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GEOLOGICAL SURVEY



HYDROGRAPHY OF NEW ENGLAND SHELF AND SLOPE

DATA REPORT FOR R/V OCEANUS CRUISE 159, NOVEMBER 13-20, 1984

by

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CONTENTS

	Page
Introduction.....	1
Objectives.....	1
Station procedures.....	1
Instrument description.....	2
Instrument calibration.....	2
Temperature time-lag.....	2
Salinity.....	3
Oxygen.....	3
Light transmission.....	3
Accuracy.....	3
Data processing.....	4
Data products.....	4
Vertical sections.....	4
Horizontal sections.....	5
TS diagrams.....	6
Station profiles.....	6
Data listings.....	6
Acknowledgments.....	7
References.....	8
Tables.....	10
Illustrations.....	18
Appendix I. Data Listings.....	111
Appendix II. Instrument Specifications.....	170
Appendix III. Methods for nutrient analysis.....	170
Appendix IV. NBIS CTD 9-track tape format.....	171

TABLES

	Page
Table 1. Hydrographic stations R/V OCEANUS Cruise 159.....	10
2. Transmissometer normalization data.....	12
3. Nutrient data.....	13
4. Suspended matter concentration.....	15
5. Shipboard meteorological observations.....	16
6. Key to meteorological observations.....	17

ILLUSTRATIONS

	Page
Figure 1a. Location of hydrographic stations	18
b. Slope moored array: Oct. 1983 to Nov. 1984	18
2. Location of hydrographic stations near Atlantis Canyon.....	19
3. Transmissometer normalization as function of station.....	20
4. Suspended matter concentration versus light attenuation.....	21

Vertical Sections

5. Section 1	
a. Temperature.....	23
b. Salinity.....	24
c. Sigma-t	25
d. Attenuation coefficient.....	26
6. Section 2	
a. Temperature.....	27
b. Salinity.....	28
c. Sigma-t.....	29
d. Attenuation coefficient.....	30
7. Section 3	
a. Temperature.....	31
b. Salinity.....	32
c. Sigma-t.....	33
d. Attenuation coefficient.....	34
8. Section 4	
a. Temperature.....	35
b. Salinity.....	36
c. Sigma-t.....	37
d. Attenuation coefficient.....	38
9. Section 5	
a. Temperature.....	39
b. Salinity.....	40
c. Sigma-t.....	41
d. Attenuation coefficient.....	42
10. Section 6	
a. Temperature.....	43
b. Salinity.....	44
c. Sigma-t.....	45
d. Attenuation coefficient.....	46

Horizontal Sections

11. a. Temperature at 10 and 50 dbars.....	48
b. Temperature at 75 and 100 dbars.....	49
12. a. Salinity at 10 and 50 dbars.....	50

	b. Salinity at 75 and 100 dbars.....	51
13.	a. Sigma-t at 10 and 50 dbars.....	52
	b. Sigma-t at 75 and 100 dbars.....	53
14.	a. Attenuation coefficient at 10 and 50 dbars.....	54
	b. Attenuation coefficient at 75 and 100 dbars.....	55
15.	a. Surface phosphate and silicate.....	56
	b. Surface nitrate and ammonia.....	57

TS Diagrams

Figure 16.	TS diagram, section 1, sta. 1, 2, 3, 4,	59
17.	TS diagram, section 2, sta. 5, 6, 7, 8.....	60
18.	TS diagram, section 2, sta. 9, 10, 11, 12.....	61
19.	TS diagram, section 3, sta. 13, 14, 15.....	62
20.	TS diagram, section 3, sta. 16, 17, 18.....	63
21.	TS diagram, section 4, sta. 19, 20, 21, 22.....	64
22.	TS diagram, section 4, sta. 23, 24, 25.....	65
23.	TS diagram, section 5, sta. 26, 27, 28, 29, 30.....	66
24.	TS diagram, section 6, sta. 38, 39, 40.....	67
25.	TS diagram, section 6, sta. 41, 42, 43, 44.....	68

Station Profiles

26.	Station 1, CTD averaged data plot, 0-1000 dbar.....	70
27.	Station 2, CTD averaged data plot, 0-250 dbar.....	71
28.	Station 3, CTD averaged data plot, 0-250 dbar.....	72
29.	Station 4, CTD averaged data plot, 0-250 dbar.....	73
30.	Station 5, CTD averaged data plot, 0-250 dbar.....	74
31.	Station 6, CTD averaged data plot, 0-250 dbar.....	75
32.	Station 7, CTD averaged data plot, 0-250 dbar.....	76
33.	Station 8, CTD averaged data plot, 0-250 dbar.....	77
34.	Station 9, CTD averaged data plot, 0-250 dbar.....	78
35.	Station 10, CTD averaged data plot, 0-250 dbar.....	79
36.	Station 11, CTD averaged data plot, 0-1000 dbar.....	80
37.	Station 12, CTD averaged data plot, 0-2000 dbar.....	81
38.	Station 13, CTD averaged data plot, 0-1000 dbar.....	82
39.	Station 14, CTD averaged data plot, 0-1000 dbar.....	83
40.	Station 15, CTD averaged data plot, 0-1000 dbar.....	84
41.	Station 16, CTD averaged data plot, 0-1000 dbar.....	85
42.	Station 17, CTD averaged data plot, 0-250 dbar.....	86
43.	Station 18, CTD averaged data plot, 0-250 dbar.....	87
44.	Station 19, CTD averaged data plot, 0-500 dbar.....	88
45.	Station 20, CTD averaged data plot, 0-250 dbar.....	89
46.	Station 21, CTD averaged data plot, 0-250 dbar.....	90
47.	Station 22, CTD averaged data plot, 0-250 dbar.....	91
48.	Station 23, CTD averaged data plot, 0-250 dbar.....	92
49.	Station 24, CTD averaged data plot, 0-250 dbar.....	93
50.	Station 25, CTD averaged data plot, 0-250 dbar.....	94

	Page
51. Station 26, CTD averaged data plot, 0-250 dbar.....	95
52. Station 27, CTD averaged data plot, 0-250 dbar.....	96
53. Station 28, CTD averaged data plot, 0-2000 dbar.....	97
54. Station 29, CTD averaged data plot, 0-250 dbar.....	98
55. Station 30, CTD averaged data plot, 0-1000 dbar.....	99
56. Station 31, CTD averaged data plot, 0-2000 dbar.....	100
57. Station 33, CTD averaged data plot, 0-2000 dbar.....	101
58. Station 35, CTD averaged data plot, 0-2000 dbar.....	102
59. Station 37, CTD averaged data plot, 0-2000 dbar.....	103
60. Station 38, CTD averaged data plot, 0-500 dbar.....	104
61. Station 39, CTD averaged data plot, 0-250 dbar.....	105
62. Station 40, CTD averaged data plot, 0-250 dbar.....	106
63. Station 41, CTD averaged data plot, 0-250 dbar.....	107
64. Station 42, CTD averaged data plot, 0-250 dbar.....	108
65. Station 43, CTD averaged data plot, 0-250 dbar.....	109
66. Station 44, CTD averaged data plot, 0-250 dbar.....	110

APPENDIX I. DATA LISTINGS

Station	Page	Station	Page
1.....	111	21.....	140
2.....	113	22.....	141
3.....	114	23.....	142
4.....	115	24.....	143
5.....	116	25.....	143
6.....	117	26.....	144
7.....	117	27.....	144
8.....	118	28.....	145
9.....	118	29.....	146
10.....	119	30.....	148
11.....	121	31.....	151
12.....	124	33.....	154
13.....	127	35.....	157
14.....	130	37.....	160
15.....	133	38.....	163
16.....	134	39.....	165
17.....	135	40.....	166
18.....	136	41.....	167
19.....	137	42.....	168
20.....	139	43.....	169
		44.....	169

HYDROGRAPHY OF NEW ENGLAND SHELF AND SLOPE

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INTRODUCTION

This report presents hydrographic data obtained on R/V OCEANUS Cruise 159 from November 13-20, 1984. The hydrographic measurements (pressure, temperature, salinity, oxygen, and light transmission) were obtained across the continental slope and upper rise south of New England (between longitude 68°00' W., and longitude 71°00'W.) as part of a study of currents and sediment transport in this region.

During the R/V OCEANUS cruise 159, a total of 44 hydrographic profiles were obtained, 41 by means of a conductivity-temperature-depth (CTD) profiler and three by means of expendable bathythermographs (XBTs). Stations are numbered sequentially; station information is tabulated in table 1. The stations were arranged into six sections. Three sections (nos. 1, 2 and 4) followed the same transect along ~70°W with stations approximately 10km apart (fig. 1a). A meandering shelf/slope front crossed these transects. A fourth section (no. 3) began in a water depth of 90 m in the Great South Channel, crossed the shelf break and ended in water depths between 1000 to 2000 m (fig. 1a). Section 5 was located near 70°30'W and section 6 was along long. 70°55'W.

OBJECTIVES

The sections were designed to aid in the interpretation of currents, temperature, pressure, and light transmission measured by a moored instrument array deployed across the slope at 70°W. long. (fig. 1b and Butman, 1986). One hydrographic section (7 stations) was made along the transect of the Shelf Edge Exchange Program (SEEP) experiment (Csanady, 1985; Csanady and others, 1987) which had six moorings deployed along 70°55'W during the time of OCEANUS 159.

STATION PROCEDURES

At each CTD station, the ship held position and a surface-water sample was obtained, using a bucket sampler, for analysis of nutrients. The CTD was lowered and held slightly below the surface while a 5-liter Niskin bottle was attached 5 m above the top of the CTD unit and CTD surface readings, latitude, longitude, and water depth were recorded in a deck log. The CTD was then lowered at approximately 30 m/min and stopped approximately 2-5 m above bottom. After the deepest readings were recorded, the Niskin bottle was closed by a messenger and a water sample was obtained. The CTD was then raised at approximately 50 m/min and stopped at the surface while CTD readings were recorded. Samples for nutrient analysis (PO_4 , SiO_4 , NO_3 , NO_2 , and NH_3) were obtained at 25 stations; the analysis (see table 3 and Appendix III) was performed later at the Woods Hole Oceanographic Institution (WHOI), Woods Hole, Mass. Approximately two liters of sea water were withdrawn for

determination of suspended matter concentration. Suspended-matter concentration was measured at 23 stations by filtering the seawater through preweighed, paired 0.45- μ m Millipore filters, rinsing salt off with distilled water and freezing at sea. The filters were air dried under a laminar flow hood, and reweighed in the laboratory during January 1987. The suspended matter and the corresponding light attenuation coefficient at the sample depth are listed in table 4. Meteorological observations during the cruise (obtained from the ship's deck log) are listed in tables 5 and 6.

INSTRUMENT DESCRIPTION

The CTD profiler (Neil Brown Instrument Systems, Mark III) was modified to measure oxygen and light transmission. A scan of data (conductivity, temperature, pressure, oxygen current, oxygen temperature, and light transmission) was obtained at a rate of 32 times each second. Conductivity was measured with a miniature four-electrode alumina ceramic cell (Neil Brown Instrument Systems, model B10086). The temperature sensor was a platinum resistance thermometer (Rosemount Engineering Co., model 171-BJ) mounted in a temperature bridge with a reference resistor. Pressure was measured with a bonded wire strain gauge bridge (Standard Control, Inc., model 211-35-440). The dissolved oxygen was computed from a time average measurement (1.024 s) of the current and internal temperature of a polarographic membrane (Beckman model 147737). Light transmission was measured using a Sea Tech 100-cm path-length transmissometer (Bartz and others, 1978) mounted horizontally inside the CTD cage. The light source was a light-emitting diode that has a wavelength of 660 nm and a beam diameter of 15 mm. All sensor ranges, accuracies, and resolutions from manufacturers' specifications are listed in Appendix II. For more detailed technical description of the CTD system, see Brown and Morrison (1978), and for more detailed description of field performance, see Fofonoff and others (1974).

Navigation was by a Northstar 6000 Loran-C, and latitude and longitude were determined by the Northstar 5101 algorithm. The Northstar latitude/longitude grid in this region is offset from true latitude/longitude by about 0.92 km toward 294.5° (Butman and Moody, 1984). Water depth at each station was measured with a Giffit echo sounder.

INSTRUMENT CALIBRATION

Temperature time-lag

The platinum resistance thermometer time constant ($T_{lag} = 0.125$ s) was selected to minimize density inversions in regions of strong thermal gradients. Since the temperature sensor had a slower response than the conductivity and pressure sensors, an exponential recursive filter (Bendat and Piersol, 1971) was applied to the conductivity and pressure series to lag these variables to match the temperature (Millard, 1982). The digital form of the filter is:

$$y(t) = y(t-dt) \cdot W_0 + x(t) \cdot W_1$$

dt = CTD sampling time interval = 0.03125 s
y(t) is the filtered output of conductivity or pressure
y(t-dt) is the previous value
x(t) is the unfiltered input

$$W0 = e^{-dt/Tlag}$$

$$W1 = 1 - W0$$

A precruise laboratory calibration of the CTD temperature had been done on January 5, 1982 at the WHOI. At that time the temperature offset (calibration bath minus CTD) ranged between -0.0081°C at 5°C and -0.0099°C at 15°C . No correction was made to the temperatures measured by the CTD to account for these offsets.

Salinity

Salinity in practical salinity units, psu (Lewis, 1980), and sigma-t were calculated from conductivity, temperature, and pressure using the 1980 equation of state for seawater (Millero, 1980) and algorithms given by Fofonoff and Millard (1983). A precruise laboratory calibration of conductivity was done on January 5, 1982 at WHOI, and the offset (calibration bath minus CTD) ranged from 0.0058 mmho to 0.0070 mmho, which corresponds to salinity offsets of 0.005 to 0.007 psu. On this basis this laboratory calibration no correction was made to the salinities reported here.

Oxygen

The oxygen sensor malfunctioned and no reliable oxygen values were obtained from the CTD unit.

Light transmission

The beam attenuation coefficient, ATN (in m^{-1}) over a 100-cm path length, was computed from the measured transmissometer voltages (TR) using

$$\text{ATN} = - \ln \left(\frac{\text{TR}}{\text{TR}_{\text{cw}}} \right)$$

where TR_{cw} is the voltage measured in clear water. The TR_{cw} value for the 100-cm transmissometer (S/N 33) drifted during the cruise. The value of TR_{cw} was the maximum transmission voltage recorded at selected reference stations that were in deep water (water depths >500 m). These reference stations (1, 11, 12, 13, 31, 33, 35 and 37) had maximum transmission at depths greater than 200 m where "clear" slope water is often found. The TR_{cw} value at station 1 was increased by 0.05 volts so that the rate of change in TR_{cw} per hour from station 1 to 11 (same location) was the same as the rate of change in TR_{cw} per hour between station 2 and 10 (same location at a water depth less than 200m and just upslope of stations 1 and 11). The TR_{cw} values for stations in between the reference stations were interpolated from the graph in figure 3 and are listed in table 2. A calibration curve for converting light attenuation coefficient to suspended matter concentration (mg/L) is nearly linear for data obtain during this cruise (figure 4 and table 4).

Accuracy

Based on calibrations, the CTD temperature and salinity data are accurate to $\pm 0.01^{\circ}\text{C}$, and 0.01 psu. The changes in the transmission voltage are accurate to ± 0.04 volts so that with a typical output voltage of 4.00 volts the attenuation coefficient are accurate to about $\pm 0.04 \text{ m}^{-1}$. Because there is some uncertainty in the normalization voltage for the transmissometer, however, the absolute value of the coefficients could be offset by a constant.

DATA PROCESSING

The CTD data (pressure, temperature, conductivity, oxygen current, oxygen temperature, and light transmission) were recorded at sea on both 9-track magnetic tape (see Appendix III) and 1/4" FM tape. The data were processed ashore using the techniques described by Millard (1982). The original 9-track data tapes were first checked for proper format and station sequence, and the data were then transferred to disc storage. The data obtained on both the downcast and upcast were subsampled (usually every 100 to 200 points), listed, and plotted to check instrument performance. Spurious points were identified and replaced with the previous good value using range filters for each variable. The ranges were typically 1 variable unit except for transmission, which was 0.05-0.10 volts. The conductivity and pressure data were time lagged to correct for the time constant of the temperature sensor (see above), and then the pressure was filtered to obtain a monotonically increasing series of water depths. Any density inversions not deleted by the range filter were identified by a point-editing program and replaced by interpolating between adjacent values of density. The editor recomputed the salinity from the interpolated values of density and the original temperature. Any spurious points in light transmission and oxygen not already deleted by the range filter were deleted using the point editor. The pressure data for stations 4, 5, 8, 10, 12, 15, 16, and 17 often stuck and did not update for several seconds. This instrument failure seemed to be associated with heavy seas (see meteorological data in table 4). A special "sticky filter" was used to delete all successive data points which did not change by at least 0.05 dbars or 0.001° C. The data were averaged over 2-dbar pressure intervals; at about 10 dbar above the bottom, this was changed to a 1-dbar average. Stations 4, 5, 8, 10, 12, 15, 16, and 17 have few points (occasionally no points) in the 2-dbar average at some depths (see Appendix I) because of the pressure malfunctions. The hydrographic sections presented in this report were contoured using 2-dbar averaged data. The data have been submitted to the National Oceanographic Data Center (NODC), Whitehaven St., NW, Washington, D. C., 20235.

DATA PRODUCTS

Vertical sections

The hydrographic data are presented in several ways. Vertical sections are shown in figures 5-10. The sections are numbered as OC159-N, where N is the section number (see fig. 1 and column 2 of table 1). The station numbers for each section are labeled across the top along with the station type (C = CTD). The surface value of the contoured variable is printed below. The vertical scale (1 cm = 40 m) is the same for all sections. The bathymetry for most sections is defined only by the depth at each station; thus the bottom profile is slightly different for sections where there are XBT stations in addition to the CTD stations.

The contour interval for each variable is the same for all sections and every fifth contour is thicker. Because of the contouring algorithms used, these sections do not show much detail at vertical scales less than 10 m and are intended to give an overall picture of the hydrography.

The sections showing temperature, salinity, sigma-t, and attenuation coefficient used the 2-dbar-averaged data, which were contoured using DISSPLA graphic subroutines (Integrated Software Systems Corp., 1981). These subroutines require data on a regularly spaced grid in both the horizontal and vertical. A regularly spaced vertical grid of $2N-1$ grid lines, where N is the number of stations, was constructed for each hydrographic section. The leftmost and rightmost vertical grid lines were set at the first and last stations in the section. The spacing between the remaining vertical grid lines was determined by computing the sum of the great circle distance, L , between successive stations along the trackline and dividing by $2N-2$. The position of the equally spaced interior, vertical grid lines does not always correspond to a station location. Horizontal grid lines were spaced every 10 m. A grid cell was 10 m high and $L/(2N-2)$ km wide.

Data values at each regularly spaced grid point were computed as a weighted average of the irregularly spaced data within a region of usually five grid cells (one cell centered on the grid point and two cells on either side). The data were weighted by D^{-3} where D is the distance (in grid units) between the location of the data values and the grid point. This smoothing removes some of the fine structure from the sections and may spread some of the frontal features.

The contouring algorithm has no provision for terminating contours at the sea floor and requires data in a rectangular format. For the sections in this data report, the left and right boundaries are the left and right vertical grid lines, the top boundary was the sea surface, and the bottom boundary was the deepest cast in the section. To speed contouring and to obtain reasonable contours at the sea floor, data were provided below the measurement depth by repeating the data measured at the greatest depth to a distance H into the bottom below the last measured value. Data below the distance H were taken from values observed at an adjacent (deeper) station, shifted upward or downward by a constant so that the values matched at the starting depth. In some cases the values from an adjacent station were inserted below the depth H without adjusting by a constant. The constant distance below H ranged from 0 to 100 m and was adjusted for each station to make the contours meet the sea floor in as reasonable a way as possible. The shape and slope of the contours near the sea floor should be interpreted with care. Contours below the sea floor were deleted in the sections presented here.

The contouring algorithm used a linear interpolation between the adjacent regularly spaced points. The tension parameter, which controls the smoothness vs. straight-line connection of points of equal value, was varied over its entire range between 1 and 10 and little difference was noted in the contours due to the high density of data points used to control the contours. A tension parameter of 10 was used in contouring the sections presented here.

Horizontal sections

Horizontal sections of temperature, salinity, sigma-t, and light attenuation were contoured for the 10-, 50-, 75-, and 100-dbars pressure surfaces (figs 11-15). Vertical sections 1, 2, and 4 show possible "calving" or "interleaving" (Wright, 1976; Voorhis and others, 1976) at about 75 dbars and horizontal sections at 75-dbars were quite variable in the vicinity of stations 1, 11, 19 (at site SE, fig. 1b) and stations 2, 10, and 20 (at site

SF, fig. 1b) near the shelf/slope front (fig. 1a). Surface values of phosphate, silicate, nitrate and ammonia (contoured in figure 12) were quite variable at stations 1, 11, and 9 with the exception of ammonia. Because of the sparse data, all horizontal sections were contoured by hand and data from all stations at the same location were averaged.

TS diagrams

Plots of temperature vs. salinity (TS plots, figs. 16-25) were organized by section (see column 2 of table 1). The symbol for each station was plotted every 100 dbar and the 100-, 200- and 600-dbar points have been annotated.

Station profiles

Plots of temperature, salinity, sigma-t, light attenuation coefficient, and buoyancy or Brunt-Vaisala frequency

$$N^2 = -(g/\rho) \frac{\partial \rho}{\partial z}$$

(ρ = water density, g = gravity) as a function of pressure at each station are shown in figures 26-66. For the Brunt-Vaisala frequency, density was determined using the 1980 equation of state (Millero and others, 1980); and the gradient of the specific volume anomaly was estimated from a least squares fit of a straight line to nine observations (± 8 dbar) centered about the specified depth. The Brunt-Vaisala frequency was not computed for the first four average depths nor for the last four average depths; the magnitudes of N listed at these depths are the same as the Brunt-Vaisala frequency for the fifth and fifth-to-last depths, respectively. The different symbols used to distinguish variables are shown on each variable axis. The units of salt are practical salinity units (psu) and are defined by Lewis (1980).

Data listing

A listing of the 2-dbar-averaged data is contained in Appendix I. For the data listings, time is in Eastern Standard Time, SALIN is the salinity, OXY is the dissolved oxygen, and no values are listed due to the malfunction of the oxygen sensor, ATN is the beam attenuation coefficient, SIGT is the density anomaly sigma-t, N is the Brunt-Vaisala frequency, DYHT A is the dynamic height anomaly, and S SPD is the speed of sound in seawater computed using a Fortran subroutine given in Fofonoff and Millard (1983). For pressures greater than 500 dbar, the 2-dbar-averaged data are listed at 20-dbar intervals.

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Table 1. Hydrographic stations made on R/V OCEANUS Cruise 159, November 13-20, 1984. The letter designation in the station column indicates a current mooring shown in figure 1b.

Station	Section	Date (EST)	Time	Latitude (N.)	Longitude (W.)	Water Depth (m)	Type
1 ~SE	1	NOV 15	2109	39° 53.80'	70° 03.70'	550*	CTD
2 SF	1	NOV 15	2235	39° 57.94'	70° 00.84'	183*	CTD
3	1	NOV 15	2358	40° 05.07'	69° 59.81'	143*	CTD
4 T	1	NOV 16	0033	40° 10.01'	69° 58.45'	105	CTD
5	2	NOV 16	1244	40° 30.03'	69° 52.76'	70	CTD
6	2	NOV 16	1350	40° 22.94'	69° 54.94'	80	CTD
7	2	NOV 16	1450	40° 16.85'	69° 56.54'	88	CTD
8 T	2	NOV 16	1600	40° 10.84'	69° 58.14'	100	CTD
9	2	NOV 16	1716	40° 04.64'	70° 00.17'	145	CTD
10 SF	2	NOV 16	2025	39° 57.70'	70° 00.94'	198*	CTD
11 ~SE	2	NOV 16	2126	39° 53.53'	70° 04.17'	578*	CTD
12 SG	2	NOV 16	2319	39° 47.95'	70° 05.40'	1175	CTD
13	3	NOV 17	1905	39° 57.58'	68° 33.51'	2200	CTD
14 SA	3	NOV 17	2038	40° 03.48'	68° 33.34'	900	CTD
15	3	NOV 17	2233	40° 08.27'	68° 35.63'	193	CTD
16	3	NOV 17	2341	40° 12.89'	68° 37.78'	148	CTD
17	3	NOV 18	0045	40° 16.48'	68° 39.18'	110	CTD
18	3	NOV 18	0156	40° 22.14'	68° 41.13'	90	CTD
19 ~SE	4	NOV 18	1703	39° 54.15'	70° 03.59'	470	CTD
20 SF	4	NOV 18	1812	39° 58.03'	70° 00.83'	175	CTD
21	4	NOV 18	1916	40° 05.01'	69° 59.77'	143	CTD
22 T	4	NOV 18	2010	40° 10.98'	69° 57.54'	100	CTD
23	4	NOV 18	2111	40° 17.04'	69° 56.28'	87	CTD
24	4	NOV 18	2207	40° 23.03'	69° 54.76'	79	CTD
25	4	NOV 18	2307	40° 30.03'	69° 52.79'	70	CTD
26	5	NOV 19	0403	40° 25.10'	70° 25.11'	80	CTD
27	5	NOV 19	0509	40° 16.17'	70° 26.55'	103	CTD
28	5	NOV 19	0612	40° 7.61'	70° 28.91'	120	CTD
29	5	NOV 19	0652	40° 3.67'	70° 30.09'	200	CTD
30	5	NOV 19	0825	39° 58.23'	70° 31.02'	605	CTD
31		NOV 19	1122	39° 48.64'	70° 00.72'	1370	CTD
32		NOV 19	1231	39° 48.50'	69° 59.40'	1055	XBT
33		NOV 19	1242	39° 48.45'	69° 58.56'	1165	CTD
34		NOV 19	1341	39° 49.60'	70° 00.08'	1065	XBT

*2m greater than greatest depth of CTD cast

Table 1. Hydrographic stations made on R/V OCEANUS Cruise 159, November 13-20, 1984. The letter designation in the station column indicates a current mooring shown in figure 1b. - Continued

Station	Section	Date (EST)	Time	Latitude (N.)	Longitude (W.)	Water Depth (m)	Type
35		NOV 19	355	39° 50.95'	70° 01.83'	1085	CTD
36		NOV 19	1404	39° 50.00'	70° 03.48'	1065	XBT
37		NOV 19	1510	39° 48.89'	70° 05.57'	1140	CTD
38	6	NOV 19	1950	39° 58.23'	70° 55.56'	375	CTD
39	6	NOV 19	2102	40° 03.42'	70° 54.94'	197*	CTD
40	6	NOV 19	2159	40° 09.53'	70° 54.94'	137	CTD
41	6	NOV 19	2313	40° 19.03'	70° 54.96'	103	CTD
42	6	NOV 20	0200	40° 30.20'	71° 00.82'	79	CTD
43	6	NOV 20	0325	40° 36.83'	70° 55.41'	71	CTD
44	6	NOV 20	0500	40° 50.10'	70° 55.30'	55	CTD

*2m greater than greatest depth of CTD cast

Table 2. Measured and interpolated values of TR_{cw} , the normalization for the transmissometer voltage, for OCEANUS cruise 159, November 13-20, 1984.

Sta.	Reference TR_{cw}	Interpolated TR_{cw}	Sta.	Reference TR_{cw}	Interpolated TR_{cw}
1	3.81	--	22		4.34
2		3.83	23		4.35
3		3.86	24		4.35
4		3.87	25		4.36
5		4.03	26		4.38
6		4.04	27		4.38
7		4.05	28		4.38
8		4.06	29		4.37
9		4.07	30		4.38
10		4.12	31	4.38	--
11	4.14	--	33	4.41	--
12	4.14	--	35	4.39	--
13	4.23	--	37	4.42	--
14		4.24	38		4.44
15		4.25	39		4.45
16		4.26	40		4.46
17		4.26	41		4.46
18		4.26	42		4.47
19		4.33	43		4.48
20		4.33	44		4.48
21		4.34			

Table 3. Nutrient data for R/V OCEANUS Cruise 159, November 13-20, 1984.

Station	depth (dbar)	P-PO ₄ (µgat/L)	Si-SiO ₂ (µg at/L)	N-NO ₃ (µg at/L)	N-NO ₂ (µg at/L)	N-NH ₃ (µg at/L)
5	0	0.40	5.3	1.5	0.36	0.38
	61	0.46	9.6	3.6	0.25	0.26
6	0	0.42	5.4	2.0	0.24	0.53
	72	0.55	10.8	5.1	0.16	0.12
7	0	0.40	3.8	1.4	0.21	0.65
	80	0.62	9.5	6.1	0.08	0.17
8	0	0.36	3.6	1.7	0.25	0.57
	91	0.45	5.3	5.2	0.12	0.17
9	0	0.36	3.4	1.8	0.28	0.24
	132	0.84	7.7	13.9	0.04	0.40
10	0	0.32	3.2	1.9	0.24	0.22
11	0	0.28	2.6	0.8	0.19	0.20
	570	0.26	2.0	1.0	0.10	0.30
13	0	0.29	2.1	0.5	0.05	0.27
14	0	0.23	1.7	0.0	0.00	0.27
15	0	0.57	3.8	3.3	0.15	0.15
16	0	0.99	2.5	2.2	0.14	0.48
17	0	0.74	3.6	4.5	0.35	0.32
18	0	0.74	4.4	4.4	0.26	0.45
19	0	0.53	4.4	2.3	0.24	0.18
	470	1.08	9.3	14.4	0.00	3.79
20	0	0.43	3.5	1.7	0.30	0.26
	169	1.11	9.6	19.9	0.02	0.13
21	0	0.54	4.0	2.2	0.34	0.42
	133	0.84	8.0	14.7	0.02	0.17
22	0	0.44	3.3	1.9	0.31	0.29
	92	0.29	3.0	2.4	0.09	0.30
23	0	0.52	4.4	2.2	0.28	0.43
	79	0.59	7.9	7.0	0.06	0.15
24	0	0.46	4.5	1.8	0.22	0.22
	71	0.50	8.9	3.9	0.15	0.32
25	0	0.52	5.8	1.8	0.62	0.24
	62	0.49	7.3	1.7	0.72	0.42

Table 3. Nutrient data for R/V OCEANUS Cruise 159, November 13-20, 1984 - Continued

Station	depth (dbar)	P-PO ₄ (µgat/L)	Si-SiO ₂ (µg at/L)	N-NO ₃ (µg at/L)	N-NO ₂ (µg at/L)	N-NH ₃ (µg at/L)
26	0	0.49	5.3	1.6	0.82	0.24
	69	0.43	6.4	2.0	0.68	0.26
27	0	0.47	5.4	3.2	0.35	0.14
	94	0.50	5.6	5.5	0.02	0.19
28	0	0.38	3.6	2.5	0.26	0.33
	112	0.71	6.8	12.3	0.01	0.12
29	0	0.41	3.9	2.3	0.28	2.05?
	191	1.04	9.6	18.9	0.00	0.17
30	0	0.32	2.3	2.3	0.24	0.25
	605	0.93	9.0	13.0	0.00	0.27
31	0	0.34	3.2	1.7	0.34	0.58
33	0	0.42	4.0	2.1	0.25	0.47
35	0	0.34	3.1	1.5	0.28	0.25
37	0	0.31	3.3	2.1	0.31	0.39
38	0	0.25	2.5	1.4	0.26	0.64
	361	1.74	18.1	28.1	0.01	0.42
39	0	0.35	3.5	1.9	0.29	0.28
	189	1.26	11.0	22.1	0.01	0.14
40	0	0.35	3.4	2.1	0.29	0.22
	130	0.84	8.2	12.4	0.00	0.23
41	0	0.49	6.6	2.3	0.67	0.23
	95	0.60	9.5	5.8	0.16	0.20
42	0	0.50	5.7	2.0	0.75	0.35
	69	0.52	7.7	2.5	0.47	0.25
43	0	0.41	3.9	1.1	0.36	0.38
	64	0.57	9.3	2.5	0.30	0.29
44	0	0.72	5.3	3.2	0.44	0.90
	45	0.63	9.5	2.9	0.74	0.34

Table 4. Suspended matter concentration for water samples obtained on R/V OCEANUS Cruise 159, November 13-20, 1984.

Station	Water Depth (m)	Sample Depth (dbar)	Suspended Matter (mg/L)	Light Attenuation (1/m)
5	70	61	0.71	0.45
6	80	72	0.50	0.37
7	88	80	0.78	0.51
8	100	91	0.21	0.15
9	145	132	0.24	0.17
19	470	461	0.26	0.06
20	175	169	0.10	0.04
21	143	133	0.32	0.24
22	100	92	0.33	0.25
23	87	79	0.41	0.34
24	79	71	0.48	0.31
25	70	62	0.44	0.29
26	80	69	0.39	0.22
27	103	94	0.72	0.51
28	120	112	0.22	0.14
29	200	191	0.17	0.11
30	605	584	0.26	0.13
39	197	189	0.34	0.15
40	137	130	0.52	0.39
41	103	95	0.66	0.50
42	79	69	0.45	0.23
43	71	64	0.66	0.49
44	55	45	0.67	0.39

Table 5. Meteorological observations for R/V OCEANUS Cruise 159 obtained from ship's deck log. November 13-20, 1984 (See Table 6 for key to meteorological observations).

Date	Time EST	Wind		Sea			Air		Weather
		Dir	Force	Dir	Swell	Height	Pressure (mb)	Temp (°c)	
Nov. 13	2000	-	3-4	NW	1	-	1007	4.4	c
	2400	NNW	6	NNW	3	4	1007	4.4	o
Nov. 14	0400	NNW	6	NNW	4	5	1007	5.6	o
	0800	WNW	7-8	NW	3	5	1010	6.1	op
	1200	NW	7-8	NW	3	5	1011	6.7	o
	1600	NW	7-8	NW	3	4	1014	9.4	o
	2000	NW	8-9	NW	3	5	1018	10.0	bc
	2400	NW	7-8	NW	3	4	1022	10.0	bc
Nov. 15	0400	NW	7	NW	4	4	1024	10.0	b
	0800	NW	4-5	NW	4	4	1028	11.1	b
	1200	W	4	NW	1	3	1026	14.4	bc
	1600	SW	4	SW	1	2	—	15.0	bc
	2000	SSW	5	SW	1	3	1022	—	bc
	2400	SW	6	SW	3	4	1018	18.9	c
Nov. 16	0400	SW	8	SW	4	5	1015	16.7	o
	0800	SWxW	7-8	SW	3	5	1014	16.1	c
	1200	WSW	4	SW	3	4	1011	15.6	c
	1600	WSW	8	WSW	4	4	1009	13.3	c
	2000	W	8-9	WSW	3-6	5-6	1013	12.2	b
	2400	WxN	8	W	4	5	1014	10.6	bc
Nov. 17	0400	W	6-7	W	5	4	1014	10.6	c
	0800	W	6	W	4	4-5	1016	8.9	o
	1200	W	7	W	4	4	1015	10.0	o
	1600	WNW	7-8	WNW	4	4-5	1017	8.9	bc
	2000	WNW	7-8	WNW	4	5-6	1020	7.8	bc
	2400	WNW	7	WNW	4	5	1022	6.7	bc
Nov. 18	0400	W	5	W	3	3	1022	6.1	c
	0800	WNW	5-6	WNW	3	3-4	1025	6.7	c
	1200	NW	3	NW	1	3	1024	6.7	o
	1600	SSW	4	SW	2	3	1023	11.1	o
	2000	WSW	4	SW	1	2	1021	10.0	or
	2400	WSW	4-5	SW	1	3	1017	8.9	op
Nov. 19	0400	SW	5	SW	1	2	1014	7.8	d
	0800	NW	5	W	1	3	1013	8.3	od
	1200	NE	5-6	N	1	3	1012	7.8	op
	1600	N	6-7	NNE	1	3	1012	7.8	op
	2000	N	7	N	1	3-4	1016	5.6	o
	2400	N	5	N	1	3	1020	1.1	bc
Nov. 20	0400	NNW	5-6	NNW	1	3-4	1021	0.6	bc
	0800	NNW	6	NNW	1	3-4	1023	0.0	bc

Table 6. - Key to meteorological observations.

Swell		Sea height	
0	No swell	0	Calm
1	Low, short or average	1	Smooth, less than 1'
2	Low, long	2	Slight 1-3'
3	Moderate, short	3	Moderate 3-5'
4	Moderate, average	4	Rough 5-8'
5	Moderate, long	5	Very rough 8-12'
6	Heavy, short	6	High 12-20'
7	Heavy, average	7	Very high 20-40'
8	Heavy, long	8	Mountainous 40' and higher
9	Confused	9	Confused

Weather		Wind	knots	mph
bc	scattered clouds	1	1-3	1-3
d	drizzle	2	4-6	4-7
f	fog	3	7-10	8-12
h	hail	4	11-16	13-18
l	lightening	5	17-21	19-24
o	overcast	6	22-27	25-31
c	mostly cloudy	7	28-33	32-38
p	passing rain showers	8	34-40	39-46
q	squalls	9	41-47	47-54
r	rain	10	48-55	55-63
s	snow	11	36-63	64-72
t	thunder	12	64-71	73-82

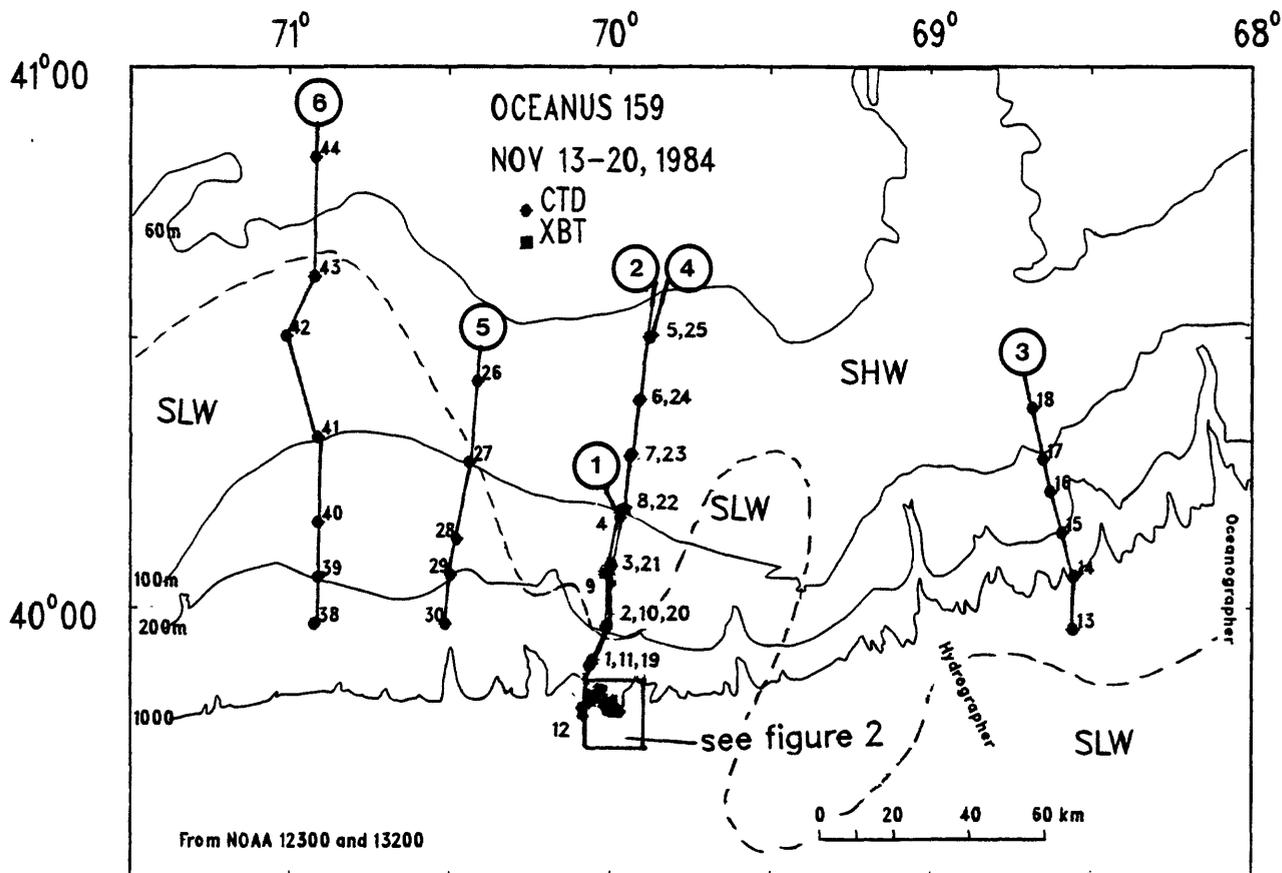


Figure 1a. Location of stations between 68° W. and 71° W. The circled numbers identify the sections shown in figures 5 to 10. The dashed line is the approximate location of the shelf/slope front for 16 November 1984.

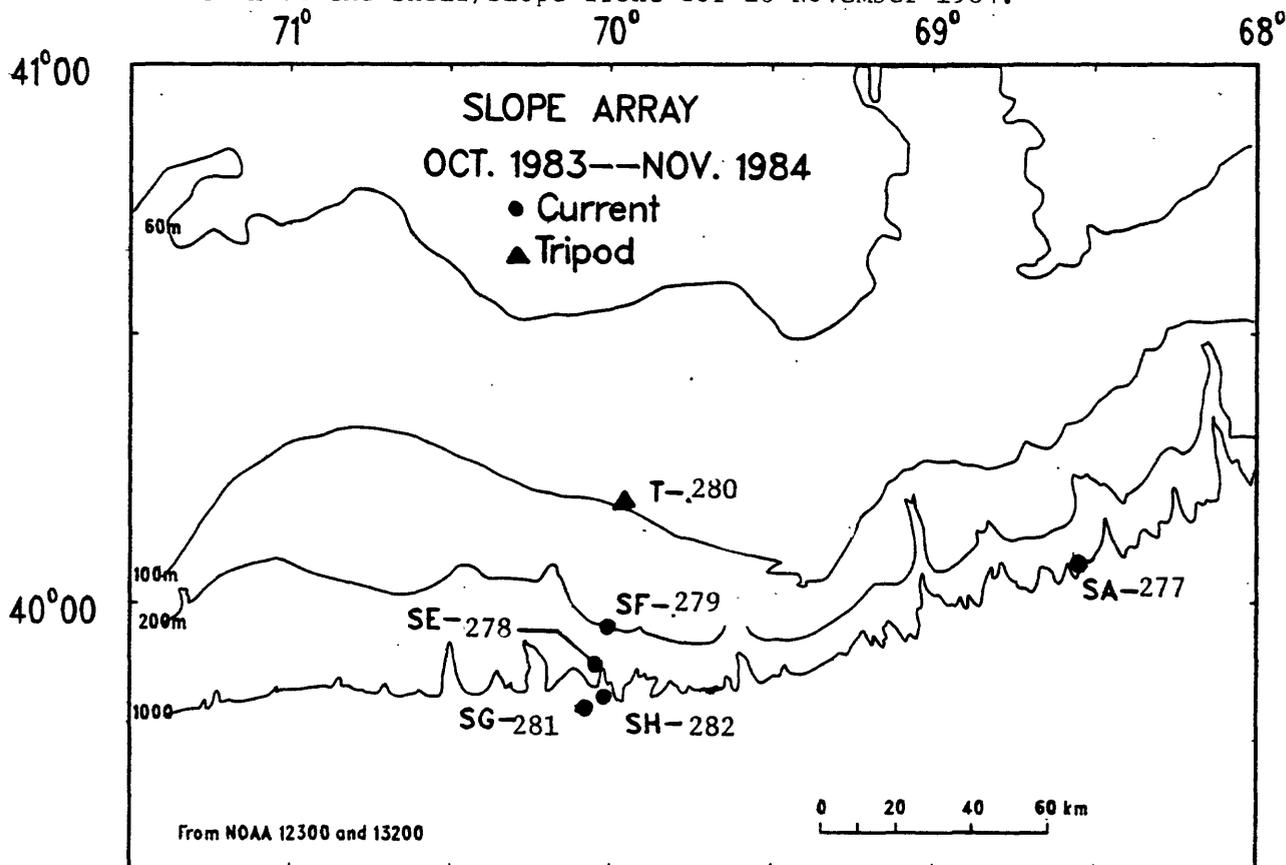


Figure 1b. Slope moored array. Stations are identified by letters. The three digit number following the station letter is the mooring number. Moorings 277-232 were recovered on OCEANUS 159.

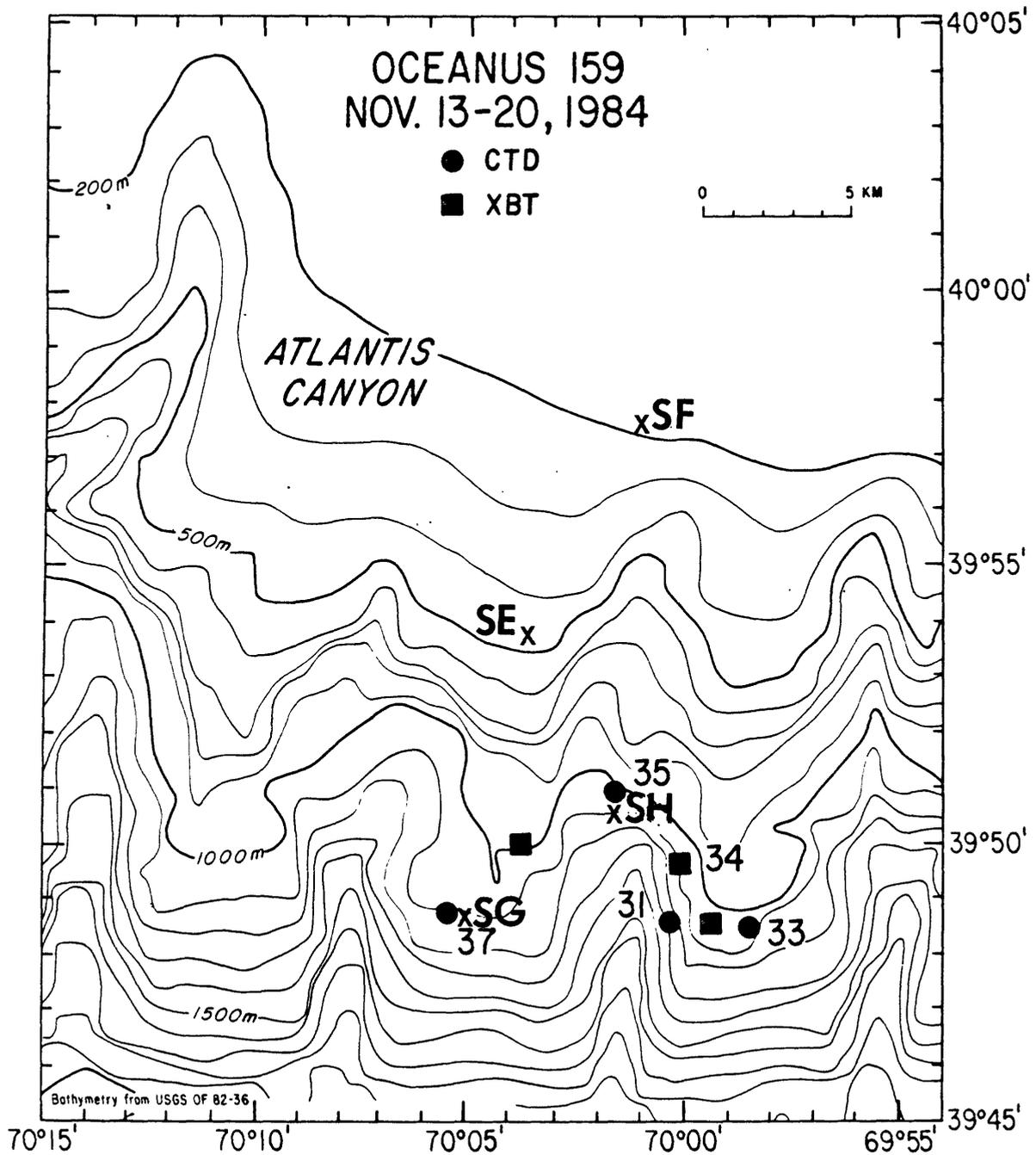


Figure 2. Detailed map showing the location of hydrographic stations east of Atlantis Canyon. The X's indicate the location of moored instrument arrays that are identified by two letters and also shown in figure 1b.

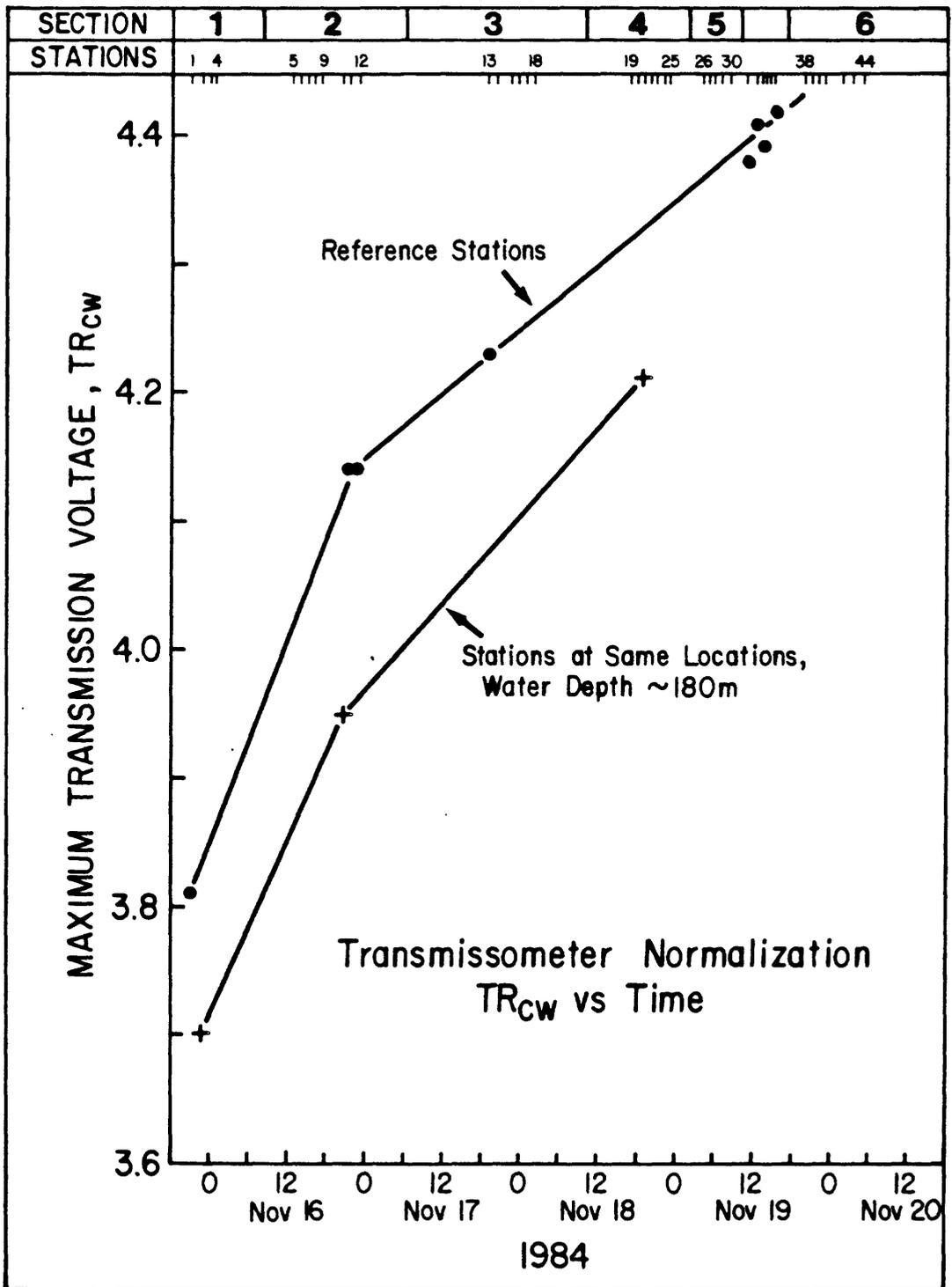


Figure 3. Maximum transmission voltage as a function of time. The reference stations are in water depths ranging from 578 to 2200 m and the maximum transmission voltage occurred at depths greater than 200 m in "clear" slope water. See text for discussion.

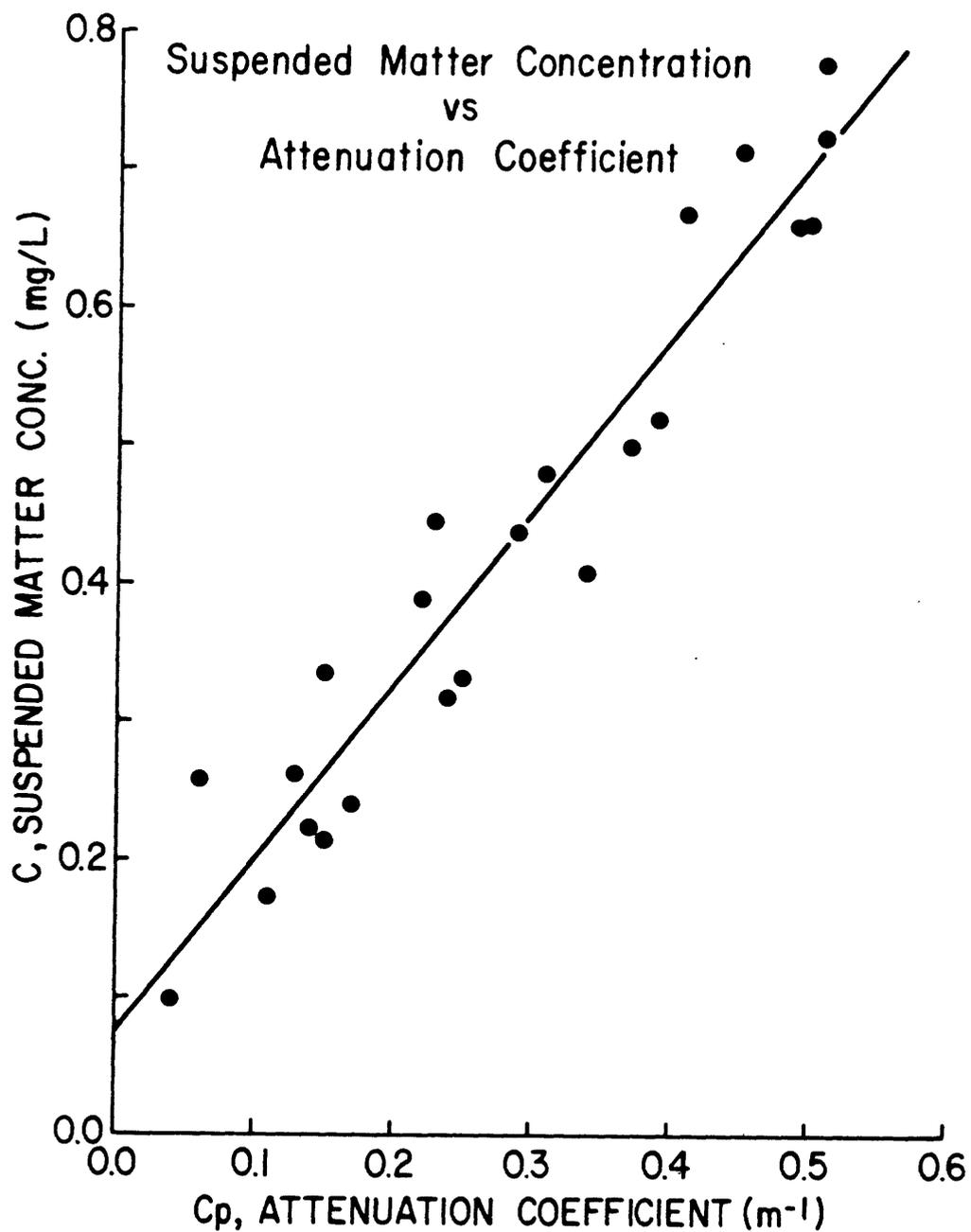
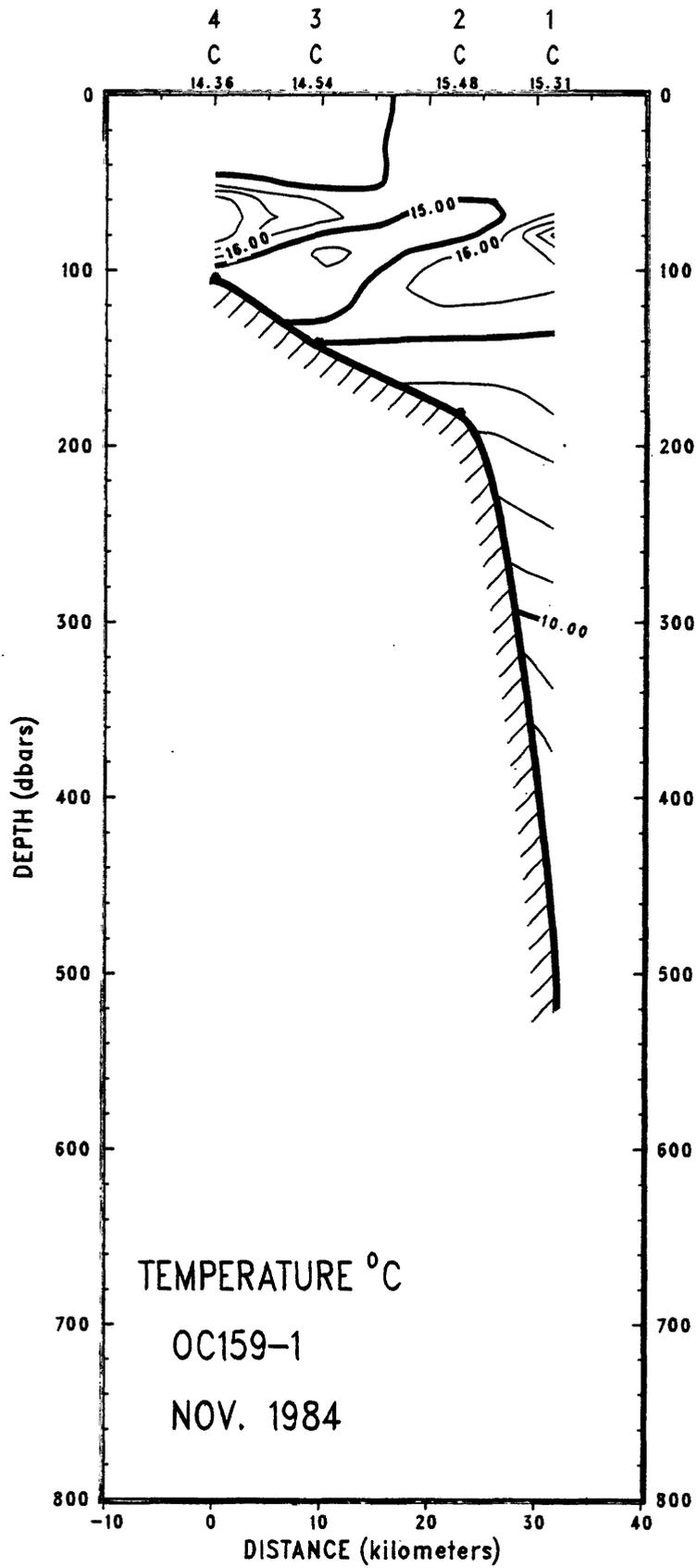
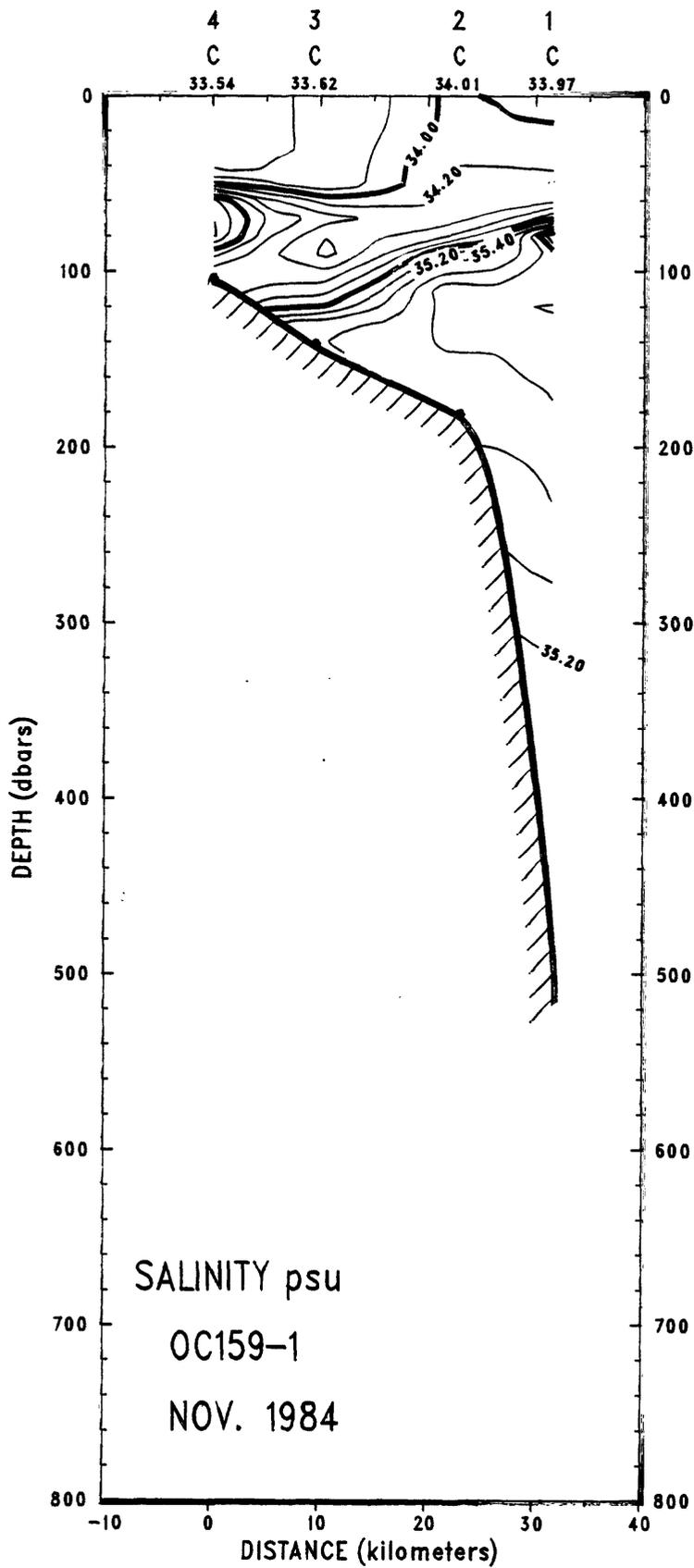


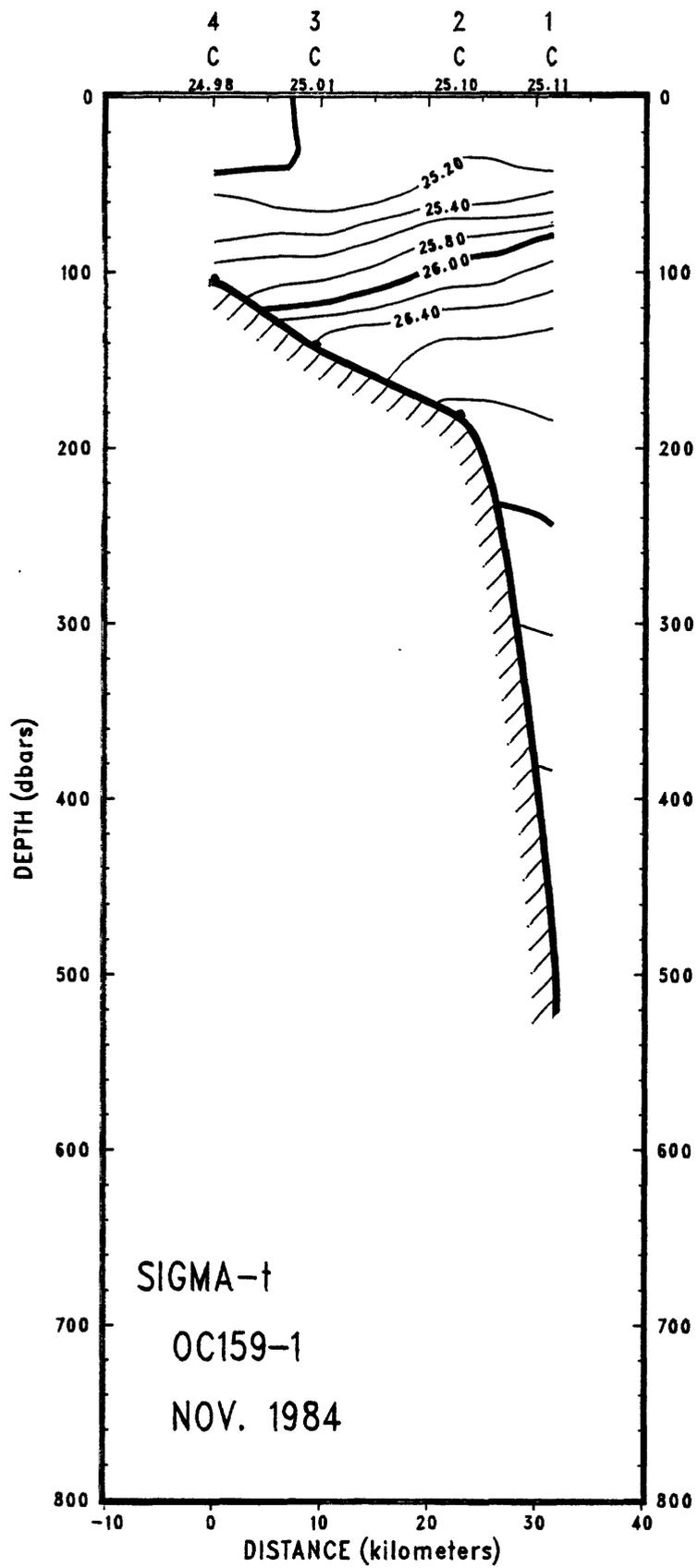
Figure 4. Calibration curve for converting values of the attenuation coefficient to suspended matter concentration. The equation for the straight line is $C = 1.26 C_p + 0.076$ with a linear regression coefficient, r equal to 0.96

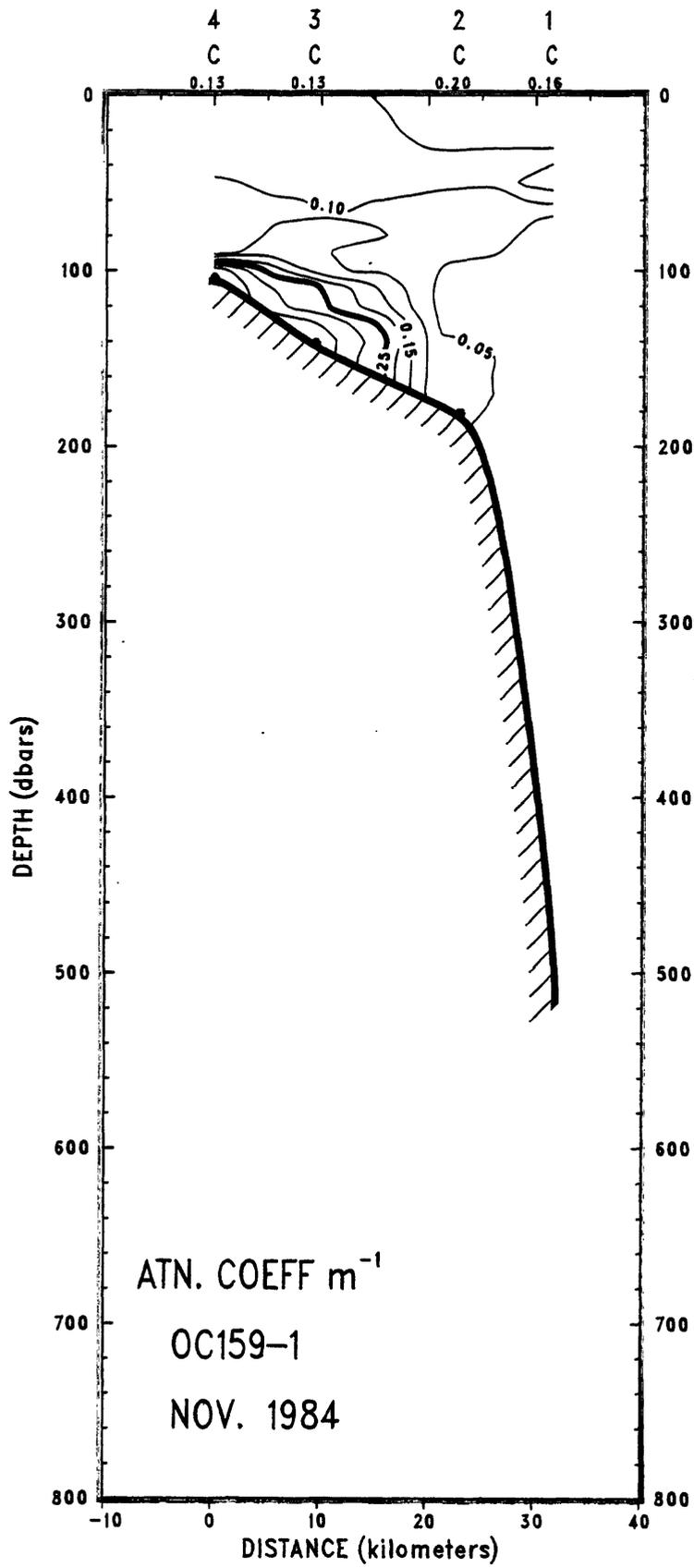
Vertical sections

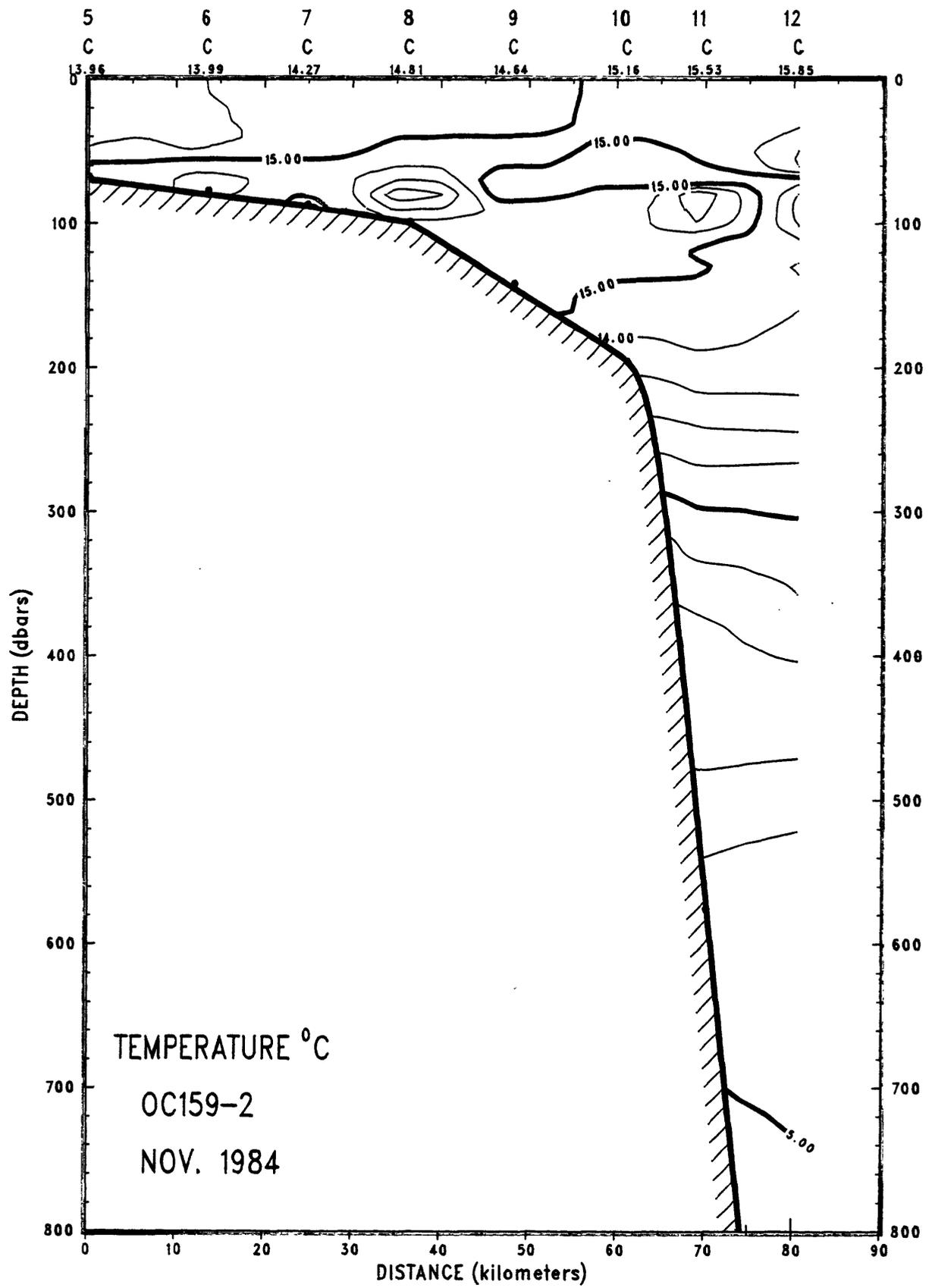
The section numbers follow the hyphen after the cruise symbol OC159 (see fig. 1 and table 1). The station numbers are shown across the top of each section with the station type (C = CTD) and surface value of the contoured variable printed below. The contour intervals are the same for each section (1°C for temperature, 0.2 psu for salinity, 0.2 for sigma-t, and 0.05 m^{-1} for attenuation coefficient). Every fifth contour line is thicker. The bathymetry for most sections is defined only by the depth at each station. Because of the computer contouring routine, the shape and slope of the contours near the sea floor should be interpreted with caution (see text). There were no reliable oxygen values obtain from the CTD. Stations 4, 5, 8, 10, 12, 15, 16, and 17 have less than 5 and occasionally no data points in the 2-dbar average at depths (see Appendix I) where the CTD data stream was "stuck" at a constant value for several seconds. The dot indicates the deepest data point at each station.

