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OREGON STATE UNIVERSITY

**CTD Observations off
Oregon and California:
R/V Wecoma, W8209A,
7-24 September 1982**

by

Jane Fleischbein
Richard E. Schramm
Adriana Huyer
Robert L. Smith

Data Report 106
Reference 83-13
October 1983

National Science Foundation
OCE-8026131
Sandia Labs Contract
SAN 52-3600

School of Oceanography
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Abstract

CTD observations were made along sections near Coos Bay at 43°13'N, off Crescent City at 41°54'N, off Eureka at 40°51'N, off of Half Moon Bay at 37°25'N, off of Pt. Purisima at 34°45'N, and along the Code Central and Pt. Arena lines near 39°N during 8-15 September 1982; the maximum sampling depth was 1000 m. CTD observations were made in the vicinity of the LLWODP Pacific Study Area W-N west of Cape Mendocino between 17 and 23 September 1982, with a maximum sampling depth of 4377 db. This data report includes vertical sections, offshore profile plots, and vertical profile plots and listings at standard depth for each of the 76 CTD stations.

TABLE OF CONTENTS

	Page
Abstract	
List of Tables and Figures	
Introduction	1
Sampling Procedures, Calibration and Data Processing	8
Data Presentation	14
Vertical Sections	17
Offshore Profiles	33
Vertical Profiles and Listings	41
Near Bottom Profiles for Deep Stations	85
Transmission Profiles for Deep Stations	95
Acknowledgments	107
Appendix: Abyssal Salinities in the Pacific Study Area W-N	104
References	107

LIST OF TABLES AND FIGURES

	Page
Table 1. List of CTD stations occupied during W8209A, showing date and time, location, wind speed and direction, and atmospheric pressure.	2
Table 2. Characteristics of the CTD probe used.	10
Table 3. Summary of the comparisons between the Neil Brown CTD probe and <i>in situ</i> calibration data.	10
Table 4. Summary of calibration data for Sea Tech Transmissometer # IM 80111.	10
Table 5. Stations edited during data processing.	12
Table 6. Comparison of corrected sonic bottom depth from the ship's PDR, the maximum CTD depth and the altimeter reading for deep stations in the Pacific Study Area.	12
Table A-1 Deep and abyssal salinity sample values from three cruises to the LLWODP Pacific Study Area.	105
Figure 1. Location of stations during Leg 1.	4
Figure 2. Location of stations in the Pacific Study Area W-N.	6
Figure 3. Location of stations in the Pacific Study Area W-N showing nearby bottom topography.	7

INTRODUCTION

Cruise W8209A was divided into two legs involving different projects. The purpose of Leg 1 was to replace current meter moorings and complete seven CTD sections between Coos Bay, Oregon and Pt. Purisima, California as part of the Large Scale West Coast Shelf Experiment (J. S. Allen, A. Huyer and R. L. Smith, principal investigators). Leg 2 of Cruise W8209A was one of a series of cruises of the Low Level Waste Ocean Disposal Program (G. R. Heath, principal investigator) to study the deep circulation and sea floor characteristics at Pacific Study Area W-N, west of Cape Mendocino, California. A complete discussion of the operations and a cruise narrative for Leg 2 was reported by Rea et. al. (1982). This report presents only the final CTD data from both legs.

The R/V Wecoma departed Newport on Leg 1 on 7 September 1982 and arrived off of Coos Bay at day break on the 8th. After replacing the Coos Bay Shallow mooring and recovering the Coos Bay Deep mooring, a second Coos Bay Deep mooring was recovered by dragging. A CTD cast was done near the Coos Bay Deep mooring (Station 1, Table 1, Figure 1) and the Five Mile CTD section was completed. On the 9th and 10th of September the Crescent City and Eureka CTD sections were completed (Figure 1) and the Eureka Shallow mooring was replaced. The Half Moon Bay mooring was replaced on 11 September and on 12 September the Pt. Purisima CTD line was finished and current meter moorings were recovered near the "Herman" and "Hondo" drill rigs in the Santa Barbara Channel. Two CTD casts took place next to the mooring sites (Stations 35 and 36, Table 1) and the ship departed for Monterey. A test of the portable hydro winch was done enroute.

The Wecoma made a quick port stop in Monterey on the 13th to off-load the portable winch and disembark J. Allen, J. Church, R. Smith and R. Still. The ship then proceeded to the Half Moon Bay CTD line and on

Table 1. List of CTD stations occupied during W8209A, showing date and time, location, wind speed and direction, and atmospheric pressure.

Date	Time	Station No. Name	Location		Wind		Pressure (mb)
			Lat. (°N)	Long. (°W)	Dir. (°T)	Spd. (kts)	
Sept.	8 1917	1 CBD	43°10.3'	124°38.8'	000°	12	1016.5
	8 2357	2 FM-1	13.0'	26.0'	000	10	1015.0
Sept.	9 0031	3 FM-3	13.0'	30.0'	350	10	1014.8
	9 0112	4 FM-4	13.0'	35.0'	320	12	1014.8
	9 0149	5 FM-5	13.0'	40.0'	340	10	1015.0
	9 0229	6 FM-6	13.0'	45.0'	-	-	1014.9
	9 0317	7 FM-7	13.0'	50.0'	AIRS	-	1015.0
	9 0419	8 FM-8	13.0'	125°00.0'	AIRS	-	1015.0
	9 0542	9 FM-9	13.0'	10.0'	AIRS	-	1015.1
	9 1331	10 CR-9	41°54.0'	20.0'	AIRS	-	1015.9
	9 1451	11 CR-8	54.0'	12.0'	AIRS	-	1015.3
	9 1623	12 CR-7	54.0'	00.0'	190	6	1015.9
	9 1756	13 CR-6	54.0'	124°48.0'	200	6	1016.1
	9 1906	14 CR-5	54.0'	42.0'	250	7	1017.0
	9 2010	15 CR-4	53.9'	35.9'	250	5	1017.1
	9 2113	16 CR-3	54.0'	28.9'	AIRS	-	1017.1
	9 2156	17 CR-2	54.1'	24.0'	AIRS	-	1017.1
	9 2242	18 CR-1	54.0'	18.0'	330	12	1017.1
Sept.	10 0510	19 EUR-7	40°52.0'	56.0'	350	20	1019.0
	10 0636	20 EUR-6	52.0'	48.0'	345	22	1018.4
	10 0801	21 EUR-5	52.1'	39.9'	350	22	1018.1
	10 0903	22 EUR-4	52.0'	33.8'	340	24	1018.5
	10 1009	23 EUR-3	52.1'	28.0'	350	24	1018.2
	10 1110	24 EUR-2	52.0'	22.0'	350	25	1018.8
	10 1155	25 EUR-1	52.0'	16.0'	350	25	1018.2
Sept.	12 0350	26 PUR-9	34°45.0'	122°00.0'	330	15	1012.0
	12 0535	27 PUR-8	45.0'	121°48.0'	320	12	1012.0
	12 0715	28 PR-7	45.1'	35.9'	320	12	1012.0
	12 0900	29 PR-6	45.1'	24.0'	320	12	1012.0
	12 1035	30 PR-5	45.0'	12.0'	320	6	1011.3
	12 1208	31 PR-4	45.0'	00.1'	AIRS	-	1012.0
	12 1310	32 PR-3	45.0'	120°54.0'	AIRS	-	1012.2
	12 1405	33 PR-2	45.1'	48.1'	AIRS	-	1012.5
	12 1453	34 PR-1	45.0'	42.0'	070	-	1012.8
	12 2100	35 HER-1	23.3'	25.1'	210	6	1013.1
	12 2332	36 HON-1	22.4'	02.5'	270	6	1012.6
Sept.	13 2327	37 HM-1	37°24.5'	122°28.2'	AIRS	-	1013.2
Sept.	14 0006	38 HM-2	23.8'	33.4'	AIRS	-	1013.0
	14 0054	39 HM-3	23.0'	39.1'	AIRS	-	1013.0
	14 0138	40 HM-4	22.2'	44.9'	AIRS	-	1012.9
	14 0225	41 HM-5	21.4'	50.7'	210	8	1013.0
	14 0314	42 HM-6	20.6'	56.9'	180	5	1012.4
	14 0432	43 HM-7	19.7'	123°03.9'	210	8	1012.9
	14 0540	44 HM-8	18.8'	09.2'	AIRS	-	1013.0
	14 0659	45 HM-9	18.0'	15.4'	AIRS	-	1013.0
	14 1423	46 COC-9	38°24.0'	49.2'	AIRS	-	1013.0

Table 1. Cont'd.

Date	Time	Station No. Name	Location		Wind		Pressure (mb)
			Lat. (°N)	Long. (°W)	Dir. (°T)	Spd. (kts)	
Sept. 14	1540	47 COC-8	38°27.1'	123°44.5'	135	9	1013.2
14	1651	48 COC-7	30.3'	39.6'	140	12	1013.3
14	1736	49 COC-6	32.7'	36.2'	140	14	1013.1
14	1812	50 COC-5	34.6'	33.3'	150	16	1013.6
14	1847	51 COC-4	36.3'	30.8'	150	15	1013.9
14	1920	52 COC-3	37.5'	28.9'	150	13	1013.9
14	1951	53 COC-2	38.8'	26.9'	150	14	1013.9
14	2020	54 COC-1	39.8'	25.5'	150	16	1013.7
14	2252	55 AR-1	56.9'	46.1'	180	20	1012.0
14	2326	56 AR-2	55.7'	49.4'	180	18	1012.0
14	2359	57 AR-3	54.7'	52.6'	180	10	1012.0
Sept. 15	0044	58 AR-4	53.9'	55.8'	AIRS	-	1011.2
15	0126	59 AR-5	53.0'	59.0'	AIRS	-	1011.5
15	0215	60 AR-6	52.0'	124°02.3'	AIRS	-	1011.2
15	0331	61 AR-7	50.2'	08.1'	AIRS	-	1011.0
15	1750	62	41°26.0'	40.6'	AIRS	-	1012.3
Sept. 19	1104	63 CMMW-5	39°30.4'	128°44.0'	AIRS	-	1015.0
19	2048	64	28.0'	13.0'	AIRS	-	1015.8
Sept. 20	0116	65	28.0'	127°55.0'	250	14	1015.5
20	0547	66	40.0'	41.5'	270	6	1015.4
Sept. 21	0211	67 CMMW-10	28.0'	37.8'	AIRS	-	1016.0
21	0619	68	18.0'	40.0'	350	12	1016.0
Sept. 22	0120	69	28.0'	24.0'	020	20	1016.2
22	2325	70 CMMW-8	06.2'	21.7'	000	14	1016.9
Sept. 23	0133	71	59.0'	07.0'	000	12	1016.2
23	0401	72	39°13.0'	126°56.0'	350	14	1015.8
23	0627	73	05.0'	38.0'	000	12	1015.3
23	0916	74	38°49.0'	53.0'	010	12	1015.6
23	1233	75	35.0'	24.9'	000	10	1015.0
23	2029	76	39°28.5'	45.7'	AIRS	-	1014.3

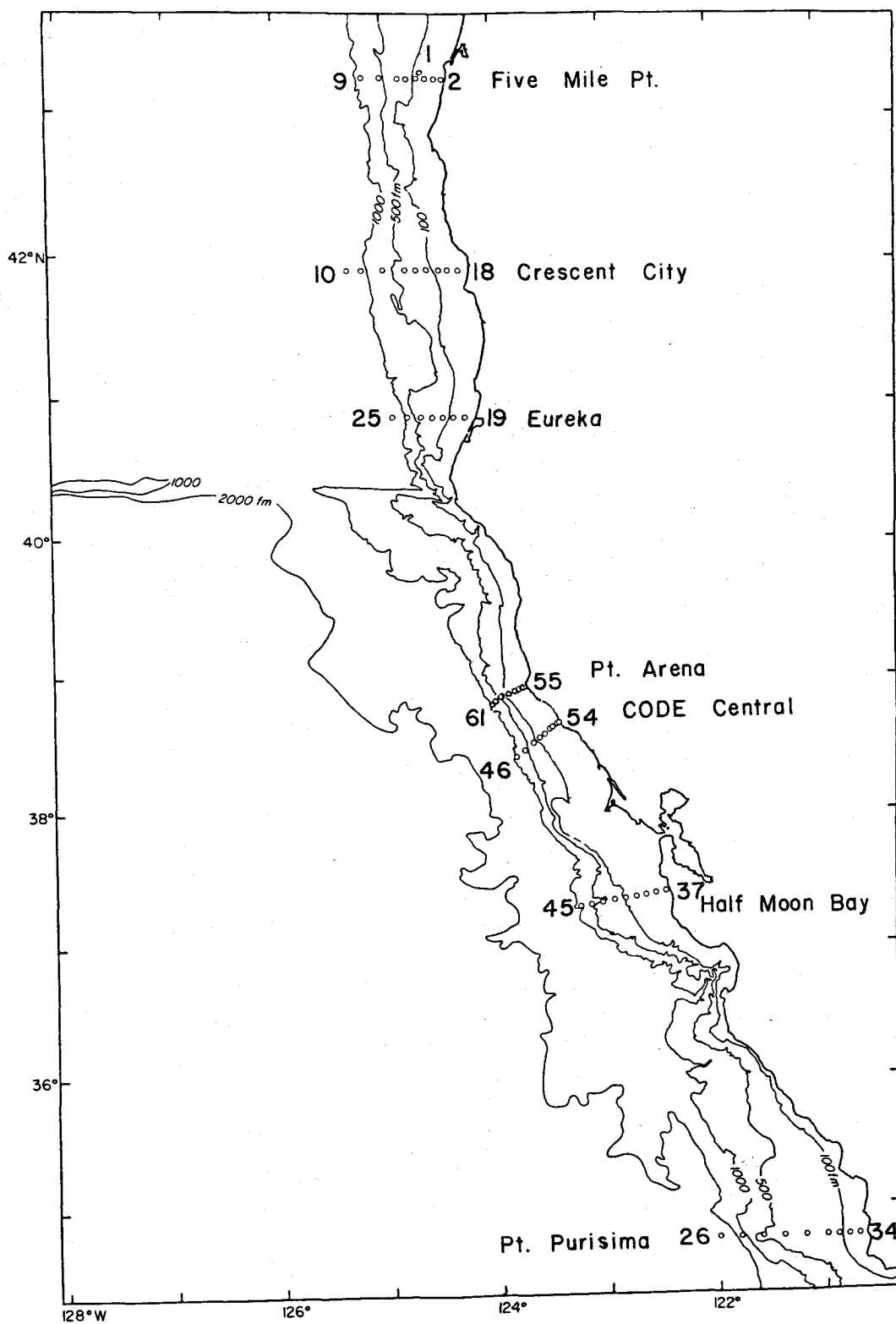


Figure 1. Location of CTD stations during W8209A, Leg 1, 8-15 September 1982.

September 13 and 14 that section and the Code Central and Pt. Arena sections were completed. The ship departed for Newport and a test of the CTD with the Rosette water sampler was done enroute (Station 62, Table 1). The ship arrived at Newport early on September 16. A total of 62 CTD casts were done on Leg 1 with a maximum sampling depth of 1000 m.

The R/V Wecoma departed on Leg 2 in the late afternoon of September 17, 1982 and returned to Newport on September 24. From the 19th to the 23rd five current meter arrays and 2 corrosion frames were recovered and one mooring was deployed (Figure 2). Seven deep CTD-Rosette casts (Sta. 63-69, Table 1, Figure 2) were completed in the vicinity of the moorings on September 19-21. Due to frequent stalling of the hydro winch during deep casts, the rosette was removed from the CTD and the last seven CTD casts (Sta. 70-76, Figure 2) on September 22-23 were done to a maximum depth of 1000 meters. The ship departed the Pacific Study Area on the afternoon of September 23rd.

Scientific Personnel on Leg 1 were John Allen, Robert Smith, Robert Still, Rich Schramm, Dennis Barstow, Henry Pittock, Mirth Miller, Jane Fleischbein and Henry Schaechterle from Oregon State University; Rich Heyner from Clatsop Community College; and John Church from C.S.I.R.O., Australia. Personnel participating in the CTD data collection on Leg 2 were Adriana Huyer, Mirth Miller, Rich Schramm, Dennis Barstow and Rich Heyner.

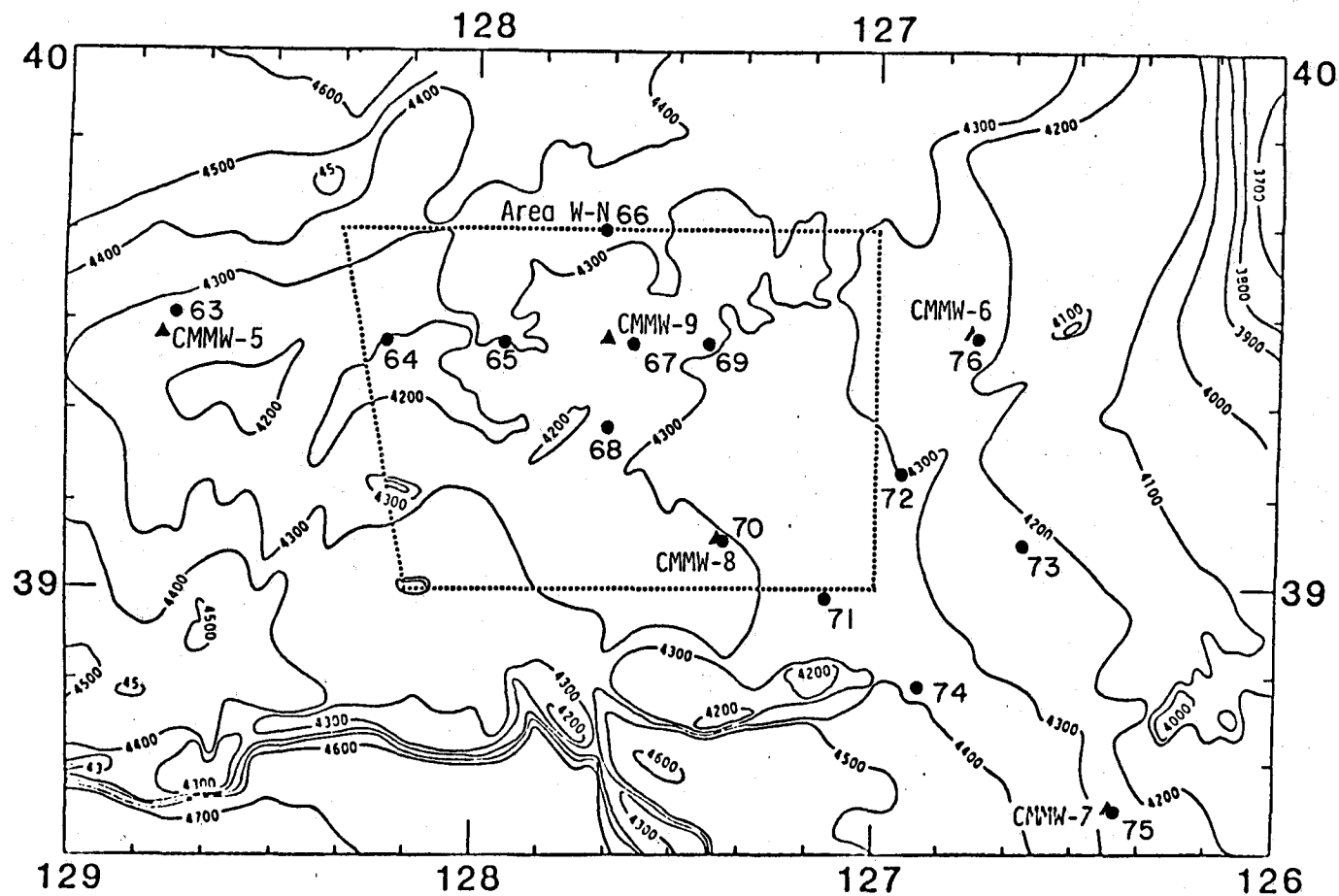


Figure 2. Location of current-meter moorings (triangles) and CTD stations (circles) occupied on cruise W8209A, Leg 2. The indicated bottom contours are uncertain in some regions; at a few CTD stations (e.g. Station 65) the observed bottom depth differed significantly from the depths inferred from this map.

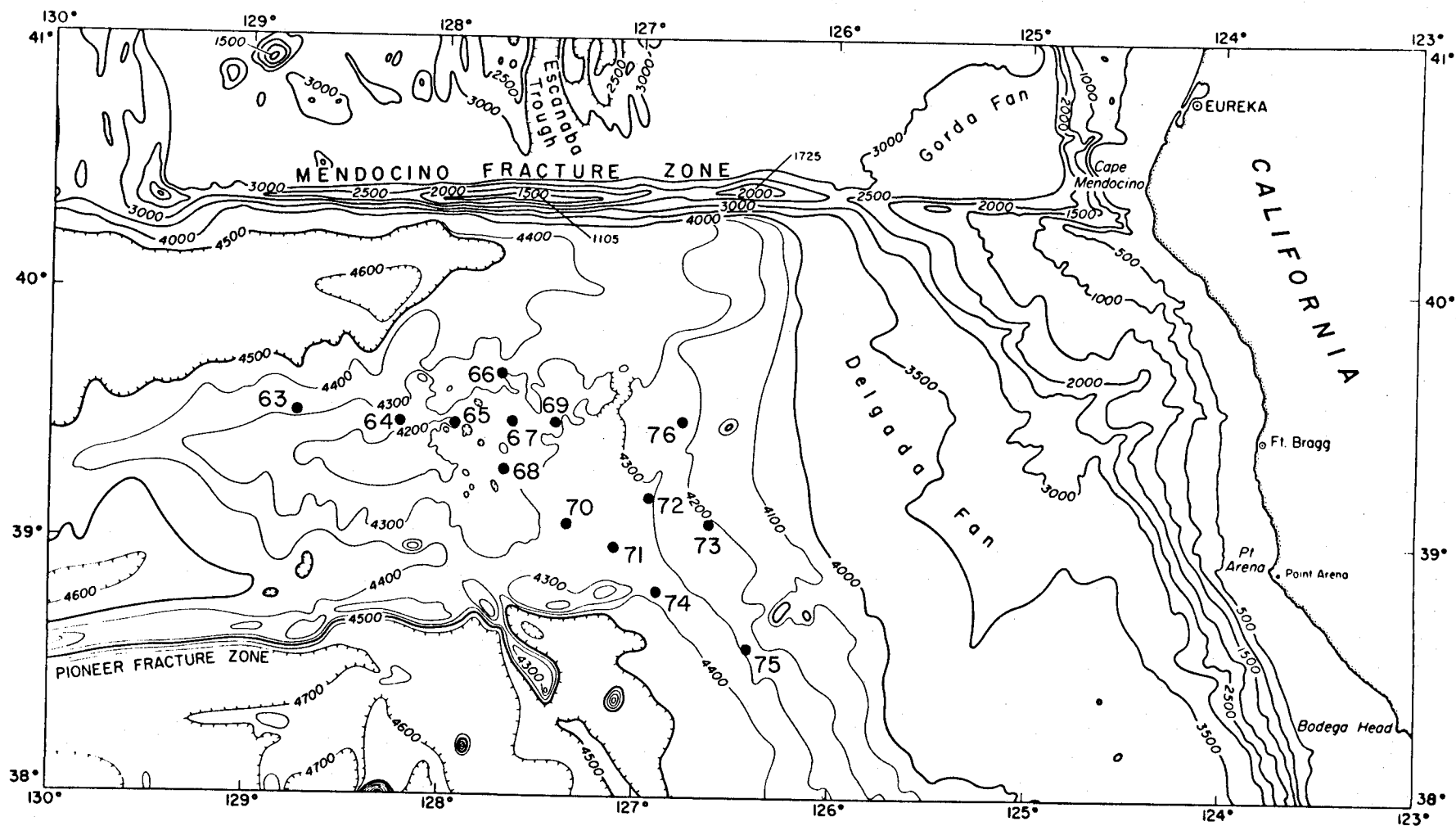


Figure 3. Location of CTD stations in Pacific Study Area W-N showing nearby bottom topography.

SAMPLING PROCEDURES, CALIBRATION AND DATA PROCESSING

A Neil Brown Instruments Mark IIIb conductivity-temperature-depth probe (CTD) was used to obtain continuous profiles of temperature and salinity versus pressure at each station. Characteristics of the CTD probe are presented in Table 2. Sampling procedures were identical with those described by Fleischbein et al. (1981). Probe #2561 with a 6500 db pressure sensor rating was used for all stations. During both legs, the CTD was equipped with Benthos Model 2110 Altimeter which measures the height above the bottom, with a typical range of 33 m and a resolution of 0.1 meter. The data from the altimeter was used primarily for studying the benthic boundary layer in the LLWODP Pacific Study Area. During the deep casts of the Leg 2 (i.e. Stations 63-69) the CTD was also equipped with a Sea Tech, Inc. 100-cm Transmissometer (S/N IM 80111) borrowed from the University of Rhode Island to see if there was a bottom nepheloid layer in the Pacific Study Area.

The CTD probe was calibrated for pressure, temperature and conductivity, by the manufacturer prior to delivery in the fall of 1980. *In situ* calibration data were also collected for temperature and conductivity sensors. At most stations a Niskin bottle equipped with 3 protected reversing thermometers was mounted about 2 m above the CTD sensors to provide calibration samples. During Stations 63-69 a rosette water sampler was mounted with the CTD, and duplicate salinity samples were drawn from one or more Niskin bottles on the rosette. The thermometers have an accuracy of $\pm 0.02^{\circ}\text{C}$ and are corrected using the results of calibrations done once every 2 years. Water sample salinity is determined by Guildline Model 8400 Autosol

salinometers with precision of better than $\pm 0.002\text{‰}$ and accuracy of $\pm 0.003\text{‰}$, using equations given by Bennett (1976).

CTD data are recorded at the actual sample depth after the bottle is tripped. Occasionally due to large wire angles the CTD and sample bottles do not remain at the same depth (and temperature) during soak time. When this resulted in relatively large differences between the sample and CTD temperature readings, these points were eliminated from the overall CTD-sample comparisons.

Duplicate salinity samples were drawn from the Niskin bottle at each station. Both sets were analyzed on OSU's Autosol #3. Because the set of salinity samples drawn first had two samples that had leaked, the second set of salinity samples was used for the final comparison.

Results of the comparison between *in situ* sample data and the CTD output are summarized in Table 3. The sample conductivity was calculated using the CTD temperature and sample salinity. CTD conductivity was corrected for the pressure and temperature effects on the cell prior to the comparison. The temperature differences are within the sampling and instrument errors so no further corrections were applied to temperature prior to processing the data. The conductivity differences had a mean offset of -0.002 and standard deviation of 0.002 which are within the sampling errors so no correction was applied to the CTD data.

The altimeter emits and measures the return time of a downward acoustic signal about once per second. In the CTD unit this time is converted to the height from the bottom in decimeters. If no return signal is detected, the height is arbitrarily set to -88 . This number is then merged into each CTD data scan sent to the deck unit (once every 32 ms). The number remains

Table 2. Characteristics of the CTD probe used.

Probe	Sample Interval	Temperature Time Constant	P	<u>Sensors</u>		
				T	C	
2561	32 ms	280 ms	Range:	6500 db	-2 to 30°C	1 to 65 mmhos
			Resolution:	0.1 db	.0005°C	.005 mmhos
			Accuracy:	±6.5 db	±.005°C	±.001 mmhos

Table 3. Summary of the comparisons between the Neil Brown CTD probe and *in situ* calibration data.

	<u>No. of Samples</u>	<u>Mean Difference</u>	<u>Standard Deviation</u>
Temperature (°C)	67	0.006	0.015
Conductivity (mmhos cm ⁻²)	75	-0.002	0.002
Salinity (‰)	75	-0.002	0.003

Table 4. Summary of calibration data for Sea Tech Transmissometer # IM 80111

	<u>Path: 100 cm Air</u>		<u>Path Blocked</u>	
	<u>Volts</u>	<u>CTD Output</u>	<u>Volts</u>	<u>CTD Output</u>
Manufacturer (14 June 1981)	4.35	--	-0.005	--
In lab, pre-cruise (Sept. 1982)	4.251	3481	-0.005	0000
At Sea, before Station 63 (19 Sept. 1982)	4.257	3486	--	--

the same until the next pulse is sent and received by the altimeter. The transmissometer measures the light transmitted by a collimated beam through a 100 cm path length, providing an analog output of 0 to 5 VCD, corresponding to 0 to 100 % transmission. This output is digitized by the CTD using the full integer range of 0 to 4095, merged into the data stream, and updated about once per second. No calibration constants were used in processing the transmissometer data, because we were interested primarily in the thickness of the bottom nepheloid layer as opposed to its exact clarity, and also because air calibration tests before and during the cruise were in good agreement with the manufacturer's original calibration (Table 4).

The procedures for processing the pressure, conductivity and temperature data were described by Gilbert, Huyer and Schramm (1981). Basically, the conductivity data are filtered with a recursive filter $C = \alpha C_{n-1} + (1 - \alpha) C_n$ where C_n is the conductivity of the current scan, C_{n-1} is the conductivity of the previous scan and α is the filter constant whose value in this case is 0.900. The salinity is then calculated from the temperature, filtered conductivity and filtered pressure. All scans with increasing pressure are sorted into 2 db bins, and 2 db averages are calculated for each parameter: temperature, salinity, pressure, height above the bottom, and transmission. At some stations, there was a sudden downward shift in conductivity that was probably due to detritus in the conductivity cell; the data from these stations were edited (Table 5).

Table 5. Stations edited during data processing.

Station no.	Depth of Jump in Conductivity	Remedy
12	257-263 db	Linear interpolation of processed salinity at 257-263 db
20	245 db	Linear interpolation of processed salinity at 244-246 db
27	509-511 db	Linear interpolation of processed salinity at 509-511 db
30	15-23 db	Linear interpolation of processed salinity at 15-23 db
43	15-19 db	Linear interpolation of processed salinity at 15-19 db
71	550-575 db	Cast stopped at 580 db, CTD brought up to 500 db and restarted. 3 min. gap at 515-517 db where recast data was joined to original cast data.

Table 6. Comparison of corrected sonic bottom depth from the ship's PDR, the maximum CTD depth and the altimeter reading for deep stations in the Pacific Study Area.

	Sonic Depth (ship's PDR) Z_B (m)	Maximum CTD Depth Z_{max} (m)	Altimeter Reading H (m)	$Z_B - Z_{max}$ (m)
63	4287	4279	6.6	8
64	4213	4205	5.4	8
65	3881	3864	--	17
66	4308	4302	4.6	6
67	4228	4232	2.5	4
68	4229	4224	4.1	5
69	4260	4240	26.9	20

For the deep stations in the Pacific Study Area, we compared the difference between the sonic depth reading of the ships PDR corrected by Matthew's Tables for variations in the speed of sound and the maximum depth sampled by the CTD with the height above the bottom as measured by the altimeter (Table 6). In general, there was fairly good agreement, but in one case (Station 65) the altimeter had not yet recorded any return signal when the PDR indicated the CTD was only 19 m above the bottom. The PDR record in this case suggested the presence of several hillocks: it is possible that the bottom slopes here were very steep and that the depth below the altimeter was greater than 33 m, the typical range of the altimeter. In another case (Station 67) the PDR depth was slightly less than the maximum CTD depth but there was no other evidence that the CTD touched bottom: we trust that the altimeter reading of 2.5 m above the bottom was more nearly correct.

DATA PRESENTATION

The CTD data from Leg 1 are summarized in vertical sections of temperature, salinity, and sigma-theta, contoured by hand. Tick marks at the top of each section indicate stations positions at which a CTD cast was made, and an inverted "T" marks the maximum depth of each cast. For each hydrographic section of Leg 1, we also show offshore profiles of surface temperature, salinity, sigma-theta, and dynamic height at 0, 100 and 200 db relative to 500 db. Dynamic height at shallow stations was computed using the extrapolation method described by Reid and Mantyla (1976); the extrapolated portion of each profile is dashed.

Vertical profiles of temperature, salinity and sigma-theta vs. pressure and listings of data at standard pressures are shown for each station of both legs. Header information for each station is as follows:

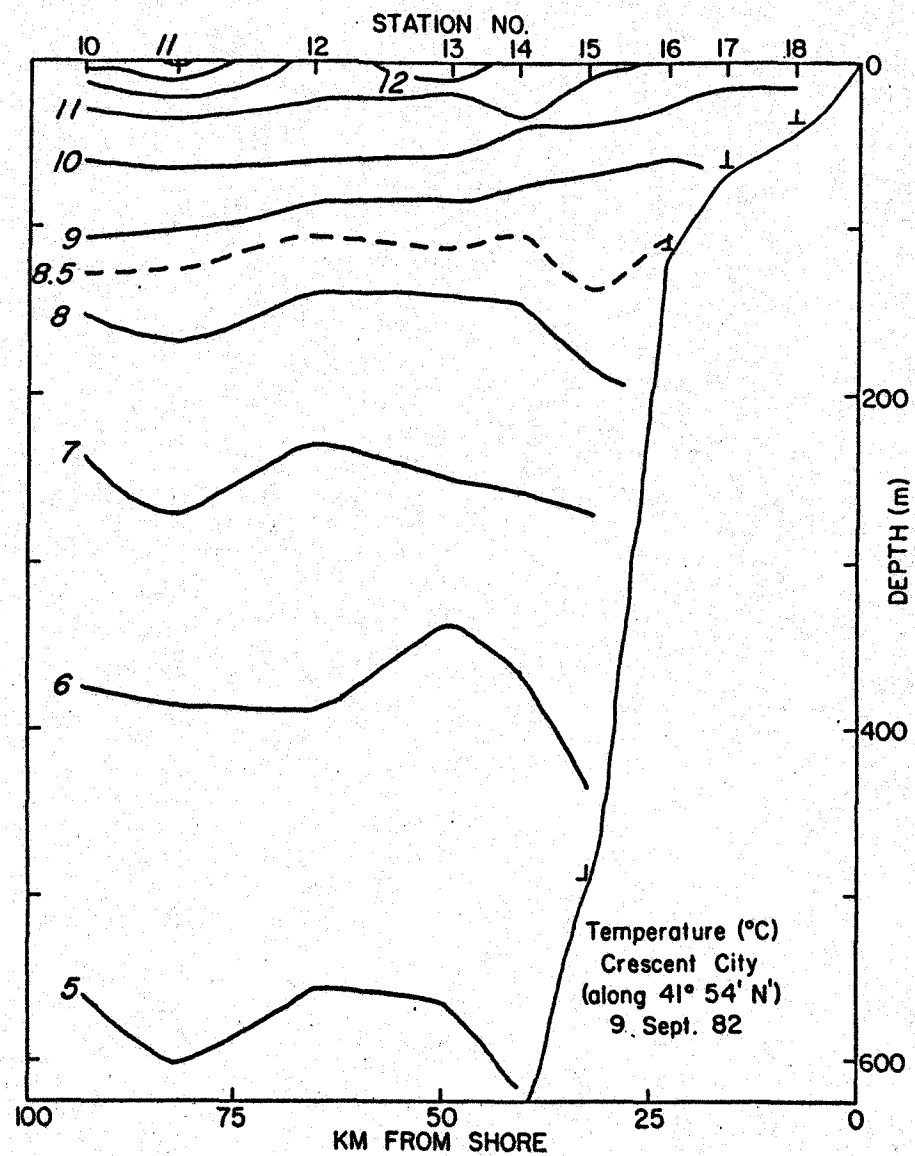
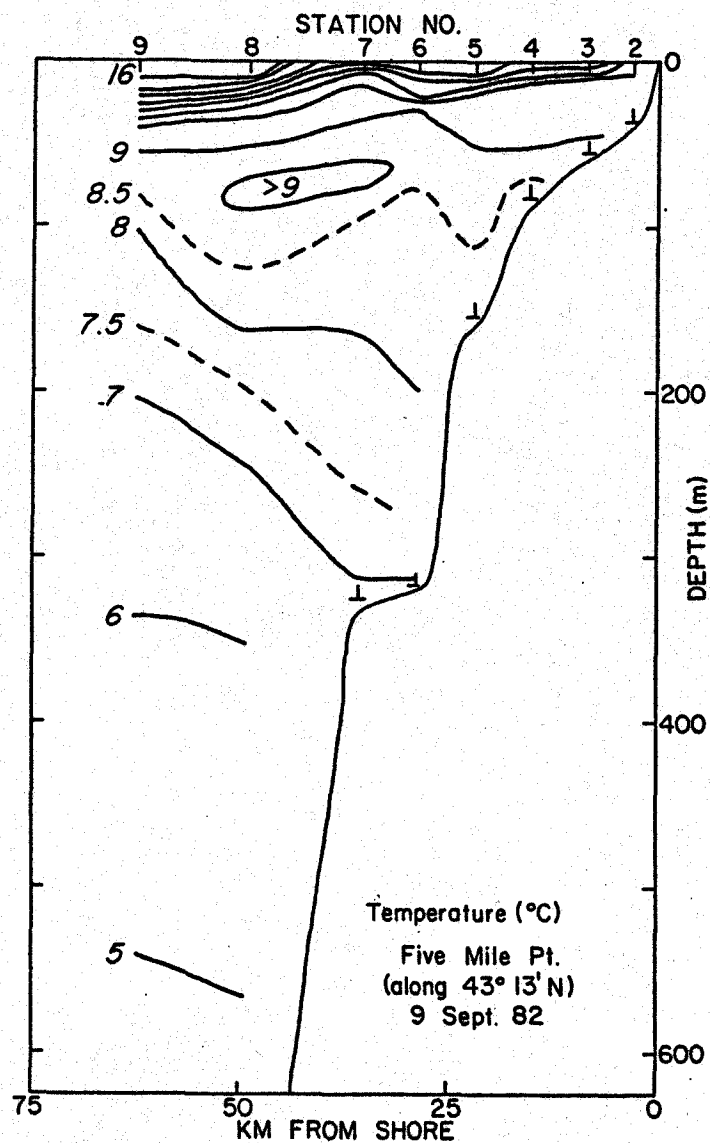
STA NO	Consecutive station number.
STATION	The CTD section name (initialed) and number of the station on the line (Refer to Figures 1 and 2).
LAT	Latitude in degrees and minutes north of the equator.
LONG	Longitude in degrees and minutes west of Greenwich.
DATE	Day/Month/Year.
TIME	Time in Greenwich Mean Time.
PROBE	CTD probe number.
DEPTH	Sonic depth in meters, corrected according to Matthews Tables appearing in the Handbook of Oceanographic Tables, U.S. Naval Oceanographic Office Publication SP-68 (1966).

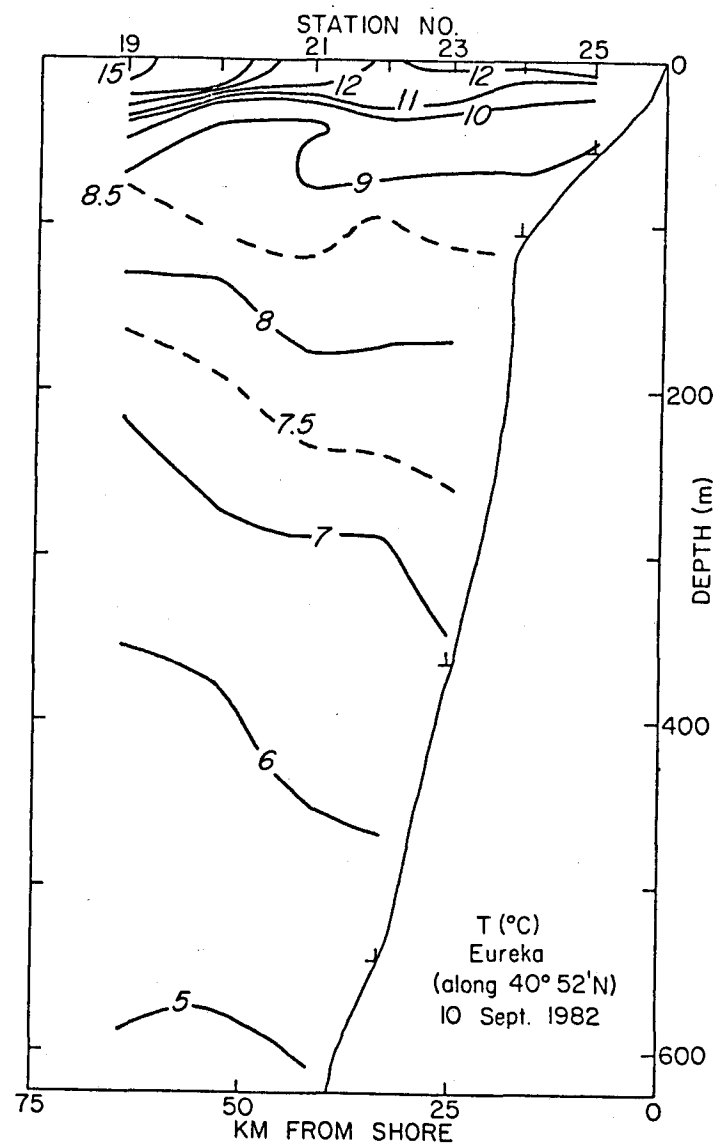
The data listing for each station gives values at standard pressures including observed and calculated parameters at the shallowest and deepest observations levels. Temperature (TEMP), salinity (SAL), potential

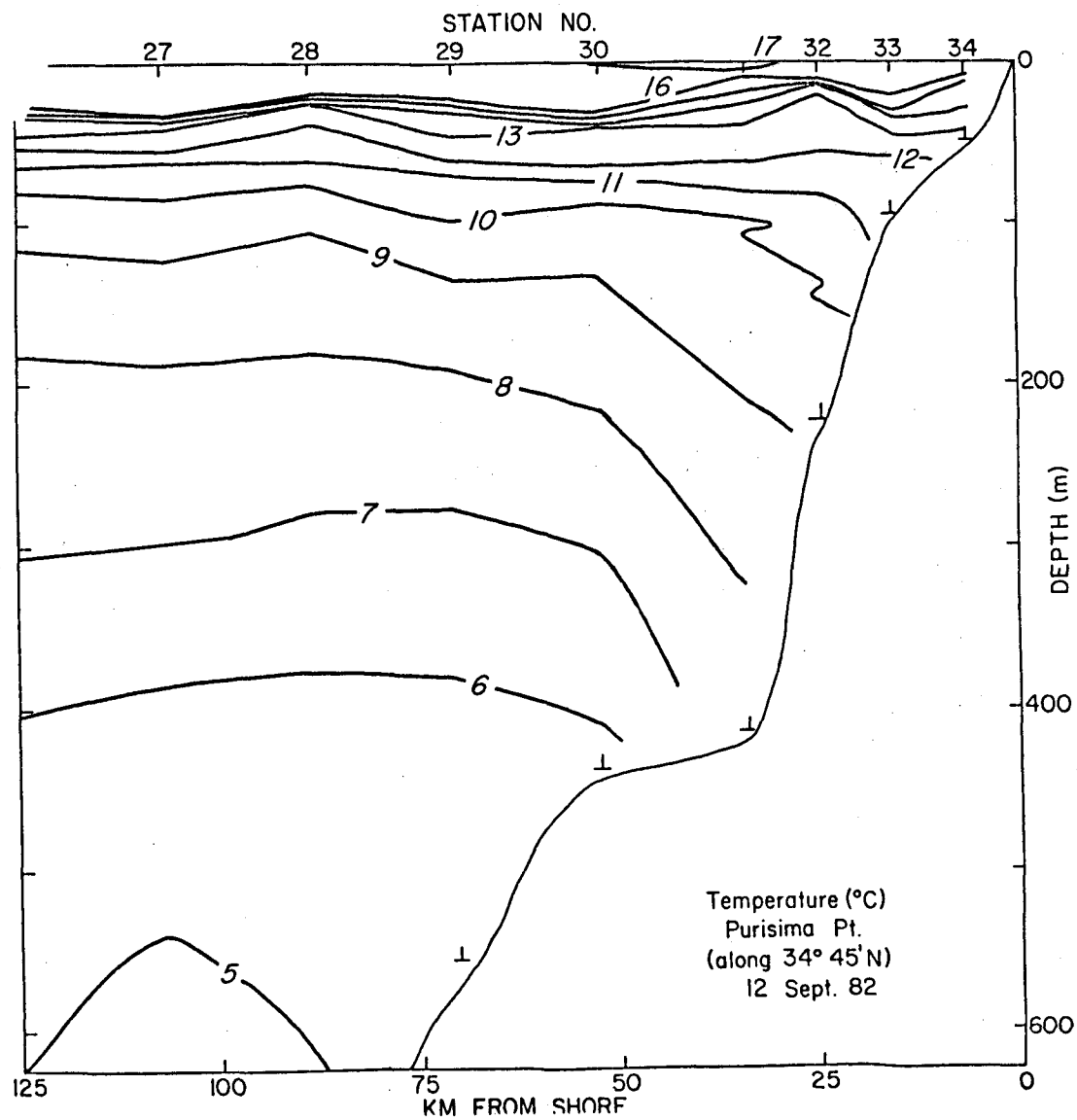
temperature, (POTEN TEMP), sigma-theta (SIGMA THETA), specific volume anomaly $\times 10^5$ (SVA) and dynamic height (DELD) in dynamic meters are given for each pressure (PRESS) in decibars. Computed parameters are calculated from the complete data array.

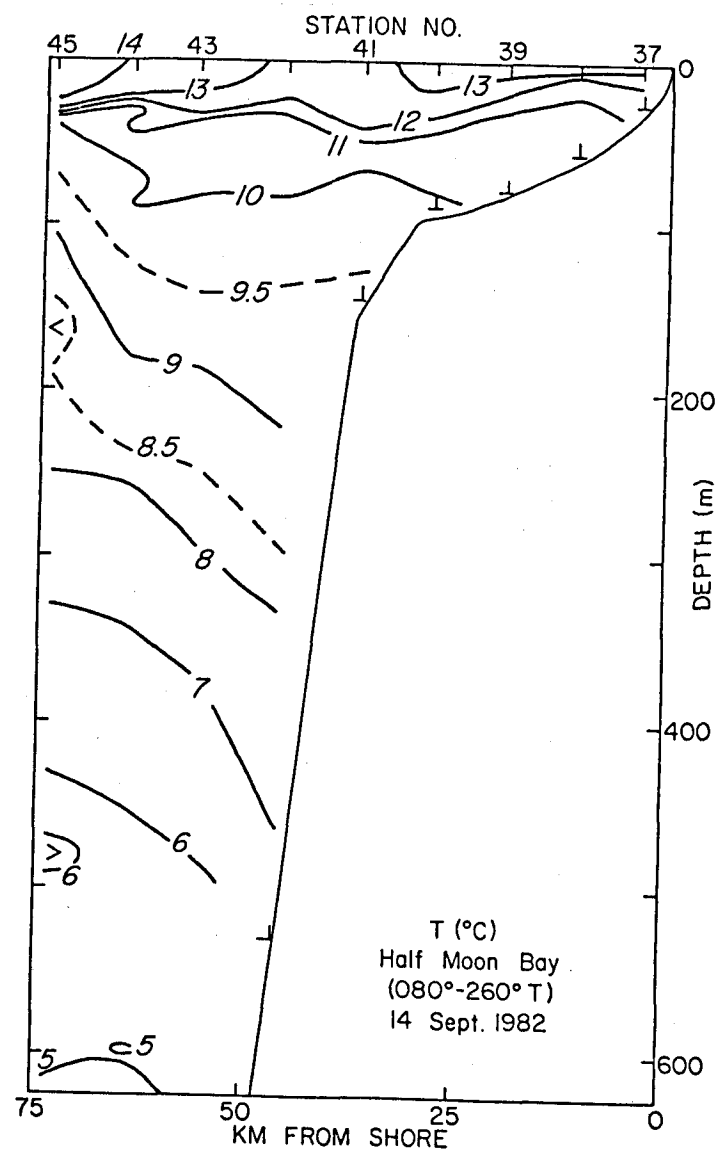
The near bottom profiles of potential temperature, salinity and sigma-theta vs. depth are also presented for each of the deep stations in the Pacific Study Area (i.e. Stations 63-69); in these plots, the bottom depth is indicated by a solid line. For these stations we also show vertical profiles of potential temperature and transmission vs. pressure.

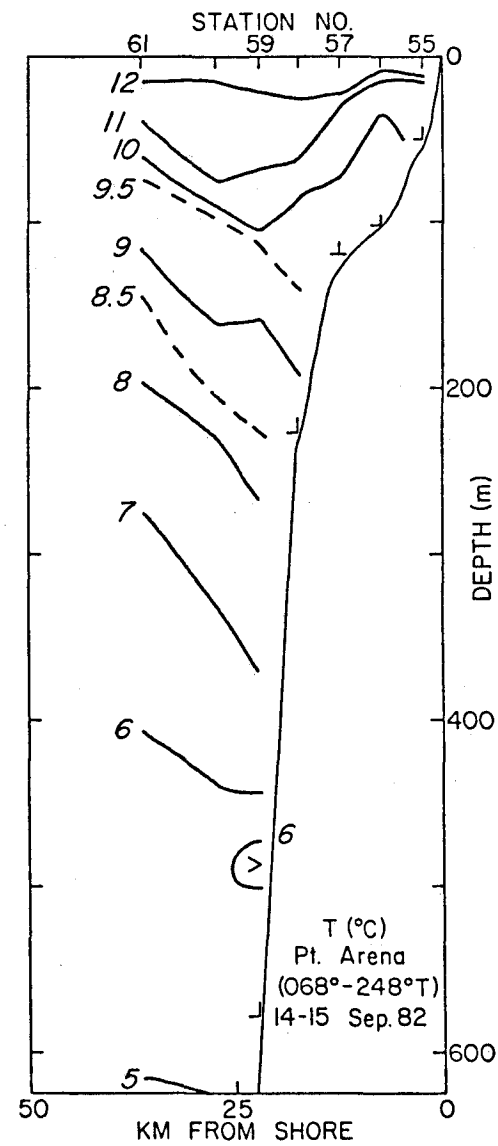
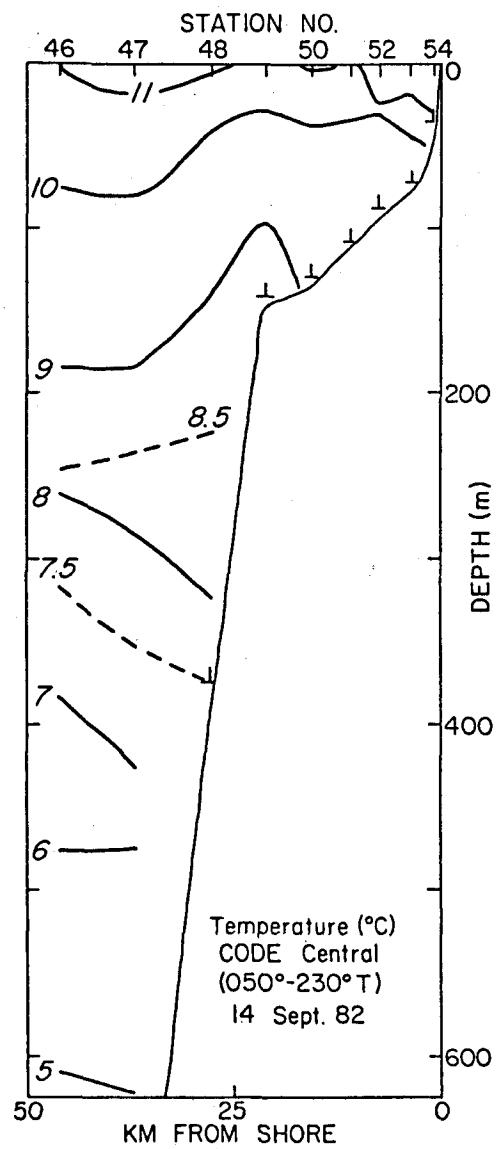
VERTICAL SECTIONS

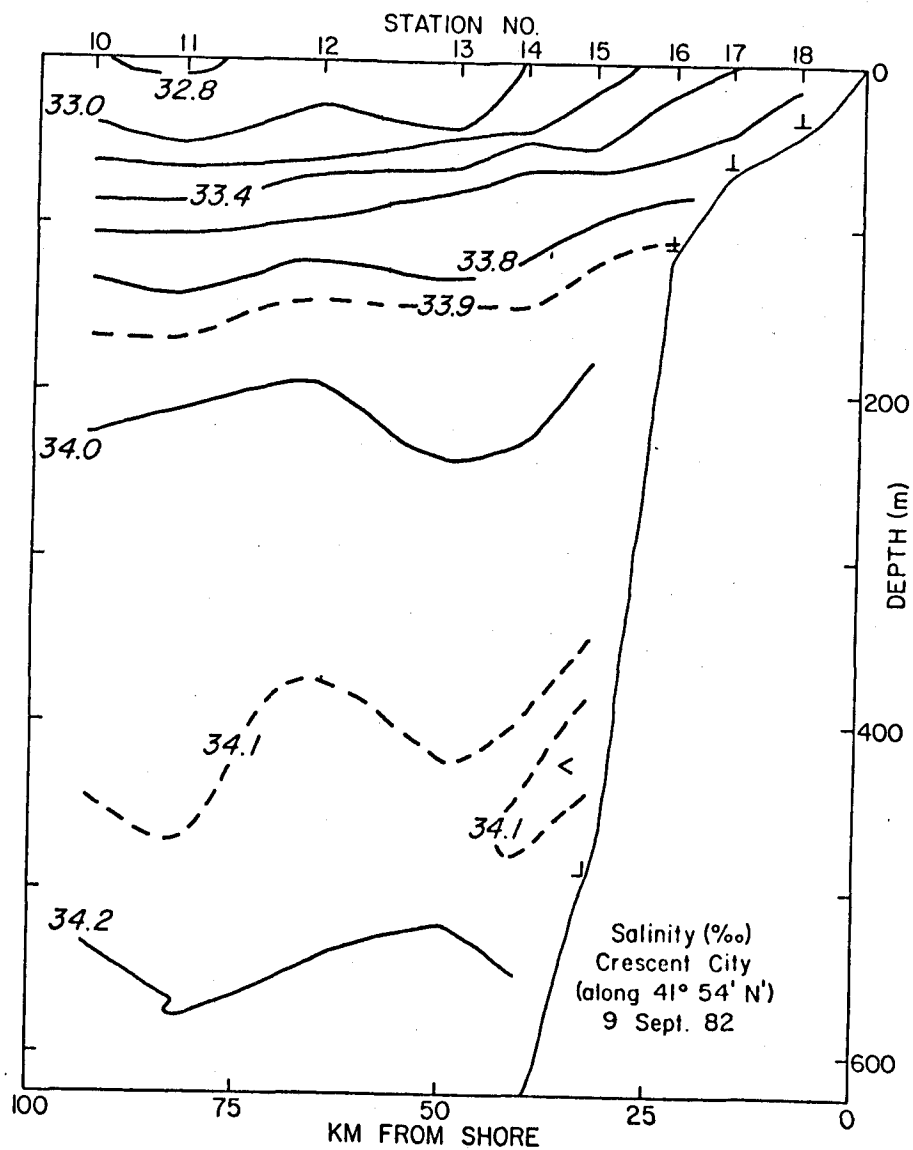
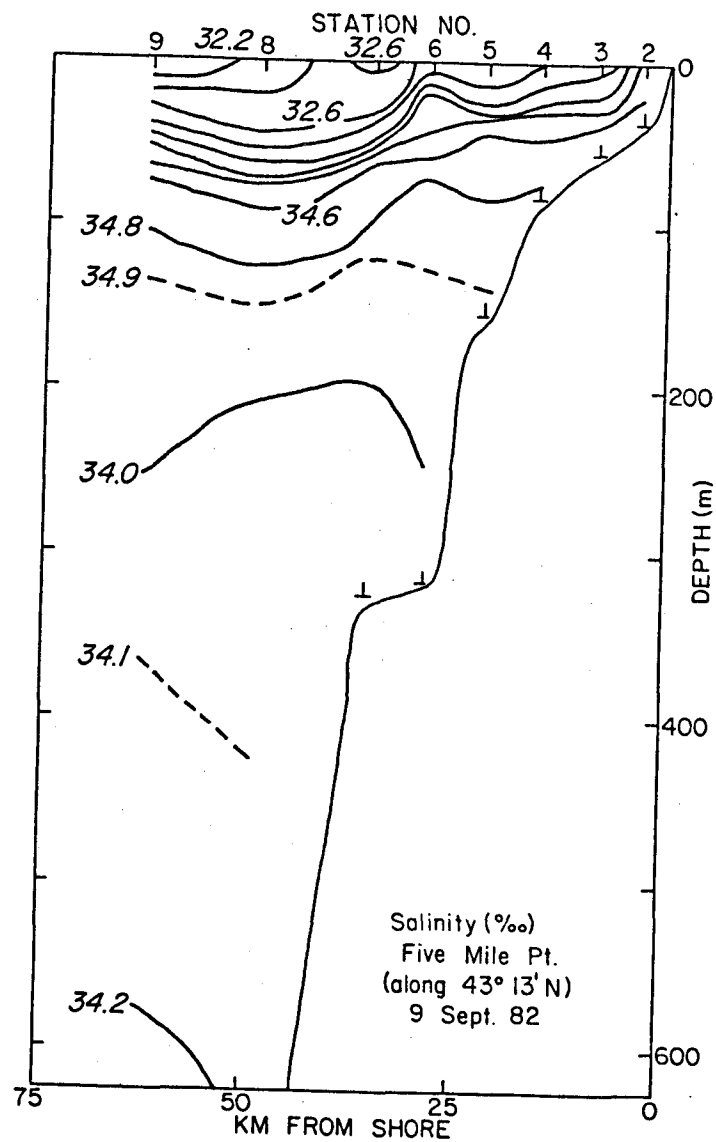


