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MOSS LANDING MARINE LABORATORIES

OCEANOGRAPHIC RESULTS FROM THE VERTEX 5 PARTICLE-TRAP EXPERIMENT ACROSS THE CALIFORNIA CURRENT

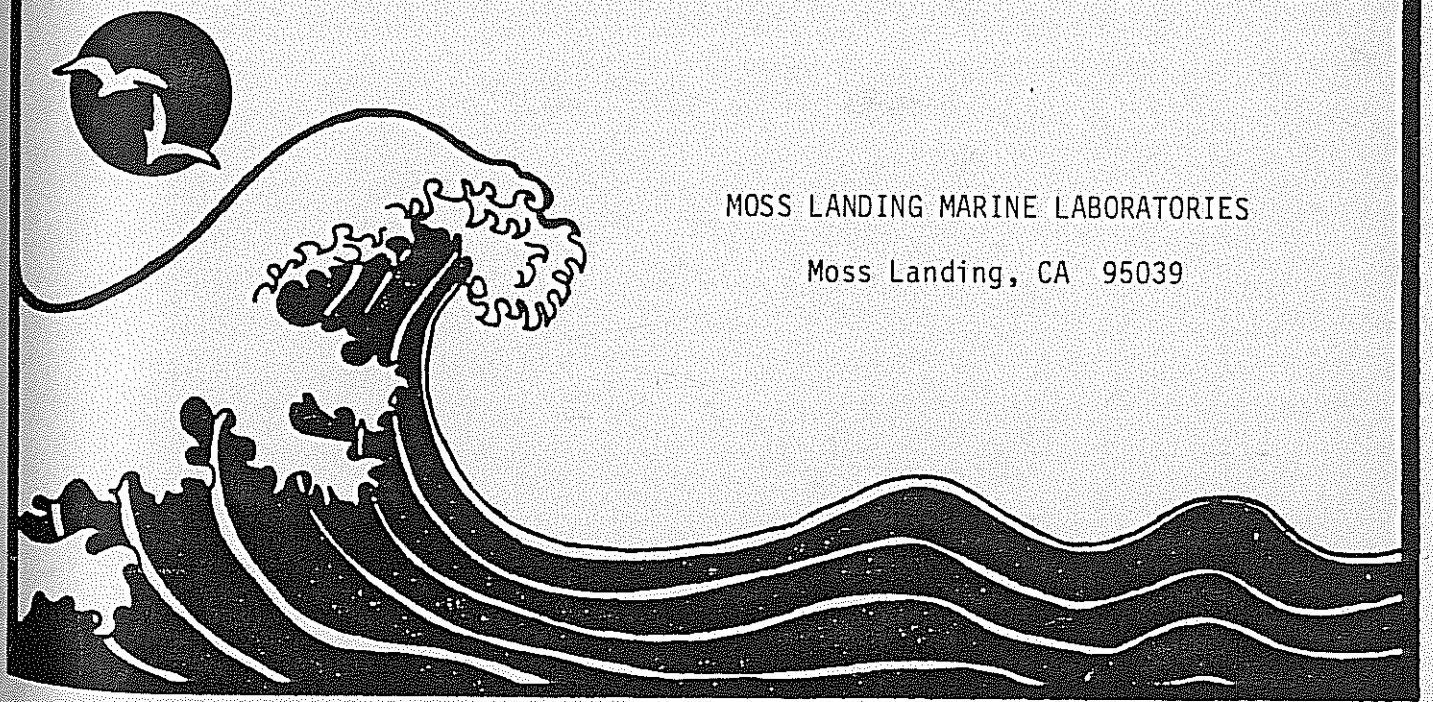
May - July 1984

Moss Landing Marine Laboratories Technical Publication 85-2

William W. Broenkow

Richard E. Reaves

August 1985



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INTRODUCTION

In this report, we present oceanographic results from the VERTEX 5 experiment conducted off the coast of California during May, June and July 1984. The major purpose of the VERTEX experiments is to understand chemical, biological and physical interactions that occur as particulate materials are produced in the upper portion of the water column, sink downward, and are transformed, decomposed, or repackaged. These studies require the expertise of many investigators at several institutions, and it is principally to these scientists to whom this data report is addressed. This report summarizes some pertinent information on the physical setting of the VERTEX 5 study area.

The data presented here were obtained by Moss Landing Marine Laboratories scientists working aboard R/V Cayuse, while the detailed biological and chemical studies were made by other scientists aboard R/V Wecoma and R/V Thomas G. Thompson. Only the oceanographic observations made by us are reported here.

SCIENTIFIC PERSONNEL

David Anderson	Graduate Research Assistant
William Broenkow	Chief Scientist
Leslie Dalaba	Graduate Research Assistant
Donald Eliason	Graduate Research Assistant
Brian Fadely	Student

Carolyn Green	Graduate Research Assistant
Katherine Hauschildt	Graduate Research Assistant
Alan Lewitus	Party Chief (Leg 1)
Kevin Lohman	Graduate Research Assistant
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Marla Stone	Graduate Research Assistant
Mark Yarbrough	Oceanographic Technician

ACKNOWLEDGMENTS

This research was supported by the National Science Foundation, Ocean Sciences Division, Grant No. OCE 82-16671. We very much appreciate the hard work and excellent seamanship of Capt. Donald Bradford and crew of the R/V Cayuse.

METHODS

The CTOD system is based on a Plessey 9400 underwater unit having conductivity, temperature, pressure and dissolved oxygen sensors. The dissolved oxygen sensor is a Beckman polarographic electrode which is temperature but not pressure compensated. Conductivity is measured with a Seabird SBE-4 platinum electrode conductivity cell with an external pump to provide rapid flushing. The system uses FM telemetry to transmit up to 5 analog signals from the fish to the Plessey 9040 deck unit. During VERTEX 5, the auxiliary fifth channel, voltage-controlled-oscillator, was used to acquire data from two optical sensors: (1) a Variosens fluorometer; and (2) a modified Martek beam transmissometer. Since five signals are used with the Plessey system, only one of the bio-optical sensors was used at a time: generally the transmissometer

was used during the down-cast, and the fluorometer was used during the up-cast. At several stations on Leg 2, the fluorometer was used as a scattering meter by using identical excitation and emission filters. Table 1 identifies which sensors were used at various stations.

Fluorescence was excited by the Variosens fluorometer using a Xenon flash lamp through broad-band blue filters A or B (Fig. 24). Fluorescence was detected by a silicon diode using broad-band or interference filters in the yellow, orange and red portion of the visible spectrum (Fig. 25). The transmissometer measured beam attenuation at 520 nm using a Wratten 61 filter or at 460 nm using the Wratten 45 filter. In Table 1 the filter combinations for the fluorometer are identified by a letter (A or B) to indicate the excitation filter, and a number (1-8) to indicate the emission filter. More details of the bio-optical instruments are provided by Broenkow et al. (1983a) and Lewitus (1984).

The data acquisition system is essentially the same as described by Broenkow et al. (1983a). The FM analog signals from the CTOD fish are routed by an HP-3497A Data Acquisition System scanner into a period-averaging counter for analog to digital conversion. The HP-9825T computer stores data at discrete depths: at 1-m intervals from the surface to 100 m; at 2-m intervals between 100 and 500 m; and at 5-m intervals thereafter. Each stored value of temperature, conductivity, dissolved oxygen and depth is determined by a center-weighted mean of 5 values obtained over a nominal 0.5-m interval (at winch speeds of 20 m/min). Temperature data are corrected for mismatch between the conductivity and temperature-time response by using a linear least-square time-rate-of-change determined from the 5 replicates. The

bio-optical data were sampled as quickly as possible due to the inherent noisiness of these signals. Typically 6 samples were averaged for the 1-m intervals; 16 for the 2-m intervals; and 60 for the 5-m intervals.

Before starting the up-cast, a rosette lanyard was tripped to change to the second bio-optical sensor, and up-cast profiles were obtained in the same manner as down-cast. At 6 depths during the up-cast, the winch was stopped to take 1.7-liter water samples for salinity and dissolved oxygen calibration. Reversing thermometers were used to field calibrate CTOD temperatures.

Salinity calibration samples were analyzed aboard ship using a Guildline Autosal 8400. Dissolved oxygen was analyzed using a colorimetric method similar to that described by Broenkow and Cline (1969), except that the iodine absorbance was determined in a 1-cm cuvette with a Varian 634 spectrophotometer at 430 nm which reduces the sensitivity for normal oxygen concentrations. The transmissometer was adjusted to read 85.5% in air (R.W. Austin, Scripps Visibility Laboratory, unpublished).

Calibration data were applied to the observed CTOD data using the following relations. The primed symbols indicate uncorrected values of temperature (T'), electrical conductivity (C'), pressure (P'), dissolved oxygen (O') as directly digitized from the sensor output. The unprimed values denote the corrected values.

$$T = a + bT'$$

$$Z = a + bZ'$$

$$Z' = f(P', \text{lat}) \quad \text{UNESCO (1983)}$$

$$S' = f(C', T, P) \quad \text{UNESCO (1983)}$$

$$O = a + bO'.$$

In the above, the first approximation to depth (Z') is determined from the UNESCO (1983) pressure-to-depth algorithm followed by an additional correction based on thermometric depths. The first approximation to salinity (S') is computed using the UNESCO (1983) algorithm using corrected pressure and temperature, but uncorrected conductivity (C'). Additional corrections to salinity are made by empirical correction based on temperature which accounts for variations in the conductivity cell-constant. Oxygen is corrected by an empirical, linear model, since we cannot obtain separate values for the membrane temperature with the five-channel system. The least squares coefficients for the CTOD corrections are given in Table 4.

Three neutrally buoyant ENDECO Model 741 current meters were placed on the MLML Trap-mooring at 40, 200, and 990 m. Current speed, direction and water temperature were recorded at 2-minute intervals. Digital precision of the thermistor data is 0.1 C, and the stall speed of the ducted propeller current meters is 2 to 3 cm/sec. Manufacturer's speed and direction calibrations have been applied, and the data were subsequently vector averaged to 30-minute intervals for presentation here.

Weather logs were maintained throughout both Leg 1 and Leg 2 of the Cayuse cruise. These data include wind speed and direction, wet and dry bulb air temperature, sea state, cloud type and coverage, and weather. These data have been collated and computer listings are available to those interested.

RESULTS

The intended Leg 1 cruise track was interrupted by severe weather. Originally we had planned to complete a line of stations to CTD Station 12 (Trap-4) and two parallel lines of CTD stations north and south of that line shoreward of Trap-2 area (Fig. 1). Most of the general oceanographic results are thus limited to the cross-sections of the Stations 1 to 12 section (Figs. 9-13) and to maps of the nearshore grid where three-dimensional observations were obtained (Figs. 2-7).

The MLML and UCSC particle-trap moorings were released in the Trap-1 area (sometimes referred to as Station 5C), which was within the coastal upwelling zone. The traps were released south of a cyclonic eddy (Fig. 4). The MLML Trap-1 mooring moved very slowly in a clockwise and then counterclockwise sense. The initial southward movement is consistent with the Leg-1 CTOD section (Fig. 11) which showed 20 cm/sec southward geostrophic surface flow. The Leg-2 CTOD survey of the Trap-1 area was made from 14 to 17 June. Hence the cyclonic geostrophic eddy (Fig. 4) appears to have influenced trap drift only during the last week of its deployment. The UCSC Trap-1 mooring appears to have drifted across the MLML mooring, but ARGOS data from the UCSC mooring were not obtained until 22 June, well after the CTOD survey was completed. Hence, it appears that the cyclonic eddy observed in the CTOD survey drifted southward and caused a rapid northwestward acceleration of the UCSC traps (Fig. 20). The net movement of the MLML Trap-1 mooring was only 13 km in 13 days, while the UCSC Trap-1 movement was 59 km in 15 days (net speeds of 1 and 5 cm/sec respectively).

The MLML Trap-2 mooring was released between CTD Stations 5 and 6 (once called trap Station 5B). This location was near the center of the

California Current where surface salinities were about 33.1. The core of the current (as suggested by salinities < 33), however, was between Stations 2 and 4 (Fig. 9). The north-south geostrophic current profile (Fig. 11) suggests weak (2 to 5 cm/sec) southerly flow in this area and a filament of northerly flow just east of where the traps were launched. The MLML Trap-2 mooring drifted slowly west to northwest only 23 km in 21 days (net speed 1 cm/sec; Fig. 21).

The MLML and UCSC Trap-4 moorings were set out at the edge of the subtropical gyre (surface salinity 34.4; Fig. 9). This location has been previously called Station 5A. The 2000-m MLML and 1500-m UCSC moorings respectively moved northeast 14 km and east 77 km during their 3-week drift (Fig. 22). Hence, the net speeds were 1 and 4 cm/sec. This difference in trap drift was probably caused by vertical current shear and a difference in the drag coefficients of the different moorings. Because the trap movement generally paralleled the CTOD section, geostrophic current estimates are of little use to understand the trap drift.

Relative currents were measured on the MLML Trap-1 and Trap-2 moorings. The peak, mean, and modal relative current speeds at 40, 200 and 990 m on the Trap-1 mooring were: 32, 11, and 9 cm/sec at 40 m; 24, 6, and 7 cm/sec at 200 m; 15, 5, 7 cm/sec at 990 m (Figs. 14-19). At 200 m on the Trap-2 mooring these speeds were 18, 7, and 7 cm/sec. By vector addition of the daily mean trap-mooring drift to the daily mean relative currents (Table 3), we have estimated the absolute current velocities for the Trap-1 and Trap-2 locations (Table 3, Figs. 23 and 24). The Trap-1 data indicate an initial easterly flow at 40 m followed by a rapid northward acceleration during the fifth day. Currents at

200 m were initially west to southwest, shifting to northwest after day 5, and at 990 m the current direction stayed more or less constant toward the west throughout the 12-day deployment. These results are consistent with the notion that an eddy drifted across the study area and are in qualitative agreement with the geostrophic maps discussed earlier. The effects of the eddy were not felt at 990 m, and this is consistent with vertical geostrophic shear which was strongest in the upper 400 m (Fig. 7). Absolute currents at 200 m on the Trap-2 mooring were northward at 3.5 cm/sec throughout the 21-day deployment (Table 3, Fig. 24). This is quite contrary to geostrophic current estimates from the Leg-1 section (Fig. 11) which indicated southerly flow. Since the traps were not deployed until nearly two weeks after the CTOD survey was made, this difference is not surprising. We have found good agreement between geostrophic speeds and the adjusted absolute currents estimated by the current meters when the CTOD surveys were contemporaneous with metered estimates (for example, Broenkow, 1982).

In addition to providing these general oceanographic results, a major goal of our work was to investigate the spectral nature of the intermediate depth fluorescence maximum we first observed off Mexico and Hawaii (Broenkow et al., 1983b; Lewitus, 1984). To do this, several different filter combinations were used on the fluorometer. However, fluorescence data shown in the CTOD data listings are from the A7 filter combination only (Fig. 25). This filter combination was used on all previous VERTEX cruises. The results of the VERTEX 5 fluorescence observations using other filters have been discussed elsewhere (Broenkow et al., in press); however, included in this report are some scattering profiles obtained in the nearshore Trap-1 area. These scattering

profiles were made by use of identical excitation and emission filters on the fluorometer. The scattering profiles shown for CTOD Stations 19, 23, 24, 27, and 30 indicate a high correlation with the transmissometer profiles. At Station 24 we observed a layer of high scattering and low transmission between the surface and 150 m (probably from phytoplankton) and another scattering layer near the bottom (probably the bottom nephaloid layer). Mid-water scattering layers were observed in profiles obtained in the Trap-1 area. For example, at Station 27 the scattering profile shows a maximum near 1400 m, and the transmissometer profile at Station 25 showed a minimum near the same depth. These features are below the depth of the maximum fluorescence (Fig. 13) and are at about the depth of the top of Davidson Seamount which rises to 1340 m between Stations 25 and 26 (35°45'N latitude, 122°50'W longitude). So there is some suggestion of direct sources of inorganic particulates to the Trap-1 area.

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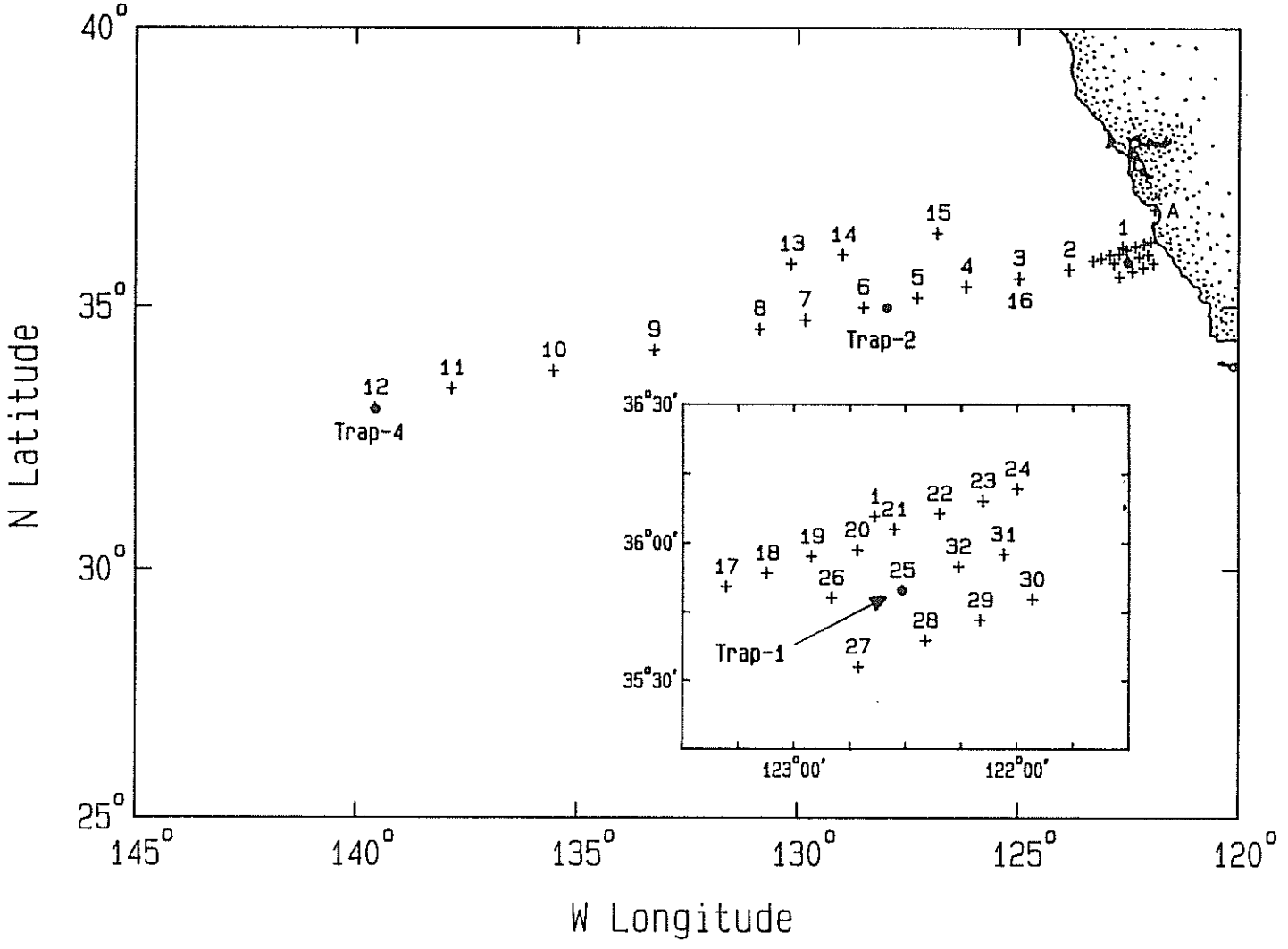


Figure 1. VERTEX 5 CTOD station positions, Leg 1 (Stations 1-15) 20 to 30 May 1984; Leg 2 (Stations 16-32) 11 to 17 June 1984.

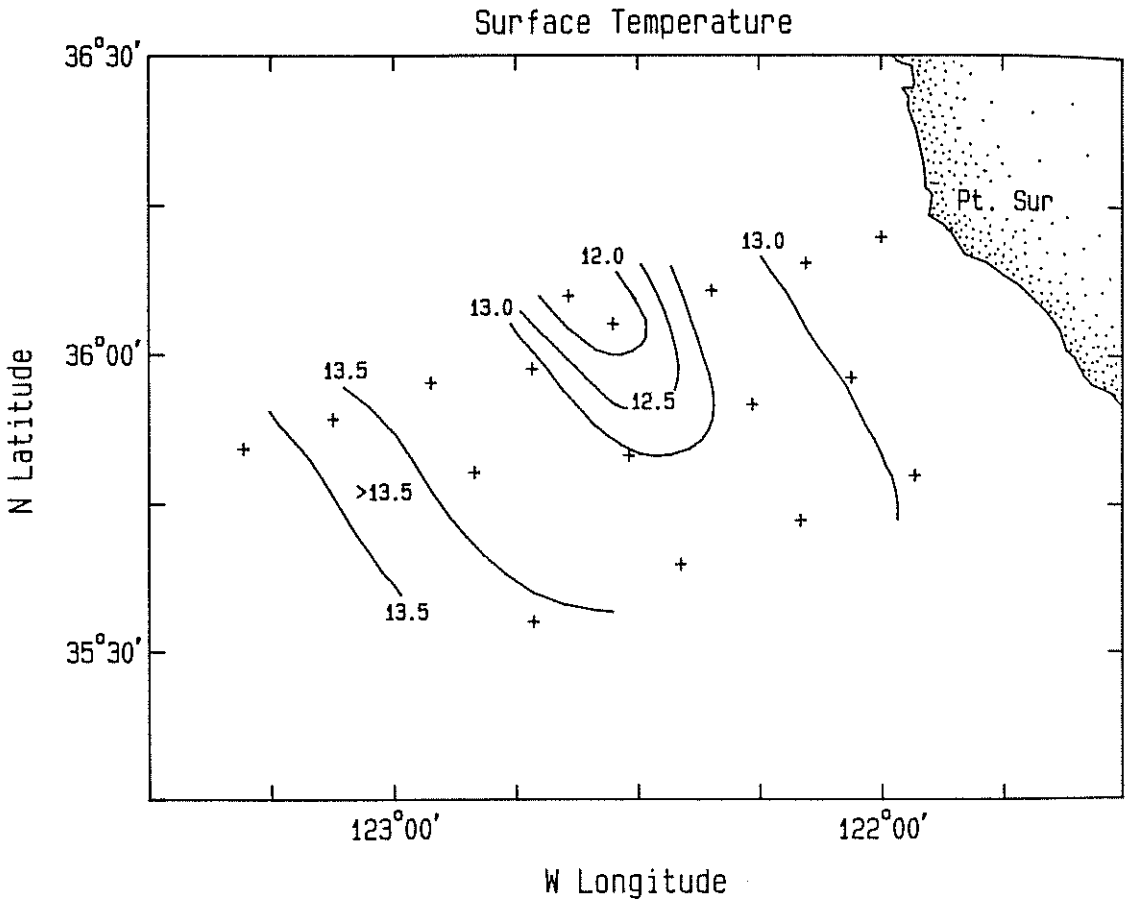


Figure 2. Surface temperature (Celsius) VERTEX 5, Leg 2; 11 to 17 June 1984.

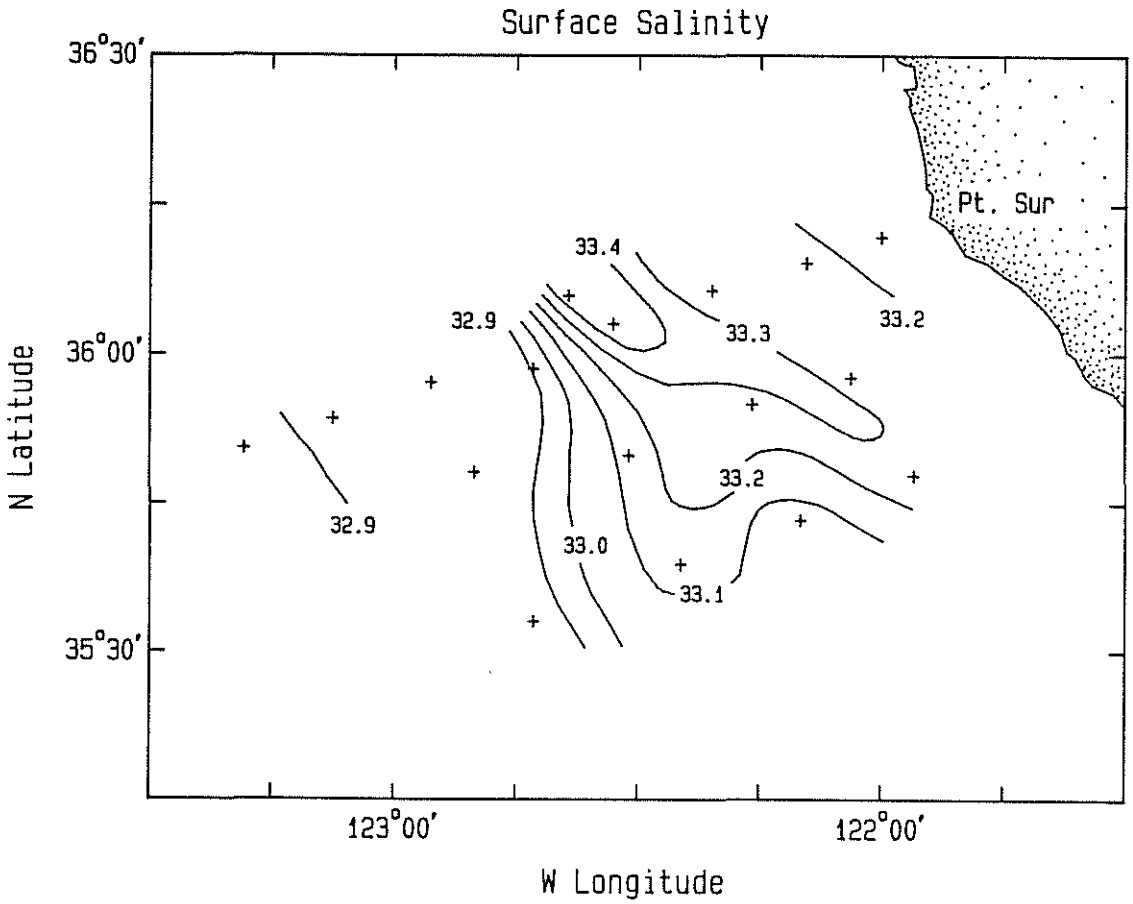


Figure 3. Surface salinity VERTEX 5, Leg 2; 11 to 17 June 1984.

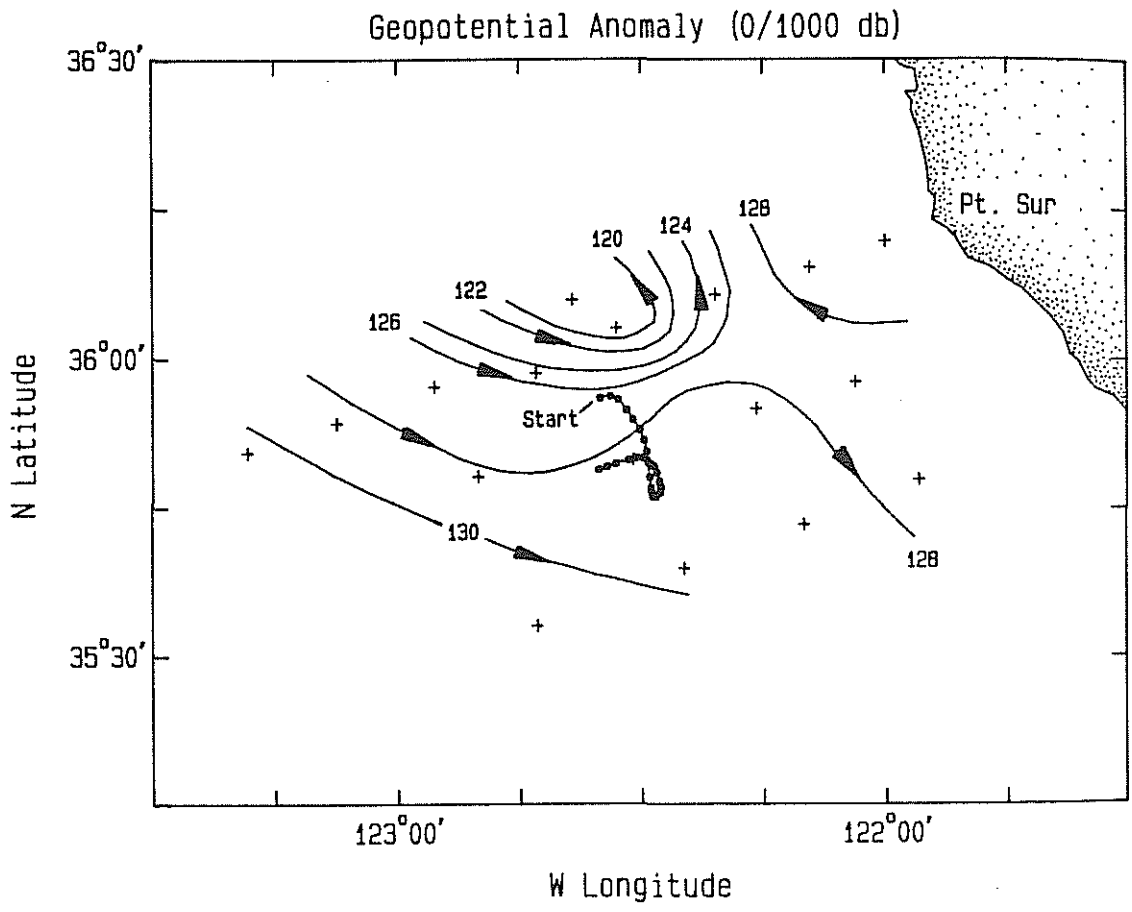


Figure 4. Geopotential anomaly (dyn cm) 0/1000 db. VERTEX 5, June 1984.

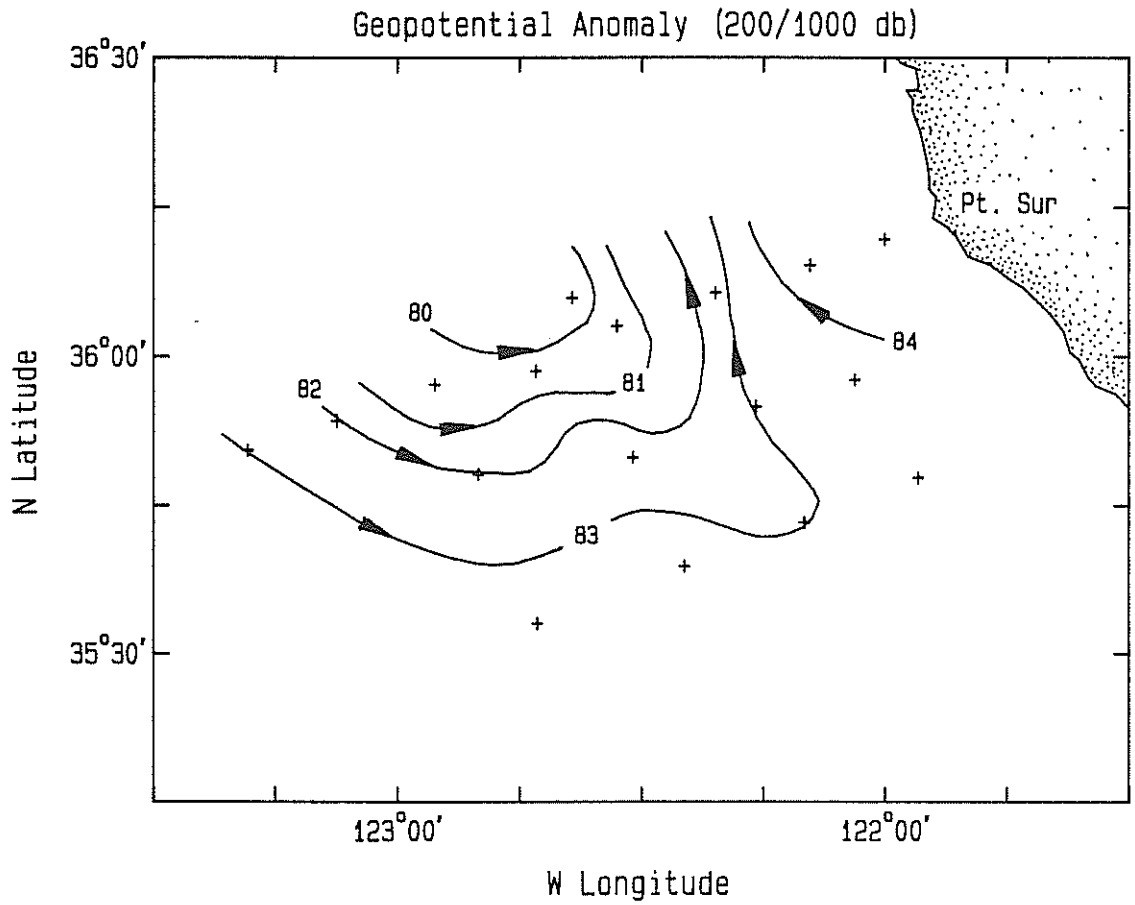


Figure 5. Geopotential anomaly (dyn cm) 200/1000 db. VERTEX 5, June 1984.

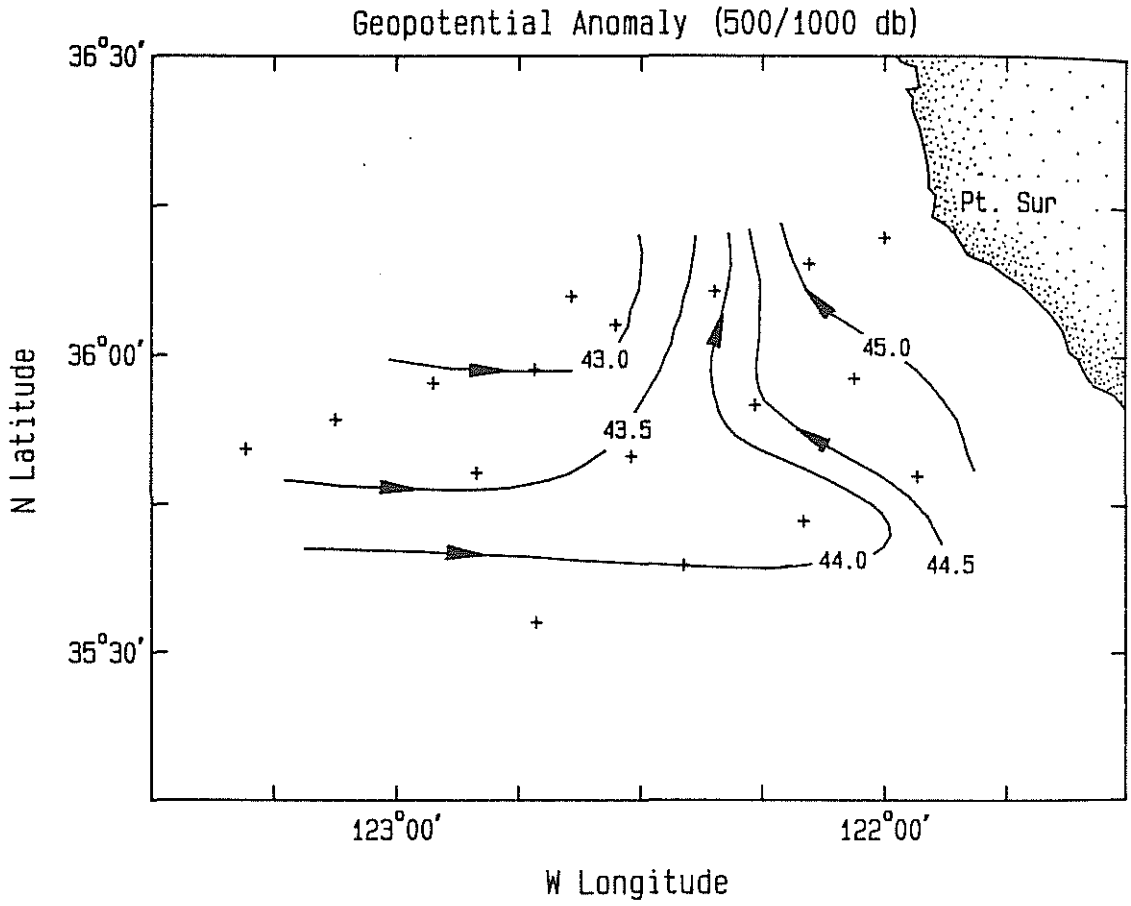


Figure 6. Geopotential anomaly (dyn cm) 500/1000 db. VERTEX 5, June 1984.

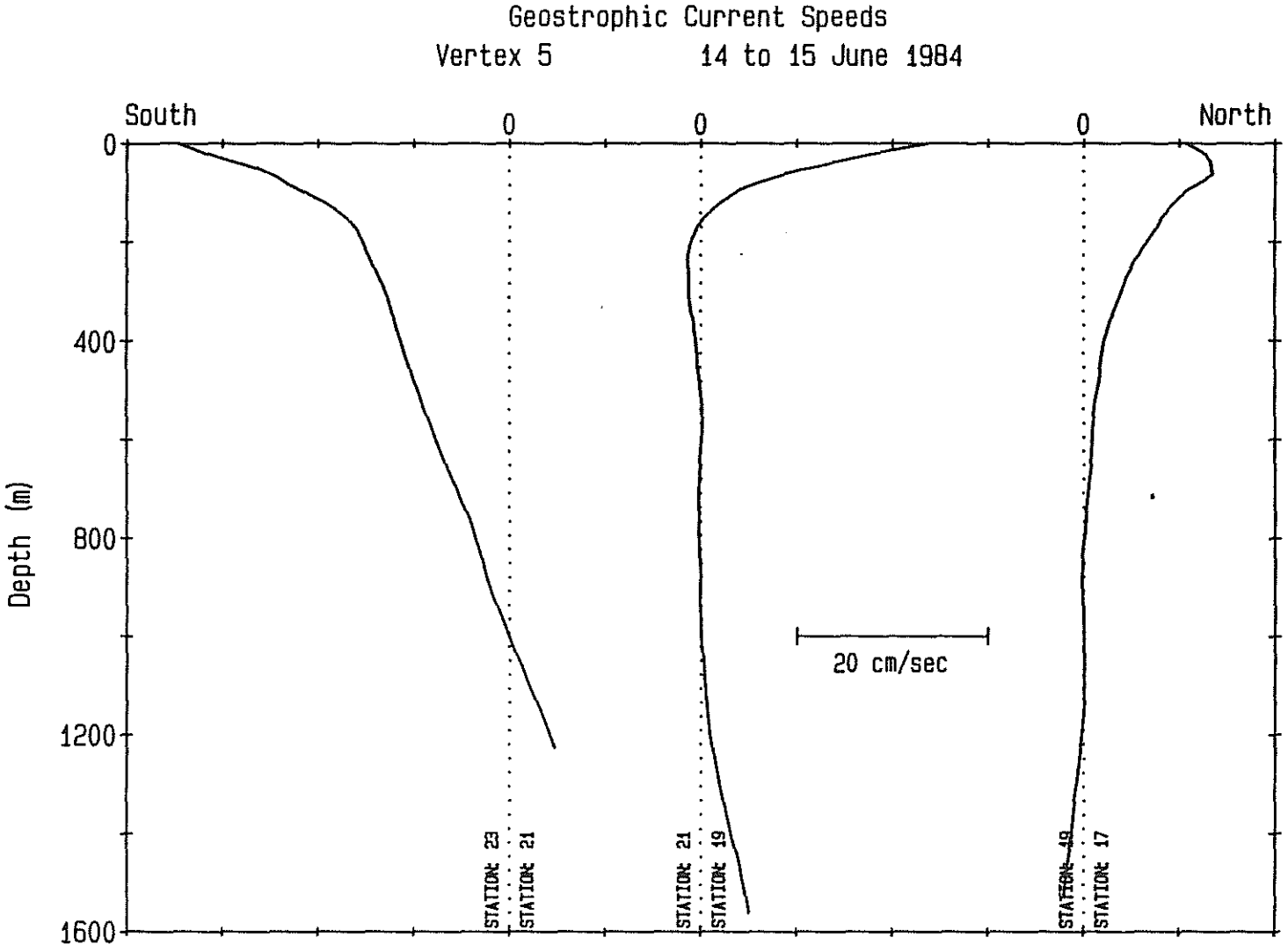


Figure 7. Geostrophic current profiles (cm/sec) relative to 1000 db along an east-west section between Stations 23 and 17. Positive values indicate northerly flow.

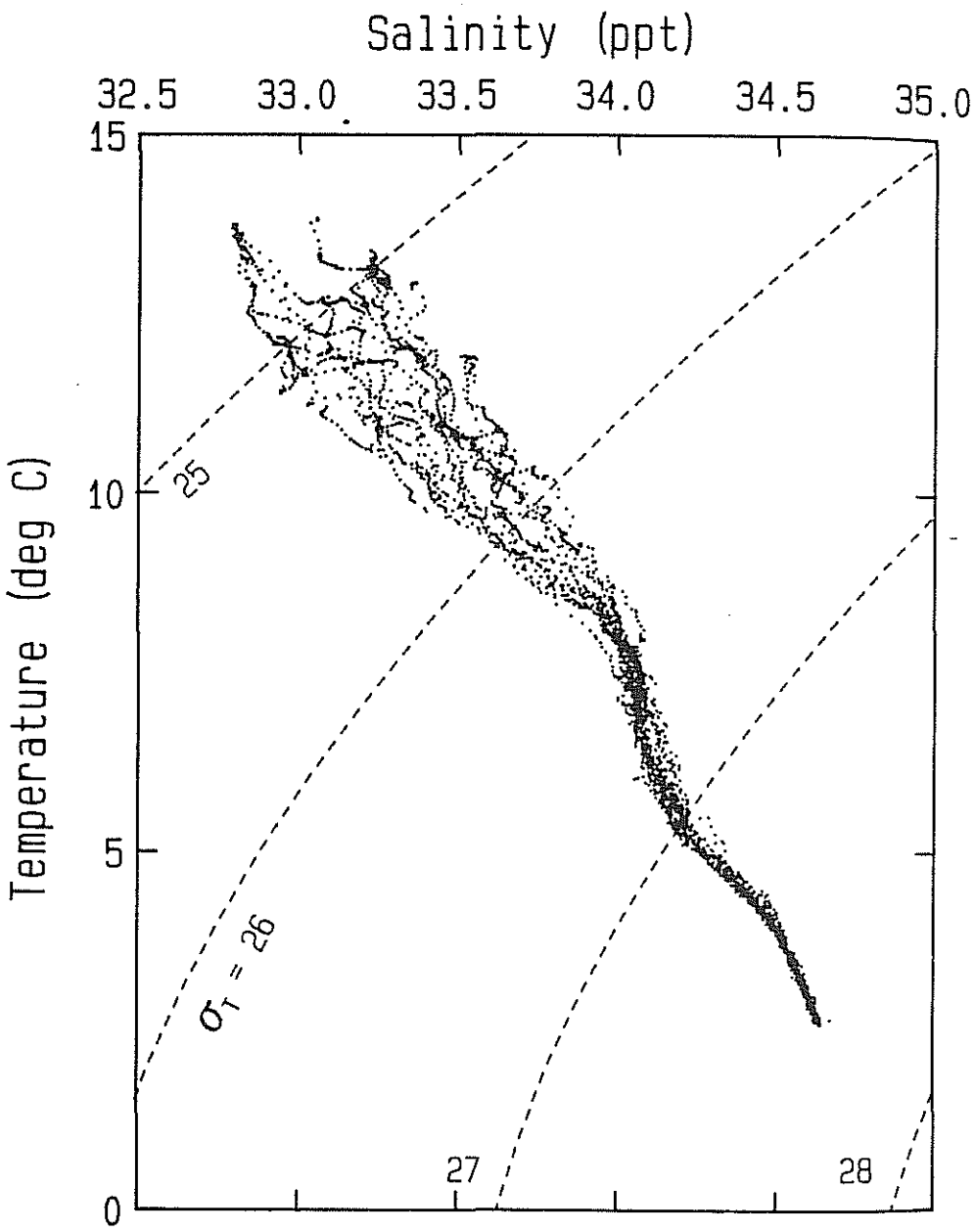


Figure 8. Composite temperature-salinity relationships for VERTEX 5, Leg 1 Station 1 and Leg 2 Stations 17-32.

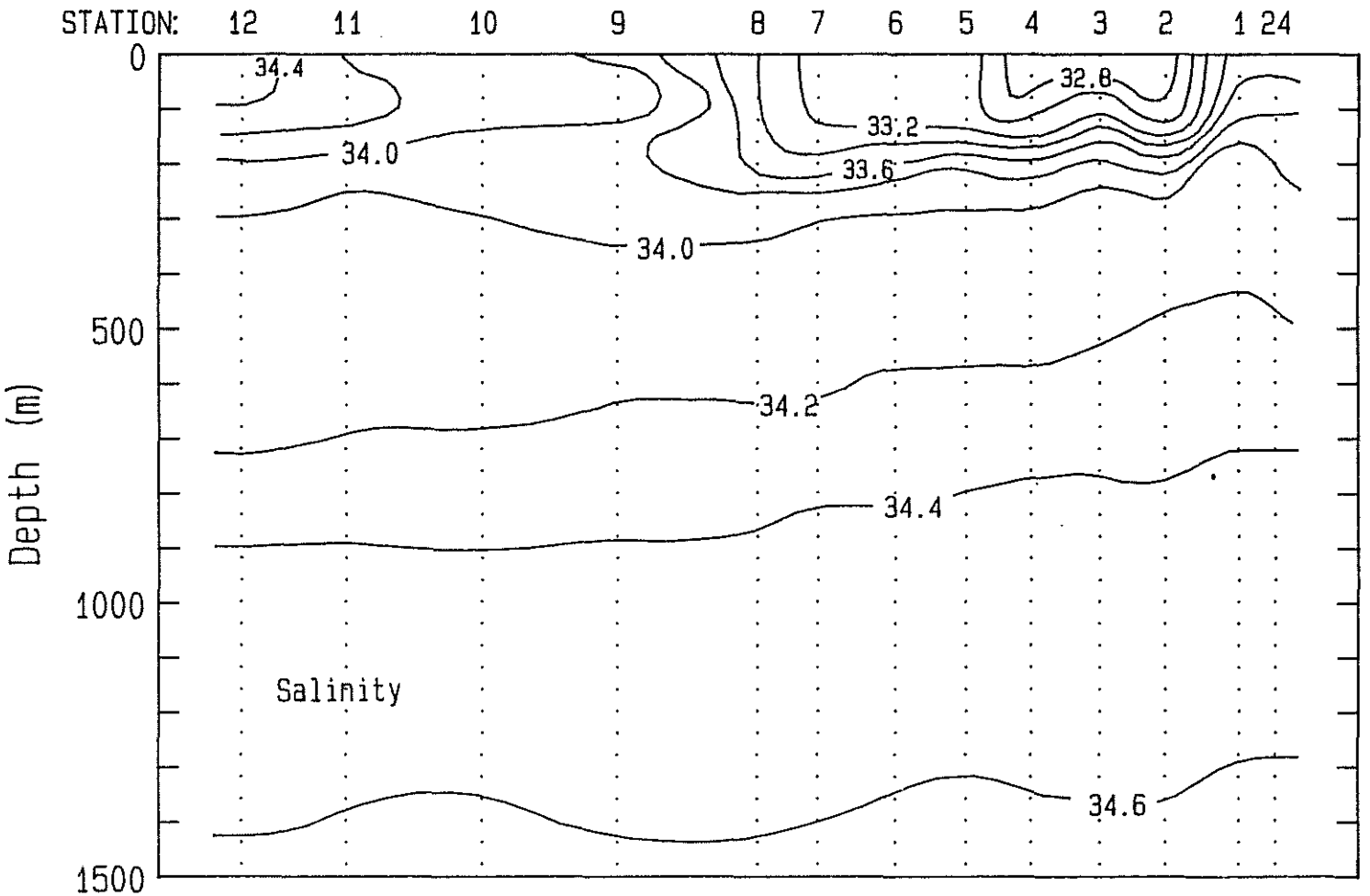


Figure 9. VERTEX 5, Leg 1, 20 to 30 May 1984. Salinity section, Stations 1 to 12 and 24.

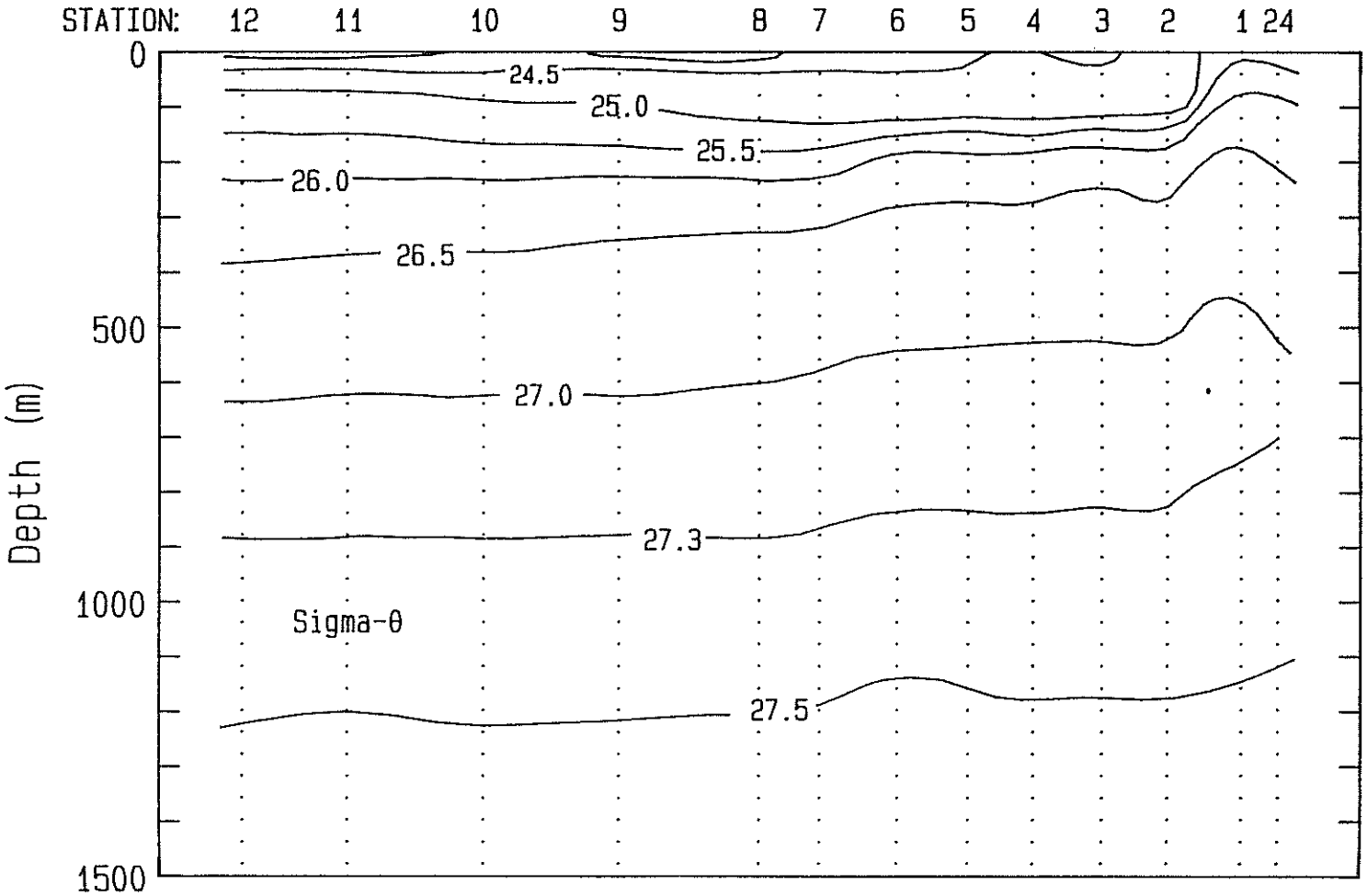


Figure 10. VERTEX 5, Leg 1, 20 to 30 May 1984. Sigma-Theta (g/liter) section, *Stations 1 to 12 and 24.*

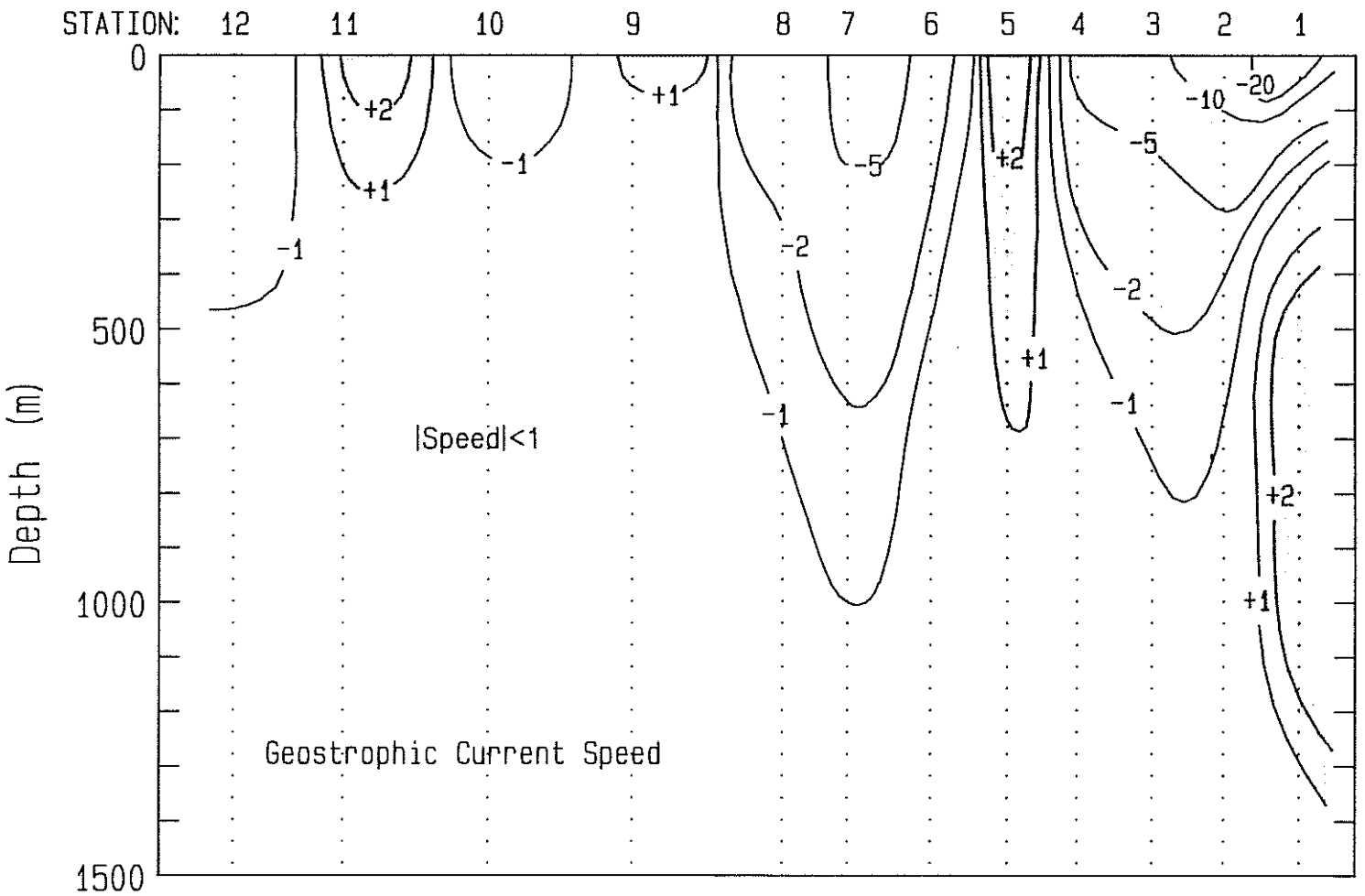


Figure 11. VERTEX 5, Leg 1, 20 to 30 May 1984. Geostrophic current (cm/sec) section, Stations 1 to 12 and 24. Shaded regions indicate northerly flow.

