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Hydrographic Data from the First
Coastal Ocean Dynamics Experiment:
R/V *Wecoma*, Leg 10,
1-4 August 1981

by

William E. Gilbert
Adriana Huyer
Richard Schramm

Data Report 97
Reference 82-10
November 1982

Code Technical Report 8
National Science Foundation
OCE-8014943

School of Oceanography
Oregon State University
Corvallis, Oregon 97331

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ABSTRACT

CTD observations were made in the CODE region between Pt. Arena(39°N) and Pt. Reyes(38°N), during 1-4 August 1981. The observations included two repeated sections along the Central Line, one section along the North Line, and one section in the region of the Pt. Ross Line run during previous cruises. Maximum sampling depth was 1000m. This report includes vertical sections, mesoscale maps and offshore profiles, plus vertical profile plots and standard depth listings for the 38 stations.

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INTRODUCTION

The Coastal Ocean Dynamics Experiment seeks to describe the response of continental shelf waters to a time-varying wind stress. The main purpose of the R/V *Wecoma* cruise CODE-1, Leg 10, was to recover the Woods Hole portion of the moored current meter array. Personnel from the CODE Shipboard Hydrography component joined the cruise to continue the time-series of repeated CTD observations in the CODE region between Pt. Arena and Pt. Reyes.

CTD observations were made along three different sections (Figure 1, Table 1) and the Central Line was occupied twice. Both the North and Central Lines had been occupied on previous legs of Code 1 (Gilbert et al., 1981, 1982; Fleischbein et al., 1982; Olivera et al., 1982).

Wind direction was nearly constant; wind speed varied from 15 to 30 knots (Table 1).

Personnel participating in the CTD data collection were Richard Schramm and Henry Schaechterle of Oregon State University, and Robert Beardsley and Carol Mills of Woods Hole Oceanographic Institution.

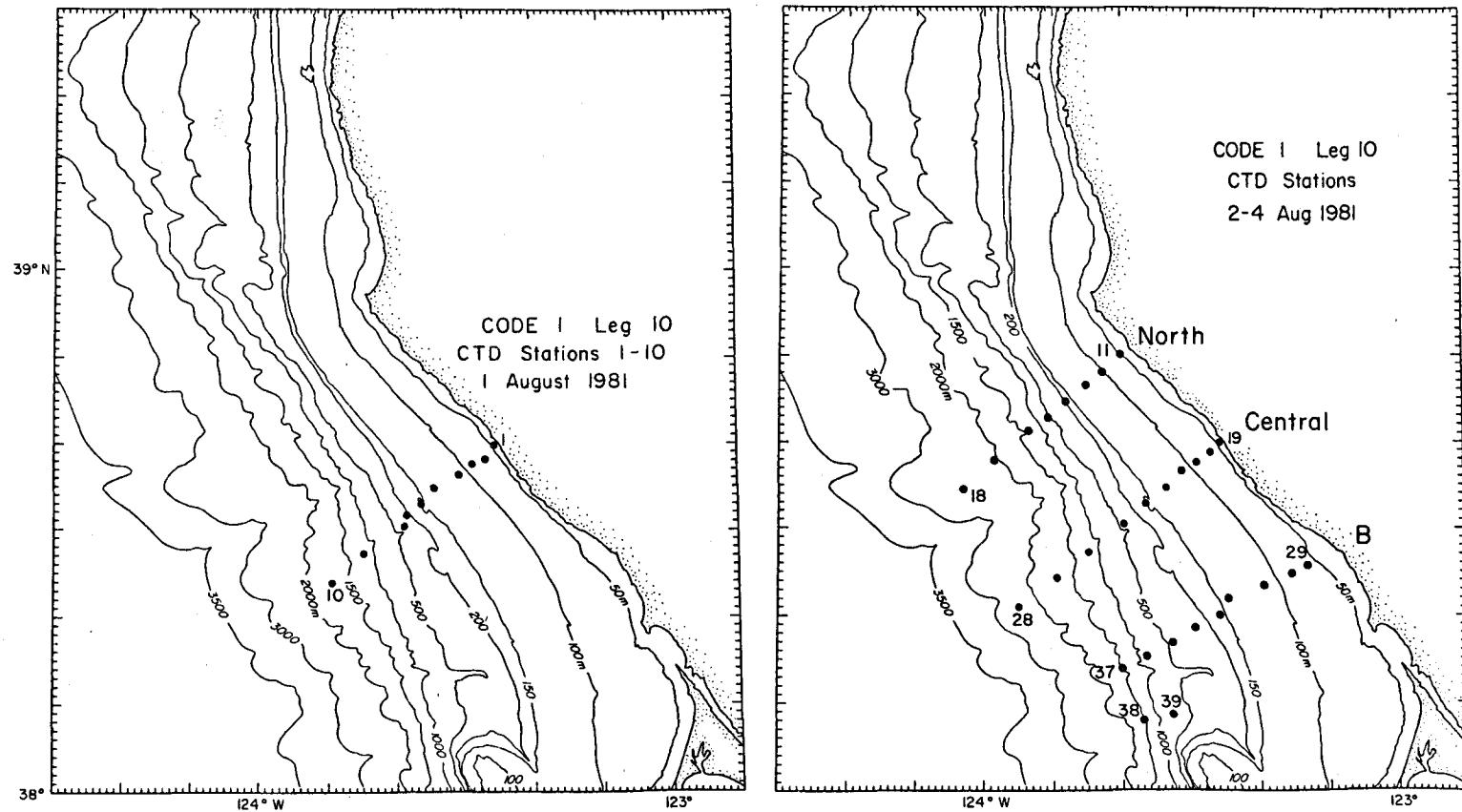


Figure 1. Location of stations in the Code region, 1-4 August 1981.

Table 1. List of CTD stations during CODE-1, Leg 10, showing date and time, location, distance from shore, wind speed and direction, atmospheric pressure, and wet and dry bulb air temperature.

		Station	Location		Wind	Atm.	Air Temp			
	No.	Name	Lat. (°N)	Long. (°W)	Dist. (km)	Dir. (°T)	Spd (kts)	Pressure (mb)	Dry (°C)	Wet
Aug. 1	0216Z	1 COC-1	38°39.8	123°25.5	0.9	310	22	1014.8	13.3	12.4
	0250	2 COC-2	38.2	26.9	4.3	310	22	1014.4	12.9	11.8
	0323	3 COC-3	37.5	28.9	7.2	310	29	1014.4	12.0	11.5
	0358	4 COC-4	36.2	30.8	10.7	315	26	1014.6	12.1	11.5
	0441	5 COC-5	34.6	34.3	16.6	320	26	1015.0	12.2	11.5
	0517	6 COC-6	32.8	36.2	21.1	320	25	1016.0	12.1	11.4
	0611	7	31.5	38.4	25.2	320	20	1016.0	12.3	11.5
	0701	8 COC-7	30.3	38.7	26.6	320	26	1016.1	12.2	11.5
	0818	9 COC-8	27.0	44.7	37.2	320	26	1016.3	12.6	11.8
	0934	10 COC-9	23.7	49.3	46.6	330	22	1017.0	12.6	11.9
Aug. 2	0235	11 NOR-1	50.0	40.0	2.0	330	20	1018.0	12.8	11.9
	0313	12 NOR-2	48.1	42.7	7.4	330	16	1017.7	12.2	11.5
	0347	13 NOR-3	46.4	45.0	12.2	330	18	1018.0	12.5	11.8
	0426	14 NOR-4	44.6	48.0	17.4	330	16	1018.0	12.6	11.9
	0507	15 NOR-5	42.7	50.6	22.6	330	20	1018.3	13.0	12.1
	0614	16 NOR-6	41.1	53.3	27.8	320	22	1018.0	12.9	12.0
	0731	17 NOR-7	37.7	58.3	37.6	330	20	1018.4	13.5	13.7
	0849	18 NOR-8	34.3	124°02.9	46.2	320	18	1018.1	13.6	12.5
Aug. 3	0059	19 COC-1	39.8	123°25.5	0.9	310	27	1015.2	12.8	11.2
	0128	20 COC-2	38.8	26.9	3.5	310	28	1015.0	12.7	11.1
	0200	21 COC-3	37.5	28.9	7.2	305	28	1015.0	12.5	11.0
	0234	22 COC-4	36.5	33.3	10.7	305	22	1015.7	12.4	11.0
	0307	23 COC-5	34.5	33.3	15.4	320	20	1015.2	12.4	11.1
	0346	24 COC-6	32.7	36.3	21.1	320	20	1015.4	12.4	11.3
	0437	25 COC-7	30.3	39.6	27.6	320	15	1016.0	12.2	11.4
	0542	26 COC-8	27.1	44.6	37.0	330	16	1016.0	13.8	12.5
	0700	27 COC-9	24.1	49.2	46.1	330	15	1016.0	13.0	12.9
	0818	28 COC-10	20.8	54.7	55.9	320	18	1015.7	13.1	12.8
Aug. 4	0009	29 B1	25.7	13.0	7.2	300	24	1012.8	12.8	11.7
	0043	30 B2	24.7	15.2	11.1	310	25	1013.1	12.5	11.7
	0123	31 B3	23.3	19.2	17.2	305	30	1013.0	12.7	11.9
	0208	32 B4	21.9	24.4	25.5	305	30	1013.8	12.6	11.9
	0255	33 B5	20.0	25.8	28.9	310	22	1014.5	12.6	12.1
	0345	34 B6	18.4	29.3	34.4	320	20	1013.9	12.5	12.1
	0436	35 B7	16.8	32.7	40.5	320	18	1014.1	12.7	12.1
	0538	36 B8	15.2	36.3	46.4	320	17	1015.0	13.0	12.3
	0651	37 B9	13.7	40.0	52.5	320	18	1015.1		
	0821	38 B10	07.9	37.0		300	18	1015.0	12.9	12.2
	0914	39 B11	08.3	32.9		320	20	1014.4		

SAMPLING AND DATA PROCESSING PROCEDURES

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. Sampling procedures were identical with those described by Fleischbein, Gilbert, Schramm and Huyer (1981), except that the probe with a 1600 db pressure sensor rating (probe #2567) was used for all stations.

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. A Niskin bottle equipped with 3 protected reversing thermometers was mounted about 2 m above the CTD sensors to provide calibration samples. 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 "Autosal" salinometers with precision of better than $\pm 0.002\text{‰}$ and accuracy of $\pm 0.003\text{‰}$.

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 of salinity samples were analyzed on OSU's Autosal #1. Comparisons between the duplicates are within the precision of the Autosal salinometer.

Results of the comparison between *in situ* sample data and the CTD output are summarized in Table 2 and Figure 2. 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 showed a mean offset of $0.012 \text{ mmhos cm}^{-2}$ and this correction was added to the CTD conductivity prior to processing the data. The data were processed in the manner described by Gilbert, Huyer and Schramm (1981), using a value of 0.862 for the coefficient, α , of the conductivity filter.

Stations that required editing during processing are listed in Table 3.

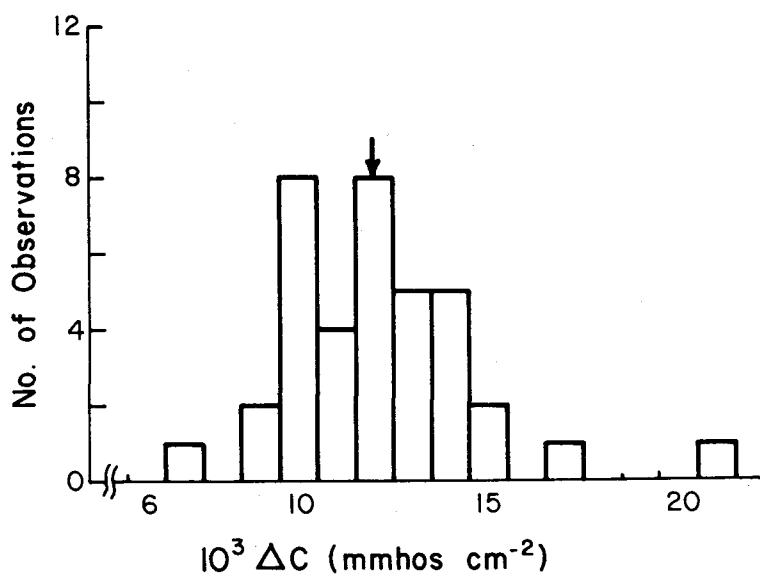


Figure 2. Histogram of the differences in conductivity between the calibration sample and the uncorrected CTD output.

Table 2. Summary of differences between the *in situ* calibration data and the Neil Brown CTD probe. CTD conductivity was corrected by adding +0.012 mmhos cm⁻² before processing.

	No. of Samples	Mean Difference	Standard Deviation
Temperature (°C)	34	-.003	0.008
Conductivity (mmhos cm ⁻²)	37	0.012	0.002
Salinity (‰)	37	0.013	0.003

Table 3. Stations edited during data processing.

<u>Station No.</u>	<u>Nature of Problem</u>	<u>Remedy</u>
8	Conductivity drop between 321 and 328 db, probably due to detritus.	Linearly interpolated processed salinity, 321-328 db.
9	Conductivity spike at 353 db.	Linearly interpolated 3 lines of raw conductivity data at 353 db; then reprocessed.
14	Conductivity spikes at 7, 15 and 22 db.	Linearly interpolated two or three lines of raw conductivity data in each case; then reprocessed.
17	Conductivity spikes at 31 db and 883 db	Linearly interpolated one line of raw conductivity data at 30 db, and four line of raw conductivity data at 883 db; then reprocessed.
18	Conductivity spikes at 35 and 125 db.	Linearly interpolated raw conductivity: one line at 35 db, two lines at 125 db; then re-processed.
36	Conductivity spike at 256 db and conductivity drop from 30-39 db.	Interpolated two lines of raw conductivity at 256 db and reprocessed; linearly interpolated processed salinity, 30-39 db.
37	Conductivity spikes at 19 db, 334 db and 649 db.	Linearly interpolated 1-3 lines of raw conductivity at each depth; then reprocessed.
38	Conductivity spikes at 39, 74-75, 79, 84 and 89 db	Linearly interpolated processed salinity at 39, 74-75, 79, 84 and 89 db.
39	Conductivity drop between 427 and 513 db.	Linearly interpolated processed salinity data, 427-513 db.

DATA PRESENTATION

The hydrographic data are summarized in vertical sections of temperature, salinity, and sigma-theta. The distributions were contoured by hand. Tick marks at the top of each section indicate station positions at which a CTD cast was made, and an inverted "T" marks the maximum depth of each cast.

For the mesoscale survey consisting of Stations 10-39, we show maps of surface temperature, salinity and sigma-theta, and of dynamic height at 0 db relative to 100 db and at 0 db, 100 db and 200 db relative to 500 db. Dynamic height at stations shallower than the reference pressure was computed using the extrapolation method described by Reid and Mantyla (1976); bottom contours are included to show where extrapolation was used.

For the Central Line sections, we also show offshore profiles of temperature, salinity, sigma-theta and dynamic height 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 are shown for each station. Header information for each station is as follows:

STA NO Consecutive station number.

STATION The CTD section name (initialled) and number of the station on the line (Refer to Figure 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.

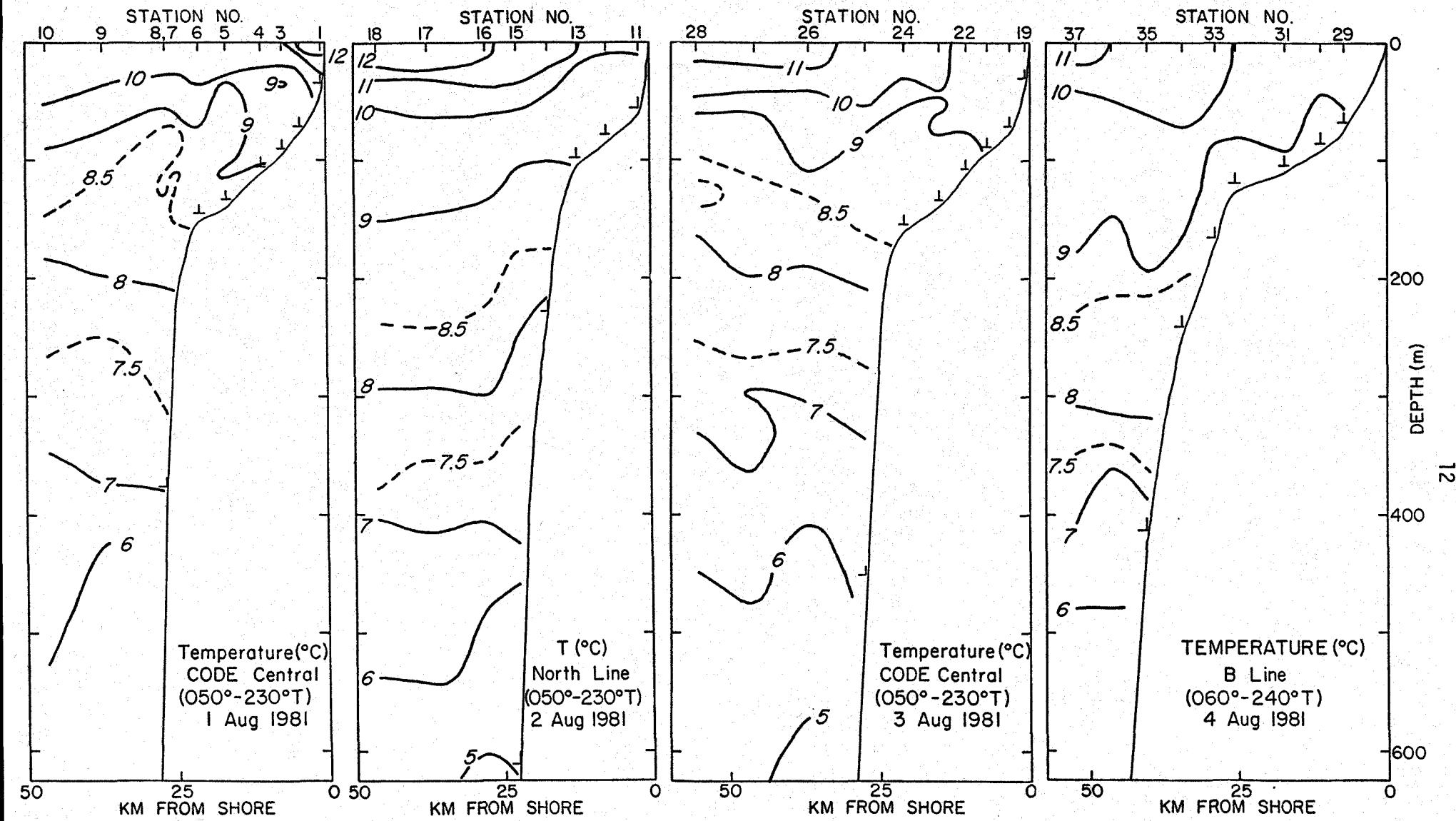
TIME Time in Greenwich Mean Time.

