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DATA FROM OTEC SITE CHARACTERIZATION STUDIES
IN THE GULF OF MEXICO AND TROPICAL SOUTH ATLANTIC

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Miami, Florida
September 1979

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DEPARTMENT OF COMMERCE**
Juanita M. Kreps, Secretary

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
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Environmental Research
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Wilmot N. Hess, Director

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A report submitted to the Department of Energy with regards to Interagency Agreement Number EX-76-A-29-1041, Task Order T027 and Amendment Number 1 with the National Oceanic and Atmospheric Administration.

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INTRODUCTION

The OTEC program of the Department of Energy has a requirement for physical oceanographic data. These data and other types of oceanographic data are necessary to evaluate the potential of various sites for OTEC operations. The types of physical oceanographic data required to perform this evaluation are given by Molinari and Festa (1978) and Molinari and Chew (1979). A suggested measurement program to obtain these data is also given in these reports, and was implemented at two sites in the Gulf of Mexico, and one in the tropical South Atlantic.

This report represents the second in a series of reports which present data collected at potential OTEC sites. The first report listed data collected in the Gulf of Mexico, south of Mobile, Alabama (Thomas et al., 1979). This report presents data collected at the Mobile site and west of Tampa, Florida, and in the tropical South Atlantic. The objectives of these data reports are to give data reduction techniques and lists and plots of the data. Analysis of the data to generate OTEC related products and site characterizations are given in a follow-up report which describes site conditions observed over one-year.

Table 1 shows the data collection effort conducted at the three sites. Thomas et al. (1979) have listed the data collected at the Mobile site from July through November, 1977. The data collected from January through December, 1978 are listed herein.

Bimonthly site visits were initiated at Tampa and Mobile in June, 1978. The site visits were discontinued at Mobile in October, 1978 because of the lack of a suitable thermal resource. Additional site visits were made to Tampa and Mobile when ships were available. Table 2 lists the area, vessel and data collected during each site visit. Table 3 lists the type of positioning used by each vessel and the accuracy of each system. The station positions are shown in Appendix 1.

The analysis techniques applied to each data-set are described next. Listings and figures for each set are given in Appendices as noted. Some preliminary data products are also given.

METEOROLOGICAL DATA

Meteorological data are collected by ship's personnel during their bridge watches. As such, the data are not as accurate as those obtained by self-recording, frequently calibrated instruments. In particular, the wave heights should be regarded as estimates rather than quantitative observations of the sea-state. A summary of the limited amount of meteorological data collected during the site visits is given in Appendix 2.

EXPENDABLE BATHYTHERMOGRAPH DATA

Expendable bathythermograph (XBT) profiles are digitized upon return to AOML. Occasionally, a radio transmission will disrupt the cast and these profiles are not read. Each profile is examined for a

TABLE 1: Collection effort in the Gulf of Mexico and South Atlantic

Site	Data Type	1977						1978											
		J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Mobile	a) Site visit	X			X	X		X					X		X		X		
	b) Current meter				R			R					R				R		
	record																		
		D			D			D					D						
Tampa	a) Site visit								X	X			X		X		X		X
	b) Current meter																R		
	record																		
													D				D		
South Atlantic	a) Site visit													X					
	b) Current meter																		
	record												D						
	c) drifting																		
	buoys												D						

D= deployed

R= retrieved

TABLE 2: Measurements taken at proposed OTEC sites in the Gulf of Mexico and South Atlantic

<u>Month</u>	<u>Year</u>	<u>Site</u>	<u>Vessel</u>	<u>XBT's</u>	<u>STD's</u>	<u>PCM's</u>	<u>Current Meter Servicing</u>
February	1978	Mobile	VIRGINIA KEY	✓			✓
February	1978	Gulf of Mexico	*GERONIMO	✓			
March	1978	Gulf of Mexico	*GERONIMO	✓			
March	1978	Tampa	VIRGINIA KEY	✓			
April	1978	Tampa	VIRGINIA KEY	✓			
June	1978	Mobile	VIRGINIA KEY	✓	✓	✓	✓
		Tampa	" "	✓	✓	✓	(Deployed)
July	1978	South Atlantic	RESEARCHER	✓	✓	✓	(Deployed)
August	1978	Mobile	VIRGINIA KEY	✓	✓	✓	
		Tampa	" "	✓	✓	✓	
October	1978	Mobile	VIRGINIA KEY	✓	✓	✓	(Retrieved)
		Tampa	" "	✓	✓	✓	✓
December	1978	Tampa	" "	✓	✓	✓	

* - ship-of-opportunity cruises which determined position of Loop Current

TABLE 3: Navigation systems and accuracies

<u>Ship</u>	<u>System</u>	<u>Accuracy of station Coordinates</u>
R/V VIRGINIA KEY	Loran-C, Omega	<u>+1</u> nautical mile
R/V RESEARCHER	Satellite	<u>+1</u> nautical mile
R/V GERONIMO	Loran-A	<u>+2</u> nautical mile

check cycle tick mark, an indicator of proper system initialization. Any profile without such a tickmark is compared to surrounding profiles for consistency. Calibration of the recorder is maintained by comparison of SST's from XBT profile and bucket temperature samples.

The XBT's are read at 1°C isotherm intervals. The 1°C isotherm depths are listed in Appendix 3. Composite plots of XBT traces are given in Appendix 4 to provide a visualization of the variability observed during the cruises.

All XBT data have been submitted to NODC for inclusion in their data bank.

STD DATA

Temperature and salinity data are collected using Plessey Environmental Systems Model 9040 and 9060 STD units. The 9040 unit telemeters the data to a deck unit where it is stored on a magnetic tape. The 9060 STD is a self-contained unit and records data on a strip chart. The 9060 unit was used on the June, August and October VIRGINIA KEY cruises and the 9040 unit on the December VIRGINIA KEY and RESEARCHER cruises.

The depth, temperature and salinity data from both units must be calibrated by other in situ data to obtain accurate readings. Niskin bottles are used to collect the salinity and temperature data for calibration. The Niskin bottles are mounted directly on the hydrographic wire at several depths in the 9060 operation. The cast is in the form of a hydrographic cast and the bottles are tripped by messenger. The Niskin bottles are placed on a Rosette Sampler in the 9040 operation and tripped electronically. Thermometric depths computed from reversing thermometer data are accurate to within 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 were quality controlled by constructing T-S plots (Figures 1 and 2) and eliminating inconsistent points. The bottle data are listed in Appendix 5.

The 9040 data are smoothed to reduce the noise in the temperature and salinity records. These data are calibrated by generating parameter versus depth curves (Figures 3 and 4) from the bottle data. The corrected 9040 STD data are listed in Appendix 6. The depth values are accurate to within ± 5 m, salinity $\pm .01$ ‰, and temperature $\pm .01^{\circ}\text{C}$.

The 9060 analogue traces are read at 20 m intervals and at the depths at which Niskin bottles were tripped. Calibration curves are generated from the bottle data as in the 9040 case, and are given in Figure 5. An additional correction was necessary to reduce the large scatter in T-S points caused by the poor resolution of the 9060 sensors. The bottle data indicate a minimum salinity of 34.88 ‰ at about 6.2°C (Figure 1). At each station, the difference between the once calibrated salinity value at 6.2°C and 34.88 ‰ was added or subtracted to the once calibrated value. This second correction served to reduce the scatter in T-S points somewhat.

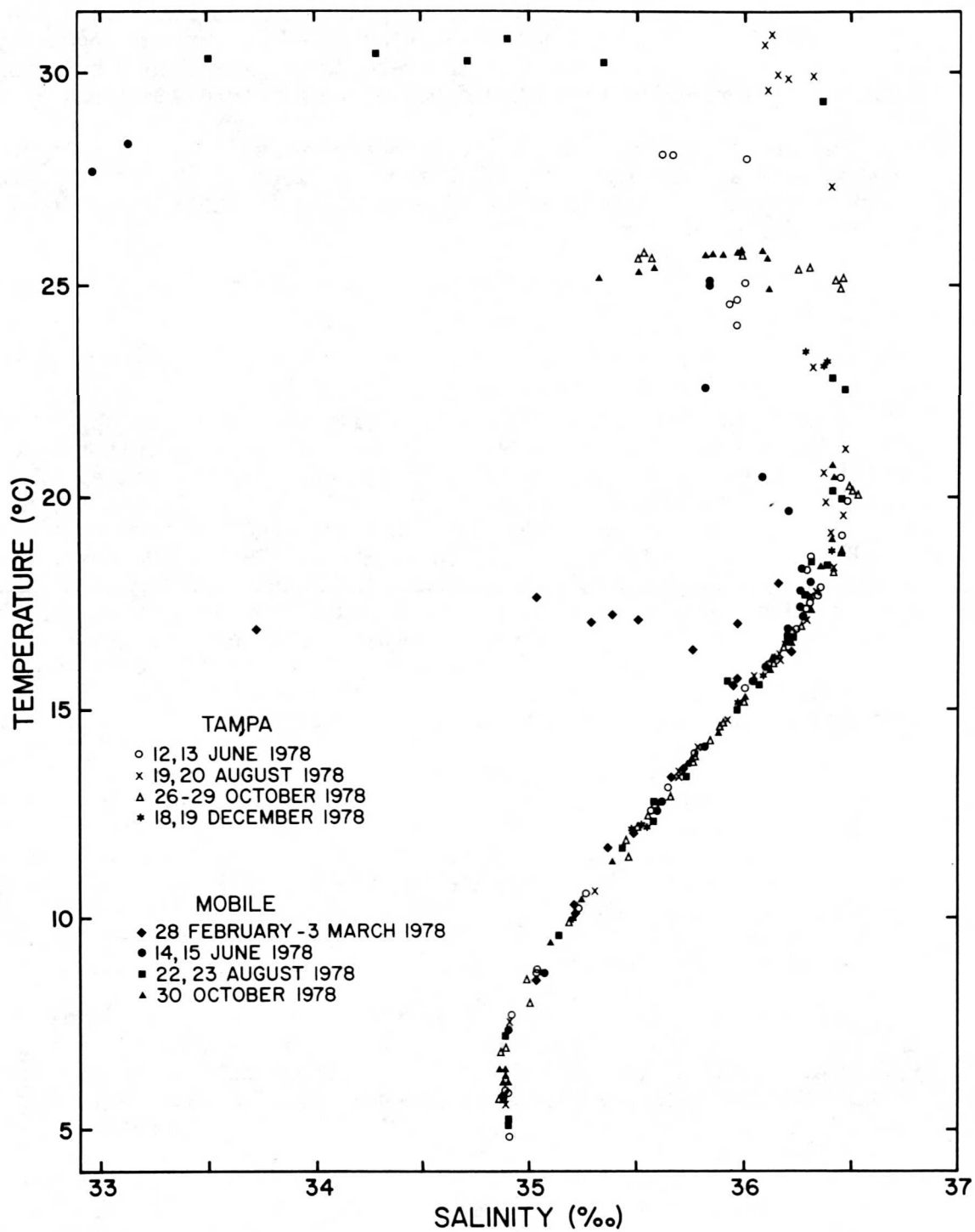


Figure 1: T-S points obtained from bottle data collected in the Gulf of Mexico.