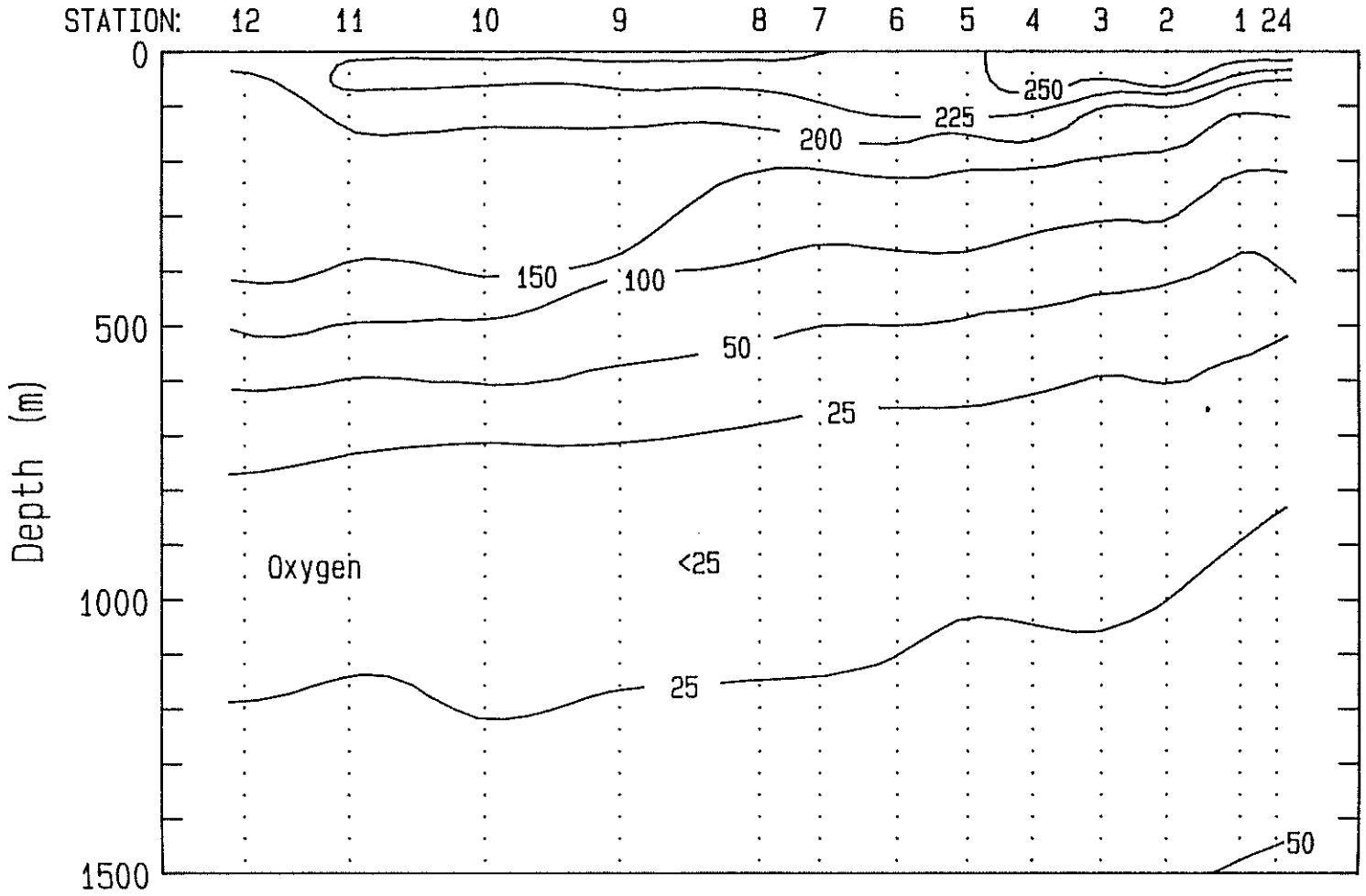


Figure 12. VERTEX 5, Leg 1, 20 to 30 May 1984. Dissolved oxygen (uM/kg) section, Stations 1 to 12 and 24.

and 24.

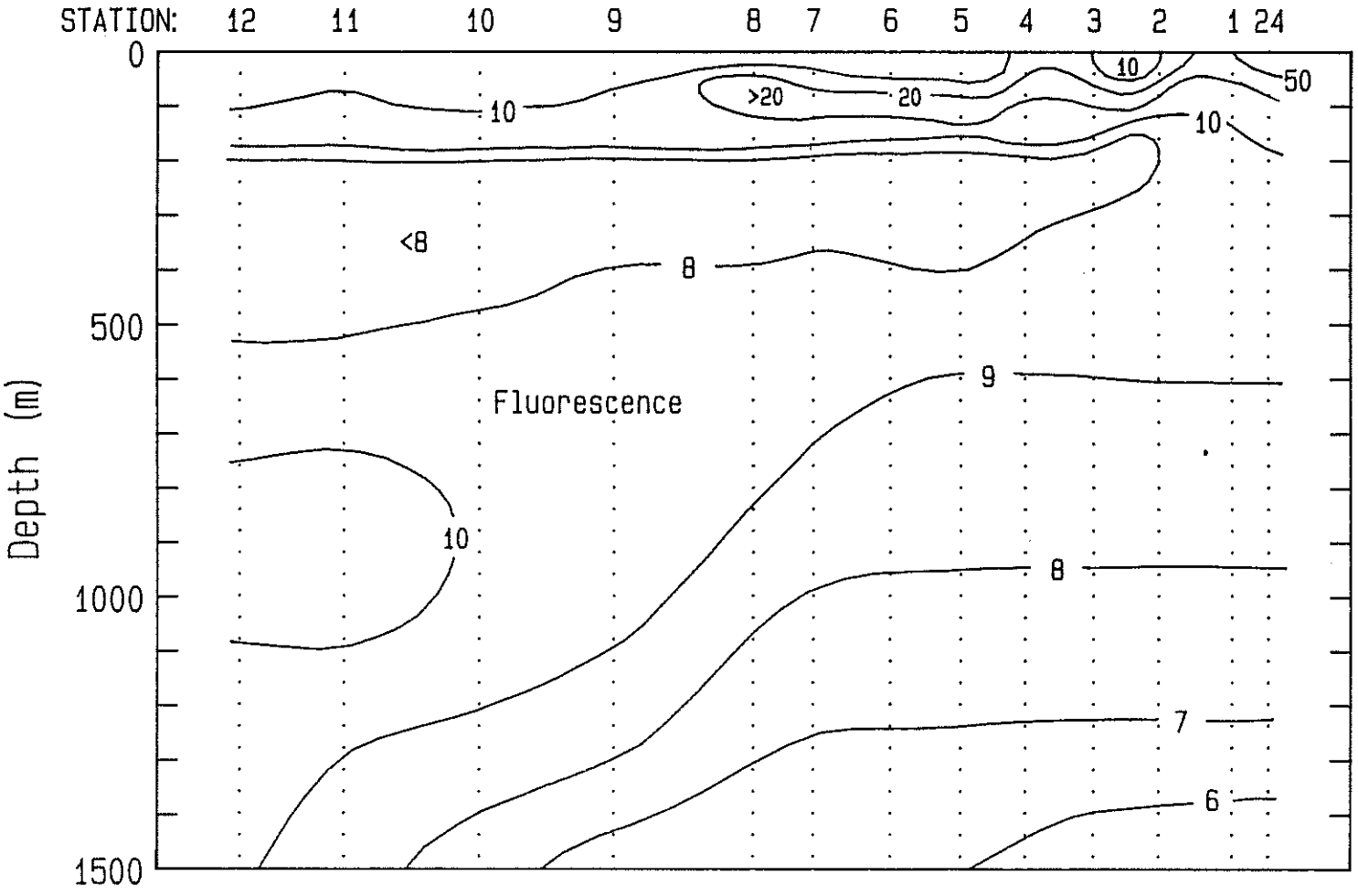


Figure 13. VERTEX 5, Leg 1, 20 to 30 May 1984. Pigment fluorescence (relative units) section, Stations 1 to 12 and 24. Only data from the A7 filter combination are shown here.

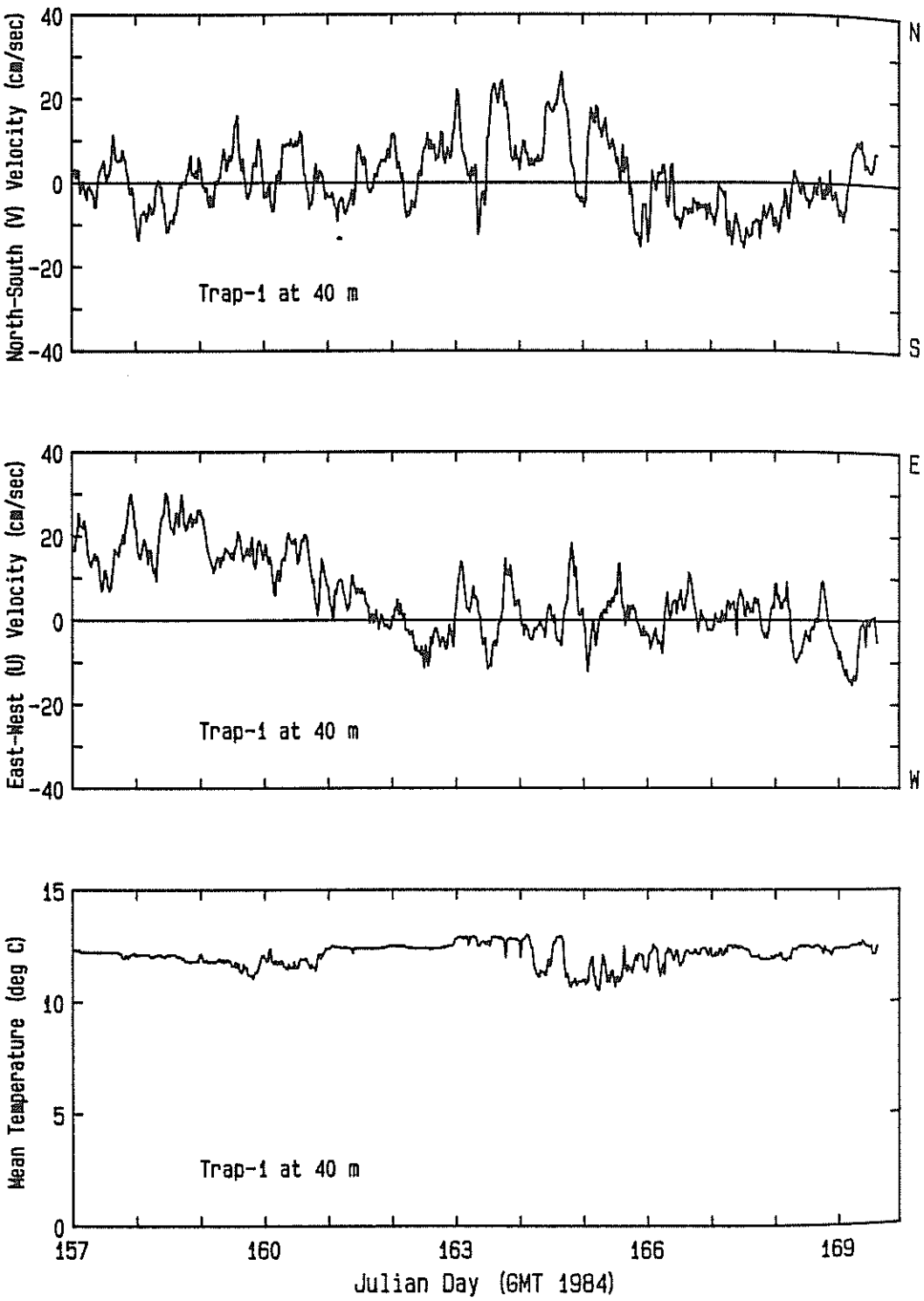


Figure 14. Relative current speed vectors and temperatures (30-minute average values) on the MLML Trap-1 mooring at 40 m. VERTEX 5, 5 to 17 June 1984.

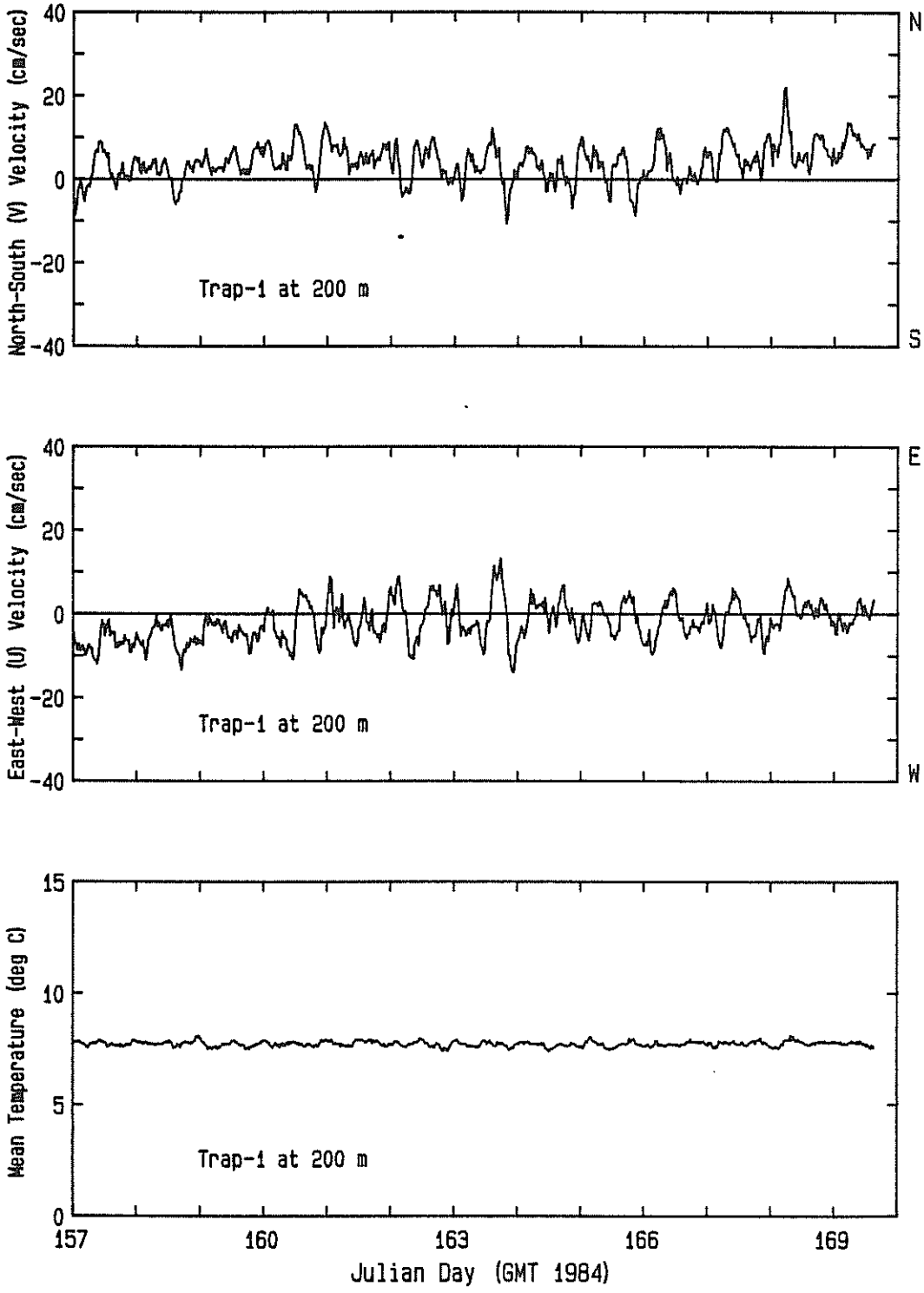


Figure 15. Relative current speed vectors and temperatures (30-minute average values) on the MLML Trap-1 mooring at 200 m. VERTEX 5, 5 to 17 June 1984.

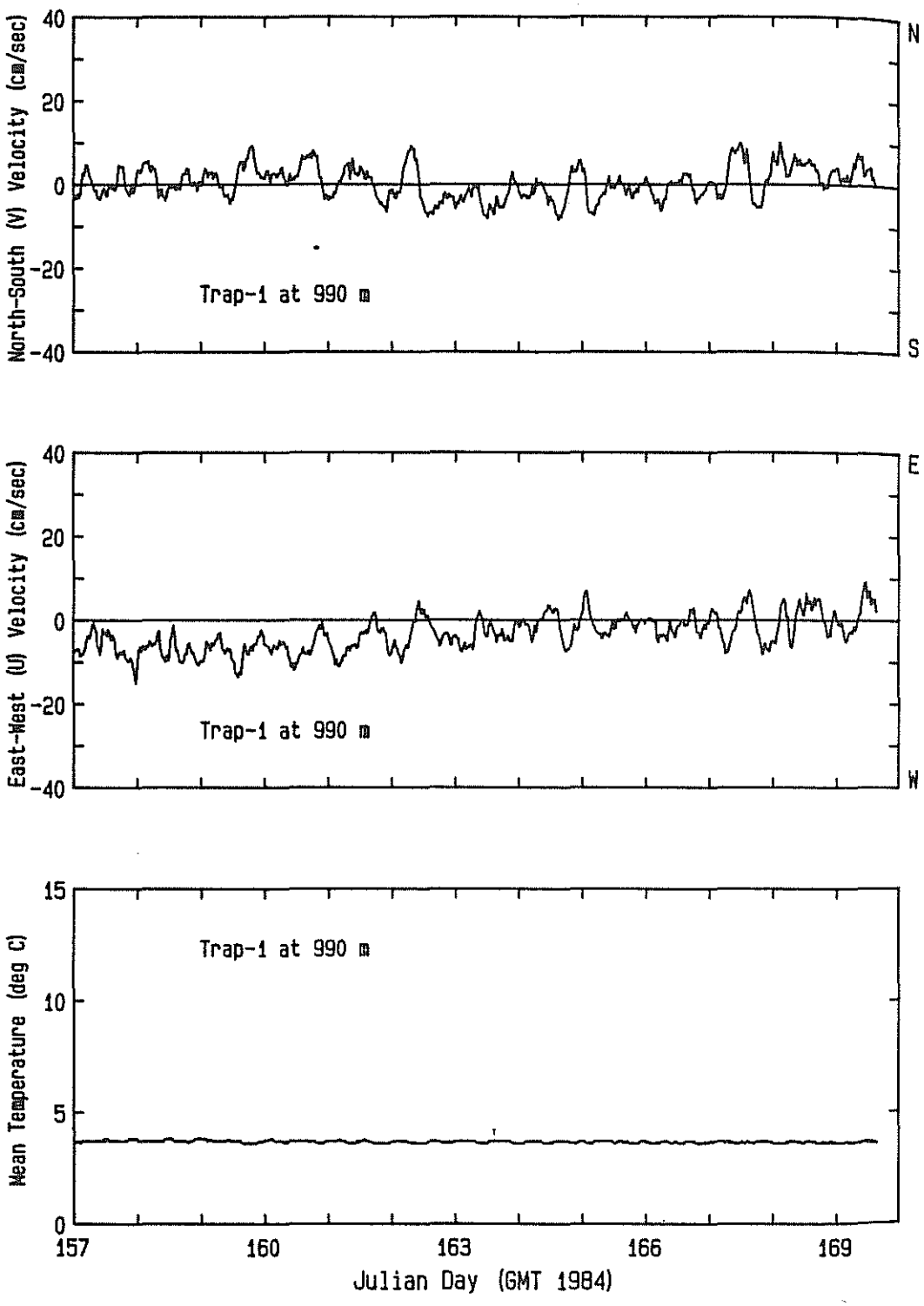


Figure 16. Relative current speed vectors and temperatures (30-minute average values) on the MLML Trap-1 mooring at 990 m. VERTEX 5, 5 to 17 June 1984.

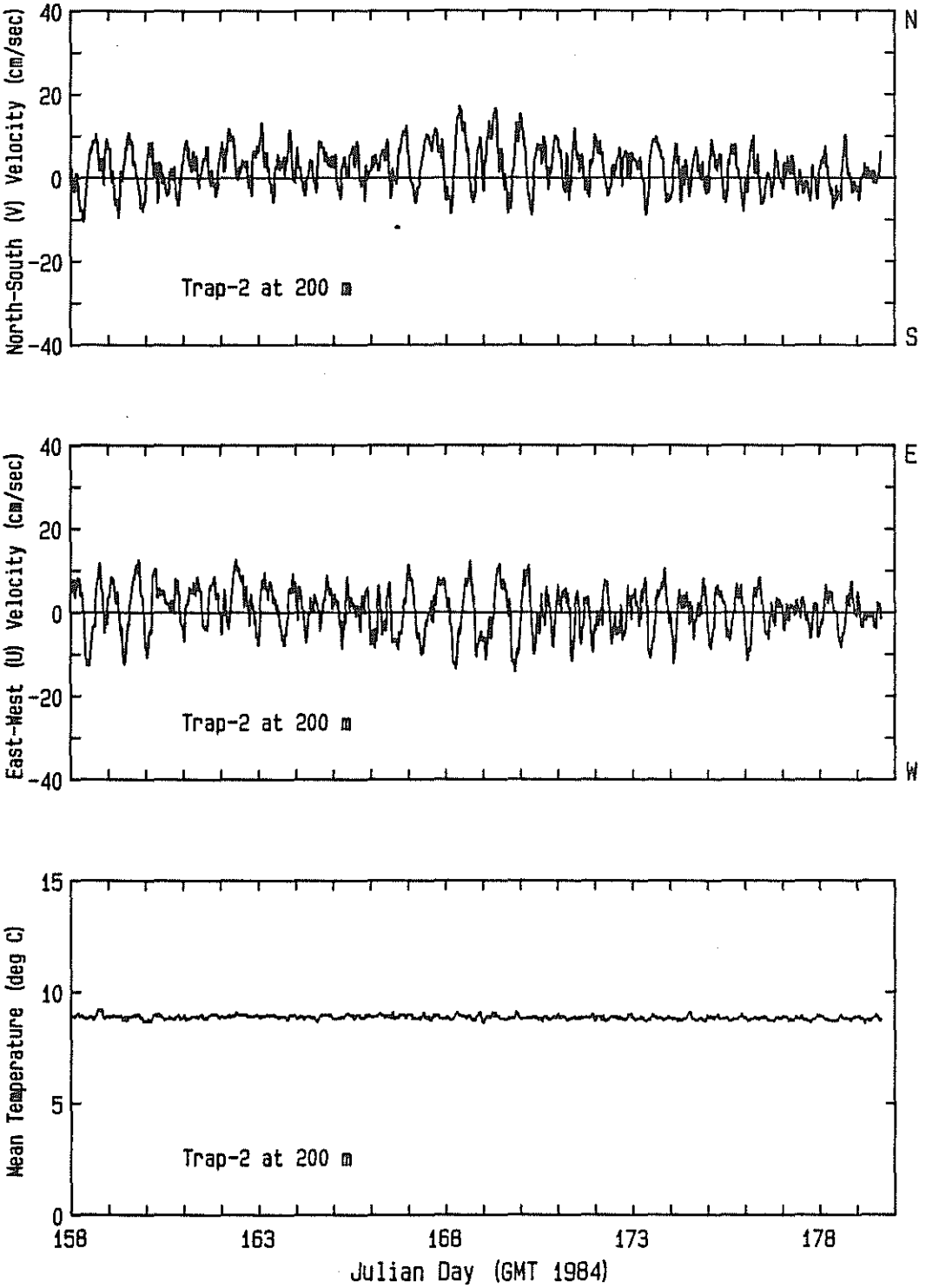


Figure 17. Relative current speed vectors and temperatures (30-minute average values) on the MLML Trap-2 mooring at 200 m. VERTEX 5, 6 to 27 June 1984.

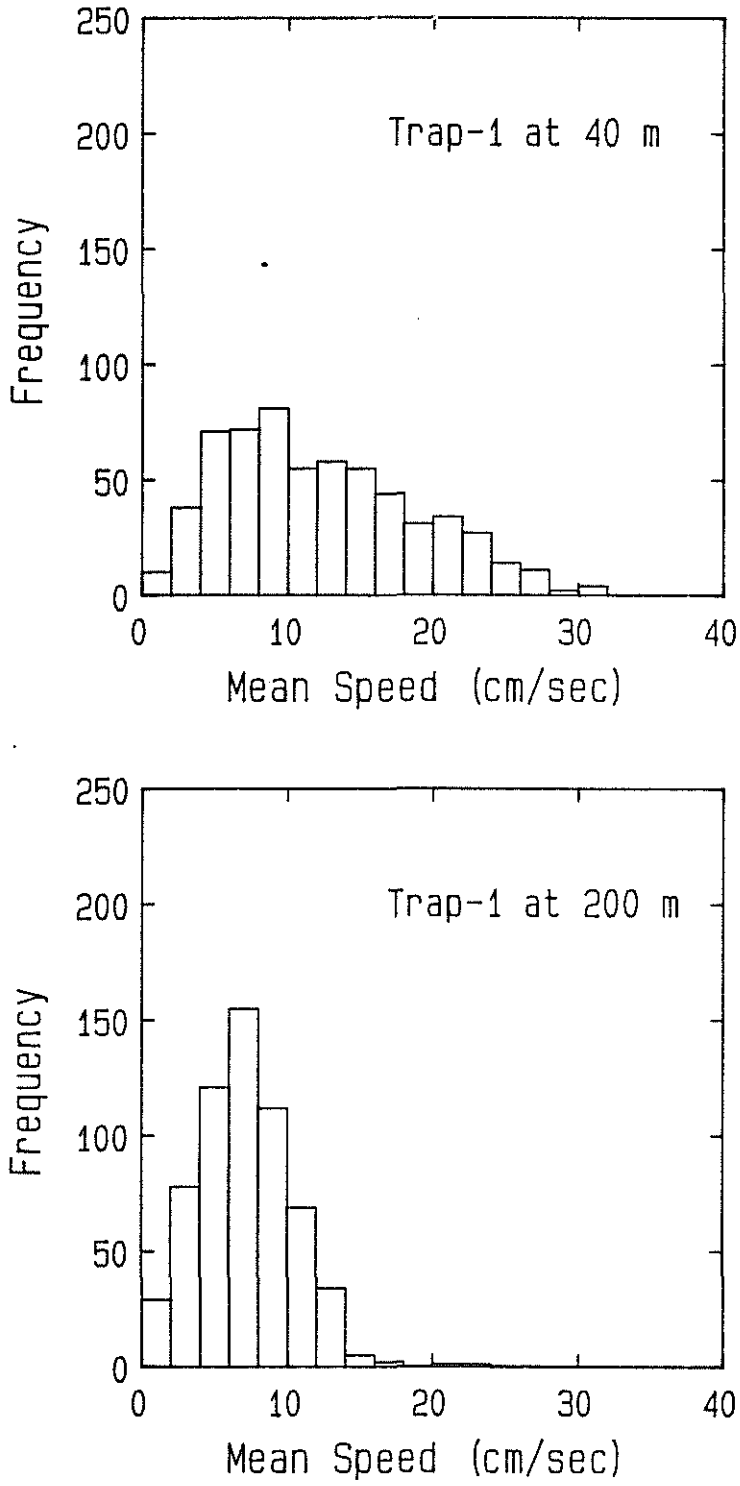


Figure 18. Relative current speed histograms (from 30-minute averages) on the MLML Trap-1 mooring at 40 and 200 m. VERTEX 5, 5 to 17 June 1984.

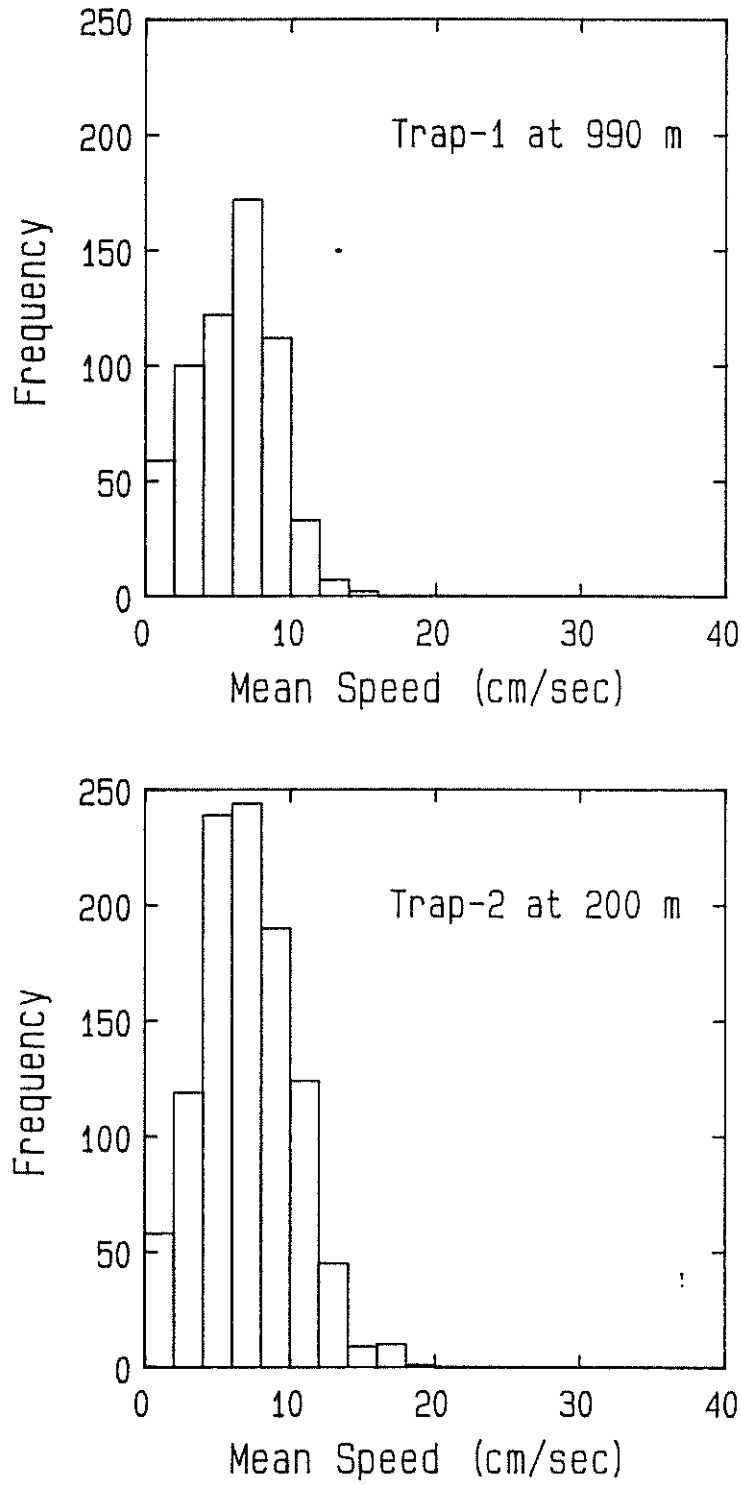


Figure 19. Relative current speed histograms (from 30-minute averages) on the MLML Trap-1 mooring at 990 m (5 to 16 June) and MLML Trap-2 mooring at 200 m (6 to 27 June), VERTEX 5 1984.

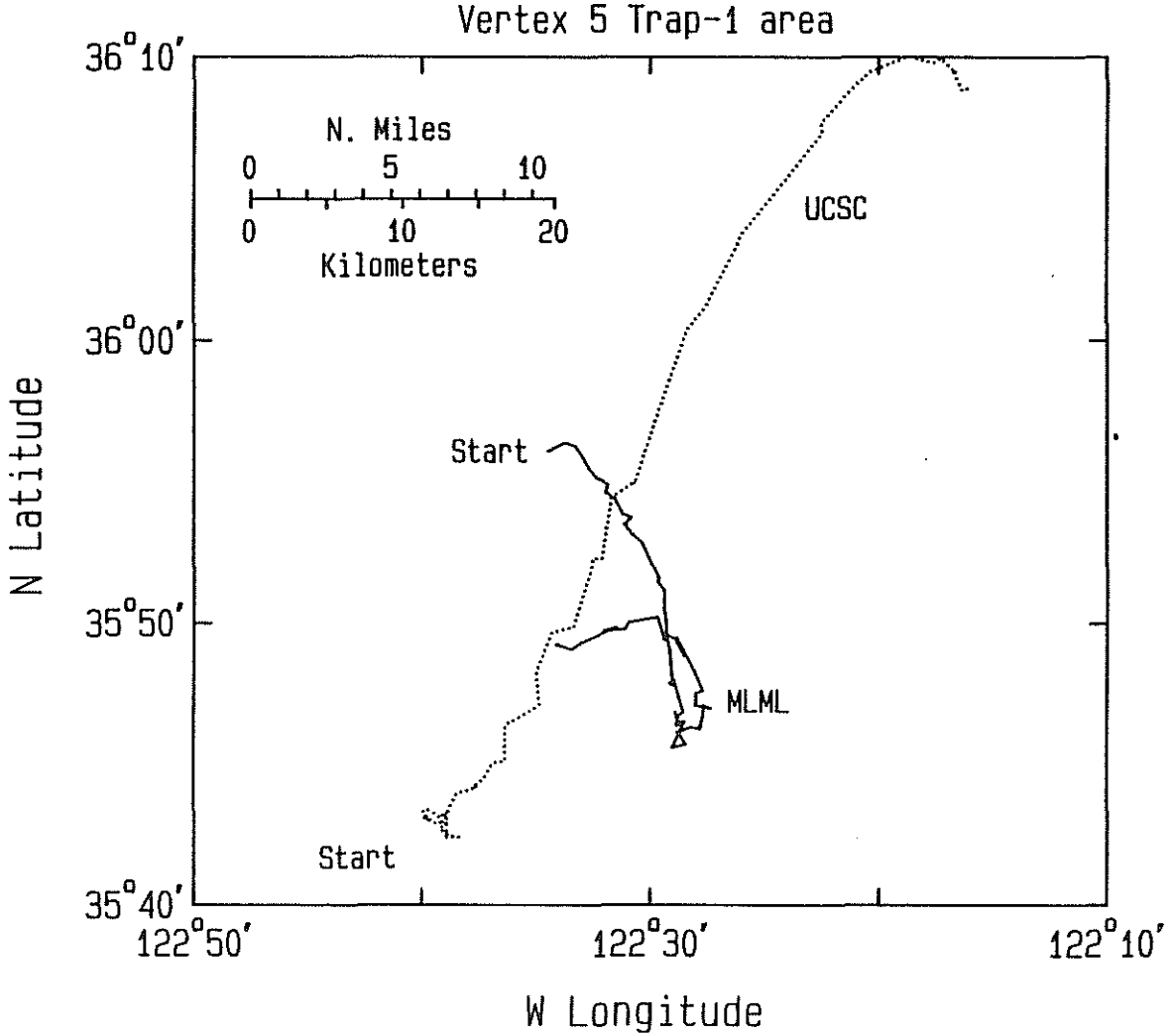


Figure 20. ARGOS satellite positions of the Moss Landing Marine Laboratories (MLML) 4 to 17 June and University of California Santa Cruz (UCSC) 22 June to 7 July particle traps; VERTEX 5, Trap-1 area, 1984.

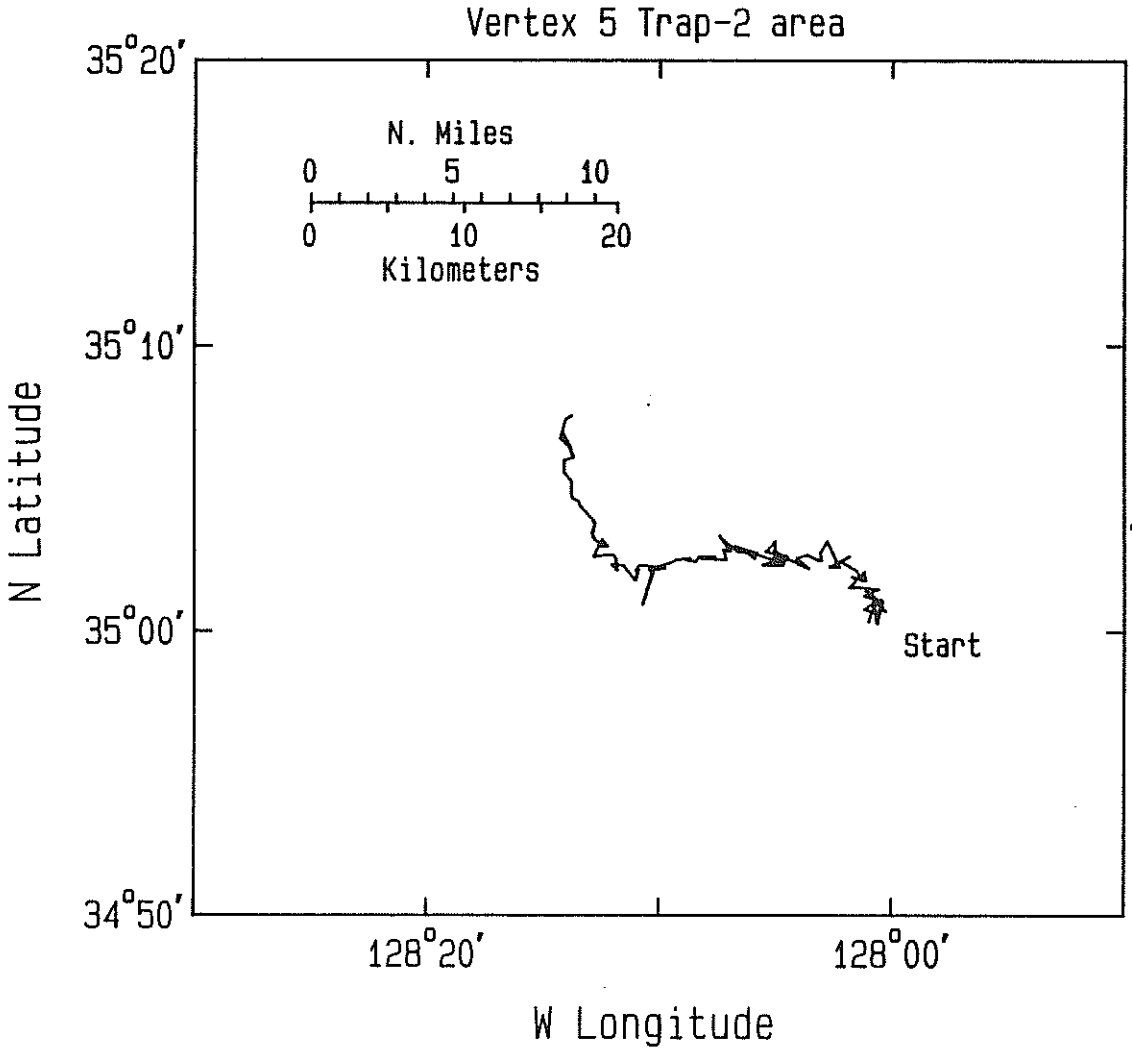


Figure 21. ARGOS satellite positions of the Moss Landing Marine Laboratories particle traps; VERTEX 5, Trap-2 area, 5 to 27 June 1984.

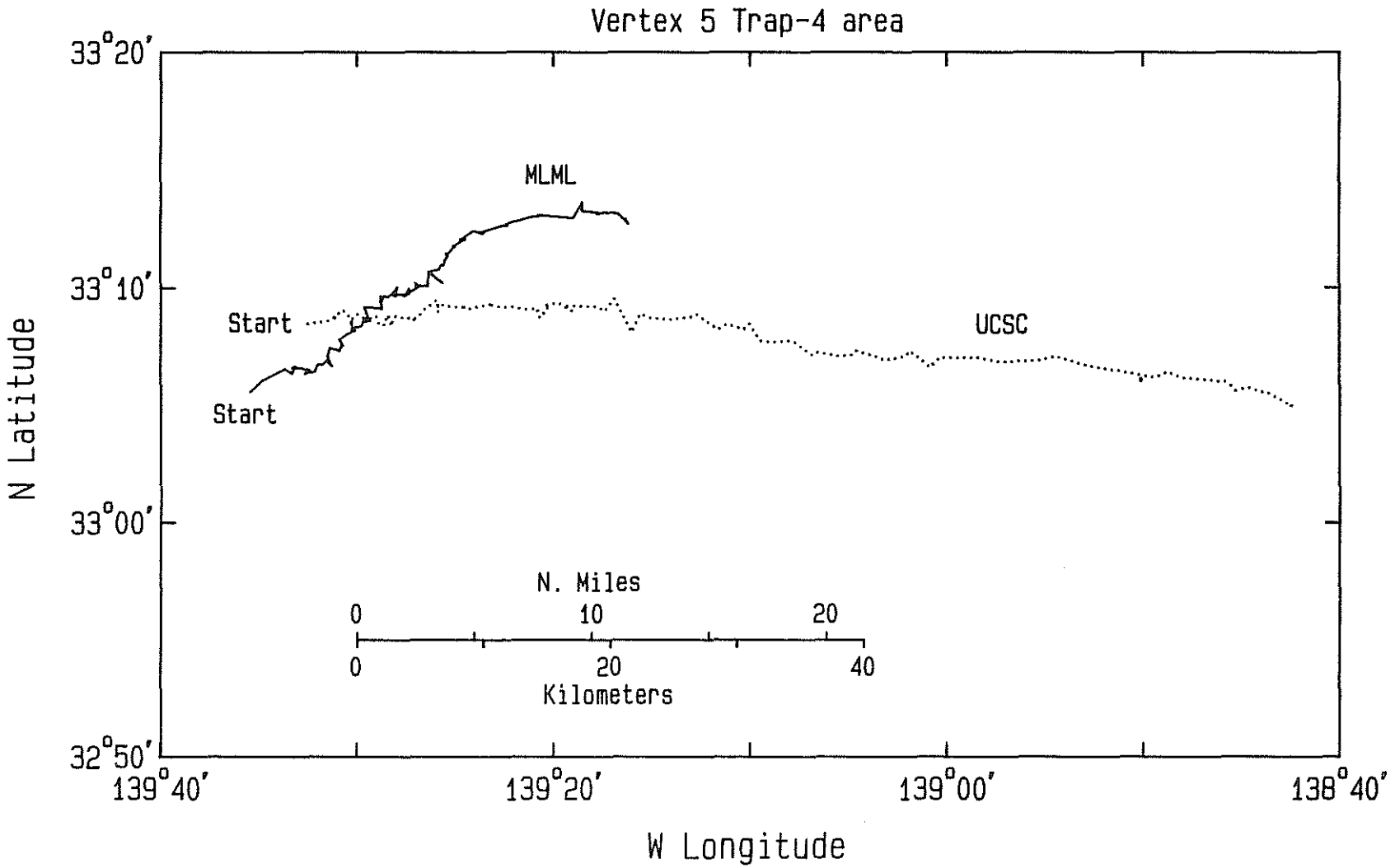


Figure 22. ARGOS satellite positions of the Moss Landing Marine Laboratories (MLML) 8 to 29 June and University of California Santa Cruz (UCSC) 8 to 27 June particle traps; VERTEX 5, Trap-4 area, 1984.

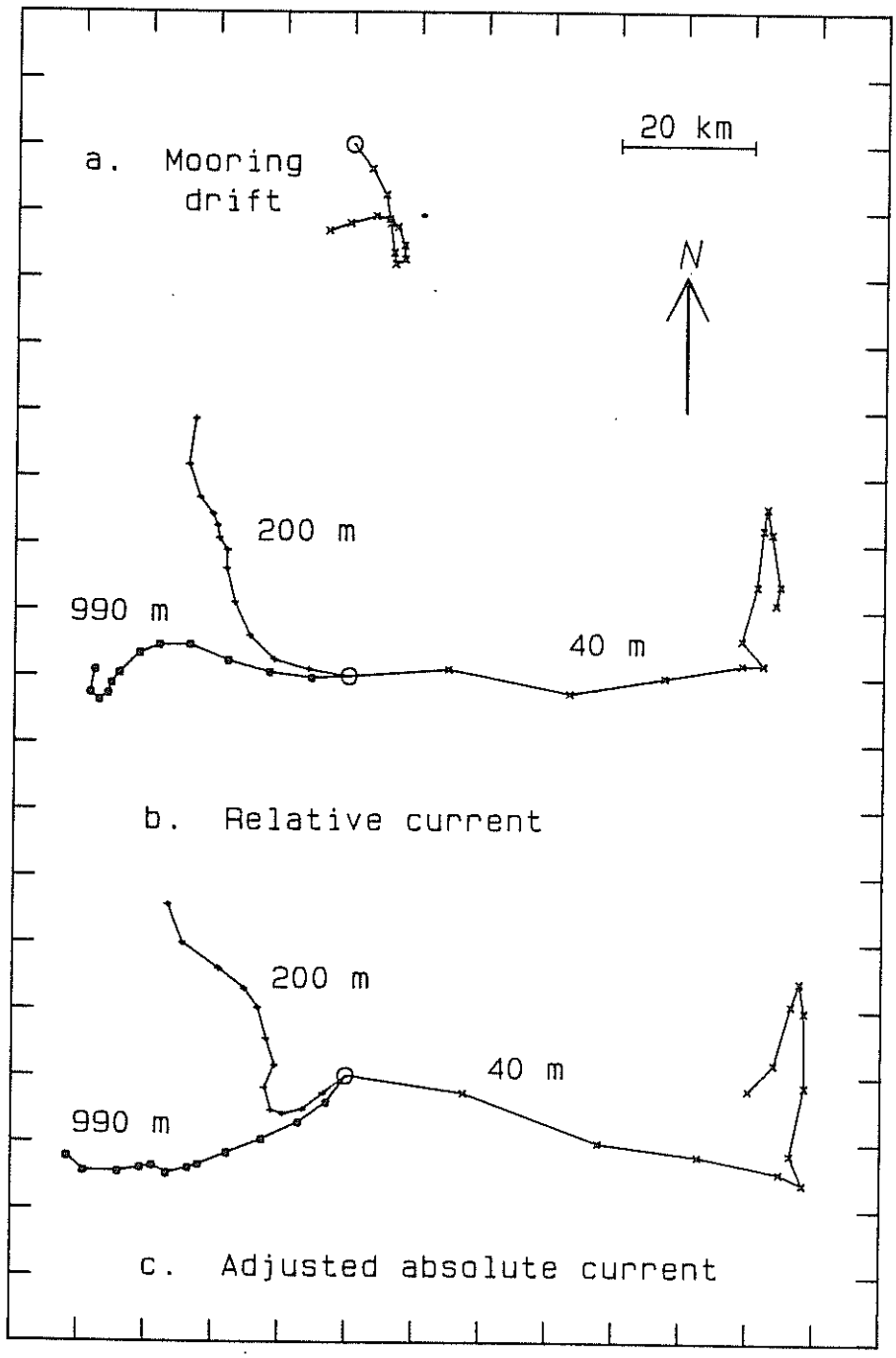


Figure 23. Progressive vector plots of daily-mean currents on the MLML Trap-1 mooring, VERTEX 5, 5 to 16 June 1984. (a) Mooring drift was determined from smoothed ARGOS positions; (b) relative current past mooring; (c) adjusted absolute current is the vector sum of the interpolated mooring drift and the relative currents. Circles show starting positions.