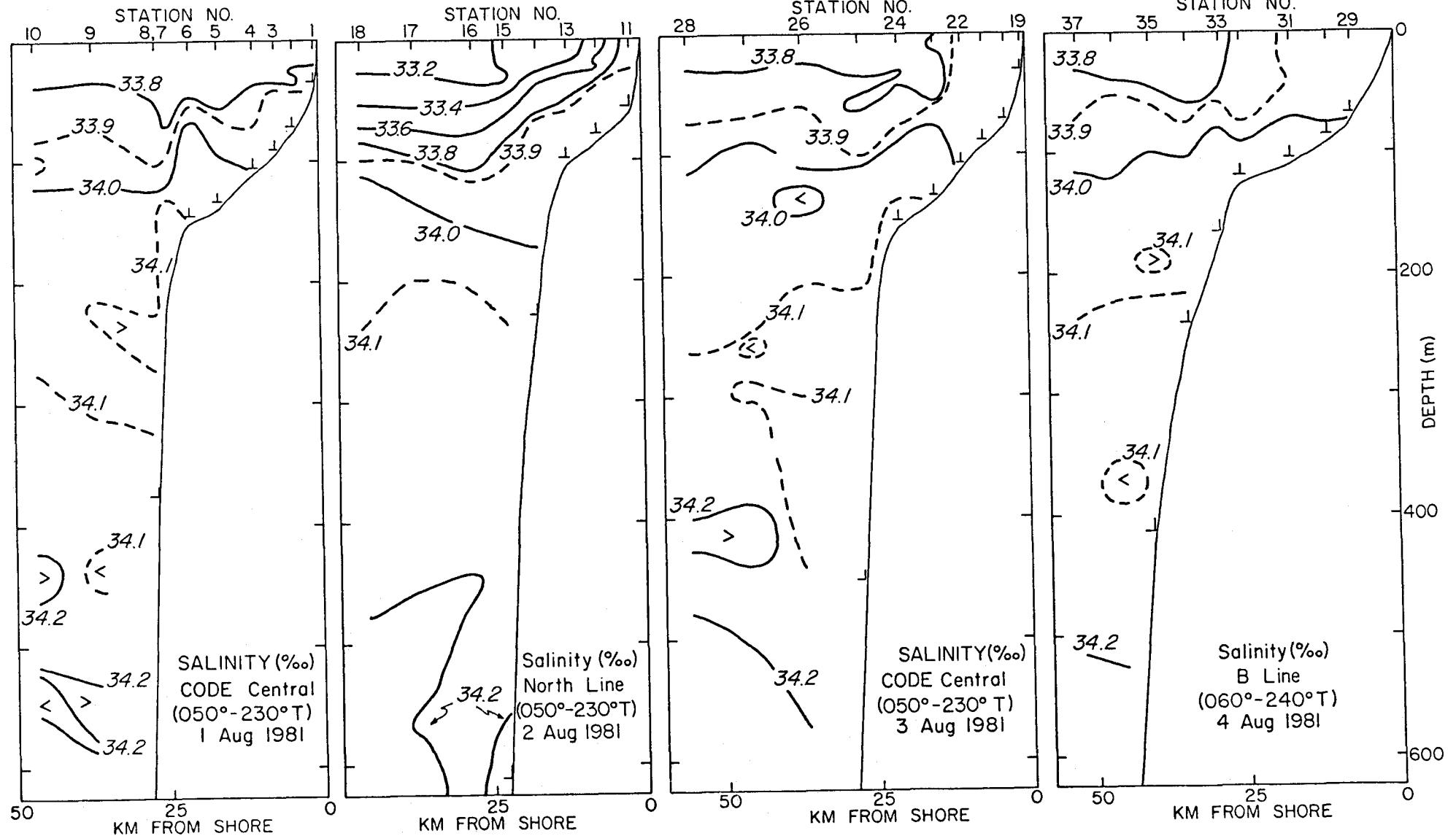
PROBE CTD probe number.

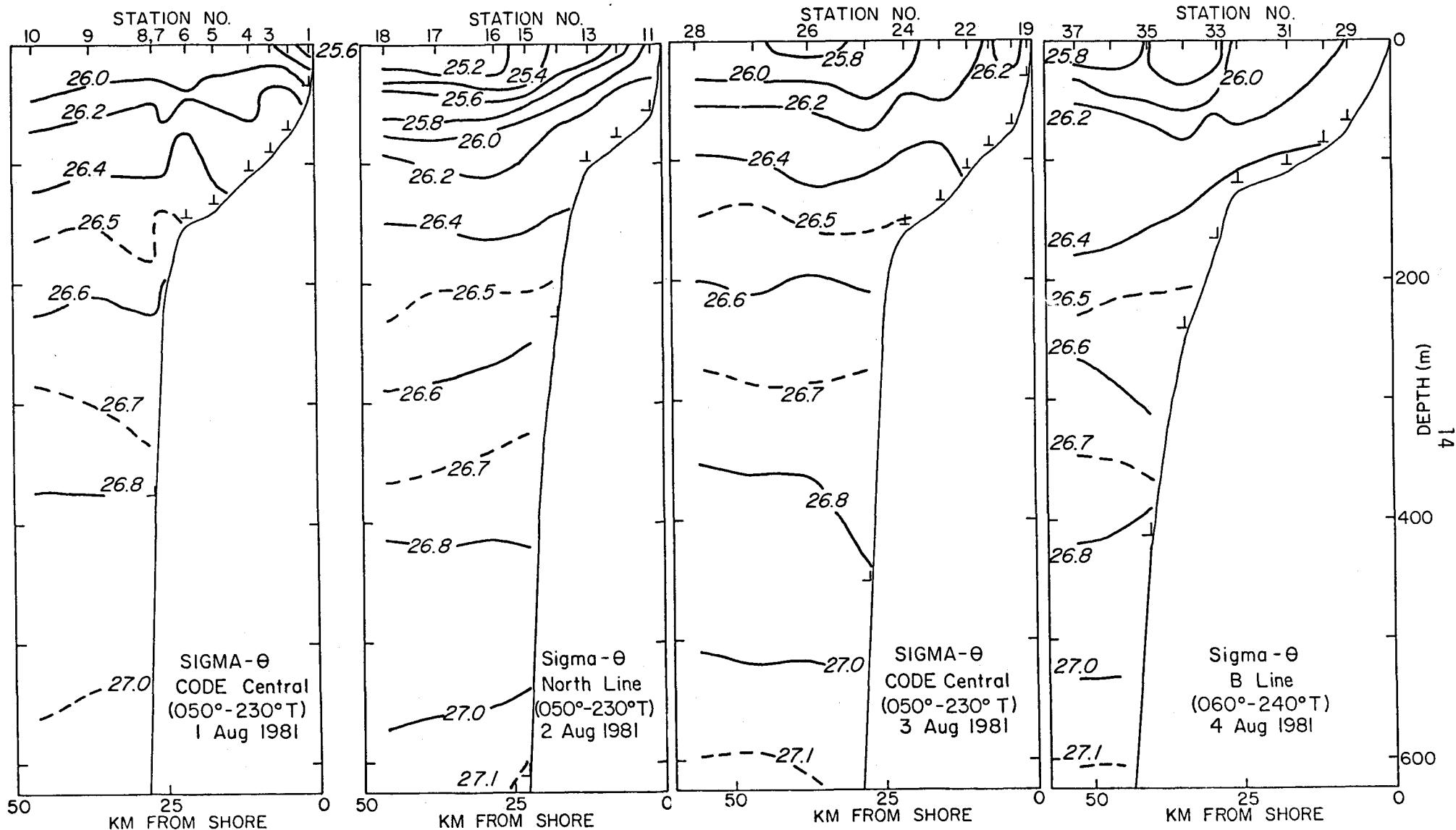
DEPTH Sonic depth in meters, corrected according to Matthews Tables appearing in the Handbook of Oceanographic Tables, U.S. Naval Oceanographic Office Publication SP-68 (1966).

The data listing for each station gives values at standard pressures including observed and calculated parameters at the shallowest and deepest observation 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.

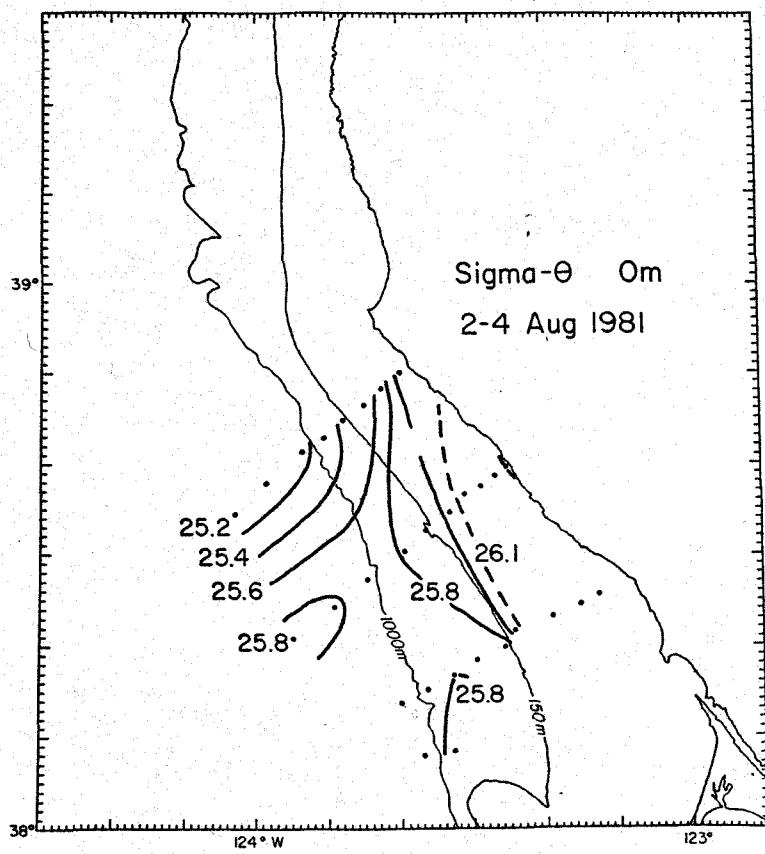
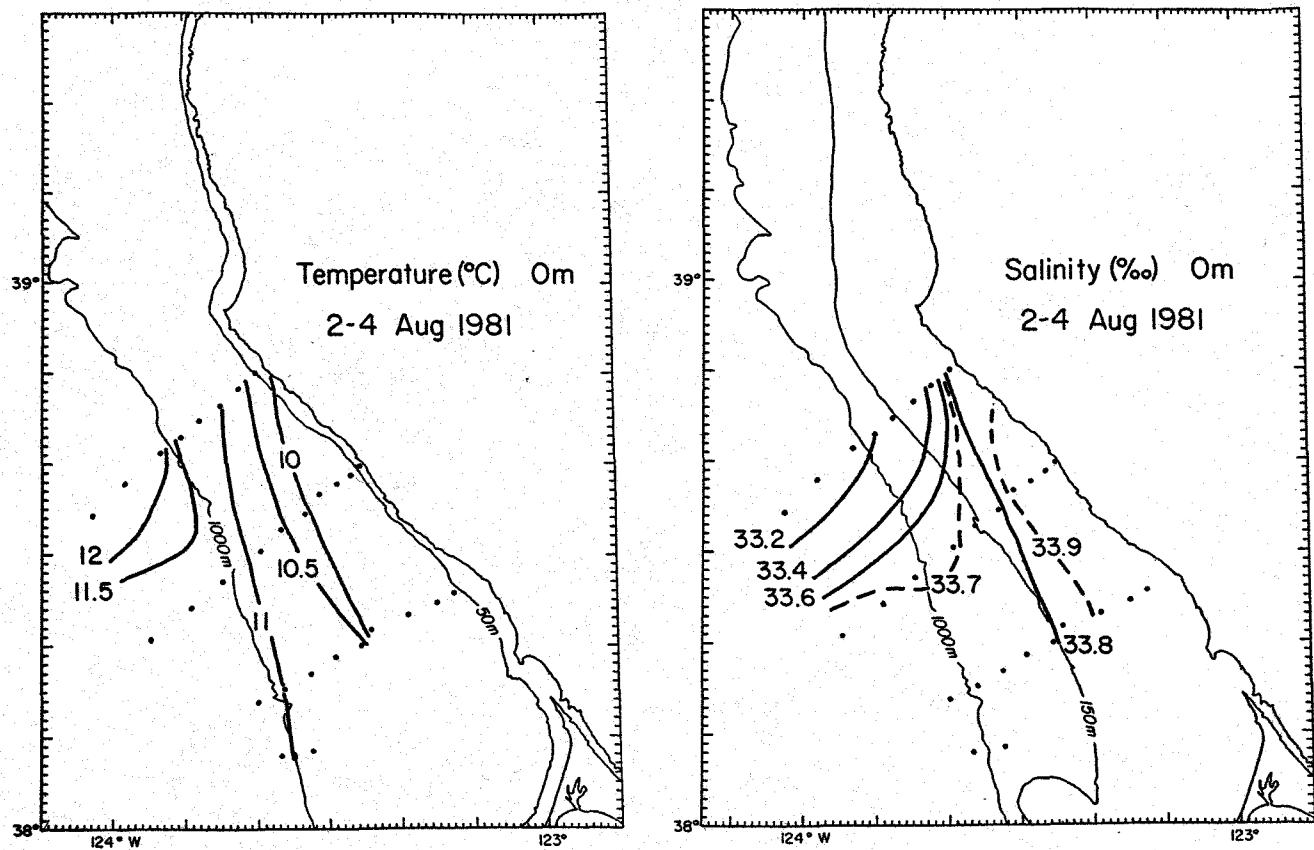
VERTICAL SECTIONS

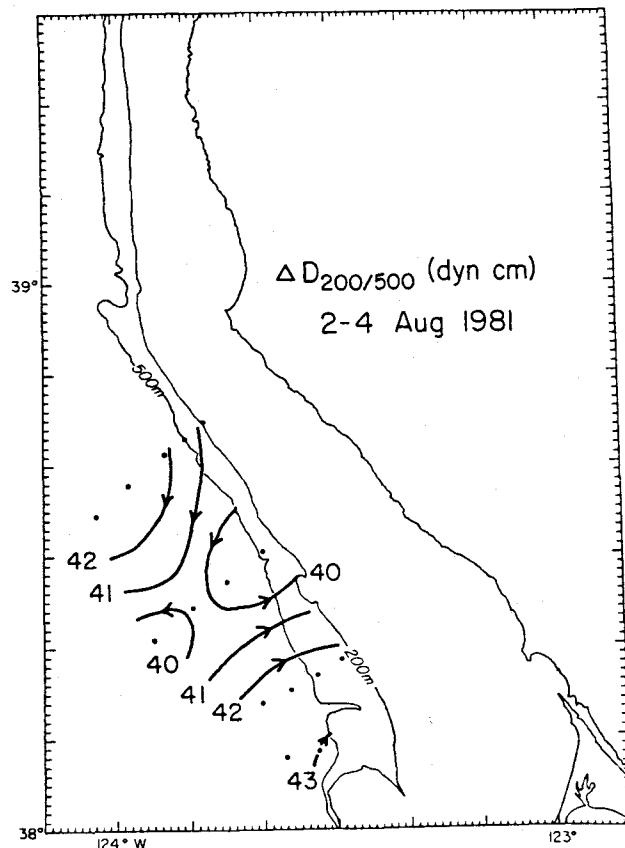
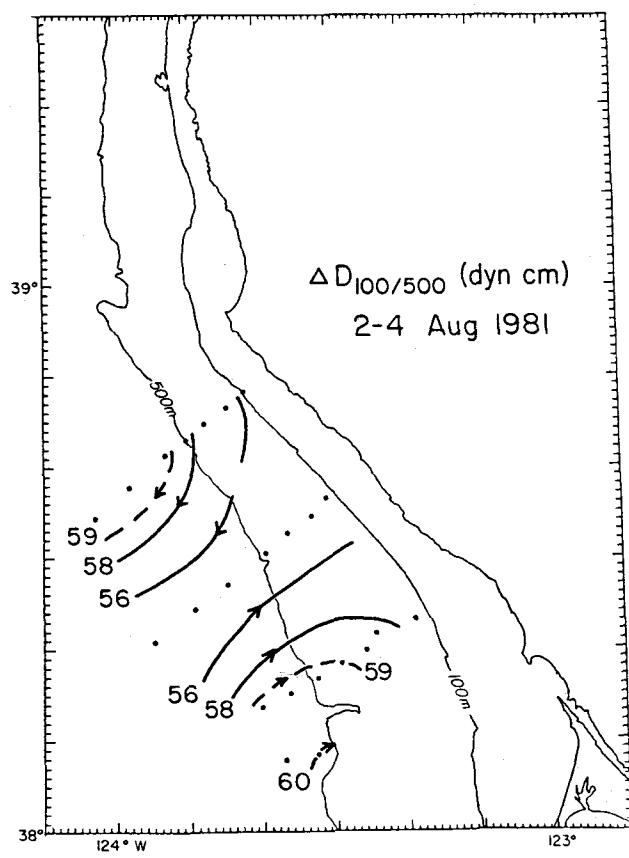
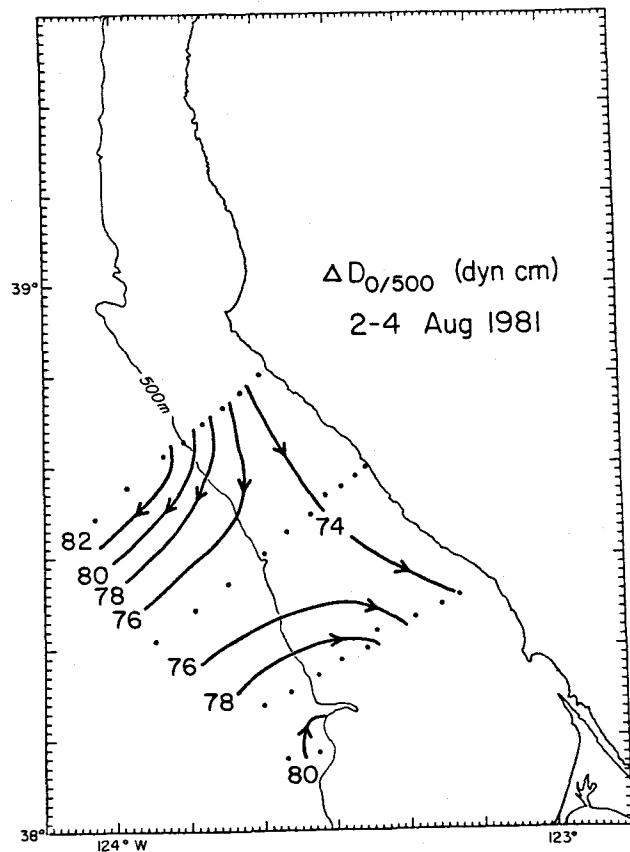
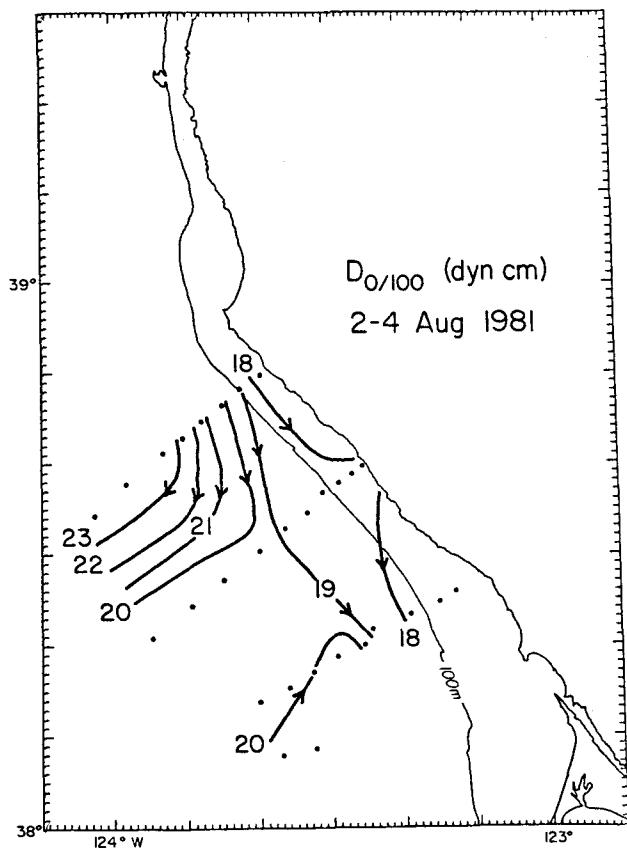






