENCE CITY CODE	ID. NO.	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 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		
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO- METER (mba)													DRY BULB	
318023	EV		4100 N	07100 W		152	11	09	20	194	1967	102	013		0048	00	13	1	2		X0			0013
						DT	SD	13	508	240	161	144	7	08										
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DTN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - ol/l$	TOTAL-P $\mu g - ol/l$	NO ₃ -N $\mu g - ol/l$	CHL-A	SiO ₄ -Si $\mu g - ol/l$	pH	S C C							
		STD	0000	1548	3205	2362		0042831	0000	15053	633													
	194	OBS	0000	1548	32050	2362				15053	633						028							
		OBS	0001	1470	32042	2378				15028														
		STD	0010	1408	3207	2393	0039896	0041	15010	642														
	000	OBS	0010	1408	32067	2393			15010	642							103							
		OBS	0014	1380	32095	2401			15002															
		STD	0020	1119	3176	2424	0036899	0080	14909	626														
		OBS	0020	1119	31760	2424			14909	626							195							
		OBS	0023	1020	31640	2432			14872															
		STD	0030	0997	3225	2483	0031338	0114	14872	581														
		OBS	0030	0997	32245	2483			14872	581							040							
		OBS	0040	0985	32290	2489			14870	547							072							

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	DRIFT MILES	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./10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA		TYPE	AMT	
318023	EV		4030 N	07100 W		152	01	09	20	223	1967	102	014		0076	01	09	0	2		X0		0014
						WATER		WIND		AIR TEMP. °C													
		COLOR CODE	TRANS. MM	DIR.	SPEED OR FORCE	BARO- METER (mbars)		DRY BULB		WET BULB		VIS. CODE	ND. OBS. DEPTHS	SPECIAL OBSERVATIONS									
		DT	SD	10	S07	227		161		144		7	12										
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	PD ₄ -P $\mu g - \text{dl/l}$	TOTAL-P $\mu g - \text{dl/l}$	NO ₂ -N $\mu g - \text{dl/l}$	CHL-A	SiO ₄ -Si $\mu g - \text{dl/l}$	pH	S CC				
		STD	0000	1520	3203	2366	0042397		0000		15044	621											
	223	OBS	0000	1520	32030	2366					15044	621				042							
		OBS	0004	1521	32040	2367					15045												
	000	OBS	0006	1470	32070	2380					15029												
		STD	0010	1462	3239	2406	0038602		0040		15031	632											
		OBS	0010	1462	32390	2406					15031	632				044							
		OBS	0014	1423	32300	2408					15018												
		STD	0020	1191	3228	2452	0034305		0077		14941	617											
		OBS	0020	1191	32280	2452					14941	617				056							
		OBS	0024	1165	32250	2454					14932												
		OBS	0026	1180	32300	2455					14938												
		STD	0030	1101	3215	2458	0033772		0111		14909	605											
		OBS	0030	1101	32145	2458					14909	605				026							
		OBS	0040	0851	32420	2520					14822	590				035							
		STD	0050	0823	3252	2531	0026766		0172		14814	572											
		OBS	0050	0823	32515	2531					14814	572				024							
		STD	0075	0755	3265	2552	0024831		0236		14794												
		OBS	0075	0755	32654	2552					14794												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DATE MO DAY HR 1/10	MARSEN 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"		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT											
318023	EV		3915 N	07100 W	116 91 09 21 044	1967	103	016		2377	15	11	X	X			X0				0016										
		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																										
DT	SD	12	508	224	211	194	7	20																							
MESSNGR TIME HR 1/10	CST 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 $\mu\text{g} - \text{ml/l}$	TOTAL-P $\mu\text{g} - \text{ml/l}$	NO ₂ -N $\mu\text{g} - \text{ml/l}$	CNL-A	SiO ₄ -Si $\mu\text{g} - \text{ml/l}$	pH	S C														
		STD	0000	2109	3515	2460	0033449	0000	15252	549																					
044		OBS	0000	2109	35150	2460			15252	549					023																
		STD	0010	2000	3516	2490	0030666	0032	15225	550																					
		OBS	0010	2000	35155	2490			15225	550					018																
		STD	0020	1710	3520	2566	0023436	0059	15144	533																					
003		OBS	0020	1710	35200	2566			15144	533					023																
		STD	0030	1460	3536	2635	0016916	0079	15070	552																					
		OBS	0030	1460	35355	2635			15070	552					022																
		OBS	0040	1425	35640	2665			15064	542					032																
		STD	0050	1430	3574	2671	0013545	0110	15069	527																					
		OBS	0050	1430	35740	2671			15069	527					048																
		STD	0075	1380	3570	2679	0012899	0143	15056	470																					
		OBS	0075	1380	35700	2679			15056	470					019																
		STD	0100	1318	3566	2689	0012036	0174	15039	402																					
		OBS	0100	1318	35660	2689			15039	402					004																
		STD	0125	1276	3560	2692	0011732	0204	15029	414																					
		STD	0150	1220	3553	2698	0011288	0232	15013	426																					
		OBS	0150	1220	35525	2698			15013	426																					
		STD	0200	1070	3532	2710	0010207	0286	14966	344																					
		OBS	0200	1070	35321	2710			14966	344																					
		STD	0250	0940	3514	2718	0009471	0335	14925	327																					
		OBS	0250	0940	35140	2718			14925	327																					
		STD	0300	0825	3508	2732	0008213	0380	14889																						
		OBS	0300	0825	35080	2732			14889																						
		STD	0400	0640	3500	2752	0006331	0452	14833																						
		OBS	0400	0640	35000	2752			14833																						
		OBS	0450	0600	35009	2758			14825																						
		STD	0500	0560	3500	2762	0005422	0511	14817																						
		OBS	0500	0560	35000	2762			14817																						
		STD	0600	0490	3497	2768	0004891	0563	14805																						
		OBS	0600	0490	34970	2768			14805																						
		STD	0700	0475	3500	2773	0004597	0610	14815																						
		STD	0800	0460	3502	2776	0004374	0655	14826																						
		OBS	0800	0460	35020	2776			14826																						
		STD	0900	0445	3501	2777	0004368	0699	14836																						
		STD	1000	0432	3501	2778	0004316	0742	14848																						
		OBS	1000	0432	35009	2778			14848																						
		STD	1100	0422	3501	2779	0004289	0785	14860																						
		STD	1200	0412	3501	2780	0004259	0828	14873																						
		OBS	1200	0412	35009	2780			14873																						
		STD	1300	0402	3501	2781	0004232	0870	14885																						
		STD	1400	0392	3501	2782	0004209	0913	14898																						
		STD	1500	0382	3501	2783	0004175	0954	14910																						
		OBS	1500	0382	35005	2783			14910																						

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARS SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TD 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	
318023	EV		3858 N	07100 W		116	81	09	21	080	1967	102	017		1006	09	14	0	2		X2			0017
						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												
						DT	SD	14	S08	220	211	200	7	17										
MESSAGE TIME HR 1/10	CST 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 µg - dl/l	TOTAL-P µg - dl/l	NO ₂ -N µg - dl/l	CHL-A	SiO ₄ -Si µg - dl/l	pH	S CODE							
080		STD	0000	1880	3574	2565	0023440	0000	15197	568														
		OBS	0000	1880	35739	2565			15197	568					031									
002		STD	0010	1860	3554	2555	0024437	0024	15190	577														
		OBS	0010	1860	35540	2555			15190	577					038									
		STD	0020	1780	3573	2590	0021196	0047	15171	586														
		OBS	0020	1780	35730	2590			15171	586					049									
		STD	0030	1650	3588	2633	0017167	0066	15136	518														
		OBS	0030	1650	35880	2633			15136	518					023									
		OBS	0040	1671	35998	2637			15145	506					053									
		STD	0050	1635	3600	2645	0016025	0099	15136	499														
		OBS	0050	1635	36000	2645			15136	499					036									
		STD	0075	1620	3614	2659	0014754	0138	15137	415														
		OBS	0075	1620	36140	2659			15137	415					013									
		STD	0100	1470	3587	2672	0013608	0173	15091	417														
		OBS	0100	1470	35865	2672			15091	417					006									
		STD	0125	1400	3573	2677	0013227	0207	15071	414														
		STD	0150	1340	3564	2682	0012790	0239	15055	411														
		OBS	0150	1340	35635	2682			15055	411														
		STD	0200	1249	3553	2692	0011929	0301	15031	402														
		OBS	0200	1249	35530	2692			15031	402														
		STD	0250	1065	3532	2711	0010244	0356	14972	333														
		OBS	0250	1065	35320	2711			14972	333														
		STD	0300	0940	3517	2720	0009391	0405	14933															
		OBS	0300	0940	35165	2720			14933															
		STD	0400	0706	3501	2743	0007203	0488	14859															
		OBS	0400	0706	35005	2743			14859															
		STD	0500	0578	3502	2762	0005521	0552	14824															
		OBS	0500	0578	35018	2762			14824															
		STD	0600	0520	3503	2770	0004819	0604	14818															
		OBS	0600	0520	35030	2770			14818															
		STD	0700	0483	3503	2774	0004511	0650	14819															
		STD	0800	0460	3502	2776	0004374	0695	14826															
		OBS	0800	0460	35020	2776			14826															
		STD	0900	0450	3502	2777	0004356	0738	14838															
		OBS	0900	0450	35020	2777			14838															

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
318	023	EV	3831 N	07203 W	116	82	09	21	138	1967	104	018	2798	15	00	0			X2			0018	
						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												
						DT	SD	17	S04	213	239	222	5			29							
MESSENGER TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₃ -N μg - at/l	CHL-A	SIO ₄ -Si μg - at/l	pH	°C						
138		STD	0000	2028	3425	2413	0037930	0000	15220	539													
		OBS	0000	2028	34245	2413			15220	539					008								
		STD	0010	2027	3462	2442	0035222	0037	15226	542													
		OBS	0010	2027	34620	2442			15226	542					002								
003		STD	0020	2017	3465	2447	0034824	0072	15225	547													
		OBS	0020	2017	34645	2447			15225	547					001								
		STD	0030	1910	3446	2460	0033551	0106	15195	549													
		OBS	0030	1910	34460	2460			15195	549					002								
		OBS	0040	1263	34415	2603			14995	561					011								
		OBS	0042	1185	34500	2625			14970														
		OBS	0045	1195	34570	2628			14975														
		STD	0050	1270	3491	2640	0016477	0156	15006	578													
		OBS	0050	1270	34910	2640			15006	578					056								
		OBS	0056	1238	35040	2657			14997														
		OBS	0069	1308	35300	2663			15026														
		OBS	0071	1254	35140	2661			15007														
		STD	0075	1260	3532	2674	0013346	0193	15011	586													
		OBS	0075	1260	35320	2674			15011	586					051								
		STD	0100	1223	3547	2693	0011617	0224	15005	453													
		OBS	0100	1223	35470	2693			15005	453					021								
		STD	0125	1198	3547	2697	0011255	0253	15000	440													
		STD	0150	1153	3546	2705	0010534	0280	14989	415													
		OBS	0150	1153	35460	2705			14989	415													
		STD	0200	1000	3521	2713	0009833	0331	14939	327													
		OBS	0200	1000	35210	2713			14939	327													
		STD	0250	0865	3514	2730	0008323	0376	14897	342													
		OBS	0250	0865	35135	2730			14897	342													
		STD	0300	0741	3505	2742	0007201	0415	14856														
		OBS	0300	0741	35050	2742			14856														
		OBS	0345	0631	34983	2752			14820														
		STD	0400	0588	3497	2757	0005847	0480	14811														
		OBS	0400	0588	34973	2757			14811														
		STD	0500	0520	3499	2766	0004993	0535	14801														
		OBS	0500	0520	34990	2766			14801														
		OBS	0560	0495	34965	2767			14800														
		OBS	0580	0505	35022	2771			14808														
		STD	0600	0497	3502	2772	0004606	0583	14808														
		OBS	0600	0497	35020	2772			14808														
		STD	0700	0475	3502	2774	0004434	0628	14816														
		OBS	0700	0475	35022	2774			14816														
		STD	0800	0453	3502	2777	0004288	0671	14823														
		OBS	0800	0453	35020	2777			14823														
		STD	0900	0440	3502	2778	0004232	0714	14834														
		OBS	0900	0440	35020	2778			14834														
138		STD	1000	0428	3501	2779	0004258	0757	14846														
		OBS	1000	0428	35010	2779			14846														
		STD	1100	0418	3501	2780	0004231	0799	14858														
		STD	1200	0409	3501	2780	0004228	0841	14871														
		OBS	1200	0409	35008	2780			14871														
		STD	1300	0401	3501	2781	0004205	0883	14885														
		STD	1400	0393	3501	2782	0004193	0925	14898														
		STD	1500	0387	3501	2783	0004189	0967	14913														
		OBS	1500	0387	35012	2783			14913														
		OBS	1500	0387	35012	2783			14913														

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

318023	EV	3900 N	07200 W	116 92	09 21 169	1967	102	019	2341	15	17	1	2				X4			0019
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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			
DT	SD	17	S08	193	250	222	4	32	

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. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - ml/l	TOTAL-P μg - ml/l	NO ₃ -N μg - ml/l	CHL-A	SiO ₄ -Si μg - ml/l	pH	S CC
		STD	0000	2082	3604	2535	0026311	0000	15256	518							
	169	OBS	0000	2082	36040	2535			15256	518							
		OBS	0005	2050	36050	2545			15248	513							007
		STD	0010	1980	3607	2565	0023536	0025	15230	512							
	003	OBS	0010	1980	36070	2565			15230	512							008
		OBS	0015	1879	36081	2592			15203	506							
		STD	0020	1832	3611	2606	0019664	0047	15191	508							
		OBS	0020	1832	36110	2606			15191	508							011
		OBS	0025	1830	36135	2608			15191	505							
		STD	0030	1773	3622	2629	0017507	0065	15177	488							
		OBS	0030	1773	36220	2629			15177								025
		OBS	0040	1770	36440	2647			15180								
		OBS	0044	1765	36450	2649			15179								
		STD	0050	1769	3645	2648	0015812	0098	15182	435							
		OBS	0050	1769	36450	2648			15182								048
		STD	0075	1610	3608	2657	0014969	0137	15134	396							
		OBS	0075	1610	36080	2657			15134	396							017
		STD	0100	1515	3593	2667	0014111	0173	15106	402							
		OBS	0100	1515	35926	2667			15106								003
		STD	0125	1361	3565	2679	0013027	0207	15058	413							
		OBS	0125	1361	35650	2679			15058	413							
		STD	0150	1312	3564	2688	0012240	0239	15045	445							
		OBS	0150	1312	35635	2688			15045								
		OBS	0175	1290	35635	2692			15042	447							
		STD	0200	1215	3554	2700	0011214	0297	15019	418							
		OBS	0200	1215	35540	2700			15019								
		OBS	0225	1160	35493	2707			15004	359							
		STD	0250	1105	3542	2711	0010212	0351	14988								
		OBS	0250	1105	35420	2711			14988								
		STD	0300	0966	3525	2722	0009191	0399	14944								
		OBS	0300	0966	35250	2722			14944								
		STD	0400	0718	3503	2744	0007181	0481	14864								
		OBS	0400	0718	35031	2744			14864								
		STD	0500	0574	3498	2759	0005750	0546	14822								
		OBS	0500	0574	34980	2759			14822								
		OBS	0526	0539	34970	2763			14812								
		OBS	0532	0552	34990	2763			14819								
		OBS	0559	0547	35001	2764			14821								
		OBS	0574	0512	34977	2766			14809								
		STD	0600	0508	3498	2767	0005039	0600	14812								
		OBS	0600	0508	34980	2767			14812								
		STD	0700	0486	3502	2773	0004608	0648	14820								
	169	OBS	0700	0486	35017	2773			14820								
		STD	0800	0460	3502	2776	0004404	0693	14826								
		OBS	0800	0460	35016	2776			14826								
		STD	0900	0445	3502	2777	0004302	0737	14836								
	003	OBS	0900	0445	35019	2777			14836								
		STD	1000	0430	3502	2779	0004246	0779	14847								
		OBS	1000	0430	35015	2779			14847								
		STD	1100	0421	3501	2779	0004269	0822	14860								
		STD	1200	0412	3501	2780	0004259	0865	14873								
		OBS	1200	0412	35009	2780			14873								
		STD	1300	0404	3501	2781	0004251	0907	14886								
		STD	1400	0397	3501	2782	0004252	0950	14900								
		STD	1500	0390	3501	2783	0004250	0992	14914								
		OBS	1500	0390	35009	2783			14914								

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 SAMPLE	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	8023	EV	3930 N	07200 W		116	92	09	21	203	1967	102	020	0686	06	17	0	2		x1		0020
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS. m	DIR.	SPEED OF FORCE	(mbs)	DRY BULB	WET BULB																
DT	SD	19	S05	169	250	222										6	19					
MESSAGE TIME 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 - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	CHL-A	SIO ₄ -S μg - at/l	pH	S.C.				
		STD	0000	2148	3552	2477	0031828		0000	15267	542											
	203	OBS	0000	2148	35515	2477				15267	542				011							
		STD	0010	2137	3558	2485	0031107		0031	15266	527											
		OBS	0010	2137	35580	2485				15266	527				009							
	001	OBS	0013	2052	35460	2499				15243												
		OBS	0017	2062	35400	2492				15246												
		STD	0020	2013	3520	2490	0030703		0062	15230	524											
		OBS	0020	2013	35200	2490				15230	524				013							
		STD	0030	1620	3468	2547	0025283		0090	15112	522											
		OBS	0030	1620	34675	2547				15112	522				021							
		OBS	0040	1511	35135	2607				15086	537				054							
		STD	0050	1447	3537	2639	0010591		0132	15070	510											
		OBS	0050	1447	35371	2639				15070	510				032							
		STD	0075	1389	3549	2661	0014601		0171	15057	450											
		OBS	0075	1389	35492	2661				15057	450				008							
		STD	0100	1375	3561	2673	0013514		0406	15058	438											
		OBS	0100	1375	35612	2673				15058	438				006							
		STD	0125	1317	3557	2682	0012745		0239	15042	435											
		STD	0150	1281	3555	2687	0012261		0470	15034	425											
		OBS	0150	1281	35550	2687				15034	425											
		OBS	0178	1267	35565	2691				15034												
		STD	0200	1215	3552	2698	0011398		0330	15019	386											
		OBS	0200	1215	35515	2698				15019	386											
		STD	0250	1059	3533	2712	0010088		0383	14970	342											
		OBS	0250	1059	35327	2712				14970	342											
		STD	0300	0905	3517	2726	0008776		0430	14920												
		OBS	0300	0905	35172	2726				14920												
		STD	0400	0675	3505	2751	0006423		0506	14847												
		OBS	0400	0675	35052	2751				14847												
		OBS	0425	0600	35014	2758				14821												
		STD	0500	0553	3500	2763	0005362		0565	14814												
		OBS	0500	0553	34996	2763				14814												
		STD	0600	0521	3500	2767	0005083		0618	14818												
		OBS	0600	0521	34996	2767				14818												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	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	8023	EV	4000 N	07200 W		152	02	09	21	236	1967	102	021		01	19	0	2					0021	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
COLOR CODE		TRANS. m		DIR.	SPEED OF FORCE		(mbs)		DRY BULB	WET BULB														
DT		SD		19	S08		146		222		200		7					08						
MESSAGE TIME HR 1/10	CASE 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	CHL-A	SiO ₄ -Si μg - at/l	pH	S.C.					
		STD	0000	1820	3355	2413		0037916		0000	15153	575												
	236	OBS	0000	1820	33550	2413					15153	575				026								
		STD	0010	1819	3391	2441		0037306		0037	15159	594												
		OBS	0010	1819	33910	2441					15159	594				037								
	000	OBS	0018	1780	33865	2447					15148													
		STD	0020	1690	3380	2464		0033181		0071	15121	583												
		OBS	0020	1690	33800	2464					15121	583				046								
		STD	0030	1353	3343	2509		0028873		0102	15012	583												
		OBS	0030	1353	33430	2509					15012	583				062								
		OBS	0040	0920	32800	2539					14853	600				040								
		STD	0050	0797	3289	2564		0023628		0154	14809	600												
		OBS	0050	0797	32838	2564					14809	600				029								
		STD	0075	0758	3318	2592		0020994		0210	14802	569												
		OBS	0075	0758	33175	2592					14802	569				013								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	HAFT 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
318023		EV	4030 N	07200 W		152	02	09	22	024	1967	102	022	0060	00	19	0	2		X4		0022	
						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											
						DT	SD	18	S20	129	194	183	6	05									
MESSNGR 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	CHL-A	SiO ₄ -Si μg - at/l	pH	STATION NUMBER				
		STD	0000	1603	3247	2382	0040923		0000	15075	587												
	024	OBS	0000	1603	32470	2382				15075	587						025						
		STD	0010	1603	3246	2381	0041024		0041	15077	599												
		OBS	0010	1603	32460	2381				15077	599						026						
		STD	0020	1526	3234	2380	0040290		0082	15053	601												
	000	OBS	0020	1526	32342	2389				15053	601						038						
		STD	0030	1305	3222	2425	0036681		0120	14981	600												
		OBS	0030	1305	32215	2425				14981	600						040						
		OBS	0040	0942	32385	2503				14856	539						043						

