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NOAA Technical Memorandum ERL AOML-47 ✓

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PHYSICAL OCEANOGRAPHIC DATA COLLECTED  
IN THE TROPICAL SOUTH ATLANTIC

Carol Roffer  
Kathy Callery  
Mayra C. Pazos  
Robert L. Molinari

Atlantic Oceanographic and Meteorological Laboratories  
Miami, Florida  
November 1981

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UNITED STATES  
DEPARTMENT OF COMMERCE

Malcolm Baldrige,  
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NATIONAL OCEANIC AND  
ATMOSPHERIC ADMINISTRATION

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## Introduction

The data presented in this report are the result of three cruises to the tropical South Atlantic Ocean during January - February, 1979, July 1979 and February - March 1980. They were collected as part of the Department of Energy's Ocean Thermal Energy Conversion (OTEC) Program, and the First GARP Global Experiment (FGGE). The data fulfill an OTEC requirement for physical oceanographic data in the South Atlantic south of about 4°S, to evaluate the potential of various sites for OTEC operations. Other data collected in the tropical Atlantic for the OTEC program are reported in Molinari et al. (1979).

Data collected as part of FGGE were obtained to study the seasonal cycle of the equatorial current system and the response of these currents to changes in wind stress fields. Katz et al. (1981) and Molinari et al. (1981), using these data, describe some aspects of the seasonal cycle of the Equatorial Undercurrent and the South Equatorial Undercurrent, respectively.

The analysis techniques applied to each data set are described next. Listings and figures for each set are given in Appendices as noted. Station positions for each cruise are shown in Appendix 1.

## Expendable Bathythermograph Data

Expendable bathythermograph (XBT) profiles are digitized upon return to AOML. Each profile is examined for a check cycle tick mark, an indicator of proper system initialization. Any profile without such a tick mark is compared to surrounding profiles for consistency. Calibration of the recorder is maintained by comparison of the sea surface temperature (SST) from the XBT profile and the temperature of the bucket sample taken during the profile.

The XBT's are read at 1° isotherm intervals. The 1° isotherm depths are listed in Appendix 2. All XBT data have been submitted to the National Oceanographic Data Center (NODC) for inclusion in their data bank.

## CTD Data

Pressure, temperature and conductivity are measured using a Neil Brown Mark III B CTD system. The Neil Brown Fish transmits data to a deck unit where it is recorded on magnetic tape. Salinity is calculated from the temperature and conductivity values.

The raw depth, temperature and salinity data are calibrated by other in situ data to obtain corrected values. Niskin bottles are used to collect water samples for the salinity calibration. The bottles, with reversing thermometers for the depth and temperature calibrations are placed on a Rosette Sampler and tripped electronically at selected depths. Thermometric depths computed from reversing thermometers are accurate to within  $\pm 10$  m. Temperature data are accurate to within  $\pm .01^{\circ}\text{C}$ . Salinity samples analyzed on a Guildline Autosol 8400 are accurate to within  $\pm .005\%$ . The temperature and salinity data obtained from the bottles were quality controlled to eliminate inconsistent values.

The CTD data are smoothed to reduce noise and generate 1 m - averaged casts. The 1 m temperature and salinity CTD values are compared to the bottle values to generate calibration curves of parameter offset versus depth. The temperature and pressure data for each of the three cruises did not require calibration. The salinity calibration curves are plotted in Figures 1, 2 and 3. Offsets, constant with depth, were applied to the January - February 1979 and July 1979 salinity data. The corrected salinity data for these cruises show a mean offset of  $.0016 \pm .0055$  and  $.0008 \pm .0098$ , respectively. More bottle data were available during the February - March 1980 cruise so a depth dependent salinity offset was applied to the data. The corrected salinity data yielded a mean offset of  $.00076 \pm .008$ . The corrected CTD data for the three cruises are plotted and listed in Appendix 3.

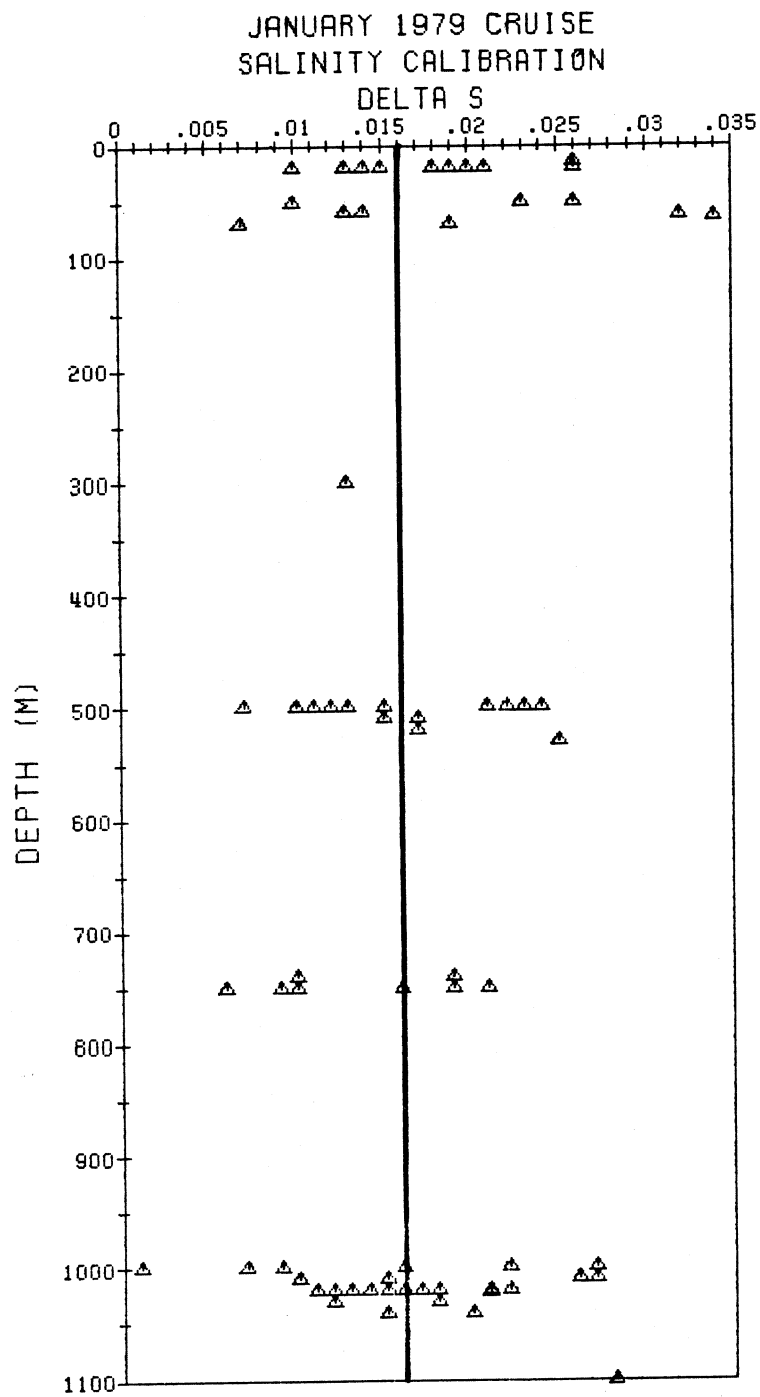


Figure 1: Calibration curve, salinity offset versus depth, for January 1979 cruise.

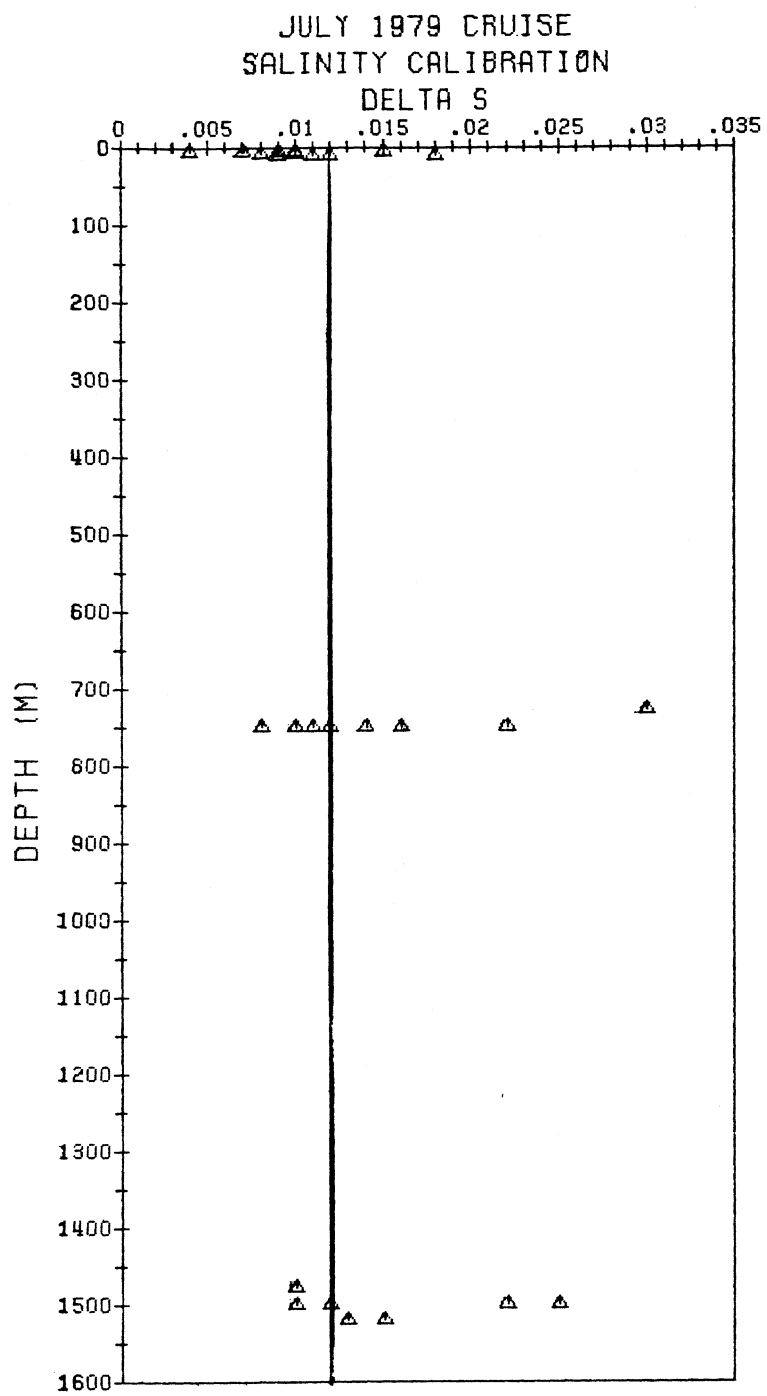


Figure 2: Calibration curve, salinity offset versus depth, for July 1979 cruise.

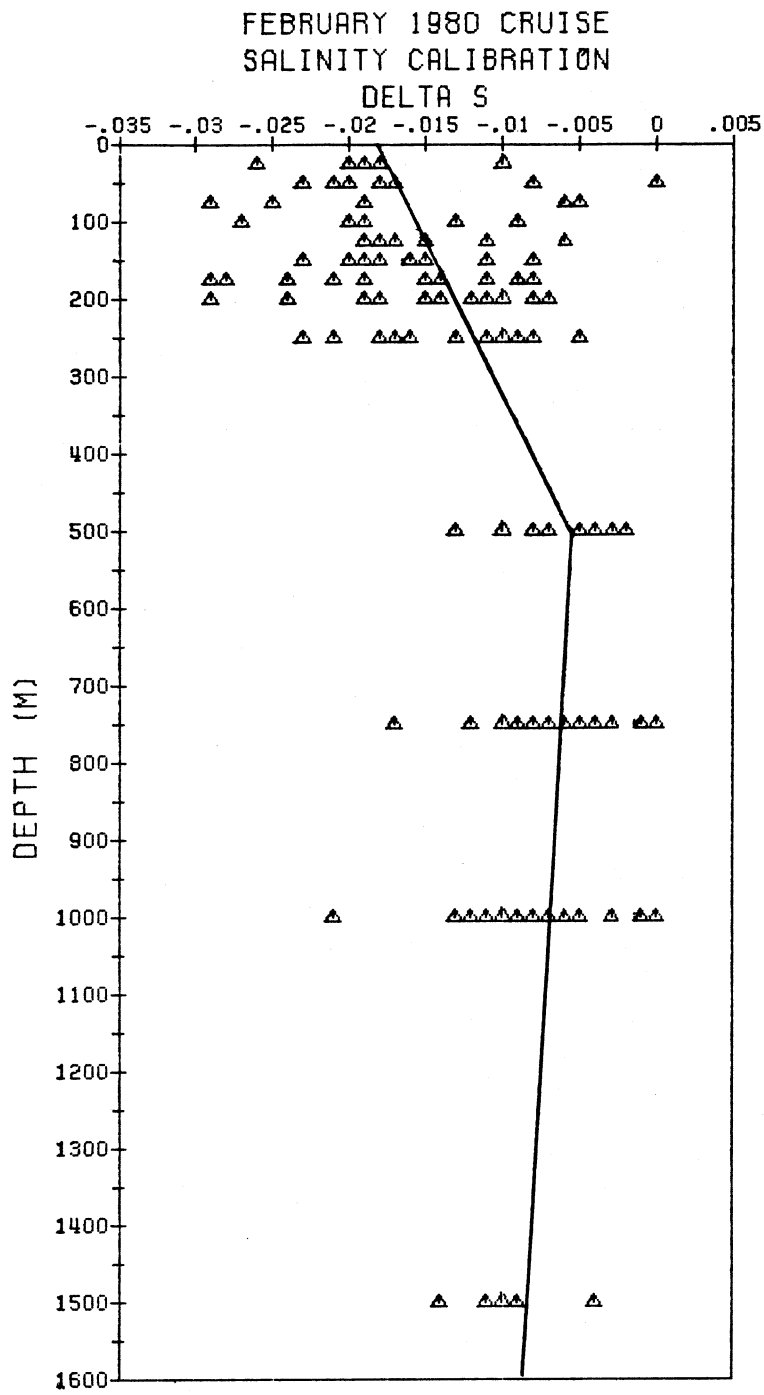


Figure 3: Calibration curve, salinity offset versus depth, for February 1980 cruise.

### Profiling Current Meter Data

Vertical profiles of horizontal current were obtained using a Marine Profile's Cyclesonde. The cyclesonde measures current relative to the ship, thus the ship drift must be removed from the velocity record. In addition, the data must be corrected for the sinking rate of the unit because of the configuration of the speed sensors.

The navigation system aboard the RESEARCHER lacks sufficient precision to generate accurate ship drift corrections at tropical latitudes. Therefore, it was assumed, somewhat arbitrarily, that currents were small at 600 m and the profiles were referenced to an assumed level of no motion at this depth. Geostrophic computations (Molinari et al., 1981) indicate speeds on the order of 10 cm/s at 600 m. Relative cyclesonde speeds are probably accurate to  $\pm 15$  cm/s and the directions to  $\pm 15^\circ$ . Cyclesonde listings and plots are given in Appendix 4.

### Drifting Buoy Data

Lagrangian drifters were deployed at positions listed in Table 1. The drifters are tracked by satellite. The accuracy of the tracking system is  $\pm 5$  km. A window shade drogue was attached to the surface drifters by a 30 m cable to insure that the drifter is coupled to the water column.

The position data received from the buoys are edited and smoothed by routines given in Herman and Cardwell (1977). These routines eliminate positions which give buoy speeds greater than five knots and use least square fitting programs to obtain positions at equal time intervals. Buoy positions are computed for six-hourly intervals. The smooth buoy positions, trajectories and speeds are given in Appendix 5.



Table 1: Deployment dates and positions for satellite tracked surface drifters.

<u>Bouy ID</u>	<u>Date</u>	<u>Latitude</u>	<u>Longitude</u>
1445	21 February 1979	7 <sup>0</sup> 35.0S	27 <sup>0</sup> 26.4W
2224	18 July 1979	6 <sup>0</sup> 59.4S	25 <sup>0</sup> 00.0W
2221	27 February 1980	7 <sup>0</sup> 00.0S	25 <sup>0</sup> 00.0W
2253	28 February 1980	9 <sup>0</sup> 00.0S	25 <sup>0</sup> 00.0W

## Acknowledgements

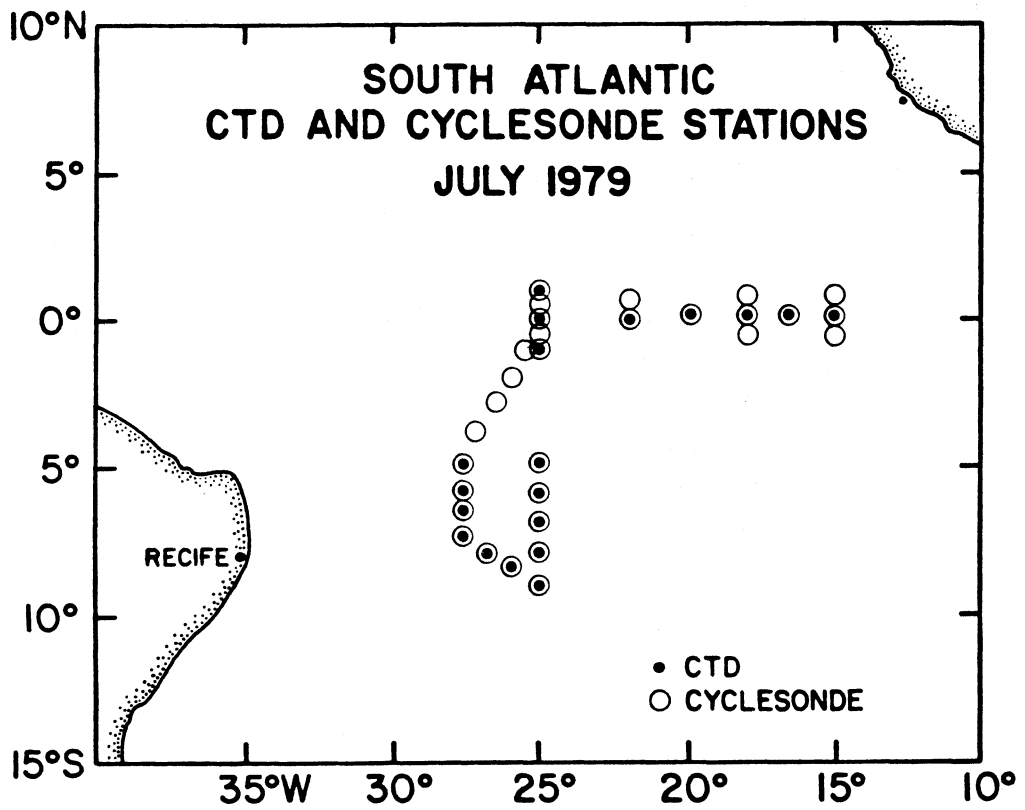
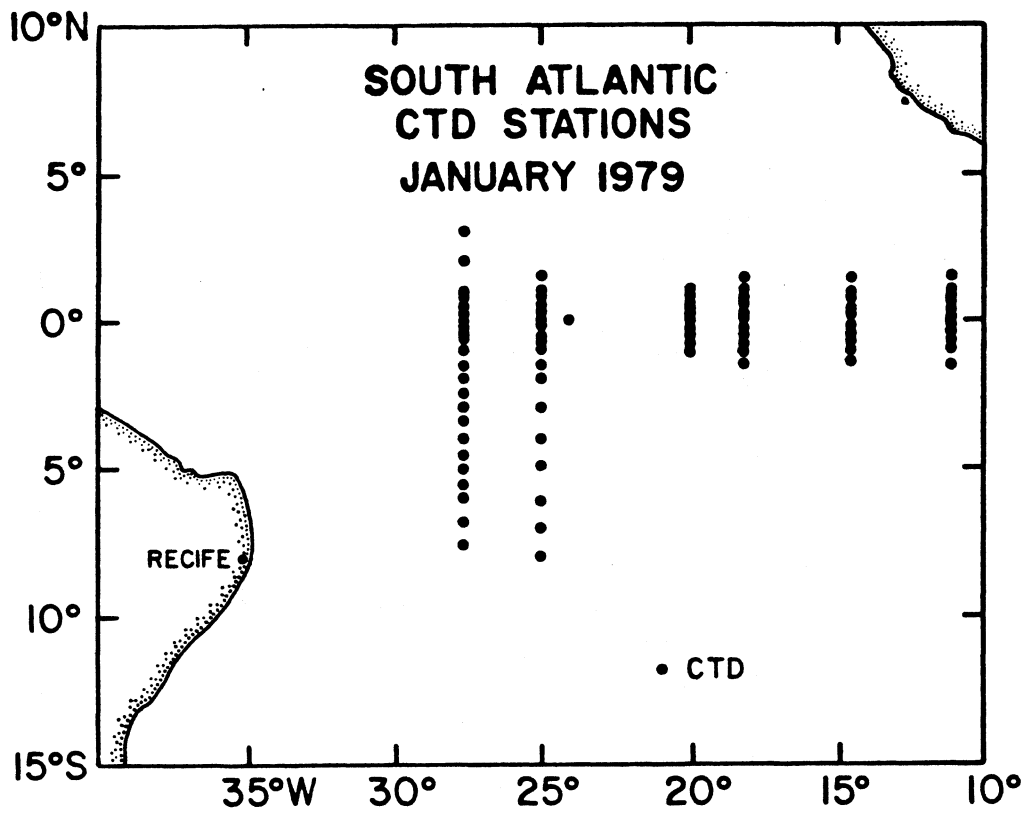
These data are in a large measure a direct result of the outstanding efforts of the officers and crew of the R/V RESEARCHER. Much of the computer software used to analyze these data were generated by Mr. A. Herman and Mr. M. Minton. These data have been collected as part of a DOE-NOAA Interagency Agreement Number EX-76-A-29-1041. Data analysis has been funded, in part, by the NOAA Special Projects Office.

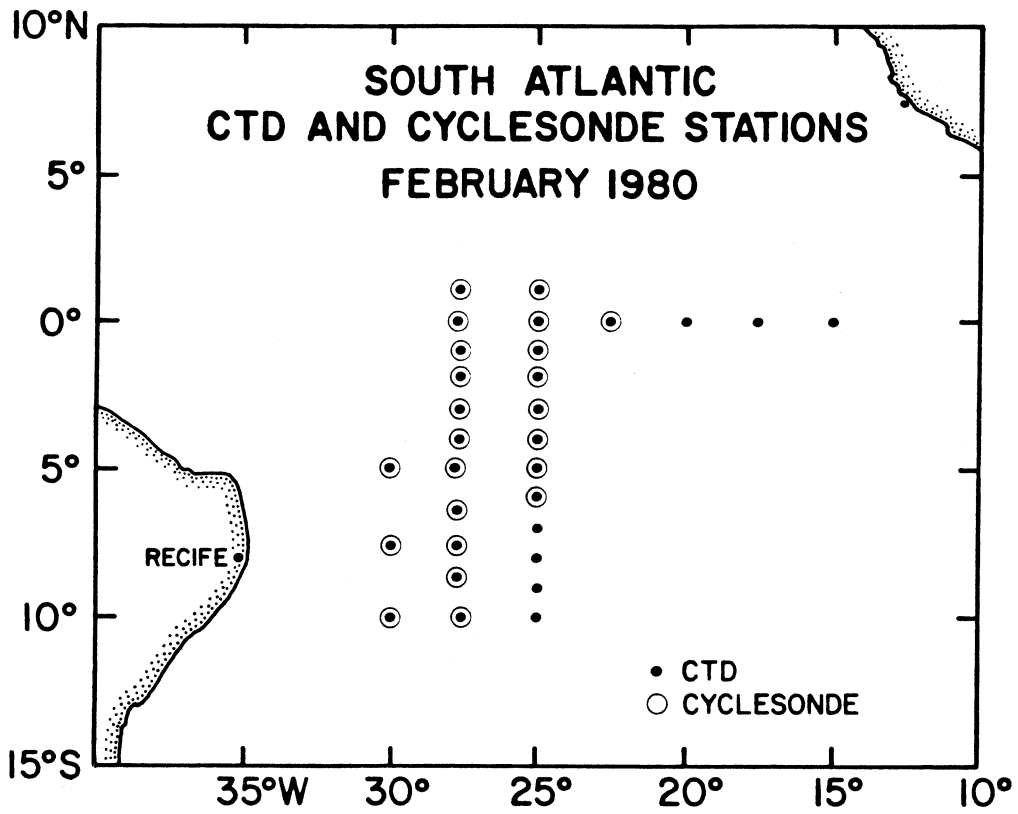
## References

- Herman, A. and C. Cardwell (1977). Computer Programs for Simple Lagrangian Processing (SLAP) Users Guide. NOAA Tech. Memo. ERL AOML-28.
- Katz, E. J., R. Molinari, D. Cartwright, P. Hisard, H. Lass and A. Mesquita (1981). The seasonal transport of the Equatorial Undercurrent in the western Atlantic (during F.G.G.E.). To appear in Oceanologic Acta, Vol. 4.
- Molinari, Robert L., John B. Hazelworth and Donald A. Ortman (1979). Data from OTEC site characterization studies in the Gulf of Mexico and tropical South Atlantic. NOAA Tech. Memo. ERL AOML-39.
- Molinari, R. L., B. Voituriez and P. Duncan (1981). Observations in the subthermocline Undercurrent of the Equatorial South Atlantic Ocean: 1978-1980. To appear in Oceanologic Acta, Vol. 4.

## Appendix 1

Station positions, designated as CTD or cyclesonde





## Appendix 2

Listing of the depths, in m of 1°C isotherms from XBT data

## ISOTHERM DEPTHS (M)

SHIP	RV	RESEARCHER	CRUISE				JAN. 79	
XBT NO.	2	3	4	5	6	7	8	
DATE (GMT)	1/19	1/19	1/19	1/20	1/20	1/20	1/20	
TIME (GMT)	1908	2100	2300	0100	0305	0500	0700	
LATITUDE	7S	7S	7S	6S	6S	6S	6S	
	29	17	06	46	33	16	05	
LONGITUDE	33W	33W	33W	32W	32W	32W	32W	
	56	36	18	55	37	19	03	
SURF T (C)	27.8	27.7	27.4	27.2	27.3	27.2	27.1	
-----								
29								
28								
27	67	75	89	82	62	58	70	
26	86	88	111	100	91	92	99	
-----								
25	100	99	122	111	101	108	110	
24	113	123	129	118	111	111	116	
23	132	135	142	132	119	117	120	
22	143	142	149	139	122	120	123	
-----								
21	151	145	153	141	125	123	130	
20	158	154	159	149	130	132	136	
19	168	160	163	153	132	139	139	
18	175	164	168	159	138	141	144	
-----								
17	182	173	173	161	141	145	149	
16	190	181	187	168	145	150	151	
15	202	198	198	173	149	152	161	
14	220	208	204	180	155	161	169	
-----								
13	241	226	216	193	164	170	179	
12	269	242	233	204	190	182	188	
11	299	262	260	225	206	210	210	
10	322	281	298	260	256	252	258	
-----								
9	347	306	359	341	308	312	342	
8	371	392	443	462	421	400	432	
7	392	480	529	570	602	550	520	
6	511	612	648	648	700	650	640	

## ISOTHERM DEPTHS (M)

SHIP	RV	RESEARCHER	CRUISE				JAN. 79	
XBT NO.	9	10	11	12	13	14	15	
DATE (GMT)	1/20	1/20	1/20	1/20	1/20	1/20	1/20	
TIME (GMT)	0900	1100	1305	1500	1700	1900	2100	
LATITUDE	5S	5S	5S	5S	4S	4S	4S	
	49	30	14	02	48	33	33	
LONGITUDE	31W	31W	30W	30W	30W	29W	29W	
	41	21	58	06	16	55	55	
SURF T (C)	27.1	27.0	27.1	27.0	27.2	26.9	26.5	
-----								
29								
28								
27	63		71		11			
26	102	101	98	96	83	91	98	
-----								
25	108	108	108	101	98	100	103	
24	114	109	113	105	101	102	108	
23	118	119	116	108	102	103	110	
22	123	121	118	113	107	108	111	
-----								
21	128	129	121	121	110	112	114	
20	131	135	125	126	113	119	120	
19	135	148	128	131	120	121	123	
18	140	150	131	136	122	127	126	
-----								
17	142	151	135	138	124	130	130	
16	149	153	139	146	131	132	131	
15	152	168	147	154	142	140	137	
14	161	176	159	158	149	149	141	
-----								
13	185	183	168	169	158	168	161	
12	200	191	182	196	191	199	210	
11	220	213	202	213	202	240	262	
10	261	249	250	250	267	283	312	
-----								
9	338	322	306	307	341	372	362	
8	418	400	400	390	401	420	378	
7	510	488	489	471	487	477	500	
6	600	580	589	553	570	580	576	

## ISOTHERM DEPTHS (M)

SHIP	RV	RESEARCHER	CRUISE				JAN. 79	
XBT NO.	16	17	18	19	20	21	22	
DATE (GMT)	1/20	1/21	1/21	1/21	1/21	1/21	1/21	
TIME (GMT)	2300	0100	0300	0500	0700	0900	1100	
LATITUDE	3S	3S	3S	3S	3S	3S	2S	
	59	46	32	32	02	02	35	
LONGITUDE	29W	28W	28W	28W	27W	27W	27W	
	04	55	34	34	51	51	08	
SURF T (C)	26.5	26.6	26.6	26.7	27.0	27.2	27.2	
-----								
29								
28								
27								
26	90	80	70	63	75	68	63	
-----								
25	93	91	88	78	78	70	73	
24	98	92	92	82	82	79	77	
23	99	95	97	87	92	80	78	
22	100	97	99	88	93	83	83	
-----								
21	101	98	100	89	95	85	89	
20	106	100	101	90	97	88	90	
19	109	101	109	93	98	90	92	
18	110	103	111	97	100	93	96	
-----								
17	111	105	113	104	103	98	98	
16	114	108	120	112	109	100	102	
15	121	111	128	118	111	109	108	
14	130	119	135	121	126	118	113	
-----								
13	145	140	153	152	170	170	150	
12	199	198	214	218	215	228	240	
11	260	251	258	266	275	282	291	
10	310	309	320	330	370	351	340	
-----								
9	383	362	375	393	403	399	400	
8	447	421	434	448	442	450	440	
7	487	479	483	487	485	498	495	
6	564	570	550	568	540	569	670	

## ISOTHERM DEPTHS (M)

SHIP	RV	RESEARCHER	CRUISE				JAN. 79	
XBT NO.	23	24	25	26	27	28	29	
DATE (GMT)	1/21	1/21	1/21	1/21	1/21	1/21	1/22	
TIME (GMT)	1300	1500	1705	1900	2100	2300	0415	
LATITUDE	2S	2S	1S	01S	01S	01S	00S	
	12	06	50	34	16	02	56	
LONGITUDE	26W	26W	26W	25W	25W	25W	24W	
	36	25	03	43	24	02	56	
SURF T (C)	27.1	27.2	27.3	27.1	26.9	26.7	26.7	
-----								
29								
28								
27	50	9	21	40				
26	82	83	78	82	80	80	73	
-----								
25	87	84	81	84	81	83	78	
24	89	86	83	85	86	87	80	
23	95	87	87	87	88	90	83	
22	99	88	89	89	93	93	88	
-----								
21	100	90	92	97	97	98	92	
20	100	91	97	100	99	99	100	
19	102	96	99	108	100	101	103	
18	104	100	101	109	106	103	108	
-----								
17	108	107	109	119	120	110	110	
16	112	109	113	121	122	118	116	
15	120	117	118	130	128	128	123	
14	130	121	122	140	139	139	145	
-----								
13	181	158	151	190	160	179	170	
12	250	220	220	266	208	209	201	
11	303	290	277	325	282	279	279	
10	348	318	299	393	308	300	300	
-----								
9	430	380	348	463	359	363	370	
8	490	440	451	530	448	430	428	
7	541	518	520	570	529	500	499	
6	615	576	593	651	590	580	578	



SHIP RV RESEARCHER		CRUISE				JAN. 79	
XBT NO.	30	31	32	33	34	35	36
DATE (GMT)	1/22	1/22	1/22	1/22	1/22	1/23	1/23
TIME (GMT)	0516	0613	0936	1932	2149	0356	0623
LATITUDE	00S 45	00S 30	00S 14	00N 15	00N 45	01N 01	00N 28
LONGITUDE	24W 57	25W 00	24W 57	25W 02	25W 00	25W 02	25W 11
SURF T (C)	26.6	26.7	26.5	27.0	27.6	27.1	26.6
29							
28							
27					3	6	
26	65	50	46	49	49	49	35
25	68	70	70	82	85	81	81
24	71	73	74	87	89	87	95
23	74	76	80	89	92	91	100
22	80	87	86	100	99	96	102
21	92	90	88	101	103	102	105
20	99	92	91	102	108	103	105
19	110	98	96	103	109	106	106
18	113	100	101	115	115	110	115
17	119	101	104	121	120	113	122
16	121	103	110	132	128	120	142
15	130	119	130	158	140	128	151
14	153	150	140	162	151	139	155
13	171	182	163	169	162	166	156
12	200	227	211	250	197	210	185
11	291	303	291	316	301	283	202
10	325	333	319	342	348	339	335
9	370	396	383	380	378	370	358
8	418	440	440	443	438	440	417
7	485	480	480	482	470	503	457
6	583	595	600	600	606	609	585

## ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE				JAN. 79	
XBT NO.	44	45	46	47	48	49	50
DATE (GMT)	1/26	1/27	1/27	1/27	1/27	1/27	1/27
TIME (GMT)	1640	0305	0400	0500	0600	0700	0800
LATITUDE	08S 30	08S 52	08S 46	08S 38	08S 31	08S 23	08S 16
LONGITUDE	25W 00	25W 14	25W 30	25W 39	25W 50	26W 02	26W 13
SURF T (C)	26.8	26.7	26.7	26.6	26.7	26.6	26.7
29							
28							
27							
26	74	70	79	91	86	83	82
25	81	73	89	100	95	98	99
24	108	91	100	109	103	105	112
23	126	109	116	114	111	113	120
22	135	118	128	121	118	124	128
21	140	123	138	130	124	130	131
20	150	130	150	132	129	133	143
19	159	133	153	141	134	141	150
18	168	141	161	148	140	150	154
17	172	158	169	151	153	160	163
16	182	170	177	160	167	172	169
15	189	180	189	170	175	178	178
14	200	193	198	180	189	190	188
13	216	208	208	185	204	198	193
12	229	222	221	211	220	209	214
11	243	246	247	229	248	226	230
10	260	270	266	255	270	250	259
9	301	300	306	300	310	288	298
8	371	343	360	358	368	365	370
7	473	479	482	468	474	459	468
6	573	599	600	585	583	568	572

SHIP RV RESEARCHER		CRUISE				JAN. 79	
XBT NO.	37	38	39	40	41	42	43
DATE (GMT)	1/23	1/24	1/24	1/25	1/25	1/26	1/26
TIME (GMT)	1100	1454	2214	0605	1340	0105	0820
LATITUDE	00N 15	02S 32	03S 01	04S 29	05S 31	06S 30	07S 30
LONGITUDE	24W 33	25W 02	22W 04	25W 02	25W 03	25W 01	24W 60
SURF T (C)	26.7	27.1	26.8	26.6	26.4	26.5	26.5
29							
28							
27		13					
26	38	73	71	58	72	80	77
25	81	77	75	70	81	91	90
24	90	79	77	74	88	100	108
23	97	82	78	77	92	103	120
22	101	84	79	80	96	110	124
21	102	89	80	84	112	112	128
20	103	90	83	88	119	121	131
19	106	92	88	89	123	127	133
18	119	94	91	93	129	130	142
17	128	100	98	98	130	137	150
16	146	109	101	100	137	140	157
15	152	116	111	106	141	149	163
14	156	131	133	138	151	157	173
13	162	169	210	218	163	166	186
12	248	241	260	252	179	175	201
11	311	310	323	288	210	197	220
10	348	357	369	330	245	240	238
9	400	400	410	376	320	320	263
8	451	443	449	449	411	410	327
7	482	497	498	509	490	498	425
6	609	580	583	580	582	602	550

## ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE				JAN. 79	
XBT NO.	51	52	53	54	55	56	57
DATE (GMT)	1/27	1/27	1/27	1/27	1/27	1/27	1/27
TIME (GMT)	0900	1000	1100	1200	1300	1400	1500
LATITUDE	08S 00	07S 55	07S 50	07S 45	07S 39	07S 34	07S 33
LONGITUDE	26W 17	26W 30	26W 40	26W 56	27W 08	27W 20	27W 26
SURF T (C)	26.6	27.6	26.8	26.9	26.9	26.9	27.0
29							
28							
27							5
26	80	86	76	77	78	81	81
25	89	100	90	90	89	98	88
24	101	112	111	101	105	111	111
23	110	122	126	118	117	121	119
22	120	129	133	124	127	129	123
21	123	131	138	129	131	135	126
20	130	138	141	134	136	141	132
19	136	141	146	139	142	145	140
18	140	149	151	148	150	152	142
17	150	154	162	151	152	155	148
16	161	160	169	161	159	163	154
15	170	165	179	170	167	172	161
14	182	176	187	180	178	180	171
13	198	188	200	192	189	188	179
12	222	203	210	207	201	199	185
11	241	221	228	221	223	220	205
10	256	260	250	249	251	233	225
9	290	290	301	280	280	300	285
8	372	363	376	337	360	380	372
7	450	450	478	450	487	472	465
6	560	452	565	558	580	600	570

ISOTHERM DEPTHS (M)							
XBT NO.	SHIP RV RESEARCHER			CRUISE		JAN. 79	
	58	59	60	61	62	63	64
DATE (GMT)	1/27	1/27	1/28	1/28	1/28	2/ 1	2/ 1
TIME (GMT)	2233	2353	0402	0518	0636	0500	0612
LATITUDE	07S	07S	06S	06S	06S	01N	01N
	15	00	32	15	00	15	30
LONGITUDE	27W	27W	27W	27W	27W	27W	27W
	35	32	30	30	30	30	30
SURF T (C)	27.0	27.0	27.0	26.7	26.8	27.1	27.0
29							
28							
27	5	30	31			15	25
26	81	89	90	95	89	52	68
25	95	96	102	104	95	68	72
24	117	118	111	108	103	73	82
23	125	123	115	112	106	74	91
22	129	129	121	117	113	79	92
21	131	132	127	123	116	86	93
20	135	135	132	130	122	95	98
19	142	139	139	132	129	105	102
18	150	142	142	137	133	110	105
17	158	147	150	140	138	116	107
16	162	154	158	146	144	119	109
15	165	162	165	155	149	126	112
14	176	168	175	172	153	139	125
13	185	173	183	182	168	175	150
12	198	192	200	191	179	210	195
11	211	212	220	215	212	233	246
10	250	255	260	255	255	265	285
9	310	315	335	335	328	320	330
8	390	400	420	400	406	415	445
7	470	485	520	495	499	505	504
6		601	645	621	600	565	570

ISOTHERM DEPTHS (M)							
XBT NO.	SHIP RV RESEARCHER			CRUISE		JAN. 79	
	65	66	67	68	69	70	71
DATE (GMT)	2/ 1	2/ 1	2/ 1	2/ 1	2/ 1	2/ 2	2/ 2
TIME (GMT)	0718	1130	1800	2105	2345	0245	0413
LATITUDE	01N	02N	02N	01N	01N	01N	00N
	42	30	29	59	30	00	45
LONGITUDE	27W	27W	27W	26W	26W	26W	26W
	31	30	15	56	43	25	15
SURF T (C)	27.0	27.0	27.5	27.2	26.9	26.9	26.9
29							
28							
27	59	15	45	40			
26	70	83	80	79	78	72	64
25	78	87	83	82	82	81	73
24	85	88	86	83	84	84	85
23	90	88	87	84	90	90	92
22	91	91	89	85	91	92	99
21	93	94	91	88	95	97	108
20	100	97	97	90	99	108	110
19	102	102	100	92	100	111	117
18	104	110	102	96	102	115	119
17	107	115	106	101	112	118	120
16	119	121	112	109	120	124	122
15	127	126	125	130	130	133	138
14	155	140	145	150	150	147	142
13	185	156	160	178	190	162	148
12	248	225	235	232	215	190	162
11	270	265	310	272		257	263
10	320	332	365	309		300	342
9	360	370	410	369		358	368
8	452	420	460	435		440	420
7	500	505	519	530		538	520
6	600	590	625	612		619	645

ISOTHERM DEPTHS (M)							
XBT NO.	SHIP RV RESEARCHER			CRUISE		JAN. 79	
	72	73	74	75	76	77	78
DATE (GMT)	2/ 2	2/ 2	2/ 2	2/ 2	2/ 2	2/ 2	2/ 2
TIME (GMT)	0538	0705	0817	0936	0900	1225	1335
LATITUDE	00N	00N	00N	00S	00S	00S	01S
	30	15	00	15	30	45	00
LONGITUDE	26W	26W	25W	25W	25W	25W	25W
	08	60	51	43	34	25	17
SURF T (C)	26.8	26.8	26.7	26.6	26.7	26.7	26.9
29							
28							
27							
26	63	55	53	50	58	52	51
25	70	68	85	83	76	59	68
24	88	87	89	86	80	72	72
23	92	90	90	88	89	77	81
22	100	91	92	90	90	80	82
21	107	99	98	91	91	83	83
20	111	103	100	92	97	87	86
19	113	108	102	95	99	89	89
18	121	112	110	101	101	91	90
17	128	127	118	112	108	98	98
16	139	138	129	122	115	103	99
15	151	150	148	142	128	123	121
14	163	155	151	147	137	132	130
13	166	159	153	161	152	160	160
12	178	188	192	195	218	201	179
11	271	273	268	270	280	260	230
10	320	315	289	280	300	293	301
9	361	378	373	351	370	360	340
8	420	421	440	421	432	436	438
7	485	459	450	461	460	483	494
6	603	590	566	577	550	581	571

ISOTHERM DEPTHS (M)							
XBT NO.	SHIP RV RESEARCHER			CRUISE		JAN. 79	
	79	80	81	82	83	84	85
DATE (GMT)	2/ 2	2/ 4	2/ 4	2/ 4	2/ 5	2/ 5	2/ 5
TIME (GMT)	1630	1839	2042	2230	0028	0234	0430
LATITUDE	01S	01N	00N	00N	00N	00N	00S
	29	00	46	30	15	00	15
LONGITUDE	25W	24W	24W	23W	23W	23W	22W
	01	26	08	49	30	12	54
SURF T (C)	27.3	27.2	26.9	26.8	26.7	26.6	26.5
29							
28							
27	15	11					
26	47	43	53	48	49	49	52
25	49	49	58	51	60	54	60
24	60	50	64	61	64	61	63
23	70	59	69	64	69	63	68
22	83	60	71	68	72	68	71
21	85	61	73	69	76	72	81
20	86	63	76	70	79	81	83
19	88	68	78	72	83	83	85
18	92	70	79	73	90	88	91
17	100	74	80	76	97	98	99
16	108	80	82	91	104	100	101
15	123	95	89	100	109	102	109
14	138	107	97	108	113	113	121
13	154	122	118	119	152	150	168
12	196	160	171	163	190	185	209
11	240	260	240	251	284	285	299
10	270	284	287	292	320	337	310
9	307	342	340	330	358	365	366
8	419	410	402	385	402	388	400
7	500	465	473	430	443	411	430
6	540	570	590	566	570	543	523

## ISOTHERM DEPTHS (M)

XBT NO.	SHIP RV RESEARCHER			CRUISE			JAN. 79	
	86	87	88	89	90	91	92	
DATE (GMT)	2/ 5	2/ 5	2/ 5	2/ 5	2/ 7	2/ 7	2/ 7	
TIME (GMT)	0625	0815	0943	1045	0030	0205	0345	
LATITUDE	00S 29	00S 45	01S 03	01S 15	00N 45	00N 30	00N 15	
LONGITUDE	22W 32	22W 15	22W 08	22W 02	19W 48	19W 37	19W 23	
SURF T (C)	26.5	26.5	26.4	26.6	26.5	26.5	26.5	
29								
23								
27								
26	48	41	33	38	50	41	41	
25	52	59	42	42	52	47	48	
24	59	71	47	49	57	53	53	
23	64	77	58	52	63	62	60	
22	70	80	64	61	66	68	63	
21	73	81	68	62	68	70	67	
20	75	82	70	65	70	76	72	
19	80	88	73	71	73	79	76	
18	83	98	83	75	78	80	78	
17	100	113	89	79	79	81	96	
16	104	130	90	86	82	87	100	
15	111	146	110	94	95	110	109	
14	140	161	126	101	131	149	140	
13	157	170	132	136	170	182	195	
12	189	200	163	183	279	250	270	
11	320	296	266	269	319	294	300	
10	331	309	278	290	337	316	330	
9	371	369	350	360	368	342	349	
8	405	411	408	420	448	392	422	
7	444	468	470	478	530	480	521	
6	549	554	531	545	620	565	615	

## ISOTHERM DEPTHS (M)

XBT NO.	SHIP RV RESEARCHER			CRUISE			JAN. 79	
	100	101	102	103	104	105	106	
DATE (GMT)	2/ 9	2/ 9	2/ 9	2/ 9	2/ 9	2/ 9	2/ 9	
TIME (GMT)	0020	0215	0407	0558	0752	0937	1155	
LATITUDE	01N 00	00N 45	00N 30	00N 15	00N 00	00S 15	00S 30	
LONGITUDE	17W 26	17W 09	16W 50	16W 32	16W 14	15W 56	15W 40	
SURF T (C)	26.6	26.4	26.3	26.2	25.9	26.0	26.2	
29								
28								
27								
26	59	61	42	37			30	
25	68	71	52	50	49	50	50	
24	71	72	59	58	62	59	53	
23	72	76	67	67	78	63	55	
22	74	81	75	77	80	73	58	
21	80	86	79	79	85	77	64	
20	82	89	82	83	90	80	75	
19	87	90	92	97	93	85	80	
18	97	98	94	100	100	90	87	
17	102	100	99	105	109	94	91	
16	112	107	110	108	113	100	100	
15	122	112	120	130	130	118	109	
14	149	131	132	142	150	128	132	
13	224	170	168	190	208	194	184	
12	300	280	280	300	291	250	269	
11	340	328	309	320	321	282	302	
10	358	334	311	323	328	308	321	
9	368	350	330	348	362	331	350	
8	416	398	430	398	420	392	401	
7	508	480	480	469	505	475	479	
6		559	560	568	610	561	562	

## ISOTHERM DEPTHS (M)

XBT NO.	SHIP RV RESEARCHER			CRUISE			JAN. 79	
	93	94	95	96	97	98	99	
DATE (GMT)	2/ 7	2/ 7	2/ 7	2/ 7	2/ 7	2/ 7	2/ 8	
TIME (GMT)	0550	0647	0819	0952	1126	1241	2230	
LATITUDE	00S 05	00S 15	00S 30	00S 45	01S 02	01S 14	01N 15	
LONGITUDE	19W 06	19W 00	18W 48	18W 36	18W 23	18W 14	17W 45	
SURF T (C)	26.3	26.2	26.2	26.3	26.4	26.6	26.8	
29								
28								
27								
26	29	30	37	39	47	53	52	
25	48	46	51	50	50	58	58	
24	49	49	53	52	53	62	63	
23	50	50	60	58	59	64	66	
22	53	51	68	61	61	67	68	
21	59	54	71	68	63	69	70	
20	62	62	78	70	67	72	76	
19	68	76	80	71	68	74	78	
18	79	91	86	73	74	77	82	
17	92	98	96	78	79	85	89	
16	97	101	103	81	86	90	94	
15	101	109	117	92	100	95	106	
14	130	130	119	101	109	100	117	
13	179	209	154	150	170	140	171	
12	272	274	242	259	268	233	269	
11	290	299	272	299	301	299	310	
10	322	339	328	336	330	330	335	
9	368	358	369	368	359	374	349	
8	425	433	389	391	383	414	414	
7	490	509	490	481	500	481	515	
6	579	603	568	533	550	551	610	

## ISOTHERM DEPTHS (M)

XBT NO.	SHIP RV RESEARCHER			CRUISE			JAN. 79	
	107	108	109	110	111	112	113	
DATE (GMT)	2/ 9	2/ 9	2/ 9	2/10	2/11	2/11	2/11	
TIME (GMT)	1405	1551	1748	2216	0005	0203	0354	
LATITUDE	00S 45	01S 00	01S 19	01N 15	01N 01	00N 45	00N 30	
LONGITUDE	15W 23	15W 05	14W 48	14W 13	13W 59	13W 42	13W 24	
SURF T (C)	26.4	26.8	27.0	27.0	27.2	26.9	26.9	
29								
28								
27					13			
26	38	40	42	66	63	59	46	
25	45	45	47	67	64	60	49	
24	48	49	48	68	66	61	50	
23	49	50	49	69	68	64	57	
22	50	51	50	70	70	71	60	
21	51	54	53	71	75	75	63	
20	53	58	57	72	78	77	65	
19	60	59	59	73	79	80	68	
18	78	60	70	77	80	82	72	
17	92	63	72	79	82	88	78	
16	101	73	78	85	87	90	80	
15	106	92	88	88	89	92	83	
14	141	118	102	102	105	120	128	
13	201	192	190	229	201	220	205	
12	269	283	272	290	283	266	254	
11	291	311	301	305	308	291	272	
10	319	320	328	321	339	318	300	
9	340	349	350	331	363	342	319	
8	381	374	360	390	390	377	350	
7	460	455	446	491	470	473	445	
6	550	548	532	580	550	578	556	

ISOTHERM DEPTHS (M)							
SHIP	RV RESEARCHER			CRUISE		JAN. 79	
XBT NO.	121	122	123	124	125	126	127
DATE (GMT)	2/12	2/12	2/13	2/13	2/13	2/13	2/13
TIME (GMT)	2118	2236	0000	0130	0257	0421	0545
LATITUDE	01N 45	02N 00	02N 13	02N 30	02N 45	03N 00	03N 15
LONGITUDE	11W 11	11W 19	11W 31	11W 42	11W 53	12W 03	12W 14
SURF T (C)	27.1	28.2	28.0	28.2	28.1	28.3	28.4
29							
28	39	30		30	40	38	41
27	48	45	48	50	51	40	48
26	49	46	48	50	51	41	50
25	50	47	49	51	52	45	50
24	50	48	49	51	53	48	50
23	50	49	50	52	54	49	50
22	51	49	50	52	57	50	51
21	52	50	51	53	59	51	52
20	56	50	55	54	62	52	53
19	67	51	59	55	67	56	53
18	71	59	70	57	69	60	55
17	74	62	83	70	70	61	63
16	81	70	88	72	81	67	69
15	91	73	92	79	93	81	81
14	137	108	130	110	122	145	130
13	238	224	237	227	210	238	217
12	264	274	287	298	296	299	277
11	288	303	325	313	320	322	300
10	299	324	352	332	342	360	350
9	322	348	372	361	380	409	393
8	380	400	430	416	420	445	435
7	490	485	480	472	477	520	500
6	600	602	563	552	575	605	570

ISOTHERM DEPTHS (M)							
SHIP	RV RESEARCHER			CRUISE		JAN. 79	
XBT NO.	114	115	116	117	118	119	120
DATE (GMT)	2/11	2/11	2/11	2/11	2/11	2/11	2/11
TIME (GMT)	0603	0730	0920	1110	1248	1450	1637
LATITUDE	00N 15	00N 00	00S 15	00S 30	00N 46	01S 00	01S 15
LONGITUDE	13W 03	13W 03	12W 27	12W 08	11W 50	11W 35	11W 17
SURF T (C)	26.8	26.6	26.6	26.6	26.8	27.0	27.0
29							
28							
27							
26	42	35	33	31	23	29	21
25	49	43	44	43	39	44	41
24	52	49	57	50	47	51	49
23	61	53	60	52	48	53	52
22	63	57	64	56	49	56	56
21	69	63	70	61	50	59	59
20	71	70	78	63	51	60	60
19	74	71	79	75	59	62	66
18	79	74	80	79	79	68	68
17	80	79	88	84	86	77	71
16	87	83	99	91	91	91	77
15	112	107	110	107	101	100	81
14	151	125	124	122	119	111	113
13	220	199	210	240	230	236	211
12	272	280	282	280	257	263	268
11	280	287	289	287	270	291	298
10	300	310	294	295	279	300	305
9	321	341	313	316	283	312	321
8	350	359	363	380	380	380	379
7	445	470	460	430	449	445	478
6	560	569	551	550	571	570	568

ISOTHERM DEPTHS (M)							
SHIP	RV RESEARCHER			CRUISE		JAN. 79	
XBT NO.	128	129	130	131	132	133	134
DATE (GMT)	2/13	2/13	2/13	2/13	2/13	2/13	2/13
TIME (GMT)	0710	0838	1005	1136	1254	1426	1556
LATITUDE	03N 30	03N 45	04N 00	04N 15	04N 30	04N 45	05N 00
LONGITUDE	12W 20	12W 32	12W 44	12W 55	13W 06	13W 16	13W 27
SURF T (C)	28.3	28.3	28.5	28.5	28.8	28.5	28.6
29							
28	40	34	30	31	28	29	29
27	44	44	39	38	32	30	32
26	48	48	42	40	38	33	37
25	49	49	47	43	40	38	38
24	50	50	48	48	41	40	40
23	50	50	50	50	43	42	42
22	50	51	53	51	44	43	44
21	50	53	57	53	47	45	46
20	51	57	59	57	49	48	48
19	54	58	60	59	50	49	50
18	58	60	63	61	51	50	51
17	60	63	67	67	59	52	58
16	72	72	75	75	70	65	67
15	83	92	95	101	107	91	141
14	122	142	149	149	160	138	160
13	205	218	203	210	230	203	220
12	268	257	252	255	260	247	264
11	300	286	289	291	289	278	294
10	332	329	319	327	318	320	330
9	380	368	380	378	361	367	361
8	430	420	452	450	430	429	420
7	490	499	532	531	518	525	525
6	572	610	644	640	630	635	635

ISOTHERM DEPTHS (M)			
SHIP	RV RESEARCHER	CRUISE	JAN. 79
XBT NO.	135		
DATE (GMT)	2/13		
TIME (GMT)	1750		
LATITUDE	05N 13		
LONGITUDE	13W 39		
SURF T (C)	28.4		
29			
28	38		
27	39		
26	40		
25	41		
24	41		
23	43		
22	47		
21	49		
20	50		
19	52		
18	54		
17	58		
16	68		
15	95		
14	153		
13	219		
12	258		
11	290		
10	327		
9	369		
8	432		
7	520		
6	630		

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE			JULY 1979	
	XBT NO.	1	2	3	4	5	6	7
DATE (GMT)	7/10	7/10	7/10	7/10	7/10	7/10	7/10	7/10
TIME (GMT)	0639	0739	0839	0939	1039	1143	1239	
LATITUDE	2N 0	1N 48	1N 37	1N 25	1N 14	0N 59	0N 47	
LONGITUDE	14W 59	15W 0	15W 1	15W 1	15W 1	15W 1	15W 1	
SURF T (C)	25.3	25.0	25.0	24.7	25.1	24.8	24.2	
29								
28								
27								
26								
25					20			
24	62	56	49	44	33	33	22	
23	66	65	57	54	46	45	46	
22	69	68	61	58	53	53	58	
21	72	72	64	63	57	59	62	
20	79	75	67	64	62	62	63	
19	81	80	68	68	63	64	64	
18	82	82	73	67	63	68	64	
17	87	85	78	69	65	72	66	
16	108	100	92	73	67	79	73	
15	130	125	125	97	88	100	86	
14	181	181	191	151	156	159	146	
13	220	217	230	210	216	221	228	
12	250	252	252	233	243	258	261	
11	274	269	264	253	261	278	275	
10	299	287	287	274	284	306	300	
9	352	337	352	363	347	365	360	
8	414	414	452	396	383	420	396	
7	490	480	540	505	502	511	485	
6		551	612	578	592	609	609	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE			JULY 1979	
	XBT NO.	8	9	10	11	12	13	14
DATE (GMT)	7/10	7/10	7/10	7/10	7/10	7/10	7/10	7/10
TIME (GMT)	1343	1520	1618	1707	1804	2100	2144	
LATITUDE	0N 34	0N 30	0N 19	0N 9	0S 1	0S 10	0S 20	
LONGITUDE	15W 1	15W 0	14W 58	14W 58	14W 56	14W 58	14W 59	
SURF T (C)	23.9	24.0	23.3	23.6	23.5	23.3	23.6	
29								
28								
27								
26								
25								
24								
23	33	30	11	17	17	20	29	
22	50	52	48	48	31	38	40	
21	51	57	57	60	42	43	47	
20	52	58	60	67	48	47	52	
19	52	59	64	72	50	51	56	
18	53	59	66	80	52	52	59	
17	56	63	78	87	62	70	72	
16	72	93	96	117	84	99	82	
15	92	110	108	121	104	122	125	
14	139	153	148	164	137	170	140	
13	240	250	236	233	215	225	204	
12	267	273	276	258	262	275	233	
11	286	297	297	277	278	315	260	
10	315	336	330	330	330	342	292	
9	358	385	375	375	380	422	373	
8	410	428	409	400	420	441	443	
7	500	490	485	460	470	490	461	
6	620	627	614	600	619	599	580	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE			JULY 1979	
	XBT NO.	15	16	17	18	19	20	21
DATE (GMT)	7/10	7/11	7/11	7/11	7/11	7/11	7/11	7/11
TIME (GMT)	2230	0030	0205	0353	0452	0548	0816	
LATITUDE	0S 17	0S 26	0S 19	0S 11	0S 7	0S 2	0S 1	
LONGITUDE	14W 59	15S 13	15W 34	15W 35	16W 5	16W 22	16W 31	
SURF T (C)	23.4	23.5	23.4	23.6	23.6	23.7	23.9	
29								
28								
27								
26								
25								
24								
23	20	35	23	38	30	40	51	
22	31	48	38	45	40	53	60	
21	41	53	46	49	46	64	66	
20	48	59	50	52	47	67	69	
19	51	64	52	54	48	70	70	
18	57	73	53	56	49	71	72	
17	65	83	60	63	50	72	75	
16	82	93	82	80	66	97	82	
15	108	142	110	107	85	117	94	
14	112	196	147	180	115	141	124	
13	210	243	228	245	225	245	240	
12	237	285	258	267	247	269	260	
11	258	324	270	283	283	305	297	
10	304	387	293	319	315	321	322	
9	370	434	380	380	378	365	364	
8	419	475	422	441	455	440	431	
7	505	538	482	510	500	496	495	
6	583	648	553	631	520	580	623	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE			JULY 1979	
	XBT NO.	22	23	24	25	26	27	28
DATE (GMT)	7/11	7/11	7/11	7/11	7/11	7/11	7/11	7/11
TIME (GMT)	0930	1030	1130	1236	1331	1432	1617	
LATITUDE	0N 1	0N 6	0N 10	0N 16	0N 20	0W 26	0N 31	
LONGITUDE	16W 43	16W 56	17W 10	17W 25	17W 37	17W 49	18W 1	
SURF T (C)	24.1	24.3	24.2	24.4	24.6	24.4	24.5	
29								
28								
27								
26								
25								
24	10	25	28	30	31	18	31	
23	35	36	47	57	44	40	51	
22	43	41	55	67	52	48	57	
21	48	46	61	72	56	51	58	
20	51	48	62	74	59	53	60	
19	54	49	64	75	60	55	64	
18	55	50	68	77	64	59	67	
17	56	53	70	84	70	70	74	
16	65	76	92	87	77	79	80	
15	87	94	100	100	95	97	90	
14	110	165	123	129	122	118	120	
13	240	265	235	235	207	200	208	
12	260	281	272	273	251	243	257	
11	297	306	307	316	310	298	292	
10	348	340	341	372	337	334	318	
9	357	379	376	390	363	366	344	
8	430	439	440	453	433	404	385	
7	468	508	507	515	496	473	463	
6	592	612	598	602	609	559	627	

## ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE				JULY 1979	
XBT NO.	36	37	38	39	40	41	42
DATE (GMT)	7/12	7/12	7/12	7/12	7/12	7/12	7/12
TIME (GMT)	0307	0406	0506	0606	0706	0806	0906
LATITUDE	05 24	05 20	05 17	05 13	05 10	05 6	05 2
LONGITUDE	18W 25	18W 37	18W 41	19W 4	19W 17	19W 31	19W 44
SURF T (C)	24.2	24.3	24.3	24.4	24.5	24.6	24.6
29							
28							
27							
26							
25							
24	23	17	28	31	28	30	31
23	30	31	41	43	37	36	41
22	35	37	49	49	47	43	51
21							
20	40	45	55	56	53	48	52
19	46	52	64	64	55	49	53
18	54	58	68	67	58	52	57
17	58	63	72	71	61	55	62
16							
15	70	72	77	78	70	64	68
14	99	69	92	87	81	71	80
13	118	105	104	96	88	80	95
12	150	134	128	129	120	100	112
11							
10	260	240	233	210	220	215	210
9	291	272	275	275	262	250	281
8	315	300	300	313	302	300	292
7	339	325	320	340	328	312	318
6							
5	362	346	340	352	343	329	343
4	400	398	365	415	390	380	440
3	499	503	472	507	473	462	480
2	527	587	562	578	558	549	591

## ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE				JULY 1979	
XBT NO.	29	30	31	32	33	34	35
DATE (GMT)	7/11	7/11	7/11	7/11	7/11	7/11	7/12
TIME (GMT)	1715	1758	1952	2128	2214	2309	0202
LATITUDE	0N 18	0N 8	0N 0	0S 8	0S 20	0S 29	0S 28
LONGITUDE	18N 0	17W 58	17W 57	17W 57	17W 59	18W 0	18W 11
SURF T (C)	24.2	24.2	24.0	23.9	24.1	24.1	24.0
29							
28							
27							
26							
25							
24	11	11	16		11	11	
23	47	39	46	42	31	30	37
22	55	48	56	51	39	36	43
21							
20	59	54	64	58	45	40	49
19	60	56	67	61	51	45	52
18	62	58	69	62	56	49	54
17	64	60	71	63	60	51	58
16							
15	72	74	81	76	74	60	80
14	75	60	85	81	95	83	91
13	97	99	100	95	115	89	105
12	115	132	141	132	133	123	139
11							
10	200	240	243	230	220	220	250
9	239	280	290	301	298	271	299
8	272	327	327	326	333	296	310
7	310	352	340	350	349	315	341
6							
5	335	375	365	378	394	345	373
4	385	431	400	420	432	410	432
3	446	483	462	495	518	512	508
2	532	581	550	584	569	609	604

## ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE				JULY 1979	
XBT NO.	43	44	45	46	47	48	49
DATE (GMT)	7/12	7/12	7/12	7/12	7/12	7/12	7/12
TIME (GMT)	1016	1330	1431	1530	1626	1735	1828
LATITUDE	0S 1	0N 2	0N 7	0N 10	0N 13	0N 17	0N 20
LONGITUDE	20W 0	20W 14	20W 28	20W 41	21W 53	21W 10	21W 21
SURF T (C)	24.7	24.8	25.0	25.0	25.1	25.1	25.0
29							
28							
27							
26							
25							
24	29	34	29	39	47	51	38
23	43	51	45	64	61	62	45
22	49	55	48	64	62	63	46
21							
20	50	55	49	66	63	65	47
19	50	57	50	67	64	65	48
18	60	63	54	75	70	70	52
17	65	73	59	78	73	75	58
16							
15	80	77	67	90	84	87	67
14	81	85	79	99	91	98	85
13	93	105	95	112	106	122	105
12	124	124	121	130	133	150	121
11							
10	200	182	170	180	200	200	180
9	270	277	273	258	252	260	236
8	285	300	290	296	294	297	282
7	328	341	328	345	319	337	343
6							
5	348	380	362	373	356	353	360
4	430	453	417	425	415	405	391
3	458	485	480	480	478	481	448
2	600	598	580	600	623	585	555

## ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE				JULY 1979	
XBT NO.	50	51	52	53	54	55	56
DATE (GMT)	7/12	7/12	7/12	7/12	7/12	7/13	7/13
TIME (GMT)	1927	2027	2118	2308	2356	0230	0354
LATITUDE	0N 24	0N 27	0N 31	0N 20	0N 10	0N 0	0S 8
LONGITUDE	21W 34	21W 48	22W 0	21W 59	21W 59	21W 59	21W 59
SURF T (C)	25.0	24.7	24.7	24.7	24.8	25.0	25.0
29							
28							
27							
26							
25							
24	15	67	62	74	72	62	30
23	70	64	79	75	75	63	43
22	71	63	80	76	77	65	55
21							
20	73	66	80	78	79	77	64
19	73	68	82	79	89	80	74
18	76	70	85	87	94	86	82
17	82	78	99	91	103	96	87
16							
15	86	100	104	97	112	100	95
14	108	100	126	102	122	112	109
13	124	110	140	130	150	133	128
12	128	118	160	138	161	160	161
11							
10	195	182	220	200	217	203	205
9	255	230	270	248	261	264	277
8	286	300	324	275	280	277	297
7	339	338	341	329	351	326	323
6							
5	365	356	353	352	365	354	370
4	412	390	400	368	400	391	424
3	478	478	475	445	467	475	485
2	593	580	610	590	560	565	577

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER		CRUISE				JULY 1979	
	XBT NO.	57	58	59	60	61	62	63
DATE (GMT)	7/13	7/13	7/13	7/13	7/13	7/13	7/13	7/13
TIME (GMT)	0450	0643	0743	0843	0943	1043	1143	
LATITUDE	05 20	05 30	05 26	05 23	05 19	05 15	05 7	05 7
LONGITUDE	22W 0	22W 0	22W 14	22W 27	22W 40	22W 54	23W 8	
SURF T (C)	25.2	25.0	25.1	25.1	24.9	25.0	24.7	
29								
28								
27								
26								
25	25	30	20	22				
24	45	49	45	44	42	50	49	
23	56	61	57	55	61	64	60	
22	65	67	66	60	68	69	67	
21	70	70	69	65	75	76	75	
20	73	74	72	70	86	83	79	
19	79	80	86	75	90	87	83	
18	88	85	93	91	93	91	90	
17	93	90	96	95	107	100	100	
16	104	109	111	111	119	115	110	
15	116	130	127	120	127	146	127	
14	155	164	159	159	155	172	152	
13	207	213	208	193	190	215	220	
12	270	257	260	253	248	258	260	
11	283	273	280	268	263	292	295	
10	311	300	311	310	306	319	326	
9	345	325	356	349	320	343	352	
8	403	413	411	435	398	400	399	
7	469	480	484	486	467	485	480	
6	577	582	567	560	530	532	528	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER		CRUISE				JULY 1979	
	XBT NO.	64	65	66	67	68	69	70
DATE (GMT)	7/13	7/13	7/13	7/13	7/13	7/14	7/14	
TIME (GMT)	1246	1346	1443	1543	1654	0900	1000	
LATITUDE	05 8	05 5	05 2	05 0	0N 4	0N 6	0N 17	
LONGITUDE	23W 22	23W 34	23W 48	24W 0	24W 14	24W 21	24W 29	
SURF T (C)	24.8	24.9	24.9	25.2	25.5	25.4	25.4	
29								
28								
27								
26								
25	50	56	55	45	53	40	33	
24	61	63	62	54	58	51	48	
23	68	65	63	60	65	56	55	
22	73	73	67	62	67	58	59	
21	74	76	72	67	68	59	60	
20	78	81	77	73	77	68	67	
19	83	84	83	77	81	71	70	
18	88	94	92	87	84	79	72	
17	99	105	108	97	103	86	76	
16	125	125	126	109	113	92	98	
15	159	150	144	125	127	122	120	
14	218	210	206	152	158	160	134	
13	270	253	263	227	222	221	200	
12	287	280	290	279	269	263	238	
11	307	306	318	305	307	295	285	
10	335	348	350	332	353	330	318	
9	378	418	403	364	387	380	372	
8	482	502	455	409	445	425	395	
7	563	591	579	470	483	485	425	
6				564	580		540	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER		CRUISE				JULY 1979	
	XBT NO.	78	79	80	81	82	83	84
DATE (GMT)	7/14	7/14	7/14	7/15	7/15	7/15	7/15	
TIME (GMT)	2146	2230	2318	0237	0324	0544	0624	
LATITUDE	0N 20	0N 10	0N 0	0S 8	0S 20	0S 31	0S 39	
LONGITUDE	25W 0	24W 59	24W 58	24W 56	24W 56	24W 55	24W 55	
SURF T (C)	25.7	25.7	25.6	25.5	25.3	25.0	24.9	
29								
28								
27								
26								
25	36	45	35	41	45	48		
24	48	51	37	47	59	69	57	
23	50	56	38	54	64	74	63	
22	51	58	39	58	67	78	73	
21	53	59	50	62	73	89	80	
20	55	71	62	77	78	92	82	
19	59	82	67	80	83	94	94	
18	65	85	78	86	86	100	99	
17	69	90	90	92	93	103	109	
16	80	100	99	101	101	108	114	
15	87	108	110	122	124	138	135	
14	104	140	139	149	159	160	173	
13	210	217	235	188	250	218	223	
12	265	268	271	273	278	278	265	
11	302	300	295	291	303	322	313	
10	311	325	330	341	352	353	326	
9	347	370	370	376	373	391	372	
8	408	430	420	419	424	433	426	
7	480	480	475	465	490	517	490	
6	560	580	570	572	599	622	609	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER		CRUISE				JULY 1979	
	XBT NO.	71	72	73	74	75	76	77
DATE (GMT)	7/14	7/14	7/14	7/14	7/14	7/14	7/14	
TIME (GMT)	1100	1200	1300	1400	1825	1926	2010	
LATITUDE	0N 28	0N 39	0N 50	1N 1	0N 49	0N 35	0N 26	
LONGITUDE	24W 40	24W 47	24W 55	25W 2	25W 4	25W 2	25W 1	
SURF T (C)	25.5	26.1	26.5	27.0	26.5	26.1	25.7	
29								
28								
27								
26		21	47	41	36	25		
25	42	42	49	43	38	42	35	
24	50	48	56	55	44	50	48	
23	53	54	60	60	47	56	53	
22	56	55	67	61	55	59	54	
21	61	58	70	66	57	60	55	
20	65	62	78	69	61	65	61	
19	75	70	82	74	67	73	64	
18	76	72	87	78	71	74	66	
17	78	73	90	80	74	78	69	
16	92	86	93	85	77	96	100	
15	103	97	100	95	85	110	108	
14	121	120	117	116	99	131	121	
13	187	195	170	180	162	230	195	
12	252	269	257	298	257	263	260	
11	305	322	281	320	285	305	293	
10	330	348	300	333	307	325	310	
9	360	370	335	355	342	350	342	
8	398	414	390	395	390	418	411	
7	460	480	463		462	490	480	
6	550	569	554		562	571	561	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE			JULY 1979	
	XBT NO.	85	86	87	88	89	90	91
DATE (GMT)	7/15	7/15	7/15	7/15	7/15	7/15	7/15	7/15
TIME (GMT)	0709	0756	1103	1146	1239	1324	1410	
LATITUDE	0S 28	0S 58	1S 8	1S 18	1S 29	1S 39	1S 49	
LONGITUDE	24W 53	24W 54	24W 56	24W 56	24W 57	24W 57	24W 57	
SURF T (C)	24.7	25.0	25.1	25.2	25.4	25.6	25.7	
29								
28								
27								
26								
25		30	30	40	60	50	60	
24	69	62	72	69	88	90	87	
23	82	74	82	84	100	91	99	
22	91	77	88	90	101	92	99	
21	100	81	93	92	101	93	100	
20	103	83	93	93	102	94	101	
19	107	94	96	94	102	95	103	
18	109	99	99	96	103	96	113	
17	113	100	102	99	105	104	114	
16	116	104	105	103	109	108	115	
15	130	112	112	110	115	115	117	
14	170	131	131	125	144	144	141	
13	210	207	195	185	205	210	212	
12	268	275	275	279	289	270	299	
11	310	312	300	310	328	310	316	
10	316	321	320	363	359	350	364	
9	365	372	336	370	377	370	380	
8	445	465	416	426	441	434	463	
7	510	530	509	510	503	510	508	
6		600	527	560	579	552	577	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE			JULY 1979	
	XBT NO.	99	100	101	102	103	104	105
DATE (GMT)	7/15	7/15	7/15	7/15	7/15	7/15	7/16	
TIME (GMT)	2028	2056	2142	2224	2308	2352	0036	
LATITUDE	3S 13	3S 19	3S 30	3S 40	3S 50	4S 0	4S 10	
LONGITUDE	24W 59	24W 59	24W 58	24W 58	24W 58	24W 59	25W 0	
SURF T (C)	25.8	25.7	25.7	25.7	25.7	25.9	26.5	
29								
28								
27								
26				052				
25	86	98	102	102	104	100	90	
24	92	98	102	102	105	103	98	
23	94	98	104	103	108	104	100	
22	97	99	104	104	110	105	101	
21	98	99	106	105	112	106	107	
20	100	101	108	109	112	112	113	
19	102	101	110	112	115	115	118	
18	115	102	111	118	118	119	120	
17	119	104	112	121	121	124	130	
16	120	106	118	129	126	133	134	
15	123	110	122		133	142	140	
14	135	123	151		142	148	147	
13	200	175	190		163	167	151	
12	269	259	260		216	200	180	
11	325	312	317		252	235	220	
10	380	361	371		318	299	260	
9	411	405	410		372	360	340	
8	445	445	460		430	409	410	
7	495	495	510		494	454	470	
6	561	562	586		551	526	540	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE			JULY 1979	
	XBT NO.	92	93	94	95	96	97	98
DATE (GMT)	7/15	7/15	7/15	7/15	7/15	7/15	7/15	7/15
TIME (GMT)	1458	1545	1630	1722	1809	1853	1940	
LATITUDE	2S 0	2S 10	2S 19	2S 31	2S 42	2S 52	2S 52	2S 55
LONGITUDE	24W 57	24W 58	24W 57	24W 58	24W 58	24W 58	24W 58	24W 53
SURF T (C)	25.7	25.8	25.7	25.8	26.0	25.9	25.9	
29								
28								
27								
26					15			
25	73	67	80	80	106	90	90	
24	91	89	98	92	109	105	102	
23	93	93	101	94	111	105	103	
22	97	95	102	95	112	108	105	
21	99	95	103	98	113	109	108	
20	101	97	106	99	115	111	109	
19	103	101	112	100	115	112	111	
18	108	103	113	100	117	112	112	
17	109	104	114	101	117	113	113	
16	111	108	116	102	119	115	116	
15	114	117	122	107	124	117	111	
14	139	148	143	125	160	139	140	
13	220	229	205	214	250	200	212	
12	311	298	300	308	327	298	280	
11	327	330	334	348	356	352	330	
10	354	368	367	383	390	400	370	
9	391	400	401	438	432	428	400	
8	446	462	443	472	470	465	441	
7	507	512	490	500	522	516	490	
6	568	585	548	575	590	595	568	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE			JULY 1979	
	XBT NO.	106	107	108	109	110	111	112
DATE (GMT)	7/16	7/16	7/16	7/16	7/16	7/16	7/16	7/16
TIME (GMT)	0123	0209	0254	0342	0558	0723	0810	
LATITUDE	4S 19	4S 29	4S 39	4S 49	4S 58	5S 9	5S 15	
LONGITUDE	25W 0	25W 0	24W 59	24W 59	25W 0	25W 1	25W 1	
SURF T (C)	26.6	26.6	26.7	26.7	26.7	26.7	26.7	
29								
28								
27								
26	95	84	82	81	82	88	97	
25	99	88	86	87	87	91	100	
24	100	93	93	95	91	97	102	
23	101	99	98	99	96	98	106	
22	108	102	104	105	98	101	110	
21	111	106	109	111	103	111	114	
20	113	109	113	118	107	115	120	
19	119	120	120	121	115	125	128	
18	123	129	125	129	122	132	130	
17	129	140	130	133	132	136	135	
16	134	144	135	141	143	145	142	
15	143	154	140	152	148	149	147	
14	154	163	151	163	150	155	151	
13	168	170	166	168	165	163	159	
12	178	185	178	176	185	184	169	
11	193	200	199	190	200	196	198	
10	235	249	239	228	233	250	260	
9	314	318	314	300	311	334	317	
8	383	399	392	378	381	393	398	
7	477	484	470	453	463	486	480	
6	554	571	579	559	550	571	589	



## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER		CRUISE				JULY 1979	
	XBT NO.	113	114	115	116	117	118	119
DATE (GMT)	7/16	7/16	7/16	7/16	7/17	7/17	7/17	7/17
TIME (GMT)	0853	0939	1027	1113	1830	1915	2005	
LATITUDE	5S 29	5S 39	5S 52	6S 0	6S 10	6S 20	6S 31	
LONGITUDE	25W 2	25W 2	25W 1	25W 1	25W 2	25W 2	25W 1	
SURF T (C)	26.6	26.7	26.6	26.5	26.7	26.7	26.7	
29								
28								
27								
26	90	83	92	80	86	81	85	
25	94	89	95	85	92	84	90	
24	98	92	98	94	96	86	97	
23	102	98	100	97	98	92	101	
22	105	100	101	100	102	102	105	
21	108	105	104	103	117	106	112	
20	112	112	107	109	125	117	115	
19	117	118	112	114	132	125	120	
18	121	122	116	122	140	129	126	
17	124	134	123	127	143	134	135	
16	130	140	130	132	150	140	142	
15	137	150	138	138	160	148	150	
14	144	154	148	146	165	158	158	
13	154	170	153	158	174	169	167	
12	170	187	170	176	194	190	183	
11	200	206	200	196	222	221	220	
10	249	250	259	222	261	258	274	
9	314	318	333	300	330	322	350	
8	388	380	400	383	401	395	424	
7	465	470	500	462	485	480	500	
6	572	559	600	570		573	609	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER		CRUISE				JULY 1979	
	XBT NO.	127	128	129	130	131	132	133
DATE (GMT)	7/18	7/18	7/18	7/18	7/18	7/18	7/18	7/18
TIME (GMT)	0356	0442	0744	0834	0915	1225	1307	
LATITUDE	7S 49	8S 0	8S 9	8S 20	8S 29	8S 39	8S 49	
LONGITUDE	25W 1	25W 2	25W 2	25W 1	25W 2	25W 4	25W 4	
SURF T (C)	26.4	26.4	26.3	26.3	26.4	26.4	26.4	
29								
28								
27								
26	97	96	96	110	101	101	98	
25	99	100	99	113	103	104	101	
24	103	107	101	116	106	113	110	
23	120	112	108	121	112	121	112	
22	129	122	118	127	133	138	131	
21	136	130	129	138	141	144	134	
20	144	147	134	148	147	150	141	
19	149	150	147	154	149	156	147	
18	153	155	153	165	155	168	153	
17	158	163	164	172	164	175	158	
16	169	174	177	182	172	182	172	
15	180	185	192	190	182	188	187	
14	193	197	200	203	192	196	195	
13	208	207	215	216	203	218	219	
12	220	219	231	225	221	239	235	
11	242	235	248	240	249	261	252	
10	258	258	263	272	270	285	278	
9	288	282	299	309	305	320	325	
8	350	343	358	362	371	373	389	
7	420	435	442	454	470	485	475	
6	564	550	550	570	580	589	560	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER		CRUISE				JULY 1979	
	XBT NO.	120	121	122	123	124	125	126
DATE (GMT)	7/17	7/17	7/17	7/18	7/18	7/18	7/18	7/18
TIME (GMT)	2043	2130	2210	0055	0144	0230	0311	
LATITUDE	6S 40	6S 50	7S 0	7S 8	7S 20	7S 30	7S 39	
LONGITUDE	25W 2	25W 2	25W 1	25W 1	25W 1	25W 1	25W 1	
SURF T (C)	26.6	26.6	26.7	26.5	26.6	26.5	26.5	
29								
28								
27								
26	85	80	90	91	87	93	97	
25	93	87	93	93	93	98	101	
24	99	91	98	98	99	104	104	
23	108	92	102	105	104	115	115	
22	112	100	110	108	107	118	122	
21	114	106	116	115	113	123	126	
20	120	113	119	123	124	129	132	
19	124	121	121	130	130	134	136	
18	130	123	131	133	139	139	143	
17	137	131	137	138	144	152	150	
16	142	138	142	144	150	154	157	
15	150	152	150	150	154	169	167	
14	157	160	158	159	165	183	179	
13	169	173	164	171	181	196	187	
12	190	181	177	183	193	209	199	
11	213	212	208	212	218	229	213	
10	251	271	249	266	255	253	246	
9	320	330	318	327	315	295	272	
8	391	403	400	430	402	363	348	
7	480	500	480	510	489	480		
6	583	591	580	598	586	576		

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER		CRUISE				JULY 1979	
	XBT NO.	134	135	136	137	138	139	140
DATE (GMT)	7/18	7/18	7/18	7/18	7/19	7/19	7/19	7/19
TIME (GMT)	1350	1715	2015	2315	0215	0616	0915	
LATITUDE	8S 57	9S 2	9S 2	9S 2	9S 2	9S 2	9S 2	9S 2
LONGITUDE	25W 3	25W 1	25W 1	25W 1	25W 1	25W 1	25W 1	25W 1
SURF T (C)	26.4	26.6	26.5	26.5	26.4	26.4	26.4	
29								
28								
27								
26	88	85	84	89	89	90	83	
25	100	95	95	98	99	97	95	
24	111	103	101	104	105	102	106	
23	118	112	110	113	115	108	114	
22	130	123	125	123	132	122	125	
21	138	130	132	133	140	133	136	
20	147	142	140	140	149	142	145	
19	150	154	153	149	153	150	152	
18	159	164	162	156	159	155	157	
17	164	171	167	164	168	162	162	
16	170	184	176	178	176	171	169	
15	179	195	183	173	187	187	182	
14	183	206	191	192	199	200	192	
13	218	219	202	204	210	212	200	
12	232	234	223	222	231	231	221	
11	260	250	249	242	252	249	245	
10	282	276	266	264	278	278	271	
9	310	315	309	308	312	312	318	
8	365	368	381	370	373	390	374	
7	440	455	463	465	470	480	473	
6	551	568	586	569	580	580	580	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE		JULY 1979		
	XBT NO.	141	142	143	144	145	146	147
DATE (GMT)	7/19	7/19	7/19	7/19	7/19	7/19	7/19	7/19
TIME (GMT)	1400	1500	1600	1902	2008	2100	2200	
LATITUDE	85 55	85 47	85 40	85 33	85 25	85 19	85 12	
LONGITUDE	25W 19	25W 31	25W 43	25W 56	26W 9	26W 19	26W 30	
SURF T (C)	26.6	26.6	26.6	26.7	26.6	26.6	26.5	
29								
28								
27								
26	82	95	105	94	89	72	83	
25	93	100	108	90	97	85	87	
24	101	103	112	105	103	97	93	
23	113	115	115	111	109	106	101	
22	122	126	131	120	118	119	110	
21	127	132	134	127	130	127	125	
20	133	137	138	135	144	137	130	
19	148	142	148	141	150	143	140	
18	162	149	158	148	158	151	147	
17	168	168	175	163	163	162	154	
16	177	173	173	176	174	171	162	
15	183	180	192	182	190	184	174	
14	205	190	197	193	203	196	190	
13	219	201	208	203	210	210	204	
12	233	219	227	219	218	222	225	
11	265	237	246	232	235	240	242	
10	299	268	272	251	258	260	262	
9	326	308	323	289	306	290	294	
8	372	394	398	352	354	345	351	
7	475	505	485	430	433	420	462	
6	570	619	598	550	538	530	597	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE		JULY 1979		
	XBT NO.	148	149	150	151	152	153	154
DATE (GMT)	7/19	7/19	7/20	7/20	7/20	7/20	7/20	7/20
TIME (GMT)	2300	2312	0230	0330	0430	0530	0831	
LATITUDE	85 5	85 4	75 58	75 51	75 44	75 39	75 34	
LONGITUDE	26W 42	26W 44	26W 56	27W 7	27W 19	27W 31	27W 36	
SURF T (C)	26.6	26.6	26.6	26.6	26.6	26.7	26.6	
29								
28								
27								
26	98	94	97	106	107	99	105	
25	100	100	100	108	108	102	115	
24	101	101	102	112	110	104	120	
23	109	113	110	114	112	108	125	
22	117	118	114	121	115	112	130	
21	122	127	124	123	122	119	134	
20	128	132	128	128	129	123	139	
19	133	141	136	132	134	128	148	
18	140	148	143	139	141	137	153	
17	149	155	148	148	146	141	160	
16	161	163	160	153	153	151	166	
15	170	172	170	165	169	158	173	
14	182	180	178	178	181	166	183	
13	195	203	189	190	196	175	195	
12	212	218	213	203	216	192	207	
11	234	235	228	218	240	214	223	
10	250	269	248	234	258	237	246	
9	283	293	280	263	282	255	267	
8	327	331	330	301	333	293	322	
7	430	430	435	395	424	420	443	
6	564	531	544	526	544	558	552	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE		JULY 1979		
	XBT NO.	155	156	157	158	159	160	161
DATE (GMT)	7/20	7/20	7/20	7/20	7/21	7/21	7/21	7/21
TIME (GMT)	1130	1545	2238	2325	0012	0113	0155	
LATITUDE	7S 34	7S 34	7S 31	7S 20	7S 13	6S 58	6S 49	
LONGITUDE	27W 36	27W 36	27W 31	27W 31	27W 31	27W 30	27W 30	
SURF T (C)	26.6	26.7	26.6	26.6	26.6	26.6	26.6	
29								
28								
27								
26	101	100	100	96	83	100	102	
25	110	105	105	100	91	108	111	
24	117	112	112	102	92	112	116	
23	118	122	119	114	99	118	122	
22	122	128	122	120	110	122	126	
21	129	136	128	123	118	127	130	
20	132	144	140	128	128	135	136	
19	144	156	150	136	136	142	141	
18	151		154	142	142	146	149	
17	158		160	150	148	150	156	
16	167		165	159	151	154	159	
15	182		176	166	165	161	163	
14	192		186	172	173	167	165	
13	206		194	182	183	176	172	
12	223		211	200	192	198	186	
11	242		223	210	208	220	210	
10	257		239	231	245	257	241	
9	278		260	273	308	326	305	
8	331		321	370	382	396	388	
7	465		430	470	480	500	480	
6	579		550	598	600	589	589	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE		JULY 1979		
	XBT NO.	162	163	164	165	166	167	168
DATE (GMT)	7/21	7/21	7/21	7/21	7/21	7/21	7/21	7/21
TIME (GMT)	0408	0540	0630	0720	1100	1403	2000	
LATITUDE	6S 39	6S 29	6S 18	6S 7	6S 0	6S 0	6S 0	6S 0
LONGITUDE	27W 30	27W 31	27W 31	27W 32	27W 31	27W 31	27W 31	27W 31
SURF T (C)	26.6	26.8	26.5	26.5	26.4	26.8	26.6	
29								
28								
27								
26	100	110	109	115	99	100	108	
25	111	113	110	116	102	104	114	
24	115	115	112	118	104	106	115	
23	117	117	113	120	106	108	117	
22	121	120	117	122	109	111	121	
21	127	124	119	125	114	117	128	
20	133	129	124	130	119	123	137	
19	136	134	130	136	128	131	139	
18	142	137	135	141	133	136	145	
17	144	140	137	148	141	143	150	
16	151	145	143	155	149	149	153	
15	157	155	152	160	154	156	163	
14	171	167	165	169	160	164	172	
13	182	178	172	180	169	174	180	
12	192	189	183	195	190	197	193	
11	206	213	219	222	221	223	211	
10	248	252	270	272	270	267	270	
9	320	340	335	345	350	340	340	
8	402	419	418	419	408	399	400	
7	485	500	503	494	485	495	470	
6	609	595	613			598	563	

ISOTHERM DEPTHS (M)							
SHIP	RV RESEARCHER		CRUISE		JULY 1979		
XBT NO.	169	170	171	172	173	174	175
DATE (GMT)	7/21	7/22	7/22	7/22	7/22	7/22	7/22
TIME (GMT)	2300	0200	0500	1300	1400	1500	1602
LATITUDE	65 0	65 0	65 0	55 45	55 33	55 20	55 7
LONGITUDE	27W 31	27W 31	27W 31	27W 34	27W 33	27W 32	27W 31
SURF T (C)	26.6	26.5	26.5	26.6	26.6	26.7	26.8
29							
28							
27							
26	101	100	109	106	99	103	100
25	104	102	112	108	102	111	104
24	105	103	113	111	103	115	110
23	107	104	116	114	111	117	117
22	110	108	118	119	117	123	123
21	120	114	123	130	123	131	131
20	124	127	131	132	131	134	134
19	128	129	134	136	136	140	142
18	132	133	138	141	143	144	146
17	135	136	144	149	146	149	153
16	140	142	151	158	156	153	158
15	150	150	164	161	169	155	162
14	157	159	176	168	175	167	172
13	169	169	183	177	181	179	179
12	182	184	194	188	192	192	193
11	216	216	221	217	211	203	214
10	269	268	270	265	268	247	250
9	340	340	333	355	345	320	315
8	400	399	400	432	409	380	392
7	477	480	482	520	495	450	469
6	590	589	583		618	570	566

ISOTHERM DEPTHS (M)							
SHIP	RV RESEARCHER		CRUISE		JULY 1979		
XBT NO.	176	177	178	179	180	181	182
DATE (GMT)	7/22	7/22	7/22	7/22	7/22	7/23	7/23
TIME (GMT)	1700	2000	2100	2200	2300	0000	0135
LATITUDE	4S 59	4S 48	4S 37	4S 26	4S 15	4S 4	4S 0
LONGITUDE	27W 31	27W 25	27W 19	27W 13	27W 8	27W 2	26W 58
SURF T (C)	26.7	26.7	26.7	26.6	26.3	26.2	26.3
29							
28							
27							
26	95	101	93	101	95	93	93
25	100	105	100	111	104	104	101
24	103	108	102	114	109	105	102
23	111	112	107	116	112	107	104
22	116	120	112	119	113	112	108
21	122	125	117	122	120	116	117
20	128	130	128	128	122	120	120
19	133	134	133	130	128	127	126
18	136	142	139	135	138	130	131
17	140	148	143	147	142	134	134
16	149	155	149	152	149	138	142
15	155	160	156	158	156	146	145
14	168	170	163	166	165	155	153
13	174	175	181	174	174	174	165
12	186	188	195	199	181	190	192
11	205	206	210	226	200	235	234
10	233	252	247	262	230	260	271
9	310	330	320	330	320	334	350
8	367	411	401	400	401	404	399
7	460	482	475	487	470	455	451
6	535	568	553	568	553	532	533