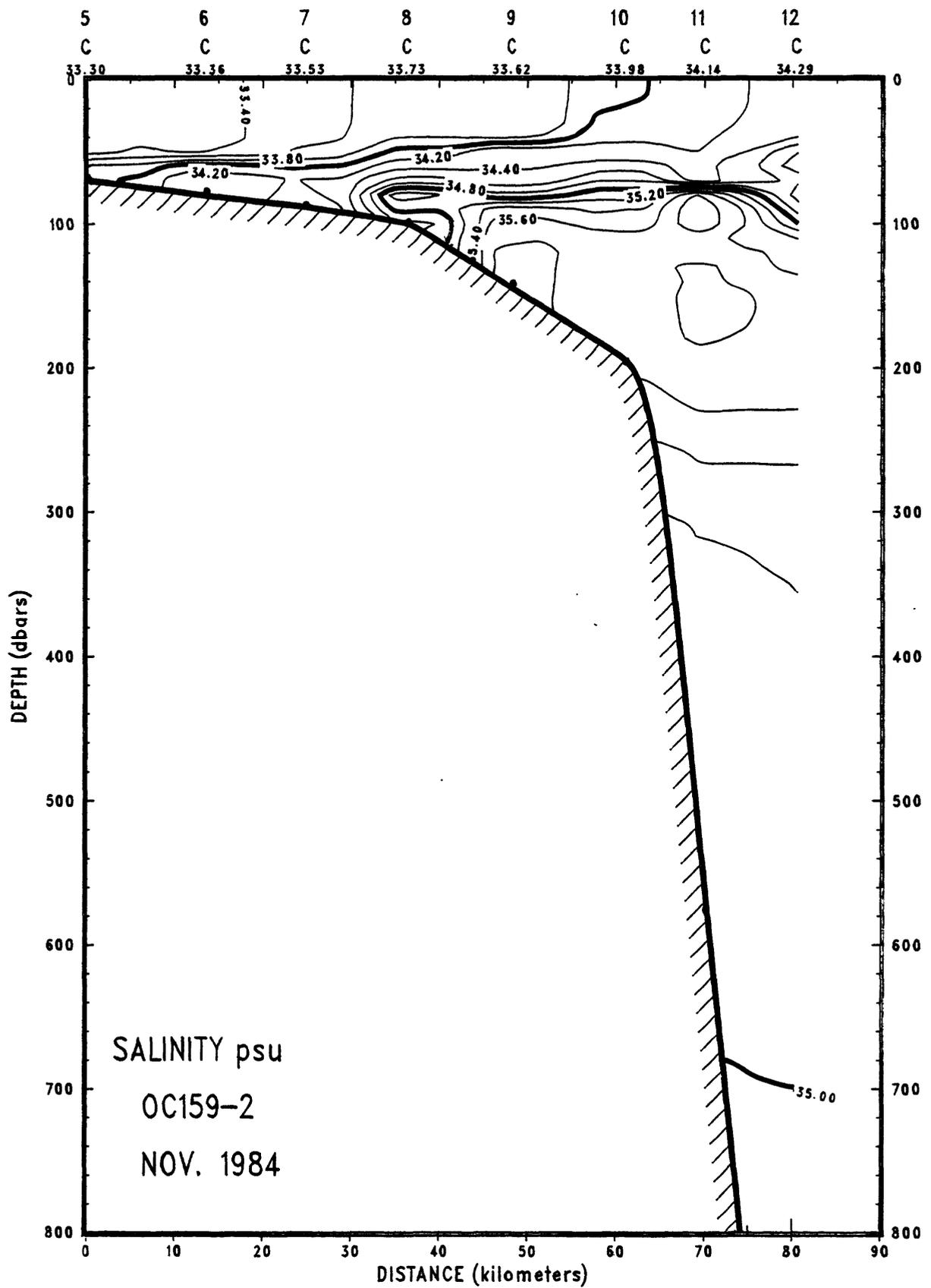


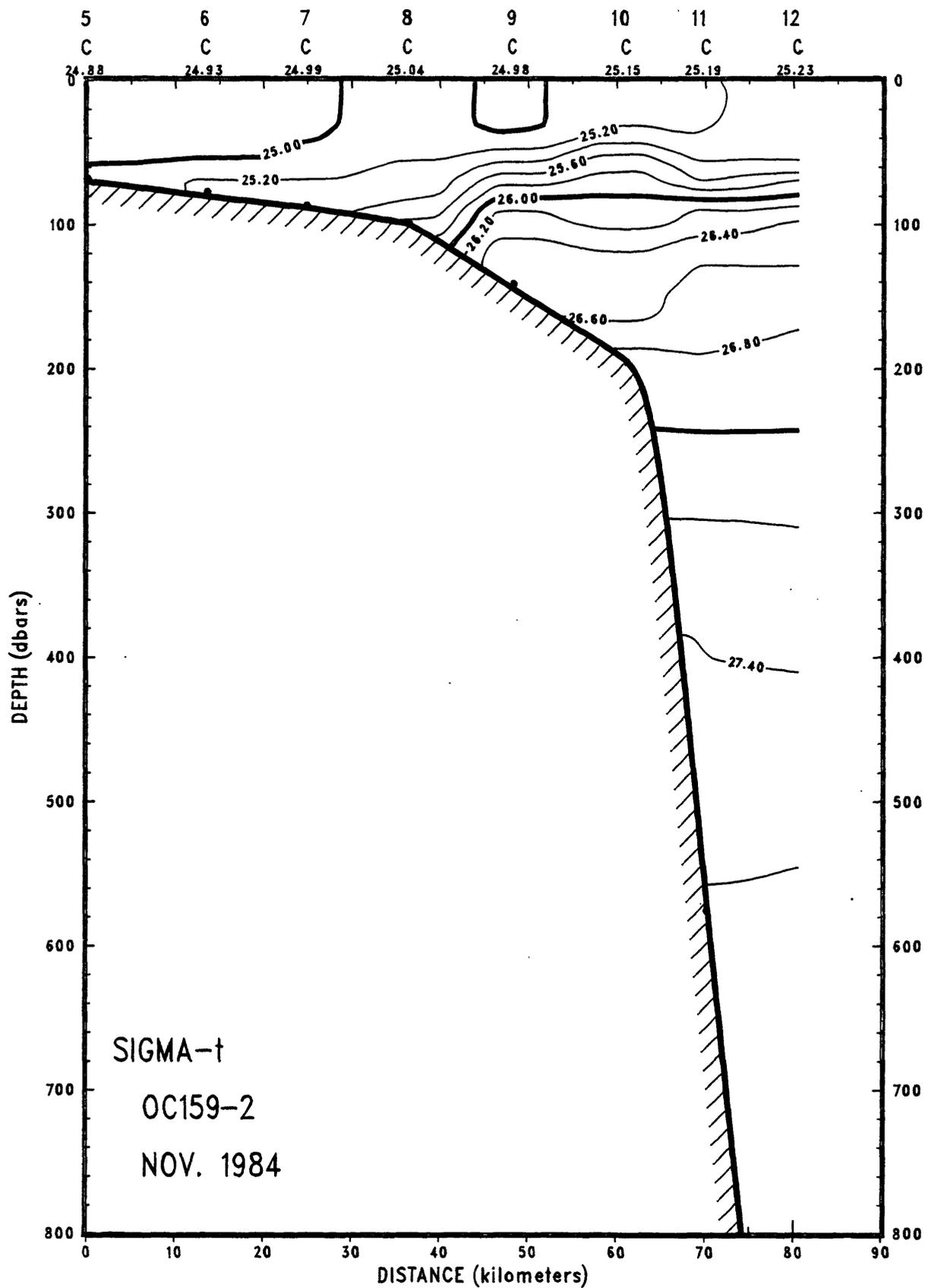


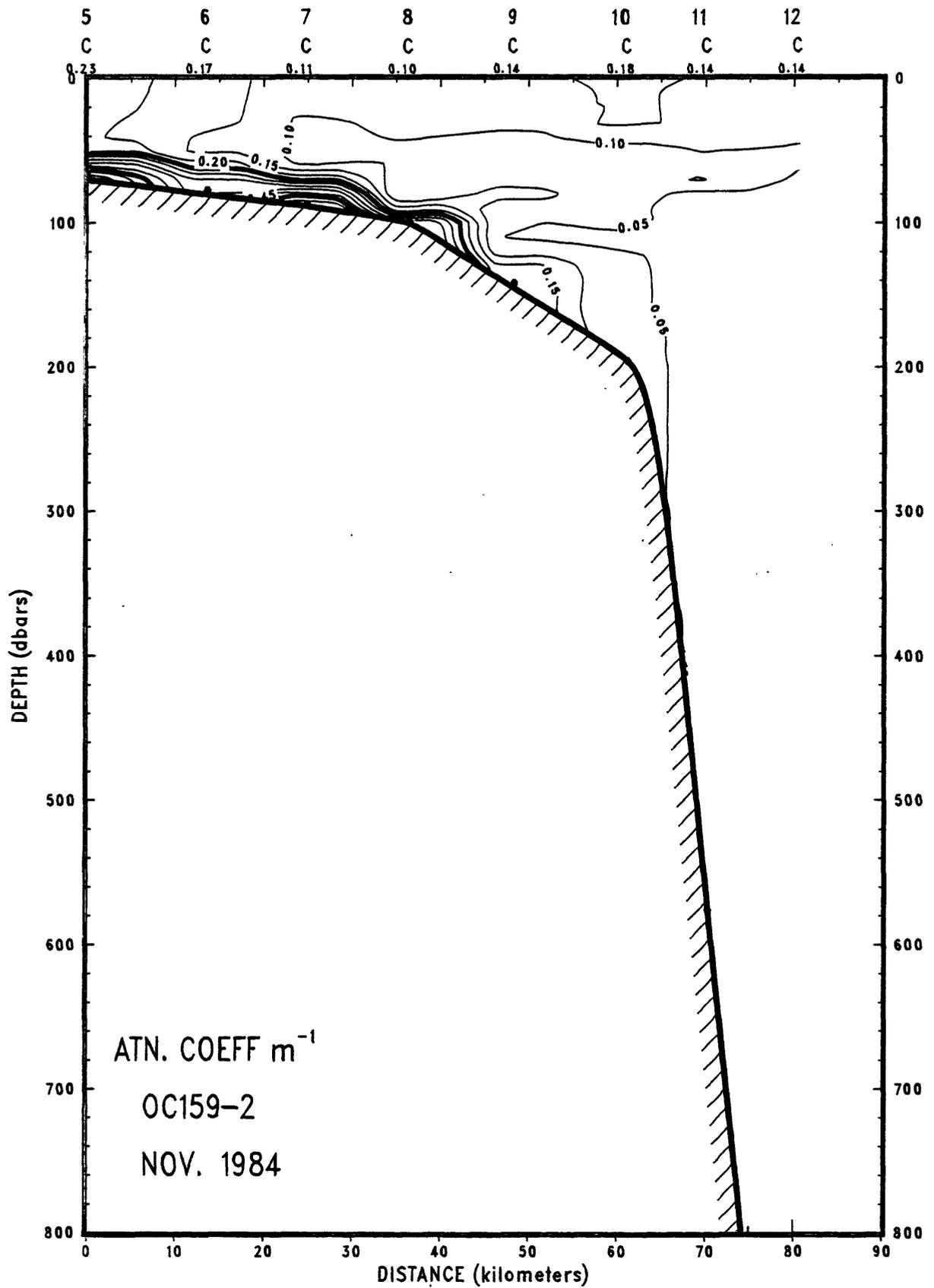


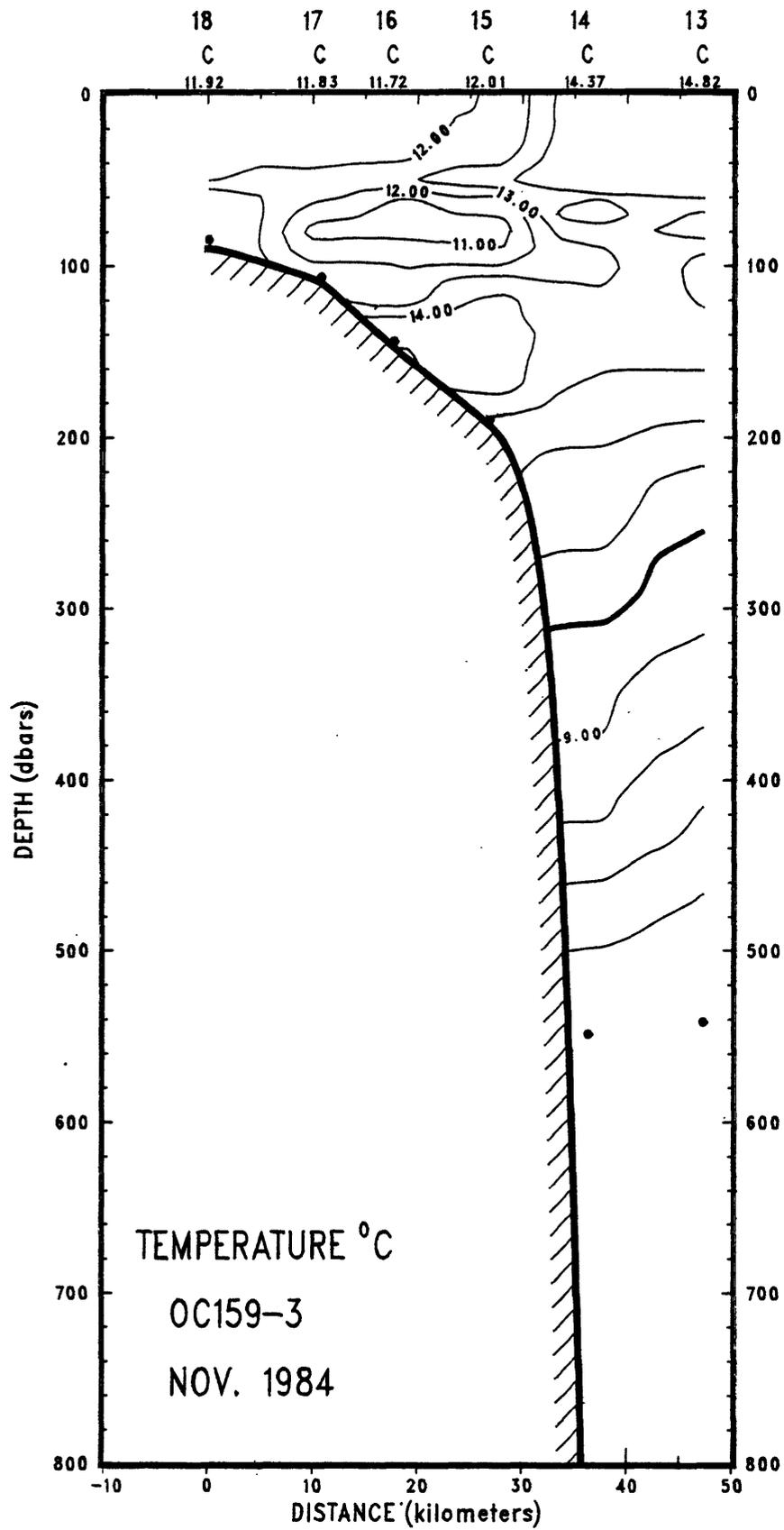


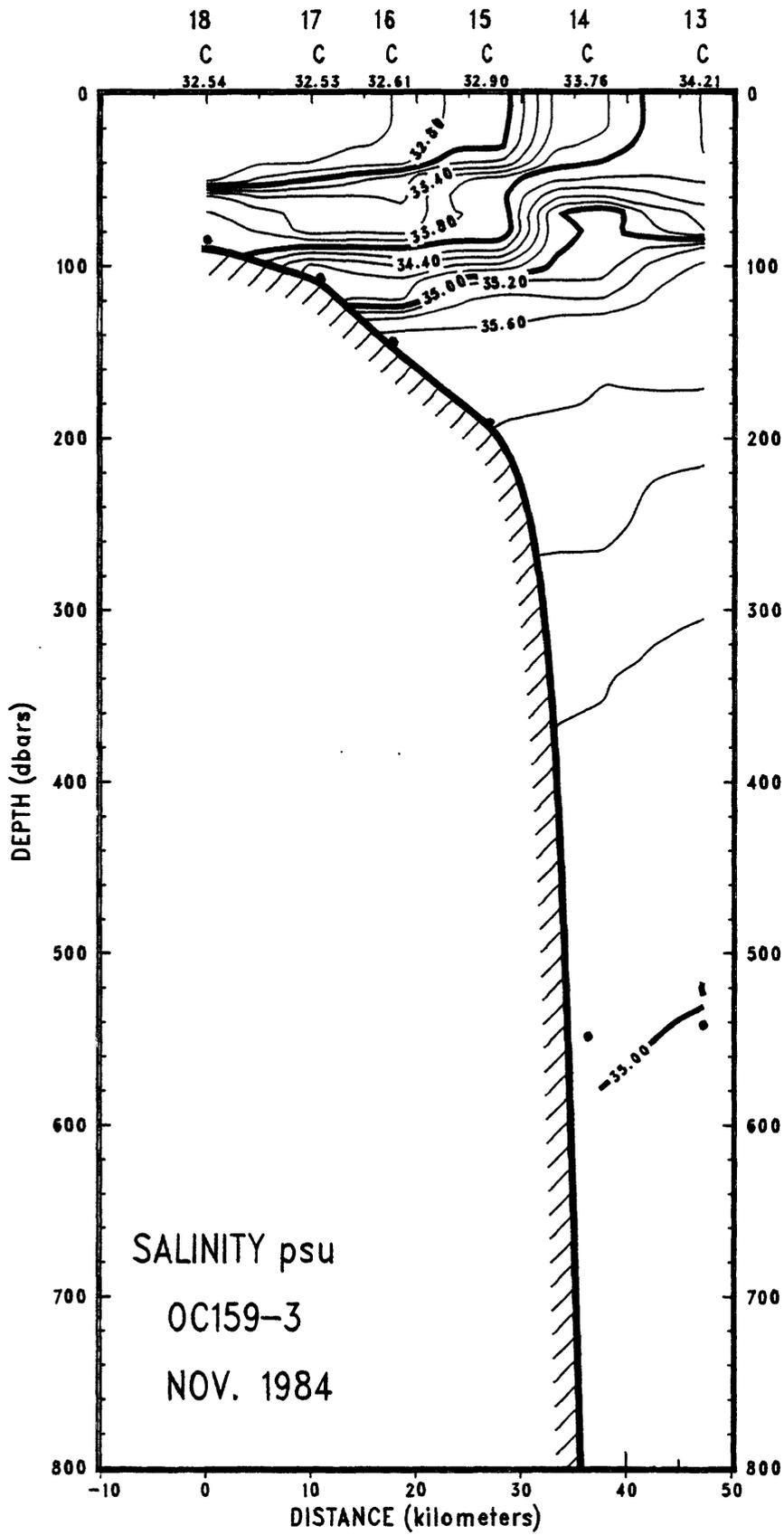


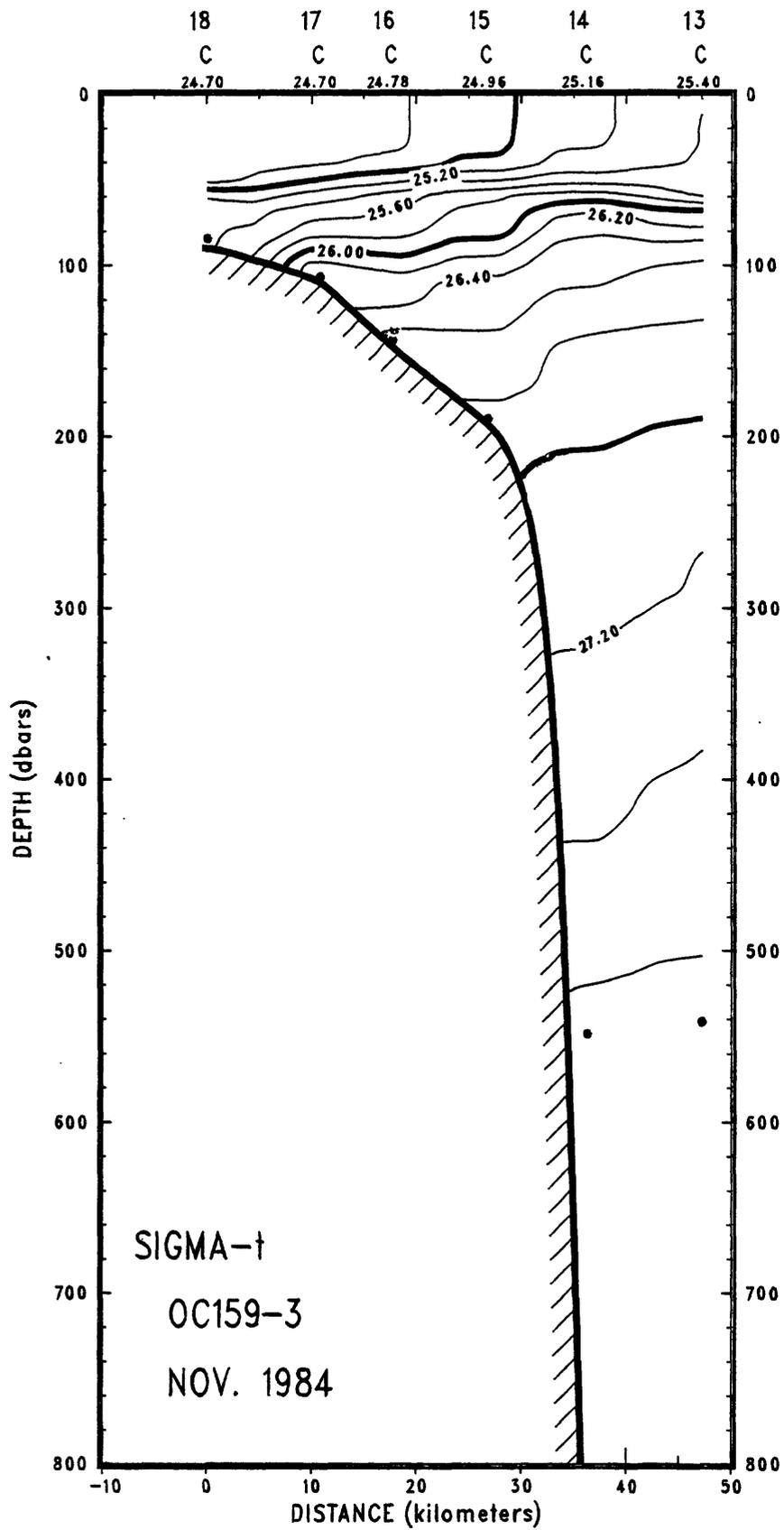


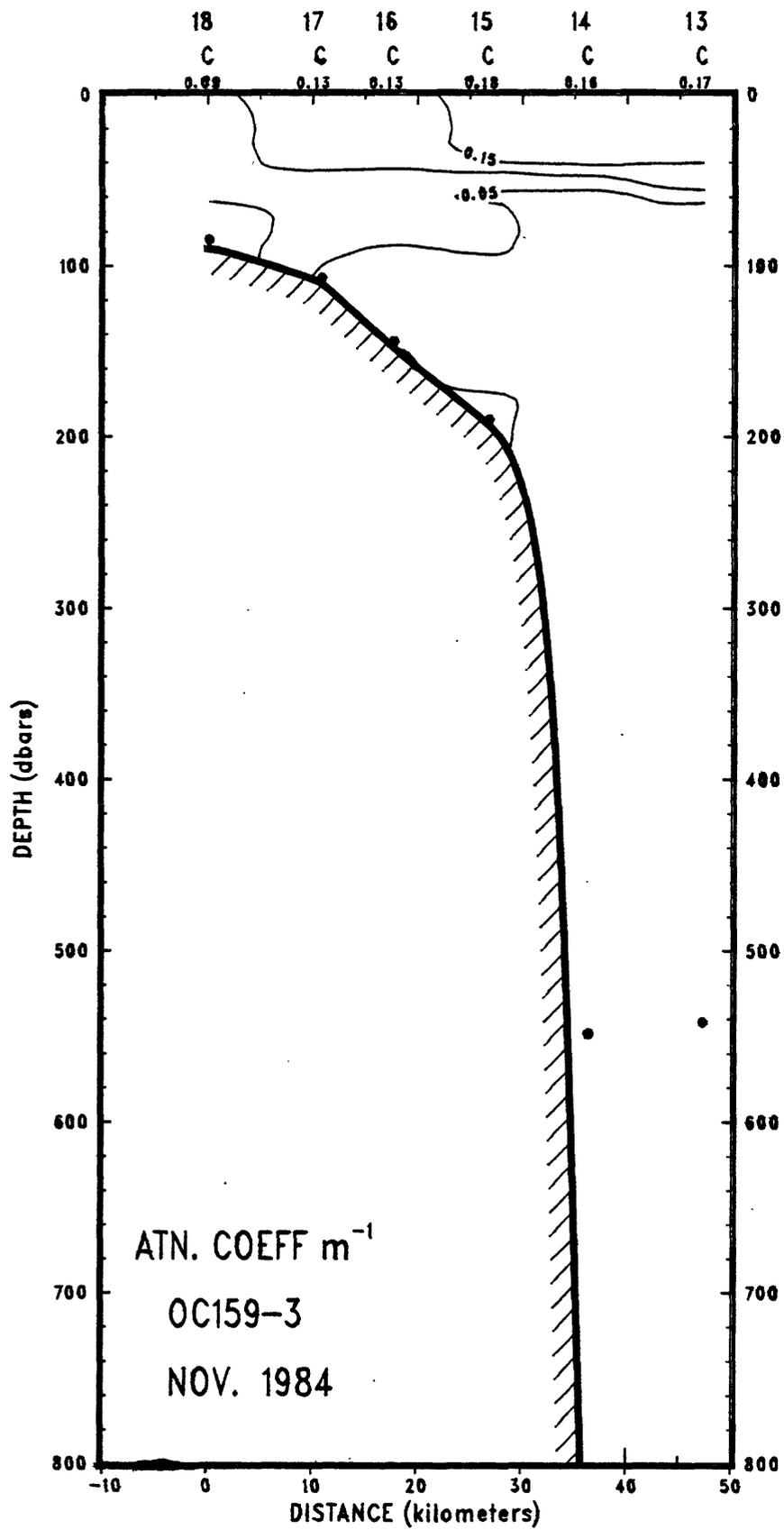


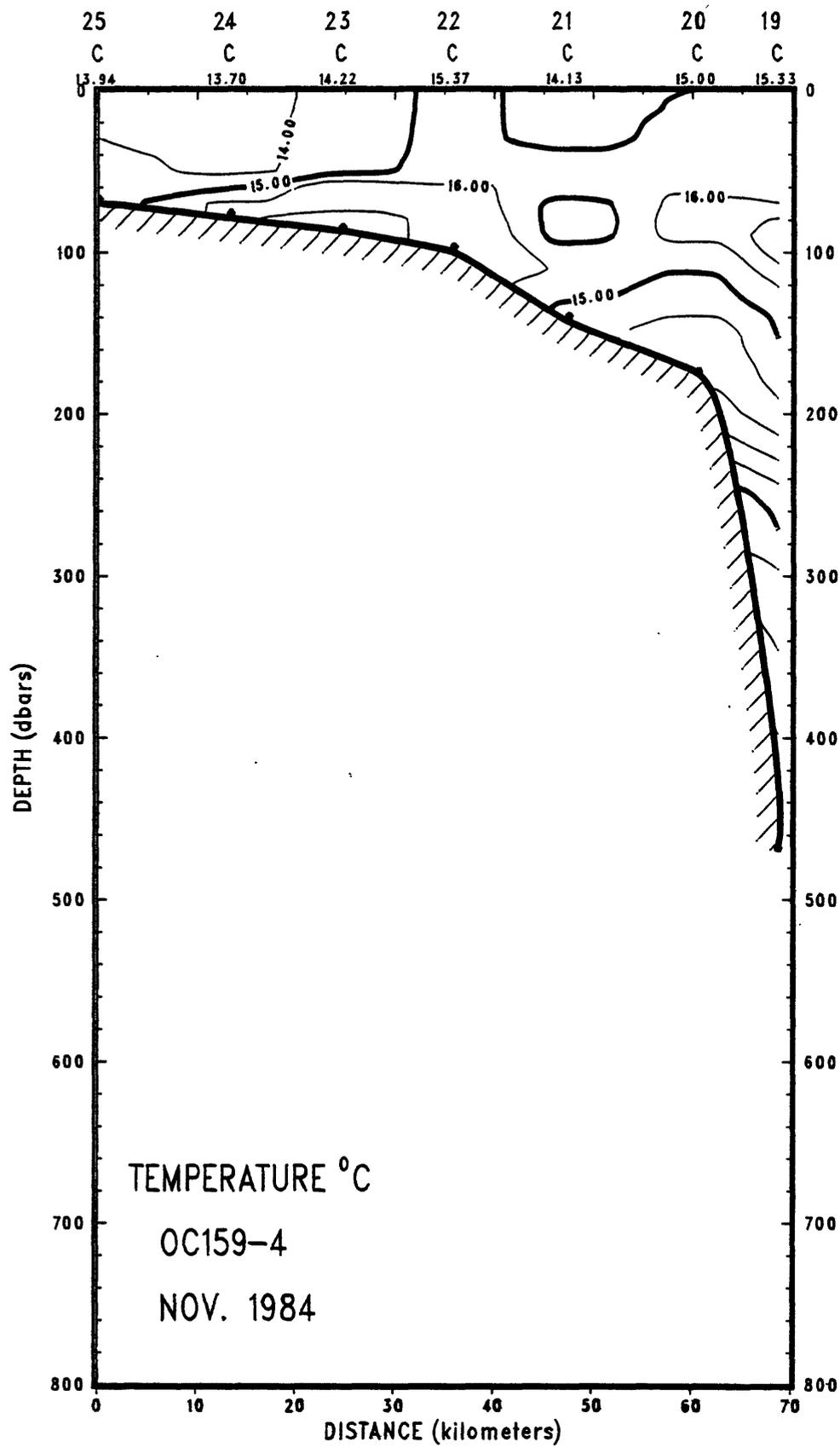


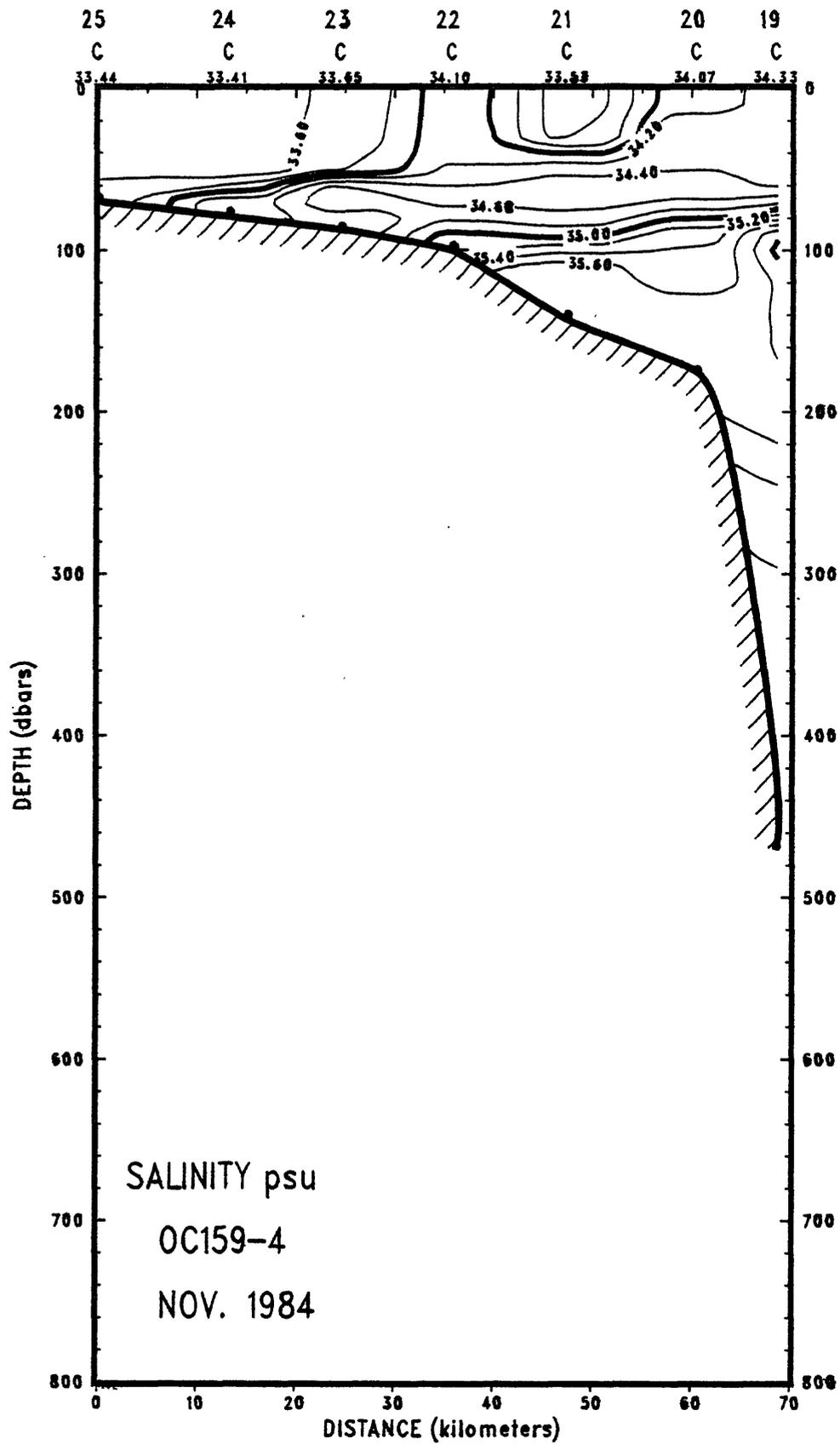


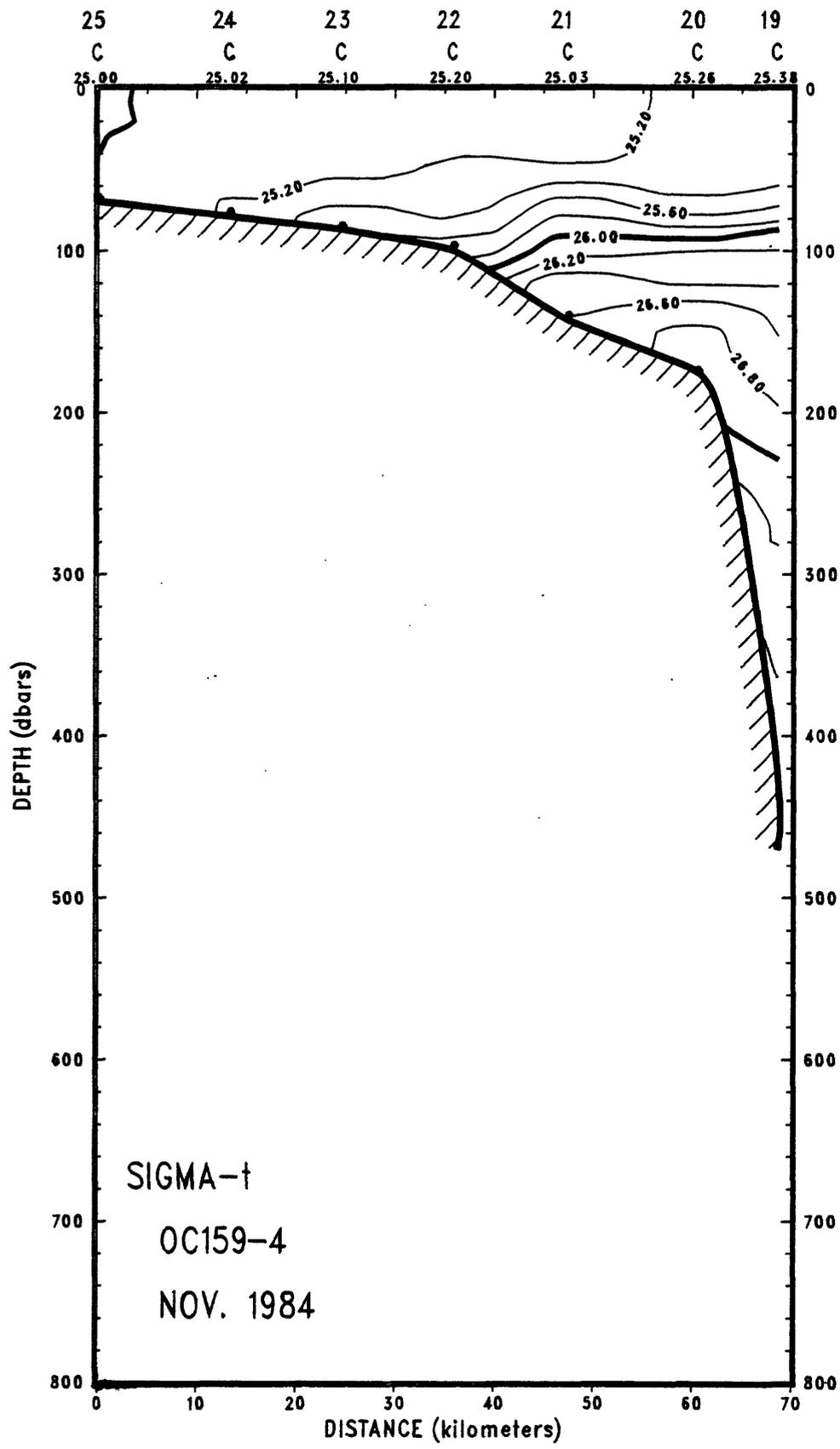


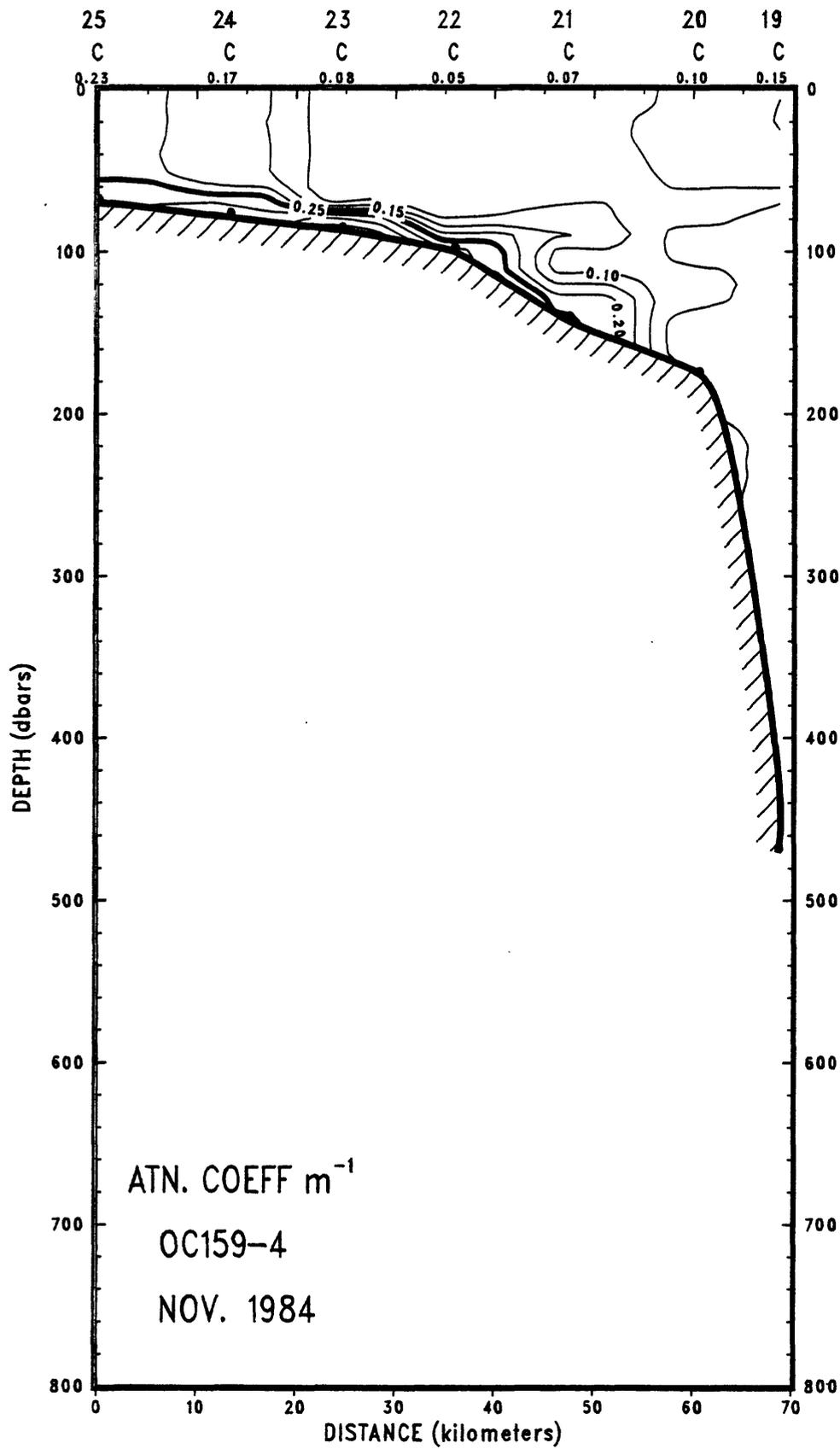


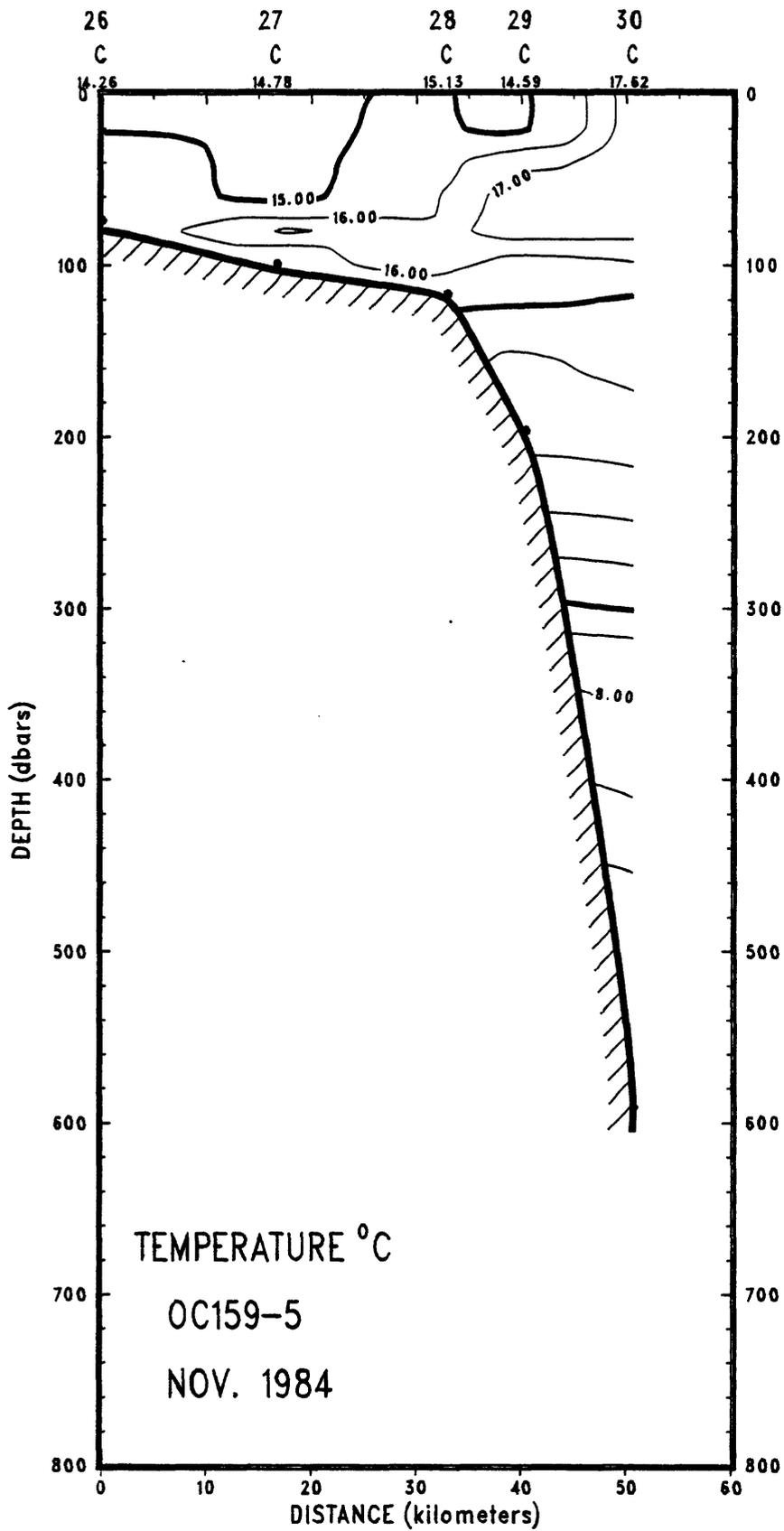


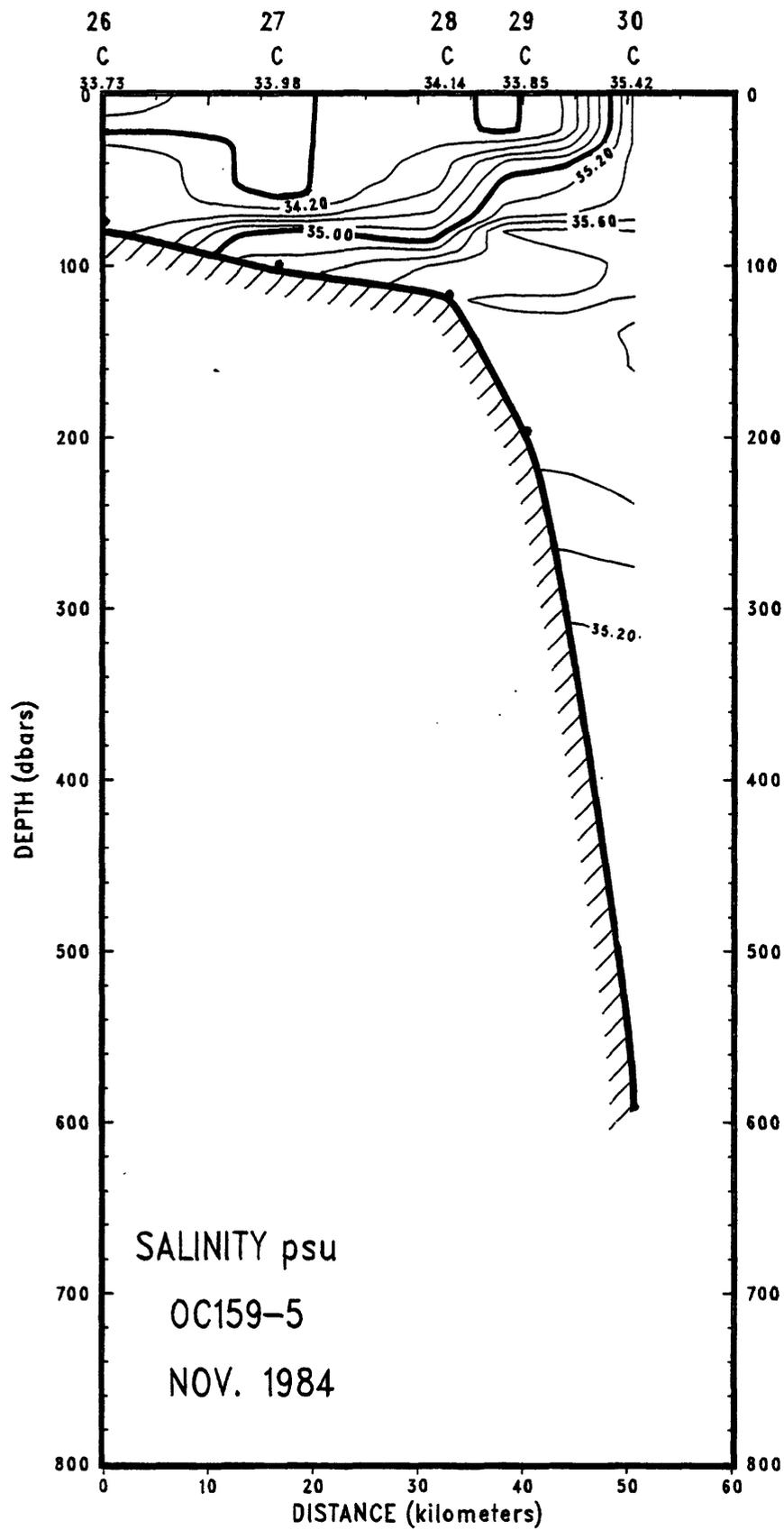


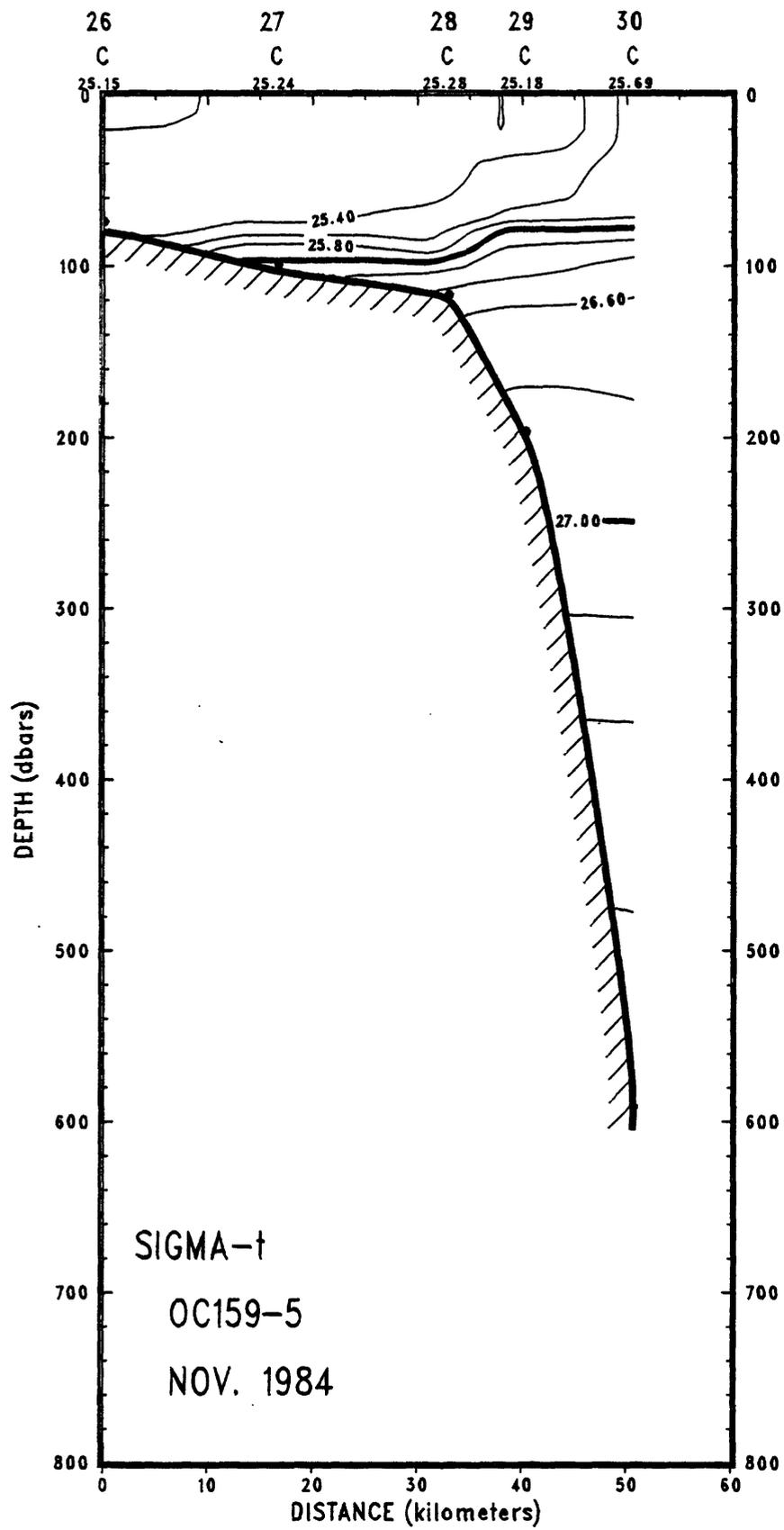


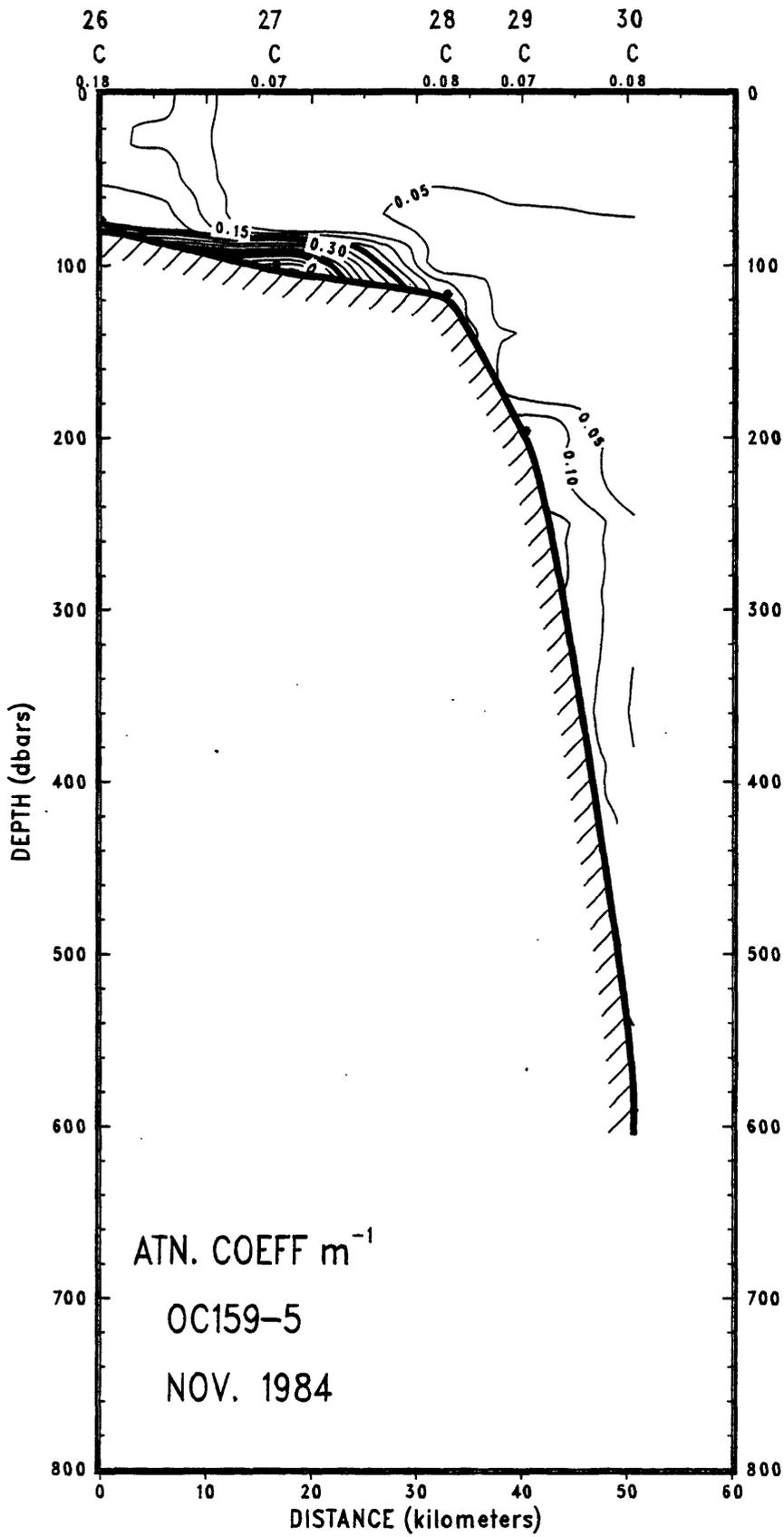


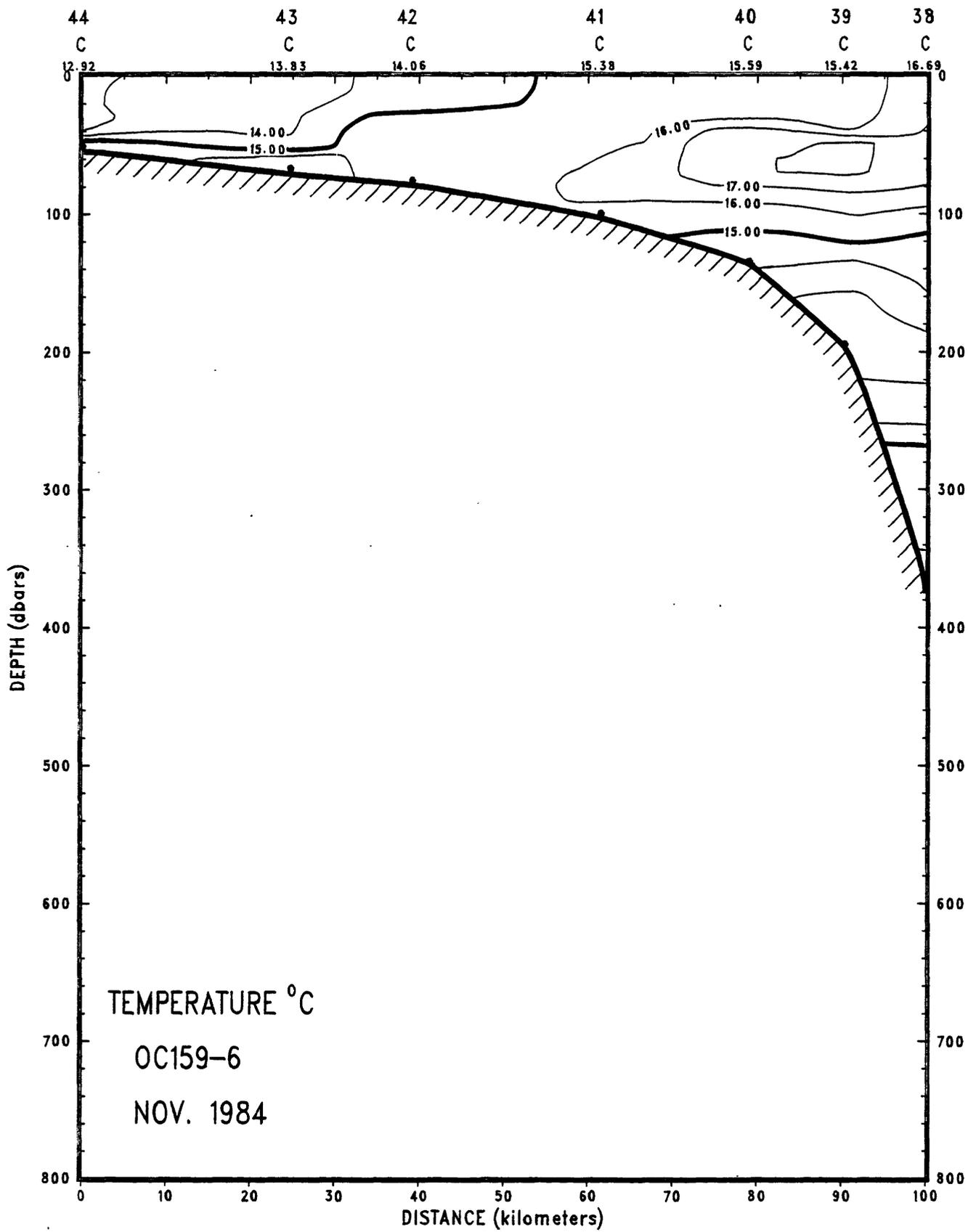


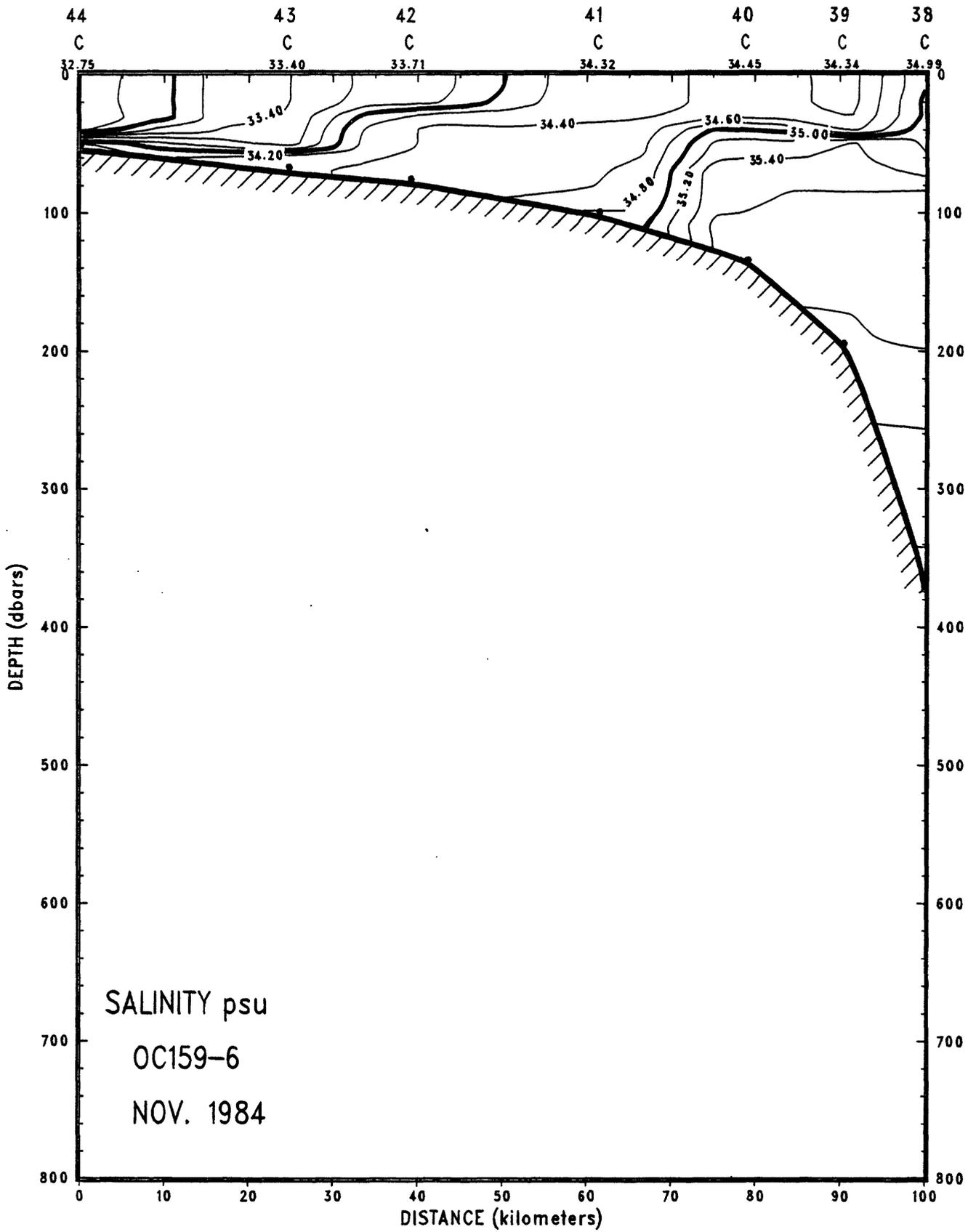


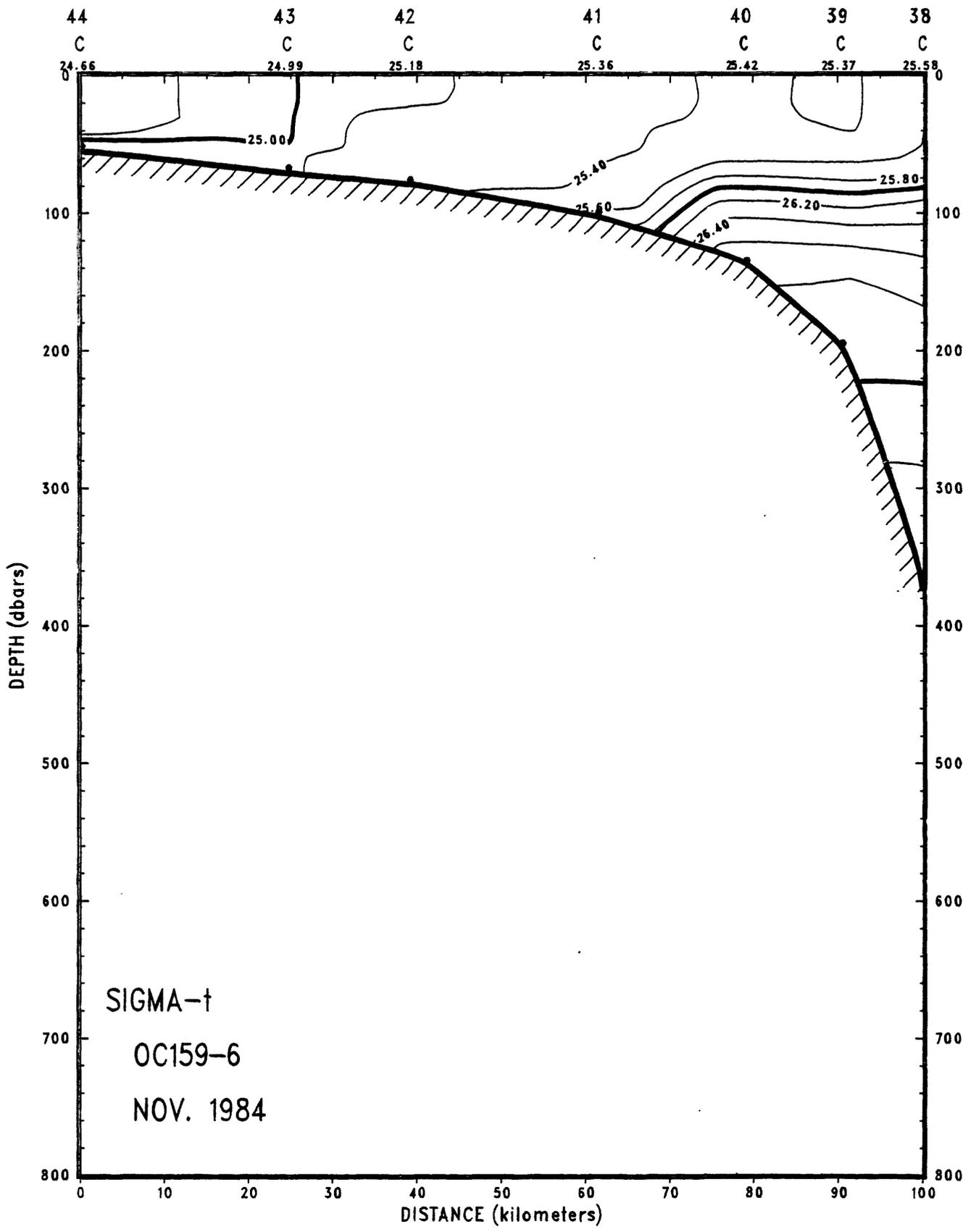


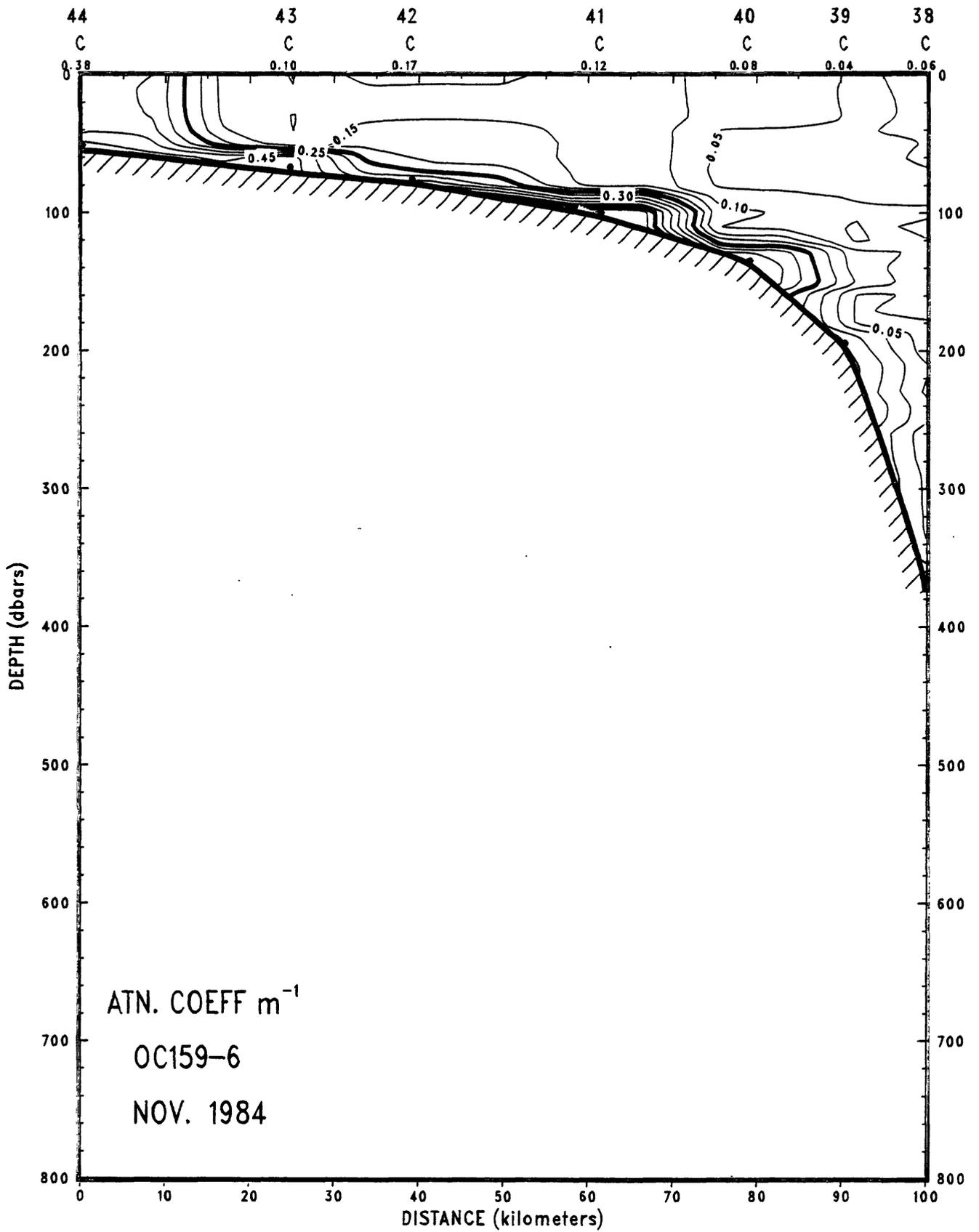






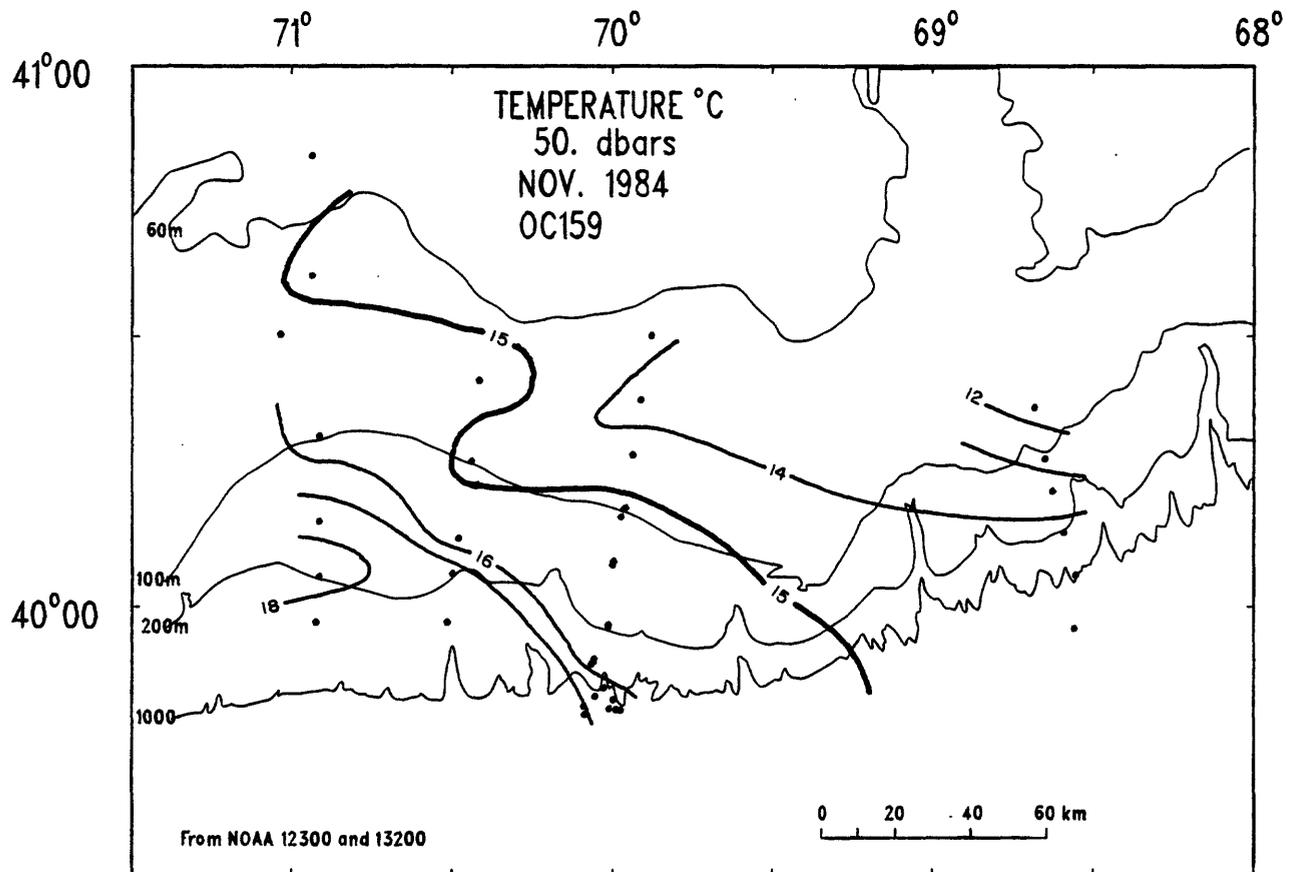
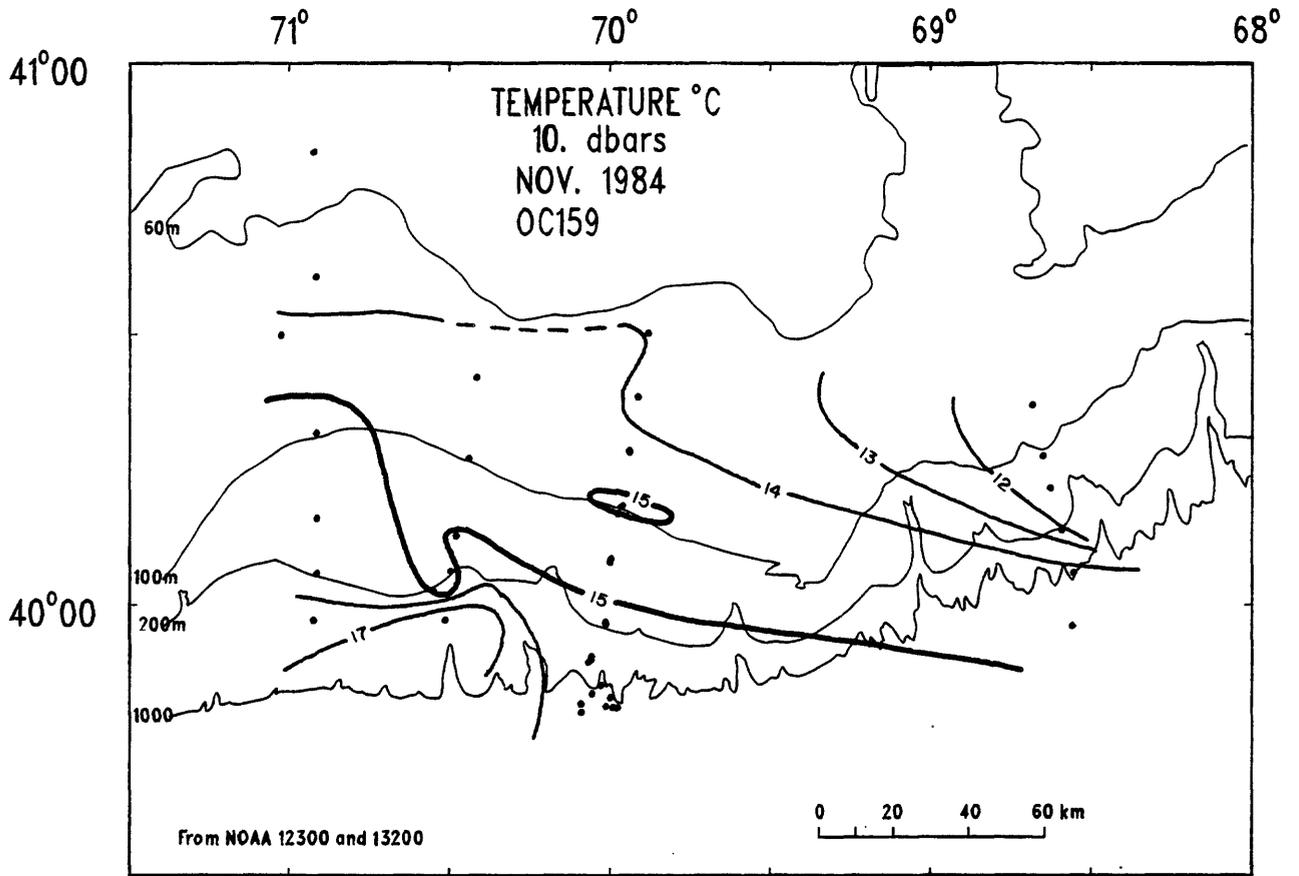


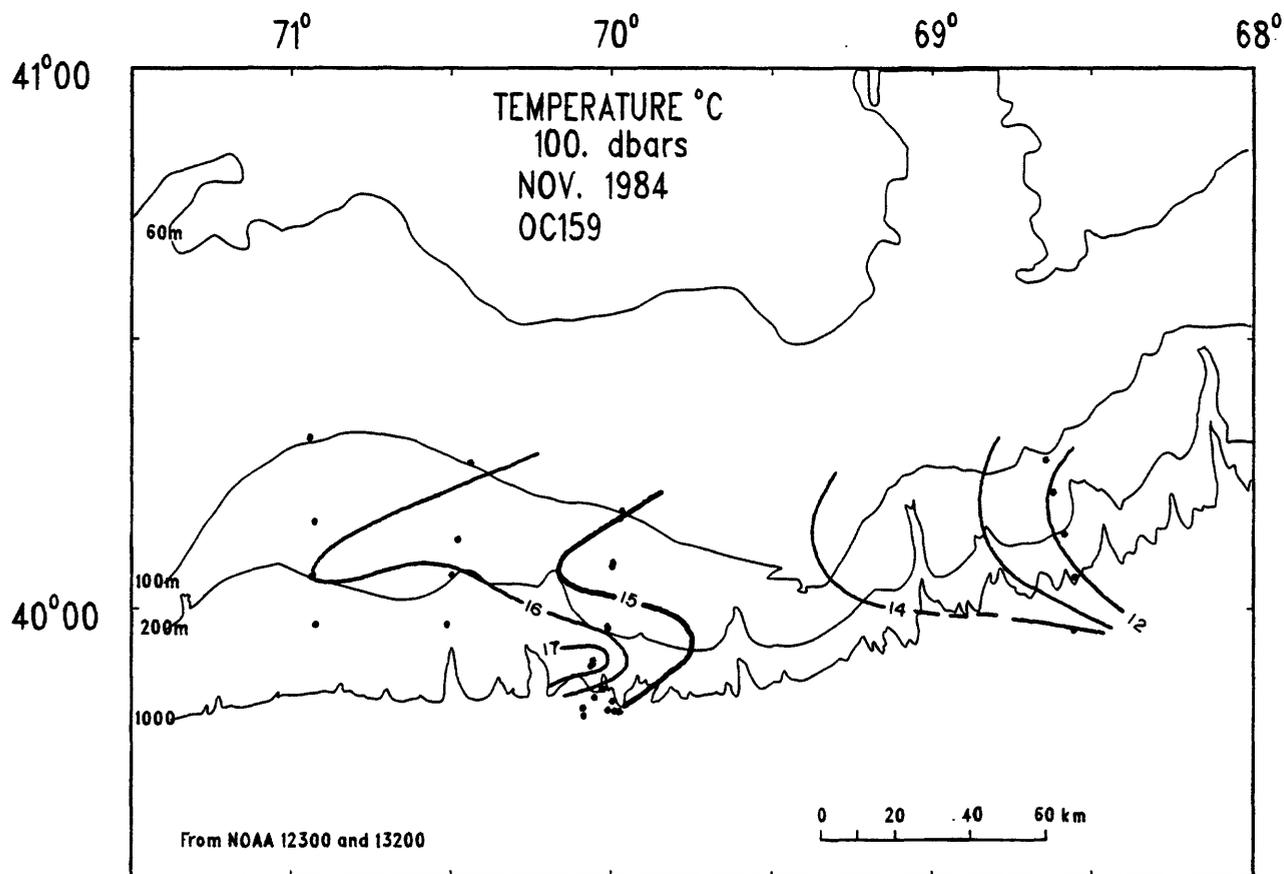
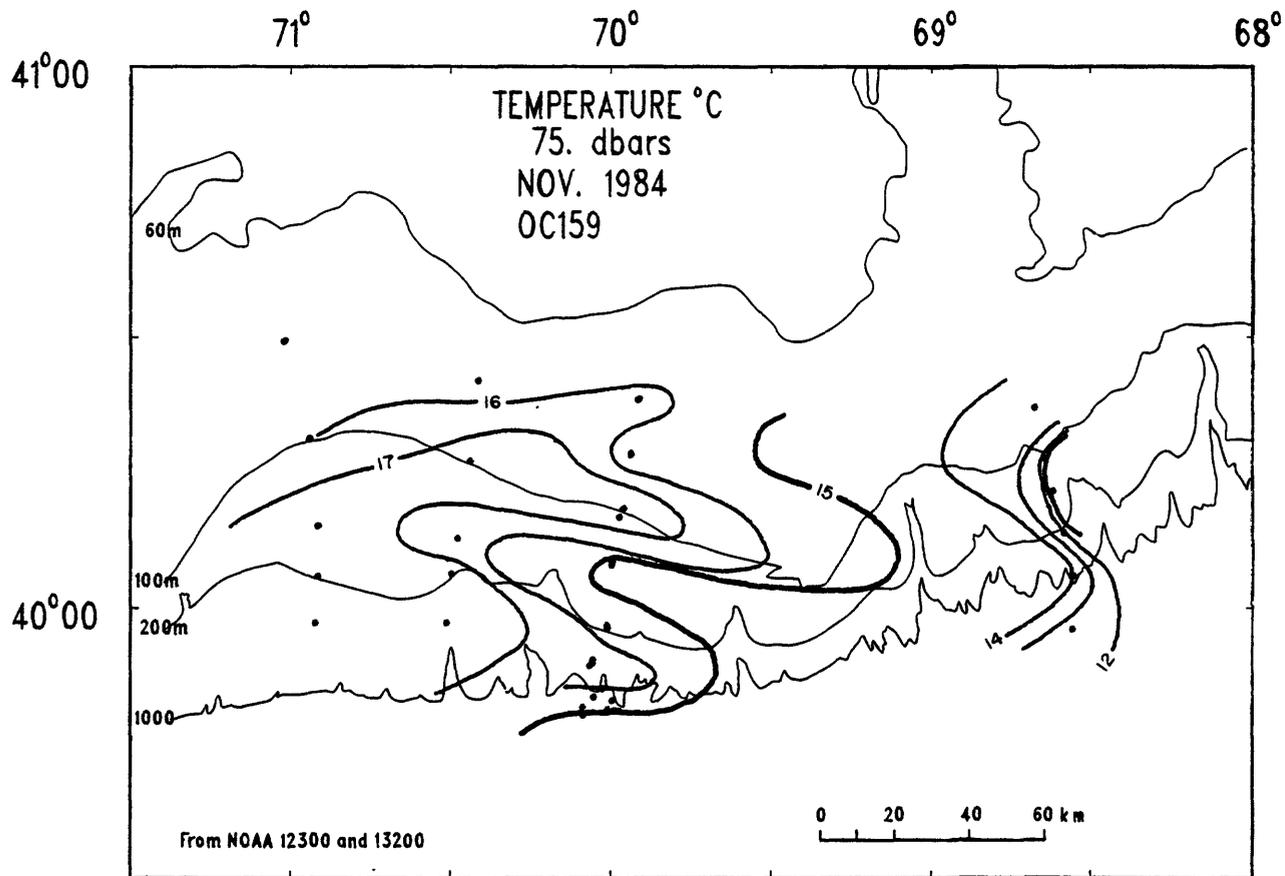


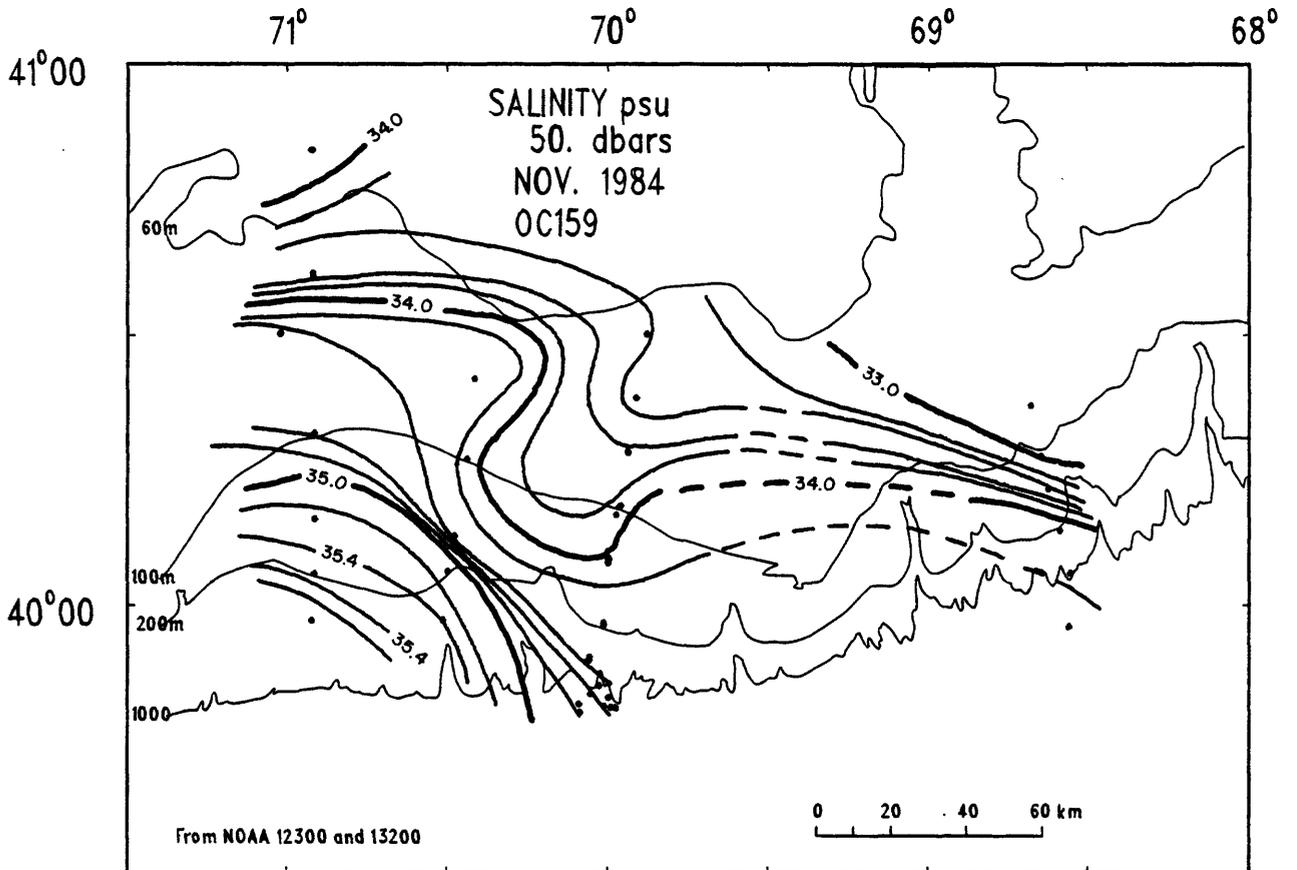
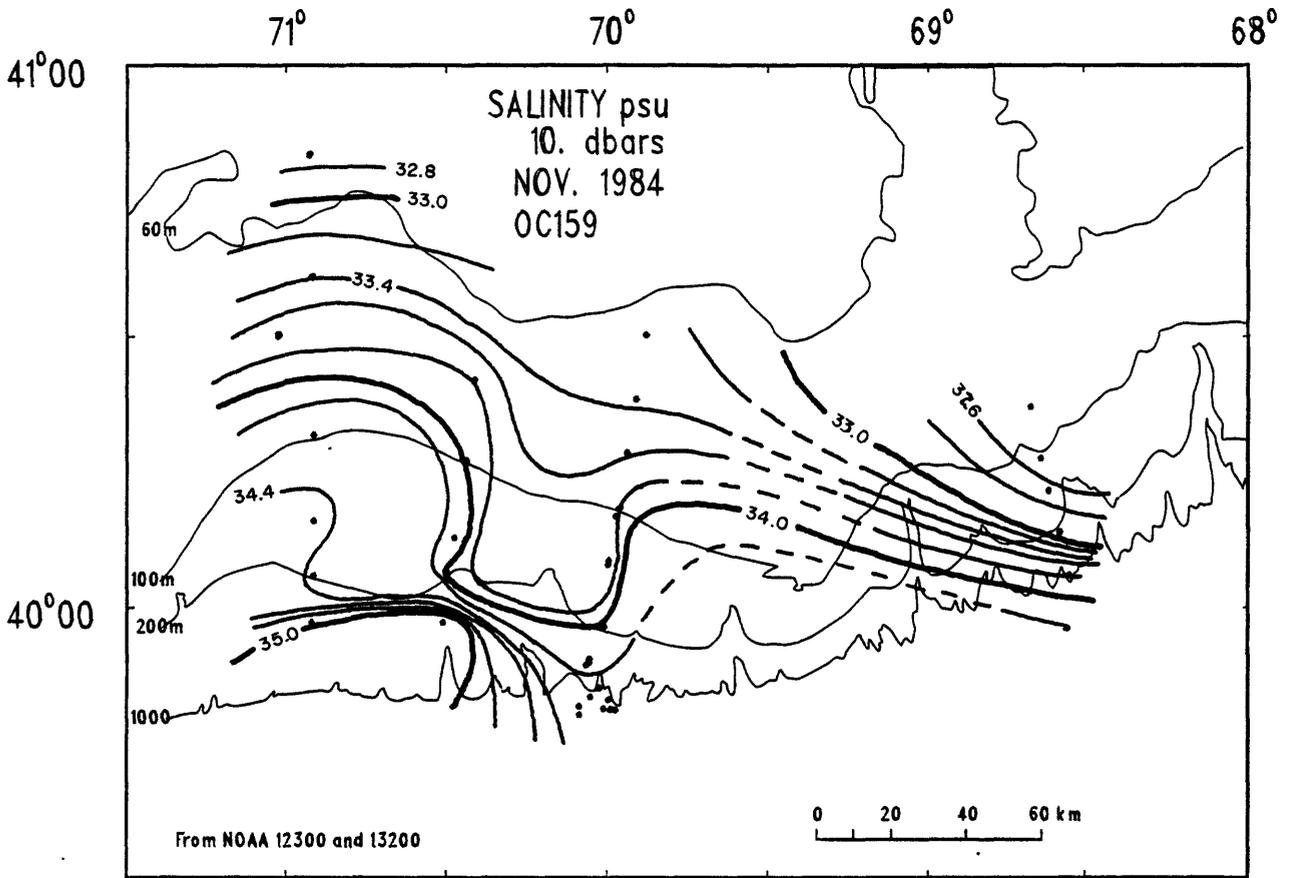


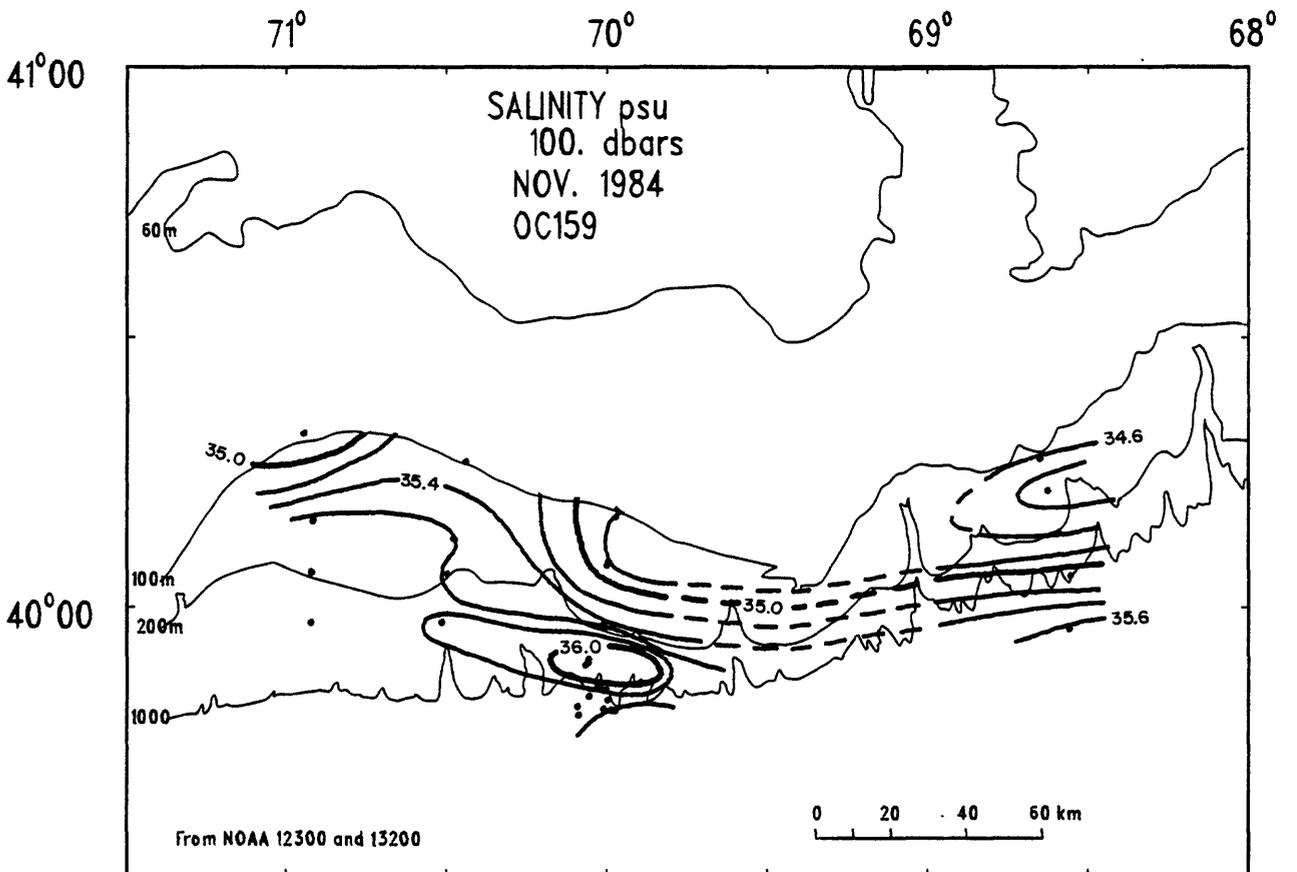
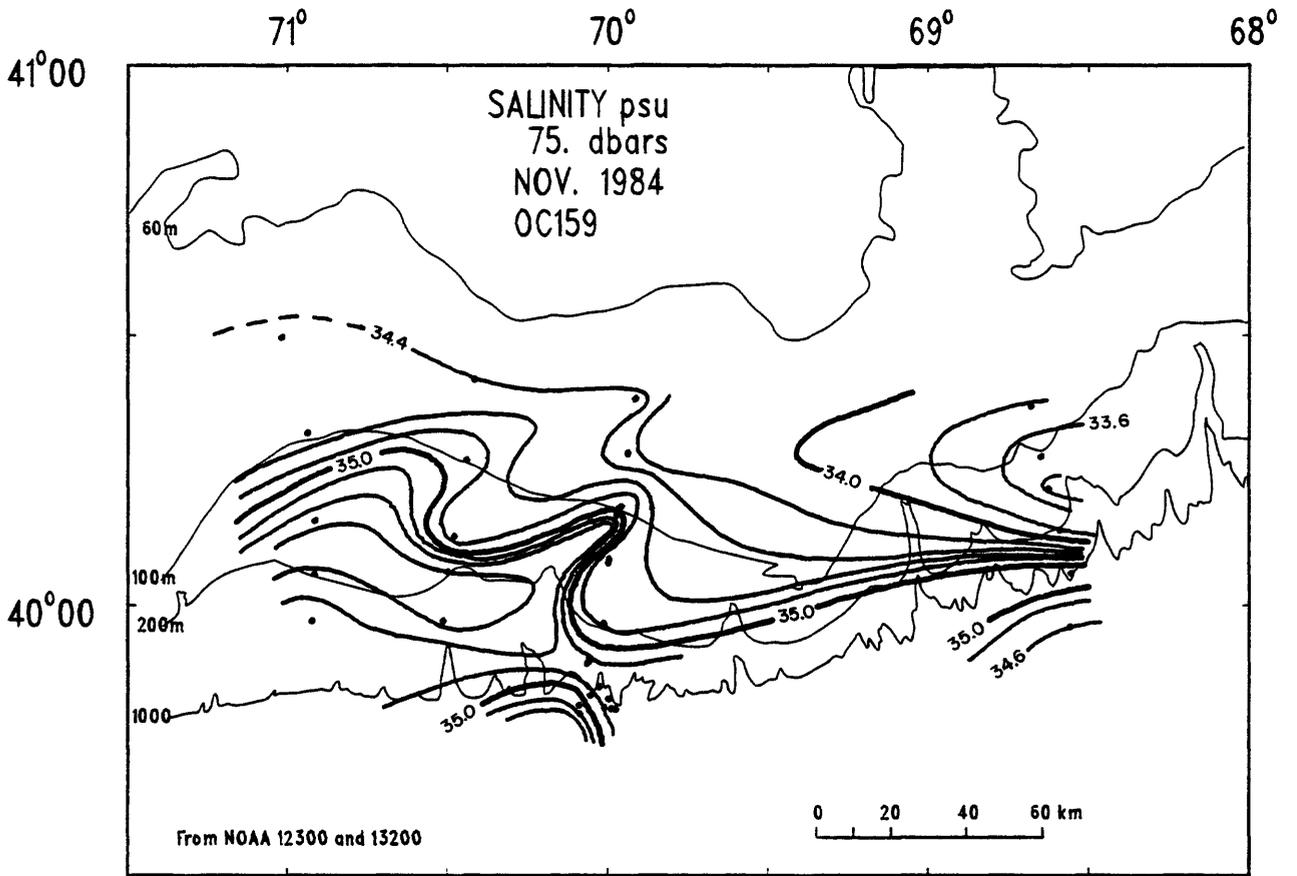
Horizontal sections

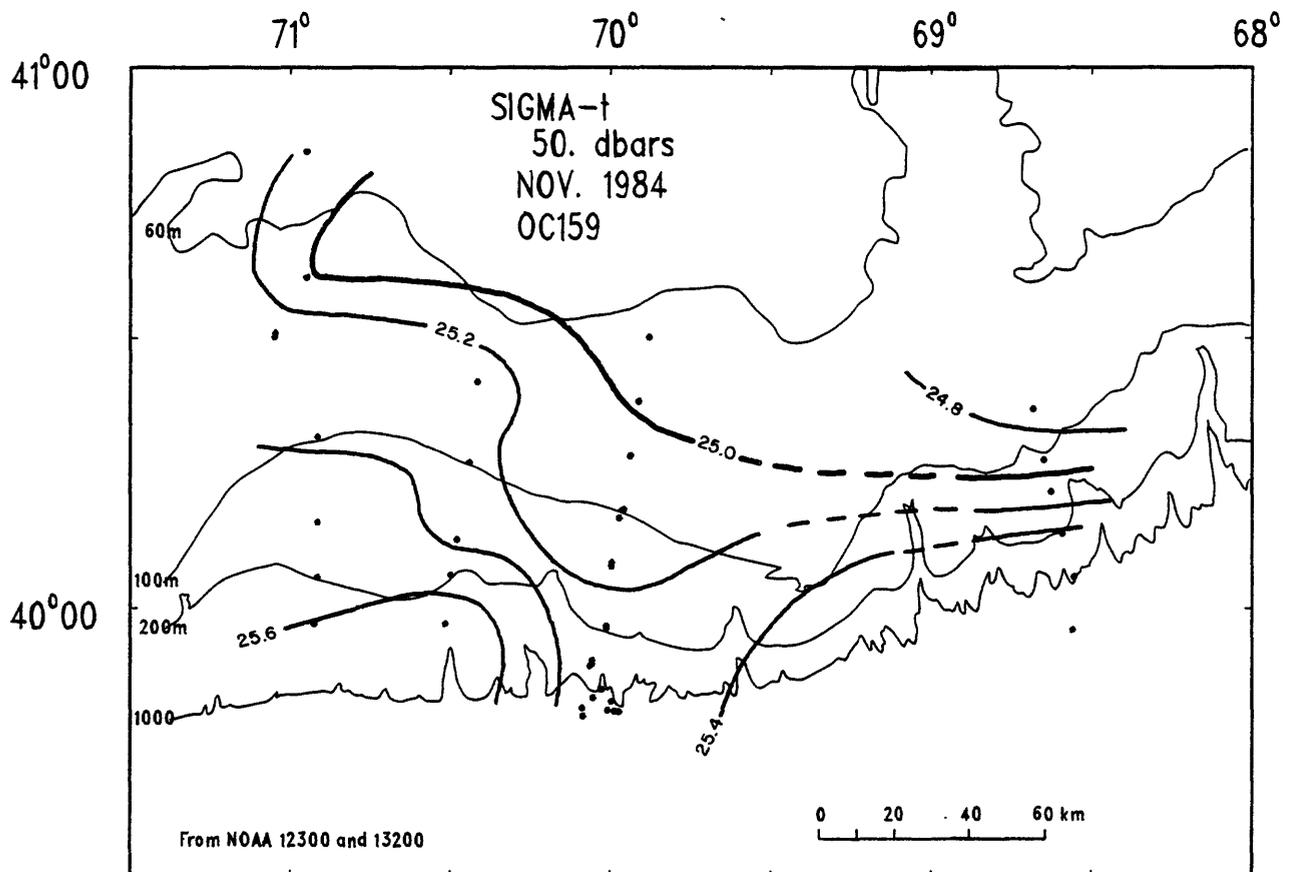
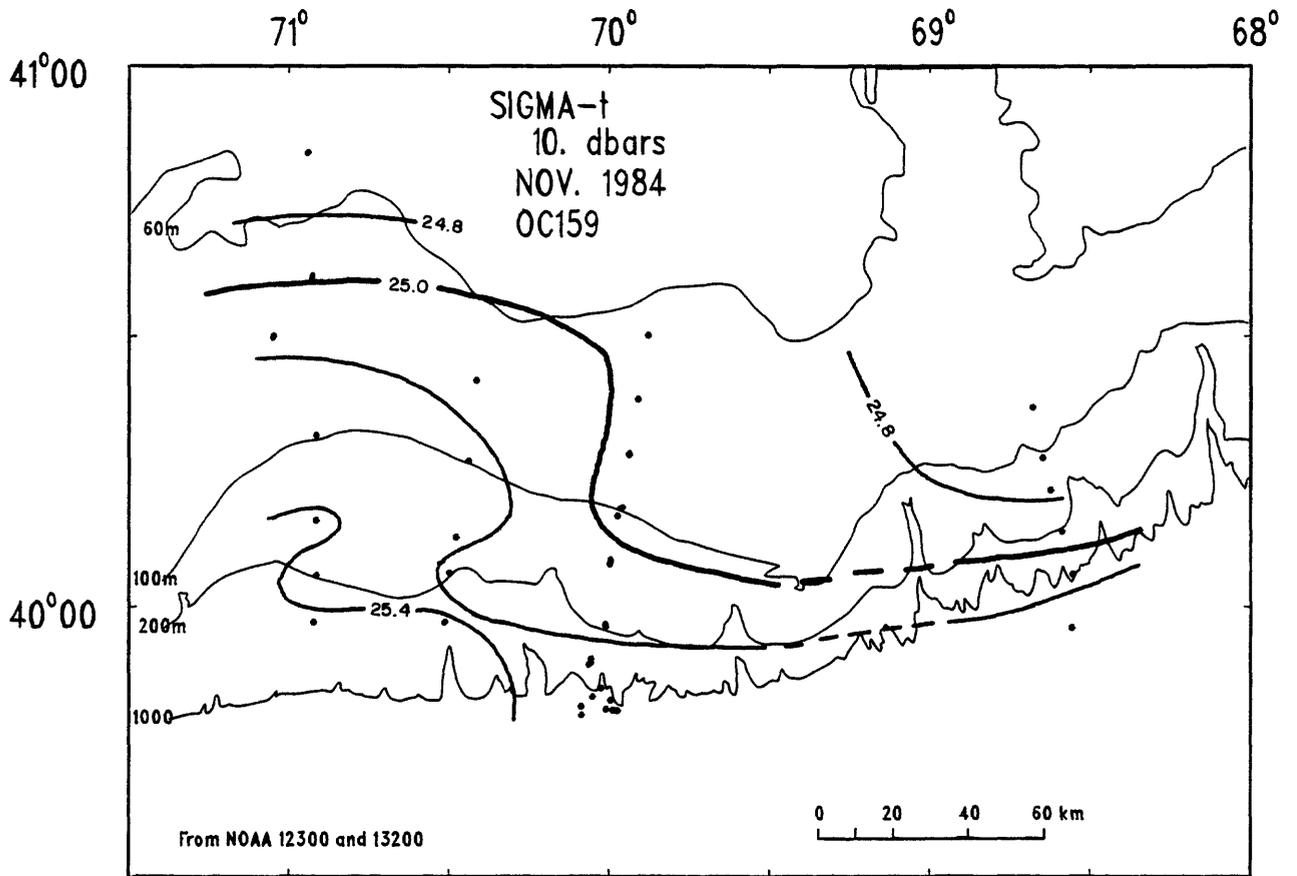
Horizontal sections were constructed on the 10-, 50-, 75- and 100-dbar pressure surfaces for temperature, salinity, density and attenuation coefficient. Surface values of phosphate, silicate, nitrate and ammonia were also contoured. Dots indicate the location of stations that were used in contouring the section and all sections were contoured by hand due to the sparse data.