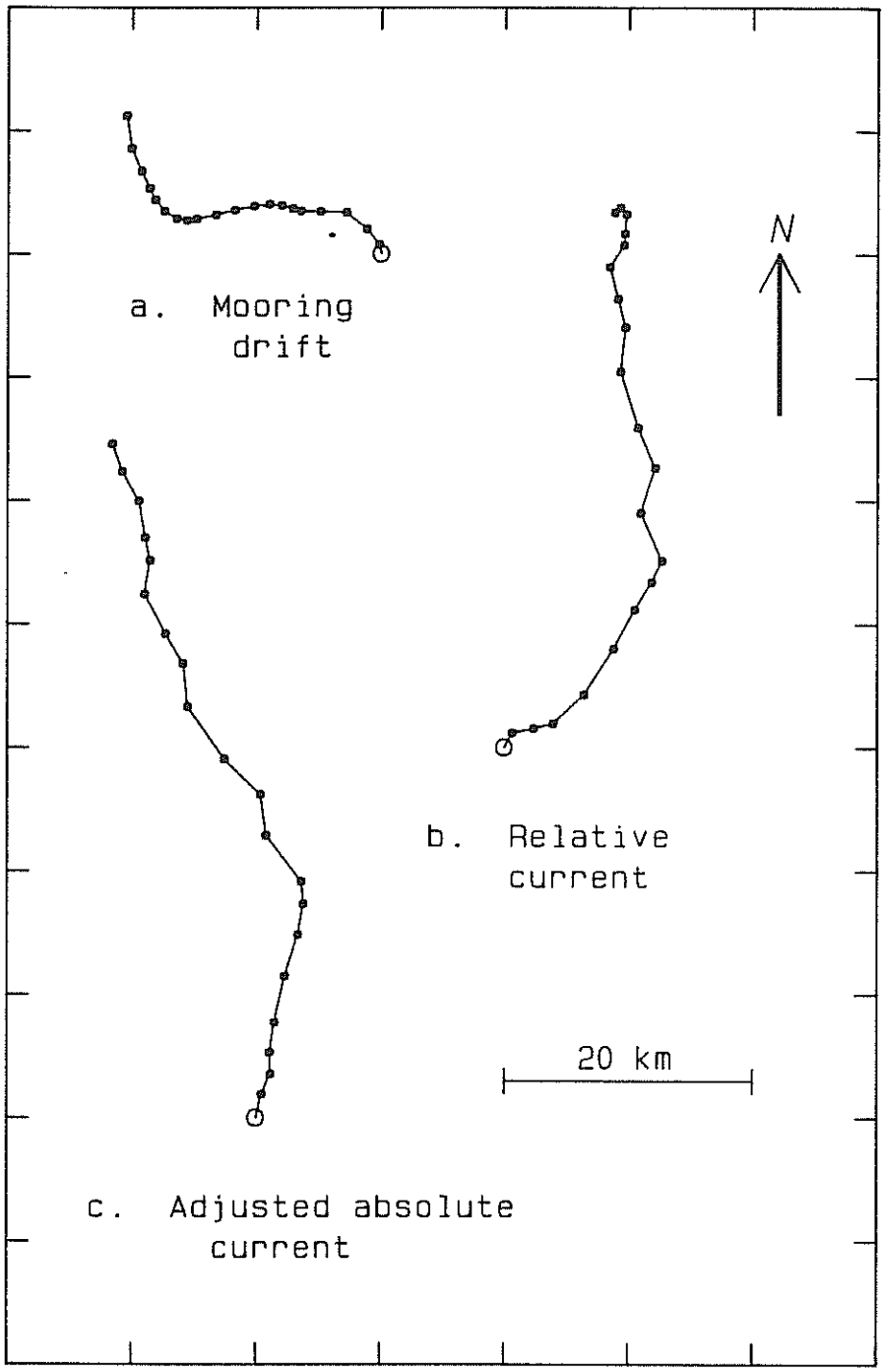


Figure 24. Progressive vector plots of daily-mean currents at 200 m on the MLML Trap-2 mooring, VERTEX 5, 6 to 25 June 1984. (a) Mooring drift was determined from smoothed ARGOS positions; (b) relative current past mooring; (c) adjusted absolute current is the vector sum of the interpolated mooring drift and the relative currents. Circles show starting positions.

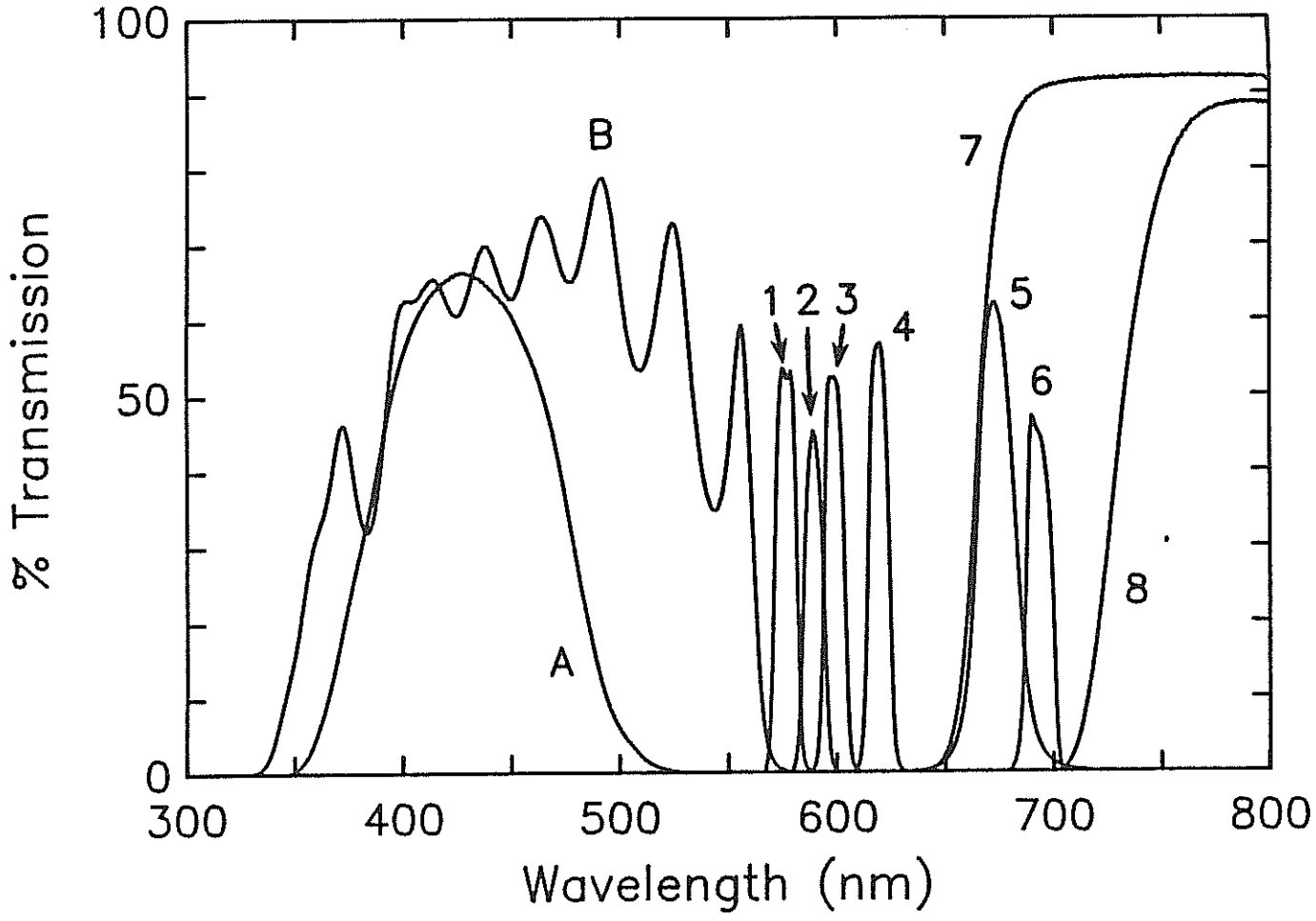


Figure 25. Transmission spectra of fluorescence excitation filters (A and B) and emission filters (1-8) used during VERTEX 5. From Broenkow et al. (in press). Filter combinations are used in Table 1a and 1b.

Table 1a.

OCEANOGRAPHIC DATA REPORT
Vertex 5 Station Information

Leg 1: 20 to 30 May 1984

STN	CTD#	GMT (hhmm)	Date (1984)	Lat ° '	Long ° '	Max Z (m)	Aux Sensor down	Aux Sensor up
1	1366	0049	20 May	36 05.8	122 38.5	1565	Tr	Fl-A7
2	1368	1217	20	35 41.1	123 50.8	1440	Tr	Fl-A7
3	1370	0014	21	35 31.1	124 59.1	1560	Tr	Fl-A7
4	1372	1122	21	35 22.3	126 10.8	1560	Tr	Fl-A7
5	1374	2054	21	35 09.6	127 17.5	1560	Tr	Fl-A7
T2/6	1376	0654	22	34 58.8	128 30.7	1560	Tr	
7	1378	1719	22	34 44.9	129 49.8	1565	Tr	Fl-A7
8	1380	0228	23	34 34.9	130 51.5	1560	Tr	Fl-A7
9	1382	1839	23	34 11.5	133 14.6	1565	Tr	Fl-A7
10	1384	1039	24	33 48.2	135 31.7	1040		Fl-A8
	1389	1546	24	33 47.3	135 27.9	1565		
	1393	2150	24	33 49.2	135 30.0	1040	Fl-A2	
	1398	0315	25	33 47.6	135 28.9	300	Fl-A7	Fl-A7
	1400	0425	25	33 47.6	135 28.9	302	Fl-A7	Fl-A7
	1402	0528	25	33 46.4	135 30.5	300	Fl-A7	Fl-A7
11	1404	2100	25	33 28.3	137 50.0	1560	Tr	Fl-A7
	1406	0050	26	33 26.9	137 50.2	1040	Fl-A5	Fl-A7
T4/12	1408	1303	26	33 06.2	139 34.2	1565	Tr	Fl-A7
	1411	1742	26	33 06.2	139 34.2	1350	Fl-B5	Fl-A7
	1417	2155	26	33 09.7	139 37.7	1565	Fl-B2	Fl-A7
13	1419	1015	29	35 46.8	130 08.8	1560	Tr	Fl-B6
14	1421	2113	29	35 57.0	128 59.1	1560	Tr	
15	1422	0916	30 May	36 20.9	126 50.2	262	Fl-B3	

Auxiliary Sensor Types:
Fl = Fluorometer (Filter combinations shown in Figure 25)
Sc = Scattering Meter (Variosens with Wratten 61 filters)
Tr = Transmissometer (Wratten 61 filter implied unless specified)

Approximate particle trap locations are indicated by T1, T2 and T4

Table 1b.

OCEANOGRAPHIC DATA REPORT
Vertex 5 Station Information

Leg 2: 11 to 17 June 1984

STN	CTD#	GMT (hhmm)	Date (1984)	Lat ° '	Long ° '	Max Z (m)	Aux Sensor down	Aux Sensor up
"A"	1423	1921	11 Jun	36 46.9	121 54.7	204	Tr	
16	1425	1556	12	35 31.2	124 58.8	990	Tr	Fl-B7
	1428	2331	12	35 30.8	124 54.9	1040	Fl-B8	
	1429	0321	13	35 33.4	124 58.1	1040	Fl-B2	
	1430	0604	13	35 33.2	124 56.6	1040	Fl-B3	
	1431	0849	13	35 32.9	124 58.2	1040	Tr-45	Fl-B1
	1434	1323	13	35 30.5	124 54.0	1045	Fl-B4	Fl-B1
	1435	1539	13	35 32.2	125 00.3	1040	Fl-B6	Fl-B1
	1436	1808	13	35 31.2	124 59.2	1040	Fl-B5	Fl-B1
17	1437	0537	14	35 50.5	123 18.4	1525	Tr-45	Sc
18	1439	1220	14	35 53.5	123 07.4	840	Sc	
19	1440	1533	14	35 57.1	122 55.4	1560	Tr	Sc
20	1442	2156	14	35 58.5	122 43.0	840	Sc	Tr-45
21	1444	0114	15	36 03.0	122 33.1	1560	Sc	Tr-45
22	1446	0639	15	36 06.4	122 20.9	840	Sc	Tr-45
23	1448	1118	15	36 09.1	122 09.2	1225	Sc	Tr-45
24	1450	1447	15	36 11.8	122 00.0	685	Sc	Tr-45
T1/25	1452	2053	15	35 49.8	122 31.1	1560	Fl-B7	Tr-45
	1454	0105	16	35 48.7	122 29.4	1565	Fl-B5	Tr-45
	1455	0426	16	35 47.2	122 27.8	1565	Fl-B2	Tr-45
26	1457	1014	16	35 48.1	122 50.1	1560	Sc	
27	1458	1501	16	35 33.0	122 42.8	1565	Sc	
28	1459	1925	16	35 38.8	122 24.7	1560	Sc	
29	1460	0003	17	35 43.3	122 10.0	1265	Sc	
30	1461	0327	17	35 47.8	121 55.9	1100	Sc	
31	1462	0742	17	35 57.6	122 03.7	1520	Sc	
32	1463	1147	17 Jun	35 54.9	122 15.9	1560	Sc	

Auxiliary Sensor Types:
Fl = Fluorometer (Filter combinations shown in Figure 25)
Sc = Scattering Meter (Variosens with Wratten 61 filters)
Tr = Transmissometer (Wratten 61 filter implied unless specified)

Approximate particle trap locations are indicated by T1, T2 and T

Table 2a.

Vertex 5 MLML Trap-1 Positions
(by ARGOS Satellite Navigation)
04 to 17 June 1984

Julian Day	GMT (hhmm)	N Lat ° '	W Long ° '
156	1652	35 56.1	122 34.5
156	2206	35 56.2	122 34.3
156	2353	35 56.4	122 33.8
157	0225	35 56.4	122 33.8
157	0411	35 56.3	122 33.3
157	1350	35 55.9	122 32.9
157	1443	35 55.5	122 32.7
157	1631	35 55.2	122 32.4
157	2340	35 54.9	122 31.9
158	0204	35 54.7	122 32.0
158	0350	35 54.4	122 31.6
158	1158	35 53.9	122 31.2
158	1342	35 53.8	122 30.8
158	1602	35 53.5	122 31.1
158	1747	35 53.2	122 30.8
158	2142	35 52.9	122 30.4
159	1146	35 51.7	122 29.7
159	1331	35 51.6	122 29.6
159	1543	35 51.5	122 29.7
159	1725	35 51.2	122 29.4
159	2309	35 50.6	122 29.4
160	0260	35 50.5	122 29.4
160	0446	35 50.2	122 29.3
160	1135	35 49.4	122 29.3
160	1319	35 49.1	122 29.2
160	1519	35 49.0	122 29.2
160	1705	35 48.5	122 29.1
160	2258	35 48.0	122 29.0
161	0044	35 47.8	122 29.0
161	0238	35 47.9	122 29.2
161	0424	35 48.0	122 29.0
161	1121	35 46.9	122 28.6
161	1309	35 46.7	122 28.9
161	1504	35 46.9	122 28.9
161	1638	35 46.7	122 28.8

Table 2a. (cont.)

Vertex 5 MLML Trap-1 Positions
(by ARGOS Satellite Navigation)
04 to 17 June 1984

Julian Day	GMT (hhmm)	N Lat ° '	W Long ° '
161	2246	35 46.4	122 28.9
162	0031	35 46.5	122 28.5
162	0217	35 46.5	122 28.8
162	0402	35 46.4	122 28.6
162	1110	35 45.6	122 29.0
162	1255	35 45.7	122 28.4
162	2234	35 46.1	122 28.8
163	0019	35 46.3	122 28.3
163	0156	35 46.3	122 27.9
163	0342	35 46.4	122 27.8
163	1057	35 46.4	122 27.8
163	1244	35 46.3	122 27.8
163	1601	35 46.7	122 27.7
163	1734	35 47.0	122 27.7
163	2221	35 47.1	122 27.7
164	0008	35 47.0	122 27.4
164	0313	35 47.1	122 28.0
164	1044	35 47.5	122 28.0
164	1233	35 47.6	122 27.7
164	2208	35 48.3	122 28.1
165	1031	35 49.5	122 28.9
165	1353	35 48.8	122 28.5
165	2333	35 49.4	122 28.9
166	1207	35 49.7	122 29.4
166	1341	35 49.4	122 29.4
166	2144	35 50.2	122 29.7
167	1148	35 50.0	122 31.0
167	1332	35 49.8	122 31.1
167	2314	35 49.7	122 32.0
168	0057	35 49.9	122 31.5
168	1135	35 49.3	122 33.1
168	1319	35 49.1	122 33.5
168	2259	35 49.3	122 34.1
169	0043	35 49.3	122 34.1

Table 2b.

Vertex 5 UCSC Trap-1 Positions
(by ARGOS Satellite Navigation)
22 June to 07 July 1984

Julian Day	GMT (hhmm)	N Lat ° '	W Long ° '
174	2146	35 43.2	122 39.1
175	0107	35 43.3	122 38.9
175	1150	35 42.4	122 38.9
175	1336	35 42.5	122 38.9
175	2134	35 42.5	122 38.9
176	0059	35 42.4	122 38.4
176	1138	35 42.4	122 38.8
176	1323	35 42.4	122 38.8
176	2301	35 42.7	122 39.2
177	0047	35 42.9	122 38.9
177	1125	35 43.0	122 39.4
177	1312	35 42.9	122 39.4
177	2248	35 43.1	122 40.0
178	0036	35 43.2	122 39.7
178	1113	35 43.1	122 39.9
178	1300	35 43.0	122 39.6
178	2236	35 43.3	122 40.0
179	0024	35 43.4	122 39.7
179	1060	35 43.1	122 39.2
179	1248	35 43.0	122 39.1
179	2223	35 44.0	122 38.5
180	0010	35 44.1	122 37.9
180	1048	35 44.2	122 37.6
180	1236	35 44.2	122 37.7
180	1408	35 44.5	122 37.3
180	2213	35 45.1	122 36.9
180	2358	35 45.1	122 36.4
181	1036	35 46.4	122 36.4
181	2202	35 46.9	122 35.2

Table 2b. (cont.)

Vertex 5 UCSC Trap-1 Positions
(by ARGOS Satellite Navigation)
22 June to 07 July 1984

Julian Day	GMT (hhmm)	N Lat ° '	W Long ° '
181	2347	35 47.1	122 34.9
182	1204	35 48.0	122 35.0
182	1349	35 48.3	122 35.0
182	2148	35 49.7	122 34.3
183	0109	35 49.9	122 33.4
183	1152	35 52.3	122 32.5
183	1337	35 52.3	122 32.1
183	2315	35 54.5	122 31.7
184	0100	35 55.0	122 30.7
184	1140	35 57.7	122 29.6
184	1326	35 58.0	122 29.5
184	2303	36 00.4	122 28.4
185	0050	36 01.1	122 27.6
185	1127	36 03.4	122 26.2
185	1313	36 03.7	122 26.0
186	0033	36 05.7	122 24.1
186	1114	36 07.3	122 22.5
186	1300	36 07.7	122 22.6
186	2238	36 09.1	122 21.0
187	0025	36 09.5	122 20.3
187	1108	36 10.0	122 18.9
187	1243	36 10.0	122 18.7
187	2226	36 09.8	122 17.6
188	0012	36 10.0	122 17.3
188	1049	36 09.4	122 16.6
188	1237	36 09.5	122 16.7
188	2213	36 08.8	122 16.4
189	0000	36 08.9	122 16.0

Table 2c.

Vertex 5 MLML Trap-2 Positions
(by ARGOS Satellite Navigation)
05 to 27 June 1984

Julian Day	GMT (hhmm)	N Lat ° '	W Long ° '
157	2334	35 00.4	128 01.0
158	0120	35 01.0	128 00.8
158	0524	35 00.3	128 00.7
158	1159	35 01.1	128 00.4
158	1346	35 01.1	128 00.5
158	1603	35 00.8	128 00.4
158	1749	35 00.7	128 00.3
158	2322	35 00.8	128 00.5
159	0321	35 00.7	128 00.8
159	0507	35 00.8	128 01.2
159	1147	35 01.1	128 00.7
159	1333	35 00.9	128 00.5
159	1542	35 01.4	128 01.1
159	1728	35 01.1	128 00.7
159	2309	35 01.3	128 01.2
160	0056	35 01.5	128 00.6
160	0260	35 01.6	128 01.4
160	0446	35 01.6	128 01.9
160	1134	35 02.1	128 01.2
160	1321	35 01.8	128 01.1
160	1519	35 01.9	128 01.7
160	1707	35 01.8	128 01.3
161	0038	35 02.2	128 01.6
161	0239	35 02.5	128 02.2
161	0424	35 02.6	128 01.9
161	1122	35 02.3	128 02.7
161	1310	35 02.3	128 02.3
161	1457	35 03.2	128 02.8
161	1818	35 02.8	128 03.1
162	0026	35 02.5	128 03.1
162	0218	35 02.5	128 03.2
162	0403	35 02.7	128 03.7
162	1110	35 02.6	128 04.1
162	1257	35 02.2	128 03.6
162	1617	35 02.6	128 04.6

Table 2c. (cont.)

Vertex 5 MLML Trap-2 Positions
(by ARGOS Satellite Navigation)
05 to 27 June 1984

Julian Day	GMT (hhmm)	N Lat ° '	W Long ° '
162	1802	35 02.7	128 04.6
162	2233	35 02.3	128 04.7
163	0019	35 02.6	128 04.6
163	0156	35 02.9	128 05.1
163	0520	35 02.3	128 04.8
163	1057	35 02.3	128 05.6
163	1418	35 02.6	128 04.5
163	1602	35 02.6	128 05.2
164	0001	35 02.7	128 04.8
164	0314	35 02.8	128 05.5
164	0459	35 03.2	128 05.0
164	1226	35 02.5	128 05.0
164	1410	35 02.5	128 05.2
165	0129	35 02.8	128 05.9
165	1213	35 03.0	128 06.8
165	1359	35 02.8	128 05.8
165	2157	35 02.6	128 05.9
166	0114	35 02.8	128 06.3
166	1208	35 02.8	128 05.9
166	1341	35 02.8	128 06.7
166	2145	35 03.4	128 07.4
166	2330	35 02.8	128 07.0
167	1149	35 02.9	128 07.3
167	1336	35 02.5	128 07.1
167	2311	35 02.6	128 08.2
168	0059	35 02.6	128 07.6
168	1136	35 02.6	128 08.3
168	1323	35 02.5	128 08.5
168	2260	35 02.5	128 08.9
169	0047	35 02.6	128 08.7
169	1124	35 02.5	128 09.3
169	1311	35 02.4	128 09.5
169	2247	35 02.3	128 10.1
170	0034	35 02.2	128 09.8
170	1112	35 02.2	128 10.4

Table 2c. (cont.)

Vertex 5 MLML Trap-2 Positions
(by ARGOS Satellite Navigation)
05 to 27 June 1984

Julian Day	GMT (hhmm)	N Lat ° '	W Long ° '
170	1259	35 02.3	128 10.2
170	1432	35 01.0	128 10.7
171	0011	35 02.3	128 10.3
171	1059	35 02.3	128 10.9
171	1420	35 02.2	128 11.0
172	0003	35 02.2	128 10.9
172	1046	35 01.8	128 11.0
172	1413	35 02.3	128 11.6
172	2211	35 02.3	128 12.1
173	0131	35 02.2	128 11.8
173	1216	35 02.6	128 11.9
173	1401	35 02.7	128 12.0
173	2338	35 02.6	128 12.8
174	0124	35 03.2	128 12.5
174	1203	35 03.0	128 12.2
174	1349	35 03.0	128 12.5
174	2329	35 03.3	128 12.8
175	1150	35 03.5	128 12.9
175	1337	35 03.8	128 12.8
176	0056	35 03.9	128 12.8
176	1138	35 04.4	128 13.4
176	1325	35 04.6	128 13.5
176	2302	35 04.7	128 13.7
177	0048	35 04.9	128 13.8
177	1126	35 05.3	128 13.8
177	1313	35 05.6	128 14.1
177	2249	35 06.0	128 14.1
178	0036	35 06.1	128 13.7
178	1113	35 07.0	128 14.2
178	1301	35 06.4	128 13.8
178	1434	35 06.8	128 14.3
178	2236	35 07.4	128 14.0
179	0024	35 07.6	128 13.8

Table 2d.

Vertex 5 MLML Trap-4 Positions
(by ARGOS Satellite Navigation)
08 to 29 June 1984

Julian Day	GMT (hhmm)	N Lat ° '	W Long ° '
160	0057	33 05.6	139 35.5
160	0300	33 06.1	139 34.8
160	0621	33 06.5	139 33.7
160	1135	33 06.4	139 33.3
160	1456	33 06.7	139 33.1
160	1701	33 06.6	139 33.3
160	1846	33 06.6	139 32.9
160	2257	33 06.5	139 32.4
161	0415	33 06.4	139 32.6
161	0603	33 06.4	139 32.2
161	1304	33 06.7	139 32.0
161	1449	33 06.7	139 31.7
161	1646	33 06.9	139 31.6
161	1820	33 06.9	139 31.6
161	2246	33 06.7	139 31.3
162	0357	33 07.1	139 31.5
162	0543	33 07.4	139 31.4
162	1251	33 07.3	139 30.9
162	1438	33 07.4	139 30.8
162	1618	33 07.6	139 30.7
162	1804	33 07.6	139 30.7
163	0013	33 07.8	139 30.9
163	0160	33 08.0	139 30.5
163	0516	33 08.2	139 30.2
163	1239	33 08.2	139 30.2
163	1426	33 08.3	139 30.2
163	1601	33 08.3	139 30.1
163	1736	33 08.3	139 29.9
164	0148	33 08.4	139 29.8
164	0454	33 08.7	139 29.6
164	1227	33 08.7	139 29.4
164	1414	33 08.6	139 29.5
165	0130	33 08.8	139 29.5
165	1215	33 09.2	139 29.6
165	1401	33 09.2	139 29.5
166	0113	33 09.1	139 28.7
166	1207	33 09.7	139 28.8
166	1343	33 09.4	139 28.8
166	2324	33 09.7	139 28.6
167	0112	33 09.6	139 28.4
167	1149	33 10.0	139 28.0
167	1338	33 09.7	139 28.0
167	1510	33 09.7	139 28.2
168	0052	33 09.7	139 27.4
168	1137	33 10.0	139 27.4

Table 2d. (cont.)

Vertex 5 MLML Trap-4 Positions
(by ARGOS Satellite Navigation)
08 to 29 June 1984

Julian Day	GMT (hhmm)	N Lat ° '	W Long ° '
168	1458	33 09.7	139 27.6
168	2259	33 09.9	139 27.1
169	0221	33 10.1	139 26.8
169	1305	33 10.2	139 27.0
169	1451	33 10.1	139 27.0
170	0208	33 10.1	139 26.4
170	1254	33 10.7	139 26.3
170	1439	33 10.6	139 26.2
170	2235	33 10.2	139 25.6
171	0022	33 10.7	139 26.3
171	0201	33 10.8	139 25.8
171	1241	33 11.0	139 25.7
171	1427	33 11.0	139 25.6
172	0145	33 11.2	139 25.5
172	1228	33 11.3	139 25.4
172	1416	33 11.5	139 25.4
173	0132	33 11.5	139 25.3
173	1216	33 11.8	139 25.0
173	1403	33 11.8	139 25.1
174	0119	33 12.0	139 24.7
174	1203	33 12.1	139 24.5
174	1351	33 12.1	139 24.7
175	0107	33 12.4	139 24.1
175	1152	33 12.3	139 23.6
175	1339	33 12.4	139 23.5
175	1512	33 12.4	139 23.7
176	0057	33 12.7	139 22.6
176	1139	33 12.7	139 22.3
176	1459	33 12.7	139 22.4
177	0042	33 13.0	139 21.1
177	1308	33 13.0	139 20.8
177	1453	33 13.1	139 20.8
178	1255	33 13.0	139 19.0
178	1440	33 13.0	139 19.0
178	2238	33 13.6	139 18.5
179	0024	33 13.3	139 18.5
179	0204	33 13.2	139 18.0
179	1243	33 13.2	139 17.8
179	1429	33 13.1	139 17.8
180	0005	33 13.2	139 17.5
180	1231	33 13.1	139 16.7
180	1417	33 13.1	139 16.6
181	0134	33 12.7	139 16.2
181	1224	33 12.9	139 16.3
181	1360	33 12.9	139 16.3

Table 2e.

Vertex 5 UCSC Trap-4 Positions
(by ARGOS Satellite Navigation)
08 to 27 June 1984

Julian Day	GMT (hhmm)	N Lat ° '	W Long ° '
160	0050	33 08.5	139 32.5
160	1136	33 08.6	139 31.5
160	1456	33 08.8	139 31.0
160	1703	33 08.7	139 31.1
160	1846	33 09.1	139 30.8
160	2259	33 08.9	139 30.5
161	0219	33 08.1	139 30.1
161	0419	33 08.6	139 30.4
161	0604	33 08.9	139 30.0
161	1304	33 08.6	139 29.3
161	1448	33 08.6	139 29.6
161	1644	33 08.8	139 29.0
161	1821	33 08.4	139 28.9
162	0026	33 08.5	139 28.1
162	0356	33 08.7	139 28.6
162	0543	33 08.8	139 28.3
162	1432	33 08.6	139 27.1
162	1619	33 08.6	139 27.2
162	1803	33 08.7	139 26.9
163	0013	33 09.1	139 26.5
163	0159	33 09.5	139 25.9
163	0336	33 08.9	139 25.9
163	0522	33 09.3	139 25.9
163	1238	33 09.2	139 25.1
163	1425	33 09.2	139 24.5
163	1601	33 09.2	139 24.7
163	1737	33 09.1	139 24.4
164	0143	33 09.3	139 23.2
164	0314	33 09.3	139 23.3
164	0456	33 09.3	139 23.3
164	1228	33 09.2	139 22.7
164	1414	33 09.2	139 22.3
165	0130	33 09.1	139 21.7
165	1356	33 09.1	139 21.3
166	0114	33 09.1	139 20.8
166	1207	33 08.7	139 20.7
166	1345	33 09.1	139 20.3
166	2324	33 09.2	139 20.5
167	0111	33 09.4	139 19.7
167	1331	33 09.0	139 19.1
167	2312	33 09.2	139 19.5
168	0059	33 09.2	139 17.7
168	1458	33 09.0	139 17.4

Table 2e. (cont.)

Vertex 5 UCSC Trap-4 Positions
(by ARGOS Satellite Navigation)
08 to 27 June 1984

Julian Day	GMT (hhmm)	N Lat ° '	W Long ° '
168	2260	33 09.5	139 16.9
169	0221	33 08.1	139 16.0
169	1305	33 08.9	139 15.6
169	1450	33 08.7	139 15.1
170	0208	33 08.6	139 14.0
170	1252	33 08.8	139 13.0
170	1438	33 08.9	139 12.7
171	0016	33 08.2	139 11.6
171	0202	33 08.5	139 11.2
171	1241	33 08.2	139 10.3
171	1426	33 08.5	139 10.0
172	0003	33 07.7	139 09.5
172	0149	33 07.7	139 08.9
172	1228	33 07.7	139 07.9
172	1416	33 07.7	139 07.7
172	2351	33 07.1	139 06.8
173	0137	33 07.3	139 06.7
173	1357	33 07.1	139 05.5
173	2338	33 07.1	139 04.8
174	0125	33 07.3	139 04.6
174	1204	33 07.0	139 03.4
174	1351	33 06.9	139 03.2
174	2325	33 07.1	139 02.1
175	0112	33 07.3	139 01.9
175	1153	33 06.6	139 00.8
175	1337	33 07.0	139 00.4
176	0056	33 07.0	138 58.4
176	1139	33 06.8	138 57.3
176	2301	33 06.9	138 55.4
177	0047	33 07.1	138 54.4
177	1306	33 06.7	138 53.0
178	1254	33 06.2	138 49.4
178	1439	33 06.4	138 48.7
179	0016	33 06.2	138 48.1
179	1243	33 06.1	138 46.3
179	1428	33 06.0	138 45.7
180	0004	33 05.6	138 45.3
180	0151	33 05.8	138 44.6
180	1231	33 05.6	138 44.0
180	1417	33 05.6	138 43.7
181	0134	33 05.0	138 42.4
181	1358	33 05.2	138 42.7

Table 3a.

Daily Mean Trap-1 Mooring Velocities
Relative and Absolute Current Velocities at 40 meters

Vertex 5
05 to 16 June 1984

GMT DAY	MOORING Speed cm/s	MOORING Dir deg	RELATIVE @ 40 m Speed cm/s	RELATIVE @ 40 m Dir deg	ABSOLUTE @ 40 m Speed cm/s	ABSOLUTE @ 40 m Dir deg
157.5	5.3	144	17.1	86	20.5	98
158.5	5.1	152	21.5	101	25.1	110
159.5	5.1	170	16.7	80	17.4	97
160.5	5.2	173	13.6	80	14.3	101
161.5	2.0	171	3.7	89	4.4	116
162.5	1.8	63	5.7	319	5.5	337
163.5	2.5	358	9.8	15	12.2	12
164.5	3.4	340	9.9	6	13.1	359
165.5	2.0	312	3.8	9	5.2	351
166.5	2.4	283	4.6	169	4.2	200
167.5	4.6	254	9.2	171	10.7	196
168.5	3.9	250	3.3	193	6.3	224

Table 3b.

Daily Mean Trap-1 Relative and Absolute Current Velocities at 200 and 990 meters

Vertex 5
05 to 16 June 1984

GMT DAY	RELATIVE @ 200 m Speed cm/s	Dir deg	ABSOLUTE @ 200 m Speed cm/s	Dir deg	RELATIVE @ 990 m Speed cm/s	Dir deg	ABSOLUTE @ 990 m Speed cm/s	Dir deg
157.5	7.2	280	5.0	232	6.6	267	5.7	217
158.5	6.2	286	4.6	232	7.4	278	6.0	234
159.5	5.9	314	3.5	256	7.5	286	7.0	245
160.5	6.4	335	2.1	288	7.1	293	6.4	248
161.5	6.0	347	4.0	345	5.2	269	5.3	247
162.5	3.2	2	4.3	23	3.7	247	1.9	252
163.5	2.5	326	4.8	342	5.0	226	3.8	255
164.5	2.2	352	5.6	345	2.3	217	2.9	299
165.5	2.2	337	4.1	325	1.8	198	2.1	259
166.5	3.7	323	5.7	307	2.0	232	3.9	260
167.5	6.0	342	7.7	305	2.0	312	5.9	271
168.5	8.0	8	7.1	339	4.0	11	3.9	312

Table 3c.

Daily Mean Trap-2 Mooring Velocities
Relative and Absolute Current Velocities at 200 meters

Vertex 5
06 to 25 June 1984

GMT DAY	MOORING Speed cm/s	MOORING Dir deg	RELATIVE @ 200 m Speed cm/s	RELATIVE @ 200 m Dir deg	ABSOLUTE @ 200 m Speed cm/s	ABSOLUTE @ 200 m Dir deg
158.5	0.9	346	1.5	27	2.3	13
159.5	1.9	322	2.0	78	2.1	23
160.5	2.5	309	1.9	76	2.0	358
161.5	2.4	272	4.0	46	2.9	9
162.5	1.8	271	5.1	33	4.4	13
163.5	0.8	287	4.2	28	4.1	17
164.5	1.1	286	3.0	31	2.9	10
165.5	1.2	275	2.2	26	2.1	355
166.5	1.4	263	4.9	337	5.5	322
167.5	1.8	258	4.4	17	3.9	353
168.5	1.9	256	4.1	337	4.7	315
169.5	1.8	258	5.5	343	6.0	325
170.5	0.9	262	4.2	6	4.0	354
171.5	1.0	278	2.8	345	3.3	330
172.5	1.4	302	3.1	346	4.2	333
173.5	1.4	321	2.5	33	3.2	9
174.5	1.2	334	1.1	4	2.2	348
175.5	1.8	335	1.8	5	3.5	350
176.5	2.3	336	0.9	317	3.2	331
177.5	3.1	352	0.7	228	2.8	340

Table 4. VERTEX 5 CTOD Calibration Coefficients

	N	a	b	Sy
Depth (m)	73	8.5	1.004	±5.0
Temperature (C)	78	-0.019	0.9971	±0.026
Salinity	70	-0.232	0.0265	±0.039
Oxygen (ml/liter)	69	-0.01	0.765	±0.28

N = number of calibration samples

a = offset (intercept)

b = first order regression coefficient (slope)

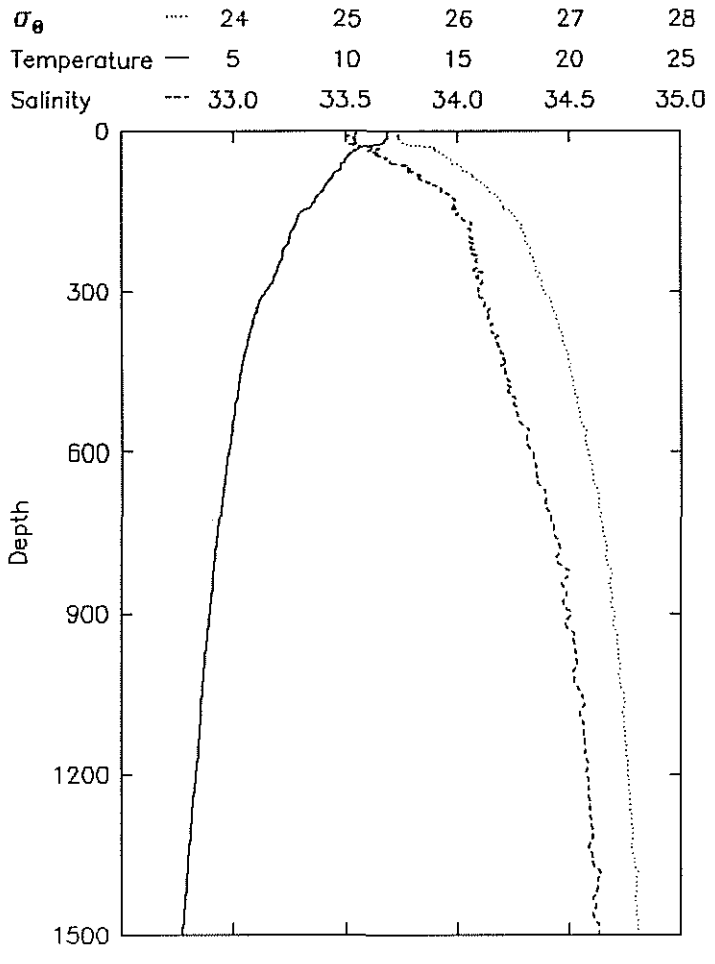
Sy = Standard error of estimate (1 SD)

Table 5. Explanation of CTOD Table Captions

Depth	= sampling depth, meters
Temp	= *in situ* temperature, Celsius
Theta	= potential temperature, Celsius
Salin	= salinity, practical salinity units
Sigma-θ	= potential density anomaly (θ,S), g/liter
Geop Anom	= geopotential anomaly, dyn m or m^2/s^2
Oxygen	= dissolved oxygen, uMoles/kg
Sat	= percentage dissolved oxygen saturation (Postman *et al.*, 1976)
Trans	= beam transmittance at 520 nm %/meter
Fluoro	= *in situ* fluorescence (relative units) See Table 1 and Fig. 25 for filter combinations.
Scatter	= light scattering (relative units)

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 0049 (GMT) 20 May 1984
STATION: 1 — Wind 20 kts; Wave 4 ft
Position: 36° 06' N 122° 38' W — CTD# 1366

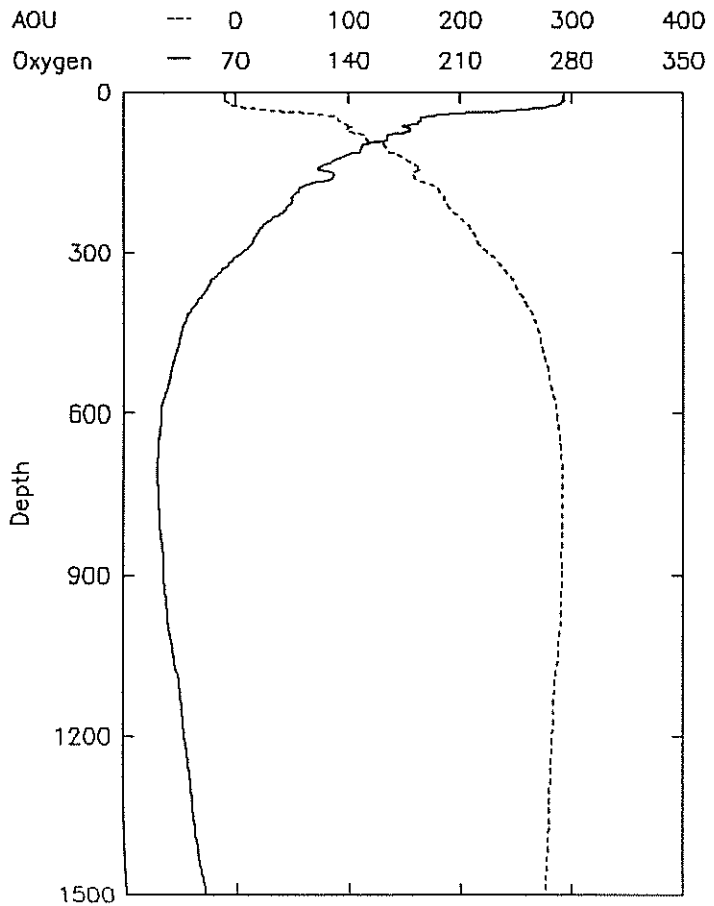


CTD# 1366: 1

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
0	11.90	11.90	33.55	25.48	0.000	275	103	57.4	104.1
5	11.90	11.90	33.55	25.48	0.012	275	103	57.4	104.1
10	11.89	11.89	33.50	25.45	0.025	275	103	57.9	104.7
15	11.83	11.83	33.52	25.47	0.037	276	104	55.9	105.2
20	11.72	11.72	33.54	25.51	0.050	273	102	53.9	66.3
25	11.44	11.43	33.51	25.54	0.062	267	99	47.7	31.4
30	10.70	10.69	33.60	25.74	0.074	257	94	48.1	26.3
35	10.51	10.51	33.62	25.78	0.085	239	87	65.2	23.0
40	10.28	10.27	33.63	25.84	0.096	206	75	80.3	23.3
45	10.13	10.12	33.64	25.87	0.107	191	69	84.0	26.4
50	10.05	10.04	33.68	25.91	0.117	186	67	85.2	25.6
55	9.97	9.97	33.70	25.94	0.128	184	66	84.5	22.7
60	9.88	9.88	33.70	25.96	0.138	181	65	84.4	21.4
65	9.79	9.78	33.78	26.03	0.148	176	63	84.4	20.6
70	9.78	9.77	33.78	26.04	0.158	180	64	83.7	19.8
75	9.66	9.65	33.77	26.05	0.168	177	63	83.9	18.5
80	9.46	9.45	33.82	26.12	0.177	165	59	84.9	17.9
85	9.41	9.41	33.83	26.14	0.187	165	59	84.8	16.0
90	9.32	9.31	33.84	26.16	0.196	163	58	84.8	16.1
95	9.21	9.20	33.87	26.20	0.205	152	54	85.2	14.6
100	9.13	9.12	33.89	26.23	0.214	149	53	85.1	13.7
110	9.04	9.03	33.93	26.28	0.232	147	52	85.0	12.0
120	8.80	8.79	33.97	26.35	0.249	136	48	85.3	11.2
130	8.68	8.67	33.99	26.38	0.266	130	46	85.7	9.8
140	8.50	8.48	33.99	26.41	0.283	123	43	86.4	10.4
150	8.09	8.07	34.01	26.49	0.299	130	45	88.1	10.4
160	7.91	7.90	34.01	26.51	0.314	130	45	89.1	9.8
170	7.85	7.84	34.06	26.56	0.329	119	41	89.0	9.8
180	7.74	7.73	34.05	26.56	0.344	110	38	89.4	9.7
190	7.58	7.56	34.06	26.60	0.359	107	37	89.5	9.7
200	7.54	7.52	34.07	26.61	0.374	106	36	89.6	9.9
210	7.47	7.45	34.07	26.62	0.388	104	36	89.5	9.7
220	7.26	7.24	34.07	26.65	0.402	101	34	89.2	10.3
230	7.22	7.20	34.08	26.66	0.417	97	33	89.4	9.8
240	7.19	7.17	34.08	26.67	0.430	91	31	89.5	9.9
250	7.06	7.03	34.09	26.70	0.444	87	29	89.6	10.1
260	6.96	6.94	34.07	26.70	0.458	85	29	89.5	10.1
270	6.86	6.84	34.09	26.72	0.472	82	28	89.6	9.7
280	6.79	6.77	34.11	26.75	0.485	81	27	89.4	9.8
290	6.63	6.60	34.09	26.75	0.498	78	26	89.5	9.8
300	6.46	6.43	34.10	26.78	0.511	74	25	89.5	9.9

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 0049 (GMT) 20 May 1984
STATION: 1 — Wind 20 kts; Wave 4 ft
Position: 36° 06' N 122° 38' W — CTD# 1366



Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
300	6.46	6.43	34.10	26.78	0.511	74	25	89.5	9.9
310	6.28	6.25	34.10	26.81	0.524	69	23	89.6	10.0
320	6.17	6.14	34.12	26.84	0.537	67	22	89.5	9.8
330	6.08	6.05	34.13	26.86	0.549	62	21	89.9	9.2
340	6.03	6.00	34.14	26.88	0.561	59	20	89.7	9.3
350	5.92	5.89	34.13	26.88	0.573	56	18	89.7	9.4
360	5.88	5.85	34.15	26.90	0.585	54	18	89.9	9.1
370	5.80	5.77	34.15	26.91	0.597	52	17	89.8	9.3
380	5.72	5.69	34.18	26.95	0.609	49	16	89.9	9.3
390	5.67	5.64	34.17	26.94	0.621	47	15	90.0	8.8
400	5.63	5.60	34.18	26.96	0.632	44	15	89.9	9.0
410	5.57	5.53	34.19	26.97	0.643	42	14	89.8	9.0
420	5.50	5.46	34.21	27.00	0.655	40	13	89.9	9.2
430	5.44	5.41	34.22	27.01	0.666	39	13	89.9	9.4
440	5.39	5.35	34.20	27.00	0.677	37	12	89.9	9.3
450	5.35	5.31	34.21	27.01	0.688	36	12	89.8	9.2
460	5.32	5.28	34.22	27.02	0.699	35	12	89.8	9.1
470	5.28	5.24	34.22	27.03	0.709	35	11	89.8	9.2
480	5.23	5.19	34.24	27.05	0.720	34	11	89.7	9.1
490	5.20	5.16	34.23	27.05	0.731	33	11	89.8	9.0
500	5.17	5.13	34.26	27.07	0.741	32	10	90.0	9.1
550	4.97	4.92	34.29	27.12	0.792	28	9	90.6	9.3
600	4.81	4.77	34.34	27.18	0.841	24	8	90.7	9.0
650	4.63	4.58	34.35	27.21	0.888	23	7	90.6	9.0
700	4.47	4.42	34.39	27.26	0.932	22	7	90.6	8.7
750	4.32	4.26	34.43	27.31	0.975	22	7	90.6	8.6
800	4.18	4.12	34.44	27.33	1.016	23	7	90.8	8.5
850	4.08	4.02	34.47	27.36	1.055	25	8	90.6	8.2
900	3.95	3.88	34.51	27.41	1.093	25	8	90.8	8.3
950	3.84	3.77	34.52	27.43	1.131	27	9	90.9	8.0
1000	3.72	3.64	34.53	27.45	1.167	29	9	90.7	7.8
1050	3.60	3.52	34.56	27.48	1.202	32	10	90.8	7.5
1100	3.54	3.46	34.56	27.49	1.236	35	11	90.8	7.2
1150	3.46	3.37	34.57	27.51	1.270	37	12	90.5	7.0
1200	3.35	3.26	34.57	27.52	1.302	39	12	90.6	6.7
1250	3.22	3.14	34.59	27.55	1.334	41	13	90.6	6.4
1300	3.12	3.03	34.60	27.56	1.365	43	13	90.8	6.3
1350	3.02	2.93	34.60	27.57	1.396	44	14	90.8	5.9
1400	2.94	2.84	34.63	27.60	1.425	46	14	90.8	5.6
1450	2.85	2.75	34.62	27.60	1.454	48	15	90.6	5.5
1500	2.75	2.65	34.64	27.63	1.483	51	15	90.6	5.3

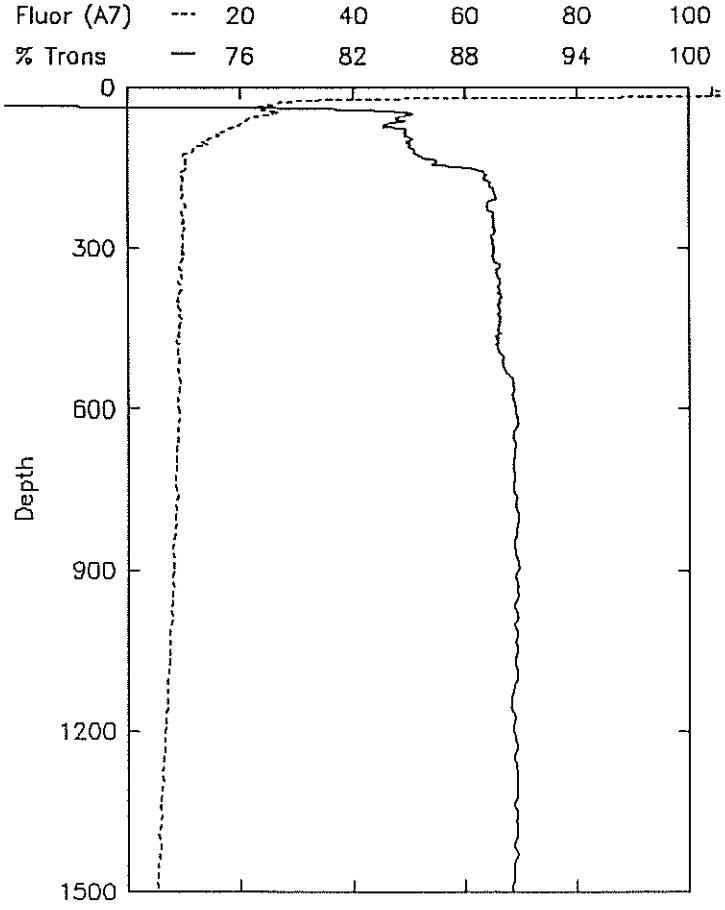
CTD# 1366: 1

CTD# 1366: 1

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 0049 (GMT) 20 May 1984
STATION: 1 — Wind 20 kts; Wave 4 ft
Position: 36° 06' N 122° 38' W — CTD# 1366

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
1500	2.75	2.65	34.64	27.63	1.483	51	15	90.6	5.3
1550	2.66	2.55	34.67	27.66	1.510	53	16	90.7	5.1
1565	2.64	2.53	34.66	27.65	1.518	53	16	90.7	



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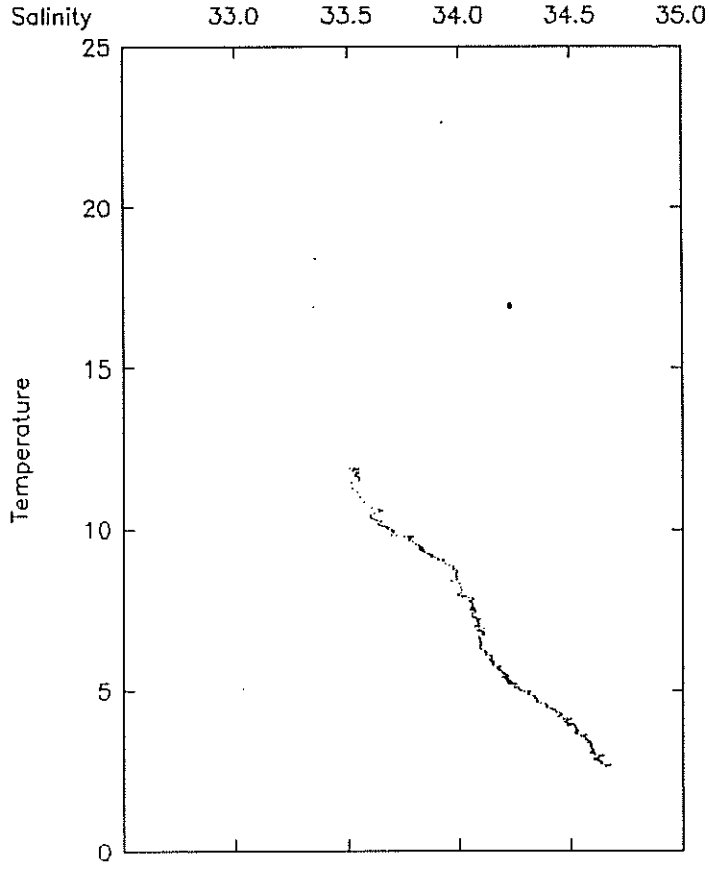
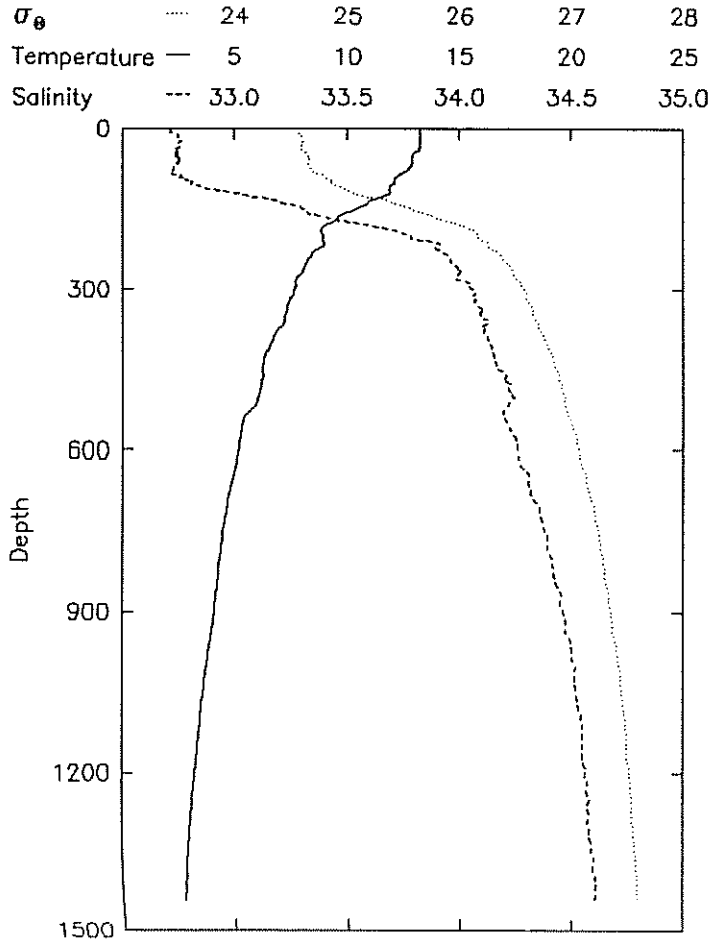