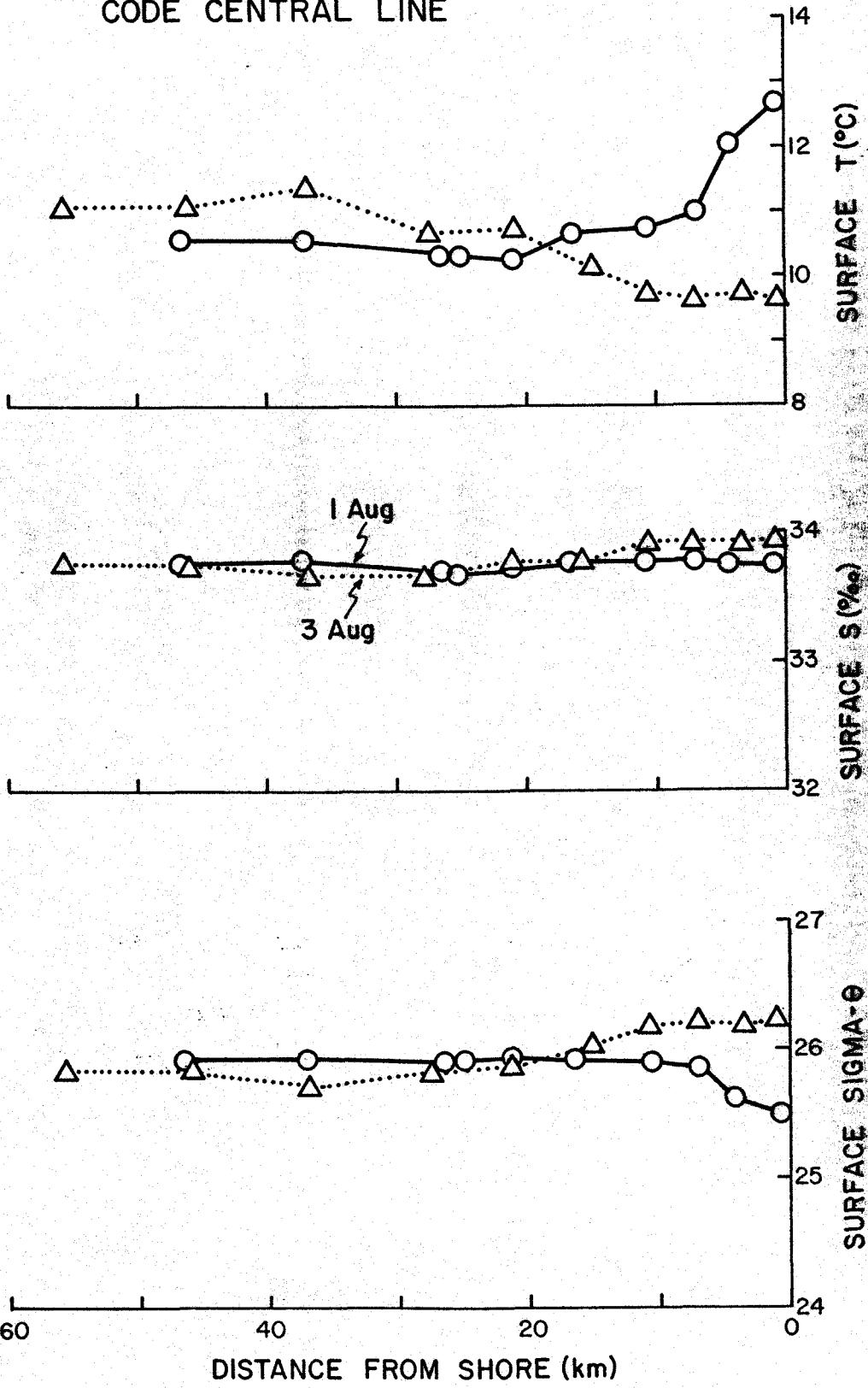
MESOSCALE MAPS





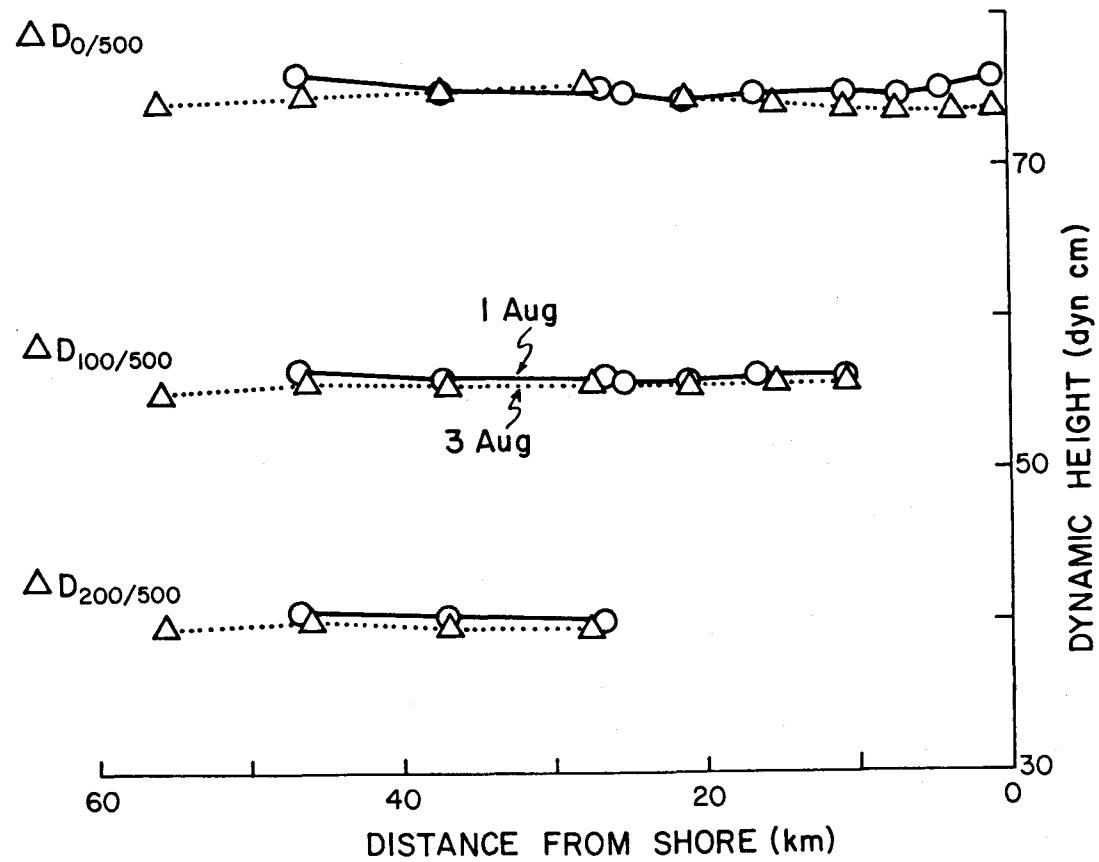
OFFSHORE PROFILES

CODE CENTRAL LINE

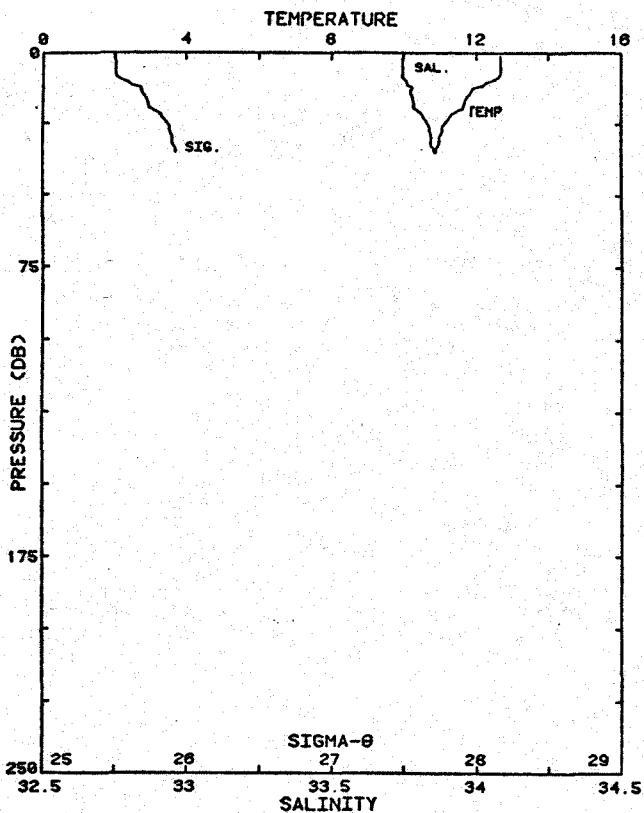


CODE CENTRAL LINE

1-3 August 1981



VERTICAL PROFILES AND LISTINGS



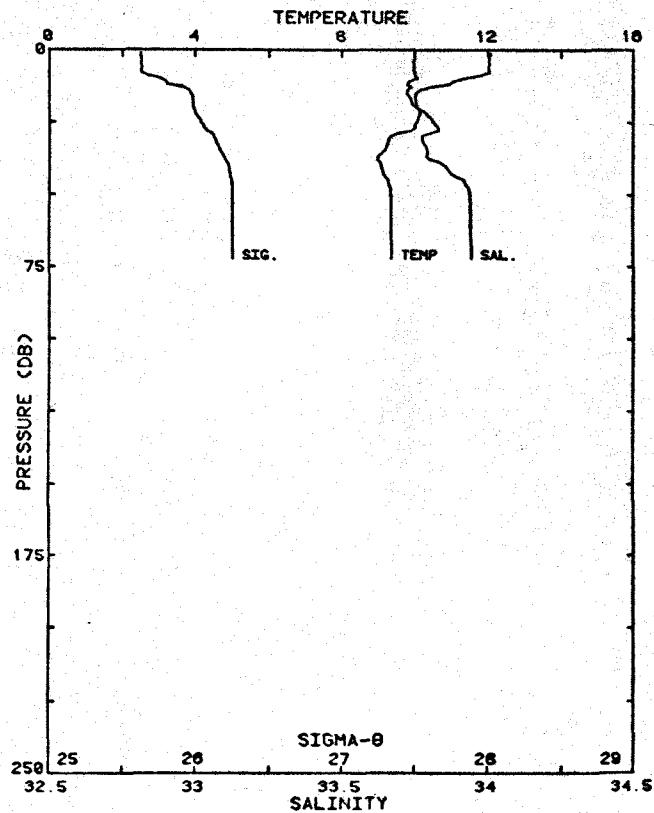
STATION 1 COC1

STA NO 1 ,COC1 LAT: 38 39.8 N LONG:123 25.5 W
1 AUG 1981 0216 GMT PROBE 2567 DEPTH 40M
0.9 KM FROM SHORE

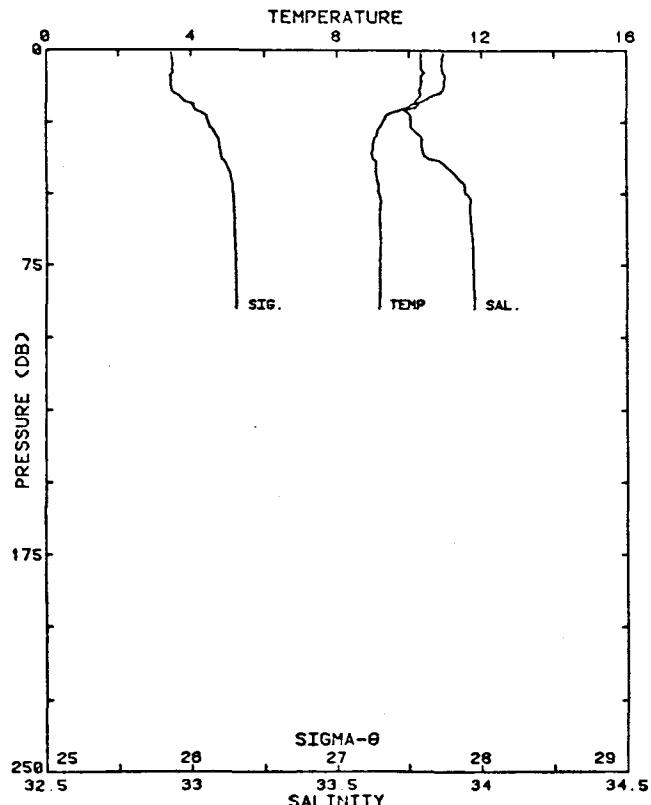
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	12.674	33.750	12.674	25.508	248.4	0.002
10	12.506	33.753	12.505	25.544	245.2	0.025
20	11.598	33.784	11.596	25.740	226.8	0.048
30	10.962	33.844	10.958	25.902	211.6	0.070
35	10.863	33.853	10.859	25.927	209.3	0.080

STA NO 2 ,COC2 LAT: 38 38.2 N LONG:123 26.9 W
1 AUG 1981 0250 GMT PROBE 2567 DEPTH 77M
4.3 KM FROM SHORE

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	12.077	33.750	12.077	25.624	237.4	0.002
10	11.394	33.759	11.393	25.758	224.8	0.024
20	10.091	33.757	10.088	25.987	203.2	0.044
30	9.359	33.776	9.355	26.124	190.4	0.064
40	9.080	33.850	9.075	26.226	180.9	0.083
50	9.357	33.940	9.352	26.252	178.7	0.101
60	9.369	33.943	9.363	26.253	178.9	0.119
70	9.379	33.946	9.372	26.253	179.0	0.137
72	9.379	33.946	9.371	26.253	179.0	0.140



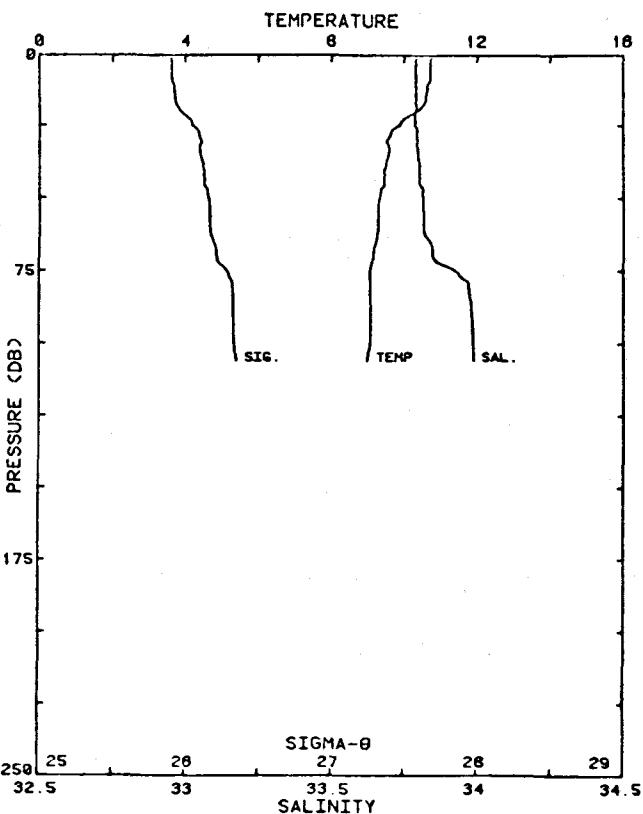
STATION 2 COC2



STATION 3 COC3

STA NO 3 ,COC3 LAT: 38 37.5 N LONG:123 28.9 W
1 AUG 1981 0323 GMT PROBE 2567 DEPTH 95M
7.2 KM FROM SHORE

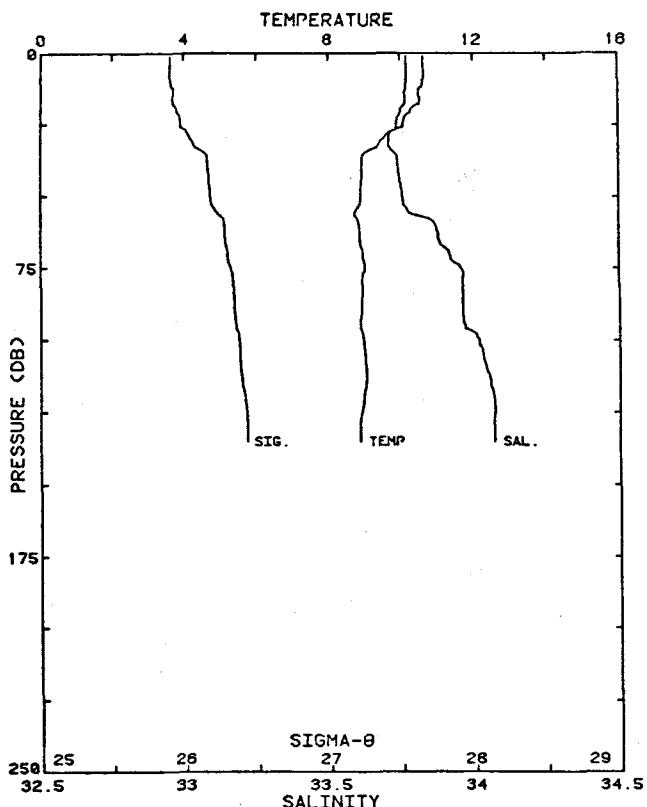
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP	THETA				
1	10.954	33.791	10.953	25.862	214.7	0.002
10	10.992	33.791	10.991	25.856	215.6	0.021
20	9.971	33.774	9.969	26.020	200.1	0.042
30	9.115	33.789	9.112	26.173	185.8	0.062
40	9.101	33.874	9.096	26.242	179.4	0.080
50	9.172	33.945	9.167	26.286	175.5	0.098
60	9.198	33.962	9.192	26.295	174.8	0.115
70	9.206	33.970	9.199	26.300	174.5	0.133
80	9.191	33.971	9.182	26.304	174.4	0.150
90	9.174	33.974	9.165	26.309	174.1	0.167



STATION 4 COC4

STA NO 4 ,COC4 LAT: 38 36.2 N LONG:123 30.8 W
1 AUG 1981 0358 GMT PROBE 2567 DEPTH 111M
10.7 KM FROM SHORE

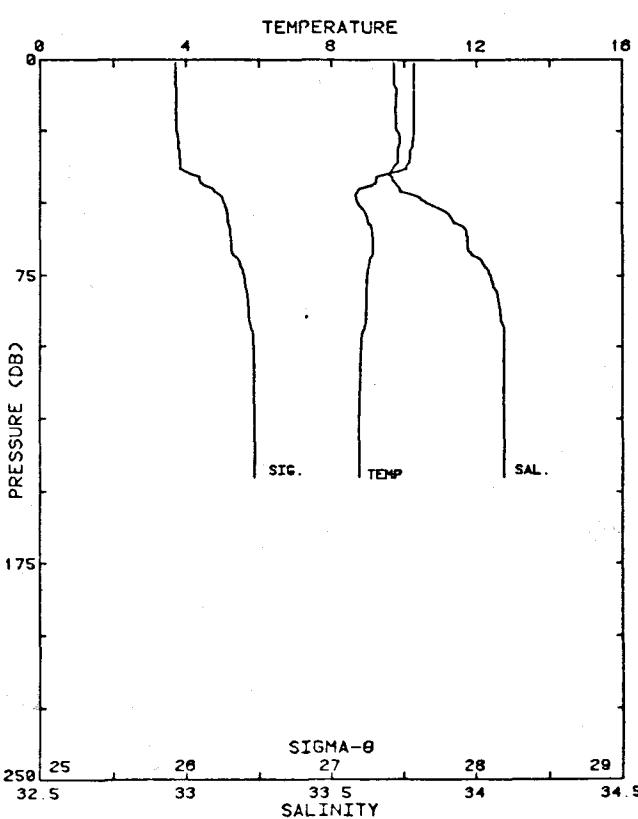
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP	THETA				
1	10.735	33.791	10.735	25.901	211.0	0.002
10	10.691	33.788	10.689	25.907	210.7	0.021
20	10.389	33.790	10.387	25.961	205.7	0.042
30	9.551	33.795	9.548	26.107	192.1	0.062
40	9.474	33.801	9.470	26.124	190.6	0.081
50	9.325	33.813	9.320	26.150	187.6	0.100
60	9.284	33.815	9.277	26.167	187.0	0.119
70	9.148	33.846	9.141	26.213	182.8	0.137
80	9.072	33.969	9.064	26.321	172.7	0.155
90	9.088	33.981	9.078	26.328	172.3	0.172
100	9.074	33.985	9.063	26.334	171.9	0.189
106	8.993	33.987	8.981	26.348	170.6	0.199



STATION 5 COC5

STA NO 5 ,COC5 LAT: 38 34.6 N LONG:123 34.3 W
1 AUG 1981 0441 GMT PROBE 2567 DEPTH 139M
16.6 KM FROM SHORE

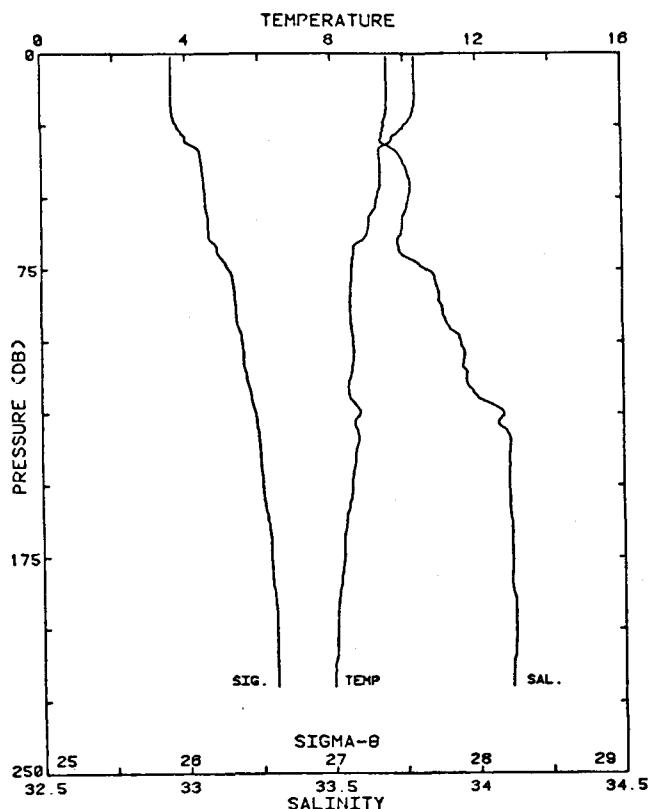
PRESS	TEMP	SAL.	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	10.637	33.772	10.637	25.904	210.7	0.002
10	10.606	33.772	10.605	25.909	210.4	0.021
20	10.272	33.748	10.269	25.949	206.9	0.042
30	9.527	33.709	9.524	26.044	198.1	0.062
40	8.919	33.740	8.915	26.166	188.6	0.081
50	8.884	33.755	8.879	26.183	185.2	0.100
60	8.836	33.866	8.830	26.278	176.4	0.118
70	8.939	33.914	8.932	26.299	174.6	0.136
80	8.922	33.958	8.913	26.336	171.2	0.153
90	8.891	33.959	8.881	26.342	170.9	0.170
100	8.955	34.015	8.944	26.376	167.9	0.187
110	9.022	34.040	9.011	26.385	167.3	0.204
120	8.957	34.064	8.944	26.415	164.6	0.220
130	8.852	34.066	8.838	26.432	163.1	0.237
135	8.852	34.067	8.838	26.434	163.1	0.245



