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**Physical Oceanographic
Observations off the
Oregon Coast, 1975:
WISP and UP-75**

by
W. E. Gilbert, A. Huyer,
E. D. Barton, and
R. L. Smith

Data Report 64
Reference 78-4
April 1976

National Science Foundation
DES 74-22290
and
IDO 71-04211

School of Oceanography
Oregon State University
Corvallis, Oregon 97331

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Abstract

This report presents observations from two programs in 1975, WISP and UP-75 to study circulation off Oregon. WISP was a study of the transition between the winter and spring regimes, and UP-75 was designed to determine whether there is a poleward undercurrent along the continental slope during the upwelling season. During WISP, eleven current meters were moored in three arrays across the shelf at 45°N from late January to late April, and hydrographic sections were made at intervals of several weeks from late January to mid-May. All current meters successfully measured velocity and temperature; ten also measured conductivity. During UP-75, four current meters were moored in an array over the shelf, at the 100 m isobath, and six current meters were moored over the upper slope, at about the 500 m isobath, from late April to late July 1975; all measured velocity and temperature, and four also measured conductivity. At the end of July, there was a hydrographic section across the shelf, both moorings were recovered, and the inshore mooring was replaced with three current meters which were retrieved in September. This data report presents the hourly data from the current meters, including time series of salinity and sigma-t; the hydrographic data; and low frequency time series (with periods longer than one day) of wind, adjusted sea level and the parameters measured from the current meters.

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Introduction

This data report contains observations collected off the Oregon coast under two separate programs, WISP and UP-75. WISP was a program to study the transition between winter and spring oceanographic conditions over the Oregon continental shelf. UP-75 was a continuation of the study of coastal upwelling circulation off Oregon. Both programs included observations from moored current meters and hydrographic sections. Supplementary observations of wind, atmospheric pressure and sea level are also included in this report.

Data from some of the moored current meters included conductivity as well as temperature, pressure, and velocity measurements. These result in salinity time series of sufficient accuracy to yield time series of sigma-t.

The purpose of this data report is to present the processed data and the results of preliminary analysis. In this way the overall results will be generally available although specialized studies of subsets of the data will not be completed for some time.

The WISP Experiment

Previous observations of the oceanographic regime over the continental shelf off Oregon showed a marked difference between conditions observed in winter and those that prevail in spring and summer (Huyer, Pillsbury and Smith, 1975). In winter, isopycnals are more or less level; currents over the shelf are barotropic and predominantly northward; and sea level at the coast is high. In spring and summer, isopycnals are tilted upward toward the coast; the current is southward at the surface and has a mean vertical shear so that the flow is sometimes northward at the bottom; and sea level is low. The WISP experiment was designed to test the hypothesis that the transition between the winter and spring regimes occurs within a few weeks.

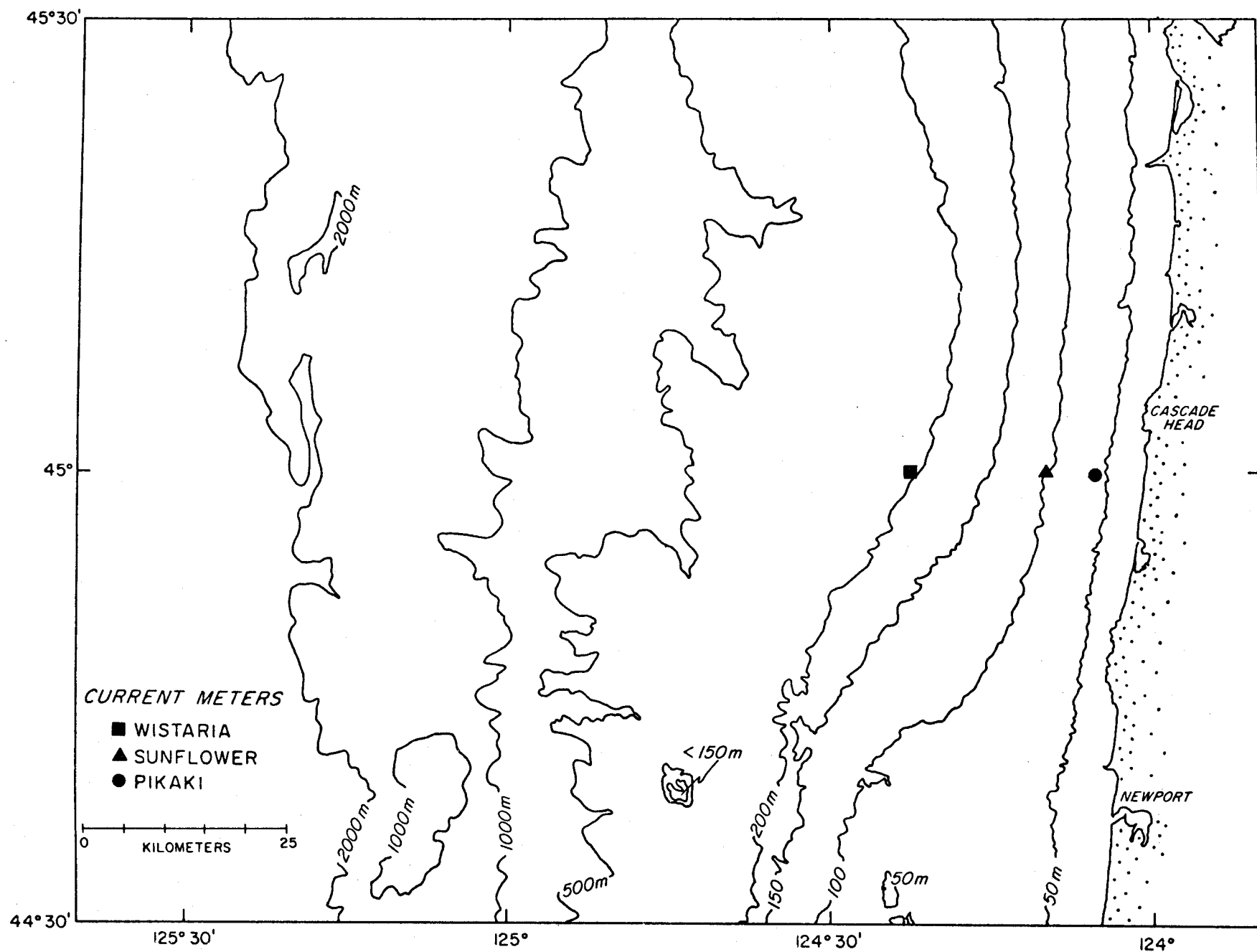


Figure 1. Location of current meter arrays during WISP, January to May 1975.

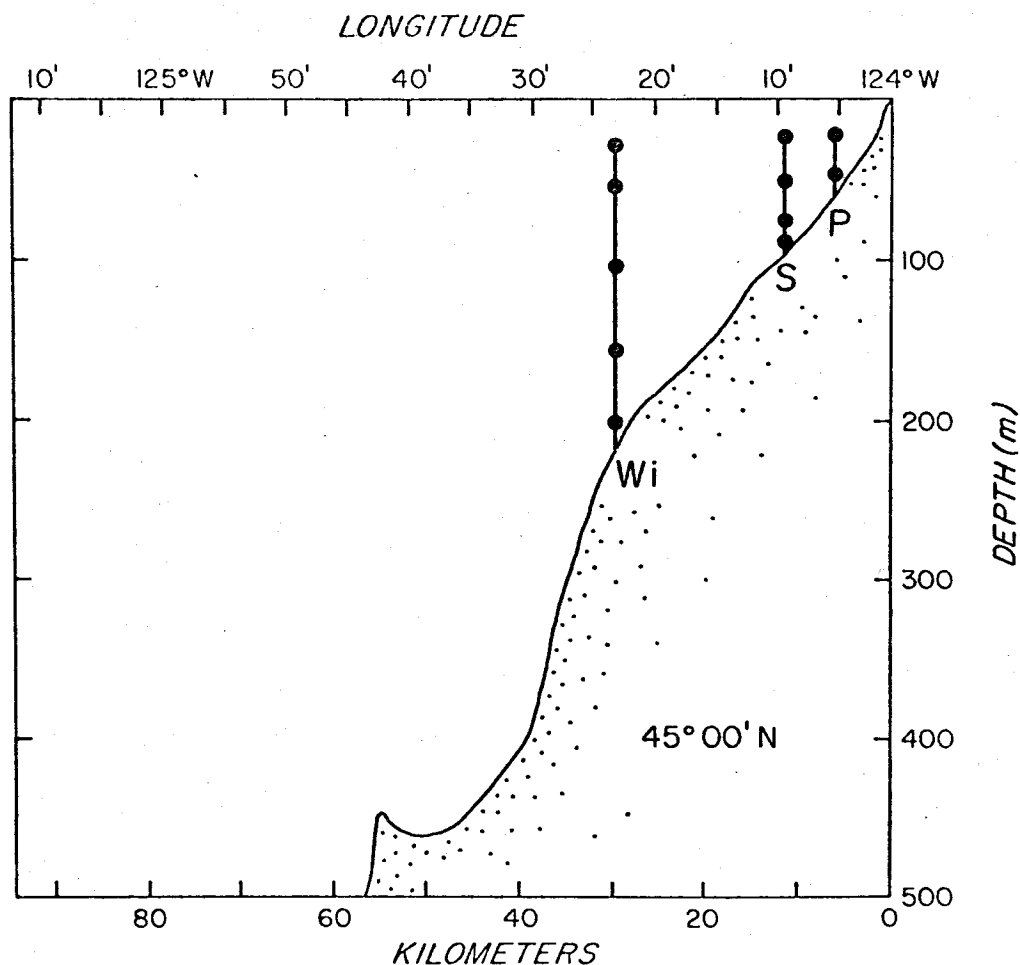


Figure 2. The WISP current meter array and the bottom profile along 45°N.

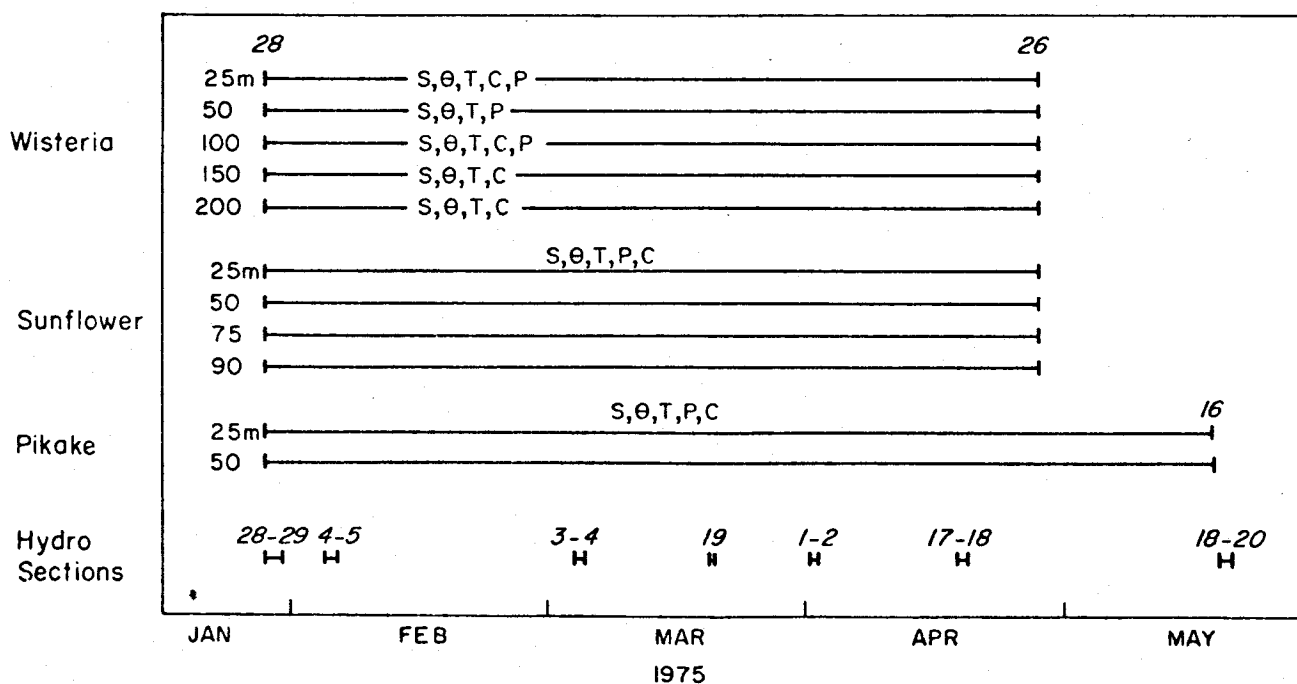


Figure 3. Length of current meter records, and time of hydrographic sections along 45°N, WISP.

Three arrays, with a total of eleven Aanderaa current meters capable of measuring and recording speed, direction, temperature and conductivity were moored across the continental shelf at 45°N in late January 1975 (Figs. 1, 2). Nine of the current meters also recorded pressure. The two offshore arrays, Wisteria and Sunflower, were recovered at the end of April 1975. The nearshore array, Pikake, was recovered in mid-May 1975. The conductivity sensor at 50 m, Wisteria, failed to operate; all other current meter instruments recorded each parameter successfully (Fig. 3). Hydrographic sections with CTD stations about 10 km apart of the shelf were made along 45°N at intervals of a few weeks from late January to mid-May 1975 (Fig. 3).

Simultaneous current observations were made off northern Oregon and Washington by the University of Washington (Hickey *et al.*, 1975) and off Vancouver Island by the Institute of Ocean Sciences, Victoria (Huyer, Gagnon and Huggett, 1976).

The UP-75 Experiment

Observations of the coastal upwelling regime in the vicinity of Cap Blanc, Northwest Africa, have clearly shown the existence of a poleward undercurrent along the continental slope (Mittelstaedt, Pillsbury and Smith, 1975). Observations to determine whether a similar slope undercurrent existed off Oregon had not been made in either of the two previous studies, CUE-I and CUE-II, of coastal upwelling off Oregon (Pillsbury *et al.*, 1974 a, b). Observations in these experiments had been limited to the water over the continental shelf and the water above 200 m over the inner slope. UP-75 was designed to test the hypothesis that a poleward undercurrent is present along the Oregon slope, and to learn more about its relationship,

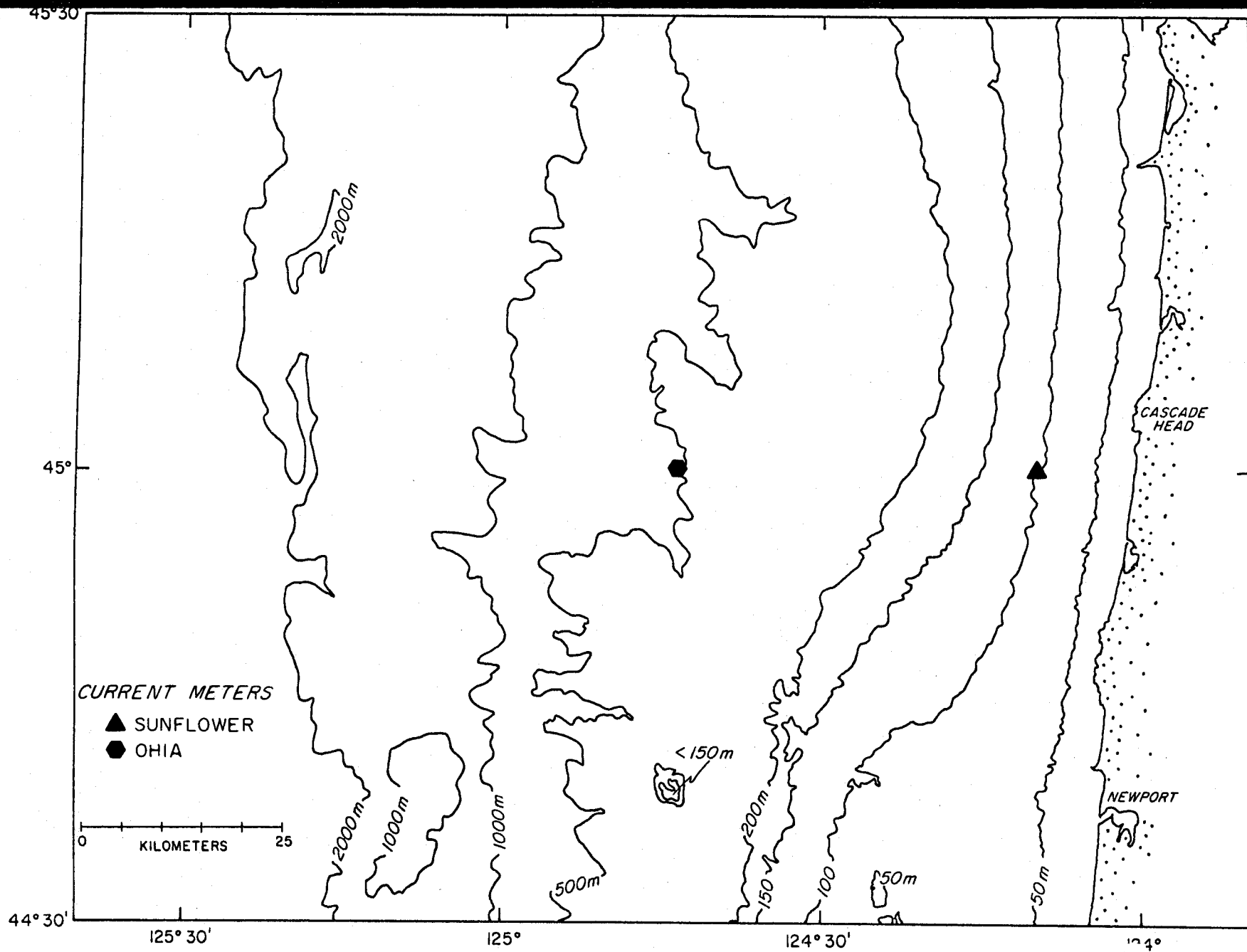


Figure 4. Location of current meter arrays during UP-75, May through July 1975.

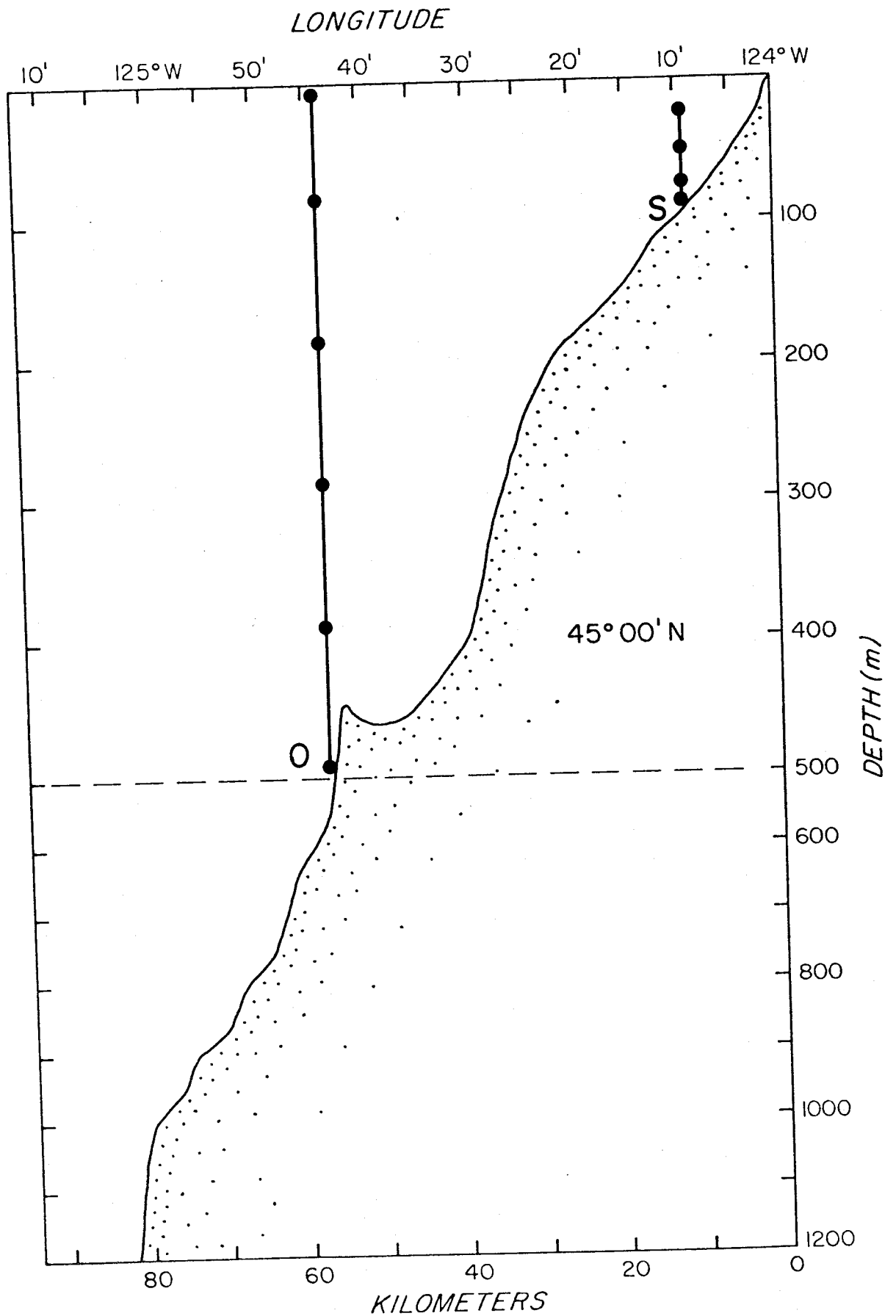


Figure 5. The UP-75 current meter array and the bottom profile along 45°N.

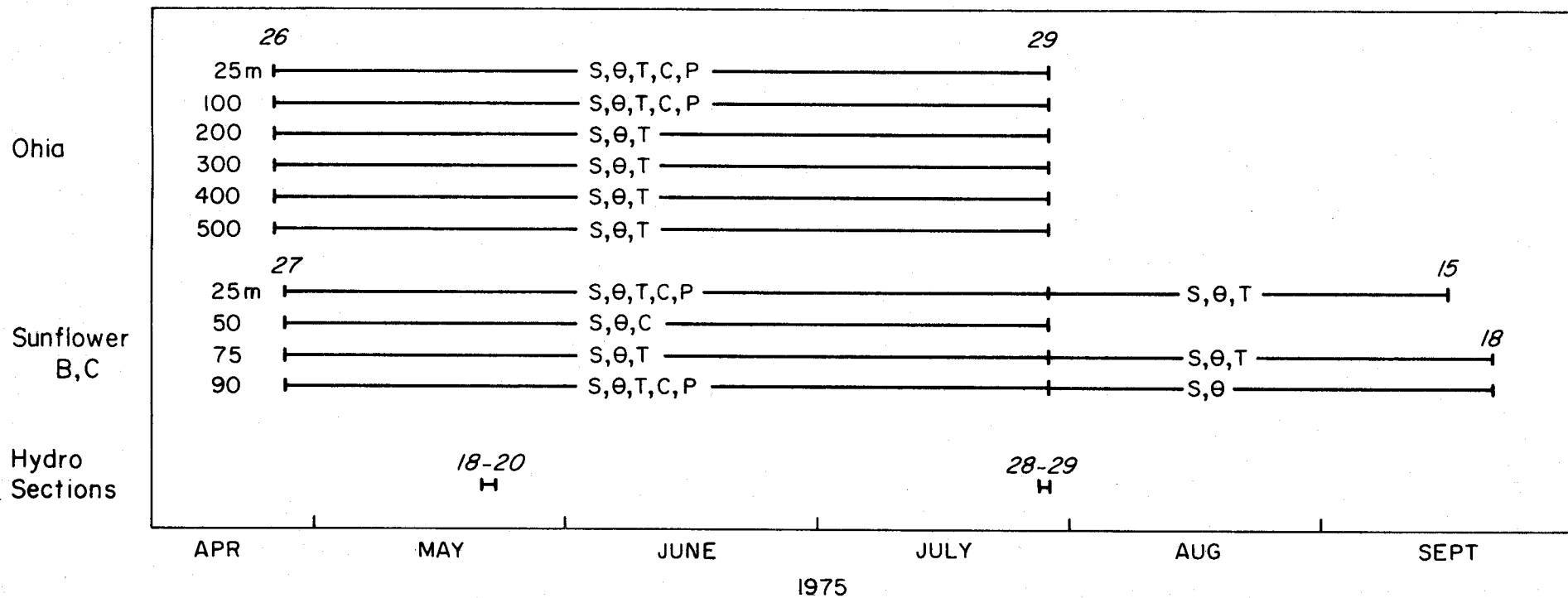


Figure 6. Length of current meter records, and time of hydrographic sections, UP-75.

if any, to the poleward undercurrent that has been observed over the shelf (e.g., Smith, 1974).

Current meters were moored at two locations along 45°N , in about 100 m and 500 m of water (Figs. 4, 5). The deeper mooring, Ohia, was instrumented with six Aanderaa current meters; the upper two recorded conductivity as well as temperature, pressure, speed and direction. The shallowest current meter was intended to be placed at a depth of 25 m, but its pressure sensor showed the actual depth to be 7 m; this indicates the subsurface float was within the zone of significant wave action, and the data from Ohia is therefore subject to the errors associated with mooring motion (Halpern and Pillsbury, 1976). The inner mooring, Sunflower, had four current meters; the top and bottom ones recorded conductivity as well as the more usual parameters. Both Sunflower and Ohia were moored on 27 April 1975 and recovered on 29 July 1975. Sunflower was replaced with three current meters, at 25, 75 and 90 m; it was retrieved on 18 September 1975 (Fig. 6). Hydrographic sections along 45°N were made in mid-May and late July 1975 (Fig. 6).

OBSERVATIONS FROM MOORED
CURRENT METERS

Observations from Moored Current Meters

All of the moored current meters were Aanderaa RCM-4 instruments. Current meters were moored on taut wire arrays with subsurface flotation of the type described by Pillsbury, Smith and Tipper (1969). The instruments measure and record the various parameters sequentially; the cycle is repeated at regular intervals (20 min for both WISP and UP-75). The parameters recorded by all instruments are: reference word, rotor count, direction, and temperature; some current meters also measure pressure and/or conductivity. The difference between successive rotor counts is used to calculate the average speed over the interval; this speed is combined with the instantaneous direction to calculate eastward and northward components of the current. The instrument clocks, rotors, compasses and temperature sensors were calibrated as described by Pillsbury *et al.* (1974a). Results of the temperature calibrations before and after WISP are shown in Table I; those for UP-75 are shown in Table II.

Conductivity Calibration and Processing

The normal conductivity range of Aanderaa RCM-4 current meters is 0 to 60 mmhos cm^{-2} . Since this is encoded as a number between 0 and 1023, the conductivity resolution is ± 0.06 mmhos cm^{-2} . The instruments were modified to reduce the conductivity range to about 30 to 50 mmhos cm^{-2} (Mesecar and Barstow, 1975); the resulting resolution is ± 0.02 mmhos cm^{-2} . All eleven current meters deployed during WISP had modified conductivity sensors; all but one recorded conductivity successfully. Five current meters with modified conductivity sensors were used during UP-75 but the conductivity data from one of these (50 m, Sunflower B) was not processed because temperature was not recorded.

Table I. Temperature calibration of current meters used during WISP, showing the calibration dates and constants ($T = a + bN + cN^2$), and the differences between the two calibrations at three temperatures.

Array	Intended Depth	Serial No.	Calibration Date	Calibration Constants			Differences at		
				a	b	c x10 ⁻⁶	5C	10C	15C
Wisteria	25	746	18 Nov. 74	-2.024	0.02048	2.382			
			15 May 75	-2.027	0.02044	2.410	.013	.017	.017
	50	747	18 Nov. 74	-2.076	0.02045	2.391			
			15 May 75	-2.115	0.02035	2.468	.064	.071	.070
	100	748	18 Nov. 74	-1.994	0.02045	2.390			
			15 May 75	-1.964	0.02033	2.468	.001	.013	.016
	150	749	18 Nov. 74	-2.039	0.02047	2.387			
			15 May 75	-1.984	0.02022	2.586	.006	.023	.019
	200	750	18 Nov. 74	-2.046	0.02055	2.328			
			15 May 75	-2.007	0.02036	2.471	.008	.022	.023
Sunflower	25	751	18 Nov. 74	-1.961	0.02041	2.398			
			11 Nov. 75	-2.011	0.02046	2.445	.028	.008	.016
	50	752	18 Nov. 74	-2.011	0.02043	2.409			
			15 May 75	-2.011	0.02039	2.432	.010	.015	.017
	75	753	4 Nov. 74	-2.042	0.02041	2.477			
			15 May 75	-2.026	0.02025	2.600	.023	.035	.034
	90	754	4 Nov. 74	-2.024	0.02039	2.481			
			15 May 75	-2.028	0.02025	2.612	.036	.041	.033
Pikake	25	755	4 Nov. 74	-1.900	0.02025	2.516			
			11 Nov. 75	-1.923	0.02035	2.442	.002	.009	.010
	50	756	4 Nov. 74	-1.980	0.02027	2.575			
			11 Nov. 75	-1.973	0.02028	2.563	.009	.009	.008

Table II. Temperature calibration of current meters used during UP-75, showing calibration dates and constants ($T = a + bN + cN^2$), and the differences between the two calibrations at three temperatures.

Array	Intended Depth	Serial No.	Calibration Date	Calibration Constants			Differences at		
				a	b	$c \times 10^{-6}$	5C	10C	15C
Ohia	25	686	4 Nov. 74	-1.907	0.02021	2.566	.039	.036	.044
			19 Aug. 75	-1.975	0.02034	2.437			
	100	689	18 Nov. 74	-1.952	0.02028	2.465	.007	.012	.015
			19 Aug. 75	-1.950	0.02025	2.475			
	200	1530	26 Mar. 75	-2.100	0.02041	2.473	.004	.002	.001
			19 Aug. 75	-2.090	0.02039	2.485			
	300	1532	26 Mar. 75	-2.056	0.02028	2.553	.011	.008	.007
			19 Aug. 75	-2.040	0.02026	2.563			
	400	1533	26 Mar. 75	-2.107	0.02032	2.555	.002	.012	.013
			19 Aug. 75	-2.156	0.02051	2.412			
Sunflower B (T off scale)	25	682	4 Nov. 74	-1.953	0.02044	2.371	.039	.038	.033
			19 Aug. 75	-1.987	0.02041	2.411			
	50	268	4 Nov. 74	-2.025	0.02036	2.493	.003	.010	.014
			11 Nov. 75	-2.037	0.02041	2.472			
	75	1539	26 Mar. 75	-2.069	0.02030	2.557	.001	.011	.011
			19 Aug. 75	-2.113	0.02047	2.430			
	90	684	29 Oct. 74	-1.894	0.02027	2.489	.039	.038	.037
			19 Aug. 75	-1.931	0.02026	2.502			
	25	441	21 Nov. 74	-2.068	0.02045	2.480	.016	.007	.014
			9 Apr. 75	-2.125	0.02063	2.318			
Sunflower B	75	452	27 Aug. 74	-2.015	0.02056	2.290	.041	.041	.029
			9 Apr. 75	-2.034	0.02045	2.417			
	90	503	4 Nov. 74	-1.912	0.02035	2.509	.034	.028	.032
			4 Feb. 76	-1.974	0.02047	2.404			

The conductivity sensors were calibrated in the laboratory in September 1974 and September 1975 by immersing the current meters in a well-mixed bath whose salinity was measured with a bench salinometer and whose temperature was measured with a quartz probe. The 1974 calibration points were used to calculate the linear regression equation between the Aanderaa output, k , and the conductivity calculated from the bath temperature and salinity. The regression constants for the WISP and UP-75 current meters are shown in Table III; the deviations for both 1974 and 1975 calibration points from the regression line are shown in Fig. 7 for each current meter. The difference between the 1974 and 1975 calibrations is usually less than 0.1 in the range of conductivities encountered during WISP (30 to 35 mmhos cm^{-2} ; bit numbers less than 250). Since the current meter at 25 m Sunflower was damaged when the array was recovered, no 1975 calibration data are available for it. Another (#689) showed large differences between the 1975 and 1974 calibration data; inspection of the conductivity cell showed a large chip in the glass liner; it is not known whether it was damaged before or after installation at sea.

The purpose of measuring the conductivity is to obtain time series of salinity, which can be calculated from temperature, conductivity and pressure. For pressure, P , we used either the direct Aanderaa pressure observations or, in their absence, a constant based on our knowledge of the instrument depth. Temperature, T , was processed using the 1974 calibration constants (Tables I and II). The preliminary conductivity estimate, C_p , was obtained from the 1974 calibration constants (Table III). We used equations from Perkin and Walker (1972) to estimate the salinity $S_p = f(P, T, C_p)$. This preliminary estimate of salinity was compared to the salinity from nearby CTD stations

Table III. Regression constants for the 1974 laboratory calibration of the modified Aanderaa conductivity sensors ($C = a + bk$).

Array	Intended Depth	C.M. Serial No.	Conductivity Cell No.	a	b
Wisteria	25	746	161	32.24	0.02079
	100	748	165	31.90	0.02032
	150	749	167	29.68	0.01922
	200	750	168	30.98	0.01981
Sunflower A	25	751	169	30.61	0.01961
	50	752	170	29.87	0.01904
	75	753	171	32.47	0.02087
	90	754	172	30.43	0.01941
Pikake	25	755	173	29.87	0.01903
	50	756	174	31.77	0.02043
Ohia	25	686	132	30.38	0.01948
	100	689	135	31.08	0.01958
Sunflower B	25	682	128	30.84	0.01961
	90	684	130	30.14	0.01907

by plotting both as a function of time. Where there was a systematic difference between the two, which could arise because of the pressure effect on the Aanderaa conductivity cell (Huyer, 1975), it was used to adjust the conductivity estimate. Salinity was again determined, and again compared to CTD values. Table IV shows the conductivity equations finally adopted for the instruments which were affected by the in situ pressure.

Data Presentation

The 20 min time series of eastward current, northward current, temperature, pressure and salinity are filtered to suppress high frequency signals

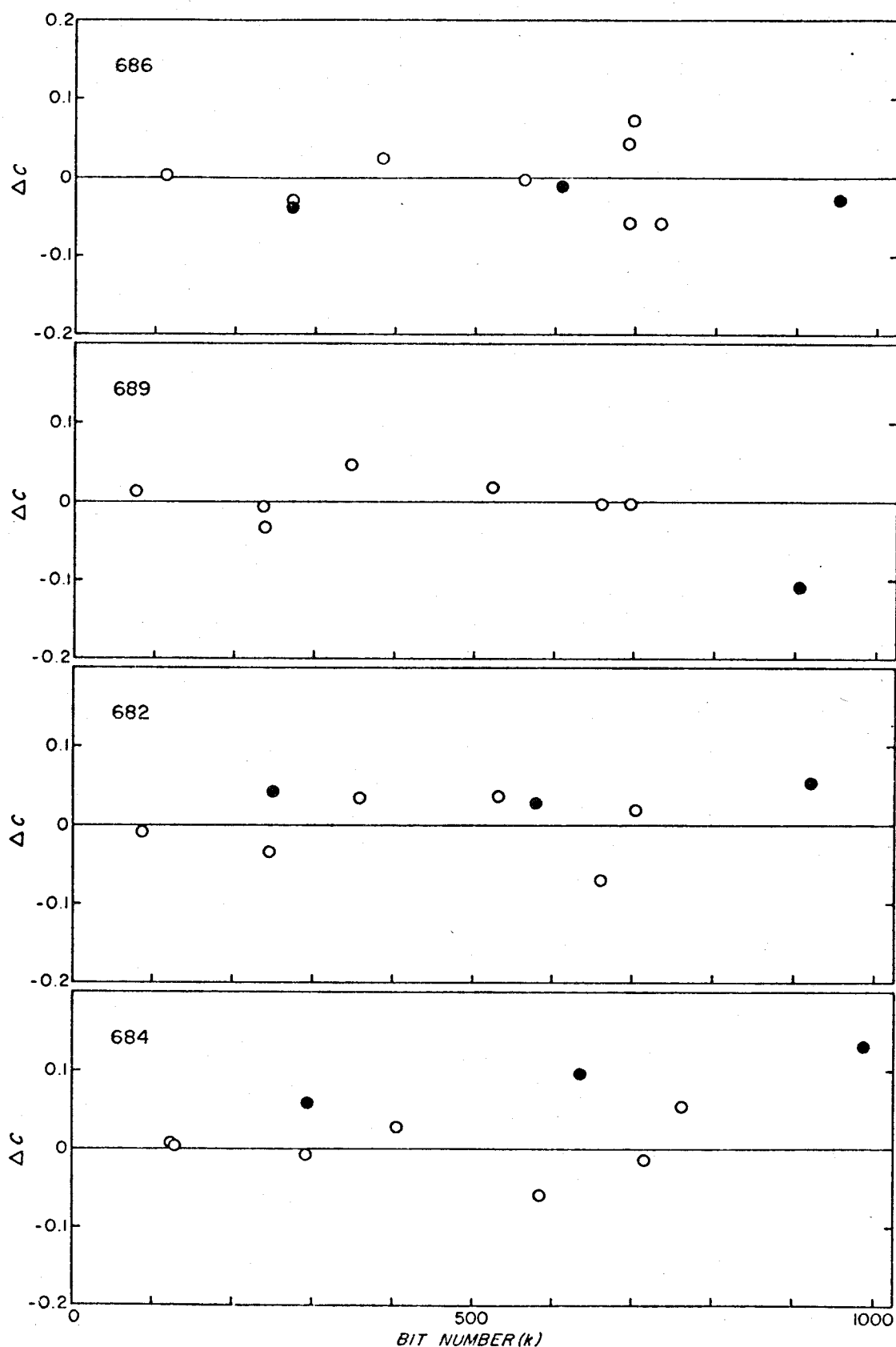


Figure 7. Deviations of the laboratory calibration data points from the regression line based on the 1974 points. ΔC is the difference between the conductivity computed from temperature and salinity of the bath and the conductivity from the Aanderaa output $C = a + bk$ (a and b are the constants in Table III). Open circles are the 1974 data points; dots are 1975 data points.

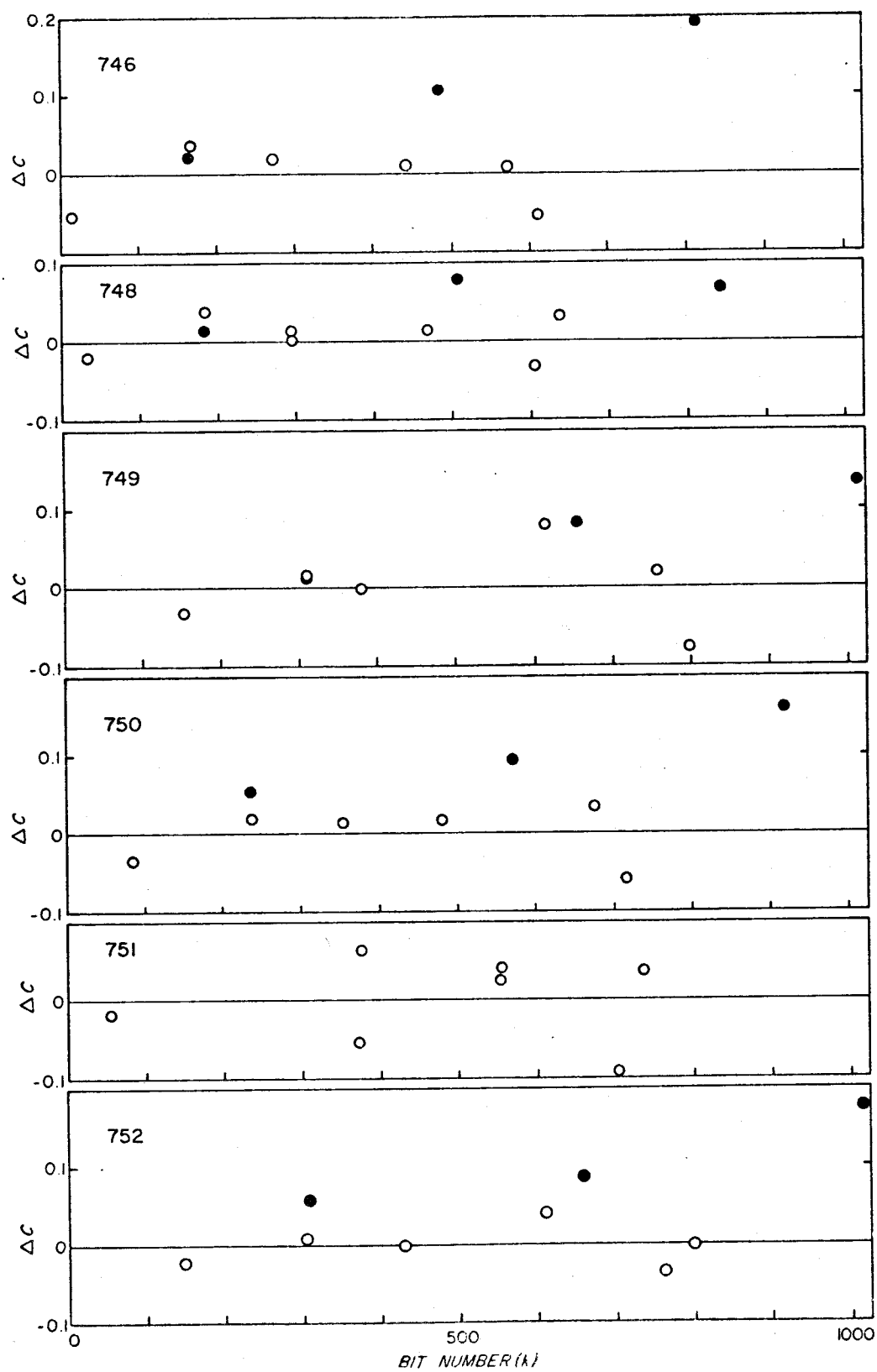


Figure 7. Cont'd.

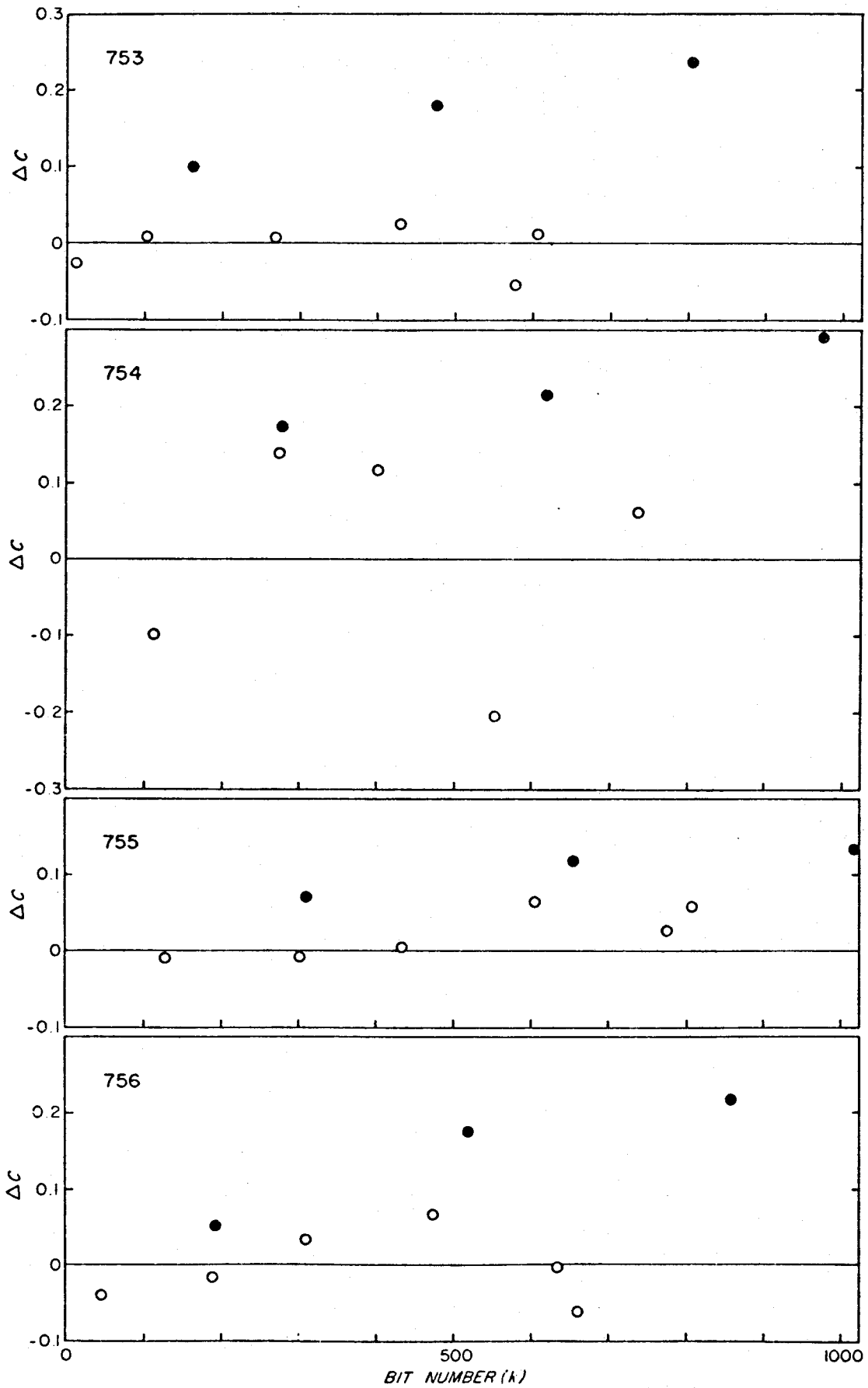


Table IV. Conductivity calibration constants ($C = a_1 + bk = a_0 + a + bk$) for calculating the conductivity from Aanderaa bit number (k) for current meters whose calibration was affected by the in situ pressure. Constants a and b were determined from the Laboratory calibration and are given in Table III; a_0 is the correction for the pressure effect on the sensor.

Array	Intended Depth(m)	C.M. Serial No.	a_0	a_1	b
Wisteria	150	749	-0.03	29.65	0.01922
	200	750	-0.12	30.86	0.01981
Sunflower A	25	751	-0.07	30.54	0.01961
	90	754	-0.09	30.34	0.01941
Sunflower B	25	682	-0.10	30.74	0.01961
	90	684	-0.20	29.94	0.01907

(e.g., internal waves), yielding hourly values. It is these hourly values that are presented in this report. The data from each string of current meters are presented separately. The header page gives the pertinent information about the location of the string, the data interval, and a general statement about the quality of the data. The depth of the instruments is given two ways: intended depth, and actual depth which is based on the mean pressure as measured by the pressure sensor or on information about the total water depth and wire lengths. First order statistics of each parameter are tabulated. A progressive vector diagram is presented for each current record. The hourly time series of sigma-t are computed from the time series of temperature and salinity, and the hourly time series of each parameter are displayed. Values of temperature, salinity and sigma-t from nearby CTD stations are displayed with the time series of these parameters (dots are from CTD stations included in this report; triangles are from stations occupied by the THOMAS G. THOMPSON; personal communication, B. Hickey).

WISP Installation

PIKAKE

Position: 45°00.3'N, 124°05.1'W

Depth of Water: 60 m

Set at 0209 GMT 28 January 1975 by R/V CAYUSE

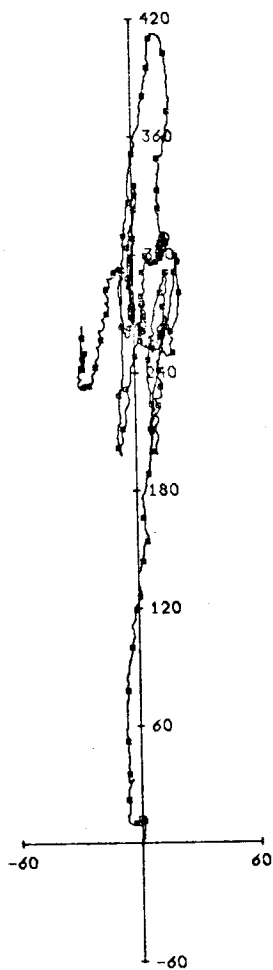
Retrieved at 2220 GMT 16 May 1975 by R/V CAYUSE

Instrumentation

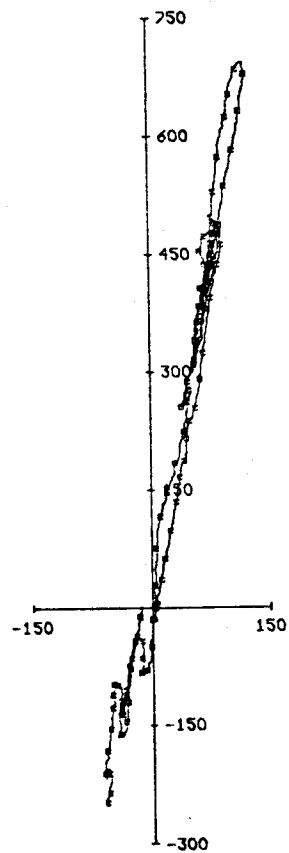
<u>Intended Depth</u>	<u>Actual Depth</u>	<u>RCM4 Serial No./ Tape No.</u>	<u>Data Interval</u>
25 m	28 m	755/14	0236 GMT 1 January to 1515 GMT 15 May
50 m	53 m	756/15	0236 GMT 1 January to 2116 GMT 16 May

Data were recorded every 20 minutes. Both meters recorded current speed and direction, temperature, pressure and conductivity data.

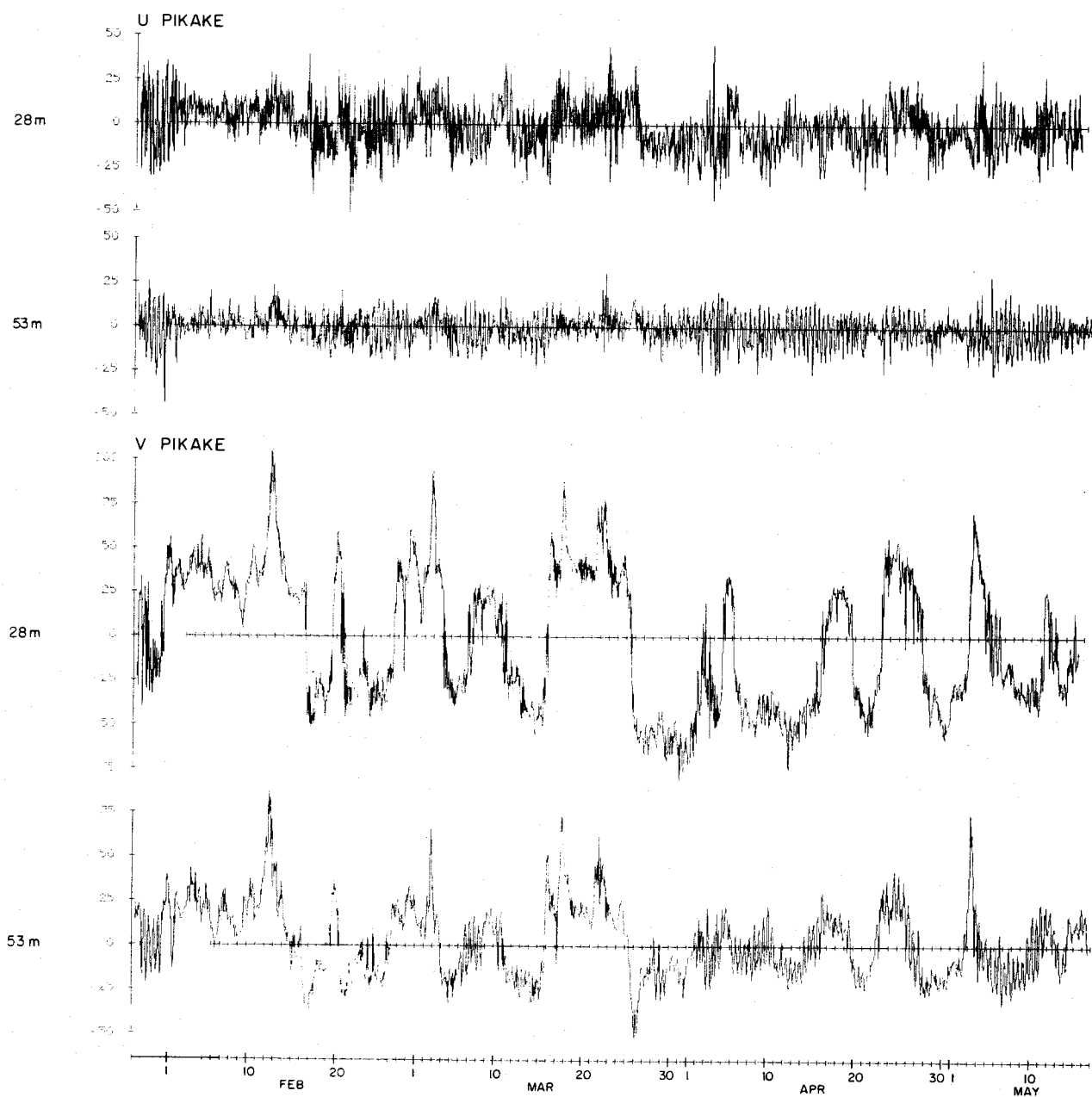
	MEAN	S.D.	MAX	MIN
28 m				
S (cm/sec)	37.0	14.5	108.1	2.0
U (cm/sec)	-0.7	12.7	45.6	-50.5
V (cm/sec)	-2.7	37.6	106.1	-80.9
T (C)	8.8	0.3	9.6	8.0
P (db)	27.9	0.9	30.1	24.8
S (o/oo)	32.35	0.48	33.47	29.96
42 m				
S (cm/sec)	19.1	10.3	88.3	1.1
U (cm/sec)	-0.3	8.3	30.8	-43.7
V (cm/sec)	2.8	19.9	87.1	-52.1
T (C)	8.5	0.6	9.5	7.3
P (db)	53.4	0.8	55.4	51.2
S (o/oo)	33.22	0.58	34.01	31.69

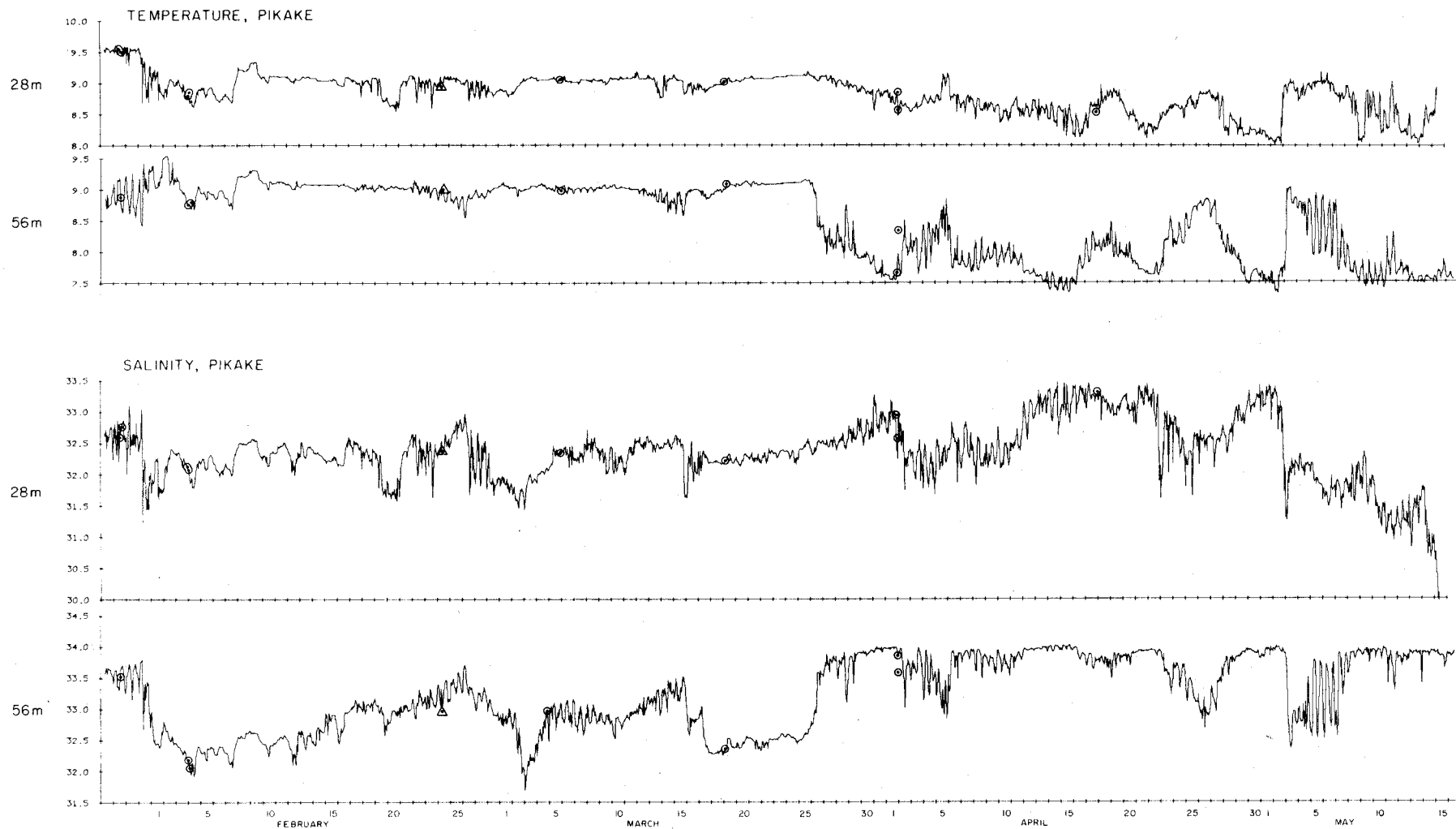


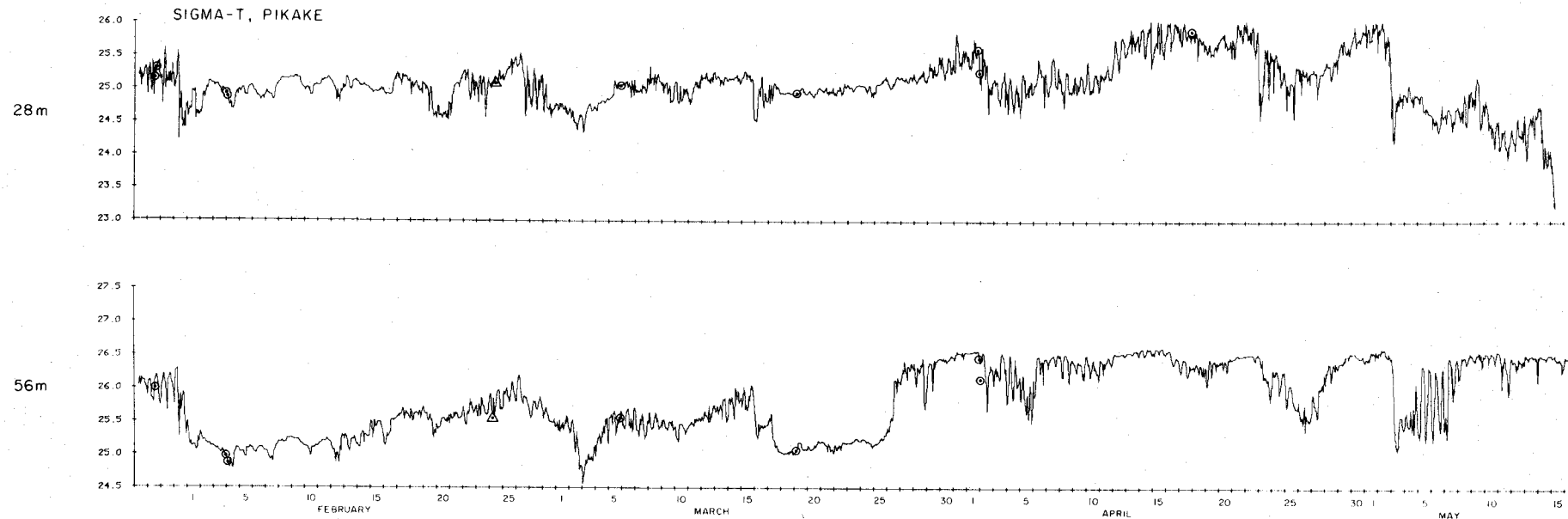
25 METERS AT PIKAKE.
107 DAYS STARTING 0855 28 JAN 75



50 METERS AT PIKAKE.
108.3 DAYS STARTING 0836 28 JAN 75







SIGMA-T FROM LP S, LP T PIKAKE 531



WISP Installation

SUNFLOWER (A)

Position: 45°00.2'N, 124°09.4'W

Depth of Water: 100 m

Set at 2247 GMT 27 January 1975 by R/V CAYUSE

Retrieved at 0035 GMT 27 April 1975 by R/V CAYUSE

Data Interval: 2313 GMT 27 January to 0033 GMT 27 April

Instrumentation

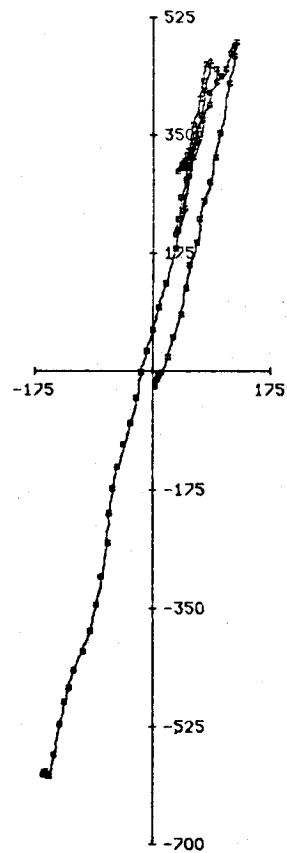
<u>Intended Depth</u>	<u>Actual Depth</u>	<u>RCM4 Serial No./Tape No.</u>
25 m	26 m	751/14
50 m	52 m	752/15
75 m	76 m	753/14
90 m	92 m	754/14

The 25 m instrument caught in screws and flooded at start of recovery. Data were recorded every 20 minutes. All meters recorded current speed and direction, temperature, pressure and conductivity data.

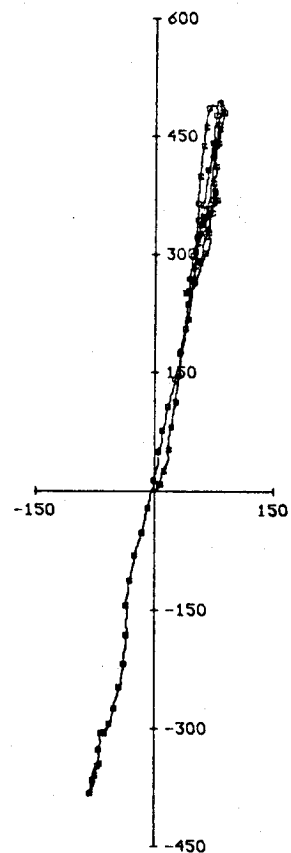
The fouling of the current meter disabled the CAYUSE, and it was towed into Newport by the R/V YAQUINA. Participants were presented commemorative certificates (see facing page).

SUNFLOWER (A)

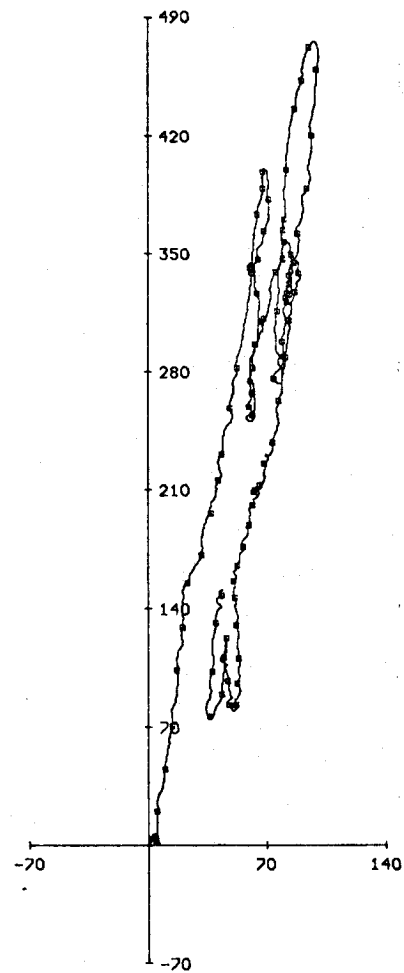
	MEAN	S.D.	MAX	MIN
26 m				
S (cm/sec)	35.2	14.7	105.1	2.3
U (cm/sec)	-2.2	13.0	34.2	-36.0
V (cm/sec)	-7.8	34.9	104.0	-74.3
T (C)	8.9	0.3	9.6	7.9
P (db)	25.4	1.1	29.9	22.6
S (o/oo)	32.4	0.27	33.01	30.55
52 m				
S (cm/sec)	31.1	13.3	102.9	2.3
U (cm/sec)	-1.0	9.9	29.3	-28.2
V (cm/sec)	-4.6	32.0	101.9	-67.2
T (C)	8.9	0.3	9.5	7.7
P (db)	52.8	1.1	56.5	50.0
S (o/oo)	32.89	0.33	33.89	32.16
76 m				
S (cm/sec)	23.6	11.8	95.8	1.9
U (cm/sec)	0.5	8.6	28.6	-29.6
V (cm/sec)	2.0	24.9	95.3	-61.6
T (C)	8.6	0.5	9.5	7.3
P (db)	76.4	0.9	79.0	73.7
S (o/oo)	33.36	0.45	33.99	32.26
92 m				
S (cm/sec)	17.9	10.7	86.5	0.2
U (cm/sec)	0.3	7.4	26.8	-26.5
V (cm/sec)	4.4	19.0	86.2	-46.8
T (C)	8.3	0.7	9.4	7.1
P (db)	92.3	0.7	94.3	90.4
S (o/oo)	33.53	0.45	34.03	32.31



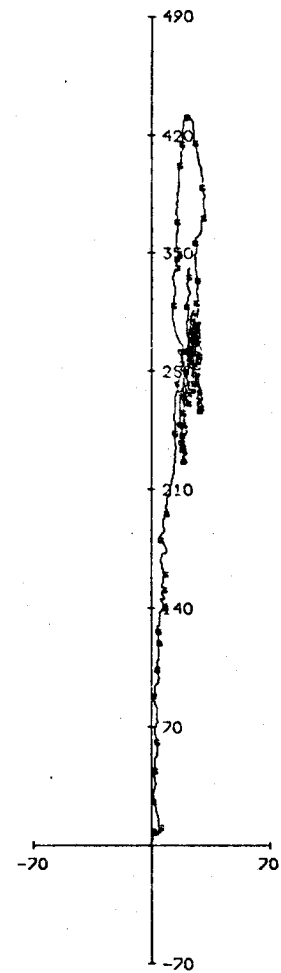
25 M AT SUNFLOWER.



50 M AT SUNFLOWER.

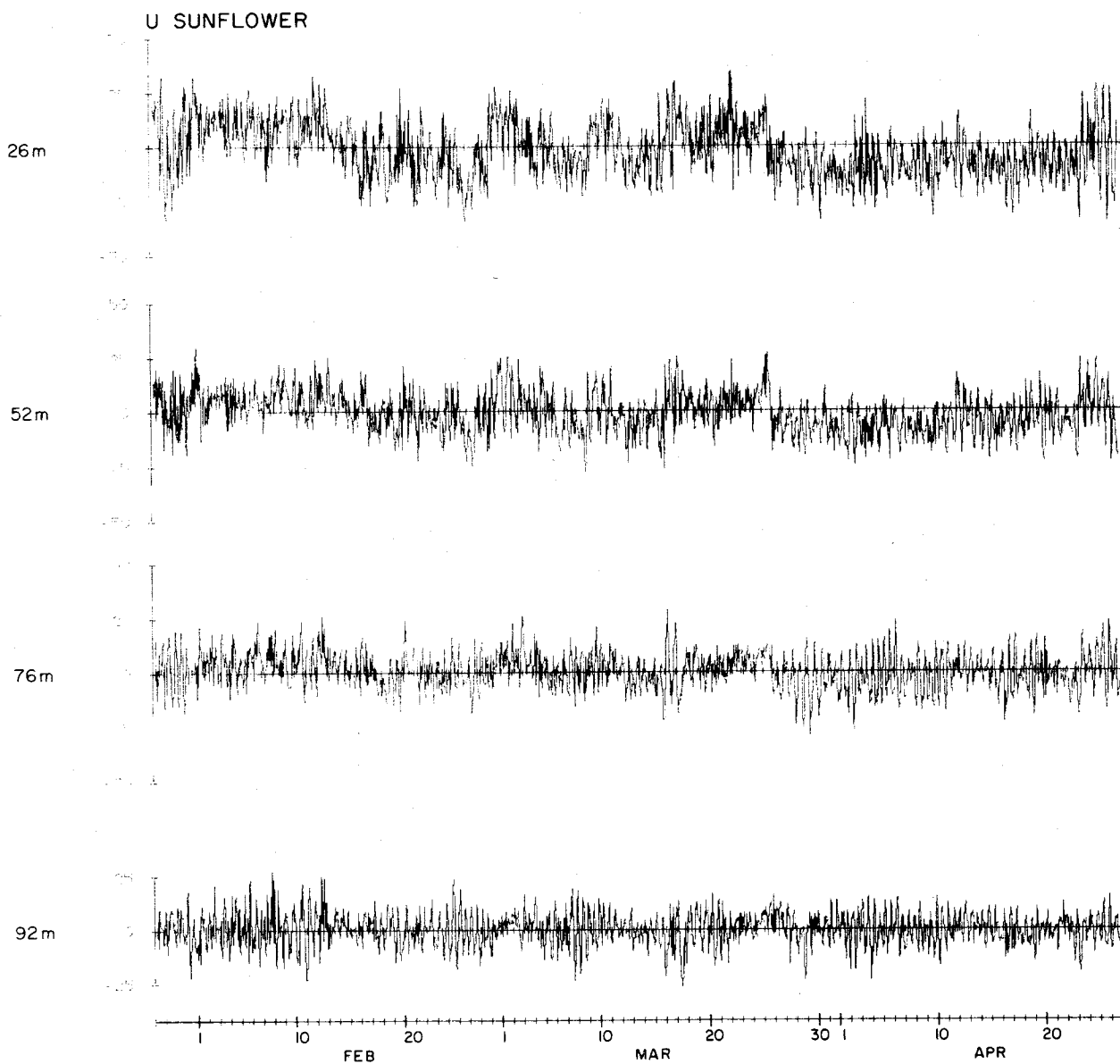


75 M AT SUNFLOWER.

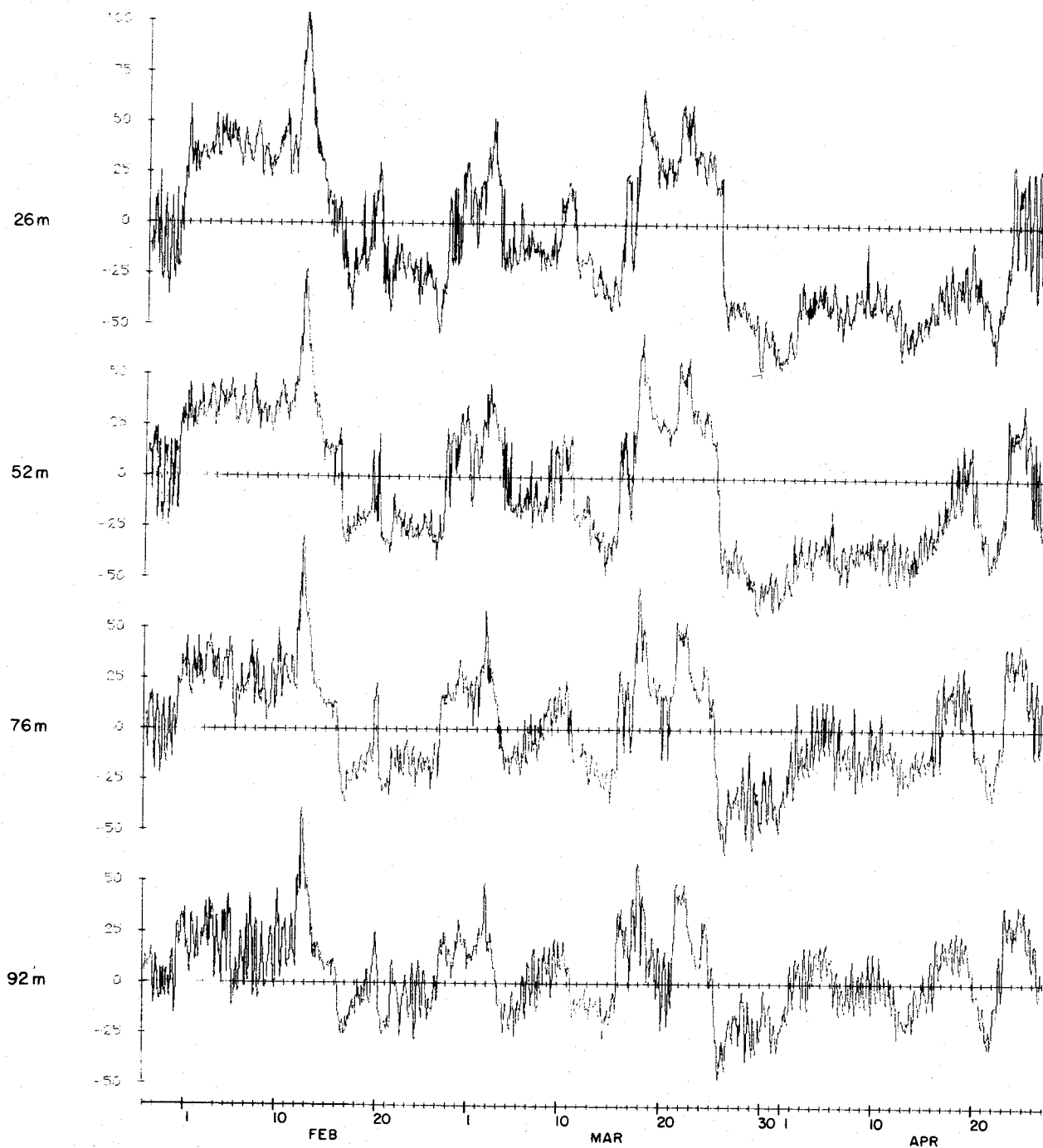


90 M AT SUNFLOWER.

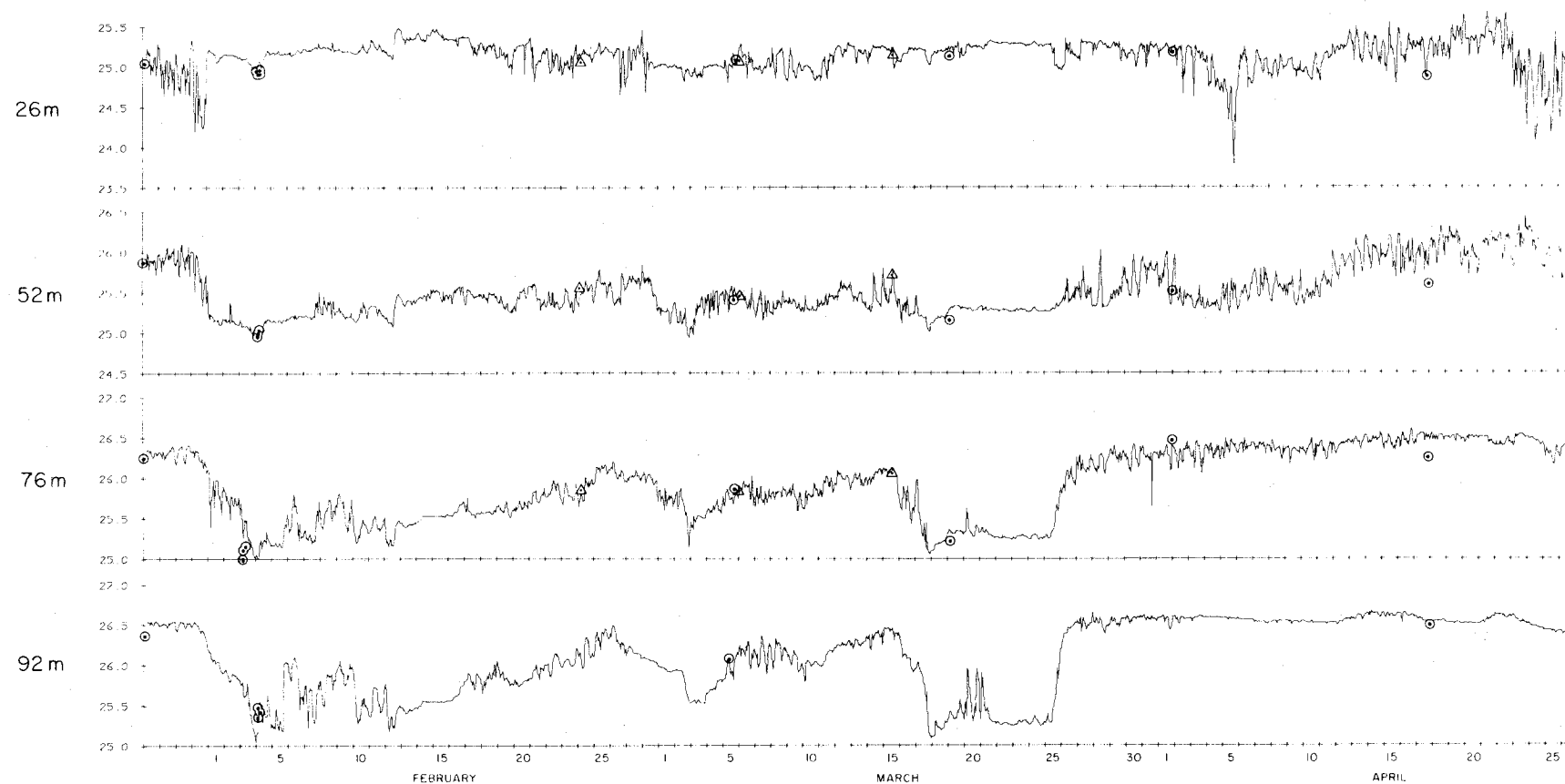
88.5 DAYS STARTING 0513 28 JAN 75



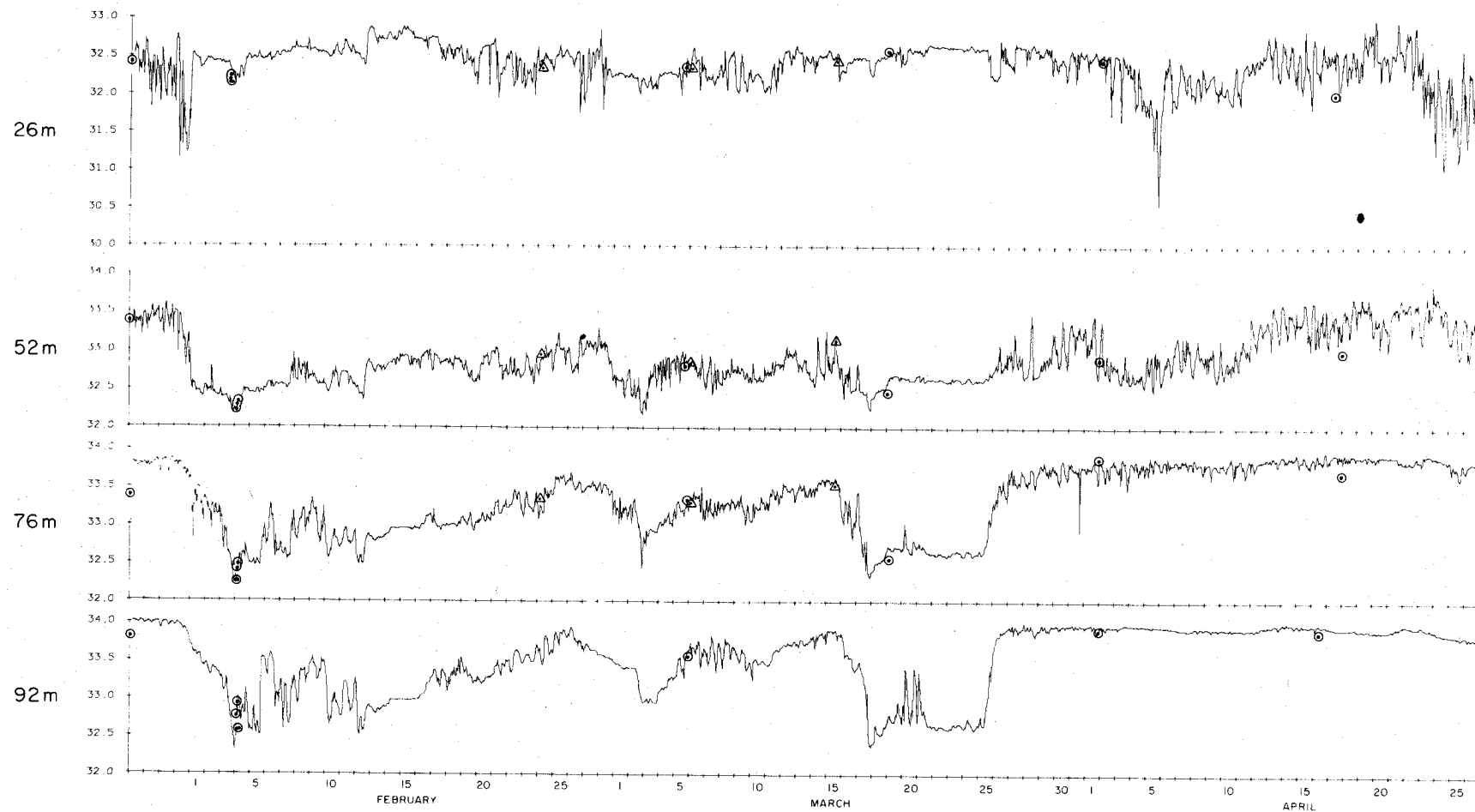
V SUNFLOWER



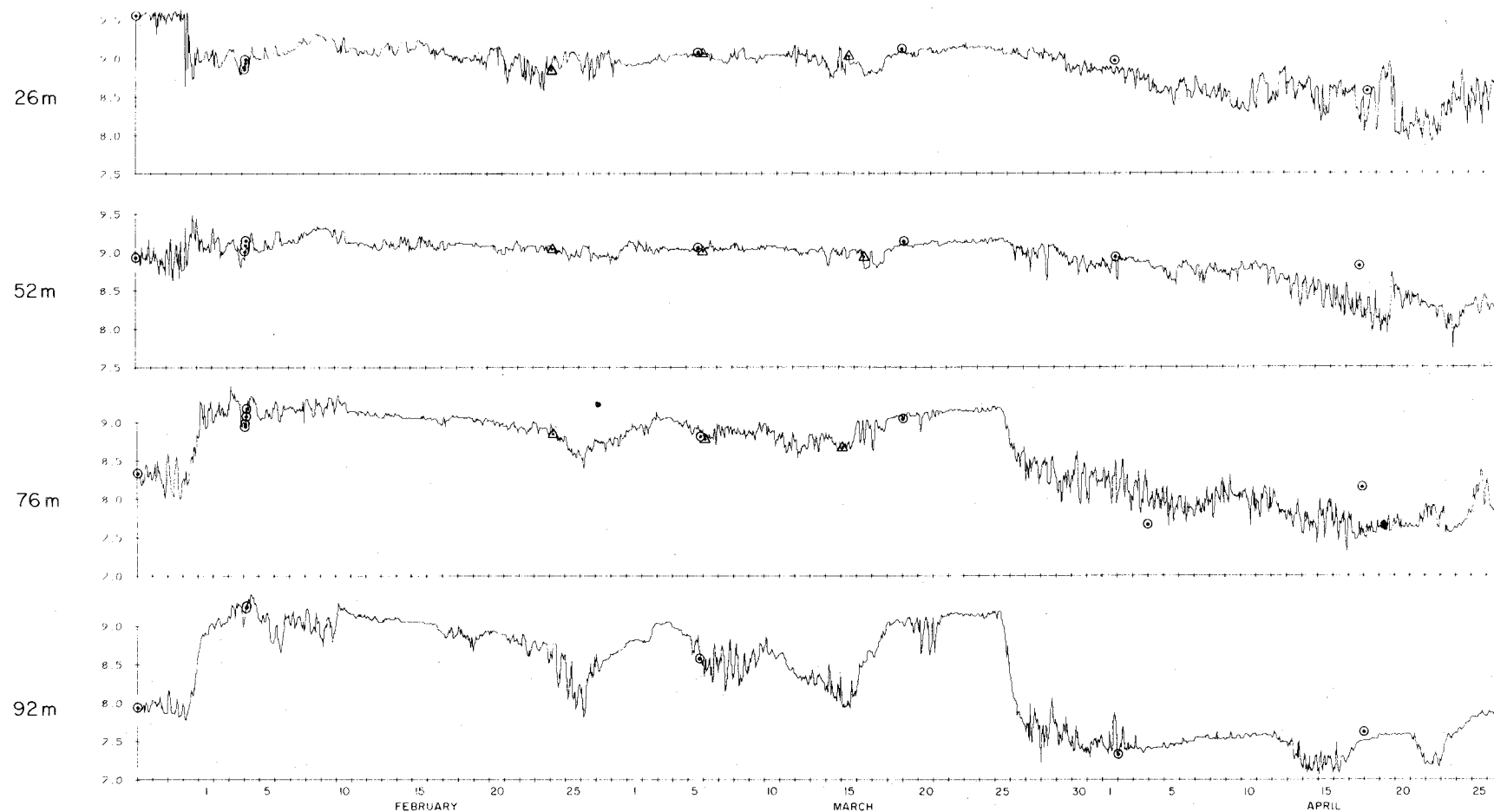
SIGMA-T, SUNFLOWER



SALINITY, SUNFLOWER



TEMPERATURE, SUNFLOWER



WISP Installation

WISTERIA

Position: 45°00.2'N, 124°23.0'W

Depth of Water: 225 m

Set at 0027 GMT 28 January 1975 by R/V CAYUSE

Retrieved at 2257 GMT 26 April 1975 by R/V CAYUSE

Data Interval: 0047 GMT 28 January to 2247 GMT 26 April

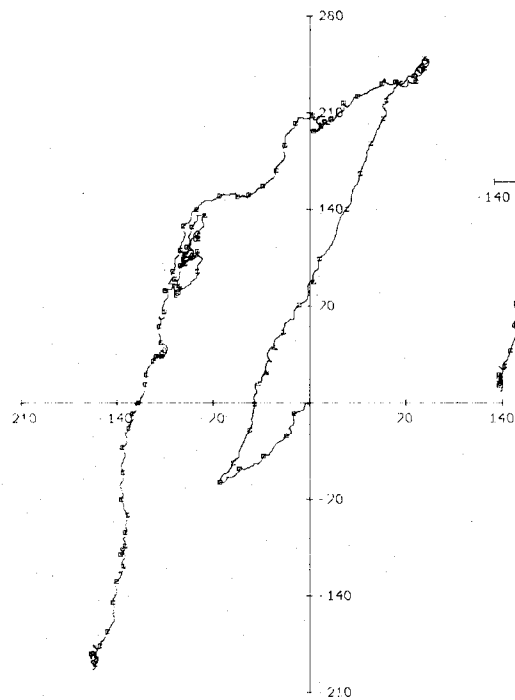
Instrumentation

<u>Intended Depth</u>	<u>Actual Depth</u>	<u>RCM4 Serial No./Tape No.</u>
25 m	31 m	746/15
50 m	55 m	747/16
100 m	106 m	748/13
150 m	156 m	749/17
200 m	206 m	750/15

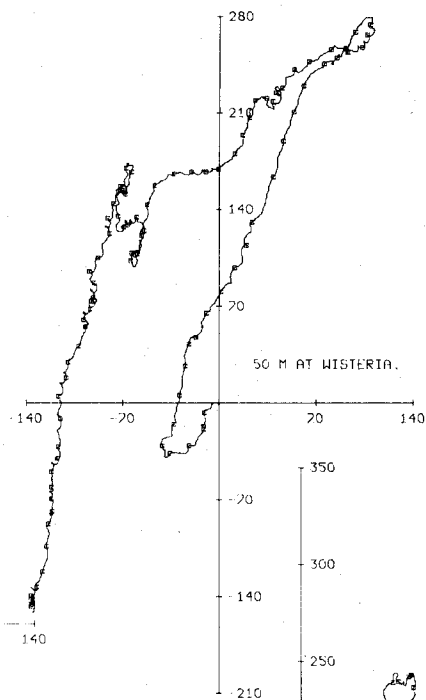
Data were recorded every 20 minutes. All meters recorded current speed and direction and temperature. All except 55 m meter recorded conductivity also. 31, 55, and 106 m meters recorded pressure.

WISTERIA

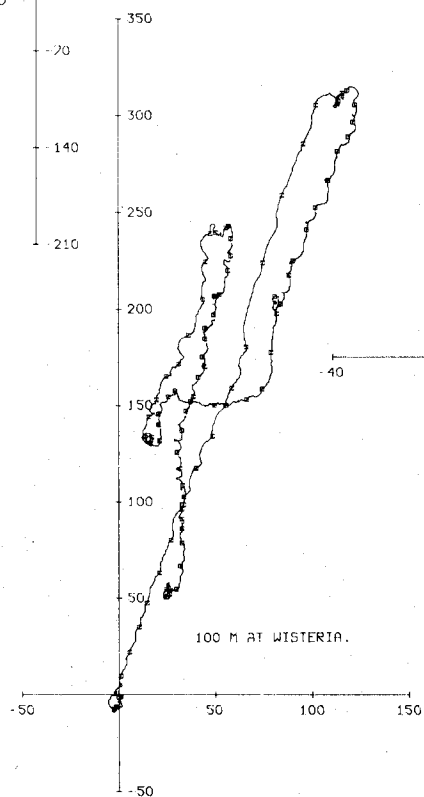
	MEAN	S.D.	MAX	MIN
31 m				
S (cm/sec)	21.8	7.4	57.9	2.4
U (cm/sec)	-2.1	14.2	39.9	-36.6
V (cm/sec)	-2.5	17.9	55.1	-37.1
T (C)	9.0	0.2	9.7	8.0
P (db)	30.6	0.8	35.6	28.4
S (o/oo)	32.29	0.20	32.63	31.25
55 m				
S (cm/sec)	20.4	6.6	56.1	3.2
U (cm/sec)	-1.8	12.3	32.6	-35.6
V (cm/sec)	-2.0	17.4	54.4	-36.0
T (C)	9.0	0.2	9.6	8.1
P (db)	55.2	0.8	60.0	53.0
106 m				
S (cm/sec)	17.1	8.7	73.0	1.3
U (cm/sec)	0.3	9.8	30.3	-27.8
V (cm/sec)	0.7	16.4	71.2	-41.7
T (C)	8.4	0.2	9.1	7.8
P (db)	106.7	0.5	111.8	105.3
S (o/oo)	33.60	0.16	33.84	32.74
156 m				
S (cm/sec)	14.3	6.1	52.7	1.0
U (cm/sec)	1.3	7.9	25.3	-22.3
V (cm/sec)	1.9	13.2	51.5	-29.9
T (C)	7.7	0.2	8.8	7.2
S (o/oo)	33.89	0.05	33.97	33.46
206 m				
S (cm/sec)	11.6	5.7	45.2	1.4
U (cm/sec)	1.1	8.5	26.7	-25.9
V (cm/sec)	2.7	9.4	45.2	-26.9
T (C)	7.2	0.4	8.6	6.2
S (o/oo)	33.95	0.04	34.02	33.64



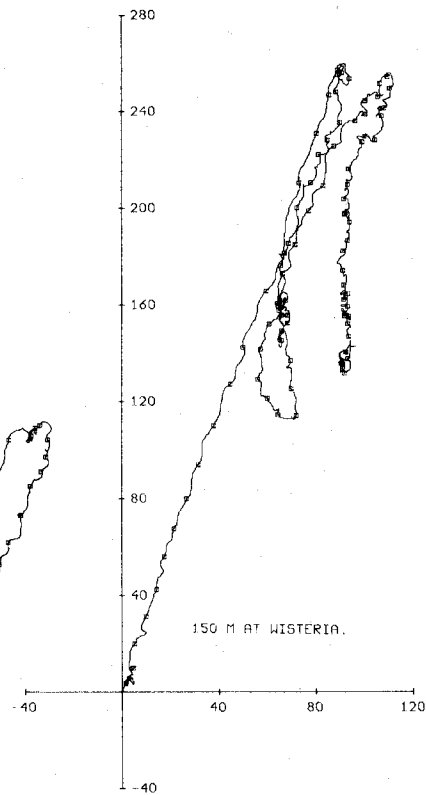
25 M AT WISTERIA. 55.4 DAYS STARTING 0647 28 JAN 75



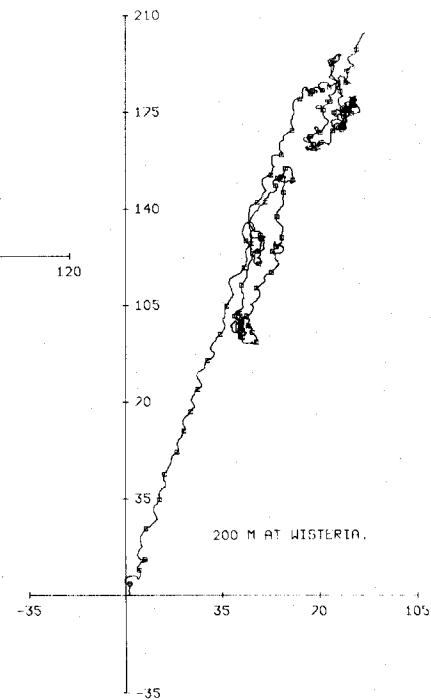
50 M AT WISTERIA.