CTD# 1366: 1

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1217 (GMT) 20 May 1984
STATION: 2 — Wind 9 kts; Wave 4 ft
Position: 35° 41' N 123° 51' W — CTD# 1368

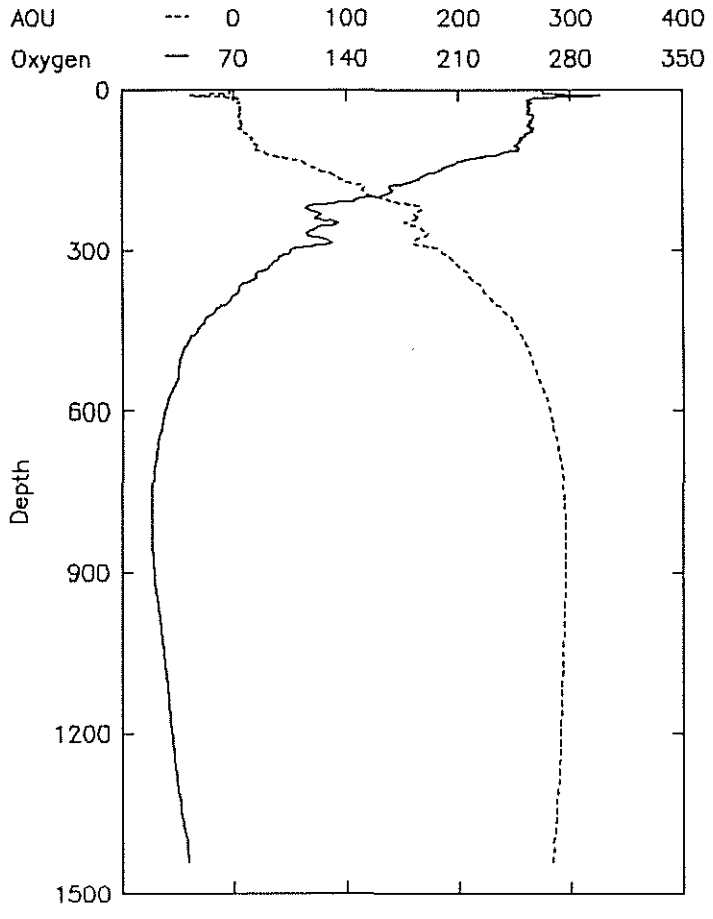


Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
0	13.25	13.25	32.72	24.58	0.000	270	101	84.8	12.3
5	13.25	13.24	32.72	24.58	0.017	263	101	84.8	11.6
10	13.24	13.24	32.74	24.59	0.033	297	114	84.3	11.9
15	13.24	13.24	32.75	24.60	0.050	259	100	84.4	12.0
20	13.24	13.24	32.76	24.61	0.067	253	97	84.6	11.6
25	13.24	13.24	32.76	24.61	0.083	256	98	84.3	11.5
30	13.25	13.24	32.75	24.60	0.100	254	97	84.2	11.7
35	13.23	13.23	32.76	24.61	0.117	254	97	84.2	11.7
40	13.20	13.20	32.74	24.61	0.133	254	97	84.2	12.4
45	13.02	13.01	32.74	24.64	0.150	254	97	84.4	15.8
50	12.92	12.91	32.73	24.65	0.166	258	98	83.0	19.5
55	12.92	12.91	32.76	24.67	0.183	256	98	82.1	23.4
60	12.92	12.92	32.76	24.68	0.199	256	97	83.0	27.5
65	12.91	12.90	32.75	24.67	0.216	253	97	82.5	32.5
70	12.85	12.85	32.74	24.67	0.232	256	97	81.5	33.0
75	12.74	12.73	32.73	24.69	0.248	256	97	81.0	29.3
80	12.62	12.61	32.73	24.71	0.265	255	97	83.3	26.0
85	12.37	12.36	32.73	24.76	0.281	252	95	83.6	21.4
90	12.24	12.23	32.77	24.81	0.297	249	93	82.6	16.1
95	12.12	12.11	32.79	24.85	0.312	249	93	83.0	13.1
100	12.13	12.12	32.81	24.87	0.328	248	93	83.9	10.9
110	11.91	11.90	32.87	24.96	0.358	249	93	84.2	9.9
120	11.93	11.92	33.01	25.06	0.388	235	88	83.8	9.4
130	11.29	11.28	33.15	25.29	0.416	215	79	82.7	8.9
140	10.87	10.85	33.24	25.43	0.443	206	75	83.3	8.8
150	10.37	10.35	33.32	25.58	0.468	199	72	83.7	7.0
160	9.78	9.77	33.36	25.71	0.491	188	67	83.0	7.9
170	9.49	9.47	33.45	25.83	0.514	182	65	82.5	8.5
180	9.06	9.04	33.59	26.01	0.535	167	59	83.0	10.1
190	8.91	8.89	33.72	26.13	0.554	168	59	80.1	9.7
200	9.01	8.99	33.79	26.17	0.573	155	55	81.6	9.4
210	8.97	8.95	33.86	26.23	0.592	138	49	83.7	9.8
220	8.95	8.93	33.90	26.27	0.610	116	41	83.0	10.2
230	8.56	8.53	33.92	26.35	0.627	125	44	83.0	10.2
240	8.43	8.41	33.96	26.39	0.644	121	42	84.1	10.5
250	8.26	8.24	33.96	26.43	0.661	133	46	84.7	10.6
260	8.15	8.13	33.99	26.47	0.677	120	42	87.4	10.6
270	8.05	8.02	34.00	26.49	0.693	116	40	88.4	10.5
280	7.82	7.80	33.99	26.51	0.709	128	44	89.3	9.6
290	7.80	7.77	34.05	26.56	0.724	124	43	89.7	9.9
300	7.72	7.69	34.06	26.58	0.739	106	37	90.2	9.7

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 2
Position: 35° 41' N 123° 51' W

1217 (GMT) 20 May 1984
Wind 9 kts; Wave 4 ft
CTD# 1368

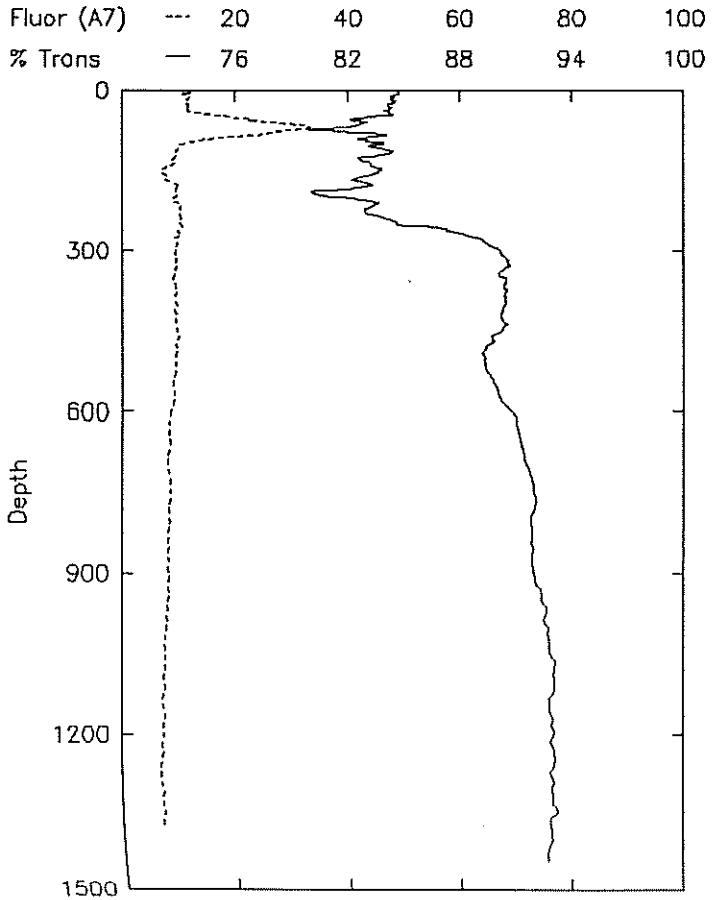


CTD# 1368: 2

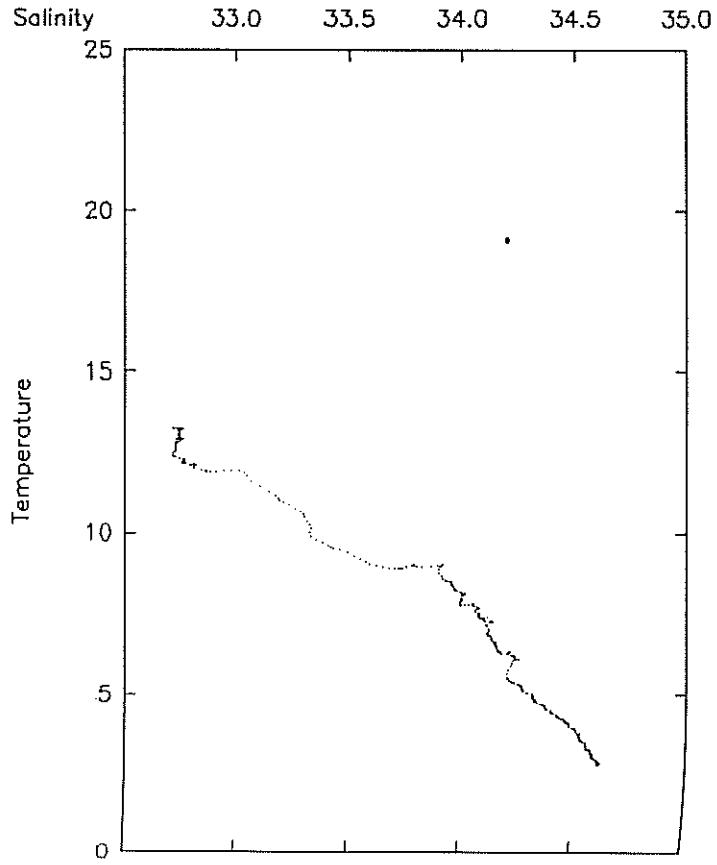
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
300	7.72	7.69	34.06	26.58	0.739	106	37	90.2	9.7
310	7.67	7.64	34.07	26.60	0.754	100	34	90.4	10.0
320	7.51	7.48	34.08	26.62	0.769	97	33	90.6	9.7
330	7.38	7.35	34.08	26.65	0.783	93	32	90.5	9.8
340	7.39	7.36	34.11	26.67	0.797	86	29	90.1	9.7
350	7.28	7.25	34.10	26.68	0.812	84	29	90.4	9.2
360	7.27	7.23	34.13	26.70	0.826	78	26	90.5	9.4
370	7.11	7.08	34.11	26.71	0.840	73	25	90.4	9.7
380	6.90	6.86	34.11	26.74	0.853	72	24	90.4	9.6
390	6.79	6.75	34.13	26.77	0.867	68	23	90.4	9.7
400	6.69	6.66	34.13	26.78	0.880	65	22	90.5	9.8
410	6.59	6.56	34.15	26.81	0.893	59	20	90.3	9.4
420	6.43	6.39	34.15	26.83	0.906	56	19	90.2	9.8
430	6.36	6.32	34.16	26.85	0.918	52	17	90.3	9.7
440	6.33	6.29	34.17	26.86	0.931	50	17	90.4	9.8
450	6.28	6.24	34.18	26.87	0.943	48	16	90.3	10.0
460	6.34	6.29	34.21	26.89	0.955	44	15	89.7	10.0
470	6.25	6.21	34.21	26.90	0.968	42	14	89.8	9.7
480	6.23	6.19	34.23	26.92	0.980	39	13	89.4	9.8
490	6.19	6.14	34.23	26.93	0.992	38	13	89.2	9.8
500	6.10	6.05	34.25	26.95	1.003	37	12	89.4	9.7
550	5.42	5.37	34.22	27.01	1.061	33	11	89.9	9.2
600	5.22	5.17	34.26	27.07	1.115	27	9	90.8	8.8
650	4.98	4.92	34.31	27.14	1.166	23	7	91.3	8.5
700	4.71	4.66	34.35	27.20	1.214	21	7	91.6	8.3
750	4.52	4.46	34.39	27.25	1.260	19	6	92.0	8.6
800	4.39	4.33	34.42	27.29	1.304	19	6	91.8	8.6
850	4.27	4.20	34.43	27.31	1.347	19	6	91.9	8.4
900	4.13	4.07	34.47	27.35	1.387	20	6	92.0	8.4
950	3.97	3.90	34.50	27.40	1.427	22	7	92.4	8.3
1000	3.80	3.72	34.52	27.43	1.464	24	8	92.7	8.0
1050	3.64	3.56	34.52	27.45	1.500	27	8	92.9	7.7
1100	3.51	3.43	34.55	27.48	1.535	28	9	93.1	7.6
1150	3.41	3.32	34.55	27.50	1.569	30	9	92.8	7.5
1200	3.28	3.19	34.56	27.52	1.602	31	10	93.1	7.5
1250	3.16	3.07	34.58	27.55	1.634	33	10	93.1	7.2
1300	3.06	2.97	34.58	27.55	1.665	35	11	93.0	7.3
1350	2.97	2.87	34.60	27.57	1.696	37	11	93.2	7.5
1400	2.90	2.81	34.61	27.59	1.726	41	13	93.0	

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1217 (GMT) 20 May 1984
STATION: 2 — Wind 9 kts; Wave 4 ft
Position: 35° 41' N 123° 51' W — CTD# 1368



CTD# 1368: 2



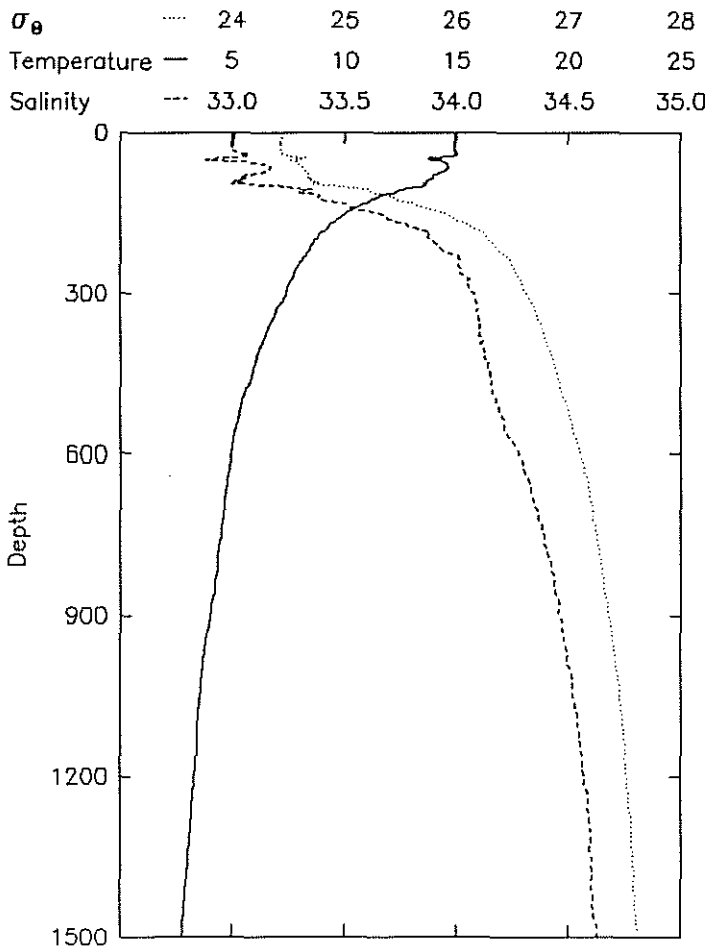
CTD# 1368: 2

09

CTD# 1368: 2

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 0014 (GMT) 21 May 1984
STATION: 3 — Wind 20 kts; Wave 6 ft
Position: 35° 31' N 124° 59' W — CTD# 1370

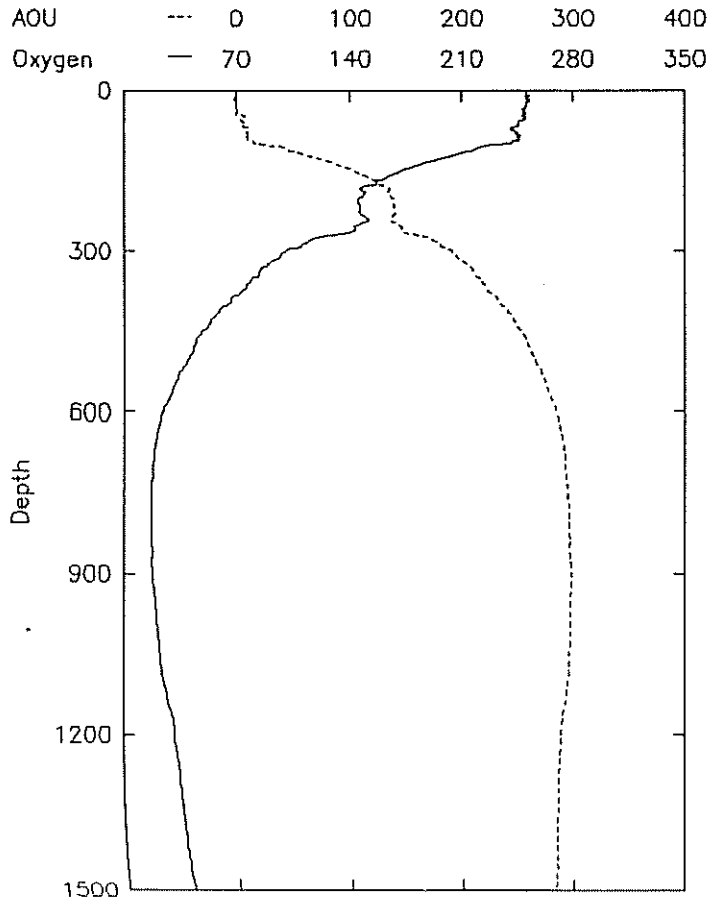


Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
0	14.97	14.97	33.01	24.45	0.000	250	100	84.6	5.3
5	14.97	14.97	33.01	24.45	0.017	251	100	84.6	5.3
10	14.98	14.98	33.02	24.45	0.035	253	101	84.7	5.3
15	14.97	14.97	33.01	24.45	0.052	251	100	84.9	5.8
20	14.98	14.97	33.01	24.45	0.070	253	101	85.0	5.6
25	14.98	14.97	33.00	24.44	0.087	251	100	85.0	6.0
30	14.97	14.97	33.01	24.44	0.104	251	100	84.9	5.8
35	14.99	14.98	33.02	24.45	0.122	248	99	84.9	6.6
40	15.06	15.05	33.06	24.46	0.139	249	99	85.5	8.1
45	14.61	14.60	33.06	24.56	0.156	249	99	85.6	8.6
50	13.83	13.82	32.89	24.59	0.173	250	97	84.6	9.2
55	14.51	14.50	33.08	24.60	0.190	249	98	86.3	9.9
60	14.65	14.64	33.15	24.62	0.206	246	98	87.5	11.1
65	14.67	14.66	33.17	24.64	0.223	246	97	88.0	12.7
70	14.54	14.53	33.16	24.65	0.240	242	96	88.0	13.8
75	14.28	14.27	33.14	24.69	0.256	243	95	87.3	17.5
80	14.00	13.99	33.06	24.70	0.272	246	96	86.3	17.6
85	13.97	13.96	33.04	24.68	0.289	247	96	86.1	21.9
90	13.72	13.71	33.02	24.71	0.305	247	96	85.9	28.2
95	13.59	13.57	33.00	24.73	0.321	243	94	84.3	27.3
100	13.46	13.45	33.23	24.93	0.337	235	91	85.5	24.8
110	12.27	12.26	33.30	25.22	0.365	218	82	87.8	19.9
120	11.46	11.44	33.39	25.44	0.392	205	76	89.6	15.6
130	11.07	11.06	33.48	25.58	0.417	192	71	90.6	13.0
140	10.50	10.48	33.54	25.73	0.440	182	66	90.9	9.8
150	10.08	10.06	33.65	25.88	0.463	172	62	91.4	6.3
160	9.74	9.72	33.70	25.98	0.483	164	59	91.7	5.3
170	9.40	9.38	33.78	26.10	0.503	157	56	91.7	5.5
180	9.19	9.17	33.84	26.18	0.522	148	53	91.8	4.9
190	8.90	8.88	33.88	26.26	0.541	150	53	91.7	5.5
200	8.75	8.73	33.89	26.29	0.558	147	52	91.7	5.3
210	8.58	8.56	33.92	26.34	0.576	146	51	91.7	5.5
220	8.46	8.44	33.94	26.38	0.593	147	51	91.7	5.6
230	8.27	8.24	34.01	26.46	0.609	147	51	91.7	5.4
240	8.09	8.07	34.01	26.49	0.625	152	53	91.9	6.2
250	7.97	7.95	34.02	26.51	0.641	145	50	92.0	6.5
260	7.84	7.82	34.02	26.53	0.656	143	49	92.0	6.4
270	7.76	7.73	34.05	26.57	0.671	130	45	91.9	6.8
280	7.63	7.60	34.05	26.59	0.686	116	40	91.9	6.8
290	7.52	7.49	34.06	26.61	0.701	110	38	91.9	8.4
300	7.47	7.44	34.08	26.63	0.716	101	34	91.8	8.1

CTD# 1370: 3

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 0014 (GMT) 21 May 1984
STATION: 3 — Wind 20 kts; Wave 6 ft
Position: 35° 31' N 124° 59' W — CTD# 1370



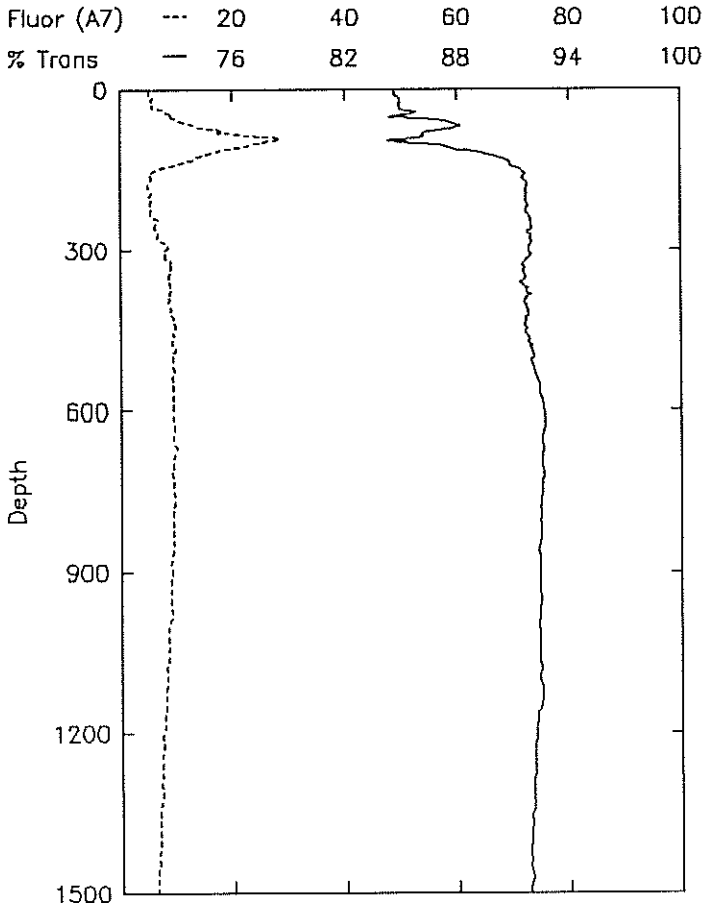
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
300	7.47	7.44	34.08	26.63	0.716	101	34	91.8	8.1
310	7.37	7.34	34.09	26.65	0.730	98	33	92.0	8.2
320	7.20	7.17	34.09	26.68	0.744	92	31	91.7	8.9
330	7.02	6.99	34.10	26.71	0.758	87	29	91.6	9.1
340	6.94	6.91	34.09	26.72	0.772	85	29	91.5	9.1
350	6.84	6.81	34.10	26.74	0.786	81	27	91.7	8.6
360	6.70	6.66	34.11	26.76	0.799	78	26	91.4	8.6
370	6.60	6.57	34.10	26.77	0.812	76	25	91.8	9.1
380	6.51	6.48	34.10	26.78	0.825	72	24	91.8	8.8
390	6.42	6.39	34.12	26.80	0.838	67	22	91.7	8.8
400	6.30	6.26	34.12	26.82	0.851	64	21	91.6	8.5
410	6.19	6.15	34.13	26.85	0.864	60	20	91.8	9.1
420	6.12	6.09	34.13	26.85	0.876	57	19	91.8	9.0
430	6.06	6.02	34.14	26.87	0.889	54	18	91.7	9.4
440	5.97	5.93	34.14	26.88	0.901	53	17	91.6	9.8
450	5.92	5.88	34.15	26.90	0.913	49	16	91.7	9.7
460	5.87	5.83	34.16	26.91	0.925	46	15	91.8	9.6
470	5.76	5.73	34.15	26.92	0.937	45	15	91.8	9.3
480	5.66	5.62	34.16	26.94	0.949	44	14	92.0	9.7
490	5.58	5.54	34.16	26.95	0.960	43	14	92.1	9.7
500	5.48	5.44	34.18	26.98	0.972	41	13	92.1	9.4
550	5.21	5.17	34.22	27.03	1.027	32	10	92.4	9.4
600	4.98	4.93	34.28	27.11	1.080	24	8	92.6	9.5
650	4.79	4.74	34.32	27.17	1.129	20	7	92.5	9.4
700	4.65	4.60	34.36	27.21	1.176	19	6	92.5	9.5
750	4.54	4.48	34.39	27.25	1.222	18	6	92.5	9.4
800	4.39	4.33	34.42	27.29	1.265	17	6	92.4	9.5
850	4.26	4.20	34.44	27.32	1.307	18	6	92.4	9.3
900	4.05	3.99	34.46	27.35	1.348	18	6	92.4	9.2
950	3.86	3.79	34.49	27.40	1.387	20	6	92.5	9.0
1000	3.72	3.65	34.51	27.43	1.424	21	7	92.3	8.5
1050	3.59	3.52	34.52	27.45	1.460	23	7	92.4	8.5
1100	3.48	3.40	34.54	27.48	1.495	25	8	92.4	8.2
1150	3.43	3.35	34.55	27.50	1.529	29	9	92.4	7.9
1200	3.35	3.26	34.57	27.52	1.562	32	10	92.2	7.5
1250	3.24	3.15	34.58	27.54	1.594	34	11	92.1	7.3
1300	3.14	3.05	34.60	27.56	1.625	36	11	92.0	7.2
1350	3.04	2.94	34.60	27.57	1.656	37	12	92.0	6.8
1400	2.96	2.86	34.60	27.58	1.686	39	12	91.9	6.9
1450	2.86	2.76	34.61	27.60	1.716	40	12	91.9	6.6
1500	2.78	2.68	34.63	27.62	1.745	42	13	91.8	6.4

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

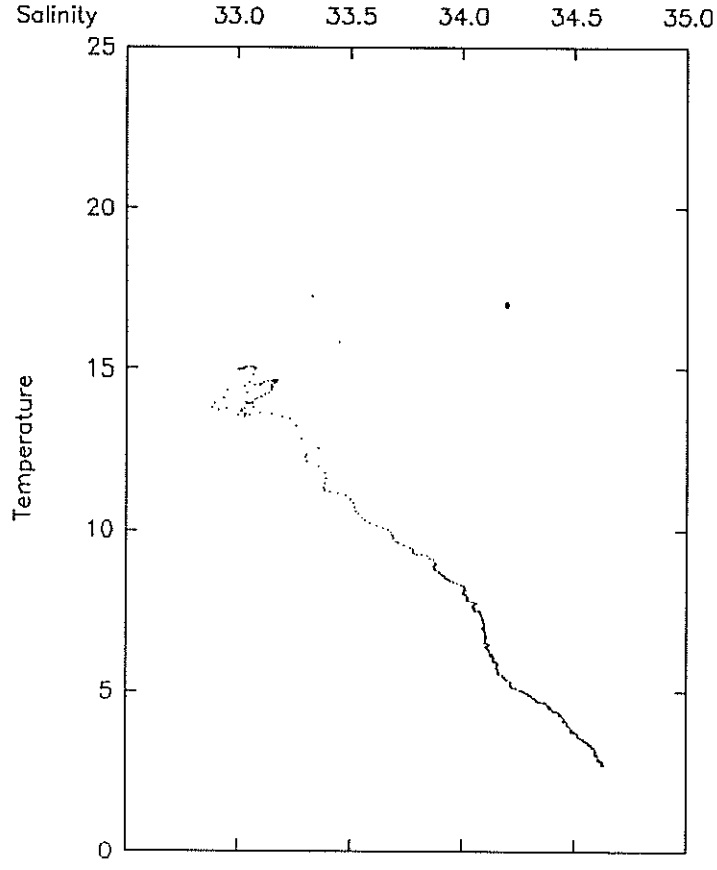
CRUISE: Vertex 5
STATION: 3
Position: 35° 31' N 124° 59' W

0014 (GMT) 21 May 1984
Wind 20 kts; Wave 6 ft
CTD# 1370

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
1500	2.78	2.68	34.63	27.62	1.745	42	13	91.8	6.4
1550	2.70	2.59	34.63	27.63	1.773	44	13	91.9	6.4
1560	2.69	2.58	34.63	27.63	1.778	44	14	91.8	6.3



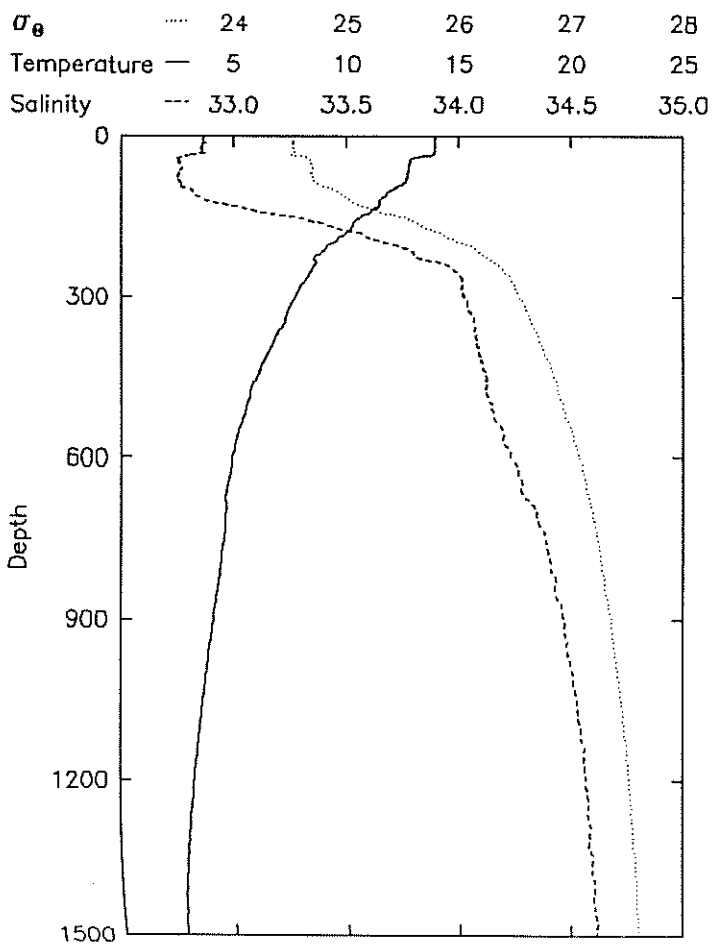
CTD# 1370: 3



CTD# 1370: 3

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

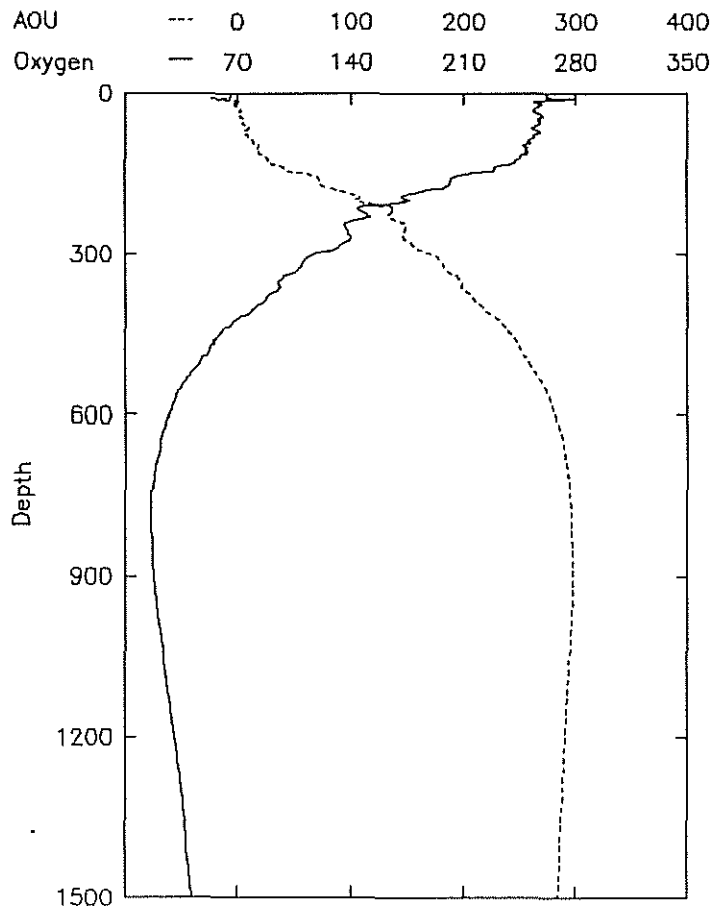
CRUISE: Vertex 5 — 1122 (GMT) 21 May 1984
STATION: 4 — Wind 10 kts; Wave 6 ft
Position: 35° 22' N 126° 11' W — CTD# 1372



Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
0	13.99	13.99	32.87	24.54	0.000	261	102	85.3	17.9
5	13.99	13.99	32.87	24.54	0.017	262	102	85.3	8.6
10	13.98	13.98	32.86	24.54	0.034	275	107	85.3	9.1
15	13.98	13.98	32.86	24.54	0.051	256	100	85.3	9.4
20	13.98	13.98	32.86	24.54	0.068	258	101	85.2	9.4
25	13.98	13.97	32.86	24.54	0.085	256	100	85.3	9.9
30	13.96	13.95	32.87	24.55	0.102	254	99	85.1	14.6
35	13.83	13.83	32.80	24.52	0.119	255	99	85.3	16.4
40	13.06	13.05	32.76	24.65	0.135	258	99	83.9	16.5
45	12.88	12.87	32.77	24.69	0.152	259	99	82.0	19.2
50	12.83	12.83	32.76	24.69	0.168	256	98	82.9	21.7
55	12.82	12.81	32.76	24.70	0.184	258	98	82.6	28.3
60	12.80	12.79	32.78	24.71	0.200	255	97	82.0	32.9
65	12.78	12.78	32.76	24.70	0.217	253	96	80.6	33.5
70	12.73	12.72	32.76	24.71	0.233	257	97	79.5	31.4
75	12.72	12.71	32.75	24.71	0.249	256	97	81.1	29.6
80	12.71	12.70	32.76	24.72	0.265	253	96	81.7	34.8
85	12.63	12.62	32.77	24.74	0.281	251	95	82.6	26.3
90	12.50	12.49	32.77	24.77	0.298	250	95	83.3	21.5
95	12.25	12.24	32.77	24.82	0.313	248	93	85.1	19.3
100	12.07	12.05	32.82	24.88	0.329	249	93	86.0	18.5
110	11.75	11.73	32.83	24.96	0.359	250	93	87.2	13.7
120	11.48	11.47	32.88	25.04	0.389	245	91	87.9	11.8
130	11.44	11.42	33.01	25.15	0.418	241	89	88.2	11.5
140	11.12	11.10	33.10	25.28	0.446	230	85	88.3	12.8
150	10.62	10.61	33.27	25.50	0.472	211	77	88.1	14.5
160	10.37	10.35	33.37	25.62	0.496	202	73	88.3	13.1
170	10.24	10.22	33.45	25.70	0.520	201	73	88.3	11.9
180	9.99	9.97	33.56	25.84	0.543	188	68	88.5	10.5
190	9.66	9.64	33.60	25.92	0.564	174	62	88.1	6.0
200	9.30	9.28	33.70	26.05	0.585	176	63	88.1	5.5
210	9.08	9.06	33.78	26.15	0.604	149	53	88.4	6.2
220	8.82	8.80	33.80	26.21	0.623	148	52	88.8	6.4
230	8.62	8.59	33.85	26.28	0.641	152	53	89.4	6.3
240	8.67	8.65	33.95	26.35	0.658	138	48	90.2	6.4
250	8.51	8.48	33.98	26.40	0.675	137	48	90.4	6.5
260	8.37	8.34	34.01	26.44	0.691	139	48	90.5	6.9
270	8.22	8.19	34.02	26.47	0.708	140	49	90.6	7.3
280	8.02	8.00	34.02	26.51	0.723	135	47	90.3	7.4
290	7.90	7.87	34.02	26.53	0.739	131	45	90.7	7.4
300	7.79	7.76	34.03	26.54	0.754	118	41	90.4	7.5

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1122 (GMT) 21 May 1984
STATION: 4 — Wind 10 kts; Wave 6 ft
Position: 35° 22' N 126° 11' W — CTD# 1372



CTD# 1372: 4

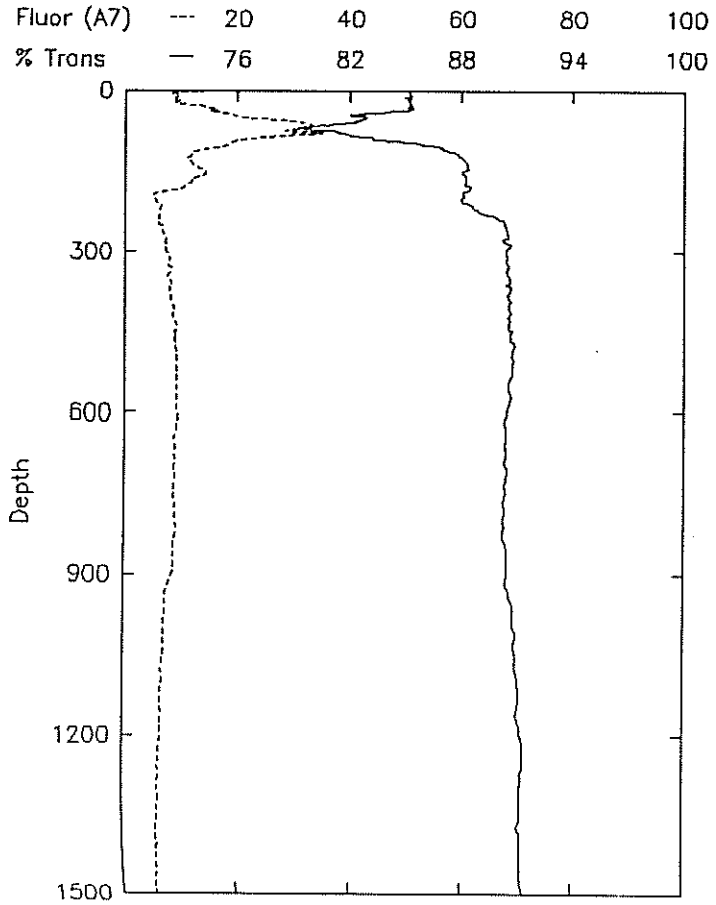
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
300	7.79	7.76	34.03	26.54	0.754	118	41	90.4	7.5
310	7.66	7.63	34.04	26.58	0.770	112	39	90.5	8.1
320	7.53	7.50	34.05	26.60	0.785	110	38	90.5	7.8
330	7.41	7.38	34.06	26.62	0.799	107	37	90.6	8.5
340	7.34	7.31	34.07	26.64	0.814	100	34	90.5	8.2
350	7.34	7.31	34.08	26.65	0.828	96	33	90.7	8.1
360	7.10	7.07	34.07	26.68	0.842	97	33	90.5	8.5
370	6.96	6.93	34.08	26.70	0.856	93	32	90.7	8.2
380	6.85	6.81	34.08	26.72	0.870	88	30	90.5	8.4
390	6.76	6.72	34.08	26.73	0.884	86	29	90.6	8.4
400	6.63	6.59	34.09	26.76	0.897	81	27	90.6	8.7
410	6.52	6.48	34.10	26.78	0.911	77	26	90.6	9.2
420	6.38	6.35	34.10	26.80	0.924	71	24	90.6	8.7
430	6.26	6.22	34.11	26.82	0.937	67	22	90.7	9.2
440	6.20	6.16	34.12	26.84	0.949	62	21	90.6	9.2
450	6.09	6.05	34.13	26.86	0.962	59	20	90.8	9.0
460	5.91	5.87	34.13	26.88	0.974	56	19	90.7	9.1
470	5.83	5.79	34.13	26.89	0.986	55	18	90.8	9.1
480	5.79	5.75	34.12	26.89	0.999	53	17	90.9	9.2
490	5.72	5.68	34.13	26.91	1.011	50	16	90.8	9.2
500	5.64	5.60	34.15	26.93	1.023	47	16	90.9	9.5
550	5.27	5.23	34.20	27.01	1.080	35	11	90.6	9.4
600	4.98	4.93	34.24	27.08	1.134	28	9	90.5	9.5
650	4.77	4.72	34.28	27.14	1.184	22	7	90.4	9.0
700	4.70	4.65	34.35	27.20	1.233	19	6	90.5	9.0
750	4.62	4.56	34.39	27.24	1.279	17	5	90.4	8.9
800	4.46	4.40	34.41	27.28	1.323	17	5	90.3	9.2
850	4.30	4.24	34.44	27.31	1.366	17	5	90.5	9.0
900	4.14	4.07	34.47	27.36	1.407	18	6	90.5	8.7
950	3.97	3.90	34.48	27.39	1.446	20	6	90.7	7.6
1000	3.84	3.77	34.51	27.42	1.484	22	7	90.9	7.3
1050	3.69	3.61	34.53	27.45	1.521	25	8	91.0	7.2
1100	3.57	3.49	34.55	27.48	1.556	26	8	91.1	7.1
1150	3.45	3.36	34.56	27.50	1.590	29	9	91.1	6.9
1200	3.31	3.22	34.57	27.52	1.623	31	10	91.3	6.8
1250	3.21	3.12	34.58	27.54	1.655	33	10	91.4	6.5
1300	3.11	3.02	34.59	27.55	1.686	35	11	91.3	6.5
1350	3.00	2.91	34.60	27.58	1.717	37	11	91.3	6.5
1400	2.91	2.82	34.61	27.59	1.747	39	12	91.3	6.3
1450	2.85	2.75	34.61	27.60	1.776	40	12	91.3	6.2
1500	2.77	2.67	34.62	27.61	1.805	42	13	91.4	6.1

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

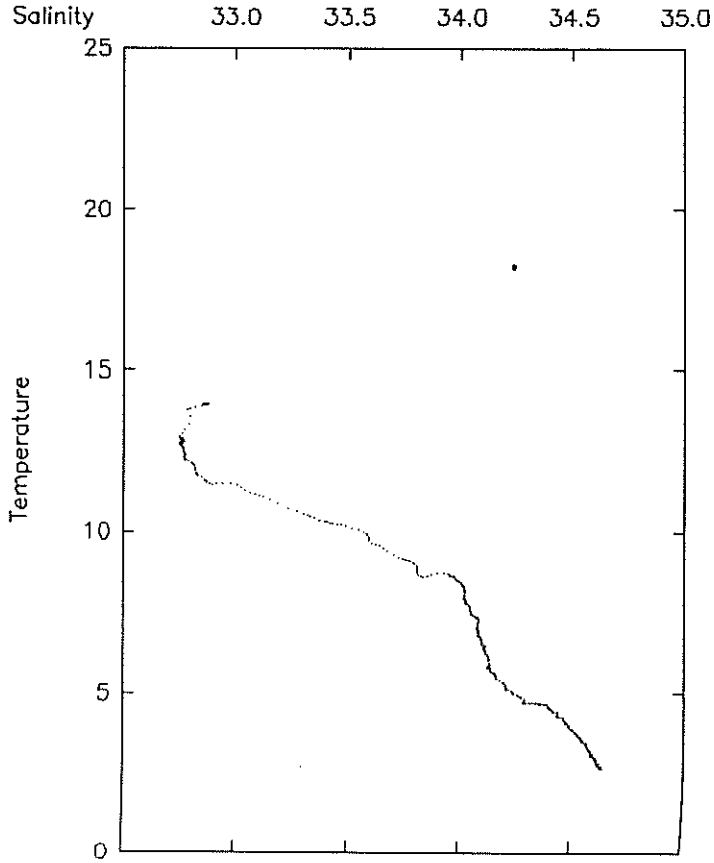
CRUISE: Vertex 5
STATION: 4
Position: 35° 22' N 126° 11' W

1122 (GMT) 21 May 1984
Wind 10 kts; Wave 6 ft
CTD# 1372

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
1500	2.77	2.67	34.62	27.61	1.805	42	13	91.4	6.1
1550	2.69	2.58	34.63	27.63	1.833	44	13	91.6	6.1
1560	2.68	2.57	34.63	27.63	1.839	44	14	91.5	6.1



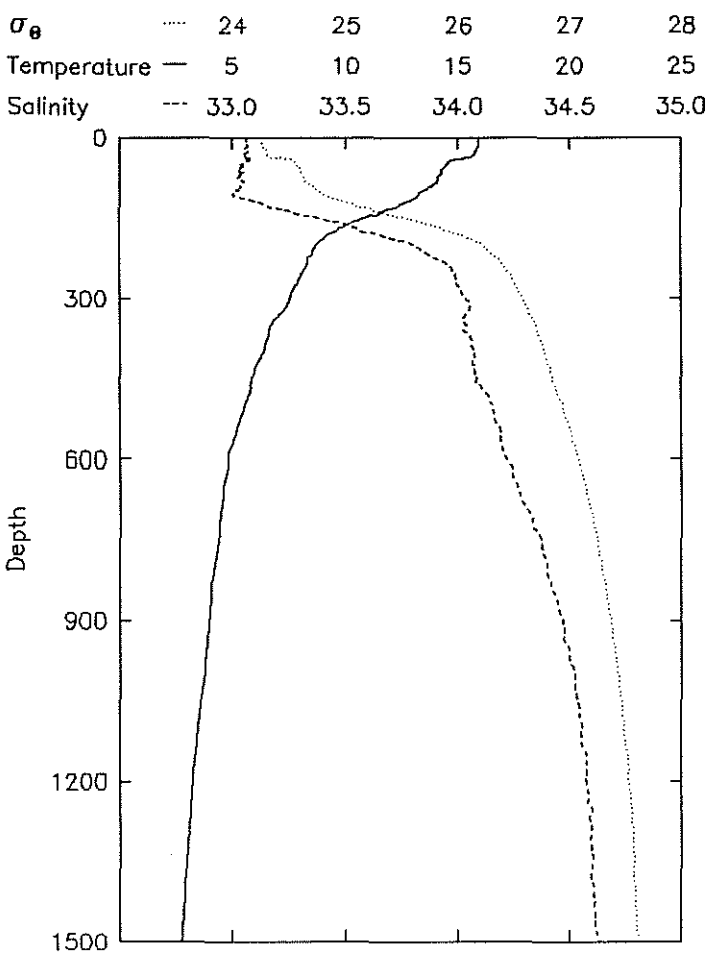
CTD# 1372: 4



CTD# 1372: 4

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 2054 (GMT) 21 May 1984
STATION: 5 — Wind 10 kts; Wave 6 ft
Position: 35° 10' N 127° 18' W — CTD# 1374

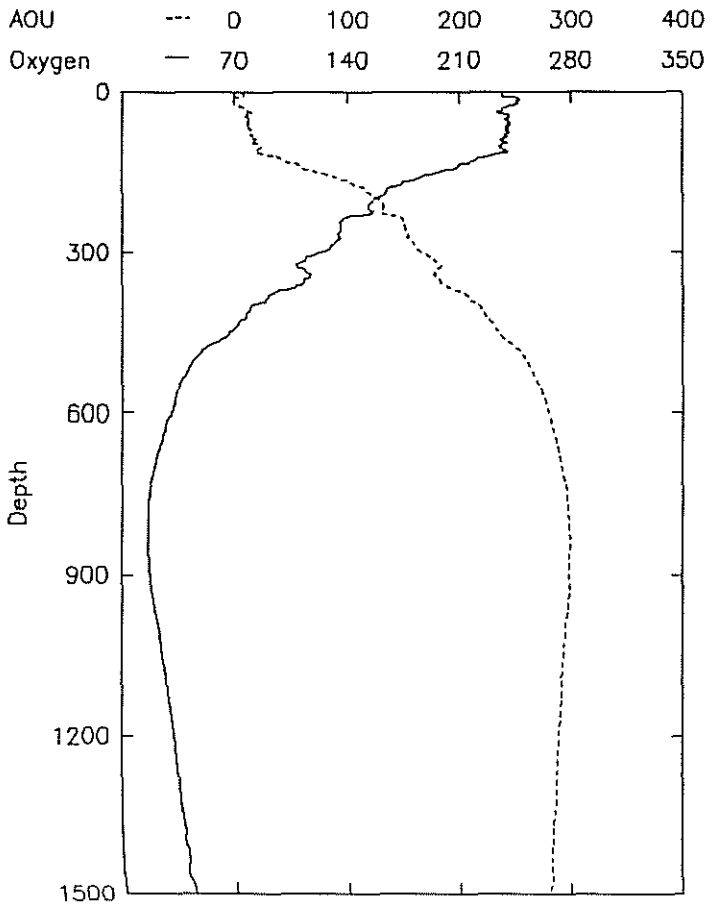


CTD# 1374: 5

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
0	15.95	15.95	33.07	24.27	0.000	236	96	87.1	3.5
5	15.95	15.95	33.07	24.27	0.018	237	96	87.1	3.5
10	15.95	15.95	33.07	24.28	0.036	243	99	86.7	3.6
15	15.96	15.95	33.07	24.27	0.055	248	101	85.5	3.6
20	15.87	15.87	33.06	24.29	0.073	246	100	85.5	3.7
25	15.81	15.81	33.07	24.31	0.091	243	98	85.2	4.0
30	15.75	15.75	33.05	24.31	0.109	238	96	84.9	4.2
35	15.64	15.64	33.06	24.34	0.127	236	95	84.8	4.4
40	14.91	14.90	33.09	24.52	0.145	237	94	83.7	5.1
45	14.62	14.61	33.06	24.56	0.162	242	96	83.2	5.7
50	14.49	14.48	33.04	24.57	0.178	239	94	83.2	7.5
55	14.42	14.41	33.04	24.59	0.195	241	95	83.2	9.8
60	14.28	14.27	33.03	24.61	0.212	242	95	83.1	10.8
65	14.30	14.29	33.05	24.62	0.229	240	94	83.8	12.9
70	14.19	14.18	33.04	24.63	0.245	239	94	83.8	13.1
75	14.10	14.09	33.03	24.65	0.262	241	94	84.1	14.6
80	14.11	14.10	33.04	24.65	0.278	238	93	84.0	21.0
85	13.99	13.97	33.06	24.69	0.295	237	92	84.0	24.2
90	13.84	13.82	33.03	24.71	0.311	236	92	83.9	29.6
95	13.64	13.62	33.02	24.73	0.327	240	93	83.9	34.6
100	13.39	13.37	33.01	24.78	0.343	236	91	84.2	37.2
110	13.15	13.13	33.03	24.84	0.375	241	92	83.2	28.9
120	12.62	12.60	33.12	25.02	0.405	227	86	84.5	21.4
130	12.19	12.18	33.18	25.14	0.434	219	82	86.5	16.4
140	11.60	11.58	33.28	25.33	0.462	209	78	88.1	14.0
150	10.82	10.80	33.40	25.56	0.487	197	72	89.1	10.1
160	10.18	10.16	33.49	25.75	0.511	186	67	90.0	6.5
170	9.70	9.68	33.55	25.88	0.533	175	63	90.2	5.2
180	9.25	9.23	33.65	26.03	0.554	166	59	90.1	4.6
190	9.02	9.00	33.73	26.13	0.574	164	58	90.3	4.3
200	8.78	8.76	33.81	26.22	0.592	157	55	90.3	4.5
210	8.64	8.62	33.84	26.27	0.610	154	54	90.2	4.9
220	8.50	8.48	33.88	26.33	0.628	155	54	90.3	4.9
230	8.36	8.34	33.94	26.39	0.645	149	52	90.1	5.1
240	8.34	8.31	33.96	26.41	0.661	137	48	90.2	5.3
250	8.18	8.16	33.98	26.45	0.678	136	47	90.2	6.2
260	8.05	8.02	33.99	26.48	0.694	136	47	90.3	6.1
270	7.93	7.90	34.00	26.50	0.709	135	47	90.4	6.2
280	7.78	7.75	34.01	26.53	0.725	133	46	90.4	6.6
290	7.66	7.63	34.02	26.56	0.740	130	45	90.4	6.9
300	7.59	7.56	34.03	26.58	0.755	124	43	90.3	7.6