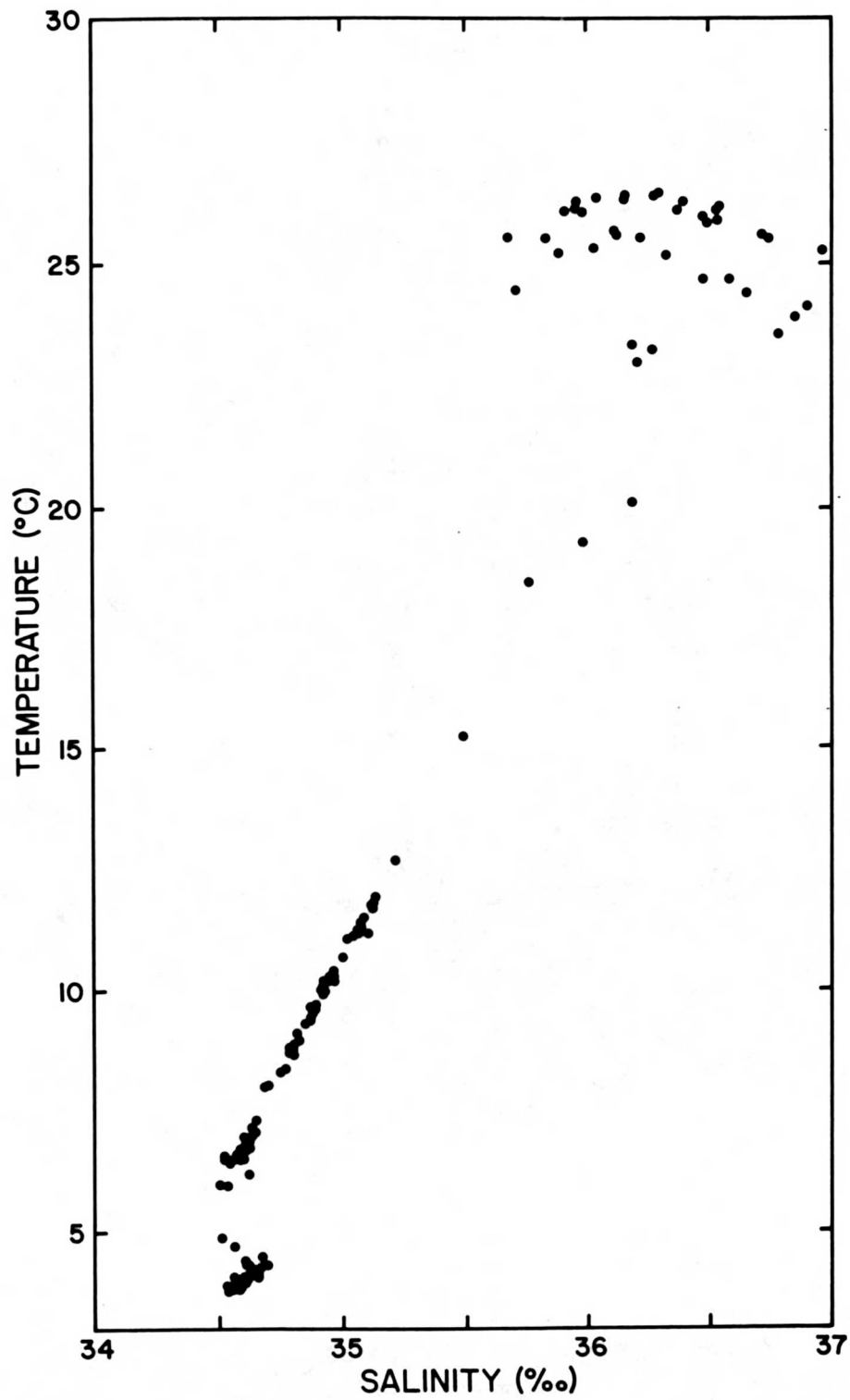


Figure 2: T-S points obtained from bottle data collected in the South Atlantic.

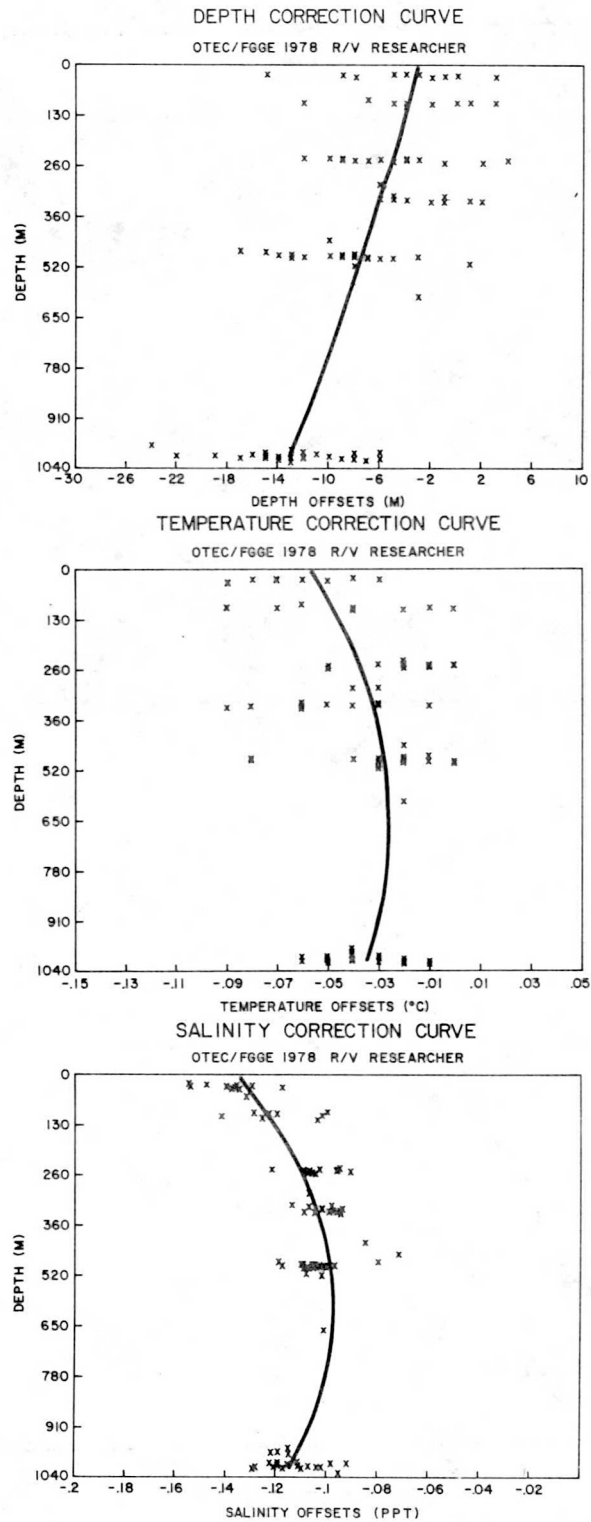
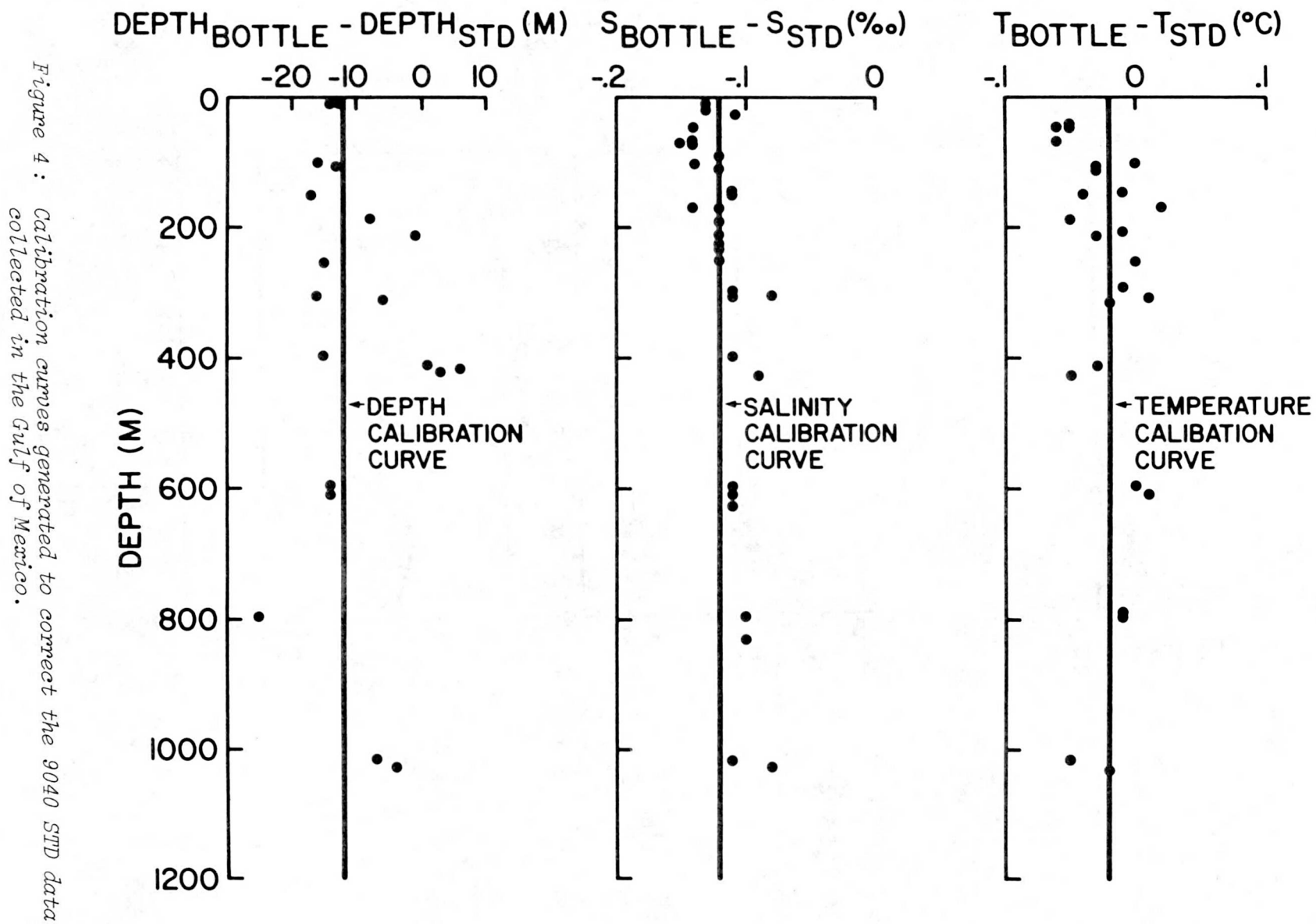


Figure 3: Calibration curves generated to correct the 9040 STD data collected in the South Atlantic.



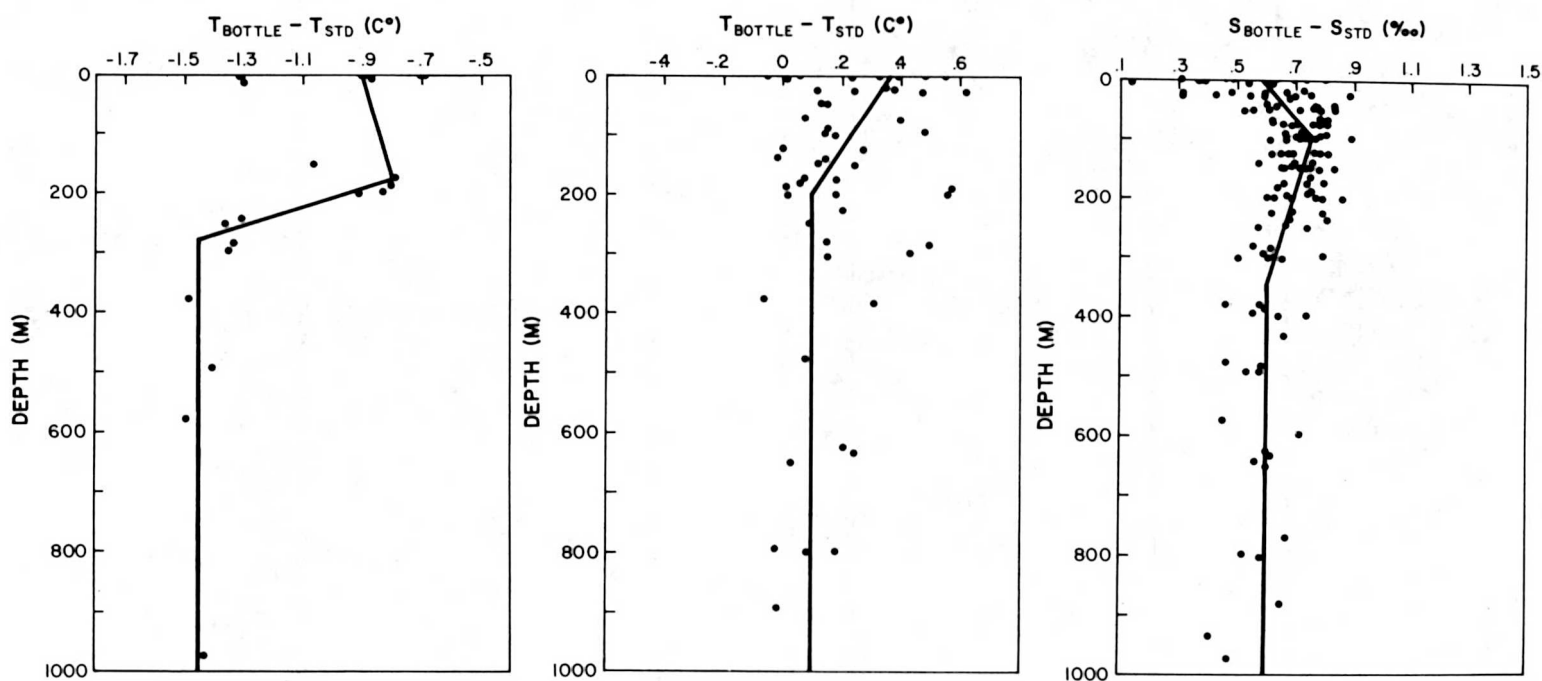


Figure 5: Calibration curves generated to correct the 9060 STD data collected in the Gulf of Mexico. The left hand temperature calibration curve is for the June 1978 cruise. The center curve is for the August and October cruise. Only one salinity curve was necessary for all cruises.

Although twice calibrated, the 9060 data still are not as accurate as the 9040 data. This lack of accuracy is apparent in the large scatter which still remains in the T-S values (Figure 6). In particular, the unit does not appear to resolve salinity changes at depths greater than 700 m. The depth values (which cannot be calibrated because of the method of obtaining bottle data) are accurate to within ± 10 m, salinity values to within $\pm .1^{\circ}/_{\infty}$, and temperature to within $\pm .05^{\circ}\text{C}$. Listings and plots of the 9060 data are given in Appendix 7.