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	HAFT 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	
318023		EV	4101 N	071545 W		152	11	09	22	056	1967	102	023	0013	00	21	3	2		X6		0023
						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										
						DT	SD	19	S22	071	178	178	6	02								
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 $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	STATION NUMBER				
		STD	0000	1672	3132	2278	0050820		0000	15083	604											
	056	OBS	0000	1672	31320	2278				15083	604					157						
		STD	0010	1653	3133	2283	0050396		0051	15079	617											
		OBS	0010	1653	31325	2283				15079	617					185						

REFERENCE	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	HAFT 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		AMT
318023	EV	4030 N	07300 W		152	03	09	22	117	1967	102	024	0030	00	20	3	2		X1		0024	
					WATER		WIND				AIR TEMP. °C											
					COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)		DRY BULB		WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
					DT	SD	22	S12	220		188		183	6	04							
MESSNGR 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	CHL-A	SiO ₄ -Si μg · at/l	pH	STATION NUMBER		
		STD	0000	1710	3150	2283		0050343		0000	15096		570									
	117	OBS	0000	1710	31500	2283					15096		570					065				
		STD	0010	1650	3178	2318		0047007		0049	15083		566									
		OBS	0010	1650	31780	2318					15083		566					078				
		STD	0020	1613	3182	2330		0045943		0095	15074		531									
	000	OBS	0020	1613	31820	2330					15074		531					084				
		OBS	0025	1613	31825	2330					15075											

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 SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CTRY CODE	ID. NO.					10"	1"	MO	DAY		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT	
318023	EV		40294N	07329 W		152	03	09	22	142	1967	102 025	0018	00	23	1	2		X1		0025		
						WATER		WIND		AIR TEMP. °C		SPECIAL OBSERVATIONS											
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	BARO- METER (mb)	DRY BULB			WET BULB	VIS. CODE	NO. OBS. DEPTHS							
						DT	SD	30	S12	085	222			200	7	04							
MESSENGER TIME HR 1/10	CST 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 ₃ -N μg - dl/l	CHL-A	Si O ₄ -Si μg - dl/l	pH	CTDS					
		STD	0000	1920	3028	2140	0064079		0000	15144	629												
	142	OBS	0000	1920	30280	2140				15144	629					496							
		OBS	0008	1723	31360	2270				15100													
		STD	0010	1722	3136	2270	0051646		0058	15100	422												
	000	OBS	0010	1722	31362	2270				15100	422					330							
		OBS	0015	1721	31361	2270				15101													

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 SAMPLES	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	
318023	EV		4000 N	07400 W		152	04	09	22	179	1967	102 026	0020	00	12	0	2		X1		0026
						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									
						DT	SD	30	S13	041	206	161	7	04							
MESSENGER TIME HR 1/10	CST 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 ₃ -N μg - dl/l	CHL-A	Si O ₄ -Si μg - dl/l	pH	CTDS			
		STD	0000	1907	3084	2185	0059707		0000	15147	582										
	179	OBS	0000	1907	30838	2185				15147	582					482					
		OBS	0005	1884	30840	2191				15141											
		STD	0010	1802	3111	2231	0055332		0058	15121	548										
	000	OBS	0010	1802	31105	2231				15121	548					514					
		OBS	0016	1790	31156	2238				15119											

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 SAMPLES	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	
318023	EV		4000 N	07330 W		152	03	09	22	1967	102 027		0040	00				X1			0027
						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									
						DT	SD	30	S08	091	206	167	8	06							
MESSENGER TIME HR 1/10	CST 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 ₃ -N μg - dl/l	CHL-A	Si O ₄ -Si μg - dl/l	pH	CTDS			
		STD	0000	1700	3163	2295	0049194		0000	15095											
	182	OBS	0000	1700	31627	2295				15095											
		STD	0010	1670	3172	2309	0047918		0049	15089											
		OBS	0010	1670	31715	2309				15089											
		STD	0020	1590	3196	2346	0044428		0095	15068											
	000	OBS	0020	1590	31960	2346				15068											
		STD	0030	1538	3211	2369	0042263		0138	15056											
		OBS	0030	1538	32110	2369				15056											
		OBS	0033	1530	32120	2371				15054											
		OBS	0037	1242	32126	2430				14959											

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	DRIFT DIRECTION	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER		
CTRY CODE	ID. NO.					10'	1'	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE	AMT
318023		EV	4000 N	07300 W		152	03	09	22	224	1967	102 028	0040	00	30	2	2		X1			0028	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. IMI	DIR.	SPEED OR FORCE	(mbs)	DRY BULB	WET BULB											
						DT	SD	31	S10	091	189	156	8					07					
MESSENGER TIME OF HR 1/10		CAS NO.	CARO 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 $\mu\text{g} - \text{dl/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	S C		
			STD	0000	1679	3204		2332		0045722		0000	15094	588									
224			OBS	0000	1679	32039		2332					15094	588				030					
			OBS	0002	1665	32020		2333					15089										
			STD	0010	1521	3212		2373		0041807		0044	15047	597									
000			OBS	0010	1521	32117		2373					15047	597				038					
			STD	0020	1329	3230		2427		0036685		0083	14988	603									
			OBS	0020	1329	32300		2427					14988	603				088					
			OBS	0027	0813	32320		2518					14804										
			STD	0030	0802	3233		2520		0027819		0115	14800	590									
			OBS	0030	0802	32330		2520					14800	590				095					
			OBS	0040	0801	32350		2522					14802	520				076					

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /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		NOCC STATION NUMBER	
CTRY CODE	ID. NO.					10'	1'	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			OIR				TYPE	AMT		
																DIR.	HGT	PER					SEA
318023		EV	39305N	07300 W		116	93	09	23	015	1967	102 029		0080	00	34	X	X		X1			0029
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. IMI	DIR.	SPEED OR FORCE	(mbs)	DRY BULB	WET BULB											
						OT	SD	34	S17	115	178	167	8					06					
MESSENGER TIME OF HR 1/10		CAS NO.	CARO 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 $\mu\text{g} - \text{dl/l}$	CHL-A	Si O ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	$\frac{1}{5}$ C			
			STD	0000	1669	3223	2349		0044093		0000	15093	590										
015			OBS	0000	1669	32232	2349					15093	590					024					
			STD	0010	1665	3224	2350		0043975		0044	15093	611										
			OBS	0010	1665	32240	2350					15093	611					028					
			STD	0020	1580	3226	2371		0042023		0087	15069	610										
000			OBS	0020	1580	32260	2371					15069	610					039					
			STD	0030	0730	3237	2533		0026553		0121	14773	596										
			OBS	0030	0730	32370	2533					14773	596					076					
			OBS	0040	0706	32450	2543					14766	561					044					
			STD	0050	0706	3248	2545		0025444		0173	14768	573										
			OBS	0050	0706	32480	2545					14768	573					043					

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER				
CTRY CODE	ID. NO.					10'	1'	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT			
318023		EV	3900 N	07300 W		116	93	09	23	045	1967	102 030		0084	01	35	1	2		X1			0030			
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
						COLOR CODE	TRANS. IMI	DIR.	SPEED OR FORCE		DRY BULB	WET BULB														
						DT	SD	33	S17		012	161					139	7	07							
MESSENGER TIME OF HR 1/10		CAS NO.	CARO 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	CHL-A	Si O ₄ -Si μg - dl/l	pH	CO ₂						
			STD	0000	2055	3458	2431		0036223		0000	15231	532													
045			OBS	0000	2055	34575	2431					15231	532					015								
			STD	0010	2055	3458	2431		0036258		0036	15233	536													
			OBS	0010	2055	34575	2431					15233	536					012								
			STD	0020	2071	3468	2435		0035942		0072	15240	540													
000			OBS	0020	2071	34680	2435					15240	540					012								
			STD	0030	1765	3400	2461		0033459		0107	15148	531													
			OBS	0030	1765	34000	2461					15148	531					016								
			OBS	0040	0898	33350	2585					14852	592					050								
			STD	0050	0814	3350	2610		0019317		0160	14823	590													
			OBS	0050	0814	33500	2610					14823	590					019								
			STD	0075	0808	3366	2623		0018084		0207	14827														
			OBS	0075	0808	33660	2623					14827						013								

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	OUT- POST 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		NDDC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
318023	EV		3900 N	07330 W		116	93	09	23	078	1967	102 031	0042	00	34	3	2		X1			0031	
						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																
DT	SO	32	S15	119	150	150	8	05															
MESSENGER TIME HR 1/10	CARD 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	PD ₄ -P $\mu\text{g} \cdot \text{ol/l}$	TOTAL-P $\mu\text{g} \cdot \text{ol/l}$	NO ₂ -N $\mu\text{g} \cdot \text{ol/l}$	CHL-A	Si O ₄ -Si $\mu\text{g} \cdot \text{ol/l}$	pH	S C					
		STO	0000	1785	3347	2415	0037720		0000	15142													
	078	OBS	0000	1785	33465	2415				15142													
		STO	0010	1827	3408	2452	0034258		0036	15163													
		OBS	0010	1827	34080	2452				15163													
		STO	0020	1710	3402	2476	0032027		0069	15130													
	000	OBS	0020	1710	34020	2476				15130													
		STO	0030	1288	3314	2500	0029764		0100	14986													
		OBS	0030	1288	33140	2500				14986													
		OBS	0040	1182	32928	2504				14949													

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		NDDC STATION NUMBER		
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT PER	SEA		TYPE	AMT			
318023	EV		3900 N	07400 W	116	94	09	23	094	1967	102 032		0036	00	33	3	2					0032		
						WATER		WIND		AIR TEMP. °C		BARO- METER		VIS. CODE		NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
COLOR CODE		TRANS. (m)		DIR.		SPEED OR FORCE		DRY BULB		WET BULB														
DT	SO	34	S18	139	139	100	8	04																
MESSENGER TIME 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	PD ₄ -P μg - ol/l	TOTAL-P μg - ol/l	NO ₂ -N μg - ol/l	CHL-A	SiO ₄ -Si μg - ol/l	pH	S C							
		STO	0000	1748						566														
	094	OBS	0000	1748	3476P	2523P				566				081										
		STO	0010	1748						569														
		OBS	0010	1748	3476P	2523P								067										
		STO	0020	1538						572														
	000	OBS	0020	1538	3209P	2367P				572				226										
		STO	0030	1477						540														
		OBS	0030	1477	3211P	2382P				540				176										

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	OUT- POST 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		NDDC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT PER	SEA		TYPE	AMT		
318023	EV		38597N	074445W		116	84	09	23	126	1967	102 033		0010	00	33	1	2		X1			0033
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	mbs		DRY BULB	WET BULB										
						OT	SO	34	S14	156		100	099					7	02				
MESSENGER TIME HR 1/10		CARD 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	PD ₄ -P $\mu\text{g} \cdot \text{ol/l}$	TOTAL-P $\mu\text{g} \cdot \text{ol/l}$	NO ₂ -N $\mu\text{g} \cdot \text{ol/l}$	CHL-A	Si O ₄ -Si $\mu\text{g} \cdot \text{ol/l}$	pH	S C			
			STO	0000	1960	3056	2151		0063004		0000	15158	547										
126			OBS	0000	1960	30560	2151					15158	547	532									
			OBS	0009	1960	30560	2151					15160	548	666									

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	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			HGT	PER	SEA	TYPE		AMT		
318023	EV		3800 N	07500 W		116	85	09	23	199	1967	102	036	0010	00	01	0	2		X1			0034
						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										
						OT	SD	33	S06	152		200	130	8	02								
MESSENGER 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 $\mu\text{g} \cdot \text{dl/l}$	TOTAL-P $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} \cdot \text{dl/l}$	pH	S C C			
199		STD	0000	1952	3088	2177			0060482		0000	15160	556										
		OBS	0000	1952	30880	2177						15160	556					130					
		OBS	0009	1952	30880	2177						15161											

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT 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./10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
318023	EV	3800 N	07430 W	116	84	09	23	221	1967	102	037	0043	00	35	0	2		X1				0035	
						WATER		WIND		AIR TEMP. °C													
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO- METER (mb)		DRY BULB	WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						DT	SD	34	S08	146		190	140	8	07								
MESSENGER 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 $\mu\text{g} \cdot \text{dl/l}$	TOTAL-P $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} \cdot \text{dl/l}$	pH	S C C				
		221	STD	0000	1659	3268	2385	0040639		0000	15095												
			OBS	0000	1659	32675	2385				15095												
			STD	0010	1660	3300	2410	0038318		0039	15101												
			OBS	0010	1660	33000	2410				15101												
			OBS	0012	1720	33300	2418				15123												
			OBS	0017	1735	33355	2419				15129												
			STD	0020	1729	3338	2422	0037119		0077	15128												
			OBS	0020	1729	33380	2422				15128												
			STD	0030	1699	3386	2466	0032976		0112	15126												
			OBS	0030	1699	33860	2466				15126												
			OBS	0040	1698	33960	2474				15129												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	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	
318023	EV		3800 N	07400 W		116	84	09	24	006	1967	102	038	0100	01	35	0	2		X0			0036
						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											
						DT	SD	35	S13	149	150	106	8	08									
MESSENGER 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 $\mu\text{g} \cdot \text{dl/l}$	TOTAL-P $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} \cdot \text{dl/l}$	pH	S C C					
006	STD	0000	1931	3416	2432		0036139	0000	15192	553													
	OBS	0000	1931	34160	2432				15192	553								031					
000	STD	0010	1931	3416	2432		0036172	0036	15194	570													
	OBS	0010	1931	34160	2432				15194	570								026					
	STD	0020	1928	3394	2416		0037729	0073	15192	570													
	OBS	0020	1928	33940	2416				15192	570								034					
	STD	0030	1695	3331	2425		0036930	0110	15118	588													
	OBS	0030	1695	33305	2425				15118	588								130					
	OBS	0040	1150	33140	2526				14940	569								040					
	STD	0050	1005	3300	2540		0025915	0173	14888	580													
	OBS	0050	1005	33000	2540				14888	580								032					
	STD	0075	0798	3334	2600		0020320	0231	14819	598													
OBS	0075	0798	33340	2600				14819	598								025						
STD	0100	0990	3440	2652		0015449	0276	14909	527														
OBS	0100	0990	34397	2652				14909	527									015					

REFERENCE		SHIP CODE	LATITUDE " 1/10	LONGITUDE " 1/10	DRIFT INDIC	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
31	8023	EV	3800 N	07330 W		116	83	09	24	029	1967	102	039	1600	15	36	0	2		X1			0037
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. MM	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
						DT	SD	34	512		146	161					128	8	19				
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 ₃ -N μg - ml/l	CHL-A	SIO ₄ -S μg - ml	pH	S CC				
		STD	0000	2008	3480	2461		0033404		0000	15221												
	030	OBS	0000	2008	34800	2461					15221												
		STD	0010	1960	3472	2467		0032844		0033	15209												
		OBS	0010	1960	34717	2467					15209												
	003	STD	0020	1870	3488	2502		0029510		0064	15187												
		OBS	0020	1870	34879	2502					15187												
		STD	0030	1600	3494	2572		0022914		0091	15109												
		OBS	0030	1600	34940	2572					15109												
		OBS	0040	1425	35200	2631					15059												
		STD	0050	1340	3524	2652		0015403		0129	15033												
		OBS	0050	1340	35240	2652					15033												
		STD	0075	1355	3569	2683		0012510		0164	15048												
		OBS	0075	1355	35685	2683					15048												
		STD	0100	1252	3561	2698		0011171		0193	15016												
		OBS	0100	1252	35605	2698					15016												
		STD	0125	1138	3547	2709		0010129		0220	14980												
		STD	0150	1025	3534	2719		0009219		0244	14942												
		OBS	0150	1025	35335	2719					14942												
		STD	0200	0800	3504	2732		0007989		0287	14863												
		OBS	0200	0800	35035	2732					14863												
		STD	0250	0705	3506	2748		0006575		0324	14834												
		OBS	0250	0705	35055	2748					14834												
		STD	0300	0622	3500	2754		0005963		0355	14809												
		OBS	0300	0622	34995	2754					14809												
		STD	0400	0535	3500	2765		0004979		0410	14790												
		OBS	0400	0535	35000	2765					14790												
		OBS	0450	0510	35000	2768					14788												
		STD	0500	0498	3500	2770		0004619		0458	14792												
		STD	0600	0476	3501	2773		0004408		0503	14799												
		OBS	0600	0476	35012	2773					14799												
		STD	0700	0454	3502	2777		0004193		0546	14807												
		STD	0800	0436	3503	2779		0004006		0587	14816												
		OBS	0800	0436	35030	2779					14816												
		STD	0900	0423	3503	2780		0003979		0627	14827												
		STD	1000	0411	3502	2781		0003959		0667	14839												
		OBS	1000	0411	35022	2781					14839												
		STD	1100	0401	3502	2783		0003916		0706	14851												
		STD	1200	0391	3503	2784		0003876		0745	14864												
		OBS	1200	0391	35025	2784					14864												
		STD	1300	0382	3503	2785		0003816		0783	14877												
		STD	1400	0375	3503	2786		0003815		0821	14891												
		STD	1500	0368	3503	2786		0003810		0860	14905												
		OBS	1500	0368	35030	2786					14905												

REFERENCE		SHIP CODE	LATITUDE ° ' 10	LONGITUDE ° ' 10	DATE MO DAY HR.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	IO. NO.					10"	1'	MO	DAY		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	
31	02	EV	3758 N	07300 W	116 73 09 24 055	1967	102	040	2500	15	36	1	2	X1								0038
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS													
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																
01	50	33	512	139	157	117	8	20														

MESSAGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \rho$ OBS. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{ml/l}$	TOTAL-P $\mu\text{g} - \text{ml/l}$	NO ₂ -N $\mu\text{g} - \text{ml/l}$	CHL-A	Si O ₄ -Si $\mu\text{g} - \text{ml/l}$	pH	S C
		STD	0000	1922	3480	2483	0031274	0000	15197	556							
	055	OBS	0000	1922	34800	2483			15197	556					051		
		STD	0010	1921	3480	2483	0031284	0031	15199	561							
		OBS	0010	1921	34800	2483			15199	561					040		
		STD	0020	1921	3498	2497	0030049	0062	15202	574							
	103	OBS	0020	1921	34975	2497			15202	574					051		
		STD	0030	1740	3511	2552	0024831	0089	15154	552							
		OBS	0030	1740	35107	2552			15154	552					068		
		OBS	0040	1445	35148	2622			15065	491					032		
		STD	0050	1415	3554	2659	0014739	0129	15061	456							
		OBS	0050	1415	35535	2659			15061	456					018		
		STD	0075	1310	3572	2695	0011371	0162	15033	420							
		OBS	0075	1310	35720	2695			15033	420					006		
		STD	0100	1240	3561	2700	0010908	0189	15012	356							
		OBS	0100	1240	35610	2700			15012	356					003		
		STD	0125	1141	3545	2707	0010329	0216	14980	340							
		STD	0150	1060	3533	2713	0009829	0241	14954	328							
		OBS	0150	1060	35333	2713			14954	328							
		STD	0200	0950	3525	2725	0008702	0288	14922	318							
		OBS	0200	0950	35252	2725			14922	318							
		STD	0250	0835	3513	2734	0007924	0329	14885	325							
		OBS	0250	0835	35127	2734			14885	325							
		STD	0300	0705	3506	2748	0006604	0365	14843								
		OBS	0300	0705	35062	2748			14843								
		STD	0400	0527	3492	2760	0005512	0426	14786								
		OBS	0400	0527	34915	2760			14786								
		OBS	0450	0512	34995	2768			14789								
		STD	0500	0480	3500	2772	0004469	0476	14784								
		OBS	0500	0480	34995	2772			14784								
		STD	0600	0459	3501	2775	0004256	0520	14792								
		OBS	0600	0459	35005	2775			14792								
		STD	0700	0442	3502	2778	0004048	0561	14802								
		STD	0800	0425	3503	2780	0003895	0601	14812								
		OBS	0800	0425	35027	2780			14812								
		STD	0900	0407	3503	2782	0003770	0639	14821								
		STD	1000	0395	3503	2784	0003720	0677	14832								
		OBS	1000	0395	35028	2784			14832								
		STD	1100	0392	3503	2784	0003763	0714	14848								
		STD	1200	0389	3503	2784	0003851	0752	14863								
		OBS	1200	0389	35025	2784			14863								
		STD	1300	0385	3503	2784	0003884	0791	14878								
		STD	1400	0380	3503	2785	0003908	0830	14893								
		STD	1500	0374	3503	2786	0003910	0869	14907								
		OBS	1500	0374	35027	2786			14907								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARSSEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE'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	OBSERVATIONS								
																DIR.	HGT	PER				SEA		
318023	EV		3756 N	07230 W		116	72	09	24	085	1967	102	041		4389	15	33	1	2		X1			0039
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH'S	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbars)	DRY BULB	WET BULB												
						OT	SD	31	522	014	161	128	20											
MESSAGE TIME HR 1/10	CASE NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-20°		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 ₃ -N μg - at/l	CH ₄ -A	SiO ₄ -Si μg - at/l	pH						
		STD	0000	2150	3511	2446		0034817	0000	15263														
	085	OBS	0000	2150	35109	2446											019							
		STD	0010	2150	3512	2447		0034774	0035	15264	527													
		OBS	0010	2150	35120	2447											020							
		STD	0020	1573	3547	2619		0018432	0061	15106	527													
	003	OBS	0020	1573	35470	2619											019							
		STD	0030	1479	3568	2656		0014935	0078	15081	524													
		OBS	0030	1479	35680	2656				15081	524						020							
		OBS	0040	1419	35720	2672				15063	545						037							
		STD	0050	1375	3568	2678		0012873	0106	15050	504													
		OBS	0050	1375	35680	2678				15050	504						063							
		STD	0075	1300	3568	2694		0011485	0136	15029	418													
		OBS	0075	1300	35678	2694				15029	418						028							
		STD	0100	1225	3552	2696		0011287	0165	15006	411													
		OBS	0100	1225	35520	2696				15006	411						007							
		STD	0125	1081	3536	2711		0009934	0191	14958	379													
		STD	0150	0960	3522	2721		0008993	0215	14917	354													
		OBS	0150	0960	35220	2721				14917	354													
		STD	0200	0790	3502	2732		0007969	0257	14858	322													
		OBS	0200	0790	35018	2732				14858	322													
		STD	0250	0705	3506	2748		0006537	0294	14834	331													
		OBS	0250	0705	35060	2748				14834	331													
		STD	0300	0615	3501	2756		0005818	0325	14806														
		OBS	0300	0615	35005	2756				14806														
		STD	0400	0518	3504	2770		0004510	0376	14784														
		OBS	0400	0518	35035	2770				14784														
		OBS	0450	0488	35030	2773				14780														
		STD	0500	0464	3503	2776		0004004	0419	14778														
		STD	0600	0429	3504	2780		0003679	0457	14780														
		OBS	0600	0429	35035	2780				14780														
		STD	0700	0425	3504	2781		0003720	0494	14795														
		STD	0800	0418	3504	2782		0003723	0531	14809														
		OBS	0800	0418	35039	2782				14809														
		STD	0900	0405	3504	2783		0003694	0568	14820														
		STD	1000	0395	3503	2784		0003705	0605	14832														
		OBS	1000	0395	35030	2784				14832														
		STD	1100	0389	3503	2784		0003724	0643	14847														
		STD	1200	0383	3503	2785		0003740	0680	14861														
		OBS	1200	0383	35030	2785				14861														
		STD	1300	0377	3503	2786		0003746	0717	14875														
		STD	1400	0372	3503	2786		0003769	0755	14890														
		STD	1500	0366	3503	2787		0003770	0793	14904														
		OBS	1500	0366	35032	2787				14904														

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	DEPTH METER	MARSON 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			
CRUISE CODE	ID. NO.					10°	1°	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		10PL	AM1	
318023	EV		3730 N	07245 W		116	72	09	24	121	1967	102	042		2853	15	31	1	2		X1			0040
						WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB															
						DT	SD	29	517	015	206	194	24											
MESSAGE TIME HR 1/10	CAS1 NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- $\times 10^2$		$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	D ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl/l}$	TOTAL-P $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} \cdot \text{dl/l}$	pH							
		STD	0000	1981	3487	2473	0032229		0000	15215	547													
121		OBS	0000	1981	34869	2473				15215	547				043									
		STD	0010	1865	3490	2505	0029203		0031	15184	552													
		OBS	0010	1865	34900	2505				15184	552				030									
		STD	0020	1742	3502	2545	0025477		0058	15151	538													
003		OBS	0020	1742	35020	2545				15151	538				074									
		STD	0030	1611	3518	2588	0021405		0081	15116	515													
		OBS	0030	1611	35180	2588				15116	515				044									
		OBS	0040	1500	35540	2641				15087	495				028									
		STD	0050	1340	3558	2678	0012898		0116	15037	461													
		OBS	0050	1340	35582	2678				15037	461				017									
		OBS	0057	1378	35700	2679				15053														
		STD	0075	1251	3555	2693	0011489		0146	15011	444													
		OBS	0075	1251	35550	2693				15011	444				004									
		OBS	0080	1240	35652	2704				15010														
		OBS	0088	1258	35675	2702				15017														
		STD	0100	1220	3558	2702	0010754		0174	15005	354													
		OBS	0100	1220	35580	2702				15005	354				002									
		STD	0125	1109	3541	2710	0010055		0200	14969	354													
		STD	0150	1011	3528	2717	0009397		0224	14936	353													
		OBS	0150	1011	35279	2717				14936	353													
		STD	0200	0858	3510	2729	0008347		0269	14885	352													
		OBS	0200	0858	35104	2729				14885	352													
		STD	0250	0715	3503	2744	0006913		0307	14838	384													
		OBS	0250	0715	35028	2744				14838	384													
		STD	0300	0601	3499	2757	0005741		0339	14800														
		OBS	0300	0601	34991	2757				14800														
		STD	0400	0531	3499	2765	0004982		0392	14789														
		OBS	0400	0531	34993	2765				14789														
		STD	0500	0483	3505	2776	0004104		0438	14786														
		OBS	0500	0483	35049	2776				14786														
		STD	0600	0461	3507	2780	0003797		0477	14794														
		OBS	0600	0461	35070	2780				14794														
		STD	0700	0446	3506	2780	0003837		0515	14804														
		OBS	0700	0446	35055	2780				14804														
		STD	0800	0423	3504	2781	0003775		0553	14811														
		OBS	0800	0423	35040	2781				14811														
		STD	0900	0416	3504	2782	0003798		0591	14825														
		OBS	0900	0416	35039	2782				14825														
		STD	1000	0405	3504	2783	0003760		0629	14837														
		OBS	1000	0405	35039	2783				14837														
		STD	1100	0397	3504	2784	0003763		0667	14850														
		STD	1200	0390	3504	2785	0003783		0704	14864														
		OBS	1200	0390	35036	2785				14864														
		STD	1300	0383	3504	2785	0003777		0742	14878														
		STD	1400	0377	3504	2786	0003789		0780	14892														
		STD	1500	0371	3504	2787	0003790		0818	14906														
		OBS	1500	0371	35038	2787				14906														

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARDEN SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE	WAVE OBSERVATIONS			WET- THER CODE	CLOUD CODES	PIC STAT- NUMBER
CTRY CODE	IO. NO.					10"	1"		MO	DAY			HR.1/10	CRUISE NO.	STATION NUMBER			
31	8023	EV	3700 N	07300 W	116	73	09 24 154	1967	102	043	2962	15	29	1	2		X1	0041
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												
DT	SD	26	S18	156	200	144	8	22										
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 ⁻¹	TOTAL-P μg - ml ⁻¹	NO ₃ -N μg - ml ⁻¹	CHL-A	SiO ₄ - μg - ml ⁻¹	pH	S	
		STD	0000	1995	3340	2358	0043231	0000	15201	541								
154		OBS	0000	1995	33400	2358			15201	541				024				
		OBS	0009	1975	33350	2359			15197									
		STD	0010	1945	3343	2373	0041813	0043	15189	549								
003		OBS	0010	1945	33430	2373			15189	549				019				
		STD	0020	1635	3395	2488	0030869	0079	15106	568								
		OBS	0020	1635	33950	2488			15106	568				027				
		STD	0030	0947	3355	2593	0020927	0105	14871	608								
		OBS	0030	0947	33545	2593			14871	608				081				
		OBS	0040	1015	34100	2624			14904	649				031				
		STD	0050	1073	3450	2645	0015996	0142	14932	604								
		OBS	0050	1073	34495	2645			14932	604				022				
		STD	0075	1209	3530	2682	0012577	0177	14994	508								
		OBS	0075	1209	35295	2682			14994	508				004				
		STD	0100	1264	3546	2684	0012498	0209	15019	471								
		OBS	0100	1264	35455	2684			15019	471				007				
		STD	0125	1213	3546	2694	0011606	0239	15005	483								
		STD	0150	1150	3546	2706	0010517	0267	14988	495								
		OBS	0150	1150	35455	2706			14988	495								
		STD	0200	0990	3532	2723	0008893	0315	14937	400								
		OBS	0200	0990	35315	2723			14937	400								
		STD	0250	0840	3509	2730	0008273	0358	14887	313								
		OBS	0250	0840	35090	2730			14887	313								
		STD	0300	0695	3504	2748	0006614	0395	14838									
		OBS	0300	0695	35042	2748			14838									
		STD	0400	0529	3499	2765	0004979	0453	14788									
		OBS	0400	0529	34990	2765			14788									
		STD	0500	0489	3501	2771	0004503	0501	14788									
		OBS	0500	0489	35005	2771			14788									
		STD	0600	0467	3504	2777	0004092	0544	14796									
		OBS	0600	0467	35040	2777			14796									
		STD	0700	0452	3505	2779	0003983	0584	14806									
		OBS	0700	0452	35045	2779			14806									
		STD	0800	0435	3505	2781	0003868	0623	14816									
		OBS	0800	0435	35047	2781			14816									
		STD	0900	0420	3504	2782	0003839	0662	14826									
		OBS	0900	0420	35040	2782			14826									
		STD	1000	0404	3503	2783	0003814	0700	14836									
		OBS	1000	0404	35030	2783			14836									
		STD	1100	0397	3503	2784	0003800	0738	14850									
		STD	1200	0390	3504	2785	0003790	0776	14864									
		OBS	1200	0390	35035	2785			14864									
		STD	1300	0383	3504	2785	0003792	0814	14878									
		STD	1400	0377	3504	2786	0003804	0852	14892									
		STD	1500	0370	3504	2787	0003799	0890	14906									
		OBS	1500	0370	35035	2787			14906									

REFERENCE		SHIP CODE	LATITUDE °	LONGITUDE °	DRAFT FOOT	MARS SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'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	
31	8023	EV	3700 N	07330 W		116	73	09	24	187	1967	104	044	2908	15	30	1	2		X1		0042
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																
DT	SD	25	S12		139	183				144	8	22										
MESSAGE TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t °	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 ₃ -N μg - at/l	CHL - A	SIO ₄ -Si μg - at/l	pH	S C					
		STD	0000	1935	3420	2434	0035946	0000	15194													
187		OBS	0000	1935	34200	2434			15194													
		STD	0010	1400	3425	2563	0023731	0030	15034													
		OBS	0010	1400	34250	2563			15034													
003		OBS	0015	1070	34255	2627			14922													
		STD	0020	1115	3465	2650	0015505	0049	14944													
		OBS	0020	1115	34650	2650			14944													
		STD	0030	1258	3522	2667	0013923	0064	15002													
		OBS	0030	1258	35220	2667			15002													
		OBS	0040	1282	35320	2669			15013													
		STD	0050	1280	3537	2674	0013292	0091	15015													
		OBS	0050	1280	35370	2674			15015													
		STD	0075	1267	3552	2688	0012011	0123	15016													
		OBS	0075	1267	35520	2688			15016													
		STD	0100	1250	3554	2693	0011617	0153	15015													
		OBS	0100	1250	35539	2693			15015													
		STD	0125	1194	3549	2700	0010998	0181	14999													
		STD	0150	1130	3542	2707	0010386	0208	14980													
		OBS	0150	1130	35424	2707			14980													
		STD	0200	0981	3523	2718	0009356	0257	14933													
		OBS	0200	0981	35232	2718			14933													
		STD	0250	0830	3510	2733	0008048	0300	14883													
		OBS	0250	0830	35100	2733			14883													
		STD	0300	0720	3503	2743	0007081	0338	14848													
		OBS	0300	0720	35026	2743			14848													
		STD	0400	0552	3501	2764	0005101	0399	14797													
		OBS	0400	0552	35012	2764			14797													
		STD	0500	0488	3502	2773	0004379	0447	14788													
		OBS	0500	0488	35020	2773			14788													
		STD	0600	0456	3502	2776	0004146	0489	14791													
		OBS	0600	0456	35015	2776			14791													
		STD	0700	0437	3502	2778	0003988	0530	14800													
		OBS	0700	0437	35020	2778			14800													
		STD	0800	0423	3502	2780	0003953	0570	14811													
		OBS	0800	0423	35016	2780			14811													
		STD	0900	0410	3502	2781	0003902	0609	14822													
		OBS	0900	0410	35015	2781			14822													
		STD	1000	0390	3502	2783	0003733	0647	14830													
		OBS	1000	0390	35018	2783			14830													
		STD	1100	0388	3502	2784	0003793	0685	14846													
		STD	1200	0384	3502	2784	0003826	0723	14861													
		OBS	1200	0384	35020	2784			14861													
		STD	1300	0379	3502	2785	0003852	0761	14876													
		STD	1400	0373	3502	2785	0003855	0800	14890													
		STD	1500	0366	3502	2786	0003850	0838	14904													
		OBS	1500	0366	35021	2786			14904													

REFERENCE		SHIP CODE	LATITUDE °	LONGITUDE °	DEPT INSTR	MARSDEN SQUARE	STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER								
CTRY CODE	ID. NO.											CRUISE NO.	STATION NUMBER								TYPE	AMT									
	10°						1°	MO	DAY	HR.1/10	DIR		HGT			PER	SEA														
318023	EV		3700 N	07400 W		116	74	09	24	211	1967	102	045		2586	15	24	2	2		X1			0043							
		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																							
		DT	SD	24	SL4		178	156	7	23																					
MESSAGE TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-30°	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	CHL-A	SiO ₄ -Si μg - dl/l	pH	ST C														
		STD	0000	1780	3393	2452	0034220	0000	15146	569																					
211		OBS	0000	1780	33930	2452			15146	569				015																	
		STD	0010	1772	3391	2453	0034212	0034	15145	578																					
		OBS	0010	1772	33910	2453			15145	578				018																	
		STD	0020	1662	3388	2476	0031974	0067	15114	605																					
003		OBS	0020	1662	33880	2476			15114	605				032																	
		STD	0030	1120	3386	2587	0021439	0094	14937	623																					
		OBS	0030	1120	33860	2587			14937	623				041																	
		OBS	0033	0930	33840	2618			14869																						
		OBS	0040	0956	34070	2632			14882	612				079																	
		STD	0050	0985	3420	2637	0016720	0132	14896	600																					
		OBS	0050	0985	34200	2637			14896	600				033																	
		STD	0075	1200	3495	2657	0014946	0172	14986	544																					
		OBS	0075	1200	34950	2657			14986	544				007																	
		OBS	0079	1247	35390	2682			15009																						
		STD	0100	1250	3547	2687	0012160	0206	15014	472																					
		OBS	0100	1250	35465	2687			15014	472				000																	
		STD	0125	1235	3556	2697	0011247	0235	15014	430																					
		STD	0150	1220	3557	2701	0010973	0263	15013	390																					
		OBS	0150	1220	35568	2701			15013	390																					
		STD	0200	1035	3535	2718	0009392	0314	14954	316																					
		OBS	0200	1035	35350	2718			14954	316																					
		STD	0250	0887	3518	2730	0008325	0358	14906	319																					
		OBS	0250	0887	35181	2730			14906	319																					
		STD	0300	0752	3506	2741	0007269	0397	14861																						
		OBS	0300	0752	35062	2741			14861																						
		STD	0400	0565	3499	2761	0005465	0461	14802																						
		OBS	0400	0565	34985	2761			14802																						
		STD	0500	0497	3502	2771	0004525	0510	14791																						
		OBS	0500	0497	35015	2771			14791																						
		STD	0600	0465	3502	2775	0004216	0554	14795																						
		OBS	0600	0465	35020	2775			14795																						
		STD	0700	0450	3503	2778	0004070	0596	14805																						
		OBS	0700	0450	35030	2778			14805																						
		STD	0800	0435	3504	2780	0003927	0636	14816																						
		OBS	0800	0435	35039	2780			14816																						
		STD	0900	0420	3503	2781	0003913	0675	14826																						
		OBS	0900	0420	35030	2781			14826																						
		STD	1000	0410	3503	2782	0003895	0714	14839																						
		OBS	1000	0410	35029	2782			14839																						
		STD	1100	0400	3503	2783	0003867	0753	14851																						
		STD	1200	0392	3503	2784	0003867	0791	14864																						
		OBS	1200	0392	35028	2784			14864																						
		STD	1300	0386	3503	2785	0003867	0830	14879																						
		STD	1400	0381	3503	2785	0003891	0869	14893																						
		STD	1500	0378	3503	2786	0003932	0908	14909																						
		OBS	1500	0378	35031	2786			14909																						