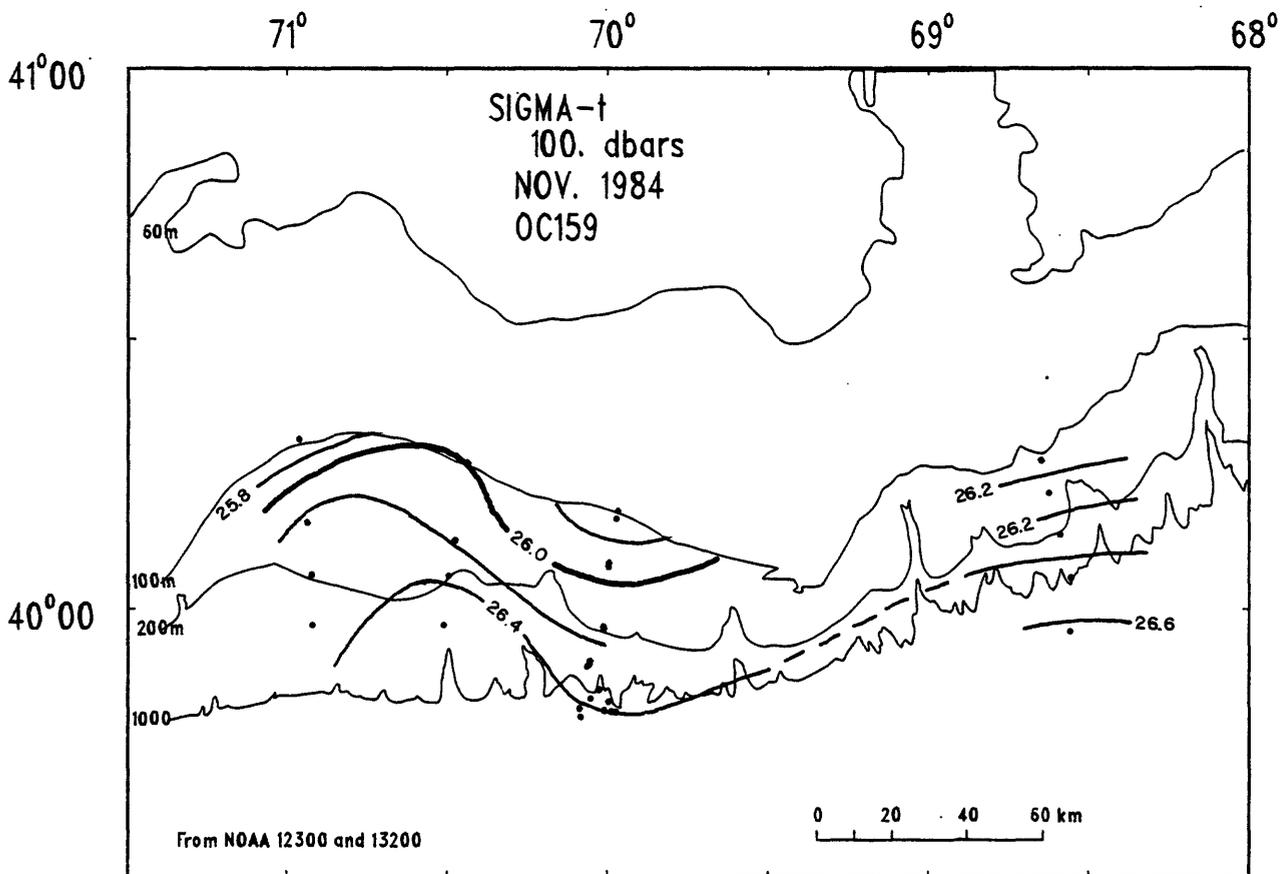
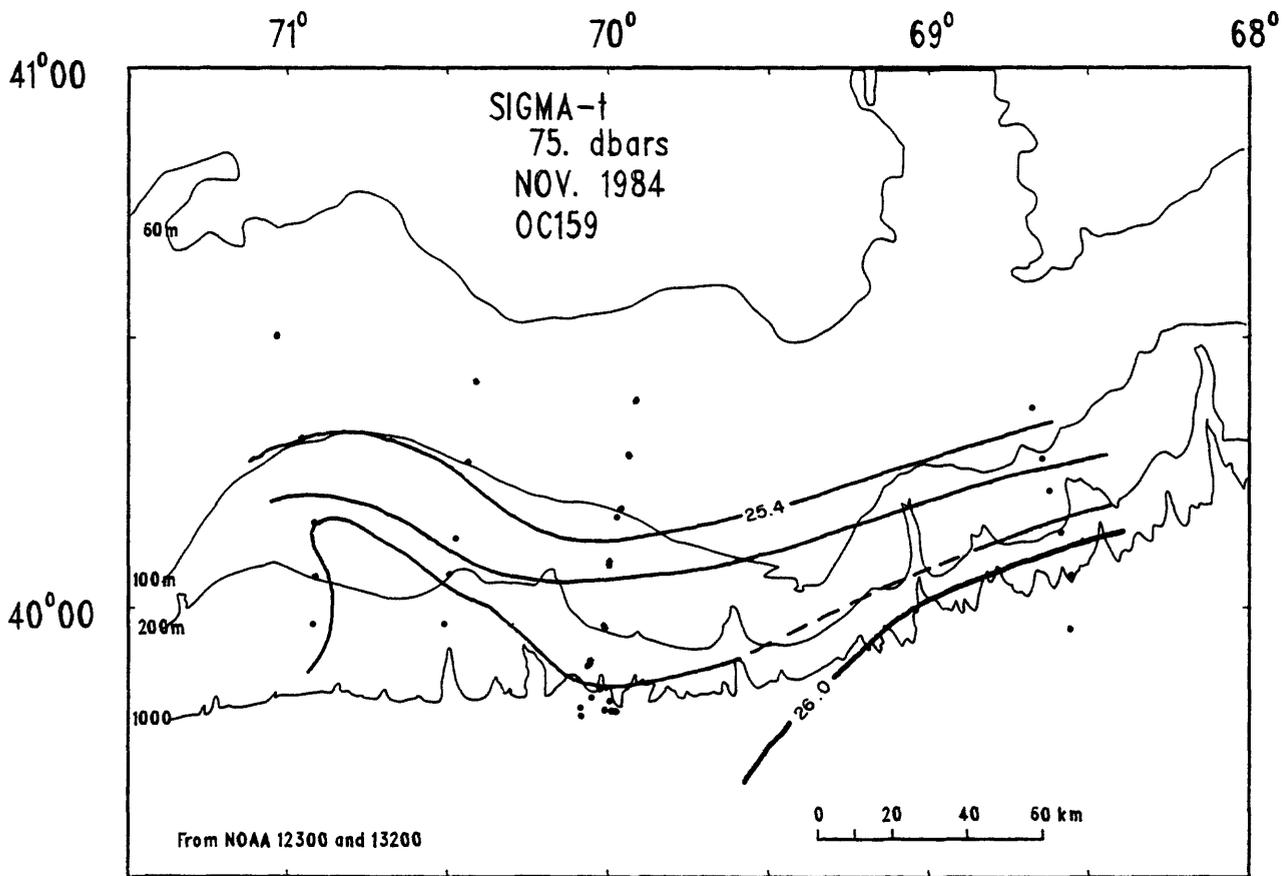


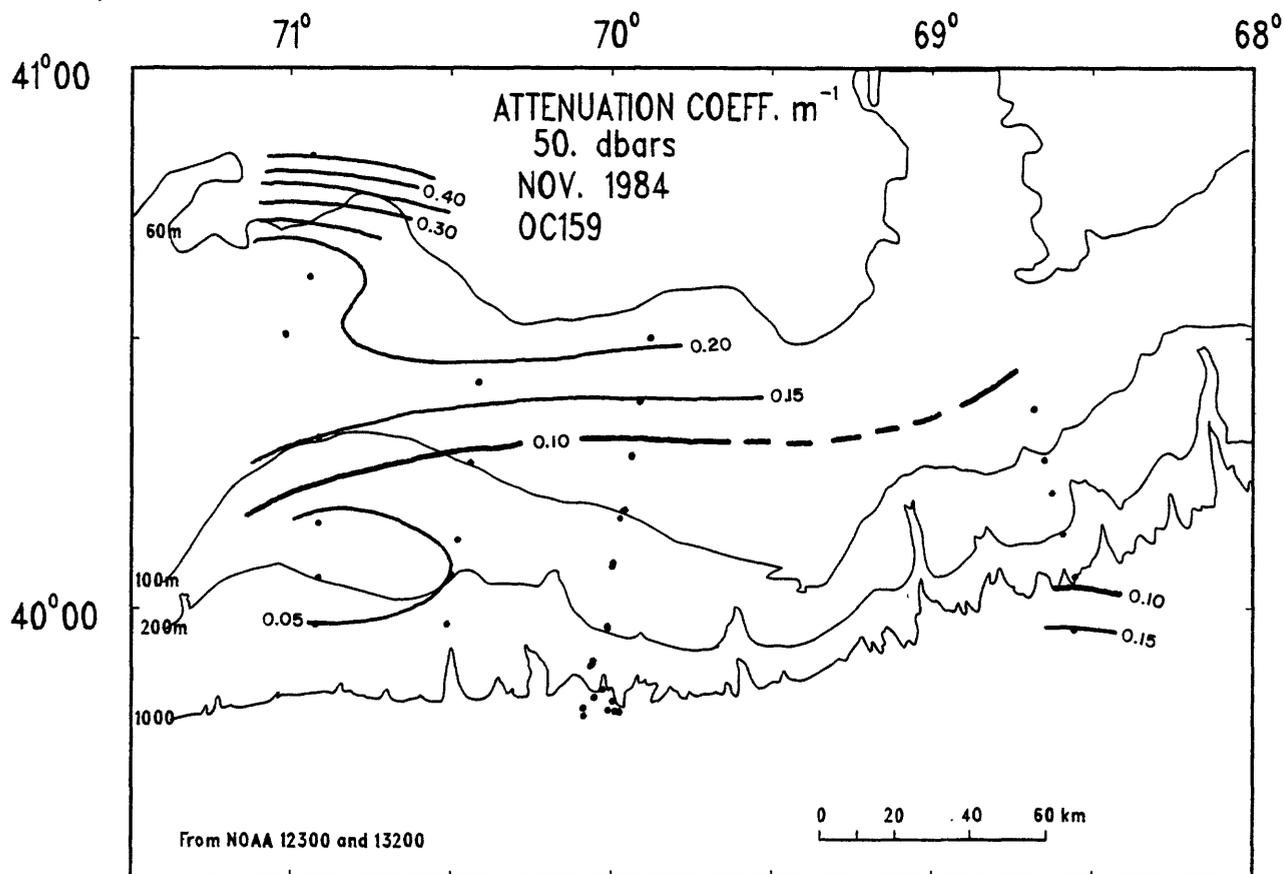
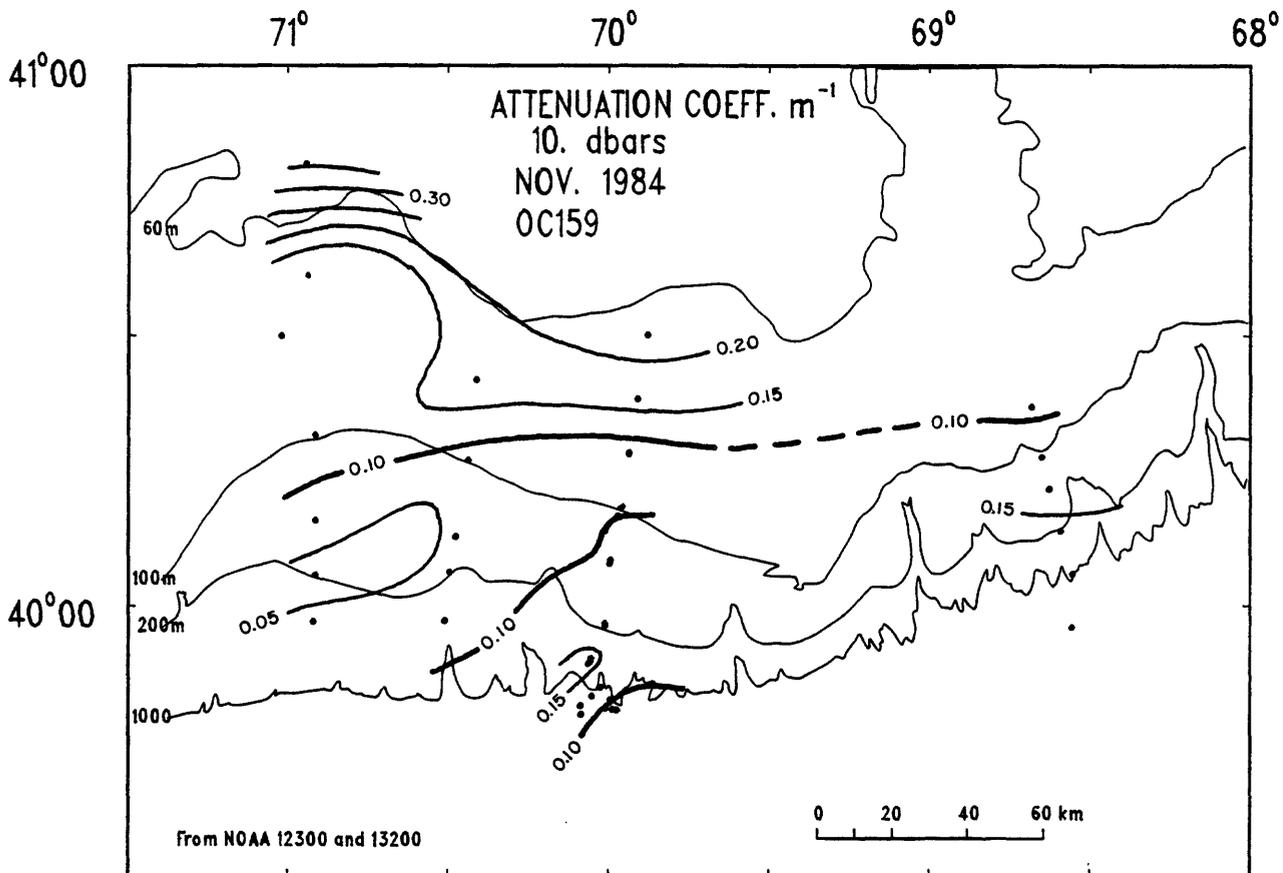


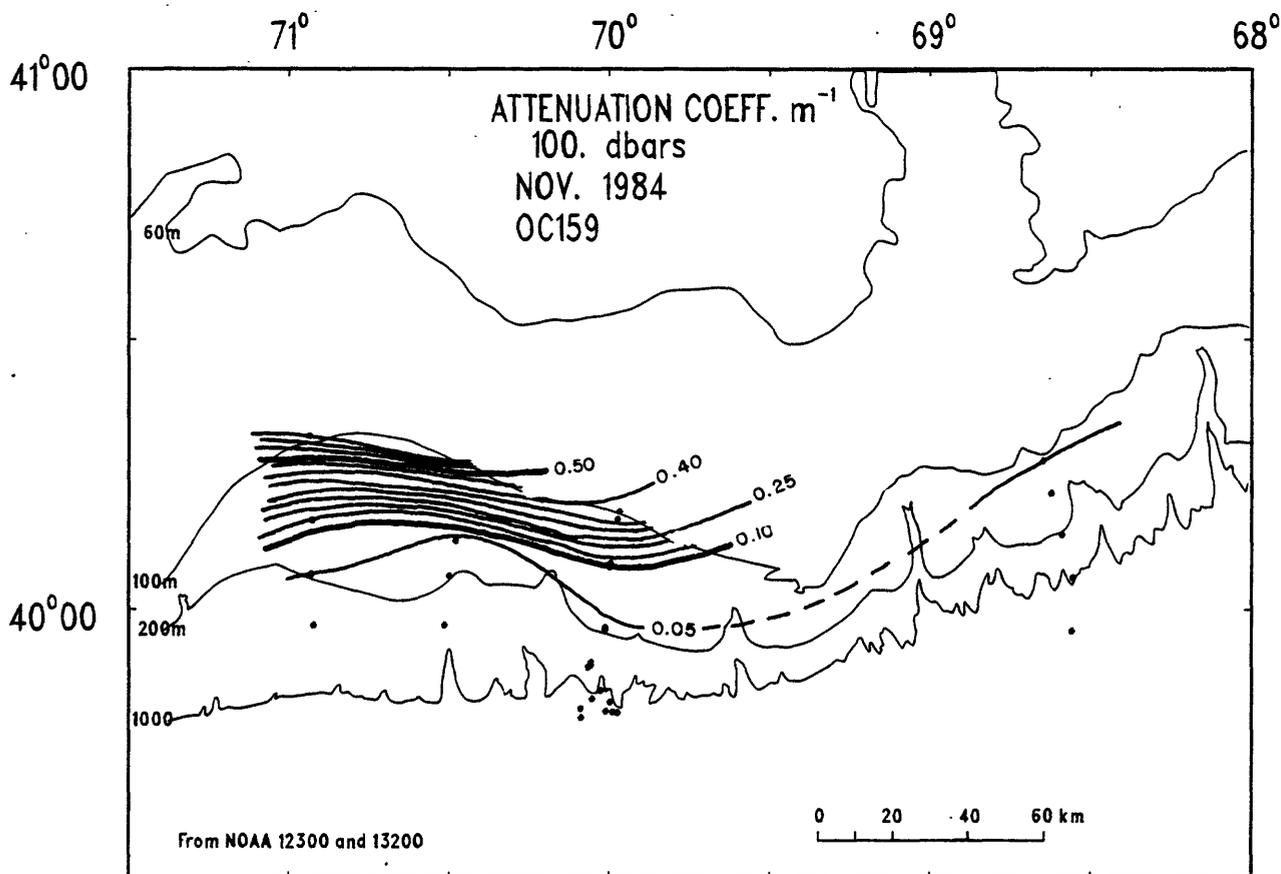
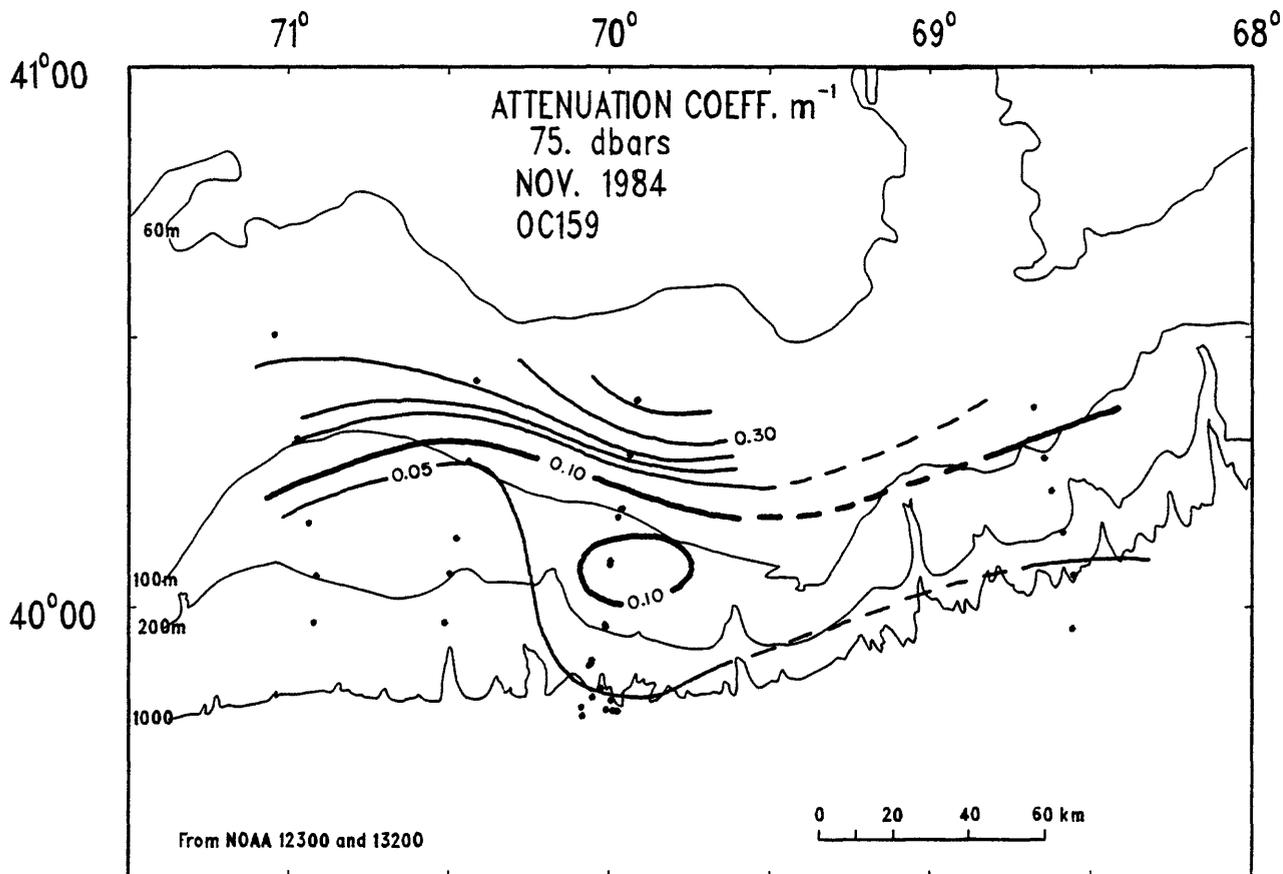


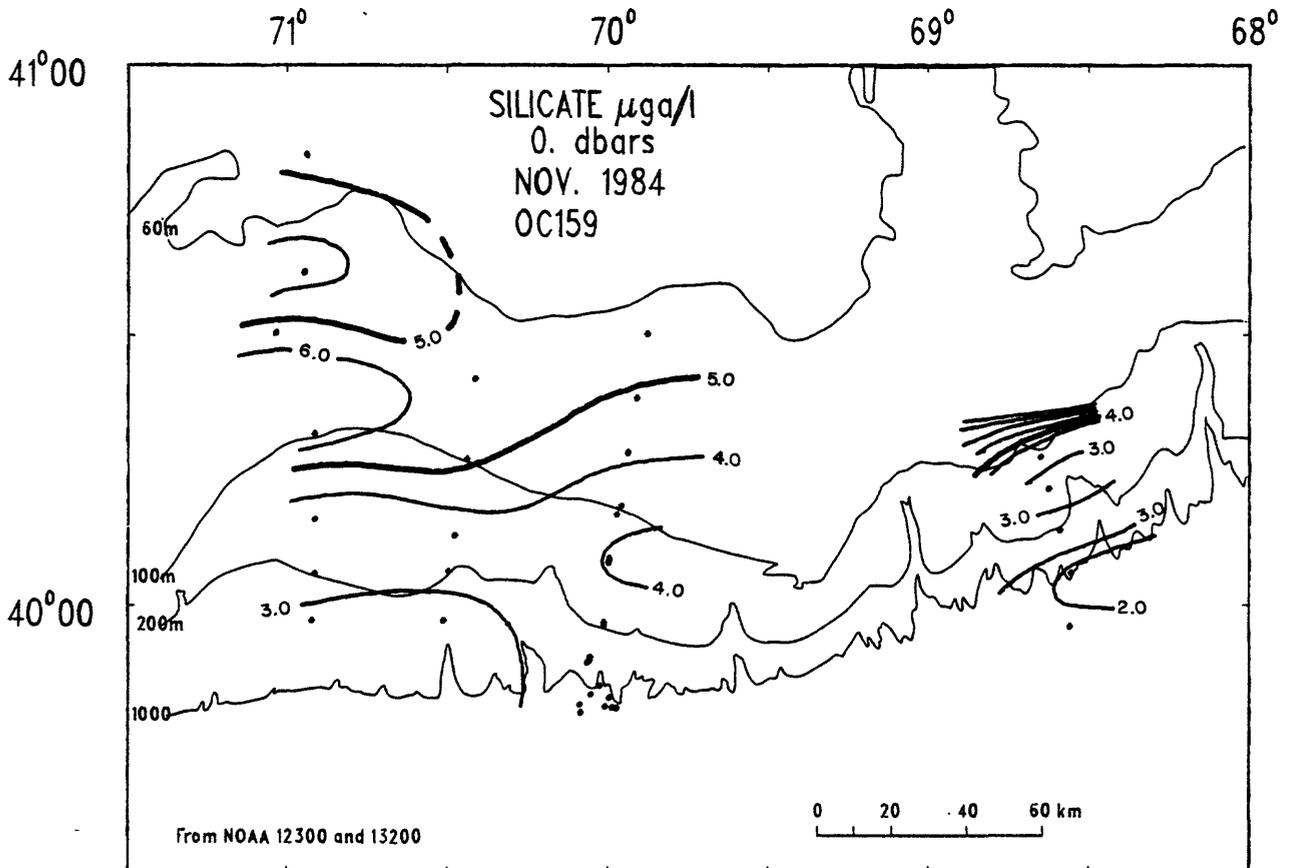
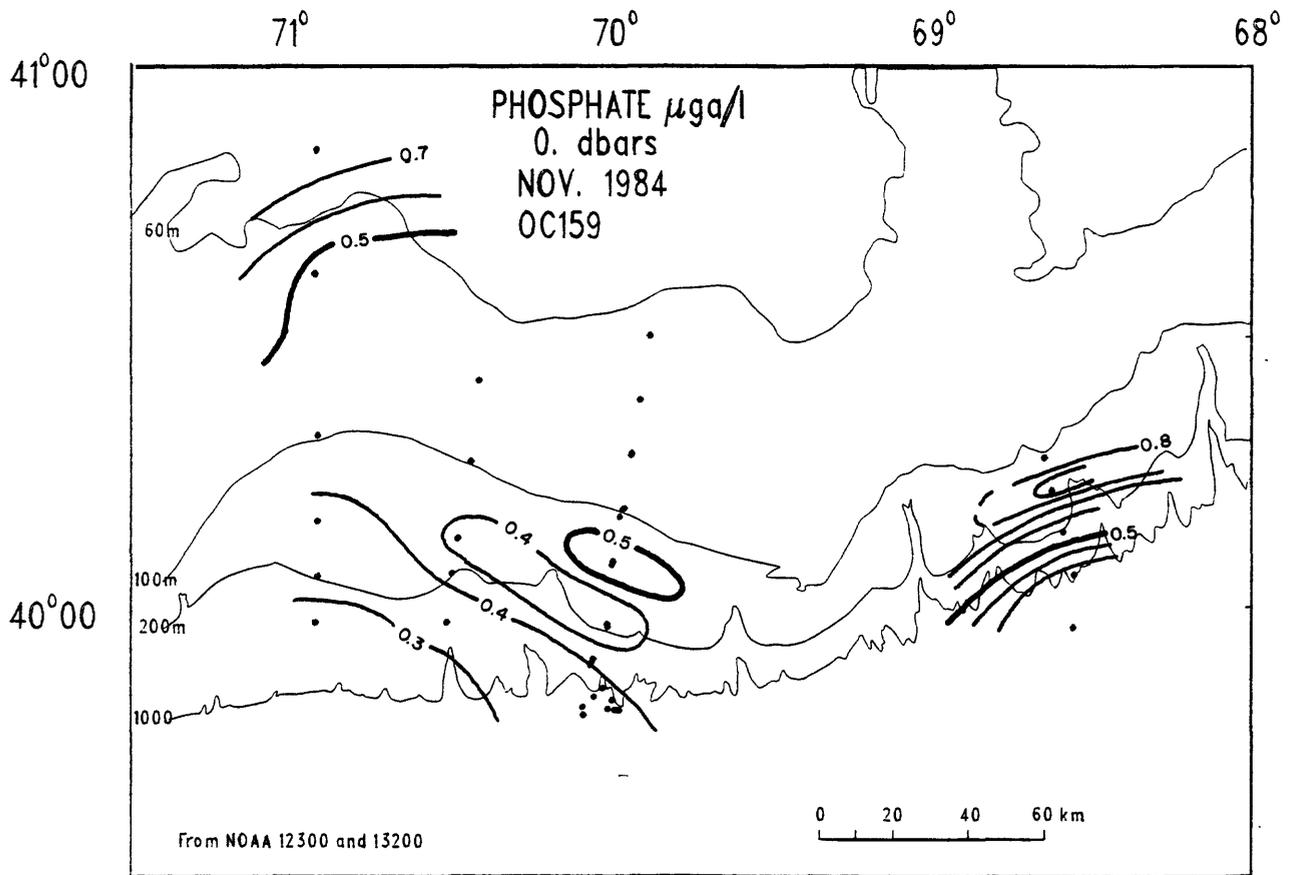


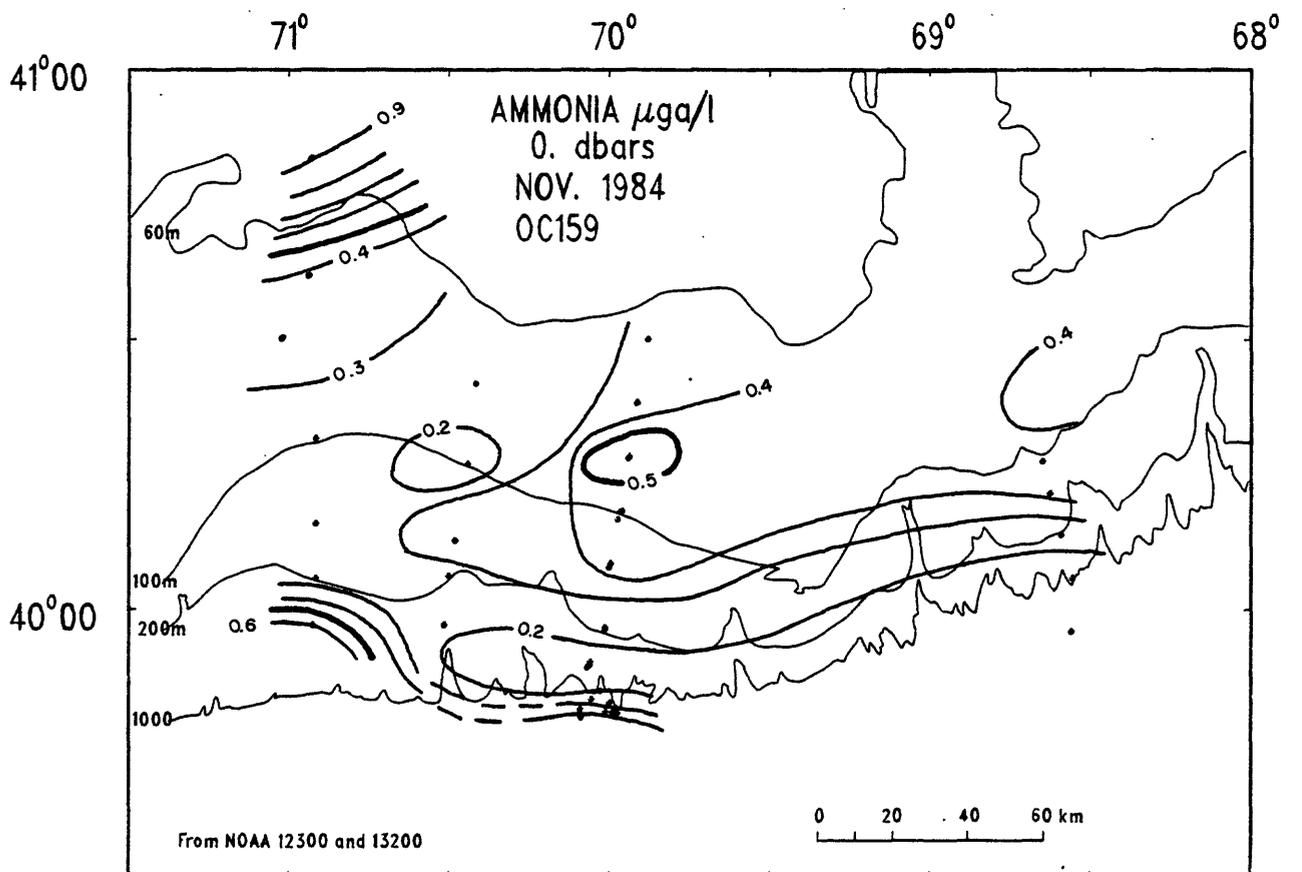
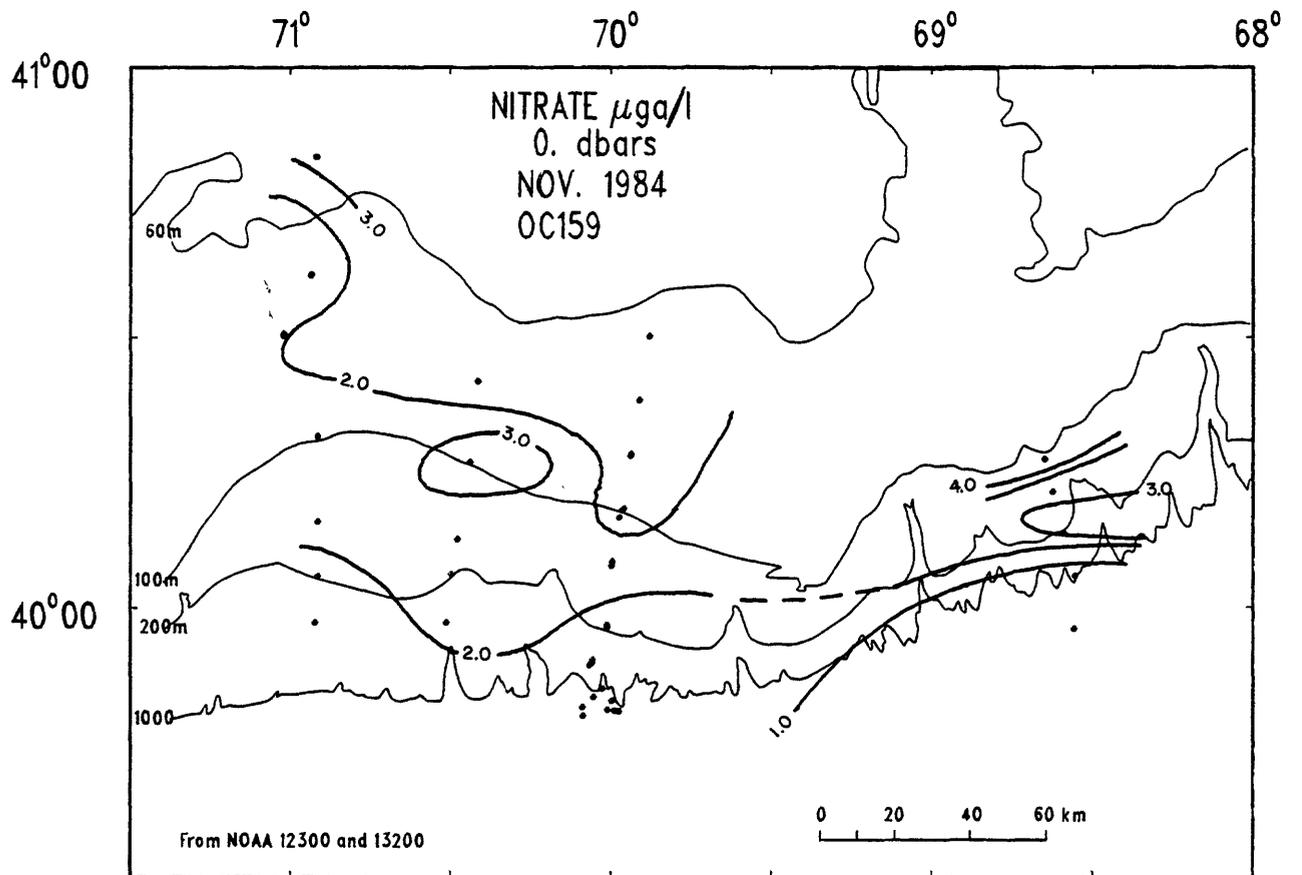










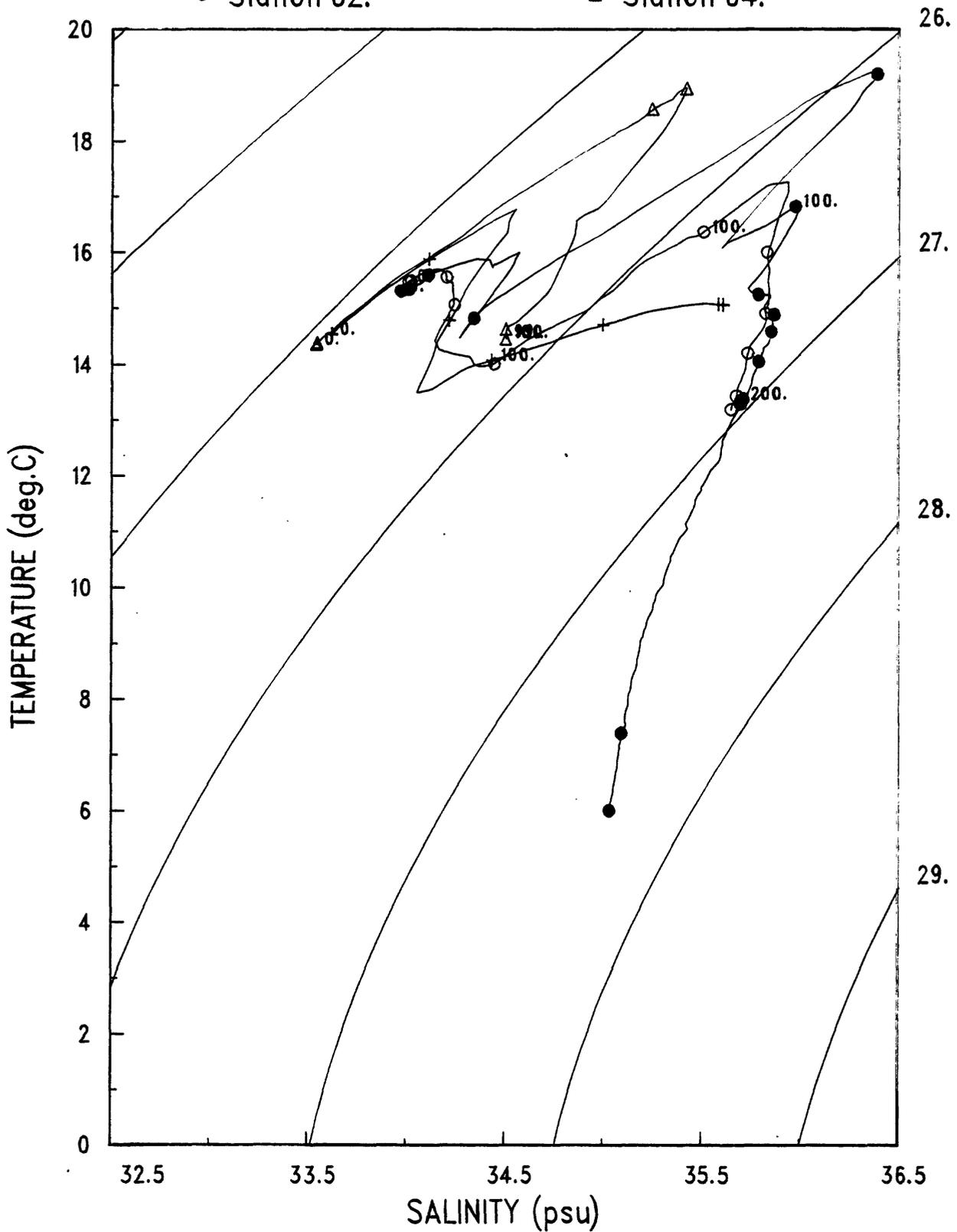


Temperature salinity diagrams

Plots of temperature vs. salinity are by section (see fig. 1). Each station is identified with a different symbol. The symbols are plotted every 20 dbars, and the 100-, 200-, and 600-dbar points have been labelled.

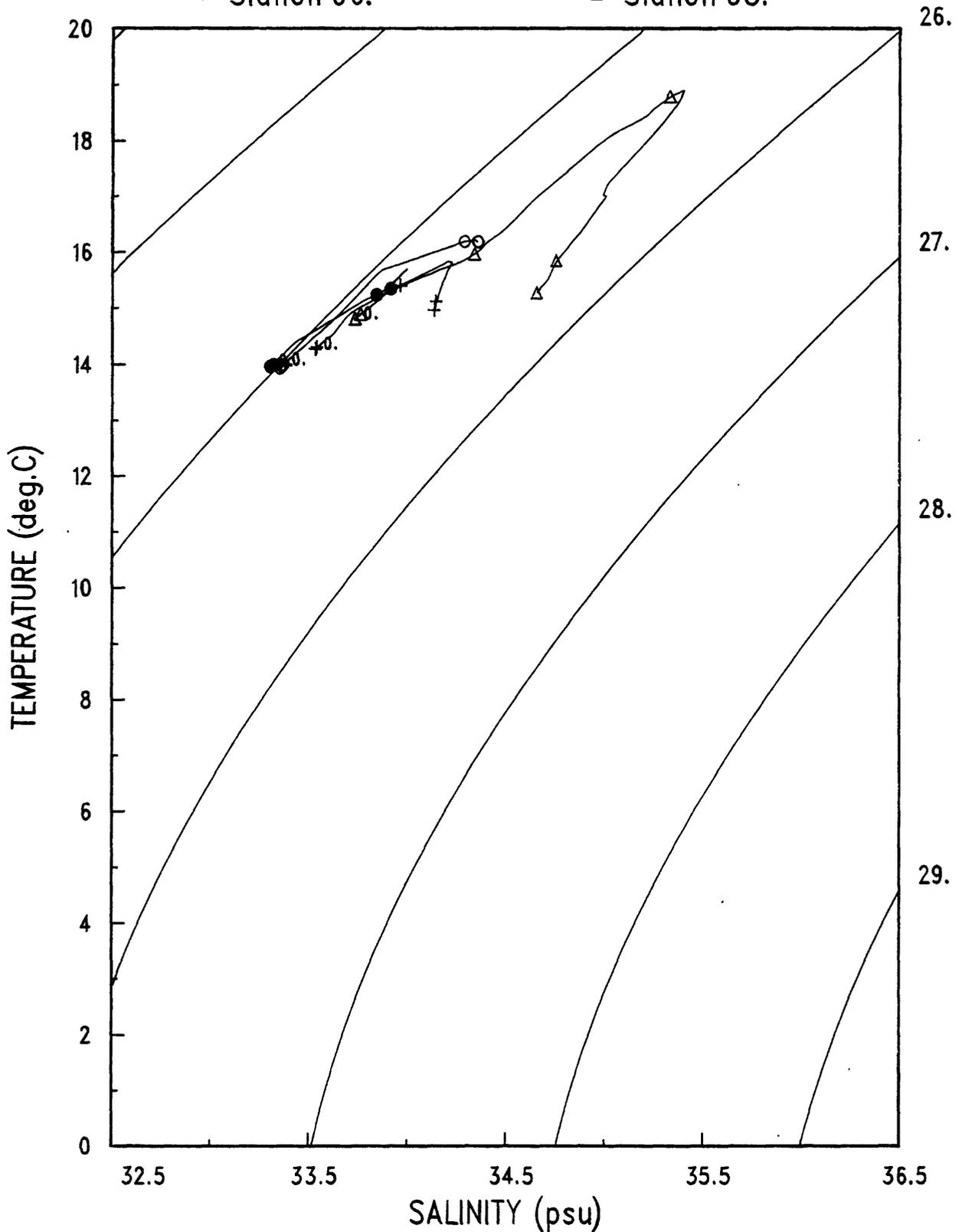
OC159--TS Diagram--Section 1

- Station 01.
- Station 02.
- + Station 03.
- △ Station 04.



OC159--TS Diagram--Section 2

- Station 05.
- Station 06.
- + Station 07.
- △ Station 08.



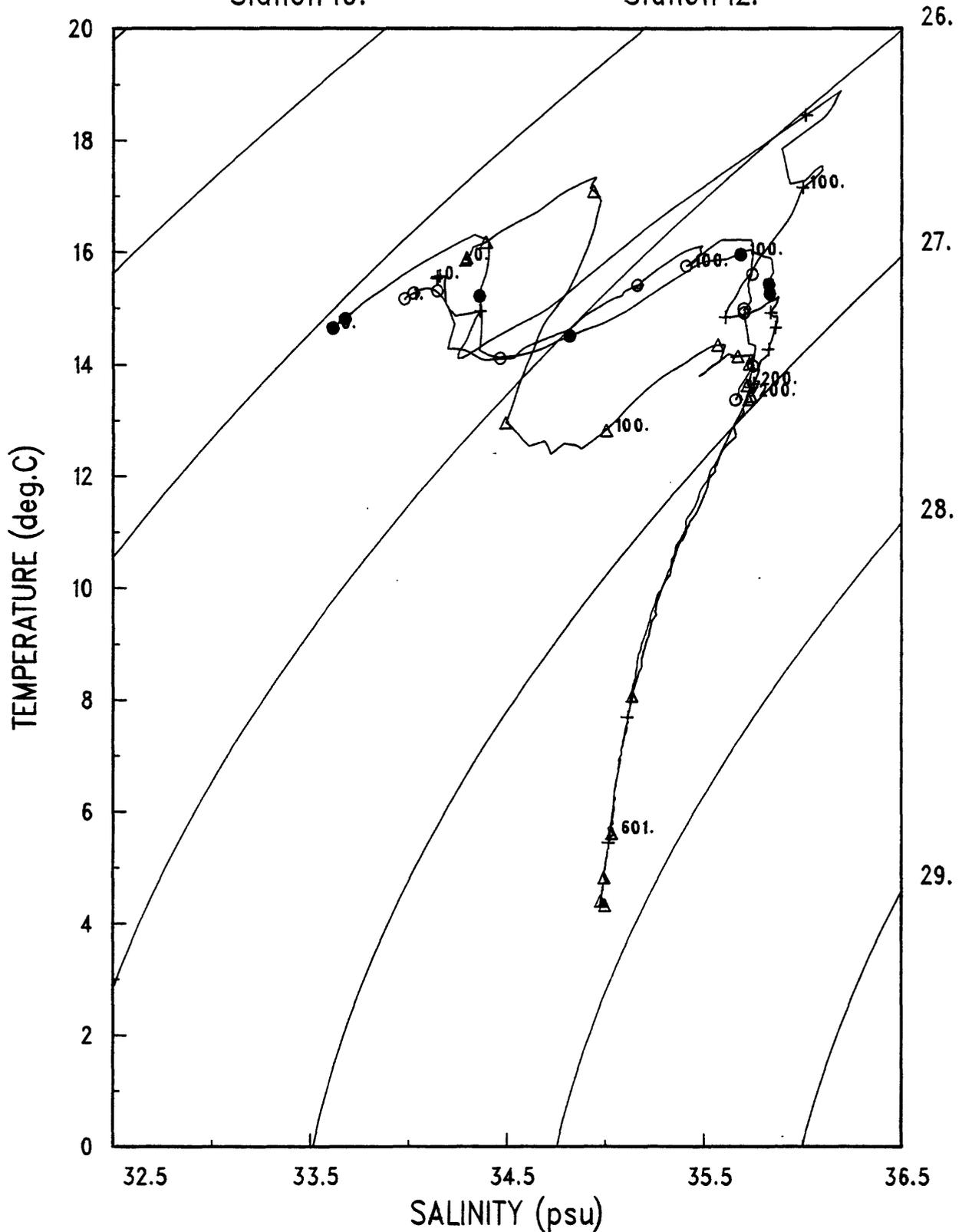
OC159--TS Diagram--Section 2

● Station 09.

+ Station 11.

○ Station 10.

△ Station 12.

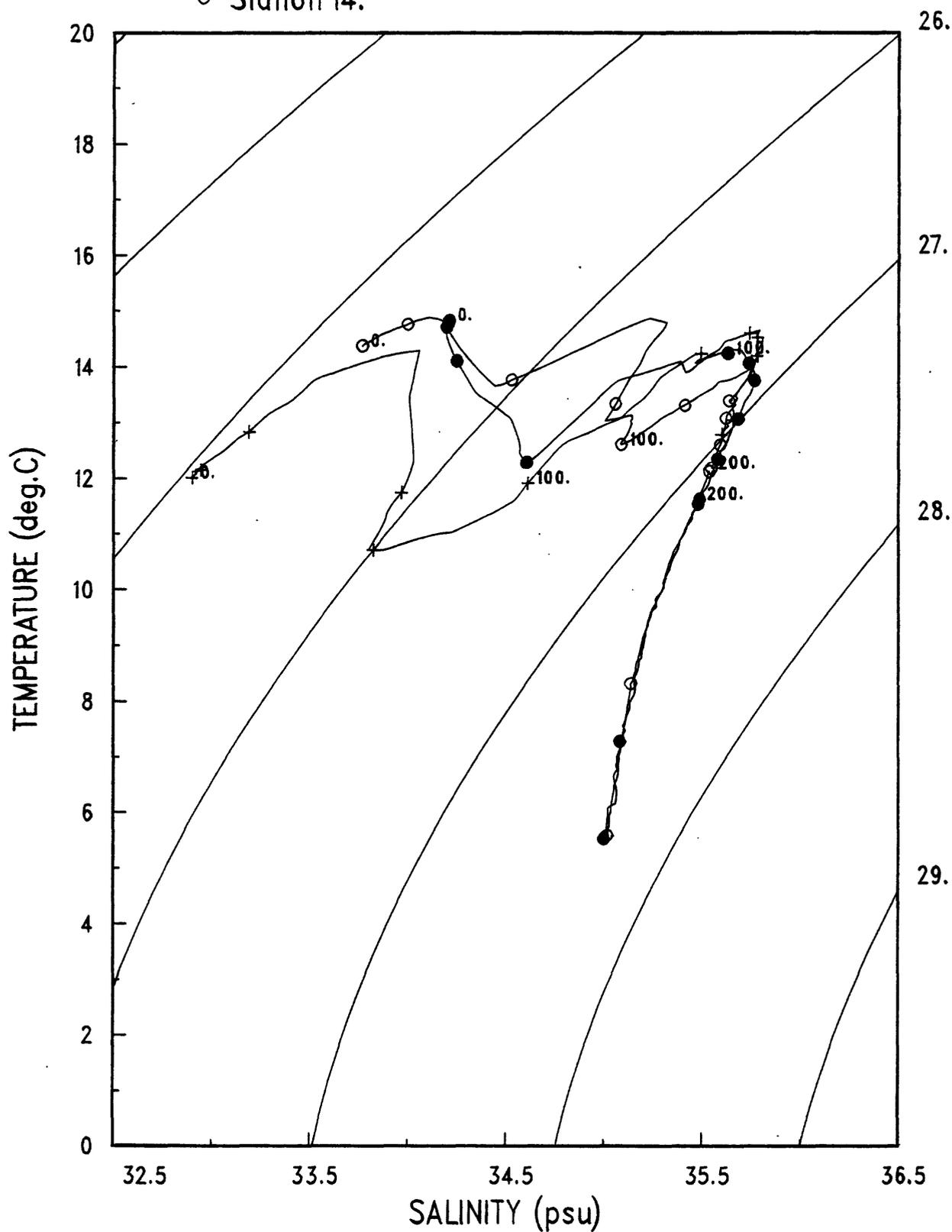


OC159--TS Diagram--Section 3

● Station 13.

+ Station 15.

○ Station 14.

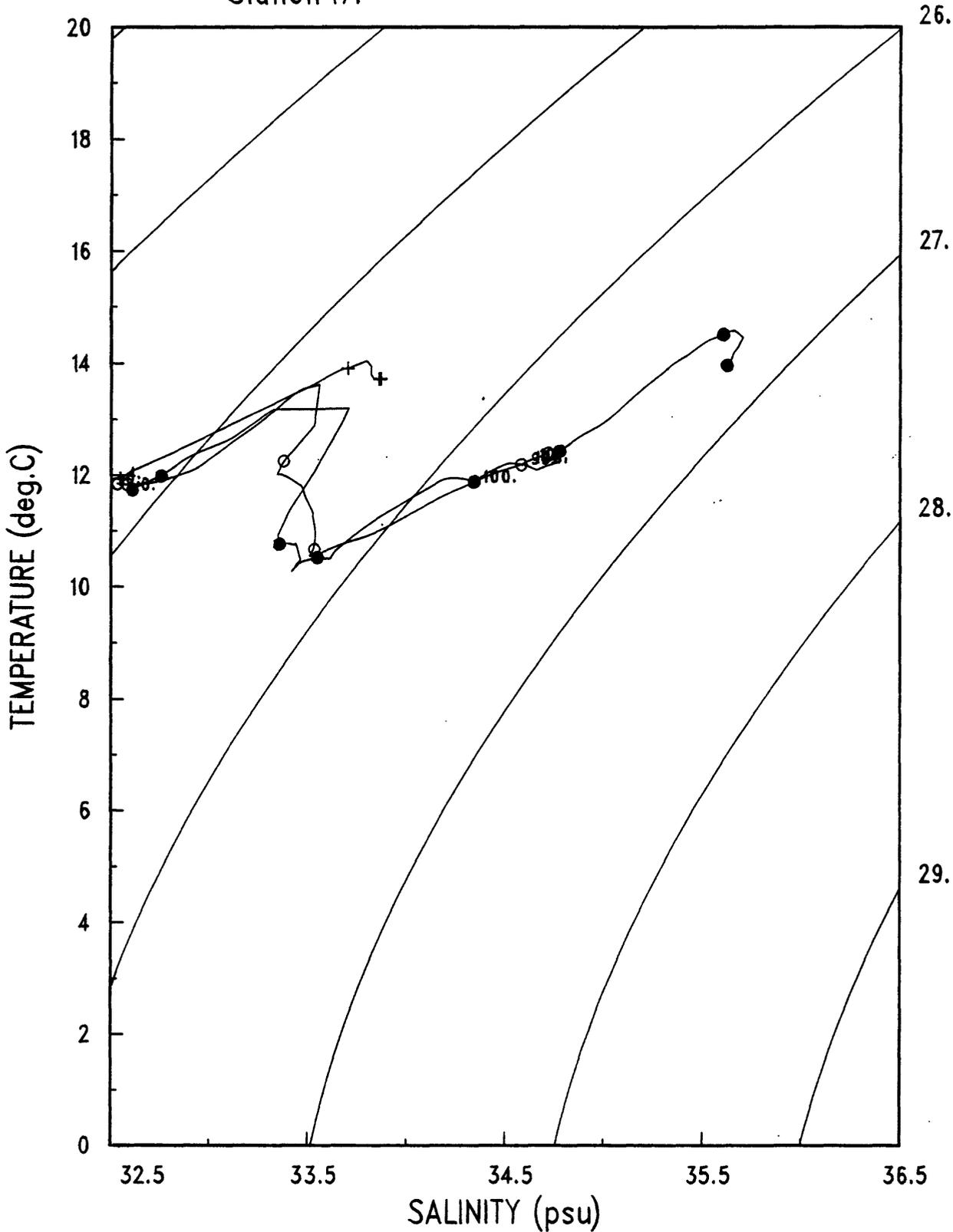


OC159--TS Diagram--Section 3

● Station 16.

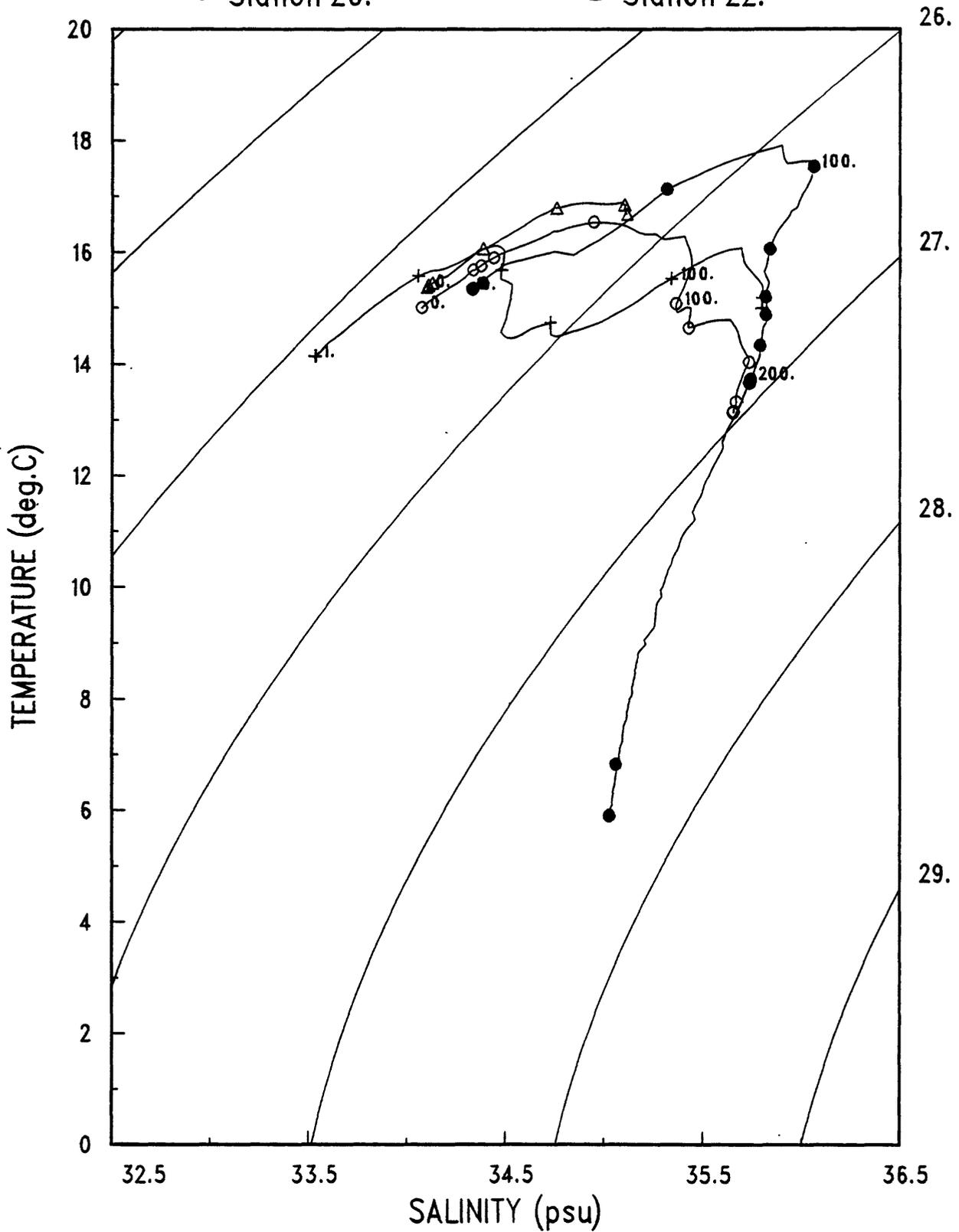
+ Station 18.

○ Station 17.



OC159--TS Diagram--Section 4

- Station 19.
- Station 20.
- + Station 21.
- △ Station 22.

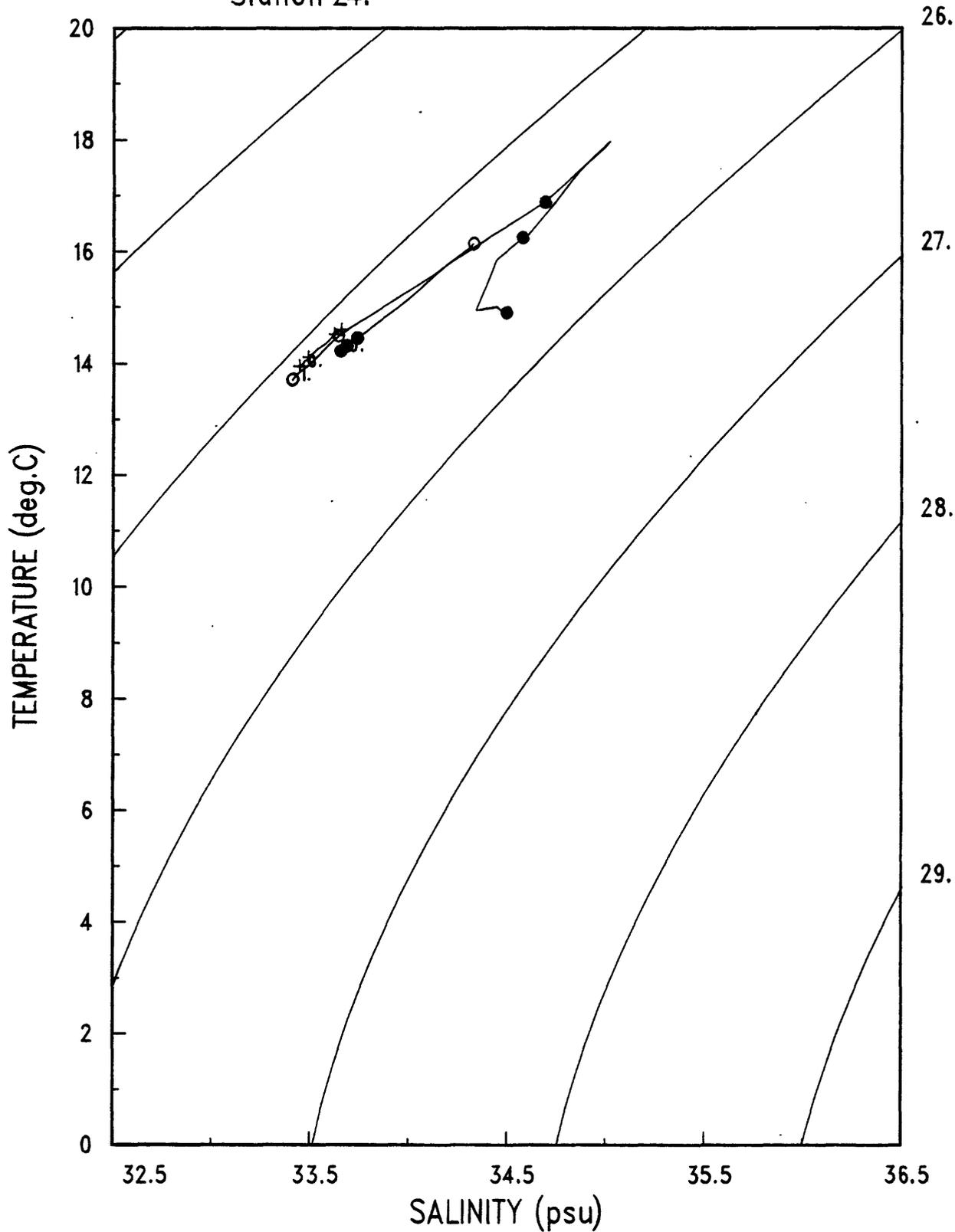


OC159--TS Diagram--Section 4

● Station 23.

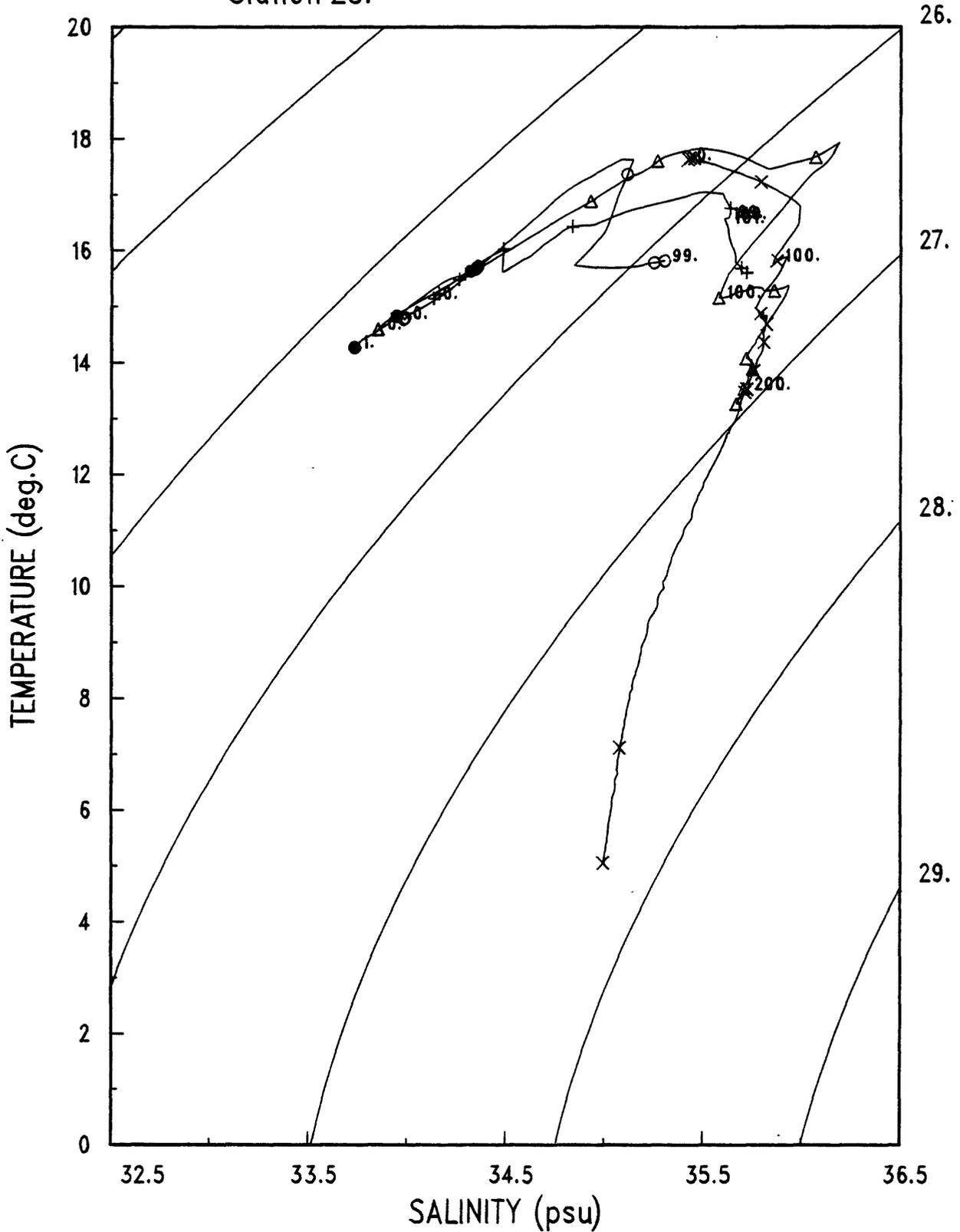
+ Station 25.

○ Station 24.



OC159--TS Diagram--Section 5

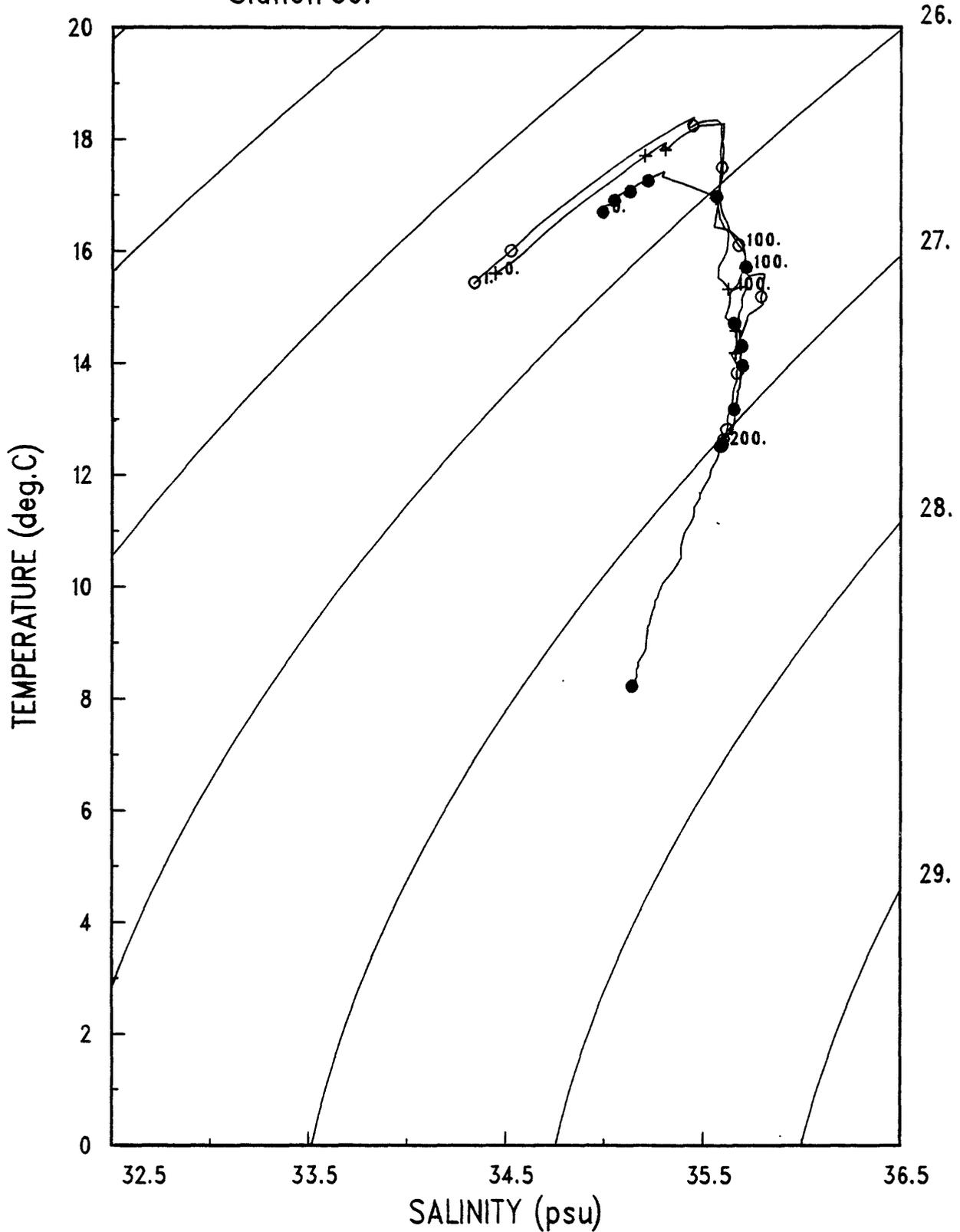
- Station 26.
- Station 27.
- + Station 28.
- △ Station 29.
- × Station 30.



OC159--TS Diagram--Section 6

● Station 38.
○ Station 39.

+ Station 40.



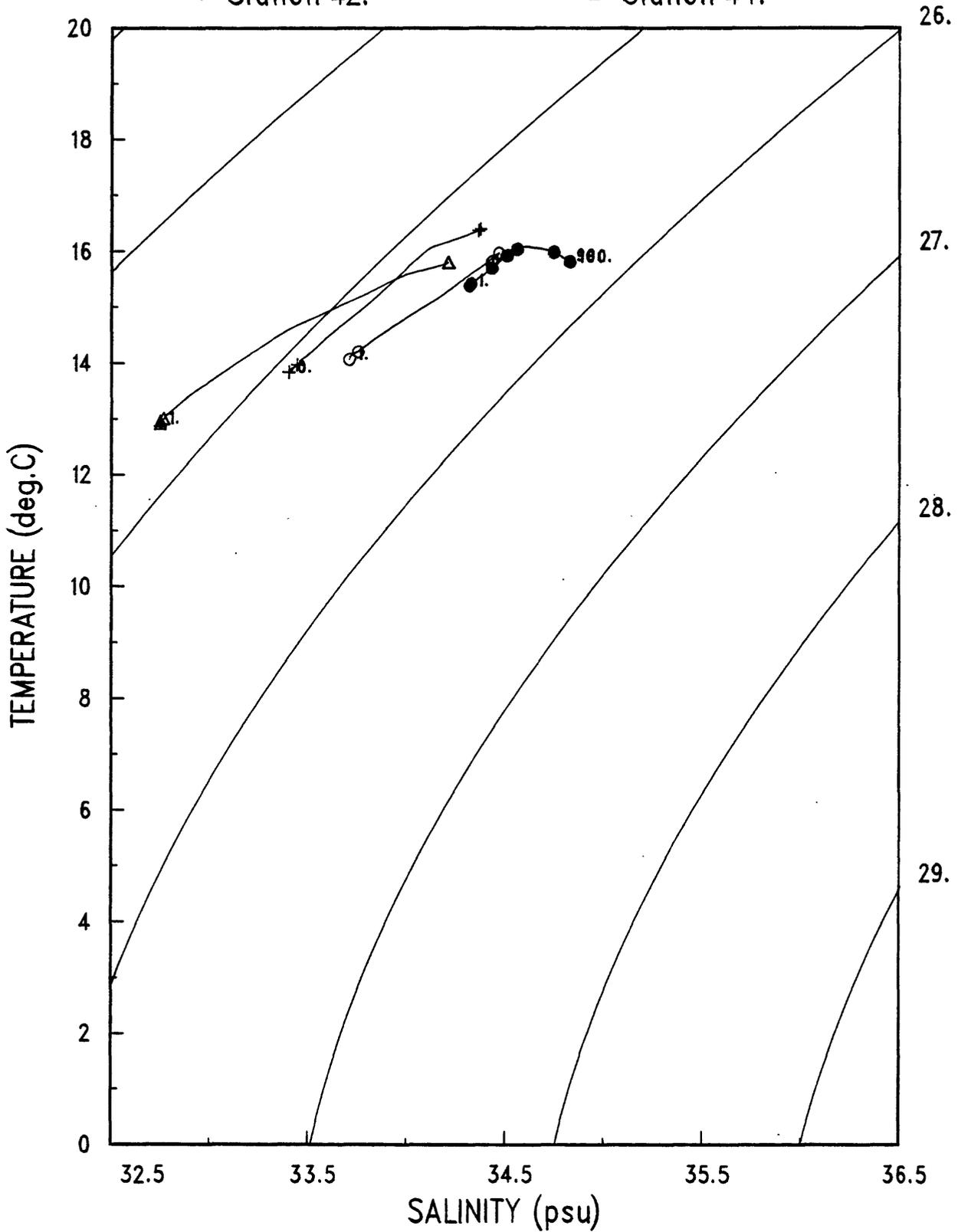
OC159--TS Diagram--Section 6

● Station 41.

+ Station 43.

○ Station 42.