PROFILING CURRENT METER DATA

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

The navigation systems aboard the RESEARCHER lacked sufficient precision to generate ship drift corrections. However, at 500 m geostrophic sections obtained concurrently in the South Atlantic (to be discussed in a following section) indicate speeds consistently less than 10 cm/sec. Therefore, the average velocity computed for the water column from 470 m to 500 m was assumed to be due entirely to ship drift, and was used as the ship drift correction. The directions and speeds of corrected cyclesonde current vectors compare favorably to geostrophic results. The cyclesonde speeds are probably accurate to $\pm 15 \text{ cm s}^{-1}$ and the directions $\pm 15^{\circ}$. Cyclesonde listings and plots are given in Appendix 8.

DRIFTING BUOY DATA

Lagrangian drifters were deployed at positions listed in Table 4. The drifters are tracked by satellite. The accuracy of the tracking system is ± 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 9.

CURRENT METER DATA

A current meter data record that began in July 1977 (Thomas et al., 1979) was continued at OTEC mooring site number two, south of Mobile, Alabama. Three consecutive recoveries and deployments of a fixed mooring, sub-surface buoy array spanned a time from October 19, 1977 through August 23, 1978. The mooring was relocated in shallower water ($29^{\circ}11.4'\text{N}$, $87^{\circ}38.2'\text{W}$), 15 nautical miles northeast of the original July deployment, at $29^{\circ}06.5'\text{N}$, $87^{\circ}55.1'\text{W}$, as shown in Appendix 1.

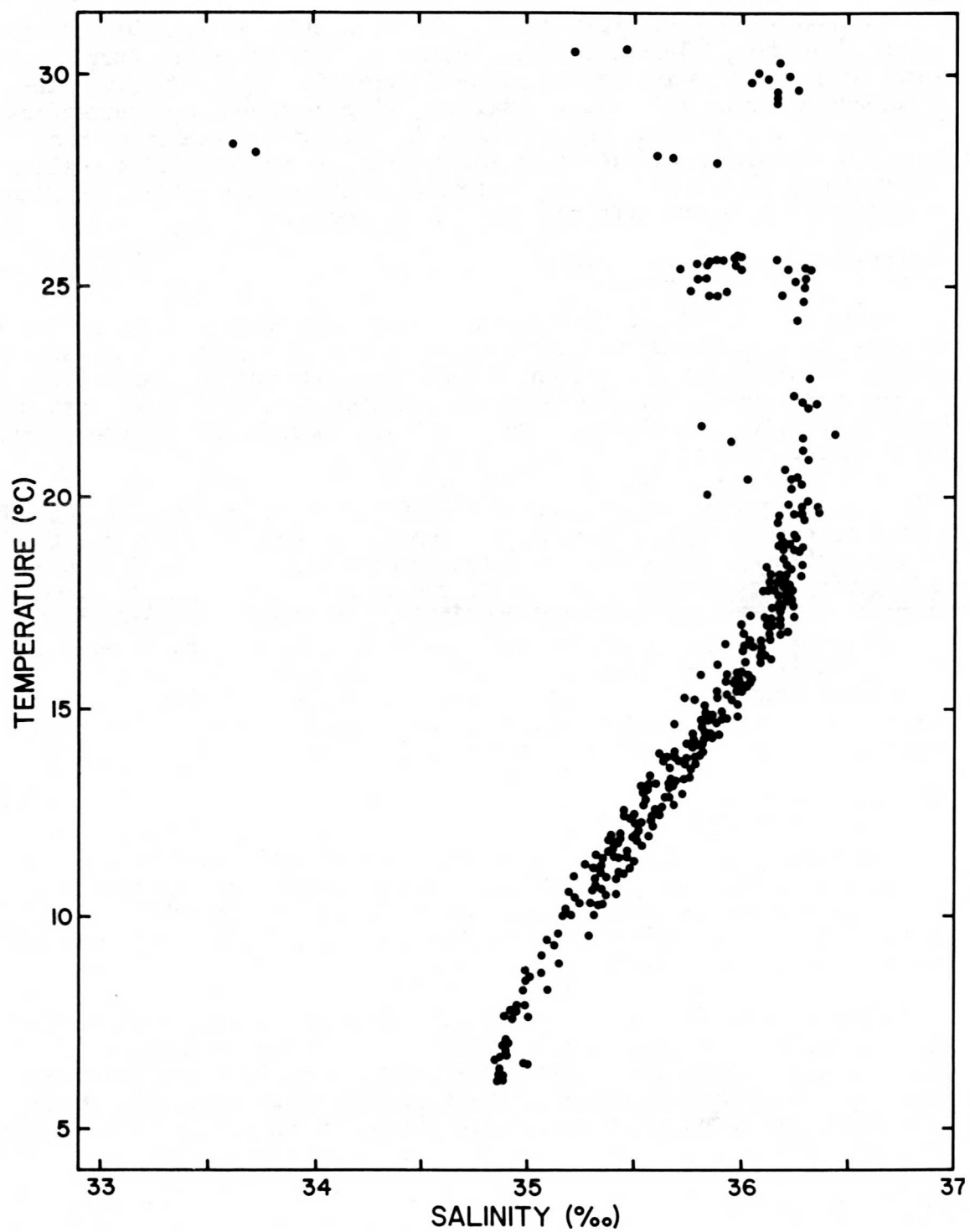


Figure 6 : T-S points obtained from 9060 STD data collected in the Gulf of Mexico.

TABLE 4: Deployment times and positions for satellite tracked surface drifters

Date	Time (Greenwich)	Latitude	Longitude
5 August 1978	0119	5°00.0'S	24°59.5'W
5 August 1978	0704	5°30.0'S	25°01.2'W
5 August 1978	1940	6°59.5'S	24°59.5'W
8 August 1978	0831	8°59.5'S	26°30.2'W
8 August 1978	1504	8°00.3'S	26°30.4'W
8 August 1978	2131	7°00.0'S	26°29.0'W
9 August 1978	0610	5°59.9'S	27°00.1'W

For the second deployment, mooring number 2 was located in 1047 meters of water with Aanderaa current meters 645, 1453, and 614 at depths of 90, 190, and 985 meters respectively. Data from meter 645 required hand-editing of speed and temperature spikes throughout the record.

Pressure data from meters 645 and 614 were adjusted by +10 and +21 respectively, to agree with the wire depths. The wire depths in this case were considered to be more accurate than the pressure data. Temperature data from meter 614 are questionable, because they do not agree with STD data and, therefore, are not included.

For the third deployment, mooring number 2 was moored in water 1047 meters deep with current meters 1687, 1686 and 613 at 95, 190 and 985 meters. Current meter 1686 malfunctioned 65 days into the record. Data following this period were not analyzed. In addition, pressure data from the meter was adjusted by +20 m to correspond with wire depths, and the pressure data from the other two meters of the array.

Only the data from the first 66 days of deployment number 4 were considered. At day 66 the entire mooring, as indicated by all the pressure sensors on the current meters, was moved from water 1033 meters deep into water 200 meters deeper (possibly by a shrimp or other type of trawler). Current meters on the array were 320, 3195, and 612 located at 70, 168 and 970 meters respectively. Pressure sensor data from meter 320 was adjusted by -15 m to agree with wire depths and with the other two pressure sensors of the array.

A mooring comprised of four Aanderaa current meters was also deployed from June 13, 1978 to October 25, 1978 at a site west of Tampa, Florida (27°39.8'N, 85°31.0'W, Appendix 1) providing, in conjunction with OTEC mooring number 2, a total of 37,001 hours of current meter and temperature data.

The Tampa mooring was placed in 1033 meters of water with 4 meters; 3283, 3477, 3202, and 3200 at 153, 249, 549, and 950 meters respectively. The entire record for meter 3477 was disregarded due to a missing speed rotor. The depths indicated by the pressure sensors for this array were used although they were an average of 17 meters deeper than the depths indicated by the location on the wire. Depth information for all meters can be considered accurate to within ± 15 meters.

Meters 645, 1453, 614, 613, 320 and 612, all have an older continuously rotating potentiometer with a ratio of 6000 rotor turns to one potentiometer turn (1024 counts). For this potentiometer, the 20-minute sampling interval used resulted in a least count speed of .20 cm/sec. The other meters 1687, 1686, 3195, 3283, 3202 and 3200 used an electronic counter with a ratio of four rotor turns to one count, which gave a least count speed of .14 cm/sec with a sampling interval of 20 minutes.

All meters other than the special cases mentioned above, were routinely transcribed, calibrated, and edited as stated in Thomas *et al.* (1979). In addition, a three hour low-pass filter was used to smooth the raw data, which were then resampled at hourly intervals (Appendix

10). Stick Plots (Appendix 10) represent data that have been smoothed with a 40 hour low-pass filter. Appendix 10 also gives speed and direction histograms computed on a polar coordinate grid, and time series of temperature data obtained from the current meters.

PRELIMINARY DATA ANALYSES PRODUCTS

Several computer software packages have been applied to the data to generate products needed by the design engineers and to assist in the interpretation of the data collected on the site. For instance, 20°C topographies have been generated to define the position of the Loop Current relative to the OTEC sites. These topographies are given in Appendix 11. The axis of the Loop is approximately coincident with the 150 m contour of this isotherm. Also given are the axes of the Loop Current generated from satellite images. Horizontal distributions of SST generated from the visits are also shown.

Vertical sections of temperature and geostrophic speeds computed relative to 900 m are given in Appendix 12 for data collected in the tropical South Atlantic. The temperature sections were generated from XBT data. Horizontal distributions of SST, temperature at 1000 m, dynamic height anomaly of the sea surface relative to 900 m and mixed layer depth for the July-August, 1978 South Atlantic data are given in Appendix 13.

ACKNOWLEDGMENTS

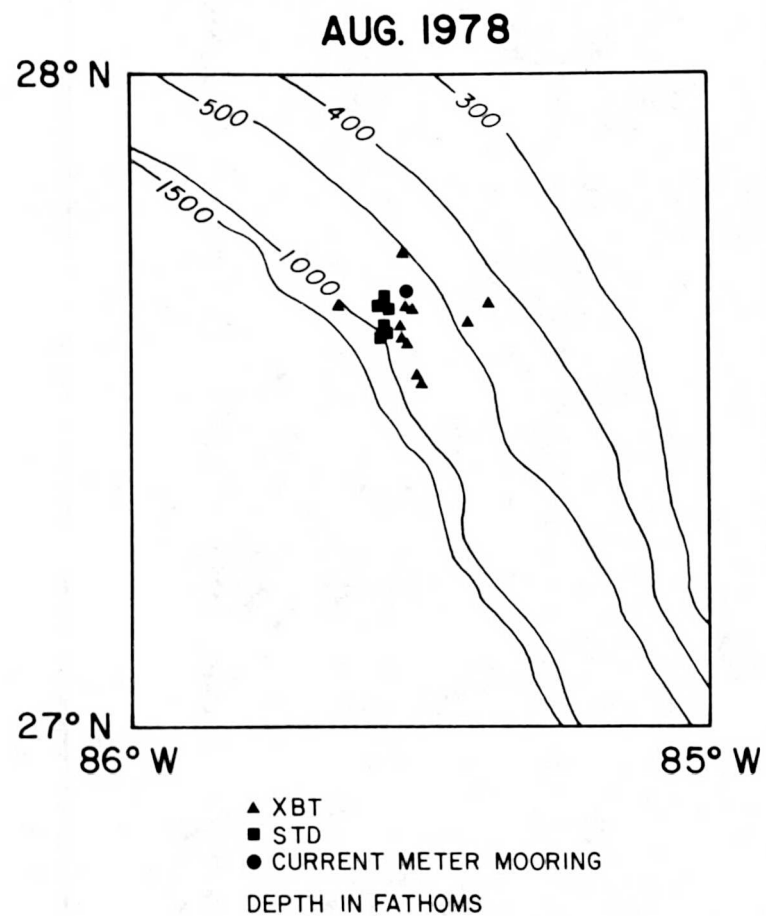
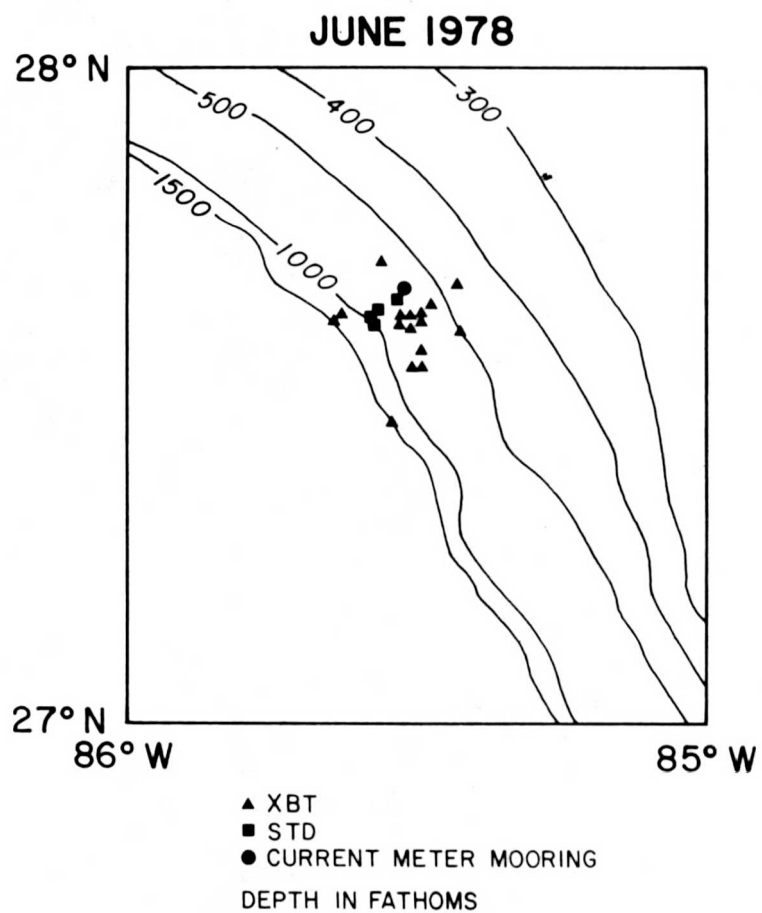
These data are in a large measure a direct result of the outstanding efforts of the officers and crew of the R/V VIRGINIA KEY and RESEARCHER. Much of the computer software used to analyze these data were generated by Mr. A. Herman, Mr. M. Minton, and Ms. C. Cardwell. These data have been collected as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