STA NO 6 ,COC6 LAT: 38 32.8 N LONG:123 36.2 W
1 AUG 1981 0517 GMT PROBE 2567 DEPTH 151M
21.1 KM FROM SHORE

PRESS	TEMP	SAL.	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	10.260	33.716	10.260	25.926	208.7	0.002
10	10.255	33.724	10.254	25.932	208.2	0.021
20	10.257	33.722	10.254	25.931	208.6	0.042
30	10.222	33.733	10.219	25.946	207.4	0.063
40	9.525	33.695	9.520	26.034	199.2	0.083
50	8.727	33.826	8.722	26.263	177.6	0.102
60	9.127	33.965	9.121	26.309	173.5	0.119
70	9.028	34.016	9.020	26.365	168.4	0.137
80	8.943	34.063	8.935	26.416	163.8	0.153
90	8.929	34.080	8.920	26.431	162.5	0.169
100	8.793	34.092	8.782	26.462	159.8	0.185
110	8.770	34.092	8.758	26.465	159.3	0.201
120	8.761	34.092	8.749	26.467	159.6	0.217
130	8.752	34.093	8.738	26.469	159.6	0.233
140	8.753	34.092	8.738	26.469	159.9	0.249
145	8.753	34.093	8.738	26.470	159.9	0.257

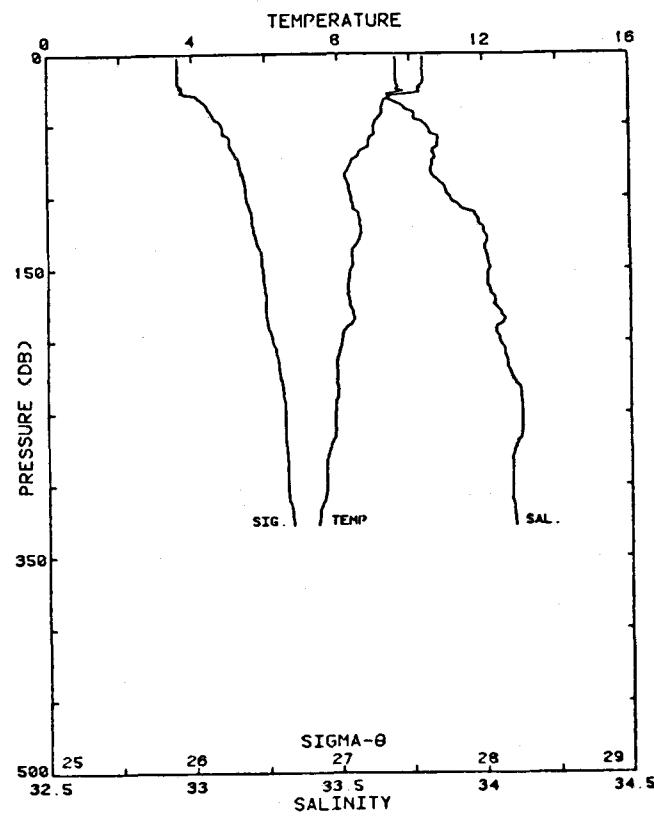
STATION 6 COC6



STATION 7 COC 6.5

STA NO 7 , LAT: 38 31.5 N LONG:123 38.4 W
1 AUG 1981 0611 GMT PROBE 2567 DEPTH 222M
25.2 KM FROM SHORE

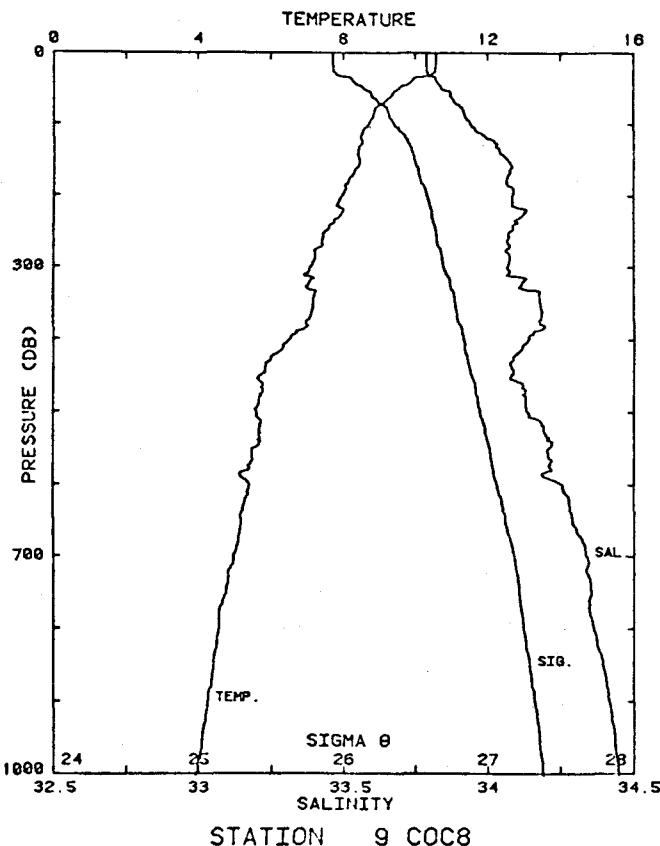
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
			TEMP	THETA		
1	10.300	33.693	10.300	25.901	211.0	0.002
10	10.314	33.695	10.312	25.900	211.3	0.021
20	10.263	33.690	10.261	25.905	211.0	0.042
30	9.658	33.668	9.655	25.990	203.2	0.063
40	9.346	33.756	9.342	26.110	192.0	0.083
50	9.252	33.765	9.247	26.132	190.1	0.102
60	9.025	33.744	9.019	26.153	188.3	0.121
70	8.582	33.744	8.574	26.222	181.9	0.139
80	8.523	33.857	8.515	26.320	172.7	0.157
90	8.503	33.880	8.493	26.341	171.0	0.174
100	8.574	33.941	8.564	26.378	167.7	0.191
110	8.531	33.957	8.520	26.397	166.0	0.207
120	8.477	34.003	8.465	26.441	162.0	0.224
130	8.638	34.082	8.624	26.479	158.7	0.240
140	8.615	34.105	8.600	26.500	156.9	0.256
150	8.521	34.105	8.505	26.515	155.6	0.271
175	8.263	34.114	8.246	26.562	151.6	0.310
200	8.067	34.125	8.047	26.600	148.3	0.347
220	7.984	34.113	7.962	26.604	148.3	0.377



STATION 8 COC7

STA NO 8 ,COC7 LAT: 38 30.3 N LONG:123 38.7 W
1 AUG 1981 0701 GMT PROBE 2567 DEPTH 384M
26.6 KM FROM SHORE LIN INT SAL. 321-328DB

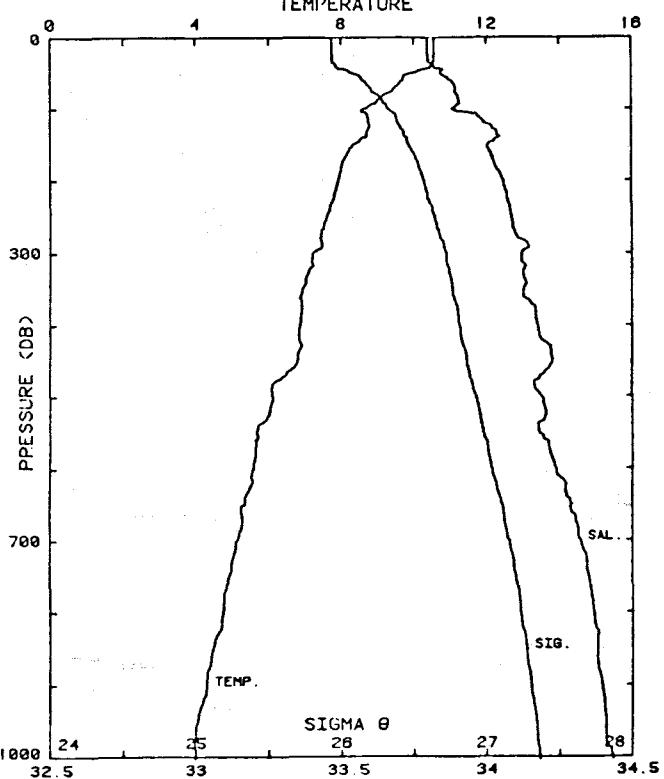
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
			TEMP	THETA		
2	10.362	33.700	10.362	25.896	211.5	0.004
10	10.352	33.702	10.351	25.899	211.4	0.021
20	10.363	33.703	10.360	25.898	211.7	0.042
30	9.467	33.677	9.464	26.028	199.5	0.063
40	9.217	33.738	9.213	26.117	191.3	0.083
50	9.000	33.802	8.994	26.201	183.5	0.101
60	8.873	33.846	8.867	26.257	178.4	0.120
70	8.578	33.824	8.571	26.285	175.9	0.137
80	8.281	33.819	8.273	26.327	172.0	0.155
90	8.256	33.852	8.247	26.357	169.4	0.172
100	8.351	33.886	8.341	26.369	168.4	0.189
110	8.485	33.948	8.474	26.397	166.0	0.205
120	8.599	33.986	8.586	26.410	165.0	0.222
130	8.570	34.011	8.557	26.434	162.9	0.238
140	8.343	34.008	8.329	26.466	160.0	0.255
150	8.318	34.015	8.303	26.476	159.3	0.271
175	8.270	34.029	8.253	26.495	157.9	0.310
200	8.067	34.050	8.047	26.541	153.9	0.349
225	7.940	34.091	7.918	26.593	149.4	0.387
250	7.882	34.125	7.858	26.628	146.5	0.424
300	7.612	34.089	7.583	26.640	146.1	0.497
328	7.395	34.099	7.363	26.680	142.7	0.538



STA NO 9 , COC8 LAT: 38 27.0 N LONG:123 44.7 W
1 AUG 1981 0818 GMT PROBE 2567 DEPTH 1219M
37.2 KM FROM SHORE

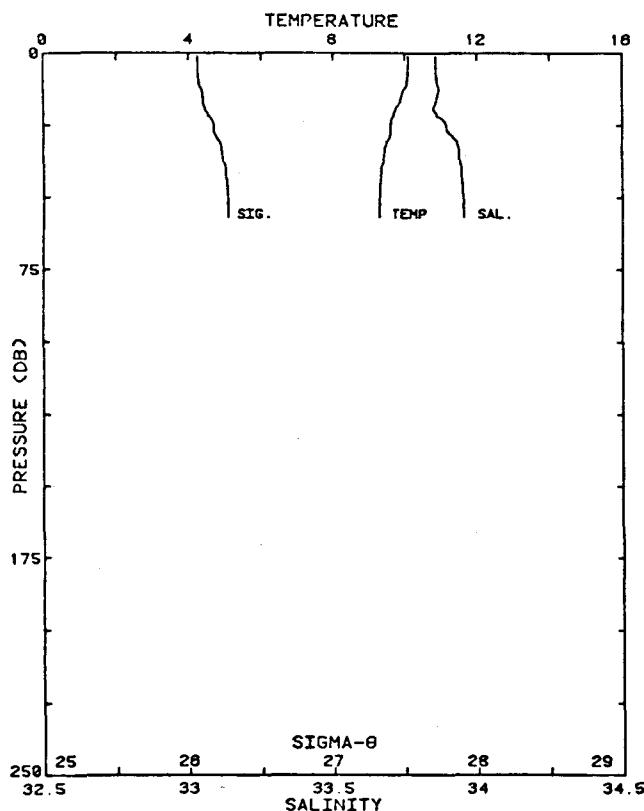
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		THETA			
1	10.574	33.789	10.574	25.928	208.5	0.002
10	10.577	33.789	10.576	25.928	208.7	0.021
20	10.574	33.790	10.572	25.929	208.8	0.042
30	10.467	33.795	10.463	25.952	206.9	0.063
40	9.938	33.822	9.933	26.064	196.4	0.083
50	9.596	33.839	9.590	26.134	189.9	0.102
60	9.382	33.873	9.375	26.196	184.2	0.121
70	9.152	33.886	9.144	26.244	179.9	0.139
80	8.885	33.914	8.876	26.308	173.9	0.157
90	8.836	33.923	8.827	26.323	172.7	0.174
100	8.721	33.942	8.711	26.356	169.8	0.191
110	8.565	33.960	8.554	26.394	166.3	0.208
120	8.489	33.996	8.476	26.434	162.7	0.224
130	8.474	34.029	8.461	26.462	160.2	0.240
140	8.419	34.043	8.405	26.482	158.5	0.256
150	8.458	34.067	8.442	26.495	157.5	0.272
175	8.198	34.066	8.181	26.534	154.2	0.311
200	7.974	34.084	7.954	26.582	150.0	0.349
225	7.970	34.125	7.947	26.615	147.3	0.386
250	7.490	34.073	7.466	26.644	144.7	0.423
300	7.090	34.067	7.062	26.697	140.4	0.494
400	6.531	34.140	6.495	26.831	128.8	0.628
500	5.608	34.137	5.567	26.946	118.4	0.752
600	5.420	34.256	5.370	27.063	108.4	0.865
800	4.559	34.343	4.497	27.248	91.9	1.062
1000	3.936	34.448	3.861	27.383	79.9	1.233
1002	3.923	34.449	3.848	27.386	79.6	1.235

TEMPERATURE



STA NO 10 , COC9 LAT: 38 23.7 N LONG:123 49.3 W
1 AUG 1981 0934 GMT PROBE 2567 DEPTH 1741M
46.6 KM FROM SHORE

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		THETA			
1	10.593	33.780	10.593	25.918	209.4	0.002
10	10.552	33.798	10.550	25.939	207.6	0.021
20	10.554	33.798	10.552	25.939	207.9	0.042
30	10.551	33.798	10.547	25.940	208.0	0.062
40	10.496	33.810	10.491	25.959	206.4	0.083
50	10.095	33.842	10.089	26.053	197.7	0.103
60	9.698	33.867	9.691	26.140	189.6	0.123
70	9.508	33.891	9.500	26.190	185.1	0.141
80	9.249	33.894	9.240	26.234	181.0	0.160
90	8.989	33.906	8.979	26.285	176.3	0.178
100	8.695	33.887	8.684	26.317	173.5	0.195
110	8.720	33.967	8.708	26.376	168.1	0.212
120	8.750	33.989	8.737	26.389	167.1	0.229
130	8.725	34.027	8.712	26.423	164.1	0.245
140	8.680	34.044	8.665	26.443	162.3	0.262
150	8.355	34.006	8.340	26.463	160.5	0.278
175	8.040	34.025	8.023	26.525	154.9	0.317
200	7.930	34.055	7.910	26.566	151.5	0.356
225	7.806	34.070	7.784	26.596	149.0	0.393
250	7.593	34.083	7.569	26.638	145.4	0.430
300	7.214	34.119	7.185	26.720	138.3	0.501
400	6.862	34.172	6.825	26.811	131.0	0.636
500	6.097	34.184	6.053	26.923	121.2	0.762
600	5.369	34.234	5.519	27.029	111.9	0.879
800	4.755	34.363	4.691	27.227	94.3	1.082
1000	3.988	34.433	3.912	27.366	81.7	1.257
1003	3.977	34.433	3.901	27.367	81.5	1.259

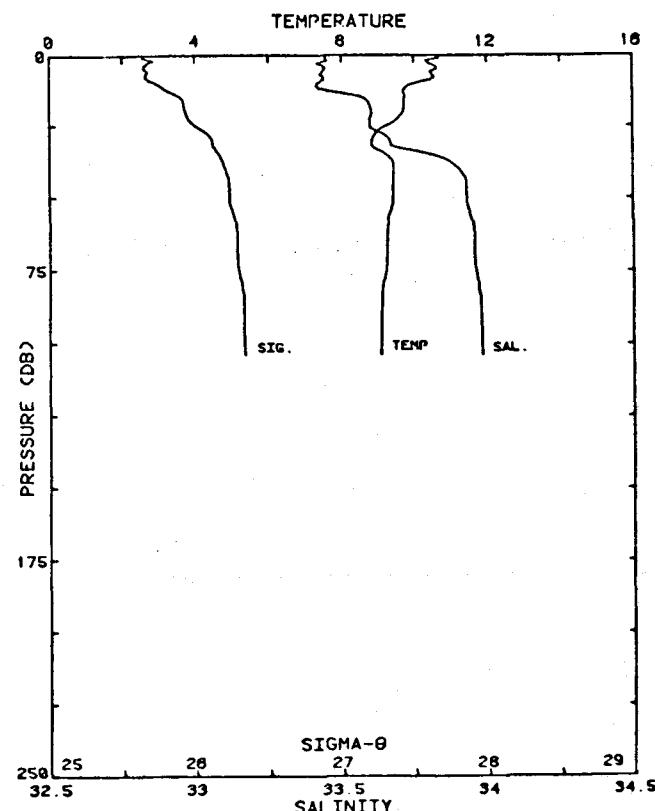


STA NO 11 ,NOR1 LAT: 38 50.0 N LONG:123 40.0 W
2 AUG 1981 0235 GMT PROBE 2567 DEPTH 62M

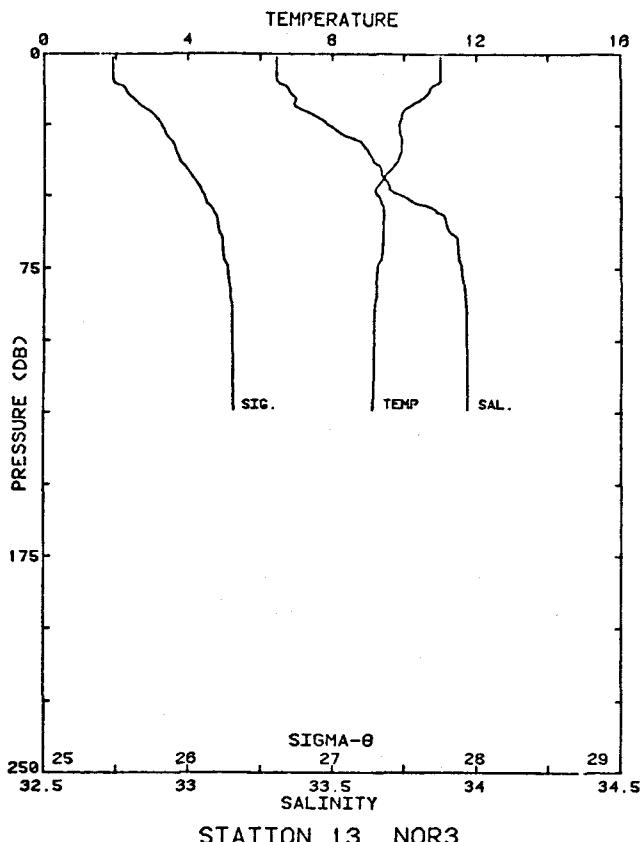
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	10.105	33.858	10.105	26.062	195.7	0.002
10	10.066	33.863	10.065	26.073	194.8	0.020
20	9.739	33.849	9.737	26.118	190.8	0.039
30	9.571	33.921	9.568	26.201	183.1	0.057
40	9.344	33.946	9.339	26.259	177.8	0.075
50	9.299	33.952	9.294	26.271	176.9	0.093
57	9.291	33.954	9.285	26.274	176.7	0.106

STA NO 12 ,NOR2 LAT: 38 48.1 N LONG:123 42.7 W
2 AUG 1981 0313 GMT PROBE 2567 DEPTH 109M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
0	10.697	33.445	10.697	25.639	235.9	0.000
10	10.128	33.422	10.127	25.719	228.5	0.023
20	9.709	33.604	9.707	25.932	208.5	0.045
30	8.856	33.663	8.853	26.118	191.0	0.065
40	9.447	33.903	9.443	26.208	182.7	0.084
50	9.418	33.932	9.412	26.236	180.3	0.102
60	9.260	33.952	9.254	26.278	176.5	0.120
70	9.235	33.956	9.227	26.285	176.0	0.137
80	9.116	33.968	9.108	26.313	173.5	0.155
90	9.081	33.976	9.071	26.326	172.5	0.172
100	9.078	33.980	9.068	26.329	172.4	0.189
104	9.061	33.981	9.050	26.333	172.1	0.196