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DATE MO DAY	MARSEEN 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	
418023		EV	3700 N	07426 W	116	74	29	25	126	1967	103	046		2012	15	24	012		X1			0044
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																
DT	SD	24	514	016	206	194		21														
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta \sigma$ OYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} - \text{dl/l}$	TOTAL-P $\mu\text{g} - \text{dl/l}$	NO ₃ -N $\mu\text{g} - \text{dl/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH	1/10					
		STD	0000	18	3385	2421	0006029	0000	15171													
126		OBS	0000	18	3385	2421	0006029	0000	15171													
		STD	0010	09.0	334.0	2524	0017435	0027	14874													
		OBS	0010	09.0	334.0	2524	0017435	0027	14874													
		STD	0020	08.8	341.0	2652	0015174	0044	14852													
213		OBS	0020	08.8	341.0	2652	0015174	0044	14852													
		STD	0030	08.48	343.0	2667	0013852	0054	14842													
		OBS	0030	08.48	343.0	2667	0013852	0054	14842													
		OBS	0040	08.00	344.0	2594																
		STD	0050	06.7	346.0	2671	0015174	0055	14807													
		OBS	0050	06.73	346.0	2671	0015174	0055	14807													
		STD	0075	10.60	348.0	2671	0014483	0107	14945													
		OBS	0075	10.60	348.0	2671	0014483	0107	14935													
		STD	0100	12.20	354.0	2682	0014481	0152	15014													
		OBS	0100	12.20	354.0	2682	0014481	0152	15014													
		STD	0120	12.20	354.0	2682	0011170	0190	150													
		STD	0150	12.19	355.0	2685	0011174	0211	1501													
		OBS	0150	12.19	355.0	2685	0011174	0211	1501													
		STD	0200	10.55	353.4	2714	0004845	0254	14961													
		OBS	0200	10.55	353.35	2714	0004845	0254	14961													
		STD	0250	09.40	351.8	2721	0009713	0311	14905													
		OBS	0250	09.40	351.75	2721	0009713	0311	14905													
		STD	0300	08.05	351.0	2746	0004471	0354	14921													
		OBS	0300	08.05	351.0	2746	0004471	0354	14921													
		STD	0400	05.72	349.4	2760	0004471	0421	14805													
		OBS	0400	05.72	349.4	2760	0004471	0421	14805													
		OBS	0450	05.33	350.0	2760			14772													
		STD	0500	05.10	350.1	2753	0004471	0470	14795													
		OBS	0500	05.10	350.1	2753	0004471	0470	14795													
		STD	0600	04.79	350.0	2774	0004471	0511	14801													
		OBS	0600	04.79	350.0	2774	0004471	0511	14801													
		STD	0700	04.60	350.0	2774	0004471	0551	14801													
		OBS	0700	04.60	350.0	2774	0004471	0551	14801													
		STD	0800	04.40	350.0	2774	0004471	0601	14801													
		OBS	0800	04.40	350.0	2774	0004471	0601	14801													
		STD	0900	04.20	350.0	2774	0004471	0642	14801													
		OBS	0900	04.20	350.0	2774	0004471	0642	14801													
		STD	1000	04.17	350.0	2774	0004471	0650	14801													
		OBS	1000	04.17	350.0	2774	0004471	0650	14801													
		STD	1100	04.00	350.0	2774	0004471	0700	14801													
		OBS	1100	04.00	350.0	2774	0004471	0700	14801													
		STD	1200	04.00	350.0	2774	0004471	0700	14801													
		OBS	1200	04.00	350.0	2774	0004471	0700	14801													
		STD	1300	03.93	350.0	2784	0004471	0700	14801													
		OBS	1300	03.93	350.0	2784	0004471	0700	14801													
		STD	1400	03.80	350.0	2784	0004471	0700	14801													
		OBS	1400	03.80	350.0	2784	0004471	0700	14801													
		STD	1500	03.80	350.0	2784	0004471	0700	14801													
		OBS	1500	03.80	350.0	2784	0004471	0700	14801													

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DATE INDICATOR	MARSOEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOQ STATION NUMBER	
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
318023	EV		3700 N	07500 W		116	75	09	25	036	1967	102	047	0044	00	29	0	2		X1			0045
						WATER		WIND		BARO- METER (mbars)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
						DT	SD	25	512		159	194	167	8	05								
MESSAGE TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t °		Σ Δ σ DTN. 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	CHL-A	SiO ₄ -Si μg - at/l	pH	STC					
		STD	0000	1680	3245	2363	0042744		0000	15099	596												
	036	OBS	0000	1680	32450	2363				15099	596					054							
		STD	0010	1621	3258	2386	0040527		0042	15084	618												
		OBS	0010	1621	32581	2386				15084	618					065							
		STD	0020	1528	3260	2409	0038414		0081	15057	607												
	003	OBS	0020	1528	3302P	2441P				607						187							
		STD	0030	1504	3263	2416	0037776		0119	15051	530												
		OBS	0030	1504	3208P	2374P				530						091							
		OBS	0040	1092	32650	2498				14914	514					195							

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DATE INDICATOR	MARSOEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOQ STATION NUMBER	
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
318023	EV		3659 N	07530 W		116	65	09	25	068	1967	102	048	0020	00								0046
						WATER		WIND		BARO- METER (mbars)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
						DT	SD																
															03								
MESSAGE TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t °		Σ Δ σ DTN. 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	CHL-A	SiO ₄ -Si μg - at/l	pH	STC					
		STD	0000	1940	3080	2174	0060774		0000	15155													
	068	OBS	0000	1940	30800	2174				15155													
		STD	0010	1940	3089	2181	0060186		0060	15158													
		OBS	0010	1940	30885	2181				15158													
		STD	0020	1891	3117	2215	0056961		0119	15149													
	000	OBS	0020	1891	31171	2215				15149													

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DRIFT 1/10	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER		
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE	AMT
318023		EV	35589N	075302W		116	55	09	25	155	1967	102	051		0018	00	02	3	2		X0		0047
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbs)	DRY BULB	WET BULB											
						DT	SD	02	514	234	167	128	8	02									
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107		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 ₃ -N μg - at/l	CHL-A	SiO ₄ -Si μg - at/l	pH	S C C					
		STO	0000	2057	2884	1995	0077938		0000	15165	554												
155		OBS	0000	2057	28835	1995				15165	554				094								
		STO	0010	2055	2996	2081	0069737		0074	15179	521												
		OBS	0010	2055	29960	2081				15179	521				146								

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DRIFT 1/10	MARSOEN 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.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT
318023		EV	3559 N	07500 W		116	55	09	25	177	1967	102	052		0048	00	36	1	2		X0		0048
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbs)	DRY BULB	WET BULB											
						DT	SD	02	512	237	178	100	8	03									
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107		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 ₃ -N μg - at/l	CHL-A	SiO ₄ -Si μg - at/l	pH	S C C					
		STO	0000	1779	3196	2302	0048544		0000	15123	589												
177		OBS	0000	1779	31960	2302				15123	589				032								
		STO	0010	1760	3199	2309	0047943		0048	15119	588												
		OBS	0010	1760	31987	2309				15119	588				034								
		STO	0020	1760	3199	2309	0047950		0096	15121	584												
000		OBS	0020	1760	31990	2309				15121	584				037								

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	STATION TIME	MARS DEN SQUARE		STATION TIME IGMT		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER		
CITY CODE	ID. NO.					10"	1"	MO	DAY		HR, 1/10	CRUISE NO.			STATION NUMBER	DIR	NGT		PER	SEA		TYPE	AMT
318023	EV	3600 N	07430 W	116	64	09 25 200	1967	102	053		1825	15	36	1	3		X1			0049			
						WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB											
						DT	SD	36	512	234	183	133	8	29									
MESSAGE TIME HR 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t		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 ₃ -N μg - dl/l	CHL-A	SIO ₄ -Si μg - dl/l	pH	S C					
		STD	0000	2103	3396	2372	0041907		0000	15237													
200		OBS	0000	2103	33960	2372				15237													
		OBS	0005	2112	34150	2384				15242													
003		OBS	0009	2048	34200	2405				15226													
		STD	0010	2085	3522	2472	0032358		0037	15248													
		OBS	0010	2085	35220	2472				15248													
		OBS	0011	1692	34200	2494				15125													
		OBS	0017	1942	35200	2508				15210													
		STD	0020	1700	3470	2530	0026850		0067	15135													
		OBS	0020	1700	34700	2530				15135													
		OBS	0022	1607	34820	2561				15109													
		OBS	0028	1717	35420	2581				15150													
		STD	0030	1660	3570	2616	0018702		0090	15137													
		OBS	0030	1660	35700	2616				15137													
		OBS	0031	1617	35800	2634				15125													
		OBS	0036	1731	36205	2638				15165													
		OBS	0040	1600	35900	2646				15123													
		STD	0050	1519	3570	2649	0015691		0124	15097													
		OBS	0050	1519	35700	2649				15097													
		STD	0075	1339	3565	2683	0012451		0159	15042													
		OBS	0075	1339	35650	2683				15042													
		STD	0100	1270	3569	2700	0010927		0188	15024													
		OBS	0100	1270	35685	2700				15024													
		STD	0125	1127	3547	2711	0009933		0214	14976													
		STD	0150	1002	3531	2721	0009041		0238	14933													
		OBS	0150	1002	35407	2721				14933													
		STD	0200	0810	3513	2738	0007456		0279	14868													
		OBS	0200	0810	35127	2738				14868													
		STD	0250	0645	3508	2751	0006251		0314	14831													
		OBS	0250	0645	35080	2751				14831													
		STD	0300	0609	3503	2758	0005591		0343	14804													
		OBS	0300	0609	35025	2758				14804													
		STD	0400	0515	3500	2768	0004705		0395	14782													
		OBS	0400	0515	35004	2768				14782													
		STD	0500	0478	3501	2773	0004363		0440	14783													
		OBS	0500	0478	35006	2773				14783													
		STD	0600	0462	3502	2775	0004195		0483	14794													
		OBS	0600	0462	35018	2775				14794													
		STD	0700	0449	3502	2777	0004117		0524	14805													
		OBS	0700	0449	35022	2777				14805													
		STD	0800	0434	3502	2779	0004048		0565	14815													
		OBS	0800	0434	35021	2779				14815													
		STD	0900	0424	3502	2780	0004006		0605	14828													
		OBS	0900	0424	35024	2780				14828													
		STD	1000	0411	3502	2781	0003967		0645	14839													
200		OBS	1000	0411	35021	2781				14839													
		STD	1100	0406	3502	2782	0004060		0685	14853													
		STD	1200	0401	3502	2782	0004039		0725	14868													
		OBS	1200	0401	35020	2782				14868													
		STD	1300	0396	3502	2783	0004067		0766	14883													
		STD	1400	0390	3502	2783	0004073		0807	14897													
		STD	1500	0384	3502	2784	0004084		0847	14911													
003		OBS	1500	0384	35021	2784				14911													

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DATE MO DAY HR. 1/10	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CRUISE CODE	ID. NO.					10'	1'	MO	OAY		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
318023	EV		3600 N	07400 W	116 64 09 25 225	1967	102	054			2834	15	35	3	2			X0				0050

318023	EV	3600 N	07400 W	116	64	09	25	225	1967	102	054	2834	15	35	3	2		X0		0050
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WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
DT	SD	35	S16	240	167	128	8	25	

MESSAGE	CAST	CARD	DEPTH	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME	Σ Δ D	SOUND	O ₂ ml/l	PO ₄ -P	TOTAL-P	NO ₃ -N	CHL-A	SI O ₄ -Si	pH	S
TIME	NO.	TYPE	(m)				ANOMALY-‰	OYN. M.	VELOCITY		μg - at/l	μg - at/l	μg - at/l		μg - at/l		C
HR 1/10								X 10 ³									

		STD	0000	2308	3315	2253	0053216	0000	15281	477							
225		OBS	0000	2308	33150	2253			15281	477							017
		OBS	0008	2312	33180	2254			15283								
		STD	0010	2345	3332	2255	0053042	0053	15294	520							
003		OBS	0010	2345	33320	2255			15294	520							015
		OBS	0012	2306	33730	2298			15289								
		STD	0020	2581	3580	2372	0041979	0101	15379	516							
		OBS	0020	2581	35800	2372			15379								022
		STD	0030	2610	3619	2392	0040081	0142	15392	512							
		OBS	0030	2610	36190	2392			15392	512							041
		OBS	0040	2515	36260	2427			15372	471							046
		STD	0050	2169	3629	2530	0026974	0209	15289	476							
		OBS	0050	2169	36290	2530			15289	476							042
		OBS	0069	1211	34300	2604			14981								
		STD	0075	1430	3505	2618	0018662	0266	15064	464							
		OBS	0075	1430	35050	2618			15064	464							028
		OBS	0084	1760	36300	2638			15183								
		STD	0100	1485	3605	2683	0012572	0305	15098	457							
		OBS	0100	1485	36050	2683			15098	457							012
		STD	0125	1243	3571	2707	0010298	0333	15019	384							
		STD	0150	1068	3545	2720	0009106	0358	14959	338							
		OBS	0150	1068	35450	2720			14959	338							
		STD	0200	0920	3520	2726	0008604	0402	14910	326							
		OBS	0200	0920	35200	2726			14910	326							
		STD	0250	0888	3525	2735	0007832	0443	14907	325							
		OBS	0250	0888	35250	2735			14907	325							
		STD	0300	0750	3511	2746	0006871	0480	14861								
		OBS	0300	0750	35112	2746			14861								
		STD	0400	0519	3501	2768	0004686	0538	14784								
		OBS	0400	0519	35013	2768			14784								
		STD	0500	0480	3501	2772	0004395	0583	14784								
		OBS	0500	0480	35005	2772			14784								
		STD	0600	0462	3502	2775	0004217	0626	14794								
		OBS	0600	0462	35015	2775			14794								
		STD	0700	0442	3502	2778	0004048	0667	14802								
		OBS	0700	0442	35020	2778			14802								
		STD	0800	0430	3503	2780	0003941	0707	14814								
		OBS	0800	0430	35029	2780			14814								
		STD	0900	0420	3503	2781	0003920	0747	14826								
		OBS	0900	0420	35029	2781			14826								
		STD	1000	0409	3503	2782	0003913	0786	14838								
		OBS	1000	0409	35025	2782			14838								
		STD	1100	0399	3502	2783	0003899	0825	14851								
		STD	1200	0391	3502	2783	0003913	0864	14864								
		OBS	1200	0391	35020	2783			14864								
		STD	1300	0384	3502	2784	0003893	0903	14878								
		STD	1400	0379	3503	2785	0003888	0942	14892								
		STD	1500	0375	3503	2786	0003901	0981	14908								
		OBS	1500	0375	35030	2786			14908								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DATE MO DAY	YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CTRY CODE	ID. NO.						CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	
318023	EV		3604 N	07330 W	116 63	09 26 016	1967	102 055	3300	15	02	2	2		X0			0051

WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VCL CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB			
DT	SD	02	518	251	183	178	8	19	

MESSENGR TIME HR 1/10	CAST OR ND.	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 $\mu\text{g} - \text{ol/l}$	TOTAL-P $\mu\text{g} - \text{ol/l}$	NO ₃ -N $\mu\text{g} - \text{ol/l}$	CHL-A	SIO ₄ -Si $\mu\text{g} - \text{ol/l}$	pH	S CC
		STD	0000	2626	3629	2394	0039753	0000	15392	477							
	016	OBS	0000	2626	36285	2394			15392	477					008		
		STD	0010	2625	3629	2395	0039750	0040	15393	479							
		OBS	0010	2625	36287	2395			15393	479					008		
		STD	0020	2625	3629	2395	0039777	0080	15395	493							
	003	OBS	0020	2625	36289	2395			15395	493					010		
		STD	0030	2625	3629	2395	0039819	0119	15396	481							
		OBS	0030	2625	36289	2395			15396	481					008		
		OBS	0040	2625	36290	2395			15398	479					012		
		STD	0050	2583	3634	2412	0038279	0197	15391	479							
		OBS	0050	2583	36340	2412			15391	479					015		
		STD	0075	2379	3669	2500	0029948	0283	15351	477							
		OBS	0075	2379	36690	2500			15351	477					013		
		STD	0100	2185	3678	2563	0024058	0350	15307	448							
		OBS	0100	2185	36780	2563			15307						017		
		STD	0125	2071	3674	2592	0021437	0407	15281	433							
		STD	0150	1976	3670	2614	0019391	0458	15259	430							
		OBS	0150	1976	36700	2614			15259	430							
		STD	0200	1843	3663	2643	0016799	0549	15230	463							
		OBS	0200	1843	36629	2643			15230	463							
		STD	0250	1749	3636	2646	0016679	0632	15207	473							
		OBS	0250	1749	36360	2646			15207	473							
		STD	0300	1578	3617	2671	0014325	0710	15162								
		OBS	0300	1578	36170	2671			15162								
		STD	0400	1218	3551	2697	0012005	0841	15053								
		OBS	0400	1218	35510	2697			15053								
		OBS	0450	1057	35360	2715			15003								
		STD	0500	0961	3527	2725	0009385	0948	14975								
		STD	0600	0780	3513	2743	0007704	1034	14922								
		OBS	0600	0780	35130	2743			14922								
		STD	0700	0583	3505	2763	0005620	1100	14860								
		STD	0800	0459	3501	2775	0004436	1151	14825								
		OBS	0800	0459	35010	2775			14825								
		STD	0900	0444	3502	2778	0004282	1194	14836								
		STD	1000	0430	3503	2780	0004136	1236	14847								
		OBS	1000	0430	35030	2780			14847								
		STD	1100	0415	3503	2782	0004047	1277	14857								
		STD	1200	0403	3503	2783	0004020	1318	14869								
		OBS	1200	0403	35026	2783			14869								
		STD	1300	0394	3503	2784	0003991	1358	14882								
		STD	1400	0389	3503	2784	0004009	1398	14897								
		STD	1500	0386	3503	2785	0004051	1438	14912								
		OBS	1500	0386	35029	2785			14912								

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'PL'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		TYPE	AMT	

31	8023	EV	3530 N	07395 W	116	53	09	26	055	1967	102	056	3621	15	36	0	2	X0		0052
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WATER		WIND		BARO- METER Imbsl	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB			
DT	SD	04	512	261	200	200	7	19	