REFERENCES

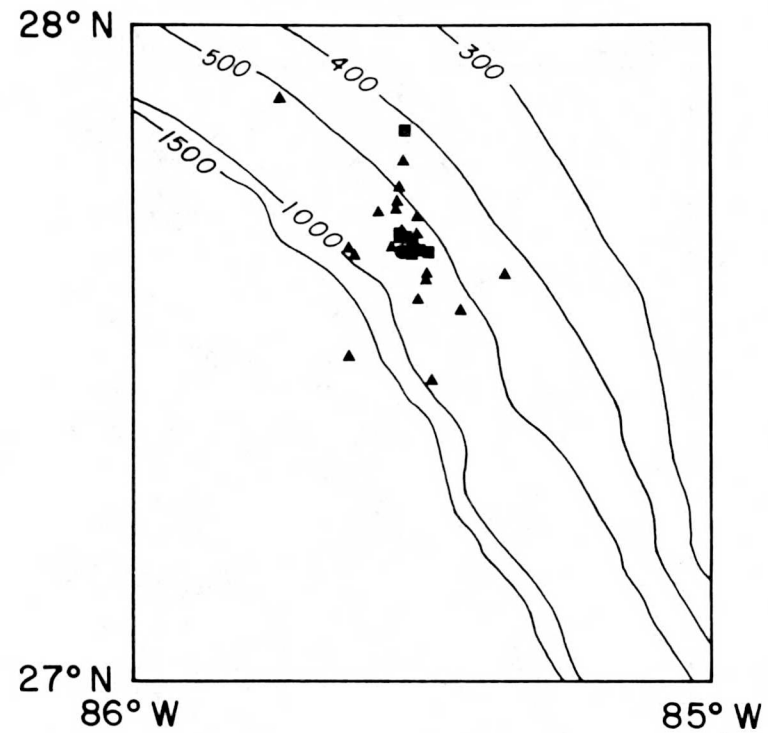
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Appendix 1

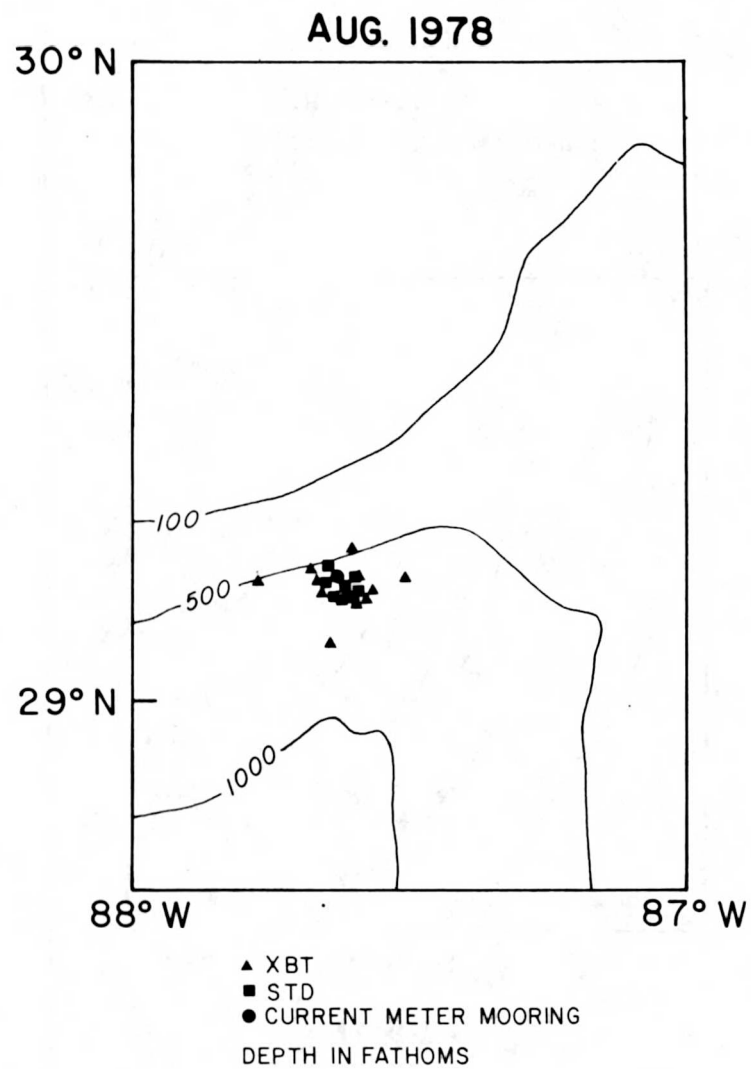
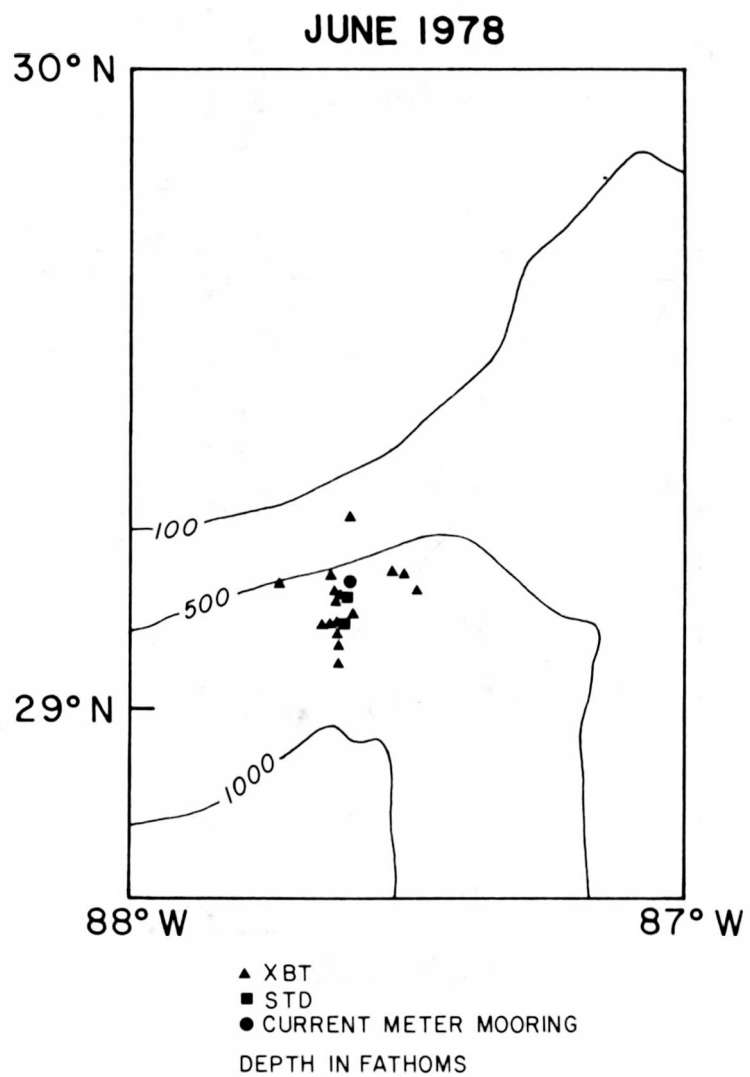
Station positions, designated as either STD, XBT or current meter.