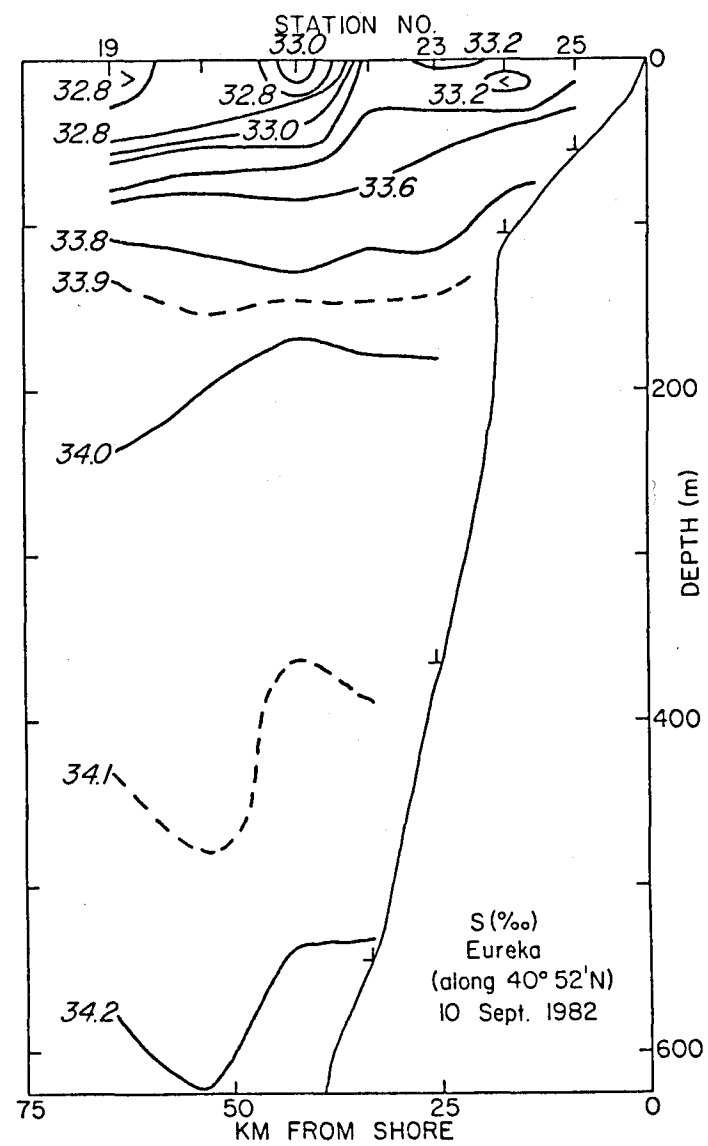


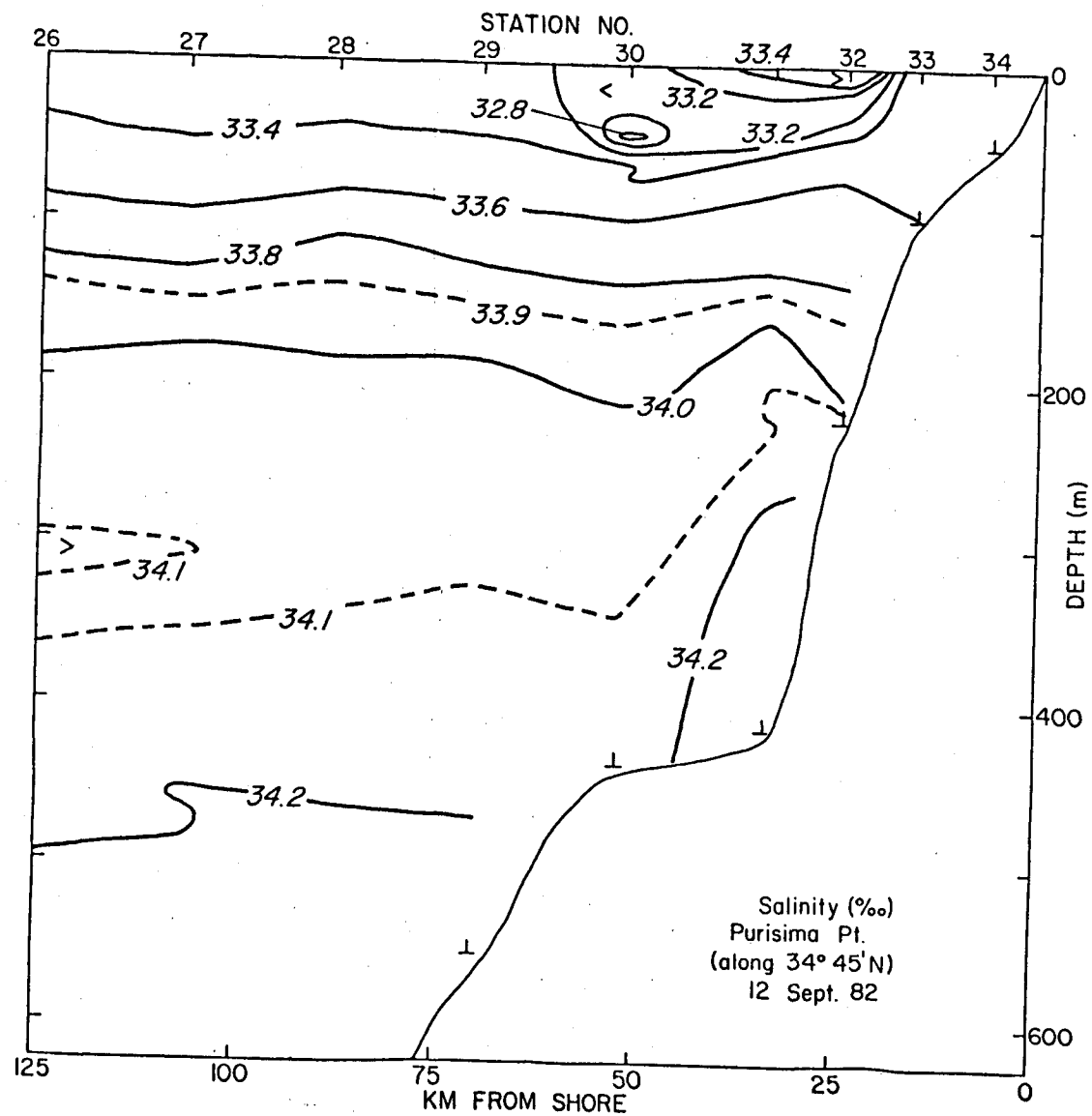


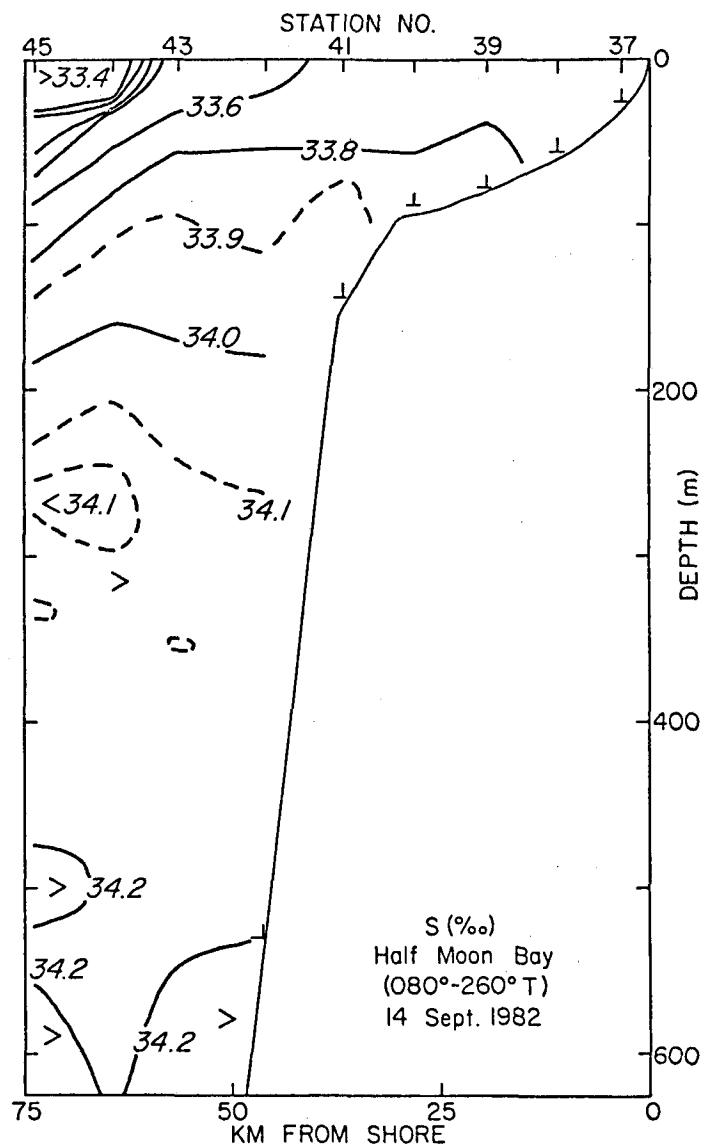


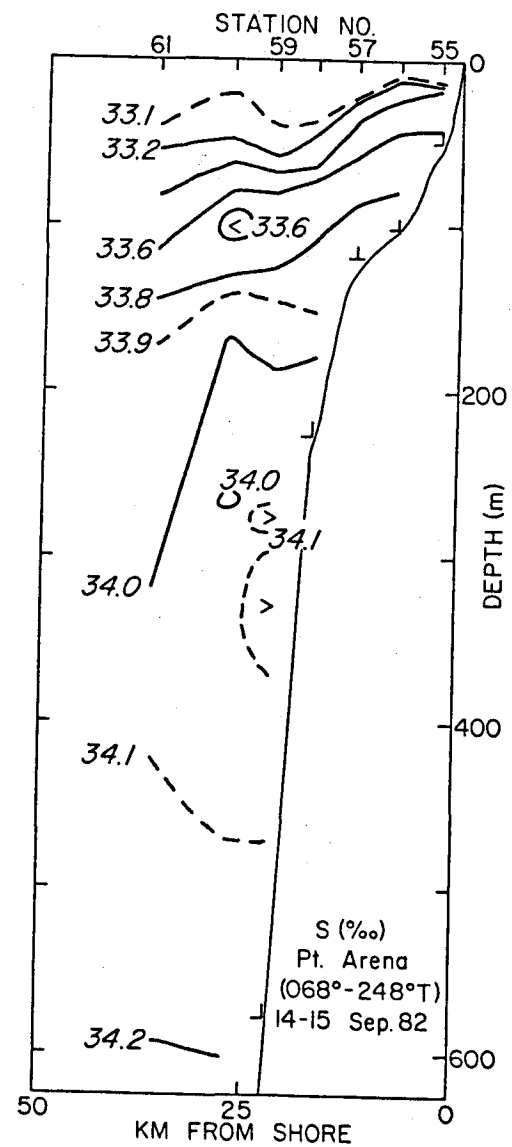
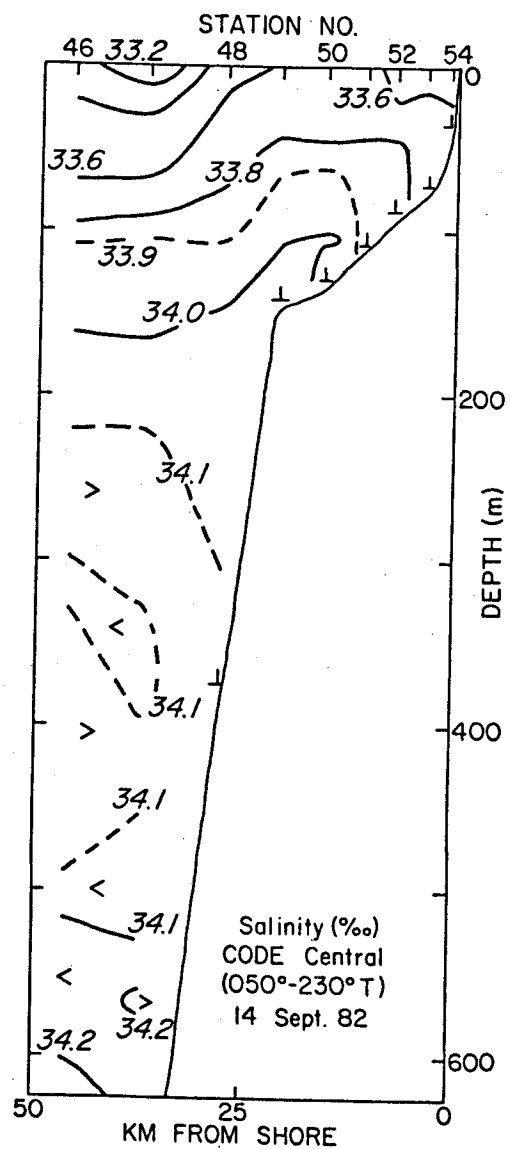


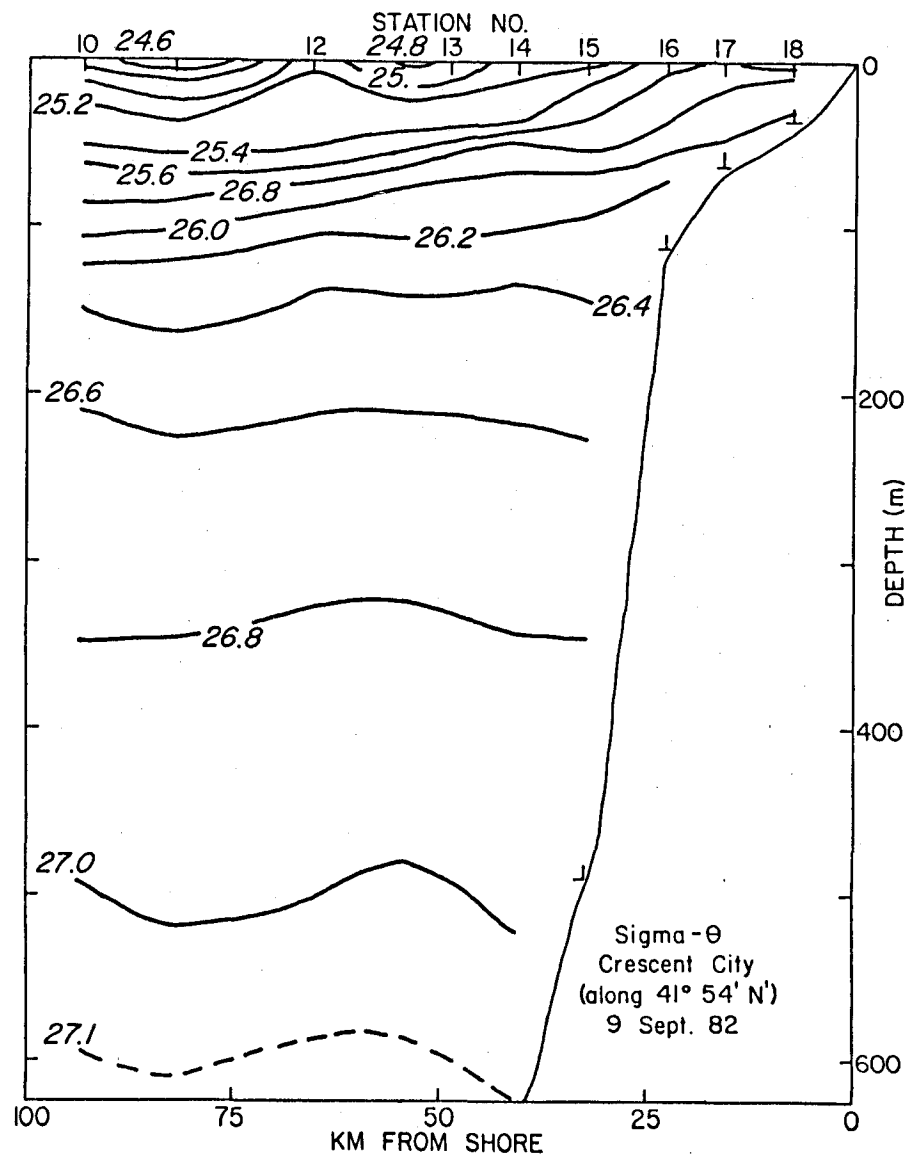
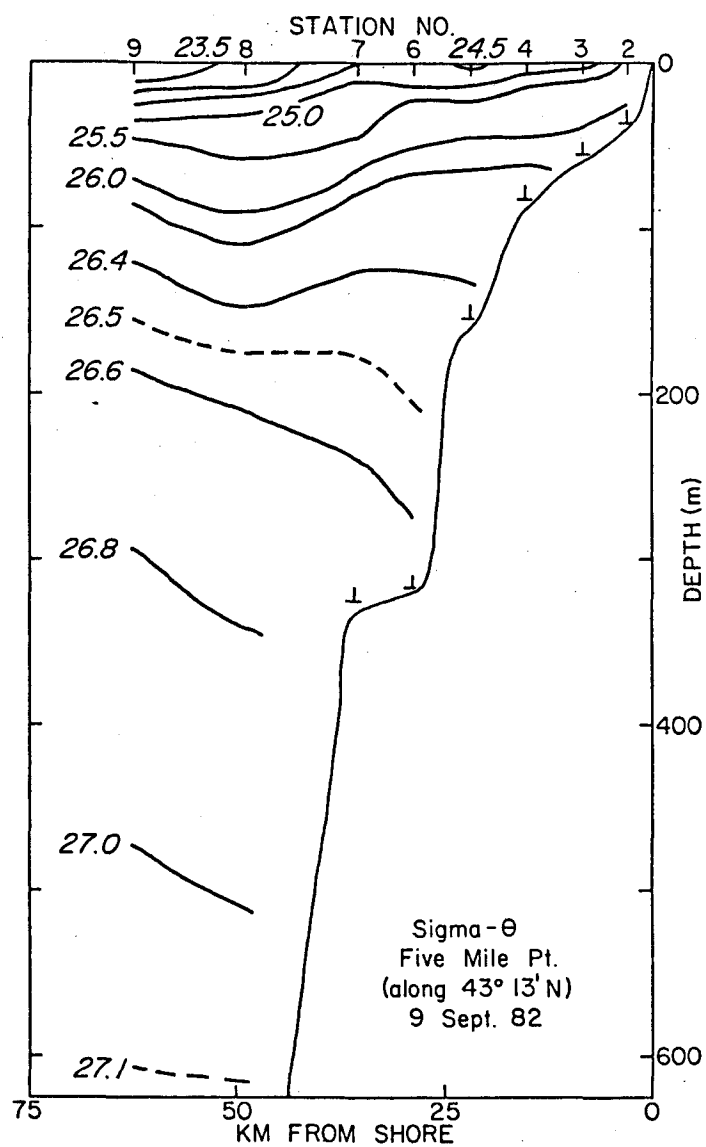


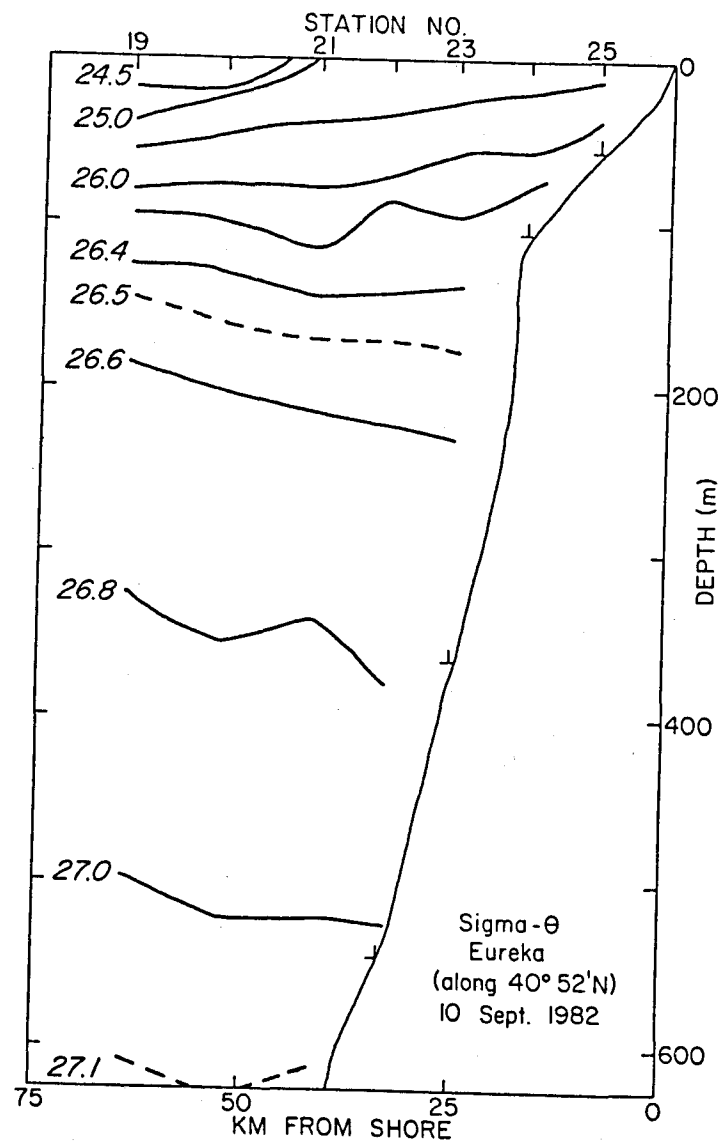


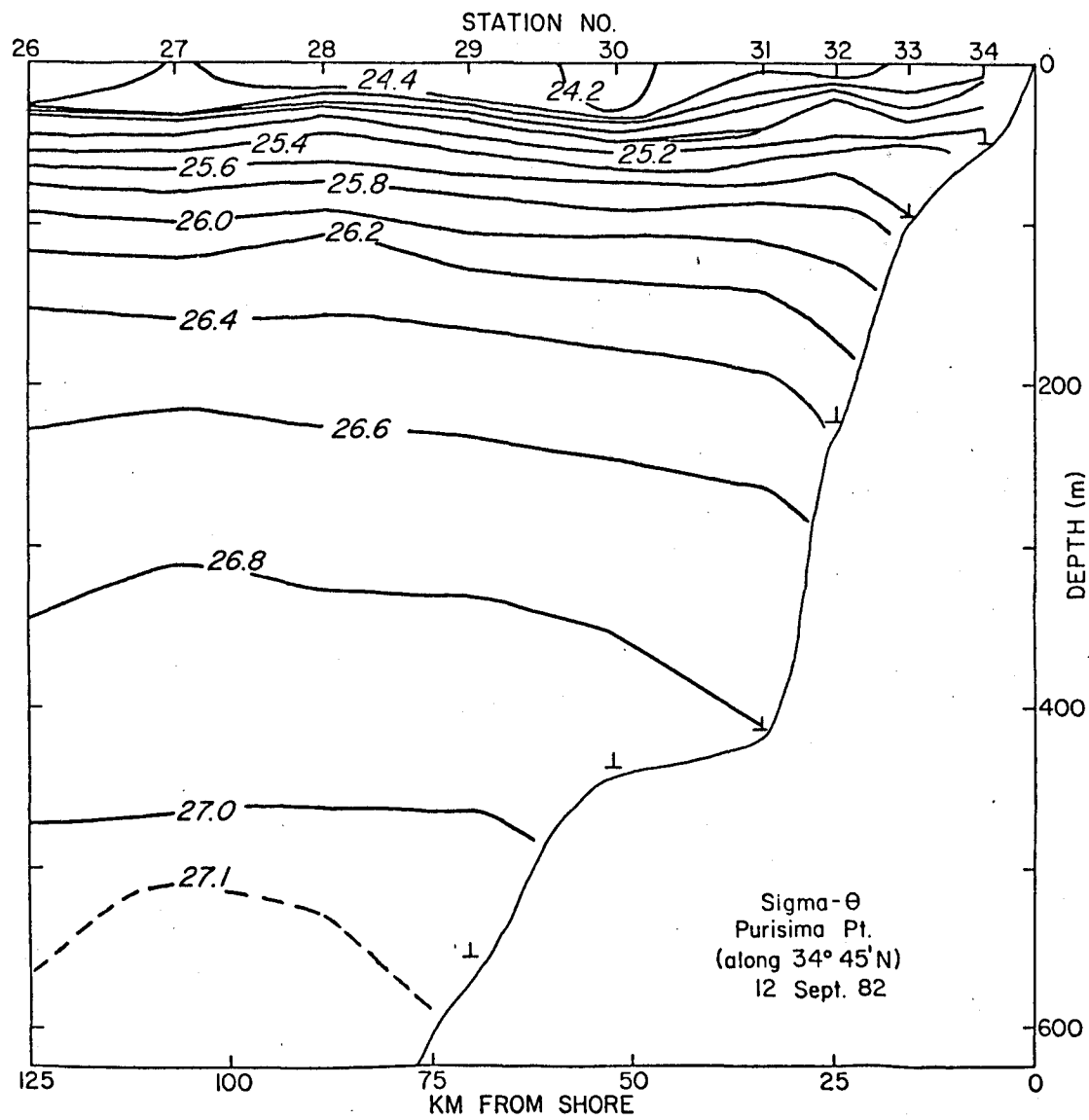


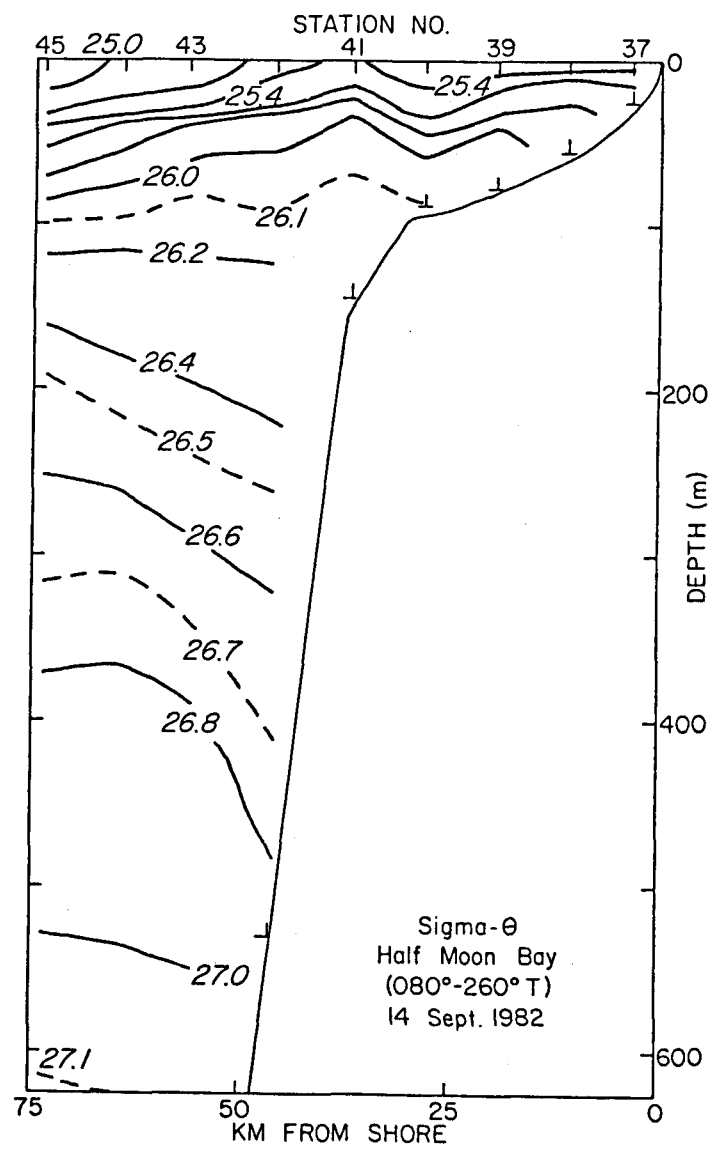


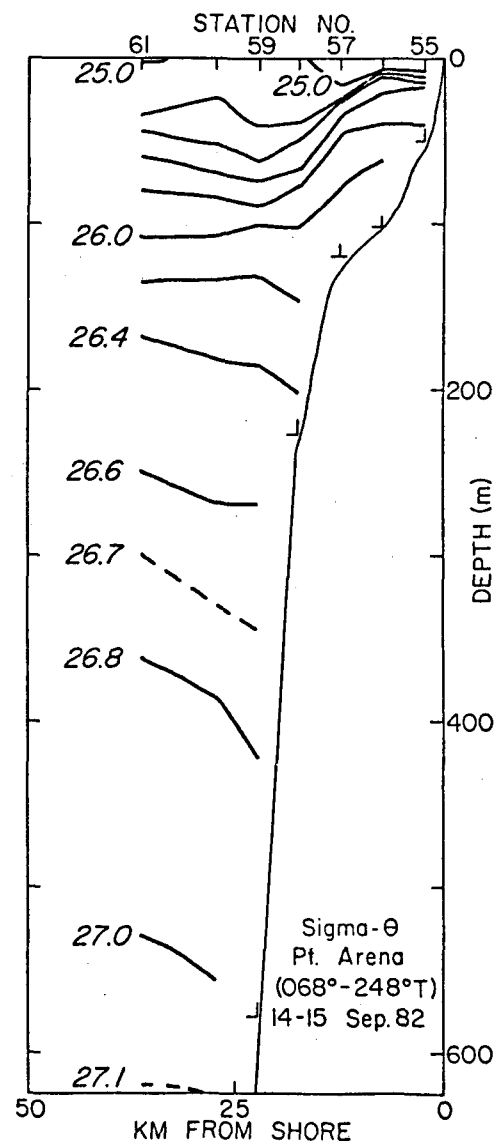
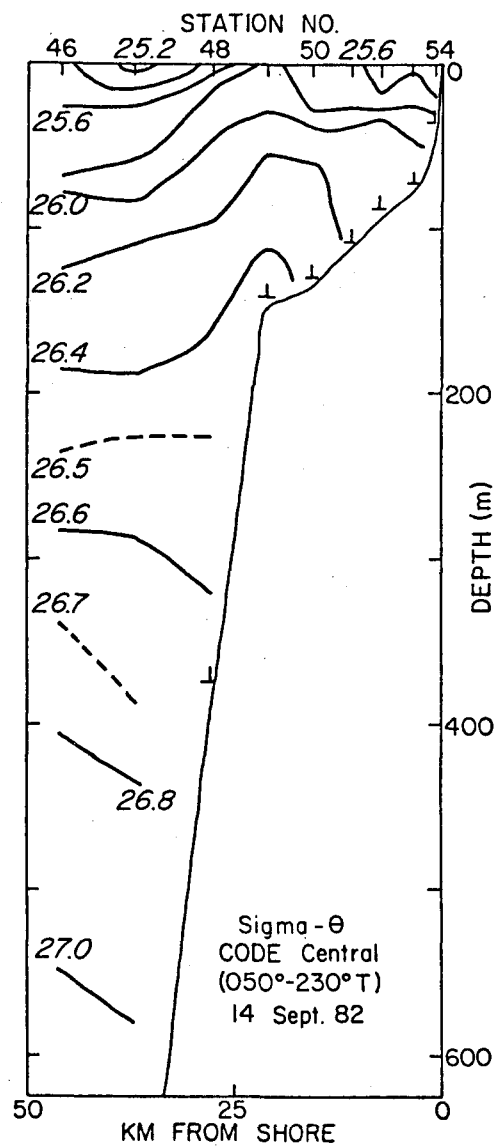






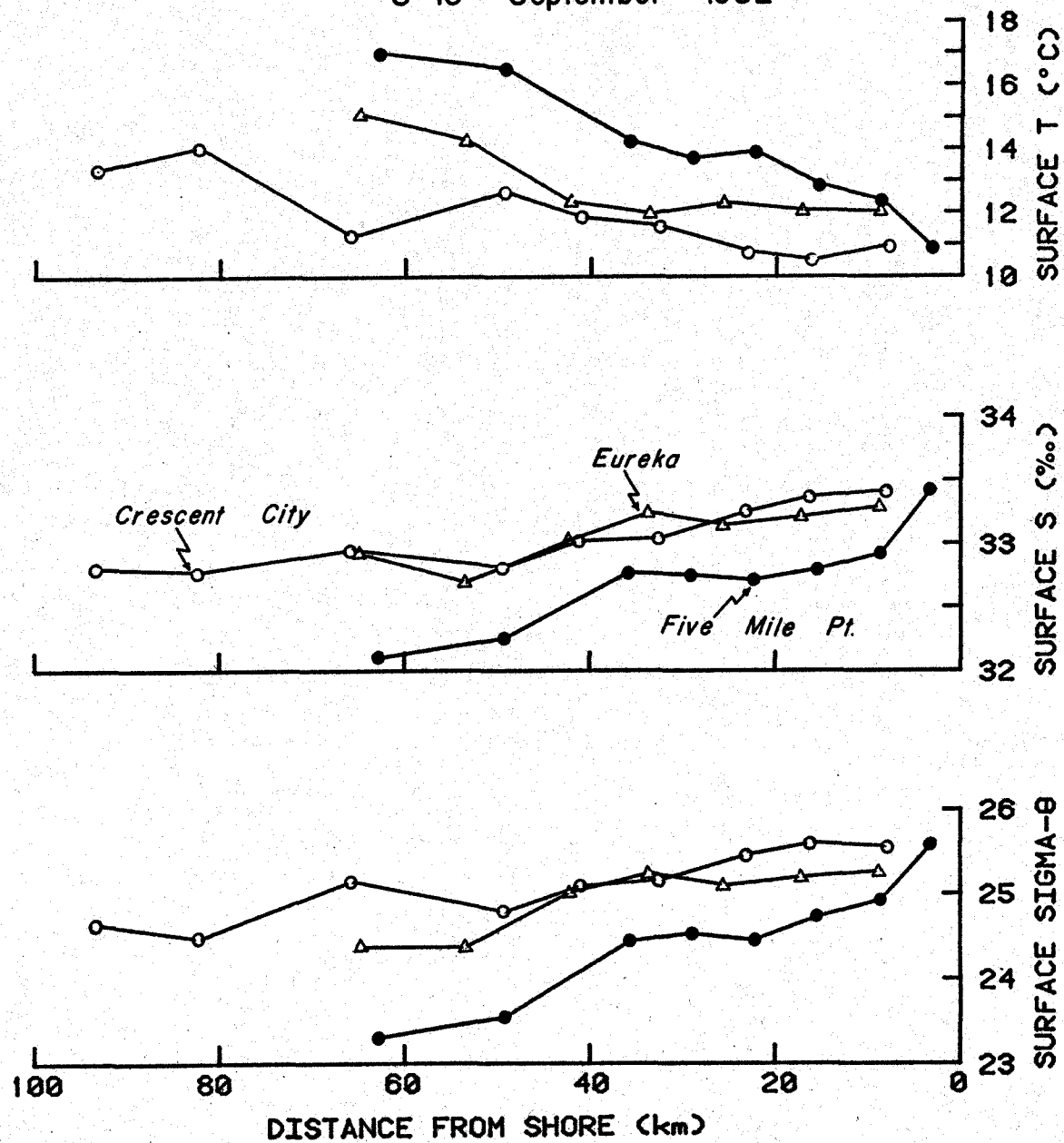




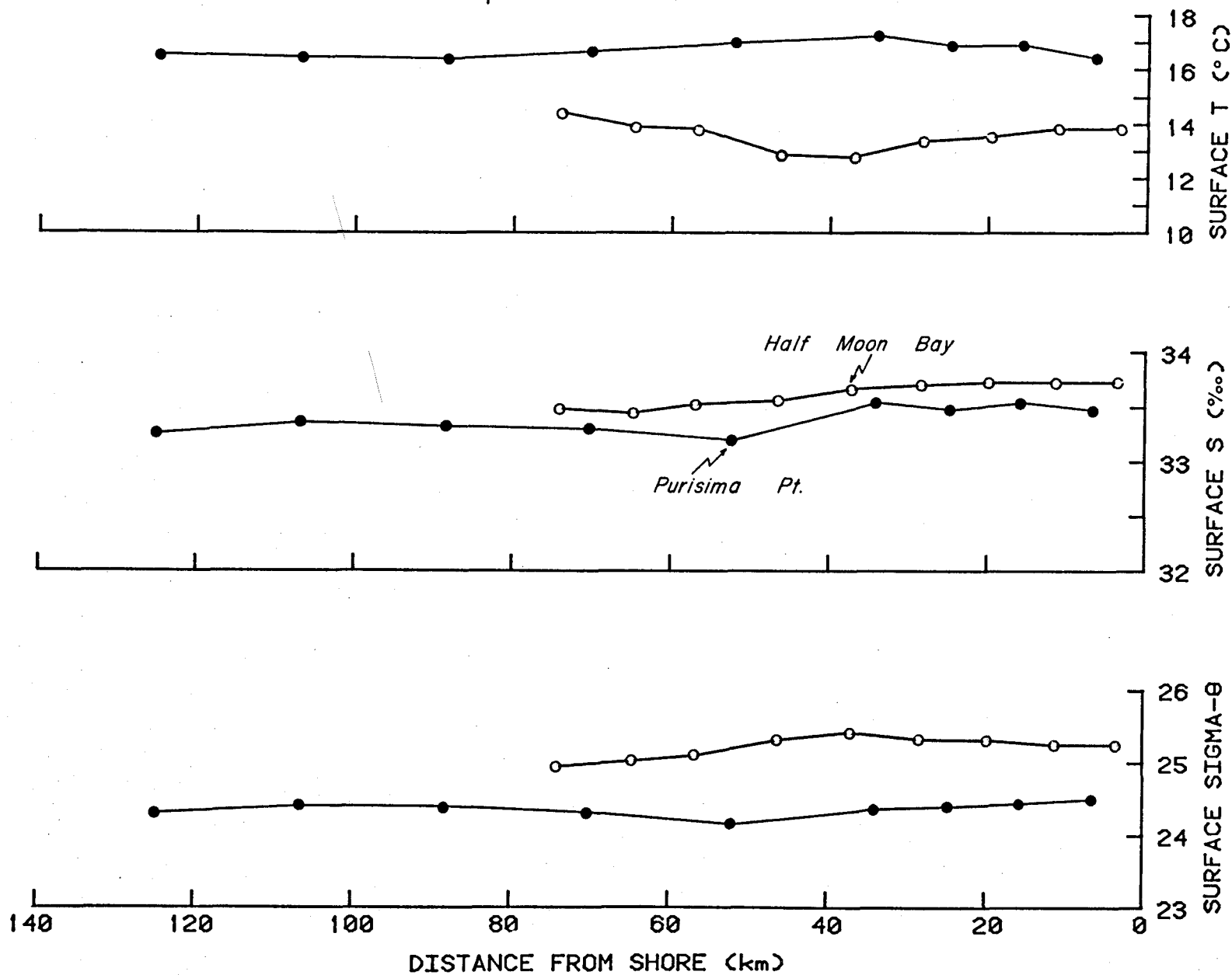


OFFSHORE PROFILES

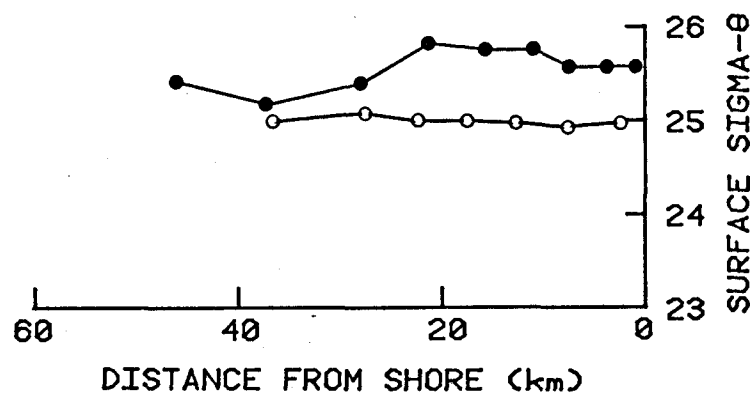
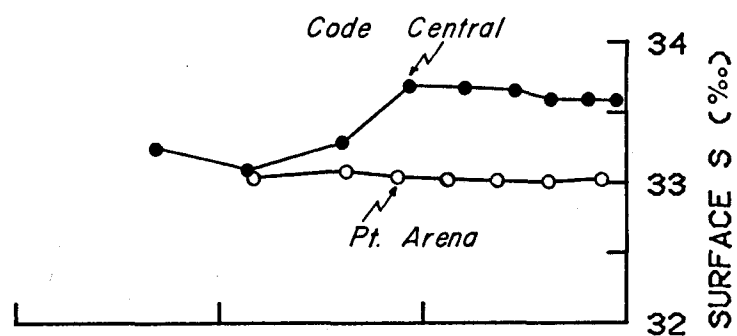
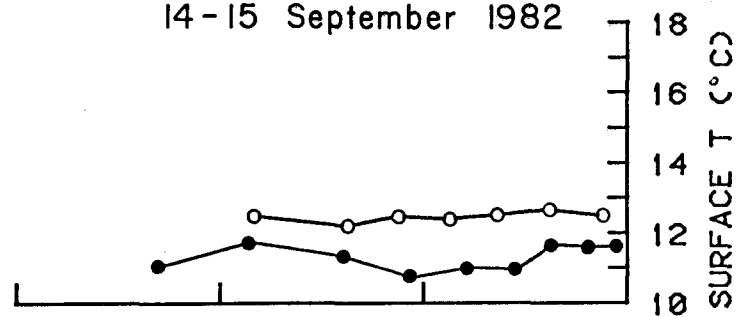
8-10 September 1982

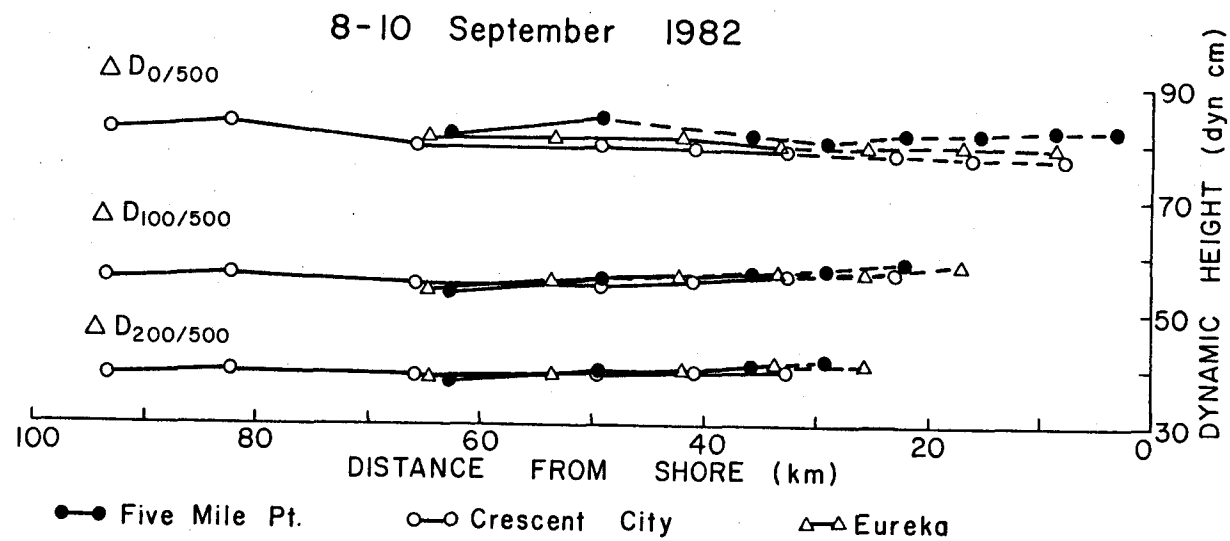


12-14 September 1982

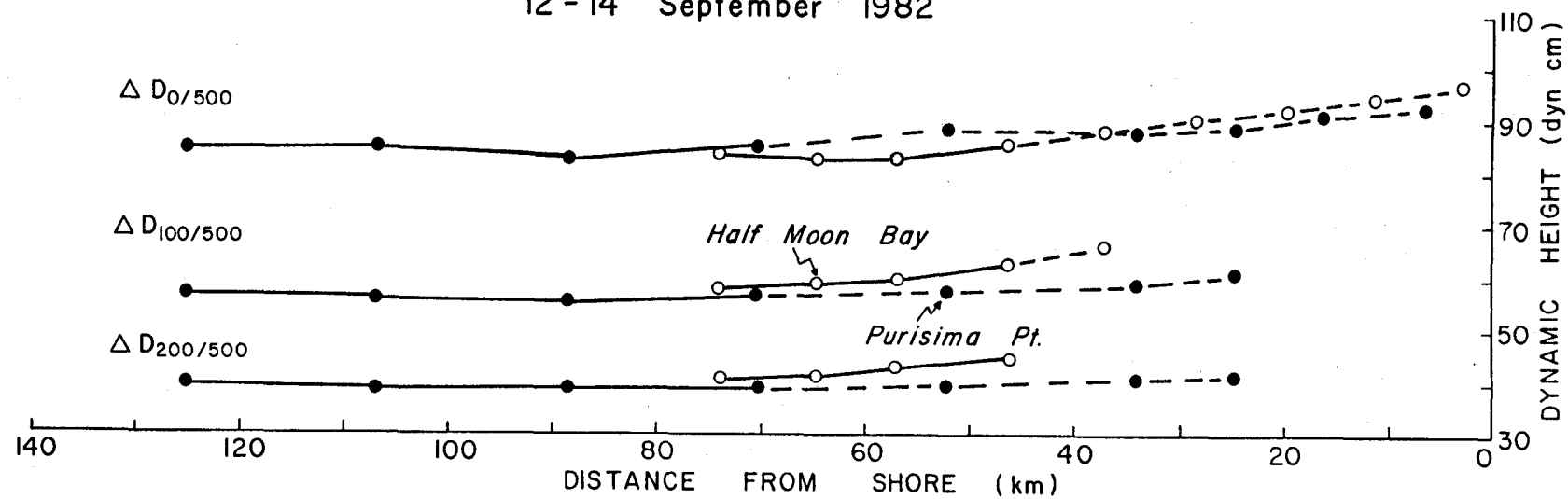


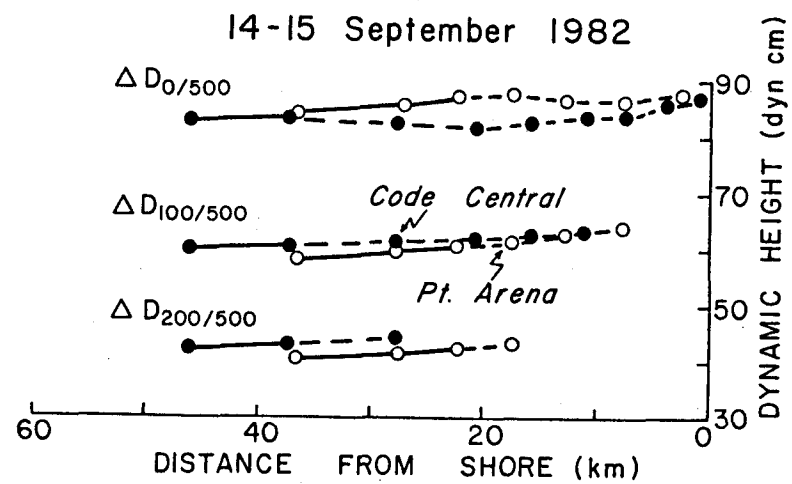
14-15 September 1982



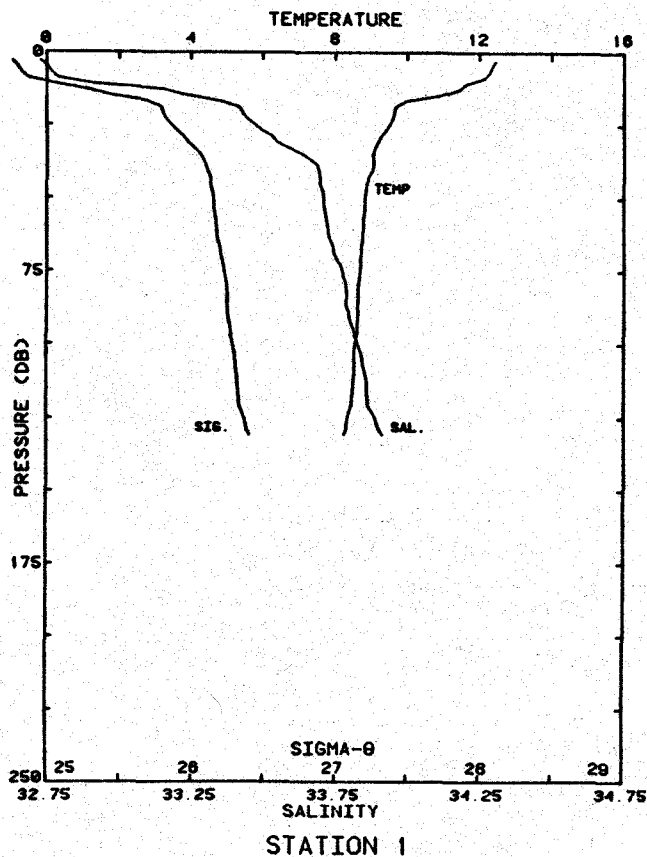


12 - 14 September 1982





VERTICAL PROFILES AND LISTINGS

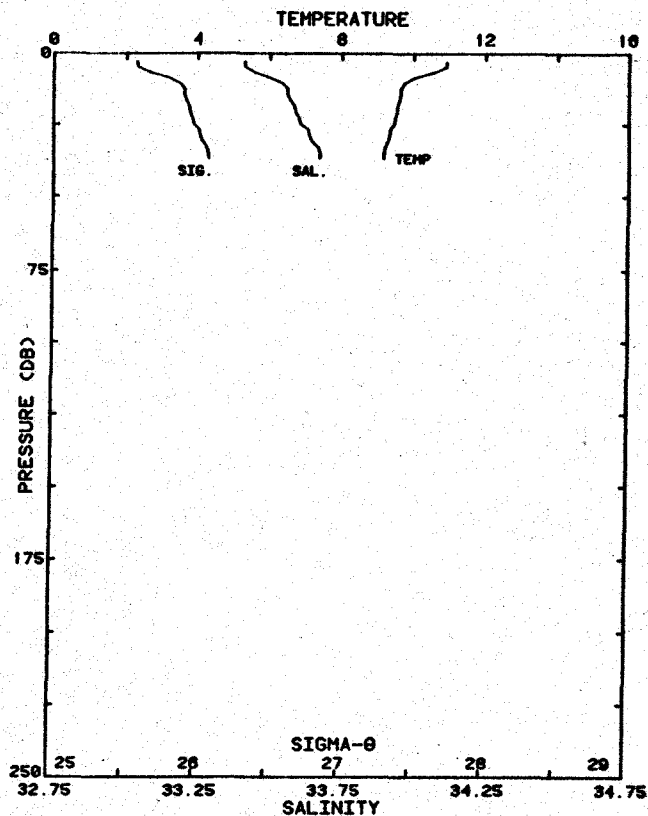


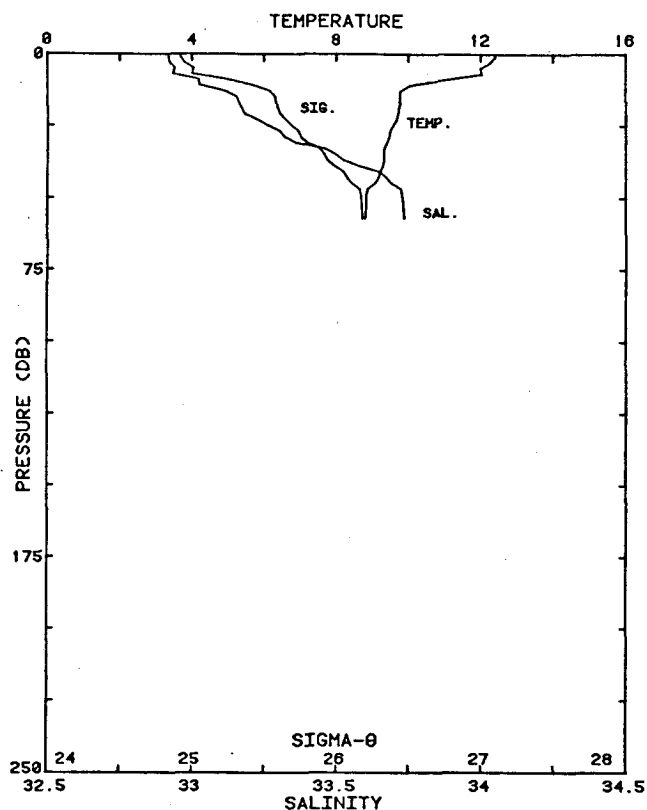
STA NO 1 , LAT: 43 10.3 N LONG:124 38.8 W
 8 SEP 1982 1917 GMT PROBE 2561 DEPTH 135M
 19.8 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
3	12.438	32.727	12.438	24.763	319.3	0.010
10	11.868	32.851	11.866	24.967	300.1	0.031
20	9.650	33.424	9.648	25.801	220.9	0.057
30	9.221	33.540	9.218	25.961	205.9	0.078
40	9.032	33.690	9.028	26.109	192.1	0.098
50	8.826	33.710	8.821	26.158	187.6	0.117
60	8.772	33.723	8.766	26.176	186.0	0.136
70	8.707	33.750	8.700	26.207	183.3	0.154
80	8.636	33.786	8.628	26.247	179.7	0.172
90	8.624	33.798	8.615	26.257	178.9	0.191
100	8.557	33.829	8.546	26.293	175.7	0.208
110	8.521	33.853	8.509	26.318	173.6	0.226
120	8.458	33.863	8.446	26.335	172.1	0.243
130	8.281	33.908	8.267	26.397	166.3	0.259
131	8.249	33.914	8.236	26.407	165.4	0.261

STA NO 2 ,FM1 LAT: 43 13.0 N LONG:124 26.0 W
 8 SEP 1982 2357 GMT PROBE 2561 DEPTH 40M
 3.2 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
3	10.908	33.410	10.907	25.574	242.1	0.007
10	9.891	33.519	9.890	25.835	217.5	0.024
20	9.547	33.588	9.545	25.945	207.2	0.045
30	9.311	33.643	9.309	26.028	199.6	0.065
37	9.166	33.675	9.162	26.076	195.1	0.079