MESSNGR 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 $\mu\text{g} \cdot \text{dl/l}$	TOTAL-P $\mu\text{g} \cdot \text{dl/l}$	NO ₃ -N $\mu\text{g} \cdot \text{dl/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} \cdot \text{dl/l}$	pH	S CODE
		STD	0000	2550	3633	2421	0037196	0000	15375	481							
	055	OBS	0000	2550	36326	2421			15375	481				005			
		STD	0010	2550	3633	2421	0037237	0037	15376	493							
		OBS	0010	2550	36326	2421			15376	493				003			
		STD	0020	2550	3633	2421	0037279	0074	15378	486							
	003	OBS	0020	2550	36326	2421			15378	486				004			
		STD	0030	2550	3633	2421	0037320	0112	15380	487							
		OBS	0030	2550	36326	2421			15380	487				007			
		OBS	0040	2530	36460	2437			15378	484				005			
		STD	0050	2400	3668	2493	0030513	0180	15352	486							
		OBS	0050	2400	36680	2493			15352	486				005			
		STD	0075	2261	3677	2541	0026061	0250	15323	488							
		OBS	0075	2261	36774	2541			15323	488				026			
		STD	0100	2112	3672	2579	0022556	0311	15288	481							
		OBS	0100	2112	36720	2579			15288	481				017			
		STD	0125	1998	3669	2607	0019927	0364	15261	434							
		STD	0150	1921	3666	2625	0018306	0412	15244	411							
		OBS	0150	1921	36660	2625			15244	411							
		STD	0200	1880	3661	2632	0017837	0502	15240	434							
		OBS	0200	1880	36610	2632			15240	434							
		STD	0250	1808	3656	2646	0016630	0589	15227	466							
		OBS	0250	1808	36560	2646			15227	466							
		STD	0300	1759	3647	2652	0016273	0671	15220								
		OBS	0300	1759	36472	2652			15220								
		STD	0400	1600	3614	2664	0015346	0829	15185								
		OBS	0400	1600	3513P	2587P											
		OBS	0450	1478	35960	2678			15152								
		STD	0500	1327	3573	2692	0012804	0970	15109								
		STD	0600	1060	3538	2716	0010518	1086	15029								
		OBS	0600	1060	35380	2716			15029								
		STD	0700	0834	3520	2740	0008212	1180	14960								
		STD	0800	0660	3509	2757	0006542	1254	14908								
		OBS	0800	0660	35090	2757			14908								
		STD	0900	0545	3509	2771	0005074	1312	14878								
		STD	1000	0467	3508	2780	0004237	1358	14863								
		OBS	1000	0467	35080	2780			14863								
		STD	1100	0441	3506	2781	0004156	1400	14868								
		STD	1200	0420	3504	2782	0004133	1442	14876								
		OBS	1200	0420	35040	2782			14876								
		STD	1300	0405	3504	2783	0004036	1483	14887								
		STD	1400	0395	3504	2784	0003990	1523	14899								
		STD	1500	0391	3504	2785	0004036	1563	14914								
		OBS	1500	0391	35040	2785			14914								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPT PROCT	MARSOEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLS	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER		
CITY CODE	IO. NO.					10"	1"	MO	DAY		HR. 1/10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE	AMT
318023	EV					3507 N	07348 W	116	53		09	26			095	1967	102		057	3475		15	05
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS							
		COLOR	TRANS.	DIR.	SPEED OF FORCE	BARO- METER (mb)		AIR TEMP. °C		ORT BULB	WET BULB												
		CODE	SD	05	S12	251			200	197	8	19											
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-σ _t		Σ Δ σ OYN. 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	CHL-A	SiO ₄ -Si μg - at/l	pH	T °C				
		STD	0000	2546	3633	2422		0037078		0000	15374	486											
	095	OBS	0000	2546	36326	2422		0037078		0000	15374	486											
		STD	0010	2545	3633	2423		0037061		0037	15374	486						018					
		OBS	0010	2545	36330	2423		0037061		0037	15375	500											
		STD	0020	2545	3633	2423		0037088		0074	15375	500						007					
	003	OBS	0020	2545	36332	2423		0037088		0074	15377	505											
		STD	0030	2545	3634	2423		0037086		0111	15377	505						007					
		OBS	0030	2545	36338	2423		0037086		0111	15379	498											
		OBS	0040	2545	36345	2424		0028191		0177	15379	498						007					
		STD	0050	2338	3676	2518		0028191		0177	15380	508						007					
		OBS	0050	2338	36760	2518		0028191		0177	15337	512											
		STD	0075	2165	3673	2564		0023824		0242	15337	512						007					
		OBS	0075	2165	36725	2564		0023824		0242	15298	497											
		STD	0100	2045	3675	2599		0020592		0297	15298	497						032					
		OBS	0100	2045	36751	2599		0020592		0297	15270	490											
		STD	0125	1972	3671	2616		0019126		0347	15270	490						019					
		STD	0150	1920	3668	2627		0019126		0347	15254	502											
		OBS	0150	1920	36680	2627		0018136		0393	15254	502											
		STD	0200	1882	3667	2636		0017452		0482	15244	508											
		OBS	0200	1882	36670	2636		0017452		0482	15244	504											
		STD	0250	1842	3664	2644		0016871		0568	15241	504											
		OBS	0250	1842	36640	2644		0016871		0568	15238	468											
		STD	0300	1811	3661	2649		0016521		0652	15238	468											
		OBS	0300	1811	36609	2649		0016521		0652	15237												
		STD	0400	1737	3647	2657		0016142		0815	15237												
		OBS	0400	1737	36465	2657		0016142		0815	15230												
		OBS	0450	1686	36372	2662		0014451		0968	15230												
		STD	0500	1526	3608	2676		0014451		0968	15222												
		STD	0600	1277	3562	2694		0012870		1104	15177												
		OBS	0600	1277	35620	2694		0012870		1104	15107												
		STD	0700	1203	3541	2692		0013200		1235	15107												
		STD	0800	1068	3525	2705		0013200		1235	15096												
		OBS	0800	1068	35252	2705		0012045		1361	15063												
		STD	0900	0803	3516	2741		0008369		1463	15063												
		STD	1000	0614	3510	2763		0008369		1463	14981												
		OBS	1000	0614	35100	2763		0006094		1535	14923												
		STD	1100	0529	3508	2773		0006094		1535	14923												
		STD	1200	0468	3507	2778		0005177		1592	14905												
		OBS	1200	0468	35065	2778		0004577		1640	14896												
		STD	1300	0453	3506	2780		0004577		1640	14896												
		STD	1400	0439	3506	2781		0004523		1686	14907												
		STD	1500	0424	3506	2783		0004429		1731	14918												
		OBS	1500	0424	35060	2783		0004329		1775	14928												

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DATE INDEX	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1'	MO	DAY	HR./10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
318023		EV	3506 N	07419 W		116	54	09	26	128	1967	102	058	3036	15	06	1	2		X1			0054
						WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB														
		DT	SD	07	506	268		250	250	8	21												
MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME AND WALT-ST07		Σ Δ C 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	CHL-A	SiO ₄ -Si μg - at/l	pH	S C				
		STD	0000	2644	3630	2390		0040187		0000	15396												
	128	OBS	0000	2644	36300	2390					15396												
		STD	0010	2644	3630	2390		0040229		0040	15397												
		OBS	0010	2644	36300	2390					15397												
		STD	0020	2644	3630	2390		0040270		0080	15399												
	003	OBS	0020	2644	36300	2390					15399												
		STD	0030	2644	3630	2390		0040312		0121	15401												
		OBS	0030	2644	36300	2390					15401												
		OBS	0040	2499	36600	2457					15373												
		STD	0050	2392	3675	2501		0029782		0191	15350												
		OBS	0050	2392	36750	2501					15350												
		STD	0075	2258	3680	2544		0025792		0260	15322												
		OBS	0075	2258	36800	2544					15322												
		STD	0100	2164	3680	2570		0023353		0322	15302												
		OBS	0100	2164	36800	2570					15302												
		STD	0125	2077	3674	2590		0021593		0378	15283												
		STD	0150	2005	3671	2607		0020089		0430	15267												
		OBS	0150	2005	36705	2607					15267												
		STD	0200	1908	3668	2630		0018020		0525	15248												
		OBS	0200	1908	36680	2630					15248												
		STD	0250	1820	3659	2646		0016701		0612	15231												
		OBS	0250	1820	36590	2646					15231												
		STD	0300	1781	3658	2654		0016050		0694	15227												
		OBS	0300	1781	36575	2654					15227												
		STD	0400	1640	3625	2663		0015452		0851	15198												
		OBS	0400	1640	36250	2663					15198												
		STD	0500	1385	3582	2687		0013371		0996	15129												
		OBS	0500	1385	35815	2687					15129												
		STD	0600	1099	3541	2712		0011004		1117	15043												
		OBS	0600	1099	35410	2712					15043												
		STD	0700	0870	3509	2726		0009598		1220	14972												
		OBS	0700	0870	35090	2726					14972												
		STD	0800	0600	3506	2762		0005914		1298	14883												
		OBS	0800	0600	35060	2762					14883												
		STD	0900	0485	3506	2776		0004505		1350	14853												
		OBS	0900	0485	35060	2776					14853												
		STD	1000	0477	3506	2777		0004550		1395	14867												
		OBS	1000	0477	35055	2777					14867												
		STD	1100	0455	3506	2779		0004373		1440	14874												
		STD	1200	0436	3506	2781		0004229		1483	14883												
		OBS	1200	0436	35055	2781					14883												
		STD	1300	0419	3505	2783		0004144		1525	14893												
		STD	1400	0404	3504	2784		0004116		1566	14903												
		STD	1500	0391	3502	2783		0004168		1608	14914												
		OBS	1500	0391	35022	2783					14914												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH 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		
CITY CODE	IO. NO.					10"	1"	MO	DAY		HR./10	CRUISE NO.			STATION NUMBER	DIR.	HGT		PER	SEA		TYPE	AMT
318023	EV		3500 N	07500 W		116	55	09	26	161	1967	102 059		2651	15	10	0	2		X1		0055	
						WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB											
						DT	SD	10	507		281	272					256	8	21				
MESSENGR 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 $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C				
		STD	0000	2760	3631	2353	0043666		0000		15422	468											
161		OBS	0000	2760	36310	2353					15422	468											
		STD	0010	2760	3632	2354	0043637		0044		15423	443							009				
		OBS	0010	2760	36320	2354					15423	443											
		STD	0020	2754	3636	2359	0043206		0087		15424	463							008				
003		OBS	0020	2754	36360	2359					15424	463											
		STD	0030	2620	3625	2393	0039949		0129		15395	463							006				
		OBS	0030	2620	36250	2393					15395	463											
		OBS	0040	2555	36380	2423					15383	463							008				
		STD	0050	2429	3635	2460	0033715		0202		15355	451							009				
		OBS	0050	2429	36350	2460					15355	451											
		STD	0075	2169	3660	2554	0024832		0275		15297	436							029				
		OBS	0075	2169	36600	2554					15297	436											
		STD	0100	1990	3660	2603	0020282		0332		15254	377							025				
		OBS	0100	1990	36600	2603					15254	377											
		STD	0125	1873	3655	2629	0017833		0380		15225	371							012				
		STD	0150	1785	3650	2647	0016171		0422		15203	364											
		OBS	0150	1785	36500	2647					15203	364											
		STD	0200	1700	3640	2661	0015083		0500		15185	429											
		OBS	0200	1700	36400	2661					15185	429											
		STD	0250	1510	3603	2676	0013707		0572		15131	397											
		OBS	0250	1510	36030	2676					15131	397											
		STD	0300	1339	3579	2694	0012057		0637		15081												
		OBS	0300	1339	35790	2694					15081												
		STD	0400	1095	3545	2715	0010171		0748		15009												
		OBS	0400	1095	35450	2715					15009												
		STD	0500	0845	3514	2733	0008454		0841		14930												
		OBS	0500	0845	35140	2733					14930												
		STD	0600	0564	3509	2769	0004939		0908		14836												
		OBS	0600	0564	35090	2769					14836												
		STD	0700	0489	3507	2776	0004260		0954		14822												
		OBS	0700	0489	35069	2776					14822												
		STD	0800	0461	3506	2779	0004083		0995		14827												
		OBS	0800	0461	35061	2779					14827												
		STD	0900	0434	3507	2782	0003826		1035		14832												
		OBS	0900	0434	35065	2782					14832												
		STD	1000	0437	3507	2782	0003936		1074		14850												
		OBS	1000	0437	35069	2782					14850												
		STD	1100	0418	3504	2782	0004011		1114		14859												
		STD	1200	0402	3503	2783	0004015		1154		14868												
		OBS	1200	0402	35025	2783					14868												
		STD	1300	0390	3503	2784	0003954		1194		14880												
		STD	1400	0383	3502	2784	0003961		1233		14894												
		STD	1500	0379	3502	2785	0003997		1273		14909												
		OBS	1500	0379	35024	2785					14909												

REFERENCE		SHIP CODE	LATITUDE ° ' 10	LONGITUDE ° ' 10	DRIFT INDICATOR	MARS DEN 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
318023	EV		3503 N	075261W		116	55	09	26	208	1967	102	060	0035	00	10	1	2		X1			0056
						WATER		WIND		BARO- METER (mbars)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB											
						0T	SD	13	505	257	250	189	8	07									
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 $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	CHL-A	Si O ₄ -Si $\mu\text{g} - \text{at/l}$	pH					
208 000		STD	0000	2188	3123	2141	0063931		0000		15228												
		OBS	0000	2188	31225	2141					15228												
		OBS	0009	2181	32000	2202					15236												
		STD	0010	2228	3282	2251	0053475		0059		15258												
		OBS	0010	2228	32820	2251					15258												
		OBS	0014	2403	34100	2297					15317												
		STD	0020	2438	3452	2319	0047035		0109		15331												
		OBS	0020	2438	34520	2319					15331												
		OBS	0023	2520	36095	2413					15369												
		STD	0030	2520	3610	2413	0038065		0152		15370												
		OBS	0030	2520	36100	2413					15370												

REFERENCE		SHIP CODE	LATITUDE ° ' 10	LONGITUDE ° ' 10	DRIFT INDICATOR	MARS DEN 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	
318023	EV		3500 N	07602 W		116	56	09	26	238	1967	102	061		00							0057		
						WATER		WIND		BARO- METER (mbars)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
						COLOR CODE	TRANS. M	DIR.	SPEED OR FORCE		DRY BULB	WET BULB												
						0T	SD																	
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 $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	CHL-A	Si O ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C C			
238		STD	0000	2200	3047	2081	0069720		0000		15223	537												
		OBS	0000	2200	30470	2081					15223	537												
		STD	0010	2200	3130	2144	0063736		0067		15234													
		OBS	0010	2200	31300	2144					15234													
																					042			

TABLE II.—Observed and interpolated oceanographic data taken by USCGC Evergreen, 11-23 December 1967, on ICNAF Cruise 67-3; prepared from NoDC Listing No. 31-8029.

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	PORT INDIC	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NDDC STATION NUMBER
CTRY CODE	ID. NO.					10°	1°	M	O	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
31	8029	EV	4100 N	07006 W		152	10	12	15	154	1967		001		0022	00	13	3	2		X1			0001
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	ND. OBS. DEPTHS	SPECIAL OBSERVATIONS								
						CDLDR CODE	TRANS. (m)	DIR.	SPEED OR FORCE			DRY BULB	WET BULB											
						DT	SD	31	S27	119	039	017	7											03
MESSAGE TIME OF 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	CHL-A	SiO ₄ -Si μg - ml/l	pH	S C C		
154		STD			0000	0555		3203		2528	0026976		0000	14693	716									
		OBS			00000	05550		32027		2528				14693	716				204					
		STD			0010	0558		3203		2528	0026981		0027	14696	726									
		OBS			00100	05580		32032		2528				14696	726				218					
		STD			0020	0558		3203		2528	0026991		0054	14698	721									
		OBS			00200	05580		32032		2528				14698	721				200					

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		NOOC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIP	HGT	PER	SEA		TYPE	AMT	
318029	EV		4045 N	070035W	152	00	12	15	182	1967		002		0063	00	13	4	2		X1			0002
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
COLOR CODE		TRANS. (m)		DIR.	SPEED OR FORCE		DRY BULB		WET BULB														
DT		SD		31	S26		105		039		017		7	07									

MESSNGR TIME HR 1/10	CAST NO.	CARGO 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 $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C
180		STD	0000	0691	3208	2516	0028166	0000	14749	672							
		OBS	00000	06910	32082	2516			14749	672					104		
		STD	0010	0691	3209	2516	0028141	0028	14750	691							
		OBS	00100	06910	32087	2516			14750	691					083		
		STD	0020	0691	3209	2516	0028153	0056	14752	689							
		OBS	00200	06910	32087	2516			14752	689					076		
		OBS	00250	06909	32087	2516			14753								
		STD	0030	0691	3209	2516	0028158	0084	14754	687							
		OBS	00300	06910	32088	2516			14754	687					074		
		OBS	00400	06910	32088	2516			14755	690					074		
		STD	0050	0691	3209	2516	0028182	0141	14757	690							
		OBS	00500	06910	32088	2516			14757	690					069		

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		NOOC STATION NUMBER
CTRY CODE	IO. NO.					10"	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
318029	EV		3959 N	07001 W	116	90	12	15	213	1967		003		0165	01	12	5	3		X1			0003
						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														
DT		SD		31	S30		085		050		028		7	17									

MESSNGR TIME HR 1/10	CAST NO.	CARGO 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 $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C
213		STD	0000	0825	3286	2558	0024135	0000	14811	658							
		OBS	00000	08250	32862	2558			14811	658					068		
		STD	0010	0825	3286	2558	0024151	0024	14813	667							
		OBS	00100	08250	32862	2558			14813	667					065		
		OBS	00190	08250	32862	2558			14814	658							
		STD	0020	0825	3286	2558	0024167	0048	14814	660							
		OBS	00200	08250	32862	2558			14814						061		
		OBS	00250	08250	32867	2559			14815								
		OBS	00280	08250	32877	2559			14816	661							
		STD	0030	0825	3289	2560	0023997	0072	14816	656					059		
		OBS	00300	08250	32887	2560			14816								
		OBS	00370	08410	32927	2561			14824	636							
		OBS	00400	08750	32997	2561			14838						072		
		OBS	00470	09300	33250	2572			14863	603							
		STD	0050	0940	3331	2575	0022619	0119	14868	598					059		
		OBS	00500	09400	33307	2575			14868								
		OBS	00700	10380	33527	2576			14910	566							
		STD	0075	1010	3393	2612	0019194	0171	14906	558					036		
		OBS	00750	10100	33927	2612			14906								
		OBS	00940	08320	33871	2636			14842	524							
		STD	0100	0870	3433	2666	0014052	0213	14864	512							
		OBS	01000	08700	34332	2666			14864						011		
		STD	0125	0943	3495	2703	0010661	0244	14903	456							
		OBS	01400	09600	35131	2714			14914	418							
		STD	0150	0960	3518	2718	0009311	0269	14916								
		OBS	01500	09600	35177	2718			14916								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	SHIP NAME	MARSden SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		HDDC STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT
318029	EV		39287N	07000 W		116	90	12	17	166	1967		004	2468	15	13	4	3		X1			0004
						WATER		WIND		AIR TEMP. °C													
						COLOR	TRANS.	DIR.	SPEED OR FORCE	BARO- METER (mbs)		DRY BULB	WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						DT	SD	29	S22	122		083	061	8	22								
MESSAGE TIME HR 1/10	CST ND.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-20°		Σ Δ D DYN. M. X 10 ³	SOUND VELOCITY	O ₂ ml/l	PD4-P μg - dl/l	TOTAL-P μg - dl/l	NO ₂ -N μg - dl/l	CHL-A	SIO ₄ -Si μg - dl/l	pH	S CC					
166		STD	0000	0900	3311	2566	0023403		0000	14843	634												
		OBS	00000	09000	33107	2566				14843	634					045							
		STD	0010	0900	3311	2566	0023421		0023	14844	631												
		OBS	00100	09000	33107	2566				14844	631					057							
		STD	0020	1225	3473	2635	0016905		0044	14983	631												
		OBS	00200	12250	34727	2635				14983	631					044							
		OBS	00250	13246	35097	2644				15022													
		STD	0030	1385	3527	2645	0016010		0060	15045	611												
		OBS	00300	13850	35271	2645				15045	611					047							
		OBS	00400	13950	35307	2645				15050	558					039							
		STD	0050	1398	3532	2645	0015990		0092	15053	557												
		OBS	00500	13980	35317	2645				15053	557					039							
		STD	0075	1442	3551	2651	0015568		0131	15074	536												
		OBS	00750	14420	35507	2651				15074	536					032							
		STD	0100	1459	3556	2651	0015612		0170	15084	539												
		OBS	01000	14590	35559	2651				15084	539					032							
		STD	0125	1450	3572	2665	0014314		0208	15087	447												
		STD	0150	1440	3578	2672	0013776		0243	15089	388												
		OBS	01500	14400	35777	2672				15089	388												
		STD	0200	1255	3560	2696	0011553		0306	15034	366												
		OBS	02000	12550	35597	2696				15034	366												
		STD	0250	1100	3529	2702	0011100		0363	14984	366												
		OBS	02500	11000	35287	2702				14984	366												
		STD	0300	0920	3511	2719	0009458		0414	14925													
		OBS	03000	09200	35112	2719				14925													
		OBS	03500	08010	35037	2732				14888													
		STD	0400	0679	3489	2738	0007662		0500	14847													
		OBS	04000	06790	34892	2738				14847													
		OBS	04500	05950	34887	2749				14821													
		STD	0500	0552	3490	2756	0006047		0568	14812													
	OBS	05000	05520	34902	2756				14812														
	STD	0600	0482	3491	2764	0005260		0625	14800														
	OBS	06000	04820	34907	2764				14800														
	STD	0700	0459	3493	2769	0004920		0676	14808														
	STD	0800	0444	3495	2772	0004680		0724	14818														
	OBS	08000	04440	34952	2772				14818														
	STD	0900	0443	3498	2775	0004559		0770	14835														
	STD	1000	0441	3499	2775	0004591		0816	14851														
	OBS	10000	04410	34987	2775				14851														
	STD	1100	0429	3498	2776	0004591		0862	14863														
	STD	1200	0418	3498	2777	0004571		0908	14875														
	OBS	12000	04180	34977	2777				14875														
	STD	1300	0408	3498	2778	0004552		0953	14887														
	STD	1400	0399	3497	2779	0004534		0999	14900														
	STD	1500	0391	3497	2779	0004534		1044	14914														
	OBS	15000	03910	34972	2779				14914														