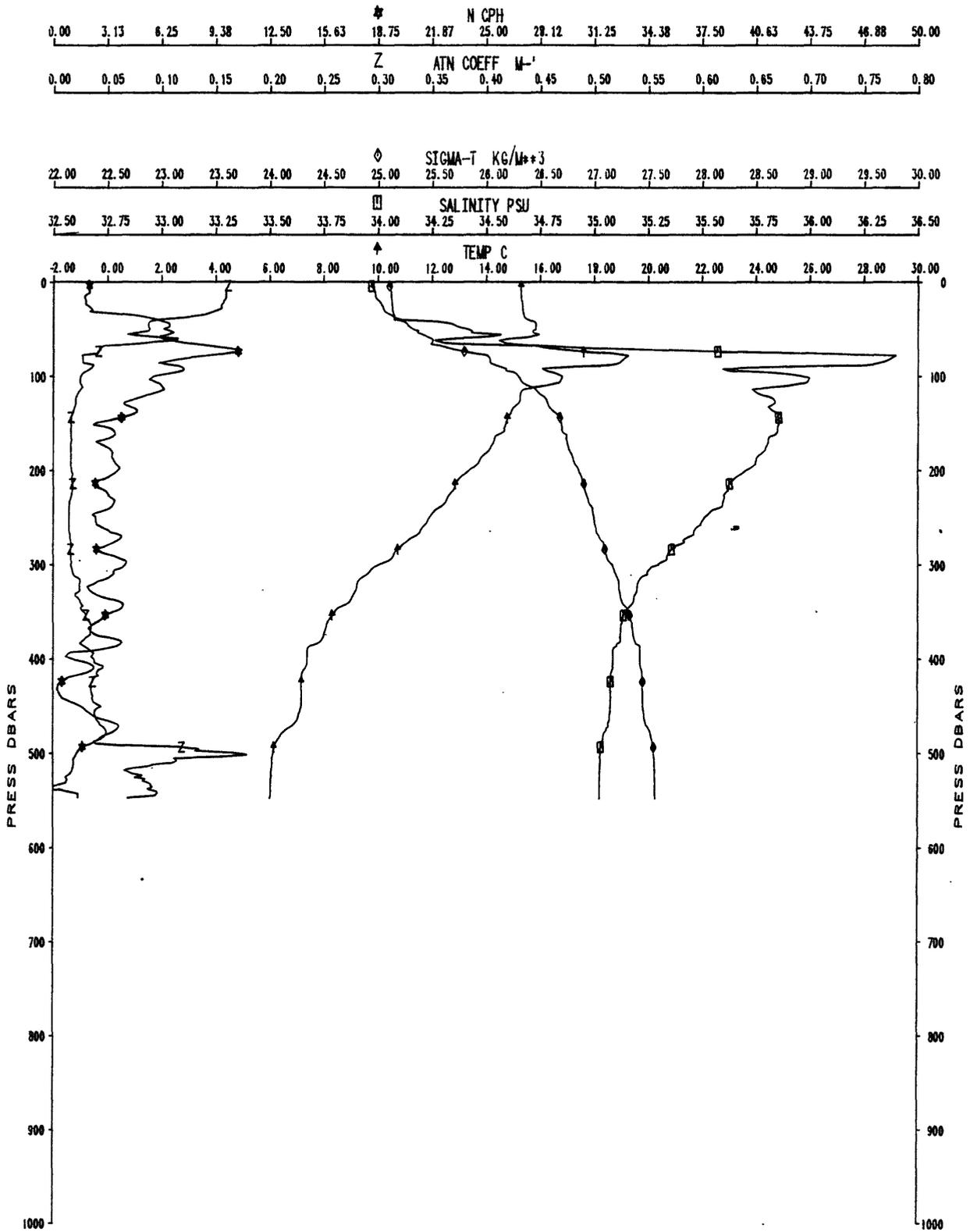
△ Station 44.



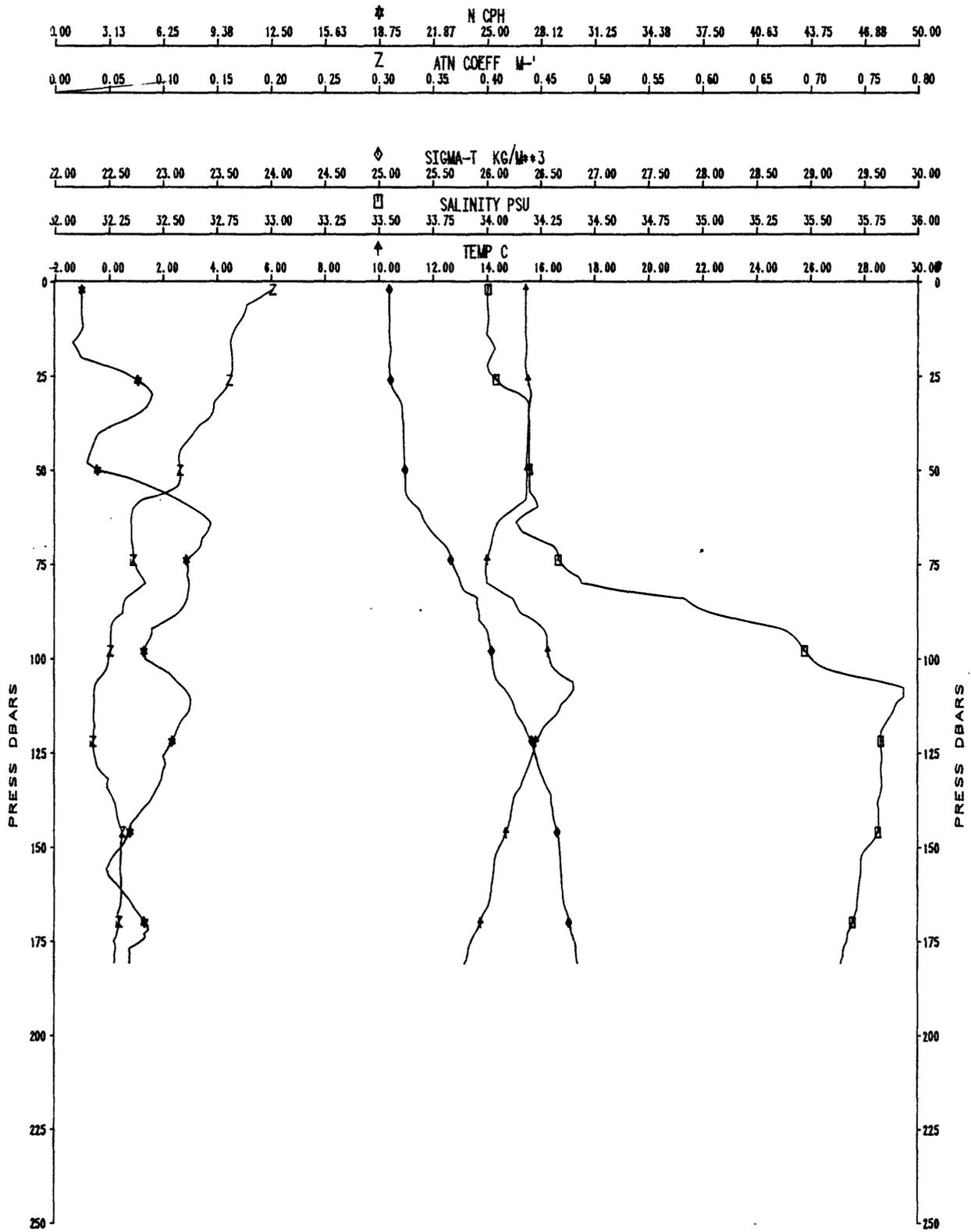
Station profiles

Vertical profiles of temperature, salinity, sigma-t, oxygen, attenuation coefficient, and Brunt-Vaisala frequency at each station (figures 26-66). The profiles are drawn using the 2-dbar-averaged data; at approximately 10 dbars above the bottom, the averaging interval becomes 1 dbar. The data are listed in Appendix I. The different symbols used to distinguish variables are shown on each variable axis. The units of salinity are practical salinity units (psu) and are defined by Lewis (1980). The XBT's at station 32, 34 and 36 malfunctioned and no plots are included.

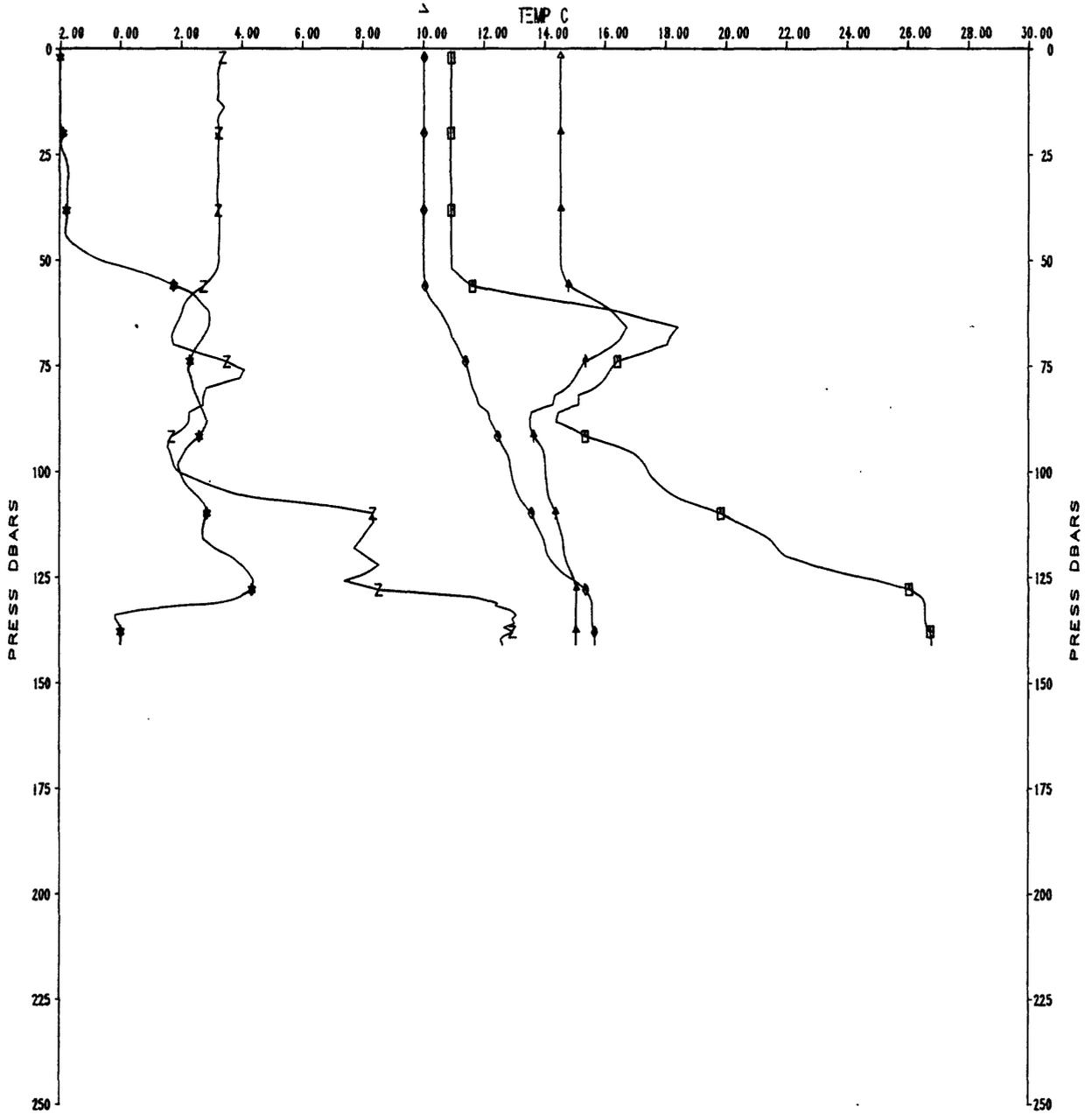
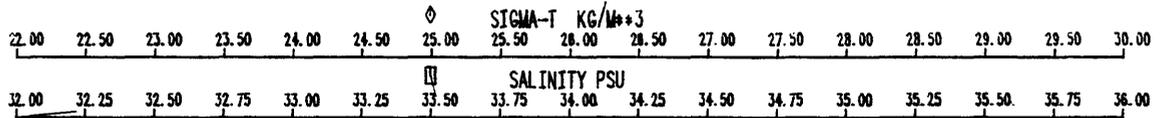
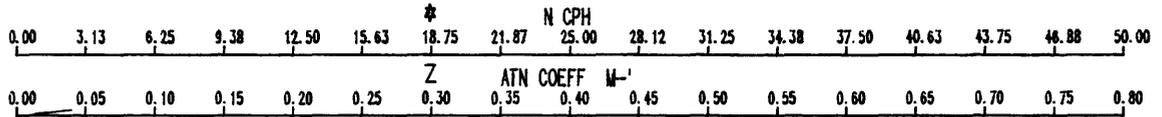
0C159B CAST #1



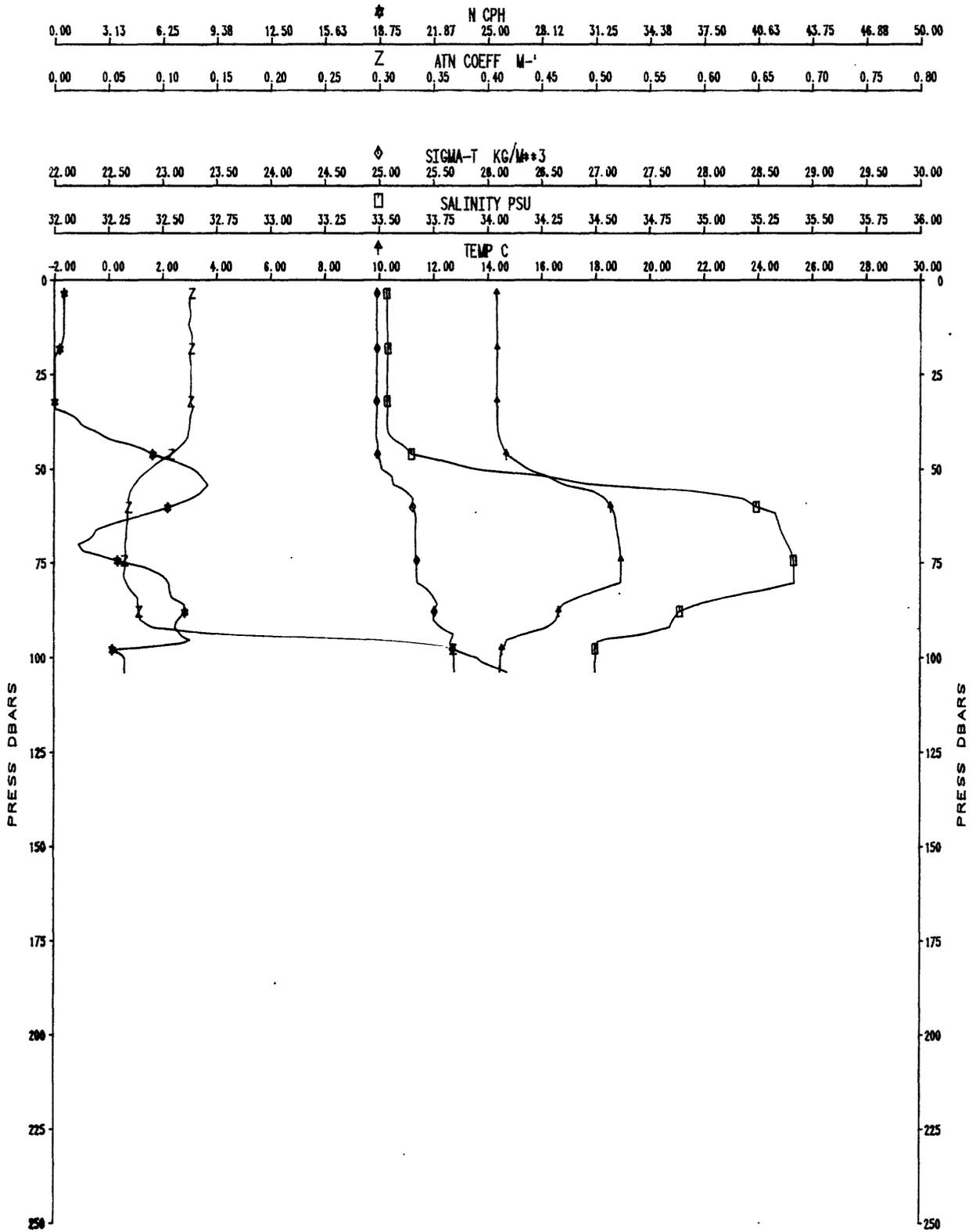
OC159A CAST #2



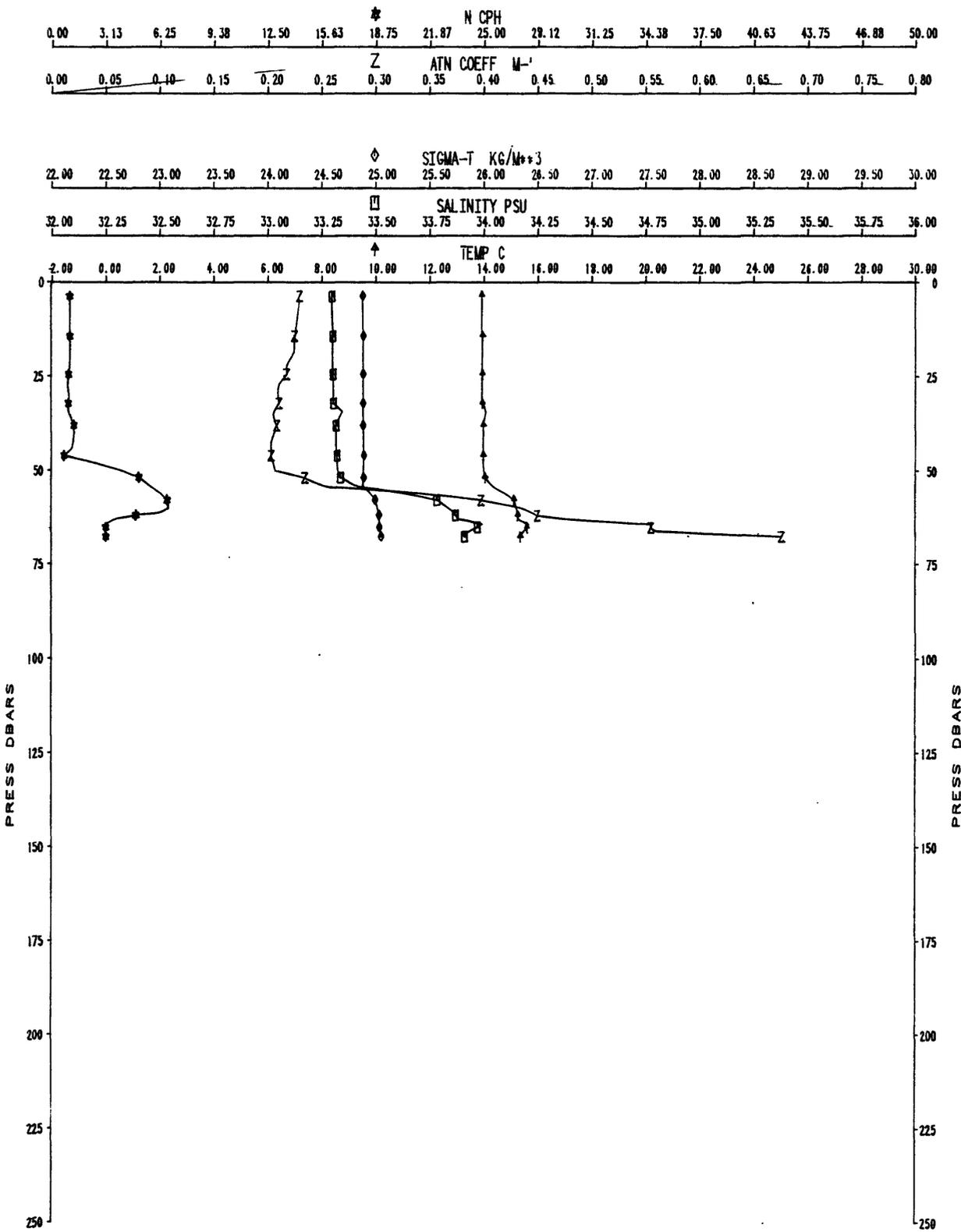
OC159B CAST #3



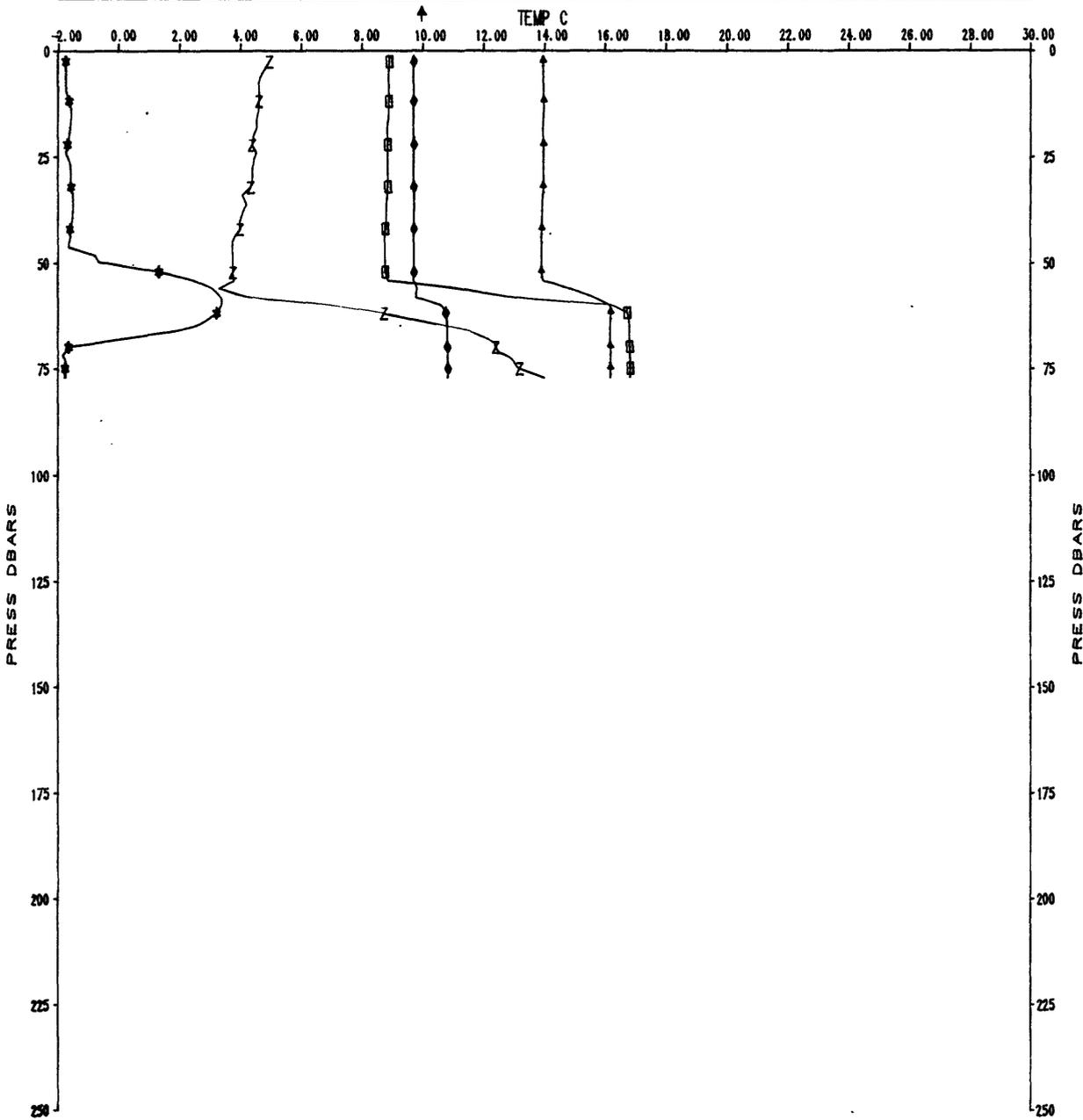
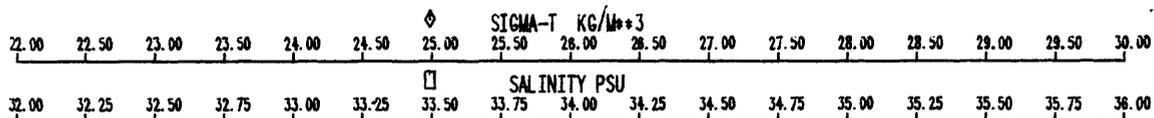
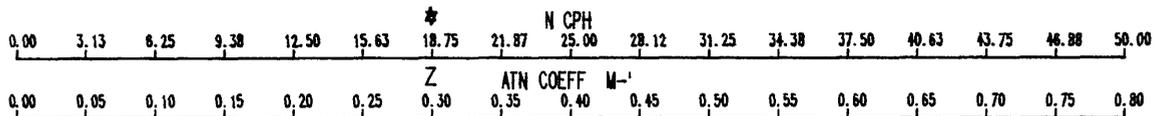
0C159A CAST #4



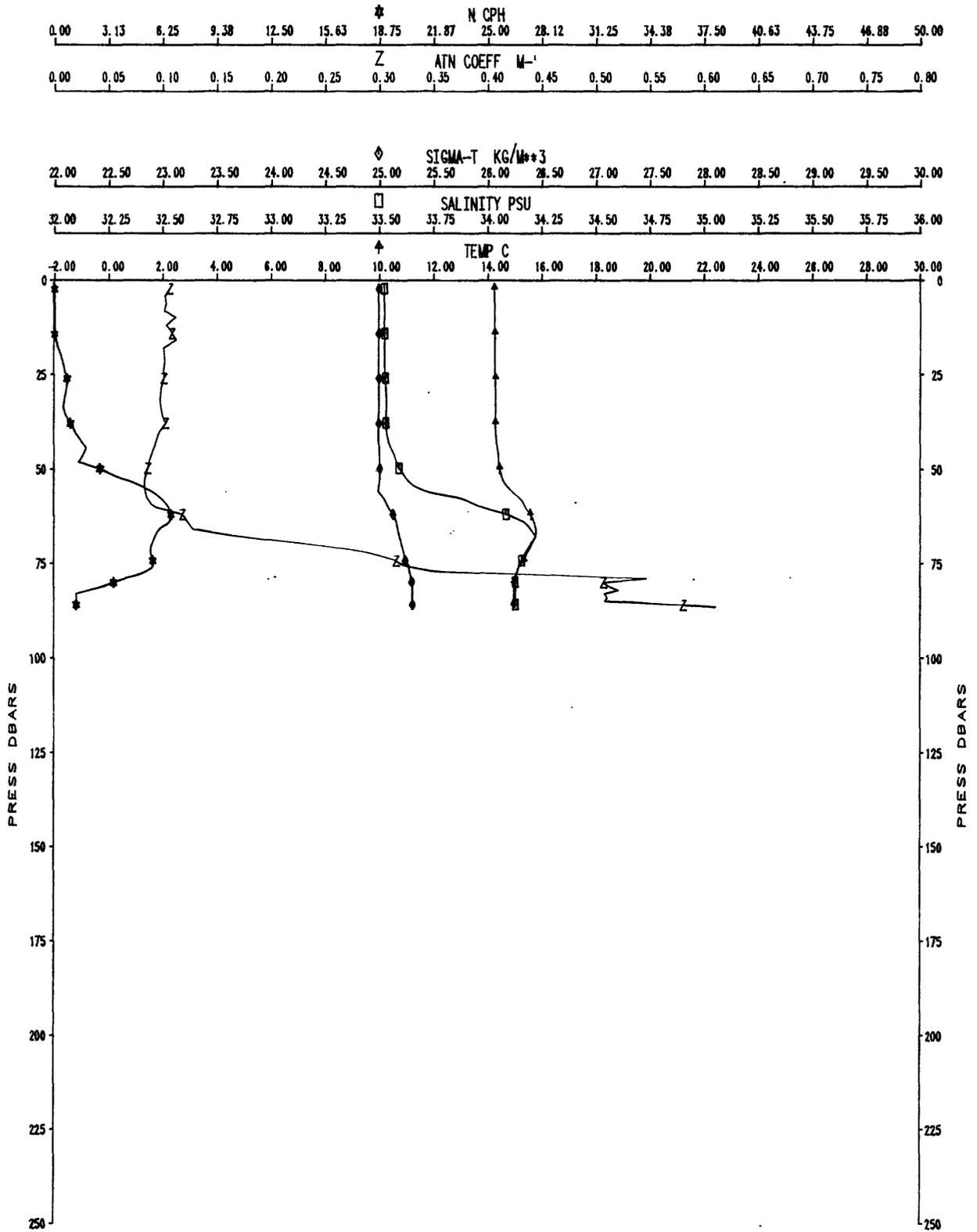
OC159B CAST #5



OC159A CAST #6



OC159A CAST #7



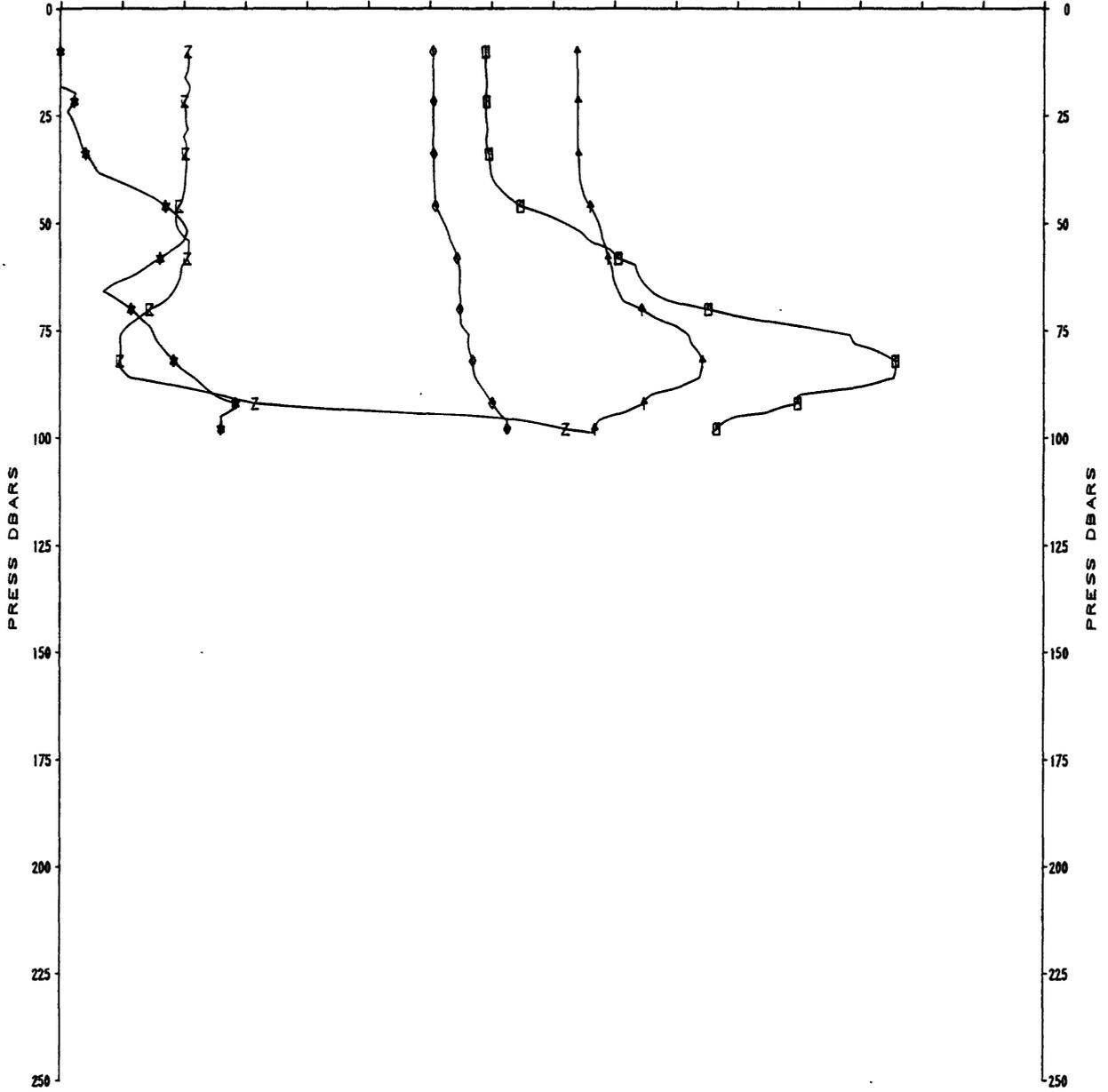
OC159B CAST #8

0.00	3.13	6.25	9.38	12.50	15.63	18.75	21.87	25.00	28.12	31.25	34.38	37.50	40.63	43.75	46.88	50.00	
							*	N CPH									
0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	
							Z	ATN COEFF M ⁻¹									

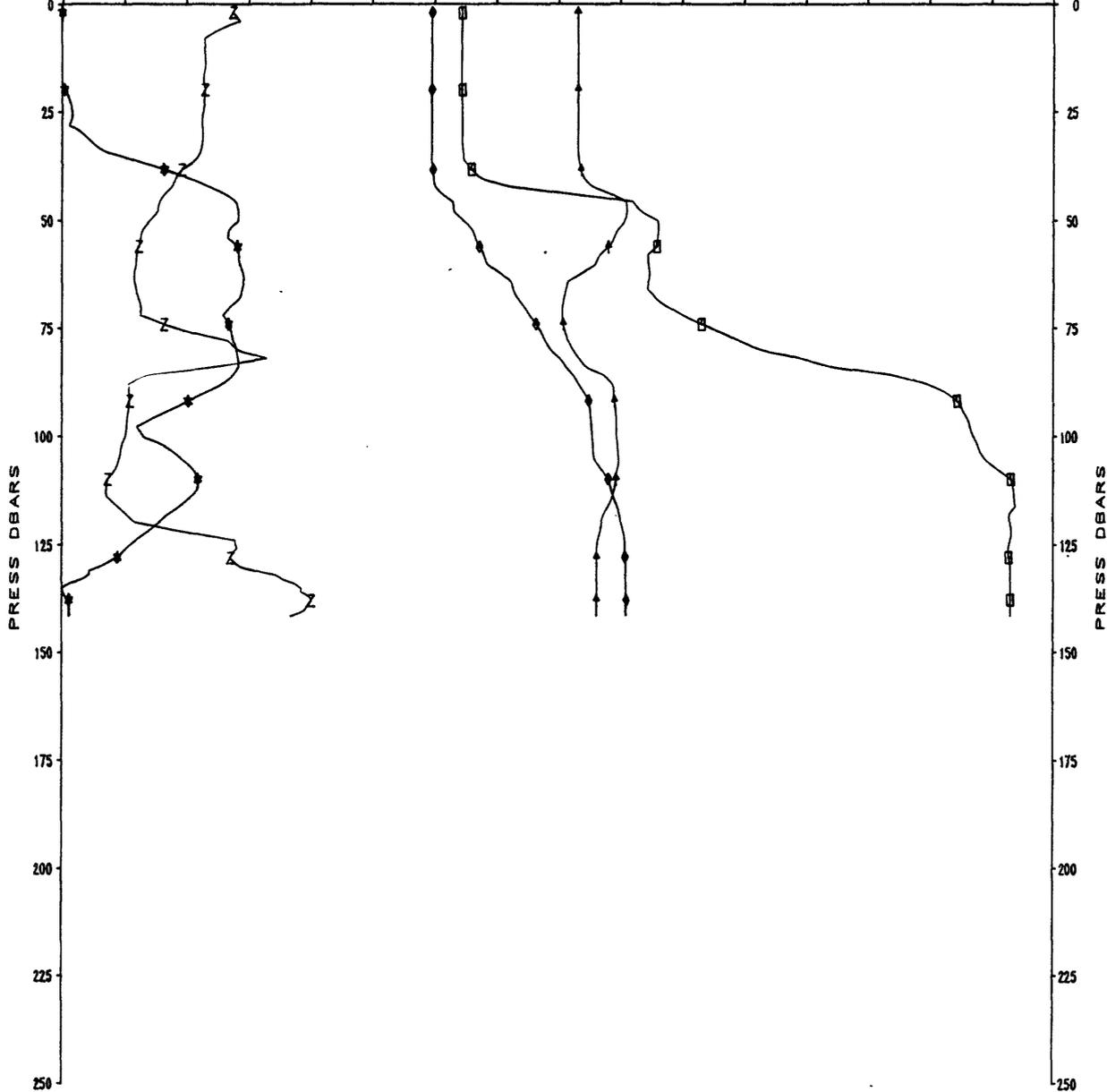
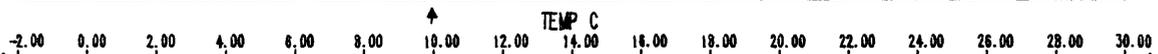
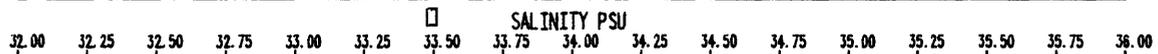
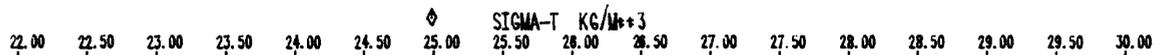
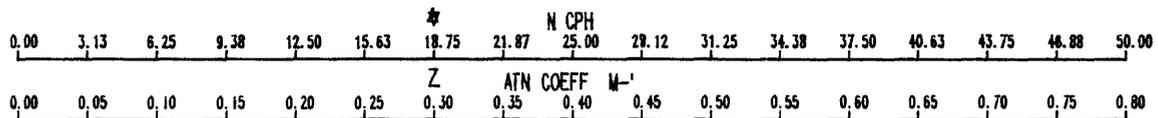
22.00	22.50	23.00	23.50	24.00	24.50	25.00	25.50	26.00	26.50	27.00	27.50	28.00	28.50	29.00	29.50	30.00	
							◇	SIGMA-T KG/M ³									

32.00	32.25	32.50	32.75	33.00	33.25	33.50	33.75	34.00	34.25	34.50	34.75	35.00	35.25	35.50	35.75	36.00	
							□	SALINITY PSU									

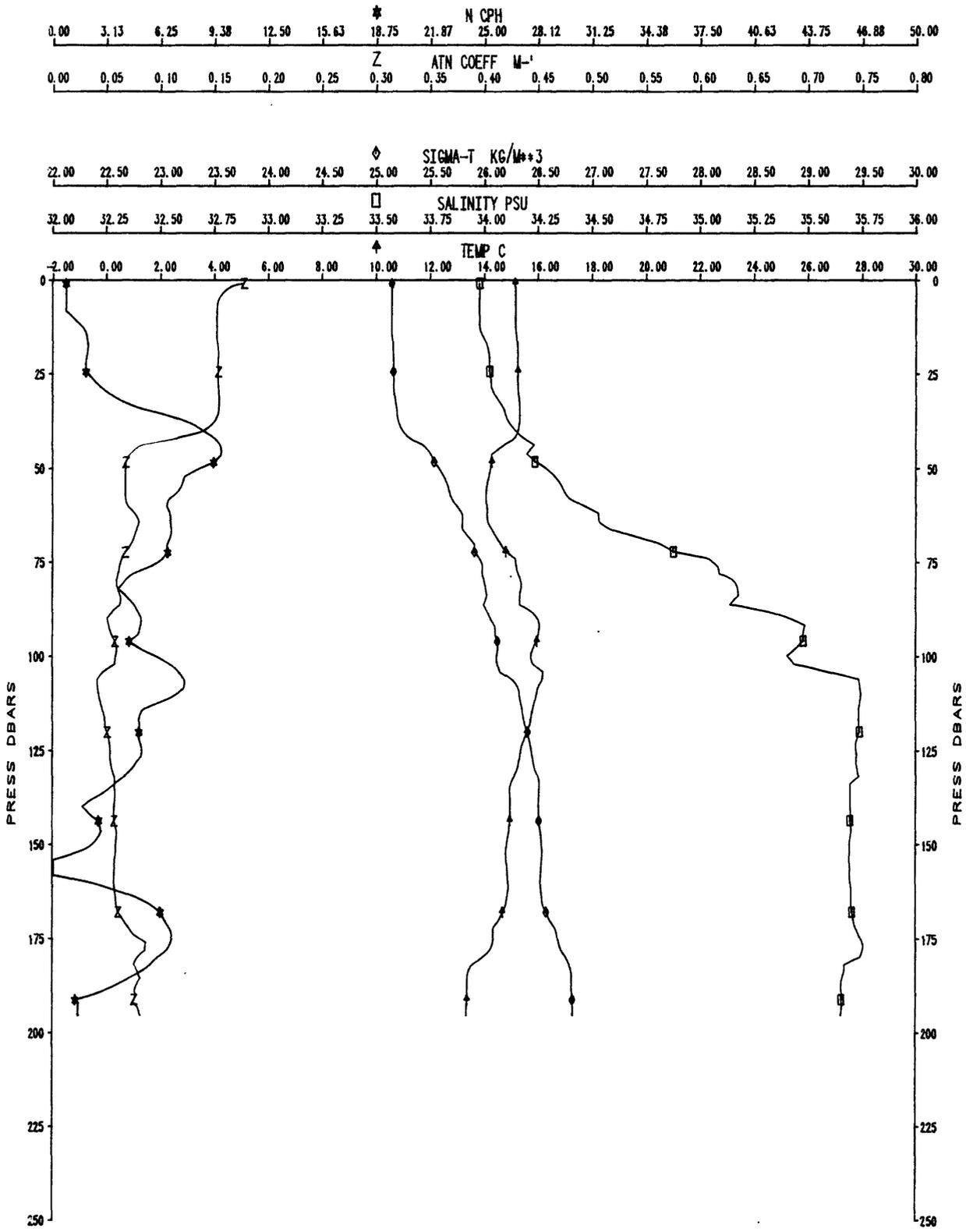
2.00	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00	28.00	30.00	
							↑	TEMP C									



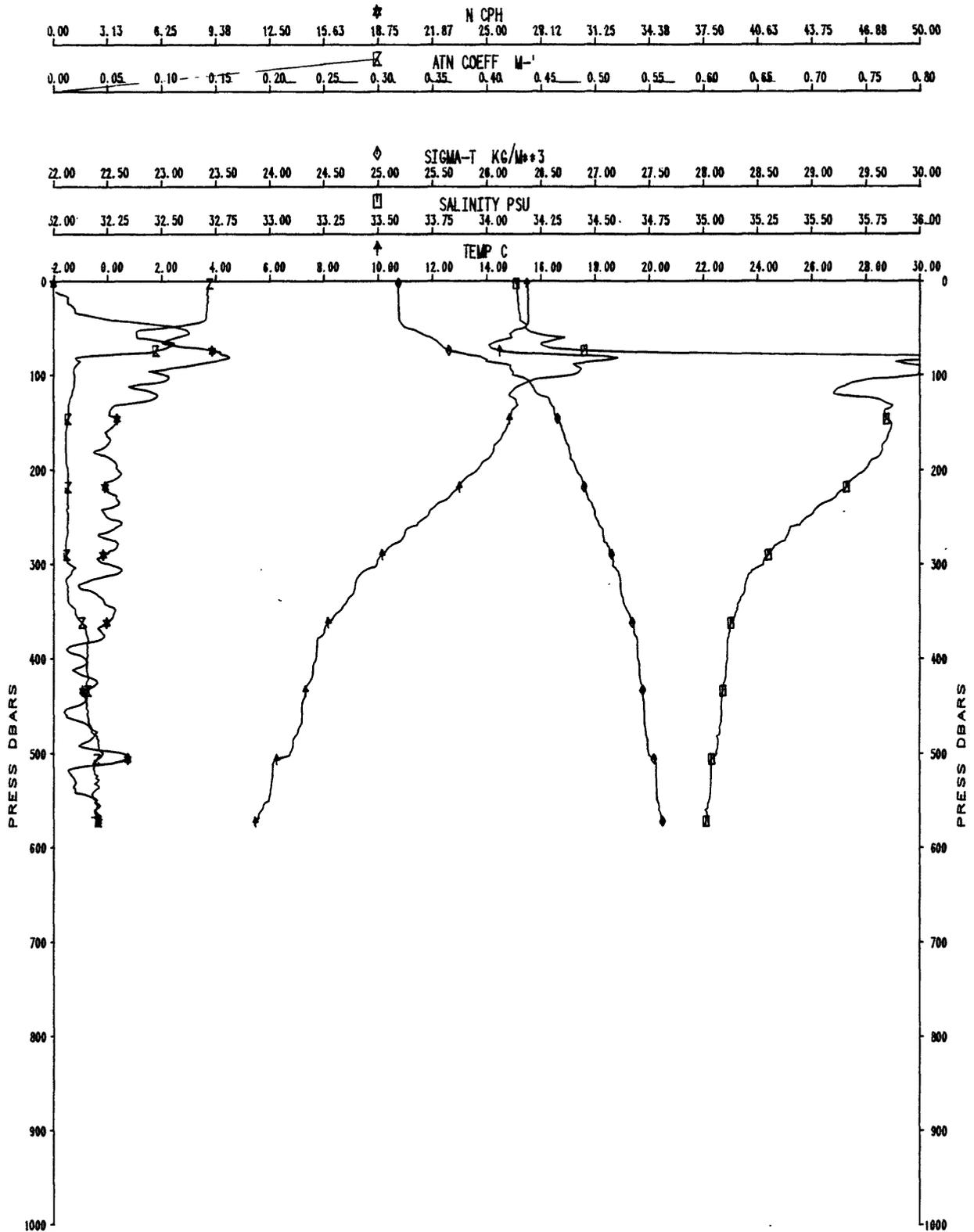
OC159A CAST #9



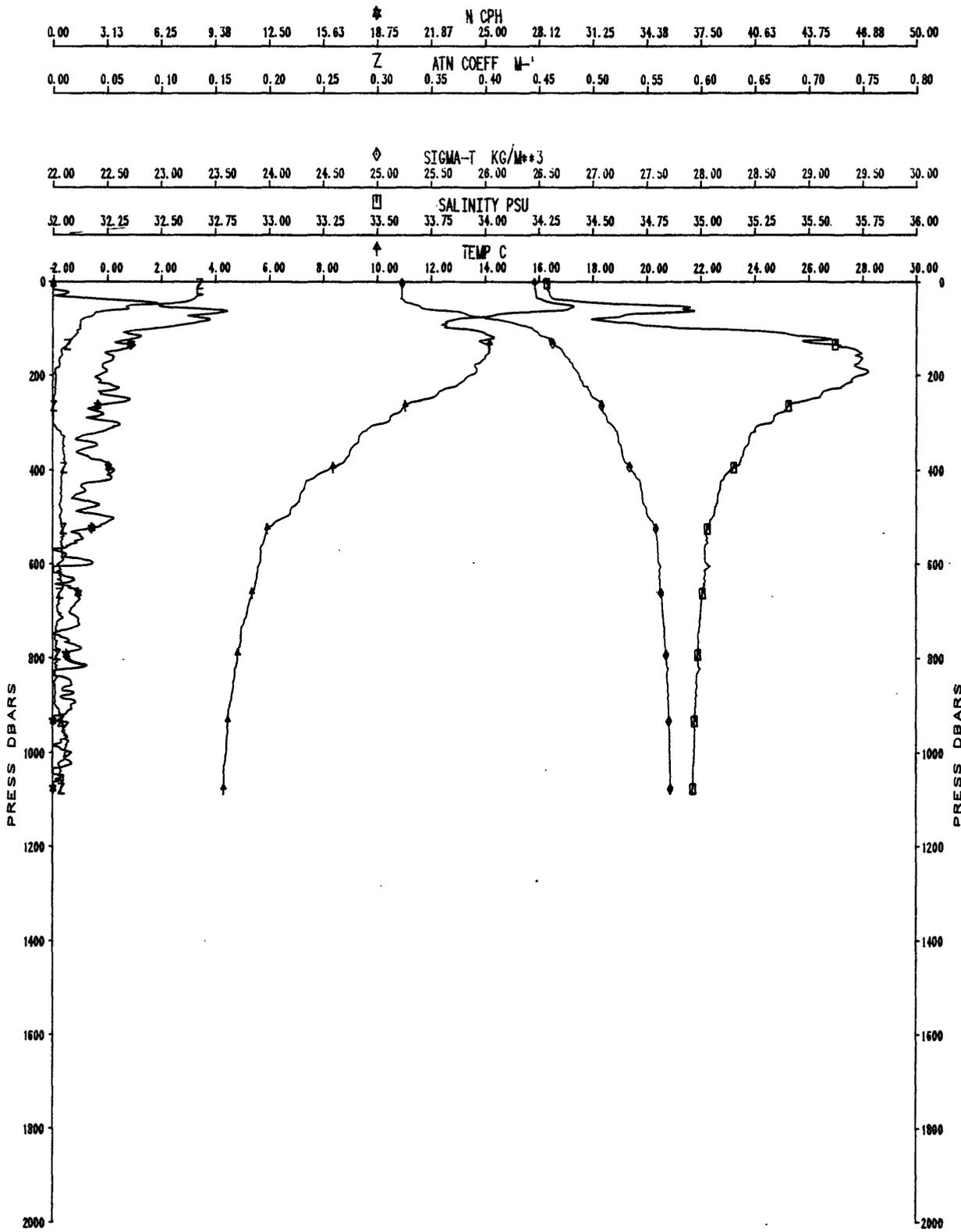
OC159A CAST #10



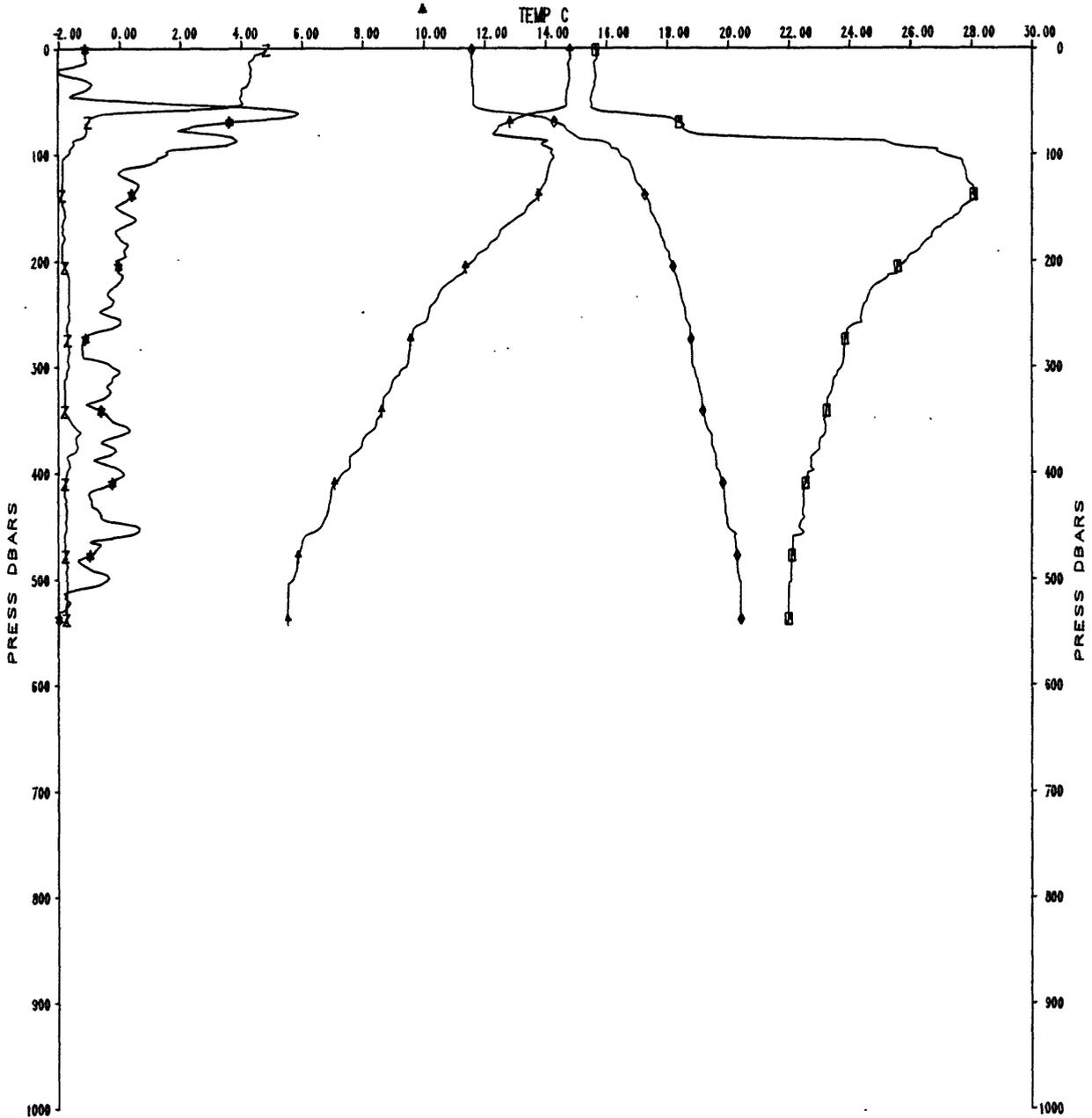
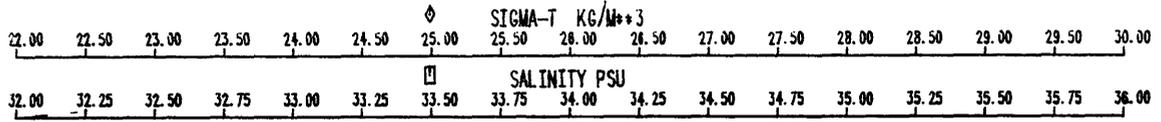
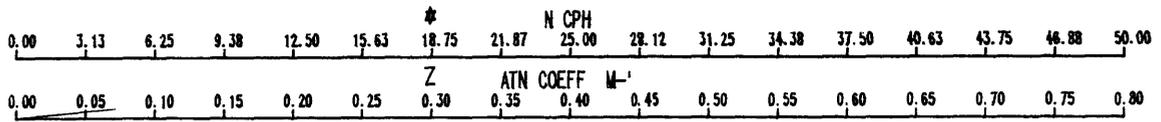
OC159B CAST #11



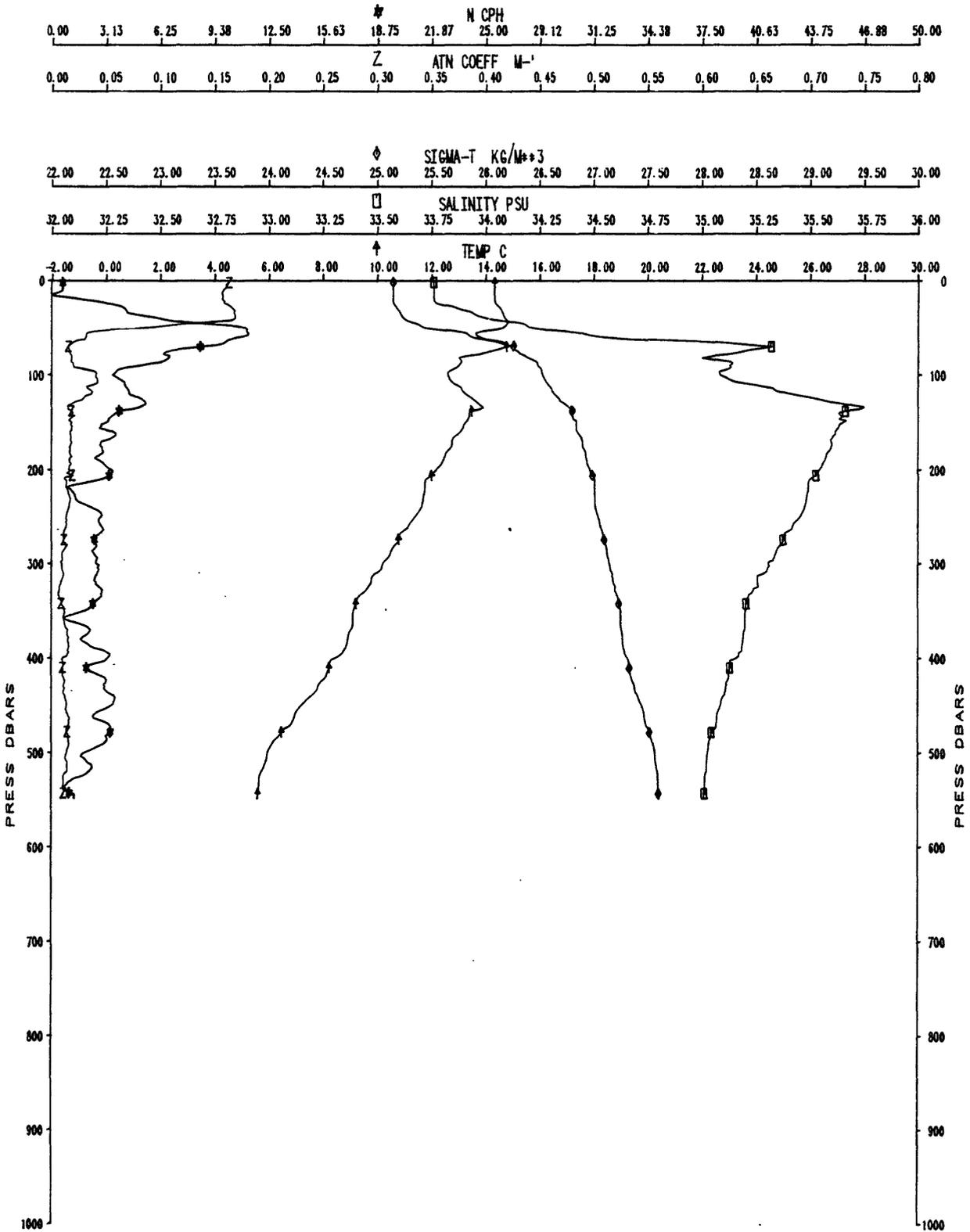
OC159B CAST #12



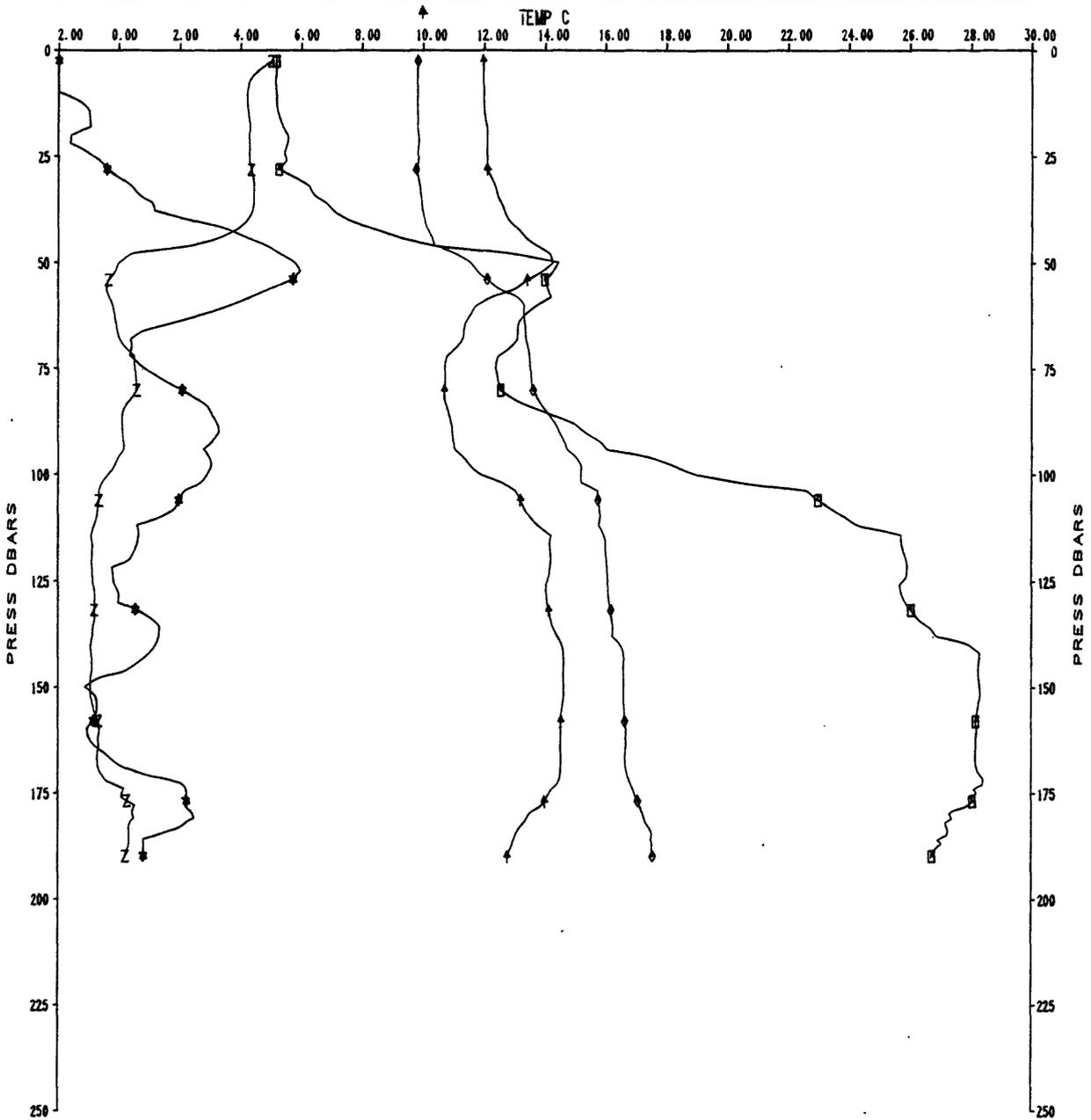
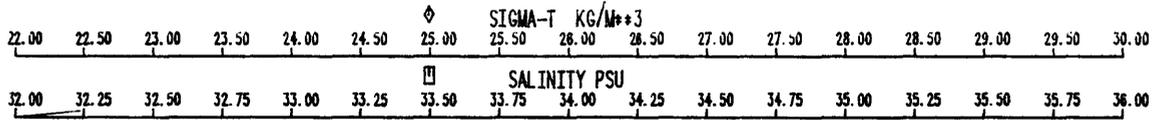
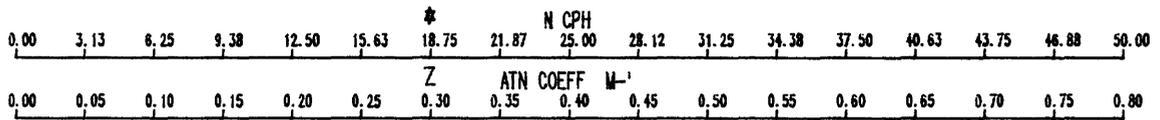
OC159B CAST #13



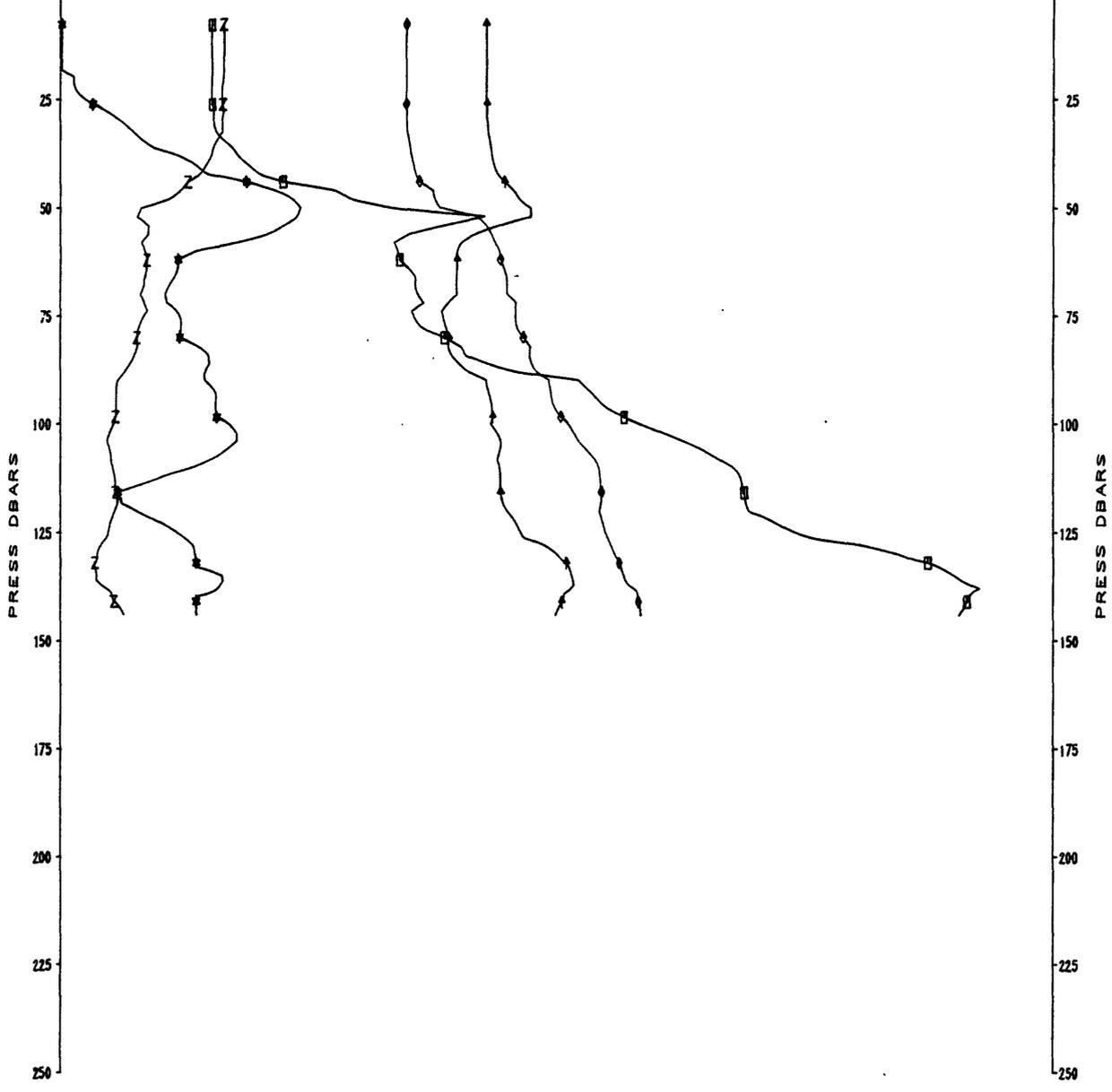
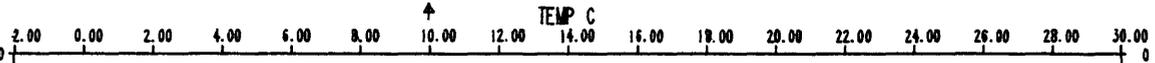
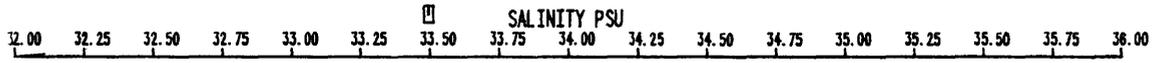
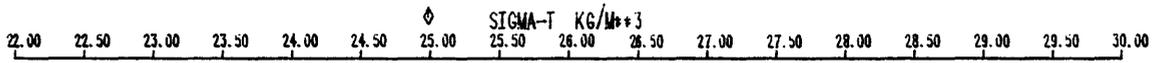
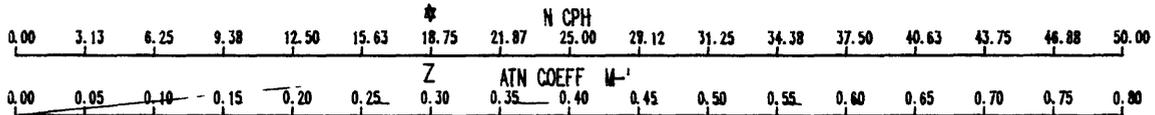
OC159A CAST #14



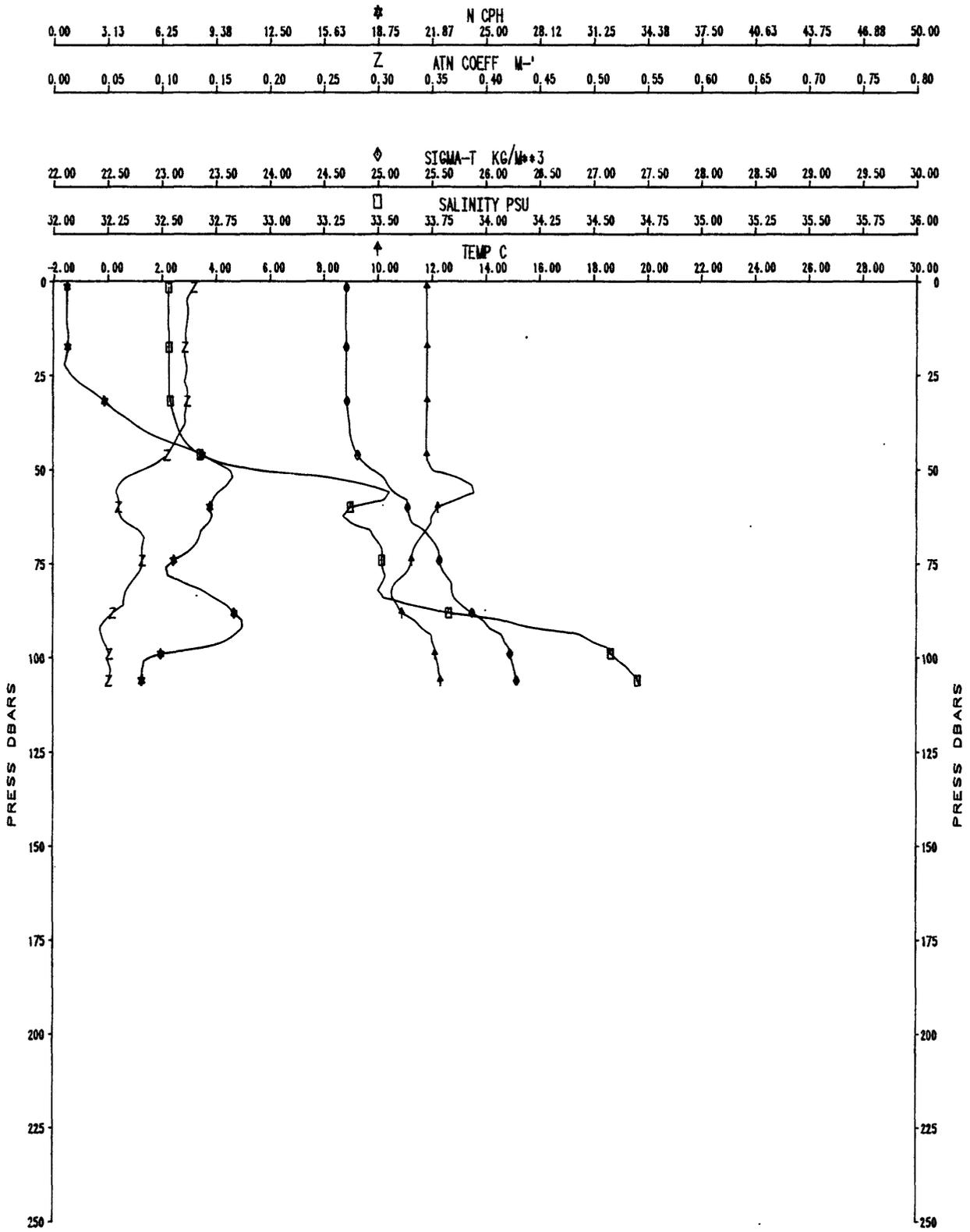
OC159B CAST #15



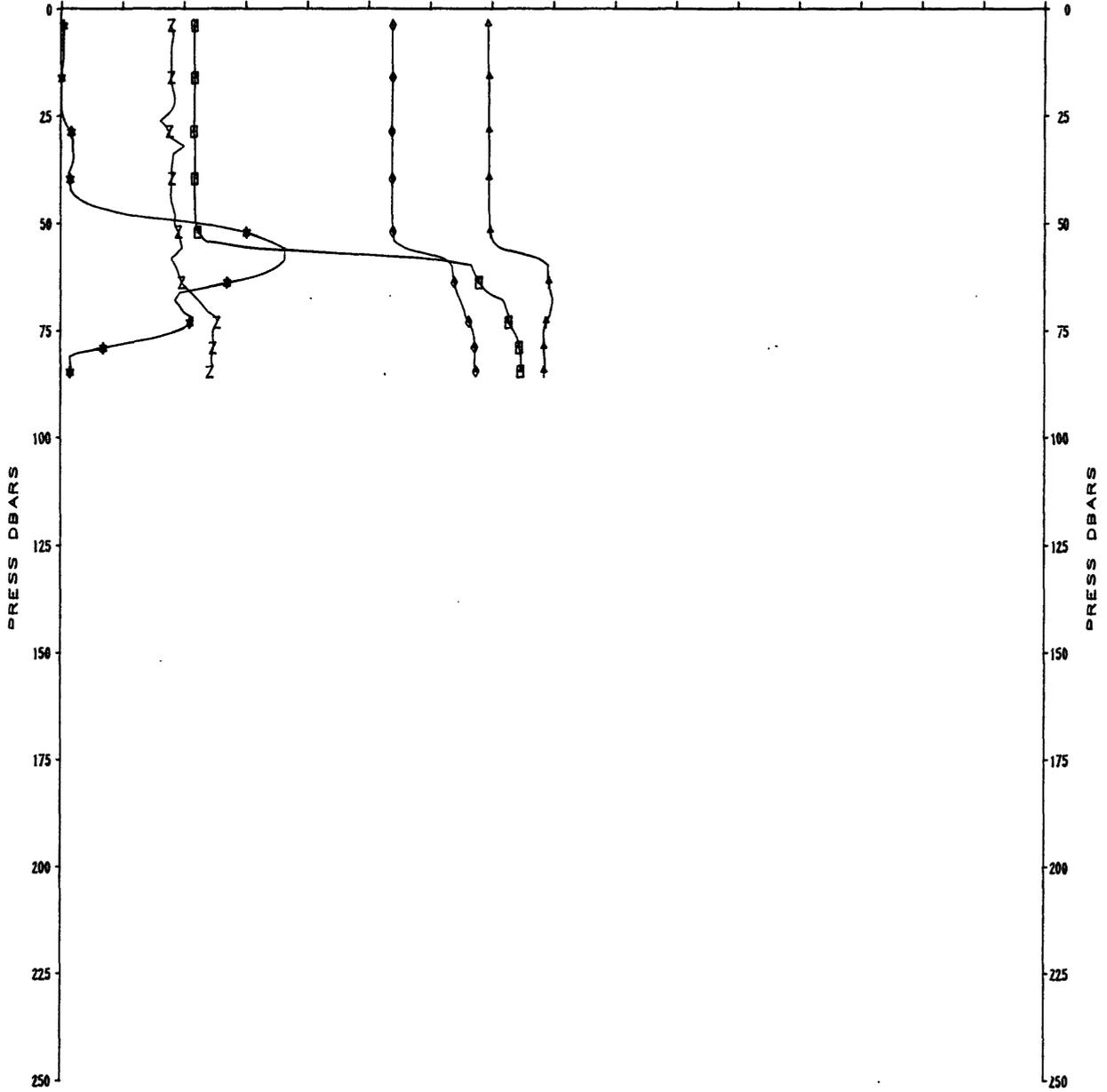
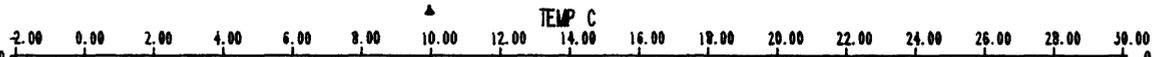
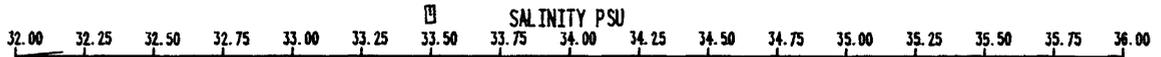
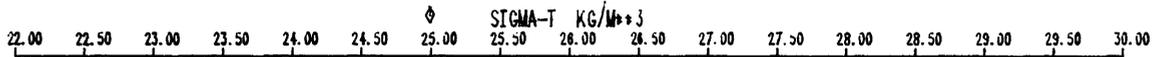
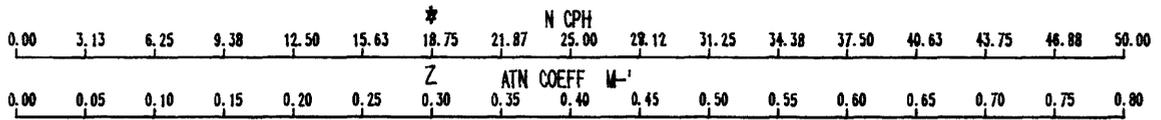
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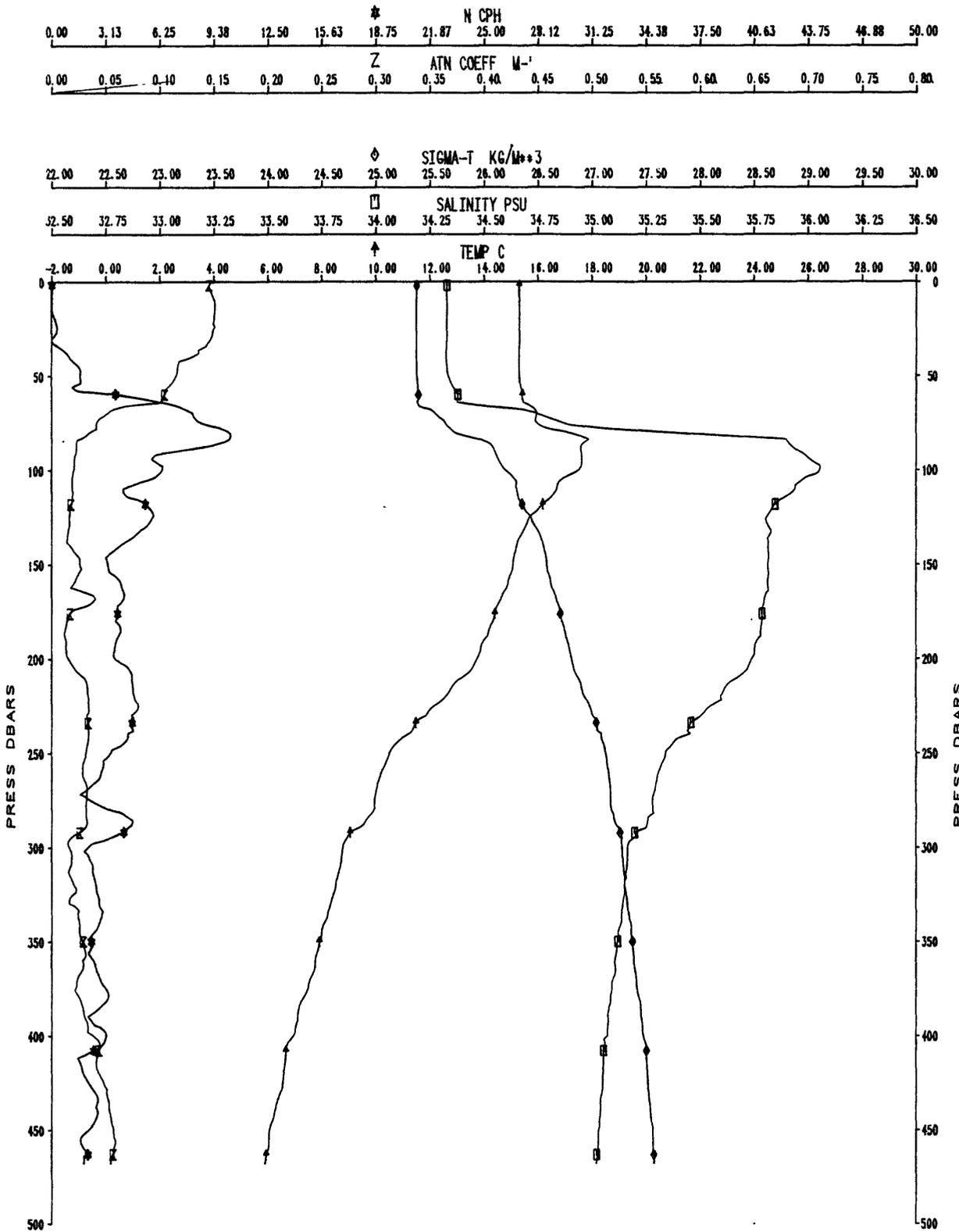
OC159A CAST #17



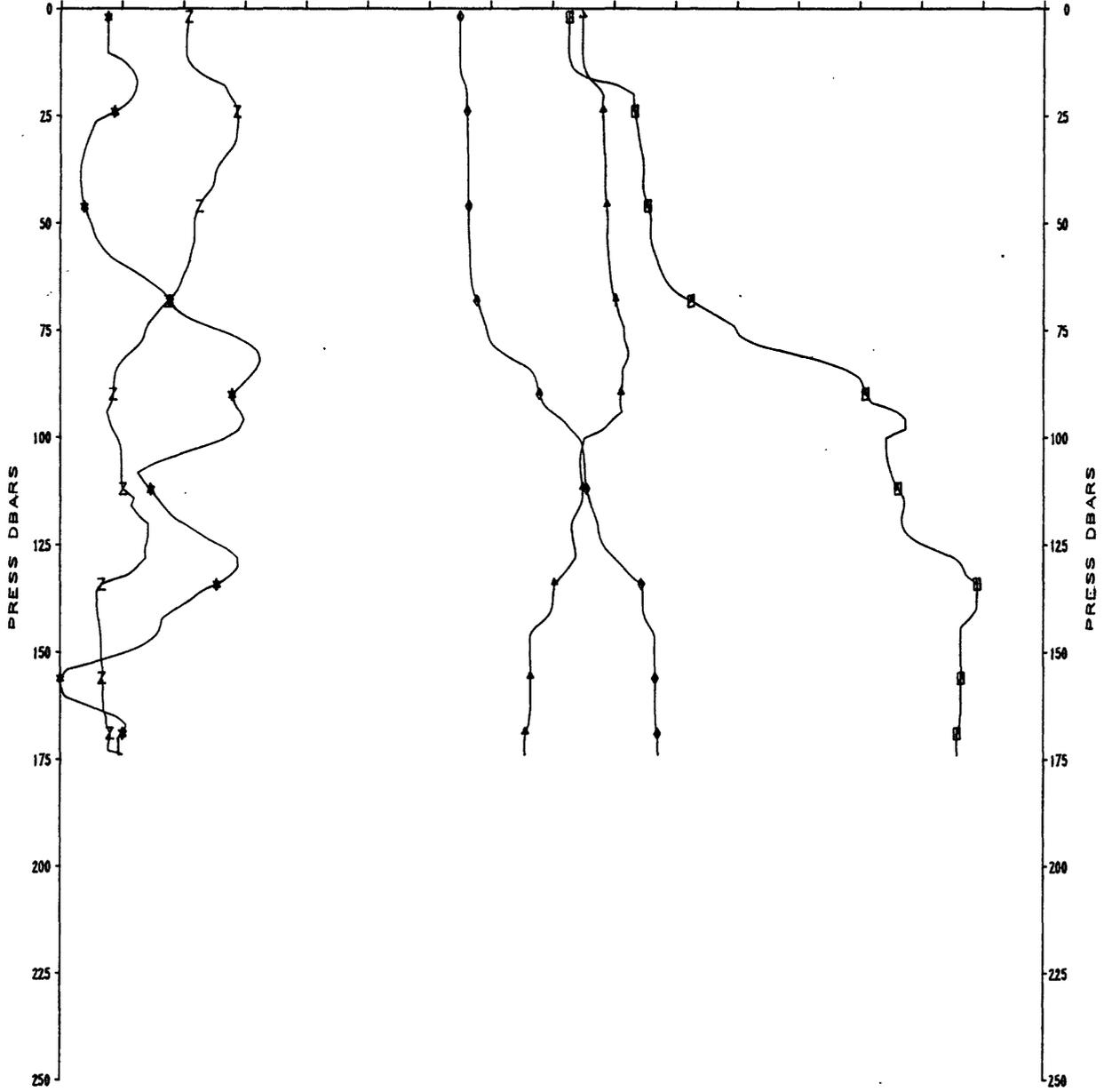
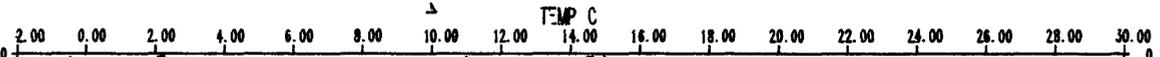
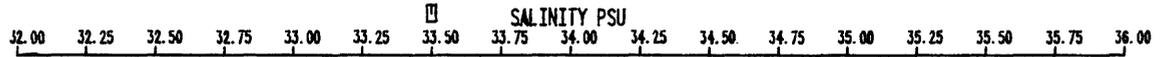
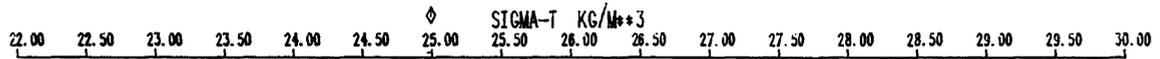
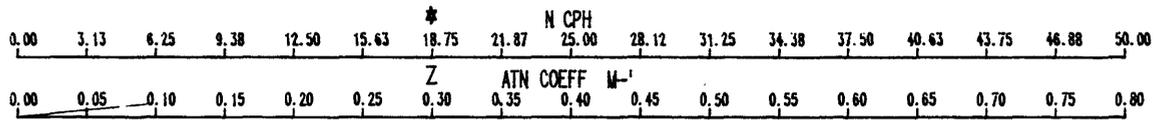
0C159U CAST #18