ISOTHERM DEPTHS (M)							
SHIP	RV RESEARCHER		CRUISE		JULY 1979		
XBT NO.	183	184	185	186	187	188	189
DATE (GMT)	7/23	7/23	7/23	7/23	7/23	7/23	7/23
TIME (GMT)	0235	0330	0430	0530	0638	0815	0915
LATITUDE	35 50	35 40	35 29	35 18	35 5	35 0	25 49
LONGITUDE	26W 35	26W 48	26W 42	26W 38	26W 33	26W 32	26W 27
SURF T (C)	26.0	25.7	25.6	25.7	25.8	25.8	25.9
29							
28							
27							
26	106						
25	110	89	90	90	86	83	79
24	113	92	92	93	88	85	81
23	116	94	93	95	88	87	86
22	118	95	98	97	90	91	88
21	122	96	100	98	91	92	88
20	123	98	102	101	93	94	89
19	126	100	103	104	97	97	90
18	131	106	104	107	99	99	91
17	134	108	106	113	103	102	93
16	138	111	115	116	107	106	96
15	143	115	120	122	111	110	99
14	150	119	129	140	129	125	102
13	162	142	148	160	169	161	160
12	186	182	221	226	241	245	232
11	255	245	263	275	310	330	310
10	305	314	355	372	380	380	372
9	390	385	410	418	430	428	432
8	441	421	460	455	472	478	471
7	487	490	500	510	520	513	520
6	578	546	565	583	570	575	570

ISOTHERM DEPTHS (M)							
SHIP	RV RESEARCHER		CRUISE		JULY 1979		
XBT NO.	190	191	192	193	194	195	196
DATE (GMT)	7/23	7/23	7/23	7/23	7/23	7/23	7/23
TIME (GMT)	1015	1115	1215	1315	1508	1614	1718
LATITUDE	25 38	25 28	25 17	25 6	15 59	15 47	15 35
LONGITUDE	26W 22	26W 17	26W 13	26W 8	26W 4	25W 59	25W 53
SURF T (C)	25.7	25.8	26.0	26.0	26.1	26.1	26.0
29							
28							
27							
26			30	10	39	12	21
25	82	92	90	80	82	80	79
24	84	93	92	82	84	87	93
23	86	95	93	84	84	87	94
22	87	96	94	85	86	88	96
21	87	97	95	86	87	89	97
20	89	99	98	87	88	90	99
19	90	100	99	92	92	92	100
18	91	102	100	95	93	93	102
17	93	103	102	97	95	95	108
16	94	103	103	98	97	101	110
15	98	111	106	104	113	107	114
14	119	128	129	123	119	146	142
13	144	159	161	152	160	160	254
12	241	267	269	268	262	273	303
11	314	315	315	303	297	311	330
10	360	388	357	349	338	331	355
9	388	414	393	399	372	352	380
8	451	442	431	433	430	403	445
7	504	488	500	482	500	499	515
6	558	570	548	528	551	547	552

ISOTHERM DEPTHS (M)								
SHIP	RV RESEARCHER			CRUISE		JULY 1979		
	XBT NO.	197	198	199	200	201	202	203
DATE (GMT)	7/23	7/23	7/23	7/23	7/23	7/24	7/24	
TIME (GMT)	1821	1917	2013	2215	2315	0015	0115	
LATITUDE	1S	1S	1S	0S	0S	0S	0S	0S
	23	13	4	56	45	34	13	
LONGITUDE	25W	25W	25W	25W	25W	25W	25W	
	48	43	38	28	22	16	12	
SURF T (C)	25.8	25.6	25.6	25.5	25.4	25.3	25.4	
29								
28								
27								
26								
25	61	67	71	77	75	50	62	
24	82	82	77	89	78	77	79	
23	85	87	86	91	79	79	84	
22	86	91	88	92	80	79	90	
21	87	93	88	93	83	81	94	
20	90	94	89	95	89	90	97	
19	92	98	92	100	95	95	102	
18	95	100	95	103	99	99	107	
17	96	100	103	101	102	101	112	
16	99	106	110	115	107	110	119	
15	104	129	114	122	127	126	139	
14	145	164	133	160	160	150	169	
13	240	261	242	260	262	232	233	
12	302	308	309	308	292	257	273	
11	323	330	337	334	315	293	295	
10	349	349	353	349	323	303	317	
9	370	372	375	380	388	360	353	
8	420	431	442	446	451	426	416	
7	499	496	488	507	500	490	480	
6	572	577	555	591	609	600	598	

ISOTHERM DEPTHS (M)								
SHIP	RV RESEARCHER			CRUISE		JULY 1979		
	XBT NO.	204	205	206	207	208	209	210
DATE (GMT)	7/24	7/24	7/24	7/24	7/24	7/24	7/24	7/24
TIME (GMT)	0215	0315	1121	1210	1257	1343	1430	
LATITUDE	0S	0N	0N	0N	0N	0N	0N	0N
	10	1	10	20	30	39	49	
LONGITUDE	25W	25W	25W	25W	25W	25W	25W	25W
	8	3	2	2	2	2	1	
SURF T (C)	25.2	25.3	25.7	26.0	26.3	26.7	26.7	
29								
28								
27								
26					12	38	39	39
25	48	60	52	58	64	64	65	
24	77	74	71	70	73	74	75	
23	82	80	74	74	82	80	79	
22	93	90	87	82	86	88	86	
21	94	93	98	88	94	92	92	
20	103	99	100	91	101	97	96	
19	115	100	102	100	103	100	100	
18	115	105	106	102	108	103	103	
17	125	124	116	109	110	107	105	
16	133	129	120	117	123	111	109	
15	144	138	138	131	128	119	121	
14	154	158	150	138	148	124	134	
13	220	237	220	200	200	200	200	
12	265	285	277	270	278	278	301	
11	295	320	305	316	320	333	352	
10	315	341	330	340	341	346	365	
9	348	366	344	362	360	368	383	
8	396	412	382	417	420	423	421	
7	460	471	475	495	495	520	510	
6	572	593	602	592	576	584	581	

ISOTHERM DEPTHS (M)				
SHIP	RV RESEARCHER	CRUISE	JULY 1979	
	XBT NO.	211		
DATE (GMT)	7/24			
TIME (GMT)	1519			
LATITUDE	1N			
	0			
LONGITUDE	25W			
	1			
SURF T (C)	26.8			
29				
28				
27				
26	39			
25	61			
24	78			
23	82			
22	84			
21	85			
20	89			
19	96			
18	100			
17	103			
16	108			
15	116			
14	122			
13	185			
12	279			
11	332			
10	349			
9	365			
8	408			
7	523			
6	612			

ISOTHERM DEPTHS (M)								
SHIP	RV RESEARCHER			CRUISE		FEB-MAR 80		
	XBT NO.	1	2	3	4	5	6	7
DATE (GMT)	2/20	2/21	2/21	2/21	2/21	2/21	2/22	
TIME (GMT)	1539	0957	1201	1352	1538	1735	0108	
LATITUDE	02N	00S	00S	00S	00N	00N	00N	
	35	01	01	00	00	00	00	
LONGITUDE	015W	015W	015W	016W	016W	017W	017W	
	36	22	49	14	39	04	55	
SURF T (C)	27.8	26.6	26.9	26.6	26.0	26.7	26.7	
29								
28								
27	35							
26	49	26	30	32	32	30	51	
25	53	52	58	50	50	53	52	
24	56	55	60	50	53	55	58	
23	57	59	63	52	67	63	62	
22	58	61	66	62	69	65	65	
21	59	62	69	63	70	68	67	
20	61	63	70	64	78	70	68	
19	62	69	72	67	80	72	72	
18	64	72	76	78	82	76	80	
17	68	77	79	81	87	79	87	
16	81	89	99	88	99	90	90	
15	112	127	115	98	111	99	99	
14	178	160	180	157	150	157	139	
13	240	230	230	235	221	233	221	
12	281	270	268	250	251	260	240	
11	301	311	303	300	312	310	301	
10	330	333	319	316	328	339	330	
9	363	367	350	350	372	380	381	
8	426	410	398	408	422	424	430	
7	512	505	466	470	520	490	482	
6	580	553	540	553	621	579	551	

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE FEB-MAR 80			
	8	9	10	11	12	13	14
XBT NO.							
DATE (GMT)	2/22	2/22	2/22	2/22	2/22	2/22	2/22
TIME (GMT)	0303	0458	0652	0841	1543	1735	1921
LATITUDE	00N 00	00N 00	00N 00	00N 00	00S 01	00S 01	00N 00
LONGITUDE	018W 20	018W 46	019W 10	019W 35	020W 25	020W 50	021W 15
SURF T (C)	26.7	26.9	26.9	27.0	27.1	27.9	27.3
-----							
29							
28							
27				16	01		12
26	48	39	41	50	40	37	38
-----							
25	50	43	48	53	50	45	48
24	54	48	52	58	54	51	54
23	62	51	55	62	58	55	58
22	67	53	58	65	62	62	59
-----							
21	70	59	64	71	69	75	73
20	78	66	69	78	72	81	84
19	80	68	73	81	78	83	86
18	82	74	77	85	80	86	89
-----							
17	92	79	81	95	83	89	93
16	99	85	87	99	92	99	97
15	102	90	103	112	103	109	111
14	140	126	139	140	160	145	133
-----							
13	218	231	232	232	206	215	203
12	249	247	250	258	210	235	238
11	300	283	288	298	229	246	250
10	317	329	321	349	331	325	311
-----							
9	398	401	390	410	378	378	373
8	440	431	430	428	442	440	425
7	499	491	499	502	510	505	495
6	560	548	544	570	620	612	587

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE FEB-MAR 80			
	22	23	24	25	26	27	28
XBT NO.							
DATE (GMT)	2/24	2/24	2/24	2/24	2/24	2/24	2/25
TIME (GMT)	0545	0658	0809	1315	1423	1527	0722
LATITUDE	00N 45	00N 25	00N 18	00S .14	00S 30	00S 45	01S 17
LONGITUDE	025W 08	025W 06	025W 03	024W 57	024W 56	024W 56	024W 56
SURF T (C)	27.5	27.8	27.8	27.8	28.0	28.5	27.9
-----							
29							
28					00	05	
27	21	18	27	11	20	25	19
26	32	32	50	31	39	45	63
-----							
25	41	46	56	45	48	72	68
24	47	48	59	49	58	79	71
23	49	49	61	60	61	82	74
22	54	51	81	72	72	88	77
-----							
21	62	69	83	81	78	93	80
20	74	74	86	83	83	98	83
19	80	79	94	86	90	104	85
18	86	94	101	88	93	110	89
-----							
17	94	101	109	91	98	115	93
16	100	104	115	110	103	126	96
15	111	115	132	121	129	135	99
14	124	122	142	150	157	149	108
-----							
13	149	165	203	200	199	200	148
12	222	245	257	256	234	241	217
11	249	270	281	279	261	284	276
10	294	315	348	349	327	307	284
-----							
9	364	360	381	372	360	373	366
8	418	405	422	399	382	417	411
7	505	495	505	499	501	529	519
6	600	615	618	595	579	640	580

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE FEB-MAR 80			
	15	16	17	18	19	20	21
XBT NO.							
DATE (GMT)	2/22	2/22	2/23	2/23	2/23	2/23	2/23
TIME (GMT)	2116	2301	0608	0812	1026	1219	1426
LATITUDE	00S 00	00N 00	00N 10	00N 19	00N 31	00N 40	00N 51
LONGITUDE	021W 41	022W 05	022W 55	023W 20	023W 46	024W 10	029W 36
SURF T (C)	27.2	27.2	27.4	27.5	27.7	27.7	28.4
-----							
29							
28							01
27	07	00	23	23	22	22	25
26	31	36	36	31	34	34	37
-----							
25	42	49	44	41	41	41	42
24	47	51	48	48	45	47	48
23	49	53	52	52	48	50	51
22	50	60	61	58	55	51	53
-----							
21	58	72	71	62	58	59	57
20	71	80	83	73	64	65	71
19	74	83	91	79	68	74	77
18	78	88	92	82	70	80	81
-----							
17	80	69	97	86	75	82	84
16	85	100	104	92	81	90	92
15	100	108	114	98	88	102	105
14	115	132	150	130	110	115	118
-----							
13	180	209	220	205	152	149	140
12	225	242	249	239	222	223	220
11	235	250	283	259	244	238	249
10	302	318	341	327	302	329	310
-----							
9	361	370	391	364	348	356	353
8	408	428	450	410	398	406	417
7	482	500	524	509	510	483	481
6	535	600	591	588	590	588	570

## ISOTHERM DEPTHS (M)

SHIP	RV RESEARCHER			CRUISE FEB-MAR 80			
	29	30	31	32	33	34	35
XBT NO.							
DATE (GMT)	2/25	2/25	2/25	2/25	2/25	2/25	2/25
TIME (GMT)	0830	0938	1408	1530	1638	2109	2217
LATITUDE	01S 31	01S 46	02S 15	02S 30	02S 45	03S 15	03S 30
LONGITUDE	024W 57	024W 59	024W 59	024W 59	024W 59	025W 05	025W 00
SURF T (C)	28.1	27.7	28.1	28.4	28.5	28.4	28.2
-----							
29							
28				01	02	10	06
27	58	55	61	63	60	56	68
26	69	62	62	68	65	60	70
-----							
25	71	69	64	69	70	65	71
24	73	72	67	72	75	69	74
23	75	74	70	75	79	72	78
22	76	76	71	82	83	78	85
-----							
21	78	79	73	85	88	80	88
20	81	81	78	89	92	88	91
19	83	82	79	91	96	91	97
18	89	85	81	97	98	99	99
-----							
17	95	88	87	98	100	102	102
16	100	89	89	100	106	105	108
15	106	95	94	104	113	108	113
14	115	101	100	112	120	112	119
-----							
13	140	130	153	145	155	144	125
12	260	253	220	211	228	210	162
11	295	292	290	292	302	298	248
10	309	328	330	345	365	335	312
-----							
9	381	369	398	400	401	384	352
8	425	437	476	448	460	465	437
7	513	522	535	499	508	497	468
6	564	579	600	648	562	560	518

ISOTHERM DEPTHS (M)								
SHIP	RV RESEARCHER			CRUISE FEB-MAR 80				
	XBT NO.	36	37	38	39	40	41	42
DATE (GMT)	2/25	2/26	2/26	2/26	2/26	2/26	2/26	2/26
TIME (GMT)	2325	0431	0531	0642	1254	1405	1523	
LATITUDE	03S 45	04S 15	04S 30	04S 44	05S 15	05S 30	05S 45	
LONGITUDE	025W 04	025W 00	025W 01	025W 02	025W 01	025W 02	025W 01	
SURF T (C)	28.1	27.6	27.5	27.6	27.7	27.7	27.8	
29								
28	08							
27	70	73	52	75	66	74	80	
26	75	84	70	84	70	78	85	
25	78	89	78	88	74	81	91	
24	79	92	83	95	84	89	98	
23	83	98	89	100	90	93	99	
22	88	100	93	100	93	98	101	
21	89	102	99	101	101	105	108	
20	99	109	103	104	108	111	112	
19	101	112	106	107	117	118	116	
18	105	117	110	111	127	121	121	
17	109	121	113	115	130	126	129	
16	117	122	122	122	139	131	134	
15	121	135	124	128	142	139	142	
14	130	144	134	132	150	146	152	
13	142	159	145	145	160	154	162	
12	151	169	154	161	170	168	174	
11	212	192	178	177	190	201	198	
10	278	238	225	211	247	262	248	
9	349	299	290	296	322	328	309	
8	422	374	358	355	390	400	398	
7	482	445	429	429	472	473	467	
6	578	533	502	518	552	568	571	

ISOTHERM DEPTHS (M)								
SHIP	RV RESEARCHER			CRUISE FEB-MAR 80				
	XBT NO.	43	44	45	46	47	48	49
DATE (GMT)	2/27	2/27	2/27	2/27	2/27	2/27	2/27	2/27
TIME (GMT)	0719	0832	0947	1418	1533	1654	2116	
LATITUDE	06S 15	06S 30	06S 45	07S 15	07S 30	07S 45	08S 15	
LONGITUDE	025W 05	025W 05	025W 00	025W 00	025W 01	025W 01	025W 01	
SURF T (C)	27.7	27.5	27.6	27.6	27.7	27.7	27.5	
29								
28								
27	67	76	79	72	70	71	73	
26	75	88	91	81	87	81	80	
25	81	98	101	92	98	97	91	
24	91	100	108	105	115	107	104	
23	101	108	111	113	123	110	111	
22	107	117	121	119	132	121	115	
21	114	122	126	130	139	128	129	
20	119	125	129	139	145	132	136	
19	125	132	132	148	149	140	145	
18	138	137	138	150	153	149	150	
17	142	141	142	156	162	156	158	
16	146	150	149	163	170	165	171	
15	152	157	155	175	179	171	187	
14	158	165	165	183	189	175	199	
13	166	173	176	195	198	183	205	
12	185	183	186	219	212	200	223	
11	209	201	200	241	237	219	238	
10	272	232	220	268	258	248	264	
9	348	314	270	288	288	281	300	
8	423	390	365	368	349	357	360	
7	521	475	450	462	430	439	450	
6	633	580	580	570	536	550	559	

ISOTHERM DEPTHS (M)								
SHIP	RV RESEARCHER			CRUISE FEB-MAR 80				
	XBT NO.	50	51	52	53	54	55	56
DATE (GMT)	2/27	2/27	2/28	2/28	2/28	2/28	2/28	2/28
TIME (GMT)	2228	2340	0458	0616	0720	1209	1358	
LATITUDE	08S 30	08S 45	09S 15	09S 30	09S 45	10S 02	10S 05	
LONGITUDE	025W 00	025W 00	024W 59	025W 00	024W 59	025W 25	025W 50	
SURF T (C)	27.5	27.5	27.5	27.3	27.4	27.3	27.4	
29								
28								
27	70	69	61	62	39	51	56	
26	78	81	68	68	50	62	69	
25	82	88	77	77	74	71	80	
24	100	102	100	96	81	90	92	
23	120	113	113	109	108	108	108	
22	129	121	121	124	121	115	114	
21	134	129	129	136	125	123	121	
20	138	141	137	145	133	133	128	
19	144	150	142	151	140	141	132	
18	151	157	149	156	151	152	142	
17	158	160	154	162	163	158	155	
16	162	163	165	169	169	163	163	
15	167	172	178	177	184	171	178	
14	180	177	195	187	196	185	195	
13	192	188	207	199	208	200	213	
12	209	209	221	214	218	225	241	
11	229	237	245	234	246	251	269	
10	258	268	269	258	274	279	299	
9	290	309	299	293	301	320	339	
8	355	380	374	349	338	356	429	
7	453	473	445	429	408	420	506	
6	543	566	558	534	500	530	595	

ISOTHERM DEPTHS (M)								
SHIP	RV RESEARCHER			CRUISE FEB-MAR 80				
	XBT NO.	57	58	59	60	61	62	63
DATE (GMT)	2/28	2/28	2/28	2/29	2/29	2/29	2/29	2/29
TIME (GMT)	1554	1750	1948	0304	0501	0849	1039	
LATITUDE	10S 01	10S 01	10S 00	10S 01	10S 00	10S 00	10S 00	10S 00
LONGITUDE	026W 16	026W 41	027W 06	027W 55	028W 20	029W 10	029W 35	
SURF T (C)	27.4	27.4	27.8	27.8	27.8	27.9	27.7	
29								
28								
27	49	50	62	52	55	49	65	
26	55	69	80	72	70	58	78	
25	62	79	87	80	79	73	89	
24	86	99	105	93	94	81	101	
23	111	115	115	102	103	87	119	
22	120	123	123	121	114	95	123	
21	128	131	131	128	123	103	138	
20	133	139	136	138	131	109	142	
19	145	145	143	142	143	119	149	
18	153	153	153	151	149	131	158	
17	162	163	166	161	164	144	168	
16	170	169	179	172	174	155	182	
15	182	179	189	182	186	168	194	
14	199	186	204	198	194	180	208	
13	212	205	217	210	208	194	219	
12	235	230	233	231	222	216	240	
11	250	261	253	259	249	232	260	
10	282	292	283	281	277	259	276	
9	311	327	318	310	316	294	305	
8	360	379	393	360	365	353	350	
7	407	420	470	451	457	449	418	
6	482	500	605	573	575	535	537	

## ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE				FEB-MAR 80	
XBT NO.	64	65	66	67	68	69	70
DATE (GMT)	2/29	2/29	2/29	2/29	3/ 1	3/ 1	3/ 1
TIME (GMT)	1645	1850	2032	2243	0026	0649	0855
LATITUDE	09S 35	09S 10	08S 45	08S 20	07S 59	07S 31	07S 31
LONGITUDE	029W 59	030W 00	029W 59	029W 58	029W 59	039W 34	029W 09
SURF T (C)	27.9	28.0	28.0	27.9	27.7	27.7	27.7
29							
28		45	29				
27	62	82	72	90	76	87	81
26	81	92	83	100	83	99	90
25	91	102	103	112	98	111	101
24	104	111	111	123	109	119	124
23	115	124	118	129	121	129	128
22	120	138	130	133	128	132	131
21	130	145	134	139	138	136	136
20	137	151	149	148	147	143	139
19	149	160	159	155	154	149	146
18	157	167	163	159	159	153	155
17	166	171	170	170	162	160	161
16	175	182	183	188	168	164	170
15	182	193	194	196	186	172	179
14	200	201	200	205	199	178	186
13	211	218	212	217	213	193	194
12	232	231	228	228	228	209	201
11	249	261	248	242	248	231	225
10	273	292	270	262	273	269	260
9	302	328	303	310	319	306	290
8	350	378	378	398	392	366	362
7	447	472	469	487	481	473	450
6	538	568		701	598	587	568

## ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE				FEB-MAR 80	
XBT NO.	71	72	73	74	75	76	77
DATE (GMT)	3/ 1	3/ 1	3/ 1	3/ 2	3/ 2	3/ 3	3/ 3
TIME (GMT)	1059	1360	1510	1551	1755	0026	0235
LATITUDE	07S 33	07S 35	07S 36	07S 59	08S 21	08S 35	08S 22
LONGITUDE	028W 44	028W 19	027W 54	027W 31	027W 31	027W 06	026W 45
SURF T (C)	27.7	27.8	28.0	27.8	28.0	27.6	27.7
29							
28							
27	81	79	83	77	74	61	71
26	87	90	92	82	82	67	74
25	98	95	106	90	90	78	84
24	110	106	117	101	108	95	96
23	122	118	122	122	128	120	105
22	129	122	129	129	134	128	118
21	133	129	133	134	136	137	120
20	139	138	135	139	148	144	128
19	148	142	141	142	150	149	132
18	151	149	149	152	156	153	142
17	156	151	152	161	163	159	155
16	162	158	163	175	175	165	166
15	169	165	174	188	186	172	174
14	177	172	184	199	193	178	183
13	188	181	194	208	204	189	200
12	196	198	206	227	216	208	222
11	208	210	223	249	236	222	245
10	235	246	249	271	273	250	269
9	288	311	287	310	313	298	310
8	362	388	380	370	365	372	370
7	480	440	490	449	462	458	445
6	570	591	591	551	570	538	546

## ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE				FEB-MAR 80	
XBT NO.	78	79	80	81	82	83	84
DATE (GMT)	3/ 3	3/ 3	3/ 3	3/ 3	3/ 3	3/ 3	3/ 4
TIME (GMT)	0434	0638	0900	1338	1557	2222	0020
LATITUDE	08S 11	08S 00	07S 30	06S 52	06S 33	06S 02	05S 51
LONGITUDE	026W 22	026W 00	026W 00	026W 44	027W 07	027W 07	026W 45
SURF T (C)	27.7	27.5	27.6	27.9	27.9	27.8	27.6
29							
28							
27	79	80	82	85	82	78	68
26	85	87	92	94	91	87	88
25	92	97	100	103	99	93	92
24	102	111	108	119	109	98	103
23	109	119	117	132	115	103	108
22	115	124	122	137	119	109	110
21	119	130	125	145	128	116	117
20	128	135	132	147	131	120	119
19	138	143	136	152	136	123	121
18	147	151	142	159	140	127	128
17	155	163	148	166	144	130	137
16	163	175	157	173	150	133	139
15	178	181	162	180	157	138	142
14	182	189	173	183	161	145	152
13	201	205	189	195	170	158	158
12	219	220	209	210		168	170
11	237	235	224	228		190	189
10	258	269	249	246		250	235
9	292	318	282	285		314	298
8	367	371	339	363		392	392
7	450	473	438	498		500	472
6	561	573	534	553		598	572

## ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE				FEB-MAR 80	
XBT NO.	85	86	87	88	89	90	91
DATE (GMT)	3/ 4	3/ 4	3/ 4	3/ 4	3/ 4	3/ 4	3/ 4
TIME (GMT)	0225	0425	0649	0907	1121	1835	2049
LATITUDE	05S 40	05S 30	05S 00	05S 00	05S 00	05S 01	05S 00
LONGITUDE	026W 22	026W 00	025W 59	026W 30	027W 00	028W 00	028W 30
SURF T (C)	27.6	27.6	27.7	27.7	27.7	27.6	27.8
29							
28							
27	80	81	86	72	67	80	86
26	99	89	90	80	78	87	95
25	109	96	94	87	85	89	99
24	115	100	99	90	92	92	102
23	118	109	100	95	100	96	105
22	121	111	104	101	102	100	109
21	126	114	108	105	105	102	112
20	130	120	114	112	107	113	116
19	132	130	118	115	113	119	121
18	141	132	122	120	119	122	126
17	147	138	124	125	123	128	130
16	149	143	126	135	128	133	136
15	151	149	129	138	131	139	144
14	161	159	134	145	137	146	148
13	169	162	147	160	149	160	155
12	181	172	163	173	160	169	164
11	200	199	187	192	187	180	182
10	249	234	227	240	223	220	225
9	301	304	292	310	300	289	299
8	373	361	371	371	390	376	406
7	459	459	440	442	470	459	480
6	540	550	520	550	555	572	549

## ISOTHERM DEPTHS (M)

		SHIP RV RESEARCHER			CRUISE FEB-MAR 80		
XBT NO.	92	93	94	95	96	97	98
DATE (GMT)	3/ 4	3/ 5	3/ 5	3/ 5	3/ 5	3/ 5	3/ 6
TIME (GMT)	2302	0119	0951	1213	1458	1732	0046
LATITUDE	055 01	055 00	045 48	045 37	045 23	045 11	035 30
LONGITUDE	029W 60	029W 30	029W 28	029W 00	028W 30	028W 00	027W 30
SURF T (C)	27.9	28.0	27.9	27.7	27.6	28.4	27.9
29							
28						004	
27	73	82	68	81	73	061	071
26	79	88	74	85	79	067	079
25	89	94	80	89	85	072	082
24	95	98	93	94	90	075	085
23	99	102	99	99	92	075	090
22	102	109	104	102	100	098	091
21	108	111	109	108	107	101	096
20	110	118	115	112	111	106	097
19	118	120	118	118	116	113	099
18	128	129	127	122	119	117	101
17	130	131	130	127	122	120	107
16	132	137	138	131	130	122	109
15	142	145	145	138	138	131	114
14	148	149	149	145	151	138	117
13	161	158	170	152	162	149	128
12	177	170	179	162	172	160	162
11	190	178	205	180	187	172	240
10	228	230	247	216	213	231	300
9	299	300	308	282	270	290	358
8	380	380	387	385	352	373	429
7	462	454	462	452	432	445	497
6	562	542	559	526	512	541	580

## ISOTHERM DEPTHS (M)

		SHIP RV RESEARCHER			CRUISE FEB-MAR 80	
XBT NO.	99	100	101	102		
DATE (GMT)	3/ 6	3/ 6	3/ 6	3/ 7		
TIME (GMT)	0734	1444	2120	0540		
LATITUDE	025 30	015 30	005 30	00N 30		
LONGITUDE	027W 28	027W 30	027W 29	027W 30		
SURF T (C)	27.7	28.0	27.7	27.4		
29						
28						
27	65	73	63	67		
26	69	79	69	82		
25	71	85	77	88		
24	72	87	81	92		
23	73	88	83	93		
22	75	91	85	98		
21	79	92	90	99		
20	80	97	92	101		
19	80	100	95	102		
18	84	103	97	107		
17	86	107	99	113		
16	90	111	103	118		
15	94	112	123	120		
14	100	117	134	141		
13	124	150	170	181		
12	210	238	247	257		
11	290	280	303	280		
10	323	308	311	319		
9	369		359	382		
8	431		400	420		
7	510		482	500		
6	589		594	609		



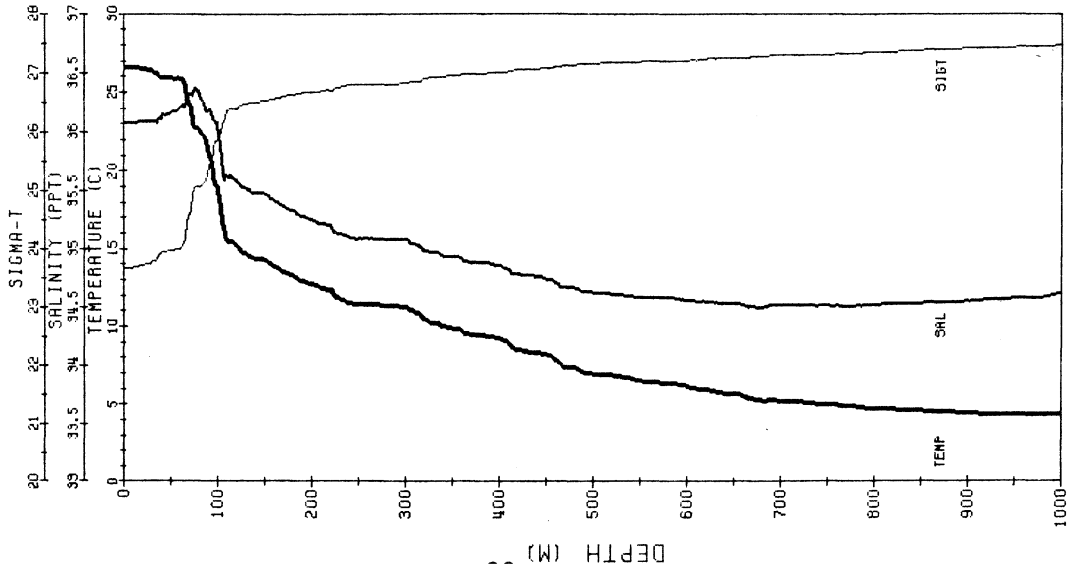
## Appendix 3

Corrected Neil Brown CTD temperature, salinity and sigma - t plots and listings

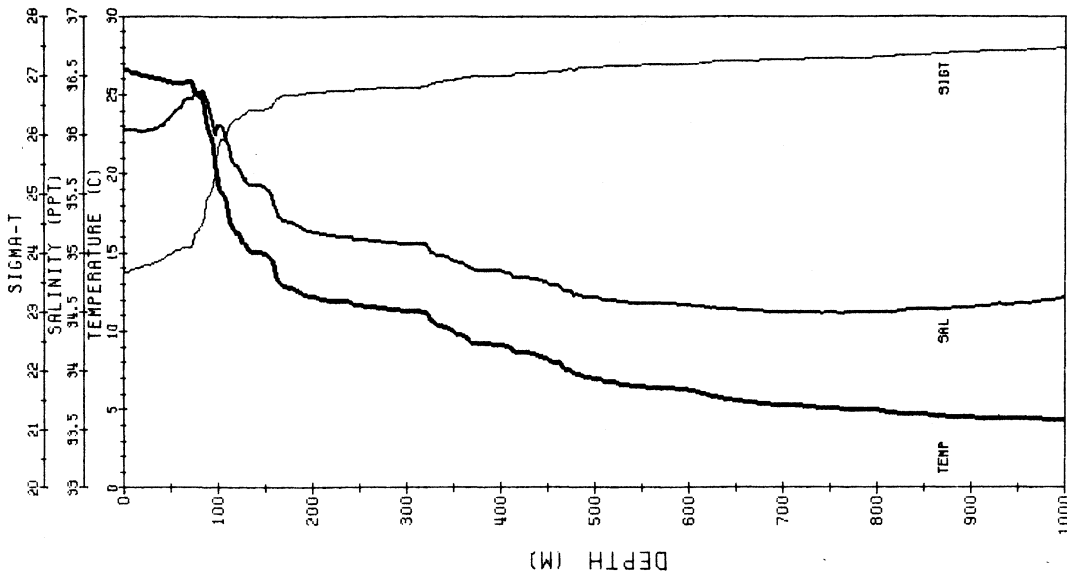
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#301 Rickenbacker Causeway  
Miami, Florida 33140

STATION 2

R/V RESEARCHER DATE 01 22 79 TIME 0626



DEPTH	TEMP	SALT	SIGT	DINH
10.	26.61	36.07	23.67	.038
20.	26.53	36.09	23.71	.080
30.	26.39	36.11	23.76	.122
40.	25.91	36.16	23.86	.203
50.	25.87	36.20	24.00	.280
60.	24.86	36.31	24.57	.311
70.	23.26	36.47	25.27	.340
80.	21.82	36.73	26.38	.364
100.	18.75	37.23	28.39	.384
110.	16.73	37.59	30.77	.401
120.	14.93	37.91	33.50	.420
130.	14.09	38.17	36.50	.433
140.	14.34	38.46	39.51	.443
150.	13.93	38.74	42.55	.465
160.	13.47	39.01	45.59	.480
170.	13.05	39.27	48.66	.495
180.	12.87	39.52	51.74	.510
190.	12.74	39.75	54.85	.524
200.	12.65	39.95	57.99	.538
210.	12.60	40.12	61.16	.553
220.	12.57	40.27	64.36	.566
230.	11.49	40.40	67.59	.580
240.	11.37	40.51	70.84	.593
250.	11.36	40.59	74.11	.606
260.	11.34	40.66	77.40	.620
270.	11.28	40.72	80.70	.633
280.	11.28	40.77	84.01	.646
290.	11.19	40.81	87.32	.659
300.	11.00	40.84	90.64	.671
340.	9.41	40.87	97.00	.758
380.	8.51	40.70	103.04	.804
420.	7.83	40.61	108.09	.847
460.	6.66	40.59	112.16	.889
500.	6.34	40.57	116.27	.929
540.	6.34	40.54	120.44	.968
580.	5.57	40.51	124.67	1.006
620.	5.57	40.50	128.95	1.044
660.	5.05	40.50	133.28	1.079
700.	5.05	40.50	137.65	1.115
740.	4.48	40.52	142.04	1.149
780.	4.48	40.54	146.44	1.182
820.	4.48	40.54	150.84	1.215
860.	4.48	40.55	155.24	1.246
900.	4.48	40.55	159.64	1.277
940.	4.48	40.58	164.04	1.307
980.	4.48	40.58	168.44	1.332
1000.	4.48	40.61	172.84	1.357

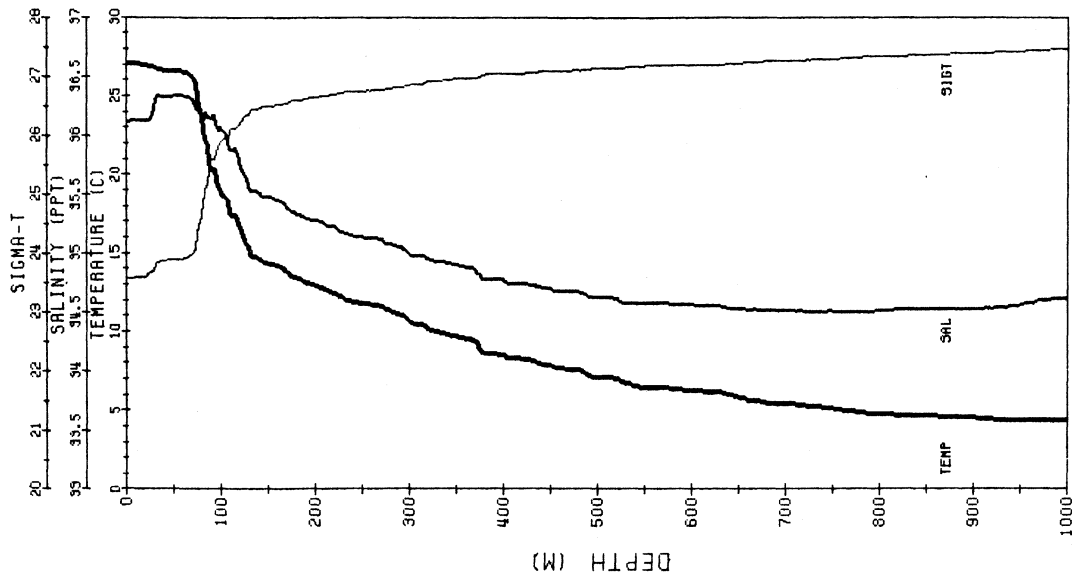


DEPTH	TEMP	SALT	SIGT	DINH
10.	26.39	36.04	23.72	.038
20.	26.30	36.04	23.76	.080
30.	26.09	36.07	23.81	.121
40.	25.97	36.14	23.87	.162
50.	25.80	36.22	23.97	.202
60.	25.76	36.30	24.10	.241
70.	25.60	36.35	24.24	.280
80.	25.59	36.37	24.39	.318
90.	25.51	36.38	24.53	.351
100.	25.49	36.38	24.68	.380
110.	25.49	36.37	24.83	.401
120.	25.47	36.34	24.99	.420
130.	25.47	36.27	25.16	.438
140.	25.42	36.25	25.32	.455
150.	25.42	36.25	25.48	.471
160.	25.41	36.25	25.65	.487
170.	25.39	36.26	25.82	.502
180.	25.37	36.25	25.99	.517
190.	25.35	36.25	26.16	.531
200.	25.34	36.25	26.34	.545
210.	25.34	36.25	26.52	.559
220.	25.33	36.25	26.70	.573
230.	25.33	36.25	26.88	.587
240.	25.32	36.25	27.06	.600
250.	25.31	36.25	27.24	.614
260.	25.30	36.25	27.42	.628
270.	25.29	36.25	27.60	.641
280.	25.28	36.25	27.78	.654
290.	25.27	36.25	27.96	.668
300.	25.27	36.25	28.14	.681
340.	25.26	36.25	28.32	.733
380.	25.25	36.25	28.50	.781
420.	25.24	36.25	28.68	.827
460.	25.23	36.25	28.86	.871
500.	25.22	36.25	29.04	.913
540.	25.21	36.25	29.22	.953
580.	25.20	36.25	29.40	.992
620.	25.19	36.25	29.58	1.030
660.	25.18	36.25	29.76	1.068
700.	25.17	36.25	29.94	1.104
740.	25.16	36.25	30.12	1.139
780.	25.15	36.25	30.30	1.175
820.	25.14	36.25	30.48	1.209
860.	25.13	36.25	30.66	1.242
900.	25.12	36.25	30.84	1.277
940.	25.11	36.25	31.02	1.306
980.	25.10	36.25	31.20	1.336
1000.	25.09	36.25	31.38	1.351



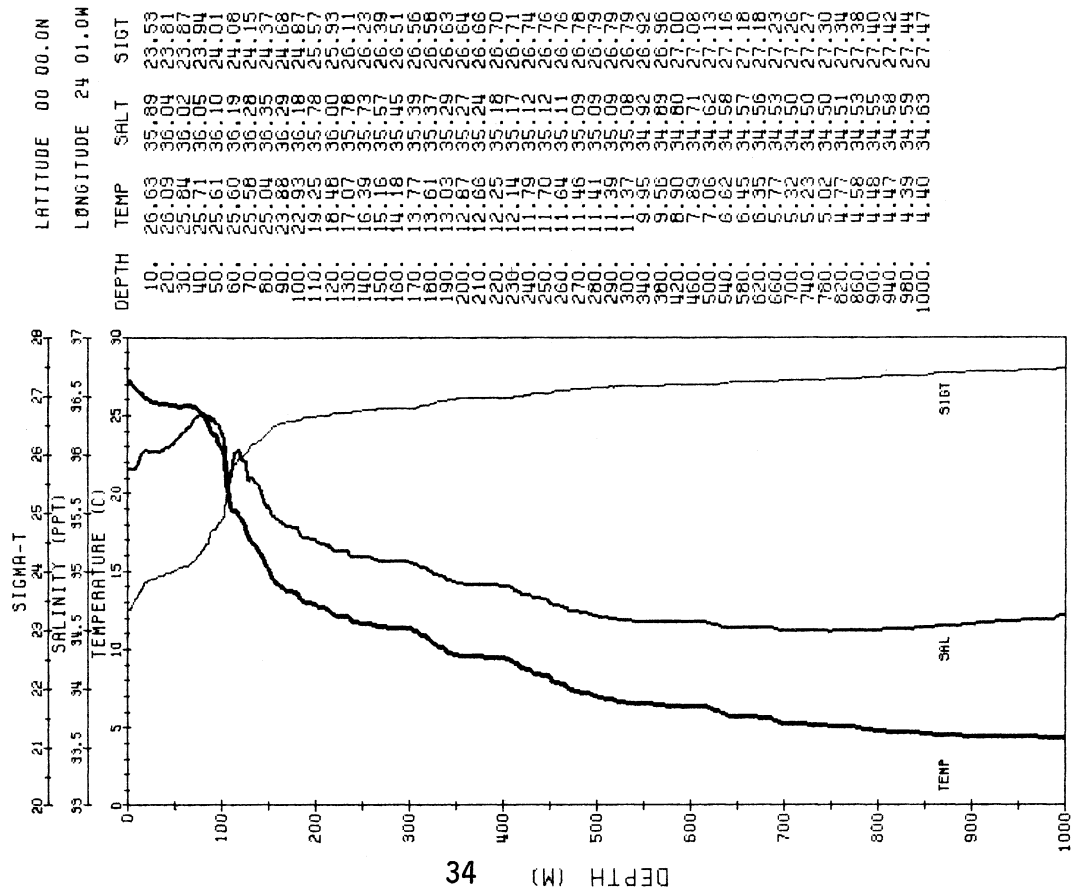
# STATION 7

R/V RESEARCHER DATE 01 24 79 TIME 0257



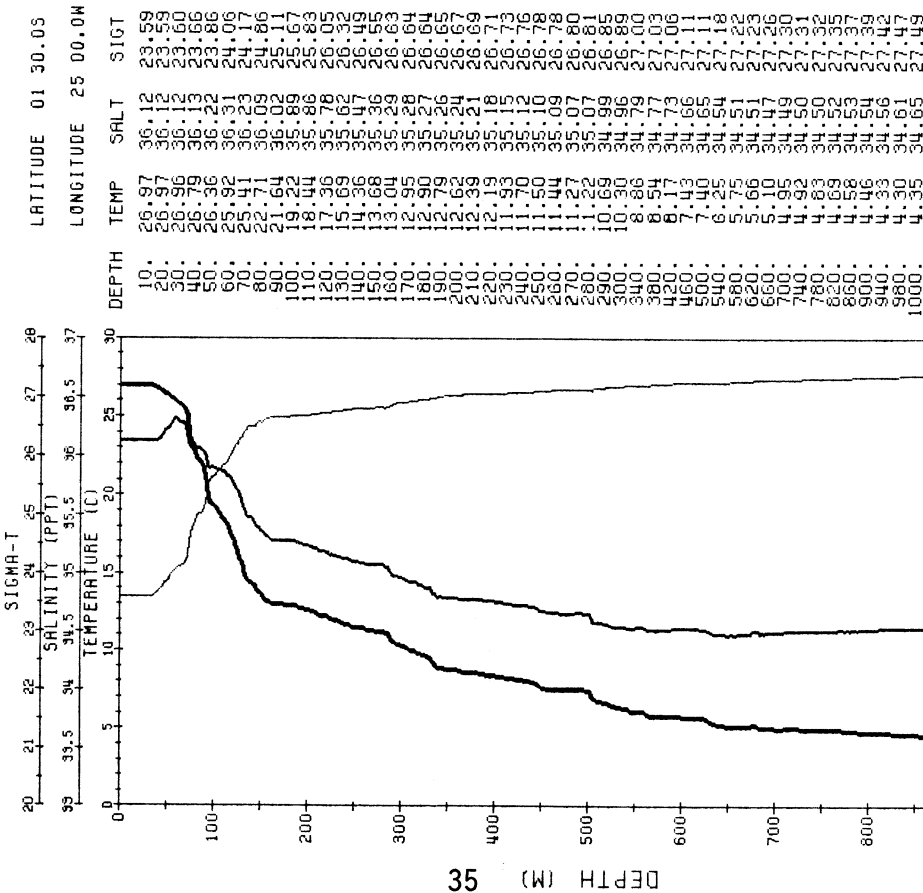
# STATION 6

R/V RESEARCHER DATE 01 23 79 TIME 1413



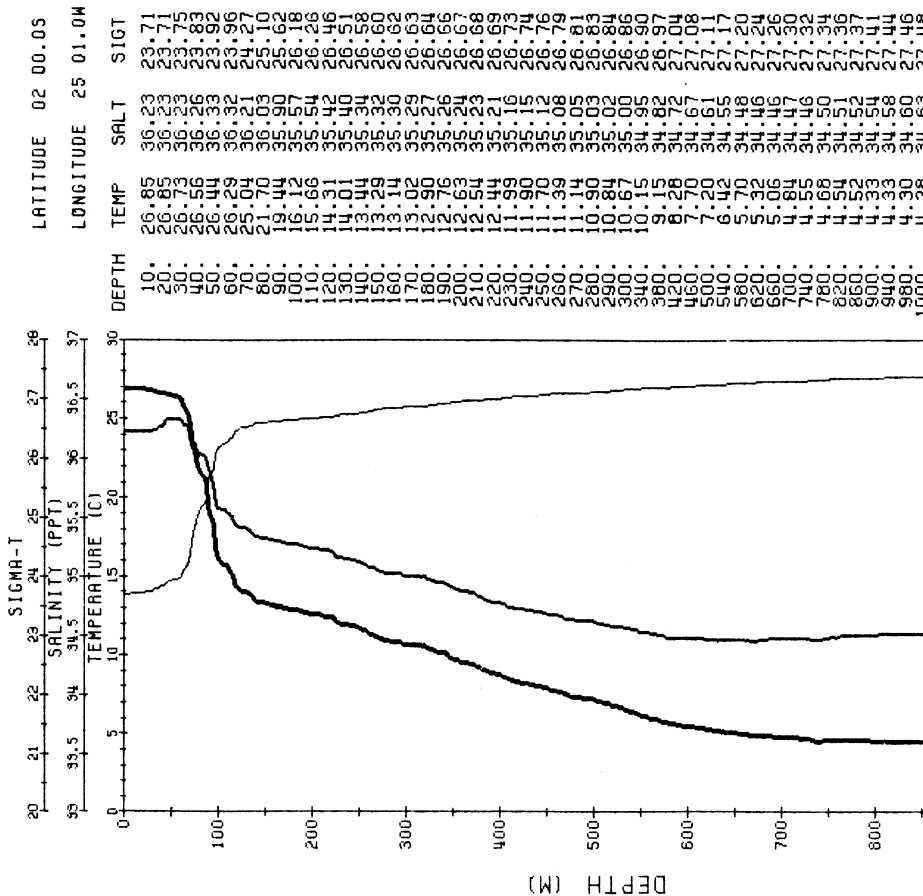
# STATION 8

R/V RESEARCHER DATE 01 24 79 TIME 0711



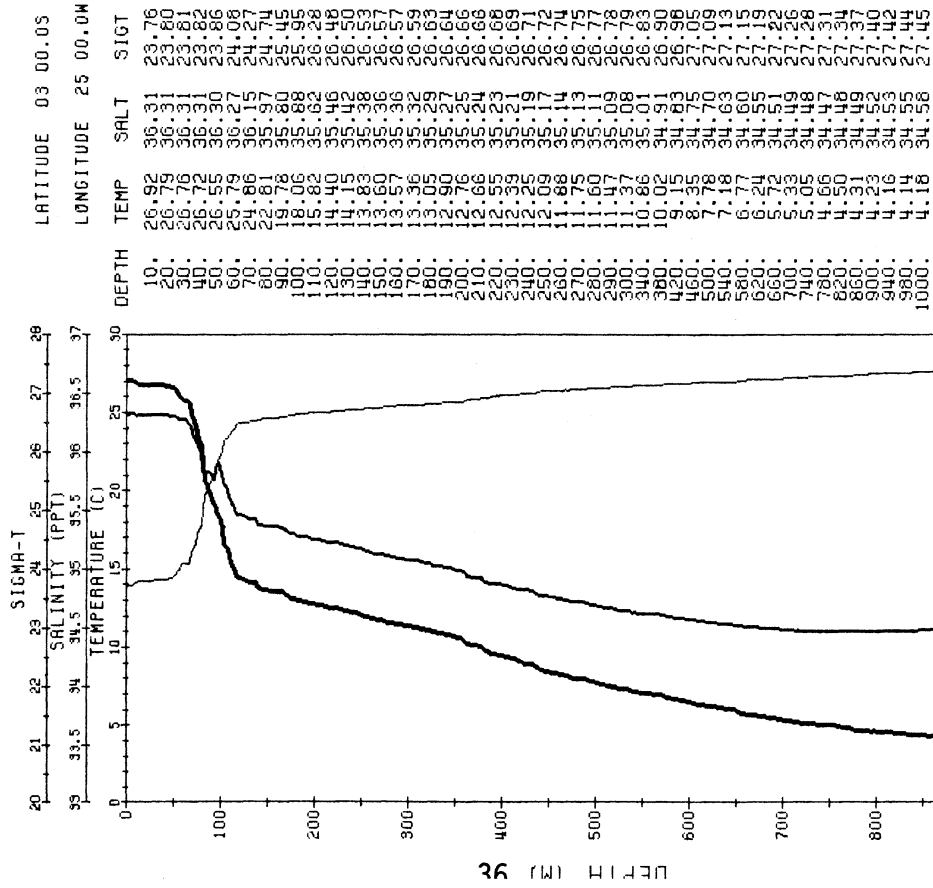
# STATION 9

R/V RESEARCHER DATE 01 24 79 TIME 1102



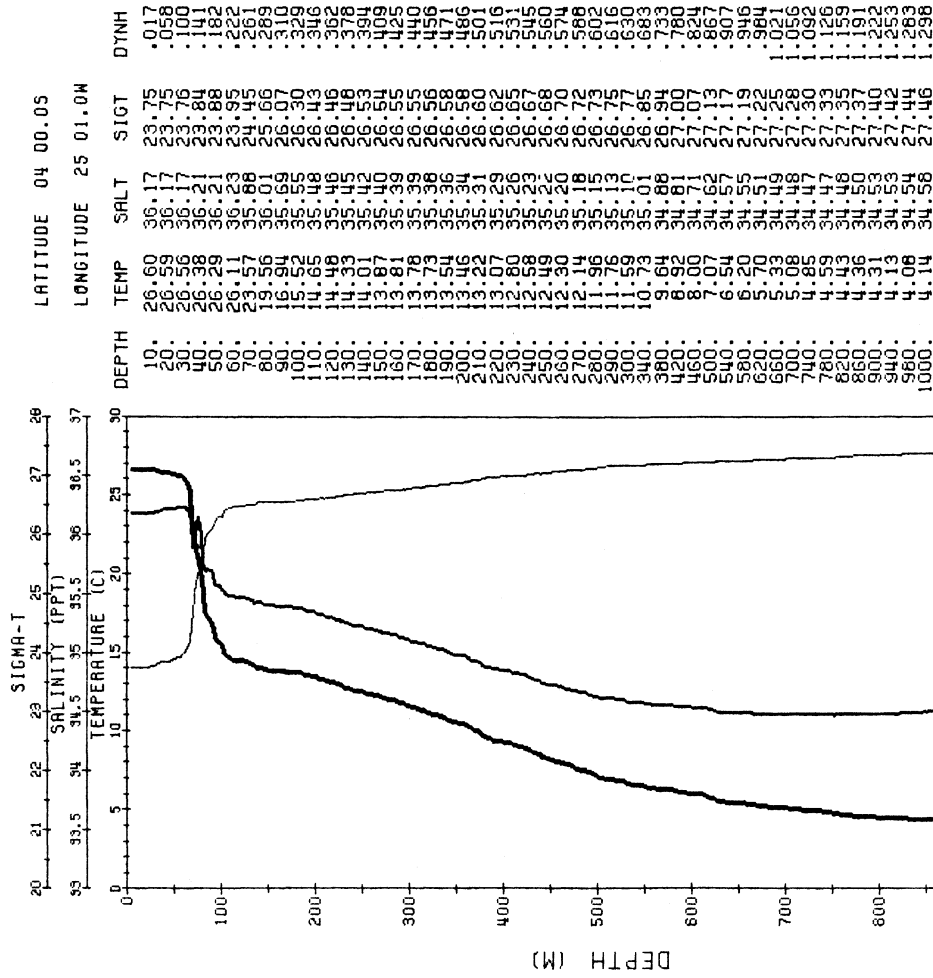
# STATION 10

R/V RESEARCHER DATE 01 24 79 TIME 1709

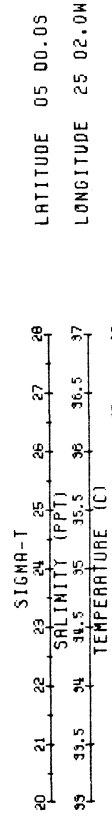


# STATION 11

R/V RESEARCHER DATE 01 25 79 TIME 0052

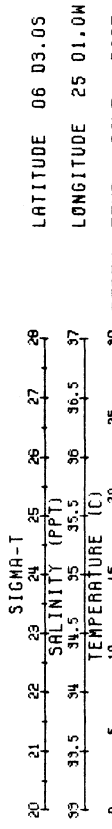


STATION 12  
 R/V RESEARCHER DATE 01 25 79 TIME 0846



DEPTH (M)	TEMP (C)	SALT	SIGT	DYNH
20	26.56	36.20	23.79	.097
30	26.56	36.20	23.78	.079
40	26.48	36.20	23.81	.120
50	26.20	36.20	23.93	.161
60	25.89	36.25	24.06	.202
70	25.52	36.24	24.14	.241
80	25.41	36.14	25.06	.280
90	22.66	36.01	25.47	.315
100	18.67	36.60	25.92	.342
120	15.65	35.54	26.31	.385
130	15.16	35.54	26.37	.402
140	14.59	35.48	26.45	.419
150	13.93	35.40	26.53	.435
160	13.76	35.33	26.58	.456
170	13.44	35.33	26.63	.466
180	13.10	35.27	26.69	.481
190	12.82	35.21	26.69	.495
200	12.43	35.18	26.72	.510
220	11.69	35.12	26.76	.524
230	11.35	35.05	26.80	.537
240	11.04	35.00	26.82	.551
250	10.66	34.98	26.83	.564
260	10.43	34.98	26.84	.576
270	10.15	34.94	26.84	.589
280	10.07	34.91	26.87	.601
290	9.97	34.89	26.87	.614
300	9.90	34.88	26.89	.626
320	9.79	34.87	26.91	.638
340	9.71	34.85	26.92	.650
360	9.55	34.84	26.93	.662
380	9.47	34.83	26.94	.674
400	9.30	34.81	26.94	.686
420	9.20	34.80	26.95	.698
440	9.07	34.79	26.95	.710
460	8.93	34.78	26.96	.722
480	8.77	34.76	26.96	.734
500	8.60	34.75	26.97	.746
520	8.47	34.74	26.97	.758
540	8.32	34.73	26.98	.770
560	8.20	34.72	26.98	.782
580	8.05	34.71	26.99	.794
600	7.92	34.70	26.99	.806
620	7.77	34.69	26.99	.818
640	7.63	34.68	26.99	.830
660	7.50	34.67	26.99	.842
680	7.32	34.66	26.99	.854
700	7.20	34.65	26.99	.866
720	7.05	34.64	26.99	.878
740	6.93	34.63	26.99	.890
760	6.77	34.62	26.99	.902
780	6.63	34.61	26.99	.914
800	6.47	34.60	26.99	.926
820	6.33	34.59	26.99	.938
840	6.17	34.58	26.99	.950
860	6.00	34.57	26.99	.962
880	5.82	34.56	26.99	.974
900	5.63	34.55	26.99	.986
920	5.43	34.54	26.99	.998
940	5.21	34.53	26.99	1.010
960	5.00	34.52	26.99	1.022
980	4.77	34.51	26.99	1.034
1000	4.51	34.63	27.50	1.282

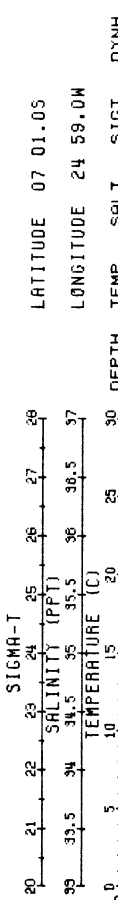
STATION 13  
 R/V RESEARCHER DATE 01 25 79 TIME 1928



DEPTH (M)	TEMP (C)	SALT	SIGT	DYNH
20	26.62	36.11	23.69	.098
30	26.59	36.11	23.71	.080
40	26.50	36.11	23.73	.122
50	26.49	36.11	23.73	.164
60	26.49	36.11	23.74	.206
70	26.36	36.27	23.89	.248
80	26.26	36.28	23.94	.290
90	26.13	36.32	23.97	.330
100	23.56	36.32	24.79	.370
110	22.19	36.28	24.77	.406
120	18.95	36.03	25.15	.461
130	16.46	35.74	25.64	.481
140	15.46	35.59	26.21	.499
150	14.54	35.48	26.46	.516
160	13.47	35.35	26.58	.531
170	12.84	35.27	26.65	.546
180	12.04	35.16	26.72	.560
190	11.46	35.08	26.78	.574
200	11.10	35.01	26.81	.587
220	10.85	35.01	26.83	.600
230	10.48	35.01	26.86	.613
240	10.27	35.01	26.88	.627
250	10.10	35.01	26.88	.639
260	10.00	35.01	26.89	.652
270	9.88	35.01	26.90	.664
280	9.82	35.01	26.91	.674
290	9.80	35.01	26.92	.686
300	9.79	35.01	26.93	.698
320	9.70	35.01	26.93	.710
340	9.61	35.01	26.94	.722
360	9.50	35.01	26.94	.734
380	9.38	35.01	26.94	.746
400	9.27	35.01	26.94	.758
420	9.15	35.01	26.94	.770
440	9.02	35.01	26.94	.782
460	8.87	35.01	26.94	.794
480	8.75	35.01	26.94	.806
500	8.60	35.01	26.94	.818
520	8.47	35.01	26.94	.830
540	8.32	35.01	26.94	.842
560	8.17	35.01	26.94	.854
580	8.00	35.01	26.94	.866
600	7.82	35.01	26.94	.878
620	7.63	35.01	26.94	.890
640	7.43	35.01	26.94	.902
660	7.20	35.01	26.94	.914
680	7.05	35.01	26.94	.926
700	6.87	35.01	26.94	.938
720	6.69	35.01	26.94	.950
740	6.50	35.01	26.94	.962
760	6.32	35.01	26.94	.974
780	6.13	35.01	26.94	.986
800	5.93	35.01	26.94	.998
820	5.72	35.01	26.94	1.010
840	5.50	35.01	26.94	1.022
860	5.27	35.01	26.94	1.034
880	5.00	35.01	26.94	1.046
900	4.77	35.01	26.94	1.058
920	4.51	35.01	26.94	1.070
940	4.27	35.01	26.94	1.084
960	4.00	35.01	26.94	1.096
980	3.73	35.01	26.94	1.108
1000	3.43	34.53	27.23	1.121

STATION 14

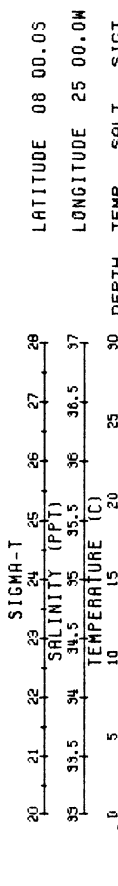
R/V RESEARCHER DATE 01 26 79 TIME 0341



DEPTH	TEMP	SALT	SIGT	DYNH
10	26.60	36.17	23.75	.037
20	26.60	36.17	23.75	.077
30	26.61	36.17	23.75	.117
40	26.60	36.24	23.80	.158
50	26.53	36.33	23.87	.205
60	26.30	36.58	23.96	.258
70	26.24	36.77	24.08	.316
80	26.19	36.74	24.18	.379
90	26.19	36.80	24.28	.442
100	26.11	36.80	24.39	.511
120	26.05	36.83	24.50	.577
140	25.99	36.84	24.64	.650
160	25.95	36.99	24.81	.721
180	25.92	37.07	25.00	.799
200	25.88	37.10	25.20	.885
220	25.82	37.10	25.41	.977
240	25.78	37.26	25.66	1.072
260	25.72	37.10	25.79	1.166
280	25.71	37.10	25.81	1.259
300	25.66	37.10	25.86	1.351
320	25.65	37.10	25.88	1.443
340	25.62	37.26	25.89	1.535
360	25.59	37.10	25.91	1.627
380	25.58	37.10	25.92	1.719
400	25.55	37.10	25.95	1.811
420	25.53	37.10	25.97	1.903
440	25.52	37.10	26.00	1.995
460	25.50	37.10	26.05	2.087
480	25.48	37.10	26.12	2.179
500	25.46	37.10	26.18	2.271
520	25.44	37.10	26.21	2.363
540	25.41	37.10	26.22	2.455
560	25.39	37.10	26.26	2.547
580	25.39	37.10	26.29	2.639
600	25.35	37.10	26.33	2.731
620	25.35	37.10	26.37	2.823
640	25.33	37.10	26.41	2.915
660	25.31	37.10	26.44	3.007
680	25.29	37.10	26.47	3.099
700	25.29	37.10	26.50	3.191
720	25.29	37.10	26.52	3.283
740	25.29	37.10	26.54	3.375
760	25.29	37.10	26.56	3.467
780	25.29	37.10	26.58	3.559
800	25.29	37.10	26.60	3.651
820	25.29	37.10	26.62	3.743
840	25.29	37.10	26.64	3.835
860	25.29	37.10	26.66	3.927
880	25.29	37.10	26.68	4.019
900	25.29	37.10	26.70	4.111
920	25.29	37.10	26.72	4.203
940	25.29	37.10	26.74	4.295
960	25.29	37.10	26.76	4.387
980	25.29	37.10	26.78	4.479
1000	25.29	37.10	26.80	4.571

STATION 15

R/V RESEARCHER DATE 01 26 79 TIME 1105

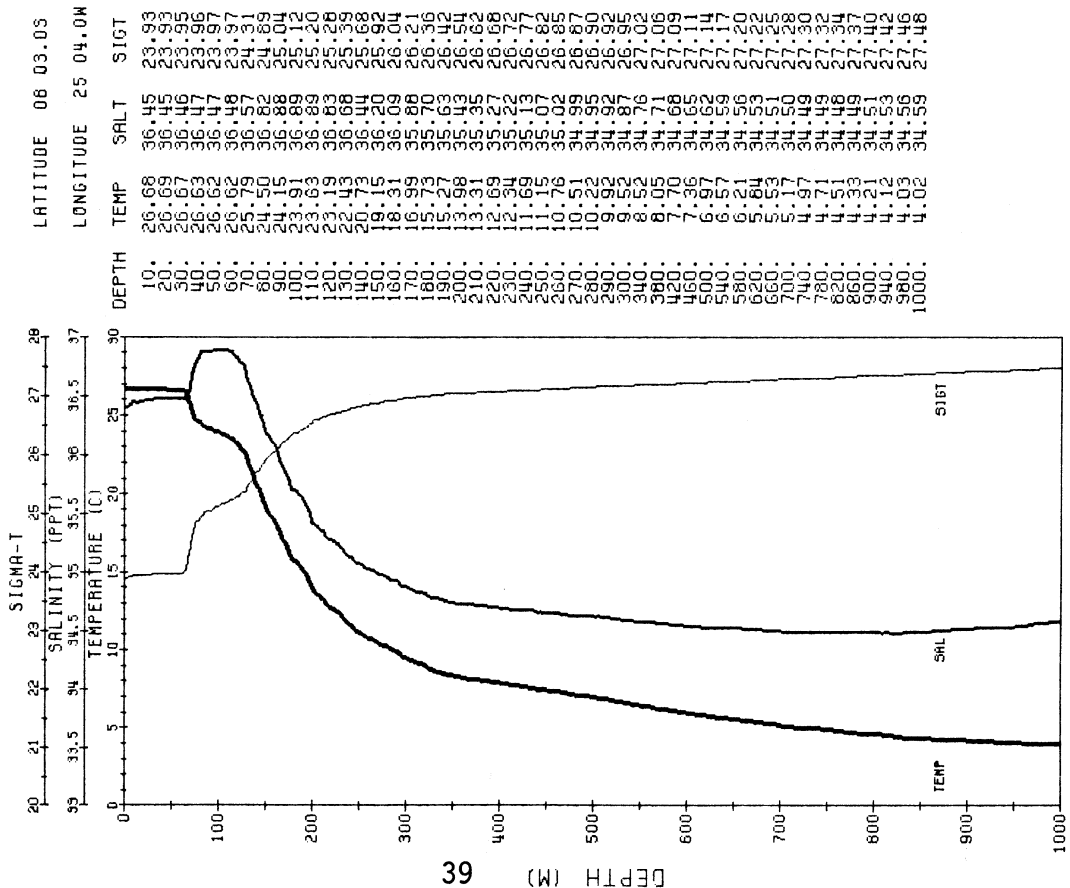


DEPTH	TEMP	SALT	SIGT	DYNH
10	26.63	36.39	23.88	.036
20	26.62	36.37	23.89	.077
30	26.62	36.37	23.89	.117
40	26.62	36.37	23.89	.158
50	26.62	36.37	23.89	.205
60	26.62	36.37	23.89	.258
70	26.57	36.43	23.95	.316
80	26.49	36.59	24.06	.379
90	26.40	36.69	24.16	.442
100	26.35	36.69	24.25	.511
120	26.25	36.58	24.37	.577
140	26.21	36.49	24.51	.650
160	26.19	36.29	24.68	.721
180	26.15	36.06	24.91	.799
200	26.13	35.91	25.11	.885
220	26.12	35.75	25.32	.977
240	26.11	35.59	25.54	1.072
260	26.10	35.42	25.79	1.166
280	26.07	35.27	26.04	1.259
300	26.05	35.11	26.26	1.351
320	26.04	35.00	26.48	1.443
340	26.03	34.90	26.71	1.535
360	26.01	34.80	26.96	1.627
380	25.99	34.73	27.22	1.719
400	25.98	34.68	27.48	1.811
420	25.96	34.65	27.74	1.903
440	25.95	34.62	28.00	1.995
460	25.94	34.60	28.26	2.087
480	25.92	34.58	28.52	2.179
500	25.91	34.57	28.78	2.271
520	25.90	34.55	29.04	2.363
540	25.88	34.54	29.30	2.455
560	25.87	34.52	29.56	2.547
580	25.86	34.50	29.82	2.639
600	25.85	34.48	30.08	2.731
620	25.84	34.47	30.34	2.823
640	25.82	34.46	30.60	2.915
660	25.81	34.44	30.86	3.007
680	25.80	34.43	31.12	3.099
700	25.79	34.41	31.38	3.191
720	25.78	34.40	31.64	3.283
740	25.77	34.38	31.90	3.375
760	25.76	34.37	32.16	3.467
780	25.75	34.36	32.42	3.559
800	25.74	34.35	32.68	3.651
820	25.73	34.34	32.94	3.743
840	25.72	34.33	33.20	3.835
860	25.71	34.32	33.46	3.927
880	25.70	34.31	33.72	4.019
900	25.69	34.30	33.98	4.111
920	25.68	34.29	34.24	4.203
940	25.67	34.28	34.50	4.295
960	25.66	34.27	34.76	4.387
980	25.65	34.26	35.02	4.479
1000	25.64	34.25	35.28	4.571



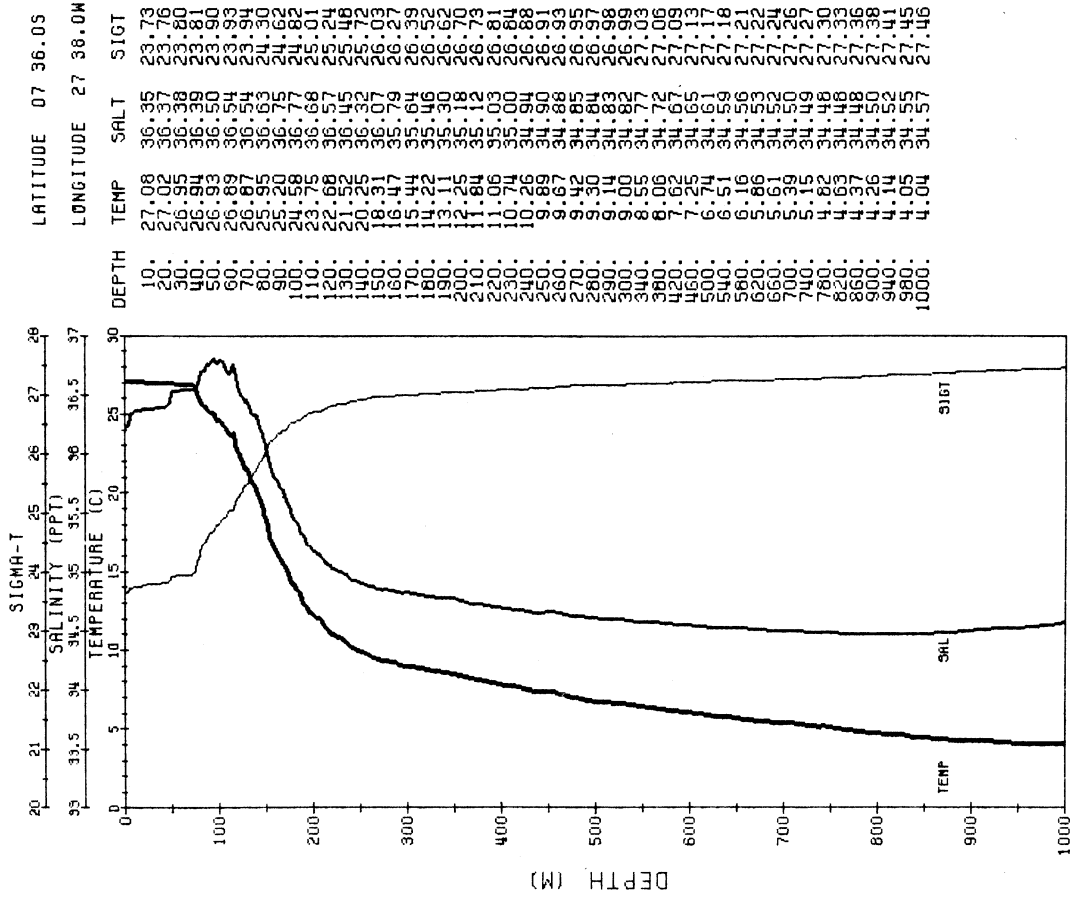
## STATION 16

R/V RESEARCHER DATE 01 26 79 TIME 2254

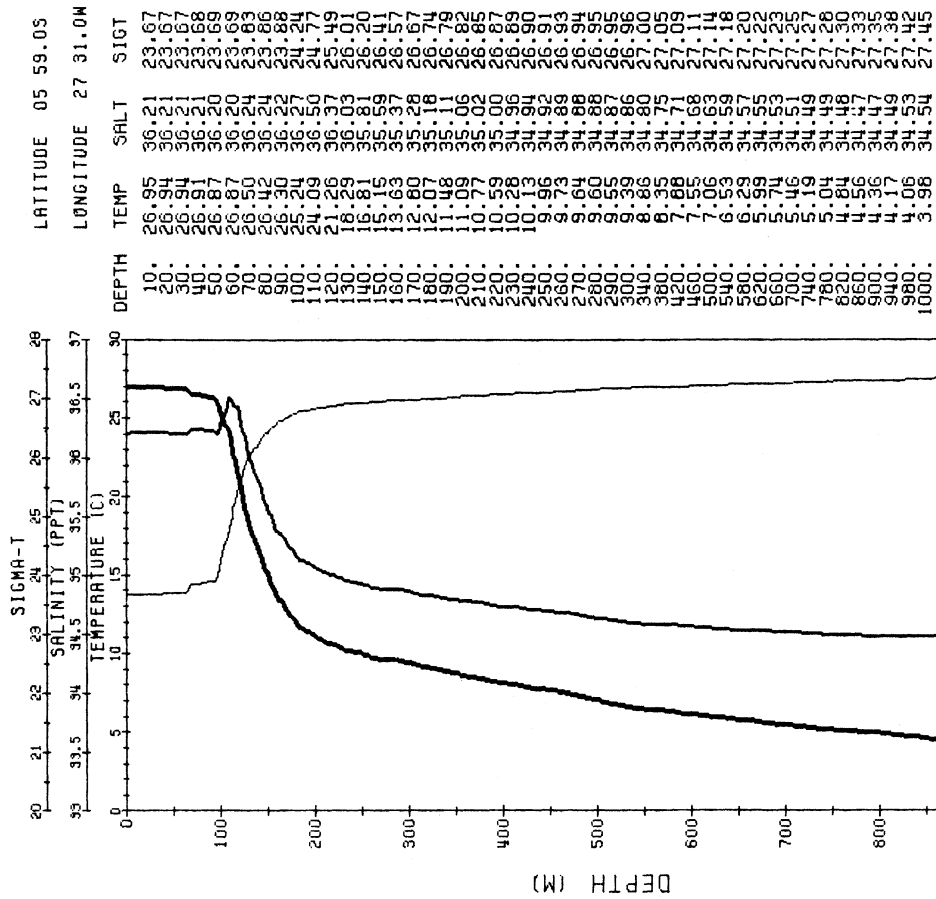


## STATION 17

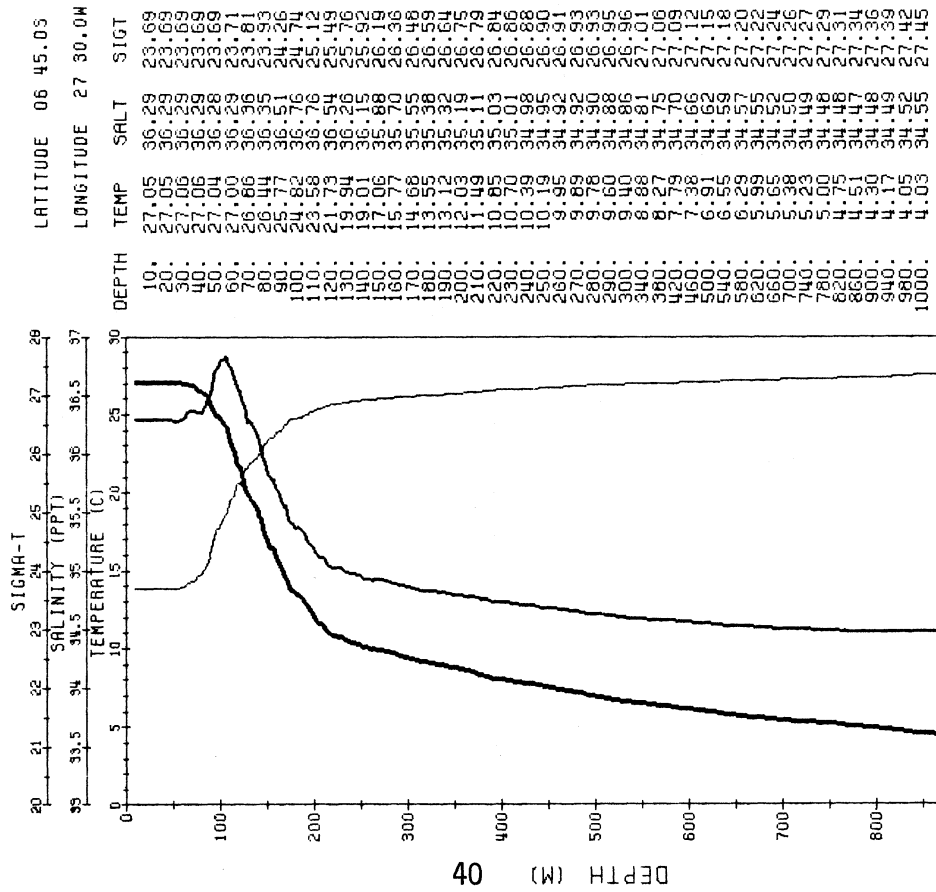
R/V RESEARCHER DATE 01 27 79 TIME 1828



STATION 19  
R/V RESEARCHER DATE 01 28 79 TIME 2120

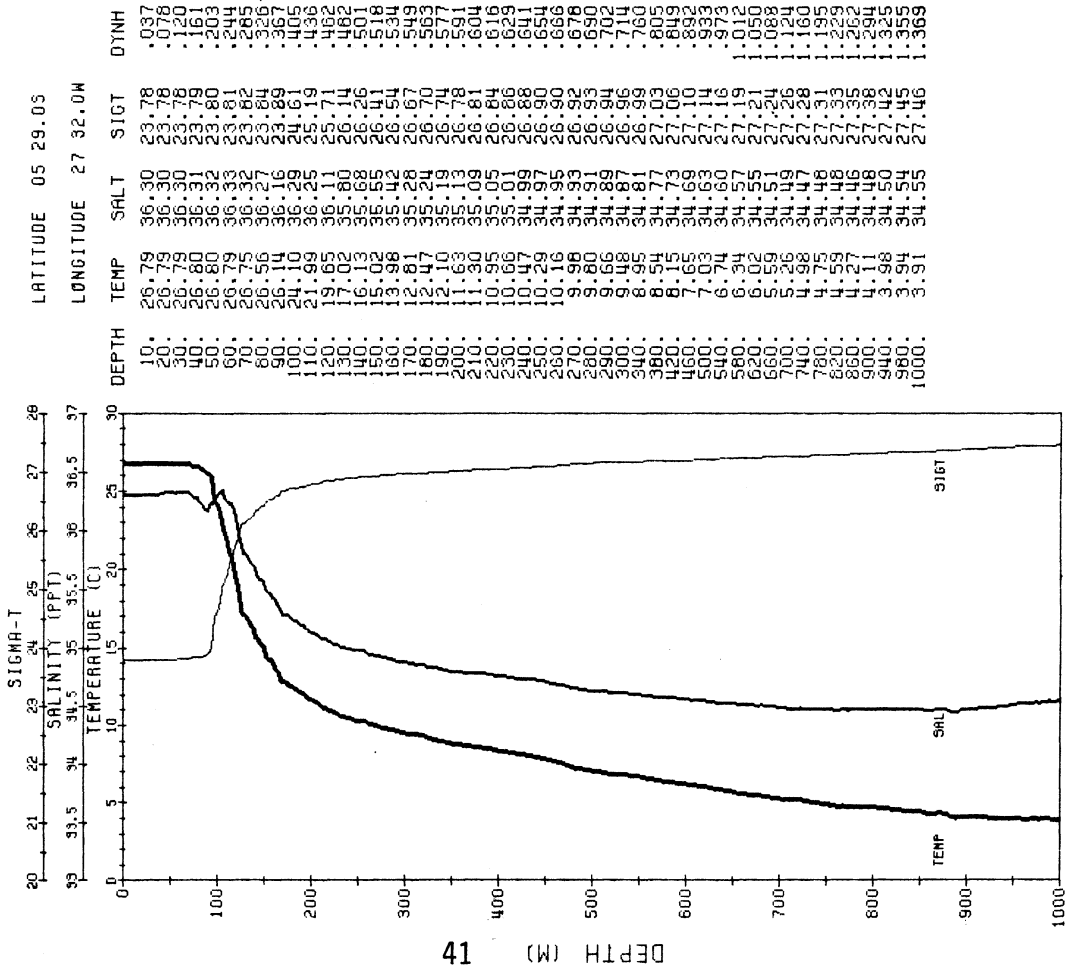


STATION 18  
R/V RESEARCHER DATE 01 28 79 TIME 0117



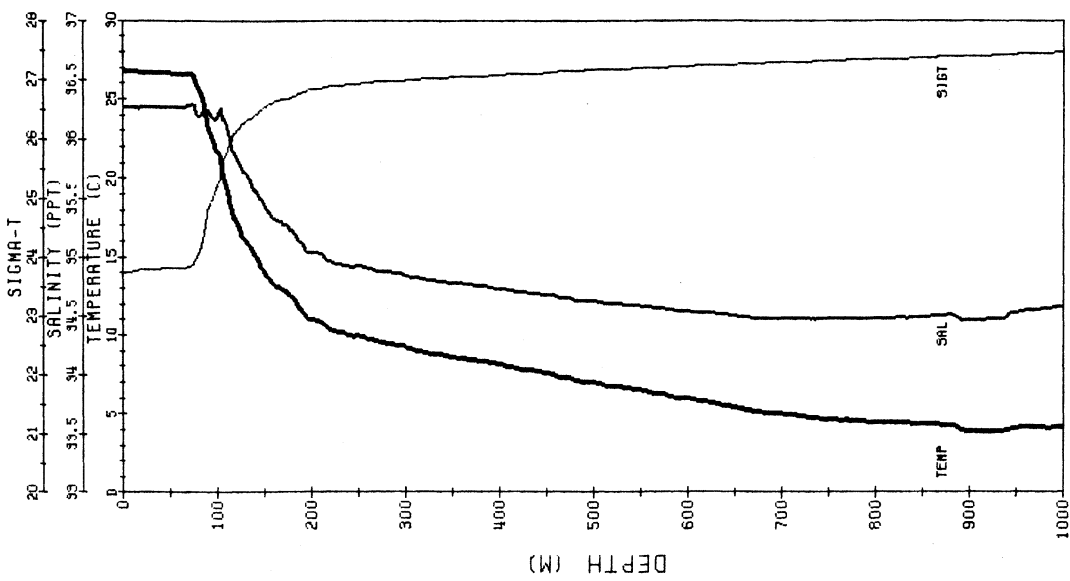
# STATION 20

R/V RESEARCHER DATE 01 29 79 TIME 0236



# STATION 21

R/V RESEARCHER DATE 01 29 79 TIME 2318

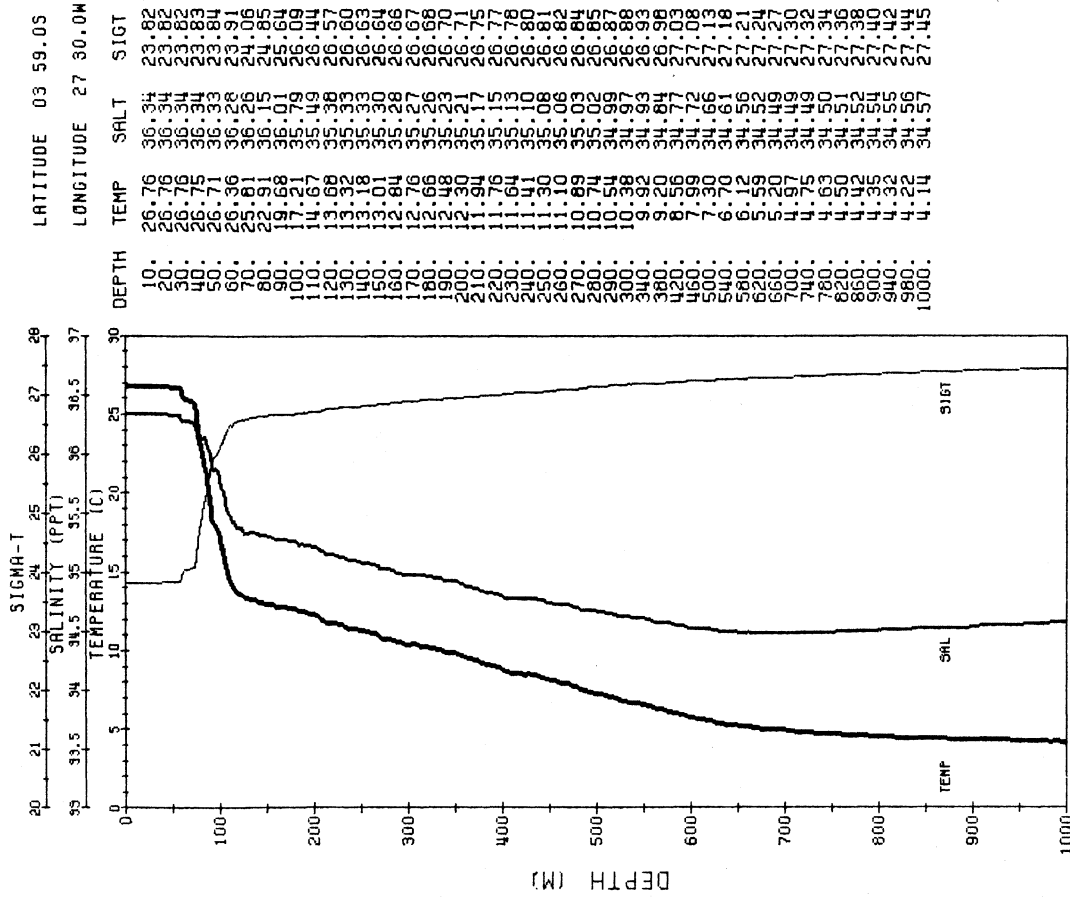
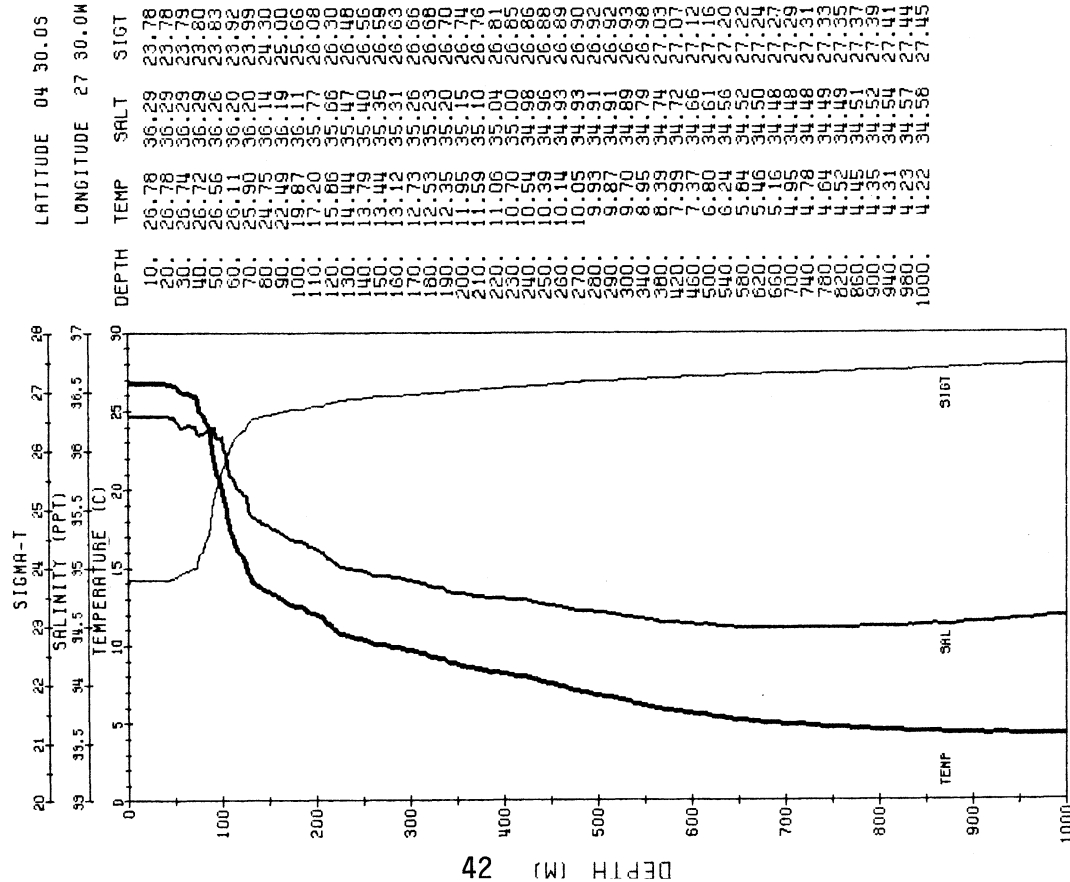