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 2054 (GMT) 21 May 1984
STATION: 5 — Wind 10 kts; Wave 6 ft
Position: 35° 10' N 127° 18' W — CTD# 1374



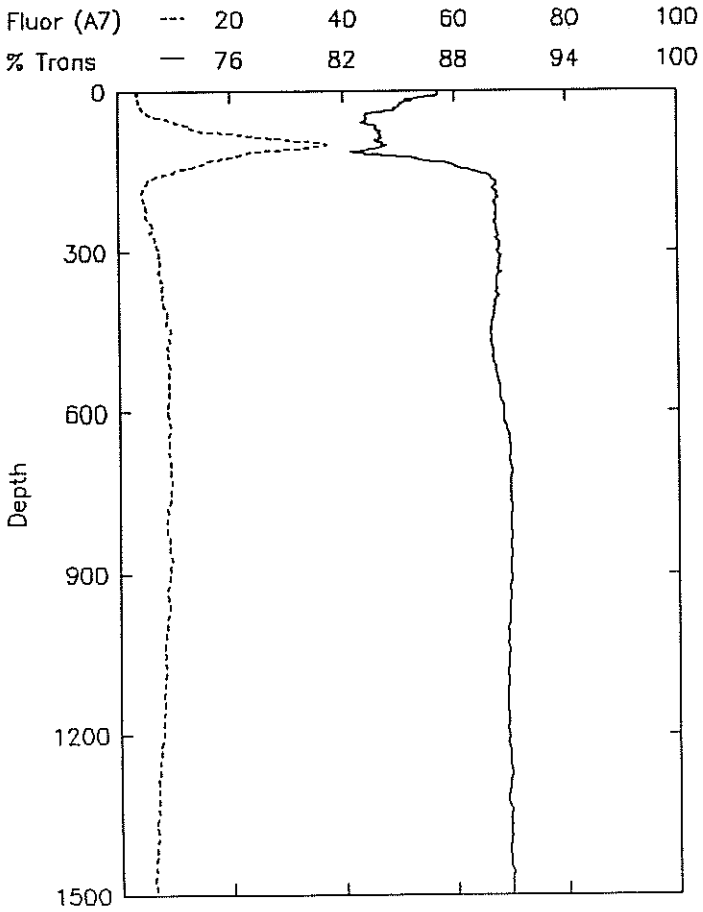
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
300	7.59	7.56	34.03	26.58	0.755	124	43	90.3	7.6
310	7.50	7.47	34.05	26.60	0.770	115	39	90.5	7.2
320	7.36	7.33	34.05	26.63	0.785	111	38	90.3	7.4
330	7.12	7.09	34.04	26.65	0.799	113	38	90.3	7.2
340	6.88	6.85	34.03	26.67	0.813	118	40	90.5	7.2
350	6.75	6.72	34.04	26.70	0.827	115	39	90.2	7.3
360	6.65	6.62	34.03	26.70	0.841	111	37	90.2	7.5
370	6.64	6.60	34.05	26.73	0.855	102	34	90.3	7.8
380	6.53	6.49	34.06	26.75	0.869	92	31	90.3	8.0
390	6.45	6.42	34.06	26.76	0.882	89	30	90.2	8.0
400	6.40	6.37	34.08	26.78	0.895	81	27	90.2	8.0
410	6.29	6.25	34.08	26.79	0.908	79	26	90.1	8.6
420	6.13	6.09	34.07	26.80	0.921	78	26	90.1	8.8
430	6.03	6.00	34.07	26.82	0.934	73	24	90.0	8.6
440	5.99	5.95	34.08	26.83	0.947	71	23	89.9	8.8
450	5.91	5.88	34.09	26.85	0.959	67	22	89.9	9.3
460	5.87	5.83	34.09	26.86	0.972	64	21	90.0	8.9
470	5.86	5.82	34.11	26.88	0.984	57	19	89.9	9.1
480	5.79	5.75	34.14	26.90	0.997	52	17	90.0	8.6
490	5.68	5.64	34.14	26.92	1.008	48	16	90.1	8.6
500	5.59	5.55	34.16	26.94	1.020	45	15	90.0	9.0
550	5.19	5.15	34.19	27.02	1.077	36	12	90.4	8.9
600	4.84	4.79	34.22	27.08	1.131	31	10	90.6	8.7
650	4.63	4.58	34.27	27.14	1.181	25	8	90.9	8.8
700	4.49	4.44	34.32	27.20	1.229	21	7	91.0	9.1
750	4.41	4.35	34.37	27.25	1.275	17	6	90.9	9.2
800	4.23	4.17	34.40	27.29	1.319	17	5	90.9	8.5
850	4.10	4.03	34.43	27.33	1.360	16	5	91.0	8.9
900	4.00	3.93	34.47	27.37	1.400	18	6	91.0	9.0
950	3.90	3.83	34.50	27.40	1.439	20	6	90.9	8.8
1000	3.79	3.71	34.52	27.43	1.476	23	7	90.8	8.4
1050	3.63	3.55	34.54	27.46	1.512	26	8	90.8	8.1
1100	3.51	3.43	34.56	27.49	1.546	28	9	90.8	8.0
1150	3.37	3.29	34.58	27.52	1.580	30	9	90.7	7.9
1200	3.26	3.17	34.58	27.53	1.612	33	10	90.8	7.7
1250	3.17	3.08	34.60	27.56	1.643	35	11	90.9	7.1
1300	3.08	2.99	34.60	27.56	1.674	36	11	90.8	6.9
1350	2.99	2.90	34.61	27.58	1.704	38	12	90.9	6.8
1400	2.94	2.84	34.61	27.59	1.734	40	12	90.9	6.5
1450	2.86	2.76	34.62	27.60	1.764	41	13	90.9	6.2
1500	2.78	2.67	34.63	27.62	1.792	44	14	90.9	6.0

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

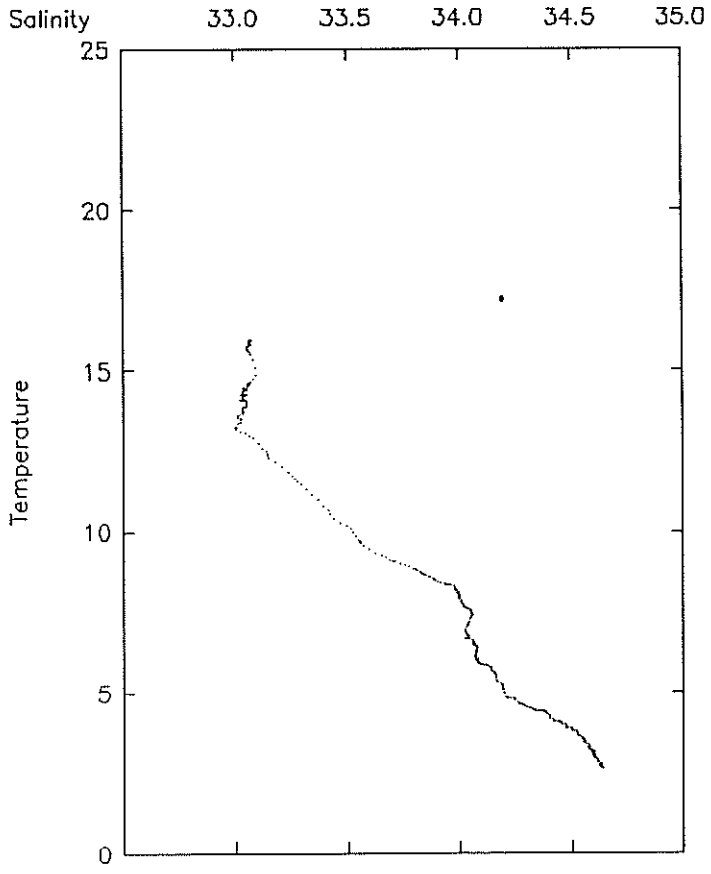
CRUISE: Vertex 5
STATION: 5
Position: 35° 10' N 127° 18' W

2054 (GMT) 21 May 1984
Wind 10 kts; Wave 6 ft
CTD# 1374

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
1500	2.78	2.67	34.63	27.62	1.792	44	14	90.9	6.0
1550	2.66	2.55	34.63	27.63	1.820	46	14	91.1	5.6
1560	2.64	2.53	34.64	27.64	1.826	46	14	91.0	5.7



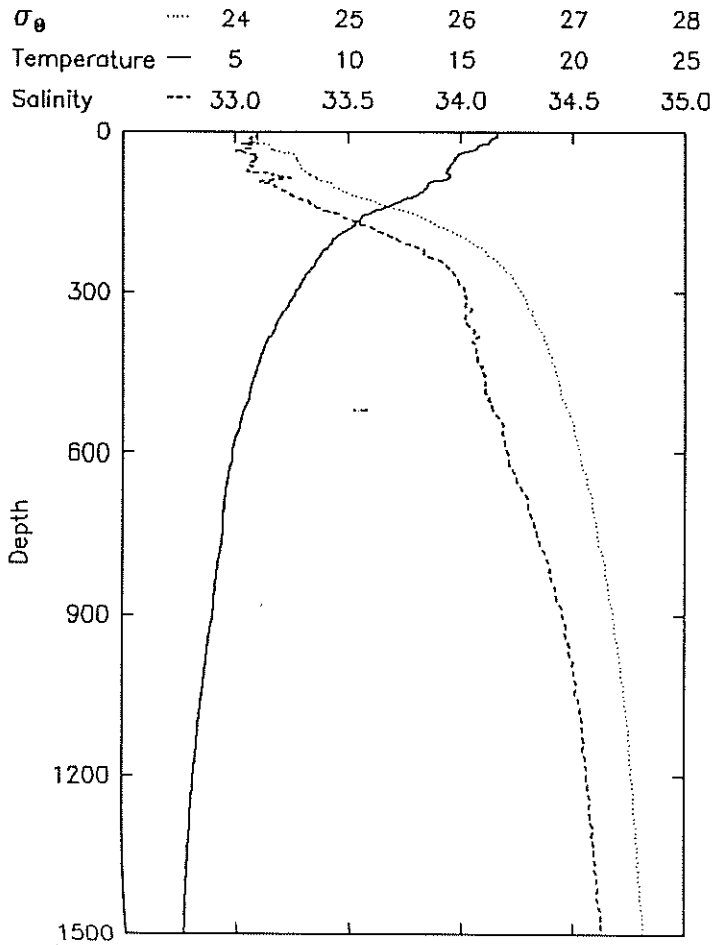
CTD# 1374: 5



CTD# 1374: 5

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

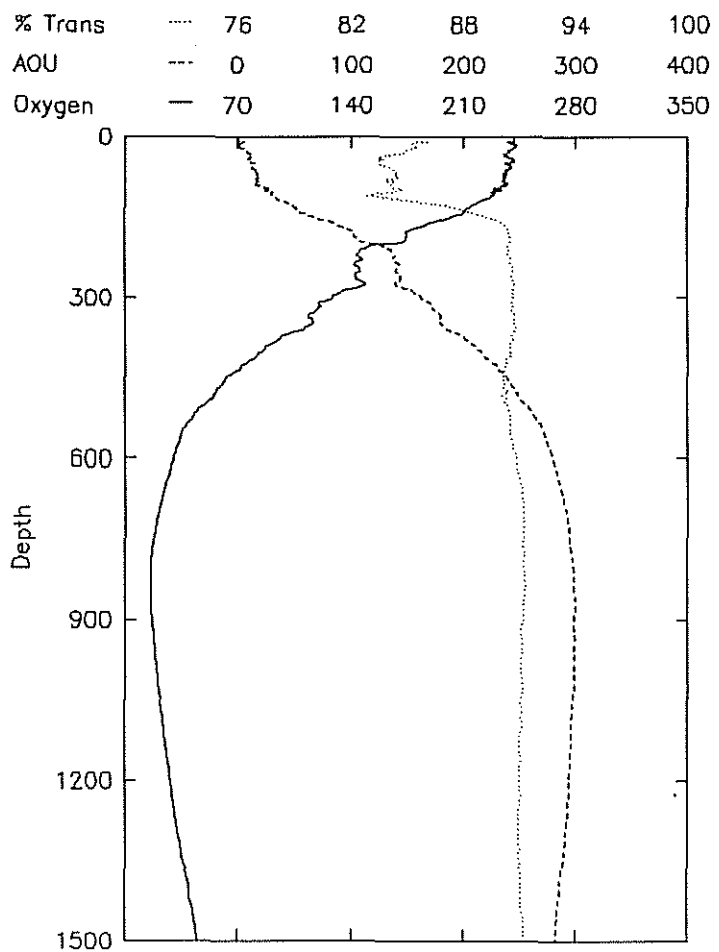
CRUISE: Vertex 5 — 0654 (GMT) 22 May 1984
STATION: 6 — Wind 7 kts; Wave 3 ft
Position: 34° 59' N 128° 31' W — CTD# 1376



Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m
0	16.62	16.62	33.10	24.14	0.000	241	100	86.0
5	16.62	16.62	33.10	24.14	0.019	242	100	86.0
10	16.60	16.60	33.07	24.13	0.038	237	98	85.9
15	16.34	16.33	33.08	24.20	0.056	244	100	85.2
20	16.28	16.28	33.08	24.21	0.075	243	99	85.5
25	15.83	15.82	33.07	24.31	0.093	238	96	84.9
30	15.74	15.73	33.08	24.33	0.111	238	96	84.8
35	15.43	15.42	33.01	24.35	0.129	235	95	83.8
40	14.99	14.98	33.06	24.48	0.147	240	96	83.7
45	14.88	14.87	33.09	24.52	0.164	240	96	83.5
50	14.78	14.77	33.10	24.55	0.181	236	94	83.5
55	14.70	14.69	33.09	24.57	0.198	239	95	83.9
60	14.57	14.57	33.06	24.57	0.215	238	94	84.1
65	14.53	14.52	33.08	24.60	0.232	238	94	84.4
70	14.43	14.42	33.06	24.60	0.248	235	93	84.3
75	14.36	14.35	33.07	24.63	0.265	235	93	84.5
80	14.56	14.55	33.17	24.66	0.282	236	93	83.8
85	14.47	14.46	33.25	24.74	0.298	237	94	84.3
90	14.16	14.14	33.16	24.73	0.314	237	93	84.1
95	13.58	13.57	33.13	24.83	0.330	233	90	84.3
100	13.56	13.55	33.17	24.87	0.345	233	90	84.6
110	13.33	13.31	33.22	24.96	0.376	227	88	82.9
120	12.91	12.90	33.26	25.07	0.406	219	84	85.3
130	12.29	12.27	33.33	25.24	0.434	214	81	87.3
140	11.74	11.72	33.36	25.37	0.461	211	79	88.2
150	11.06	11.04	33.43	25.55	0.487	202	75	89.3
160	10.61	10.59	33.48	25.67	0.511	190	69	90.0
170	10.36	10.34	33.54	25.76	0.534	181	66	90.4
180	10.13	10.11	33.61	25.85	0.556	175	63	90.5
190	9.69	9.67	33.66	25.96	0.577	174	62	90.5
200	9.36	9.34	33.71	26.06	0.597	159	57	90.4
210	9.21	9.19	33.77	26.13	0.617	147	52	90.4
220	9.02	9.00	33.84	26.21	0.636	144	51	90.4
230	8.85	8.83	33.85	26.24	0.654	147	52	90.6
240	8.64	8.61	33.91	26.32	0.672	143	50	90.6
250	8.55	8.53	33.94	26.36	0.689	146	51	90.6
260	8.34	8.31	33.96	26.41	0.706	143	50	90.6
270	8.16	8.13	33.98	26.46	0.722	147	51	90.6
280	8.01	7.99	33.99	26.48	0.738	145	50	90.7
290	7.90	7.87	34.01	26.51	0.754	134	46	90.6
300	7.70	7.67	34.02	26.55	0.769	129	44	90.6

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 0654 (GMT) 22 May 1984
STATION: 6 — Wind 7 kts; Wave 3 ft
Position: 34° 59' N 128° 31' W — CTD# 1376



CTD# 1376: 6

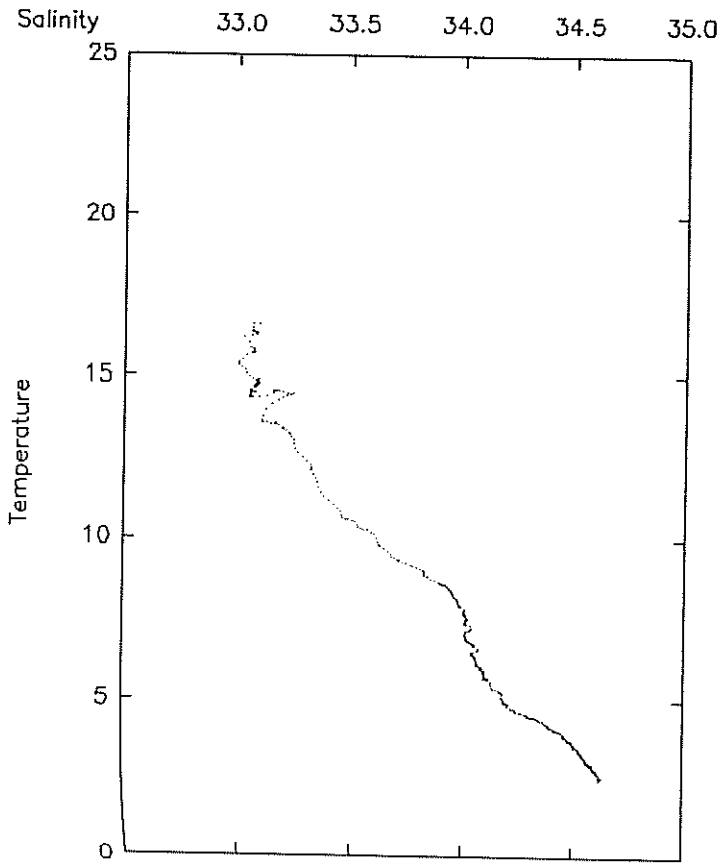
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m
300	7.70	7.67	34.02	26.55	0.769	129	44	90.6
310	7.60	7.57	34.02	26.57	0.784	121	41	90.6
320	7.45	7.42	34.02	26.59	0.799	120	41	90.7
330	7.32	7.29	34.04	26.63	0.814	115	39	90.7
340	7.12	7.08	34.02	26.64	0.829	116	39	90.7
350	6.97	6.94	34.03	26.66	0.843	116	39	90.7
360	6.86	6.83	34.03	26.68	0.857	111	37	90.7
370	6.77	6.74	34.06	26.71	0.871	99	33	90.6
380	6.63	6.60	34.08	26.75	0.885	95	32	90.7
390	6.46	6.43	34.05	26.75	0.898	88	29	90.5
400	6.36	6.32	34.07	26.77	0.912	86	29	90.5
410	6.29	6.25	34.07	26.78	0.925	82	27	90.5
420	6.16	6.13	34.08	26.81	0.938	77	25	90.3
430	6.10	6.07	34.08	26.82	0.950	72	24	90.2
440	6.02	5.98	34.10	26.84	0.963	68	23	90.2
450	5.96	5.92	34.10	26.85	0.976	63	21	90.2
460	5.87	5.83	34.10	26.87	0.988	62	20	90.2
470	5.79	5.75	34.11	26.88	1.000	58	19	90.2
480	5.72	5.68	34.12	26.89	1.013	56	18	90.2
490	5.68	5.64	34.11	26.90	1.025	54	18	90.4
500	5.66	5.61	34.12	26.91	1.037	50	16	90.4
550	5.25	5.21	34.19	27.01	1.094	36	12	90.5
600	4.91	4.86	34.21	27.07	1.148	31	10	90.8
650	4.68	4.63	34.25	27.12	1.200	25	8	91.1
700	4.55	4.49	34.30	27.18	1.248	21	7	91.2
750	4.48	4.42	34.34	27.22	1.295	18	6	91.2
800	4.29	4.23	34.39	27.28	1.340	17	5	91.2
850	4.15	4.08	34.42	27.32	1.382	16	5	91.3
900	4.04	3.97	34.46	27.36	1.423	17	5	91.2
950	3.86	3.79	34.48	27.40	1.462	19	6	91.1
1000	3.71	3.63	34.50	27.43	1.499	20	6	91.1
1050	3.56	3.49	34.51	27.45	1.535	22	7	91.1
1100	3.42	3.34	34.55	27.49	1.570	24	8	91.1
1150	3.31	3.23	34.55	27.50	1.603	26	8	91.0
1200	3.19	3.10	34.56	27.53	1.636	28	9	91.0
1250	3.10	3.01	34.58	27.55	1.667	31	9	90.9
1300	3.02	2.93	34.60	27.57	1.698	33	10	90.9
1350	2.91	2.82	34.60	27.58	1.728	36	11	91.0
1400	2.83	2.73	34.61	27.60	1.757	40	12	91.1
1450	2.74	2.63	34.62	27.61	1.786	43	13	91.2
1500	2.65	2.54	34.63	27.63	1.814	45	14	91.2

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 6
Position: 34° 59' N 128° 31' W

0654 (GMT) 22 May 1984
Wind 7 kts; Wave 3 ft
CTD# 1376

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m
1500	2.65	2.54	34.63	27.63	1.814	45	14	91.2
1550	2.57	2.46	34.63	27.63	1.841	47	14	91.1

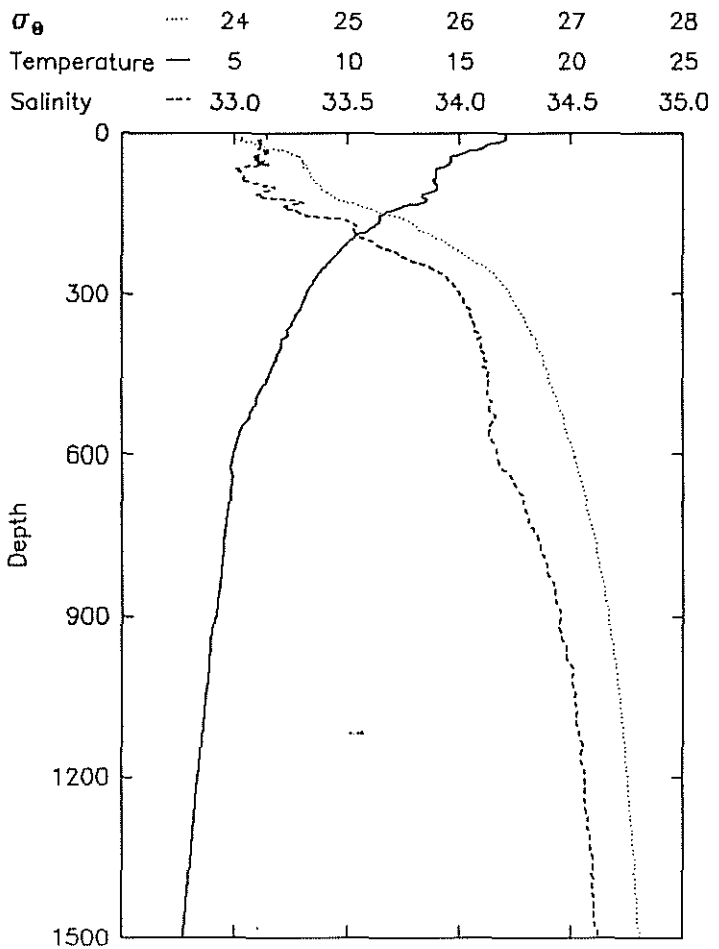


CTD# 1376: 6

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 7
Position: 34° 45' N 129° 50' W

1719 (GMT) 22 May 1984
Wind 5 kts; Wave 2 ft
CTD# 1378

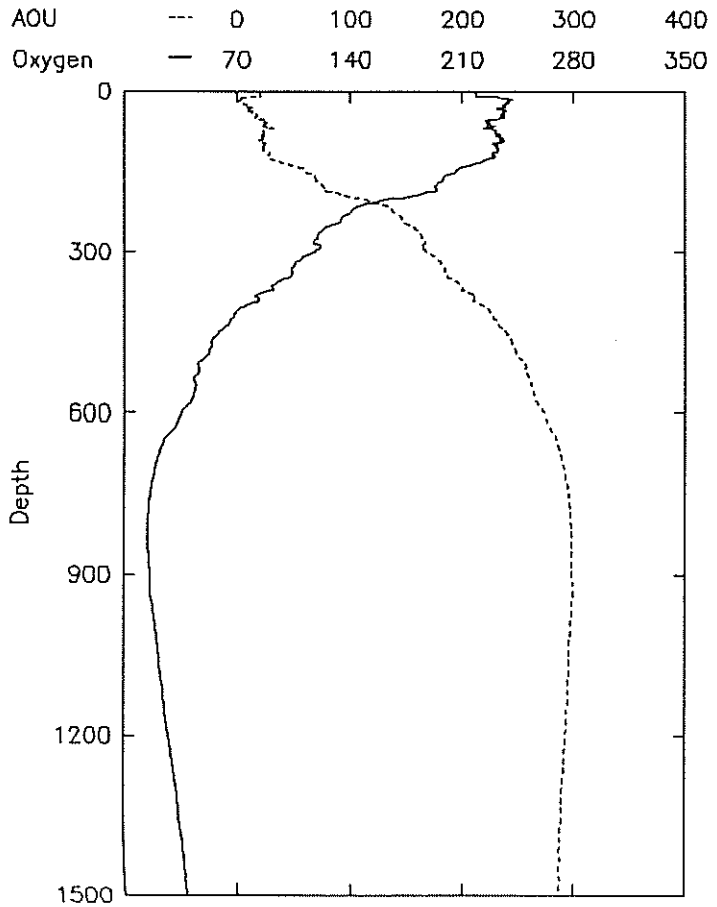


CTD# 1378: 7

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
0	17.08	17.08	33.15	24.07	0.000	219	91	85.8	2.9
5	17.08	17.08	33.15	24.07	0.019	219	91	85.8	2.7
10	17.09	17.08	33.14	24.07	0.038	224	93	85.7	2.4
15	16.92	16.92	33.11	24.08	0.058	242	100	85.8	2.6
20	16.50	16.49	33.12	24.19	0.076	239	98	85.9	2.8
25	16.17	16.17	33.13	24.27	0.095	236	96	85.7	3.0
30	15.93	15.93	33.11	24.31	0.113	233	95	85.5	3.3
35	15.34	15.34	33.16	24.48	0.131	238	96	85.2	4.3
40	14.99	14.98	33.11	24.52	0.148	236	94	85.1	6.0
45	14.61	14.60	33.09	24.58	0.165	234	93	85.1	7.4
50	14.65	14.64	33.12	24.60	0.181	234	93	85.2	8.4
55	14.59	14.58	33.10	24.60	0.198	225	89	85.1	9.5
60	14.49	14.49	33.11	24.63	0.215	225	89	85.1	11.0
65	14.15	14.14	33.03	24.64	0.231	231	90	85.3	11.8
70	13.95	13.94	33.02	24.67	0.248	229	89	85.7	13.0
75	13.96	13.95	33.03	24.68	0.264	232	91	85.7	13.9
80	13.95	13.94	33.03	24.68	0.281	235	92	85.5	15.2
85	13.92	13.91	33.04	24.69	0.297	236	92	85.6	18.1
90	13.84	13.83	33.05	24.72	0.313	234	91	85.6	19.3
95	13.97	13.95	33.12	24.74	0.329	234	91	85.7	20.7
100	14.01	14.00	33.16	24.77	0.345	233	91	85.6	22.5
110	13.60	13.58	33.13	24.83	0.377	233	90	85.5	28.2
120	13.41	13.39	33.14	24.87	0.408	231	89	85.1	23.6
130	13.32	13.30	33.31	25.02	0.439	222	86	87.1	18.8
140	12.26	12.25	33.22	25.16	0.468	211	80	88.8	14.5
150	11.62	11.60	33.30	25.34	0.495	206	77	90.1	10.3
160	11.45	11.43	33.45	25.49	0.521	199	74	90.7	7.8
170	11.31	11.29	33.53	25.58	0.546	196	73	91.2	6.8
180	11.01	10.99	33.52	25.63	0.570	194	71	91.4	5.5
190	10.45	10.42	33.54	25.74	0.593	186	68	91.5	5.1
200	10.10	10.08	33.59	25.84	0.616	167	60	91.7	5.5
210	9.88	9.86	33.64	25.91	0.637	151	54	91.7	5.5
220	9.64	9.62	33.71	26.00	0.658	142	51	91.7	6.1
230	9.45	9.43	33.74	26.06	0.678	137	49	91.8	6.6
240	9.23	9.20	33.80	26.15	0.698	134	48	91.8	6.4
250	9.03	9.00	33.87	26.24	0.716	128	45	91.8	6.9
260	8.85	8.82	33.92	26.30	0.734	123	43	91.8	6.5
270	8.69	8.66	33.95	26.35	0.752	121	42	91.8	6.8
280	8.53	8.50	33.97	26.39	0.769	118	41	91.7	7.7
290	8.38	8.35	33.99	26.43	0.785	123	43	91.9	7.3
300	8.25	8.22	34.01	26.46	0.801	119	41	91.9	7.4

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1719 (GMT) 22 May 1984
STATION: 7 — Wind 5 kts; Wave 2 ft
Position: 34° 45' N 129° 50' W — CTD# 1378



CTD# 1378: 7

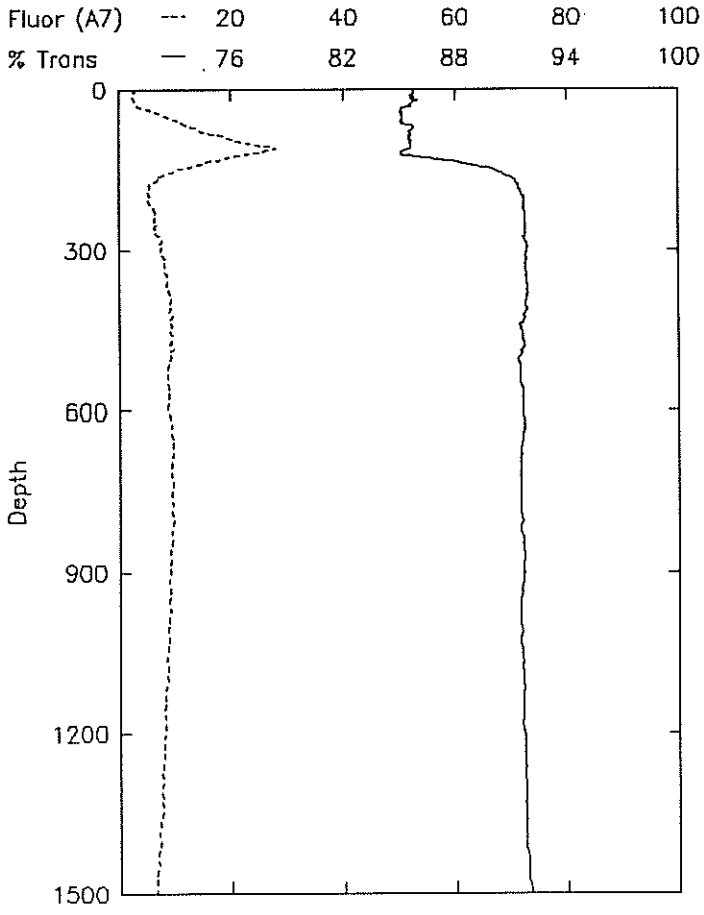
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
300	8.25	8.22	34.01	26.46	0.801	119	41	91.9	7.4
310	8.15	8.12	34.02	26.49	0.818	112	39	91.8	7.7
320	8.06	8.02	34.02	26.50	0.833	107	37	91.8	8.5
330	7.95	7.91	34.05	26.54	0.849	104	36	91.8	8.2
340	7.77	7.73	34.05	26.57	0.864	105	36	91.8	8.3
350	7.66	7.63	34.06	26.59	0.879	99	34	91.8	8.6
360	7.53	7.50	34.07	26.62	0.894	93	32	91.8	8.7
370	7.37	7.34	34.07	26.64	0.909	93	32	91.9	8.9
380	7.31	7.27	34.10	26.67	0.923	82	28	91.9	9.1
390	7.11	7.07	34.09	26.69	0.937	84	28	91.9	9.2
400	7.09	7.05	34.10	26.70	0.951	75	26	91.8	9.2
410	6.98	6.94	34.11	26.73	0.965	70	24	91.9	9.3
420	6.88	6.84	34.11	26.74	0.979	68	23	91.7	9.4
430	6.75	6.71	34.11	26.76	0.992	66	22	91.7	9.2
440	6.66	6.62	34.13	26.78	1.006	63	21	91.4	9.4
450	6.55	6.51	34.13	26.80	1.019	59	20	91.6	9.2
460	6.49	6.45	34.13	26.80	1.032	56	19	91.6	9.7
470	6.36	6.32	34.13	26.83	1.045	54	18	91.6	9.4
480	6.20	6.15	34.13	26.85	1.057	54	18	91.8	9.6
490	6.06	6.02	34.13	26.86	1.070	53	17	91.6	9.2
500	6.00	5.96	34.15	26.88	1.082	49	16	91.4	9.4
550	5.38	5.33	34.14	26.96	1.142	45	15	91.5	8.8
600	4.98	4.94	34.17	27.03	1.198	36	12	91.6	8.9
650	4.90	4.85	34.25	27.09	1.251	25	8	91.6	9.5
700	4.77	4.72	34.30	27.15	1.302	20	6	91.5	9.4
750	4.59	4.53	34.35	27.21	1.349	16	5	91.5	9.5
800	4.49	4.43	34.39	27.26	1.395	15	5	91.6	9.8
850	4.36	4.29	34.43	27.30	1.439	15	5	91.6	9.4
900	4.18	4.11	34.45	27.34	1.480	16	5	91.7	9.1
950	3.99	3.92	34.48	27.38	1.520	18	6	91.5	9.0
1000	3.91	3.84	34.51	27.41	1.559	20	6	91.5	8.9
1050	3.76	3.68	34.52	27.44	1.596	22	7	91.6	8.6
1100	3.64	3.56	34.53	27.45	1.632	24	7	91.6	8.6
1150	3.53	3.44	34.55	27.48	1.667	26	8	91.6	8.2
1200	3.40	3.31	34.56	27.51	1.701	28	9	91.7	8.2
1250	3.27	3.18	34.56	27.52	1.734	30	9	91.7	7.9
1300	3.16	3.06	34.58	27.55	1.766	33	10	91.7	7.6
1350	3.07	2.97	34.60	27.56	1.797	35	11	91.8	7.7
1400	2.96	2.86	34.60	27.58	1.828	37	11	91.8	7.3
1450	2.84	2.74	34.60	27.59	1.857	38	12	91.9	6.9
1500	2.74	2.64	34.62	27.61	1.886	39	12	92.0	6.6

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

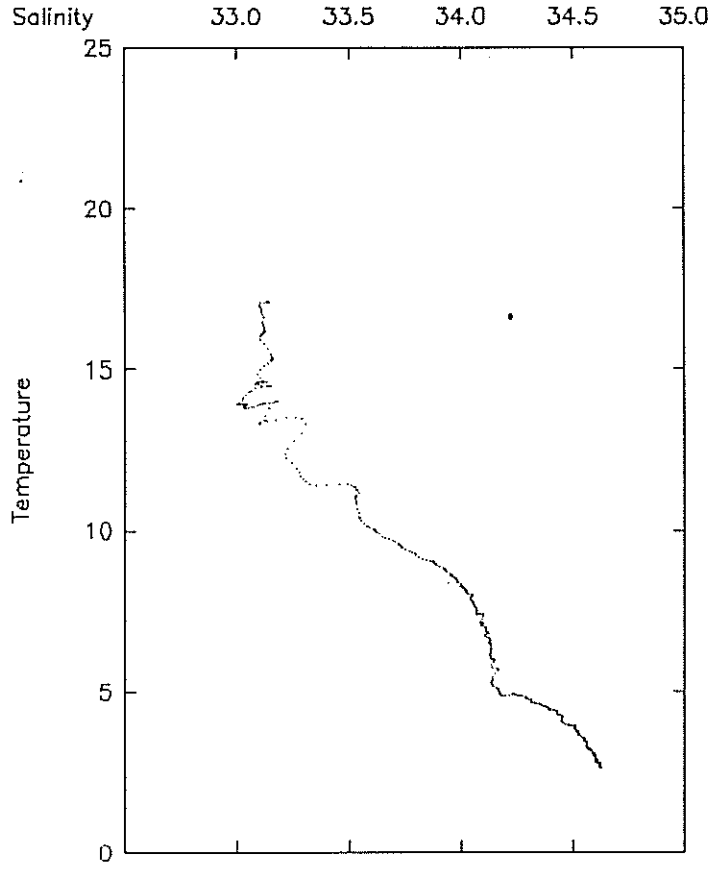
CRUISE: Vertex 5
STATION: 7
Position: 34° 45' N 129° 50' W

1719 (GMT) 22 May 1984
Wind 5 kts; Wave 2 ft
CTD# 1378

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
1500	2.74	2.64	34.62	27.61	1.886	39	12	92.0	6.6
1550	2.66	2.55	34.62	27.62	1.914	42	13	92.0	6.6
1565	2.62	2.51	34.63	27.63	1.923	42	13	92.0	6.6



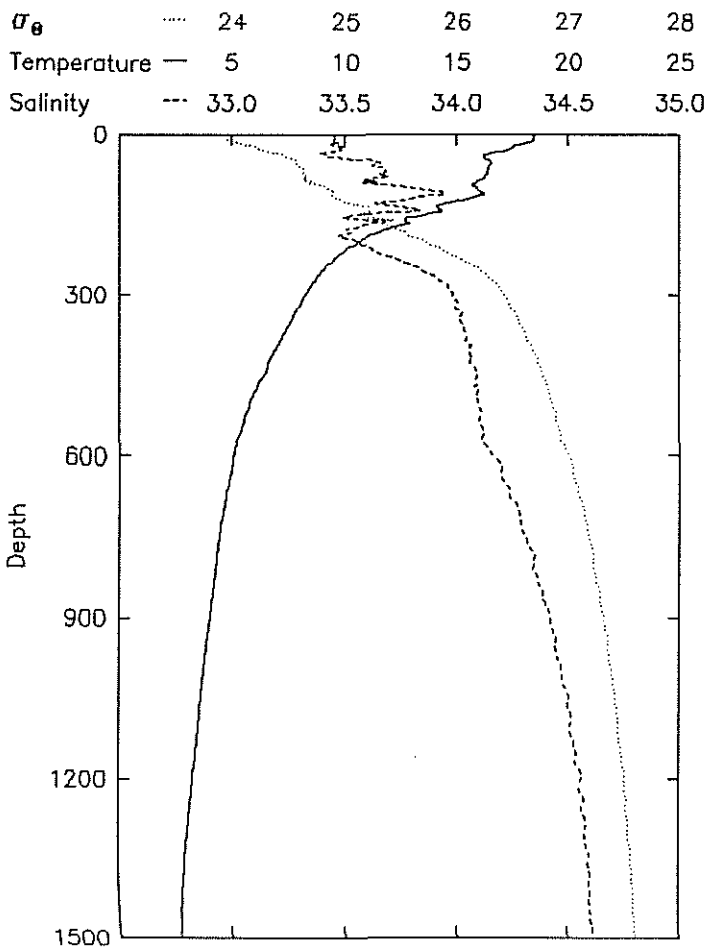
CTD# 1378: 7



CTD# 1378: 7

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

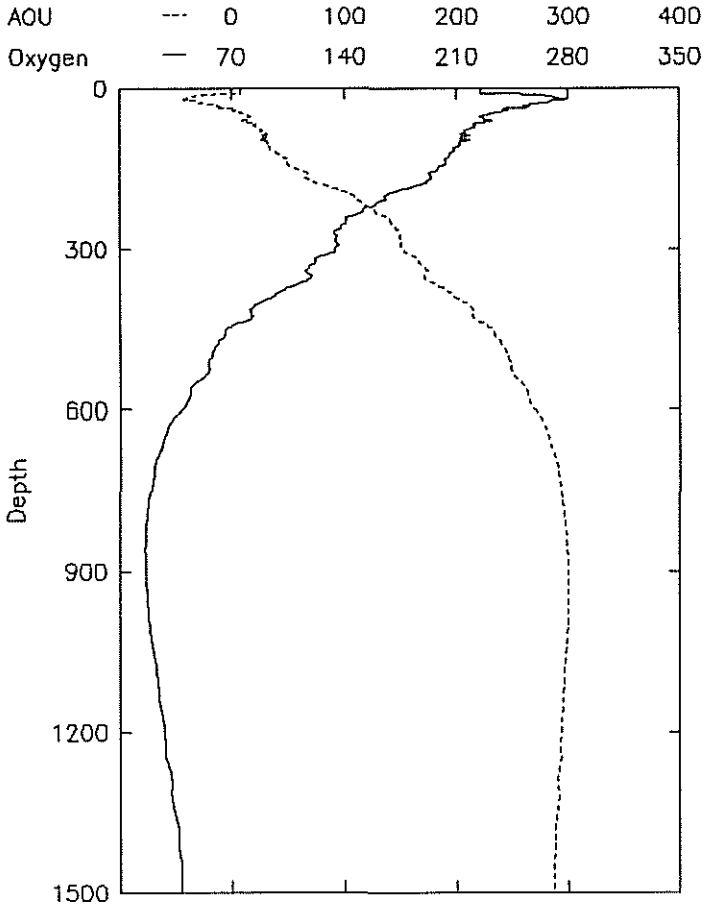
CRUISE: Vertex 5 — 0228 (GMT) 23 May 1984
STATION: 8 — Wind 10 kts; Wave 1 ft
Position: 34° 35' N 130° 52' W — CTD# 1380



Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
0	18.49	18.49	33.46	23.97	0.000	224	96	80.8	7.5
5	18.49	18.49	33.46	23.97	0.020	225	96	80.8	7.1
10	18.48	18.48	33.45	23.97	0.039	234	100	79.9	7.0
15	18.20	18.20	33.46	24.05	0.059	268	114	80.8	6.6
20	17.72	17.72	33.46	24.16	0.078	278	117	81.3	6.8
25	17.51	17.50	33.50	24.24	0.096	269	113	81.6	8.6
30	17.23	17.22	33.48	24.30	0.115	257	107	81.8	9.6
35	16.52	16.52	33.39	24.39	0.133	256	105	81.4	10.8
40	16.23	16.23	33.41	24.48	0.150	239	98	81.6	11.3
45	16.30	16.30	33.51	24.53	0.167	234	96	81.9	13.0
50	16.54	16.53	33.63	24.57	0.184	227	94	83.0	12.2
55	16.56	16.56	33.65	24.59	0.201	227	94	84.1	15.3
60	16.44	16.43	33.64	24.60	0.218	232	96	83.5	15.6
65	16.43	16.41	33.68	24.64	0.234	223	92	83.7	18.1
70	16.39	16.38	33.68	24.65	0.251	221	91	85.1	19.5
75	16.31	16.30	33.66	24.65	0.267	219	90	85.2	19.2
80	16.29	16.27	33.68	24.67	0.284	216	89	85.4	20.3
85	16.03	16.01	33.59	24.66	0.300	212	87	85.4	22.5
90	15.87	15.85	33.60	24.70	0.317	215	88	85.4	25.4
95	15.75	15.74	33.72	24.82	0.333	215	87	85.2	31.4
100	15.96	15.95	33.81	24.84	0.348	212	86	85.4	32.6
110	16.26	16.24	33.95	24.89	0.379	209	86	86.5	24.3
120	15.48	15.46	33.80	24.94	0.410	206	83	87.6	25.4
130	14.33	14.31	33.65	25.08	0.440	204	80	88.6	22.3
140	14.30	14.28	33.84	25.23	0.468	203	80	89.5	17.8
150	13.55	13.52	33.56	25.18	0.496	198	77	90.2	14.5
160	12.66	12.64	33.68	25.44	0.524	193	74	90.6	11.1
170	12.50	12.48	33.58	25.40	0.550	193	73	90.8	8.7
180	11.67	11.65	33.53	25.52	0.576	187	70	91.2	5.4
190	11.04	11.01	33.47	25.58	0.600	175	65	91.3	4.2
200	10.67	10.64	33.56	25.72	0.624	166	61	91.4	4.4
210	10.21	10.18	33.61	25.84	0.647	164	59	91.5	4.0
220	9.91	9.88	33.64	25.91	0.668	156	56	91.5	3.9
230	9.62	9.59	33.71	26.02	0.689	152	54	91.6	4.0
240	9.33	9.30	33.77	26.11	0.709	142	51	91.6	4.1
250	9.08	9.06	33.84	26.20	0.728	141	50	91.6	4.6
260	8.94	8.91	33.88	26.26	0.746	138	49	91.6	4.6
270	8.77	8.74	33.92	26.31	0.764	134	47	91.7	4.6
280	8.61	8.58	33.96	26.37	0.781	135	47	91.7	5.1
290	8.46	8.43	33.97	26.40	0.798	136	48	91.7	5.1
300	8.31	8.28	33.98	26.43	0.815	134	47	91.7	5.3

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 0228 (GMT) 23 May 1984
STATION: 8 — Wind 10 kts; Wave 1 ft
Position: 34° 35' N 130° 52' W — CTD# 1380



CTD# 1380: 8

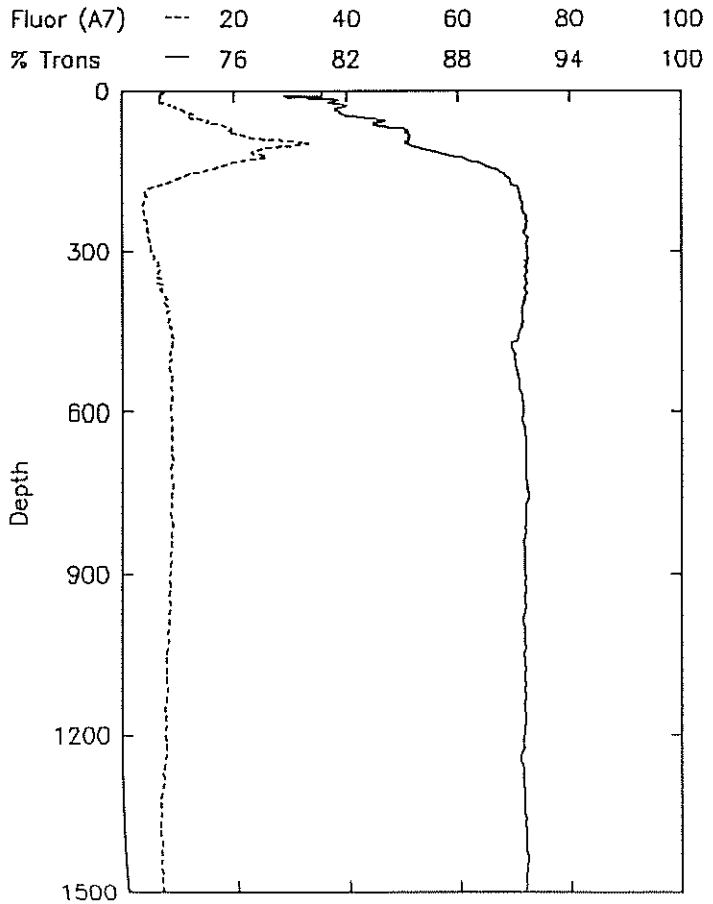
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
300	8.31	8.28	33.98	26.43	0.815	134	47	91.7	5.3
310	8.17	8.14	34.00	26.47	0.831	130	45	91.7	5.8
320	8.07	8.03	34.00	26.48	0.847	122	42	91.6	6.2
330	7.88	7.84	34.02	26.53	0.863	120	41	91.6	6.5
340	7.76	7.73	34.02	26.54	0.878	117	40	91.7	6.5
350	7.66	7.63	34.02	26.56	0.893	121	41	91.6	6.9
360	7.51	7.48	34.03	26.59	0.909	116	40	91.7	7.0
370	7.38	7.34	34.04	26.62	0.923	107	37	91.6	6.9
380	7.25	7.22	34.05	26.64	0.938	100	34	91.6	7.5
390	7.15	7.11	34.05	26.66	0.952	95	32	91.6	8.1
400	7.01	6.98	34.06	26.68	0.967	87	29	91.5	8.0
410	6.85	6.81	34.06	26.71	0.981	83	28	91.4	8.6
420	6.74	6.70	34.07	26.73	0.995	82	28	91.4	8.3
430	6.64	6.60	34.07	26.74	1.008	82	28	91.5	8.3
440	6.61	6.57	34.09	26.76	1.022	73	24	91.4	8.8
450	6.48	6.44	34.09	26.78	1.035	67	22	91.3	8.9
460	6.29	6.24	34.09	26.80	1.048	66	22	91.2	9.1
470	6.19	6.15	34.09	26.81	1.061	63	21	91.0	9.0
480	6.07	6.03	34.10	26.84	1.074	61	20	90.9	9.0
490	5.96	5.92	34.09	26.84	1.087	59	19	91.0	8.6
500	5.86	5.81	34.10	26.87	1.099	58	19	91.0	9.1
550	5.50	5.46	34.12	26.93	1.160	48	16	91.3	8.8
600	5.11	5.06	34.17	27.01	1.218	39	13	91.5	8.7
650	4.91	4.86	34.22	27.08	1.272	28	9	91.6	8.9
700	4.69	4.64	34.28	27.15	1.323	22	7	91.6	8.9
750	4.49	4.43	34.31	27.19	1.371	19	6	91.8	8.9
800	4.35	4.29	34.35	27.24	1.417	17	5	91.6	9.0
850	4.23	4.17	34.39	27.28	1.461	16	5	91.5	8.9
900	4.08	4.01	34.42	27.33	1.504	16	5	91.6	8.7
950	3.92	3.85	34.45	27.36	1.544	17	5	91.5	8.6
1000	3.80	3.72	34.47	27.40	1.583	19	6	91.6	8.6
1050	3.67	3.60	34.50	27.43	1.621	21	7	91.5	7.9
1100	3.58	3.50	34.51	27.45	1.657	24	7	91.6	8.0
1150	3.46	3.38	34.54	27.48	1.692	25	8	91.6	7.7
1200	3.32	3.24	34.56	27.51	1.726	28	9	91.5	7.7
1250	3.21	3.12	34.57	27.53	1.759	29	9	91.4	7.7
1300	3.10	3.01	34.58	27.55	1.790	33	10	91.5	7.2
1350	2.99	2.90	34.60	27.57	1.821	34	11	91.6	6.9
1400	2.91	2.81	34.60	27.58	1.851	37	11	91.7	6.7
1450	2.83	2.73	34.60	27.59	1.880	39	12	91.6	6.3
1500	2.75	2.65	34.61	27.61	1.909	38	12	91.5	6.4