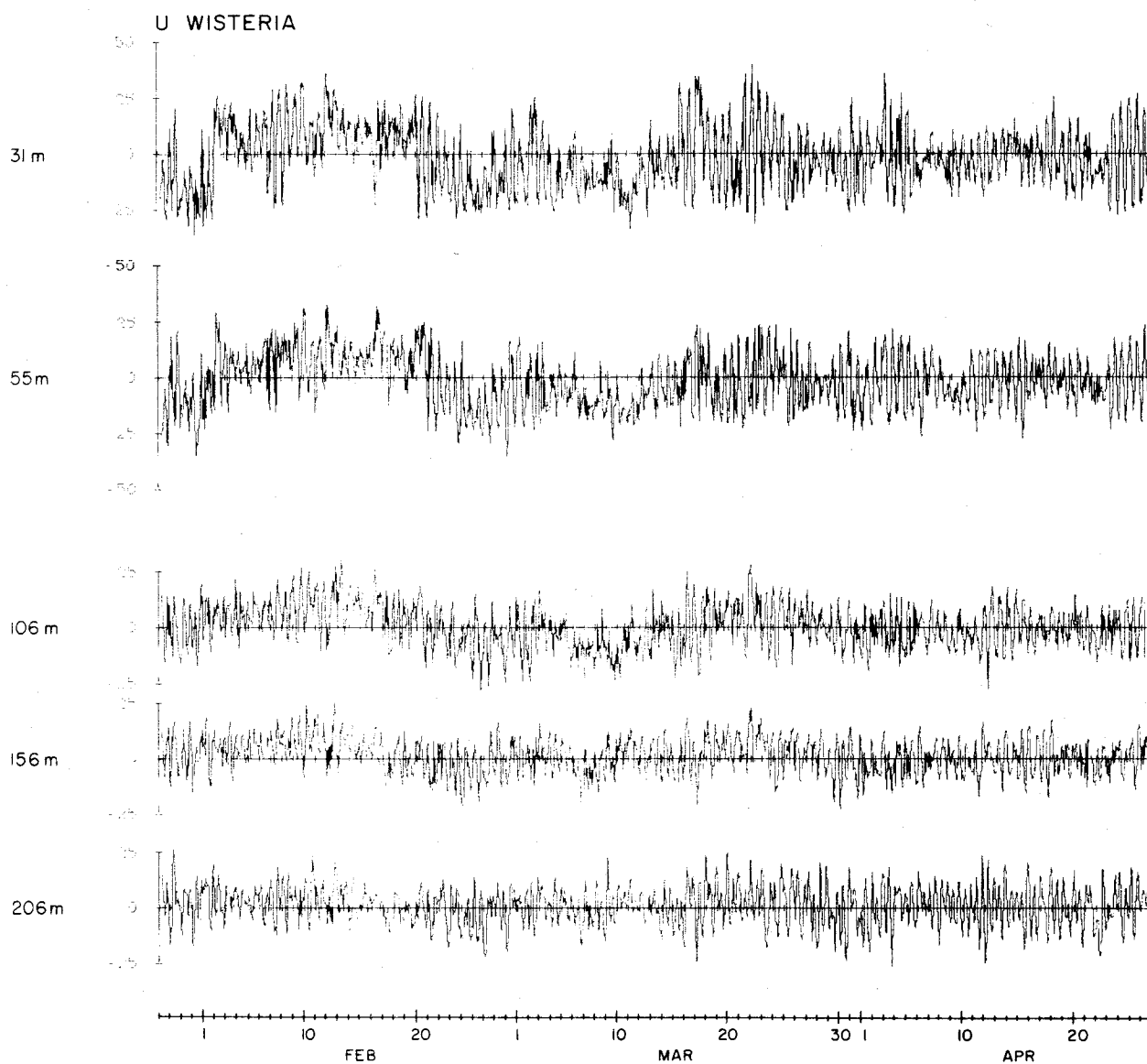
100 M AT WISTERIA.



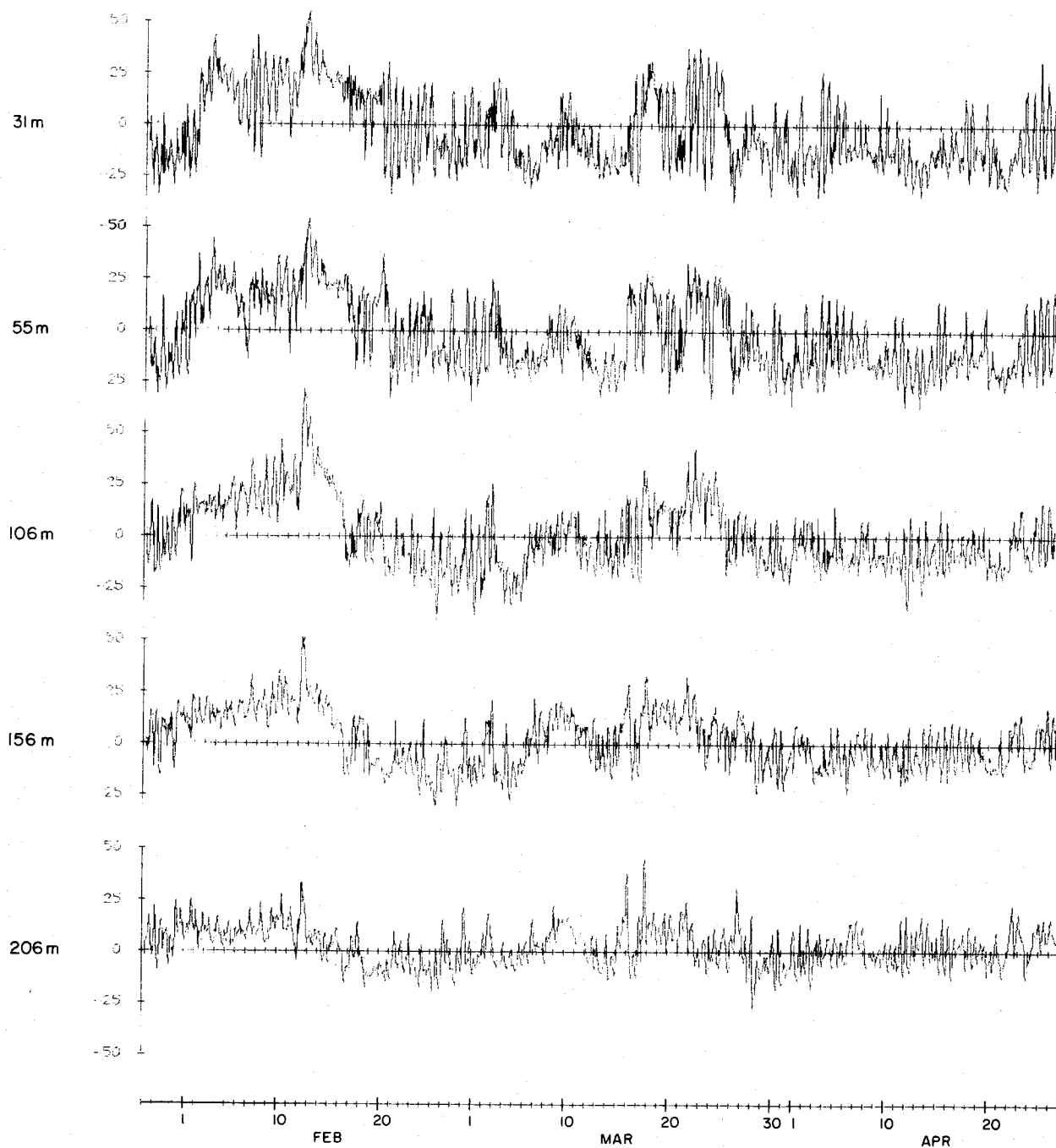
150 M AT WISTERIA.



200 M AT WISTERIA.

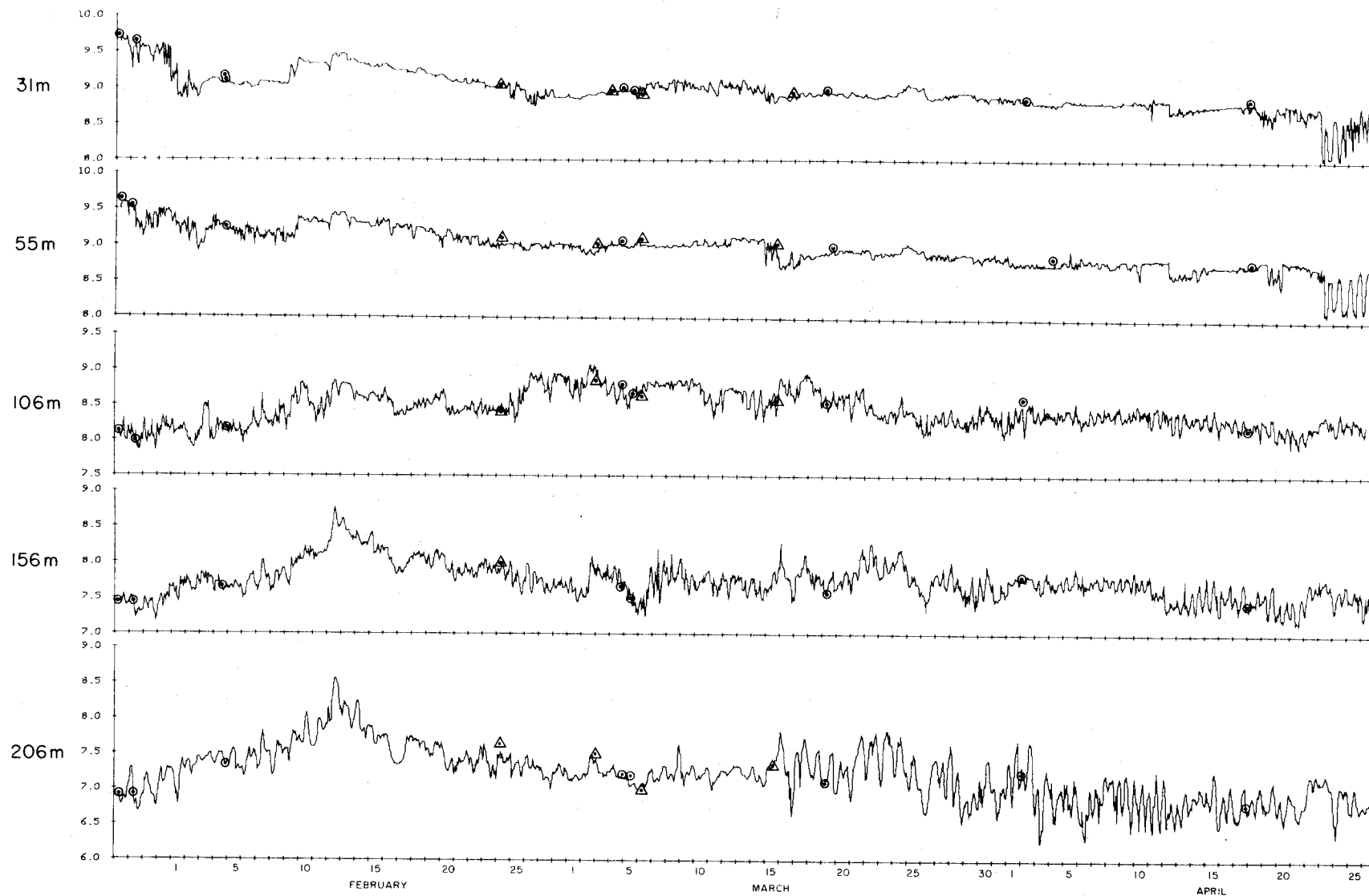


V WISTERIA

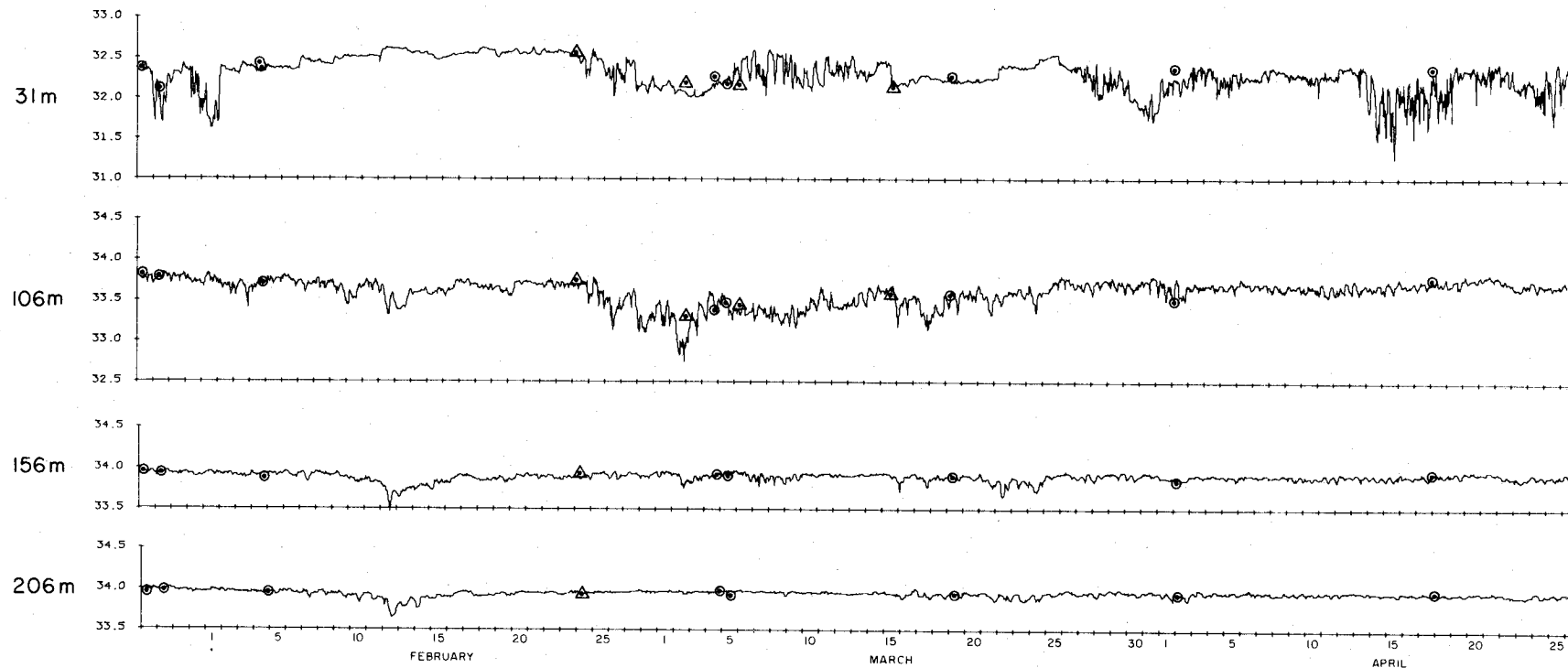


TEMPERATURE, WISTERIA

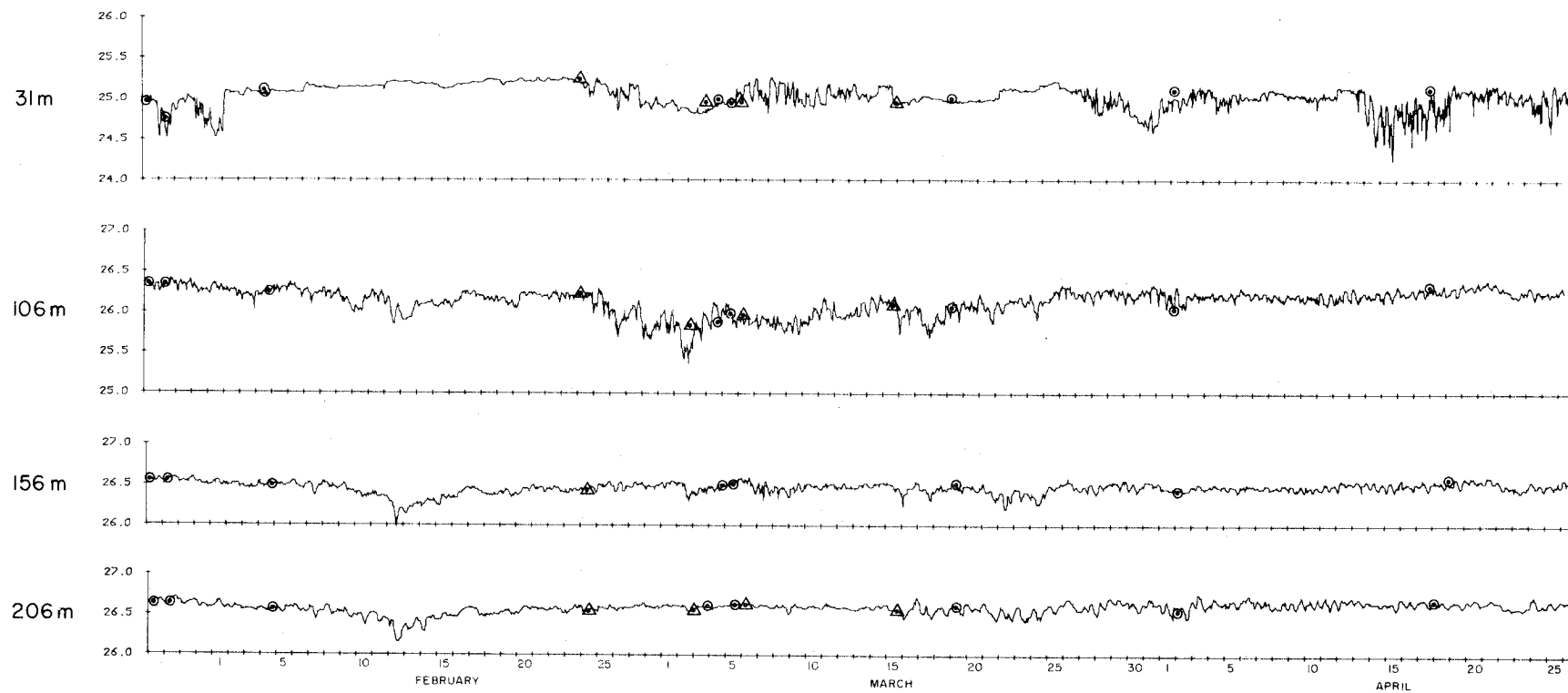
38



SALINITY, WISTERIA



SIGMA-T, WISTERIA



UP-75 Installation

OHIA

Position: 44°59.3'N, 124°43.8'W

Depth of Water: 543 m

Set at 1815 GMT 26 April 1975 by R/V CAYUSE

Retrieved at 1324 GMT 29 July 1975 by R/V YAQUINA

Data Interval: 2207 GMT 26 April to 1547 29 July

Instrumentation

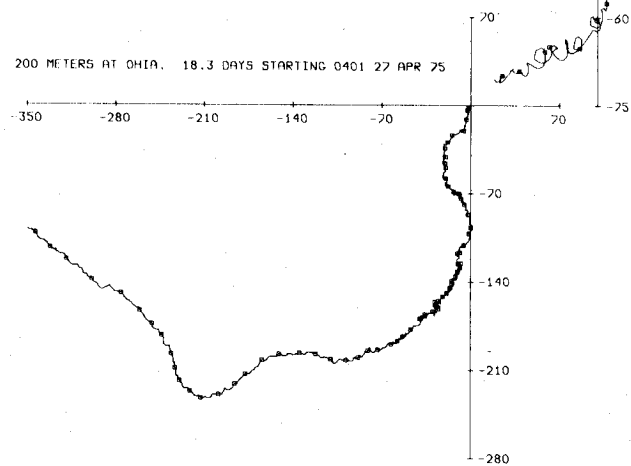
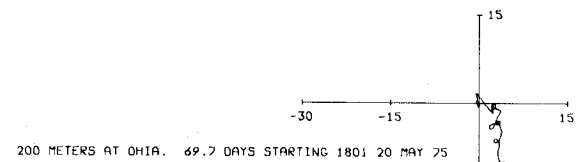
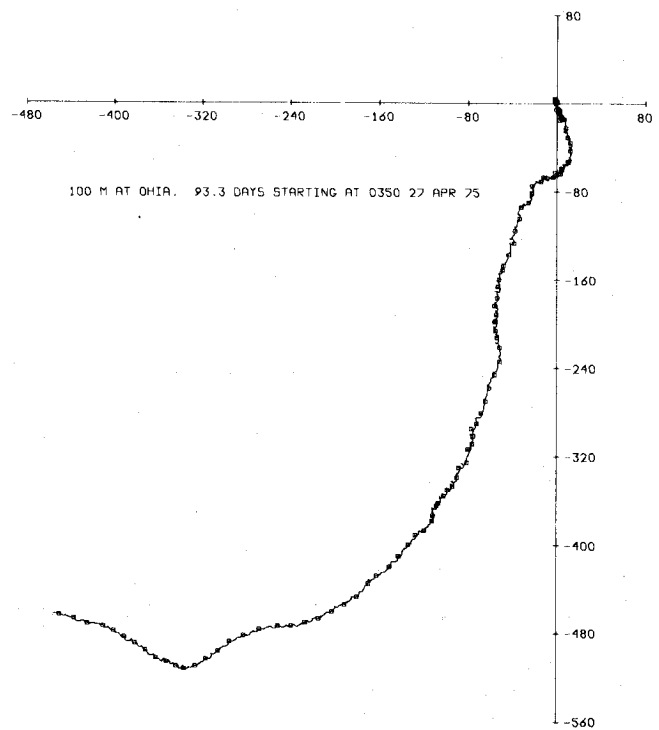
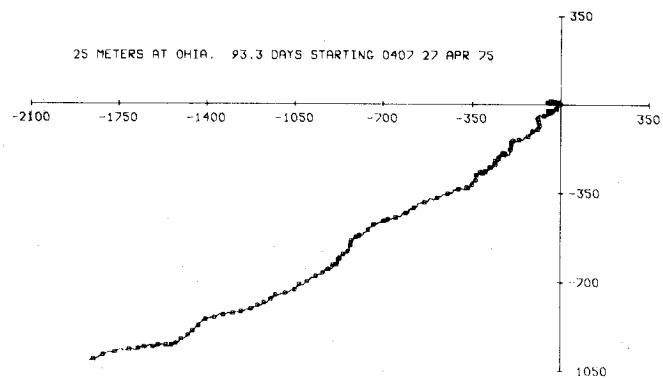
<u>Intended Depth</u>	<u>Actual Depth</u>	<u>RCM4 Serial No./Tape No.</u>
25 m	7 m	686/24
100 m	82 m	689/17
200 m	182 m	1530/4
300 m	282 m*	1532/4
400 m	382 m*	1533/4
500 m	482 m*	1537/4

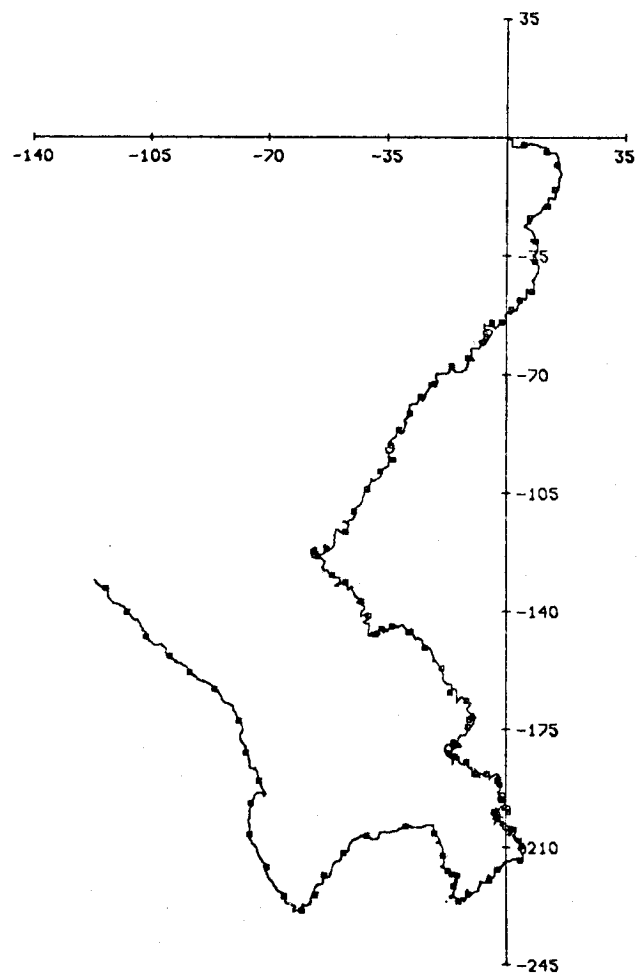
Data were recorded every 20 minutes. Two top meters recorded current speed and direction, temperature, pressure and conductivity. Bottom four meters recorded current speed and direction, and temperature. At the top current meter, conductivity data was below the minimum of the instrument for several hours on 25 May 1975. The 200 m meter's speed sensor failed at 1800 GMT 15 May and recovered at 1200 GMT 20 May. In processed data file, speed, u, and v have been zeroed from line 905 to 1132 inclusive. These lines weren't used in computing speed, u, and v statistics.

* The pressure records show that the upper two current meters, whose nominal depths were 25 m and 100 m, actually set at 7 m and 82 m. This may indicate (a) that the water depth at the mooring was 18 m shallower than estimated, in which case all six of the current meters were 18 m shallower than their nominal depths, or (b) that one or more of the cable lengths below the 100 m instrument were too long. We believe the former is more likely.

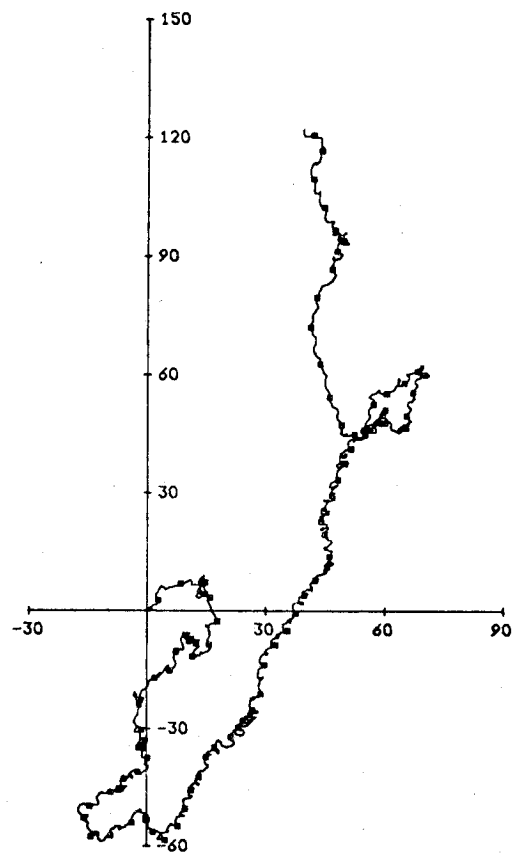
OHIA

	MEAN	S.D.	MAX	MIN
7 m				
S (cm/sec)	48.4	13.1	81.4	1.3
U (cm/sec)	-23.1	31.9	81.3	-78.4
V (cm/sec)	-12.6	28.3	73.4	-72.9
T (C)	12.5	1.8	16.4	9.2
P (db)	6.9	1.1	1.12	4.8
S (o/oo)	31.29	0.74	32.01	26.25
S (o/oo)	30.55	1.20	32.13	25.90
82 m				
S (cm/sec)	17.5	4.4	37.3	2.4
U (cm/sec)	-5.7	11.2	25.5	-28.2
V (cm/sec)	-5.7	11.6	27.9	-35.0
T (C)	8.0	0.3	8.8	7.3
P (db)	82.7	0.8	85.4	80.9
S (o/oo)	33.35	0.12	33.67	32.91
182 m				
S (cm/sec)	14.8	6.7	52.4	1.6
U (cm/sec)	-4.8	9.9	34.3	-49.6
V (cm/sec)	-2.2	11.3	40.7	-28.6
T (C)	7.0	0.3	7.6	6.4
282 m				
S (cm/sec)	11.3	2.5	21.2	1.1
U (cm/sec)	-1.5	7.6	15.8	-18.1
V (cm/sec)	-1.6	8.4	15.8	-18.3
T (C)	6.2	0.1	6.6	5.9
382 m				
S (cm/sec)	10.3	2.4	19.5	2.0
U (cm/sec)	0.5	7.7	16.1	-15.6
V (cm/sec)	1.5	7.0	19.0	-15.2
T (C)	5.6	0.1	6.0	5.4
482 m				
S (cm/sec)	8.1	2.6	17.5	0.7
U (cm/sec)	0.3	4.6	14.8	-10.7
V (cm/sec)	4.5	5.7	17.5	-12.7
T (C)	5.2	0.1	5.6	4.9

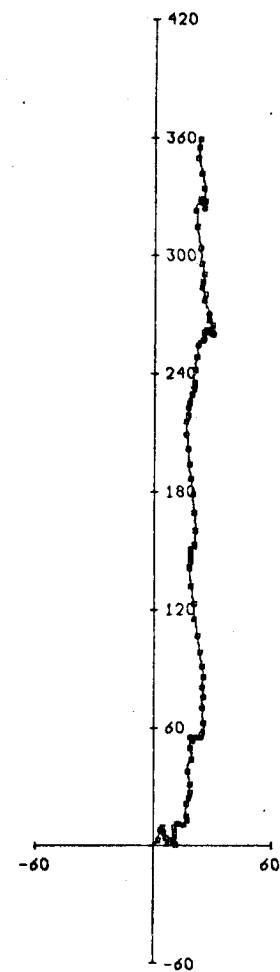




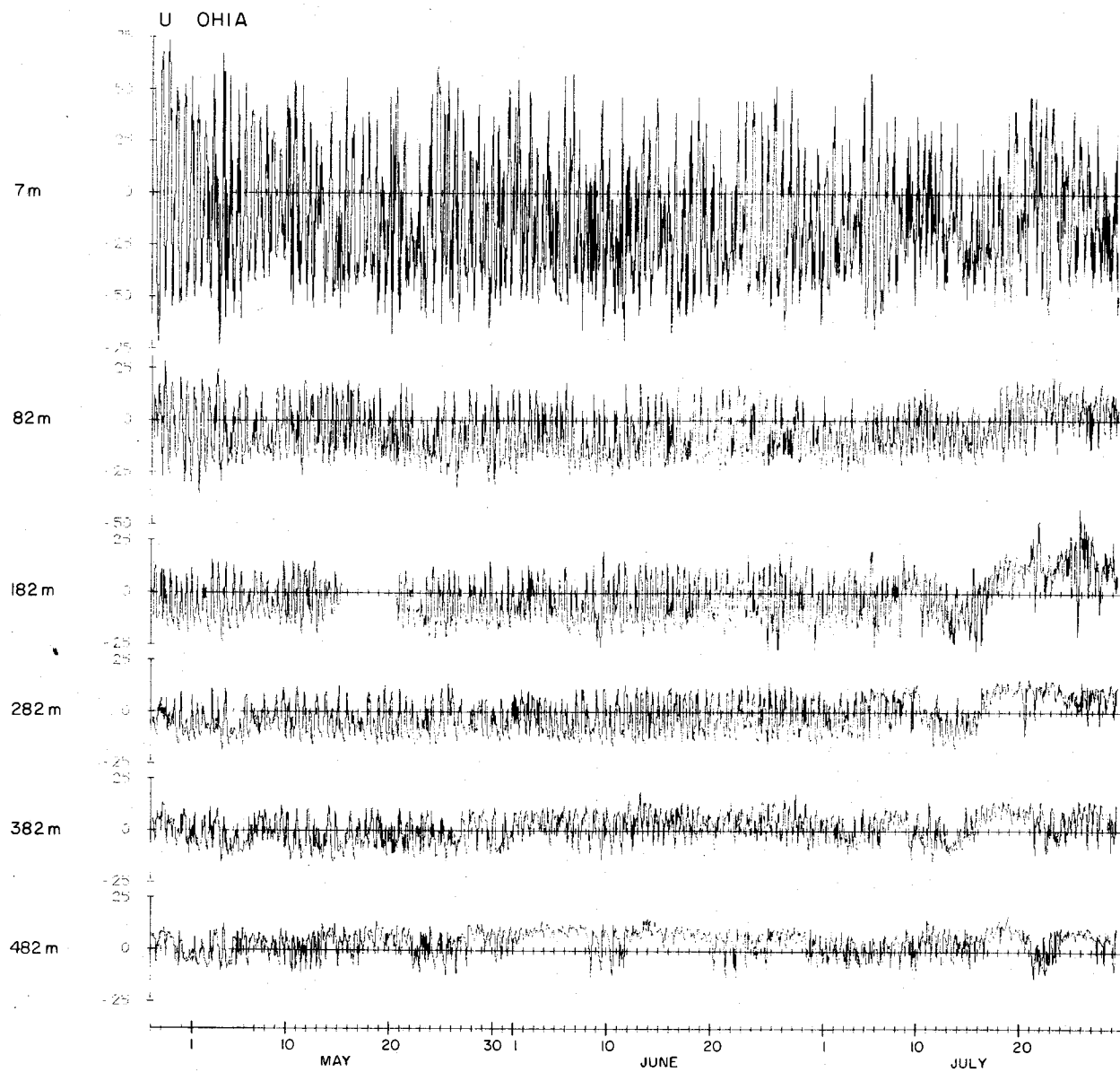
300 M AT OHIA. 93.3 DAYS STARTING 0403 27 APR 75

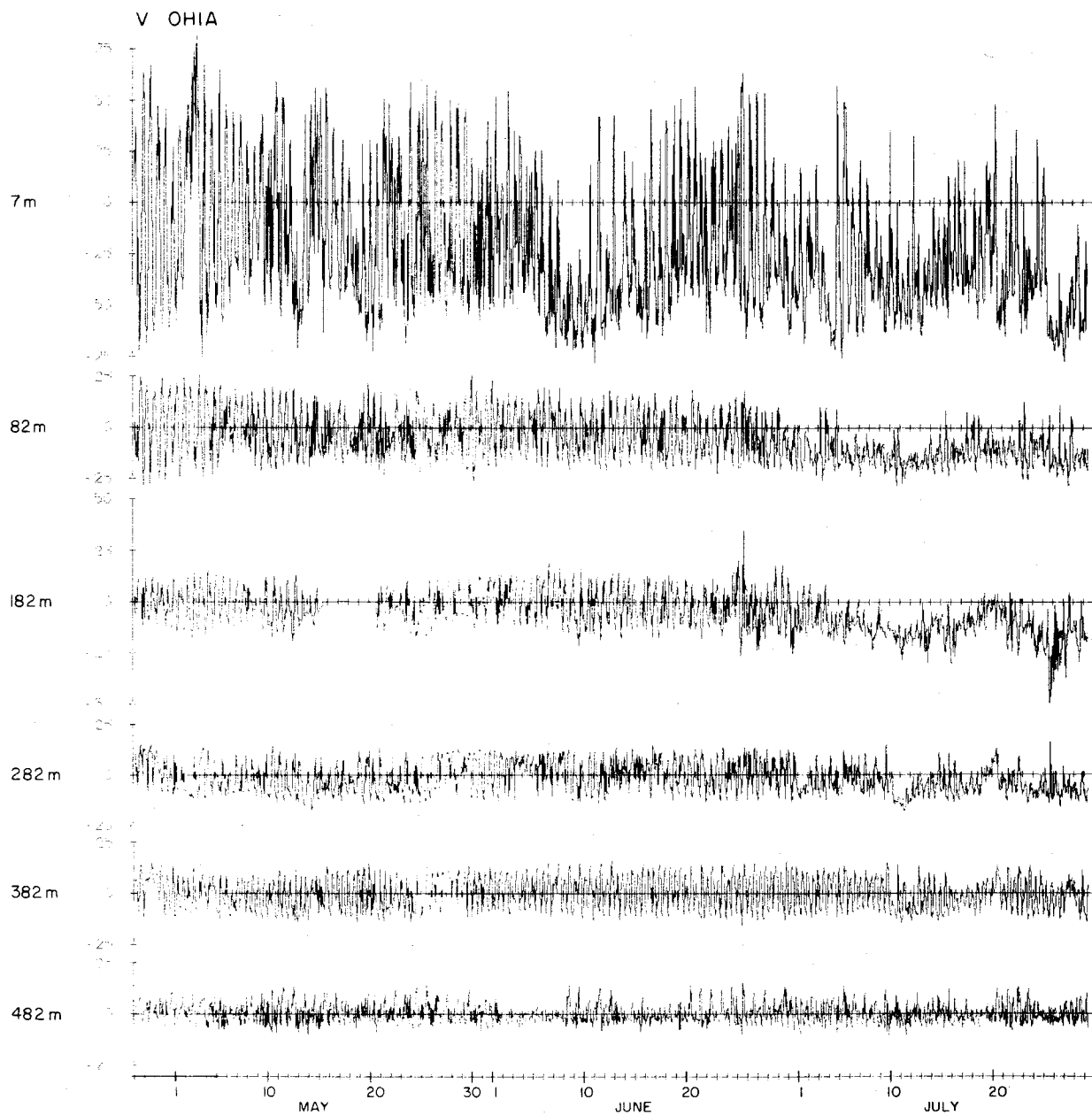


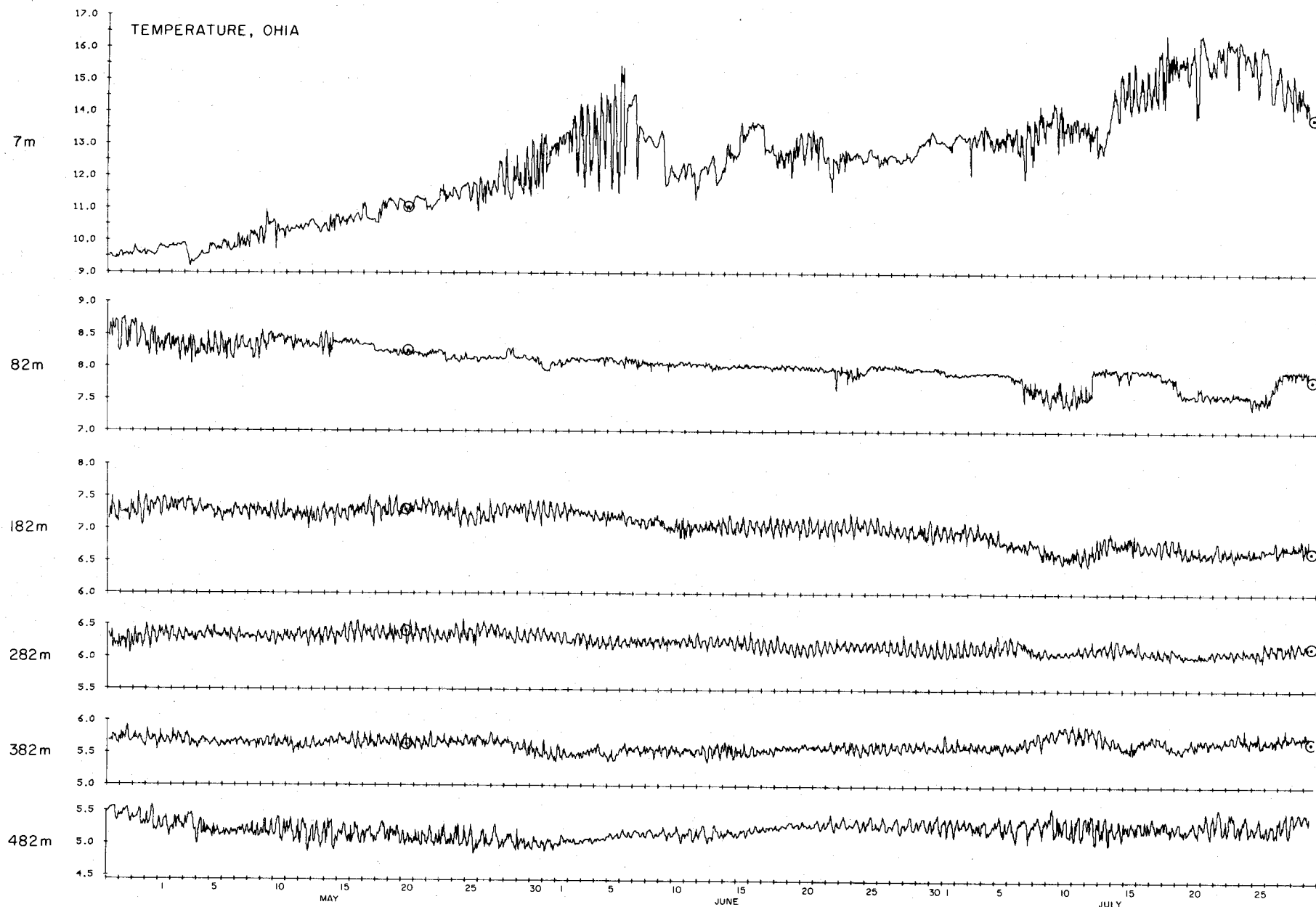
400 M AT OHIA. 93.3 DAYS STARTING 0404 27 APR 75

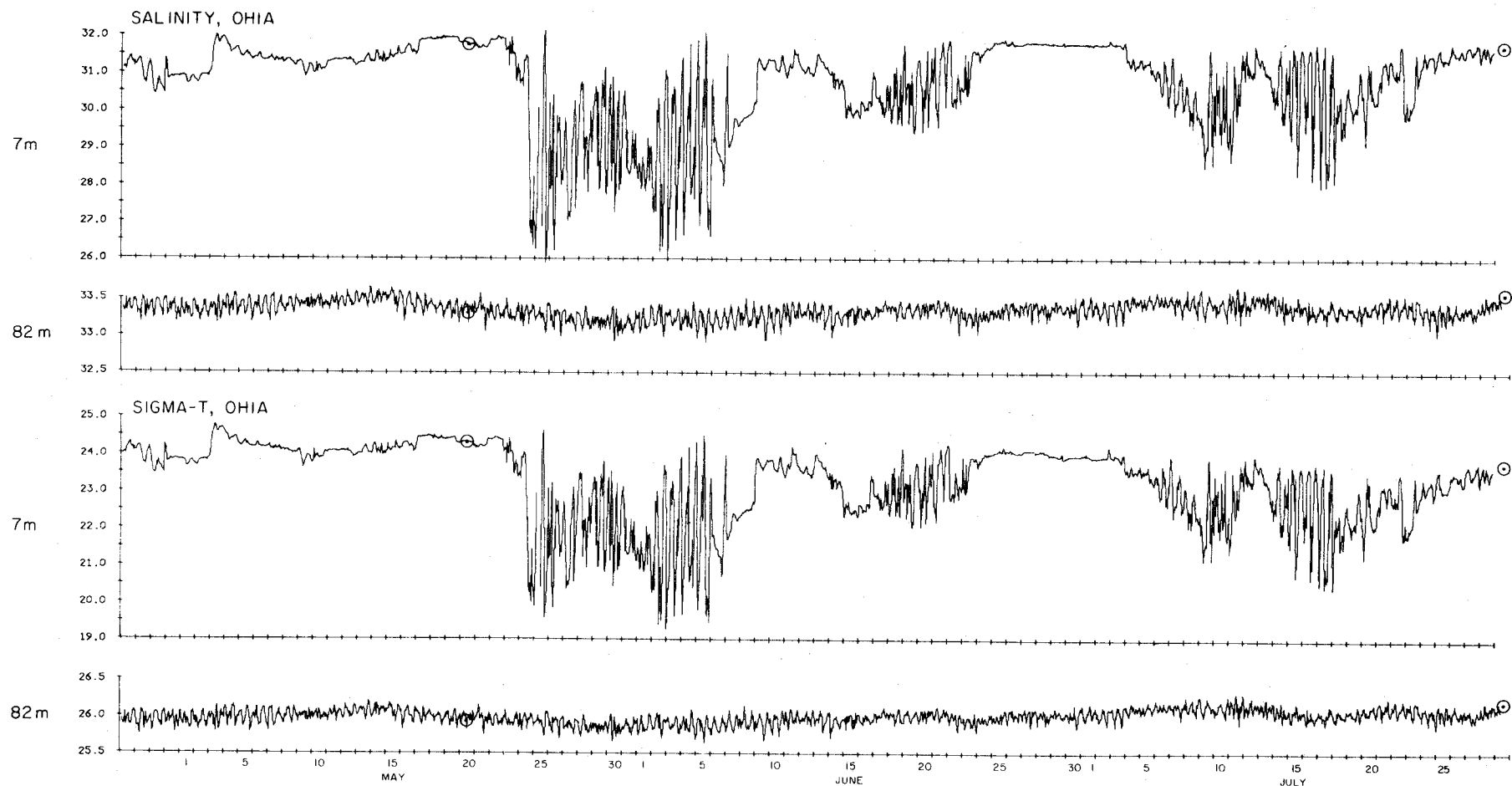


500 M AT OHIA. 93.3 DAYS STARTING 0408 27 APR 75









UP-75 Installation

SUNFLOWER (B)

Position: 44°59.8'N, 124°09.8'W

Depth of Water: 100 m

Set at 1857 GMT 27 April 1975 by R/V CAYUSE

Retrieved at 0040 GMT 29 July 1975 by R/V YAQUINA

Data Interval: 1943 GMT 27 April to 0023 GMT 29 July

Instrumentation

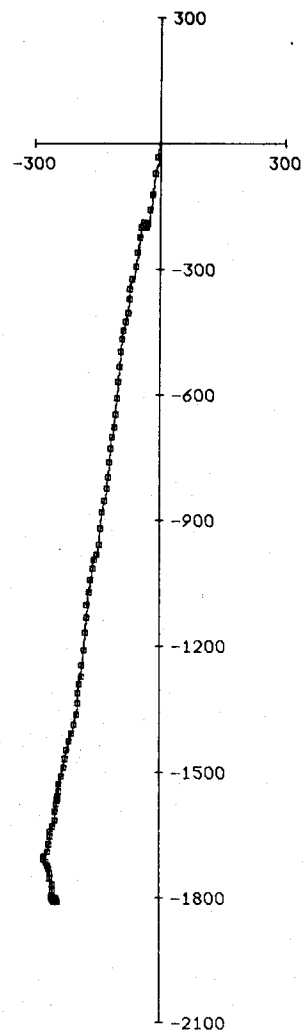
<u>Intended Depth</u>	<u>Actual Depth</u>	<u>RCM4 Serial No./Tape No.</u>
25 m	27 m	682/26
50 m	52 m	268/34
75 m	78 m	1539/4
90 m	93 m	684/23

Data were recorded every 20 minutes. All meters recorded current speed and direction. In addition, 27 and 93 m meters recorded temperature, pressure and conductivity, 52 m recorded conductivity, and 78 m recorded temperature.

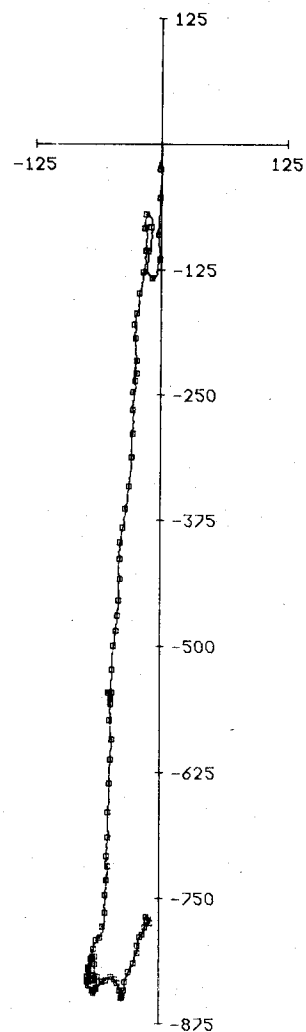
Meter 268 had a 1200:1 speed reduction ratio during this installation, and as a result speed required special processing. At speeds above about 45 cm/sec the wiper of the speed potentiometer made more than a complete circuit during each cycle. Even at lower speeds a large fraction of the speed readings involved crossing the potentiometer's dead zone, whose width is unknown. The record was processed assuming a 9-bit dead zone. There was no interpolation at dead zone crossings, since they constituted such a large part of the record. The resulting speed record was jumpier than usual, probably because the width of the dead zone is not 9 bits. The roughness was then removed with a single hanning. As a result, there may be appreciable error in the immediate vicinity of sharp changes of speed.

SUNFLOWER (B)

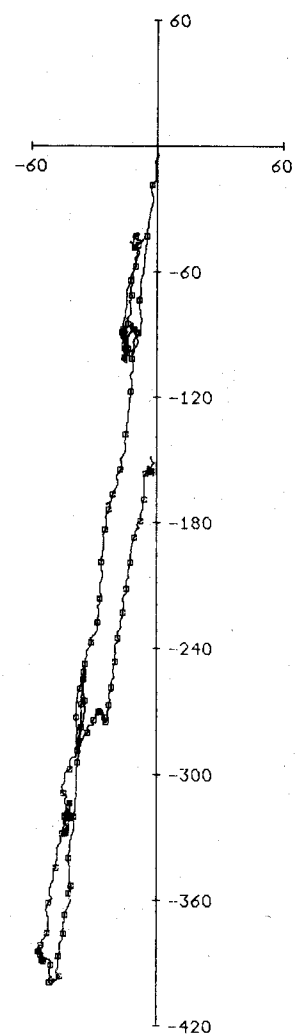
	MEAN	S.D.	MAX	MIN
27 m				
S (cm/sec)	26.7	12.9	66.5	2.0
U (cm/sec)	-3.1	8.2	31.4	-33.1
V (cm/sec)	-22.9	16.7	38.6	-65.3
T (C)	8.0	0.5	10.1	7.3
P (db)	26.6	0.8	28.4	23.9
S (o/oo)	32.88	0.54	33.82	31.22
52 m				
S (cm/sec)	17.6	8.6	51.5	1.2
U (cm/sec)	-0.1	6.2	21.5	-24.9
V (cm/sec)	-9.7	15.9	50.5	-51.2
78 m				
S (cm/sec)	15.0	6.5	61.3	1.5
U (cm/sec)	0.0	6.2	17.1	-19.9
V (cm/sec)	-1.9	15.0	60.0	-43.0
T (C)	7.1	0.3	8.1	6.5
93 m				
S (cm/sec)	12.1	6.7	57.3	0.4
U (cm/sec)	0.6	5.0	24.0	-20.1
V (cm/sec)	0.0	12.9	57.0	-34.4
T (C)	6.9	0.3	7.8	6.3
P (db)	93.0	0.6	94.1	91.1
S (o/oo)	33.83	0.07	34.00	33.65



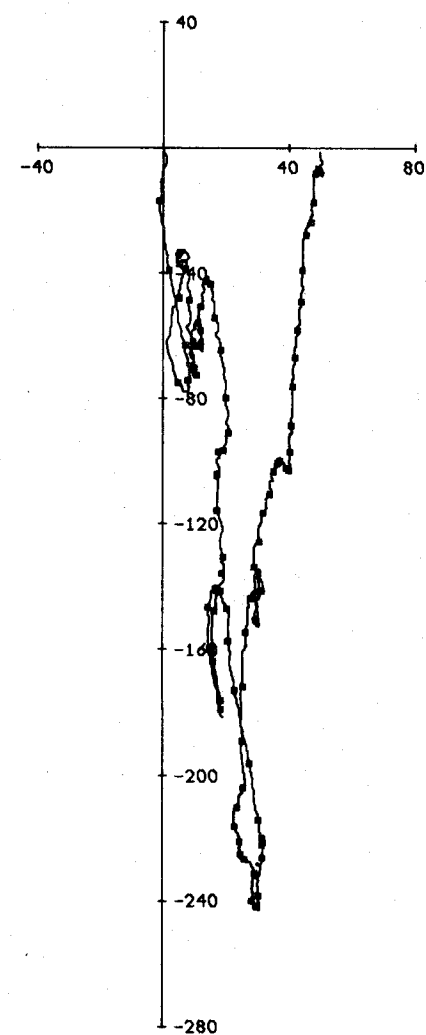
25 M AT SUNFLOWER.



50 M AT SUNFLOWER.

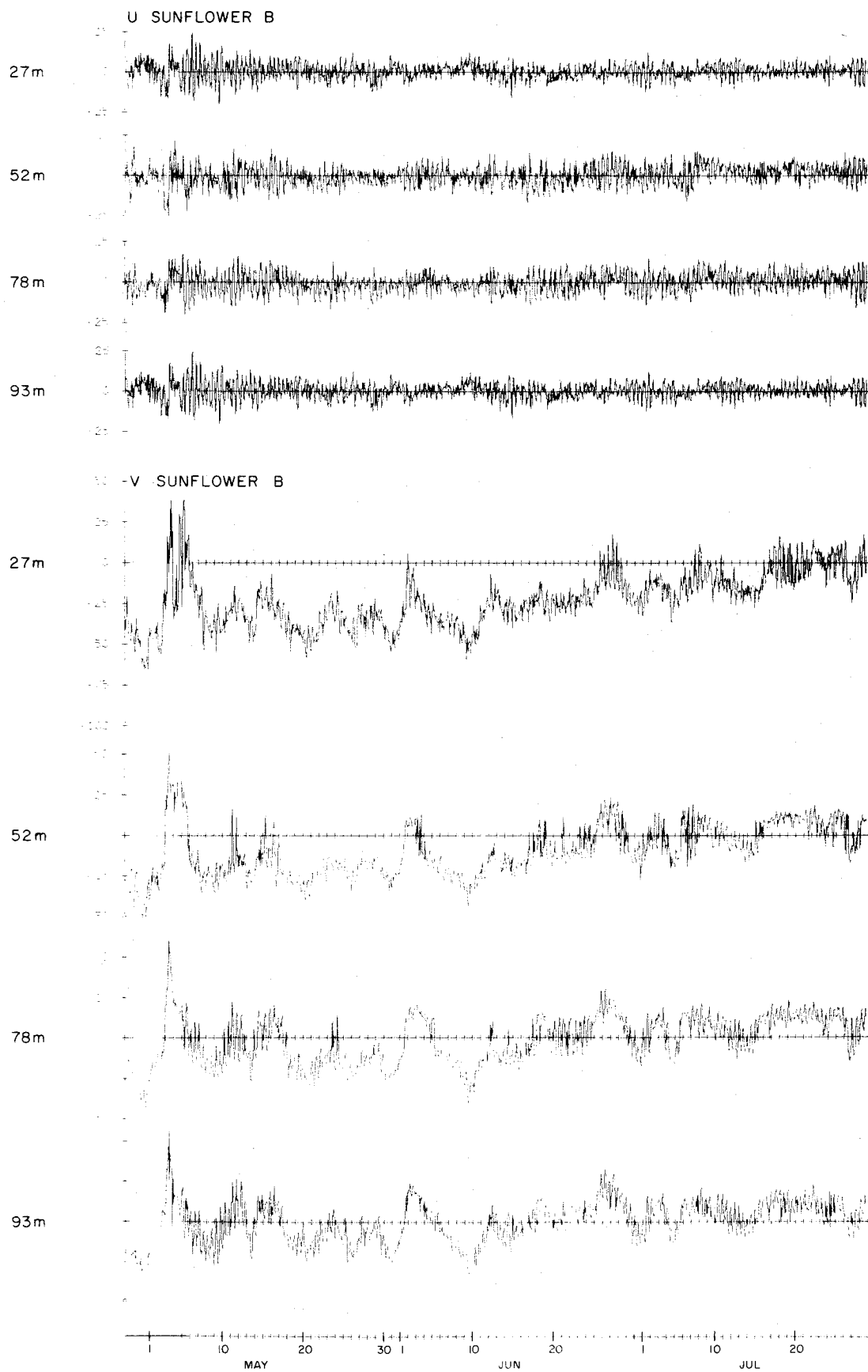


75 M AT SUNFLOWER.

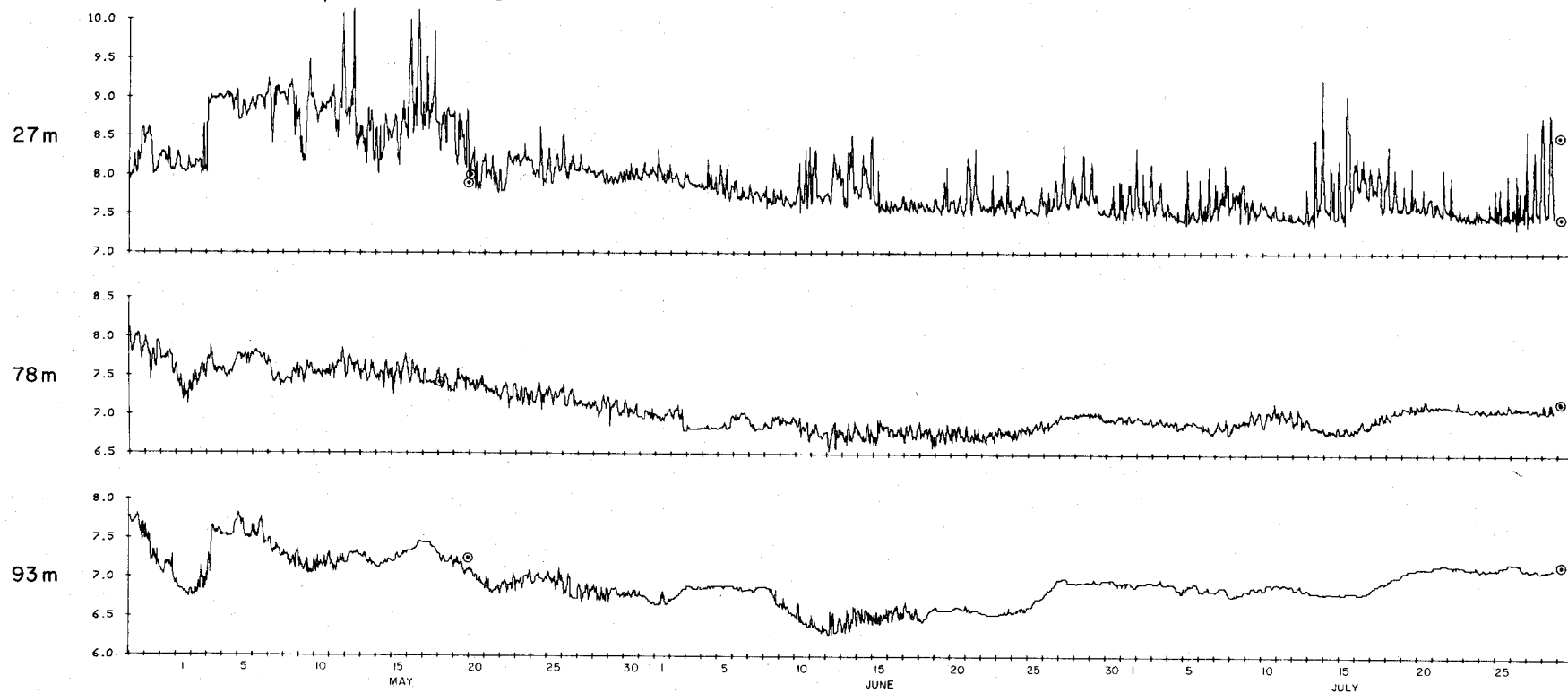


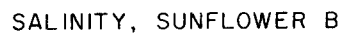
90 M AT SUNFLOWER.

91.7 DAYS STARTING 0144 28 APR 75



TEMPERATURE, SUNFLOWER B





UP-75 Installation

SUNFLOWER (C)

Position: 44°59.75'N, 124°09.1'W

Depth of Water: 95 m

Set at 0215 GMT 29 July 1975 by R/V YAQUINA

Retrieved at 0402 GMT 18 September 1975 by R/V CAYUSE

25 m meter recovered by fisherman on 15 September 1975

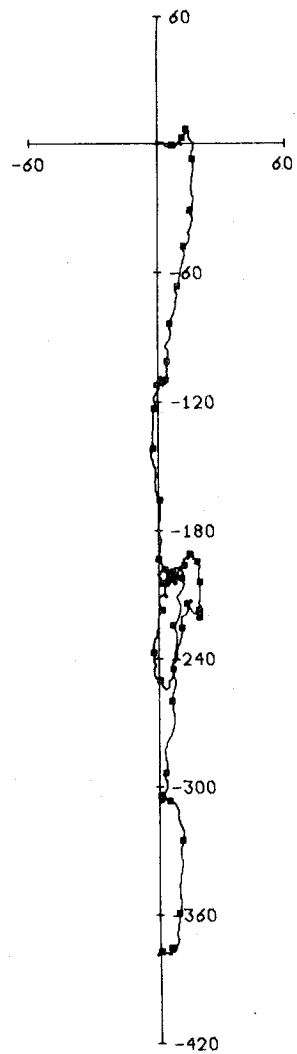
Data Interval: 0247 GMT 29 July to 1547 GMT 12 September

InstrumentationIntended DepthRCM4 Serial No./Tape No.

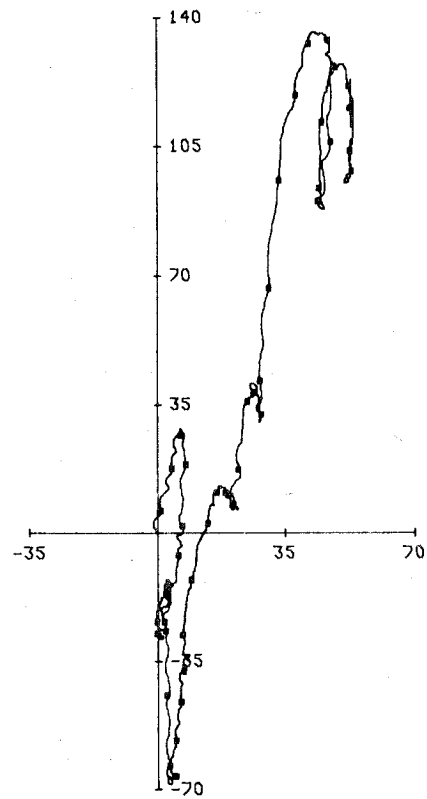
25 m	441/27
75 m	452/31
90 m	503/30

Data were recorded every 20 minutes. All meters recorded current speed and direction. Top two meters recorded temperature also.

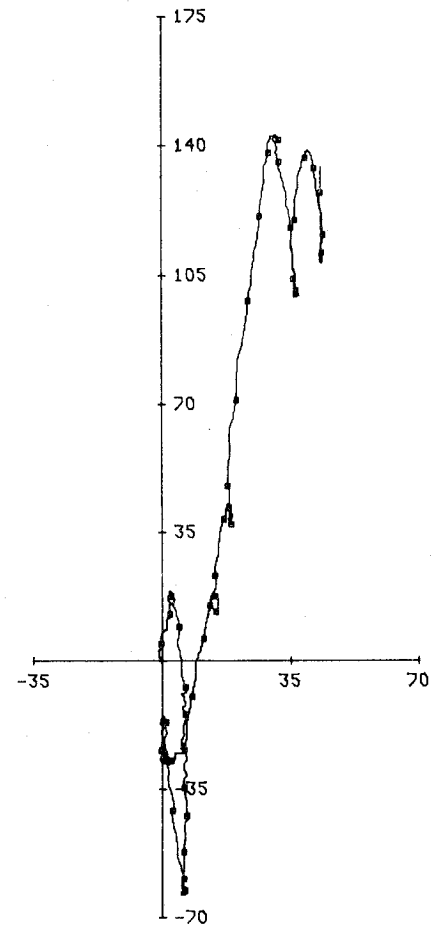
	MEAN	S.D.	MAX	MIN
25 m				
S (cm/sec)	20.0	9.7	54.7	1.1
U (cm/sec)	0.0	9.5	25.1	-23.4
V (cm/sec)	-9.7	17.6	35.6	-54.3
T (C)	7.96	0.91	13.2	7.16
75 m				
S (cm/sec)	16.5	7.0	39.1	1.5
U (cm/sec)	1.4	6.5	17.7	-18.7
V (cm/sec)	3.2	16.3	38.9	-35.7
T (C)	7.11	0.14	7.57	6.74
90 m				
S (cm/sec)	14.4	7.4	34.8	0.7
U (cm/sec)	1.1	4.8	11.8	-17.0
V (cm/sec)	3.4	15.0	34.7	-32.1



25 M AT SUNFLOWER.

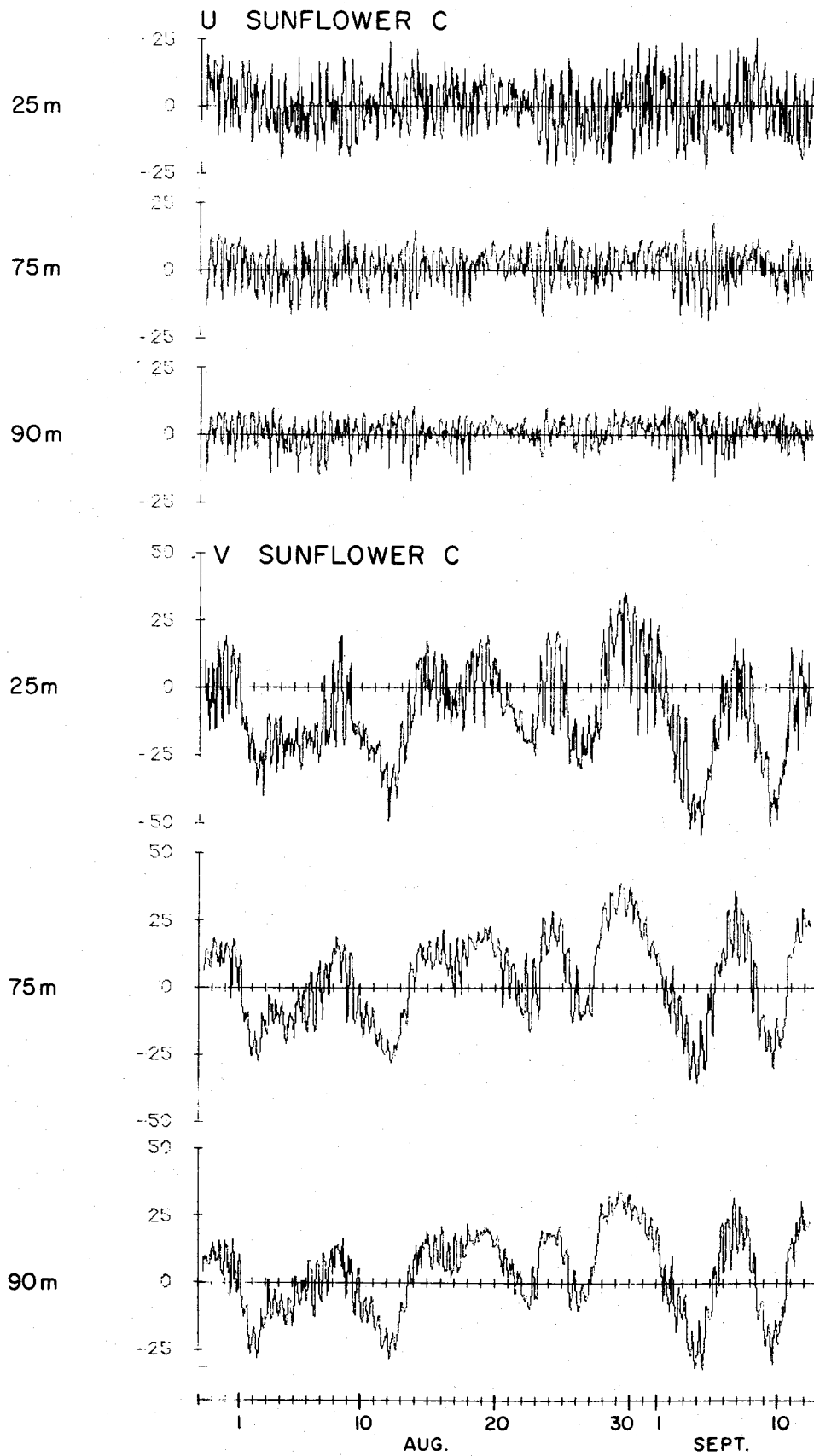


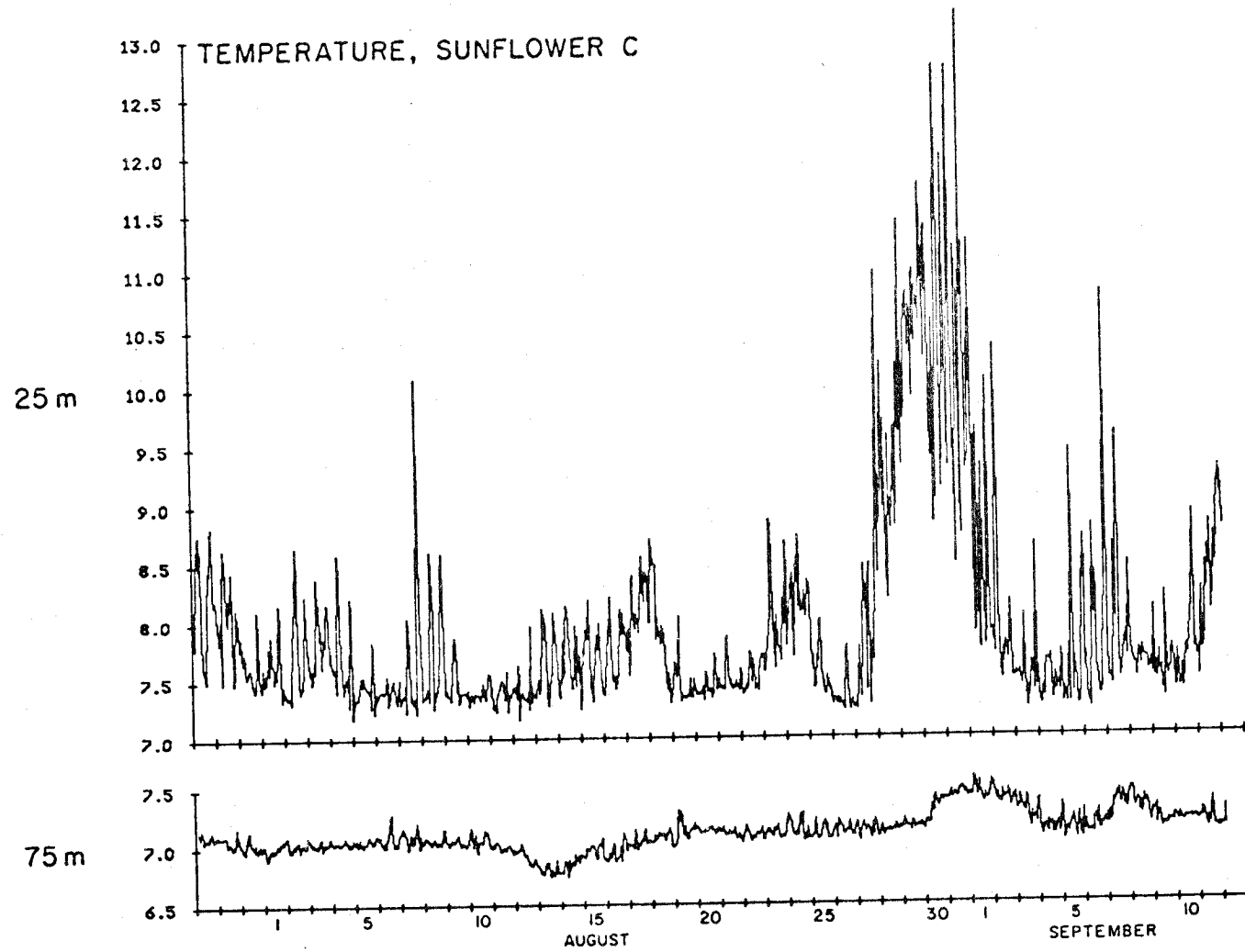
75 M AT SUNFLOWER.



90 M AT SUNFLOWER.

45.1 DAYS STARTING 0847 29 JUL 75





LOW PASSED TIME SERIES OF WIND,
ADJUSTED SEA LEVEL AND OBSERVATIONS
FROM MOORED CURRENT METERS

Low Passed Time Series of Wind, Adjusted Sea Level and Observations from Moored Current Meters

The hourly observations from the current meters were filtered to suppress signals with diurnal and shorter periods. The filter is symmetrical, has 61 unique weights and a half power point at about 40 hours. The filter has been used extensively in earlier observations off Oregon (e.g., Mooers et al., 1968; Smith, 1974). At the beginning and end of the time series, the number of filter weights is reduced so that only 24 hours (instead of 60) are lost at each end.

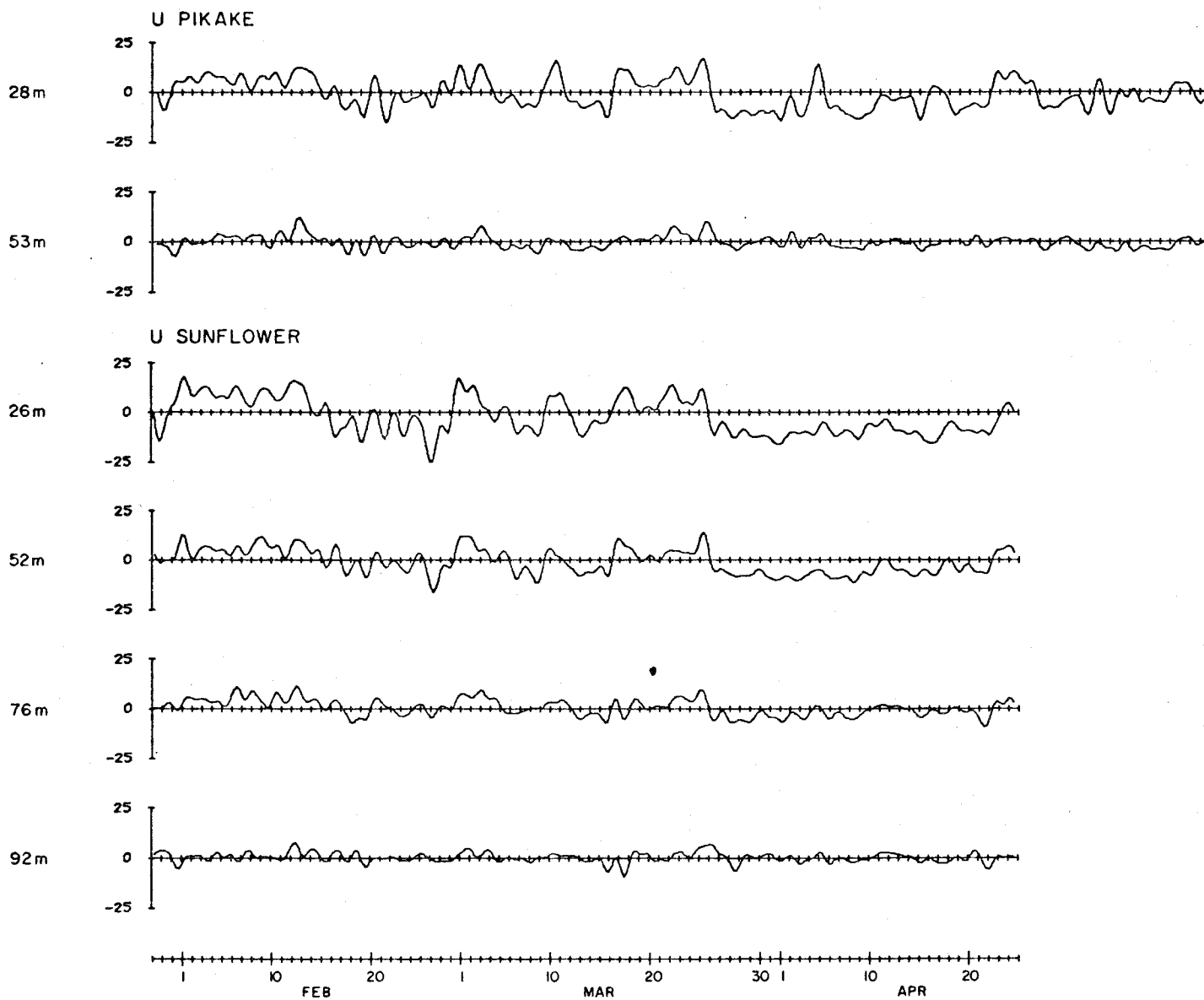
As well as the observations from the current meters, we include in this section observations of the Newport wind and sea level, since both have previously been shown to be related to the oceanography of the shelf water (e.g., Smith, 1974). Hourly observations are made of the wind, sea level and atmospheric pressure. Wind stress is calculated from the hourly wind velocity components:

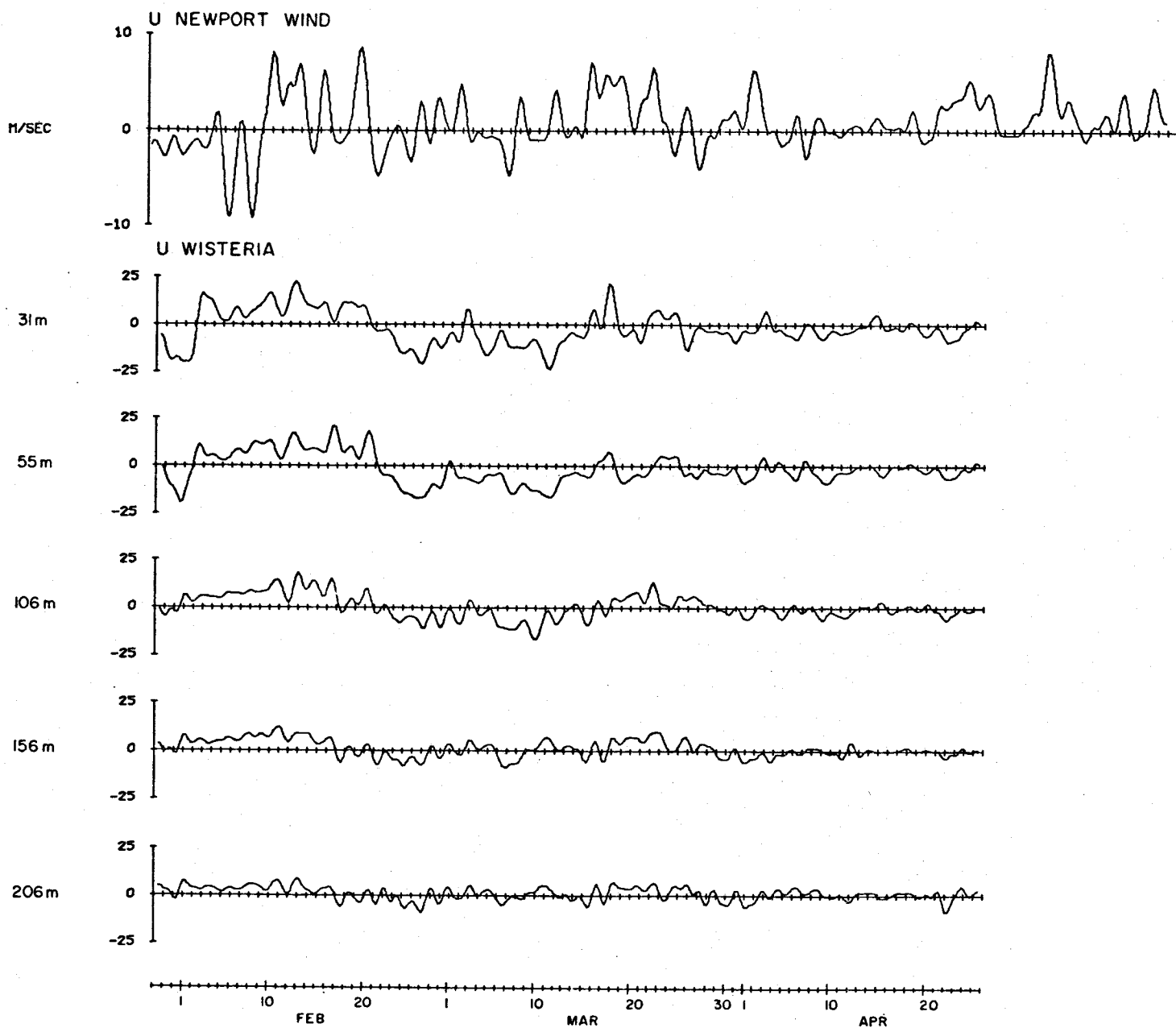
$$\begin{aligned}\tau_x &= 1.25 \times 10^{-3} \times 1.5 \times 10^{-3} (u^2 + v^2)^{\frac{1}{2}} u \\ \tau_y &= 1.25 \times 10^{-3} \times 1.5 \times 10^{-3} (u^2 + v^2)^{\frac{1}{2}} v .\end{aligned}$$

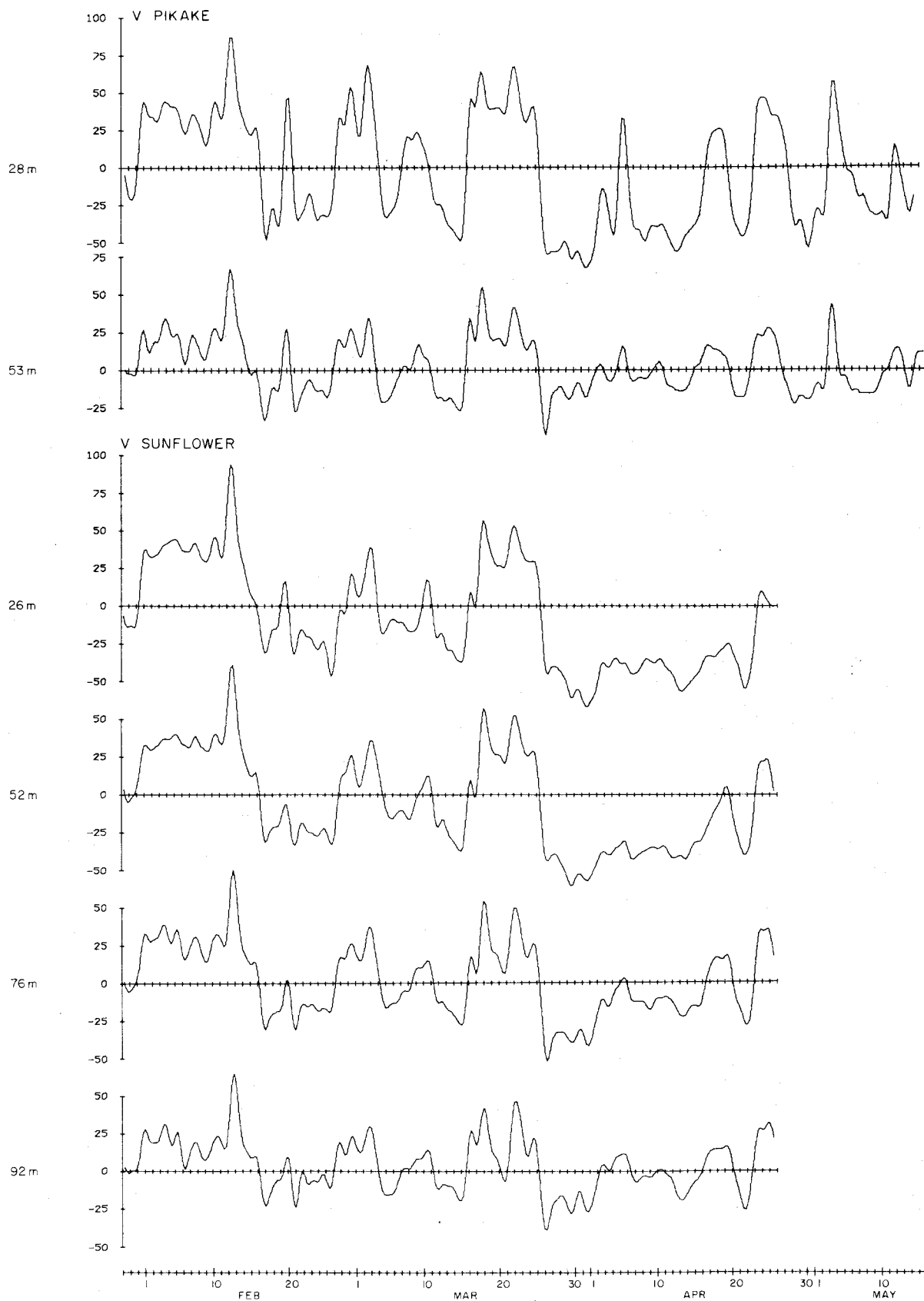
Sea level is adjusted for the inverted barometer effect by adding 1 cm for every 1 mb change in atmospheric pressure. The hourly values of wind velocity, wind stress, and adjusted sea level were low passed in the same way as parameters from the current meters.

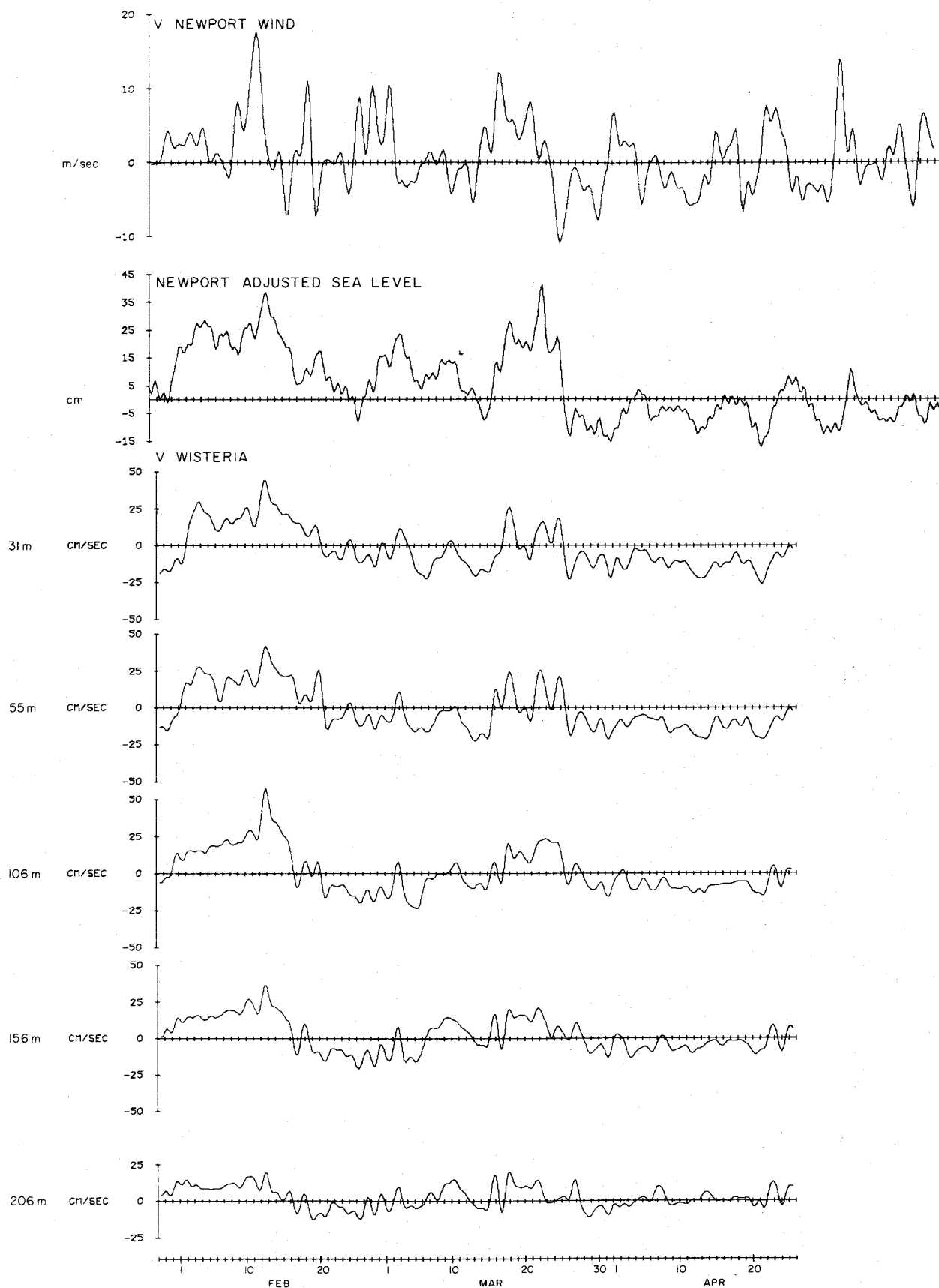
Simultaneous observations of the same parameter from the different moorings are put on the same or facing pages. The eastward component of the wind is shown with the eastward component of the currents. The northward component of the wind and the adjusted sea level are shown with the northward components of the currents. Time series of the current vectors (stick diagrams) are shown with time series of the vector wind stress.