STATION 22

R/V RESEARCHER DATE 01 30 79 TIME 0520

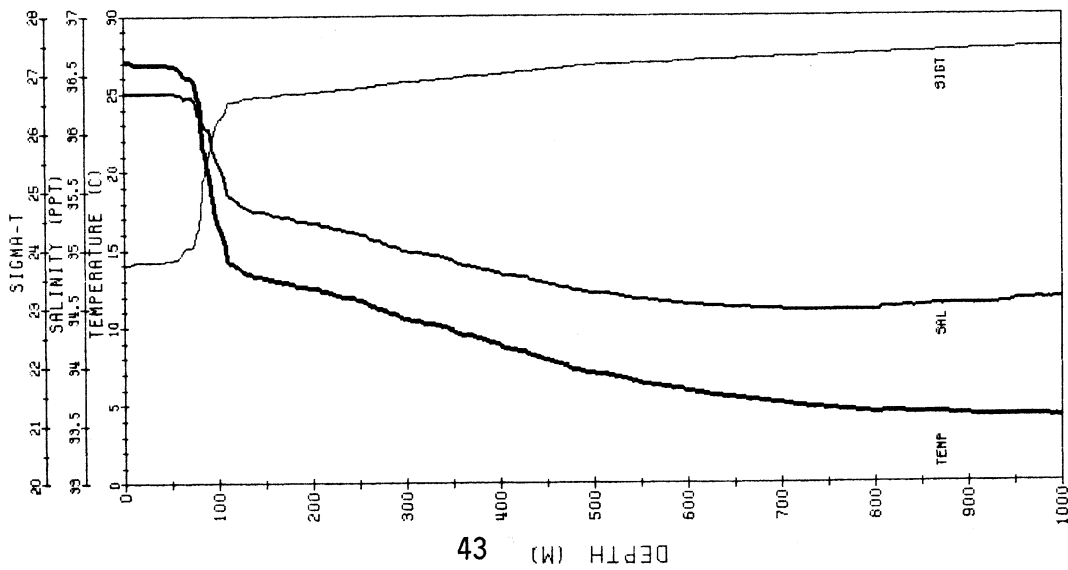
STATION 23

R/V RESEARCHER DATE 01 30 79 TIME 0848



# STATION 24

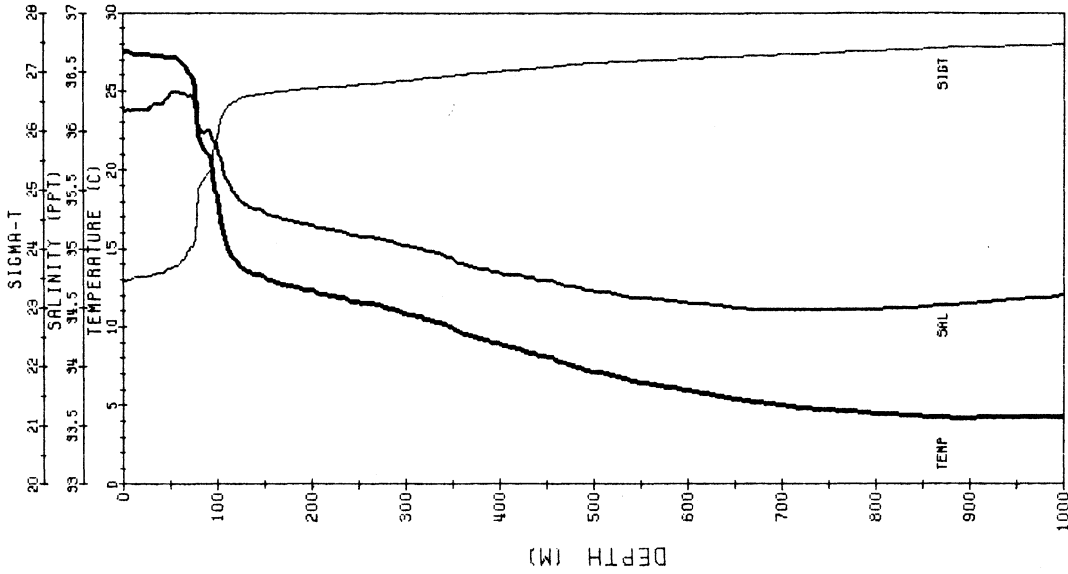
R/V RESEARCHER DATE 01 30 79 TIME 1406



DEPTH (M)	TEMP (C)	SALT	SIGT	DYNH
10	26.94	36.34	23.77	037
20	26.85	36.34	23.80	079
30	26.84	36.34	23.80	120
40	26.79	36.34	23.82	161
50	26.51	36.32	23.88	202
60	25.97	36.30	24.04	243
70	24.52	36.16	24.38	283
80	24.08	36.03	25.54	321
90	16.48	35.74	26.22	350
100	14.32	35.47	26.50	372
110	13.93	35.41	26.54	389
120	13.93	35.35	26.54	405
130	13.21	35.32	26.59	420
140	13.01	35.31	26.61	435
150	13.01	35.29	26.62	450
160	12.87	35.25	26.63	464
170	12.75	35.20	26.65	479
180	12.66	35.16	26.67	493
190	12.58	35.12	26.68	507
200	12.50	35.07	26.71	522
210	12.43	35.02	26.73	536
220	12.36	34.97	26.76	550
230	12.29	34.92	26.77	564
240	12.22	34.87	26.78	578
250	12.15	34.82	26.78	592
260	12.08	34.77	26.82	606
270	11.94	34.72	26.84	620
280	11.86	34.67	26.86	634
290	10.57	34.59	26.90	648
300	10.57	34.54	26.93	662
340	9.29	34.43	26.96	676
380	8.51	34.36	27.03	690
420	7.74	34.29	27.11	704
460	7.04	34.23	27.17	718
500	6.59	34.18	27.20	732
540	6.17	34.13	27.23	746
580	5.95	34.09	27.25	760
620	5.88	34.05	27.26	774
660	5.88	34.01	27.28	788
700	5.83	33.97	27.30	802
740	4.59	33.94	27.33	816
780	4.44	33.91	27.36	830
820	4.44	33.87	27.37	844
860	4.44	33.83	27.39	858
900	4.44	33.79	27.42	872
940	4.25	33.74	27.44	886
980	4.20	33.69	27.45	900
1000	4.20	33.64	27.45	914

# STATION 25

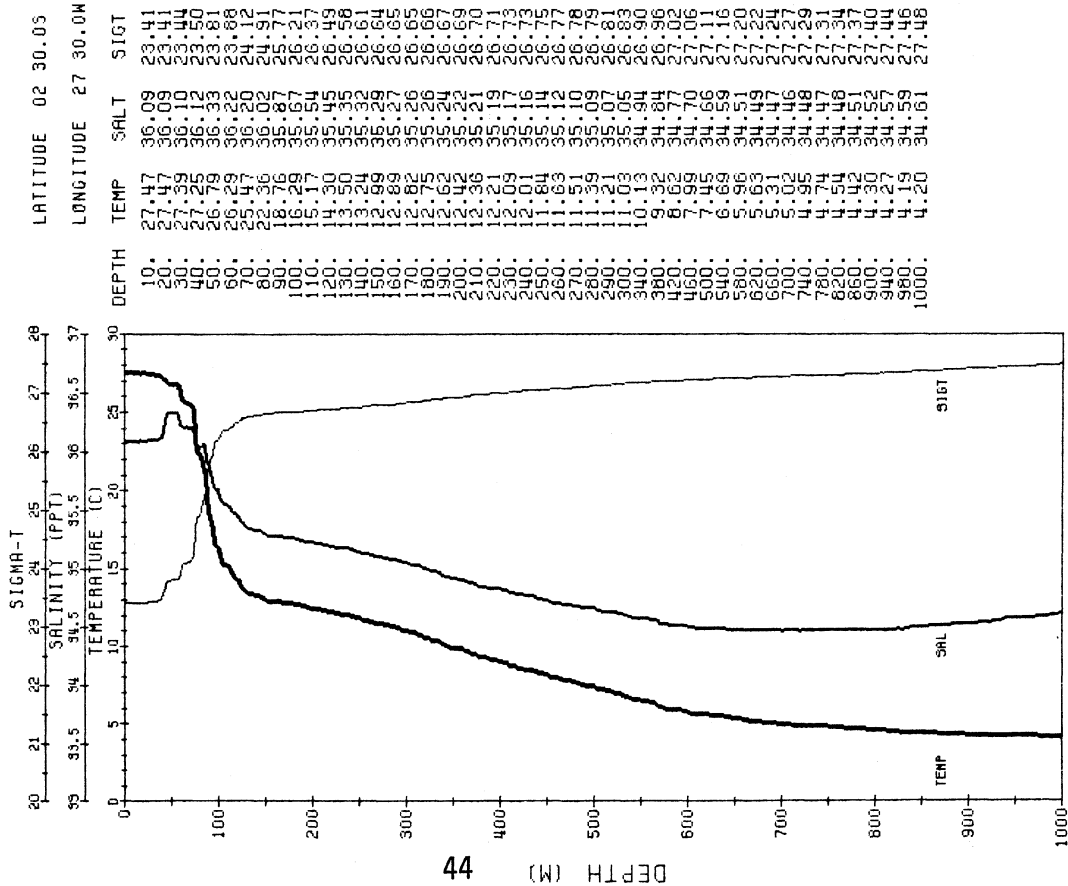
R/V RESEARCHER DATE 01 30 79 TIME 1722



DEPTH (M)	TEMP (C)	SALT	SIGT	DYNH
10	27.43	36.17	23.48	040
20	27.31	36.20	23.52	084
30	27.24	36.23	23.55	128
40	27.17	36.31	23.67	171
50	26.98	36.29	23.74	214
60	22.15	36.01	23.97	257
70	22.07	36.00	24.25	297
80	18.42	35.89	24.56	335
90	15.36	35.59	25.37	364
100	14.26	35.45	26.50	389
110	13.63	35.37	26.57	408
120	13.34	35.34	26.60	424
130	13.17	35.31	26.62	440
140	12.92	35.28	26.64	455
150	12.68	35.24	26.67	470
160	12.58	35.21	26.67	484
170	12.50	35.17	26.70	499
180	12.43	35.14	26.73	513
190	12.36	35.11	26.75	527
200	12.29	35.07	26.77	541
210	12.22	35.02	26.78	555
220	12.15	34.97	26.78	569
230	12.08	34.92	26.78	583
240	12.01	34.87	26.79	597
250	11.94	34.82	26.81	611
260	11.86	34.77	26.82	625
270	11.79	34.72	26.84	639
280	11.72	34.67	26.86	653
290	10.57	34.59	26.90	667
300	10.57	34.54	26.93	681
340	9.29	34.43	26.96	695
380	8.51	34.36	27.03	709
420	7.74	34.29	27.11	723
460	7.04	34.23	27.17	737
500	6.59	34.18	27.20	751
540	6.17	34.13	27.23	765
580	5.95	34.09	27.25	779
620	5.88	34.05	27.26	793
660	5.88	34.01	27.28	807
700	5.83	33.97	27.30	821
740	4.59	33.94	27.33	835
780	4.44	33.91	27.36	849
820	4.44	33.87	27.37	863
860	4.44	33.83	27.39	877
900	4.25	33.79	27.42	891
940	4.20	33.74	27.44	905
980	4.20	33.69	27.45	919
1000	4.20	33.64	27.47	933

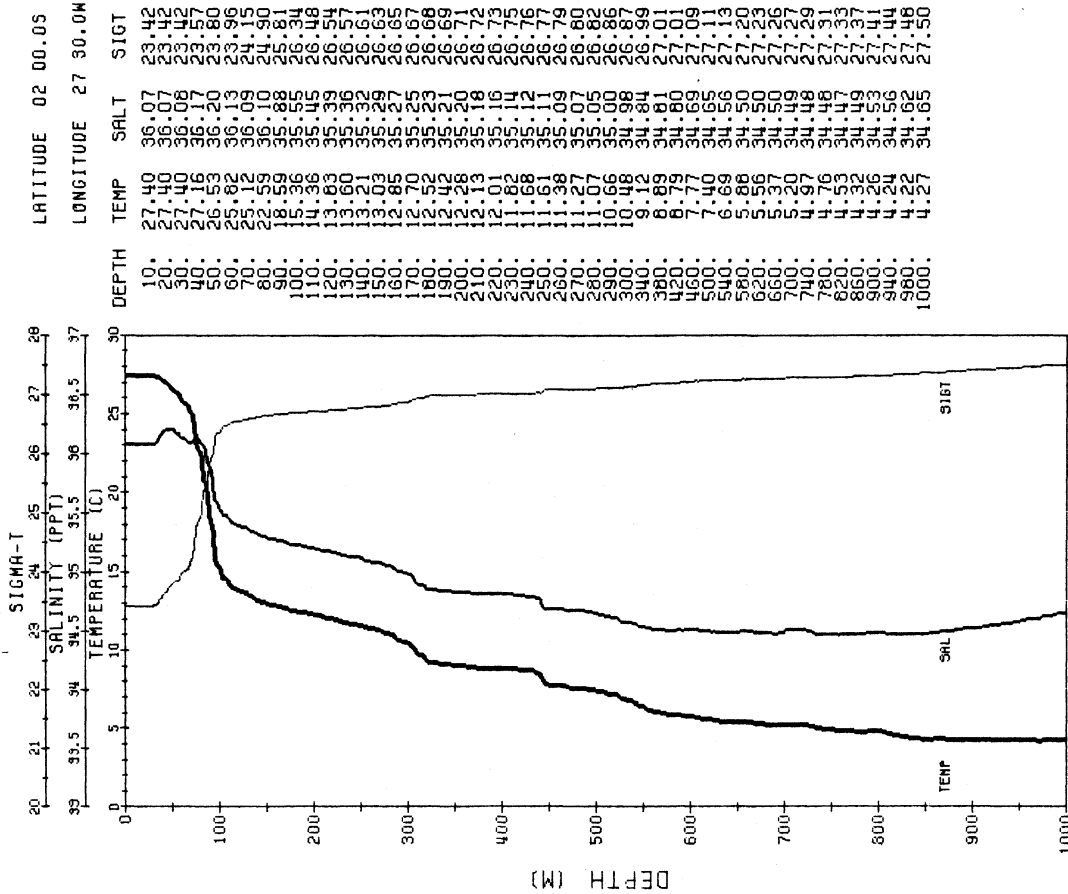
# STATION 26

R/V RESEARCHER DATE 01 30 79 TIME 2337



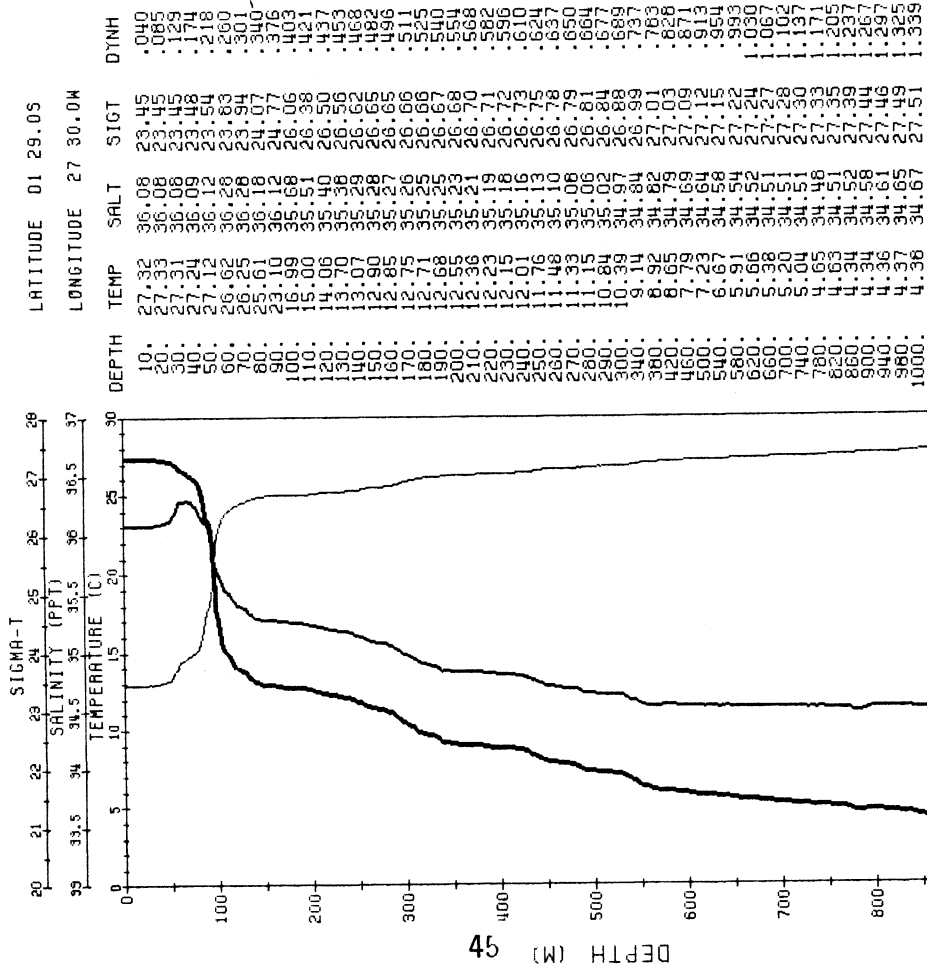
# STATION 27

R/V RESEARCHER DATE 01 31 79 TIME 0311



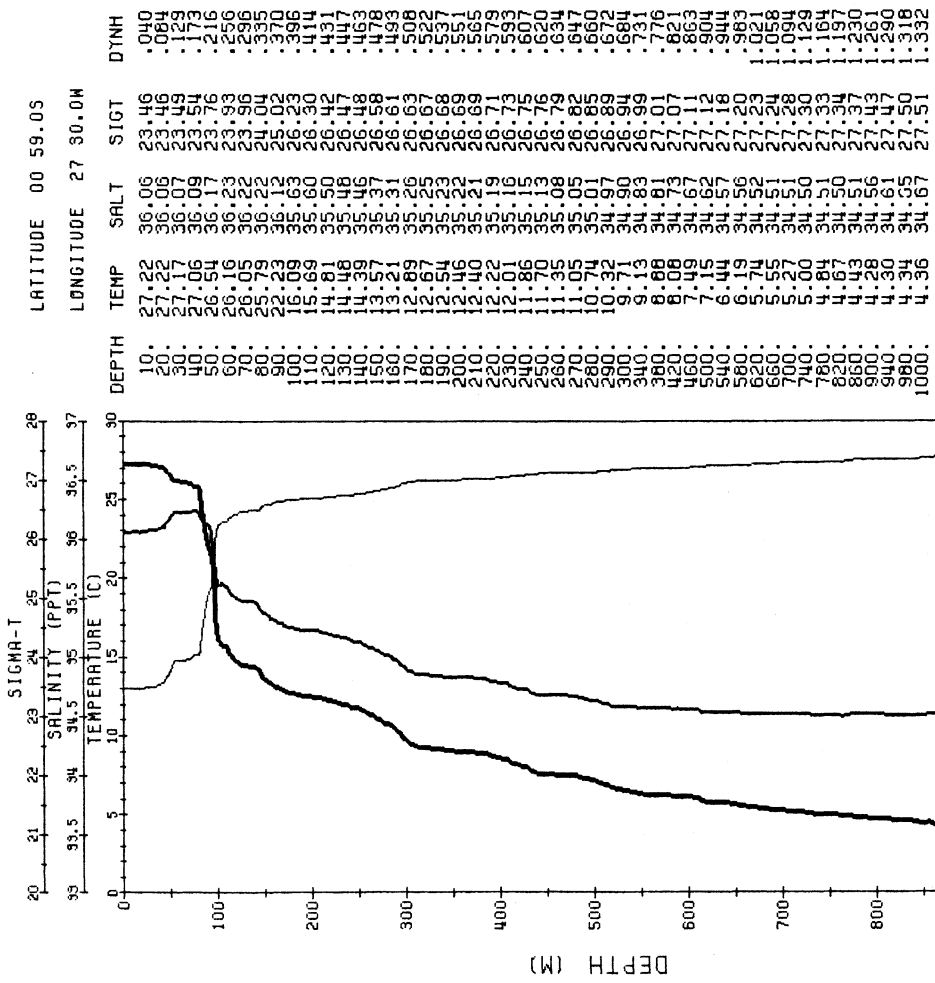
# STATION 28

R/V RESEARCHER DATE 01 31 79 TIME 0707



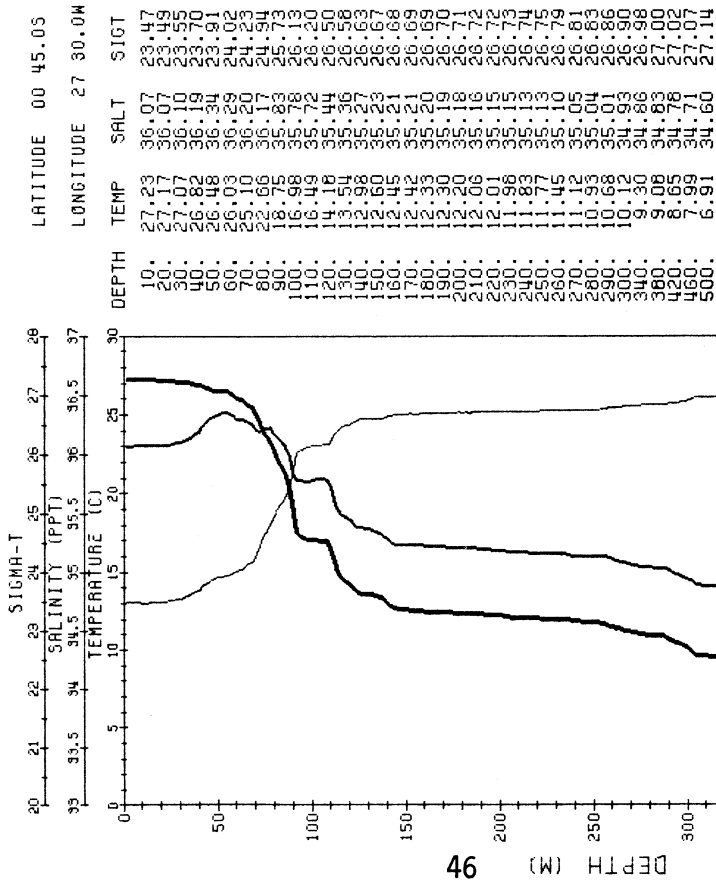
# STATION 29

R/V RESEARCHER DATE 01 31 79 TIME 1043



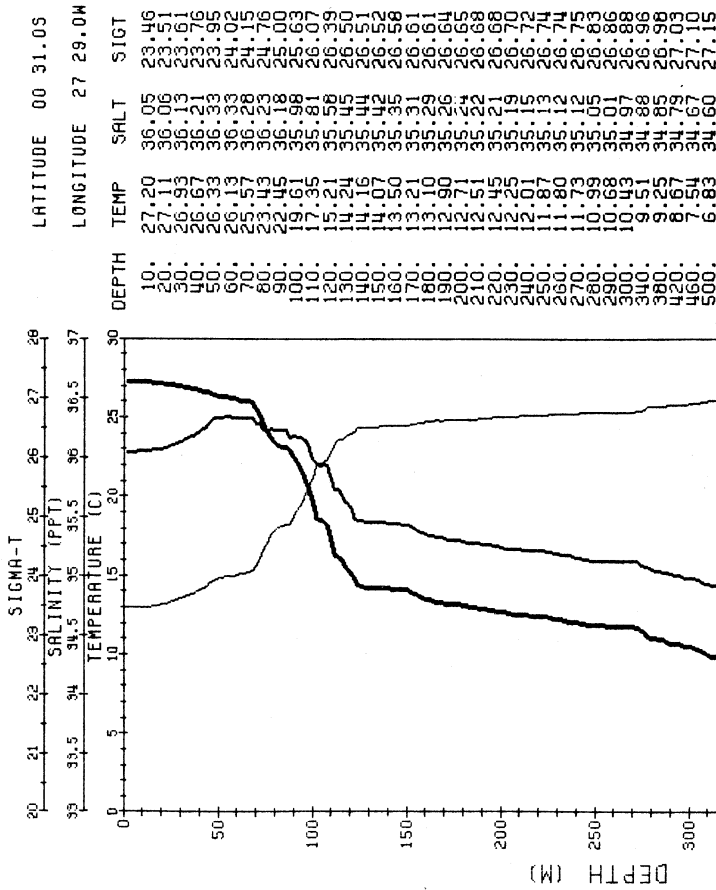
# STATION 30

R/V RESEARCHER DATE 01 31 79 TIME 1302



# STATION 31

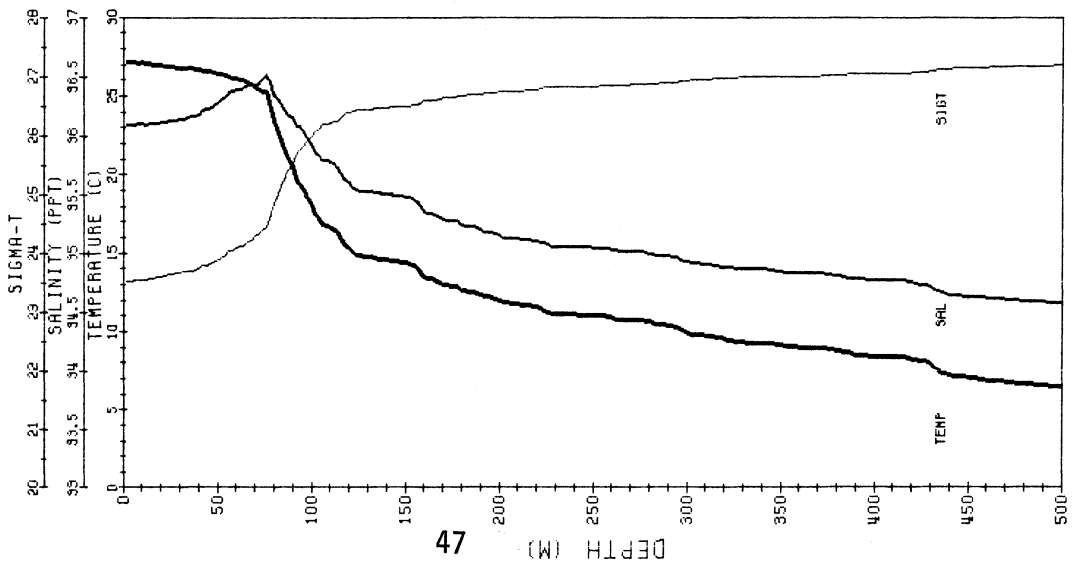
R/V RESEARCHER DATE 01 31 79 TIME 1518





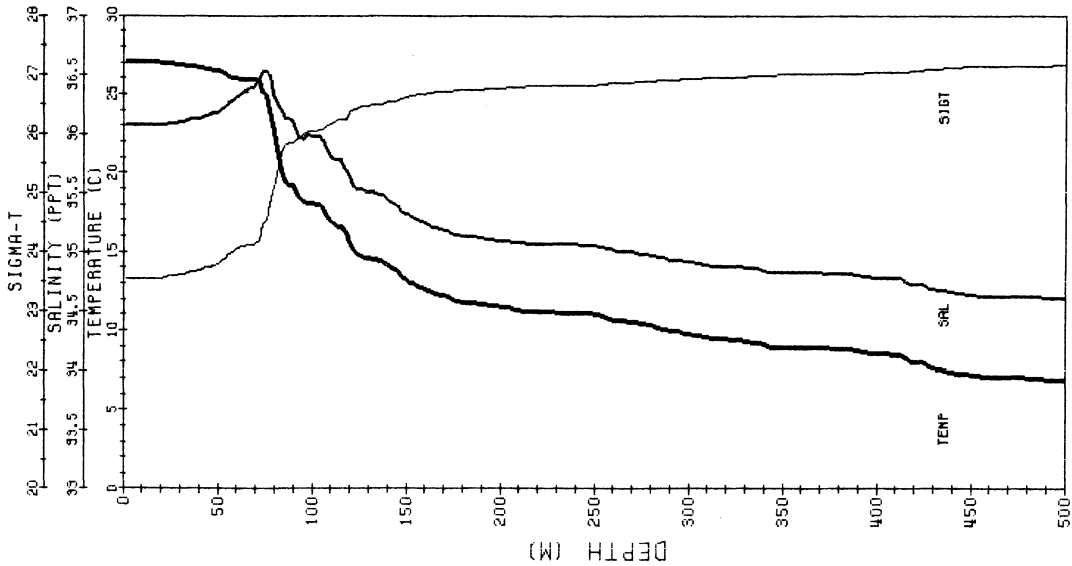
# STATION 32

R/V RESEARCHER DATE 01 31 79 TIME 1723



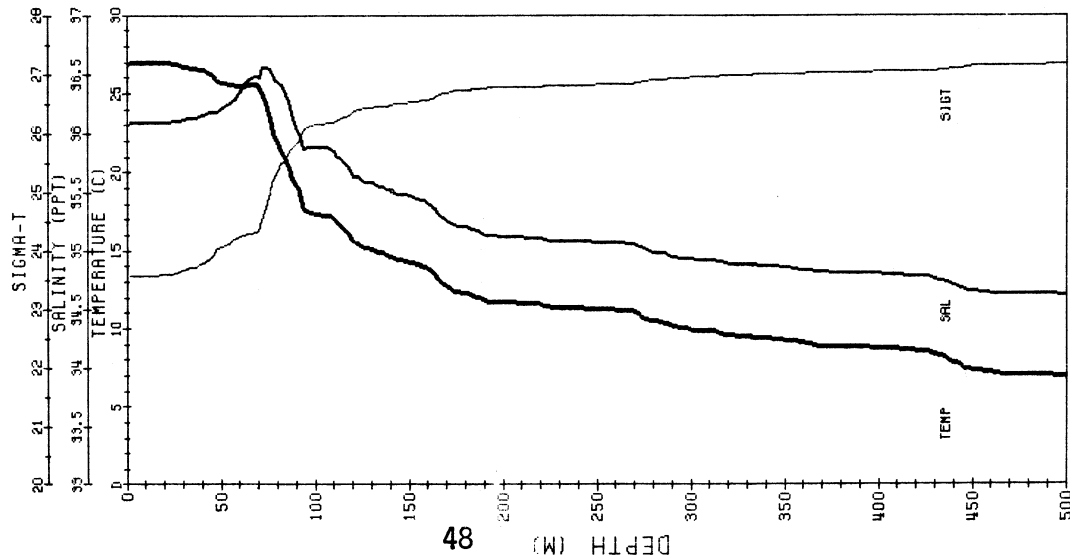
# STATION 33

R/V RESEARCHER DATE 01 31 79 TIME 1920



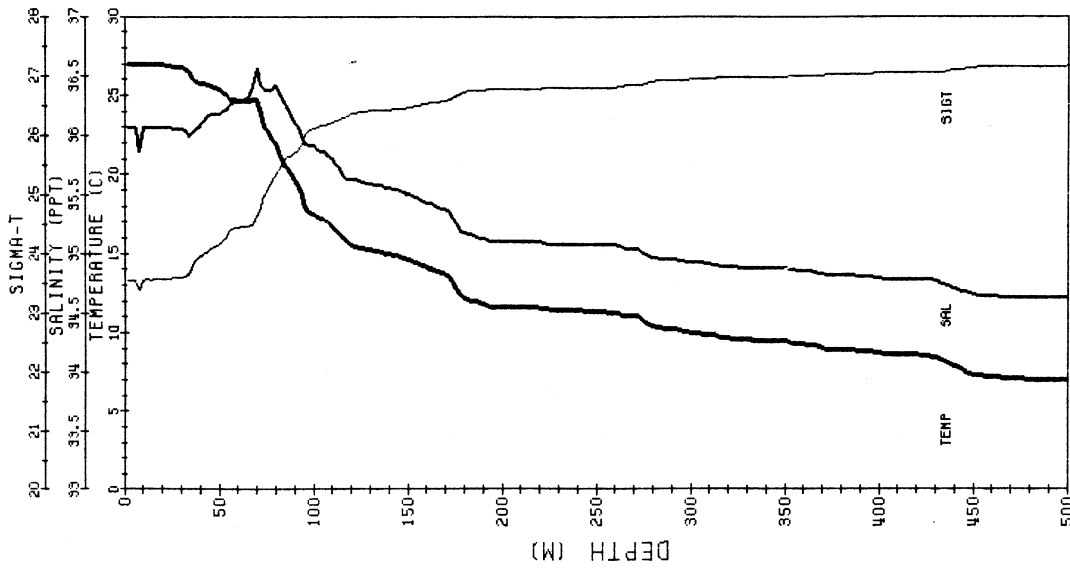
# STATION 34

R/V RESEARCHER DATE 01 31 79 TIME 2108



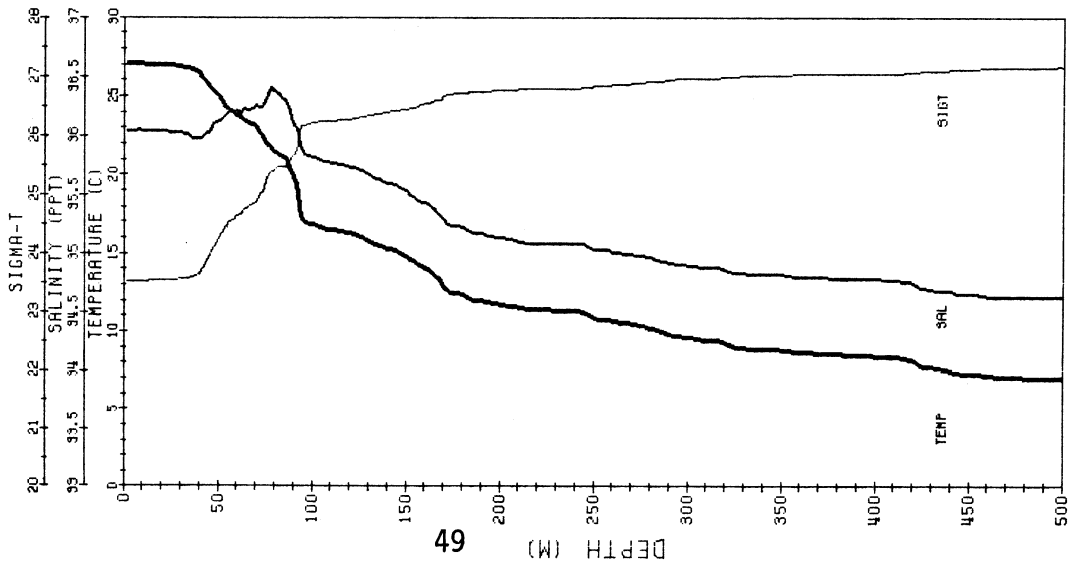
# STATION 35

R/V RESEARCHER DATE 01 31 79 TIME 2256



# STATION 36

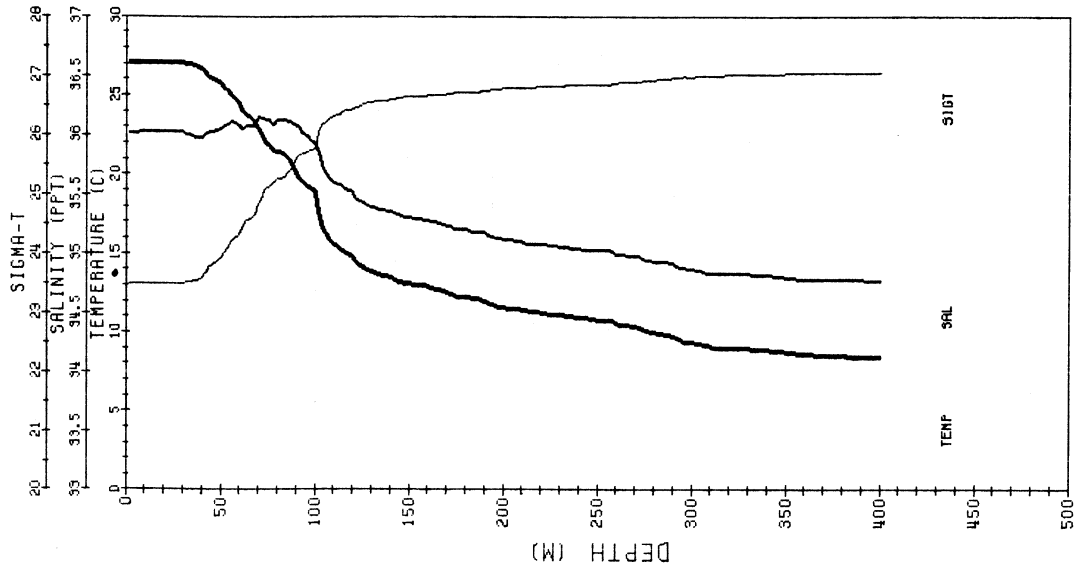
R/V RESEARCHER DATE 02 01 79 TIME 0056



DEPTH	TEMP	SALT	SIGT	DYNH
10.	27.01	36.04	23.52	0.39
20.	26.98	36.04	23.53	0.83
30.	26.83	36.02	23.56	1.27
40.	26.47	36.08	23.64	1.70
50.	24.97	36.13	24.23	2.10
60.	23.81	36.21	24.63	2.57
70.	23.15	36.25	24.86	3.06
80.	21.43	36.37	25.42	3.56
90.	19.89	36.50	26.01	4.07
100.	18.73	36.61	26.57	4.59
110.	17.71	36.73	27.10	5.12
120.	16.71	36.86	27.63	5.66
130.	15.74	37.00	28.13	6.21
140.	14.77	37.15	28.63	6.76
150.	13.77	37.32	29.14	7.31
160.	12.73	37.43	29.53	7.85
170.	11.62	37.50	29.96	8.40
180.	10.33	37.52	30.70	8.98
190.	8.92	37.46	31.75	9.57
200.	7.18	37.32	32.78	10.18
210.	5.48	37.09	33.79	10.81
220.	3.77	36.79	34.79	11.46
230.	2.10	36.44	35.78	12.13
240.	0.50	36.08	36.77	12.81
250.	0.84	35.72	37.76	13.51
260.	1.19	35.36	38.75	14.22
270.	1.50	35.00	39.74	14.94
280.	1.78	34.64	40.73	15.67
290.	2.00	34.28	41.72	16.41
300.	2.16	33.91	42.71	17.16
340.	2.84	34.89	46.96	22.99
380.	3.58	34.81	47.02	24.29
420.	4.19	34.74	47.03	25.73
460.	4.14	34.63	47.06	27.13
500.	3.96	34.62	47.14	28.55

# STATION 37

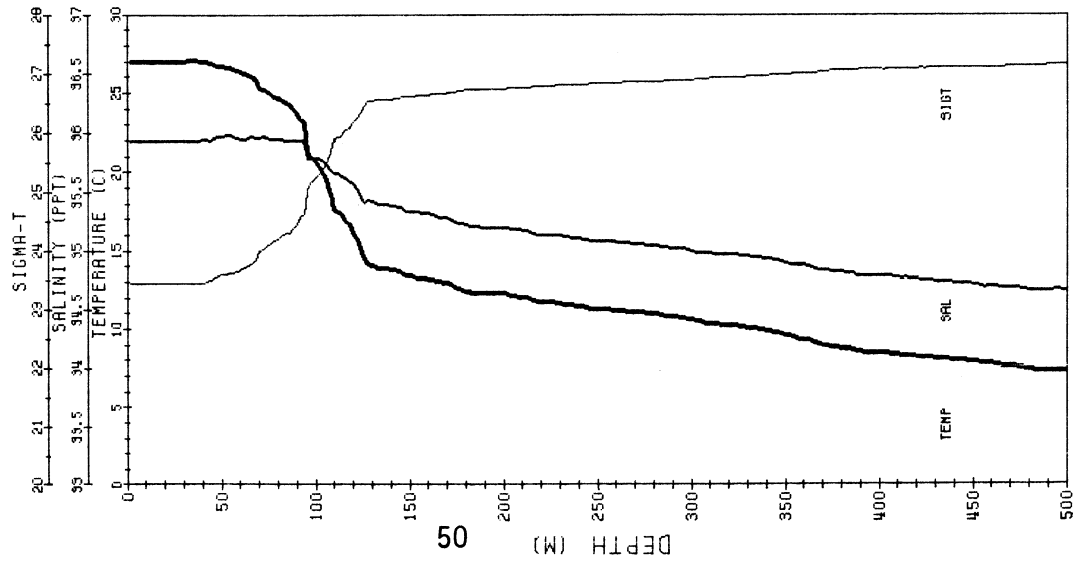
R/V RESEARCHER DATE 02 01 79 TIME 0257



DEPTH	TEMP	SALT	SIGT	DYNH
10.	27.03	36.02	23.49	0.40
20.	27.03	36.02	23.49	0.84
30.	26.70	36.02	23.49	1.28
40.	26.74	36.08	23.49	1.73
50.	25.53	36.08	23.49	2.15
60.	23.93	36.09	23.49	2.57
70.	21.97	36.12	23.49	3.01
80.	19.91	36.08	23.49	3.44
90.	18.58	36.03	23.49	3.84
100.	17.73	36.00	23.49	4.20
110.	16.73	36.00	23.49	4.56
120.	15.84	36.00	23.49	4.91
130.	14.45	36.00	23.49	5.29
140.	13.05	36.00	23.49	5.68
150.	11.65	36.00	23.49	6.09
160.	10.26	36.00	23.49	6.51
170.	8.86	36.00	23.49	6.94
180.	7.46	36.00	23.49	7.37
190.	6.06	36.00	23.49	7.81
200.	4.66	36.00	23.49	8.25
210.	3.26	36.00	23.49	8.69
220.	1.86	36.00	23.49	9.13
230.	0.46	36.00	23.49	9.57
240.	0.81	36.00	23.49	10.01
250.	1.16	36.00	23.49	10.45
260.	1.51	36.00	23.49	10.89
270.	1.86	36.00	23.49	11.33
280.	2.21	36.00	23.49	11.77
290.	2.56	36.00	23.49	12.21
300.	2.91	36.00	23.49	12.65
340.	3.62	36.00	23.49	14.09
380.	4.34	36.00	23.49	15.53
420.	4.82	36.00	23.49	16.97
460.	4.44	36.00	23.49	18.41
500.	3.77	36.00	23.49	19.85

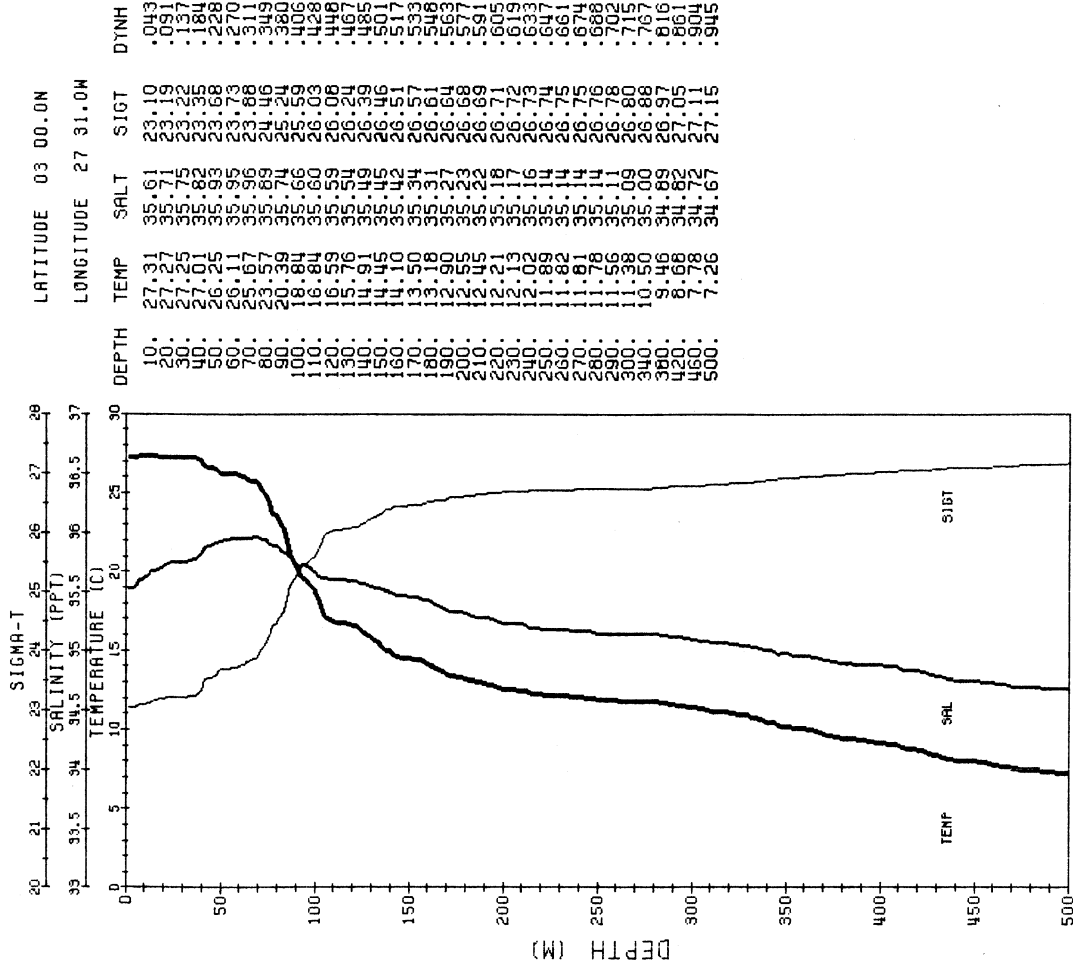
# STATION 38

R/V RESEARCHER DATE 02 01 79 TIME 0835



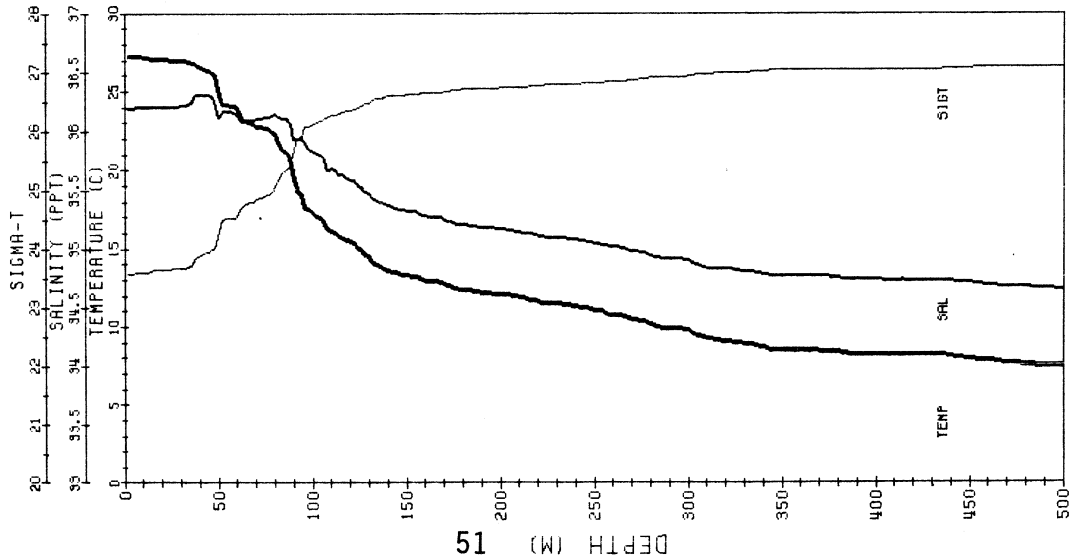
# STATION 39

R/V RESEARCHER DATE 01 01 79 TIME 1348



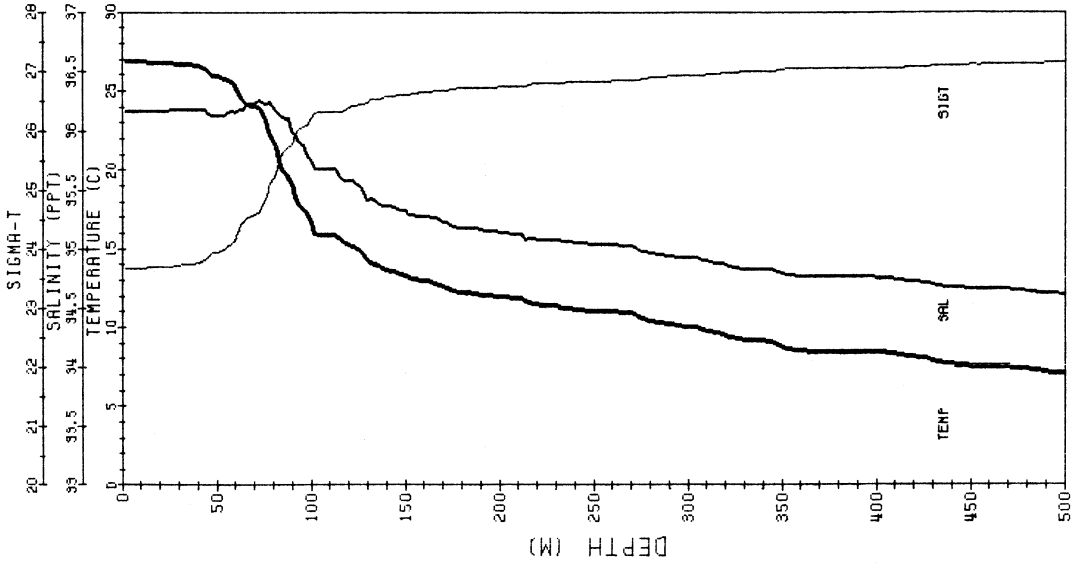
# STATION 40

R/V RESEARCHER DATE 02 02 79 TIME 1905



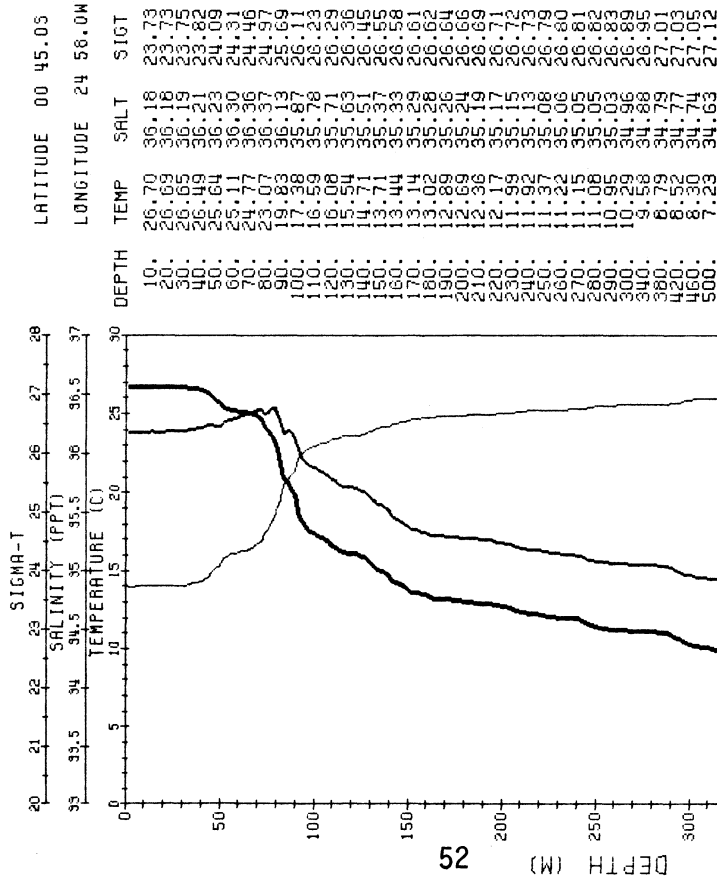
# STATION 41

R/V RESEARCHER DATE 02 02 79 TIME 2353



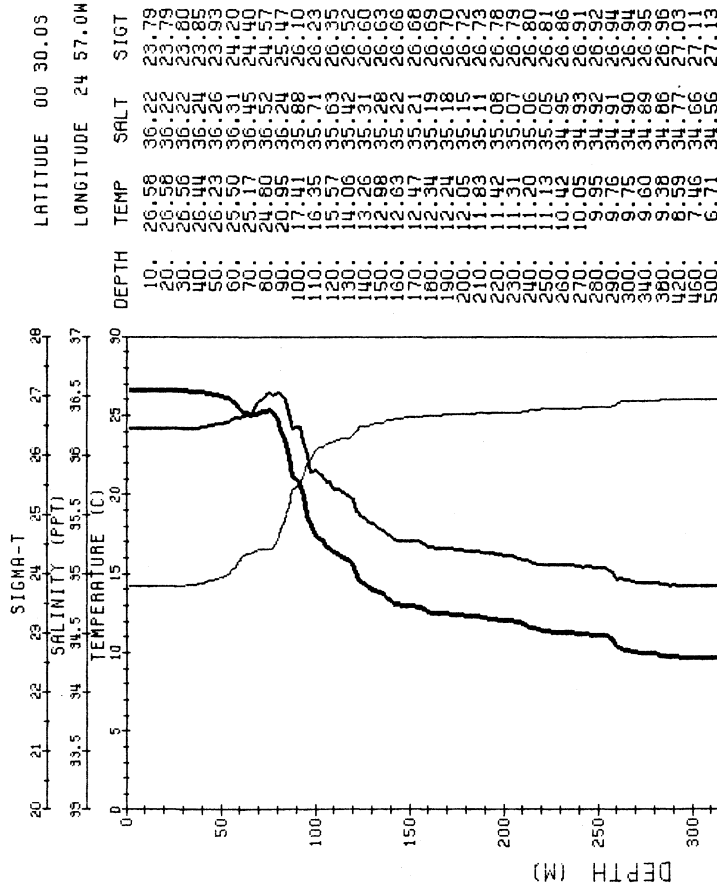
# STATION 42

R/V RESEARCHER DATE 02 03 79 TIME 0335



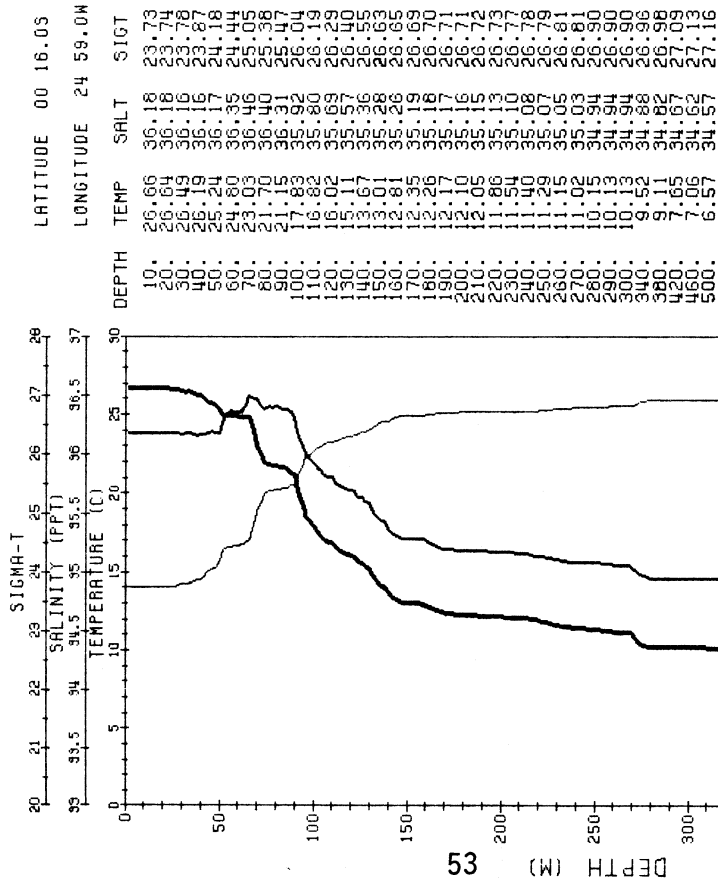
# STATION 43

R/V RESEARCHER DATE 02 03 79 TIME 0707



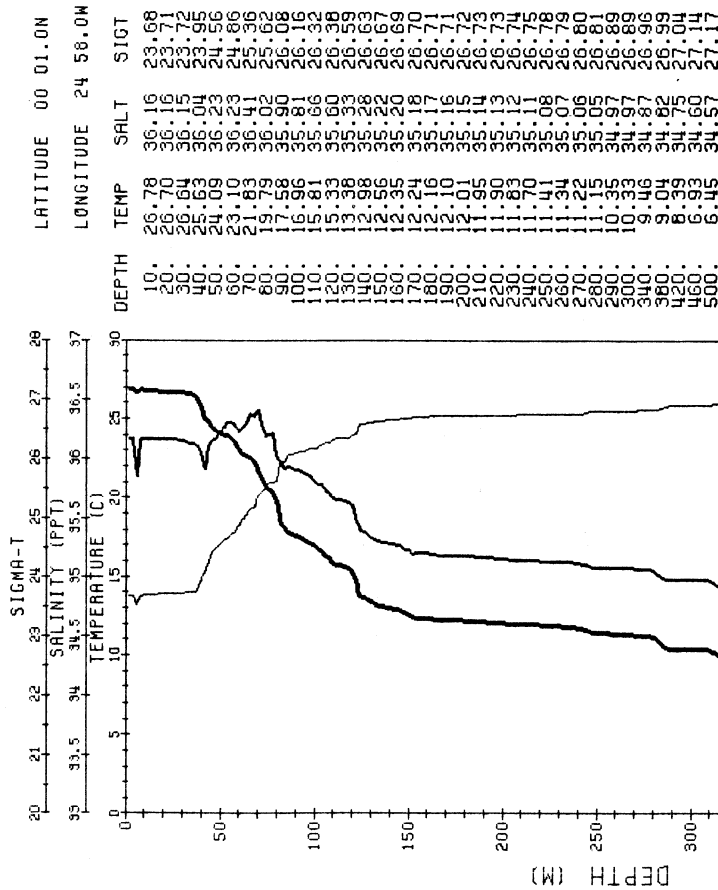
# STATION 44

R/V RESEARCHER DATE 02 03 79 TIME 1049

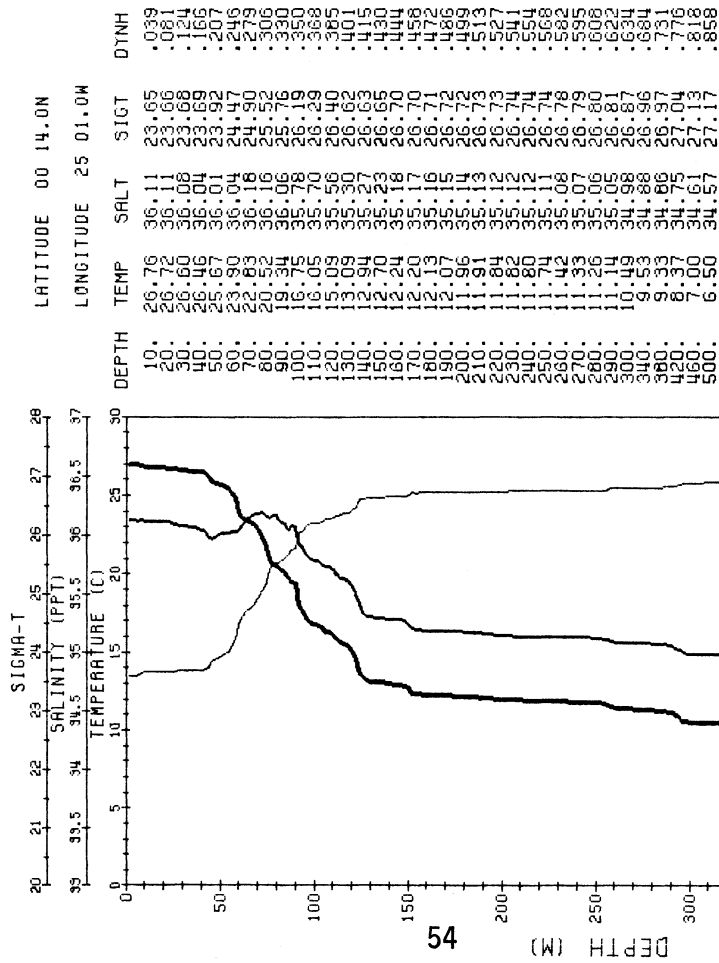


# STATION 45

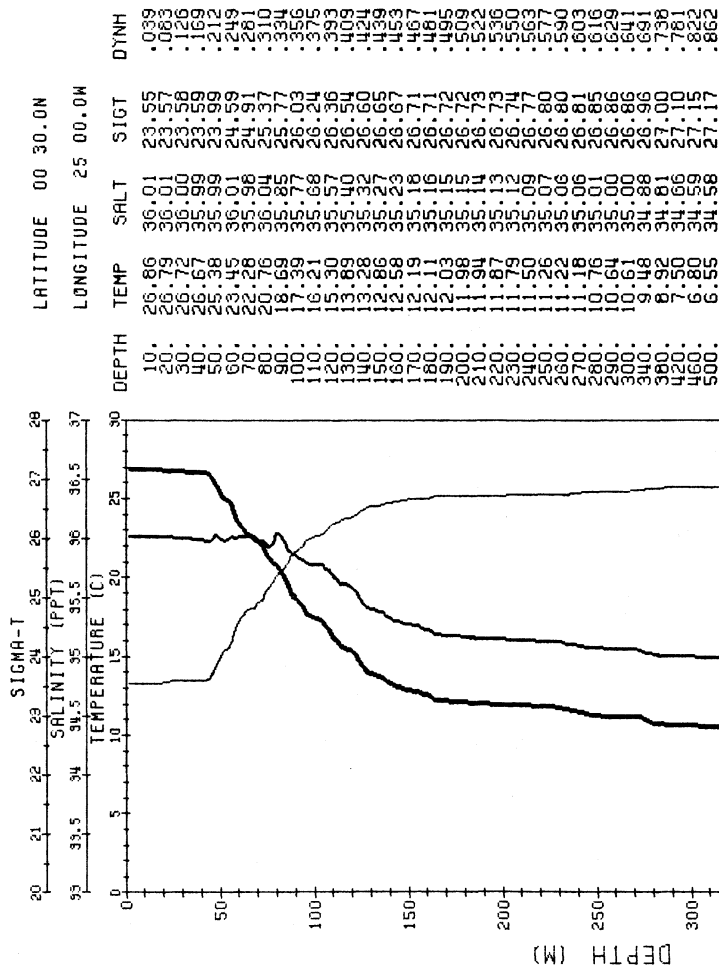
R/V RESEARCHER DATE 02 03 79 TIME 1511



STATION 46  
R/V RESEARCHER DATE 02 03 79 TIME 1915

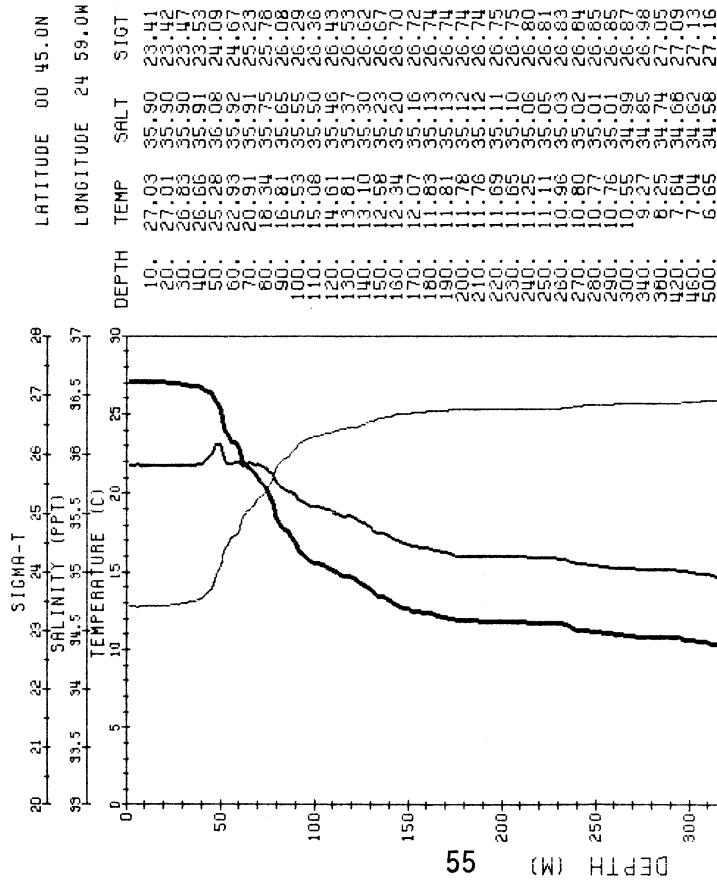


STATION 47  
R/V RESEARCHER DATE 02 03 79 TIME 2245

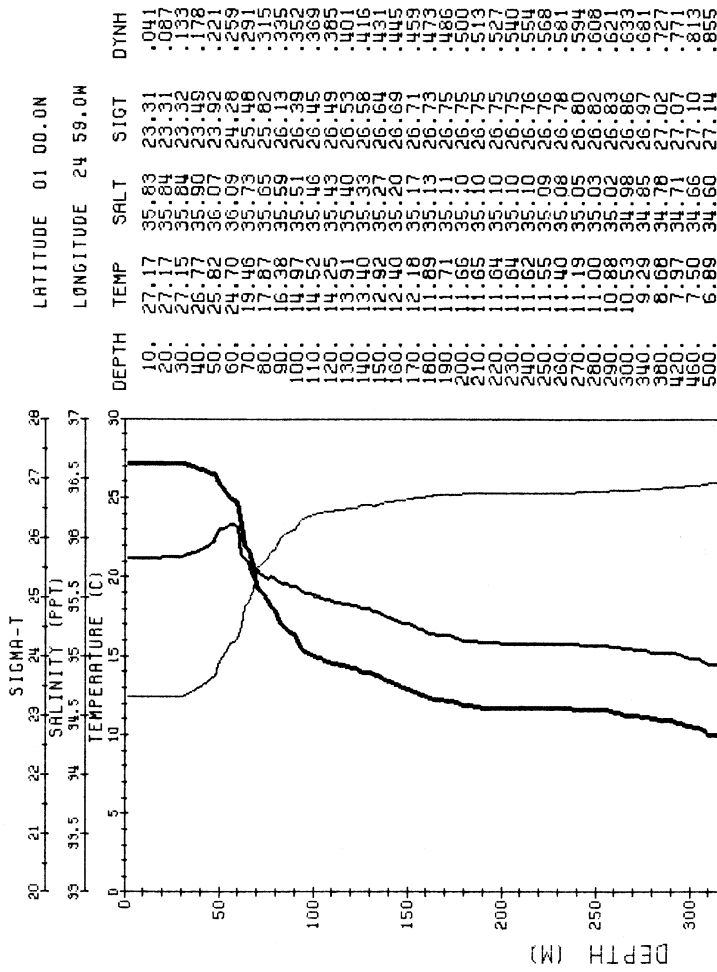




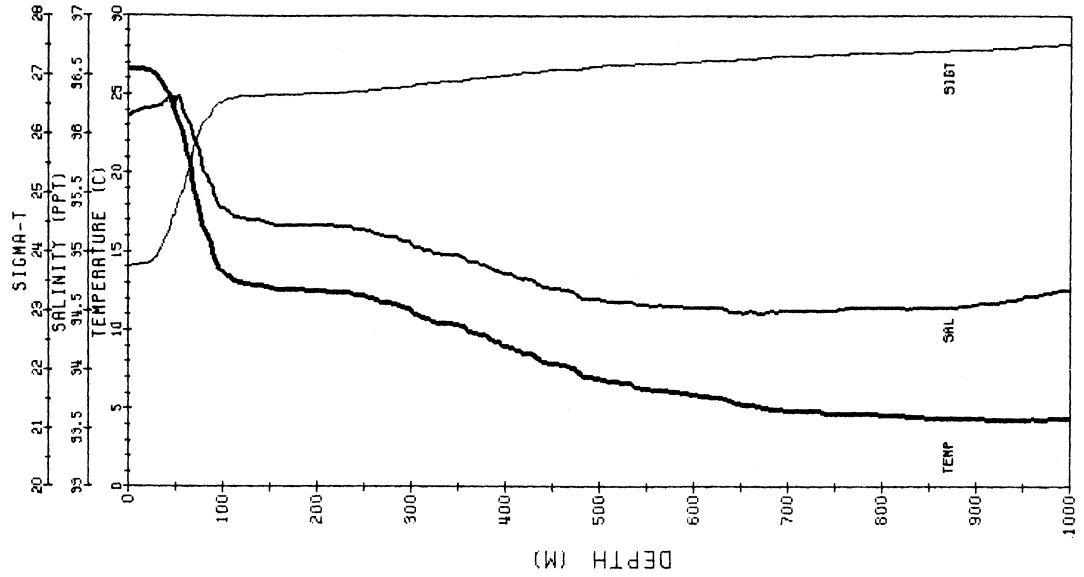
STATION 48  
R/V RESEARCHER DATE 02 04 79 TIME 0241



STATION 49  
R/V RESEARCHER DATE 02 04 79 TIME 0609

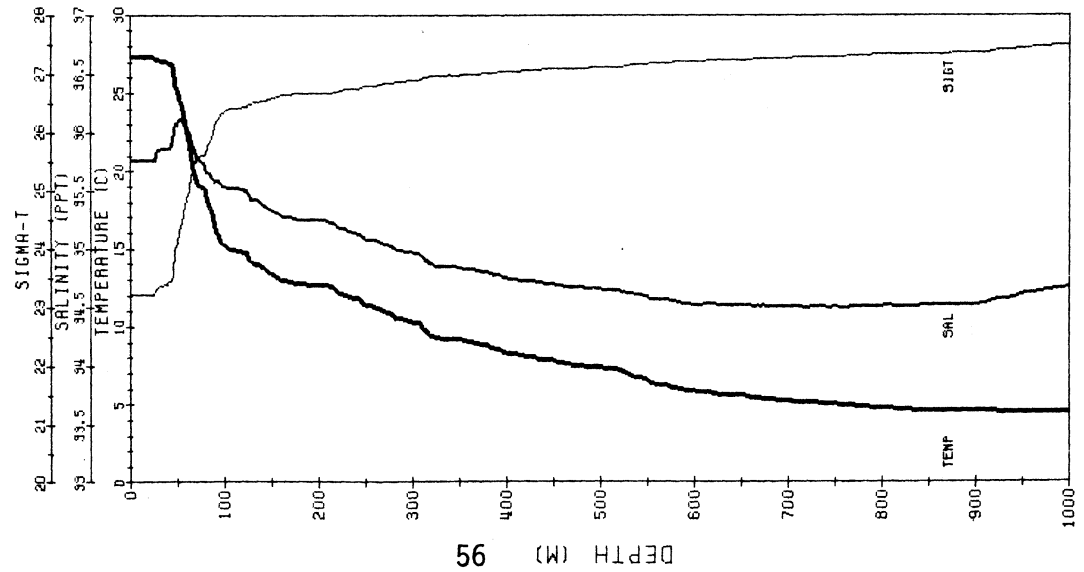


STATION 51  
R/V RESEARCHER DATE 02 06 79 TIME 0055



DEPTH	TEMP	SALT	SIGT	DTNH
10	26.58	36.19	23.77	037
20	26.52	36.21	23.80	079
30	26.21	36.23	23.92	120
40	25.35	36.27	24.22	158
50	23.87	36.23	24.63	194
60	22.20	36.18	25.08	235
70	18.47	35.99	25.79	257
80	15.78	35.54	26.19	282
90	13.71	35.37	26.59	307
100	13.31	35.32	26.59	320
120	13.04	35.32	26.63	335
140	12.92	35.37	26.64	349
160	12.97	35.27	26.65	364
180	12.62	35.24	26.67	387
200	12.60	35.23	26.67	407
220	12.59	35.23	26.68	431
240	12.49	35.22	26.68	449
260	12.47	35.22	26.69	464
280	12.43	35.21	26.69	478
300	12.38	35.21	26.69	492
320	12.24	35.19	26.71	506
340	12.21	35.16	26.73	520
360	11.78	35.14	26.76	534
380	11.50	35.13	26.78	548
400	11.50	35.10	26.78	562
420	11.45	35.07	26.79	576
440	10.45	34.98	26.88	589
460	9.61	34.88	26.95	603
480	8.53	34.77	27.03	617
500	7.85	34.68	27.08	631
520	6.80	34.55	27.18	644
540	6.03	34.54	27.24	658
560	5.55	34.52	27.27	672
580	5.22	34.50	27.27	686
600	4.87	34.50	27.34	700
620	4.68	34.50	27.34	714
640	4.61	34.52	27.36	728
660	4.55	34.52	27.37	742
680	4.57	34.52	27.39	756
700	4.37	34.52	27.42	770
720	4.30	34.52	27.45	784
740	4.32	34.52	27.45	798
760	4.30	34.52	27.47	812
780	4.34	34.52	27.52	826
800	4.34	34.52	27.52	840
820	4.34	34.52	27.52	854
840	4.34	34.52	27.52	868
860	4.34	34.52	27.52	882
880	4.34	34.52	27.52	896
900	4.34	34.52	27.52	910
920	4.34	34.52	27.52	924
940	4.34	34.52	27.52	938
960	4.34	34.52	27.52	952
980	4.34	34.52	27.52	966
1000	4.34	34.52	27.52	980

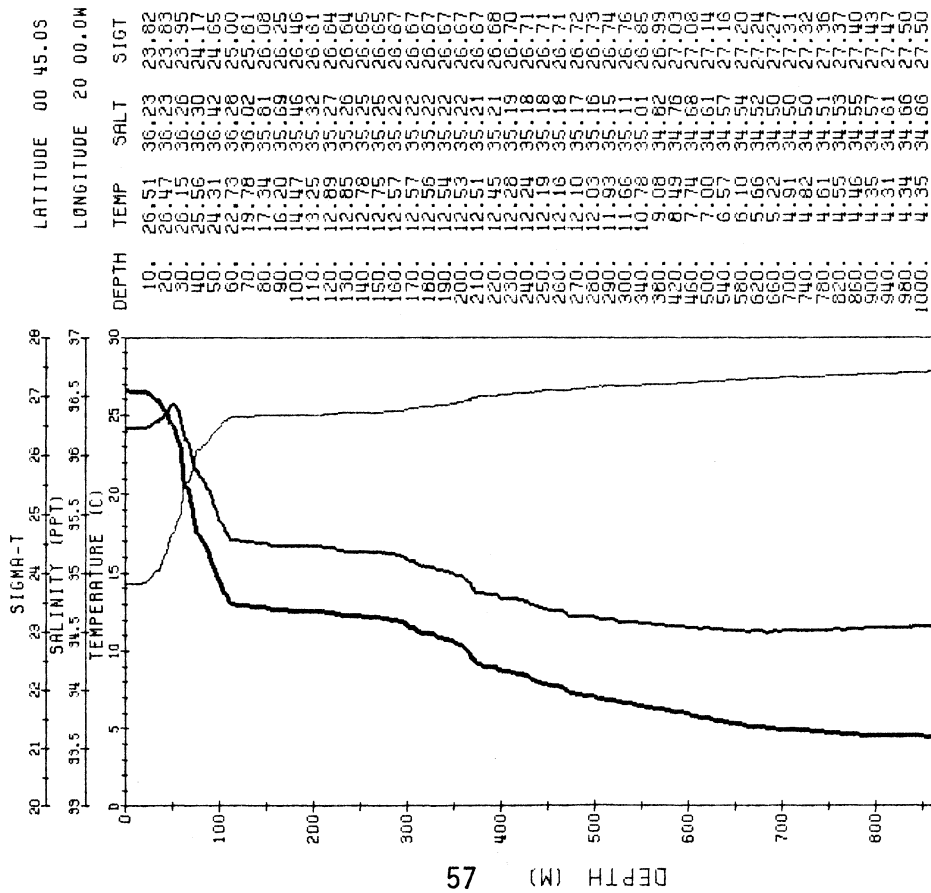
STATION 50  
R/V RESEARCHER DATE 02 04 79 TIME 0958



DEPTH	TEMP	SALT	SIGT	DTNH
10	27.30	35.76	23.22	042
20	27.30	35.76	23.22	069
30	27.13	35.76	23.31	135
40	26.78	35.76	23.39	181
50	25.19	36.00	24.10	223
60	22.61	36.09	24.86	258
70	19.63	35.74	25.63	286
80	16.51	35.50	26.10	311
90	14.94	35.50	26.41	330
100	14.09	35.52	26.41	350
120	13.99	35.51	26.45	367
140	13.83	35.51	26.51	384
160	13.69	35.52	26.54	402
180	13.29	35.52	26.59	421
200	12.93	35.29	26.64	446
220	12.68	35.25	26.68	460
240	12.75	35.25	26.68	475
260	12.75	35.25	26.68	489
280	12.68	35.24	26.68	504
300	12.51	35.19	26.69	518
320	12.34	35.16	26.73	532
340	12.04	35.14	26.75	546
360	11.83	35.08	26.78	560
380	11.41	35.07	26.80	573
400	11.27	35.04	26.84	587
420	10.98	35.01	26.89	600
440	10.75	35.01	26.87	613
460	10.52	34.99	26.87	625
480	10.31	34.96	26.89	638
500	9.26	34.85	26.98	651
520	8.84	34.80	27.01	664
540	8.14	34.73	27.06	677
560	7.43	34.66	27.09	690
580	6.82	34.61	27.11	703
600	6.55	34.56	27.16	716
620	6.33	34.54	27.21	729
640	6.13	34.52	27.25	742
660	5.93	34.51	27.29	755
680	5.55	34.51	27.32	768
700	5.55	34.51	27.32	781
720	5.55	34.51	27.32	794
740	5.55	34.51	27.32	807
760	5.55	34.51	27.32	820
780	5.55	34.51	27.32	833
800	5.55	34.51	27.32	846
820	5.55	34.51	27.32	859
840	5.55	34.51	27.32	872
860	5.55	34.51	27.32	885
880	5.55	34.51	27.32	898
900	5.55	34.51	27.32	911
920	5.55	34.51	27.32	924
940	5.55	34.51	27.32	937
960	5.55	34.51	27.32	950
980	5.55	34.51	27.32	963
1000	5.55	34.51	27.32	976

STATION 52

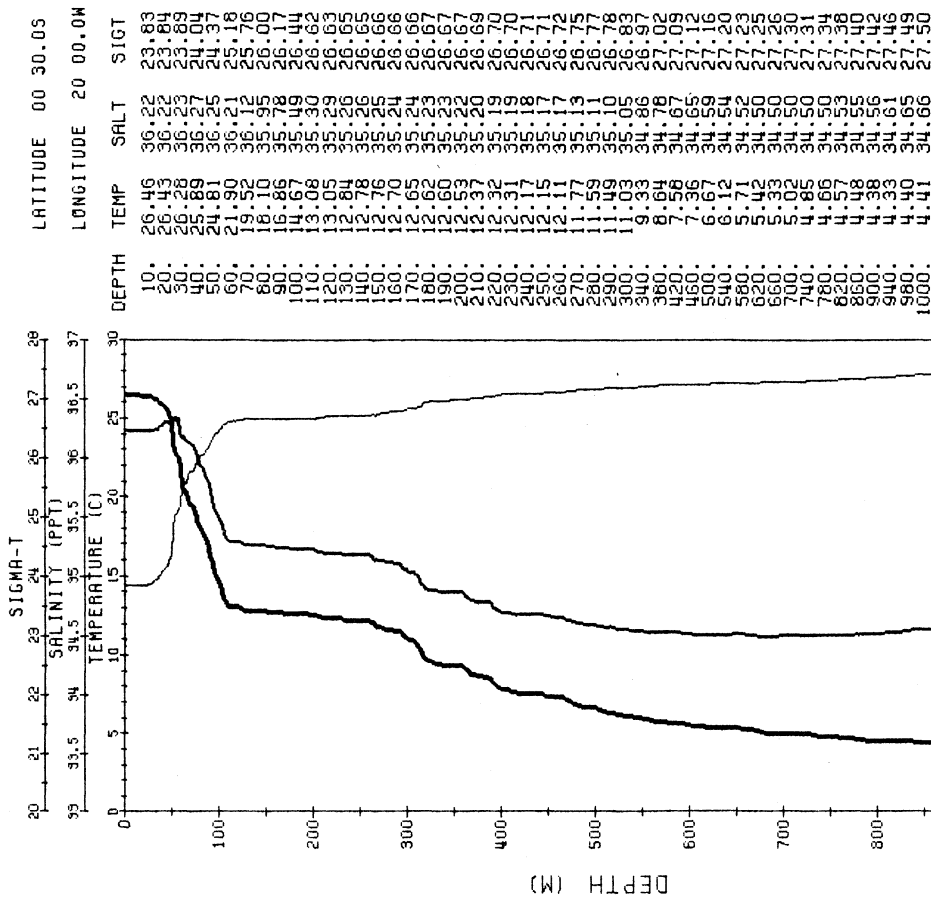
R/V RESEARCHER DATE 02 06 79 TIME 0328



57 DEPTH (M)

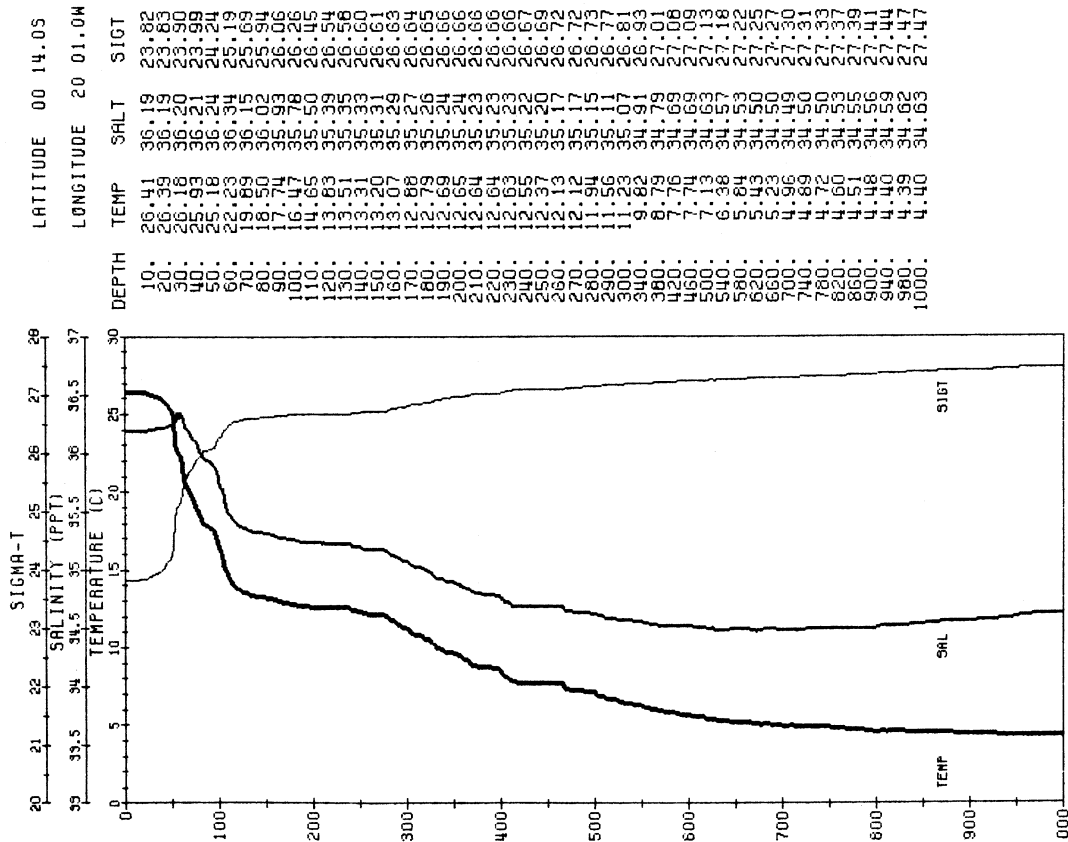
STATION 53

R/V RESEARCHER DATE 02 06 79 TIME 0603



# STATION 54

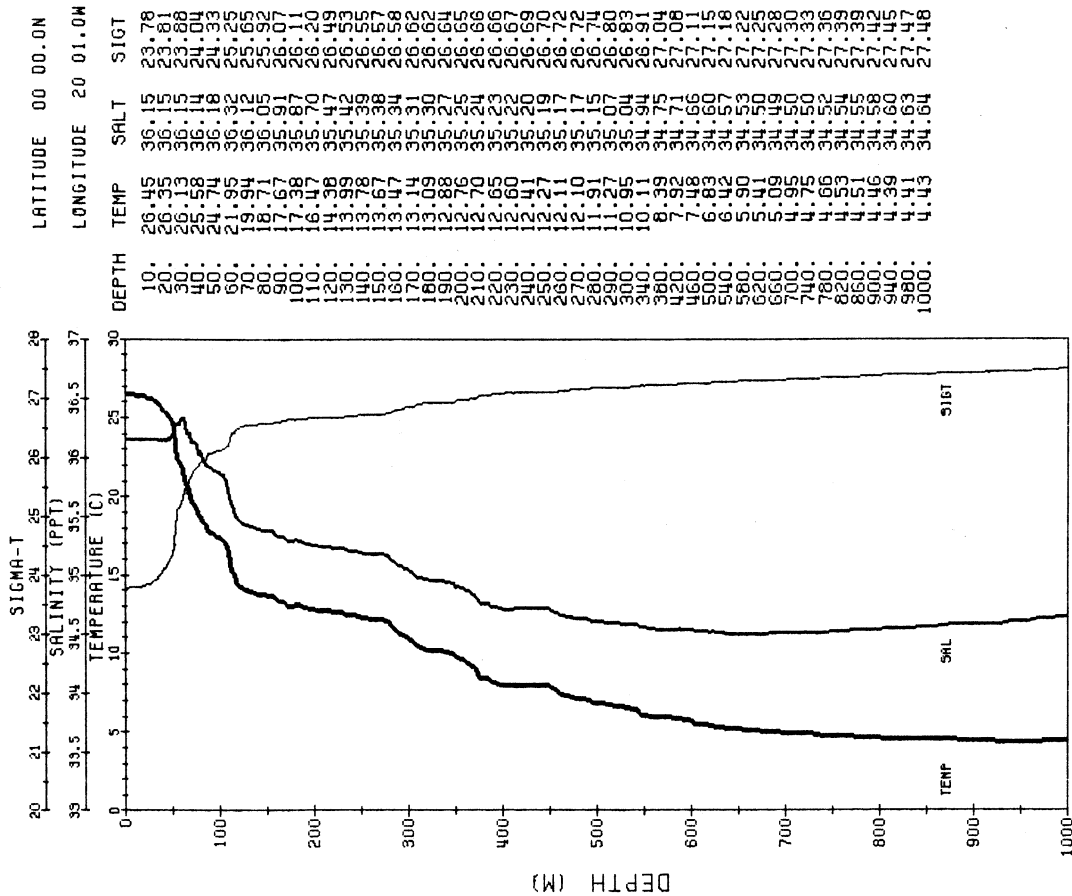
R/V RESEARCHER DATE 02 06 79 TIME 0837



58

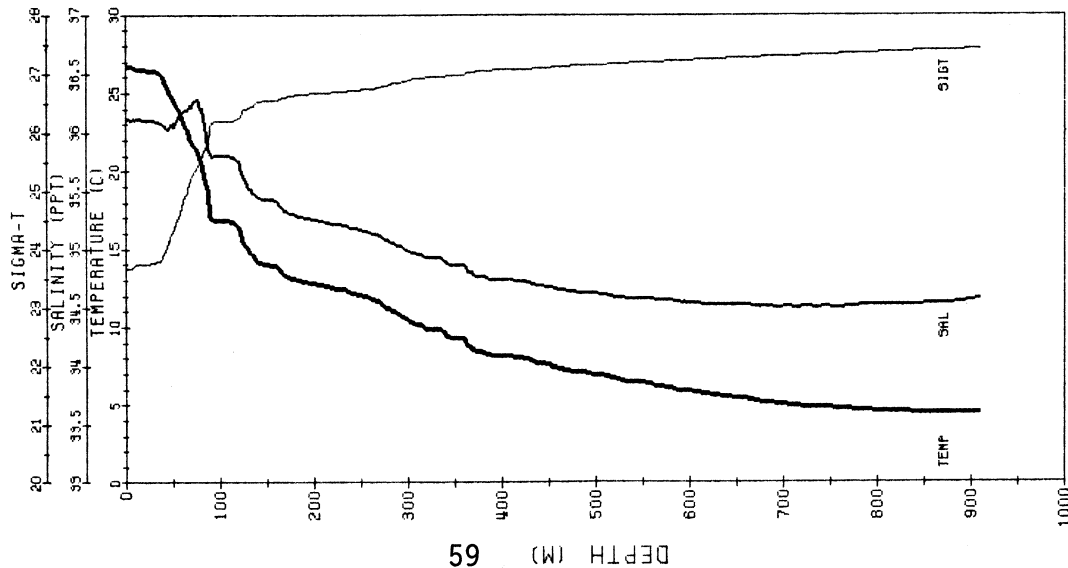
# STATION 55

R/V RESEARCHER DATE 02 06 79 TIME 1058



# STATION 56

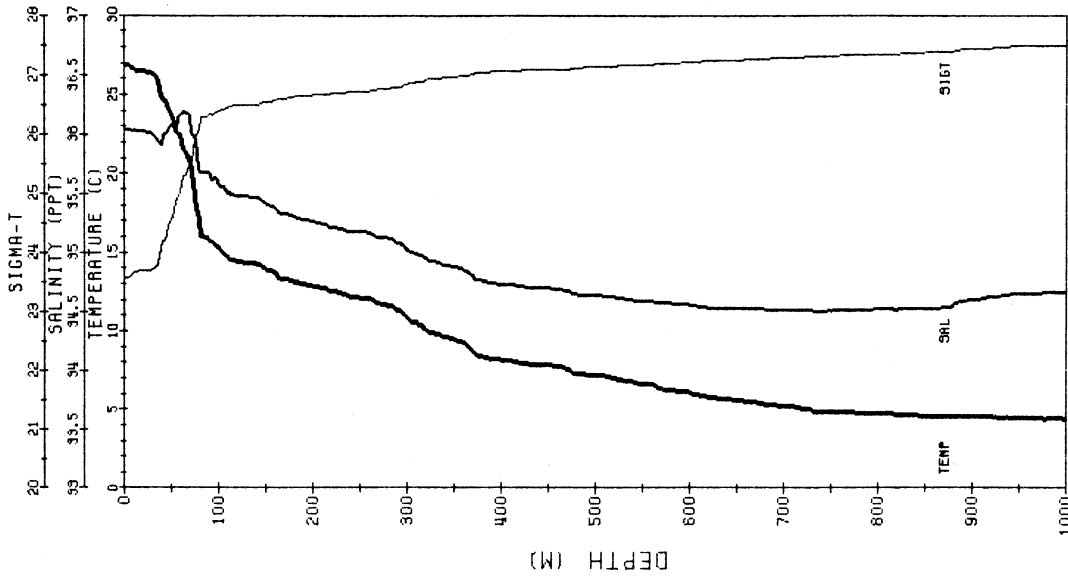
R/V RESEARCHER DATE 02 06 79 TIME 1359



DEPTH	TEMP	SALT	SIGT	DYNH
10	26.55	36.10	23.71	0.38
20	26.44	36.10	23.75	0.80
30	26.39	36.10	23.76	1.21
40	26.01	36.06	23.85	1.63
50	24.60	36.07	24.29	2.02
60	23.41	36.15	24.71	2.36
70	21.85	36.21	25.20	2.67
80	20.61	36.19	25.53	2.96
90	19.24	36.80	26.19	3.16
100	17.82	36.80	26.19	3.35
110	16.82	36.80	26.19	3.54
120	16.02	36.75	26.24	3.72
130	15.02	36.52	26.42	3.90
140	14.00	36.41	26.51	4.06
150	13.00	36.42	26.53	4.22
160	12.00	36.41	26.54	4.37
170	11.00	36.41	26.54	4.52
180	10.04	36.32	26.60	4.67
190	9.07	36.23	26.64	4.82
200	8.77	36.24	26.66	4.96
210	8.67	36.21	26.68	5.11
220	8.47	36.20	26.68	5.25
230	8.41	36.18	26.68	5.39
240	8.35	36.16	26.73	5.54
250	8.01	36.14	26.77	5.68
260	7.85	36.11	26.77	5.81
270	7.69	35.06	26.81	5.95
280	7.16	35.03	26.84	6.08
290	6.86	34.98	26.88	6.21
300	6.69	34.99	26.94	6.34
340	6.42	34.73	26.94	6.83
380	6.11	34.73	27.04	7.28
420	5.79	34.65	27.06	7.72
460	5.39	34.62	27.11	8.14
500	4.99	34.58	27.14	8.55
540	4.64	34.56	27.18	8.95
580	4.12	34.56	27.21	9.34
620	3.73	34.53	27.24	9.71
660	3.08	34.52	27.26	10.08
700	2.47	34.51	27.30	10.43
740	1.88	34.51	27.32	10.77
780	1.11	34.51	27.37	11.14
820	0.47	34.54	27.37	11.46
860	0.54	34.54	27.37	11.76
900	1.54	34.56	27.40	12.07