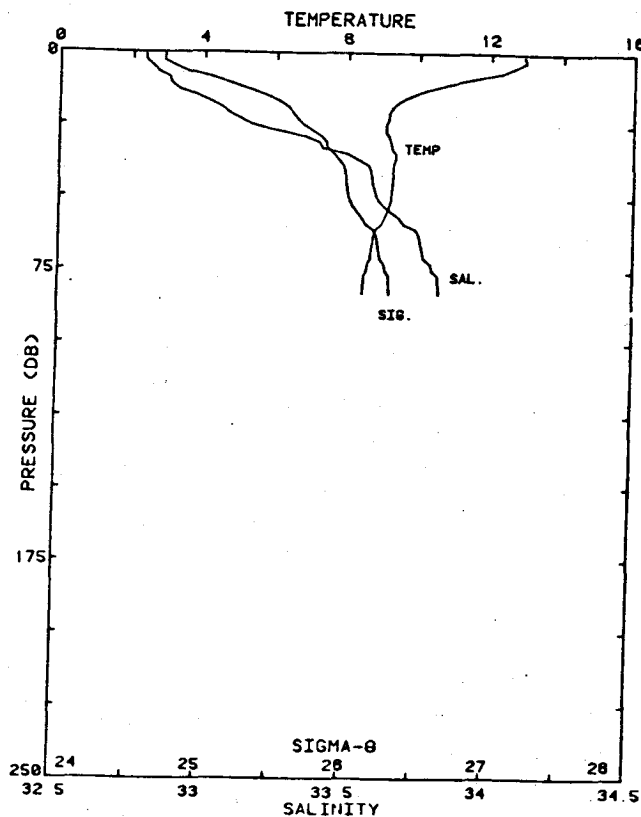
STATION 3 FM3

STA NO 3 ,FM3 LAT: 43 13.0 N LONG:124 30.0 W
 9 SEP 1982 0034 GMT PROBE 2561 DEPTH 60M
 8.6 KM FROM SHORE

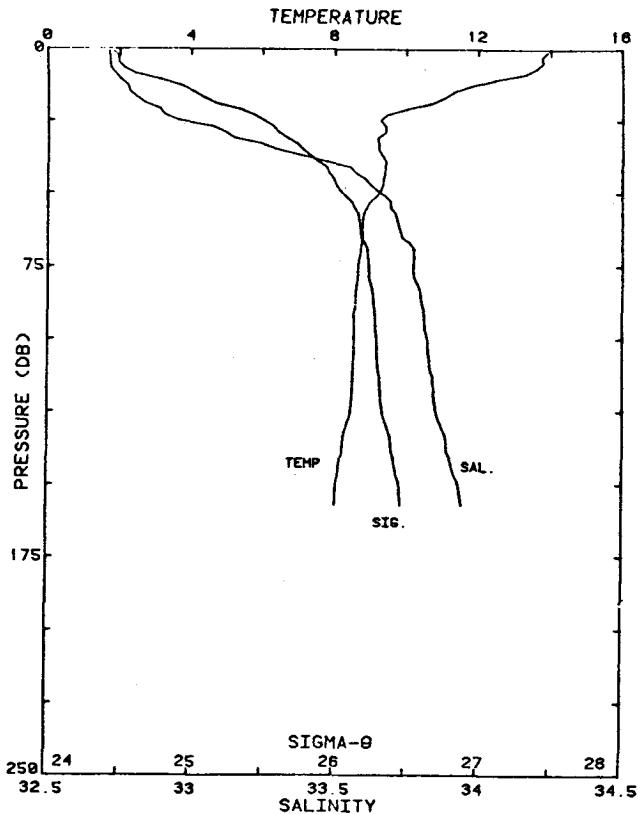
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.399	32.918	12.399	24.918	304.5	0.003
10	10.563	33.026	10.562	25.336	265.0	0.030
20	9.705	33.177	9.703	25.600	240.1	0.054
30	9.422	33.340	9.419	25.773	223.8	0.077
40	9.244	33.613	9.240	26.015	201.0	0.098
50	8.823	33.729	8.818	26.172	186.2	0.117
57	8.797	33.735	8.791	26.181	185.5	0.131

STA NO 4 ,FM4 LAT: 43 13.0 N LONG:124 35.0 W
 9 SEP 1982 0112 GMT PROBE 2561 DEPTH 90M
 15.4 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.903	32.793	12.903	24.724	322.9	0.003
10	11.163	32.881	11.161	25.118	285.7	0.031
20	9.196	33.073	9.194	25.601	239.9	0.057
30	9.192	33.380	9.189	25.840	217.3	0.080
40	9.281	33.577	9.276	25.981	204.2	0.101
50	9.221	33.604	9.216	26.011	201.6	0.121
60	8.880	33.720	8.873	26.157	187.9	0.141
70	8.660	33.765	8.653	26.227	181.4	0.160
80	8.471	33.820	8.463	26.299	174.8	0.177
83	8.461	33.823	8.453	26.302	174.4	0.182



STATION 4 FM4



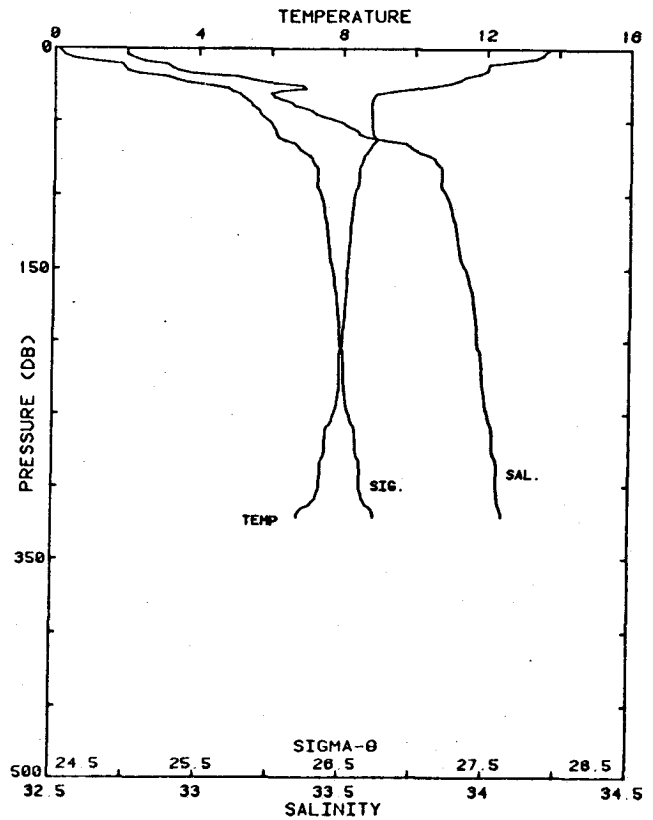
STATION 5 FM5

STA NO 5 FM5 LAT: 43 13.0 N LONG: 124 40.0 W
 9 SEP 1982 0149 GMT PROBE 2561 DEPTH 162M
 22.1 KM FROM SHORE

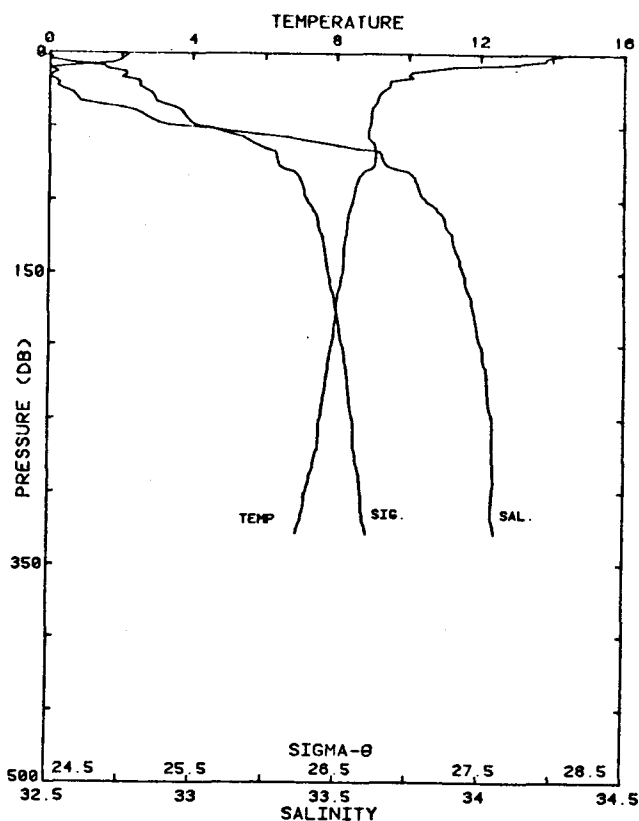
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	13.918	32.712	13.917	24.458	348.3	0.003
10	12.873	32.742	12.872	24.690	326.5	0.034
20	10.331	32.862	10.328	25.250	273.4	0.064
30	9.292	33.132	9.288	25.632	237.2	0.090
40	9.415	33.510	9.411	25.908	211.2	0.112
50	9.228	33.660	9.222	26.054	197.4	0.132
60	8.780	33.720	8.774	26.172	186.4	0.151
70	8.708	33.776	8.700	26.227	181.4	0.170
80	8.628	33.781	8.620	26.244	179.9	0.187
90	8.554	33.809	8.545	26.277	177.0	0.206
100	8.535	33.823	8.524	26.291	175.8	0.223
110	8.518	33.833	8.506	26.303	175.0	0.241
120	8.481	33.847	8.469	26.319	173.6	0.258
130	8.326	33.870	8.313	26.361	169.8	0.275
140	8.184	33.896	8.169	26.402	166.0	0.292
150	8.047	33.933	8.032	26.452	161.4	0.309
157	8.012	33.944	7.997	26.466	160.2	0.319

STA NO 6 FM6 LAT: 43 13.0 N LONG: 124 45.0 W
 9 SEP 1982 0229 GMT PROBE 2561 DEPTH 321M
 28.9 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	13.700	32.749	13.700	24.531	341.4	0.003
10	12.370	32.851	12.370	24.871	309.2	0.033
20	11.305	33.159	11.302	25.309	267.7	0.062
30	9.147	33.262	9.144	25.756	225.4	0.087
40	8.770	33.349	8.766	25.884	213.4	0.109
50	8.792	33.480	8.786	25.983	204.2	0.130
60	8.852	33.569	8.846	26.043	198.7	0.150
70	8.684	33.756	8.677	26.215	182.5	0.169
80	8.478	33.836	8.470	26.310	173.7	0.186
90	8.436	33.842	8.427	26.322	172.8	0.204
100	8.330	33.861	8.320	26.352	170.0	0.221
110	8.277	33.879	8.266	26.375	168.1	0.237
120	8.230	33.893	8.218	26.392	166.6	0.255
130	8.201	33.901	8.189	26.403	165.7	0.271
140	8.173	33.909	8.159	26.414	164.9	0.288
150	8.136	33.928	8.121	26.434	163.1	0.304
175	8.081	33.957	8.063	26.467	160.5	0.344
200	8.017	33.970	7.997	26.486	159.1	0.384
225	7.932	33.987	7.909	26.513	157.0	0.424
250	7.784	34.006	7.759	26.550	153.9	0.463
300	7.404	34.040	7.375	26.632	146.8	0.538
321	6.791	34.059	6.761	26.731	137.2	0.567



STATION 6 FM6



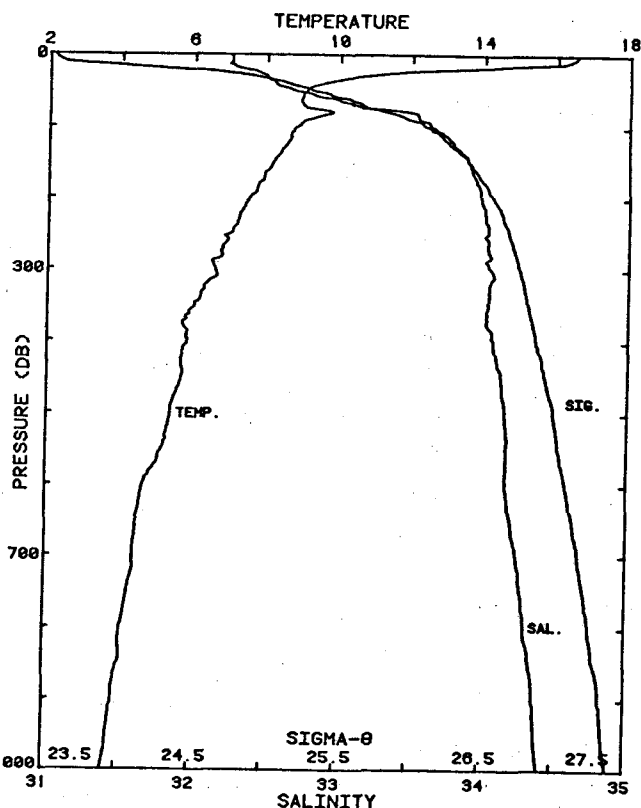
STATION 7 FM7

STA NO 7 ,FM7 LAT: 43 13.0 N LONG:124 50.0 W
 9 SEP 1982 0317 GMT PROBE 2561 DEPTH 334M
 35.6 KM FROM SHORE

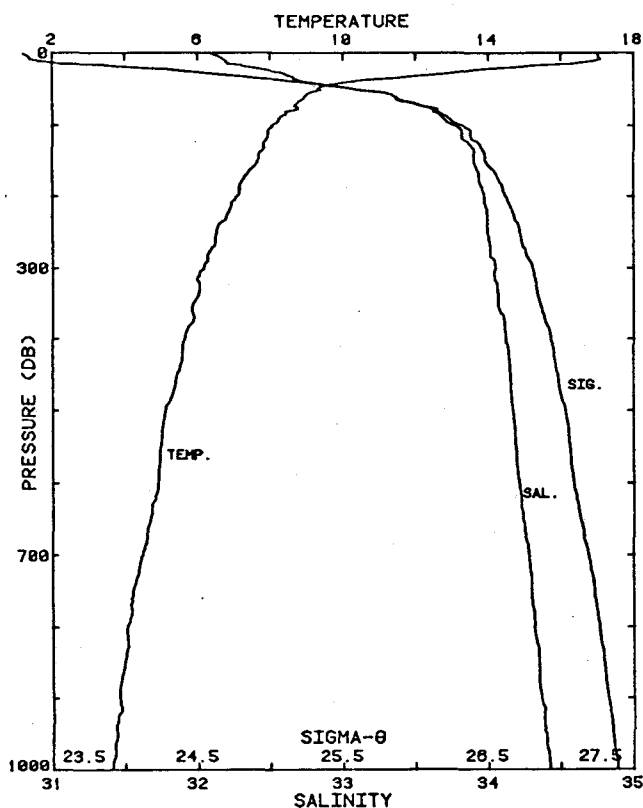
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	14.233	32.770	14.232	24.437	350.3	0.004
10	11.028	32.551	11.026	24.887	307.7	0.034
20	9.488	32.528	9.485	25.129	284.8	0.063
30	9.167	32.595	9.164	25.233	275.1	0.091
40	8.974	32.809	8.969	25.430	256.5	0.117
50	8.922	32.989	8.916	25.580	242.5	0.143
60	8.982	33.414	8.976	25.901	212.1	0.166
70	9.073	33.656	9.064	26.076	195.8	0.186
80	8.857	33.724	8.849	26.163	187.6	0.205
90	8.535	33.781	8.526	26.259	178.8	0.223
100	8.459	33.811	8.449	26.294	175.6	0.241
110	8.326	33.869	8.314	26.360	169.5	0.259
120	8.290	33.886	8.278	26.378	167.9	0.275
130	8.212	33.905	8.199	26.406	165.5	0.292
140	8.193	33.924	8.179	26.423	164.0	0.309
150	8.165	33.941	8.151	26.441	162.6	0.325
175	7.983	33.973	7.965	26.494	157.9	0.365
200	7.848	34.001	7.828	26.536	154.3	0.404
225	7.687	34.024	7.665	26.578	150.7	0.442
250	7.536	34.044	7.512	26.616	147.5	0.479
300	7.133	34.043	7.105	26.672	142.7	0.552
329	6.876	34.054	6.846	26.716	138.9	0.593

STA NO 8 ,FMB LAT: 43 13.0 N LONG:125 0.0 W
 9 SEP 1982 0419 GMT PROBE 2561 DEPTH 1066M
 49.1 KM FROM SHORE

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	16.524	32.255	16.524	23.541	435.8	0.004
10	16.235	32.254	16.233	23.606	429.8	0.044
20	13.065	32.336	13.062	24.340	360.1	0.083
30	10.587	32.496	10.584	24.920	304.9	0.116
40	9.532	32.557	9.527	25.145	283.7	0.145
50	9.071	32.688	9.066	25.321	267.1	0.172
60	8.947	32.926	8.941	25.526	247.8	0.199
70	8.997	33.101	8.989	25.655	235.7	0.222
80	9.771	33.508	9.762	25.847	217.8	0.245
90	9.085	33.559	9.076	25.999	203.5	0.266
100	8.812	33.641	8.802	26.106	193.5	0.286
110	8.668	33.722	8.656	26.193	185.4	0.305
120	8.602	33.779	8.590	26.247	180.4	0.323
130	8.463	33.820	8.450	26.301	175.5	0.341
140	8.323	33.875	8.308	26.365	169.5	0.359
150	8.186	33.896	8.170	26.403	166.2	0.375
175	7.906	33.951	7.888	26.487	158.5	0.416
200	7.523	33.983	7.504	26.568	151.1	0.455
225	7.255	34.015	7.233	26.632	145.3	0.491
250	7.003	34.028	6.980	26.677	141.4	0.527
300	6.615	34.055	6.588	26.752	134.9	0.596
400	5.862	34.076	5.828	26.866	124.8	0.725
500	5.415	34.160	5.373	26.988	114.2	0.845
600	4.683	34.169	4.637	27.080	105.7	0.955
800	4.114	34.308	4.054	27.252	90.6	1.151
1000	3.638	34.414	3.565	27.386	78.9	1.320
1005	3.633	34.415	3.560	27.387	78.8	1.324



STATION 8 FM8



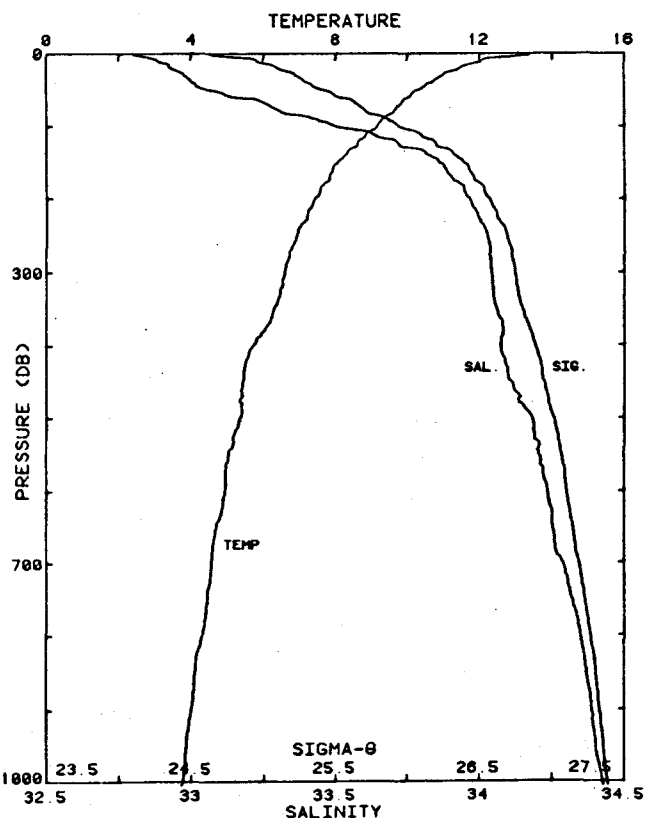
STATION 9 FM9

STA NO 9 ,FM9 LAT: 43 13.0 N LONG:125 10.0 W
9 SEP 1982 0542 GMT PROBE 2561 DEPTH 1656M
62.6 KM FROM SHORE

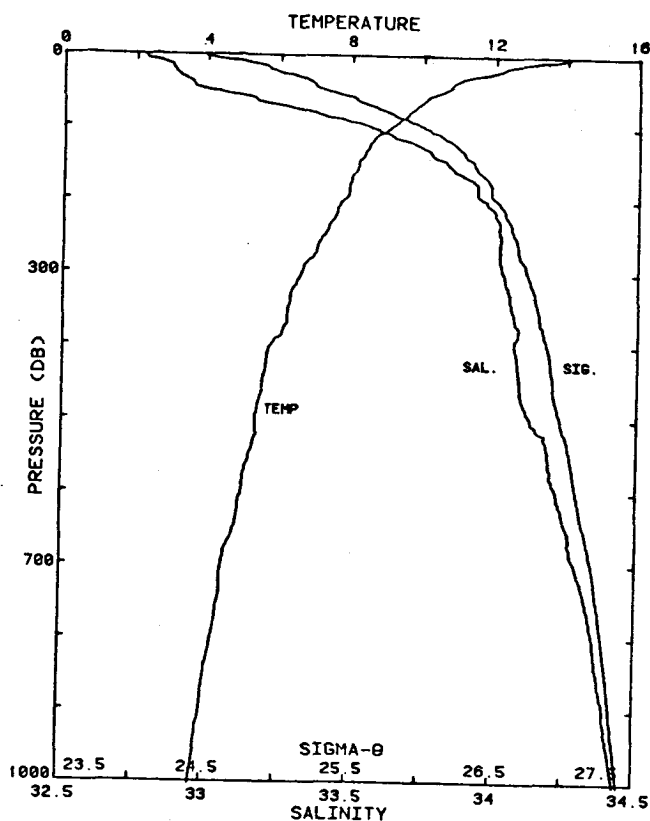
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	17.023	32.100	17.022	23.307	458.1	0.005
10	17.012	32.188	17.010	23.378	451.7	0.046
20	14.636	32.358	14.633	24.037	389.1	0.088
30	12.451	32.616	12.446	24.676	328.3	0.124
40	10.163	32.751	10.158	25.192	279.2	0.154
50	9.350	33.074	9.345	25.578	242.7	0.179
60	8.958	33.354	8.951	25.858	216.2	0.203
70	8.729	33.486	8.722	25.997	203.2	0.224
80	8.536	33.630	8.527	26.140	189.8	0.243
90	8.241	33.689	8.233	26.232	181.2	0.262
100	8.063	33.763	8.052	26.316	173.4	0.280
110	7.938	33.814	7.927	26.374	168.0	0.296
120	7.891	33.826	7.880	26.391	166.6	0.314
130	7.823	33.881	7.810	26.444	161.7	0.330
140	7.708	33.902	7.694	26.477	158.7	0.346
150	7.675	33.900	7.661	26.481	158.6	0.362
175	7.275	33.937	7.259	26.567	150.7	0.400
200	7.068	33.973	7.049	26.625	145.6	0.437
225	6.807	33.995	6.786	26.677	140.8	0.473
250	6.519	33.997	6.496	26.718	137.2	0.507
300	6.168	34.049	6.141	26.805	129.5	0.575
400	5.628	34.118	5.595	26.928	118.8	0.699
500	5.106	34.171	5.066	27.032	109.7	0.813
600	4.911	34.213	4.864	27.089	105.3	0.921
800	4.056	34.316	3.995	27.264	89.3	1.114
1000	3.635	34.424	3.562	27.394	78.1	1.282
1007	3.545	34.423	3.473	27.402	77.2	1.288

STA NO 10 ,CR9 LAT: 41 54.0 N LONG:125 20.0 W
9 SEP 1982 1331 GMT PROBE 2561 DEPTH 3089M
93.2 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	13.391	32.803	13.391	24.635	331.5	0.003
10	12.074	32.883	12.073	24.953	301.4	0.032
20	11.478	32.928	11.475	25.099	287.8	0.061
30	10.992	32.977	10.989	25.223	276.1	0.090
40	10.695	33.004	10.691	25.298	269.3	0.117
50	10.328	33.053	10.323	25.399	259.8	0.144
60	10.054	33.145	10.047	25.517	248.8	0.169
70	9.805	33.263	9.797	25.651	236.2	0.192
80	9.642	33.309	9.634	25.714	230.5	0.216
90	9.336	33.428	9.326	25.856	217.1	0.238
100	9.156	33.500	9.145	25.943	209.1	0.259
110	8.868	33.629	8.856	26.088	195.4	0.280
120	8.651	33.708	8.638	26.184	186.5	0.299
130	8.488	33.759	8.474	26.250	180.4	0.318
140	8.276	33.825	8.262	26.333	172.6	0.335
150	8.061	33.862	8.046	26.394	166.9	0.352
175	7.826	33.911	7.809	26.468	160.3	0.393
200	7.435	33.966	7.416	26.568	151.1	0.432
225	7.219	33.996	7.197	26.622	146.3	0.468
250	6.920	34.027	6.897	26.688	140.3	0.504
300	6.599	34.041	6.571	26.743	135.7	0.573
400	5.701	34.071	5.668	26.883	123.2	0.704
500	5.345	34.181	5.304	27.012	111.9	0.821
600	4.949	34.235	4.901	27.101	104.1	0.928
800	4.299	34.347	4.238	27.264	89.9	1.122
1000	3.753	34.424	3.678	27.383	79.4	1.291
1005	3.732	34.428	3.658	27.388	78.9	1.295



STATION 10 CR9



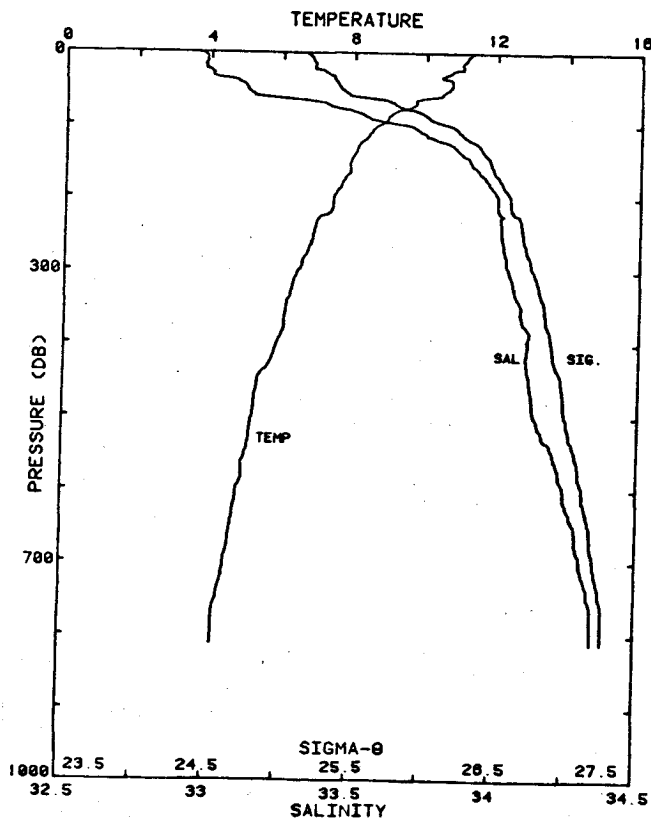
STATION 11 CR8

STA NO 11 CR8 LAT: 41 54.0 N LONG: 125 12.0 W
 9 SEP 1982 1451 GMT PROBE 2561 DEPTH 2302M
 82.2 KM FROM SHORE

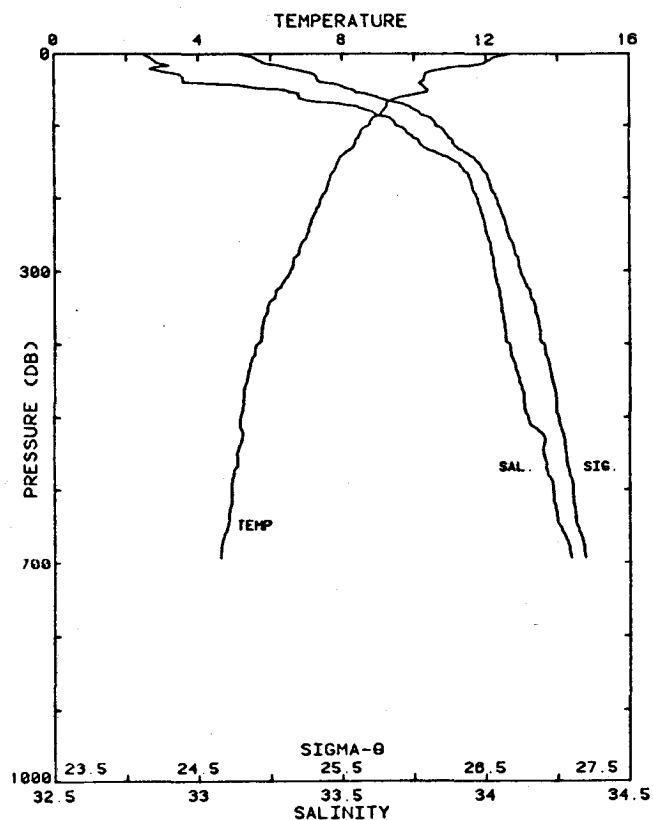
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	14.085	32.775	14.085	24.472	347.0	0.003
10	13.090	32.621	13.089	24.710	324.6	0.034
20	12.174	32.878	12.171	24.931	303.8	0.065
30	11.326	32.902	11.321	25.106	287.3	0.095
40	10.830	32.947	10.825	25.230	275.7	0.123
50	10.566	32.996	10.560	25.314	267.9	0.150
60	10.093	33.153	10.086	25.517	248.8	0.177
70	9.856	33.237	9.847	25.622	239.0	0.200
80	9.602	33.362	9.593	25.761	225.9	0.224
90	9.359	33.471	9.349	25.886	214.3	0.246
100	9.100	33.567	9.089	26.003	203.3	0.267
110	8.752	33.636	8.740	26.111	193.1	0.287
120	8.572	33.699	8.559	26.189	185.9	0.306
130	8.457	33.754	8.444	26.250	180.3	0.324
140	8.342	33.784	8.328	26.291	176.6	0.342
150	8.196	33.833	8.181	26.353	170.9	0.359
175	7.991	33.928	7.974	26.457	161.4	0.401
200	7.793	33.965	7.773	26.516	156.2	0.441
225	7.531	34.010	7.509	26.589	149.6	0.479
250	7.205	34.021	7.182	26.644	144.6	0.516
300	6.632	34.032	6.605	26.731	136.8	0.586
400	5.782	34.070	5.749	26.872	124.3	0.716
500	5.370	34.130	5.329	26.969	115.9	0.837
600	5.029	34.224	4.981	27.084	105.8	0.947
800	4.248	34.356	4.188	27.277	88.6	1.140
1000	3.685	34.435	3.612	27.398	77.8	1.307
1003	3.681	34.436	3.608	27.399	77.7	1.309

STA NO 12 CR7 LAT: 41 54.0 N LONG: 125 0.0 W
 9 SEP 1982 1623 GMT PROBE 2561 DEPTH 824M
 65.7 KM FROM SHORE LIN INT SAL. 257-263DB

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	11.264	32.955	11.264	25.158	281.7	0.003
10	11.127	32.986	11.125	25.207	277.2	0.028
20	11.023	32.982	11.021	25.222	276.0	0.056
30	10.569	33.008	10.566	25.323	266.7	0.083
40	10.702	33.096	10.697	25.368	262.6	0.109
50	10.620	33.126	10.614	25.406	259.2	0.135
60	10.297	33.171	10.290	25.496	250.8	0.161
70	9.701	33.403	9.693	25.777	224.3	0.184
80	9.168	33.492	9.160	25.934	209.5	0.206
90	8.916	33.553	8.906	26.021	201.3	0.226
100	8.644	33.693	8.634	26.173	187.2	0.246
110	8.448	33.739	8.437	26.240	180.9	0.265
120	8.295	33.789	8.283	26.301	175.2	0.282
130	8.098	33.851	8.085	26.380	167.9	0.300
140	8.019	33.877	8.005	26.413	165.0	0.316
150	7.912	33.906	7.897	26.451	161.5	0.333
175	7.749	33.962	7.732	26.519	155.4	0.372
200	7.447	34.004	7.428	26.596	148.5	0.410
225	7.118	34.025	7.097	26.658	142.8	0.447
250	6.899	34.019	6.876	26.684	140.6	0.483
300	6.486	34.046	6.459	26.761	133.9	0.551
400	5.905	34.112	5.871	26.889	122.7	0.679
500	5.258	34.139	5.218	26.990	113.8	0.797
600	4.855	34.245	4.808	27.121	102.2	0.905
800	4.252	34.348	4.192	27.269	89.3	1.094
811	4.242	34.349	4.181	27.271	89.2	1.104



STATION 12 CR7

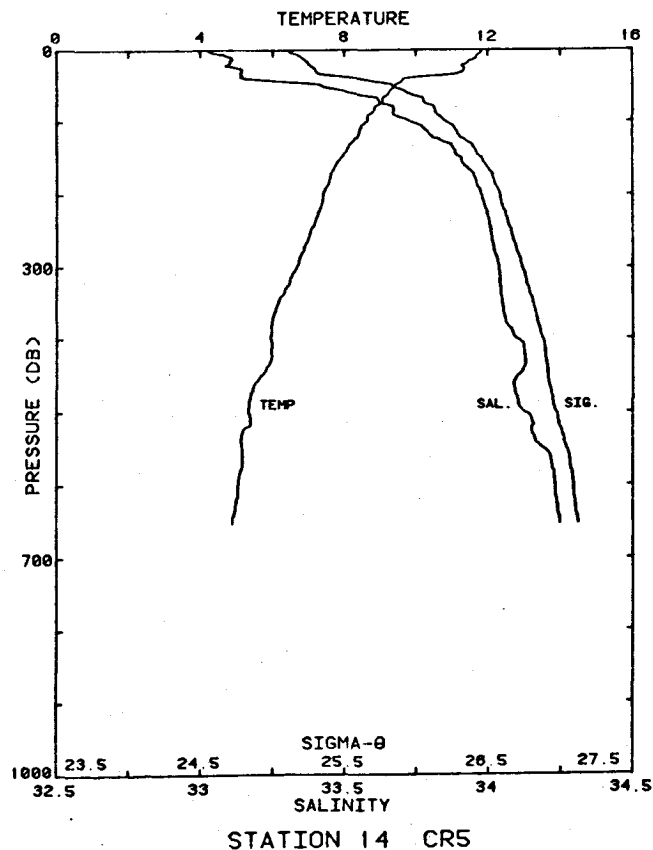


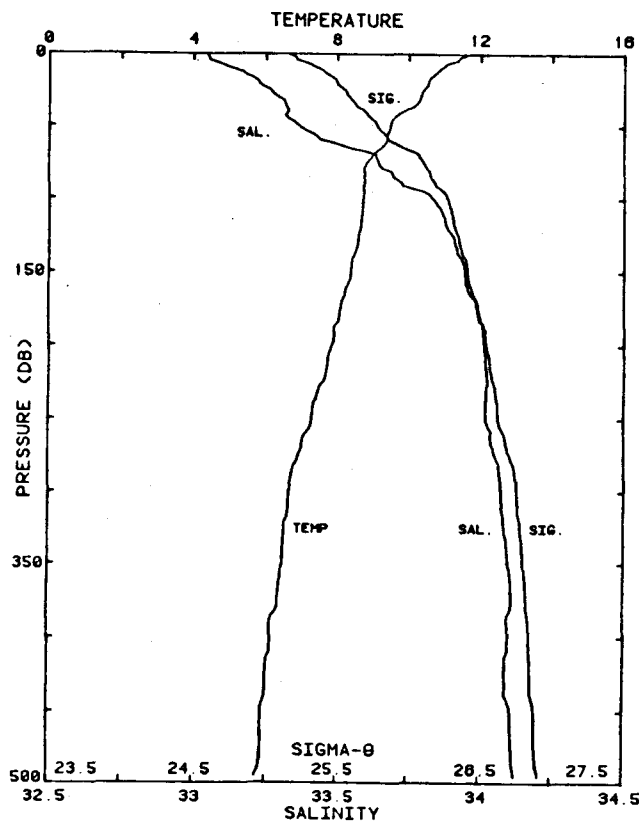
STA NO 13 ,CR6 LAT: 41 54.0 N LONG:124 48.0 W
 9 SEP 1982 1756 GMT PROBE 2561 DEPTH 689M
 49.2 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.659	32.810	12.659	24.785	317.2	0.003
10	12.068	32.847	12.067	24.926	304.0	0.031
20	10.920	32.838	10.917	25.128	284.9	0.060
30	10.301	32.940	10.297	25.315	267.3	0.088
40	10.155	32.997	10.150	25.385	260.9	0.115
50	10.377	33.297	10.371	25.580	242.6	0.140
60	9.595	33.350	9.590	25.753	226.3	0.163
70	9.243	33.506	9.236	25.931	209.5	0.185
80	9.120	33.601	9.111	26.026	200.7	0.206
90	8.845	33.667	8.837	26.122	191.8	0.225
100	8.737	33.692	8.727	26.157	188.6	0.244
110	8.522	33.729	8.511	26.219	182.8	0.263
120	8.392	33.767	8.380	26.270	178.2	0.281
130	8.299	33.788	8.286	26.301	175.4	0.299
140	8.025	33.850	8.011	26.390	167.1	0.316
150	7.874	33.901	7.859	26.452	161.3	0.332
175	7.632	33.949	7.615	26.526	154.8	0.371
200	7.415	33.970	7.396	26.573	150.6	0.410
225	7.194	33.989	7.173	26.620	146.4	0.447
250	7.017	34.004	6.994	26.656	143.3	0.484
300	6.549	34.030	6.522	26.741	135.8	0.553
400	5.609	34.081	5.576	26.901	121.3	0.681
500	5.172	34.147	5.132	27.007	112.1	0.797
600	4.928	34.233	4.880	27.103	103.9	0.904
693	4.603	34.295	4.549	27.189	96.3	0.998

STA NO 14 ,CR5 LAT: 41 54.0 N LONG:124 42.0 W
 9 SEP 1982 1906 GMT PROBE 2561 DEPTH 653M
 40.9 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	11.850	33.027	11.850	25.106	286.6	0.003
10	11.678	33.097	11.676	25.193	278.6	0.029
20	11.394	33.101	11.392	25.247	273.6	0.056
30	11.298	33.145	11.293	25.300	268.9	0.083
40	9.874	33.146	9.869	25.549	245.3	0.110
50	9.418	33.416	9.413	25.833	218.4	0.132
60	9.238	33.516	9.231	25.941	208.5	0.154
70	9.056	33.618	9.049	26.049	198.3	0.174
80	8.847	33.671	8.839	26.124	191.4	0.193
90	8.711	33.673	8.701	26.146	189.4	0.213
100	8.633	33.731	8.623	26.204	184.1	0.231
110	8.448	33.777	8.437	26.269	178.1	0.249
120	8.392	33.799	8.379	26.295	175.8	0.267
130	8.222	33.852	8.208	26.362	169.6	0.285
140	8.067	33.884	8.053	26.411	165.2	0.301
150	7.917	33.901	7.903	26.447	161.9	0.318
175	7.615	33.950	7.598	26.529	154.4	0.357
200	7.405	33.977	7.385	26.581	149.9	0.395
225	7.265	33.997	7.244	26.617	146.8	0.432
250	7.055	34.009	7.031	26.655	143.4	0.469
300	6.669	34.035	6.642	26.729	137.0	0.539
400	5.932	34.093	5.898	26.871	124.5	0.669
500	5.334	34.123	5.293	26.968	116.0	0.789
600	5.044	34.230	4.996	27.087	105.6	0.900
653	4.878	34.247	4.826	27.120	102.8	0.955





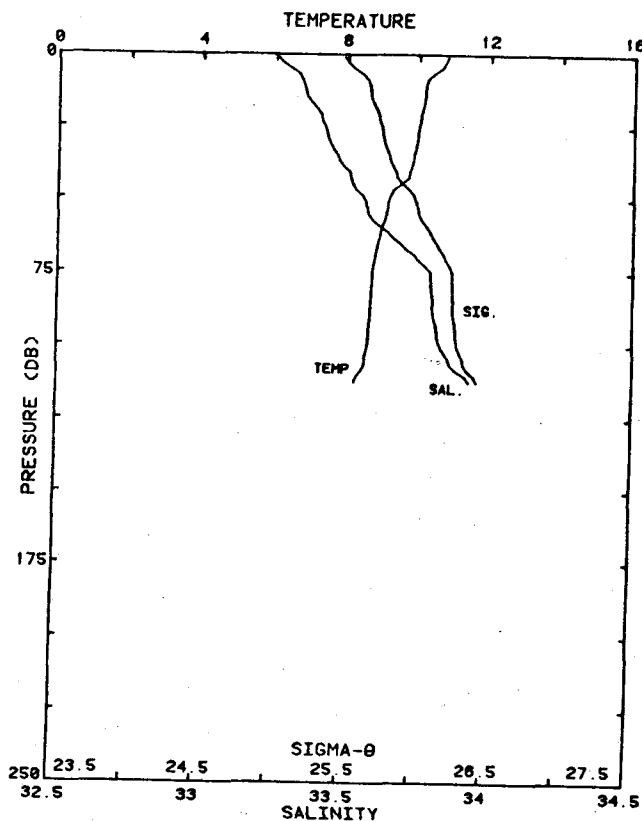
STATION 15 CR4

STA NO 15 ,CR4 LAT: 41 53.9 N LONG:124 35.9 W
 9 SEP 1982 2010 GMT PROBE 2561 DEPTH 495M
 32.5 KM FROM SHORE

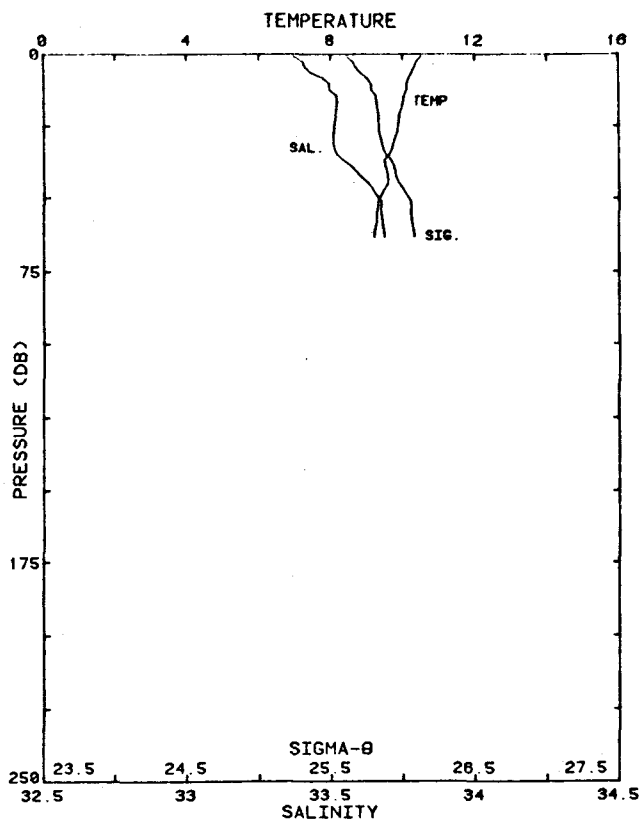
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	11.579	33.047	11.579	25.171	280.4	0.003
10	10.924	33.129	10.922	25.354	263.3	0.027
20	10.531	33.224	10.529	25.496	249.9	0.053
30	10.329	33.287	10.326	25.580	242.1	0.078
40	9.853	33.327	9.848	25.693	231.6	0.102
50	9.488	33.368	9.483	25.784	223.1	0.124
60	9.377	33.462	9.370	25.877	214.6	0.146
70	8.993	33.637	8.986	26.074	195.9	0.166
80	8.768	33.677	8.760	26.141	189.8	0.186
90	8.751	33.728	8.741	26.184	185.9	0.205
100	8.722	33.835	8.711	26.272	177.7	0.223
110	8.698	33.869	8.687	26.302	175.0	0.240
120	8.649	33.886	8.636	26.323	173.2	0.258
130	8.580	33.911	8.566	26.354	170.5	0.275
140	8.444	33.931	8.430	26.390	167.2	0.292
150	8.388	33.946	8.372	26.412	165.4	0.309
175	8.104	33.990	8.087	26.488	158.5	0.349
200	7.861	34.013	7.841	26.543	153.6	0.388
225	7.631	34.025	7.610	26.586	149.9	0.426
250	7.304	34.021	7.281	26.630	146.0	0.463
300	6.674	34.073	6.648	26.757	134.3	0.533
400	6.149	34.099	6.115	26.848	126.8	0.663
495	5.741	34.125	5.699	26.921	120.8	0.781

STA NO 16 ,CR3 LAT: 41 54.0 N LONG:124 28.9 W
 9 SEP 1982 2113 GMT PROBE 2561 DEPTH 118M
 22.9 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	10.795	33.254	10.795	25.473	251.7	0.003
10	10.202	33.344	10.201	25.646	235.4	0.025
20	10.083	33.402	10.081	25.712	229.4	0.048
30	9.967	33.439	9.964	25.760	225.0	0.071
40	9.798	33.500	9.793	25.837	218.0	0.093
50	9.203	33.563	9.196	25.983	204.2	0.114
60	8.979	33.631	8.972	26.072	196.0	0.134
70	8.802	33.747	8.795	26.190	184.9	0.153
80	8.720	33.799	8.712	26.244	180.0	0.171
90	8.697	33.808	8.688	26.254	179.2	0.189
100	8.630	33.831	8.620	26.283	176.6	0.207
110	8.385	33.901	8.374	26.375	168.0	0.224
113	8.252	33.933	8.241	26.421	163.7	0.229



STATION 16 CR3



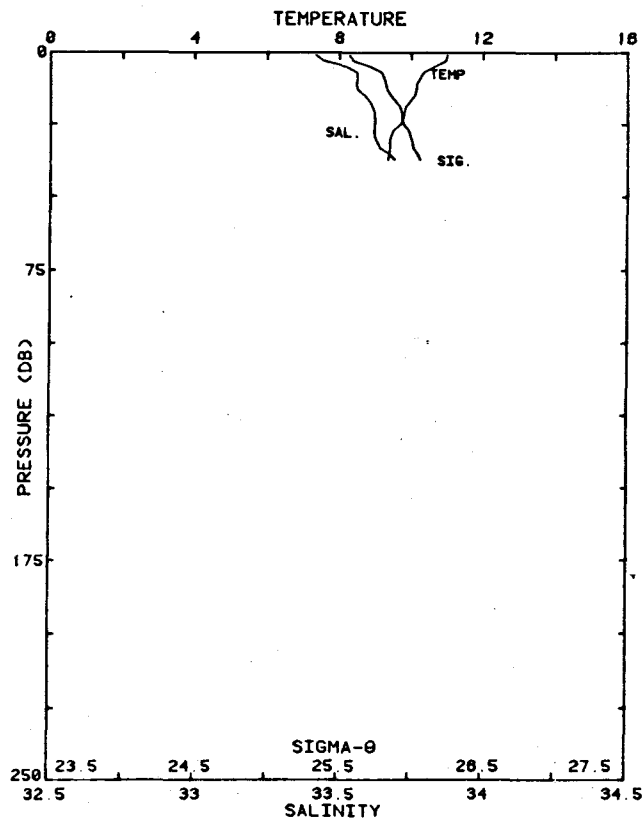
STATION 17 CR2

STA NO 17 CR2 LAT: 41 54.1 N LONG: 124 24.0 W
 9 SEP 1982 2156 GMT PROBE 2561 DEPTH 67M
 16.1 KM FROM SHORE

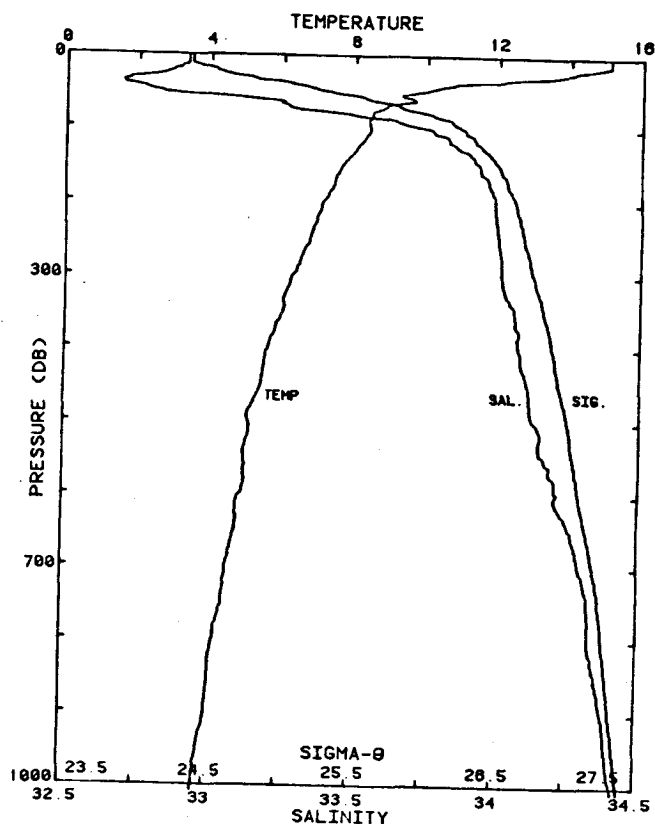
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	10.525	33.370	10.525	25.611	238.6	0.002
10	10.135	33.484	10.135	25.766	224.1	0.023
20	9.936	33.518	9.934	25.826	218.5	0.045
30	9.760	33.508	9.758	25.848	216.6	0.067
40	9.526	33.579	9.521	25.942	207.9	0.088
50	9.349	33.665	9.344	26.039	198.9	0.109
60	9.233	33.681	9.227	26.071	196.1	0.128
63	9.193	33.686	9.186	26.081	195.2	0.134

STA NO 18 CR1 LAT: 41 54.0 N LONG: 124 18.0 W
 9 SEP 1982 2242 GMT PROBE 2561 DEPTH 43M
 7.8 KM FROM SHORE

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	10.987	33.417	10.987	25.566	242.9	0.002
10	10.192	33.560	10.191	25.816	219.3	0.023
20	9.810	33.619	9.808	25.926	209.0	0.045
30	9.403	33.626	9.399	26.000	202.3	0.065
37	9.340	33.692	9.336	26.061	196.6	0.079



STATION 18 CR1



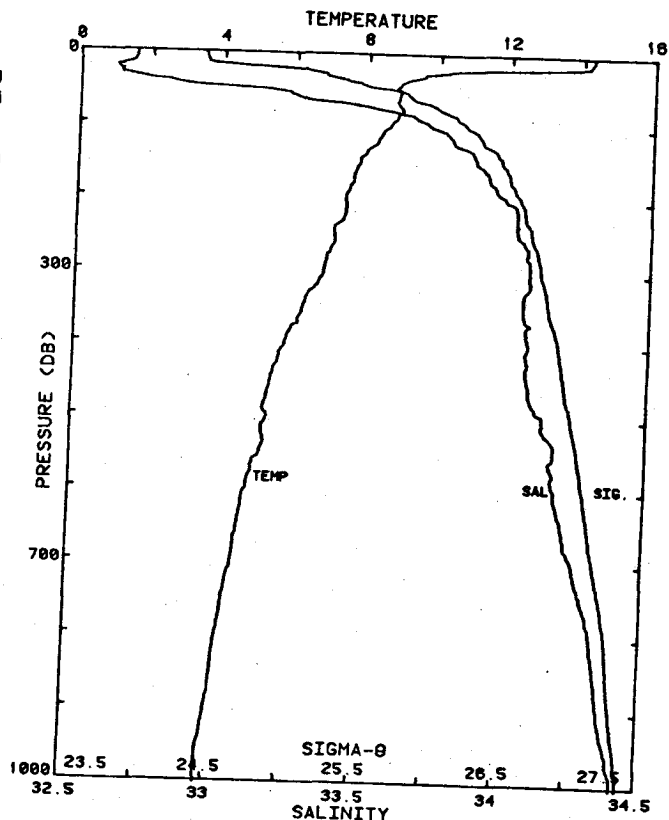
STATION 19 EUR7

STA NO 19 ,EUR7 LAT: 40 52.0 N LONG:124 56.0 W
 10 SEP 1982 0510 GMT PROBE 2561 DEPTH 2790M
 64.6 KM FROM SHORE

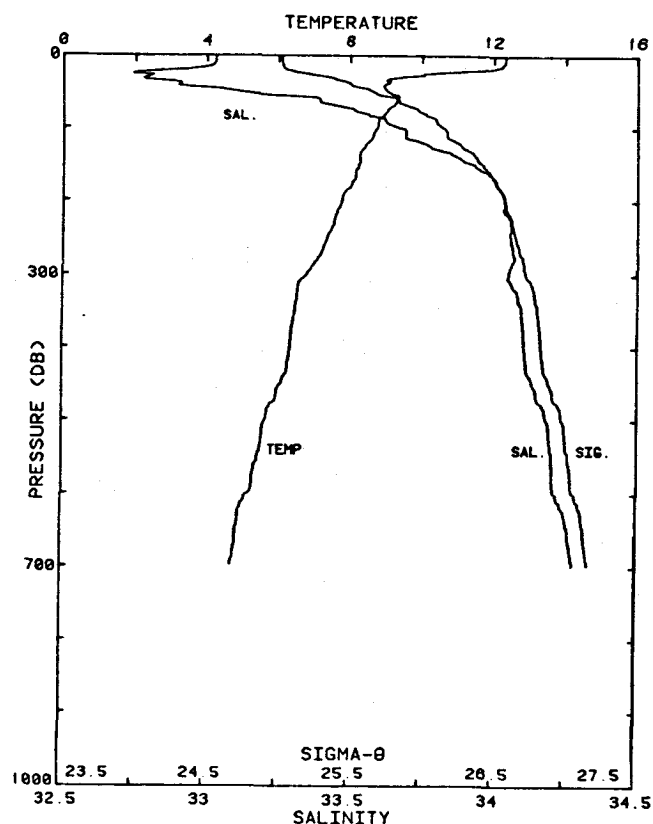
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	15.100	32.919	15.100	24.368	356.9	0.004
10	15.102	32.919	15.100	24.368	357.2	0.036
20	14.272	32.882	14.269	24.516	343.4	0.071
30	12.962	32.793	12.958	24.712	324.8	0.105
40	10.748	32.701	10.743	25.053	292.5	0.135
50	9.845	32.813	9.839	25.294	269.8	0.163
60	9.617	33.137	9.611	25.584	242.4	0.190
70	8.871	33.268	8.863	25.805	221.5	0.212
80	8.475	33.452	8.467	26.010	202.1	0.234
90	8.381	33.644	8.372	26.175	186.7	0.253
100	8.432	33.757	8.422	26.255	179.2	0.272
110	8.314	33.818	8.304	26.321	173.2	0.289
120	8.183	33.839	8.170	26.358	169.8	0.307
130	8.021	33.883	8.008	26.417	164.4	0.323
140	7.846	33.917	7.832	26.469	159.6	0.340
150	7.675	33.937	7.661	26.510	155.8	0.354
175	7.451	33.968	7.435	26.567	150.8	0.393
200	7.132	33.991	7.114	26.629	145.2	0.431
225	6.965	33.993	6.944	26.655	143.1	0.466
250	6.778	34.004	6.756	26.689	140.1	0.502
300	6.324	34.014	6.298	26.758	134.1	0.570
400	5.666	34.078	5.633	26.892	122.2	0.697
500	5.142	34.136	5.102	27.000	112.7	0.815
600	4.931	34.214	4.884	27.087	105.4	0.925
800	4.222	34.333	4.162	27.260	90.1	1.118
1000	3.701	34.422	3.628	27.386	79.0	1.287
1007	3.688	34.424	3.614	27.389	78.8	1.292

STA NO 20 ,EUR6 LAT: 40 52.0 N LONG:124 48.0 W
 10 SEP 1982 0636 GMT PROBE 2561 DEPTH 1502M
 53.4 KM FROM SHORE LIN INT SAL 245DB

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	14.287	32.697	14.287	24.370	356.8	0.004
10	14.208	32.688	14.207	24.381	356.0	0.036
20	11.978	32.637	11.975	24.778	318.3	0.071
30	9.562	32.641	9.559	25.205	277.7	0.100
40	8.977	32.777	8.973	25.404	259.0	0.126
50	8.844	33.103	8.839	25.680	233.0	0.152
60	8.856	33.255	8.850	25.797	222.0	0.174
70	8.832	33.433	8.825	25.941	208.6	0.196
80	8.960	33.584	8.951	26.038	199.5	0.216
90	8.806	33.673	8.797	26.132	190.8	0.236
100	8.630	33.723	8.620	26.198	184.7	0.254
110	8.415	33.783	8.403	26.279	177.2	0.272
120	8.300	33.802	8.288	26.311	174.3	0.290
130	8.076	33.853	8.063	26.385	167.4	0.307
140	7.914	33.876	7.900	26.427	163.6	0.324
150	7.816	33.887	7.800	26.451	161.5	0.340
175	7.653	33.934	7.636	26.511	156.1	0.379
200	7.441	33.993	7.422	26.587	149.2	0.418
225	7.418	34.033	7.397	26.623	146.3	0.454
250	7.139	34.036	7.116	26.665	142.6	0.491
300	6.874	34.079	6.846	26.735	136.6	0.560
400	5.852	34.081	5.818	26.871	124.4	0.690
500	5.401	34.137	5.359	26.971	115.7	0.811
600	4.904	34.187	4.857	27.069	107.1	0.922
800	4.205	34.326	4.144	27.257	90.3	1.119
1000	3.780	34.417	3.707	27.374	80.4	1.290
1003	3.780	34.417	3.706	27.374	80.3	1.292