WISP

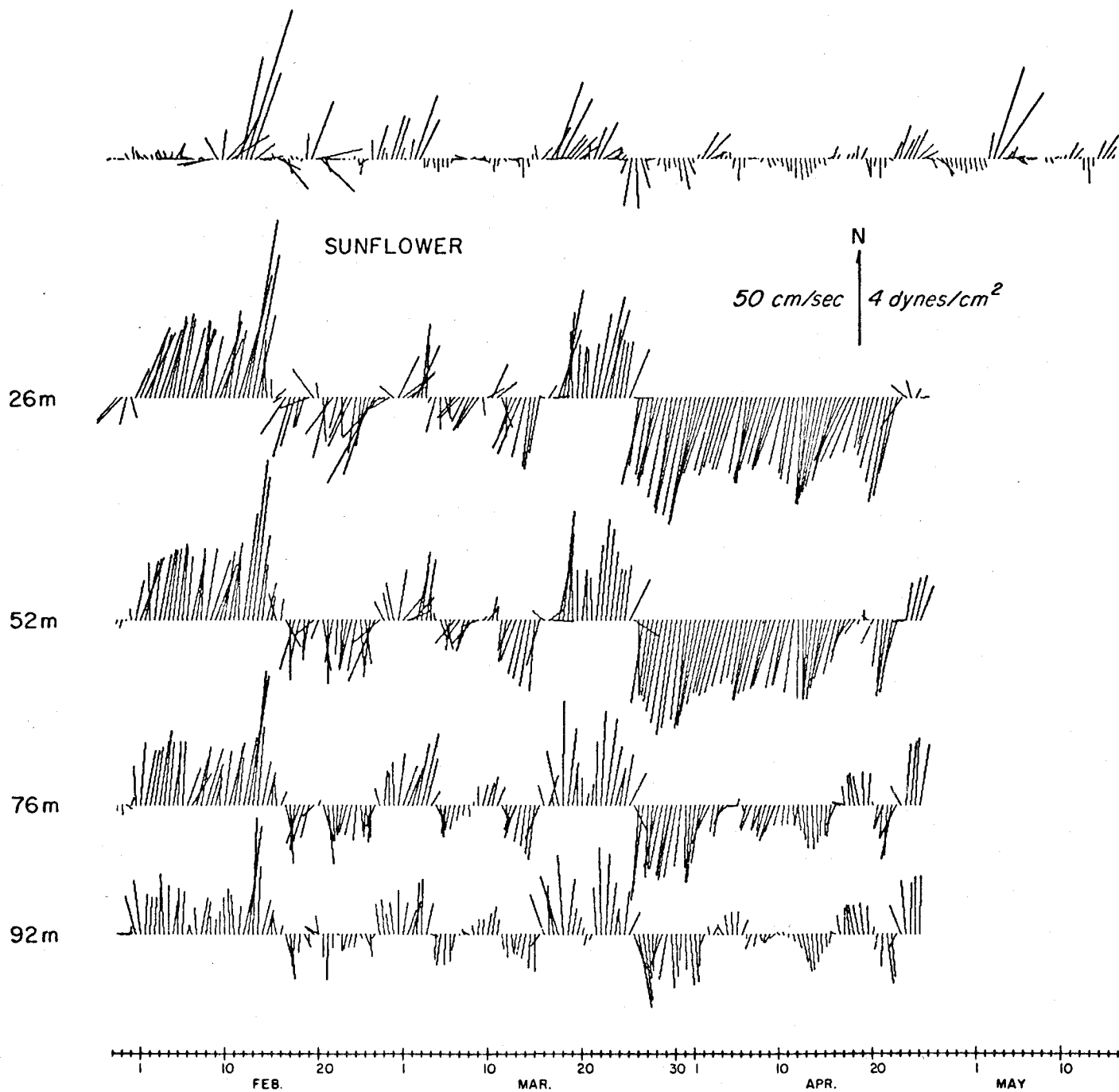




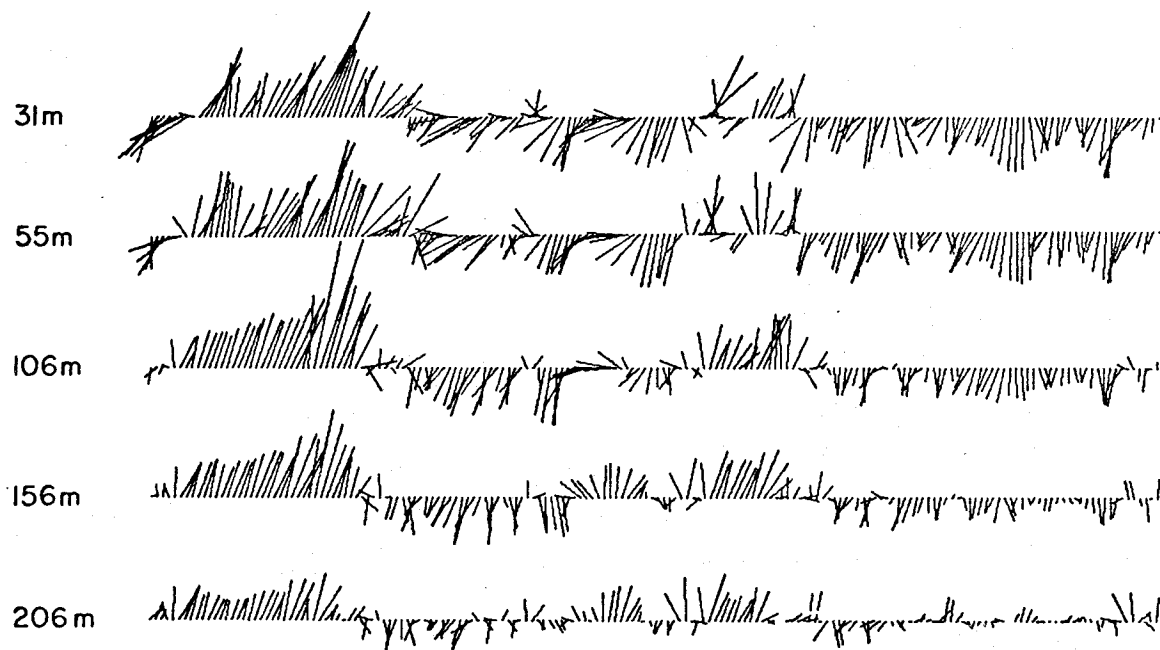




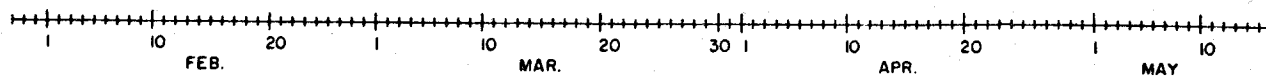
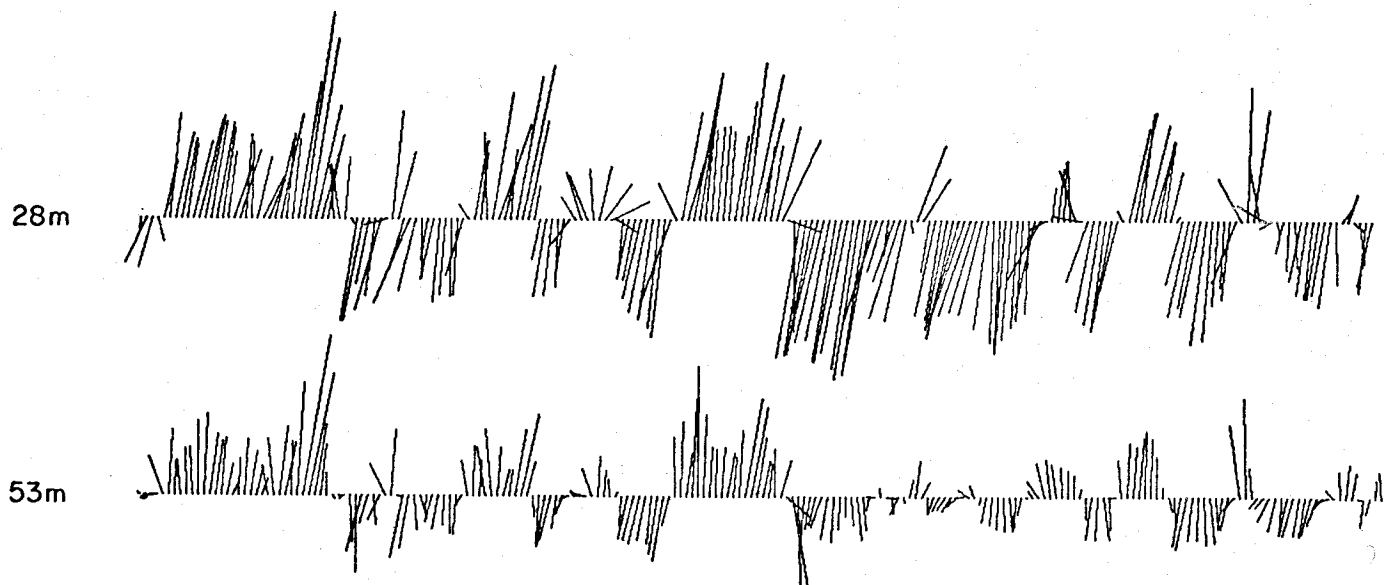
NEWPORT WIND STRESS

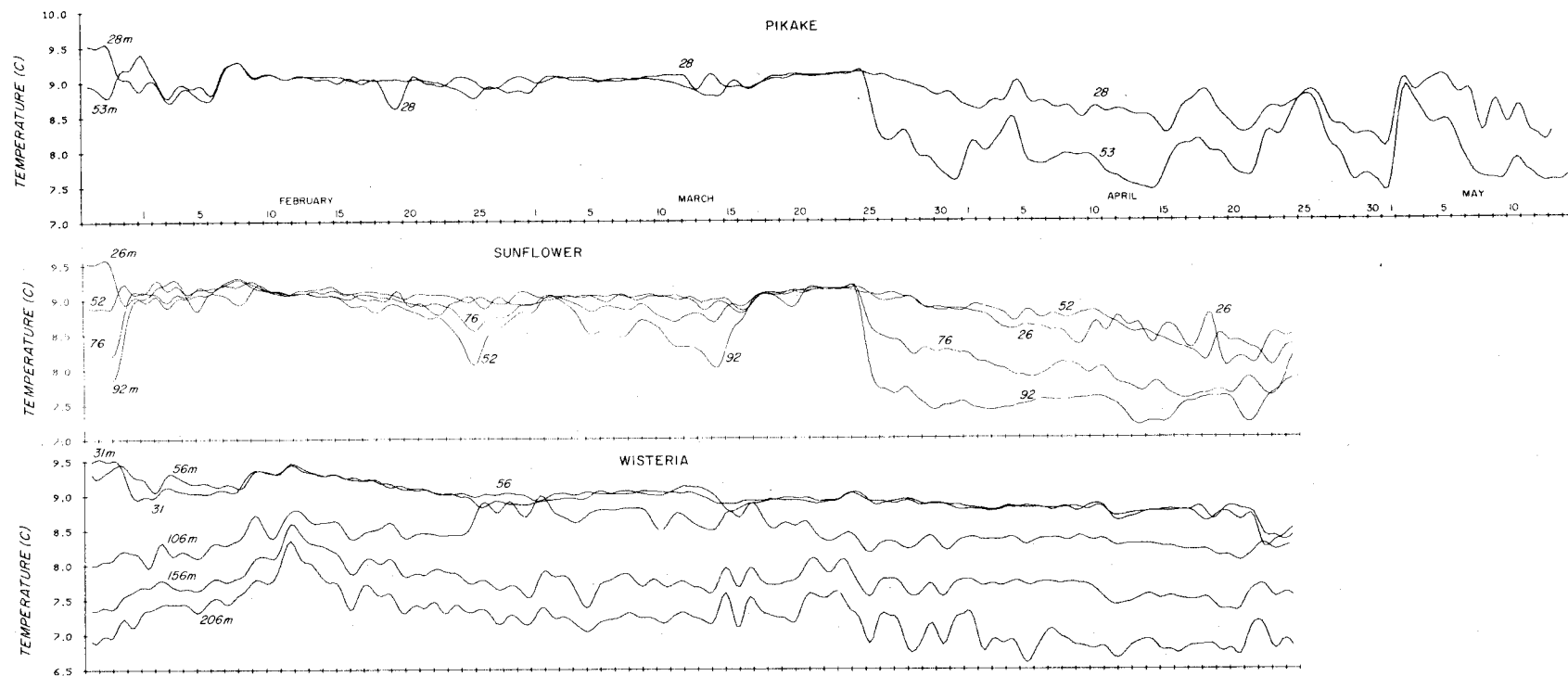


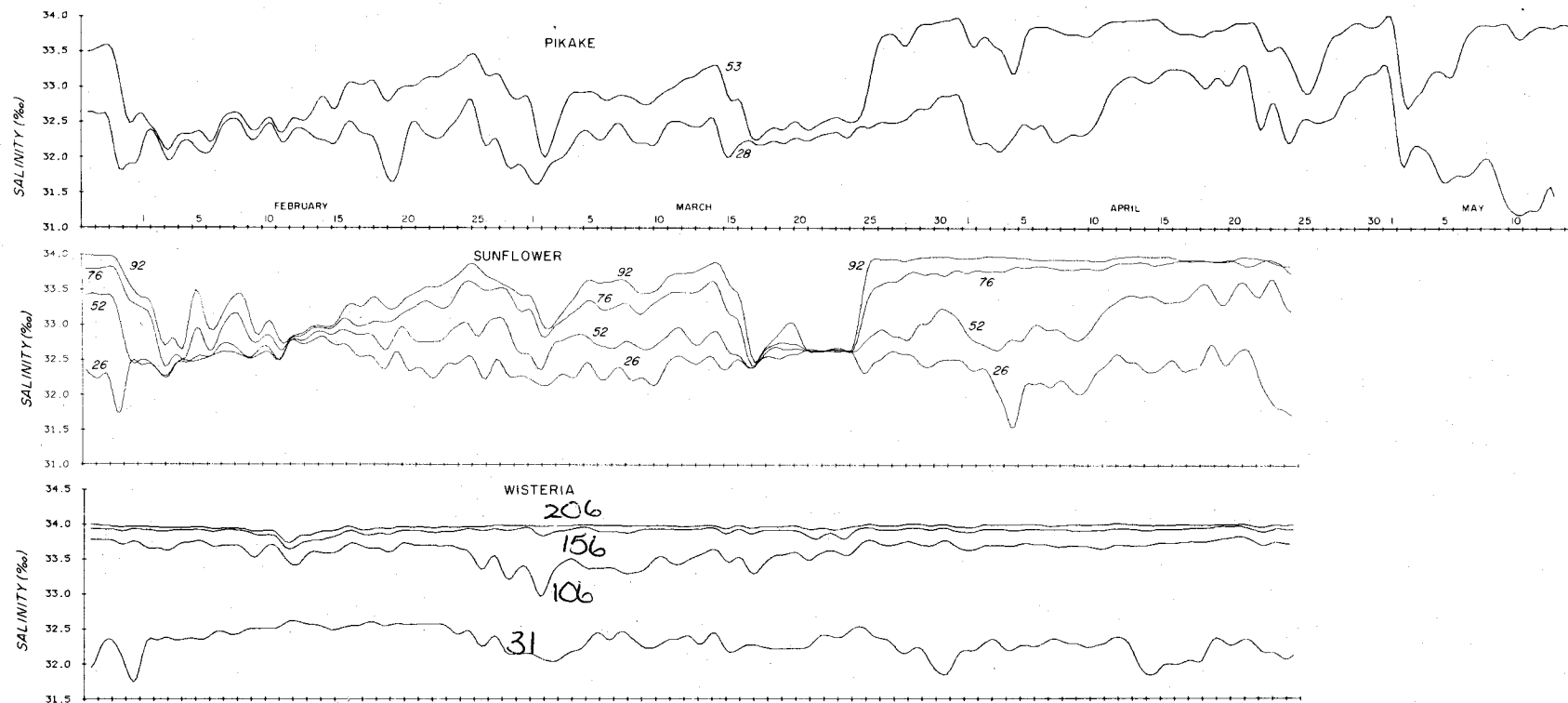
WISTERIA

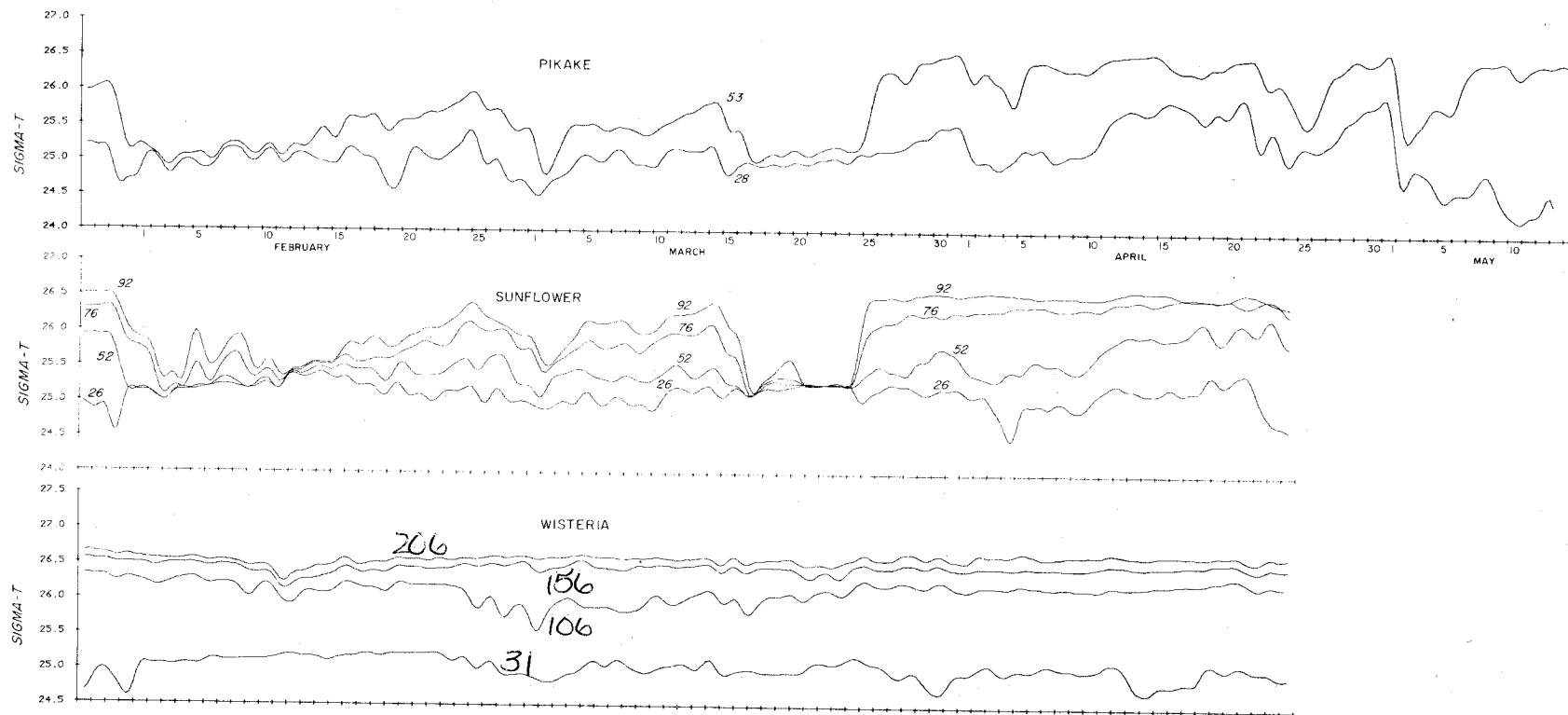


PIKAKE

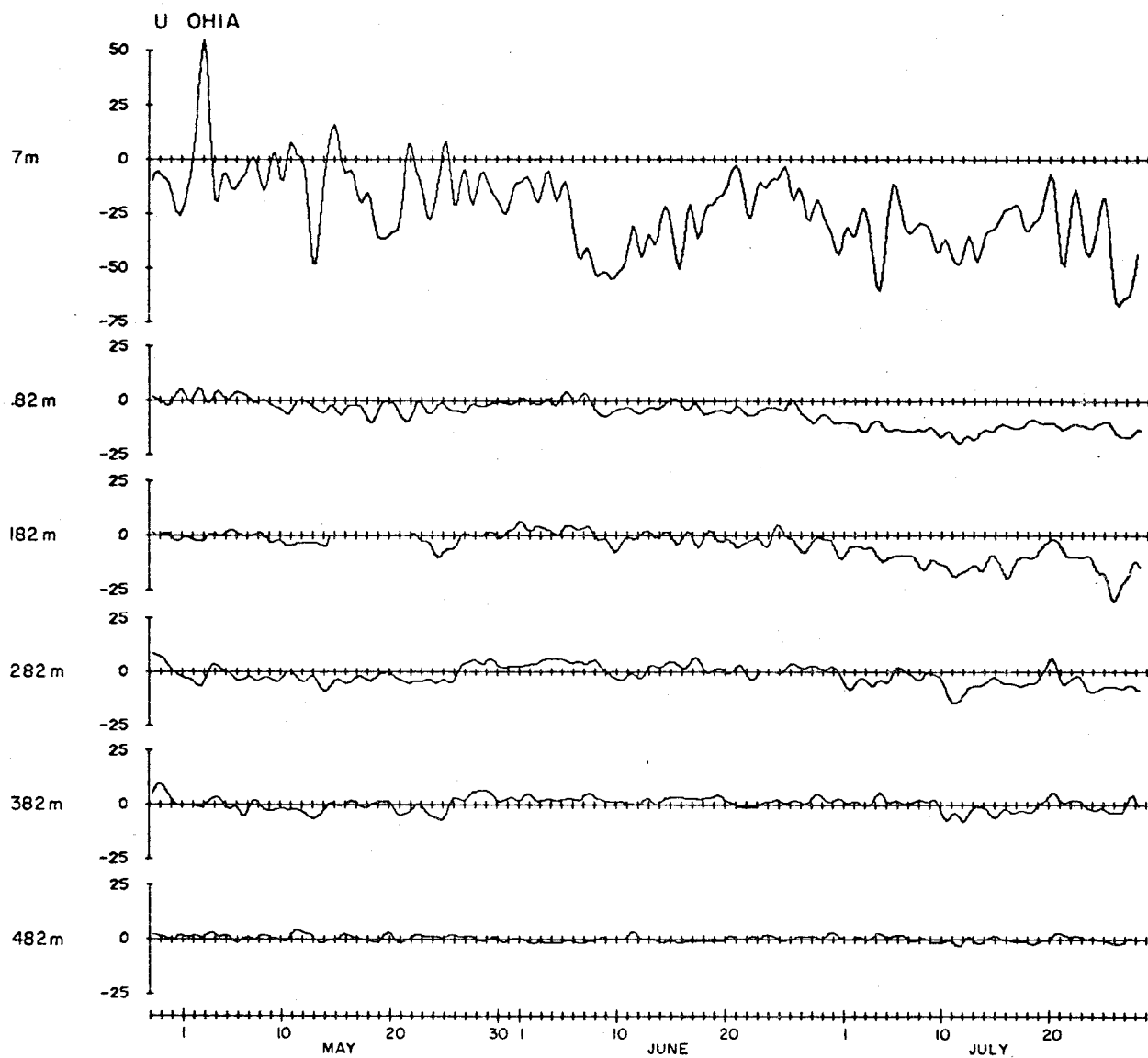


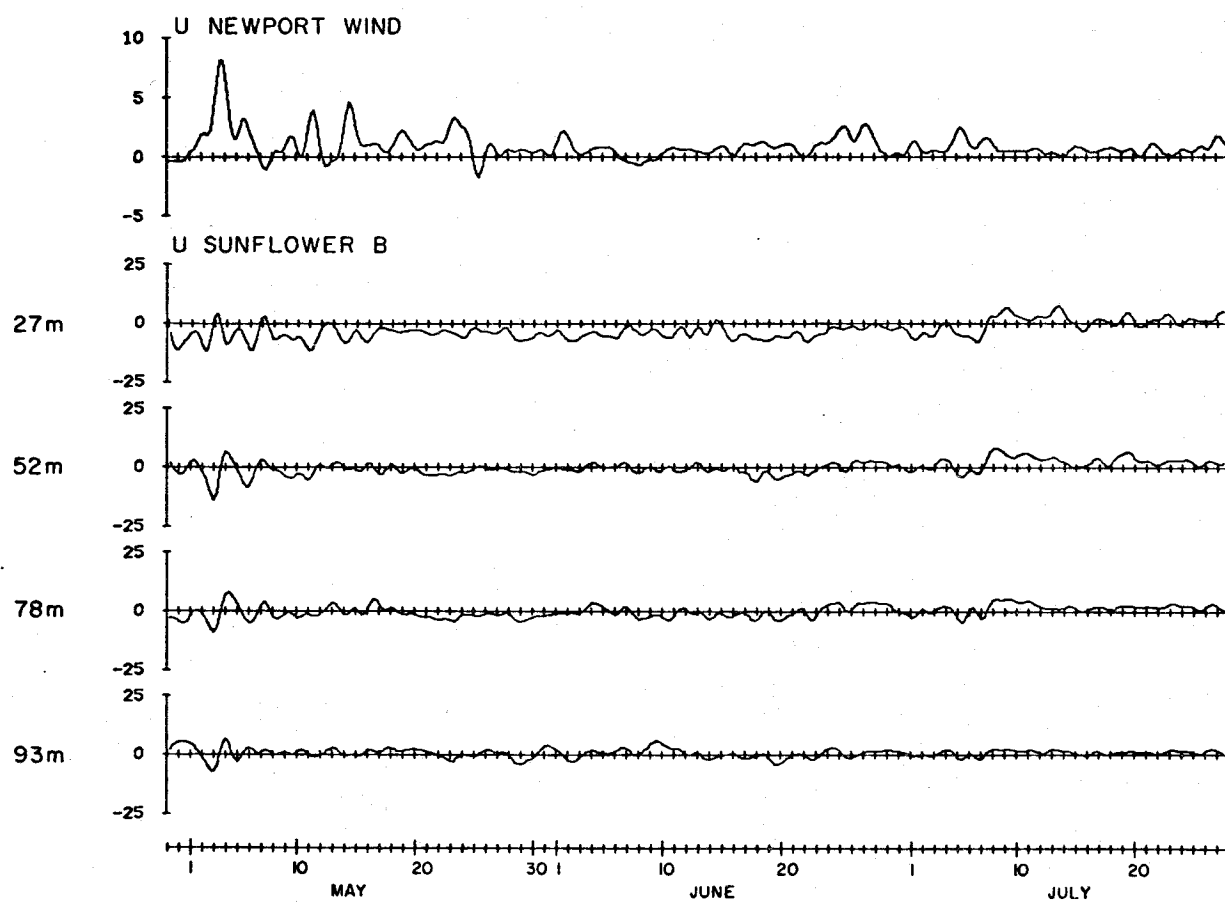


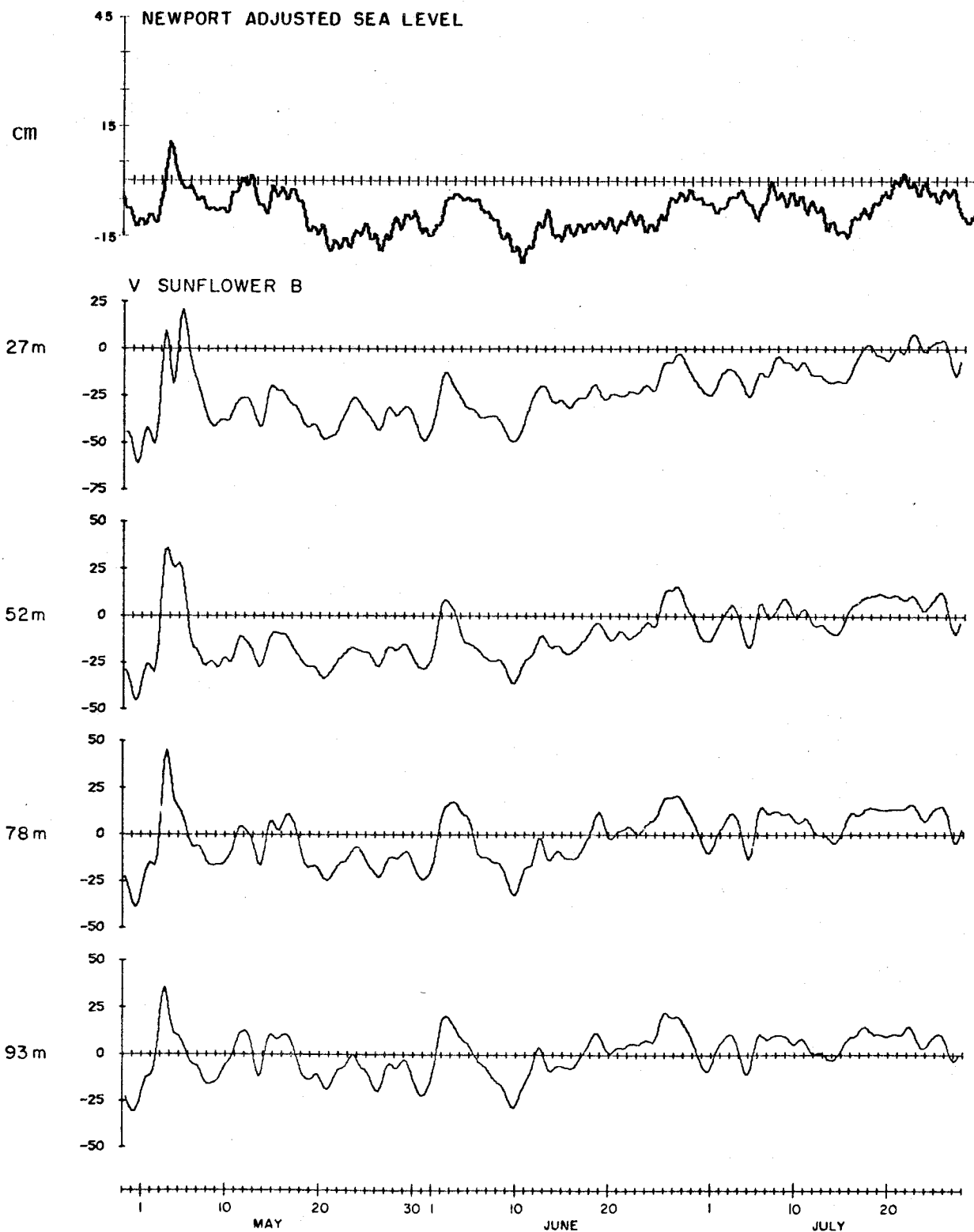


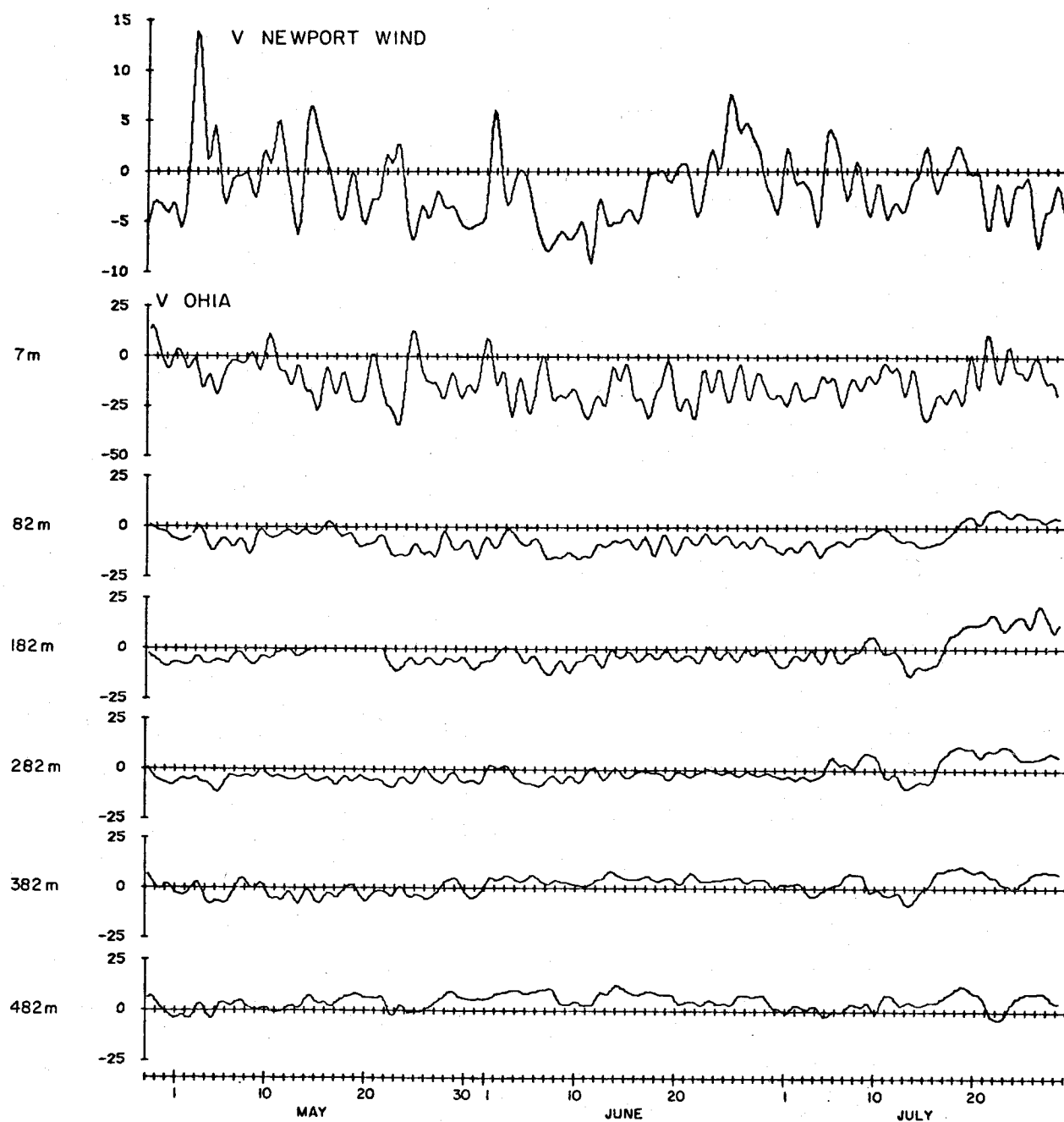


UP-75





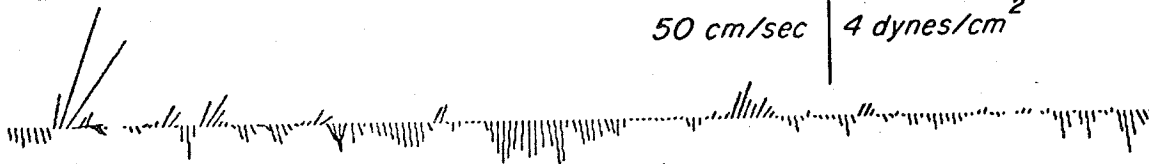




NEWPORT WIND STRESS

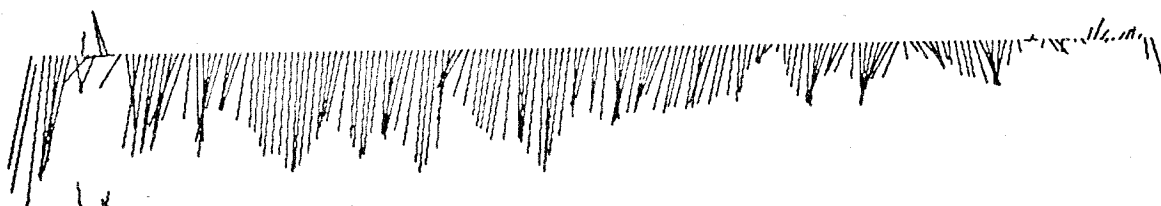
50 cm/sec 4 dynes/cm^2

N



SUNFLOWER B

27m



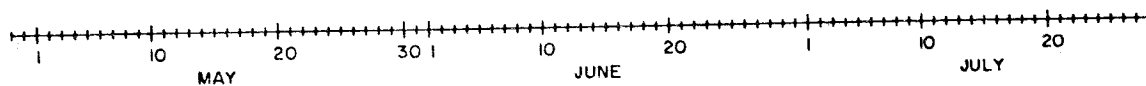
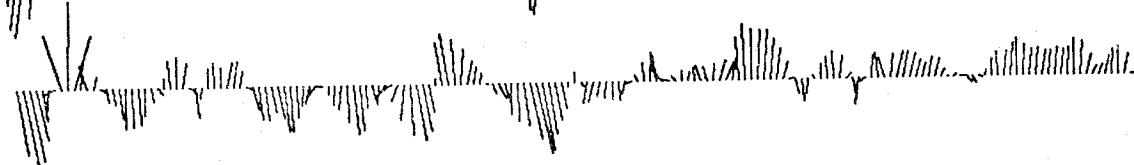
52m

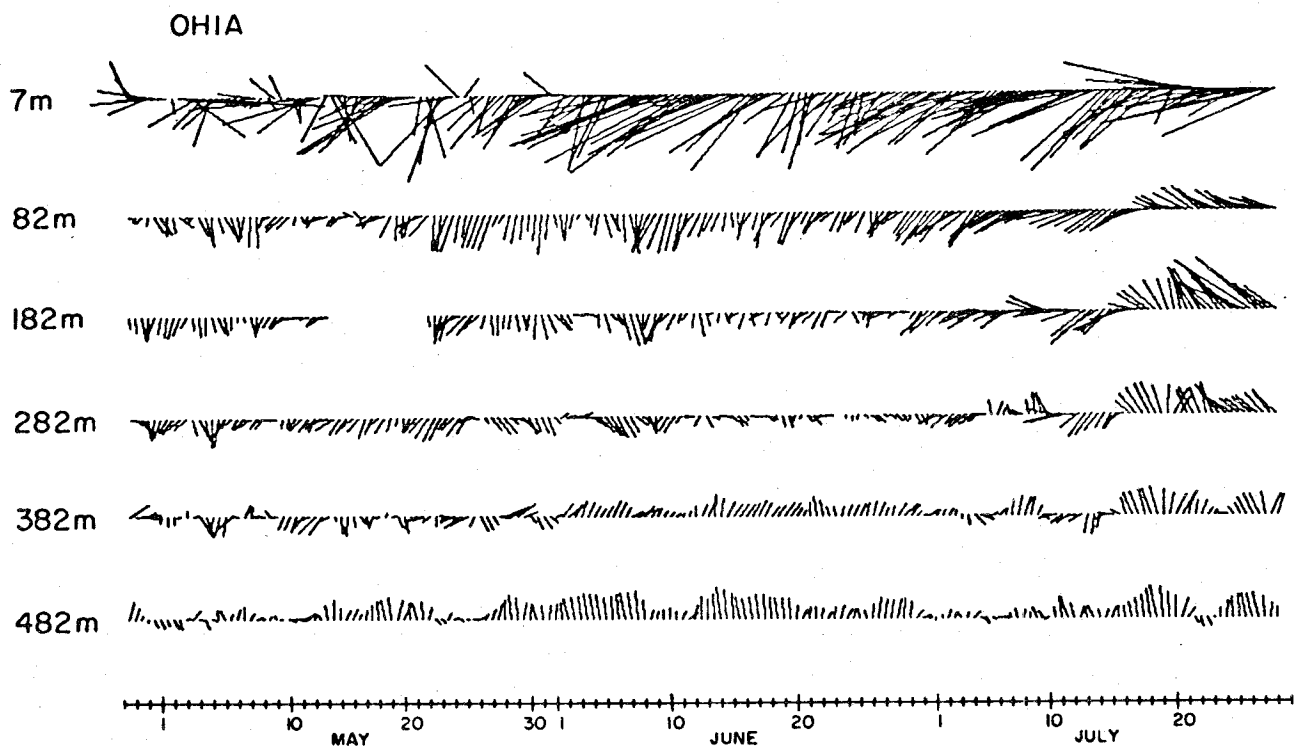


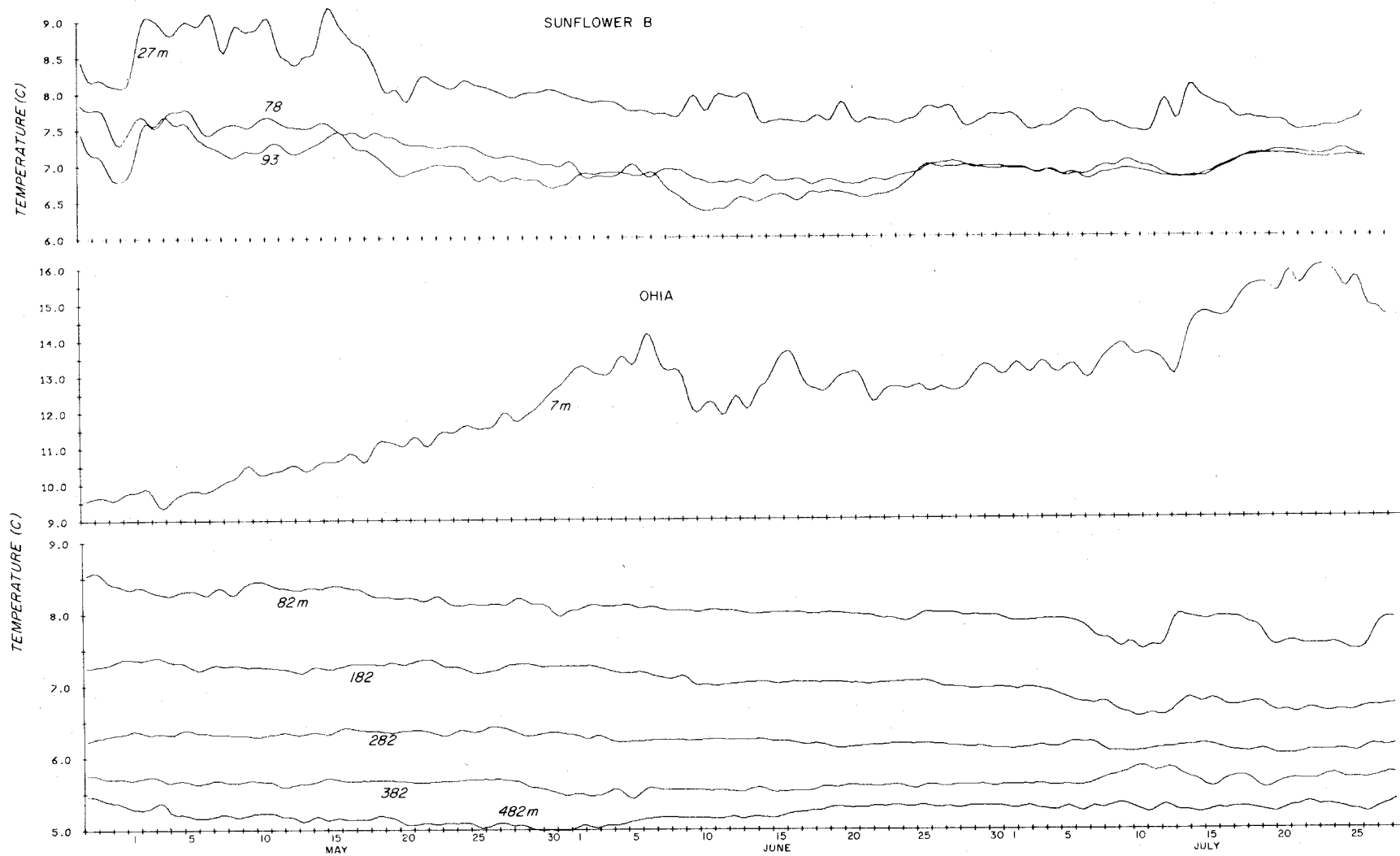
78m

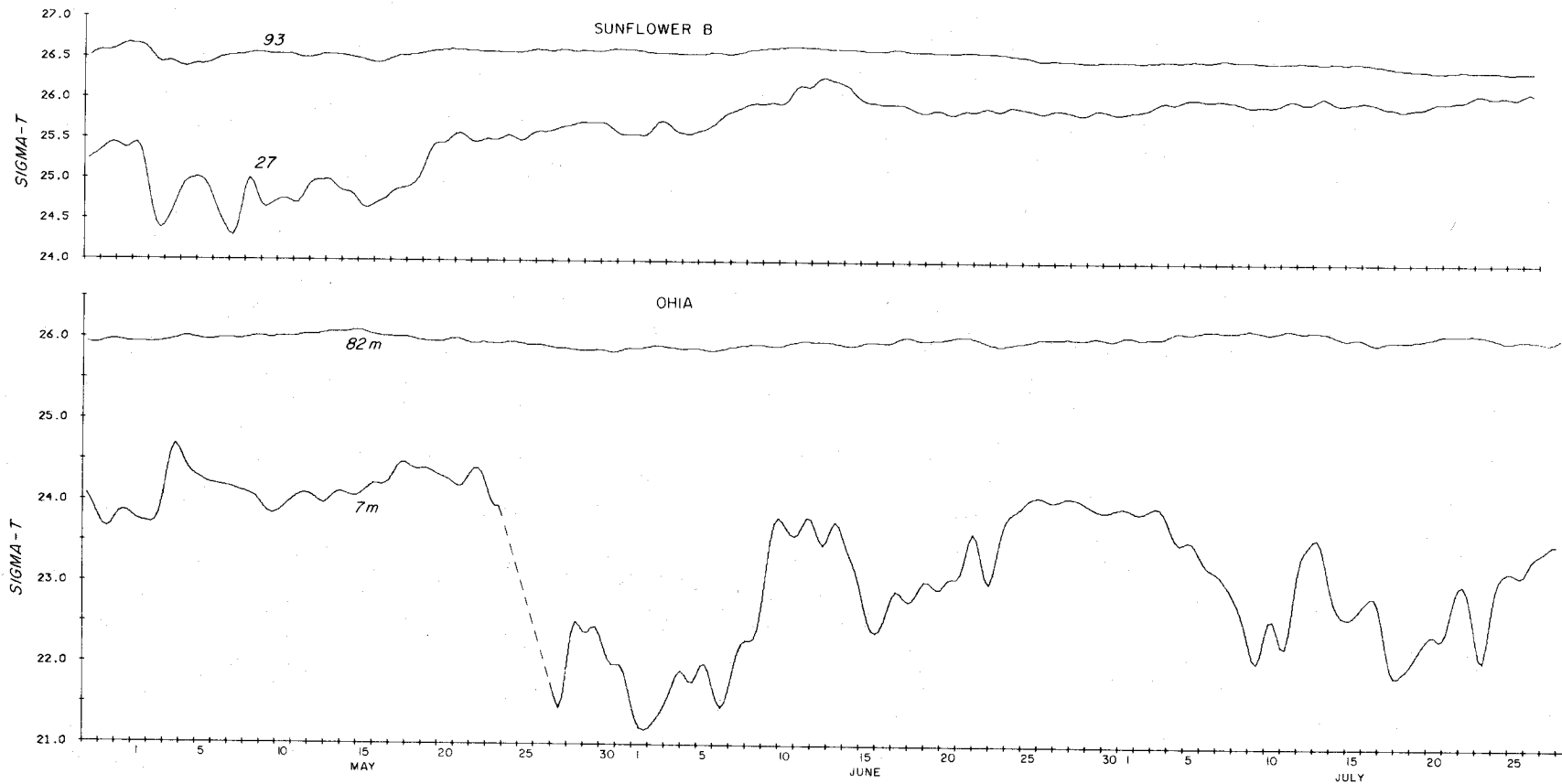


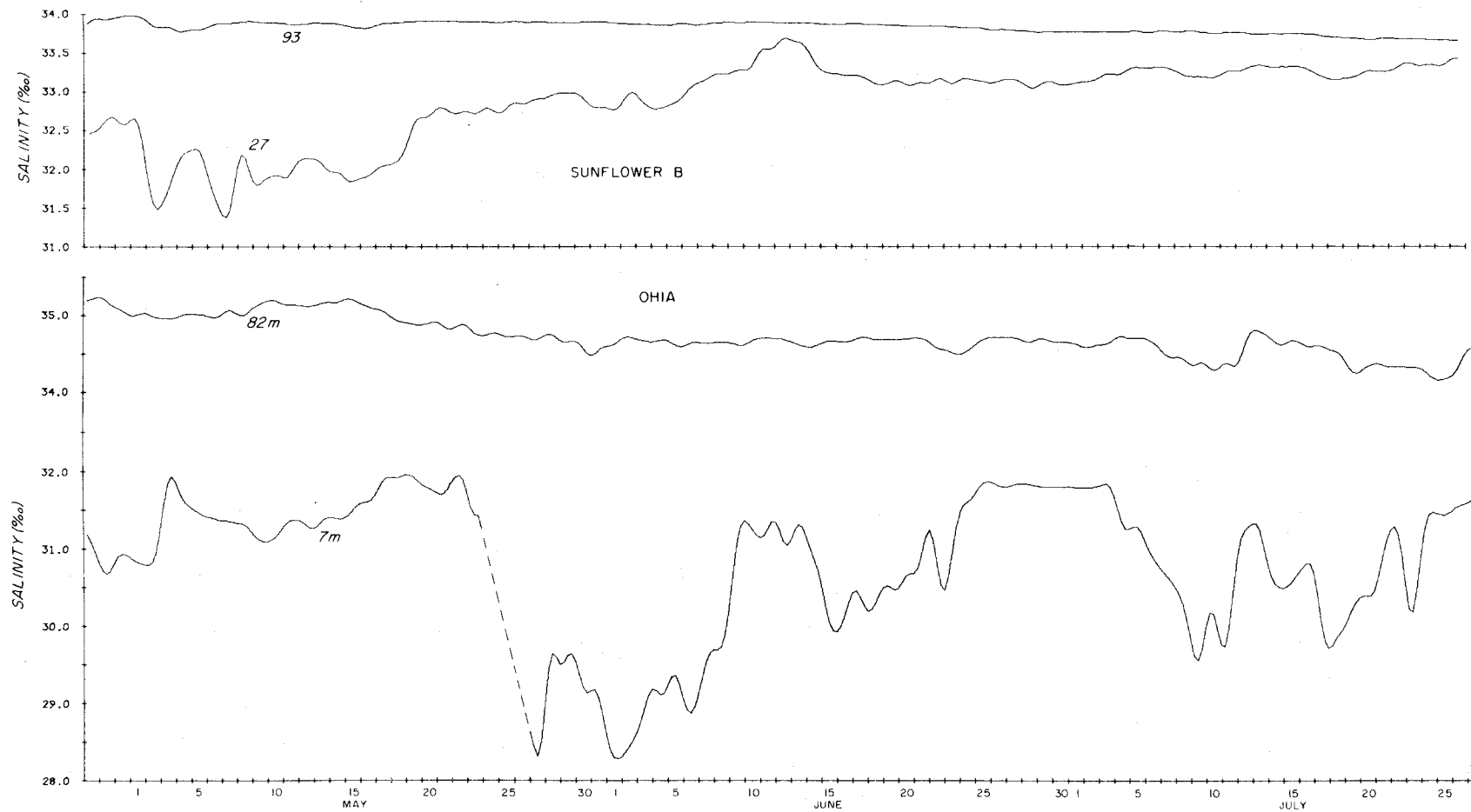
93m

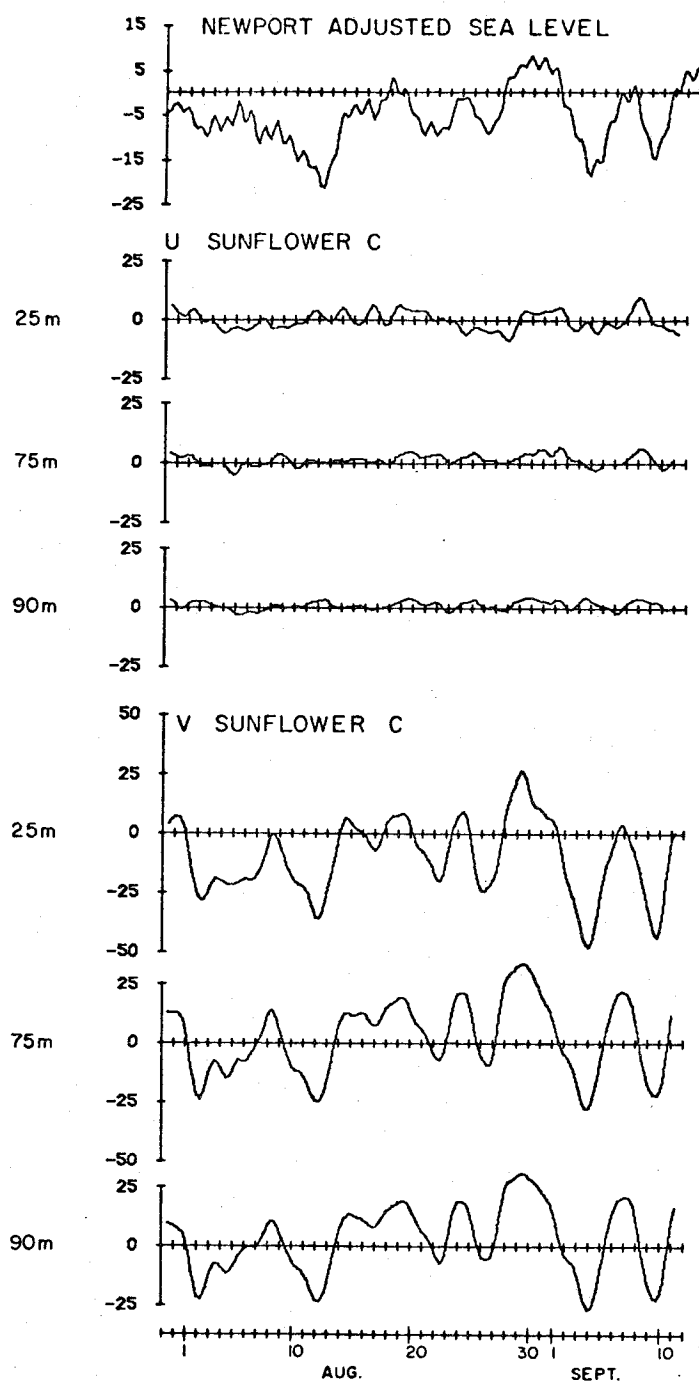




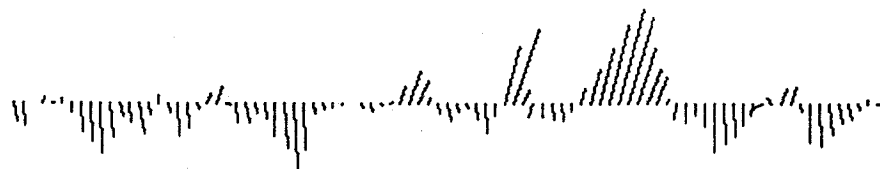




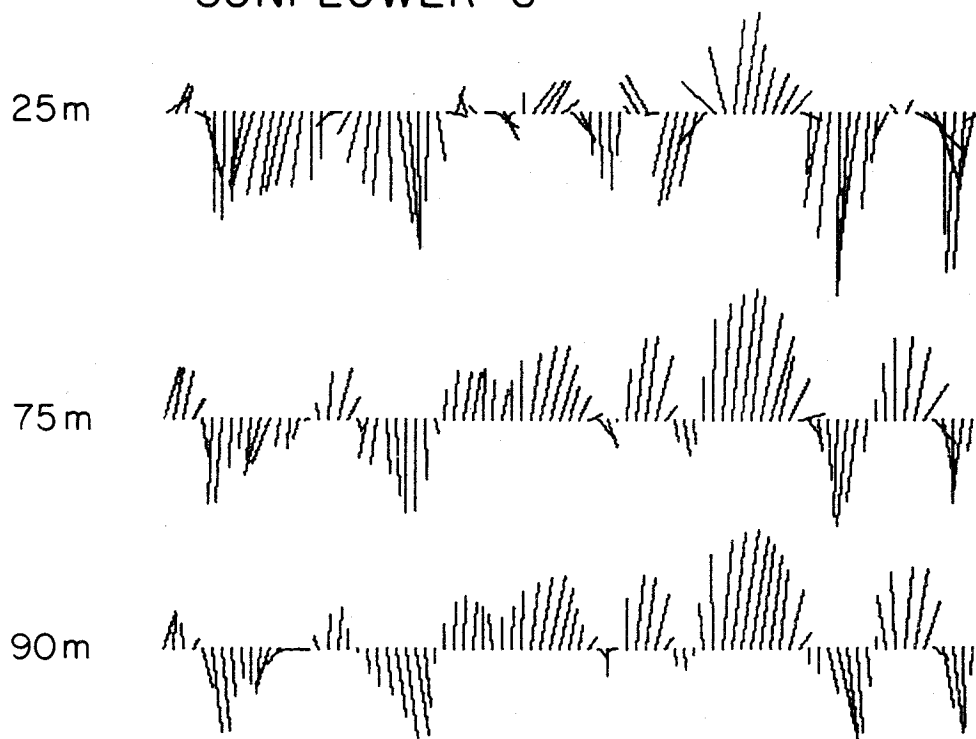




NEWPORT WIND STRESS



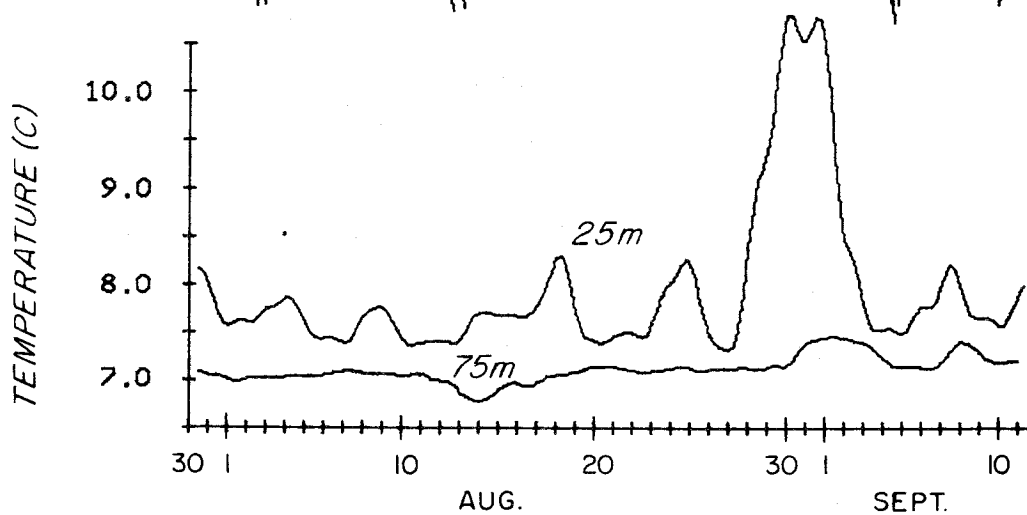
SUNFLOWER C



N

4 dynes/cm

50 cm/sec



CTD OBSERVATIONS

CTD Observations

Hydrographic stations along 45°N were occupied on eight cruises of the R/V YAQUINA between January and July 1975. Stations were usually at intervals of six minutes of longitude over the shelf and upper slope, and at 12' to about 125°W.

Each station consisted of a single cast of a Geodyne conductivity-temperature-depth (CTD) probe, with one sampling bottle equipped with reversing thermometers mounted about 2 m above the CTD sensors. The CTD normally records while it is being lowered at a rate of 15-30 m min⁻¹. The sample bottle is usually tripped at the bottom of the cast, after a 5-10 minute wait to allow the thermometers to reach equilibrium. The sample is collected to provide in situ calibrations of the CTD probe.

A total of four different CTD probes were used. Each measures pressure, temperature and conductivity sequentially. Each probe begins the sampling cycle at regular intervals of 4 sec or less. Each probe must be calibrated separately; whenever a sensor is replaced or repaired, it must be recalibrated.

The CTD data usually undergoes preliminary processing at sea on a PDP-8 computer. For processing the temperature data at sea we use an equation of the form:

$$T_p = c + bN_T + aN_T^2$$

where N_T is the CTD bit number, T_p is the preliminary temperature estimate, and a , b , and c are determined by a least squares fit to the laboratory calibration data. For conductivity we use a preliminary equation of the form:

$$C_p = kN_c$$

where C_p is the preliminary conductivity estimate and N_c is the CTD bit number for conductivity, and k is the same for all probes, regardless of their current status. For pressure, we use equations of the form:

$$P = c + bN_p + aN_p^2$$

where N_p is the CTD bit number, and a , b , and c are provided by the sensor manufacturer.

Temperature Calibration

The CTD temperature sensors are calibrated by using two or three protected reversing thermometers on the sample bottle above the probe. The reversing thermometers are calibrated once per year against a quartz probe, and have an accuracy of $\pm 0.02^\circ\text{C}$.

The sample temperature, T_s , is compared to the preliminary CTD temperature, T_p , and linear and quadratic relationships are determined by a least squares fit:

$$T_s = a_1 + b_1 T_p + c_1 T_p^2.$$

In practice, c_1 is negligible, b_1 is usually equal to 1, and the procedure is really used to determine a_1 . This amounts to changing the temperature equation to:

$$T = (c + a_1) + bN_T + aN_T^2.$$

The temperature calibration constants determined for each cruise are shown in Table V.

Conductivity Calibration

A water sample is collected from the sample bottle and its salinity is determined on a bench salinometer with a precision of better than 0.005 o/oo.

Table V . Final temperature calibration constants used to compute CTD
temperatures $T = a + bN_T + cN_T^2$, for each probe, 1975 cruises.

	PROBE #1			PROBE #3			PROBE #4			PROBE #5		
	a	$b \times 10^2$	$c \times 10^8$	a	$b \times 10^2$	$c \times 10^7$	a	$b \times 10^2$	$c \times 10^8$	a	$b \times 10^2$	$c \times 10^{-7}$
Y7501C	-1.769	0.8989	1.298	-2.134	0.8969	0.1775	-1.036	0.9000	1.734	-1.990	0.8801	0.7707
Y7502A	-1.769	0.8989	1.298	-2.050	0.8969	0.1775	-1.129	0.8876	1.710	-2.001	0.8801	0.7707
Y7503A				sensor replaced			sensor replaced					
				-2.050	0.8974	0.1459	-1.903	0.8976	0.9633	sensor replaced		
Y7503C							-1.903	0.8976	0.9633			
Y7504A							-1.900	0.8976	0.9633			
Y7504B							-1.874	0.8976	0.9633			
Y7505C							-1.898	0.8976	0.9633			
Y7507C	-1.697	0.8960	1.234									
Y7510A	-1.751	0.8939	0.9394	-2.037	0.8967	0.1751	-1.905	0.8972	1.149			
Y7510D										-1.562	0.8989	0.2124

Conductivity of the sample, C_s , is calculated from the sample temperature and salinity, by an iteration method and Perkin and Walker's (1972) equations:

$$C_s = f(P, T_s, S_s).$$

The sample conductivity is compared to the preliminary CTD conductivity C_p . We assume a relationship:

$$C_s = b_o C_p$$

and determine b_o by minimizing the sum of squared differences. This amounts to determining a new value of k , so that

$$C = k_1 N_c = b_o k N_c.$$

Table VI shows values of b_o for each probe on all cruises.

Data Processing

After the calibration constants have been determined for a particular cruise, the CTD data are read from magnetic or punched paper tapes. Pressure, conductivity and temperature are calculated. If depth remains constant, conductivity and temperature from up to six samples are averaged. If pressure decreases, the data are deleted. The resulting pressure-increasing file is used to calculate salinity using Perkin and Walker's (1972) equations, and sigma-t is calculated using Knudsen's equation as reported by Sweers (1971). Profiles of T , S , σ_t are plotted for error detection. The data are edited by hand to remove obviously erroneous values.

The final processed values of temperature and salinity are again compared to the sample values. Results are summarized in Table VII.

Table VI. Conductivity calibration constants, b_o , for the CTD probes, 1975 cruises, and the number of stations, N, from which the constants are calculated.

Cruise	Probe #1		Probe #3		Probe #4		Probe #5	
	N	b_o	N	b_o	N	b_o	N	b_o
Y7501C	4	1.00385	3	1.01858	6	1.01576	15	1.01963
Y7502A	4	1.00365	2	1.01414	15	1.01964	3	1.01973
Y7503A	-----	-----	12	1.01605	13	1.01467		
Y7503C	1	0.99217	1	1.01610	7	1.01461		
Y7504A					11	1.01518	1	1.01384
Y7504B					8	1.01460		
Y7505C	1	0.99474	1	1.01541	12	1.01372	1	1.01820
Y7507C	10	1.00810						
Y7510A*	8	1.00220			9	1.0147		
					10	1.0101		
Y7510D							3	1.01851

----- means conductivity cell was repaired or replaced

* Conductivity data from Probe 4 on this cruise were divided into two groups, since the differences between CTD and sample conductivities had a bimodal distribution.

Table VII. Means, standard deviations and largest absolute value of the difference between the sample and finally processed CTD data values.

	No. of Observations	TEMPERATURE			CONDUCTIVITY			SALINITY		
		μ	S.D.	max.	μ	S.D.	max.	μ	S.D.	max.
Probe No. 1										
Y7501C	4	0	.010	.012	0	.013	.015	0	.011	-.017
Y7502A	4	0	.005	.007	-.002	.019	.023	-.001	.019	.022
Y7507C	9	.001	.014	-.020	0	.044	.084	0	.048	.077
Y7510A	8	-.006	.015	.033	0	.017	.033	.005	.015	.026
Probe No. 3										
Y7501C	3	0	.020	.020	-.003	.081	-.096	-.003	.074	-.089
Y7502A	2	0	0	.005	.001	0	0	0	.008	-.006
Y7503A	12	0	.014	.030	-.002	.007	-.013	-.004	.014	-.042
Y7510A	9	.001	.014	.030	-.001	.016	.038	-.001	.010	.015
Probe No. 4										
Y7501C	6	0	.021	.038	-.003	.024	-.035	-.005	.018	-.026
Y7502A	15	0	.018	.042	0	.013	.036	0	.017	.022
Y7503A	13	0	.014	.026	.004	.027	.045	.002	.025	.040
Y7503C	7	0	.015	.020	0	.017	.025	0	.019	.036
Y7504A	11	0	.036	.055	.001	.035	-.074	.002	.030	.049
Y7504B	8	0	.016	.030	0	.019	.034	.001	.016	
Y7505C	8	-.003	.024	.034	0	.024	.042	.002	.019	.035
Y7510A (A)*	10	0	.015	.030	0	.015	-.025	-.001	.016	-.038
Y7510A (B)*	9	0	.011	-.020	0	.022	-.041	.001	.022	-.032
Y7510A (A+B)*	19	0	.013	.030	.001	.089	-.118	0	.083	.108
Probe No. 5										
Y7501C	15	0	.018	.042	.013	.013	.049	.014	.017	.039
Y7502A	3	0	.006	-.007	0	.003	-.007	0	.006	-.003
Y7510D	3	0	.066	-.070	0	.011	-.013	.005	.052	.059

* Note - Stations from Probe No. 4, Y7510A were split into two groups, A and B, because the difference population was strongly bimodal.

Data Presentation

The hydrographic data is summarized in vertical sections of temperature, salinity and sigma-t. The distributions were contoured by hand. Tick marks at the top of each section indicate station positions at which a CTD cast was made.

Following the vertical distributions, the hydrographic data are presented in more detail. Data from each cruise are presented separately, beginning with a map of station positions. For each station, profiles of temperature, salinity and sigma-t are shown. The header data for each station gives location and weather information coded as follows:

CAST NO	Consecutive cast number. For CTD casts, the number is followed by "U" if the profile was obtained during ascent of the probe or "D" if it was obtained during descent.
STATION	Station designator for positions along the L or H lines, or indicating parachute drogue stations (D).
LAT	Latitude in degrees and minutes north of the equator.
LONG	Longitude in degrees and minutes west of Greenwich.
DATE	Month/day/year.
TIME	Hours and minutes, Universal time.
DPTH	Bottom depth in meters.
PROBE	OSU1, OSU2, OSU3 - CTD units 1, 2, 3. STD - Bissett Berman self-contained probe unit.
SWELL DIR	Direction in degrees True from which the swell propagates.
HT	Swell height in feet.
PER	Swell period in seconds.
BAR	Atmospheric pressure in excess of 1000 mb.
WEATHER	See WMO weather code.
WIND DIR	Direction in degrees True from which the wind blows.

SPD	Wind speed in knots.
CLOUD TYPE	The two predominant cloud types (see WMO Cloud Type code).
AMOUNT	Coded cloud amount (see WMO Cloud Amount code).
AIR TEMP	Air temperature in degrees Celsius.
WET BULB	Wet bulb temperature in degrees Celsius.

The data listing includes observed and calculated parameters at the shallowest and deepest observation levels. If there was no observation at 0 m, sea surface values are assumed to be the same as those of the shallowest observation. For each depth, the temperature (TEMP) and salinity (SAL) values are as observed or interpolated linearly from the nearest neighboring values. Sigma-t (SIGMA), specific volume anomaly $\times 10^5$ (SVA), dynamic height (DELD) in dynamic meters, and potential energy in 10^8 ergs cm^{-2} (POTE) are given for each depth. Computed parameters are calculated from the complete data array.

WMO WEATHER CODE

CLOUD TYPE CODE

Code	Cloud Type	Code	Cloud Type
0	Cirrus Ci	5	Nimbostratus Ns
1	Cirrocumulus Cc	6	Stratocumulus Sc
2	Cirrostratus Cs	7	Stratus St
3	Alto cumulus Ac	8	Cumulus Cu
4	Altostratus As	9	Cumulonimbus Cb
X	Cloud not visible owing to darkness, fog, dust storm, sand storm, or other analogous phenomena		

CLOUD AMOUNT CODE

Code	Cloud Cover	Code	Cloud Cover
0	0	6	6 oktas
1	1 okta or less, but not zero	7	7 oktas or more, but not 8 oktas
2	2 oktas	8	8 oktas
3	3 oktas	9	Sky obscured, or cloud amount cannot be estimated
4	4 oktas		
5	5 oktas		

Note: 1 okta = $\frac{1}{8}$ of the sky covered

WMO WEATHER CODE

NO PRECIPITATION ON STATION AT TIME OF OBSERVATION

Code figure		ww	
No meteors except photometeors	{	00	Cloud development not observed or not observable
		01	Clouds generally dissolving or becoming less developed
		02	State of sky on the whole unchanged
Haze, dust, sand or smoke	{	03	Clouds generally forming or developing
		04	Visibility reduced by smoke, e.g. veldt or forest fires, industrial smoke or volcanic ashes
		05	Haze
		06	Widespread dust in suspension in the air, not raised by wind at or near the station at the time of observation
		07	Dust or sand raised by wind at or near the station at the time of observation, but no well developed dust whirl(s) or sand whirl(s), and no duststorm or sandstorm seen
		08	Well developed dust whirl(s) or sand whirl(s) seen at or near the station during the preceding hour or at the time of observation, but no duststorm or sandstorm
		09	Duststorm or sandstorm within sight at the time of observation, or at the station during the preceding hour
		10	Mist
		11	Patches of shallow fog or ice fog at the station, whether on land or sea, not deeper than about 2 metres on land or 10 metres at sea
		12	More or less continuous
		13	Lightning visible, no thunder heard
		14	Precipitation within sight, not reaching the ground or the surface of the sea
		15	Precipitation within sight, reaching the ground or the surface of the sea, but distant (i.e. estimated to be more than 5 km) from the station
		16	Precipitation within sight, reaching the ground or the surface of the sea, near to, but not at the station
		17	Thunderstorm, but no precipitation at the time of observation
		18	Squalls
		19	Funnel clouds
		{ at or within sight of the station during the preceding hour or at the time of observation	
		{ characteristic change of the state of sky during the past hour	
ww = 20 - 29			
Precipitation, fog, ice fog or thunderstorm at the station during the preceding hour but not at the time of observation			
		20	Drizzle (not freezing) or snow grains
		21	Rain (not freezing)
		22	Snow
		23	Rain and snow or ice pellets, type (a)
		24	Freezing drizzle or freezing rain
		25	Shower(s) of rain
		26	Shower(s) of snow, or of rain and snow
		27	Shower(s) of hail, or of rain and hail
		28	Fog or ice fog
		29	Thunderstorm (with or without precipitation)
ww = 30 - 39			
Duststorm, sandstorm, drifting or blowing snow			
		30	{ Slight or moderate duststorm or sandstorm
		31	{ Slight or moderate duststorm or sandstorm
		32	{ Slight or moderate duststorm or sandstorm
		33	{ Severe duststorm or sandstorm
		34	{ Severe duststorm or sandstorm
		35	{ Severe duststorm or sandstorm
		36	Slight or moderate blowing snow
		37	Heavy drifting snow
		38	Slight or moderate blowing snow
		39	Heavy blowing snow
ww = 40 - 49			
Fog or ice fog at the time of observation			
		40	Fog or ice fog at a distance at the time of observation, but not at the station during the preceding hour, the fog or ice fog extending to a level above that of the observer
		41	Fog or ice fog in patches
		42	Fog or ice fog, sky visible
		43	Fog or ice fog, sky invisible
		44	Fog or ice fog, sky visible
		45	Fog or ice fog, sky invisible
		46	Fog or ice fog, sky visible
		47	Fog or ice fog, sky invisible
		48	Fog, depositing rime, sky visible
		49	Fog, depositing rime, sky invisible

PRECIPITATION ON STATION AT TIME OF OBSERVATION

ww = 50 - 59 Drizzle

- | | | | |
|----|--|---|--------------------------------------|
| 50 | Drizzle, not freezing, intermittent | { | slight at time of observation |
| 51 | Drizzle, not freezing, continuous | | |
| 52 | Drizzle, not freezing, intermittent | { | moderate at time of observation |
| 53 | Drizzle, not freezing, continuous | | |
| 54 | Drizzle, not freezing, intermittent | { | heavy (dense) at time of observation |
| 55 | Drizzle, not freezing, continuous | | |
| 56 | Drizzle, freezing, slight | | |
| 57 | Drizzle, freezing, moderate or heavy (dense) | | |
| 58 | Drizzle and rain, slight | | |
| 59 | Drizzle and rain, moderate or heavy | | |

ww = 60 - 69 Rain

- | | | | |
|----|---|---|---------------------------------|
| 60 | Rain, not freezing, intermittent | { | slight at time of observation |
| 61 | Rain, not freezing, continuous | | |
| 62 | Rain, not freezing, intermittent | { | moderate at time of observation |
| 63 | Rain, not freezing, continuous | | |
| 64 | Rain, not freezing, intermittent | { | heavy at time of observation |
| 65 | Rain, not freezing, continuous | | |
| 66 | Rain, freezing, slight | | |
| 67 | Rain, freezing, moderate or heavy | | |
| 68 | Rain or drizzle and snow, slight | | |
| 69 | Rain or drizzle and snow, moderate or heavy | | |

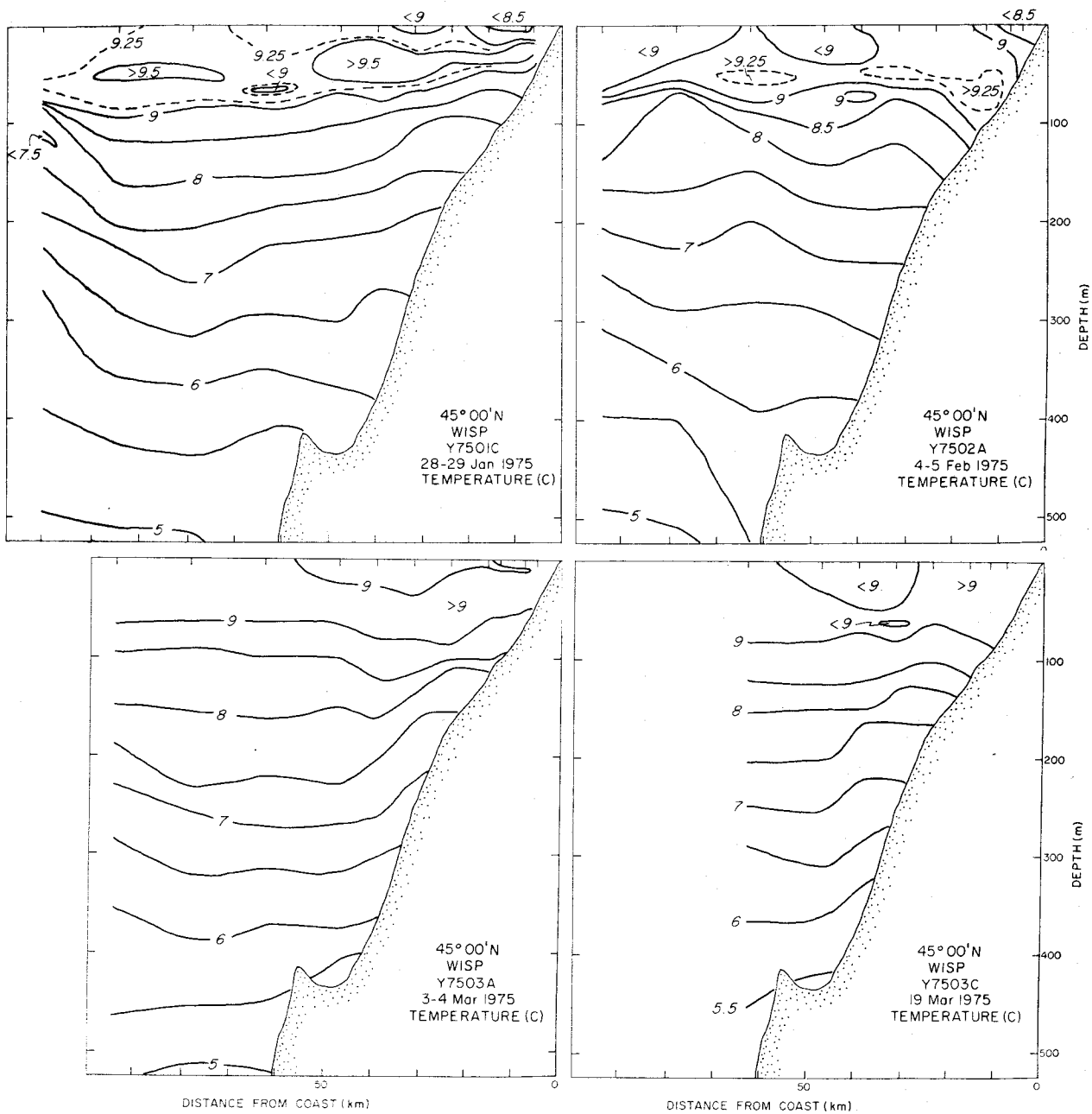
70 - 79 Solid precipitation not in showers

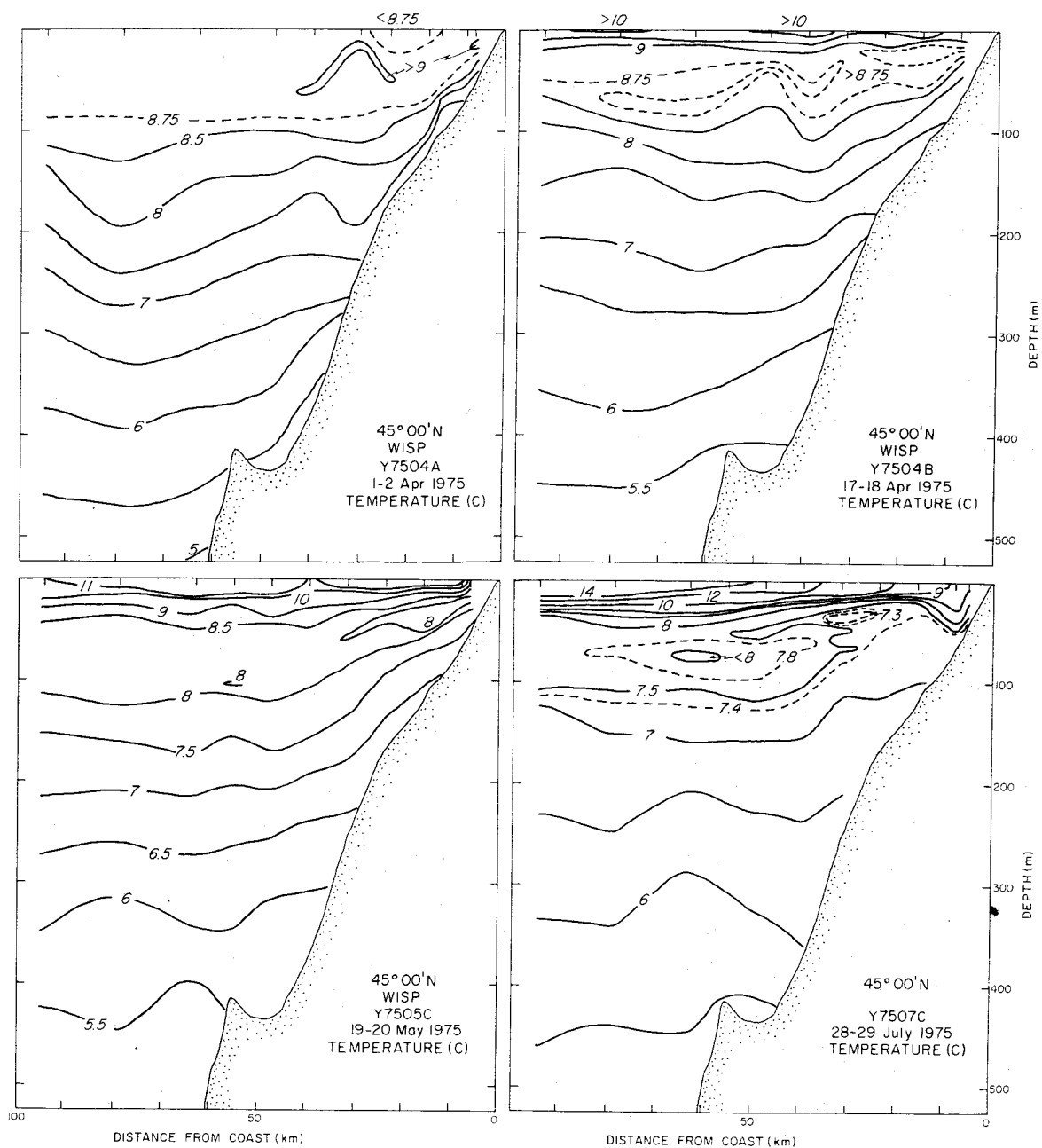
- | | | | |
|----|---|---|---------------------------------|
| 70 | Intermittent fall of snow flakes | { | slight at time of observation |
| 71 | Continuous fall of snow flakes | | |
| 72 | Intermittent fall of snow flakes | { | moderate at time of observation |
| 73 | Continuous fall of snow flakes | | |
| 74 | Intermittent fall of snow flakes | { | heavy at time of observation |
| 75 | Continuous fall of snow flakes | | |
| 76 | Ice prisms (with or without fog) | | |
| 77 | Snow grains (with or without fog) | | |
| 78 | Isolated starlike snow crystals (with or without fog) | | |
| 79 | Ice pellets, type (a) | | |

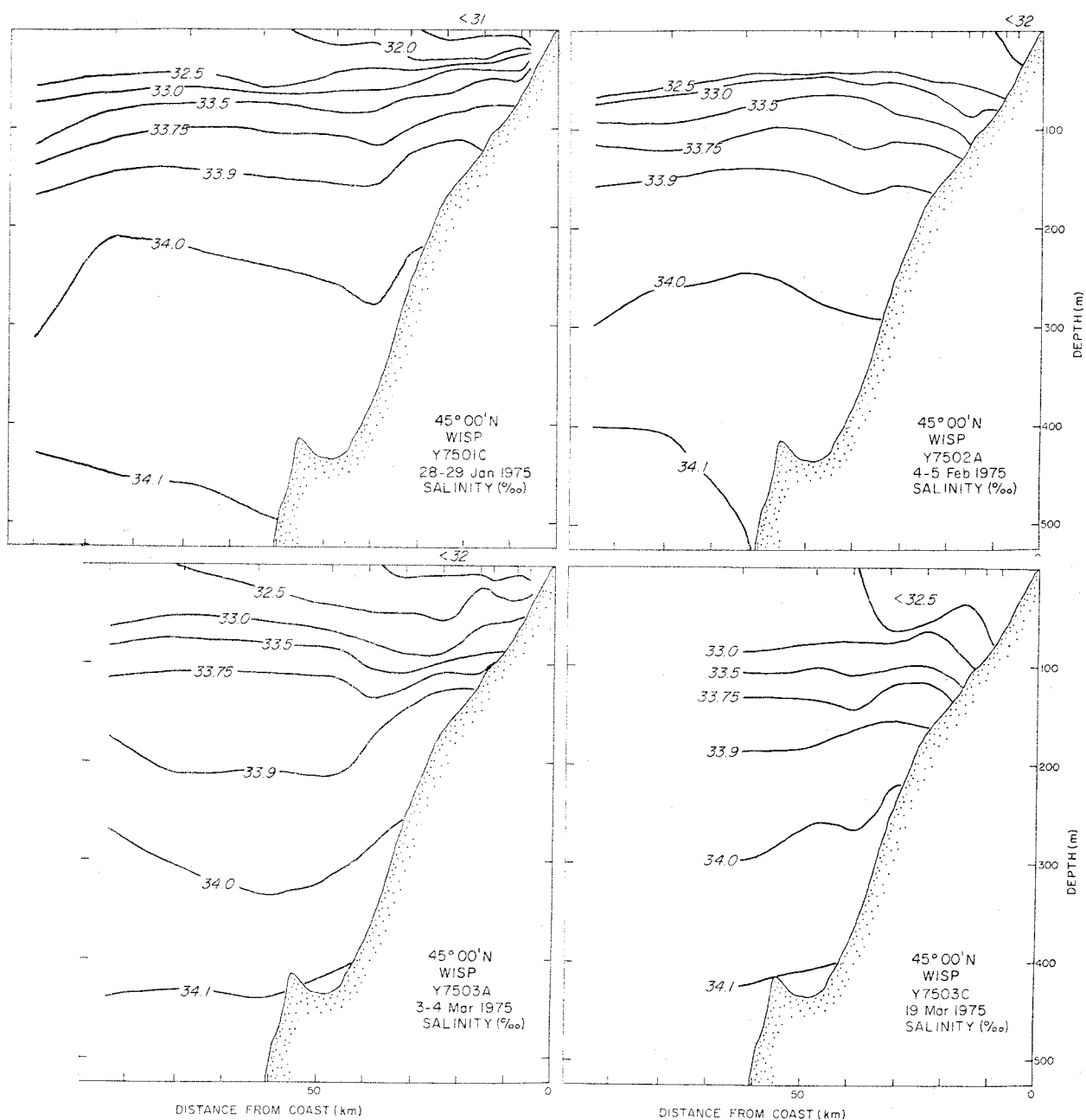
ww = 80 - 99 Showery precipitation, or precipitation with current or recent thunderstorm

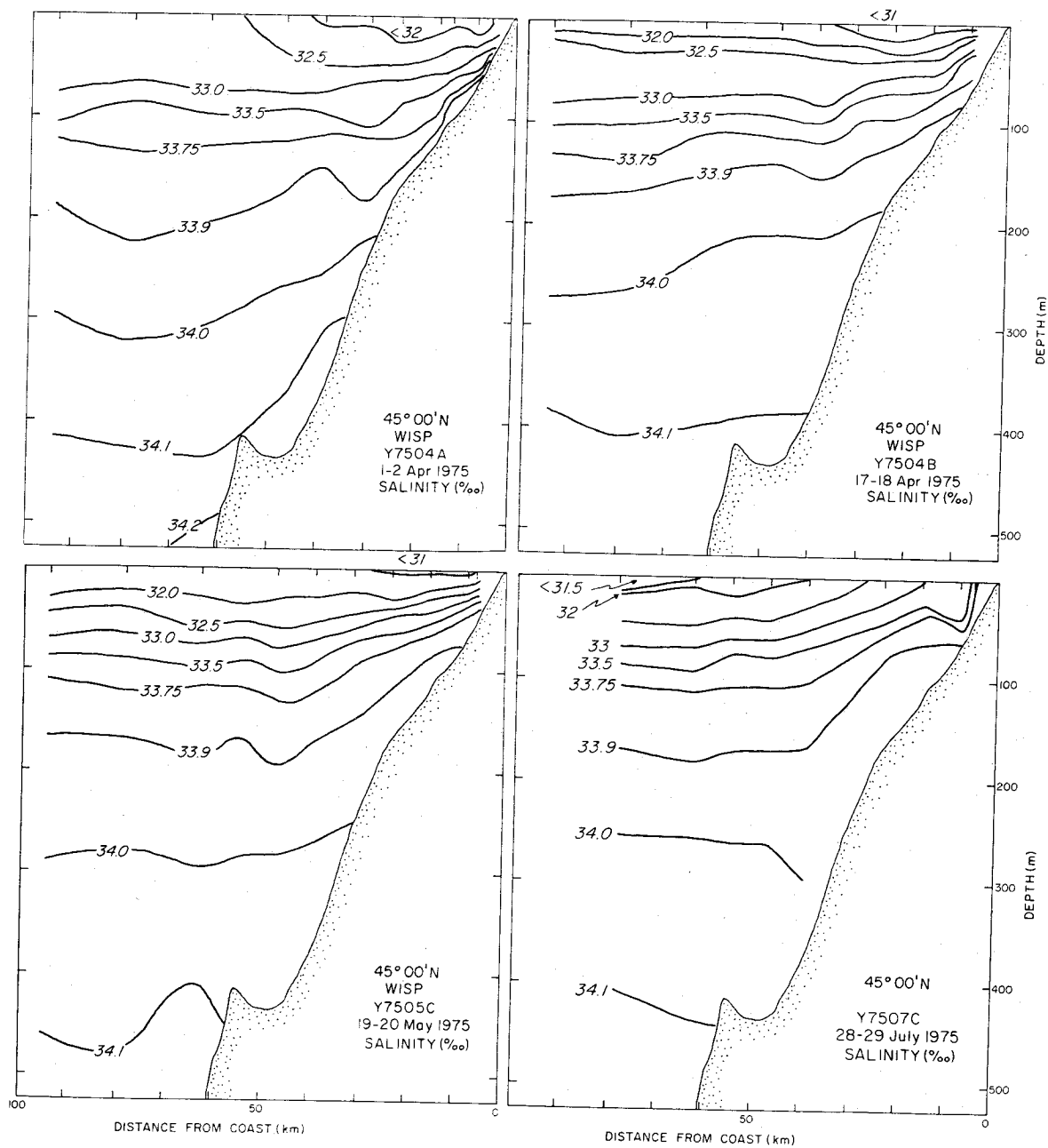
- | | | | |
|----|--|---|---|
| 80 | Rain shower(s), slight | | |
| 81 | Rain shower(s), moderate or heavy | | |
| 82 | Rain shower(s), violent | | |
| 83 | Shower(s) of rain and snow mixed, slight | | |
| 84 | Shower(s) of rain and snow mixed, moderate or heavy | | |
| 85 | Snow shower(s), slight | | |
| 86 | Snow shower(s), moderate or heavy | | |
| 87 | Shower(s) of snow pellets or ice pellets, type (b), with or without rain or rain and snow mixed | { | - slight |
| 88 | Shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder | | |
| 89 | Slight rain at time of observation | | |
| 90 | Moderate or heavy rain at time of observation | | |
| 91 | Slight snow, or rain and snow mixed or hail at time of observation | { | - moderate or heavy |
| 92 | Moderate or heavy snow, or rain and snow mixed or hail at time of observation | | |
| 93 | Thunderstorm, slight or moderate, without hail, but with rain and/or snow at time of observation | | |
| 94 | Thunderstorm, slight or moderate, with hail at time of observation | | |
| 95 | Thunderstorm, heavy, without hail, but with rain and/or snow at time of observation | { | thunderstorm during the preceding hour but not at time of observation |
| 96 | Thunderstorm, combined with duststorm or sandstorm at time of observation | | |
| 97 | Thunderstorm, heavy, with hail at time of observation | | |
| 98 | Thunderstorm, heavy, without hail, but with rain and/or snow at time of observation | | |
| 99 | Thunderstorm, heavy, with hail at time of observation | | |

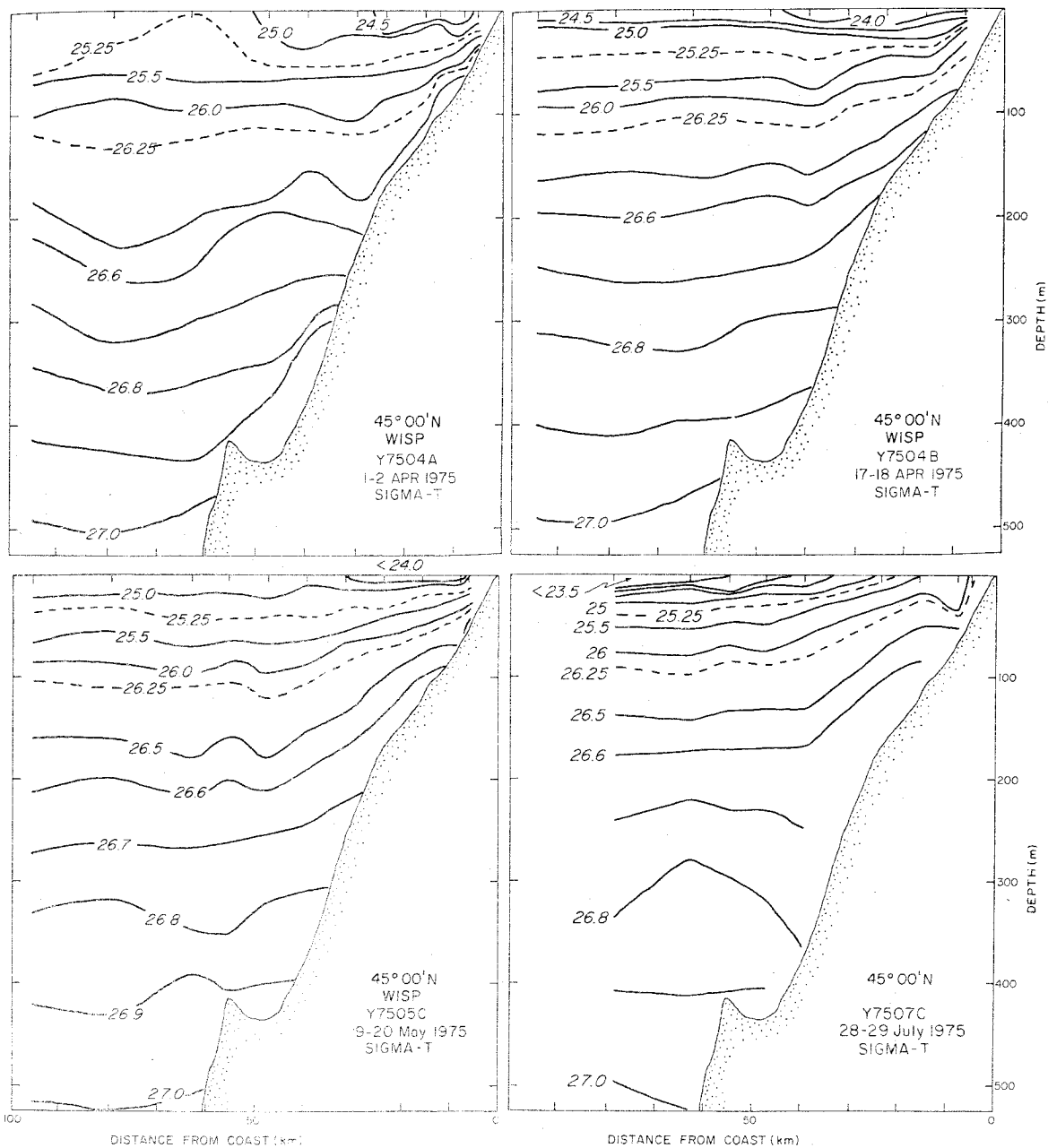
VERTICAL DISTRIBUTIONS OF
TEMPERATURE, SALINITY AND SIGMA-T

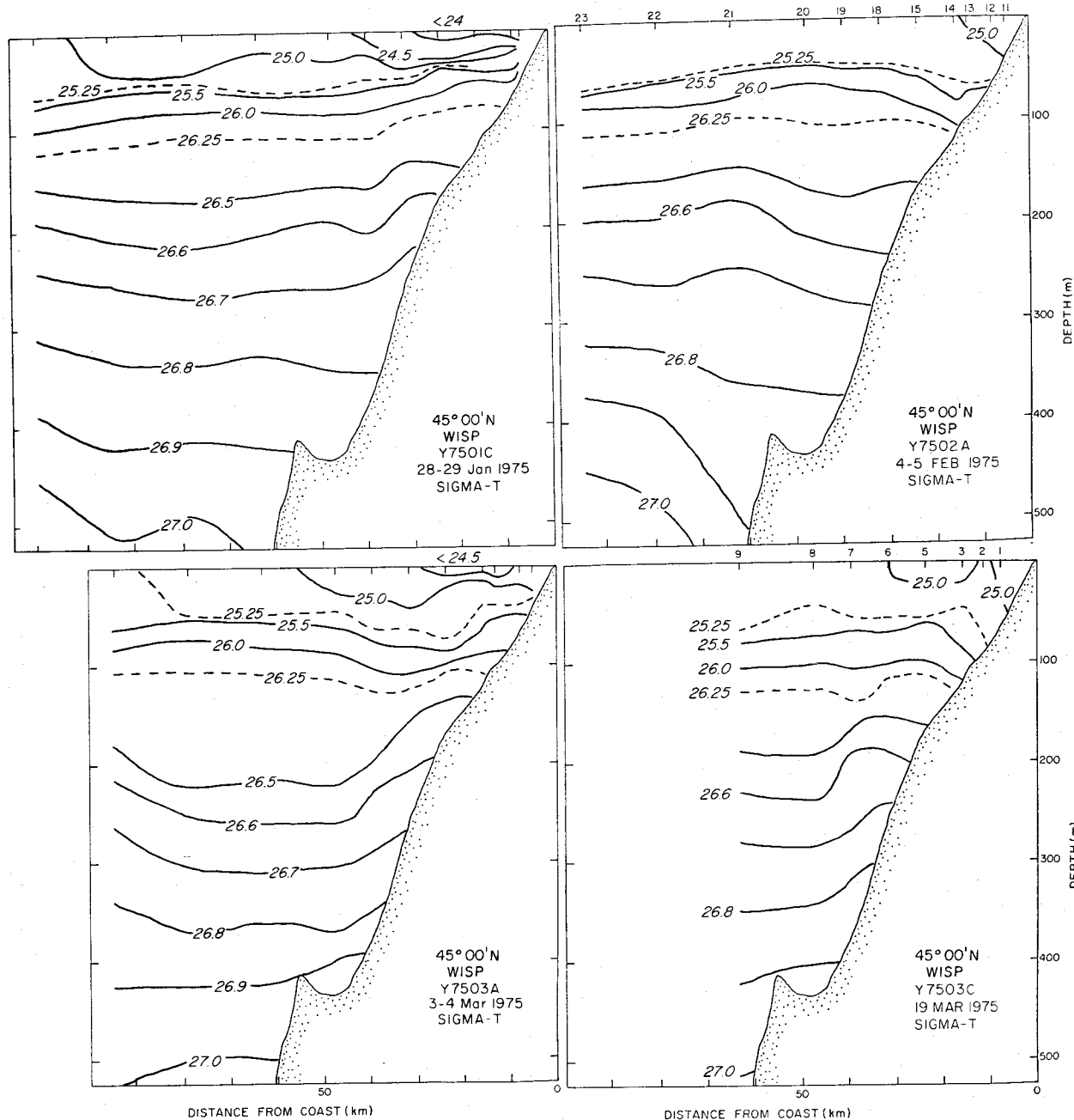


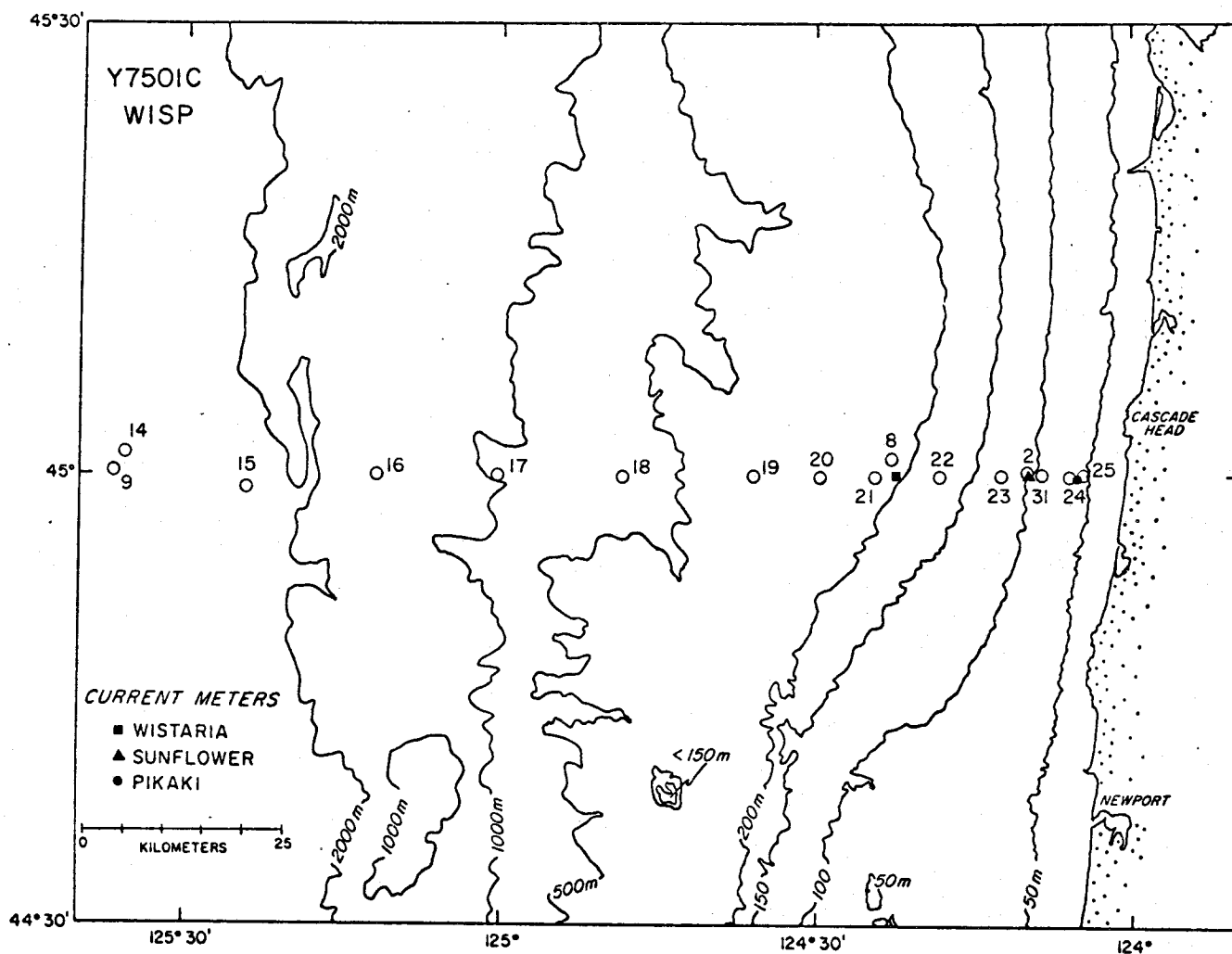










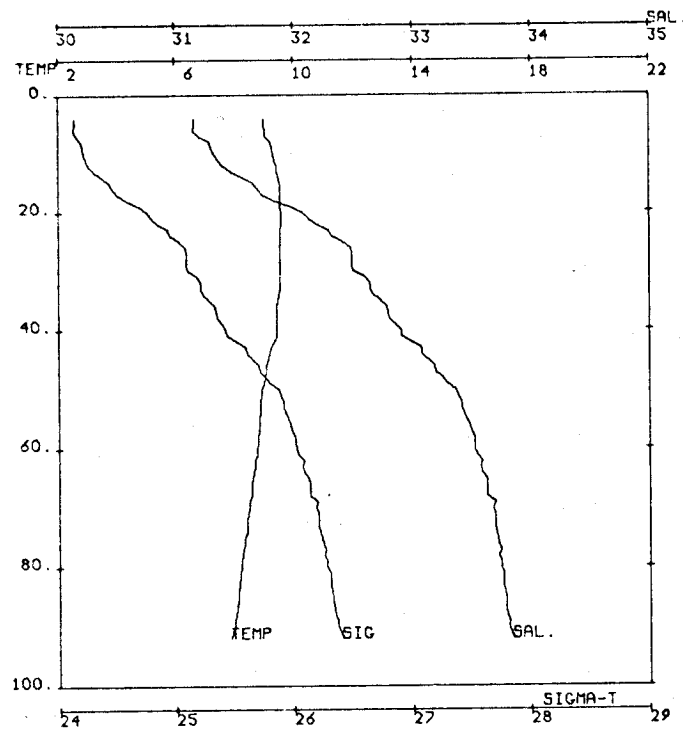


Y7501C
R/V YAQUINA
27 - 29 January 1975

Moored current meters at Wisteria, Sunflower and Pikake. Hydrographic section along 45°N.