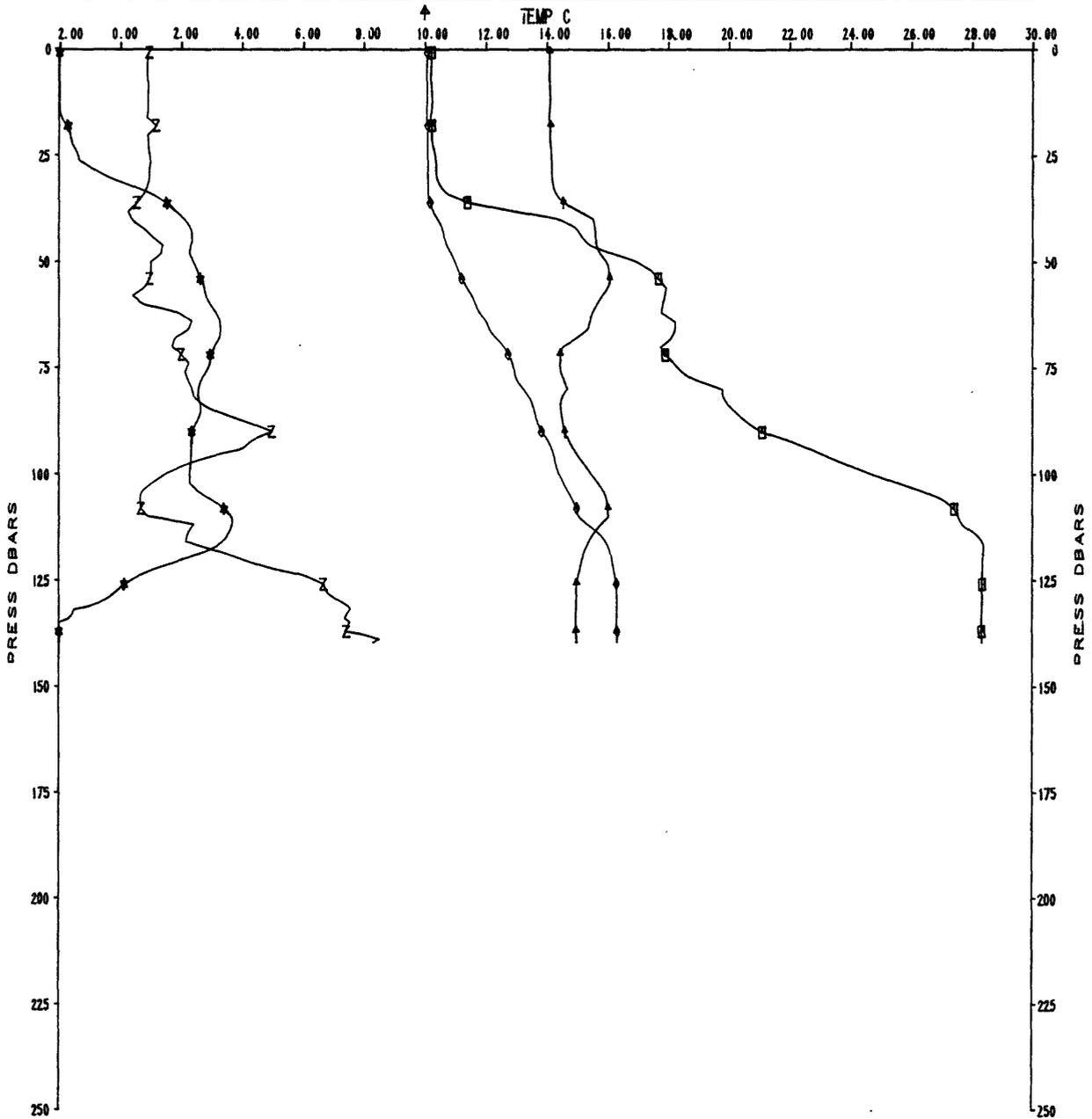
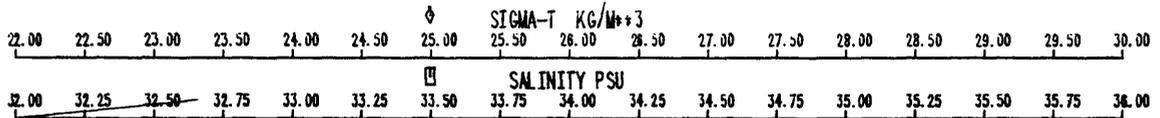
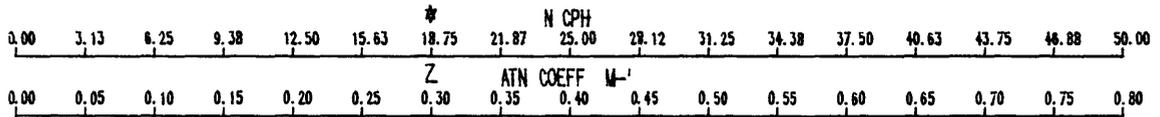
OC159A CAST #19



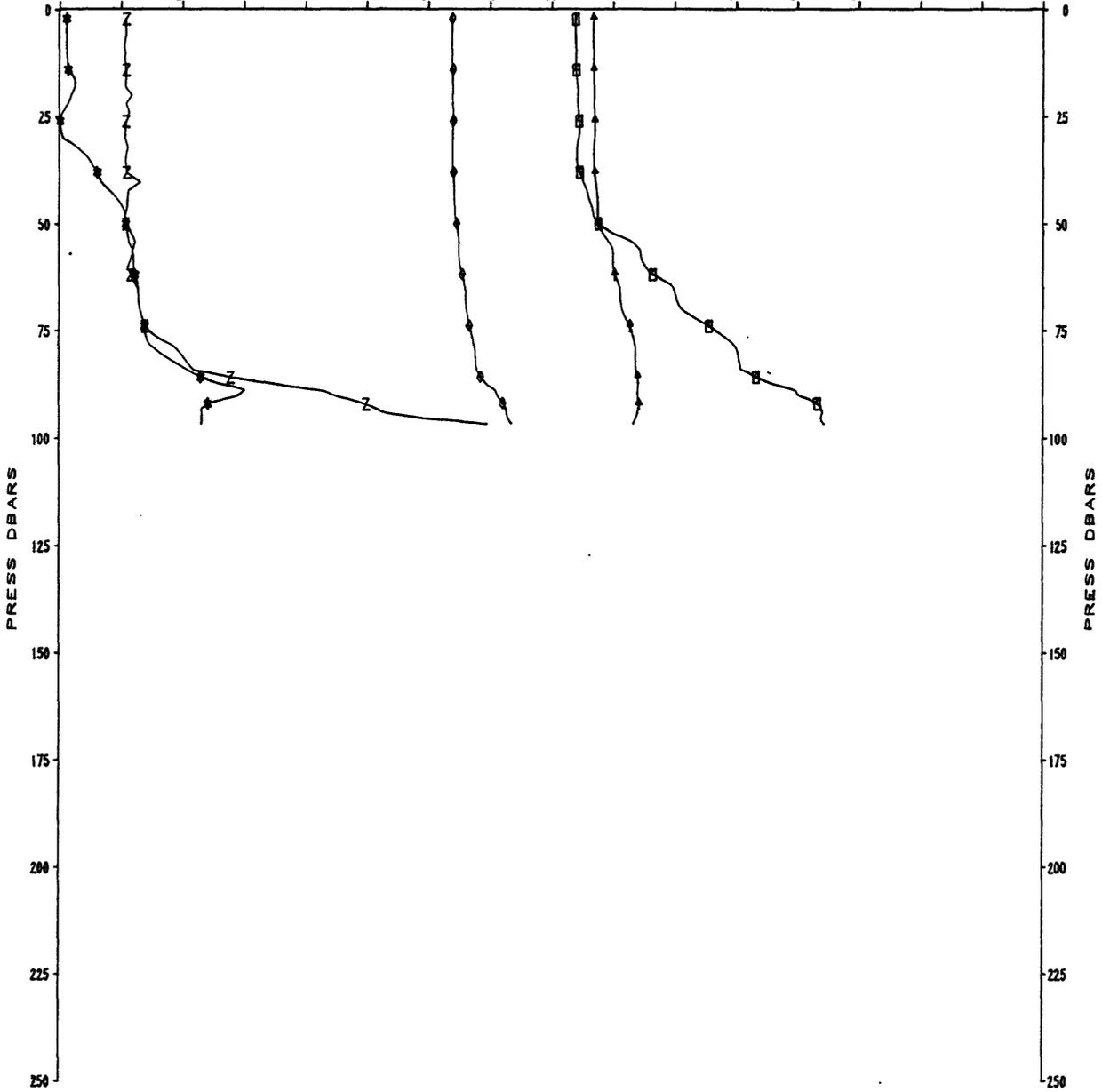
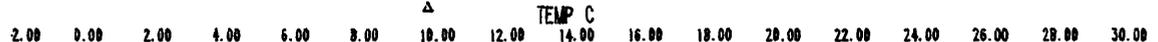
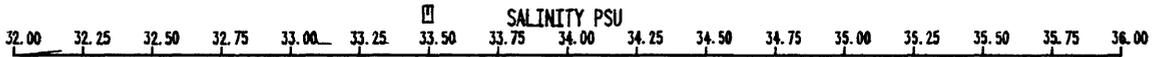
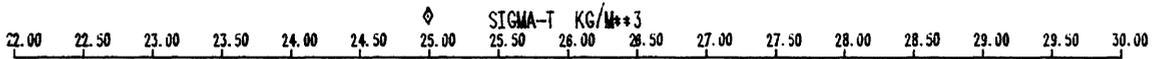
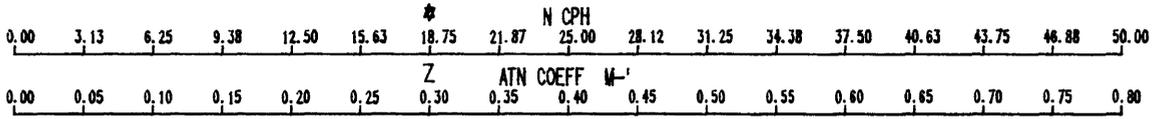
0C159U CAST #20



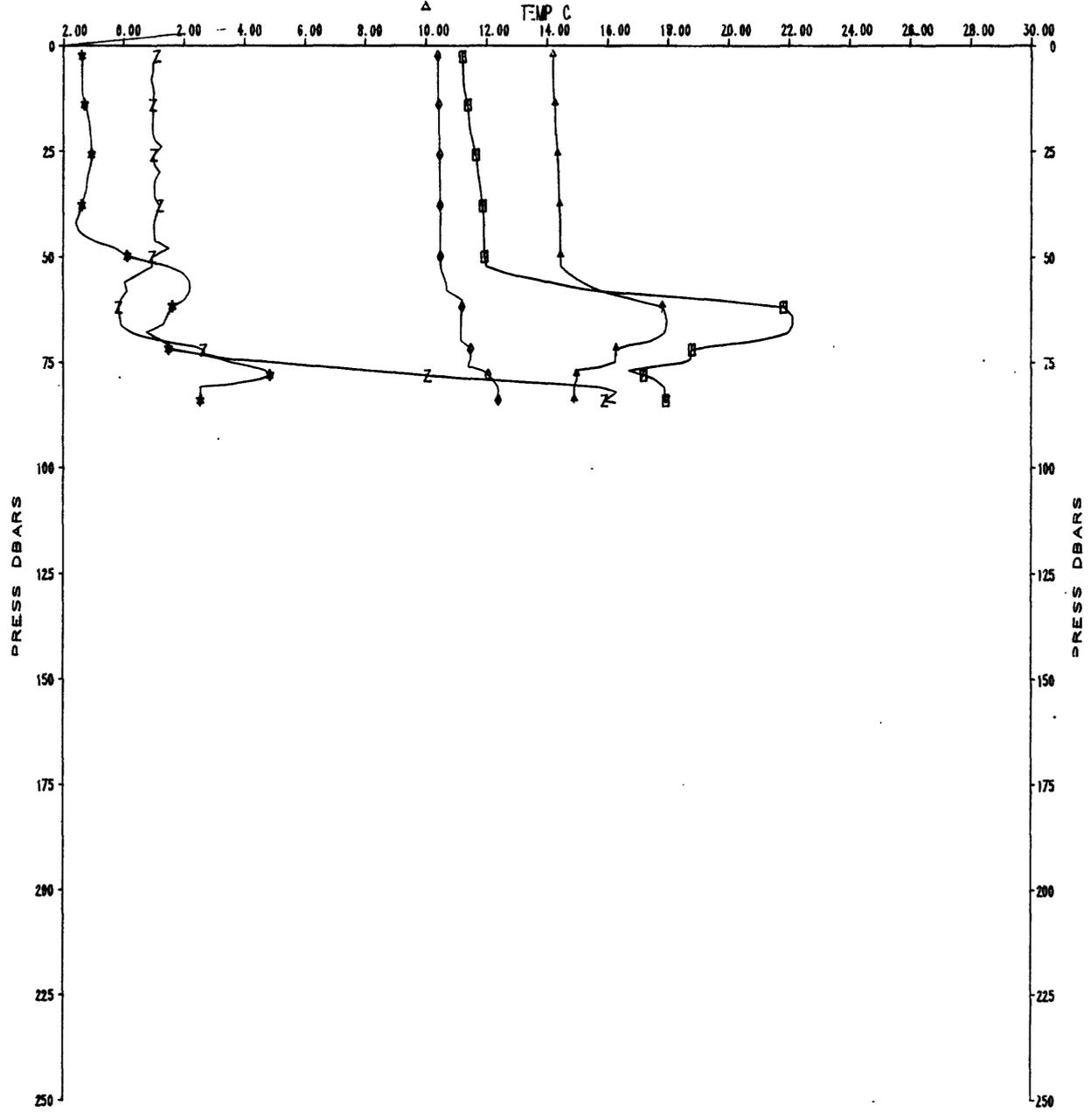
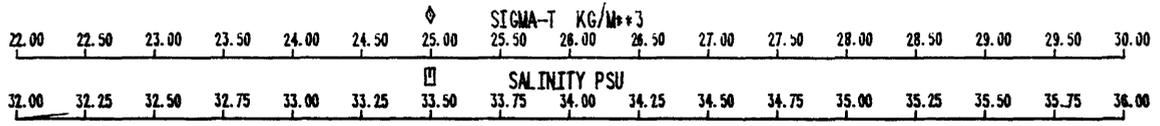
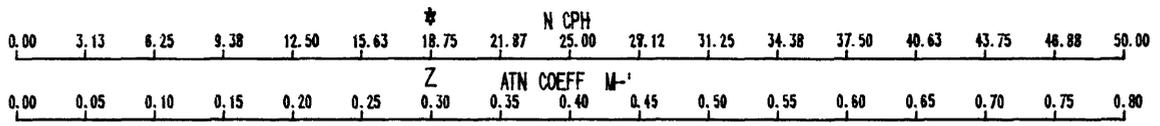
OC159U CAST #21



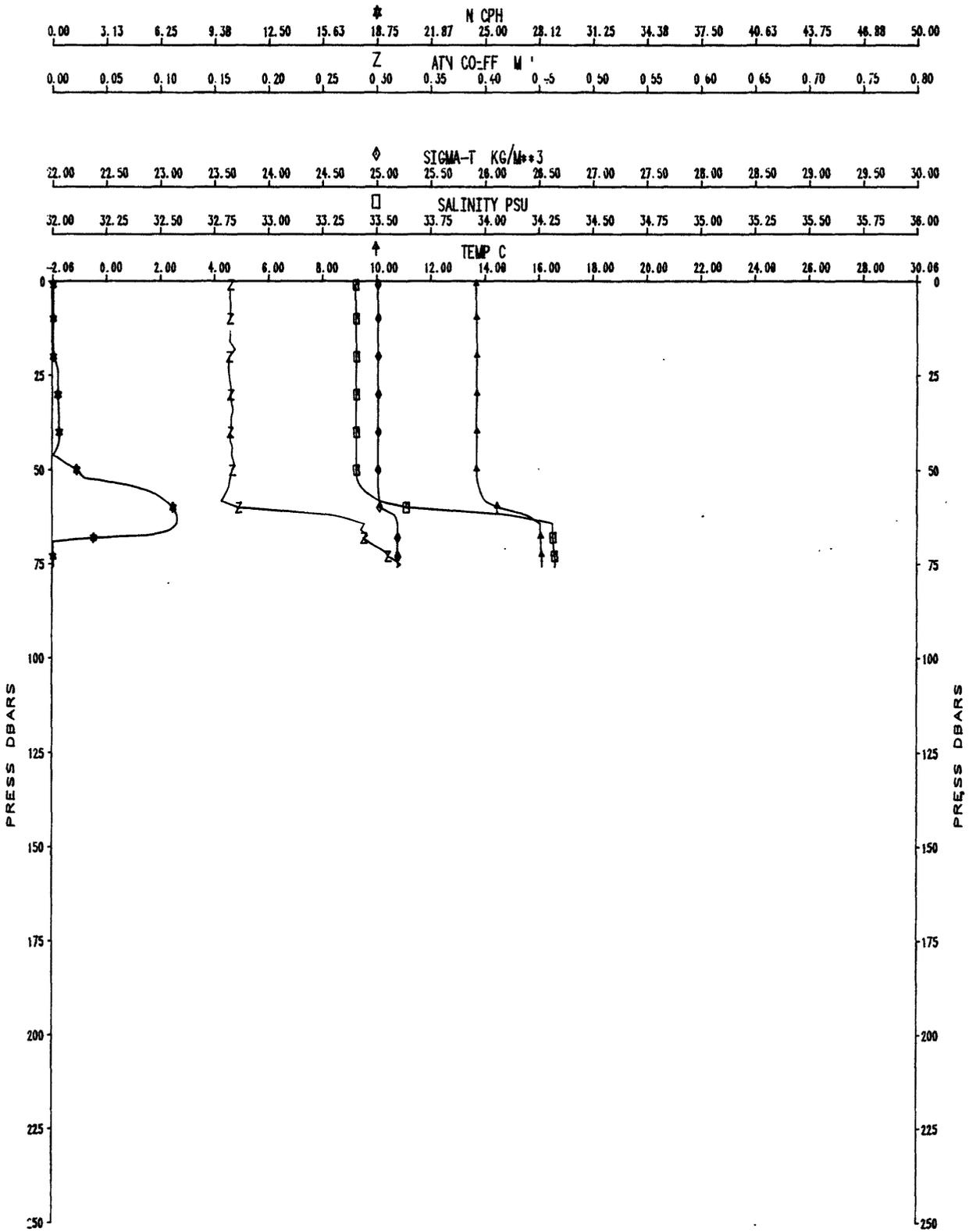
OC159U CAST #22



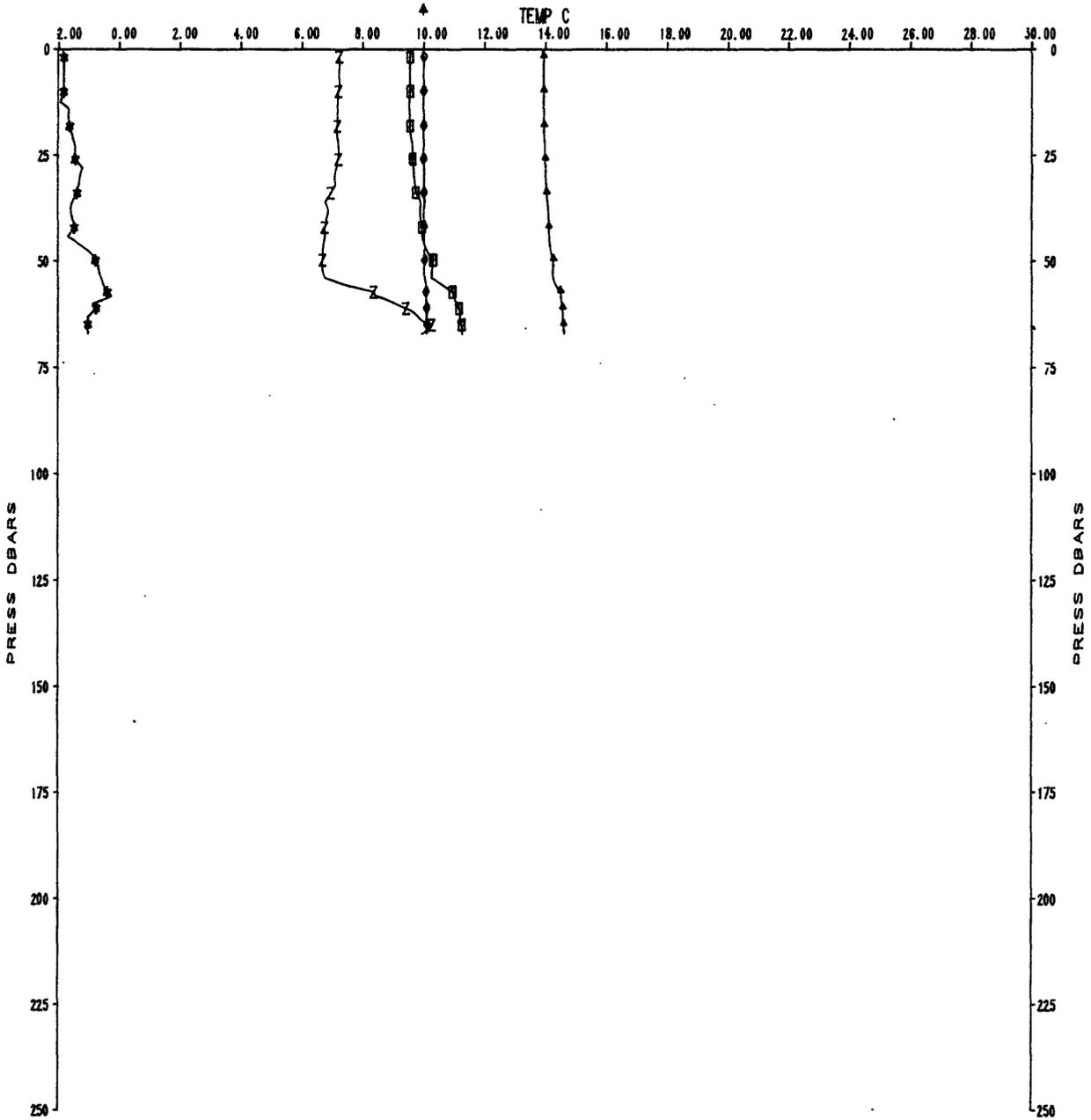
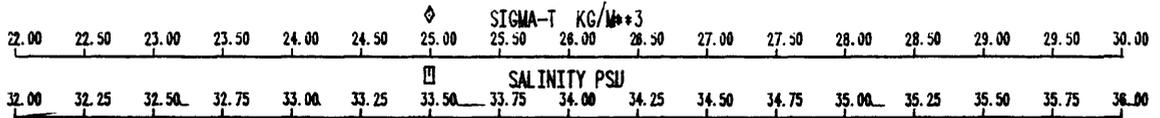
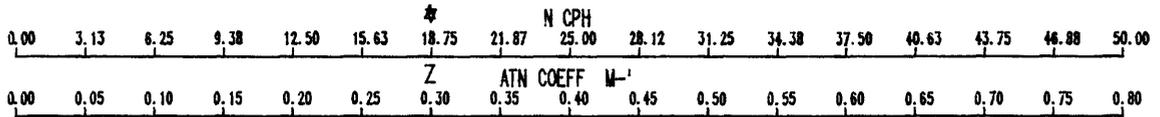
0C159U CAST #23



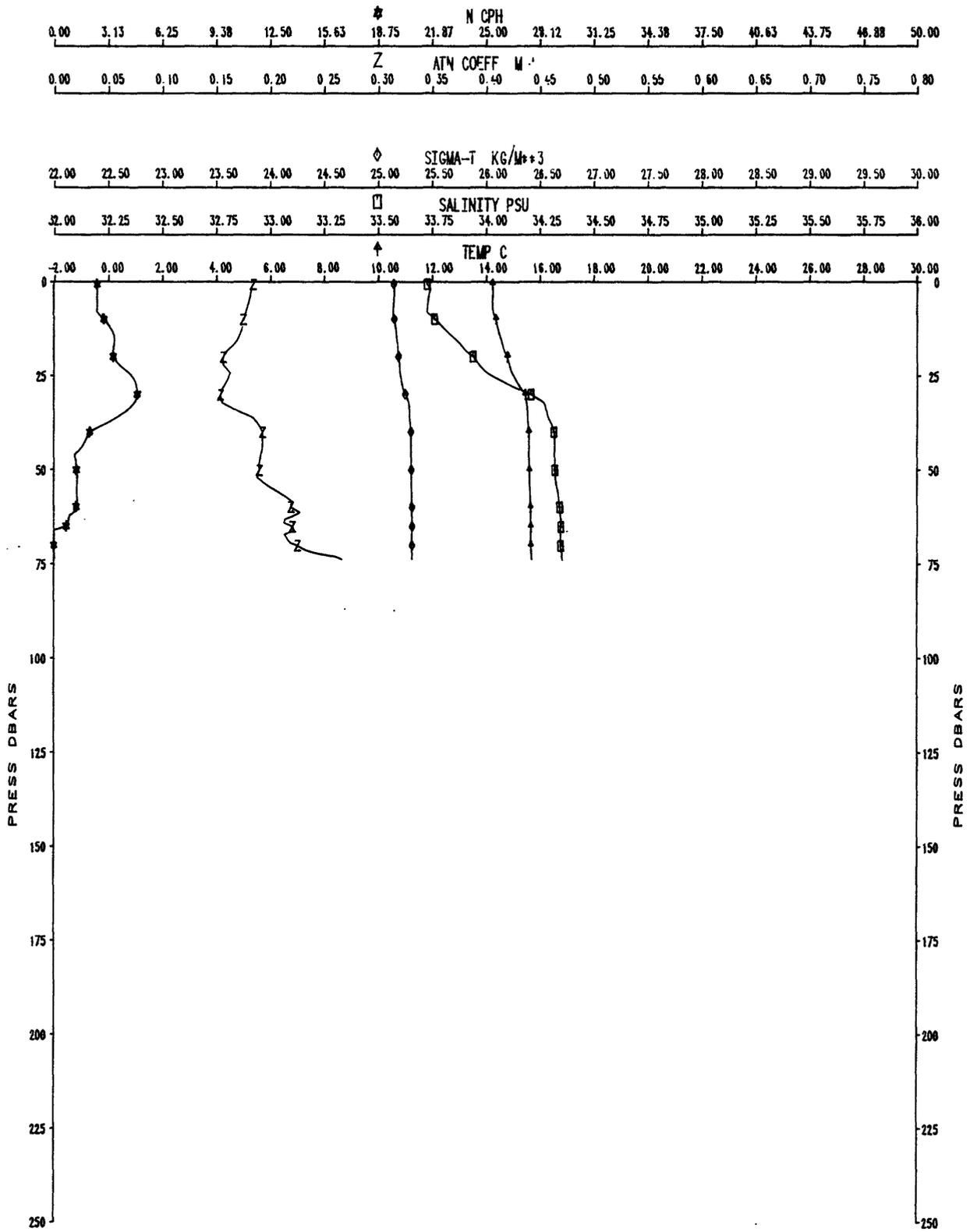
OC159A CAST #24



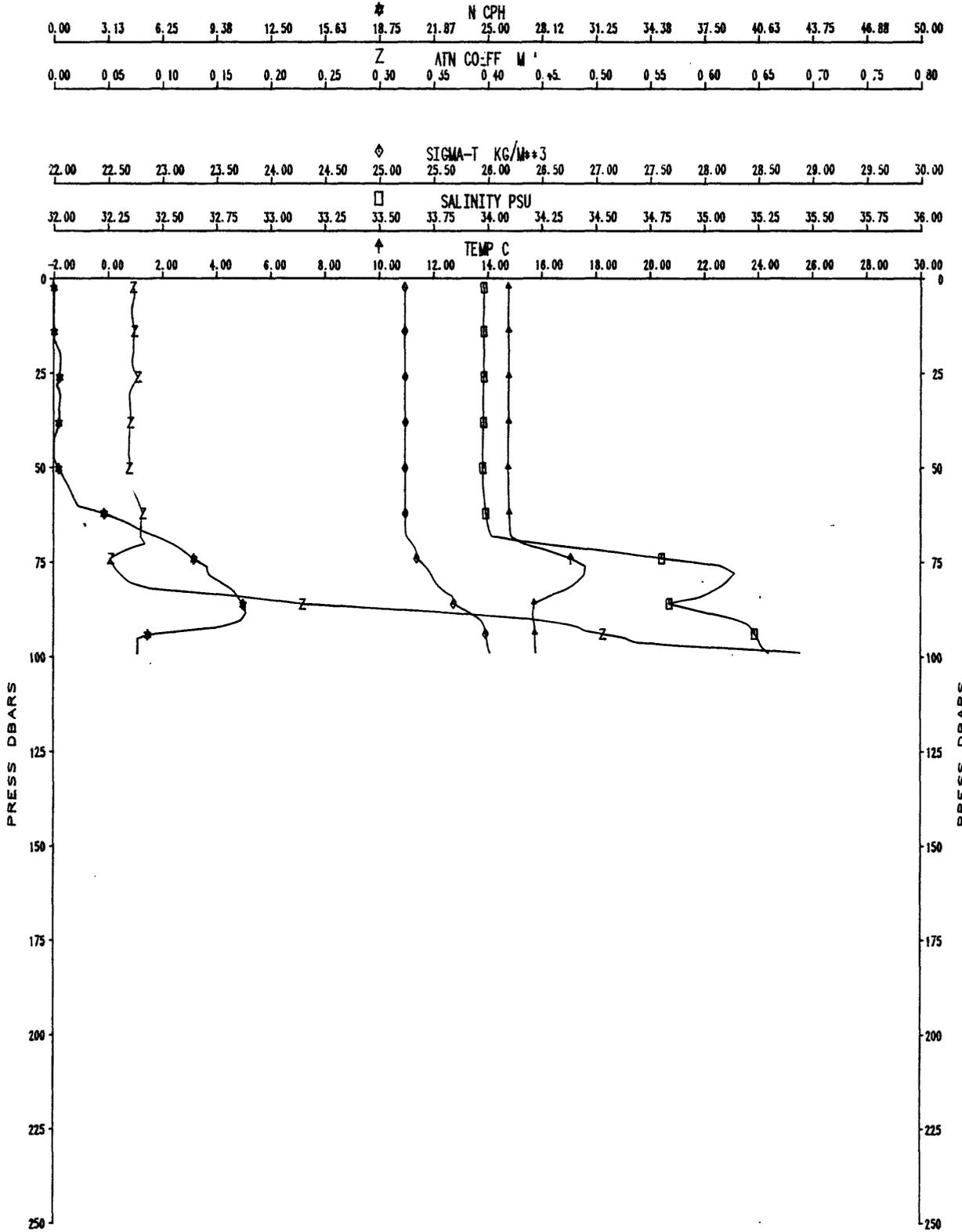
0C159U CAST #25



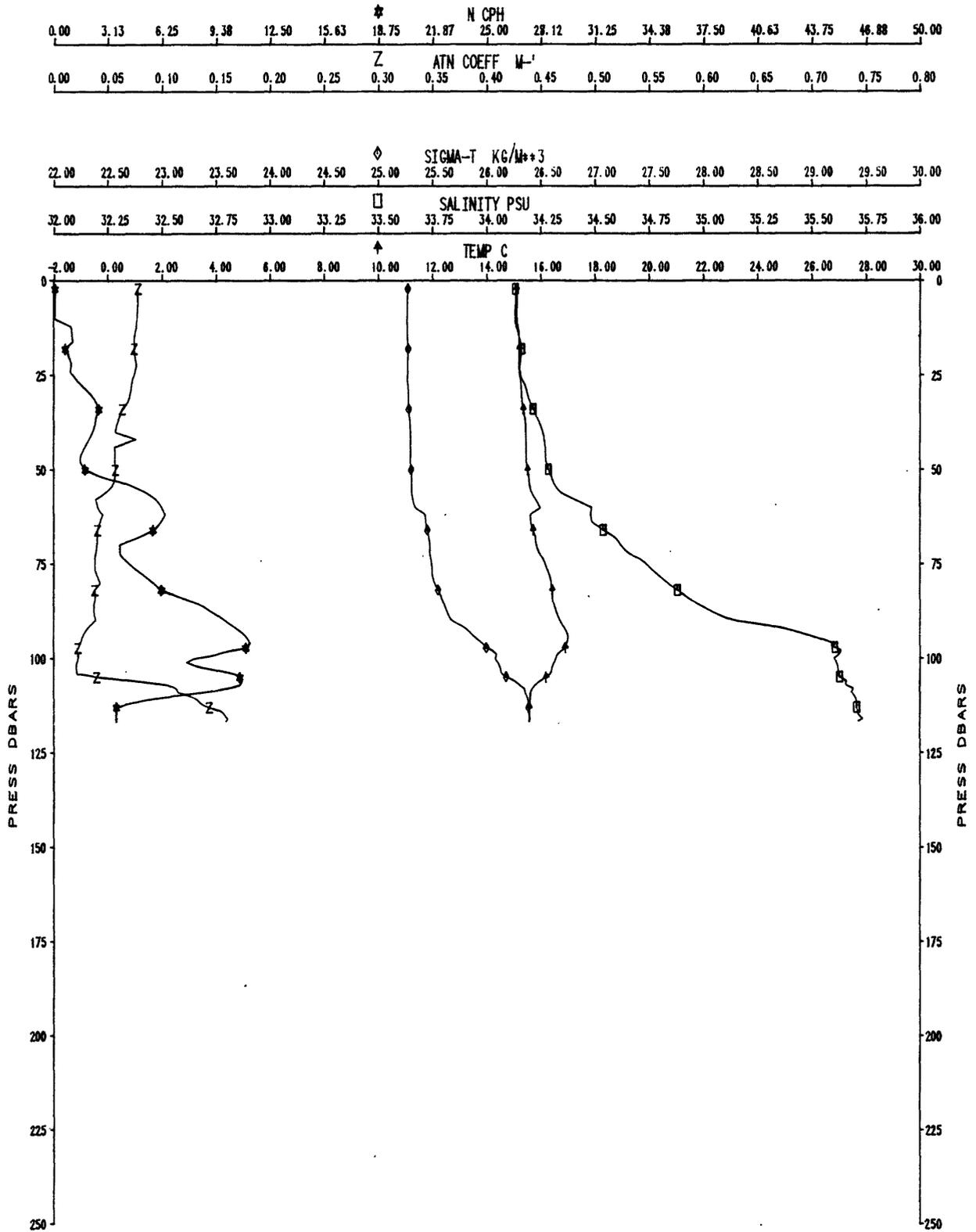
OC159A CAST #26



OC159A CAST #27



OC159A CAST #28

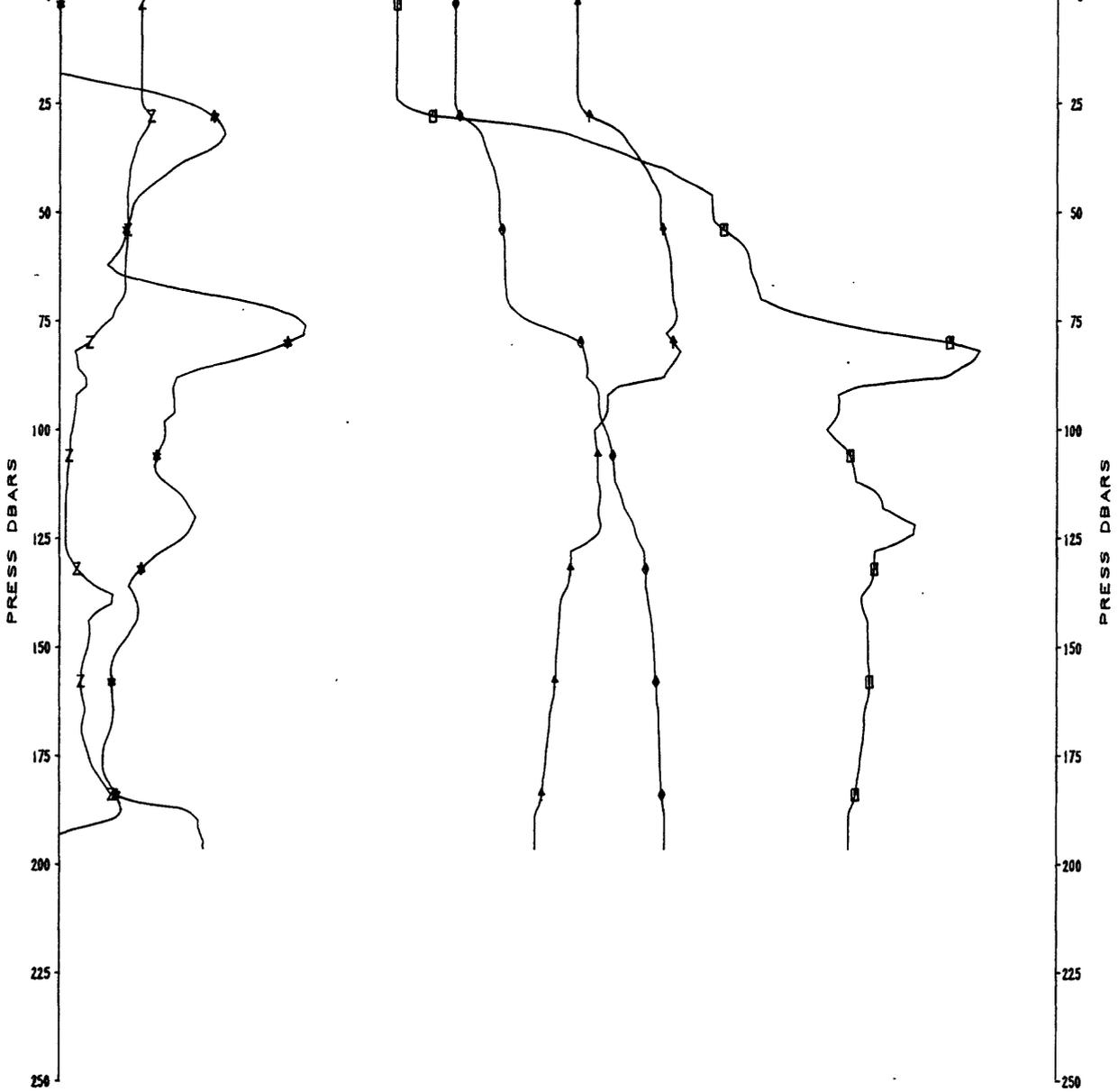


OC159U CAST #29

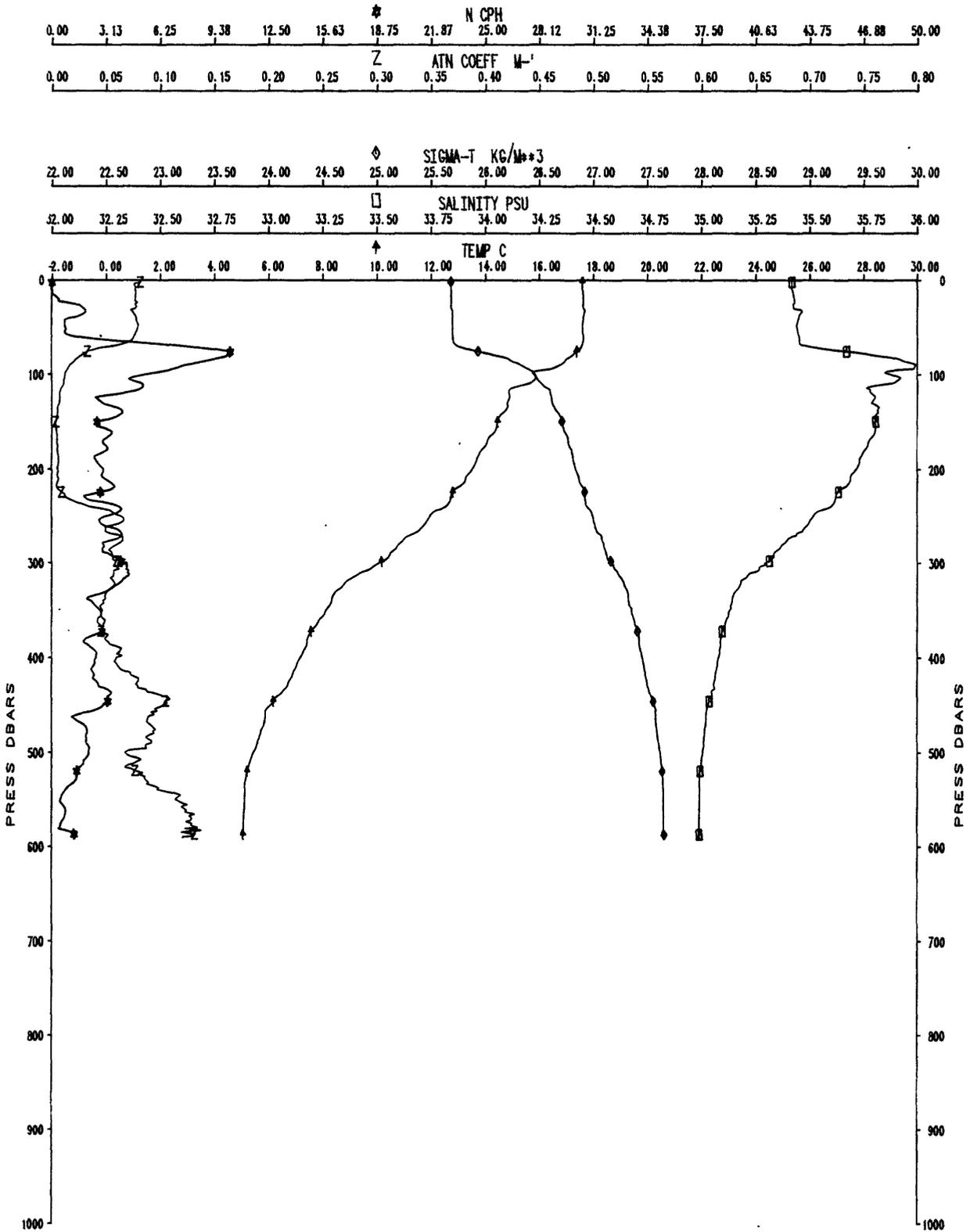
0.00	3.13	6.25	9.38	12.50	15.63	18.75	21.87	25.00	28.12	31.25	34.38	37.50	40.63	43.75	46.88	50.00
* N CPH																
0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80
Z ATN COEFF M ⁻¹																

22.00	22.50	23.00	23.50	24.00	24.50	25.00	25.50	26.00	26.50	27.00	27.50	28.00	28.50	29.00	29.50	30.00
◇ SIGMA-T KG/M ³																
32.50	32.75	33.00	33.25	33.50	33.75	34.00	34.25	34.50	34.75	35.00	35.25	35.50	35.75	36.00	36.25	36.50
□ SALINITY PSU																

2.00	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00	28.00	30.00
↑ TEMP C																



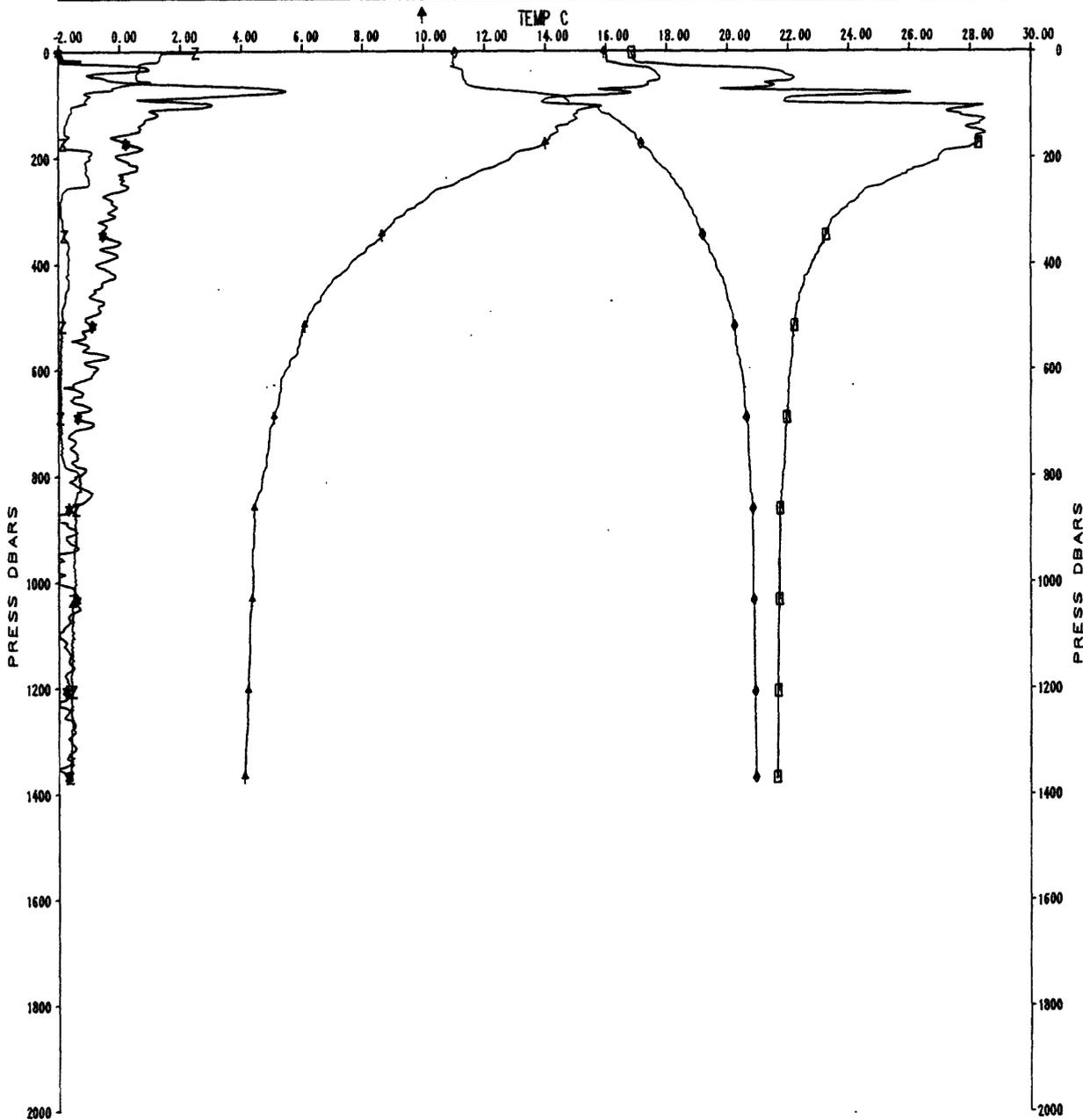
OC159A CAST #30



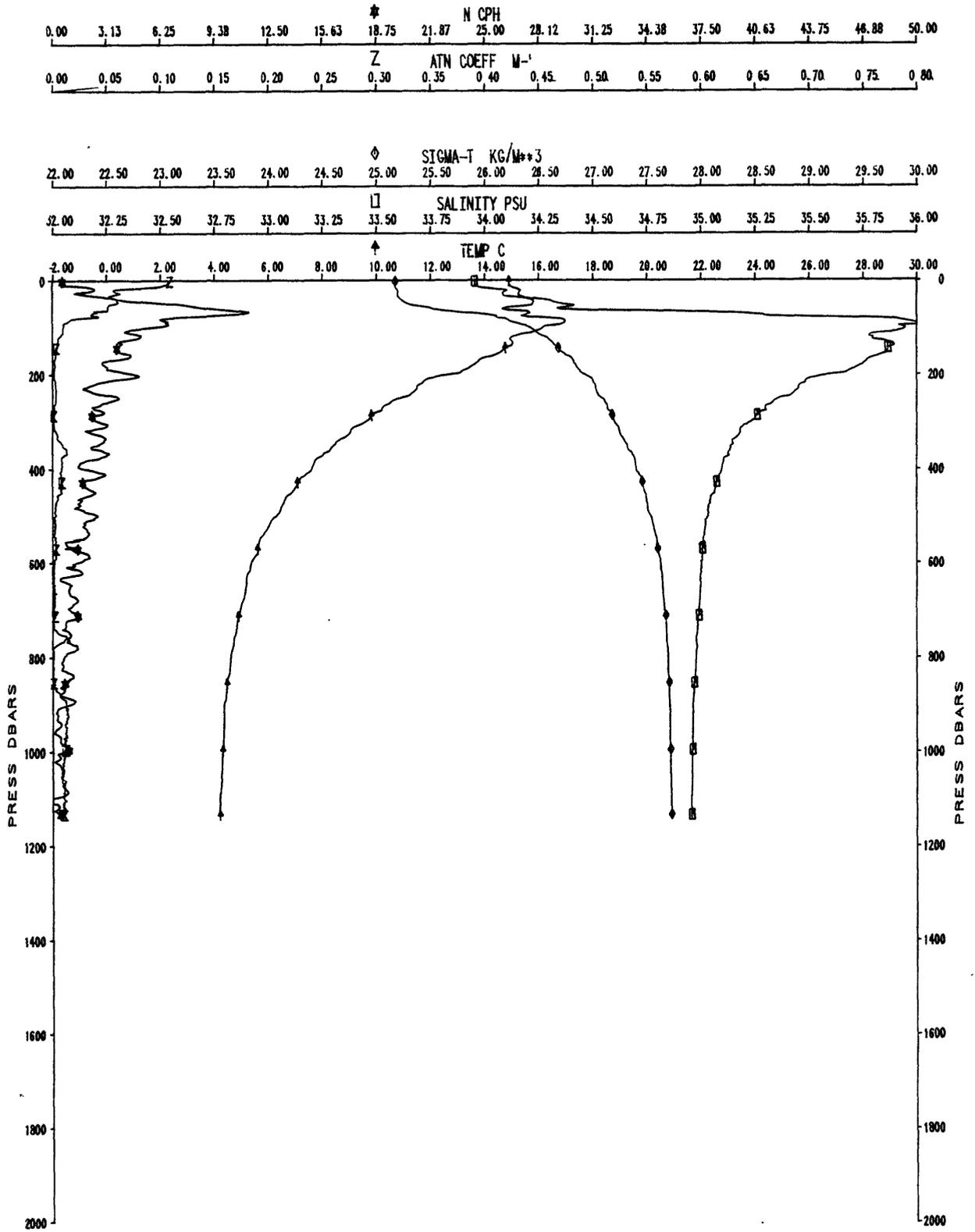
OC159A CAST #31

0.00	3.13	6.25	9.38	12.50	15.63	18.75	21.87	25.00	28.12	31.25	34.38	37.50	40.63	43.75	46.88	50.00
* N CPH																
0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80
Z ATN COEFF M ⁻¹																

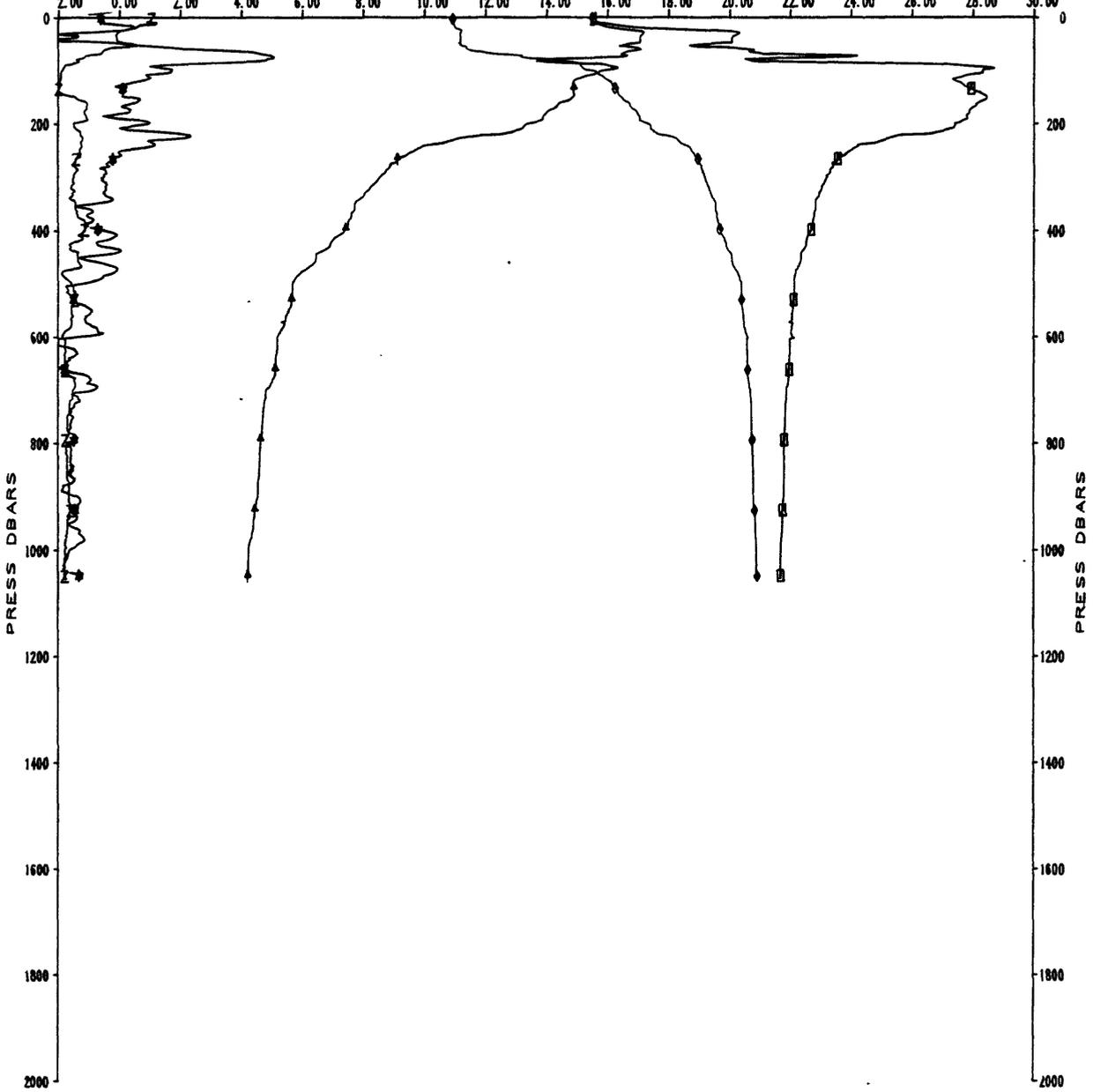
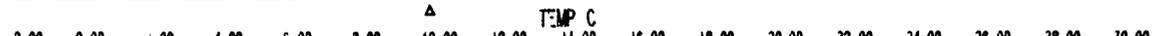
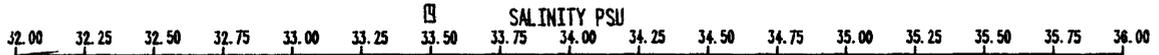
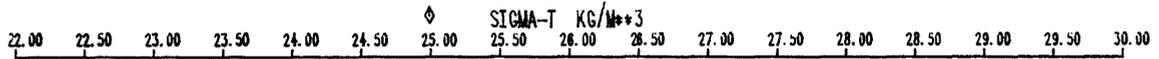
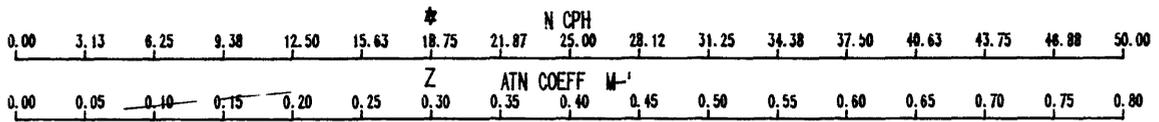
22.00	22.50	23.00	23.50	24.00	24.50	25.00	25.50	26.00	26.50	27.00	27.50	28.00	28.50	29.00	29.50	30.00
◇ SIGMA-T KG/M ³																
32.00	32.25	32.50	32.75	33.00	33.25	33.50	33.75	34.00	34.25	34.50	34.75	35.00	35.25	35.50	35.75	36.00
□ SALINITY PSU																



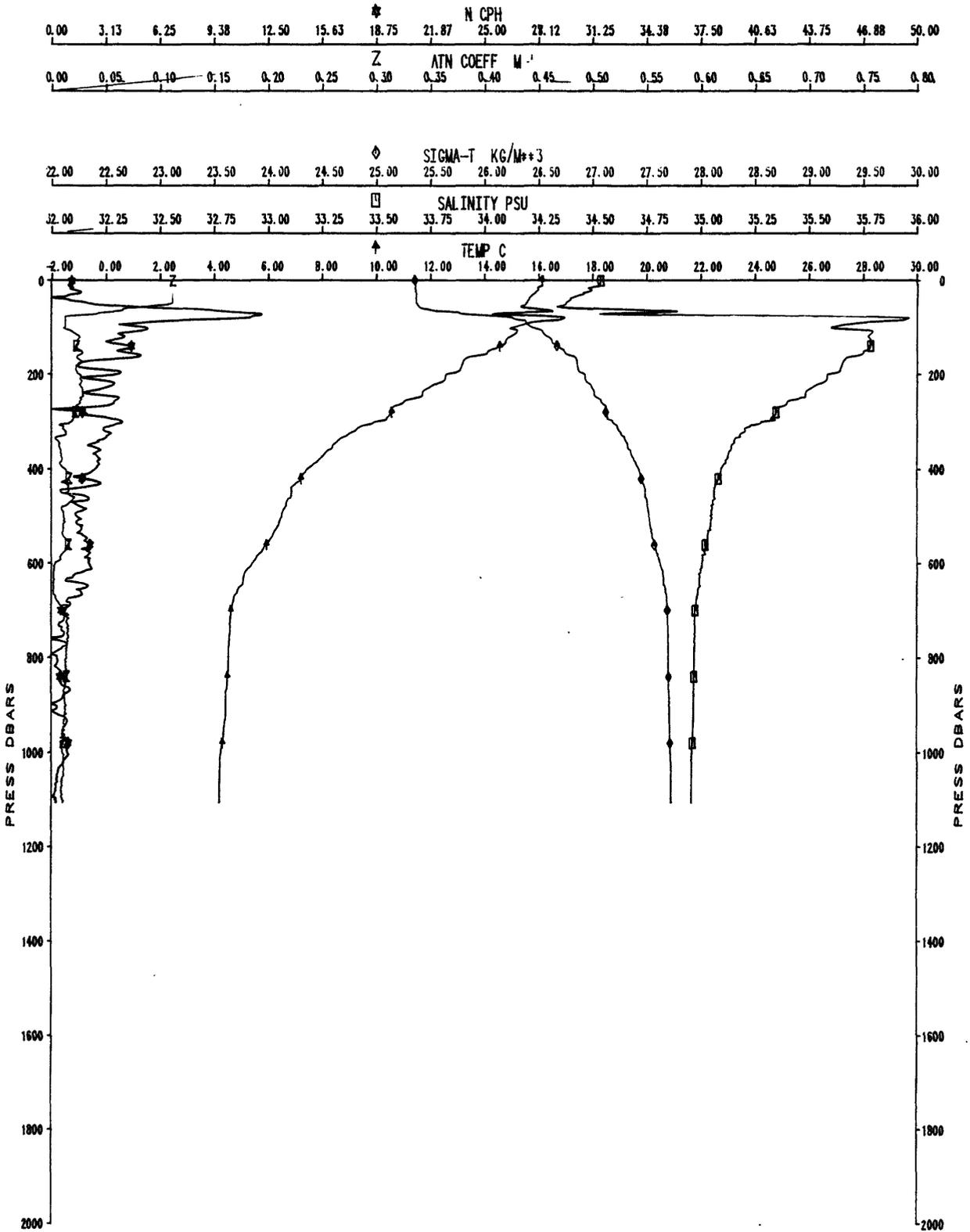
OC159A CAST #33



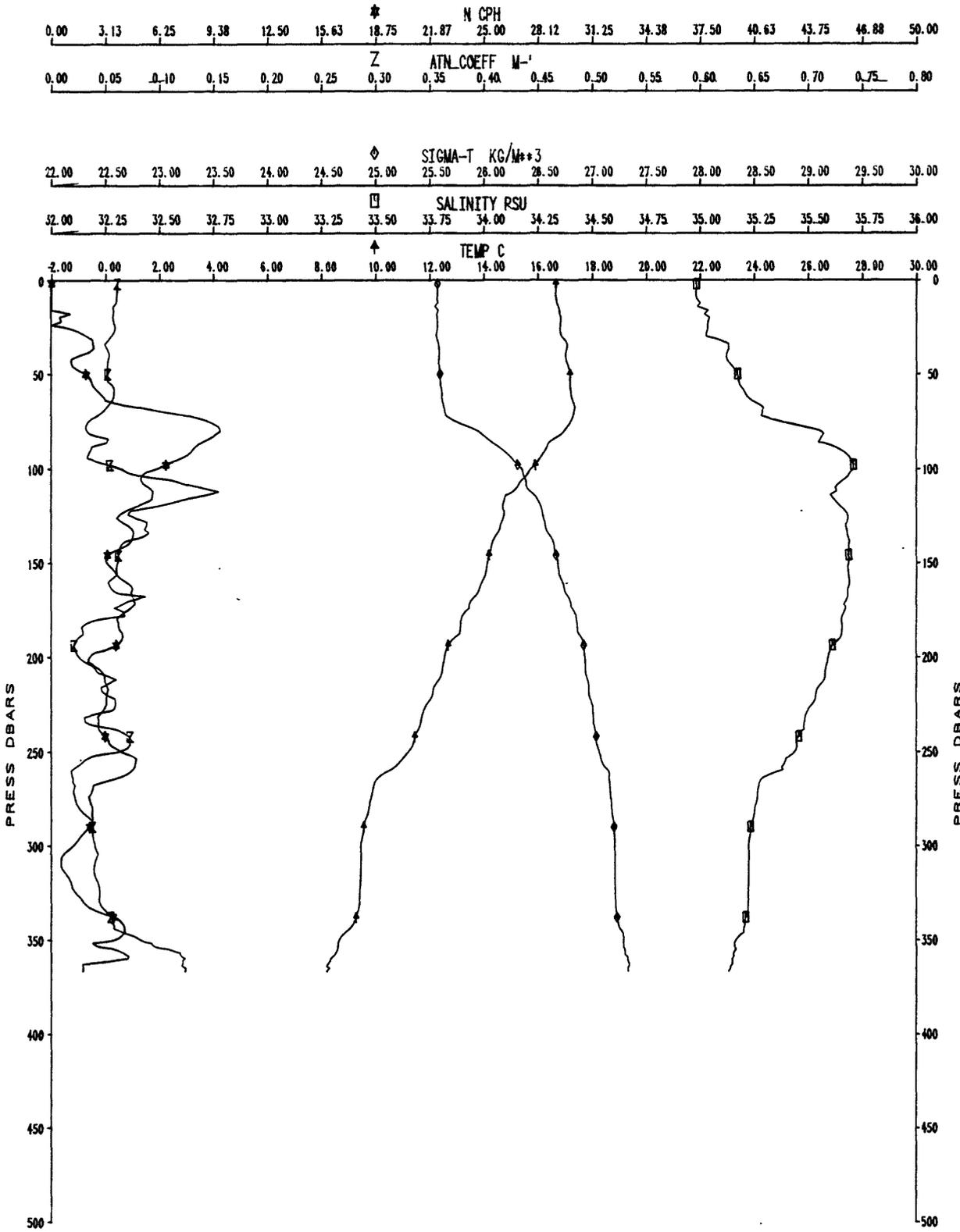
OC159B CAST #35



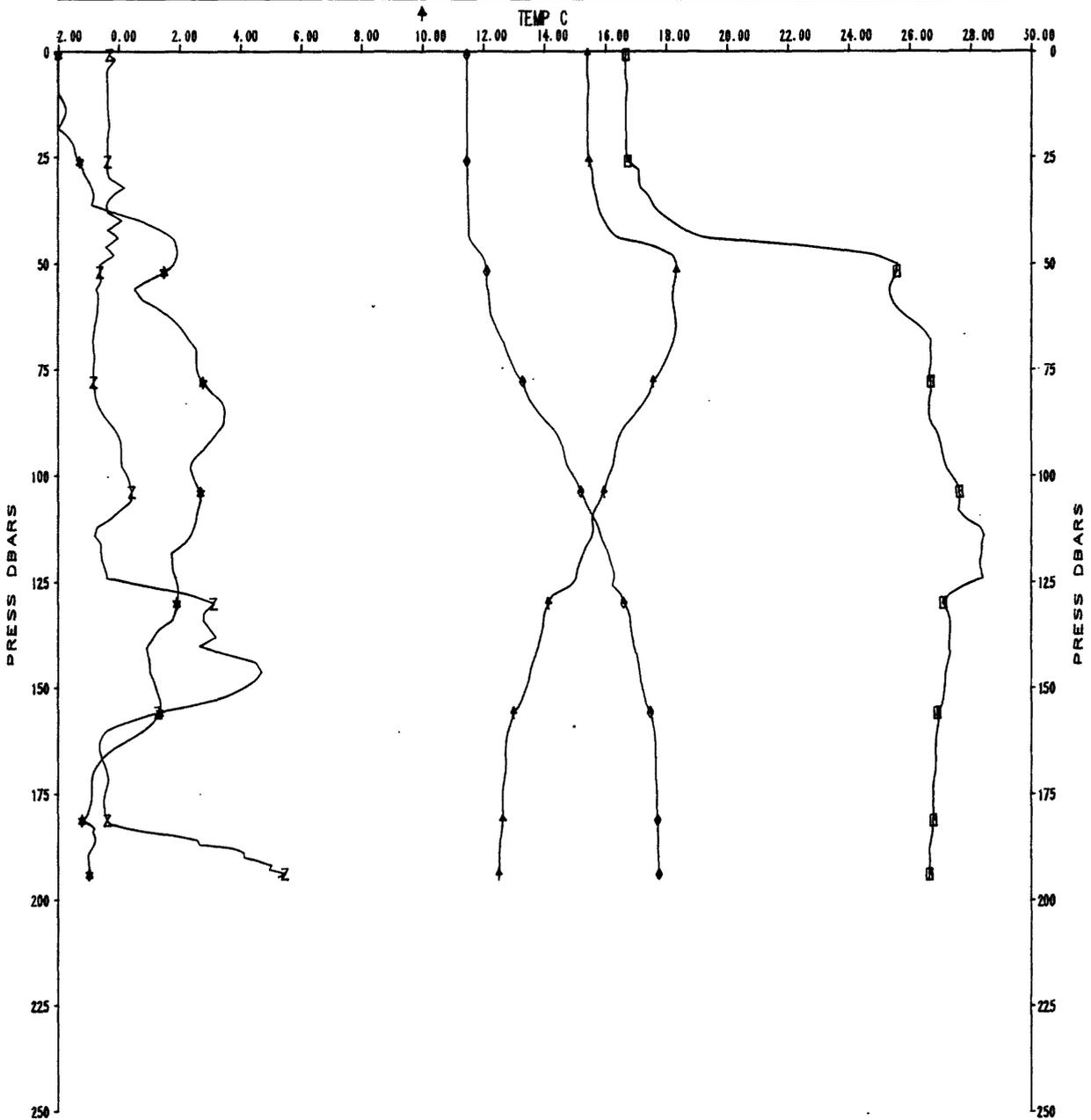
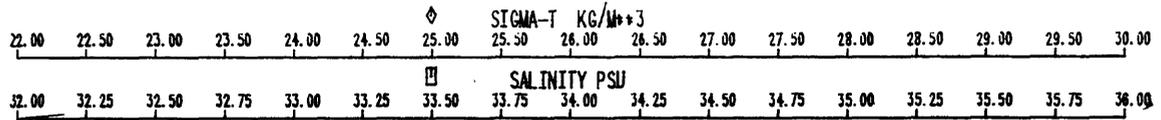
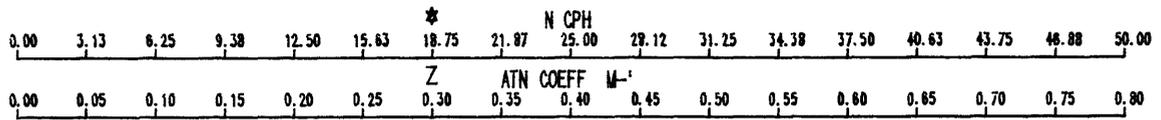
OC159A CAST #37



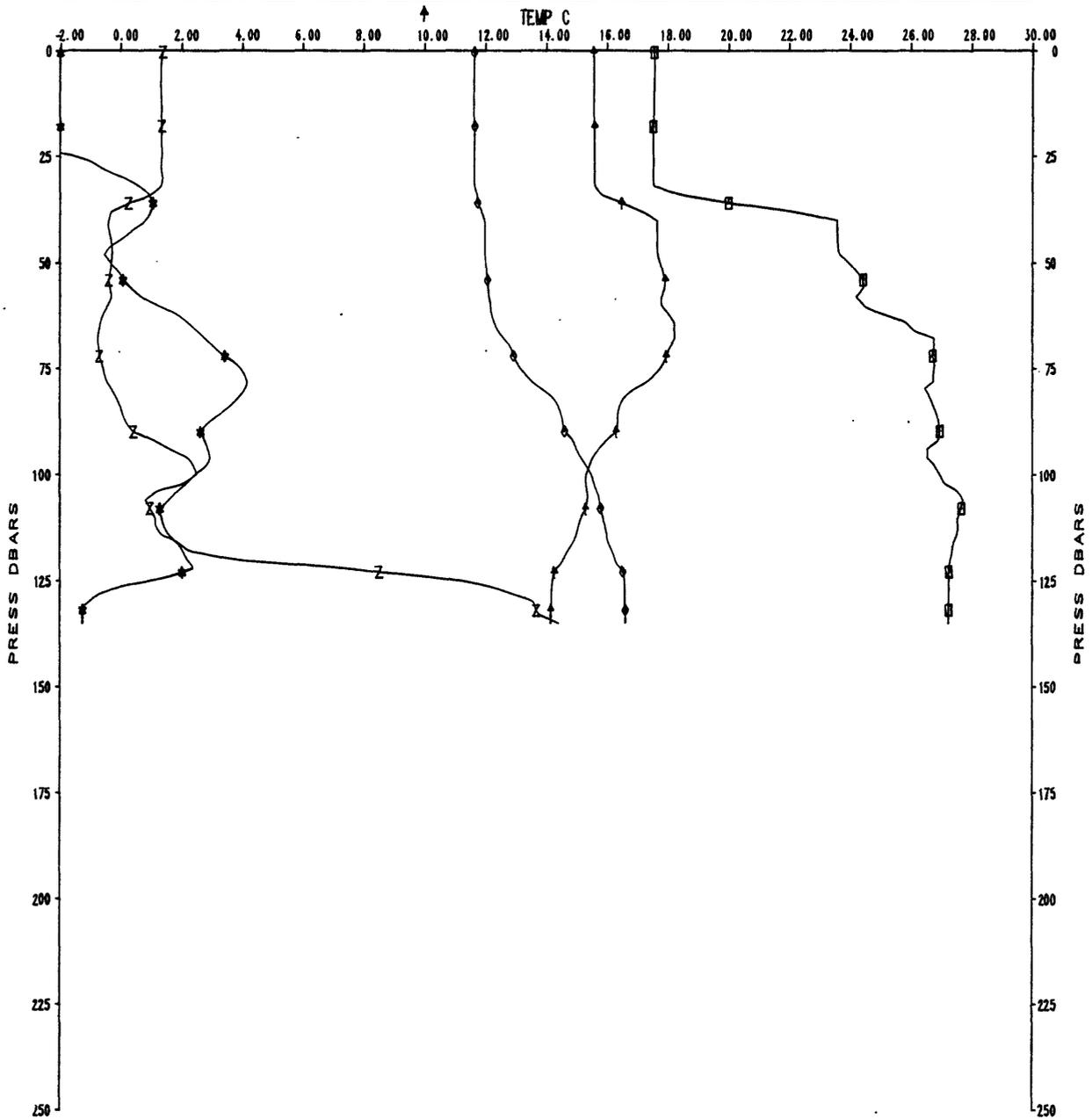
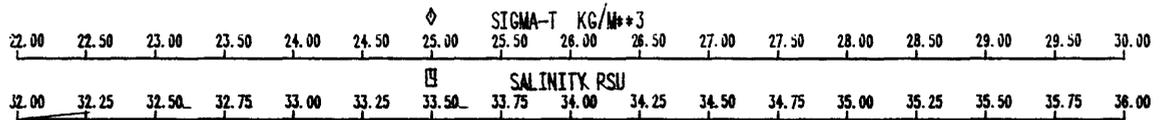
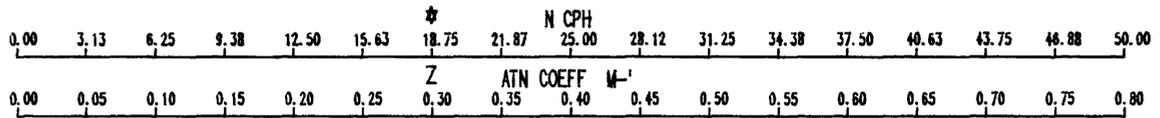
OC159A CAST #38



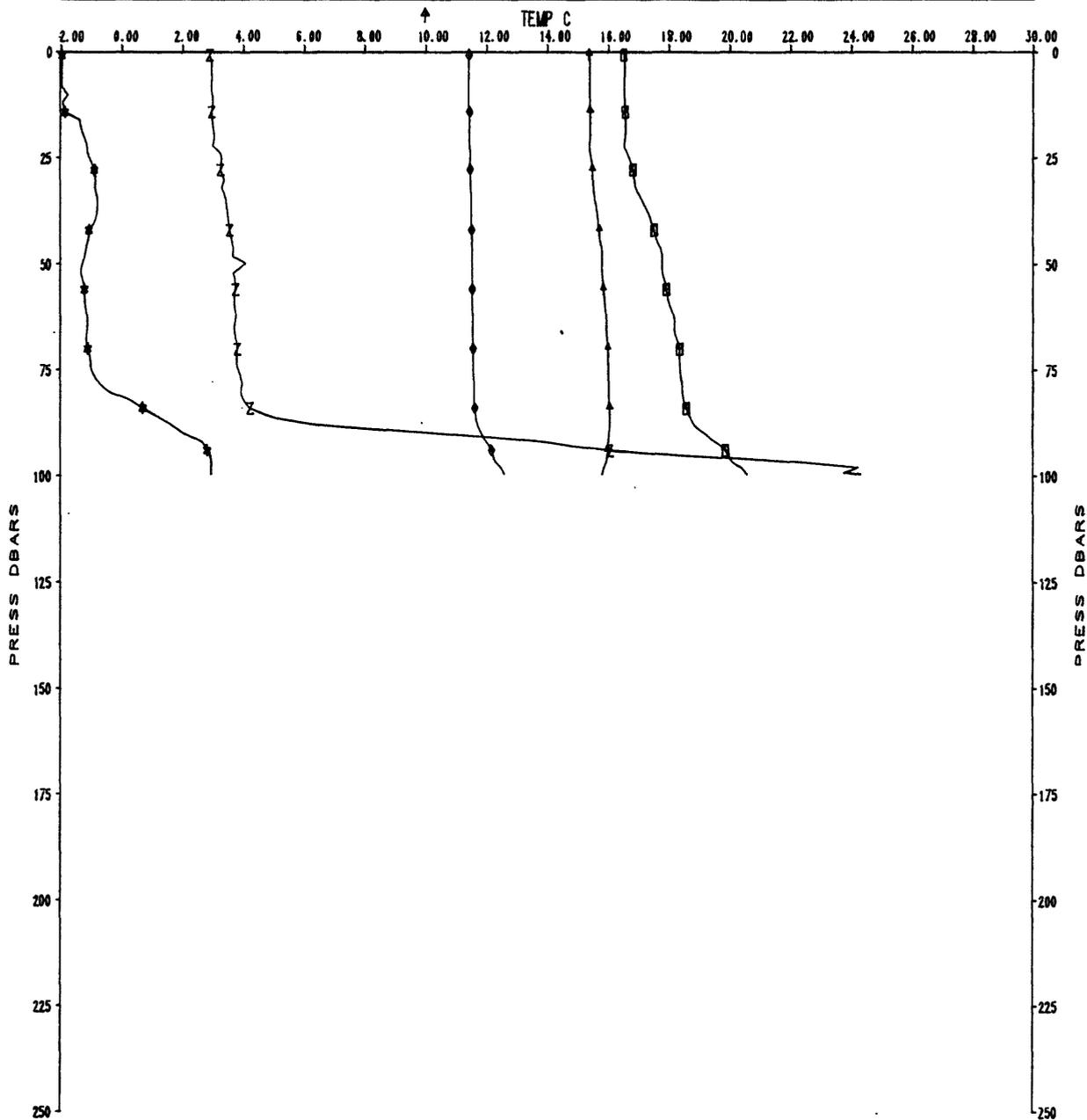
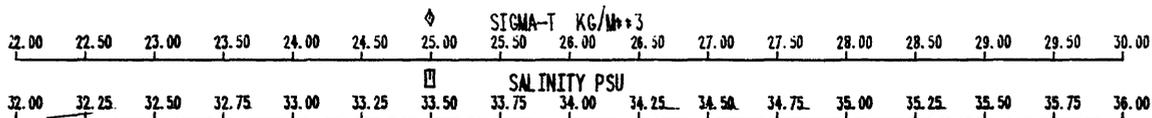
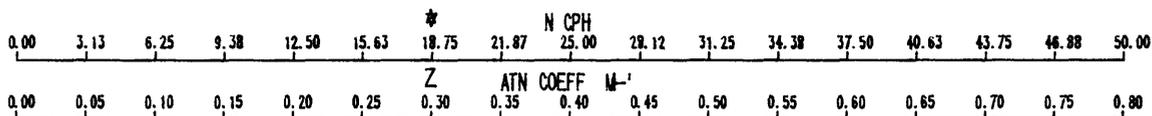
OC159B CAST #39



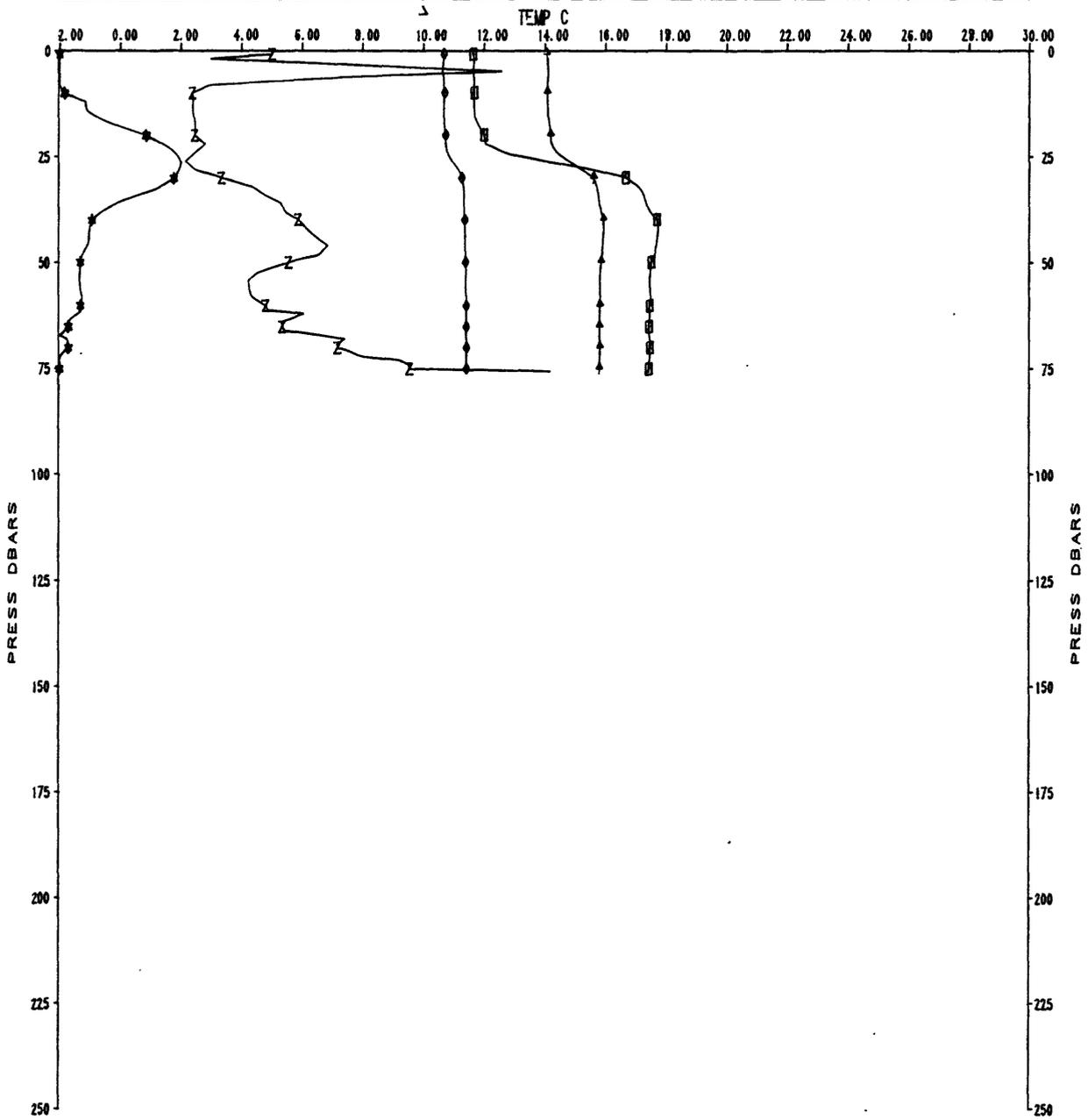
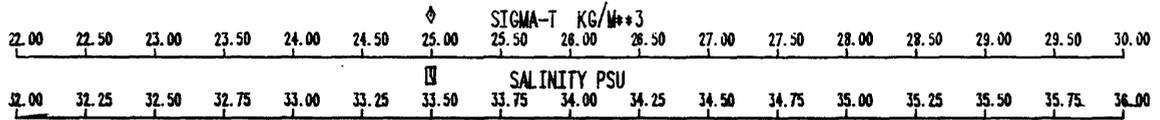
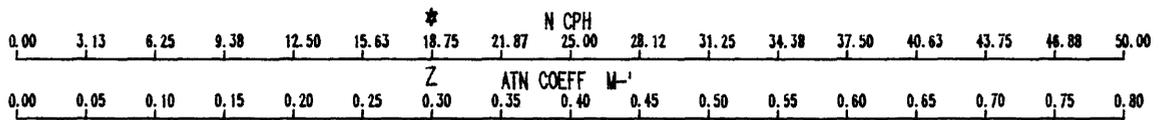
0C159U CAST #40



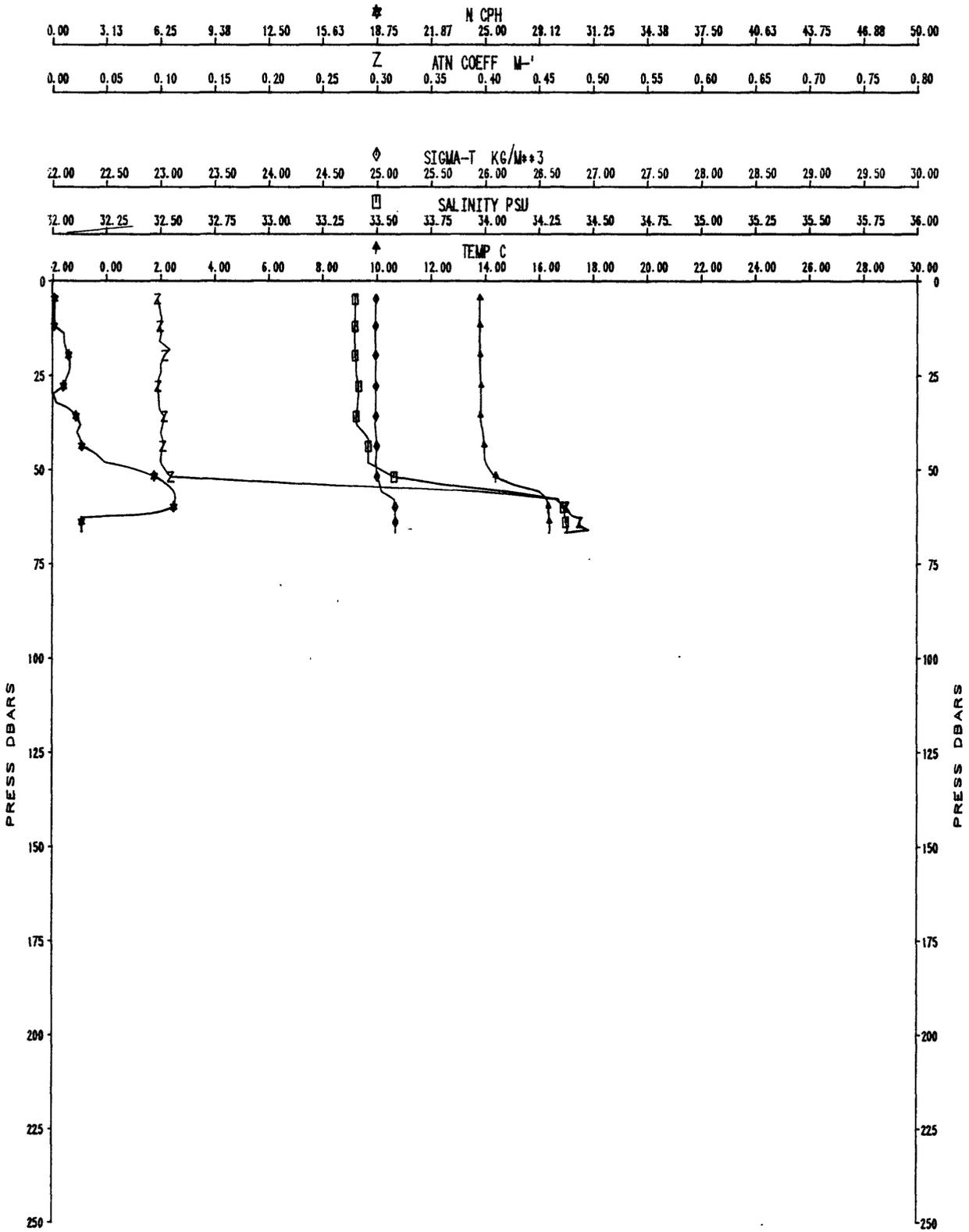
OC159U CAST #41



OC159B CAST #42



OC159A CAST #43



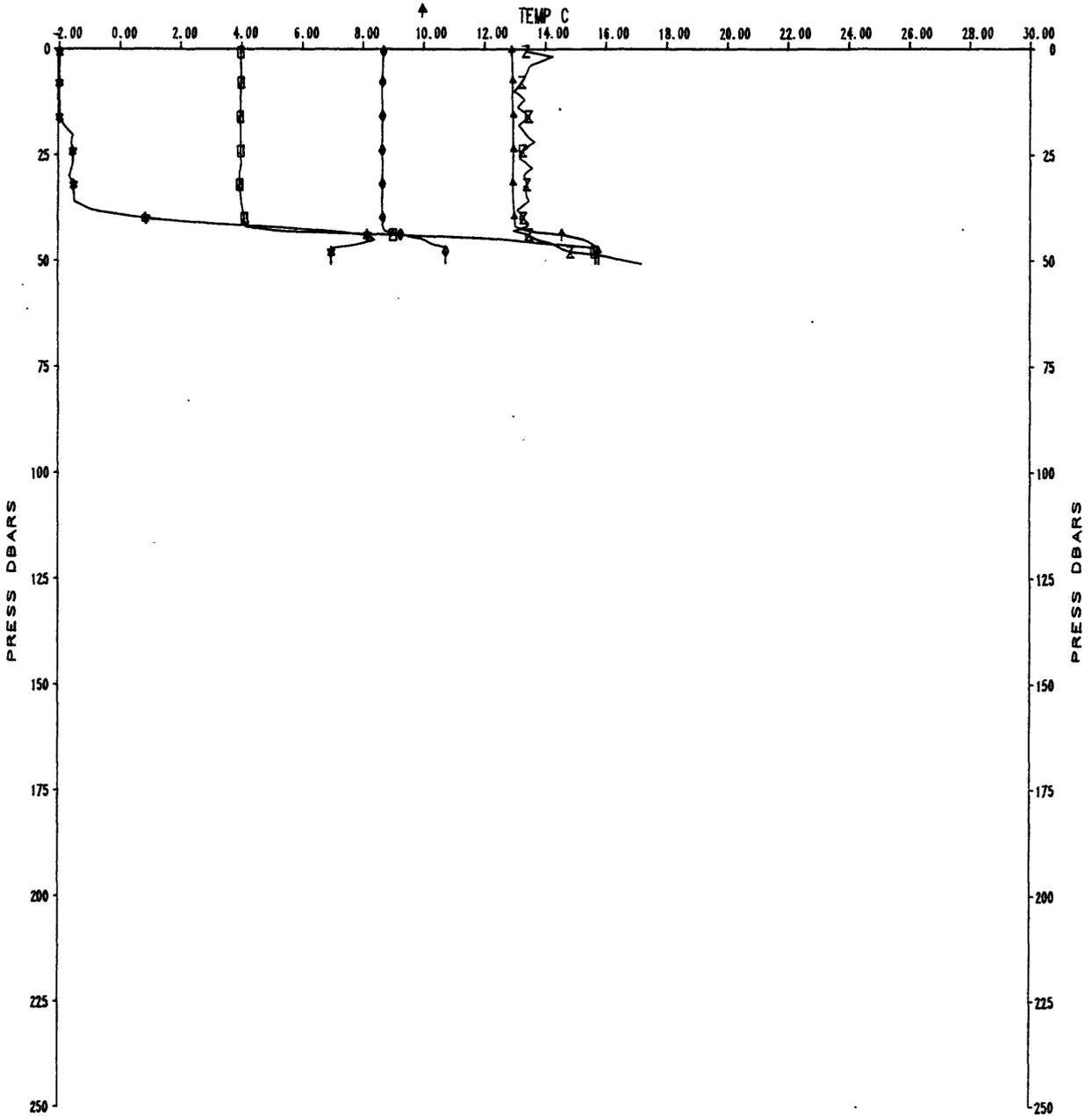
OC159A CAST #44

0.00 3.13 6.25 9.38 12.50 15.63 18.75 21.87 25.00 28.12 31.25 34.38 37.50 40.63 43.75 46.88 50.00
 * N CPH

0.00 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60 0.65 0.70 0.75 0.80
 † ATM COEFF M⁻¹

22.00 22.50 23.00 23.50 24.00 24.50 25.00 25.50 26.00 26.50 27.00 27.50 28.00 28.50 29.00 29.50 30.00
 ◇ SIGMA-T KG/M³

32.00 32.25 32.50 32.75 33.00 33.25 33.50 33.75 34.00 34.25 34.50 34.75 35.00 35.25 35.50 35.75 36.00
 □ SALINITY RSU



Appendix I. - Data listings

The 2-dbar-averaged data are listed in Appendix I. For the data listings, time is in Eastern Standard Time, SALIN is the salinity, OXY is the dissolved oxygen (no oxygens are listed due to sensor malfunction), ATN is the beam attenuation coefficient, SIGT is the density anomaly $\sigma\text{-t}$, N is the Brunt-Vaisala frequency, DYHT A is the dynamic height anomaly, and S SPD is the speed of sound in seawater. For pressures greater than 500 dbar, the 2-dbar-averaged data are subsampled at 20-dbar intervals. The XBT for stations 32, 34 and 36 malfunctioned so that there is no data for these stations.