STATION 20 EUR6

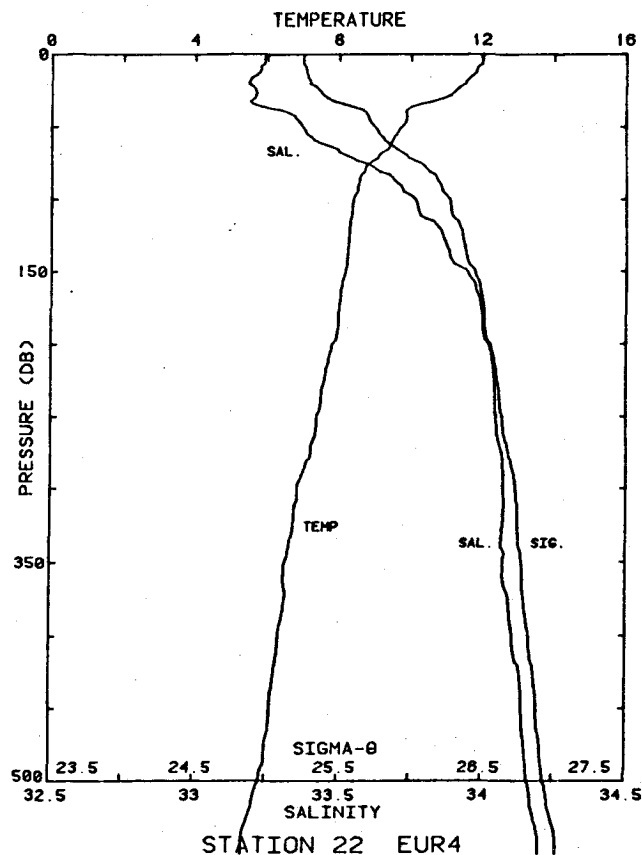


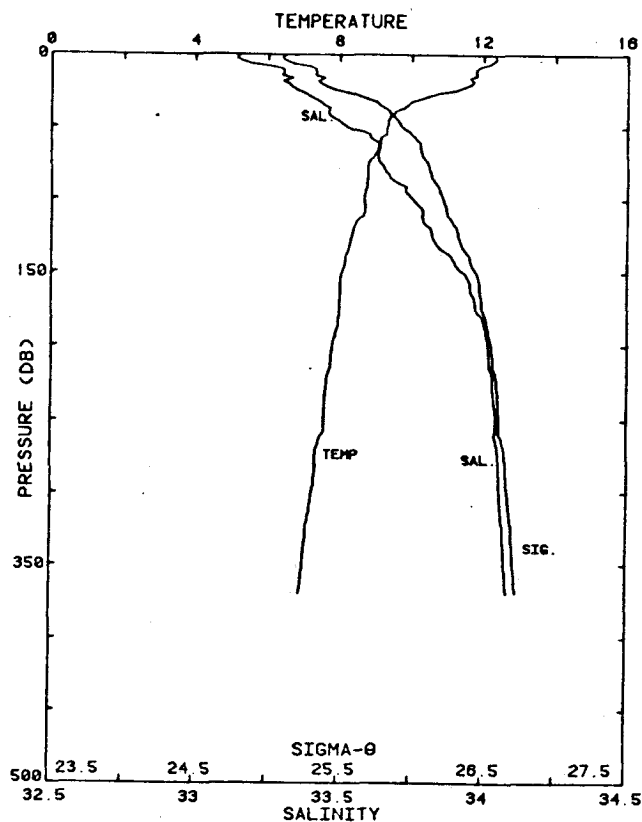
STA NO 21 ,EUR5 LAT: 40 52.1 N LONG:124 39.9 W
10 SEP 1982 0801 GMT PROBE 2561 DEPTH 700M
42.1 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.330	33.032	12.329	25.019	294.9	0.003
10	12.282	33.028	12.281	25.026	294.5	0.030
20	11.441	32.882	11.439	25.069	290.6	0.059
30	9.302	32.788	9.299	25.361	262.9	0.087
40	8.939	32.900	8.936	25.507	249.3	0.113
50	9.076	33.130	9.071	25.664	234.5	0.137
60	9.285	33.393	9.278	25.836	218.3	0.159
70	9.153	33.463	9.146	25.913	211.3	0.181
80	8.951	33.549	8.944	26.012	202.0	0.201
90	8.778	33.623	8.769	26.098	194.1	0.221
100	8.727	33.678	8.716	26.149	189.4	0.240
110	8.627	33.693	8.616	26.176	187.0	0.259
120	8.472	33.754	8.460	26.247	180.4	0.278
130	8.307	33.815	8.295	26.320	173.6	0.295
140	8.264	33.881	8.250	26.378	168.3	0.312
150	8.219	33.932	8.204	26.426	164.0	0.329
175	8.041	34.007	8.023	26.511	156.3	0.369
200	7.753	34.037	7.734	26.577	150.3	0.407
225	7.555	34.058	7.533	26.623	146.4	0.444
250	7.355	34.059	7.331	26.653	143.9	0.481
300	6.800	34.052	6.773	26.724	137.6	0.551
400	6.342	34.106	6.306	26.829	128.8	0.682
500	5.652	34.185	5.610	26.979	115.4	0.805
600	5.178	34.214	5.129	27.059	108.5	0.917
697	4.726	34.280	4.671	27.164	99.0	1.016

STA NO 22 ,EUR4 LAT: 40 52.0 N LONG:124 33.8 W
10 SEP 1982 0903 GMT PROBE 2561 DEPTH 546M
33.6 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	11.959	33.242	11.958	25.252	272.7	0.003
10	11.830	33.227	11.828	25.265	271.7	0.027
20	11.493	33.186	11.491	25.295	269.1	0.055
30	10.991	33.208	10.988	25.403	259.0	0.080
40	9.860	33.311	9.856	25.678	233.0	0.106
50	9.745	33.374	9.741	25.747	226.7	0.128
60	9.465	33.425	9.458	25.833	218.7	0.151
70	9.093	33.534	9.086	25.978	205.1	0.172
80	8.699	33.636	8.690	26.119	191.8	0.192
90	8.529	33.709	8.520	26.204	184.0	0.211
100	8.390	33.764	8.380	26.267	178.1	0.229
110	8.348	33.781	8.337	26.288	176.4	0.246
120	8.284	33.850	8.272	26.351	170.5	0.264
130	8.257	33.871	8.243	26.372	168.7	0.281
140	8.220	33.888	8.206	26.391	167.1	0.298
150	8.156	33.945	8.141	26.445	162.1	0.314
175	7.998	33.994	7.980	26.508	156.6	0.354
200	7.826	34.021	7.807	26.555	152.5	0.393
225	7.605	34.042	7.583	26.603	148.2	0.430
250	7.393	34.048	7.370	26.639	145.2	0.467
300	6.861	34.073	6.833	26.733	136.9	0.538
400	6.348	34.108	6.312	26.829	128.9	0.671
500	5.844	34.165	5.801	26.940	119.3	0.795
551	5.365	34.204	5.320	27.029	110.9	0.853





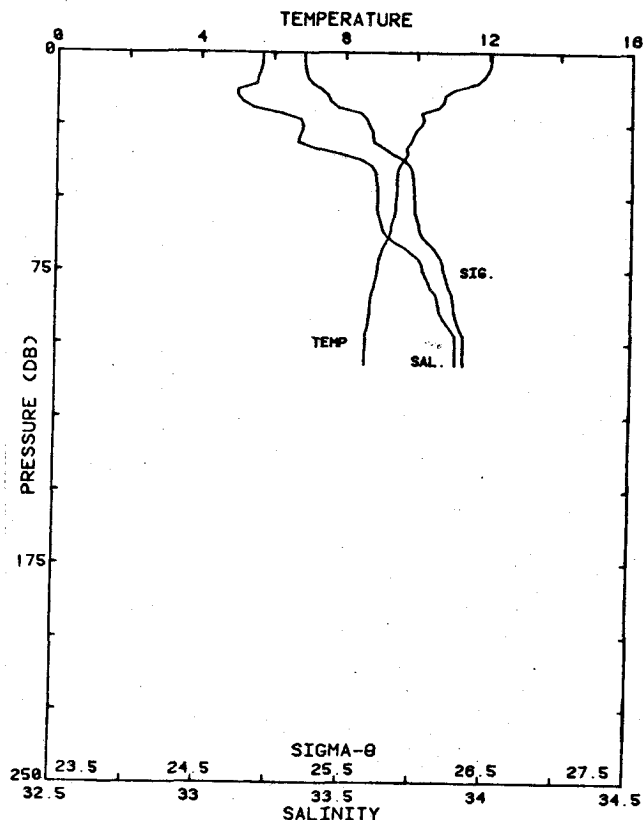
STATION 23 EUR3

STA NO 23 ,EUR3 LAT: 40 52.1 N LONG:124 28.0 W
 10 SEP 1982 1009 GMT PROBE 2561 DEPTH 370M
 25.5 KM FROM SHORE

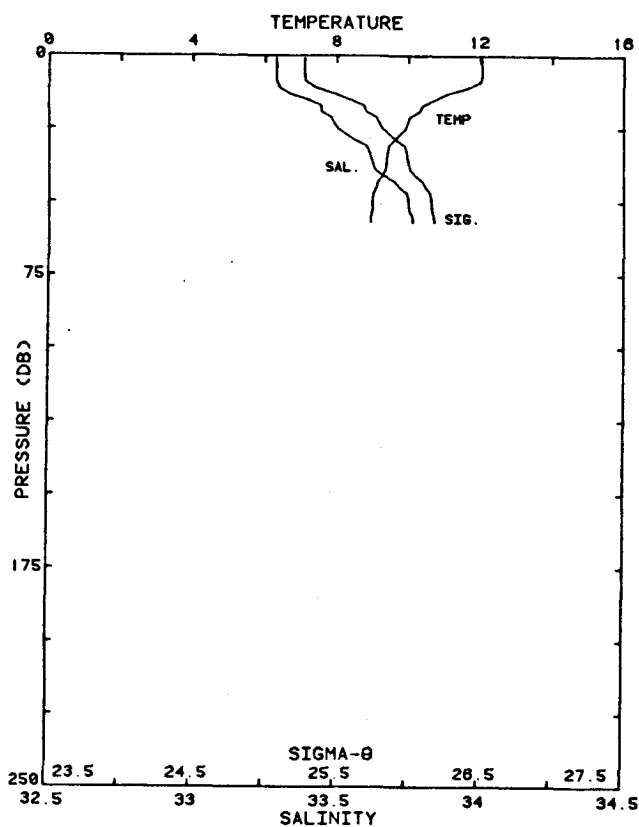
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.316	33.149	12.316	25.113	286.0	0.003
10	11.840	33.286	11.838	25.309	267.5	0.028
20	11.677	33.312	11.675	25.360	263.0	0.055
30	10.388	33.400	10.384	25.658	234.8	0.080
40	9.533	33.461	9.528	25.850	216.7	0.102
50	9.316	33.532	9.310	25.940	208.3	0.123
60	9.114	33.632	9.108	26.050	198.0	0.144
70	8.958	33.633	8.950	26.078	195.6	0.163
80	8.770	33.657	8.762	26.125	191.3	0.183
90	8.747	33.717	8.737	26.176	186.6	0.201
100	8.667	33.754	8.656	26.217	182.9	0.220
110	8.652	33.785	8.641	26.243	180.6	0.238
120	8.360	33.813	8.348	26.311	174.3	0.256
130	8.271	33.833	8.259	26.340	171.7	0.273
140	8.153	33.890	8.139	26.404	165.9	0.290
150	8.053	33.929	8.038	26.448	161.8	0.307
175	7.997	33.974	7.980	26.492	158.1	0.346
200	7.793	34.016	7.773	26.556	152.4	0.385
225	7.630	34.031	7.608	26.591	149.4	0.423
250	7.567	34.044	7.543	26.611	148.0	0.460
300	7.229	34.057	7.201	26.670	143.0	0.533
369	6.908	34.087	6.874	26.738	137.5	0.629

STA NO 24 ,EUR2 LAT: 40 52.0 N LONG:124 22.0 W
 10 SEP 1982 1110 GMT PROBE 2561 DEPTH 111M
 17.1 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.058	33.211	12.058	25.210	276.8	0.003
10	11.750	33.192	11.749	25.253	272.9	0.027
20	10.357	33.229	10.354	25.531	246.7	0.054
30	9.868	33.337	9.864	25.698	231.0	0.078
40	9.490	33.599	9.486	25.964	205.8	0.099
50	9.429	33.613	9.423	25.986	204.0	0.120
60	9.293	33.631	9.287	26.021	200.8	0.140
70	8.979	33.747	8.972	26.163	187.6	0.159
80	8.836	33.799	8.828	26.226	181.8	0.178
90	8.716	33.840	8.707	26.277	177.1	0.196
100	8.598	33.889	8.587	26.333	171.8	0.213
107	8.589	33.890	8.578	26.336	171.8	0.225



STATION 24 EUR2



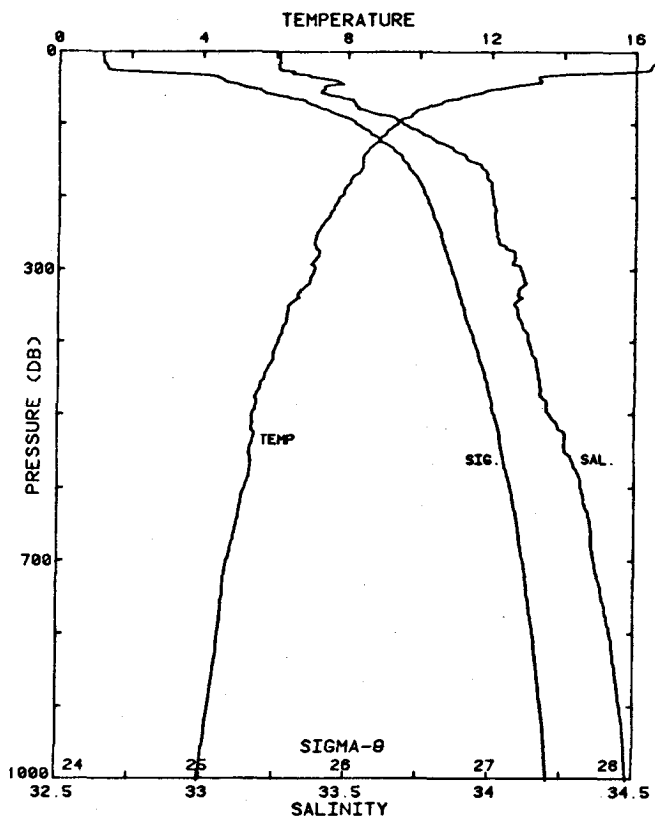
STATION 25 EUR1

STA NO 25 ,EUR1 LAT: 40 52.0 N LONG:124 16.0 W
10 SEP 1982 1155 GMT PROBE 2561 DEPTH 59M
8.7 KM FROM SHORE

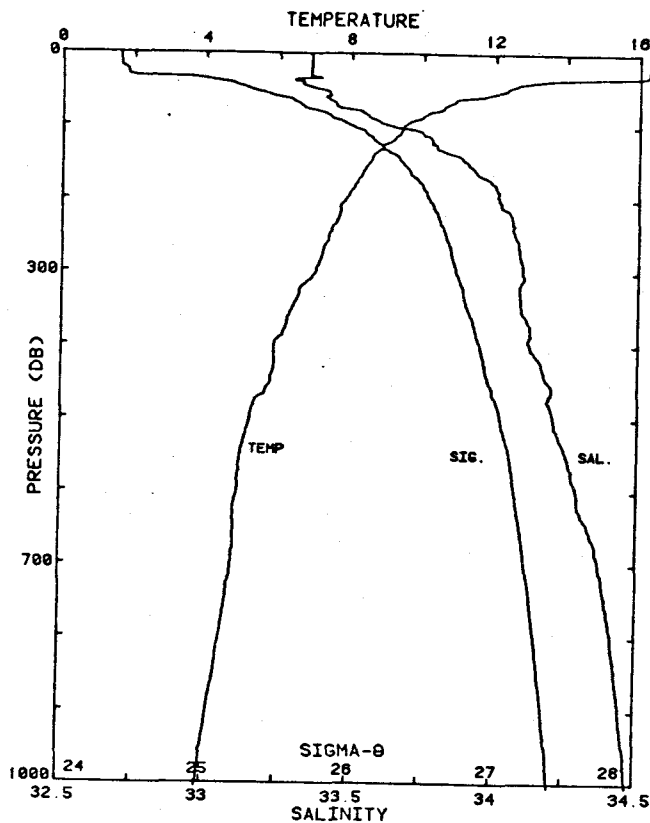
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.036	33.288	12.035	25.274	270.7	0.003
10	11.832	33.295	11.831	25.317	266.7	0.027
20	10.174	33.464	10.172	25.744	226.4	0.052
30	9.533	33.586	9.531	25.947	207.3	0.073
40	9.323	33.650	9.319	26.031	199.5	0.093
50	9.005	33.751	9.000	26.161	187.3	0.113
57	8.955	33.767	8.949	26.182	185.5	0.126

STA NO 26 ,PUR9 LAT: 34 45.0 N LONG:122 0.0 W
12 SEP 1982 0350 GMT PROBE 2561 DEPTH 4031M
124.9 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	16.565	33.261	16.565	24.302	363.2	0.004
10	16.557	33.261	16.556	24.304	363.3	0.036
20	16.426	33.259	16.423	24.333	360.9	0.072
30	15.007	33.310	15.003	24.686	327.5	0.108
40	13.348	33.444	13.343	25.139	284.5	0.138
50	12.402	33.417	12.395	25.305	269.0	0.166
60	11.411	33.435	11.403	25.504	250.2	0.192
70	10.617	33.523	10.609	25.715	230.3	0.215
80	10.014	33.546	10.005	25.837	218.8	0.237
90	9.748	33.653	9.737	25.965	206.9	0.259
100	9.366	33.692	9.355	26.058	198.2	0.279
110	9.085	33.746	9.073	26.146	190.0	0.299
120	8.901	33.791	8.887	26.211	184.0	0.317
130	8.694	33.844	8.680	26.284	177.2	0.336
140	8.502	33.888	8.487	26.347	171.2	0.353
150	8.406	33.921	8.391	26.389	167.5	0.370
175	8.087	33.984	8.069	26.486	158.7	0.410
200	7.786	34.004	7.766	26.547	153.3	0.450
225	7.500	34.010	7.478	26.593	149.2	0.487
250	7.144	34.020	7.120	26.651	143.9	0.524
300	7.091	34.104	7.063	26.725	137.7	0.595
400	6.067	34.129	6.033	26.882	123.6	0.725
500	5.367	34.204	5.326	27.028	110.4	0.841
600	5.167	34.312	5.118	27.138	101.0	0.947
800	4.454	34.417	4.391	27.302	86.6	1.133
1000	3.924	34.479	3.849	27.410	77.4	1.297
1003	3.923	34.480	3.848	27.410	77.4	1.299



STATION 26 PUR9



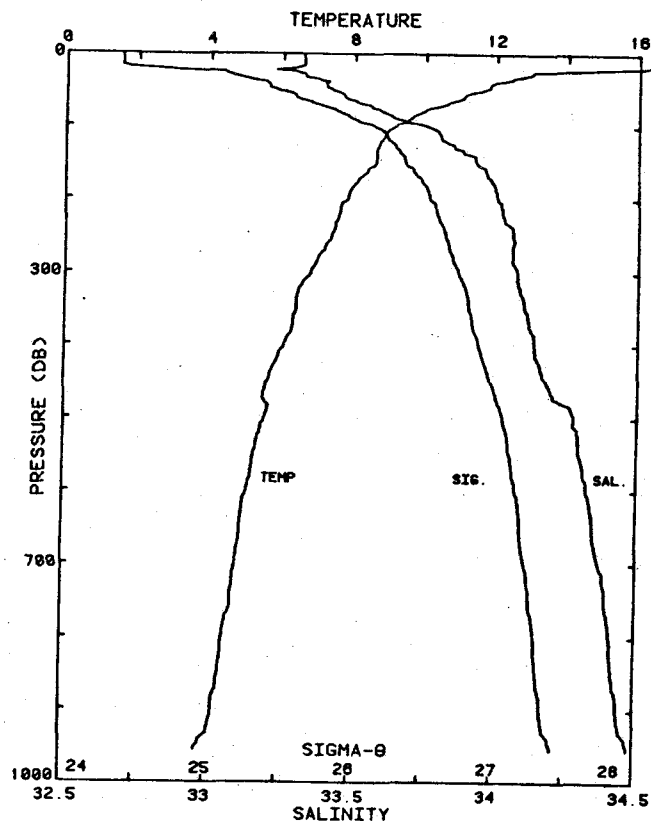
STATION 27 PUR8

STA NO 27 ,PUR8 LAT: 34 45.0 N LONG:121 48.0 W
 12 SEP 1982 0535 GMT PROBE 2561 DEPTH 2463M
 106.7 KM FROM SHORE LIN INT SAL 509-511DB

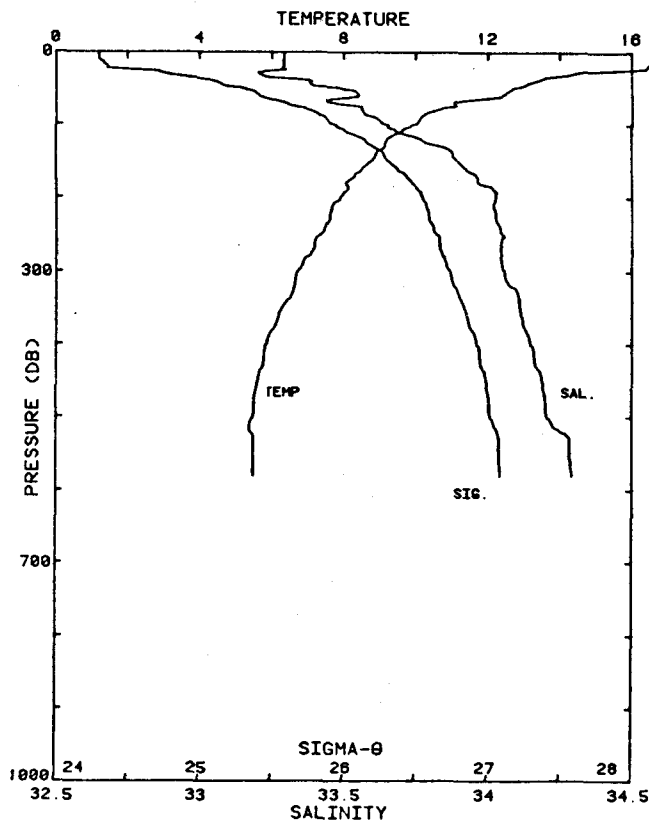
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	16.463	33.361	16.462	24.402	353.7	0.004
10	16.469	33.361	16.468	24.400	354.1	0.036
20	16.415	33.359	16.412	24.412	353.3	0.071
30	16.236	33.356	16.231	24.451	349.9	0.105
40	13.104	33.316	13.100	25.089	289.3	0.138
50	12.318	33.381	12.311	25.293	270.1	0.166
60	11.451	33.417	11.444	25.483	252.1	0.192
70	10.704	33.444	10.696	25.639	237.5	0.216
80	10.283	33.535	10.274	25.782	224.1	0.239
90	9.845	33.578	9.836	25.889	214.0	0.261
100	9.442	33.652	9.431	26.014	202.3	0.282
110	9.347	33.750	9.335	26.107	193.8	0.302
120	9.134	33.782	9.121	26.166	188.3	0.321
130	8.847	33.799	8.834	26.225	182.8	0.339
140	8.597	33.875	8.583	26.324	173.6	0.357
150	8.491	33.907	8.476	26.365	169.8	0.374
175	8.186	33.987	8.168	26.474	159.9	0.415
200	7.842	34.016	7.823	26.548	153.2	0.455
225	7.644	34.061	7.622	26.613	147.4	0.492
250	7.362	34.070	7.338	26.661	143.1	0.529
300	7.010	34.098	6.983	26.733	137.0	0.598
400	5.878	34.125	5.844	26.903	121.4	0.727
500	5.228	34.207	5.188	27.047	108.5	0.842
600	4.911	34.291	4.864	27.150	99.5	0.946
800	4.464	34.417	4.402	27.302	86.7	1.131
1000	3.868	34.474	3.793	27.410	77.1	1.295
1005	3.855	34.476	3.780	27.414	76.9	1.299

STA NO 28 ,PR7 LAT: 34 45.1 N LONG:121 35.9 W
 12 SEP 1982 0715 GMT PROBE 2561 DEPTH 933M
 88.3 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	16.395	33.321	16.395	24.386	355.2	0.004
10	16.404	33.324	16.402	24.388	355.4	0.036
20	15.618	33.294	15.615	24.541	341.0	0.071
30	12.798	33.327	12.793	25.158	282.4	0.101
40	11.914	33.404	11.909	25.387	260.8	0.128
50	11.610	33.422	11.604	25.458	254.4	0.155
60	11.055	33.467	11.048	25.595	241.6	0.178
70	10.547	33.537	10.539	25.737	228.1	0.203
80	9.946	33.597	9.937	25.888	214.0	0.224
90	9.557	33.652	9.547	25.996	203.9	0.245
100	9.153	33.760	9.142	26.145	189.9	0.265
110	8.884	33.802	8.873	26.221	182.8	0.284
120	8.765	33.817	8.752	26.252	180.0	0.302
130	8.660	33.858	8.647	26.300	175.7	0.319
140	8.652	33.919	8.638	26.350	171.2	0.337
150	8.623	33.931	8.608	26.364	170.0	0.354
175	8.121	33.986	8.104	26.483	159.0	0.395
200	7.850	34.007	7.831	26.540	153.9	0.434
225	7.570	34.028	7.548	26.598	148.8	0.471
250	7.385	34.061	7.360	26.649	144.2	0.507
300	6.819	34.076	6.791	26.741	136.0	0.578
400	6.089	34.136	6.055	26.885	123.4	0.707
500	5.571	34.276	5.529	27.061	107.6	0.822
600	5.106	34.324	5.057	27.155	99.4	0.925
800	4.477	34.412	4.415	27.297	87.2	1.112
955	3.765	34.481	3.694	27.426	75.0	1.241



STATION 28 PR7

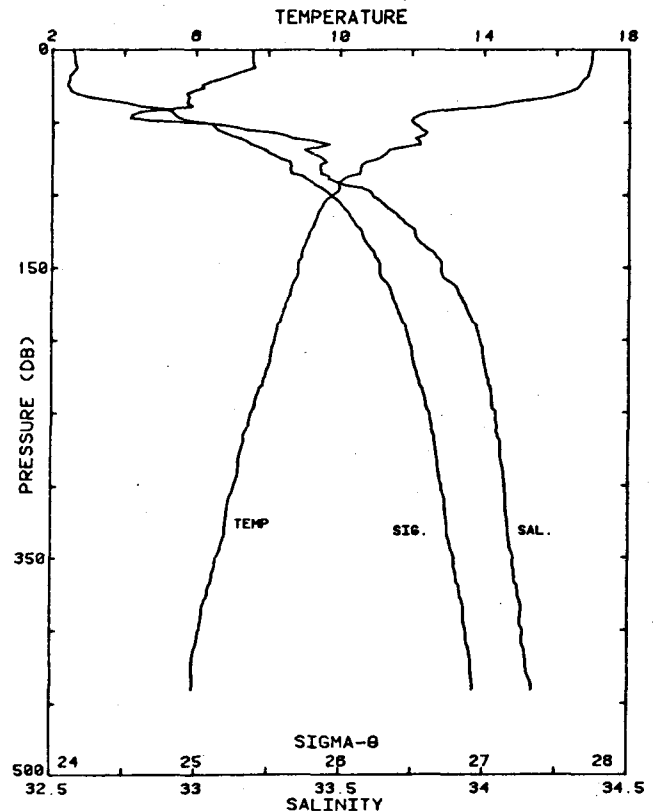


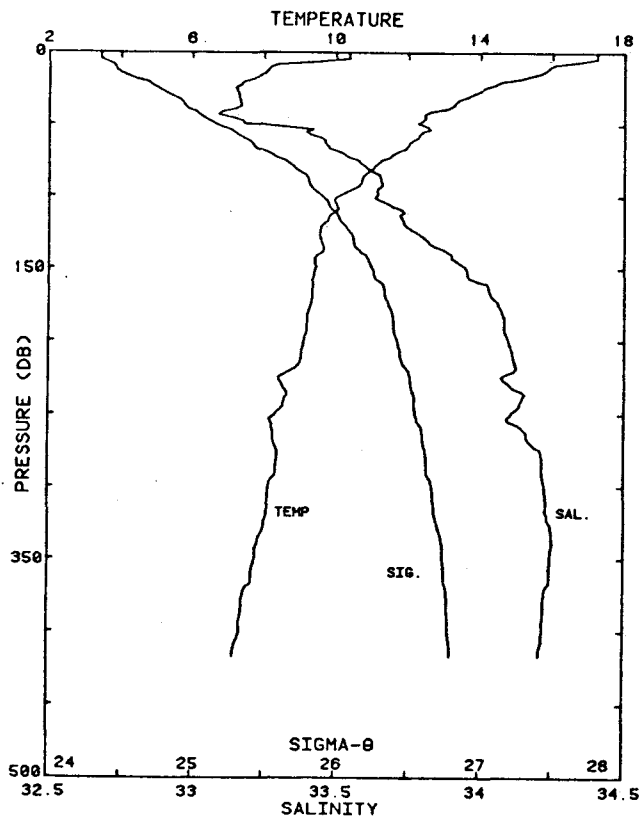
STA NO 29 ,PR6 LAT: 34 45.1 N LONG:121 24.0 W
12 SEP 1982 0900 GMT PROBE 2561 DEPTH 572M
70.2 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	16.682	33.294	16.682	24.300	363.4	0.004
10	16.684	33.292	16.683	24.298	363.9	0.036
20	16.422	33.292	16.419	24.358	358.5	0.072
30	14.330	33.207	14.326	24.754	321.0	0.106
40	13.324	33.381	13.318	25.096	288.7	0.137
50	12.674	33.485	12.667	25.305	269.0	0.165
60	12.368	33.550	12.360	25.414	258.8	0.192
70	11.040	33.458	11.032	25.590	242.2	0.216
80	10.574	33.563	10.565	25.753	226.9	0.240
90	10.130	33.608	10.119	25.865	216.4	0.262
100	9.944	33.646	9.932	25.927	210.7	0.284
110	9.576	33.687	9.564	26.020	202.0	0.304
120	9.212	33.763	9.199	26.139	190.9	0.324
130	9.146	33.832	9.132	26.204	184.9	0.343
140	8.901	33.879	8.886	26.279	177.9	0.361
150	8.767	33.895	8.752	26.313	174.9	0.379
175	8.177	33.965	8.159	26.458	161.3	0.420
200	7.898	34.027	7.878	26.548	153.2	0.460
225	7.609	34.026	7.588	26.590	149.5	0.497
250	7.385	34.048	7.361	26.639	145.1	0.535
300	6.732	34.058	6.704	26.739	136.2	0.604
400	5.861	34.148	5.827	26.923	119.5	0.733
500	5.484	34.206	5.444	27.016	111.7	0.847
581	5.483	34.292	5.434	27.085	106.3	0.934

STA NO 30 ,PR5 LAT: 34 45.0 N LONG:121 12.0 W
12 SEP 1982 1035 GMT PROBE 2561 DEPTH 443M
52.0 KM FROM SHORE LIN INT SAL 15-23DB

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	17.010	33.196	17.010	24.148	377.9	0.004
10	16.952	33.196	16.951	24.162	376.8	0.038
20	16.801	33.095	16.797	24.121	381.2	0.076
30	16.278	32.978	16.273	24.152	378.5	0.113
40	13.716	32.953	13.710	24.685	327.8	0.149
50	11.998	32.954	11.992	25.023	295.7	0.180
60	12.181	33.320	12.173	25.272	272.3	0.208
70	11.300	33.382	11.292	25.483	252.3	0.235
80	10.568	33.428	10.559	25.649	236.7	0.259
90	10.023	33.473	10.013	25.779	224.6	0.282
100	9.775	33.612	9.764	25.929	210.5	0.304
110	9.418	33.673	9.406	26.035	200.5	0.325
120	9.253	33.731	9.240	26.108	193.9	0.344
130	9.069	33.767	9.055	26.166	188.5	0.363
140	8.906	33.824	8.891	26.236	182.0	0.382
150	8.806	33.851	8.790	26.272	178.7	0.400
175	8.467	33.936	8.449	26.392	167.8	0.443
200	8.156	33.987	8.135	26.479	159.8	0.485
225	7.890	34.009	7.868	26.536	154.8	0.524
250	7.498	34.039	7.474	26.616	147.4	0.562
300	7.054	34.074	7.026	26.707	139.4	0.634
400	6.115	34.139	6.081	26.884	123.5	0.765
441	5.928	34.169	5.891	26.932	119.3	0.814



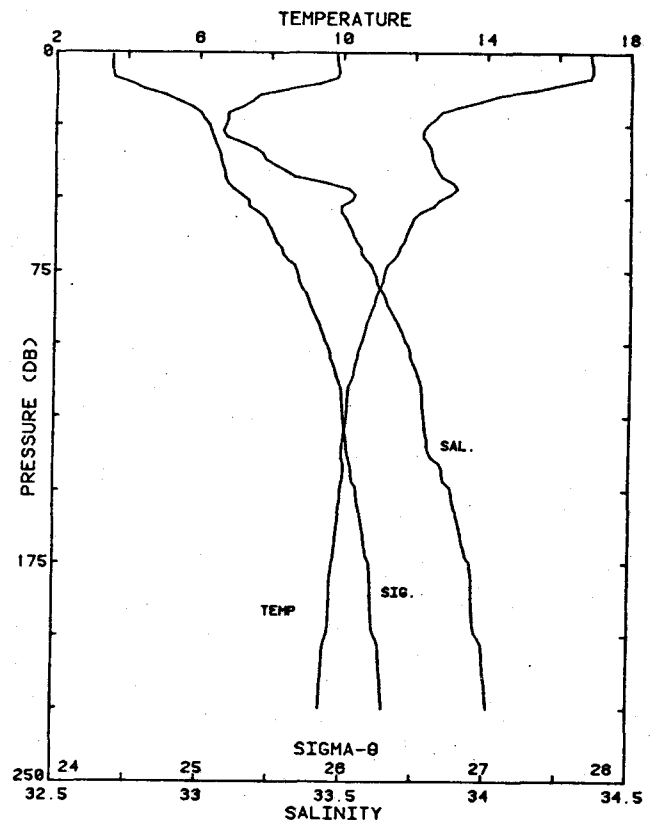


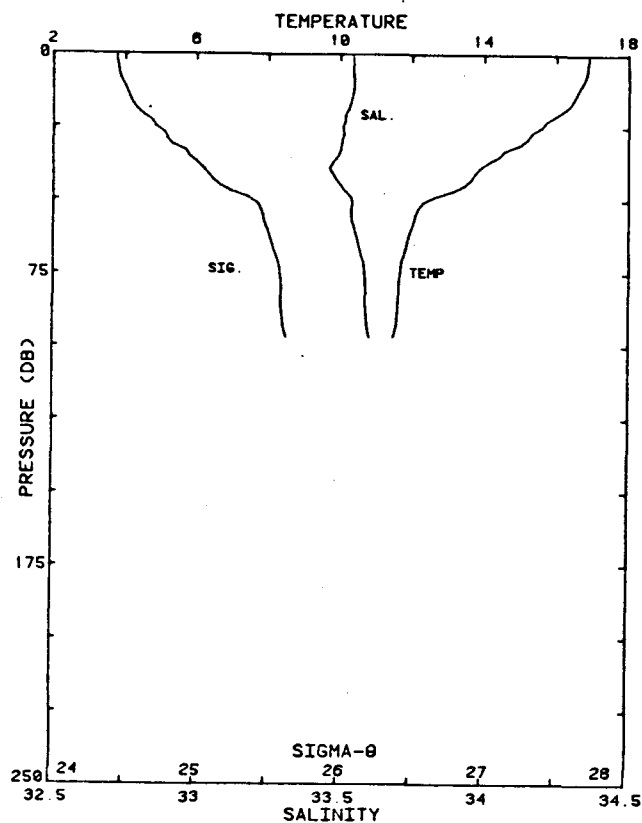
STA NO 31 ,PR4 LAT: 34 45.0 N LONG:121 0.1 W
12 SEP 1982 1208 GMT PROBE 2561 DEPTH 420M
33.9 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	17.241	33.545	17.241	24.361	357.6	0.004
10	15.981	33.283	15.980	24.452	349.2	0.036
20	14.807	33.192	14.805	24.641	331.5	0.070
30	13.738	33.159	13.734	24.840	312.8	0.102
40	12.837	33.124	12.832	24.993	298.4	0.133
50	12.382	33.246	12.375	25.176	281.2	0.162
60	12.182	33.453	12.175	25.375	262.5	0.189
70	11.626	33.520	11.617	25.531	247.9	0.214
80	11.031	33.604	11.021	25.705	231.5	0.238
90	10.682	33.657	10.672	25.808	221.9	0.261
100	10.040	33.638	10.029	25.905	212.9	0.282
110	9.994	33.729	9.981	25.983	205.6	0.303
120	9.598	33.739	9.585	26.057	198.7	0.324
130	9.563	33.812	9.549	26.120	193.0	0.343
140	9.536	33.894	9.521	26.188	186.7	0.362
150	9.422	33.950	9.405	26.252	180.9	0.381
175	9.275	34.064	9.255	26.364	170.7	0.424
200	9.090	34.099	9.069	26.422	165.7	0.467
225	8.394	34.074	8.371	26.512	157.3	0.507
250	8.297	34.108	8.271	26.553	153.8	0.546
300	8.139	34.227	8.108	26.670	143.6	0.621
400	7.347	34.221	7.308	26.783	134.2	0.758
417	7.165	34.209	7.125	26.800	132.7	0.781

STA NO 32 ,PR3 LAT: 34 45.0 N LONG:120 54.0 W
12 SEP 1982 1310 GMT PROBE 2561 DEPTH 229M
24.6 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	16.884	33.476	16.884	24.392	354.6	0.004
10	16.474	33.442	16.473	24.461	348.3	0.036
20	12.934	33.121	12.931	24.971	299.9	0.068
30	12.257	33.118	12.253	25.101	287.8	0.097
40	12.582	33.281	12.576	25.165	282.1	0.126
50	12.818	33.535	12.812	25.315	268.1	0.153
60	11.854	33.524	11.847	25.492	251.4	0.179
70	11.470	33.572	11.461	25.601	241.3	0.204
80	11.083	33.624	11.074	25.711	231.0	0.228
90	10.770	33.674	10.759	25.806	222.1	0.250
100	10.517	33.723	10.505	25.889	214.5	0.272
110	10.313	33.760	10.300	25.953	208.6	0.293
120	10.139	33.778	10.125	25.997	204.5	0.313
130	10.064	33.790	10.049	26.020	202.6	0.334
140	10.026	33.827	10.010	26.055	199.5	0.354
150	9.980	33.882	9.962	26.106	194.9	0.374
175	9.749	33.951	9.729	26.199	186.6	0.421
200	9.617	33.977	9.595	26.241	183.1	0.468
225	9.436	34.016	9.412	26.302	177.7	0.513





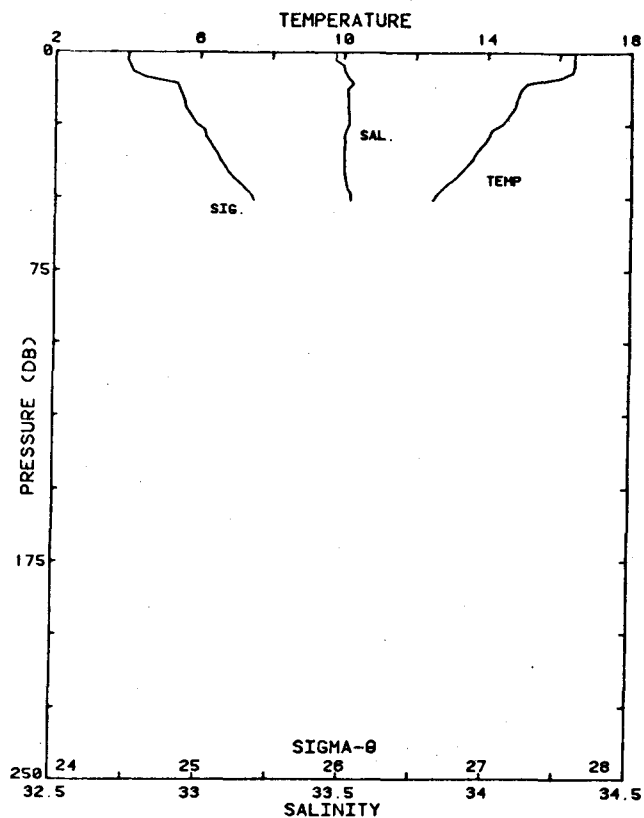
STATION 33 PR2

STA NO 33 ,PR2 LAT: 34 45.1 N LONG:120 48.1 W
 12 SEP 1982 1405 GMT PROBE 2561 DEPTH 100M
 15.7 KM FROM SHORE

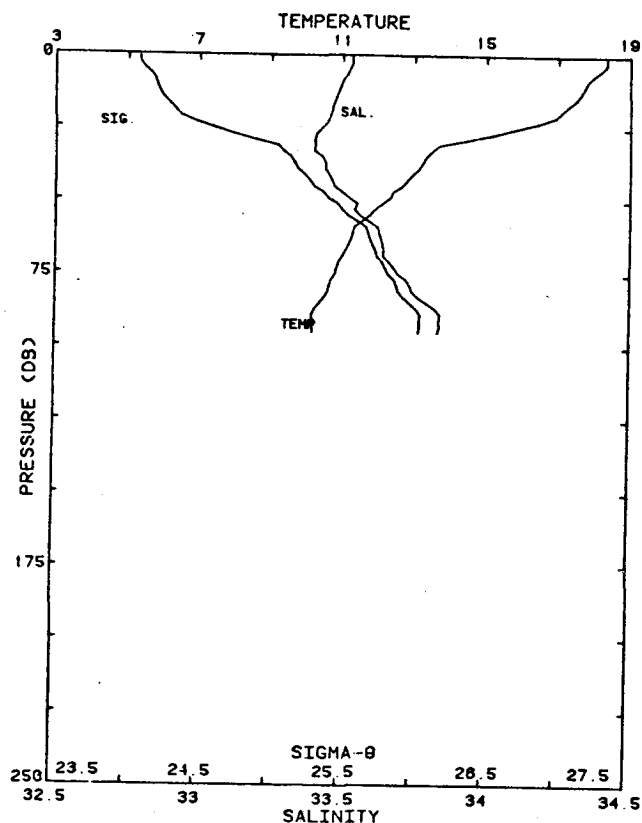
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	16.904	33.545	16.904	24.440	350.0	0.004
10	16.706	33.547	16.704	24.488	345.8	0.034
20	16.105	33.522	16.101	24.608	334.7	0.069
30	15.120	33.507	15.115	24.815	315.2	0.101
40	13.810	33.468	13.805	25.063	291.8	0.132
50	12.463	33.539	12.456	25.388	261.1	0.160
60	11.972	33.550	11.964	25.490	251.6	0.185
70	11.726	33.576	11.717	25.556	245.5	0.209
80	11.621	33.587	11.611	25.584	243.1	0.235
90	11.580	33.591	11.569	25.596	242.3	0.259
97	11.469	33.603	11.457	25.625	239.6	0.276

STA NO 34 ,PR1 LAT: 34 45.0 N LONG:120 42.0 W
 12 SEP 1982 1453 GMT PROBE 2561 DEPTH 56M
 6.4 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	16.409	33.470	16.409	24.497	344.6	0.003
10	15.555	33.521	15.553	24.729	322.7	0.034
20	14.700	33.514	14.697	24.912	305.7	0.065
30	13.984	33.500	13.980	25.053	292.5	0.095
40	13.341	33.500	13.335	25.184	280.3	0.124
50	12.519	33.522	12.513	25.364	263.4	0.150
51	12.477	33.522	12.470	25.371	262.7	0.153



STATION 34 PR1

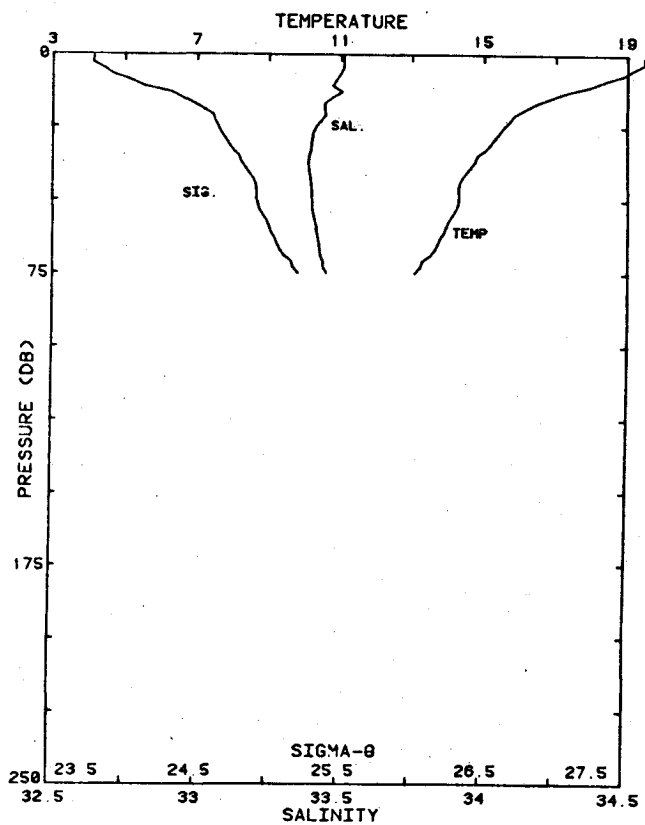


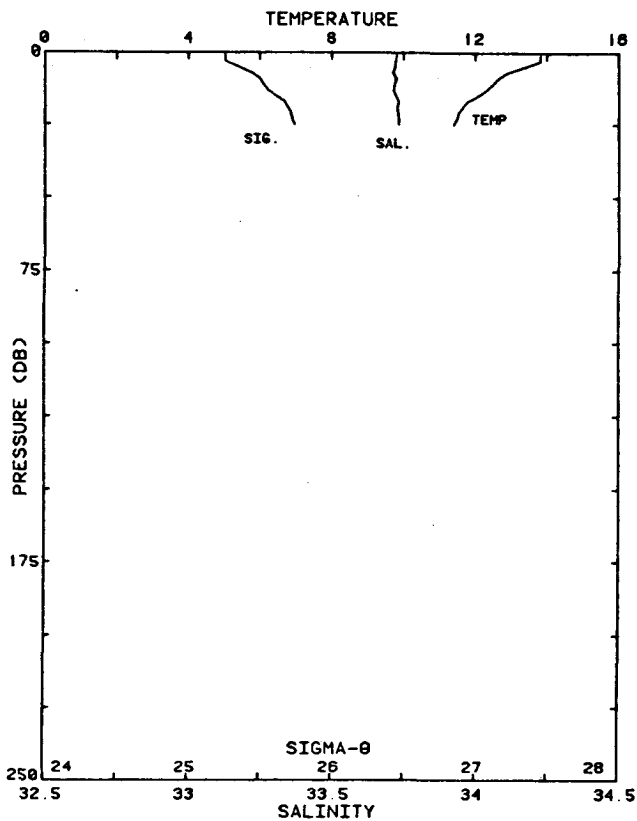
STA NO 35 , LAT: 34 23.3 N LONG:120 25.1 W
12 SEP 1982 2100 GMT PROBE 2561 DEPTH 98M
7.4 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	18.356	33.531	18.356	24.080	384.4	0.004
10	17.761	33.496	17.759	24.198	373.4	0.038
20	16.993	33.457	16.990	24.353	359.0	0.075
30	14.037	33.401	14.033	24.964	301.0	0.108
40	13.015	33.444	13.010	25.206	278.1	0.137
50	12.222	33.537	12.217	25.432	256.9	0.163
60	11.300	33.625	11.293	25.672	234.3	0.189
70	10.936	33.652	10.927	25.759	226.2	0.212
80	10.605	33.739	10.596	25.885	214.3	0.233
90	10.160	33.840	10.149	26.041	199.7	0.254
95	10.175	33.834	10.164	26.034	200.5	0.264

STA NO 36 , LAT: 34 22.4 N LONG:120 2.5 W
12 SEP 1982 2332 GMT PROBE 2561 DEPTH 80M
9.6 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	19.469	33.509	19.469	23.783	412.7	0.004
10	18.174	33.477	18.173	24.083	384.4	0.041
20	15.962	33.445	15.958	24.581	337.2	0.076
30	15.222	33.397	15.217	24.709	325.3	0.109
40	14.543	33.388	14.538	24.849	312.3	0.141
50	14.270	33.398	14.263	24.915	306.3	0.172
60	13.896	33.413	13.887	25.004	298.0	0.202
70	13.371	33.431	13.361	25.125	286.7	0.231
75	13.063	33.448	13.053	25.200	279.7	0.246





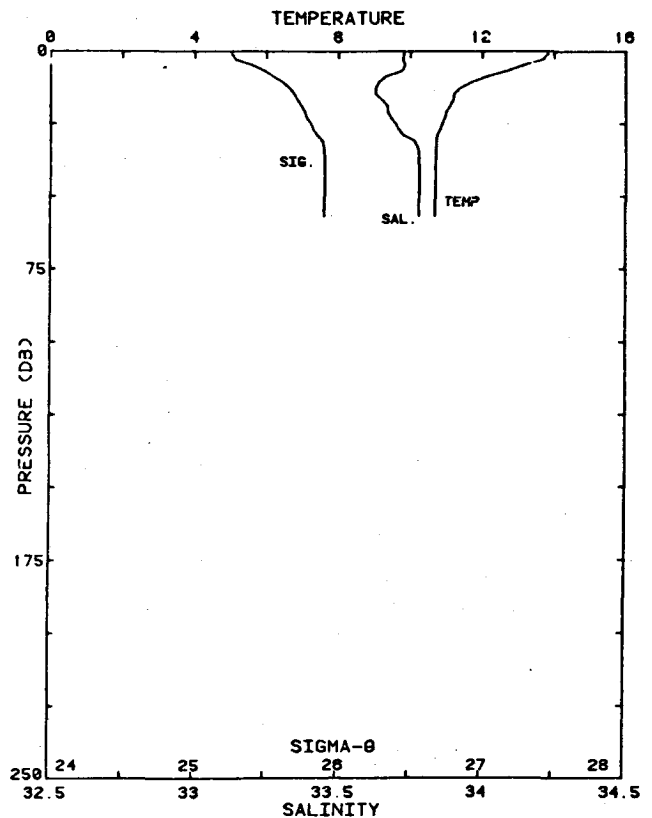
STATION 37 HM1

STA NO 37 ,HM1 LAT: 37 24.5 N LONG:122 28.2 W
 13 SEP 1982 2327 GMT PROBE 2561 DEPTH 30M
 3.4 KM FROM SHORE

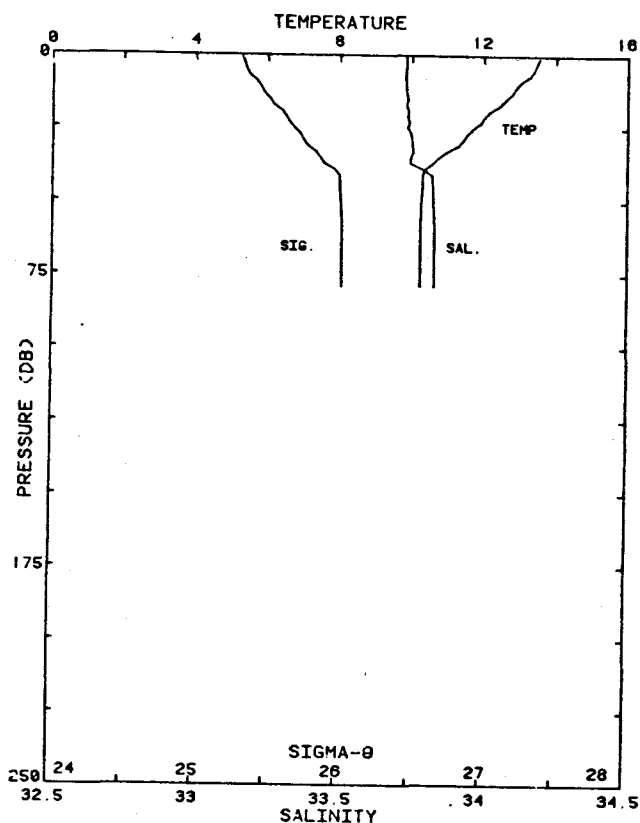
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	13.828	33.726	13.828	25.258	272.2	0.003
10	12.561	33.721	12.560	25.508	248.6	0.026
20	11.575	33.728	11.571	25.701	230.5	0.050
27	11.352	33.737	11.349	25.749	226.1	0.066

STA NO 38 ,HM2 LAT: 37 23.8 N LONG:122 33.4 W
 14 SEP 1982 0006 GMT PROBE 2561 DEPTH 61M
 11.2 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	13.831	33.727	13.831	25.257	272.2	0.003
10	11.921	33.652	11.919	25.577	242.0	0.026
20	11.049	33.671	11.046	25.752	225.6	0.049
30	10.727	33.743	10.724	25.867	215.0	0.071
40	10.694	33.779	10.689	25.900	212.0	0.093
50	10.693	33.780	10.687	25.901	212.2	0.114
57	10.690	33.781	10.684	25.902	212.2	0.129



STATION 38 HM2



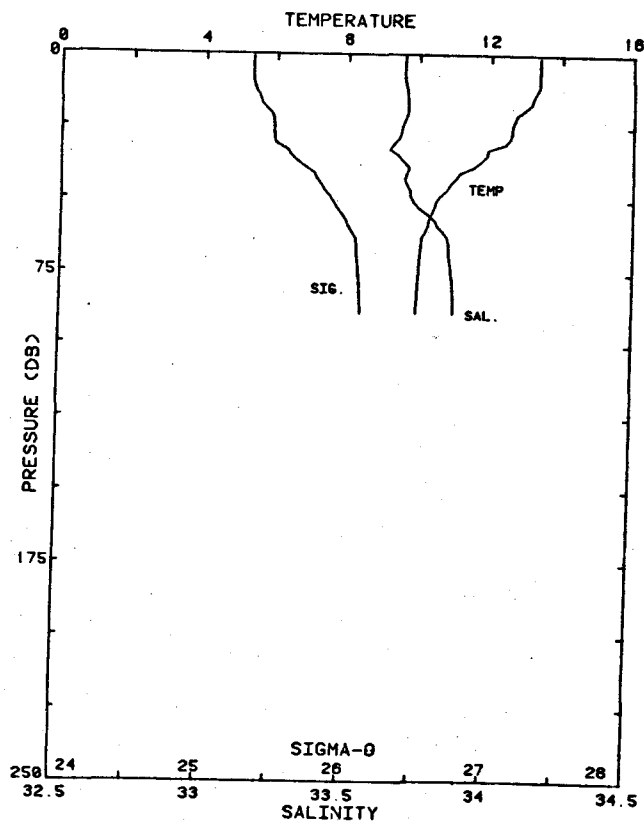
STATION 39 HM3

STA NO 39 ,HM3 LAT: 37 23.0 N LONG:122 39.1 W
 14 SEP 1982 0054 GMT PROBE 2561 DEPTH 81M
 19.7 KM FROM SHORE

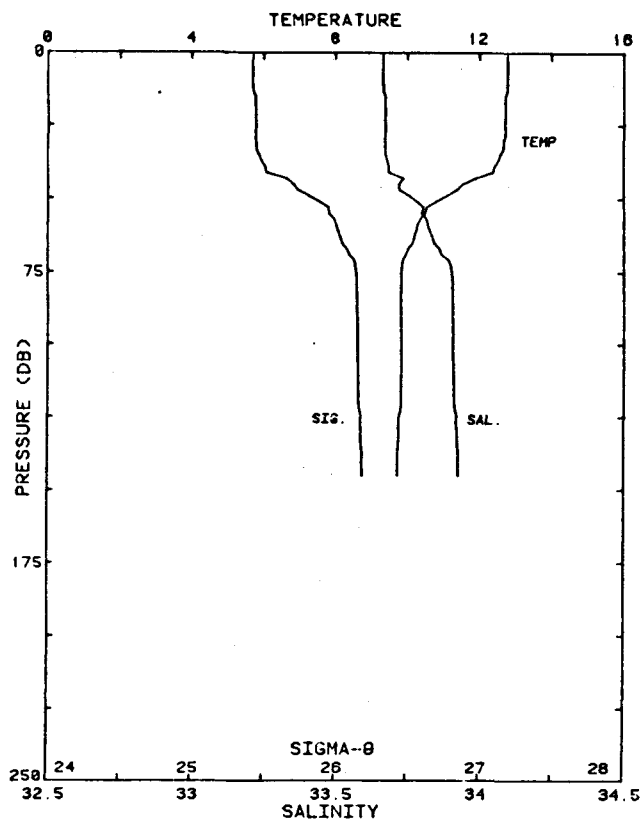
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	13.533	33.728	13.533	25.320	266.3	0.003
10	12.956	33.728	12.955	25.436	255.5	0.026
20	12.088	33.736	12.086	25.611	239.1	0.051
30	11.366	33.750	11.363	25.757	225.4	0.075
40	10.335	33.806	10.331	25.984	204.0	0.096
50	10.272	33.826	10.266	26.010	201.7	0.116
60	10.251	33.831	10.244	26.018	201.2	0.136
70	10.252	33.832	10.244	26.018	201.4	0.156
79	10.250	33.832	10.241	26.019	201.5	0.174