# STATION 57

R/V RESEARCHER DATE 02 06 79 TIME 1713

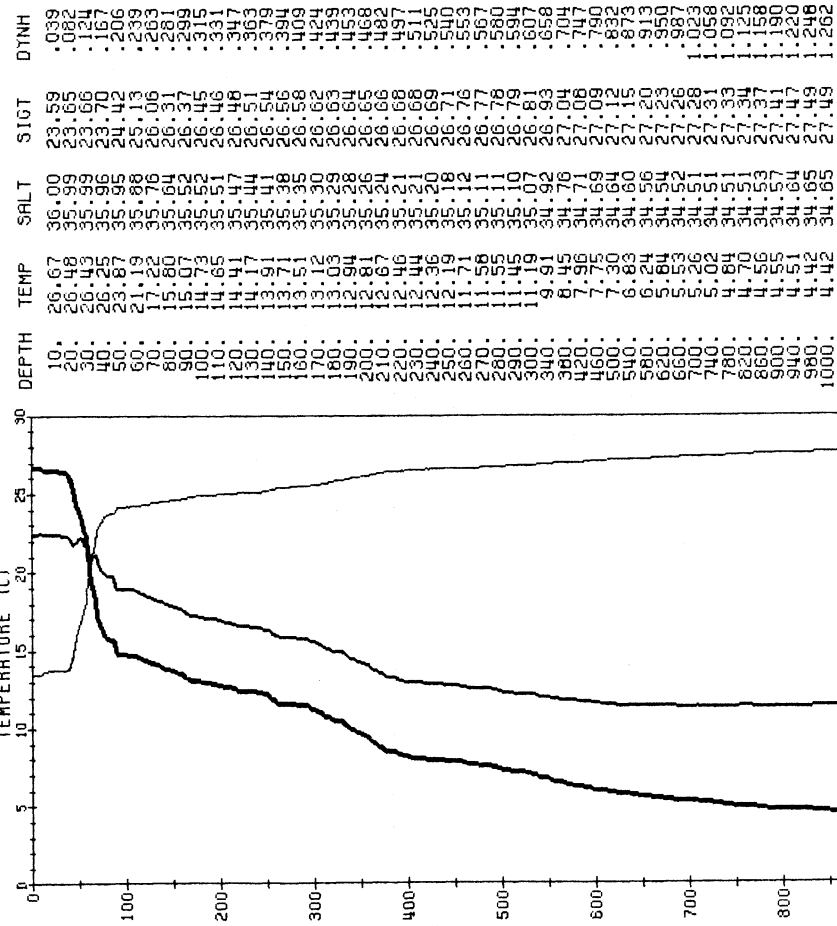


DEPTH	TEMP	SALT	SIGT	DYNH
10	26.64	36.03	23.63	0.39
20	26.44	36.02	23.69	0.81
30	26.33	36.01	23.71	1.24
40	24.94	36.07	24.07	1.65
50	23.78	36.15	24.54	2.01
60	22.46	36.15	24.99	2.33
70	21.06	36.21	25.40	2.64
80	19.85	36.27	25.76	2.83
90	18.32	36.31	26.06	3.01
100	17.14	36.32	26.32	3.18
110	16.00	36.32	26.57	3.35
120	14.99	36.32	26.79	3.52
130	14.33	36.32	26.90	3.67
140	13.77	36.32	26.90	3.82
150	13.26	36.32	26.90	3.98
160	12.89	36.32	26.90	4.13
170	12.70	36.32	26.90	4.29
180	12.11	36.32	26.90	4.43
190	11.87	36.32	26.90	4.58
200	12.34	36.32	26.86	4.73
210	12.49	36.32	26.86	4.87
220	12.41	36.32	26.86	5.02
230	12.16	36.32	26.86	5.16
240	12.09	36.32	26.71	5.30
250	12.06	36.32	26.71	5.44
260	12.06	36.32	26.72	5.58
270	11.72	36.32	26.76	5.72
280	11.31	36.32	26.80	5.85
290	10.87	36.32	26.84	5.99
300	10.87	36.32	26.84	6.12
340	9.63	34.75	26.95	6.61
380	8.73	34.71	27.05	7.07
420	7.95	34.71	27.09	7.50
460	7.20	34.69	27.13	7.93
500	6.78	34.69	27.15	8.34
540	6.50	34.60	27.15	8.75
580	6.26	34.57	27.23	9.14
620	6.01	34.53	27.23	9.53
660	5.50	34.51	27.23	9.89
700	5.21	34.51	27.23	10.25
740	4.82	34.51	27.23	10.59
780	4.47	34.51	27.23	10.93
820	4.14	34.51	27.23	11.26
860	3.80	34.50	27.23	11.58
900	3.47	34.50	27.23	11.89
940	3.14	34.47	27.23	12.19
980	2.81	34.46	27.23	12.47
1000	2.40	34.46	27.23	12.71

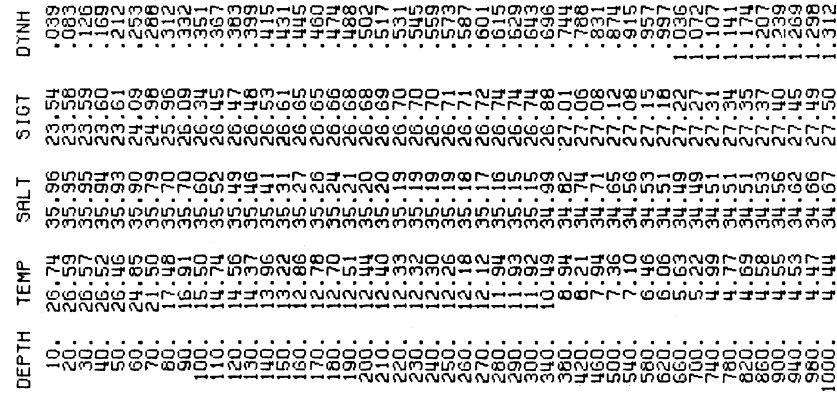
STATION 58

R/V RESEARCHER DATE 02 06 79 TIME 1929

LATITUDE 00 46.0N  
 LONGITUDE 20 00.0W  
 SIGMA-T  
 SALINITY (PPT)  
 TEMPERATURE (C)



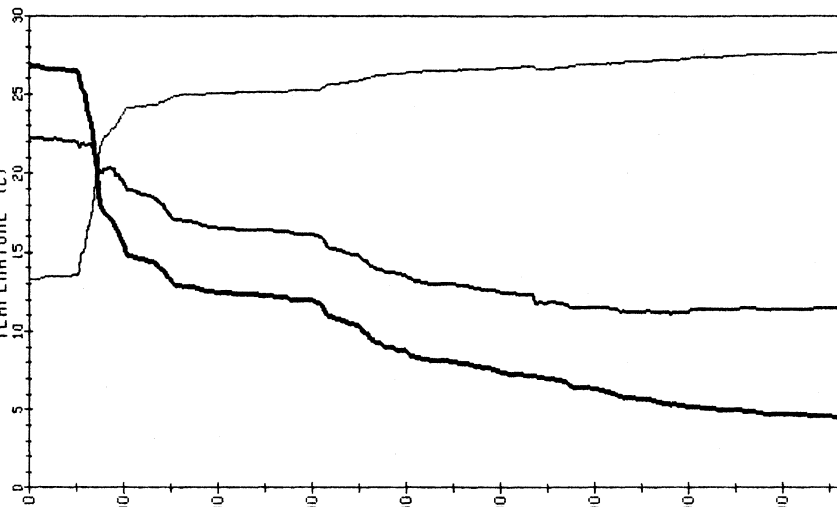
LATITUDE 01 00.0N  
 LONGITUDE 20 00.0W  
 SIGMA-T  
 SALINITY (PPT)  
 TEMPERATURE (C)



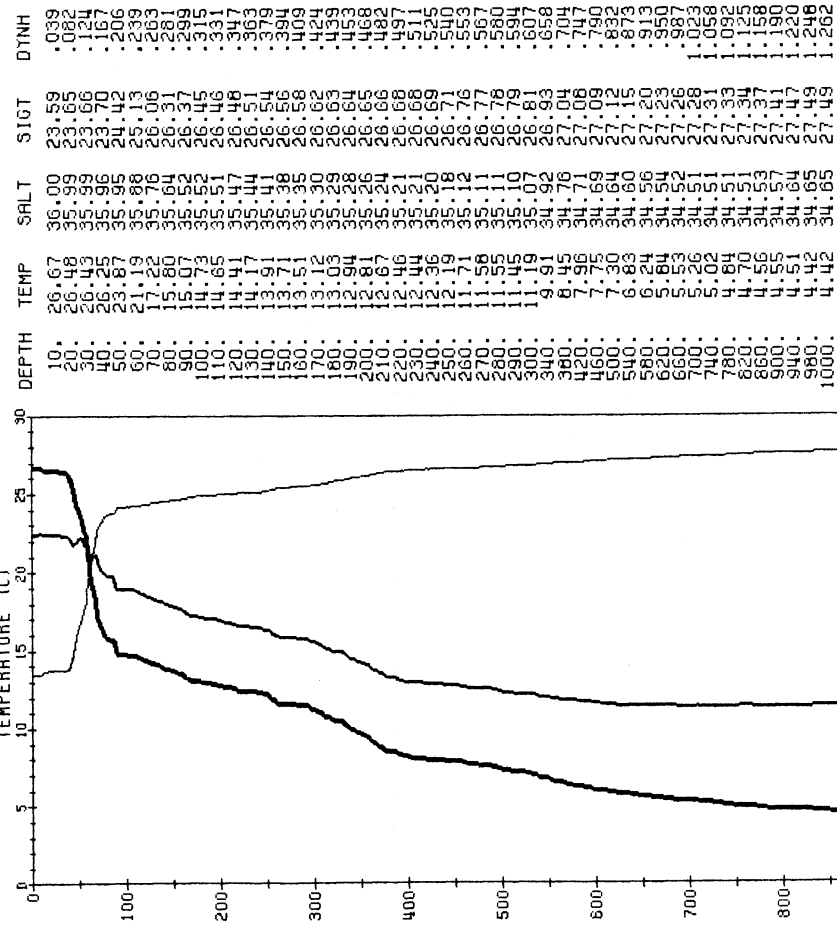
STATION 59

R/V RESEARCHER DATE 02 06 79 TIME 2148

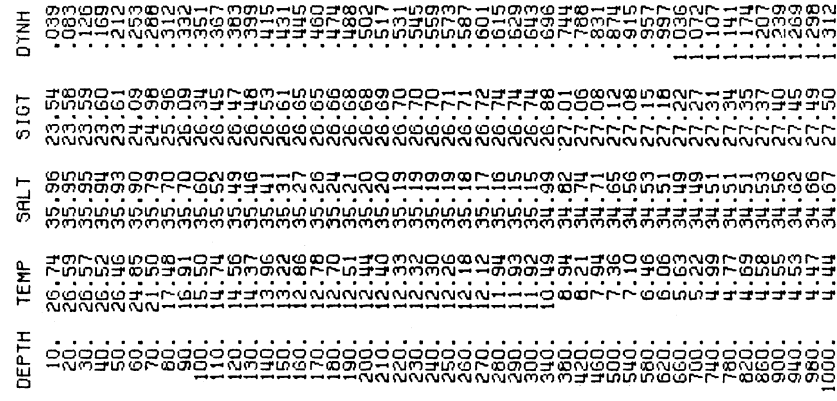
LATITUDE 01 00.0N  
 LONGITUDE 20 00.0W  
 SIGMA-T  
 SALINITY (PPT)  
 TEMPERATURE (C)



LATITUDE 00 46.0N  
 LONGITUDE 20 00.0W  
 SIGMA-T  
 SALINITY (PPT)  
 TEMPERATURE (C)



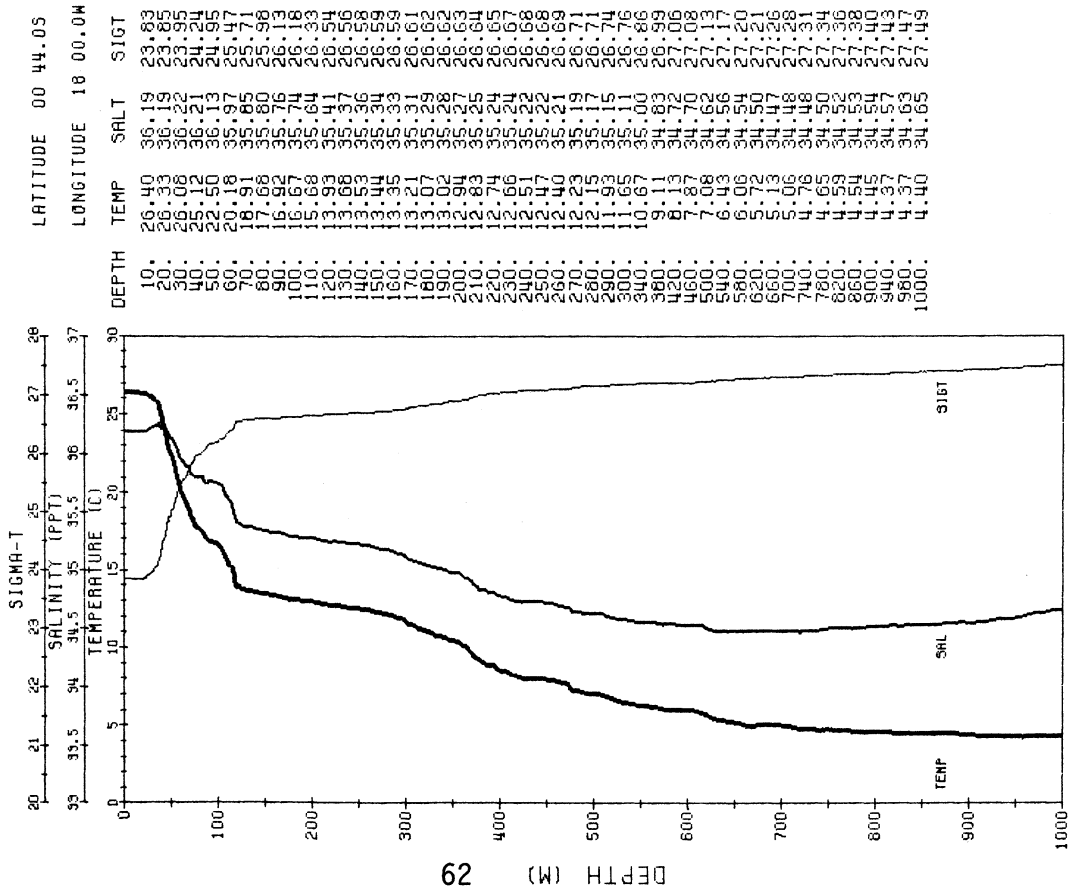
LATITUDE 01 00.0N  
 LONGITUDE 20 00.0W  
 SIGMA-T  
 SALINITY (PPT)  
 TEMPERATURE (C)





# STATION 62

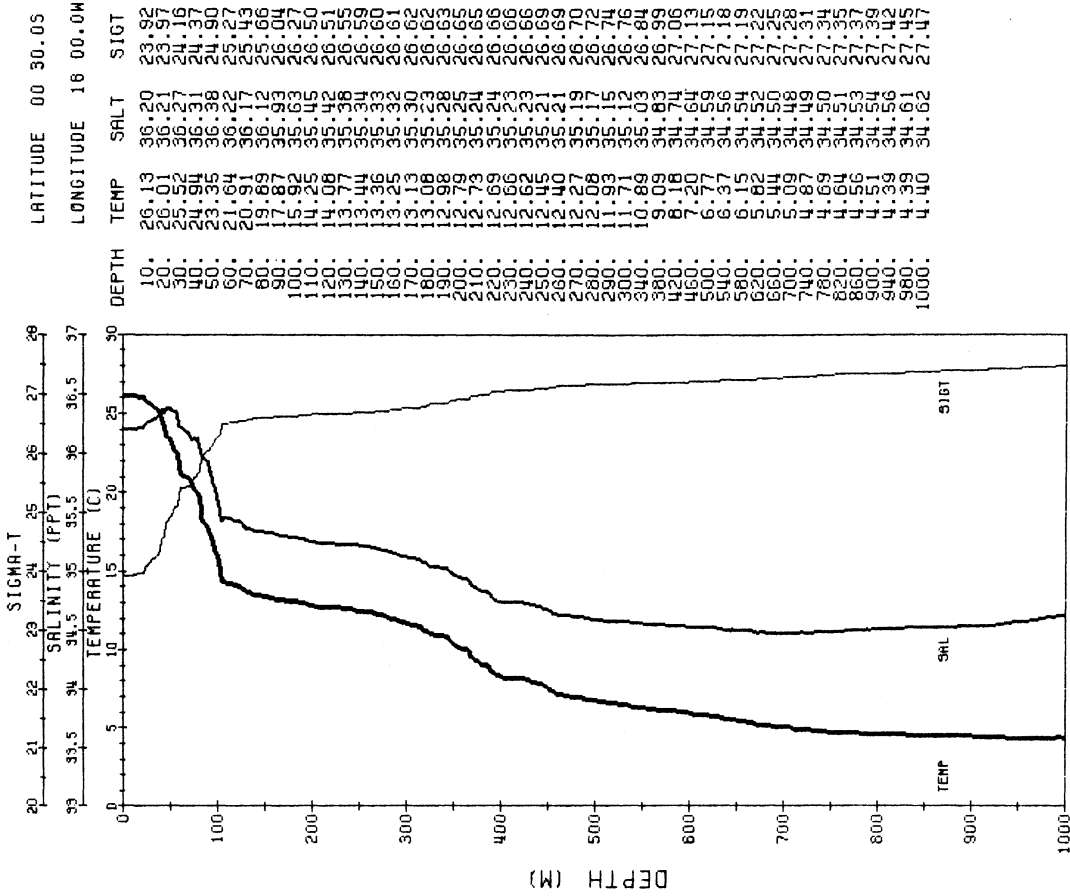
R/V RESEARCHER DATE 02 07 79 TIME 2013



DEPTH (M) 29

# STATION 63

R/V RESEARCHER DATE 02 07 79 TIME 2249

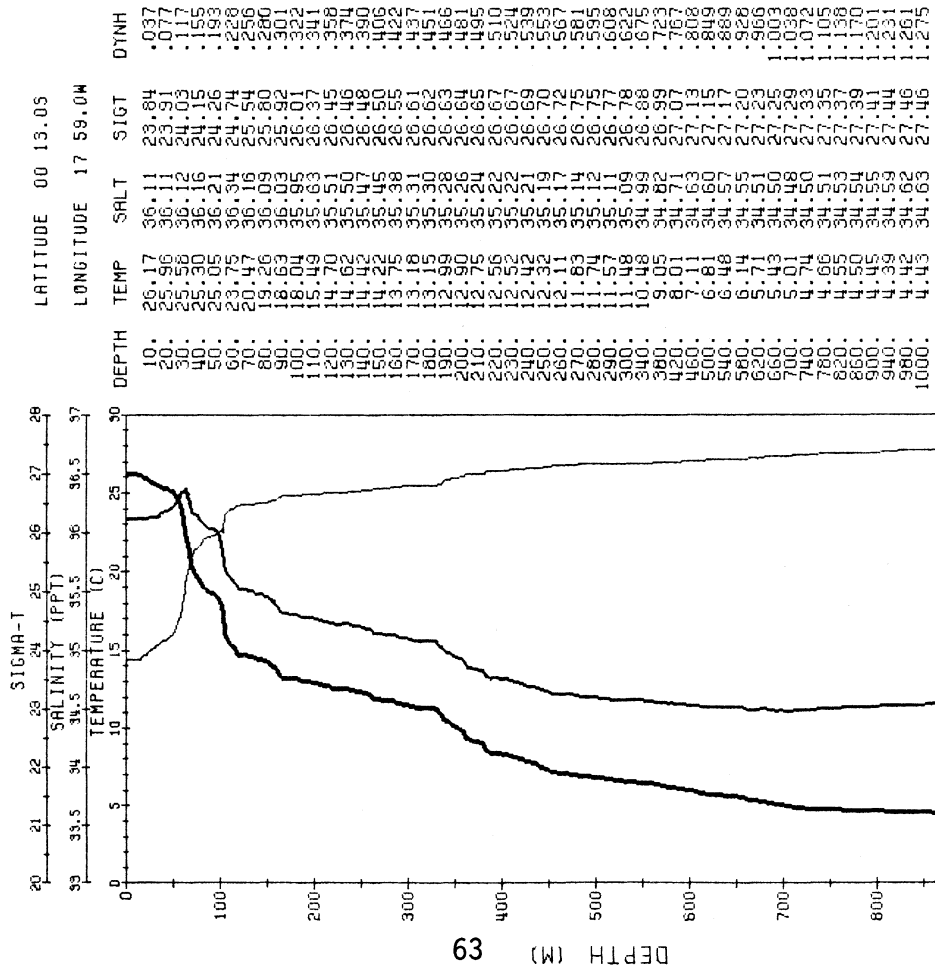


DEPTH (M) 29



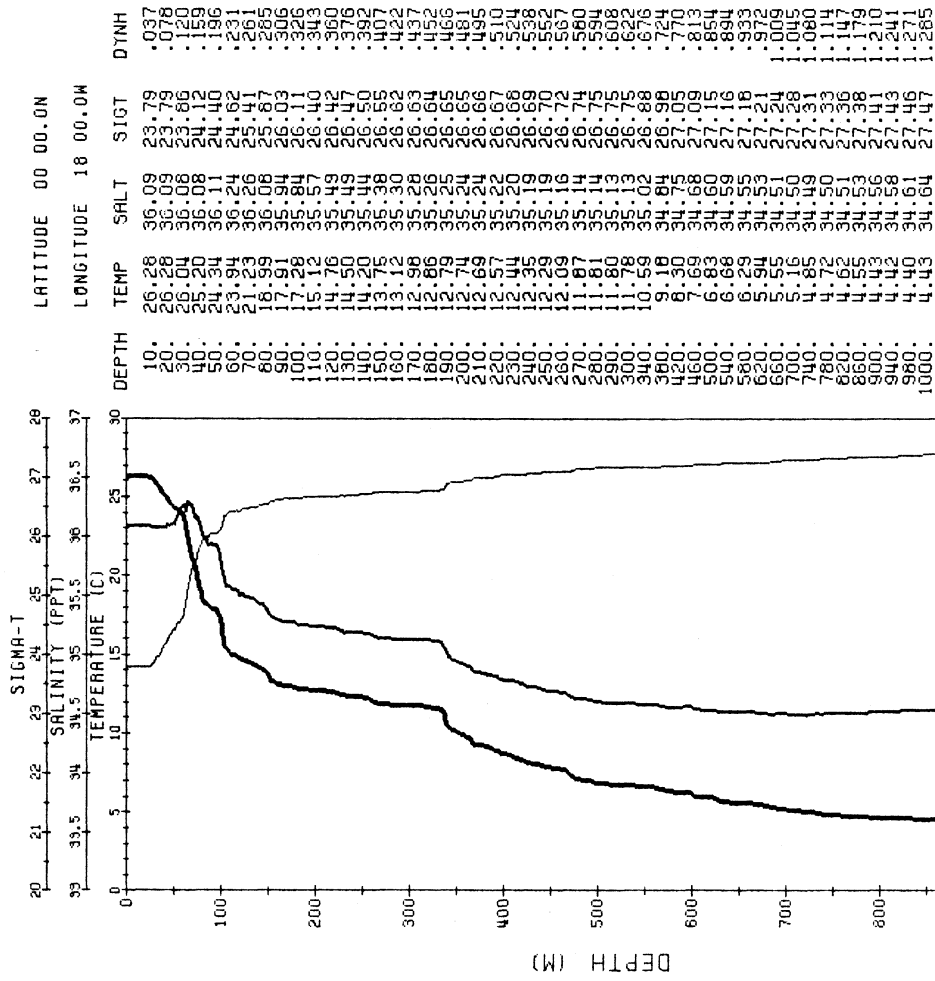
# STATION 64

R/V RESEARCHER DATE 02 08 79 TIME 0117

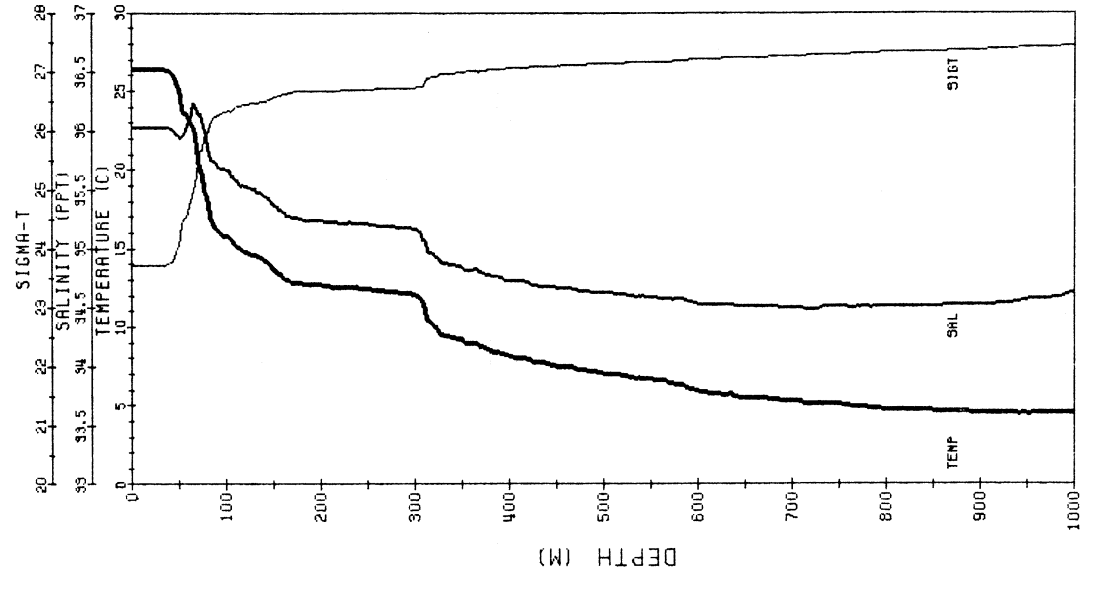


# STATION 65

R/V RESEARCHER DATE 02 08 79 TIME 0337

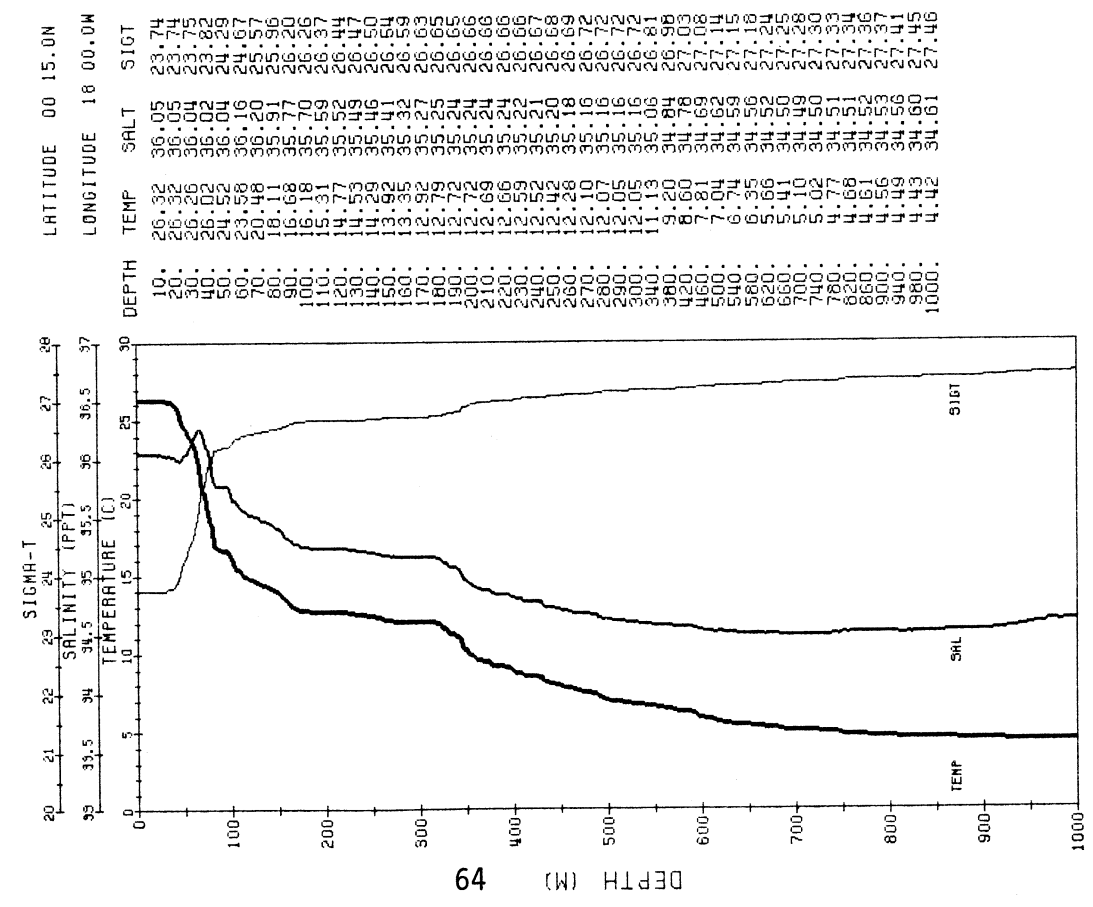


STATION 67  
R/V RESEARCHER DATE 02 08 79 TIME 0814



DEPTH	TEMP	SALT	SIGT	DTNH
10.	26.37	36.03	23.71	.038
20.	26.36	36.03	23.71	.080
30.	26.27	36.02	23.72	.122
40.	25.13	35.95	24.04	.164
50.	23.41	36.04	24.04	.205
60.	21.75	36.16	24.56	.240
70.	19.23	36.28	25.30	.271
80.	16.78	36.35	25.95	.304
90.	14.61	36.39	26.33	.331
100.	12.98	36.44	26.44	.365
120.	11.47	36.50	26.44	.391
140.	9.90	36.57	26.60	.413
160.	8.37	36.61	26.67	.438
180.	6.77	36.65	26.67	.453
200.	5.11	36.69	26.69	.472
220.	3.51	36.72	26.67	.486
240.	1.91	36.72	26.67	.501
260.	0.32	36.71	26.70	.515
280.	0.17	36.68	26.70	.529
300.	0.12	36.69	26.69	.543
320.	0.12	36.69	26.69	.558
340.	0.19	36.71	26.70	.572
360.	0.28	36.72	26.70	.586
380.	0.36	36.72	26.71	.601
400.	0.45	36.72	26.72	.615
420.	0.51	36.72	26.72	.629
440.	0.56	36.72	26.72	.643
460.	0.61	36.72	26.72	.658
480.	0.66	36.72	26.72	.672
500.	0.70	36.72	26.72	.686
520.	0.74	36.72	26.72	.700
540.	0.77	36.72	26.72	.714
560.	0.81	36.72	26.72	.728
580.	0.84	36.71	26.71	.742
600.	0.87	36.71	26.71	.756
620.	0.89	36.71	26.71	.770
640.	0.91	36.71	26.71	.784
660.	0.93	36.71	26.71	.798
680.	0.94	36.71	26.71	.812
700.	0.95	36.71	26.71	.826
720.	0.96	36.71	26.71	.840
740.	0.96	36.71	26.71	.854
760.	0.97	36.71	26.71	.868
780.	0.97	36.71	26.71	.882
800.	0.98	36.71	26.71	.896
820.	0.98	36.71	26.71	.910
840.	0.99	36.71	26.71	.924
860.	0.99	36.71	26.71	.938
880.	0.99	36.71	26.71	.952
900.	0.99	36.71	26.71	.966
920.	0.99	36.71	26.71	.980
940.	0.99	36.71	26.71	.994
960.	0.99	36.71	26.71	1.008
980.	0.99	36.71	26.71	1.022
1000.	0.99	36.71	26.71	1.036

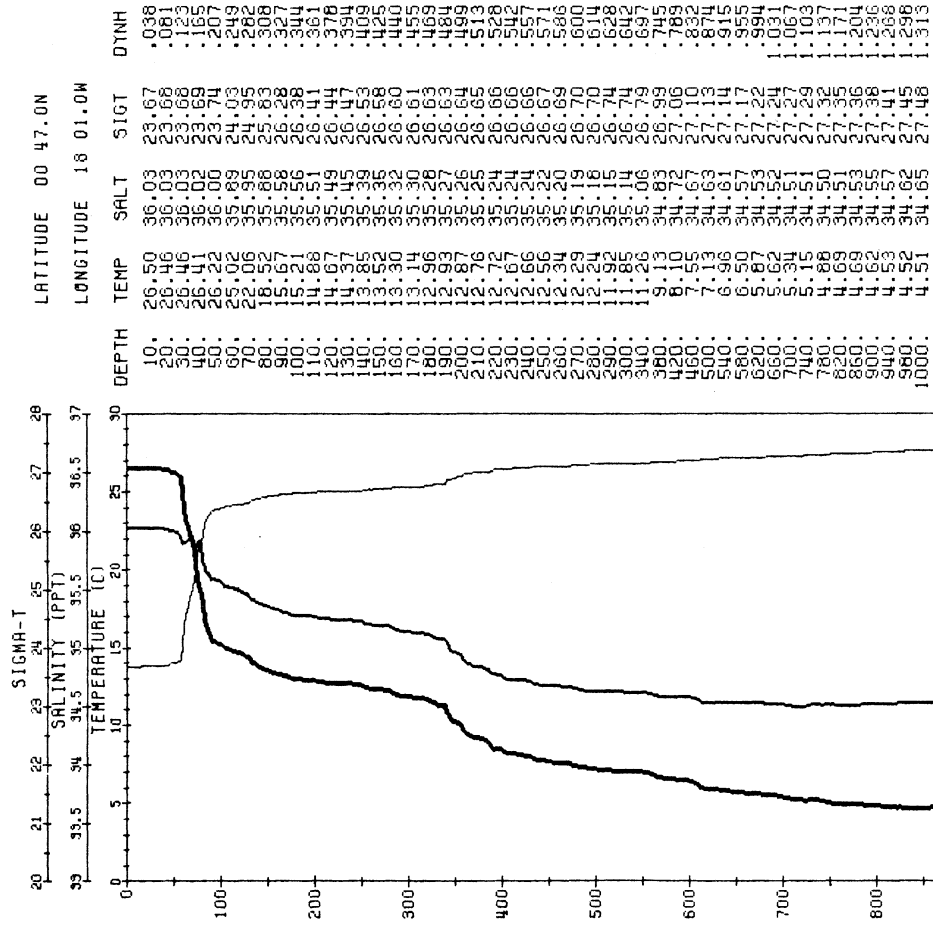
STATION 66  
R/V RESEARCHER DATE 02 08 79 TIME 0600



DEPTH	TEMP	SALT	SIGT	DTNH
10.	26.32	36.05	23.74	.038
20.	26.26	36.04	23.74	.079
30.	26.02	36.02	23.82	.121
40.	24.52	36.04	24.28	.163
50.	23.58	36.16	24.67	.203
60.	22.48	36.20	25.57	.237
70.	20.91	36.26	26.50	.269
80.	19.68	36.27	26.56	.300
90.	18.31	36.27	26.56	.328
100.	16.97	36.27	26.57	.340
120.	15.37	36.29	26.57	.370
140.	14.59	36.32	26.57	.395
160.	13.83	36.34	26.59	.423
180.	13.22	36.32	26.62	.436
200.	12.72	36.32	26.63	.457
220.	12.69	36.32	26.63	.481
240.	12.66	36.32	26.66	.496
260.	12.65	36.32	26.66	.510
280.	12.65	36.32	26.66	.525
300.	12.65	36.32	26.66	.539
320.	12.65	36.32	26.66	.554
340.	12.65	36.32	26.68	.568
360.	12.65	36.32	26.68	.582
380.	12.10	35.18	26.72	.596
400.	12.07	35.16	26.72	.610
420.	12.05	35.16	26.72	.624
440.	12.05	35.16	26.81	.639
460.	11.13	35.06	26.81	.679
480.	9.20	34.84	26.98	.728
500.	7.81	34.78	27.03	.774
520.	6.98	34.69	27.08	.817
540.	6.35	34.59	27.14	.859
560.	5.55	34.50	27.18	.900
580.	4.61	34.40	27.21	.940
600.	3.54	34.30	27.25	.978
620.	2.36	34.20	27.28	1.014
640.	1.10	34.15	27.30	1.050
660.	0.77	34.10	27.30	1.085
680.	0.46	34.10	27.30	1.119
700.	0.17	34.10	27.30	1.152
720.	0.01	34.10	27.30	1.187
740.	0.01	34.10	27.30	1.217
760.	0.01	34.10	27.30	1.249
780.	0.01	34.10	27.30	1.279
800.	0.01	34.10	27.30	1.309
820.	0.01	34.10	27.30	1.339
840.	0.01	34.10	27.30	1.369
860.	0.01	34.10	27.30	1.394
880.	0.01	34.10	27.30	1.429
900.	0.01	34.10	27.30	1.459
920.	0.01	34.10	27.30	1.489
940.	0.01	34.10	27.30	1.519
960.	0.01	34.10	27.30	1.549
980.	0.01	34.10	27.30	1.579
1000.	0.01	34.10	27.30	1.609

# STATION 68

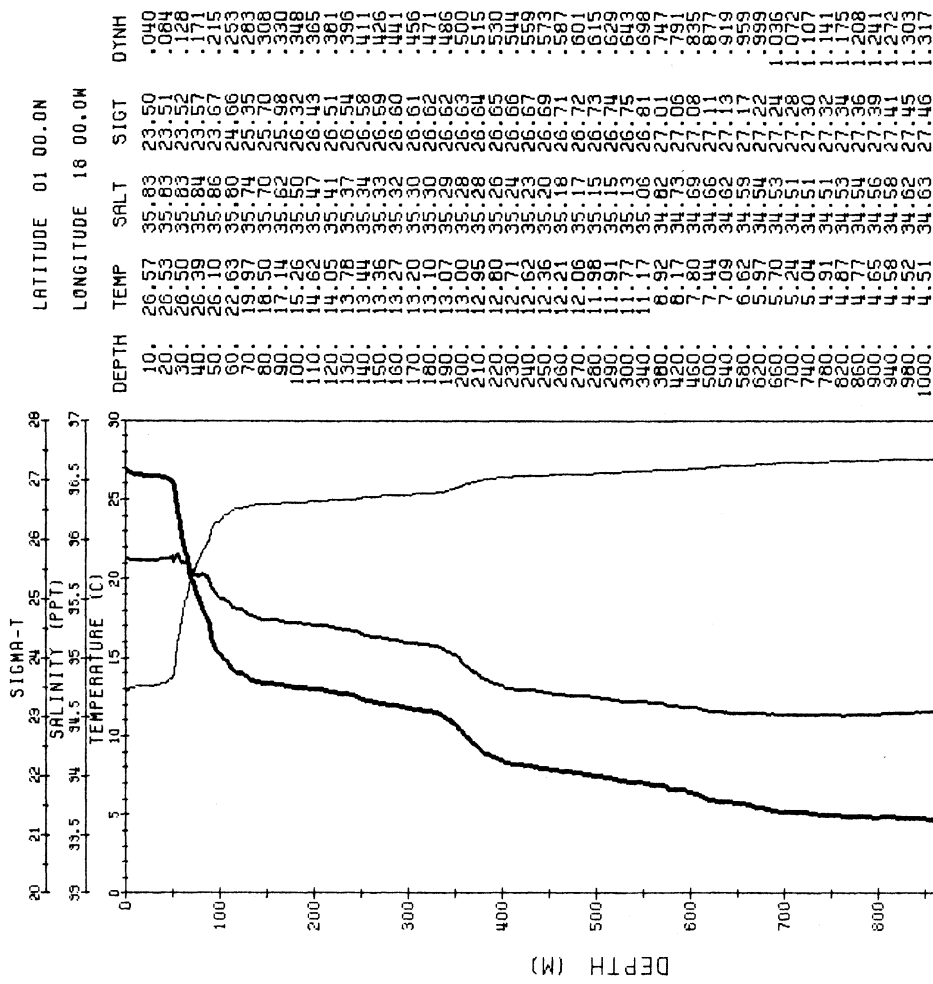
R/V RESEARCHER DATE 02 08 79 TIME 1050



65 DEPTH (M)

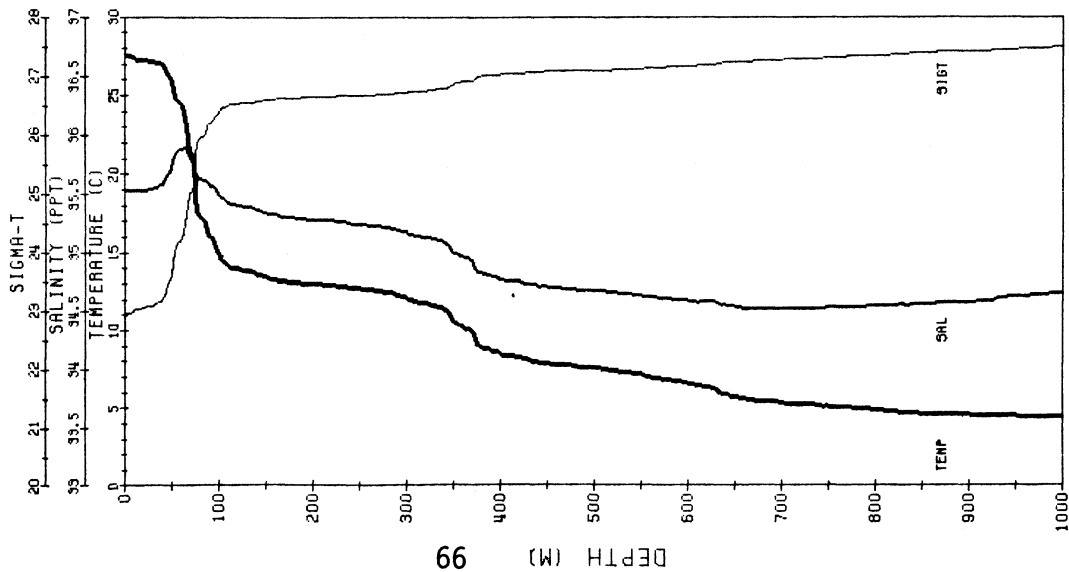
# STATION 69

R/V RESEARCHER DATE 02 08 79 TIME 1318



STATION 70

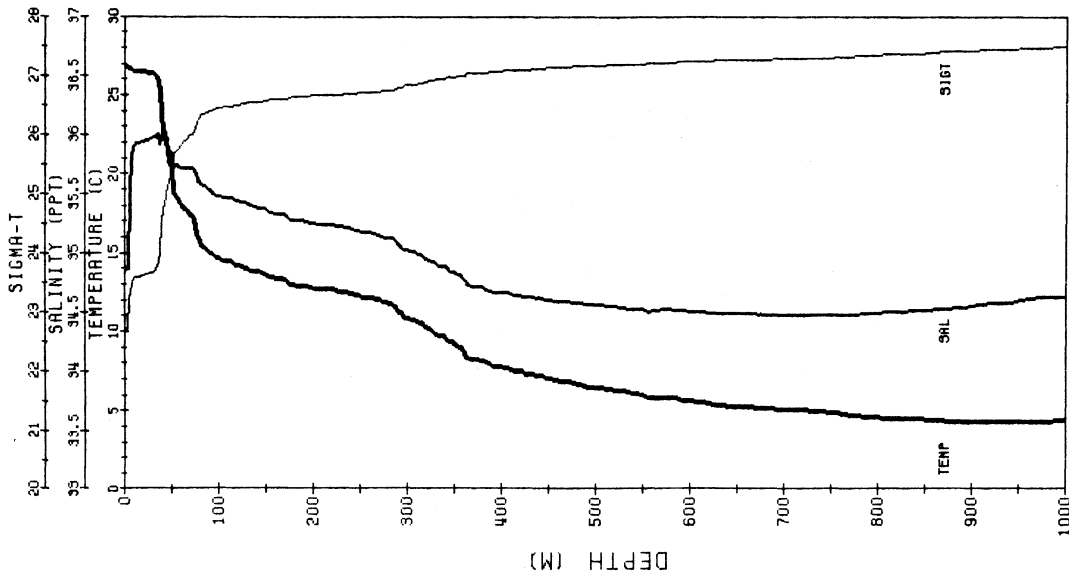
R/V RESEARCHER DATE 02 08 79 TIME 1640



DEPTH (M)

STATION 71

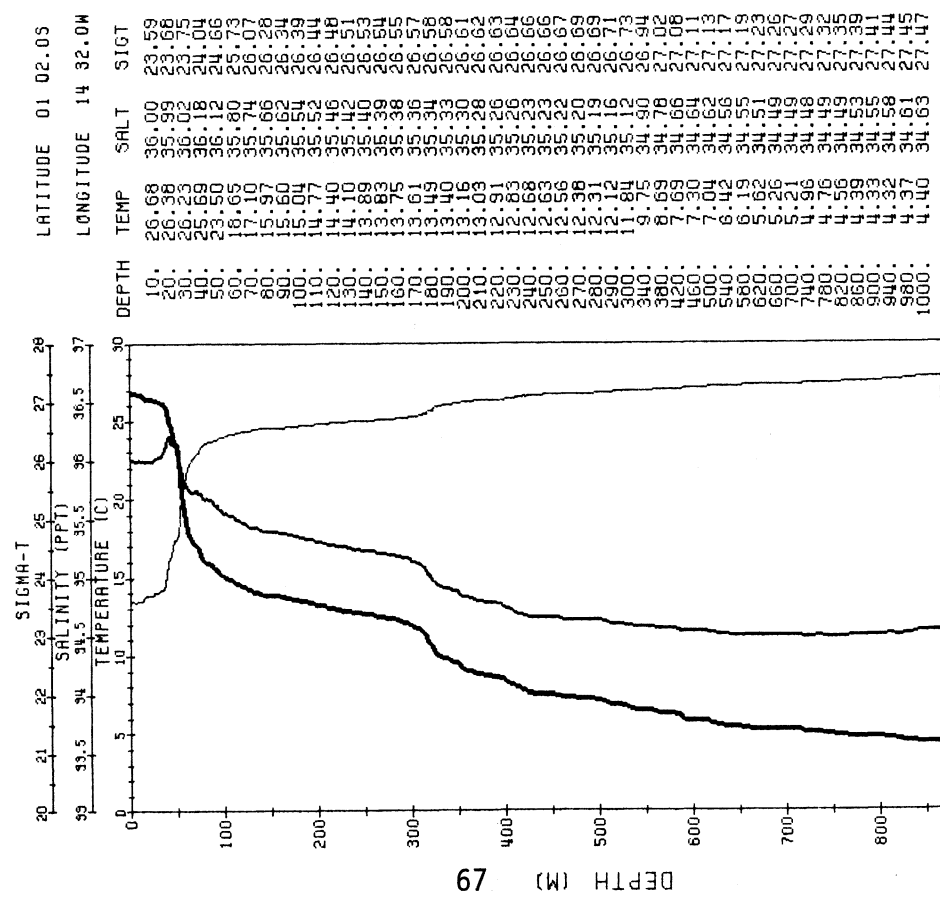
R/V RESEARCHER DATE 02 09 79 TIME 1939



DEPTH (M)

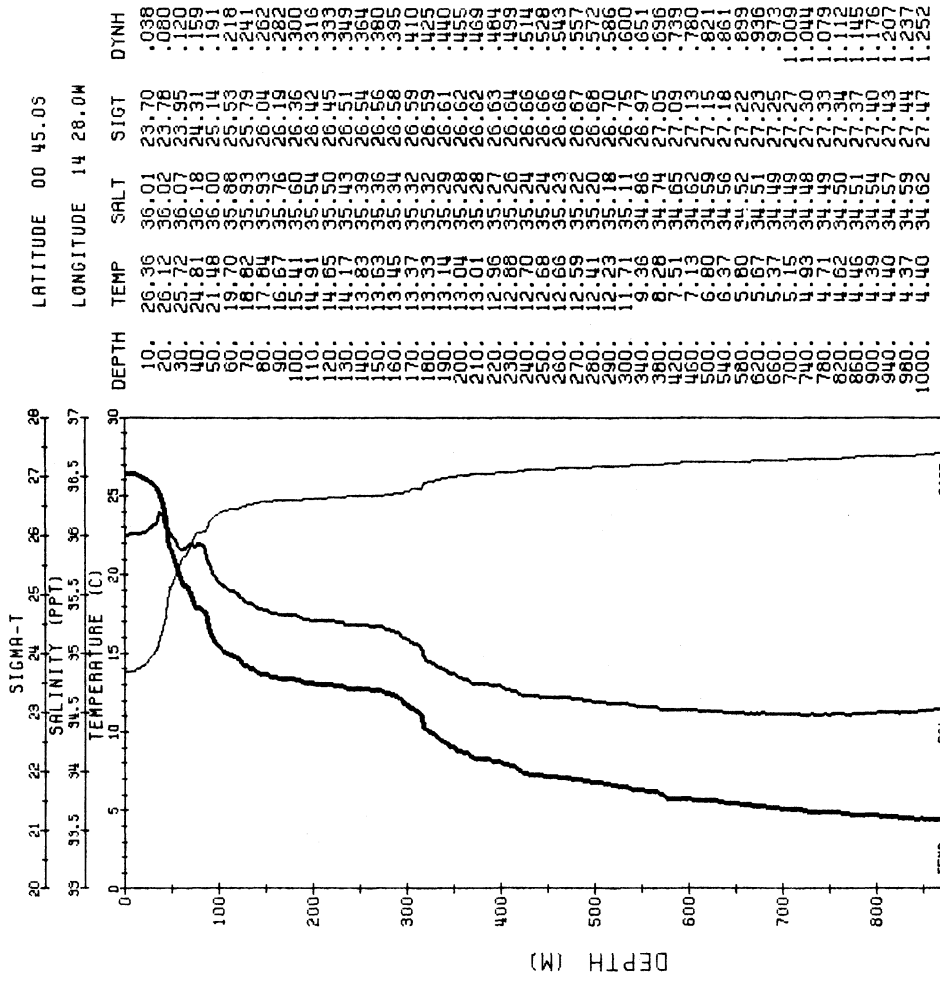
# STATION 72

R/V RESEARCHER DATE 02 09 79 TIME 2311



# STATION 73

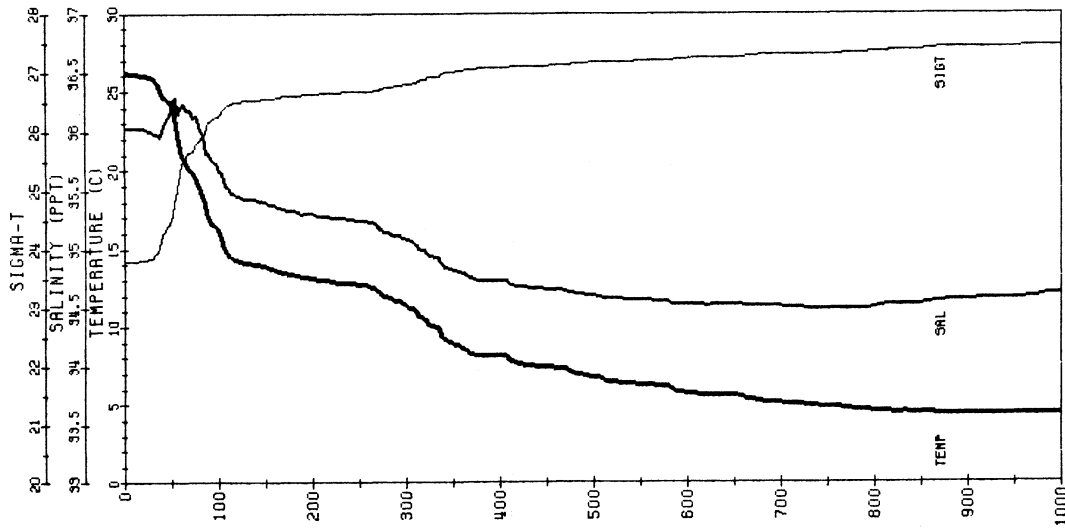
R/V RESEARCHER DATE 02 10 79 TIME 0139





# STATION 76

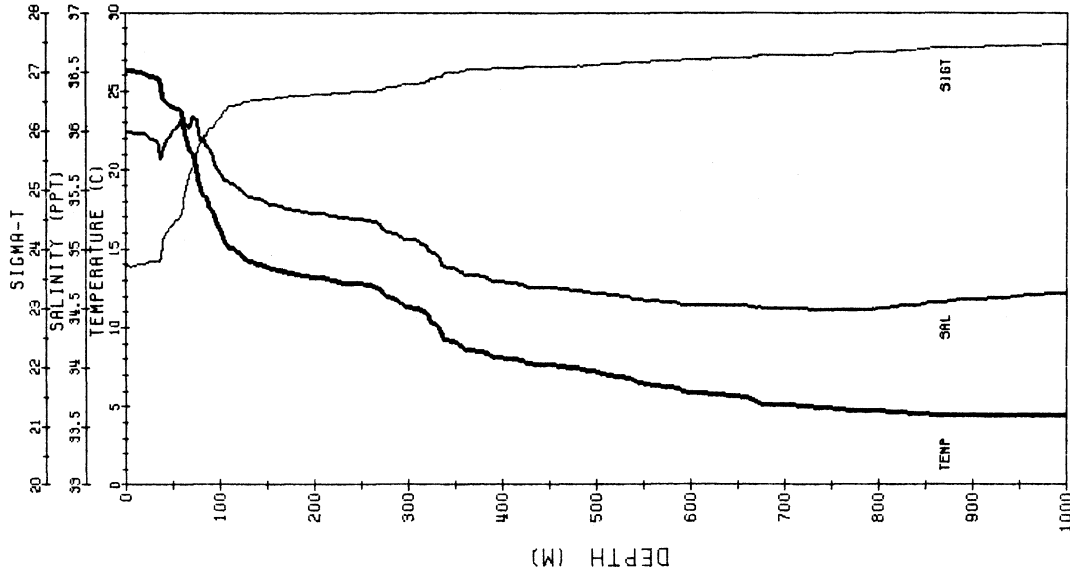
R/V RESEARCHER DATE 02 10 79 TIME 0806



DEPTH (M) 59

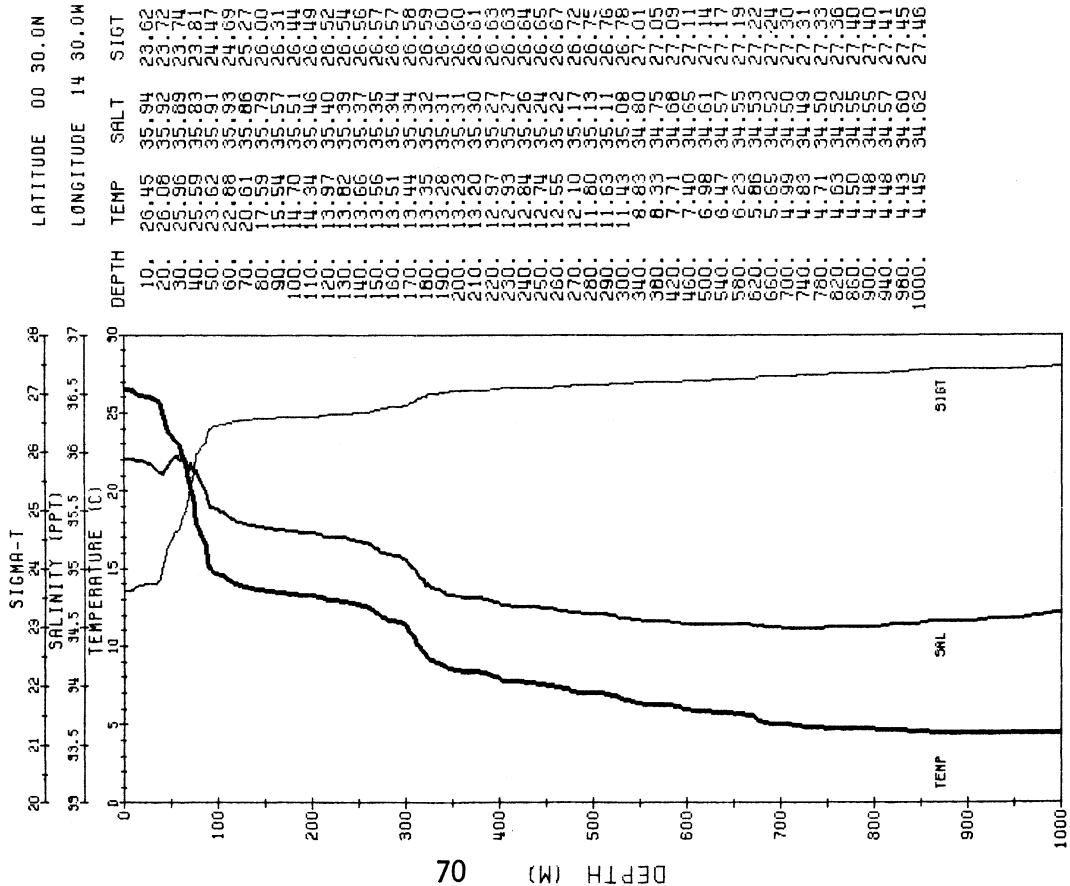
# STATION 77

R/V RESEARCHER DATE 02 10 79 TIME 1020



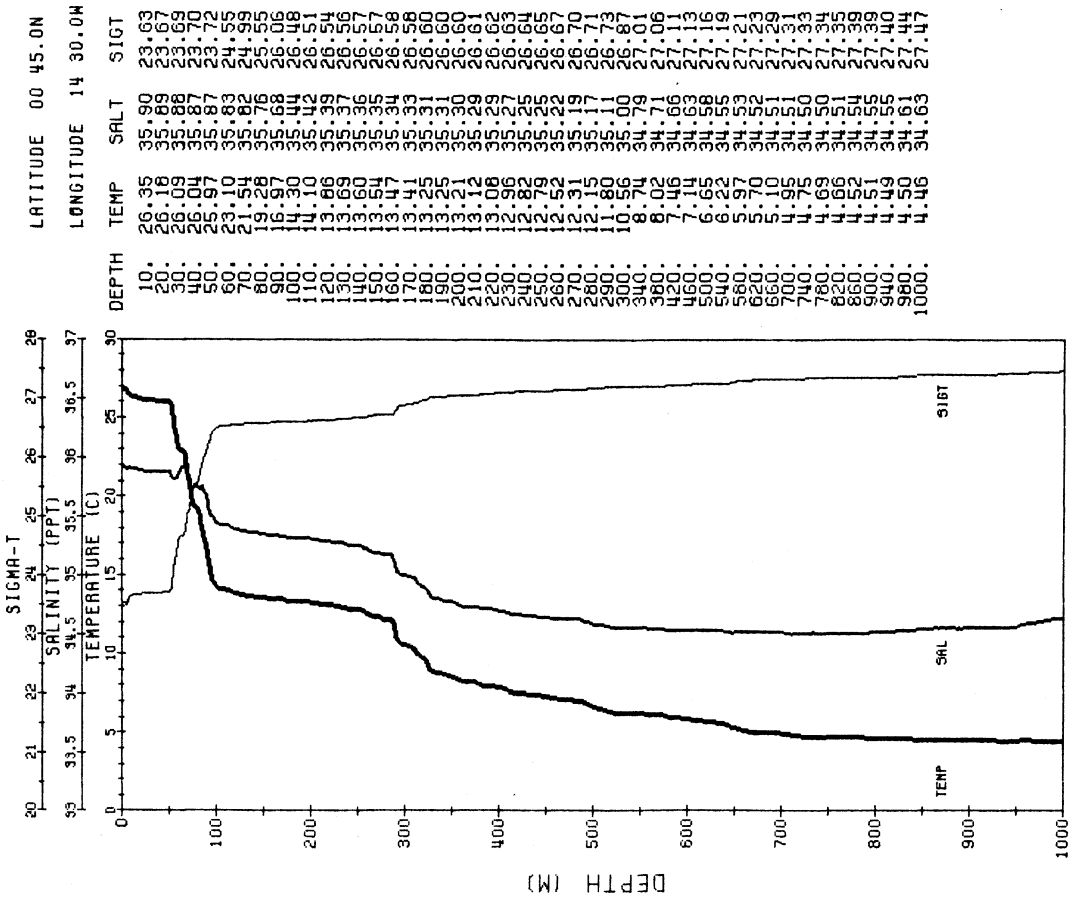
# STATION 78

R/V RESEARCHER DATE 02 10 79 TIME 1235



# STATION 79

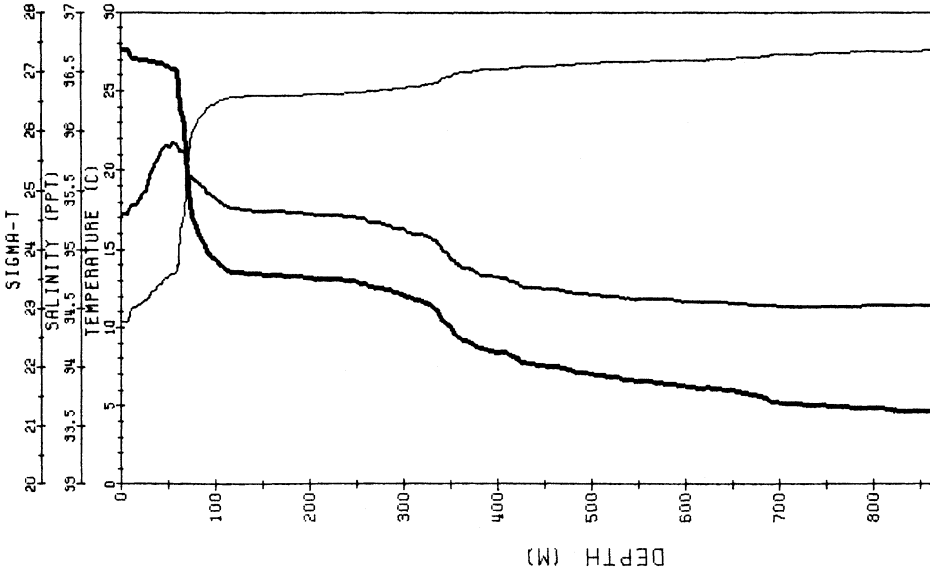
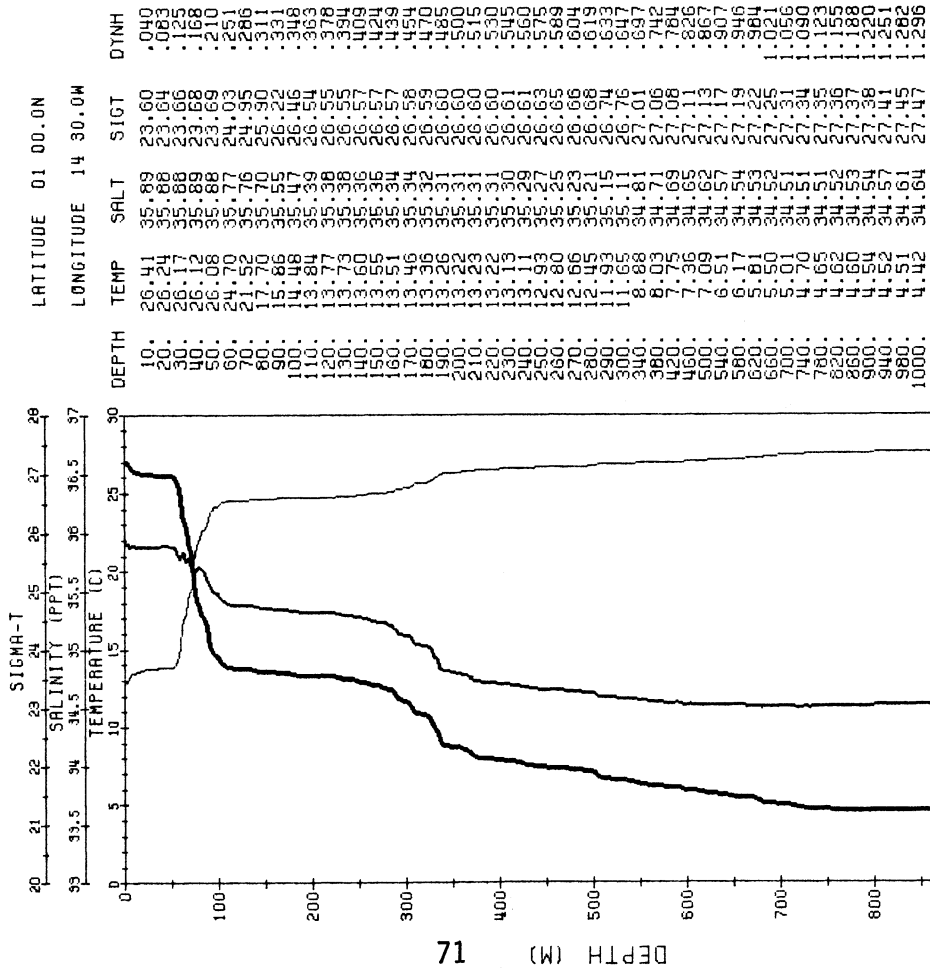
R/V RESEARCHER DATE 02 10 79 TIME 1443





# STATION 80

R/V RESEARCHER DATE 02 10 79 TIME 1633



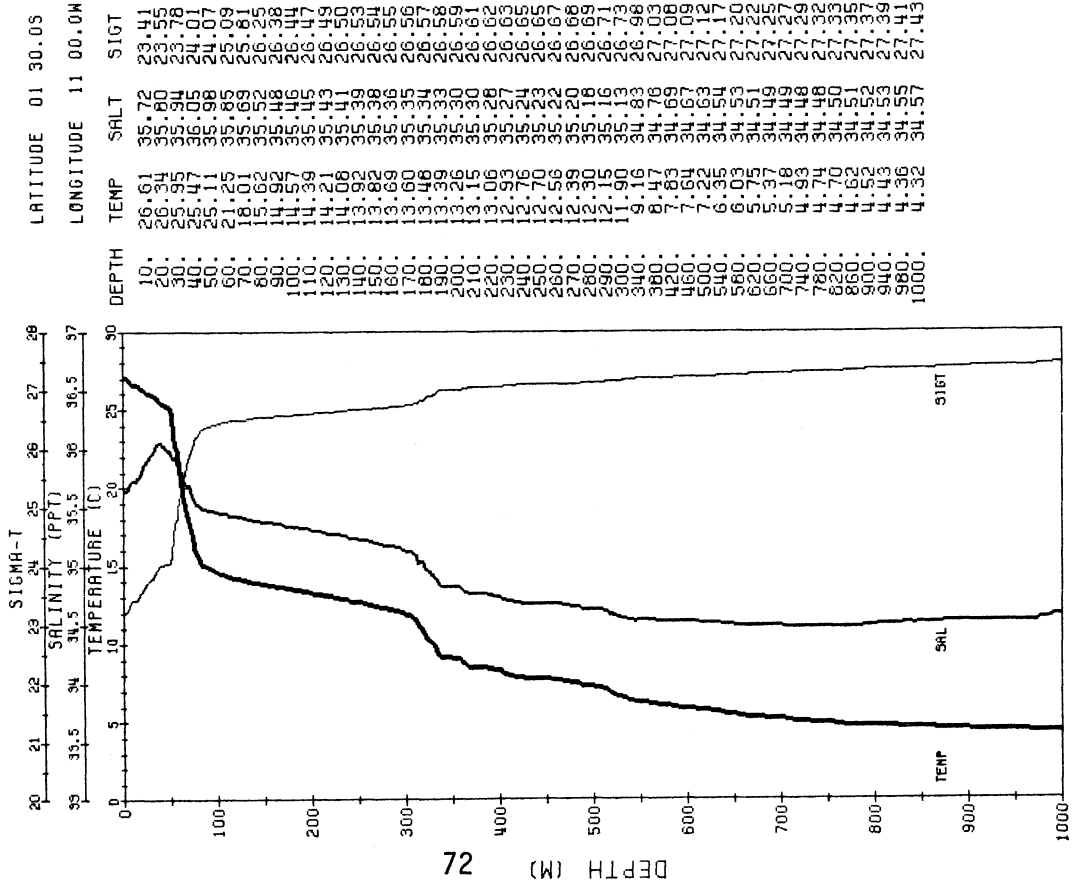
# STATION 81

R/V RESEARCHER DATE 02 10 79 TIME 1936

DEPTH	TEMP	SALT	SIGT	DYNH
10.	27.34	35.43	23.88	046
20.	26.89	35.43	23.07	095
30.	26.81	35.57	23.19	142
40.	26.57	35.77	23.38	188
50.	26.27	35.88	23.54	233
60.	26.04	35.99	23.64	276
70.	25.73	35.51	23.11	312
80.	25.35	35.57	23.08	335
90.	25.44	35.44	23.32	353
100.	25.35	35.38	23.53	370
110.	25.54	35.35	23.57	385
120.	25.51	35.35	23.57	401
130.	25.44	35.33	23.58	416
140.	25.36	35.32	23.58	431
150.	25.36	35.32	23.58	446
160.	25.32	35.31	23.59	461
170.	25.25	35.32	23.60	476
180.	25.28	35.31	23.61	491
190.	25.21	35.30	23.62	506
200.	25.11	35.29	23.63	521
210.	25.11	35.29	23.64	536
220.	25.09	35.29	23.65	551
230.	25.09	35.29	23.65	565
240.	25.09	35.29	23.66	580
250.	25.09	35.29	23.66	595
260.	25.09	35.29	23.67	610
270.	25.09	35.29	23.68	625
280.	25.09	35.29	23.69	639
290.	25.09	35.29	23.70	653
300.	25.09	35.29	23.70	668
310.	25.09	35.29	23.71	682
320.	25.09	35.29	23.71	697
330.	25.09	35.29	23.71	711
340.	25.09	35.29	23.71	725
350.	25.09	35.29	23.71	739
360.	25.09	35.29	23.71	753
370.	25.09	35.29	23.71	767
380.	25.09	35.29	23.71	781
390.	25.09	35.29	23.71	795
400.	25.09	35.29	23.71	809
410.	25.09	35.29	23.71	823
420.	25.09	35.29	23.71	837
430.	25.09	35.29	23.71	851
440.	25.09	35.29	23.71	865
450.	25.09	35.29	23.71	879
460.	25.09	35.29	23.71	893
470.	25.09	35.29	23.71	907
480.	25.09	35.29	23.71	921
490.	25.09	35.29	23.71	935
500.	25.09	35.29	23.71	949
510.	25.09	35.29	23.71	963
520.	25.09	35.29	23.71	977
530.	25.09	35.29	23.71	991
540.	25.09	35.29	23.71	1005
550.	25.09	35.29	23.71	1019
560.	25.09	35.29	23.71	1033
570.	25.09	35.29	23.71	1047
580.	25.09	35.29	23.71	1061
590.	25.09	35.29	23.71	1075
600.	25.09	35.29	23.71	1089
610.	25.09	35.29	23.71	1103
620.	25.09	35.29	23.71	1117
630.	25.09	35.29	23.71	1131
640.	25.09	35.29	23.71	1145
650.	25.09	35.29	23.71	1159
660.	25.09	35.29	23.71	1173
670.	25.09	35.29	23.71	1187
680.	25.09	35.29	23.71	1201
690.	25.09	35.29	23.71	1215
700.	25.09	35.29	23.71	1229
710.	25.09	35.29	23.71	1243
720.	25.09	35.29	23.71	1257
730.	25.09	35.29	23.71	1271
740.	25.09	35.29	23.71	1285
750.	25.09	35.29	23.71	1299
760.	25.09	35.29	23.71	1313
770.	25.09	35.29	23.71	1327
780.	25.09	35.29	23.71	1341
790.	25.09	35.29	23.71	1355
800.	25.09	35.29	23.71	1369
810.	25.09	35.29	23.71	1383
820.	25.09	35.29	23.71	1397
830.	25.09	35.29	23.71	1411
840.	25.09	35.29	23.71	1425
850.	25.09	35.29	23.71	1439
860.	25.09	35.29	23.71	1453
870.	25.09	35.29	23.71	1467
880.	25.09	35.29	23.71	1481
890.	25.09	35.29	23.71	1495
900.	25.09	35.29	23.71	1509
910.	25.09	35.29	23.71	1523
920.	25.09	35.29	23.71	1537
930.	25.09	35.29	23.71	1551
940.	25.09	35.29	23.71	1565
950.	25.09	35.29	23.71	1579
960.	25.09	35.29	23.71	1593
970.	25.09	35.29	23.71	1607
980.	25.09	35.29	23.71	1621
990.	25.09	35.29	23.71	1635
1000.	25.09	35.29	23.71	1649