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	
4	159	1	15 NOV 1984	2109	39°53.8'N	70°03.7'W	550	103	159	1	15 NOV 1984	2109	39°53.8'N	70°03.7'W	550	
DEPTH m	PRESS dbar	TEMP °C	SALIN psu	OXY ml/l	ATN m ⁻¹	SIGT gm/cm ³	DYHF A ₂ 10m ² /s ²	DEPTH m	PRESS dbar	TEMP °C	SALIN psu	OXY ml/l	ATN m ⁻¹	SIGT gm/cm ³	DYHF A ₂ 10m ² /s ²	DEPTH N
4	4.1	15.311	33.968	0.16	0.16	25.109	0.000	103	103.8	16.807	35.998	0.02	26.328	0.245	1515.	5.5
6	6.1	15.309	33.978	0.16	0.16	25.117	0.006	105	106.7	16.751	35.992	0.02	26.336	0.249	1515.	5.9
8	8.0	15.310	33.983	0.16	0.16	25.121	0.011	107	107.7	16.516	35.952	0.02	26.361	0.251	1514.	6.2
10	10.1	15.311	33.988	0.16	0.16	25.124	0.017	109	110.1	16.210	35.902	0.03	26.394	0.255	1513.	6.3
12	11.9	15.313	33.991	0.16	0.16	25.126	0.022	111	112.0	15.673	35.808	0.03	26.445	0.258	1513.	6.4
14	13.9	15.316	33.991	0.16	0.16	25.126	0.028	113	114.0	15.360	35.733	0.02	26.458	0.262	1511.	6.5
16	15.9	15.315	33.994	0.16	0.16	25.128	0.033	115	116.0	15.285	35.740	0.02	26.480	0.265	1510.	6.2
18	17.8	15.316	33.997	0.16	0.16	25.130	0.039	117	118.1	15.266	35.754	0.02	26.495	0.268	1510.	5.8
20	19.9	15.345	34.010	0.16	0.16	25.134	0.045	119	120.3	15.249	35.783	0.02	26.521	0.271	1510.	5.4
22	22.1	15.357	34.017	0.16	0.16	25.136	0.051	121	122.0	15.234	35.816	0.02	26.550	0.274	1510.	5.2
24	24.0	15.367	34.019	0.15	0.15	25.136	0.056	123	124.0	15.233	35.833	0.02	26.563	0.277	1510.	4.8
26	26.1	15.378	34.028	0.15	0.15	25.140	0.062	125	126.2	15.226	35.842	0.02	26.572	0.280	1510.	4.4
28	28.0	15.375	34.029	0.15	0.15	25.142	0.067	127	128.1	15.197	35.843	0.02	26.579	0.283	1510.	4.1
30	29.9	15.380	34.031	0.15	0.15	25.142	0.073	129	129.9	15.136	35.835	0.02	26.586	0.286	1510.	4.1
32	32.0	15.399	34.041	0.15	0.15	25.146	0.079	131	132.0	15.028	35.810	0.02	26.591	0.289	1510.	4.3
34	34.2	15.431	34.060	0.14	0.14	25.154	0.085	133	134.1	14.978	35.812	0.02	26.604	0.292	1510.	4.6
36	35.9	15.445	34.071	0.13	0.13	25.159	0.090	135	136.1	14.930	35.821	0.02	26.621	0.295	1510.	4.8
38	38.0	15.473	34.080	0.12	0.12	25.160	0.096	137	138.0	14.916	35.842	0.02	26.641	0.298	1510.	4.9
40	39.9	15.602	34.107	0.10	0.10	25.152	0.101	139	139.9	14.893	35.863	0.02	26.662	0.300	1510.	4.8
42	41.9	15.819	34.286	0.09	0.09	25.240	0.107	141	142.0	14.803	35.854	0.02	26.675	0.303	1509.	4.4
44	44.2	15.877	34.345	0.09	0.09	25.273	0.113	143	143.9	14.761	35.857	0.02	26.687	0.306	1509.	3.9
46	46.2	15.891	34.359	0.09	0.09	25.280	0.118	145	146.1	14.741	35.860	0.02	26.693	0.309	1509.	3.4
48	47.9	15.868	34.385	0.09	0.09	25.305	0.123	147	148.0	14.724	35.860	0.02	26.696	0.312	1509.	2.9
50	50.2	15.871	34.420	0.09	0.09	25.332	0.129	149	150.0	14.708	35.859	0.02	26.700	0.314	1509.	2.4
52	52.1	15.729	34.436	0.09	0.09	25.379	0.134	151	152.0	14.688	35.855	0.02	26.701	0.317	1509.	2.3
53	53.8	15.759	34.436	0.08	0.08	25.369	0.138	153	154.1	14.651	35.851	0.02	26.706	0.323	1509.	2.9
55	55.8	16.001	34.572	0.07	0.07	25.419	0.144	155	156.0	14.652	35.851	0.02	26.706	0.323	1509.	3.3
58	58.1	15.663	34.519	0.09	0.09	25.455	0.149	157	158.0	14.654	35.853	0.02	26.707	0.325	1509.	3.5
60	60.2	14.830	34.340	0.12	0.12	25.501	0.155	159	160.0	14.589	35.848	0.02	26.717	0.328	1509.	3.6
61	61.9	14.471	34.264	0.11	0.11	25.520	0.159	161	162.0	14.408	35.842	0.02	26.752	0.331	1508.	3.6
64	64.1	14.603	34.286	0.09	0.09	25.508	0.164	162	163.8	14.318	35.815	0.02	26.750	0.333	1508.	3.5
66	66.1	14.999	34.381	0.08	0.08	25.496	0.169	165	165.9	14.296	35.809	0.02	26.750	0.336	1508.	3.3
67	67.8	15.905	34.780	0.05	0.05	25.593	0.174	167	168.2	14.287	35.808	0.02	26.751	0.339	1508.	2.8
70	70.2	16.299	34.980	0.04	0.04	25.664	0.179	169	170.0	14.245	35.806	0.02	26.759	0.341	1508.	2.4
72	72.1	17.001	35.276	0.04	0.04	25.727	0.183	170	171.8	14.227	35.805	0.02	26.762	0.344	1508.	2.7
73	73.8	17.627	35.572	0.04	0.04	25.803	0.187	173	174.1	14.167	35.797	0.02	26.768	0.347	1508.	3.0
75	76.1	18.819	36.074	0.04	0.04	25.890	0.192	175	176.1	14.142	35.793	0.02	26.771	0.350	1508.	3.2
77	78.1	19.291	36.399	0.03	0.03	26.017	0.196	177	178.0	14.112	35.795	0.02	26.779	0.352	1508.	3.3
79	79.8	19.086	36.385	0.03	0.03	26.030	0.200	180	179.9	14.055	35.784	0.02	26.782	0.354	1508.	3.4
81	81.9	19.086	36.365	0.03	0.03	26.044	0.204	182	181.8	13.981	35.780	0.02	26.795	0.357	1507.	3.4
83	84.0	19.015	36.347	0.03	0.03	26.048	0.208	182	184.0	13.873	35.762	0.02	26.803	0.360	1507.	3.4
85	86.1	18.918	36.314	0.03	0.03	26.048	0.212	185	186.0	13.805	35.754	0.02	26.812	0.362	1507.	3.4
87	88.1	18.586	36.259	0.04	0.04	26.091	0.216	187	188.0	13.780	35.752	0.02	26.815	0.365	1507.	3.4
89	89.8	17.267	35.883	0.04	0.04	26.129	0.219	188	189.9	13.750	35.751	0.02	26.821	0.367	1507.	3.5
91	92.1	16.071	35.595	0.03	0.03	26.190	0.224	190	192.0	13.712	35.746	0.02	26.825	0.370	1507.	3.6
93	93.9	16.153	35.614	0.03	0.03	26.186	0.227	192	193.9	13.659	35.747	0.02	26.837	0.372	1506.	3.6
95	95.9	16.483	35.824	0.03	0.03	26.271	0.231	194	196.1	13.565	35.735	0.02	26.847	0.375	1506.	3.8
97	98.2	16.696	35.917	0.03	0.03	26.291	0.235	196	198.0	13.443	35.723	0.02	26.863	0.378	1506.	3.8
99	100.1	16.828	35.971	0.02	0.02	26.302	0.238	198	199.7	13.380	35.706	0.02	26.863	0.380	1506.	3.9
101	102.0	16.843	36.000	0.02	0.02	26.321	0.241	201	202.2	13.294	35.693	0.02	26.870	0.383	1505.	3.6

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
401	404-1	7.391	35.088	0.04	27.433	0.575	1487.	2	2.2	15.479	34.007	0.20	25.102	0.000	1507.
403	406-1	7.382	35.088	0.04	27.434	0.576	1487.	4	3.8	15.470	34.003	0.19	25.100	0.005	1507.
404	407-9	7.344	35.086	0.05	27.438	0.578	1487.	6	6.1	15.478	34.005	0.18	25.100	0.011	1507.
406	409-9	7.317	35.088	0.05	27.444	0.579	1487.	8	8.0	15.483	34.007	0.18	25.101	0.016	1507.
409	412-1	7.243	35.084	0.04	27.451	0.581	1486.	10	10.1	15.486	34.009	0.17	25.101	0.022	1507.
410	413-8	7.214	35.080	0.04	27.452	0.582	1486.	12	11.9	15.478	34.006	0.17	25.101	0.028	1507.
412	416-0	7.200	35.080	0.04	27.454	0.583	1486.	14	14.0	15.468	34.001	0.16	25.099	0.034	1507.
414	418-1	7.191	35.079	0.04	27.454	0.585	1486.	16	16.1	15.524	34.026	0.16	25.106	0.040	1507.
416	419-9	7.187	35.079	0.04	27.455	0.586	1486.	18	17.9	15.519	34.040	0.16	25.118	0.045	1507.
418	421-9	7.186	35.078	0.04	27.455	0.587	1486.	20	20.2	15.493	34.020	0.16	25.109	0.051	1507.
421	424-2	7.184	35.078	0.04	27.455	0.589	1486.	22	22.0	15.469	34.004	0.16	25.102	0.056	1507.
422	426-0	7.184	35.078	0.03	27.455	0.590	1486.	24	23.9	15.485	34.008	0.16	25.101	0.062	1507.
424	428-1	7.185	35.079	0.03	27.455	0.591	1486.	26	26.1	15.556	34.044	0.16	25.113	0.068	1508.
426	430-1	7.184	35.078	0.03	27.455	0.593	1487.	28	28.0	15.629	34.075	0.16	25.120	0.074	1508.
428	431-9	7.184	35.078	0.03	27.455	0.594	1487.	30	29.8	15.706	34.156	0.15	25.166	0.079	1508.
430	434-1	7.184	35.078	0.03	27.455	0.596	1487.	32	32.0	15.643	34.196	0.15	25.211	0.085	1508.
432	436-1	7.184	35.078	0.04	27.455	0.597	1487.	34	34.0	15.608	34.200	0.14	25.222	0.090	1508.
434	437-6	7.183	35.078	0.04	27.455	0.598	1487.	36	36.0	15.596	34.202	0.14	25.226	0.096	1508.
436	440-1	7.184	35.078	0.04	27.455	0.600	1487.	38	38.0	15.568	34.203	0.13	25.233	0.101	1508.
438	442-2	7.184	35.079	0.04	27.455	0.601	1487.	40	40.1	15.559	34.202	0.13	25.234	0.107	1508.
440	443-9	7.182	35.078	0.04	27.455	0.602	1487.	42	42.1	15.554	34.202	0.12	25.235	0.113	1508.
442	446-1	7.182	35.078	0.04	27.455	0.604	1487.	44	44.0	15.543	34.202	0.12	25.238	0.118	1508.
443	447-4	7.180	35.078	0.04	27.456	0.605	1487.	46	46.1	15.518	34.202	0.11	25.243	0.123	1508.
447	450-8	7.170	35.077	0.04	27.456	0.607	1487.	48	48.1	15.504	34.202	0.11	25.246	0.129	1508.
448	451-9	7.156	35.078	0.04	27.459	0.608	1487.	50	50.0	15.501	34.202	0.12	25.247	0.134	1508.
450	454-1	7.143	35.076	0.04	27.459	0.609	1487.	52	52.0	15.498	34.202	0.12	25.248	0.139	1508.
452	455-9	7.122	35.077	0.04	27.463	0.611	1487.	54	54.1	15.495	34.202	0.11	25.248	0.145	1508.
454	457-8	7.086	35.076	0.04	27.467	0.612	1487.	56	56.0	15.499	34.203	0.10	25.248	0.150	1508.
456	460-0	7.068	35.074	0.04	27.468	0.613	1487.	57	57.9	15.459	34.232	0.08	25.279	0.156	1508.
458	462-1	7.054	35.073	0.04	27.469	0.615	1487.	60	60.0	15.069	34.240	0.07	25.371	0.161	1507.
460	464-1	7.037	35.074	0.04	27.472	0.616	1487.	62	62.2	14.663	34.169	0.07	25.405	0.167	1506.
462	465-8	6.988	35.072	0.04	27.477	0.617	1486.	63	63.9	14.415	34.138	0.07	25.434	0.171	1505.
464	468-2	6.924	35.068	0.04	27.483	0.619	1486.	66	66.1	14.275	34.159	0.07	25.480	0.177	1504.
466	470-0	6.886	35.066	0.04	27.487	0.620	1486.	67	67.8	14.203	34.215	0.07	25.538	0.181	1504.
468	471-9	6.787	35.069	0.05	27.503	0.621	1486.	70	70.3	14.146	34.315	0.07	25.627	0.187	1504.
470	474-0	6.658	35.058	0.05	27.512	0.623	1485.	71	72.0	14.062	34.335	0.07	25.661	0.191	1504.
472	475-9	6.378	35.059	0.05	27.524	0.624	1485.	73	73.9	14.016	34.336	0.07	25.671	0.195	1504.
474	477-9	6.486	35.050	0.05	27.528	0.625	1485.	76	76.2	13.967	34.368	0.08	25.706	0.201	1504.
476	480-3	6.427	35.046	0.05	27.533	0.627	1484.	77	78.0	13.991	34.423	0.08	25.744	0.205	1504.
478	482-0	6.396	35.044	0.05	27.536	0.628	1484.	79	79.9	14.010	34.443	0.08	25.755	0.209	1504.
480	483-9	6.366	35.044	0.05	27.540	0.629	1484.	81	82.1	14.478	34.624	0.07	25.796	0.214	1506.
482	486-0	6.302	35.043	0.04	27.548	0.630	1484.	83	84.0	14.969	34.917	0.07	25.916	0.218	1508.
484	487-9	6.252	35.039	0.04	27.551	0.631	1484.	85	86.1	15.142	34.966	0.06	25.915	0.223	1508.
486	490-2	6.213	35.035	0.04	27.553	0.633	1484.	87	88.0	15.295	35.042	0.06	25.940	0.226	1509.
488	492-0	6.186	35.036	0.06	27.558	0.634	1484.	89	89.9	15.809	35.186	0.05	25.935	0.230	1511.
489	493-8	6.168	35.033	0.12	27.558	0.635	1484.	91	92.0	16.143	35.370	0.05	26.000	0.235	1512.
492	496-2	6.159	35.033	0.14	27.558	0.636	1484.	93	94.0	16.264	35.423	0.05	26.013	0.239	1513.
493	497-9	6.159	35.033	0.13	27.559	0.637	1484.	95	96.1	16.280	35.453	0.05	26.032	0.243	1513.
496	500-0	6.150	35.034	0.17	27.560	0.638	1484.	97	98.1	16.293	35.477	0.05	26.048	0.247	1513.
516	520-2	6.052	35.029	0.07	27.569	0.650	1484.	99	100.0	16.368	35.505	0.05	26.052	0.251	1513.

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH		
OC	159	3	15 NOV 1984	2358	40°05.1'N	69°59.8'W	143		
DEPTH m	PRESS dbar	TEMP °C	SALIN psu	OXY ml/l	ATN m ⁻¹	SIGT gm/cm ³	DYHT A ₂ 10m ² /s ²	S SPD m/s	N cph
101	102.0	14.104	34.457	0.11	25.746	0.278	1505.	1505.	6.4
103	104.0	14.137	34.495	0.13	25.769	0.282	1505.	1505.	6.7
105	106.0	14.181	34.542	0.15	25.796	0.287	1505.	1505.	7.2
107	108.0	14.289	34.632	0.22	25.842	0.291	1506.	1506.	7.5
109	110.0	14.393	34.732	0.26	25.898	0.295	1506.	1506.	7.6
111	112.1	14.482	34.800	0.26	25.931	0.300	1507.	1507.	7.4
113	113.9	14.569	34.870	0.25	25.967	0.304	1507.	1507.	7.4
115	116.0	14.644	34.935	0.25	26.000	0.308	1507.	1507.	7.4
117	118.2	14.669	34.966	0.24	26.019	0.312	1508.	1508.	7.9
119	120.0	14.706	34.995	0.25	26.033	0.316	1508.	1508.	8.8
121	122.2	14.810	35.103	0.26	26.094	0.320	1508.	1508.	9.4
123	124.0	14.941	35.217	0.26	26.153	0.324	1509.	1509.	9.8
125	126.0	15.041	35.385	0.24	26.261	0.327	1509.	1509.	10.0
127	128.1	15.090	35.512	0.26	26.347	0.331	1510.	1510.	9.9
129	129.9	15.076	35.564	0.34	26.391	0.334	1510.	1510.	9.3
130	131.3	15.069	35.575	0.36	26.401	0.336	1510.	1510.	8.2
131	131.9	15.067	35.578	0.36	26.404	0.337	1510.	1510.	6.3
132	133.0	15.068	35.579	0.37	26.404	0.339	1510.	1510.	4.1
133	134.1	15.068	35.579	0.38	26.405	0.341	1510.	1510.	2.9
134	134.9	15.068	35.580	0.37	26.405	0.342	1510.	1510.	2.9
135	136.0	15.067	35.586	0.38	26.406	0.344	1510.	1510.	3.0
136	137.0	15.065	35.600	0.37	26.421	0.346	1510.	1510.	3.2
137	138.0	15.065	35.602	0.37	26.422	0.349	1510.	1510.	3.2
138	139.0	15.066	35.603	0.36	26.424	0.351	1510.	1510.	3.2
139	140.0	15.066	35.603	0.36	26.424	0.351	1510.	1510.	3.2
140	141.0	15.066	35.604	0.37	26.424	0.352	1510.	1510.	3.2

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH		
OC	159	4	16 NOV 1984	0033	40°10.0'N	69°58.5'W	105		
DEPTH m	PRESS dbar	TEMP °C	SALIN psu	OXY ml/l	ATN m ⁻¹	SIGT gm/cm ³	DYHT A ₂ 10m ² /s ²	S SPD m/s	N cph
4	3.6	14.361	33.539	0.13	24.983	0.000	1503.	1503.	0.6
6	5.8	14.365	33.540	0.12	24.983	0.007	1503.	1503.	0.6
8	8.2	14.366	33.541	0.13	24.984	0.014	1503.	1503.	0.6
10	9.6	14.370	33.541	0.13	24.983	0.018	1503.	1503.	0.6
12	12.1	14.376	33.542	0.12	24.983	0.025	1503.	1503.	0.6
14	14.0	14.377	33.543	0.13	24.983	0.031	1503.	1503.	0.5
16	16.1	14.377	33.543	0.13	24.983	0.037	1503.	1503.	0.4
18	18.2	14.377	33.545	0.13	24.984	0.043	1503.	1503.	0.3
20	19.9	14.374	33.544	0.12	24.984	0.049	1503.	1503.	-0.1
22	21.7	14.372	33.542	0.13	24.983	0.054	1503.	1503.	-0.3
24	24.0	14.372	33.542	0.13	24.983	0.061	1503.	1503.	-0.5
26	26.4	14.373	33.541	0.13	24.982	0.068	1503.	1503.	-0.5
28	28.0	14.372	33.542	0.13	24.983	0.072	1503.	1503.	-0.4
30	30.3	14.370	33.541	0.13	24.983	0.079	1503.	1503.	-0.3
32	32.2	14.372	33.540	0.13	24.982	0.085	1503.	1503.	-0.6
34	33.9	14.372	33.542	0.13	24.983	0.090	1504.	1504.	-0.7
36	36.1	14.372	33.541	0.13	24.982	0.096	1504.	1504.	1.1
38	38.2	14.374	33.541	0.13	24.982	0.103	1504.	1504.	1.5
40	40.1	14.392	33.542	0.12	24.979	0.109	1504.	1504.	2.4
42	42.0	14.467	33.564	0.12	24.980	0.114	1504.	1504.	3.1
43	43.8	14.574	33.617	0.12	24.999	0.120	1504.	1504.	4.7
46	46.0	14.723	33.653	0.11	24.994	0.126	1505.	1505.	5.7
48	47.9	15.122	33.801	0.10	25.022	0.132	1506.	1506.	7.1
50	50.1	15.517	33.931	0.09	25.035	0.138	1508.	1508.	8.1
52	51.9	16.277	34.275	0.08	25.128	0.143	1511.	1511.	8.5
54	54.1	16.785	34.449	0.07	25.143	0.149	1512.	1512.	8.9
55	55.9	17.938	34.962	0.07	25.259	0.155	1516.	1516.	8.5
57	57.8	18.379	35.181	0.07	25.318	0.160	1518.	1518.	7.9
60	60.1	18.581	35.246	0.07	25.317	0.166	1519.	1519.	6.5
61	61.7	18.730	35.333	0.07	25.346	0.170	1519.	1519.	5.4
64	64.1	18.763	35.350	0.07	25.350	0.176	1519.	1519.	3.6
65	65.9	18.811	35.357	0.07	25.344	0.181	1520.	1520.	2.5
68	68.3	18.873	35.378	0.07	25.344	0.187	1520.	1520.	2.1
69	70.0	18.905	35.392	0.06	25.346	0.192	1520.	1520.	1.4
71	71.8	18.946	35.409	0.07	25.349	0.197	1520.	1520.	1.6
74	74.4	18.953	35.418	0.06	25.354	0.204	1520.	1520.	3.6
75	76.1	18.956	35.419	0.07	25.354	0.208	1520.	1520.	5.1
78	78.3	18.957	35.419	0.06	25.354	0.214	1520.	1520.	6.2
80	80.3	18.942	35.422	0.07	25.360	0.219	1520.	1520.	6.6
81	82.0	18.216	35.305	0.07	25.453	0.223	1518.	1518.	6.7
83	84.0	17.384	35.110	0.08	25.508	0.229	1515.	1515.	6.8
85	85.9	16.801	34.978	0.08	25.545	0.233	1514.	1514.	7.5
87	87.9	16.655	34.892	0.08	25.513	0.238	1513.	1513.	7.6
89	90.1	16.568	34.858	0.08	25.508	0.244	1513.	1513.	7.1
91	92.0	16.272	34.847	0.09	25.568	0.248	1512.	1512.	7.0
93	93.9	15.304	34.719	0.15	25.689	0.253	1509.	1509.	7.3
94	95.2	14.731	34.547	0.29	25.682	0.256	1507.	1507.	7.8
95	96.0	14.682	34.510	0.33	25.664	0.258	1507.	1507.	7.5
96	97.0	14.634	34.502	0.36	25.668	0.260	1507.	1507.	5.9
97	97.8	14.533	34.498	0.37	25.687	0.262	1506.	1506.	3.3

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH		
OC	159	4	16 NOV 1984	0033	40°10.0'N	69°58.5'W	105		
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	N
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	cph
98	99.1	14.499	34.501		0.38	25.697	0.265	1506.	3.9
99	100.1	14.487	34.502		0.39	25.700	0.267	1506.	4.1
100	100.8	14.479	34.501		0.39	25.700	0.269	1506.	4.1
101	102.0	14.473	34.498		0.40	25.700	0.272	1506.	4.1
102	102.8	14.464	34.500		0.41	25.703	0.274	1506.	4.1
103	103.8	14.453	34.500		0.42	25.706	0.276	1506.	4.1

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH		
OC	159	5	16 NOV 1984	1244	40°30.0'N	69°52.8'W	70		
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	N
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	cph
4	3.8	13.964	33.299		0.23	24.881	0.000	1501.	1.0
6	5.7	13.965	33.299		0.23	24.880	0.006	1501.	1.0
8	7.7	13.964	33.300		0.23	24.882	0.012	1501.	1.0
14	14.4	13.957	33.304		0.22	24.886	0.032	1502.	1.0
18	18.6	13.958	33.302		0.22	24.885	0.045	1502.	1.0
22	21.9	13.957	33.303		0.22	24.886	0.055	1502.	1.0
24	24.5	13.955	33.305		0.22	24.887	0.063	1502.	0.9
27	27.0	13.957	33.306		0.21	24.888	0.071	1502.	0.9
30	30.0	13.958	33.307		0.21	24.888	0.080	1502.	1.0
32	32.2	13.958	33.307		0.21	24.889	0.087	1502.	0.9
34	34.3	14.114	33.350		0.21	24.889	0.093	1502.	0.9
36	36.3	14.056	33.335		0.21	24.890	0.099	1502.	1.1
38	38.1	13.993	33.319		0.21	24.890	0.105	1502.	1.3
42	41.9	13.982	33.317		0.20	24.891	0.117	1502.	1.2
44	44.0	13.981	33.318		0.20	24.892	0.123	1502.	1.1
46	46.1	13.979	33.324		0.20	24.897	0.129	1502.	0.7
48	48.0	13.980	33.325		0.21	24.898	0.135	1502.	2.5
50	50.1	14.007	33.326		0.21	24.893	0.142	1502.	4.0
52	51.9	14.058	33.341		0.24	24.894	0.147	1503.	5.0
54	54.2	14.352	33.413		0.25	24.888	0.154	1504.	5.7
56	56.0	14.823	33.635		0.34	24.959	0.160	1505.	6.3
57	57.9	15.152	33.788		0.40	25.005	0.165	1507.	6.7
59	59.9	15.236	33.839		0.43	25.026	0.171	1507.	6.7
61	61.2	15.283	33.866		0.45	25.036	0.175	1507.	6.4
62	62.0	15.291	33.874		0.45	25.041	0.177	1507.	4.8
62	62.9	15.309	33.883		0.47	25.044	0.180	1507.	3.6
64	64.3	15.700	33.996		0.56	25.044	0.184	1509.	3.1
65	65.2	15.620	33.973		0.56	25.044	0.187	1508.	3.1
66	66.1	15.493	33.937		0.56	25.045	0.190	1508.	3.1
66	67.0	15.351	33.906		0.62	25.052	0.192	1508.	3.1
67	67.7	15.343	33.911		0.68	25.058	0.194	1508.	3.1

SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
159	10	159	9	16 NOV 1984	1716	40°04.6'N	70°00.2'W	145
		PRESS dbar	TEMP °C	SALIN psu	OXY ml/l	ATN m ⁻¹	SVHT A 10m ² /s ²	S SPD m/s
		2	14.641	33.616	0.14	24.983	0.000	1504.
		4	14.642	33.615	0.14	24.983	0.006	1504.
		6	14.641	33.616	0.13	24.983	0.011	1504.
		8	14.644	33.615	0.11	24.981	0.018	1504.
		10	14.643	33.614	0.11	24.981	0.024	1504.
		12	14.641	33.614	0.11	24.981	0.029	1504.
		14	14.642	33.614	0.11	24.981	0.037	1504.
		16	14.641	33.613	0.11	24.981	0.041	1504.
		18	14.643	33.614	0.11	24.981	0.047	1504.
		20	14.643	33.614	0.11	24.981	0.053	1504.
		22	14.643	33.613	0.11	24.981	0.060	1504.
		24	14.643	33.613	0.11	24.980	0.065	1504.
		26	14.643	33.613	0.11	24.981	0.071	1504.
		28	14.644	33.614	0.11	24.981	0.078	1504.
		30	14.643	33.615	0.11	24.982	0.083	1504.
		32	14.642	33.614	0.11	24.981	0.089	1504.
		34	14.651	33.617	0.11	24.982	0.095	1505.
		36	14.670	33.620	0.11	24.980	0.101	1505.
		38	14.747	33.653	0.10	24.989	0.108	1505.
		40	14.808	33.678	0.09	24.995	0.113	1505.
		42	15.096	33.771	0.09	25.004	0.119	1506.
		44	15.793	34.058	0.08	25.071	0.125	1509.
		45	16.241	34.304	0.08	25.158	0.130	1510.
		48	16.293	34.338	0.08	25.172	0.136	1511.
		50	16.202	34.406	0.07	25.246	0.142	1511.
		52	15.925	34.411	0.06	25.312	0.147	1510.
		54	15.803	34.406	0.06	25.336	0.152	1509.
		56	15.616	34.399	0.06	25.373	0.158	1509.
		57	15.336	34.365	0.06	25.409	0.162	1508.
		60	15.208	34.361	0.06	25.434	0.168	1508.
		62	14.836	34.371	0.06	25.524	0.173	1506.
		64	14.336	34.364	0.06	25.626	0.178	1505.
		65	14.240	34.359	0.06	25.642	0.182	1505.
		68	14.178	34.392	0.06	25.681	0.187	1504.
		69	14.119	34.440	0.06	25.730	0.191	1504.
		71	14.125	34.505	0.06	25.779	0.196	1504.
		74	14.163	34.583	0.08	25.831	0.201	1505.
		75	14.241	34.662	0.10	25.876	0.205	1505.
		77	14.354	34.730	0.13	25.904	0.209	1506.
		80	14.498	34.817	0.14	25.941	0.214	1506.
		81	14.700	34.976	0.16	26.020	0.217	1507.
		83	14.921	35.098	0.12	26.065	0.222	1508.
		85	15.504	35.349	0.07	26.130	0.225	1510.
		87	15.804	35.489	0.05	26.169	0.229	1511.
		89	15.846	35.571	0.05	26.224	0.233	1511.
		91	15.859	35.614	0.05	26.254	0.236	1512.
		93	15.888	35.635	0.05	26.263	0.240	1512.
		95	15.918	35.656	0.05	26.272	0.243	1512.
		97	15.926	35.663	0.05	26.276	0.247	1512.
		99	15.942	35.681	0.05	26.286	0.251	1512.
		100	15.942	35.681	0.05	26.286	0.251	1512.
		2	2.0					
		4	4.0					
		6	5.8					
		8	7.9					
		10	10.1					
		12	11.7					
		14	14.3					
		16	15.9					
		18	17.9					
		20	20.0					
		22	22.1					
		24	23.8					
		26	26.0					
		28	28.2					
		30	32.0					
		32	33.9					
		34	33.9					
		36	36.0					
		38	38.3					
		40	40.0					
		42	42.1					
		44	44.1					
		45	45.8					
		48	48.0					
		50	50.2					
		52	51.9					
		54	54.1					
		56	56.1					
		57	57.7					
		60	60.0					
		62	62.0					
		64	64.0					
		65	65.9					
		68	68.1					
		69	69.8					
		71	71.2					
		74	74.1					
		75	76.1					
		77	77.9					
		80	80.2					
		81	82.0					
		83	84.1					
		85	85.9					
		87	88.0					
		89	90.1					
		91	91.9					
		93	94.1					
		95	96.0					
		96	97.0					
		97	97.9					
		98	98.7					
		99	100.2					
		100	100.2					
		10	14.806	33.730	0.10	25.035	0.000	1505.
		12	14.810	33.730	0.10	25.035	0.005	1505.
		14	14.815	33.730	0.10	25.034	0.012	1505.
		16	14.819	33.732	0.10	25.034	0.018	1505.
		18	14.820	33.734	0.11	25.036	0.024	1505.
		20	14.815	33.731	0.10	25.035	0.028	1505.
		22	14.817	33.732	0.10	25.035	0.034	1505.
		24	14.811	33.730	0.10	25.034	0.041	1505.
		26	14.823	33.732	0.10	25.034	0.047	1505.
		28	14.823	33.739	0.10	25.039	0.053	1505.
		30	14.821	33.733	0.10	25.035	0.058	1505.
		32	14.831	33.734	0.10	25.033	0.064	1505.
		34	14.842	33.744	0.10	25.038	0.070	1505.
		36	14.853	33.746	0.10	25.038	0.076	1505.
		38	14.869	33.752	0.10	25.039	0.083	1505.
		40	14.893	33.760	0.10	25.040	0.088	1506.
		42	14.975	33.789	0.10	25.044	0.093	1506.
		44	15.061	33.824	0.10	25.053	0.099	1506.
		46	15.231	33.872	0.10	25.053	0.105	1507.
		48	15.416	33.977	0.09	25.093	0.111	1508.
		50	15.527	34.053	0.09	25.126	0.116	1508.
		52	15.606	34.116	0.10	25.158	0.122	1508.
		54	15.666	34.148	0.10	25.169	0.128	1509.
		56	15.771	34.232	0.10	25.210	0.133	1509.
		58	15.813	34.270	0.10	25.229	0.139	1509.
		59	15.960	34.338	0.10	25.248	0.143	1510.
		62	15.996	34.354	0.10	25.252	0.150	1510.
		64	16.068	34.376	0.09	25.253	0.155	1510.
		65	16.185	34.403	0.09	25.247	0.160	1511.
		68	16.331	34.470	0.09	25.265	0.166	1511.
		69	16.925	34.636	0.07	25.253	0.172	1513.
		71	17.350	34.776	0.06	25.260	0.177	1515.
		73	18.055	35.008	0.05	25.266	0.182	1517.
		75	18.441	35.210	0.05	25.324	0.188	1519.
		77	18.528	35.232	0.05	25.319	0.193	1519.
		79	18.789	35.329	0.05	25.328	0.198	1520.
		82	18.891	35.399	0.05	25.355	0.204	1520.
		83	18.892	35.401	0.05	25.357	0.208	1520.
		85	18.784	35.391	0.06	25.377	0.214	1520.
		87	18.229	35.272	0.10	25.424	0.220	1518.
		89	17.225	35.010	0.13	25.469	0.225	1515.
		91	17.017	34.985	0.15	25.499	0.228	1514.
		91	17.017	34.985	0.15	25.499	0.228	1514.
		92	16.988	35.000	0.16	25.518	0.230	1514.
		92	16.988	35.000	0.16	25.518	0.230	1514.
		93	16.401	34.881	0.			

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
99	159	10	16 NOV 1984	2025	39°57.7'N	70°00.9'W	198	194	159	10	16 NOV 1984	2025	39°57.7'N	70°00.9'W	198
101	102.1	15.739	35.405	0.06	26.120	0.239	1511.	194	195.1	13.359	35.655	0.08	26.828	0.385	1505.
103	104.1	16.206	35.587	0.05	26.126	0.243	1311.	194	195.5	13.357	35.655	0.08	26.828	0.386	1505.
105	106.1	16.207	35.739	0.04	26.153	0.247	1513.								
107	108.1	16.015	35.746	0.04	26.269	0.251	1513.								
109	110.0	15.975	35.751	0.04	26.319	0.255	1512.								
111	111.8	15.895	35.746	0.04	26.332	0.258	1512.								
113	113.9	15.812	35.740	0.05	26.347	0.261	1512.								
115	116.1	15.755	35.741	0.05	26.361	0.264	1512.								
117	118.1	15.695	35.737	0.05	26.375	0.268	1512.								
119	120.1	15.594	35.741	0.05	26.385	0.271	1512.								
121	121.9	15.492	35.726	0.05	26.412	0.275	1511.								
123	123.8	15.385	35.721	0.05	26.423	0.278	1511.								
125	126.3	15.347	35.727	0.05	26.443	0.281	1511.								
127	128.0	15.282	35.723	0.05	26.456	0.285	1511.								
129	130.1	15.248	35.730	0.06	26.468	0.288	1511.								
131	132.0	15.107	35.736	0.06	26.481	0.291	1510.								
133	133.9	14.965	35.697	0.06	26.517	0.294	1510.								
135	136.3	14.955	35.695	0.06	26.518	0.297	1510.								
137	137.9	14.970	35.696	0.06	26.518	0.300	1510.								
139	139.8	14.977	35.696	0.06	26.516	0.303	1510.								
141	142.1	14.973	35.699	0.06	26.515	0.306	1510.								
143	143.7	14.969	35.697	0.06	26.518	0.309	1510.								
145	146.1	14.942	35.703	0.06	26.517	0.312	1510.								
147	147.8	14.884	35.697	0.06	26.528	0.316	1510.								
149	150.3	14.840	35.692	0.06	26.536	0.318	1510.								
151	151.9	14.808	35.695	0.06	26.542	0.322	1509.								
153	154.1	14.818	35.690	0.06	26.545	0.325	1509.								
154	155.7	14.866	35.696	0.06	26.545	0.328	1509.								
157	158.1	14.880	35.695	0.06	26.539	0.330	1510.								
159	160.0	14.909	35.697	0.06	26.535	0.334	1510.								
161	161.9	14.913	35.700	0.06	26.531	0.337	1510.								
163	163.9	14.857	35.701	0.06	26.532	0.340	1510.								
165	166.0	14.829	35.700	0.06	26.545	0.343	1510.								
167	167.9	14.694	35.706	0.06	26.551	0.346	1510.								
169	170.1	14.582	35.713	0.07	26.585	0.349	1509.								
171	171.9	14.363	35.722	0.07	26.614	0.352	1509.								
172	173.8	14.354	35.737	0.07	26.668	0.355	1508.								
175	176.1	14.320	35.757	0.09	26.682	0.357	1508.								
177	178.1	14.242	35.758	0.09	26.705	0.361	1508.								
179	180.0	13.968	35.746	0.08	26.723	0.363	1508.								
181	182.0	13.560	35.671	0.08	26.771	0.366	1507.								
182	183.9	13.435	35.670	0.08	26.799	0.369	1506.								
184	185.7	13.390	35.656	0.08	26.824	0.371	1505.								
187	188.3	13.385	35.656	0.08	26.823	0.373	1505.								
188	190.0	13.377	35.657	0.08	26.823	0.377	1505.								
190	191.3	13.379	35.656	0.08	26.826	0.379	1505.								
190	192.0	13.385	35.656	0.08	26.824	0.380	1505.								
191	193.0	13.377	35.660	0.08	26.823	0.381	1505.								
192	194.0	13.365	35.659	0.08	26.828	0.382	1505.								
				0.08	26.830	0.384	1505.								

SHIP OC	CRUISE 159	STATION 11	DATE 16 NOV 1984	EST 2126	LATITUDE 39°53.5'N	LONGITUDE 70°04.2'W	DEPTH 578	SHIP OC	CRUISE 159	STATION 11	DATE 16 NOV 1984	EST 2126	LATITUDE 39°53.5'N	LONGITUDE 70°04.2'W	DEPTH 578				
DEPTH m	PRESS dbar	TEMP °C	SALIN psu	OXY ml/l	ATN m ⁻¹	SIGT gm/cm ³	DYHT A 10m ² /s ²	S SPD m/s	N	DEPTH m	PRESS dbar	TEMP °C	SALIN psu	OXY ml/l	ATN m ⁻¹	SIGT gm/cm ³	DYHT A 10m ² /s ²	S SPD m/s	N
3	2.6	15.525	34.140	0.14	25.194	0.000	1507.	101	102.1	16.579	35.928	0.02	26.328	0.246	1514.	6.7			
4	4.1	15.536	34.141	0.14	25.193	0.004	1507.	103	104.0	15.868	35.772	0.02	26.373	0.249	1512.	6.7			
6	5.9	15.542	34.143	0.14	25.192	0.009	1507.	105	106.0	15.602	35.730	0.02	26.401	0.252	1511.	6.5			
8	8.0	15.544	34.142	0.14	25.191	0.015	1508.	107	108.0	15.435	35.686	0.02	26.405	0.256	1511.	6.0			
10	10.2	15.548	34.143	0.14	25.191	0.021	1508.	109	110.0	15.282	35.670	0.02	26.427	0.259	1510.	4.9			
12	11.8	15.548	34.143	0.14	25.191	0.026	1508.	111	112.2	15.110	35.637	0.02	26.440	0.262	1510.	4.4			
14	14.1	15.549	34.143	0.14	25.191	0.032	1508.	113	114.1	15.032	35.620	0.02	26.444	0.265	1509.	4.6			
16	15.7	15.550	34.143	0.14	25.191	0.036	1508.	115	115.8	14.970	35.612	0.02	26.451	0.268	1509.	5.4			
18	18.0	15.552	34.145	0.14	25.192	0.043	1508.	117	118.2	14.876	35.603	0.02	26.464	0.272	1509.	5.8			
20	20.0	15.550	34.145	0.14	25.192	0.048	1508.	119	119.7	14.829	35.603	0.02	26.475	0.274	1509.	6.0			
22	22.1	15.551	34.145	0.14	25.192	0.054	1508.	121	122.1	14.843	35.672	0.02	26.525	0.278	1509.	6.1			
24	24.0	15.555	34.149	0.14	25.194	0.059	1508.	123	123.8	14.975	35.777	0.02	26.578	0.281	1510.	5.9			
26	25.9	15.556	34.148	0.14	25.194	0.065	1508.	125	126.0	15.094	35.823	0.01	26.586	0.284	1510.	5.7			
28	28.1	15.553	34.147	0.14	25.193	0.071	1508.	127	128.1	15.106	35.834	0.01	26.592	0.287	1510.	5.1			
30	30.2	15.556	34.149	0.14	25.194	0.077	1508.	129	130.2	15.149	35.862	0.01	26.604	0.290	1510.	4.3			
32	31.8	15.558	34.150	0.14	25.194	0.081	1508.	131	131.7	15.194	35.877	0.01	26.606	0.292	1510.	3.5			
34	34.1	15.562	34.158	0.14	25.200	0.087	1508.	133	134.0	15.071	35.870	0.01	26.628	0.296	1510.	3.4			
36	35.9	15.564	34.157	0.14	25.198	0.092	1508.	135	136.0	14.961	35.839	0.01	26.628	0.299	1510.	3.3			
37	37.8	15.565	34.159	0.14	25.200	0.097	1508.	137	138.2	14.913	35.835	0.01	26.636	0.302	1510.	3.2			
40	40.1	15.568	34.160	0.14	25.200	0.104	1508.	139	140.2	14.908	35.834	0.01	26.636	0.305	1510.	3.3			
41	41.6	15.570	34.160	0.14	25.200	0.108	1508.	141	141.9	14.885	35.831	0.01	26.639	0.307	1510.	3.2			
44	44.3	15.566	34.176	0.13	25.213	0.115	1508.	143	143.8	14.866	35.840	0.01	26.651	0.310	1510.	3.5			
46	45.9	15.544	34.188	0.13	25.226	0.120	1508.	145	146.1	14.835	35.844	0.01	26.660	0.313	1510.	3.7			
48	48.0	15.467	34.185	0.12	25.242	0.126	1508.	147	147.8	14.844	35.860	0.01	26.670	0.315	1510.	3.8			
49	49.8	15.399	34.185	0.10	25.257	0.131	1508.	149	150.1	14.848	35.869	0.01	26.676	0.319	1510.	3.7			
52	52.0	15.047	34.195	0.08	25.342	0.136	1507.	151	151.8	14.777	35.870	0.01	26.693	0.321	1509.	3.6			
54	54.0	14.979	34.208	0.08	25.366	0.142	1507.	153	154.0	14.753	35.869	0.01	26.698	0.324	1509.	3.5			
56	56.1	14.857	34.238	0.08	25.417	0.147	1506.	155	155.8	14.735	35.868	0.01	26.701	0.327	1509.	3.3			
57	57.9	14.874	34.263	0.08	25.432	0.152	1506.	157	159.7	14.697	35.865	0.01	26.707	0.330	1509.	3.2			
60	60.3	14.941	34.364	0.08	25.495	0.158	1507.	158	159.7	14.644	35.859	0.01	26.713	0.332	1509.	3.0			
61	61.9	14.718	34.323	0.09	25.512	0.162	1506.	161	162.1	14.586	35.855	0.01	26.723	0.335	1509.	3.1			
64	64.1	14.416	34.294	0.10	25.555	0.167	1505.	163	164.0	14.570	35.854	0.01	26.726	0.338	1509.	3.1			
65	66.0	14.228	34.255	0.11	25.564	0.172	1504.	165	166.0	14.541	35.852	0.01	26.731	0.340	1509.	3.3			
68	68.1	14.101	34.250	0.11	25.587	0.177	1504.	167	167.9	14.510	35.849	0.01	26.734	0.343	1509.	3.3			
70	70.1	14.113	34.279	0.11	25.607	0.182	1504.	169	170.0	14.421	35.839	0.01	26.747	0.346	1509.	3.3			
71	71.9	14.176	34.309	0.10	25.617	0.186	1504.	171	171.9	14.380	35.828	0.01	26.747	0.348	1509.	3.2			
73	73.9	14.505	34.453	0.09	25.658	0.191	1506.	173	174.0	14.282	35.826	0.01	26.766	0.351	1508.	3.1			
75	75.9	14.970	34.707	0.09	25.753	0.195	1507.	175	176.0	14.269	35.826	0.01	26.769	0.354	1508.	3.0			
77	77.9	16.606	35.273	0.05	25.818	0.200	1513.	177	178.1	14.264	35.826	0.01	26.770	0.357	1508.	2.8			
79	80.1	18.439	36.014	0.03	25.941	0.205	1520.	178	179.8	14.255	35.822	0.01	26.769	0.359	1508.	2.4			
81	81.8	18.875	36.193	0.02	25.966	0.208	1521.	180	181.9	14.208	35.819	0.01	26.777	0.362	1508.	2.4			
84	84.3	18.441	36.117	0.02	26.019	0.213	1520.	183	184.2	14.162	35.814	0.01	26.783	0.365	1508.	2.8			
85	85.8	17.829	35.888	0.02	25.996	0.216	1518.	184	184.2	14.129	35.808	0.01	26.785	0.367	1508.	3.2			
87	88.2	17.203	35.931	0.02	26.181	0.221	1516.	187	188.2	14.068	35.782	0.01	26.778	0.370	1508.	3.3			
89	90.0	17.258	36.008	0.02	26.227	0.224	1516.	188	190.0	13.937	35.774	0.01	26.799	0.372	1507.	3.5			
91	92.2	17.484	36.073	0.02	26.222	0.228	1517.	191	192.1	13.843	35.767	0.01	26.814	0.375	1507.	3.6			
93	93.8	17.538	36.098	0.02	26.228	0.231	1517.	192	193.9	13.819	35.764	0.01	26.818	0.377	1507.	3.7			
95	96.1	17.450	36.099	0.02	26.251	0.235	1517.	194	195.9	13.780	35.760	0.01	26.822	0.380	1507.	3.7			
97	97.8	17.385	36.085	0.02	26.256	0.238	1517.	196	198.0	13.687	35.750	0.01	26.833	0.382	1507.	3.7			
99	99.9	17.145	35.994	0.02	26.244	0.242	1516.	198	200.0	13.644	35.746	0.01	26.839	0.385	1506.	3.8			

SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH		
OC	159	11	16 NOV 1984	2126	39°53.5'N	70°04.2'W	578	OC	159	11	16 NOV 1984	2126	39°53.5'N	70°04.2'W	578		
								DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	N
								m	dbar	°C	psu	m1/1	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	cph
200	202.1	13.581	35.736	0.01	26.845	0.387	1506.	300	302.1	9.903	35.258	0.02	27.171	0.496	1495.	3.5	
202	203.7	13.476	35.718	0.01	26.853	0.390	1506.	301	303.8	9.705	35.245	0.02	27.194	0.498	1494.	3.8	
204	206.0	13.330	35.709	0.01	26.875	0.392	1506.	303	306.0	9.535	35.224	0.02	27.206	0.500	1493.	4.0	
206	208.0	13.261	35.698	0.01	26.881	0.395	1505.	306	308.1	9.424	35.223	0.02	27.224	0.501	1493.	3.9	
208	210.1	13.191	35.686	0.01	26.886	0.397	1505.	307	310.0	9.357	35.210	0.02	27.225	0.503	1493.	3.8	
210	212.0	13.093	35.675	0.01	26.898	0.400	1505.	309	311.7	9.302	35.209	0.02	27.233	0.505	1493.	3.2	
213	214.3	13.058	35.671	0.01	26.902	0.402	1505.	312	314.2	9.236	35.204	0.01	27.240	0.507	1492.	2.7	
214	215.6	13.043	35.667	0.01	26.902	0.404	1505.	313	316.0	9.217	35.200	0.01	27.240	0.508	1492.	2.3	
216	218.0	12.996	35.661	0.01	26.906	0.407	1505.	315	317.9	9.179	35.198	0.01	27.245	0.510	1492.	2.1	
218	220.0	12.940	35.651	0.01	26.910	0.409	1504.	317	319.9	9.168	35.195	0.01	27.244	0.512	1492.	1.7	
220	222.0	12.814	35.634	0.01	26.922	0.412	1504.	319	322.0	9.152	35.193	0.01	27.247	0.514	1492.	1.5	
222	224.1	12.744	35.622	0.01	26.927	0.414	1504.	321	324.0	9.139	35.193	0.01	27.247	0.516	1492.	1.5	
224	226.1	12.692	35.618	0.01	26.934	0.416	1504.	323	326.1	9.132	35.192	0.01	27.248	0.517	1492.	1.6	
226	227.7	12.650	35.613	0.01	26.939	0.418	1504.	325	328.0	9.119	35.191	0.01	27.248	0.519	1492.	2.1	
228	230.0	12.579	35.602	0.01	26.945	0.421	1503.	327	330.0	9.102	35.189	0.01	27.250	0.521	1492.	2.4	
230	231.9	12.474	35.585	0.01	26.952	0.423	1503.	329	331.7	9.080	35.187	0.01	27.252	0.522	1492.	2.5	
232	233.9	12.384	35.564	0.01	26.973	0.425	1502.	331	334.0	8.984	35.174	0.01	27.258	0.524	1492.	2.6	
234	236.3	12.157	35.543	0.01	26.982	0.428	1502.	333	336.0	8.904	35.174	0.01	27.271	0.526	1492.	2.9	
236	237.9	12.124	35.533	0.01	26.980	0.430	1502.	335	338.2	8.884	35.167	0.01	27.270	0.528	1492.	2.9	
238	240.2	12.014	35.522	0.01	26.992	0.433	1501.	337	339.7	8.853	35.167	0.01	27.273	0.529	1491.	3.0	
240	241.8	11.920	35.513	0.01	27.004	0.434	1501.	339	342.0	8.797	35.158	0.01	27.275	0.531	1491.	3.0	
242	244.0	11.892	35.509	0.01	27.006	0.437	1501.	341	344.2	8.722	35.154	0.02	27.289	0.533	1491.	3.2	
244	246.3	11.870	35.504	0.01	27.006	0.439	1501.	343	345.9	8.688	35.160	0.02	27.289	0.535	1491.	3.5	
246	248.1	11.835	35.495	0.01	27.006	0.441	1501.	345	348.0	8.647	35.158	0.02	27.298	0.536	1491.	3.6	
248	249.8	11.748	35.477	0.01	27.026	0.443	1501.	347	349.7	8.585	35.156	0.02	27.304	0.538	1491.	3.6	
250	251.9	11.629	35.470	0.01	27.026	0.445	1500.	349	352.3	8.450	35.142	0.02	27.320	0.540	1490.	3.5	
252	254.0	11.535	35.456	0.01	27.032	0.448	1500.	351	354.1	8.403	35.149	0.02	27.330	0.541	1490.	3.5	
254	255.9	11.462	35.450	0.01	27.044	0.450	1500.	353	356.4	8.349	35.141	0.02	27.332	0.543	1490.	3.4	
256	258.1	11.432	35.446	0.01	27.044	0.452	1500.	355	357.9	8.323	35.139	0.02	27.334	0.544	1490.	3.5	
258	260.0	11.218	35.403	0.01	27.050	0.454	1499.	357	360.2	8.245	35.134	0.02	27.342	0.546	1489.	3.2	
260	261.9	11.067	35.402	0.01	27.077	0.456	1498.	359	362.0	8.166	35.128	0.03	27.349	0.547	1489.	3.1	
262	264.1	11.000	35.394	0.01	27.083	0.458	1498.	361	364.1	8.107	35.128	0.03	27.359	0.549	1489.	3.0	
264	266.0	10.994	35.393	0.01	27.083	0.460	1498.	363	366.0	8.042	35.123	0.03	27.365	0.551	1489.	2.7	
266	268.0	10.983	35.392	0.01	27.084	0.463	1498.	365	368.0	8.026	35.123	0.03	27.367	0.552	1489.	2.6	
268	270.1	10.937	35.383	0.01	27.086	0.465	1498.	367	370.0	8.021	35.123	0.03	27.368	0.554	1489.	2.7	
269	271.7	10.904	35.382	0.01	27.091	0.466	1498.	369	372.0	8.018	35.122	0.03	27.368	0.555	1489.	2.8	
272	274.3	10.858	35.377	0.01	27.096	0.469	1498.	371	374.1	7.986	35.117	0.03	27.368	0.557	1489.	2.9	
274	275.9	10.774	35.355	0.01	27.094	0.471	1498.	373	375.9	7.919	35.120	0.03	27.381	0.558	1488.	3.0	
276	278.2	10.580	35.347	0.01	27.122	0.473	1497.	375	378.0	7.786	35.113	0.03	27.395	0.560	1488.	2.9	
278	280.0	10.507	35.327	0.01	27.120	0.475	1497.	377	379.9	7.765	35.112	0.03	27.398	0.561	1488.	2.7	
279	281.8	10.390	35.327	0.01	27.140	0.476	1496.	379	382.1	7.751	35.112	0.03	27.399	0.563	1488.	2.4	
282	284.2	10.326	35.316	0.01	27.143	0.479	1496.	381	383.8	7.747	35.112	0.03	27.400	0.564	1488.	1.7	
283	285.5	10.310	35.314	0.01	27.144	0.480	1496.	383	386.2	7.743	35.111	0.03	27.400	0.566	1488.	1.1	
286	288.1	10.237	35.304	0.01	27.149	0.483	1496.	385	388.0	7.740	35.111	0.03	27.400	0.567	1488.	0.9	
287	289.8	10.157	35.300	0.01	27.160	0.484	1496.	387	390.1	7.736	35.111	0.03	27.401	0.569	1488.	0.8	
290	292.0	10.066	35.288	0.01	27.166	0.486	1495.	389	392.1	7.729	35.111	0.03	27.401	0.570	1488.	0.8	
292	294.0	10.006	35.282	0.01	27.172	0.488	1495.	390	393.7	7.730	35.111	0.03	27.402	0.571	1488.	1.0	
294	296.0	9.975	35.278	0.01	27.174	0.490	1495.	393	396.1	7.732	35.110	0.03	27.401	0.574	1488.	1.4	
296	298.2	9.962	35.277	0.01	27.176	0.492	1495.	394	397.9	7.726	35.111	0.03	27.402	0.574	1488.	1.7	
297	299.9	9.950	35.276	0.01	27.176	0.494	1495.	397	400.1	7.714	35.110	0.03	27.403	0.576	1488.	1.9	

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH									
	159	11	16 NOV 1984	2126	39°53.5'N	70°04.2'W	578		159	11	16 NOV 1984	2126	39°53.5'N	70°04.2'W	578									
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT	A	S	SPD	N	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT	A	S	SPD	N	
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m/s	m/s	cph	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m/s	cph		
398	401.7	7.688	35.107		0.03	27.405	0.577	1488.																
401	404.2	7.625	35.107		0.03	27.414	0.579	1488.																
402	406.0	7.604	35.104		0.03	27.415	0.580	1488.																
405	408.1	7.599	35.105		0.03	27.416	0.582	1488.																
406	409.8	7.596	35.104		0.03	27.416	0.583	1488.																
409	412.2	7.591	35.104		0.03	27.416	0.585	1488.																
410	413.8	7.589	35.104		0.03	27.417	0.586	1488.																
412	416.0	7.581	35.103		0.03	27.417	0.588	1488.																
414	418.0	7.574	35.103		0.03	27.418	0.589	1488.																
416	420.0	7.549	35.102		0.03	27.421	0.590	1488.																
418	422.0	7.517	35.099		0.03	27.424	0.592	1488.																
420	424.1	7.490	35.099		0.03	27.427	0.593	1488.																
422	426.0	7.437	35.092		0.03	27.430	0.595	1487.																
424	428.0	7.371	35.092		0.03	27.439	0.596	1487.																
427	430.2	7.333	35.090		0.03	27.443	0.598	1487.																
428	432.0	7.326	35.090		0.03	27.444	0.599	1487.																
430	433.8	7.322	35.090		0.03	27.445	0.600	1487.																
432	436.2	7.318	35.090		0.03	27.445	0.602	1487.																
434	437.8	7.314	35.089		0.03	27.445	0.603	1487.																
436	440.0	7.293	35.087		0.03	27.446	0.605	1487.																
438	441.7	7.267	35.084		0.03	27.448	0.606	1487.																
440	444.1	7.224	35.085		0.03	27.454	0.607	1487.																
442	446.1	7.201	35.083		0.03	27.456	0.609	1487.																
444	448.2	7.193	35.084		0.03	27.458	0.610	1487.																
446	450.0	7.189	35.083		0.03	27.458	0.612	1487.																
448	452.2	7.187	35.083		0.03	27.458	0.613	1487.																
450	453.6	7.188	35.083		0.03	27.458	0.614	1487.																
452	456.1	7.183	35.083		0.03	27.459	0.616	1487.																
454	458.0	7.182	35.083		0.03	27.459	0.617	1487.																
456	460.1	7.178	35.083		0.03	27.459	0.618	1487.																
458	461.8	7.178	35.083		0.03	27.459	0.620	1487.																
460	464.0	7.174	35.082		0.03	27.459	0.621	1487.																
462	465.9	7.165	35.082		0.03	27.460	0.622	1487.																
464	468.1	7.159	35.082		0.03	27.461	0.624	1487.																
466	469.8	7.137	35.076		0.03	27.460	0.625	1487.																
468	471.9	7.083	35.074		0.03	27.466	0.627	1487.																
470	473.9	7.057	35.076		0.04	27.471	0.628	1487.																
472	476.3	7.037	35.077		0.04	27.474	0.630	1487.																
473	477.5	7.033	35.075		0.04	27.474	0.630	1487.																
476	479.8	7.000	35.074		0.04	27.477	0.632	1487.																
478	481.8	6.924	35.060		0.04	27.477	0.633	1486.																
480	484.2	6.867	35.068		0.04	27.491	0.635	1486.																
481	485.7	6.861	35.068		0.04	27.492	0.636	1486.																
484	488.1	6.859	35.068		0.04	27.492	0.637	1486.																
485	489.8	6.858	35.068		0.04	27.493	0.639	1486.																
488	492.2	6.850	35.067		0.04	27.493	0.640	1486.																
490	493.9	6.830	35.066		0.04	27.495	0.641	1486.																
492	496.3	6.810	35.063		0.04	27.495	0.643	1486.																
494	497.9	6.771	35.059		0.04	27.497	0.644	1486.																
495	499.9	6.744	35.063		0.05	27.504	0.645	1486.																

SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
159	202	159	12	16 NOV 1984	2319	39°48.0'N	70°05.4'W	1175
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SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
OC	m	159	12	16 NOV 1984	2319	39°48.0'N	70°05.4'W	1175
DEPTH	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	DEPTH
m	159	12	16 NOV 1984	2319	39°48.0'N	70°05.4'W	1175	1175
400	403.9	7.978	35.126	0.01	27.377	0.567	1489.	3.5
402	405.9	7.905	35.120	0.01	27.383	0.569	1489.	3.4
405	408.1	7.852	35.118	0.01	27.389	0.570	1489.	3.3
406	410.0	7.765	35.114	0.01	27.399	0.572	1488.	3.1
409	412.1	7.740	35.108	0.01	27.398	0.573	1488.	3.2
410	414.0	7.704	35.107	0.01	27.402	0.575	1488.	3.4
412	416.1	7.663	35.107	0.01	27.409	0.576	1488.	3.4
414	418.0	7.605	35.104	0.01	27.415	0.578	1488.	3.3
416	420.0	7.497	35.105	0.01	27.431	0.579	1488.	3.3
418	421.7	7.382	35.094	0.01	27.439	0.580	1487.	3.1
420	424.0	7.367	35.091	0.01	27.439	0.582	1487.	2.8
422	426.1	7.353	35.091	0.01	27.441	0.583	1487.	2.4
424	428.0	7.323	35.092	0.01	27.446	0.585	1487.	1.9
426	429.9	7.317	35.091	0.01	27.446	0.586	1487.	1.6
428	431.9	7.306	35.089	0.01	27.447	0.587	1487.	1.7
430	434.1	7.293	35.089	0.01	27.448	0.589	1487.	1.5
432	436.2	7.283	35.089	0.01	27.450	0.590	1487.	1.6
434	438.3	7.276	35.089	0.01	27.451	0.592	1487.	1.7
436	440.1	7.263	35.091	0.01	27.454	0.593	1487.	1.8
438	442.0	7.245	35.086	0.01	27.453	0.594	1487.	1.9
440	443.9	7.200	35.087	0.01	27.460	0.596	1487.	1.9
442	446.1	7.179	35.082	0.01	27.459	0.597	1487.	1.8
444	447.9	7.162	35.082	0.01	27.461	0.598	1487.	1.7
446	449.6	7.145	35.081	0.01	27.462	0.600	1487.	1.6
448	452.2	7.131	35.081	0.01	27.464	0.601	1487.	1.3
450	454.1	7.121	35.080	0.01	27.466	0.603	1487.	1.3
452	455.9	7.112	35.078	0.01	27.465	0.604	1487.	1.2
454	458.0	7.109	35.079	0.01	27.466	0.605	1487.	1.1
456	460.3	7.104	35.078	0.01	27.466	0.607	1487.	1.0
458	461.9	7.095	35.078	0.01	27.467	0.608	1487.	1.4
460	464.2	7.091	35.078	0.01	27.468	0.610	1487.	1.6
462	466.1	7.085	35.079	0.01	27.469	0.611	1487.	1.9
464	468.0	7.074	35.076	0.01	27.468	0.612	1487.	2.2
466	469.9	7.024	35.076	0.01	27.477	0.613	1487.	2.3
468	472.0	6.991	35.070	0.01	27.476	0.615	1486.	2.6
470	474.3	6.948	35.073	0.01	27.484	0.616	1486.	2.7
472	475.9	6.895	35.070	0.01	27.489	0.617	1486.	2.7
474	478.1	6.847	35.062	0.01	27.489	0.619	1486.	2.5
476	479.7	6.803	35.066	0.01	27.499	0.620	1486.	2.3
478	481.8	6.783	35.064	0.01	27.500	0.621	1486.	2.0
480	483.9	6.776	35.064	0.01	27.500	0.623	1486.	1.7
481	485.8	6.772	35.062	0.01	27.500	0.624	1486.	1.5
484	488.2	6.764	35.063	0.01	27.501	0.625	1486.	1.3
486	490.0	6.760	35.062	0.01	27.501	0.627	1486.	1.6
488	492.0	6.749	35.062	0.01	27.502	0.628	1486.	1.9
490	493.9	6.735	35.061	0.01	27.504	0.629	1486.	2.4
492	496.0	6.711	35.063	0.01	27.508	0.630	1486.	2.7
494	498.1	6.640	35.056	0.01	27.513	0.632	1486.	2.9
496	500.0	6.577	35.051	0.01	27.517	0.633	1485.	3.3
515	520.0	6.025	35.038	0.01	27.580	0.645	1483.	2.8

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
1	159	13	17 NOV 1984	1905	39°57.6'N	68°33.5'W	2200	101	159	13	17 NOV 1984	1905	39°57.6'N	68°33.5'W	2200
DEPT	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²
1	1.1	14.824	34.209		0.17	25.401	0.000	101	101.8	14.300	35.649		0.01	26.626	0.225
4	4.5	14.828	34.210		0.17	25.401	0.009	103	103.9	14.297	35.688		0.00	26.657	0.228
6	6.0	14.848	34.212		0.16	25.398	0.012	105	106.2	14.213	35.713		0.00	26.694	0.231
8	7.8	14.848	34.212		0.16	25.399	0.017	107	107.7	14.183	35.715		0.00	26.702	0.233
10	10.1	14.848	34.212		0.16	25.398	0.023	109	110.1	14.167	35.719		0.00	26.708	0.236
12	12.1	14.875	34.212		0.16	25.406	0.028	111	111.9	14.138	35.725		0.00	26.719	0.239
14	14.1	14.766	34.201		0.16	25.408	0.033	113	113.9	14.115	35.728		0.00	26.726	0.241
16	15.8	14.766	34.201		0.16	25.408	0.038	115	116.1	14.095	35.732		0.00	26.733	0.244
18	17.9	14.781	34.203		0.16	25.406	0.043	117	117.9	14.078	35.731		0.00	26.737	0.247
20	20.1	14.789	34.205		0.16	25.406	0.049	119	119.8	14.057	35.733		0.00	26.743	0.249
22	21.8	14.793	34.206		0.16	25.406	0.053	121	122.1	14.044	35.735		0.00	26.747	0.252
24	24.1	14.802	34.207		0.16	25.405	0.059	123	124.0	14.027	35.737		0.00	26.752	0.255
26	26.1	14.812	34.210		0.16	25.403	0.064	125	126.0	14.014	35.740		0.00	26.757	0.257
28	28.0	14.802	34.206		0.16	25.403	0.069	127	128.3	13.970	35.750		0.00	26.774	0.260
30	30.1	14.792	34.205		0.16	25.405	0.074	129	129.8	13.925	35.760		0.00	26.779	0.262
32	32.0	14.780	34.201		0.16	25.404	0.079	131	132.0	13.897	35.764		0.00	26.800	0.265
34	34.2	14.771	34.203		0.15	25.408	0.085	133	133.9	13.849	35.765		0.00	26.811	0.268
36	35.9	14.755	34.202		0.15	25.411	0.089	135	135.9	13.800	35.763		0.00	26.820	0.270
38	38.1	14.718	34.196		0.15	25.414	0.095	137	138.2	13.779	35.761		0.00	26.823	0.273
39	39.7	14.705	34.194		0.15	25.415	0.099	139	139.9	13.747	35.762		0.00	26.830	0.275
42	42.0	14.696	34.191		0.15	25.415	0.105	141	142.0	13.710	35.770		0.00	26.834	0.278
44	44.0	14.690	34.188		0.15	25.414	0.110	143	143.9	13.598	35.754		0.00	26.855	0.280
46	46.1	14.685	34.188		0.15	25.415	0.115	145	146.3	13.504	35.740		0.00	26.864	0.283
48	48.0	14.670	34.184		0.15	25.415	0.120	147	148.1	13.447	35.725		0.00	26.864	0.285
50	50.0	14.682	34.187		0.15	25.415	0.125	149	149.9	13.384	35.714		0.00	26.869	0.287
52	52.2	14.693	34.188		0.15	25.413	0.131	151	152.2	13.357	35.709		0.00	26.870	0.290
54	54.2	14.694	34.193		0.15	25.417	0.136	153	154.0	13.338	35.708		0.00	26.874	0.292
55	55.7	14.603	34.186		0.14	25.432	0.140	155	156.2	13.269	35.700		0.01	26.882	0.295
58	58.0	14.385	34.247		0.07	25.492	0.146	157	157.9	13.126	35.681		0.01	26.896	0.297
60	60.0	14.098	34.345		0.04	25.585	0.151	159	160.0	13.061	35.679		0.01	26.907	0.300
61	62.0	13.514	34.345		0.04	25.782	0.155	161	161.9	12.956	35.656		0.00	26.911	0.302
64	64.0	13.303	34.434		0.03	25.894	0.160	163	164.1	12.859	35.645		0.00	26.922	0.304
65	65.9	13.087	34.517		0.03	26.030	0.164	165	165.8	12.761	35.632		0.00	26.931	0.306
67	68.0	13.000	34.531		0.03	26.030	0.168	167	168.3	12.680	35.627		0.00	26.944	0.309
69	70.0	12.834	34.551		0.02	26.079	0.172	168	168.8	12.574	35.607		0.00	26.944	0.311
72	72.1	12.605	34.571		0.02	26.140	0.176	170	171.9	12.518	35.595		0.00	26.951	0.313
73	73.8	12.468	34.569		0.02	26.165	0.179	173	174.0	12.494	35.591		0.00	26.953	0.316
75	76.0	12.444	34.570		0.02	26.171	0.183	174	175.9	12.466	35.587		0.00	26.955	0.318
77	77.9	12.370	34.581		0.02	26.193	0.187	177	178.0	12.432	35.586		0.01	26.961	0.320
80	80.2	12.279	34.603		0.02	26.228	0.191	179	180.0	12.338	35.574		0.01	26.970	0.322
81	81.8	12.319	34.632		0.02	26.242	0.194	180	181.9	12.226	35.561		0.00	26.982	0.325
84	84.2	12.929	34.816		0.02	26.265	0.198	183	184.1	12.177	35.555		0.00	26.986	0.327
85	86.0	13.737	35.061		0.01	26.290	0.201	184	185.7	12.130	35.548		0.00	26.990	0.329
87	87.9	14.090	35.389		0.01	26.470	0.204	187	188.1	12.098	35.541		0.00	26.992	0.331
89	90.2	13.891	35.417		0.01	26.533	0.208	188	189.9	12.022	35.535		0.00	27.002	0.333
91	92.1	13.917	35.438		0.01	26.544	0.211	190	191.8	11.863	35.524		0.00	27.023	0.335
93	94.1	14.128	35.503		0.01	26.550	0.214	193	194.2	11.757	35.500		0.00	27.025	0.338
95	95.9	14.271	35.616		0.01	26.606	0.216	194	195.7	11.720	35.494		0.00	27.027	0.340
97	98.1	14.222	35.610		0.01	26.613	0.219	196	197.9	11.704	35.492		0.00	27.029	0.342
99	100.0	14.236	35.628		0.01	26.623	0.222	198	200.0	11.622	35.483		0.00	27.037	0.344

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
200	159	13	17 NOV 1984	1905	39°57.6'N	68°33.5'W	2200	300	159	13	17 NOV 1984	1905	39°57.6'N	68°33.5'W	2200
DEPTH m				ATN m ⁻¹	SIGT gm/cm ³	DYHT A 10m ² /s ²	N cph	DEPTH m				ATN m ⁻¹	SIGT gm/cm ³	DYHT A 10m ² /s ²	N cph
202.0				0.00	27.048	0.346	1499.	302.2				0.01	27.236	0.442	1492.
204.2				0.01	27.058	0.349	1499.	301				0.01	27.238	0.444	1492.
203				0.01	27.056	0.350	1499.	305.0				0.01	27.240	0.445	1492.
204				0.01	27.057	0.353	1499.	305				0.01	27.241	0.447	1492.
206				0.01	27.063	0.355	1498.	307.9				0.01	27.250	0.449	1492.
208				0.01	27.075	0.357	1498.	310.1				0.01	27.261	0.451	1492.
210				0.01	27.077	0.359	1498.	312.0				0.01	27.263	0.452	1492.
212				0.01	27.088	0.361	1498.	311				0.01	27.268	0.457	1491.
214				0.01	27.091	0.363	1497.	315.3				0.01	27.275	0.459	1491.
216				0.01	27.097	0.365	1497.	318.1				0.01	27.277	0.461	1491.
218				0.01	27.106	0.369	1496.	319.9				0.01	27.284	0.463	1491.
220				0.01	27.116	0.371	1496.	322.0				0.01	27.293	0.466	1491.
222				0.01	27.119	0.373	1496.	325.9				0.01	27.299	0.466	1491.
224				0.01	27.123	0.375	1496.	328				0.01	27.294	0.468	1491.
226				0.01	27.124	0.377	1496.	330.3				0.01	27.296	0.469	1491.
228				0.01	27.125	0.379	1496.	331.9				0.01	27.298	0.471	1491.
230				0.01	27.130	0.381	1496.	333				0.01	27.297	0.473	1491.
232				0.01	27.137	0.383	1495.	333				0.01	27.299	0.474	1491.
234				0.01	27.140	0.385	1495.	335				0.01	27.300	0.476	1491.
236				0.01	27.150	0.386	1495.	337				0.01	27.301	0.478	1491.
238				0.01	27.156	0.390	1495.	340.0				0.01	27.309	0.479	1490.
240				0.01	27.157	0.393	1495.	341				0.01	27.315	0.481	1490.
242				0.01	27.159	0.394	1495.	343				0.01	27.318	0.482	1490.
244				0.01	27.160	0.396	1495.	343				0.01	27.321	0.484	1490.
246				0.01	27.163	0.398	1495.	349				0.01	27.324	0.486	1490.
248				0.01	27.166	0.400	1495.	351				0.01	27.330	0.487	1490.
250				0.01	27.182	0.402	1495.	353				0.01	27.335	0.489	1490.
252				0.01	27.188	0.404	1494.	355				0.02	27.343	0.491	1490.
254				0.01	27.198	0.405	1493.	357				0.02	27.343	0.491	1490.
256				0.01	27.198	0.407	1493.	359				0.02	27.352	0.492	1489.
258				0.01	27.199	0.409	1493.	361				0.02	27.372	0.494	1489.
260				0.01	27.201	0.411	1493.	363				0.01	27.373	0.495	1489.
262				0.01	27.204	0.413	1493.	365				0.01	27.375	0.497	1489.
264				0.01	27.204	0.415	1493.	366.0				0.01	27.378	0.498	1489.
266				0.01	27.205	0.417	1493.	368.0				0.01	27.376	0.500	1489.
268				0.01	27.207	0.418	1493.	368.0				0.01	27.377	0.501	1489.
270				0.01	27.207	0.420	1493.	371.9				0.02	27.377	0.501	1489.
272				0.01	27.207	0.422	1493.	374.1				0.02	27.383	0.503	1489.
274				0.01	27.208	0.424	1493.	376.1				0.02	27.393	0.504	1488.
276				0.01	27.208	0.426	1493.	378.0				0.01	27.394	0.506	1488.
278				0.01	27.211	0.429	1493.	380.0				0.01	27.394	0.506	1488.
280				0.01	27.211	0.431	1493.	381.9				0.01	27.403	0.507	1488.
282				0.01	27.212	0.433	1493.	379				0.01	27.410	0.509	1487.
284				0.01	27.213	0.434	1493.	381.9				0.01	27.410	0.510	1487.
286				0.01	27.213	0.437	1493.	383				0.01	27.410	0.512	1487.
288				0.01	27.216	0.438	1493.	385.9				0.01	27.411	0.513	1487.
290				0.01	27.218	0.440	1493.	388.1				0.01	27.411	0.514	1487.
292				0.01	27.218	0.440	1493.	390.0				0.01	27.412	0.516	1487.
294				0.01	27.218	0.440	1493.	391.8				0.01	27.412	0.517	1487.
296				0.01	27.218	0.440	1493.	394.1				0.01	27.434	0.519	1487.
298				0.01	27.218	0.440	1493.	395.8				0.01	27.434	0.519	1487.
300.3				0.01	27.218	0.440	1493.	397				0.01	27.439	0.520	1487.