STA NO 40 ,HM4 LAT: 37 22.2 N LONG:122 44.9 W
 14 SEP 1982 0138 GMT PROBE 2561 DEPTH 94M
 28.3 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	13.362	33.699	13.361	25.333	265.1	0.003
10	13.345	33.701	13.343	25.337	264.9	0.026
20	12.807	33.707	12.805	25.449	254.5	0.053
30	12.468	33.672	12.464	25.489	251.0	0.078
40	11.334	33.712	11.329	25.733	227.9	0.102
50	10.536	33.727	10.530	25.888	213.4	0.124
60	10.229	33.826	10.222	26.018	201.3	0.145
70	10.060	33.861	10.052	26.073	196.1	0.164
80	10.005	33.873	9.996	26.092	194.6	0.184
89	9.979	33.876	9.969	26.100	194.1	0.201



STATION 40 HM4

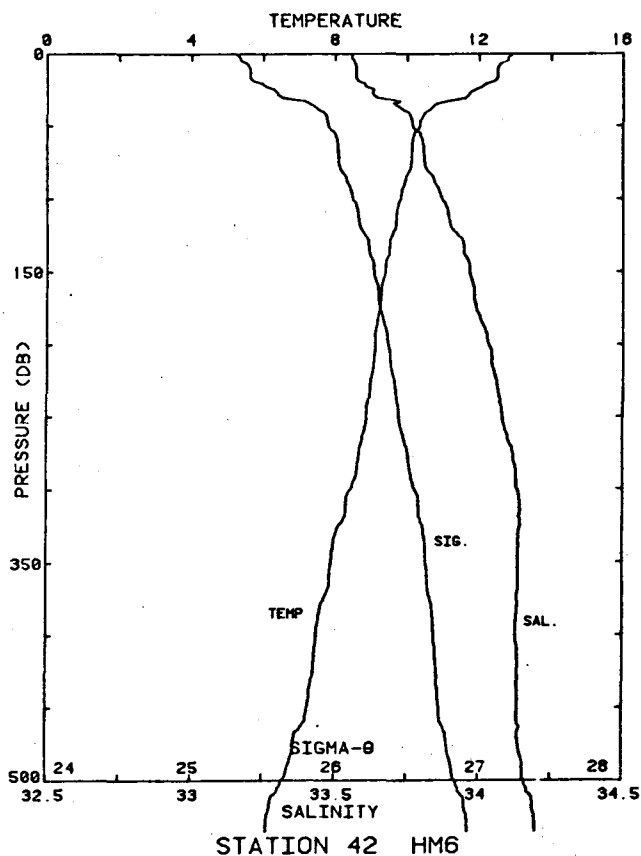


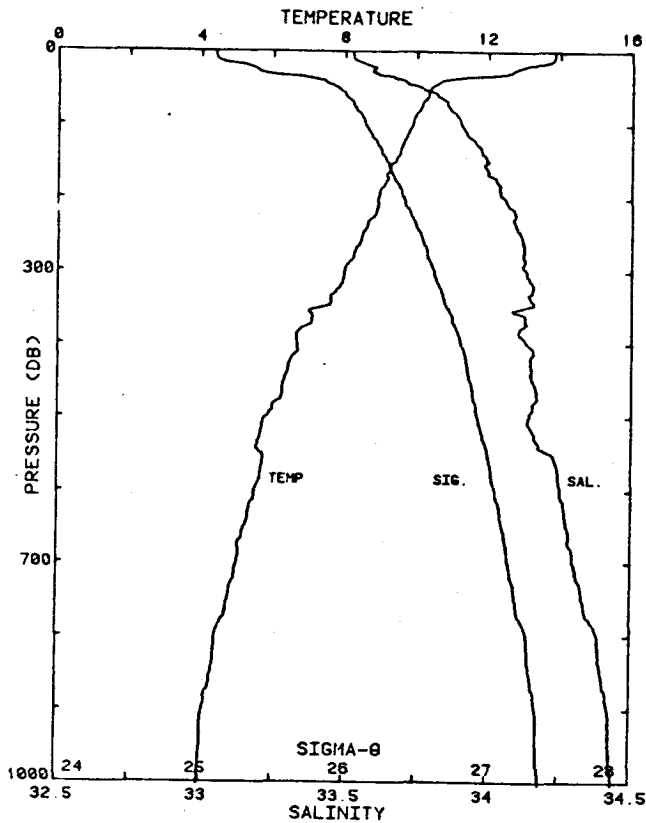
STA NO 41 ,HMS LAT: 37 21.4 N LONG:122 50.7 W
14 SEP 1982 0014 GMT PROBE 2561 DEPTH 151M
37.0 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.773	33.665	12.773	25.424	256.4	0.003
10	12.783	33.665	12.782	25.421	256.9	0.026
20	12.712	33.672	12.710	25.441	255.3	0.052
30	12.680	33.673	12.675	25.448	254.8	0.077
40	12.392	33.686	12.387	25.515	248.7	0.102
50	10.953	33.770	10.947	25.847	217.3	0.125
60	10.265	33.825	10.258	26.011	201.9	0.146
70	9.913	33.882	9.906	26.115	192.2	0.166
80	9.829	33.907	9.819	26.149	189.2	0.185
90	9.826	33.908	9.817	26.150	189.3	0.204
100	9.826	33.908	9.815	26.151	189.5	0.223
110	9.815	33.910	9.802	26.154	189.4	0.242
120	9.809	33.911	9.795	26.157	189.3	0.261
130	9.746	33.922	9.732	26.175	187.8	0.279
140	9.724	33.925	9.708	26.182	187.4	0.298
145	9.715	33.927	9.699	26.185	187.2	0.307

STA NO 42 ,HM6 LAT: 37 20.6 N LONG:122 56.9 W
14 SEP 1982 0314 GMT PROBE 2561 DEPTH 535M
46.2 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.889	33.559	12.889	25.318	266.4	0.003
10	12.509	33.572	12.508	25.403	258.6	0.026
20	12.296	33.589	12.293	25.458	253.7	0.053
30	11.643	33.638	11.639	25.619	238.6	0.077
40	10.536	33.744	10.532	25.901	212.0	0.099
50	10.341	33.769	10.335	25.954	207.1	0.120
60	10.140	33.803	10.133	26.015	201.5	0.140
70	10.117	33.808	10.109	26.023	200.9	0.160
80	10.068	33.818	10.059	26.039	199.6	0.180
90	9.909	33.850	9.899	26.091	194.9	0.200
100	9.814	33.871	9.802	26.124	192.1	0.219
110	9.702	33.893	9.690	26.159	188.9	0.238
120	9.663	33.905	9.650	26.176	187.5	0.257
130	9.514	33.945	9.500	26.232	182.4	0.275
140	9.458	33.954	9.443	26.248	181.0	0.294
150	9.391	33.967	9.374	26.270	179.2	0.312
175	9.247	33.990	9.228	26.311	175.7	0.356
200	9.111	34.033	9.089	26.368	170.9	0.399
225	8.972	34.060	8.948	26.411	167.2	0.441
250	8.865	34.082	8.838	26.445	164.4	0.483
300	8.439	34.134	8.408	26.552	154.9	0.562
400	7.490	34.129	7.451	26.691	143.0	0.711
500	6.573	34.159	6.528	26.842	129.4	0.849
535	6.120	34.201	6.073	26.934	120.7	0.892





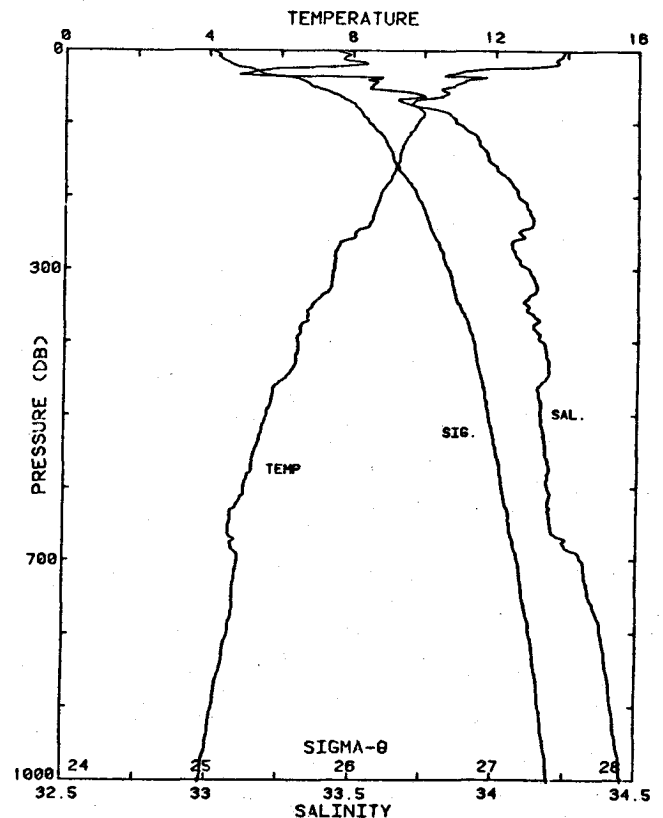
STATION 43 HM7

STA NO 43 ,HM7 LAT: 37 19.7 N LONG:123 3.9 W
 14 SEP 1982 0432 GMT PROBE 2561 DEPTH 1022M
 56.7 KM FROM SHORE LIN INT SAL 15-19DB

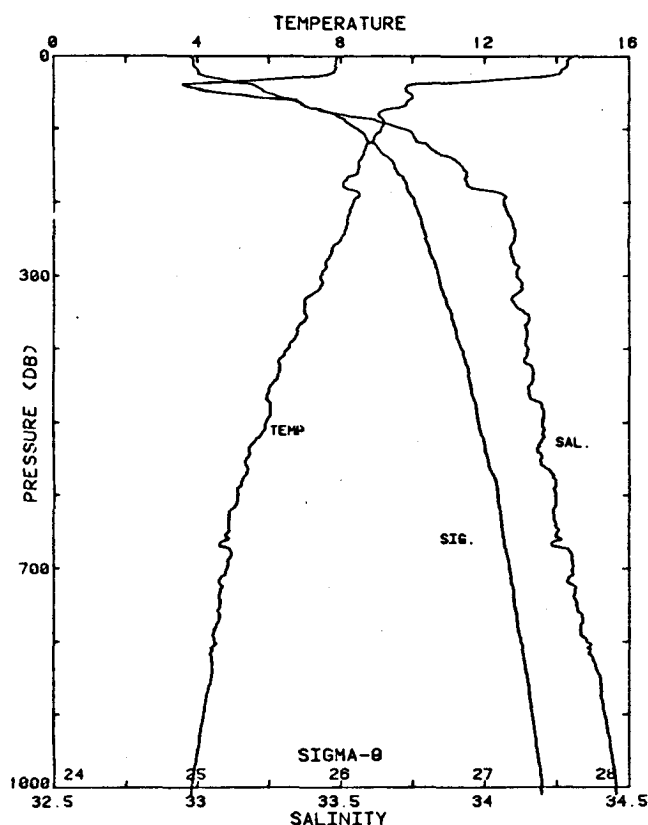
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	13.848	33.526	13.848	25.100	287.2	0.003
10	13.829	33.530	13.827	25.107	286.8	0.029
20	13.024	33.584	13.021	25.312	267.6	0.057
30	12.531	33.603	12.527	25.424	257.2	0.083
40	10.757	33.696	10.753	25.825	219.2	0.106
50	10.376	33.763	10.370	25.944	208.1	0.128
60	10.297	33.819	10.290	26.000	202.9	0.148
70	10.143	33.854	10.135	26.054	198.1	0.169
80	10.061	33.867	10.052	26.079	195.9	0.188
90	9.917	33.895	9.907	26.125	191.7	0.208
100	9.866	33.906	9.855	26.142	190.3	0.227
110	9.747	33.922	9.734	26.175	187.4	0.245
120	9.664	33.945	9.651	26.207	184.5	0.264
130	9.572	33.968	9.557	26.240	181.6	0.282
140	9.519	33.979	9.503	26.257	180.2	0.301
150	9.399	33.997	9.382	26.292	177.1	0.319
175	9.184	34.027	9.165	26.350	172.0	0.362
200	8.927	34.057	8.906	26.415	166.3	0.405
225	8.803	34.094	8.779	26.464	162.0	0.445
250	8.490	34.111	8.464	26.527	156.5	0.486
300	7.976	34.135	7.946	26.623	148.0	0.562
400	6.675	34.137	6.640	26.809	131.0	0.701
500	5.806	34.144	5.764	26.928	120.3	0.826
600	5.494	34.252	5.444	27.052	109.5	0.941
800	4.429	34.387	4.367	27.281	88.5	1.141
1000	3.956	34.440	3.880	27.375	80.7	1.309
1003	3.955	34.440	3.879	27.375	80.7	1.312

STA NO 44 ,HM8 LAT: 37 18.8 N LONG:123 9.2 W
 14 SEP 1982 0540 GMT PROBE 2561 DEPTH 1105M
 64.6 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	13.916	33.447	13.916	25.024	294.4	0.003
10	13.792	33.470	13.791	25.068	290.5	0.029
20	13.532	33.522	13.529	25.162	281.9	0.058
30	11.029	33.151	11.026	25.352	263.9	0.085
40	11.306	33.573	11.300	25.631	237.7	0.111
50	10.712	33.563	10.706	25.729	228.5	0.134
60	10.620	33.736	10.613	25.881	214.3	0.156
70	9.734	33.668	9.726	25.979	205.2	0.177
80	9.890	33.778	9.881	26.038	199.7	0.197
90	9.991	33.846	9.981	26.074	196.6	0.217
100	9.837	33.866	9.826	26.116	192.8	0.236
110	9.701	33.902	9.689	26.167	188.2	0.255
120	9.535	33.937	9.521	26.222	183.1	0.274
130	9.423	33.944	9.409	26.246	181.0	0.292
140	9.348	33.970	9.333	26.279	178.1	0.310
150	9.326	33.977	9.310	26.288	177.5	0.328
175	9.077	34.042	9.058	26.379	169.2	0.371
200	8.775	34.077	8.754	26.455	162.4	0.413
225	8.596	34.121	8.573	26.517	156.9	0.452
250	8.082	34.084	8.057	26.567	152.4	0.491
300	7.512	34.117	7.483	26.676	142.6	0.565
400	6.485	34.168	6.449	26.859	126.1	0.699
500	5.635	34.160	5.593	26.962	116.9	0.821
600	4.995	34.186	4.948	27.058	108.2	0.933
800	4.597	34.376	4.535	27.254	91.4	1.131
1000	3.835	34.453	3.760	27.398	78.2	1.299
1003	3.824	34.455	3.750	27.400	78.1	1.302



STATION 44 HM8



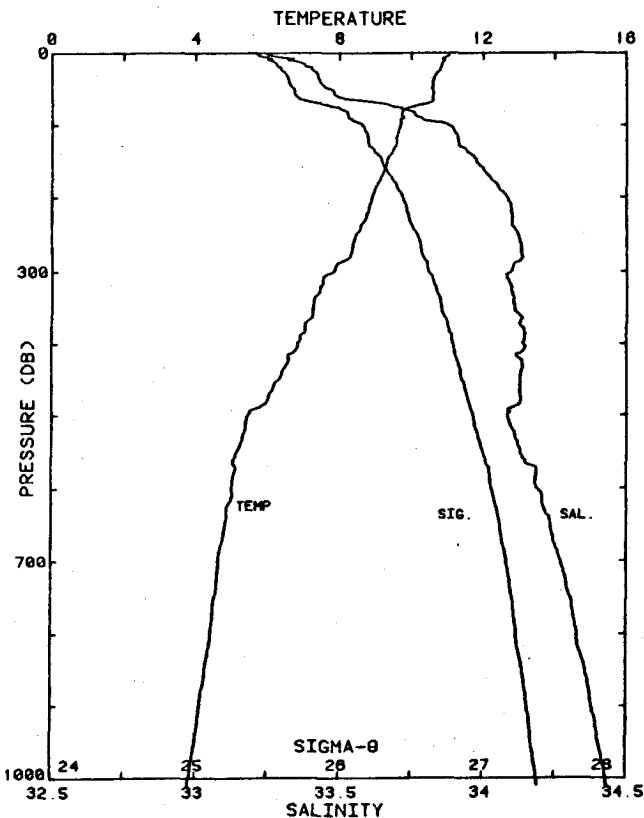
STATION 45 HM9

STA NO 45 ,HM9 LAT: 37 18.0 N LONG:123 15.4 W
14 SEP 1982 0659 GMT PROBE 2561 DEPTH 1394M
73.9 KM FROM SHORE

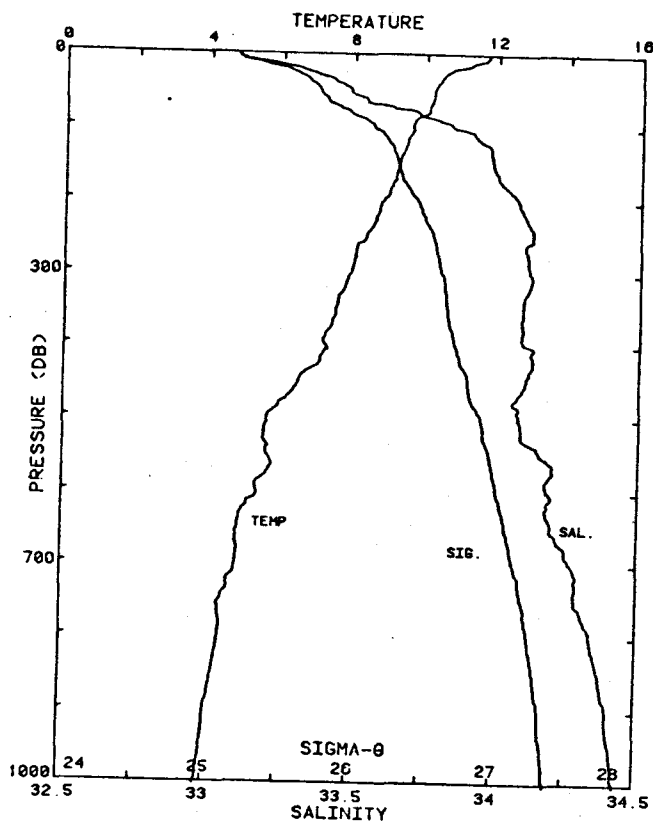
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	14.445	33.489	14.445	24.946	301.9	0.003
10	14.311	33.483	14.309	24.970	299.8	0.030
20	14.122	33.478	14.119	25.006	296.7	0.060
30	13.208	33.360	13.203	25.101	287.9	0.090
40	9.948	32.956	9.944	25.387	260.7	0.117
50	9.851	33.047	9.845	25.475	252.6	0.142
60	9.919	33.300	9.912	25.661	235.1	0.167
70	9.701	33.384	9.693	25.763	225.6	0.190
80	9.049	33.493	9.040	25.954	207.6	0.212
90	9.200	33.631	9.191	26.037	200.0	0.232
100	9.124	33.718	9.113	26.117	192.5	0.252
110	8.958	33.756	8.947	26.173	187.4	0.271
120	8.792	33.786	8.780	26.223	182.8	0.289
130	8.653	33.826	8.639	26.276	177.9	0.307
140	8.572	33.889	8.557	26.337	172.2	0.325
150	8.510	33.920	8.494	26.373	169.2	0.342
175	8.050	33.938	8.033	26.456	161.5	0.363
200	8.348	34.065	8.328	26.511	156.9	0.423
225	8.179	34.094	8.156	26.560	152.6	0.462
250	8.010	34.105	7.985	26.595	149.8	0.500
300	7.455	34.114	7.425	26.682	142.0	0.572
400	6.537	34.151	6.501	26.838	128.1	0.707
500	5.917	34.201	5.873	26.959	117.5	0.830
600	5.121	34.245	5.073	27.091	105.4	0.941
800	4.464	34.355	4.402	27.252	91.3	1.138
1000	3.836	34.456	3.762	27.400	78.1	1.307
1009	3.825	34.457	3.750	27.402	78.0	1.314

STA NO 46 ,COC9 LAT: 38 24.0 N LONG:123 49.2 W
14 SEP 1982 1423 GMT PROBE 2561 DEPTH 1846M
46.0 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	11.055	33.251	11.055	25.425	256.3	0.003
10	10.894	33.330	10.893	25.515	247.9	0.026
20	10.820	33.392	10.818	25.576	242.3	0.049
30	10.685	33.422	10.682	25.624	238.0	0.073
40	10.597	33.430	10.592	25.646	236.2	0.098
50	10.566	33.459	10.560	25.674	233.7	0.121
60	10.589	33.486	10.582	25.691	232.4	0.145
70	10.486	33.630	10.477	25.821	220.2	0.167
80	9.780	33.727	9.771	26.017	201.7	0.188
90	9.760	33.777	9.751	26.059	197.9	0.208
100	9.666	33.878	9.655	26.154	189.2	0.227
110	9.606	33.903	9.594	26.183	186.6	0.246
120	9.567	33.911	9.554	26.197	185.5	0.265
130	9.524	33.925	9.510	26.215	184.0	0.283
140	9.405	33.958	9.390	26.260	179.8	0.302
150	9.299	33.976	9.283	26.292	177.0	0.319
175	9.101	34.028	9.082	26.365	170.6	0.363
200	8.903	34.082	8.882	26.439	164.0	0.405
225	8.741	34.101	8.717	26.479	160.6	0.445
250	8.462	34.120	8.436	26.538	155.4	0.485
300	7.839	34.098	7.810	26.615	148.7	0.561
400	6.827	34.139	6.790	26.791	132.9	0.701
500	5.425	34.084	5.385	26.927	120.0	0.827
600	5.003	34.188	4.956	27.059	108.2	0.941
800	4.427	34.330	4.365	27.236	92.7	1.140
1000	3.831	34.432	3.757	27.381	79.8	1.313
1009	3.796	34.435	3.721	27.387	79.3	1.320



STATION 46 COC9



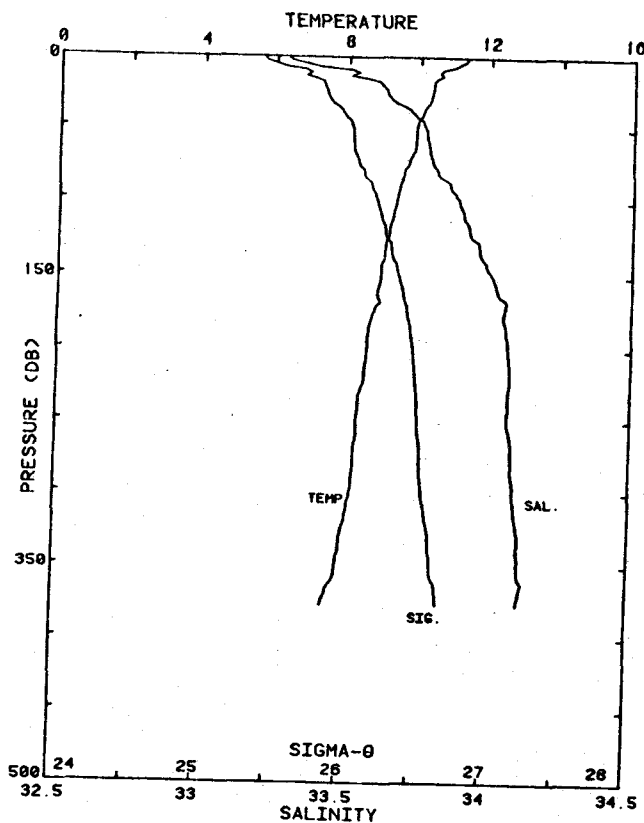
STATION 47 COC8

STA NO 47 ,COC8 LAT: 38 27.1 N LONG:123 44.5 W
14 SEP 1982 1540 GMT PROBE 2561 DEPTH 1216M
37.1 KM FROM SHORE

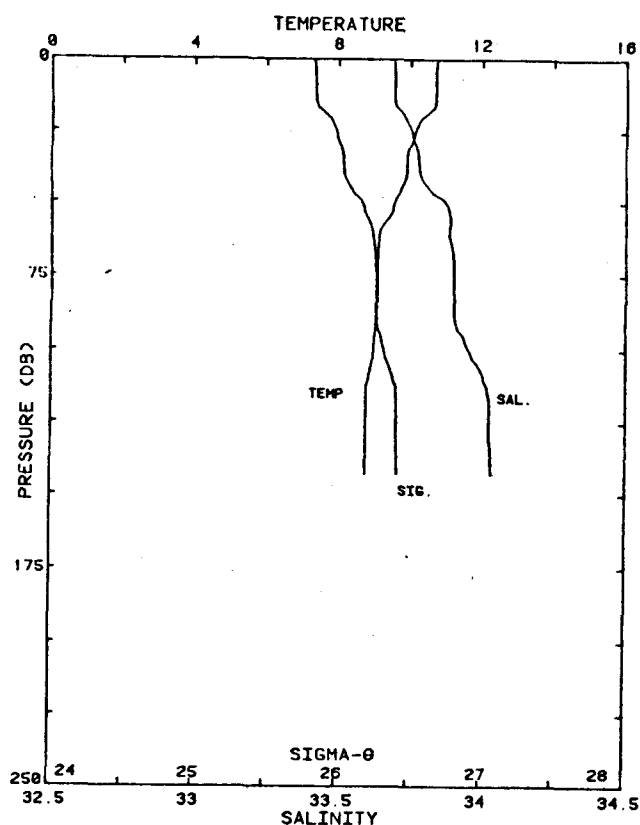
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	11.733	33.094	11.733	25.179	279.6	0.003
10	11.532	33.138	11.531	25.250	273.0	0.028
20	10.856	33.301	10.853	25.499	249.7	0.054
30	10.477	33.381	10.473	25.628	237.6	0.079
40	10.324	33.447	10.319	25.706	230.4	0.102
50	10.195	33.487	10.189	25.760	225.6	0.125
60	10.167	33.539	10.160	25.805	221.5	0.147
70	10.075	33.617	10.067	25.892	214.4	0.169
80	10.019	33.723	10.010	25.973	205.9	0.190
90	9.667	33.794	9.657	26.087	195.2	0.210
100	9.612	33.847	9.601	26.138	190.6	0.229
110	9.548	33.917	9.536	26.205	184.6	0.248
120	9.466	33.943	9.453	26.238	181.5	0.266
130	9.398	33.974	9.383	26.274	178.4	0.284
140	9.289	33.979	9.274	26.295	176.6	0.302
150	9.241	33.984	9.224	26.307	175.6	0.319
175	9.067	34.015	9.048	26.360	171.1	0.363
200	8.813	34.074	8.792	26.447	163.2	0.405
225	8.627	34.102	8.604	26.497	158.8	0.445
250	8.352	34.125	8.326	26.558	153.4	0.484
300	7.918	34.117	7.888	26.618	148.4	0.560
400	7.247	34.114	7.209	26.713	140.6	0.704
500	5.647	34.080	5.605	26.896	123.1	0.836
600	5.384	34.189	5.333	27.015	112.9	0.954
800	4.390	34.341	4.329	27.250	91.4	1.156
1000	3.807	34.433	3.733	27.385	79.4	1.326
1003	3.798	34.434	3.723	27.386	79.3	1.328

STA NO 48 ,COC7 LAT: 38 30.3 N LONG:123 39.6 W
14 SEP 1982 1651 GMT PROBE 2561 DEPTH 380M
27.8 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	11.309	33.288	11.309	25.408	257.9	0.003
10	10.592	33.523	10.592	25.718	228.6	0.025
20	10.366	33.618	10.364	25.831	218.0	0.047
30	10.286	33.651	10.283	25.871	214.5	0.069
40	10.068	33.728	10.064	25.968	205.5	0.090
50	9.902	33.771	9.896	26.031	199.8	0.110
60	9.896	33.784	9.889	26.042	199.0	0.130
70	9.759	33.795	9.751	26.073	196.1	0.150
80	9.583	33.818	9.574	26.121	191.8	0.169
90	9.460	33.861	9.450	26.175	186.9	0.188
100	9.379	33.892	9.368	26.212	183.6	0.207
110	9.295	33.910	9.283	26.240	181.2	0.225
120	9.198	33.931	9.185	26.272	178.3	0.243
130	9.095	33.965	9.081	26.316	174.3	0.261
140	9.029	33.986	9.015	26.342	172.0	0.278
150	8.978	34.013	8.963	26.372	169.4	0.295
175	8.802	34.057	8.784	26.434	163.9	0.336
200	8.616	34.071	8.596	26.475	160.5	0.377
225	8.503	34.079	8.480	26.498	158.6	0.417
250	8.359	34.072	8.333	26.516	157.4	0.457
300	8.228	34.098	8.197	26.557	154.4	0.535
377	7.500	34.121	7.463	26.683	143.3	0.649



STATION 48 COC7



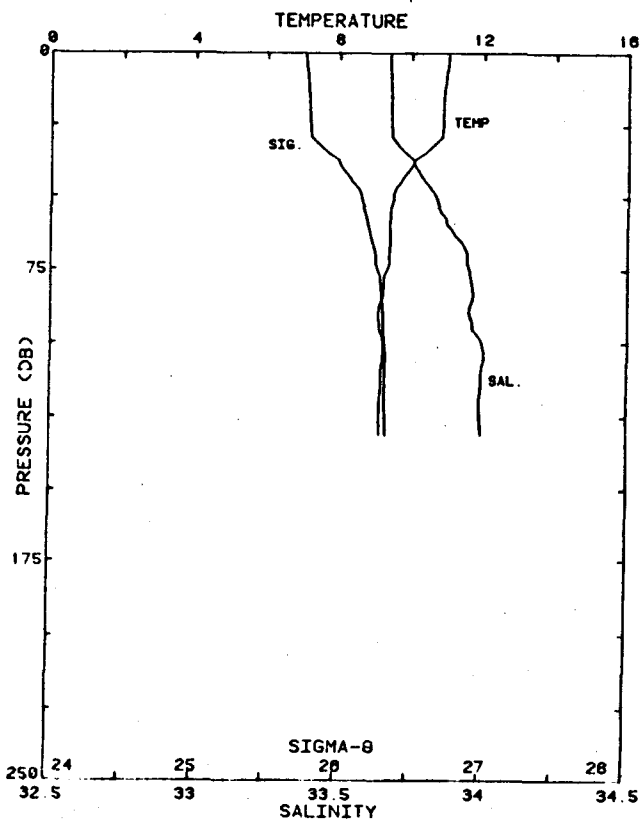
STATION 49 COC6

STA NO 49 ,COC6 LAT: 38 32.7 N LONG:123 36.2 W
14 SEP 1982 1736 GMT PROBE 2561 DEPTH 149M
21.2 KM FROM SHORE

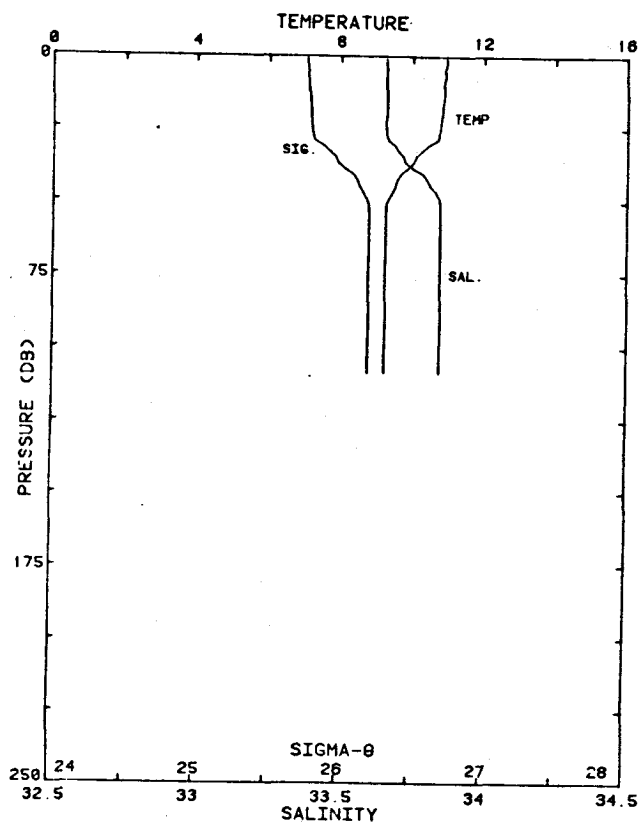
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	10.730	33.693	10.730	25.826	218.2	0.002
10	10.684	33.694	10.683	25.835	217.5	0.022
20	10.364	33.727	10.362	25.917	209.9	0.043
30	9.989	33.770	9.985	26.014	200.9	0.064
40	9.893	33.785	9.889	26.043	198.4	0.084
50	9.564	33.872	9.559	26.166	187.0	0.103
60	9.152	33.885	9.146	26.242	179.8	0.122
70	9.102	33.902	9.095	26.264	178.0	0.140
80	9.088	33.902	9.080	26.267	177.9	0.157
90	9.071	33.908	9.062	26.274	177.4	0.175
100	8.997	33.955	8.986	26.322	173.0	0.193
110	8.851	34.005	8.840	26.385	167.3	0.209
120	8.790	34.028	8.778	26.412	164.8	0.226
130	8.793	34.028	8.779	26.413	165.0	0.243
140	8.788	34.036	8.773	26.420	164.5	0.259
143	8.785	34.037	8.770	26.421	164.5	0.264

STA NO 50 ,COC5 LAT: 38 34.6 N LONG:123 33.3 W
14 SEP 1982 1812 GMT PROBE 2561 DEPTH 136M
15.7 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	11.016	33.675	11.016	25.761	224.3	0.002
10	10.936	33.678	10.935	25.778	222.9	0.023
20	10.873	33.680	10.871	25.791	221.9	0.045
30	10.759	33.688	10.756	25.818	219.6	0.067
40	9.960	33.766	9.955	26.017	200.9	0.088
50	9.476	33.834	9.472	26.149	188.5	0.107
60	9.393	33.882	9.386	26.201	183.8	0.126
70	9.385	33.945	9.377	26.252	179.2	0.144
80	9.237	33.961	9.229	26.288	175.9	0.162
90	9.093	33.954	9.083	26.307	174.3	0.179
100	9.231	33.996	9.220	26.317	173.6	0.197
110	9.185	33.997	9.173	26.326	173.0	0.214
120	9.153	33.991	9.140	26.326	173.2	0.231
130	9.147	33.996	9.133	26.332	172.8	0.249
131	9.147	33.997	9.133	26.332	172.7	0.250



STATION 50 COC5



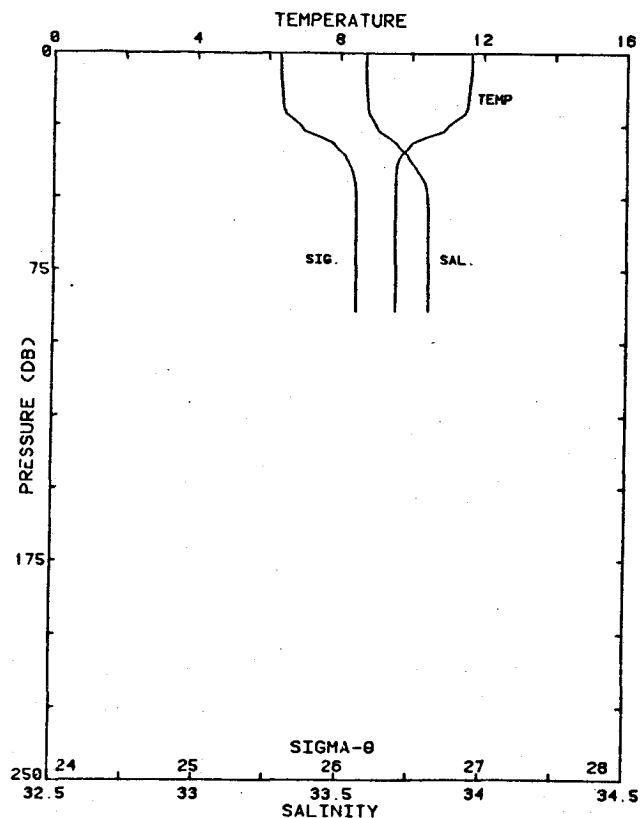
STATION 51 COC4

STA NO 51 ,COC4 LAT: 38 36.3 N LONG:123 30.8 W
 14 SEP 1982 1847 GMT PROBE 2561 DEPTH 111M
 10.9 KM FROM SHORE

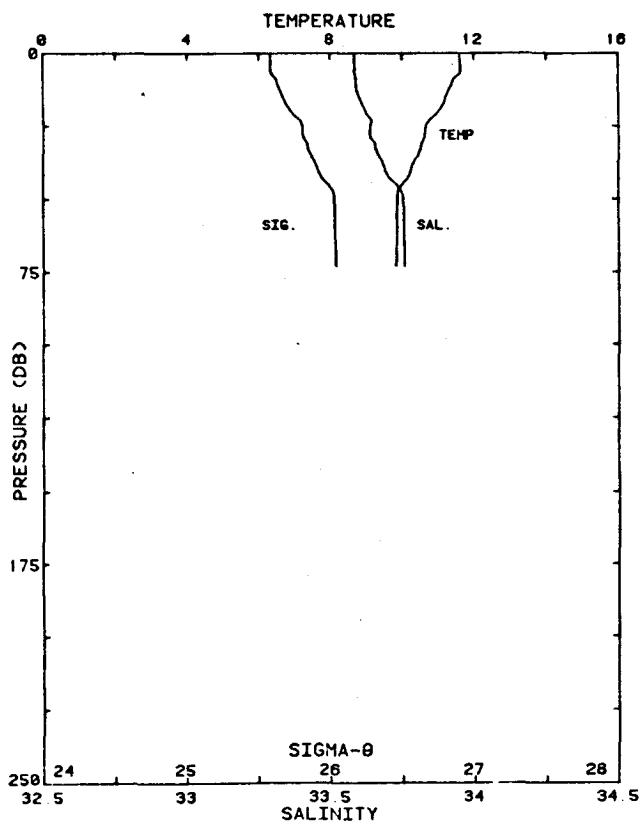
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	10.942	33.657	10.942	25.761	224.4	0.002
10	10.878	33.658	10.877	25.773	223.4	0.023
20	10.808	33.658	10.806	25.785	222.4	0.045
30	10.568	33.674	10.564	25.840	217.5	0.067
40	9.748	33.766	9.744	26.052	197.5	0.088
50	9.298	33.845	9.292	26.187	184.9	0.106
60	9.248	33.847	9.241	26.198	184.1	0.125
70	9.248	33.847	9.241	26.198	184.3	0.144
80	9.248	33.847	9.240	26.197	184.5	0.162
90	9.247	33.847	9.238	26.198	184.7	0.180
100	9.248	33.847	9.237	26.198	184.9	0.199
109	9.251	33.847	9.239	26.198	185.1	0.215

STA NO 52 ,COC3 LAT: 38 37.5 N LONG:123 28.9 W
 14 SEP 1982 1920 GMT PROBE 2561 DEPTH 94M
 7.4 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	11.655	33.589	11.655	25.578	241.7	0.002
10	11.616	33.590	11.615	25.586	241.1	0.025
20	11.514	33.599	11.512	25.612	238.9	0.049
30	10.207	33.683	10.203	25.910	210.8	0.071
40	9.583	33.767	9.578	26.080	194.8	0.091
50	9.572	33.806	9.567	26.113	191.9	0.110
60	9.572	33.810	9.566	26.116	191.9	0.130
70	9.573	33.810	9.565	26.116	192.1	0.149
80	9.573	33.810	9.564	26.115	192.3	0.168
89	9.572	33.811	9.562	26.117	192.4	0.185



STATION 52 COC3



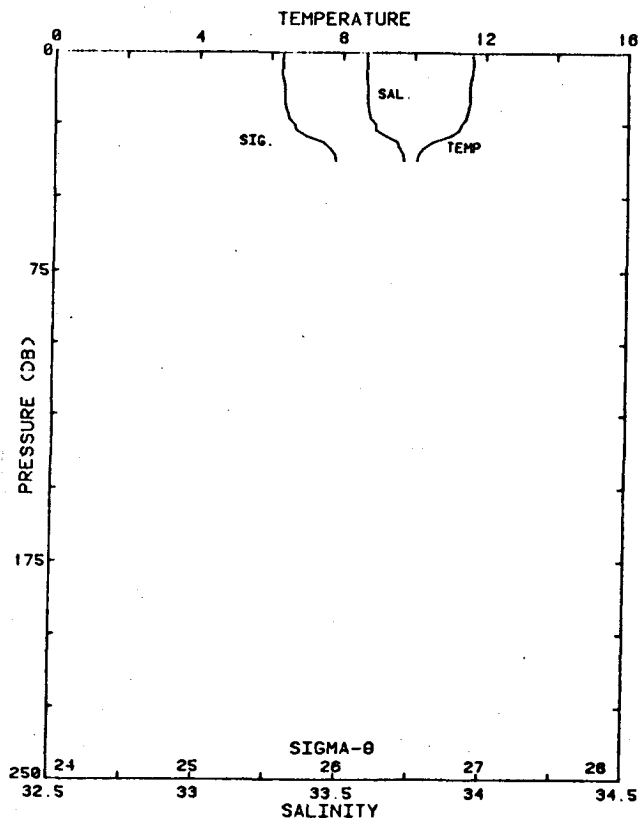
STATION 53 COC2

STA NO 53 ,COC2 LAT: 38 38.8 N LONG:123 26.9 W
 14 SEP 1982 1951 GMT PROBE 2561 DEPTH 78M
 3.7 KM FROM SHORE

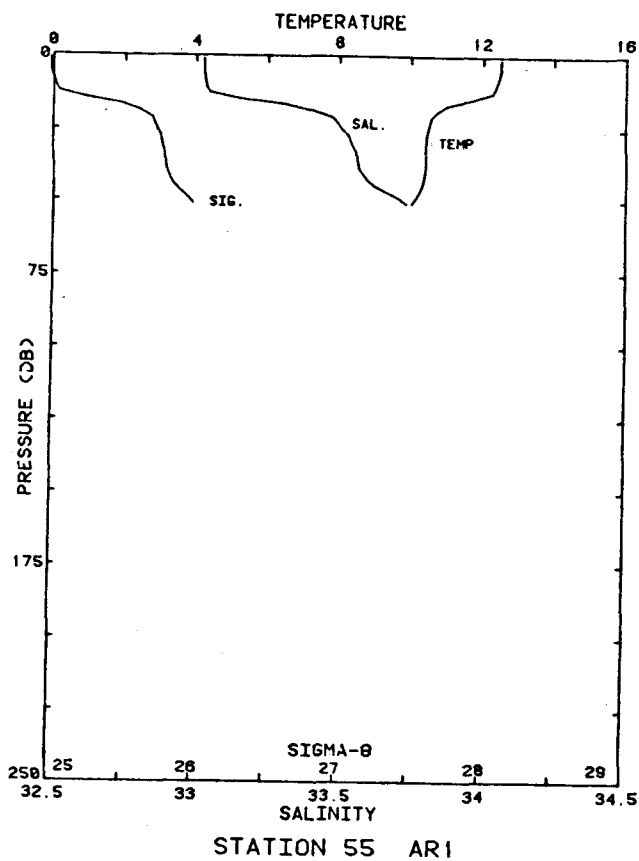
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	11.609	33.584	11.609	25.583	241.3	0.002
10	11.395	33.590	11.394	25.627	237.3	0.024
20	10.995	33.624	10.993	25.726	228.2	0.048
30	10.560	33.647	10.557	25.821	219.3	0.069
40	10.236	33.690	10.232	25.910	211.1	0.091
50	9.847	33.751	9.842	26.024	200.4	0.112
60	9.840	33.755	9.833	26.028	200.2	0.132
70	9.818	33.757	9.809	26.034	199.9	0.152
73	9.813	33.757	9.805	26.035	199.9	0.158

STA NO 54 ,COC1 LAT: 38 39.8 N LONG:123 25.5 W
 14 SEP 1982 2020 GMT PROBE 2561 DEPTH 45M
 0.9 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	11.618	33.581	11.618	25.579	241.6	0.002
10	11.574	33.584	11.573	25.589	240.9	0.025
20	11.501	33.589	11.499	25.607	239.4	0.049
30	10.753	33.671	10.750	25.806	220.8	0.072
37	10.081	33.715	10.077	25.956	206.6	0.086



STATION 54 COC1

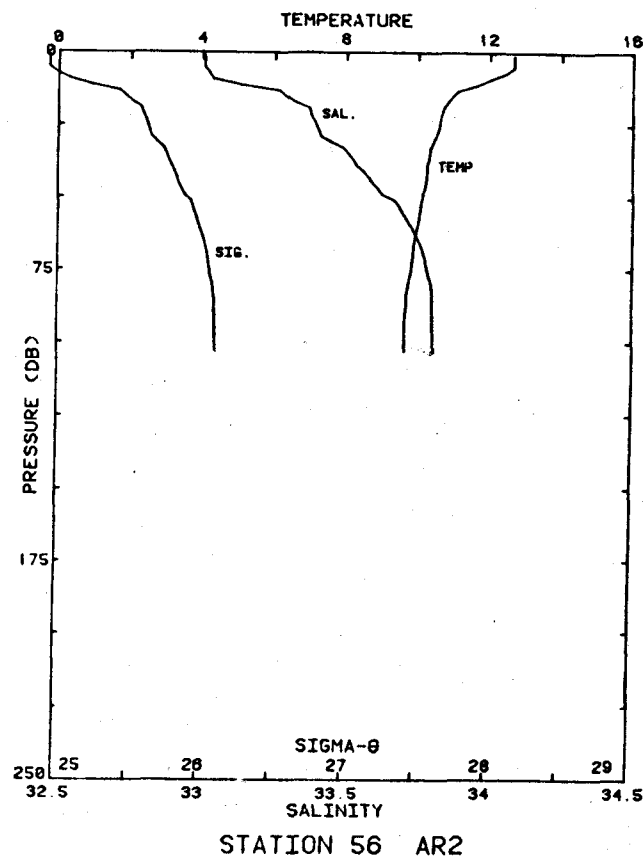


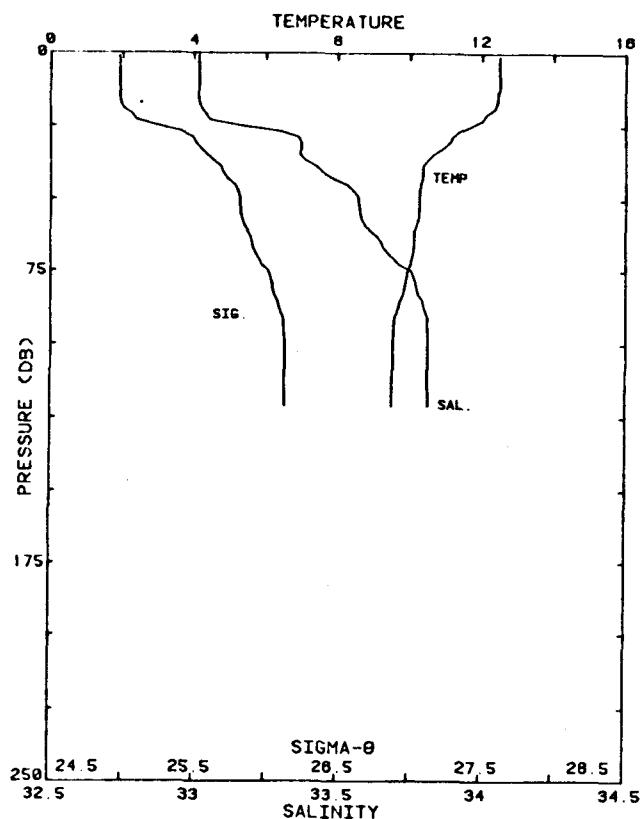
STA NO 55 AR1 LAT: 38 56.9 N LONG:123 46.1 W
 14 SEP 1982 2252 GMT PROBE 2561 DEPTH 56M
 2.4 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.499	33.025	12.499	24.982	298.4	0.003
10	12.371	33.033	12.370	25.013	295.7	0.030
20	10.645	33.441	10.643	25.646	235.7	0.057
30	10.435	33.546	10.432	25.764	224.7	0.080
40	10.383	33.576	10.378	25.796	221.9	0.102
50	10.080	33.721	10.074	25.962	206.3	0.124
51	10.031	33.735	10.026	25.981	204.5	0.126

STA NO 56 AR2 LAT: 38 55.7 N LONG:123 49.4 W
 14 SEP 1982 2326 GMT PROBE 2561 DEPTH 105M
 7.6 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.663	33.006	12.663	24.935	302.9	0.003
10	11.842	33.088	11.840	25.155	282.2	0.030
20	10.705	33.374	10.702	25.583	241.7	0.056
30	10.475	33.430	10.472	25.667	233.9	0.080
40	10.271	33.552	10.267	25.797	221.8	0.102
50	10.123	33.649	10.117	25.898	212.4	0.124
60	10.002	33.728	9.995	25.979	204.8	0.145
70	9.880	33.774	9.872	26.037	199.7	0.165
80	9.764	33.800	9.755	26.076	196.1	0.184
90	9.695	33.806	9.685	26.093	194.7	0.204
100	9.667	33.808	9.656	26.099	194.3	0.223
103	9.658	33.809	9.647	26.102	194.1	0.229





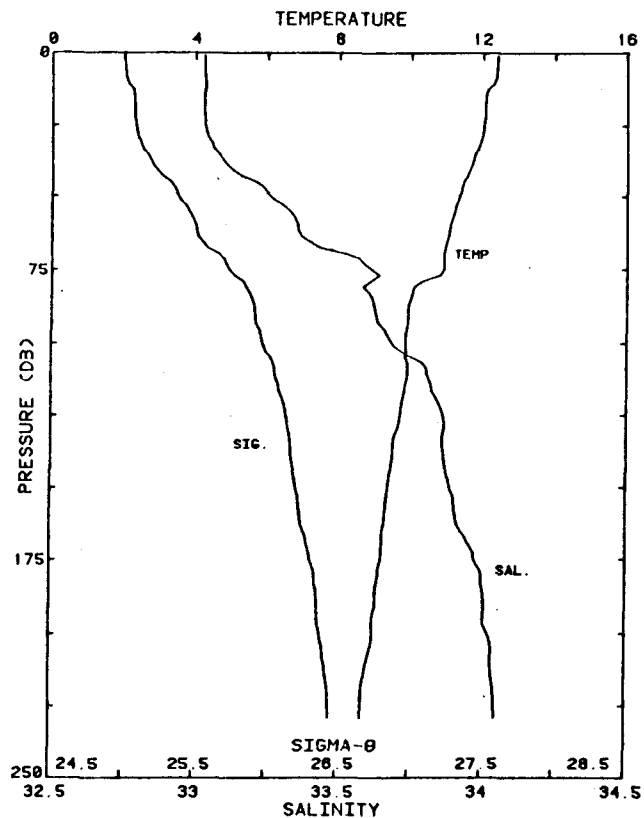
STATION 57 AR3

STA NO 57 AR3 LAT: 38 54.7 N LONG: 123 52.6 W
14 SEP 1982 2359 GMT PROBE 2561 DEPTH 129M
12.6 KM FROM SHORE

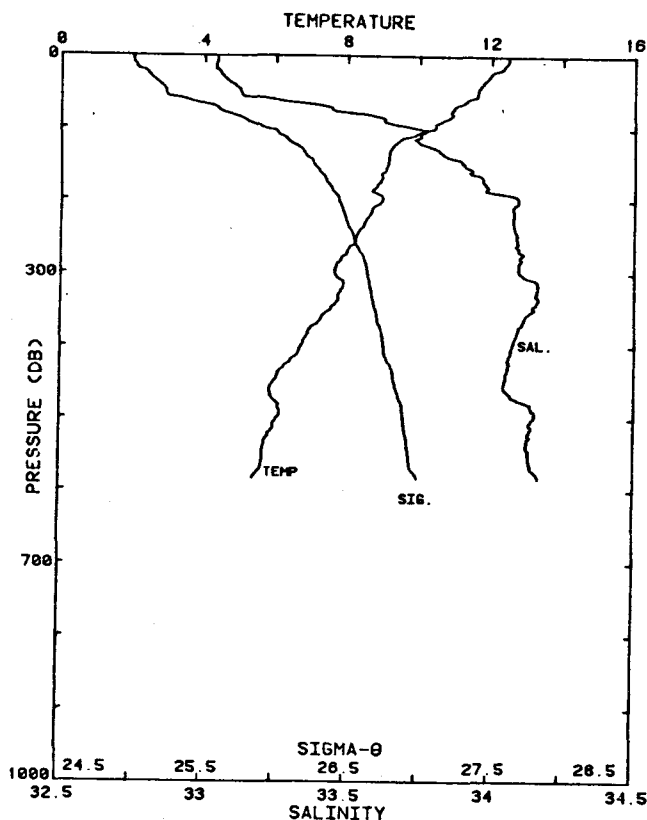
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.485	33.016	12.485	24.977	298.9	0.003
10	12.486	33.016	12.484	24.978	299.1	0.030
20	12.229	33.034	12.227	25.041	293.3	0.060
30	11.139	33.367	11.136	25.500	249.8	0.087
40	10.345	33.435	10.340	25.693	231.6	0.111
50	10.246	33.569	10.240	25.815	220.3	0.134
60	10.148	33.602	10.141	25.857	216.5	0.156
70	10.060	33.685	10.052	25.937	209.1	0.177
80	9.848	33.771	9.839	26.040	199.6	0.197
90	9.603	33.808	9.593	26.110	193.1	0.217
100	9.527	33.813	9.516	26.126	191.7	0.236
110	9.527	33.813	9.514	26.126	191.9	0.255
120	9.521	33.815	9.508	26.129	191.9	0.274
121	9.520	33.815	9.507	26.129	191.9	0.276

STA NO 58 AR4 LAT: 38 53.9 N LONG: 123 55.8 W
15 SEP 1982 0044 GMT PROBE 2561 DEPTH 232M
17.4 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.399	33.030	12.399	25.005	296.3	0.003
10	12.312	33.032	12.311	25.023	294.8	0.030
20	12.045	33.028	12.042	25.071	290.4	0.059
30	11.939	33.049	11.935	25.107	287.2	0.088
40	11.644	33.119	11.639	25.217	277.1	0.116
50	11.337	33.260	11.330	25.382	261.5	0.142
60	11.076	33.356	11.069	25.504	250.1	0.169
70	10.905	33.545	10.897	25.682	233.5	0.192
80	10.203	33.596	10.194	25.844	218.3	0.215
90	9.930	33.629	9.920	25.915	211.6	0.237
100	9.868	33.687	9.857	25.971	206.5	0.258
110	9.928	33.806	9.916	26.054	198.9	0.278
120	9.778	33.842	9.764	26.108	194.0	0.298
130	9.628	33.866	9.615	26.152	190.0	0.317
140	9.505	33.867	9.490	26.173	188.2	0.336
150	9.401	33.891	9.385	26.208	185.0	0.354
175	9.218	33.976	9.199	26.305	176.3	0.400
200	8.977	34.025	8.957	26.382	169.4	0.443
225	8.690	34.049	8.666	26.447	163.6	0.484
229	8.679	34.050	8.655	26.449	163.5	0.491