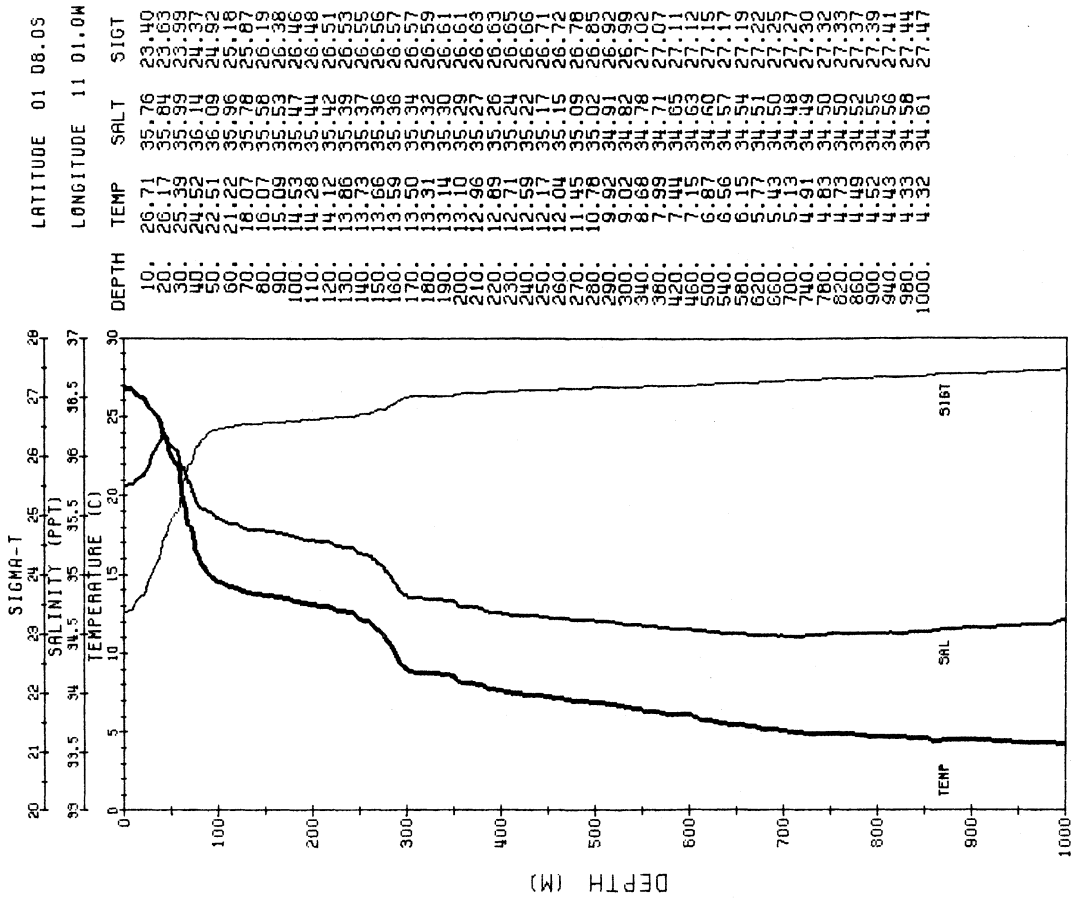
# STATION 82

R/V RESEARCHER DATE 02 11 79 TIME 1849



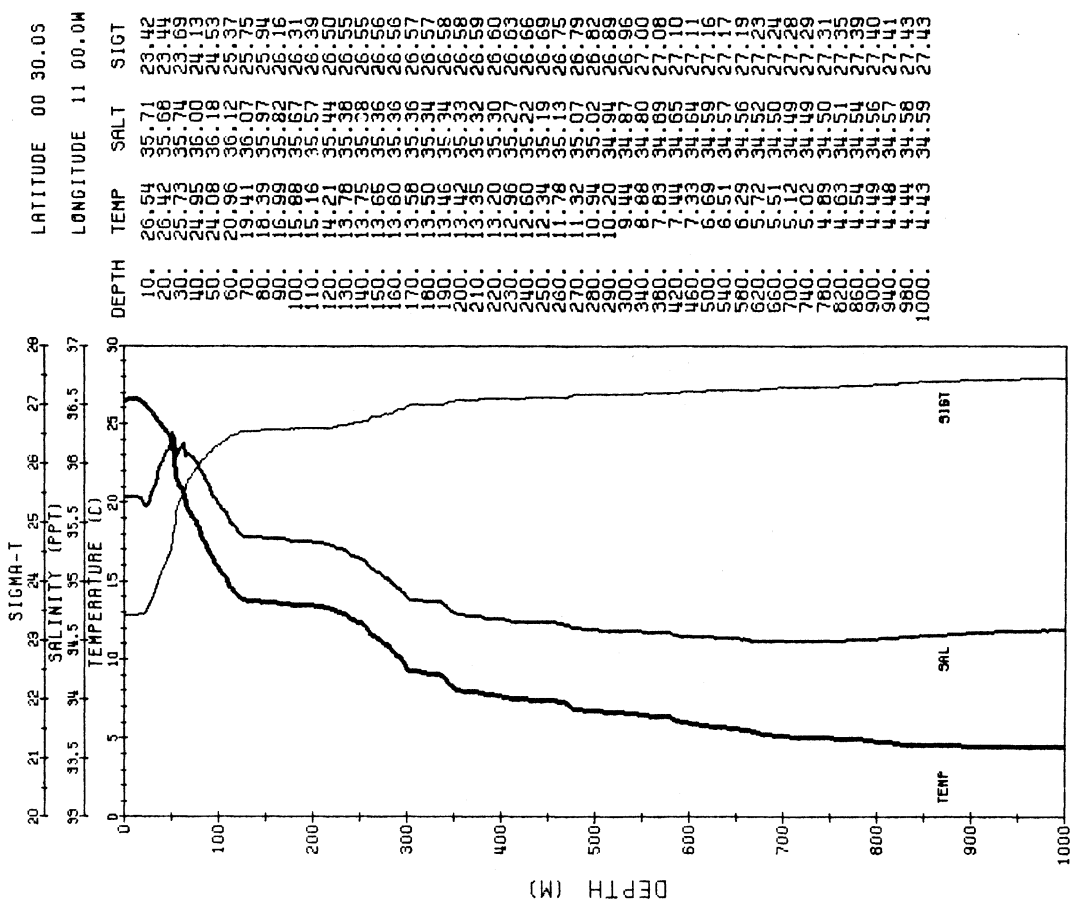
# STATION 83

R/V RESEARCHER DATE 02 11 79 TIME 2225



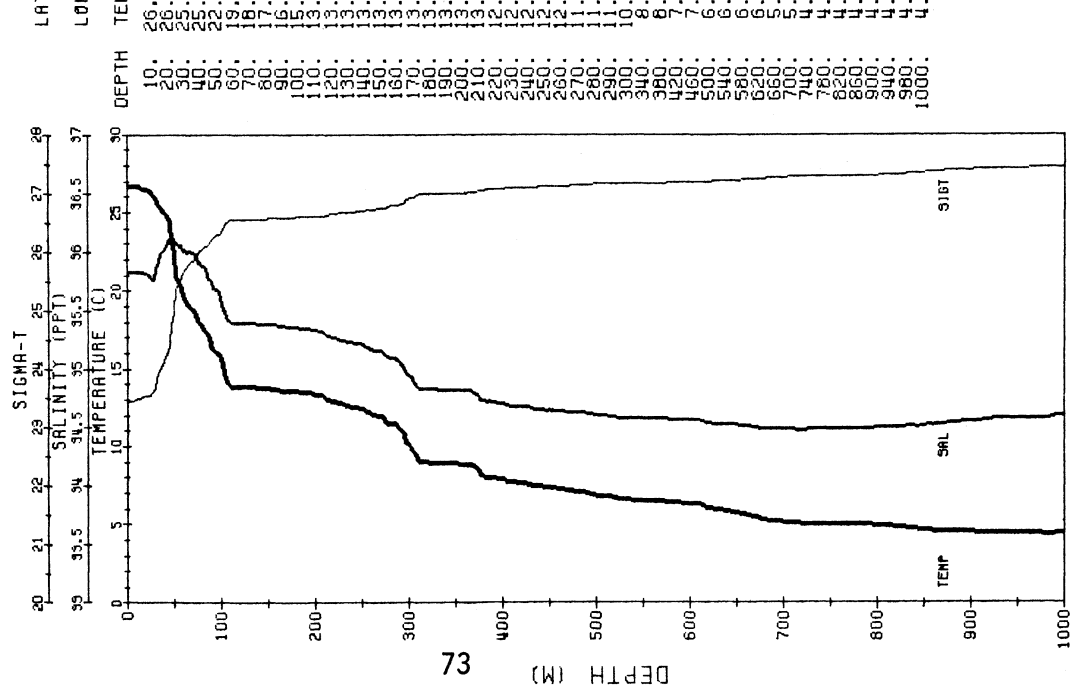
# STATION 84

R/V RESEARCHER DATE 02 12 79 TIME 0050



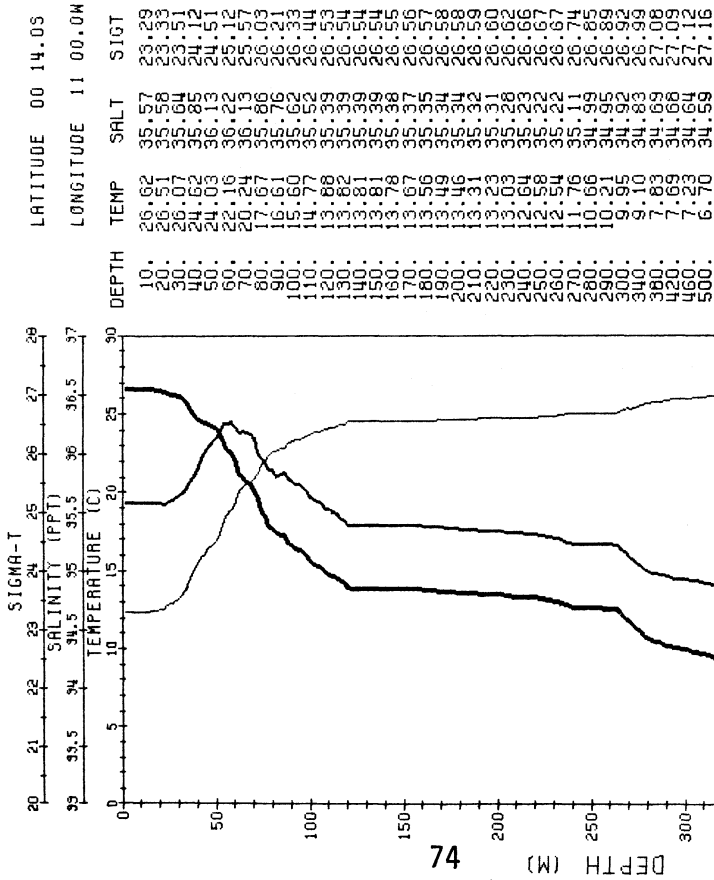
# STATION 85

R/V RESEARCHER DATE 02 12 79 TIME 0254



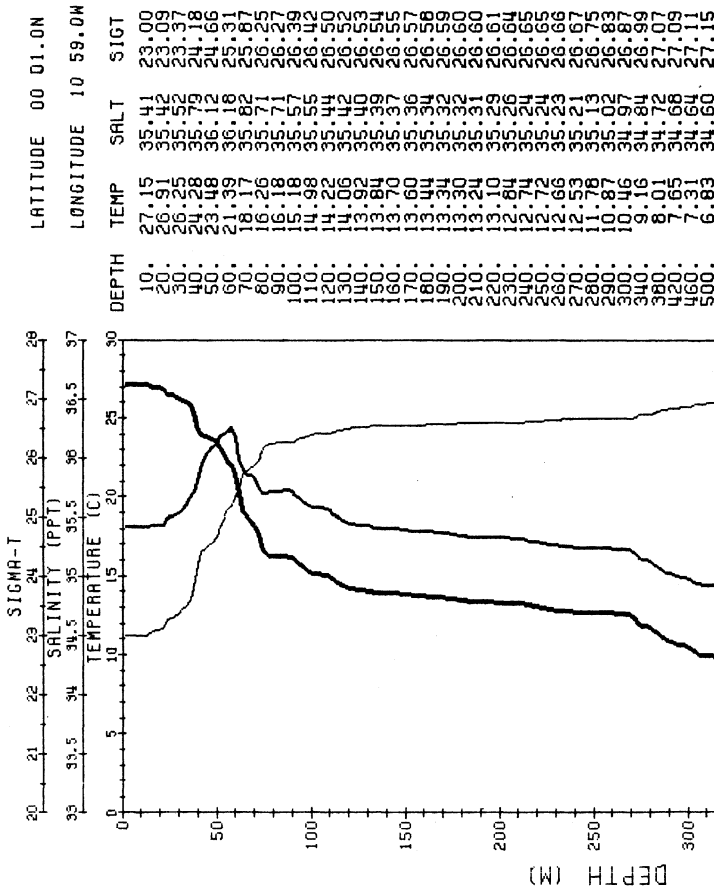
# STATION 86

R/V RESEARCHER DATE 02 12 79 TIME 0512



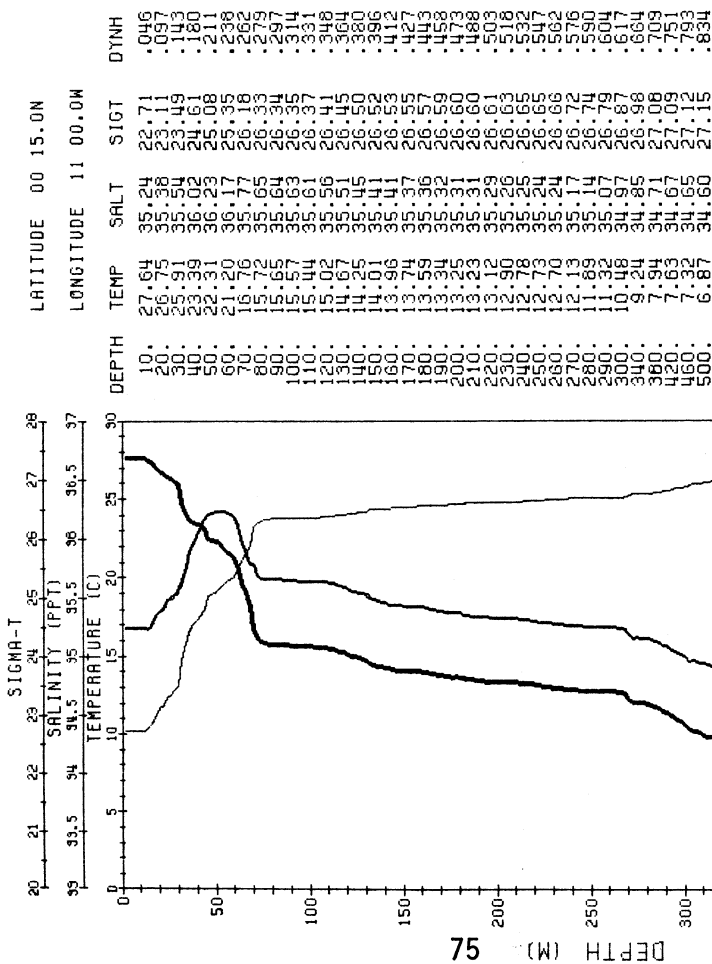
# STATION 87

R/V RESEARCHER DATE 02 12 79 TIME 0713



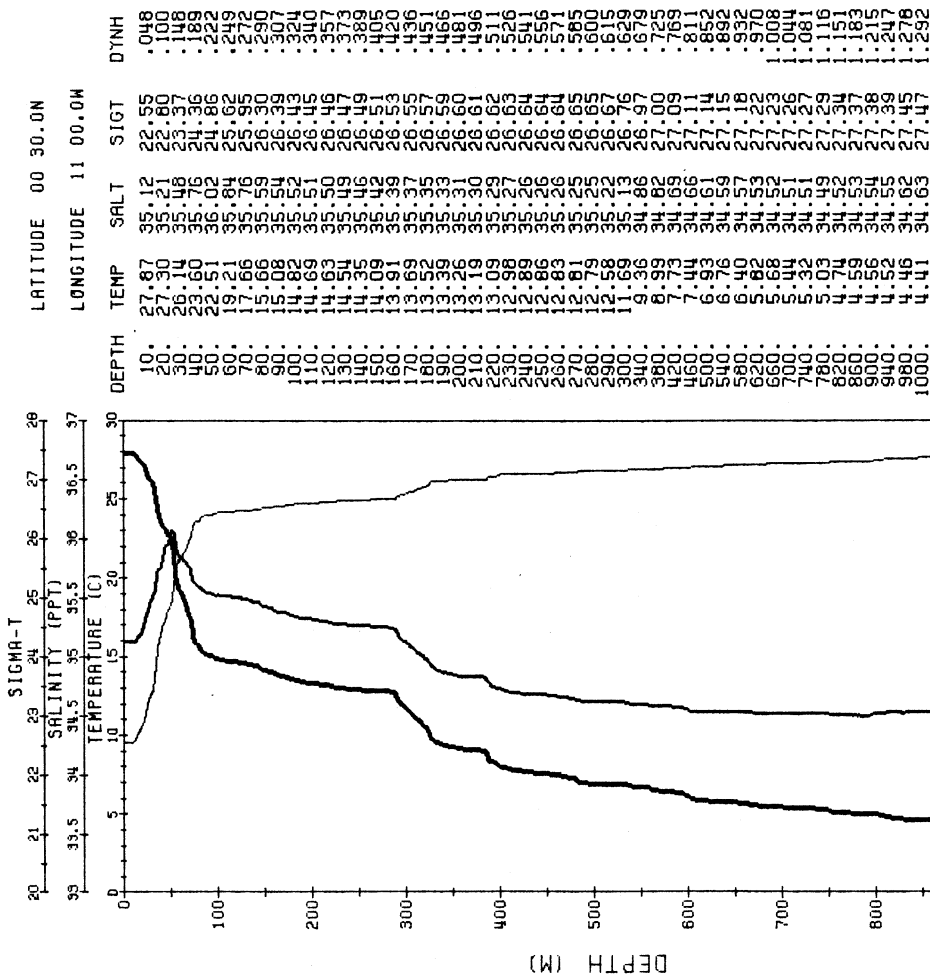
# STATION 88

R/V RESEARCHER DATE 02 12 79 TIME 0846



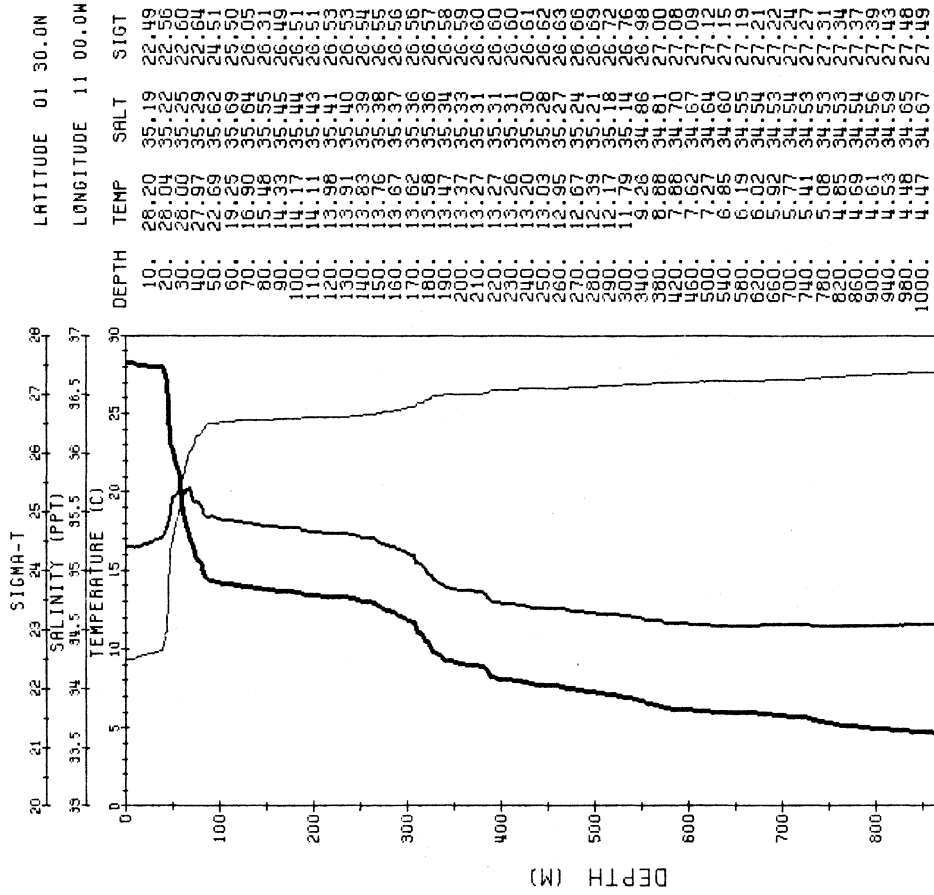
# STATION 89

R/V RESEARCHER DATE 02 12 79 TIME 1041



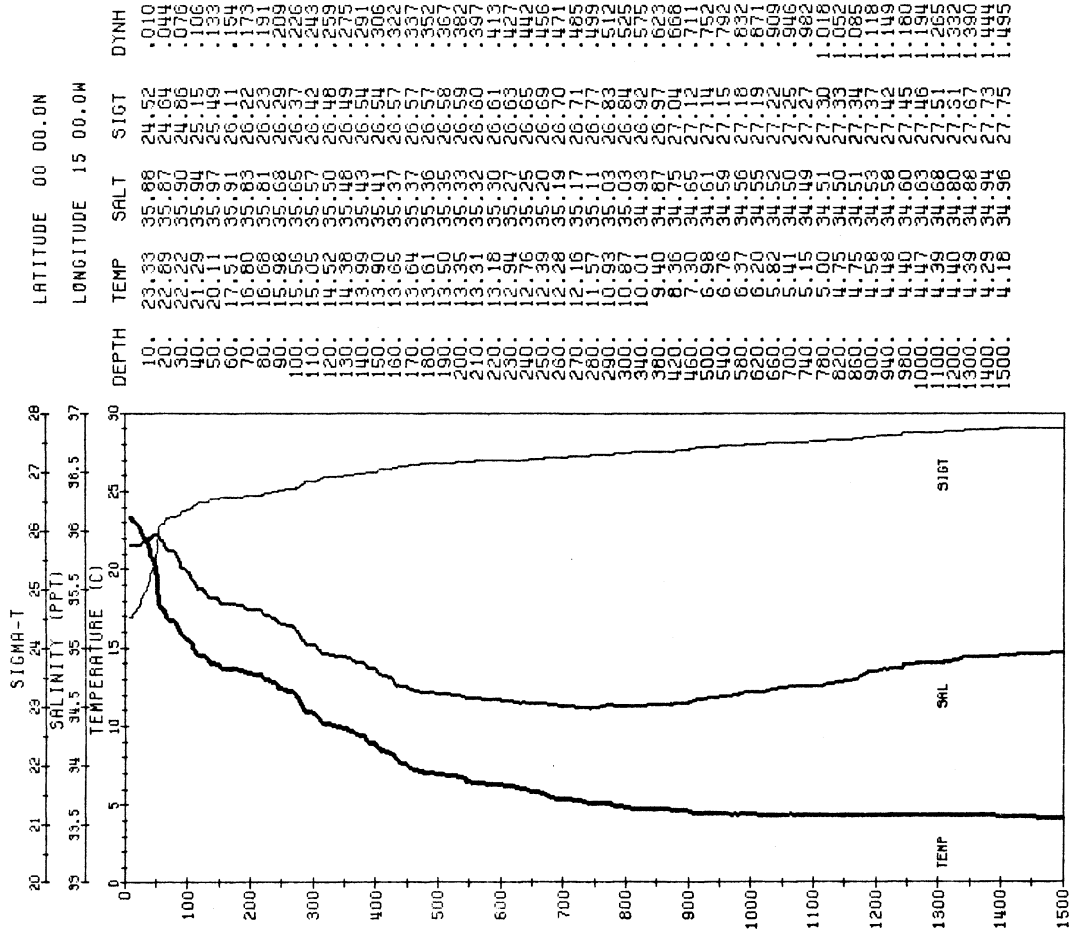


STATION 92  
R/V RESEARCHER DATE 02 12 79 TIME 1743



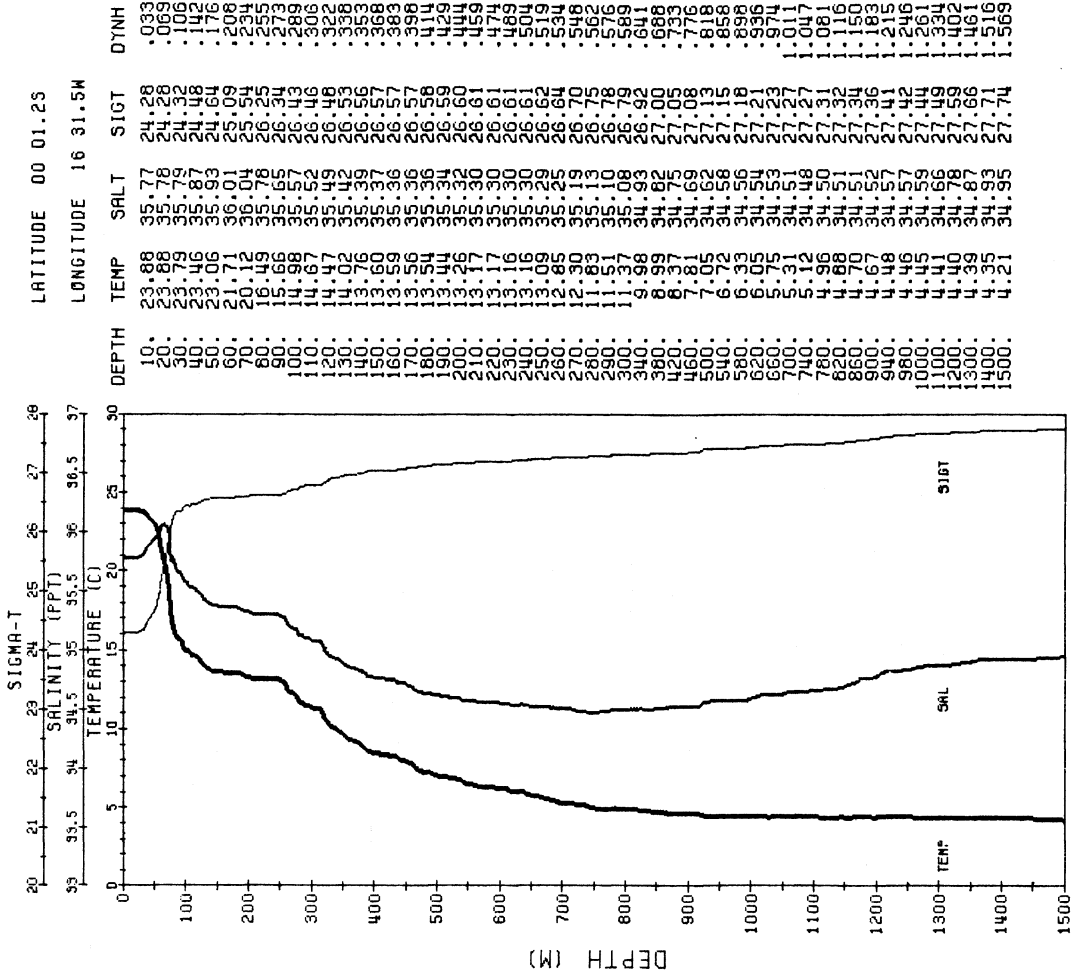
## STATION 1

R/V RESEARCHER DATE 07 10 79 TIME 1802



## STATION 2

R/V RESEARCHER DATE 07 11 79 TIME 0628



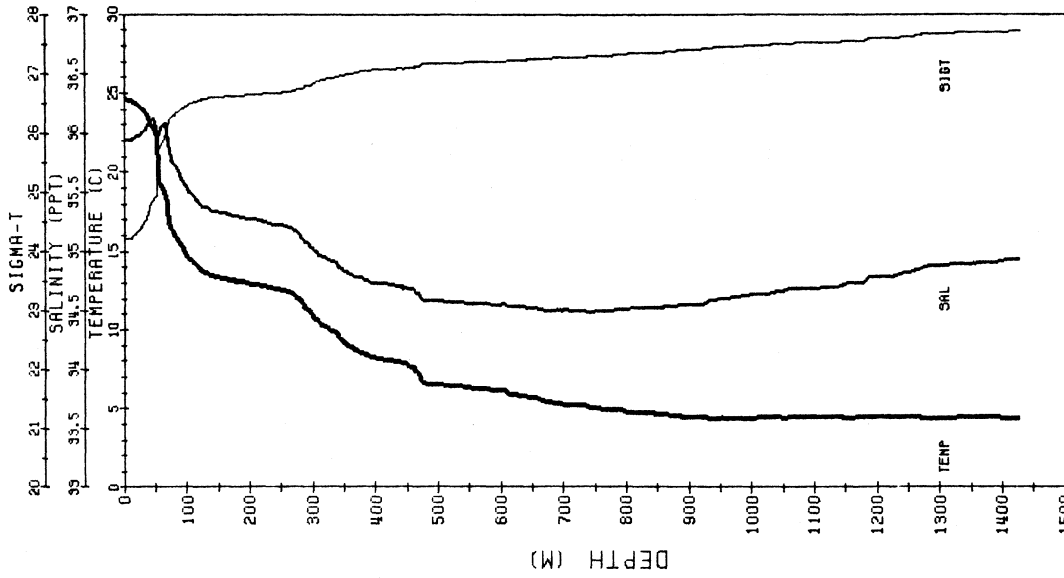


STATION 3

R/V RESEARCHER DATE 07 11 79 TIME 1841

STATION 4

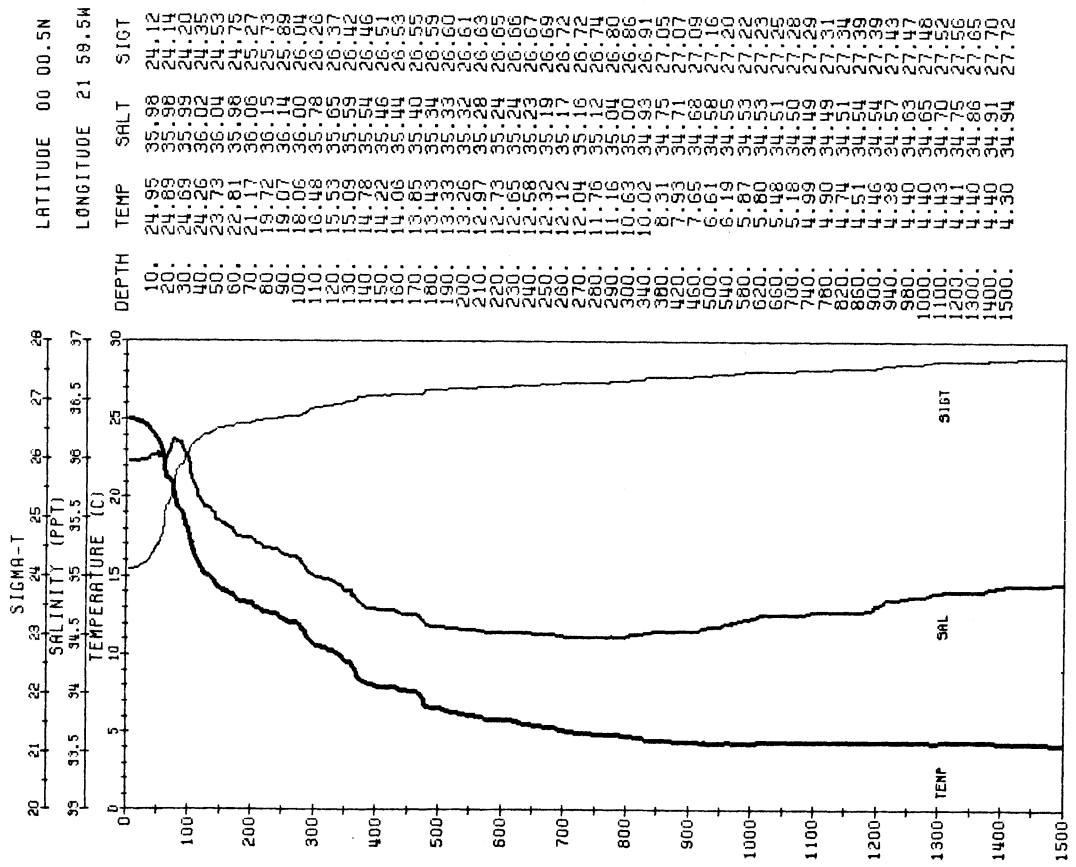
R/V RESEARCHER DATE 07 12 79 TIME 1020



DEPTH (M)	TEMP (C)	SAL (PPT)	SIGT	DYNH
0	24.55	35.94	24.20	0.34
10	24.30	35.97	24.20	0.70
20	23.97	36.00	24.17	1.06
30	23.22	36.00	24.12	1.40
40	22.49	36.00	24.02	1.72
50	22.7	36.00	23.80	2.09
60	19.55	36.02	23.50	2.49
70	17.46	36.02	23.30	2.97
80	15.46	36.02	23.10	3.39
90	14.31	36.02	22.90	3.74
100	13.92	36.02	22.80	4.06
110	13.65	36.02	22.80	4.21
120	13.37	36.02	22.80	4.36
130	13.34	36.02	22.80	4.45
140	13.36	36.02	22.80	4.58
150	13.26	36.02	22.80	4.65
160	13.18	36.02	22.80	4.79
170	13.08	36.02	22.80	4.91
180	13.01	36.02	22.80	5.08
190	12.89	36.02	22.80	5.23
200	12.81	36.02	22.80	5.37
210	12.81	36.02	22.80	5.53
220	12.60	36.02	22.80	5.63
230	12.43	36.02	22.80	5.79
240	12.24	36.02	22.80	5.92
250	11.95	36.02	22.80	6.03
260	11.90	36.02	22.80	6.13
270	11.69	36.02	22.80	6.29
280	11.47	36.02	22.80	6.41
290	11.24	36.02	22.80	6.55
300	10.99	36.02	22.80	6.70
340	9.48	34.76	27.03	7.05
380	8.40	34.65	27.10	7.24
420	6.67	34.56	27.15	7.44
460	6.30	34.56	27.19	7.55
500	6.08	34.52	27.20	7.64
540	5.74	34.51	27.22	7.72
580	5.49	34.49	27.23	7.81
620	5.25	34.49	27.23	7.89
660	4.91	34.49	27.23	7.96
700	4.85	34.49	27.23	8.04
740	4.80	34.50	27.23	8.11
780	4.71	34.51	27.23	8.18
820	4.71	34.51	27.23	8.24
860	4.53	34.53	27.23	8.31
900	4.42	34.53	27.23	8.37
940	4.40	34.53	27.23	8.43
980	4.40	34.53	27.23	8.49
1000	4.40	34.53	27.23	8.55
1100	4.41	34.53	27.23	8.61
1200	4.41	34.53	27.23	8.67
1300	4.39	34.53	27.23	8.73
1400	4.39	34.53	27.23	8.79
1500	4.39	34.53	27.23	8.85

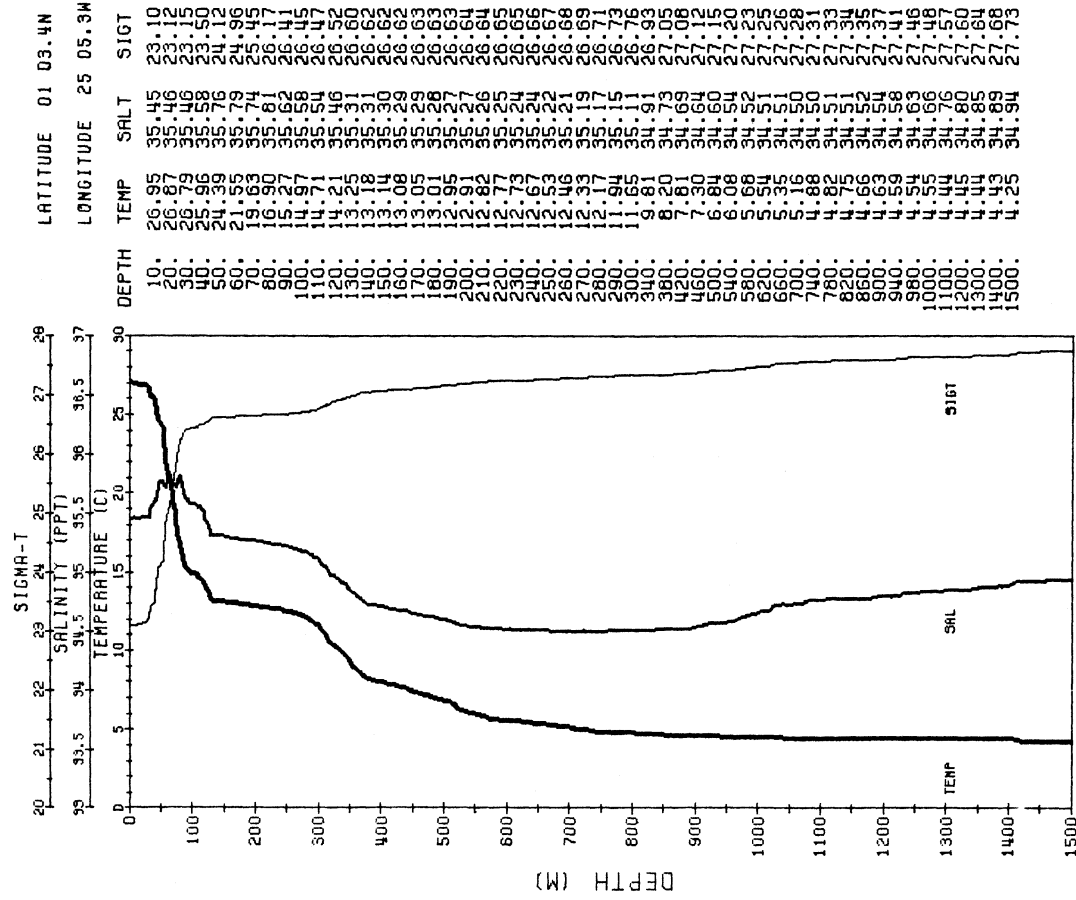
# STATION 5

R/V RESEARCHER DATE 07 13 79 TIME 0053



# STATION 6

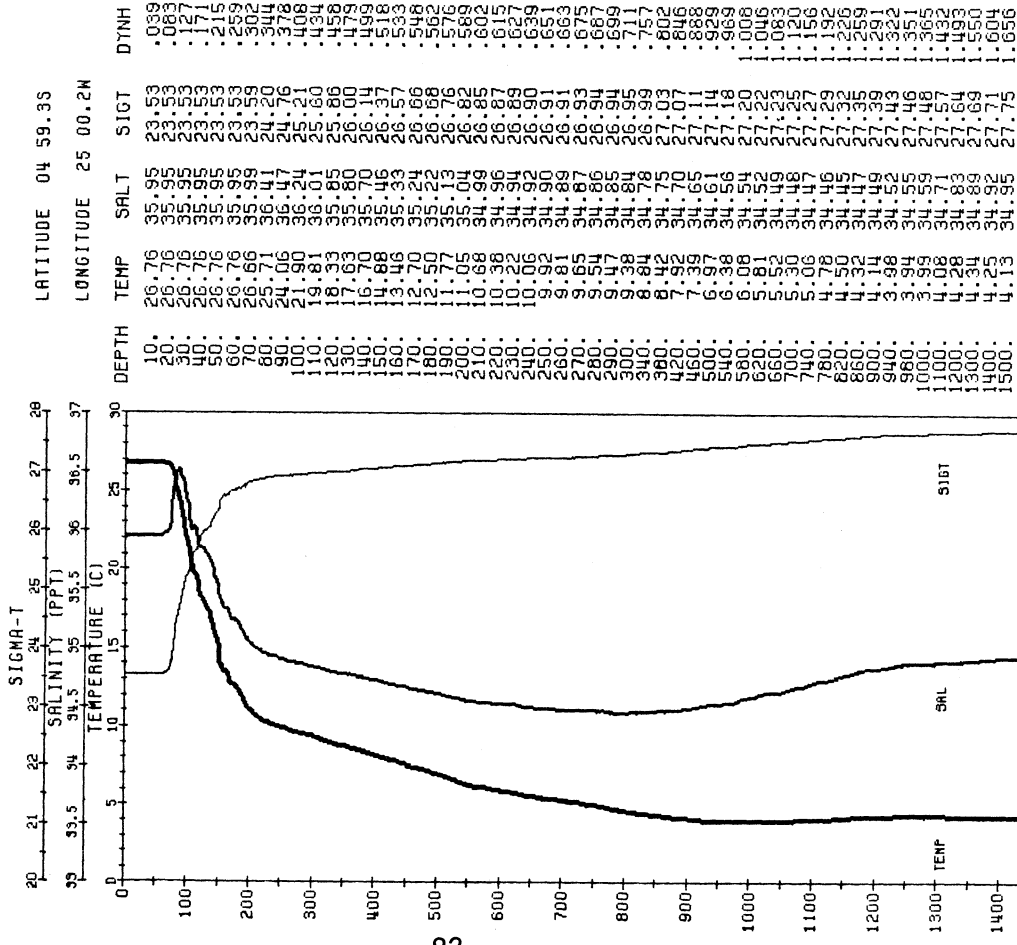
R/V RESEARCHER DATE 07 14 79 TIME 1605





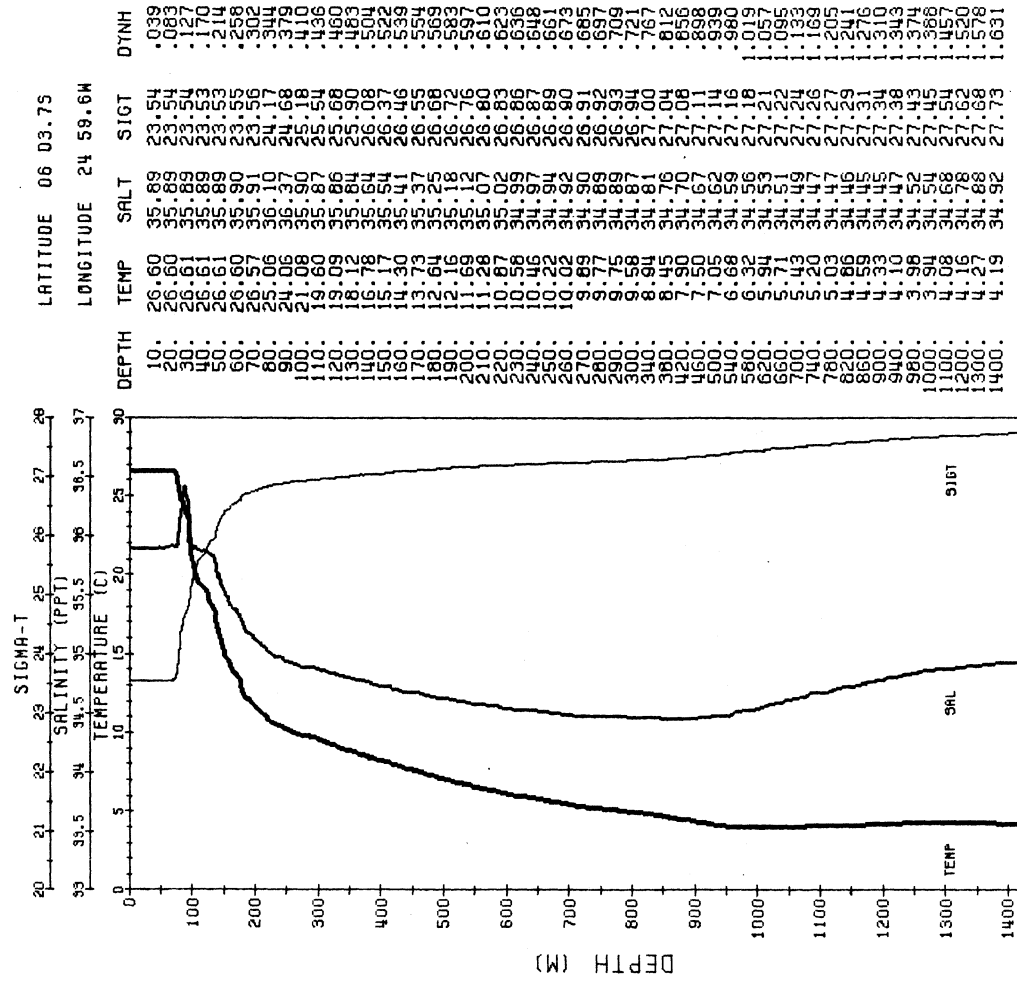
# STATION 9

R/V RESEARCHER DATE 07 16 79 TIME 0435



# STATION 10

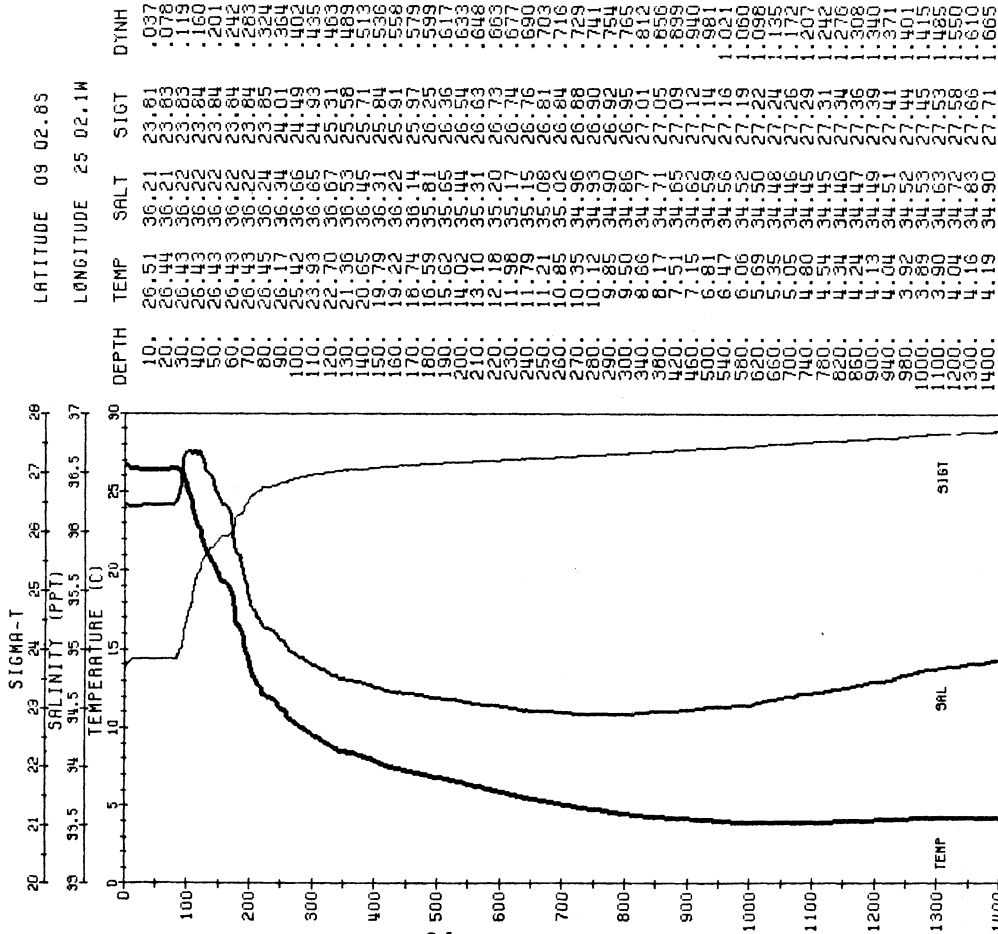
R/V RESEARCHER DATE 07 17 79 TIME 0528





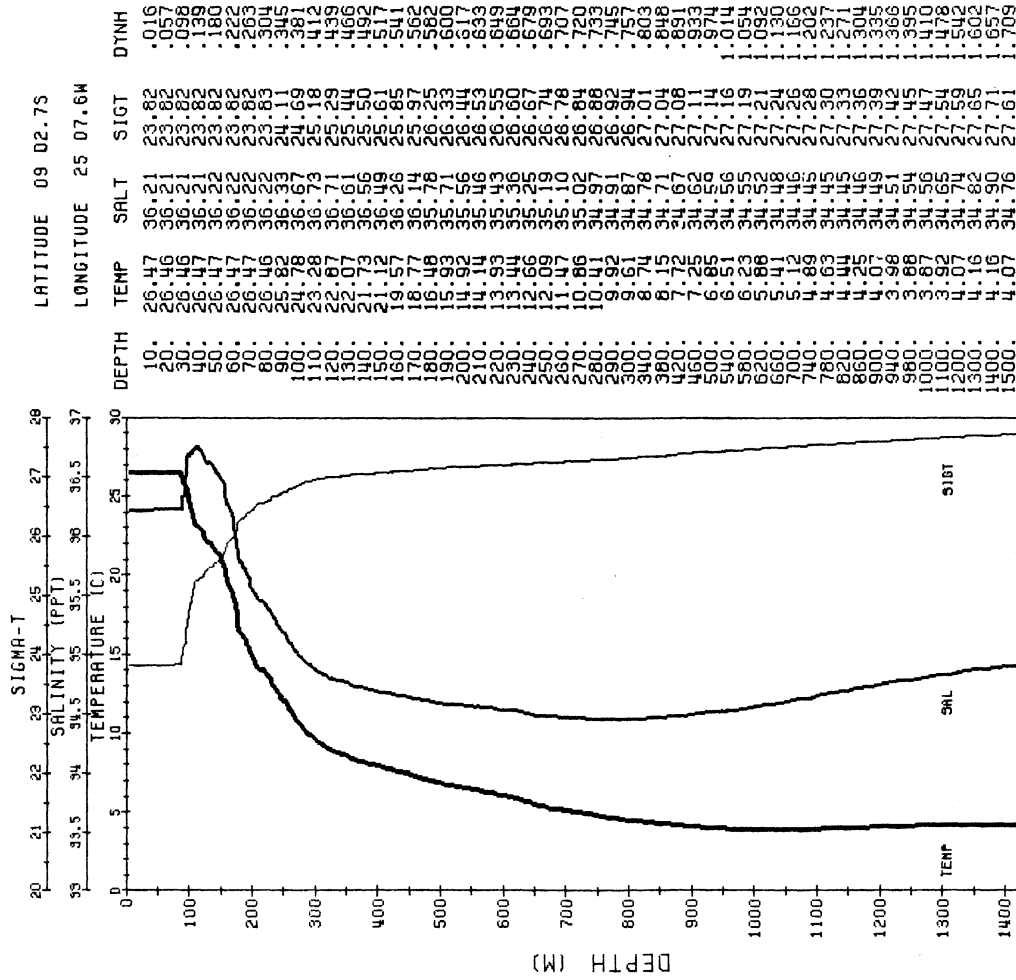
# STATION 13

R/V RESEARCHER DATE 07 18 79 TIME 1541



# STATION 14

R/V RESEARCHER DATE 07 19 79 TIME 1145



# STATION 15

R/V RESEARCHER DATE 07 19 79 TIME 1702

LATITUDE 08 34.45  
 LONGITUDE 25 54.5M  
 SIGMA-T  
 SALINITY (PPT)  
 TEMPERATURE (C)

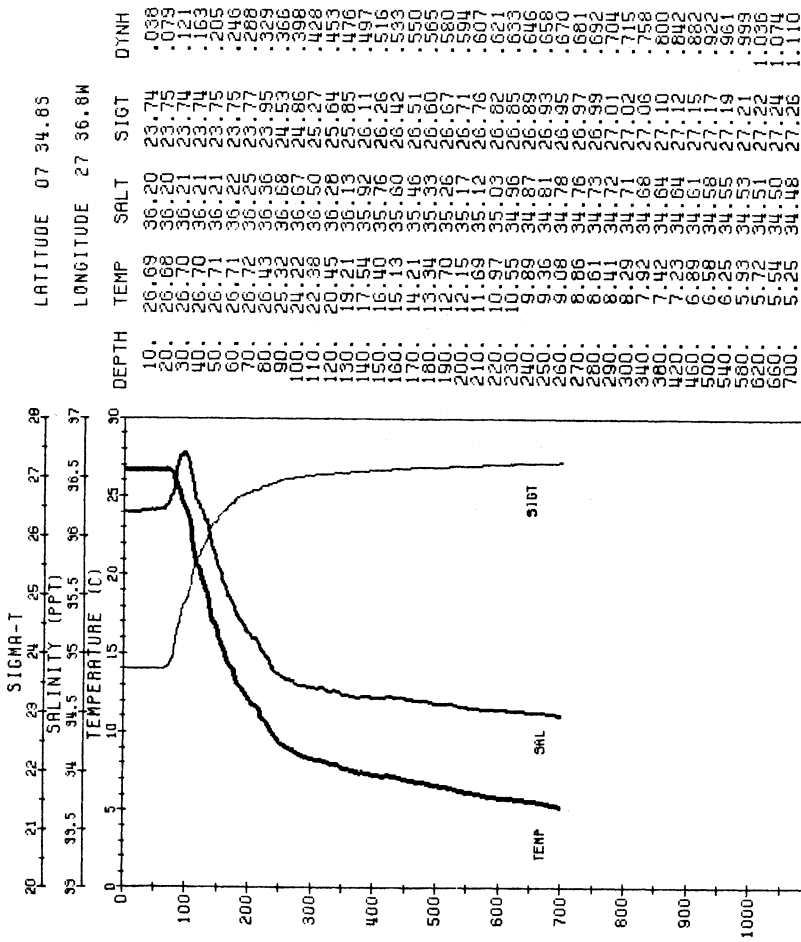
DEPTH (M)	TEMP	SALT	SIGT	DTNH
10	26.62	36.19	33.76	0.97
20	26.57	36.19	33.77	0.79
30	26.54	36.19	33.78	1.20
40	26.53	36.19	33.79	1.62
50	26.53	36.19	33.79	2.03
60	26.53	36.19	33.79	2.45
70	26.54	36.20	33.79	2.86
80	26.54	36.41	33.97	3.28
90	26.48	36.49	34.46	3.69
100	25.08	36.58	35.00	4.07
110	23.50	36.58	35.00	4.39
120	22.81	36.53	35.17	4.68
130	21.81	36.37	35.33	4.96
140	20.86	36.27	35.54	5.21
150	19.80	36.05	35.88	5.45
160	17.50	35.90	36.10	5.66
170	17.09	35.66	36.17	5.85
180	16.41	35.68	36.27	6.04
190	15.77	35.57	36.34	6.23
200	13.32	35.58	36.51	6.54
210	12.74	35.55	36.62	6.88
220	12.11	35.48	36.73	7.22
230	11.48	35.40	36.82	7.59
240	10.88	35.31	36.89	7.97
250	10.32	35.21	36.95	8.37
260	9.79	35.10	37.00	8.78
270	9.26	34.99	37.04	9.20
280	8.74	34.87	37.07	9.63
290	8.24	34.75	37.09	10.07
300	7.75	34.63	37.10	10.52
340	6.26	34.54	37.15	11.02
380	5.34	34.50	37.18	11.53
420	4.77	34.48	37.20	12.05
460	4.41	34.47	37.22	12.58
500	4.17	34.47	37.24	13.12
540	4.04	34.47	37.26	13.67
580	4.04	34.46	37.29	14.22
620	4.04	34.48	37.31	14.78
660	4.04	34.48	37.34	15.34
700	4.04	34.49	37.36	15.91
740	4.04	34.49	37.41	16.48
780	4.04	34.51	37.44	17.05
820	4.04	34.51	37.44	17.63
860	4.04	34.51	37.44	18.21
900	4.04	34.51	37.44	18.79
940	4.04	34.51	37.44	19.37
980	4.04	34.51	37.44	19.95
1000	4.04	34.51	37.44	20.53
1100	4.04	34.51	37.44	21.11
1200	4.04	34.51	37.44	21.69
1300	4.04	34.51	37.44	22.27
1400	4.04	34.51	37.44	22.85
1500	4.04	34.51	37.44	23.43

LATITUDE 08 04.6S  
 LONGITUDE 26 45.3M  
 SIGMA-T  
 SALINITY (PPT)  
 TEMPERATURE (C)

DEPTH (M)	TEMP	SALT	SIGT	DTNH
10	26.64	36.36	33.88	0.96
20	26.65	36.37	33.88	0.77
30	26.67	36.41	33.90	1.17
40	26.64	36.41	33.91	1.58
50	26.64	36.39	33.92	1.98
60	26.59	36.40	33.92	2.38
70	26.59	36.40	33.93	2.78
80	26.57	36.50	34.02	3.19
90	25.24	36.53	34.02	3.59
100	23.24	36.53	34.04	3.96
110	22.11	36.53	34.04	4.27
120	20.82	36.42	34.45	4.55
130	19.47	36.32	34.57	4.82
140	18.59	36.17	34.81	5.07
150	17.65	35.95	34.96	5.32
160	16.55	35.79	34.96	5.54
170	15.21	35.66	34.96	5.79
180	14.11	35.49	34.96	6.01
190	13.24	35.34	34.96	6.16
200	12.49	35.21	34.96	6.31
210	11.85	35.10	34.96	6.46
220	11.37	35.03	34.96	6.61
230	10.96	34.99	34.96	6.76
240	10.66	34.99	34.96	6.91
250	10.37	34.99	34.96	7.06
260	10.11	34.95	34.96	7.21
270	9.87	34.88	34.96	7.36
280	9.64	34.84	34.96	7.51
290	9.42	34.72	34.96	7.66
300	9.25	34.66	34.96	7.81
340	7.68	34.66	34.96	8.27
380	6.89	34.66	34.96	8.73
420	6.29	34.66	34.96	9.19
460	5.88	34.66	34.96	9.65
500	5.55	34.55	34.96	10.11
540	5.33	34.53	34.96	10.57
580	5.14	34.51	34.96	11.03
620	5.00	34.48	34.96	11.49
660	4.86	34.48	34.96	11.95
700	4.74	34.46	34.96	12.41
740	4.63	34.44	34.96	12.87
780	4.43	34.44	34.96	13.33
820	4.18	34.50	34.96	13.79
860	4.10	34.52	34.96	14.25
900	4.04	34.52	34.96	14.71
940	4.04	34.55	34.96	15.17
980	4.04	34.55	34.96	15.63
1000	4.04	34.74	34.96	16.09
1100	4.04	34.80	34.96	16.55
1200	4.04	34.84	34.96	17.01
1300	4.04	34.84	34.96	17.47
1400	4.04	34.84	34.96	17.93
1500	4.04	34.84	34.96	18.39

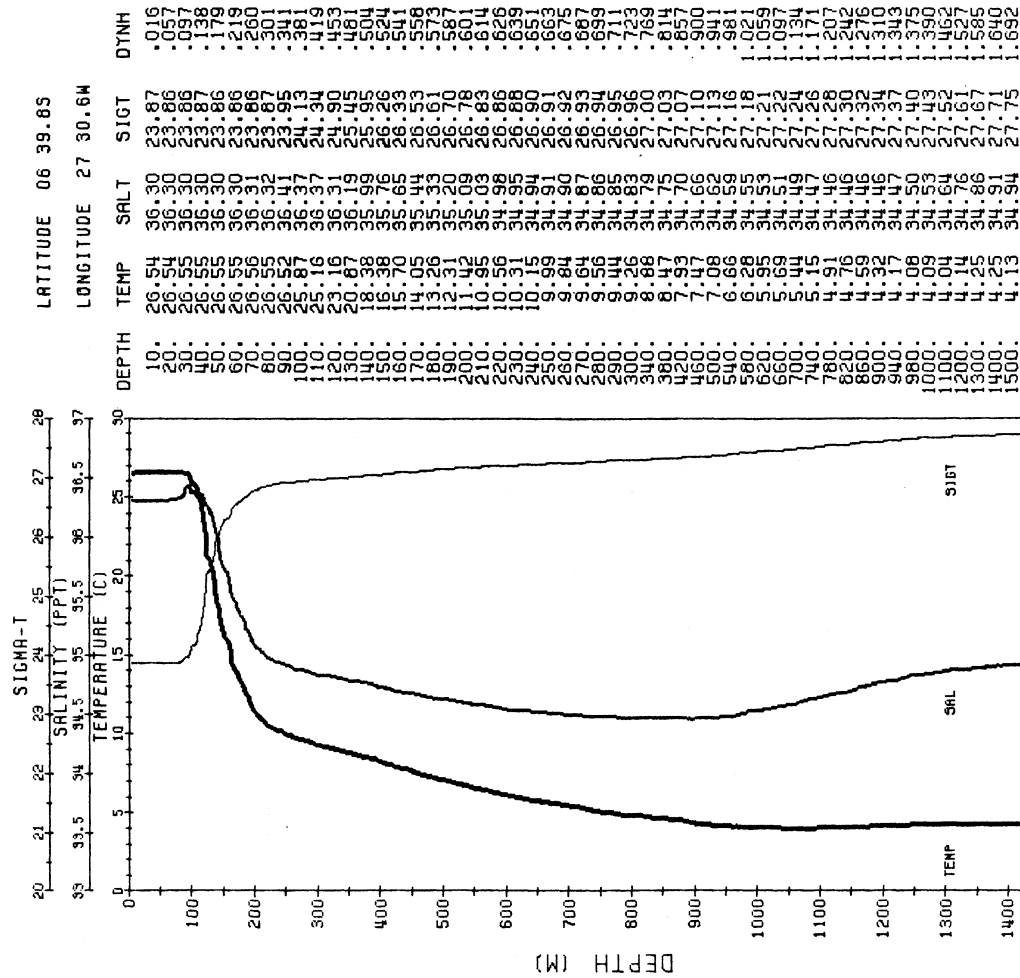
# STATION 17

R/V RESEARCHER DATE 07 20 79 TIME 0600



# STATION 18

R/V RESEARCHER DATE 07 21 79 TIME 0243

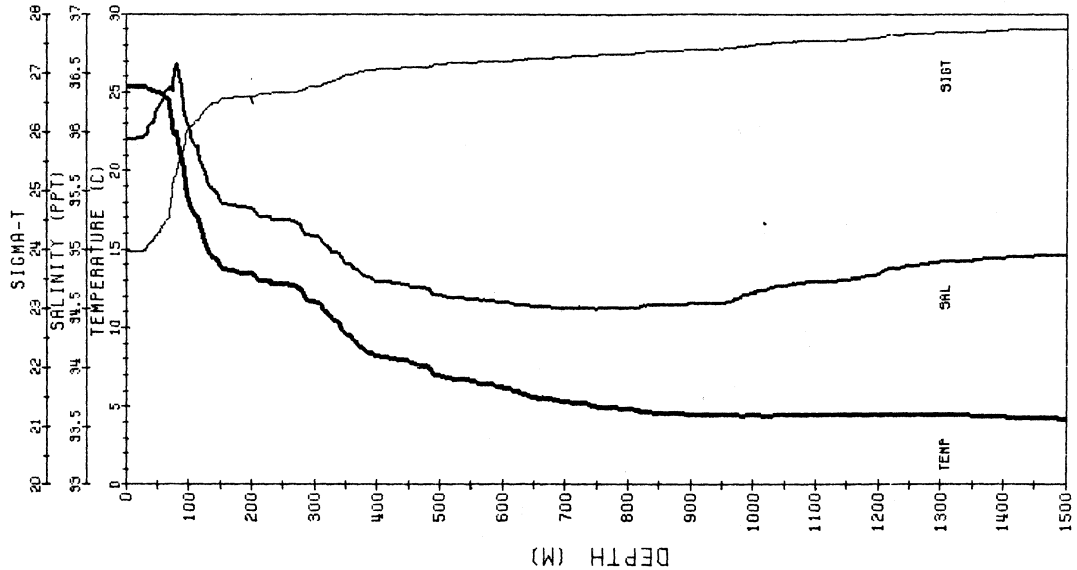






STATION 21  
R/V RESEARCHER DATE 07 24 79 TIME 0326

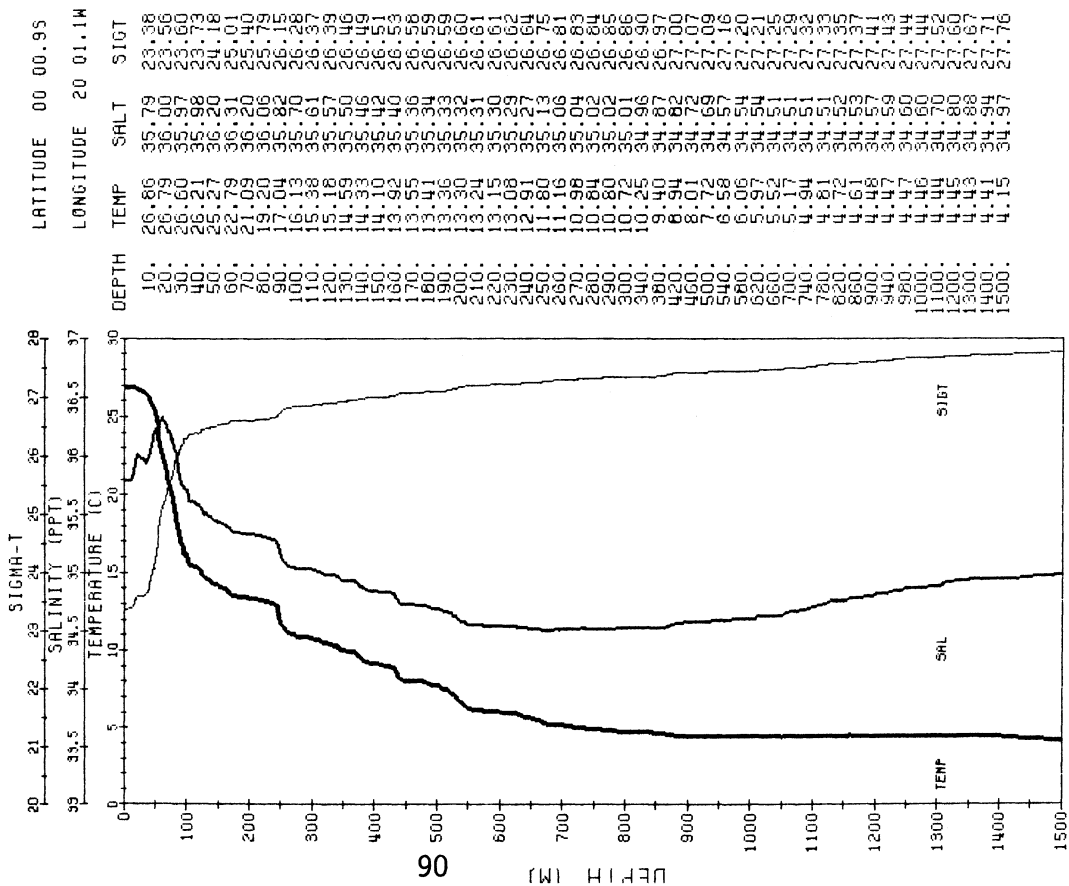
DEPTH	TEMP	SALT	SIGT	DINH
10	25.39	35.94	23.95	.036
20	25.38	35.95	23.96	.075
30	25.36	35.97	23.98	.154
40	25.33	36.00	24.12	.191
50	25.10	36.01	24.20	.268
60	24.79	36.02	24.40	.293
70	24.15	36.05	24.63	.392
80	23.57	36.06	24.92	.316
90	23.00	36.07	25.02	.340
100	22.21	36.09	25.07	.359
110	19.21	36.11	25.17	.378
120	19.05	36.14	25.20	.395
130	14.44	36.16	25.23	.411
140	13.91	36.17	25.25	.427
150	13.70	36.19	25.27	.442
160	13.62	36.20	25.27	.473
170	13.27	36.21	25.29	.488
180	13.22	36.22	25.29	.518
190	13.48	36.23	25.29	.533
200	13.44	36.24	25.29	.547
210	13.07	36.25	25.29	.562
220	12.92	36.25	25.29	.577
230	12.78	36.25	25.29	.591
240	12.77	36.25	25.29	.606
250	12.75	36.23	25.29	.620
270	12.63	35.12	26.08	.634
280	12.39	35.11	26.75	.648
290	11.72	34.96	26.88	.701
300	11.64	34.78	27.03	.747
310	10.31	34.70	27.09	.791
360	8.05	34.68	27.14	.834
420	6.68	34.58	27.16	.876
500	6.68	34.58	27.18	.919
580	6.39	34.53	27.18	.955
660	5.53	34.50	27.25	1.032
700	5.28	34.49	27.29	1.068
740	5.10	34.40	27.29	1.103
780	4.88	34.30	27.34	1.138
820	4.68	34.21	27.34	1.173
860	4.49	34.13	27.37	1.207
900	4.30	34.05	27.39	1.239
940	4.13	34.00	27.41	1.269
980	4.00	34.00	27.41	1.299
1020	3.87	34.00	27.41	1.329
1060	3.73	34.00	27.41	1.359
1100	3.60	34.00	27.41	1.389
1140	3.47	34.00	27.41	1.419
1180	3.33	34.00	27.41	1.448
1220	3.20	34.00	27.41	1.478
1260	3.07	34.00	27.41	1.506
1300	2.94	34.00	27.41	1.536
1340	2.81	34.00	27.41	1.566
1380	2.68	34.00	27.41	1.596
1420	2.54	34.00	27.41	1.626
1460	2.41	34.00	27.41	1.656
1500	2.27	34.00	27.41	1.686





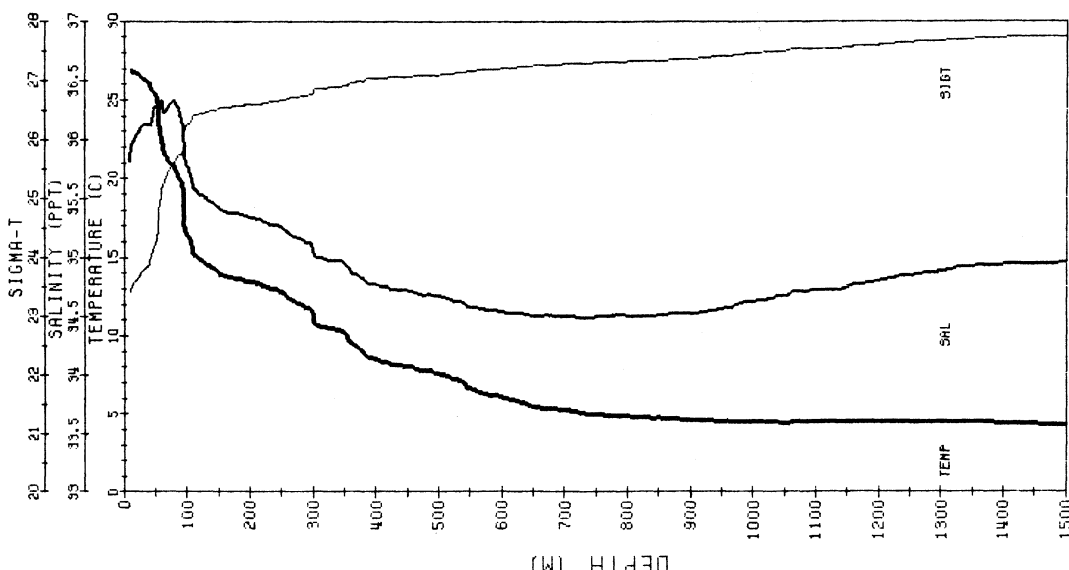
# STATION 3

R/V RESEARCHER DATE 02 22 80 TIME 1041



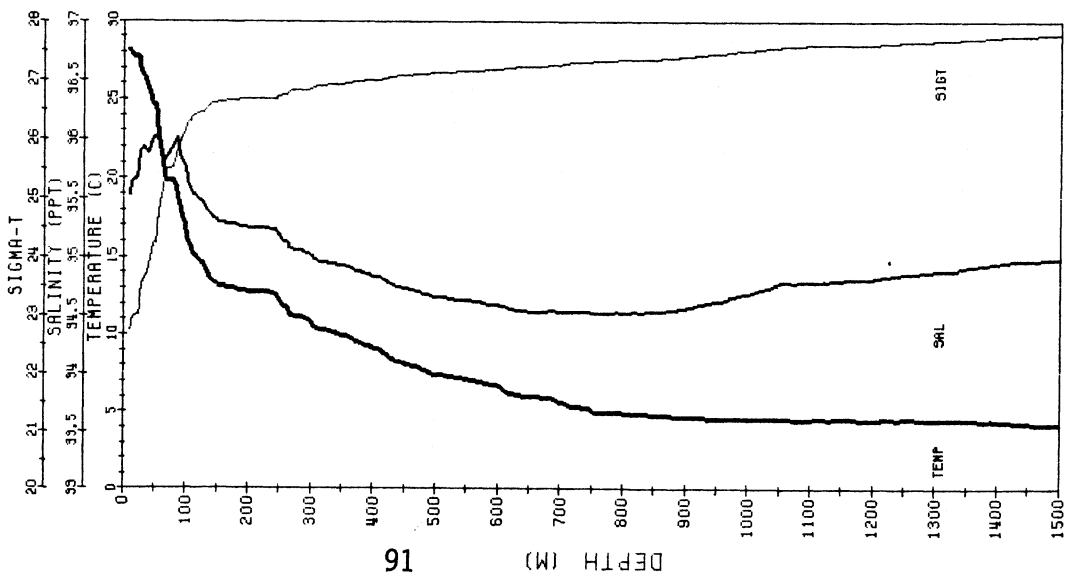
# STATION 4

R/V RESEARCHER DATE 02 23 80 TIME 0212



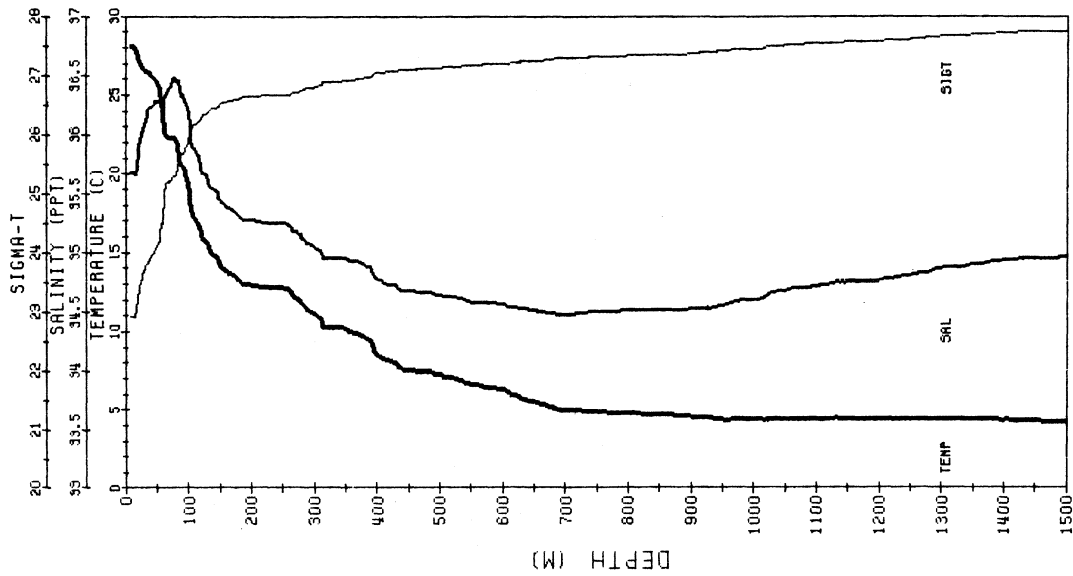
# STATION 5

R/V RESEARCHER DATE 02 23 80 TIME 1745



# STATION 6

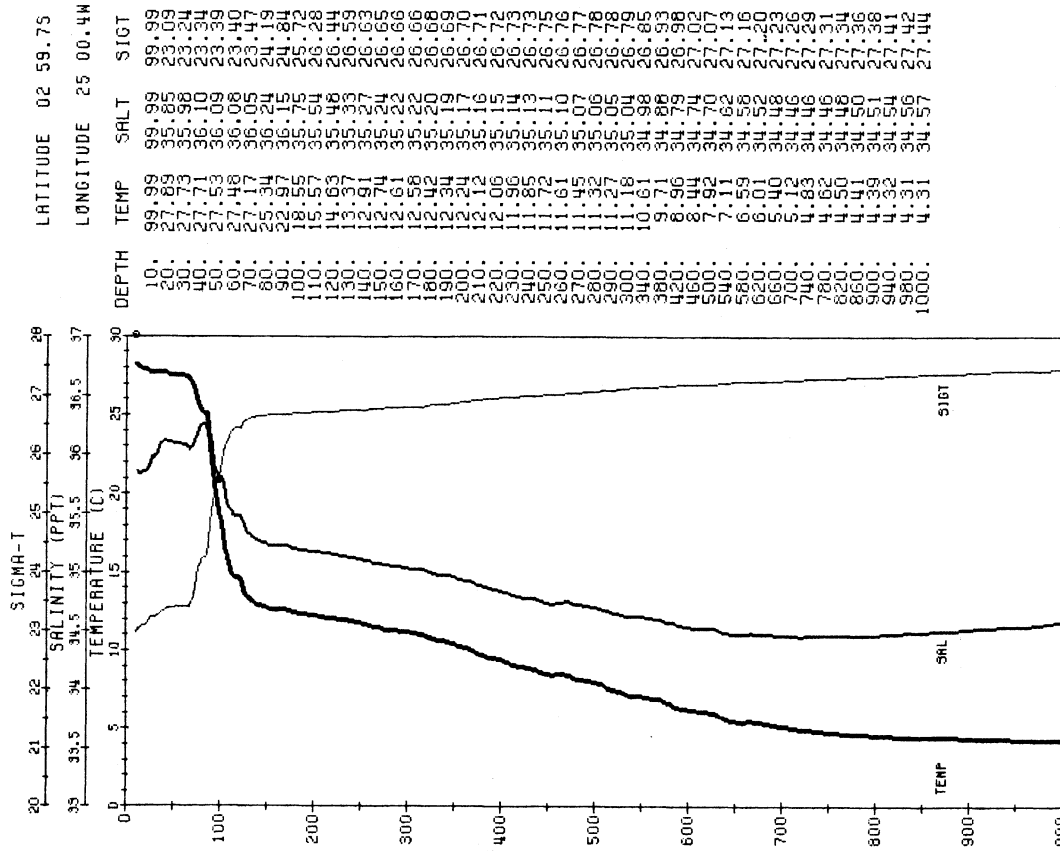
R/V RESEARCHER DATE 02 24 80 TIME 0912





### STATION 9

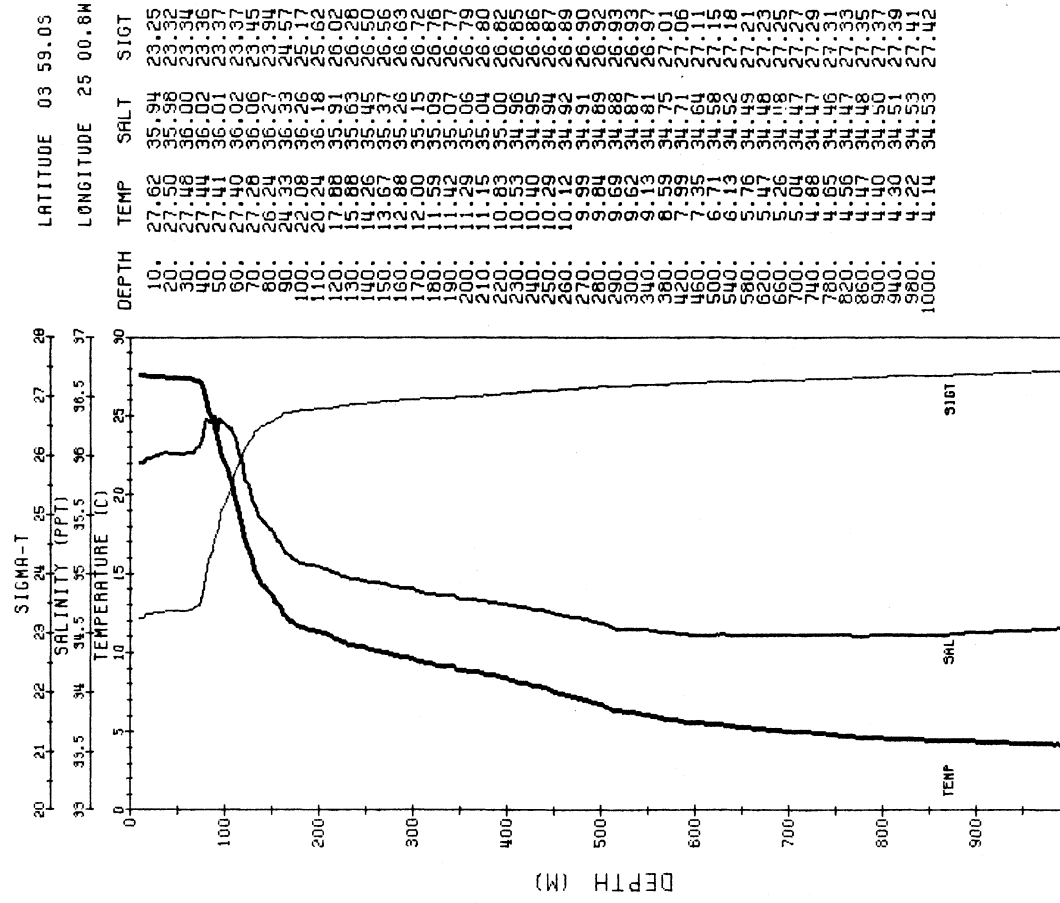
R/V RESEARCHER DATE 02 25 80 TIME 1850



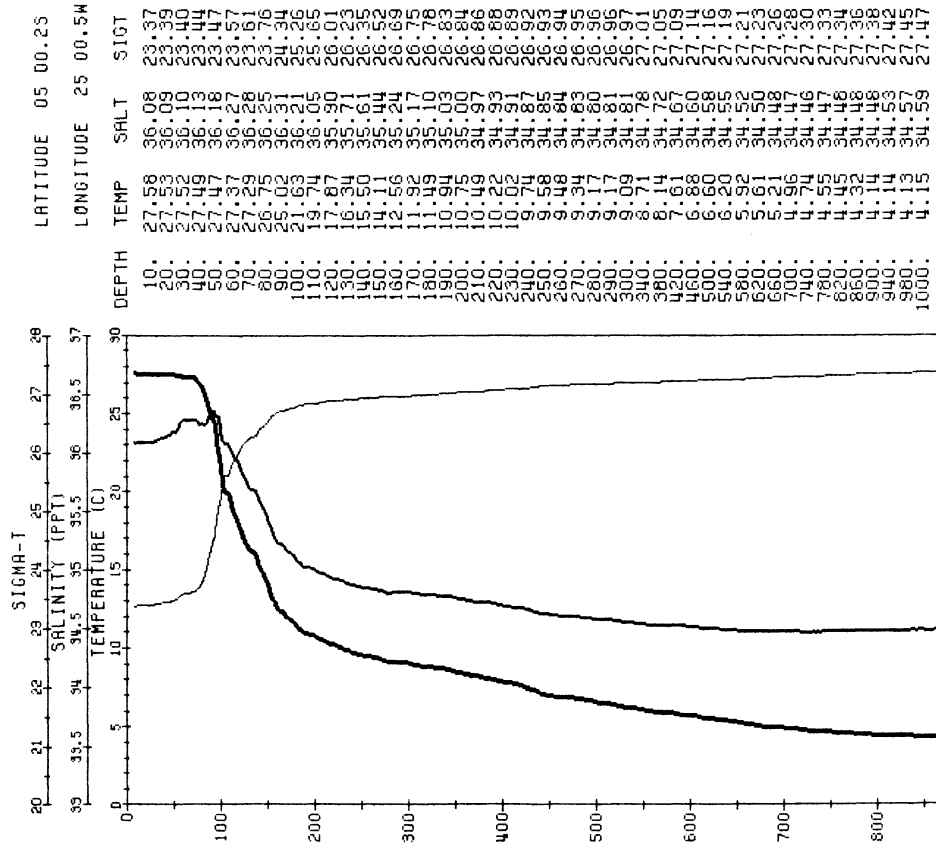
93 (M) FILED

### STATION 10

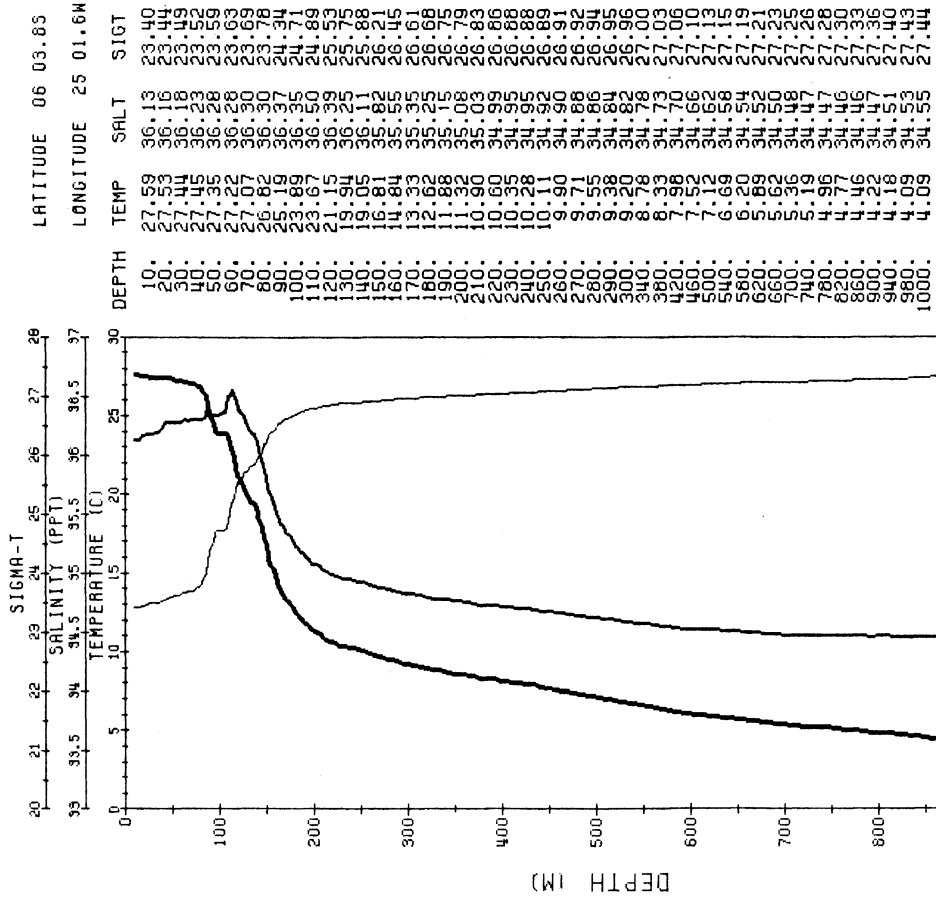
R/V RESEARCHER DATE 02 26 80 TIME 0041



STATION 11  
R/V RESEARCHER DATE 02 26 80 TIME 0908



STATION 12  
R/V RESEARCHER DATE 02 26 80 TIME 1757

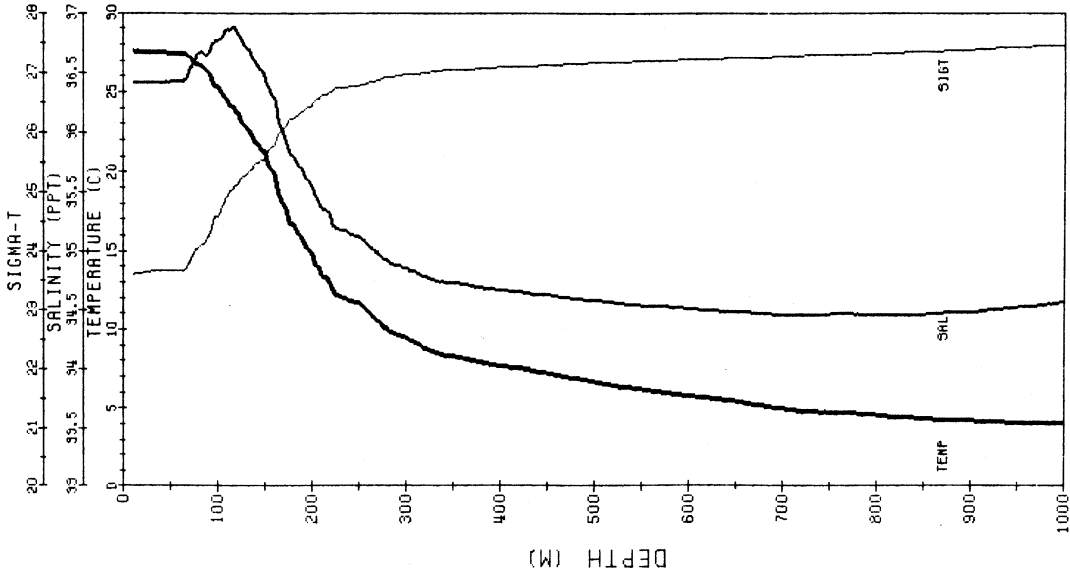




# STATION 13

R/V RESEARCHER DATE 02 27 80 TIME 1106

LATITUDE 06 59.45  
 LONGITUDE 25 00.0W

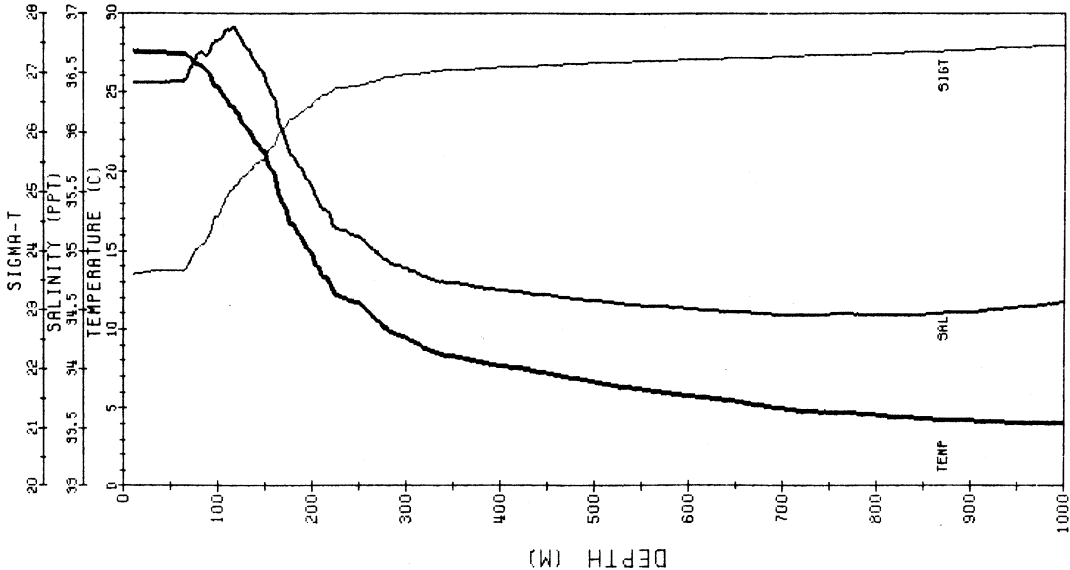


DEPTH	TEMP	SALT	SIGT	DYNH
10	27.50	36.21	27.49	009
20	27.48	36.24	27.51	053
30	27.48	36.25	27.52	097
40	27.48	36.25	27.53	141
50	27.48	36.25	27.53	185
60	27.48	36.25	27.53	229
70	27.48	36.25	27.53	272
80	27.48	36.25	27.53	312
90	27.48	36.25	27.53	348
100	27.48	36.25	27.53	380
110	27.48	36.25	27.53	411
120	27.48	36.25	27.53	439
130	27.48	36.25	27.53	466
140	27.48	36.25	27.53	490
150	27.48	36.25	27.53	513
160	27.48	36.25	27.53	534
170	27.48	36.25	27.53	552
180	27.48	36.25	27.53	570
190	27.48	36.25	27.53	586
200	27.48	36.25	27.53	602
210	27.48	36.25	27.53	616
220	27.48	36.25	27.53	629
230	27.48	36.25	27.53	642
240	27.48	36.25	27.53	655
250	27.48	36.25	27.53	667
260	27.48	36.25	27.53	680
270	27.48	36.25	27.53	691
280	27.48	36.25	27.53	703
290	27.48	36.25	27.53	714
300	27.48	36.25	27.53	726
310	27.48	36.25	27.53	736
320	27.48	36.25	27.53	746
330	27.48	36.25	27.53	756
340	27.48	36.25	27.53	766
350	27.48	36.25	27.53	776
360	27.48	36.25	27.53	786
370	27.48	36.25	27.53	796
380	27.48	36.25	27.53	806
390	27.48	36.25	27.53	816
400	27.48	36.25	27.53	826
410	27.48	36.25	27.53	836
420	27.48	36.25	27.53	846
430	27.48	36.25	27.53	856
440	27.48	36.25	27.53	866
450	27.48	36.25	27.53	876
460	27.48	36.25	27.53	886
470	27.48	36.25	27.53	896
480	27.48	36.25	27.53	906
490	27.48	36.25	27.53	916
500	27.48	36.25	27.53	926
510	27.48	36.25	27.53	936
520	27.48	36.25	27.53	946
530	27.48	36.25	27.53	956
540	27.48	36.25	27.53	966
550	27.48	36.25	27.53	976
560	27.48	36.25	27.53	986
570	27.48	36.25	27.53	996
580	27.48	36.25	27.53	1006
590	27.48	36.25	27.53	1016
600	27.48	36.25	27.53	1026
610	27.48	36.25	27.53	1036
620	27.48	36.25	27.53	1046
630	27.48	36.25	27.53	1056
640	27.48	36.25	27.53	1066
650	27.48	36.25	27.53	1076
660	27.48	36.25	27.53	1086
670	27.48	36.25	27.53	1096
680	27.48	36.25	27.53	1106
690	27.48	36.25	27.53	1116
700	27.48	36.25	27.53	1126
710	27.48	36.25	27.53	1136
720	27.48	36.25	27.53	1146
730	27.48	36.25	27.53	1156
740	27.48	36.25	27.53	1166
750	27.48	36.25	27.53	1176
760	27.48	36.25	27.53	1186
770	27.48	36.25	27.53	1196
780	27.48	36.25	27.53	1206
790	27.48	36.25	27.53	1216
800	27.48	36.25	27.53	1226
810	27.48	36.25	27.53	1236
820	27.48	36.25	27.53	1246
830	27.48	36.25	27.53	1256
840	27.48	36.25	27.53	1266
850	27.48	36.25	27.53	1276
860	27.48	36.25	27.53	1286
870	27.48	36.25	27.53	1296
880	27.48	36.25	27.53	1306
890	27.48	36.25	27.53	1316
900	27.48	36.25	27.53	1326
910	27.48	36.25	27.53	1336
920	27.48	36.25	27.53	1346
930	27.48	36.25	27.53	1356
940	27.48	36.25	27.53	1366
950	27.48	36.25	27.53	1376
960	27.48	36.25	27.53	1386
970	27.48	36.25	27.53	1396
980	27.48	36.25	27.53	1406
990	27.48	36.25	27.53	1416
1000	27.48	36.25	27.53	1426

# STATION 14

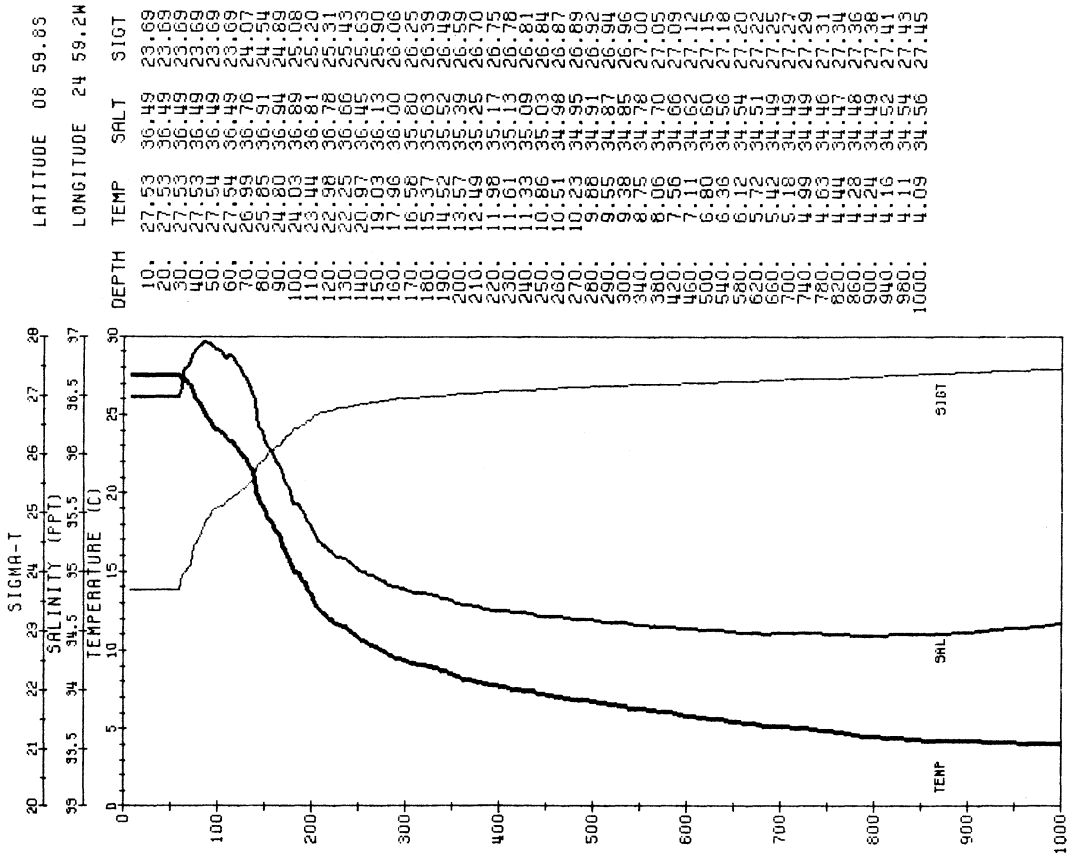
R/V RESEARCHER DATE 02 27 80 TIME 1904

LATITUDE 07 59.65  
 LONGITUDE 25 00.8W

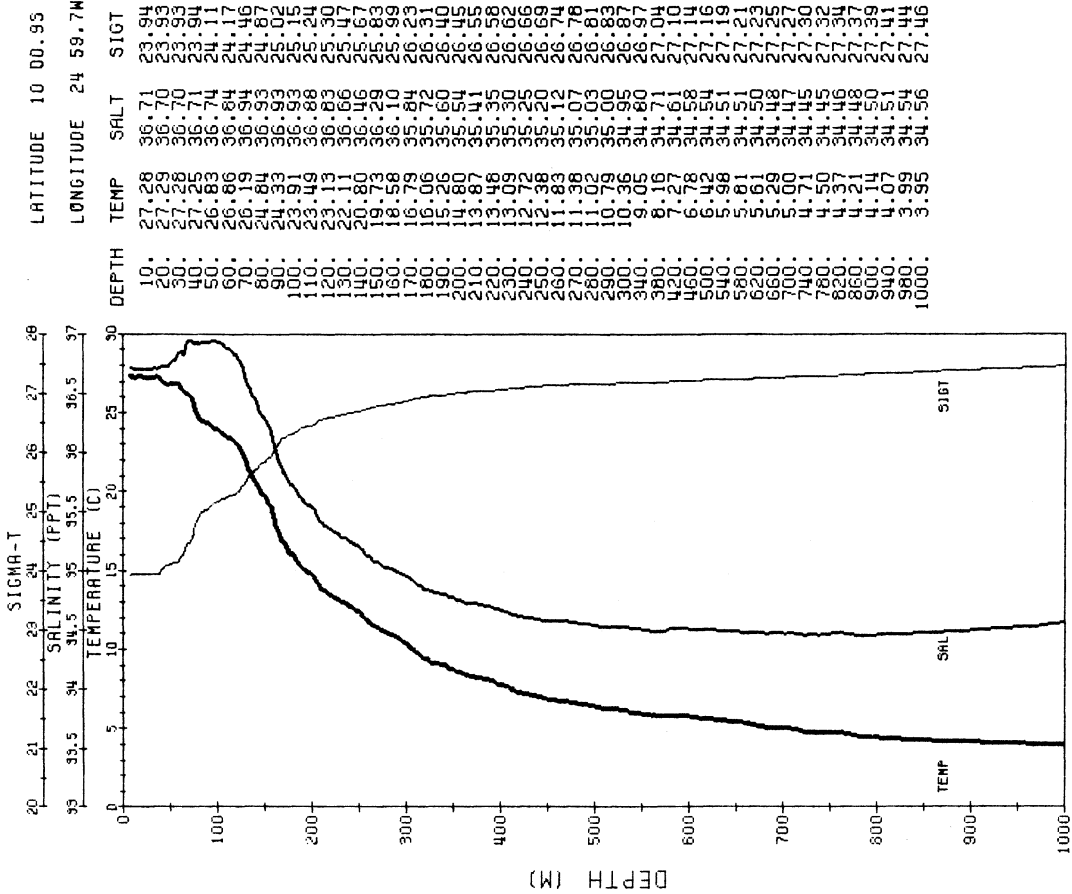


DEPTH	TEMP	SALT	SIGT	DYNH
20	27.56	36.44	27.56	056
30	27.47	36.41	27.62	099
40	27.47	36.42	27.63	142
50	27.45	36.42	27.66	184
60	27.45	36.42	27.66	227
70	27.45	36.43	27.69	270
80	27.45	36.45	27.69	310
90	27.45	36.45	27.69	348
100	27.45	36.45	27.69	383
110	27.45	36.45	27.69	416
120	27.45	36.45	27.69	446
130	27.45	36.45	27.69	474
140	27.45	36.45	27.69	501
150	27.45	36.45	27.69	526
160	27.45	36.45	27.69	550
170	27.45	36.45	27.69	572
180	27.45	36.45	27.69	591
190	27.45	36.45	27.69	609
200	27.45	36.45	27.69	626
210	27.45	36.45	27.69	642
220	27.45	36.45	27.69	657
230	27.45	36.45	27.69	671
240	27.45	36.45	27.69	684
250	27.45	36.45	27.69	698
260	27.45	36.45	27.69	711
270	27.45	36.45	27.69	724
280	27.45	36.45	27.69	736
290	27.45	36.45	27.69	749
300	27.45	36.45	27.69	760
310	27.45	36.45	27.69	770
320	27.45	36.45	27.69	780
330	27.45	36.45	27.69	790
340	27.45	36.45	27.69	800
350	27.45	36.45	27.69	810
360	27.45	36.45	27.69	820
370	27.45	36.45	27.69	830
380	27.45	36.45	27.69	840
390	27.45	36.45	27.69	850
400	27.45	36.45	27.69	860
410	27.45	36.45	27.69	870
420	27.45	36.45	27.69	880
430	27.45	36.45	27.69	890
440	27.45	36.45	27.69	900
450	27.45	36.45	27.69	910
460	27.45	36.45	27.69	920
470	27.45	36.45	27.69	930
480	27.45	36.45	27.69	940
490	27.45	36.45	27.69	950
500	27.45	36.45	27.69	960
510	27.45	36.45	27.69	970
520	27.45	36.45	27.69	980
530	27.45	36.45	27.69	990
540	27.45	36.45	27.69	1000
550	27.45	36.45	27.69	1010
560	27.45	36.45	27.69	1020
570	27.45	36.45	27.69	1030
580	27.45	36.45	27.69	1040
590	27.45	36.45	27.69	1050
600	27.45	36.45	27.69	1060
610	27.45	36.45	27.69	1070
620	27.45	36.45	27.69	1080
630	27.45	36.45	27.69	1090
640	27.45	36.45	27.69	1100
650	27.45	36.45	27.69	1110
660	27.45	36.45	27.69	1120
670	27.45	36.45	27.69	1130
680	27.45	36.45	27.69	1140
690	27.45	36.45	27.69	1150
700	27.45	36.45	27.69	1160
710	27.45	36.45	27.69	1170
720	27.45	36.45	27.69	1180
730	27.45	36.45	27.69	1190
740	27.45	36.45	27.69	1200
750	27.45	36.45	27.69	1210
760	27.45	36.45	27.69	1220
770	27.45	36.45	27.69	1230
780	27.45	36.45	27.69	1240
790	27.45	36.45	27.69	1250
800	27.45	36.45	27.69	1260
810	27.45	36.45	27.69	1270
820	27.45	36.45	27.69	1280
830	27.45	36.45	27.69	1290
840	27.45	36.45	27.69	1300
850	27.45	36.45	27.69	1310
860	27.45	36.45	27.69	1320
870	27.45	36.45	27.69	1330
880	27.45	36.45	27.69	1340
890	27.45	36.45	27.69	1350
900	27.45	36.45	27.69	1360
910	27.45	36.45	27.69	1370
920	27.45	36.45	27.69	1380
930	27.45	36.45	27.69	1390
940	27.45	36.45	27.69	1400
950	27.45	36.45	27.69	1410
960	27.45	36.45	27.69	1420
970	27.45	36.45	27.69	1430
980	27.45	36.45	27.69	1440
990	27.45	36.45	27.69	1450
1000	27.45	36.45	27.69	1460