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DEPT 1000 F	MARSDEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NOOC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR.	1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
31	0029	EV	3859 N	070015W		116	80	12	17	199	1967		005		2834	15	11	3	2		X1		0005
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	METER (mba)		DRY BULB	WET BULB										
						DT	SD	30	522	146		094	067	7	22								

MESSNGR TIME HR 1/10	CST 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 $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	$\frac{1}{^\circ\text{C}}$
199		STD	0000	0939	3333	2577	0022362	0000	14860	627							
		OBS	00000	09390	33327	2577			14860	627					054		
		STD	0010	1100	3433	2627	0017605	0020	14933	638							
		OBS	00100	11000	34327	2627			14933	638					056		
		STD	0020	1450	3544	2644	0016082	0037	15067	578							
		OBS	00200	14500	35437	2644			15067	578					049		
		OBS	00250	14390	35438	2646			15064								
		STD	0030	1434	3545	2648	0015710	0053	15063	539							
		OBS	00300	14340	35447	2648			15063	539					036		
		OBS	00400	14420	35472	2648			15068	528					026		
		STD	0050	1444	3549	2649	0015674	0084	15070	535							
		OBS	00500	14440	35488	2649			15070	535					022		
		STD	0075	1460	3560	2654	0015267	0123	15081	525							
		OBS	00750	14600	35599	2654			15081	525					028		
		STD	0100	1550	3596	2661	0014635	0160	15118	518							
		OBS	01000	15500	35957	2661			15118	518					025		
		STD	0125	1494	3582	2663	0014515	0197	15103	432							
		STD	0150	1430	3571	2669	0014088	0232	15085	376							
		OBS	01500	14300	35706	2669			15085	376							
		STD	0200	1275	3556	2690	0012193	0298	15040	358							
		OBS	02000	12750	35562	2690			15040	358							
		STD	0250	1160	3540	2699	0011372	0357	15007	363							
		OBS	02500	11600	35397	2699			15007	363							
		STD	0300	1040	3527	2711	0010315	0411	14971								
		OBS	03000	10400	35267	2711			14971								
		OBS	03500	09100	35097	2720			14929								
		STD	0400	0776	3500	2733	0008274	0504	14886								
		OBS	04000	07760	34997	2733			14886								
		OBS	04500	06500	34946	2747			14844								
		STD	0500	0598	3487	2747	0006901	0580	14830								
		OBS	05000	05980	34867	2747			14830								
		STD	0600	0501	3493	2764	0005352	0641	14808								
		OBS	06000	05010	34926	2764			14808								
		STD	0700	0471	3494	2768	0004993	0693	14813								
		STD	0800	0450	3495	2771	0004791	0742	14821								
		OBS	08000	04500	34947	2771			14821								
		STD	0900	0444	3496	2773	0004725	0789	14835								
		STD	1000	0435	3497	2774	0004670	0836	14848								
		OBS	10000	04350	34966	2774			14848								
		STD	1100	0423	3497	2776	0004619	0883	14860								
		STD	1200	0412	3497	2777	0004583	0929	14872								
		OBS	12000	04120	34965	2777			14872								
		STD	1300	0403	3497	2778	0004561	0975	14885								
		STD	1400	0395	3497	2779	0004541	1020	14898								
		STD	1500	0388	3497	2779	0004538	1066	14912								
		OBS	15000	03880	34966	2779			14912								

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	MARSSEN SQUARE	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLING	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NO. STATION NUMBER
CRUISE NO.	ID. NO.					10"	1"		MO	DAY			HR./10	CRUISE NO.	STATION NUMBER		DR.	HGT	
318029	EV	38303N	07057 W	116	80	12	18	016	1967	006	3200	15	12	4	2	X2			0006

WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED DI FORCE		DRY BULB	WET BULB			
DT	SD	31	516	183	089	072	7	23	

MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ O OYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	CHL-A	Si O ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	S CUD
017	STD		0000	1515	3550	2634	0016950	0000	15085	537							
	OBS		00000	15150	35495	2634			15085	537					024		
	STD		0010	1515	3550	2634	0016981	0017	15086	555							
	OBS		00100	15150	35495	2634			15086	555					031		
	STD		0020	1524	3552	2634	0017004	0034	15091	542							
	OBS		00200	15240	35522	2634			15091	542					027		
	OBS		00250	15260	35527	2634			15093								
	STD		0030	1527	3553	2634	0017033	0051	15094	536							
	OBS		00300	15270	35531	2634			15094	536					027		
	OBS		00400	15270	35531	2634			15095	535					017		
	STD		0050	1527	3554	2635	0017014	0085	15097	533							
	OBS		00500	15270	35542	2635			15097	533					009		
	STD		0075	1490	3548	2638	0016783	0127	15089	542							
	OBS		00750	14900	35477	2638			15089	542					016		
	OBS		00850	12000	35247	2680			14992								
	STD		0100	1290	3548	2680	0012797	0164	15028	485							
	OBS		01000	12900	35482	2680			15028	485					014		
	STD		0125	1246	3544	2686	0012334	0196	15016	432							
	STD		0150	1185	3537	2692	0011799	0226	14999	399							
	OBS		01500	11850	35367	2692			14999	399							
	STD		0200	1009	3517	2709	0010307	0281	14942	391							
	OBS		02000	10090	35166	2709			14942	391							
	STD		0250	0839	3503	2726	0008723	0329	14885	342							
	OBS		02500	08390	35027	2726			14885	342							
	STD		0300	0728	3499	2739	0007490	0369	14851								
	OBS		03000	07280	34986	2739			14851								
	OBS		03500	06350	34927	2747			14821								
	STD		0400	0565	3492	2755	0005970	0436	14801								
	OBS		04000	05650	34917	2755			14801								
	OBS		04500	05350	34935	2760			14798								
	STD		0500	0511	3494	2763	0005268	0493	14796								
	OBS		05000	05110	34938	2763			14796								
	STD		0600	0475	3495	2768	0004878	0543	14798								
	OBS		06000	04750	34947	2768			14798								
	STD		0700	0456	3497	2772	0004587	0591	14807								
	STD		0800	0440	3498	2775	0004447	0636	14817								
	OBS		08000	04400	34977	2775			14817								
	STD		0900	0430	3498	2776	0004441	0680	14830								
	STD		1000	0420	3497	2776	0004439	0725	14842								
	OBS		10000	04200	34972	2776			14842								
	STD		1100	0409	3497	2777	0004413	0769	14854								
	STD		1200	0399	3497	2778	0004403	0813	14867								
	OBS		12000	03990	34967	2778			14867								
	STD		1300	0391	3497	2779	0004393	0857	14880								
	STD		1400	0385	3497	2780	0004397	0901	14894								
	STD		1500	0380	3497	2780	0004419	0945	14909								
	OBS		15000	03800	34968	2780			14909								

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

318029	EV	3859 N	07058 W	116	80	12	18	063	1967			007		2834	15	12	3	2		X2			0007
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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			

DT	S0	34	S12	193	100	078	8	23	
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MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ OBS. IN. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g - at/l$	TOTAL-P $\mu g - at/l$	NO ₂ -N $\mu g - at/l$	CHL-A	Si O ₄ -Si $\mu g - at/l$	pH	S C
		STO	0000	1398	3530	2644	0015993	0000	15045	553							
063		OBS	0000	13980	35297	2644			15045	553				039			
		STO	0010	1398	3530	2644	0016000	0016	15046	578							
		OBS	00100	13980	35300	2644			15046	578				039			
		STO	0020	1399	3530	2644	0016020	0032	15048	570							
		OBS	00200	13990	35304	2644			15048	570				035			
		OBS	00250	13900	35300	2646			15046								
		STO	0030	1380	3530	2648	0015719	0048	15044	569							
		OBS	00300	13800	35297	2648			15044	569				038			
		OBS	00400	13790	35297	2648			15045	570				032			
		STO	0050	1375	3529	2648	0015743	0079	15045	564							
		OBS	00500	13750	35288	2648			15045	564				035			
		STO	0075	1360	3527	2650	0015654	0119	15044	553							
		OBS	00750	13600	35269	2650			15044	553				034			
		OBS	00900	13980	35727	2677			15065								
		STO	0100	1363	3565	2678	0013018	0154	15054	367							
		OBS	01000	13630	35647	2678			15054	367				002			
		STO	0125	1232	3551	2694	0011557	0185	15013	334							
		STO	0150	1125	3539	2705	0010568	0213	14978	312							
		OBS	01500	11250	35387	2705			14978	312							
		STO	0200	0980	3522	2718	0009443	0263	14932	301							
		OBS	02000	09800	35218	2718			14932	301							
		STO	0250	0875	3511	2726	0008699	0308	14900	323							
		OBS	02500	08750	35105	2726			14900	323							
		STO	0300	0763	3501	2735	0007835	0350	14864								
		OBS	03000	07630	35007	2735			14864								
		OBS	03500	07000	35008	2745			14848								
		STO	0400	0601	3498	2756	0005934	0418	14817								
		OBS	04000	06010	34984	2756			14817								
		OBS	04500	05490	34970	2761			14804								
		STO	0500	0519	3498	2766	0005040	0473	14800								
		OBS	05000	05190	34982	2766			14800								
		STO	0600	0481	3497	2769	0004795	0522	14801								
		OBS	06000	04810	34968	2769			14801								
		STO	0700	0458	3498	2773	0004538	0569	14808								
		STO	0800	0440	3499	2775	0004373	0614	14817								
		OBS	08000	04400	34987	2775			14817								
		STO	0900	0429	3499	2776	0004355	0657	14829								
		STO	1000	0419	3498	2777	0004346	0701	14842								
		OBS	10000	04190	34983	2777			14842								
		STO	1100	0409	3498	2778	0004340	0744	14854								
		STO	1200	0400	3498	2779	0004342	0788	14867								
		OBS	12000	04000	34977	2779			14867								
		STO	1300	0392	3498	2780	0004332	0831	14881								
		STO	1400	0385	3498	2780	0004339	0874	14894								
		STO	1500	0379	3498	2781	0004348	0918	14909								
		OBS	15000	03790	34976	2781			14909								

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	DRIFT INCHES	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
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYPE		AMT		
318029	EV		39287N	070595W		116	90	12	18	093	1967		008		2514	15	12	2	3		X1			0008
WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS															
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																		
DT	SD	35	S07		213	089																067	7	22
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 - at/l	TOTAL-P μg - at/l	NO ₃ -N μg - at/l	CHL - A	SIO ₄ -Si μg - at/l	pH	S							
093		STD	0000	1457	3531	2632	0017117	0000	15064	544														
		OBS	00000	14570	35307	2632			15064	544					027									
		STD	0010	1458	3531	2632	0017145	0017	15066	553														
		OBS	00100	14580	35310	2632			15066	553					023									
		STD	0020	1458	3531	2632	0017167	0034	15068	555														
		OBS	00200	14580	35311	2632			15068	555					023									
		OBS	00250	14590	35312	2632			15069															
		STD	0030	1459	3531	2632	0017195	0051	15070	558														
		OBS	00300	14590	35314	2632			15070	558					032									
		OBS	00400	14590	35314	2632			15071						033									
		STD	0050	1460	3532	2632	0017253	0086	15073	548														
		OBS	00500	14600	35317	2632			15073	548					027									
		STD	0075	1431	3542	2646	0015985	0127	15069	545														
		OBS	00750	14310	35419	2646			15069	545					035									
		STD	0100	1430	3543	2647	0015950	0167	15073	491														
		OBS	01000	14300	35431	2647			15073	491					011									
		STD	0125	1331	3553	2676	0013311	0204	15046	413														
		STD	0150	1239	3555	2696	0011476	0235	15020	357														
		OBS	01500	12390	35548	2696			15020	357														
		STD	0200	1075	3533	2710	0010220	0289	14968	309														
		OBS	02000	10750	35331	2710			14968	309														
		STD	0250	0995	3516	2710	0010242	0340	14945	299														
		OBS	02500	09950	35158	2710			14945	299														
		STD	0300	0790	3503	2733	0008060	0386	14875															
		OBS	03000	07900	35030	2733			14875															
		OBS	03500	06530	34956	2747			14829															
		STD	0400	0571	3491	2754	0006120	0457	14804															
		OBS	04000	05710	34907	2754			14804															
		OBS	04500	05390	34927	2759			14799															
		STD	0500	0525	3492	2760	0005567	0515	14802															
		OBS	05000	05250	34921	2760			14802															
		STD	0600	0482	3496	2768	0004889	0568	14801															
		OBS	06000	04820	34957	2768			14801															
		STD	0700	0465	3498	2772	0004623	0615	14811															
		STD	0800	0450	3500	2775	0004421	0660	14822															
		OBS	08000	04500	34997	2775			14822															
		STD	0900	0440	3499	2776	0004454	0705	14834															
		STD	1000	0428	3499	2777	0004421	0749	14846															
		OBS	10000	04280	34988	2777			14846															
		STD	1100	0411	3498	2778	0004365	0793	14855															
		STD	1200	0397	3498	2779	0004312	0837	14866															
		OBS	12000	03970	34976	2779			14866															
		STD	1300	0387	3498	2780	0004276	0879	14878															
		STD	1400	0382	3498	2781	0004293	0922	14893															
		STD	1500	0380	3498	2781	0004354	0966	14909															
		OBS	15000	03800	34977	2781			14909															

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	UNITS 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	ID. NO.					10"	1"	MO	DAY	HR, 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
31	8029	EV	39585N	07101 W		116	91	12	18	134	1967		009		0412	04	17	1	3		X1			0009

WATER				WIND		BARO- METER	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB						
01	SD	21	502	885	078	061	7	15			

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 $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C
		STD	0000	0809	3276	2552	0024692	0000	14804	642							
134		OBS	00000	08090	32757	2552			14804	642					050		
		STD	0010	0809	3276	2553	0024678	0025	14805	653							
		OBS	00100	08090	32761	2553			14805	653					047		
		STD	0020	0809	3277	2553	0024656	0049	14807	656							
		OBS	00200	08090	32766	2553			14807	656					049		
		OBS	00250	08090	32767	2553			14808								
		STD	0030	0809	3277	2553	0024649	0074	14809	656							
		OBS	00300	08090	32769	2553			14809	656					046		
		OBS	00400	08100	32987	2570			14813	666					047		
		STD	0050	1110	3411	2608	0019490	0118	14940	653							
		OBS	00500	11100	34107	2608			14940	653					049		
		STD	0075	1419	3523	2634	0017144	0164	15063	528							
		OBS	00750	14190	35227	2634			15063	528					021		
		STD	0100	1370	3536	2654	0015279	0204	15053	412							
		OBS	01000	13700	35357	2654			15053	412					002		
		STD	0125	1264	3535	2675	0013334	0240	15021	401							
		STD	0150	1170	3533	2692	0011819	0272	14993	382							
		OBS	01500	11700	35327	2692			14993	382							
		STD	0200	1016	3521	2710	0010123	0327	14945	320							
		OBS	02000	10160	35207	2710			14945	320							
		STD	0250	0922	3515	2722	0009093	0375	14918	315							
		OBS	02500	09220	35152	2722			14918	315							
		STD	0300	0792	3503	2733	0008097	0418	14876								
		OBS	03000	07920	35029	2733			14876								
		OBS	03500	06400	34896	2744			14823								
		STD	0400	0565	3496	2759	0005658	0486	14802								
		OBS	04000	05650	34959	2759			14802								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	UNITS 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	ID. NO.					10"	1"	MO	DAY	HR, 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE	
31	8029	EV	40325N	070590W		152	00	12	18	169	1967	010		0079	00	19	1	2	X2			001

WATER				WIND		BARO- METER (Inches)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB						
DT	SD	16	504	224	067	044	7	07			

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 $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₃ -N $\mu\text{g} - \text{at/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C
		STD	0000	0800	3227	2515	0028202	0000	14794	640							
169		OBS	00000	08000	32269	2515			14794	640					043		
		STD	0010	0800	3228	2516	0028157	0028	14795	653							
		OBS	00100	08000	32277	2516			14795	653					042		
		STD	0020	0804	3229	2516	0028167	0056	14799	647							
		OBS	00200	08040	32285	2516			14799	647					040		
		OBS	00250	08040	32285	2516			14800								
		STD	0030	0804	3229	2516	0028182	0085	14800	642							
		OBS	00300	08040	32285	2516			14800	642					040		
		OBS	00400	08310	32352	2517			14813	640					046		
		STD	0050	0845	3239	2518	0028038	0141	14821	640							
		OBS	00500	08450	32386	2518			14821	640					030		