STATION 58 AR4



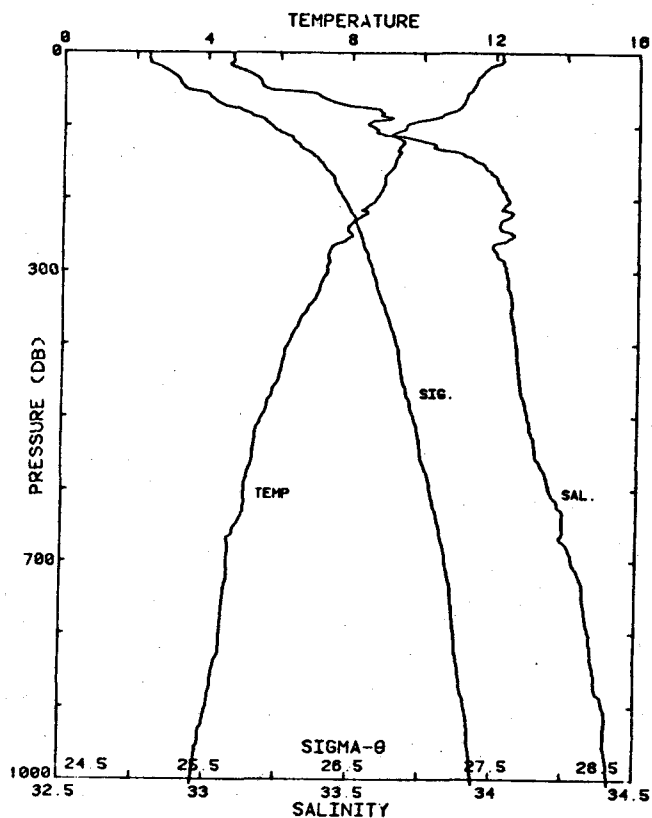
STATION 59 AR5

STA NO 59 ,AR5 LAT: 38 53.0 N LONG:123 59.0 W
15 SEP 1982 0126 GMT PROBE 2561 DEPTH 591M
22.3 KM FROM SHORE

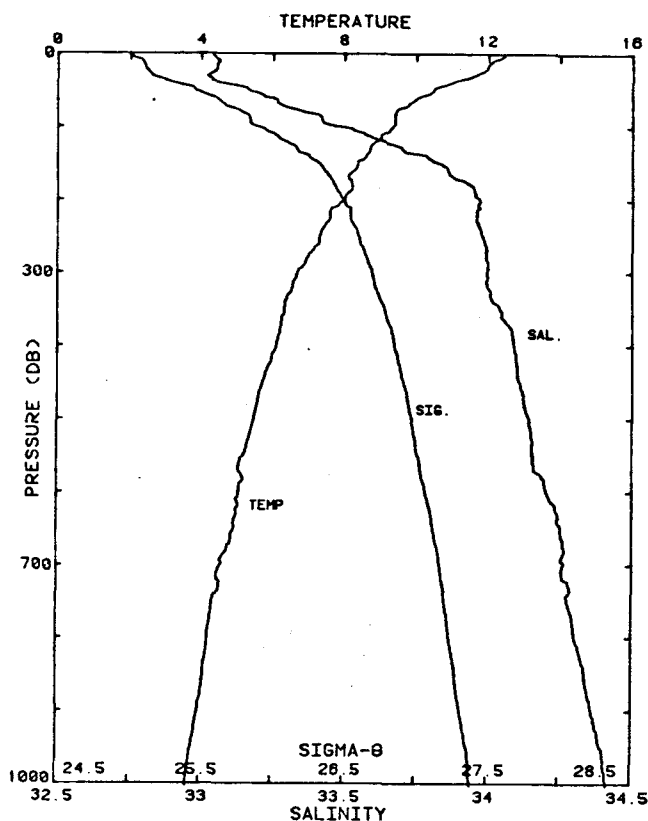
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.482	33.044	12.482	25.000	296.7	0.003
10	12.422	33.041	12.421	25.010	296.1	0.030
20	12.165	33.044	12.162	25.062	291.4	0.059
30	11.903	33.066	11.899	25.127	285.3	0.088
40	11.710	33.101	11.706	25.191	279.5	0.116
50	11.606	33.125	11.599	25.229	276.2	0.144
60	11.375	33.222	11.367	25.346	265.2	0.171
70	10.983	33.416	10.975	25.567	244.4	0.197
80	10.917	33.533	10.908	25.670	234.9	0.221
90	10.621	33.630	10.611	25.798	222.9	0.244
100	10.409	33.738	10.397	25.920	211.5	0.265
110	9.800	33.754	9.788	26.035	200.6	0.286
120	9.340	33.752	9.327	26.110	193.7	0.306
130	9.175	33.818	9.161	26.188	186.4	0.325
140	9.144	33.861	9.128	26.227	183.0	0.343
150	9.107	33.905	9.091	26.267	179.3	0.361
175	8.890	33.972	8.871	26.354	171.5	0.405
200	8.959	34.095	8.938	26.440	163.9	0.447
225	8.540	34.077	8.517	26.491	159.3	0.487
250	8.238	34.091	8.213	26.549	154.2	0.526
300	7.658	34.103	7.628	26.645	145.7	0.600
400	6.723	34.075	6.687	26.753	136.3	0.742
500	6.076	34.149	6.031	26.898	123.5	0.871
583	5.397	34.169	5.349	26.997	114.3	0.971

STA NO 60 ,AR6 LAT: 38 52.0 N LONG:124 2.3 W
15 SEP 1982 0215 GMT PROBE 2561 DEPTH 1454M
27.4 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.183	33.087	12.183	25.090	288.2	0.003
10	12.196	33.088	12.194	25.089	288.5	0.029
20	11.823	33.087	11.821	25.158	282.1	0.058
30	11.596	33.148	11.592	25.248	273.9	0.085
40	11.435	33.181	11.430	25.303	268.8	0.113
50	11.334	33.210	11.328	25.343	265.2	0.139
60	11.172	33.387	11.165	25.510	249.5	0.164
70	11.077	33.460	11.069	25.584	242.7	0.190
80	10.798	33.599	10.788	25.742	228.0	0.213
90	10.190	33.633	10.180	25.875	215.5	0.235
100	9.493	33.562	9.483	25.935	209.8	0.256
110	9.161	33.592	9.149	26.013	202.6	0.277
120	9.403	33.740	9.390	26.090	195.6	0.297
130	9.300	33.791	9.286	26.146	190.4	0.316
140	9.282	33.889	9.267	26.226	183.1	0.335
150	9.182	33.943	9.166	26.284	177.7	0.353
175	8.910	34.007	8.891	26.378	169.2	0.396
200	8.659	34.042	8.638	26.445	163.3	0.437
225	8.236	34.051	8.213	26.518	156.7	0.477
250	8.003	34.066	7.978	26.564	152.6	0.516
300	7.297	34.037	7.268	26.645	145.5	0.590
400	6.245	34.074	6.210	26.816	129.9	0.728
500	5.527	34.117	5.486	26.940	118.8	0.853
600	5.049	34.193	5.001	27.057	108.4	0.967
800	4.435	34.340	4.373	27.244	92.1	1.164
1000	3.699	34.413	3.626	27.379	79.6	1.335
1007	3.682	34.415	3.608	27.382	79.3	1.341



STATION 60 AR6

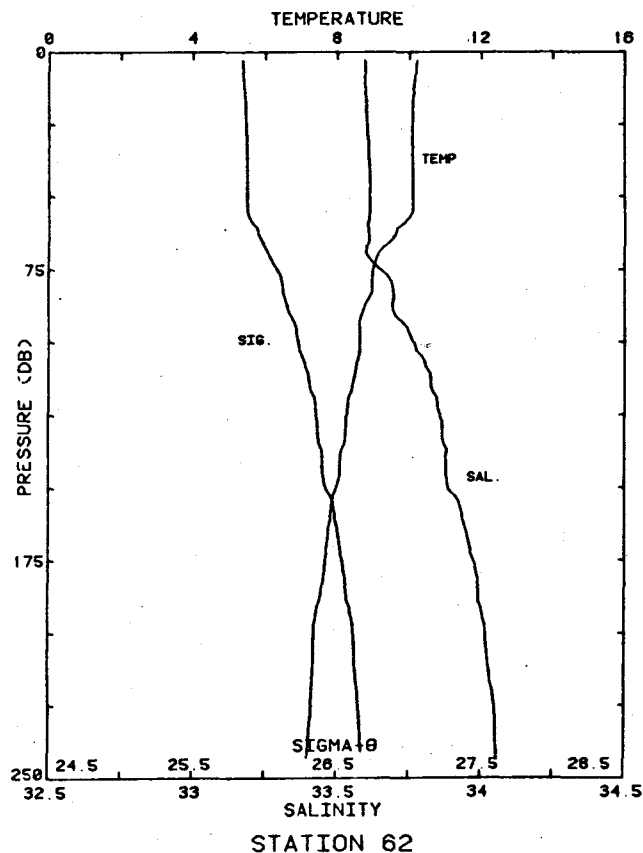


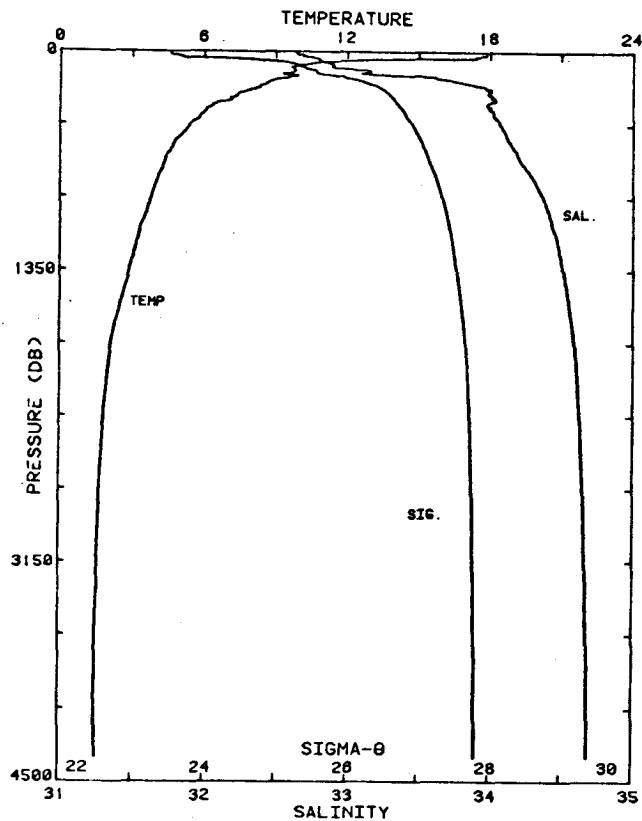
STA NO 61 , AR7 LAT: 38 50.2 N LONG:124 8.1 W
15 SEP 1982 0331 GMT PROBE 2561 DEPTH 2180M
36.4 KM FROM SHORE

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	12.470	33.039	12.470	24.998	296.9	0.003
10	12.114	33.063	12.113	25.085	288.8	0.030
20	11.951	33.054	11.948	25.108	286.9	0.058
30	11.604	33.024	11.600	25.149	283.2	0.087
40	10.960	33.071	10.956	25.302	268.8	0.115
50	10.493	33.168	10.486	25.461	254.0	0.141
60	10.050	33.236	10.043	25.589	242.0	0.166
70	9.781	33.278	9.773	25.667	234.7	0.189
80	9.437	33.364	9.429	25.790	223.2	0.212
90	9.418	33.422	9.408	25.839	218.8	0.234
100	9.352	33.484	9.341	25.898	213.3	0.255
110	9.091	33.571	9.079	26.008	203.0	0.276
120	8.905	33.636	8.892	26.089	195.6	0.296
130	8.725	33.701	8.711	26.167	188.2	0.316
140	8.607	33.787	8.592	26.253	180.3	0.334
150	8.373	33.832	8.358	26.324	173.7	0.352
175	8.194	33.922	8.176	26.422	164.8	0.394
200	7.973	33.971	7.954	26.493	158.4	0.435
225	7.577	33.958	7.556	26.542	154.1	0.473
250	7.285	33.979	7.261	26.600	148.9	0.512
300	6.682	33.997	6.655	26.697	140.1	0.584
400	6.076	34.090	6.042	26.850	126.6	0.716
500	5.455	34.142	5.413	26.969	116.1	0.838
600	5.052	34.203	5.003	27.065	107.6	0.950
800	4.214	34.304	4.154	27.238	92.2	1.147
1000	3.627	34.417	3.554	27.389	78.5	1.317
1003	3.621	34.419	3.548	27.392	78.3	1.320

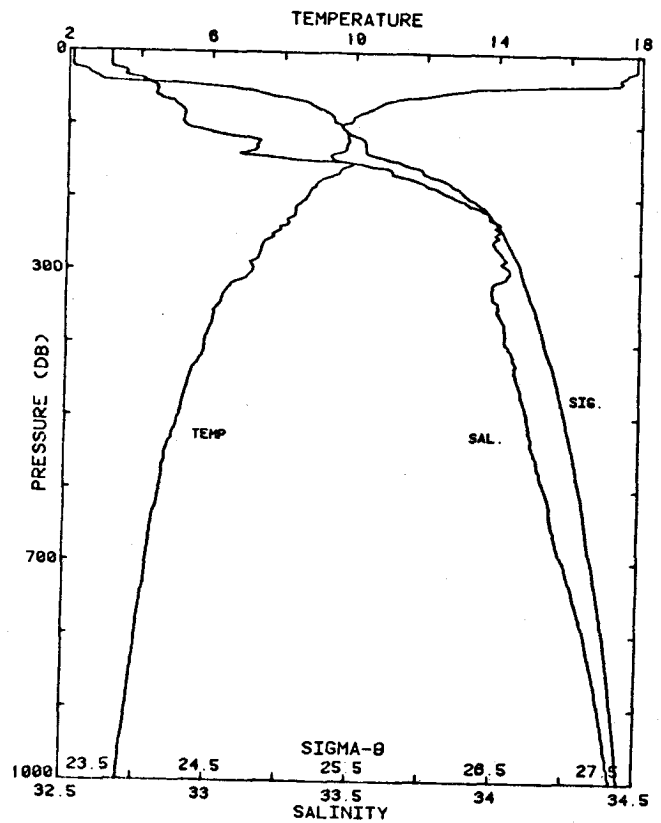
STA NO 62 , LAT: 41 26.0 N LONG:124 40.6 W
15 SEP 1982 1756 GMT PROBE 2561 DEPTH 1032M

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
3	10.204	33.594	10.204	25.841	216.8	0.007
10	10.151	33.596	10.149	25.851	216.0	0.022
20	10.093	33.601	10.090	25.865	214.8	0.043
30	10.081	33.607	10.077	25.872	214.4	0.065
40	10.087	33.611	10.082	25.874	214.4	0.086
50	10.090	33.612	10.085	25.875	214.6	0.108
60	9.746	33.606	9.739	25.927	209.7	0.129
70	9.118	33.605	9.111	26.029	200.2	0.149
80	8.963	33.691	8.955	26.121	191.7	0.169
90	8.687	33.700	8.677	26.172	187.1	0.188
100	8.628	33.764	8.619	26.231	181.6	0.206
110	8.508	33.817	8.497	26.291	176.1	0.224
120	8.297	33.847	8.285	26.347	170.9	0.242
130	8.249	33.867	8.236	26.370	168.9	0.259
140	8.098	33.879	8.084	26.402	166.0	0.275
150	7.985	33.888	7.971	26.425	163.9	0.292
175	7.680	33.976	7.663	26.540	153.4	0.331
200	7.366	34.017	7.348	26.617	146.4	0.369
225	7.298	34.048	7.277	26.651	143.5	0.405
250	7.174	34.058	7.151	26.677	141.5	0.441
251	7.169	34.058	7.145	26.678	141.4	0.442





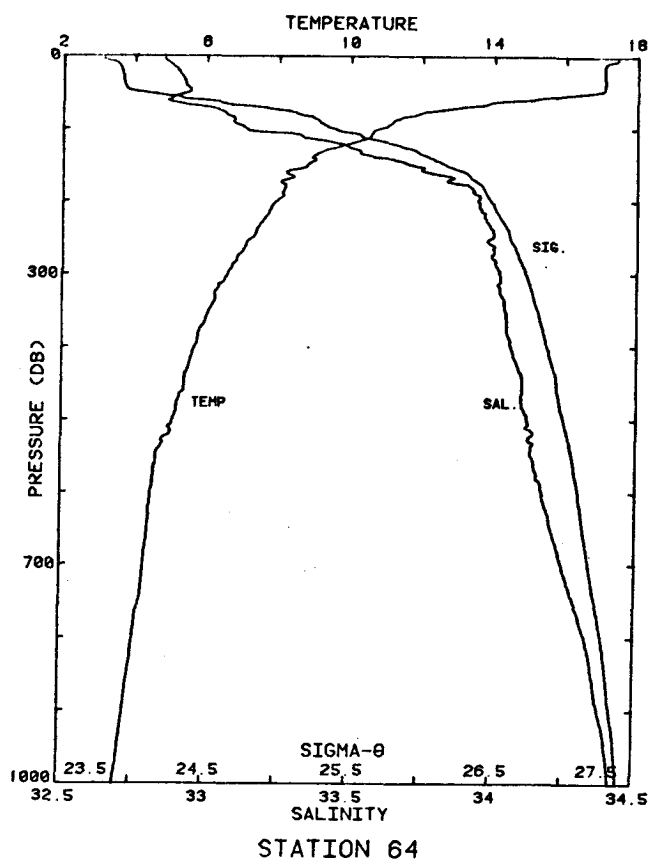
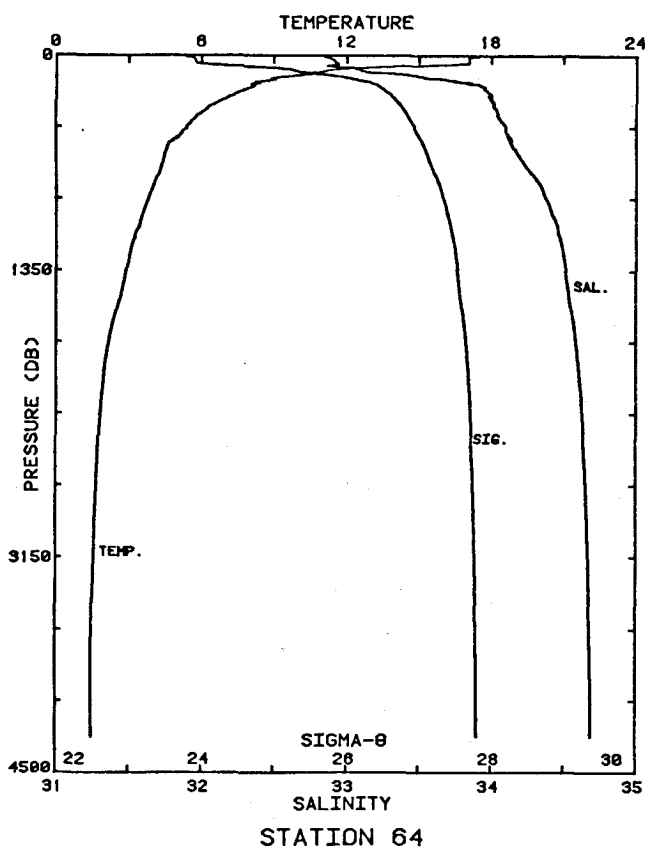
STATION 63 CMW5



STATION 63 CMW5

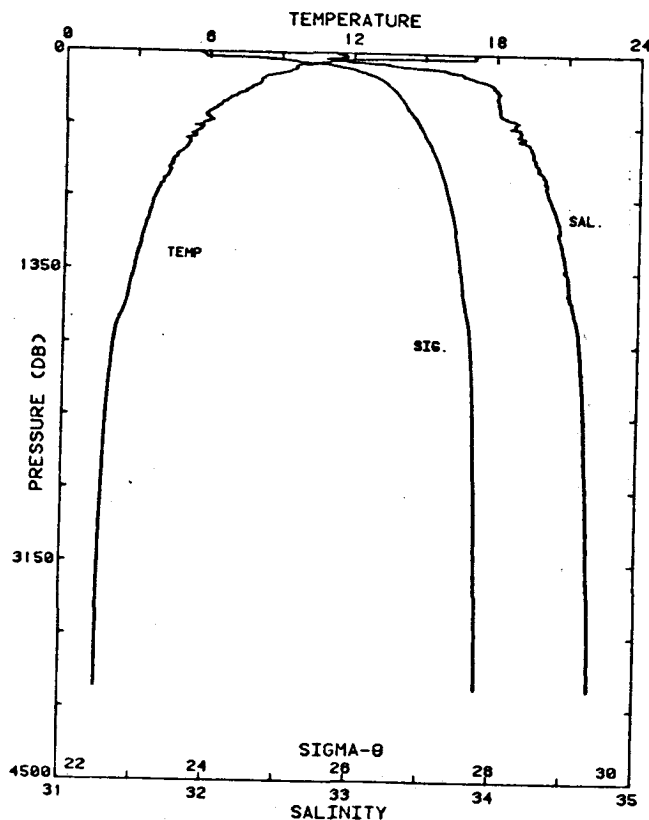
STA NO 63 CMW5 LAT: 39 30.4 N LONG: 128 44.0 W
 19 SEP 1982 1104 GMT PROBE 2561 DEPTH 4287M

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	17.847	32.647	17.847	23.529	436.9	0.004
10	17.850	32.646	17.848	23.529	437.3	0.044
20	17.853	32.647	17.850	23.530	437.6	0.087
30	17.552	32.702	17.547	23.644	426.9	0.131
40	17.385	32.762	17.378	23.730	419.1	0.173
50	13.304	32.806	13.297	24.656	330.7	0.211
60	12.052	32.804	12.045	24.898	307.9	0.242
70	10.807	32.868	10.799	25.172	281.8	0.271
80	10.401	32.899	10.392	25.267	273.0	0.299
90	9.938	32.900	9.927	25.347	265.6	0.326
100	9.649	32.904	9.638	25.398	260.9	0.352
110	9.767	32.996	9.755	25.449	256.2	0.379
120	9.832	33.157	9.819	25.565	245.5	0.403
130	9.753	33.157	9.738	25.578	244.5	0.428
140	9.356	33.114	9.340	25.609	241.5	0.453
150	9.706	33.428	9.689	25.797	224.1	0.475
175	9.088	33.702	9.069	26.112	194.5	0.528
200	8.648	33.850	8.627	26.297	177.3	0.574
225	8.294	33.978	8.271	26.452	162.9	0.616
250	7.723	33.995	7.699	26.550	153.9	0.655
300	7.174	34.042	7.145	26.666	143.4	0.729
400	5.837	34.028	5.803	26.832	128.1	0.864
500	5.145	34.109	5.104	26.979	114.7	0.986
600	4.637	34.174	4.591	27.089	104.8	1.095
800	4.043	34.319	3.984	27.268	89.0	1.289
1000	3.572	34.418	3.500	27.396	77.8	1.455
1500	2.622	34.547	2.518	27.587	60.5	1.797
2000	1.979	34.615	1.843	27.697	50.2	2.069
2500	1.739	34.646	1.564	27.743	46.8	2.310
3000	1.607	34.667	1.388	27.772	45.1	2.539
3500	1.529	34.680	1.262	27.792	44.5	2.763
4000	1.482	34.691	1.164	27.807	44.4	2.984
4353	1.508	34.692	1.150	27.809	45.6	3.143

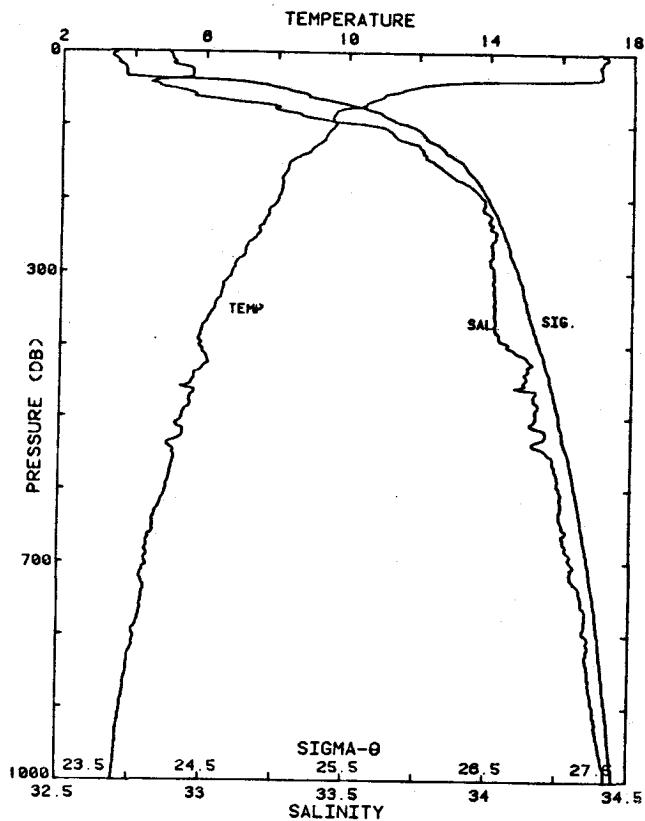


STA NO 64 , LAT: 39 28.0 N LONG:128 13.0 W
 19 SEP 1982 2048 GMT PROBE 2561 DEPTH 4213M

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
5	17.460	32.852	17.459	23.779	413.2	0.021
10	17.149	32.866	17.147	23.863	405.4	0.041
20	17.072	32.895	17.069	23.905	401.7	0.081
30	17.079	32.913	17.074	23.917	400.9	0.122
40	17.085	32.924	17.078	23.924	400.5	0.162
50	16.917	32.942	16.909	23.978	395.8	0.202
60	15.163	32.879	15.153	24.324	362.8	0.240
70	13.441	32.952	13.432	24.742	323.2	0.274
80	11.936	33.067	11.925	25.123	286.9	0.304
90	11.186	33.094	11.175	25.281	272.0	0.331
100	10.875	33.136	10.864	25.370	263.8	0.359
110	10.557	33.327	10.545	25.573	244.6	0.384
120	10.043	33.447	10.029	25.756	227.5	0.407
130	9.305	33.526	9.291	25.938	210.1	0.430
140	8.940	33.579	8.925	26.038	200.7	0.450
150	8.832	33.698	8.816	26.148	190.4	0.470
175	8.044	33.841	8.026	26.380	168.6	0.514
200	7.962	33.944	7.942	26.475	160.1	0.555
225	7.586	33.973	7.564	26.552	153.1	0.594
250	7.253	33.993	7.230	26.615	147.4	0.632
300	6.597	34.022	6.570	26.728	137.1	0.702
400	5.696	34.062	5.663	26.875	123.9	0.833
500	5.084	34.120	5.044	26.995	113.2	0.951
600	4.503	34.175	4.457	27.104	103.2	1.059
800	4.051	34.332	3.992	27.278	88.1	1.251
1000	3.552	34.424	3.480	27.402	77.1	1.416
1500	2.695	34.538	2.591	27.575	62.0	1.757
2000	1.975	34.610	1.839	27.694	50.5	2.033
2500	1.737	34.645	1.562	27.743	46.8	2.275
3000	1.607	34.667	1.388	27.773	45.1	2.503
3500	1.518	34.682	1.252	27.794	44.2	2.727
4000	1.480	34.692	1.161	27.808	44.3	2.947
4277	1.503	34.693	1.153	27.810	45.3	3.071



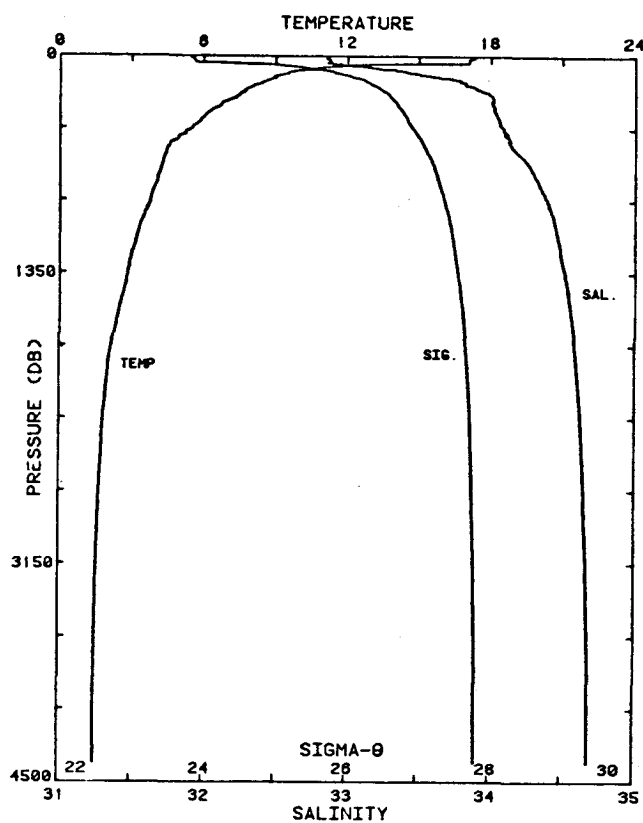
STATION 65



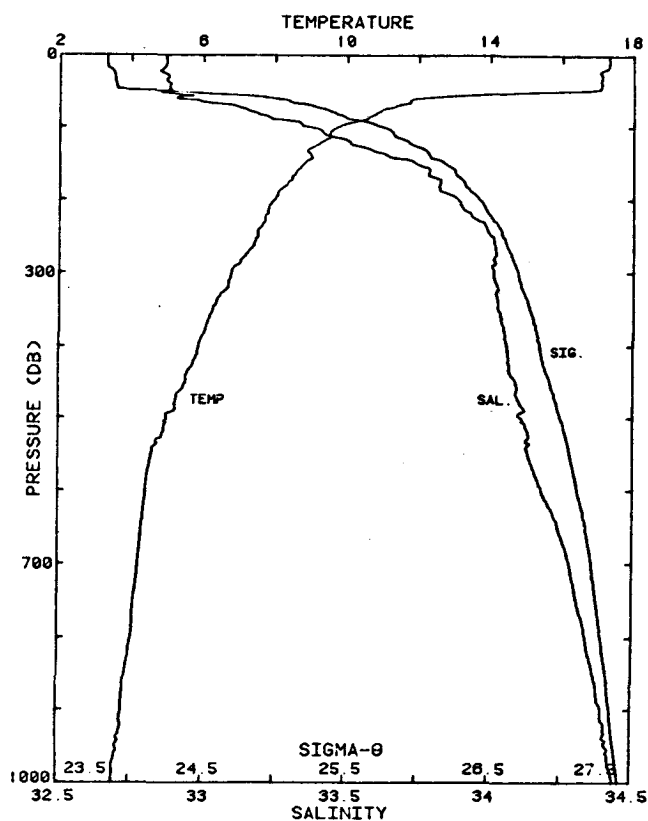
STATION 65

STA NO 65 , LAT: 39 28.0 N LONG:127 55.0 W
20 SEP 1982 0116 GMT PROBE 2561 DEPTH 3881M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	17.119	32.872	17.119	23.875	404.0	0.004
10	17.197	32.880	17.196	23.862	405.4	0.041
20	17.058	32.912	17.054	23.921	400.2	0.081
30	17.099	32.954	17.094	23.943	398.4	0.121
40	13.204	32.838	13.198	24.699	326.4	0.159
50	11.608	32.875	11.602	25.035	294.6	0.190
60	10.976	32.962	10.969	25.216	277.5	0.218
70	10.502	33.164	10.494	25.456	254.9	0.244
80	9.701	33.256	9.693	25.662	235.3	0.270
90	9.536	33.373	9.526	25.781	224.3	0.292
100	9.625	33.575	9.614	25.925	210.9	0.314
110	9.417	33.655	9.405	26.021	201.9	0.335
120	9.295	33.694	9.282	26.072	197.2	0.354
130	8.993	33.759	8.979	26.171	188.0	0.374
140	8.653	33.774	8.639	26.236	181.9	0.392
150	8.326	33.809	8.311	26.313	174.6	0.410
175	8.150	33.908	8.132	26.418	165.1	0.453
200	8.030	33.982	8.010	26.494	158.4	0.493
225	7.728	34.006	7.706	26.557	152.7	0.532
250	7.446	34.022	7.422	26.611	147.9	0.570
300	6.761	34.018	6.733	26.703	139.6	0.641
400	5.869	34.063	5.835	26.855	126.0	0.775
500	5.393	34.166	5.352	26.995	113.6	0.894
600	4.986	34.252	4.938	27.112	103.2	1.003
800	4.105	34.348	4.046	27.286	87.5	1.192
1000	3.546	34.423	3.474	27.402	77.2	1.357
1500	2.700	34.522	2.595	27.561	63.3	1.704
2000	1.938	34.614	1.802	27.700	49.8	1.977
2500	1.734	34.645	1.559	27.743	46.8	2.217
3000	1.595	34.667	1.377	27.774	44.9	2.446
3500	1.513	34.682	1.246	27.794	44.1	2.668
3927	1.496	34.689	1.185	27.804	44.5	2.857



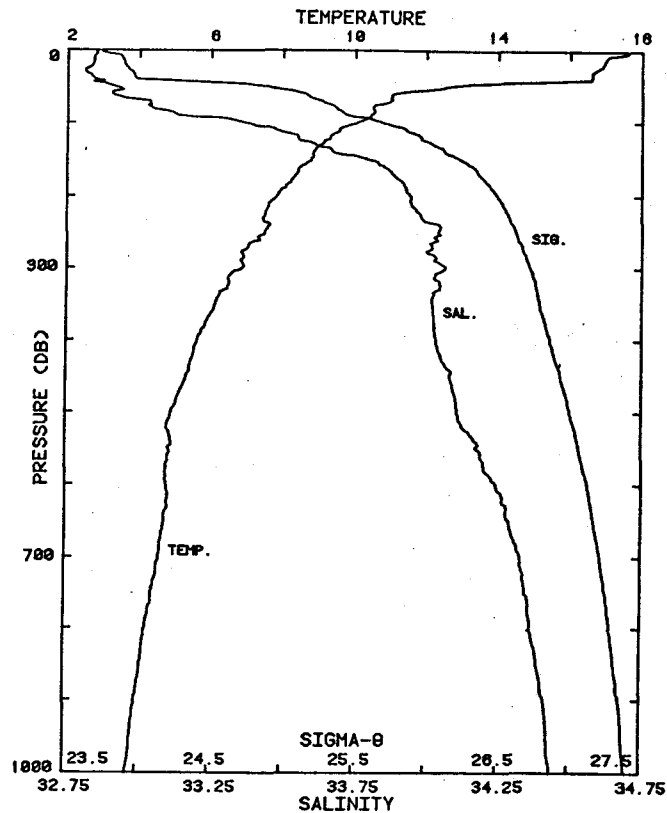
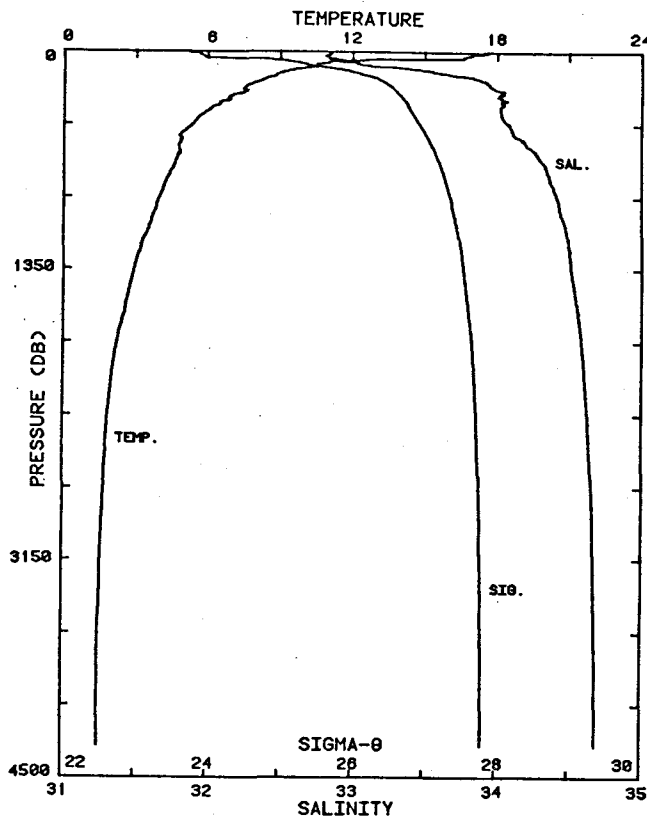
STATION 66



STATION 66

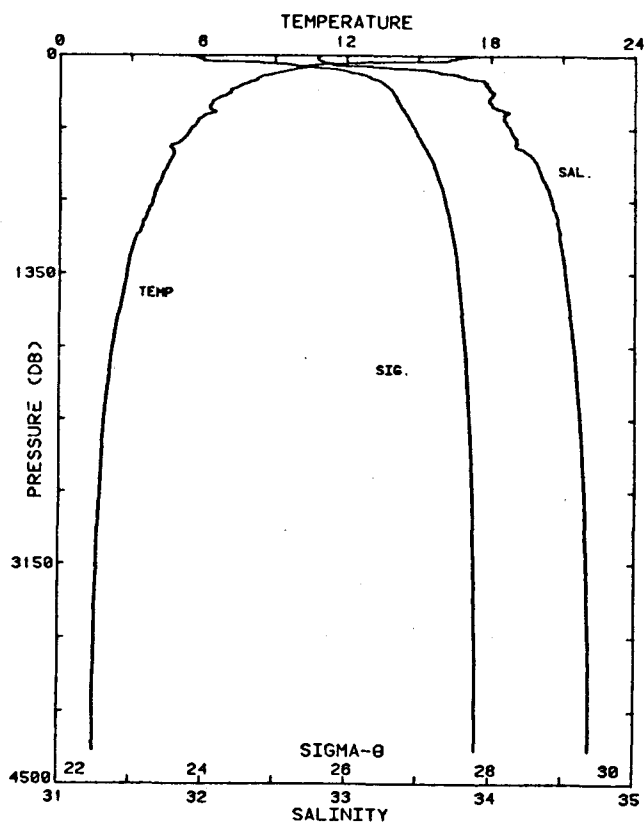
STA NO 66 , LAT: 39 40.0 N LONG:127 41.5 W
 20 SEP 1982 0547 GMT PROBE 2561 DEPTH 4308M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
			TEMP	THETA		
1	17.318	32.871	17.318	23.827	408.5	0.004
10	17.320	32.871	17.319	23.827	408.8	0.041
20	17.187	32.859	17.183	23.850	406.9	0.082
30	17.118	32.879	17.113	23.882	404.3	0.122
40	17.101	32.884	17.095	23.890	403.8	0.163
50	16.010	32.871	16.001	24.128	381.2	0.203
60	12.114	32.909	12.106	24.966	301.4	0.236
70	11.445	33.097	11.437	25.238	275.8	0.265
80	10.866	33.177	10.857	25.403	260.2	0.292
90	10.469	33.266	10.459	25.542	247.2	0.317
100	9.765	33.365	9.753	25.738	228.6	0.340
110	9.513	33.423	9.501	25.825	220.6	0.363
120	9.317	33.508	9.304	25.923	211.4	0.385
130	8.953	33.576	8.939	26.034	201.0	0.405
140	9.007	33.643	8.991	26.078	197.0	0.425
150	8.822	33.737	8.806	26.181	187.4	0.444
175	8.397	33.827	8.379	26.317	174.8	0.490
200	7.987	33.889	7.967	26.427	164.6	0.533
225	7.703	33.945	7.681	26.513	156.8	0.572
250	7.507	34.006	7.483	26.590	149.9	0.611
300	6.785	34.012	6.758	26.695	140.3	0.683
400	5.893	34.061	5.859	26.850	126.4	0.816
500	5.002	34.109	4.962	26.995	113.0	0.937
600	4.437	34.181	4.391	27.116	102.0	1.043
800	4.031	34.338	3.971	27.285	87.4	1.230
1000	3.521	34.441	3.449	27.419	75.5	1.393
1500	2.593	34.543	2.490	27.587	60.5	1.730
2000	1.993	34.608	1.857	27.691	50.9	2.005
2500	1.745	34.645	1.569	27.742	46.9	2.247
3000	1.605	34.667	1.386	27.773	45.1	2.477
3500	1.526	34.681	1.259	27.792	44.4	2.700
4000	1.485	34.690	1.167	27.807	44.4	2.921
4377	1.513	34.692	1.151	27.809	45.7	3.091

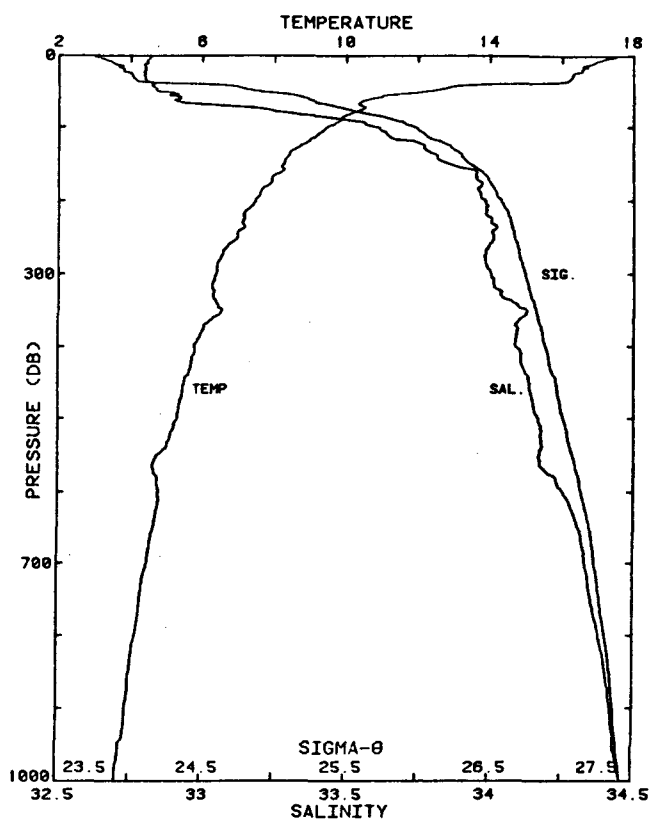


STA NO 67 ,CMMW1 LAT: 39 28.0 N LONG:127 37.8 W
21 SEP 1982 0211 GMT PROBE 2561 DEPTH 4228M

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	WELD
1	17.609	32.851	17.608	23.742	416.5	0.004
10	17.004	32.842	17.002	23.880	403.8	0.041
20	16.893	32.837	16.890	23.901	402.0	0.081
30	16.610	32.817	16.606	23.933	397.5	0.121
40	16.038	32.861	16.032	24.116	382.2	0.161
50	12.477	32.923	12.470	24.909	306.7	0.194
60	11.036	32.909	11.028	25.164	282.5	0.223
70	10.984	33.037	10.976	25.274	272.3	0.252
80	10.493	33.053	10.483	25.371	263.1	0.278
90	10.435	33.161	10.424	25.466	254.4	0.303
100	10.045	33.369	10.033	25.694	232.9	0.328
110	9.571	33.476	9.558	25.856	217.6	0.350
120	9.314	33.553	9.300	25.958	208.0	0.372
130	9.056	33.612	9.042	26.047	199.8	0.392
140	8.856	33.674	8.842	26.126	192.4	0.412
150	8.784	33.796	8.768	26.233	182.4	0.431
175	8.290	33.896	8.272	26.387	168.1	0.474
200	7.835	33.944	7.816	26.493	158.4	0.515
225	7.504	33.976	7.482	26.566	151.7	0.554
250	7.482	34.041	7.457	26.621	147.0	0.590
300	6.868	34.063	6.841	26.724	137.7	0.662
400	5.622	34.033	5.589	26.861	125.1	0.794
500	4.932	34.108	4.893	27.002	112.2	0.912
600	4.792	34.243	4.745	27.126	101.6	1.019
800	4.246	34.367	4.185	27.285	87.8	1.207
1000	3.730	34.441	3.658	27.398	78.0	1.372
1500	2.690	34.539	2.586	27.576	61.9	1.715
2000	2.017	34.606	1.881	27.687	51.4	1.997
2500	1.755	34.643	1.579	27.740	47.2	2.241
3000	1.604	34.667	1.383	27.773	45.1	2.470
3500	1.525	34.681	1.258	27.793	44.4	2.694
4000	1.482	34.691	1.164	27.807	44.3	2.915
4305	1.506	34.692	1.153	27.809	45.4	3.052



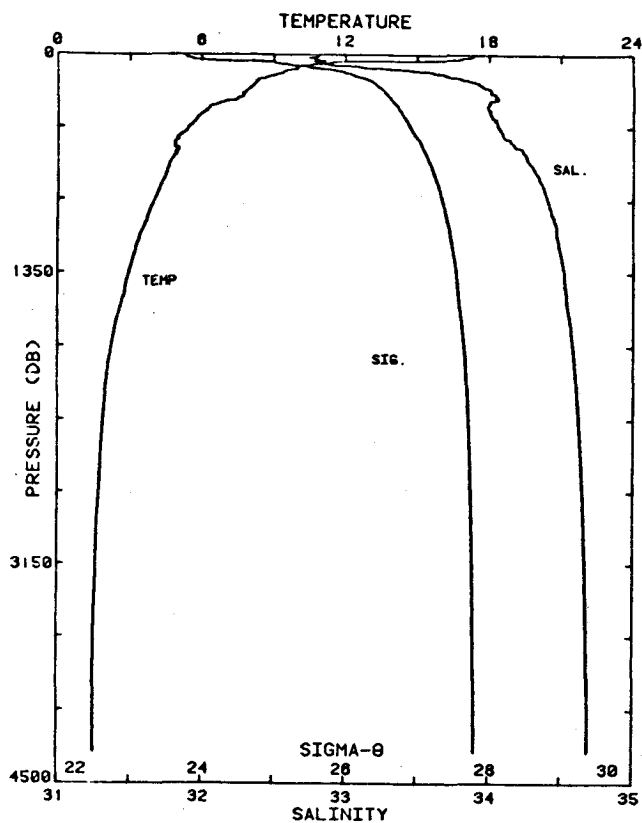
STATION 68



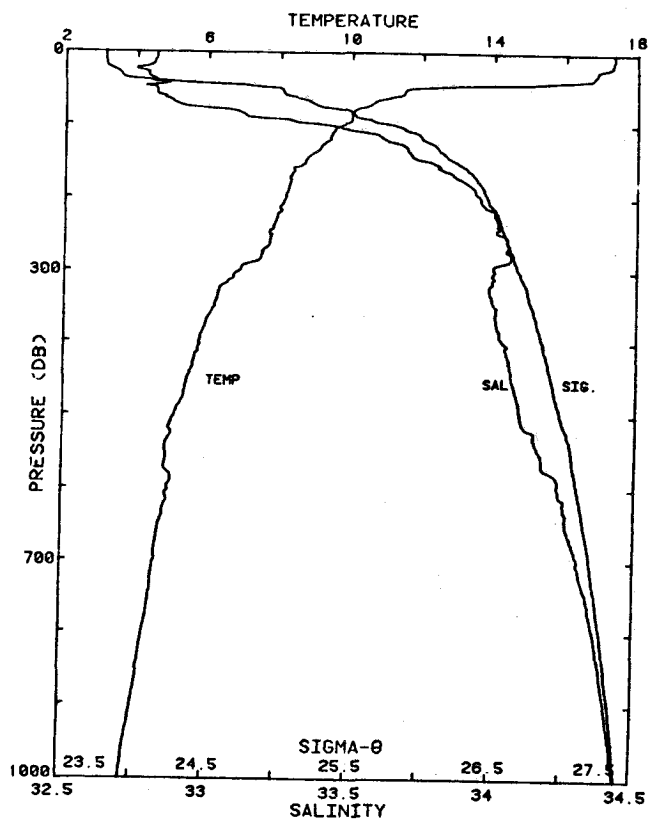
STATION 68

STA NO 68 , LAT: 39 18.0 N LONG:127 40.0 W
21 SEP 1982 0619 GMT PROBE 2561 DEPTH 4229M

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	17.520	32.825	17.520	23.744	416.5	0.004
10	16.926	32.809	16.925	23.872	404.4	0.041
20	16.561	32.801	16.558	23.951	397.3	0.081
30	16.290	32.799	16.285	24.011	391.8	0.120
40	14.880	32.831	14.873	24.344	360.4	0.160
50	12.352	32.839	12.347	24.867	310.6	0.192
60	10.848	32.923	10.841	25.208	278.2	0.221
70	10.379	33.034	10.371	25.376	262.5	0.248
80	10.222	33.278	10.213	25.593	242.1	0.273
90	9.851	33.497	9.840	25.826	220.0	0.296
100	9.457	33.602	9.446	25.972	206.3	0.318
110	9.198	33.642	9.186	26.047	199.4	0.338
120	8.938	33.741	8.926	26.165	188.4	0.358
130	8.564	33.774	8.552	26.250	180.4	0.376
140	8.388	33.818	8.374	26.310	174.8	0.394
150	8.264	33.858	8.248	26.361	170.2	0.411
175	7.938	33.971	7.920	26.498	157.4	0.451
200	7.468	33.984	7.449	26.576	150.3	0.490
225	7.150	34.005	7.129	26.639	144.6	0.527
250	6.977	34.013	6.954	26.669	142.1	0.562
300	6.391	34.003	6.364	26.741	135.7	0.632
400	5.793	34.089	5.759	26.885	123.0	0.761
500	5.309	34.167	5.268	27.006	112.4	0.879
600	4.784	34.253	4.738	27.135	100.7	0.985
800	4.163	34.382	4.103	27.305	85.8	1.170
1000	3.628	34.462	3.556	27.424	75.2	1.331
1500	2.614	34.538	2.510	27.582	61.1	1.664
2000	2.062	34.599	1.924	27.679	52.4	1.945
2500	1.766	34.641	1.590	27.738	47.5	2.191
3000	1.613	34.666	1.395	27.771	45.3	2.424
3500	1.523	34.681	1.256	27.793	44.3	2.647
4000	1.481	34.691	1.163	27.807	44.3	2.868
4297	1.505	34.693	1.152	27.809	45.3	3.001



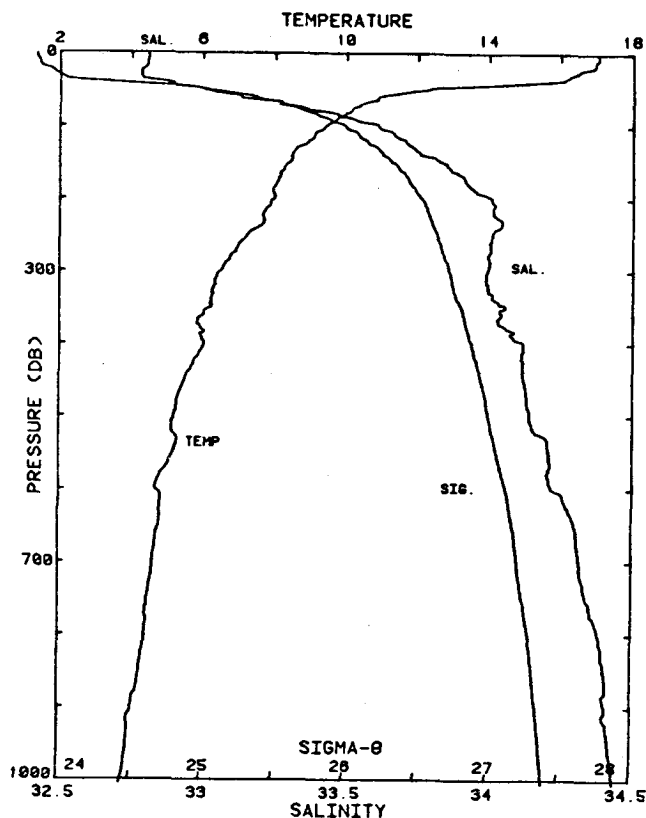
STATION 69



STATION 69

STA NO 69 , LAT: 39 28.0 N LONG:127 24.0 W
 22 SEP 1982 0120 GMT PROBE 2561 DEPTH 4260M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	17.360	32.819	17.360	23.777	413.2	0.004
10	17.349	32.816	17.347	23.778	413.5	0.041
20	17.232	32.795	17.229	23.790	412.7	0.083
30	16.831	32.790	16.826	23.881	404.3	0.124
40	15.795	32.809	15.789	24.131	380.7	0.163
50	11.556	32.816	11.550	24.997	298.1	0.197
60	11.251	32.835	11.244	25.069	291.6	0.226
70	10.589	32.882	10.581	25.222	277.1	0.255
80	10.051	33.084	10.042	25.471	253.6	0.282
90	9.972	33.157	9.963	25.541	247.2	0.306
100	9.751	33.405	9.740	25.772	225.4	0.330
110	9.464	33.529	9.452	25.915	212.0	0.352
120	9.376	33.614	9.363	25.996	204.5	0.373
130	9.121	33.687	9.108	26.094	195.3	0.393
140	8.887	33.707	8.872	26.147	190.4	0.412
150	8.694	33.760	8.678	26.219	183.8	0.431
175	8.290	33.884	8.272	26.377	169.0	0.474
200	8.147	33.951	8.127	26.453	162.3	0.516
225	7.914	34.002	7.892	26.527	155.6	0.555
250	7.742	34.026	7.718	26.570	151.8	0.594
300	6.889	34.002	6.861	26.674	142.4	0.668
400	5.777	34.033	5.743	26.843	127.0	0.802
500	5.115	34.096	5.076	26.972	115.3	0.923
600	4.952	34.230	4.905	27.098	104.4	1.032
800	4.319	34.365	4.258	27.276	88.8	1.224
1000	3.729	34.446	3.655	27.403	77.5	1.391
1500	2.687	34.540	2.582	27.576	61.8	1.734
2000	2.028	34.605	1.891	27.685	51.6	2.013
2500	1.775	34.641	1.598	27.736	47.6	2.260
3000	1.612	34.665	1.393	27.771	45.3	2.492
3500	1.526	34.681	1.258	27.792	44.4	2.717
4000	1.488	34.690	1.169	27.806	44.5	2.938
4313	1.506	34.693	1.152	27.809	45.4	3.079



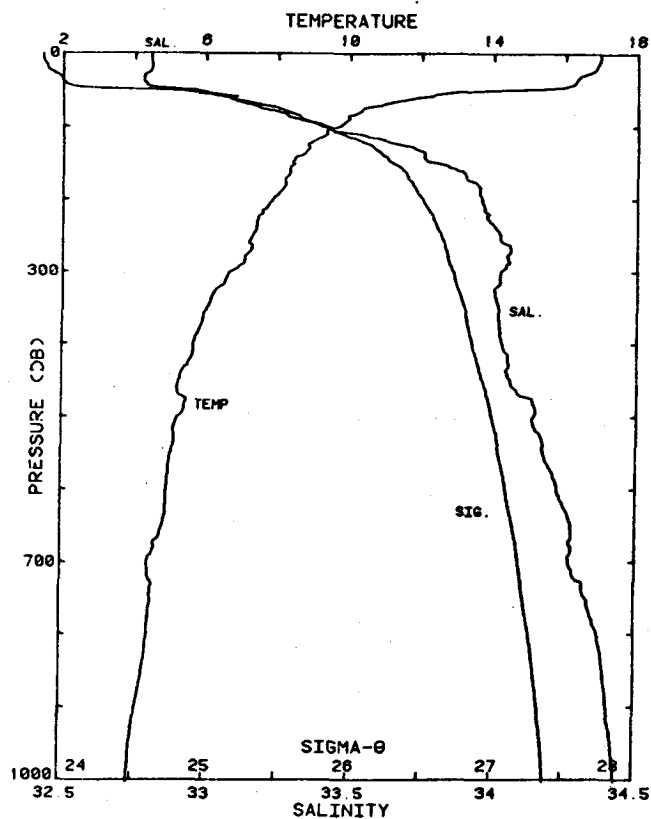
STA NO 70 , CMMW8 LAT: 39 6.2 N LONG: 127 21.7 W
22 SEP 1982 2325 GMT PROBE 2561 DEPTH 4340M

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
3	17.043	32.809	17.043	23.845	406.9	0.012
10	17.005	32.808	17.003	23.854	406.3	0.041
20	16.881	32.804	16.878	23.879	404.1	0.081
30	16.334	32.784	16.329	23.991	393.8	0.121
40	15.393	32.855	15.387	24.255	368.9	0.160
50	12.319	32.995	12.313	24.993	298.6	0.193
60	10.980	33.127	10.973	25.343	265.4	0.221
70	10.427	33.264	10.419	25.547	246.3	0.247
80	10.116	33.414	10.106	25.717	230.2	0.271
90	9.714	33.521	9.704	25.867	216.1	0.293
100	9.399	33.613	9.389	25.991	204.5	0.314
110	9.104	33.667	9.093	26.080	196.2	0.334
120	8.916	33.709	8.903	26.144	190.3	0.353
130	8.571	33.739	8.558	26.220	183.2	0.372
140	8.442	33.771	8.428	26.265	179.0	0.390
150	8.353	33.842	8.337	26.335	172.6	0.407
175	8.056	33.917	8.038	26.439	163.1	0.449
200	7.936	34.011	7.916	26.530	154.9	0.490
225	7.651	34.027	7.629	26.585	150.0	0.527
250	7.208	34.011	7.186	26.635	145.4	0.565
300	6.479	33.995	6.453	26.722	137.5	0.635
400	6.035	34.120	6.000	26.879	123.8	0.766
500	5.194	34.143	5.154	27.000	112.8	0.883
600	4.678	34.220	4.632	27.120	101.9	0.991
800	4.393	34.386	4.332	27.285	88.2	1.181
1000	3.781	34.444	3.707	27.395	78.4	1.347
1005	3.768	34.444	3.694	27.397	78.2	1.351