STATION 15  
 R/V RESEARCHER DATE 02 28 80 TIME 0210

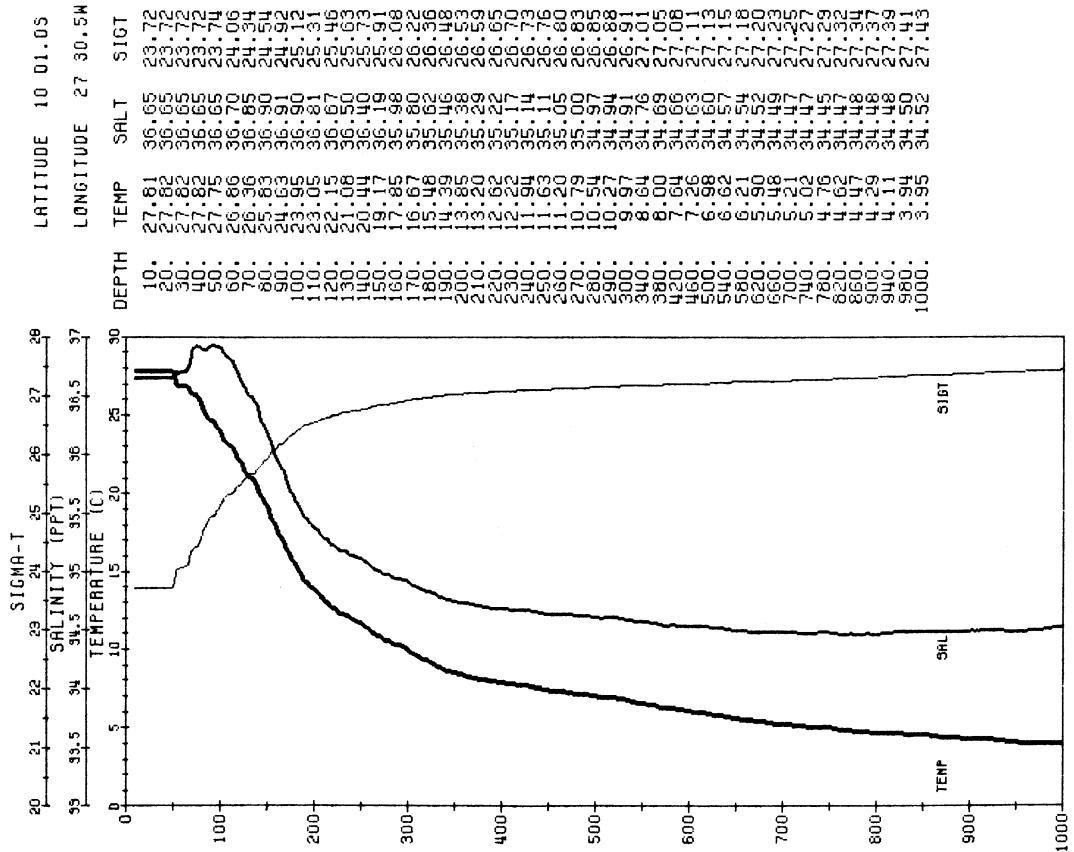


STATION 16  
 R/V RESEARCHER DATE 02 28 80 TIME 0839



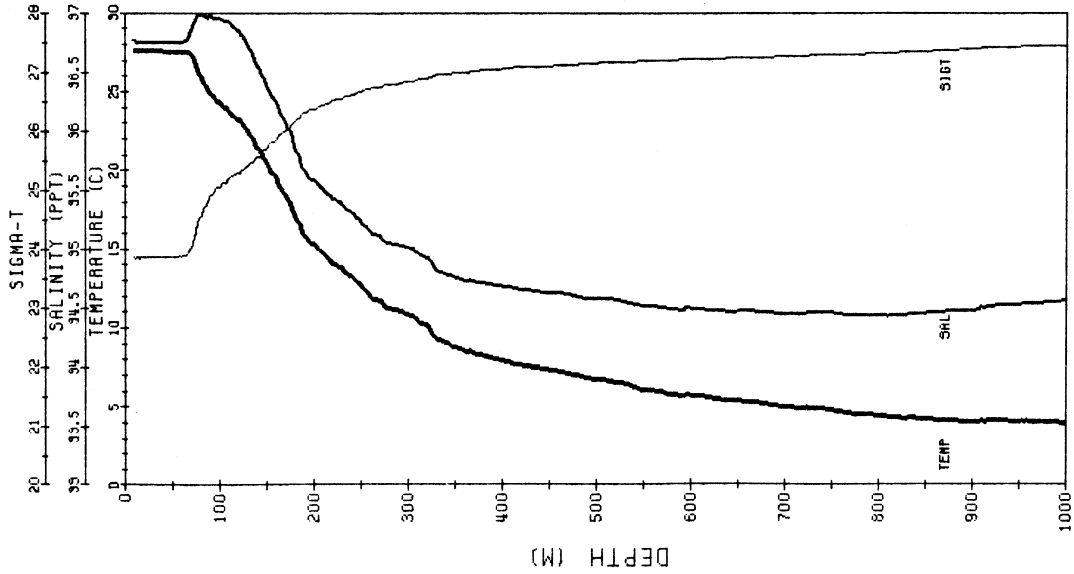
# STATION 17

R/V RESEARCHER DATE 02 28 80 TIME 2240



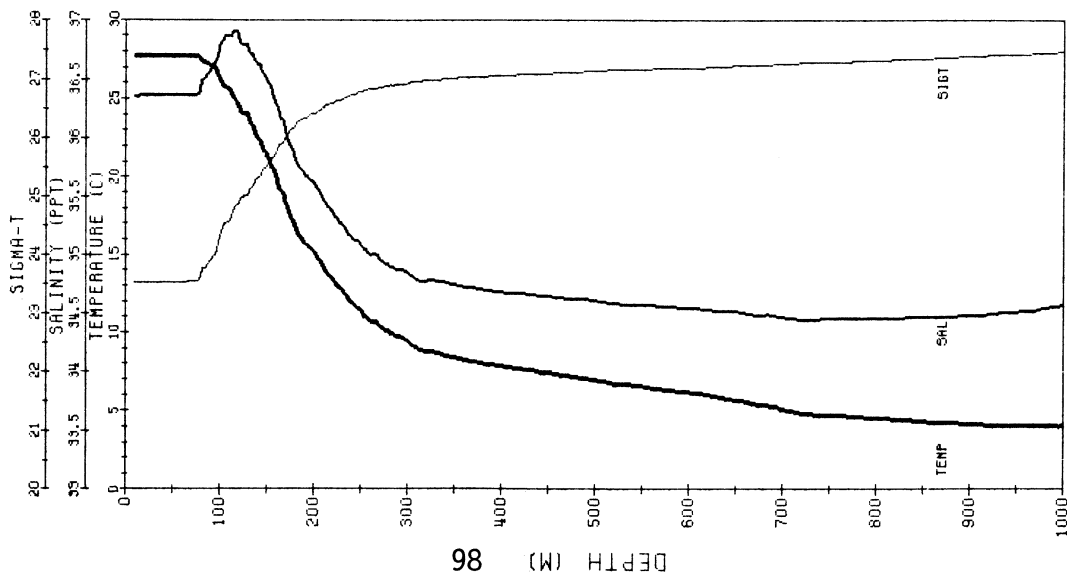
# STATION 18

R/V RESEARCHER DATE 02 29 80 TIME 1339



# STATION 19

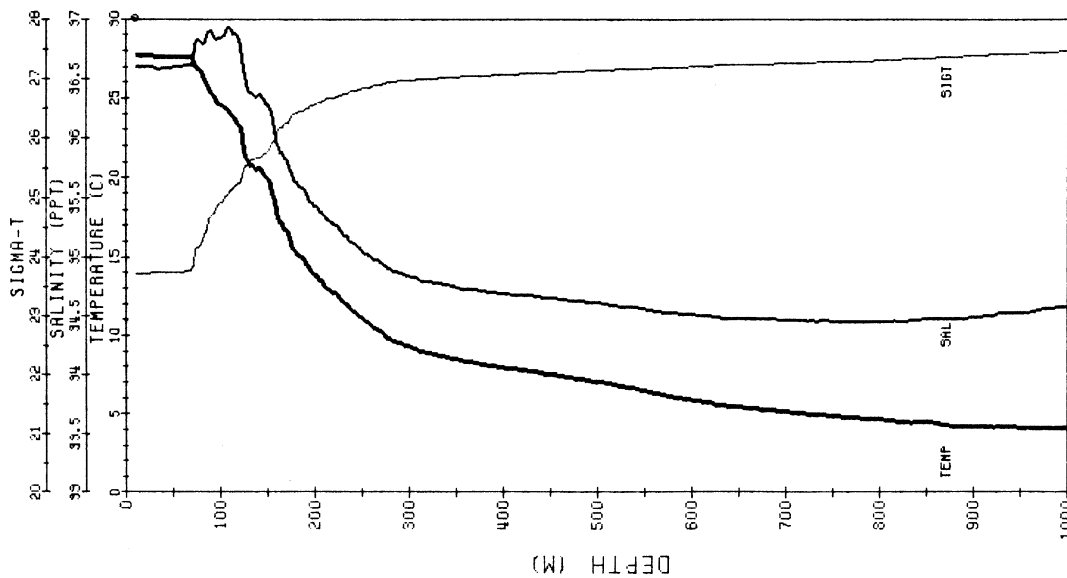
R/V RESEARCHER DATE 03 01 80 TIME 0344



DEPTH	TEMP	SALT	SIGT	DYNH
10.	27.73	36.35	23.52	.044
20.	27.73	36.36	23.52	.092
30.	27.74	36.36	23.52	.136
40.	27.73	36.36	23.52	.180
50.	27.73	36.36	23.52	.224
60.	27.72	36.36	23.52	.268
70.	27.55	36.41	23.62	.312
80.	26.84	36.57	23.87	.353
90.	25.84	36.86	24.28	.428
100.	24.75	36.88	24.86	.461
110.	24.01	36.63	25.01	.491
120.	22.59	36.51	25.20	.520
130.	21.49	36.52	25.76	.546
140.	20.09	36.31	26.00	.592
150.	18.45	36.07	26.19	.612
160.	17.05	35.87	26.33	.630
170.	15.91	35.65	26.41	.647
180.	15.26	35.49	26.51	.664
190.	14.35	35.37	26.59	.679
200.	13.59	35.30	26.59	.694
210.	12.80	35.27	26.73	.708
220.	11.83	35.10	26.78	.723
230.	11.09	35.07	26.84	.735
240.	10.51	34.97	26.89	.748
250.	10.16	34.88	26.89	.762
260.	9.82	34.80	26.91	.772
270.	9.53	34.72	26.95	.784
280.	9.22	34.71	27.01	.830
290.	8.98	34.64	27.05	.874
300.	8.70	34.64	27.08	.918
310.	8.34	34.61	27.11	.960
320.	8.06	34.58	27.14	1.001
330.	7.73	34.51	27.18	1.041
340.	7.34	34.46	27.21	1.080
350.	6.96	34.34	27.23	1.119
360.	6.64	34.21	27.26	1.157
370.	6.31	34.14	27.29	1.193
380.	5.96	34.05	27.31	1.229
390.	5.77	34.04	27.33	1.263
400.	5.49	34.04	27.35	1.297
410.	5.20	34.04	27.38	1.330
420.	4.93	34.04	27.41	1.362
430.	4.64	34.04	27.44	1.394
440.	4.38	34.04	27.44	1.424
450.	4.14	34.04	27.44	1.458
460.	3.94	34.04	27.46	1.498
470.	3.77	34.04	27.46	1.543
480.	3.61	34.04	27.46	1.588
490.	3.47	34.04	27.46	1.633
500.	3.34	34.04	27.46	1.678
510.	3.22	34.04	27.46	1.723
520.	3.11	34.04	27.46	1.768
530.	3.01	34.04	27.46	1.813
540.	2.92	34.04	27.46	1.858
550.	2.84	34.04	27.46	1.903
560.	2.77	34.04	27.46	1.948
570.	2.71	34.04	27.46	1.993
580.	2.66	34.04	27.46	2.038
590.	2.61	34.04	27.46	2.083
600.	2.57	34.04	27.46	2.128
610.	2.53	34.04	27.46	2.173
620.	2.50	34.04	27.46	2.218
630.	2.47	34.04	27.46	2.263
640.	2.44	34.04	27.46	2.308
650.	2.42	34.04	27.46	2.353
660.	2.40	34.04	27.46	2.398
670.	2.38	34.04	27.46	2.443
680.	2.36	34.04	27.46	2.488
690.	2.35	34.04	27.46	2.533
700.	2.34	34.04	27.46	2.578
710.	2.33	34.04	27.46	2.623
720.	2.32	34.04	27.46	2.668
730.	2.31	34.04	27.46	2.713
740.	2.30	34.04	27.46	2.758
750.	2.29	34.04	27.46	2.803
760.	2.28	34.04	27.46	2.848
770.	2.27	34.04	27.46	2.893
780.	2.26	34.04	27.46	2.938
790.	2.25	34.04	27.46	2.983
800.	2.24	34.04	27.46	3.028
810.	2.23	34.04	27.46	3.073
820.	2.22	34.04	27.46	3.118
830.	2.21	34.04	27.46	3.163
840.	2.20	34.04	27.46	3.208
850.	2.19	34.04	27.46	3.253
860.	2.18	34.04	27.46	3.298
870.	2.17	34.04	27.46	3.343
880.	2.16	34.04	27.46	3.388
890.	2.15	34.04	27.46	3.433
900.	2.14	34.04	27.46	3.478
910.	2.13	34.04	27.46	3.523
920.	2.12	34.04	27.46	3.568
930.	2.11	34.04	27.46	3.613
940.	2.10	34.04	27.46	3.658
950.	2.09	34.04	27.46	3.703
960.	2.08	34.04	27.46	3.748
970.	2.07	34.04	27.46	3.793
980.	2.06	34.04	27.46	3.838
990.	2.05	34.04	27.46	3.883
1000.	2.04	34.04	27.46	3.928

# STATION 20

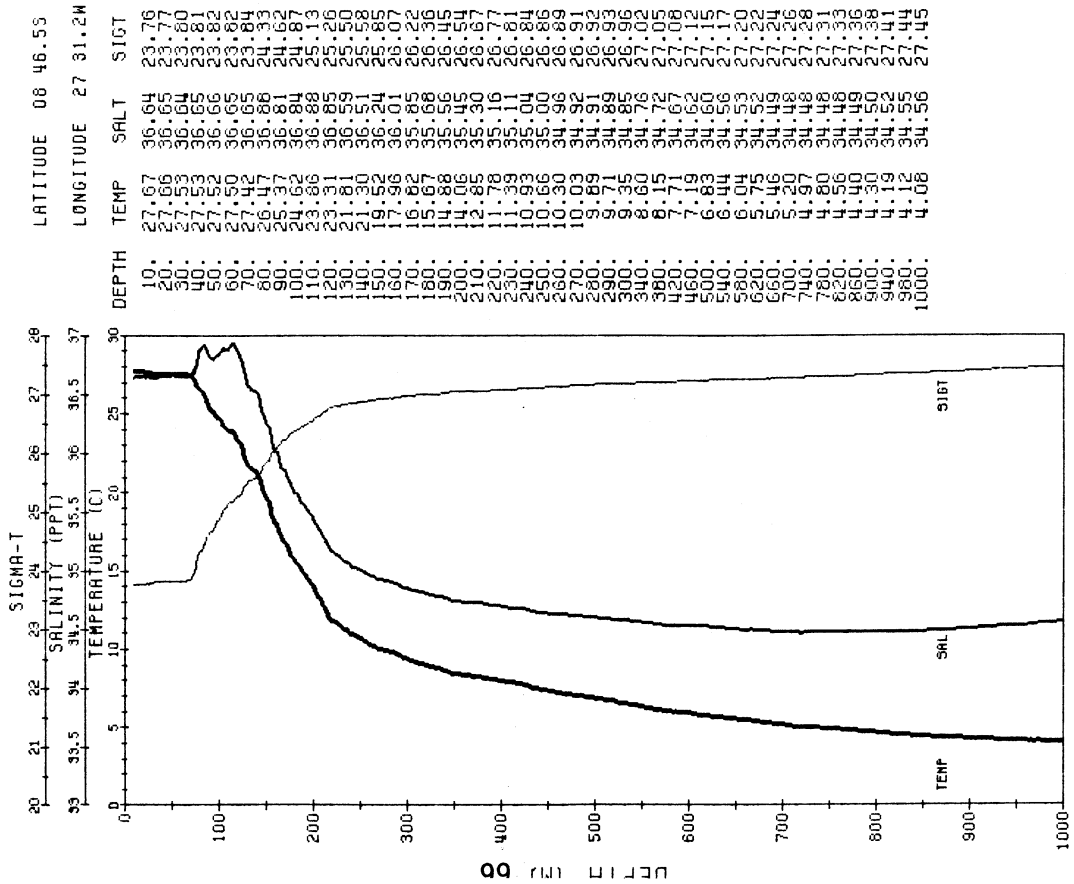
R/V RESEARCHER DATE 03 01 80 TIME 2257



DEPTH	TEMP	SALT	SIGT	DYNH
10.	99.79	99.7200	99.99	9.999
20.	27.70	36.629	23.72	.080
30.	27.58	36.629	23.73	.123
40.	27.58	36.60	23.73	.163
50.	27.60	36.60	23.73	.205
60.	27.60	36.60	23.73	.247
70.	26.67	36.80	23.76	.286
80.	24.53	36.80	24.15	.321
90.	24.48	36.84	24.90	.354
100.	24.17	36.82	25.06	.384
110.	23.33	36.82	25.24	.413
120.	21.05	36.41	25.57	.463
130.	20.54	36.35	25.67	.486
140.	19.91	36.27	25.77	.508
150.	17.77	35.97	26.09	.528
160.	16.29	35.82	26.23	.544
170.	15.29	35.63	26.41	.558
180.	14.84	35.56	26.46	.570
190.	13.84	35.42	26.57	.583
200.	13.30	35.35	26.62	.593
210.	12.74	35.27	26.67	.607
220.	12.15	35.20	26.73	.621
230.	11.54	35.12	26.79	.635
240.	11.07	35.06	26.83	.648
250.	10.63	34.97	26.88	.661
260.	10.22	34.89	26.93	.674
270.	9.82	34.80	26.98	.687
280.	9.50	34.72	27.03	.700
290.	9.29	34.66	27.06	.713
300.	9.09	34.61	27.09	.726
310.	8.86	34.57	27.09	.739
320.	8.71	34.54	27.09	.752
330.	8.54	34.51	27.09	.765
340.	8.37	34.48	27.09	.778
350.	8.21	34.46	27.09	.791
360.	8.06	34.44	27.09	.804
370.	7.91	34.42	27.09	.817
380.	7.77	34.41	27.09	.830
390.	7.63	34.40	27.09	.843
400.	7.50	34.39	27.09	.856
410.	7.37	34.38	27.09	.869
420.	7.25	34.37	27.09	.882
430.	7.13	34.37	27.09	.895
440.	7.01	34.36	27.09	.908
450.	6.89	34.36	27.09	.921
460.	6.78	34.35	27.09	.934
470.	6.67	34.35	27.09	.947
480.	6.56	34.35	27.09	.960
490.	6.45	34.35	27.09	.973
500.	6.34	34.35	27.09	.986
510.	6.23	34.35	27.09	.999
520.	6.12	34.35	27.09	1.012
530.	6.01	34.35	27.09	1.025
540.	5.90	34.35	27.09	1.038
550.	5.79	34.35	27.09	1.051
560.	5.68	34.35	27.09	1.064
570.	5.57	34.35	27.09	1.077
580.	5.46	34.35	27.09	1.090
590.	5.35	34.35	27.09	1.103
600.	5.24	34.35	27.09	1.116
610.	5.13	34.35	27.09	1.129
620.	5.02	34.35	27.09	1.142
630.	4.91	34.35	27.09	1.155
640.	4.80	34.35	27.09	1.168
650.	4.69	34.35	27.09	1.181
660.	4.58	34.35	27.09	1.194
670.	4.47	34.35	27.09	1.207
680.	4.36	34.35	27.09	1.220
690.	4.25	34.35	27.09	1.233
700.	4.14	34.35	27.09	1.246
710.	4.03	34.35	27.09	1.259
720.	3.92	34.35	27.09	1.272
730.	3.81	34.35	27.09	1.285
740.	3.70	34.35	27.09	1.298
750.	3.59	34.35	27.09	1.311
760.	3.48	34.35	27.09	1.324
770.	3.37	34.35	27.09	1.337
780.	3.26	34.35	27.09	1.350
790.	3.15	34.35	27.09	1.363
800.	3.04	34.35	27.09	1.376
810.	2.93	34.35	27.09	1.389
820.	2.82	34.35	27.09	1.402
830.	2.71	34.35	27.09	1.415
840.	2.60	34.35	27.09	1.428
850.	2.49	34.35	27.09	1.441
860.	2.38	34.35	27.09	1.454
870.	2.27	34.35	27.09	1.467
880.	2.16	34.35	27.09	1.480
890.	2.05	34.35	27.09	1.493
900.	1.94	34.35	27.09	1.506
910.	1.83	34.35	27.09	1.519
920.	1.72	34.35	27.09	1.532
930.	1.61	34.35	27.09	1.545
940.	1.50	34.35	27.09	1.558
950.	1.39	34.35	27.09	1.571
960.	1.28	34.35	27.09	1.584
970.	1.17	34.35	27.09	1.597
980.	1.06	34.35	27.09	1.610
990.	0.95	34.35	27.09	1.623
1000.	0.84	34.35	27.09	1.636

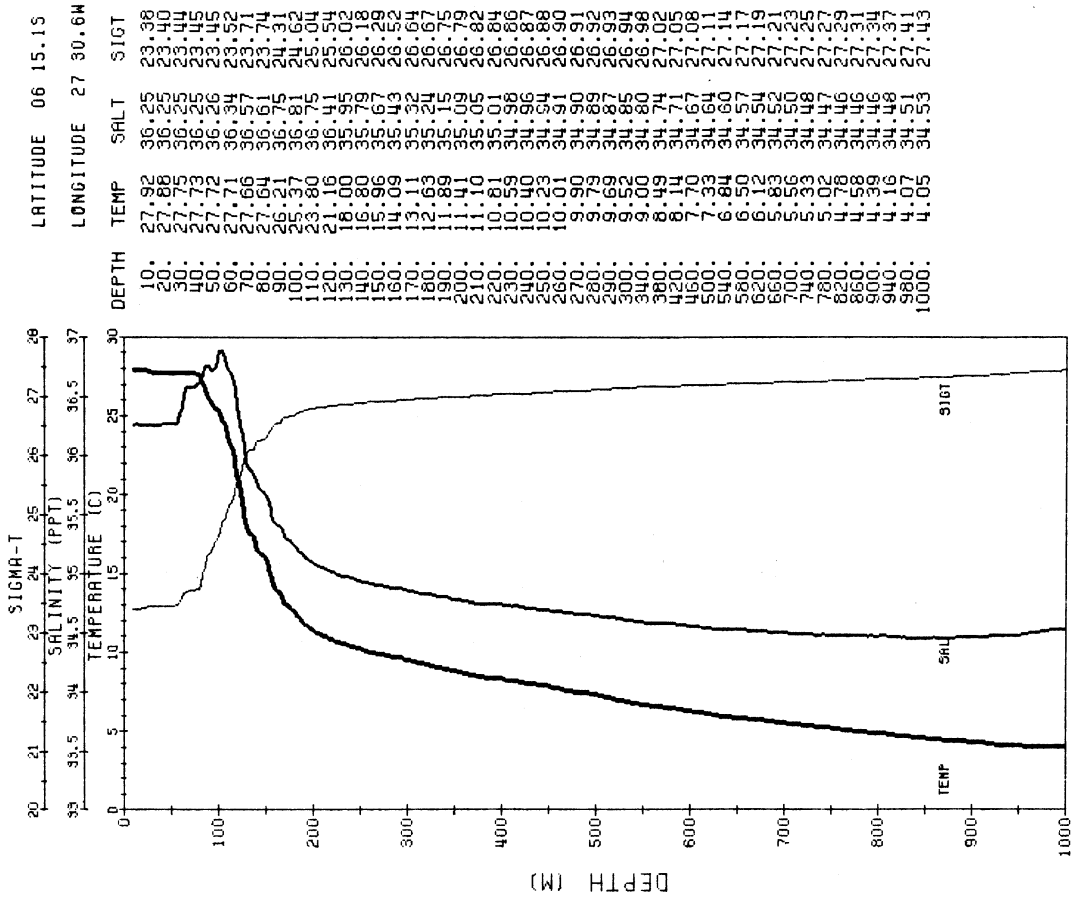
# STATION 21

R/V RESEARCHER DATE 03 02 80 TIME 2106



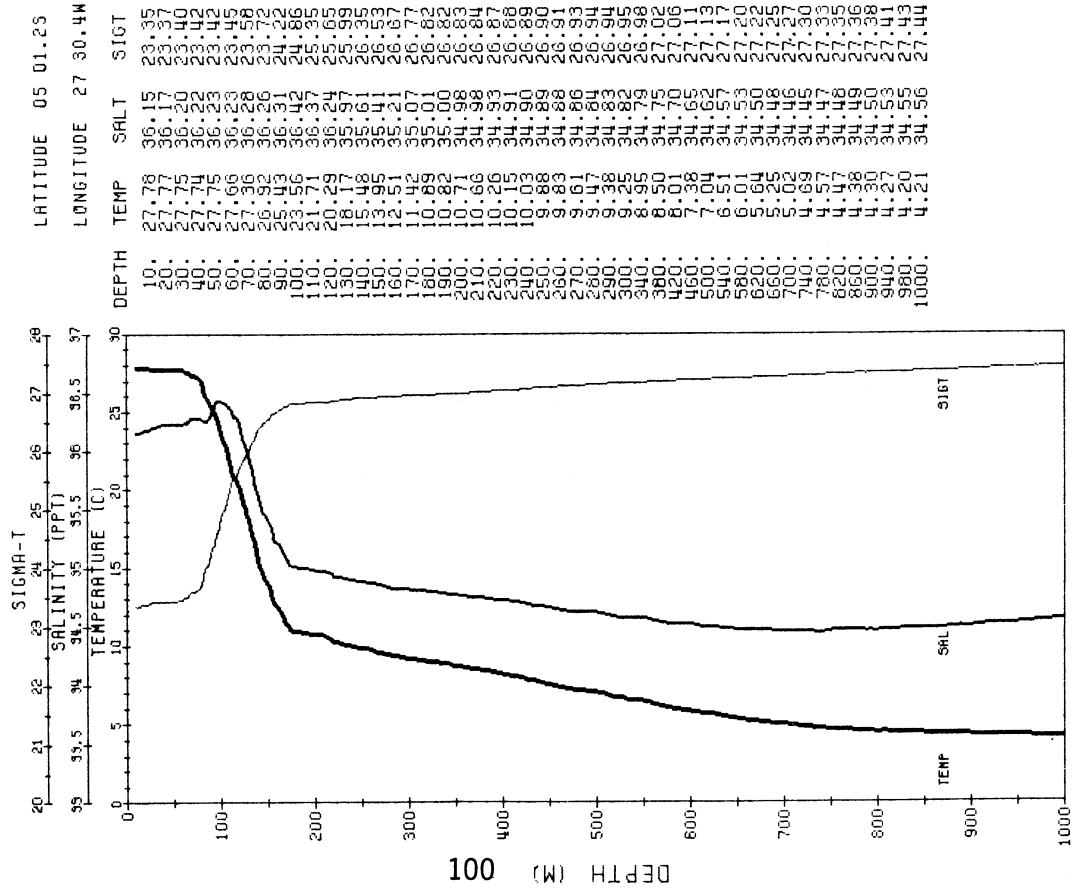
# STATION 22

R/V RESEARCHER DATE 03 03 80 TIME 1914



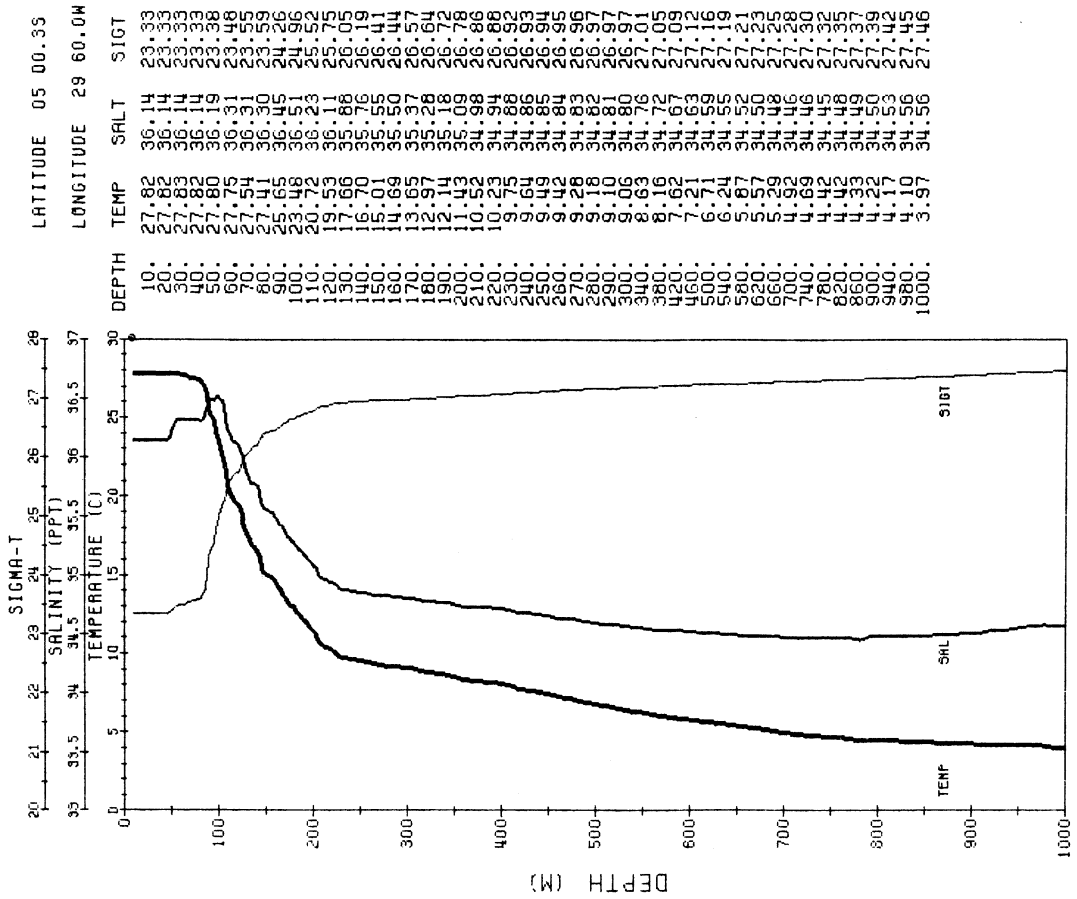
# STATION 23

R/V RESEARCHER DATE 03 04 80 TIME 1431



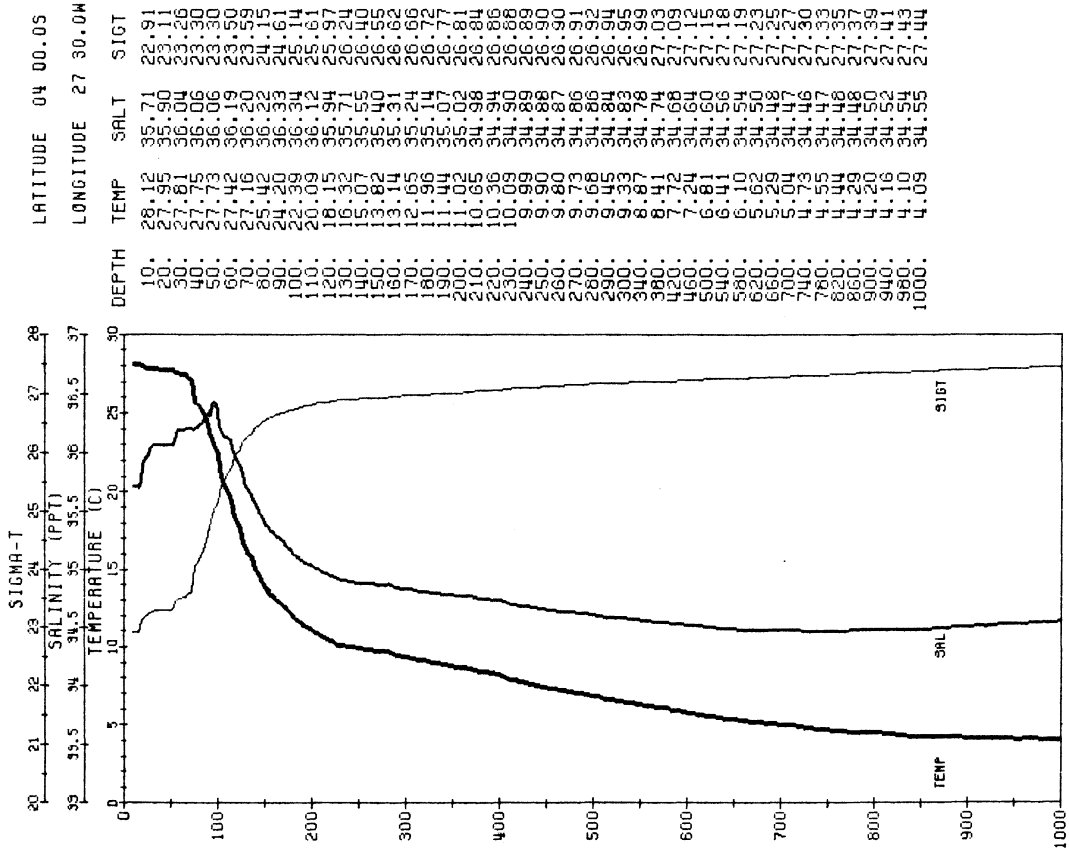
# STATION 24

R/V RESEARCHER DATE 03 05 80 TIME 0437



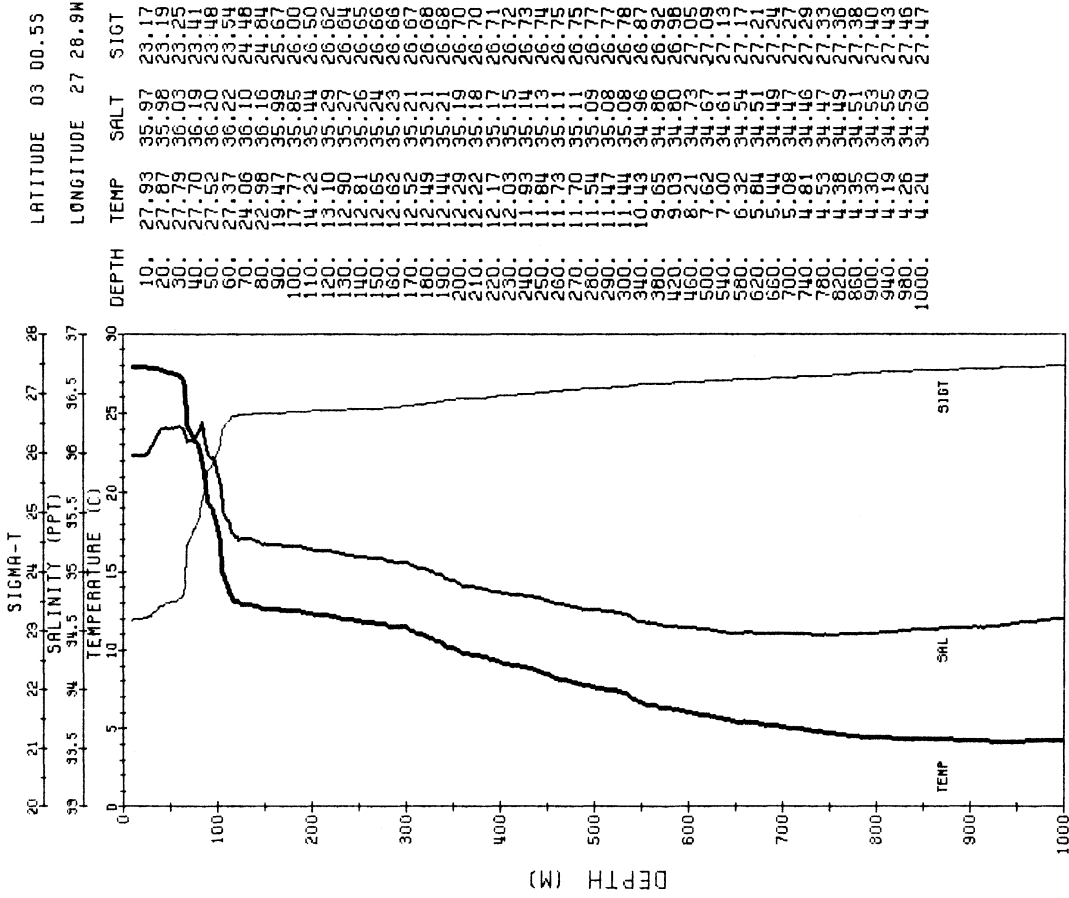
# STATION 25

R/V RESEARCHER DATE 03 05 80 TIME 2125



# STATION 26

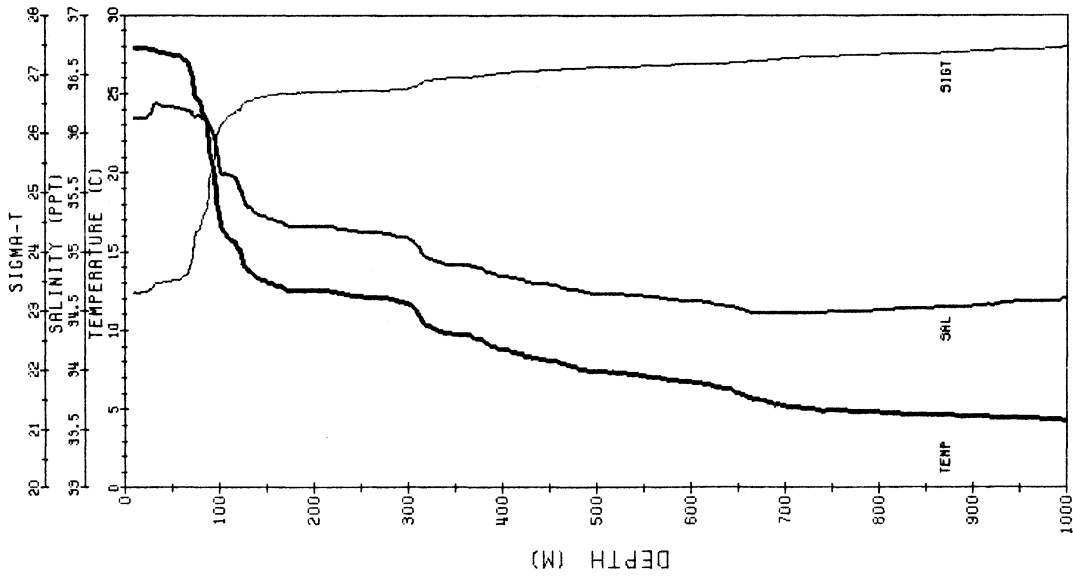
R/V RESEARCHER DATE 03 06 80 TIME 0414



# STATION 27

R/V RESEARCHER DATE 03 06 80 TIME 1119

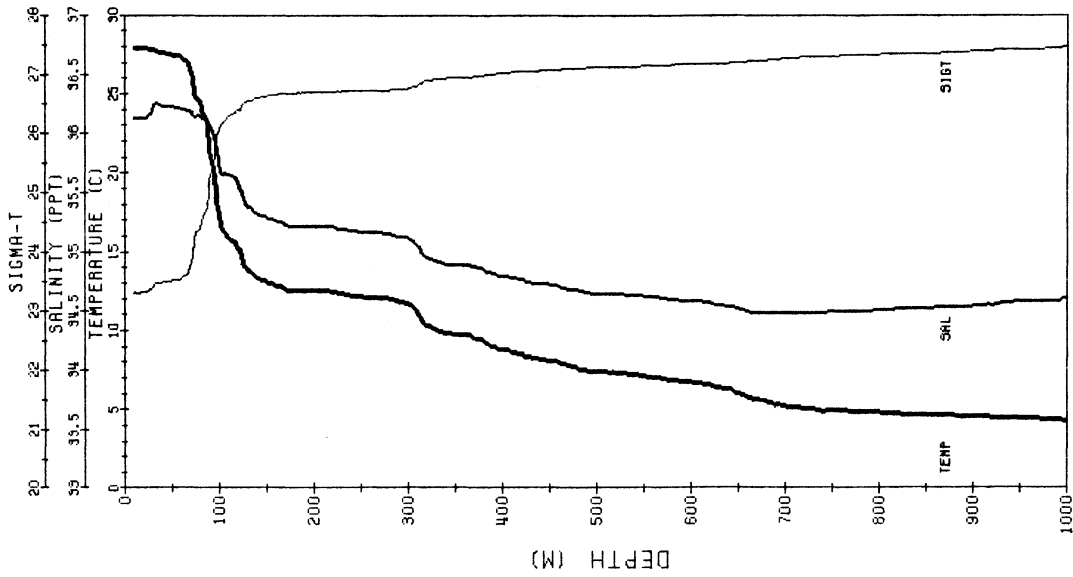
DEPTH	TEMP	SALT	SIGT	DYNH
10.	27.66	35.91	23.21	.009
20.	27.72	36.12	23.35	.051
30.	27.74	36.23	23.49	.095
40.	27.74	36.24	23.55	.139
50.	27.72	36.25	23.61	.183
60.	27.68	36.21	23.65	.226
70.	27.64	36.19	23.71	.268
80.	27.48	36.00	23.81	.306
90.	27.43	35.72	23.94	.343
100.	17.92	35.56	23.98	.387
110.	17.82	35.38	24.05	.404
120.	17.62	35.30	24.13	.420
130.	17.44	35.23	24.21	.430
140.	17.34	35.17	24.29	.439
150.	17.24	35.12	24.37	.445
160.	17.16	35.07	24.44	.454
170.	17.09	35.03	24.51	.459
180.	17.03	35.00	24.58	.468
190.	17.06	35.01	24.65	.476
200.	17.36	35.21	24.72	.485
210.	17.24	35.18	24.79	.499
220.	17.04	35.15	24.86	.513
230.	17.99	35.14	24.93	.527
240.	17.90	35.13	25.00	.541
250.	17.83	35.11	25.07	.555
260.	17.76	35.09	25.14	.569
270.	17.63	35.08	25.21	.583
280.	17.45	35.06	25.28	.596
290.	17.24	35.05	25.35	.610
300.	17.16	35.05	25.42	.623
340.	9.27	34.84	26.97	.637
380.	8.87	34.81	27.01	.700
420.	8.31	34.72	27.06	.746
460.	8.30	34.68	27.09	.791
500.	7.69	34.65	27.11	.833
540.	7.35	34.65	27.12	.874
580.	6.91	34.58	27.17	.916
620.	6.54	34.58	27.22	.958
660.	6.06	34.47	27.27	1.002
700.	5.54	34.47	27.31	1.047
740.	4.99	34.46	27.33	1.091
780.	4.50	34.47	27.35	1.137
820.	4.00	34.48	27.37	1.180
860.	3.50	34.48	27.37	1.222
900.	3.07	34.49	27.40	1.264
940.	2.63	34.51	27.42	1.305
980.	2.23	34.57	27.44	1.345
1000.	1.83	34.59	27.45	1.385



# STATION 28

R/V RESEARCHER DATE 03 06 80 TIME 1814

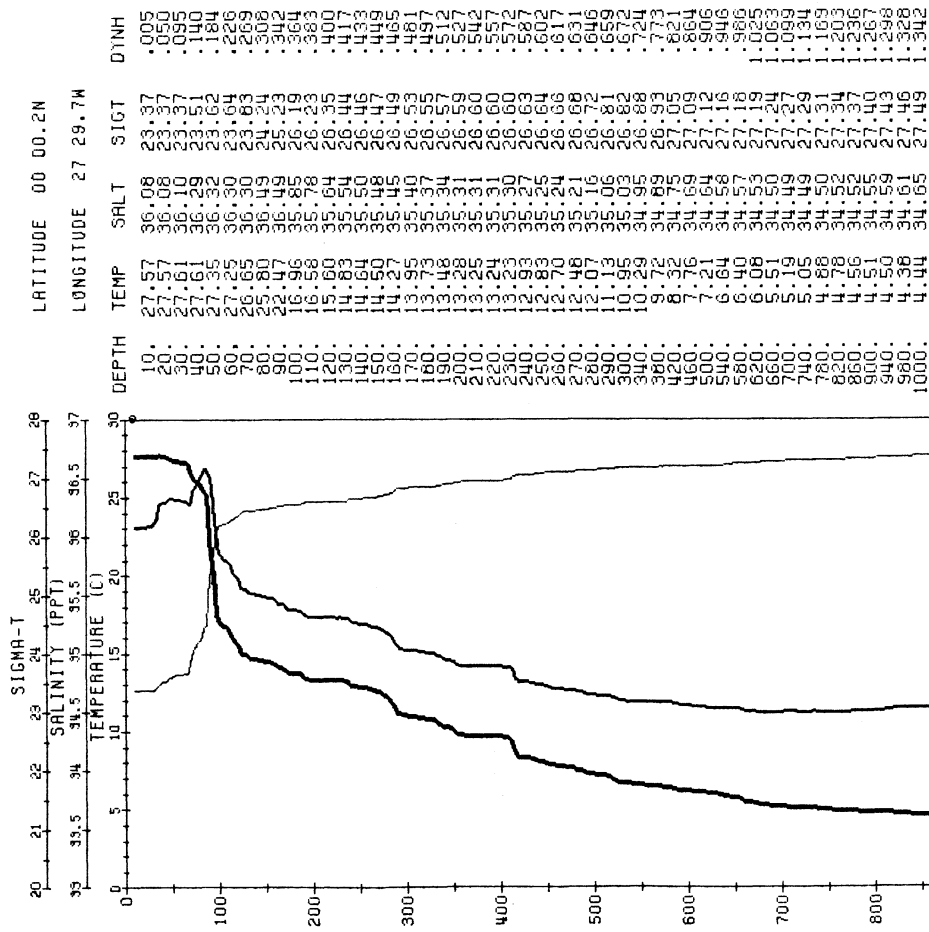
DEPTH	TEMP	SALT	SIGT	DYNH
10.	27.92	36.13	23.29	.005
20.	27.87	36.13	23.31	.050
30.	27.78	36.18	23.38	.096
40.	27.60	36.22	23.47	.141
50.	27.46	36.23	23.51	.185
60.	27.34	36.20	23.54	.229
70.	27.50	36.17	23.55	.271
80.	24.43	36.07	23.61	.310
90.	21.40	35.77	23.68	.343
100.	17.92	35.65	23.72	.387
110.	17.82	35.48	23.79	.404
120.	17.62	35.39	23.86	.420
130.	17.44	35.32	23.93	.430
140.	17.34	35.26	24.00	.439
150.	17.24	35.21	24.07	.445
160.	17.16	35.17	24.14	.454
170.	17.09	35.14	24.21	.459
180.	17.03	35.11	24.28	.468
190.	17.06	35.12	24.35	.476
200.	17.36	35.21	24.42	.485
210.	17.24	35.19	24.49	.499
220.	17.04	35.17	24.56	.513
230.	17.99	35.16	24.63	.527
240.	17.90	35.16	24.70	.541
250.	17.83	35.15	24.77	.555
260.	17.76	35.15	24.84	.569
270.	17.63	35.13	24.91	.583
280.	17.45	35.11	24.98	.596
290.	17.24	35.11	25.05	.610
300.	17.16	35.11	25.12	.623
340.	9.79	34.89	26.74	.637
380.	9.33	34.85	26.92	.700
420.	8.84	34.76	27.03	.746
460.	8.31	34.70	27.07	.807
500.	7.77	34.64	27.11	.851
540.	7.35	34.62	27.12	.893
580.	6.90	34.59	27.15	.935
620.	6.48	34.59	27.19	.976
660.	6.06	34.56	27.21	1.017
700.	5.54	34.48	27.26	1.059
740.	5.06	34.48	27.30	1.101
780.	4.50	34.48	27.33	1.143
820.	4.00	34.49	27.35	1.185
860.	3.50	34.51	27.37	1.227
900.	3.07	34.52	27.39	1.269
940.	2.63	34.56	27.41	1.311
980.	2.23	34.57	27.43	1.353
1000.	1.83	34.61	27.46	1.395





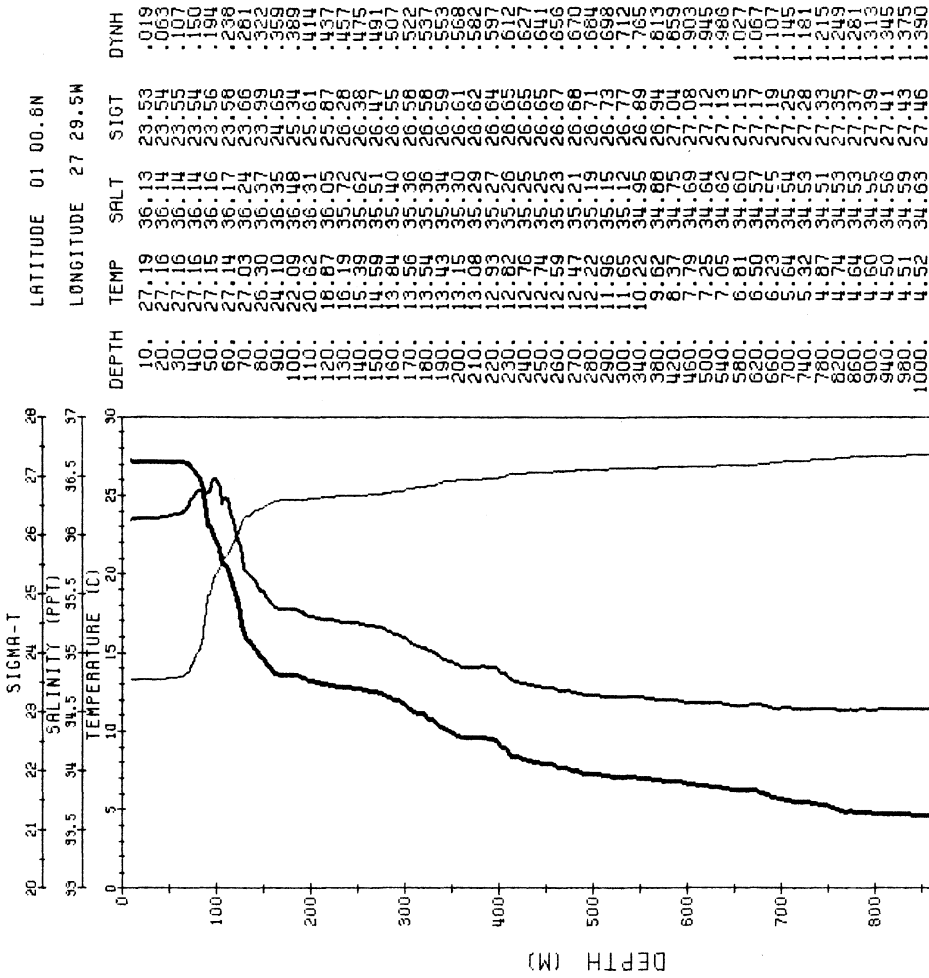
# STATION 29

R/V RESEARCHER DATE 03 07 80 TIME 0118



# STATION 30

R/V RESEARCHER DATE 03 07 80 TIME 0926

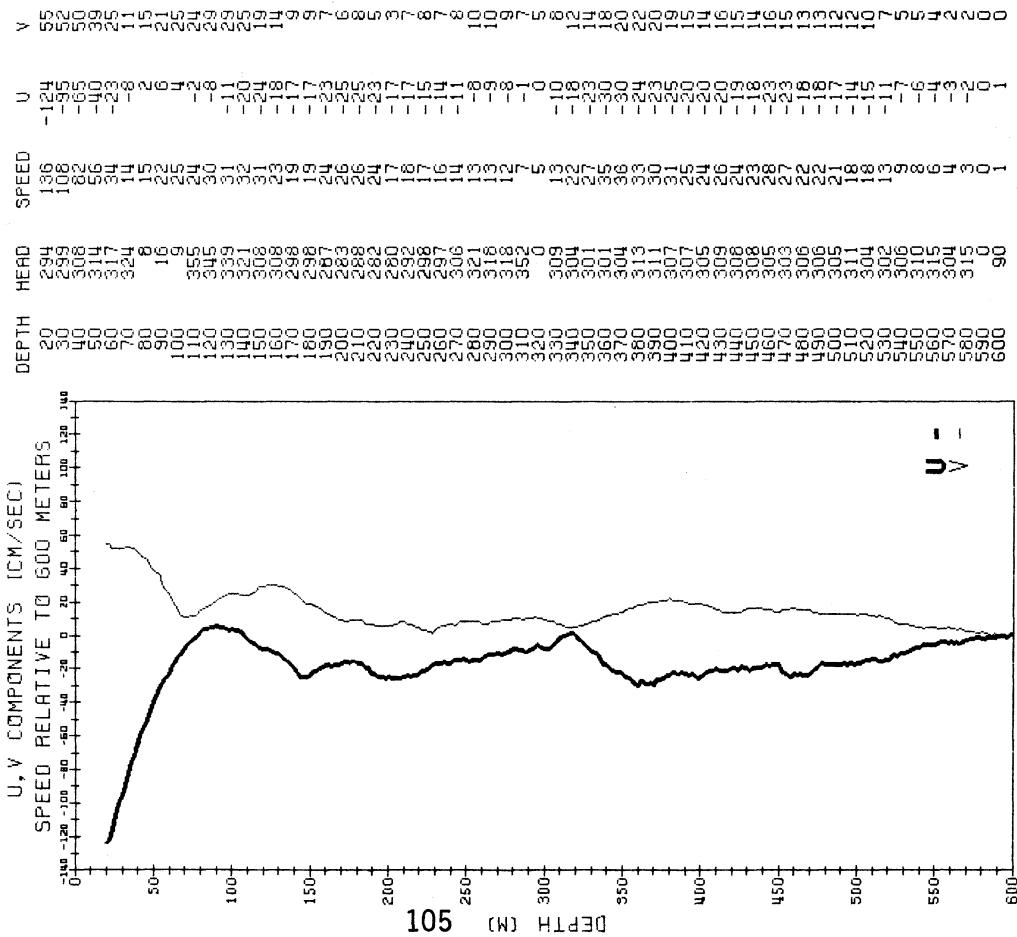


## Appendix 4

### Cyclesonde plots and listings

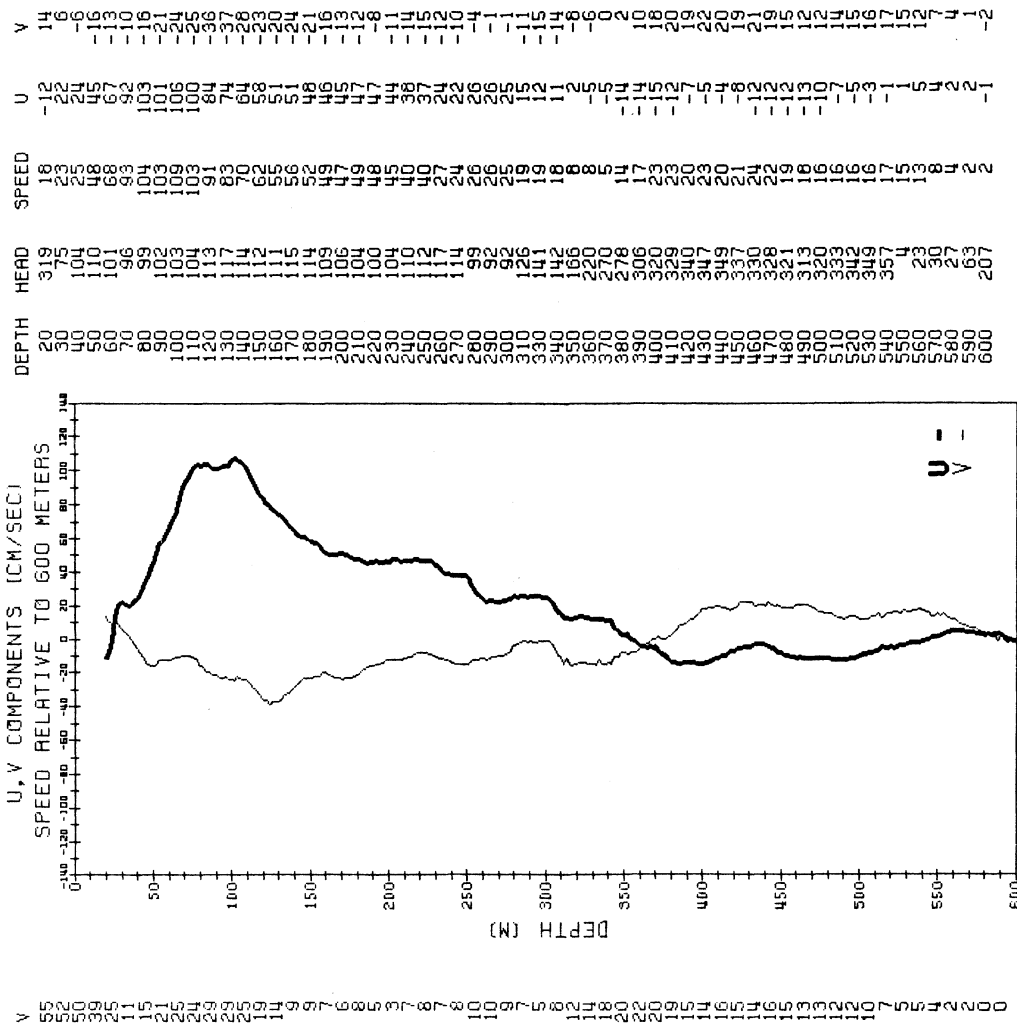
# CYCLESØNDE 1

R/V RESEARCHER DATE 07 10 79 TIME 1425  
 LATITUDE 00 31.4N LONGITUDE 15 00.0W



# CYCLESØNDE 2

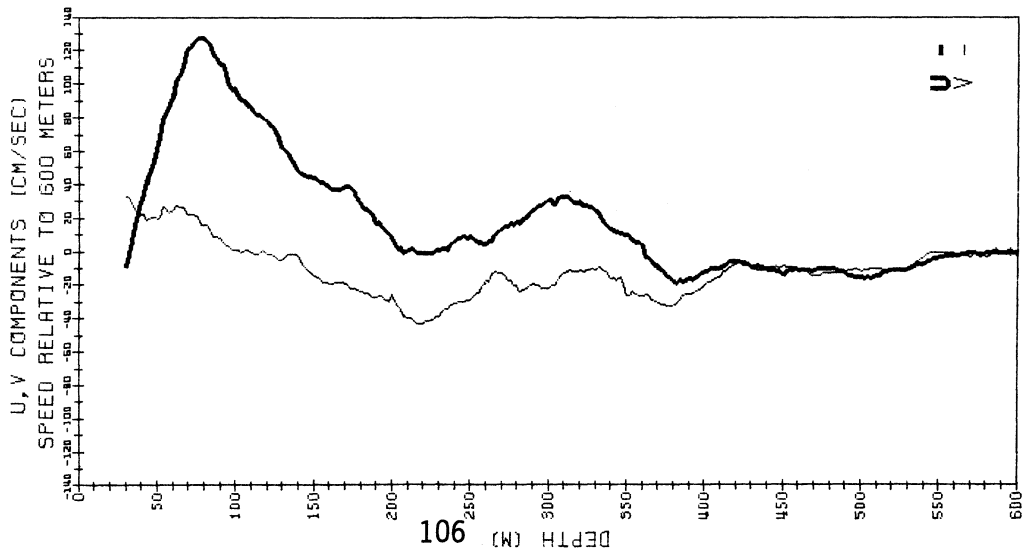
R/V RESEARCHER DATE 07 10 79 TIME 1802  
 LATITUDE 00 00.0N LONGITUDE 15 00.0W



### CYCLESØNDE 3

R/V RESEARCHER DATE 07 10 79 TIME 2242  
 LATITUDE 00 29.9S LONGITUDE 14 59.1W

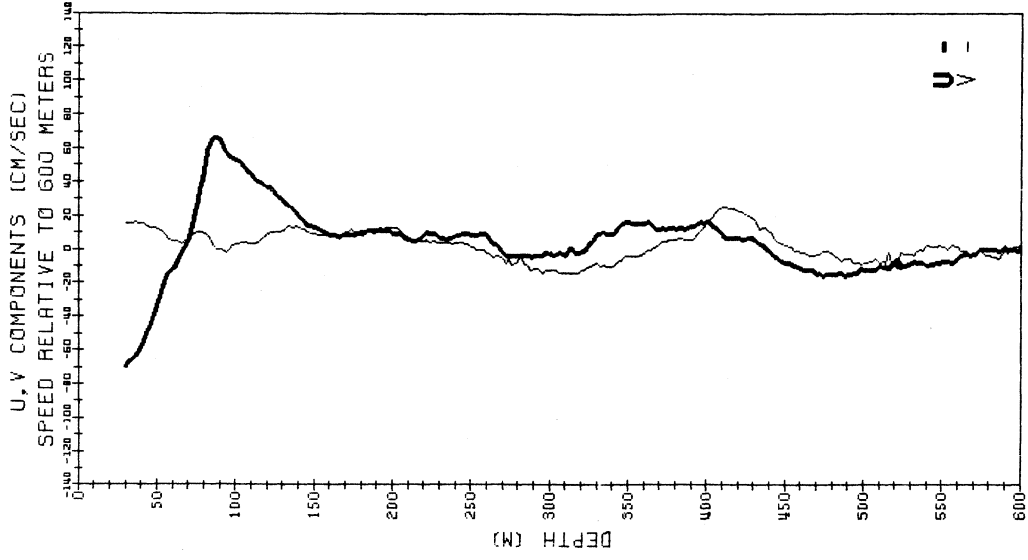
DEPTH	HEAD	SPEED	U	V
30	345	34	93	33
40	353	36	92	20
50	72	35	92	25
60	75	35	127	16
70	80	123	112	8
80	83	112	86	10
90	86	119	88	10
100	89	86	78	10
110	90	86	63	10
120	91	78	49	15
130	95	63	43	22
140	92	46	39	19
150	106	43	39	19
160	116	43	39	23
170	128	37	17	25
180	148	27	9	25
190	160	27	0	22
200	179	27	0	22
210	180	27	0	22
220	178	28	0	22
230	167	28	0	22
240	162	28	0	22
250	161	28	0	22
260	161	28	0	22
270	161	28	0	22
280	161	28	0	22
290	161	28	0	22
300	161	28	0	22
310	161	28	0	22
320	161	28	0	22
330	161	28	0	22
340	161	28	0	22
350	161	28	0	22
360	161	28	0	22
370	161	28	0	22
380	161	28	0	22
390	161	28	0	22
400	161	28	0	22
410	161	28	0	22
420	161	28	0	22
430	161	28	0	22
440	161	28	0	22
450	161	28	0	22
460	161	28	0	22
470	161	28	0	22
480	161	28	0	22
490	161	28	0	22
500	161	28	0	22
510	161	28	0	22
520	161	28	0	22
530	161	28	0	22
540	161	28	0	22
550	161	28	0	22
560	161	28	0	22
570	161	28	0	22
580	161	28	0	22
590	161	28	0	22
600	161	28	0	22



### CYCLESØNDE 4

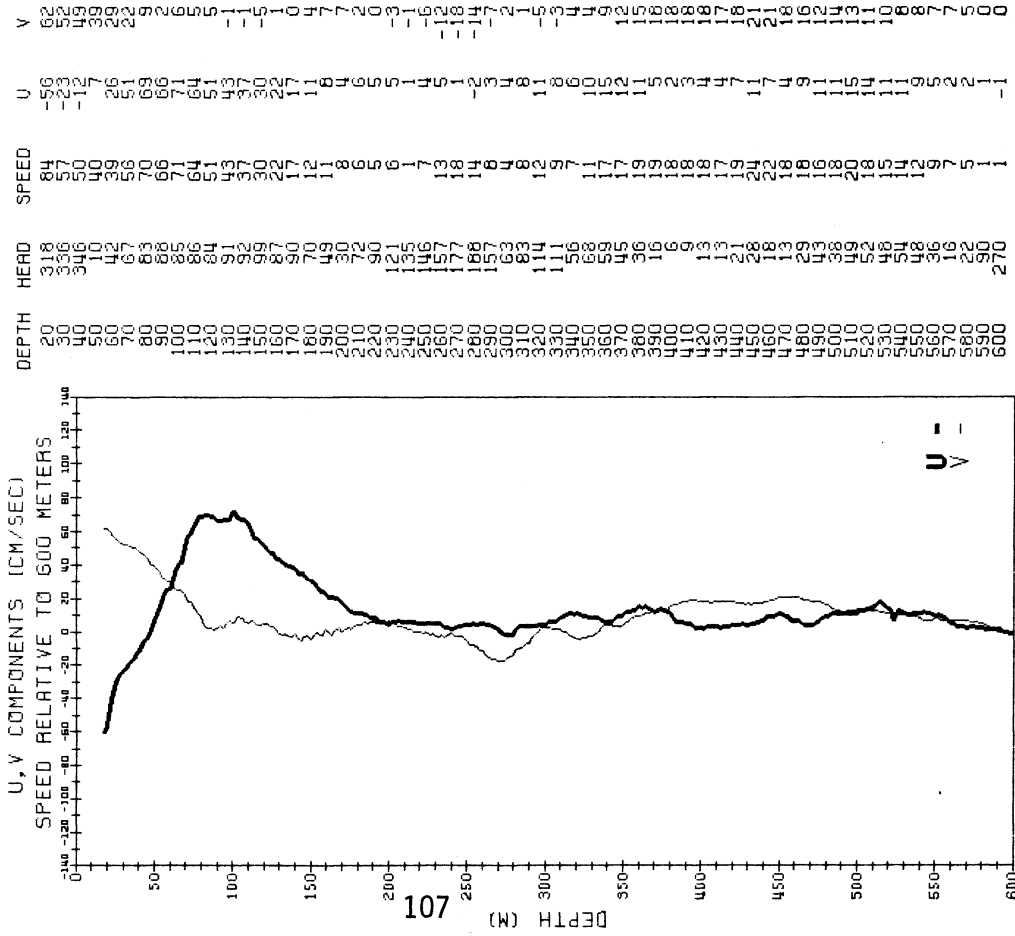
R/V RESEARCHER DATE 07 11 79 TIME 0628  
 LATITUDE 00 01.2S LONGITUDE 16 31.5W

DEPTH	HEAD	SPEED	U	V
30	282	72	-70	15
40	284	91	-34	15
50	289	36	-12	15
60	293	16	46	9
70	45	47	65	0
80	79	65	44	3
90	90	53	36	9
100	87	44	20	3
110	86	37	11	3
120	76	31	8	3
130	69	24	3	3
140	57	16	1	3
150	55	11	1	3
160	39	11	1	3
170	39	11	1	3
180	35	11	1	3
190	35	11	1	3
200	35	11	1	3
210	35	11	1	3
220	35	11	1	3
230	35	11	1	3
240	35	11	1	3
250	35	11	1	3
260	35	11	1	3
270	35	11	1	3
280	35	11	1	3
290	35	11	1	3
300	35	11	1	3
310	35	11	1	3
320	35	11	1	3
330	35	11	1	3
340	35	11	1	3
350	35	11	1	3
360	35	11	1	3
370	35	11	1	3
380	35	11	1	3
390	35	11	1	3
400	35	11	1	3
410	35	11	1	3
420	35	11	1	3
430	35	11	1	3
440	35	11	1	3
450	35	11	1	3
460	35	11	1	3
470	35	11	1	3
480	35	11	1	3
490	35	11	1	3
500	35	11	1	3
510	35	11	1	3
520	35	11	1	3
530	35	11	1	3
540	35	11	1	3
550	35	11	1	3
560	35	11	1	3
570	35	11	1	3
580	35	11	1	3
590	35	11	1	3
600	35	11	1	3



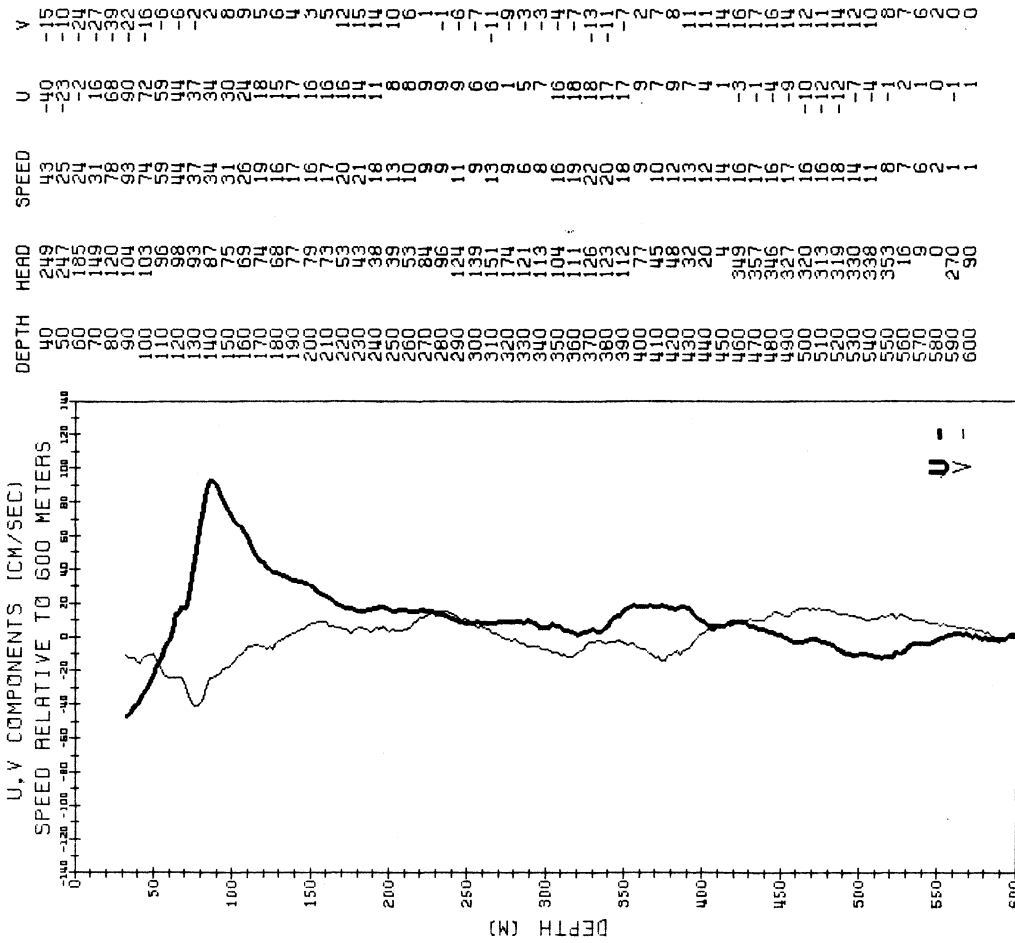
### CYCLESØNDE 5

R/V RESEARCHER DATE 07 11 79 TIME 1524  
 LATITUDE 00 30.0N LONGITUDE 18 00.0W



### CYCLESØNDE 6

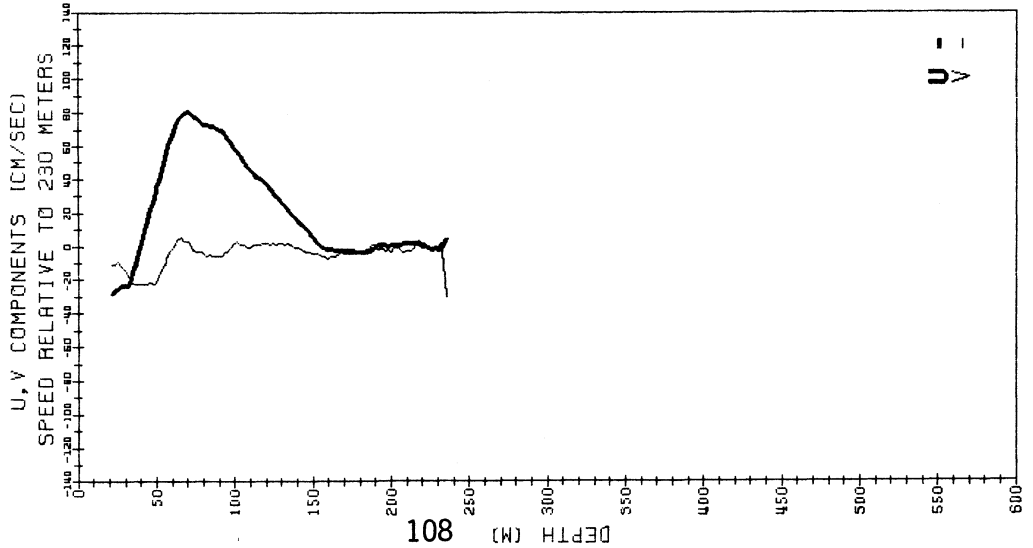
R/V RESEARCHER DATE 07 11 79 TIME 1841  
 LATITUDE 00 00.0N LONGITUDE 18 00.0W



# CYCLESØNDE 7

R/V RESEARCHER DATE 07 11 79 TIME 2307  
 LATITUDE 00 30.0S LONGITUDE 18 00.0W

DEPTH	HEAD	SPEED	U	V
30	239	27	-23	-14
40	180	22	33	-22
50	122	39	67	-13
60	91	81	81	-6
70	88	73	70	2
80	93	59	46	2
90	88	37	37	0
100	90	16	16	-1
110	87	7	7	-1
120	86	4	4	1
130	124	1	1	1
140	188	1	1	1
150	207	1	1	1
160	225	1	1	1
170	196	1	1	1
180	196	1	1	1
200	196	1	1	1
210	196	1	1	1
220	196	1	1	1
230	270	1	1	1

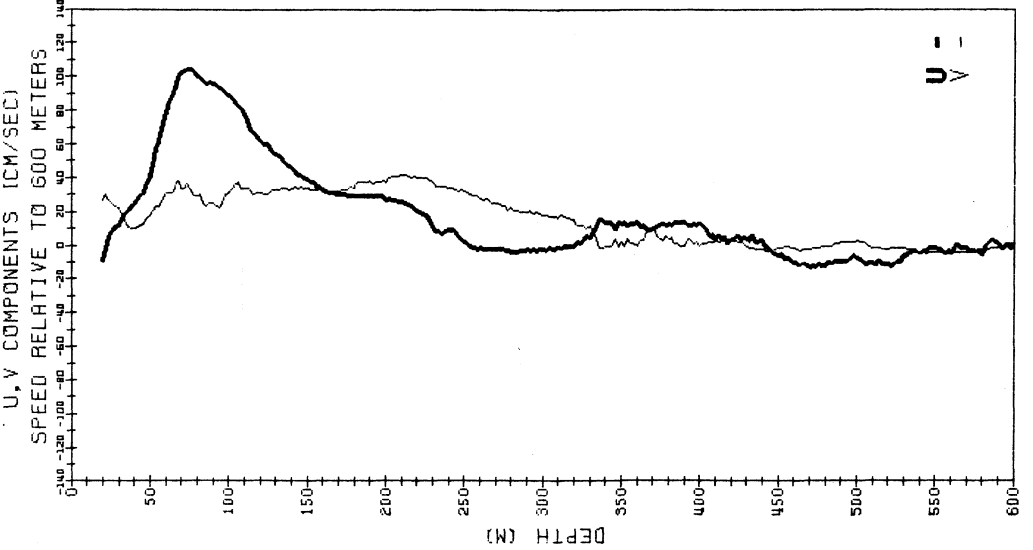


108

# CYCLESØNDE 8

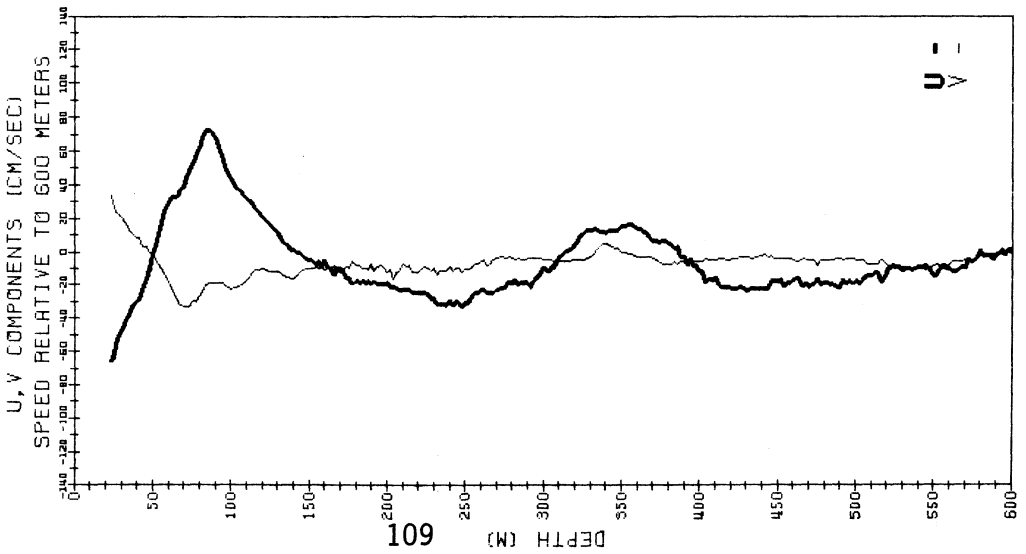
R/V RESEARCHER DATE 07 12 79 TIME 0009  
 LATITUDE 00 30.0S LONGITUDE 18 00.0W

DEPTH	HEAD	SPEED	U	V
20	342	28	19	27
30	279	23	24	10
40	66	25	41	18
50	66	85	79	31
60	99	104	103	49
70	74	108	100	89
80	75	99	99	95
90	66	85	89	82
100	63	63	54	66
110	59	52	46	53
120	54	46	33	33
130	46	44	29	34
140	43	45	26	37
150	40	46	22	40
160	36	46	22	41
170	28	45	22	41
180	18	39	22	41
190	11	35	22	41
200	11	32	22	41
210	11	32	22	41
220	11	32	22	41
230	11	32	22	41
240	359	26	22	41
250	359	26	22	41
260	359	26	22	41
270	359	26	22	41
280	359	26	22	41
290	359	26	22	41
300	359	26	22	41
310	0	11	12	12
320	0	11	12	12
330	20	11	12	12
340	81	11	12	12
350	90	11	12	12
360	43	11	12	12
370	73	11	12	12
380	90	11	12	12
390	45	11	12	12
400	45	11	12	12
410	90	11	12	12
420	53	11	12	12
430	90	11	12	12
440	124	16	10	10
450	261	13	10	10
460	261	13	10	10
470	270	13	10	10
480	263	13	10	10
490	264	13	10	10
500	264	13	10	10
510	264	13	10	10
520	264	13	10	10
530	264	13	10	10
540	264	13	10	10
550	264	13	10	10
560	264	13	10	10
570	264	13	10	10
580	264	13	10	10
590	264	13	10	10
600	264	13	10	10



# CYCLESØNDE 9

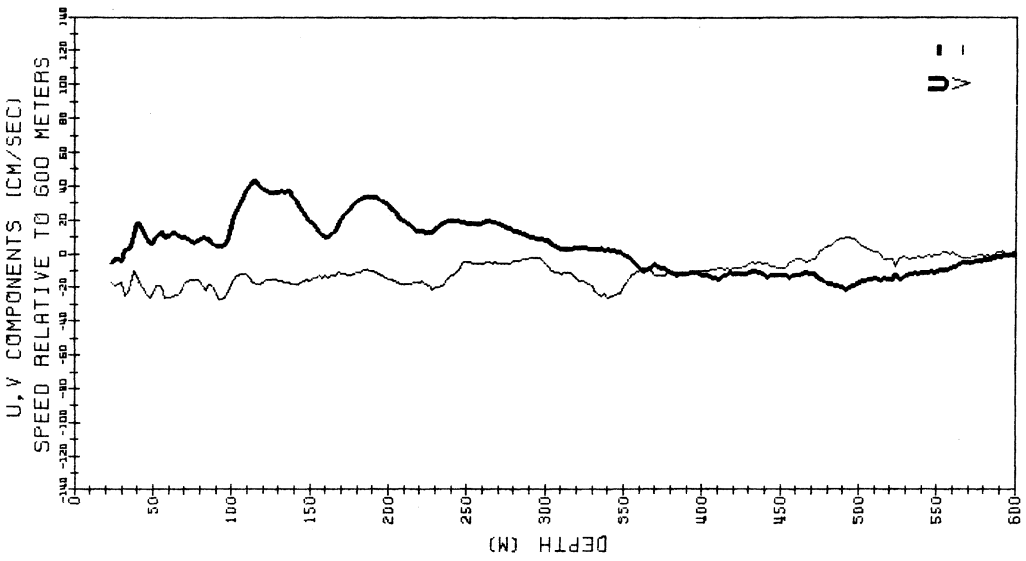
R/V RESEARCHER DATE 07 12 79 TIME 1020  
 LATITUDE 00 01.2N LONGITUDE 20 00.0W



DEPTH (M)	U	V
30	294	21
50	235	18
70	131	18
90	130	19
110	114	19
130	106	17
150	117	16
170	115	16
190	135	12
210	176	11
230	204	12
250	233	12
270	246	15
290	251	11
310	236	8
330	253	13
350	243	10
370	250	9
390	253	9
410	250	9
430	255	5
450	250	5
470	260	5
490	259	5
510	241	5
530	207	5
550	173	5
570	103	5
590	68	5
600	60	5
610	102	5
620	144	5
630	147	5
640	207	5
650	245	5
660	263	5
670	257	5
680	254	5
690	257	5
700	220	5
710	221	5
720	19	5
730	15	5
740	14	5
750	13	5
760	12	5
770	12	5
780	11	5
790	11	5
800	11	5
810	11	5
820	11	5
830	11	5
840	11	5
850	11	5
860	11	5
870	11	5
880	11	5
890	11	5
900	11	5

# CYCLESØNDE 10

R/V RESEARCHER DATE 07 12 79 TIME 2129  
 LATITUDE 00 31.1N LONGITUDE 21 59.8W

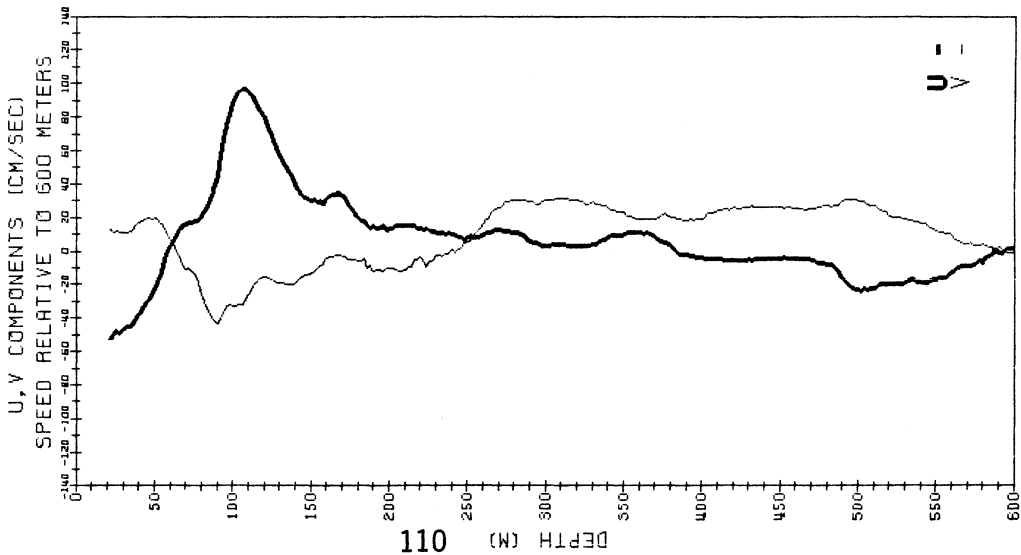


DEPTH (M)	U	V
30	18	17
50	11	23
70	10	28
90	9	21
110	16	24
130	38	40
150	38	42
170	33	39
190	10	38
210	21	25
230	34	24
250	10	16
270	32	21
290	11	11
310	15	10
330	20	18
350	15	10
370	8	10
390	8	10
410	10	10
430	10	10
450	10	10
470	10	10
490	10	10
510	10	10
530	10	10
550	10	10
570	10	10
590	10	10
600	10	10

CYCLESØNDE 11

R/V RESEARCHER DATE 07 13 79 TIME 0053  
 LATITUDE 00 00.5N LONGITUDE 21 59.5W

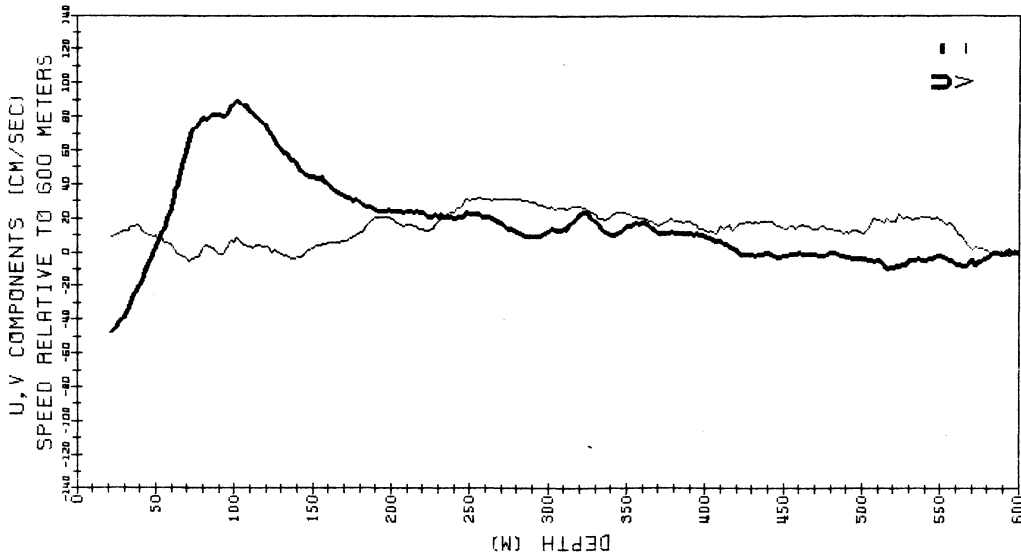
DEPTH	HEAD	SPEED	U	V
30	283	48	-47	11
40	294	42	-38	17
50	311	30	-23	20
60	325	8	3	7
70	341	19	16	-26
80	354	33	21	-43
90	362	62	45	-33
100	374	94	68	-26
110	381	98	95	-15
120	388	81	68	-19
130	391	61	40	-13
140	395	44	30	-11
150	397	33	31	-11
160	395	33	21	-16
170	395	21	15	-10
180	397	17	15	-11
190	396	11	14	-11
200	396	11	14	-11
210	396	11	14	-11
220	396	11	14	-11
230	396	11	14	-11
240	396	11	14	-11
250	396	11	14	-11
260	396	11	14	-11
270	396	11	14	-11
280	396	11	14	-11
290	396	11	14	-11
300	396	11	14	-11
310	396	11	14	-11
320	396	11	14	-11
330	396	11	14	-11
340	396	11	14	-11
350	396	11	14	-11
360	396	11	14	-11
370	396	11	14	-11
380	396	11	14	-11
390	396	11	14	-11
400	396	11	14	-11
410	396	11	14	-11
420	396	11	14	-11
430	396	11	14	-11
440	396	11	14	-11
450	396	11	14	-11
460	396	11	14	-11
470	396	11	14	-11
480	396	11	14	-11
490	396	11	14	-11
500	396	11	14	-11
510	396	11	14	-11
520	396	11	14	-11
530	396	11	14	-11
540	396	11	14	-11
550	396	11	14	-11
560	396	11	14	-11
570	396	11	14	-11
580	396	11	14	-11
590	396	11	14	-11
600	396	11	14	-11



CYCLESØNDE 12

R/V RESEARCHER DATE 07 13 79 TIME 0546  
 LATITUDE 00 30.0S LONGITUDE 22 00.0W

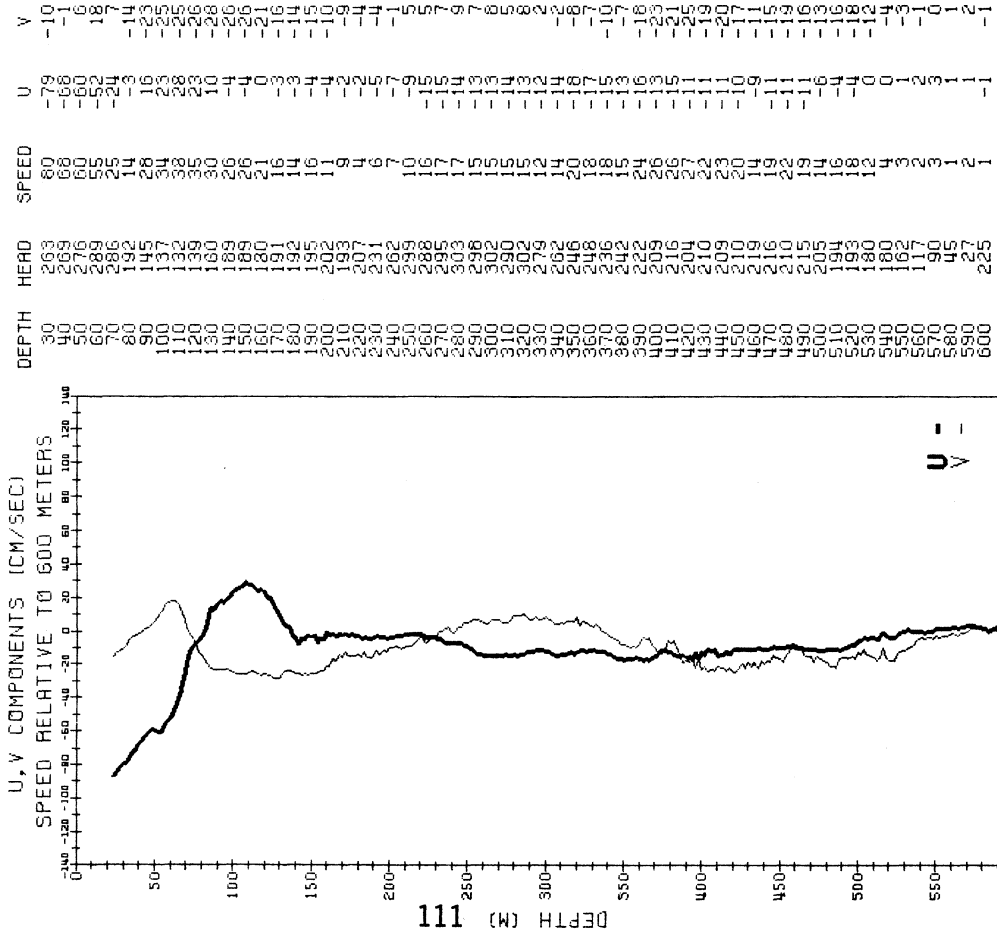
DEPTH	HEAD	SPEED	U	V
30	288	41	-39	13
40	307	25	-20	15
50	317	10	26	14
60	331	26	59	14
70	341	79	81	12
80	349	81	83	9
90	356	83	75	6
100	361	61	54	3
110	364	40	33	2
120	366	33	25	2
130	367	33	25	2
140	367	33	25	2
150	367	33	25	2
160	367	33	25	2
170	367	33	25	2
180	367	33	25	2
190	367	33	25	2
200	367	33	25	2
210	367	33	25	2
220	367	33	25	2
230	367	33	25	2
240	367	33	25	2
250	367	33	25	2
260	367	33	25	2
270	367	33	25	2
280	367	33	25	2
290	367	33	25	2
300	367	33	25	2
310	367	33	25	2
320	367	33	25	2
330	367	33	25	2
340	367	33	25	2
350	367	33	25	2
360	367	33	25	2
370	367	33	25	2
380	367	33	25	2
390	367	33	25	2
400	367	33	25	2
410	367	33	25	2
420	367	33	25	2
430	367	33	25	2
440	367	33	25	2
450	367	33	25	2
460	367	33	25	2
470	367	33	25	2
480	367	33	25	2
490	367	33	25	2
500	367	33	25	2
510	367	33	25	2
520	367	33	25	2
530	367	33	25	2
540	367	33	25	2
550	367	33	25	2
560	367	33	25	2
570	367	33	25	2
580	367	33	25	2
590	367	33	25	2
600	367	33	25	2