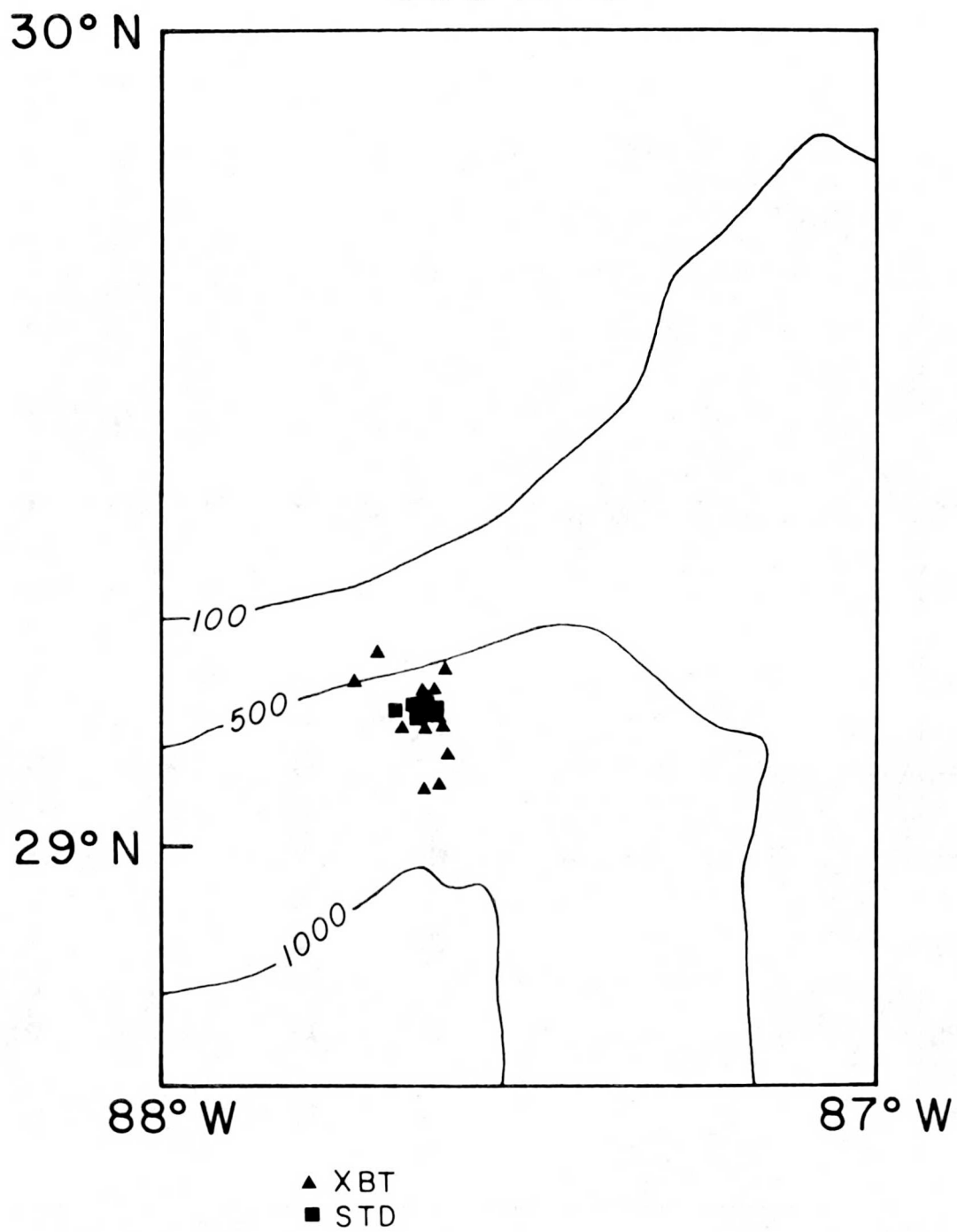
DEC. 1978



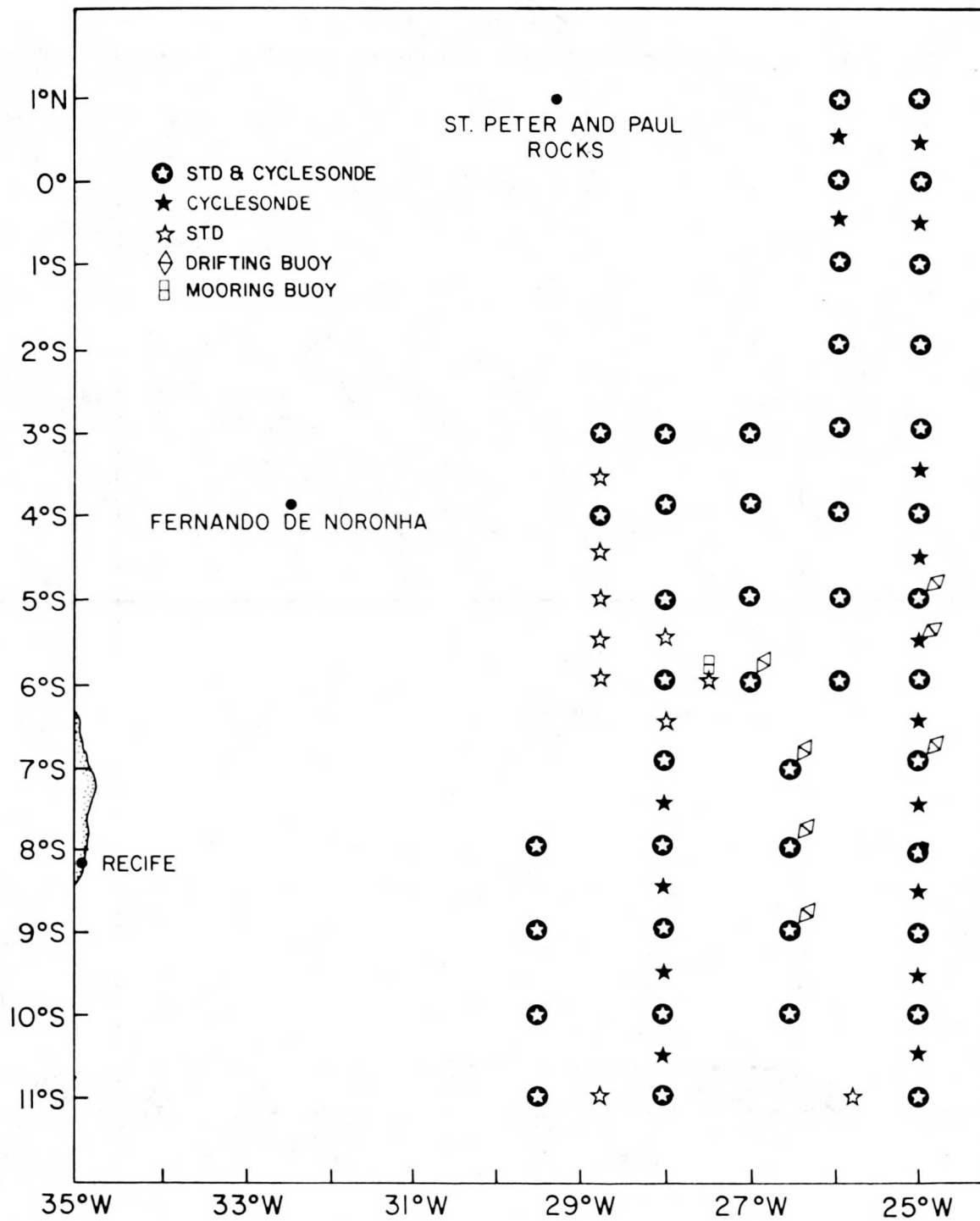
▲ XBT
■ STD
● CURRENT METER MOORING
DEPTH IN FATHOMS



OCT. 1978



DEPTH IN FATHOMS



Appendix 2. Meteorological data collected during site visits. Data were collected by ship's personnel during bridge watches.

R/V RESEARCHER

Month	Day/Time (Local)	Latitude (°S)	Longitude (°W)	Wind		Height		Air Temperature (°C)
				Dir (°)	Spd (knots)	Sea (ft)	Swell (ft)	
July	25/1200	2°40'	29°24'	120	18	4	10	28.0
	26/0000	3°30'	28°45'	110	18	3	7	25.5
	1200	4°28'	28°46'	090	20	5	10	27.5
	27/0000	6°00'	28°45'	110	20	5	10	25.5
	1200	5°27'	28°02'	115	21	5	10	26.0
	28/0000	4°29'	28°02'	110	21	5	12	25.5
	1200	2°58'	28°03'	110	18	5	10	27.5
	29/0000	3°16'	27°01'	145	17	3	8	25.0
	1200	4°30'	27°01'	130	16	4	8	27.0
	30/0000	5°30'	27°01'	145	17	4	10	25.0
	1200	6°00'	26°00'	145	20	4	10	26.0
	31/0000	4°41'	26°00'	130	16	3	7	24.5
	1200	3°00'	26°02'	150	12	3	5	28.0
August	4/1200	3°45'	24°59'	140	16	4	10	26.5
	5/0000	5°00'	25°00'	135	18	4	8	24.5
	6/0000	7°38'	24°59'	120	22	5	12	25.0
	1200	9°00'	24°58'	130	20	6	12	26.0
	7/0000	10°07'	25°00'	130	15	4	6	23.8
	1200	11°02'	25°09'	120	20	4	9	24.5
	8/0000	9°49'	26°30'	135	21	4	8	24.5
	1200	8°00'	26°30'	110	15	3	7	25.0
	9/0000	6°00'	27°00'	115	15	3	6	24.5
	1200	5°59'	27°31'	100	12	3	6	26.5
	10/0000	6°30'	28°00'	135	18	3	7	25.0
	1200	7°56'	28°00'	140	14	3	7	26.5
	11/0000	9°01'	28°01'	140	20	3	7	23.0
	1200	10°29'	28°00'	150	16	4	7	25.5
	12/0000	11°00'	28°41'	100	12	3	5	24.0
	1200	10°04'	29°30'	130	14	2	5	25.0
	13/0000	8°51'	29°29'	130	20	4	8	25.0
	1200	8°02'	30°08'	140	20	4	10	27.0
	14/0000	8°01'	32°48'	140	19	4	8	25.2
	1200	8°05'	34°48'	140	16	3	6	27.0

R/V VIRGINIA KEY

Month	Date/Time (Local)	Latitude (°N)	Longitude (°W)	Wind		Height		Air Temperature (°C)
				Dir (°)	Spd (knots)	Sea (ft)	Swell (ft)	
August	15/1800	25.6	80.1	112	5	1	3	27.8
	17/0600	24.7	80.9	090	10	1	2	28.9
	1800	25.1	82.4	---	0	0	1	27.8
	18/0600	25.7	83.2	135	3	0	1	27.2
	1800	27.5	85.4	---	0	0	0	28.9
	19/0600	27.6	85.5	090	3	0	1	27.2
	1800	27.6	85.5	---	0	0	1	33.3
	20/0600	27.6	85.5	67	2	0	1	30.6
	1800	27.6	85.5	0	14	2	0	28.9
	21/0600	27.7	85.5	045	7	0	1	28.9
	1800	29.1	87.6	067	6	0	1	29.4
	22/0600	29.2	87.6	---	0	0	0	29.4
	1800	29.2	87.6	---	0	0	0	33.3
	23/0600	29.2	87.6	090	6	0	0	28.3
	1800	29.2	87.8	090	10	1	2	30.6
	24/0600	29.8	88.2	112	12	1	2	28.3
	25/0600	28.7	87.6	090	12	1	3	28.3
	1800	27.4	86.8	090	14	1	3	28.3
	26/0600	25.8	85.9	135	12	2	3	26.7
	1800	24.8	84.5	135	15	2	3	25.6
October	25/0600	27.6*	85.5*	090	10	-	-	23.9
	1800	27.6*	85.5*	090	13	3**	-	25.6
	26/0600	27.6*	85.5*	100	13	2**	-	24.4
	1800	27.6*	85.5*	110	15	6**	-	25.0
	28/1800	27.6*	85.5*	050	13	3**	-	23.9
	29/0000	27.6*	85.5*	045	14	5**	-	22.8
	30/0600	29.2*	87.6*	100	20	5**	-	22.8
	1800	29.2*	87.6*	080	18	8**	-	23.9
	31/0600	29.2*	87.6*	080	15	6**	-	22.8
	2100	29.2*	87.6*	060	14	4**	-	22.2
November	1/0600	29.2*	87.6*	040	10	2**	-	23.3
	1800	29.2*	87.6*	040	7	1**	-	22.8
	2/0600	29.2*	87.6*	020	11	1**	-	23.3
December	17/0000	27.33	83.55	330	9	0**	-	22.2
	1200	27.39	85.33	010	18	6**	-	23.3
	18/0000	27.39	85.35	070	14	8**	-	18.9
	1200	27.40	85.32	130	13	4**	-	22.2
	19/0000	27.40	85.31	150	4	1**	-	20.0
	1200	27.44	85.33	180	8	2**	-	22.8
	20/0000	27.37	84.04	170	10	2**	-	22.8

* = Approximate

** = Not designated as sea or swell

Appendix 3

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

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-FEB. 78

XBT NO.	1	2	3	4	5	6	7
DATE (GMT)	2/28	2/28	2/28	2/28	2/28	2/28	3/ 1
TIME (GMT)	1310	15 4	17 0	19 0	21 0	23 0	1 5
LATITUDE	29 00	29 00	29 00	29 00	28 60	29 00	28 59
LONGITUDE	88 00	88 00	88 00	87 59	87 59	87 59	87 59
SURF T (C)	16.1	16.0	15.8	16.0	16.0	16.0	16.1
29							
28							
27							
26							
25							
24							
23							
22							
16	22	5	5	14	5	4	10
17	35	38	58	60	60	60	45
18	88	105					
18	112	112	117	130			
17	150	152	138	153	149	152	149
16	170	170	171	170	169	170	168
15	205	203	200	211	201	195	191
14	240	235	232	240	228	220	224
13	270	274	266	268	260	261	260
12	307	312	309	320	303	300	300
11	358	360	352	370		360	360
10	420	429	411	438		420	417
9	500	500	479	500		477	475
8	580		545	578		558	542
7	698		640	690		657	650
6							

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-FEB. 78

XBT NO.	8	9	10	11	12	13	14
DATE (GMT)	3/ 1	3/ 1	3/ 1	3/ 1	3/ 1	3/ 1	3/ 1
TIME (GMT)	3 0	5 0	7 0	9 0	11 0	13 0	15 0
LATITUDE	28 59	28 59	28 58	28 59	28 59	28 59	29 00
LONGITUDE	87 59	88 00	88 01	88 02	88 03	88 04	88 03
SURF T (C)	16.2	15.8	15.7	15.6	15.5	15.4	15.0
29							
28							
27							
26							
25							
24							
23							
22							
16	12	22	28	27	18	15	18
17	20	68	53	47	57	49	53
18					100	100	98
18				126	117	117	116
17	147	144	139	151	150	149	151
16	170	171	172	176	170	169	176
15	200	196	200	200	193	194	201
14	230	230	228	227	221	227	231
13	270	260	259	268	267	260	266
12	310	300	300	300	300	298	308
11	360	340	340	340	340	331	348
10	414	393	394	401	400	391	412
9	489	470	470	466	468	454	469
8	550	530	541	540	540	520	549
7	659	620	626	630	640	622	650
6		780	780	780	780	767	790

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-FEB. 78

XBT NO.	15	16	17	18	19	20	21
DATE (GMT)	3/ 1	3/ 1	3/ 1	3/ 1	3/ 2	3/ 2	3/ 2
TIME (GMT)	17 0	19 0	21 0	23 0	1 5	3 0	5 0
LATITUDE	28 59	28 58	28 56	28 54	28 52	28 59	28 59
LONGITUDE	88 03	88 03	88 04	88 05	88 06	88 01	88 01
SURF T (C)	15.0	15.2	15.5	15.8	15.7	14.9	14.9
29							
28							
27							
26							
25							
24							
23							
22							
16	18	11	19	18	20	32	37
17	57	50	44	22	26	61	60
18	93	92				112	
18	114	128	116	95		130	120
17	149	157	150	150	141	148	140
16	175	179	180	185	187	170	168
15	203	200	205	210	217	200	195
14	230	235	240	242	243	230	220
13	260	260	270	270	279	265	256
12	300	310	309	310	310	309	300
11	349	350	350	350	360	357	342
10	393	400	394	401	409	405	391
9	467	470	470	470	473	471	470
8	539	540	541	550	549	539	538
7	620	640	639	650	647	640	635
6	780	800	800				