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	DEPTH METER	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				
318029		EV	41000N	071000W		152	11	12	18	195	1967		011		0049	00	18	0	2		X2			0011		
						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														
						0T	5D	36	508	213	106	083	7	06												
MESSAGE TIME 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 - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	CHL-A	Si O ₄ -Si μg - at/l	pH	S C									
195		STD	0000	0740	3218	2517	0028084	0000	14769	658																
		OBS	00000	07400	32177	2517			14769	658				054												
		STD	0010	0740	3218	2517	0028060	0028	14771	663																
		OBS	00100	07400	32182	2517			14771	663				050												
		STD	0020	0740	3220	2518	0027961	0056	14773	666																
		OBS	00200	07400	32197	2518			14773	666				045												
		OBS	00250	07450	32216	2519			14776																	
		STD	0030	0750	3224	2520	0027823	0084	14779	659																
	OBS	00300	07500	32235	2520			14779	659				061													
	OBS	00400	07520	32239	2520			14781	667				053													

REFERENCE		SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	DEPTH METER	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										
318029		EV	40580N	071580W		152	01	12	18	239	1967		012		0018	00	01	0	2		X1			0012								
						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																			
						DT	SD	18	512	176		078	072		02																	
MESSAGE TIME 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 - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	CHL-A	SiO ₄ -Si μg - at/l	pH	S C													
	239	STD	0000	0675	3170	2488	0030846		0000		14737	670																				
		OBS	00000	06750	31697	2488					14737	670					201															
		STD	0010	0680	3175	2491	0030500		0031		14742	678																				
		OBS	00100	06800	31753	2491					14742	678					215															

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DRAFT INCHES	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. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER		SEA	TYPE		AMT	
318029		EV	40315N	072020W		152	02	12	19	026	1967		013		0057	00	01	1	2		X1			0013
						WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
		COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE			DIR.	WET BULB		WET BULB													
						DT	SD	18	S15	169	100	094	7	07										
MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}^t		$\Sigma \Delta \theta$ 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 $\mu\text{g} - \text{at/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C C						
		STD	0000	0862	3257	2530	0026842		0000	14821	633													
026		OBS	00000	08620	32569	2530				14821	633					059								
		STD	0010	0862	3257	2530	0026858		0027	14823	640													
		OBS	00100	08620	32569	2530				14823	640					069								
		STD	0020	0863	3257	2530	0026874		0054	14825	639													
		OBS	00200	08630	32571	2530				14825	639					053								
		OBS	00250	08646	32573	2530				14826														
		STD	0030	0866	3258	2530	0026890		0081	14828	644													
		OBS	00300	08660	32577	2530				14828	644					078								
		OBS	00400	08680	32583	2530				14830	640					061								
		STD	0050	0868	3258	2530	0026907		0134	14832	633													
		OBS	00500	08680	32583	2530				14832	633					049								

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	ORIG. INCH	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. 1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA		TYPE	AMT		
318029		EV	39590N	072010W		116	92	12	19	058	1967		014		0091	01	03	0	2		X2			0014
						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
COLOR		TRANS.	DIR.	SPEED	OR	FORCE	DRY	WET	BULB															
CODE	DT	SD	22	S15	156	111	111	5	08															
MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t		$\Sigma \Delta \theta$ 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 $\mu\text{g} - \text{at/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{at/l}$	pH	S C C						
		STD	0000	0875	3266	2535	0026362		0000	14827	624													
	058	OBS	00000	08750	32659	2535				14827	624					052								
		STD	0010	0873	3266	2535	0026357		0026	14828	636													
		OBS	00100	08730	32658	2535				14828	636					050								
		STD	0020	0873	3266	2535	0026366		0053	14830	630													
		OBS	00200	08730	32659	2535				14830	630					044								
		OBS	00250	08720	32659	2535				14830														
		STD	0030	0872	3266	2535	0026368		0079	14831	629													
		OBS	00300	08720	32659	2535				14831	629					041								
		OBS	00400	08710	32657	2535				14832	624					036								
		STD	0050	0871	3268	2537	0026253		0132	14834	624													
		OBS	00500	08710	32677	2537				14834	624					052								
		STD	0075	1081	3288	2518	0028123		0200	14918	552													
		OBS	00750	10810	32877	2518				14918	552					027								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	HAFT MOON	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		HULL STATION NUMBER	
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR. 1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT		
318029	EV		39310N	072025W		116	92	12	19	087	1967		015		0667	06	03	1	2		X2			0015
						WATER		WIND		BARO- METER (mba)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB																			
DT	SO	25	S11	152	111	111	5	20																
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ ρ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₂ -P μg - 01/1	TOTAL-P μg - 01/1	NO ₂ -N μg - 01/1	CHL-A	SiO ₄ -Si μg - 01/1	pH	S C C							
		STD	0000	1125	3434	2623	0017947	0000	14940	587														
087		OBS	00000	11250	34336	2623			14940	587				054										
		STD	0010	1286	3493	2638	0016550	0017	15005	590														
		OBS	00100	12860	34927	2638			15005	590				040										
		STD	0020	1328	3504	2639	0016531	0034	15022	587														
		OBS	00200	13280	35043	2639			15022					033										
		OBS	00250	13390	35080	2639			15027															
		STD	0030	1350	3512	2640	0016445	0050	15032	583														
		OBS	00300	13500	35117	2640			15032	583				031										
		OBS	00400	13860	35227	2641			15047	552				027										
		STD	0050	1400	3528	2642	0016279	0083	15053	555														
		OBS	00500	14000	35283	2642			15053	555				020										
		STD	0075	1349	3524	2650	0015657	0123	15040	488														
		OBS	00750	13490	35239	2650			15040	488				010										
		OBS	00850	13550	35567	2674			15048															
		OBS	00900	13650	35604	2674			15053															
		STD	0100	1335	3564	2683	0012552	0158	15045	380														
		OBS	01000	13350	35635	2683			15045	380				002										
		STD	0125	1278	3553	2687	0012283	0189	15028	368														
		STD	0150	1200	3543	2694	0011650	0219	15005	352														
		OBS	01500	12000	35425	2694			15005	352														
		STD	0200	0984	3522	2717	0009472	0272	14934	309														
		OBS	02000	09840	35223	2717			14934	309														
		STD	0250	0896	3513	2725	0008836	0318	14908	300														
		OBS	02500	08960	35131	2725			14908	300														
		STD	0300	0803	3504	2732	0008164	0360	14880															
		OBS	03000	08030	35042	2732			14880															
		OBS	03500	07150	34998	2742			14854															
		STD	0400	0629	3499	2752	0006295	0433	14828															
		OBS	04000	06290	34985	2752			14828															
		OBS	04500	05620	34928	2756			14809															
		STD	0500	0534	3493	2760	0005627	0492	14805															
		OBS	05000	05340	34928	2760			14805															
		STD	0600	0515	3494	2763	0005408	0547	14814															
		OBS	06000	05150	34942	2763			14814															

REFERENCE		SHIP CODE	LATITUDE * 1/10	LONGITUDE * 1/10	DEPT INCH	MARSOEN 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	IO. NO.					10"	1"	MO	DAY	HR.	1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA	TYPE	AMT	
318029	EV		38599N	072011W		116	82	12	19	121	1967		016		2360	15	20	3	3		X2		0016
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS					
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	METER (mbal)	DRY BULB	WET BULB											
						DT	SD	29	S22	179	122	122	4	22									

MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t ?	Σ Δ σ OYN. 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	CHL - a	Si O ₄ -Si μg - at/l	pH	NOCC STATION NUMBER
	121	STD	0000	1370	3511	2635	0016829	0000	15033	554							
		OBS	00000	13700	35107	2635			15033	554				047			
		STD	0010	1374	3537	2654	0015016	0016	15039	565							
		OBS	00100	13740	35369	2654			15039	565				039			
		STD	0020	1374	3537	2655	0015023	0031	15041	554							
		OBS	00200	13740	35372	2655			15041	554				045			
		OBS	00250	13740	35374	2655			15042								
		STD	0030	1374	3538	2655	0015029	0046	15043	554							
		OBS	00300	13740	35375	2655			15043	554				040			
		OBS	00400	13700	35367	2655			15043	547				046			
		STD	0050	1370	3538	2656	0014992	0076	15045	552							
		OBS	00500	13700	35377	2656			15045	552				033			
		STD	0075	1361	3537	2657	0014957	0113	15046	536							
		OBS	00750	13610	35367	2657			15046	536				036			
		STD	0100	1210	3541	2691	0011801	0147	15000	536							
		OBS	01000	12100	35412	2691			15000	536				025			
		STD	0125	1073	3531	2708	0010164	0174	14955	394							
		STD	0150	0970	3522	2720	0009141	0198	14920	308							
		OBS	01500	09700	35222	2720			14920	308							
		STD	0200	0870	3507	2724	0008805	0243	14889	302							
		OBS	02000	08700	35067	2724			14889	302							
		STD	0250	0760	3502	2737	0007594	0284	14855	327							
		OBS	02500	07600	35022	2737			14855	327							
		STD	0300	0600	3500	2757	0005650	0317	14800								
		OBS	03000	06003	35002	2757			14800								
		OBS	03500	05600	34968	2760			14792								
		STD	0400	0522	3496	2764	0005102	0371	14784								
		OBS	04000	05220	34962	2764			14784								
		OBS	04500	05020	34955	2766			14784								
		STD	0500	0496	3500	2770	0004647	0420	14791								
		OBS	05000	04960	34997	2770			14791								
		STD	0600	0453	3496	2772	0004541	0466	14789								
		OBS	06000	04530	34957	2772			14789								
		STD	0700	0441	3496	2773	0004481	0511	14801								
		STD	0800	0432	3497	2775	0004439	0556	14814								
		OBS	08000	04320	34965	2775			14814								
		STD	0900	0427	3497	2775	0004471	0600	14828								
		STD	1000	0420	3497	2776	0004476	0645	14842								
		OBS	10000	04200	34967	2776			14842								
		STD	1100	0409	3497	2777	0004436	0689	14854								
		STD	1200	0400	3497	2778	0004416	0734	14867								
		OBS	12000	04000	34967	2778			14867								
		STD	1300	0392	3497	2779	0004406	0778	14880								
		STD	1400	0385	3497	2780	0004405	0822	14894								
		STD	1500	0380	3497	2780	0004427	0866	14909								
		OBS	15000	03800	34967	2780			14909								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH METERS	MARS SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLE'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		SIA	TYPE		AMT	
318029		EV	38285N	072011W		116	82	12	19	157	1967		017	2743	15	09	1			X0			0017	
					WATER		WIND		BARO- METER (mbs)		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS									
		COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DIR.	BARO- METER (mbs)	DRY BULB	WET BULB															
		DT	SD	30	S12	210	150	139	7	22														
MESSENGER TIME HR 1/10	CAST OF NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY-210°	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PD ₄ -P μg - dl/l	TOTAL-P μg - dl/l	ND ₂ -N μg - dl/l	CHL-A	Si O ₂ -Si μg - dl/l	pH	S C C							
157		STD	0000	1160	3463	2639	0016417	0000	14956	606														
		OBS	00000	11600	34627	2639			14956	606				034										
		STD	0010	1229	3488	2646	0015851	0016	14985	611														
		OBS	00100	12290	34877	2646			14985	611				041										
		STD	0020	1229	3488	2646	0015839	0032	14986	598														
		OBS	00200	12290	34882	2646			14986	598				033										
		OBS	00250	12470	34946	2647			14994															
		STD	0030	1271	3503	2649	0015585	0048	15004	582														
		OBS	00300	12710	35027	2649			15004	582				034										
		OBS	00400	13200	35162	2650			15024	564				028										
		STD	0050	1329	3528	2657	0014918	0078	15030	564														
		OBS	00500	13290	35277	2657			15030	564				006										
		STD	0075	1300	3555	2683	0012445	0112	15028	429														
		OBS	00750	13000	35547	2683			15028	429				003										
		STD	0100	1255	3555	2692	0011653	0143	15017	401														
		OBS	01000	12550	35547	2692			15017	401				000										
		STD	0125	1177	3543	2699	0011127	0171	14993	364														
		STD	0150	1100	3534	2706	0010494	0198	14969	337														
		OBS	01500	11000	35337	2706			14969	337														
		STD	0200	0950	3519	2720	0009181	0247	14921	314														
		OBS	02000	09500	35187	2720			14921	314														
		STD	0250	0840	3509	2730	0008295	0291	14887	323														
		OBS	02500	08400	35087	2730			14887	323														
		STD	0300	0750	3503	2739	0007500	0330	14860															
		OBS	03000	07500	35027	2739			14860															
		OBS	03500	06150	34977	2754			14814															
		STD	0400	0552	3499	2762	0005294	0394	14797															
		OBS	04000	05520	34986	2762			14797															
		OBS	04500	04850	34942	2767			14777															
		STD	0500	0480	3497	2769	0004677	0444	14784															
	OBS	05000	04800	34967	2769			14784																
	STD	0600	0455	3497	2772	0004490	0490	14790																
	OBS	06000	04550	34967	2772			14790																
	STD	0700	0442	3498	2775	0004345	0534	14801																
	STD	0800	0430	3498	2776	0004289	0577	14813																
	OBS	08000	04300	34982	2776			14813																
	STD	0900	0421	3499	2778	0004220	0620	14826																
	STD	1000	0412	3499	2779	0004193	0662	14839																
	OBS	10000	04120	34992	2779			14839																
	STD	1100	0403	3499	2780	0004191	0704	14852																
	STD	1200	0395	3499	2780	0004213	0746	14865																
	OBS	12000	03950	34986	2780			14865																
	STD	1300	0388	3499	2781	0004215	0788	14879																
	STD	1400	0383	3499	2782	0004232	0830	14894																
	STD	1500	0378	3499	2782	0004254	0873	14908																
	OBS	15000	03780	34987	2782			14908																

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH FATHOM	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.	HGT	PER		SEA	TYPE		AMT
						WATER		WIND		BARO- METER		AIR TEMP. °C				VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
COLOR CODE	TRANS. IMI	DIR.	SPEED OR FORCE	BARO- METER (mb)	DRY BULB	WET BULB																	
DT	SD	ZB	S12	230	144	7	22																
MESSNGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Delta \rho$ 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 $\mu\text{g} - \text{dl/l}$	CHL-A	SiO ₄ -Si $\mu\text{g} - \text{dl/l}$	pH							
	226	STD	0000	1059	3379	2592	0020877	0000	14910	628													
		OBS	00000	10590	33787	2592			14910	628					050								
		STD	0010	1135	3424	2614	0018874	0020	14944	619													
		OBS	00100	11350	34237	2614			14944	619					043								
		STD	0020	1190	3453	2626	0017738	0038	14969	614													
		OBS	00200	11900	34527	2626			14969	614					034								
		OBS	00250	12110	34630	2630			14978														
		STD	0030	1229	3471	2632	0017151	0056	14986	614													
		OBS	00300	12290	34707	2632			14986	614					031								
		OBS	00400	13050	34928	2635			15016	587					041								
		STD	0050	1270	3496	2644	0016132	0089	15006	586													
		OBS	00500	12700	34957	2644			15006	586					037								
		STD	0075	1190	3493	2657	0014933	0128	14983	460													
		OBS	00750	11900	34927	2657			14983	460					011								
		STD	0100	1330	3563	2684	0012476	0162	15043	416													
		OBS	01000	13300	35632	2684			15043	416					003								
		STD	0125	1257	3547	2686	0012322	0193	15021	405													
		STD	0150	1195	3537	2691	0011946	0223	15002	390													
		OBS	01500	11950	35372	2691			15002	390													
		STD	0200	1105	3536	2707	0010518	0279	14979	349													
		OBS	02000	11050	35362	2707			14979	349													
		STD	0250	0985	3523	2717	0009568	0330	14942	327													
		OBS	02500	09850	35227	2717			14942	327													
		STD	0300	0840	3508	2730	0008427	0375	14895														
		OBS	03000	08400	35082	2730			14895														
		OBS	03500	07000	34977	2742			14848														
		STD	0400	0610	3492	2750	0006549	0450	14819														
		OBS	04000	06100	34917	2750			14819														
		OBS	04500	05650	34959	2759			14810														
		STD	0500	0509	3495	2764	0005176	0508	14795														
		OBS	05000	05090	34947	2764			14795														
		STD	0600	0470	3498	2771	0004595	0557	14796														
		OBS	06000	04700	34977	2771			14796														
		STD	0700	0453	3498	2773	0004477	0602	14806														
		STD	0800	0440	3499	2775	0004380	0647	14817														
		OBS	08000	04400	34986	2775			14817														
		STD	0900	0434	3501	2778	0004232	0690	14832														
		STD	1000	0425	3502	2779	0004177	0732	14845														
		OBS	10000	04250	35016	2779			14845														
		STD	1100	0411	3500	2780	0004217	0774	14855														
		STD	1200	0400	3499	2780	0004269	0816	14867														
		OBS	12000	04000	34987	2780			14867														
		STD	1300	0392	3499	2781	0004259	0859	14881														
		STD	1400	0386	3499	2781	0004271	0901	14895														
		STD	1500	0384	3499	2781	0004333	0945	14911														
		OBS	15000	03840	34987	2781			14911														

REFERENCE CRUY NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	CHFT INDCTR	MARSDEN SQUARE	STATION TIME (GMT)					YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'AMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOCC STATION NUMBER		
						10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT			
318029	EV	38580N	073000W		116	83	12	20	025	1967		019		0086	01	36	0	2		X0			0019		
WATER						WIND			BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE		TRANS- MIT		DIR.		SPEED OR FORCE		METER (mbs)		DRY BULB		WET BULB													
DT	SD	27	S14	237	106	094	8	08																	

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ ρ GYN. 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	CHL-A	SIO ₄ -Si μg - at/l	pH	S CCT
025		STD	0000	0913	3284	2543	0025565	0000	14844	674							
		OBS	00000	09130	32842	2543			14844	674				057			
		STD	0010	0910	3284	2544	0025530	0026	14845	668							
		OBS	00100	09100	32843	2544			14845					053			
		STD	0020	0911	3288	2546	0025288	0051	14847	663							
		OBS	00200	09110	32880	2546			14847	663				054			
		OBS	00250	09210	32886	2545			14852								
		STD	0030	0923	3291	2547	0025287	0076	14854	659							
		OBS	00300	09230	32907	2547			14854	659				047			
		OBS	00400	09600	33126	2558			14872	648				038			
		STD	0050	1081	3386	2594	0020838	0122	14927	559							
		OBS	00500	10810	33857	2594			14927	559				026			
	STD	0075	1202	3462	2631	0017430	0170	14983	527								
	OBS	00750	12020	34617	2631			14983	527				030				

REFERENCE CTRY NO.		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	CHFT INDCTR	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
						10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR.	HGT	PER	SEA		TYPE	AMT	
318029		EV	39295N	072595W		116	92	12	20	057	1967	020	0064	00	16	1	2		X0			0020	
						WATER		WIND		AIR TEMP. °C													
COLOR CODE		TRANSL.		DIR.		SPEED OR FORCE		BARO- METER (mb/s)		DRY BULB		WET BULB		VIS. CODE		NO. OBS. DEPTH		SPECIAL OBSERVATIONS					
0T		S0		33		S10		240		094		083		8		07							

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ ρ GYN. 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	CHL-A	SiO ₄ -Si μg - at/l	pH
057		STD	0000	0888	3257	2526	0027198	0000	14831	669						
		OBS	00000	08880	32572	2526			14831	669				142		
		STD	0010	0889	3258	2526	0027208	0027	14833	666						
		OBS	00100	08890	32575	2526			14833	666				195		
		STD	0020	0889	3258	2526	0027210	0054	14835	672						
		OBS	00200	08890	32577	2526			14835	672				124		
		OBS	00250	08890	32582	2527			14836							
		STD	0030	0889	3259	2527	0027115	0082	14837	663						
		OBS	00300	08890	32592	2527			14837	663				173		
		OBS	00400	08900	32718	2537			14840	649				087		
	STD	0050	0910	3294	2551	0024910	0134	14852	645							
	OBS	00500	09100	32936	2551			14852	645				061			