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

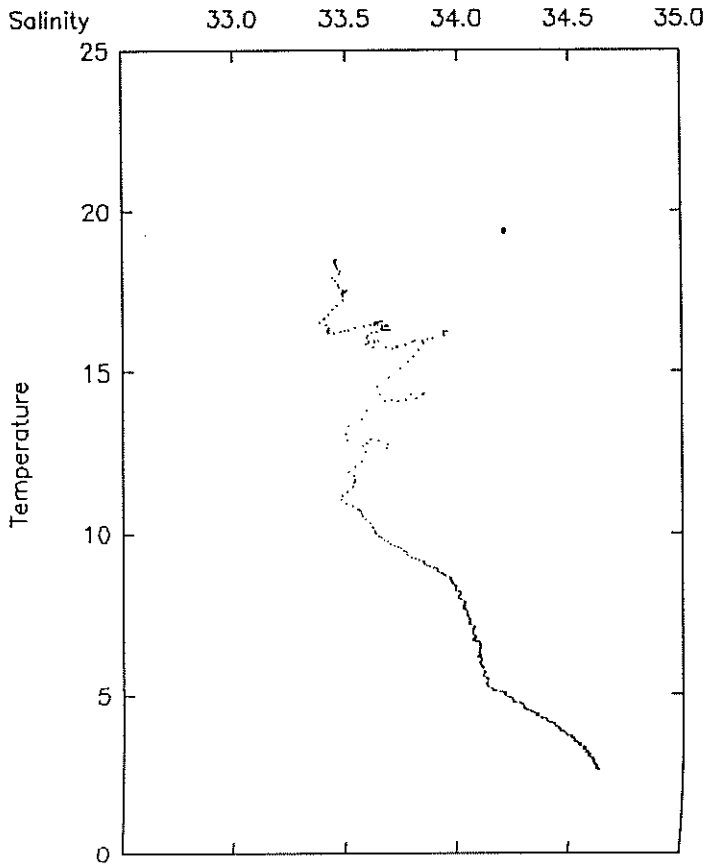
CRUISE: Vertex 5
STATION: 8
Position: 34° 35' N 130° 52' W

0228 (GMT) 23 May 1984
Wind 10 kts; Wave 1 ft
CTD# 1380

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
1500	2.75	2.65	34.61	27.61	1.909	38	12	91.5	6.4
1550	2.70	2.59	34.62	27.62	1.938	43	13	91.7	6.1
1560	2.67	2.56	34.62	27.62	1.944	43	13	91.6	6.0



CTD# 1380: 8

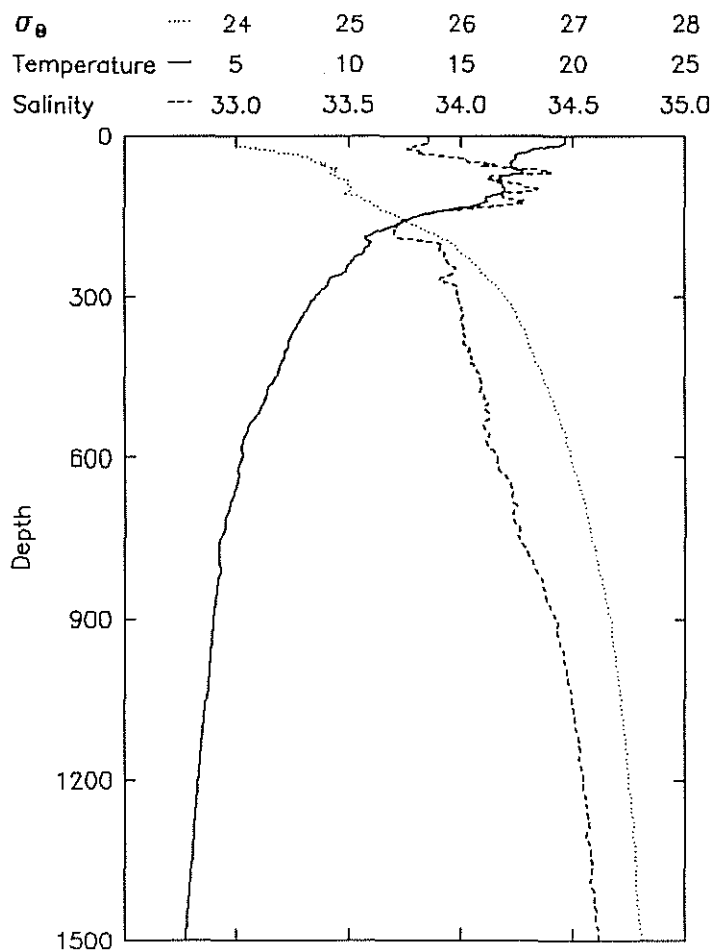


CTD# 1380: 8

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 9
Position: 34° 11' N 133° 15' W

1839 (GMT) 23 May 1984
Wind 5 kts; Wave 2 ft
CTD# 1382

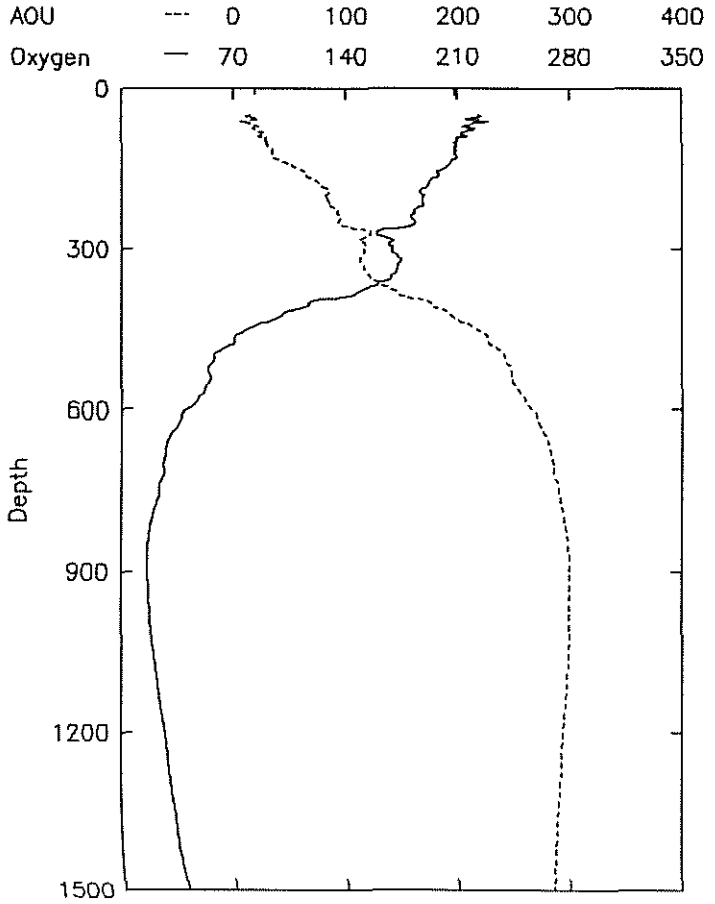


CTD# 1382: 9

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
0	19.63	19.63	33.86	23.99	0.000	208	91	86.3	3.1
5	19.63	19.63	33.86	23.99	0.020	208	91	86.3	3.1
10	19.63	19.63	33.86	23.99	0.039	208	91	86.3	2.7
15	19.55	19.55	33.84	24.00	0.059			86.9	2.8
20	19.10	19.10	33.78	24.07	0.078			86.7	2.9
25	18.31	18.30	33.77	24.26	0.097			87.2	2.8
30	17.99	17.98	33.82	24.37	0.115			87.2	2.8
35	17.47	17.46	33.87	24.53	0.132			87.0	2.9
40	17.43	17.42	33.98	24.63	0.149			86.9	3.3
45	17.36	17.35	34.02	24.68	0.166			86.9	3.2
50	17.21	17.20	34.08	24.76	0.182	223	94	86.9	3.4
55	17.25	17.24	34.11	24.77	0.198	220	92	87.0	3.8
60	17.27	17.26	34.26	24.88	0.213	221	93	87.2	4.5
65	17.68	17.67	34.40	24.89	0.229	221	94	87.6	5.1
70	17.68	17.67	34.33	24.84	0.244	215	91	87.3	7.5
75	16.92	16.91	34.14	24.88	0.260	221	92	87.6	8.1
80	16.70	16.69	34.12	24.91	0.275	217	90	87.4	9.5
85	16.65	16.63	34.21	24.99	0.290	213	88	87.5	10.9
90	16.84	16.83	34.27	24.99	0.305	215	90	87.9	11.6
95	16.88	16.87	34.28	25.00	0.320	210	87	87.9	15.2
100	16.97	16.95	34.34	25.02	0.335	208	87	87.8	18.5
110	16.44	16.42	34.18	25.02	0.365	208	86	87.5	31.1
120	16.18	16.16	34.26	25.14	0.394	208	86	86.8	25.0
130	15.54	15.52	34.17	25.22	0.422	209	85	88.1	19.0
140	14.10	14.08	33.89	25.32	0.449	205	81	89.0	16.4
150	12.99	12.97	33.79	25.46	0.475	201	77	89.6	14.4
160	12.40	12.38	33.73	25.53	0.500	198	75	90.0	9.0
170	11.81	11.79	33.72	25.64	0.525	194	73	90.6	5.4
180	11.18	11.16	33.71	25.74	0.548	192	71	91.2	4.1
190	10.75	10.73	33.73	25.84	0.571	187	69	91.4	3.6
200	11.01	10.99	33.90	25.92	0.592	190	70	91.8	3.5
210	10.74	10.71	33.90	25.97	0.613	188	69	91.9	3.5
220	10.56	10.54	33.93	26.03	0.634	187	69	92.0	3.5
230	10.23	10.20	33.93	26.08	0.653	183	66	92.0	3.5
240	10.01	9.98	33.95	26.14	0.673	181	65	91.9	3.9
250	9.90	9.87	33.98	26.17	0.692	184	66	92.1	4.2
260	9.49	9.46	33.94	26.22	0.711	176	63	91.9	4.1
270	9.13	9.10	33.91	26.25	0.729	159	56	91.8	4.0
280	9.05	9.02	33.99	26.32	0.747	167	59	91.9	4.1
290	8.79	8.76	33.98	26.36	0.764	167	59	92.0	4.1
300	8.58	8.55	34.00	26.40	0.781	170	59	92.1	4.2

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1839 (GMT) 23 May 1984
STATION: 9 — Wind 5 kts; Wave 2 ft
Position: 34° 11' N 133° 15' W — CTD# 1382



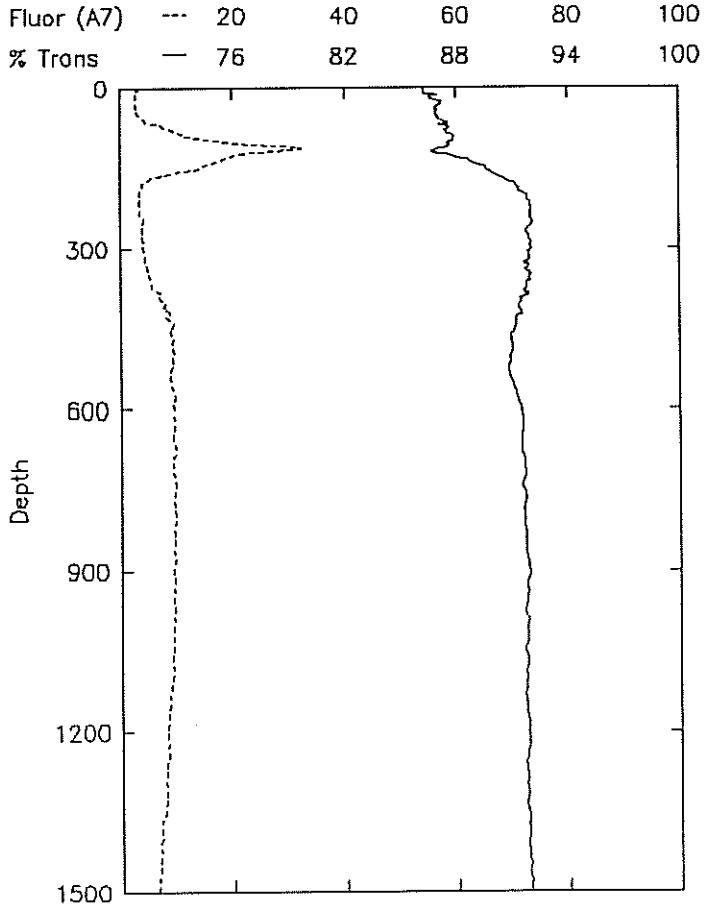
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
300	8.58	8.55	34.00	26.40	0.781	170	59	92.1	4.2
310	8.38	8.34	33.99	26.43	0.797	171	60	91.9	4.5
320	8.24	8.21	34.00	26.46	0.814	175	61	92.0	4.4
330	8.08	8.05	34.01	26.49	0.830	172	60	91.8	4.6
340	7.94	7.91	34.00	26.51	0.846	172	59	91.7	4.9
350	7.80	7.76	34.00	26.53	0.861	169	58	92.0	5.3
360	7.65	7.61	34.01	26.56	0.877	164	56	92.0	5.7
370	7.50	7.47	34.01	26.57	0.892	157	54	91.8	5.7
380	7.38	7.34	34.01	26.59	0.907	148	50	91.7	7.1
390	7.34	7.31	34.02	26.61	0.922	138	47	91.7	7.0
400	7.25	7.21	34.04	26.63	0.937	118	40	91.5	8.1
410	7.17	7.13	34.04	26.64	0.951	113	38	91.4	7.9
420	7.07	7.03	34.04	26.66	0.966	102	35	91.5	8.8
430	6.95	6.91	34.06	26.69	0.980	97	33	91.2	8.4
440	6.89	6.85	34.07	26.71	0.994	86	29	91.2	9.5
450	6.79	6.75	34.09	26.74	1.008	79	27	91.1	9.0
460	6.66	6.62	34.09	26.76	1.021	73	24	90.9	9.0
470	6.46	6.42	34.09	26.78	1.035	71	24	91.0	9.6
480	6.41	6.37	34.09	26.79	1.048	69	23	91.0	9.4
490	6.34	6.30	34.11	26.81	1.061	62	21	91.0	9.5
500	6.22	6.17	34.12	26.84	1.074	58	19	90.9	9.3
550	5.52	5.47	34.12	26.92	1.136	56	18	91.0	9.1
600	5.30	5.25	34.16	26.98	1.194	41	13	91.5	9.6
650	5.05	4.99	34.22	27.06	1.249	30	10	91.5	9.3
700	4.66	4.61	34.24	27.11	1.301	26	8	91.6	9.4
750	4.31	4.26	34.26	27.17	1.350	24	8	91.6	9.6
800	4.29	4.23	34.33	27.23	1.397	20	6	91.6	9.8
850	4.15	4.08	34.38	27.28	1.441	17	5	91.7	9.7
900	3.99	3.92	34.43	27.34	1.483	17	5	91.9	9.3
950	3.89	3.82	34.44	27.36	1.523	18	6	91.8	9.4
1000	3.79	3.72	34.47	27.39	1.562	19	6	91.8	9.6
1050	3.66	3.59	34.49	27.43	1.600	20	6	91.7	9.5
1100	3.54	3.46	34.51	27.45	1.636	22	7	91.8	9.2
1150	3.42	3.33	34.53	27.48	1.671	25	8	91.7	8.7
1200	3.30	3.21	34.54	27.50	1.705	28	9	91.8	8.3
1250	3.19	3.10	34.56	27.53	1.738	29	9	91.7	8.5
1300	3.10	3.00	34.56	27.54	1.770	32	10	91.7	8.0
1350	3.02	2.92	34.58	27.56	1.801	34	11	91.8	7.7
1400	2.94	2.84	34.59	27.57	1.832	36	11	91.8	7.2
1450	2.83	2.72	34.61	27.60	1.861	38	12	91.9	6.9
1500	2.74	2.64	34.61	27.61	1.890	40	12	91.9	6.4

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

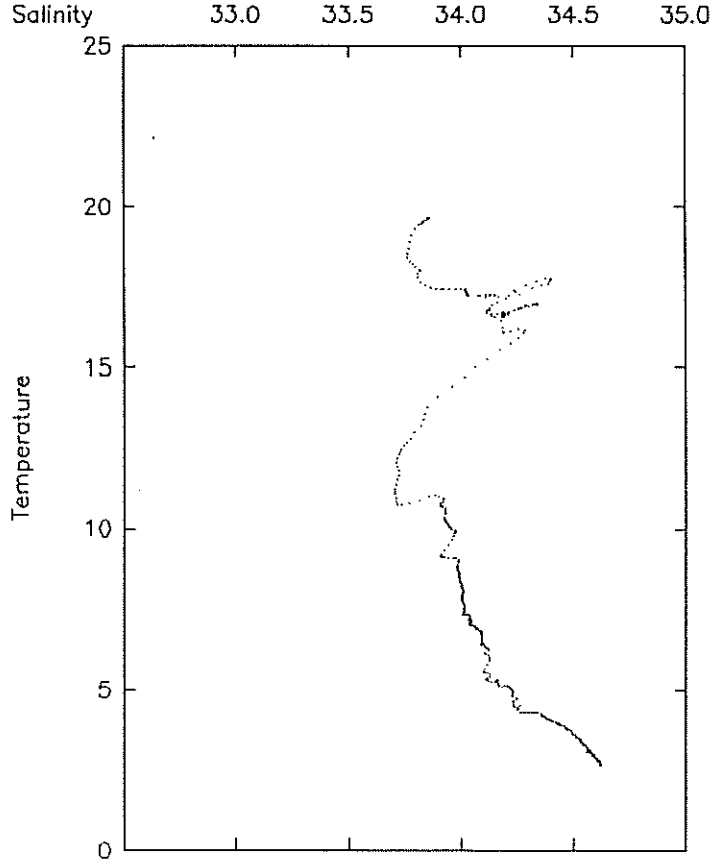
CRUISE: Vertex 5
STATION: 9
Position: 34° 11' N 133° 15' W

1839 (GMT) 23 May 1984
Wind 5 kts; Wave 2 ft
CTD# 1382

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
1500	2.74	2.64	34.61	27.61	1.890	40	12	91.9	6.4
1550	2.67	2.56	34.62	27.62	1.918	42	13	91.8	6.4
1565	2.64	2.54	34.62	27.63	1.927	42	13	91.9	6.4



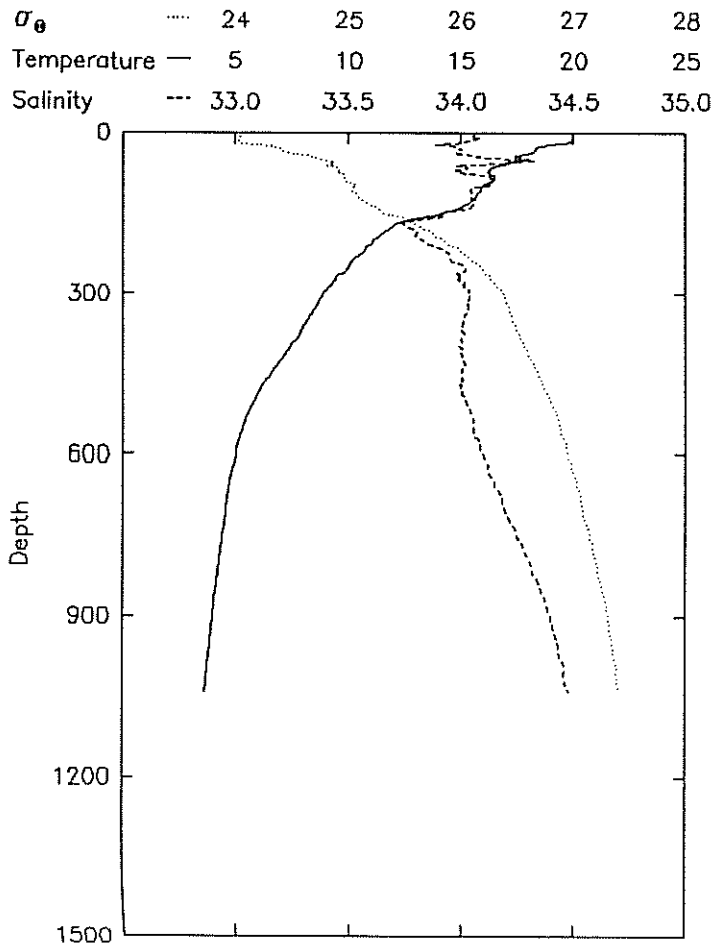
CTD# 1382: 9



CTD# 1382: 9

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1039 (GMT) 24 May 1984
STATION: 10 — Wind 4 kts; Wave 2 ft
Position: 33° 48' N 135° 32' W — CTD# 1384

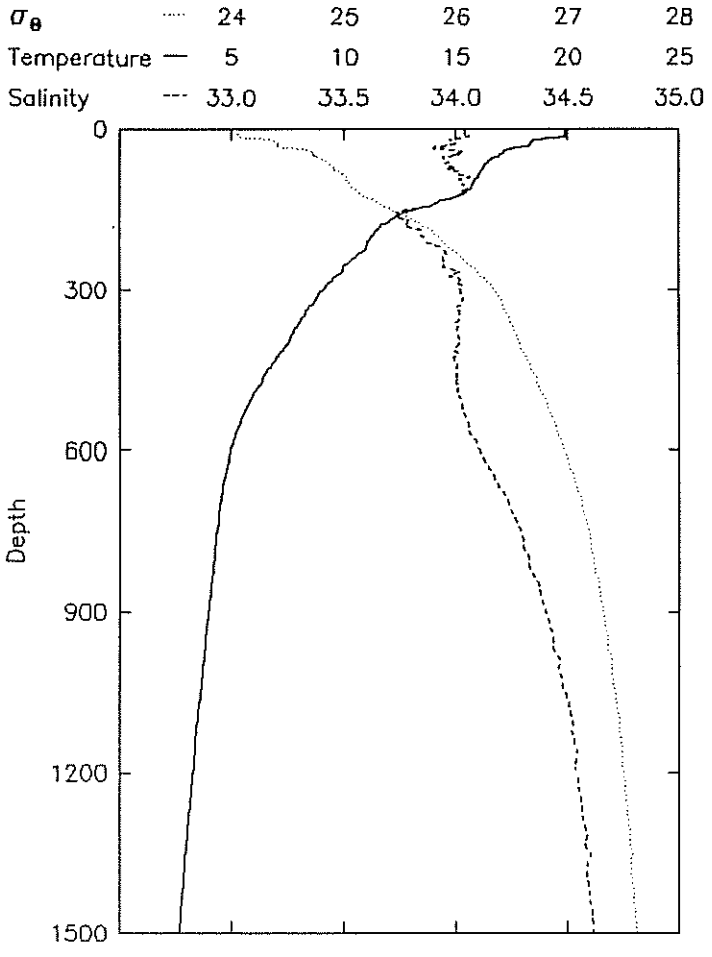


Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Fluoro
0	19.99	19.99	34.06	24.05	0.000	212	94	2.7
5	19.99	19.99	34.06	24.05	0.019	213	94	2.7
10	20.00	20.00	34.08	24.06	0.039	210	93	2.4
15	19.97	19.97	34.05	24.04	0.058	210	93	2.2
20	19.57	19.56	33.96	24.08	0.077	206	90	2.3
25	18.57	18.56	33.97	24.34	0.096	211	91	2.1
30	18.36	18.36	34.00	24.42	0.113	207	89	2.2
35	18.24	18.23	33.98	24.44	0.131	205	88	2.2
40	17.87	17.87	34.02	24.55	0.148	206	87	2.1
45	17.48	17.48	34.09	24.70	0.165	211	89	2.0
50	17.76	17.75	34.30	24.80	0.181	214	91	2.2
55	17.22	17.21	34.24	24.88	0.196	209	88	2.1
60	16.72	16.71	34.00	24.82	0.212	217	90	2.0
65	16.40	16.39	34.03	24.91	0.227	215	89	1.9
70	16.28	16.27	33.98	24.90	0.243	213	88	1.9
75	16.24	16.23	34.01	24.94	0.258	213	88	2.2
80	16.51	16.50	34.12	24.96	0.273	207	86	2.1
85	16.50	16.49	34.14	24.97	0.288	213	88	2.0
90	16.42	16.40	34.13	24.99	0.303	214	89	1.9
95	16.19	16.18	34.12	25.03	0.318	215	88	1.9
100	15.96	15.94	34.09	25.06	0.333	212	87	2.0
110	15.84	15.82	34.05	25.06	0.362	213	87	2.0
120	15.67	15.65	34.05	25.09	0.391	214	87	2.1
130	15.42	15.40	34.06	25.16	0.420	207	84	2.2
140	14.88	14.86	34.04	25.26	0.448	204	82	2.2
150	14.11	14.09	33.92	25.33	0.475	205	81	2.4
160	12.92	12.90	33.83	25.51	0.501	201	77	2.1
170	12.12	12.10	33.74	25.59	0.525	194	73	2.1
180	11.79	11.76	33.79	25.69	0.549	193	72	2.1
190	11.47	11.45	33.80	25.76	0.572	197	73	2.0
200	11.13	11.11	33.83	25.85	0.594	197	73	2.0
210	10.93	10.91	33.88	25.92	0.616	192	71	2.2
220	10.73	10.71	33.93	25.99	0.637	190	70	2.1
230	10.43	10.40	33.95	26.06	0.657	189	69	2.0
240	10.17	10.14	33.97	26.12	0.676	184	67	2.2
250	10.04	10.01	34.02	26.19	0.695	184	67	2.1
260	9.83	9.80	33.99	26.20	0.714	187	67	2.2
270	9.45	9.42	33.99	26.26	0.732	180	64	2.2
280	9.30	9.27	34.02	26.31	0.750	183	65	2.2
290	9.10	9.07	34.04	26.35	0.768	180	64	2.2
300	8.94	8.91	34.05	26.39	0.785	181	64	2.2

CTD# 1384: 10

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1546 (GMT) 24 May 1984
STATION: 10 — Wind 5 kts; Wave 4 ft
Position: 33° 47' N 135° 28' W — CTD# 1389

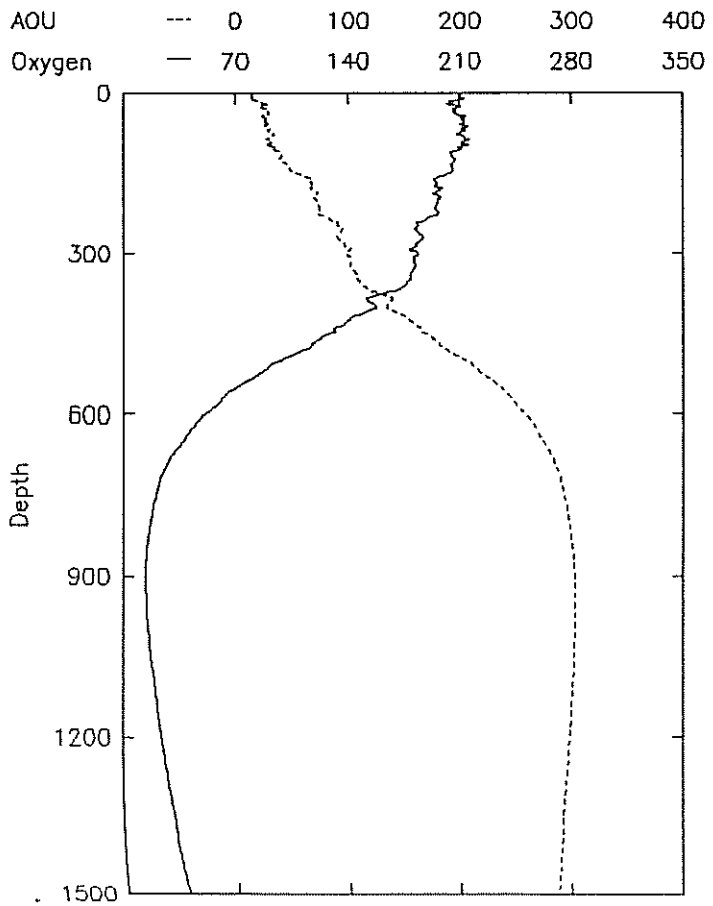


CTD# 1389: 10

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %
0	19.89	19.89	34.04	24.06	0.000	216	93
5	19.89	19.89	34.04	24.06	0.019	211	93
10	19.89	19.89	34.04	24.06	0.038	212	93
15	19.86	19.86	34.05	24.08	0.058	204	90
20	18.57	18.57	33.97	24.34	0.076	203	87
25	18.39	18.38	34.00	24.41	0.094	211	90
30	18.29	18.28	33.97	24.41	0.111	206	88
35	17.65	17.65	33.90	24.52	0.129	206	87
40	17.20	17.19	33.99	24.70	0.146	208	87
45	17.10	17.09	34.01	24.73	0.162	213	89
50	16.99	16.98	34.01	24.76	0.178	213	89
55	16.64	16.63	33.95	24.80	0.194	214	89
60	16.47	16.46	33.96	24.84	0.209	211	87
65	16.36	16.35	33.96	24.87	0.225	213	88
70	16.27	16.25	33.98	24.91	0.240	214	88
75	16.20	16.19	33.97	24.91	0.255	211	87
80	16.09	16.08	34.02	24.98	0.271	212	87
85	16.02	16.00	34.02	24.99	0.286	214	88
90	15.99	15.98	34.06	25.03	0.300	213	87
95	15.88	15.86	34.02	25.03	0.315	214	87
100	15.80	15.78	34.03	25.05	0.330	210	86
110	15.68	15.66	34.05	25.09	0.359	204	83
120	15.38	15.36	34.03	25.14	0.388	206	83
130	14.68	14.66	33.98	25.26	0.416	206	82
140	14.04	14.02	33.90	25.33	0.443	206	81
150	13.18	13.16	33.78	25.41	0.469	203	78
160	12.43	12.41	33.75	25.54	0.495	194	74
170	12.13	12.10	33.79	25.63	0.519	196	74
180	11.67	11.64	33.78	25.71	0.542	199	74
190	11.45	11.42	33.85	25.80	0.565	195	72
200	11.25	11.22	33.85	25.84	0.587	196	73
210	11.07	11.05	33.87	25.89	0.609	196	72
220	11.02	10.99	33.93	25.95	0.630	197	73
230	10.77	10.75	33.96	26.01	0.651	193	71
240	10.47	10.44	33.94	26.05	0.671	185	68
250	10.17	10.14	33.94	26.10	0.691	183	66
260	9.95	9.92	33.97	26.17	0.710	184	66
270	9.79	9.76	33.99	26.21	0.729	187	67
280	9.50	9.47	34.02	26.27	0.747	183	65
290	9.25	9.22	34.02	26.32	0.765	180	64
300	9.08	9.05	34.02	26.35	0.783	184	65

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1546 (GMT) 24 May 1984
STATION: 10 — Wind 5 kts; Wave 4 ft
Position: 33° 47' N 135° 28' W — CTD# 1389



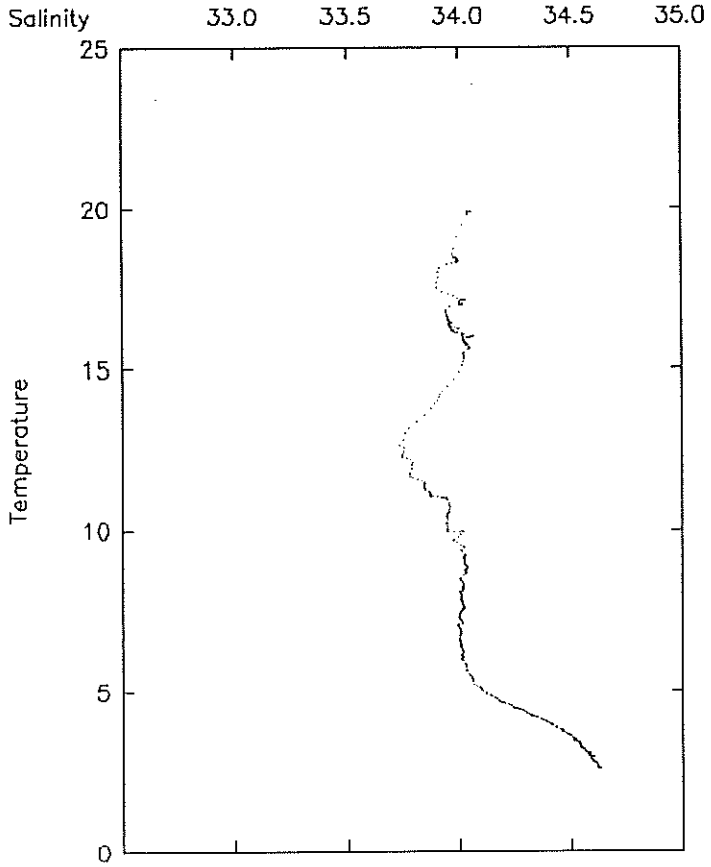
CTD# 1389: 10

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %
300	9.08	9.05	34.02	26.35	0.783	184	65
310	8.90	8.87	34.02	26.37	0.800	182	64
320	8.77	8.74	34.03	26.40	0.817	182	64
330	8.58	8.54	34.02	26.42	0.833	181	63
340	8.35	8.32	34.02	26.45	0.850	179	62
350	8.24	8.21	34.02	26.47	0.866	179	62
360	8.08	8.05	34.00	26.48	0.882	175	61
370	7.93	7.89	34.01	26.51	0.898	168	58
380	7.78	7.74	34.01	26.54	0.914	155	53
390	7.65	7.61	34.02	26.56	0.929	154	53
400	7.55	7.51	34.02	26.57	0.944	158	54
410	7.36	7.32	34.00	26.59	0.960	150	51
420	7.17	7.13	34.01	26.62	0.975	142	48
430	7.00	6.96	33.99	26.63	0.989	138	47
440	6.83	6.79	34.01	26.67	1.004	132	44
450	6.65	6.60	34.00	26.68	1.018	128	43
460	6.48	6.44	34.00	26.71	1.032	123	41
470	6.41	6.37	34.00	26.72	1.046	118	39
480	6.26	6.21	34.01	26.75	1.060	113	38
490	6.08	6.04	34.01	26.77	1.073	106	35
500	5.94	5.90	34.02	26.79	1.086	98	32
550	5.41	5.36	34.06	26.89	1.150	71	23
600	4.98	4.93	34.11	26.97	1.209	51	17
650	4.72	4.66	34.17	27.06	1.264	37	12
700	4.52	4.46	34.24	27.13	1.316	26	8
750	4.37	4.31	34.29	27.19	1.364	21	7
800	4.25	4.19	34.33	27.23	1.411	17	5
850	4.11	4.05	34.37	27.28	1.455	15	5
900	4.00	3.93	34.40	27.32	1.498	14	5
950	3.87	3.80	34.44	27.36	1.539	15	5
1000	3.76	3.69	34.46	27.39	1.578	16	5
1050	3.64	3.57	34.49	27.42	1.616	18	5
1100	3.50	3.42	34.52	27.46	1.651	20	6
1150	3.40	3.31	34.53	27.48	1.686	22	7
1200	3.30	3.21	34.54	27.50	1.720	24	8
1250	3.18	3.09	34.56	27.52	1.753	27	8
1300	3.07	2.98	34.57	27.55	1.785	30	9
1350	2.96	2.87	34.60	27.58	1.816	32	10
1400	2.87	2.77	34.59	27.58	1.846	34	10
1450	2.78	2.68	34.61	27.60	1.875	36	11
1500	2.69	2.58	34.62	27.62	1.904	39	12

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1546 (GMT) 24 May 1984
STATION: 10 — Wind 5 kts; Wave 4 ft
Position: 33° 47' N 135° 28' W — CTD# 1389

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %
1500	2.69	2.58	34.62	27.62	1.904	39	12
1550	2.59	2.49	34.62	27.63	1.931	41	12
1565	2.56	2.46	34.63	27.64	1.940	42	13

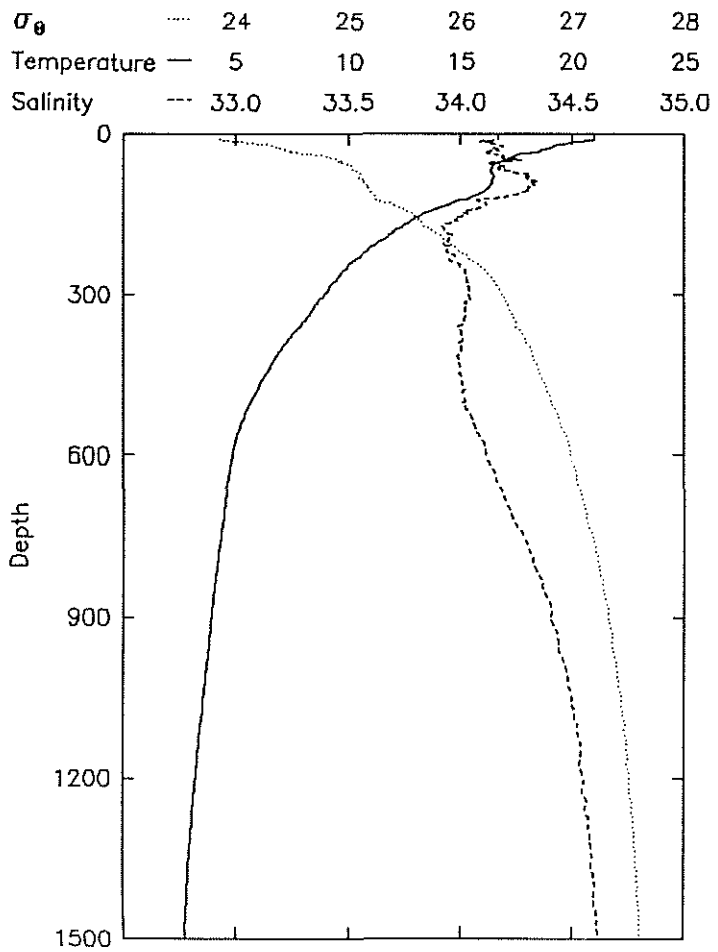


CTD# 1389: 10

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 11
Position: 33° 28' N 137° 50' W

2100 (GMT) 25 May 1984
Wind 0 kts; Wave 0 ft
CTD# 1404

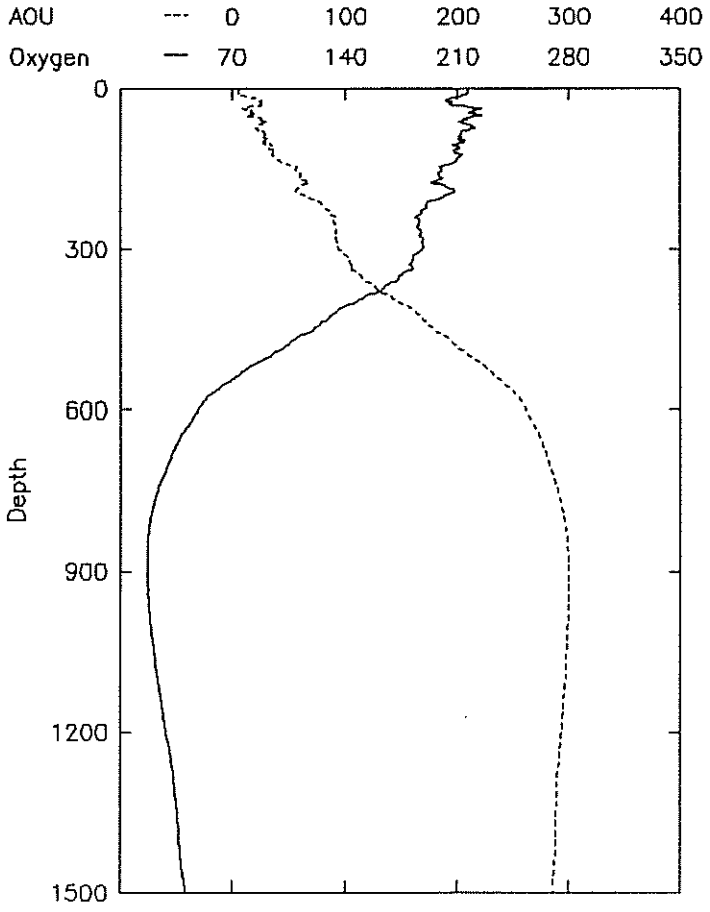


CTD# 1404: 11

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
0	20.98	20.98	34.17	23.87	0.000	216	97	85.5	3.2
5	20.98	20.97	34.17	23.87	0.020	217	97	85.5	3.2
10	20.98	20.97	34.17	23.87	0.040	217	97	85.5	3.2
15	20.20	20.20	34.10	24.03	0.060	212	94	86.4	3.4
20	19.53	19.53	34.14	24.23	0.079	205	90	86.6	3.2
25	19.16	19.15	34.19	24.36	0.097	205	89	86.9	3.3
30	18.67	18.66	34.16	24.47	0.115	205	88	87.3	3.3
35	18.31	18.30	34.14	24.54	0.132	221	95	87.2	3.3
40	17.49	17.49	34.18	24.77	0.148	220	93	87.3	3.3
45	17.17	17.16	34.18	24.85	0.164	217	91	87.2	3.7
50	17.11	17.10	34.26	24.92	0.179	226	95	87.4	3.5
55	16.57	16.56	34.12	24.94	0.195	216	89	87.8	4.4
60	16.44	16.43	34.19	25.03	0.209	214	88	87.8	4.6
65	16.39	16.38	34.17	25.02	0.224	214	88	88.0	7.4
70	16.38	16.37	34.23	25.07	0.239	220	91	88.0	7.6
75	16.47	16.45	34.30	25.11	0.253	219	91	88.1	8.7
80	16.53	16.51	34.30	25.09	0.268	214	89	88.4	10.2
85	16.42	16.41	34.31	25.12	0.282	212	88	88.4	12.3
90	16.43	16.41	34.34	25.15	0.296	213	88	88.5	14.6
95	16.37	16.35	34.33	25.15	0.310	211	87	88.5	15.8
100	16.26	16.24	34.30	25.15	0.325	214	88	88.5	18.5
110	15.89	15.88	34.27	25.21	0.353	212	87	88.1	24.6
120	15.36	15.35	34.14	25.23	0.380	210	85	87.5	35.5
130	14.56	14.54	34.12	25.39	0.407	210	84	86.8	29.6
140	13.90	13.88	34.06	25.49	0.433	206	81	88.4	22.7
150	13.32	13.30	34.03	25.59	0.458	200	78	89.8	19.5
160	12.86	12.84	33.99	25.64	0.482	198	76	90.2	17.3
170	12.51	12.49	33.93	25.66	0.506	198	76	90.6	12.4
180	12.08	12.06	33.93	25.75	0.529	202	76	91.2	11.1
190	11.83	11.80	33.97	25.83	0.552	209	78	91.6	6.5
200	11.42	11.39	33.95	25.89	0.573	202	75	92.2	4.2
210	11.06	11.03	33.95	25.95	0.595	193	71	92.2	3.7
220	10.77	10.74	33.94	26.00	0.615	191	70	92.4	3.8
230	10.51	10.48	33.97	26.07	0.636	188	69	92.5	3.7
240	10.10	10.08	33.97	26.14	0.655	184	67	92.5	3.7
250	9.94	9.91	34.01	26.19	0.674	186	67	92.6	3.8
260	9.69	9.66	34.02	26.24	0.692	186	67	92.6	4.0
270	9.51	9.48	34.03	26.28	0.710	187	67	92.5	4.0
280	9.27	9.24	34.03	26.32	0.728	189	67	92.5	4.0
290	9.13	9.10	34.04	26.35	0.745	189	67	92.7	4.1
300	8.97	8.94	34.04	26.37	0.763	188	67	92.7	4.2

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 2100 (GMT) 25 May 1984
STATION: 11 — Wind 0 kts; Wave 0 ft
Position: 33° 28' N 137° 50' W — CTD# 1404



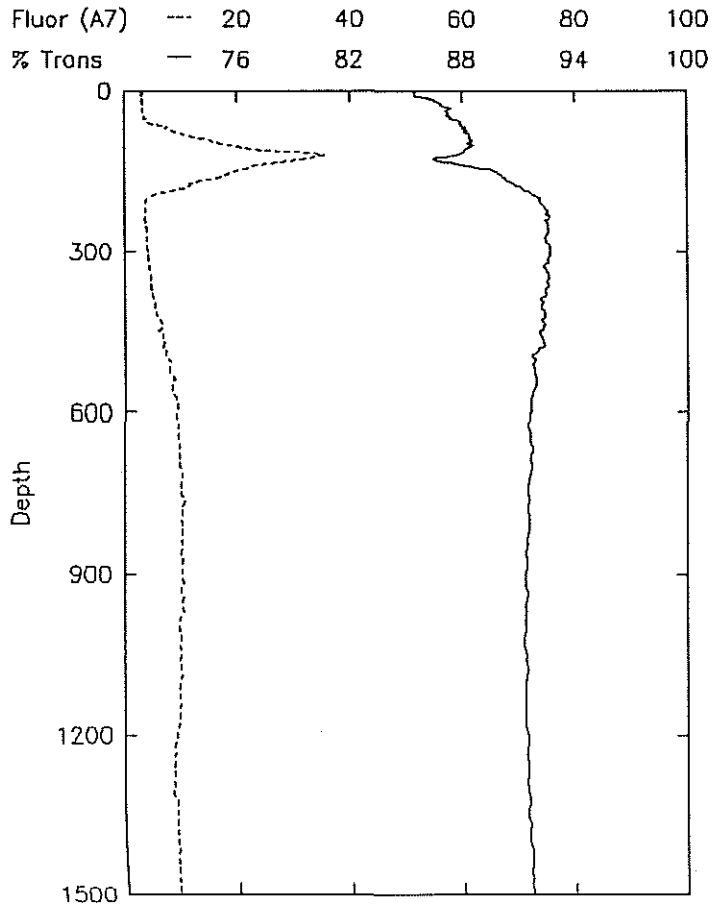
CTD# 1404: 11

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
300	8.97	8.94	34.04	26.37	0.763	188	67	92.7	4.2
310	8.76	8.73	34.04	26.41	0.779	184	65	92.6	4.2
320	8.58	8.55	34.03	26.43	0.796	183	64	92.6	4.3
330	8.44	8.40	34.02	26.44	0.812	180	63	92.4	4.4
340	8.27	8.24	34.02	26.47	0.829	179	62	92.6	4.6
350	8.09	8.05	34.02	26.49	0.845	174	60	92.6	4.7
360	7.89	7.86	33.99	26.50	0.861	171	59	92.6	4.8
370	7.65	7.62	34.01	26.55	0.876	165	57	92.4	4.8
380	7.45	7.42	34.01	26.58	0.891	160	55	92.5	5.0
390	7.28	7.24	34.00	26.59	0.906	151	52	92.2	5.3
400	7.09	7.06	34.01	26.63	0.921	146	49	92.2	5.4
410	6.92	6.88	34.00	26.65	0.936	137	46	92.4	5.6
420	6.77	6.74	33.99	26.66	0.950	133	45	92.4	5.9
430	6.63	6.59	34.00	26.69	0.964	130	43	92.2	6.4
440	6.51	6.47	34.00	26.70	0.978	125	42	92.3	6.7
450	6.38	6.34	34.00	26.72	0.992	121	40	92.1	6.2
460	6.18	6.14	34.00	26.75	1.006	113	38	92.3	6.9
470	6.09	6.04	34.01	26.76	1.019	109	36	92.3	7.1
480	6.00	5.96	34.01	26.78	1.033	104	34	92.1	6.8
490	5.84	5.80	34.02	26.80	1.046	98	32	91.8	7.4
500	5.72	5.67	34.01	26.81	1.059	93	31	91.9	7.7
550	5.22	5.18	34.07	26.92	1.121	66	22	91.9	8.5
600	4.90	4.85	34.12	26.99	1.178	49	16	91.6	9.2
650	4.68	4.63	34.17	27.06	1.233	38	12	91.6	9.6
700	4.52	4.47	34.22	27.12	1.284	31	10	91.7	9.9
750	4.37	4.32	34.28	27.18	1.334	24	8	91.5	10.2
800	4.22	4.16	34.33	27.23	1.380	19	6	91.6	10.2
850	4.08	4.02	34.37	27.28	1.424	17	5	91.4	10.3
900	3.95	3.89	34.40	27.32	1.466	17	5	91.4	10.2
950	3.86	3.79	34.44	27.37	1.506	18	6	91.4	10.4
1000	3.72	3.64	34.48	27.41	1.545	19	6	91.3	9.8
1050	3.59	3.51	34.50	27.44	1.582	22	7	91.4	10.1
1100	3.47	3.39	34.53	27.47	1.617	24	7	91.4	10.0
1150	3.36	3.28	34.54	27.49	1.651	27	8	91.4	9.9
1200	3.26	3.17	34.55	27.51	1.685	29	9	91.5	9.5
1250	3.13	3.04	34.57	27.54	1.717	32	10	91.5	9.0
1300	3.06	2.97	34.58	27.55	1.749	34	11	91.5	8.9
1350	2.96	2.87	34.59	27.57	1.780	36	11	91.5	9.5
1400	2.89	2.80	34.61	27.59	1.810	37	11	91.6	9.4
1450	2.82	2.72	34.61	27.60	1.839	39	12	91.6	9.4
1500	2.73	2.63	34.62	27.61	1.868	41	13	91.7	9.4

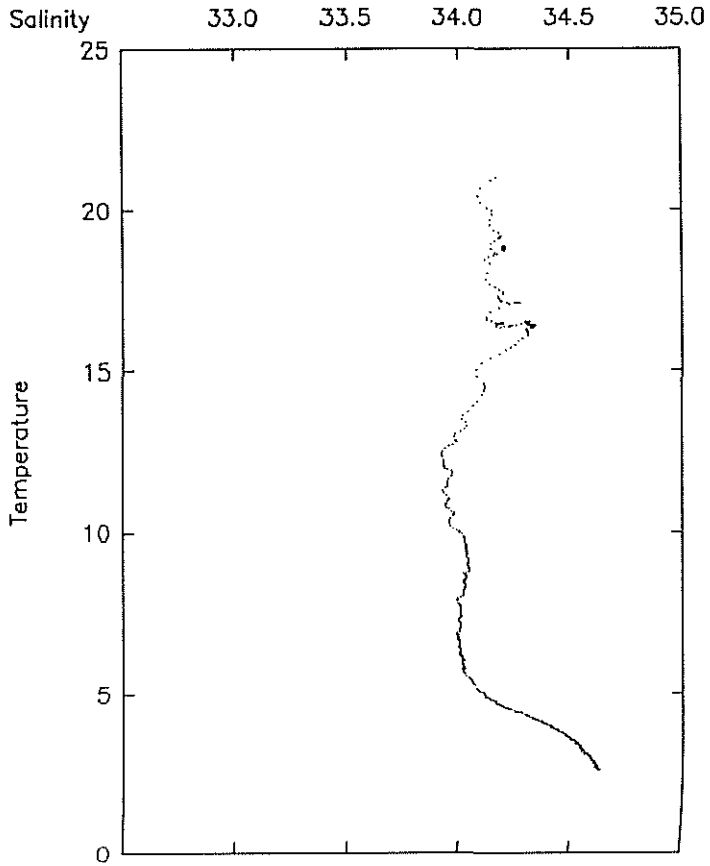
MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 2100 (GMT) 25 May 1984
STATION: 11 — Wind 0 kts; Wave 0 ft
Position: 33° 28' N 137° 50' W — CTD# 1404

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
1500	2.73	2.63	34.62	27.61	1.868	41	13	91.7	9.4
1550	2.64	2.54	34.62	27.62	1.896	43	13	91.6	9.6
1560	2.62	2.52	34.63	27.63	1.902	43	13	91.6	9.7



CTD# 1404: 11

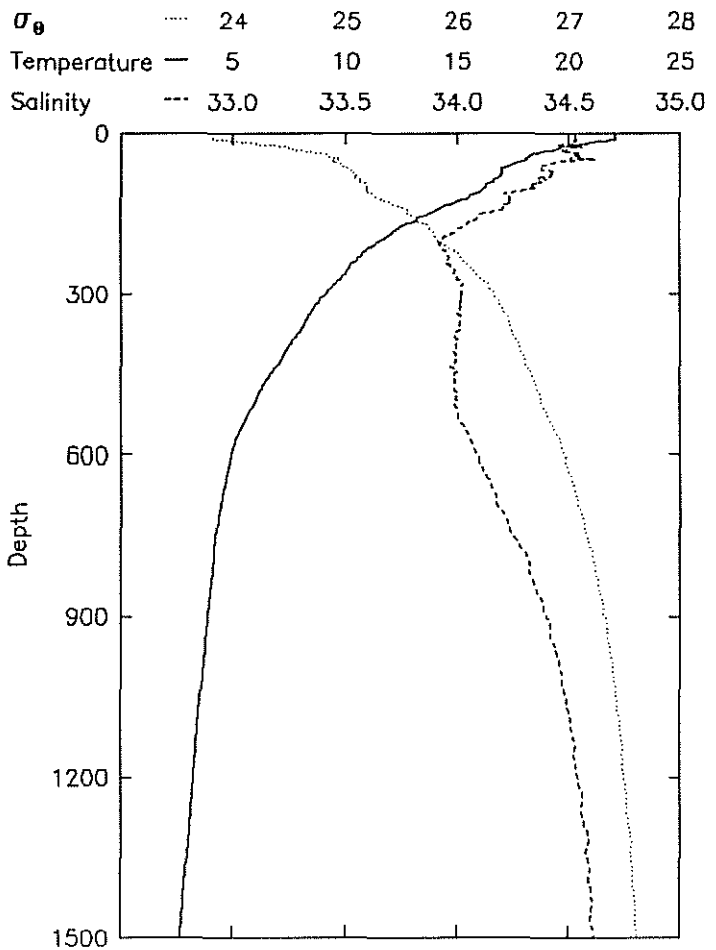


CTD# 1404: 11

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 12: PITS
Position: 33° 06' N 139° 34' W