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-FEB. 78

XBT NO.	22	23	24	25	26	27	28
DATE (GMT)	3/ 2	3/ 2	3/ 2	3/ 2	3/ 2	3/ 2	3/ 2
TIME (GMT)	7 0	9 0	11 0	13 0	15 0	17 0	19 0
LATITUDE	28 59	29 00	29 00	29 00	29 00	29 00	29 00
LONGITUDE	88 02	87 58	88 01	88 00	88 00	88 01	87 59
SURF T (C)	14.7	14.4	14.5	14.6	14.9	14.8	15.0
29							
28							
27							
26							
25							
24							
23							
22							
16	20	47	13	11	19	14	15
17	48	62	38	59	60	44	54
18	81						
18	122	122	090			115	111
17	155	140	145	148	144	147	140
16	180	173	174	167	161	171	162
15	207	200	200	200	203	210	201
14	240	234	230	236	230	239	225
13	278	256	262	261	250	267	255
12	310	295	300	300	296	305	298
11	350	350	350	355	350	360	
10	407	401	407	408	410	417	
9	480	462	468	469	470	481	
8	560	540	550	540	530	549	
7	651	639	630	625	630	645	
6		780					

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-FEB. 78						
XBT NO.	29	30	31	32	33	34	35	
DATE (GMT)	3/10	3/10	3/10	3/10	3/10	3/10	3/10	
TIME (GMT)	640	816	10 0	1135	13 6	1431	16 0	
LATITUDE	26	26	26	26	26	25	25	
	30	22	15	08	01	44	45	
LONGITUDE	88	87	87	87	87	86	86	
	00	45	30	13	00	44	31	
SURF T (C)	19.0	19.0	19.3	19.1	23.3	25.3	25.5	
29								
28								
27								
26								
25						070	095	
24						080	110	
23					019	100	130	
22					033	120	158	
21					083	150	180	
20					115	174	200	
19	066	070	035	081	160	190	230	
18	110	128	099	121	178	240	260	
17	150	160	160	170	196	249	290	
16	177	179	177	192	221	270	328	
15	210	205	210	213	250	290	353	
14	238	239	236	255	279	321	392	
13	270	270	269	280	318	357	420	
12	307	304	308	330	359	390	454	
11	349	345	342	367	421	420	497	
10	390	392	392	405	450	469	527	
9	460	460	441	458	490	538	570	
8	520	518	508	528	590	600	611	
7	610	613	619	599	654	690	700	
6			750	739		780		

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-FEB. 78						
XBT NO.	36	37	38	39	40	41	42	
DATE (GMT)	3/10	3/10	3/10	3/10	3/10	3/11	3/11	
TIME (GMT)	1728	1858	2028	22 4	2336	111	242	
LATITUDE	25	25	25	25	25	25	24	
	38	31	24	16	06	00	55	
LONGITUDE	86	86	85	85	85	85	84	
	16	1	47	32	18	03	47	
SURF T (C)	25.4	25.1	25.2	25.1	25.3	25.3	25.4	
29								
28								
27								
26								
25	078	052	140	100	148	110	115	
24	140	105	158	151	157	139	122	
23	151	166	169	170	170	155	143	
22	170	185	185	187	190	178	160	
21	190	204	208	210	205	206	185	
20	218	219	233	249	230	220	212	
19	244	240	269	274	270	251	237	
18	278	275	298	321	300	280	260	
17	303	310	339	360	340	330	294	
16	340	347	380	395	384	360	350	
15	387	376	418	430	429	407	380	
14	418	420	465	470	460	440	417	
13	455	461	502	510	500	485	455	
12	494	510	540	554	540	528	489	
11	540	556	592	602	580	563		
10	580	605	640	650	637	608		
9	644	640	679	708	707	700		
8	679	696	750	775	790	758		
7	760	760						
6								

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-FEB. 78			
XBT NO.	44	45	46	47	48
DATE (GMT)	3/11	3/11	3/11	3/11	3/11
TIME (GMT)	546	720	910	1045	1225
LATITUDE	24	24	24	24	24
	47	43	41	40	32
LONGITUDE	84	84	83	83	83
	15	00	43	28	12
SURF T (C)	21.4	20.5	20.7	21.3	21.2
29					
28					
27					
26					
25					
24					
23					
22					
21	049			035	039
20	080	050	040	052	042
19	115	093	048	055	051
18	136	109			
17	158	118			
16	185	128			
15	209	158			
14	228	178			
13	245	215			
12	270	270			
11	310	292			
10	366	355			
9	440				
8	538				
7	652				
6	788				

ISOTHERM DEPTHS (M)

SHIP RV GERONTICO

CRUISE OTEC-FEB. 78

XBT NO.	2	3	4	5	1	2	3
DATE (GMT)	2/27	2/27	2/27	2/28	3/ 6	3/ 6	3/ 6
TIME (GMT)	613	12 5	18 6	19 6	1510	18 7	21 1
LATITUDE	25 08	25 09	25 29	26 05	26 53	26 47	26 34
LONGITUDE	84 21	84 33	84 13	84 20	84 41	84 54	84 53
SURF T (C)	25.4	25.3	23.4	21.7	18.8	20.8	20.7
29							
28							
27							
26							
25	036	087					
24	051	093					
23	060	099	005				
22	099	125	009				
21	126	141	040	011			
20	147	171	118	051		062	055
19	158	200	145	078		077	070
18	197	219	154	092	083	099	079
17	220	259	169	110	151	112	100
16	241	286		126	168	140	118
15	281	317		143	183	167	149
14	305	342			195	189	185
13	322	380			215	215	221
12	352	423				259	260
11	377	473				343	286
10		529				412	338
9		570				451	490
8		648				528	650
7		737				662	
6							

ISOTHERM DEPTHS (M)

SHIP RV GERONTICO

CRUISE OTEC-FEB. 78

XBT NO.	5	7	9	10	11	12	13
DATE (GMT)	3/ 7	3/ 7	3/ 7	3/ 7	3/ 7	3/ 7	3/ 7
TIME (GMT)	24 0	525	740	9 5	1220	1525	1915
LATITUDE	26 16	25 36	25 12	25 06	25 05	25 21	25 47
LONGITUDE	84 50	84 30	84 40	84 45	84 29	84 19	84 09
SURF T (C)	20.3	21.2	24.3	25.4	22.2	20.7	20.8
29							
28							
27							
26							
25				076			
24			030	080			
23			041	090			
22			046	110			
21		012	122	139	068		
20	051	040	160	189	086	016	049
19	085	080	189	221	129	039	060
18	100	104	207	253	160	060	106
17	115	130	230	288	178	080	131
16	140	150	260	310	203	106	
15	167	189	281	340	230	137	
14	197	209	307	369	260	155	
13	240	257	335	400	300		
12	282	290	370	435	352		
11	324	330	408	481	400		
10	379	382	470	530	450		
9	444	449	541	584	491		
8	508	538	620	663	600		
7	620	660	712	760	691		
6							

ISOTHERM DEPTHS (M)

SHIP RV GERONTICO

CRUISE OTEC-FEB. 78

XBT NO.	14	15	16	18	19	20
DATE (GMT)	3/ 8	3/ 8	3/ 8	3/ 8	3/ 8	3/ 8
TIME (GMT)	4 3	6 0	7 5	820	920	1150
LATITUDE	25 57	25 45	25 42	25 37	25 35	25 24
LONGITUDE	84 16	84 34	84 39	84 47	84 51	84 24
SURF T (C)	20.8	24.3	25.0	25.3	25.3	24.8
29						
28						
27						
26						
25		011	024	059	069	027
24		015	027	081	091	031
23		020	033	094	100	037
22						
21		026	079	140	143	050
20	050	078	128	150	162	101
19	080	108	155	180	190	148
18	094	120	179	209	221	163
17	118	140	196	232	252	185
16	147	164	216	267	281	207
15	160	186	247	300	310	240
14		227	277	330	349	267
13		250	306	360	380	300
12		284	356	398	419	344
11			410	450	462	400
10			459	501	515	456
9			538	560	573	
8			610	630	650	
7			715	720	740	
6						

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-MAR. 78

XBT NO.	1	2	3	4	5	6	7
DATE (GMT)	3/24	3/24	3/24	3/24	3/24	3/24	3/24
TIME (GMT)	8 0	10 0	12 0	14 0	16 0	18 0	20 0
LATITUDE	27 32	27 32	27 33	27 33	27 33	27 33	27 33
LONGITUDE	85 30	85 30	85 30	85 30	85 30	85 29	85 29
SURF T (C)	21.0	19.7	20.1	19.3	20.6	20.6	20.0
29							
28							
27							
26							
25							
24							
23							
22							
21							
20							
19	040	010	010	025	007	014	005
18	130	088	077	093	100	074	087
17	170	151	151	172	170	154	155
16	211	189	188	215	201	182	197
15	235	211	211	232	224	208	216
14	255	240	241	265	263	236	239
13	280	267	259	283	285	253	262
12	300	282	276	305	319	298	313
11	342	333	332	355	364	352	365
10	405	387	389	404	405	393	404
9	468	437		455	462	437	458
8	537	510			523		
7	622	601			633		
6	764	751			760		

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-MAR. 78

XBT NO.	8	9	10	11	12	13	14
DATE (GMT)	3/24	3/25	3/25	3/25	3/25	3/25	3/25
TIME (GMT)	22 0	034	248	5 0	720	940	1158
LATITUDE	27 32	27 26	27 21	27 17	27 09	27 02	26 52
LONGITUDE	85 29	85 51	86 13	86 35	86 55	87 16	87 38
SURF T (C)	21.0	20.1	24.3	24.4	23.5	23.5	23.8
29							
28							
27							
26							
25							
24			012	017			
23			015	030	040	043	031
22			016	045	050	050	045
21			017	063	071	060	054
20	008	005	018	075	080	070	071
19	015	028	034	086	088	093	084
18	083	142	164	107	110	113	100
17	154			148	135	124	137
16	199			183	152	146	150
15	221			216	177	159	175
14	244			238	201	177	211
13	272			280	230	200	249
12	330			311	270	228	280
11	369			380	300	254	305
10	400			421	368	320	351
9	461			480	400	379	410
8	535				516	439	465
7						519	
6							

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-MAR. 78

XBT NO.	15	16	17	18	19	20	21
DATE (GMT)	3/25	3/25	3/25	3/25	3/26	3/26	3/26
TIME (GMT)	1420	1645	1920	2334	347	745	1147
LATITUDE	26 47	26 43	26 32	26 45	27 21	27 56	28 30
LONGITUDE	87 59	88 39	88 42	88 51	88 44	88 32	88 21
SURF T (C)	22.7	23.0	23.5	20.7	19.7	19.7	19.2
29							
28							
27							
26							
25							
24							
23			024				
22	043	036	029				
21	056	041	061				
20	088	050	105	021			
19	110	115	130	061	071	039	045
18	139	138	155	156	111	142	100
17	177	162	173	177	137	167	150
16	200	199	195	198	154	188	180
15	226	230	226	226	191	206	210
14	251	257	260	260	218	230	236
13	288	290	297	296	258	269	278
12	327	327	330	330	300	301	320
11	371	368	372	368	346	345	357
10	420	416	423	405	401	397	410
9	469	470	476	469	455	451	479
8				545	533	535	
7							
6							

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-MAR. 78

XBT NO.	22	23	24	25	26	27	28
DATE (GMT)	3/26	4/ 2	4/ 2	4/ 2	4/ 2	4/ 2	4/ 2
TIME (GMT)	1533	040	340	540	840	1240	1540
LATITUDE	28 59	27 33	27 33	27 33	27 33	27 33	27 37
LONGITUDE	88 19	85 30	85 30	85 30	85 30	85 30	85 30
SURF T (C)	18.7	23.6	23.5	23.4	23.3	23.3	23.3
29							
28							
27							
26							
25							
24							
23		020	020	013	017	020	004
22		023	028	031	032	034	006
21		049	041	050	050	047	025
20		069	060	070	070	070	040
19	068	091	091	089	089	090	056
18	109	107	110	113	102	108	077
17	148	130	120	124	126	120	081
16	170	149	149	142	144	139	107
15	200	180	180	187	170	161	130
14	227	200	209	218	201	200	170
13	270	239	249	252	235	227	210
12	300	271	280	275	278	267	241
11	349	320	338	340	329	312	291
10	398	371	380	397	391	380	333
9	449	441	443	459	450	436	400
8		520	519	519	510	499	483
7		602	600	629	610	599	580
6		751	750	780	770	740	

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-APRIL 78

XBT NO.	2	3	5	6	7	8	10
DATE (GMT)	4/12	4/12	4/12	4/13	4/13	4/13	4/19
TIME (GMT)	1313	1710	2220	1410	1517	1636	1745
LATITUDE	27 33	27 33	27 33	28 52	28 57	29 05	27 33
LONGITUDE	85 30	85 30	85 30	87 46	87 54	88 02	85 30
SURF T (C)	23.4	23.2	23.6	21.3	21.3	20.7	24.4

29							
28							
27							
26							

25							
24							014
23	008	011	010				015
22	013	017	014				020

21	018	025	016	018	018		031
20	033	041	021	021	021	013	050
19	097	081	076	065	051	044	129
18	113	120	110	112	070	070	166

17	147	156	135	130	122	098	211
16	178	189	169	160	149	128	241
15	208	220	199	190	178	159	270
14	246	259	239	223	217	198	299

13	290	290	267	260	252	240	328
12	325	327	306	300	291	287	351
11	358	360	342	340	341	338	384
10	407	397	391	388	400	392	430