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT IN/100	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
318029		EV	40000N	073000W		152	03	12	20	089	1967	021	0051	00	16	1	2		X0			0021	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbs)	DRY BULB	WET BULB											
						DT	SD	34	S19	244	083	077	8									06	
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-210?		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	CHL-A	Si O ₄ -Si μg - at/l	pH	S C					
		STD	0000	0829	3236	2518	0027949		0000	14806													
089		OBS	00000	08290	32357	2518				14806						128							
		STD	0010	0829	3236	2518	0027927		0028	14808	675												
		OBS	00100	08290	32362	2518				14808	675					146							
		STD	0020	0839	3246	2525	0027340		0056	14814	675												
		OBS	00200	08390	32462	2525				14814						181							
		OBS	00250	08410	32496	2527				14816													
		STD	0030	0842	3252	2529	0026960		0083	14818	675												
		OBS	00300	08420	32521	2529				14818	675					146							
		OBS	00400	08780	32638	2533				14835	652					111							

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT IN/100	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	
318029	EV		40350N	073000W		152	03	12	20	126	1967	022	0022	00	12	0	2		X1			0022
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS						
						COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbs)	DRY BULB	WET BULB										
						DT	SD	30	S10	179	078	061	8	03								
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME AND MALT-210?		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	CHL-A	Si O ₄ -Si μg - at/l	pH	S C				
		STD	0000	0620	3155	2483	0031312		0000	14713	712											
126		OBS	00000	06200	31547	2483				14713	712					329						
		STD	0010	0620	3159	2486	0031022		0031	14715	708											
		OBS	00100	06200	31587	2486				14715	708					288						
		STD	0020	0675	3174	2491	0030532		0062	14741	698											
		OBS	00200	06750	31742	2491				14741	698					275						

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT IN/100	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	
318029	EV		40296N	073296W		152	03	12	20	147	1967	023	0020	00					X1			0023	
						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											
						DT	SD	23	S08	301	067	050	8	02									
MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME AND MALT-210?		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	CHL-A	Si O ₄ -Si μg - at/l	pH	S C				
		STD	0000	0680	3169	2486		0030990		0000	14739	678											
147		OBS	00000	06800	31686	2486					14739	678					347						
		STD	0010	0772	3200	2498		0029871		0030	14781	669											
		OBS	00100	07720	31996	2498					14781	669					354						

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARS SQUARE		STATION TIME 1 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
318029	EV		39595N	07400 W		116	94	12	20	185	1967	024	0020	00	36	0	2		X1			0024	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR	TRANS. (m)	DIR.	SPEED OF FORCE	(mb)	DRY BULB	WET BULB											
						OT	SD	00	500	295	089	067	8					02					
MESSENGER TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S %.	SIGMA-T		SPECIFIC VOLUME ANOMALY- σ_t^{20}		$\Sigma \Delta D$ 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 $\mu g - at/l$	CHL-A	SiO ₄ -Si $\mu g - at/l$	pH	S C C				
185	STO	0000		0672	3102	2435		0035898		0000	14727	718											
	OBS	00000		06720	31017	2435					14727	718					522						
	STO	0010		0682	3156	2476		0031991		0034	14740	702											
	OBS	00100		06820	31557	2476					14740	702					328						

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARS DEN 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	
318029	EV		39300N	074000W		116	94	12	20	211	1967		025		0018	00	18	0	2		X1			0025
						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												
						DT	SD	05	502		230	094					078	7	02					
MESSENGER TIME OF HR 1/10		CARD NO.	CARD TYPE	DEPTH (m)	T °C	S %.	SIGMA-T		SPECIFIC VOLUME ANOMALY-2107		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 ₃ -N μg - at/l	CHL-A	SiO ₄ -Si μg - at/l	pH	S C C				
211		STO	0000	0700	3161	2477			0031829		0000	14746	713											
		OBS	00000	07000	31607	2477						14746	713					333						
		STO	0010	0695	3163	2480			0031629		0032	14746	725											
		OBS	00100	06950	31627	2480						14746	725					369						

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARS DEN 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	
318029	EV		39015N	07401 W		116	94	12	20	237	1967	026	0034	00	18	0	2		X1			0026	
						WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mbal)	DRY BULB	WET BULB											
						DT	SD	05	503	298	094	078	8	05									
MESSENGER TIME OF HR 1/10		CARD NO.	CARD TYPE	DEPTH (m)	T °C	S %.	SIGMA-T		SPECIFIC VOLUME ANOMALY-2107		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	CHL-A	SiO ₄ -Si μg - at/l	pH	S C C			
237		STO	0000	0889	3244	2516	0028179		0000	14830	670												
		OBS	00000	08890	32442	2516				14830	670						391						
		STO	0010	0889	3244	2516	0028195		0028	14832	674												
		OBS	00100	08890	32442	2516				14832	674						351						
		STO	0020	0889	3247	2518	0028034		0056	14833	674												
		OBS	00200	08890	32466	2518				14833	674						404						
		OBS	00250	08890	32482	2519				14834													
		STO	0030	0889	3250	2520	0027783		0084	14836	670												
		OBS	00300	08890	32502	2520				14836	670						338						

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		
CITY CODE	ID. NO.					10"	1"	MO		DAY	HR,1/10			CRUISE NO.	STATION NUMBER	DIR		HGT PER	SEA		TYPE	AMT
318029	EV		38295N	074464W	116	84	12	21 061	1967		028	0023	00	18	0	2		X0			0027	
					WATER		WIND		AIR TEMP. °C		NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
					COLOR CODE	TRANS. IMI	DIR.	SPEED OF FORCE	BARO- METER (mbars)	DRY BULB				WET BULB	VIS. CODE							
					OT	SD	00	00	305	094	083	6	03									
MESSNGR TIME HR 1/10	CAST 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 $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	CHL-A	SiO ₂ -Si $\mu\text{g} - \text{at/l}$	pH					
		STD	0000	0682	3056	2397	0039463		0000	14725	706											
	061	OBS	00000	06820	30557	2397				14725	706					472						
		STD	0010	0862	3233	2511	0028672		0034	14820	683											
		OBS	00100	08620	32325	2511				14820	683					360						
		STD	0020	0866	3235	2512	0028568		0063	14823	638											
		OBS	00200	08660	32349	2512				14823	638					378						

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DRIFT DIRECTION	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			
CITY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT				
318029	EV		3800 N	074305W		116	84	12	21	116	1967		030	0034	00					X1			0028			
						WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS											
						COLOR CODE	TRANS. IMI	DIR.	SPEED OF FORCE		DRY BULB	WET BULB														
						DT	SD	12	507		295	117					100	7	05							
MESSNGR TIME HR 1/10	CAST 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 $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	CHL-A	SiO ₂ -Si $\mu\text{g} - \text{at/l}$	pH							
		STD	0000	0952	3269	2525		0027307		0000		14857														
	116	OBS	00000	09520	32687	2525						14857														
		STD	0010	0952	3269	2525		0027325		0027		14858														
		OBS	00100	09520	32687	2525						14858														
		STD	0020	0955	3271	2526		0027197		0055		14861														
		OBS	00200	09550	32713	2526						14861														
		OBS	00250	09580	32727	2527						14863														
		STD	0030	0961	3274	2528		0027086		0082		14866														
		OBS	00300	09610	32743	2528						14866														

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METERS	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		
CITY CODE	ID. NO.					10"	1"	MO	DAY	HR.1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER		SEA	TYPE		AMT	
318029	EV		37595N	073585W		116	73	12	21	143	1967		031	0135	01	27	0	2		X1		0029		
						WATER		WIND		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS								
						COLOR CODE	TRANS. IMI	DIR.	SPEED OR FORCE	BARO- METER (mbs)	DRY BULB							WET BULB						
						OT	SD	09	504	301	122							100	8	10				
MESSNGR TIME HR 1/10	CAST 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 $\mu\text{g} - \text{at/l}$	TOTAL-P $\mu\text{g} - \text{at/l}$	NO ₂ -N $\mu\text{g} - \text{at/l}$	CHL-A	SiO ₂ -Si $\mu\text{g} - \text{at/l}$	pH	S C C				
		STD	0000	0953	3313	2559		0024075		0000		14863	647											
	143	OBS	00000	09530	33125	2559						14863	647							227				
		STD	0010	0959	3320	2564		0023624		0024		14867	648											
		OBS	00100	09590	33201	2564						14867	648							122				
		STD	0020	0960	3324	2566		0023399		0047		14870	652											
		OBS	00200	09600	33236	2566						14870	652							178				
		OBS	00250	09640	33293	2570						14873												
		STD	0030	0970	3336	2574		0022679		0070		14877	652											
		OBS	00300	09700	33357	2574						14877	652							132				
		OBS	00400	09910	33447	2578						14887	629							068				
		STD	0050	1040	3375	2593		0020964		0114		14911	580											
		OBS	00500	10400	33747	2593						14911	580							037				
		STD	0075	1220	3496	2654		0015263		0159		14993	472											
		OBS	00750	12200	34957	2654						14993	472							019				
		STD	0100	1245	3528	2674		0013408		0195		15010	411											
		OBS	01000	12450	35282	2674						15010	411							007				
		STD	0125	1245	3542	2684		0012484		0228		15016												
		OBS	01250	12450	35417	2684						15016												

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	HAUL NO.	MARSOEN SQUARE		STATION TIME (GMT)				YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS				WEA- THER CODE	CLOUD CODES		NOO. STATION NUMBER
CITY CODE	IO. NO.					10'	1'	MO	DAY	HR	1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA		TYPE	AMT	

318029 EV 37585N 073310W 116 73 12 21 166 1967 032 1646 15 30 0 2 X1 0030

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			

DT SD 10 S06 298 122 111 8 22

MESSENGER TIME HR 1/10	CAST 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 $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	CHL - A	SIO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	1 CC
166		STD	0000	1070	3387	2597	0020470	0000	14915								
		OBS	00000	10700	33867	2597			14915								
		STD	0010	1066	3426	2628	0017545	0019	14920								
		OBS	00100	10660	34257	2628			14920								
		STD	0020	1182	3454	2628	0017521	0037	14966								
		OBS	00200	11820	34537	2628			14966								
		OBS	00250	12640	34871	2638			14999								
		STD	0030	1335	3510	2642	0016299	0053	15027								
		OBS	00300	13350	35097	2642			15027								
		OBS	00400	13420	35197	2648			15032								
		STD	0050	1360	3525	2648	0015709	0085	15040								
		OBS	00500	13600	35252	2648			15040								
		STD	0075	1369	3541	2658	0014823	0124	15049								
		OBS	00750	13690	35407	2658			15049								
		STD	0100	1366	3560	2674	0013407	0159	15054								
		OBS	01000	13660	35602	2674			15054								
		STD	0125	1275	3550	2685	0012445	0191	15027								
		STD	0150	1195	3542	2694	0011616	0221	15003								
		OBS	01500	11950	35417	2694			15003								
		STD	0200	1069	3531	2709	0010300	0276	14965								
		OBS	02000	10690	35306	2709			14965								
		STD	0250	0905	3510	2721	0009228	0325	14911								
		OBS	02500	09050	35097	2721			14911								
		STD	0300	0780	3502	2734	0007972	0368	14871								
		OBS	03000	07800	35022	2734			14871								
		OBS	03500	06750	34967	2745			14838								
		STD	0400	0601	3499	2756	0005912	0437	14817								
		OBS	04000	06010	34987	2756			14817								
		OBS	04500	05300	34966	2763			14796								
		STD	0500	0500	3497	2767	0004926	0492	14792								
		OBS	05000	05000	34966	2767			14792								
		STD	0600	0485	3501	2772	0004562	0539	14803								
		OBS	06000	04850	35006	2772			14803								
		STD	0700	0452	3500	2775	0004317	0583	14806								
		STD	0800	0428	3500	2778	0004154	0626	14812								
		OBS	08000	04280	34997	2778			14812								
		STD	0900	0418	3499	2778	0004184	0667	14825								
		STD	1000	0410	3498	2778	0004242	0710	14838								
		OBS	10000	04100	34982	2778			14838								
		STD	1100	0405	3499	2779	0004253	0752	14853								
		STD	1200	0399	3499	2780	0004256	0795	14867								
		OBS	12000	03990	34987	2780			14867								
		STD	1300	0392	3499	2781	0004259	0837	14881								
		STD	1400	0384	3499	2781	0004253	0880	14894								
		STD	1500	0375	3499	2782	0004223	0922	14907								
		OBS	15000	03750	34986	2782			14907								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	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.					MO	DAY	HR. 1/10	CRUISE NO.		STATION NUMBER	DIR.			HGT	PER	SEA	TYP		AMT			
318029	EV		38005N	07301 W	116	83	12	21	195	1967		033		2560	15	36	0	2		X1			0031
		WATER		WIND		BARD- METER (mbs)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS												
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB																		
DT	SD	14	S06	271	144		128	8					22										
MESSENGER TIME HR 1/10	CAST OF ND.	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	PD ₄ -P μg - at/l	TOTAL-P μg - at/l	NO ₂ -N μg - at/l	CHL-A	SiD ₄ -Si μg - at/l	pH	STC					
195		STD	0000	1075	3418	2620	0018264	0000		14920	615												
		OBS	00000	10750	34177	2620				14920	615					054							
		STD	0010	1180	3463	2636	0016798	0018		14965	608												
		OBS	00100	11800	34627	2636				14965	608					067							
		STD	0020	1250	3481	2636	0016780	0034		14993	630												
		OBS	00200	12500	34807	2636				14993	630					082							
		OBS	00250	12500	34824	2637				14994													
		STD	0030	1254	3483	2637	0016697	0051		14996	616												
		OBS	00300	12540	34832	2637				14996	616					054							
		OBS	00400	12700	34927	2641				15004	590					047							
		STD	0050	1290	3499	2642	0016292	0084		15013	608												
		OBS	00500	12900	34987	2642				15013	608					045							
		STD	0075	1310	3534	2665	0014178	0122		15029	581												
		OBS	00750	13100	35337	2665				15029	581					040							
		STD	0100	1324	3553	2677	0013090	0156		15040	449												
		OBS	01000	13240	35532	2677				15040	449					011							
		STD	0125	1235	3550	2693	0011687	0187		15013	415												
		STD	0150	1150	3544	2704	0010649	0215		14987	390												
		OBS	01500	11500	35437	2704				14987	390												
		STD	0200	0995	3523	2716	0009588	0266		14938	369												
		OBS	02000	09950	35232	2716				14938	369												
		STD	0250	0869	3505	2722	0009035	0312		14897	325												
		OBS	02500	08690	35047	2722				14897	325												
		STD	0300	0722	3504	2744	0007027	0352		14849													
		OBS	03000	07220	35037	2744				14849													
		OBS	03500	06500	34987	2750				14828													
		STD	0400	0578	3498	2758	0005689	0416		14807													
	OBS	04000	05780	34977	2758				14807														
	OBS	04500	05300	34977	2764				14796														
	STD	0500	0500	3498	2768	0004844	0469		14792														
	OBS	05000	05000	34977	2768				14792														
	STD	0600	0459	3499	2773	0004389	0515		14792														
	OBS	06000	04590	34987	2773				14792														
	STD	0700	0441	3499	2775	0004281	0558		14801														
	STD	0800	0425	3499	2777	0004191	0601		14811														
	OBS	08000	04250	34987	2777				14811														
	STD	0900	0411	3498	2778	0004173	0642		14822														
	STD	1000	0400	3498	2779	0004157	0684		14834														
	OBS	10000	04000	34977	2779				14834														
	STD	1100	0394	3498	2780	0004176	0726		14848														
	STD	1200	0388	3498	2780	0004192	0768		14862														
	OBS	12000	03880	34977	2780				14862														
	STD	1300	0382	3498	2781	0004183	0809		14876														
	STD	1400	0377	3498	2782	0004207	0851		14891														
	STD	1500	0372	3499	2783	0004176	0893		14906														
	OBS	15000	03720	34987	2783				14906														

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	PORT INDIC	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	
318029	EV		37590N	072300W		116	72	12	21	225	1967		034		3017	15					X1		0032
						WATER		WIND		AIR TEMP. °C													
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	BARO- METER (mb)		DRY BULB		WET BULB		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS					
						0T	SD	16	S07	271		150		133		8	22						
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t 07	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg - σ _t /l	TOTAL-P μg - σ _t /l	NO ₃ -N μg - σ _t /l	CHL-A	Si O ₄ -Si μg - σ _t /l	pH	S						
225		STD	0000	1258	3489	2641	0016304	0000	14993	588													
		OBS	00000	12580	34885	2641			14993	588					032								
		STD	0010	1260	3492	2643	0016140	0016	14996	610													
		OBS	00100	12600	34916	2643			14996	610					046								
		STD	0020	1260	3492	2643	0016166	0032	14997	598													
		OBS	00200	12600	34916	2643			14997	598					042								
		OBS	00250	12600	34915	2643			14998														
		STD	0030	1260	3492	2643	0016192	0049	14999	608													
		OBS	00300	12600	34916	2643			14999	608					048								
		OBS	00400	12600	34916	2643			15001	581					052								
		STD	0050	1261	3493	2643	0016183	0081	15003	585													
		OBS	00500	12610	34927	2643			15003	585					062								
		STD	0075	1299	3514	2652	0015424	0120	15022	574													
		OBS	00750	12990	35138	2652			15022	574					033								
		STD	0100	1315	3558	2683	0012585	0155	15037	455													
		OBS	01000	13150	35577	2683			15037	455					010								
		STD	0125	1269	3552	2688	0012184	0186	15025	425													
		STD	0150	1206	3545	2694	0011607	0216	15007	392													
		OBS	01500	12060	35446	2694			15007	392													
		STD	0200	1029	3528	2714	0009820	0270	14951	321													
		OBS	02000	10290	35278	2714			14951	321													
		STD	0250	0895	3512	2724	0008923	0317	14908	319													
		OBS	02500	08950	35117	2724			14908	319													
		STD	0300	0774	3506	2738	0007633	0358	14869														
		OBS	03000	07740	35056	2738			14869														
		OBS	03500	06750	35007	2748			14838														
		STD	0400	0585	3499	2758	0005712	0425	14810														
		OBS	04000	05850	34986	2758			14810														
		OBS	04500	05250	34987	2766			14794														
		STD	0500	0489	3498	2769	0004711	0477	14788														
		OBS	05000	04890	34977	2769			14788														
		STD	0600	0460	3499	2773	0004394	0522	14792														
	OBS	06000	04600	34988	2773			14792															
	STD	0700	0441	3499	2775	0004273	0566	14801															
	STD	0800	0427	3499	2777	0004208	0608	14812															
	OBS	08000	04270	34988	2777			14812															
	STD	0900	0420	3499	2778	0004230	0650	14826															
	STD	1000	0412	3499	2778	0004237	0693	14839															
	OBS	10000	04120	34986	2778			14839															
	STD	1100	0402	3498	2779	0004223	0735	14851															
	STD	1200	0393	3498	2780	0004218	0777	14864															
	OBS	12000	03930	34982	2780			14864															
	STD	1300	0386	3498	2781	0004205	0819	14878															
	STD	1400	0380	3499	2782	0004209	0861	14892															
	STD	1500	0375	3499	2782	0004215	0903	14907															
	OBS	15000	03750	34987	2782			14907