1303 (GMT) 26 May 1984
Wind 0 kts; Wave 1 ft
CTD# 1408



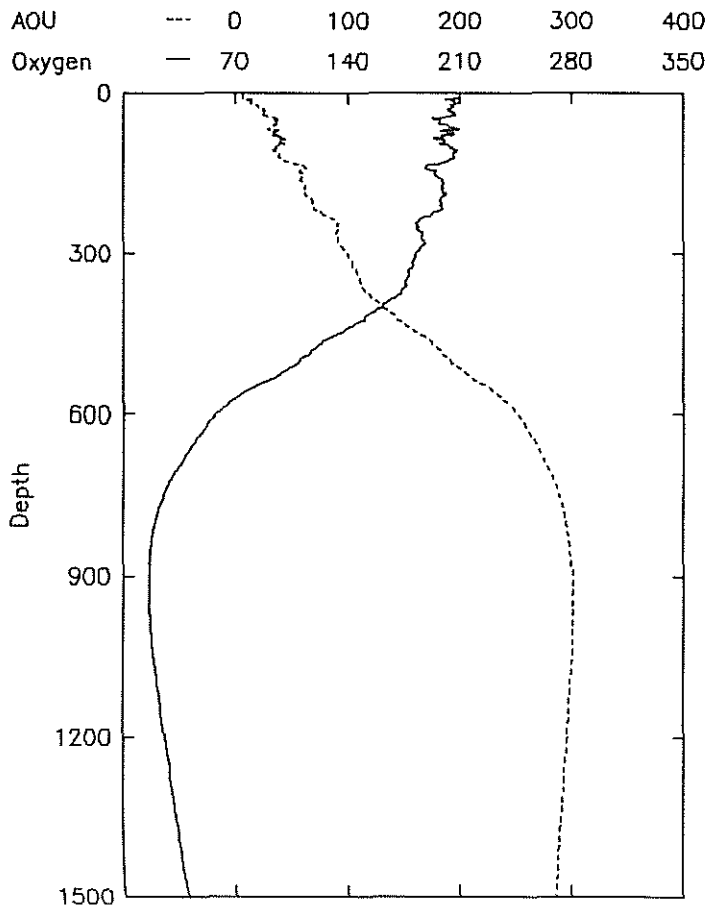
CTD# 1408: 12: PITS

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
0	22.11	22.11	34.53	23.83	0.000	210	97	84.7	3.6
5	22.11	22.11	34.53	23.83	0.020	210	97	84.7	3.6
10	22.11	22.10	34.53	23.83	0.041	210	97	84.7	3.7
15	21.42	21.41	34.52	24.02	0.061	207	94	86.0	3.6
20	20.66	20.66	34.50	24.20	0.080	208	93	86.7	4.4
25	19.77	19.76	34.56	24.49	0.098	206	91	86.9	4.0
30	19.45	19.44	34.49	24.52	0.115	203	89	87.3	4.4
35	18.71	18.71	34.49	24.71	0.131	205	89	87.2	5.2
40	18.39	18.39	34.56	24.84	0.147	207	89	87.7	5.0
45	18.19	18.18	34.51	24.85	0.163	202	86	88.1	4.5
50	18.09	18.08	34.57	24.92	0.178	197	84	88.0	4.6
55	17.70	17.69	34.43	24.92	0.193	198	84	88.3	4.1
60	17.37	17.36	34.39	24.96	0.209	202	85	88.2	4.1
65	17.00	16.99	34.38	25.04	0.223	207	86	88.7	4.8
70	17.01	17.00	34.42	25.07	0.238	199	83	88.8	4.4
75	17.00	16.99	34.42	25.07	0.252	206	86	88.9	5.1
80	16.90	16.88	34.42	25.10	0.267	199	83	89.1	5.5
85	16.71	16.70	34.40	25.12	0.281	194	81	89.2	6.3
90	16.61	16.59	34.37	25.12	0.296	201	84	89.4	6.9
95	16.29	16.27	34.34	25.18	0.310	198	82	89.4	7.6
100	16.28	16.26	34.35	25.19	0.324	205	85	89.4	8.8
110	15.94	15.92	34.23	25.18	0.352	207	85	88.9	12.8
120	15.50	15.48	34.24	25.28	0.379	207	84	88.6	20.9
130	14.85	14.83	34.24	25.42	0.406	200	80	88.8	24.0
140	14.18	14.16	34.21	25.54	0.431	189	75	89.7	20.4
150	13.74	13.72	34.11	25.56	0.456	194	76	89.8	18.4
160	13.21	13.19	34.09	25.65	0.480	199	77	90.3	14.6
170	12.63	12.61	34.04	25.73	0.504	200	77	90.8	11.4
180	12.26	12.24	34.00	25.77	0.526	200	76	91.5	9.6
190	11.98	11.96	33.96	25.79	0.549	202	76	91.6	6.6
200	11.56	11.53	33.92	25.84	0.571	198	74	91.9	4.7
210	11.24	11.21	33.92	25.90	0.593	198	74	92.1	4.2
220	10.85	10.82	33.96	25.99	0.614	196	72	92.4	3.8
230	10.67	10.65	33.96	26.03	0.634	191	70	92.3	3.8
240	10.38	10.36	33.95	26.07	0.654	185	67	92.3	4.0
250	10.17	10.14	33.98	26.13	0.674	185	67	92.3	3.9
260	10.04	10.01	33.99	26.16	0.693	187	68	92.5	4.1
270	9.81	9.78	34.00	26.21	0.712	187	67	92.4	4.0
280	9.53	9.50	34.03	26.28	0.730	188	67	92.3	4.0
290	9.32	9.29	34.02	26.30	0.748	185	66	92.2	4.1
300	9.15	9.12	34.02	26.34	0.765	182	65	92.2	4.1

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 12: PITS
Position: 33° 06' N 139° 34' W

1303 (GMT) 26 May 1984
Wind 0 kts; Wave 1 ft
CTD# 1408



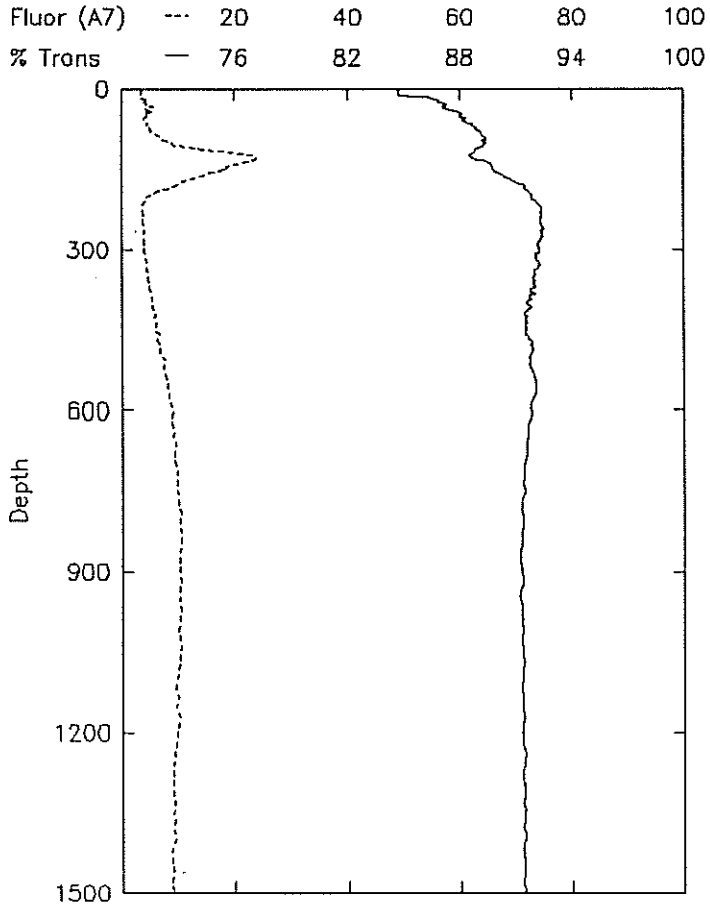
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
300	9.15	9.12	34.02	26.34	0.765	182	65	92.2	4.1
310	8.92	8.89	34.02	26.37	0.783	182	64	92.0	4.3
320	8.74	8.71	34.00	26.38	0.800	180	63	92.1	4.5
330	8.58	8.55	34.02	26.42	0.816	178	63	92.3	4.4
340	8.41	8.38	34.01	26.44	0.833	178	62	92.0	4.6
350	8.28	8.24	34.01	26.46	0.849	176	61	92.0	4.6
360	8.17	8.13	34.01	26.47	0.865	177	61	92.0	4.9
370	8.02	7.98	33.99	26.49	0.881	174	60	92.0	5.0
380	7.80	7.76	33.99	26.52	0.897	170	59	92.0	5.2
390	7.64	7.60	34.00	26.55	0.913	164	56	91.8	5.3
400	7.48	7.44	34.00	26.57	0.928	161	55	91.6	5.5
410	7.33	7.29	33.99	26.58	0.943	156	53	91.7	5.7
420	7.20	7.16	34.00	26.61	0.958	151	51	91.4	5.9
430	7.08	7.04	33.99	26.62	0.973	145	49	91.5	5.8
440	6.88	6.84	33.99	26.65	0.988	140	47	91.5	6.2
450	6.72	6.68	33.99	26.67	1.002	134	45	91.6	6.1
460	6.54	6.50	33.99	26.69	1.017	127	42	91.6	6.8
470	6.39	6.35	33.99	26.71	1.031	123	41	91.8	6.4
480	6.27	6.23	33.99	26.73	1.044	119	39	91.8	6.7
490	6.14	6.10	34.00	26.75	1.058	116	38	91.9	6.8
500	6.07	6.03	34.00	26.76	1.072	111	37	91.7	7.2
550	5.41	5.36	34.04	26.87	1.136	81	26	92.1	8.3
600	4.97	4.92	34.09	26.97	1.196	58	19	91.8	9.1
650	4.70	4.65	34.15	27.04	1.252	45	14	91.6	9.3
700	4.47	4.42	34.19	27.10	1.305	34	11	91.4	9.7
750	4.28	4.22	34.26	27.17	1.354	26	8	91.5	10.0
800	4.18	4.12	34.33	27.24	1.401	20	6	91.3	10.4
850	4.05	3.99	34.35	27.27	1.445	18	6	91.3	10.6
900	3.93	3.86	34.40	27.33	1.487	17	5	91.3	10.3
950	3.81	3.74	34.43	27.36	1.528	17	5	91.2	10.3
1000	3.70	3.63	34.46	27.40	1.566	17	5	91.3	10.2
1050	3.58	3.50	34.49	27.43	1.604	19	6	91.4	10.3
1100	3.47	3.39	34.51	27.46	1.639	22	7	91.4	9.8
1150	3.38	3.29	34.53	27.48	1.674	24	7	91.3	9.7
1200	3.27	3.19	34.54	27.50	1.708	26	8	91.3	9.8
1250	3.18	3.09	34.56	27.53	1.741	29	9	91.4	9.5
1300	3.09	3.00	34.59	27.55	1.773	31	10	91.4	9.2
1350	2.98	2.88	34.59	27.57	1.803	34	10	91.5	9.2
1400	2.87	2.77	34.59	27.58	1.833	36	11	91.5	9.5
1450	2.77	2.67	34.61	27.60	1.862	38	12	91.4	9.1
1500	2.68	2.57	34.62	27.62	1.891	41	12	91.4	9.1

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

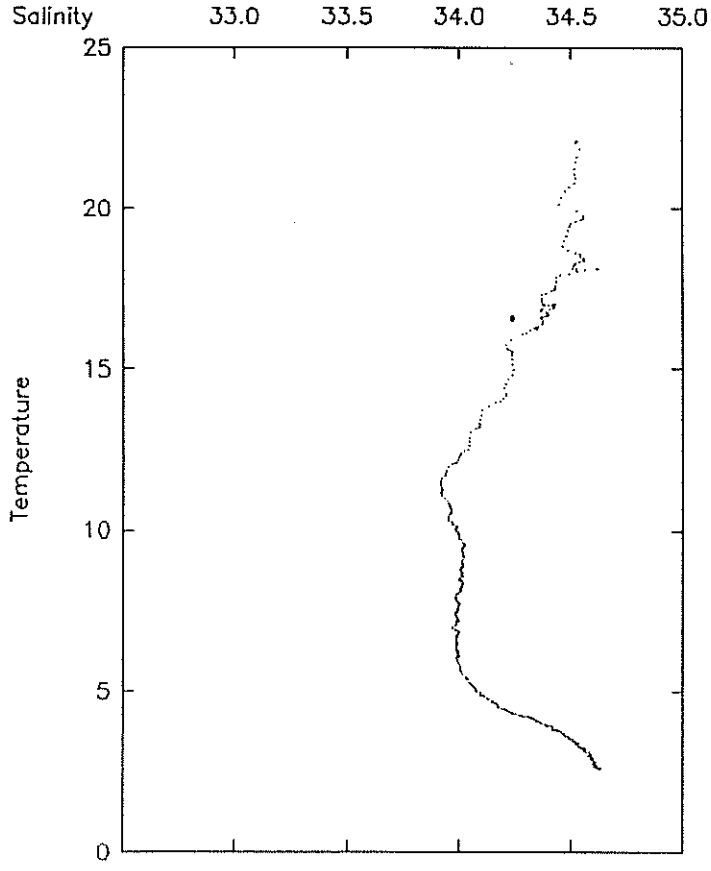
CRUISE: Vertex 5
STATION: 12: PITS
Position: 33° 06' N 139° 34' W

1303 (GMT) 26 May 1984
Wind 0 kts; Wave 1 ft
CTD# 1408

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Fluoro
1500	2.68	2.57	34.62	27.62	1.891	41	12	91.4	9.1
1550	2.60	2.49	34.63	27.63	1.919	43	13	91.4	9.0
1565	2.58	2.47	34.63	27.63	1.927	44	13	91.4	8.9



CTD# 1408: 12: PITS

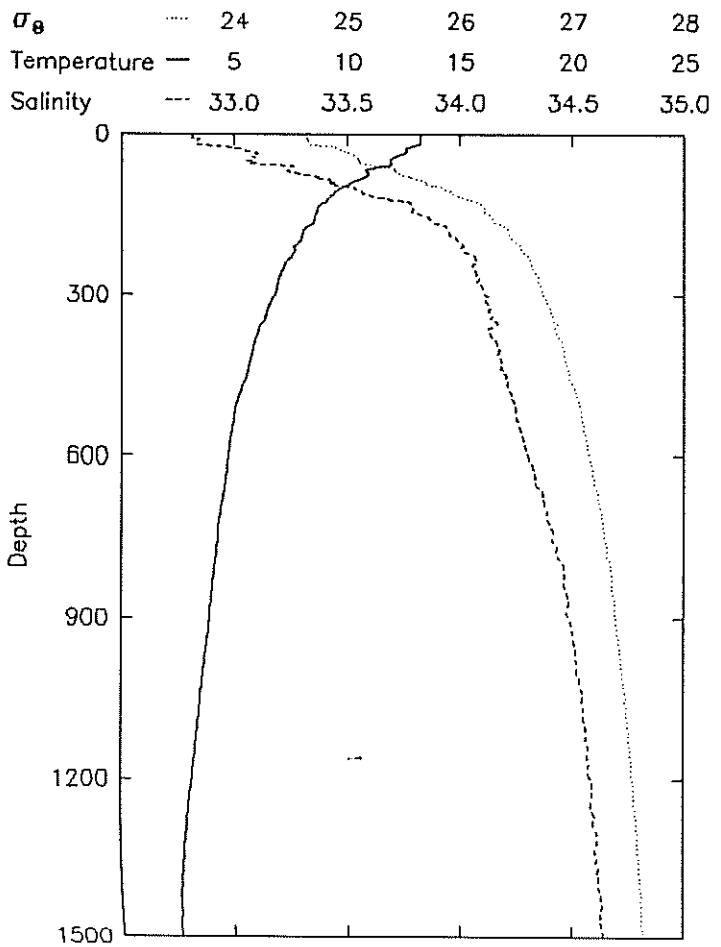


CTD# 1408: 12: PITS

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 19
Position: 35° 57' N 122° 55' W

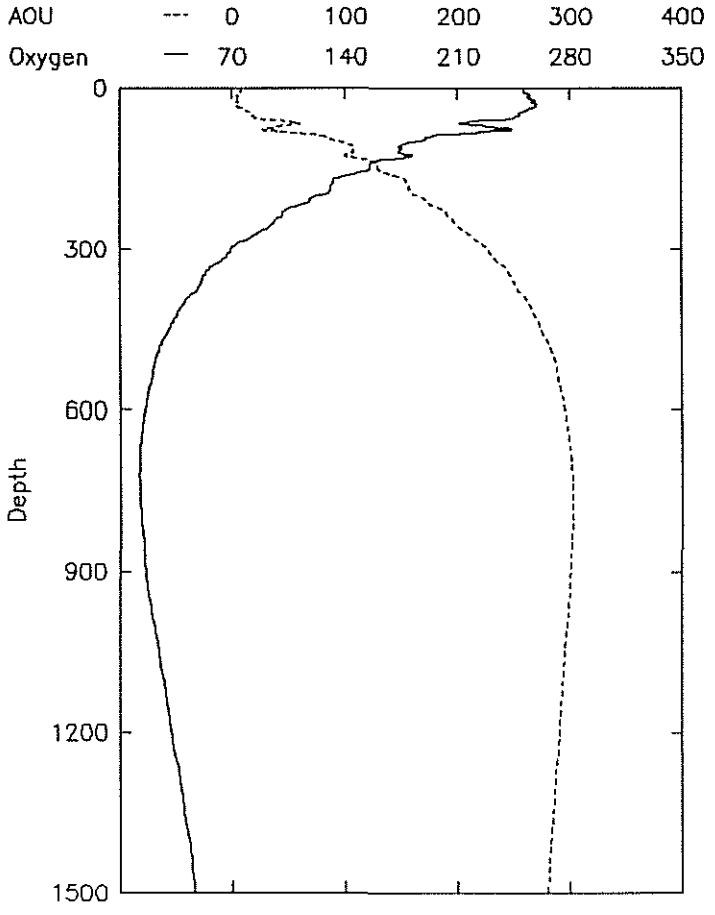
1533 (GMT) 14 Jun 1984
Wind 15 kts; Wave 4 ft
CTD# 1440



Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Scatter
0	13.27	13.27	32.82	24.65	0.000	251	97	76.8	89
5	13.27	13.27	32.82	24.65	0.016	252	97	76.8	89
10	13.26	13.26	32.85	24.68	0.033	254	98	77.0	89
15	13.25	13.24	32.84	24.67	0.049	255	98	77.5	87
20	13.19	13.19	32.85	24.69	0.065	256	98	77.4	89
25	12.71	12.71	33.00	24.90	0.081	257	98	76.2	90
30	12.65	12.65	33.04	24.94	0.096	259	99	74.8	91
35	12.55	12.55	33.10	25.01	0.111	258	98	75.3	88
40	12.29	12.28	33.09	25.06	0.126	254	96	76.1	80
45	12.02	12.02	33.10	25.11	0.140	250	94	77.3	78
50	11.91	11.91	33.06	25.10	0.154	249	93	79.3	78
55	12.00	12.00	33.10	25.12	0.169	246	92	80.6	77
60	11.56	11.55	33.27	25.33	0.183	226	84	85.0	75
65	10.92	10.91	33.25	25.43	0.196	212	78	86.7	76
70	10.89	10.88	33.25	25.43	0.208	227	83	85.2	76
75	10.97	10.96	33.31	25.47	0.221	241	89	84.0	75
80	10.78	10.77	33.38	25.55	0.233	234	86	84.5	74
85	10.45	10.44	33.42	25.64	0.245	209	76	85.9	74
90	10.18	10.17	33.45	25.71	0.257	193	70	87.9	73
95	10.01	10.00	33.45	25.74	0.268	190	69	88.4	71
100	9.74	9.73	33.54	25.85	0.279	183	65	89.0	71
110	9.42	9.41	33.57	25.93	0.301	175	62	89.4	75
120	9.15	9.14	33.68	26.06	0.321	175	62	89.0	75
130	8.92	8.90	33.79	26.18	0.340	175	62	88.0	76
140	8.72	8.70	33.80	26.22	0.358	156	55	87.8	73
150	8.66	8.65	33.83	26.26	0.376	155	55	88.5	76
160	8.60	8.59	33.87	26.30	0.394	145	51	88.8	74
170	8.39	8.37	33.93	26.38	0.411	133	46	88.4	77
180	8.12	8.10	33.95	26.44	0.427	132	46	88.6	77
190	8.07	8.05	33.97	26.46	0.443	131	46	88.7	77
200	7.95	7.93	34.00	26.50	0.459	125	43	88.6	76
210	7.71	7.69	34.01	26.54	0.475	119	41	88.0	72
220	7.71	7.69	34.03	26.56	0.490	110	38	88.2	68
230	7.54	7.52	34.07	26.61	0.504	103	35	88.7	67
240	7.32	7.30	34.07	26.64	0.519	101	34	89.2	63
250	7.21	7.19	34.06	26.65	0.533	97	33	89.3	62
260	7.12	7.10	34.08	26.68	0.547	93	31	89.7	60
270	7.02	6.99	34.09	26.70	0.561	86	29	89.7	62
280	6.97	6.94	34.09	26.71	0.575	81	27	89.7	59
290	6.93	6.90	34.11	26.73	0.588	73	25	90.0	58
300	6.85	6.82	34.12	26.75	0.602	70	23	90.1	59

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1533 (GMT) 14 Jun 1984
STATION: 19 — Wind 15 kts; Wave 4 ft
Position: 35° 57' N 122° 55' W — CTD# 1440



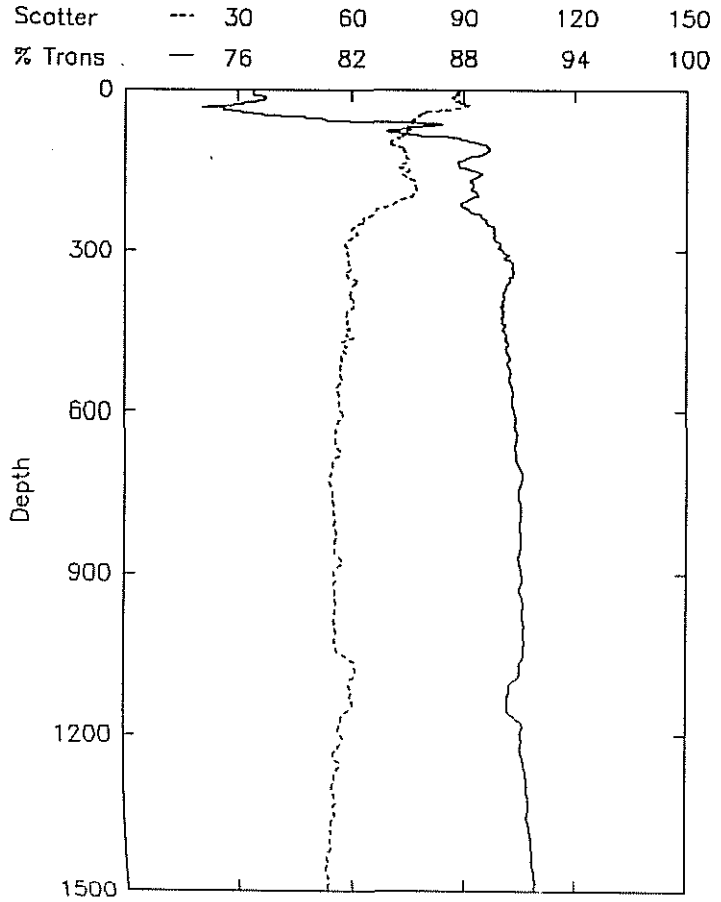
CTD# 1440: 19

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Scatter
300	6.85	6.82	34.12	26.75	0.602	70	23	90.1	59
310	6.71	6.68	34.12	26.77	0.615	68	23	90.4	59
320	6.58	6.56	34.13	26.79	0.628	64	22	90.6	59
330	6.49	6.46	34.13	26.81	0.641	59	20	90.7	60
340	6.43	6.40	34.15	26.83	0.654	55	18	90.7	59
350	6.34	6.31	34.16	26.85	0.666	52	17	90.5	59
360	6.15	6.12	34.13	26.85	0.678	51	17	90.4	62
370	6.08	6.05	34.14	26.86	0.691	50	16	90.3	60
380	6.00	5.96	34.15	26.89	0.703	47	16	90.2	60
390	5.93	5.89	34.17	26.91	0.715	43	14	90.2	60
400	5.88	5.84	34.17	26.92	0.727	40	13	90.2	61
410	5.82	5.78	34.17	26.92	0.739	38	13	90.2	59
420	5.78	5.74	34.18	26.94	0.750	36	12	90.2	59
430	5.71	5.67	34.19	26.95	0.762	35	11	90.1	59
440	5.66	5.63	34.19	26.96	0.773	32	11	90.3	60
450	5.60	5.56	34.21	26.98	0.785	31	10	90.2	60
460	5.53	5.49	34.21	26.99	0.796	29	9	90.3	60
470	5.39	5.35	34.22	27.01	0.807	27	9	90.4	58
480	5.33	5.29	34.22	27.02	0.818	26	8	90.3	59
490	5.22	5.18	34.23	27.04	0.828	24	8	90.4	59
500	5.15	5.11	34.25	27.06	0.839	23	7	90.6	58
550	4.96	4.92	34.27	27.10	0.891	20	6	90.6	57
600	4.78	4.74	34.30	27.15	0.940	16	5	90.8	57
650	4.64	4.59	34.34	27.20	0.987	14	4	90.8	56
700	4.44	4.39	34.39	27.26	1.032	12	4	91.0	55
750	4.30	4.24	34.41	27.29	1.075	12	4	91.0	55
800	4.19	4.13	34.46	27.35	1.117	13	4	91.1	56
850	4.07	4.00	34.47	27.37	1.156	15	5	91.1	56
900	3.96	3.89	34.49	27.39	1.195	16	5	91.2	56
950	3.84	3.77	34.51	27.42	1.233	18	6	91.2	56
1000	3.68	3.61	34.52	27.45	1.269	22	7	91.3	56
1050	3.55	3.47	34.55	27.48	1.303	25	8	91.3	58
1100	3.45	3.37	34.56	27.50	1.337	28	9	90.7	60
1150	3.32	3.24	34.57	27.52	1.370	30	9	90.4	60
1200	3.19	3.11	34.59	27.55	1.402	32	10	91.1	58
1250	3.06	2.97	34.59	27.56	1.433	35	11	91.3	57
1300	2.94	2.85	34.62	27.59	1.463	38	12	91.5	55
1350	2.84	2.75	34.62	27.60	1.491	40	12	91.5	56
1400	2.73	2.64	34.62	27.61	1.520	43	13	91.7	54
1450	2.68	2.58	34.63	27.63	1.547	45	14	91.8	54
1500	2.62	2.52	34.64	27.64	1.574	47	14	91.9	54

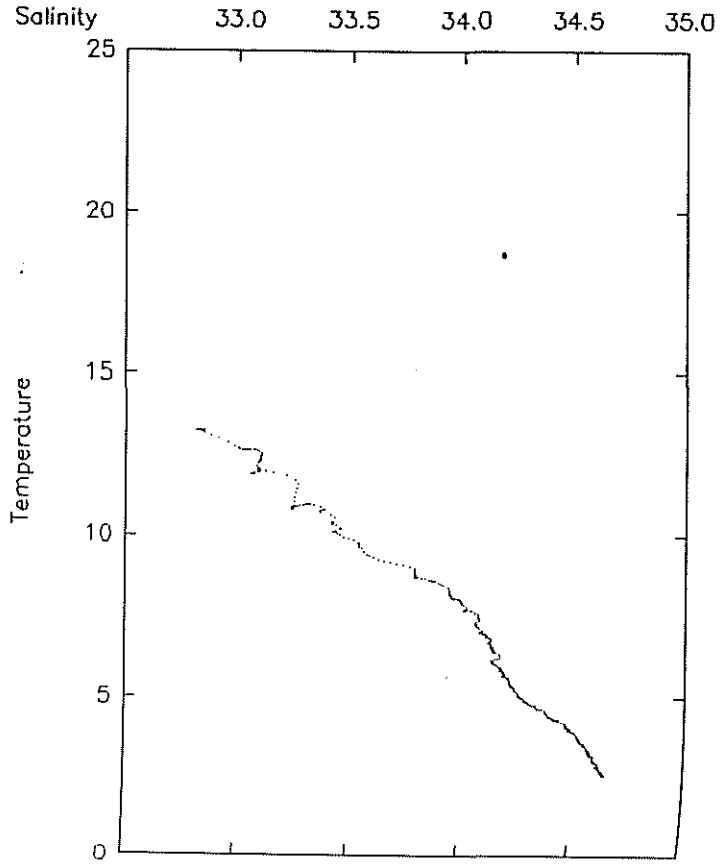
MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1533 (GMT) 14 Jun 1984
STATION: 19 — Wind 15 kts; Wave 4 ft
Position: 35° 57' N 122° 55' W — CTD# 1440

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Trans %/m	Scatter
1500	2.62	2.52	34.64	27.64	1.574	47	14	91.9	54
1550	2.59	2.48	34.64	27.64	1.601	48	15	91.9	53



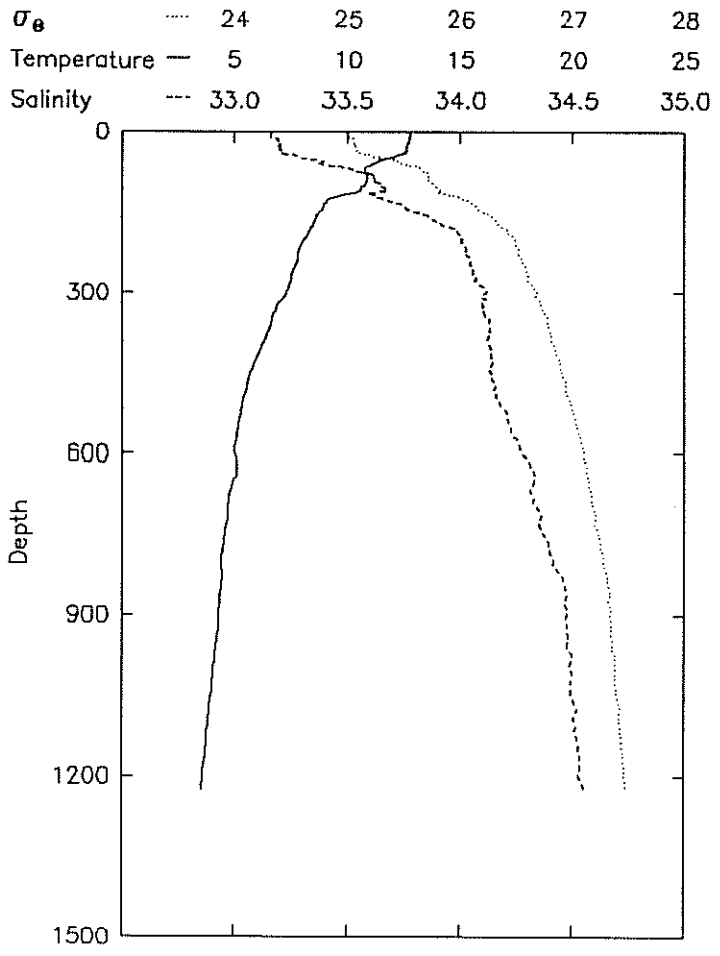
CTD# 1440: 19



CTD# 1440: 19

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

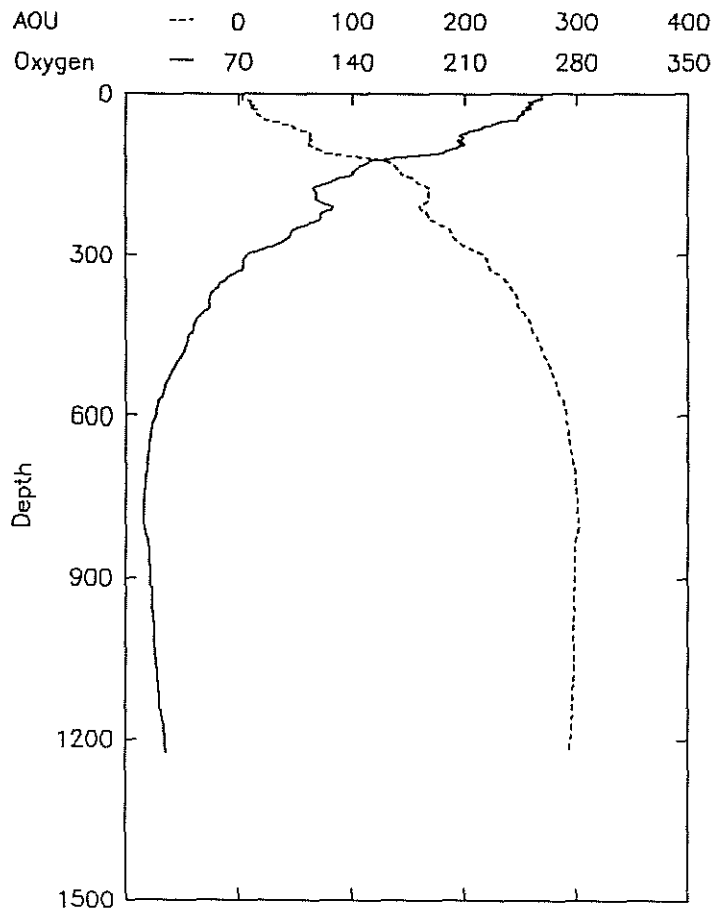
CRUISE: Vertex 5 — 1118 (GMT) 15 Jun 1984
STATION: 23 — Wind 4 kts; Wave 3 ft
Position: 36° 09' N 122° 09' W — CTD# 1448



Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Scatter	Trans %/m
0	12.80	12.80	33.17	25.01	0.000	258	98	99	78.2
5	12.80	12.80	33.17	25.01	0.015	258	98	99	77.9
10	12.77	12.77	33.18	25.03	0.029	256	98	100	78.0
15	12.73	12.73	33.20	25.05	0.044	250	95	101	77.1
20	12.72	12.71	33.20	25.05	0.058	252	96	102	73.9
25	12.64	12.63	33.21	25.08	0.073	249	95	103	71.8
30	12.60	12.60	33.20	25.08	0.087	247	94	101	75.3
35	12.60	12.60	33.21	25.08	0.102	247	94	102	80.1
40	12.49	12.49	33.22	25.11	0.116	244	93	99	80.5
45	12.18	12.18	33.28	25.22	0.130	244	92	97	77.9
50	11.70	11.69	33.33	25.35	0.144	238	89	95	77.7
55	11.42	11.41	33.40	25.46	0.156	230	85	94	77.6
60	11.14	11.13	33.39	25.50	0.169	223	82	89	78.4
65	10.88	10.87	33.47	25.61	0.181	220	81	88	79.7
70	10.75	10.74	33.52	25.67	0.193	213	78	89	76.8
75	10.76	10.75	33.56	25.70	0.204	209	77	91	81.9
80	10.86	10.85	33.62	25.73	0.216	208	76	90	77.3
85	10.87	10.86	33.62	25.72	0.227	208	76	89	75.3
90	10.89	10.88	33.63	25.73	0.239	208	77	89	81.2
95	10.82	10.81	33.64	25.75	0.250	210	77	87	80.3
100	10.75	10.74	33.65	25.77	0.261	206	76	88	81.8
110	10.50	10.49	33.67	25.83	0.283	196	71	85	82.8
120	9.47	9.45	33.63	25.97	0.305	163	58	81	85.0
130	9.08	9.07	33.70	26.09	0.325	148	52	78	88.3
140	8.98	8.97	33.75	26.15	0.344	143	50	78	88.7
150	8.81	8.79	33.81	26.22	0.362	140	49	81	88.7
160	8.66	8.64	33.87	26.29	0.380	129	45	79	88.6
170	8.56	8.54	33.91	26.34	0.397	122	43	78	89.5
180	8.42	8.40	33.97	26.41	0.414	117	41	73	90.3
190	8.32	8.30	33.99	26.44	0.430	119	41	69	90.3
200	8.15	8.13	34.01	26.48	0.446	121	42	70	90.7
210	8.02	8.00	34.01	26.50	0.462	129	44	69	90.8
220	7.91	7.89	34.03	26.53	0.478	123	42	68	91.0
230	7.86	7.84	34.04	26.54	0.493	122	42	66	91.2
240	7.84	7.81	34.05	26.55	0.508	116	40	67	91.3
250	7.73	7.71	34.05	26.57	0.523	105	36	64	91.5
260	7.63	7.60	34.06	26.59	0.538	103	35	65	91.6
270	7.58	7.55	34.07	26.61	0.553	100	34	63	91.7
280	7.52	7.49	34.07	26.62	0.567	94	32	64	91.8
290	7.45	7.42	34.10	26.65	0.582	85	29	62	91.6
300	7.33	7.30	34.12	26.68	0.596	75	26	62	91.5

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1118 (GMT) 15 Jun 1984
STATION: 23 — Wind 4 kts; Wave 3 ft
Position: 36° 09' N 122° 09' W — CTD# 1448

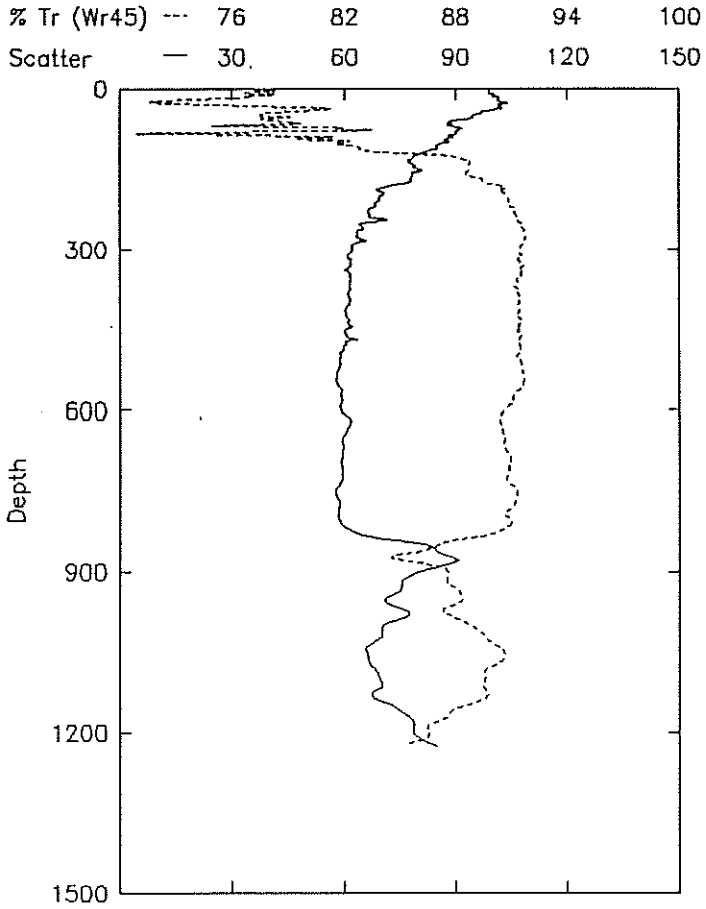


CTD# 1448: 23

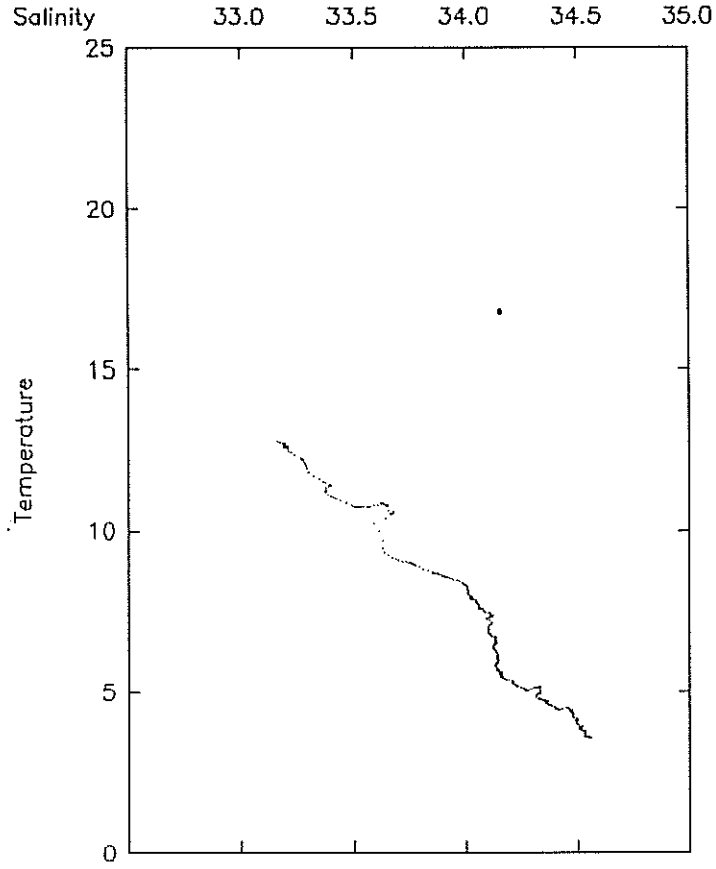
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Scatter	Trans %/m
300	7.33	7.30	34.12	26.68	0.596	75	26	62	91.5
310	7.21	7.18	34.11	26.69	0.610	73	25	61	91.5
320	6.99	6.96	34.10	26.71	0.624	74	25	62	91.4
330	6.90	6.87	34.10	26.73	0.637	70	24	62	91.7
340	6.77	6.74	34.11	26.76	0.651	64	22	61	91.6
350	6.69	6.66	34.13	26.78	0.664	60	20	61	91.4
360	6.65	6.62	34.13	26.79	0.677	57	19	61	91.3
370	6.57	6.54	34.13	26.80	0.690	54	18	61	91.2
380	6.45	6.42	34.13	26.81	0.703	52	17	61	91.4
390	6.35	6.32	34.12	26.82	0.716	52	17	61	91.4
400	6.25	6.21	34.13	26.84	0.728	52	17	61	91.4
410	6.14	6.10	34.14	26.86	0.741	48	16	60	91.4
420	6.05	6.02	34.14	26.87	0.753	45	15	60	91.4
430	5.93	5.89	34.15	26.89	0.765	43	14	61	91.5
440	5.86	5.82	34.14	26.90	0.778	43	14	61	91.4
450	5.72	5.68	34.14	26.91	0.790	40	13	60	91.3
460	5.65	5.61	34.14	26.92	0.801	39	13	61	91.5
470	5.61	5.57	34.16	26.94	0.813	37	12	62	91.5
480	5.58	5.54	34.15	26.94	0.825	36	12	60	91.4
490	5.49	5.45	34.16	26.96	0.836	34	11	59	91.5
500	5.41	5.37	34.18	26.98	0.848	32	10	59	91.3
550	5.20	5.15	34.22	27.04	0.903	25	8	58	91.6
600	5.04	5.00	34.28	27.10	0.955	19	6	59	90.6
650	4.97	4.92	34.33	27.15	1.005	15	5	59	90.6
700	4.74	4.69	34.35	27.19	1.054	13	4	59	90.9
750	4.60	4.54	34.37	27.23	1.100	12	4	58	91.3
800	4.43	4.36	34.42	27.28	1.144	12	4	58	90.8
850	4.42	4.35	34.47	27.33	1.187	15	5	82	87.0
900	4.32	4.26	34.47	27.34	1.228	16	5	80	87.6
950	4.25	4.18	34.48	27.35	1.269	17	5	71	88.4
1000	4.10	4.02	34.49	27.38	1.308	18	6	71	88.8
1050	3.99	3.91	34.50	27.39	1.347	19	6	66	90.6
1100	3.86	3.77	34.51	27.42	1.385	21	6	69	89.6
1150	3.76	3.68	34.53	27.44	1.422	22	7	73	88.4
1200	3.62	3.53	34.53	27.46	1.458	25	8	79	86.6

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1118 (GMT) 15 Jun 1984
STATION: 23 — Wind 4 kts; Wave 3 ft
Position: 36° 09' N 122° 09' W — CTD# 1448



CTD# 1448: 23

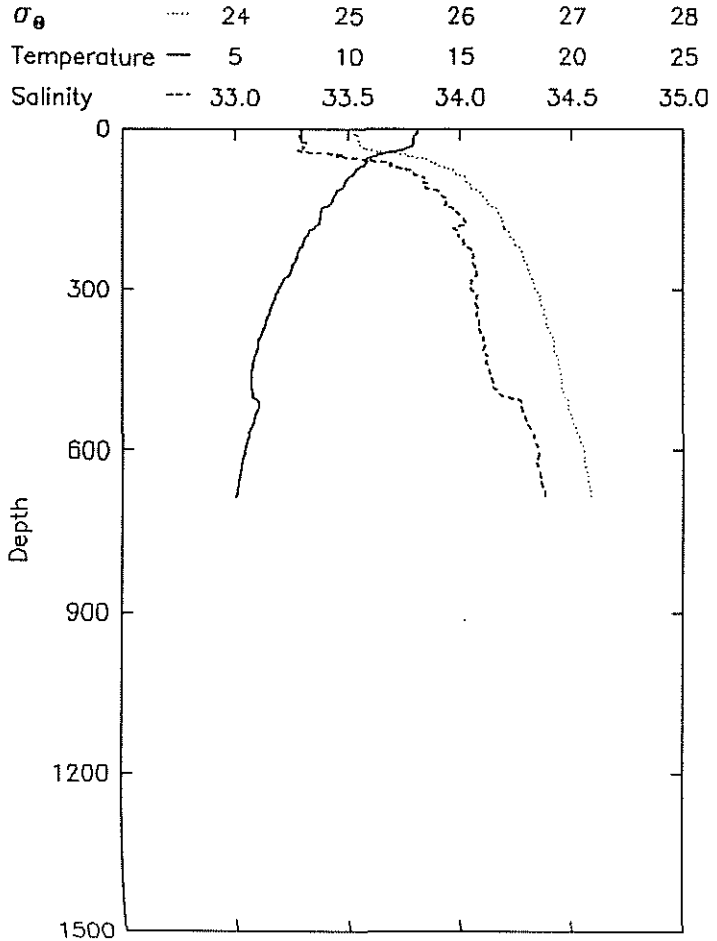


CTD# 1448: 23

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 24
Position: 36° 12' N 122° 00' W

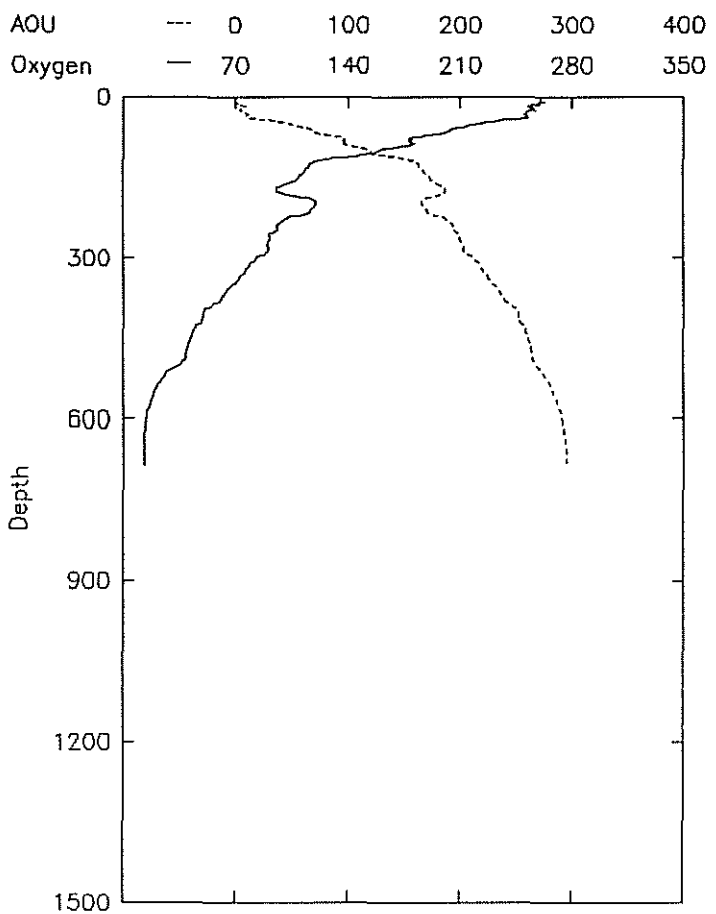
1447 (GMT) 15 Jun 1984
Wind 4 kts; Wave 1 ft
CTD# 1450



Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Scatter	Trans %/m
0	13.08	13.08	33.30	25.06	0.000	260	100	97	78.2
5	13.08	13.08	33.30	25.06	0.014	260	100	97	78.2
10	13.06	13.06	33.30	25.06	0.029	263	101	96	80.5
15	12.93	12.93	33.29	25.09	0.043	259	99	97	81.2
20	12.91	12.90	33.31	25.10	0.058	255	98	97	81.2
25	12.91	12.91	33.31	25.10	0.072	256	98	96	78.0
30	12.91	12.90	33.31	25.11	0.086	252	96	96	69.6
35	12.65	12.64	33.31	25.16	0.100	252	96	101	71.9
40	12.25	12.24	33.28	25.21	0.114	250	94	99	79.9
45	11.63	11.62	33.39	25.41	0.128	232	87	90	78.5
50	11.28	11.28	33.46	25.53	0.140	221	82	89	80.8
55	10.88	10.88	33.55	25.67	0.152	213	78	91	79.1
60	10.85	10.84	33.61	25.72	0.164	205	75	99	73.3
65	10.77	10.76	33.69	25.80	0.175	202	74	103	72.3
70	10.59	10.58	33.71	25.84	0.186	194	71	100	72.9
75	10.38	10.38	33.76	25.92	0.196	181	66	100	72.3
80	10.33	10.32	33.78	25.95	0.207	180	65	98	75.7
85	10.23	10.22	33.80	25.98	0.217	181	66	96	79.0
90	10.01	10.00	33.84	26.05	0.227	177	64	95	80.0
95	9.95	9.94	33.83	26.05	0.237	167	60	94	82.5
100	9.87	9.86	33.84	26.07	0.247	159	57	95	83.1
110	9.71	9.70	33.85	26.11	0.266	142	51	90	86.3
120	9.47	9.46	33.91	26.19	0.285	121	43	86	87.4
130	9.33	9.32	33.94	26.23	0.303	117	42	85	88.1
140	9.23	9.21	33.94	26.25	0.321	113	40	84	88.1
150	8.89	8.87	33.97	26.33	0.338	110	39	83	88.5
160	8.86	8.84	34.00	26.36	0.355	105	37	87	87.2
170	8.82	8.80	34.02	26.38	0.372	97	34	92	91.0
180	8.70	8.68	34.01	26.39	0.389	100	35	88	91.2
190	8.35	8.33	33.99	26.43	0.405	118	41	73	91.0
200	8.21	8.19	33.99	26.45	0.421	121	42	71	91.4
210	8.09	8.07	34.02	26.49	0.437	118	41	70	91.6
220	7.98	7.95	34.03	26.52	0.453	110	38	68	91.6
230	7.83	7.81	34.06	26.56	0.468	101	35	66	91.1
240	7.78	7.76	34.06	26.57	0.483	96	33	65	91.5
250	7.63	7.61	34.06	26.59	0.498	95	33	65	91.5
260	7.55	7.53	34.07	26.61	0.512	92	31	64	91.4
270	7.48	7.45	34.08	26.63	0.527	91	31	63	91.2
280	7.24	7.21	34.06	26.65	0.541	91	31	64	91.4
290	7.10	7.08	34.05	26.66	0.555	90	30	66	91.2
300	6.96	6.93	34.06	26.68	0.570	84	28	66	91.4

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1447 (GMT) 15 Jun 1984
STATION: 24 — Wind 4 kts; Wave 1 ft
Position: 36° 12' N 122° 00' W — CTD# 1450