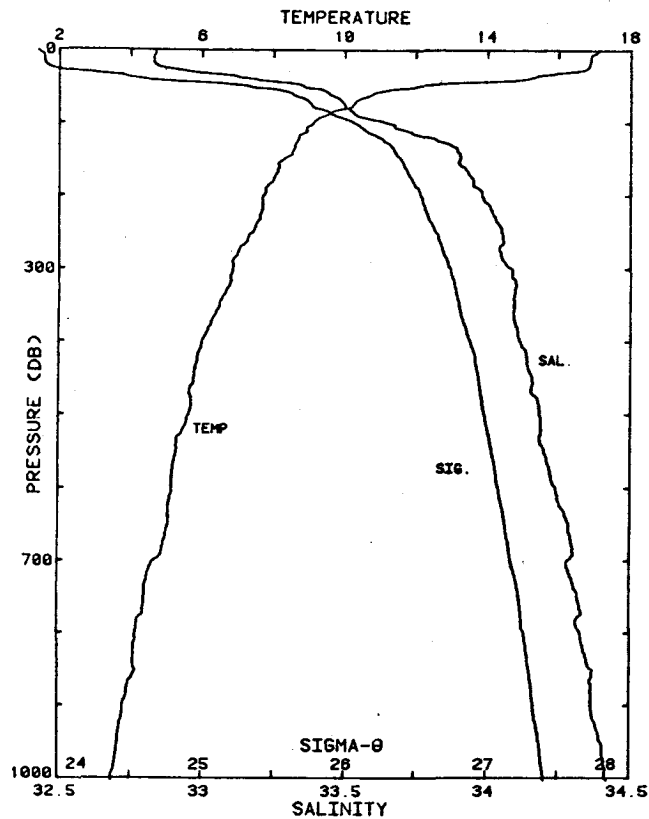
STATION 70 CMMW8

STA NO 71 , LAT: 38 59.0 N LONG: 127 7.0 W
23 SEP 1982 0133 GMT PROBE 2561 DEPTH 4340M
3 MIN. GAP 515-517DB

PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	16.955	32.809	16.955	23.865	404.8	0.004
10	16.951	32.807	16.948	23.865	405.1	0.041
20	16.851	32.811	16.847	23.891	403.0	0.081
30	16.500	32.787	16.495	23.955	397.2	0.121
40	16.255	32.781	16.249	24.006	392.6	0.161
50	14.609	32.917	14.601	24.469	348.7	0.199
60	12.059	33.095	12.052	25.121	286.7	0.229
70	10.900	33.152	10.892	25.377	262.4	0.257
80	10.233	33.250	10.223	25.569	244.2	0.282
90	9.937	33.317	9.927	25.672	234.7	0.306
100	9.664	33.415	9.652	25.793	223.3	0.329
110	9.331	33.518	9.319	25.928	210.7	0.350
120	8.977	33.623	8.964	26.066	197.7	0.371
130	8.839	33.718	8.826	26.163	188.7	0.390
140	8.658	33.757	8.644	26.222	183.3	0.409
150	8.371	33.781	8.355	26.285	177.4	0.427
175	8.177	33.921	8.159	26.424	164.6	0.469
200	7.821	33.961	7.802	26.508	156.9	0.510
225	7.412	33.977	7.391	26.580	150.4	0.548
250	7.277	34.024	7.253	26.636	145.4	0.585
300	6.665	34.026	6.638	26.722	137.7	0.655
400	5.658	34.031	5.624	26.855	125.7	0.787
500	5.240	34.140	5.200	26.993	113.5	0.907
600	4.943	34.227	4.896	27.096	104.6	1.016
800	4.433	34.373	4.371	27.270	89.6	1.209
1000	3.901	34.437	3.826	27.378	80.3	1.378
1003	3.898	34.438	3.823	27.379	80.2	1.380



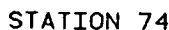
STATION 71



STATION 76

STA NO 76 , LAT: 39 28.5 N LONG: 126 45.7 W
 23 SEP 1982 2029 GMT PROBE 2561 DEPTH 4220M

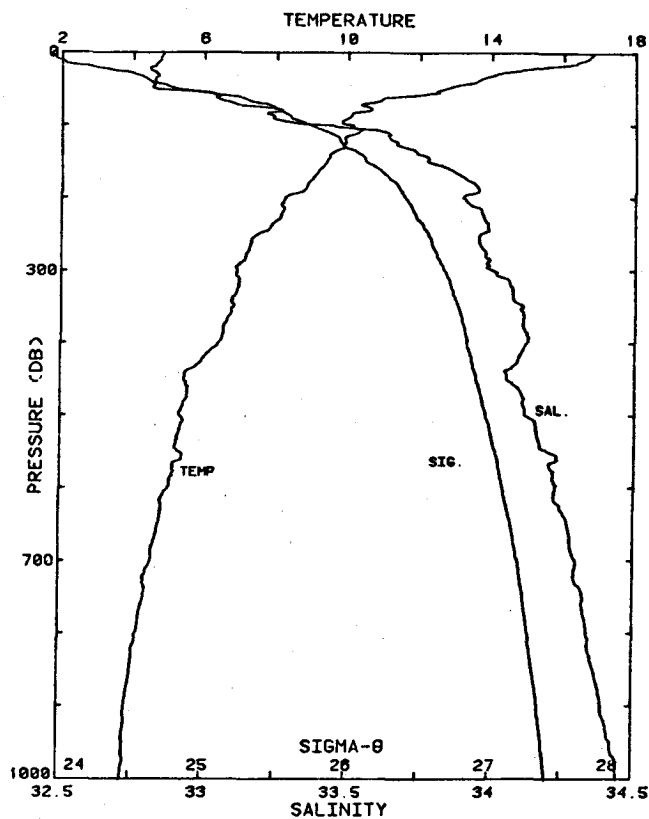
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	17.113	32.838	17.113	23.850	406.2	0.004
10	16.880	32.831	16.878	23.900	401.8	0.040
20	16.853	32.835	16.850	23.909	401.3	0.081
30	16.265	32.967	16.260	24.146	379.0	0.120
40	14.955	33.192	14.950	24.610	335.0	0.155
50	12.002	33.359	11.996	25.336	266.0	0.185
60	10.772	33.444	10.765	25.627	238.4	0.209
70	10.311	33.489	10.303	25.742	227.7	0.233
80	9.999	33.510	9.990	25.811	221.3	0.255
90	9.433	33.543	9.423	25.931	210.0	0.277
100	9.101	33.646	9.090	26.066	197.4	0.297
110	8.929	33.711	8.918	26.143	190.2	0.317
120	8.692	33.800	8.679	26.250	180.2	0.336
130	8.593	33.872	8.580	26.322	173.6	0.353
140	8.515	33.898	8.500	26.354	170.7	0.370
150	8.265	33.905	8.250	26.398	166.6	0.387
175	8.011	33.946	7.994	26.468	160.4	0.428
200	7.707	33.981	7.688	26.540	153.8	0.468
225	7.645	34.020	7.623	26.580	150.5	0.505
250	7.406	34.052	7.382	26.640	145.1	0.543
300	6.842	34.085	6.814	26.744	135.7	0.613
400	5.993	34.115	5.957	26.880	123.7	0.743
500	5.636	34.184	5.594	26.981	115.2	0.862
600	5.166	34.241	5.117	27.082	106.3	0.972
800	4.169	34.328	4.109	27.263	89.8	1.168
1000	3.467	34.414	3.395	27.403	76.9	1.335
1003	3.499	34.421	3.427	27.405	76.8	1.337



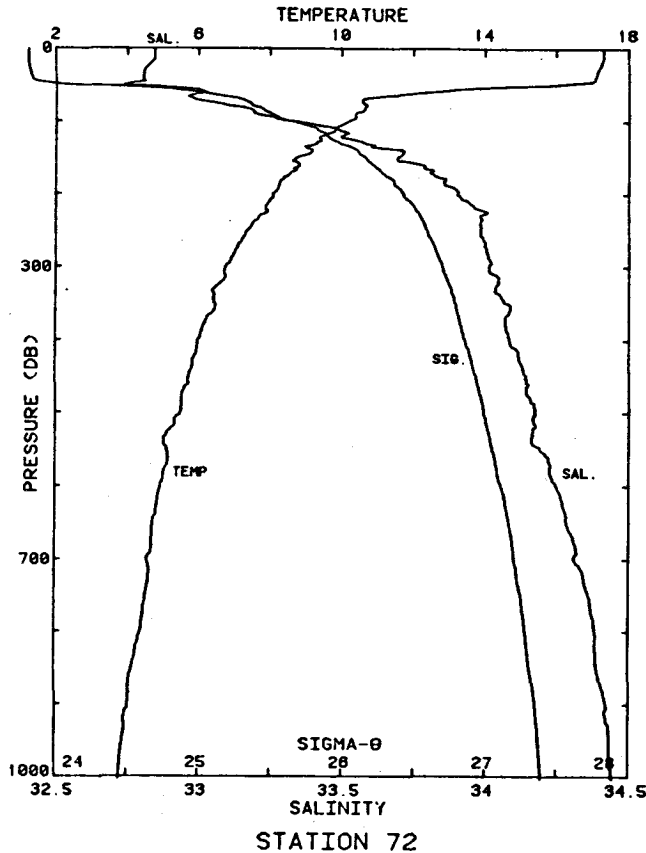
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	17.662	32.874	17.662	23.747	416.1	0.004
10	17.665	32.874	17.663	23.747	416.4	0.042
20	17.663	32.873	17.660	23.747	416.7	0.083
30	17.243	32.847	17.239	23.828	409.4	0.125
40	13.948	32.773	13.943	24.500	345.5	0.163
50	12.045	32.812	12.038	24.905	307.0	0.196
60	11.287	32.838	11.280	25.064	292.0	0.226
70	10.355	32.834	10.347	25.224	276.9	0.254
80	9.946	32.866	9.938	25.318	268.1	0.282
90	9.852	33.023	9.842	25.457	255.1	0.308
100	9.748	33.214	9.737	25.623	239.6	0.333
110	9.465	33.376	9.453	25.795	223.3	0.356
120	9.038	33.472	9.025	25.940	209.7	0.377
130	8.960	33.595	8.947	26.047	199.7	0.398
140	8.647	33.683	8.632	26.166	188.5	0.417
150	8.476	33.720	8.461	26.221	183.5	0.435
175	8.376	33.912	8.358	26.387	168.2	0.479
200	7.943	33.958	7.923	26.488	158.9	0.520
225	7.476	33.964	7.454	26.561	152.2	0.559
250	7.191	33.982	7.168	26.615	147.4	0.597
300	7.041	34.074	7.013	26.709	139.2	0.668
400	5.620	34.042	5.587	26.869	124.4	0.799
500	5.240	34.154	5.199	27.003	112.5	0.918
600	4.879	34.244	4.832	27.117	102.5	1.024
800	4.306	34.365	4.246	27.278	88.7	1.215
1000	3.853	34.456	3.779	27.398	78.3	1.382
1003	3.849	34.456	3.774	27.399	78.3	1.384

STA NO 75 , LAT: 38 35.0 N LONG:126 24.9 W
23 SEP 1982 1233 GMT PROBE 2561 DEPTH 4311M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
1	16.818	32.856	16.818	23.933	398.4	0.004
10	16.569	32.846	16.569	23.984	393.9	0.040
20	15.440	32.818	15.437	24.216	371.9	0.079
30	14.108	32.835	14.103	24.514	343.8	0.114
40	13.558	32.825	13.552	24.620	334.0	0.147
50	12.677	32.825	12.671	24.794	317.6	0.181
60	11.615	33.042	11.608	25.163	282.6	0.211
70	10.577	33.095	10.568	25.389	261.2	0.237
80	10.608	33.267	10.598	25.517	249.3	0.262
90	10.018	33.238	10.008	25.597	241.9	0.287
100	10.006	33.392	9.995	25.718	230.6	0.311
110	10.285	33.630	10.272	25.856	217.8	0.333
120	9.900	33.652	9.887	25.939	210.0	0.355
130	9.880	33.695	9.865	25.977	206.6	0.376
140	9.495	33.750	9.479	26.083	196.6	0.396
150	9.382	33.779	9.366	26.124	192.9	0.415
175	8.948	33.918	8.929	26.302	176.4	0.461
200	8.231	33.906	8.210	26.405	166.9	0.504
225	8.119	33.973	8.097	26.474	160.8	0.545
250	7.484	33.963	7.460	26.559	152.8	0.584
300	6.915	34.007	6.887	26.674	142.4	0.658
400	6.422	34.127	6.386	26.834	128.4	0.793
500	5.330	34.123	5.289	26.968	116.0	0.914
600	5.020	34.226	4.972	27.087	105.6	1.025
800	4.154	34.341	4.094	27.274	88.7	1.217
1000	3.770	34.450	3.696	27.402	77.7	1.383
1001	3.768	34.450	3.694	27.402	77.7	1.383



STATION 75

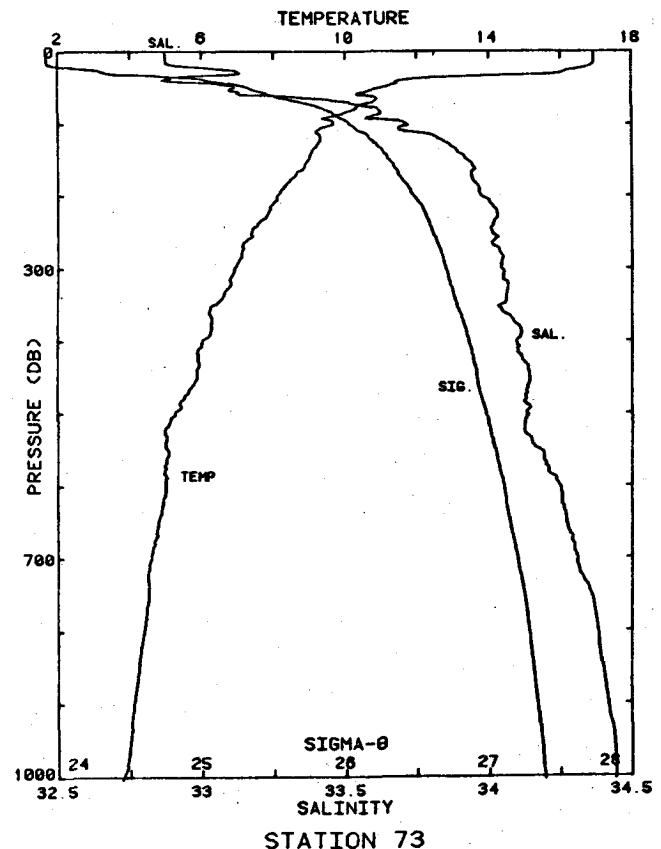


STA NO 72 , LAT: 39 13.0 N LONG: 126 56.0 W
23 SEP 1982 0401 GMT PROBE 2561 DEPTH 4307M

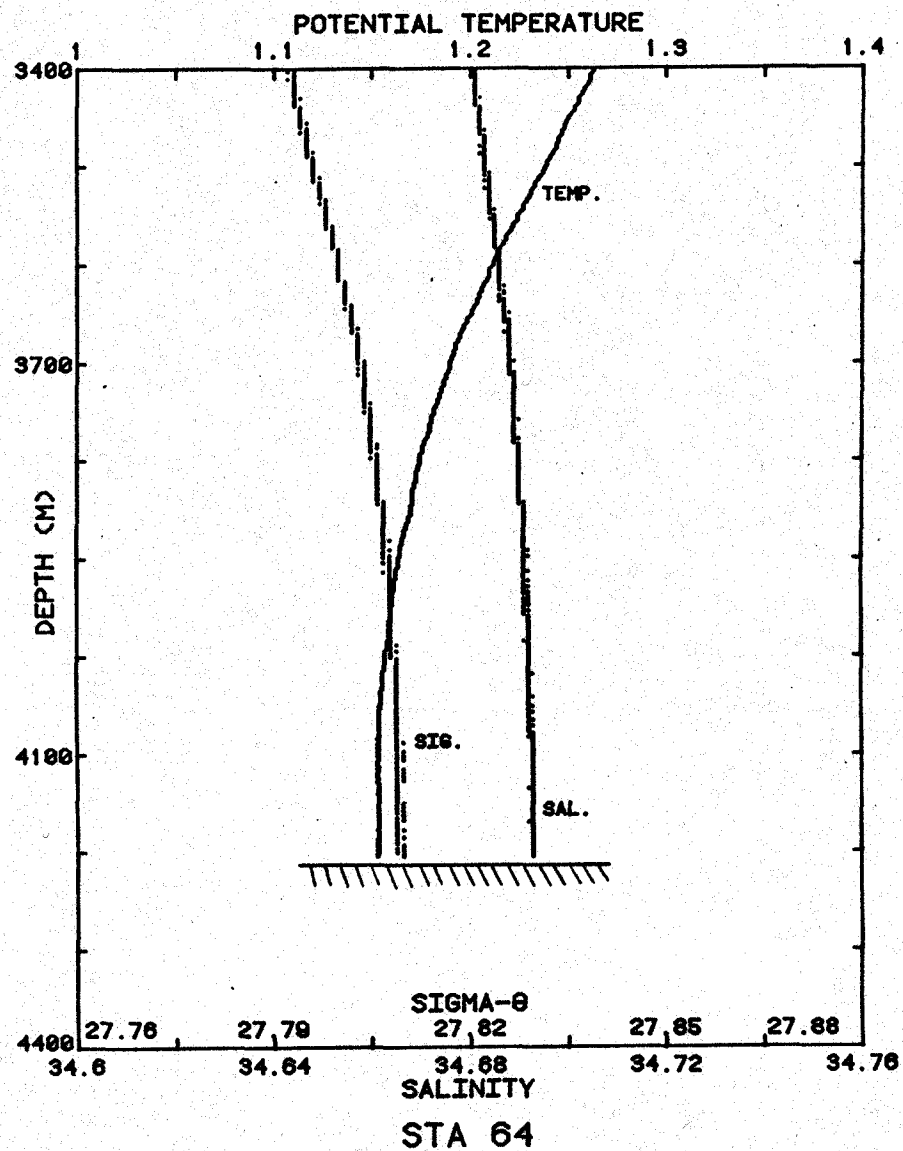
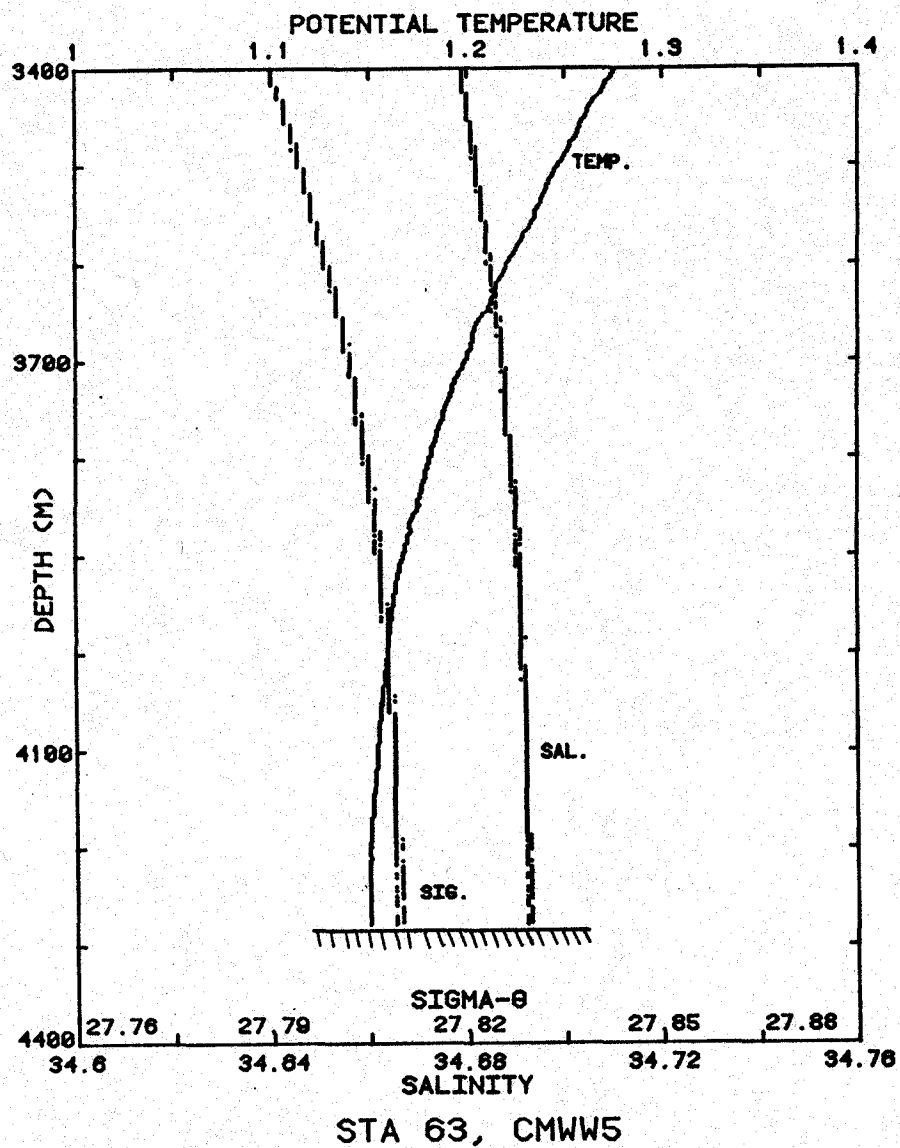
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	17.304	32.846	17.304	23.811	410.0	0.004
10	17.304	32.846	17.302	23.812	410.2	0.041
20	17.266	32.836	17.262	23.813	410.4	0.082
30	17.149	32.811	17.144	23.823	409.9	0.123
40	17.079	32.804	17.073	23.833	409.2	0.164
50	16.128	32.749	16.120	24.010	392.5	0.205
60	12.684	33.012	12.676	24.937	304.3	0.239
70	10.631	32.979	10.623	25.290	270.6	0.267
80	10.668	33.129	10.658	25.399	260.5	0.294
90	10.373	33.201	10.361	25.508	250.4	0.319
100	10.184	33.319	10.172	25.632	238.8	0.343
110	9.819	33.479	9.807	25.818	221.2	0.366
120	9.444	33.500	9.431	25.896	214.0	0.389
130	9.283	33.578	9.269	25.983	205.8	0.410
140	9.156	33.708	9.142	26.104	194.5	0.430
150	8.726	33.693	8.710	26.161	189.2	0.449
175	8.458	33.824	8.440	26.305	176.0	0.494
200	8.053	33.903	8.033	26.428	164.6	0.537
225	7.926	34.008	7.903	26.530	155.4	0.577
250	7.359	33.985	7.336	26.594	149.5	0.614
300	6.745	34.014	6.718	26.701	139.7	0.687
400	5.983	34.085	5.949	26.859	125.7	0.819
500	5.495	34.174	5.454	26.990	114.2	0.938
600	4.942	34.248	4.894	27.113	103.0	1.047
800	4.395	34.384	4.333	27.284	88.3	1.237
1000	3.790	34.443	3.717	27.394	78.5	1.402
1003	3.788	34.444	3.713	27.395	78.4	1.405

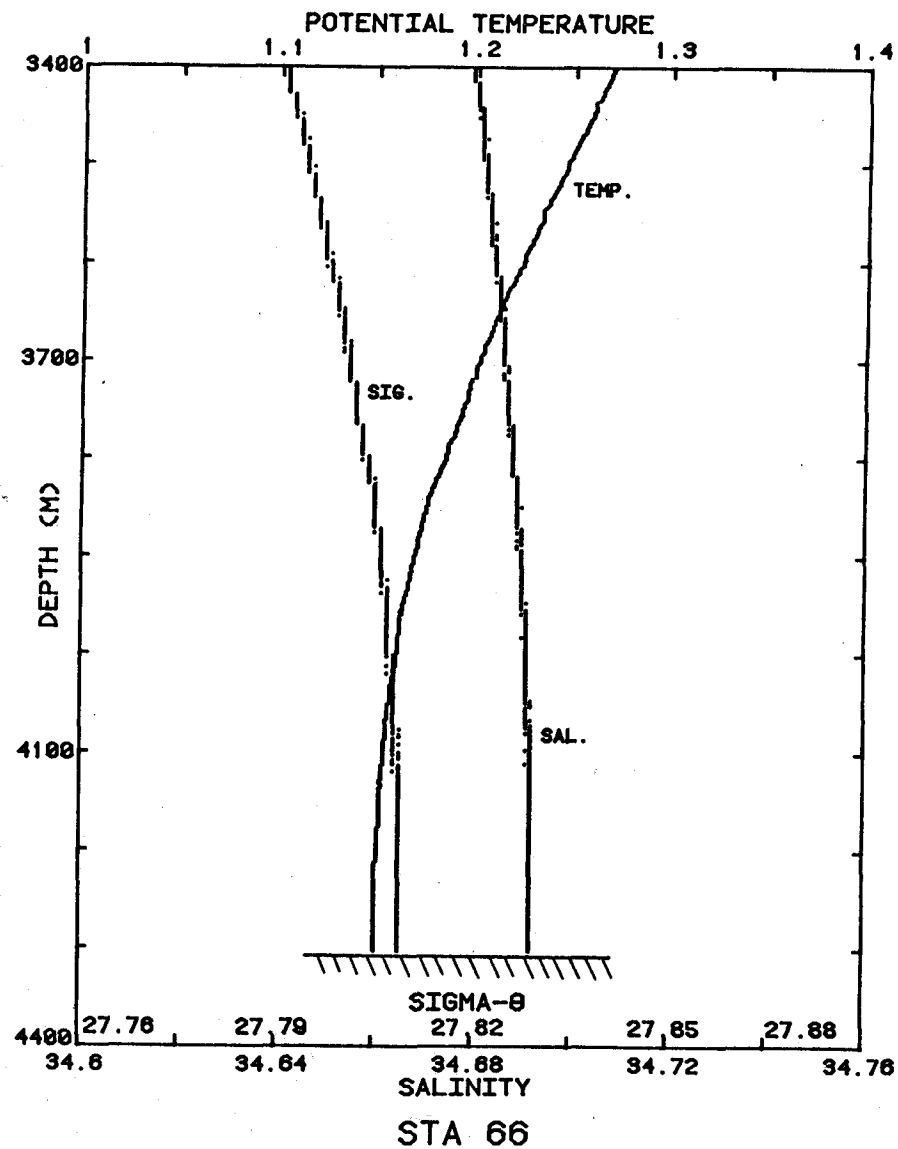
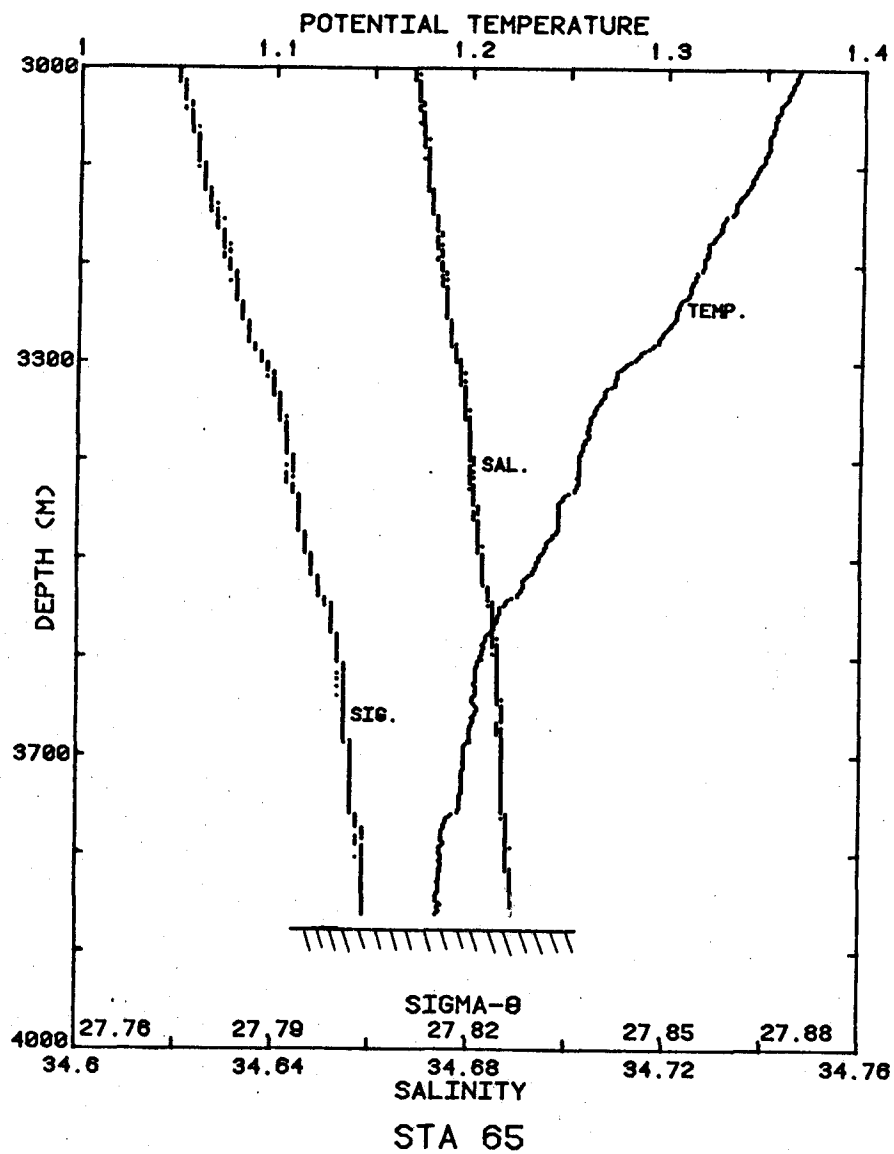
STA NO 73 , LAT: 39 5.0 N LONG: 126 38.0 W
23 SEP 1982 0627 GMT PROBE 2561 DEPTH 4219M

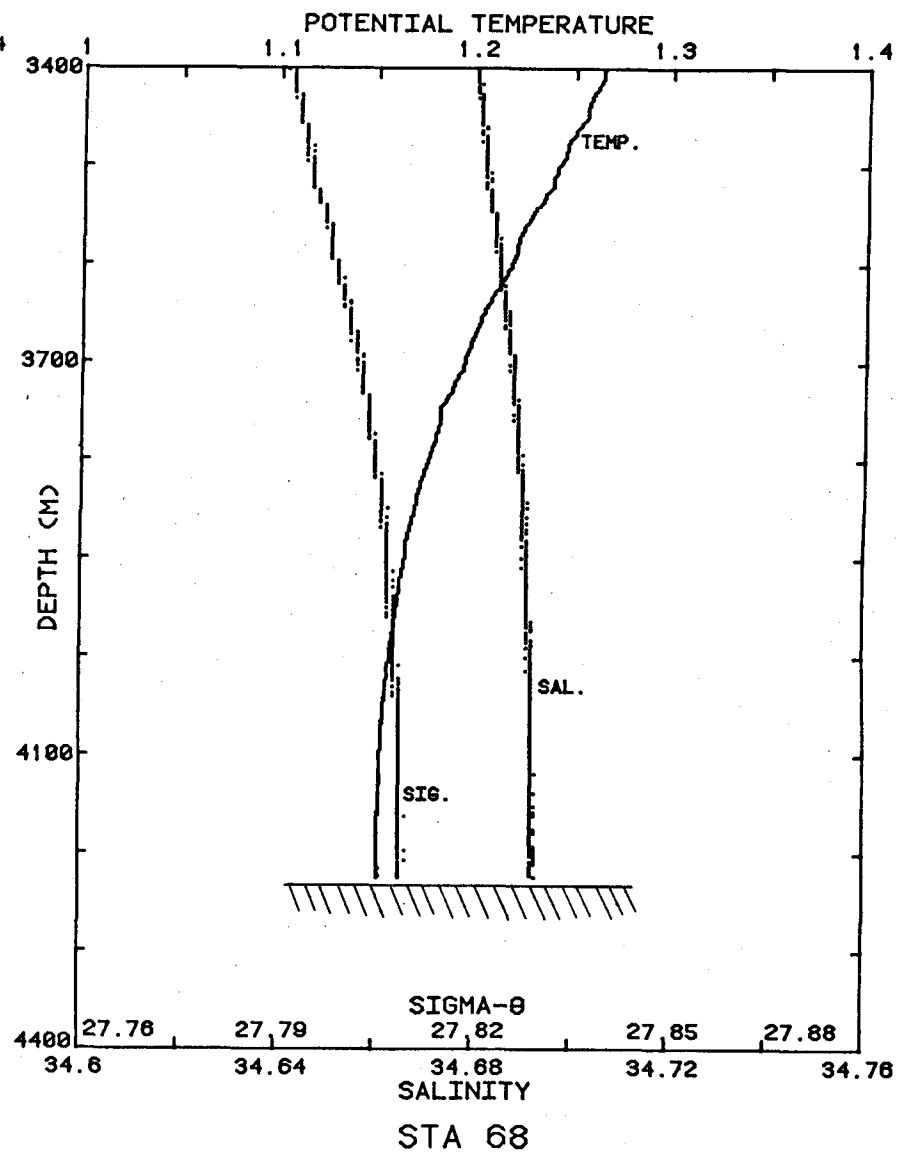
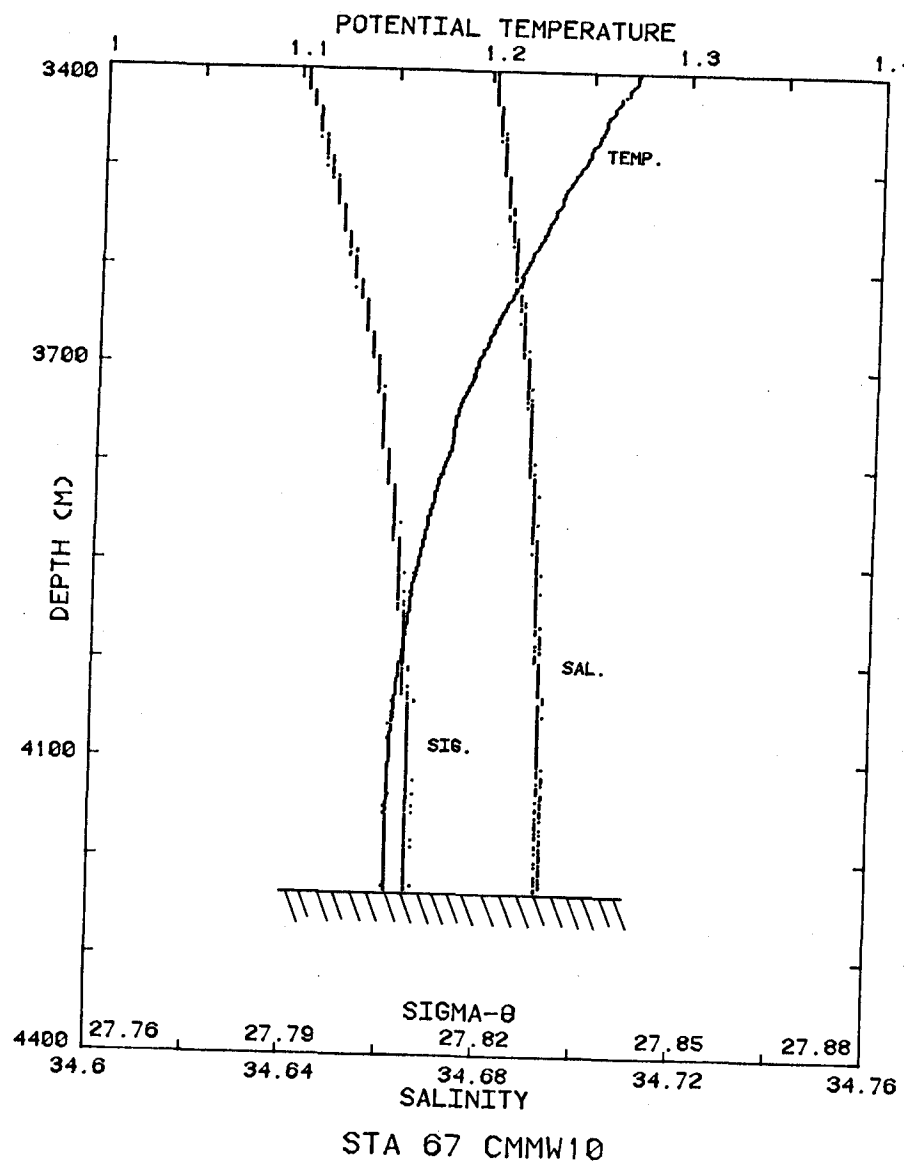
PRESS	TEMP	SAL	POTEN TEMP	SIGMA THETA	SVA	DELD
1	16.929	32.874	16.929	23.921	399.5	0.004
10	16.930	32.875	16.928	23.922	399.7	0.040
20	16.866	32.900	16.863	23.955	396.8	0.080
30	16.058	33.130	16.054	24.318	362.6	0.117
40	11.722	32.878	11.717	25.016	296.2	0.151
50	11.109	33.114	11.103	25.309	268.4	0.179
60	10.344	33.131	10.337	25.457	254.5	0.205
70	10.814	33.487	10.805	25.653	236.2	0.229
80	10.270	33.614	10.261	25.846	218.0	0.252
90	9.631	33.597	9.621	25.940	209.2	0.273
100	9.657	33.709	9.646	26.024	201.5	0.294
110	9.184	33.700	9.173	26.093	195.0	0.314
120	9.303	33.821	9.290	26.169	188.0	0.333
130	9.190	33.865	9.176	26.222	183.2	0.352
140	9.050	33.892	9.035	26.266	179.3	0.370
150	8.958	33.922	8.941	26.304	175.8	0.388
175	8.529	33.941	8.511	26.386	168.3	0.430
200	8.108	33.972	8.087	26.475	160.2	0.472
225	7.845	34.030	7.823	26.559	152.6	0.510
250	7.393	34.013	7.370	26.611	147.8	0.548
300	6.911	34.042	6.883	26.702	139.8	0.619
400	6.040	34.098	6.005	26.861	125.5	0.752
500	5.273	34.131	5.232	26.982	114.6	0.873
600	4.996	34.246	4.948	27.106	103.8	0.982
800	4.388	34.380	4.326	27.281	88.5	1.173
1000	3.811	34.443	3.737	27.392	78.8	1.340
1003	3.784	34.441	3.709	27.393	78.6	1.342

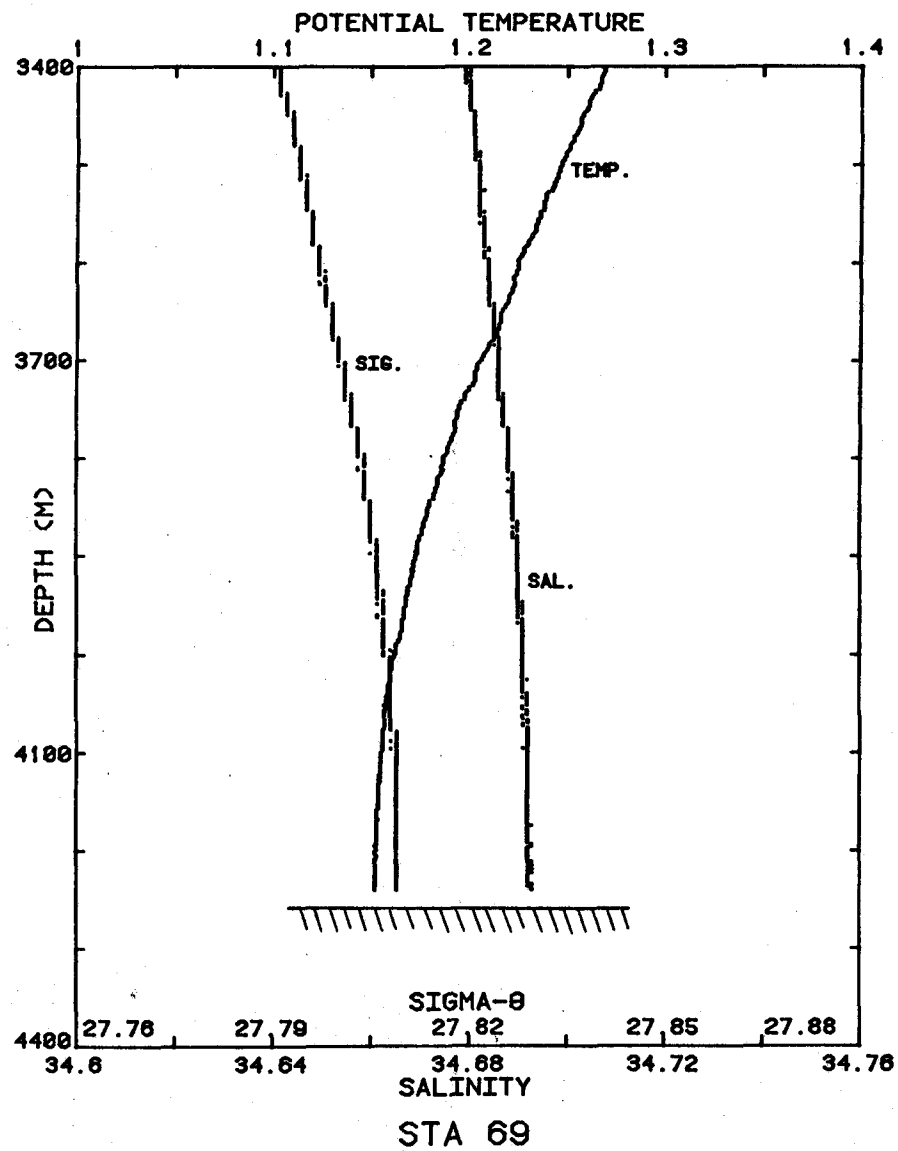


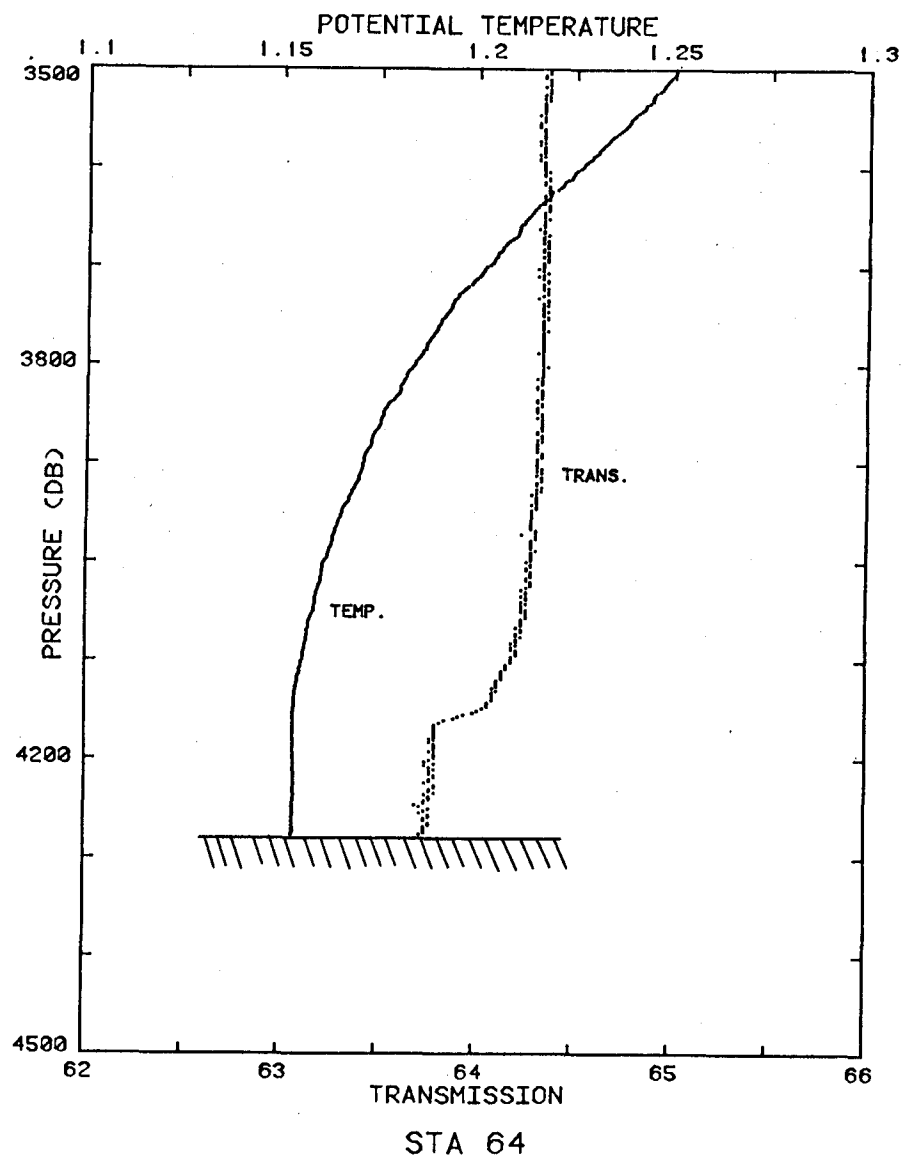
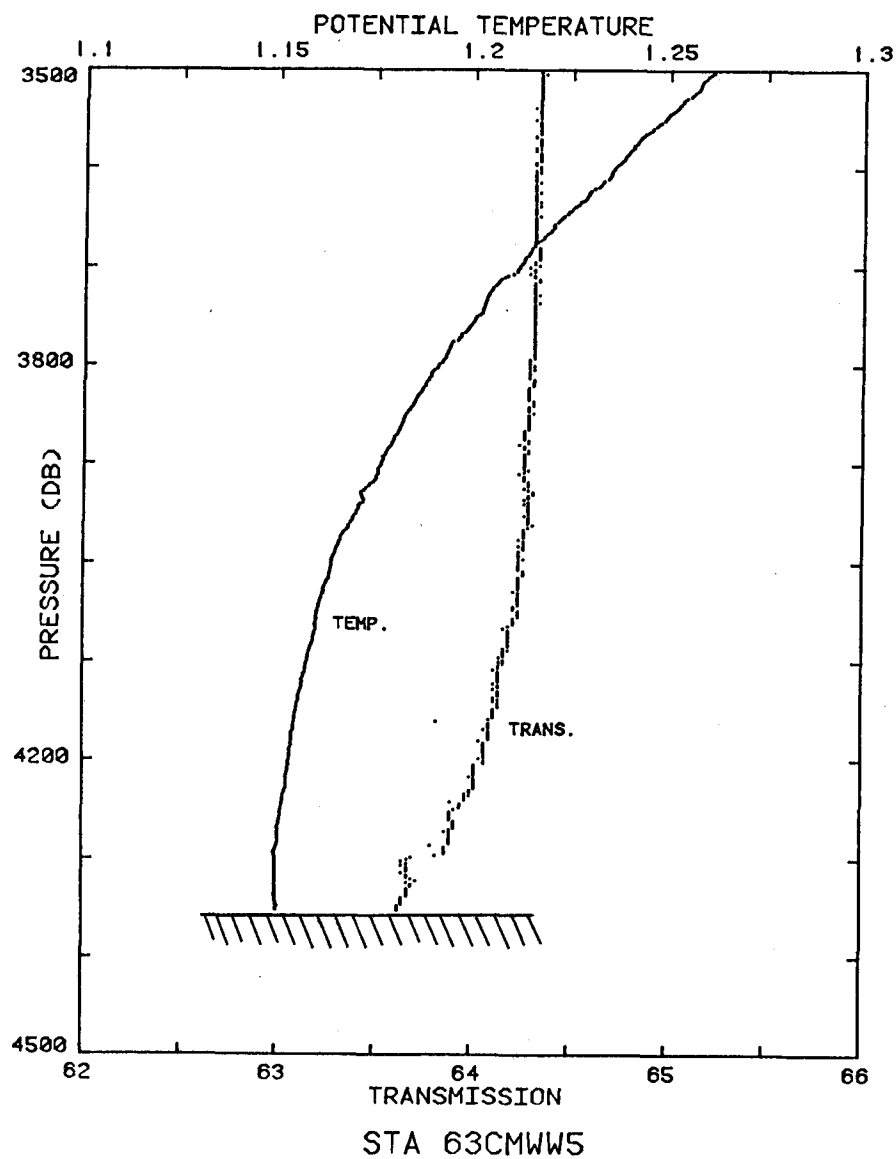
NEAR-BOTTOM PROFILES FOR DEEP STATIONS

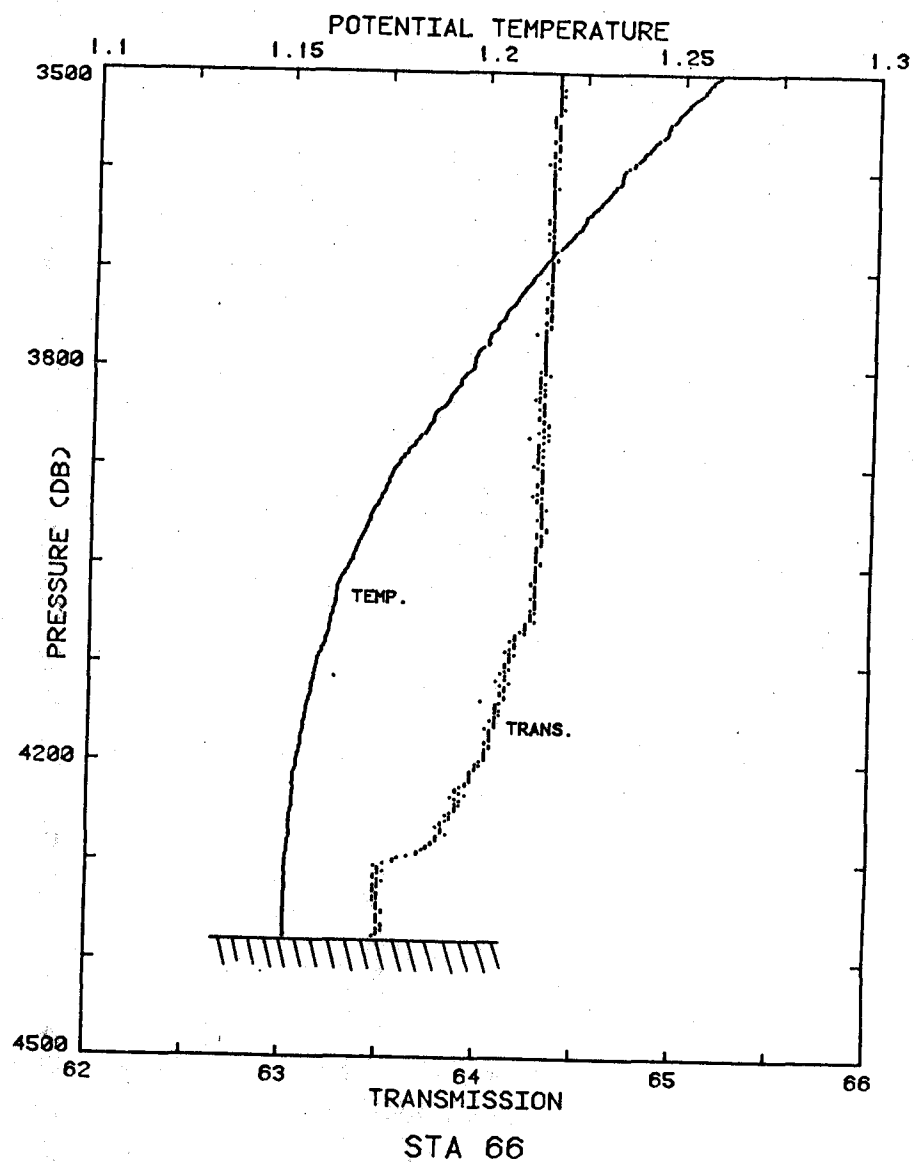
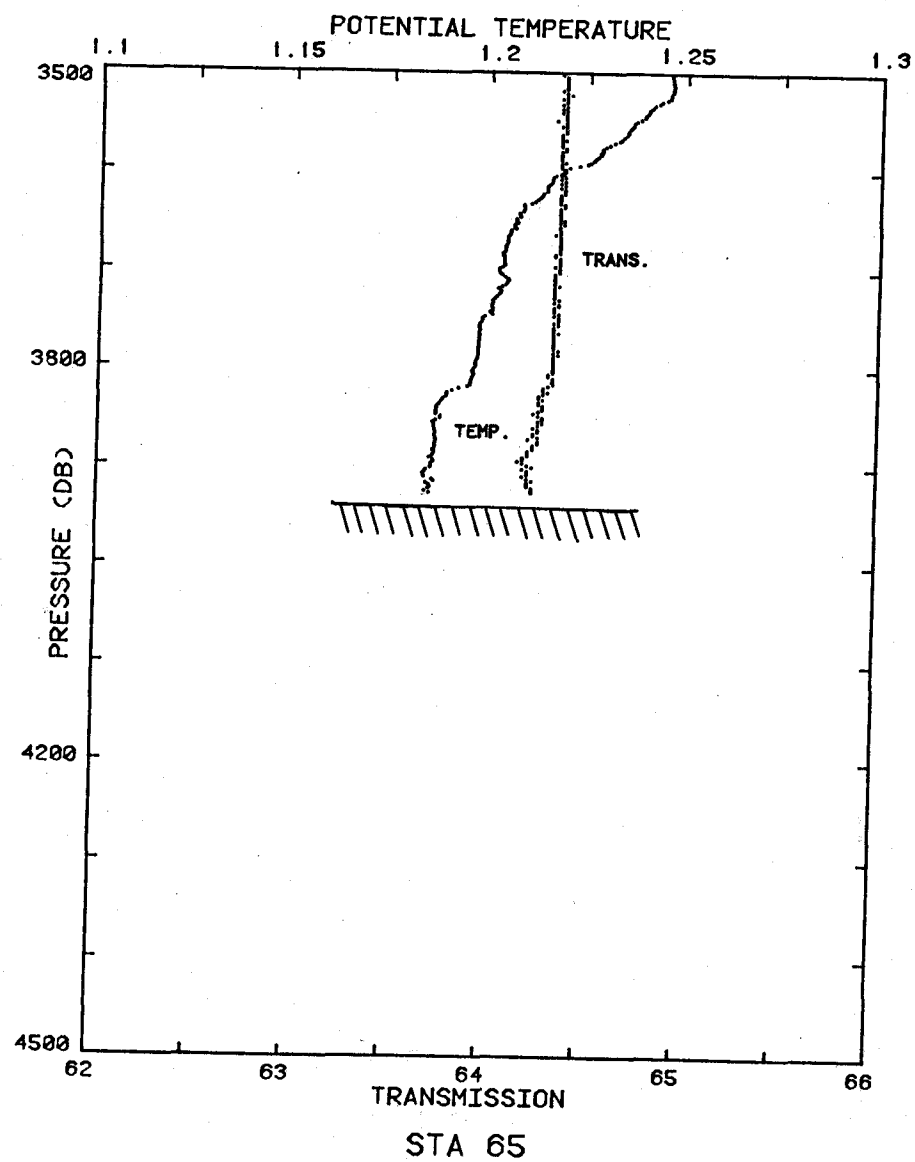


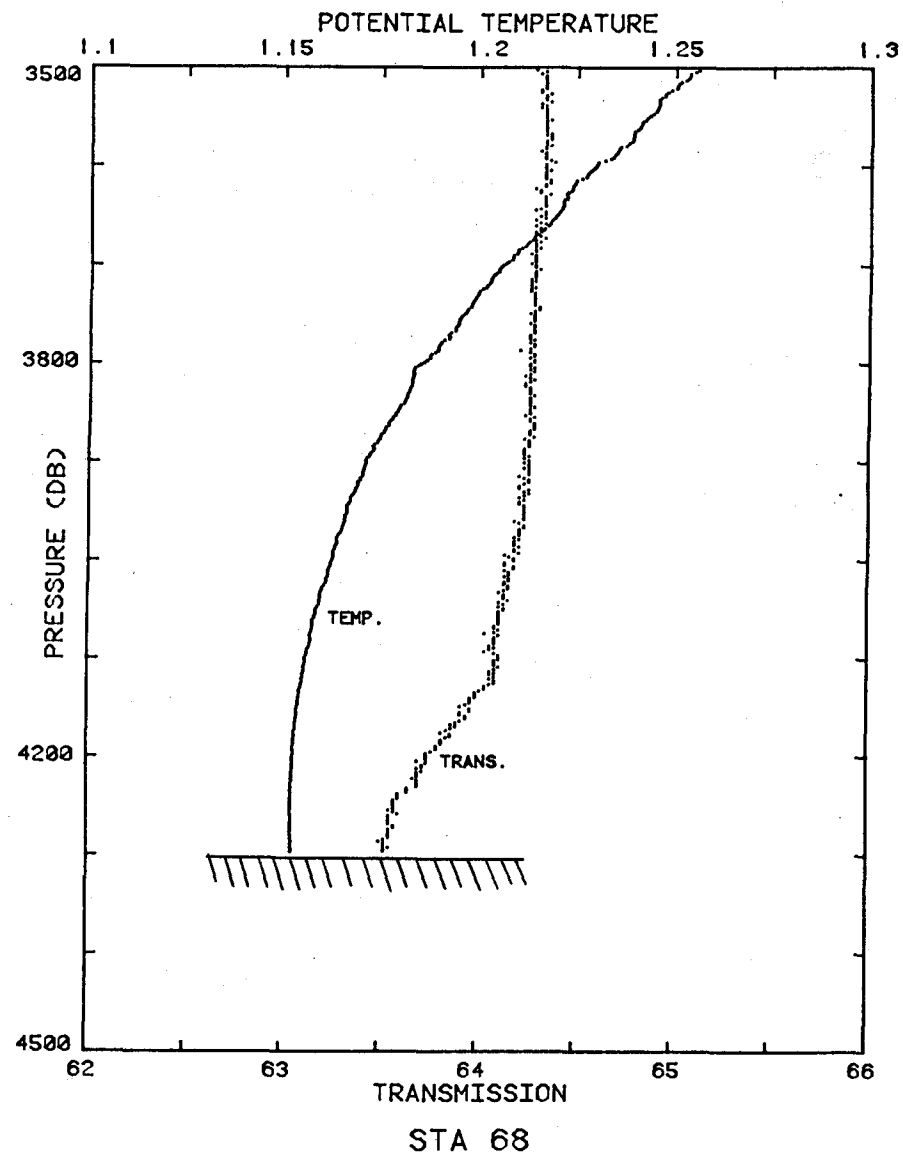
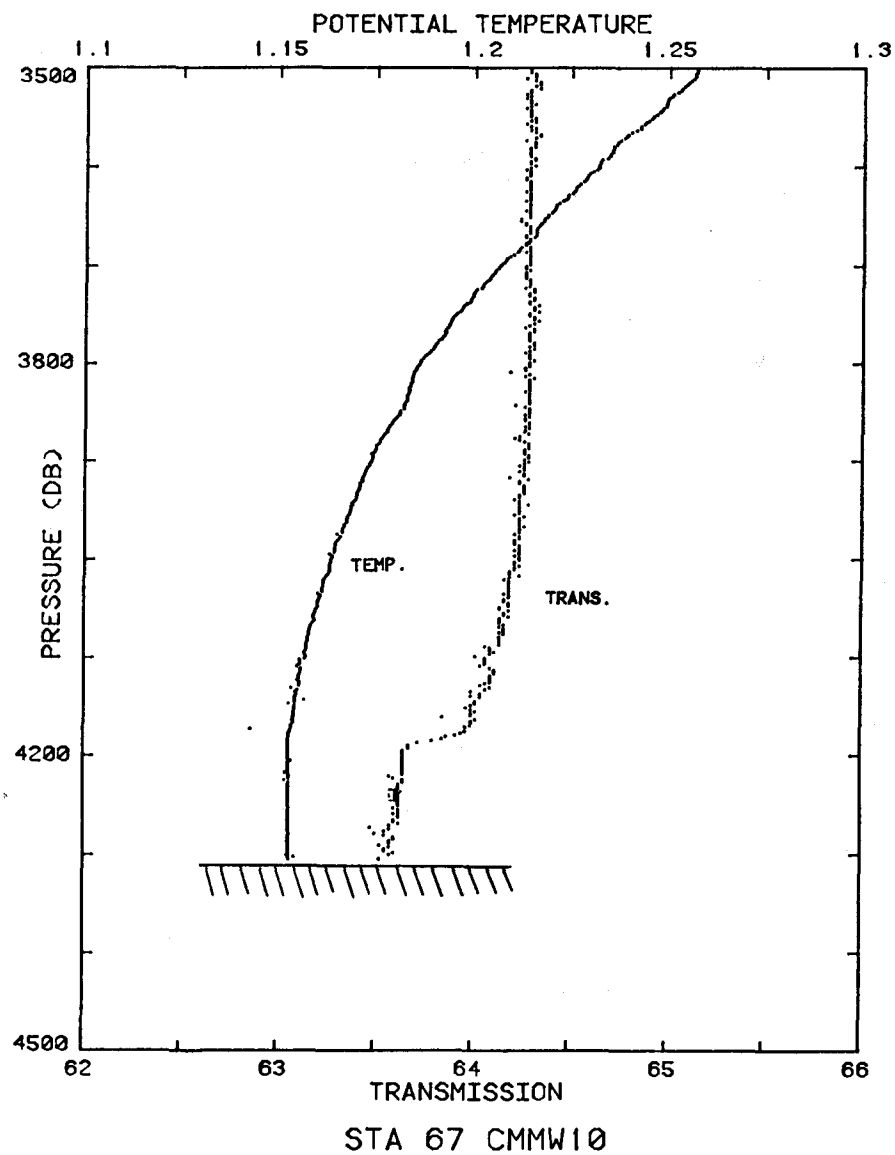