9	471	460	451	450	458	460	490
8	528	522	520	536	531	535	555
7	618	615	619	631	640	620	641
6	728	742	748	770	792	749	780

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-APRIL 78

XBT NO.	11	12	13
DATE (GMT)	4/19	4/19	4/19
TIME (GMT)	1930	21 1	23 9
LATITUDE	27 33	27 33	27 40
LONGITUDE	85 31	85 31	85 38
SURF T (C)	24.4	24.6	24.4

29			
28			
27			
26			

25			
24	018	020	010
23	020	021	013
22	026	028	022

21	040	039	028
20	058	060	042
19	130	140	134
18	169	187	169

17	213	218	190
16	238	239	230
15	270	270	260
14	291	293	293

13	321	326	319
12	345	358	349
11	380	390	380
10	423	444	443

9	500	510	509
8	571	572	572
7	651	660	670
6		800	779

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-JUNE 78					
XBT NO.	1	2	3	4	5	6	7
DATE (GMT)	6/11	6/12	6/12	6/12	6/12	6/12	6/12
TIME (GMT)	23 0	2 0	8 0	11 0	15 7	18 0	21 0
LATITUDE	27 39	27 40	27 38	27 37	27 38	27 38	27 38
LONGITUDE	85 29	85 31	85 30	85 30	85 31	85 38	85 32
SURF T (C)	28.3	28.2	27.9	27.7	27.9	27.8	28.2
29							
28	3	2					4
27	013	012	010	013	012	012	012
26	018	017	019	019	019	021	018
25	023	023	022	023	022	023	021
24	027	028	027	031	027	031	025
23	034	033	033	036	033	035	027
22	039	038	038	042	040	039	034
21	049	043	046	049	048	046	037
20	059	062	052	056	057	056	051
19	083	079	072	073	075	072	068
18	113	106	105	102	105	111	104
17	153	160	152	150	147	149	141
16	181	187	180	180	172	177	166
15	210	213	210	210	207	206	202
14	245	251	250	250	240	240	243
13	281	281	279	281	280	282	272
12	318	322	320	325	323	330	322
11	361	363	361	359	361	369	362
10	409	412	401	405	405	412	413
9	473	466	471	462	464	482	472
8	544	545	547	542	538	548	551
7	625	635	621	630	625	640	628
6	752	760	752	770	753	760	748

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-JUNE 78					
XBT NO.	8	9	10	12	13	14	15
DATE (GMT)	6/13	6/13	6/13	6/13	6/13	6/13	6/13
TIME (GMT)	015	3 5	6 0	12 0	15 0	18 0	21 0
LATITUDE	27 28	27 37	27 36	27 34	27 33	27 33	27 36
LONGITUDE	85 33	85 32	85 31	85 30	85 30	85 31	85 26
SURF T (C)	28.0	28.0	28.0	27.8	28.0	28.0	28.3
29							
28	7	10	12		7	5	8
27	015	015	017	018	016	017	017
26	019	018	019	020	020	020	021
25	022	022	022	022	024	024	025
24	028	027	026	029	030	028	028
23	031	032	032	032	035	034	033
22	037	036	036	036	038	040	043
21	039	038	041	041	041	042	050
20	050	049	050	054	051	052	060
19	068	066	067	069	073	071	081
18	103	098	099	103	106	100	111
17	142	141	143	149	152	143	149
16	172	178	174	182	181	169	170
15	205	212	207	210	205	206	212
14	244	241	238	242	249	244	245
13	274	278	279	290	293	288	286
12	333	322	319	333	331	332	328
11	364	365	367	372	370	370	370
10	421	417	410	410	418	422	413
9	483	476	473	468	477	483	486
8	561	558	542	550	568	570	558
7	641	640	634	633	639	640	638
6	760	767	749	767	770	765	747

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-JUNE 78					
XBT NO.	16	17	18	19	20	21	22
DATE (GMT)	6/14	6/14	6/14	6/14	6/14	6/14	6/14
TIME (GMT)	0 0	3 0	530	813	1033	1258	15 7
LATITUDE	27 41	27 43	27 38	27 52	28 05	28 20	28 30
LONGITUDE	85 26	85 34	85 39	85 56	86 13	86 30	86 48
SURF T (C)	28.2	28.2	28.3	28.0	28.3	28.3	28.4
29							
28	8	9	9	5	15	12	17
27	016	015	019	014	028	030	034
26	021	023	022	021	030	036	039
25	025	025	026	025	036	040	047
24	033	029	034	040	040	052	050
23	037	034	039	045	044	065	059
22	046	038	042	051	069	078	070
21	053	042	046	060	091	090	083
20	061	053	049	072	123	117	107
19	078	062	066	086	141	151	148
18	104	101	096	130	173	165	159
17	153	147	138	171	191	180	178
16	188	178	170	206	217	204	199
15	219	217	201	260	251	224	221
14	252	245	245	298	277	256	259
13	282	282	285	330	316	298	298
12	328	330	335	383	351	341	335
11	368	373	377	425	400	392	387
10	411	428	420	465	465	436	433
9	482	484	483	531	530	510	502
8	547	552	551	599	598	575	557
7	628	647	646	692	670	649	655
6	749	756	760	857	760	710	

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-JUNE 78					
XBT NO.	23	24	25	26	27	28	29
DATE (GMT)	6/14	6/14	6/14	6/15	6/15	6/15	6/15
TIME (GMT)	1718	1920	2131	049	4 0	7 0	10 0
LATITUDE	28 45	28 56	29 12	29 10	29 09	29 08	29 07
LONGITUDE	87 04	87 20	87 38	87 38	87 37	87 38	87 38
SURF T (C)	28.1	28.1	28.5	28.3	28.2	28.1	27.7
29							
28	15	7	8	5	4	5	
27	029	024	015	011	010	014	008
26	032	031	017	018	020	021	020
25	038	037	021	025	025	025	022
24	049	042	028	030	030	031	027
23	054	049	032	035	038	038	032
22	058	052	039	040	040	042	041
21	068	058	041	042	042	048	048
20	077	070	048	047	047	052	053
19	105	101	065	056	061	065	060
18	130	128	097	090	092	087	092
17	142	162	149	145	143	151	147
16	183	188	198	190	184	190	186
15	213	209	215	221	217	219	216
14	251	243	240	241	241	248	245
13	280	277	286	288	283	288	283
12	323	319	327	323	325	327	324
11	365	362	358	368	366	371	367
10	419	420	413	424	417	425	423
9	485	485	467	475	462	474	476
8	557	553	535	547	537	550	550
7	630	634	615	632	615	620	637
6	748	760	750	760	750	757	763

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-JUNE 78							
XBT NO.	30	31	32	33	34	35	36
DATE (GMT)	6/15	6/15	6/15	6/15	6/15	6/16	6/16
TIME (GMT)	1044	13 0	16 0	19 0	22 0	1 0	3 0
LATITUDE	29 07	29 06	29 06	29 08	29 08	29 04	29 12
LONGITUDE	87 38	87 38	87 38	87 39	87 40	87 38	87 45
SURF T (C)	27.9	27.8	27.9	28.3	28.7	28.5	28.3
29							
28				7	7	10	7
27	010	013	022	014	014	023	010
26	018	019	026	022	022	032	012
25	023	023	027	023	030	037	021
24	028	029	038	033	036	042	026
23	032	035	042	041	040	043	035
22	039	043	046	048	048	046	040
21	046	048	050	050	051	050	052
20	050	051	056	055	056	053	059
19	061	069	070	072	069	072	064
18	097	104	106	108	108	103	104
17	154	164	157	162	161	150	172
16	187	190	189	189	193	184	202
15	213	216	217	231	232	223	232
14	244	251	243	257	257	252	255
13	280	291	286	300	290	283	286
12	320	331	333	331	323	337	324
11	367	373	370	381	378	374	355
10	420	429	421	416	410	419	397
9	468	473	463	475	470		482
8	591	546	533	531	529	544	534
7	632	642	633	647	639	647	618
6	760	772	767	775	770	790	743

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-JUNE 78							
XBT NO.	44	45	46	47	48	49	50
DATE (GMT)	6/17	6/18	6/18	6/18	6/18	6/18	6/18
TIME (GMT)	857	1135	14 8	1641	1941	2123	2330
LATITUDE	29 00	28 41	28 22	28 04	27 45	27 27	27 09
LONGITUDE	88 01	87 41	87 40	87 30	87 22	87 12	87 01
SURF T (C)	27.8	27.9	27.8	28.1	27.7	28.3	28.5
29							
28				17		23	52
27	022	029	030	028	020	032	070
26	030	036	033	035	032	037	080
25	036	039	041	042	040	041	044
24	043	045	047	046	048	050	106
23	050	052	053	053	053	058	120
22	051	059	060	060	060	075	143
21	053	069	068	068	070	094	152
20	060	082	077	078	084	112	179
19	072	095	084	093	107	135	189
18	097	108	097	105	124	152	210
17	169	117	112	117	141	173	236
16	211	151	132	134	159	200	261
15	237	178	150	154	180	234	288
14	264	204	175	178	212	253	321
13	298	233	199	207	240	289	364
12	333	269	231	246	282	327	399
11	370	308	274	282	325	367	448
10	425	358	317	325	373	427	496
9	467	428	372	376	420	484	550
8	531	498	449	435	493	568	632
7	627	584	522	520	577	652	742
6	750	729	677	657	710	788	

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-JUNE 78							
XBT NO.	37	38	39	40	41	42	43
DATE (GMT)	6/16	6/16	6/16	6/16	6/16	6/16	6/17
TIME (GMT)	6 0	9 0	12 0	15 0	19 0	21 0	4 0
LATITUDE	29 19	29 11	29 13	29 13	29 11	29 13	29 11
LONGITUDE	87 37	87 30	87 31	87 32	87 38	87 39	87 38
SURF T (C)	28.2	28.0	27.8	27.9	28.0	28.1	27.8
29							
28	8	18				009	
27	009	028	027	015	010	010	011
26	010	030	029	020	011	012	016
25	023	033	030	028	016	022	023
24	028	034	032	033	030	029	031
23	031	041	039	038	032	045	041
22	033	047	043	040	040	047	048
21	036	050	052	045	048	058	054
20	048	061	059	049	057	063	056
19	073	080	078	055	061	066	061
18	101	100	109	100	065	088	098
17	177	150	158	164	108	150	161
16	214	187	200	213	205	208	200
15	234	220	225	235	234	241	233
14	255	248	256	276	272	269	260
13	280	278	284	307	307	299	293
12		337	337	351	340	330	329
11		384	394	389	379	363	371
10		430	446	446	418	408	424
9		490	498	522	479	478	475
8		560	561	578	537	533	530
7		633	631	614	633	635	627
6		760	753	717	753	744	742

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-JUNE 78							
XBT NO.	51	52	53	54	55	56	57
DATE (GMT)	6/19	6/19	6/19	6/19	6/19	6/19	6/19
TIME (GMT)	132	333	547	8 0	10 3	1215	1513
LATITUDE	26 51	26 32	26 13	25 56	25 37	25 21	25 01
LONGITUDE	86 51	86 45	86 33	86 31	86 19	86 08	85 58
SURF T (C)	28.6	28.5	28.3	27.7	28.0	27.7	28.2
29							
28	45	50	31		23		22
27	066	064	039	23	024	023	051
26	082	080	051	028	025	026	068
25	103	109	075	039	029	030	071
24	116	124	090	045	034	046	088
23	136	142	107	049	048	055	098
22	158	157	123	059	051	065	110
21	176	174	136	066	067	071	123
20	205	200	148	092	086	085	168
19	232	226	172	107	097	100	185
18	258	252	204	147	115	119	210
17	288	311	239	179	150	134	231
16	321	341	270	207	174	173	280
15	349	376	307	242	200	195	327
14	379	408	332	274	234	228	360
13	412	440	371	308	263	251	385
12	451	471	407	338	292	291	419
11	498	515	446	375	333	331	466
10	543	553	484	420	386	385	507
9	599	612	546	474	454	465	560
8	698	672	621	545	503	564	617
7	758	751	697	640	596	630	696
6			829	757	713	751	825

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-JUNE 78

XBT NO.	58	59	60	61	62	63	64
DATE (GMT)	6/19	6/19	6/19	6/19	6/20	6/20	6/20
TIME (GMT)	1727	1938	2140	2354	05	1341	325
LATITUDE	24 55	24 50	24 43	24 38	24 39	24 35	24 28
LONGITUDE	85 38	85 16	84 51	84 34	84 32	84 16	84 00
SURF T (C)	28.5	28.4	28.5	28.6	28.6	28.2	28.0
29							
28	40	50	40	051	050	52	48
27	046	066	050	057	062	075	078
26	083	092	081	082	090	106	094
25	096	108	101	119	130	129	119
24	110	138	158	140	141	146	131
23	127	152	172	161	156	155	149
22	149	171	188	184	180	178	166
21	168	188	204	204	212	200	174
20	190	216	230	250	250	220	178
19	213	240	258	263	265	246	181
18	253	272	297	300	300	260	182
17	282	298	337	330	330	278	183
16	315	333	372	362	365	300	185
15	352	378	410	411	410	343	187
14	380	422	446	450	440	367	194
13	415	465	483	490	480	391	205
12	459	502	534	526	504	416	210
11	500	543	579	551	548	447	223
10	535	601	626	580	572	495	263
9	586	647	660	626	640	545	327
8	663	710	725	680	690	603	412
7	740	790	825	750	758	668	543
6	855					800	790