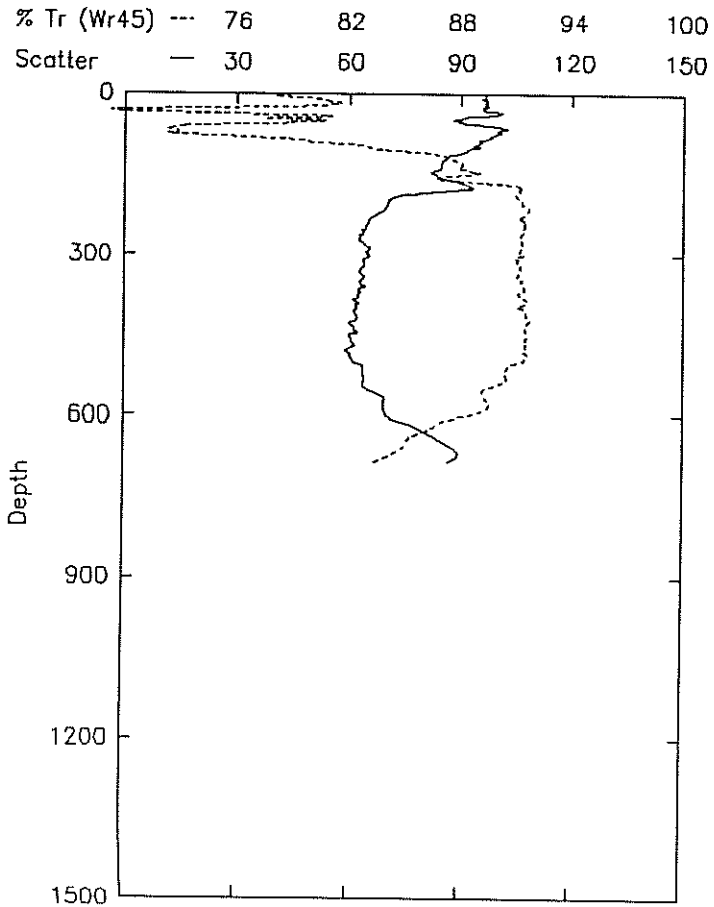
CTD# 1450: 24

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Scatter	Trans %/m
300	6.96	6.93	34.06	26.68	0.570	84	28	66	91.4
310	6.83	6.81	34.08	26.72	0.583	80	27	64	91.1
320	6.77	6.74	34.07	26.72	0.597	78	26	64	91.3
330	6.66	6.63	34.08	26.74	0.610	75	25	63	91.1
340	6.60	6.56	34.09	26.76	0.624	72	24	64	91.1
350	6.49	6.46	34.08	26.77	0.637	69	23	63	91.3
360	6.42	6.38	34.09	26.78	0.650	65	22	64	91.5
370	6.34	6.31	34.09	26.79	0.663	63	21	63	91.2
380	6.24	6.21	34.09	26.81	0.676	60	20	63	91.5
390	6.12	6.09	34.11	26.84	0.689	55	18	63	91.6
400	6.06	6.03	34.11	26.85	0.701	50	17	62	91.4
410	6.04	6.00	34.11	26.85	0.714	50	16	62	91.6
420	5.97	5.94	34.12	26.86	0.726	49	16	62	91.7
430	5.87	5.83	34.13	26.89	0.738	45	15	61	91.5
440	5.84	5.80	34.13	26.89	0.751	44	14	61	91.5
450	5.80	5.76	34.13	26.90	0.763	42	14	60	91.6
460	5.77	5.73	34.14	26.91	0.775	41	13	61	91.6
470	5.76	5.72	34.15	26.92	0.787	40	13	61	91.5
480	5.77	5.73	34.16	26.92	0.799	40	13	59	91.4
490	5.82	5.78	34.18	26.93	0.810	38	13	60	91.5
500	5.85	5.81	34.20	26.95	0.822	35	12	61	91.1
550	5.86	5.82	34.31	27.03	0.879	20	7	65	89.4
600	5.48	5.43	34.35	27.11	0.931	15	5	70	88.3
650	5.23	5.17	34.36	27.15	0.982	13	4	86	85.1

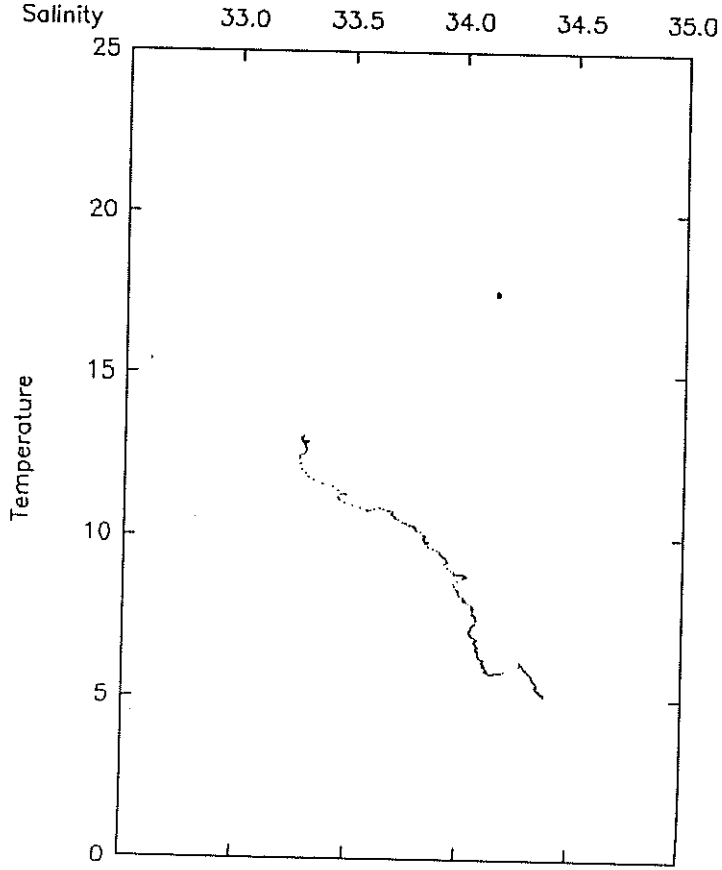
MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 24
Position: 36° 12' N 122° 00' W

1447 (GMT) 15 Jun 1984
Wind 4 kts; Wave 1 ft
CTD# 1450



CTD# 1450: 24



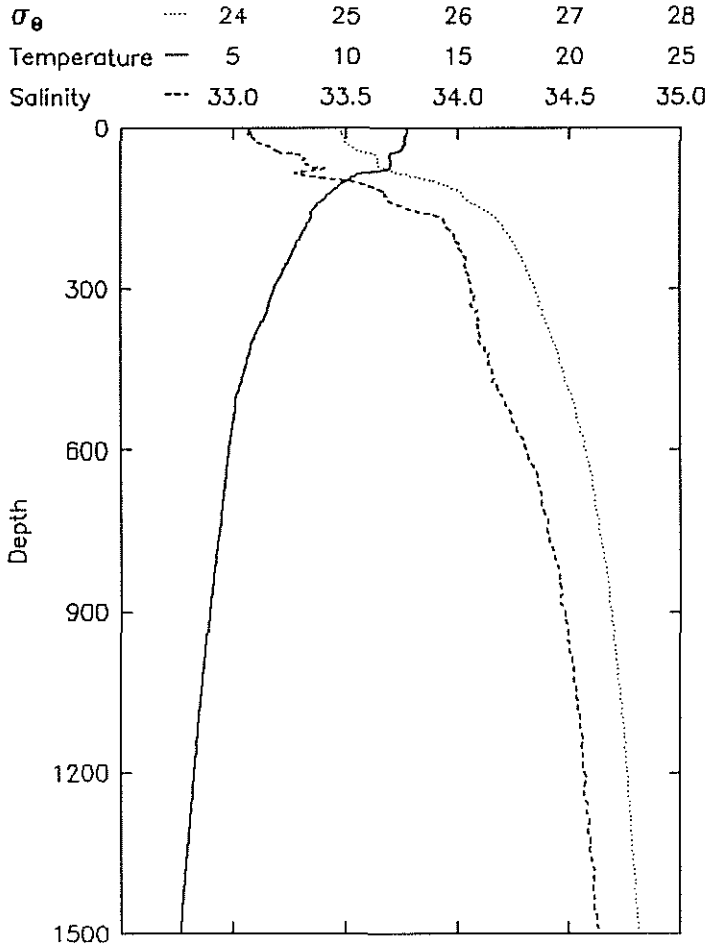
CTD# 1450: 24

100

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 25 (PIT 5C)
Position: 35° 50' N 122° 31' W

2053 (GMT) 15 Jun 1984
Wind 3 kts; Wave 3 ft
CTD# 1452

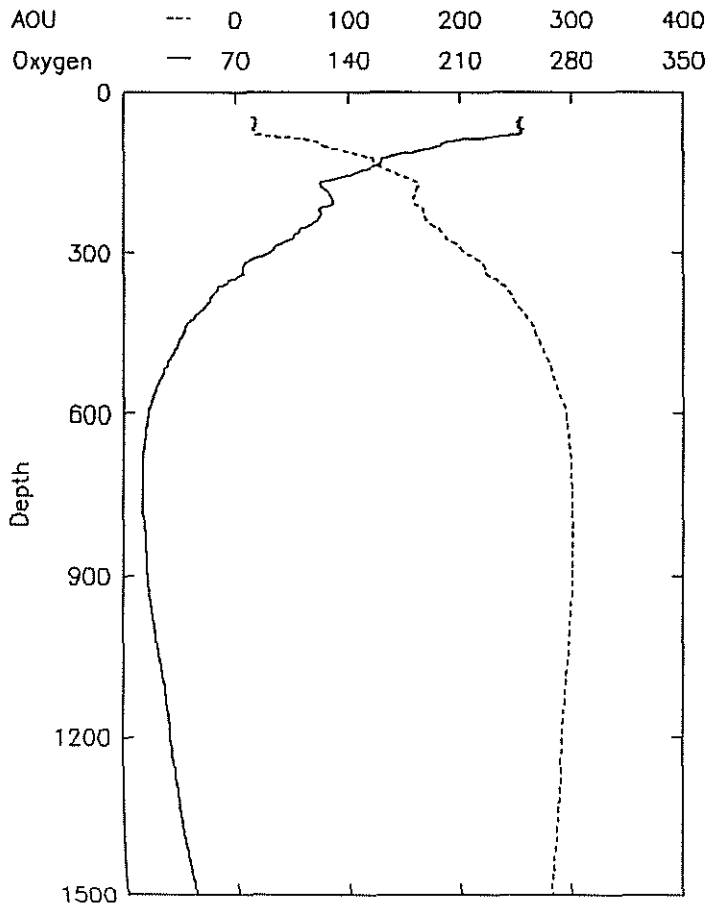


CTD# 1452: 25 (PIT 5C)

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Fluoro	Trans %/m
0	12.73	12.73	33.07	24.95	0.000			63.8	76.8
5	12.73	12.72	33.07	24.95	0.015			63.8	74.9
10	12.73	12.73	33.09	24.97	0.030			67.0	67.1
15	12.64	12.64	33.08	24.98	0.045			83.5	75.8
20	12.62	12.62	33.10	24.99	0.060			89.5	79.4
25	12.65	12.65	33.10	24.99	0.074			91.8	81.6
30	12.70	12.69	33.13	25.01	0.089			90.9	80.1
35	12.58	12.58	33.17	25.06	0.104			87.2	79.3
40	12.54	12.53	33.19	25.08	0.118			81.0	80.4
45	12.26	12.25	33.20	25.15	0.133			77.1	80.4
50	12.00	12.00	33.31	25.27	0.146	248	93	69.4	81.2
55	12.01	12.00	33.31	25.28	0.160	247	93	67.8	81.5
60	12.02	12.02	33.32	25.28	0.173	248	93	66.5	84.6
65	12.02	12.02	33.33	25.29	0.187	246	93	68.3	85.4
70	12.05	12.04	33.34	25.30	0.200	250	94	68.7	86.7
75	11.98	11.97	33.41	25.36	0.214	249	94	68.7	87.7
80	11.72	11.71	33.36	25.37	0.227	244	91	57.1	87.8
85	10.65	10.64	33.28	25.50	0.239	222	81	43.0	87.6
90	10.40	10.39	33.33	25.58	0.252	207	75	39.1	88.0
95	10.24	10.23	33.43	25.68	0.263	200	72	35.9	88.1
100	10.00	9.99	33.53	25.81	0.275	198	71	33.8	88.7
110	9.66	9.65	33.63	25.94	0.296	182	65	33.6	88.6
120	9.36	9.34	33.68	26.03	0.316	165	59	30.8	88.5
130	9.14	9.13	33.69	26.07	0.336	160	57	28.3	88.4
140	8.87	8.86	33.72	26.14	0.355	154	54	26.1	88.0
150	8.68	8.66	33.78	26.22	0.374	145	51	25.2	87.9
160	8.51	8.50	33.86	26.31	0.392	134	47	24.5	88.7
170	8.53	8.51	33.94	26.37	0.409	123	43	22.2	89.1
180	8.35	8.34	33.95	26.40	0.426	125	44	21.5	89.1
190	8.25	8.23	33.96	26.43	0.442	128	45	19.5	88.9
200	8.09	8.07	33.99	26.47	0.458	130	45	19.7	89.5
210	7.96	7.94	33.99	26.49	0.474	130	45	20.2	89.4
220	7.84	7.82	34.00	26.52	0.489	122	42	20.1	89.8
230	7.70	7.67	34.02	26.55	0.505	123	42	19.4	89.8
240	7.62	7.60	34.04	26.58	0.520	121	41	19.6	90.1
250	7.49	7.47	34.03	26.59	0.534	115	39	19.3	90.1
260	7.34	7.32	34.04	26.62	0.549	110	37	19.5	90.2
270	7.25	7.23	34.05	26.64	0.564	106	36	19.4	90.4
280	7.13	7.10	34.05	26.65	0.578	100	34	19.9	90.6
290	6.99	6.96	34.06	26.69	0.592	95	32	19.8	90.7
300	6.87	6.85	34.06	26.70	0.606	91	31	20.0	90.5

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 2053 (GMT) 15 Jun 1984
STATION: 25 (PIT 5C) — Wind 3 kts; Wave 3 ft
Position: 35° 50' N 122° 31' W — CTD# 1452



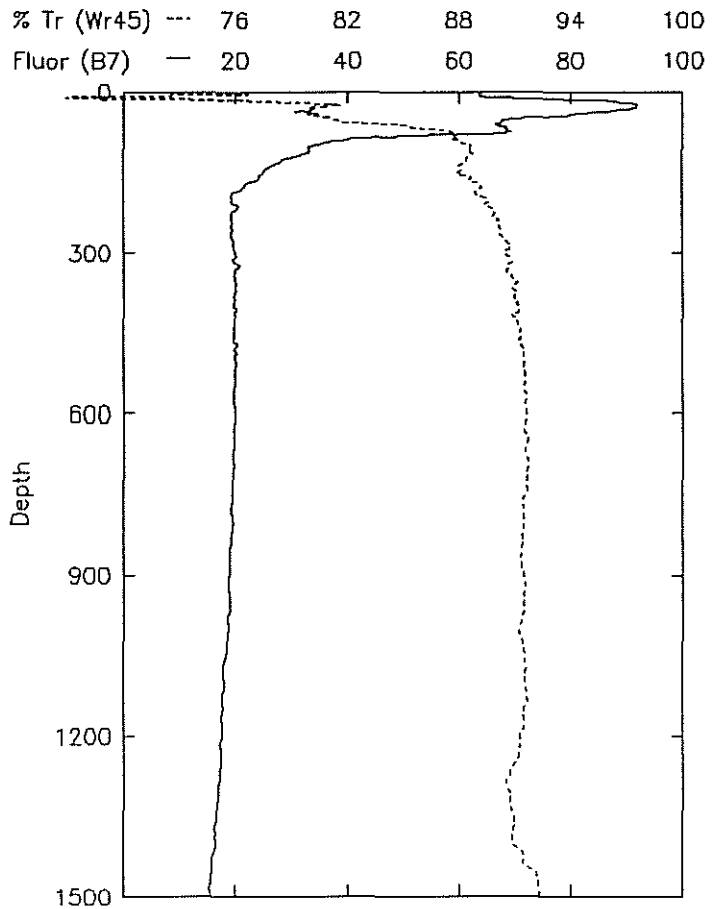
CTD# 1452: 25 (PIT 5C)

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Fluoro	Trans %/m
300	6.87	6.85	34.06	26.70	0.606	91	31	20.0	90.5
310	6.79	6.76	34.08	26.73	0.619	83	28	20.0	90.8
320	6.69	6.66	34.08	26.74	0.633	76	26	20.4	90.7
330	6.63	6.60	34.06	26.73	0.646	75	25	20.2	90.6
340	6.59	6.56	34.09	26.76	0.660	74	25	20.0	90.8
350	6.49	6.46	34.09	26.77	0.673	67	22	20.0	91.0
360	6.36	6.33	34.09	26.79	0.686	61	20	20.2	90.9
370	6.19	6.16	34.10	26.82	0.699	58	19	20.2	91.0
380	6.08	6.05	34.10	26.84	0.711	55	18	19.8	91.0
390	6.00	5.97	34.10	26.85	0.724	54	18	19.8	91.2
400	5.87	5.84	34.10	26.86	0.736	51	17	19.7	91.2
410	5.82	5.78	34.13	26.89	0.749	47	16	20.1	91.2
420	5.76	5.73	34.14	26.91	0.761	44	15	20.1	91.0
430	5.68	5.64	34.15	26.92	0.772	41	13	20.1	91.2
440	5.64	5.60	34.14	26.92	0.784	39	13	19.9	91.4
450	5.57	5.53	34.16	26.95	0.796	38	12	19.9	91.3
460	5.49	5.45	34.16	26.96	0.807	36	12	19.8	91.3
470	5.43	5.39	34.16	26.97	0.819	34	11	20.5	91.4
480	5.34	5.30	34.18	26.99	0.830	33	11	20.0	91.5
490	5.26	5.22	34.19	27.00	0.841	31	10	20.4	91.5
500	5.17	5.13	34.20	27.03	0.852	29	9	20.1	91.5
550	5.04	5.00	34.26	27.09	0.905	22	7	20.0	91.5
600	4.85	4.80	34.31	27.15	0.955	16	5	20.0	91.7
650	4.71	4.66	34.36	27.21	1.002	14	4	19.9	91.7
700	4.56	4.51	34.38	27.24	1.048	12	4	19.7	91.7
750	4.44	4.38	34.40	27.27	1.092	12	4	19.5	91.6
800	4.26	4.20	34.43	27.31	1.134	13	4	19.7	91.5
850	4.12	4.06	34.46	27.35	1.175	14	5	19.3	91.4
900	3.98	3.92	34.48	27.38	1.214	15	5	19.1	91.5
950	3.87	3.80	34.49	27.41	1.252	17	5	19.2	91.5
1000	3.74	3.67	34.52	27.44	1.289	20	6	18.9	91.2
1050	3.62	3.54	34.53	27.46	1.325	23	7	18.5	91.5
1100	3.50	3.42	34.55	27.49	1.359	26	8	18.1	91.6
1150	3.40	3.31	34.56	27.50	1.393	28	9	17.9	91.5
1200	3.29	3.21	34.57	27.52	1.426	30	9	17.9	91.3
1250	3.20	3.11	34.57	27.53	1.458	32	10	17.4	91.0
1300	3.08	2.99	34.59	27.56	1.489	34	11	17.0	90.6
1350	2.98	2.88	34.60	27.58	1.520	36	11	16.8	91.0
1400	2.86	2.76	34.62	27.60	1.549	39	12	16.6	90.9
1450	2.77	2.67	34.62	27.61	1.578	42	13	15.9	92.1
1500	2.69	2.58	34.63	27.62	1.606	44	13	15.6	92.4

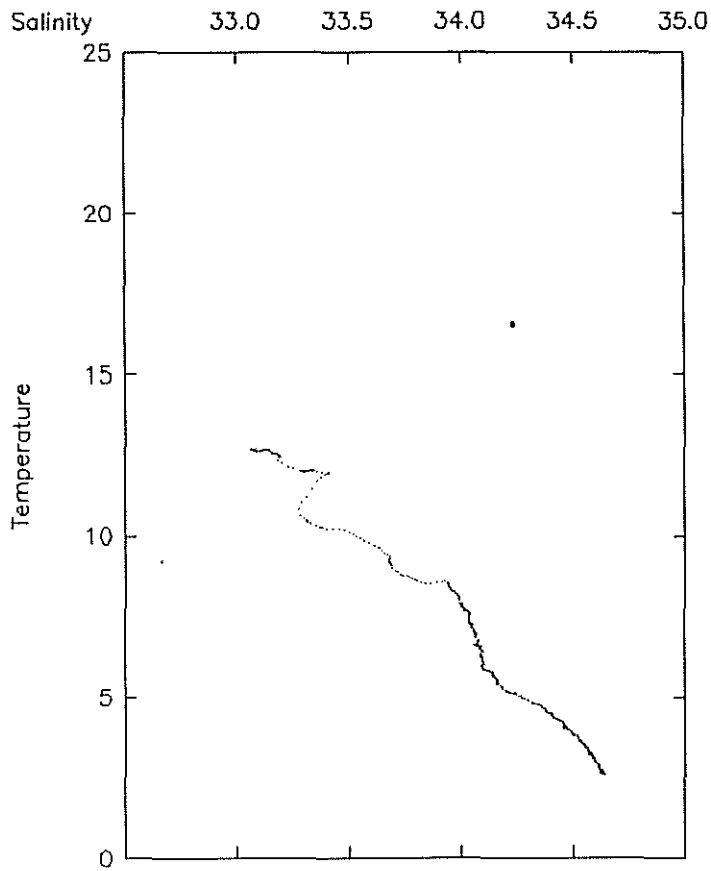
MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 2053 (GMT) 15 Jun 1984
STATION: 25 (PIT 5C) — Wind 3 kts; Wave 3 ft
Position: 35° 50' N 122° 31' W — CTD# 1452

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Fluoro	Trans %/m
1500	2.69	2.58	34.63	27.62	1.606	44	13	15.6	92.4
1550	2.61	2.50	34.63	27.64	1.633	46	14	15.4	91.9
1560	2.60	2.49	34.64	27.64	1.639	46	14	15.6	91.7



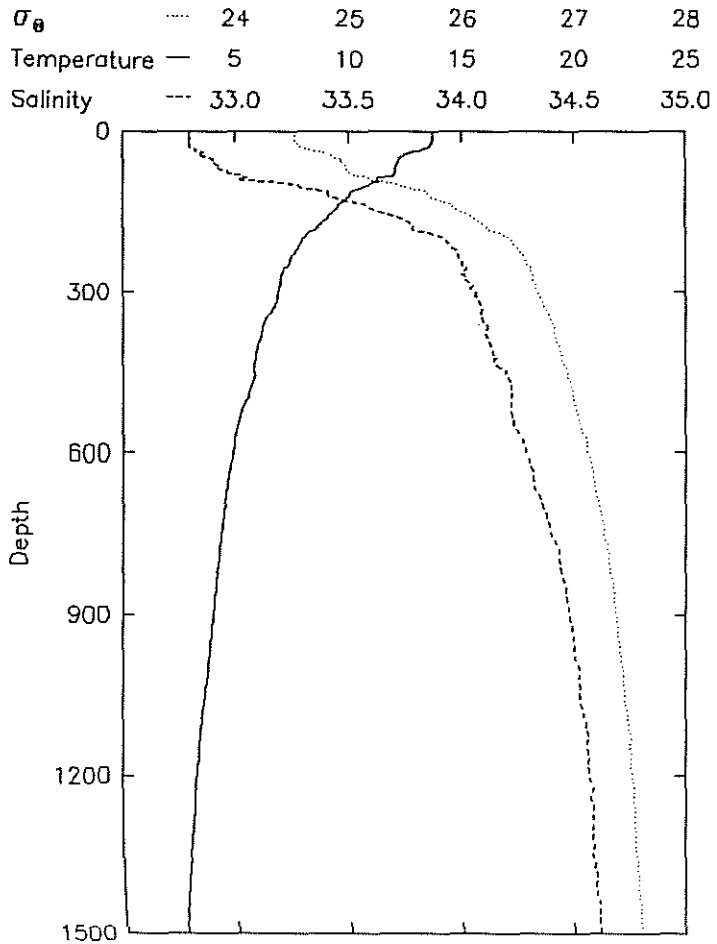
CTD# 1452: 25 (PIT 5C)



CTD# 1452: 25 (PIT 5C)

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

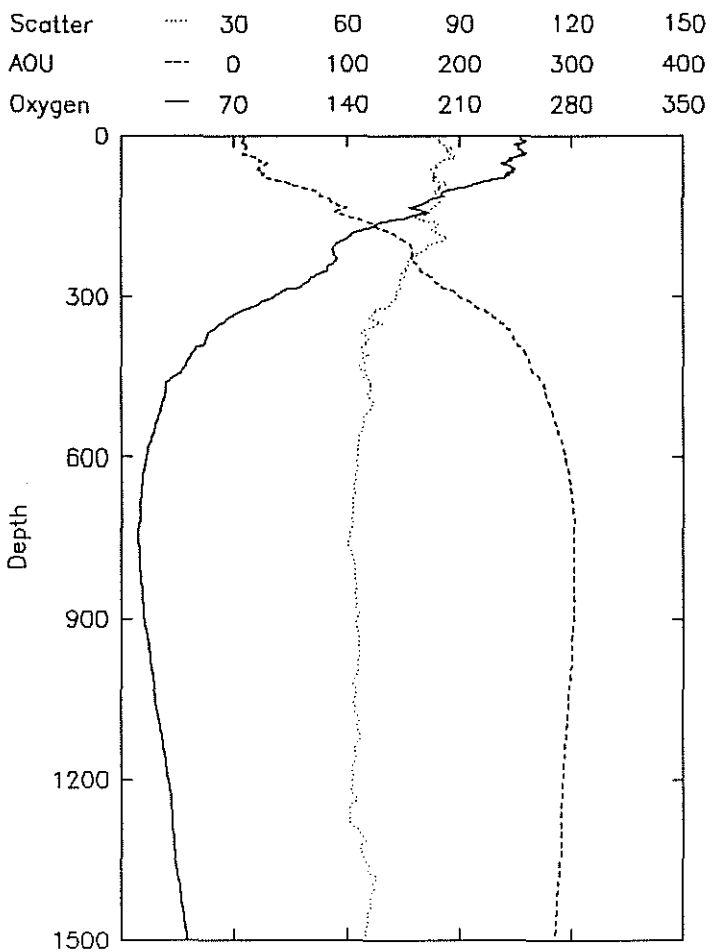
CRUISE: Vertex 5 — 1501 (GMT) 16 Jun 1984
STATION: 27 — Wind 5 kts; Wave 5 ft
Position: 35° 33' N 122° 43' W — CTD# 1458



Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Scatter
0	13.74	13.74	32.80	24.54	0.000	248	96	84
5	13.74	13.74	32.80	24.54	0.017	248	96	84
10	13.74	13.74	32.79	24.53	0.034	252	98	85
15	13.73	13.73	32.80	24.54	0.051	247	96	86
20	13.70	13.70	32.79	24.54	0.068	247	96	86
25	13.64	13.63	32.80	24.56	0.085	247	96	88
30	13.49	13.48	32.81	24.60	0.101	249	96	87
35	13.20	13.20	32.84	24.68	0.118	251	96	87
40	12.66	12.66	32.85	24.80	0.134	244	93	89
45	12.44	12.44	32.85	24.84	0.150	242	91	86
50	12.24	12.23	32.89	24.91	0.165	237	89	85
55	12.18	12.17	32.90	24.93	0.180	239	90	84
60	12.13	12.13	32.91	24.94	0.195	244	91	83
65	12.07	12.06	32.93	24.97	0.210	243	91	83
70	12.07	12.06	32.93	24.97	0.225	240	90	83
75	12.05	12.04	32.97	25.00	0.240	238	89	83
80	12.00	11.99	33.00	25.04	0.255	235	88	83
85	11.53	11.52	33.04	25.16	0.269	224	83	84
90	11.20	11.19	33.03	25.21	0.283	218	80	86
95	11.26	11.25	33.20	25.33	0.297	213	79	84
100	10.86	10.85	33.26	25.45	0.310	205	75	84
110	10.21	10.19	33.38	25.66	0.335	199	72	84
120	10.03	10.02	33.41	25.71	0.358	191	69	85
130	9.78	9.77	33.50	25.82	0.380	184	66	84
140	9.54	9.52	33.58	25.92	0.402	189	67	82
150	9.30	9.28	33.63	26.00	0.422	179	64	79
160	9.11	9.09	33.72	26.10	0.442	164	58	83
170	8.90	8.88	33.77	26.18	0.461	157	55	83
180	8.66	8.64	33.78	26.22	0.479	145	51	84
190	8.28	8.27	33.86	26.34	0.497	141	49	87
200	8.03	8.01	33.92	26.43	0.514	135	47	84
210	7.91	7.89	33.95	26.46	0.530	131	45	81
220	7.75	7.73	33.97	26.51	0.546	132	45	78
230	7.58	7.56	33.99	26.54	0.561	134	46	77
240	7.45	7.43	33.99	26.56	0.576	130	44	76
250	7.40	7.38	34.00	26.58	0.591	128	44	76
260	7.16	7.13	34.01	26.62	0.606	121	41	76
270	7.08	7.05	34.02	26.64	0.620	117	40	74
280	7.03	7.01	34.03	26.65	0.634	112	38	75
290	7.01	6.99	34.05	26.67	0.649	100	34	73
300	6.96	6.93	34.06	26.69	0.663	96	32	73

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 1501 (GMT) 16 Jun 1984
STATION: 27 — Wind 5 kts; Wave 5 ft
Position: 35° 33' N 122° 43' W — CTD# 1458



CTD# 1458: 27

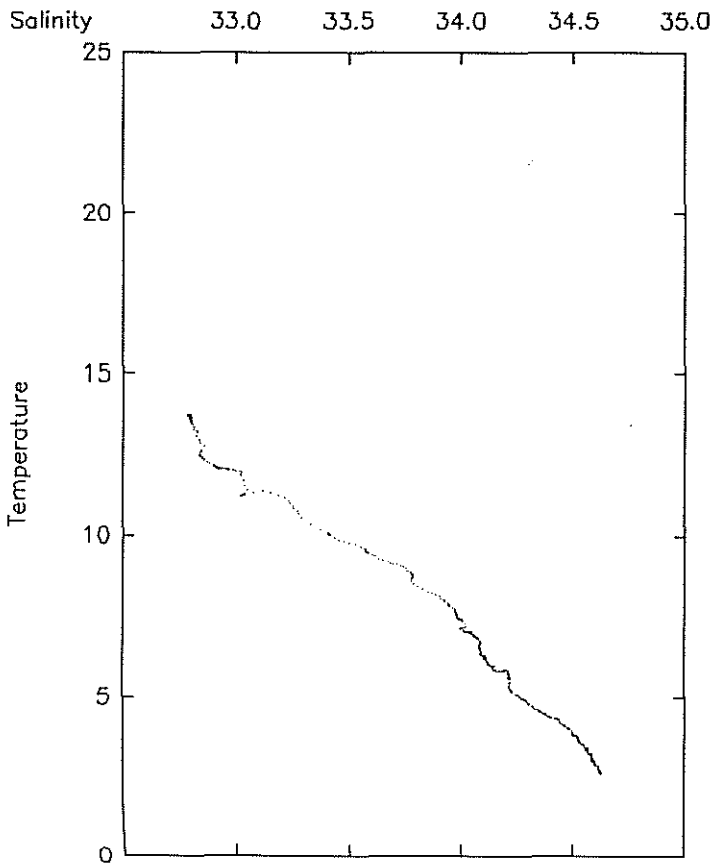
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Scatter
300	6.96	6.93	34.06	26.69	0.663	96	32	73
310	6.89	6.86	34.06	26.70	0.677	87	29	72
320	6.84	6.81	34.08	26.72	0.690	82	27	71
330	6.71	6.68	34.09	26.75	0.704	72	24	68
340	6.56	6.53	34.09	26.76	0.717	67	22	66
350	6.36	6.33	34.09	26.79	0.730	63	21	69
360	6.28	6.25	34.11	26.82	0.743	58	19	66
370	6.22	6.19	34.11	26.83	0.756	54	18	65
380	6.19	6.16	34.11	26.83	0.768	53	18	65
390	6.12	6.09	34.12	26.85	0.781	50	17	65
400	6.02	5.98	34.13	26.87	0.793	46	15	64
410	5.98	5.94	34.14	26.88	0.806	43	14	65
420	5.97	5.93	34.16	26.90	0.818	41	14	64
430	5.92	5.88	34.15	26.89	0.830	40	13	64
440	5.83	5.79	34.16	26.92	0.842	38	13	65
450	5.83	5.79	34.20	26.95	0.853	33	11	65
460	5.85	5.81	34.20	26.95	0.865	29	10	66
470	5.76	5.72	34.21	26.97	0.877	28	9	67
480	5.69	5.65	34.22	26.98	0.888	28	9	66
490	5.61	5.57	34.22	26.99	0.899	27	9	66
500	5.56	5.51	34.22	27.00	0.910	26	8	67
550	5.15	5.10	34.23	27.06	0.965	21	7	64
600	4.93	4.88	34.28	27.12	1.016	16	5	63
650	4.69	4.64	34.32	27.18	1.064	13	4	62
700	4.53	4.48	34.36	27.23	1.111	11	4	62
750	4.39	4.34	34.40	27.27	1.155	11	4	61
800	4.30	4.24	34.44	27.31	1.197	12	4	62
850	4.14	4.07	34.46	27.35	1.238	13	4	62
900	4.04	3.97	34.48	27.38	1.278	15	5	63
950	3.94	3.87	34.50	27.40	1.316	17	5	63
1000	3.80	3.73	34.52	27.43	1.353	19	6	63
1050	3.67	3.59	34.53	27.45	1.389	21	7	62
1100	3.51	3.43	34.55	27.49	1.424	24	8	63
1150	3.40	3.32	34.56	27.50	1.458	27	8	62
1200	3.31	3.22	34.57	27.52	1.491	30	9	61
1250	3.23	3.14	34.58	27.54	1.523	32	10	61
1300	3.14	3.05	34.59	27.55	1.554	32	10	63
1350	3.05	2.95	34.59	27.56	1.585	34	10	65
1400	2.93	2.83	34.60	27.58	1.615	37	11	67
1450	2.84	2.73	34.62	27.60	1.645	39	12	66
1500	2.74	2.64	34.62	27.61	1.673	41	13	65

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5
STATION: 27
Position: 35° 33' N 122° 43' W

1501 (GMT) 16 Jun 1984
Wind 5 kts; Wave 5 ft
CTD# 1458

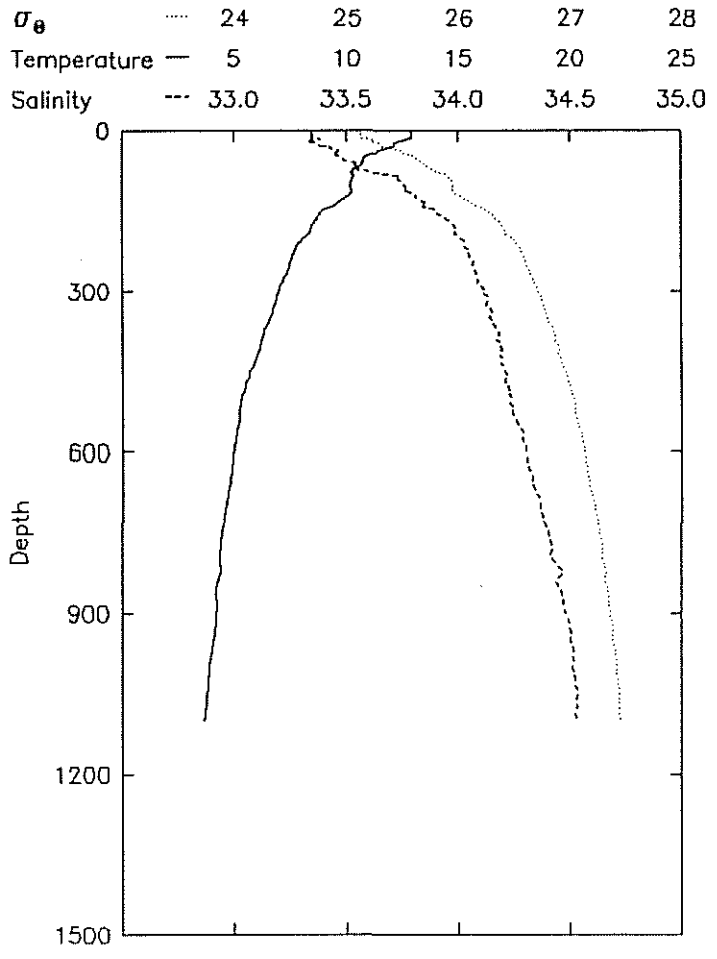
Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Scatter
1500	2.74	2.64	34.62	27.61	1.673	41	13	65
1550	2.67	2.56	34.63	27.62	1.702	43	13	66



CTD# 1458: 27

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 0327 (GMT) 17 Jun 1984
STATION: 30 — Wind 20 kts; Wave 5 ft
Position: 35° 48' N 121° 56' W — CTD# 1461

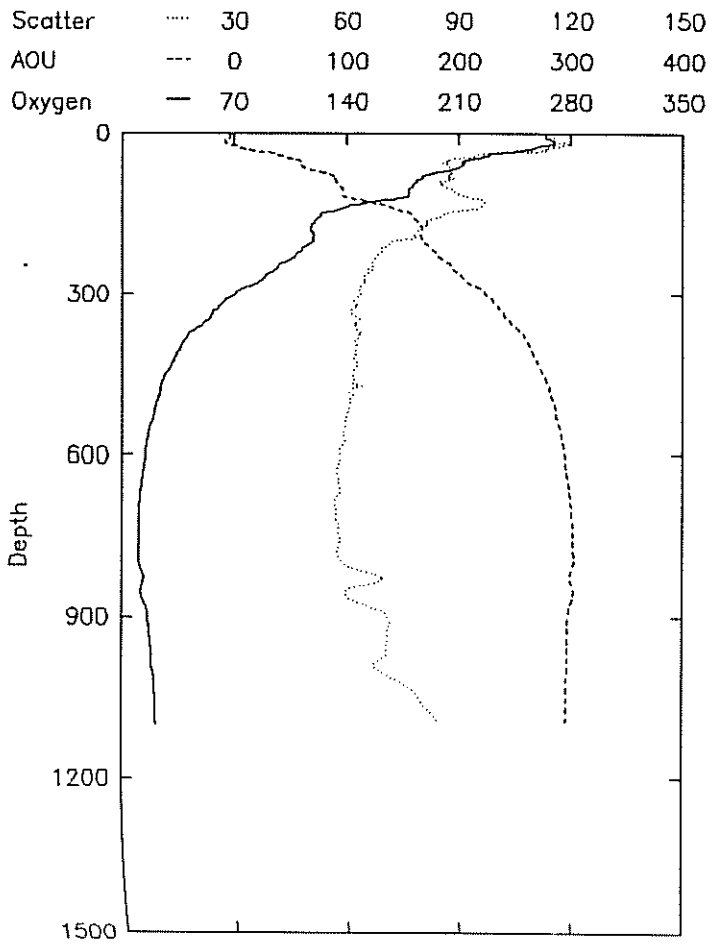


CTD# 1461: 30

Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Scatter
0	12.93	12.93	33.35	25.13	0.000	264	101	116
5	12.93	12.93	33.35	25.13	0.014	265	101	116
10	12.93	12.93	33.37	25.14	0.028	265	102	115
15	12.84	12.84	33.35	25.15	0.042	270	103	115
20	12.43	12.43	33.35	25.22	0.056	270	102	119
25	12.15	12.15	33.38	25.30	0.070	260	98	117
30	11.98	11.98	33.43	25.37	0.083	252	95	114
35	11.60	11.59	33.44	25.46	0.096	240	89	107
40	11.39	11.38	33.46	25.51	0.108	229	85	95
45	11.04	11.03	33.46	25.57	0.120	224	83	92
50	10.85	10.84	33.48	25.62	0.132	214	78	87
55	10.76	10.76	33.49	25.64	0.144	214	78	86
60	10.74	10.73	33.56	25.70	0.156	212	78	87
65	10.63	10.62	33.54	25.71	0.167	208	76	88
70	10.40	10.39	33.56	25.76	0.179	201	73	87
75	10.31	10.30	33.59	25.80	0.190	193	70	88
80	10.21	10.20	33.65	25.86	0.201	188	68	87
85	10.36	10.35	33.74	25.91	0.211	185	67	89
90	10.27	10.26	33.73	25.92	0.222	184	67	85
95	10.22	10.21	33.75	25.94	0.232	182	66	85
100	10.19	10.18	33.75	25.95	0.243	181	66	87
110	10.22	10.21	33.77	25.96	0.263	179	65	89
120	10.11	10.09	33.81	26.01	0.284	174	63	94
130	9.77	9.76	33.84	26.09	0.303	151	54	97
140	9.43	9.41	33.84	26.15	0.323	137	49	95
150	8.97	8.96	33.91	26.27	0.341	125	44	86
160	8.78	8.76	33.94	26.32	0.358	122	43	83
170	8.64	8.63	33.97	26.37	0.375	119	42	82
180	8.49	8.48	33.99	26.41	0.392	118	41	80
190	8.42	8.40	33.99	26.42	0.408	121	42	78
200	8.14	8.12	34.01	26.48	0.424	120	42	74
210	7.94	7.92	34.03	26.52	0.440	116	40	71
220	7.79	7.77	34.04	26.56	0.455	112	38	70
230	7.67	7.65	34.05	26.58	0.470	108	37	68
240	7.59	7.56	34.06	26.60	0.485	102	35	67
250	7.52	7.50	34.07	26.61	0.499	98	34	66
260	7.44	7.41	34.08	26.63	0.514	92	31	66
270	7.35	7.32	34.09	26.65	0.528	89	30	65
280	7.22	7.19	34.09	26.68	0.542	84	29	65
290	7.09	7.07	34.11	26.71	0.556	75	25	64
300	7.03	7.00	34.11	26.72	0.570	71	24	64

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

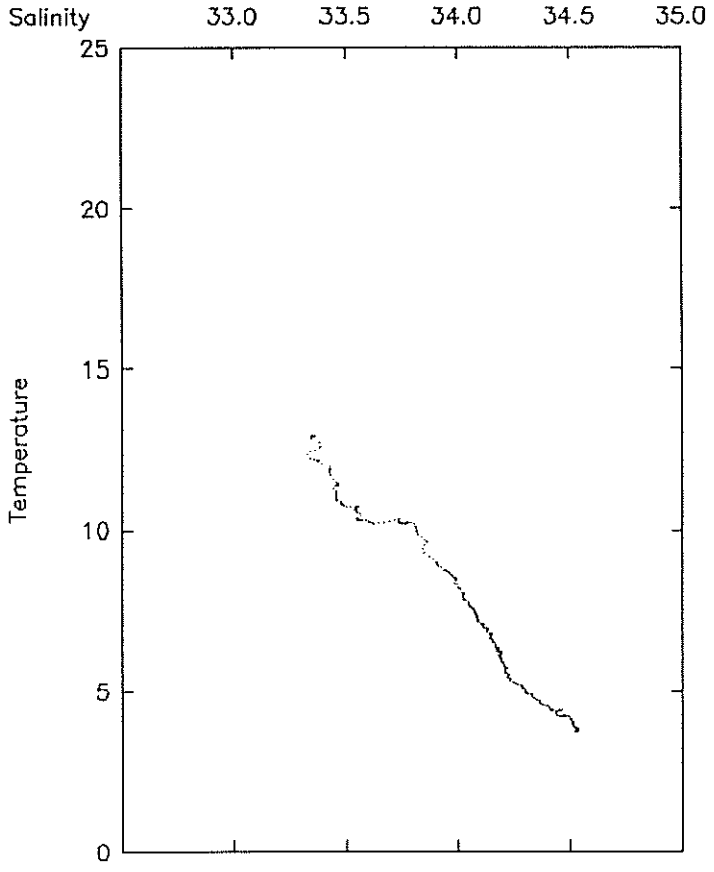
CRUISE: Vertex 5 — 0327 (GMT) 17 Jun 1984
STATION: 30 — Wind 20 kts; Wave 5 ft
Position: 35° 48' N 121° 56' W — CTD# 1461



Depth m	Temp °C	Theta °C	Salin ppt	Sigma-θ g/l	Geop Anom m^2/s^2	Oxygen uM/kg	Sat %	Scatter
300	7.03	7.00	34.11	26.72	0.570	71	24	64
310	6.95	6.93	34.13	26.75	0.583	65	22	62
320	6.89	6.86	34.13	26.75	0.597	62	21	63
330	6.79	6.76	34.15	26.78	0.610	58	19	62
340	6.75	6.72	34.15	26.79	0.623	56	19	62
350	6.65	6.61	34.14	26.80	0.636	53	18	63
360	6.55	6.52	34.16	26.82	0.649	49	16	63
370	6.39	6.36	34.17	26.85	0.661	44	15	64
380	6.33	6.30	34.19	26.87	0.674	41	14	63
390	6.25	6.22	34.18	26.87	0.686	39	13	62
400	6.21	6.17	34.20	26.90	0.698	37	12	63
410	6.15	6.11	34.20	26.90	0.710	35	12	62
420	6.07	6.03	34.19	26.91	0.722	33	11	62
430	5.96	5.92	34.20	26.93	0.734	31	10	63
440	5.90	5.86	34.20	26.94	0.746	30	10	62
450	5.74	5.70	34.21	26.96	0.757	27	9	62
460	5.71	5.67	34.22	26.98	0.769	26	9	62
470	5.56	5.52	34.21	26.99	0.780	25	8	64
480	5.52	5.48	34.22	27.00	0.791	24	8	61
490	5.44	5.40	34.22	27.01	0.802	24	8	62
500	5.35	5.31	34.24	27.04	0.813	22	7	61
550	5.21	5.16	34.27	27.08	0.866	18	6	60
600	4.99	4.94	34.30	27.13	0.917	15	5	58
650	4.85	4.80	34.33	27.17	0.966	13	4	58
700	4.66	4.61	34.37	27.22	1.013	11	4	57
750	4.50	4.44	34.41	27.27	1.058	11	3	58
800	4.37	4.30	34.42	27.29	1.101	11	4	59
850	4.24	4.17	34.45	27.33	1.143	12	4	60
900	4.23	4.16	34.48	27.36	1.183	17	5	71
950	4.11	4.04	34.50	27.39	1.222	18	6	71
1000	3.92	3.85	34.51	27.41	1.260	20	6	69
1050	3.83	3.75	34.54	27.44	1.297	21	7	80
1100	3.71	3.62	34.54	27.45	1.333	22	7	85

MOSS LANDING MARINE LABORATORIES
Vertical Profiling Data

CRUISE: Vertex 5 — 0327 (GMT) 17 Jun 1984
STATION: 30 — Wind 20 kts; Wave 5 ft
Position: 35° 48' N 121° 56' W — CTD# 1461



CTD# 1461: 30

Geostrophic Currents CRUISE: Vertex 5 SECTION: E-W Transect Reference Depth = 1000 m

STN/CTD#:	12/1408	11/1404	10/1389	9/1382	8/1380	7/1378	6/1376	5/1374	4/1372	3/1370	2/1368	1/1366
Lat:	33°06.2'N	33°28.3'N	33°47.3'N	34°11.5'N	34°34.9'N	34°44.9'N	34°58.8'N	35°09.6'N	35°22.3'N	35°31.1'N	35°41.1'N	36°05.8'N
Long:	139°34.2'W	137°50.0'W	135°27.9'W	133°14.6'W	130°51.5'W	129°49.8'W	128°30.7'W	127°17.5'W	126°10.8'W	124°59.1'W	123°50.8'W	122°38.5'W
Date:	26 May 84	25 May 84	24 May 84	23 May 84	23 May 84	22 May 84	22 May 84	21 May 84	21 May 84	21 May 84	20 May 84	20 May 84
Dist (km):	166.4	221.9	209.4	222.9	95.9	122.9	112.6	103.6	109.4	104.4	117.8	
Depth (m)												
0	-1.6	1.9	-0.9	1.1	-3.1	-5.8	-2.5	0.9	-6.5	4.5	-29.6	
20	-1.6	2.0	-1.0	1.2	-2.9	-5.7	-2.3	1.5	-6.7	4.8	-27.9	
40	-1.7	2.0	-1.1	1.1	-2.8	-5.8	-2.2	2.0	-6.9	5.2	-25.9	
60	-1.7	1.9	-1.1	0.9	-2.7	-5.8	-2.2	2.2	-7.1	5.4	-23.5	
80	-1.7	1.7	-1.2	0.7	-2.7	-5.9	-2.1	2.4	-7.3	5.4	-20.9	
100	-1.7	1.6	-1.2	0.4	-2.7	-5.8	-2.2	2.6	-7.3	5.5	-18.3	
120	-1.7	1.4	-1.3	0.2	-2.9	-5.6	-2.4	2.8	-6.8	4.9	-15.8	
140	-1.8	1.3	-1.3	0.1	-3.0	-5.2	-2.5	2.8	-5.9	4.3	-13.7	
160	-1.8	1.2	-1.2	-0.1	-2.7	-4.8	-2.5	2.6	-5.1	3.6	-12.0	
180	-1.8	1.1	-1.2	-0.4	-2.3	-4.5	-2.3	2.2	-4.3	3.1	-10.6	
200	-1.8	1.1	-1.2	-0.6	-2.0	-4.1	-1.9	1.8	-3.6	2.8	-9.7	
220	-1.8	1.0	-1.1	-0.8	-1.8	-3.7	-1.6	1.5	-3.2	2.6	-9.0	
240	-1.7	1.0	-1.0	-0.8	-1.6	-3.3	-1.4	1.3	-2.9	2.3	-8.3	
260	-1.6	0.8	-0.9	-0.8	-1.6	-3.1	-1.2	1.2	-2.7	2.2	-7.8	
280	-1.5	0.8	-0.9	-0.7	-1.5	-2.9	-1.1	1.1	-2.5	2.0	-7.4	
300	-1.4	0.7	-0.8	-0.7	-1.4	-2.7	-1.0	1.0	-2.3	1.9	-6.9	
350	-1.3	0.7	-0.6	-0.6	-1.3	-2.3	-0.8	0.8	-1.9	1.6	-5.9	
400	-1.1	0.6	-0.4	-0.5	-1.1	-2.0	-0.7	0.7	-1.5	1.3	-4.9	
450	-0.9	0.4	-0.3	-0.3	-1.0	-1.6	-0.7	0.6	-1.2	1.1	-4.2	
500	-0.7	0.3	-0.2	-0.2	-1.0	-1.4	-0.7	0.7	-1.0	1.0	-3.5	
550	-0.4	0.2	-0.1	-0.2	-0.8	-1.2	-0.7	0.6	-0.8	0.7	-2.9	
600	-0.3	0.1	-0.0	-0.2	-0.6	-0.9	-0.6	0.6	-0.6	0.6	-2.4	
650	-0.2	0.1	-0.0	-0.1	-0.5	-0.8	-0.5	0.6	-0.5	0.3	-1.9	
700	-0.1	0.1	-0.0	-0.0	-0.4	-0.6	-0.5	0.5	-0.4	0.2	-1.5	
750	-0.1	0.1	-0.1	0.0	-0.4	-0.5	-0.4	0.5	-0.3	0.2	-1.2	
800	-0.1	0.1	-0.1	0.0	-0.3	-0.4	-0.2	0.4	-0.2	0.1	-0.9	
850	-0.0	0.1	-0.1	0.0	-0.2	-0.3	-0.2	0.3	-0.2	0.1	-0.6	
900	-0.0	0.0	-0.0	0.0	-0.1	-0.2	-0.1	0.2	-0.1	0.1	-0.4	
950	-0.0	0.0	-0.0	0.0	-0.1	-0.1	-0.0	0.1	-0.1	0.0	-0.2	
1000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1100	0.0	-0.1	0.0	0.0	0.1	0.3	0.0	-0.2	0.1	-0.0	0.2	
1200	0.1	-0.1	-0.0	-0.0	0.1	0.5	0.0	-0.3	0.1	-0.0	0.2	
1300	0.1	-0.2	-0.0	0.0	-0.0	0.8	0.1	-0.5	0.1	0.0	0.3	
1400	0.1	-0.2	-0.1	0.1	-0.1	1.0	-0.0	-0.5	0.1	0.1	0.3	
1500	0.1	-0.2	-0.1	0.1	-0.1	1.3	-0.2	-0.5	0.1			
Transp (svp):	-1.34	1.26	-0.93	-0.24	-1.09	-2.57	-1.04	0.97	-2.21	1.63	-7.39	