STATION 12 NOR2



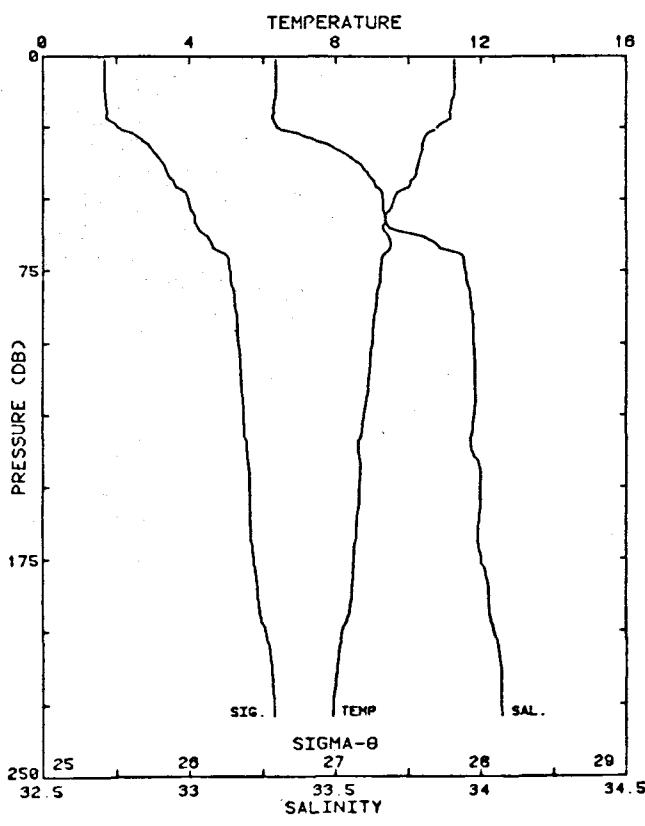
STATION 13 NOR3

STA NO 13 ,NOR3 LAT: 38 46.4 N LONG:123 45.0 W
2 AUG 1981 0347 GMT PROBE 2567 DEPTH 129M

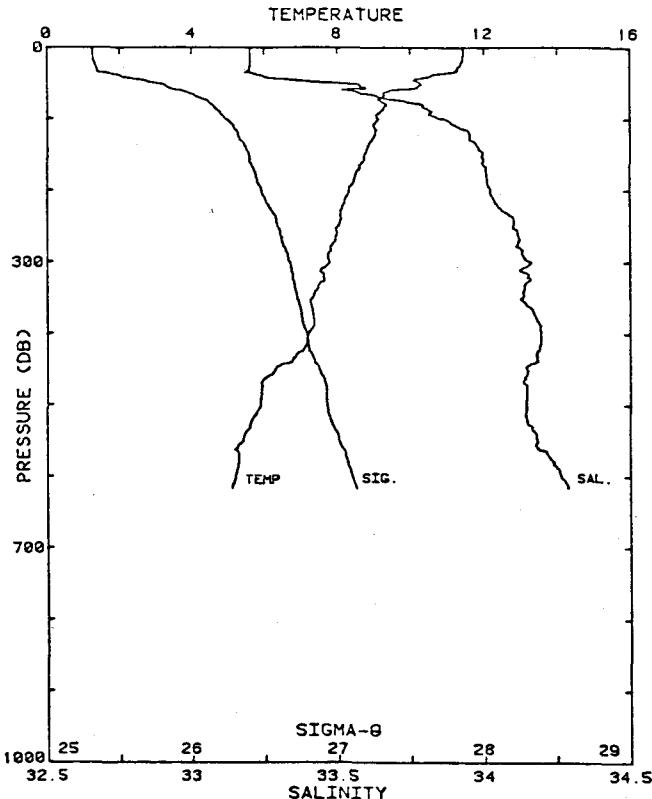
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	11.001	33.306	11.001	25.478	251.3	0.003
10	10.995	33.307	10.993	25.479	251.3	0.025
20	10.002	33.388	10.000	25.715	229.1	0.049
30	9.925	33.573	9.922	25.872	214.4	0.071
40	9.670	33.666	9.685	25.983	204.0	0.092
50	9.259	33.739	9.253	26.111	192.1	0.112
60	9.425	33.896	9.418	26.207	183.2	0.131
70	9.394	33.937	9.387	26.244	179.9	0.149
80	9.226	33.954	9.218	26.285	176.2	0.167
90	9.160	33.963	9.150	26.302	174.7	0.184
100	9.150	33.964	9.140	26.305	174.7	0.202
110	9.142	33.965	9.131	26.307	174.7	0.219
120	9.128	33.966	9.115	26.310	174.6	0.237
124	9.097	33.967	9.084	26.316	174.1	0.244

STA NO 14 ,NOR4 LAT: 38 44.6 N LONG:123 48.0 W
2 AUG 1981 0426 GMT PROBE 2567 DEPTH 232M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	11.277	33.294	11.277	25.418	256.9	0.003
10	11.281	33.294	11.230	25.418	257.2	0.026
20	11.134	33.288	11.132	25.440	255.3	0.051
30	10.402	33.438	10.399	25.605	232.2	0.076
40	10.234	33.600	10.229	25.841	217.6	0.098
50	9.613	33.663	9.608	25.994	203.2	0.119
60	9.304	33.687	9.297	26.064	196.8	0.140
70	9.281	33.940	9.273	26.265	177.9	0.158
80	9.195	33.954	9.186	26.290	175.7	0.176
90	9.059	33.273	9.049	26.327	172.4	0.193
100	9.009	33.975	8.998	26.337	171.6	0.211
110	8.937	33.979	8.926	26.351	170.5	0.228
120	8.845	33.982	8.833	26.368	169.0	0.245
130	8.740	33.973	8.727	26.377	168.3	0.262
140	8.653	33.977	8.638	26.395	166.9	0.278
150	8.653	33.997	8.638	26.410	165.6	0.295
175	8.502	34.001	8.484	26.437	163.5	0.336
200	8.192	34.044	8.172	26.518	156.1	0.376
225	7.944	34.070	7.921	26.576	151.1	0.415
229	7.923	34.073	7.900	26.581	150.6	0.421



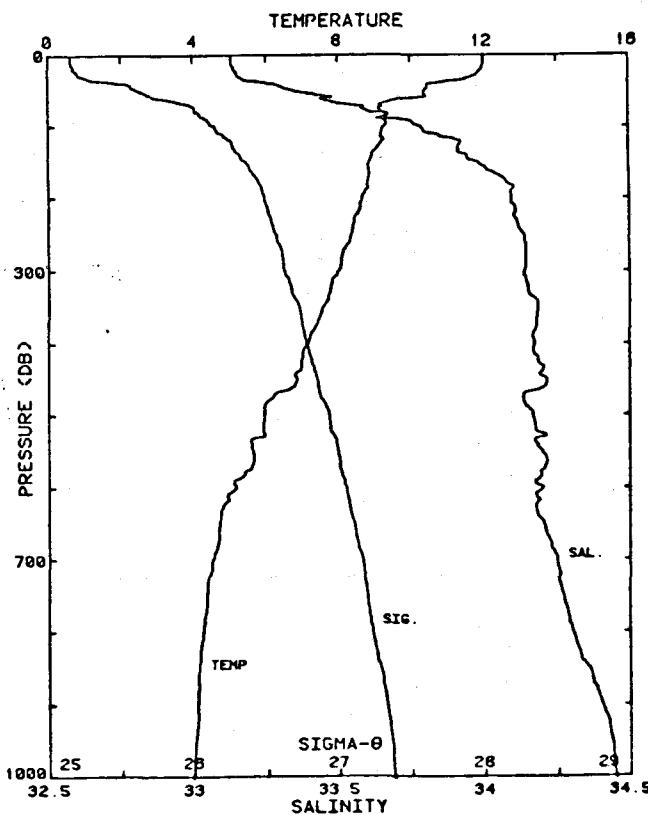
STATION 14 NOR4



STATION 15 NOR 5

STA NO 15 ,NOR5 LAT: 38 42.7 N LONG:123 50.6 W
2 AUG 1981 0507 GMT PROBE 2567 DEPTH 627M

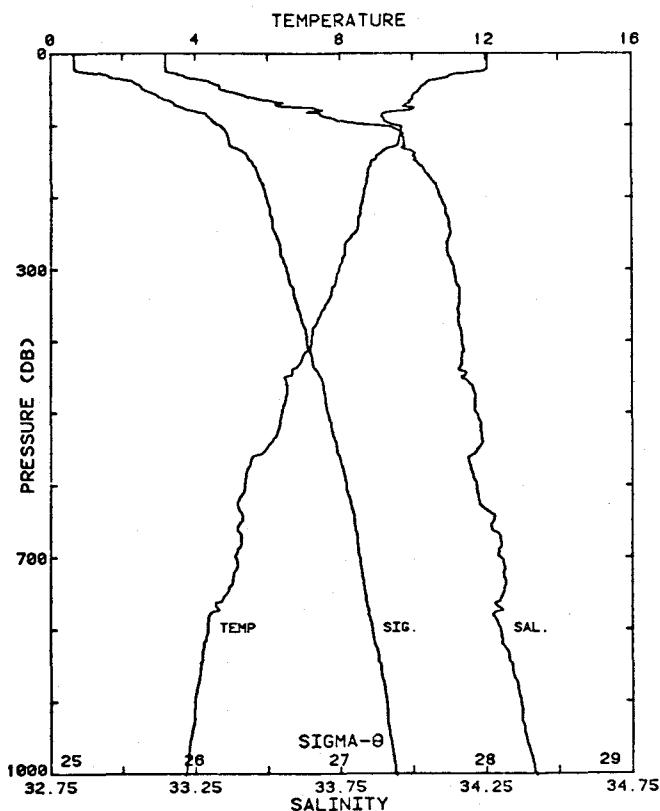
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	11.433	33.202	11.433	25.319	266.4	0.003
10	11.438	33.202	11.436	25.318	266.7	0.027
20	11.414	33.202	11.411	25.322	266.5	0.053
30	11.275	33.199	11.271	25.346	264.5	0.080
40	10.563	33.246	10.558	25.508	249.2	0.106
50	10.261	33.477	10.256	25.741	227.3	0.130
60	9.510	33.517	9.503	25.898	212.6	0.152
70	9.196	33.644	9.189	26.047	198.5	0.172
80	9.330	33.782	9.321	26.133	190.6	0.191
90	9.177	33.821	9.170	26.168	185.6	0.210
100	9.079	33.848	9.069	26.226	182.1	0.229
110	8.973	33.902	8.961	26.285	176.7	0.247
120	9.014	33.948	9.001	26.314	174.2	0.264
130	8.921	33.949	8.908	26.330	172.8	0.281
140	8.808	33.980	8.793	26.373	169.0	0.299
150	8.742	33.993	8.726	26.393	167.2	0.315
175	8.524	34.008	8.506	26.439	163.3	0.357
200	8.314	34.022	8.294	26.482	159.6	0.397
225	8.119	34.054	8.097	26.537	154.7	0.437
250	8.027	34.102	8.002	26.589	150.3	0.475
300	7.774	34.156	7.744	26.669	143.4	0.548
400	7.182	34.195	7.144	26.786	133.7	0.687
500	5.869	34.144	5.826	26.920	121.1	0.813
600	5.163	34.263	5.115	27.100	104.6	0.926
617	5.075	34.285	5.025	27.127	102.1	0.944



STA NO 16 ,NOR6 LAT: 38 41.1 N LONG:123 53.3 W
2 AUG 1981 0614 GMT PROBE 2567 DEPTH 1318H

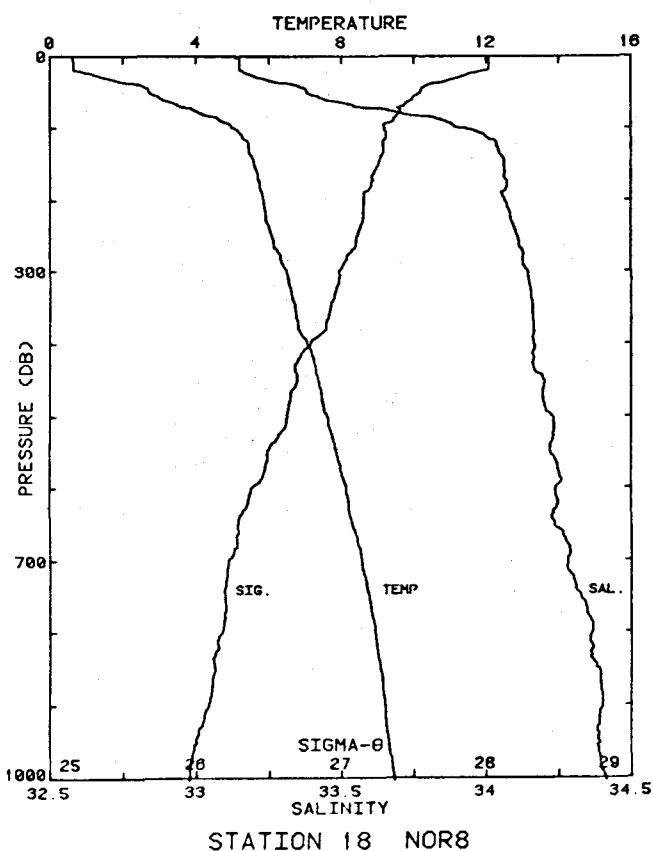
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	12.022	33.130	12.022	25.154	282.1	0.003
10	12.023	33.130	12.022	25.154	282.3	0.028
20	11.966	33.138	11.963	25.171	280.9	0.056
30	11.790	33.153	11.786	25.216	276.9	0.084
40	10.875	33.251	10.870	25.458	254.1	0.111
50	10.412	33.339	10.406	25.607	240.1	0.136
60	10.420	33.482	10.413	25.717	229.8	0.159
70	9.168	33.527	9.160	25.960	206.8	0.181
80	9.202	33.604	9.193	26.015	201.8	0.201
90	9.091	33.667	9.082	26.082	195.6	0.221
100	9.289	33.780	9.278	26.139	190.4	0.240
110	9.215	33.813	9.204	26.177	187.1	0.259
120	9.249	33.923	9.236	26.257	179.6	0.278
130	9.102	33.913	9.088	26.274	178.2	0.295
140	8.953	33.945	8.939	26.322	173.8	0.313
150	8.876	33.981	8.860	26.363	170.1	0.330
175	8.829	34.074	8.811	26.443	163.1	0.372
200	8.666	34.094	8.645	26.485	159.5	0.412
225	8.460	34.101	8.437	26.523	156.4	0.452
250	8.350	34.137	8.324	26.568	152.5	0.490
300	7.999	34.138	7.969	26.622	148.0	0.565
400	7.135	34.172	7.097	26.774	134.8	0.706
500	5.922	34.165	5.879	26.930	120.3	0.834
600	5.144	34.200	5.095	27.052	109.0	0.949
800	4.233	34.302	4.173	27.235	92.5	1.149
1000	3.962	34.449	3.887	27.381	80.1	1.319
1003	3.959	34.450	3.884	27.382	80.0	1.321

STATION 16 NOR6



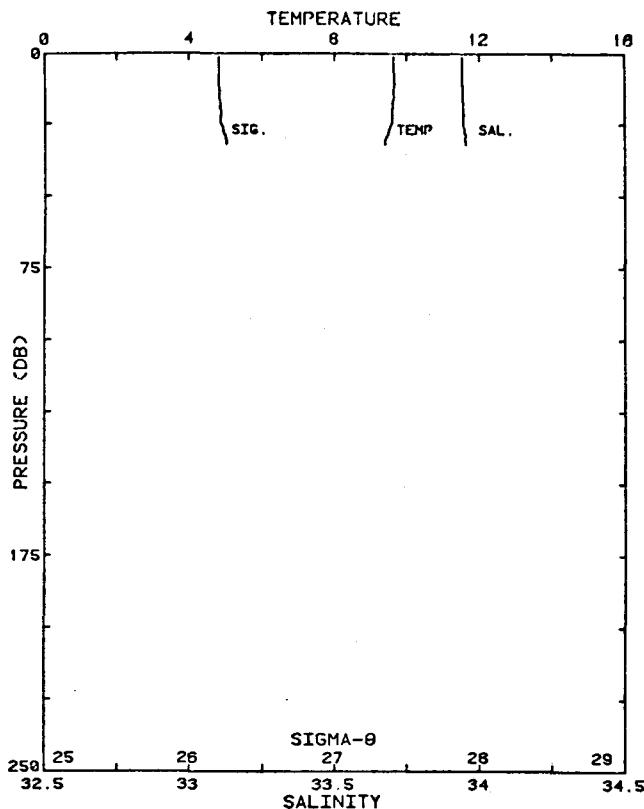
STA NO 17 ,NOR7 LAT: 38 37.7 N LONG:123 58.3 W
2 AUG 1981 0731 GMT PROBE 2567 DEPTH 2101M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
			TEMP	THETA		
1	12.061	33.148	12.061	25.160	281.5	0.003
10	12.058	33.148	12.057	25.161	281.6	0.028
20	12.053	33.148	12.051	25.162	281.7	0.056
30	11.123	33.189	11.119	25.345	262.6	0.084
40	10.423	33.301	10.418	25.575	242.8	0.109
50	10.217	33.336	10.212	25.638	237.1	0.133
60	10.005	33.425	9.998	25.743	227.3	0.156
70	9.856	33.540	9.848	25.858	216.6	0.179
80	9.644	33.678	9.635	26.001	203.2	0.200
90	9.201	33.718	9.191	26.105	193.5	0.220
100	9.565	33.884	9.553	26.176	187.0	0.239
110	9.687	33.964	9.675	26.218	183.3	0.257
120	9.625	33.971	9.611	26.233	182.0	0.275
130	9.472	33.966	9.458	26.255	180.2	0.294
140	9.078	34.009	9.063	26.353	171.0	0.311
150	8.843	34.012	8.817	26.389	167.6	0.328
175	8.753	34.067	8.734	26.450	162.4	0.369
200	8.646	34.096	8.625	26.490	159.1	0.409
225	8.563	34.117	8.539	26.519	156.7	0.449
250	8.419	34.132	8.393	26.554	153.8	0.488
300	7.962	34.142	7.932	26.631	147.2	0.563
400	7.186	34.169	7.148	26.765	135.7	0.704
500	6.388	34.217	6.343	26.912	122.6	0.832
600	5.345	34.218	5.296	27.043	110.2	0.949
800	4.340	34.301	4.279	27.223	93.8	1.153
1000	3.733	34.421	3.659	27.382	79.4	1.325
1003	3.722	34.424	3.649	27.386	79.1	1.328



STA NO 18 ,NOR8 LAT: 38 34.3 N LONG:124 2.9 W
2 AUG 1981 0849 GMT PROBE 2567 DEPTH 2377M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
			TEMP	THETA		
2	12.069	33.135	12.069	25.149	282.6	0.006
10	12.069	33.149	12.067	25.160	281.7	0.028
20	12.006	33.152	12.004	25.174	280.5	0.056
30	11.220	33.215	11.216	25.368	262.4	0.083
40	10.399	33.336	10.394	25.607	239.8	0.109
50	10.184	33.381	10.178	25.678	233.2	0.132
60	9.953	33.440	9.947	25.764	225.3	0.155
70	9.688	33.547	9.680	25.892	213.3	0.177
80	9.589	33.704	9.581	26.032	200.2	0.198
90	9.441	33.849	9.431	26.168	187.5	0.217
100	9.193	33.903	9.183	26.250	179.9	0.235
110	9.234	33.993	9.222	26.315	174.0	0.253
120	9.152	34.034	9.139	26.360	169.9	0.270
130	9.163	34.042	9.149	26.365	169.8	0.287
140	9.095	34.055	9.080	26.306	167.9	0.304
150	9.041	34.062	9.025	26.400	166.7	0.321
175	8.843	34.071	8.824	26.439	163.4	0.362
200	8.627	34.064	8.606	26.468	161.1	0.402
225	8.615	34.085	8.592	26.486	159.9	0.443
250	8.453	34.107	8.427	26.529	156.2	0.482
300	7.958	34.143	7.928	26.632	147.1	0.558
400	7.148	34.165	7.110	26.767	135.4	0.701
500	6.505	34.229	6.461	26.905	123.3	0.830
600	5.534	34.240	5.483	27.038	111.0	0.948
800	4.711	34.366	4.647	27.234	93.5	1.152
1000	3.813	34.410	3.738	27.366	81.2	1.326
1003	3.810	34.412	3.735	27.367	81.0	1.329