Used mainly CTD probe #5. Tested CTD probes #1, 3 and 4.

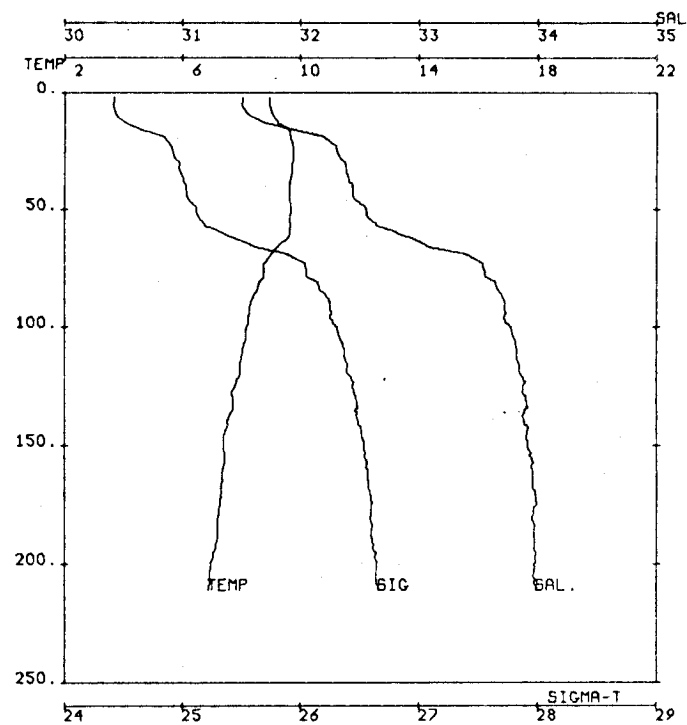
Personnel: Robert L. Smith, E. D. Barton, Dennis Barstow, Robert Kapaun, Tedd Wright, Elizabeth Harris, Eileen Olson, Frank Waite, Dan Thornton, Rich Schramm.



2D

CAST NO 20 LAT 45 00.2 DATE 1/28/75 TIME 148
STATION LONG 124 09.8 DPTH 97 PROBE OSUS
SWELL DIR 100 HT 7 PER 8 BAR 21.8 WEATHER 02
WIND DIR 180 SPD 8 CLOUD TYPE 3-6 AMOUNT 8
AIR TEMP NET BULB
SAMPLE DEPTH 76.0 SAMPLE TEMP 8.25 SAL 33.732

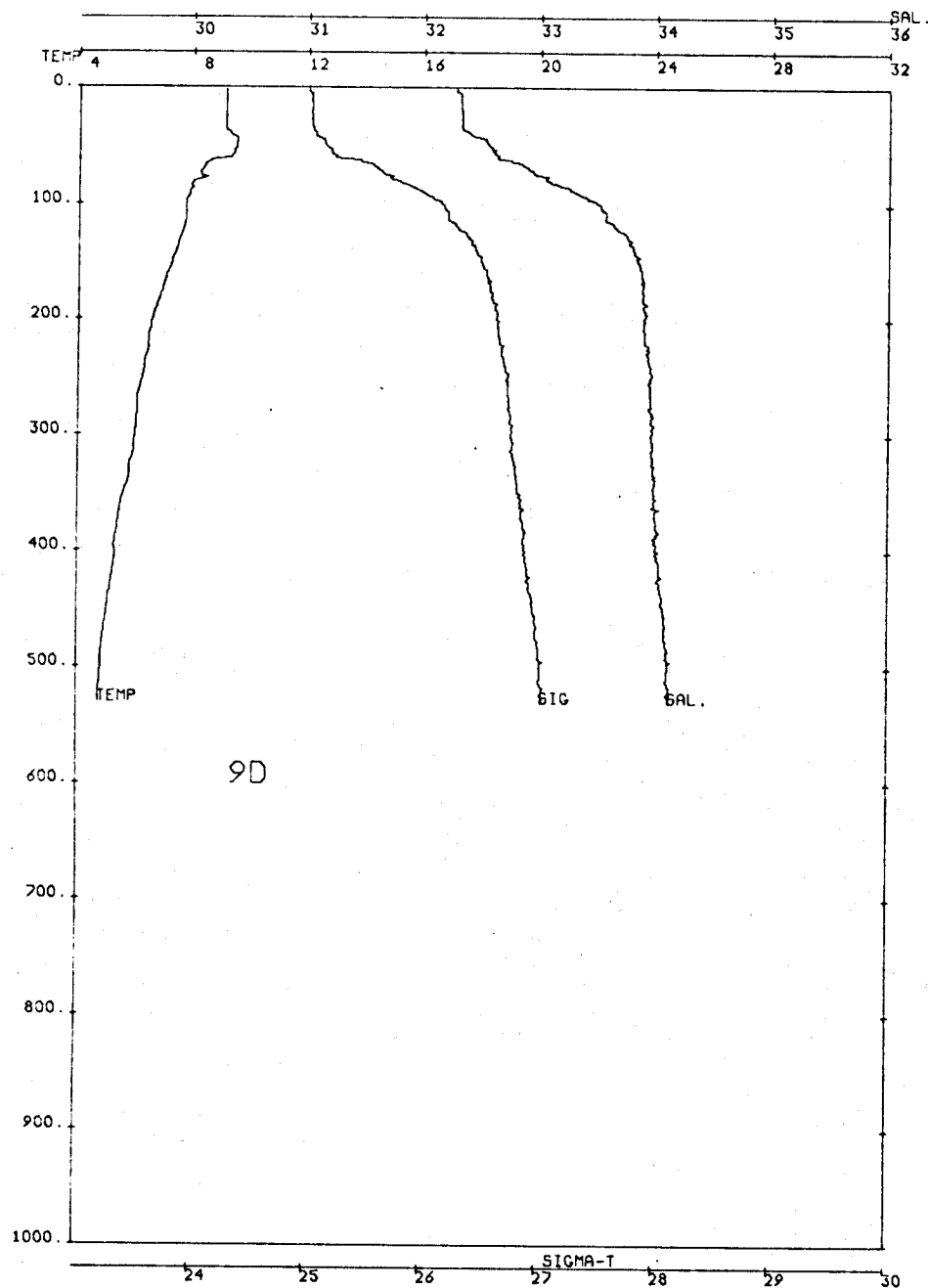
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.30	31.16	24.14	378.7	0.000	0.000
4	9.00	31.16	24.14	378.8	0.015	0.003
10	9.32	31.33	24.23	371.0	0.038	0.019
20	9.58	32.08	24.77	319.4	0.073	0.071
30	9.55	32.51	25.11	287.2	0.103	0.145
40	9.45	32.91	25.44	256.2	0.130	0.240
50	8.93	33.37	25.88	214.4	0.153	0.345
60	8.77	33.53	26.01	200.3	0.174	0.459
70	8.46	33.68	26.20	184.8	0.193	0.583
80	8.18	33.75	26.29	175.7	0.211	0.718
90	7.94	33.81	26.37	168.0	0.228	0.864
92	7.85	33.85	26.42	163.8	0.231	0.894



8D

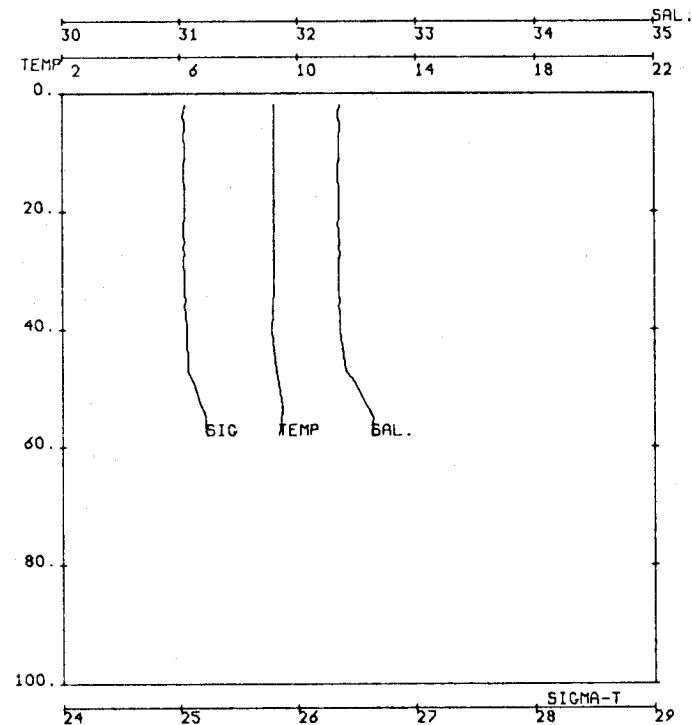
CAST NO 8D LAT 45 01.2 DATE 1/28/75 TIME 707
STATION LONG 124 22.3 DPTH 218 PROBE OSUS
SWELL DIR 300 HT 7 PER 9 BAR 16.8 WEATHER 22
WIND DIR 180 SPD 22 CLOUD TYPE 6-8 AMOUNT 8
AIR TEMP 5.0 NET BULB 4.7
SAMPLE DEPTH 187.0 SAMPLE TEMP 7.19 SAL 33.970

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.95	31.51	24.42	352.0	0.000	0.000
2	8.95	31.51	24.42	352.0	0.007	0.001
10	9.12	31.58	24.45	349.4	0.015	0.018
20	9.70	32.22	24.66	310.5	0.066	0.067
30	9.72	32.38	24.98	289.5	0.099	0.140
40	9.64	32.44	25.04	284.0	0.109	0.247
50	9.66	32.56	25.13	285.6	0.158	0.378
60	9.62	32.82	25.34	245.9	0.186	0.532
70	8.94	33.44	25.93	209.7	0.210	0.688
80	8.68	33.61	26.11	193.4	0.230	0.807
90	8.32	33.73	26.25	179.6	0.248	0.995
100	8.17	33.78	26.32	173.7	0.266	1.164
110	8.04	33.83	26.37	168.6	0.283	1.343
120	7.94	33.86	26.42	164.4	0.300	1.519
130	7.73	33.90	26.48	158.7	0.316	1.717
140	7.53	33.89	26.50	157.1	0.332	1.951
150	7.39	33.92	26.54	153.2	0.347	2.174
160	7.36	33.96	26.58	149.9	0.362	2.410
170	7.33	33.98	26.60	148.2	0.377	2.656
180	7.21	33.95	26.59	148.9	0.392	2.914
190	7.17	33.98	26.62	146.3	0.407	3.186
200	6.96	33.97	26.64	144.3	0.421	3.498
211	6.87	33.99	26.67	141.8	0.437	3.793



CAST NO 90 LAT 45 00.5 DATE 1/28/75 TIME 1611
 STATION LONG 125 36.0 DPTH 2690 PPROBE OSUS
 SWELL DIR 310 HT 8 PER 9 BAR 16.3 WEATHER 01
 WIND DIR 350 SPD 16 CLOUD TYPE 6-8 AMOUNT 7
 AIR TEMP 6.3 WET BULB 4.3
 SAMPLE DEPTH 698.0 SAMPLE TEMP 4.25 SAL 34.274

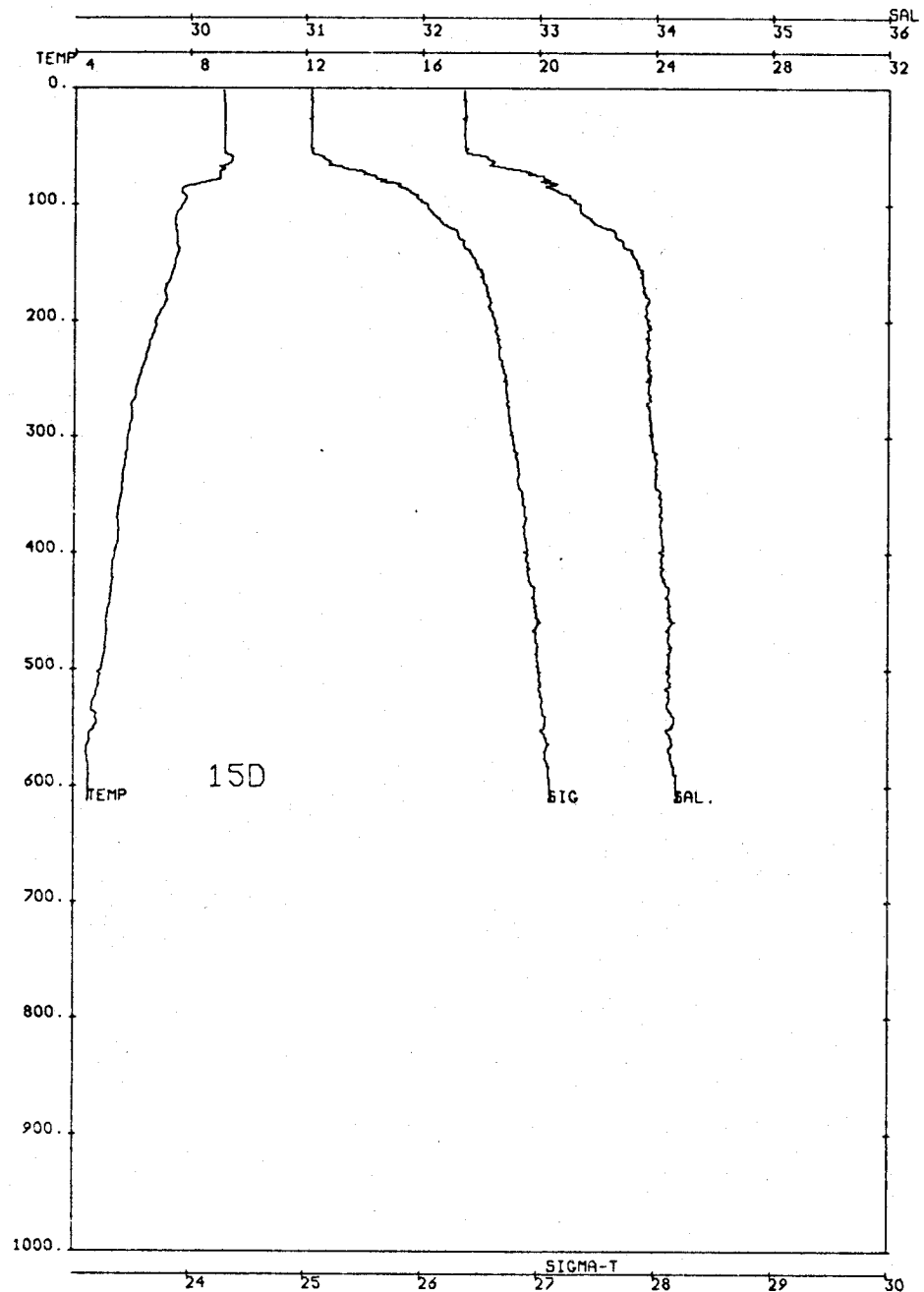
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.10	32.28	25.00	297.0	0.000	0.000
2	9.10	32.28	25.00	297.0	0.006	0.001
10	9.12	32.31	25.02	295.2	0.030	0.015
20	9.12	32.32	25.03	294.6	0.059	0.059
30	9.12	32.32	25.03	294.8	0.068	0.111
40	9.33	32.41	25.07	291.5	0.118	0.215
50	9.49	32.57	25.17	282.2	0.146	0.364
60	9.28	32.62	25.24	275.5	0.174	0.517
70	8.32	32.90	25.61	240.7	0.199	0.680
80	8.02	33.08	25.79	223.2	0.223	0.854
90	7.85	33.32	26.00	203.1	0.244	1.015
100	7.72	33.52	26.18	186.6	0.263	1.270
110	7.71	33.57	26.22	183.3	0.282	1.411
120	7.65	33.66	26.30	175.6	0.300	1.620
130	7.49	33.77	26.41	165.3	0.317	1.832
140	7.37	33.82	26.46	160.1	0.333	2.051
150	7.23	33.86	26.52	155.4	0.349	2.282
160	7.04	33.88	26.56	151.5	0.364	2.500
170	6.95	33.89	26.58	148.6	0.379	2.768
180	6.83	33.88	26.59	149.0	0.394	3.029
190	6.69	33.90	26.62	145.8	0.409	3.301
200	6.56	33.89	26.63	145.0	0.423	3.583
225	6.45	33.92	26.67	141.7	0.459	4.340
250	6.25	33.95	26.72	137.3	0.494	5.161
300	5.99	33.95	26.75	134.6	0.561	7.013
400	5.32	34.03	26.90	121.6	0.689	11.473
500	4.83	34.11	27.02	110.9	0.805	16.604
530	4.75	34.12	27.03	109.5	0.838	18.185



14D

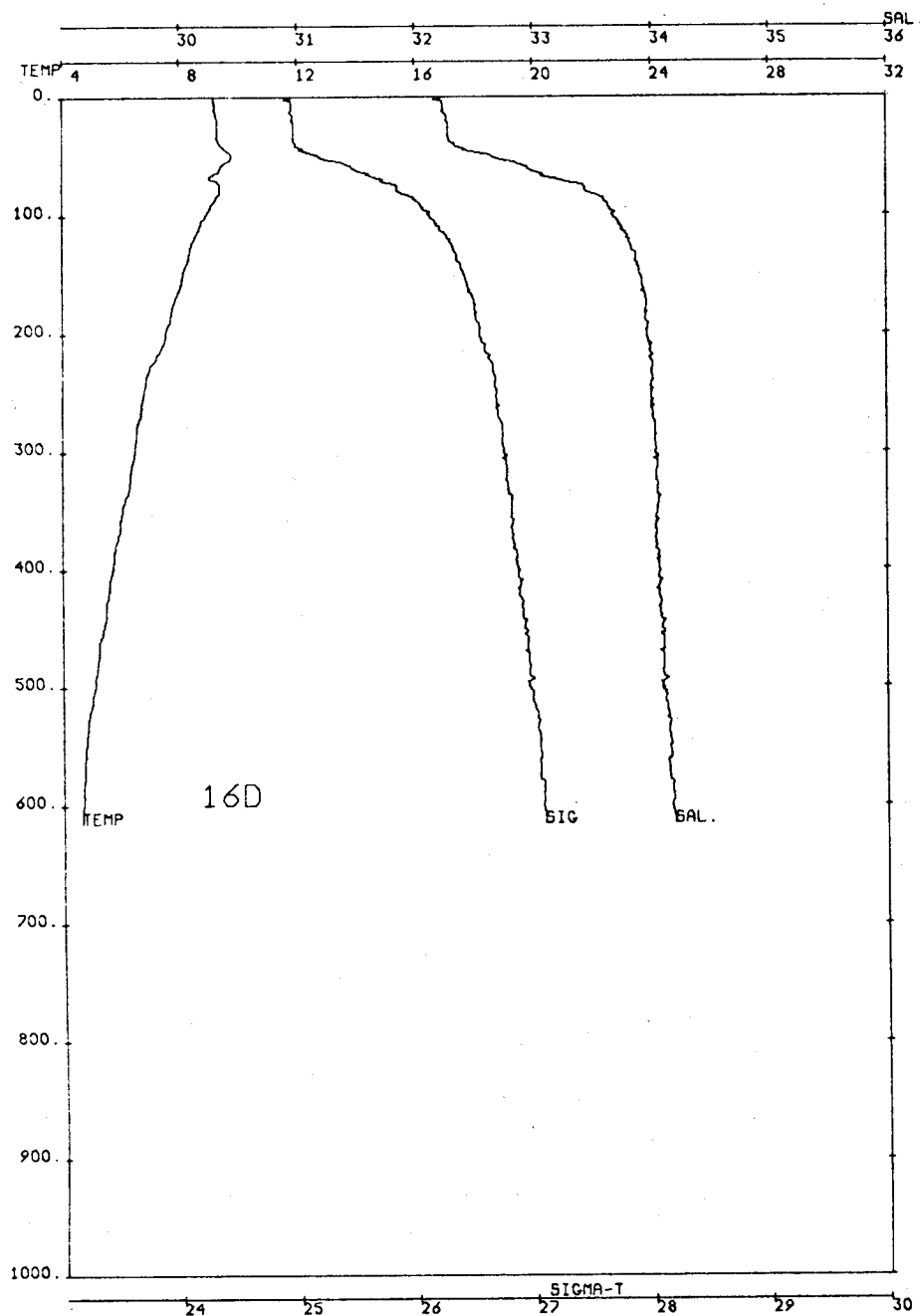
CAST NO 14D LAT 45 01.5 DATE 1/28/75 TIME 2025
 STATION LONG 125 35.2 DPTH 2679 PROBE OSU5
 SWELL DIR 310 HT 9 PER 7 BHR 18 8 WEATHER 01
 WIND DIR 010 SPD 20 CLOUD TYPE 6-8 AMOUNT 7
 AIR TEMP 6.1 WET BULB 4.8
 SAMPLE DEPTH 21.0 SAMPLE TEP 9.20 SAL 32.242

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.20	32.36	25.05	292.5	0.000	0.000
2	9.20	32.36	25.05	292.6	0.006	0.001
10	9.20	32.35	25.04	293.4	0.029	0.015
20	9.20	32.35	25.04	293.6	0.059	0.059
30	9.19	32.35	25.04	293.6	0.088	0.122
40	9.11	32.36	25.06	291.9	0.117	0.235
50	9.39	32.51	25.14	284.7	0.146	0.365
58	9.34	32.63	25.24	275.6	0.169	0.486



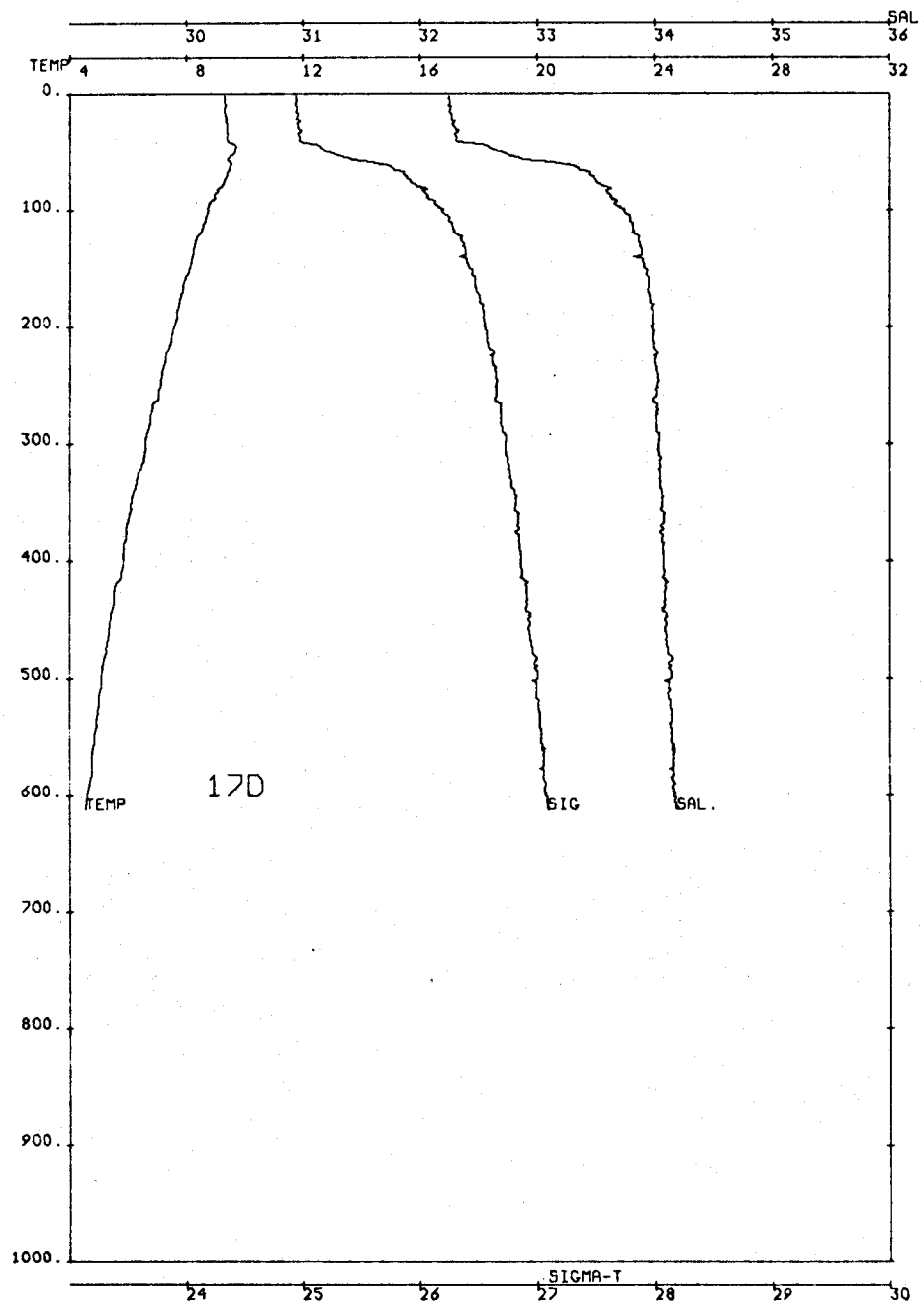
CAST NO 150 LAT 44 59.2 DATE 1/28/75 TIME 2216
 STATION LONG 125 24.0 DPTH 2681 PROBE OSUC
 SWELL DIR 310 HT 9 PER 7 BAR 19.2 WEATHER 02
 WIND DIR 010 SPD 15 CLOUD TYPE 6-8 AMOUNT 7
 AIR TEMP 6.5 WET BULB 4.7
 SAMPLE DEPTH 607.0 SAMPLE TEMP 4.51 SAL 34.212

DEPTH	TEMP	SAL	SIGMA	SVR	DELTD	POTE
0	9.17	32.36	25.05	292.1	0.000	0.000
2	9.17	32.36	25.05	292.1	0.006	0.001
10	9.18	32.35	25.04	293.1	0.029	0.015
20	9.18	32.37	25.06	291.8	0.058	0.058
30	9.19	32.36	25.05	292.9	0.088	0.111
40	9.19	32.36	25.05	293.0	0.117	0.224
50	9.20	32.36	25.05	293.4	0.146	0.366
60	9.49	32.58	25.16	283.2	0.175	0.525
70	9.18	32.80	25.40	260.8	0.203	0.704
80	8.62	33.01	25.65	237.0	0.237	0.887
90	7.73	33.19	25.92	211.2	0.249	1.071
100	7.72	33.36	26.05	198.5	0.270	1.268
110	7.49	33.41	26.13	191.8	0.289	1.474
120	7.52	33.57	26.25	180.5	0.308	1.689
130	7.56	33.70	26.34	171.5	0.325	1.908
140	7.59	33.80	26.42	164.6	0.342	2.126
150	7.48	33.84	26.47	160.3	0.359	2.371
160	7.35	33.89	26.52	155.0	0.374	2.615
170	7.18	33.90	26.55	152.1	0.390	2.869
180	7.20	33.94	26.58	149.5	0.405	3.131
190	7.01	33.92	26.59	148.6	0.420	3.408
200	6.81	33.93	26.63	145.3	0.434	3.694
225	6.54	33.93	26.66	142.1	0.470	4.454
250	6.23	33.94	26.71	137.7	0.505	5.231
300	5.84	33.97	26.79	131.2	0.572	7.127
400	5.41	34.05	26.91	120.9	0.697	11.480
500	4.96	34.12	27.01	111.7	0.811	16.635
600	4.51	34.18	27.11	102.9	0.918	22.585
613	4.50	34.18	27.11	102.9	0.931	23.307



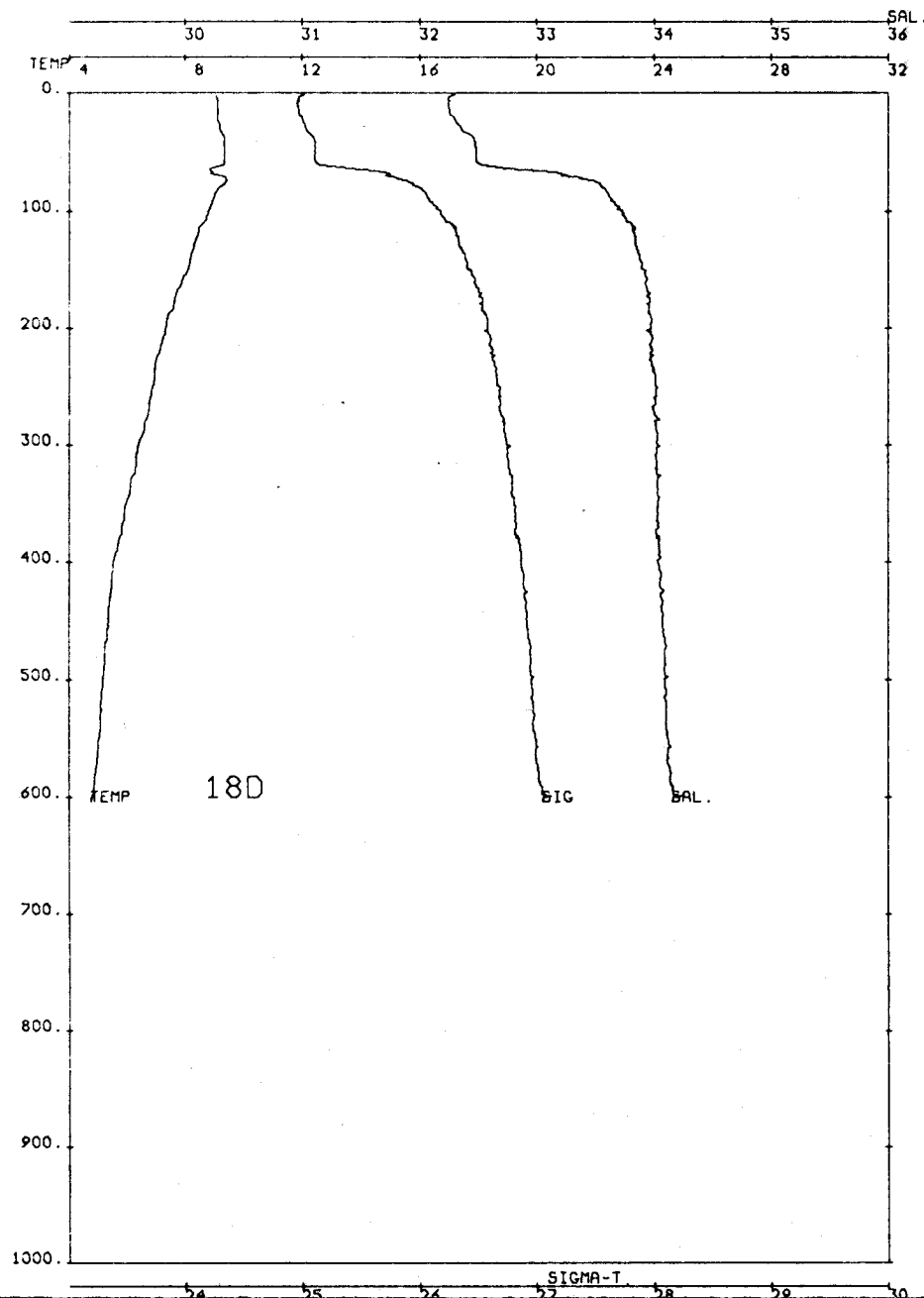
CAST NO 16D LAT 45 00 0 DATE 1/29/75 TIME 51
 STATION LONG 125 12 0 DPTH 1356 PROBE 0505
 SWELL DIR 300 HT 10 FEP 9 BAR 20.0 WEATHER 01
 WIND DIR 000 SPD 15 CLOUD TYPE 6- AMOUNT 6
 AIR TEMP 6.4 WET BULB 4.3
 SAMPLE DEPTH 591.0 SAMPLE TEMP 4.65 SAL 34.195

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTS
0	9.19	32.23	24.95	102.0	0.000	0.000
1	9.19	32.23	24.95	102.0	0.001	0.000
10	9.22	32.25	24.96	101.1	0.010	0.015
20	9.31	32.26	24.95	101.9	0.060	0.060
30	9.31	32.29	24.98	299.9	0.090	0.115
40	9.45	32.34	24.99	298.5	0.120	0.240
50	9.78	32.66	25.19	280.1	0.149	0.371
60	9.48	32.96	25.49	252.1	0.176	0.517
70	9.15	33.24	25.74	227.7	0.200	0.677
80	9.40	33.46	25.88	215.5	0.222	0.818
90	9.12	33.64	26.06	198.0	0.243	1.012
100	8.88	33.68	26.13	191.6	0.262	1.196
110	8.66	33.76	26.22	182.8	0.281	1.364
120	8.47	33.82	26.30	175.4	0.289	1.601
130	8.36	33.85	26.34	171.8	0.316	1.818
140	8.23	33.89	26.39	167.1	0.333	2.047
150	8.10	33.92	26.44	163.1	0.350	2.287
160	8.02	33.94	26.46	160.7	0.366	2.513
170	7.84	33.96	26.51	156.8	0.382	2.600
180	7.73	33.95	26.52	156.1	0.397	3.073
190	7.64	33.97	26.54	153.5	0.411	3.159
200	7.53	33.97	26.56	152.1	0.428	3.656
225	7.04	34.02	26.67	142.0	0.465	4.440
250	6.76	34.01	26.70	139.7	0.500	5.275
300	6.46	34.03	26.75	124.7	0.568	7.149
400	5.69	34.07	26.88	123.1	0.697	11.644
500	5.11	34.09	26.97	115.7	0.815	16.564
600	4.66	34.17	27.08	105.4	0.923	22.891
615	4.63	34.20	27.11	103.0	0.939	23.837



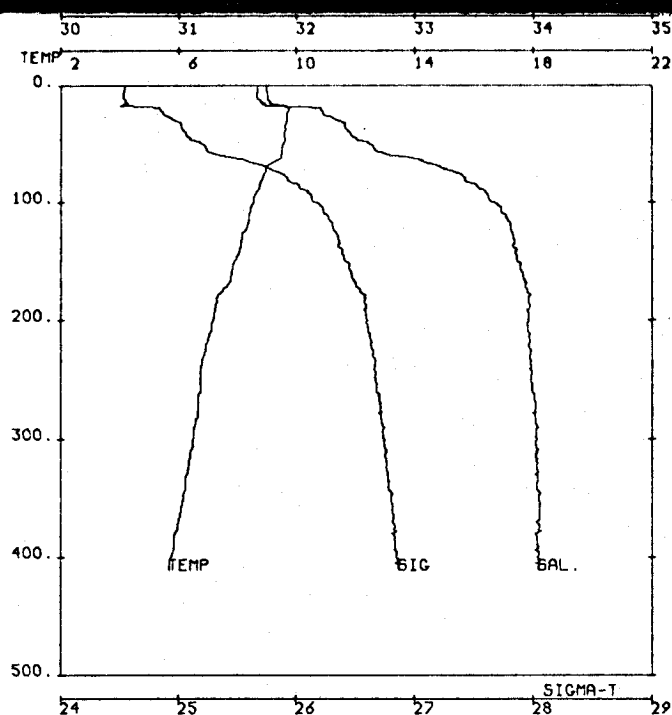
CAST NO 170 LAT 45 00 0 DATE 1/29/75 TIME 247
 STATION LONG 125 00 0 DPTH 930 PROBE 0505
 SWELL DIR 310 HT 10 PER 9 BAR 20.8 WEATHER 02
 WIND DIR 010 SPD 19 CLOUD TYPE 6- AMOUNT 8
 AIR TEMP 6.7 WET BULB 4.5
 SAMPLE DEPTH 605.0 SAMPLE TEMP 4.54 SAL 34.194

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.32	32.25	24.94	302.5	0.000	0.000
2	9.32	32.25	24.94	302.5	0.006	0.001
10	9.34	32.24	24.93	301.7	0.010	0.015
20	9.37	32.27	24.95	302.1	0.060	0.060
30	9.41	32.30	24.97	300.7	0.091	0.136
40	9.43	32.31	24.97	300.4	0.120	0.240
50	9.64	32.68	25.23	276.1	0.149	0.370
60	9.55	33.18	25.63	238.2	0.175	0.513
70	9.38	33.45	25.87	215.7	0.198	0.658
80	9.20	33.57	25.99	204.2	0.219	0.815
90	8.96	33.64	26.09	195.6	0.238	0.983
100	8.74	33.74	26.20	185.0	0.257	1.161
110	8.61	33.80	26.27	178.5	0.275	1.351
120	8.43	33.83	26.32	174.1	0.291	1.556
130	8.27	33.89	26.39	167.5	0.310	1.768
140	8.20	33.82	26.34	171.8	0.327	1.994
150	8.08	33.92	26.44	162.8	0.343	2.233
160	7.93	33.95	26.49	158.6	0.359	2.482
170	7.85	33.95	26.50	157.2	0.375	2.742
180	7.75	33.97	26.53	154.9	0.391	3.015
190	7.67	33.99	26.56	152.5	0.406	3.298
200	7.57	33.98	26.56	152.0	0.421	3.585
225	7.29	34.01	26.63	146.2	0.459	4.387
250	7.11	34.02	26.66	143.4	0.495	5.244
300	6.59	34.03	26.74	136.4	0.564	7.164
400	5.82	34.08	26.88	124.1	0.694	11.675
500	5.09	34.14	27.01	111.7	0.812	16.977
600	4.61	34.15	27.07	106.3	0.921	22.971
612	4.54	34.19	27.11	102.6	0.933	23.730



CAST NO 180 LAT 45 00.0 DATE 1/29/75 TIME 501
 STATION LONG 124 48.2 DPTH 630 PROBE OSUS
 SWELL DIR 310 HT 9 PER 9 BAR 21.5 WEATHER 02
 WIND DIR 355 SPD 10 CLOUD TYPE 8- AMOUNT 4
 AIR TEMP 5.7 WET BULB 4.3
 SAMPLE DEPTH 485.0 SAMPLE TEMP 5.20 SAL 34.136

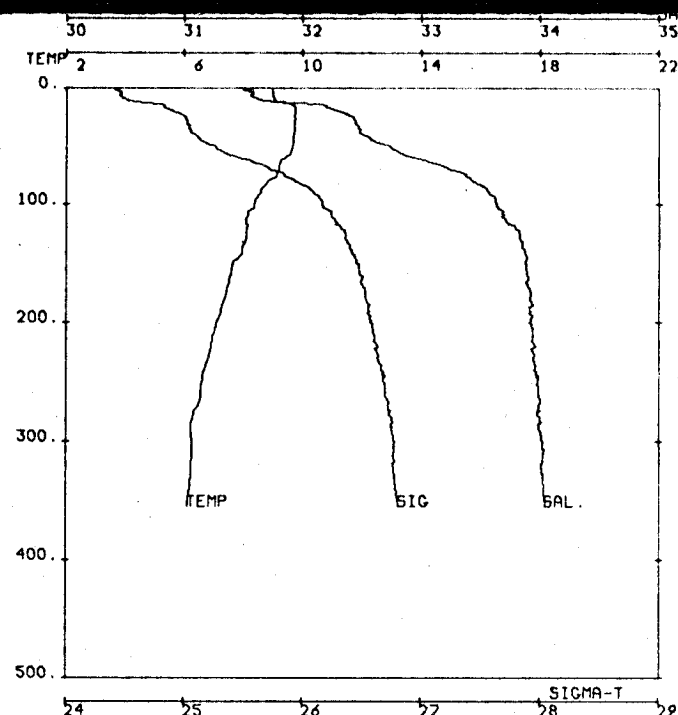
DEPTH	TEMP	SAL	SIGMA	SWA	DEL	POTE
0	9.08	32.30	25.02	295.2	0.000	0.000
2	9.08	32.30	25.02	295.2	0.006	0.001
10	9.11	32.25	24.98	299.5	0.010	0.015
20	9.12	32.29	25.01	296.9	0.060	0.060
30	9.21	32.36	25.05	293.2	0.089	0.104
40	9.35	32.47	25.11	287.3	0.118	0.215
50	9.35	32.49	25.13	286.0	0.147	0.164
60	9.36	32.52	25.15	284.1	0.176	0.522
70	9.18	33.21	25.72	230.4	0.201	0.684
80	9.16	33.57	26.00	203.6	0.222	0.844
90	8.94	33.65	26.10	194.5	0.242	1.010
100	8.77	33.72	26.18	186.9	0.261	1.154
110	8.59	33.82	26.28	177.0	0.279	1.385
120	8.43	33.83	26.32	174.1	0.297	1.587
130	8.32	33.86	26.36	170.4	0.314	1.802
140	8.18	33.88	26.39	167.1	0.331	2.029
150	8.07	33.93	26.45	162.0	0.347	2.269
160	7.88	33.93	26.48	159.4	0.363	2.518
170	7.69	33.97	26.54	153.9	0.379	2.777
180	7.60	33.96	26.54	153.5	0.394	3.047
190	7.40	33.98	26.59	149.4	0.410	3.328
200	7.33	33.98	26.60	148.6	0.425	3.619
225	7.00	33.98	26.64	144.5	0.461	4.199
250	6.87	34.03	26.70	139.4	0.497	5.246
300	6.37	34.04	26.77	132.8	0.566	7.119
400	5.53	34.04	26.88	123.4	0.695	11.641
500	5.16	34.10	26.97	115.6	0.814	16.979
600	4.77	34.16	27.06	107.5	0.926	23.160
604	4.77	34.16	27.06	107.5	0.930	23.419



19D

CAST NO 19D LAT 45 00.0 DATE 1/29/75 TIME 701
STATION LONG 124 36.0 DPTH 435 PROBE OSUS
SWELL DIR 310 HT 9 PER 9 BAR 22.0 WEATHER 02
WIND DIR 300 SPD 8 CLOUD TYPE 8- AMOUNT 8
AIR TEMP 6.3 WET BULB 4.5
SAMPLE DEPTH 406.0 SAMPLE TEMP 5.66 SAL 34.050

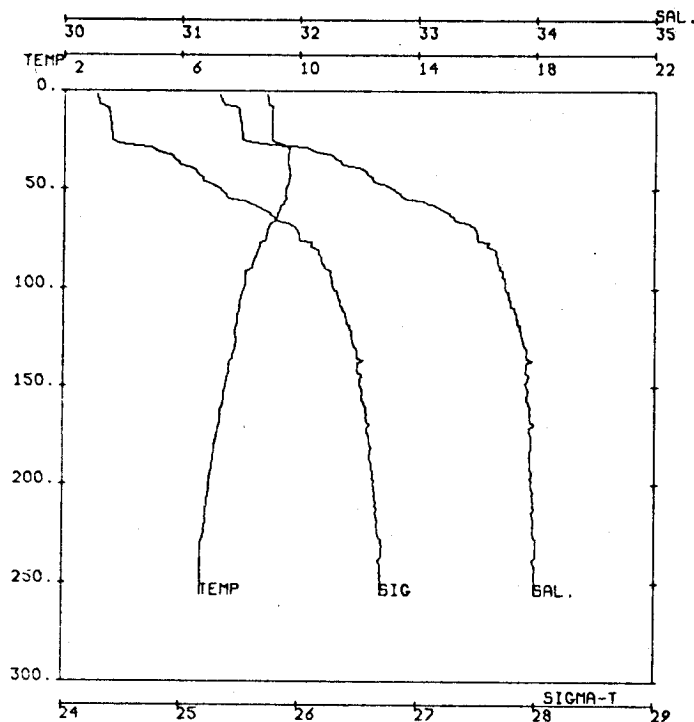
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.00	31.67	24.54	340.8	0.000	0.000
2	9.00	31.67	24.54	340.8	0.007	0.001
10	9.03	31.67	24.54	341.4	0.034	0.017
20	9.75	32.21	24.84	312.4	0.068	0.067
30	9.69	32.37	24.98	299.8	0.098	0.144
40	9.61	32.46	25.06	292.1	0.128	0.247
50	9.54	32.63	25.21	278.5	0.157	0.376
60	9.47	32.82	25.36	263.6	0.184	0.527
70	8.98	33.22	25.75	226.6	0.208	0.684
80	8.84	33.42	25.93	209.9	0.230	0.846
90	8.67	33.60	26.10	194.2	0.250	1.018
100	8.54	33.66	26.17	188.0	0.269	1.199
110	8.41	33.76	26.27	178.8	0.287	1.390
120	8.32	33.81	26.32	174.0	0.305	1.593
130	8.14	33.84	26.37	169.3	0.322	1.807
140	8.06	33.87	26.40	166.1	0.339	2.035
150	7.88	33.87	26.43	163.7	0.356	2.275
160	7.78	33.92	26.48	158.7	0.372	2.524
170	7.62	33.93	26.52	155.9	0.387	2.784
180	7.31	33.96	26.58	149.5	0.403	3.050
190	7.25	33.98	26.61	147.4	0.417	3.325
200	7.17	33.97	26.61	147.2	0.432	3.613
225	6.90	33.99	26.66	142.4	0.469	4.387
250	6.75	33.98	26.68	141.5	0.504	5.227
300	6.49	34.04	26.76	134.3	0.573	7.119
400	5.73	34.03	26.85	126.6	0.703	11.667
411	5.66	34.05	26.87	124.4	0.717	12.224



20D

CAST NO 20D LAT 45 00.1 DATE 1/29/75 TIME 817
STATION LONG 124 29.9 DPTH 358 PROBE OSUS
SWELL DIR 310 HT 9 PER 8 BAR 22.0 WEATHER 01
WIND DIR 030 SPD 14 CLOUD TYPE 6-8 AMOUNT 7
AIR TEMP 5.5 WET BULB 4.5
SAMPLE DEPTH 336.0 SAMPLE TEMP 6.17 SAL 34.025

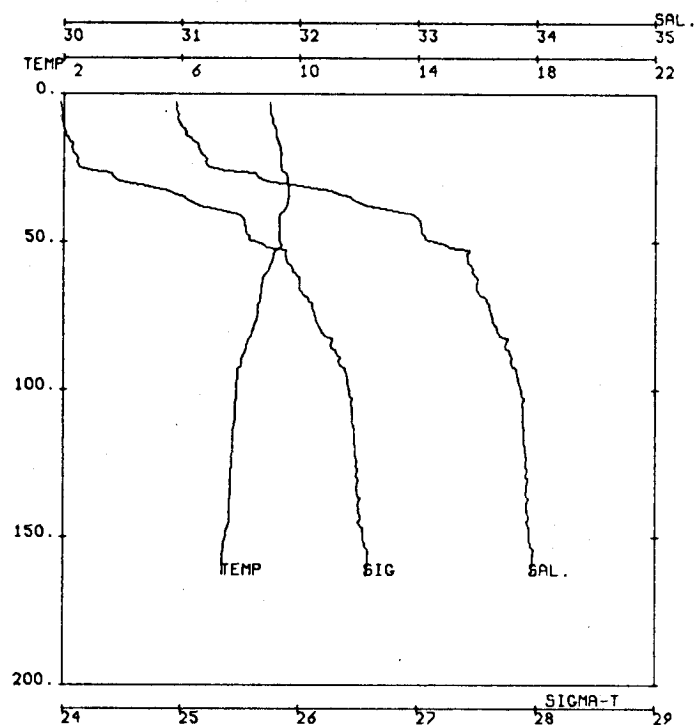
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.99	31.50	24.41	353.3	0.000	0.000
2	8.99	31.50	24.41	353.3	0.007	0.001
10	9.05	31.65	24.52	343.2	0.035	0.017
20	9.75	32.30	24.91	305.7	0.067	0.065
30	9.74	32.44	25.02	295.4	0.097	0.119
40	9.69	32.51	25.09	289.6	0.126	0.242
50	9.65	32.74	25.27	272.1	0.154	0.369
60	9.39	32.94	25.47	253.5	0.181	0.514
70	9.19	33.23	25.73	229.1	0.204	0.669
80	8.84	33.44	25.95	208.4	0.226	0.812
90	8.58	33.58	26.10	194.3	0.246	1.002
100	8.36	33.64	26.18	186.8	0.265	1.182
110	8.14	33.68	26.24	180.8	0.281	1.374
120	8.13	33.80	26.34	172.0	0.301	1.576
130	8.08	33.84	26.38	168.4	0.318	1.789
140	7.97	33.88	26.43	164.1	0.335	2.012
150	7.64	33.87	26.47	160.3	0.351	2.247
160	7.58	33.89	26.49	158.2	0.367	2.492
170	7.45	33.91	26.52	154.9	0.382	2.750
180	7.36	33.92	26.54	153.2	0.398	3.019
190	7.24	33.92	26.56	151.7	0.413	3.300
200	7.09	33.91	26.57	150.6	0.428	3.594
225	6.87	33.95	26.64	144.7	0.465	4.172
250	6.61	33.99	26.70	138.9	0.500	5.115
300	6.26	34.03	26.78	132.1	0.568	7.080
355	6.11	34.04	26.81	130.1	0.640	9.450



21D

CAST NO 210 LAT 45 00.5 DATE 1/29/75 TIME 940
 STATION LONG 124 24.0 DPTH 258 PROBE OSU5
 SWELL DIR 310 HT 8 PER 8 BAR 22.5 WEATHER 01
 WIND DIR 090 SPD 5 CLOUD TYPE 6-8 AMOUNT 5
 AIR TEMP 5.4 WET BULB 3.7
 SAMPLE DEPTH 232.0 SAMPLE TEMP 6.65 SAL 34.002

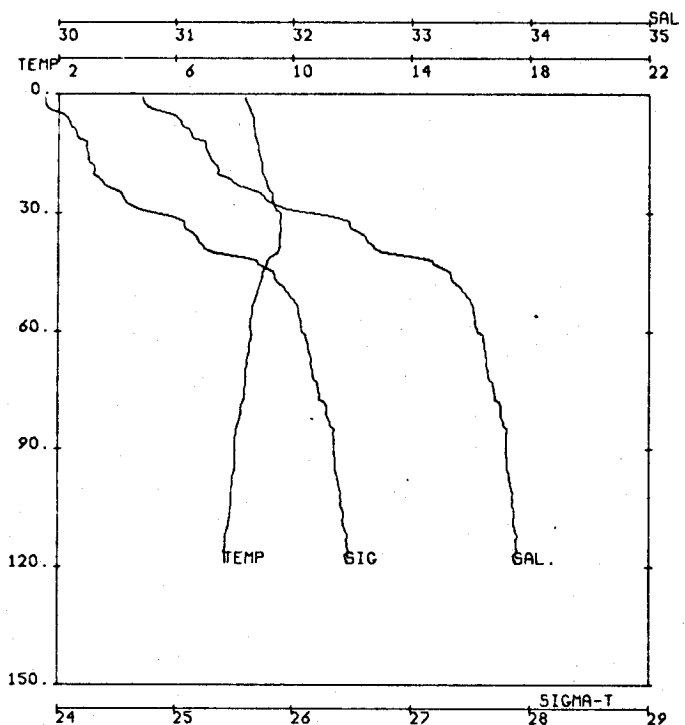
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.89	31.32	24.29	365.2	0.000	0.000
2	8.89	31.32	24.29	365.3	0.007	0.001
10	9.05	31.48	24.39	355.8	0.016	0.018
20	9.01	31.50	24.40	354.2	0.072	0.071
30	9.65	32.11	24.78	318.4	0.106	0.157
40	9.69	32.55	25.12	286.6	0.137	0.263
50	9.52	32.80	25.34	265.6	0.164	0.388
60	9.30	33.20	25.69	232.8	0.190	0.526
70	8.88	33.50	25.99	204.4	0.211	0.669
80	8.60	33.63	26.13	190.7	0.231	0.818
90	8.34	33.69	26.22	182.7	0.250	0.976
100	8.12	33.75	26.30	175.2	0.268	1.144
110	7.97	33.82	26.38	168.0	0.285	1.324
120	7.80	33.86	26.43	162.8	0.301	1.514
130	7.80	33.92	26.48	158.5	0.317	1.715
140	7.61	33.92	26.51	156.0	0.333	1.926
150	7.47	33.93	26.54	153.5	0.349	2.150
160	7.37	33.96	26.57	150.0	0.364	2.387
170	7.27	33.98	26.60	147.3	0.379	2.633
180	7.11	33.96	26.61	146.8	0.394	2.892
190	7.00	33.96	26.62	145.9	0.408	3.163
200	6.96	33.96	26.63	145.1	0.423	3.447
225	6.77	33.98	26.68	141.0	0.458	4.203
250	6.67	33.99	26.69	139.7	0.493	5.029



22D

CAST NO 220 LAT 45 00.0 DATE 1/29/75 TIME 1053
 STATION LONG 124 18.0 DPTH 163 PROBE OSU5
 SWELL DIR 310 HT 7 PER 8 BAR 22.8 WEATHER 01
 WIND DIR SPD 0 CLOUD TYPE 8- AMOUNT 2
 AIR TEMP 5.9 WET BULB 3.6
 SAMPLE DEPTH 159.0 SAMPLE TEMP 7.38 SAL 33.955

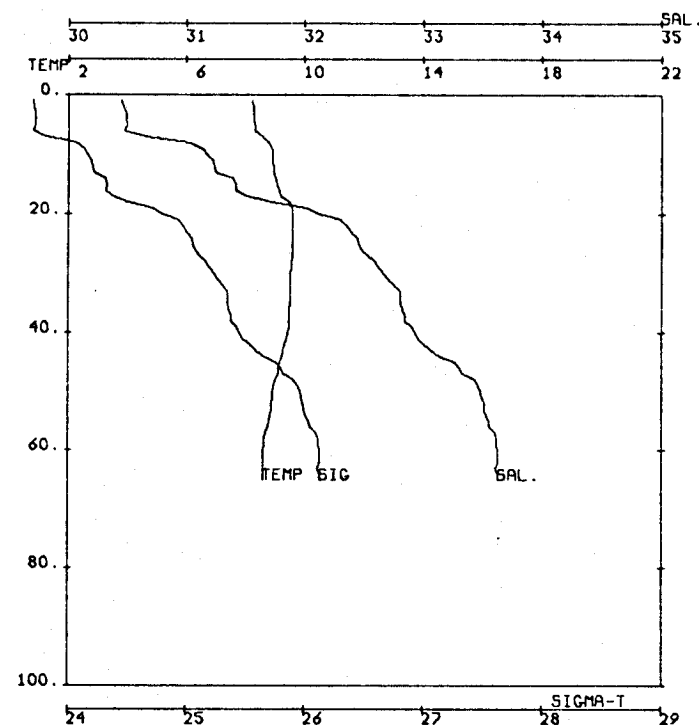
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.00	30.95	23.98	394.4	0.000	0.000
3	9.00	30.95	23.98	394.4	0.012	0.002
10	9.07	30.99	24.00	392.5	0.019	0.010
20	9.38	31.17	24.09	383.9	0.078	0.078
30	9.60	31.78	24.53	342.1	0.115	0.170
40	9.40	32.86	25.41	259.2	0.145	0.273
50	9.35	33.16	25.65	236.4	0.170	0.384
60	8.90	33.45	25.95	208.2	0.191	0.503
70	8.68	33.58	26.08	195.5	0.211	0.624
80	8.41	33.67	26.19	185.0	0.230	0.776
90	8.04	33.78	26.34	171.7	0.248	0.927
100	7.89	33.88	26.44	162.3	0.265	1.084
110	7.83	33.89	26.45	160.8	0.281	1.254
120	7.75	33.91	26.48	158.3	0.297	1.437
130	7.68	33.93	26.51	156.1	0.312	1.633
140	7.63	33.93	26.51	155.6	0.328	1.845
150	7.49	33.94	26.54	153.0	0.341	2.068
160	7.39	33.96	26.57	150.7	0.359	2.302
163	7.39	33.95	26.56	151.1	0.363	2.374



23D

CAST NO 23D LAT 44 59.9 DATE 1/29/75 TIME 1210
 STATION LONG 124 12.2 DPTH 119 PROBE OSU5
 SWELL DIR 310 HT 7 PER 9 BAR 22.9 WEATHER 02
 WIND DIR 105 SPD 4 CLOUD TYPE 6- AMOUNT 5
 AIR TEMP 5.9 WET BULB 3.7
 SAMPLE DEPTH 99.0 SAMPLE TEMP 7.91 SAL 33.834

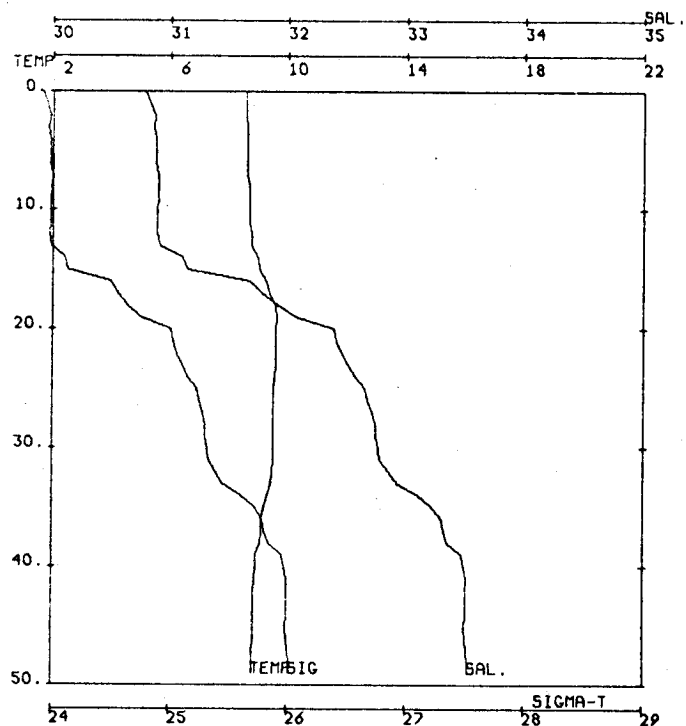
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.41	30.72	23.89	403.1	0.000	0.000
1	8.41	30.72	23.89	403.1	0.004	0.000
10	8.72	31.14	24.17	376.3	0.019	0.019
20	9.01	31.36	24.30	364.3	0.076	0.074
30	9.58	32.15	24.92	314.4	0.110	0.160
40	9.47	32.77	25.33	286.9	0.139	0.259
50	8.78	33.44	25.96	206.6	0.161	0.359
60	8.58	33.56	26.08	195.3	0.181	0.469
70	8.41	33.65	26.13	186.3	0.200	0.592
80	8.23	33.76	26.29	175.7	0.218	0.728
90	8.05	33.80	26.35	170.3	0.235	0.874
100	7.92	33.85	26.41	164.9	0.252	1.034
110	7.80	33.88	26.45	161.2	0.268	1.206
119	7.71	33.88	26.46	160.0	0.283	1.370



24D

CAST NO 24D LAT 45 00.1 DATE 1/29/75 TIME 1319
 STATION LONG 124 06.0 DPTH 66 PROBE OSU5
 SWELL DIR 300 HT 8 PER 9 BAR 23.2 WEATHER 01
 WIND DIR 055 SPD 8 CLOUD TYPE 6- AMOUNT 4
 AIR TEMP 5.5 WET BULB 3.5
 SAMPLE DEPTH 58.0 SAMPLE TEMP 8.62 SAL 33.611

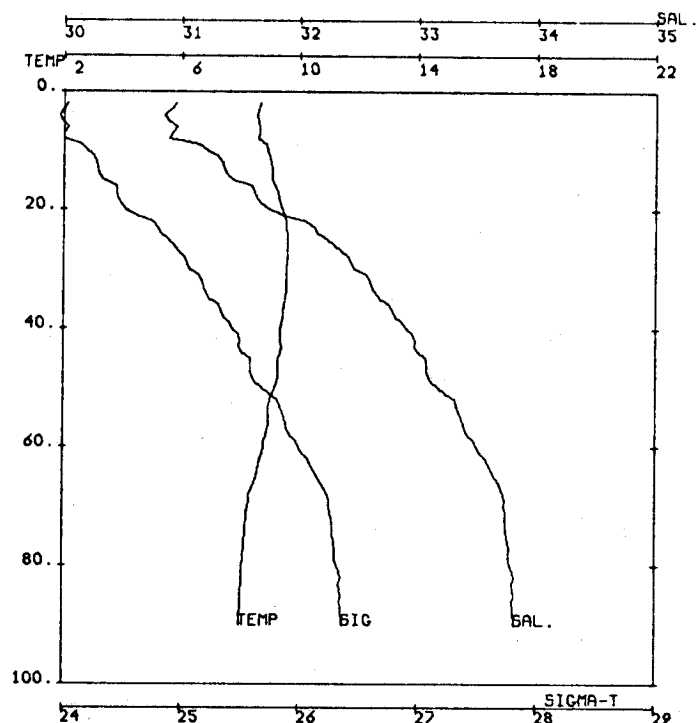
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.25	30.45	23.70	421.0	0.000	0.000
1	8.25	30.45	23.70	421.1	0.004	0.000
10	8.91	31.18	24.17	376.1	0.041	0.020
20	9.60	32.13	24.81	316.0	0.077	0.072
30	9.52	32.67	25.24	274.9	0.106	0.146
40	9.45	32.94	25.46	254.0	0.132	0.233
50	8.93	33.49	25.97	205.5	0.155	0.340
60	8.61	33.63	26.13	190.5	0.175	0.449
65	8.60	33.63	26.13	190.5	0.184	0.509



250

CAST NO 250 LAT 44 59.8 DATE 1/29/75 TIME 1558
 STATION LONG 124 04.8 DPTH 54 PROBE OSU5
 SWELL DIR 300 HT 9 PER 8 BAR 28.8 WEATHER 01
 WIND DIR 090 SPD 4 CLOUD TYPE 6-8 AMOUNT 2
 AIR TEMP 4.5 WET BULB 2.8
 SAMPLE DEPTH 50.0 SAMPLE TEMP 8.74 SAL 33.541

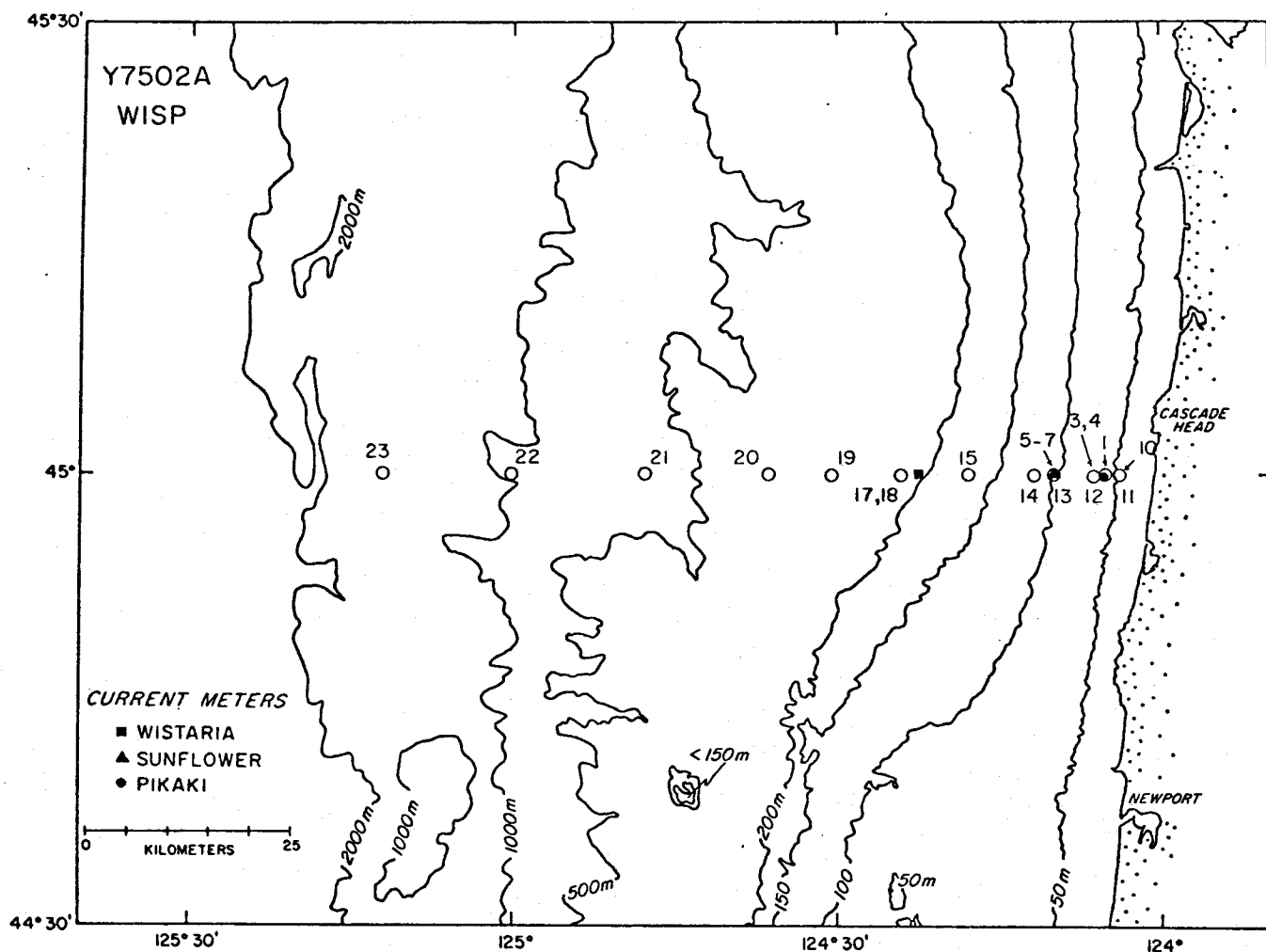
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.54	30.79	23.92	399.7	0.000	0.000
10	8.67	30.89	23.98	394.2	0.039	0.020
20	9.61	32.40	25.01	296.1	0.076	0.073
30	9.50	32.77	25.32	267.2	0.104	0.143
40	8.90	33.50	25.99	204.1	0.127	0.224
49	8.78	33.53	26.03	200.3	0.145	0.305



310

CAST NO 310 LAT 44 59.7 DATE 1/29/75 TIME 1920
 STATION LONG 124 08.6 DPTH 92 PROBE OSU5
 SWELL DIR 300 HT 9 PER 8 BAR 24.0 WEATHER 02
 WIND DIR SPD 0 CLOUD TYPE 8- AMOUNT 2
 AIR TEMP 6.6 WET BULB 4.0
 SAMPLE DEPTH 90.0 SAMPLE TEMP 7.99 SAL

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.67	30.95	24.03	389.6	0.000	0.000
2	8.67	30.95	24.03	389.6	0.008	0.001
10	8.93	31.22	24.20	373.4	0.019	0.019
20	9.44	31.75	24.54	341.7	0.075	0.073
30	9.57	32.47	25.08	290.5	0.106	0.150
40	9.36	32.91	25.45	254.8	0.137	0.245
50	9.17	33.18	25.69	232.1	0.157	0.355
60	8.78	33.50	26.01	202.7	0.179	0.473
70	8.28	33.73	26.26	178.5	0.198	0.595
80	8.09	33.79	26.34	171.5	0.215	0.726
90	7.99	33.82	26.38	168.0	0.232	0.869

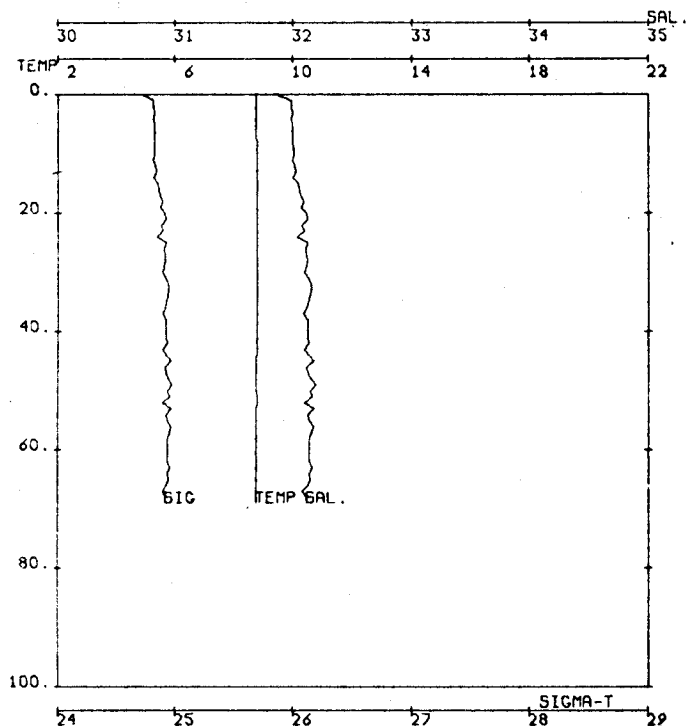


Y7502C
R/V YAQUINA
3 - 5 February 1975

Hydrographic section along 45°N.

Used mainly CTD #4; its temperature calibration had drifted since the previous cruise. Tested CTD probes #1 and 3, both of which had spiky conductivity records, and probe #5, which appeared to function properly.

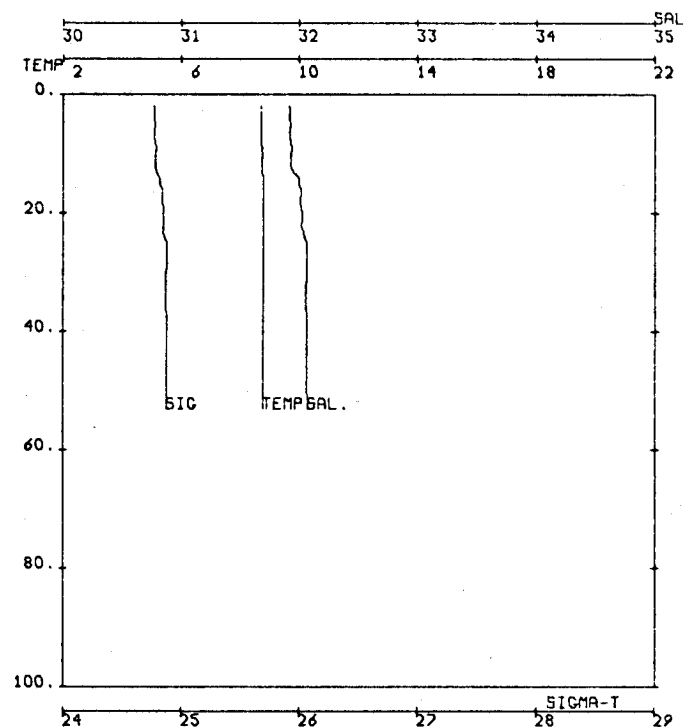
Personnel: Robert L. Smith, Jane Huyer, Dennis Barstow, Ben Moore, Robert Kapaun, Lyn Wilcox, Kathy Lee, Tedd Wright, Jim Wilcox, Francis Kapaun.



1U

CAST NO 1U LAT 45 00.5 DATE 2/ 4/75 TIME 37
STATION LONG 124 05.6 DPTH PROBE OSU3
SNELL DIR 200 HT PER 5 BAR 01.0 WEATHER
WIND DIR 120 SPD 10 CLOUD TYPE 7- AMOUNT 8
AIR TEMP 7.0 WET BULB 5.8
SAMPLE DEPTH 62.3 SAMPLE TEMP 8.78 SAL 32.067

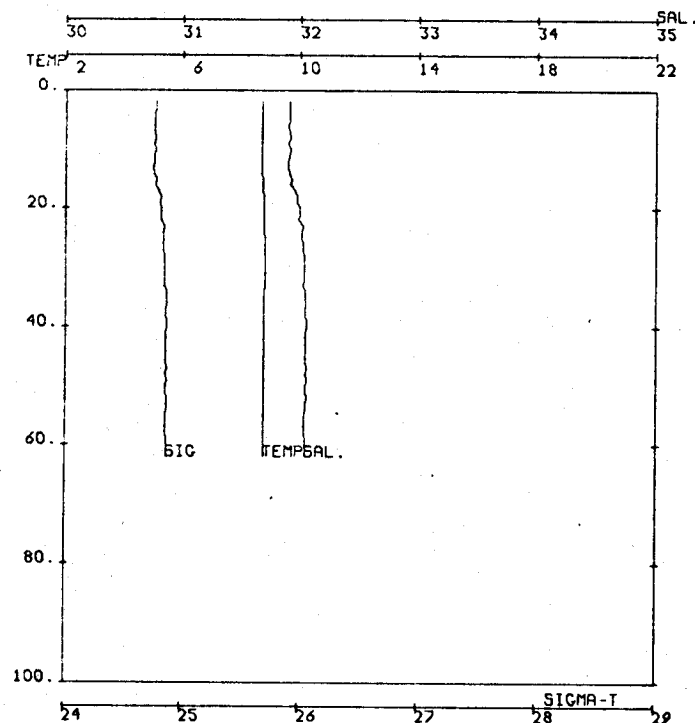
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.75	31.86	24.73	323.1	0.000	0.000
10	8.79	32.01	24.84	312.6	0.031	0.016
20	8.80	32.12	24.92	304.8	0.062	0.062
30	8.80	32.10	24.91	306.4	0.093	0.139
40	8.80	32.13	24.93	304.3	0.123	0.245
50	8.77	32.15	24.95	302.6	0.154	0.381
60	8.76	32.14	24.95	303.3	0.184	0.548
69	8.76	32.12	24.93	305.0	0.211	0.724



3D

CAST NO 3D LAT 45 00.2 DATE 2/ 4/75 TIME 229
STATION LONG 124 06.4 DPTH PROBE OSU4
SNELL DIR 200 HT PER 5 BAR 01.0 WEATHER 02
WIND DIR 180 SPD 25 CLOUD TYPE 7- AMOUNT 8
AIR TEMP
SAMPLE DEPTH SAMPLE TEMP WET BULB SAL

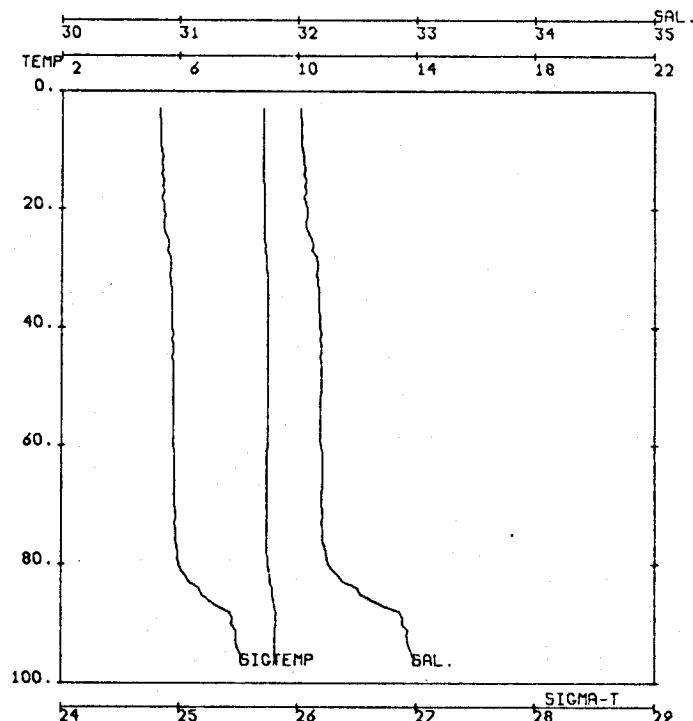
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.72	31.92	24.78	318.2	0.000	0.000
2	8.72	31.92	24.78	318.2	0.006	0.001
10	8.74	31.93	24.78	317.9	0.032	0.016
20	8.79	32.03	24.86	311.3	0.063	0.063
30	8.81	32.07	24.88	308.8	0.094	0.140
40	8.80	32.07	24.88	308.8	0.125	0.249
50	8.80	32.07	24.88	309.0	0.156	0.388
53	8.81	32.08	24.89	308.4	0.165	0.435



4D

CAST NO 4D LAT 45 00.2 DATE 2/ 4/75 TIME 258
 STATION LONG 124 06.4 DPTH PROBE OSUS
 SWELL DIR 200 HT PER 5 BAR 01.0 WEATHER 02
 WIND DIR 170 SPD 25 CLOUD TYPE 7- AMOUNT 8
 AIR TEMP
 WET BULB
 SAMPLE DEPTH 59.0 SAMPLE TEMP 8.80 SAL 32.042

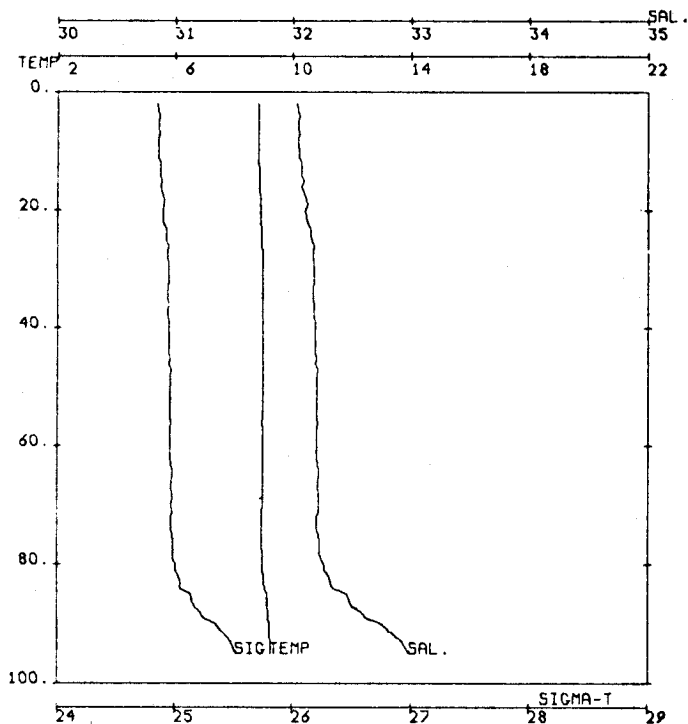
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.72	31.91	24.77	318.9	0.000	0.000
2	8.72	31.91	24.77	318.9	0.006	0.001
10	8.72	31.92	24.78	318.3	0.032	0.016
20	8.80	32.00	24.83	313.7	0.064	0.064
30	8.82	32.04	24.86	311.2	0.095	0.142
40	8.79	32.06	24.88	309.4	0.126	0.250
50	8.81	32.05	24.87	310.6	0.157	0.390
60	8.79	32.05	24.87	310.5	0.188	0.561
62	8.79	32.05	24.87	310.5	0.194	0.599



5D

CAST NO 5D LAT 45 00.0 DATE 2/ 4/75 TIME 405
 STATION LONG 124 10.1 DPTH PROBE OSUS
 SWELL DIR 200 HT 7 PER 7 BAR 99.9 WEATHER 02
 WIND DIR 170 SPD 25 CLOUD TYPE 7- AMOUNT 8
 AIR TEMP 6.0 WET BULB 4.6
 SAMPLE DEPTH 71.0 SAMPLE TEMP 8.95 SAL 32.204

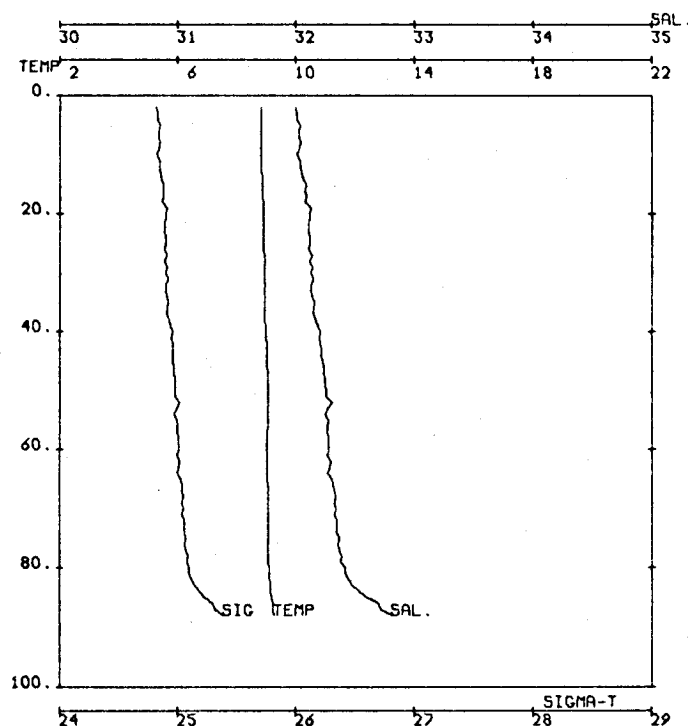
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.83	32.02	24.84	312.3	0.000	0.000
3	8.83	32.02	24.84	312.4	0.009	0.001
10	8.84	32.04	24.86	311.1	0.031	0.016
20	8.88	32.08	24.88	308.9	0.062	0.062
30	8.97	32.17	24.94	303.7	0.093	0.139
40	8.99	32.19	24.95	302.7	0.123	0.245
50	8.99	32.20	24.96	302.1	0.153	0.381
60	8.98	32.20	24.96	302.1	0.184	0.548
70	8.96	32.20	24.96	302.0	0.214	0.743
80	8.99	32.26	25.00	298.2	0.244	0.969
90	9.26	32.88	25.45	256.4	0.272	1.204
97	9.21	32.98	25.53	248.4	0.289	1.369



60

CAST NO 60 LAT 45 00.5 DATE 2/ 4/75 TIME 439
STATION LONG 124 10.1 DPTH PROBE OSU4
SWELL DIR 200 HT 7 PER 7 BAR 00.0 WEATHER 02
WIND DIR 190 SPD 25 CLOUD TYPE 6-7 AMOUNT 8
AIR TEMP WET BULB
SAMPLE DEPTH 70.5 SAMPLE TEMP 8.97 SAL 32.220

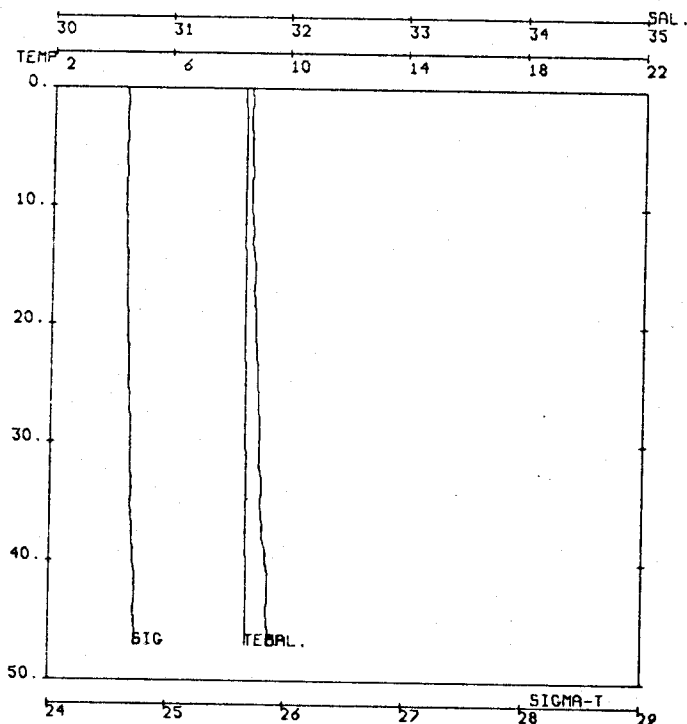
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.83	32.04	24.86	310.8	0.000	0.000
2	8.83	32.04	24.86	310.9	0.006	0.001
10	8.84	32.06	24.87	309.6	0.031	0.016
20	8.91	32.11	24.90	307.1	0.062	0.062
30	8.98	32.19	24.95	302.4	0.092	0.138
40	8.99	32.20	24.96	301.9	0.122	0.244
50	8.99	32.21	24.96	301.4	0.153	0.379
60	8.98	32.21	24.97	301.4	0.183	0.545
70	8.98	32.23	24.98	300.1	0.213	0.740
80	9.00	32.28	25.02	296.8	0.243	0.965
90	9.24	32.76	25.35	265.0	0.271	1.208
95	9.26	32.99	25.53	248.4	0.284	1.326



70

CAST NO 70 LAT 45 00.5 DATE 2/ 4/75 TIME 508
STATION LONG 124 10.2 DPTH PROBE OSU3
SWELL DIR 200 HT 7 PER 7 BAR 00.0 WEATHER 02
WIND DIR 200 SPD 20 CLOUD TYPE 6-7 AMOUNT 8
AIR TEMP WET BULB
SAMPLE DEPTH 68. SAMPLE TEMP 9.08 SAL 32.324

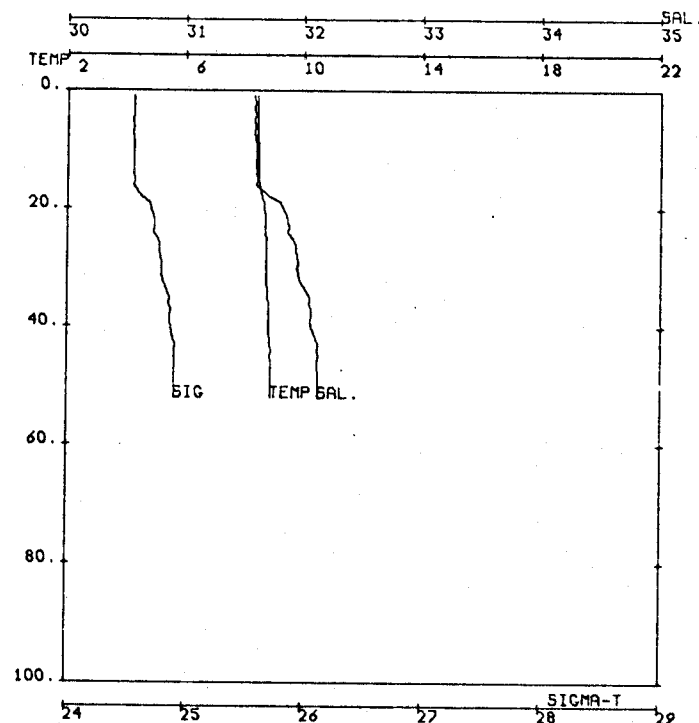
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.83	32.00	24.83	313.8	0.000	0.000
2	8.83	32.00	24.83	313.8	0.006	0.001
10	8.84	32.01	24.83	313.4	0.031	0.016
20	8.92	32.12	24.91	306.5	0.062	0.062
30	8.95	32.13	24.91	306.4	0.093	0.139
40	9.01	32.21	24.96	301.5	0.123	0.245
50	9.09	32.26	24.99	299.1	0.153	0.381
60	9.05	32.28	25.01	297.2	0.183	0.545
70	9.08	32.34	25.05	293.4	0.213	0.737
80	9.12	32.42	25.11	288.2	0.242	0.955
88	9.26	32.81	25.39	261.6	0.264	1.142



10D

CAST NO 100 LAT 45 00.1 DATE 2/ 4/75 TIME 717
STATION LONG 124 04.3 DPTH PROBE OSU4
SWELL DIR 200 HT 7 PER 7 BAR 01.5 WEATHER 02
WIND DIR 200 SPD 12 CLOUD TYPE 5-6 AMOUNT 8
AIR TEMP WET BULB
SAMPLE DEPTH SAMPLE TEMP SAL

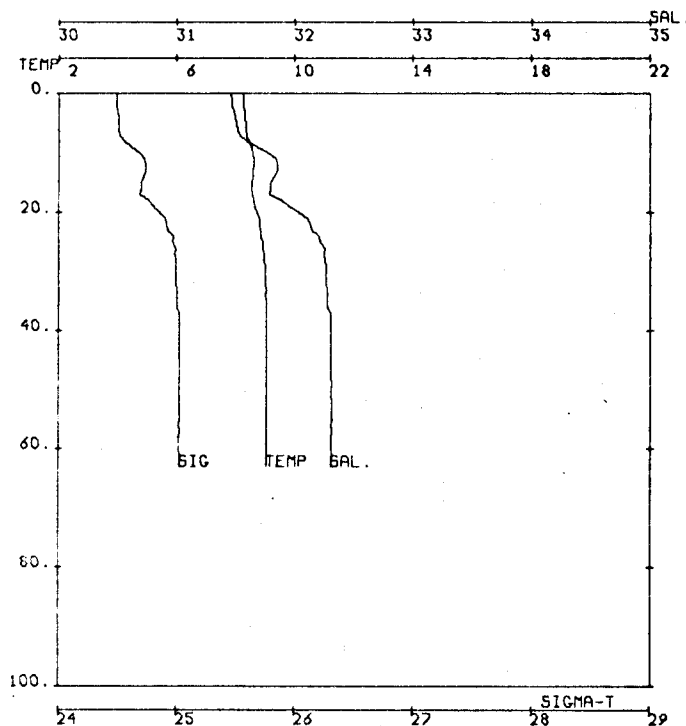
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.53	31.68	24.62	333.3	0.000	0.000
10	8.55	31.69	24.63	333.0	0.032	0.017
20	8.59	31.74	24.66	330.0	0.066	0.066
30	8.65	31.78	24.68	328.0	0.099	0.149
40	8.71	31.84	24.72	324.6	0.132	0.263
47	8.72	31.87	24.74	322.6	0.155	0.361



11D

CAST NO 110 LAT 45 00.0 DATE 2/ 4/75 TIME 1604
STATION LONG 124 04.6 DPTH PROBE OSU4
SWELL DIR 210 HT 7 PER 7 BAR 03.3 WEATHER 02
WIND DIR 060 SPD 10 CLOUD TYPE 6- AMOUNT 8
AIR TEMP WET BULB
SAMPLE DEPTH 48.0 SAMPLE TEMP 8.88 SAL 32.162