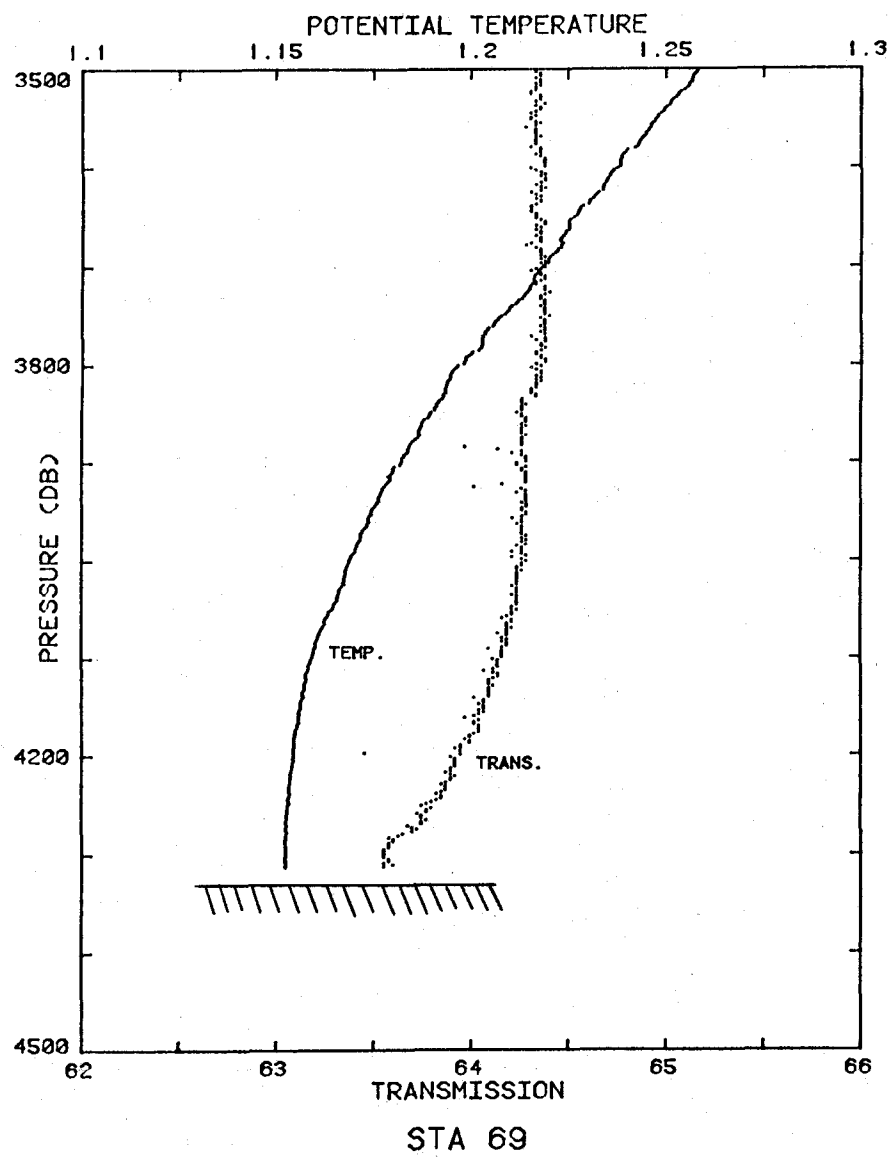




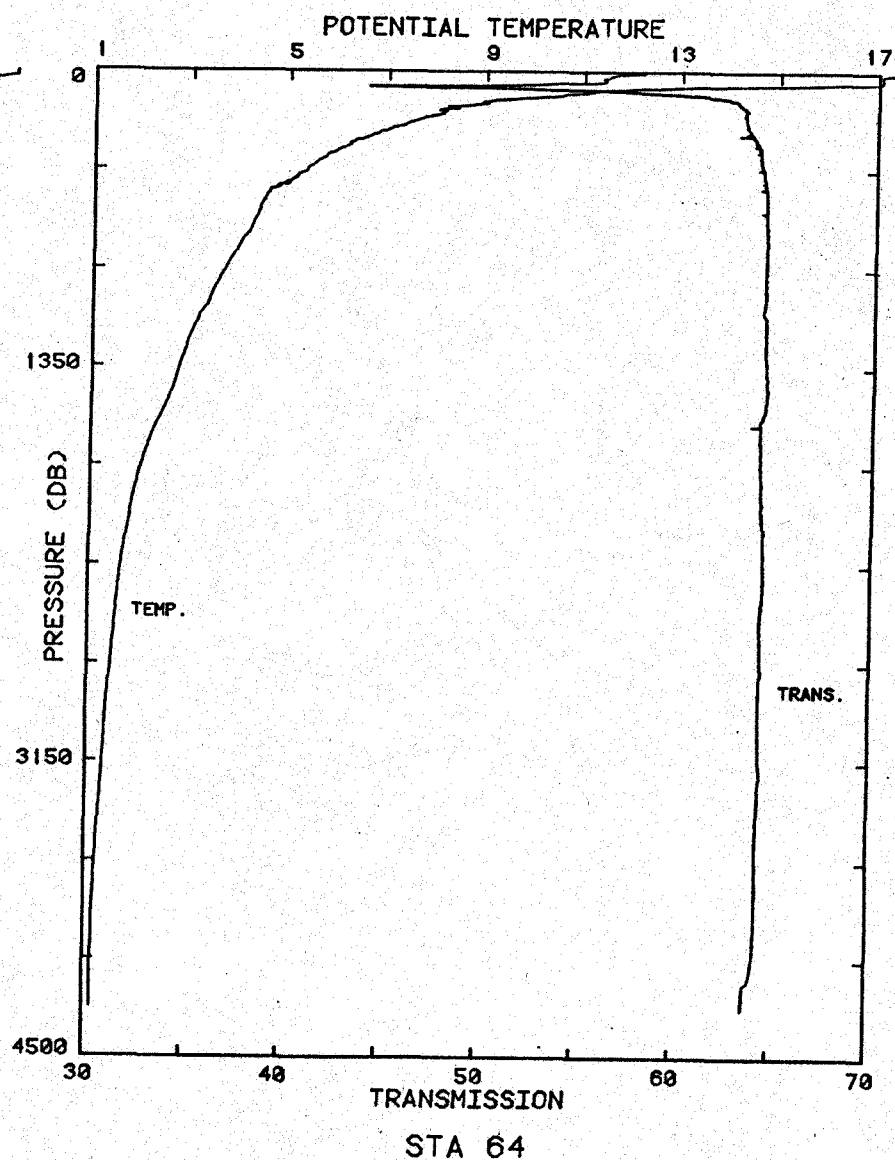
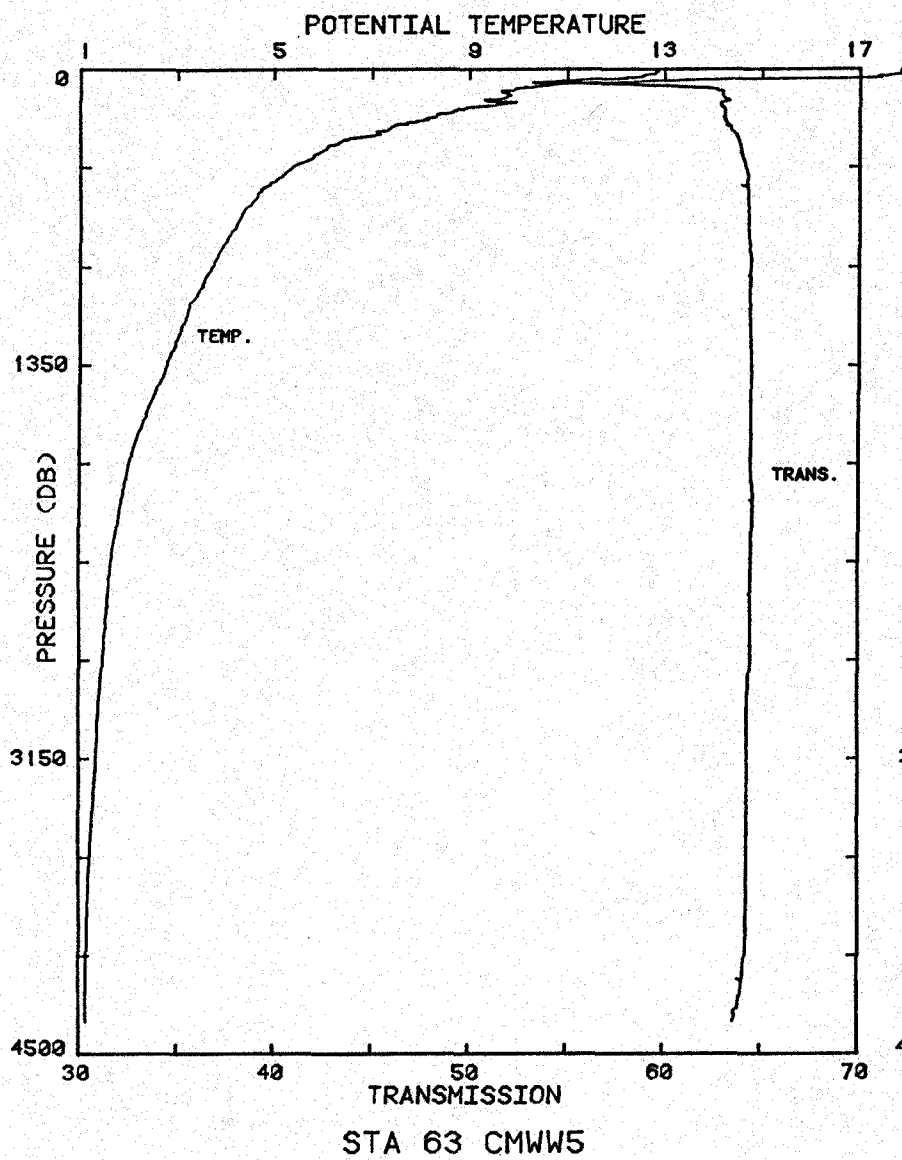


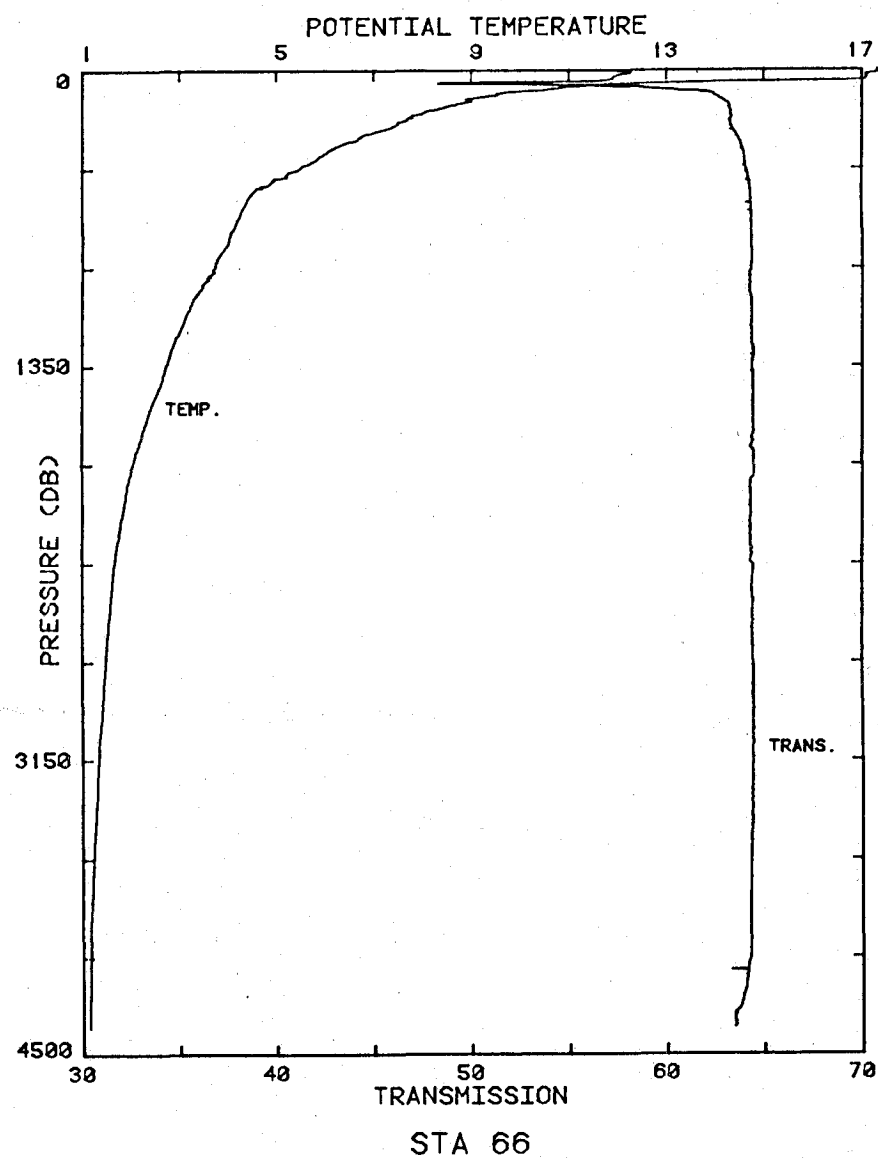
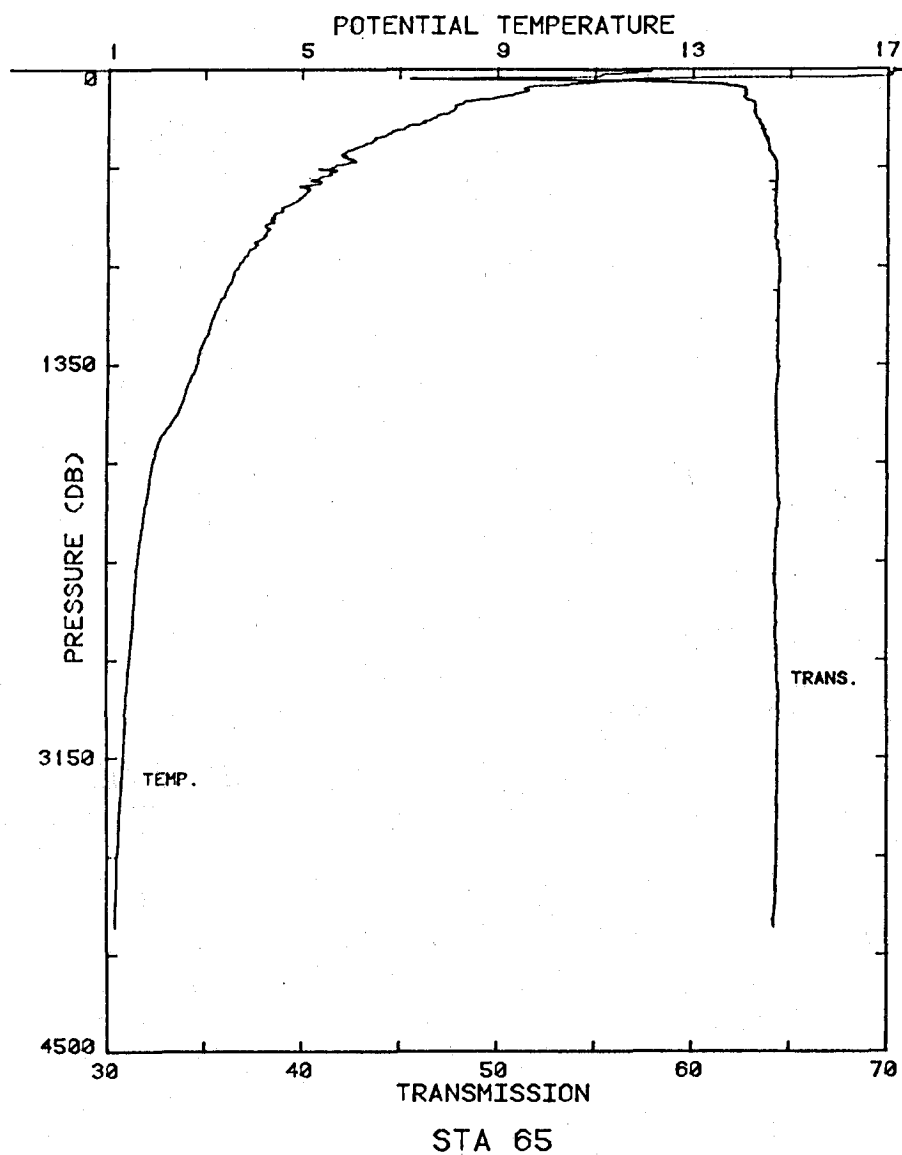


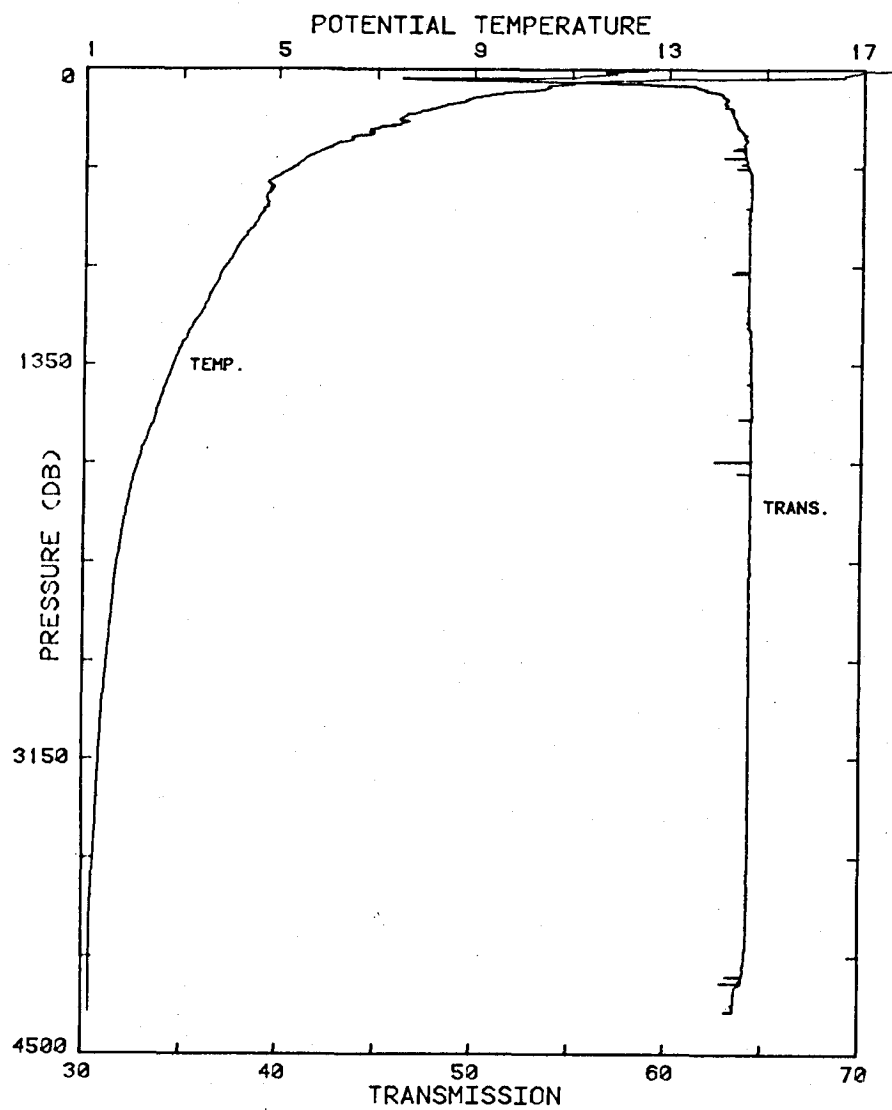




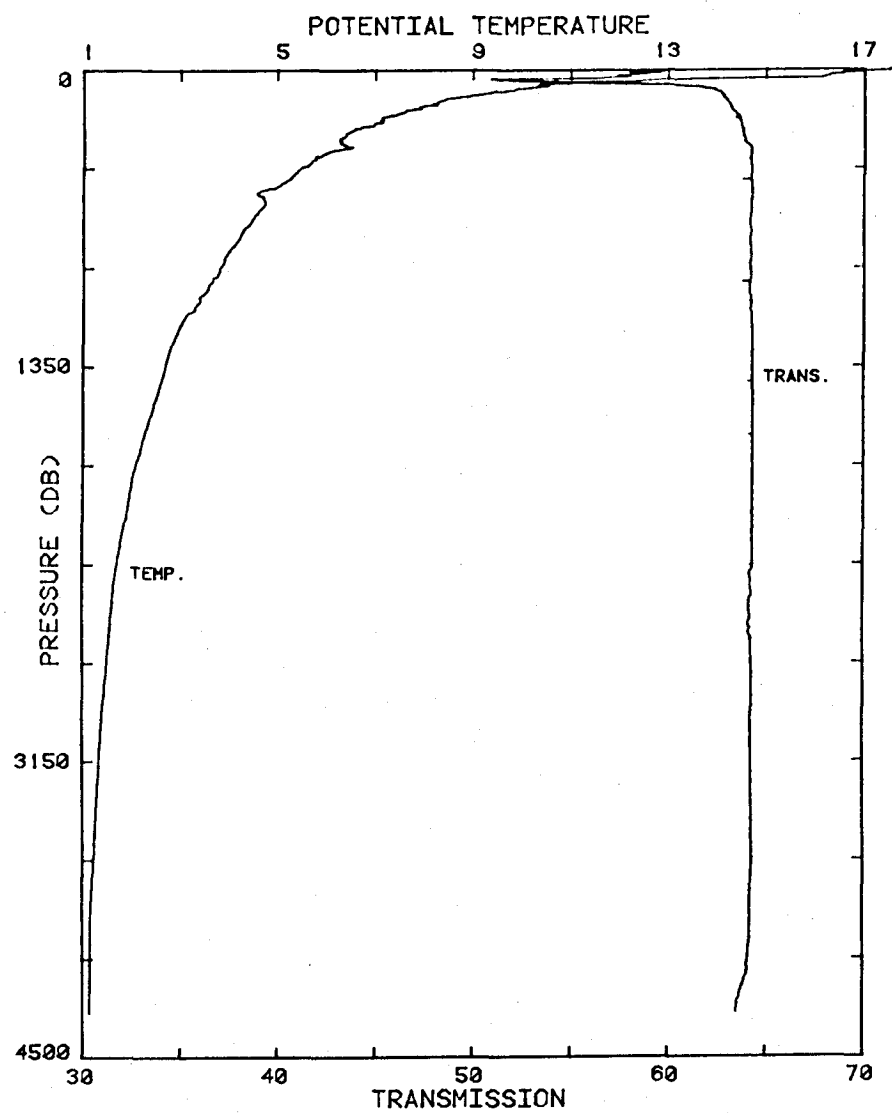
TRANSMISSION PROFILES FOR DEEP STATIONS



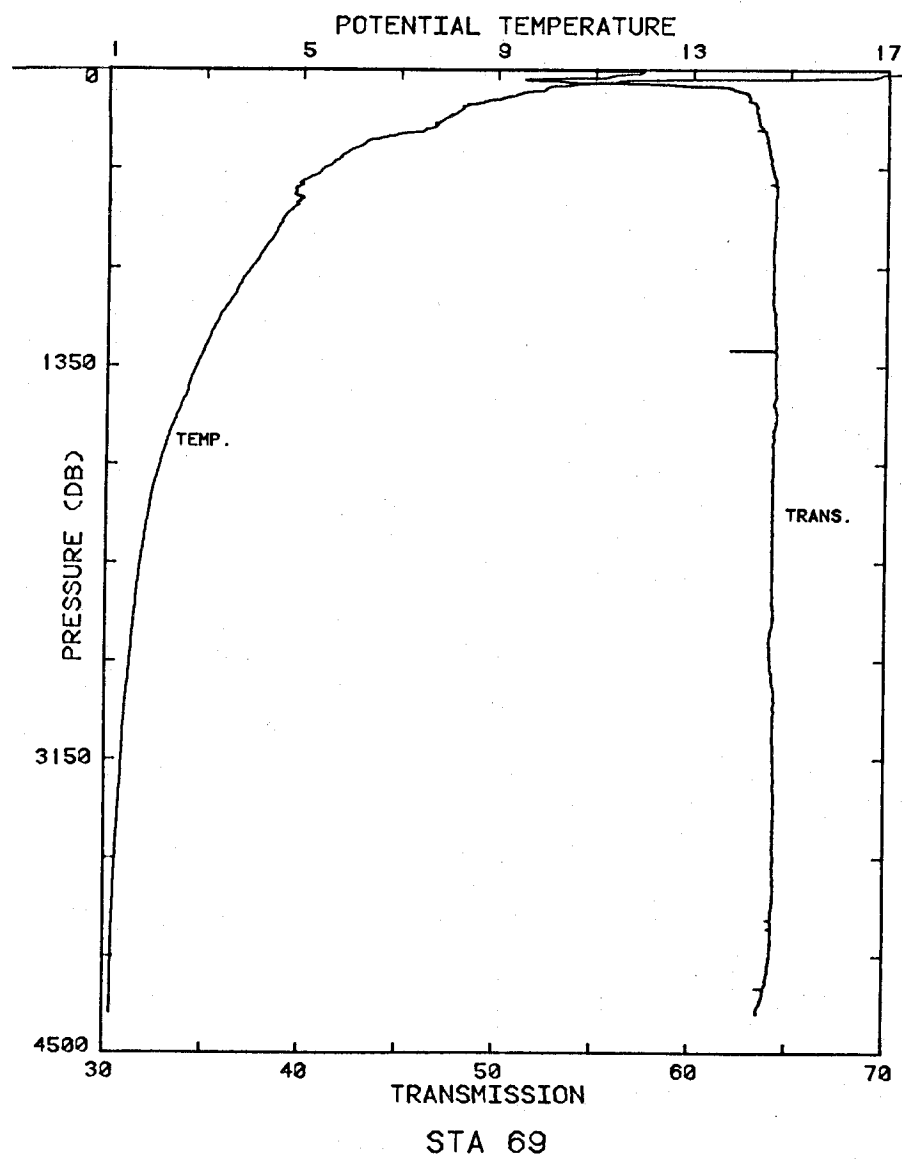


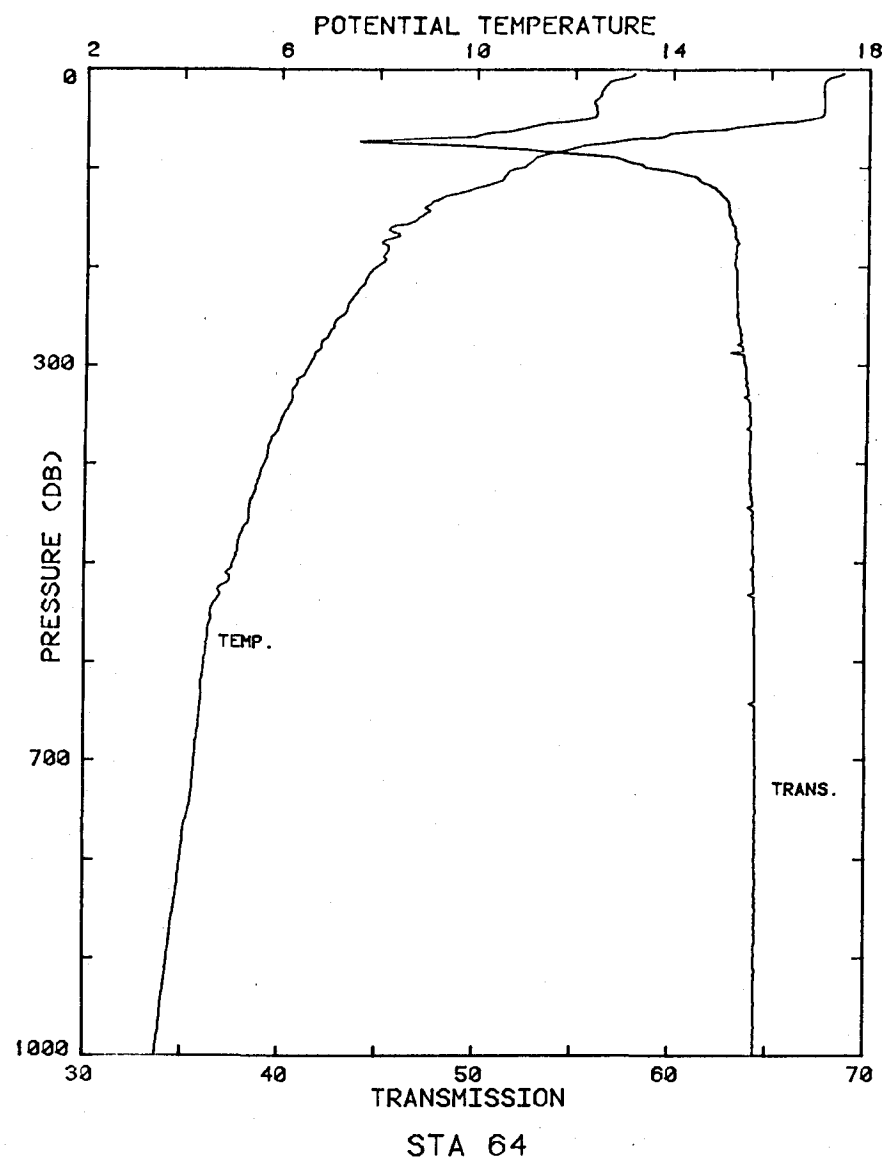
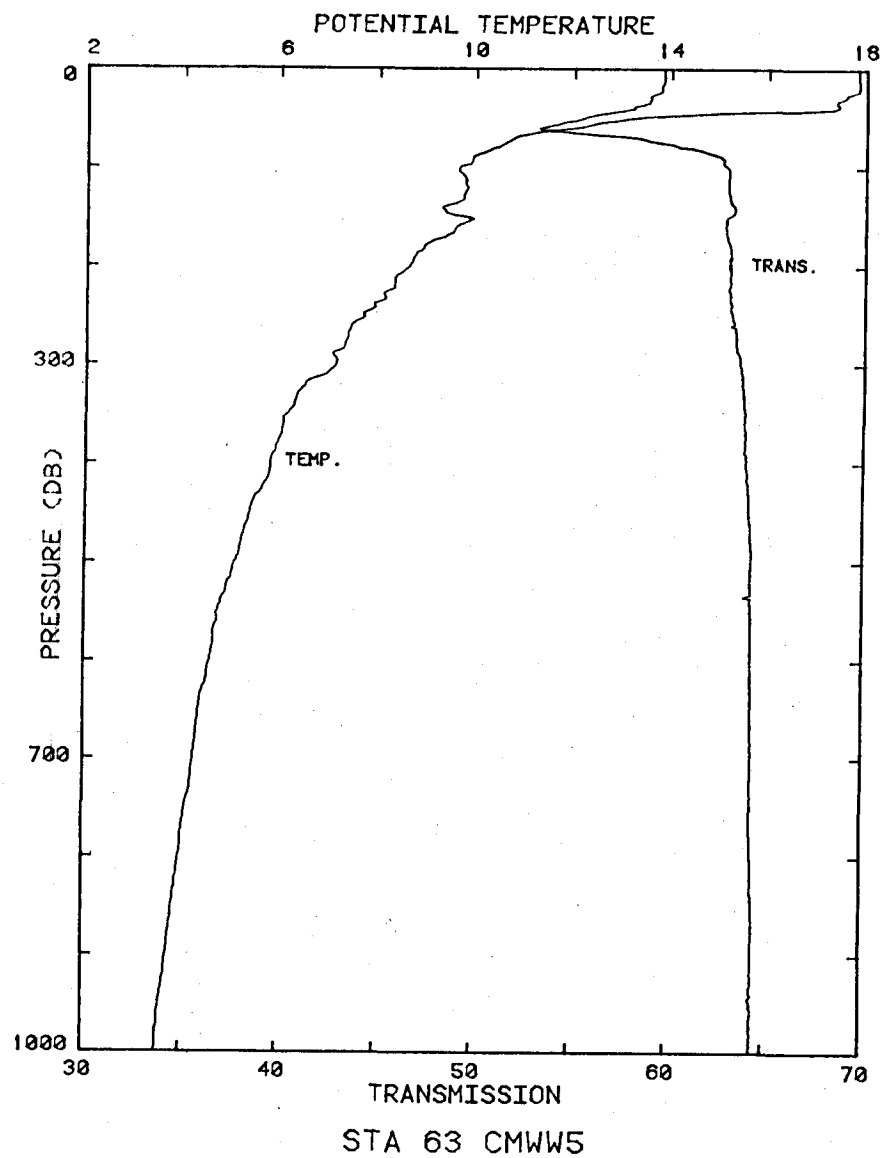


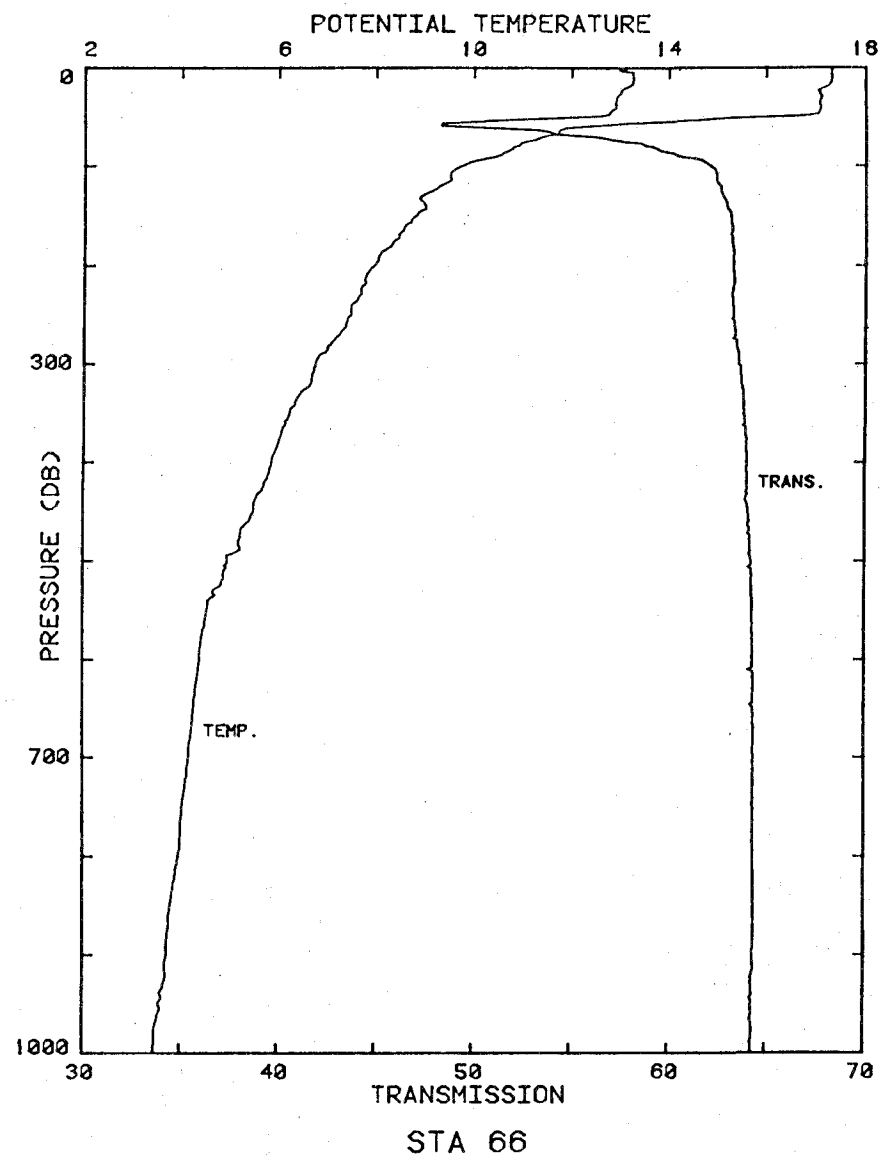
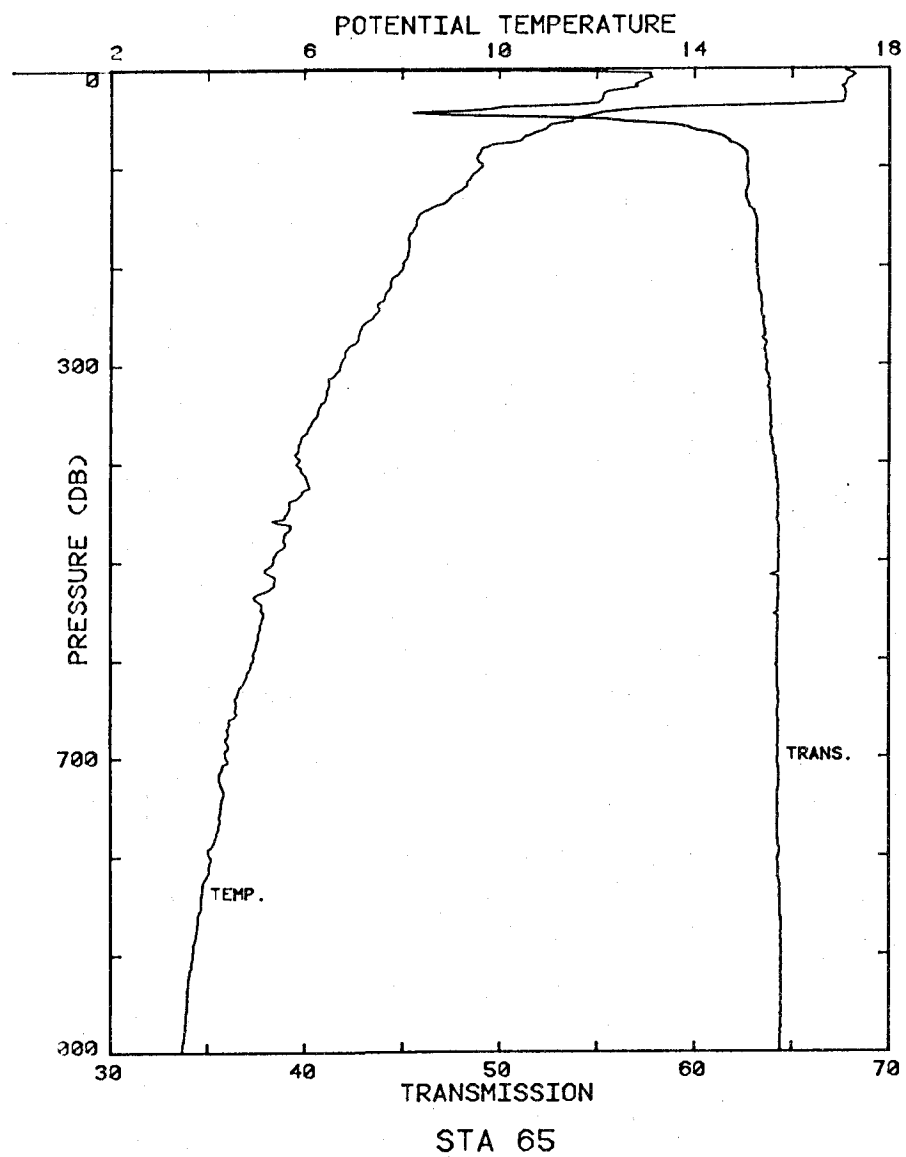
STA 67 CMMW10

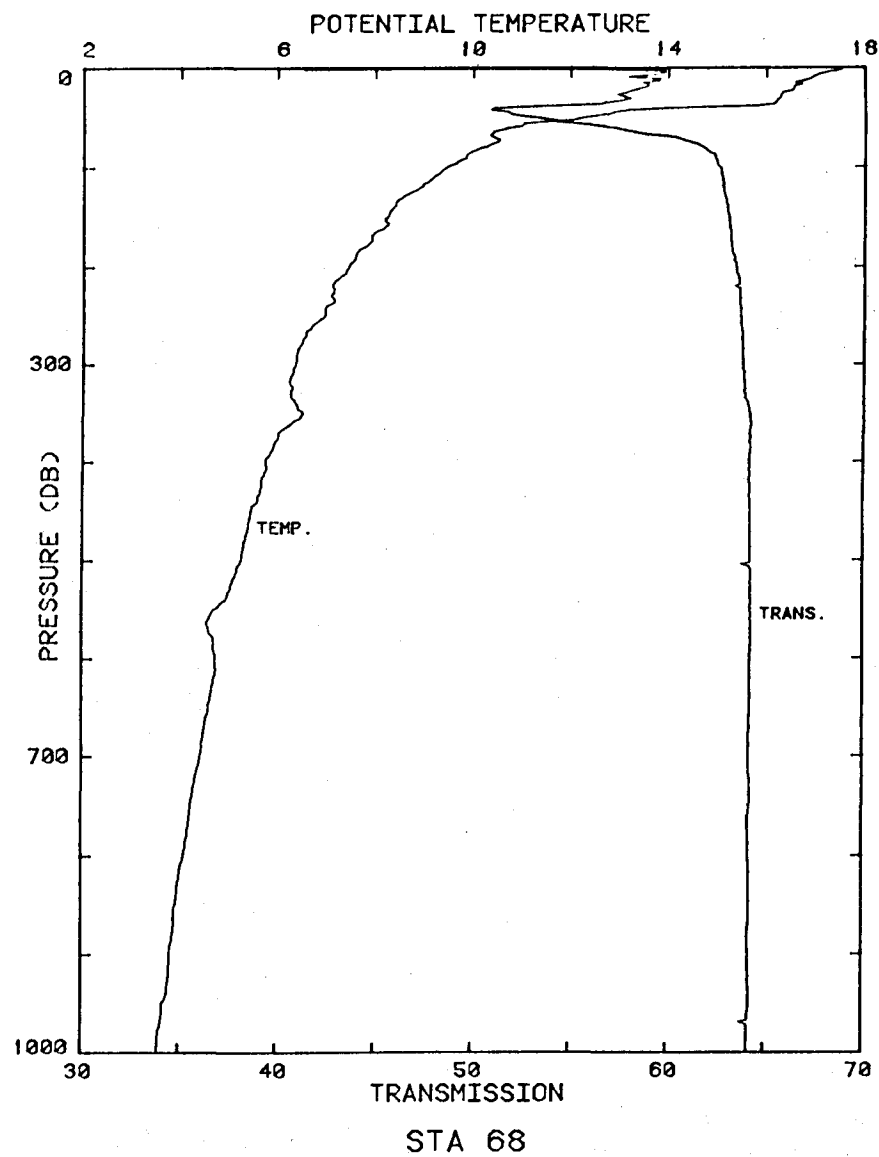
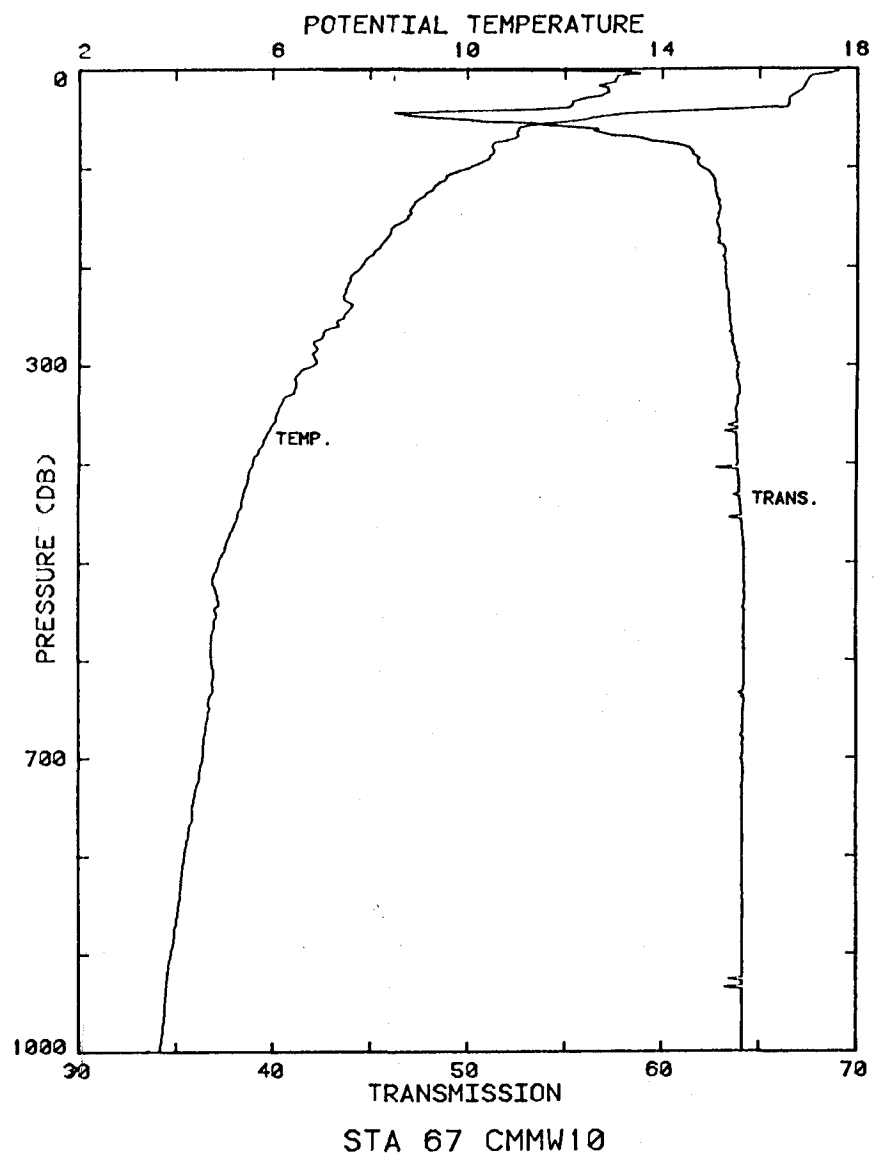


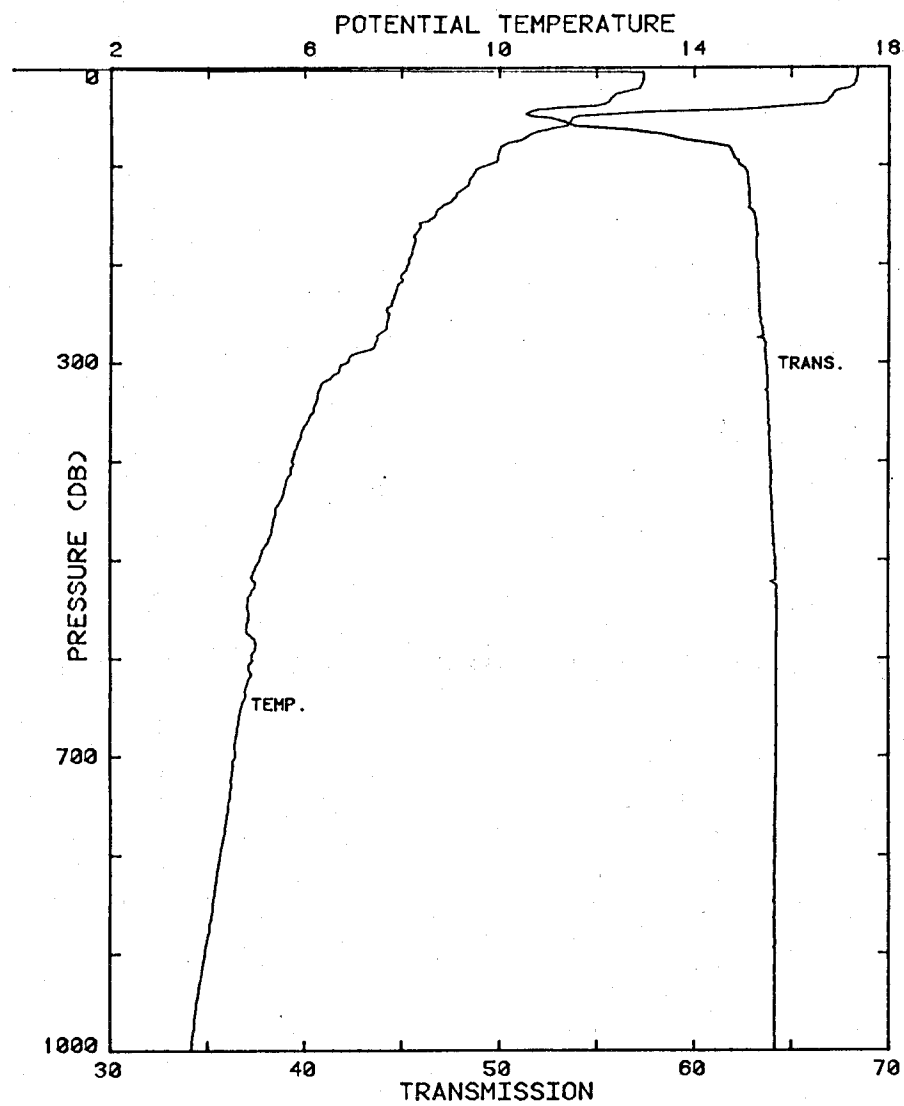
STA 68











STA 69

Appendix. Abyssal salinities in the Pacific Study Area W-N

In earlier data reports (Fleischbein et al., 1981; Fleischbein and Huyer, 1982) we reported on deep CTD casts during two previous cruises to the LLWODP Pacific Study Area W-N. In light of the extremely low overall variability of salinity in the abyssal North Pacific (Mantyla and Reid, 1983), the salinity values of the deep calibration samples from all three cruises are re-examined here. Table A-1 lists all the salinity values from calibration samples collected at pressures greater than 3500 m within or near the Pacific Study Area during the three cruises. All samples were analyzed on Guildline Autosol Model 8400 salinometers. Except for W8102A, all samples were analyzed in the laboratory ashore after each cruise. The water samples were stored in 500 ml flint glass bottles which have screw tops with a polyethylene cone-shaped insert. The outside of each bottle top was wrapped with Parafilm to further reduce the possibility of leakage. Comparison of samples analyzed in March 1982 with duplicates analyzed in September 1981 soon after the W8108B cruise showed no significant salinity differences.

Only two deep samples were obtained during the W8102A cruise, and one of these had a salinity several parts per million lower than the other. Neither of these samples is within the Pacific Study Area. The samples from depths greater than 4000 during the other two cruises all have salinities between 34.687 and 34.694 ‰. The mode (and the median) of all samples below 3900 db is 34.689 ‰.

Table A-1. Deep and abyssal salinity sample values from three cruises to the LLWDP Pacific Study Area. Unless otherwise noted all samples were analyzed ashore after each cruise. Dates of salinometer runs and batch numbers of the standard water used are shown in the footnotes.

Cruise	Station	Bottom depth (m)	Lat (N)	Long (W)	CTD		Sample Salinity (‰) (Duplicates from the same Niskin Bottle)			
					CTD Pressure (db) at Sample Depth	Temp. (C) at Sample Depth				
W8102A	33	4440	37° 24.0'	126° 11.0'	3996	1.490	34.679 ¹		34.677 ²	
	35	4074	37° 48.1'	125° 20.6'	3998	1.489	34.684 ¹		34.683 ²	
W8108B	18	4219	39° 27.9'	128° 45.0'	4098	1.491	34.688 ³	34.689 ³	34.689 ⁴	34.692 ⁴
	26	4292	38° 37.0'	126° 25.0'	4178	1.510	34.689 ³		34.692 ³	34.691 ³ , 34.689 ³
	29	4336	39° 17.0'	127° 22.0'	4298	1.506	34.689 ³	34.694 ³	34.690 ³	34.691 ³ , 34.689 ³
W8290A	63	4287	39° 30.4'	128° 44.0'	3501	1.528	34.666 ⁵		34.666 ⁵	
	63	4287	39° 30.4'	128° 44.0'	4314	1.503	34.688 ⁵		34.690 ⁵	
	64	4213	39° 28.0	128° 13.0'	4247	1.499	34.690 ⁵		--	
	65	3881	39° 28.0	127° 55.0'	3899	1.491	34.685 ⁵		34.682 ⁵	
	66	4308	39° 40.0	127° 41.5	4351	1.509	34.687 ⁵		34.687 ⁵	
	67	4228	39° 28.0	127° 37.8'	4108	1.486	34.688 ⁵		34.689 ⁵	
	68	4229	39° 18.0	127° 40.0'	4275	1.502	34.687 ⁵		34.687 ⁵	
	69	4260	39° 28.0	127° 24.0'	4098	1.488	34.689 ⁵		34.687 ⁵	

Analyzed at sea, 13 Feb. 1981; probably P-85
 Analyzed at sea, 17 Feb. 1981; probably P-85
 16-21 September 1981; P-85
 25 March 1982, P-90
 8 October 1982, P-92

These samples then indicate that the salinity of the abyssal water near 38.5°N, 128°W is 34.689 ‰. This is in good agreement with the maps presented by Mantyla and Reid (1983) which show that the abyssal salinity in this region is slightly less than 34.690 ‰.

In this data report, values of abyssal CTD salinities from depths greater than 4250 m (Stations 63-64, 66-69) are 34.692 or 34.693 ‰. These are slightly higher than the actual value as inferred from Table A-1 and the maps of Mantyla and Reid, but the difference is not larger than the stated accuracy (~ 0.003 ‰) of the CTD. Similarly, abyssal CTD salinity values reported for Stations 63-68 of W8102A (Fleischbein et al., 1981) are 34.687 and 34.688, only slightly below the probable actual value of 34.689 ‰. Also, most of the abyssal CTD salinity values reported for W8108B differ by only a few parts per million from 34.689 ‰: the range is 34.692 - 34.694 at W8108B Stations 18-26. However, the final stations (27-29) of W8108B all have abyssal CTD salinity values of 34.699 ‰, ten parts per million higher than the probable actual value. These data are likely in error by this amount.

ACKNOWLEDGMENTS

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