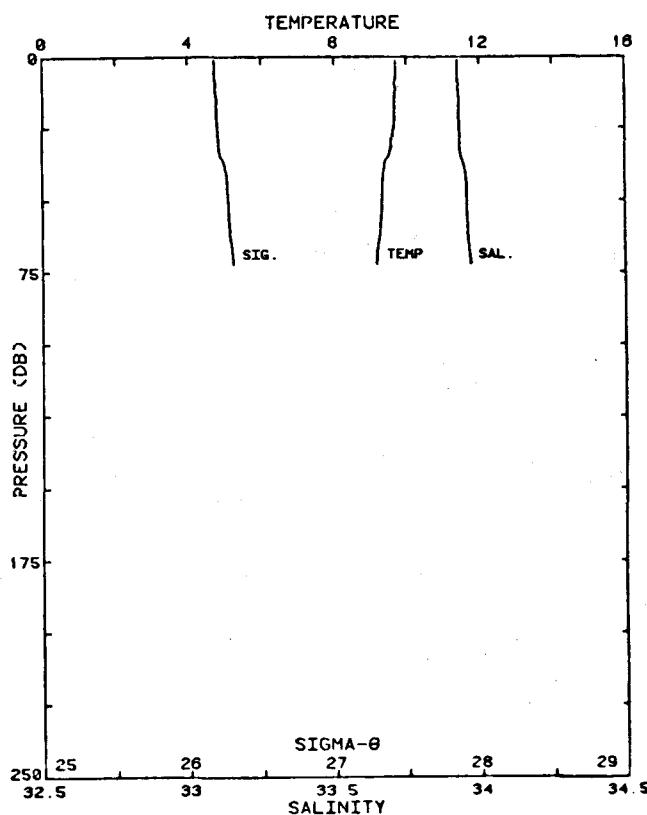


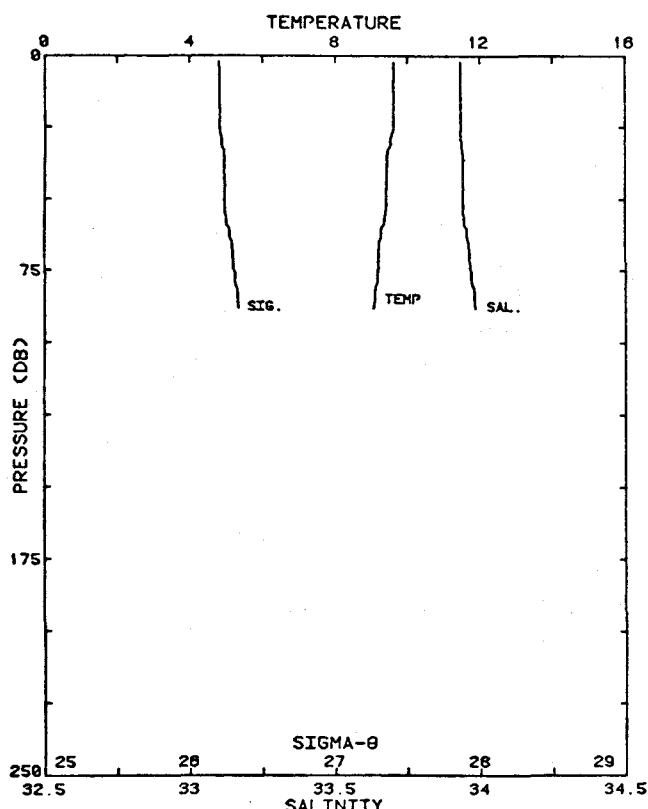
STA NO 19 ,COC1 LAT: 38 39.8 N LONG:123 25.5 W
3 AUG 1981 0059 GMT PROBE 2567 DEPTH 36M
0.9 KM FROM SHORE

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	9.641	33.941	9.641	26.205	182.1	0.002
10	9.658	33.940	9.657	26.202	182.6	0.018
20	9.598	33.943	9.595	26.215	181.6	0.036
30	9.414	33.947	9.410	26.249	178.5	0.055
32	9.391	33.952	9.387	26.255	178.0	0.058

STA NO 20 ,COC2 LAT: 38 38.8 N LONG:123 26.9 W
3 AUG 1981 0128 GMT PROBE 2567 DEPTH 76M
3.5 KM FROM SHORE

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	9.710	33.927	9.710	26.183	184.3	0.002
10	9.671	33.930	9.670	26.192	183.6	0.018
20	9.660	33.929	9.658	26.194	183.6	0.037
30	9.576	33.934	9.572	26.211	182.2	0.055
40	9.373	33.951	9.368	26.258	177.9	0.073
50	9.312	33.955	9.307	26.271	176.7	0.091
60	9.264	33.958	9.257	26.282	176.1	0.109
70	9.175	33.967	9.167	26.303	174.3	0.126
72	9.163	33.969	9.156	26.306	174.0	0.130

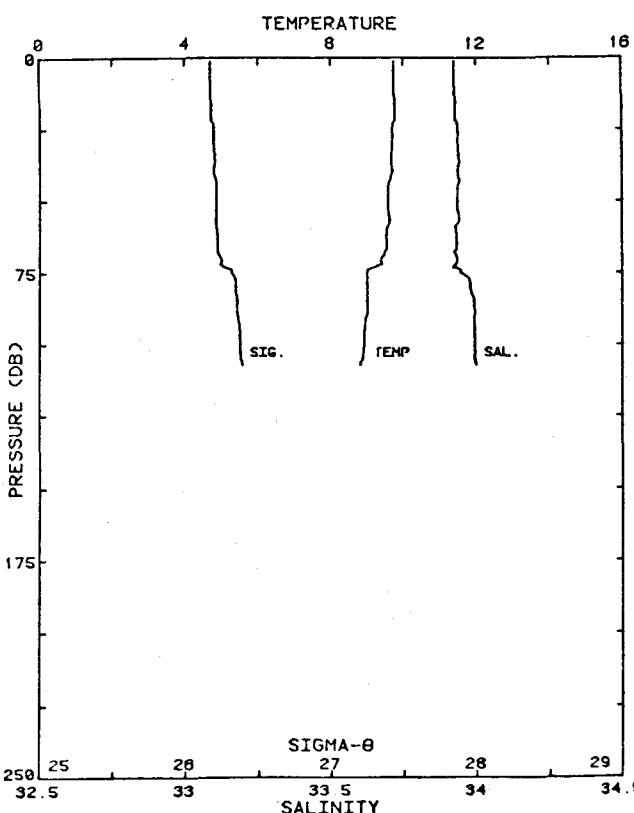




STATION 21 COC3

STA NO 21 ,COC3 LAT: 38 37.5 N LONG:123 28.9 W
3 AUG 1981 0200 GMT PROBE 2567 DEPTH 93M
7.2 KM FROM SHORE

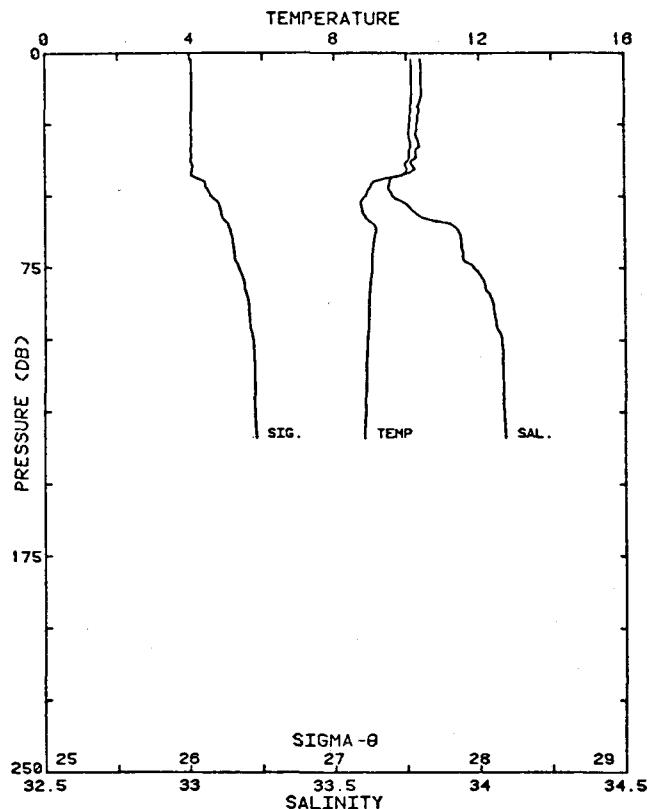
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
2	9.623	33.933	9.623	26.202	182.4	0.004
10	9.611	33.932	9.610	26.204	182.5	0.018
20	9.606	33.933	9.604	26.206	182.5	0.036
30	9.526	33.936	9.522	26.221	181.2	0.055
40	9.436	33.941	9.432	26.240	179.7	0.073
50	9.420	33.942	9.415	26.243	179.5	0.091
60	9.289	33.954	9.283	26.274	176.8	0.109
70	9.198	33.964	9.191	26.297	174.8	0.126
80	9.134	33.972	9.126	26.313	173.5	0.144
88	9.053	33.983	9.044	26.335	171.6	0.157



STATION 22 COC4

STA NO 22 ,COC4 LAT: 38 36.5 N LONG:123 31.0 W
3 AUG 1981 0234 GMT PROBE 2567 DEPTH 112M
10.7 KM FROM SHORE

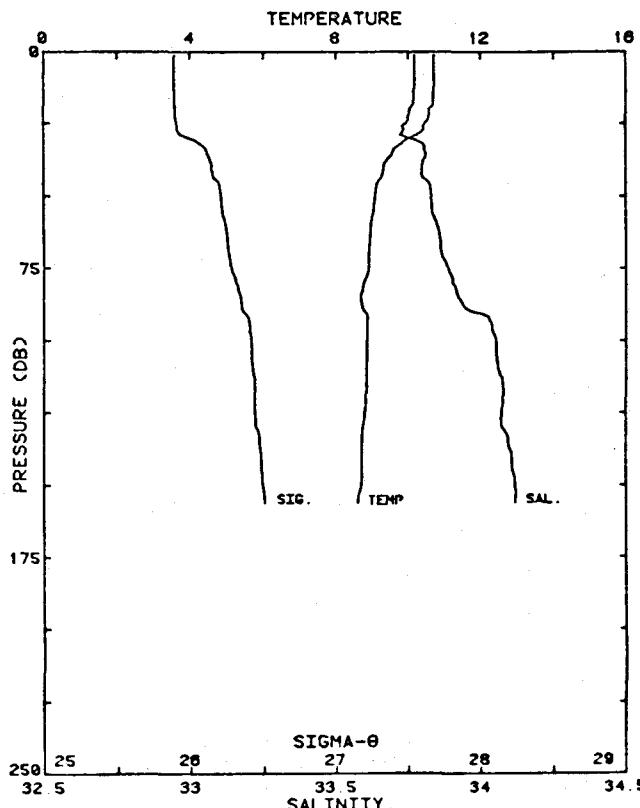
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP			THETA		
1	9.753	33.926	9.753	26.175	185.0	0.002
10	9.748	33.926	9.747	26.176	185.1	0.019
20	9.752	33.926	9.750	26.175	185.3	0.037
30	9.674	33.935	9.671	26.196	183.6	0.055
40	9.681	33.934	9.677	26.194	184.1	0.074
50	9.555	33.934	9.550	26.215	182.3	0.092
60	9.525	33.929	9.518	26.216	182.3	0.110
70	9.385	33.932	9.377	26.241	180.1	0.128
80	8.976	33.977	8.967	26.343	170.6	0.146
90	8.969	33.991	8.959	26.355	169.7	0.163
100	8.882	33.992	8.871	26.370	168.5	0.180
107	8.784	33.996	8.772	26.380	166.9	0.192



STATION 23 COC5

STA NO 23 ,COC5 LAT: 38 34.5 N LONG:123 33.3 W
3 AUG 1981 0307 GMT PROBE 2567 DEPTH 139M
15.4 KM FROM SHORE

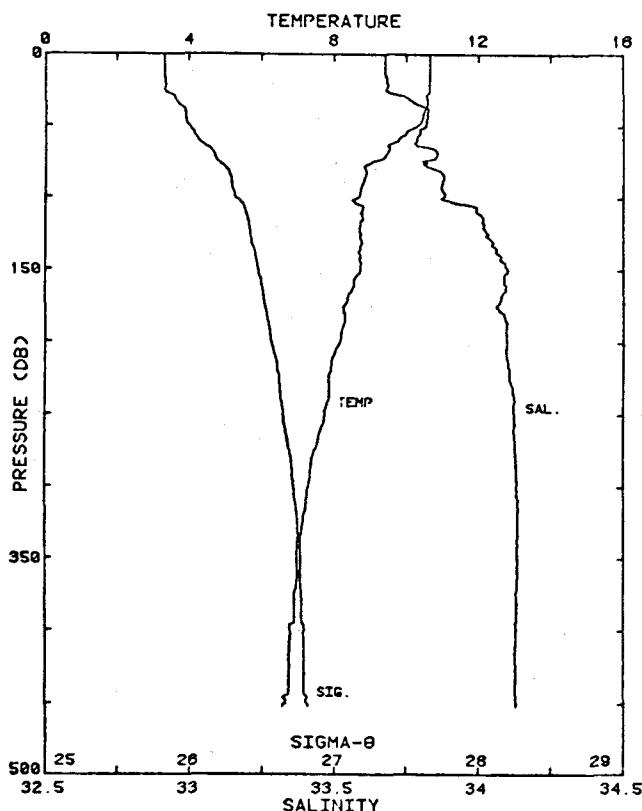
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
2	10.130	33.796	10.130	26.010	200.6	0.004
10	10.134	33.799	10.133	26.012	200.6	0.020
20	10.110	33.792	10.108	26.010	201.0	0.040
30	10.075	33.786	10.071	26.013	201.1	0.060
40	9.960	33.772	9.956	26.021	200.4	0.080
50	8.860	33.699	8.855	26.144	188.9	0.100
60	9.068	33.897	9.061	26.265	177.6	0.118
70	9.045	33.943	9.037	26.305	174.0	0.136
80	8.977	34.014	8.968	26.372	167.9	0.153
90	8.937	34.047	8.927	26.403	165.1	0.169
100	8.886	34.074	8.875	26.433	162.5	0.186
110	8.852	34.077	8.841	26.441	161.9	0.202
120	8.840	34.079	8.827	26.444	161.8	0.218
130	8.823	34.085	8.809	26.452	161.3	0.234
134	8.807	34.086	8.793	26.456	161.0	0.241



STA NO 24 ,COC6 LAT: 38 32.7 N LONG:123 36.3 W
3 AUG 1981 0346 GMT PROBE 2567 DEPTH 160M
21.1 KM FROM SHORE

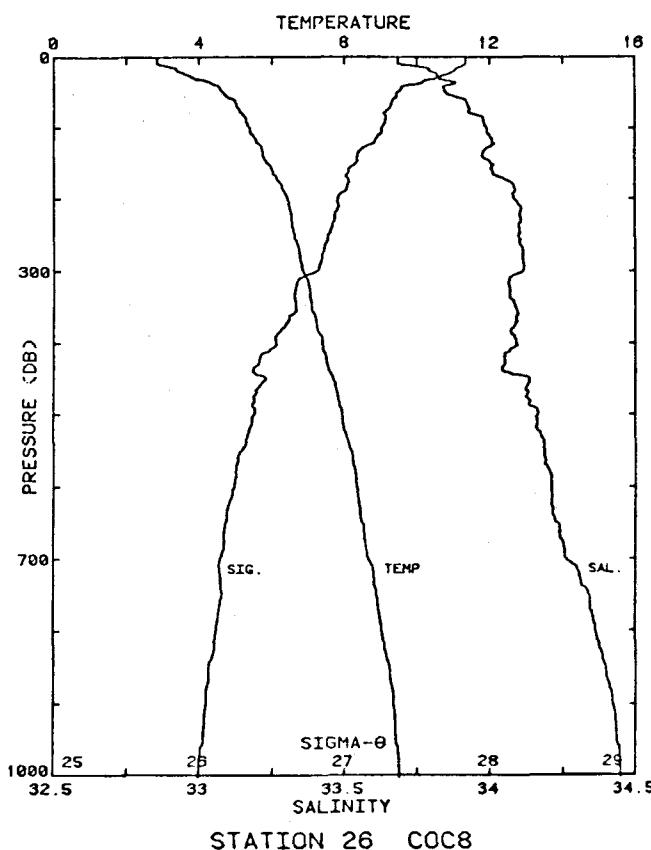
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	10.722	33.773	10.722	25.890	212.1	0.002
10	10.726	33.773	10.724	25.889	212.3	0.021
20	10.572	33.753	10.569	25.901	211.4	0.042
30	10.082	33.746	10.079	25.980	204.2	0.064
40	9.317	33.797	9.313	26.147	188.4	0.083
50	9.079	33.831	9.073	26.212	182.5	0.101
60	8.968	33.850	8.962	26.244	179.6	0.119
70	8.902	33.865	8.894	26.267	177.6	0.137
80	8.764	33.904	8.756	26.319	172.9	0.155
90	8.788	33.968	8.779	26.366	168.7	0.172
100	8.855	34.051	8.844	26.420	163.7	0.188
110	8.836	34.059	8.825	26.430	163.0	0.205
120	8.828	34.075	8.815	26.444	161.9	0.221
130	8.739	34.072	8.725	26.455	161.0	0.237
140	8.712	34.106	8.698	26.486	158.2	0.253
150	8.704	34.118	8.689	26.497	157.4	0.269
156	8.613	34.110	8.597	26.511	156.1	0.278

STATION 24 COC6



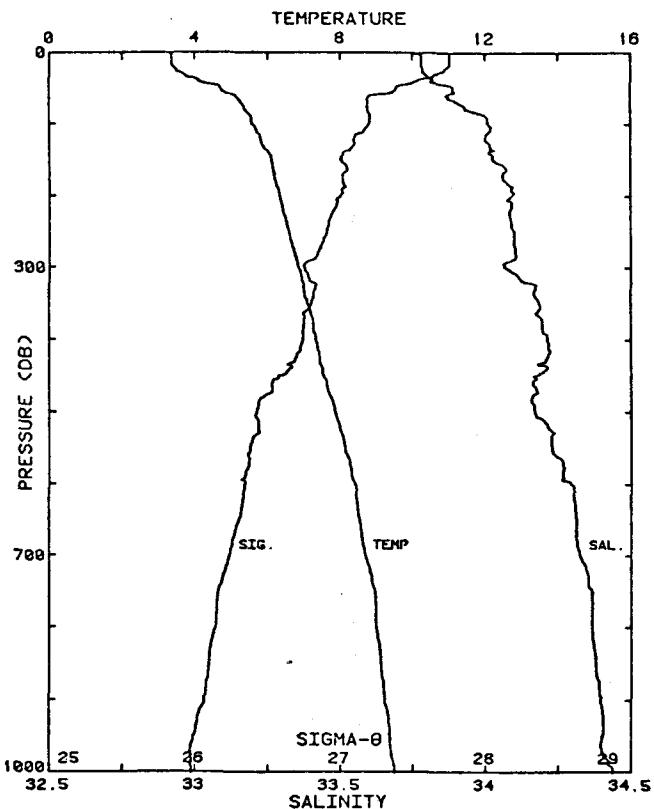
STA NO 25 ,COC7 LAT: 38 30.3 N LONG:123 39.6 W
3 AUG 1981 0437 GMT PROBE 2567 DEPTH 469M
27.6 KM FROM SHORE

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	10.651	33.677	10.651	25.827	218.0	0.002
10	10.653	33.677	10.652	25.827	218.2	0.022
20	10.646	33.682	10.643	25.833	217.9	0.044
30	10.541	33.747	10.537	25.902	211.6	0.065
40	10.490	33.825	10.485	25.972	205.2	0.086
50	10.295	33.818	10.289	26.000	202.7	0.107
60	9.767	33.787	9.760	26.065	196.7	0.127
70	9.437	33.856	9.429	26.174	186.6	0.146
80	8.864	33.839	8.855	26.252	179.2	0.164
90	8.810	33.875	8.801	26.289	175.9	0.182
100	8.677	33.878	8.667	26.312	173.9	0.199
110	8.755	33.993	8.743	26.391	166.7	0.216
120	8.708	34.015	8.696	26.415	164.6	0.233
130	8.776	34.048	8.762	26.431	163.3	0.249
140	8.737	34.075	8.722	26.458	160.9	0.265
150	8.732	34.101	8.716	26.480	159.0	0.281
175	8.271	34.061	8.253	26.520	155.6	0.321
200	8.150	34.098	8.130	26.566	151.6	0.359
225	7.834	34.107	7.812	26.621	146.7	0.396
250	7.723	34.123	7.699	26.650	144.4	0.433
300	7.291	34.132	7.262	26.719	138.4	0.503
400	6.774	34.134	6.737	26.794	132.6	0.638
452	6.566	34.129	6.525	26.818	130.8	0.707