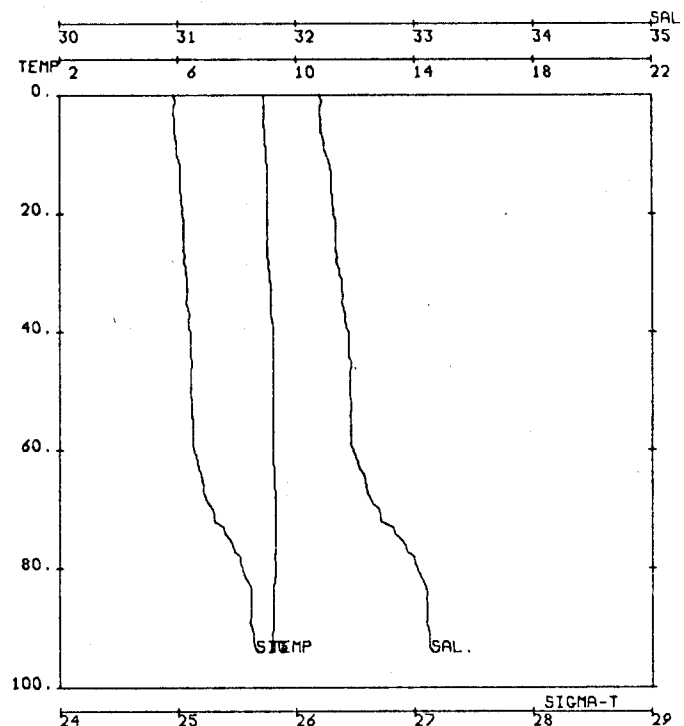
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.42	31.58	24.56	339.2	0.000	0.000
1	8.42	31.58	24.56	339.2	0.003	0.000
10	8.46	31.60	24.57	338.4	0.034	0.017
20	8.68	31.83	24.72	324.6	0.068	0.067
30	8.76	31.95	24.80	317.0	0.099	0.147
40	8.83	32.07	24.88	309.2	0.131	0.256
50	8.90	32.13	24.92	306.0	0.161	0.394
52	8.90	32.13	24.92	306.0	0.167	0.425



12D

CAST NO 12D LAT 45 00.0 DATE 2/ 4/75 TIME 1637
 STATION LONG 124 06.2 DPTH PROBE OSU4
 SWELL DIR 220 HT 6 PER 7 BAR 03.3 WEATHER 02
 WIND DIR 080 SPD 10 CLOUD TYPE 6-8 AMOUNT 8
 AIR TEMP 5.9 WET BULB 4.4
 SAMPLE DEPTH 61.0 SAMPLE TEMP 9.07 SAL 32.232

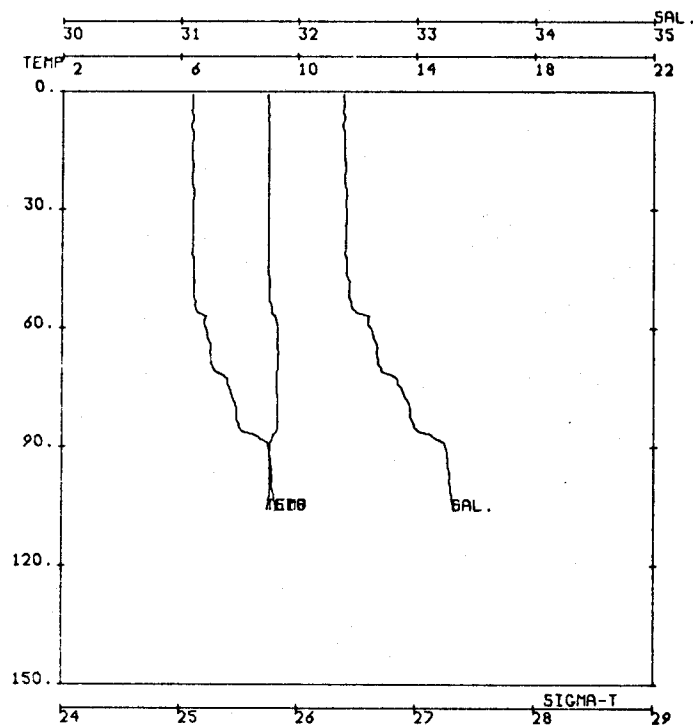
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.26	31.46	24.49	345.9	0.000	0.000
10	8.59	31.78	24.69	326.9	0.034	0.017
20	8.77	32.04	24.87	310.3	0.066	0.065
30	9.03	32.27	25.01	297.2	0.096	0.140
40	9.06	32.31	25.03	294.8	0.126	0.244
50	9.06	32.31	25.03	295.0	0.156	0.377
60	9.07	32.31	25.03	295.3	0.185	0.539
63	9.07	32.31	25.03	295.3	0.194	0.593



13D

CAST NO 13D LAT 45 00.0 DATE 2/ 4/75 TIME 1718
 STATION LONG 124 10.1 DPTH PROBE OSU4
 SWELL DIR 220 HT 6 PER 7 BAR 03.6 WEATHER 02
 WIND DIR 100 SPD 12 CLOUD TYPE 6-8 AMOUNT 7
 AIR TEMP 6.6 WET BULB 4.9
 SAMPLE DEPTH 91.0 SAMPLE TEMP 9.19 SAL 33.071

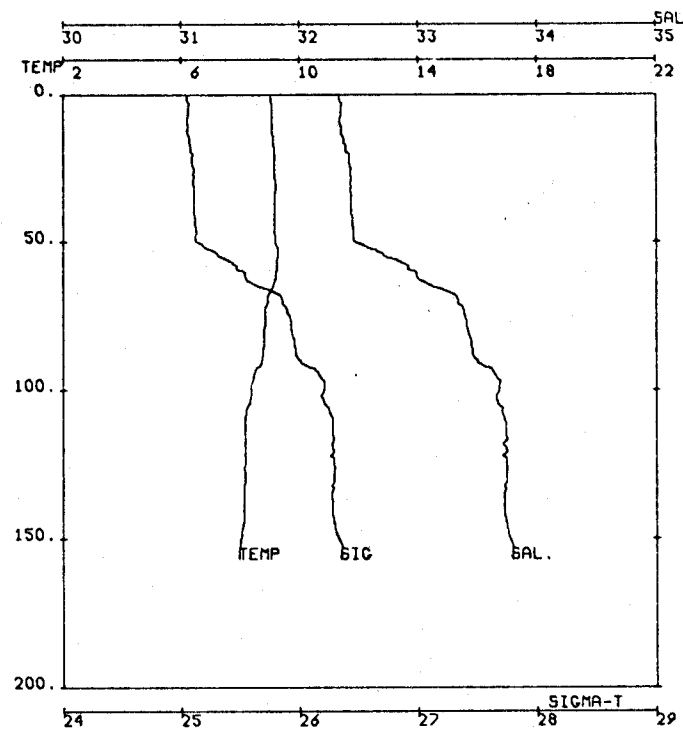
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.91	32.20	24.97	300.1	0.000	0.000
10	9.00	32.26	25.00	297.1	0.030	0.015
20	9.03	32.32	25.04	293.3	0.059	0.059
30	9.10	32.37	25.07	290.8	0.089	0.132
40	9.22	32.45	25.12	286.8	0.117	0.233
50	9.25	32.46	25.12	286.7	0.146	0.362
60	9.23	32.49	25.15	284.4	0.175	0.520
70	9.33	32.71	25.30	269.7	0.203	0.700
80	9.31	33.03	25.55	245.9	0.228	0.893
90	9.22	33.12	25.64	238.1	0.252	1.097
94	9.17	33.15	25.67	235.1	0.262	1.185



14D

CAST NO 140 LAT 45 00.0 DATE 2/ 4/75 TIME 1756
 STATION LONG 124 11.9 DPTH PROBE OSU4
 SWELL DIR 220 HT 6 PER 7 BAR 03.7 WEATHER 02
 WIND DIR 120 SPD 18 CLOUD TYPE 6- 8 AMOUNT 6
 AIR TEMP 6.6 WET BULB 4.6
 SAMPLE DEPTH 24.0 SAMPLE TEMP 9.02 SAL 32.424

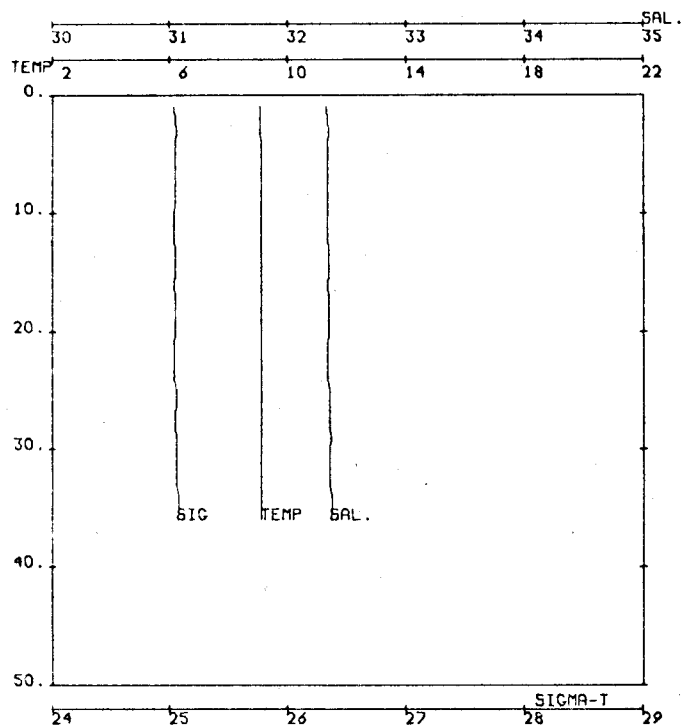
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.00	32.39	25.10	287.3	0.000	0.000
1	9.00	32.39	25.10	287.3	0.003	0.000
10	9.02	32.40	25.11	287.0	0.029	0.014
20	9.02	32.41	25.12	286.5	0.057	0.057
30	9.03	32.42	25.12	286.0	0.086	0.129
40	9.04	32.41	25.11	287.1	0.115	0.229
50	9.09	32.44	25.13	285.8	0.143	0.358
60	9.37	32.63	25.23	276.1	0.172	0.513
70	9.34	32.71	25.30	269.9	0.199	0.691
80	9.36	32.96	25.49	251.9	0.225	0.885
90	9.07	33.26	25.77	225.4	0.249	1.091
100	9.08	33.30	25.80	222.8	0.271	1.304
106	8.99	33.32	25.83	220.0	0.285	1.441



15D

CAST NO 150 LAT 45 00.1 DATE 2/ 4/75 TIME 1854
 STATION LONG 124 17.9 DPTH PROBE OSU4
 SWELL DIR 220 HT 6 PER 7 BAR 04.0 WEATHER 21
 WIND DIR 100 SPD 18 CLOUD TYPE 6- AMOUNT 8
 AIR TEMP 6.0 WET BULB 4.8
 SAMPLE DEPTH 123.0 SAMPLE TEMP 8.13 SAL 33.756

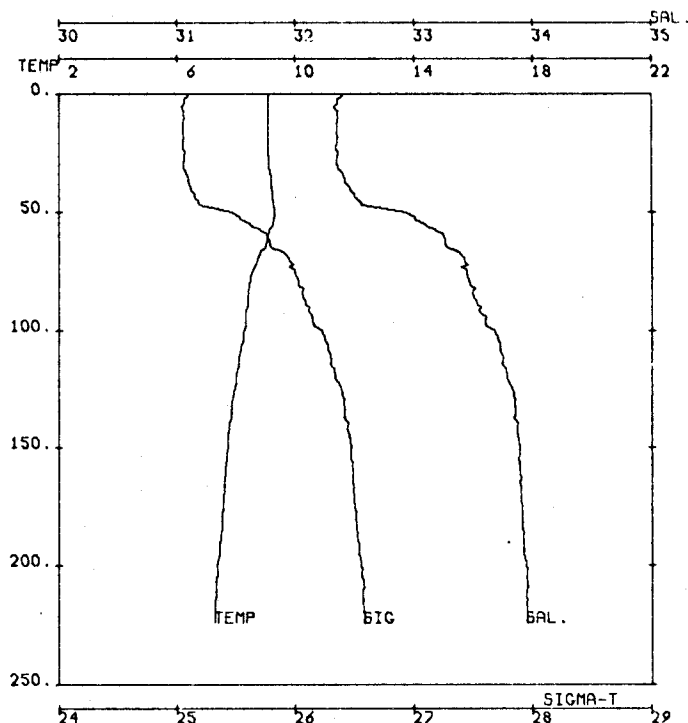
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.05	32.34	25.06	291.8	0.000	0.000
1	9.05	32.34	25.06	291.8	0.003	0.000
10	9.06	32.35	25.06	291.3	0.029	0.015
20	9.15	32.42	25.10	287.7	0.058	0.058
30	9.18	32.43	25.11	287.5	0.087	0.110
40	9.16	32.44	25.12	286.7	0.116	0.210
50	9.19	32.48	25.14	284.3	0.144	0.359
60	9.19	32.99	25.54	246.7	0.171	0.505
70	8.90	33.34	25.86	216.5	0.194	0.656
80	8.80	33.43	25.95	208.5	0.215	0.814
90	8.71	33.50	26.02	202.2	0.236	0.990
100	8.35	33.68	26.21	183.7	0.255	1.169
110	8.16	33.73	26.28	177.4	0.273	1.360
120	8.14	33.75	26.30	175.8	0.291	1.563
130	8.14	33.74	26.29	176.7	0.308	1.784
140	8.11	33.73	26.29	177.2	0.326	2.024
150	8.01	33.78	26.34	172.2	0.344	2.278
157	7.97	33.79	26.35	171.0	0.355	2.462



170

CAST NO 170 LAT 45 00.0 DATE 2/ 4/75 TIME 2017
 STATION LONG 124 24.0 DPTH PROBE 0505
 SWELL DIR 230 HT 6 PER 7 BAR 6.7 WEATHER 02
 WIND DIR 250 SPD 3 CLOUD TYPE 7- AMOUNT 8
 AIR TEMP 6.0 WET BULB 5.1
 SAMPLE DEPTH 28.0 SAMPLE TEMP 9.10 SAL 32.362

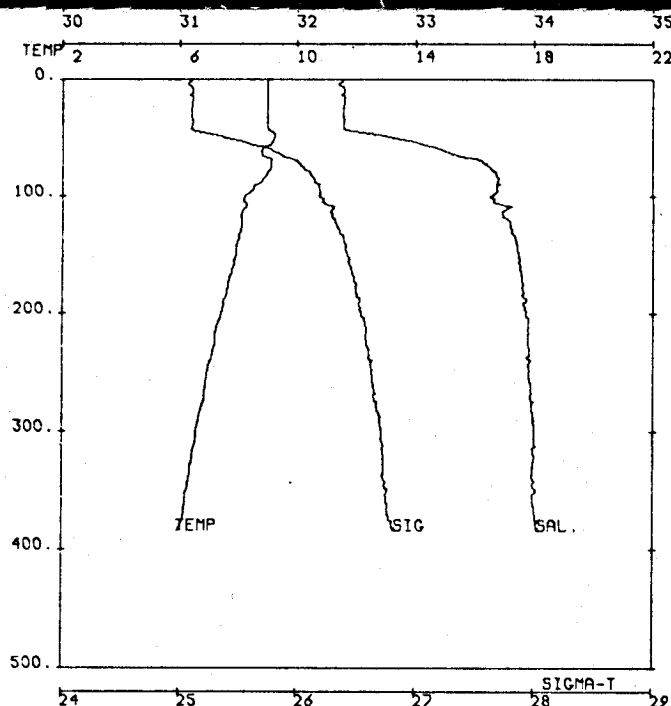
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.09	32.33	25.04	293.1	0.000	0.000
1	9.09	32.33	25.04	293.1	0.003	0.000
10	9.10	32.34	25.05	292.7	0.029	0.015
20	9.11	32.35	25.06	292.3	0.059	0.059
30	9.11	32.36	25.06	291.7	0.088	0.132
36	9.12	32.37	25.07	291.2	0.105	0.189



180

CAST NO 180 LAT 45 00.0 DATE 2/ 4/75 TIME 2123
 STATION LONG 124 24.0 DPTH PROBE 0504
 SWELL DIR 230 HT 6 PER 7 BAR 6.7 WEATHER 02
 WIND DIR 250 SPD 3 CLOUD TYPE 7- AMOUNT 8
 AIR TEMP 6.0 WET BULB 5.1
 SAMPLE DEPTH SAMPLE TEMP SAL

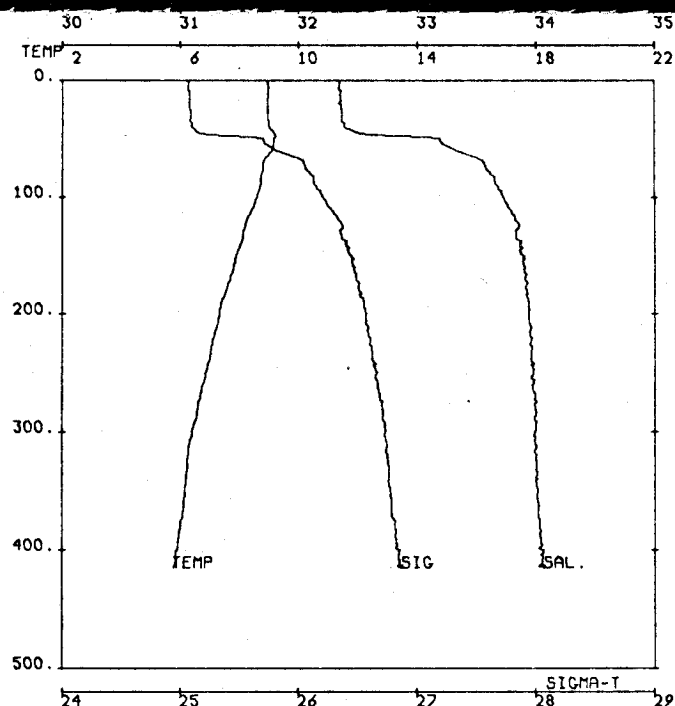
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.10	32.40	25.10	288.1	0.000	0.000
10	9.08	32.36	25.07	290.9	0.029	0.015
20	9.09	32.35	25.06	292.0	0.058	0.058
30	9.10	32.36	25.06	291.5	0.087	0.131
40	9.23	32.47	25.13	285.5	0.116	0.232
50	9.33	32.93	25.47	253.1	0.144	0.357
60	9.05	33.26	25.78	224.6	0.168	0.488
70	8.72	33.43	25.96	207.2	0.190	0.629
80	8.45	33.48	26.04	199.7	0.210	0.781
90	8.35	33.57	26.13	191.7	0.230	0.948
100	8.24	33.69	26.24	181.4	0.248	1.127
110	8.10	33.75	26.30	175.1	0.266	1.315
120	8.01	33.79	26.35	171.0	0.284	1.514
130	7.85	33.85	26.42	164.4	0.300	1.722
140	7.75	33.88	26.45	161.3	0.317	1.943
150	7.70	33.89	26.47	159.7	0.333	2.175
160	7.62	33.90	26.49	158.0	0.349	2.422
170	7.57	33.91	26.51	156.7	0.364	2.681
180	7.53	33.91	26.51	156.3	0.380	2.955
190	7.45	33.93	26.54	153.8	0.395	3.242
200	7.37	33.94	26.56	152.1	0.411	3.540



19D

CAST NO 19D LAT 45 00.0 DATE 2/ 4/75 TIME 2242
 STATION LONG 124 30.0 DPTH PROBE OSU4
 SWELL DIR 230 HT 6 PER 7 BAR 08.0 WEATHER 01
 WIND DIR 200 SPD 8 CLOUD TYPE 6- 8 AMOUNT 5
 AIR TEMP 7.7 WET BULB 5.7
 SAMPLE DEPTH 358.0 SAMPLE TEMP 6.17 SAL 34.032

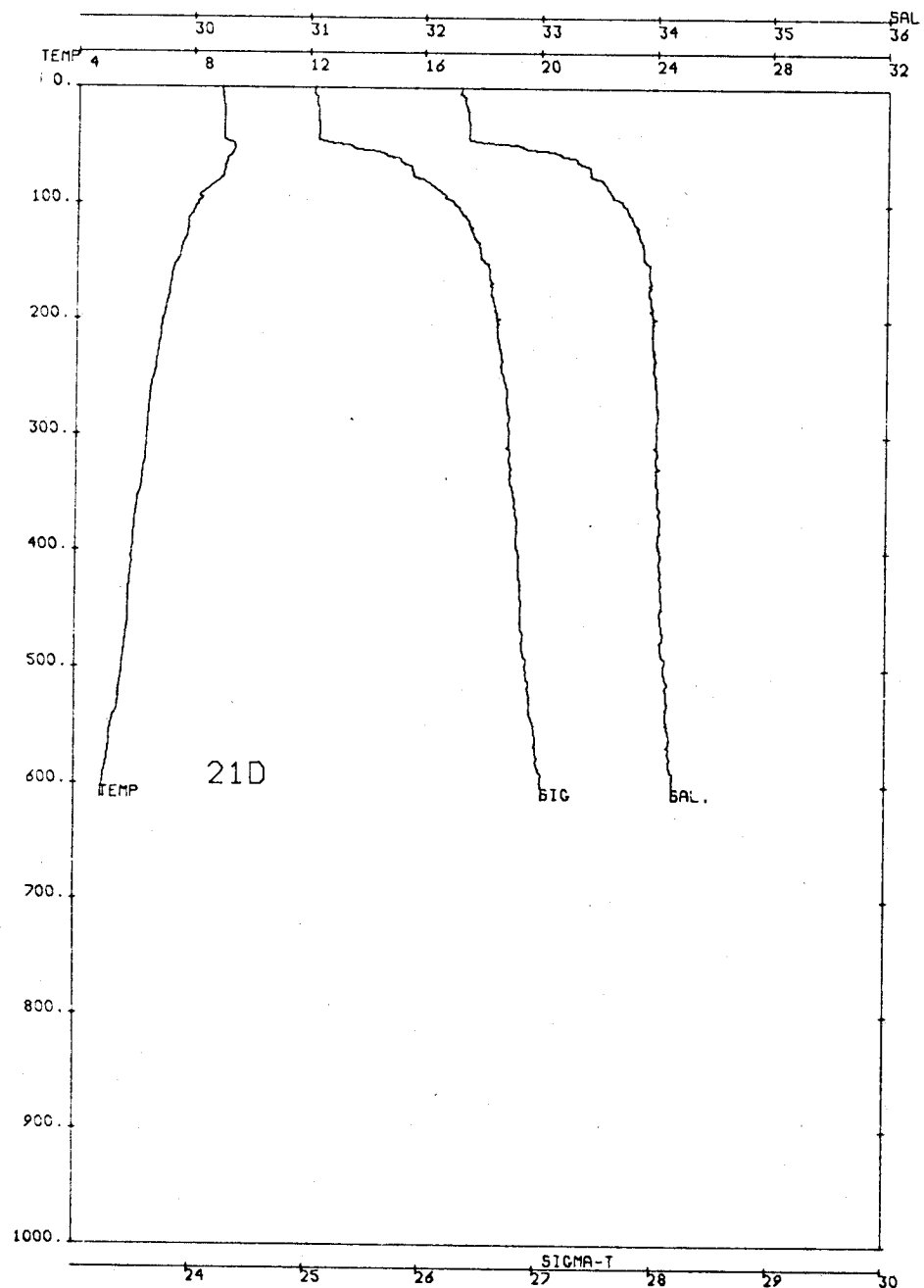
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.01	32.39	25.10	287.5	0.000	0.000
10	8.99	32.40	25.11	286.6	0.029	0.014
20	8.99	32.40	25.11	286.7	0.058	0.057
30	8.99	32.39	25.11	287.7	0.086	0.129
40	9.00	32.39	25.10	288.0	0.115	0.230
50	9.21	32.82	25.41	259.4	0.143	0.354
60	8.79	33.23	25.79	222.9	0.167	0.486
70	9.09	33.57	26.01	202.4	0.188	0.625
80	8.98	33.68	26.11	192.7	0.208	0.773
90	8.62	33.72	26.20	184.5	0.227	0.934
100	8.20	33.63	26.20	185.2	0.245	1.110
110	8.22	33.77	26.30	175.3	0.263	1.299
120	8.13	33.78	26.32	173.4	0.281	1.501
130	8.05	33.82	26.36	169.8	0.298	1.715
140	7.94	33.85	26.41	165.9	0.315	1.941
150	7.90	33.88	26.44	163.2	0.331	2.179
160	7.78	33.89	26.46	160.9	0.347	2.431
170	7.67	33.90	26.48	158.8	0.363	2.694
180	7.61	33.91	26.50	157.4	0.379	2.971
190	7.49	33.94	26.54	153.7	0.395	3.259
200	7.41	33.93	26.55	153.4	0.410	3.559
225	7.20	33.95	26.59	149.4	0.448	4.356
250	6.93	33.96	26.63	145.7	0.484	5.229
300	6.56	34.01	26.73	137.5	0.555	7.175
384	5.92	34.04	26.83	128.1	0.669	11.047



20D

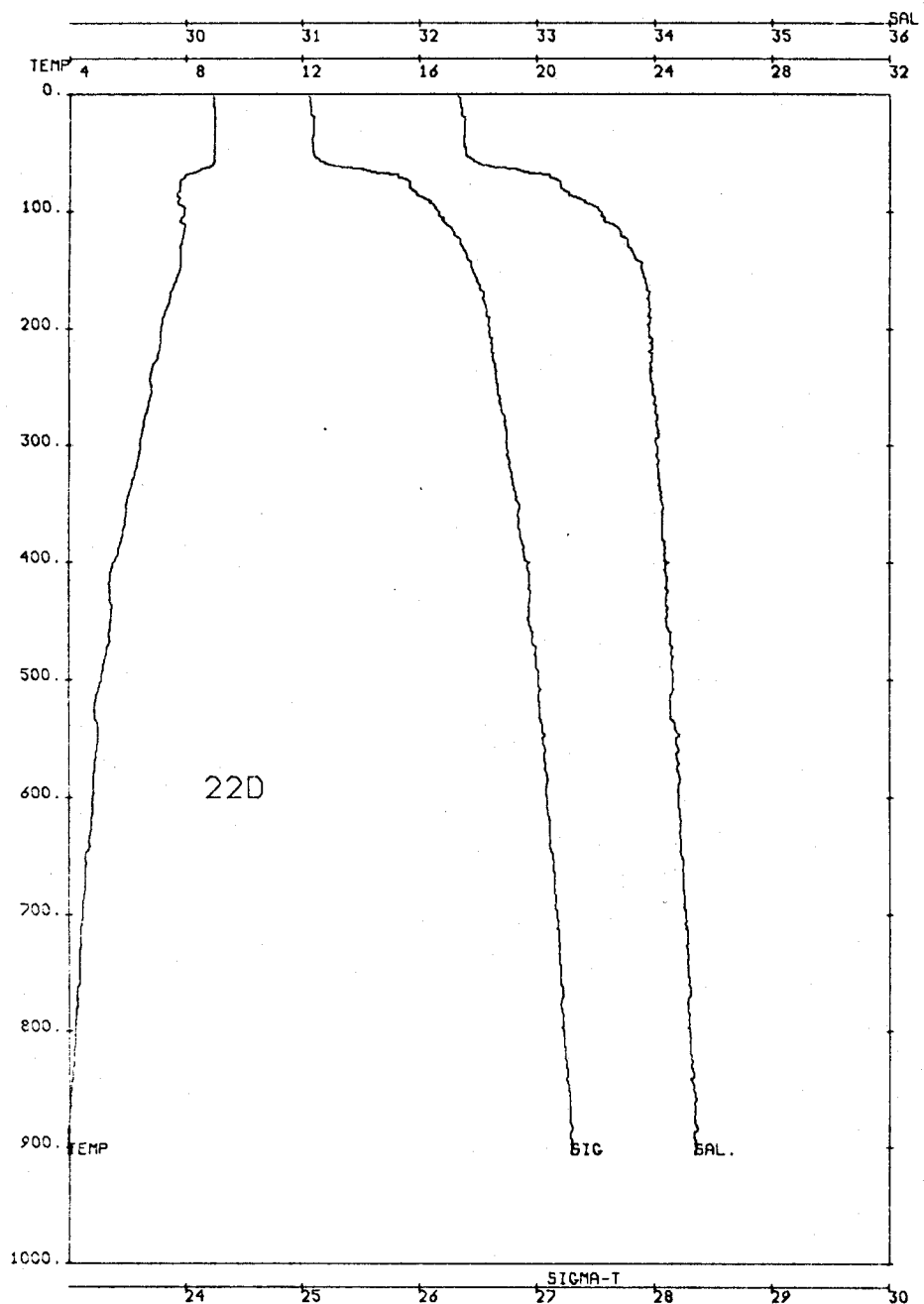
CAST NO 20D LAT 45 00.2 DATE 2/ 5/75 TIME 27
 STATION LONG 125 36.7 DPTH PROBE OSU4
 SWELL DIR 230 HT 6 PER 7 BAR 08.8 WEATHER 02
 WIND DIR 150 SPD 14 CLOUD TYPE 4- 6 AMOUNT 8
 AIR TEMP 7.5 WET BULB 5.7
 SAMPLE DEPTH 410.0 SAMPLE TEMP 5.77 SAL 34.067

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.97	32.35	25.08	289.8	0.000	0.000
1	8.97	32.35	25.08	289.9	0.003	0.000
10	8.98	32.35	25.08	290.2	0.029	0.015
20	8.97	32.36	25.09	289.4	0.058	0.058
30	8.97	32.37	25.09	288.9	0.087	0.110
40	9.04	32.40	25.11	287.8	0.116	0.231
50	9.17	33.19	25.70	231.4	0.143	0.352
60	9.09	33.35	25.84	218.7	0.165	0.476
70	8.80	33.57	26.06	198.0	0.186	0.610
80	8.74	33.62	26.11	193.6	0.206	0.757
90	8.71	33.68	26.16	188.8	0.225	0.920
100	8.58	33.73	26.22	183.4	0.243	1.096
110	8.40	33.79	26.29	176.5	0.261	1.285
120	8.23	33.84	26.36	170.4	0.279	1.484
130	8.12	33.84	26.37	169.0	0.295	1.695
140	8.02	33.86	26.40	166.3	0.312	1.922
150	7.88	33.90	26.45	161.5	0.329	2.159
160	7.79	33.92	26.48	158.9	0.345	2.409
170	7.67	33.91	26.49	158.1	0.361	2.670
180	7.53	33.92	26.52	155.5	0.376	2.944
190	7.37	33.94	26.56	152.0	0.391	3.228
200	7.30	33.95	26.58	150.4	0.407	3.522
225	7.07	33.95	26.61	147.7	0.444	4.313
250	6.84	33.98	26.66	142.7	0.480	5.173
300	6.40	33.99	26.73	136.9	0.550	7.086
400	5.87	34.07	26.86	125.4	0.682	11.697
415	5.75	34.08	26.88	123.4	0.701	12.467



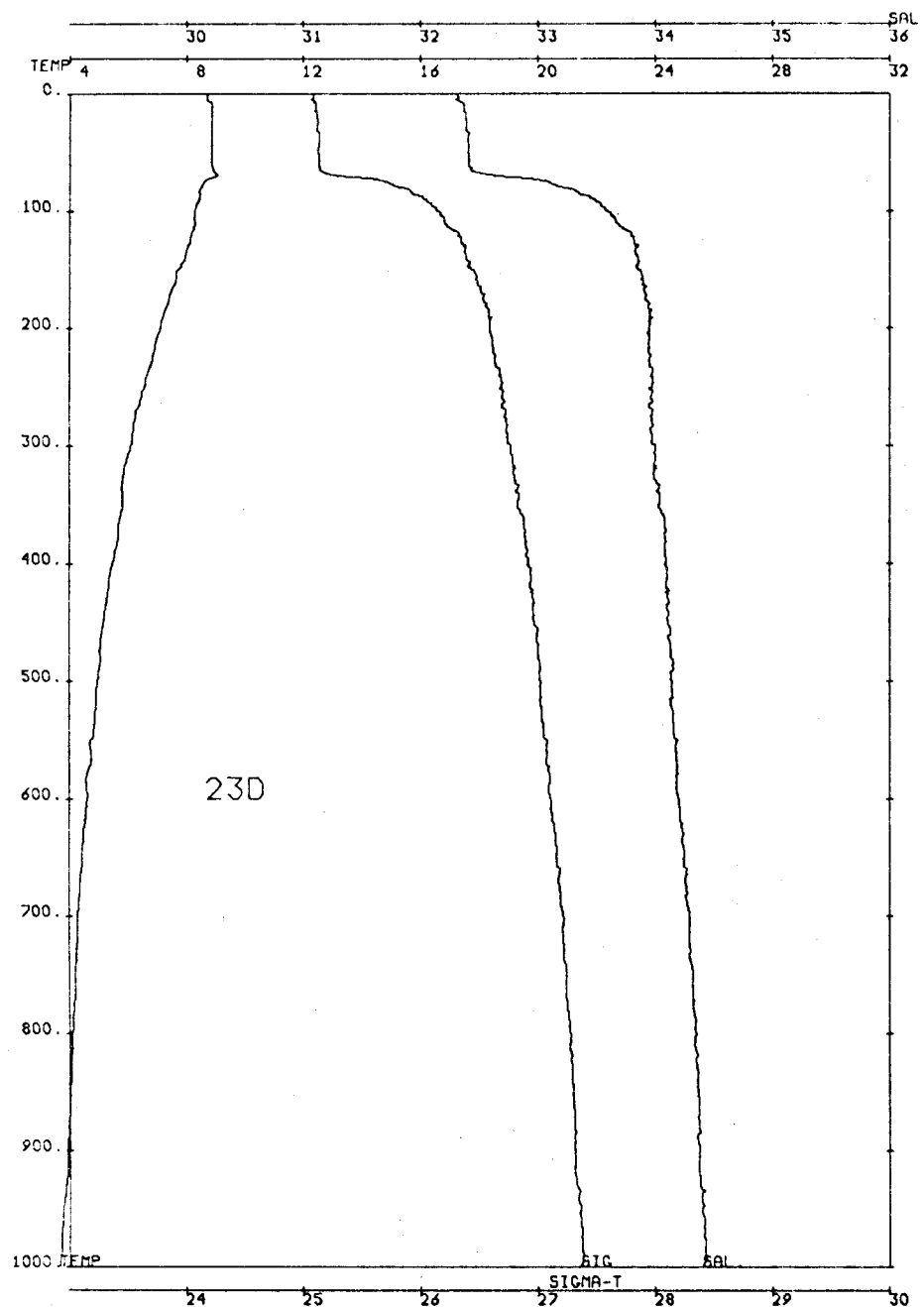
CAST NO 21D LAT 45 00.1 DATE 2/ 5/75 TIME 202
 STATION LONG 124 47.6 DPTH PROBE OSU4
 SWELL DIR 230 HT 6 PER 7 BAR 08.0 WEATHER 62
 WIND DIR 150 SPD 20 CLOUD TYPE 5- AMOUNT 8
 AIR TEMP 7.7 WET BULB 6.3
 SAMPLE DEPTH 600.0 SAMPLE TEMP 4.91 SAL 34.152

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.01	32.32	25.05	292.7	0.000	0.000
10	9.02	32.34	25.06	291.5	0.029	0.015
20	9.06	32.38	25.09	289.3	0.058	0.058
30	9.07	32.39	25.09	288.9	0.067	0.131
40	9.08	32.38	25.08	289.9	0.116	0.272
50	9.43	32.84	25.39	261.3	0.144	0.359
60	9.21	33.28	25.77	225.5	0.169	0.493
70	9.06	33.43	25.91	212.3	0.191	0.635
80	8.86	33.55	26.03	200.8	0.212	0.791
90	8.08	33.66	26.24	181.1	0.231	0.957
100	8.14	33.72	26.27	177.7	0.249	1.131
110	7.90	33.79	26.37	169.2	0.267	1.313
120	7.83	33.85	26.42	164.0	0.283	1.505
130	7.71	33.87	26.46	161.0	0.300	1.709
140	7.59	33.90	26.50	157.2	0.316	1.923
150	7.44	33.92	26.53	153.8	0.331	2.150
160	7.29	33.94	26.57	150.4	0.346	2.383
170	7.24	33.94	26.58	149.9	0.361	2.629
180	7.17	33.96	26.60	147.6	0.376	2.890
190	7.08	33.98	26.63	145.1	0.391	3.161
200	6.98	33.97	26.64	144.6	0.405	3.444
225	6.83	33.99	26.67	141.5	0.441	4.205
250	6.66	34.00	26.70	138.8	0.476	5.038
300	6.45	34.02	26.75	135.3	0.544	6.910
400	5.96	34.05	26.83	128.1	0.676	11.525
500	5.63	34.08	26.90	122.9	0.802	17.185
600	4.95	34.17	27.05	108.9	0.918	23.557
612	4.92	34.16	27.05	109.4	0.931	24.351



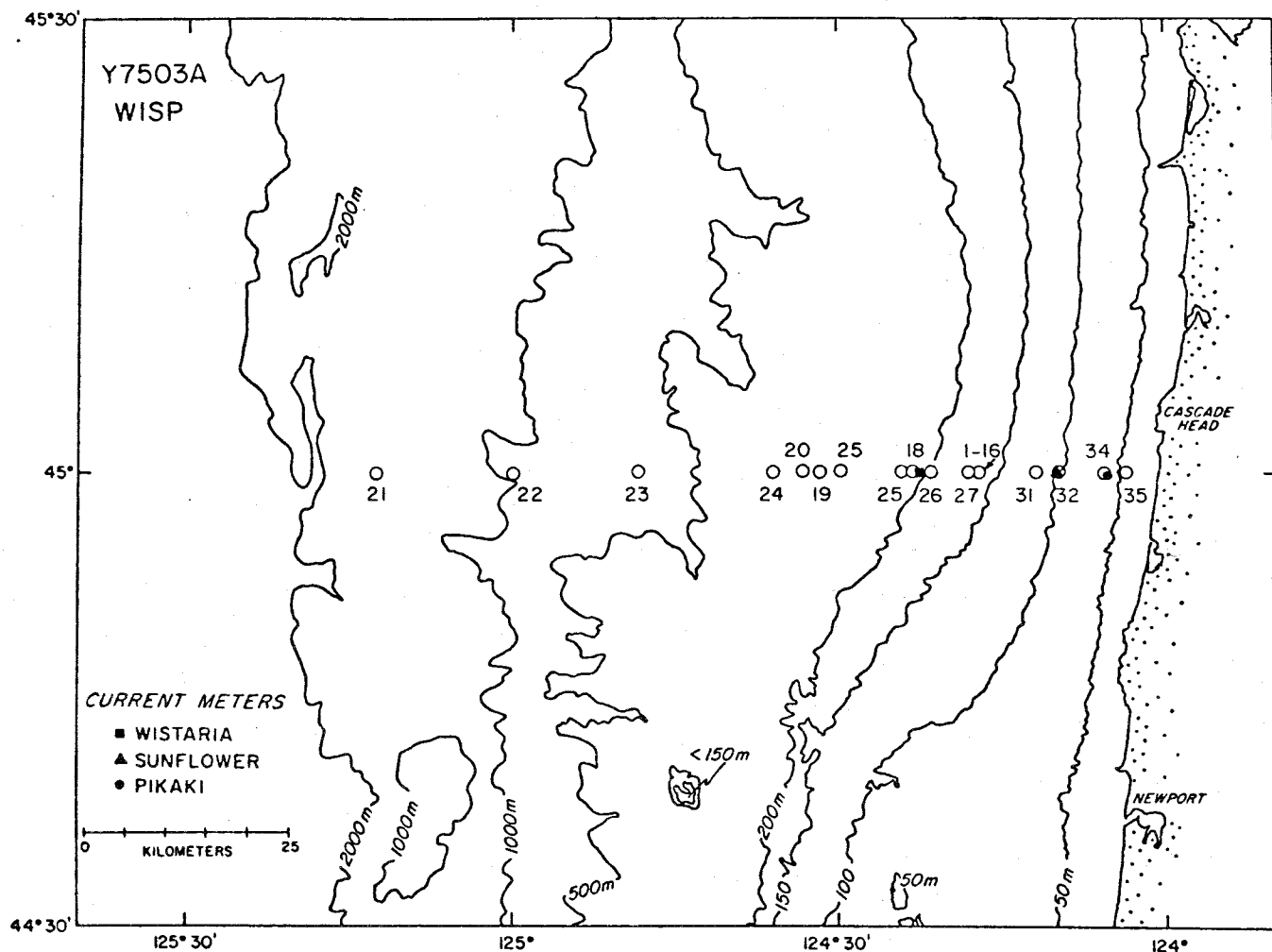
CAST NO 220 LAT 45 00.0 DATE 2/ 5/75 TIME 343
 STATION LONG 124 59.5 DPTH PROBE DSU4
 SWELL DIR 230 HT 6 PER 7 BAR 08.0 WEATHER 01
 WIND DIR 190 SPD 6 CLOUD TYPE 6- AMOUNT 1
 AIR TEMP 7.8 WET BULB 5.8
 SAMPLE DEPTH 902.0 SAMPLE TEMP 3.93 SAL 34.352

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.96	32.33	25.06	291.2	0.000	0.000
2	8.96	32.33	25.06	291.2	0.006	0.001
10	8.97	32.36	25.09	289.3	0.029	0.015
20	8.98	32.39	25.11	287.4	0.058	0.058
30	8.99	32.39	25.11	287.7	0.087	0.110
40	9.00	32.38	25.10	288.7	0.115	0.231
50	9.01	32.40	25.11	287.6	0.144	0.360
60	8.92	32.56	25.25	274.5	0.173	0.516
70	7.94	33.11	25.83	219.7	0.197	0.674
80	7.78	33.21	25.93	210.2	0.218	0.822
90	7.77	33.41	26.09	195.4	0.239	1.006
100	7.94	33.55	26.17	187.5	0.258	1.188
110	7.97	33.64	26.24	181.4	0.276	1.382
120	7.92	33.71	26.30	175.6	0.294	1.586
130	7.81	33.78	26.37	169.0	0.311	1.800
140	7.82	33.84	26.42	164.9	0.328	2.024
150	7.81	33.90	26.46	160.5	0.344	2.259
160	7.65	33.92	26.50	156.9	0.360	2.504
170	7.48	33.95	26.55	152.5	0.375	2.750
180	7.40	33.96	26.57	150.8	0.390	3.024
190	7.24	33.97	26.60	148.0	0.405	3.301
200	7.15	33.96	26.61	147.6	0.420	3.590
225	7.02	33.98	26.64	144.8	0.457	4.369
250	6.83	33.99	26.67	141.9	0.492	5.219
300	6.43	34.02	26.75	135.0	0.561	7.110
400	5.50	34.13	26.95	116.4	0.689	11.558
500	5.11	34.16	27.02	110.5	0.805	16.762
600	4.81	34.21	27.09	104.6	0.912	22.656
800	4.20	34.30	27.24	92.3	1.107	36.254
906	3.94	34.35	27.30	86.4	1.200	44.244



CAST NO 23D LAT 45 00.1 DATE 2/ 5/75 TIME 609
 STATION LONG 125 11.8 DPTH PROBE OSU4
 SWELL DIR 230 HT 6 PER 7 BAR 10.6 WEATHER 01
 WIND DIR 290 SPD 10 CLOUD TYPE 6-8 AMOUNT 8
 AIR TEMP 6.9 WET BULB 5.1
 SAMPLE DEPTH 1007.0 SAMPLE TEMP 3.68 SAL 34.410

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.71	32.32	25.09	288.3	0.000	0.000
10	8.86	32.38	25.12	286.2	0.029	0.014
20	8.87	32.39	25.12	285.7	0.057	0.057
30	8.87	32.40	25.13	285.2	0.086	0.129
40	8.87	32.41	25.14	284.6	0.114	0.228
50	8.89	32.41	25.14	285.0	0.143	0.356
60	8.89	32.42	25.14	284.5	0.171	0.513
70	9.05	32.67	25.31	268.5	0.199	0.696
80	8.48	33.23	25.84	218.7	0.223	0.872
90	8.42	33.49	26.05	198.7	0.244	1.048
100	8.28	33.59	26.15	189.4	0.263	1.232
110	8.30	33.67	26.21	183.9	0.282	1.426
120	8.14	33.81	26.35	171.4	0.299	1.630
130	8.06	33.83	26.37	168.9	0.316	1.843
140	7.95	33.86	26.41	165.3	0.333	2.069
150	7.67	33.88	26.47	160.0	0.349	2.307
160	7.62	33.90	26.49	158.0	0.365	2.552
170	7.44	33.91	26.53	154.9	0.381	2.810
180	7.33	33.94	26.56	151.3	0.396	3.077
190	7.20	33.95	26.59	148.9	0.411	3.353
200	7.09	33.95	26.61	147.6	0.426	3.641
225	6.83	33.95	26.64	144.5	0.462	4.415
250	6.56	33.98	26.70	139.0	0.498	5.253
300	6.09	34.01	26.79	131.4	0.566	7.128
400	5.47	34.09	26.93	119.0	0.691	11.501
500	4.95	34.15	27.03	109.3	0.805	16.605
600	4.61	34.21	27.12	101.9	0.911	22.441
800	4.08	34.36	27.30	86.4	1.099	35.533
1000	3.69	34.41	27.38	79.8	1.265	50.494

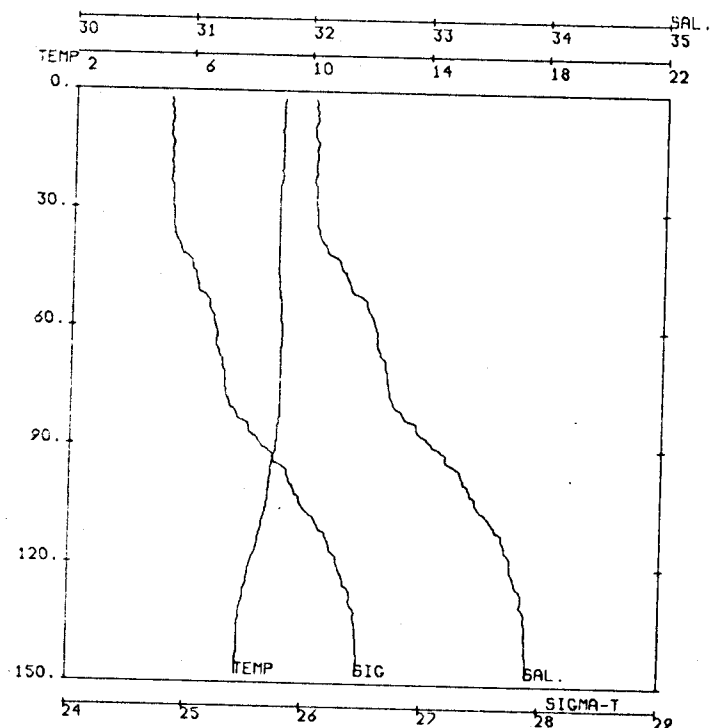


Y7503A
R/V YAQUINA
3 - 5 March 1975

Hydrographic section along 45°N.

Used mainly CTD probe #3 and 4, which had both been repaired. However, conductivities of probe #3 were still somewhat noisy. Tested probe #1, which still had noisy conductivity data.

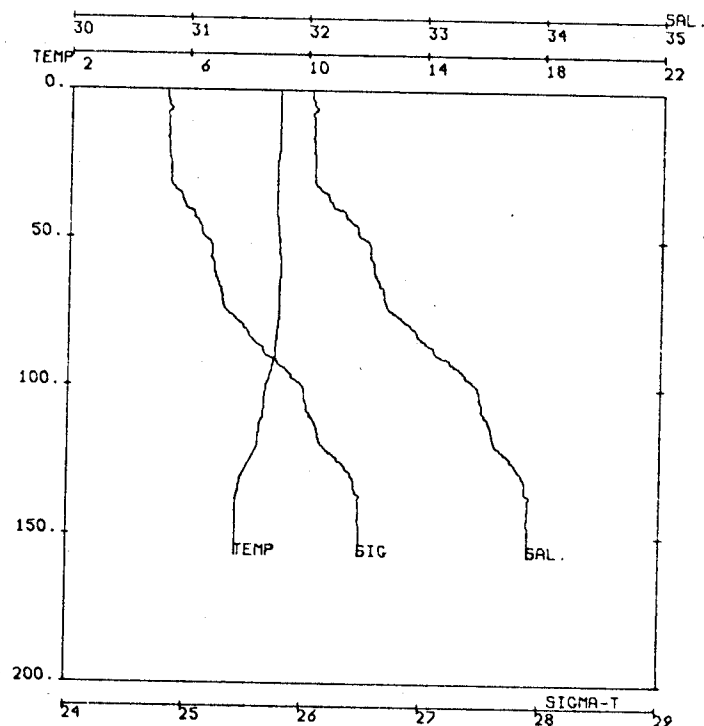
Personnel: Robert L. Smith, Dennis Barstow, Robert Kapaun, Tedd Wright, Henry Pittcock, Peter Eberhardt, Cindy Boesser, Suzanne Atiyeh, Ralph Schramm, Tom Sawtell.



1D

CAST NO 1D LAT 45 00 0 DATE 3/ 3/75 TIME 2357
STATION LONG 124 17 0 DPTH 155 PROBE OSU4
SWELL DIR 290 HT 6 PER 6 BAR 23.8 WEATHER
WIND DIR 000 SPD 20 CLOUD TYPE 0- 6 AMOUNT 4
AIR TEMP 8.5 WET BULB 6.0
SAMPLE DEPTH 12. SAMPLE TEMP 8.99 SAL 32.098

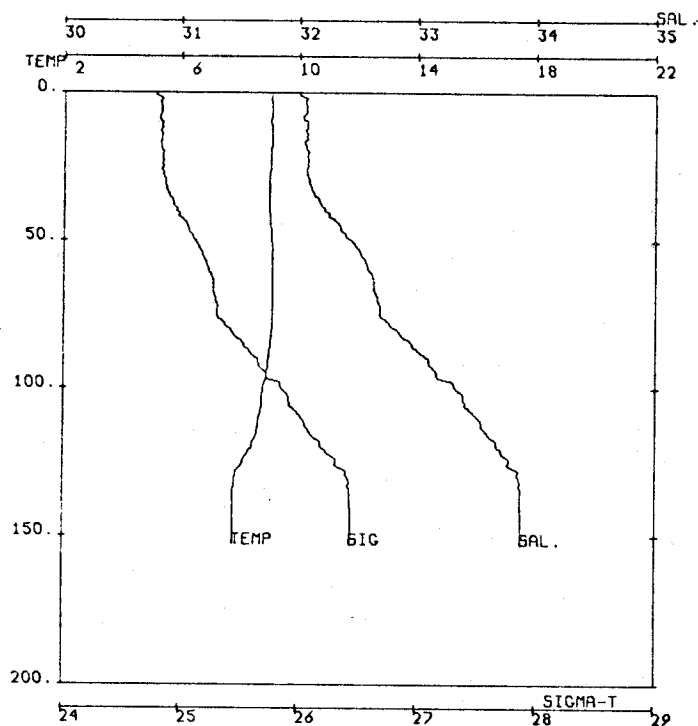
DEPTH	TEMP	SAL	SIGMA	SWA	DELD	POTE
0	9.10	32.04	24.82	314.8	0.000	0.000
2	9.10	32.04	24.82	314.8	0.006	0.001
10	9.05	32.04	24.82	314.2	0.031	0.016
20	9.05	32.05	24.83	313.6	0.063	0.063
30	9.00	32.07	24.85	311.6	0.094	0.141
40	8.99	32.16	24.93	304.9	0.125	0.249
50	9.05	32.17	25.08	290.4	0.155	0.382
60	9.14	32.58	25.23	276.3	0.183	0.537
70	9.12	32.66	25.30	270.3	0.210	0.715
80	9.10	32.75	25.37	263.5	0.237	0.915
90	9.00	33.08	25.64	237.7	0.262	1.128
100	8.78	33.38	25.91	212.3	0.284	1.340
110	8.55	33.61	26.13	192.0	0.305	1.553
120	8.16	33.75	26.30	176.1	0.323	1.764
130	7.89	33.83	26.40	166.5	0.340	1.976
140	7.78	33.89	26.46	160.6	0.356	2.195
148	7.77	33.90	26.47	159.9	0.369	2.379



2D

CAST NO 2D LAT 44 59.6 DATE 3/ 4/75 TIME 54
STATION LONG 124 17.5 DPTH 157 PROBE OSU4
SWELL DIR 290 HT 6 PER 6 BAR 23.4 WEATHER 02
WIND DIR 000 SPD 20 CLOUD TYPE 0- 6 AMOUNT 4
AIR TEMP 8.9 WET BULB 6.5
SAMPLE DEPTH 154. SAMPLE TEMP 7.68 SAL 33.914

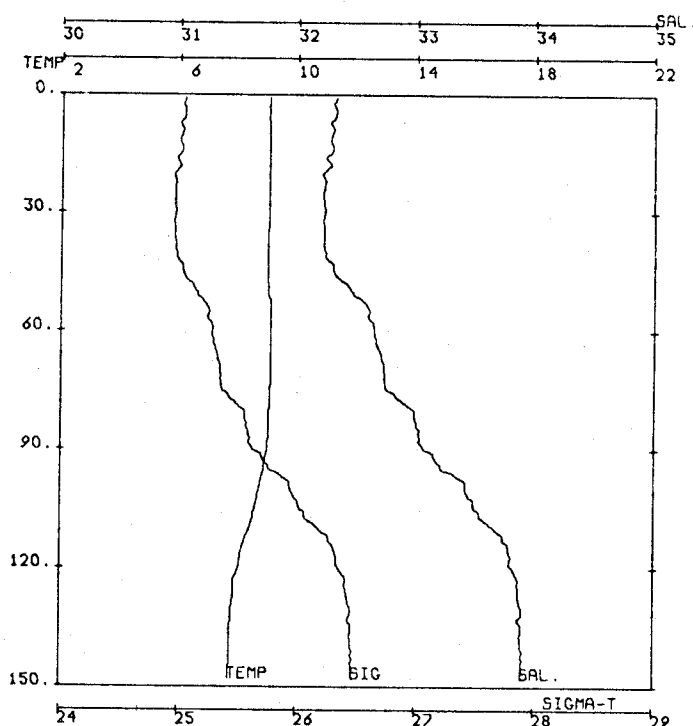
DEPTH	TEMP	SAL	SIGMA	SWA	DELD	POTE
0	9.08	32.04	24.82	314.5	0.000	0.000
1	9.08	32.04	24.82	314.5	0.003	0.000
10	9.08	32.05	24.83	313.9	0.031	0.016
20	9.06	32.06	24.84	313.0	0.063	0.063
30	9.00	32.07	24.85	311.6	0.094	0.141
40	8.99	32.25	25.00	298.2	0.124	0.247
50	9.10	32.49	25.17	282.2	0.153	0.377
60	9.14	32.58	25.23	276.3	0.181	0.530
70	9.12	32.67	25.30	269.5	0.208	0.707
80	9.06	32.90	25.49	251.7	0.235	0.964
90	8.97	33.15	25.70	232.0	0.259	1.110
100	8.67	33.46	25.99	204.7	0.281	1.316
110	8.59	33.51	26.04	200.0	0.301	1.528
120	8.40	33.62	26.16	189.2	0.320	1.750
130	7.88	33.84	26.41	165.6	0.336	1.970
140	7.71	33.90	26.48	158.9	0.354	2.188
150	7.70	33.90	26.48	158.9	0.370	2.419
157	7.70	33.90	26.48	159.0	0.381	2.590



3D

CAST NO 3D LAT 45 00.0 DATE 3/4/75 TIME 203
STATION LONG 124 17.0 DPTH 155 PROBE OSU4
SWELL DIR 290 HT 6 PER 6 BAR WEATHER 03
WIND DIR 150 SPD 22 CLOUD TYPE 3-4 AMOUNT 6
AIR TEMP 8.3 WET BULB 6.1
SAMPLE DEPTH SAMPLE TEMP SAL

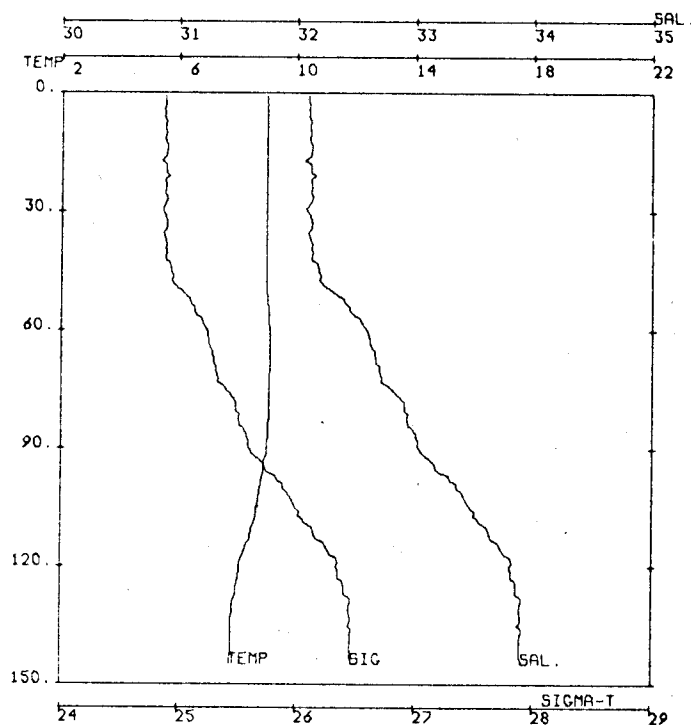
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.06	32.00	24.79	317.2	0.000	0.000
1	9.06	32.00	24.79	317.2	0.003	0.000
10	9.05	32.07	24.85	312.0	0.031	0.016
20	9.03	32.08	24.86	311.1	0.063	0.063
30	9.00	32.09	24.87	310.1	0.094	0.141
40	9.01	32.21	24.96	301.5	0.124	0.247
50	9.08	32.45	25.14	284.9	0.154	0.379
60	9.13	32.60	25.25	274.7	0.182	0.533
70	9.11	32.67	25.31	269.4	0.209	0.709
80	9.09	32.83	25.42	257.4	0.235	0.908
90	8.97	33.10	25.66	235.7	0.260	1.119
100	8.79	33.33	25.87	216.2	0.283	1.325
110	8.65	33.52	26.04	200.2	0.304	1.555
120	8.43	33.68	26.20	185.2	0.323	1.776
130	7.85	33.86	26.43	163.7	0.340	1.993
140	7.80	33.87	26.44	162.4	0.357	2.212
150	7.79	33.88	26.45	161.7	0.373	2.446
153	7.79	33.88	26.45	161.7	0.378	2.520



4D

CAST NO 4D LAT 44 59.8 DATE 3/4/75 TIME 155
STATION LONG 124 17.0 DPTH 155 PROBE OSU3
SWELL DIR 290 HT 7 PER 8 BAR 22.5 WEATHER 03
WIND DIR 000 SPD 22 CLOUD TYPE 3-4 AMOUNT 2
AIR TEMP 8.6 WET BULB 6.6
SAMPLE DEPTH 147. SAMPLE TEMP 7.72 SAL 33.910

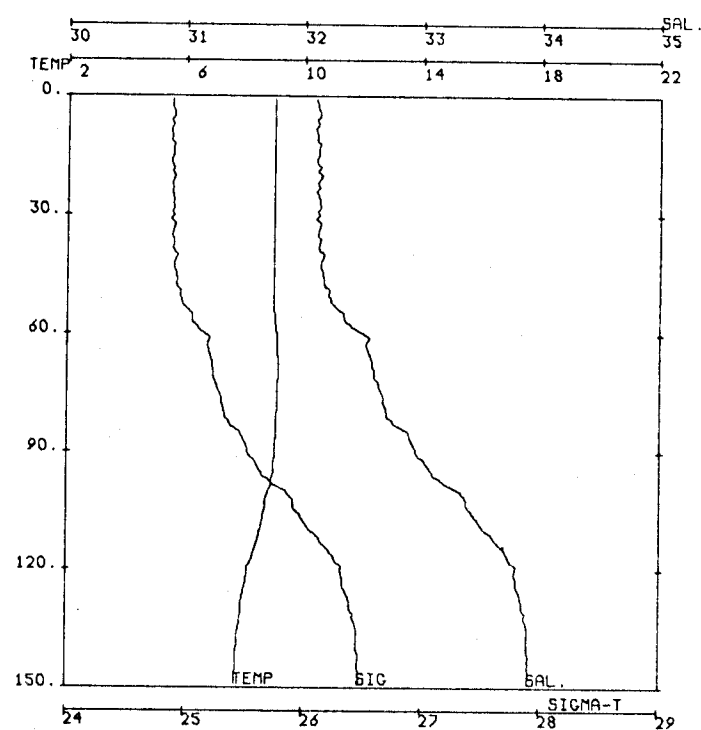
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.02	32.32	25.05	292.8	0.000	0.000
1	9.02	32.32	25.05	292.8	0.003	0.000
10	9.02	32.28	25.01	295.9	0.029	0.015
20	9.02	32.20	24.95	302.1	0.059	0.059
30	9.02	32.23	24.97	300.4	0.089	0.135
40	8.99	32.24	24.99	299.0	0.119	0.240
50	9.04	32.47	25.16	282.8	0.149	0.371
60	9.13	32.65	25.29	271.0	0.178	0.523
70	9.10	32.73	25.35	264.8	0.203	0.696
80	9.04	32.99	25.57	244.8	0.229	0.891
90	9.00	33.07	25.63	238.4	0.253	1.097
100	8.71	33.42	25.95	208.3	0.275	1.307
110	8.38	33.67	26.20	185.1	0.295	1.516
120	8.04	33.82	26.37	169.2	0.313	1.717
130	7.81	33.90	26.46	160.1	0.329	1.921
140	7.76	33.89	26.46	160.3	0.345	2.128
148	7.73	33.89	26.47	160.0	0.358	2.322



5D

CAST NO. 5D LAT 44 59.7 DATE 3/ 4/75 TIME 502
 STATION LONG 124 17.2 DPTH 154 PROBE OSU3
 SWELL DIR 290 HT 7 PER 8 BAR 21.5 WEATHER 02
 WIND DIR 000 SPD 25 CLOUD TYPE 3-4 AMOUNT 6
 AIR TEMP 8.2 WET BULB 6.4
 SAMPLE DEPTH 33. SAMPLE TEMP 9.00 SAL 32.119

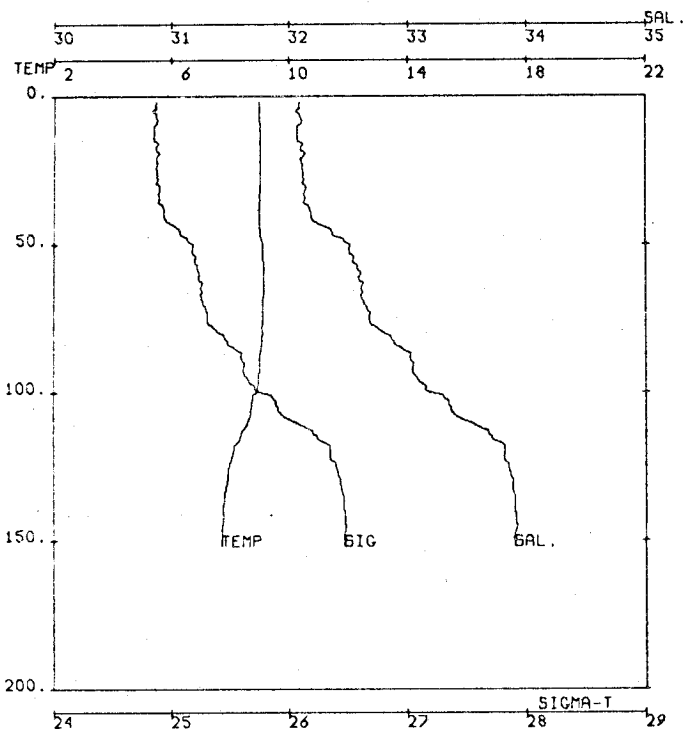
DEPTH	TEMP	SAL	SIGMA	SWA	DELD	POTE
0	9.00	32.10	24.88	308.8	0.000	0.000
1	9.00	32.10	24.88	308.9	0.003	0.000
10	9.00	32.12	24.89	307.5	0.031	0.015
20	9.00	32.12	24.89	307.7	0.062	0.062
30	9.01	32.10	24.88	309.5	0.092	0.119
40	9.02	32.14	24.91	306.5	0.123	0.246
50	9.01	32.11	25.04	294.2	0.153	0.383
60	9.12	32.60	25.25	274.5	0.182	0.518
70	9.10	32.70	25.33	267.0	0.209	0.714
80	9.07	32.91	25.50	251.2	0.235	0.908
90	9.01	33.04	25.61	240.8	0.259	1.117
100	8.77	33.36	25.90	213.6	0.282	1.312
110	8.49	33.62	26.14	190.4	0.302	1.545
120	8.07	33.80	26.35	171.1	0.320	1.752
130	7.85	33.89	26.45	161.4	0.337	1.959
140	7.72	33.89	26.46	160.8	0.353	2.175
145	7.75	33.91	26.48	158.8	0.361	2.289



6D

CAST NO. 6D LAT 44 59.8 DATE 3/ 4/75 TIME 600
 STATION LONG 124 17.2 DPTH 155 PROBE OSU3
 SWELL DIR 290 HT 7 PER 8 BAR 21.5 WEATHER 02
 WIND DIR 000 SPD 24 CLOUD TYPE 3-4 AMOUNT 8
 AIR TEMP WET BULB
 SAMPLE DEPTH 143. SAMPLE TEMP 7.74 SAL 33.904

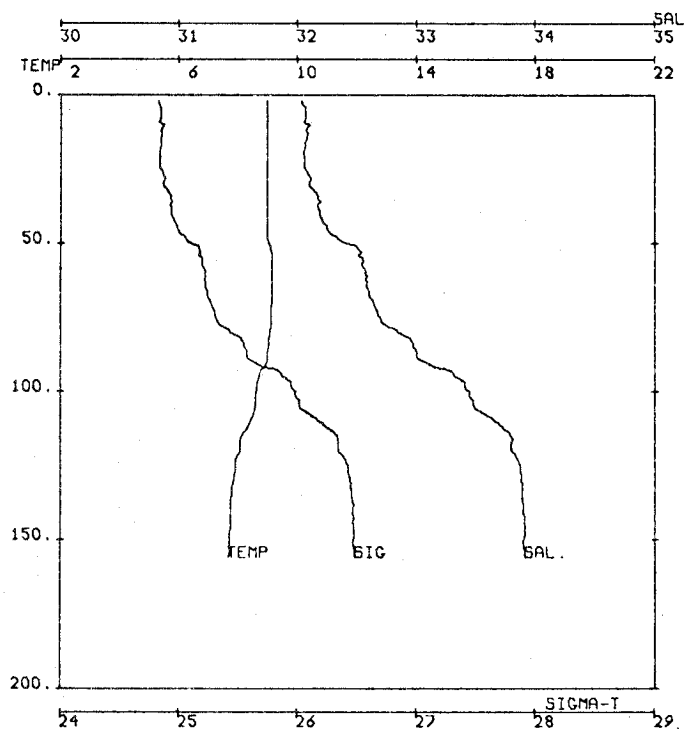
DEPTH	TEMP	SAL	SIGMA	SWA	DELD	POTE
0	9.00	32.10	24.88	308.8	0.000	0.000
1	9.00	32.10	24.88	308.9	0.003	0.000
10	9.00	32.11	24.89	308.3	0.031	0.015
20	9.00	32.15	24.92	305.5	0.062	0.062
30	9.01	32.13	24.90	307.3	0.092	0.119
40	9.00	32.17	24.93	304.3	0.123	0.246
50	9.00	32.20	24.96	302.3	0.154	0.383
60	9.10	32.51	25.18	280.9	0.183	0.544
70	9.14	32.60	25.25	275.0	0.211	0.725
80	9.09	32.71	25.34	266.3	0.238	0.928
90	9.04	32.95	25.53	247.9	0.263	1.145
100	8.79	33.33	25.87	216.2	0.287	1.368
110	8.53	33.54	26.07	196.9	0.308	1.585
120	8.12	33.79	26.33	172.6	0.326	1.796
130	7.91	33.85	26.41	165.3	0.343	2.007
140	7.77	33.89	26.46	160.5	0.359	2.225
149	7.73	33.90	26.48	159.3	0.373	2.422



7D

CAST NO 7D LAT 44 39.9 DATE 3/4/75 TIME 701
 STATION LONG 124 17.0 DPTH 157 PROBE OSU3
 SWELL DIR 290 HT 5 PER 6 BAR 21.5 WEATHER 02
 WIND DIR 000 SPD 24 CLOUD TYPE 6- AMOUNT 8
 AIR TEMP 8.3 WET BULB 6.5
 SAMPLE DEPTH 17. SAMPLE TEMP 9.02 SAL 32.112

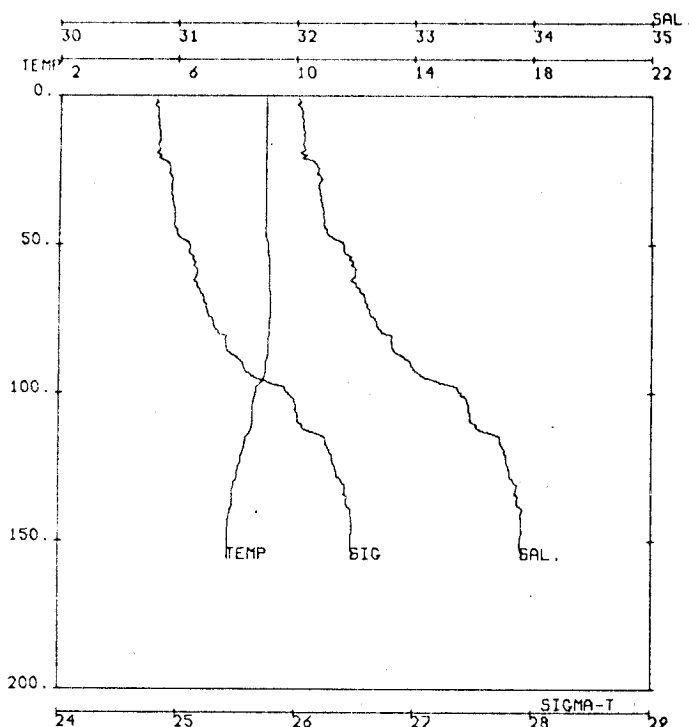
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.01	32.09	24.87	109.7	0.000	0.000
2	9.01	32.09	24.87	109.8	0.006	0.001
10	9.02	32.07	24.85	111.5	0.011	0.016
20	9.02	32.12	24.89	108.0	0.062	0.062
30	9.02	32.14	24.91	106.7	0.093	0.139
40	9.00	32.19	24.95	102.8	0.123	0.246
50	9.10	32.52	25.19	200.0	0.153	0.378
60	9.15	32.61	25.25	274.2	0.181	0.531
70	9.10	32.64	25.20	271.7	0.189	0.509
80	9.10	32.81	25.42	259.0	0.215	0.909
90	9.08	33.05	25.62	219.6	0.259	1.119
100	9.87	33.20	25.76	227.0	0.283	1.344
110	8.57	33.53	26.06	198.2	0.304	1.566
120	8.09	33.82	26.36	169.9	0.322	1.774
130	7.89	33.89	26.44	162.0	0.339	1.982
140	7.77	33.91	26.48	159.0	0.355	2.198
150	7.72	33.91	26.49	158.5	0.371	2.428
152	7.72	33.91	26.49	158.5	0.374	2.476



8D

CAST NO 8D LAT 44 00.0 DATE 3/4/75 TIME 802
 STATION LONG 124 17.0 DPTH 156 PROBE OSU3
 SWELL DIR 290 HT 6 PER 6 BAR 20.0 WEATHER 02
 WIND DIR 100 SPD 20 CLOUD TYPE 6- AMOUNT 8
 AIR TEMP 8.2 WET BULB 6.3
 SAMPLE DEPTH 144. SAMPLE TEMP SAL

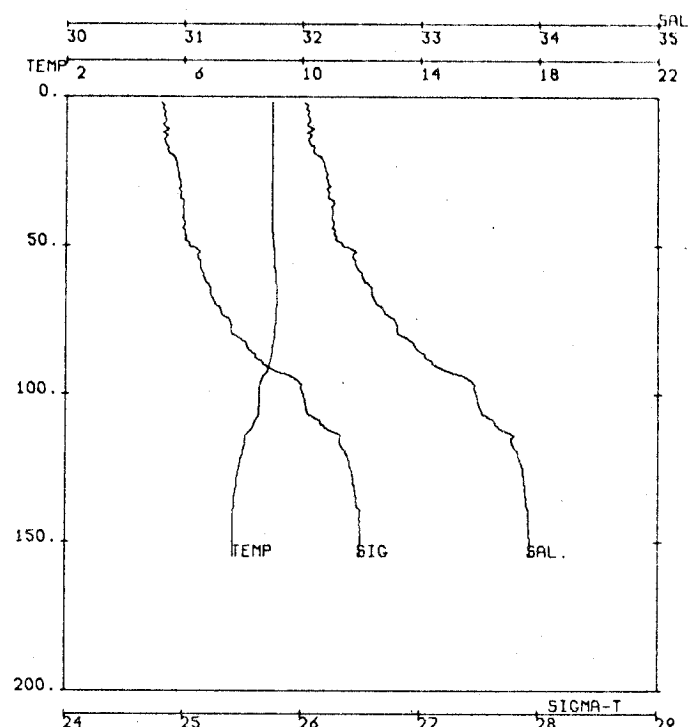
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.99	32.04	24.83	313.2	0.000	0.000
2	8.99	32.04	24.83	313.2	0.006	0.001
10	8.99	32.11	24.89	108.1	0.031	0.016
20	9.00	32.06	24.85	312.2	0.062	0.062
30	9.00	32.10	24.88	109.3	0.093	0.140
40	8.99	32.19	24.95	102.7	0.124	0.246
50	9.07	32.42	25.12	287.0	0.154	0.380
60	9.15	32.57	25.22	277.2	0.181	0.531
70	9.14	32.65	25.28	271.3	0.209	0.713
80	9.09	32.85	25.45	255.9	0.216	0.912
90	8.96	33.07	25.64	237.8	0.260	1.121
100	8.60	33.45	25.99	204.4	0.282	1.326
110	8.38	33.67	26.20	185.1	0.302	1.534
120	8.06	33.81	26.36	170.2	0.319	1.735
130	7.85	33.88	26.44	162.2	0.336	1.940
140	7.76	33.90	26.47	159.6	0.352	2.156
150	7.73	33.90	26.48	159.3	0.367	2.386
156	7.69	33.92	26.50	157.4	0.377	2.531



90

CAST NO 90 LAT 45 00.0 DATE 3/ 4/75 TIME 901
STATION LONG 124 17.0 DPTH 156 PROBE 0503
SWELL DIR 230 HT 6 PER 6 BAR 20.0 WEATHER 02
WIND DIR 000 SPD 16 CLOUD TYPE 6- AMOUNT 8
AIR TEMP 8.2 WET BULB 6.3
SAMPLE DEPTH 29. SAMPLE TEMP 8.99 SAL 32.246

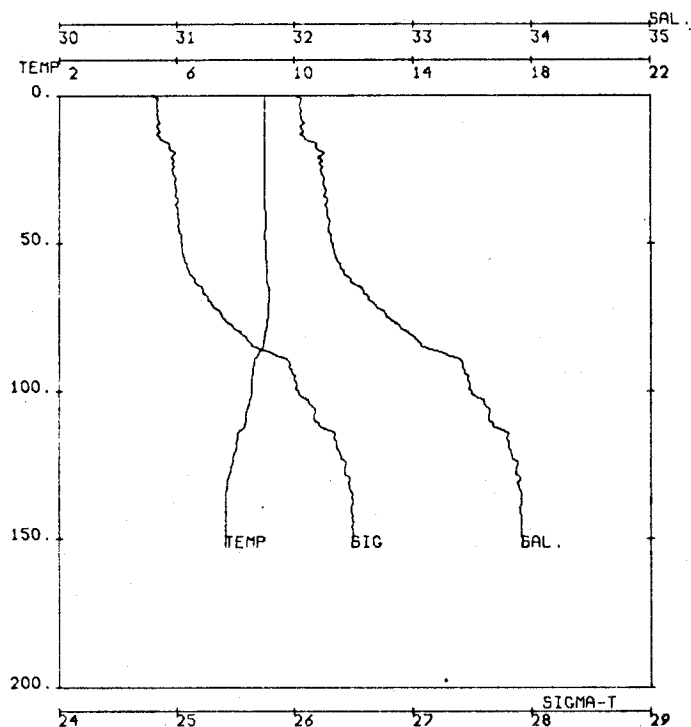
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.00	32.02	24.82	314.8	0.000	0.000
1	9.00	32.02	24.82	314.8	0.003	0.000
10	9.00	32.06	24.85	312.0	0.031	0.016
20	9.00	32.09	24.87	309.9	0.063	0.062
30	8.99	32.19	24.95	302.5	0.093	0.138
40	9.00	32.23	24.98	299.9	0.122	0.244
50	9.07	32.41	25.11	287.7	0.153	0.377
60	9.11	32.50	25.17	281.8	0.181	0.534
70	9.14	32.61	25.25	274.3	0.209	0.715
80	9.10	32.74	25.36	264.2	0.236	0.918
90	9.00	32.98	25.56	245.1	0.262	1.135
100	8.65	33.40	25.95	208.9	0.285	1.353
110	8.55	33.49	26.03	200.9	0.305	1.567
120	8.21	33.76	26.30	176.1	0.324	1.780
130	7.92	33.85	26.41	165.4	0.341	1.994
140	7.72	33.91	26.48	159.1	0.357	2.214
150	7.73	33.90	26.48	159.3	0.373	2.444
156	7.70	33.91	26.49	158.3	0.382	2.590



100

CAST NO 100 LAT 45 00.2 DATE 3/ 4/75 TIME 1000
STATION LONG 124 17.0 DPTH 158 PROBE 0503
SWELL DIR 230 HT 6 PER 6 BAR 19.0 WEATHER 02
WIND DIR 000 SPD 20 CLOUD TYPE 6- AMOUNT 8
AIR TEMP 8.1 WET BULB 6.2
SAMPLE DEPTH 131. SAMPLE TEMP 7.71 SAL 33.892

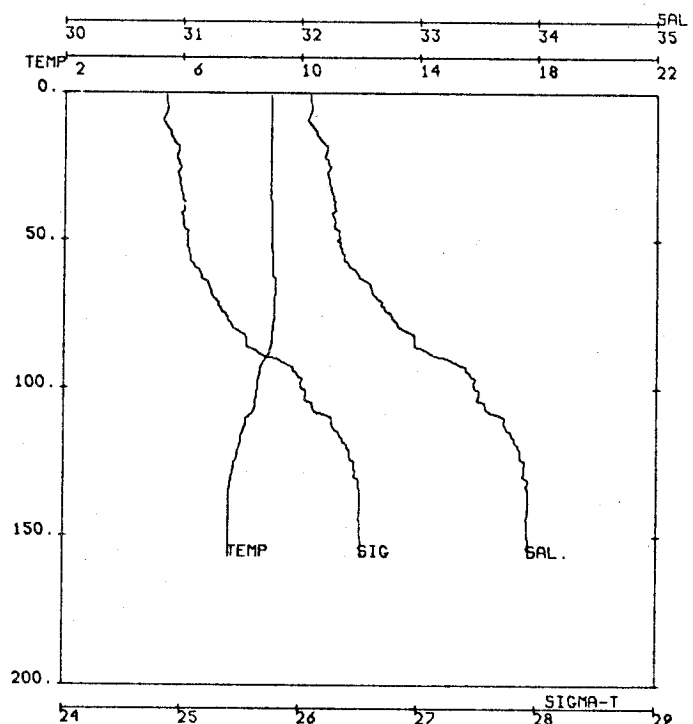
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.99	32.02	24.82	314.6	0.000	0.000
2	8.99	32.02	24.82	314.7	0.005	0.001
10	9.00	32.06	24.85	312.0	0.031	0.016
20	9.00	32.16	24.92	304.7	0.062	0.062
30	8.99	32.24	24.99	298.8	0.093	0.138
40	9.01	32.25	24.99	298.5	0.122	0.242
50	9.04	32.33	25.05	293.2	0.152	0.376
60	9.11	32.51	25.18	281.1	0.181	0.532
70	9.14	32.64	25.28	272.0	0.208	0.712
80	9.09	32.82	25.43	258.1	0.235	0.909
90	8.89	33.10	25.68	234.5	0.259	1.117
100	8.55	33.48	26.02	201.5	0.280	1.319
110	8.37	33.63	26.17	187.9	0.300	1.526
120	7.99	33.83	26.38	167.7	0.318	1.728
130	7.79	33.88	26.45	161.3	0.334	1.933
140	7.66	33.91	26.49	157.5	0.350	2.148
150	7.66	33.92	26.50	156.9	0.366	2.375
155	7.68	33.91	26.49	158.0	0.373	2.495



11D

CAST NO 11D LAT 45 00.2 DATE 3/ 4/75 TIME 1100
STATION LONG 124 17.0 DPTH 157 PROBE OSU3
SWELL DIR 290 HT 6 PER 7 BAR 18.0 WEATHER 02
WIND DIR 000 SPD 21 CLOUD TYPE 6- AMOUNT 8
AIR TEMP 7.9 WET BULB 6.0
SAMPLE DEPTH 9.5 SAMPLE TEMP 8.91 SAL

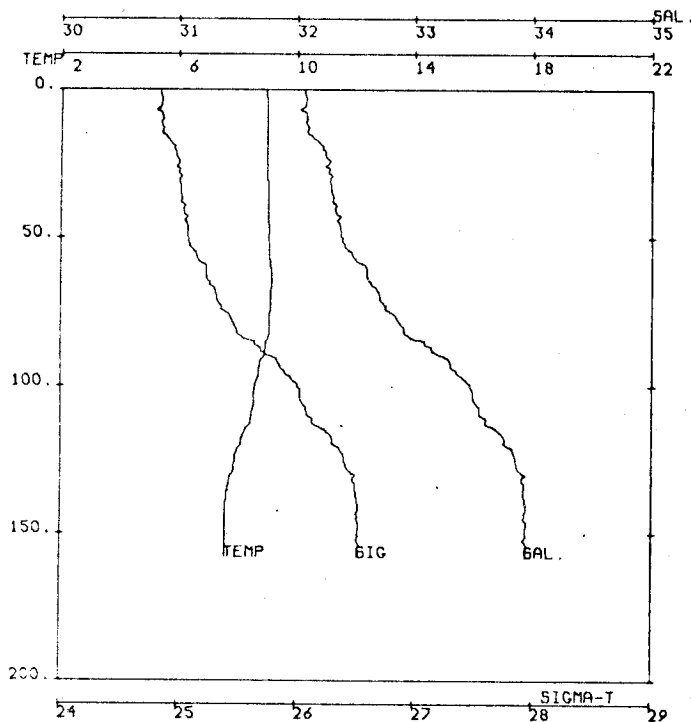
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.00	32.00	24.80	316.3	0.000	0.000
10	9.00	32.05	24.84	312.7	0.011	0.016
20	8.99	32.23	24.98	299.4	0.062	0.061
30	9.00	32.25	24.99	298.2	0.092	0.136
40	9.02	32.28	25.01	296.4	0.122	0.240
50	9.02	32.33	25.05	292.9	0.151	0.373
60	9.09	32.42	25.11	287.4	0.180	0.532
70	9.13	32.67	25.30	269.7	0.208	0.714
80	9.01	32.96	25.55	246.5	0.234	0.908
90	8.53	33.42	25.97	206.9	0.257	1.104
100	8.54	33.50	26.04	199.8	0.277	1.297
110	8.36	33.65	26.19	186.3	0.296	1.498
120	7.99	33.83	26.38	167.7	0.314	1.698
130	7.73	33.91	26.48	158.3	0.330	1.902
140	7.66	33.91	26.49	157.5	0.346	2.115
150	7.66	33.93	26.51	156.1	0.362	2.342
153	7.66	33.92	26.50	156.9	0.366	2.414



12D

CAST NO 12D LAT 44 59.9 DATE 3/ 4/75 TIME 1202
STATION LONG 124 17.0 DPTH 157 PROBE OSU3
SWELL DIR 290 HT 6 PER 7 BAR 17.8 WEATHER 02
WIND DIR 000 SPD 25 CLOUD TYPE 0- AMOUNT 5
AIR TEMP 7.9 WET BULB 6.0
SAMPLE DEPTH 146. SAMPLE TEMP 7.58 SAL 33.932

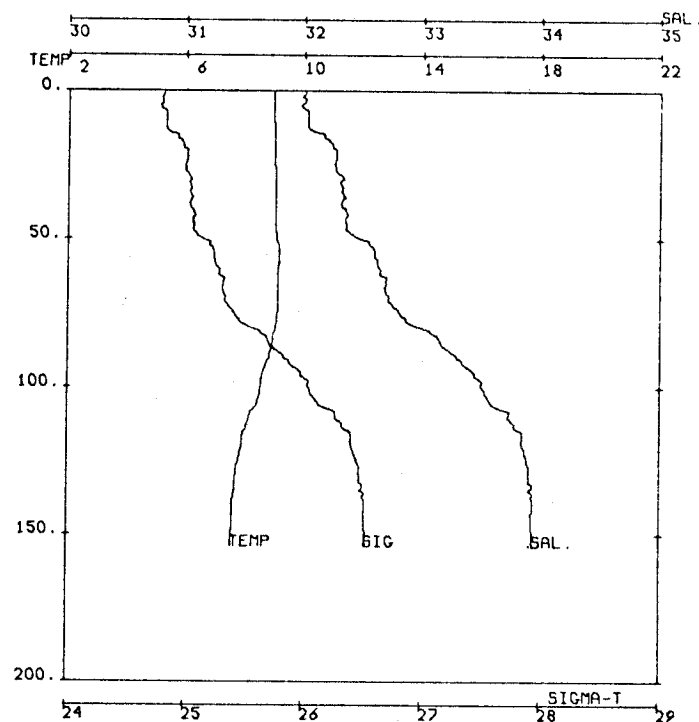
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.00	32.00	24.80	316.3	0.000	0.000
1	9.00	32.08	24.86	310.4	0.003	0.000
10	9.00	32.07	24.85	311.2	0.031	0.016
20	9.00	32.21	24.96	301.0	0.062	0.061
30	9.00	32.24	24.99	299.0	0.092	0.136
40	9.02	32.30	25.03	295.0	0.121	0.240
50	9.03	32.31	25.04	294.5	0.151	0.373
60	9.09	32.47	25.15	283.7	0.180	0.533
70	9.13	32.66	25.29	270.4	0.208	0.713
80	9.07	32.86	25.46	254.9	0.234	0.910
90	8.79	33.25	25.81	221.9	0.258	1.116
100	8.54	33.46	26.03	201.3	0.279	1.313
110	8.17	33.73	26.28	177.6	0.298	1.517
120	7.92	33.84	26.40	166.0	0.316	1.715
130	7.69	33.88	26.47	159.9	0.332	1.917
140	7.59	33.93	26.52	155.0	0.347	2.128
150	7.59	33.92	26.51	155.9	0.363	2.353
157	7.58	33.93	26.52	155.1	0.374	2.520



13D

CAST NO 130 LAT 45 00.0 DATE 3/ 4/75 TIME 1257
 STATION LONG 124 17.0 DPTH 157 PROBE OSU3
 SWELL DIR 290 HT 7 PER 7 BAR 17.2 WEATHER 01
 WIND DIR 000 SPD 20 CLOUD TYPE 3-4 AMOUNT 2
 AIR TEMP 7.9 WET BULB 6.0
 SAMPLE DEPTH 27. SAMPLE TEMP 9.02 SAL

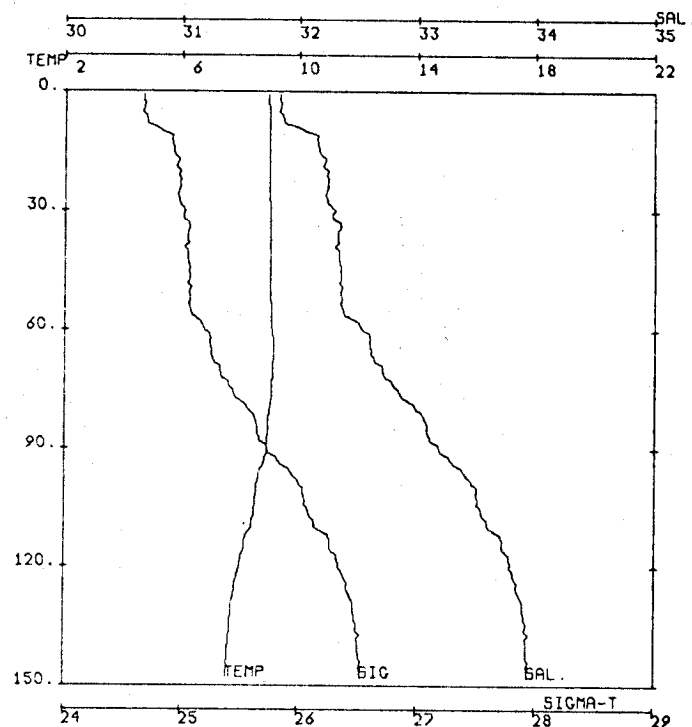
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.97	32.06	24.85	311.4	0.000	0.000
10	8.98	32.09	24.87	309.5	0.031	0.016
20	8.99	32.21	24.96	300.9	0.062	0.062
30	9.01	32.28	25.02	296.1	0.092	0.116
40	9.03	32.32	25.04	293.6	0.121	0.239
50	9.05	32.33	25.10	288.9	0.150	0.170
60	9.14	32.60	25.25	274.9	0.178	0.526
70	9.11	32.71	25.34	266.4	0.206	0.702
80	9.07	32.91	25.50	251.2	0.232	0.897
90	8.86	33.26	25.81	222.2	0.256	1.100
100	8.58	33.47	26.01	202.7	0.277	1.301
110	8.43	33.57	26.11	193.9	0.297	1.510
120	8.09	33.78	26.33	172.9	0.315	1.719
130	7.76	33.94	26.50	156.5	0.331	1.924
140	7.61	33.95	26.52	153.8	0.347	2.135
150	7.60	33.94	26.53	154.6	0.362	2.359
156	7.60	33.94	26.53	154.7	0.375	2.549



14D

CAST NO 140 LAT 44 59.7 DATE 3/ 4/75 TIME 1400
 STATION LONG 124 17.0 DPTH 156 PROBE OSU3
 SWELL DIR 290 HT 7 PER 7 BAR 17.0 WEATHER 01
 WIND DIR 000 SPD 19 CLOUD TYPE 3-4 AMOUNT 2
 AIR TEMP 7.5 WET BULB 5.5
 SAMPLE DEPTH 144. SAMPLE TEMP 7.58 SAL 33.932

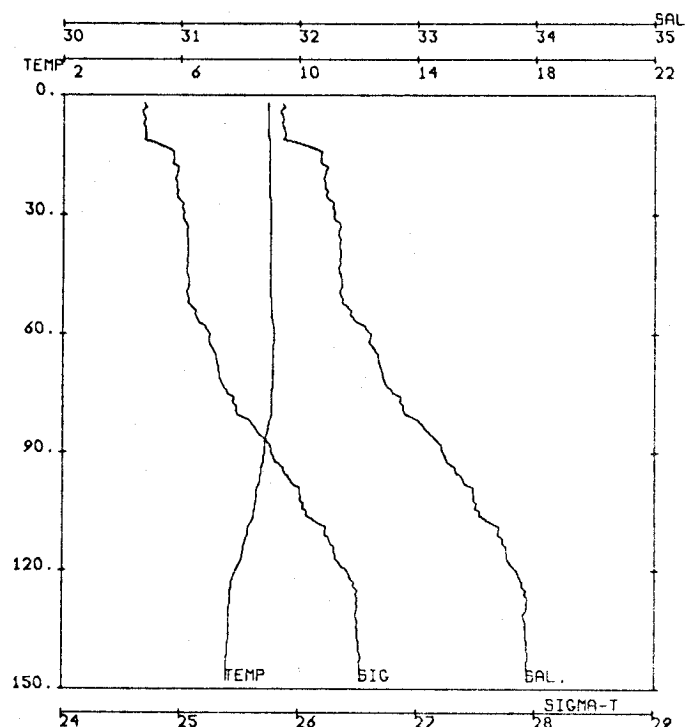
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.95	32.01	24.81	314.8	0.000	0.000
1	8.95	32.01	24.81	314.8	0.003	0.000
10	8.97	32.03	24.83	313.8	0.032	0.016
20	9.00	32.27	25.01	296.6	0.062	0.062
30	9.04	32.34	25.06	292.1	0.092	0.116
40	9.03	32.35	25.07	281.4	0.121	0.238
50	9.09	32.47	25.15	283.6	0.150	0.169
60	9.11	32.65	25.29	270.7	0.178	0.520
70	9.11	32.71	25.34	266.4	0.204	0.694
80	9.02	33.00	25.58	243.7	0.230	0.898
90	8.82	33.30	25.84	218.7	0.253	1.083
100	8.53	33.51	26.05	199.0	0.274	1.280
110	8.17	33.72	26.27	178.3	0.293	1.478
120	7.89	33.86	26.42	164.0	0.310	1.672
130	7.69	33.91	26.49	157.7	0.326	1.873
140	7.59	33.94	26.53	154.3	0.341	2.084
150	7.58	33.93	26.52	155.0	0.357	2.308
154	7.57	33.94	26.53	154.2	0.363	2.402



15D

CAST NO 15D LAT 45 00.2 DATE 3/4/75 TIME 1502
 STATION LONG 124 17.1 DPTH 157 PROBE OS03
 SWELL DIR 300 HT 7 PER 8 BAR 16.8 WEATHER 01
 WIND DIR 000 SPD 20 CLOUD TYPE 6-8 AMOUNT 2
 AIR TEMP 7.5 WET BULB 5.2
 SAMPLE DEPTH 103. SAMPLE TEMP 8.48 SAL 33.513