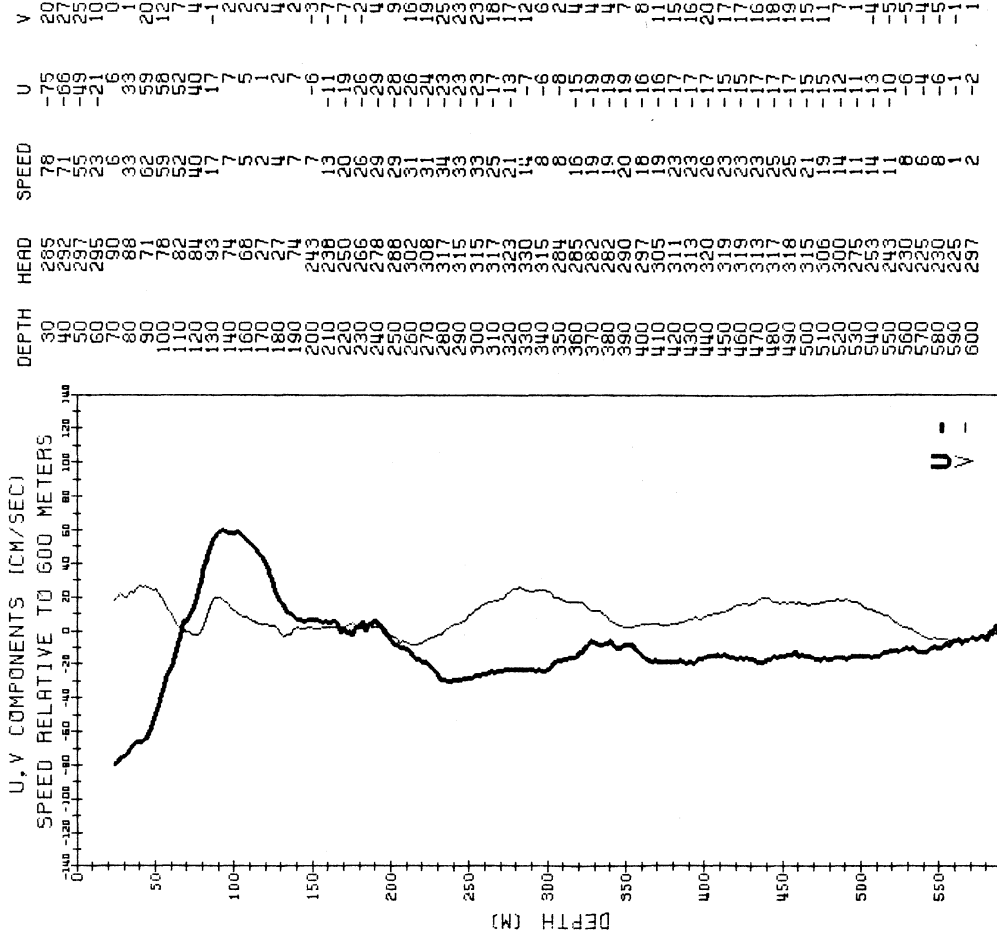
### CYCLESØNDE 13

R/V RESEARCHER DATE 07 14 79 TIME 1605  
 LATITUDE 01 03.4N LONGITUDE 25 05.3W



### CYCLESØNDE 14

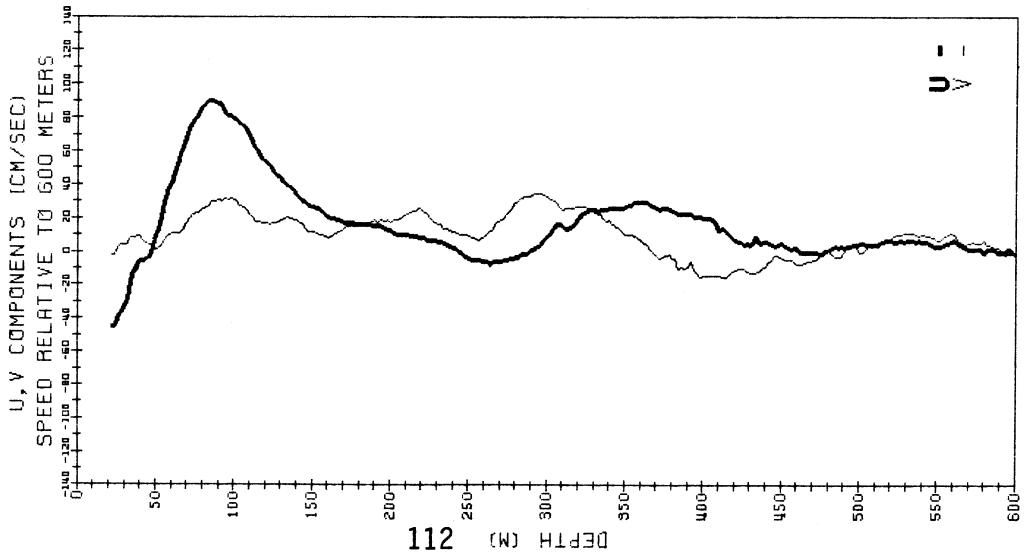
R/V RESEARCHER DATE 07 14 79 TIME 2026  
 LATITUDE 00 27.1N LONGITUDE 25 01.1W



CYCLESØNDE 15

R/V RESEARCHER DATE 07 15 79 TIME 0024  
 LATITUDE 00 00.35 LONGITUDE 24 56.9W

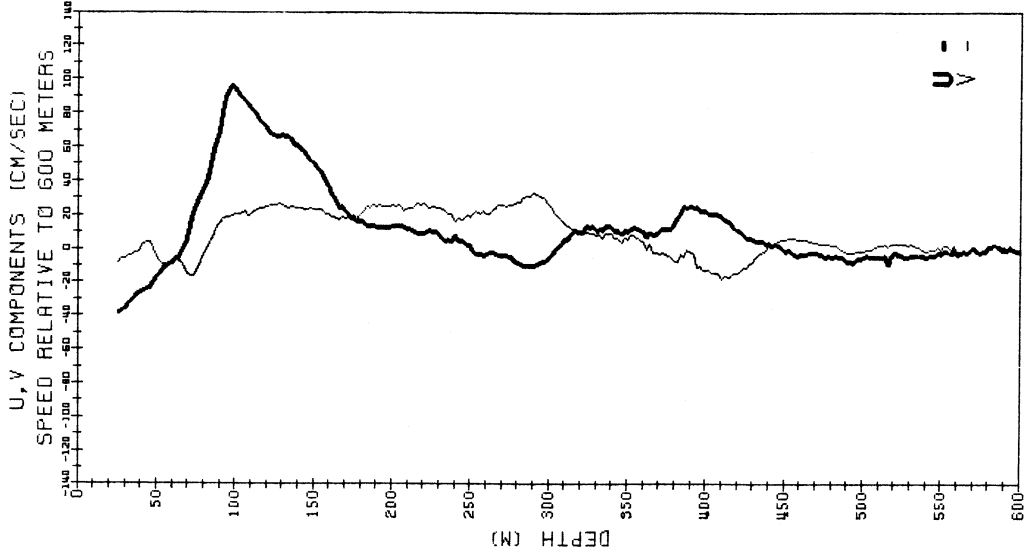
DEPTH	HEAD	SPEED	U	V
30	276	33	-33	49
50	276	19	-9	17
70	76	42	48	26
90	73	70	88	31
100	69	93	79	22
110	73	57	54	19
120	67	48	34	11
130	61	39	22	14
140	66	30	17	19
150	69	22	11	8
160	51	22	16	19
170	45	23	13	16
180	38	24	11	9
190	37	21	8	9
200	34	17	2	9
210	18	12	-6	9
220	21	10	-3	9
230	9	10	1	9
240	336	29	20	9
250	326	34	20	9
260	354	30	20	9
270	15	34	20	9
280	37	34	20	9
290	37	34	20	9
300	54	34	20	9
310	70	34	20	9
320	70	34	20	9
330	99	34	20	9
340	112	34	20	9
350	139	34	20	9
360	148	34	20	9
370	163	34	20	9
380	143	34	20	9
390	129	34	20	9
400	164	34	20	9
410	180	34	20	9
420	45	34	20	9
430	90	34	20	9
440	90	34	20	9
450	39	34	20	9
460	39	34	20	9
470	45	34	20	9
480	90	34	20	9
490	90	34	20	9
500	39	34	20	9
510	39	34	20	9
520	32	34	20	9
530	31	34	20	9
540	23	34	20	9
550	35	34	20	9
560	11	34	20	9
570	352	34	20	9
580	270	34	20	9
590		34	20	9
600		34	20	9



CYCLESØNDE 16

R/V RESEARCHER DATE 07 15 79 TIME 0444  
 LATITUDE 00 29.9S LONGITUDE 24 56.4W

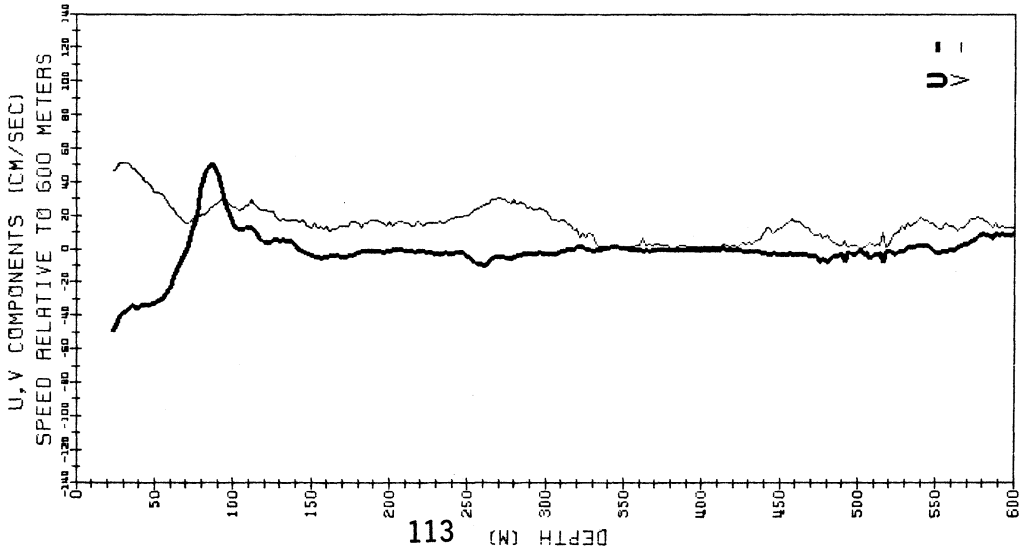
DEPTH	HEAD	SPEED	U	V
30	260	36	35	6
50	270	26	-20	0
70	254	18	-17	0
90	158	11	-8	0
100	97	35	35	15
110	78	71	69	22
120	76	97	83	22
130	71	75	71	29
140	69	72	67	29
150	65	66	61	29
160	55	42	36	23
170	51	28	22	18
180	37	26	16	22
190	27	28	12	27
200	28	27	11	27
210	18	25	8	27
220	18	19	8	27
230	27	16	9	27
240	27	16	9	27
250	351	29	10	26
260	344	29	10	26
270	33	26	9	26
280	343	26	9	26
290	343	26	9	26
300	25	26	9	26
310	25	26	9	26
320	25	26	9	26
330	25	26	9	26
340	25	26	9	26
350	25	26	9	26
360	25	26	9	26
370	107	12	10	9
380	107	12	10	9
390	115	17	11	9
400	131	22	11	9
410	133	22	11	9
420	139	22	11	9
430	139	22	11	9
440	69	16	9	9
450	351	16	9	9
460	333	16	9	9
470	333	16	9	9
480	229	16	9	9
490	229	16	9	9
500	251	16	9	9
510	259	16	9	9
520	307	16	9	9
530	259	16	9	9
540	259	16	9	9
550	229	16	9	9
560	229	16	9	9
570	229	16	9	9
580	229	16	9	9
590	229	16	9	9
600	229	16	9	9



### CYCLESØNDE 17

R/V RESEARCHER DATE 07 15 79 TIME 0926  
 LATITUDE 01 02.4S LONGITUDE 24 57.0W

DEPTH (M)	U	V	SPEED	HEAD
30	0.4	0.1	0.4	323
45	0.7	0.1	0.7	322
50	0.7	0.1	0.7	317
60	0.5	0.1	0.5	315
70	0.3	0.1	0.3	302
80	0.3	0.1	0.3	298
90	0.3	0.1	0.3	293
100	0.3	0.1	0.3	277
110	0.3	0.1	0.3	270
120	0.3	0.1	0.3	267
130	0.3	0.1	0.3	267
140	0.3	0.1	0.3	267
150	0.3	0.1	0.3	243
160	0.3	0.1	0.3	240
170	0.3	0.1	0.3	240
180	0.3	0.1	0.3	235
190	0.3	0.1	0.3	235
200	0.3	0.1	0.3	235
210	0.3	0.1	0.3	235
220	0.3	0.1	0.3	235
230	0.3	0.1	0.3	235
240	0.3	0.1	0.3	235
250	0.3	0.1	0.3	235
260	0.3	0.1	0.3	235
270	0.3	0.1	0.3	235
280	0.3	0.1	0.3	235
290	0.3	0.1	0.3	235
300	0.3	0.1	0.3	235
310	0.3	0.1	0.3	235
320	0.3	0.1	0.3	235
330	0.3	0.1	0.3	235
340	0.3	0.1	0.3	235
350	0.3	0.1	0.3	235
360	0.3	0.1	0.3	235
370	0.3	0.1	0.3	235
380	0.3	0.1	0.3	235
390	0.3	0.1	0.3	235
400	0.3	0.1	0.3	235
410	0.3	0.1	0.3	235
420	0.3	0.1	0.3	235
430	0.3	0.1	0.3	235
440	0.3	0.1	0.3	235
450	0.3	0.1	0.3	235
460	0.3	0.1	0.3	235
470	0.3	0.1	0.3	235
480	0.3	0.1	0.3	235
490	0.3	0.1	0.3	235
500	0.3	0.1	0.3	235
510	0.3	0.1	0.3	235
520	0.3	0.1	0.3	235
530	0.3	0.1	0.3	235
540	0.3	0.1	0.3	235
550	0.3	0.1	0.3	235
560	0.3	0.1	0.3	235
570	0.3	0.1	0.3	235
580	0.3	0.1	0.3	235
590	0.3	0.1	0.3	235
600	0.3	0.1	0.3	235

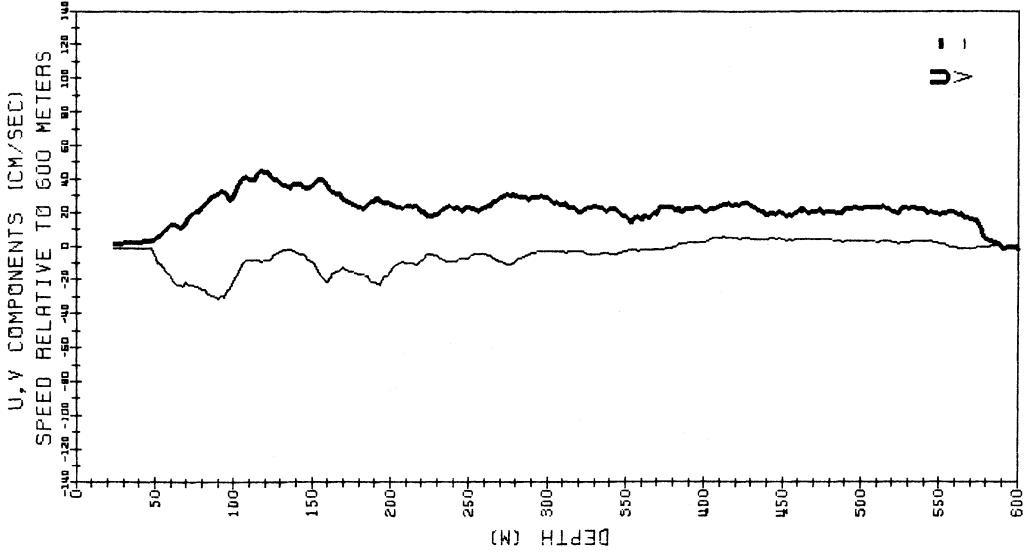


113 DEPTH (M)

### CYCLESØNDE 19

R/V RESEARCHER DATE 07 17 79 TIME 0528  
 LATITUDE 06 03.7S LONGITUDE 24 59.6W

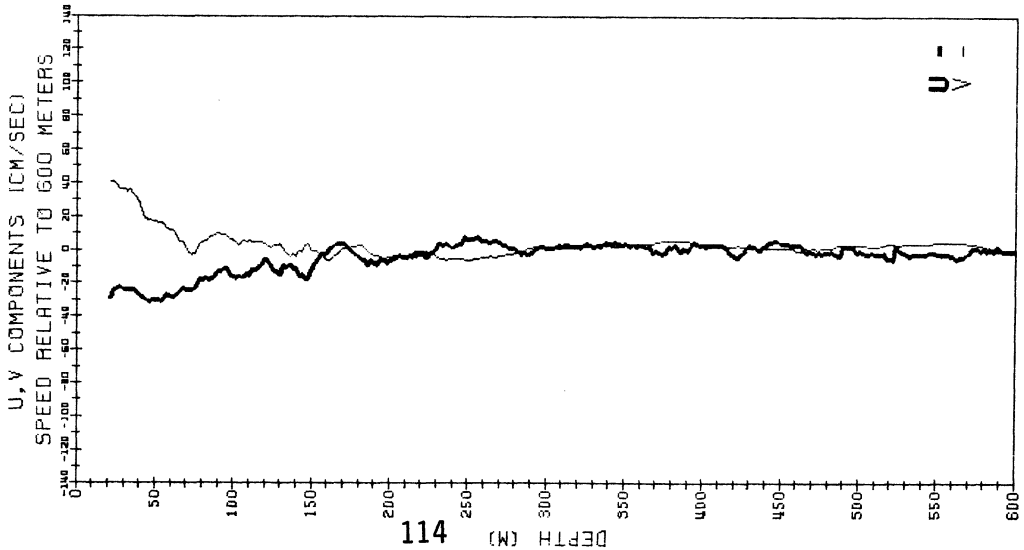
DEPTH (M)	U	V	SPEED	HEAD
50	4	-15	6	141
50	13	-14	22	144
70	14	-16	25	146
80	23	-31	35	139
90	29	-31	44	135
100	44	-31	46	126
110	44	-31	41	101
120	44	-31	45	100
130	44	-31	45	95
140	44	-31	45	104
150	37	-31	42	104
160	36	-31	42	115
170	28	-31	39	126
180	23	-31	29	128
190	23	-31	29	121
200	25	-31	22	113
210	24	-31	22	111
220	23	-31	22	108
230	23	-31	22	112
240	23	-31	22	107
250	23	-31	22	107
260	23	-31	22	107
270	23	-31	22	107
280	23	-31	22	107
290	23	-31	22	107
300	23	-31	22	98
310	23	-31	22	97
320	23	-31	22	97
330	23	-31	22	97
340	23	-31	22	103
350	23	-31	22	103
360	23	-31	22	99
370	23	-31	22	98
380	23	-31	22	98
390	23	-31	22	98
400	23	-31	22	85
410	23	-31	22	85
420	23	-31	22	78
430	23	-31	22	81
440	23	-31	22	77
450	23	-31	22	79
460	23	-31	22	79
470	23	-31	22	79
480	23	-31	22	79
490	23	-31	22	82
500	23	-31	22	82
510	23	-31	22	85
520	23	-31	22	85
530	23	-31	22	85
540	23	-31	22	85
550	23	-31	22	87
560	23	-31	22	87
570	23	-31	22	87
580	23	-31	22	87
590	23	-31	22	87
600	23	-31	22	297



CYCLESØNDE 20

R/V RESEARCHER DATE 07 17 79 TIME 2213  
 LATITUDE 06 59.8S LONGITUDE 25 01.8W

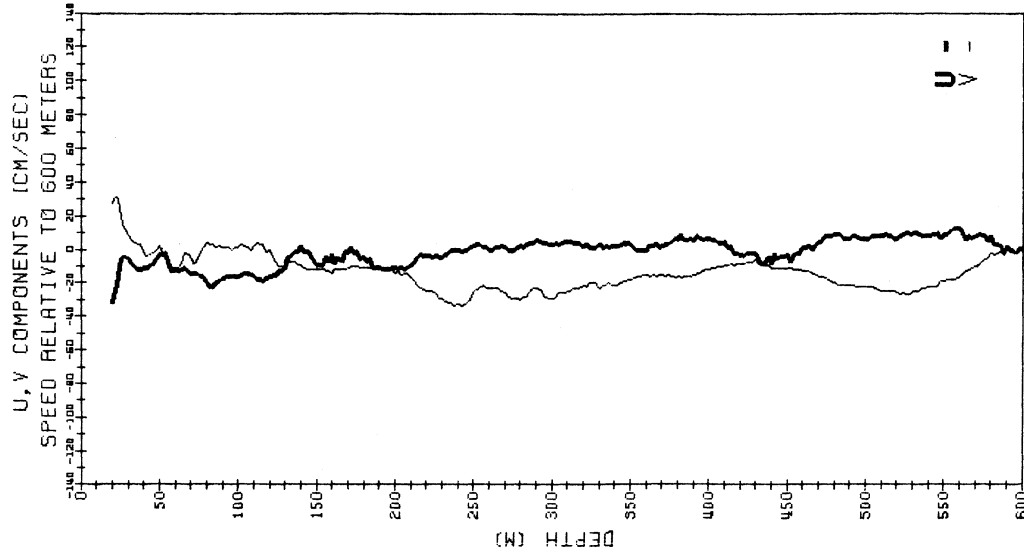
DEPTH (M)	HEAD	SPEED	U	V
30	326	43	-24	36
40	317	40	-27	29
50	310	34	-30	21
60	293	30	-28	17
70	275	24	-18	11
80	268	19	-13	9
90	308	16	-11	9
100	293	16	-11	9
110	299	16	-11	9
120	309	16	-11	9
130	295	16	-11	9
140	290	16	-11	9
150	287	16	-11	9
160	286	16	-11	9
170	286	16	-11	9
180	307	16	-11	9
190	307	16	-11	9
200	305	16	-11	9
210	305	16	-11	9
220	305	16	-11	9
230	305	16	-11	9
240	305	16	-11	9
250	305	16	-11	9
260	305	16	-11	9
270	305	16	-11	9
280	305	16	-11	9
290	305	16	-11	9
300	305	16	-11	9
310	305	16	-11	9
320	305	16	-11	9
330	305	16	-11	9
340	305	16	-11	9
350	305	16	-11	9
360	305	16	-11	9
370	305	16	-11	9
380	305	16	-11	9
390	305	16	-11	9
400	305	16	-11	9
410	305	16	-11	9
420	305	16	-11	9
430	305	16	-11	9
440	305	16	-11	9
450	305	16	-11	9
460	305	16	-11	9
470	305	16	-11	9
480	305	16	-11	9
490	305	16	-11	9
500	305	16	-11	9
510	305	16	-11	9
520	305	16	-11	9
530	305	16	-11	9
540	305	16	-11	9
550	305	16	-11	9
560	305	16	-11	9
570	305	16	-11	9
580	305	16	-11	9
590	305	16	-11	9
600	305	16	-11	9



CYCLESØNDE 21

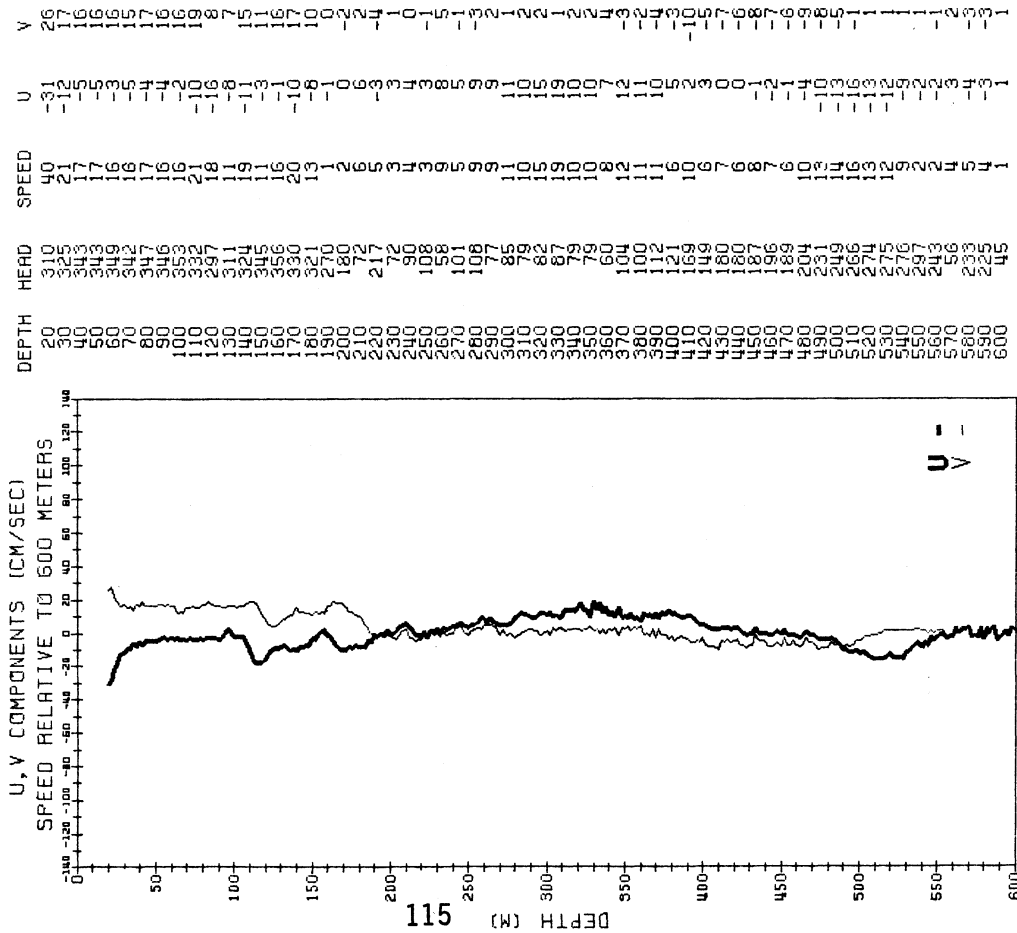
R/V RESEARCHER DATE 07 18 79 TIME 0458  
 LATITUDE 08 00.0S LONGITUDE 25 02.5W

DEPTH (M)	HEAD	SPEED	U	V
30	311	43	-32	28
40	323	10	-16	11
50	270	11	-13	11
60	304	15	-20	14
70	254	20	-17	11
80	281	17	-16	11
90	273	16	-16	11
100	277	16	-16	11
110	270	16	-16	11
120	231	16	-16	11
130	207	16	-16	11
140	217	16	-16	11
150	192	16	-16	11
160	204	16	-16	11
170	223	16	-16	11
180	218	16	-16	11
190	208	16	-16	11
200	189	16	-16	11
210	225	16	-16	11
220	190	16	-16	11
230	180	16	-16	11
240	176	16	-16	11
250	180	16	-16	11
260	178	16	-16	11
270	176	16	-16	11
280	165	16	-16	11
290	174	16	-16	11
300	169	16	-16	11
310	177	16	-16	11
320	170	16	-16	11
330	175	16	-16	11
340	171	16	-16	11
350	180	16	-16	11
360	172	16	-16	11
370	159	16	-16	11
380	158	16	-16	11
390	159	16	-16	11
400	151	16	-16	11
410	201	16	-16	11
420	198	16	-16	11
430	190	16	-16	11
440	190	16	-16	11
450	175	16	-16	11
460	163	16	-16	11
470	156	16	-16	11
480	162	16	-16	11
490	162	16	-16	11
500	165	16	-16	11
510	165	16	-16	11
520	165	16	-16	11
530	165	16	-16	11
540	165	16	-16	11
550	165	16	-16	11
560	165	16	-16	11
570	165	16	-16	11
580	165	16	-16	11
590	165	16	-16	11
600	165	16	-16	11



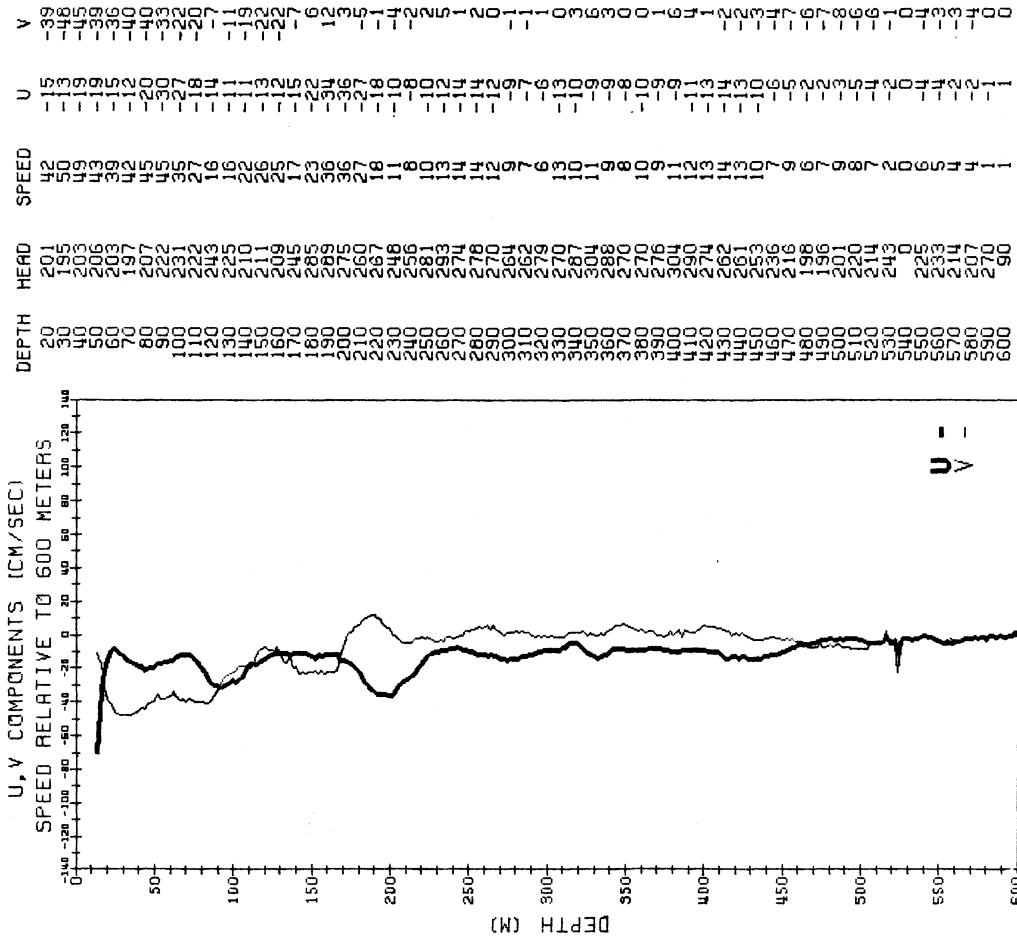
CYCLESØNDE 22

R/V RESEARCHER DATE 07 18 79 TIME 1541  
 LATITUDE 09 02.85 LONGITUDE 25 02.1W



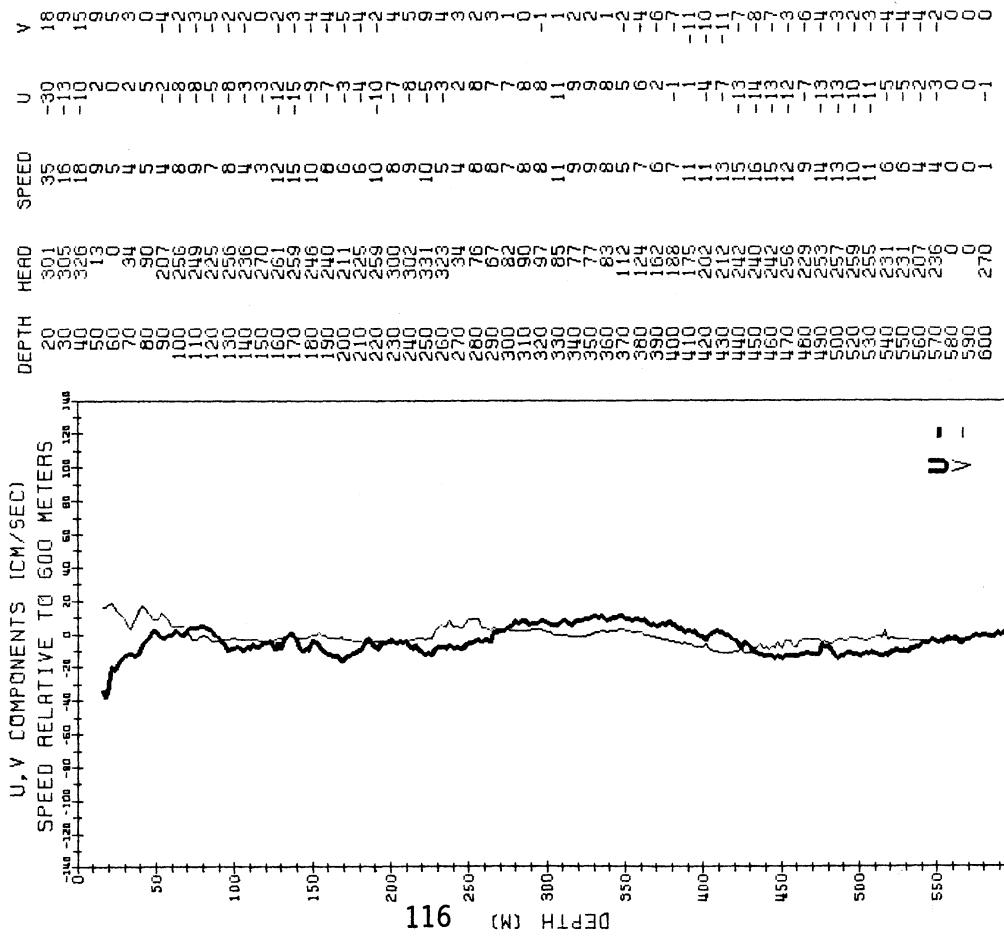
CYCLESØNDE 23

R/V RESEARCHER DATE 07 19 79 TIME 1702  
 LATITUDE 08 34.4S LONGITUDE 25 54.5W



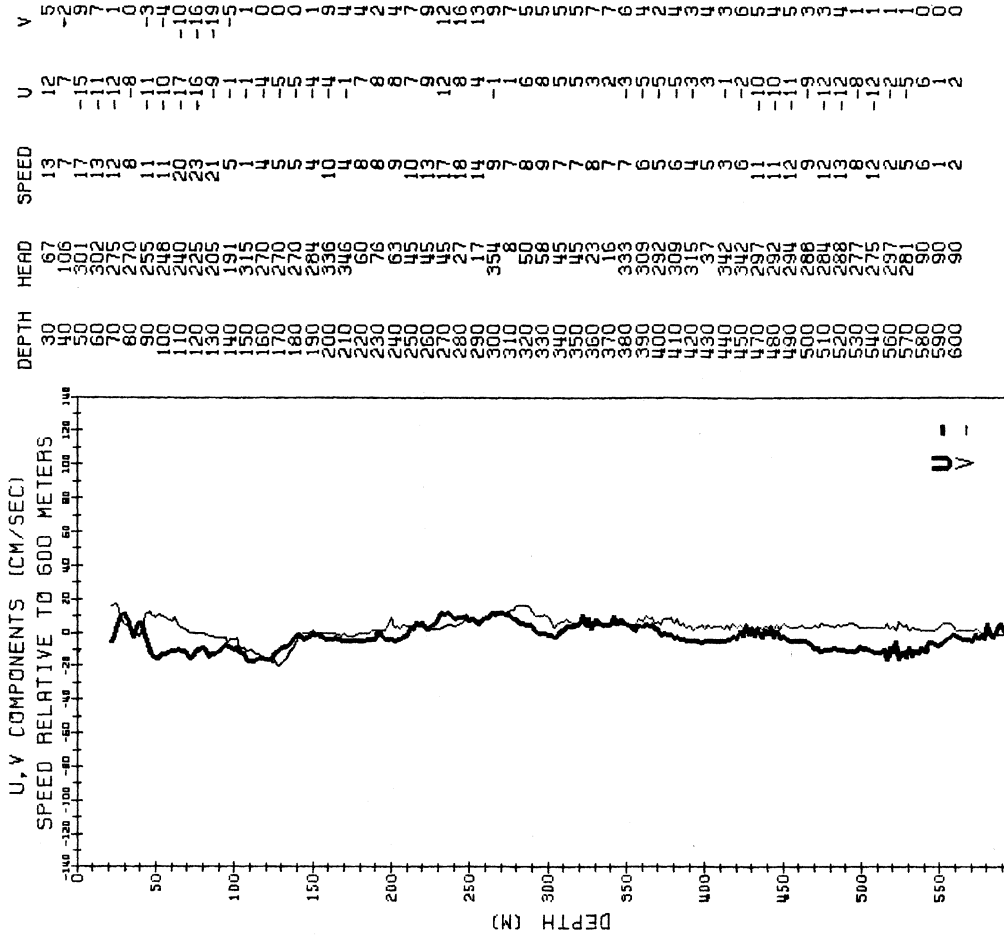
CYCLESØNDE 24

R/V RESEARCHER DATE 07 19 79 TIME 2317  
 LATITUDE 08 04.6S LONGITUDE 26 45.3W



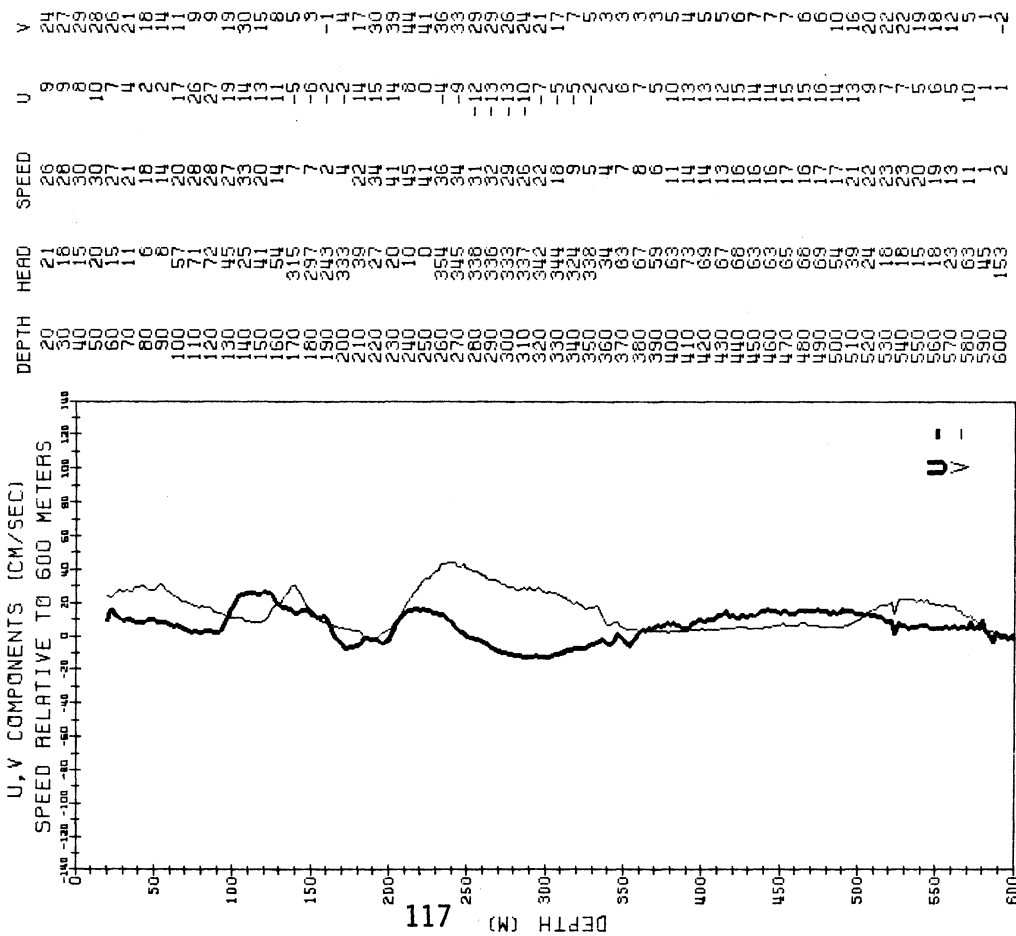
CYCLESØNDE 25

R/V RESEARCHER DATE 07 20 79 TIME 0600  
 LATITUDE 07 34.8S LONGITUDE 27 36.8W



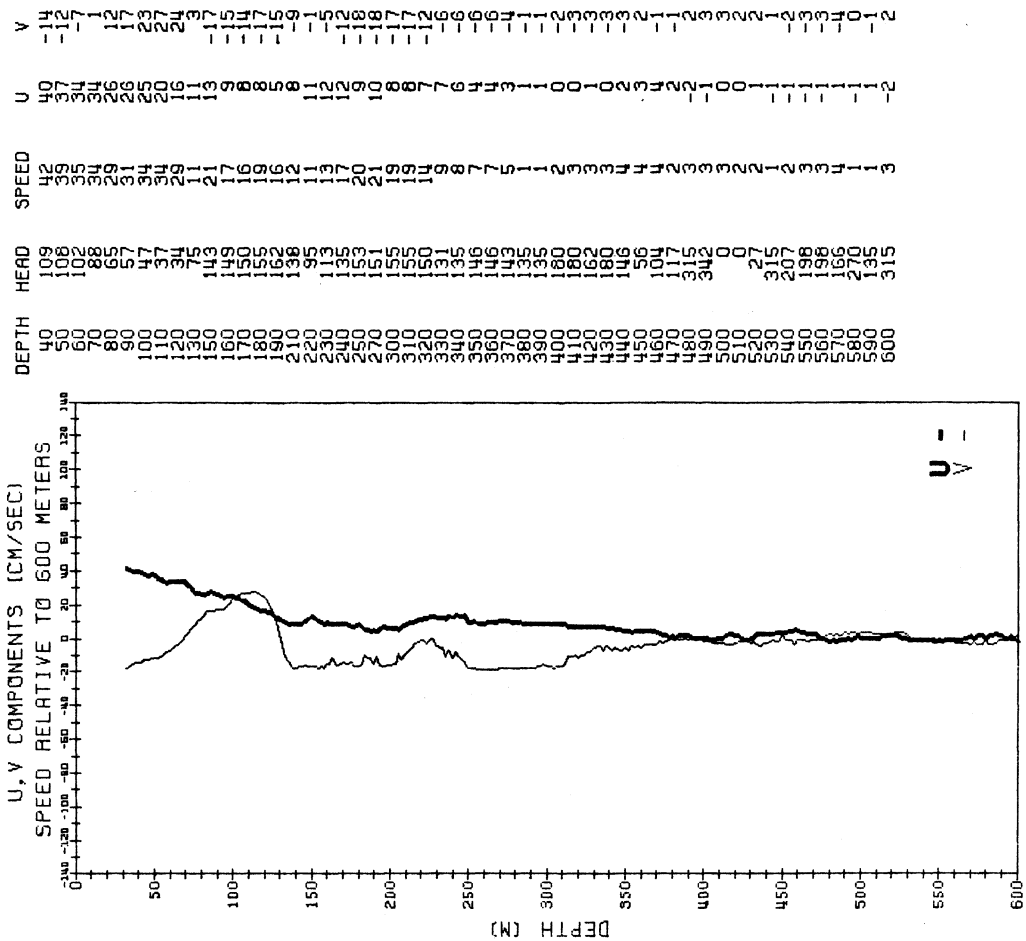
CYCLESØNDE 26

R/V RESEARCHER DATE 07 21 79 TIME 0243  
 LATITUDE 06 39.85 LONGITUDE 27 30.6W



CYCLESØNDE 27

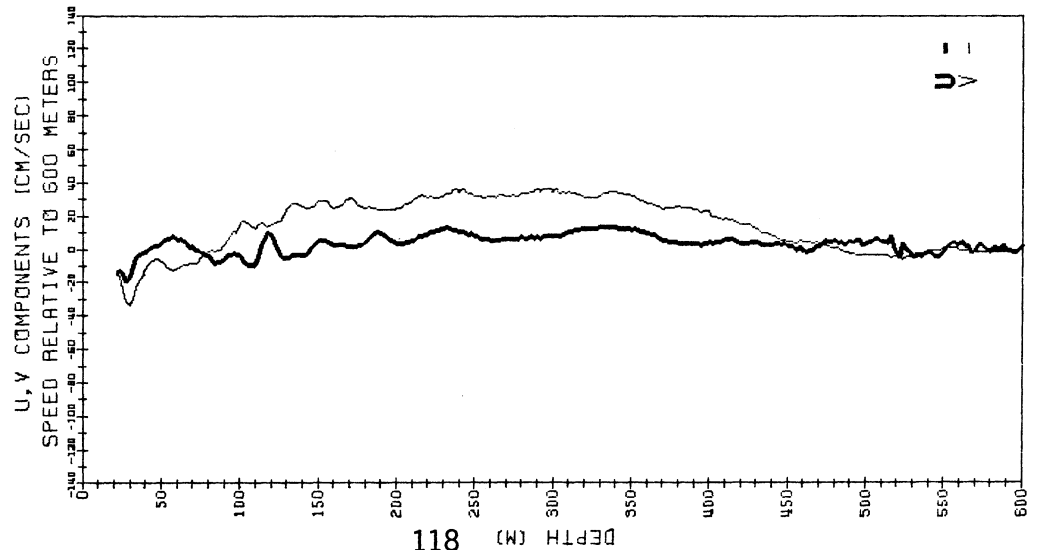
R/V RESEARCHER DATE 07 21 79 TIME 0812  
 LATITUDE 06 00.55 LONGITUDE 27 30.2W



CYCLESØNDE 28

R/V RESEARCHER DATE 07 22 79 TIME 1758  
 LATITUDE 05 00.05 LONGITUDE 27 30.0W

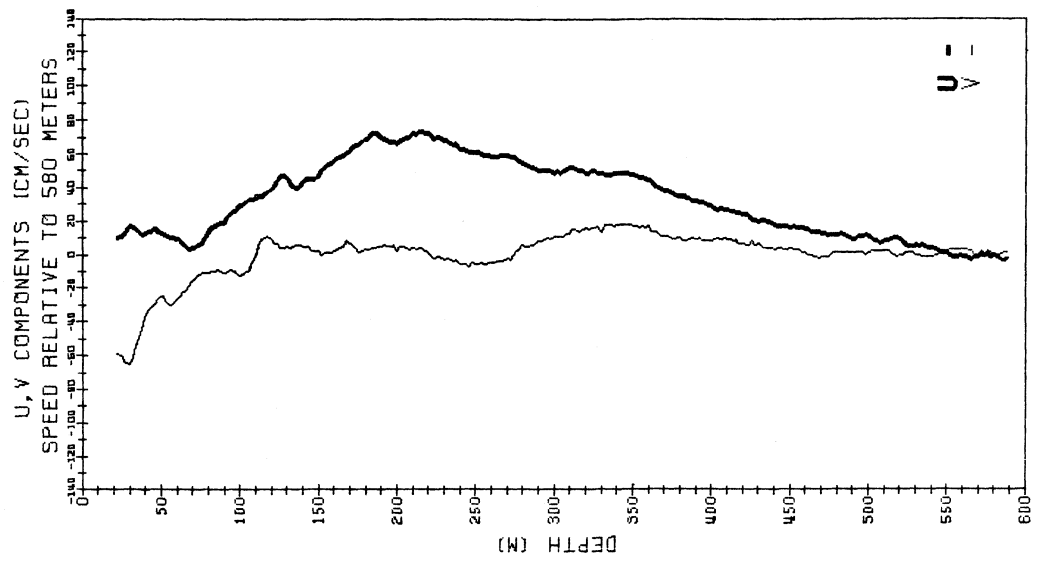
DEPTH (M)	HEAD	SPEED	U	V
30	207	38	-17	-34
40	185	12	-1	-17
50	151	16	6	-11
60	166	18	-6	-11
70	266	47	-6	-11
80	297	14	-8	-11
90	328	15	-8	-11
100	328	25	-9	-11
110	348	26	-9	-11
120	355	25	-9	-11
130	127	31	-9	-11
140	4	26	-9	-11
150	11	25	-9	-11
160	23	26	-9	-11
170	11	25	-9	-11
180	12	26	-9	-11
190	16	30	-9	-11
200	22	32	-9	-11
210	17	33	-9	-11
220	11	33	-9	-11
230	11	33	-9	-11
240	11	33	-9	-11
250	11	33	-9	-11
260	11	33	-9	-11
270	11	33	-9	-11
280	13	37	-9	-11
290	13	37	-9	-11
300	17	36	-9	-11
310	23	35	-9	-11
320	22	35	-9	-11
330	22	38	-9	-11
340	22	38	-9	-11
350	21	36	-9	-11
360	20	36	-9	-11
370	19	36	-9	-11
380	19	36	-9	-11
390	19	36	-9	-11
400	20	36	-9	-11
410	20	36	-9	-11
420	21	36	-9	-11
430	22	36	-9	-11
440	22	36	-9	-11
450	27	36	-9	-11
460	27	36	-9	-11
470	81	36	-9	-11
480	108	36	-9	-11
490	127	36	-9	-11
500	121	36	-9	-11
510	223	36	-9	-11
520	270	36	-9	-11
530	270	36	-9	-11
540	270	36	-9	-11
550	180	36	-9	-11
560	180	36	-9	-11
570	180	36	-9	-11
580	180	36	-9	-11
590	180	36	-9	-11
600	180	36	-9	-11



CYCLESØNDE 29

R/V RESEARCHER DATE 07 23 79 TIME 0039  
 LATITUDE 04 00.25 LONGITUDE 27 00.2W

DEPTH (M)	HEAD	SPEED	U	V
30	165	67	17	-65
40	161	40	13	-38
50	153	28	13	-25
60	162	19	13	-27
70	166	17	13	-11
80	190	17	13	-11
90	120	22	13	-11
100	111	22	13	-11
110	72	24	13	-11
120	84	24	13	-11
130	83	45	13	-11
140	88	47	13	-11
150	88	56	13	-11
160	84	62	13	-11
170	88	69	13	-11
180	86	70	13	-11
190	88	69	13	-11
200	87	72	13	-11
210	89	68	13	-11
220	93	68	13	-11
230	95	63	13	-11
240	95	61	13	-11
250	95	55	13	-11
260	95	55	13	-11
270	84	55	13	-11
280	81	55	13	-11
290	77	55	13	-11
300	72	55	13	-11
310	72	55	13	-11
320	74	55	13	-11
330	70	55	13	-11
340	70	55	13	-11
350	69	55	13	-11
360	69	55	13	-11
370	74	55	13	-11
380	74	55	13	-11
390	74	55	13	-11
400	72	55	13	-11
410	74	55	13	-11
420	71	55	13	-11
430	66	55	13	-11
440	66	55	13	-11
450	66	55	13	-11
460	66	55	13	-11
470	64	55	13	-11
480	64	55	13	-11
490	65	55	13	-11
500	76	55	13	-11
510	90	55	13	-11
520	104	55	13	-11
530	104	55	13	-11
540	104	55	13	-11
550	104	55	13	-11
560	104	55	13	-11
570	104	55	13	-11
580	104	55	13	-11
590	104	55	13	-11
600	104	55	13	-11

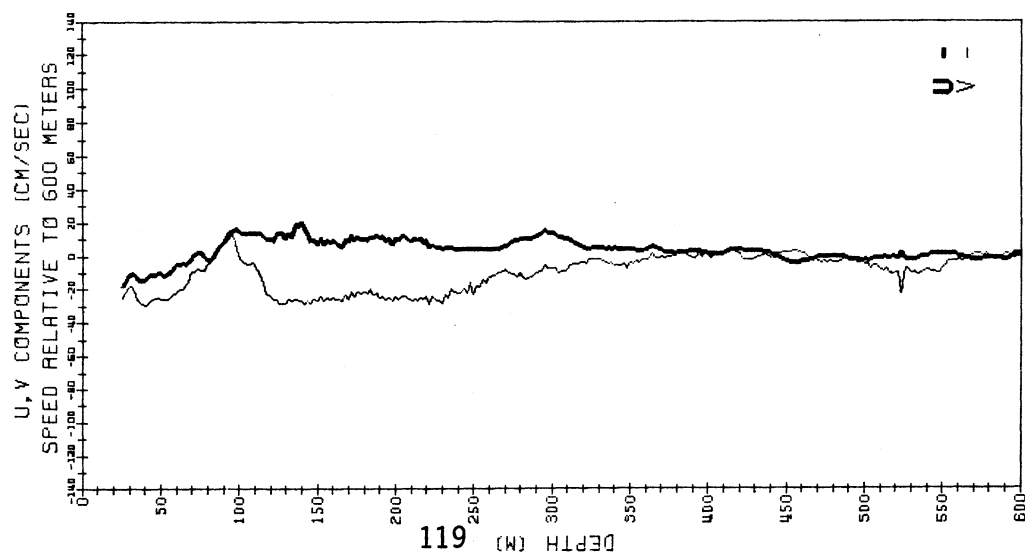




CYCLESØNDE 30

R/V RESEARCHER DATE 07 23 79 TIME 0800  
 LATITUDE 03 01.15 LONGITUDE 26 33.0W

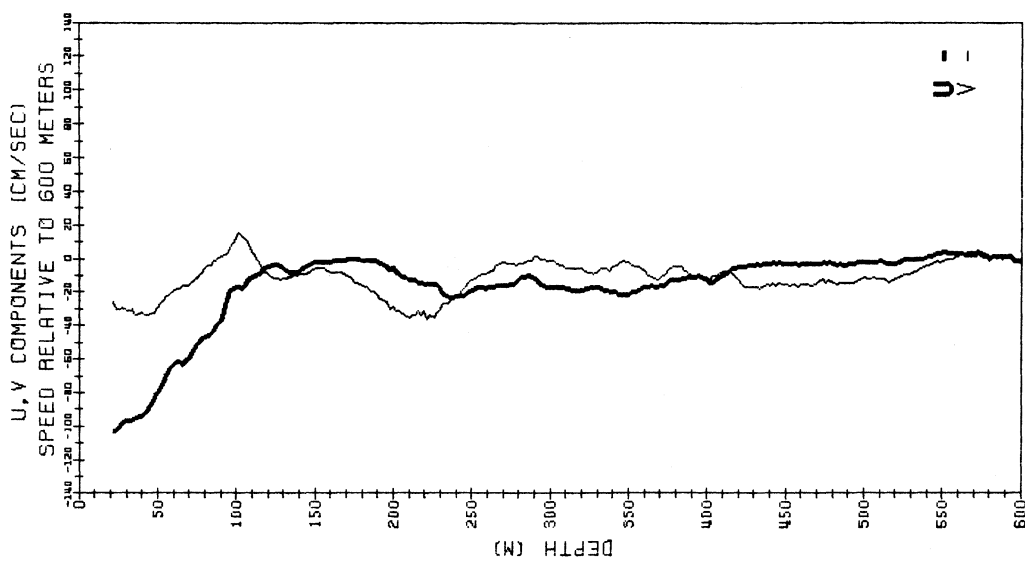
DEPTH	HEAD	SPEED	U	V
30	211	21	-14	-18
40	206	32	-10	-26
50	201	28	-5	-19
60	193	22	-3	-5
70	202	9	15	9
80	42	12	14	15
90	86	15	10	10
100	110	26	10	15
110	157	30	27	28
120	160	34	27	28
130	142	27	10	10
140	165	27	11	11
150	160	27	11	11
160	155	27	11	11
170	150	27	11	11
180	150	27	11	11
190	155	28	11	11
200	153	28	11	11
210	153	28	11	11
220	153	28	11	11
230	172	22	14	10
240	170	14	10	10
250	163	14	10	10
260	143	14	10	10
270	135	14	10	10
280	130	16	14	10
290	117	13	10	10
300	129	11	10	10
310	112	9	10	10
320	140	8	10	10
330	135	8	10	10
340	117	8	10	10
350	90	8	10	10
360	63	2	10	10
370	63	2	10	10
380	108	4	10	10
390	45	3	10	10
400	34	3	10	10
410	176	3	10	10
420	108	3	10	10
430	135	3	10	10
440	204	3	10	10
450	288	3	10	10
460	180	3	10	10
470	180	3	10	10
480	243	3	10	10
490	202	3	10	10
500	186	3	10	10
510	191	3	10	10
520	170	3	10	10
530	172	3	10	10
540	180	3	10	10
550	237	3	10	10
560	225	3	10	10
570	297	3	10	10
580	297	3	10	10
590	90	3	10	10
600				



CYCLESØNDE 31

R/V RESEARCHER DATE 07 23 79 TIME 1406  
 LATITUDE 02 00.05 LONGITUDE 26 02.0W

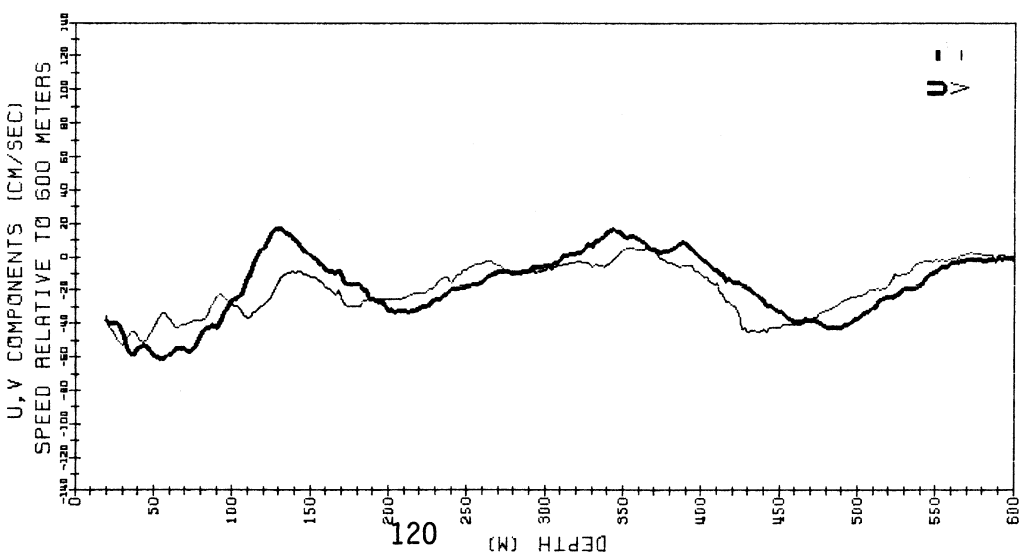
DEPTH	HEAD	SPEED	U	V
30	252	102	-37	-31
40	251	99	-34	-29
50	250	85	-30	-19
60	253	66	-16	-16
70	255	62	-47	-12
80	263	37	-17	9
90	305	12	-11	12
100	290	10	-15	14
110	209	13	-9	19
120	207	11	-7	19
130	218	16	-2	8
140	194	10	0	8
150	170	16	1	19
160	180	16	1	19
170	185	20	5	20
180	200	27	5	20
190	206	37	5	20
200	211	35	3	20
210	227	32	2	20
220	235	32	2	20
230	235	32	2	20
240	235	32	2	20
250	265	19	9	33
260	275	13	3	33
270	267	17	8	37
280	252	19	8	37
290	252	20	11	37
300	248	18	11	37
310	256	22	17	52
320	248	21	20	52
330	268	22	17	52
340	248	20	17	52
350	233	14	13	10
360	249	14	13	10
370	228	15	12	10
380	227	16	11	10
390	232	17	11	10
400	201	17	11	10
410	193	16	11	10
420	191	16	11	10
430	191	16	11	10
440	192	16	11	10
450	192	16	11	10
460	192	16	11	10
470	192	16	11	10
480	192	16	11	10
490	185	16	11	10
500	185	16	11	10
510	187	16	11	10
520	187	16	11	10
530	187	16	11	10
540	187	16	11	10
550	187	16	11	10
560	104	16	11	10
570	27	16	11	10
580	27	16	11	10
590	27	16	11	10
600	225	16	11	10



CYCLESØNDE 32

R/V RESEARCHER DATE 07 23 79 TIME 2053  
 LATITUDE 01 01.05 LONGITUDE 25 32.3W

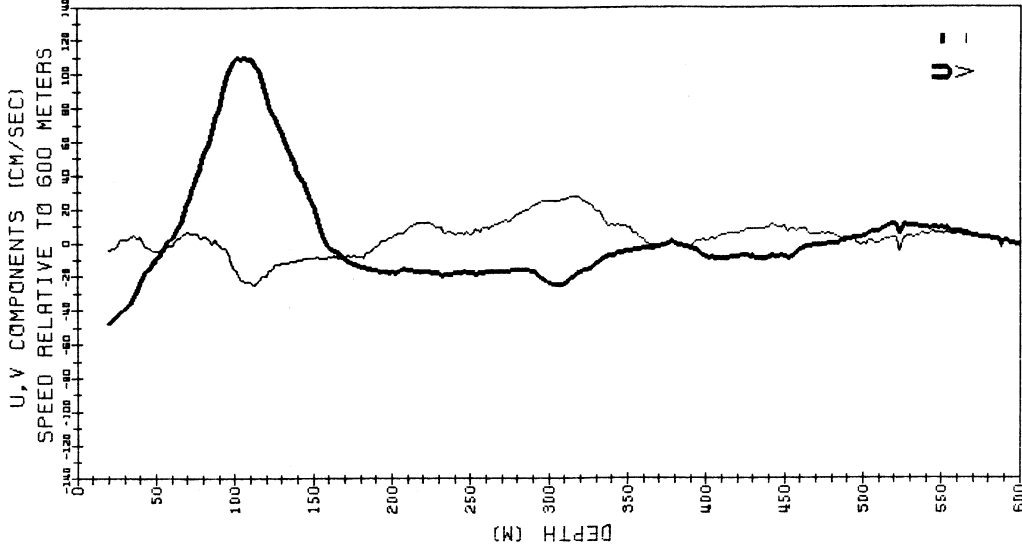
DEPTH	HEAD	SPEED	U	V
20	227	52	-38	-35
30	230	70	-35	-47
40	233	73	-25	-47
50	234	69	-25	-37
60	233	69	-25	-37
70	233	69	-25	-37
80	232	66	-25	-34
90	230	66	-25	-34
100	229	68	-25	-36
110	228	68	-25	-36
120	228	68	-25	-36
130	228	68	-25	-36
140	228	68	-25	-36
150	228	68	-25	-36
160	228	68	-25	-36
170	228	68	-25	-36
180	228	68	-25	-36
190	228	68	-25	-36
200	228	68	-25	-36
210	228	68	-25	-36
220	228	68	-25	-36
230	228	68	-25	-36
240	228	68	-25	-36
250	228	68	-25	-36
260	228	68	-25	-36
270	228	68	-25	-36
280	228	68	-25	-36
290	228	68	-25	-36
300	228	68	-25	-36
310	228	68	-25	-36
320	228	68	-25	-36
330	228	68	-25	-36
340	228	68	-25	-36
350	228	68	-25	-36
360	228	68	-25	-36
370	228	68	-25	-36
380	228	68	-25	-36
390	228	68	-25	-36
400	228	68	-25	-36
410	228	68	-25	-36
420	228	68	-25	-36
430	228	68	-25	-36
440	228	68	-25	-36
450	228	68	-25	-36
460	228	68	-25	-36
470	228	68	-25	-36
480	228	68	-25	-36
490	228	68	-25	-36
500	228	68	-25	-36
510	228	68	-25	-36
520	228	68	-25	-36
530	228	68	-25	-36
540	228	68	-25	-36
550	228	68	-25	-36
560	228	68	-25	-36
570	228	68	-25	-36
580	228	68	-25	-36
590	228	68	-25	-36
600	228	68	-25	-36



CYCLESØNDE 33

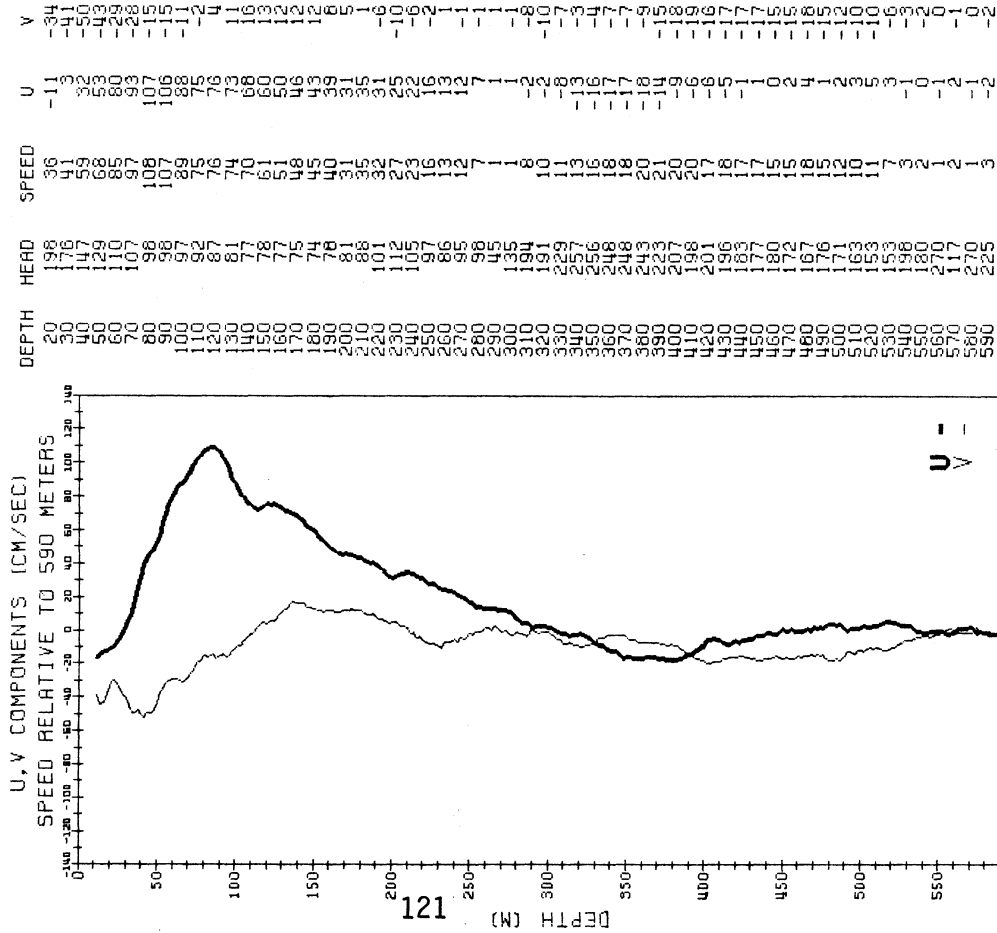
R/V RESEARCHER DATE 07 24 79 TIME 0326  
 LATITUDE 00 01.2N LONGITUDE 25 03.7W

DEPTH	HEAD	SPEED	U	V
20	265	48	-48	-4
30	273	39	-39	-2
40	273	21	-21	-7
50	271	10	3	-7
60	174	25	24	-7
70	80	25	25	-7
80	91	22	22	-7
90	98	22	22	-7
100	102	109	108	-5
110	103	90	88	-5
120	103	68	67	-5
130	103	43	42	-5
140	112	24	23	-5
150	194	8	8	-5
160	228	12	12	-5
170	240	16	16	-5
180	263	16	16	-5
190	280	16	16	-5
200	287	18	17	-5
210	305	21	20	-5
220	297	19	19	-5
230	286	19	19	-5
240	286	19	19	-5
250	286	19	19	-5
260	286	19	19	-5
270	307	21	20	-5
280	317	22	21	-5
290	322	22	21	-5
300	316	22	21	-5
310	317	22	21	-5
320	328	22	21	-5
330	328	22	21	-5
340	328	22	21	-5
350	328	22	21	-5
360	328	22	21	-5
370	328	22	21	-5
380	328	22	21	-5
390	328	22	21	-5
400	328	22	21	-5
410	328	22	21	-5
420	328	22	21	-5
430	328	22	21	-5
440	328	22	21	-5
450	328	22	21	-5
460	328	22	21	-5
470	328	22	21	-5
480	328	22	21	-5
490	328	22	21	-5
500	328	22	21	-5
510	328	22	21	-5
520	328	22	21	-5
530	328	22	21	-5
540	328	22	21	-5
550	328	22	21	-5
560	328	22	21	-5
570	328	22	21	-5
580	328	22	21	-5
590	328	22	21	-5
600	328	22	21	-5



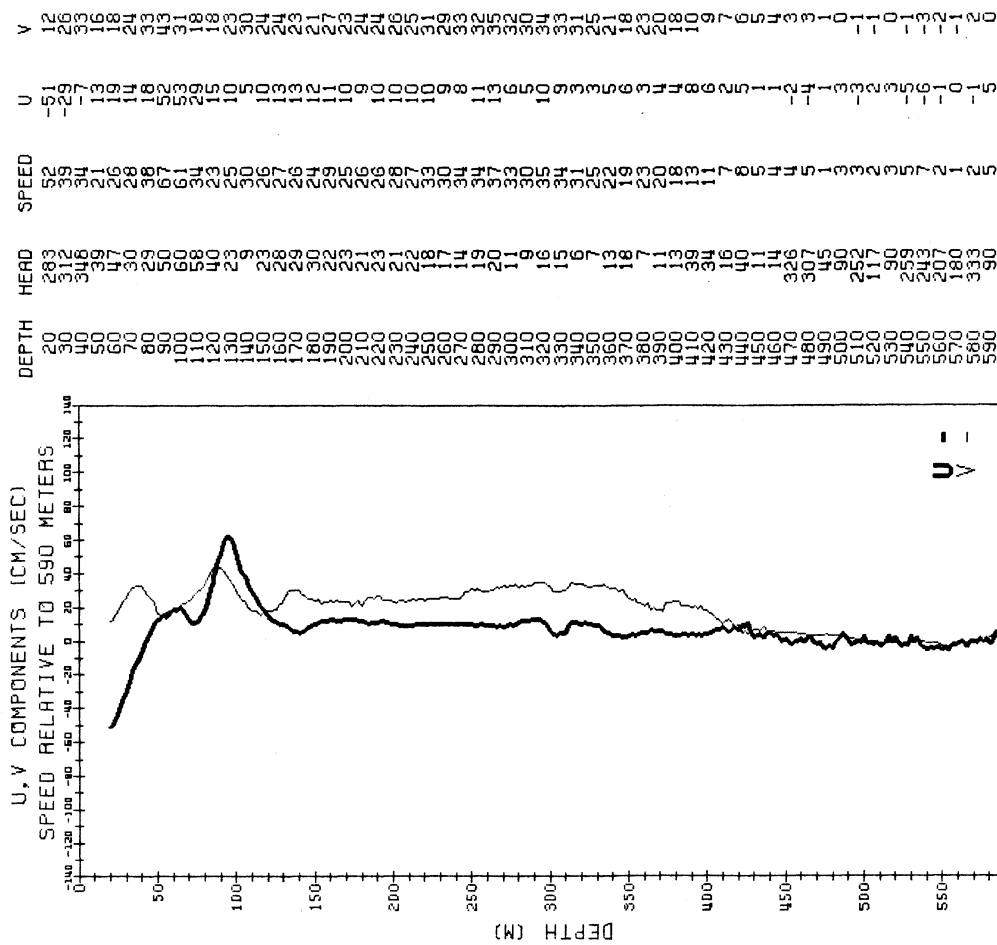
CYCLESØNDE 4

R/V RESEARCHER DATE 02 23 80 TIME 0212  
 LATITUDE 00 01.2S LONGITUDE 22 29.2W



CYCLESØNDE 5

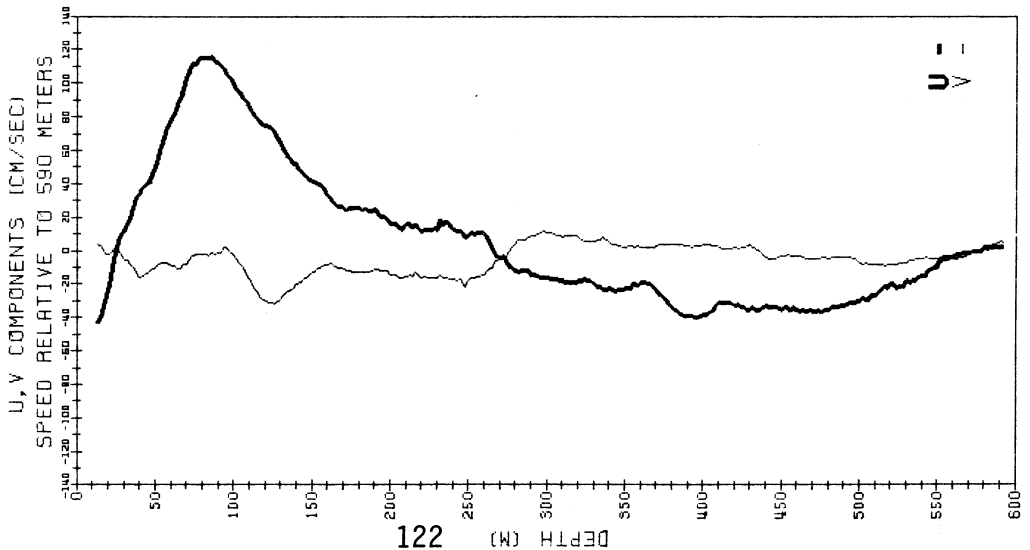
R/V RESEARCHER DATE 02 23 80 TIME 1745  
 LATITUDE 01 01.9N LONGITUDE 25 01.9W



CYCLESØNDE 6

R/V RESEARCHER DATE 02 24 80 TIME 0912  
 LATITUDE 00 00.0N LONGITUDE 25 00.0W

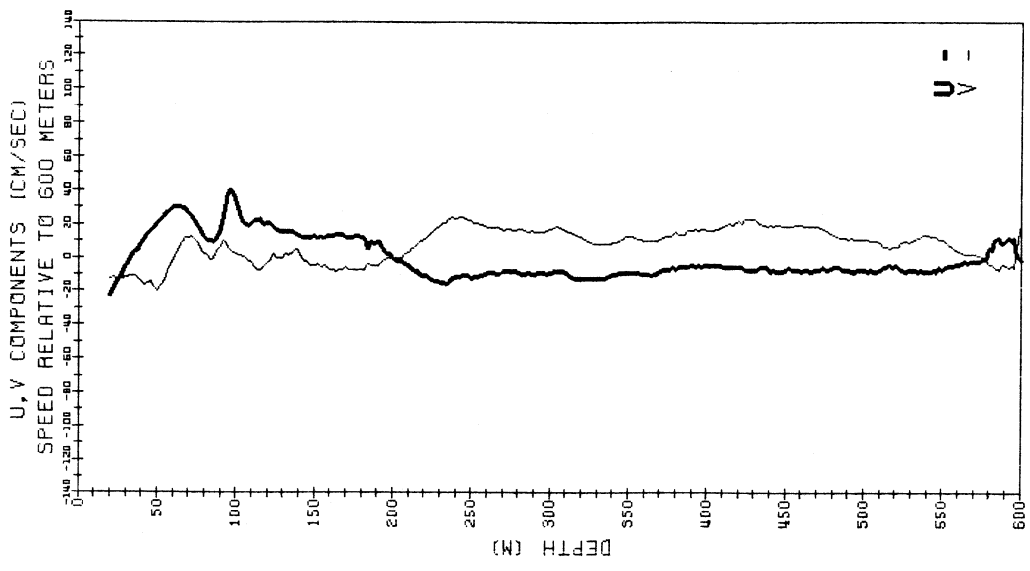
DEPTH	HEAD	SPEED	U	V
20	285	24	-12	-2
30	277	5	31	-16
40	115	26	20	-10
50	107	57	50	-8
60	94	105	103	-2
70	91	112	112	-2
80	91	100	100	-17
90	101	88	86	-12
100	112	71	75	-17
110	114	56	52	-29
120	111	44	42	-13
130	107	35	26	-8
140	103	28	16	-11
150	113	22	15	-11
160	114	22	12	-15
170	131	17	10	-11
180	143	17	10	-11
190	141	17	10	-11
200	143	17	10	-11
210	143	17	10	-11
220	143	17	10	-11
230	143	17	10	-11
240	143	17	10	-11
250	143	17	10	-11
260	143	17	10	-11
270	143	17	10	-11
280	143	17	10	-11
290	143	17	10	-11
300	143	17	10	-11
310	143	17	10	-11
320	143	17	10	-11
330	143	17	10	-11
340	143	17	10	-11
350	143	17	10	-11
360	143	17	10	-11
370	143	17	10	-11
380	143	17	10	-11
390	143	17	10	-11
400	143	17	10	-11
410	143	17	10	-11
420	143	17	10	-11
430	143	17	10	-11
440	143	17	10	-11
450	143	17	10	-11
460	143	17	10	-11
470	143	17	10	-11
480	143	17	10	-11
490	143	17	10	-11
500	143	17	10	-11
510	143	17	10	-11
520	143	17	10	-11
530	143	17	10	-11
540	143	17	10	-11
550	143	17	10	-11
560	143	17	10	-11
570	143	17	10	-11
580	143	17	10	-11
590	143	17	10	-11
600	143	17	10	-11



CYCLESØNDE 7

R/V RESEARCHER DATE 02 24 80 TIME 1756  
 LATITUDE 01 01.6S LONGITUDE 24 55.0W

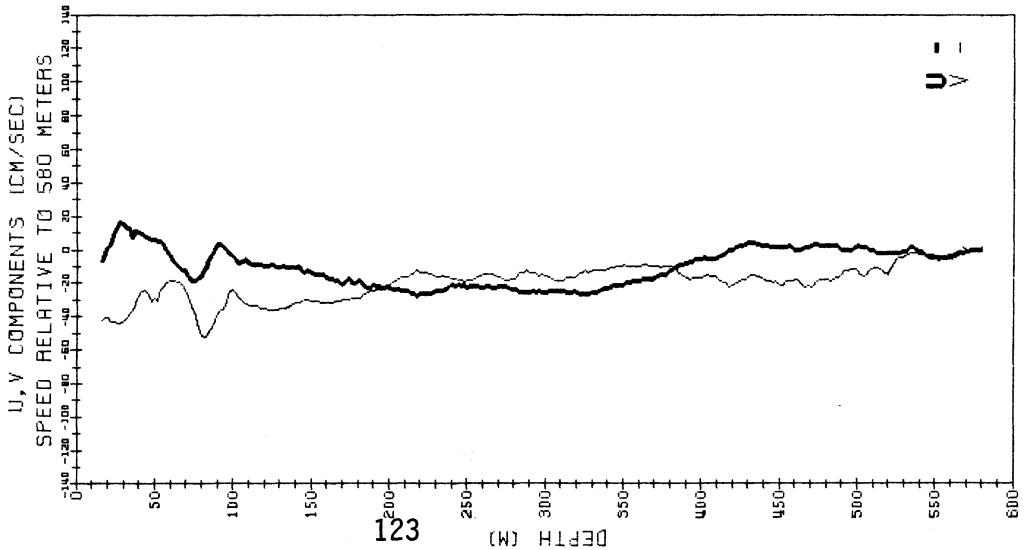
DEPTH	HEAD	SPEED	U	V
20	341	26	-23	13
30	293	16	8	-12
40	130	29	23	-14
50	134	30	30	-20
60	66	30	27	-1
70	81	30	27	2
80	68	35	27	2
90	87	35	21	2
100	98	21	15	-3
110	98	15	13	0
120	90	15	13	0
130	73	15	13	0
140	111	15	13	0
150	118	13	13	0
160	117	13	13	0
170	120	11	13	0
180	119	11	13	0
190	110	10	13	0
200	301	19	15	0
210	223	22	15	0
220	223	22	15	0
230	223	22	15	0
240	223	22	15	0
250	223	22	15	0
260	223	22	15	0
270	223	22	15	0
280	223	22	15	0
290	223	22	15	0
300	223	22	15	0
310	223	22	15	0
320	223	22	15	0
330	223	22	15	0
340	223	22	15	0
350	223	22	15	0
360	223	22	15	0
370	223	22	15	0
380	223	22	15	0
390	223	22	15	0
400	223	22	15	0
410	223	22	15	0
420	223	22	15	0
430	223	22	15	0
440	223	22	15	0
450	223	22	15	0
460	223	22	15	0
470	223	22	15	0
480	223	22	15	0
490	223	22	15	0
500	223	22	15	0
510	223	22	15	0
520	223	22	15	0
530	223	22	15	0
540	223	22	15	0
550	223	22	15	0
560	223	22	15	0
570	223	22	15	0
580	223	22	15	0
590	223	22	15	0
600	223	22	15	0



CYCLESØNDE 8

R/V RESEARCHER DATE 02 25 80 TIME 1047  
 LATITUDE 02 00.05 LONGITUDE 25 00.0W

DEPTH	HEAD	SPEED	U	V
20	179	41	15	-41
30	160	30	10	-26
40	168	30	6	-19
50	208	19	-4	-24
60	175	54	-13	-52
80	197	38	3	-24
100	183	24	-8	-35
110	193	35	-10	-32
120	196	37	-11	-31
130	197	34	-14	-30
140	199	36	-17	-25
150	204	37	-21	-14
160	215	35	-19	-25
170	210	33	-23	-17
180	228	30	-27	-17
190	234	30	-25	-10
200	236	30	-23	-5
210	233	30	-23	-10
220	230	30	-23	-10
230	227	28	-23	-10
240	223	30	-23	-10
250	222	30	-23	-10
260	222	30	-23	-10
270	222	30	-23	-10
280	222	30	-23	-10
290	222	30	-23	-10
300	222	30	-23	-10
310	222	30	-23	-10
320	222	30	-23	-10
330	222	30	-23	-10
340	222	30	-23	-10
350	222	30	-23	-10
360	222	30	-23	-10
370	222	30	-23	-10
380	222	30	-23	-10
390	222	30	-23	-10
400	222	30	-23	-10
410	222	30	-23	-10
420	222	30	-23	-10
430	222	30	-23	-10
440	222	30	-23	-10
450	222	30	-23	-10
460	222	30	-23	-10
470	222	30	-23	-10
480	222	30	-23	-10
490	222	30	-23	-10
500	222	30	-23	-10
510	222	30	-23	-10
520	222	30	-23	-10
530	222	30	-23	-10
540	222	30	-23	-10
550	222	30	-23	-10
560	222	30	-23	-10
570	222	30	-23	-10
580	222	30	-23	-10

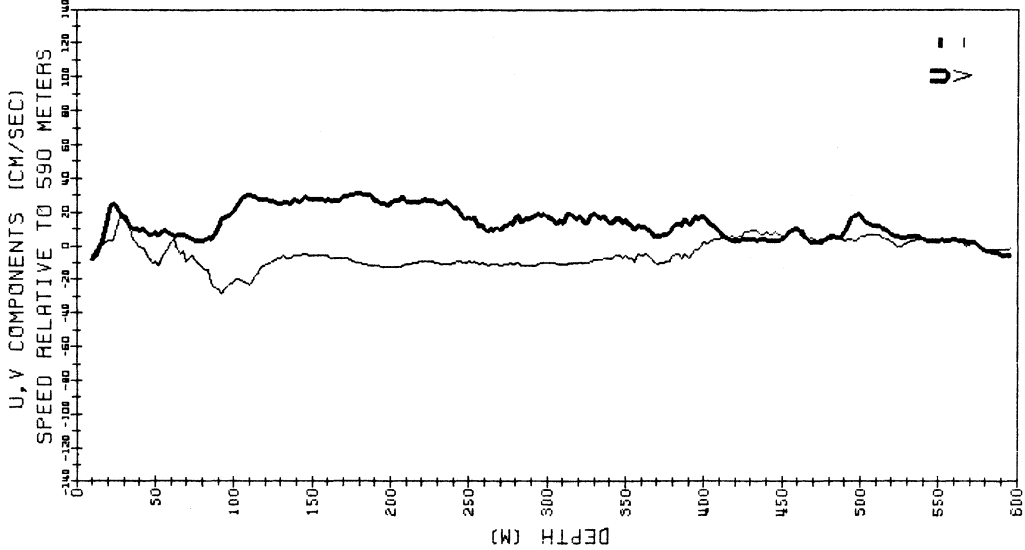


123

CYCLESØNDE 9

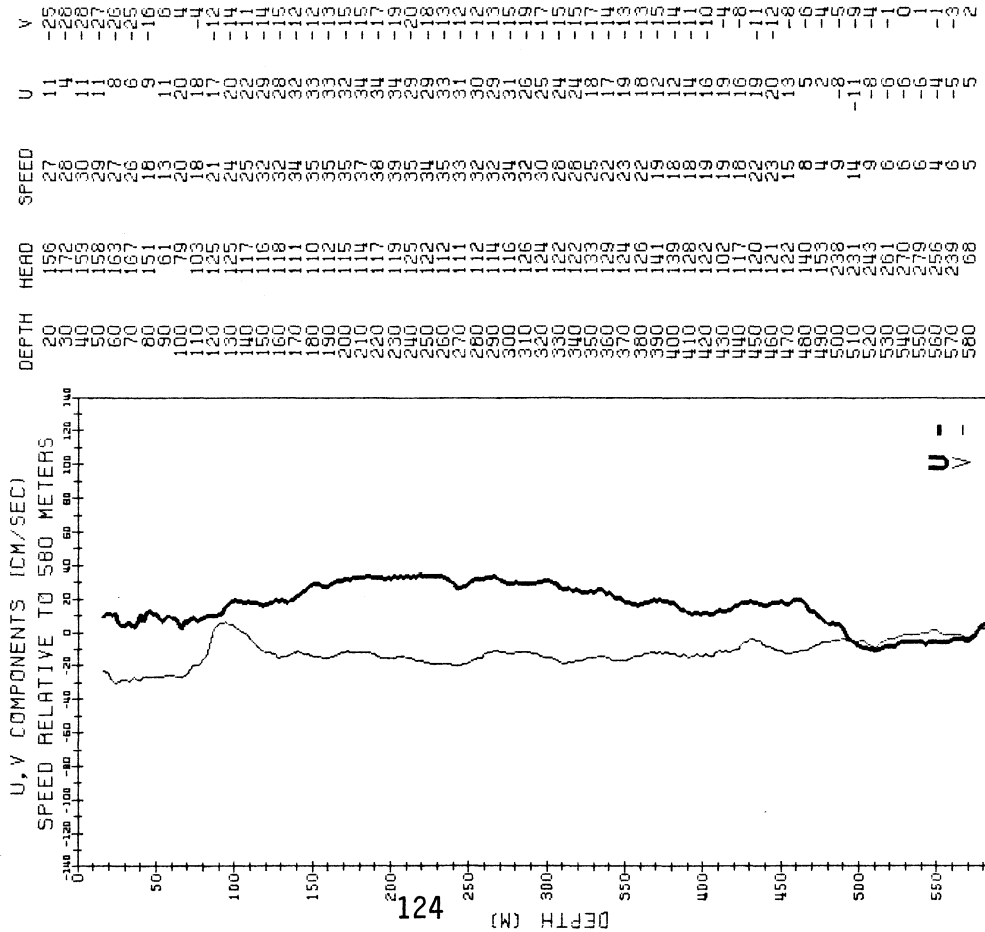
R/V RESEARCHER DATE 02 25 80 TIME 1850  
 LATITUDE 02 59.75 LONGITUDE 25 00.4W

DEPTH	HEAD	SPEED	U	V
10	233	10	18	-9
20	280	17	16	0
30	420	24	16	0
40	390	24	16	0
50	138	12	16	0
60	74	12	16	0
70	146	11	16	0
80	157	13	16	0
90	135	23	11	-13
100	127	38	11	-21
110	111	30	11	-23
120	106	30	11	-17
130	103	28	11	-6
140	102	29	11	-6
150	102	29	11	-7
160	104	30	11	-10
170	108	30	11	-3
180	114	30	11	-9
190	117	29	11	-10
200	113	28	11	-10
210	108	27	11	-10
220	112	27	11	-10
230	117	27	11	-10
240	119	27	11	-10
250	138	27	11	-10
260	133	25	11	-10
270	133	25	11	-10
280	125	20	11	-10
290	120	20	11	-10
300	128	18	11	-10
310	120	20	11	-10
320	119	20	11	-10
330	117	16	11	-9
340	112	16	11	-9
350	119	13	11	-9
360	151	13	11	-9
370	118	13	11	-9
380	118	11	11	-9
390	83	11	11	-9
400	83	11	11	-9
410	83	11	11	-9
420	83	11	11	-9
430	83	11	11	-9
440	83	11	11	-9
450	83	11	11	-9
460	83	11	11	-9
470	83	11	11	-9
480	83	11	11	-9
490	83	11	11	-9
500	83	11	11	-9
510	83	11	11	-9
520	83	11	11	-9
530	83	11	11	-9
540	83	11	11	-9
550	83	11	11	-9
560	83	11	11	-9
570	83	11	11	-9
580	83	11	11	-9



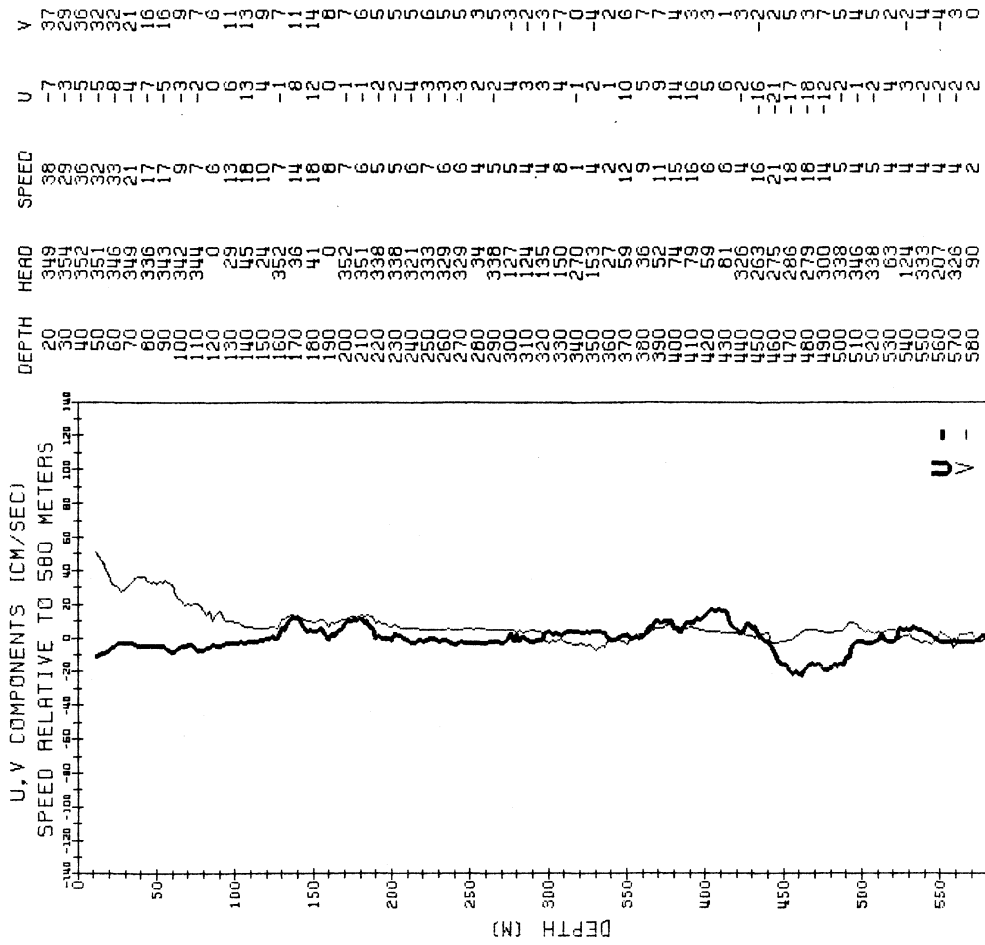
### CYCLESØNDE 10

R/V RESEARCHER DATE 02 26 80 TIME 0041  
 LATITUDE 03 59.0S LONGITUDE 25 00.8W



### CYCLESØNDE 11

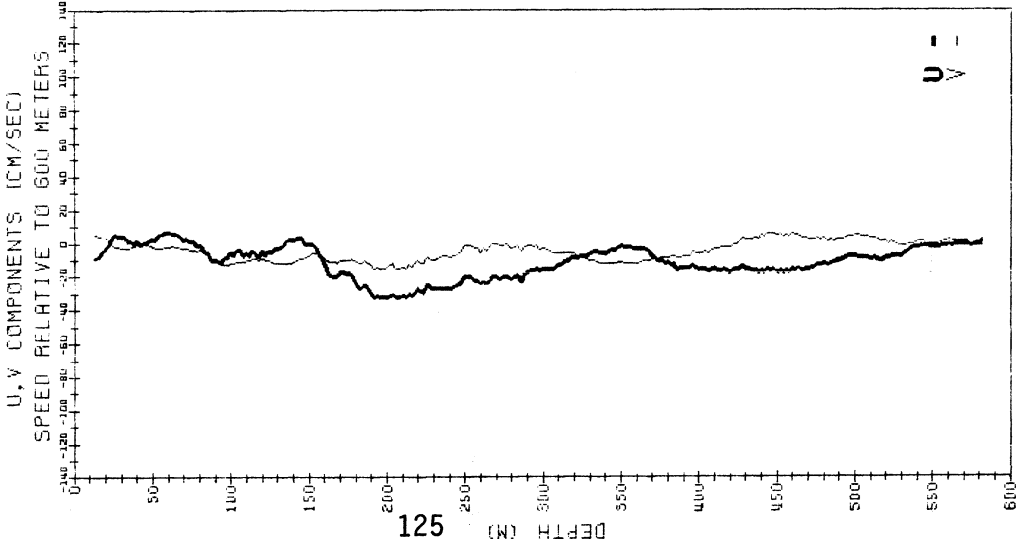
R/V RESEARCHER DATE 02 26 80 TIME 0908  
 LATITUDE 05 00.2S LONGITUDE 25 00.5W