STA NO 26 ,COC8 LAT: 38 27.1 N LONG:123 44.6 W
3 AUG 1981 0542 GMT PROBE 2567 DEPTH 1258M
37.0 KM FROM SHORE

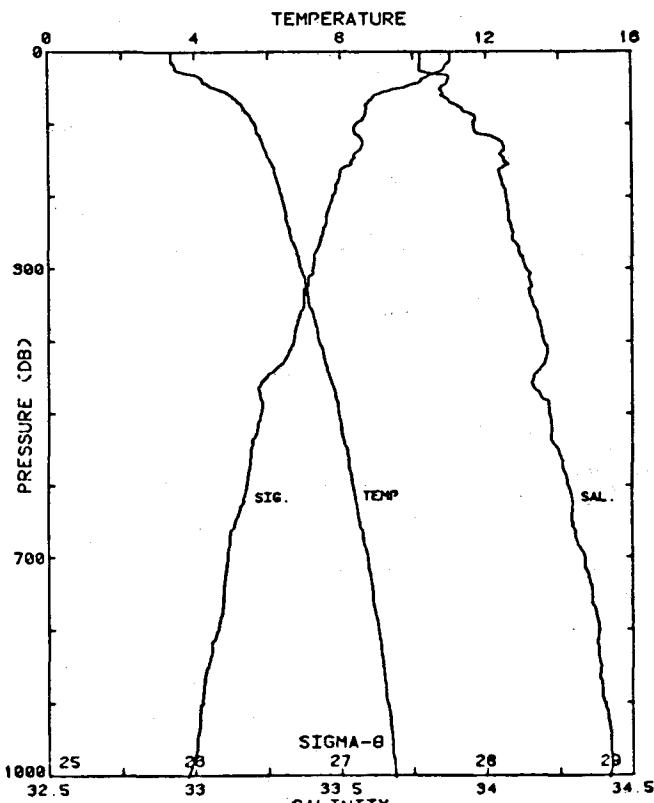
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	11.349	33.684	11.349	25.708	229.4	0.002
10	11.343	33.688	11.342	25.713	229.1	0.023
20	11.040	33.793	11.038	25.849	216.4	0.045
30	10.594	33.824	10.590	25.253	206.8	0.066
40	10.010	33.876	10.005	26.094	193.6	0.086
50	9.515	33.845	9.510	26.152	188.2	0.105
60	9.412	33.887	9.405	26.202	183.6	0.124
70	9.266	33.924	9.258	26.255	178.9	0.142
80	9.083	33.925	9.074	26.285	176.1	0.160
90	9.122	33.976	9.112	26.319	173.1	0.177
100	9.026	33.987	9.015	26.343	171.1	0.194
110	8.920	33.997	8.916	26.366	169.0	0.211
120	8.829	34.007	8.817	26.390	166.9	0.228
130	8.478	33.986	8.465	26.429	163.4	0.245
140	8.360	33.973	8.346	26.436	162.8	0.261
150	8.321	34.000	8.306	26.464	160.4	0.277
175	8.114	34.056	8.096	26.539	153.7	0.316
200	7.812	34.081	7.792	26.604	147.9	0.354
225	7.729	34.103	7.707	26.634	145.4	0.390
250	7.542	34.098	7.517	26.657	143.6	0.427
300	7.223	34.111	7.194	26.713	138.9	0.497
400	6.098	34.090	6.064	26.847	126.9	0.630
500	5.490	34.165	5.448	26.982	114.8	0.751
600	4.939	34.210	4.892	27.083	105.8	0.861
800	4.458	34.361	4.396	27.258	90.8	1.057
1000	3.972	34.449	3.897	27.331	80.2	1.226



STATION 27 COC9

STA NO 27 ,COC9 LAT: 38 34.1 N LONG:123 49.2 W
3 AUG 1981 0700 GMT PROBE 2567 DEPTH 1717M
46.1 KM FROM SHORE

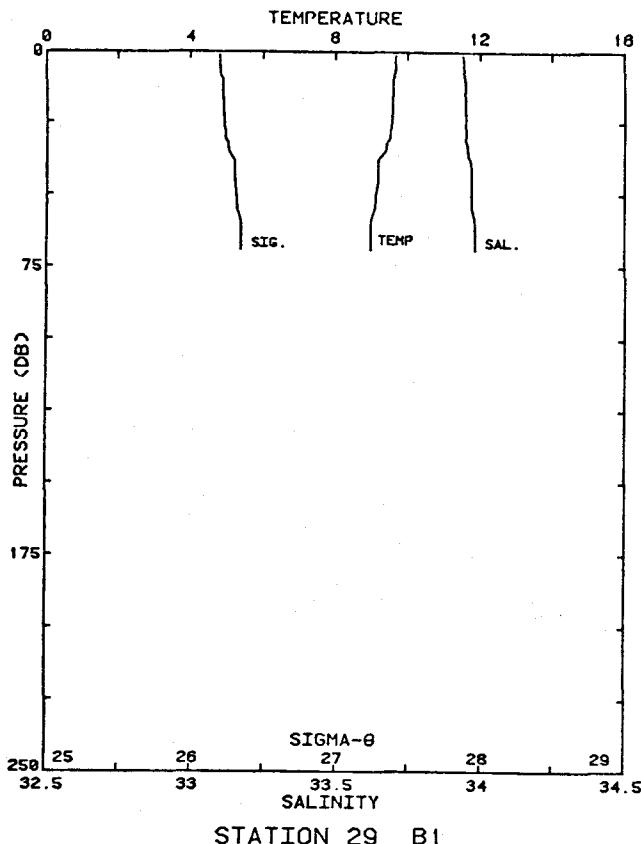
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP	THETA				
1	11.039	33.754	11.039	25.818	218.9	0.002
10	11.031	33.781	11.029	25.841	216.9	0.022
20	10.976	33.784	10.974	25.853	216.0	0.043
30	10.651	33.795	10.648	25.920	209.9	0.065
40	10.099	33.817	10.095	26.032	199.4	0.085
50	9.570	33.891	9.565	26.179	185.6	0.104
60	8.858	33.868	8.852	26.276	176.6	0.123
70	8.778	33.901	8.771	26.315	173.1	0.140
80	8.760	33.933	8.752	26.342	170.7	0.157
90	8.831	34.004	8.822	26.387	166.8	0.174
100	8.815	34.010	8.805	26.394	166.2	0.191
110	8.654	34.017	8.643	26.425	163.4	0.207
120	8.393	34.001	8.381	26.453	160.9	0.224
130	8.379	34.015	8.366	26.466	159.8	0.240
140	8.089	34.012	8.075	26.507	156.0	0.255
150	8.019	34.027	8.004	26.530	154.1	0.271
175	8.067	34.060	8.050	26.549	152.7	0.309
200	8.013	34.092	7.993	26.583	149.9	0.347
225	7.767	34.083	7.745	26.612	147.6	0.384
250	7.628	34.100	7.604	26.646	144.7	0.421
300	6.992	34.067	6.964	26.710	139.1	0.492
400	6.964	34.214	6.926	26.831	129.3	0.625
500	5.684	34.169	5.642	26.962	116.9	0.749
600	5.365	34.292	5.315	27.099	104.9	0.860
800	4.574	34.366	4.511	27.250	91.8	1.055
1000	3.897	34.436	3.822	27.378	80.3	1.228
1002	3.897	34.436	3.822	27.378	80.3	1.229



STATION 28 COC10

STA NO 28 ,COC10 LAT: 38 20.8 N LONG:123 54.7 W
3 AUG 1981 0818 GMT PROBE 2567 DEPTH 2291M
55.9 KM FROM SHORE

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP	THETA				
0	11.054	33.777	11.054	25.833	217.4	0.000
10	11.034	33.776	11.033	25.837	217.3	0.022
20	10.886	33.774	10.884	25.862	215.2	0.043
30	10.626	33.802	10.622	25.929	209.0	0.065
40	10.238	33.872	10.233	26.051	197.6	0.085
50	9.765	33.846	9.759	26.112	192.1	0.104
60	8.991	33.849	8.985	26.240	180.0	0.123
70	8.775	33.876	8.767	26.295	174.9	0.141
80	8.707	33.920	8.699	26.340	170.8	0.158
90	8.659	33.962	8.650	26.381	167.2	0.175
100	8.436	33.957	8.426	26.412	164.4	0.191
110	8.375	33.960	8.364	26.423	163.5	0.208
120	8.553	34.028	8.541	26.449	161.3	0.224
130	8.598	34.058	8.585	26.463	159.9	0.240
140	8.436	34.050	8.422	26.485	158.2	0.256
150	8.311	34.060	8.295	26.512	155.8	0.272
175	7.971	34.051	7.954	26.556	152.0	0.310
200	7.781	34.067	7.762	26.597	148.5	0.348
225	7.622	34.076	7.600	26.628	145.9	0.384
250	7.515	34.090	7.491	26.654	143.8	0.421
300	7.257	34.136	7.229	26.727	137.6	0.491
400	6.713	34.196	6.676	26.851	127.1	0.623
500	5.801	34.215	5.758	26.984	115.0	0.743
600	5.406	34.278	5.356	27.083	106.6	0.854
800	4.628	34.384	4.565	27.258	91.2	1.051
1000	3.807	34.421	3.733	27.375	80.3	1.221
1003	3.778	34.418	3.704	27.376	80.2	1.224



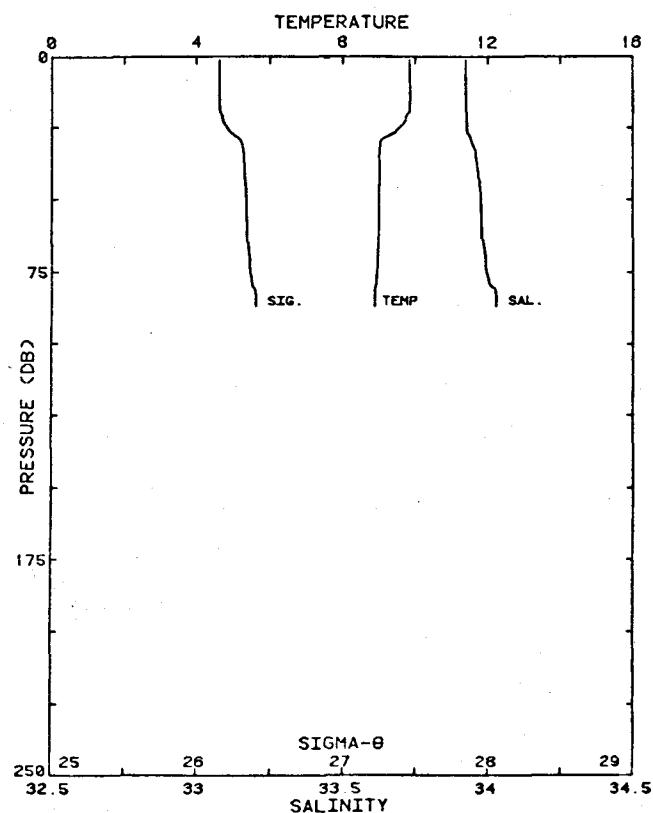
STATION 29 B1

STA NO 29 ,B1 LAT: 38 25.7 N LONG:123 13.0 W
4 AUG 1981 0009 GMT PROBE 2567 DEPTH 74M

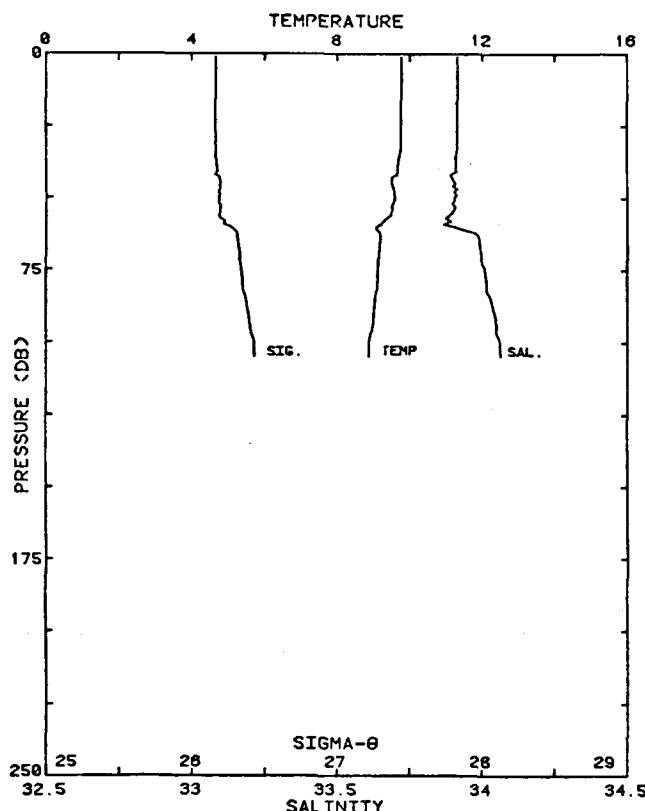
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	9.677	33.939	9.677	26.198	182.8	0.002
10	9.584	33.946	9.583	26.219	181.0	0.018
20	9.573	33.946	9.571	26.221	181.0	0.036
30	9.513	33.949	9.509	26.233	180.1	0.054
40	9.177	33.967	9.173	26.302	173.7	0.072
50	9.116	33.966	9.111	26.311	173.1	0.089
60	8.972	33.980	8.966	26.345	170.1	0.107
69	8.972	33.981	8.965	26.347	170.1	0.122

STA NO 30 ,B2 LAT: 38 24.7 N LONG:123 15.2 W
4 AUG 1981 0043 GMT PROBE 2567 DEPTH 92M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	9.851	33.926	9.851	26.158	186.6	0.002
10	9.862	33.925	9.861	26.156	187.0	0.019
20	9.837	33.927	9.835	26.162	186.6	0.037
30	9.039	33.944	9.036	26.306	173.1	0.056
40	9.010	33.965	9.005	26.327	171.4	0.073
50	8.991	33.976	8.986	26.339	170.4	0.090
60	8.984	33.979	8.978	26.342	170.3	0.107
70	8.943	33.990	8.935	26.358	169.0	0.124
80	8.892	34.007	8.884	26.379	167.2	0.141
87	8.859	34.025	8.850	26.399	165.5	0.152

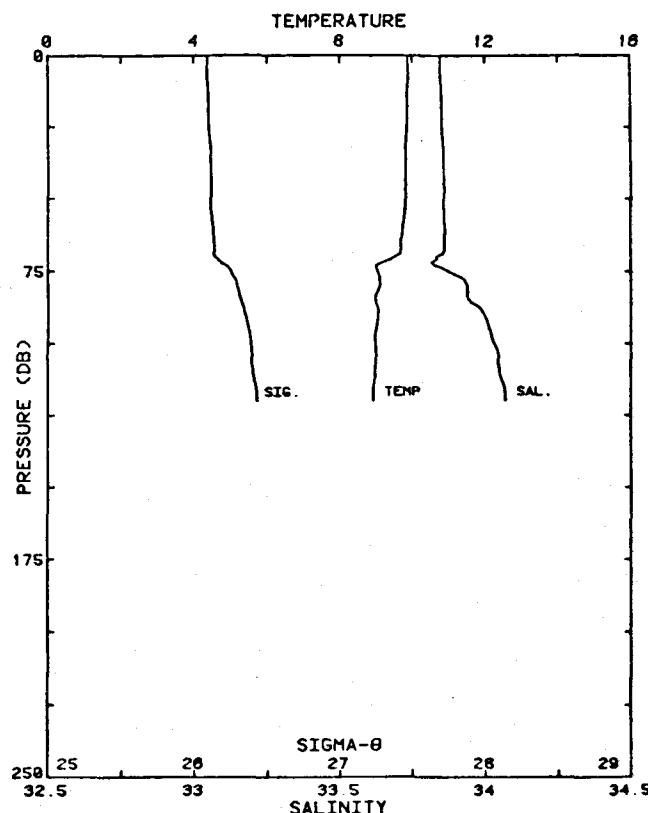


STATION 30 B2



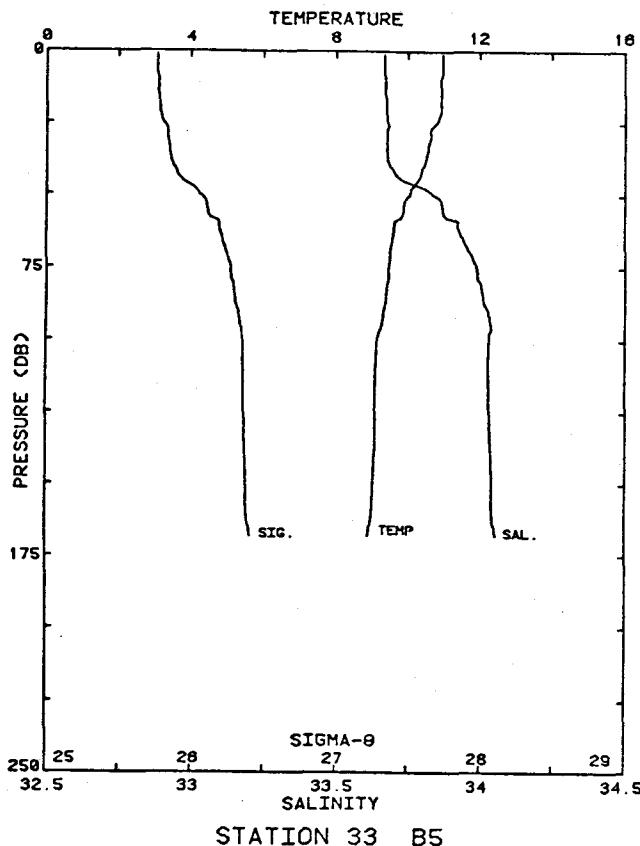
STA NO 31 B3 LAT: 38 23.3 N LONG: 123 19.2 W
4 AUG 1981 0123 GMT PROBE 2567 DEPTH 110M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	9.770	33.914	9.770	26.163	186.1	0.002
10	9.771	33.914	9.770	26.163	186.3	0.019
20	9.768	33.914	9.766	26.164	186.5	0.037
30	9.763	33.915	9.760	26.165	186.5	0.056
40	9.677	33.908	9.673	26.174	185.9	0.075
50	9.595	33.904	9.590	26.185	185.1	0.093
60	9.094	33.905	9.087	26.267	177.4	0.111
70	9.152	33.996	9.144	26.330	171.7	0.129
80	9.119	34.016	9.110	26.350	170.0	0.146
90	9.019	34.042	9.009	26.387	166.7	0.163
100	8.878	34.061	8.868	26.424	163.3	0.179
105	8.872	34.064	8.861	26.427	163.1	0.187



STA NO 32 B4 LAT: 38 21.9 N LONG: 123 24.4 W
4 AUG 1981 0208 GMT PROBE 2567 DEPTH 126M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
0	9.885	33.848	9.885	26.092	192.8	0.000
10	9.867	33.848	9.866	26.093	192.7	0.019
20	9.849	33.851	9.847	26.100	192.5	0.039
30	9.819	33.855	9.816	26.109	191.9	0.058
40	9.791	33.856	9.787	26.115	191.5	0.077
50	9.792	33.856	9.787	26.115	191.8	0.096
60	9.715	33.860	9.708	26.131	190.4	0.115
70	9.502	33.831	9.494	26.144	189.4	0.134
80	9.089	33.936	9.081	26.293	175.4	0.152
90	9.031	33.992	9.021	26.346	170.5	0.170
100	8.954	34.027	8.944	26.305	167.0	0.186
110	8.957	34.047	8.945	26.401	165.7	0.203
120	8.896	34.067	8.883	26.427	163.5	0.219