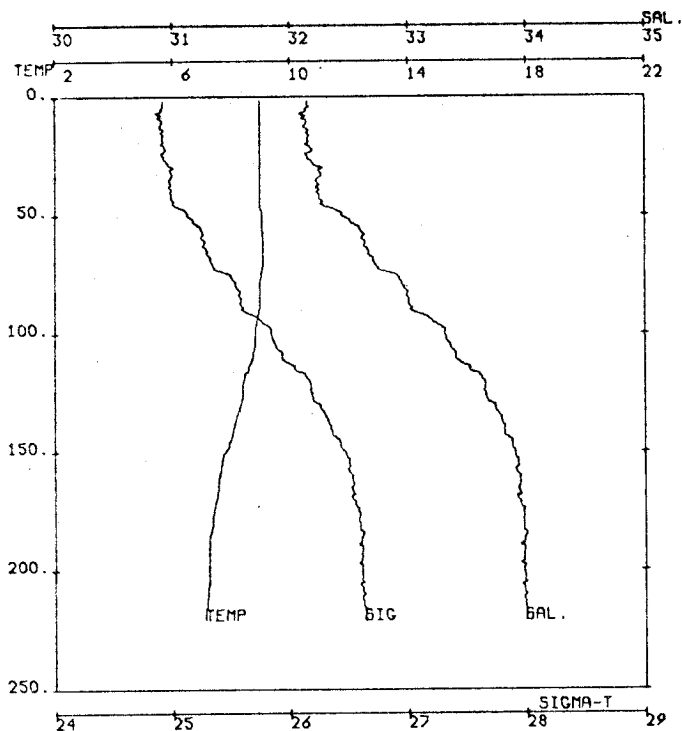
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.97	31.84	24.68	327.7	0.000	0.000
1	8.97	31.84	24.68	327.8	0.003	0.000
10	9.00	32.04	24.83	313.5	0.033	0.016
20	9.00	32.25	24.99	298.0	0.063	0.062
30	9.02	32.31	25.04	294.1	0.093	0.136
40	9.04	32.34	25.06	292.3	0.122	0.239
50	9.05	32.35	25.06	291.9	0.151	0.370
60	9.10	32.54	25.21	278.7	0.180	0.528
70	9.11	32.71	25.34	266.4	0.207	0.705
80	9.00	33.00	25.58	243.4	0.233	0.897
90	8.91	33.19	25.74	228.2	0.256	1.098
100	8.55	33.51	26.05	199.2	0.278	1.300
110	8.38	33.61	26.15	189.5	0.297	1.505
120	8.00	33.78	26.34	171.6	0.315	1.708
130	7.73	33.90	26.48	159.0	0.331	1.913
140	7.60	33.93	26.52	155.1	0.347	2.125
148	7.57	33.94	26.53	154.1	0.359	2.303



16D

CAST NO 16D LAT 44 59.7 DATE 3/4/75 TIME 1602
 STATION LONG 124 17.2 DPTH 157 PROBE OS03
 SWELL DIR 300 HT 7 PER 8 BAR 16.8 WEATHER 01
 WIND DIR 000 SPD 20 CLOUD TYPE 6-8 AMOUNT 2
 AIR TEMP 8.4 WET BULB 6.5
 SAMPLE DEPTH 17. SAMPLE TEMP 8.99 SAL 33.219

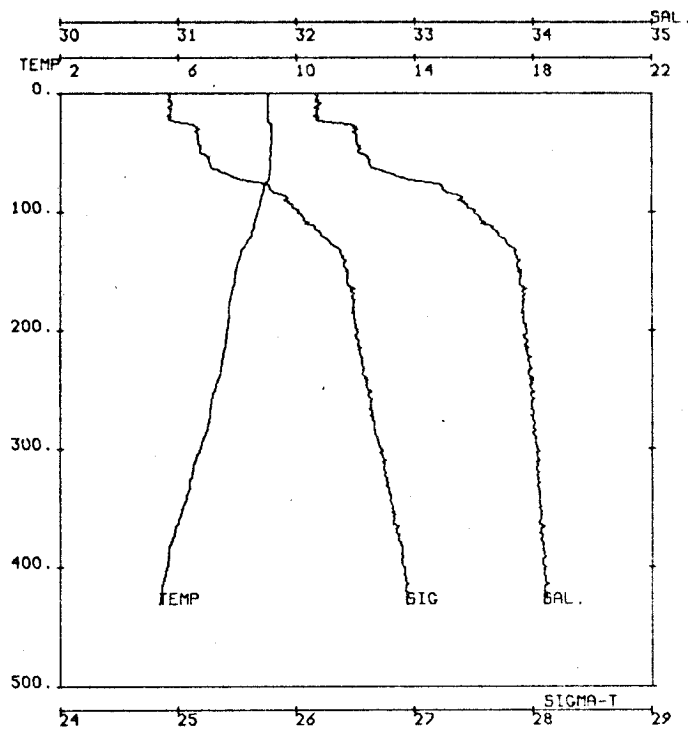
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.97	31.86	24.69	326.3	0.000	0.000
2	8.97	31.86	24.69	326.3	0.007	0.001
10	8.97	31.88	24.71	324.9	0.033	0.018
20	9.00	32.21	24.96	301.0	0.063	0.062
30	9.05	32.29	25.02	296.0	0.093	0.137
40	9.04	32.35	25.07	291.6	0.123	0.239
50	9.05	32.35	25.06	291.9	0.152	0.371
60	9.14	32.61	25.25	274.1	0.180	0.527
70	9.11	32.71	25.34	266.4	0.207	0.703
80	9.06	32.90	25.49	251.7	0.233	0.897
90	8.82	33.22	25.78	224.6	0.257	1.097
100	8.57	33.47	26.01	202.5	0.278	1.300
110	8.27	33.68	26.22	182.7	0.298	1.505
120	7.86	33.84	26.41	165.1	0.315	1.706
130	7.65	33.92	26.50	156.4	0.331	1.904
140	7.59	33.93	26.52	155.0	0.347	2.115
148	7.56	33.93	26.52	154.7	0.359	2.293



18D

CAST NO 180 LAT 45 00.0 DATE 3/4/75 TIME 2105
 STATION LONG 124 23.0 DPTH 219 PROBE OSU3
 SWELL DIR 300 HT 7 PER 7 BAR 10.0 WEATHER 02
 WIND DIR 350 SPD 26 CLOUD TYPE 6-0 AMOUNT 2
 AIR TEMP 7.8 WET BULB 5.6
 SAMPLE DEPTH 224 SAMPLE TEMP 7.24 SAL 33.974

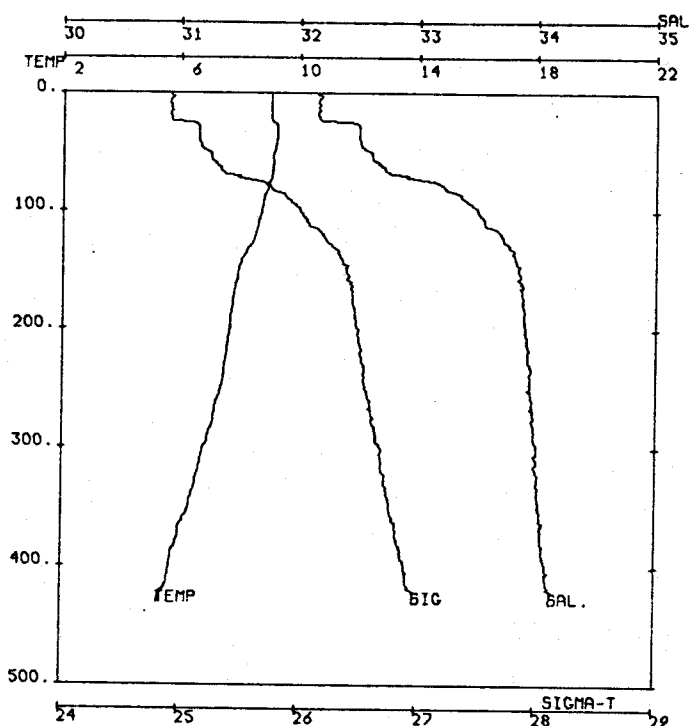
DEPTH	TEMP	SAL	SIGMA	SWA	DELD	POTE
0	8.98	32.15	24.92	304.8	0.000	0.000
2	8.98	32.15	24.92	304.9	0.006	0.001
10	8.98	32.14	24.91	305.8	0.031	0.015
20	8.98	32.13	24.90	306.7	0.061	0.061
30	9.00	32.28	25.02	296.0	0.092	0.137
40	9.00	32.23	24.98	299.9	0.121	0.242
50	9.07	32.43	25.12	286.2	0.151	0.374
60	9.10	32.60	25.25	274.2	0.178	0.526
70	9.10	32.72	25.35	265.5	0.205	0.701
80	9.00	32.97	25.56	245.6	0.231	0.892
90	8.97	33.02	25.60	241.7	0.255	1.098
100	8.83	33.32	25.86	217.5	0.278	1.313
110	8.74	33.41	25.94	209.7	0.299	1.537
120	8.43	33.65	26.18	187.4	0.319	1.765
130	8.31	33.74	26.26	179.2	0.338	1.997
140	8.09	33.81	26.35	171.0	0.355	2.233
150	7.80	33.91	26.47	159.6	0.372	2.473
160	7.58	33.95	26.54	153.7	0.387	2.716
170	7.48	33.93	26.54	153.6	0.403	2.969
180	7.34	33.98	26.59	148.5	0.418	3.232
190	7.24	33.98	26.61	147.2	0.432	3.505
200	7.22	33.98	26.61	147.1	0.447	3.793
221	7.10	33.99	26.64	145.1	0.478	4.439



19D

CAST NO 190 LAT 44 59.7 DATE 3/4/75 TIME 2101
 STATION LONG 124 31.9 DPTH 428 PROBE OSU3
 SWELL DIR 300 HT 7 PER 8 BAR 14.8 WEATHER 02
 WIND DIR 340 SPD 23 CLOUD TYPE 0-0 AMOUNT 1
 AIR TEMP 7.3 WET BULB 5.0
 SAMPLE DEPTH 425 SAMPLE TEMP 5.27 SAL 34.108

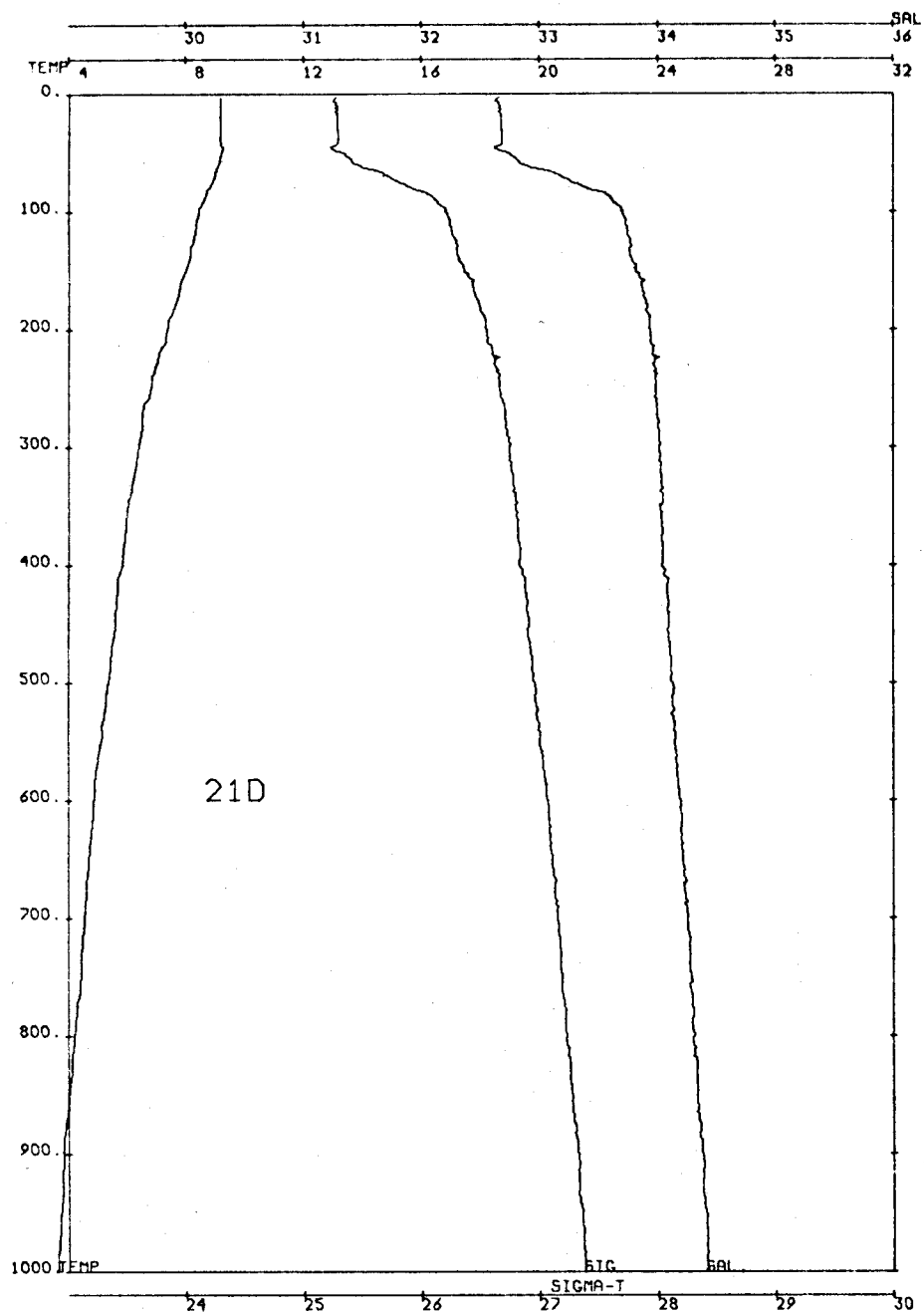
DEPTH	TEMP	SAL	SIGMA	SWA	DELD	POTE
0	9.02	32.18	24.94	302.2	0.000	0.000
10	9.02	32.19	24.94	302.6	0.020	0.015
20	9.02	32.19	24.94	302.8	0.061	0.061
30	9.15	32.52	25.16	290.4	0.090	0.114
40	9.15	32.51	25.17	281.3	0.118	0.212
50	9.14	32.53	25.19	279.9	0.146	0.359
60	9.11	32.62	25.27	272.6	0.174	0.509
70	9.07	32.86	25.46	254.7	0.200	0.681
80	8.89	33.24	25.78	224.3	0.224	0.853
90	8.77	33.36	25.90	213.5	0.246	1.040
100	8.68	33.50	26.02	201.9	0.266	1.218
110	8.56	33.55	26.08	196.6	0.286	1.446
120	8.46	33.70	26.21	184.2	0.305	1.661
130	8.18	33.84	26.36	169.9	0.322	1.881
140	8.04	33.89	26.42	164.3	0.339	2.108
150	7.94	33.87	26.42	164.6	0.355	2.347
160	7.90	33.89	26.44	162.6	0.372	2.599
170	7.78	33.92	26.49	158.8	0.388	2.863
180	7.73	33.92	26.49	158.3	0.404	3.141
190	7.70	33.91	26.49	158.8	0.420	3.435
200	7.65	33.94	26.52	156.1	0.435	3.741
225	7.48	33.95	26.55	153.3	0.474	4.562
250	7.23	33.99	26.62	147.1	0.511	5.453
300	6.74	34.04	26.72	137.7	0.583	7.425
400	5.60	34.11	26.93	119.1	0.712	11.917
431	5.55	34.09	26.94	117.9	0.749	12.440



200

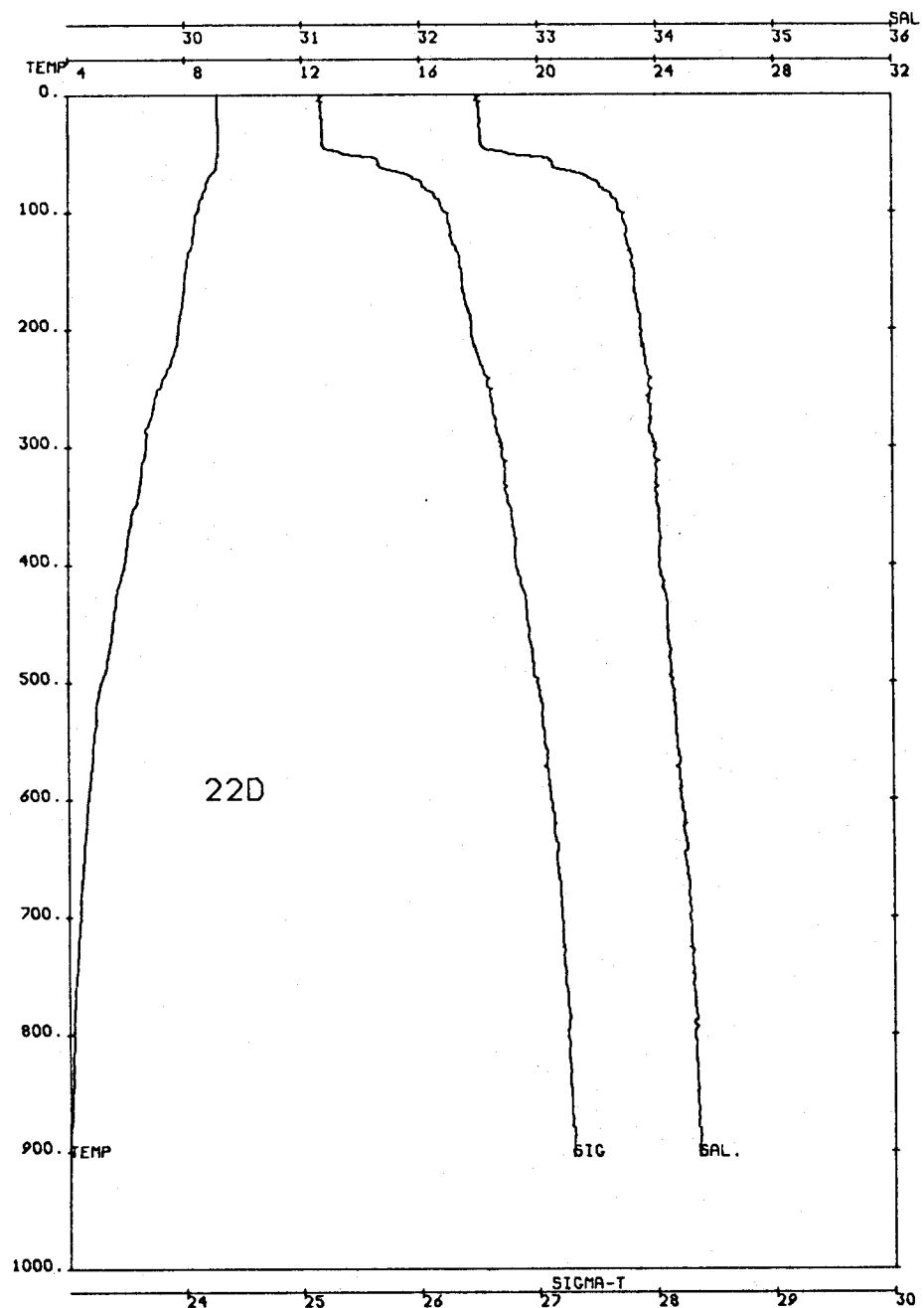
CAST NO 200 LAT 44 59.1 DATE 3/ 4/75 TIME 2359
 STATION LONG 124 33.3 DPTH 431 PROBE OSU4
 SWELL DIR 300 HT 7 PER 8 BAR 14.2 WEATHER 02
 WIND DIR 340 SPD 22 CLOUD TYPE 2- AMOUNT 3
 AIR TEMP 7.9 WET BULB 5.0
 SAMPLE DEPTH 422. SAMPLE TEMP 5.33 SAL 34.114

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.03	32.15	24.91	305.6	0.000	0.000
2	9.03	32.15	24.91	305.6	0.006	0.001
10	9.03	32.17	24.92	304.3	0.031	0.015
20	9.04	32.16	24.92	305.3	0.061	0.061
30	9.22	32.50	25.16	282.9	0.090	0.134
40	9.21	32.50	25.16	283.0	0.119	0.233
50	9.10	32.59	25.24	274.7	0.147	0.359
60	9.10	32.66	25.30	269.8	0.174	0.509
70	9.05	32.91	25.50	250.7	0.200	0.681
80	8.90	33.22	25.77	225.6	0.224	0.859
90	8.78	33.38	25.91	212.1	0.246	1.044
100	8.71	33.50	26.02	202.4	0.267	1.240
110	8.60	33.56	26.08	196.5	0.287	1.449
120	8.50	33.69	26.20	185.5	0.306	1.668
130	8.29	33.76	26.28	177.4	0.324	1.894
140	8.05	33.82	26.37	169.7	0.341	2.127
150	7.94	33.84	26.40	166.8	0.358	2.370
160	7.86	33.88	26.44	162.8	0.374	2.626
170	7.80	33.87	26.45	162.4	0.390	2.894
180	7.74	33.89	26.47	160.7	0.407	3.177
190	7.69	33.89	26.47	160.2	0.423	3.473
200	7.64	33.91	26.50	158.1	0.439	3.784
225	7.51	33.93	26.53	155.2	0.478	4.616
250	7.36	33.94	26.56	152.8	0.516	5.528
300	6.77	34.00	26.69	141.0	0.590	7.549
400	5.67	34.09	26.90	121.4	0.722	12.169
431	5.29	34.12	26.97	114.9	0.759	13.689



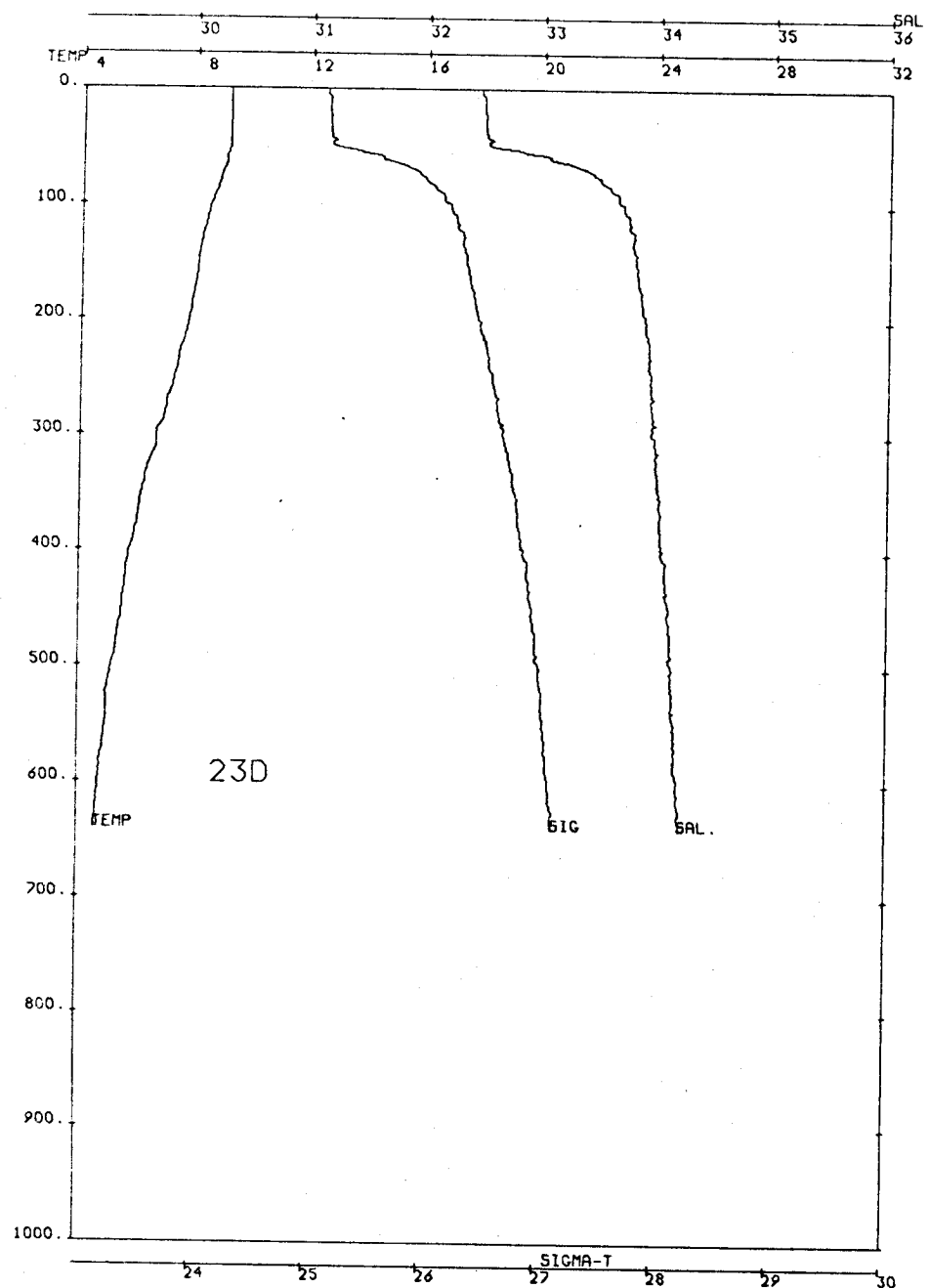
CAST NO 21D LAT 45 00.1 DATE 3/ 5/75 TIME 154
 STATION LONG 125 12.0 DPTH 1200 PROBE 0504
 SWELL DIR 300 HT 7 PER 8 BAP 14.0 WEATHER 02
 WIND DIR 000 SPD 22 CLOUD TYPE 6- 7 AMOUNT 2
 AIR TEMP 7.2 WET BULB 6.5
 SAMPLE DEPTH 1006 SAMPLE TEMP 3.63 SAL 34.411

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	NOTE
0	9.19	32.67	25.29	269.4	0.000	0.000
3	9.19	32.67	25.29	269.4	0.000	0.001
10	9.19	32.67	25.29	269.5	0.027	0.014
20	9.20	32.68	25.30	269.1	0.054	0.054
30	9.20	32.68	25.30	269.3	0.081	0.121
40	9.20	32.68	25.30	269.5	0.108	0.216
50	9.19	32.74	25.35	265.0	0.135	0.338
60	9.12	32.86	25.45	255.3	0.161	0.481
70	8.97	33.19	25.73	238.7	0.185	0.607
80	8.78	33.41	25.93	209.7	0.207	0.801
90	8.61	33.62	26.13	181.8	0.227	0.969
100	8.44	33.69	26.21	184.3	0.245	1.147
110	8.36	33.73	26.25	180.3	0.264	1.337
120	8.29	33.75	26.28	178.0	0.281	1.540
130	8.17	33.78	26.32	174.2	0.299	1.760
140	8.13	33.79	26.33	173.0	0.316	1.998
150	7.98	33.81	26.37	169.6	0.334	2.245
160	7.81	33.86	26.43	161.6	0.350	2.502
170	7.74	33.88	26.46	161.3	0.366	2.769
180	7.61	33.91	26.50	157.4	0.382	3.047
190	7.42	33.93	26.55	151.1	0.399	3.335
200	7.35	33.94	26.56	151.9	0.413	3.624
225	7.04	33.97	26.63	145.8	0.450	4.425
250	6.80	33.98	26.67	142.2	0.486	5.275
300	6.38	34.02	26.76	134.4	0.555	7.167
400	5.83	34.03	26.83	127.9	0.635	11.704
500	5.35	34.13	26.97	115.7	0.805	17.114
600	4.85	34.20	27.09	105.5	0.916	23.325
800	4.21	34.32	27.25	90.9	1.114	37.004
1000	3.62	34.41	27.38	79.0	1.282	52.049



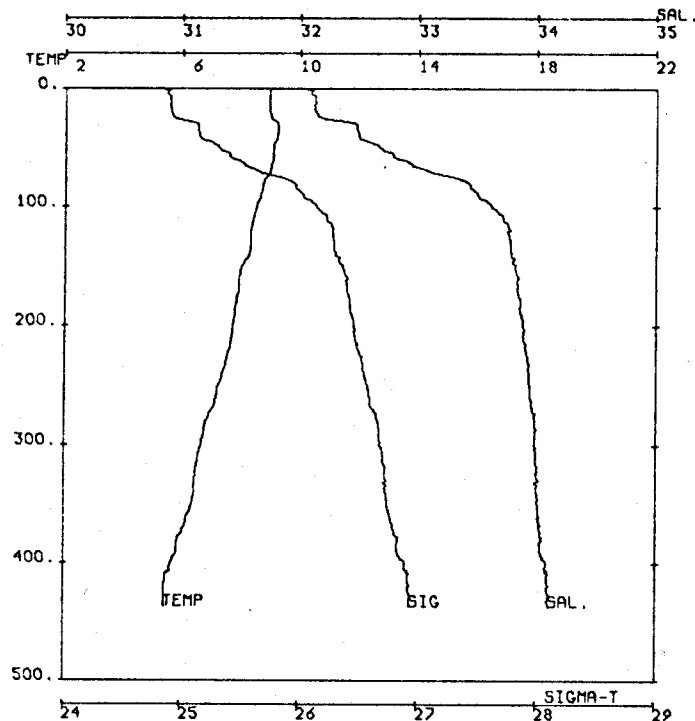
CAST NO 22D LAT 45 00.1 DATE 3/ 5/75 TIME 607
 STATION LONG 124 59.9 DPTH 941 PROBE 0504
 SWELL DIR 300 HT 7 PER 8 BAR 14.0 WEATHER 02
 WIND DIR 000 SPD 22 CLOUD TYPE 6-8 AMOUNT 2
 AIR TEMP 7.5 WET BULB 5.9
 SAMPLE DEPTH 899. SAMPLE TEMP 4.00 SAL 34.35

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.10	32.44	25.13	285.1	0.000	0.000
10	9.13	32.49	25.16	282.0	0.028	0.014
20	9.14	32.50	25.17	281.6	0.056	0.056
30	9.14	32.52	25.18	280.3	0.084	0.127
40	9.14	32.52	25.18	280.4	0.112	0.225
50	9.17	32.75	25.36	264.0	0.140	0.349
60	9.08	33.13	25.67	234.6	0.164	0.482
70	8.81	33.43	25.95	208.5	0.186	0.626
80	8.70	33.56	26.06	197.4	0.207	0.778
90	8.51	33.68	26.19	185.9	0.226	0.940
100	8.43	33.71	26.22	182.6	0.244	1.116
110	8.33	33.75	26.27	178.4	0.262	1.305
120	8.29	33.75	26.28	178.0	0.280	1.510
130	8.22	33.78	26.31	174.5	0.298	1.730
140	8.09	33.81	26.35	171.0	0.315	1.963
150	8.02	33.82	26.37	169.4	0.332	2.211
160	8.00	33.82	26.37	169.3	0.349	2.473
170	7.95	33.84	26.40	167.2	0.366	2.752
180	7.91	33.85	26.41	166.1	0.383	3.044
190	7.82	33.87	26.44	163.5	0.399	3.349
200	7.79	33.88	26.45	162.5	0.415	3.666
225	7.56	33.92	26.51	157.0	0.455	4.517
250	7.16	33.95	26.60	149.3	0.494	5.427
300	6.66	33.98	26.69	141.0	0.566	7.413
400	5.92	34.02	26.82	129.8	0.700	12.095
500	5.13	34.12	26.99	113.7	0.820	17.485
600	4.66	34.20	27.11	103.2	0.927	23.360
800	4.16	34.31	27.25	91.0	1.117	36.621
904	3.99	34.35	27.30	87.0	1.209	44.445



CAST NO 23D LAT 45 00.0 DATE 3/5/75 TIME 012
 STATION LONG 124 48.0 DPTH 649 PROBE 0504
 SNELL DIR 300 HT 6 PER 7 BAR 13.0 WEATHER 02
 WIND DIR 000 SPD 18 CLOUD TYPE 8- AMOUNT 1
 AIR TEMP 7.5 WET BULB 5.7
 SAMPLE DEPTH 569. SAMPLE TEMP 4.81 SAL 34.167

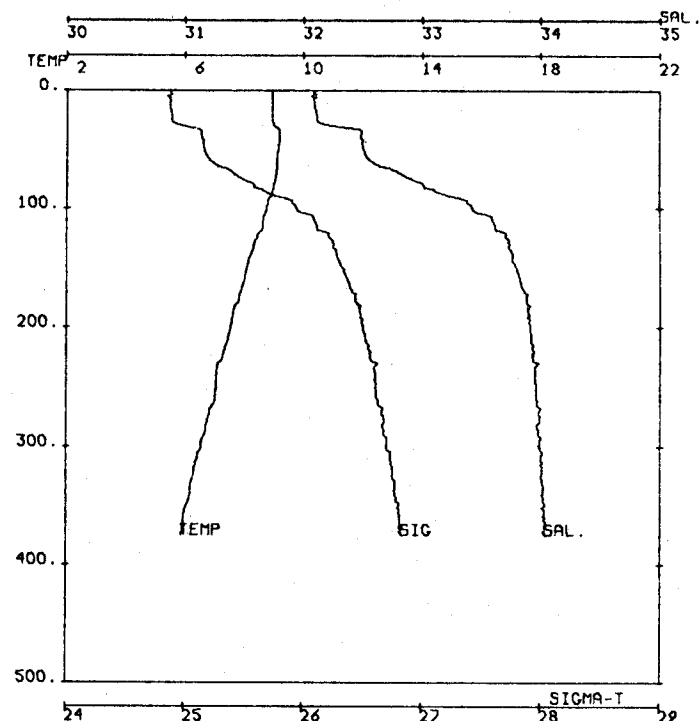
DEPTH	TEMP	SAL	SIGMA	SVA	DELO	FOTE
0	9.15	32.46	25.14	284.3	0.000	0.000
1	9.15	32.46	25.14	284.4	0.001	0.000
10	9.15	32.49	25.16	282.3	0.028	0.014
20	9.15	32.49	25.16	282.5	0.057	0.057
30	9.16	32.49	25.16	282.8	0.085	0.107
40	9.17	32.50	25.17	282.1	0.113	0.216
50	9.14	32.60	25.25	274.7	0.141	0.152
60	9.01	32.66	25.63	238.8	0.166	0.491
70	8.89	32.39	25.90	212.7	0.189	0.616
80	8.78	32.51	26.01	202.3	0.209	0.791
90	8.62	32.65	26.15	189.7	0.229	0.953
100	8.46	32.69	26.20	184.6	0.248	1.118
110	8.36	32.75	26.27	178.8	0.266	1.328
120	8.29	32.75	26.28	178.0	0.284	1.501
130	8.18	32.78	26.32	174.3	0.301	1.752
140	8.12	32.79	26.33	172.9	0.319	1.993
150	8.07	32.80	26.35	171.6	0.336	2.215
160	8.01	32.82	26.37	169.4	0.353	2.499
170	7.95	32.84	26.40	167.2	0.370	2.777
180	7.89	32.85	26.41	165.8	0.386	3.068
190	7.84	32.86	26.43	164.5	0.403	3.372
200	7.76	32.88	26.46	162.1	0.419	3.689
225	7.44	32.92	26.53	155.0	0.459	4.500
250	7.24	32.94	26.58	151.1	0.497	5.440
300	6.63	32.96	26.68	142.1	0.570	7.496
400	5.73	34.04	26.85	125.9	0.703	12.099
500	5.14	34.14	27.00	112.4	0.822	17.431
600	4.72	34.19	27.09	104.7	0.931	23.415
640	4.60	34.21	27.12	102.1	0.972	25.966



24D

CAST NO 24D LAT 45 00.0 DATE 3/ 5/75 TIME 1020
 STATION LONG 124 35.0 DPTH 430 PROBE OSU4
 SWELL DIR 300 HT 6 PER 7 BAR 12.0 WEATHER 02
 WIND DIR 000 SPD 24 CLOUD TYPE 8- AMOUNT 1
 AIR TEMP 7.8 WET BULB 5.5
 SAMPLE DEPTH SAMPLE TEMP SAL

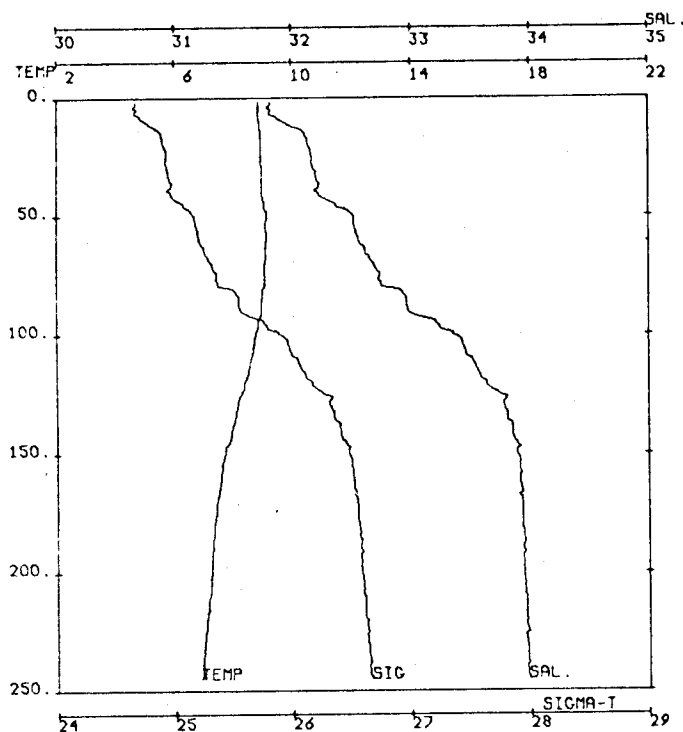
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.95	31.99	24.80	316.3	0.000	0.000
10	8.96	32.12	24.90	306.9	0.031	0.015
20	8.97	32.13	24.91	306.5	0.062	0.061
30	9.23	32.47	25.13	285.3	0.091	0.136
40	9.21	32.49	25.15	283.7	0.120	0.236
50	9.08	32.67	25.31	268.6	0.148	0.360
60	9.06	32.82	25.43	257.3	0.174	0.504
70	8.96	33.07	25.64	237.4	0.198	0.664
80	8.72	33.42	25.95	208.1	0.220	0.829
90	8.64	33.50	26.03	201.2	0.241	1.003
100	8.50	33.62	26.14	190.4	0.261	1.189
110	8.40	33.72	26.24	181.6	0.279	1.383
120	8.33	33.78	26.29	176.3	0.297	1.589
130	8.30	33.78	26.30	176.1	0.315	1.810
140	8.26	33.78	26.30	175.7	0.332	2.048
150	8.00	33.81	26.37	169.9	0.349	2.298
160	7.93	33.84	26.40	166.8	0.366	2.559
170	7.90	33.84	26.40	166.5	0.383	2.833
180	7.82	33.86	26.43	164.1	0.399	3.122
190	7.79	33.87	26.44	163.1	0.416	3.426
200	7.73	33.88	26.46	161.6	0.432	3.741
225	7.54	33.91	26.51	157.1	0.472	4.588
250	7.23	33.95	26.59	150.3	0.510	5.502
300	6.66	33.98	26.69	141.0	0.583	7.493
400	5.65	34.09	26.90	121.2	0.716	12.153
437	5.43	34.11	26.95	117.4	0.760	13.992



25D

CAST NO 25D LAT 44 59.9 DATE 3/ 5/75 TIME 1151
 STATION LONG 124 30.0 DPTH 378 PROBE OSU4
 SWELL DIR 300 HT 7 PER 7 BAR 11.8 WEATHER 02
 WIND DIR 100 SPD 21 CLOUD TYPE 8- AMOUNT 1
 AIR TEMP 7.4 WET BULB 5.2
 SAMPLE DEPTH 369 SAMPLE TEMP 5.90 SAL 34.066

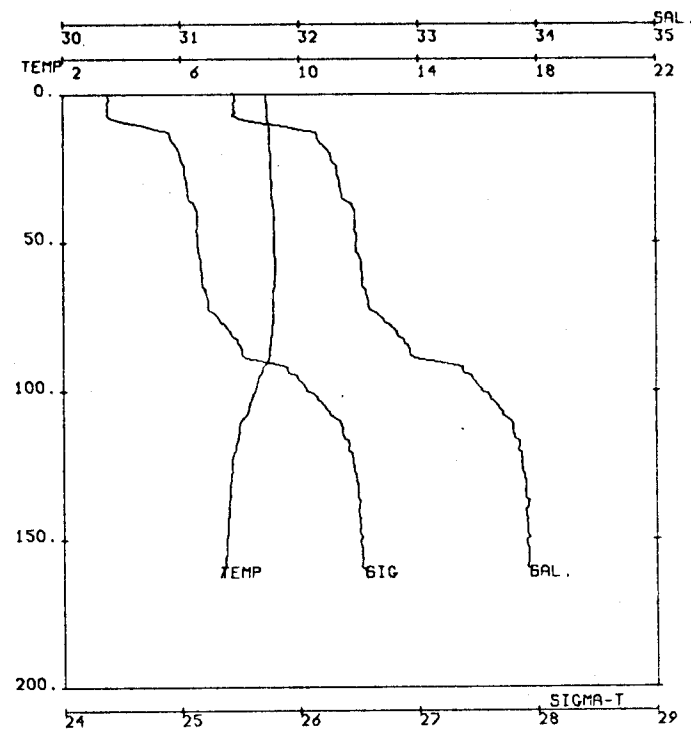
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.94	32.10	24.89	308.0	0.000	0.000
1	8.94	32.10	24.89	308.0	0.003	0.000
10	8.95	32.10	24.89	308.3	0.031	0.015
20	8.96	32.11	24.89	307.8	0.062	0.062
30	9.03	32.24	24.98	299.4	0.092	0.138
40	9.19	32.49	25.15	283.4	0.121	0.238
50	9.16	32.51	25.17	281.6	0.149	0.366
60	9.11	32.57	25.23	276.6	0.177	0.519
70	9.08	32.80	25.41	259.3	0.204	0.694
80	9.00	33.01	25.59	242.7	0.229	0.892
90	8.90	33.23	25.78	225.1	0.253	1.092
100	8.75	33.43	25.95	208.1	0.274	1.284
110	8.64	33.60	26.10	194.1	0.294	1.494
120	8.53	33.69	26.19	186.0	0.313	1.716
130	8.34	33.74	26.26	179.6	0.332	1.947
140	8.21	33.77	26.30	175.7	0.349	2.184
150	8.10	33.80	26.35	171.7	0.367	2.436
160	8.02	33.83	26.38	168.8	0.384	2.700
170	7.89	33.86	26.42	164.9	0.400	2.975
180	7.77	33.89	26.46	161.1	0.417	3.269
190	7.64	33.91	26.50	158.0	0.433	3.583
200	7.55	33.92	26.52	156.1	0.448	3.900
225	7.27	33.93	26.57	151.9	0.487	4.676
250	7.06	33.96	26.62	147.2	0.524	5.553
300	6.55	34.00	26.72	138.1	0.595	7.510
375	5.88	34.04	26.84	127.5	0.694	10.849



260

CAST NO 260 LAT 45 00.2 DATE 3/ 5/75 TIME 1314
 STATION LONG 124 23.9 DPTH 245 PROBE 0504
 SWELL DIR 300 HT 7 PER 7 BAR 11.0 WEATHER 02
 WIND DIR 000 SPD 20 CLOUD TYPE - AMOUNT 0
 AIR TEMP 7.0 WET BULB 4.6
 SAMPLE DEPTH 241. SAMPLE TEMP 6.90 SAL 34.002

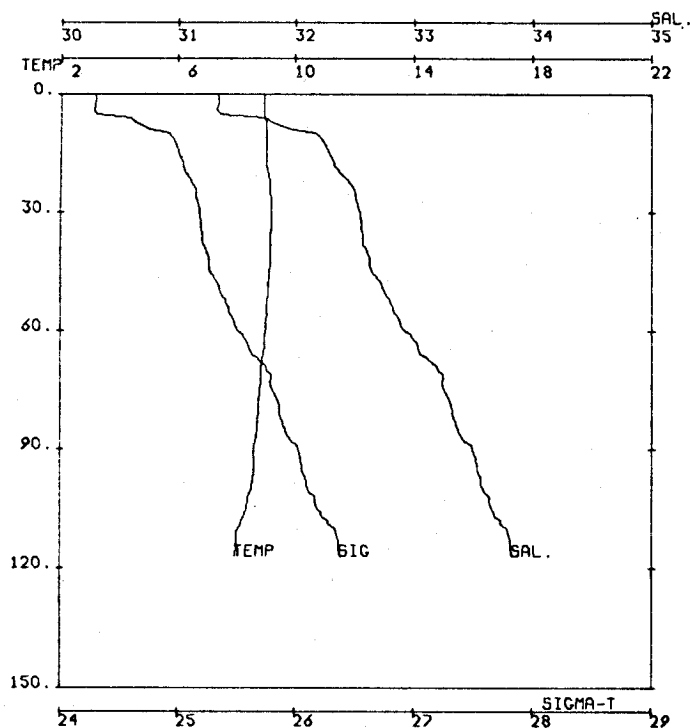
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.87	31.82	24.68	327.8	0.000	0.000
2	8.87	31.82	24.68	327.8	0.007	0.001
10	8.90	31.92	24.75	328.9	0.033	0.016
20	8.96	32.14	24.91	305.6	0.064	0.063
30	8.99	32.18	24.94	303.3	0.094	0.119
40	9.00	32.22	24.97	300.6	0.124	0.244
50	9.14	32.52	25.18	288.6	0.153	0.375
60	9.14	32.56	25.21	277.8	0.181	0.529
70	9.09	32.69	25.32	267.6	0.209	0.706
80	9.07	32.76	25.38	262.3	0.235	0.905
90	8.96	32.98	25.57	244.5	0.268	1.115
100	8.75	33.36	25.90	213.3	0.283	1.330
110	8.60	33.52	26.05	199.4	0.303	1.546
120	8.37	33.64	26.18	187.3	0.323	1.770
130	8.12	33.79	26.33	172.7	0.340	1.993
140	7.93	33.86	26.42	165.0	0.357	2.221
150	7.69	33.90	26.48	158.8	0.373	2.456
160	7.54	33.92	26.52	155.4	0.389	2.698
170	7.41	33.93	26.55	153.0	0.405	2.952
180	7.31	33.94	26.57	151.0	0.420	3.218
190	7.26	33.94	26.57	150.5	0.435	3.496
200	7.22	33.95	26.59	149.3	0.450	3.788
215	7.01	33.99	26.65	143.9	0.487	4.570
245	6.86	33.99	26.67	142.2	0.515	5.247



270

CAST NO 270 LAT 45 00.0 DATE 3/ 5/75 TIME 1424
 STATION LONG 124 17.8 DPTH 161 PROBE 0304
 SWELL DIR 300 HT 7 PER 7 BAR 10.1 WEATHER 02
 WIND DIR 000 SPD 18 CLOUD TYPE 3- AMOUNT 1
 AIR TEMP 7.0 WET BULB 4.5
 SAMPLE DEPTH 155. SAMPLE TEMP 7.47 SAL 33.946

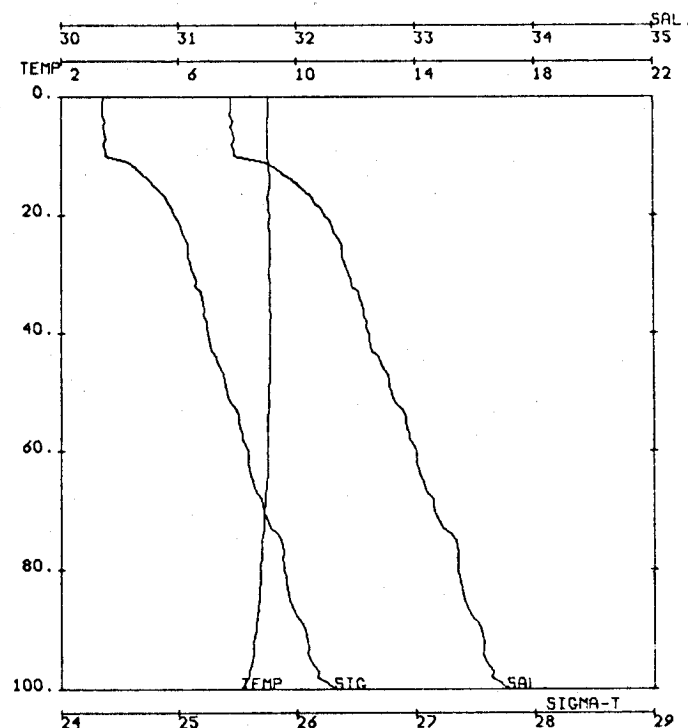
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.89	31.45	24.39	355.6	0.000	0.000
1	8.89	31.45	24.39	355.6	0.004	0.000
10	8.97	31.73	24.60	335.8	0.035	0.018
20	9.03	32.26	25.00	297.7	0.066	0.064
30	9.07	32.34	25.05	292.6	0.076	0.117
40	9.14	32.47	25.14	284.1	0.125	0.218
50	9.15	32.47	25.14	284.5	0.153	0.368
60	9.18	32.53	25.18	280.6	0.181	0.532
70	9.12	32.58	25.23	276.2	0.209	0.701
80	9.08	32.62	25.43	258.0	0.236	0.884
90	8.91	33.10	25.67	214.9	0.261	1.117
100	8.53	33.53	26.07	197.5	0.282	1.315
110	8.00	33.78	26.34	171.4	0.300	1.508
120	7.83	33.84	26.41	164.7	0.317	1.701
130	7.67	33.91	26.49	157.4	0.333	1.901
140	7.59	33.90	26.50	157.2	0.349	2.113
150	7.52	33.91	26.51	155.7	0.364	2.333
160	7.38	33.94	26.56	151.7	0.380	2.573
163	7.32	33.94	26.57	150.9	0.384	2.681



31D

CAST NO 31D LAT 44 59.8 DATE 3/ 5/75 TIME 1909
 STATION LONG 124 12.1 DPTH 117 PROBE OSU4
 SWELL DIR 000 HT 6 PER 8 BAR 08.9 WEATHER 02
 WIND DIR 000 SPD 16 CLOUD TYPE 6-8 AMOUNT 2
 AIR TEMP 7.97 WET BULB
 SAMPLE DEPTH 112 SAMPLE TEMP 7.97 SAL 33.837

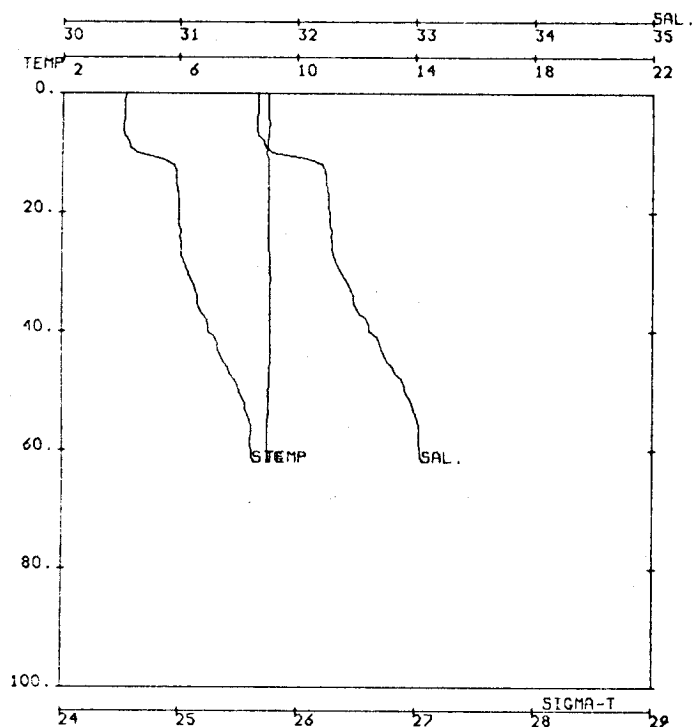
DEPTH	TEMP	SAL	SIGMA	SVA	DELTD	POTE
0	8.97	31.14	24.29	164.9	0.000	0.000
10	9.02	31.18	24.94	163.5	0.015	0.017
20	9.10	31.29	25.09	289.1	0.064	0.061
30	9.19	31.55	25.20	278.8	0.093	0.112
40	9.14	31.61	25.25	273.8	0.120	0.229
50	9.07	31.76	25.38	261.8	0.147	0.350
60	8.99	31.91	25.51	248.1	0.173	0.490
70	8.84	31.21	25.77	225.3	0.196	0.643
80	8.74	31.33	25.88	215.1	0.218	0.808
90	8.61	31.50	26.03	200.7	0.239	0.987
100	8.51	31.59	26.12	192.7	0.259	1.173
110	8.01	31.79	26.35	171.1	0.277	1.366
117	7.97	31.83	26.39	167.4	0.289	1.500



32D

CAST NO 32D LAT 45 00.0 DATE 3/ 5/75 TIME 1951
 STATION LONG 124 10.2 DPTH 102 PROBE OSU4
 SWELL DIR 315 HT 6 PER 8 BAR 18.1 WEATHER 02
 WIND DIR 000 SPD 16 CLOUD TYPE 6-8 AMOUNT 2
 AIR TEMP 9.06 WET BULB 4.9
 SAMPLE DEPTH 43 SAMPLE TEMP 9.06 SAL 33.670

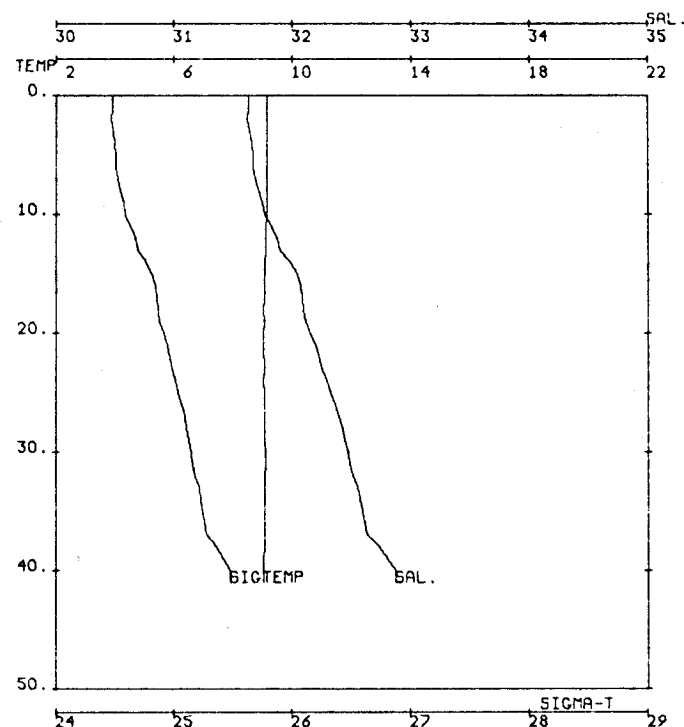
DEPTH	TEMP	SAL	SIGMA	SVA	DELTD	POTE
0	9.02	31.44	24.36	158.2	0.000	0.000
10	8.99	31.47	24.39	155.7	0.016	0.018
20	9.06	31.23	24.97	300.4	0.068	0.065
30	9.05	31.44	25.14	284.9	0.097	0.118
40	9.08	31.61	25.26	272.9	0.125	0.215
50	9.05	31.80	25.42	258.5	0.151	0.355
60	8.98	31.01	25.59	242.0	0.176	0.492
70	8.89	31.16	25.72	229.7	0.200	0.646
80	8.77	31.35	25.89	214.0	0.222	0.810
90	8.58	31.55	26.08	196.6	0.242	0.986
100	8.12	31.77	26.32	173.7	0.261	1.166



34D

CAST NO 34D LAT 45 00.0 DATE 17/5/75 TIME 2110
 STATION LONG 124 06.0 DPTH 65 PROBE 0504
 SWELL DIR 310 HT 6 PER 8 BAR 07.2 WEATHER 02
 WIND DIR 340 SPD 14 CLOUD TYPE 0-6 AMOUNT 2
 AIR TEMP 7.5 NET BULB 5.1
 SAMPLE DEPTH 16 SAMPLE TEMP 9.02 SAL 32.244

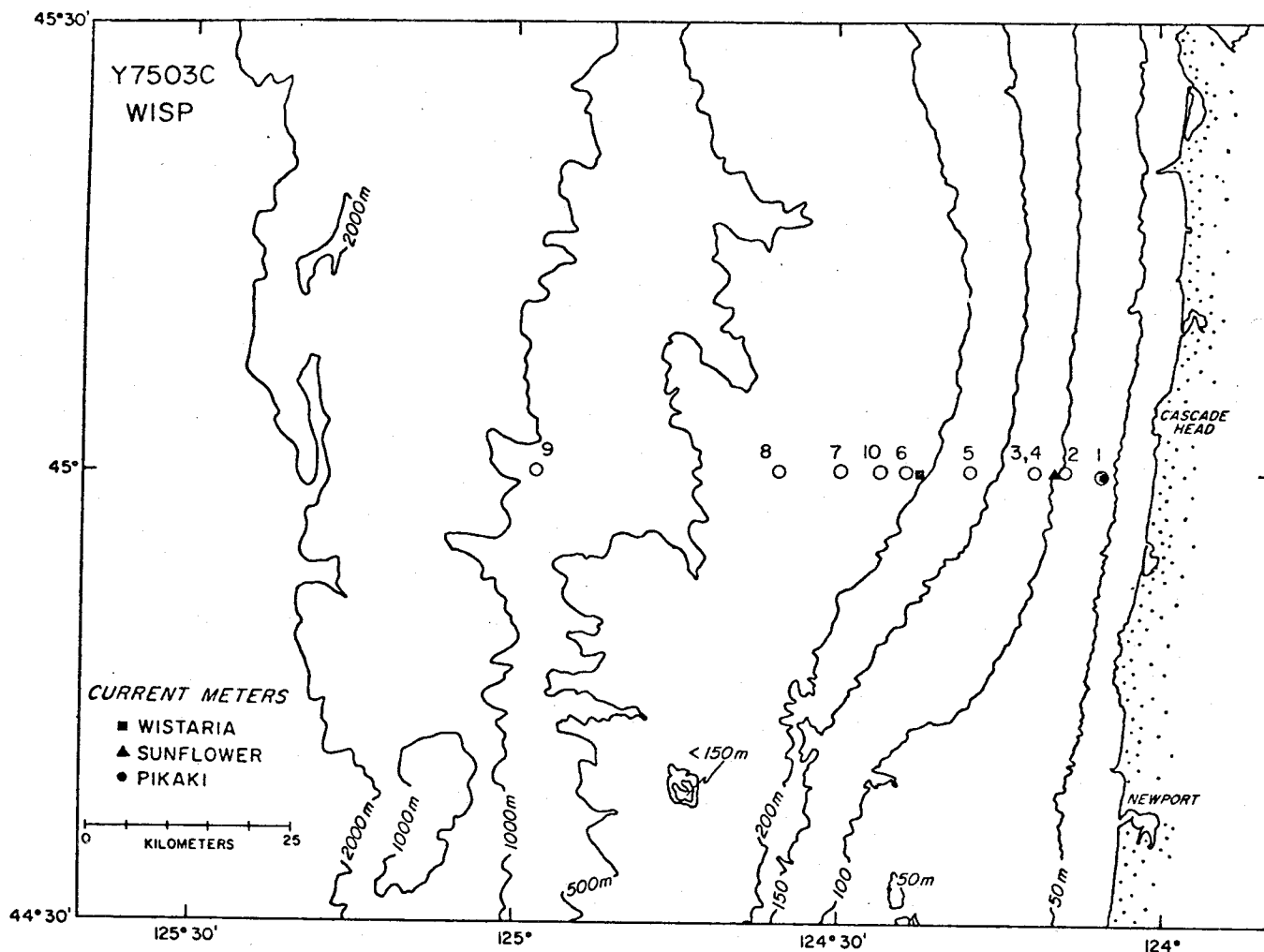
DEPTH	TEMP	SAL	SIGMA	SWA	DELD	POTE
0	9.03	31.67	24.54	241.3	0.000	0.000
10	8.98	31.79	24.64	131.5	0.014	0.017
20	9.04	32.28	25.01	296.4	0.064	0.062
30	9.08	32.38	25.08	289.8	0.094	0.136
40	9.08	32.61	25.26	272.9	0.122	0.234
50	9.01	32.91	25.51	249.7	0.148	0.351
60	8.96	33.04	25.62	239.5	0.172	0.484
62	8.96	33.06	25.63	238.1	0.177	0.513



35D

CAST NO 35D LAT 45 00.0 DATE 17/5/75 TIME 2155
 STATION LONG 124 04.1 DPTH 41 PROBE 0504
 SWELL DIR 310 HT 6 PER 8 BAR 16.0 WEATHER 02
 WIND DIR 340 SPD 16 CLOUD TYPE 0-6 AMOUNT 2
 AIR TEMP 8.9 NET BULB 6.2
 SAMPLE DEPTH 14 SAMPLE TEMP 9.12 SAL 32.902

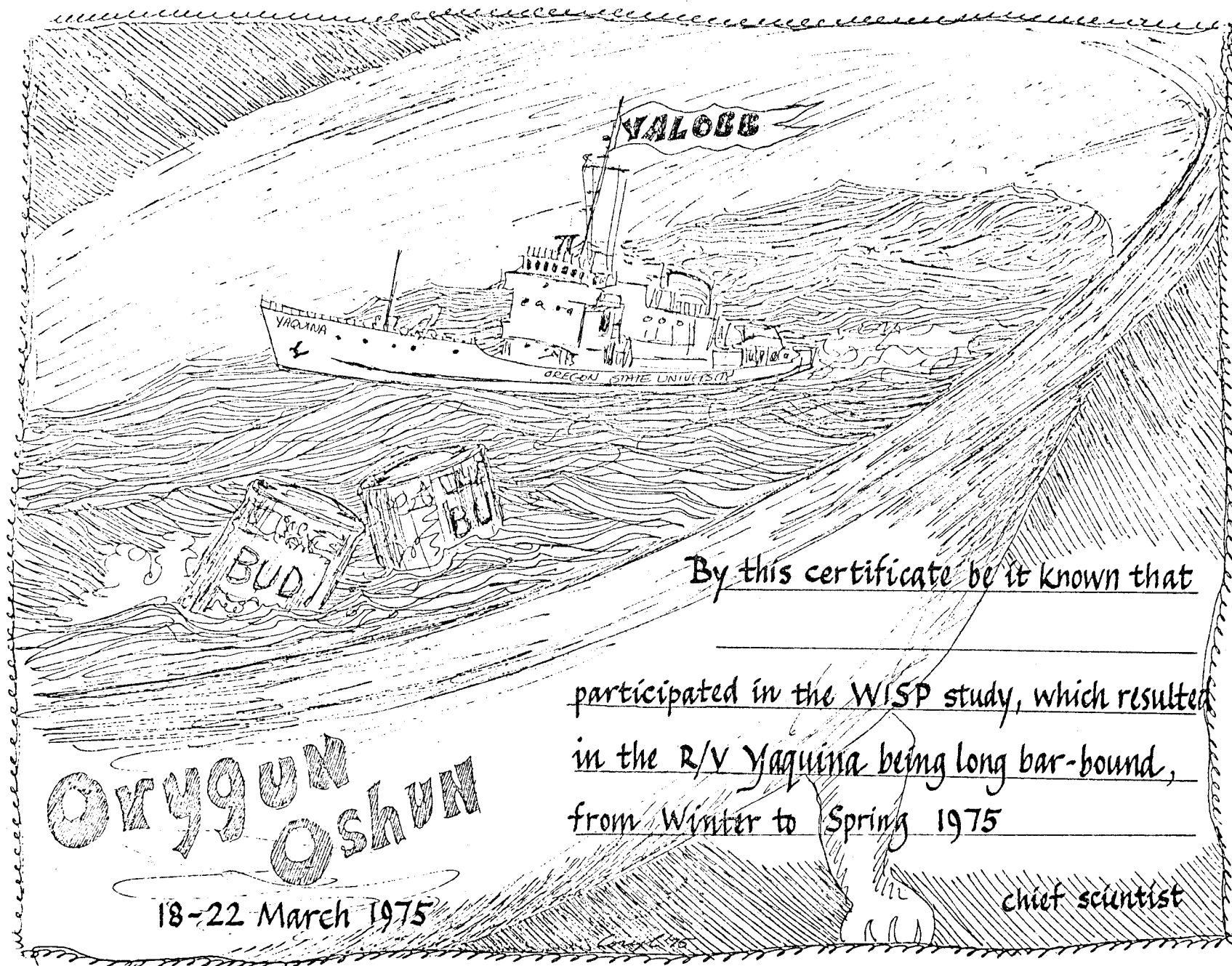
DEPTH	TEMP	SAL	SIGMA	SWA	DELD	POTE
0	9.15	31.63	24.49	346.0	0.000	0.000
10	9.14	31.77	24.60	115.6	0.014	0.017
20	9.03	32.16	24.92	205.2	0.066	0.065
30	9.10	32.48	25.16	282.6	0.095	0.128
40	9.02	32.68	25.48	251.9	0.123	0.202
41	9.02	32.68	25.48	251.9	0.125	0.241



Y7503C
R/V YAQUINA
18 - 22 March 1975

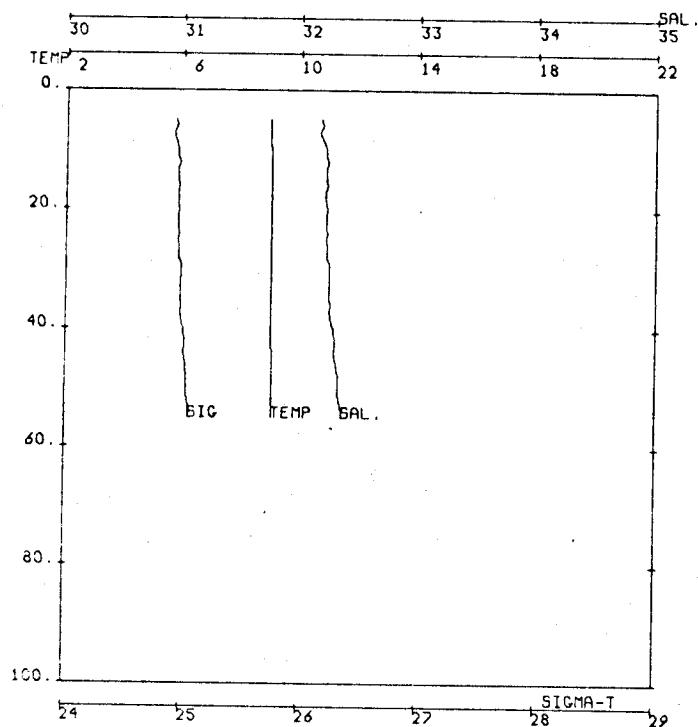
Hydrographic section along 45°N. Used mainly CTD probe #4. Tested CTD probes #1, which was still noisy; #3, which worked all right; and #5, which leaked.

Bar-bound off Newport from Wednesday afternoon (19 March) to Friday evening (21 March). Arrived at Astoria on Saturday evening (22 March). Certificates were presented to participating personnel: Robert L. Smith, Ekki Mittelstaedt, Jane Huyer, Dennis Barstow, Robert Kapaun, Ben Moore, Tedd Wright, Sabine Mittelstaedt, Gene Itzen, Paul Brookhyser.



By this certificate be it known that

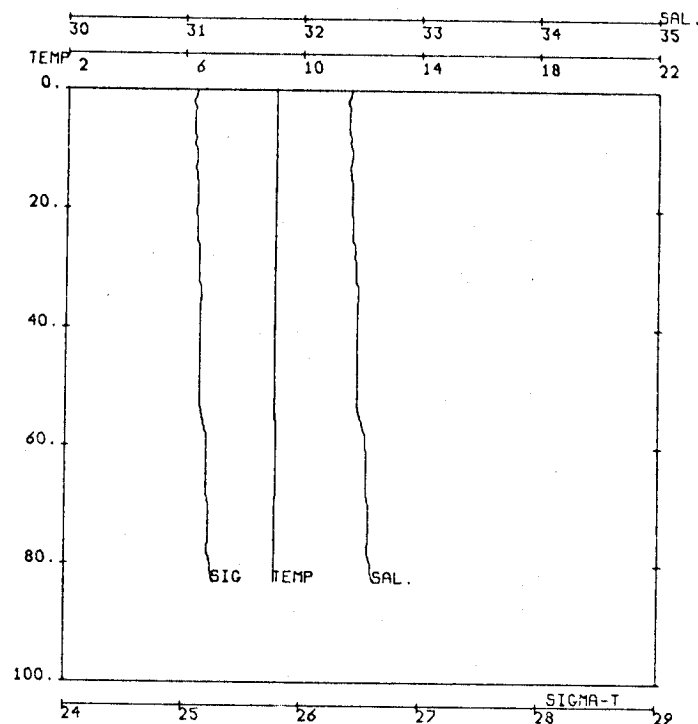
participated in the WISP study, which resulted
in the R/V Yaguana being long bar-bound,
from Winter to Spring 1975



1D

CAST NO 1D LAT 45 00.4 DATE 3/19/75 TIME 232
 STATION LONG 124 06.0 DPTH 64 PROBE OSU4
 SWELL DIR 200 HT 12 PER 9 BAR 10.9 WEATHER
 WIND DIR 200 SPD 18 CLOUD TYPE 3-6 AMOUNT 6
 AIR TEMP 8.9 WET BULB 8.0
 SAMPLE DEPTH 52 SAMPLE TEMP 9.07 SAL 32.350

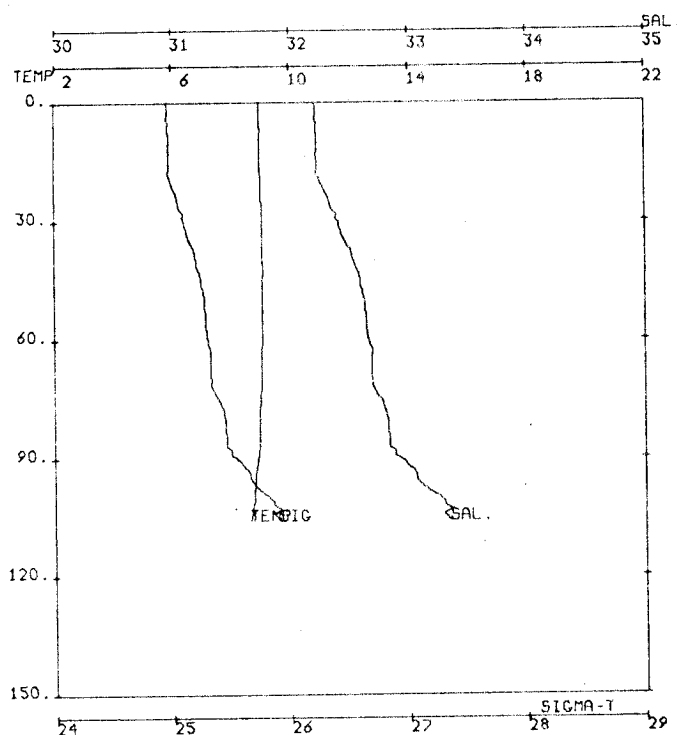
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.00	32.18	24.94	102.9	0.000	0.000
5	9.00	32.18	24.94	103.0	0.015	0.004
10	9.02	32.22	24.97	100.4	0.010	0.015
20	9.03	32.23	24.97	100.0	0.060	0.060
30	9.03	32.25	24.99	298.7	0.090	0.135
40	9.05	32.29	25.02	296.2	0.120	0.240
50	9.08	32.33	25.04	293.8	0.150	0.372
55	9.08	32.36	25.07	291.7	0.164	0.449



2D

CAST NO 2D LAT 45 00.0 DATE 3/19/75 TIME 315
 STATION LONG 124 08.8 DPTH 90 PROBE OSU4
 SWELL DIR 200 HT 11 PER 9 BAR 11.2 WEATHER 03
 WIND DIR 220 SPD 18 CLOUD TYPE 6-8 AMOUNT 7
 AIR TEMP 8.5 WET BULB 6.9
 SAMPLE DEPTH 72 SAMPLE TEMP 9.11 SAL 32.567

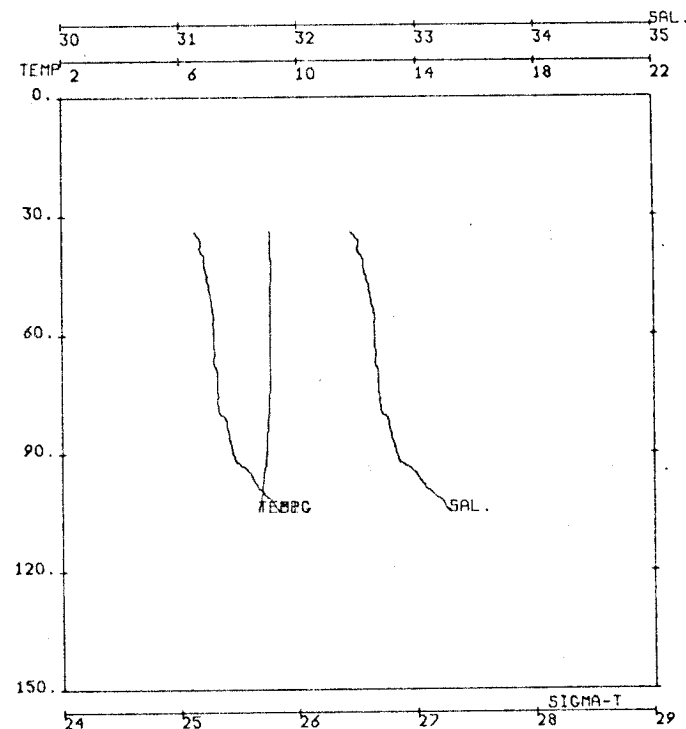
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.11	32.41	25.10	287.5	0.000	0.000
10	9.12	32.42	25.11	287.0	0.029	0.014
20	9.12	32.42	25.11	287.2	0.058	0.058
30	9.11	32.46	25.14	284.3	0.086	0.129
40	9.13	32.47	25.15	284.0	0.115	0.228
50	9.13	32.47	25.15	284.2	0.143	0.356
60	9.14	32.54	25.20	279.3	0.171	0.511
70	9.13	32.57	25.22	277.1	0.199	0.692
80	9.12	32.59	25.24	275.6	0.227	0.900
83	9.10	32.62	25.27	273.2	0.235	0.967



3D

CAST NO 3D LAT 44 59.9 DATE 3/19/75 TIME 421
 STATION LONG 124 11.8 DPTH 116 PROBE OSU4
 SWELL DIR HT PER BAR WEATHER 02
 WIND DIR SPD CLOUD TYPE 6-8 AMOUNT 7
 AIR TEMP
 WET BULB
 SAMPLE DEPTH SAMPLE TEMP SAL

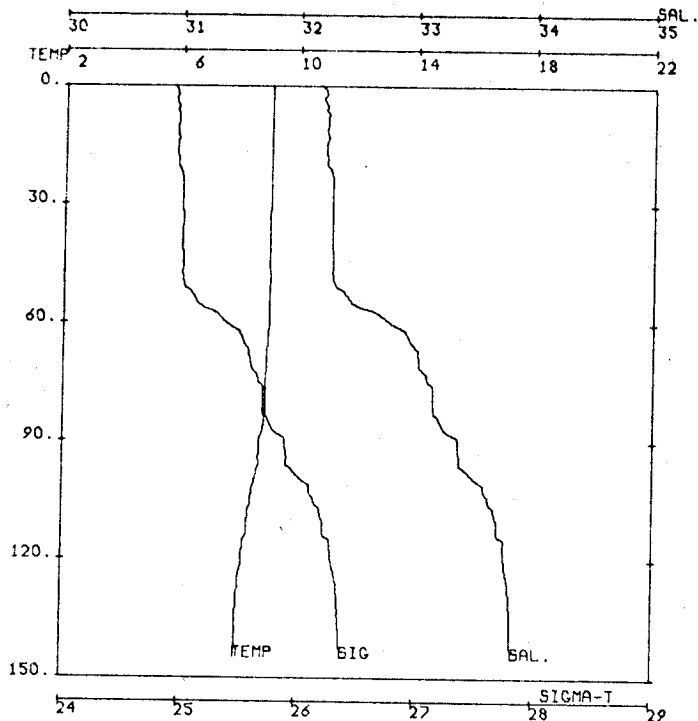
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.01	32.22	24.97	300.1	0.000	0.000
10	9.01	32.24	24.99	298.8	0.010	0.015
20	9.03	32.27	25.01	297.0	0.060	0.060
30	9.07	32.42	25.12	286.6	0.089	0.113
40	9.09	32.55	25.21	277.5	0.117	0.231
50	9.08	32.64	25.29	270.8	0.145	0.355
60	9.06	32.67	25.31	268.4	0.172	0.503
70	9.05	32.70	25.34	266.2	0.198	0.677
80	8.94	32.83	25.46	255.1	0.224	0.872
90	8.88	32.94	25.55	246.3	0.250	1.087
100	8.76	33.27	25.83	220.2	0.273	1.310
105	8.62	33.36	25.92	211.5	0.286	1.443



4D

CAST NO 4D LAT 44 59.9 DATE 3/19/75 TIME 443
 STATION LONG 124 11.8 DPTH 116 PROBE OSU4
 SWELL DIR 280 HT 11 PER 9 BAR 11.6 WEATHER 02
 WIND DIR 200 SPD 17 CLOUD TYPE 6-8 AMOUNT 7
 AIR TEMP 8.0 WET BULB 6.0
 SAMPLE DEPTH 98. SAMPLE TEMP 8.79 SAL 33.153

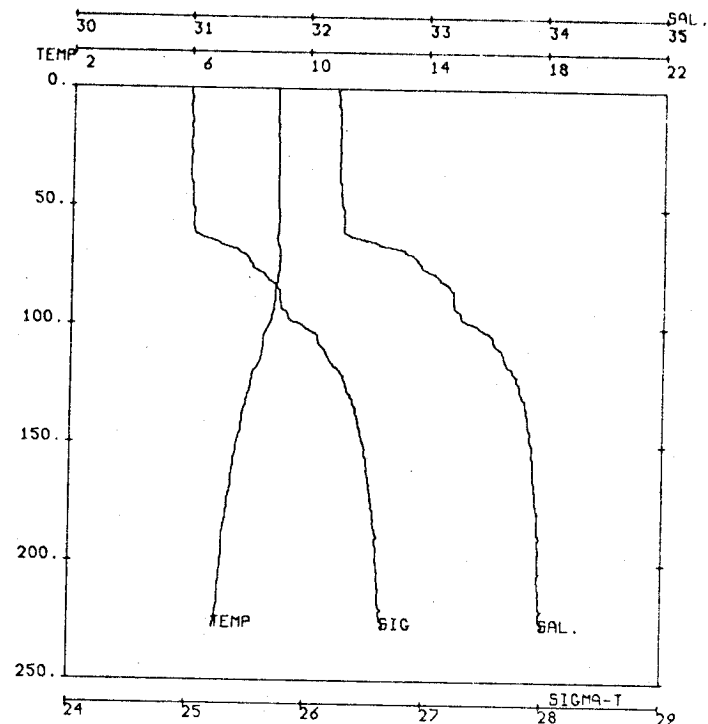
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
40	9.09	32.54	25.21	278.2	0.114	0.226
50	9.08	32.61	25.26	273.0	0.141	0.350
60	9.06	32.65	25.29	270.2	0.168	0.499
70	9.06	32.68	25.32	267.9	0.195	0.674
80	9.03	32.72	25.36	264.6	0.222	0.874
90	8.94	32.83	25.46	255.3	0.248	1.094
100	8.80	33.13	25.71	231.1	0.272	1.325
105	8.67	33.28	25.85	218.2	0.283	1.439



5D

CAST NO 50 LAT 45 00.1 DATE 3/19/75 TIME 601
 STATION LONG 124 17.9 DPTH 158 PROBE OSU4
 SWELL DIR 280 HT 11 PER 9 BAR 11.9 WEATHER 01
 WIND DIR 220 SPD 12 CLOUD TYPE 6-8 AMOUNT 3
 AIR TEMP 8.2 WET BULB 6.5
 SAMPLE DEPTH 137. SAMPLE TEMP 7.93 SAL 33.824

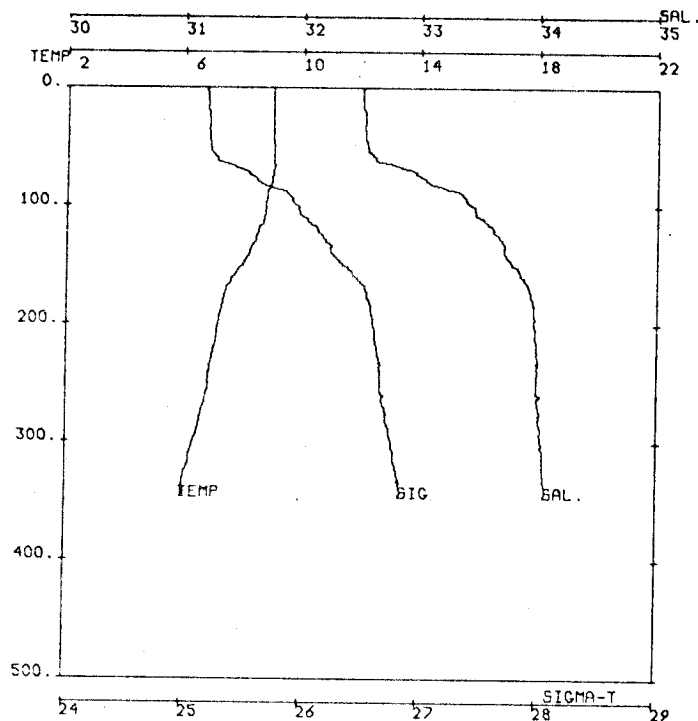
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.08	32.19	24.94	183.4	0.000	0.000
10	9.09	32.24	24.97	199.9	0.030	0.015
20	9.09	32.24	24.97	190.1	0.060	0.060
30	9.05	32.29	25.02	296.1	0.090	0.134
40	9.05	32.29	25.02	296.2	0.119	0.218
50	9.06	32.31	25.04	294.6	0.149	0.371
60	9.03	32.79	25.41	259.1	0.177	0.524
70	8.97	33.01	25.61	240.5	0.201	0.684
80	8.91	33.15	25.71	231.0	0.225	0.859
90	8.72	33.37	25.91	212.0	0.247	1.050
100	8.57	33.52	26.05	198.8	0.268	1.248
110	8.31	33.70	26.23	181.8	0.287	1.447
120	8.16	33.76	26.31	174.9	0.305	1.651
130	7.99	33.81	26.37	169.4	0.322	1.866
140	7.94	33.82	26.38	168.1	0.339	2.094
145	7.93	33.83	26.39	167.3	0.347	2.213



6D

CAST NO 6D LAT 45 00.0 DATE 3/19/75 TIME 710
 STATION LONG 124 24.1 DPTH 212 PROBE OSU4
 SWELL DIR 240 HT 11 PER 9 BAR 11.7 WEATHER 01
 WIND DIR 220 SPD 15 CLOUD TYPE 8- AMOUNT 2
 AIR TEMP 8.2 WET BULB 5.7
 SAMPLE DEPTH 226. SAMPLE TEMP 6.92 SAL 33.997

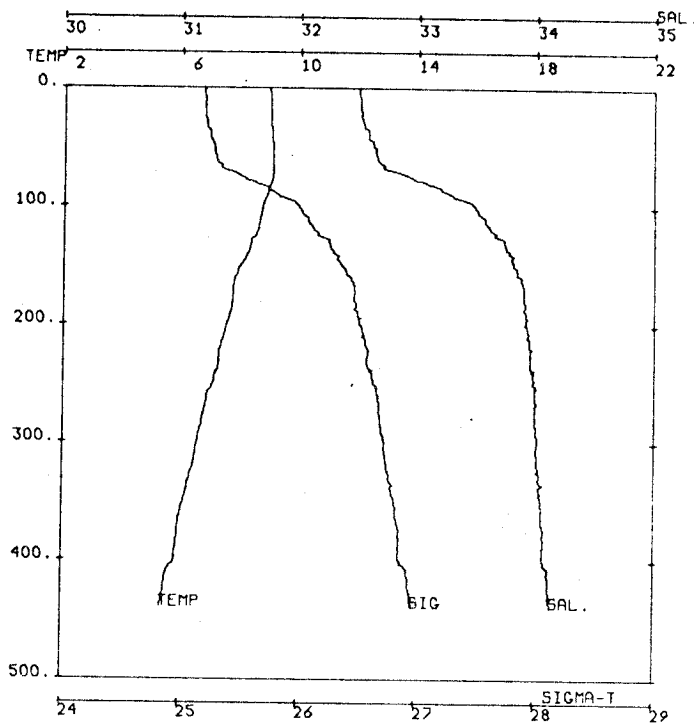
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.97	32.26	25.01	296.5	0.000	0.000
10	8.97	32.26	25.01	296.7	0.030	0.015
20	8.97	32.27	25.01	296.1	0.059	0.059
30	8.98	32.27	25.01	296.4	0.089	0.114
40	8.99	32.28	25.02	296.0	0.119	0.218
50	9.01	32.30	25.03	295.0	0.148	0.371
60	9.08	32.31	25.04	294.0	0.178	0.531
70	9.08	32.89	25.48	252.6	0.205	0.711
80	8.98	33.12	25.68	234.2	0.230	0.894
90	8.89	33.24	25.78	224.2	0.252	1.087
100	8.67	33.44	25.98	206.2	0.274	1.294
110	8.48	33.64	26.16	188.8	0.294	1.500
120	8.17	33.75	26.29	175.2	0.312	1.711
130	7.99	33.82	26.38	168.6	0.329	1.927
140	7.82	33.87	26.44	162.7	0.346	2.149
150	7.65	33.91	26.50	157.5	0.362	2.382
160	7.52	33.92	26.52	155.1	0.378	2.625
170	7.42	33.94	26.55	152.4	0.392	2.879
180	7.30	33.95	26.58	150.1	0.408	3.144
190	7.19	33.96	26.60	148.0	0.423	3.419
200	7.17	33.96	26.60	147.9	0.438	3.707
225	6.94	33.99	26.66	142.0	0.474	4.451
228	6.92	33.99	26.66	142.7	0.479	4.577



7D

CAST NO 7D LAT 45 00.0 DATE 3/19/75 TIME 831
STATION LONG 124 30.0 DPTH 373 PROBE OSU4
SWELL DIR 280 HT 11 PER 9 BAR 11.6 WEATHER 03
WIND DIR 220 SPD 20 CLOUD TYPE 6-8 AMOUNT 8
AIR TEMP 8.5 WET BULB 6.1
SAMPLE DEPTH SAMPLE TEMP SAL

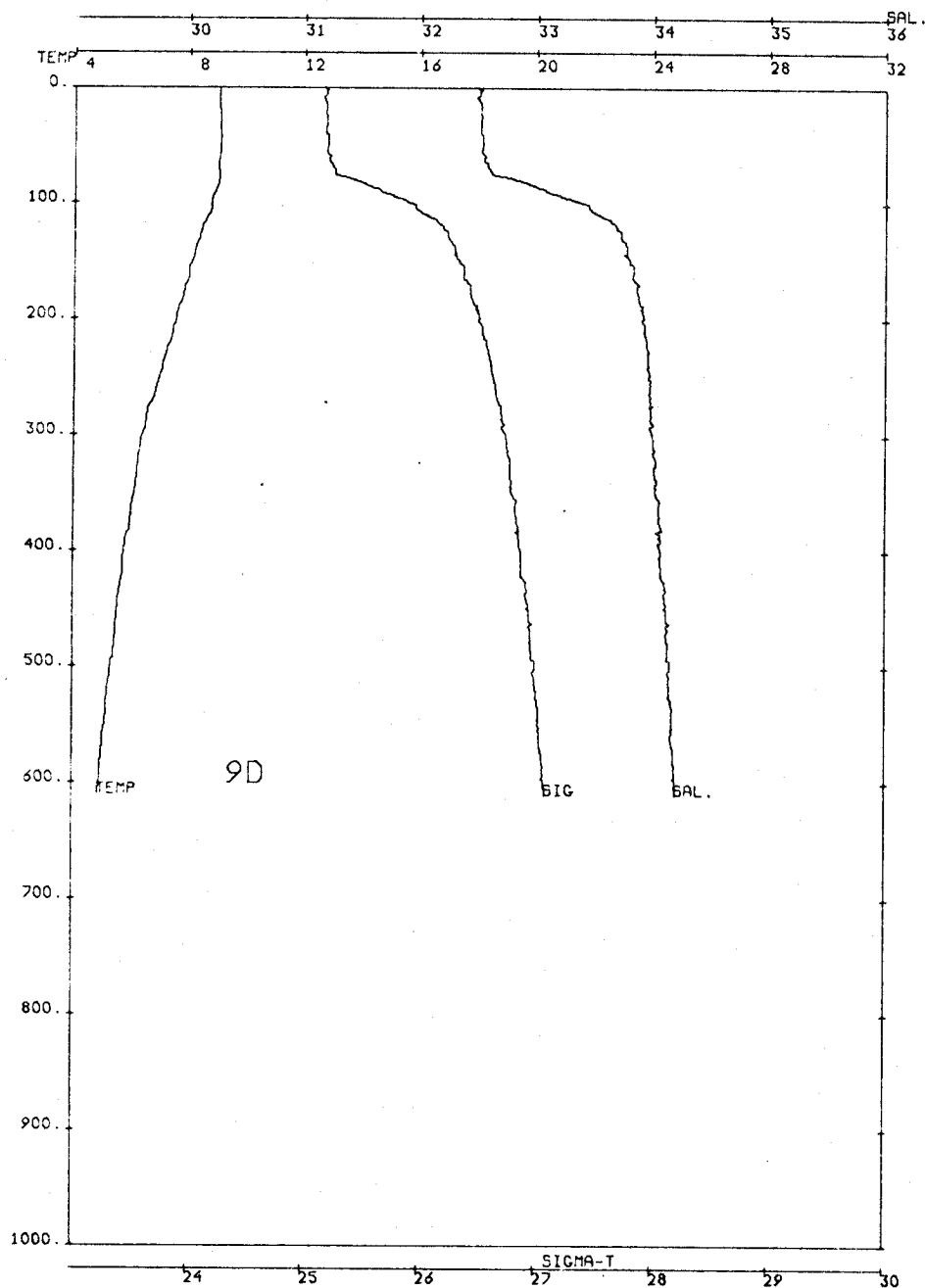
DEPTH	TEMP	SAL	SIGMA	SWA	DELD	POTE
0	8.98	32.51	25.20	278.1	0.000	0.000
10	8.99	32.50	25.19	279.2	0.028	0.014
20	8.99	32.53	25.21	277.1	0.056	0.056
30	8.99	32.53	25.21	277.3	0.083	0.125
40	8.99	32.53	25.21	277.4	0.111	0.222
50	9.04	32.55	25.22	276.9	0.139	0.347
60	9.02	32.62	25.28	271.6	0.166	0.498
70	9.00	32.94	25.53	247.7	0.193	0.668
80	8.94	33.08	25.65	236.6	0.217	0.849
90	8.79	33.36	25.89	213.8	0.239	1.040
100	8.74	33.46	25.98	205.8	0.260	1.240
110	8.71	33.53	26.04	200.3	0.281	1.455
120	8.51	33.63	26.15	190.1	0.300	1.680
130	8.42	33.69	26.21	184.5	0.319	1.914
140	8.20	33.72	26.27	179.2	0.337	2.158
150	8.00	33.78	26.34	172.1	0.355	2.412
160	7.64	33.88	26.47	159.7	0.371	2.667
170	7.42	33.93	26.54	153.1	0.387	2.926
180	7.31	33.95	26.56	150.3	0.402	3.191
190	7.24	33.95	26.59	148.7	0.417	3.467
200	7.16	33.97	26.61	147.0	0.432	3.755
225	6.97	33.98	26.65	144.1	0.468	4.526
250	6.83	33.99	26.67	141.9	0.503	5.370
300	6.33	34.03	26.77	133.0	0.572	7.264
347	5.93	34.05	26.85	126.3	0.633	9.222



8D

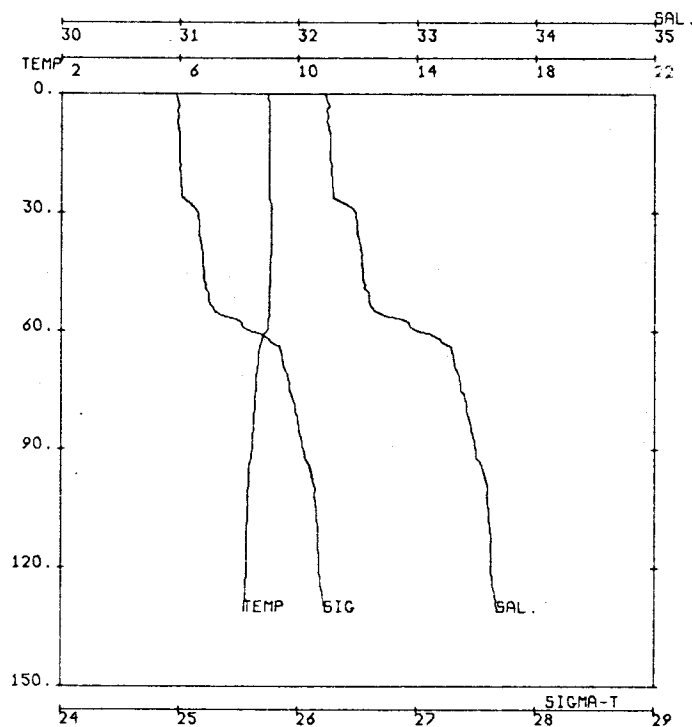
CAST NO 8D LAT 45 00.0 DATE 3/19/75 TIME 1016
STATION LONG 124 36.0 DPTH 439 PROBE OSU4
SWELL DIR 280 HT 11 PER 9 BAR 10.8 WEATHER 02
WIND DIR 210 SPD 20 CLOUD TYPE 6-8 AMOUNT 8
AIR TEMP 8.5 WET BULB 5.5
SAMPLE DEPTH 427. SAMPLE TEMP 5.51 SAL 34.105

DEPTH	TEMP	SAL	SIGMA	SWA	DELD	POTE
0	8.96	32.50	25.20	278.5	0.000	0.000
10	8.99	32.51	25.20	278.4	0.028	0.014
20	8.99	32.52	25.21	277.8	0.056	0.056
30	8.99	32.54	25.22	276.5	0.084	0.125
40	9.05	32.58	25.24	274.6	0.111	0.222
50	9.03	32.62	25.27	272.3	0.138	0.345
60	9.08	32.65	25.29	270.2	0.166	0.494
70	9.09	32.79	25.40	260.2	0.192	0.667
80	9.00	32.97	25.63	238.2	0.217	0.850
90	8.87	33.29	25.83	220.1	0.240	1.047
100	8.72	33.48	26.00	204.0	0.261	1.247
110	8.64	33.56	26.07	197.1	0.281	1.458
120	8.56	33.62	26.13	191.6	0.300	1.682
130	8.35	33.73	26.25	180.5	0.319	1.914
140	8.21	33.79	26.32	174.2	0.337	2.154
150	7.98	33.81	26.37	169.6	0.354	2.402
160	7.81	33.88	26.45	162.1	0.371	2.661
170	7.75	33.89	26.47	160.7	0.387	2.927
180	7.72	33.90	26.48	159.7	0.403	3.200
190	7.65	33.91	26.50	158.1	0.419	3.502
200	7.51	33.92	26.52	155.6	0.434	3.800
225	7.28	33.95	26.58	150.6	0.471	4.618
250	7.06	33.98	26.63	145.7	0.510	5.500
300	6.56	34.02	26.73	136.7	0.580	7.431
400	5.81	34.08	26.88	123.9	0.710	11.968
439	5.36	34.13	26.97	115.1	0.756	13.825



CAST NO 9D LAT 44 59.8 DATE 2/19/75 TIME 1221
 STATION LONG 124 58.0 DPTH 615 PROBE OS04
 SWELL DIR 270 HT 11 PER 9 BAR 9.9 WEATHER 02
 WIND DIR 220 SPD 20 CLOUD TYPE 5-6 AMOUNT 8
 AIR TEMP 8.3 WET BULB 5.7
 SAMPLE DEPTH SAMPLE TEMP SAL

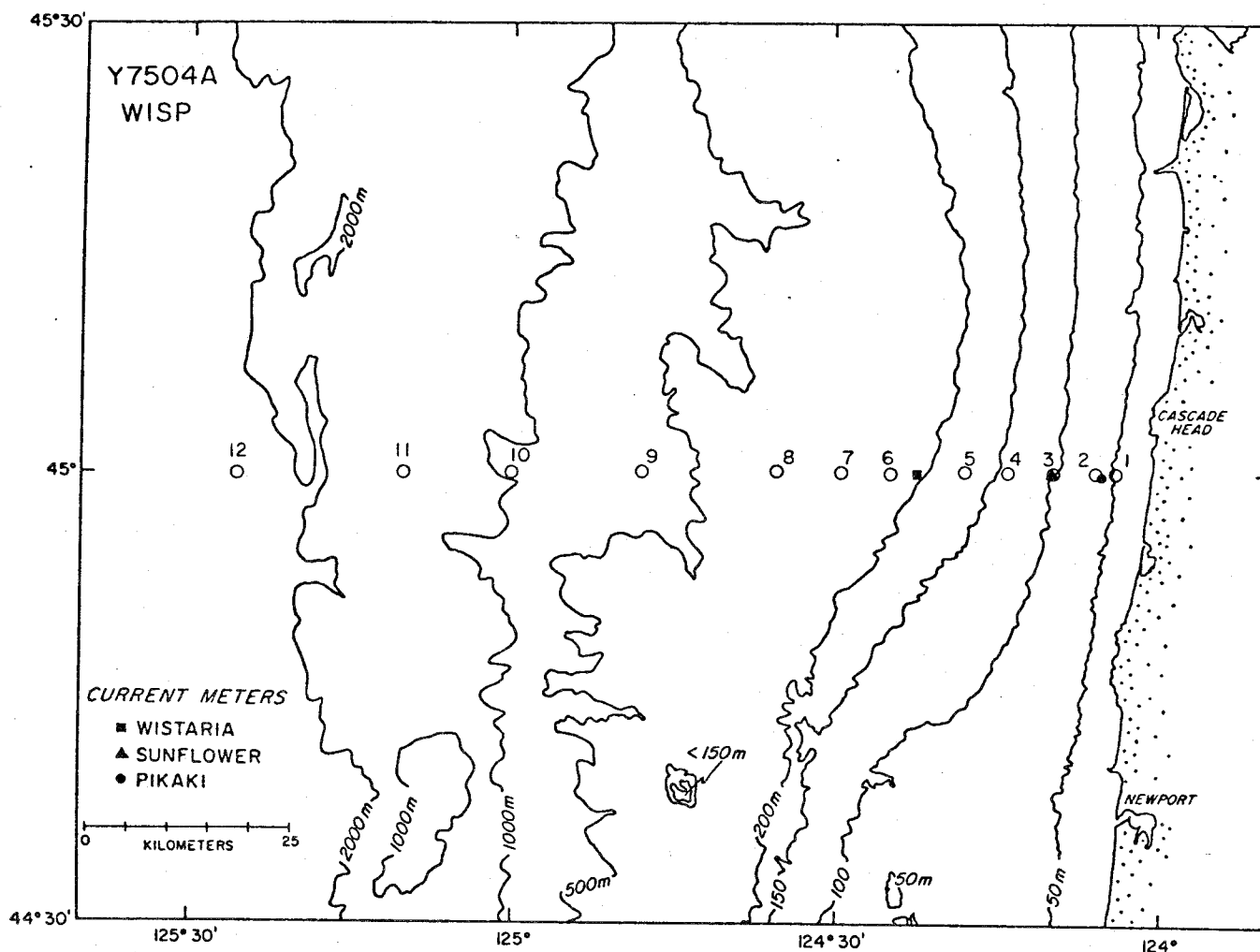
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.04	32.49	25.18	280.5	0.000	0.000
10	9.05	32.50	25.18	280.0	0.028	0.014
20	9.06	32.51	25.19	279.6	0.056	0.056
30	9.06	32.51	25.19	279.8	0.084	0.126
40	9.06	32.51	25.19	280.0	0.112	0.224
50	9.06	32.53	25.20	278.7	0.140	0.349
60	9.02	32.56	25.23	276.0	0.168	0.502
70	9.00	32.59	25.26	273.6	0.195	0.682
80	9.03	32.83	25.44	258.5	0.222	0.883
90	8.88	33.09	25.67	235.1	0.246	1.091
100	8.76	33.39	25.92	211.3	0.269	1.302
110	8.67	33.52	26.05	199.4	0.289	1.517
120	8.45	33.69	26.20	184.8	0.308	1.737
130	8.35	33.73	26.25	180.5	0.327	1.965
140	8.19	33.77	26.31	175.4	0.344	2.204
150	8.09	33.80	26.34	171.9	0.362	2.457
160	7.99	33.83	26.38	168.4	0.379	2.719
170	7.87	33.88	26.44	163.1	0.395	2.995
180	7.79	33.87	26.44	162.9	0.412	3.281
190	7.63	33.91	26.50	157.8	0.428	3.578
200	7.54	33.90	26.50	157.5	0.444	3.885
225	7.25	33.95	26.58	150.1	0.482	4.699
250	6.97	33.96	26.63	146.0	0.519	5.575
300	6.37	34.00	26.74	135.8	0.589	7.505
400	5.76	34.08	26.88	123.3	0.719	12.037
500	5.29	34.16	27.00	112.7	0.838	17.372
600	4.93	34.20	27.08	106.4	0.947	23.414
610	4.87	34.20	27.08	105.8	0.958	24.054



100

CAST NO 100 LAT 44 47.6 DATE 3/19/75 TIME 1510
 STATION LONG 124 26.7 DPTH 144 FPOB OSU4
 SWELL DIR 260 HT 11 PER 9 BAR 11.3 WEATHER 02
 WIND DIR 240 SPD 16 CLOUD TYPE 6-8 AMOUNT 6
 AIR TEMP WET BULB
 SAMPLE DEPTH 17 SAMPLE TEMP 9.01 SAL 32.311

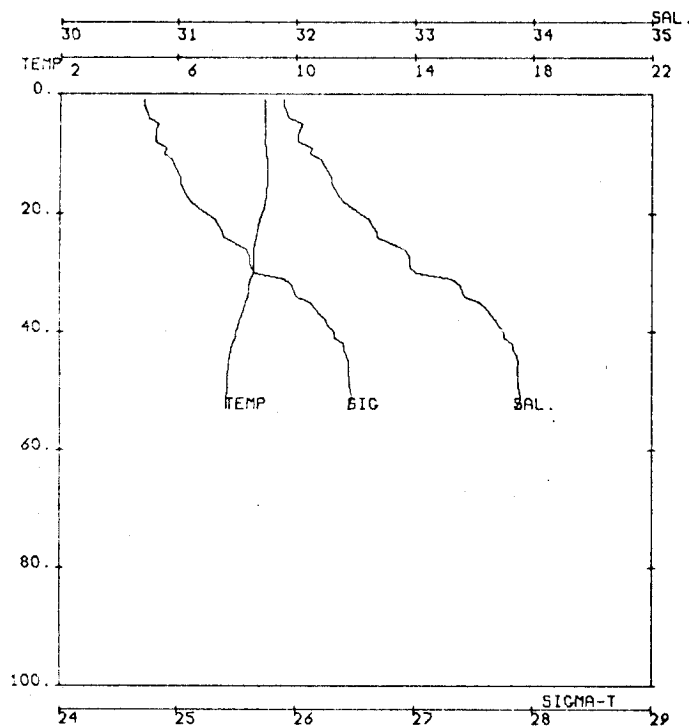
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.01	32.23	24.98	299.3	0.000	0.000
10	9.02	32.27	25.01	296.8	0.020	0.015
20	9.03	32.28	25.01	296.3	0.059	0.059
30	9.12	32.49	25.16	282.2	0.089	0.132
40	9.10	32.54	25.21	278.4	0.117	0.231
50	9.05	32.60	25.26	273.3	0.145	0.355
60	8.95	32.62	25.60	240.8	0.171	0.499
70	8.63	33.34	25.90	212.5	0.193	0.642
80	8.54	33.42	25.92	205.4	0.214	0.798
90	8.46	33.50	26.05	198.5	0.224	0.970
100	8.33	33.60	26.15	189.4	0.252	1.154
110	8.29	33.62	26.17	187.5	0.272	1.352
120	8.27	33.63	26.18	186.6	0.291	1.566
130	8.18	33.68	26.24	181.8	0.309	1.797
131	8.18	33.68	26.24	181.8	0.311	1.821



Y7504A
R/V YAQUINA
1 - 2 April 1975

Hydrographic section along 45°N using CTD probe #4.