CYCLESONDE 12

R/V RESEARCHER DATE 02 26 80 TIME 1757  
 LATITUDE 06 03.85 LONGITUDE 25 01.6W

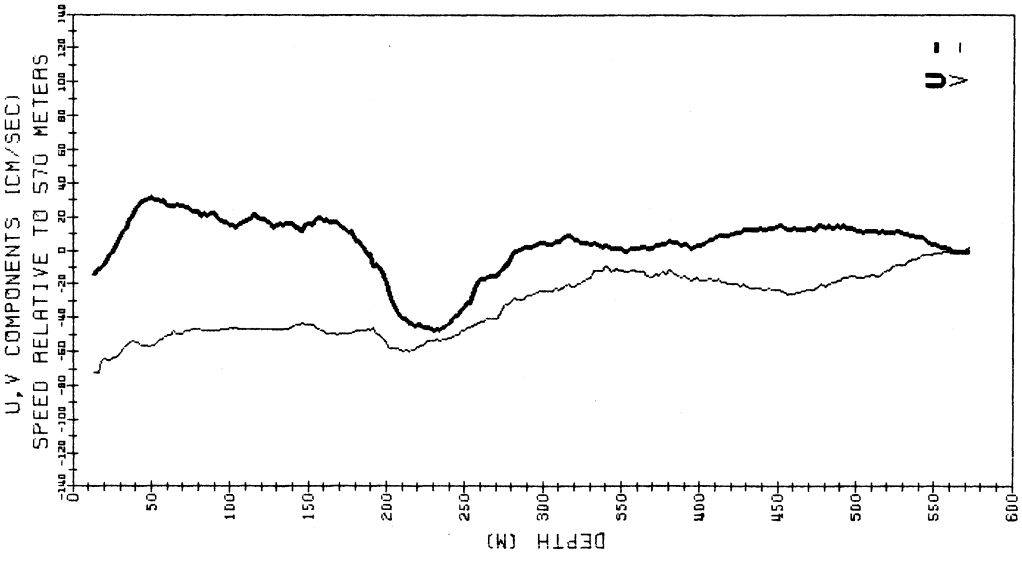
DEPTH (M)	SPEED	U	V
20	4	-3	3
30	3	-2	0
40	3	2	-3
50	3	2	-3
60	4	2	-3
70	4	2	-3
80	4	2	-3
90	14	-10	-4
100	13	-6	-10
110	12	-4	-9
120	12	-2	-12
130	11	0	-11
140	14	-11	-8
150	12	-3	-10
160	20	-3	-13
170	25	-2	-14
180	24	-2	-14
190	24	-2	-14
200	24	-2	-14
210	24	-2	-14
220	24	-2	-14
230	24	-2	-14
240	24	-2	-14
250	24	-2	-14
260	24	-2	-14
270	24	-2	-14
280	24	-2	-14
290	24	-2	-14
300	24	-2	-14
310	24	-2	-14
320	24	-2	-14
330	24	-2	-14
340	24	-2	-14
350	24	-2	-14
360	24	-2	-14
370	24	-2	-14
380	24	-2	-14
390	24	-2	-14
400	24	-2	-14
410	24	-2	-14
420	24	-2	-14
430	24	-2	-14
440	24	-2	-14
450	24	-2	-14
460	24	-2	-14
470	24	-2	-14
480	24	-2	-14
490	24	-2	-14
500	24	-2	-14
510	24	-2	-14
520	24	-2	-14
530	24	-2	-14
540	24	-2	-14
550	24	-2	-14
560	24	-2	-14
570	24	-2	-14
580	24	-2	-14



CYCLESONDE 16

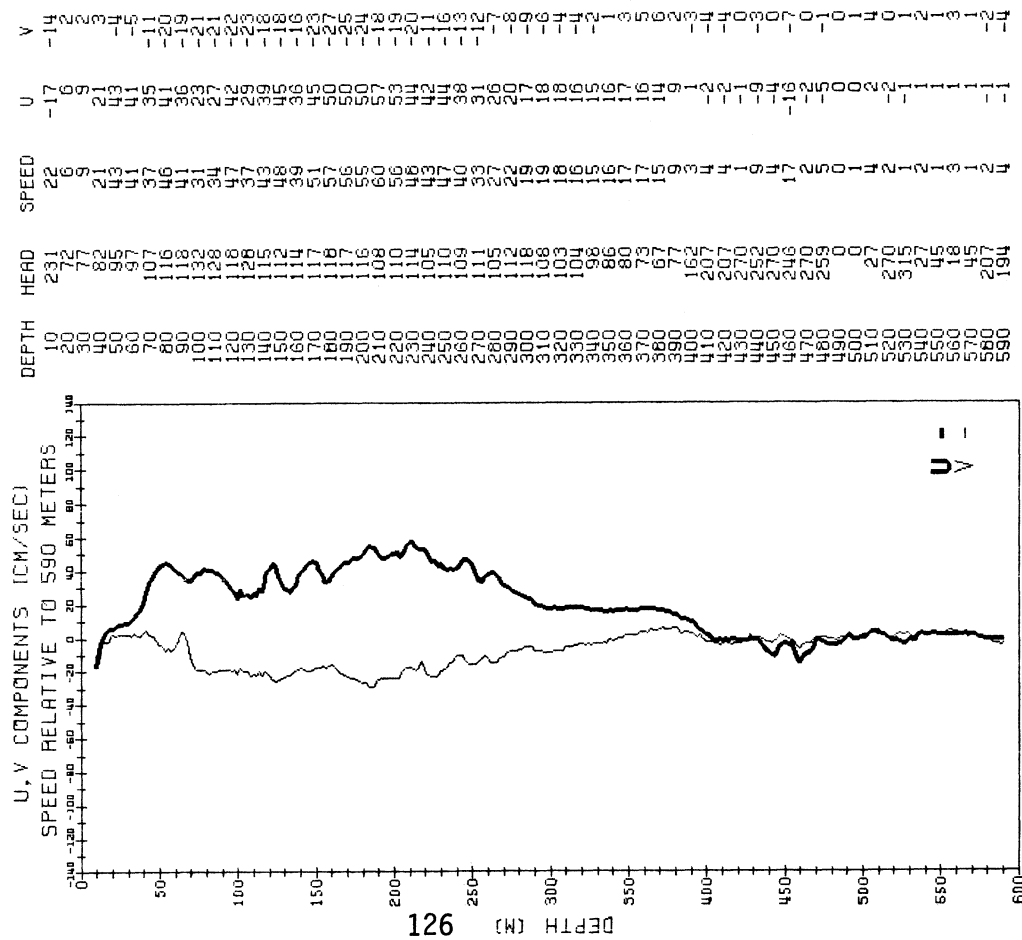
R/V RESEARCHER DATE 02 28 80 TIME 2240  
 LATITUDE 10 01.05 LONGITUDE 27 30.5W

DEPTH (M)	SPEED	U	V
20	187	-8	64
30	173	3	51
40	156	2	36
50	150	2	26
60	151	7	19
70	154	2	-47
80	155	2	-48
90	162	1	-46
100	159	1	-47
110	158	1	-47
120	162	1	-45
130	160	1	-44
140	160	1	-48
150	159	1	-48
160	163	1	-48
170	182	1	-48
180	200	1	-48
190	214	1	-48
200	220	1	-48
210	220	1	-48
220	220	1	-48
230	220	1	-48
240	220	1	-48
250	220	1	-48
260	220	1	-48
270	220	1	-48
280	220	1	-48
290	220	1	-48
300	220	1	-48
310	220	1	-48
320	220	1	-48
330	220	1	-48
340	220	1	-48
350	220	1	-48
360	220	1	-48
370	220	1	-48
380	220	1	-48
390	220	1	-48
400	220	1	-48
410	220	1	-48
420	220	1	-48
430	220	1	-48
440	220	1	-48
450	220	1	-48
460	220	1	-48
470	220	1	-48
480	220	1	-48
490	220	1	-48
500	220	1	-48
510	220	1	-48
520	220	1	-48
530	220	1	-48
540	220	1	-48
550	220	1	-48
560	220	1	-48
570	220	1	-48



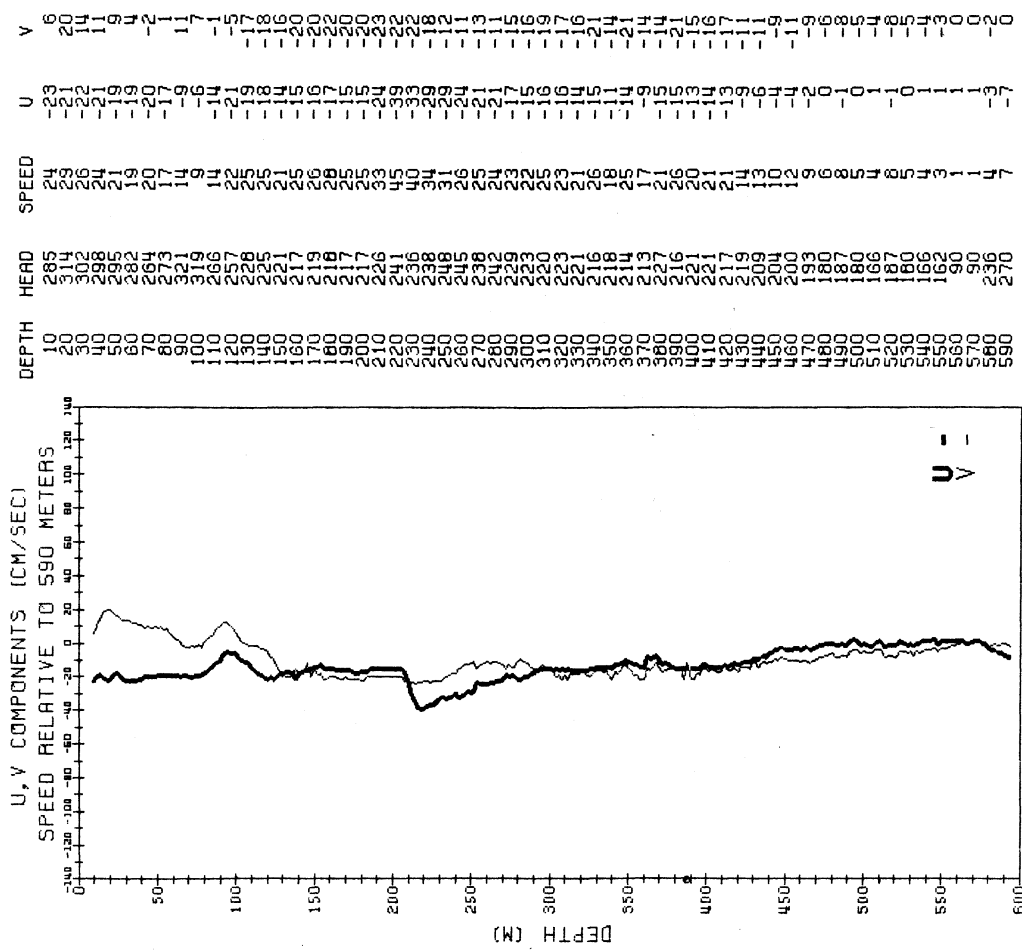
CYCLESØNDE 17

A/V RESEARCHER DATE 02 29 80 TIME 1339  
 LATITUDE 10 00.85 LONGITUDE 29 59.2W



CYCLESØNDE 18

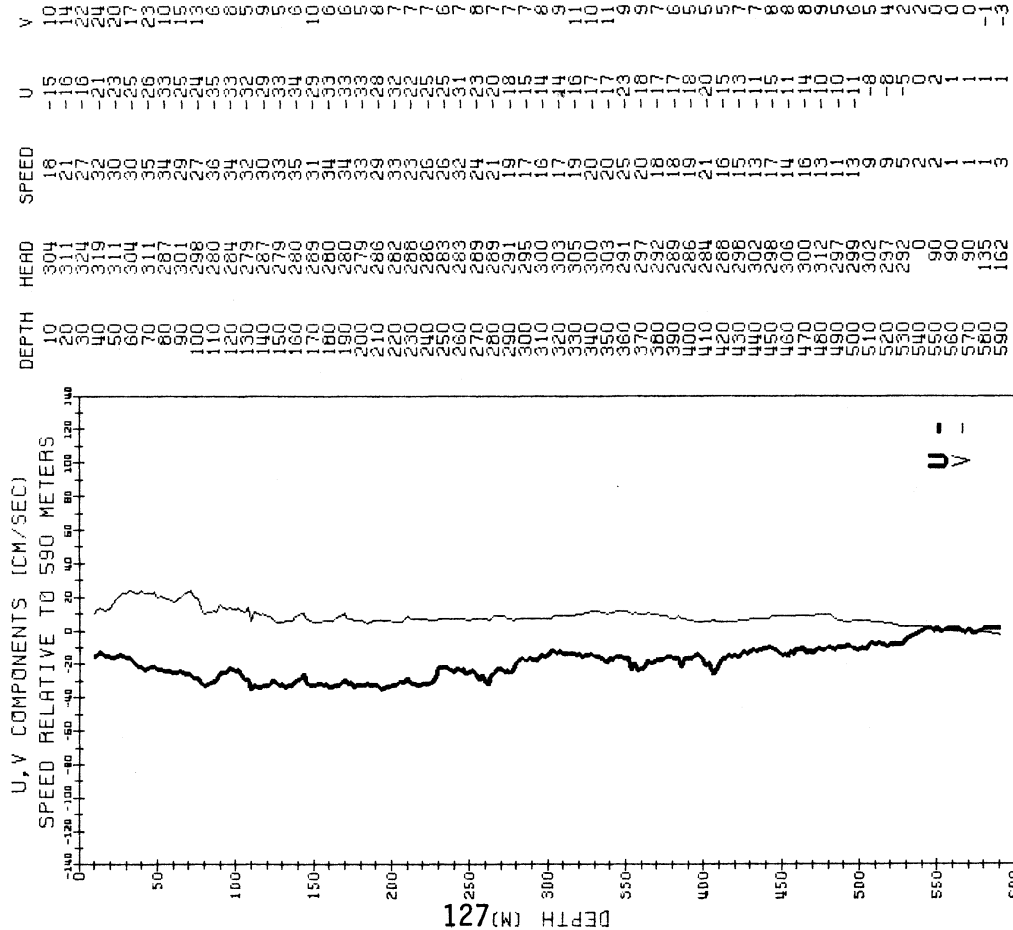
A/V RESEARCHER DATE 03 01 80 TIME 0344  
 LATITUDE 07 30.05 LONGITUDE 30 00.0W





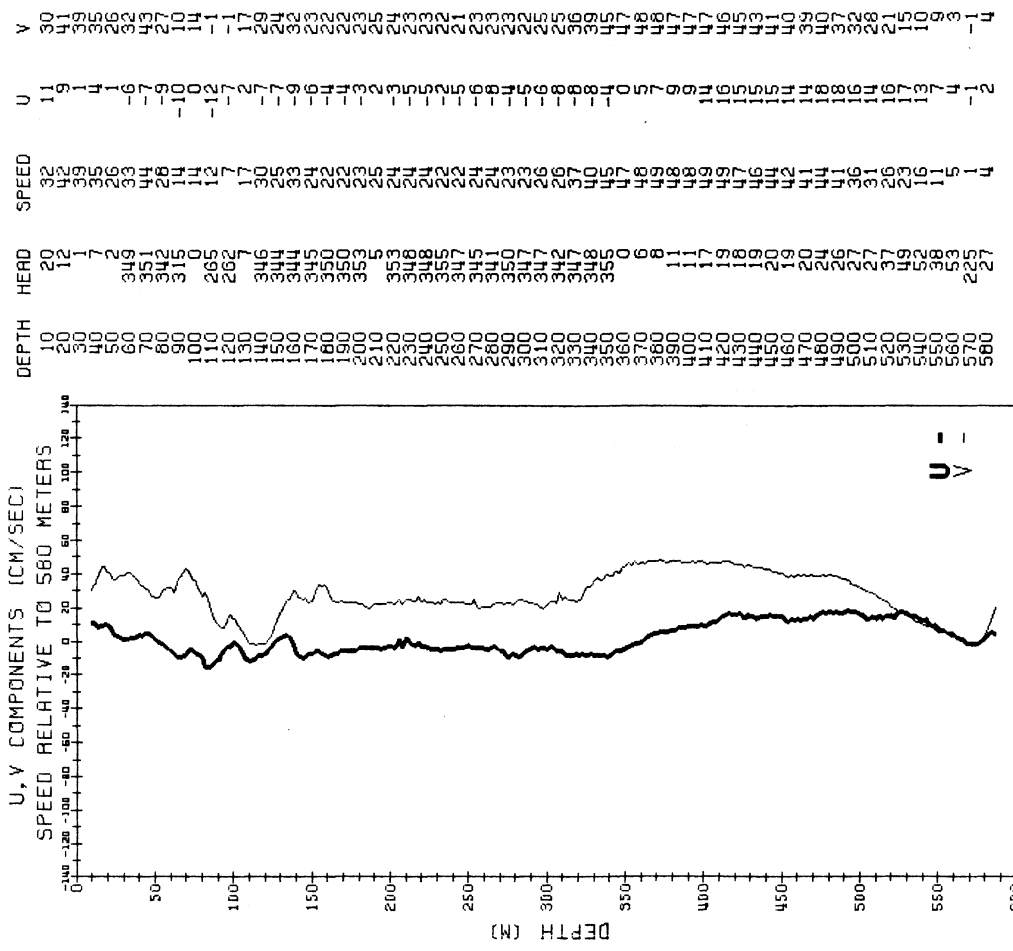
CYCLESØNDE 19

R/V RESEARCHER DATE 03 01 80 TIME 2257  
 LATITUDE 07 35.7S LONGITUDE 27 31.7W



CYCLESØNDE 20

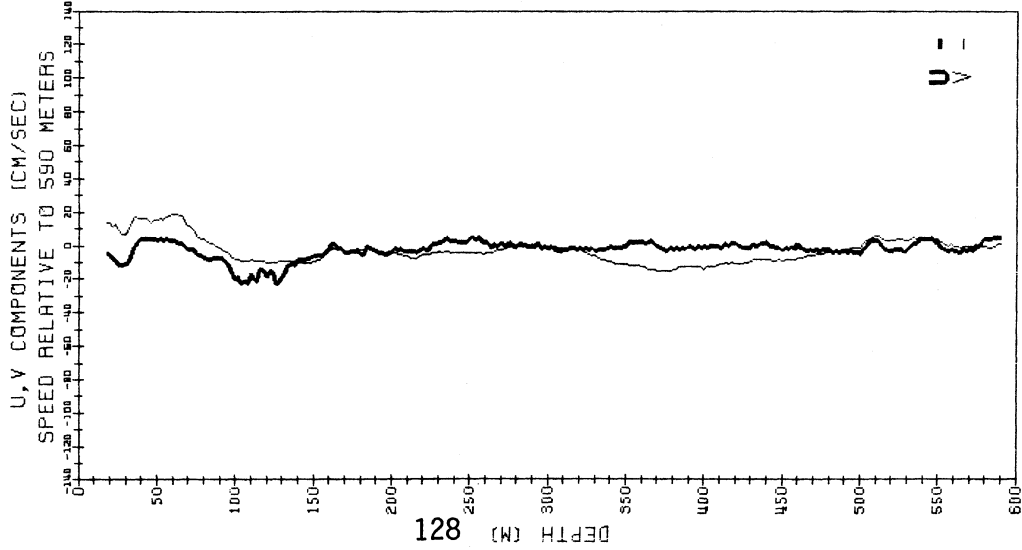
R/V RESEARCHER DATE 03 02 80 TIME 2106  
 LATITUDE 08 46.5S LONGITUDE 27 31.2W



CYCLESØNDE 21

R/V RESEARCHER DATE 03 03 80 TIME 1914  
 LATITUDE 06 15.15 LONGITUDE 27 30.6W

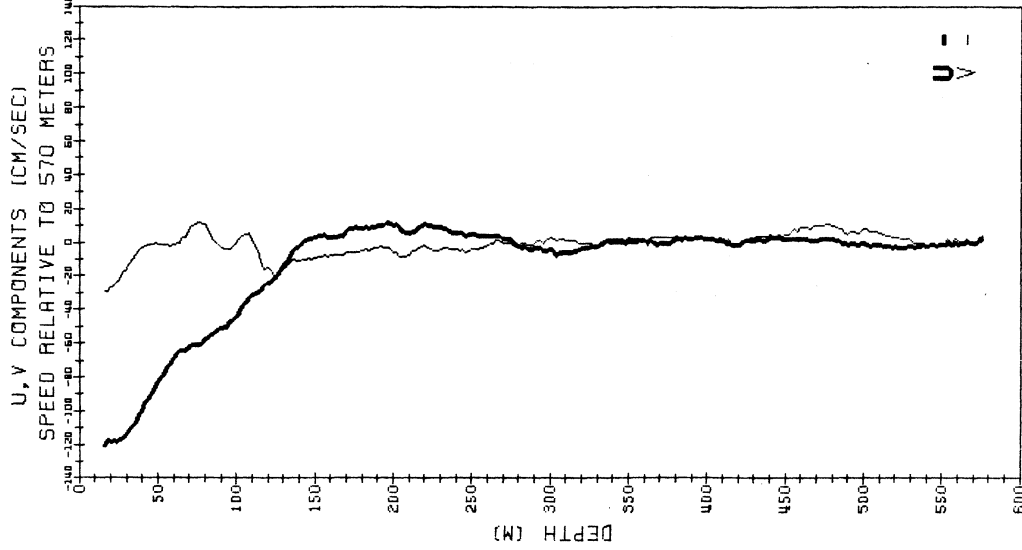
DEPTH	HEAD	SPEED	U	V
20	337	15	-6	14
30	302	16	-11	15
40	14	15	3	16
50	11	15	3	16
60	9	12	3	16
70	351	11	3	16
80	300	10	3	16
90	262	10	3	16
100	248	10	3	16
110	242	10	3	16
120	242	10	3	16
130	245	10	3	16
140	219	10	3	16
150	217	10	3	16
160	233	10	3	16
170	249	10	3	16
180	217	10	3	16
190	207	10	3	16
200	191	10	3	16
210	146	10	3	16
220	143	10	3	16
230	135	10	3	16
240	135	10	3	16
250	135	10	3	16
260	0	10	3	16
270	0	10	3	16
280	270	10	3	16
290	243	10	3	16
300	207	10	3	16
310	207	10	3	16
320	180	10	3	16
330	180	10	3	16
340	180	10	3	16
350	171	10	3	16
360	180	10	3	16
370	180	10	3	16
380	188	10	3	16
390	180	10	3	16
400	180	10	3	16
410	185	10	3	16
420	175	10	3	16
430	186	10	3	16
440	198	10	3	16
450	172	10	3	16
460	217	10	3	16
470	207	10	3	16
480	227	10	3	16
490	227	10	3	16
500	215	10	3	16
510	315	10	3	16
520	327	10	3	16
530	327	10	3	16
540	270	10	3	16
550	270	10	3	16
560	90	10	3	16
570	79	10	3	16



CYCLESØNDE 22

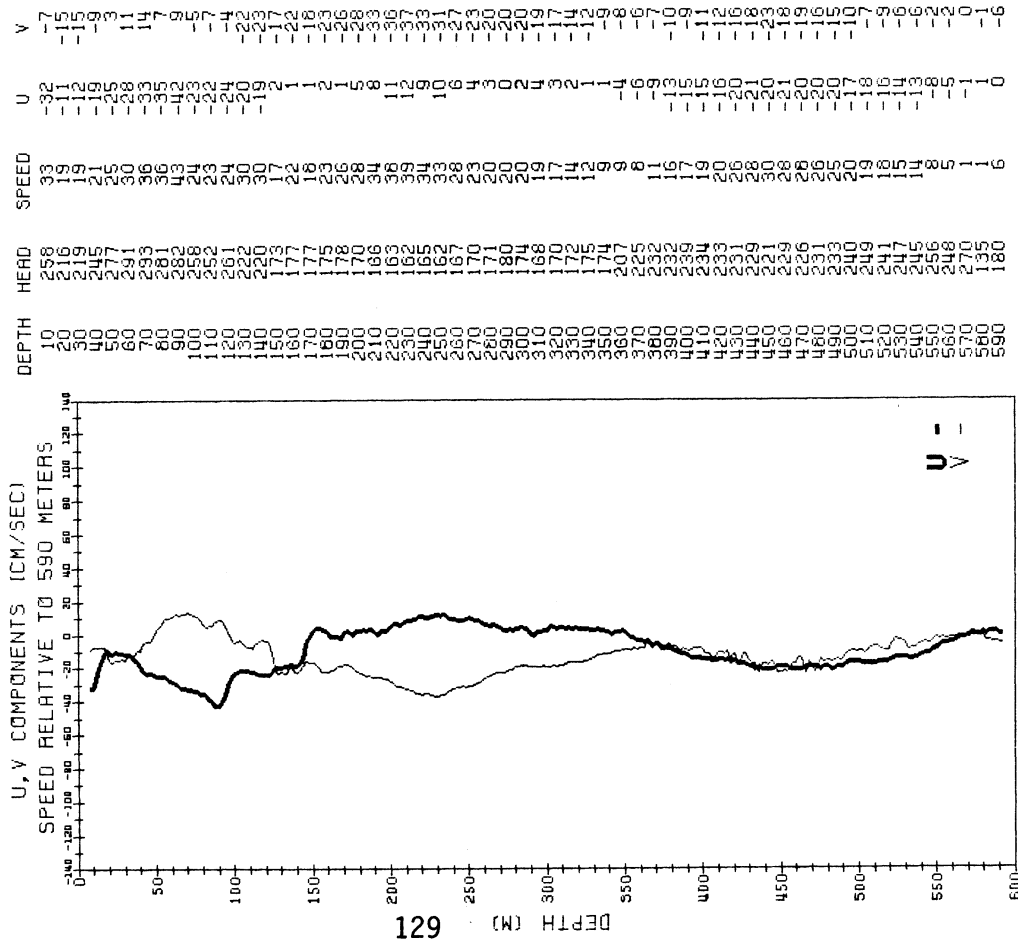
R/V RESEARCHER DATE 03 04 80 TIME 1431  
 LATITUDE 05 01.25 LONGITUDE 27 30.4W

DEPTH	HEAD	SPEED	U	V
20	257	122	-119	-27
30	262	114	-113	-16
40	269	100	-83	-13
50	269	83	-69	-11
60	276	62	-57	-11
70	281	56	-51	-11
80	270	54	-41	-11
90	270	31	-34	-11
100	238	28	-24	-11
110	238	21	-11	-11
120	238	11	9	-11
130	238	9	9	-11
140	238	9	9	-11
150	238	9	9	-11
160	238	9	9	-11
170	238	9	9	-11
180	238	9	9	-11
190	238	9	9	-11
200	238	9	9	-11
210	238	9	9	-11
220	238	9	9	-11
230	238	9	9	-11
240	238	9	9	-11
250	238	9	9	-11
260	238	9	9	-11
270	238	9	9	-11
280	238	9	9	-11
290	238	9	9	-11
300	238	9	9	-11
310	238	9	9	-11
320	238	9	9	-11
330	238	9	9	-11
340	238	9	9	-11
350	238	9	9	-11
360	238	9	9	-11
370	238	9	9	-11
380	238	9	9	-11
390	238	9	9	-11
400	238	9	9	-11
410	238	9	9	-11
420	238	9	9	-11
430	238	9	9	-11
440	238	9	9	-11
450	238	9	9	-11
460	238	9	9	-11
470	238	9	9	-11
480	238	9	9	-11
490	238	9	9	-11
500	238	9	9	-11
510	238	9	9	-11
520	238	9	9	-11
530	238	9	9	-11
540	238	9	9	-11
550	238	9	9	-11
560	238	9	9	-11
570	238	9	9	-11



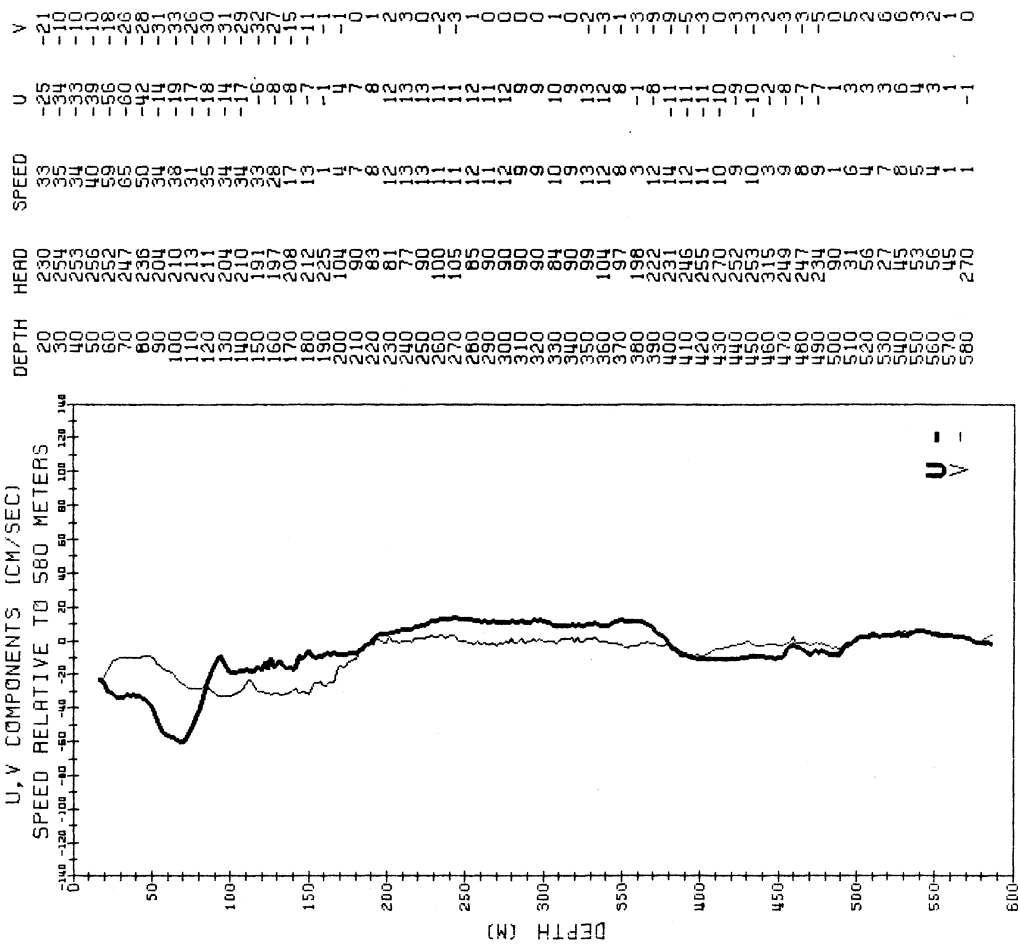
CYCLESØNDE 23

R/V RESEARCHER DATE 03 05 80 TIME 0437  
 LATITUDE 05 00.35 LONGITUDE 29 60.0W



CYCLESØNDE 24

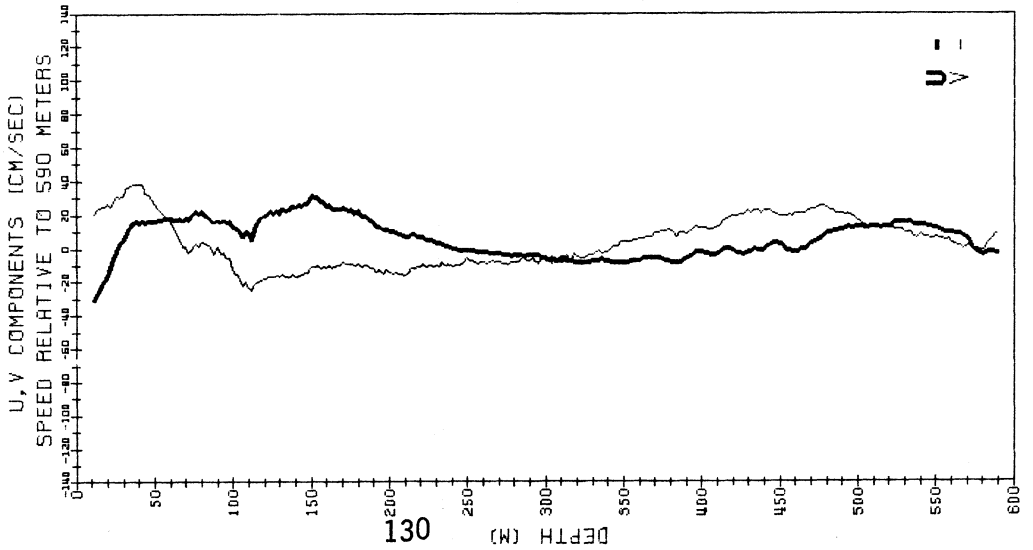
R/V RESEARCHER DATE 03 05 80 TIME 2125  
 LATITUDE 04 00.05 LONGITUDE 27 30.0W



# CYCLESØNDE 25

A/V RESEARCHER DATE 03 06 80 TIME 0414  
 LATITUDE 03 00.55 LONGITUDE 27 28.9W

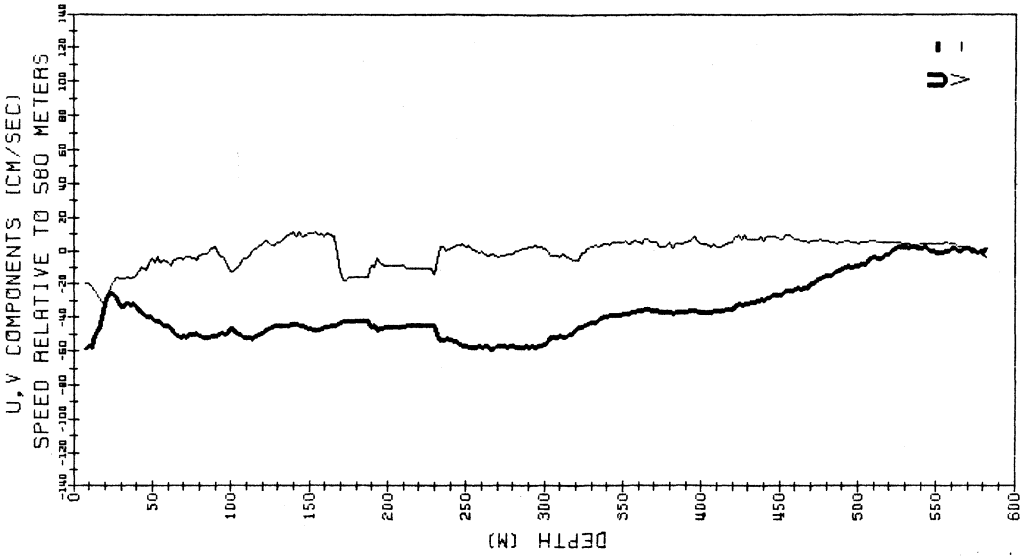
DEPTH	HEAD	SPEED	U	V
20	329	31	-16	27
30	311	33	15	32
40	221	41	16	38
50	31	24	18	27
60	48	18	18	16
70	87	17	22	4
80	87	15	13	12
90	33	15	20	12
100	33	27	21	17
110	33	27	21	17
120	33	27	21	17
130	33	27	21	17
140	33	27	21	17
150	116	23	23	11
160	108	17	23	9
170	129	17	10	12
180	144	17	5	16
190	155	13	5	11
200	148	10	0	11
210	163	9	0	11
220	189	9	0	11
230	201	9	0	11
240	207	9	0	11
250	221	10	4	8
260	221	10	4	8
270	238	10	4	8
280	240	10	4	8
290	254	9	4	8
300	297	9	4	8
310	311	9	4	8
320	326	11	6	6
330	321	11	6	6
340	323	11	6	6
350	351	11	6	6
360	357	11	6	6
370	357	11	6	6
380	357	11	6	6
390	357	11	6	6
400	357	11	6	6
410	357	11	6	6
420	357	11	6	6
430	357	11	6	6
440	357	11	6	6
450	357	11	6	6
460	357	11	6	6
470	357	11	6	6
480	357	11	6	6
490	357	11	6	6
500	357	11	6	6
510	357	11	6	6
520	357	11	6	6
530	357	11	6	6
540	357	11	6	6
550	357	11	6	6
560	357	11	6	6
570	357	11	6	6
580	357	11	6	6
590	357	11	6	6
600	357	11	6	6



# CYCLESØNDE 26

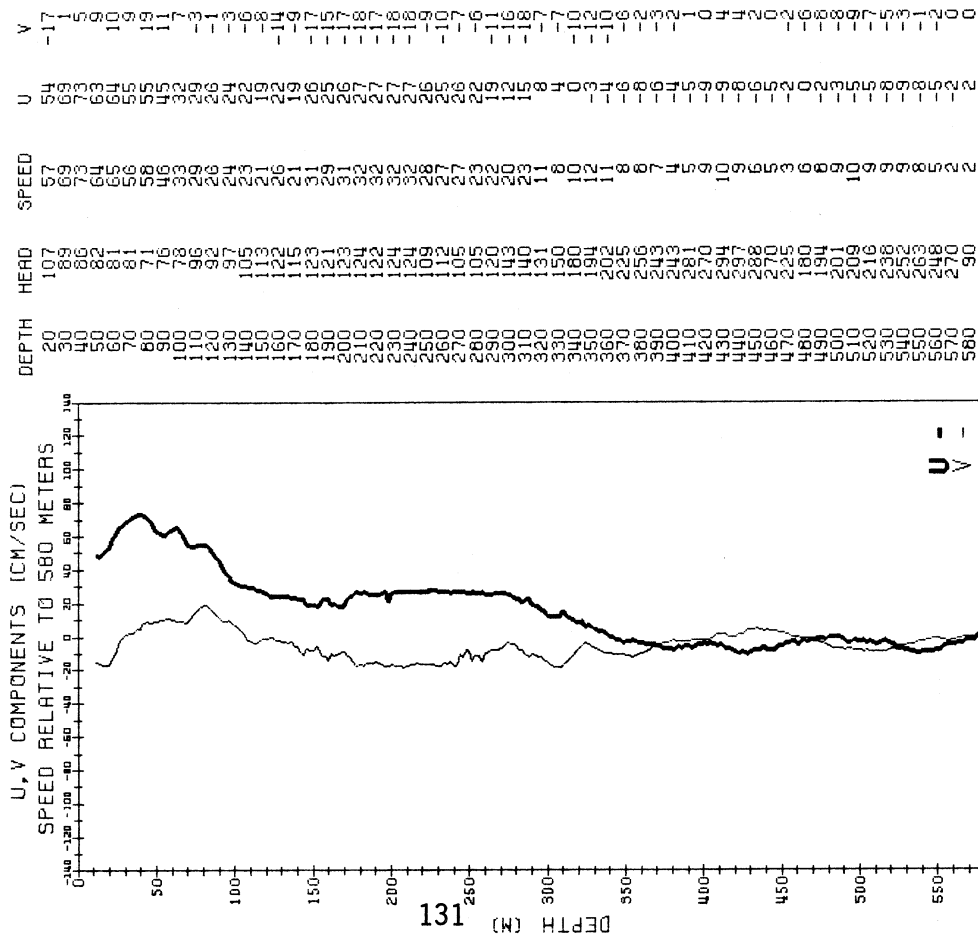
A/V RESEARCHER DATE 03 06 80 TIME 1119  
 LATITUDE 02 01.05 LONGITUDE 27 29.3W

DEPTH	HEAD	SPEED	U	V
10	251	60	57	-20
20	225	48	32	-32
30	243	35	14	-17
40	246	37	14	-15
50	263	46	15	-9
60	263	51	11	-6
70	272	51	11	-6
80	272	49	17	-6
90	255	49	17	-6
100	265	49	19	-5
110	275	49	19	-5
120	280	49	19	-5
130	284	49	19	-5
140	284	49	19	-5
150	282	49	19	-5
160	292	49	19	-5
170	293	47	16	-8
180	253	47	16	-8
190	253	47	16	-8
200	259	47	16	-8
210	259	47	16	-8
220	256	49	15	-11
230	271	47	15	-11
240	272	47	15	-11
250	270	58	17	-11
260	266	57	17	-11
270	266	58	17	-11
280	272	57	17	-11
290	271	56	17	-11
300	266	51	18	-11
310	263	48	18	-11
320	273	43	18	-11
330	276	40	18	-11
340	277	38	18	-11
350	278	36	18	-11
360	278	36	18	-11
370	278	36	18	-11
380	278	36	18	-11
390	278	36	18	-11
400	278	36	18	-11
410	278	36	18	-11
420	278	36	18	-11
430	282	33	18	-11
440	285	33	18	-11
450	287	33	18	-11
460	287	33	18	-11
470	287	33	18	-11
480	287	33	18	-11
490	287	33	18	-11
500	287	33	18	-11
510	287	33	18	-11
520	287	33	18	-11
530	287	33	18	-11
540	287	33	18	-11
550	287	33	18	-11
560	287	33	18	-11
570	287	33	18	-11
580	287	33	18	-11
590	287	33	18	-11
600	287	33	18	-11



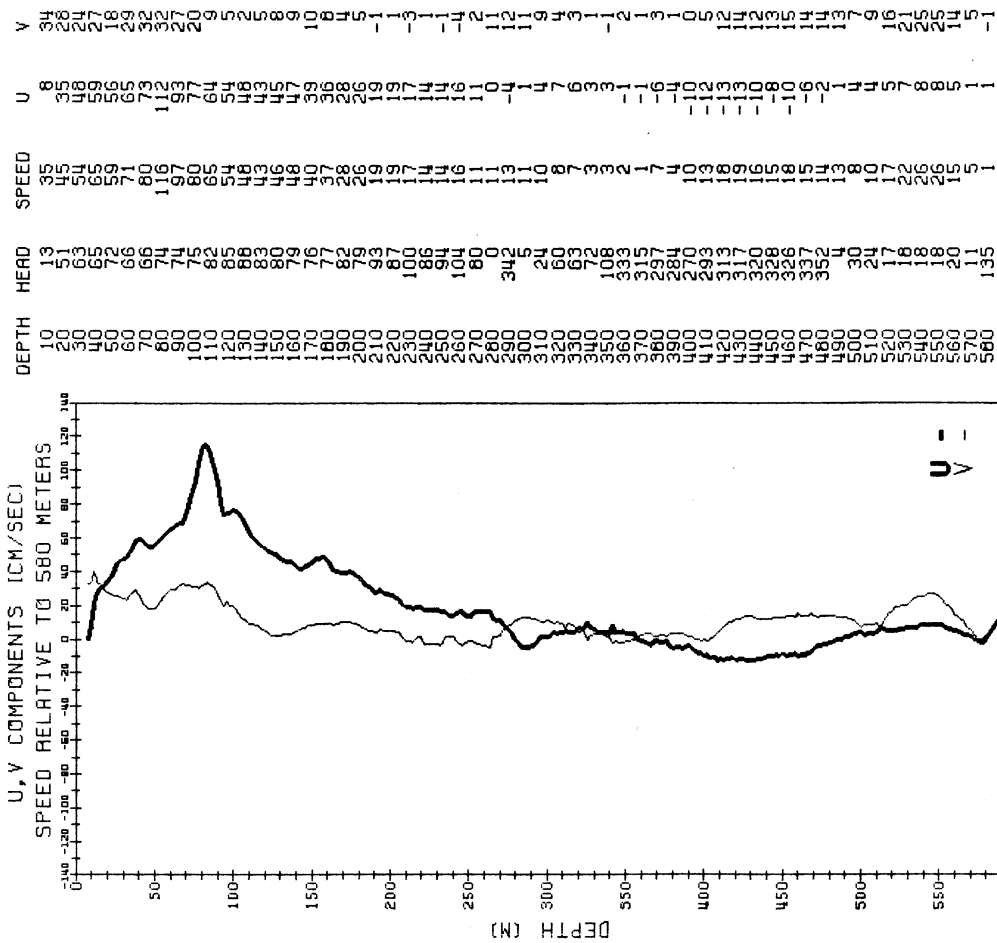
# CYCLESØNDE 27

R/V RESEARCHER DATE 03 06 80 TIME 1814  
 LATITUDE 01 00.45 LONGITUDE 27 28.5W



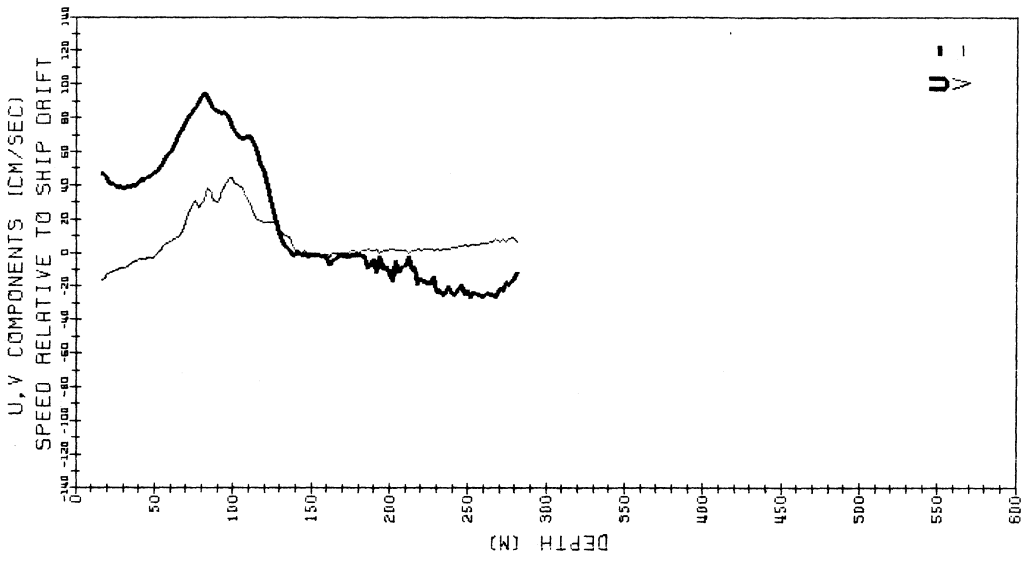
# CYCLESØNDE 28

R/V RESEARCHER DATE 03 07 80 TIME 0118  
 LATITUDE 00 00.2N LONGITUDE 27 29.7W



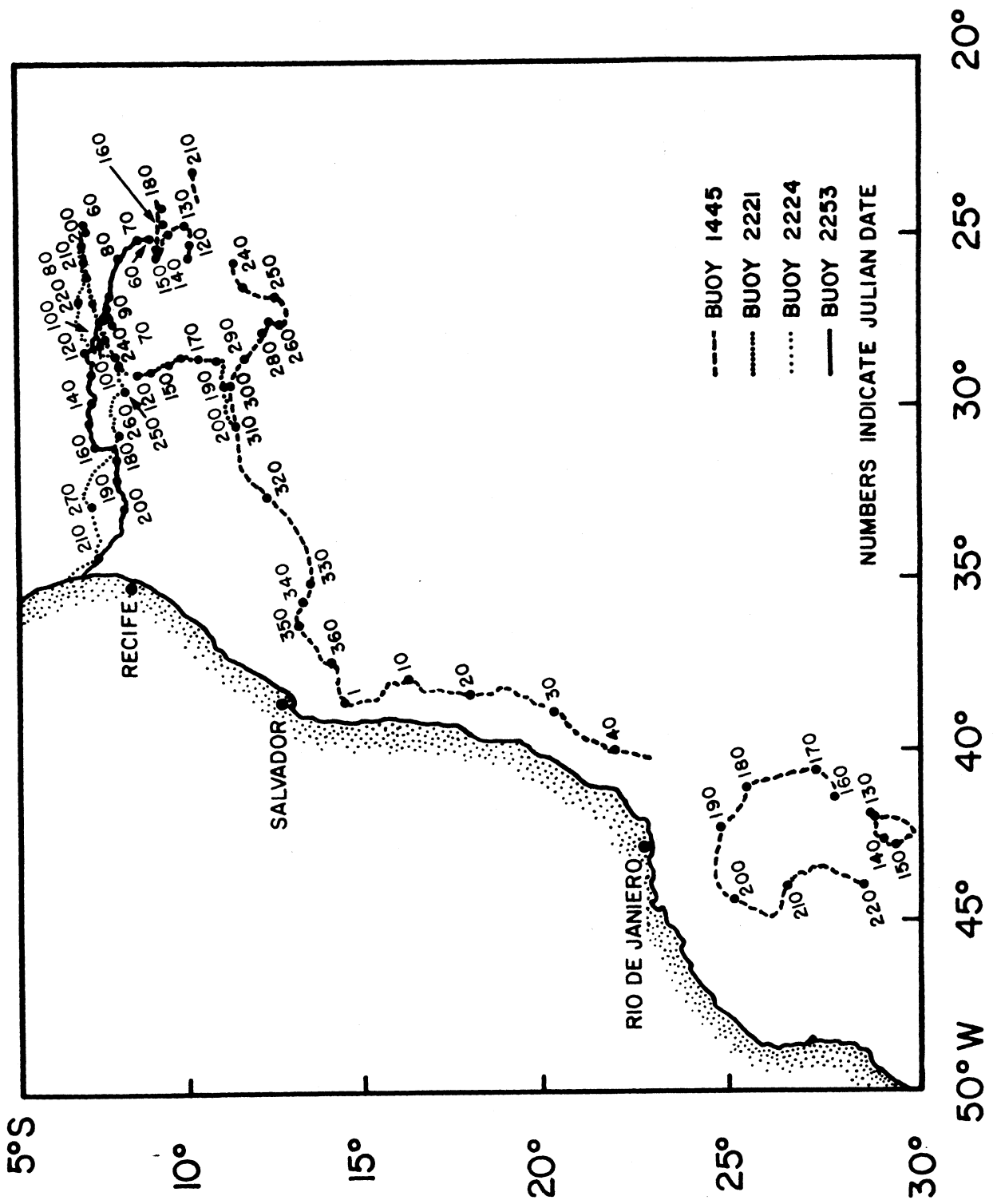
CYCLESØNDE 29  
 R/V RESEARCHER DATE 03 07 80 TIME 0926  
 LATITUDE 01 00.8N LONGITUDE 27 29.5W

DEPTH	HEAD	SPEED	U	V
20	106	46	44	-13
30	103	39	38	-14
40	95	42	42	-17
50	92	48	60	-27
60	83	60	77	-18
70	77	79	92	29
80	73	96	84	44
90	70	89	74	44
100	59	86	69	31
110	66	76	47	18
120	69	50	10	11
130	41	18	1	0
140	0	1	1	0
150	270	22	1	0
160	270	14	1	0
170	270	17	1	2
180	264	17	1	2
190	278	15	1	2
200	278	15	1	2
210	274	22	1	2
220	274	22	1	2
230	277	22	1	2
240	280	22	1	2
250	283	22	1	2
260	270	22	1	2
280	288	17	1	15



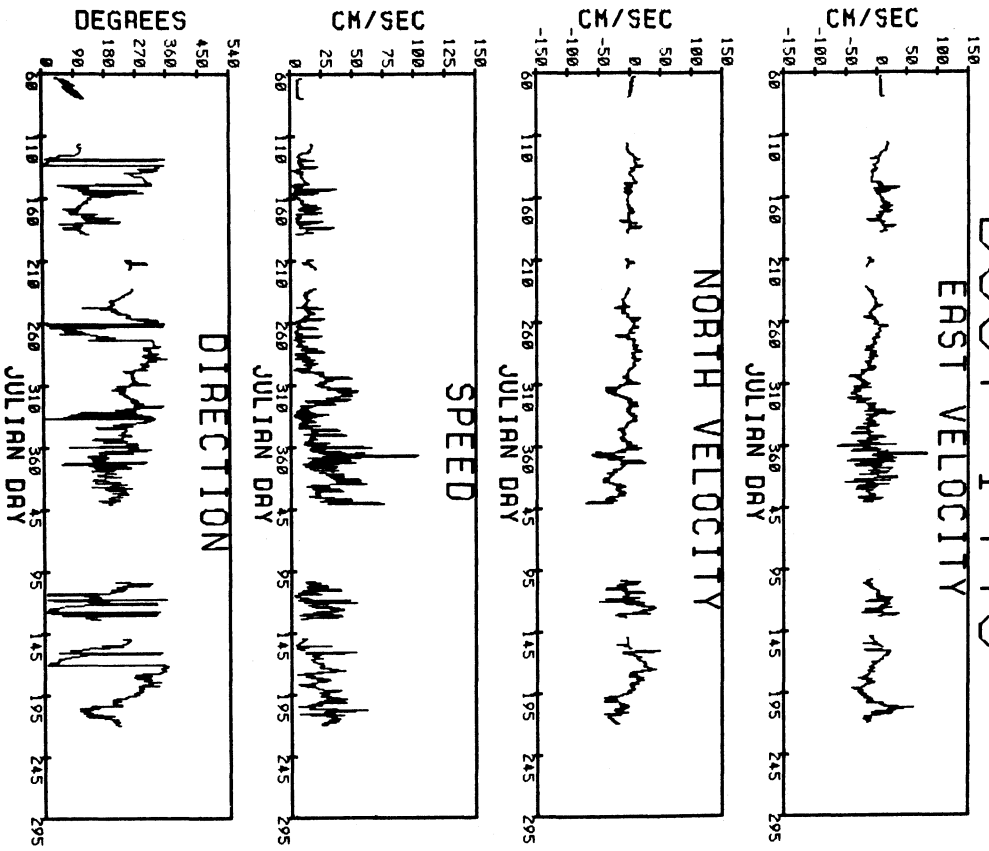
## Appendix 5

Drifting buoy data listings and plots of trajectories and velocities

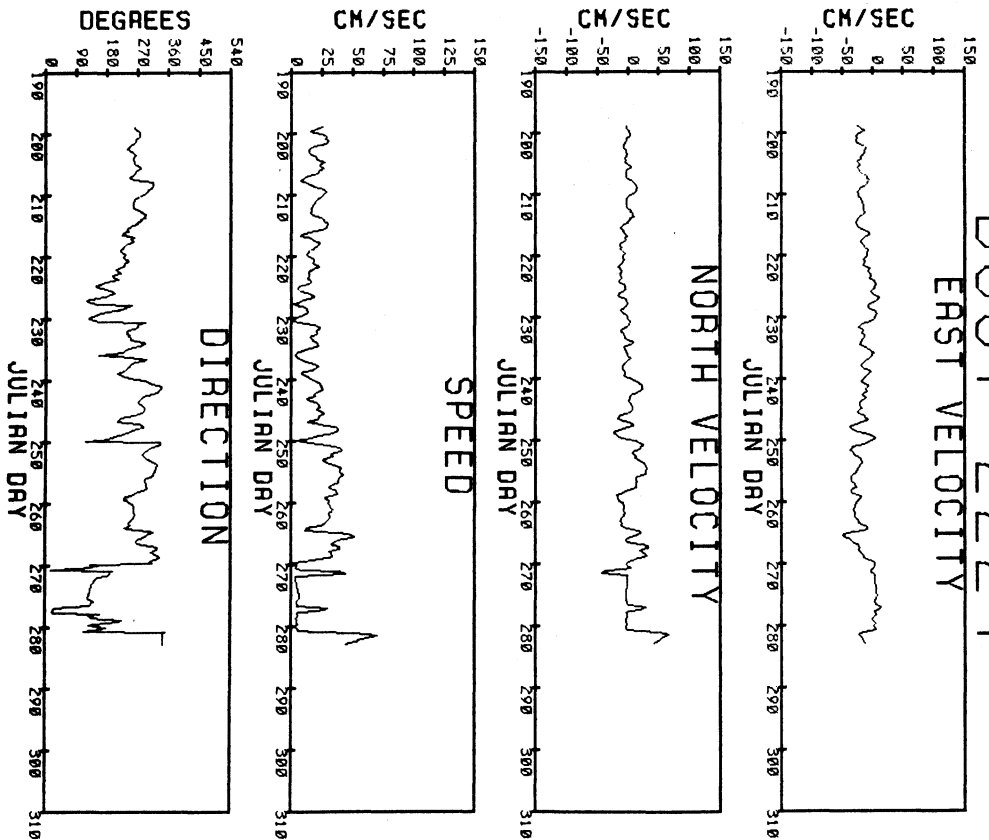




# BUOY 1445

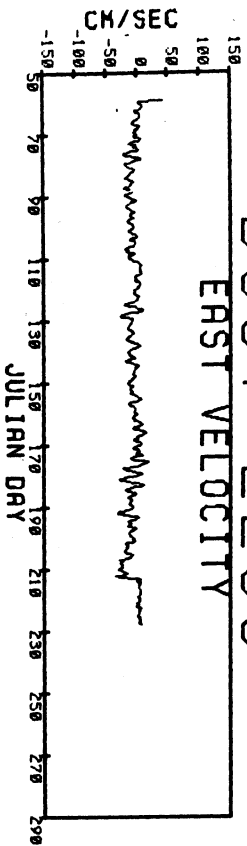


# BUOY 2224

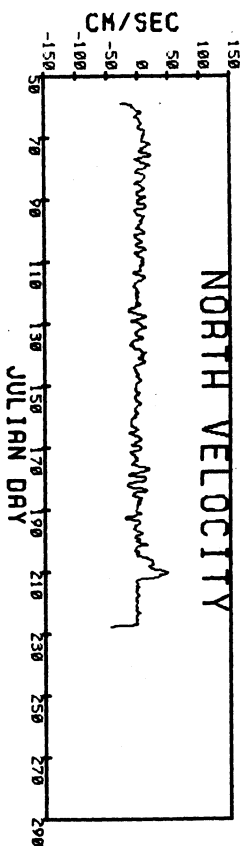


# BUOY 2253

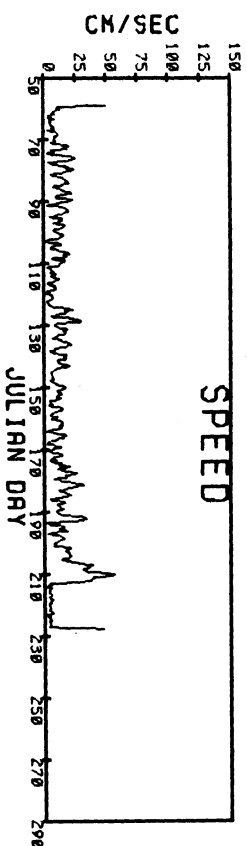
## FAST VELOCITY



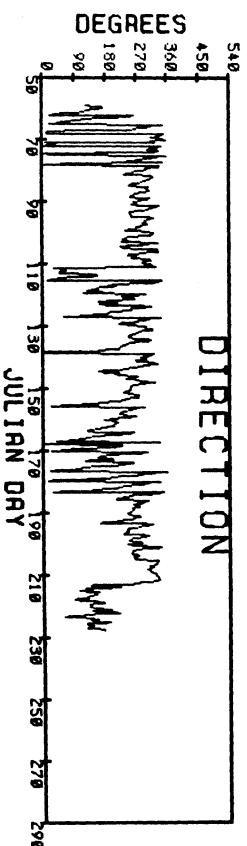
## NORTH VELOCITY



## SPEED

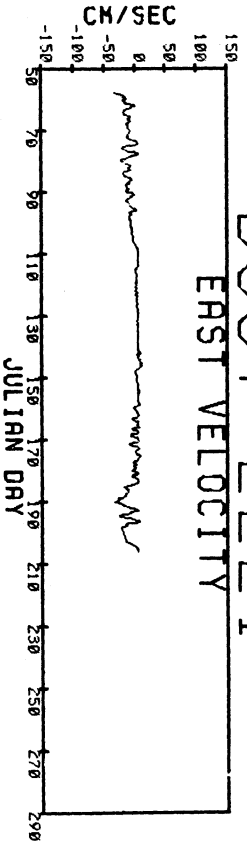


## DIRECTION

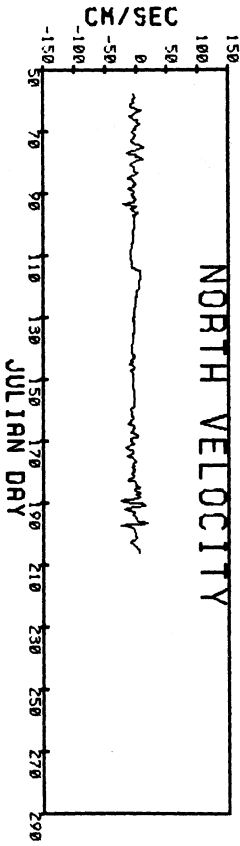


# BUOY 2221

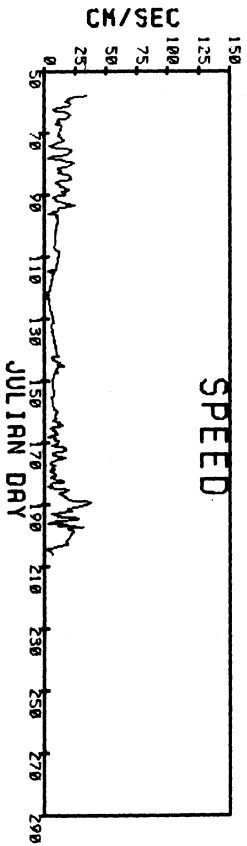
## FAST VELOCITY



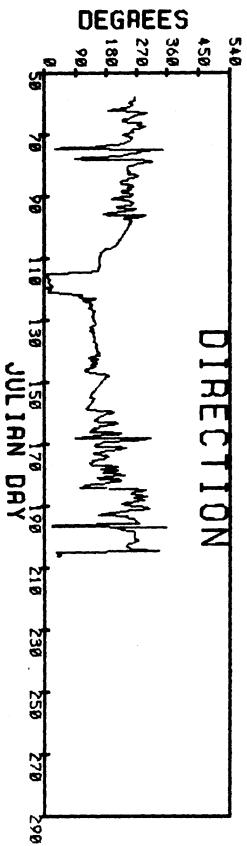
## NORTH VELOCITY



## SPEED



## DIRECTION



BUOY ID 1445 YEAR 1979-1980

JULIAN DAY	LATITUDE N	LONGITUDE W	JULIAN DAY	LATITUDE N	LONGITUDE W	JULIAN DAY	LATITUDE N	LONGITUDE W
63 51	-7.89	27.61	281 04	-12.11	27.87	65 01	-27.92	40.26
64 01	-7.87	27.59	282 04	-12.08	28.01	66 01	-28.03	40.29
65 01	-7.83	27.57	283 04	-12.03	28.07	67 01	-28.16	40.41
66 01	-7.80	27.54	284 04	-11.96	28.15	68 01	-28.29	40.55
67 01	-7.76	27.51	285 04	-11.87	28.28	69 01	-28.40	40.60
68 01	-7.74	27.49	286 04	-11.82	28.34	70 01	-28.54	40.68
69 01	-7.71	27.46	287 04	-11.77	28.39	71 01	-28.66	40.77
70 01	-7.69	27.43	288 04	-11.71	28.45	72 01	-28.74	40.81
71 01	-7.67	27.40	289 04	-11.73	28.48	73 01	-28.81	40.81
72 01	-7.66	27.38	290 04	-11.65	28.58	74 01	-28.86	40.88
73 01	-7.65	27.35	291 04	-11.60	28.65	75 01	-28.87	40.95
74 01	-7.64	27.32	292 04	-11.50	28.74	76 01	-28.92	41.01
75 01	-7.64	27.29	293 04	-11.47	28.81	77 01	-28.98	41.07
76 01	-7.64	27.26	294 04	-11.42	28.95	78 01	-29.02	41.16
77 01	-7.64	27.23	295 04	-11.36	29.05	79 01	-29.09	41.25
78 01	-7.65	27.20	296 04	-11.31	29.12	80 01	-29.15	41.42
79 01	-7.66	27.17	297 04	-11.28	29.22	81 01	-29.23	41.49
80 01	-7.68	27.14	298 04	-11.26	29.32	82 01	-29.31	41.51
117 73	-10.02	25.58	299 04	-11.26	29.47	83 01	-29.44	41.64
118 23	-10.04	25.51	300 04	-11.28	29.52	84 01	-29.53	41.63
119 23	-10.06	25.37	301 04	-11.28	29.68	85 01	-29.69	41.51
120 23	-10.09	25.24	302 04	-11.30	29.82	86 01	-29.75	41.45
121 23	-10.11	25.12	303 04	-11.33	30.02	87 01	-29.89	41.37
122 23	-10.12	25.01	304 04	-11.43	30.26	88 01	-30.05	41.21
123 23	-10.14	24.90	305 04	-11.46	30.48	89 01	-30.03	41.06
124 23	-10.15	24.79	306 04	-11.47	30.82	90 01	-30.02	40.87
125 23	-10.14	24.72	307 04	-11.50	31.01	91 01	-29.88	40.66
126 23	-10.13	24.67	308 04	-11.52	31.27	104 65	-28.81	41.97
127 23	-10.10	24.63	309 04	-11.47	31.44	105 15	-28.84	42.01
128 23	-10.06	24.62	310 04	-11.49	31.60	106 15	-28.87	42.11
129 23	-10.01	24.63	311 04	-11.55	31.78	107 15	-28.81	42.24
130 23	-9.91	24.70	312 04	-11.66	31.97	108 15	-28.78	42.36
131 23	-9.87	24.71	313 04	-11.82	32.20	109 15	-28.92	42.52
132 23	-9.82	24.72	314 04	-12.01	32.38	110 15	-28.98	42.62
133 23	-9.75	24.73	315 04	-12.30	32.49	111 15	-29.06	42.73
134 23	-9.70	24.75	316 04	-12.54	32.81	112 15	-29.28	42.81
135 23	-9.64	24.77	317 04	-12.79	33.06	113 15	-29.37	42.86
136 23	-9.52	24.82	318 04	-13.04	33.37	114 15	-29.44	42.88
137 23	-9.47	24.85	319 04	-13.20	33.63	115 15	-29.32	42.88
138 23	-9.45	24.89	320 04	-13.34	33.92	116 15	-29.34	42.88
139 23	-9.43	24.91	321 04	-13.43	34.16	117 15	-29.35	42.86
140 23	-9.40	24.96	322 04	-13.46	34.47	118 15	-29.37	42.83
141 23	-9.39	25.02	323 04	-13.50	34.66	119 15	-29.38	42.78
142 23	-9.38	25.08	324 04	-13.51	34.93	120 15	-29.36	42.75
143 23	-9.37	25.15	325 04	-13.49	35.12	121 15	-29.57	42.58
144 23	-9.34	25.21	326 04	-13.47	35.26	122 15	-29.83	42.46
145 23	-9.31	25.28	327 04	-13.40	35.40	123 15	-29.78	42.49
146 23	-9.27	25.36	328 04	-13.38	35.52	124 15	-29.82	42.34
147 23	-9.23	25.43	329 04	-13.33	35.64	125 15	-29.75	42.22
148 23	-9.18	25.51	330 04	-13.33	35.72	126 15	-29.60	42.06
149 23	-9.10	25.59	331 04	-13.35	35.77	127 15	-29.34	41.98
150 23	-9.14	25.58	332 04	-13.36	35.86	128 15	-29.07	41.93
151 23	-9.12	25.60	333 04	-13.38	35.81	129 15	-28.83	41.90
152 23	-9.09	25.56	334 04	-13.37	35.84	130 15	-28.68	41.85
153 23	-9.11	25.54	335 04	-13.35	35.54	131 15	-28.56	41.94
154 23	-9.14	25.38	336 04	-13.30	35.73	132 15	-28.41	42.04
155 23	-9.13	25.41	337 04	-13.24	35.75	133 15	-28.51	41.95
156 23	-9.11	25.43	338 04	-13.18	35.78	134 15	-28.62	41.72
157 23	-9.14	25.35	339 04	-13.08	35.99	135 15	-28.69	41.65
158 23	-9.13	25.36	340 04	-13.07	36.02	150 64	-27.77	41.33
159 23	-9.13	25.38	345 51	-13.22	36.37	151 14	-27.78	41.38
160 23	-9.14	25.38	346 01	-13.31	36.46	152 14	-27.79	41.46
161 23	-9.15	25.35	347 01	-13.39	36.56	153 14	-27.79	41.54
162 23	-9.16	25.31	348 01	-13.48	36.69	154 14	-27.80	41.60
163 23	-9.18	25.24	349 01	-13.56	36.80	155 14	-27.80	41.64
164 23	-9.21	25.19	350 01	-13.63	37.00	156 14	-27.81	41.67
165 23	-9.22	25.12	351 01	-13.71	37.10	157 14	-27.82	41.70
166 23	-9.23	25.03	352 01	-13.81	37.27	158 14	-27.92	41.82
167 23	-9.25	24.90	353 01	-13.93	37.28	159 14	-27.92	41.80
168 23	-9.25	24.83	354 01	-14.02	37.35	161 89	-27.95	41.45
169 23	-9.25	24.68	355 01	-14.13	37.41	162 14	-27.92	41.45

BUOY ID 1445 YEAR 1979-1980

JULIAN DAY	LATITUDE N	LONGITUDE W	JULIAN DAY	LATITUDE N	LONGITUDE W	JULIAN DAY	LATITUDE N	LONGITUDE W
170.23	-9.23	24.63	356.01	-14.18	37.50	163.14	-27.68	41.55
171.23	-9.20	24.50	357.01	-14.17	37.54	164.14	-27.78	41.38
172.23	-9.19	24.40	358.01	-14.21	37.63	165.14	-27.79	41.21
173.23	-9.15	24.26	359.01	-14.21	37.70	166.14	-27.74	41.04
174.23	-9.16	24.23	360.01	-14.21	37.83	167.14	-27.64	40.88
175.23	-9.17	24.18	361.01	-14.26	37.93	168.14	-27.54	40.78
176.23	-9.17	24.13	362.01	-14.16	38.16	169.14	-27.44	40.69
177.23	-9.18	24.12	363.01	-14.24	38.27	170.14	-27.33	40.60
178.23	-9.18	24.08	364.01	-14.36	38.37	171.14	-27.19	40.57
179.23	-9.18	24.05	365.01	-14.53	38.40	172.14	-27.00	40.54
180.23	-9.26	24.12	365.26	-14.60	38.38	173.14	-26.82	40.60
181.23	-9.24	24.08	365.51	-14.65	38.39	174.14	-26.63	40.64
182.23	-9.19	24.00	365.76	-14.79	38.45	175.14	-26.45	40.69
183.23	-9.18	23.94	1.01	-14.84	38.46	176.14	-26.21	40.77
184.23	-9.17	23.89	2.01	-15.04	38.46	177.14	-25.93	40.83
185.23	-9.07	23.70	3.01	-15.37	38.31	178.14	-25.69	40.91
186.23	-9.06	23.60	4.01	-15.63	38.26	179.14	-25.54	40.99
187.23	-9.07	23.51	5.01	-15.86	38.11	180.14	-25.50	41.06
188.23	-9.10	23.41	6.01	-16.14	37.96	181.14	-25.45	41.16
209.54	-10.14	23.15	7.01	-16.28	37.93	182.14	-25.45	41.26
210.04	-10.15	23.23	8.01	-16.32	37.91	183.14	-25.43	41.38
211.04	-10.21	23.32	9.01	-16.45	37.89	184.14	-25.30	41.56
212.04	-10.24	23.41	10.01	-16.47	37.93	185.14	-25.21	41.70
213.04	-10.23	23.49	11.01	-16.42	38.01	186.14	-25.09	41.87
214.04	-10.26	23.60	12.01	-16.50	38.04	187.14	-24.98	42.00
215.04	-10.30	23.72	13.01	-16.60	38.11	188.14	-24.90	42.11
216.04	-10.33	23.85	14.01	-16.70	38.16	189.14	-24.84	42.16
217.04	-10.38	24.00	15.01	-16.83	38.18	190.14	-24.81	42.28
232.54	-11.32	25.76	16.01	-17.00	38.21	191.14	-24.76	42.44
233.04	-11.33	25.84	17.01	-17.31	38.23	192.14	-24.73	42.62
234.04	-11.35	25.98	18.01	-17.53	38.23	193.14	-24.69	42.83
235.04	-11.38	26.09	19.01	-17.76	38.20	194.14	-24.63	43.12
236.04	-11.40	26.20	20.01	-18.00	38.22	195.14	-24.63	43.34
237.04	-11.44	26.27	21.01	-18.24	38.18	196.14	-24.63	43.57
238.04	-11.48	26.36	22.01	-18.53	38.18	197.14	-24.67	43.80
239.04	-11.53	26.43	23.01	-18.79	38.22	198.14	-24.76	43.97
240.04	-11.60	26.50	24.01	-19.10	38.26	199.14	-24.89	44.18
241.04	-11.69	26.56	25.01	-19.37	38.31	200.14	-25.13	44.33
242.04	-11.78	26.60	26.01	-19.68	38.38	201.14	-25.40	44.46
243.04	-11.88	26.64	27.01	-19.83	38.48	202.14	-25.57	44.58
244.04	-11.97	26.68	28.01	-20.00	38.59	203.14	-25.84	44.70
245.04	-12.05	26.71	29.01	-20.17	38.69	204.14	-25.99	44.76
246.04	-12.13	26.74	30.01	-20.29	38.82	205.14	-26.11	44.87
247.04	-12.19	26.76	31.01	-20.46	39.01	206.14	-26.17	44.82
248.04	-12.23	26.76	32.01	-20.60	39.16	207.14	-26.26	44.76
249.04	-12.32	26.79	33.01	-20.76	39.28	208.14	-26.31	44.65
250.04	-12.49	26.79	34.01	-20.88	39.41	209.14	-26.39	44.29
251.04	-12.58	26.84	35.01	-20.97	39.54	210.14	-26.56	43.98
252.04	-12.67	26.90	36.01	-21.03	39.63	211.14	-26.67	43.75
253.04	-12.76	26.99	37.01	-21.24	39.72	212.14	-26.84	43.56
254.04	-12.81	27.09	38.01	-21.52	39.82	213.14	-27.04	43.61
255.04	-12.83	27.20	39.01	-21.82	39.90	214.14	-27.17	43.40
256.04	-12.86	27.27	40.01	-22.12	39.97	215.14	-27.43	43.41
257.04	-12.83	27.39	41.01	-22.44	40.04	216.14	-27.69	43.47
258.04	-12.81	27.46	42.01	-22.71	40.10	217.14	-27.94	43.61
259.04	-12.68	27.54	43.01	-23.19	40.23	218.14	-28.16	43.70
260.04	-12.64	27.58	44.01	-23.76	40.29	219.14	-28.38	43.85
261.04	-12.63	27.60	45.01	-24.04	40.29	220.14	-28.57	43.95
262.04	-12.56	27.58	46.01	-24.02	40.23	221.14	-28.74	44.07
263.04	-12.54	27.64	47.01	-24.26	40.22			
264.04	-12.50	27.66	48.01	-24.41	40.13			
265.04	-12.45	27.63	49.01	-24.60	40.06			
266.04	-12.40	27.55	50.01	-24.80	39.99			
267.04	-12.39	27.54	51.01	-25.02	39.91			
268.04	-12.34	27.50	52.01	-25.20	39.71			
269.04	-12.32	27.51	53.01	-25.43	39.70			
270.04	-12.32	27.51	54.01	-25.71	39.72			
271.04	-12.36	27.52	55.01	-26.00	39.86			
272.04	-12.47	27.54	56.01	-26.24	40.05			
273.04	-12.47	27.56	57.01	-26.65	40.19			
274.04	-12.44	27.57	58.01	-26.80	40.22			
275.04	-12.48	27.57	59.01	-27.00	40.25			
276.04	-12.42	27.63	60.01	-27.20	40.30			
277.04	-12.37	27.66	61.01	-27.38	40.34			
278.04	-12.34	27.68	62.01	-27.53	40.20			
279.04	-12.28	27.74	63.01	-27.69	40.32			
280.04	-12.20	27.80	64.01	-27.81	40.27			

BUOY ID 2224 YEAR 1979

JULIAN DAY	LATITUDE N	LONGITUDE W	JULIAN DAY	LATITUDE N	LONGITUDE W
199 00	-7.00	25.02	242 00	-8.03	29.60
200 00	-7.00	25.17	243 00	-7.93	29.71
201 00	-6.98	25.36	244 00	-7.90	29.82
202 00	-7.01	25.58	245 00	-7.86	29.99
203 00	-7.06	25.70	246 00	-7.83	30.18
204 00	-7.07	25.82	247 00	-7.96	30.27
205 00	-7.10	26.00	248 00	-7.93	30.44
206 00	-7.09	26.18	249 00	-8.03	30.70
207 00	-7.10	26.35	250 00	-8.17	30.75
208 00	-7.11	26.42	251 00	-8.06	30.81
209 00	-7.03	26.50	252 00	-7.91	31.07
210 00	-6.94	26.68	253 00	-7.84	31.32
211 00	-6.92	26.86	254 00	-7.70	31.47
212 00	-6.94	27.00	255 00	-7.47	31.66
213 00	-6.95	27.13	256 00	-7.26	31.89
214 00	-6.90	27.26	257 00	-7.16	32.17
215 00	-6.88	27.47	258 00	-7.06	32.40
216 00	-6.97	27.66	259 00	-7.09	32.68
217 00	-7.01	27.74	260 00	-7.23	32.86
218 00	-7.04	27.87	261 00	-7.31	33.08
219 00	-7.15	28.00	262 00	-7.36	33.32
220 00	-7.23	28.08	263 00	-7.42	33.55
221 00	-7.30	28.17	264 00	-7.51	33.74
222 00	-7.40	28.29	265 00	-7.52	33.82
223 00	-7.51	28.36	266 00	-7.40	34.16
224 00	-7.60	28.40	267 00	-7.40	34.45
225 00	-7.70	28.40	268 00	-7.19	34.64
226 00	-7.75	28.42	269 00	-7.00	34.79
227 00	-7.87	28.42	270 00	-6.90	34.87
228 00	-7.89	28.38	271 00	-6.90	34.87
229 00	-7.93	28.44	272 00	-7.12	34.90
230 00	-8.00	28.41	273 00	-7.11	34.91
231 00	-7.99	28.42	274 00	-7.11	34.91
232 00	-7.98	28.57	275 00	-7.11	34.90
233 00	-8.07	28.71	276 00	-7.12	34.88
234 00	-8.11	28.83	277 00	-7.12	34.89
235 00	-8.08	28.98	278 00	-6.98	34.84
236 00	-8.12	29.05	279 00	-6.98	34.84
237 00	-8.11	29.08	280 00	-6.98	34.83
238 00	-8.13	29.19	281 00	-6.98	34.84
239 00	-8.21	29.31	282 00	-6.59	34.97
240 00	-8.26	29.37	283 00	-6.19	35.11
241 00	-8.19	29.51			

BUOY ID 2221 YEAR 1980

JULIAN DAY	LATITUDE N	LONGITUDE W	JULIAN DAY	LATITUDE N	LONGITUDE W	JULIAN DAY	LATITUDE N	LONGITUDE W
58.00	-6.97	24.88	109.00	-8.52	29.04	160.00	-9.89	28.51
59.00	-6.99	25.09	110.00	-8.60	29.03	161.00	-9.96	28.53
60.00	-7.01	25.24	111.00	-8.68	29.02	162.00	-10.02	28.54
61.00	-7.06	25.37	112.00	-8.75	29.02	163.00	-10.07	28.51
62.00	-7.13	25.50	113.00	-8.82	29.01	164.00	-10.13	28.54
63.00	-7.17	25.53	114.00	-8.88	29.01	165.00	-10.22	28.54
64.00	-7.12	25.64	115.00	-8.93	29.00	166.00	-10.25	28.52
65.00	-7.13	25.79	116.00	-8.88	29.02	167.00	-10.29	28.52
66.00	-7.21	25.89	117.00	-8.83	29.04	168.00	-10.35	28.53
67.00	-7.22	25.97	118.00	-8.79	29.05	169.00	-10.33	28.53
68.00	-7.20	26.04	119.00	-8.75	29.07	170.00	-10.37	28.57
69.00	-7.18	26.14	120.00	-8.72	29.07	171.00	-10.43	28.54
70.00	-7.19	26.23	121.00	-8.69	29.08	172.00	-10.46	28.59
71.00	-7.24	26.31	122.00	-8.66	29.09	173.00	-10.59	28.61
72.00	-7.24	26.39	123.00	-8.64	29.09	174.00	-10.64	28.59
73.00	-7.28	26.49	124.00	-8.63	29.10	175.00	-10.69	28.60
74.00	-7.34	26.54	125.00	-8.62	29.10	176.00	-10.79	28.56
75.00	-7.34	26.53	126.00	-8.61	29.10	177.00	-10.82	28.54
76.00	-7.26	26.64	127.00	-8.61	29.10	178.00	-10.85	28.57
77.00	-7.29	26.79	128.00	-8.61	29.10	179.00	-10.88	28.60
78.00	-7.38	26.82	129.00	-8.62	29.10	180.00	-10.91	28.60
79.00	-7.36	26.83	130.00	-8.63	29.09	181.00	-10.96	28.64
80.00	-7.31	26.95	131.00	-8.64	29.08	182.00	-10.99	28.64
81.00	-7.34	27.12	132.00	-8.66	29.07	183.00	-11.06	28.68
82.00	-7.40	27.21	133.00	-8.69	29.06	184.00	-11.11	28.68
83.00	-7.42	27.29	134.00	-8.72	29.05	185.00	-11.11	28.67
84.00	-7.42	27.39	135.00	-8.75	29.04	186.00	-11.09	28.79
85.00	-7.46	27.54	136.00	-8.79	29.02	187.00	-11.10	28.89
86.00	-7.56	27.65	137.00	-8.83	29.00	188.00	-11.07	29.00
87.00	-7.58	27.70	138.00	-8.88	28.98	189.00	-11.03	29.13
88.00	-7.60	27.79	139.00	-8.93	28.96	190.00	-11.18	29.34
89.00	-7.68	27.91	140.00	-8.99	28.94	191.00	-11.19	29.58
90.00	-7.71	28.00	141.00	-9.05	28.92	192.00	-11.13	29.73
91.00	-7.77	28.09	142.00	-9.11	28.89	193.00	-11.26	29.79
92.00	-7.80	28.13	143.00	-9.16	28.86	194.00	-11.29	29.82
93.00	-7.80	28.21	144.00	-9.18	28.83	195.00	-11.32	29.96
94.00	-7.90	28.32	145.00	-9.25	28.79	196.00	-11.30	30.10
95.00	-7.93	28.42	146.00	-9.33	28.73	197.00	-11.24	30.09
96.00	-8.00	28.46	147.00	-9.34	28.67	198.00	-11.33	30.18
97.00	-7.99	28.50	148.00	-9.40	28.63	199.00	-11.38	30.33
98.00	-8.02	28.56	149.00	-9.45	28.65	200.00	-11.38	30.51
99.00	-8.05	28.64	150.00	-9.50	28.67	201.00	-11.38	30.66
100.00	-8.08	28.71	151.00	-9.55	28.68	202.00	-11.37	30.81
101.00	-8.11	28.77	152.00	-9.60	28.68	203.00	-11.40	30.94
102.00	-8.15	28.82	153.00	-9.64	28.68	204.00	-11.46	31.04
103.00	-8.19	28.87	154.00	-9.68	28.67	205.00	-11.45	31.08
104.00	-8.23	28.92	155.00	-9.72	28.65	206.00	-11.42	31.08
105.00	-8.28	28.96	156.00	-9.75	28.63			
106.00	-8.33	28.99	157.00	-9.79	28.60			
107.00	-8.39	29.01	158.00	-9.82	28.57			
108.00	-8.45	29.03	159.00	-9.84	28.52			

BUOY ID 2253 YEAR 1980

JULIAN DAY	LATITUDE N	LONGITUDE W	JULIAN DAY	LATITUDE N	LONGITUDE W	JULIAN DAY	LATITUDE N	LONGITUDE W
59.00	-8.89	25.18	116.00	-7.12	28.28	173.00	-7.92	31.05
60.00	-9.03	25.03	117.00	-7.09	28.31	174.00	-7.94	31.02
61.00	-9.10	25.00	118.00	-7.12	28.34	175.00	-7.96	31.10
62.00	-9.09	24.95	119.00	-7.18	28.32	176.00	-8.04	31.03
63.00	-9.07	24.96	120.00	-7.18	28.33	177.00	-8.00	30.96
64.00	-9.10	24.94	121.00	-7.17	28.37	178.00	-7.87	31.07
65.00	-9.08	24.93	122.00	-7.17	28.42	179.00	-7.92	31.19
66.00	-9.04	24.95	123.00	-7.18	28.44	180.00	-7.96	31.15
67.00	-9.02	25.01	124.00	-7.18	28.45	181.00	-7.86	31.23
68.00	-8.99	25.00	125.00	-7.17	28.52	182.00	-7.91	31.45
69.00	-8.90	25.03	126.00	-7.26	28.63	183.00	-8.06	31.49
70.00	-8.85	25.07	127.00	-7.36	28.64	184.00	-8.01	31.44
71.00	-8.79	25.09	128.00	-7.31	28.65	185.00	-7.98	31.56
72.00	-8.74	25.10	129.00	-7.25	28.84	186.00	-8.03	31.65
73.00	-8.62	25.12	130.00	-7.33	28.95	187.00	-8.01	31.71
74.00	-8.54	25.19	131.00	-7.31	29.02	188.00	-8.01	31.81
75.00	-8.50	25.22	132.00	-7.22	29.11	189.00	-7.99	31.89
76.00	-8.38	25.24	133.00	-7.21	29.23	190.00	-8.00	31.99
77.00	-8.27	25.40	134.00	-7.24	29.32	191.00	-8.02	32.06
78.00	-8.29	25.47	135.00	-7.22	29.38	192.00	-8.00	32.22
79.00	-8.23	25.47	136.00	-7.21	29.49	193.00	-8.12	32.45
80.00	-8.12	25.57	137.00	-7.30	29.61	194.00	-8.20	32.47
81.00	-8.09	25.72	138.00	-7.37	29.67	195.00	-8.17	32.53
82.00	-8.11	25.78	139.00	-7.38	29.66	196.00	-8.21	32.63
83.00	-8.03	25.84	140.00	-7.32	29.73	197.00	-8.25	32.72
84.00	-7.96	25.95	141.00	-7.26	29.86	198.00	-8.22	32.77
85.00	-7.95	26.09	142.00	-7.24	29.95	199.00	-8.21	32.87
86.00	-7.94	26.16	143.00	-7.18	30.01	200.00	-8.21	32.96
87.00	-7.88	26.24	144.00	-7.15	30.15	201.00	-8.21	33.02
88.00	-7.86	26.40	145.00	-7.21	30.18	202.00	-8.12	33.09
89.00	-7.86	26.48	146.00	-7.23	30.21	203.00	-8.13	33.22
90.00	-7.79	26.60	147.00	-7.22	30.25	204.00	-8.16	33.36
91.00	-7.78	26.72	148.00	-7.22	30.31	205.00	-8.16	33.53
92.00	-7.76	26.76	149.00	-7.20	30.35	206.00	-8.10	33.62
93.00	-7.67	26.85	150.00	-7.20	30.44	207.00	-7.97	33.70
94.00	-7.66	27.00	151.00	-7.22	30.55	208.00	-7.77	33.92
95.00	-7.68	27.10	152.00	-7.26	30.62	209.00	-7.63	34.13
96.00	-7.64	27.15	153.00	-7.26	30.72	210.00	-7.44	34.32
97.00	-7.57	27.24	154.00	-7.28	30.80	211.00	-7.09	34.55
98.00	-7.54	27.31	155.00	-7.30	30.83	212.00	-6.80	34.71
99.00	-7.53	27.43	156.00	-7.30	30.81	213.00	-6.68	34.93
100.00	-7.53	27.49	157.00	-7.27	30.87	214.00	-6.69	34.93
101.00	-7.47	27.54	158.00	-7.30	30.97	215.00	-6.69	34.94
102.00	-7.44	27.65	159.00	-7.34	31.00	216.00	-6.69	34.94
103.00	-7.46	27.70	160.00	-7.36	31.04	217.00	-6.69	34.94
104.00	-7.44	27.73	161.00	-7.39	31.07	218.00	-6.68	34.94
105.00	-7.44	27.81	162.00	-7.49	31.12	219.00	-6.69	34.93
106.00	-7.42	27.86	163.00	-7.59	31.15	220.00	-6.69	34.93
107.00	-7.34	27.93	164.00	-7.65	31.10	221.00	-6.68	34.93
108.00	-7.36	28.06	165.00	-7.66	31.12	222.00	-6.69	34.93
109.00	-7.36	28.14	166.00	-7.77	31.11	223.00	-6.70	34.94
110.00	-7.30	28.25	167.00	-7.80	31.02	224.00	-6.68	34.93
111.00	-7.25	28.33	168.00	-7.76	31.02	225.00	-6.68	34.93
112.00	-7.21	28.35	169.00	-7.77	31.05	226.00	-6.69	34.94
113.00	-7.18	28.33	170.00	-7.83	31.01	227.00	-6.69	34.93
114.00	-7.19	28.32	171.00	-7.79	31.01	228.00	-6.78	34.93
115.00	-7.20	28.30	172.00	-7.86	31.06	229.00	-7.07	34.90