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH			
	159	13	17 NOV 1984	1905	39°57.6'N	68°33.5'W	2200	159	159	13	17 NOV 1984	1905	39°57.6'N	68°33.5'W	2200			
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DIHT A	S SPD	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DIHT A	S SPD	DEPTH
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	N
																		cph
398	401.9	7.278	35.077	0.01	27.441	0.522	1486.	3.3	515	520.1	5.537	35.000	0.01	27.611	0.593	1481.	0.4	
401	404.2	7.238	35.077	0.01	27.446	0.523	1486.	3.2	535	540.1	5.530	34.998	0.01	27.610	0.604	1482.	-0.7	
402	405.9	7.179	35.074	0.01	27.452	0.524	1486.	2.9										
404	408.0	7.149	35.076	0.01	27.458	0.526	1486.	2.8										
406	410.0	7.071	35.070	0.01	27.464	0.527	1486.	2.7										
408	412.0	7.015	35.063	0.01	27.467	0.528	1486.	2.5										
411	414.3	6.978	35.062	0.01	27.471	0.530	1485.	2.2										
414	416.0	6.956	35.061	0.01	27.473	0.531	1485.	1.8										
417	417.9	6.954	35.061	0.01	27.474	0.532	1485.	1.6										
418	420.2	6.953	35.061	0.01	27.473	0.534	1485.	1.5										
418	422.0	6.947	35.061	0.00	27.474	0.535	1485.	1.6										
420	423.9	6.941	35.061	0.01	27.475	0.536	1485.	1.6										
422	426.1	6.924	35.062	0.01	27.478	0.538	1485.	1.7										
424	427.9	6.894	35.059	0.01	27.480	0.539	1485.	1.7										
426	429.9	6.879	35.061	0.01	27.484	0.540	1485.	1.7										
428	432.2	6.867	35.058	0.01	27.483	0.542	1485.	1.7										
430	433.9	6.853	35.057	0.01	27.485	0.543	1485.	2.0										
432	436.0	6.846	35.056	0.01	27.485	0.544	1485.	2.1										
434	437.8	6.827	35.055	0.01	27.487	0.546	1485.	2.1										
436	440.0	6.808	35.057	0.01	27.491	0.547	1485.	2.2										
438	442.1	6.768	35.064	0.01	27.502	0.548	1485.	2.2										
440	443.9	6.723	35.054	0.01	27.500	0.549	1485.	2.3										
442	446.0	6.700	35.050	0.01	27.499	0.551	1485.	2.6										
444	448.1	6.674	35.048	0.01	27.504	0.552	1485.	3.2										
446	450.1	6.641	35.044	0.01	27.504	0.553	1485.	3.9										
448	451.9	6.589	35.045	0.01	27.511	0.555	1485.	4.1										
450	454.1	6.497	35.054	0.01	27.530	0.556	1484.	4.2										
452	456.1	6.360	35.063	0.01	27.555	0.557	1484.	4.1										
454	457.9	6.154	35.055	0.01	27.577	0.558	1483.	3.8										
456	459.8	6.086	35.020	0.01	27.557	0.559	1483.	3.3										
458	462.1	6.047	35.016	0.01	27.560	0.561	1483.	2.5										
460	464.0	6.007	35.018	0.01	27.566	0.562	1482.	1.7										
462	465.8	5.983	35.017	0.00	27.568	0.563	1482.	1.6										
464	467.8	5.972	35.015	0.01	27.569	0.564	1482.	2.2										
466	470.1	5.964	35.015	0.01	27.570	0.565	1482.	2.1										
468	471.9	5.944	35.017	0.01	27.574	0.566	1482.	1.9										
470	474.1	5.901	35.017	0.01	27.579	0.568	1482.	1.9										
472	475.9	5.878	35.014	0.01	27.579	0.569	1482.	1.8										
474	478.0	5.868	35.013	0.01	27.580	0.570	1482.	1.6										
476	479.9	5.858	35.013	0.01	27.581	0.571	1482.	1.3										
478	481.9	5.854	35.013	0.01	27.582	0.572	1482.	1.0										
480	483.9	5.849	35.013	0.01	27.582	0.573	1482.	1.0										
482	485.9	5.848	35.013	0.01	27.582	0.574	1482.	1.1										
484	488.1	5.849	35.013	0.01	27.582	0.575	1482.	1.4										
486	489.9	5.837	35.012	0.01	27.583	0.576	1482.	1.5										
488	492.2	5.822	35.011	0.01	27.585	0.578	1482.	1.7										
489	493.8	5.795	35.011	0.01	27.588	0.579	1482.	2.1										
492	496.0	5.765	35.010	0.01	27.591	0.580	1482.	2.4										
494	498.2	5.752	35.009	0.01	27.592	0.581	1482.	2.6										
496	500.1	5.716	35.008	0.01	27.595	0.582	1482.	2.6										

SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
159		159	14	17 NOV 1984	2038	40°03.5'N	68°33.3'W	900
2	1.9	14.368	33.765	0.16	25.156	0.000	1503.	0.6
4	3.9	14.372	33.765	0.16	25.156	0.006	1503.	0.6
6	6.3	14.372	33.766	0.16	25.156	0.012	1503.	0.6
8	7.7	14.371	33.766	0.16	25.156	0.016	1503.	0.6
10	10.0	14.369	33.766	0.16	25.157	0.023	1503.	0.6
12	12.0	14.364	33.766	0.16	25.158	0.028	1503.	0.4
14	14.2	14.365	33.766	0.16	25.158	0.034	1503.	-0.3
16	15.9	14.369	33.767	0.16	25.157	0.039	1503.	-0.3
18	18.0	14.374	33.766	0.16	25.156	0.045	1504.	1.1
20	20.3	14.374	33.766	0.16	25.156	0.051	1504.	1.8
22	21.8	14.382	33.767	0.16	25.155	0.056	1504.	2.6
24	24.0	14.399	33.775	0.16	25.157	0.062	1504.	3.2
26	26.3	14.449	33.803	0.16	25.168	0.068	1504.	3.8
28	27.8	14.545	33.867	0.17	25.182	0.073	1504.	4.1
30	30.0	14.580	33.875	0.17	25.196	0.079	1505.	4.2
32	32.1	14.629	33.902	0.17	25.207	0.084	1505.	4.3
34	33.9	14.679	33.938	0.17	25.223	0.089	1505.	4.4
36	36.0	14.691	33.949	0.17	25.230	0.095	1505.	4.7
38	38.0	14.715	33.967	0.17	25.238	0.101	1505.	5.5
40	40.0	14.755	33.997	0.17	25.253	0.106	1505.	6.2
42	42.1	14.813	34.034	0.17	25.269	0.112	1506.	6.6
44	43.9	14.883	34.110	0.15	25.312	0.117	1506.	7.5
46	46.0	14.832	34.172	0.12	25.371	0.122	1506.	9.1
48	48.0	14.742	34.194	0.10	25.407	0.127	1506.	10.4
50	50.0	14.671	34.201	0.09	25.428	0.132	1506.	11.1
52	52.0	14.406	34.245	0.06	25.519	0.138	1503.	11.3
54	54.0	13.903	34.364	0.04	25.716	0.142	1503.	11.2
56	56.0	13.631	34.442	0.03	25.829	0.147	1503.	11.4
58	58.2	13.669	34.478	0.03	25.853	0.151	1503.	11.3
59	59.8	13.761	34.527	0.03	25.872	0.155	1503.	10.7
62	62.2	13.932	34.649	0.03	25.931	0.160	1504.	10.2
63	63.8	14.371	34.910	0.02	26.040	0.163	1506.	10.0
65	66.0	14.729	35.126	0.02	26.129	0.167	1507.	9.9
68	68.2	14.862	35.231	0.02	26.182	0.172	1508.	9.5
69	69.9	14.780	35.320	0.01	26.268	0.175	1507.	8.5
71	72.0	14.566	35.270	0.02	26.276	0.178	1507.	7.5
73	74.0	14.336	35.212	0.02	26.280	0.182	1506.	6.8
75	75.9	14.058	35.181	0.02	26.315	0.185	1505.	6.5
78	78.3	13.821	35.128	0.02	26.324	0.189	1504.	6.4
79	80.1	13.329	35.053	0.02	26.368	0.192	1503.	6.8
81	81.9	13.025	35.000	0.02	26.389	0.195	1502.	6.7
83	84.0	13.061	35.061	0.02	26.428	0.199	1502.	6.5
85	86.1	13.132	35.135	0.02	26.472	0.202	1502.	6.3
87	88.1	13.074	35.144	0.02	26.490	0.205	1502.	5.7
89	90.1	13.025	35.131	0.02	26.490	0.208	1502.	5.2
91	91.6	12.970	35.138	0.02	26.506	0.211	1502.	4.4
93	94.0	12.804	35.120	0.02	26.526	0.214	1501.	3.8
95	96.1	12.655	35.083	0.04	26.526	0.217	1501.	3.7
97	97.9	12.604	35.080	0.04	26.535	0.220	1501.	3.6
99	100.1	12.604	35.083	0.04	26.537	0.223	1501.	3.4

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
185	159	15	17 NOV 1984	2233	40°08.3'N	68°35.6'W	193	8	159	16	17 NOV 1984	2341	40°12.9'N	68°37.8'W	148
185	187.0	12.931	35.631	0.06	26.879	0.370	1504.	8	7.6	11.724	32.609	0.13	24.784	0.000	1493.
187	188.1	12.877	35.607	0.06	26.896	0.371	1504.	10	10.0	11.721	32.609	0.13	24.784	0.007	1493.
187	188.9	12.804	35.597	0.06	26.888	0.372	1504.	12	12.0	11.723	32.608	0.13	24.784	0.014	1493.
188	189.9	12.783	35.593	0.06	26.895	0.373	1503.	14	13.8	11.724	32.609	0.13	24.784	0.019	1493.
				0.06	26.897	0.375	1503.	16	16.3	11.725	32.609	0.13	24.784	0.027	1493.
								18	18.1	11.727	32.610	0.13	24.784	0.033	1493.
								20	19.7	11.724	32.609	0.13	24.784	0.038	1493.
								22	22.0	11.720	32.608	0.13	24.784	0.046	1493.
								24	24.2	11.724	32.606	0.13	24.782	0.052	1493.
								26	26.1	11.735	32.610	0.13	24.783	0.058	1493.
								28	27.8	11.736	32.618	0.13	24.789	0.064	1494.
								30	29.9	11.738	32.614	0.13	24.785	0.070	1494.
								32	32.4	11.761	32.625	0.13	24.790	0.078	1494.
								34	34.3	11.818	32.654	0.12	24.802	0.084	1494.
								36	36.1	11.875	32.693	0.12	24.822	0.090	1494.
								38	38.0	11.912	32.714	0.12	24.831	0.096	1494.
								40	39.9	11.977	32.755	0.12	24.851	0.102	1495.
								42	42.2	12.077	32.797	0.11	24.865	0.109	1495.
								44	44.0	12.323	32.898	0.10	24.896	0.114	1496.
								46	46.0	12.644	33.112	0.10	25.001	0.120	1498.
								48	47.9	12.772	33.166	0.09	25.018	0.126	1498.
								50	50.0	13.163	33.323	0.06	25.062	0.132	1500.
								52	52.0	13.183	33.708	0.06	25.356	0.138	1500.
								54	54.1	12.098	33.538	0.07	25.436	0.143	1496.
								56	56.1	11.334	33.401	0.07	25.471	0.148	1494.
								57	57.9	10.899	33.344	0.06	25.504	0.153	1492.
								59	60.0	10.750	33.354	0.07	25.539	0.158	1491.
								61	62.0	10.761	33.366	0.07	25.546	0.163	1492.
								64	64.2	10.762	33.408	0.07	25.579	0.168	1492.
								65	66.0	10.735	33.431	0.07	25.601	0.172	1492.
								68	68.1	10.732	33.430	0.07	25.601	0.177	1492.
								69	69.9	10.764	33.440	0.06	25.603	0.182	1492.
								71	71.9	10.467	33.465	0.07	25.674	0.186	1491.
								73	73.8	10.263	33.413	0.07	25.669	0.191	1490.
								75	75.9	10.318	33.424	0.06	25.668	0.196	1490.
								77	77.9	10.425	33.459	0.06	25.677	0.200	1491.
								79	80.0	10.511	33.547	0.06	25.731	0.205	1491.
								81	82.0	10.486	33.614	0.06	25.787	0.210	1491.
								83	84.0	10.597	33.631	0.06	25.781	0.214	1492.
								85	86.1	10.876	33.719	0.05	25.801	0.219	1493.
								87	88.1	11.178	33.834	0.05	25.836	0.223	1494.
								89	89.8	11.707	34.085	0.05	25.934	0.227	1496.
								91	92.1	11.793	34.129	0.04	25.952	0.231	1497.
								93	93.7	11.861	34.156	0.04	25.961	0.235	1497.
								95	95.9	11.920	34.189	0.04	25.975	0.239	1497.
								98	98.4	11.937	34.270	0.04	26.035	0.244	1497.
								99	100.0	11.865	34.340	0.04	26.103	0.247	1497.
								101	101.9	12.068	34.426	0.04	26.131	0.251	1498.
								103	104.0	12.201	34.515	0.04	26.175	0.255	1499.
								105	106.0	12.180	34.595	0.04	26.241	0.259	1499.

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
107	159	16	17 NOV 1984	2341	40°12.9'N	68°37.8'W	148	2	159	17	18 NOV 1984	0045	40°16.5'N	68°39.2'W	110
109	109.8	12.079	34.654	0.04	26.306	0.262	1498.	7.6	4	11.832	32.532	0.13	24.704	0.000	1493.
111	109.8	12.161	34.711	0.04	26.335	0.265	1499.	6.7	4	11.835	32.531	0.12	24.703	0.009	1493.
111	111.7	12.183	34.739	0.04	26.352	0.269	1499.	5.4	6	11.837	32.531	0.12	24.703	0.014	1493.
113	114.1	12.194	34.749	0.04	26.357	0.273	1499.	3.9	8	11.838	32.531	0.12	24.703	0.020	1493.
115	115.7	12.201	34.754	0.04	26.360	0.275	1499.	2.8	11	11.840	32.531	0.12	24.702	0.031	1493.
117	118.2	12.245	34.757	0.05	26.354	0.280	1499.	3.0	14	11.838	32.534	0.12	24.705	0.040	1494.
119	120.1	12.419	34.775	0.04	26.334	0.283	1500.	3.7	16	11.838	32.535	0.12	24.706	0.048	1494.
121	122.0	12.639	34.863	0.04	26.359	0.286	1501.	4.7	17	11.839	32.535	0.12	24.705	0.051	1494.
123	123.9	12.761	34.917	0.04	26.377	0.289	1501.	5.4	20	11.838	32.535	0.12	24.706	0.060	1494.
125	126.1	12.939	35.008	0.04	26.412	0.293	1502.	6.2	22	11.839	32.534	0.12	24.705	0.066	1494.
127	128.0	13.653	35.234	0.03	26.441	0.296	1505.	6.7	24	11.841	32.536	0.12	24.705	0.074	1494.
129	130.1	14.036	35.378	0.03	26.473	0.299	1506.	6.8	24	11.840	32.536	0.12	24.706	0.081	1494.
130	131.3	14.152	35.435	0.03	26.492	0.301	1507.	6.9	28	11.841	32.536	0.12	24.706	0.086	1494.
131	132.0	14.319	35.495	0.03	26.503	0.302	1507.	6.8	30	11.840	32.537	0.12	24.707	0.092	1494.
132	133.0	14.414	35.542	0.03	26.519	0.304	1508.	6.8	30	11.836	32.541	0.12	24.711	0.098	1494.
133	134.0	14.448	35.571	0.03	26.534	0.305	1508.	7.5	32	11.836	32.541	0.12	24.711	0.098	1494.
134	135.0	14.492	35.602	0.03	26.548	0.307	1508.	8.1	34	11.831	32.550	0.12	24.719	0.106	1494.
135	136.0	14.538	35.625	0.03	26.556	0.308	1508.	8.2	35	11.828	32.559	0.12	24.726	0.110	1494.
136	137.1	14.557	35.663	0.03	26.581	0.310	1508.	8.1	37	11.823	32.572	0.12	24.737	0.117	1494.
137	138.0	14.441	35.705	0.04	26.638	0.311	1508.	7.9	40	11.821	32.584	0.12	24.747	0.124	1494.
138	139.0	14.230	35.670	0.04	26.657	0.313	1507.	7.5	42	11.823	32.609	0.11	24.766	0.132	1494.
139	140.0	14.198	35.652	0.04	26.656	0.314	1507.	6.8	44	11.825	32.637	0.11	24.787	0.138	1494.
140	140.9	14.150	35.652	0.04	26.660	0.315	1507.	6.8	46	11.836	32.683	0.11	24.821	0.143	1494.
141	142.0	14.073	35.646	0.05	26.672	0.317	1507.	6.8	48	11.822	32.766	0.10	24.875	0.150	1495.
142	143.0	13.991	35.632	0.05	26.678	0.318	1507.	6.8	50	12.077	32.925	0.08	24.964	0.156	1495.
143	144.0	13.947	35.622	0.05	26.680	0.320	1506.	6.8	52	12.959	33.268	0.07	25.060	0.161	1499.
									54	13.511	33.459	0.06	25.097	0.167	1501.
									56	13.608	33.532	0.06	25.155	0.173	1501.
									58	12.893	33.532	0.06	25.277	0.178	1499.
									59	12.240	33.375	0.06	25.282	0.183	1497.
									62	12.001	33.341	0.06	25.301	0.190	1496.
									64	11.993	33.374	0.07	25.329	0.195	1496.
									65	11.803	33.466	0.08	25.435	0.199	1495.
									67	11.593	33.488	0.08	25.491	0.205	1495.
									69	11.392	33.517	0.08	25.551	0.209	1494.
									71	11.298	33.527	0.08	25.576	0.214	1494.
									73	11.264	33.524	0.08	25.579	0.219	1494.
									75	11.203	33.525	0.08	25.591	0.224	1494.
									77	10.996	33.540	0.08	25.640	0.229	1493.
									79	10.659	33.530	0.07	25.692	0.233	1492.
									81	10.534	33.504	0.07	25.693	0.238	1491.
									83	10.531	33.525	0.07	25.710	0.242	1491.
									85	10.741	33.662	0.06	25.780	0.247	1492.
									87	10.930	33.834	0.05	25.880	0.252	1493.
									89	11.413	34.081	0.05	25.986	0.256	1495.
									91	11.637	34.195	0.04	26.033	0.260	1496.
									93	12.021	34.438	0.04	26.149	0.263	1498.
									95	12.096	34.508	0.05	26.189	0.267	1498.
									97	12.165	34.568	0.05	26.223	0.270	1498.
									97	12.176	34.578	0.05	26.228	0.271	1499.
									98	12.181	34.586	0.05	26.233	0.273	1499.

SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH		
159		159	19	18 NOV 1984	1703	39°54.2'N	70°03.6'W	470		
		PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	N
		dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	cph
399	402.1	402.1	6.827	35.055	0.04	27.486	0.568	1485.	3.1	
401	404.1	404.1	6.727	35.062	0.04	27.505	0.569	1484.	3.0	
402	405.8	405.8	6.695	35.057	0.04	27.506	0.570	1484.	2.8	
404	408.0	408.0	6.674	35.055	0.04	27.507	0.572	1484.	2.4	
407	410.1	410.1	6.665	35.055	0.04	27.508	0.573	1484.	2.0	
408	412.0	412.0	6.663	35.055	0.04	27.509	0.574	1484.	1.5	
410	414.0	414.0	6.652	35.054	0.04	27.510	0.576	1484.	1.6	
412	415.9	415.9	6.634	35.054	0.04	27.512	0.577	1484.	1.7	
414	418.0	418.0	6.605	35.052	0.04	27.515	0.578	1484.	1.7	
416	420.1	420.1	6.589	35.051	0.04	27.518	0.581	1484.	1.8	
418	422.0	422.0	6.566	35.050	0.04	27.518	0.581	1484.	1.9	
420	424.0	424.0	6.553	35.051	0.05	27.521	0.582	1484.	2.1	
422	425.9	425.9	6.547	35.050	0.05	27.521	0.583	1484.	2.2	
425	428.3	428.3	6.523	35.050	0.05	27.524	0.584	1484.	2.4	
426	430.0	430.0	6.461	35.046	0.05	27.529	0.585	1484.	2.5	
428	431.9	431.9	6.421	35.044	0.05	27.533	0.587	1483.	2.7	
430	433.9	433.9	6.371	35.039	0.05	27.535	0.588	1483.	2.7	
432	435.9	435.9	6.322	35.039	0.05	27.542	0.589	1483.	2.7	
434	438.0	438.0	6.299	35.040	0.05	27.546	0.590	1483.	2.6	
436	440.0	440.0	6.262	35.041	0.05	27.552	0.591	1483.	2.7	
438	441.9	441.9	6.236	35.037	0.05	27.552	0.593	1483.	2.7	
440	444.0	444.0	6.209	35.038	0.06	27.556	0.594	1483.	2.6	
442	446.2	446.2	6.147	35.033	0.06	27.560	0.595	1483.	2.5	
444	447.9	447.9	6.092	35.036	0.06	27.570	0.596	1483.	2.3	
446	449.9	449.9	6.053	35.029	0.06	27.569	0.597	1482.	2.2	
448	452.0	452.0	6.040	35.029	0.06	27.571	0.598	1482.	1.9	
450	454.0	454.0	6.036	35.030	0.06	27.572	0.600	1482.	1.7	
452	456.0	456.0	6.033	35.030	0.06	27.572	0.601	1482.	1.6	
454	458.0	458.0	6.025	35.029	0.06	27.573	0.602	1482.	1.7	
456	460.1	460.1	6.018	35.029	0.06	27.573	0.603	1482.	1.8	
457	461.2	461.2	5.986	35.030	0.06	27.579	0.604	1482.	2.0	
458	462.0	462.0	5.966	35.033	0.06	27.583	0.604	1482.	2.1	
459	463.1	463.1	5.943	35.023	0.06	27.579	0.605	1482.	2.1	
460	463.9	463.9	5.938	35.026	0.06	27.581	0.605	1482.	1.8	
461	465.0	465.0	5.927	35.027	0.06	27.584	0.606	1482.	1.8	
462	465.9	465.9	5.922	35.025	0.05	27.583	0.606	1482.	1.8	
463	467.0	467.0	5.913	35.024	0.05	27.583	0.607	1482.	1.8	
464	467.8	467.8	5.904	35.022	0.05	27.582	0.607	1482.	1.8	

SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH		
159		159	20	18 NOV 1984	1812	39°58.0'N	70°00.8'W	175		
		PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	N
		dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	cph
2	1.9	1.9	14.995	34.071	0.10	25.258	0.000	1506.	2.4	
4	4.0	4.0	14.997	34.071	0.10	25.257	0.006	1506.	2.4	
6	6.0	6.0	14.999	34.069	0.10	25.256	0.011	1506.	2.4	
7.9	7.9	7.9	14.994	34.069	0.10	25.256	0.016	1506.	2.4	
10	10.2	10.2	14.999	34.070	0.10	25.256	0.023	1506.	2.4	
12	11.8	11.8	15.011	34.073	0.10	25.256	0.027	1506.	3.2	
14	14.0	14.0	15.054	34.088	0.11	25.258	0.033	1506.	3.7	
16	16.1	16.1	15.183	34.137	0.12	25.268	0.039	1507.	3.9	
18	17.8	17.8	15.463	34.267	0.13	25.306	0.043	1508.	3.9	
20	20.0	20.0	15.670	34.333	0.14	25.310	0.049	1508.	3.8	
22	22.1	22.1	15.667	34.338	0.14	25.315	0.055	1508.	3.4	
24	24.0	24.0	15.663	34.339	0.14	25.316	0.059	1508.	2.8	
26	26.1	26.1	15.678	34.346	0.14	25.319	0.065	1508.	1.8	
28	28.0	28.0	15.696	34.353	0.14	25.320	0.070	1509.	1.6	
30	29.9	29.9	15.705	34.357	0.14	25.321	0.075	1509.	1.4	
32	32.1	32.1	15.720	34.365	0.14	25.323	0.081	1509.	1.3	
34	34.0	34.0	15.741	34.371	0.13	25.323	0.086	1509.	1.1	
36	36.0	36.0	15.754	34.375	0.13	25.324	0.091	1509.	1.0	
38	38.0	38.0	15.754	34.376	0.13	25.324	0.097	1509.	1.0	
40	39.9	39.9	15.745	34.373	0.13	25.324	0.102	1509.	1.0	
42	42.0	42.0	15.743	34.373	0.12	25.325	0.107	1509.	1.1	
44	44.1	44.1	15.773	34.383	0.12	25.325	0.113	1509.	1.1	
46	45.9	45.9	15.794	34.392	0.11	25.327	0.118	1509.	1.2	
48	48.2	48.2	15.833	34.404	0.11	25.328	0.124	1509.	1.4	
49	49.8	49.8	15.839	34.406	0.11	25.328	0.128	1509.	1.6	
52	52.0	52.0	15.826	34.404	0.11	25.329	0.134	1509.	1.7	
54	54.0	54.0	15.819	34.405	0.11	25.332	0.139	1509.	1.9	
55	55.9	55.9	15.832	34.413	0.11	25.335	0.144	1510.	2.2	
58	58.0	58.0	15.866	34.427	0.10	25.338	0.150	1510.	2.6	
60	60.0	60.0	15.890	34.437	0.10	25.341	0.155	1510.	3.3	
61	62.0	62.0	15.920	34.452	0.10	25.345	0.160	1510.	4.0	
64	64.0	64.0	15.960	34.473	0.10	25.352	0.166	1510.	4.7	
65	66.0	66.0	15.996	34.503	0.09	25.367	0.171	1510.	5.2	
68	68.1	68.1	16.090	34.568	0.09	25.396	0.176	1511.	5.6	
69	69.9	69.9	16.156	34.622	0.08	25.422	0.181	1511.	5.8	
71	72.0	72.0	16.250	34.684	0.08	25.448	0.186	1511.	6.4	
73	74.0	74.0	16.359	34.743	0.07	25.468	0.191	1512.	7.5	
75	76.0	76.0	16.354	34.760	0.07	25.483	0.196	1512.	8.7	
77	78.0	78.0	16.427	34.816	0.07	25.509	0.201	1512.	9.6	
79	79.9	79.9	16.530	34.943	0.06	25.582	0.206	1513.	10.1	
81	82.0	82.0	16.483	35.090	0.05	25.706	0.211	1513.	10.2	
83	84.0	84.0	16.312	35.189	0.05	25.822	0.215	1512.	10.0	
85	86.0	86.0	16.307	35.253	0.04	25.872	0.220	1512.	9.6	
87	88.1	88.1	16.285	35.270	0.04	25.891	0.224	1512.	9.2	
89	90.0	90.0	16.248	35.281	0.04	25.908	0.228	1512.	8.8	
91	91.9	91.9	16.215	35.304	0.04	25.933	0.232	1512.	8.9	
93	94.1	94.1	16.275	35.407	0.04	25.998	0.237	1513.	9.2	
95	95.8	95.8	15.981	35.440	0.04	26.092	0.240	1512.	9.3	
97	98.0	98.0	15.712	35.443	0.04	26.155	0.244	1511.	9.1	
99	100.2	100.2	15.068	35.359	0.05	26.235	0.248	1509.	8.4	

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
101	159	20	18 NOV 1984	1812	39°58.0'N	70°00.8'W	175	1	0.8	21	18 NOV 1984	1916	40°05.0'N	69°59.8'W	143
103	159	101		0.05	26.254	0.252	1509.	1	0.8	14.130		0.07	25.026	0.000	1502.
105	159	104.1		0.05	26.270	0.255	1509.	2	1.8	14.130		0.07	25.025	0.003	1502.
107	159	105.9		0.05	26.277	0.259	1509.	4	3.8	14.128		0.07	25.025	0.009	1502.
109	159	108.1		0.05	26.280	0.262	1509.	6	5.9	14.129		0.07	25.024	0.015	1502.
111	159	110.0		0.05	26.284	0.266	1509.	8	7.9	14.128		0.07	25.024	0.021	1502.
113	159	111.9		0.05	26.289	0.269	1509.	10	10.1	14.139		0.07	25.024	0.027	1502.
115	159	114.1		0.06	26.310	0.273	1509.	12	12.0	14.152		0.07	25.024	0.033	1502.
117	159	115.9		0.06	26.328	0.276	1509.	14	14.0	14.146		0.07	25.024	0.039	1502.
119	159	118.1		0.06	26.358	0.280	1508.	16	16.1	14.125		0.07	25.023	0.045	1502.
121	159	119.9		0.07	26.380	0.283	1508.	18	17.9	14.130		0.08	25.024	0.050	1502.
123	159	122.0		0.07	26.388	0.286	1508.	20	20.1	14.132		0.07	25.023	0.056	1502.
125	159	124.0		0.07	26.406	0.290	1508.	22	22.0	14.136		0.07	25.023	0.062	1503.
127	159	126.0		0.07	26.447	0.293	1509.	24	24.1	14.175		0.07	25.025	0.068	1503.
129	159	128.0		0.07	26.513	0.296	1509.	26	26.0	14.190		0.07	25.025	0.074	1503.
131	159	131.9		0.06	26.581	0.299	1508.	28	28.0	14.194		0.07	25.025	0.080	1503.
133	159	133.9		0.06	26.636	0.302	1508.	30	30.0	14.200		0.07	25.025	0.085	1503.
135	159	135.7		0.03	26.735	0.305	1507.	32	32.1	14.245		0.07	25.028	0.092	1503.
137	159	137.2		0.03	26.744	0.307	1507.	34	33.9	14.349		0.07	25.028	0.097	1504.
139	159	139.8		0.03	26.747	0.313	1507.	36	36.1	14.569		0.06	25.046	0.103	1504.
141	159	142.1		0.03	26.762	0.316	1506.	38	38.0	15.090		0.06	25.065	0.109	1506.
143	159	144.0		0.03	26.807	0.318	1505.	40	40.0	15.569		0.06	25.120	0.115	1508.
145	159	146.0		0.03	26.843	0.321	1504.	42	42.0	15.661		0.07	25.120	0.120	1508.
147	159	148.0		0.03	26.844	0.323	1504.	44	44.0	15.666		0.08	25.168	0.126	1508.
149	159	150.0		0.03	26.844	0.325	1504.	46	46.1	15.678		0.09	25.189	0.132	1509.
151	159	152.1		0.03	26.844	0.328	1505.	48	47.9	15.792		0.08	25.228	0.137	1509.
153	159	154.0		0.03	26.844	0.330	1505.	50	50.0	16.033		0.08	25.258	0.142	1510.
155	159	156.1		0.03	26.845	0.333	1505.	52	52.0	16.103		0.07	25.288	0.148	1510.
157	159	157.9		0.04	26.844	0.335	1505.	54	54.0	16.107		0.07	25.310	0.153	1510.
159	159	160.2		0.03	26.844	0.338	1505.	56	56.1	16.026		0.07	25.352	0.159	1510.
161	159	161.2		0.04	26.843	0.339	1505.	57	57.9	15.821		0.06	25.398	0.164	1510.
163	159	163.0		0.04	26.843	0.340	1505.	59	60.0	15.665		0.07	25.423	0.169	1509.
165	159	164.1		0.04	26.843	0.342	1505.	62	62.0	15.497		0.10	25.458	0.174	1509.
167	159	166.0		0.04	26.846	0.343	1505.	64	64.1	15.417		0.11	25.519	0.179	1508.
169	159	168.0		0.04	26.847	0.344	1505.	65	65.9	15.353		0.11	25.536	0.184	1508.
171	159	170.0		0.04	26.849	0.345	1505.	67	68.0	15.023		0.09	25.595	0.189	1507.
173	159	171.0		0.04	26.852	0.347	1505.	70	70.1	14.549		0.09	25.663	0.194	1506.
175	159	173.9		0.04	26.856	0.348	1504.	71	71.9	14.467		0.10	25.694	0.198	1506.
177	159	175.0		0.04	26.865	0.349	1504.	73	73.9	14.442		0.11	25.731	0.202	1506.
179	159	177.0		0.04	26.867	0.350	1504.	75	76.0	14.468		0.10	25.748	0.207	1506.
181	159	179.0		0.04	26.869	0.351	1504.	77	77.9	14.608		0.11	25.766	0.212	1506.
183	159	181.0		0.04	26.869	0.351	1504.	79	80.0	14.719		0.11	25.823	0.216	1507.
185	159	183.0		0.04	26.869	0.353	1504.	81	82.0	14.506		0.11	25.873	0.221	1506.
187	159	185.0		0.04	26.869	0.354	1504.	83	84.0	14.467		0.12	25.900	0.225	1506.
189	159	187.0		0.04	26.869	0.354	1504.	85	86.1	14.504		0.14	25.921	0.229	1506.
191	159	189.0		0.05	26.870	0.355	1504.	87	87.9	14.554		0.16	25.939	0.233	1507.
193	159	191.0		0.05	26.870	0.355	1504.	89	90.1	14.615		0.18	25.973	0.237	1507.
195	159	193.0		0.05	26.870	0.355	1504.	91	92.0	14.759		0.16	26.025	0.241	1507.
197	159	195.0		0.05	26.870	0.355	1504.	93	94.0	14.928		0.15	26.035	0.245	1508.
199	159	197.0		0.05	26.870	0.355	1504.	95	96.0	15.106		0.12	26.079	0.249	1509.
201	159	199.0		0.05	26.870	0.355	1504.	97	98.0	15.337		0.10	26.094	0.253	1510.

SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	
159		159	21	18 NOV 1984	1916	40°05.0'N	69°59.8'W	143	
	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	
	159	159	22	18 NOV 1984	2010	40°11.0'N	69°57.5'W	100	
99	99.9	2.2	15.370	34.099	0.05	25.197	0.000	1507.0	0.3
101	102.1	4.0	15.369	34.099	0.05	25.197	0.005	1507.0	0.3
103	104.0	5.8	15.371	34.100	0.05	25.197	0.010	1507.0	0.3
105	105.9	6	15.377	34.101	0.05	25.196	0.016	1507.0	0.3
107	108.1	10.2	15.380	34.101	0.05	25.196	0.022	1507.0	0.3
109	109.9	11.8	15.377	34.101	0.05	25.197	0.026	1507.0	0.4
111	112.0	14.2	15.375	34.100	0.05	25.196	0.033	1507.0	0.4
113	114.0	16.0	15.376	34.100	0.05	25.197	0.038	1507.0	0.7
115	116.0	18.1	15.396	34.108	0.05	25.198	0.044	1507.0	0.8
117	117.9	20.0	15.403	34.108	0.06	25.197	0.049	1507.0	0.6
119	120.0	22.1	15.396	34.110	0.05	25.197	0.054	1507.0	0.5
121	122.1	24.1	15.396	34.110	0.06	25.199	0.060	1507.0	0.1
123	123.9	26.1	15.410	34.112	0.05	25.198	0.066	1507.0	-0.4
125	126.0	27.9	15.430	34.115	0.05	25.196	0.071	1507.0	-0.5
127	128.1	30.1	15.410	34.110	0.05	25.197	0.077	1507.0	0.2
129	130.0	31.8	15.387	34.103	0.06	25.196	0.082	1507.0	0.8
130	131.2	34.2	15.387	34.104	0.05	25.197	0.088	1507.0	1.4
131	132.0	35.9	15.390	34.103	0.05	25.195	0.093	1507.0	1.6
132	133.0	38.0	15.408	34.114	0.05	25.200	0.099	1508.0	1.9
133	134.1	40.2	15.442	34.129	0.07	25.204	0.105	1508.0	2.1
134	134.9	42.1	15.483	34.145	0.06	25.208	0.110	1508.0	2.5
135	136.0	44.1	15.507	34.152	0.05	25.208	0.116	1508.0	2.9
136	137.0	46.1	15.533	34.169	0.06	25.215	0.121	1508.0	3.2
137	137.8	47.9	15.537	34.171	0.05	25.215	0.126	1508.0	3.3
138	139.0	50.0	15.533	34.193	0.05	25.233	0.132	1508.0	3.4
139	139.6	51.9	15.656	34.241	0.06	25.242	0.137	1509.0	3.4
		54.1	15.911	34.330	0.06	25.254	0.143	1510.0	3.5
		56.0	16.036	34.365	0.06	25.252	0.149	1510.0	3.7
		58.1	16.038	34.369	0.06	25.255	0.154	1510.0	3.8
		60.0	16.057	34.389	0.06	25.266	0.159	1510.0	3.8
		61.8	16.089	34.417	0.06	25.279	0.164	1510.0	3.8
		64.1	16.245	34.491	0.06	25.301	0.170	1511.0	4.0
		65.0	16.275	34.508	0.06	25.307	0.176	1511.0	4.0
		67.9	16.291	34.513	0.06	25.308	0.181	1511.0	4.0
		70.1	16.334	34.535	0.07	25.314	0.186	1511.0	4.1
		71.8	16.434	34.582	0.07	25.327	0.191	1512.0	4.2
		73.0	16.594	34.645	0.07	25.338	0.197	1512.0	4.3
		76.1	16.693	34.704	0.08	25.360	0.202	1513.0	4.3
		78.2	16.768	34.746	0.09	25.375	0.208	1513.0	4.5
		79.8	16.777	34.760	0.10	25.384	0.212	1513.0	4.9
		81.0	16.778	34.766	0.10	25.388	0.218	1513.0	5.6
		83.0	16.783	34.776	0.11	25.394	0.223	1513.0	6.4
		85.8	16.843	34.836	0.14	25.427	0.228	1514.0	7.2
		87.3	16.873	34.900	0.17	25.469	0.231	1514.0	8.0
		88.1	16.856	34.954	0.19	25.514	0.233	1514.0	8.9
		88.9	16.846	34.997	0.21	25.550	0.235	1514.0	9.4
		90.0	16.845	35.009	0.22	25.559	0.238	1514.0	9.1
		91.0	16.853	35.055	0.24	25.592	0.240	1514.0	8.3
		92.0	16.878	35.086	0.25	25.610	0.243	1514.0	7.5
		93.0	16.837	35.103	0.26	25.633	0.245	1514.0	7.2

SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
93	94.0	159	22	18 NOV 1984	2010	40°11.0'N	69°57.5'W	100
94	95.0	159	22	18 NOV 1984	2010	40°11.0'N	69°57.5'W	100
95	96.0	159	22	18 NOV 1984	2010	40°11.0'N	69°57.5'W	100
96	96.6	159	22	18 NOV 1984	2010	40°11.0'N	69°57.5'W	100
93	94.0	159	23	18 NOV 1984	2111	40°17.0'N	69°56.3'W	87
94	95.0	159	23	18 NOV 1984	2111	40°17.0'N	69°56.3'W	87
95	96.0	159	23	18 NOV 1984	2111	40°17.0'N	69°56.3'W	87
96	96.6	159	23	18 NOV 1984	2111	40°17.0'N	69°56.3'W	87

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
	159	24	18 NOV 1984	2207	40°23.0'N	69°54.8'W	79
DEPTH	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
m	159	24	18 NOV 1984	2207	40°23.0'N	69°54.8'W	79
1	1.0	13.700	33.406	0.16	25.018	0.000	1501.
2	2.0	13.701	33.405	0.16	25.017	0.003	1501.
4	4.0	13.702	33.405	0.16	25.017	0.009	1501.
6	6.0	13.703	33.406	0.17	25.017	0.015	1501.
8	8.0	13.706	33.406	0.17	25.017	0.021	1501.
10	9.9	13.710	33.407	0.16	25.017	0.026	1501.
12	12.0	13.709	33.408	0.16	25.017	0.032	1501.
14	14.1	13.709	33.407	0.16	25.017	0.039	1501.
16	16.0	13.718	33.408	0.16	25.016	0.044	1501.
18	18.0	13.720	33.409	0.17	25.016	0.050	1501.
20	20.0	13.721	33.409	0.16	25.016	0.056	1501.
22	22.0	13.720	33.409	0.16	25.016	0.062	1501.
24	23.9	13.719	33.409	0.16	25.016	0.067	1501.
26	25.9	13.718	33.408	0.16	25.016	0.073	1501.
28	28.1	13.718	33.408	0.17	25.016	0.080	1501.
30	30.1	13.719	33.409	0.17	25.016	0.086	1501.
32	31.8	13.719	33.409	0.17	25.016	0.091	1501.
34	34.0	13.716	33.408	0.17	25.016	0.097	1501.
36	36.2	13.716	33.408	0.17	25.016	0.103	1501.
38	37.9	13.716	33.408	0.17	25.016	0.108	1501.
40	40.1	13.718	33.408	0.16	25.016	0.115	1501.
42	42.3	13.718	33.409	0.16	25.016	0.121	1501.
44	43.9	13.718	33.409	0.17	25.016	0.126	1501.
46	46.0	13.717	33.408	0.17	25.016	0.132	1501.
48	48.2	13.719	33.409	0.17	25.016	0.139	1501.
50	50.1	13.719	33.409	0.17	25.016	0.144	1502.
52	52.2	13.718	33.408	0.16	25.016	0.151	1502.
54	54.0	13.786	33.425	0.16	25.015	0.156	1502.
55	55.9	13.860	33.453	0.16	25.022	0.161	1502.
58	58.3	14.040	33.513	0.16	25.031	0.168	1503.
59	60.0	14.491	33.642	0.17	25.035	0.173	1504.
61	61.9	15.571	34.123	0.26	25.170	0.179	1508.
64	64.2	16.082	34.315	0.29	25.203	0.185	1510.
65	65.8	16.100	34.319	0.29	25.201	0.190	1510.
67	67.3	16.105	34.319	0.29	25.201	0.194	1510.
67	68.0	16.105	34.320	0.29	25.201	0.196	1510.
68	69.0	16.111	34.319	0.29	25.199	0.199	1510.
69	69.9	16.116	34.320	0.30	25.199	0.201	1511.
70	71.0	16.124	34.323	0.31	25.199	0.204	1511.
72	72.1	16.128	34.323	0.31	25.200	0.207	1511.
72	72.9	16.135	34.326	0.31	25.200	0.210	1511.
73	74.0	16.138	34.327	0.32	25.199	0.213	1511.
75	75.1	16.141	34.328	0.32	25.199	0.216	1511.
75	75.7	16.144	34.327	0.32	25.198	0.217	1511.

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
	159	25	18 NOV 1984	2307	40°30.0'N	69°52.8'W	70
DEPTH	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
m	159	25	18 NOV 1984	2307	40°30.0'N	69°52.8'W	70
2	1.9	13.943	33.442	0.23	24.996	0.000	1501.
4	3.8	13.941	33.442	0.23	24.996	0.006	1502.
6	6.0	13.941	33.441	0.23	24.995	0.012	1502.
8	7.9	13.943	33.442	0.23	24.996	0.018	1502.
10	9.9	13.946	33.443	0.23	24.996	0.024	1502.
12	12.2	13.935	33.440	0.23	24.996	0.031	1502.
14	13.9	13.937	33.440	0.23	24.995	0.035	1502.
16	16.1	13.938	33.441	0.23	24.996	0.042	1502.
18	18.1	13.945	33.442	0.23	24.996	0.048	1502.
20	19.9	13.950	33.443	0.23	24.995	0.053	1502.
22	22.0	13.974	33.453	0.23	24.998	0.059	1502.
24	24.2	13.984	33.454	0.23	24.996	0.066	1502.
26	26.0	13.989	33.456	0.23	24.997	0.071	1502.
28	27.8	13.999	33.459	0.23	24.997	0.077	1502.
30	29.9	13.999	33.462	0.23	24.999	0.083	1502.
32	31.9	14.023	33.467	0.23	24.998	0.089	1502.
34	33.9	14.035	33.470	0.22	24.998	0.095	1502.
36	35.9	14.075	33.491	0.22	25.006	0.101	1503.
38	38.1	14.100	33.489	0.22	24.999	0.107	1503.
40	40.1	14.109	33.492	0.22	25.000	0.113	1503.
42	42.1	14.117	33.494	0.22	25.000	0.119	1503.
44	43.9	14.125	33.494	0.22	24.998	0.124	1503.
45	45.8	14.138	33.503	0.22	25.002	0.130	1503.
47	47.8	14.189	33.517	0.22	25.003	0.136	1503.
49	49.8	14.269	33.542	0.22	25.005	0.142	1503.
52	51.9	14.269	33.538	0.22	25.002	0.148	1503.
54	54.0	14.252	33.535	0.22	25.003	0.154	1503.
56	55.9	14.360	33.587	0.24	25.020	0.160	1504.
57	57.2	14.498	33.620	0.26	25.016	0.164	1504.
58	58.1	14.514	33.625	0.26	25.017	0.166	1504.
58	58.9	14.520	33.630	0.27	25.020	0.168	1505.
60	60.0	14.538	33.635	0.28	25.020	0.172	1505.
61	61.1	14.569	33.647	0.29	25.022	0.175	1505.
61	61.9	14.576	33.653	0.29	25.025	0.177	1505.
63	63.0	14.579	33.650	0.30	25.023	0.181	1505.
64	64.1	14.587	33.655	0.30	25.023	0.184	1505.
64	64.9	14.600	33.658	0.31	25.025	0.186	1505.
66	66.0	14.603	33.660	0.30	25.025	0.189	1505.
66	67.0	14.603	33.660	0.30	25.025	0.192	1505.

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH		
	159	26	19 NOV 1984	0403	40°25.1'N	70°25.1'W	80	159	27	19 NOV 1984	0509	40°16.2'N	70°26.6'W	103			
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s
1	0.7	14.263	33.730		0.18	25.151	0.000	1503.	2	2.4	14.780	33.984		0.07	25.237	0.000	1505.
2	2.0	14.290	33.746		0.18	25.158	0.004	1503.	4	4.0	14.779	33.984		0.07	25.237	0.004	1505.
4	4.1	14.280	33.737		0.18	25.153	0.009	1503.	6	6.0	14.779	33.983		0.07	25.236	0.010	1505.
6	6.0	14.275	33.734		0.18	25.152	0.015	1503.	8	8.0	14.775	33.984		0.07	25.238	0.015	1505.
8	8.0	14.290	33.731		0.18	25.146	0.021	1503.	10	9.9	14.772	33.982		0.07	25.237	0.020	1505.
10	9.9	14.385	33.764		0.18	25.152	0.026	1503.	12	12.0	14.774	33.982		0.07	25.237	0.026	1505.
12	12.0	14.436	33.804		0.17	25.168	0.032	1504.	14	14.0	14.777	33.982		0.07	25.237	0.031	1505.
14	14.1	14.534	33.837		0.17	25.176	0.037	1504.	16	15.9	14.780	33.983		0.07	25.236	0.037	1505.
16	15.9	14.627	33.876		0.17	25.186	0.043	1504.	18	18.0	14.783	33.984		0.07	25.236	0.043	1505.
18	18.1	14.696	33.905		0.16	25.195	0.049	1505.	20	20.1	14.782	33.984		0.07	25.237	0.048	1505.
20	19.9	14.824	33.945		0.16	25.198	0.054	1505.	22	21.9	14.776	33.982		0.07	25.237	0.053	1505.
22	22.0	14.886	33.970		0.16	25.204	0.059	1505.	24	24.0	14.780	33.983		0.07	25.236	0.059	1505.
24	24.0	14.976	34.000		0.16	25.207	0.065	1506.	26	26.0	14.780	33.984		0.08	25.237	0.064	1505.
26	26.0	15.125	34.060		0.16	25.221	0.070	1506.	28	28.1	14.775	33.982		0.07	25.237	0.070	1505.
28	28.0	15.306	34.129		0.16	25.234	0.076	1507.	30	30.0	14.771	33.981		0.07	25.237	0.075	1505.
30	29.9	15.486	34.213		0.15	25.259	0.081	1508.	32	31.9	14.770	33.980		0.07	25.236	0.081	1505.
32	32.0	15.538	34.273		0.16	25.293	0.087	1508.	34	34.1	14.769	33.980		0.07	25.237	0.087	1505.
34	34.1	15.564	34.286		0.17	25.298	0.092	1508.	36	35.9	14.771	33.980		0.07	25.236	0.091	1505.
36	36.0	15.586	34.291		0.18	25.297	0.097	1508.	38	38.0	14.768	33.981		0.07	25.237	0.097	1505.
38	38.0	15.613	34.313		0.19	25.307	0.103	1508.	40	40.0	14.763	33.978		0.07	25.237	0.103	1505.
40	40.0	15.622	34.319		0.19	25.310	0.108	1508.	42	42.1	14.763	33.978		0.07	25.237	0.108	1505.
42	42.1	15.621	34.321		0.19	25.311	0.114	1509.	44	44.0	14.761	33.977		0.07	25.236	0.114	1505.
44	44.0	15.618	34.321		0.19	25.312	0.119	1509.	46	46.2	14.758	33.977		0.07	25.237	0.120	1505.
46	46.0	15.617	34.320		0.19	25.312	0.124	1509.	47	47.8	14.761	33.977		0.07	25.236	0.124	1506.
47	47.9	15.616	34.321		0.19	25.313	0.129	1509.	50	50.2	14.764	33.978		0.07	25.236	0.130	1506.
50	50.0	15.615	34.321		0.19	25.313	0.135	1509.	52	52.0	14.767	33.979		0.07	25.236	0.135	1506.
52	51.9	15.620	34.324		0.19	25.314	0.140	1509.	54	54.0	14.768	33.979		0.07	25.236	0.141	1506.
54	54.1	15.630	34.330		0.20	25.316	0.146	1509.	56	56.0	14.772	33.979		0.07	25.235	0.146	1506.
55	55.6	15.650	34.338		0.21	25.318	0.150	1509.	58	58.0	14.784	33.986		0.08	25.238	0.152	1506.
58	58.3	15.668	34.344		0.22	25.319	0.157	1509.	60	60.0	14.793	33.988		0.08	25.237	0.157	1506.
59	59.8	15.668	34.345		0.22	25.320	0.161	1509.	62	62.0	14.805	33.994		0.08	25.239	0.163	1506.
61	61.2	15.674	34.345		0.23	25.318	0.165	1509.	64	64.1	14.820	34.000		0.08	25.241	0.169	1506.
62	62.0	15.679	34.347		0.22	25.319	0.167	1509.	65	65.9	14.834	34.006		0.08	25.243	0.173	1506.
63	63.0	15.676	34.350		0.21	25.322	0.172	1509.	68	68.1	14.866	34.020		0.08	25.246	0.179	1506.
64	65.0	15.674	34.349		0.22	25.321	0.175	1509.	69	70.0	15.262	34.209		0.08	25.305	0.185	1508.
66	66.0	15.677	34.347		0.22	25.319	0.177	1509.	71	71.9	16.242	34.544		0.06	25.342	0.190	1511.
66	67.0	15.675	34.348		0.21	25.321	0.180	1509.	73	74.0	17.084	34.808		0.05	25.348	0.195	1514.
67	68.0	15.673	34.347		0.22	25.320	0.183	1509.	75	76.0	17.632	35.082		0.05	25.426	0.200	1516.
67	69.0	15.675	34.348		0.22	25.320	0.185	1509.	77	78.0	17.622	35.143		0.06	25.475	0.205	1516.
68	69.0	15.675	34.348		0.22	25.320	0.188	1509.	79	80.1	17.364	35.112		0.07	25.514	0.211	1515.
69	70.0	15.677	34.348		0.23	25.318	0.191	1509.	81	82.0	16.973	35.063		0.09	25.570	0.215	1514.
70	71.0	15.688	34.349		0.23	25.318	0.191	1509.	83	84.0	16.309	34.998		0.17	25.676	0.220	1512.
71	72.0	15.691	34.353		0.24	25.321	0.193	1509.	85	86.0	15.727	34.840		0.23	25.688	0.225	1510.
72	73.0	15.697	34.352		0.26	25.318	0.196	1509.	87	88.1	15.672	34.991		0.35	25.816	0.230	1510.
73	73.7	15.709	34.355		0.27	25.319	0.198	1509.	89	90.0	15.701	35.136		0.44	25.921	0.234	1511.
									91	91.3	15.737	35.196		0.47	25.959	0.236	1511.
									91	92.0	15.756	35.214		0.48	25.969	0.238	1511.
									92	93.0	15.765	35.229		0.49	25.978	0.240	1511.
									93	94.0	15.769	35.237		0.51	25.983	0.242	1511.
									94	95.0	15.774	35.248		0.53	25.990	0.244	1511.

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH						
	159	27	19 NOV 1984	0509	40°16.2'N	70°26.6'W	103	159	28	19 NOV 1984	0612	40°07.6'N	70°28.9'W	120							
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S	SPD	N	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S	SPD	N
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m/s	cph	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m/s	cph
95	96.0	15.780	35.259		0.53	25.998	0.246	1511.	4.8	2	2-3	15.135	34.135		0.08	25.276	0.000	1506.	-0.2		
96	97.0	15.783	35.264		0.57	26.001	0.248	1511.	4.8	4	4.0	15.145	34.133		0.08	25.273	0.005	1506.	-0.2		
97	98.0	15.795	35.279		0.64	26.010	0.250	1511.	4.8	6	6.1	15.144	34.134		0.08	25.274	0.010	1506.	-0.2		
98	99.0	15.809	35.300		0.69	26.023	0.252	1511.	4.8	8	7.9	15.135	34.130		0.08	25.272	0.015	1506.	-0.2		
										10	10.0	15.142	34.131		0.08	25.272	0.021	1506.	-0.2		
										12	12.1	15.167	34.135		0.08	25.269	0.026	1506.	1.0		
										14	13.9	15.226	34.149		0.07	25.267	0.031	1507.	1.1		
										16	16.1	15.235	34.161		0.07	25.275	0.037	1507.	1.1		
										18	18.0	15.236	34.165		0.07	25.277	0.042	1507.	0.6		
										20	19.9	15.221	34.161		0.07	25.277	0.047	1507.	0.9		
										22	22.1	15.209	34.154		0.08	25.275	0.053	1507.	1.0		
										24	24.0	15.207	34.152		0.08	25.274	0.058	1507.	1.0		
										26	26.0	15.271	34.160		0.07	25.266	0.064	1507.	1.3		
										28	28.0	15.304	34.185		0.07	25.277	0.069	1507.	1.7		
										30	30.1	15.316	34.192		0.07	25.280	0.075	1507.	2.1		
										32	31.9	15.350	34.205		0.07	25.283	0.080	1507.	2.4		
										34	34.0	15.392	34.219		0.06	25.284	0.085	1508.	2.6		
										36	36.1	15.434	34.236		0.06	25.288	0.091	1508.	2.4		
										38	38.0	15.459	34.253		0.06	25.296	0.096	1508.	2.3		
										40	40.1	15.473	34.263		0.06	25.300	0.102	1508.	2.2		
										42	42.0	15.492	34.272		0.08	25.303	0.107	1508.	2.0		
										44	43.9	15.506	34.275		0.06	25.302	0.112	1508.	1.7		
										46	46.0	15.509	34.277		0.06	25.303	0.118	1508.	1.5		
										48	47.9	15.516	34.279		0.06	25.303	0.123	1508.	1.5		
										50	50.1	15.537	34.287		0.06	25.305	0.128	1508.	1.8		
										52	51.9	15.575	34.302		0.06	25.307	0.133	1509.	2.6		
										54	54.0	15.610	34.316		0.05	25.310	0.139	1509.	4.3		
										56	56.0	15.689	34.341		0.05	25.312	0.144	1509.	5.3		
										57	57.9	15.867	34.405		0.04	25.321	0.149	1510.	5.9		
										60	60.2	16.020	34.487		0.04	25.349	0.155	1510.	6.2		
										61	61.9	15.619	34.481		0.05	25.436	0.160	1509.	6.4		
										63	64.0	15.606	34.490		0.04	25.445	0.165	1509.	6.2		
										66	66.1	15.724	34.541		0.04	25.458	0.171	1509.	5.7		
										67	68.0	15.844	34.595		0.04	25.472	0.175	1510.	4.9		
										69	69.9	15.872	34.619		0.04	25.485	0.180	1510.	3.8		
										72	72.2	16.001	34.658		0.04	25.486	0.186	1511.	3.8		
										73	73.9	16.146	34.714		0.04	25.495	0.190	1511.	4.0		
										75	76.0	16.243	34.757		0.04	25.506	0.195	1512.	4.6		
										77	77.9	16.370	34.795		0.04	25.506	0.200	1512.	5.1		
										79	80.1	16.419	34.837		0.04	25.526	0.205	1512.	5.7		
										81	81.9	16.448	34.886		0.04	25.557	0.210	1512.	6.2		
										83	84.1	16.445	34.936		0.04	25.597	0.215	1512.	7.4		
										85	85.7	16.495	34.975		0.04	25.615	0.219	1513.	8.4		
										87	88.2	16.626	35.059		0.04	25.649	0.225	1513.	9.2		
										89	89.9	16.715	35.125		0.04	25.679	0.229	1514.	9.8		
										91	92.0	16.921	35.365		0.03	25.814	0.234	1515.	10.5		
										93	94.0	17.047	35.492		0.03	25.881	0.238	1515.	11.1		
										95	96.1	17.012	35.599		0.02	25.972	0.242	1515.	11.3		
										97	97.3	16.914	35.609		0.02	26.004	0.245	1515.	11.1		
										97	97.9	16.751	35.636		0.02	26.063	0.246	1514.	10.2		

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH			
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S	SPD	N
m	dbar	°C	psu	ml/l	m ⁻¹	g/cm ³	10m ² /s ²	m/s	m/s	cph
98	99.0	16.588	35.631	0.02	26.097	0.248	1514.	9.4		
99	100.1	16.558	35.604	0.02	26.084	0.250	1514.	8.1		
100	101.0	16.484	35.613	0.02	26.108	0.252	1514.	7.6		
101	102.0	16.422	35.619	0.02	26.127	0.254	1513.	8.1		
102	103.0	16.395	35.623	0.02	26.136	0.256	1513.	9.1		
103	104.1	16.367	35.624	0.02	26.144	0.258	1513.	10.4		
104	105.0	16.206	35.630	0.04	26.186	0.260	1513.	10.7		
105	106.0	15.945	35.660	0.07	26.269	0.262	1512.	10.9		
106	107.0	15.783	35.660	0.11	26.306	0.263	1512.	10.7		
107	108.0	15.671	35.693	0.11	26.357	0.265	1511.	10.0		
108	109.0	15.625	35.687	0.11	26.363	0.267	1511.	8.5		
109	110.1	15.589	35.699	0.13	26.380	0.269	1511.	6.7		
110	110.9	15.577	35.707	0.13	26.389	0.270	1511.	5.3		
111	112.1	15.573	35.709	0.14	26.391	0.272	1511.	4.2		
112	113.0	15.574	35.709	0.14	26.392	0.273	1511.	3.6		
113	114.1	15.580	35.713	0.15	26.393	0.275	1511.	3.6		
114	114.9	15.586	35.717	0.16	26.394	0.277	1511.	3.6		
115	116.0	15.589	35.737	0.16	26.409	0.278	1511.	3.6		
116	116.7	15.590	35.719	0.16	26.396	0.280	1511.	3.6		

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH			
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S	SPD	N
m	dbar	°C	psu	ml/l	m ⁻¹	g/cm ³	10m ² /s ²	m/s	m/s	cph
2	2.0	14.592	33.853	0.07	25.177	0.000	1504.			-0.4
4	3.9	14.591	33.853	0.07	25.177	0.005	1504.			-0.4
6	6.0	14.590	33.853	0.07	25.177	0.011	1504.			-0.4
8	7.9	14.588	33.852	0.07	25.177	0.016	1504.			-0.4
10	10.0	14.586	33.852	0.07	25.177	0.022	1504.			-0.4
12	12.0	14.586	33.851	0.07	25.177	0.028	1504.			-0.5
14	13.9	14.587	33.851	0.07	25.176	0.033	1504.			-0.6
16	16.0	14.586	33.851	0.07	25.176	0.039	1504.			-0.7
18	18.0	14.585	33.850	0.07	25.176	0.045	1504.			-0.4
19	19.9	14.587	33.850	0.07	25.175	0.050	1504.			1.8
20	22.0	14.588	33.849	0.07	25.174	0.055	1504.			4.3
24	24.0	14.606	33.853	0.07	25.174	0.061	1504.			6.0
26	26.0	14.724	33.890	0.07	25.177	0.067	1505.			7.0
28	27.9	14.961	33.997	0.07	25.208	0.072	1506.			7.8
30	30.0	15.641	34.344	0.07	25.325	0.078	1508.			8.2
32	32.0	16.055	34.542	0.07	25.383	0.083	1510.			8.3
34	34.0	16.233	34.626	0.06	25.407	0.088	1511.			8.0
36	36.0	16.483	34.735	0.06	25.434	0.093	1512.			7.3
38	38.1	16.656	34.821	0.06	25.459	0.098	1512.			6.3
40	40.0	16.876	34.930	0.06	25.491	0.103	1513.			5.6
42	42.0	16.991	34.982	0.06	25.503	0.108	1513.			5.1
44	44.0	17.161	35.056	0.05	25.520	0.113	1514.			4.5
46	46.0	17.300	35.115	0.05	25.532	0.118	1515.			4.0
48	48.0	17.309	35.121	0.05	25.535	0.123	1515.			3.7
50	50.0	17.309	35.122	0.05	25.535	0.128	1515.			3.6
52	52.0	17.314	35.127	0.05	25.538	0.133	1515.			3.4
54	54.0	17.360	35.162	0.05	25.554	0.138	1515.			3.3
56	56.0	17.455	35.214	0.05	25.570	0.143	1515.			3.2
58	58.0	17.544	35.250	0.05	25.576	0.147	1516.			3.1
59	59.9	17.596	35.266	0.05	25.576	0.152	1516.			2.8
62	62.0	17.610	35.271	0.05	25.576	0.157	1516.			2.4
63	64.0	17.622	35.277	0.05	25.578	0.162	1516.			2.8
65	66.0	17.661	35.294	0.05	25.582	0.167	1516.			4.2
67	68.0	17.669	35.304	0.05	25.587	0.172	1516.			6.3
69	70.0	17.690	35.315	0.05	25.590	0.176	1516.			8.8
71	72.0	17.773	35.391	0.04	25.628	0.181	1517.			10.7
73	74.0	17.827	35.500	0.04	25.699	0.186	1517.			11.9
75	76.0	17.736	35.646	0.03	25.833	0.190	1517.			12.4
77	78.0	17.455	35.831	0.03	26.044	0.195	1516.			12.3
79	79.9	17.667	36.070	0.02	26.175	0.198	1517.			11.4
81	82.0	17.923	36.190	0.01	26.204	0.202	1518.			10.3
83	84.0	17.782	36.167	0.01	26.221	0.206	1518.			8.8
85	86.0	17.522	36.107	0.01	26.239	0.209	1517.			7.0
87	88.0	17.400	36.054	0.02	26.228	0.213	1517.			5.9
89	90.0	15.909	35.698	0.02	26.307	0.217	1512.			5.7
91	92.0	15.567	35.624	0.01	26.327	0.220	1511.			5.7
93	94.0	15.566	35.624	0.01	26.328	0.223	1511.			5.7
95	96.0	15.537	35.622	0.01	26.333	0.227	1511.			5.7
97	98.0	15.408	35.604	0.01	26.348	0.230	1510.			5.2
99	100.0	15.150	35.576	0.01	26.384	0.233	1509.			5.3

SHIP OC	CRUISE 159	STATION 29	DATE 19 NOV 1984	EST 0652	LATITUDE 40°03.7'N	LONGITUDE 70°30.1'W	DEPTH 200	SHIP OC	CRUISE 159	STATION 29	DATE 19 NOV 1984	EST 0652	LATITUDE 40°03.7'N	LONGITUDE 70°30.1'W	DEPTH 200				
DEPTH m	PRESS dbar	TEMP °C	SALIN psu	OXY ml/l	ATN m ⁻¹	SIGT gm/cm ³	DYHT A 10m ² /s ²	S SPD m/s	N cph	DEPTH m	PRESS dbar	TEMP °C	SALIN psu	OXY ml/l	ATN m ⁻¹	SIGT gm/cm ³	DYHT A 10m ² /s ²	S SPD m/s	N cph
101	102.0	15.148	35.605		0.01	26.406	0.237	1510.	5.3	192	194.0	13.255	35.665		0.11	26.857	0.362	1505.	-0.2
103	104.0	15.209	35.650		0.01	26.428	0.240	1510.	5.0	193	195.0	13.256	35.665		0.12	26.857	0.363	1505.	-0.2
105	106.0	15.247	35.673		0.01	26.437	0.243	1510.	4.9	194	196.1	13.257	35.665		0.12	26.857	0.365	1505.	-0.2
107	108.0	15.257	35.684		0.01	26.444	0.247	1510.	4.7	195	196.5	13.257	35.665		0.12	26.857	0.365	1505.	-0.2
109	110.0	15.254	35.692		0.01	26.450	0.250	1510.	4.8										
111	112.0	15.255	35.699		0.01	26.455	0.253	1510.	5.3										
113	114.0	15.335	35.769		0.00	26.492	0.256	1510.	5.9										
115	116.0	15.323	35.797		0.00	26.515	0.259	1511.	6.3										
117	118.0	15.274	35.804		0.00	26.532	0.262	1510.	6.6										
119	120.0	15.272	35.861		0.00	26.576	0.265	1511.	6.8										
123	124.0	15.364	35.933		0.00	26.611	0.268	1511.	6.7										
125	126.0	15.282	35.929		0.00	26.627	0.271	1511.	6.4										
125	126.0	14.947	35.871		0.00	26.656	0.274	1510.	5.9										
127	128.0	14.412	35.772		0.01	26.697	0.277	1508.	5.1										
129	130.0	14.381	35.764		0.01	26.697	0.280	1508.	4.5										
131	132.0	14.373	35.767		0.01	26.701	0.282	1508.	4.1										
133	134.0	14.339	35.762		0.02	26.703	0.285	1508.	3.6										
135	136.0	14.292	35.747		0.03	26.705	0.288	1508.	3.4										
137	138.0	14.114	35.717		0.04	26.718	0.291	1507.	3.8										
139	140.0	14.062	35.715		0.04	26.727	0.293	1507.	3.9										
141	142.0	14.035	35.728		0.03	26.743	0.296	1507.	4.0										
143	144.0	14.027	35.743		0.02	26.756	0.299	1507.	3.9										
145	146.0	13.998	35.741		0.02	26.761	0.301	1507.	3.6										
147	148.0	13.963	35.742		0.02	26.769	0.304	1507.	3.3										
149	150.0	13.950	35.743		0.02	26.773	0.306	1507.	3.0										
151	152.0	13.921	35.743		0.02	26.779	0.309	1507.	2.7										
153	154.0	13.909	35.745		0.02	26.783	0.312	1507.	2.6										
155	155.9	13.912	35.750		0.02	26.786	0.314	1507.	2.5										
157	158.0	13.891	35.749		0.02	26.790	0.317	1507.	2.6										
159	160.1	13.874	35.749		0.02	26.793	0.319	1507.	2.6										
161	161.9	13.850	35.744		0.02	26.795	0.322	1507.	2.7										
163	164.0	13.757	35.730		0.02	26.804	0.324	1506.	2.7										
165	166.0	13.706	35.724		0.02	26.810	0.327	1506.	2.7										
167	167.9	13.704	35.727		0.02	26.812	0.330	1506.	2.6										
169	170.0	13.672	35.724		0.02	26.816	0.332	1506.	2.5										
171	172.1	13.640	35.720		0.02	26.820	0.335	1506.	2.2										
172	173.9	13.610	35.715		0.02	26.822	0.337	1506.	2.2										
175	176.0	13.584	35.710		0.02	26.824	0.340	1506.	2.2										
177	178.1	13.568	35.708		0.03	26.826	0.342	1506.	2.2										
179	180.0	13.524	35.701		0.03	26.830	0.345	1506.	2.3										
181	182.0	13.481	35.695		0.04	26.834	0.347	1506.	2.6										
182	184.0	13.460	35.691		0.04	26.835	0.350	1506.	2.8										
185	186.1	13.405	35.682		0.06	26.840	0.352	1505.	3.0										
186	187.3	13.329	35.671		0.10	26.847	0.354	1505.	3.1										
186	188.0	13.276	35.667		0.10	26.854	0.355	1505.	3.1										
187	189.0	13.256	35.665		0.11	26.857	0.356	1505.	2.9										
188	190.0	13.254	35.665		0.11	26.857	0.357	1505.	2.4										
189	191.0	13.253	35.665		0.11	26.857	0.359	1505.	1.7										
190	192.0	13.253	35.665		0.11	26.857	0.360	1505.	0.8										
191	193.1	13.254	35.665		0.11	26.857	0.361	1505.	-0.2										

SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH		
OC	159	30	19 NOV 1984	0825	39°58.2'N	70°31.0'W	605	OC	159	30	19 NOV 1984	0825	39°58.2'N	70°31.0'W	605		
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s
2	2.2	17.617	35.421		0.08	25.690	0.000	1515.	-0.4	101.9	15.862	35.908		0.01	26.479	0.214	1512.
4	4.0	17.614	35.421		0.08	25.691	0.004	1515.	-0.4	103	15.874	35.924		0.01	26.488	0.218	1512.
6	6.3	17.615	35.420		0.08	25.690	0.009	1515.	-0.4	105	15.810	35.914		0.01	26.496	0.221	1512.
8	8.0	17.610	35.421		0.08	25.691	0.013	1515.	-0.4	107	15.709	35.900		0.01	26.508	0.224	1512.
10	9.9	17.610	35.420		0.08	25.691	0.018	1515.	-0.4	109	15.515	35.870		0.01	26.529	0.227	1511.
12	12.2	17.624	35.423		0.08	25.690	0.023	1515.	-0.4	111	15.199	35.794		0.01	26.541	0.230	1510.
14	14.0	17.636	35.426		0.08	25.689	0.027	1515.	-0.2	113	14.950	35.764		0.01	26.573	0.233	1509.
16	16.0	17.642	35.428		0.08	25.689	0.032	1515.	0.2	115	14.876	35.779		0.01	26.601	0.236	1509.
18	18.1	17.644	35.429		0.08	25.689	0.037	1516.	0.3	117	14.850	35.778		0.01	26.606	0.239	1509.
20	20.0	17.649	35.431		0.08	25.690	0.041	1516.	0.4	119	14.866	35.787		0.01	26.610	0.242	1509.
22	21.9	17.652	35.433		0.08	25.690	0.045	1516.	0.4	121	14.886	35.801		0.01	26.616	0.244	1509.
24	24.0	17.653	35.434		0.08	25.691	0.050	1516.	1.1	123	14.882	35.806		0.01	26.620	0.247	1509.
26	25.8	17.640	35.428		0.08	25.689	0.054	1516.	1.5	125	14.855	35.801		0.01	26.623	0.250	1509.
28	28.1	17.645	35.429		0.08	25.689	0.060	1516.	1.7	127	14.823	35.794		0.01	26.624	0.253	1509.
30	30.1	17.644	35.429		0.08	25.689	0.064	1516.	1.9	129	14.795	35.789		0.01	26.627	0.256	1509.
32	31.8	17.700	35.461		0.07	25.700	0.068	1516.	2.0	131	14.825	35.807		0.01	26.634	0.259	1509.
34	34.1	17.706	35.467		0.07	25.703	0.073	1516.	2.0	133	14.823	35.822		0.00	26.646	0.262	1509.
36	36.0	17.678	35.458		0.07	25.703	0.078	1516.	1.8	135	14.779	35.821		0.00	26.654	0.265	1509.
38	37.9	17.667	35.455		0.08	25.704	0.082	1516.	1.5	137	14.743	35.816		0.00	26.659	0.267	1509.
40	40.0	17.657	35.453		0.08	25.704	0.087	1516.	0.9	139	14.676	35.820		0.00	26.676	0.270	1509.
41	41.8	17.652	35.452		0.08	25.705	0.091	1516.	0.7	141	14.569	35.810		0.00	26.692	0.273	1509.
44	44.1	17.643	35.447		0.08	25.704	0.096	1516.	0.7	143	14.451	35.804		0.00	26.698	0.276	1508.
46	46.1	17.627	35.444		0.08	25.705	0.101	1516.	0.7	145	14.482	35.805		0.00	26.707	0.279	1508.
47	47.8	17.621	35.443		0.08	25.705	0.105	1516.	0.7	147	14.458	35.808		0.00	26.714	0.281	1508.
50	50.1	17.622	35.443		0.08	25.705	0.110	1516.	0.8	149	14.449	35.806		0.00	26.715	0.284	1508.
52	51.9	17.627	35.444		0.08	25.705	0.114	1516.	0.8	151	14.442	35.807		0.00	26.717	0.287	1508.
53	53.8	17.631	35.444		0.08	25.706	0.118	1516.	0.7	153	14.431	35.807		0.00	26.719	0.290	1508.
56	56.2	17.635	35.448		0.08	25.706	0.124	1516.	0.8	155	14.407	35.805		0.00	26.723	0.292	1508.
58	58.1	17.641	35.451		0.08	25.706	0.128	1516.	1.0	157	14.377	35.804		0.00	26.729	0.295	1508.
59	59.9	17.646	35.452		0.08	25.706	0.132	1516.	1.4	159	14.357	35.805		0.00	26.734	0.297	1508.
62	62.0	17.651	35.454		0.07	25.707	0.137	1516.	2.3	161	14.289	35.802		0.00	26.746	0.301	1508.
63	64.0	17.648	35.454		0.07	25.708	0.142	1516.	3.6	163	14.195	35.796		0.00	26.762	0.303	1508.
65	65.9	17.636	35.454		0.07	25.710	0.146	1516.	4.9	165	14.142	35.786		0.00	26.765	0.306	1508.
67	68.0	17.611	35.457		0.06	25.719	0.151	1516.	6.4	167	14.090	35.779		0.00	26.771	0.308	1507.
70	70.1	17.595	35.487		0.06	25.745	0.156	1516.	7.8	169	14.073	35.775		0.00	26.772	0.311	1507.
71	71.9	17.557	35.534		0.04	25.791	0.160	1516.	8.8	171	14.049	35.770		0.00	26.773	0.313	1507.
73	74.1	17.489	35.586		0.04	25.847	0.165	1516.	9.7	173	14.021	35.769		0.01	26.778	0.316	1507.
75	75.8	17.384	35.673		0.03	25.939	0.168	1516.	10.3	175	13.971	35.765		0.01	26.785	0.319	1507.
77	78.1	17.284	35.747		0.03	26.021	0.173	1516.	10.3	177	13.888	35.761		0.00	26.800	0.322	1507.
79	79.9	17.219	35.792		0.03	26.071	0.177	1516.	10.1	178	13.836	35.754		0.01	26.805	0.324	1507.
81	81.9	17.075	35.871		0.02	26.166	0.180	1515.	9.7	180	13.799	35.748		0.01	26.809	0.326	1507.
83	84.1	16.983	35.916		0.02	26.222	0.184	1515.	9.1	182	13.768	35.745		0.01	26.812	0.329	1507.
85	85.9	16.959	35.932		0.02	26.240	0.188	1515.	8.6	184	13.726	35.738		0.01	26.816	0.332	1507.
87	88.1	16.863	35.970		0.02	26.292	0.192	1515.	8.2	186	13.692	35.733		0.01	26.819	0.334	1506.
89	89.8	16.777	35.991		0.02	26.329	0.195	1515.	7.6	188	13.680	35.732		0.01	26.821	0.336	1506.
91	92.0	16.648	35.988		0.02	26.357	0.198	1514.	7.3	191	13.661	35.730		0.01	26.824	0.339	1506.
93	94.0	16.450	35.984		0.01	26.401	0.202	1514.	6.9	192	13.624	35.730		0.01	26.831	0.342	1506.
95	96.2	15.896	35.865		0.01	26.438	0.205	1512.	6.3	194	13.587	35.725		0.01	26.835	0.344	1506.
97	98.0	15.748	35.850		0.01	26.460	0.208	1512.	5.7	196	13.553	35.722		0.01	26.840	0.347	1506.
99	100.0	15.805	35.874		0.01	26.466	0.211	1512.	5.2	198	13.513	35.718		0.01	26.845	0.349	1506.

SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH								
OC	159	30	19 NOV 1984	0825	39°58.2'N	70°31.0'W	605	OC	159	30	19 NOV 1984	0825	39°58.2'N	70°31.0'W	605								
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT	A	S	SPD	N	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT	A	S	SPD	N
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	10m ² /s ²	m/s	m/s	cph	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	10m ² /s ²	m/s	m/s	cph
200	202.0	13.459	35.708		0.01	26.848	0.352	1506.			3.0	299	301.9	9.947	35.294		0.06	27.191	0.462	1495.		4.3	
203	204.3	13.395	35.701		0.01	26.856	0.355	1506.			2.9	301	303.8	9.850	35.270		0.06	27.189	0.464	1495.		4.4	
204	205.9	13.318	35.691		0.00	26.864	0.357	1505.			2.9	304	306.1	9.784	35.267		0.06	27.198	0.466	1494.		4.3	
206	208.1	13.288	35.690		0.01	26.870	0.359	1505.			2.9	305	307.8	9.617	35.263		0.06	27.223	0.468	1494.		4.5	
208	209.8	13.275	35.690		0.01	26.872	0.361	1505.			3.0	307	310.1	9.424	35.226		0.06	27.227	0.470	1493.		4.4	
210	212.0	13.263	35.689		0.01	26.874	0.364	1505.			3.3	309	311.9	9.314	35.216		0.06	27.237	0.471	1493.		4.5	
212	214.2	13.214	35.682		0.00	26.879	0.367	1505.			3.4	312	314.3	9.180	35.212		0.06	27.255	0.473	1492.		4.4	
214	216.0	13.136	35.676		0.00	26.890	0.369	1505.			3.6	313	315.8	9.052	35.201		0.05	27.267	0.475	1492.		4.1	
216	217.8	13.081	35.672		0.00	26.898	0.371	1505.			3.7	315	318.1	8.929	35.183		0.06	27.273	0.477	1491.		4.1	
218	220.3	12.913	35.652		0.00	26.916	0.374	1504.			3.6	317	320.0	8.853	35.185		0.06	27.287	0.478	1491.		3.9	
220	221.9	12.835	35.635		0.01	26.919	0.376	1504.			3.3	319	322.2	8.797	35.179		0.06	27.292	0.480	1491.		3.7	
222	224.2	12.801	35.634		0.01	26.925	0.379	1504.			2.8	321	323.9	8.750	35.175		0.06	27.296	0.482	1491.		3.6	
224	226.0	12.749	35.626		0.01	26.930	0.381	1504.			2.3	323	325.9	8.678	35.172		0.05	27.305	0.483	1491.		3.5	
226	228.0	12.738	35.621		0.01	26.928	0.385	1504.			1.9	325	327.9	8.558	35.165		0.05	27.318	0.485	1490.		3.3	
228	229.7	12.735	35.621		0.01	26.928	0.385	1504.			1.8	327	329.9	8.485	35.156		0.05	27.323	0.486	1490.		3.1	
230	232.1	12.725	35.619		0.02	26.929	0.388	1504.			2.0	329	332.1	8.435	35.152		0.05	27.327	0.488	1490.		2.8	
232	234.0	12.694	35.615		0.02	26.932	0.390	1504.			2.6	331	333.9	8.393	35.149		0.05	27.331	0.490	1490.		2.4	
234	236.1	12.666	35.612		0.02	26.935	0.393	1504.			3.3	333	335.9	8.363	35.145		0.05	27.333	0.491	1490.		2.1	
236	237.9	12.607	35.605		0.03	26.941	0.395	1504.			3.7	335	338.1	8.346	35.142		0.05	27.333	0.493	1490.		2.0	
238	240.0	12.550	35.598		0.03	26.947	0.397	1503.			4.0	337	339.9	8.339	35.143		0.05	27.335	0.494	1490.		2.3	
240	241.9	12.557	35.576		0.05	26.968	0.399	1503.			4.1	339	342.3	8.305	35.140		0.05	27.337	0.496	1489.		2.4	
242	243.9	12.517	35.548		0.05	26.985	0.402	1502.			4.0	341	343.9	8.277	35.138		0.05	27.340	0.498	1489.		2.5	
244	246.0	12.066	35.532		0.06	26.990	0.404	1502.			3.8	343	346.0	8.228	35.133		0.04	27.344	0.499	1489.		2.6	
246	248.1	12.008	35.524		0.06	26.995	0.406	1502.			3.4	345	347.8	8.166	35.138		0.04	27.357	0.501	1489.		2.7	
248	249.9	11.941	35.516		0.06	27.002	0.408	1501.			3.0	347	350.0	8.113	35.127		0.05	27.357	0.502	1489.		2.8	
250	252.0	11.901	35.509		0.07	27.004	0.411	1501.			2.8	349	352.1	8.094	35.125		0.04	27.358	0.504	1489.		2.9	
252	254.1	11.850	35.502		0.07	27.008	0.413	1501.			2.7	351	354.1	8.071	35.125		0.04	27.362	0.505	1489.		2.9	
254	256.0	11.820	35.497		0.07	27.011	0.415	1501.			2.7	353	356.0	8.022	35.125		0.05	27.369	0.507	1489.		2.8	
256	258.0	11.775	35.495		0.06	27.018	0.417	1501.			2.8	355	357.9	7.931	35.117		0.04	27.377	0.508	1488.		3.0	
258	259.8	11.709	35.487		0.06	27.024	0.419	1501.			3.0	357	360.0	7.876	35.113		0.04	27.381	0.510	1488.		3.1	
260	262.0	11.660	35.476		0.05	27.024	0.422	1501.			3.5	359	362.0	7.836	35.113		0.04	27.388	0.511	1488.		3.1	
262	264.1	11.587	35.468		0.05	27.032	0.424	1500.			3.8	361	364.0	7.801	35.109		0.04	27.390	0.513	1488.		3.0	
264	265.8	11.543	35.467		0.05	27.039	0.426	1500.			4.0	363	365.9	7.754	35.107		0.04	27.395	0.514	1488.		3.0	
266	268.1	11.404	35.442		0.05	27.046	0.428	1500.			4.0	365	368.0	7.695	35.109		0.04	27.405	0.516	1488.		3.0	
268	269.9	11.220	35.440		0.06	27.078	0.430	1499.			4.1	367	370.1	7.617	35.099		0.05	27.409	0.517	1487.		3.0	
270	272.0	11.084	35.412		0.07	27.082	0.432	1499.			4.0	369	372.0	7.586	35.097		0.05	27.412	0.519	1487.		2.9	
272	274.0	11.019	35.401		0.07	27.085	0.434	1498.			3.7	371	374.2	7.543	35.098		0.05	27.419	0.520	1487.		2.7	
274	275.8	10.972	35.397		0.07	27.090	0.436	1498.			3.3	373	375.9	7.502	35.096		0.05	27.423	0.522	1487.		2.3	
276	278.2	10.882	35.388		0.06	27.100	0.439	1498.			2.9	375	378.0	7.468	35.093		0.05	27.426	0.523	1487.		2.1	
278	279.9	10.795	35.377		0.06	27.107	0.440	1498.			3.0	377	379.9	7.444	35.091		0.05	27.428	0.524	1487.		1.9	
280	282.1	10.768	35.367		0.06	27.104	0.443	1498.			3.0	379	382.0	7.437	35.090		0.05	27.428	0.526	1487.		1.8	
282	284.0	10.720	35.365		0.05	27.111	0.445	1498.			2.9	381	384.0	7.435	35.090		0.05	27.428	0.527	1487.		1.8	
284	285.9	10.624	35.351		0.05	27.117	0.447	1497.			2.9	383	385.8	7.431	35.090		0.05	27.429	0.529	1487.		2.1	
286	288.1	10.532	35.339		0.05	27.125	0.449	1497.			2.9	385	388.1	7.403	35.091		0.06	27.433	0.530	1487.		2.2	
288	289.8	10.496	35.337		0.05	27.129	0.450	1497.			3.3	387	390.0	7.350	35.087		0.06	27.438	0.532	1487.		2.4	
290	292.2	10.471	35.334		0.06	27.131	0.453	1497.			3.4	389	392.0	7.318	35.084		0.06	27.441	0.533	1486.		2.5	
291	293.7	10.422	35.334		0.06	27.140	0.454	1497.			3.8	390	393.9	7.288	35.086		0.06	27.447	0.534	1486.		2.6	
294	296.1	10.350	35.320		0.06	27.142	0.457	1496.			3.9	393	396.0	7.250	35.082		0.06	27.449	0.536	1486.		2.6	
296	298.0	10.180	35.314		0.06	27.167	0.458	1496.			4.0	395	398.0	7.212	35.080		0.06	27.452	0.537	1486.		2.6	
297	299.9	10.077	35.292		0.06	27.167	0.460	1495.			4.3	396	399.8	7.178	35.078		0.06	27.456	0.538	1486.		2.6	

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH								
159	159	30	19 NOV 1984	0825	39°58.2'N	70°31.0'W	605	159	159	30	19 NOV 1984	0825	39°58.2'N	70°31.0'W	605								
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT	A	S	SPD	N	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT	A	S	SPD	N
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²			m/s	cph	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²			m/s	cph
399	402.3	7.115	35.075		0.06	27.462	0.540	1486.	2.5	1486.	2.5	515	519.8	5.223	34.996	0.08	27.646	0.607	1480.	1.4	1480.	1.4	
400	403.9	7.084	35.073		0.06	27.465	0.541	1486.	2.5	1486.	2.5	535	540.0	5.126	34.993	0.10	27.655	0.617	1480.	0.8	1480.	0.8	
403	406.1	7.060	35.072		0.06	27.468	0.543	1486.	2.5	1486.	2.5	555	560.1	5.113	34.993	0.12	27.656	0.627	1480.	0.8	1480.	0.8	
404	407.9	7.033	35.073		0.06	27.472	0.544	1486.	2.5	1486.	2.5	575	580.2	5.083	34.991	0.14	27.659	0.637	1481.	0.4	1481.	0.4	
406	409.9	7.011	35.070		0.06	27.473	0.545	1486.	2.3	1486.	2.3												
408	412.0	6.965	35.069		0.06	27.479	0.546	1485.	2.3	1485.	2.3												
411	414.3	6.918	35.066		0.07	27.482	0.548	1485.	2.3	1485.	2.3												
412	415.9	6.897	35.065		0.07	27.485	0.549	1485.	2.4	1485.	2.4												
415	418.1	6.885	35.064		0.07	27.485	0.551	1485.	2.5	1485.	2.5												
416	420.0	6.864	35.063		0.08	27.488	0.552	1485.	2.4	1485.	2.4												
418	421.8	6.810	35.064		0.08	27.496	0.553	1485.	2.4	1485.	2.4												
420	424.1	6.758	35.058		0.08	27.499	0.554	1485.	2.5	1485.	2.5												
422	426.0	6.729	35.058		0.08	27.502	0.556	1485.	2.7	1485.	2.7												
424	428.1	6.721	35.057		0.08	27.502	0.557	1485.	2.7	1485.	2.7												
426	429.9	6.700	35.057		0.08	27.505	0.558	1485.	2.7	1485.	2.7												
428	431.9	6.647	35.063		0.08	27.518	0.559	1484.	3.1	1484.	3.1												
430	434.1	6.553	35.049		0.09	27.519	0.561	1484.	3.3	1484.	3.3												
432	436.0	6.520	35.048		0.09	27.523	0.562	1484.	3.5	1484.	3.5												
434	438.0	6.469	35.050		0.10	27.531	0.563	1484.	3.5	1484.	3.5												
436	439.9	6.347	35.051		0.10	27.548	0.564	1483.	3.3	1483.	3.3												
438	442.3	6.236	35.036		0.11	27.550	0.566	1483.	3.3	1483.	3.3												
440	444.0	6.200	35.034		0.11	27.554	0.567	1483.	3.3	1483.	3.3												
442	445.8	6.180	35.037		0.11	27.559	0.568	1483.	3.2	1483.	3.2												
444	448.1	6.155	35.034		0.11	27.560	0.569	1483.	3.0	1483.	3.0												
446	449.7	6.083	35.034		0.10	27.570	0.570	1482.	3.0	1482.	3.0												
448	452.1	5.977	35.027		0.10	27.577	0.571	1482.	2.8	1482.	2.8												
450	454.0	5.918	35.028		0.09	27.586	0.572	1482.	2.6	1482.	2.6												
452	456.2	5.897	35.023		0.09	27.584	0.574	1482.	2.2	1482.	2.2												
454	457.8	5.883	35.022		0.09	27.585	0.575	1482.	1.8	1482.	1.8												
456	460.1	5.878	35.021		0.09	27.585	0.576	1482.	1.4	1482.	1.4												
458	461.8	5.877	35.021		0.09	27.586	0.577	1482.	1.1	1482.	1.1												
460	464.1	5.871	35.021		0.09	27.586	0.578	1482.	1.3	1482.	1.3												
462	466.0	5.860	35.022		0.09	27.588	0.579	1482.	1.5	1482.	1.5												
464	468.1	5.849	35.021		0.09	27.589	0.580	1482.	1.7	1482.	1.7												
466	470.2	5.831	35.020		0.09	27.590	0.581	1482.	1.8	1482.	1.8												
468	471.9	5.817	35.020		0.09	27.592	0.582	1482.	2.0	1482.	2.0												
470	474.1	5.773	35.016		0.09	27.595	0.584	1482.	2.0	1482.	2.0												
472	476.0	5.727	35.015		0.10	27.599	0.585	1481.	2.1	1481.	2.1												
474	478.0	5.723	35.016		0.09	27.600	0.586	1482.	2.1	1482.	2.1												
476	480.0	5.706	35.017		0.10	27.604	0.587	1481.	2.1	1481.	2.1												
478	481.9	5.682	35.014		0.09	27.604	0.588	1481.	2.0	1481.	2.0												
480	484.2	5.634	35.013		0.09	27.607	0.589	1481.	2.0	1481.	2.0												
482	486.0	5.634	35.013		0.09	27.609	0.590	1481.	2.0	1481.	2.0												
484	487.8	5.605	35.013		0.09	27.613	0.591	1481.	2.0	1481.	2.0												
486	490.2	5.579	35.010		0.09	27.614	0.592	1481.	2.0	1481.	2.0												
488	491.9	5.556	35.012		0.09	27.618	0.593	1481.	2.1	1481.	2.1												
490	494.2	5.534	35.009		0.09	27.619	0.594	1481.	2.2	1481.	2.2												
492	495.9	5.522	35.009		0.09	27.620	0.595	1481.	2.2	1481.	2.2												
494	498.1	5.479	35.006		0.07	27.623	0.596	1481.	2.2	1481.	2.2												
496	500.1	5.425	35.006		0.07	27.630	0.597	1481.	2.2	1481.	2.2												

SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
OC	m	159	31	19 NOV 1984	1122	39°48.6'N	70°00.7'W	1370
DEPTH	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	N
m	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	cph
200	202.0	35.620	0.03	0.03	26.903	0.383	1504.	3.1
202	12.854	35.622	0.02	0.02	26.911	0.385	1504.	3.2
204	204.0	35.619	0.02	0.02	26.924	0.387	1503.	3.4
206	208.2	35.605	0.02	0.02	26.925	0.390	1503.	3.6
208	209.6	35.596	0.02	0.02	26.931	0.391	1503.	3.7
211	212.3	35.582	0.02	0.02	26.947	0.395	1503.	3.7
212	12.428	35.574	0.02	0.02	26.952	0.396	1502.	3.7
214	215.9	35.569	0.02	0.02	26.962	0.399	1502.	4.1
216	217.9	35.555	0.02	0.02	26.967	0.401	1502.	4.1
218	220.1	35.539	0.02	0.02	26.977	0.403	1502.	4.0
220	221.7	35.516	0.02	0.02	26.991	0.405	1501.	4.0
222	224.0	35.517	0.02	0.02	27.012	0.408	1501.	4.1
224	226.0	35.499	0.02	0.02	27.014	0.410	1500.	3.8
226	228.2	35.490	0.02	0.02	27.016	0.412	1500.	3.5
228	230.1	35.491	0.02	0.02	27.027	0.414	1500.	3.2
230	231.9	35.491	0.02	0.02	27.043	0.416	1500.	3.1
232	234.1	35.467	0.02	0.02	27.034	0.419	1500.	3.2
234	236.1	35.462	0.02	0.02	27.040	0.421	1500.	3.3
236	237.1	35.451	0.02	0.02	27.046	0.423	1499.	3.2
238	240.1	35.439	0.02	0.02	27.058	0.425	1499.	3.2
240	241.8	35.429	0.02	0.02	27.065	0.427	1499.	3.4
242	244.1	35.422	0.02	0.02	27.075	0.429	1498.	3.3
244	245.9	35.409	0.02	0.02	27.073	0.431	1498.	3.2
246	248.0	35.402	0.03	0.03	27.080	0.433	1498.	3.2
248	249.9	35.399	0.02	0.02	27.087	0.435	1498.	3.3
250	252.1	35.389	0.02	0.02	27.091	0.437	1498.	3.5
252	253.8	35.382	0.02	0.02	27.101	0.439	1497.	3.6
254	256.1	35.354	0.01	0.01	27.109	0.442	1497.	3.6
256	257.8	35.336	0.01	0.01	27.117	0.443	1496.	3.6
258	260.1	35.324	0.01	0.01	27.129	0.446	1496.	3.5
260	261.9	35.318	0.00	0.00	27.132	0.447	1496.	3.3
262	264.0	35.312	0.00	0.00	27.137	0.449	1496.	3.0
264	266.0	35.310	0.00	0.00	27.144	0.451	1496.	2.7
266	268.0	35.305	0.00	0.00	27.148	0.453	1495.	2.6
268	270.0	35.298	0.00	0.00	27.151	0.455	1495.	2.4
270	272.0	35.294	0.00	0.00	27.152	0.457	1495.	2.3
272	274.0	35.294	0.00	0.00	27.154	0.459	1495.	2.3
274	276.0	35.292	0.00	0.00	27.162	0.461	1495.	2.5
276	278.0	35.285	0.00	0.00	27.161	0.463	1495.	2.6
278	280.1	35.281	0.00	0.00	27.164	0.465	1495.	2.7
280	281.9	35.278	0.00	0.00	27.171	0.467	1495.	2.8
282	284.0	35.272	0.00	0.00	27.179	0.469	1495.	2.7
284	286.2	35.256	0.00	0.00	27.181	0.471	1494.	2.7
286	288.2	35.251	0.00	0.00	27.187	0.472	1494.	2.8
288	290.0	35.249	0.00	0.00	27.191	0.474	1494.	2.9
289	291.9	35.243	0.00	0.00	27.190	0.476	1494.	3.0
291	293.9	35.245	0.00	0.00	27.196	0.478	1494.	3.0
294	296.0	35.234	0.00	0.00	27.205	0.480	1494.	2.9
295	297.9	35.227	0.00	0.00	27.217	0.481	1493.	2.8
297	299.9	35.220	0.00	0.00	27.220	0.483	1493.	2.7
299	302.0	35.215	0.00	0.00	27.219	0.485	1493.	2.5
301	303.9	35.212	0.00	0.00	27.220	0.487	1493.	2.5
303	306.0	35.211	0.00	0.00	27.224	0.489	1493.	2.6
305	308.0	35.207	0.00	0.00	27.225	0.491	1493.	2.8
307	310.0	35.199	0.00	0.00	27.234	0.492	1492.	2.9
309	312.1	35.197	0.00	0.00	27.244	0.494	1492.	2.9
311	313.9	35.188	0.00	0.00	27.250	0.496	1492.	2.7
313	316.1	35.180	0.00	0.00	27.252	0.498	1492.	2.6
315	317.9	35.178	0.00	0.00	27.253	0.499	1492.	2.4
317	320.0	35.178	0.00	0.00	27.255	0.501	1492.	2.1
319	322.2	35.178	0.00	0.00	27.255	0.503	1492.	2.0
321	323.8	35.175	0.00	0.00	27.261	0.504	1492.	2.3
323	326.0	35.173	0.00	0.00	27.266	0.506	1492.	2.4
325	328.2	35.169	0.00	0.00	27.264	0.508	1491.	2.5
327	329.8	35.169	0.00	0.00	27.270	0.510	1491.	2.5
329	332.0	35.167	0.00	0.00	27.278	0.511	1491.	2.5
331	334.3	35.160	0.00	0.00	27.279	0.513	1491.	2.4
333	335.9	35.159	0.00	0.00	27.283	0.515	1491.	2.3
335	338.0	35.157	0.00	0.00	27.285	0.517	1491.	2.3
337	339.9	35.157	0.00	0.00	27.288	0.518	1491.	2.2
339	342.1	35.156	0.00	0.00	27.290	0.520	1491.	2.2
341	343.8	35.154	0.00	0.00	27.290	0.521	1491.	2.1
343	346.0	35.156	0.00	0.00	27.299	0.523	1491.	2.3
345	348.2	35.152	0.00	0.00	27.299	0.525	1491.	2.4
347	350.0	35.151	0.01	0.01	27.302	0.527	1491.	2.5
349	352.2	35.149	0.01	0.01	27.303	0.528	1491.	2.6
351	353.8	35.148	0.01	0.01	27.311	0.530	1490.	2.8
353	356.0	35.148	0.01	0.01	27.317	0.531	1490.	2.9
355	358.0	35.144	0.01	0.01	27.320	0.533	1490.	3.2
357	360.0	35.141	0.01	0.01	27.322	0.535	1490.	3.2
359	362.0	35.149	0.01	0.01	27.338	0.536	1490.	3.1
361	364.0	35.136	0.01	0.01	27.337	0.538	1490.	3.1
363	366.0	35.138	0.01	0.01	27.351	0.539	1489.	2.9
365	368.1	35.130	0.01	0.01	27.351	0.541	1489.	2.6
367	370.0	35.128	0.01	0.01	27.353	0.543	1489.	2.2
369	372.0	35.127	0.01	0.01	27.357	0.544	1489.	2.1
371	374.1	35.125	0.01	0.01	27.355	0.546	1489.	2.2
373	375.9	35.125	0.01	0.01	27.357	0.547	1489.	2.5
375	378.0	35.126	0.01	0.01	27.363	0.549	1489.	2.6
377	380.0	35.120	0.01	0.01	27.364	0.550	1489.	2.8
379	382.0	35.121	0.01	0.01	27.377	0.552	1489.	3.0
381	383.9	35.114	0.01	0.01	27.380	0.553	1489.	3.1
383	386.1	35.111	0.01	0.01	27.385	0.555	1488.	3.1
385	388.0	35.110	0.01	0.01	27.390	0.556	1488.	2.9
387	390.1	35.110	0.01	0.01	27.395	0.558	1488.	2.7
389	391.9	35.108	0.01	0.01	27.400	0.559	1488.	2.6
391	394.0	35.106	0.01	0.01	27.406	0.561	1488.	2.5
393	396.0	35.098	0.01	0.01	27.403	0.562	1488.	2.3
395	397.9	35.102	0.01	0.01	27.412	0.564	1488.	2.1
397	400.1	35.097	0.01	0.01	27.412	0.565	1488.	2.0

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH								
	159	31	19 NOV 1984	1122	39°48.6'N	70°00.7'W	1370	159	31	19 NOV 1984	1122	39°48.6'N	70°00.7'W	1370									
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT	A	S	SPD	N	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT	A	S	SPD	N
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m/s	m/s	cph	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m/s	cph	
399	402.0	7.564	35.095	0.01	27.413	0.567	1488.	1.9	516	520.1	6.053	35.023	0.00	27.564	0.643	1484.	1.7						
401	404.0	7.548	35.094	0.01	27.415	0.568	1488.	2.0	535	540.2	5.941	35.019	0.00	27.575	0.654	1483.	1.3						
402	406.0	7.532	35.094	0.01	27.417	0.570	1487.	2.0	555	559.9	5.851	35.018	0.00	27.586	0.666	1483.	1.5						
405	408.1	7.513	35.093	0.01	27.419	0.571	1487.	2.3	575	579.9	5.639	35.014	0.00	27.609	0.677	1483.	2.4						
406	409.9	7.478	35.089	0.01	27.421	0.572	1487.	2.4	594	599.9	5.482	35.008	0.00	27.624	0.688	1483.	2.0						
409	412.1	7.434	35.086	0.01	27.423	0.574	1487.	2.5	614	620.0	5.308	35.003	0.00	27.642	0.698	1482.	1.3						
410	414.0	7.386	35.085	0.01	27.432	0.575	1487.	2.7	634	640.0	5.273	35.002	0.00	27.644	0.709	1482.	1.1						
412	416.0	7.345	35.086	0.01	27.438	0.577	1487.	2.6	654	660.0	5.221	35.000	0.00	27.649	0.719	1482.	0.7						
414	418.1	7.318	35.082	0.01	27.439	0.578	1487.	2.8	674	680.0	5.103	34.997	0.00	27.661	0.729	1482.	1.1						
416	419.8	7.289	35.077	0.01	27.439	0.579	1487.	2.9	693	699.9	5.048	34.995	0.00	27.666	0.739	1482.	1.8						
418	422.0	7.212	35.078	0.01	27.450	0.581	1487.	3.0	713	720.1	4.917	34.990	0.00	27.677	0.749	1482.	0.6						
420	424.1	7.159	35.065	0.01	27.448	0.582	1486.	2.9	733	740.0	4.892	34.989	0.00	27.679	0.759	1482.	0.8						
422	425.9	7.074	35.065	0.01	27.460	0.584	1486.	2.9	753	760.0	4.851	34.987	0.00	27.683	0.769	1482.	1.0						
424	428.0	7.031	35.067	0.01	27.468	0.585	1486.	2.8	773	780.1	4.815	34.985	0.00	27.685	0.779	1483.	0.9						
426	429.9	7.007	35.068	0.01	27.472	0.586	1486.	2.6	792	800.0	4.695	34.978	0.02	27.693	0.788	1483.	0.9						
428	432.1	6.993	35.065	0.01	27.472	0.588	1486.	2.4	812	819.9	4.658	34.976	0.02	27.695	0.798	1483.	1.0						
430	434.0	6.975	35.064	0.01	27.473	0.589	1486.	2.3	832	840.0	4.524	34.972	0.01	27.707	0.807	1482.	1.6						
432	435.9	6.958	35.066	0.01	27.477	0.590	1486.	2.2	852	860.0	4.427	34.968	0.01	27.715	0.817	1482.	0.6						
434	438.1	6.929	35.063	0.01	27.479	0.592	1486.	2.2	871	879.7	4.438	34.967	0.01	27.713	0.826	1483.	-0.8						
436	439.9	6.896	35.061	0.01	27.481	0.593	1486.	2.3	891	900.0	4.447	34.967	0.01	27.712	0.835	1483.	0.8						
438	442.0	6.848	35.063	0.01	27.490	0.594	1485.	2.2	911	920.1	4.414	34.967	0.01	27.715	0.845	1483.	0.4						
440	444.1	6.826	35.058	0.01	27.489	0.596	1485.	2.2	931	940.2	4.373	34.964	0.01	27.718	0.854	1484.	0.9						
442	445.9	6.808	35.057	0.01	27.491	0.597	1485.	2.1	950	959.8	4.374	34.965	0.01	27.719	0.863	1484.	0.3						
444	448.2	6.778	35.055	0.01	27.493	0.598	1485.	1.9	970	980.0	4.397	34.965	0.01	27.716	0.872	1484.	-0.5						
446	449.8	6.749	35.053	0.01	27.495	0.600	1485.	1.8	990	1000.0	4.398	34.966	0.01	27.717	0.882	1485.	-0.2						
448	452.0	6.721	35.052	0.01	27.499	0.601	1485.	1.9	1010	1020.1	4.380	34.965	0.01	27.718	0.891	1485.	0.8						
450	453.9	6.706	35.050	0.01	27.499	0.602	1485.	1.9	1030	1040.1	4.342	34.964	0.01	27.721	0.901	1485.	0.8						
452	456.2	6.689	35.048	0.01	27.500	0.604	1485.	1.8	1049	1060.0	4.288	34.962	0.01	27.725	0.910	1485.	0.6						
454	457.8	6.649	35.044	0.01	27.502	0.605	1485.	1.7	1069	1080.0	4.271	34.961	0.01	27.726	0.920	1485.	0.5						
456	460.1	6.622	35.045	0.01	27.507	0.606	1485.	1.6	1089	1099.9	4.270	34.961	0.01	27.726	0.929	1486.	0.0						
458	462.0	6.618	35.044	0.01	27.506	0.607	1485.	1.6	1108	1119.9	4.272	34.961	0.01	27.726	0.938	1486.	0.3						
460	464.0	6.614	35.044	0.01	27.507	0.609	1485.	1.7	1128	1140.0	4.260	34.960	0.01	27.727	0.948	1486.	0.6						
462	466.1	6.609	35.045	0.01	27.508	0.610	1485.	1.8	1148	1160.0	4.245	34.961	0.01	27.729	0.957	1487.	0.8						
464	467.9	6.600	35.044	0.01	27.509	0.611	1485.	1.9	1168	1179.9	4.229	34.960	0.01	27.730	0.967	1487.	0.3						
466	470.1	6.586	35.043	0.01	27.510	0.613	1485.	2.2	1187	1200.0	4.221	34.960	0.01	27.731	0.976	1487.	0.4						
468	471.9	6.534	35.044	0.01	27.518	0.614	1485.	2.3	1207	1219.9	4.211	34.959	0.01	27.732	0.986	1488.	0.4						
470	474.1	6.495	35.039	0.01	27.519	0.615	1485.	2.4	1227	1240.1	4.217	34.960	0.01	27.731	0.995	1488.	0.5						
472	475.9	6.452	35.037	0.00	27.523	0.616	1484.	2.4	1247	1260.2	4.207	34.959	0.01	27.732	1.005	1488.	0.5						
474	478.1	6.407	35.035	0.00	27.527	0.618	1484.	2.3	1266	1279.9	4.176	34.958	0.01	27.735	1.014	1488.	0.8						
476	479.9	6.392	35.035	0.00	27.529	0.619	1484.	2.1	1286	1300.0	4.161	34.959	0.01	27.736	1.024	1489.	0.6						
478	482.1	6.381	35.034	0.00	27.530	0.620	1484.	2.1	1306	1319.9	4.127	34.957	0.01	27.739	1.034	1489.	0.8						
480	483.9	6.364	35.036	0.00	27.534	0.621	1484.	2.0	1326	1340.1	4.118	34.957	0.01	27.740	1.043	1489.	0.6						
482	486.1	6.341	35.033	0.00	27.535	0.622	1484.	2.1	1345	1360.1	4.111	34.957	0.01	27.740	1.053	1489.	0.3						
484	487.9	6.313	35.030	0.00	27.536	0.624	1484.	2.2															
486	490.1	6.278	35.031	0.00	27.541	0.625	1484.	2.2															
488	492.0	6.256	35.030	0.00	27.543	0.626	1484.	2.1															
490	494.1	6.229	35.031	0.00	27.548	0.627	1484.	2.0															
492	496.0	6.211	35.031	0.00	27.550	0.628	1484.	1.9															
494	498.0	6.190	35.028	0.00	27.551	0.630	1484.	1.7															
496	500.1	6.175	35.028	0.00	27.552	0.631	1484.	1.6															

SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
2	1.9	14.931	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	101	102.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
4	4.1	14.940	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	103	103.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
6	5.9	14.946	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	105	106.1	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
8	8.1	14.932	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	107	107.8	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
10	9.9	14.977	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	109	109.8	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
12	12.0	14.989	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	111	112.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
14	14.2	15.000	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	113	114.1	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
16	15.9	15.068	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	115	115.8	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
18	17.7	15.182	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	117	118.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
20	19.9	15.298	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	119	120.1	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
22	21.8	15.365	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	121	122.2	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
24	24.0	15.327	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	123	124.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
26	25.8	15.302	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	125	126.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
28	28.0	15.296	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	127	128.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
30	30.2	15.294	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	129	129.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
32	32.1	15.295	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	131	132.2	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
34	33.8	15.323	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	133	133.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
36	35.9	15.432	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	135	135.8	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
38	38.0	15.555	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	137	137.8	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
40	39.9	15.712	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	139	140.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
42	42.0	15.814	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	141	141.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
44	44.2	15.849	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	143	144.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
45	45.8	15.862	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	145	145.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
48	48.1	15.852	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	147	148.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
50	50.1	15.821	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	149	150.2	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
51	51.8	15.824	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	151	152.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
54	54.1	15.638	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	153	153.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
56	56.1	15.357	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	155	156.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
58	58.2	14.877	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	157	157.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
59	59.8	14.755	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	159	159.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
62	62.2	14.643	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	161	162.3	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
63	63.9	14.742	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	163	163.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
66	66.1	15.601	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	165	166.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
68	68.0	15.681	34	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	167	167.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
69	69.9	15.738	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	169	170.1	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
72	72.1	15.606	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	171	172.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
73	73.8	15.569	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	173	174.1	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
75	76.1	15.356	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	175	176.0	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
77	77.7	15.461	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	177	178.1	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
80	80.3	16.356	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	179	179.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
81	82.1	16.868	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	180	181.8	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
83	83.9	16.984	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	183	184.1	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
85	85.9	17.010	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	184	185.9	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
87	88.0	17.026	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	186	187.8	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
89	90.0	16.999	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	189	190.2	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
91	91.9	16.893	36	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	190	191.8	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
93	94.0	16.833	36	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	193	194.1	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
95	95.9	16.572	36	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	194	195.8	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
97	98.1	16.240	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	196	198.1	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
99	100.0	16.192	35	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	198	199.8	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH		
	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165		159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165		
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s
200	202.0	12.456	35.582		0.00	26.953	0.376	1502.	300	302.0	9.503	35.224		0.00	27.211	0.477	1493.
202	203.7	12.285	35.557		0.00	26.967	0.377	1502.	301	304.0	9.444	35.215		0.00	27.214	0.479	1493.
205	206.2	12.112	35.537		0.00	26.985	0.380	1501.	303	306.0	9.367	35.215		0.00	27.227	0.480	1493.
206	207.9	11.934	35.515		0.00	27.003	0.382	1501.	306	308.1	9.289	35.197		0.00	27.225	0.482	1493.
208	209.9	11.854	35.499		0.00	27.006	0.384	1500.	307	309.9	9.188	35.196		0.00	27.242	0.484	1492.
210	212.1	11.786	35.490		0.00	27.011	0.387	1500.	309	312.0	9.122	35.190		0.00	27.248	0.486	1492.
212	213.9	11.744	35.485		0.00	27.016	0.389	1500.	311	314.0	9.096	35.182		0.00	27.246	0.488	1492.
214	215.9	11.726	35.483		0.00	27.017	0.391	1500.	313	315.9	9.065	35.182		0.00	27.251	0.489	1492.
216	218.2	11.699	35.481		0.00	27.021	0.393	1500.	315	318.0	9.054	35.181		0.00	27.252	0.491	1492.
218	219.8	11.616	35.470		0.00	27.028	0.395	1500.	317	320.0	9.048	35.181		0.00	27.253	0.493	1492.
220	222.3	11.542	35.460		0.00	27.034	0.398	1499.	319	322.0	9.029	35.181		0.00	27.256	0.494	1492.
222	223.9	11.509	35.453		0.00	27.036	0.399	1499.	321	324.0	9.006	35.182		0.00	27.260	0.496	1492.
224	226.1	11.499	35.452		0.00	27.036	0.402	1499.	323	326.2	8.983	35.177		0.00	27.260	0.498	1492.
226	228.1	11.492	35.451		0.00	27.036	0.404	1499.	325	327.8	8.938	35.178		0.00	27.268	0.500	1492.
228	230.0	11.488	35.451		0.00	27.037	0.406	1499.	327	330.0	8.884	35.173		0.01	27.273	0.501	1491.
230	231.9	11.467	35.451		0.00	27.041	0.408	1499.	329	332.0	8.845	35.167		0.00	27.274	0.503	1491.
232	234.0	11.418	35.443		0.00	27.044	0.410	1499.	331	334.0	8.755	35.168		0.00	27.289	0.505	1491.
234	236.0	11.376	35.436		0.00	27.047	0.412	1499.	333	336.0	8.701	35.159		0.00	27.291	0.507	1491.
236	238.2	11.344	35.432		0.00	27.049	0.415	1499.	335	338.0	8.642	35.154		0.01	27.297	0.508	1491.
238	239.9	11.287	35.428		0.00	27.057	0.417	1499.	337	339.8	8.581	35.145		0.01	27.298	0.510	1490.
240	242.1	11.259	35.420		0.00	27.056	0.419	1499.	339	342.0	8.527	35.147		0.01	27.309	0.511	1490.
242	244.1	11.231	35.418		0.00	27.059	0.421	1499.	341	344.1	8.508	35.146		0.01	27.311	0.513	1490.
244	246.1	11.145	35.412		0.00	27.070	0.423	1498.	343	346.0	8.493	35.145		0.01	27.313	0.515	1490.
246	247.8	10.982	35.383		0.00	27.078	0.425	1498.	345	347.9	8.441	35.152		0.01	27.326	0.516	1490.
248	250.0	10.827	35.364		0.00	27.091	0.427	1497.	347	350.0	8.397	35.145		0.01	27.327	0.518	1490.
250	251.9	10.698	35.358		0.00	27.109	0.429	1497.	349	352.1	8.372	35.138		0.01	27.326	0.520	1490.
252	254.0	10.637	35.349		0.00	27.114	0.431	1497.	351	354.0	8.341	35.138		0.01	27.331	0.521	1490.
254	256.2	10.574	35.339		0.00	27.117	0.433	1496.	353	355.9	8.318	35.138		0.01	27.334	0.523	1490.
256	257.9	10.546	35.336		0.00	27.120	0.435	1496.	355	358.0	8.298	35.136		0.01	27.335	0.524	1490.
258	260.1	10.514	35.334		0.00	27.124	0.437	1496.	357	359.9	8.282	35.131		0.01	27.334	0.526	1490.
260	261.9	10.446	35.328		0.00	27.131	0.439	1496.	359	361.9	8.234	35.136		0.01	27.345	0.527	1489.
262	263.9	10.361	35.325		0.00	27.143	0.443	1496.	361	364.2	8.141	35.126		0.01	27.352	0.529	1489.
264	266.1	10.286	35.307		0.00	27.143	0.443	1496.	363	365.9	8.055	35.127		0.01	27.366	0.531	1489.
266	267.9	10.243	35.300		0.00	27.145	0.445	1495.	365	368.1	8.039	35.123		0.01	27.365	0.532	1489.
268	270.0	10.218	35.300		0.00	27.149	0.447	1495.	367	370.0	8.029	35.123		0.01	27.366	0.534	1489.
270	272.0	10.217	35.300		0.00	27.149	0.449	1495.	369	372.0	7.988	35.131		0.01	27.379	0.535	1489.
272	274.0	10.208	35.298		0.00	27.149	0.451	1495.	371	374.1	7.894	35.123		0.01	27.387	0.537	1488.
274	275.9	10.187	35.298		0.00	27.153	0.453	1495.	373	375.9	7.833	35.111		0.01	27.386	0.538	1488.
276	278.0	10.097	35.303		0.00	27.173	0.454	1495.	375	378.0	7.772	35.108		0.01	27.393	0.540	1488.
278	280.2	9.996	35.276		0.00	27.169	0.457	1495.	377	380.0	7.745	35.107		0.01	27.396	0.541	1488.
280	282.0	9.919	35.272		0.00	27.179	0.458	1495.	379	382.1	7.732	35.103		0.01	27.395	0.543	1488.
282	284.2	9.871	35.266		0.00	27.183	0.460	1494.	381	383.9	7.717	35.106		0.01	27.400	0.544	1488.
283	285.9	9.824	35.262		0.00	27.187	0.462	1494.	383	386.0	7.706	35.104		0.01	27.400	0.546	1488.
286	288.1	9.789	35.254		0.00	27.187	0.464	1494.	385	388.0	7.695	35.102		0.01	27.400	0.547	1488.
288	290.0	9.778	35.252		0.00	27.187	0.466	1494.	387	389.9	7.666	35.102		0.01	27.404	0.549	1488.
290	292.0	9.751	35.251		0.00	27.191	0.468	1494.	389	392.0	7.654	35.100		0.01	27.404	0.550	1488.
292	294.0	9.715	35.252		0.00	27.198	0.469	1494.	391	394.1	7.639	35.098		0.01	27.405	0.552	1488.
294	296.1	9.667	35.244		0.00	27.200	0.471	1494.	392	395.9	7.626	35.099		0.01	27.407	0.553	1488.
295	298.0	9.622	35.236		0.00	27.201	0.473	1494.	395	398.0	7.616	35.098		0.01	27.408	0.554	1488.
297	299.9	9.559	35.232		0.00	27.208	0.475	1493.	397	400.0	7.606	35.096		0.01	27.408	0.556	1488.

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
398	159	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165	159	33	33	19 NOV 1984	1242	39°48.5'N	69°58.6'W	1165
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²
398	402.0	7.589	35.097	0.01	0.01	27.411	0.557	515	520.1	6.008	35.021	0.00	0.00	27.568	0.634
401	404.1	7.579	35.094	0.01	0.01	27.410	0.559	535	540.1	5.804	35.014	0.00	0.00	27.589	0.645
402	406.0	7.525	35.095	0.01	0.01	27.419	0.560	535	560.0	5.630	35.022	0.00	0.00	27.617	0.656
404	408.0	7.470	35.088	0.01	0.01	27.422	0.562	535	580.0	5.579	35.012	0.00	0.00	27.616	0.667
406	409.9	7.410	35.094	0.01	0.01	27.435	0.563	595	600.1	5.360	35.005	0.00	0.00	27.637	0.678
408	412.0	7.386	35.086	0.01	0.01	27.432	0.565	614	620.0	5.259	35.005	0.00	0.00	27.649	0.688
411	414.1	7.348	35.085	0.01	0.01	27.437	0.566	634	640.0	5.184	34.998	0.00	0.00	27.652	0.698
412	415.9	7.238	35.087	0.01	0.01	27.454	0.567	654	660.1	5.135	34.997	0.00	0.00	27.657	0.708
414	418.0	7.214	35.079	0.01	0.01	27.451	0.569	674	680.1	5.047	34.993	0.00	0.00	27.657	0.718
416	419.9	7.194	35.079	0.01	0.01	27.454	0.570	693	699.9	4.959	34.991	0.00	0.00	27.673	0.728
418	422.1	7.165	35.075	0.01	0.01	27.455	0.572	713	719.7	4.856	34.989	0.00	0.00	27.683	0.738
420	423.9	7.128	35.075	0.01	0.01	27.460	0.573	733	740.0	4.815	34.986	0.00	0.00	27.686	0.748
422	426.0	7.103	35.074	0.01	0.01	27.463	0.574	753	760.0	4.728	34.979	0.01	0.01	27.690	0.757
424	428.1	7.093	35.075	0.01	0.01	27.465	0.576	772	779.9	4.675	34.981	0.00	0.00	27.698	0.767
426	430.0	7.086	35.072	0.01	0.01	27.464	0.577	792	800.0	4.604	34.977	0.00	0.00	27.703	0.776
428	432.0	7.073	35.072	0.01	0.01	27.466	0.578	812	819.9	4.578	34.976	0.00	0.00	27.704	0.786
430	434.1	7.062	35.071	0.01	0.01	27.467	0.580	832	840.0	4.514	34.973	0.00	0.00	27.710	0.795
432	435.9	7.041	35.071	0.01	0.01	27.470	0.581	852	860.1	4.462	34.969	0.00	0.00	27.712	0.804
434	438.0	7.007	35.070	0.01	0.01	27.473	0.582	871	880.0	4.437	34.967	0.01	0.01	27.713	0.814
436	440.0	6.979	35.069	0.01	0.01	27.476	0.584	891	900.0	4.350	34.963	0.01	0.01	27.720	0.823
438	442.1	6.972	35.065	0.01	0.01	27.474	0.585	911	919.7	4.344	34.963	0.01	0.01	27.720	0.832
440	443.9	6.949	35.068	0.01	0.01	27.480	0.586	931	940.0	4.344	34.963	0.01	0.01	27.720	0.841
442	446.0	6.908	35.063	0.01	0.01	27.482	0.588	951	960.1	4.337	34.963	0.01	0.01	27.721	0.851
444	448.0	6.888	35.063	0.01	0.01	27.485	0.589	970	980.0	4.330	34.963	0.01	0.01	27.721	0.860
446	450.1	6.856	35.063	0.01	0.01	27.489	0.590	990	999.9	4.289	34.962	0.01	0.01	27.725	0.869
448	451.9	6.800	35.062	0.01	0.01	27.496	0.591	1010	1019.9	4.283	34.961	0.01	0.01	27.725	0.878
450	454.3	6.731	35.053	0.00	0.00	27.498	0.593	1030	1040.0	4.274	34.961	0.01	0.01	27.726	0.888
452	455.8	6.693	35.052	0.00	0.00	27.502	0.594	1049	1060.1	4.255	34.960	0.01	0.01	27.728	0.897
454	458.1	6.666	35.046	0.00	0.00	27.501	0.595	1069	1080.2	4.231	34.960	0.01	0.01	27.730	0.906
456	460.1	6.656	35.046	0.00	0.00	27.503	0.597	1089	1099.8	4.200	34.958	0.01	0.01	27.732	0.915
458	462.0	6.638	35.045	0.00	0.00	27.505	0.598	1109	1120.2	4.202	34.959	0.01	0.01	27.732	0.925
462	465.9	6.590	35.046	0.00	0.00	27.511	0.601	1128	1140.0	4.198	34.959	0.01	0.01	27.733	0.934
464	468.1	6.580	35.041	0.00	0.00	27.509	0.602								
466	470.0	6.573	35.041	0.00	0.00	27.510	0.603								
468	472.1	6.570	35.040	0.00	0.00	27.509	0.604								
470	474.0	6.529	35.045	0.00	0.00	27.519	0.606								
472	476.1	6.512	35.036	0.00	0.00	27.514	0.608								
474	478.0	6.495	35.036	0.00	0.00	27.517	0.608								
476	480.1	6.483	35.034	0.00	0.00	27.516	0.609								
478	481.9	6.467	35.035	0.00	0.00	27.520	0.611								
480	484.0	6.454	35.036	0.00	0.00	27.522	0.612								
482	486.1	6.447	35.034	0.00	0.00	27.521	0.613								
484	487.9	6.434	35.033	0.00	0.00	27.522	0.614								
486	490.1	6.429	35.033	0.00	0.00	27.523	0.616								
488	492.0	6.409	35.034	0.00	0.00	27.526	0.617								
490	493.9	6.376	35.035	0.00	0.00	27.532	0.618								
492	496.0	6.364	35.034	0.00	0.00	27.535	0.619								
494	498.1	6.332	35.030	0.00	0.00	27.534	0.621								
495	499.9	6.294	35.033	0.00	0.00	27.541	0.622								

SHIP OC	DEPTH m	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
OC	m	159	35	19 NOV 1984	1355	39°51.0'N	70°01.8'W	1085
DEPTH	TEMP °C	PRESS dbar	SALIN psu	OXY ml/l	ATN m ⁻¹	SIGT gm/cm ³	DYHT A 10m ² /s ²	N cph
200	13.279	201.8	35.679	0.01	26.859	0.384	1505.	4.3
202	13.279	204.0	35.674	0.01	26.859	0.387	1505.	3.9
204	13.229	206.1	35.671	0.01	26.867	0.389	1505.	3.6
206	13.226	207.9	35.670	0.01	26.867	0.391	1505.	3.1
208	13.160	210.0	35.652	0.01	26.866	0.394	1505.	3.3
210	13.012	212.1	35.635	0.02	26.883	0.397	1504.	3.5
212	12.934	213.8	35.625	0.02	26.891	0.399	1504.	4.3
214	12.836	216.0	35.600	0.02	26.892	0.401	1504.	5.3
216	12.656	218.1	35.588	0.02	26.918	0.404	1503.	6.1
218	12.536	220.0	35.553	0.02	26.915	0.406	1503.	6.5
220	11.841	222.2	35.449	0.02	26.969	0.409	1500.	6.8
222	11.484	223.8	35.436	0.02	27.026	0.410	1499.	6.8
224	11.276	226.0	35.415	0.02	27.049	0.413	1499.	6.5
226	11.084	228.1	35.403	0.02	27.075	0.415	1498.	6.1
228	10.999	229.9	35.391	0.02	27.081	0.417	1498.	5.2
230	10.880	232.0	35.378	0.02	27.092	0.419	1497.	4.6
232	10.759	234.1	35.362	0.02	27.102	0.421	1497.	4.7
234	10.673	235.9	35.351	0.02	27.108	0.423	1497.	4.8
236	10.445	238.0	35.313	0.02	27.120	0.425	1496.	4.9
238	10.169	240.0	35.276	0.02	27.138	0.427	1495.	5.0
240	9.993	242.0	35.280	0.02	27.173	0.429	1494.	4.8
242	9.896	244.0	35.271	0.02	27.182	0.431	1494.	4.6
244	9.787	246.1	35.258	0.02	27.190	0.433	1493.	4.3
246	9.736	248.0	35.257	0.02	27.198	0.434	1493.	3.8
248	9.684	249.9	35.248	0.02	27.200	0.436	1493.	3.3
250	9.617	252.1	35.240	0.02	27.205	0.438	1493.	3.1
252	9.520	253.9	35.233	0.02	27.216	0.440	1493.	3.0
254	9.473	256.0	35.230	0.02	27.221	0.441	1492.	3.1
256	9.423	258.2	35.226	0.02	27.227	0.443	1492.	3.2
258	9.398	259.8	35.218	0.02	27.224	0.445	1492.	3.2
260	9.278	262.0	35.207	0.02	27.236	0.447	1492.	3.1
262	9.183	264.1	35.200	0.01	27.245	0.449	1491.	2.8
264	9.126	265.9	35.196	0.01	27.251	0.450	1491.	2.8
266	9.099	268.1	35.196	0.01	27.256	0.452	1491.	2.8
268	9.094	270.0	35.195	0.01	27.256	0.454	1491.	2.7
270	9.072	272.0	35.178	0.01	27.246	0.455	1491.	2.5
272	8.932	274.0	35.173	0.01	27.265	0.457	1491.	2.5
274	8.892	276.0	35.174	0.01	27.272	0.459	1491.	2.5
276	8.880	278.0	35.176	0.01	27.276	0.461	1491.	2.5
278	8.871	280.1	35.171	0.01	27.273	0.462	1491.	2.6
280	8.854	281.9	35.174	0.01	27.278	0.464	1491.	2.2
282	8.819	284.0	35.166	0.02	27.277	0.466	1490.	2.1
284	8.767	286.0	35.162	0.02	27.283	0.467	1490.	2.3
286	8.724	288.0	35.164	0.01	27.291	0.469	1490.	2.4
288	8.710	290.1	35.163	0.01	27.291	0.471	1490.	2.4
289	8.718	291.8	35.160	0.01	27.290	0.472	1490.	2.5
292	8.623	294.0	35.158	0.01	27.302	0.474	1490.	2.4
294	8.600	296.0	35.146	0.01	27.297	0.476	1490.	2.3
295	8.559	298.0	35.151	0.01	27.307	0.477	1490.	2.4
298	8.547	300.0	35.151	0.01	27.309	0.479	1490.	2.3

SHIP OC	CRUISE 159	STATION 35	DATE 19 NOV 1984	EST 1355	LATITUDE 39°51.0'N	LONGITUDE 70°01.8'W	DEPTH 1085	SHIP OC	CRUISE 159	STATION 35	DATE 19 NOV 1984	EST 1355	LATITUDE 39°51.0'N	LONGITUDE 70°01.8'W	DEPTH 1085				
DEPTH m	PRESS dbar	TEMP °C	SALIN psu	OXY ml/l	ATN m ⁻¹	SIGT gm/cm ³	DYHT A 10m ² /s ²	S SPD m/s	N cph	DEPTH m	PRESS dbar	TEMP °C	SALIN psu	OXY ml/l	ATN m ⁻¹	SIGT gm/cm ³	DYHT A 10m ² /s ²	S SPD m/s	N cph
399	402.0	7.367	35.082	0.02	27.431	0.555	1487.	515	519.8	5.667	35.015	0.01	27.607	0.626	1482.	0.6			
400	403.9	7.323	35.082	0.02	27.438	0.557	1487.	535	540.0	5.648	35.014	0.01	27.609	0.637	1482.	1.2			
403	406.0	7.272	35.077	0.02	27.441	0.558	1486.	555	560.0	5.474	35.008	0.01	27.625	0.648	1482.	1.5			
405	408.1	7.202	35.074	0.02	27.449	0.559	1486.	575	580.1	5.409	35.010	0.01	27.635	0.659	1482.	1.7			
406	410.0	7.156	35.071	0.02	27.453	0.561	1486.	595	600.1	5.196	35.009	0.00	27.660	0.669	1481.	1.3			
408	412.0	7.103	35.068	0.02	27.459	0.562	1486.	614	620.1	5.176	34.999	0.01	27.654	0.679	1482.	0.5			
410	414.0	7.047	35.067	0.02	27.465	0.563	1486.	634	640.2	5.127	34.997	0.01	27.658	0.689	1482.	0.5			
412	415.9	7.017	35.068	0.02	27.470	0.565	1486.	654	660.2	5.127	34.997	0.01	27.658	0.689	1482.	0.0			
414	418.0	7.000	35.067	0.02	27.472	0.566	1486.	674	680.0	5.041	34.994	0.01	27.666	0.709	1482.	1.7			
416	420.0	6.972	35.063	0.02	27.473	0.567	1486.	694	700.0	4.826	34.986	0.01	27.685	0.719	1482.	1.9			
418	422.1	6.930	35.066	0.01	27.480	0.569	1485.	713	720.1	4.763	34.983	0.01	27.689	0.728	1482.	1.1			
420	424.0	6.920	35.065	0.01	27.481	0.570	1485.	733	740.0	4.723	34.981	0.01	27.692	0.738	1482.	0.7			
422	425.9	6.910	35.065	0.01	27.483	0.571	1485.	753	760.0	4.693	34.979	0.01	27.694	0.747	1482.	0.7			
424	428.1	6.905	35.065	0.01	27.483	0.573	1485.	772	779.9	4.679	34.978	0.01	27.695	0.757	1482.	0.5			
426	430.1	6.888	35.061	0.01	27.483	0.574	1485.	792	799.9	4.647	34.978	0.01	27.698	0.766	1482.	0.5			
428	432.0	6.840	35.059	0.01	27.488	0.575	1485.	812	819.9	4.619	34.976	0.01	27.700	0.776	1483.	0.6			
430	434.0	6.796	35.056	0.01	27.492	0.577	1485.	832	840.0	4.605	34.976	0.01	27.702	0.785	1483.	0.7			
432	436.0	6.749	35.054	0.01	27.496	0.578	1485.	852	860.0	4.588	34.977	0.01	27.704	0.795	1483.	0.6			
434	438.0	6.679	35.049	0.01	27.502	0.579	1485.	871	880.1	4.562	34.976	0.01	27.706	0.804	1483.	0.2			
436	440.0	6.594	35.043	0.02	27.512	0.581	1484.	891	900.0	4.553	34.975	0.01	27.707	0.814	1484.	0.9			
438	442.0	6.525	35.043	0.02	27.518	0.582	1484.	911	920.1	4.472	34.972	0.01	27.713	0.823	1484.	1.0			
440	444.0	6.470	35.044	0.02	27.526	0.583	1484.	931	940.0	4.432	34.970	0.01	27.716	0.833	1484.	1.0			
442	445.9	6.461	35.045	0.02	27.528	0.584	1484.	950	960.0	4.397	34.969	0.01	27.719	0.842	1484.	0.9			
444	448.0	6.454	35.045	0.02	27.529	0.585	1484.	970	979.9	4.304	34.965	0.01	27.726	0.851	1484.	1.3			
446	450.0	6.457	35.044	0.02	27.528	0.587	1484.	990	1000.0	4.245	34.963	0.01	27.731	0.860	1484.	0.6			
448	452.0	6.449	35.044	0.02	27.529	0.588	1484.	1010	1020.0	4.235	34.963	0.01	27.732	0.870	1484.	0.3			
450	453.9	6.444	35.044	0.02	27.529	0.589	1484.	1029	1039.9	4.233	34.963	0.01	27.732	0.879	1485.	0.3			
452	456.0	6.441	35.044	0.02	27.530	0.590	1484.												
454	458.0	6.430	35.041	0.02	27.529	0.592	1484.												
456	460.0	6.402	35.040	0.02	27.532	0.593	1484.												
458	462.1	6.362	35.040	0.02	27.537	0.594	1484.												
460	463.9	6.344	35.036	0.02	27.536	0.595	1484.												
462	466.0	6.294	35.037	0.02	27.544	0.597	1484.												
464	468.0	6.244	35.030	0.02	27.545	0.598	1483.												
466	470.0	6.196	35.033	0.02	27.554	0.599	1483.												
468	472.1	6.166	35.030	0.01	27.555	0.600	1483.												
470	474.0	6.091	35.024	0.01	27.560	0.601	1483.												
472	476.0	6.004	35.024	0.00	27.572	0.602	1483.												
474	478.1	5.962	35.025	0.00	27.577	0.604	1482.												
476	480.0	5.929	35.021	0.00	27.578	0.605	1482.												
478	482.1	5.904	35.021	0.00	27.582	0.606	1482.												
480	484.0	5.846	35.018	0.00	27.587	0.607	1482.												
482	486.0	5.822	35.019	0.01	27.591	0.608	1482.												
484	488.0	5.794	35.017	0.01	27.592	0.609	1482.												
486	490.1	5.763	35.018	0.01	27.597	0.610	1482.												
488	491.9	5.754	35.017	0.01	27.597	0.611	1482.												
490	493.9	5.737	35.015	0.01	27.598	0.612	1482.												
492	496.0	5.683	35.016	0.01	27.606	0.613	1482.												
494	498.1	5.682	35.016	0.01	27.606	0.615	1482.												
495	499.9	5.679	35.015	0.01	27.606	0.616	1482.												

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
396	159	37	19 NOV 1984	1510	39°48.9'N	70°05.6'W	1140	496	159	37	19 NOV 1984	1510	39°48.9'N	70°05.6'W	1140
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A ₂	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A ₂
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²
396	399.9	7.432	35.093	0.01	27.431	0.553	1487.	496	500.1	6.480	35.047	0.01	27.528	0.619	1485.
399	402.0	7.411	35.091	0.01	27.432	0.555	1487.	515	520.0	6.356	35.044	0.01	27.542	0.632	1485.
401	404.1	7.388	35.091	0.01	27.436	0.556	1487.	535	540.0	6.165	35.032	0.01	27.557	0.644	1484.
403	406.0	7.371	35.090	0.01	27.437	0.558	1487.	555	560.0	5.944	35.021	0.02	27.576	0.655	1484.
404	408.0	7.331	35.091	0.02	27.444	0.559	1487.	575	580.0	5.654	35.026	0.01	27.617	0.667	1483.
407	410.1	7.278	35.085	0.02	27.447	0.561	1487.	595	600.0	5.400	35.004	0.00	27.631	0.677	1482.
408	411.9	7.259	35.084	0.02	27.449	0.562	1487.	614	620.0	5.119	34.995	0.00	27.658	0.688	1481.
410	414.1	7.247	35.083	0.02	27.450	0.563	1487.	634	640.0	5.053	34.993	0.00	27.664	0.698	1481.
412	416.0	7.237	35.082	0.02	27.450	0.565	1487.	654	660.0	4.859	34.986	0.00	27.681	0.707	1481.
414	418.0	7.231	35.081	0.02	27.450	0.566	1487.	674	680.0	4.702	34.980	0.00	27.694	0.717	1481.
416	419.9	7.221	35.080	0.02	27.451	0.567	1487.	693	700.0	4.630	34.975	0.01	27.698	0.726	1481.
418	422.1	7.210	35.078	0.02	27.451	0.569	1486.	713	720.0	4.598	34.973	0.02	27.700	0.735	1481.
420	423.7	7.201	35.079	0.01	27.453	0.570	1486.	733	740.1	4.582	34.972	0.02	27.701	0.745	1481.
422	426.1	7.143	35.073	0.01	27.457	0.572	1486.	753	760.1	4.556	34.971	0.02	27.703	0.754	1481.
424	427.9	7.056	35.074	0.01	27.469	0.573	1486.	773	780.1	4.531	34.971	0.01	27.706	0.763	1482.
426	430.0	7.011	35.065	0.01	27.469	0.574	1486.	792	800.0	4.527	34.970	0.01	27.705	0.772	1482.
428	432.0	6.986	35.067	0.01	27.474	0.576	1486.	812	820.1	4.521	34.970	0.01	27.706	0.782	1482.
430	434.0	6.943	35.066	0.02	27.479	0.577	1486.	832	840.0	4.506	34.970	0.01	27.708	0.791	1482.
432	436.0	6.888	35.066	0.02	27.487	0.578	1485.	852	860.0	4.492	34.969	0.01	27.709	0.800	1483.
434	437.8	6.857	35.062	0.02	27.488	0.579	1485.	871	880.0	4.432	34.967	0.01	27.714	0.810	1483.
436	440.0	6.846	35.060	0.02	27.488	0.581	1485.	891	899.9	4.420	34.966	0.01	27.714	0.819	1483.
438	442.0	6.845	35.060	0.02	27.488	0.582	1485.	911	920.0	4.421	34.966	0.01	27.714	0.828	1483.
440	444.1	6.846	35.060	0.02	27.488	0.584	1485.	931	940.0	4.380	34.965	0.01	27.718	0.838	1484.
442	445.9	6.846	35.060	0.02	27.487	0.585	1485.	950	960.0	4.345	34.964	0.01	27.721	0.847	1484.
444	448.0	6.848	35.060	0.02	27.487	0.586	1486.	970	980.1	4.320	34.963	0.01	27.723	0.856	1484.
446	450.0	6.846	35.060	0.01	27.488	0.587	1486.	990	1000.0	4.258	34.961	0.01	27.728	0.865	1484.
448	452.0	6.836	35.059	0.01	27.488	0.589	1486.	1010	1020.0	4.213	34.959	0.01	27.731	0.875	1484.
450	454.0	6.831	35.059	0.02	27.489	0.590	1486.	1030	1040.0	4.199	34.958	0.01	27.732	0.884	1485.
452	456.1	6.839	35.059	0.02	27.488	0.591	1486.	1049	1060.0	4.194	34.958	0.01	27.733	0.893	1485.
454	457.8	6.842	35.060	0.02	27.489	0.593	1486.	1069	1080.0	4.194	34.958	0.01	27.732	0.902	1485.
456	460.1	6.827	35.060	0.02	27.491	0.594	1486.	1088	1099.0	4.194	34.958	0.01	27.732	0.911	1485.
458	462.0	6.754	35.066	0.02	27.505	0.595	1485.								
460	464.0	6.712	35.056	0.02	27.503	0.597	1485.								
462	466.1	6.692	35.053	0.02	27.503	0.598	1485.								
464	468.0	6.684	35.055	0.02	27.506	0.599	1485.								
466	470.0	6.668	35.054	0.02	27.507	0.600	1485.								
468	472.0	6.655	35.053	0.02	27.509	0.602	1485.								
470	474.1	6.647	35.057	0.01	27.513	0.603	1485.								
472	476.0	6.652	35.045	0.01	27.503	0.604	1485.								
474	478.1	6.639	35.050	0.01	27.508	0.606	1485.								
476	480.0	6.616	35.052	0.01	27.513	0.607	1485.								
478	482.0	6.591	35.051	0.01	27.516	0.608	1485.								
480	484.0	6.567	35.049	0.01	27.517	0.609	1485.								
482	486.0	6.545	35.049	0.01	27.520	0.611	1485.								
484	488.0	6.533	35.047	0.01	27.520	0.612	1485.								
486	490.1	6.520	35.048	0.01	27.523	0.613	1485.								
488	492.0	6.506	35.048	0.01	27.524	0.614	1485.								
490	494.0	6.497	35.048	0.01	27.525	0.616	1485.								
492	496.1	6.486	35.051	0.01	27.530	0.617	1485.								
493	497.9	6.491	35.041	0.01	27.521	0.618	1485.								

SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
OC	159	38	19 NOV 1984	1950	3° 58.1' N	7° 55.1' W	37	OC	159	38	19 NOV 1984	1950	3° 58.1' N	7° 55.1' W	37
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²
2	1.9	16.689	34.987		0.06	25.579	0.000	101.8	101.8	15.636	35.693		0.07	26.365	0.226
4	3.9	16.685	34.989		0.06	25.581	0.005	103	104.1	15.546	35.685		0.09	26.379	0.230
6	6.1	16.675	34.983		0.06	25.579	0.010	105	105.9	15.371	35.663		0.11	26.402	0.233
8	8.1	16.676	34.986		0.06	25.581	0.015	107	108.1	15.302	35.640		0.12	26.399	0.236
10	9.7	16.710	34.986		0.06	25.573	0.019	109	109.8	15.228	35.627		0.14	26.406	0.239
12	12.1	16.725	35.005		0.06	25.584	0.024	111	112.1	15.080	35.630		0.15	26.441	0.243
14	14.0	16.801	34.993		0.06	25.557	0.029	113	113.9	14.812	35.604		0.14	26.480	0.246
16	16.1	16.835	35.041		0.06	25.586	0.034	115	116.1	14.749	35.617		0.12	26.503	0.249
18	18.1	16.834	35.025		0.06	25.574	0.039	117	118.0	14.711	35.635		0.11	26.526	0.252
20	19.8	16.897	35.046		0.06	25.575	0.043	119	120.0	14.697	35.649		0.10	26.540	0.255
22	22.2	16.870	35.041		0.06	25.578	0.049	121	122.2	14.735	35.670		0.07	26.548	0.258
24	23.9	16.873	35.040		0.06	25.576	0.053	123	124.1	14.743	35.683		0.07	26.556	0.261
26	25.9	16.847	35.039		0.06	25.582	0.058	125	126.1	14.723	35.686		0.08	26.563	0.264
28	28.0	16.871	35.032		0.06	25.570	0.063	127	128.2	14.656	35.683		0.09	26.575	0.267
30	29.9	16.894	35.033		0.05	25.565	0.067	129	129.9	14.606	35.675		0.09	26.580	0.270
32	31.8	17.039	35.093		0.05	25.578	0.072	131	132.2	14.588	35.680		0.09	26.587	0.273
34	33.9	17.114	35.133		0.05	25.590	0.077	133	133.9	14.537	35.682		0.09	26.600	0.276
36	36.2	17.116	35.139		0.05	25.594	0.082	135	135.8	14.417	35.684		0.09	26.628	0.279
38	38.1	17.081	35.132		0.05	25.598	0.087	137	138.2	14.352	35.695		0.07	26.650	0.282
40	40.0	17.054	35.125		0.05	25.598	0.091	139	139.9	14.294	35.691		0.06	26.659	0.285
42	41.9	17.077	35.128		0.05	25.595	0.096	141	141.9	14.273	35.691		0.06	26.664	0.287
44	44.0	17.111	35.138		0.05	25.594	0.101	143	144.0	14.246	35.693		0.06	26.671	0.290
46	45.8	17.154	35.154		0.05	25.597	0.105	145	145.8	14.202	35.690		0.06	26.678	0.293
48	48.0	17.192	35.167		0.05	25.597	0.111	147	147.8	14.163	35.691		0.06	26.687	0.296
50	49.9	17.212	35.178		0.05	25.601	0.115	149	150.2	14.123	35.688		0.06	26.694	0.299
52	52.1	17.217	35.181		0.05	25.603	0.121	151	152.1	14.105	35.685		0.06	26.695	0.301
53	53.8	17.219	35.183		0.05	25.603	0.124	153	154.0	14.084	35.687		0.06	26.701	0.304
56	56.2	17.214	35.189		0.06	25.609	0.130	155	156.2	14.060	35.687		0.06	26.707	0.307
58	57.9	17.233	35.204		0.06	25.616	0.134	157	157.8	14.019	35.690		0.06	26.717	0.309
60	60.1	17.251	35.214		0.06	25.620	0.140	159	160.0	13.942	35.694		0.05	26.737	0.312
61	61.9	17.269	35.221		0.06	25.621	0.144	161	162.1	13.877	35.692		0.05	26.749	0.315
64	63.9	17.320	35.241		0.06	25.624	0.149	163	164.1	13.836	35.685		0.06	26.752	0.318
66	66.1	17.387	35.277		0.05	25.635	0.154	165	166.1	13.788	35.685		0.06	26.762	0.320
67	67.8	17.419	35.298		0.05	25.643	0.158	167	167.9	13.673	35.688		0.09	26.788	0.323
70	70.1	17.365	35.293		0.05	25.652	0.163	169	170.1	13.527	35.677		0.07	26.811	0.326
72	72.0	17.328	35.288		0.04	25.658	0.168	171	172.0	13.480	35.667		0.07	26.812	0.328
74	74.0	17.269	35.333		0.04	25.707	0.172	173	174.1	13.469	35.673		0.06	26.819	0.331
76	76.0	17.188	35.400		0.03	25.777	0.177	175	175.7	13.322	35.667		0.07	26.845	0.333
77	77.9	17.076	35.481		0.03	25.867	0.181	177	178.1	13.216	35.658		0.07	26.859	0.336
80	80.1	16.966	35.563		0.03	25.956	0.186	179	180.1	13.165	35.652		0.04	26.865	0.338
81	81.8	16.881	35.574		0.04	25.984	0.189	181	182.0	13.149	35.655		0.03	26.871	0.340
84	84.2	16.606	35.560		0.05	26.038	0.194	183	184.2	13.136	35.657		0.03	26.875	0.343
85	86.0	16.420	35.551		0.05	26.075	0.197	185	186.1	13.114	35.654		0.03	26.877	0.345
88	88.1	16.373	35.616		0.04	26.136	0.202	187	187.9	13.097	35.649		0.03	26.882	0.348
89	90.1	16.287	35.649		0.04	26.181	0.205	189	190.1	12.892	35.649		0.02	26.918	0.350
91	92.0	16.198	35.677		0.03	26.224	0.209	191	192.2	12.772	35.629		0.02	26.927	0.353
93	93.9	16.109	35.694		0.03	26.258	0.212	193	193.9	12.690	35.613		0.02	26.931	0.355
95	95.9	16.021	35.703		0.04	26.285	0.216	195	196.0	12.628	35.607		0.02	26.938	0.357
97	98.0	15.904	35.710		0.05	26.317	0.219	196	197.8	12.586	35.595		0.02	26.937	0.359
100	100.2	15.705	35.711		0.07	26.363	0.223	199	200.0	12.551	35.592		0.03	26.942	0.362

SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP OC	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
201	202.1	12-518	35-588	0.03	26.946	0.364	1503.	300	302.0	9-468	35-228	0.04	27.220	0.466	1493.
203	204.1	12-492	35-583	0.04	26.947	0.366	1503.	302	304.0	9-469	35-228	0.04	27.220	0.467	1493.
205	206.0	12-466	35-579	0.04	26.949	0.369	1502.	304	305.9	9-465	35-228	0.04	27.221	0.469	1493.
207	208.0	12-454	35-577	0.04	26.950	0.371	1502.	306	308.1	9-458	35-227	0.04	27.221	0.471	1493.
209	210.0	12-430	35-577	0.05	26.955	0.373	1502.	308	310.2	9-454	35-226	0.04	27.221	0.473	1493.
210	211.9	12-353	35-576	0.06	26.968	0.375	1502.	310	312.1	9-454	35-225	0.04	27.221	0.475	1493.
213	214.0	12-244	35-561	0.05	26.978	0.378	1502.	312	314.0	9-456	35-226	0.04	27.221	0.476	1493.
214	215.9	12-159	35-545	0.05	26.983	0.380	1502.	314	315.8	9-455	35-226	0.04	27.221	0.478	1493.
217	218.0	12-134	35-539	0.05	26.983	0.382	1502.	316	318.0	9-451	35-226	0.04	27.221	0.480	1493.
218	219.9	12-120	35-536	0.05	26.983	0.384	1501.	318	320.3	9-445	35-225	0.04	27.222	0.482	1493.
220	221.9	12-055	35-532	0.06	26.993	0.387	1501.	320	322.0	9-437	35-226	0.04	27.224	0.484	1493.
222	224.0	11-952	35-528	0.06	27.009	0.389	1501.	321	323.8	9-427	35-225	0.05	27.225	0.485	1493.
225	226.1	11-844	35-507	0.06	27.014	0.391	1501.	324	326.0	9-422	35-224	0.05	27.225	0.487	1493.
226	227.9	11-787	35-500	0.06	27.019	0.393	1500.	326	328.0	9-417	35-225	0.04	27.227	0.489	1493.
228	229.9	11-740	35-491	0.04	27.021	0.395	1500.	328	330.0	9-408	35-223	0.04	27.226	0.491	1493.
230	231.8	11-702	35-484	0.03	27.023	0.397	1500.	330	332.1	9-390	35-222	0.05	27.229	0.493	1493.
232	234.0	11-680	35-484	0.03	27.027	0.400	1500.	332	334.1	9-367	35-223	0.05	27.233	0.495	1493.
234	235.8	11-649	35-478	0.04	27.028	0.402	1500.	334	336.0	9-315	35-219	0.05	27.239	0.496	1493.
237	238.2	11-584	35-480	0.06	27.042	0.404	1500.	335	338.0	9-289	35-213	0.05	27.239	0.498	1493.
238	239.8	11-505	35-463	0.07	27.043	0.406	1500.	337	339.9	9-243	35-211	0.05	27.244	0.500	1493.
240	242.0	11-436	35-458	0.07	27.049	0.408	1499.	340	342.0	9-176	35-210	0.06	27.254	0.502	1493.
242	244.0	11-418	35-448	0.07	27.048	0.410	1499.	341	344.0	9-051	35-203	0.06	27.269	0.503	1492.
244	246.0	11-400	35-449	0.07	27.052	0.413	1499.	343	346.0	8-888	35-205	0.07	27.297	0.505	1492.
246	248.0	11-328	35-450	0.07	27.066	0.415	1499.	345	347.9	8-746	35-182	0.08	27.302	0.507	1491.
248	250.0	11-229	35-442	0.06	27.078	0.417	1499.	347	350.1	8-676	35-170	0.08	27.304	0.508	1491.
250	252.1	11-092	35-421	0.04	27.087	0.419	1498.	349	351.3	8-641	35-164	0.09	27.304	0.509	1491.
252	253.9	10-979	35-398	0.03	27.090	0.421	1498.	349	351.9	8-637	35-164	0.09	27.305	0.510	1491.
254	256.0	10-866	35-394	0.03	27.107	0.423	1498.	350	353.1	8-627	35-162	0.09	27.305	0.511	1491.
256	258.1	10-713	35-379	0.02	27.123	0.425	1497.	351	354.0	8-614	35-163	0.10	27.307	0.512	1491.
258	260.0	10-508	35-383	0.02	27.163	0.427	1496.	352	355.0	8-603	35-166	0.11	27.312	0.512	1491.
260	261.9	10-241	35-330	0.02	27.168	0.429	1495.	353	355.9	8-558	35-163	0.11	27.316	0.513	1491.
262	264.3	10-063	35-289	0.02	27.167	0.431	1495.	354	357.0	8-528	35-157	0.12	27.316	0.514	1491.
264	265.8	9-974	35-279	0.02	27.175	0.432	1494.	355	358.0	8-501	35-155	0.12	27.319	0.515	1490.
266	267.9	9-943	35-274	0.02	27.176	0.434	1494.	356	358.9	8-388	35-158	0.12	27.339	0.516	1490.
268	269.8	9-898	35-268	0.02	27.180	0.436	1494.	357	360.0	8-356	35-150	0.12	27.338	0.517	1490.
270	272.1	9-874	35-266	0.02	27.182	0.438	1494.	358	361.0	8-330	35-152	0.12	27.343	0.517	1490.
272	273.9	9-850	35-266	0.02	27.186	0.440	1494.	359	362.0	8-278	35-150	0.12	27.350	0.518	1490.
274	276.0	9-811	35-264	0.02	27.191	0.442	1494.	360	363.0	8-229	35-150	0.12	27.357	0.519	1489.
276	278.0	9-774	35-256	0.02	27.191	0.444	1494.	361	364.0	8-192	35-142	0.12	27.357	0.520	1489.
278	280.0	9-753	35-252	0.03	27.192	0.446	1494.	362	365.0	8-316	35-143	0.12	27.339	0.520	1490.
280	282.0	9-725	35-252	0.03	27.196	0.447	1494.	363	366.0	8-232	35-137	0.12	27.347	0.521	1490.
282	284.2	9-683	35-248	0.03	27.200	0.449	1494.	363	366.8	8-224	35-135	0.12	27.346	0.522	1490.
284	285.9	9-631	35-246	0.04	27.207	0.451	1494.	364							
286	288.2	9-580	35-238	0.04	27.209	0.453	1493.								
288	290.0	9-566	35-236	0.04	27.211	0.455	1493.								
290	292.0	9-558	35-238	0.04	27.213	0.457	1493.								
292	294.0	9-537	35-236	0.04	27.215	0.458	1493.								
294	296.0	9-503	35-232	0.04	27.218	0.460	1493.								
296	297.9	9-476	35-229	0.04	27.220	0.462	1493.								
298	300.0	9-467	35-227	0.04	27.220	0.464	1493.								

SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH		
OC	159	39	19 NOV 1984	2102	40°03.4'N	70°54.9'W	197	OC	159	40	19 NOV 1984	2159	40°09.5'N	70°54.9'W	137		
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /e ²	m/s	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /e ²	m/s
189	190.0	12.520	35.583		0.15	26.941	0.359	1502.	0	0.5	15.586	34.445		0.08	25.415	0.000	1508.
189	191.0	12.517	35.582		0.17	26.941	0.360	1502.	2	1.8	15.596	34.447		0.08	25.414	0.003	1508.
190	192.0	12.506	35.581		0.18	26.942	0.361	1502.	4	4.0	15.602	34.448		0.08	25.414	0.009	1508.
191	193.0	12.503	35.581		0.17	26.943	0.362	1502.	6	6.2	15.599	34.448		0.08	25.414	0.015	1508.
192	194.0	12.498	35.581		0.19	26.944	0.364	1502.	8	8.0	15.605	34.448		0.08	25.413	0.019	1508.
193	194.7	12.508	35.581		0.18	26.942	0.365	1502.	10	10.1	15.600	34.446		0.08	25.413	0.025	1508.
									12	12.0	15.600	34.446		0.08	25.413	0.029	1508.
									14	14.0	15.596	34.446		0.08	25.413	0.035	1508.
									16	16.0	15.595	34.445		0.08	25.413	0.040	1508.
									18	18.0	15.585	34.441		0.08	25.412	0.045	1508.
									20	20.0	15.587	34.442		0.08	25.412	0.050	1508.
									22	22.0	15.589	34.442		0.08	25.412	0.055	1508.
									24	24.0	15.592	34.442		0.08	25.411	0.060	1508.
									26	26.0	15.602	34.445		0.08	25.411	0.065	1508.
									28	28.1	15.602	34.443		0.08	25.410	0.071	1508.
									30	29.9	15.599	34.442		0.08	25.410	0.075	1508.
									32	32.0	15.609	34.447		0.08	25.411	0.081	1508.
									34	34.0	15.815	34.538		0.08	25.435	0.086	1509.
									36	36.0	16.505	34.753		0.06	25.442	0.091	1512.
									38	38.0	17.192	35.011		0.04	25.478	0.096	1514.
									40	40.1	17.692	35.201		0.04	25.502	0.101	1516.
									42	41.9	17.694	35.202		0.04	25.503	0.106	1516.
									44	44.0	17.698	35.204		0.04	25.503	0.111	1516.
									46	46.1	17.696	35.205		0.04	25.505	0.116	1516.
									48	48.0	17.705	35.211		0.04	25.507	0.121	1516.
									50	50.1	17.797	35.249		0.04	25.514	0.126	1516.
									52	52.0	17.880	35.280		0.04	25.517	0.131	1517.
									54	54.2	17.937	35.308		0.04	25.524	0.136	1517.
									55	55.9	17.929	35.310		0.04	25.528	0.140	1517.
									58	58.1	17.784	35.276		0.04	25.537	0.146	1516.
									60	60.1	17.806	35.303		0.04	25.553	0.151	1517.
									61	62.0	18.021	35.375		0.04	25.555	0.155	1517.
									64	64.1	18.238	35.483		0.03	25.584	0.160	1518.
									65	66.0	18.240	35.512		0.03	25.606	0.165	1518.
									67	67.9	18.274	35.600		0.03	25.665	0.170	1518.
									70	70.1	18.067	35.601		0.03	25.717	0.174	1518.
									71	72.1	17.949	35.592		0.03	25.739	0.179	1517.
									73	73.9	17.865	35.602		0.03	25.767	0.183	1517.
									75	76.0	17.619	35.596		0.04	25.823	0.188	1517.
									78	78.1	17.372	35.596		0.04	25.883	0.192	1516.
									79	79.8	16.929	35.560		0.04	25.963	0.196	1515.
									81	81.9	16.561	35.579		0.05	26.064	0.200	1514.
									83	84.0	16.427	35.598		0.05	26.110	0.204	1513.
									85	86.1	16.359	35.613		0.05	26.137	0.208	1513.
									87	88.0	16.344	35.618		0.05	26.145	0.212	1513.
									89	90.0	16.301	35.623		0.06	26.158	0.216	1513.
									91	91.9	15.981	35.616		0.08	26.227	0.219	1512.
									93	94.0	15.723	35.571		0.09	26.251	0.223	1511.
									95	96.1	15.508	35.568		0.11	26.298	0.227	1511.
									97	97.9	15.435	35.599		0.11	26.338	0.230	1510.

SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH			
OC	159	40	19 NOV 1984	2159	40°09.5'N	70°54.9'W	137	OC	159	41	19 NOV 1984	2313	40°19.0'N	70°55.0'W	103			
DEPTH		TEMP	SALIN	OXY	ATN	SIGT	DYHT	A	S SPD	N			SIGT	DYHT	A	S SPD	N	
m	press	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	cph			m ⁻¹	gm/cm ³	10m ² /s ²	m/s	cph		
99	99.9	15.305	35.623	0.11	0.11	26.385	0.233	1510.	6.9	1	0.8	15.377	34.316	0.12	25.363	0.000	1507.	-0.4
101	102.1	15.301	35.640	0.10	0.10	26.400	0.237	1510.	6.5	2	1.9	15.391	34.318	0.12	25.361	0.003	1507.	-0.4
103	103.9	15.344	35.694	0.08	0.08	26.431	0.240	1510.	6.0	4	4.1	15.395	34.320	0.12	25.361	0.009	1507.	-0.4
105	106.0	15.354	35.717	0.07	0.07	26.447	0.243	1510.	5.6	6	6.1	15.397	34.320	0.12	25.361	0.014	1507.	-0.4
107	108.1	15.297	35.709	0.07	0.07	26.453	0.246	1510.	5.2	8	8.0	15.393	34.318	0.12	25.360	0.019	1507.	-0.4
109	110.2	15.136	35.691	0.08	0.08	26.476	0.250	1510.	5.3	10	10.1	15.395	34.319	0.12	25.361	0.024	1507.	0.4
111	111.9	15.068	35.693	0.08	0.08	26.492	0.252	1510.	5.3	12	11.8	15.403	34.321	0.13	25.361	0.029	1507.	0.1
113	114.1	14.988	35.693	0.08	0.08	26.510	0.256	1509.	5.6	14	14.2	15.402	34.322	0.12	25.361	0.035	1507.	0.2
115	115.9	14.896	35.674	0.10	0.10	26.516	0.259	1509.	6.0	16	15.9	15.402	34.321	0.12	25.360	0.039	1507.	0.9
117	118.0	14.710	35.672	0.10	0.10	26.555	0.262	1508.	6.3	18	18.0	15.402	34.322	0.13	25.362	0.045	1507.	1.1
119	120.1	14.561	35.662	0.14	0.14	26.579	0.265	1508.	6.6	20	19.9	15.413	34.323	0.13	25.360	0.050	1508.	1.2
120	121.2	14.480	35.659	0.20	0.20	26.595	0.267	1508.	6.9	22	22.1	15.382	34.314	0.13	25.360	0.056	1507.	1.4
121	122.0	14.340	35.661	0.23	0.23	26.626	0.268	1507.	6.9	24	23.9	15.399	34.331	0.13	25.369	0.060	1508.	1.4
122	123.0	14.270	35.658	0.26	0.26	26.639	0.269	1507.	6.3	26	26.0	15.479	34.349	0.13	25.365	0.066	1508.	1.6
123	124.0	14.225	35.658	0.30	0.30	26.649	0.271	1507.	5.6	28	27.8	15.488	34.354	0.13	25.367	0.070	1508.	1.7
124	125.1	14.205	35.659	0.33	0.33	26.654	0.272	1507.	4.7	30	30.0	15.499	34.360	0.13	25.369	0.076	1508.	1.7
125	125.9	14.196	35.658	0.35	0.35	26.655	0.273	1507.	3.5	32	32.1	15.518	34.363	0.13	25.367	0.082	1508.	1.7
126	127.0	14.185	35.659	0.36	0.36	26.658	0.275	1507.	2.7	34	33.9	15.548	34.384	0.14	25.377	0.086	1508.	1.8
127	128.0	14.180	35.659	0.37	0.37	26.659	0.276	1507.	2.1	36	36.0	15.614	34.400	0.14	25.375	0.092	1508.	1.8
128	129.0	14.173	35.658	0.38	0.38	26.660	0.278	1507.	1.8	38	38.1	15.671	34.422	0.14	25.378	0.097	1509.	1.7
129	130.0	14.168	35.657	0.39	0.39	26.661	0.279	1507.	1.5	40	39.9	15.695	34.430	0.14	25.379	0.102	1509.	1.7
130	131.0	14.165	35.657	0.39	0.39	26.661	0.280	1507.	1.2	42	42.1	15.730	34.441	0.14	25.380	0.108	1509.	1.4
131	132.0	14.164	35.657	0.39	0.39	26.661	0.283	1507.	1.2	44	43.9	15.730	34.447	0.14	25.384	0.112	1509.	1.4
132	133.0	14.164	35.657	0.39	0.39	26.661	0.283	1507.	1.2	46	46.0	15.798	34.467	0.14	25.384	0.118	1509.	1.2
133	134.1	14.163	35.657	0.40	0.40	26.661	0.285	1507.	1.2	48	48.2	15.822	34.474	0.14	25.384	0.124	1509.	1.2
134	135.1	14.161	35.656	0.41	0.41	26.661	0.286	1507.	1.2	50	49.9	15.823	34.474	0.15	25.384	0.128	1509.	1.0
										52	52.0	15.825	34.476	0.14	25.385	0.133	1509.	1.0
										54	54.1	15.866	34.489	0.14	25.386	0.139	1510.	1.1
										55	55.9	15.872	34.492	0.14	25.387	0.144	1510.	1.2
										58	58.0	15.897	34.498	0.14	25.386	0.149	1510.	1.2
										60	60.1	15.918	34.509	0.14	25.389	0.154	1510.	1.2
										61	62.0	15.966	34.524	0.14	25.390	0.159	1510.	1.3
										63	64.0	15.970	34.525	0.14	25.390	0.165	1510.	1.3
										65	66.0	15.969	34.525	0.14	25.390	0.170	1510.	1.3
										67	67.9	16.012	34.541	0.14	25.393	0.175	1510.	1.2
										69	70.0	16.022	34.546	0.15	25.394	0.180	1510.	1.4
										71	71.9	16.022	34.546	0.15	25.394	0.185	1511.	1.5
										74	74.1	16.025	34.548	0.15	25.395	0.191	1511.	1.6
										75	75.8	16.030	34.551	0.15	25.396	0.195	1511.	1.7
										77	78.0	16.036	34.557	0.15	25.399	0.201	1511.	2.0
										79	80.1	16.034	34.558	0.15	25.401	0.206	1511.	2.4
										81	81.9	16.040	34.562	0.15	25.403	0.211	1511.	3.4
										83	84.0	16.061	34.575	0.16	25.407	0.216	1511.	4.2
										85	86.0	16.079	34.590	0.17	25.415	0.221	1511.	5.0
										87	88.0	16.082	34.608	0.21	25.428	0.227	1511.	5.7
										89	90.1	16.056	34.658	0.32	25.473	0.232	1511.	6.4
										91	91.2	16.042	34.678	0.37	25.491	0.235	1511.	6.9
										92	92.0	16.026	34.699	0.40	25.511	0.237	1511.	7.3
										93	93.0	16.009	34.724	0.42	25.534	0.239	1511.	7.4
										94	94.0	15.989	34.736	0.45	25.548	0.242	1511.	7.5

SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH			
OC	159	41	19 NOV 1984	2313	40°19.0'N	70°55.0'W	103	OC	159	42	20 NOV 1984	0200	40°30.2'N	71°00.8'W	79			
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	DEPTH
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	m
94	95.1	15.978	34.746		0.50	25.558	0.244	1511.	1	0.8	14.062	33.707		0.17	25.176	0.000	1502.	-0.9
95	96.0	15.964	34.755		0.57	25.569	0.247	1511.	2	1.9	14.097	33.712		0.12	25.173	0.003	1502.	-0.9
96	97.0	15.933	34.771		0.62	25.587	0.249	1511.	5	4.9	14.120	33.707		0.36	25.164	0.012	1502.	-0.9
97	98.0	15.861	34.804		0.66	25.629	0.252	1511.	6	6.1	14.104	33.710		0.25	25.169	0.015	1502.	-0.9
98	99.2	15.830	34.817		0.64	25.646	0.254	1511.	8	8.1	14.094	33.711		0.12	25.172	0.020	1502.	-0.9
99	99.6	15.807	34.826		0.66	25.659	0.255	1511.	10	9.9	14.083	33.710		0.11	25.173	0.025	1502.	0.3
									12	11.9	14.095	33.708		0.11	25.170	0.031	1502.	1.4
									14	13.9	14.111	33.711		0.11	25.168	0.037	1503.	1.5
									16	15.8	14.117	33.712		0.11	25.168	0.042	1503.	2.0
									18	17.9	14.177	33.732		0.11	25.171	0.048	1503.	3.2
									20	19.9	14.198	33.752		0.11	25.182	0.053	1503.	4.5
									22	22.0	14.228	33.761		0.12	25.183	0.059	1503.	5.4
									24	24.1	14.430	33.834		0.11	25.196	0.065	1504.	6.0
									26	26.0	14.789	33.988		0.10	25.239	0.070	1505.	6.3
									28	27.8	15.210	34.177		0.11	25.293	0.075	1507.	6.2
									30	30.0	15.631	34.337		0.13	25.322	0.081	1508.	5.9
									32	32.1	15.755	34.393		0.16	25.337	0.086	1509.	5.2
									34	33.9	15.802	34.412		0.17	25.341	0.091	1509.	4.1
									36	35.9	15.838	34.423		0.18	25.342	0.096	1509.	2.9
									38	38.0	15.895	34.437		0.19	25.339	0.102	1509.	2.1
									40	40.0	15.963	34.466		0.20	25.346	0.107	1510.	1.7
									42	41.9	15.975	34.471		0.20	25.347	0.112	1510.	1.5
									44	44.0	15.961	34.469		0.21	25.349	0.118	1510.	1.5
									46	46.0	15.941	34.465		0.22	25.350	0.123	1510.	1.4
									48	48.1	15.902	34.454		0.21	25.351	0.129	1510.	1.1
									49	49.9	15.861	34.440		0.19	25.349	0.133	1510.	1.1
									52	52.2	15.833	34.435		0.16	25.352	0.139	1509.	1.0
									54	54.1	15.824	34.432		0.16	25.352	0.144	1509.	1.0
									56	56.1	15.833	34.435		0.16	25.352	0.150	1510.	1.1
									58	58.1	15.836	34.438		0.16	25.353	0.155	1510.	1.2
									60	60.1	15.818	34.434		0.17	25.354	0.160	1510.	1.1
									61	61.3	15.810	34.431		0.17	25.354	0.163	1510.	1.1
									62	62.0	15.816	34.434		0.20	25.355	0.165	1510.	1.0
									62	63.0	15.814	34.434		0.19	25.356	0.168	1510.	0.6
									63	63.9	15.810	34.432		0.18	25.355	0.173	1510.	0.5
									65	65.0	15.808	34.432		0.18	25.355	0.173	1510.	0.5
									66	66.1	15.808	34.430		0.19	25.354	0.176	1510.	0.3
									67	67.0	15.816	34.433		0.21	25.354	0.178	1510.	-0.3
									67	68.0	15.820	34.436		0.24	25.355	0.181	1510.	0.4
									69	69.1	15.818	34.435		0.23	25.355	0.184	1510.	0.4
									69	70.0	15.821	34.435		0.23	25.355	0.186	1510.	0.5
									70	71.0	15.819	34.434		0.24	25.354	0.189	1510.	0.2
									71	72.0	15.817	34.434		0.25	25.355	0.192	1510.	-0.5
									72	73.0	15.811	34.432		0.28	25.354	0.194	1510.	-0.5
									73	74.0	15.809	34.431		0.29	25.354	0.197	1510.	-0.5
									74	75.0	15.806	34.431		0.29	25.355	0.199	1510.	-0.5
									75	75.6	15.803	34.429		0.40	25.354	0.201	1510.	-0.5

SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH	SHIP	CRUISE	STATION	DATE	EST	LATITUDE	LONGITUDE	DEPTH
OC	159	43	20 NOV 1984	0325	40°36.8'N	70°55.4'W	71	OC	159	44	20 NOV 1984	0500	40°50.1'N	70°55.3'W	55
DEPTH	PRESS	TEMP	SALIN	OXY	ATN	SIGT	DYHT A	S SPD	SIGT	DYHT A	S SPD	SIGT	DYHT A	S SPD	N
m	dbar	°C	psu	ml/l	m ⁻¹	gm/cm ³	10m ² /s ²	m/s	gm/cm ³	10m ² /s ²	m/s	gm/cm ³	10m ² /s ²	m/s	cph
5	4.8	13.829	33.400		0.10	24.987	0.000	1501.	0.38	24.665	0.000	1497.	0.000	1497.	-1.1
6	6.1	13.831	33.401		0.10	24.987	0.004	1501.	0.41	24.663	0.004	1497.	0.004	1497.	-1.1
8	8.2	13.831	33.401		0.10	24.987	0.010	1501.	0.39	24.662	0.010	1497.	0.010	1497.	-1.1
10	10.2	13.832	33.401		0.10	24.987	0.016	1501.	0.38	24.659	0.017	1497.	0.017	1497.	-1.1
12	12.0	13.831	33.400		0.10	24.987	0.021	1501.	0.38	24.659	0.024	1498.	0.024	1498.	-1.1
14	14.0	13.831	33.400		0.10	24.987	0.027	1501.	0.38	24.659	0.031	1498.	0.031	1498.	-0.9
16	16.0	13.827	33.399		0.10	24.987	0.033	1501.	0.37	24.659	0.037	1498.	0.037	1498.	-0.7
18	18.1	13.829	33.400		0.11	24.987	0.039	1501.	0.38	24.659	0.043	1498.	0.043	1498.	-0.4
20	19.7	13.833	33.401		0.10	24.987	0.044	1501.	0.38	24.659	0.050	1498.	0.050	1498.	-0.3
22	21.9	13.835	33.407		0.10	24.991	0.051	1501.	0.38	24.658	0.063	1498.	0.063	1498.	0.7
24	24.0	13.845	33.405		0.10	24.988	0.057	1501.	0.38	24.657	0.070	1498.	0.070	1498.	0.6
26	25.9	13.866	33.413		0.10	24.989	0.063	1502.	0.39	24.658	0.076	1498.	0.076	1498.	0.7
28	27.9	13.886	33.420		0.10	24.991	0.068	1502.	0.38	24.658	0.083	1498.	0.083	1498.	0.7
30	30.0	13.872	33.417		0.10	24.991	0.075	1502.	0.38	24.660	0.090	1498.	0.090	1498.	0.6
32	32.2	13.863	33.413		0.10	24.990	0.081	1502.	0.38	24.661	0.096	1498.	0.096	1498.	0.5
34	34.0	13.863	33.411		0.10	24.988	0.086	1502.	0.38	24.659	0.102	1498.	0.102	1498.	0.8
36	35.9	13.836	33.406		0.10	24.990	0.092	1502.	0.38	24.660	0.109	1498.	0.109	1498.	0.8
38	38.1	13.884	33.409		0.10	24.982	0.099	1502.	0.38	24.659	0.115	1498.	0.115	1498.	1.7
40	40.2	13.967	33.446		0.10	24.994	0.105	1502.	0.38	24.663	0.129	1498.	0.129	1498.	4.4
42	42.0	14.006	33.465		0.10	25.001	0.116	1502.	0.39	24.662	0.133	1498.	0.133	1498.	7.9
44	43.8	14.001	33.464		0.10	25.001	0.116	1502.	0.39	24.661	0.135	1498.	0.135	1498.	10.8
46	46.0	13.994	33.463		0.10	25.001	0.122	1502.	0.39	24.680	0.139	1500.	0.139	1500.	14.0
48	48.2	14.050	33.463		0.10	24.990	0.128	1503.	0.39	24.815	0.141	1504.	0.141	1504.	15.9
50	50.1	14.213	33.524		0.10	25.003	0.134	1503.	0.37	24.880	0.145	1507.	0.145	1507.	16.2
52	51.9	14.426	33.584		0.11	25.004	0.140	1504.	0.39	24.997	0.148	1508.	0.148	1508.	15.5
53	53.9	14.993	33.786		0.23	25.038	0.145	1506.	0.41	25.054	0.151	1509.	0.151	1509.	14.0
55	55.9	16.058	34.109		0.40	25.050	0.151	1510.	0.42	25.186	0.153	1509.	0.153	1509.	14.0
57	57.9	16.332	34.340		0.47	25.165	0.157	1511.	0.45	25.187	0.156	1509.	0.156	1509.	14.0
60	60.1	16.369	34.364		0.48	25.175	0.163	1511.	0.46	25.186	0.159	1509.	0.159	1509.	14.0
61	61.3	16.379	34.368		0.48	25.175	0.166	1511.	0.45	25.187	0.159	1509.	0.159	1509.	14.0
62	62.1	16.389	34.369		0.48	25.174	0.169	1511.	0.46	25.186	0.159	1509.	0.159	1509.	14.0
64	64.0	16.401	34.377		0.49	25.177	0.171	1511.	0.48	25.187	0.161	1509.	0.161	1509.	14.0
66	66.0	16.423	34.380		0.49	25.175	0.177	1511.	0.48	25.187	0.161	1509.	0.161	1509.	14.0
66	66.7	16.394	34.373		0.48	25.176	0.182	1511.	0.48	25.187	0.161	1509.	0.161	1509.	14.0

Appendix II

Manufacturers' specifications for instruments used on R/V OCEANUS Cruise 159.
See text for calibration of CTD.

Instrument	Sensor	Range	Accuracy	Resolution
CTD	Conductivity	1 to 65 mmho	±0.005 mmhos	0.001 mmhos
	Temperature	-32 to +32°C	±0.005°C	0.0005°C
	Pressure	0-3200 dbar	±3.2 dbar	0.048 dbar
	Oxygen	0-2 µA	±2 nA	0.5 nA
	Light	0-4.50 v	±0.1 v	0.01 v

Appendix III Methods for nutrient analysis

Automated methods for nutrients were based on Wood, Armstrong and Richards (1967) for nitrate, Bendschneider and Robinson (1952) for nitrite, Murphy and Riley (1962) for phosphate, Koroleff (1976) for silicate, Soloranzo (1969) for ammonia, and described in Technicon Corp. Industrial method papers (1973). During analytical work with water samples some minor and major method changes have been made.

References

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Appendix IV.- NBIS CTD 9-track tape format

The NBIS CTD tape recorder interface writes two types of records; data records and header records. The records are 512 bytes (8 bits/byte) long. The usual sequence in a CTD cast will be one header record, followed by data records, followed by an End-Of-File.

Data records

A single scan of CTD data is 13 bytes long, 1 byte of frame sync and 12 bytes of data (table 1). An integer number of data scans is packed into 512 byte data records. For the USGS CTD, a data record contains 39 scans of data, and the remaining 5 bytes in the data record are filled with zeros.

Header records

A scan of header information consists of 8 bytes. The first byte is frame sync, which is either 00 (all "0"s) or FF (all "1"s). The remaining 7 bytes represent 14 BCD digits (4 bits each) which may be set on the CTD front panel. The 8 byte scan of header information is padded with zeros. One header record is written on the 9-T tape when "enter CTD header" data button is pushed.

Appendix Table III-1. - Bit assignments for USGS NBIS CTD

Byte	Variable	Range	Conversion
1	Frame sync	15 or 240	
2	Pressure LSB	0-65535	÷ 20 = P (dbars)
3	Pressure MSB		
4	Temperature LSB	0-65535	÷ 2000 = T (°C)
5	Temperature MSB		
6	Conductivity LSB	0-65535	÷ 1000 C (mmho)
7	Conductivity MSB		
8	Sign		LSB = pressure negative 2nd = temperature negative 3rd = oxygen temperature negative 4th-8th = zero
9	Oxygen current	0-4096	÷ 2000 = current (µA)
10	(12 bits only)		
11	Oxygen temperature	0-255	x 256 ÷ 2000 T (°C)
12,13	Transmission	0-4096	x 32 ÷ 4096 = TR (volts)