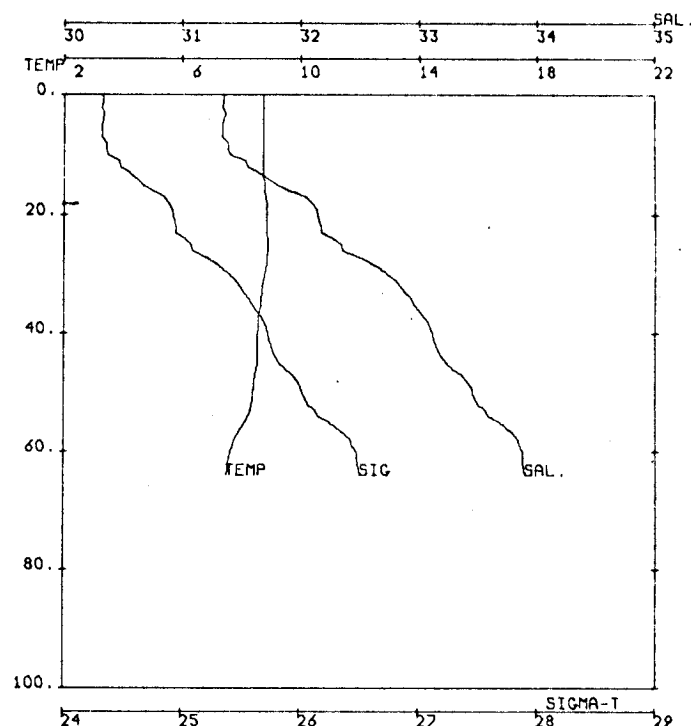
Personnel: Robert L. Smith, Dennis Barstow, Robert Kapaun, Becky Rakish, Ben Moore, Henry Pittock, Tedd Wright, Wilbur Temple, Dave Plawman, Mike Grogan, Ken Smithee, Rich Schramm, Darrell Christenson, Jean Christenson, Cindy Thursby.



1D

CAST NO 1D LAT 44 59.3 DATE 4/ 1/75 TIME 2230
 STATION LONG 124 04.5 DPTH 50 PROBE 0504
 SWELL DIR 330 HT 4 PER 6 BAR 23.0 WEATHER 03
 WIND DIR 190 SPD 18 CLOUD TYPE 8-6 AMOUNT 6
 AIR TEMP 10.0 WET BULB 7.7
 SAMPLE DEPTH 48. SAMPLE TEMP 7.72 SAL 33.886

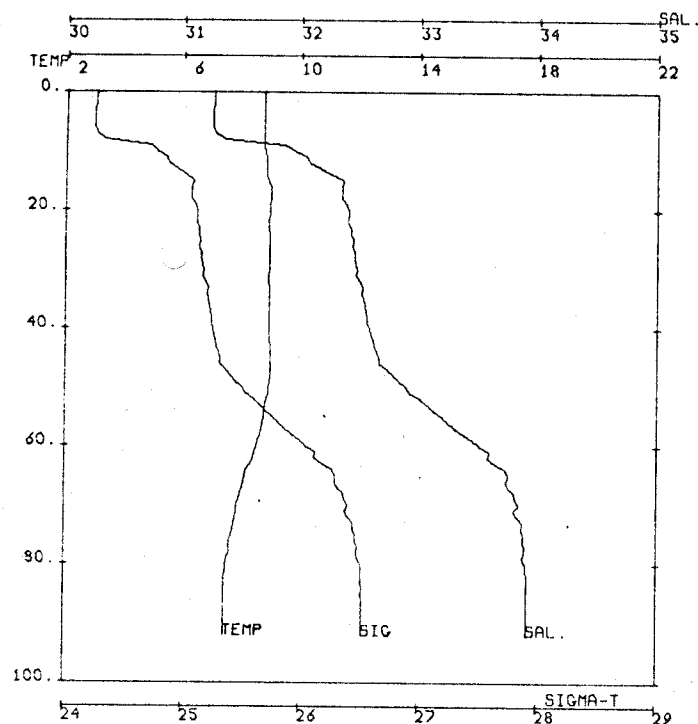
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.94	31.90	24.73	322.8	0.000	0.000
1	8.94	31.90	24.73	322.9	0.003	0.000
10	8.99	32.12	24.89	307.4	0.032	0.016
20	8.85	32.55	25.25	273.6	0.061	0.059
30	8.56	33.02	25.66	234.6	0.086	0.122
40	7.97	33.76	26.33	171.3	0.105	0.189
50	7.66	33.89	26.48	157.5	0.121	0.262
53	7.65	33.85	26.45	160.4	0.126	0.286



2D

CAST NO 2D LAT 44 59.6 DATE 4/ 1/75 TIME 2320
 STATION LONG 124 06.0 DPTH 64 PROBE 0504
 SWELL DIR 330 HT 4 PER 7 BAR 21.1 WEATHER 03
 WIND DIR 190 SPD 18 CLOUD TYPE 0-8 AMOUNT 8
 AIR TEMP 9.9 WET BULB 7.7
 SAMPLE DEPTH 6. SAMPLE TEMP 8.77 SAL 31.343

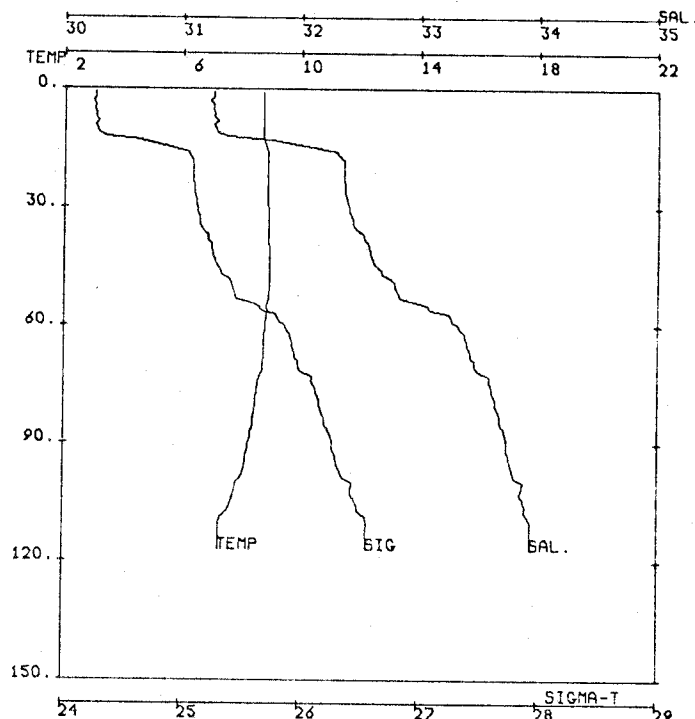
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.76	31.35	24.33	361.1	0.000	0.000
10	8.75	31.41	24.38	356.7	0.036	0.018
20	8.88	32.15	24.94	303.7	0.069	0.067
30	8.79	32.74	25.41	258.7	0.097	0.138
40	8.57	33.12	25.74	227.5	0.122	0.222
50	8.41	33.46	26.03	200.1	0.143	0.319
60	7.62	33.89	26.48	157.1	0.161	0.417
64	7.53	33.91	26.51	154.4	0.167	0.455



3D

CAST NO 3D LAT 45 00.0 DATE 4/ 2/75 TIME 15
 STATION LONG 124 09.9 DPTH 92 PROBE 0504
 SWELL DIR 330 HT 4 PER 7 BAR 20.9 WEATHER 02
 WIND DIR 190 SPD 13 CLOUD TYPE 2-4 AMOUNT 8
 AIR TEMP 8.4 WET BULB 7.2
 SAMPLE DEPTH 83. SAMPLE TEMP 7.45 SAL 33.933

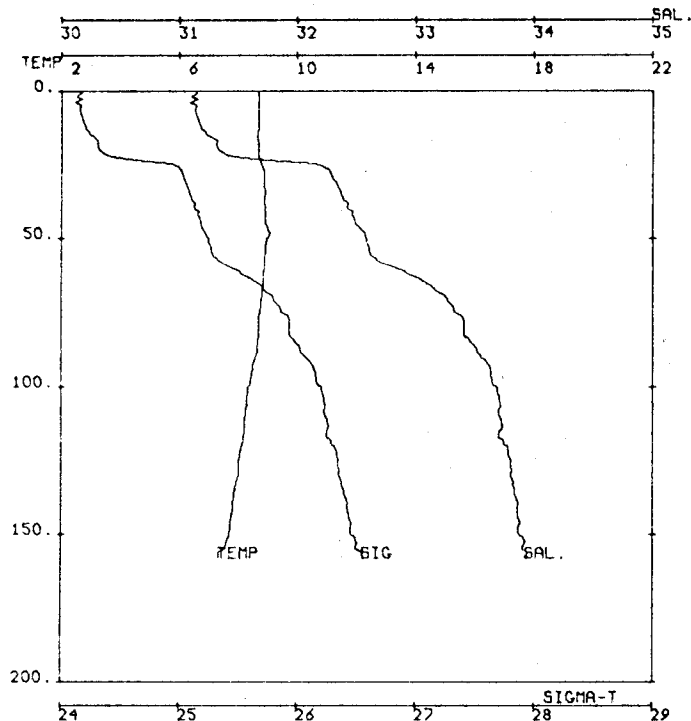
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.75	31.26	24.26	367.7	0.000	0.000
10	8.79	31.95	24.79	317.1	0.036	0.018
20	8.95	32.41	25.13	285.4	0.066	0.062
30	8.95	32.48	25.18	280.4	0.094	0.133
40	8.96	32.59	25.27	272.5	0.122	0.229
50	8.92	32.90	25.51	249.1	0.148	0.348
60	8.53	33.52	26.06	197.5	0.171	0.471
70	7.85	33.85	26.42	163.4	0.188	0.587
80	7.47	33.91	26.52	153.9	0.204	0.706
90	7.43	33.92	26.53	152.7	0.220	0.836
92	7.43	33.92	26.53	152.8	0.223	0.864



4D

CAST NO 4D LAT 45 00.0 DATE 4/ 2/75 TIME 115
 STATION LONG 124 12.0 DPTH 113 PROBE 0504
 SWELL DIR 330 HT 4 PER 7 BAR 20.2 WEATHER 02
 WIND DIR 190 SPD 18 CLOUD TYPE 2-4 AMOUNT 8
 AIR TEMP 8.3 WET BULB 7.2
 SAMPLE DEPTH 2. SAMPLE TEMP 8.78 SAL 31.252

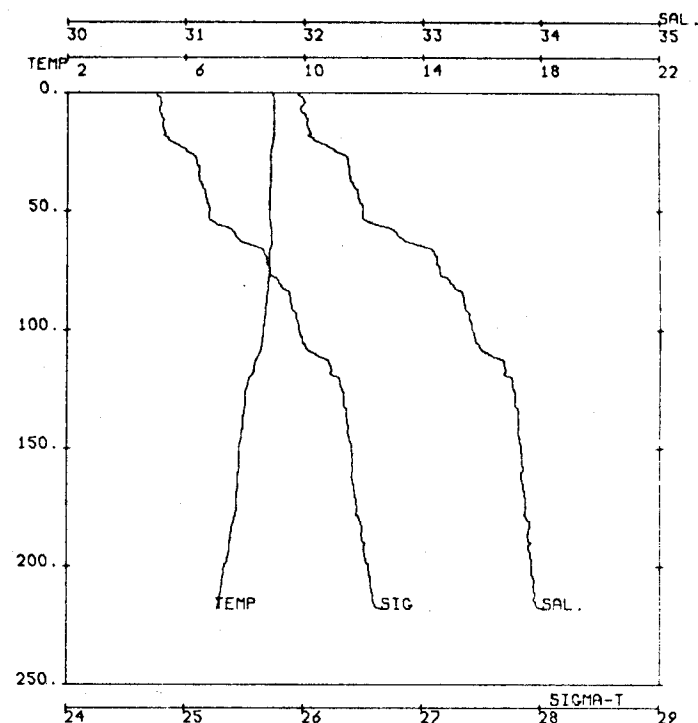
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.71	31.26	24.27	367.1	0.000	0.000
1	8.71	31.26	24.27	367.1	0.004	0.000
10	8.70	31.28	24.28	365.6	0.037	0.018
20	8.88	32.36	25.10	288.1	0.068	0.065
30	8.90	32.41	25.13	284.9	0.097	0.137
40	8.94	32.58	25.26	273.0	0.125	0.235
50	8.95	32.80	25.43	257.0	0.152	0.355
60	8.79	33.33	25.87	215.5	0.175	0.485
70	8.73	33.46	25.98	205.1	0.196	0.621
80	8.46	33.64	26.16	187.9	0.216	0.766
90	8.25	33.74	26.27	177.6	0.234	0.921
100	7.82	33.88	26.45	161.3	0.251	1.085
110	7.29	33.95	26.58	148.9	0.267	1.251
117	7.28	33.95	26.58	148.9	0.278	1.370



50

CAST NO 50 LAT 45 00.0 DATE 4/ 2/75 TIME 217
STATION LONG 124 18.0 DPTH 160 PROBE OFU4
SWELL DIR 330 HT 4 PER 7 BAR 20.0 WEATHER 02
WIND DIR 210 SPD 16 CLOUD TYPE 2-3 AMOUNT 8
AIR TEMP 8.2 WET BULB 6.4
SAMPLE DEPTH 78. SAMPLE TEMP 8.70 SAL 33.418

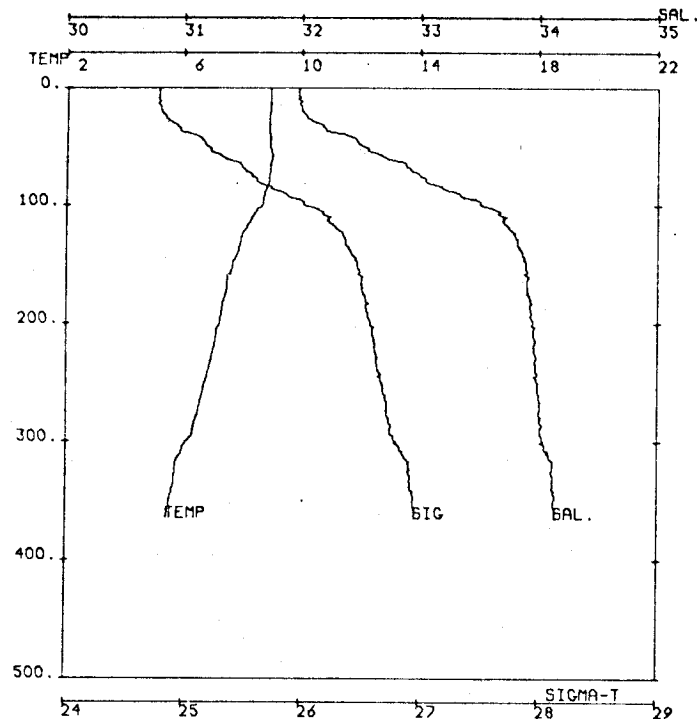
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.72	31.15	24.18	375.4	0.000	0.000
1	8.72	31.15	24.18	375.5	0.004	0.000
10	8.71	31.17	24.20	374.0	0.038	0.019
20	8.70	31.34	24.33	361.3	0.074	0.074
30	8.93	32.31	25.05	292.7	0.106	0.153
40	8.93	32.43	25.15	284.0	0.135	0.254
50	9.01	32.59	25.26	273.5	0.163	0.379
60	8.90	32.85	25.48	252.7	0.190	0.526
70	8.81	33.27	25.82	220.4	0.213	0.679
80	8.70	33.41	25.95	200.5	0.235	0.839
90	8.60	33.56	26.08	196.1	0.255	1.012
100	8.37	33.69	26.22	183.3	0.274	1.191
110	8.25	33.72	26.26	179.5	0.292	1.382
120	8.12	33.78	26.32	173.3	0.310	1.586
130	8.00	33.81	26.37	169.5	0.327	1.800
140	7.85	33.86	26.43	163.8	0.344	2.024
150	7.71	33.88	26.46	160.5	0.360	2.259
158	7.34	33.93	26.56	151.8	0.372	2.450



60

CAST NO 60 LAT 44 59.8 DATE 4/ 2/75 TIME 311
STATION LONG 124 22.8 DPTH 218 PROBE OSU4
SWELL DIR 330 HT 4 PER 8 BAR 19.0 WEATHER 02
WIND DIR 210 SPD 16 CLOUD TYPE 6-8 AMOUNT 8
AIR TEMP 8.1 WET BULB 7.0
SAMPLE DEPTH 157. SAMPLE TEMP 7.78 SAL 33.878

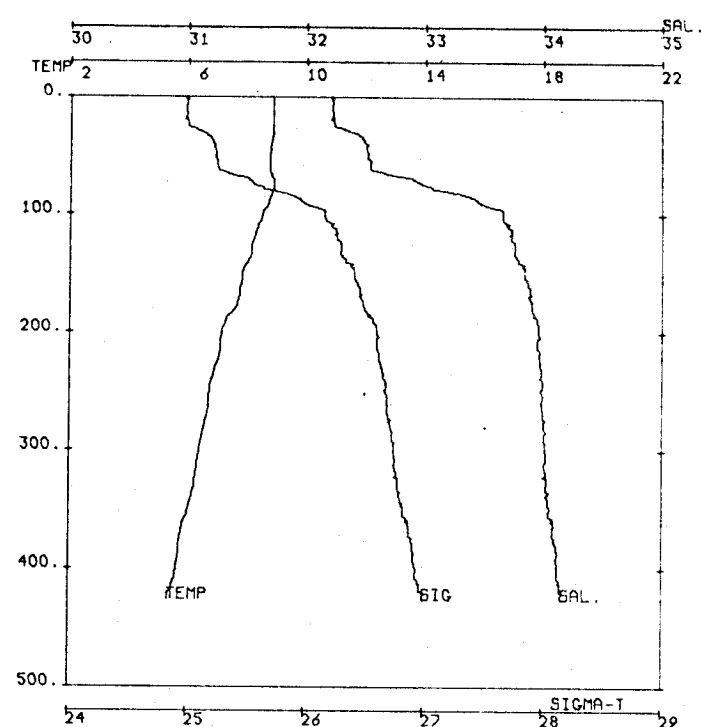
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	8.97	31.95	24.77	319.6	0.000	0.000
1	8.97	31.95	24.77	319.6	0.003	0.000
10	8.99	32.01	24.81	315.6	0.032	0.016
20	8.94	32.08	24.87	309.8	0.063	0.063
30	8.87	32.37	25.11	287.4	0.093	0.136
40	8.85	32.43	25.16	282.8	0.121	0.236
50	8.84	32.50	25.21	277.6	0.149	0.362
60	8.91	32.79	25.43	257.3	0.176	0.511
70	8.84	33.12	25.70	231.9	0.200	0.698
80	8.79	33.23	25.79	223.2	0.223	0.840
90	8.73	33.36	25.90	212.9	0.245	1.023
100	8.64	33.43	25.97	206.5	0.266	1.222
110	8.48	33.56	26.10	194.7	0.286	1.435
120	8.16	33.76	26.30	175.4	0.304	1.646
130	8.03	33.79	26.35	171.4	0.322	1.862
140	7.94	33.82	26.38	168.1	0.339	2.091
150	7.85	33.84	26.41	165.5	0.355	2.333
160	7.81	33.84	26.42	165.1	0.372	2.589
170	7.77	33.87	26.45	162.5	0.388	2.859
180	7.66	33.89	26.48	159.6	0.404	3.142
190	7.51	33.92	26.52	155.4	0.420	3.433
200	7.35	33.93	26.55	153.0	0.436	3.735
218	7.07	34.03	26.67	141.6	0.463	4.298



7D

CAST NO 7D LAT 44 59.9 DATE 4/ 2/75 TIME 433
 STATION LONG 124 29.8 DPTH 370 PROBE OSU4
 SWELL DIR 330 HT 4 PER 8 BAR 18.5 WEATHER 03
 WIND DIR 200 SPD 18 CLOUD TYPE 8-6 AMOUNT 8
 AIR TEMP 8.5 WET BULB 6.4
 SAMPLE DEPTH 363. SAMPLE TEMP 5.48 SAL 34.112

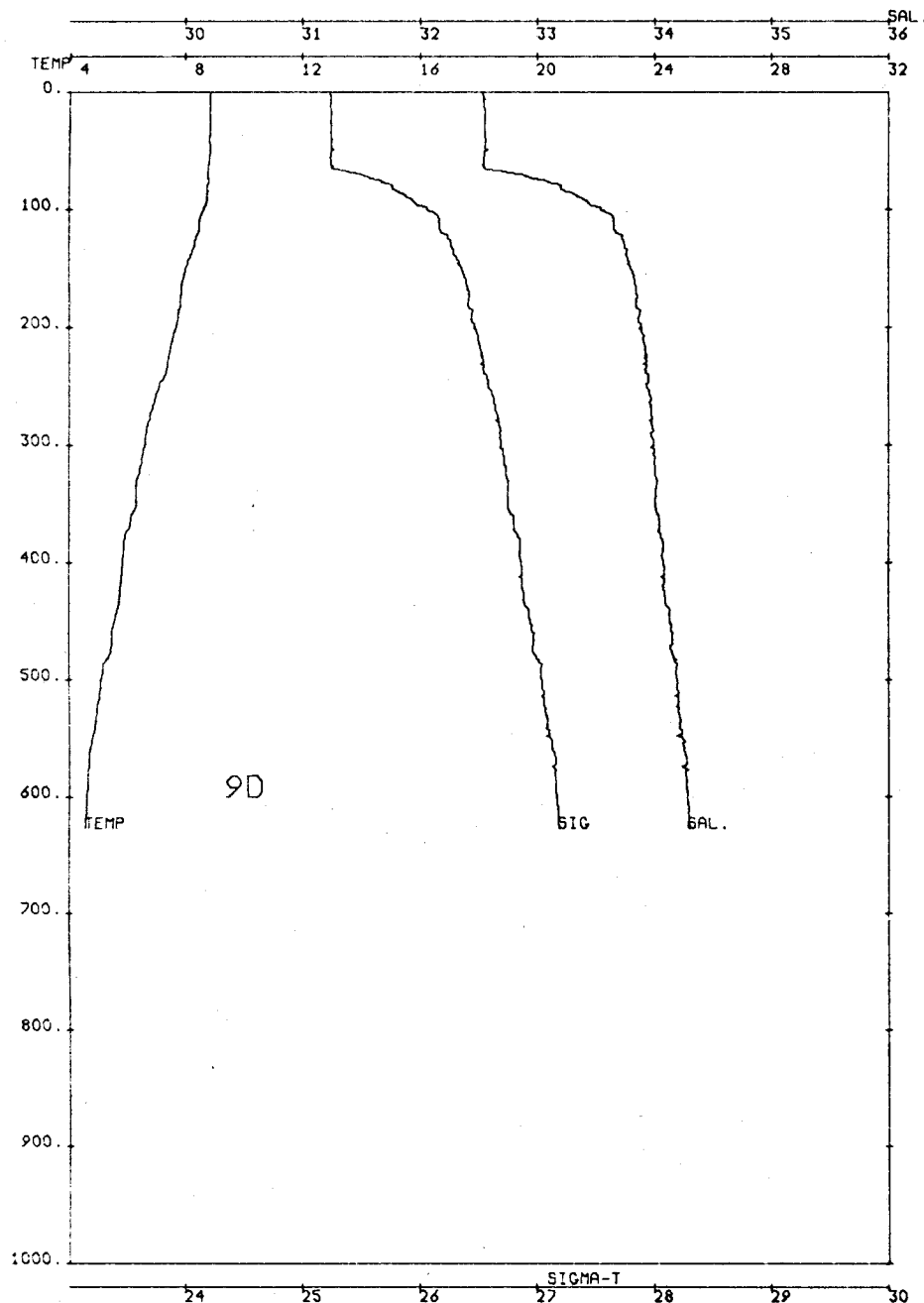
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.95	31.90	24.79	317.0	0.000	0.000
1	8.95	31.98	24.79	317.1	0.003	0.000
10	8.95	31.98	24.79	317.2	0.032	0.016
20	8.94	32.00	24.81	315.7	0.063	0.063
30	8.93	32.13	24.91	306.1	0.094	0.141
40	8.94	32.38	25.11	287.8	0.124	0.246
50	8.97	32.53	25.22	277.3	0.153	0.372
60	9.01	32.72	25.36	264.0	0.180	0.522
70	8.95	32.93	25.53	247.7	0.205	0.686
80	8.90	33.06	25.64	237.5	0.229	0.868
90	8.74	33.32	25.87	215.6	0.252	1.060
100	8.69	33.52	26.03	200.6	0.273	1.257
110	8.11	33.73	26.26	179.6	0.291	1.455
120	8.11	33.75	26.30	175.4	0.309	1.661
130	7.94	33.83	26.39	167.2	0.326	1.873
140	7.84	33.87	26.44	163.0	0.343	2.097
150	7.67	33.90	26.48	158.5	0.359	2.330
160	7.51	33.92	26.52	154.9	0.375	2.575
170	7.48	33.91	26.52	155.4	0.390	2.832
180	7.34	33.93	26.56	152.2	0.406	3.101
190	7.29	33.94	26.57	150.9	0.421	3.382
200	7.22	33.95	26.59	149.3	0.436	3.674
225	6.99	33.96	26.63	145.9	0.473	4.455
250	6.72	34.00	26.70	139.6	0.508	5.303
300	5.09	34.05	26.82	128.4	0.576	7.165
365	5.45	34.14	26.97	114.6	0.653	9.726



8D

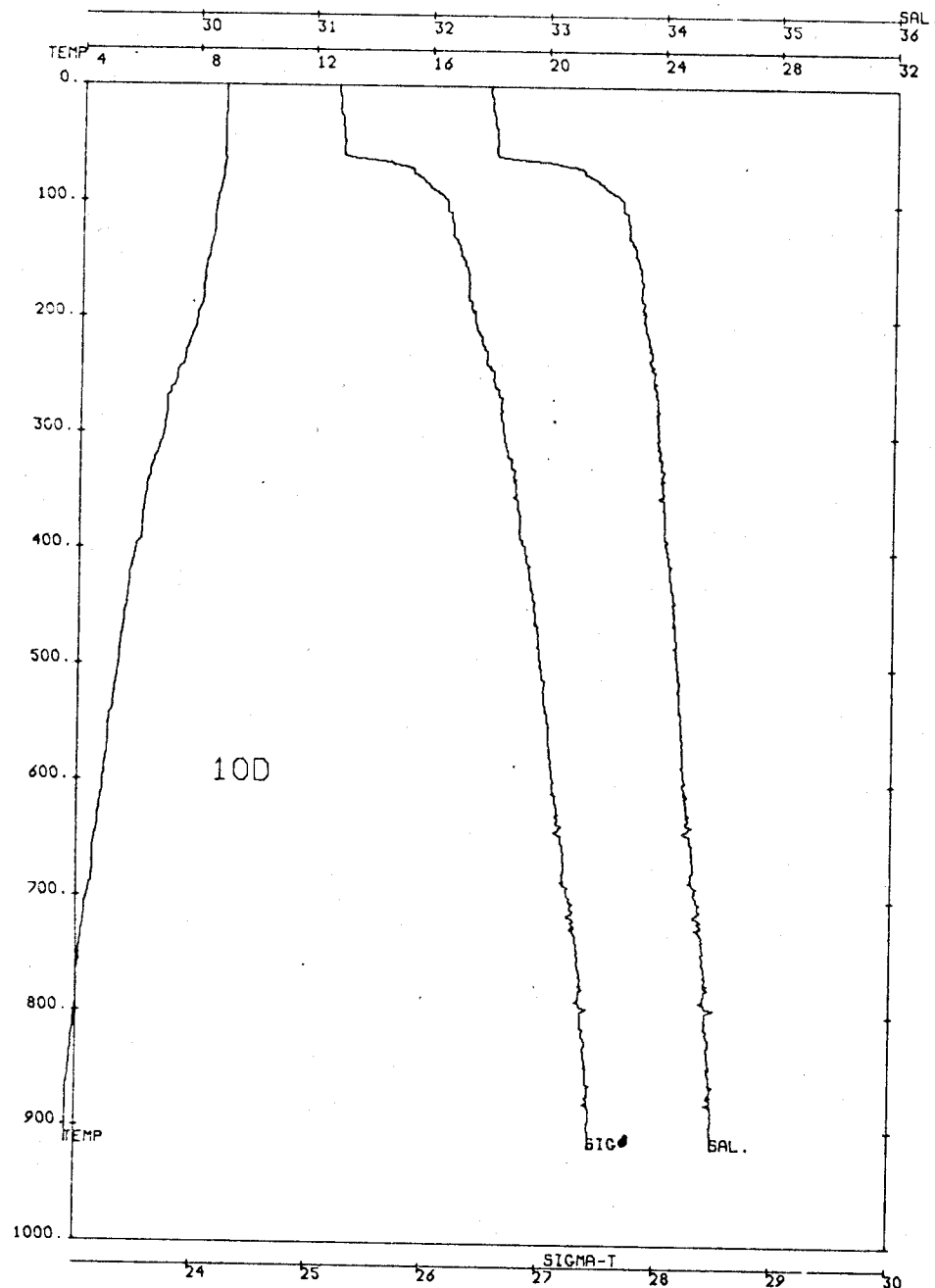
CAST NO 8D LAT 45 00.1 DATE 4/ 2/75 TIME 541
 STATION LONG 124 36.0 DPTH 430 PROBE OSU4
 SWELL DIR 330 HT 5 PER 8 BAR 17.0 WEATHER 03
 WIND DIR 200 SPD 22 CLOUD TYPE 6-8 AMOUNT 8
 AIR TEMP 8.5 WET BULB 7.0
 SAMPLE DEPTH 16. SAMPLE TEMP 8.83 SAL 32.254

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.87	32.21	24.98	298.8	0.000	0.000
10	8.87	32.22	24.99	298.2	0.010	0.015
20	8.88	32.23	25.00	297.8	0.060	0.060
30	8.86	32.38	25.12	286.5	0.089	0.133
40	8.79	32.51	25.23	275.0	0.117	0.231
50	8.77	32.51	25.23	275.0	0.145	0.355
60	8.75	32.53	25.25	274.2	0.172	0.506
70	8.90	32.90	25.52	249.2	0.199	0.678
80	8.85	33.18	25.74	227.8	0.223	0.859
90	8.72	33.46	25.98	205.3	0.244	1.040
100	8.50	33.65	26.17	188.1	0.263	1.225
110	8.36	33.70	26.23	182.6	0.282	1.420
120	8.24	33.72	26.26	179.5	0.300	1.627
130	8.15	33.76	26.30	175.4	0.318	1.847
140	8.05	33.78	26.34	172.6	0.335	2.083
150	7.85	33.84	26.41	165.5	0.352	2.325
160	7.78	33.87	26.45	162.0	0.368	2.579
170	7.73	33.88	26.46	161.1	0.384	2.845
180	7.58	33.90	26.50	157.7	0.400	3.123
190	7.29	33.95	26.58	150.2	0.416	3.408
200	7.16	33.96	26.60	147.8	0.431	3.698
225	7.01	33.98	26.64	144.7	0.467	4.479
250	6.75	33.98	26.68	141.5	0.503	5.324
300	6.41	34.02	26.75	134.8	0.572	7.220
400	5.63	34.13	26.94	118.0	0.699	11.550
426	5.34	34.16	27.00	112.5	0.729	12.899



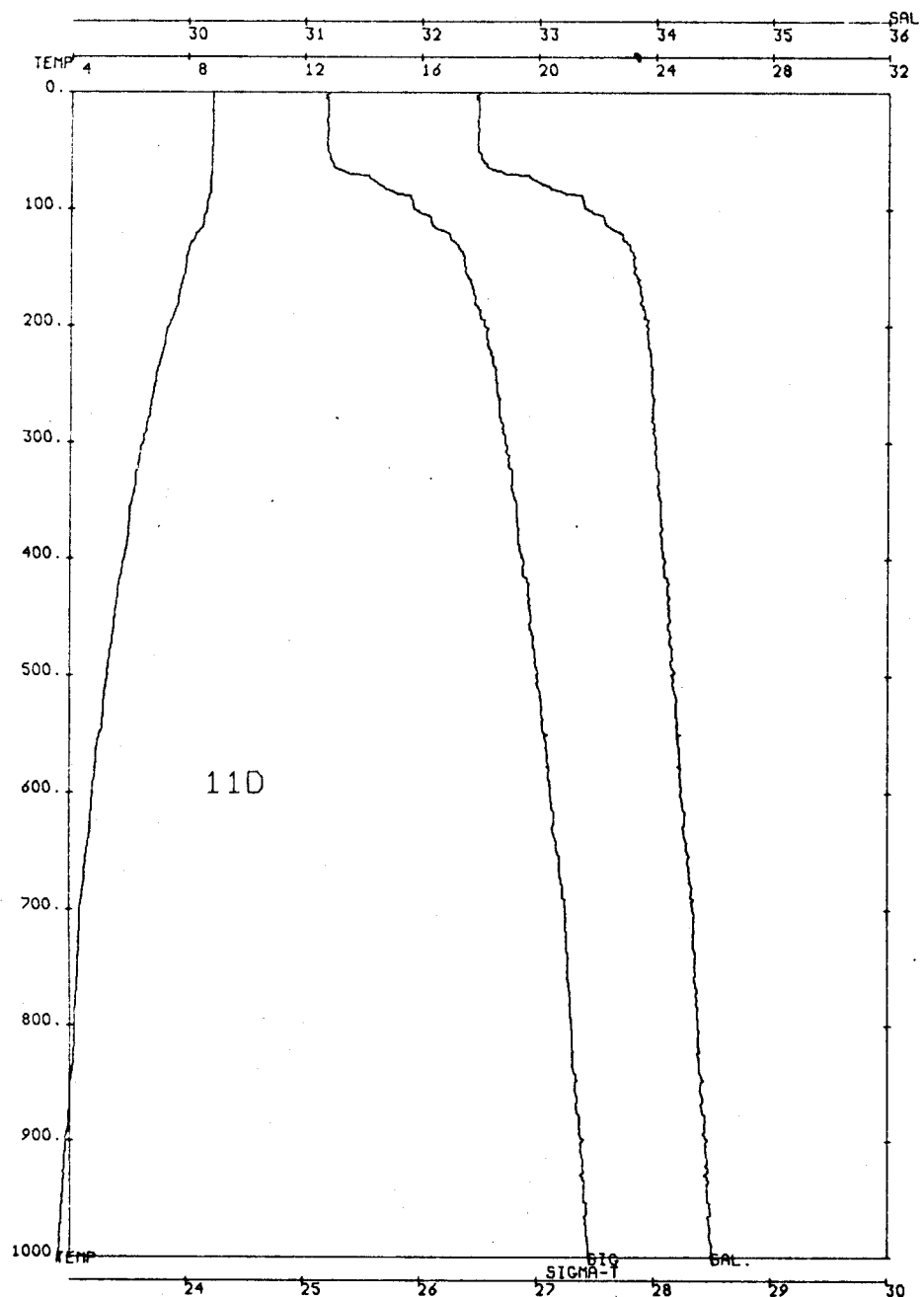
CAST NO 90 LAT 45 00.0 DATE 4/ 2/75 TIME 825
 STATION LONG 124 48.1 DPTH 642 PROBE OSU4
 SNEEL DIR 330 HT 5 PER 7 BAR 16.0 WEATHER 03
 WIND DIR 200 SPD 20 CLOUD TYPE - AMOUNT 9
 AIR TEMP 8.9 WET BULB 7.6
 SAMPLE DEPTH 28. SAMPLE TEMP 8.84 SAL 32.565

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.86	32.54	25.24	274.1	0.000	0.000
10	8.86	32.55	25.25	273.5	0.027	0.014
20	8.86	32.56	25.26	273.0	0.055	0.055
30	8.86	32.55	25.25	273.9	0.082	0.123
40	8.85	32.57	25.27	272.4	0.109	0.219
50	8.86	32.55	25.25	274.2	0.137	0.342
60	8.82	32.54	25.25	274.5	0.164	0.493
70	8.81	32.86	25.50	250.8	0.191	0.667
80	8.77	33.20	25.77	225.2	0.215	0.845
90	8.76	33.38	25.91	211.8	0.237	1.032
100	8.62	33.54	26.06	198.1	0.257	1.226
110	8.49	33.65	26.17	188.2	0.276	1.426
120	8.44	33.68	26.20	185.4	0.295	1.642
130	8.32	33.75	26.27	178.6	0.313	1.867
140	8.15	33.77	26.31	174.8	0.331	2.106
150	8.00	33.80	26.36	170.6	0.348	2.357
160	7.90	33.83	26.40	167.1	0.365	2.617
170	7.86	33.85	26.42	165.2	0.381	2.891
180	7.84	33.85	26.42	165.1	0.398	3.180
190	7.75	33.87	26.45	162.8	0.414	3.481
200	7.68	33.90	26.48	159.5	0.430	3.798
225	7.44	33.94	26.55	153.5	0.470	4.630
250	7.12	33.94	26.59	149.5	0.508	5.532
300	6.62	34.00	26.71	139.0	0.579	7.497
400	5.84	34.08	26.87	124.3	0.711	12.108
500	5.09	34.20	27.06	107.3	0.829	17.381
600	4.60	34.28	27.18	96.5	0.930	22.945
627	4.54	34.29	27.19	95.4	0.956	24.523



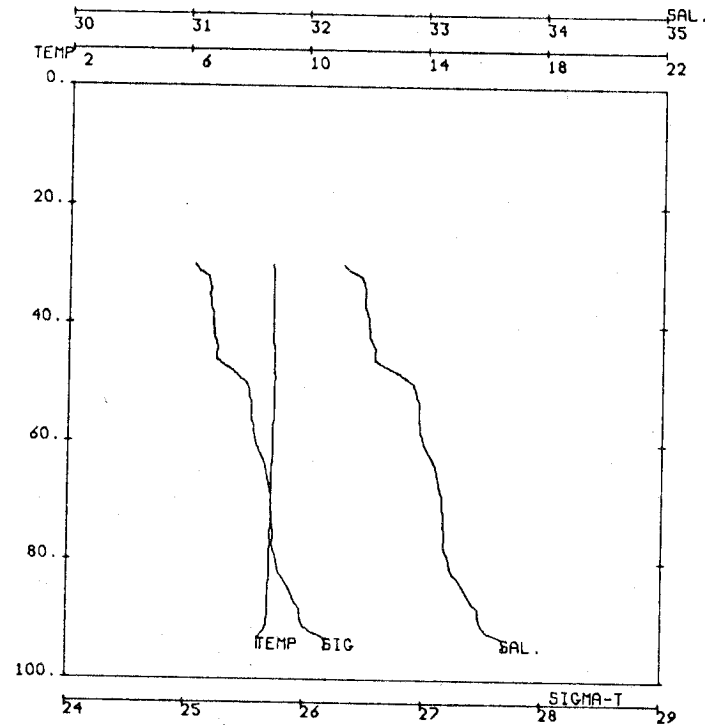
CAST NO 100 LAT 45 00.0 DATE 4/ 2/75 TIME 947
 STATION LONG 125 00.0 DPTH 907 PROBE OSU4
 SWELL DIR 330 HT 5 PER 7 BAR 14.0 WEATHER 02
 WIND DIR 210 SPD 24 CLOUD TYPE 6- 8 AMOUNT 8
 AIR TEMP 6.9 WET BULB 6.4

SAMPLE DEPTH	TEMP	SAL	SIGMA	SYA	DELD	POTE
0	8.90	32.51	25.21	276.9	0.000	0.000
10	8.90	32.52	25.22	276.3	0.020	0.014
20	8.90	32.52	25.22	276.5	0.055	0.055
30	8.88	32.54	25.24	274.9	0.083	0.124
40	8.88	32.56	25.26	273.6	0.110	0.220
50	8.88	32.56	25.26	273.8	0.118	0.343
60	8.89	32.58	25.27	272.6	0.165	0.494
70	8.84	33.29	25.83	219.3	0.199	0.451
80	8.79	33.43	25.95	208.4	0.211	0.812
90	8.71	33.56	26.06	197.7	0.231	0.985
100	8.61	33.65	26.15	189.8	0.250	1.168
110	8.57	33.69	26.19	186.4	0.269	1.366
120	8.54	33.70	26.20	185.4	0.288	1.580
130	8.50	33.71	26.21	184.2	0.306	1.810
140	8.40	33.76	26.27	179.2	0.324	2.054
150	8.30	33.79	26.31	175.7	0.342	2.312
160	8.25	33.81	26.33	173.6	0.360	2.582
170	8.21	33.83	26.35	171.7	0.377	2.867
180	8.21	33.81	26.33	173.4	0.394	3.170
190	8.11	33.82	26.36	171.4	0.411	3.487
200	7.98	33.84	26.39	168.2	0.428	3.816
225	7.67	33.91	26.49	159.0	0.469	4.689
250	7.31	33.93	26.56	152.8	0.508	5.619
300	6.87	33.98	26.66	143.9	0.582	7.642
400	5.94	34.07	26.85	126.3	0.717	12.347
500	5.37	34.15	26.99	114.4	0.836	17.699
600	4.87	34.21	27.09	105.0	0.944	23.655
800	3.95	34.42	27.36	80.0	1.126	36.272
916	3.66	34.49	27.44	72.9	1.213	43.767



CAST NO 110 LAT 44 59.6 DATE 4/ 2/75 TIME 1330
 STATION LONG 125 10.5 DPTH 1371 PROBE OSU4
 SWELL DIR 300 HT 5 PER 7 BAR 14.0 WEATHER 02
 WIND DIR 270 SPD 19 CLOUD TYPE 6- AMOUNT 8
 AIR TEMP 7.5 WET BULB 6.0
 SAMPLE DEPTH 39.0 SAMPLE TEMP 8.81 SAL 32.530

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.86	32.48	25.20	278.6	0.000	0.000
10	8.86	32.49	25.20	278.0	0.028	0.014
20	8.86	32.49	25.20	278.1	0.056	0.056
30	8.86	32.49	25.20	278.3	0.083	0.125
40	8.86	32.49	25.20	278.5	0.111	0.223
50	8.85	32.49	25.21	278.5	0.139	0.348
60	8.84	32.54	25.25	274.8	0.167	0.500
70	8.84	32.74	25.40	260.1	0.194	0.675
80	8.81	33.09	25.68	233.9	0.218	0.857
90	8.71	33.38	25.92	211.0	0.240	1.047
100	8.66	33.42	25.96	207.6	0.261	1.246
110	8.55	33.57	26.10	195.0	0.281	1.455
120	8.34	33.70	26.23	182.4	0.300	1.674
130	8.08	33.78	26.33	172.9	0.318	1.897
140	7.97	33.83	26.39	167.8	0.335	2.127
150	7.92	33.84	26.40	166.5	0.352	2.371
160	7.82	33.87	26.44	163.0	0.369	2.629
170	7.72	33.87	26.45	161.8	0.385	2.897
180	7.66	33.87	26.46	161.1	0.401	3.178
190	7.52	33.91	26.51	156.3	0.417	3.470
200	7.37	33.93	26.55	152.9	0.432	3.770
225	7.10	33.96	26.61	147.4	0.470	4.566
250	6.87	33.97	26.65	143.9	0.506	5.425
300	6.48	34.01	26.74	136.4	0.576	7.356
400	5.82	34.09	26.88	123.3	0.706	11.896
500	5.27	34.16	27.01	112.5	0.824	17.180
600	4.79	34.23	27.12	102.5	0.930	23.043
800	4.15	34.38	27.30	85.7	1.115	35.935
1000	3.58	34.49	27.45	72.6	1.274	50.132
1006	3.56	34.50	27.46	71.7	1.278	50.564

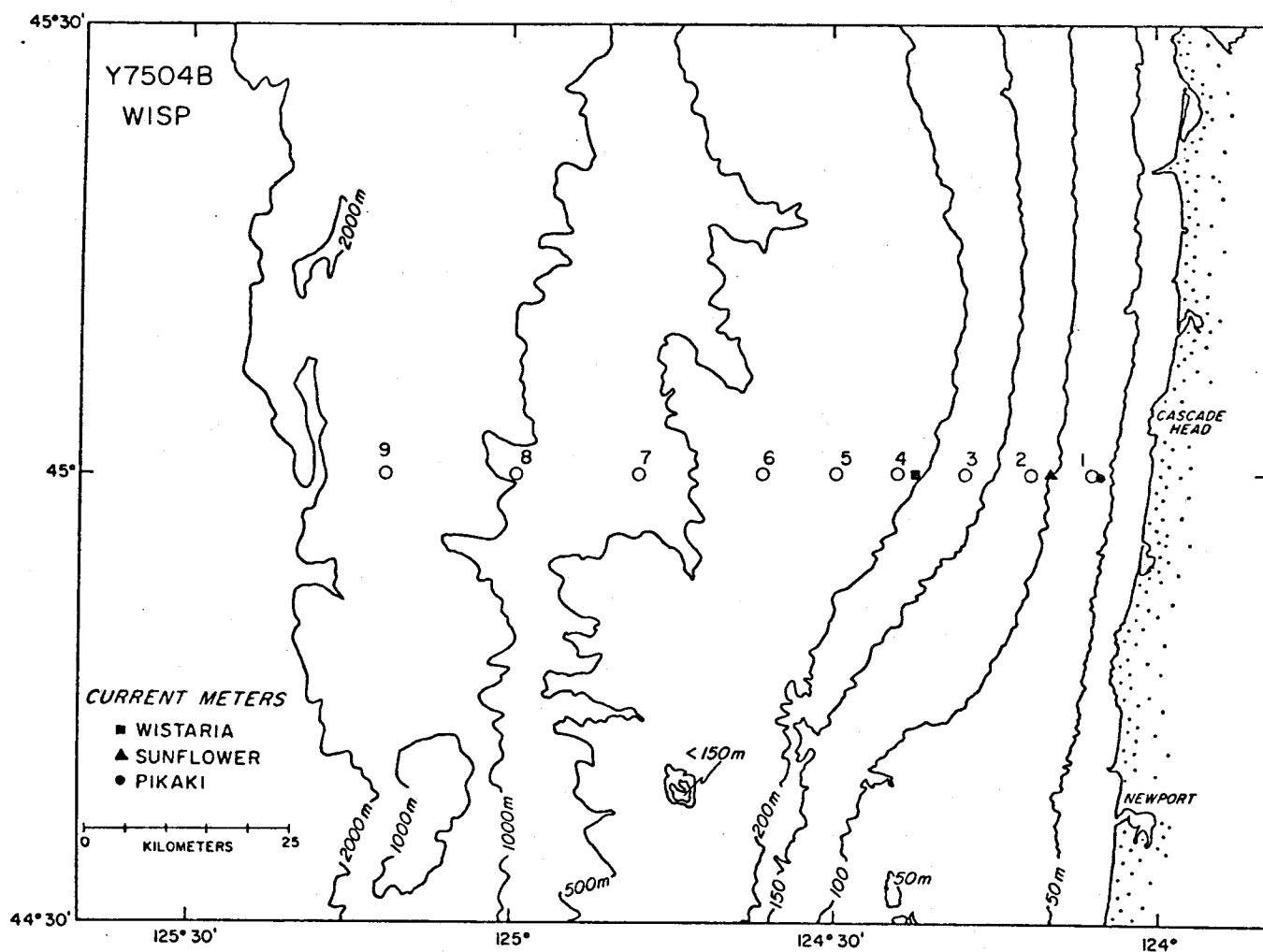


12D

CAST NO 12D LAT 44 41.1 DATE 4/ 2/75 TIME 1721
 STATION LONG 124 25.8 DPTH 98 PROBE OSU4
 SWELL DIR 270 HT 5 PER 5 BAR 17.4 WEATHER
 WIND DIR 270 SPD 16 CLOUD TYPE 6- 8 AMOUNT
 AIR TEMP WET BULB
 SAMPLE DEPTH 73. SAMPLE TEMP 8.83 SAL 33.088

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
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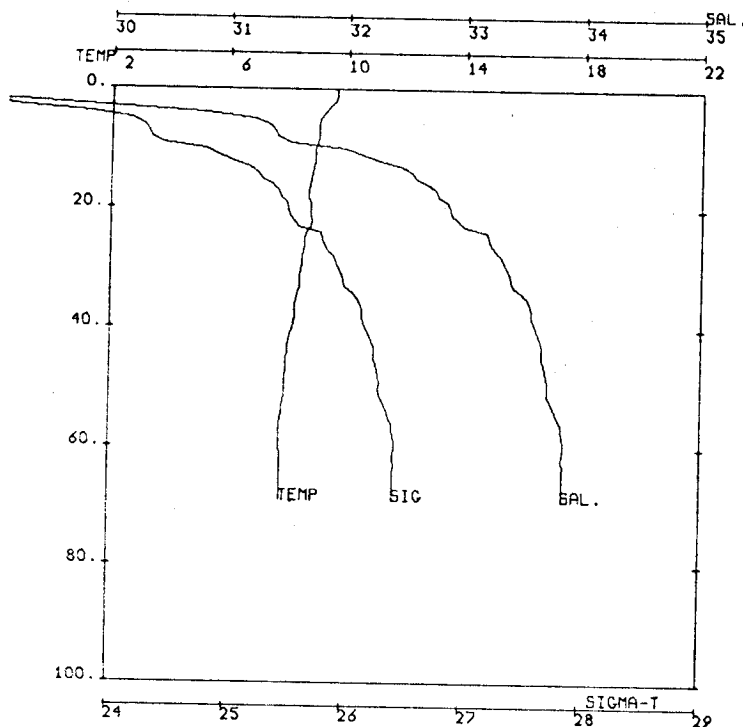
30	8.92	32.43	25.15	283.7	0.087	0.130
40	8.91	32.53	25.23	276.3	0.115	0.228
50	8.96	32.91	25.52	249.0	0.142	0.349
60	8.93	33.00	25.59	242.0	0.167	0.483
70	8.86	33.16	25.73	229.3	0.190	0.635
80	8.85	33.22	25.78	224.9	0.213	0.806
90	8.77	33.48	25.99	204.6	0.234	0.988
95	8.47	33.67	26.19	186.1	0.244	1.078



Y7504B
R/V YAQUINA
17 - 19 April 1975

Hydrographic section along 45°N, using CTD probe #4.

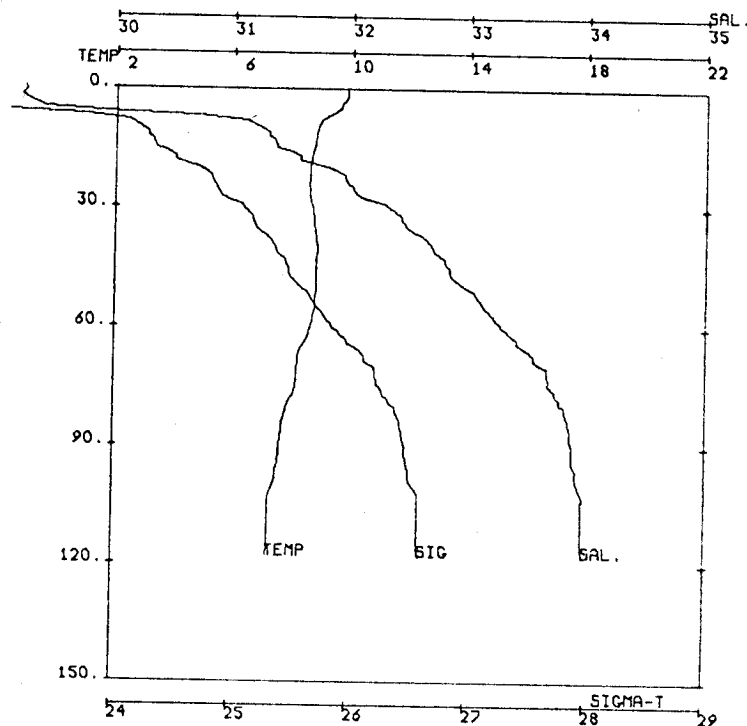
Personnel: E. D. Barton, Dennis Barstow, Bob Kapaun, Marv Lilly, Lyn Brixius, David Standley, John Vito, Mark Borgerson, Henry Pittock, David Wilkenson, Harvey Jobe, Janice Jobe, Susanne Atiyeh, Les Miller, Robert Key, Jim Mitchell.



1D

CAST NO 1D LAT 44 59.9 DATE 4/17/75 TIME 2110
STATION LONG 124 06.4 DPTH 69 PROBE 0504
SWELL DIR 310 HT 4 PER 7 BAR 20.4 WEATHER 00
WIND DIR 170 SFD 6 CLOUD TYPE 6- AMOUNT 8
AIR TEMP 9.9 WET BULB 8.8
SAMPLE DEPTH SAMPLE TEMP SAL

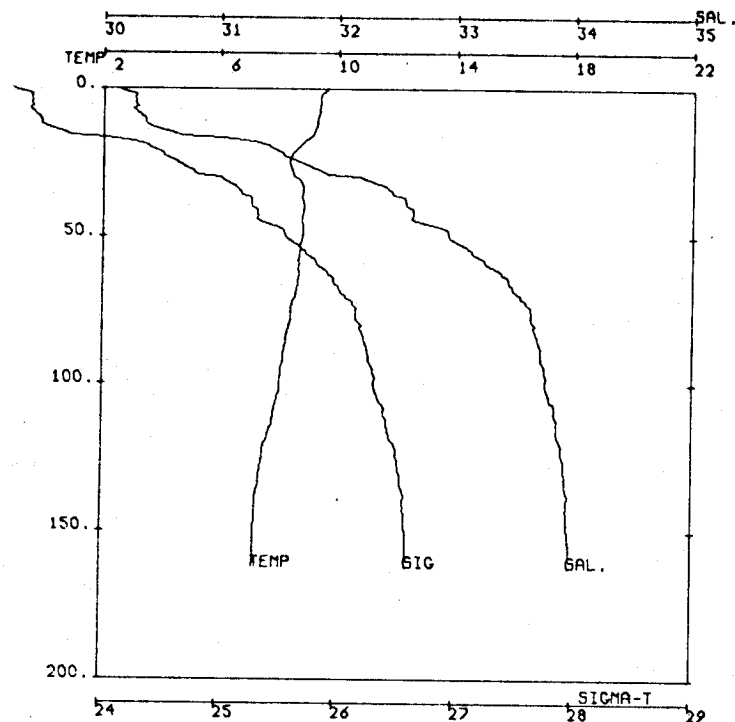
DEPTH	TEMP	SAL	SIGMA	SVI	DELD	POTE
0	9.63	20.88	22.27	557.5	0.000	0.000
10	8.91	31.99	24.81	315.9	0.042	0.019
20	8.80	32.88	25.52	248.3	0.070	0.059
30	8.48	33.37	25.95	207.4	0.092	0.115
40	8.19	33.61	26.18	185.6	0.112	0.184
50	7.96	33.71	26.29	175.0	0.130	0.264
60	7.81	33.85	26.43	162.7	0.147	0.356
69	7.82	33.84	26.42	163.7	0.161	0.451



2D

CAST NO 2D LAT 45 00.0 DATE 4/17/75 TIME 2213
STATION LONG 124 12.0 DPTH 125 PROBE 0504
SWELL DIR 310 HT 4 PER 7 BAR 20.2 WEATHER 01
WIND DIR 170 SFD 8 CLOUD TYPE 6- AMOUNT 6
AIR TEMP 9.8 WET BULB 8.5
SAMPLE DEPTH 111. SAMPLE TEMP 7.24 SAL 33.956

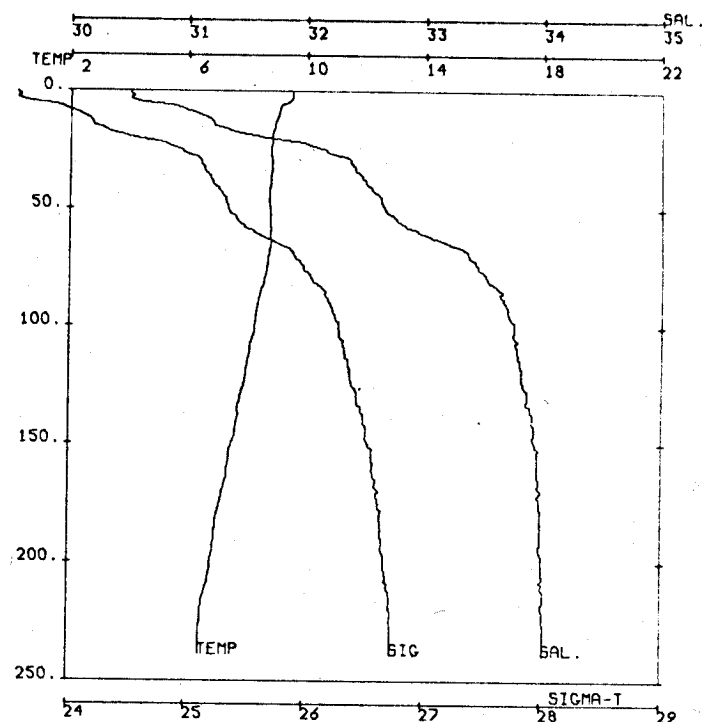
DEPTH	TEMP	SAL	SIGMA	SVI	DELD	POTE
0	9.83	29.23	22.51	534.5	0.000	0.000
10	8.85	31.24	24.23	370.7	0.048	0.022
20	8.59	31.84	24.74	322.5	0.083	0.075
30	8.71	32.33	25.10	288.0	0.114	0.151
40	8.86	32.70	25.37	262.9	0.141	0.247
50	8.82	32.99	25.60	241.0	0.166	0.361
60	8.65	33.29	25.86	216.4	0.189	0.486
70	8.19	33.66	26.22	182.4	0.209	0.616
80	7.83	33.82	26.40	165.5	0.227	0.748
90	7.64	33.89	26.48	157.9	0.243	0.886
100	7.42	33.94	26.55	151.3	0.259	1.033
110	7.26	33.97	26.60	147.0	0.273	1.186
118	7.25	33.98	26.61	146.3	0.285	1.322



3D

CAST NO 3D LAT 45 00.0 DATE 4/17/75 TIME 2330
 STATION LONG 124 18.0 DPTH 161 PROBE 05U4
 SWELL DIR 310 HT 4 PER 5 BAR 20.2 WEATHER 03
 WIND DIR 190 SPD 10 CLOUD TYPE 6- AMOUNT 7
 AIR TEMP 9.6 WET BULB 8.4
 SAMPLE DEPTH 152. SAMPLE TEMP 7.23 SAL 33.953

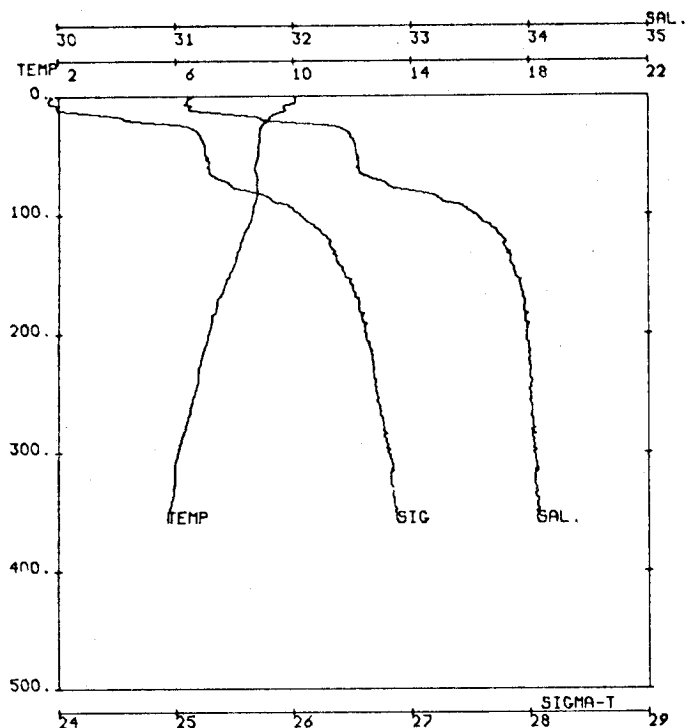
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.65	30.13	23.24	464.9	0.000	0.000
10	9.29	30.36	23.48	442.6	0.045	0.022
20	8.65	31.44	24.42	353.2	0.086	0.083
30	8.55	32.19	25.02	296.1	0.119	0.165
40	8.86	32.60	25.29	270.3	0.147	0.264
50	8.81	32.95	25.57	243.8	0.173	0.380
60	8.69	33.29	25.85	217.0	0.196	0.506
70	8.58	33.55	26.08	196.2	0.217	0.639
80	8.36	33.68	26.21	183.5	0.236	0.781
90	8.19	33.73	26.28	177.5	0.254	0.934
100	8.08	33.77	26.32	173.1	0.271	1.100
110	7.88	33.84	26.41	165.3	0.288	1.278
120	7.57	33.90	26.50	156.6	0.304	1.463
130	7.41	33.93	26.55	152.3	0.320	1.656
140	7.28	33.95	26.58	149.2	0.335	1.859
150	7.24	33.97	26.60	147.4	0.349	2.075
160	7.22	33.96	26.60	148.0	0.364	2.303
162	7.21	33.97	26.61	147.1	0.367	2.350



4D

CAST NO 4D LAT 45 00.0 DATE 4/18/75 TIME 24
 STATION LONG 124 24.0 DPTH 238 PROBE 05U4
 SWELL DIR 310 HT 4 PER 6 BAR 20.4 WEATHER 01
 WIND DIR 190 SPD 4 CLOUD TYPE 6- AMOUNT 7
 AIR TEMP 9.4 WET BULB 8.2
 SAMPLE DEPTH 232. SAMPLE TEMP 6.46 SAL 34.022

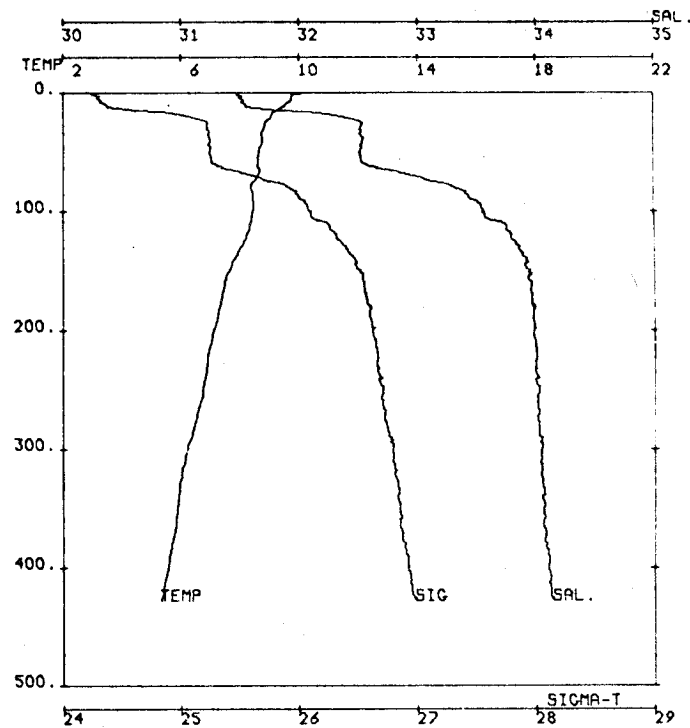
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.52	30.51	23.56	434.7	0.000	0.000
1	9.52	30.51	23.56	434.7	0.004	0.000
10	9.03	31.10	24.09	383.8	0.042	0.020
20	8.82	31.66	24.56	339.2	0.078	0.075
30	8.85	32.38	25.12	286.3	0.109	0.151
40	8.78	32.52	25.24	275.1	0.137	0.249
50	8.79	32.67	25.35	264.3	0.164	0.370
60	8.81	32.96	25.58	243.2	0.189	0.510
70	8.73	33.38	25.92	211.0	0.211	0.655
80	8.60	33.54	26.06	197.4	0.232	0.809
90	8.38	33.69	26.22	183.2	0.251	0.969
100	8.27	33.76	26.29	176.6	0.269	1.140
110	8.11	33.79	26.33	172.2	0.286	1.323
120	7.99	33.83	26.38	167.7	0.303	1.518
130	7.80	33.88	26.45	161.5	0.320	1.725
140	7.69	33.93	26.51	156.4	0.336	1.940
150	7.51	33.95	26.55	152.6	0.351	2.165
160	7.37	33.96	26.57	150.0	0.366	2.398
170	7.20	34.00	26.63	144.9	0.381	2.643
180	7.02	33.99	26.65	143.4	0.396	2.897
190	6.95	34.00	26.66	141.8	0.410	3.161
200	6.85	34.00	26.68	140.7	0.424	3.437
225	6.50	34.02	26.74	134.9	0.458	4.165
239	6.46	34.02	26.75	134.6	0.477	4.602



5D

CAST NO 5D LAT 45 00.3 DATE 4/18/75 TIME 126
 STATION LONG 124 29.2 DPTH 366 PROBE 05U4
 SWELL DIR 310 HT 3 PER 5 BAR 20.1 WEATHER 02
 WIND DIR 200 SPD 8 CLOUD TYPE 6- AMOUNT 7
 AIR TEMP 9.8 WET BULB 8.2
 SAMPLE DEPTH 351. SAMPLE TEMP 5.72 SAL 34.081

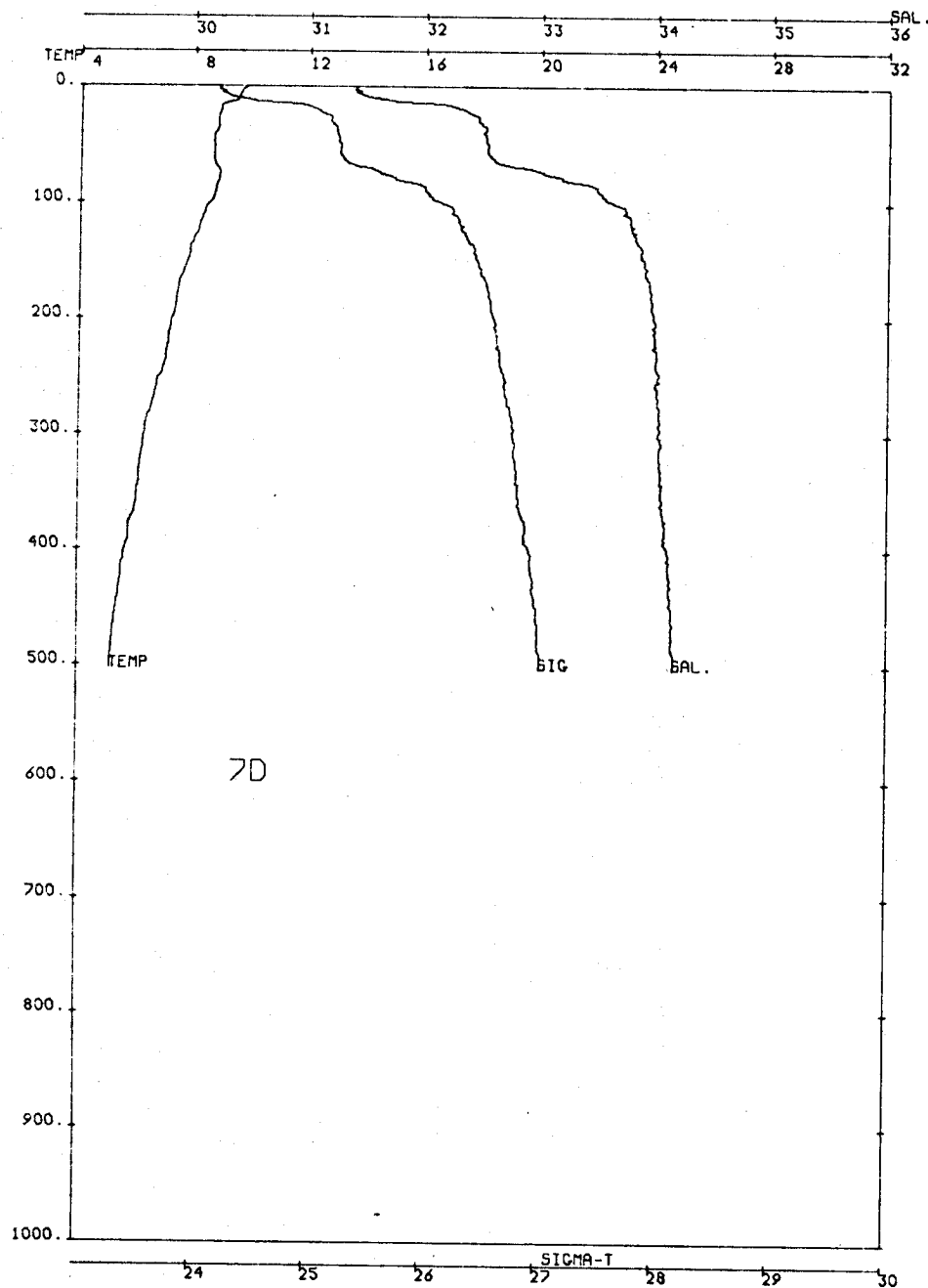
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	10.02	31.10	23.94	398.5	0.000	0.000
10	9.72	31.10	23.98	394.1	0.040	0.020
20	9.15	31.74	24.57	338.1	0.076	0.074
30	8.84	32.47	25.19	279.5	0.106	0.148
40	8.81	32.53	25.24	274.8	0.134	0.245
50	8.80	32.55	25.26	273.3	0.161	0.369
60	8.68	32.54	25.27	272.5	0.188	0.518
70	8.80	32.69	25.37	263.3	0.215	0.693
80	8.81	33.01	25.62	239.8	0.241	0.893
90	8.68	33.32	25.88	215.1	0.263	1.074
100	8.60	33.56	26.08	196.3	0.284	1.267
110	8.46	33.68	26.20	185.5	0.303	1.468
120	8.26	33.79	26.31	174.5	0.321	1.674
130	8.11	33.82	26.36	170.4	0.338	1.890
140	8.00	33.85	26.40	166.7	0.355	2.118
150	7.83	33.89	26.45	161.5	0.371	2.355
160	7.63	33.93	26.52	155.5	0.387	2.601
170	7.45	33.96	26.56	151.3	0.402	2.856
180	7.37	33.95	26.57	151.1	0.417	3.119
190	7.23	33.97	26.60	147.8	0.432	3.394
200	7.11	33.99	26.63	144.9	0.447	3.678
225	6.83	34.00	26.68	140.7	0.483	4.436
250	6.63	34.02	26.72	137.0	0.517	5.261
300	6.06	34.04	26.81	128.8	0.584	7.086
359	5.70	34.08	26.89	122.0	0.658	9.520



6D

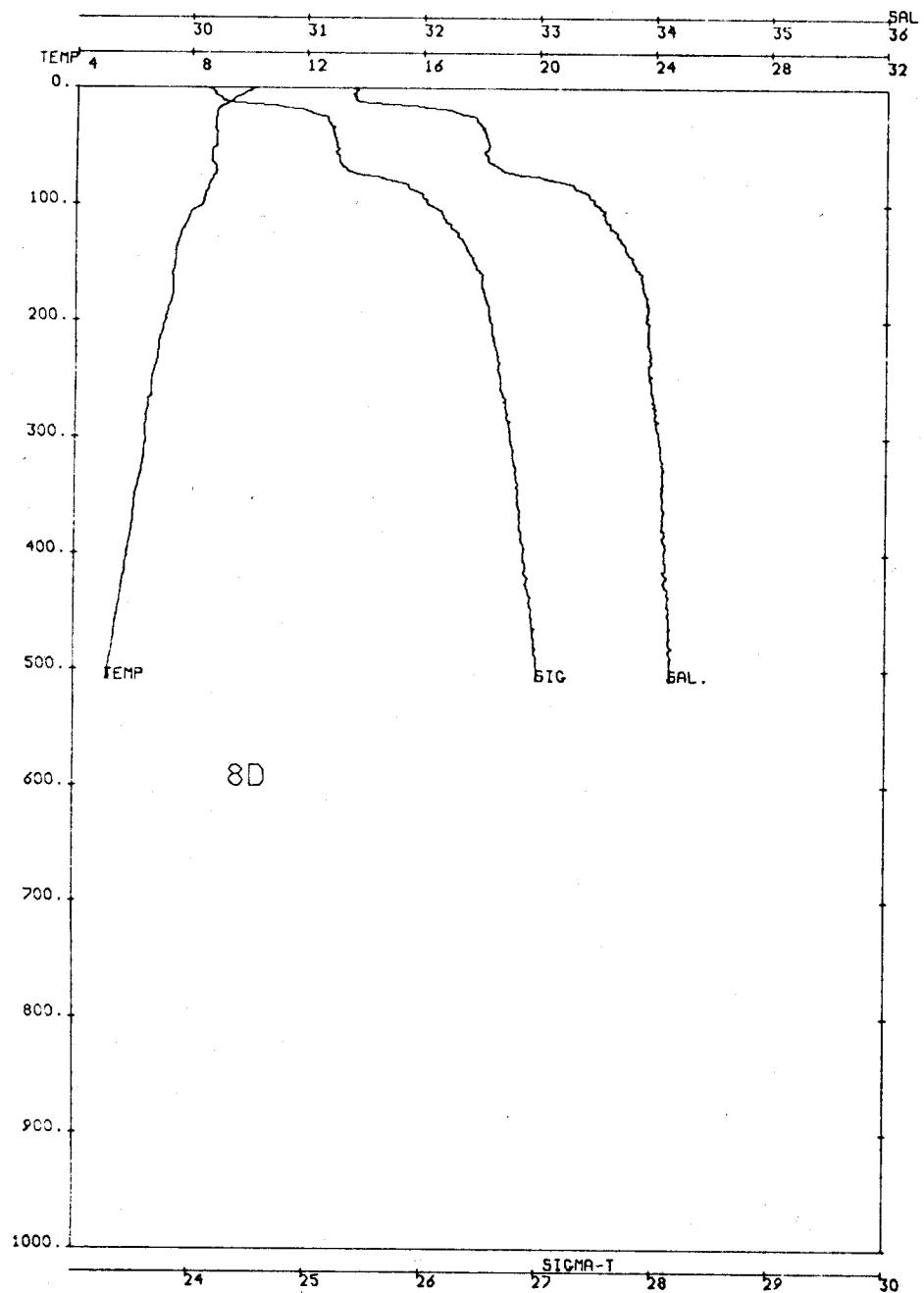
CAST NO 6D LAT 44 59.8 DATE 4/18/75 TIME 238
 STATION LONG 124 36.0 DPTH 439 PROBE 05U4
 SWELL DIR 310 HT 5 PER 5 BAR 20.4 WEATHER 02
 WIND DIR 210 SPD 4 CLOUD TYPE 6- AMOUNT 6
 AIR TEMP 9.8 WET BULB 7.6
 SAMPLE DEPTH 424. SAMPLE TEMP 5.37 SAL 34.113

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	10.27	31.50	24.21	372.8	0.000	0.000
10	9.51	31.55	24.37	357.5	0.036	0.018
20	9.04	32.35	25.07	291.2	0.069	0.067
30	8.80	32.51	25.23	276.0	0.097	0.136
40	8.75	32.53	25.25	273.9	0.124	0.232
50	8.63	32.50	25.25	274.6	0.152	0.356
60	8.59	32.56	25.30	269.7	0.179	0.506
70	8.58	32.95	25.61	240.7	0.205	0.672
80	8.36	33.31	25.92	211.0	0.227	0.840
90	8.45	33.45	26.02	202.1	0.248	1.015
100	8.43	33.56	26.11	193.0	0.267	1.202
110	8.35	33.72	26.24	180.9	0.287	1.402
120	8.20	33.78	26.31	174.5	0.304	1.606
130	8.00	33.85	26.40	166.5	0.321	1.819
140	7.79	33.91	26.48	159.3	0.338	2.039
150	7.63	33.94	26.52	155.0	0.353	2.268
160	7.46	33.96	26.56	151.3	0.369	2.505
170	7.40	33.96	26.57	150.6	0.384	2.754
180	7.30	33.97	26.59	148.7	0.399	3.016
190	7.24	33.98	26.61	147.2	0.414	3.289
200	7.10	33.98	26.63	145.5	0.428	3.574
225	6.92	34.00	26.67	142.0	0.464	4.335
250	6.75	34.02	26.71	138.6	0.499	5.170
300	6.22	34.04	26.79	130.8	0.567	7.028
400	5.55	34.10	26.93	118.8	0.692	11.389
428	5.32	34.15	26.99	113.0	0.724	12.734



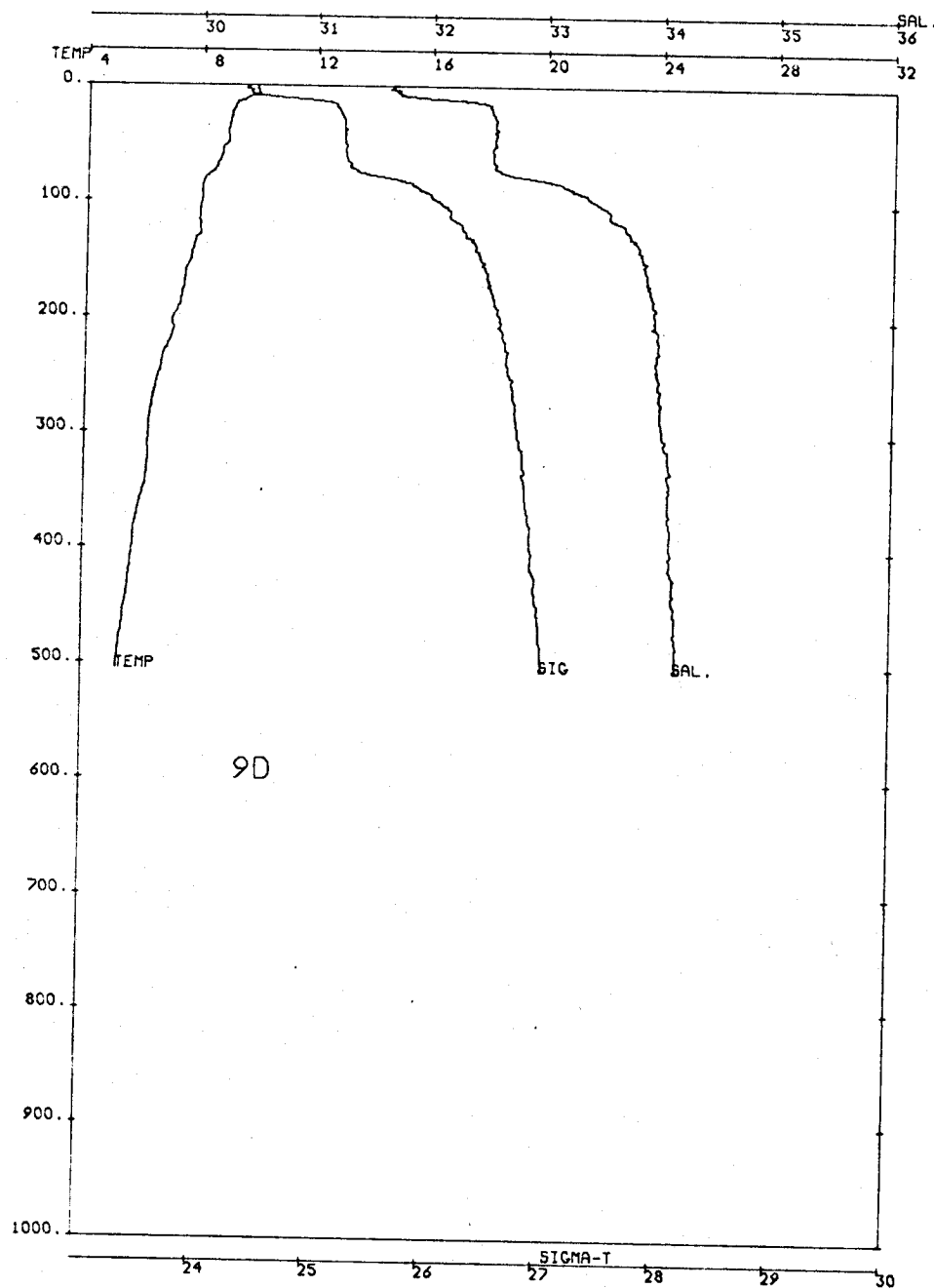
CAST NO 7D LAT 45 00.0 DATE 4/18/75 TIME 512
 STATION LONG 124 48.3 DPTH 681 PROBE 0504
 SWELL DIR 310 HT 5 PER 8 BAR 20.5 WEATHER 00
 WIND DIR 210 SPD 8 CLOUD TYPE 6- AMOUNT 8
 AIR TEMP 10.3 WET BULB 8.3
 SAMPLE DEPTH 503. SAMPLE TEMP 5.17 SAL 34.142

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.83	31.41	24.21	372.6	0.000	0.000
10	9.51	31.56	24.38	356.7	0.017	0.018
20	8.86	32.34	25.09	289.3	0.068	0.065
30	8.81	32.46	25.19	279.8	0.097	0.116
40	8.67	32.50	25.24	275.0	0.124	0.232
50	8.66	32.54	25.27	272.0	0.152	0.355
60	8.67	32.57	25.30	270.1	0.179	0.505
70	8.82	32.91	25.54	247.2	0.205	0.677
80	8.84	33.19	25.75	226.9	0.229	0.854
90	8.71	33.49	26.01	202.9	0.250	1.032
100	8.52	33.63	26.15	189.9	0.270	1.219
110	8.31	33.75	26.27	178.1	0.288	1.410
120	8.17	33.80	26.33	172.5	0.305	1.612
130	7.99	33.81	26.37	169.4	0.322	1.826
140	7.85	33.87	26.44	163.1	0.339	2.049
150	7.76	33.90	26.47	159.8	0.355	2.285
160	7.62	33.91	26.50	157.2	0.371	2.530
170	7.47	33.94	26.54	153.1	0.387	2.786
180	7.41	33.94	26.55	152.4	0.402	3.052
190	7.34	33.96	26.58	150.1	0.417	3.330
200	7.22	33.98	26.61	147.1	0.432	3.620
225	7.09	33.97	26.62	146.5	0.468	4.194
250	6.80	34.01	26.69	140.0	0.504	5.240
300	6.29	34.02	26.77	133.2	0.572	7.109
400	5.62	34.11	26.92	119.3	0.700	11.570
500	5.16	34.17	27.03	110.4	0.814	16.717
503	5.16	34.16	27.02	111.2	0.817	16.883



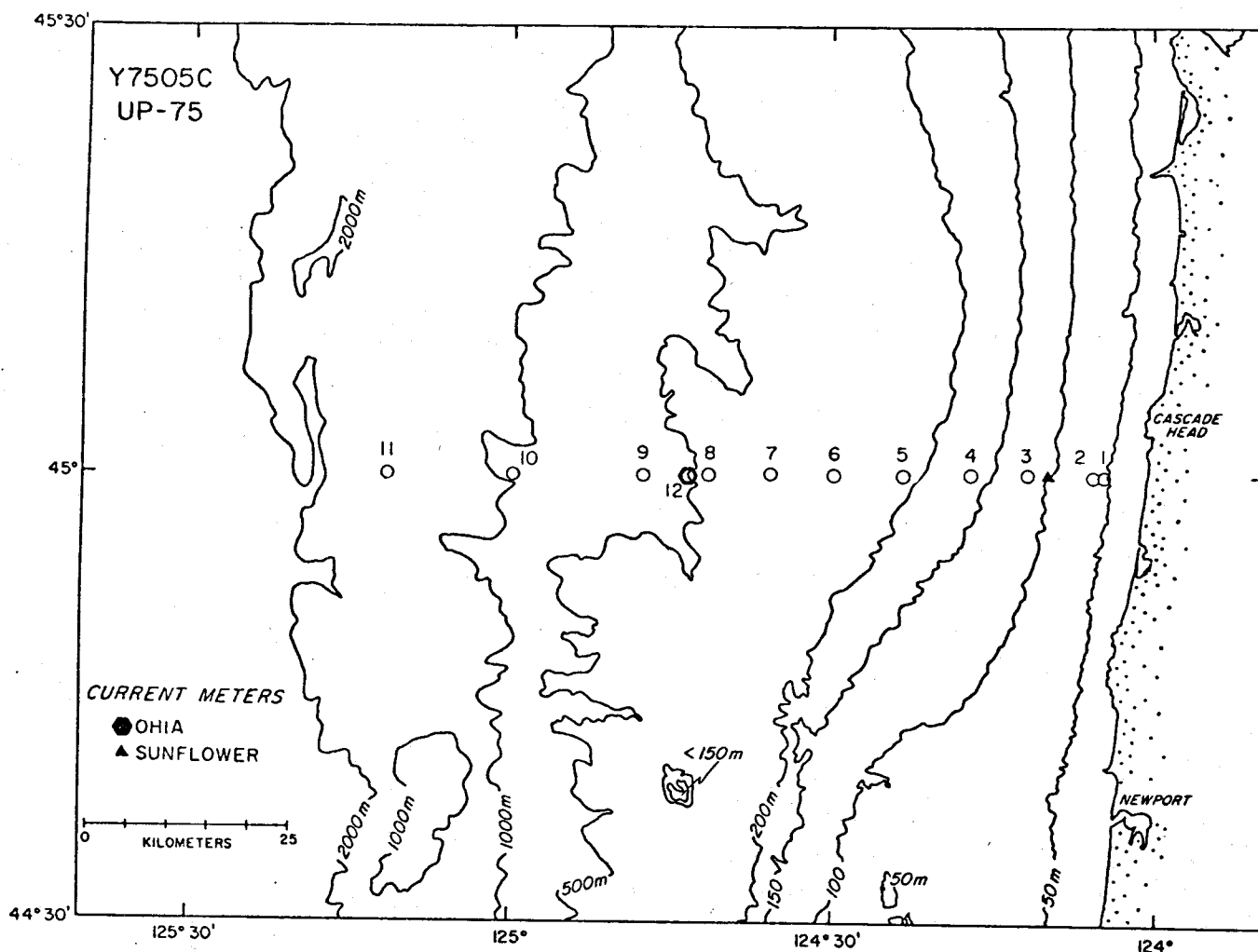
CAST NO 80 LAT 45 00.0 DATE 4/18/75 TIME 734
 STATION LONG 125 00.1 DPTH 960 PROBE 0504
 SWELL DIR 310 HT 4 PER 7 BAR 20.3 WEATHER 02
 WIND DIR 230 SPD 8 CLOUD TYPE 6- AMOUNT 8
 AIR TEMP 9.5 WET BULB 7.5
 SAMPLE DEPTH 53. SAMPLE TEMP 8.86 SAL 32.586

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	10.14	31.40	24.15	378.2	0.000	0.000
1	10.14	31.40	24.15	378.2	0.004	0.000
10	9.45	31.41	24.27	367.0	0.037	0.019
20	8.87	32.27	25.03	294.6	0.070	0.067
30	8.84	32.49	25.21	278.0	0.099	0.118
40	8.88	32.54	25.24	275.1	0.126	0.215
50	8.86	32.57	25.27	272.7	0.154	0.358
60	8.72	32.56	25.28	271.6	0.181	0.508
70	8.86	32.68	25.35	264.9	0.208	0.682
80	8.69	33.15	25.75	227.7	0.233	0.868
90	8.49	33.41	25.98	205.6	0.254	1.051
100	8.40	33.49	26.06	198.5	0.274	1.247
110	7.91	33.57	26.19	185.7	0.293	1.442
120	7.76	33.62	26.25	180.1	0.312	1.653
130	7.56	33.71	26.35	170.8	0.329	1.872
140	7.49	33.76	26.40	166.2	0.346	2.099
150	7.43	33.82	26.46	161.1	0.362	2.336
160	7.38	33.89	26.51	155.7	0.378	2.581
170	7.41	33.90	26.52	155.2	0.394	2.838
180	7.35	33.93	26.55	152.3	0.409	3.107
190	7.21	33.94	26.58	149.8	0.424	3.385
200	7.10	33.93	26.59	149.2	0.439	3.676
225	6.86	33.97	26.65	143.4	0.476	4.452
250	6.62	33.96	26.68	141.3	0.511	5.298
300	6.44	34.04	26.76	133.7	0.580	7.180
400	5.83	34.09	26.88	123.4	0.708	11.650
500	5.18	34.15	27.01	112.1	0.825	16.931
589	5.12	34.14	27.01	112.2	0.835	17.440



CAST NO 90 LAT 45 00.0 DATE 4/18/75 TIME 1219
 STATION LONG 125 12.0 DPTH 1170 PROBE 0SU4
 SHELL DIR 310 HT 4 PER 5 BAR 200 WEATHER 01
 WIND DIR 270 SPD 6 CLOUD TYPE 9 -6 AMOUNT
 AIR TEMP 0.9 WET BULB 4.8
 SAMPLE DEPTH 48. SAMPLE TEMP 8.86 SAL 32.557

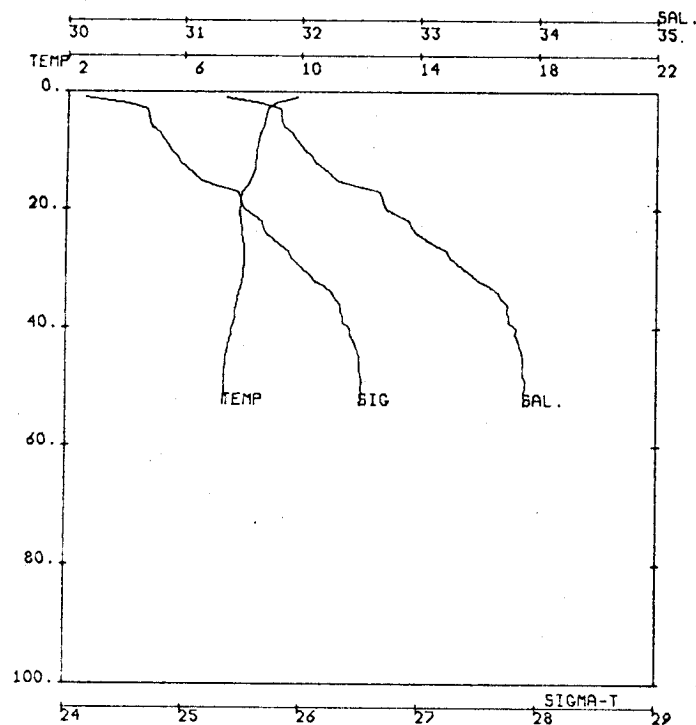
DEPTH	TEMP	SAL	SIGMA	SVL	DELD	POTE
0	9.88	31.69	24.42	352.6	0.000	0.000
10	9.57	31.92	24.65	330.9	0.035	0.017
20	9.05	32.52	25.20	278.7	0.064	0.061
30	8.90	32.56	25.25	273.7	0.092	0.110
40	8.85	32.54	25.24	274.6	0.119	0.226
50	8.86	32.54	25.24	274.9	0.147	0.349
60	8.64	32.53	25.27	272.6	0.174	0.500
70	8.47	32.54	25.30	269.6	0.201	0.676
80	8.07	32.94	25.67	234.3	0.227	0.867
90	7.98	33.23	25.91	211.7	0.249	1.052
100	7.94	33.43	26.08	196.4	0.269	1.246
110	7.92	33.55	26.17	187.4	0.288	1.445
120	7.94	33.68	26.27	178.2	0.306	1.657
130	7.86	33.72	26.32	174.2	0.324	1.877
140	7.73	33.80	26.40	166.6	0.341	2.103
150	7.63	33.84	26.44	162.4	0.357	2.341
160	7.43	33.88	26.50	156.8	0.373	2.588
170	7.40	33.90	26.52	155.1	0.389	2.847
180	7.32	33.91	26.54	153.4	0.404	3.117
190	7.27	33.94	26.57	150.6	0.419	3.398
200	7.02	33.95	26.62	146.6	0.434	3.687
225	6.83	33.98	26.67	142.2	0.471	4.450
250	6.53	33.98	26.71	138.6	0.506	5.295
300	6.24	34.02	26.77	132.6	0.573	7.155
400	5.73	34.10	26.90	121.4	0.700	11.569
500	5.23	34.15	27.00	112.7	0.817	16.817
505	5.22	34.14	27.00	113.4	0.822	17.098



Y7505C
R/V YAQUINA
19 - 20 May 1975

Hydrographic section along 45°N, using CTD probe #4.