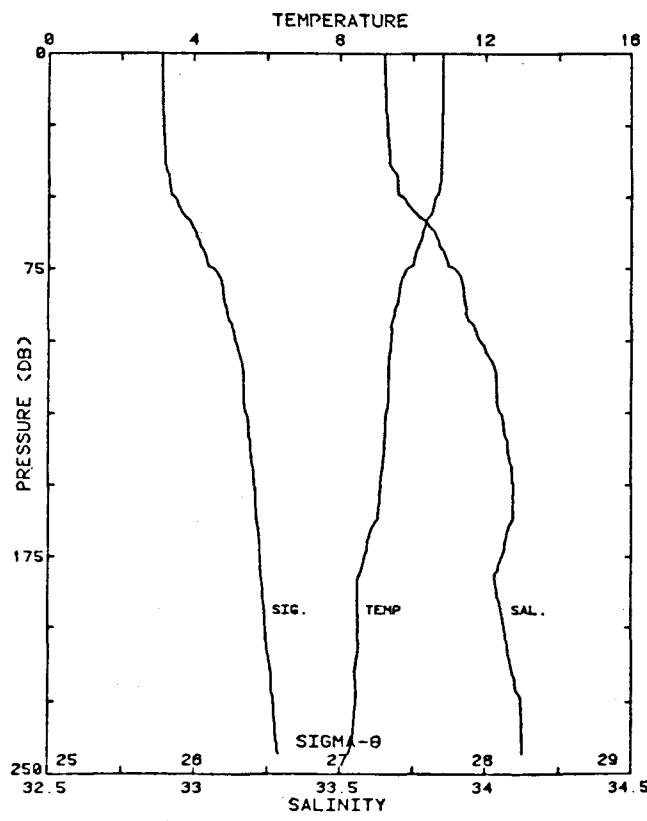


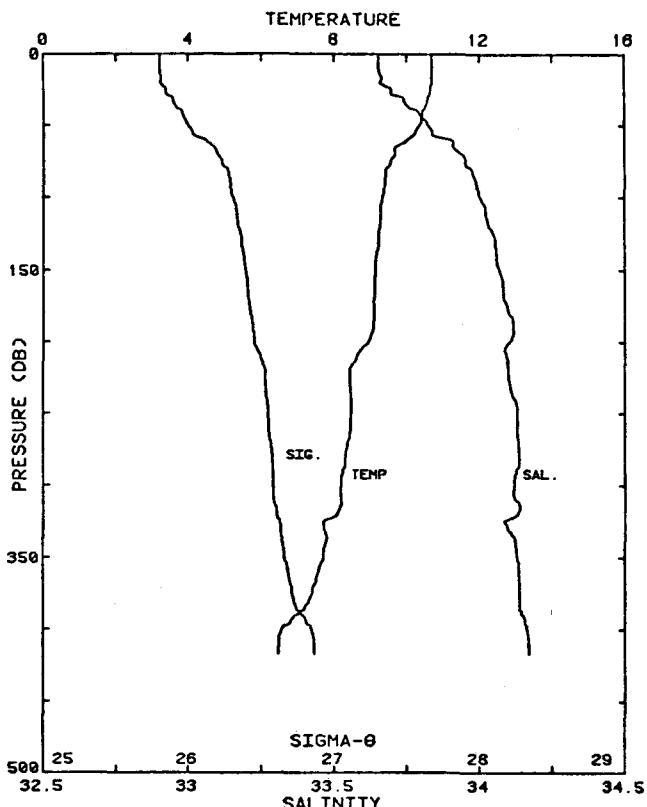
STA NO 33 B5 LAT: 38 20.0 N LONG: 123 25.8 W
4 AUG 1981 0255 GMT PROBE 2567 DEPTH 173M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	10.966	33.668	10.966	25.765	223.9	0.002
10	10.915	33.673	10.914	25.778	222.7	0.022
20	10.911	33.674	10.909	25.779	223.0	0.045
30	10.634	33.679	10.631	25.833	218.2	0.067
40	10.438	33.689	10.433	25.875	214.4	0.088
50	10.048	33.837	10.043	26.057	197.3	0.109
60	9.631	33.922	9.625	26.193	184.6	0.128
70	9.507	33.967	9.499	26.249	179.4	0.146
80	9.426	34.000	9.417	26.288	175.9	0.164
90	9.329	34.028	9.319	26.326	172.5	0.182
100	9.157	34.032	9.146	26.357	169.8	0.199
110	9.120	34.029	9.108	26.361	169.6	0.216
120	9.114	34.031	9.101	26.364	169.5	0.233
130	9.104	34.033	9.090	26.367	169.4	0.250
140	9.087	34.038	9.072	26.374	169.0	0.267
150	9.053	34.042	9.037	26.382	168.4	0.283
168	8.929	34.057	8.912	26.414	165.7	0.314

STA NO 34 B6 LAT: 38 18.4 N LONG: 123 29.3 W
4 AUG 1981 0345 GMT PROBE 2567 DEPTH 253M

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
0	10.827	33.651	10.826	25.776	222.8	0.000
10	10.323	33.653	10.822	25.779	222.8	0.022
20	10.821	33.655	10.818	25.781	222.9	0.045
30	10.777	33.664	10.794	25.794	221.7	0.067
40	10.780	33.677	10.775	25.805	221.0	0.089
50	10.626	33.710	10.620	25.859	216.2	0.111
60	10.323	33.804	10.316	25.985	204.4	0.132
70	10.049	33.853	10.041	26.074	196.1	0.152
80	9.649	33.920	9.640	26.189	185.3	0.171
90	9.496	33.934	9.486	26.226	182.1	0.189
100	9.379	33.977	9.368	26.278	177.3	0.207
110	9.321	34.031	9.309	26.330	172.3	0.225
120	9.313	34.039	9.300	26.338	172.0	0.242
130	9.232	34.063	9.218	26.370	169.2	0.259
140	9.194	34.080	9.179	26.389	167.6	0.276
150	9.106	34.094	9.090	26.414	165.3	0.293
175	8.677	34.055	8.659	26.452	162.1	0.334
200	8.501	34.065	8.480	26.487	159.2	0.374
225	8.435	34.122	8.412	26.543	154.4	0.413
243	8.247	34.127	8.222	26.576	151.5	0.441

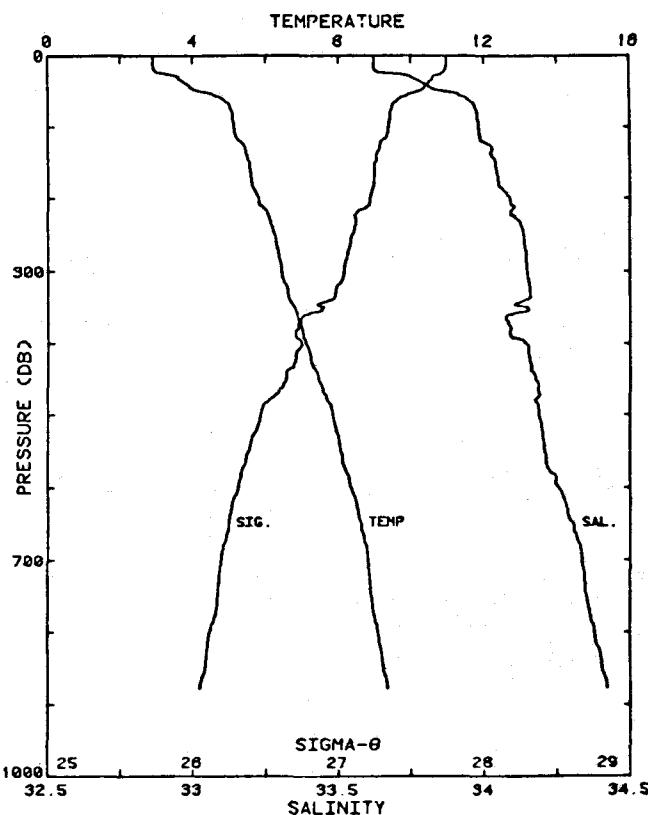




STATION 35 B7

STA NO 35 ,B7 LAT: 38 16.8 N LONG:123 32.7 W
4 AUG 1981 0436 GMT PROBE 2567 DEPTH 425M

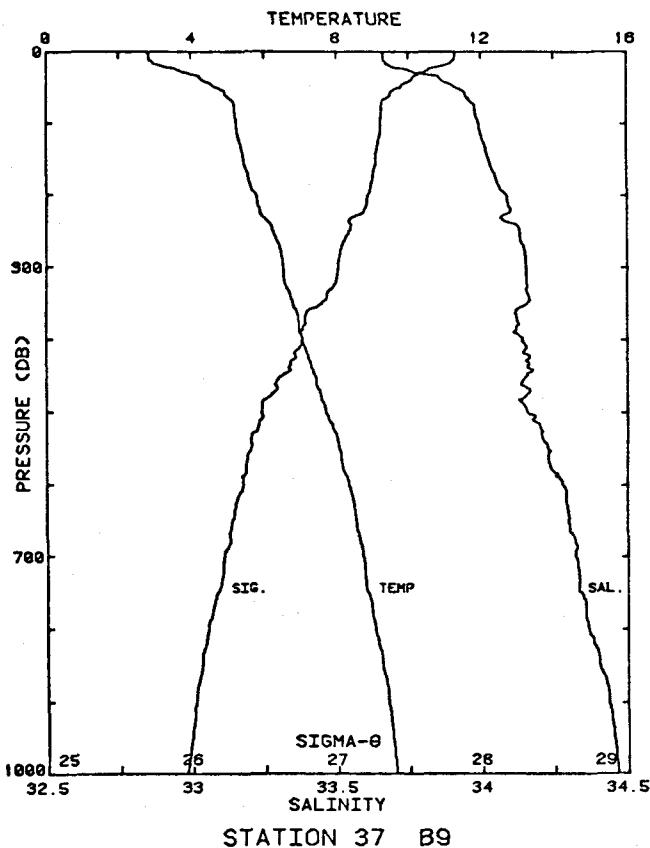
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
0	10.701	33.655	10.701	25.801	220.5	0.000
10	10.702	33.654	10.701	25.801	220.7	0.022
20	10.699	33.658	10.697	25.804	220.6	0.044
30	10.611	33.715	10.607	25.864	215.2	0.066
40	10.437	33.782	10.432	25.947	207.5	0.087
50	10.344	33.822	10.339	25.995	203.2	0.108
60	10.012	33.897	10.005	26.110	192.5	0.128
70	9.677	33.940	9.669	26.200	184.1	0.146
80	9.426	33.968	9.418	26.263	178.3	0.164
90	9.389	33.986	9.379	26.283	176.6	0.182
100	9.333	34.000	9.322	26.304	174.9	0.200
110	9.277	34.020	9.265	26.329	172.7	0.217
120	9.259	34.031	9.246	26.340	171.3	0.234
130	9.215	34.053	9.201	26.365	169.7	0.251
140	9.154	34.058	9.139	26.378	168.6	0.268
150	9.124	34.068	9.108	26.392	167.5	0.285
175	9.094	34.093	9.075	26.416	165.7	0.327
200	8.936	34.104	8.915	26.451	162.9	0.368
225	8.427	34.100	8.403	26.527	155.9	0.408
250	8.464	34.130	8.438	26.545	154.7	0.446
300	8.186	34.119	8.155	26.579	152.2	0.523
400	6.571	34.162	6.534	26.842	127.8	0.667
417	6.459	34.170	6.421	26.864	125.7	0.688



STATION 36 B8

STA NO 36 ,B8 LAT: 38 15.2 N LONG:123 36.3 W
4 AUG 1981 0538 GMT PROBE 2567 DEPTH 898M
LIN INT SAL. 30-39DB

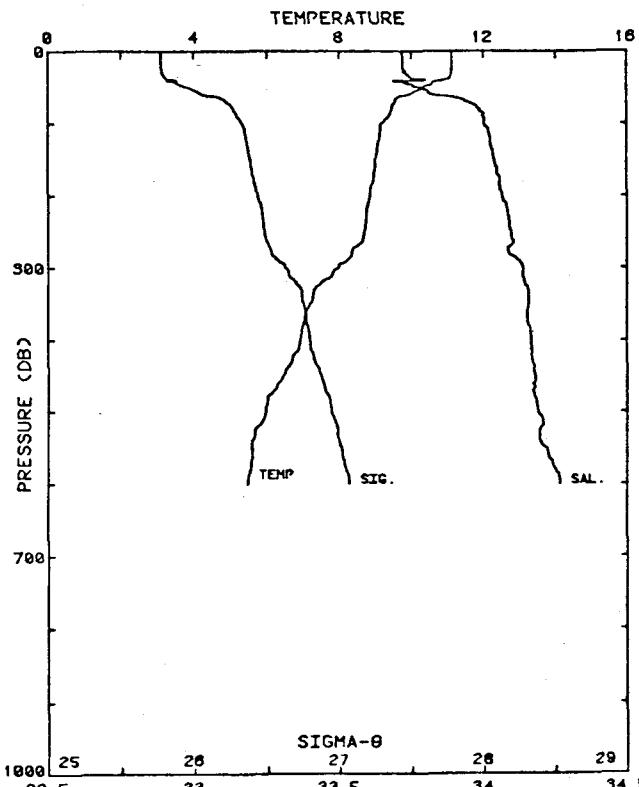
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	10.984	33.621	10.984	25.725	227.7	0.002
10	10.981	33.623	10.980	25.727	227.7	0.023
20	10.944	33.627	10.942	25.737	227.0	0.046
30	10.611	33.754	10.608	25.895	212.3	0.068
40	10.421	33.800	10.417	25.964	205.9	0.089
50	10.200	33.857	10.194	26.047	198.3	0.109
60	9.696	33.939	9.689	26.195	184.3	0.128
70	9.485	33.965	9.477	26.251	179.2	0.146
80	9.416	33.975	9.407	26.270	177.6	0.164
90	9.405	33.976	9.395	26.273	177.6	0.182
100	9.375	33.980	9.364	26.282	176.9	0.199
110	9.344	33.982	9.332	26.288	176.5	0.217
120	9.168	33.989	9.155	26.322	173.5	0.235
130	9.122	34.026	9.108	26.359	170.2	0.252
140	9.030	34.025	9.015	26.372	169.1	0.269
150	8.986	34.033	8.970	26.390	167.6	0.285
175	8.967	34.047	8.948	26.401	167.1	0.327
200	8.852	34.086	8.830	26.449	163.0	0.369
225	8.461	34.103	8.438	26.524	156.2	0.409
250	8.368	34.136	8.342	26.545	152.8	0.447
300	8.139	34.147	8.108	26.608	149.5	0.523
400	6.962	34.138	6.924	26.771	134.3	0.665
500	5.844	34.187	5.801	26.957	117.7	0.791
600	5.235	34.251	5.186	27.062	106.4	0.904
800	4.440	34.377	4.378	27.272	89.4	1.097
878	4.160	34.419	4.094	27.336	83.6	1.165



STATION 37 B9

STA NO 37 ,B9 LAT: 38 13.7 N LONG:123 40.0 W
4 AUG 1981 0651 GMT PROBE 2567 DEPTH 1564M

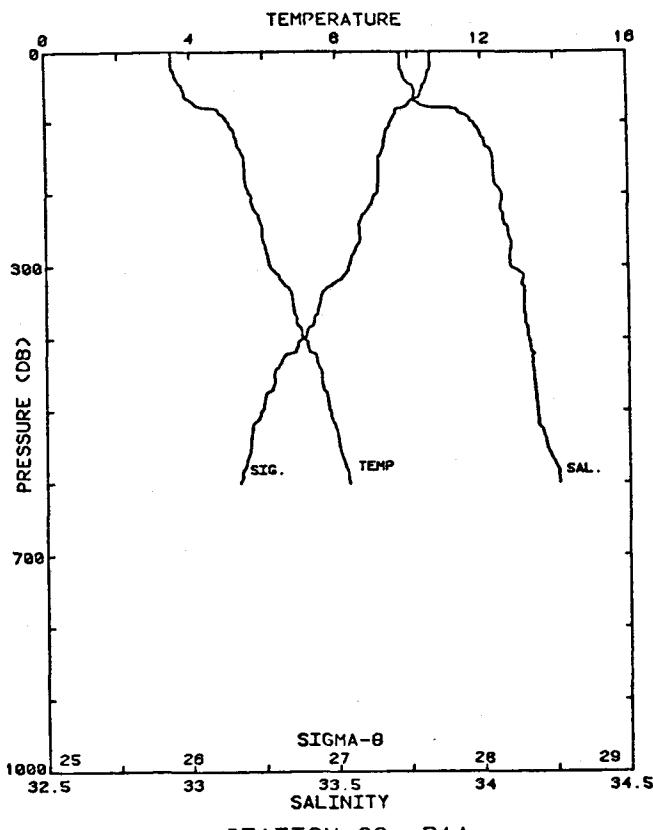
PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	11.281	33.662	11.280	25.703	229.8	0.002
10	11.269	33.664	11.268	25.707	229.7	0.023
20	10.980	33.686	10.978	25.777	223.3	0.046
30	10.412	33.776	10.409	25.947	207.3	0.067
40	10.080	33.862	10.075	26.071	195.8	0.087
50	9.799	33.907	9.793	26.154	188.1	0.106
60	9.496	33.944	9.489	26.232	180.8	0.125
70	9.270	33.952	9.262	26.284	176.1	0.142
80	9.250	33.978	9.242	26.300	174.8	0.160
90	9.247	33.982	9.237	26.304	174.6	0.177
100	9.230	33.992	9.219	26.314	173.9	0.195
110	9.223	33.995	9.212	26.318	173.7	0.212
120	9.188	34.002	9.175	26.329	172.8	0.230
130	9.155	34.012	9.141	26.342	171.8	0.247
140	9.104	34.018	9.089	26.355	170.8	0.264
150	9.091	34.025	9.075	26.363	170.2	0.281
175	9.010	34.049	8.991	26.395	167.7	0.323
200	8.860	34.085	8.839	26.448	163.1	0.365
225	8.711	34.092	8.687	26.477	160.8	0.405
250	8.335	34.131	8.309	26.565	152.7	0.444
300	8.026	34.152	7.996	26.630	147.4	0.519
400	7.048	34.141	7.011	26.762	135.8	0.661
500	5.921	34.156	5.878	26.923	120.9	0.789
600	5.409	34.278	5.359	27.083	106.6	0.902
800	4.431	34.366	4.370	27.264	90.1	1.098
1000	3.811	34.465	3.737	27.410	77.1	1.263



STATION 38 B10

STA NO 38 ,B10 LAT: 38 7.9 N LONG:123 37.0 W
4 AUG 1981 0821 GMT PROBE 2567 DEPTH 1583M
SINT39,74-75 79,84,89DB

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
	TEMP		TEMP	THETA		
1	11.144	33.714	11.144	25.768	223.7	0.002
10	11.140	33.720	11.139	25.774	223.3	0.022
20	11.140	33.721	11.137	25.775	223.4	0.045
30	11.131	33.729	11.127	25.783	222.9	0.067
40	10.976	33.788	10.971	25.857	216.1	0.089
50	10.369	33.761	10.363	25.943	208.1	0.110
60	9.965	33.817	9.958	26.056	197.6	0.131
70	9.558	33.939	9.550	26.219	182.3	0.149
80	9.466	33.984	9.457	26.269	177.7	0.167
90	9.378	33.996	9.368	26.293	175.6	0.185
100	9.184	34.003	9.173	26.330	172.3	0.202
110	9.158	34.017	9.146	26.345	171.1	0.220
120	9.132	34.023	9.119	26.355	170.4	0.237
130	9.086	34.025	9.072	26.363	169.7	0.254
140	9.068	34.033	9.053	26.373	169.1	0.271
150	9.019	34.037	9.003	26.384	168.2	0.287
175	8.979	34.056	8.960	26.406	166.7	0.329
200	8.850	34.063	8.829	26.431	164.7	0.371
225	8.753	34.083	8.729	26.463	162.1	0.412
250	8.688	34.094	8.662	26.482	160.8	0.452
300	7.975	34.136	7.946	26.624	147.9	0.530
400	6.926	34.166	6.889	26.798	132.3	0.667
500	5.950	34.189	5.907	26.945	118.9	0.793
600	5.441	34.264	5.391	27.068	108.0	0.906



STATION 39 B11

STA NO 39 B11 LAT: 38 8.3 N LONG: 123 32.9 W
 4 AUG 1981 0914 GMT PROBE 2567 DEPTH 755M
 LIN INT SAL. 427-513DB

PRESS	TEMP	SAL	POTEN	SIGMA	SVA	DELD
			TEMP	SIGMA THETA		
2	10.618	33.719	10.617	25.866	214.4	0.004
10	10.618	33.723	10.617	25.869	214.2	0.021
20	10.624	33.723	10.622	25.868	214.6	0.043
30	10.545	33.731	10.541	25.888	212.9	0.064
40	10.507	33.738	10.502	25.900	212.0	0.086
50	10.395	33.766	10.390	25.942	208.2	0.107
60	10.330	33.770	10.323	25.957	207.1	0.127
70	10.082	33.770	10.074	25.999	203.2	0.148
80	9.891	33.811	9.882	26.064	197.2	0.168
90	9.624	33.933	9.614	26.204	184.2	0.187
100	9.498	33.965	9.487	26.249	180.0	0.205
110	9.407	33.987	9.395	26.281	177.2	0.223
120	9.351	33.997	9.338	26.299	175.7	0.240
130	9.311	34.010	9.297	26.316	174.3	0.258
140	9.260	34.030	9.244	26.339	172.3	0.275
150	9.158	34.036	9.142	26.361	170.4	0.292
175	9.154	34.040	9.135	26.365	170.6	0.335
200	9.108	34.064	9.087	26.392	168.5	0.377
225	8.829	34.066	8.805	26.433	164.5	0.419
250	8.631	34.089	8.605	26.487	160.3	0.459
300	8.320	34.096	8.289	26.541	155.9	0.539
400	7.075	34.158	7.037	26.771	135.0	0.682
500	5.894	34.186	5.851	26.950	118.4	0.807
600	5.301	34.259	5.252	27.080	106.6	0.919
601	5.302	34.259	5.252	27.080	106.7	0.920

ACKNOWLEDGMENTS

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