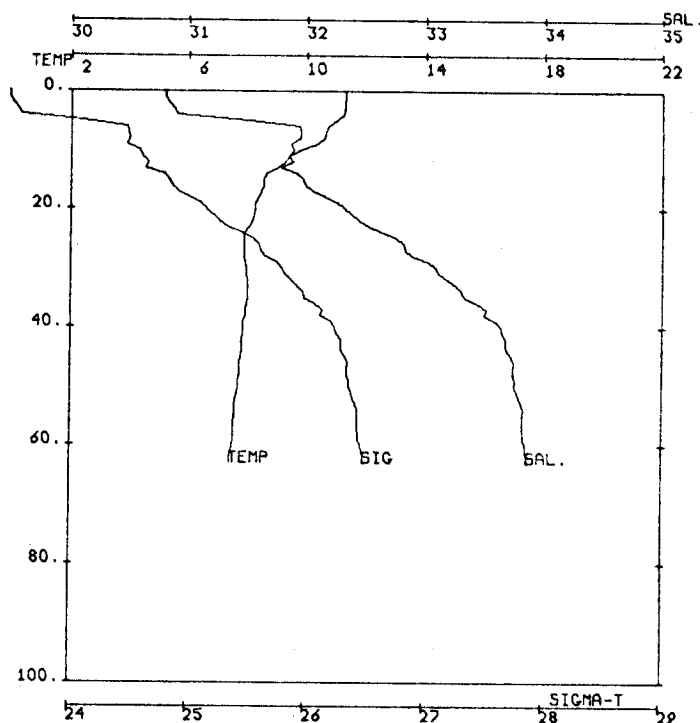
Personnel: Robert L. Smith, Dennis Barstow, Ben Moore, Robert Kapaun, John Vito, Henry Pittock, Tedd Wright, Rich Schramm, Ciro De Cristo, Frank Waite, Rich Macovis, Tom Harpole, Jerry Harpole, Elizabeth Harris, Jane Bastian, Sabine Mittelstaedt, Julie Fernald.



1D

CAST NO 1D LAT 45 00.0 DATE 5/19/75 TIME 2129
 STATION LONG 124 05.0 DPTH 56 PROBE OSU4
 SWELL DIR 310 HT 6 PER 6 BAR 21.1 WEATHER
 WIND DIR 310 SPD 18 CLOUD TYPE 6- AMOUNT 8
 AIR TEMP 10.8 WET BULB 7.3
 SAMPLE DEPTH 51. SAMPLE TEMP 7.35 SAL 33.888

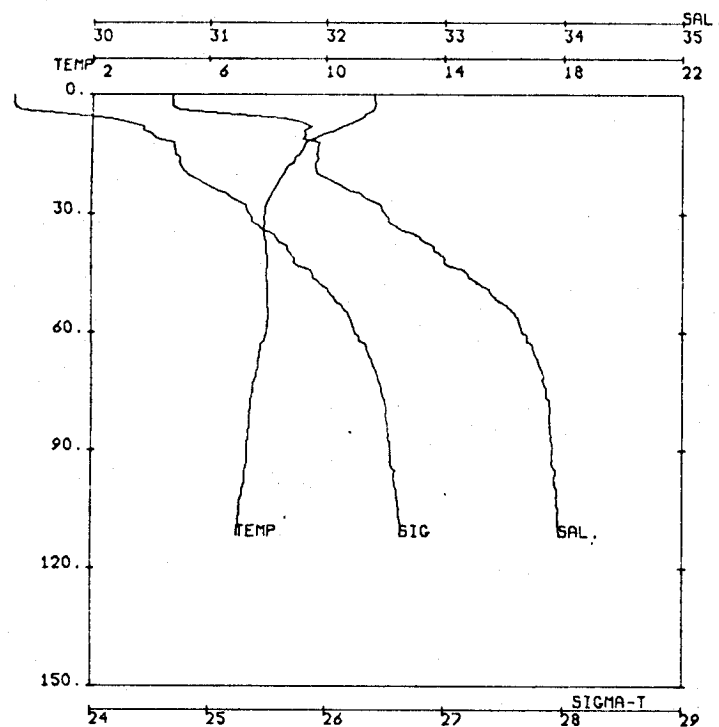
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	9.89	31.36	24.16	377.2	0.000	0.000
1	9.89	31.36	24.16	377.3	0.004	0.000
10	8.48	32.04	24.91	305.9	0.033	0.016
20	7.93	32.73	25.53	247.1	0.061	0.057
30	8.03	33.38	26.02	200.3	0.083	0.112
40	7.65	33.02	26.42	162.4	0.101	0.174
50	7.38	33.89	26.52	153.7	0.116	0.244
53	7.37	33.88	26.51	154.3	0.121	0.268



2D

CAST NO 2D LAT 45 00.0 DATE 5/19/75 TIME 2227
 STATION LONG 124 06.0 DPTH 66 PROBE OSU4
 SWELL DIR 310 HT 6 PER 6 BAR 21.0 WEATHER 03
 WIND DIR 330 SPD 16 CLOUD TYPE 3- AMOUNT 6
 AIR TEMP 10.2 WET BULB 7.5
 SAMPLE DEPTH 53. SAMPLE TEMP 7.54 SAL 33.834

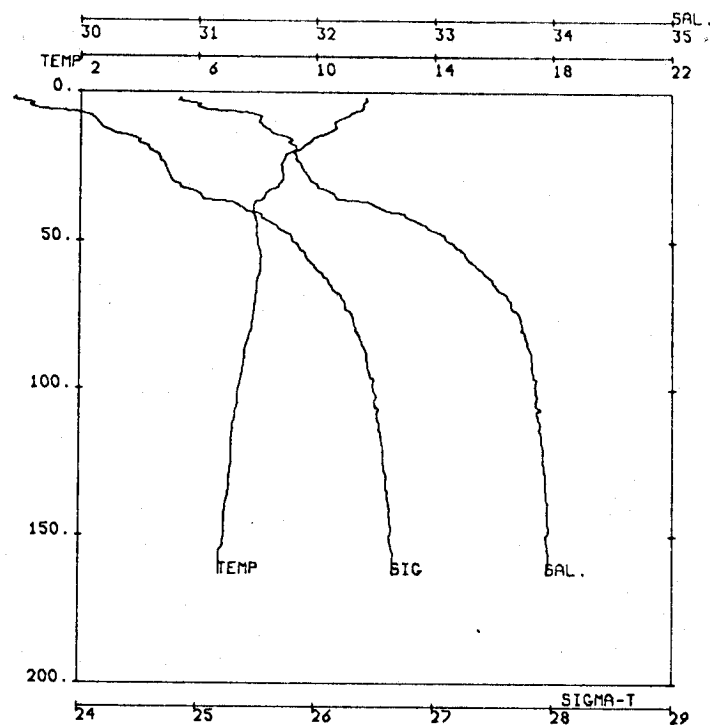
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	11.30	30.80	23.49	441.5	0.000	0.000
10	9.78	31.90	24.60	335.7	0.019	0.018
20	8.28	32.33	25.17	281.7	0.070	0.065
30	7.98	33.10	25.81	220.4	0.095	0.127
40	7.86	33.65	26.26	178.0	0.115	0.196
50	7.71	33.76	26.37	167.8	0.123	0.274
60	7.51	33.86	26.48	157.8	0.149	0.362
63	7.44	33.87	26.49	156.2	0.153	0.391



3D

CAST NO 3D LAT 45 00.2 DATE 5/20/75 TIME 18
 STATION LONG 124 12 0 DPTH 118 PROBE OSU4
 SWELL DIR 310 HT 8 PER 8 BAR 20.5 WEATHER 18
 WIND DIR 320 SPD 20 CLOUD TYPE 8-6 AMOUNT 4
 AIR TEMP 11.6 WET BULB 7.1
 SAMPLE DEPTH 102. SAMPLE TEMP 7.08 SAL 33.961

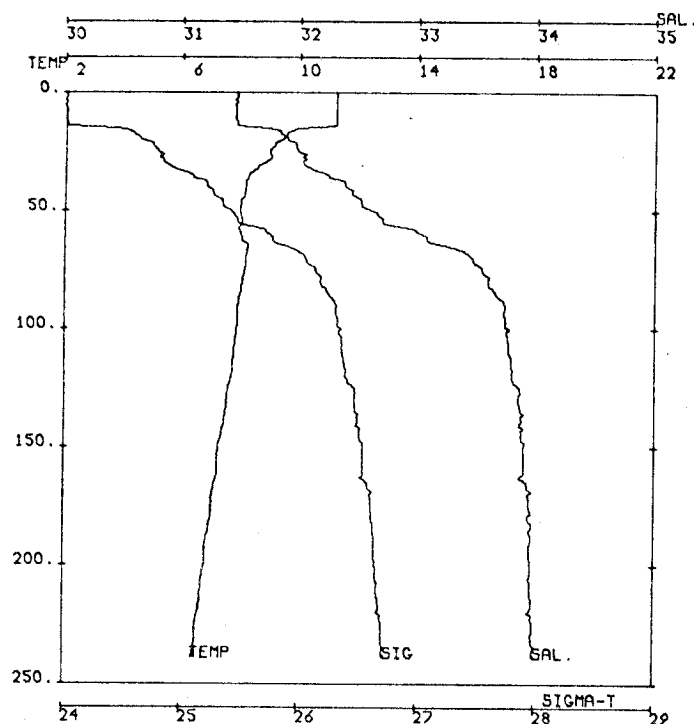
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	11.65	30.69	23.34	455.5	0.000	0.000
10	9.50	31.83	24.52	342.7	0.041	0.019
20	8.51	31.94	24.83	314.0	0.073	0.068
30	7.90	32.50	25.36	263.6	0.102	0.138
40	7.98	32.96	25.71	230.6	0.126	0.225
50	7.98	33.40	26.05	198.4	0.148	0.321
60	7.97	33.66	26.25	179.1	0.166	0.424
70	7.61	33.83	26.44	161.6	0.183	0.533
80	7.37	33.89	26.52	154.0	0.199	0.651
90	7.29	33.91	26.55	151.6	0.214	0.782
100	7.13	33.95	26.60	146.6	0.229	0.924
110	6.97	33.96	26.63	143.9	0.244	1.076
112	6.95	33.97	26.64	142.9	0.247	1.108



4D

CAST NO 4D LAT 45 00.2 DATE 5/20/75 TIME 189
 STATION LONG 124 17.5 DPTH 160 PROBE OSU4
 SWELL DIR 310 HT 8 PER 8 BAR 20.2 WEATHER 02
 WIND DIR 320 SPD 23 CLOUD TYPE 8- AMOUNT 5
 AIR TEMP 10.4 WET BULB 7.6
 SAMPLE DEPTH SAMPLE TEMP SAL

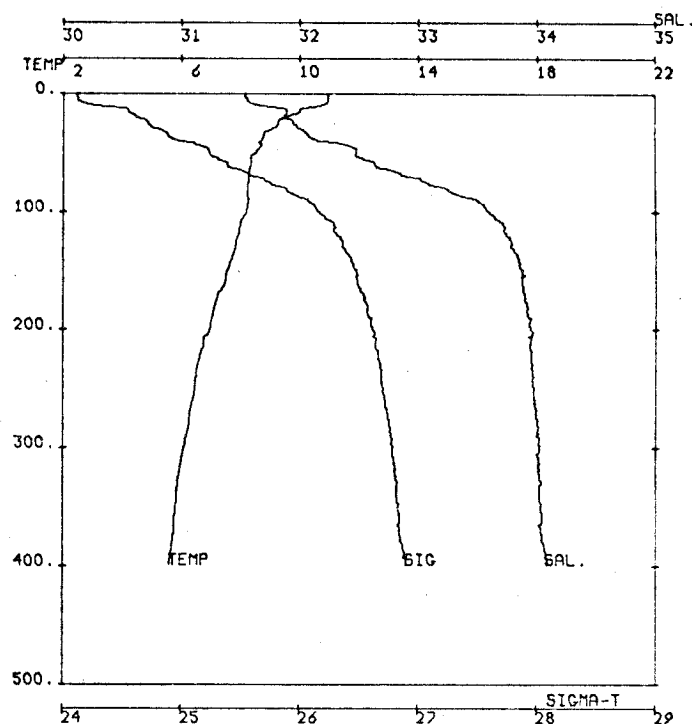
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	11.69	30.85	23.46	444.4	0.000	0.000
2	11.69	30.85	23.46	444.4	0.009	0.001
10	10.60	31.51	24.16	377.6	0.042	0.020
20	9.14	31.80	24.62	333.5	0.077	0.073
30	8.81	31.96	24.80	317.0	0.110	0.154
40	7.89	32.59	25.42	257.2	0.179	0.254
50	8.04	33.11	25.81	220.8	0.162	0.360
60	8.10	33.40	26.03	200.2	0.183	0.475
70	7.94	33.64	26.24	180.3	0.202	0.599
80	7.81	33.73	26.33	172.0	0.220	0.730
90	7.57	33.82	26.44	162.1	0.236	0.871
100	7.37	33.86	26.50	156.5	0.252	1.022
110	7.25	33.88	26.53	153.6	0.268	1.185
120	7.14	33.92	26.58	149.3	0.283	1.359
130	7.08	33.94	26.60	147.1	0.298	1.545
140	6.95	33.95	26.63	144.8	0.312	1.742
150	6.90	33.94	26.62	145.0	0.327	1.951
160	6.75	33.96	26.66	141.7	0.341	2.172
163	6.75	33.95	26.65	142.5	0.345	2.241



50

CAST NO 50 LAT 45 00.1 DATE 5/20/75 TIME 238
STATION LONG 124 23.6 DPTH 244 PROBE OSU4
SWELL DIR 300 HT 8 PER 8 BAR 20.5 WEATHER 02
WIND DIR 340 SPD 23 CLOUD TYPE 8- 6 AMOUNT 5
AIR TEMP 10.2 WET BULB 7.6
SAMPLE DEPTH 235. SAMPLE TEMP 6.42 SAL 34.013

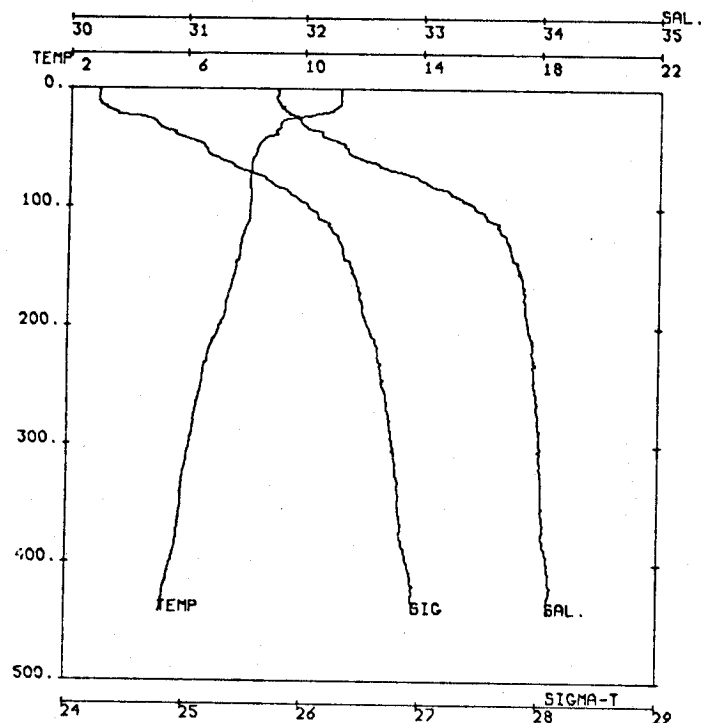
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	11.22	31.47	24.02	390.6	0.000	0.000
10	11.24	31.45	24.00	392.6	0.039	0.020
20	9.35	31.90	24.67	329.3	0.075	0.073
30	8.73	32.04	24.88	309.4	0.107	0.152
40	8.18	32.40	25.24	275.4	0.136	0.253
50	8.01	32.62	25.43	256.8	0.163	0.373
60	8.02	33.05	25.77	225.1	0.187	0.507
70	8.20	33.47	26.07	196.6	0.208	0.645
80	8.07	33.60	26.19	185.3	0.227	0.787
90	7.93	33.75	26.33	172.3	0.245	0.919
100	7.86	33.78	26.36	169.3	0.262	1.103
110	7.80	33.78	26.37	168.6	0.279	1.281
120	7.70	33.80	26.40	165.9	0.296	1.473
130	7.56	33.86	26.47	159.6	0.312	1.674
140	7.46	33.87	26.49	157.7	0.328	1.887
150	7.26	33.90	26.54	152.8	0.343	2.111
160	7.25	33.90	26.54	152.9	0.359	2.348
170	7.06	33.94	26.60	147.5	0.374	2.596
180	7.01	33.94	26.61	146.5	0.388	2.851
190	6.85	33.96	26.65	143.5	0.403	3.118
200	6.81	33.97	26.66	142.3	0.417	3.398
225	6.52	33.98	26.71	138.2	0.452	4.146
239	6.40	34.00	26.74	135.3	0.471	4.592



60

CAST NO 60 LAT 44 59.9 DATE 5/20/75 TIME 412
STATION LONG 124 29.9 DPTH 410 PROBE OSU4
SWELL DIR 300 HT 7 PER 7 BAR 20.5 WEATHER 02
WIND DIR 330 SPD 20 CLOUD TYPE 8- 6 AMOUNT 6
AIR TEMP 10.2 WET BULB 7.8
SAMPLE DEPTH SAMPLE TEMP SAL

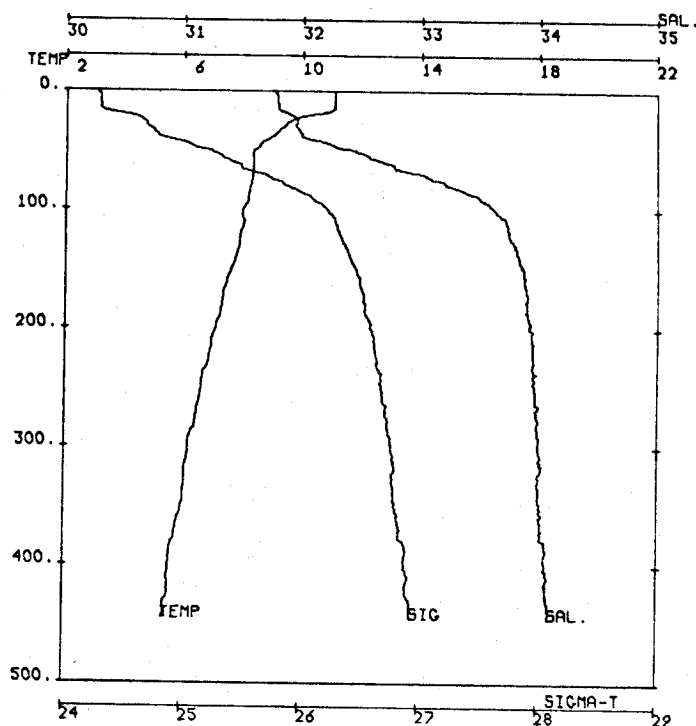
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	10.97	31.54	24.12	381.2	0.000	0.000
10	10.62	31.68	24.29	365.3	0.038	0.019
20	9.40	31.86	24.63	333.0	0.072	0.070
30	8.99	32.03	24.82	314.4	0.104	0.151
40	8.64	32.16	24.98	299.8	0.135	0.258
50	8.46	32.47	25.25	274.3	0.163	0.384
60	8.34	32.64	25.40	260.1	0.190	0.531
70	8.27	32.91	25.62	239.2	0.215	0.693
80	8.24	33.25	25.89	213.7	0.237	0.862
90	8.28	33.49	26.07	196.6	0.258	1.038
100	8.19	33.60	26.17	187.3	0.277	1.219
110	7.98	33.71	26.29	176.3	0.295	1.410
120	7.92	33.74	26.32	173.4	0.313	1.611
130	7.83	33.78	26.37	168.9	0.330	1.823
140	7.70	33.85	26.44	162.5	0.346	2.046
150	7.54	33.87	26.48	158.9	0.362	2.279
160	7.47	33.88	26.50	157.4	0.378	2.524
170	7.23	33.89	26.54	153.5	0.394	2.781
180	7.11	33.92	26.58	149.8	0.409	3.046
190	7.04	33.95	26.61	146.8	0.424	3.322
200	6.97	33.95	26.62	146.0	0.438	3.608
225	6.61	33.95	26.67	141.6	0.474	4.369
250	6.46	33.98	26.71	137.7	0.509	5.195



7D

CAST NO 7D LAT 45 00.1 DATE 5/20/75 TIME 542
STATION LONG 124 36.1 DPTH 430 PROBE OSU4
SWELL DIR 300 HT 7 PER 7 BAR 21.2 WEATHER 03
WIND DIR 350 SPD 19 CLOUD TYPE 8- AMOUNT 4
AIR TEMP 10.4 WET BULB 7.7
SAMPLE DEPTH 414. SAMPLE TEMP 5.42 SAL 34.097

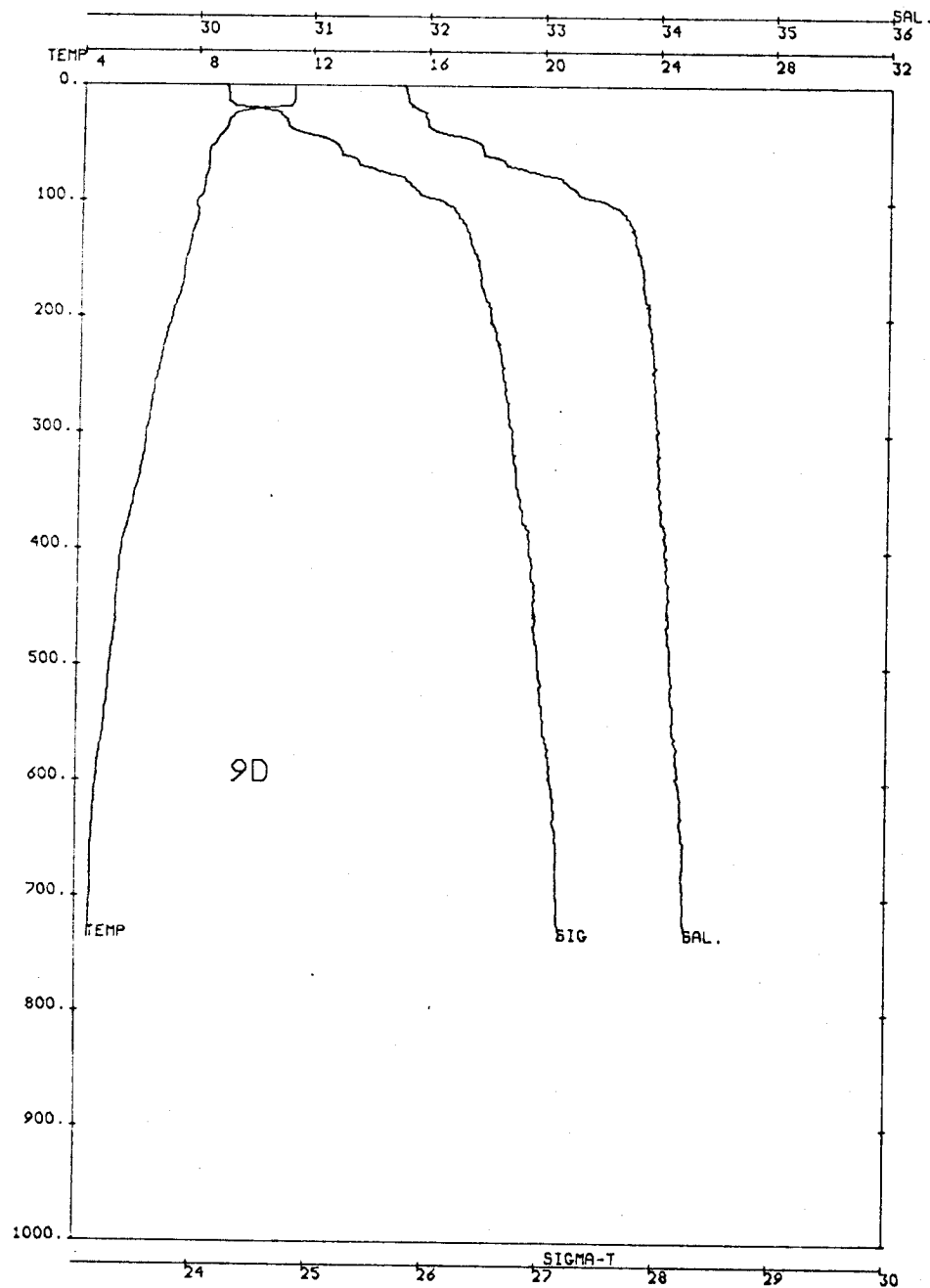
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	11.22	31.78	24.26	367.7	0.000	0.000
1	11.22	31.78	24.26	367.7	0.004	0.000
10	11.23	31.78	24.26	368.0	0.037	0.018
20	10.71	31.87	24.42	352.9	0.073	0.073
30	9.17	31.99	24.77	320.0	0.106	0.156
40	8.79	32.15	24.95	302.7	0.138	0.265
50	8.40	32.37	25.18	280.9	0.167	0.395
60	8.26	32.51	25.31	268.6	0.194	0.547
70	8.21	32.82	25.56	245.1	0.220	0.714
80	8.19	33.05	25.74	227.9	0.243	0.890
90	8.24	33.25	25.89	213.9	0.265	1.077
100	8.21	33.45	26.05	198.8	0.286	1.271
110	8.18	33.55	26.14	191.1	0.305	1.474
120	8.00	33.67	26.26	179.7	0.324	1.685
130	7.90	33.74	26.33	173.3	0.341	1.904
140	7.86	33.77	26.36	170.7	0.358	2.136
150	7.75	33.81	26.40	166.3	0.375	2.380
160	7.62	33.86	26.46	160.9	0.391	2.633
170	7.51	33.86	26.48	159.6	0.407	2.897
180	7.39	33.88	26.51	156.6	0.423	3.174
190	7.36	33.89	26.52	155.6	0.439	3.463
200	7.16	33.91	26.57	151.5	0.454	3.763
225	6.77	33.95	26.65	143.7	0.491	4.543
250	6.56	33.96	26.69	140.5	0.526	5.385
300	6.15	34.01	26.78	132.2	0.594	7.249
400	5.53	34.09	26.92	119.7	0.722	11.702
442	5.21	34.06	26.95	117.0	0.771	13.281



8D

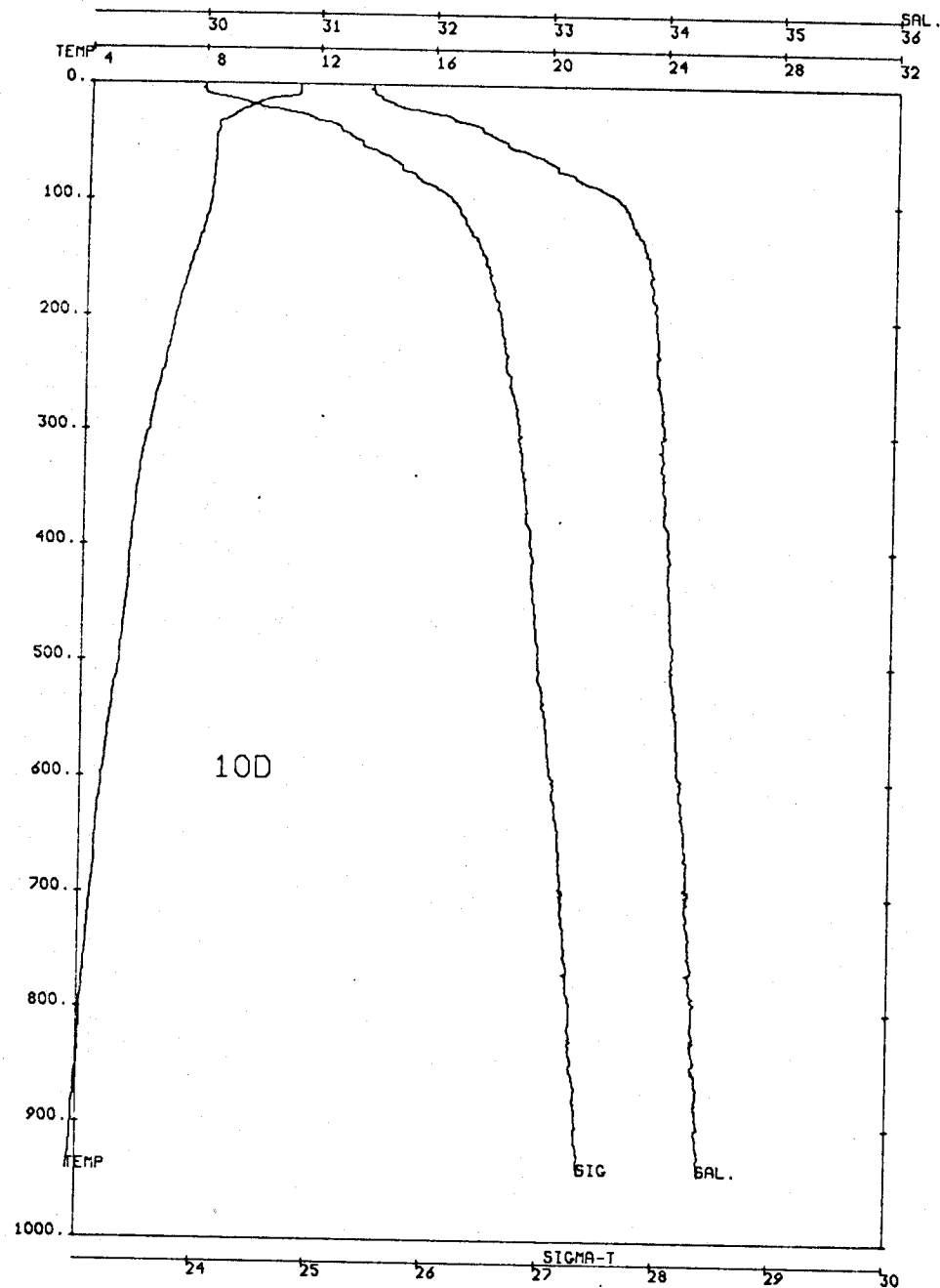
CAST NO 8D LAT 45 00.0 DATE 5/20/75 TIME 706
STATION LONG 124 42.0 DPTH 475 PROBE OSU4
SWELL DIR 300 HT 7 PER 7 BAR 23.0 WEATHER 03
WIND DIR 350 SPD 18 CLOUD TYPE 8- AMOUNT 4
AIR TEMP 10.3 WET BULB 8.1
SAMPLE DEPTH 427. SAMPLE TEMP 5.49 SAL

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	11.07	31.77	24.28	365.9	0.000	0.000
10	11.07	31.79	24.29	364.6	0.037	0.018
20	10.14	31.90	24.54	341.5	0.073	0.072
30	9.36	31.95	24.70	325.9	0.106	0.155
40	8.86	32.05	24.86	311.2	0.138	0.267
50	8.36	32.45	25.25	274.4	0.167	0.398
60	8.37	32.69	25.43	256.8	0.194	0.545
70	8.34	33.01	25.69	232.8	0.218	0.706
80	8.26	33.25	25.89	214.0	0.241	0.873
90	8.21	33.50	26.09	194.9	0.261	1.046
100	8.00	33.63	26.22	182.4	0.280	1.225
110	8.06	33.72	26.29	176.7	0.298	1.413
120	7.92	33.74	26.32	173.4	0.315	1.613
130	7.89	33.80	26.37	168.7	0.332	1.827
140	7.77	33.83	26.42	164.9	0.349	2.052
150	7.60	33.87	26.47	159.8	0.365	2.288
160	7.47	33.88	26.50	157.4	0.381	2.533
170	7.35	33.91	26.54	153.6	0.397	2.790
180	7.31	33.91	26.54	153.2	0.412	3.060
190	7.22	33.92	26.56	151.4	0.427	3.343
200	7.09	33.93	26.59	149.1	0.442	3.635
225	6.87	33.96	26.64	144.3	0.479	4.410
250	6.63	33.97	26.68	140.7	0.514	5.255
300	6.19	34.00	26.77	133.4	0.583	7.133
400	5.56	34.07	26.90	121.6	0.711	11.625
445	5.36	34.10	26.95	117.4	0.765	13.904



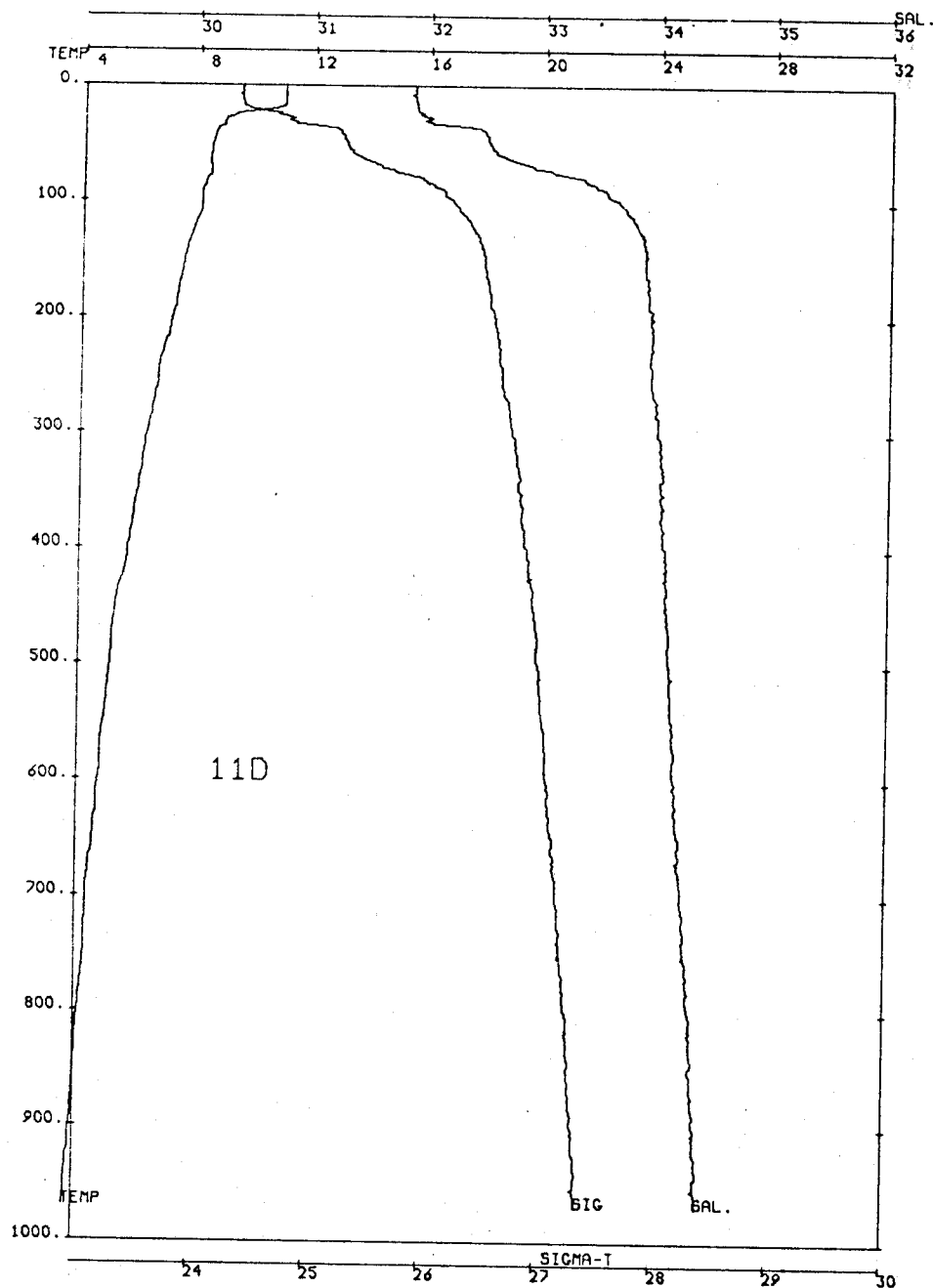
CAST NO 90 LAT 45 00.0 DATE 5/20/75 TIME 841
 STATION LONG 124 48.0 DPTH 746 PROBE 05U4
 SWELL DIR 300 HT 7 PER 7 BAR 23.0 WEATHER 02
 WIND DIR 330 SPD 18 CLOUD TYPE 6-8 AMOUNT 4
 AIR TEMP 10.3 WET BULB 8.1
 SAMPLE DEPTH 727. SAMPLE TEMP 4.46 SAL 34.248

DEPTH	TEMP	SAL	SIGMA	SVR	CELD	POTE
0	11.34	31.80	24.25	368.2	0.000	0.000
10	11.34	31.82	24.27	366.9	0.037	0.018
20	10.05	31.91	24.56	339.3	0.073	0.073
30	9.08	32.00	24.79	318.0	0.105	0.153
40	8.89	32.10	24.89	307.9	0.137	0.264
50	8.59	32.46	25.22	276.9	0.166	0.394
60	8.38	32.49	25.28	271.9	0.193	0.544
70	8.40	32.74	25.47	253.7	0.219	0.714
80	8.28	33.16	25.82	221.0	0.243	0.891
90	8.25	33.27	25.91	212.5	0.265	1.076
100	8.01	33.54	26.15	189.2	0.285	1.269
110	8.07	33.71	26.28	177.6	0.303	1.462
120	7.95	33.77	26.34	171.6	0.321	1.663
130	7.83	33.79	26.38	168.6	0.338	1.876
140	7.77	33.82	26.41	165.7	0.355	2.101
150	7.63	33.85	26.45	161.7	0.371	2.339
160	7.59	33.87	26.47	159.0	0.387	2.588
170	7.56	33.87	26.48	159.5	0.403	2.852
180	7.44	33.89	26.51	156.5	0.419	3.129
190	7.31	33.89	26.53	154.9	0.435	3.416
200	7.19	33.92	26.57	151.2	0.450	3.712
225	6.89	33.95	26.63	145.3	0.487	4.498
250	6.66	33.97	26.68	141.1	0.522	5.348
300	6.31	34.00	26.75	135.0	0.592	7.245
400	5.51	34.07	26.91	120.9	0.720	11.725
500	5.13	34.12	26.99	113.7	0.836	16.964
600	4.68	34.20	27.10	103.4	0.945	22.924
736	4.43	34.27	27.19	96.6	1.080	31.915



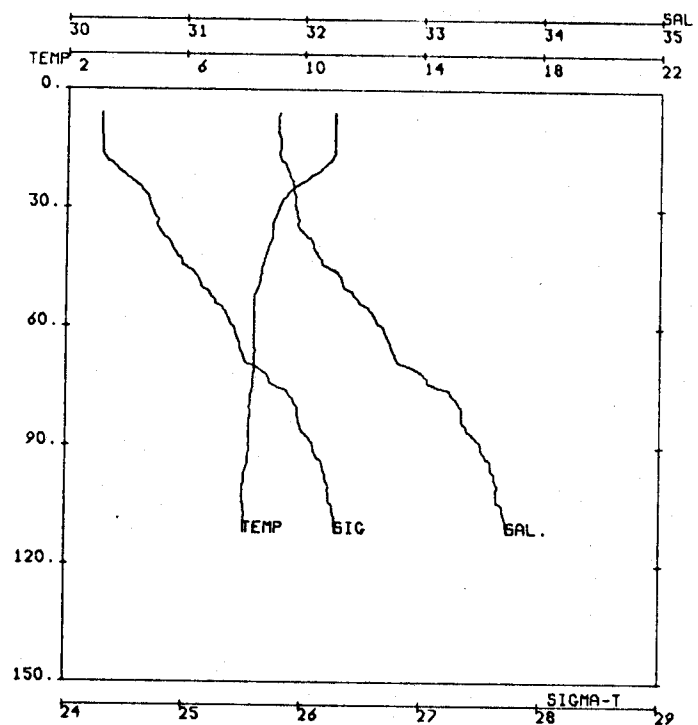
CAST NO 100 LAT 45 00.0 DATE 5/20/75 TIME 1043
 STATION LONG 125 00.0 DPTH 941 PROBE OSU4
 SWELL DIR 300 HT 7 PER 7 BAR 23.0 WEATHER 02
 WIND DIR 340 SPD 14 CLOUD TYPE 6-8 AMOUNT 5
 AIR TEMP 11.5 WET BULB 8.5
 SAMPLE DEPTH 894. SAMPLE TEMP 3.81 SAL 34.377

DEPTH	TEMP	SAL	SIGMA	SWA	DELD	POTE
0	11.31	31.46	24.00	392.8	0.000	0.000
1	11.31	31.46	24.00	392.9	0.004	0.000
10	11.18	31.54	24.08	384.9	0.039	0.020
20	9.54	31.73	24.50	344.7	0.075	0.074
30	8.80	32.16	24.96	302.0	0.107	0.152
40	8.46	32.43	25.22	277.1	0.135	0.251
50	8.39	32.63	25.38	261.4	0.162	0.372
60	8.39	32.89	25.59	242.3	0.187	0.511
70	8.37	33.06	25.72	229.5	0.211	0.663
80	8.33	33.26	25.89	214.3	0.233	0.830
90	8.27	33.48	26.07	197.2	0.254	1.004
100	8.24	33.64	26.20	185.1	0.273	1.185
110	8.17	33.69	26.25	180.5	0.291	1.377
120	8.05	33.74	26.30	175.3	0.309	1.582
130	7.89	33.81	26.38	168.0	0.326	1.798
140	7.78	33.84	26.42	164.3	0.343	2.023
150	7.63	33.87	26.47	160.2	0.359	2.258
160	7.51	33.89	26.50	157.2	0.375	2.504
170	7.40	33.90	26.52	155.1	0.391	2.762
180	7.26	33.90	26.54	153.3	0.406	3.032
190	7.20	33.92	26.57	151.1	0.421	3.312
200	7.06	33.94	26.60	147.9	0.436	3.603
225	6.87	33.96	26.64	144.3	0.473	4.382
250	6.61	33.97	26.69	140.4	0.509	5.234
300	6.19	34.01	26.77	132.7	0.577	7.104
400	5.64	34.08	26.90	121.8	0.704	11.564
500	5.30	34.11	26.96	116.5	0.824	16.944
600	4.70	34.20	27.10	103.7	0.935	23.024
800	4.08	34.32	27.26	89.4	1.128	36.512
941	3.67	34.39	27.36	80.6	1.248	46.965



CAST NO 110 LAT 44 59.9 DATE 5/20/75 TIME 1303
 STATION LONG 125 12.1 DPTH 1280 PROBE OSU4
 SWELL DIR 300 HT 10 PER 7 BAR 23.9 WEATHER 03
 WIND DIR 330 SPD 18 CLOUD TYPE 6- AMOUNT 5
 AIR TEMP 10.2 WET BULB 8.0
 SAMPLE DEPTH SAMPLE TEMP SAL

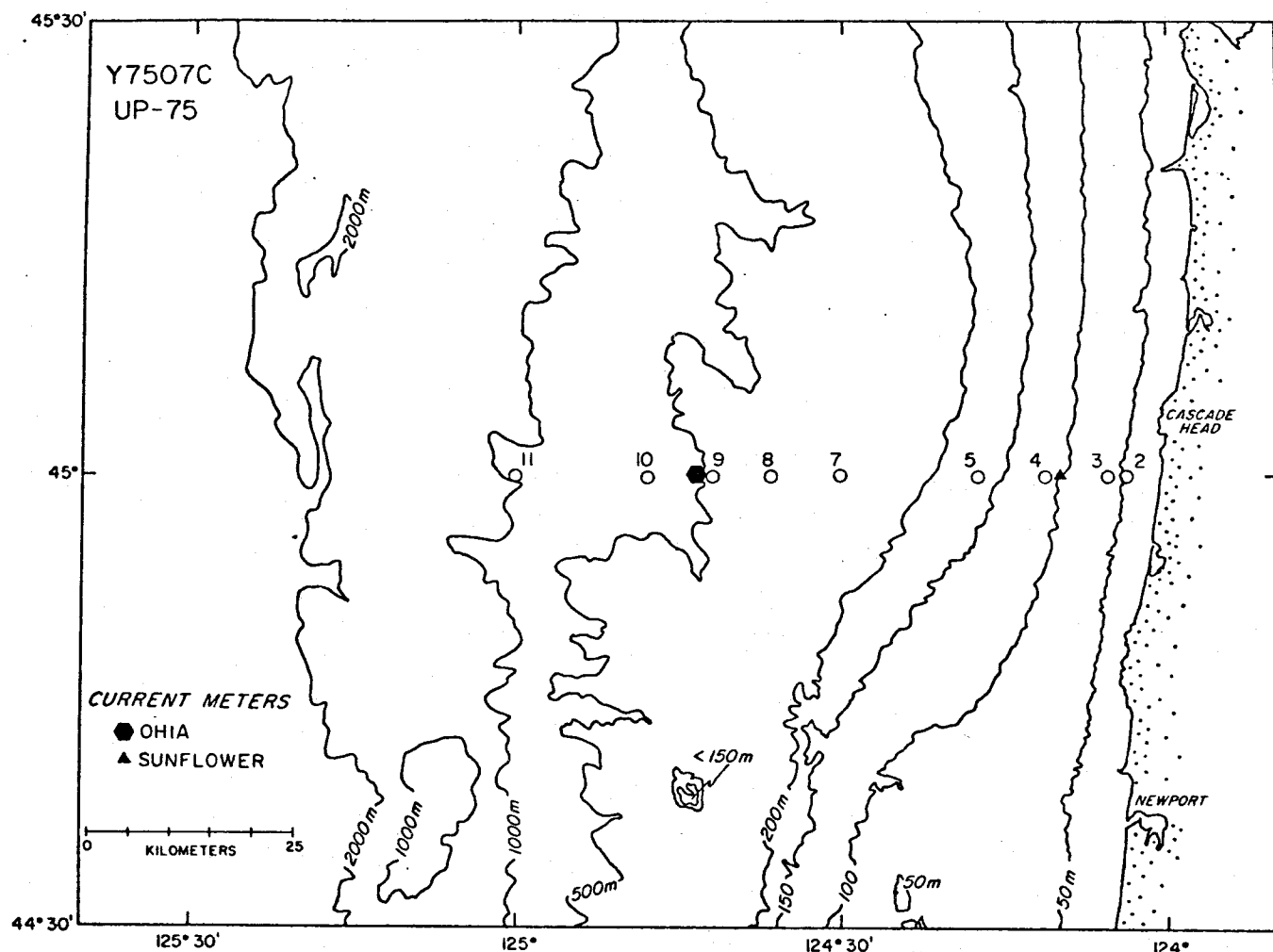
DEPTH	TEMP	SAL	SIGMA	SYA	DELD	POTE
0	10.96	31.87	24.38	356.7	0.000	0.000
10	10.97	31.87	24.37	357.0	0.016	0.018
20	10.61	31.89	24.45	349.8	0.071	0.071
30	8.91	31.95	24.77	319.2	0.104	0.153
40	8.55	32.48	25.24	274.7	0.133	0.255
50	8.45	32.51	25.28	271.2	0.161	0.378
60	8.41	32.63	25.38	261.9	0.188	0.525
70	8.42	32.91	25.60	241.5	0.213	0.688
80	8.27	33.34	25.96	207.5	0.235	0.857
90	8.11	33.53	26.13	191.2	0.255	1.027
100	8.12	33.65	26.22	182.6	0.274	1.206
110	8.06	33.73	26.29	176.0	0.292	1.394
120	7.88	33.80	26.38	168.4	0.309	1.591
130	7.74	33.86	26.44	162.1	0.326	1.798
140	7.63	33.88	26.47	159.3	0.342	2.016
150	7.53	33.87	26.49	158.3	0.358	2.246
160	7.46	33.88	26.50	157.1	0.373	2.491
170	7.36	33.90	26.53	154.1	0.389	2.748
180	7.30	33.91	26.55	153.1	0.404	3.017
190	7.26	33.90	26.54	153.4	0.420	3.301
200	7.12	33.95	26.60	148.0	0.435	3.594
225	6.85	33.93	26.62	146.2	0.472	4.378
250	6.66	33.94	26.66	143.3	0.508	5.237
300	6.30	33.99	26.74	135.6	0.578	7.150
400	5.67	34.07	26.89	122.9	0.706	11.656
500	5.10	34.12	26.99	113.4	0.824	16.953
600	4.72	34.16	27.07	106.9	0.934	22.999
800	4.11	34.32	27.26	89.7	1.131	36.725
969	3.67	34.39	27.36	80.8	1.275	49.441



120

CAST NO 120 LAT 44 59.2 DATE 5/20/75 TIME 1608
 STATION LONG 124 43.8 DPTH 550 PROBE OSU4
 SWELL DIR 300 HT 9 PER 8 BAR 24.8 WEATHER 03
 WIND DIR 340 SPD 14 CLOUD TYPE 6-8 AMOUNT 6
 AIR TEMP 11.0 WET BULB 8.6
 SAMPLE DEPTH 7. SAMPLE TEMP 11.02 SAL 31.811

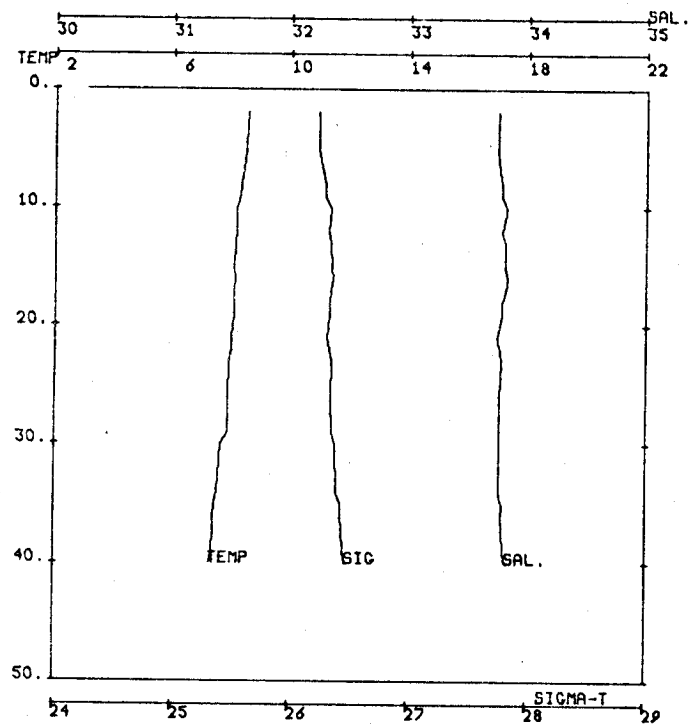
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	11.04	31.79	24.30	163.9	0.000	0.000
6	11.04	31.79	24.30	164.0	0.022	0.007
10	11.04	31.78	24.29	164.8	0.036	0.018
20	10.60	31.86	24.43	151.8	0.073	0.072
30	9.17	31.94	24.73	123.8	0.106	0.156
40	8.80	32.09	24.90	107.3	0.138	0.267
50	8.46	32.35	25.15	83.2	0.167	0.399
60	8.37	32.68	25.43	57.6	0.194	0.546
70	8.36	32.90	25.60	41.3	0.219	0.710
80	8.21	33.34	25.97	206.6	0.241	0.876
90	8.19	33.51	26.10	193.9	0.262	1.048
100	8.01	33.65	26.24	181.0	0.280	1.226
110	8.04	33.72	26.29	176.4	0.298	1.415
112	8.02	33.73	26.30	175.4	0.302	1.454



Y7507C
R/V YAQUINA
28 - 29 July 1975

Hydrographic section along 45°N, using CTD probe #1. Instrument appeared to function well during the cruise, but in processing the data it became apparent that the conductivity sensor had behaved erratically. Data from two stations (6, 12) were discarded. The remaining data were processed as usual. The salinity from stations 3 and 5 still disagreed with the sample salinity, and the CTD salinities at these stations was further adjusted by subtracting 0.06 from all salinity data at station 3, and 0.07 from all salinity data at station 5. All salinity data from this cruise is somewhat doubtful, but temperature was apparently measured successfully.

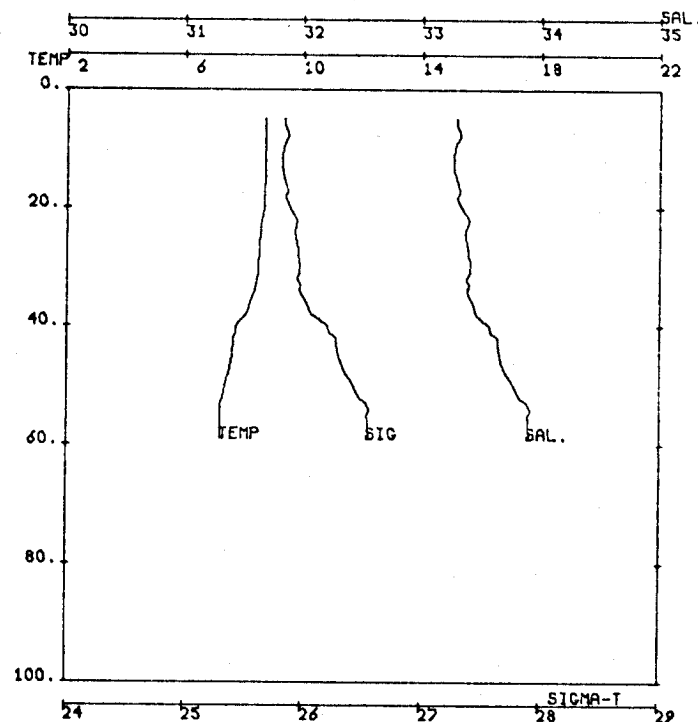
Personnel: Robert L. Smith, Jane Huyer, Dennis Barstow, Ben Moore, Robert Kapaun, Robert Still, Henry Pittock, Dennis Root, James Marthaler, Fred Ramsey, Beth Ramsey, Sean Smith, David Still, Dee Stewart, Rich Schramm, Jerry Bertrand.



2D

CAST NO 20 LAT 45 00 1 DATE 7/29/75 TIME 356
 STATION LONG 124 04 2 DPTH 44 PROBE OSU1
 SWELL DIR 340 HT 5 PER 6 BAR 15.6 WEATHER 02
 WIND DIR 340 SPD 6 CLOUD TYPE 6- AMOUNT 7
 AIR TEMP 11.0 WET BULB 9.8
 SAMPLE DEPTH SAMPLE TEMP SAL

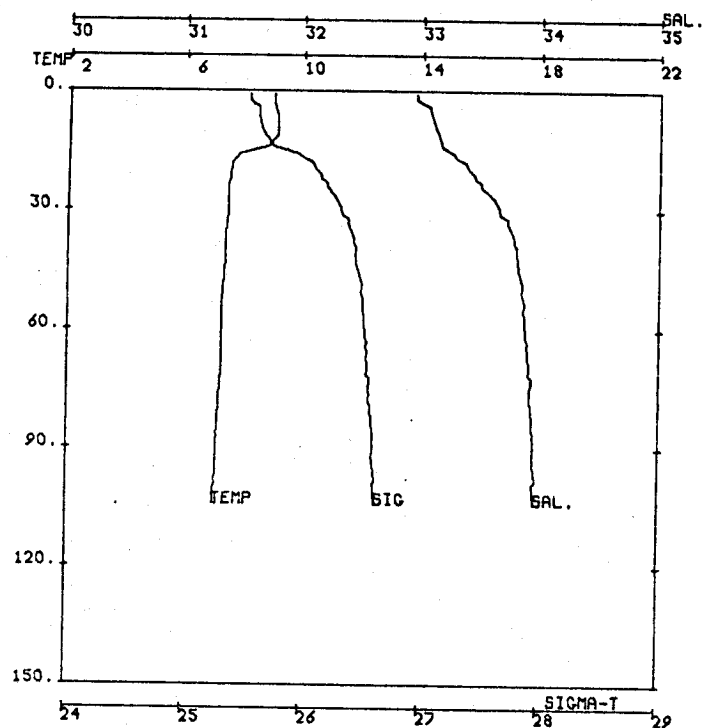
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.55	33.75	26.24	179.7	0.000	0.000
2	8.55	33.75	26.24	179.7	0.004	0.000
10	8.15	33.82	26.35	168.9	0.018	0.009
20	8.03	33.76	26.32	171.7	0.035	0.034
30	7.62	33.76	26.38	166.3	0.052	0.077
40	7.28	33.82	26.48	157.4	0.068	0.134



3D

CAST NO 30 LAT 45 00 0 DATE 7/29/75 TIME 426
 STATION LONG 124 06 0 DPTH 68 PROBE OSU1
 SWELL DIR 320 HT 4 PER 6 BAR 15.9 WEATHER 02
 WIND DIR 000 SPD 6 CLOUD TYPE 6- AMOUNT 3
 AIR TEMP 10.5 WET BULB 9.4
 SAMPLE DEPTH 52. SAMPLE TEMP 7.28 SAL 33.826

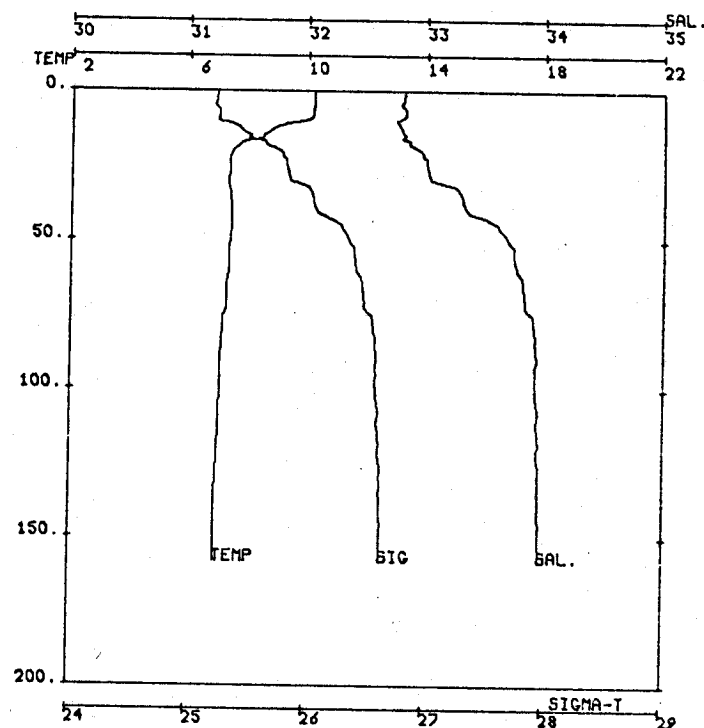
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	8.73	33.29	25.85	216.5	0.000	0.000
5	8.73	33.29	25.85	216.6	0.011	0.003
10	8.73	33.27	25.83	218.1	0.022	0.011
20	8.67	33.34	25.90	212.2	0.043	0.043
30	8.48	33.41	25.98	204.7	0.064	0.095
40	7.72	33.57	26.22	182.0	0.084	0.165
50	7.36	33.78	26.43	161.6	0.101	0.242
59	7.19	33.89	26.55	151.2	0.115	0.317



40

CAST NO 40 LAT 45 00.1 DATE 7/29/75 TIME 535
STATION LONG 124 11.9 DPTH 118 PROBE OSU1
SWELL DIR 320 HT 5 PER 6 BAR 16.2 WEATHER 02
WIND DIR 345 SPD 8 CLOUD TYPE 6- AMOUNT 4
AIR TEMP 12.1 WET BULB 10.2
SAMPLE DEPTH 102. SAMPLE TEMP 7.00 SAL 33.945

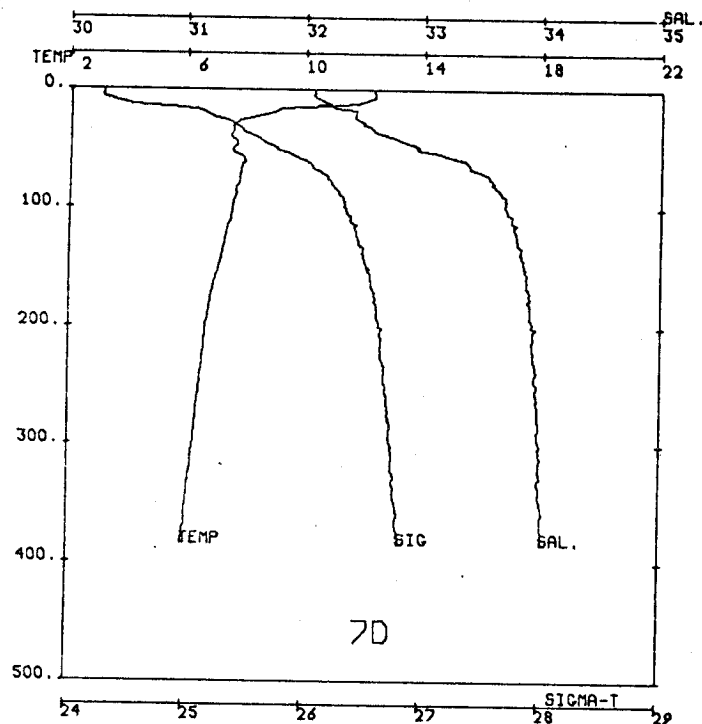
DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	9.01	32.95	25.54	245.9	0.000	0.000
1	9.01	32.95	25.54	245.9	0.002	0.000
10	9.12	33.12	25.66	234.7	0.024	0.012
20	7.53	33.41	26.12	191.0	0.045	0.044
30	7.43	33.65	26.33	171.5	0.063	0.088
40	7.35	33.80	26.45	159.8	0.080	0.146
50	7.27	33.84	26.49	155.9	0.096	0.217
60	7.23	33.88	26.50	152.5	0.111	0.301
70	7.22	33.91	26.56	150.3	0.126	0.400
80	7.14	33.93	26.58	147.9	0.141	0.511
90	7.09	33.95	26.61	145.9	0.156	0.636
100	7.00	33.95	26.62	144.9	0.170	0.774
104	6.99	33.96	26.63	144.1	0.176	0.833



50

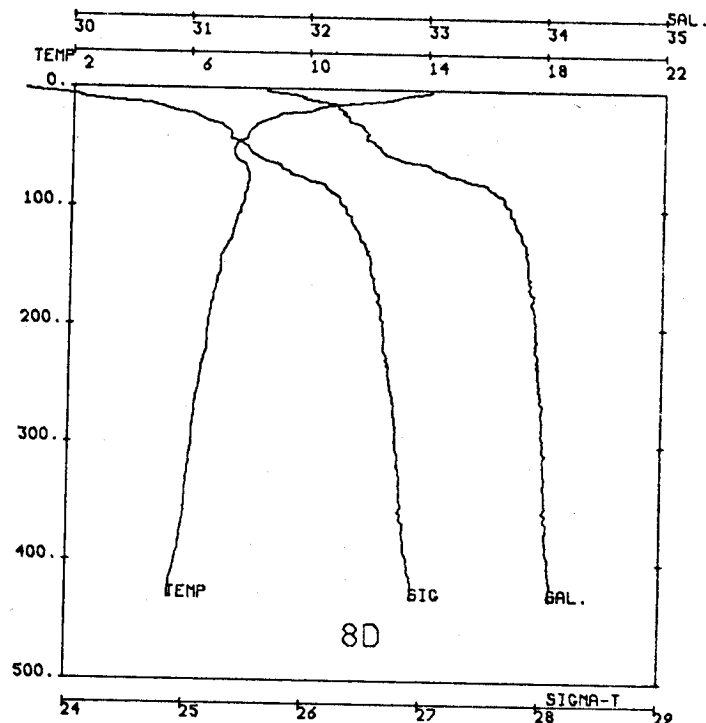
CAST NO 50 LAT 44 59.9 DATE 7/29/75 TIME 650
STATION LONG 124 17.9 DPTH 160 PROBE OSU1
SWELL DIR 320 HT 5 PER 6 BAR 16.4 WEATHER 02
WIND DIR 340 SPD 6 CLOUD TYPE 6- AMOUNT 2
AIR TEMP 11.6 WET BULB 10.5
SAMPLE DEPTH 144. SAMPLE TEMP 6.94 SAL 33.958

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	10.21	32.81	25.23	274.9	0.000	0.000
1	10.21	32.81	25.23	274.9	0.002	0.000
10	9.84	32.74	25.24	274.3	0.027	0.014
20	7.43	32.95	25.77	223.9	0.052	0.051
30	7.32	33.05	25.87	215.1	0.074	0.105
40	7.43	33.35	26.09	194.4	0.094	0.175
50	7.38	33.70	26.37	167.8	0.112	0.255
60	7.34	33.77	26.43	162.2	0.128	0.345
70	7.27	33.84	26.49	156.2	0.144	0.448
80	7.14	33.91	26.57	149.4	0.159	0.562
90	7.08	33.94	26.60	146.5	0.174	0.688
100	7.06	33.93	26.59	147.1	0.189	0.828
110	7.04	33.94	26.61	146.3	0.204	0.981
120	6.99	33.94	26.61	145.8	0.218	1.149
130	6.95	33.95	26.63	144.2	0.233	1.330
140	6.92	33.96	26.64	143.7	0.247	1.524
150	6.92	33.96	26.64	143.8	0.261	1.732
158	6.91	33.96	26.64	143.8	0.273	1.909



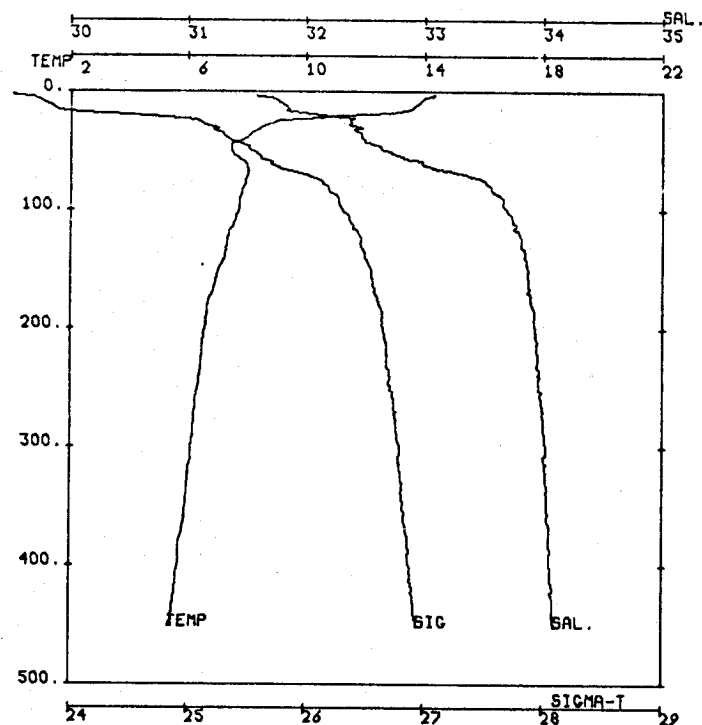
CAST NO 7D LAT 44 59.1 DATE 7/29/75 TIME 1140
 STATION LONG 124 30.2 DPTH 390 PROBE OSU1
 SWELL DIR 320 HT 6 PER 7 BAR 16.8 WEATHER 03
 WIND DIR 000 SPD 0 CLOUD TYPE 6- AMOUNT 7
 AIR TEMP 15.4 WET BULB 13.8
 SAMPLE DEPTH SAMPLE TEMP SAL

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	12.33	32.07	24.28	365.6	0.000	0.000
2	12.33	32.07	24.28	365.7	0.007	0.001
10	11.96	32.15	24.42	353.0	0.036	0.018
20	8.75	32.42	25.17	291.5	0.068	0.065
30	7.56	32.50	25.41	258.9	0.095	0.112
40	7.47	32.72	25.59	241.9	0.120	0.220
50	7.52	32.94	25.75	226.3	0.142	0.325
60	7.96	33.34	26.00	202.7	0.165	0.442
70	7.80	33.49	26.14	189.5	0.184	0.570
80	7.73	33.57	26.22	182.7	0.203	0.708
90	7.62	33.69	26.33	172.5	0.221	0.858
100	7.51	33.70	26.35	170.3	0.238	1.021
110	7.47	33.74	26.39	167.0	0.254	1.198
120	7.31	33.78	26.45	161.5	0.271	1.386
130	7.26	33.79	26.46	160.7	0.287	1.587
140	7.17	33.83	26.50	156.7	0.303	1.800
150	7.06	33.86	26.54	153.1	0.318	2.024
160	6.93	33.87	26.57	150.4	0.333	2.259
170	6.85	33.90	26.60	147.4	0.348	2.506
180	6.76	33.90	26.61	146.6	0.363	2.764
190	6.72	33.91	26.63	145.5	0.378	3.034
200	6.65	33.91	26.63	144.7	0.392	3.315
225	6.57	33.94	26.67	141.8	0.428	4.073
250	6.45	33.97	26.71	138.3	0.463	4.905
300	6.25	34.00	26.76	134.2	0.531	6.785
384	5.87	34.01	26.81	129.7	0.642	10.574



CAST NO 8D LAT 45 00.2 DATE 7/29/75 TIME 1307
 STATION LONG 124 36.9 DPTH 439 PROBE OSU1
 SWELL DIR 320 HT 6 PER 7 BAR 17.2 WEATHER 03
 WIND DIR 240 SPD 3 CLOUD TYPE 6- AMOUNT 8
 AIR TEMP 15.2 WET BULB 12.9
 SAMPLE DEPTH 428. SAMPLE TEMP 5.44 SAL 34.117

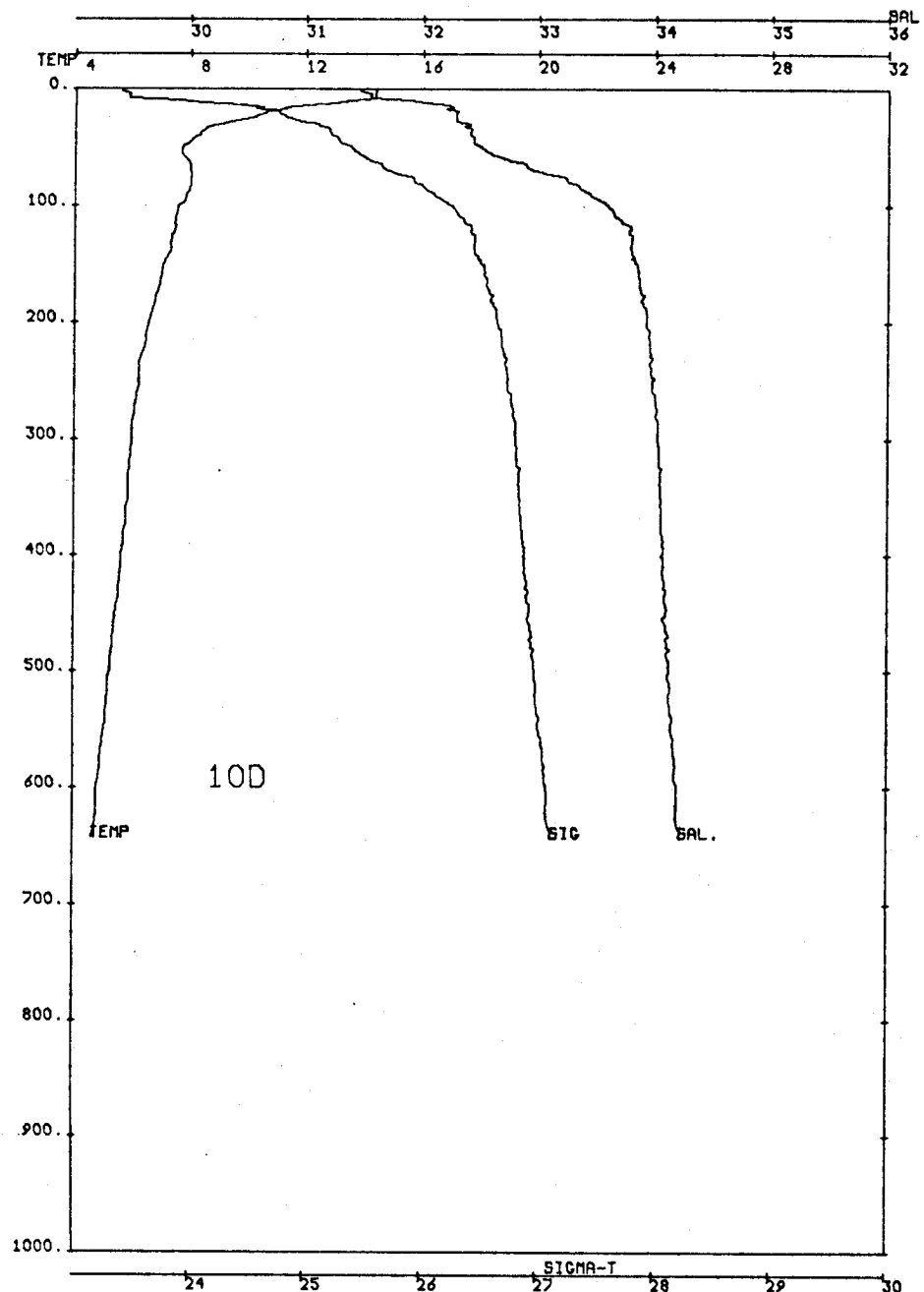
DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	14.10	31.64	23.60	430.5	0.000	0.000
2	14.10	31.64	23.60	430.5	0.009	0.001
10	12.41	32.04	24.24	369.5	0.040	0.020
20	9.75	32.31	24.92	305.0	0.073	0.068
30	8.20	32.43	25.26	273.3	0.102	0.140
40	7.90	32.49	25.35	264.8	0.129	0.233
50	7.46	32.60	25.50	250.4	0.154	0.349
60	7.60	32.79	25.63	238.6	0.179	0.484
70	7.97	33.14	25.85	217.5	0.202	0.631
80	7.92	33.51	26.14	189.8	0.222	0.786
90	7.82	33.65	26.27	178.2	0.241	0.944
100	7.72	33.71	26.33	172.4	0.258	1.111
110	7.59	33.75	26.38	167.9	0.276	1.291
120	7.48	33.80	26.44	162.4	0.292	1.481
130	7.30	33.85	26.50	156.8	0.308	1.681
140	7.09	33.86	26.54	153.4	0.324	1.891
150	7.09	33.86	26.54	153.5	0.339	2.117
160	6.97	33.87	26.56	151.3	0.354	2.349
170	6.88	33.89	26.59	148.8	0.369	2.596
180	6.77	33.90	26.61	146.7	0.384	2.853
190	6.72	33.92	26.63	144.7	0.398	3.121
200	6.66	33.94	26.66	142.6	0.413	3.402
225	6.54	33.96	26.69	139.9	0.448	4.158
250	6.37	33.98	26.73	136.6	0.483	4.982
300	6.15	34.01	26.77	132.5	0.550	6.825
400	5.64	34.06	26.88	123.3	0.679	11.313
431	5.42	34.07	26.92	120.2	0.716	12.870



90

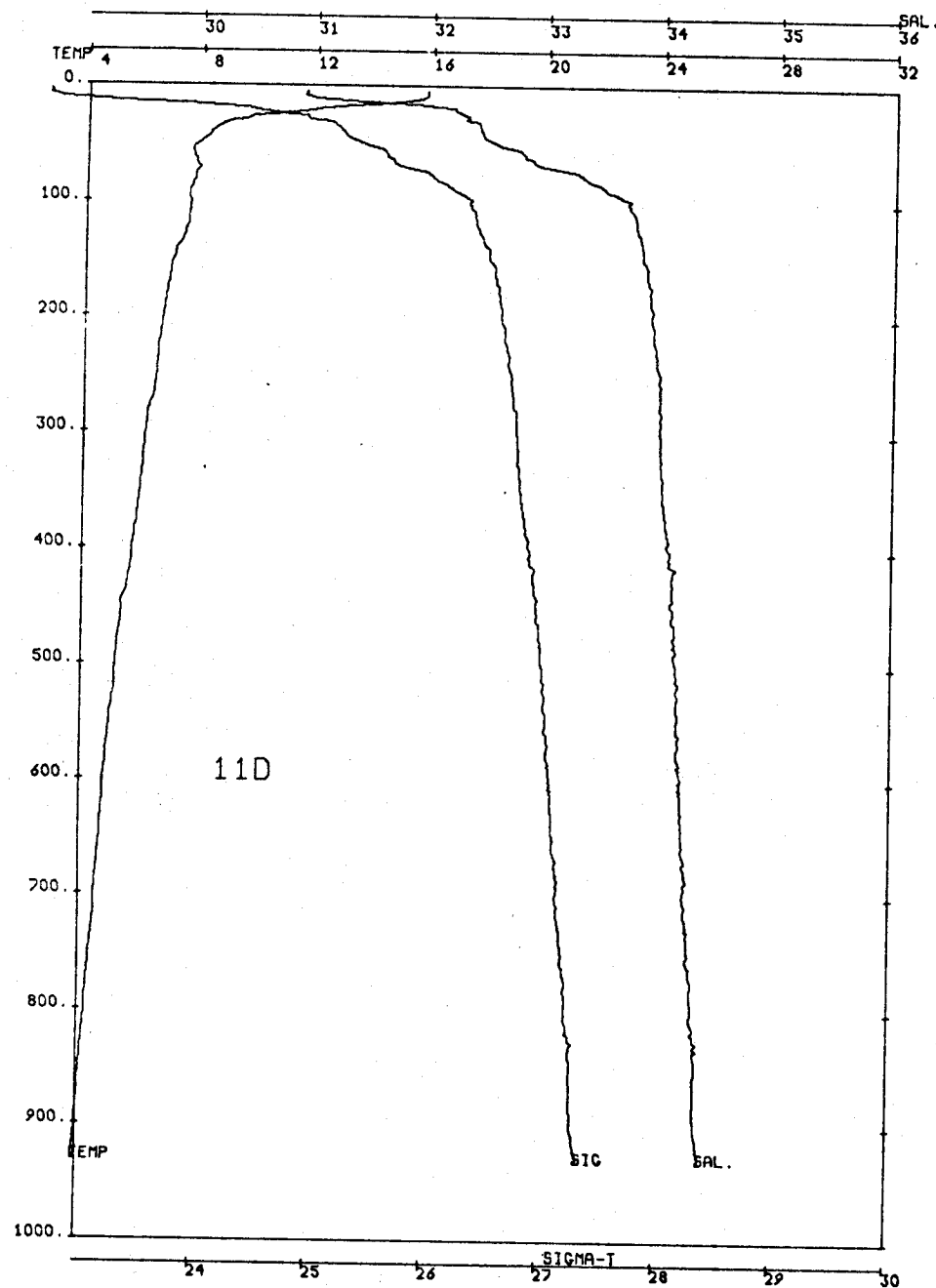
CAST NO 90 LAT 45 00.1 DATE 7/29/75 TIME 1417
 STATION LONG 124 42.0 DEPTH 463 PROBE 0501
 SWELL DIR 320 HT 6 PER 7 BAR 17.3 WEATHER 02
 WIND DIR SPD CLOUD TYPE 3-6 AMOUNT 8
 AIR TEMP WET BULB
 SAMPLE DEPTH 449. SAMPLE TEMP 5.38 SAL 34.125

DEPTH	TEMP	SAL	SIGMA	SVA	DELD	POTE
0	14.32	31.58	23.51	439.2	0.000	0.000
3	14.32	31.58	23.51	439.3	0.013	0.002
10	13.75	31.80	23.79	412.4	0.043	0.021
20	11.25	32.13	24.53	342.7	0.082	0.080
30	8.46	32.44	25.22	275.3	0.112	0.153
40	7.88	32.49	25.35	264.5	0.139	0.248
50	7.45	32.66	25.54	246.2	0.164	0.362
60	7.94	32.98	25.72	229.6	0.188	0.492
70	8.00	33.35	26.01	202.7	0.210	0.635
80	7.83	33.56	26.20	184.9	0.229	0.780
90	7.73	33.66	26.29	176.2	0.247	0.934
100	7.69	33.69	26.32	173.6	0.265	1.101
110	7.53	33.74	26.38	167.8	0.282	1.279
120	7.34	33.80	26.45	160.9	0.298	1.467
130	7.27	33.81	26.47	159.4	0.314	1.667
140	7.20	33.84	26.50	156.3	0.330	1.879
150	7.00	33.88	26.56	151.1	0.345	2.101
160	6.90	33.87	26.57	150.2	0.360	2.334
170	6.79	33.89	26.60	147.6	0.375	2.581
180	6.65	33.91	26.63	144.4	0.390	2.836
190	6.61	33.92	26.65	143.0	0.404	3.101
200	6.54	33.93	26.66	141.8	0.419	3.379
225	6.45	33.96	26.70	138.7	0.454	4.123
250	6.32	33.96	26.72	137.4	0.488	4.944
300	6.09	34.03	26.80	129.9	0.555	6.771
400	5.65	34.06	26.88	123.4	0.682	11.213
451	5.36	34.10	26.95	117.5	0.743	13.825



CAST NO 100 LAT 45 00 1 DATE 7/29/75 TIME 1752
 STATION LONG 124 48 0 DPTH 670 PROCS 0501
 SWELL DIR 320 HT 6 PER 6 BAR 18 2 WEATHER 02
 WIND DIR 330 SPD 17 CLOUD TYPE 3-6 AMOUNT 7
 AIR TEMP 15.9 WET BULB 12.6
 SAMPLE DEPTH 640. SAMPLE TEMP 4.66 SAL 34.223

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	POTE
0	14.34	31.46	23.41	448.4	0.000	0.000
2	14.34	31.46	23.41	448.5	0.009	0.001
10	13.46	31.89	23.92	400.0	0.044	0.002
20	10.57	32.29	24.77	319.5	0.079	0.074
30	9.02	32.41	25.12	286.6	0.110	0.151
40	8.28	32.42	25.24	275.3	0.138	0.248
50	7.69	32.51	25.39	260.5	0.165	0.369
60	7.88	32.72	25.53	248.0	0.190	0.509
70	8.01	32.98	25.71	230.6	0.214	0.644
80	8.00	33.26	25.94	209.5	0.236	0.827
90	7.85	33.44	26.10	194.2	0.256	0.997
100	7.56	33.60	26.27	178.5	0.275	1.175
110	7.48	33.67	26.34	171.9	0.292	1.359
120	7.49	33.80	26.43	162.9	0.309	1.551
130	7.33	33.79	26.45	161.5	0.325	1.754
140	7.27	33.79	26.46	161.0	0.341	1.972
150	7.06	33.85	26.53	153.9	0.357	2.200
160	6.99	33.86	26.55	152.6	0.372	2.437
170	6.91	33.87	26.57	150.4	0.387	2.687
180	6.80	33.88	26.59	148.6	0.402	2.948
190	6.66	33.93	26.65	143.2	0.417	3.218
200	6.56	33.93	26.66	142.1	0.431	3.496
225	6.36	33.96	26.72	137.2	0.456	4.233
250	6.23	33.97	26.74	135.5	0.500	5.045
300	5.99	34.03	26.81	128.7	0.566	6.347
400	5.65	34.06	26.88	123.8	0.691	11.244
500	5.25	34.13	26.98	114.7	0.810	16.586
600	4.81	34.20	27.09	105.2	0.921	22.656
643	4.62	34.22	27.13	101.7	0.966	25.448



CAST NO 11D LAT 45 00.2 DATE 7/29/75 TIME 1930
 STATION LONG 125 00.0 DPTH 944 PROSE 0501
 SWELL DIR 320 HT 6 PER 8 BAR 19.0 WEATHER 02
 WIND DIR 330 SPD 18 CLOUD TYPE 3-6 AMOUNT 7
 AIR TEMP 16.2 NET BULB 12.9
 SAMPLE DEPTH 886. SAMPLE TEMP 3.98 SAL 34.351

DEPTH	TEMP	SAL	SIGMA	SVR	DELD	FOTE
0	15.80	30.91	22.68	518.5	0.000	0.000
5	15.80	30.91	22.68	518.6	0.026	0.006
10	15.66	30.96	22.75	512.5	0.052	0.026
20	11.98	32.19	24.44	351.0	0.095	0.089
30	9.17	32.34	25.04	294.1	0.127	0.169
40	8.28	32.43	25.24	274.6	0.155	0.267
50	7.85	32.57	25.41	258.6	0.182	0.387
60	7.70	32.80	25.62	239.3	0.207	0.523
70	7.92	33.04	25.77	224.9	0.230	0.674
80	7.74	33.34	26.04	199.8	0.251	0.830
90	7.55	33.52	26.20	184.1	0.270	0.993
100	7.63	33.69	26.33	172.7	0.288	1.159
110	7.56	33.76	26.39	166.7	0.305	1.338
120	7.52	33.77	26.40	165.8	0.321	1.529
130	7.39	33.80	26.45	161.7	0.338	1.734
140	7.13	33.83	26.51	156.1	0.354	1.948
150	7.02	33.84	26.53	154.1	0.369	2.174
160	6.95	33.86	26.55	151.8	0.384	2.409
170	6.89	33.88	26.58	149.6	0.399	2.658
180	6.81	33.90	26.61	147.3	0.414	2.918
190	6.76	33.91	26.62	146.1	0.429	3.190
200	6.71	33.91	26.63	145.5	0.443	3.474
225	6.56	33.95	26.68	140.9	0.479	4.235
250	6.49	33.98	26.71	137.9	0.514	5.064
300	6.14	33.99	26.77	133.1	0.582	6.926
400	5.72	34.09	26.90	122.1	0.711	11.442
500	5.18	34.15	27.01	112.0	0.828	16.795
600	4.81	34.17	27.07	107.2	0.918	22.721
800	4.23	34.31	27.24	92.2	1.137	36.593
931	3.82	34.37	27.33	83.7	1.252	46.535

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