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER CRUISE OTEC-JULY 78

XBT NO.	6	7	8	9	10	11	12
DATE (GMT)	7/25	7/25	7/26	7/26	7/26	7/26	7/26
TIME (GMT)	1840	2315	020	610	715	12 5	17 0
LATITUDE	02 59	03 03	03 16	03 49	03 59	04 16	04 43
LONGITUDE	028 45	028 46	028 47	028 47	028 47	028 47	028 50
SURF T (C)	26.5	26.4	26.3	26.0	26.1	26.1	26.4
29							
28							
27							
26	66	68	71	68	73	85	97
25	91	90	80	88	95	98	106
24	93	95	100	101	105	110	110
23	96	99	102	109	113	117	115
22	99	101	104	112	121	121	119
21	100	102	106	119	124	125	127
20	101	103	108	122	130	129	130
19	102	105	110	127	133	135	133
18	107	111	120	132	140	140	140
17	113	113	126	138	145	145	146
16	119	118	130	141	158	149	153
15	122	120	135	150	167	155	158
14	132	129	141	154	177	161	167
13	160	159	152	166	187	172	176
12	222	215	200	173	199	182	191
11	309	300	290	192	221	205	215
10	365	350	350	259	276	240	261
9	399	390	391	325	340	300	312
8	452	449	450	400	420	400	392
7	508	500	511	465	480	470	479
6	581	559	565	545	564	550	551

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER CRUISE OTEC-JULY 78

XBT NO.	13	14	15	16	17	18	19
DATE (GMT)	7/26	7/27	7/27	7/27	7/27	7/28	7/28
TIME (GMT)	22 0	131	7 5	1310	16 0	015	125
LATITUDE	05 17	05 42	05 59	05 41	05 15	04 44	04 29
LONGITUDE	028 47	028 47	028 24	028 00	028 02	028 04	028 04
SURF T (C)	26.6	26.6	26.5	26.3	26.4	26.3	26.4
29							
28							
27							
26	93	105	103	98	103	89	91
25	107	111	109	105	108	92	96
24	113	121	118	112	115	95	100
23	119	125	127	120	126	102	110
22	125	135	129	123	133	108	119
21	130	138	135	128	138	116	121
20	134	144	139	129	143	118	123
19	136	148	143	131	148	122	130
18	142	151	147	136	150	127	135
17	146	155	155	140	150	135	141
16	156	162	164	149	151	146	146
15	169	165	175	153	153	154	150
14	178	177	180	159	161	162	155
13	185	182	193	169	173	170	165
12	197	198	206	187	190	180	180
11	221	220	223	213	208	201	208
10	262	265	267	260	250	250	250
9	326	345	328	340	326	310	310
8	400	431	412	480	410	384	410
7	492	522	522	646	499	470	470
6	600	620	625		590	550	540

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER CRUISE OTEC-JULY 78

XBT NO.	20	21	22	23	24	25	26
DATE (GMT)	7/28	7/28	7/28	7/28	7/28	7/28	7/28
TIME (GMT)	245	845	10 0	1110	1630	1730	19 0
LATITUDE	04 12	03 52	03 30	03 15	02 56	02 58	03 01
LONGITUDE	028 03	028 04	028 04	028 04	028 00	027 48	027 30
SURF T (C)	26.2	25.8	26.1	26.0	26.2	26.2	26.1
29							
28							
27							
26	85				40	22	15
25	92	82	72	70	68	70	70
24	98	88	80	80	81	73	75
23	102	96	85	85	83	81	81
22	112	99	89	89	89	84	83
21	118	107	93	90	91	89	89
20	121	109	100	93	92	90	90
19	126	110	101	100	96	92	94
18	129	113	109	102	102	97	95
17	131	120	112	114	103	103	99
16	136	124	116	116	108	110	101
15	143	128	119	119	113	119	110
14	151	133	125	123	128	126	115
13	162	155	138	132	155	156	169
12	175	190	188	200	220	216	230
11	196	252	292	291	297	292	301
10	295	300	338	350	348	341	360
9	348	350	392	399	391	389	415
8	412	415	439	441	442	443	465
7	467	480	481	510	492	500	520
6	537	542	549	570	542	554	569

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER CRUISE OTEC-JULY 78

XBT NO.	27	28	29	30	31	32	33
DATE (GMT)	7/28	7/29	7/29	7/29	7/29	7/29	7/29
TIME (GMT)	20 7	255	7 0	1328	1510	1720	2324
LATITUDE	03 03	03 16	03 45	04 15	04 30	04 44	05 14
LONGITUDE	027 17	027 02	027 01	027 00	027 00	027 00	027 02
SURF T (C)	26.0	25.9	25.8	26.4	26.5	26.5	26.5
29							
28							
27							
26				91	88	89	101
25	65	78	77	95	91	91	105
24	70	84	81	98	98	93	109
23	72	88	90	101	101	99	111
22	82	92	97	110	111	108	118
21	84	93	99	118	122	114	121
20	87	98	100	120	129	122	125
19	90	101	100	125	131	131	131
18	92	102	110	128	135	135	136
17	96	103	111	131	140	140	142
16	99	109	116	143	147	148	149
15	108	115	120	151	150	153	155
14	116	131	128	158	164	162	159
13	149	159	140	170	173	168	165
12	205	213	209	195	181	183	182
11	272	290	272	235	192	198	195
10	351	360	325	290	253	256	245
9	400	400	375	345	317	320	310
8	449	462	439	405	396	410	400
7	500	509	507	455	461	473	490
6	566	560	561	550	545	561	600

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE OTEC-JULY 78						
XRT NO.	34	35	36	37	38	39	40	
DATE (GMT)	7/30	7/30	7/30	7/30	7/30	7/30	7/30	
TIME (GMT)	4 5	1010	1125	1230	1820	1930	2045	
LATITUDE	05 46	05 58	05 59	05 58	05 45	05 30	05 14	
LONGITUDE	027 00	026 45	026 30	026 17	026 04	026 04	026 03	
SURF T (C)	26.5	26.5	26.6	26.4	26.5	26.4	25.8	
29								
28								
27								
26	97	89	81	81	90	70		
25	106	92	82	82	97	95	85	
24	112	98	84	87	100	101	89	
23	117	99	87	110	105	104	91	
22	119	101	101	115	108	109	98	
21	123	109	119	121	114	116	102	
20	130	119	120	124	119	123	109	
19	133	125	125	132	123	134	117	
18	140	129	130	138	132	135	120	
17	144	134	134	147	142	140	128	
16	160	148	141	152	148	153	132	
15	161	150	150	161	153	158	141	
14	165	158	161	169	170	165	148	
13	170	163	170	180	178	170	158	
12	179	179	182	199	191	175	170	
11	206		205	220	213	205	178	
10	248		245	255	261	255	222	
9	315		315	349	312	314	310	
8	415		400	425	395	390	390	
7	495		485	510	475	442	485	
6	599		600	600	580	600	570	

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE OTEC-JULY 78						
XRT NO.	41	42	43	44	45	46	47	
DATE (GMT)	7/31	7/31	7/31	7/31	7/31	7/31	7/31	
TIME (GMT)	255	4 0	5 0	11 0	1213	1325	20 0	
LATITUDE	04 42	04 28	04 15	03 45	03 29	03 13	02 58	
LONGITUDE	026 01	025 58	025 58	025 59	026 01	026 01	026 04	
SURF T (C)	25.7	25.9	25.9	25.8	25.5	25.6	25.8	
29								
28								
27								
26								
25	78	81	80	78	79	69	71	
24	82	83	85	85	84	71	72	
23	89	91	90	87	87	75	74	
22	92	96	94	89	92	80	80	
21	100	103	98	91	98	82	83	
20	102	109	102	95	101	89	87	
19	111	114	103	98	104	92	89	
18	116	117	107	102	106	96	90	
17	120	125	112	107	108	100	93	
16	125	131	118	109	115	101	95	
15	131	134	128	114	119	105	100	
14	146	149	137	120	125	119	100	
13	155	156	152	149	149	135	147	
12	175	171	175	200	200	200	222	
11	194	198	208	262	280	275	282	
10	249	248	267	330	358	345	357	
9	309	330	332	375	400	405	420	
8	392	400	408	429	445	455	455	
7	472	468	475	500	480	499	494	
6	590	572	552	581	560	560	542	

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE OTEC-JULY 78						
XRT NO.	48	49	50	51	52	53	54	
DATE (GMT)	7/31	7/31	7/31	8/ 1	8/ 1	8/ 1	8/ 1	
TIME (GMT)	21 0	2235	2330	110	550	7 5	815	
LATITUDE	02 45	02 24	02 13	01 59	01 44	01 26	01 11	
LONGITUDE	026 04	026 03	026 02	026 00	026 01	026 01	026 02	
SURF T (C)	25.8	25.7	25.8	25.7	25.6	25.5	25.4	
29								
28								
27								
26								
25	57	62	65	80	87	58	60	
24	62	64	68	81	88	73	80	
23	63	68	70	83	90	75	81	
22	63	69	72	85	91	76	83	
21	74	70	76	87	92	79	84	
20	83	72	81	88	94	80	88	
19	84	73	84	89	100	81	89	
18	85	79	85	90	101	83	99	
17	91	82	88	92	103	90	100	
16	92	84	91	96	107	97	107	
15	99	87	91	105	114	108	111	
14	111	96	114	115	122	120	122	
13	155	138	150	145	151	162	160	
12	222	219	235	200	223	230	236	
11	270	260	285	290	289	282	290	
10	370	359	380	370	379	345	356	
9	418	422	450	454	431	400	390	
8	460	455	480	472	462	425	425	
7	503	483	505	495	483	475	467	
6	561	525	535	522	510	510	515	

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE OTEC-JULY 78						
XRT NO.	55	56	57	58	59	60	61	
DATE (GMT)	8/ 1	8/ 1	8/ 1	8/ 1	8/ 1	8/ 1	8/ 2	
TIME (GMT)	950	1230	1430	1625	1730	2153	145	
LATITUDE	00 59	00 45	00 28	00 13	00 01	00 16	00 45	
LONGITUDE	025 59	026 01	025 59	026 01	026 01	026 00	026 00	
SURF T (C)	25.3	25.4	25.4	25.6	25.4	25.2	26.1	
29								
28								
27								
26							60	
25	55	52	60	60	42	62	57	
24	74	74	78	72	78	77	70	
23	78	75	79	76	88	88	75	
22	79	78	81	81	102	99	85	
21	80	80	83	86	107	100	89	
20	88	85	86	92	108	100	92	
19	92	90	90	99	115	107	94	
18	99	99	92	106	119	111	101	
17	100	101	97	108	123	113	108	
16	105	109	117	117	127	120	115	
15	113	118	130	127	132	130	140	
14	130	125	140	136	147	140	152	
13	142	150	190	175	181	175	165	
12	221	219	262	221	239	212	215	
11	255	270	290	273	284	288	280	
10	330	330	325	319	328	300	332	
9	382	385	380	367	378	343	370	
8	413	419	411	399	415	393	420	
7	450	460	470	475	468	489	500	
6	510	500	540	521	659	577	590	

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE OTEC-JULY 78						
XBT NO.	62	63	64	65	79	80	81	
DATE (GMT)	8/ 2	8/ 2	8/ 2	8/ 2	8/ 3	8/ 4	8/ 4	
TIME (GMT)	253	7 5	820	930	2355	1 0	215	
LATITUDE	00	00	00	00	02	02	02	
	58	58	58	59	15	28	40	
LONGITUDE	026	025	025	025	025	025	025	
	00	45	29	14	01	01	01	
SURF T (C)	26.6	26.3	26.3	25.7	25.3	25.0	25.1	
29								
28								
27								
26								
25	47	49	38					
24	61	69	72	68	50	56	40	
23	68	75	76	80	65	63	52	
22	72	79	79	82	70	72	65	
21	77	89	88	84	74	74	73	
20	81	91	89	85	75	76	78	
19	94	98	93	93	78	78	80	
18	86	100	95	99	79	81	82	
17	93	102	98	103	81	84	88	
16	96	105	99	107	82	87	91	
15	101	112	103	114	84	92	94	
14	119	129	120	144	90	95	98	
13	147	153	142	150	110	101	114	
12	161	168	160	167	160	161	170	
11	192	220	235	240	210	247	230	
10	275	271	288	295	271	303	300	
9	326	307	328	325	330	360	350	
8	374	370	364	368	385	402	428	
7	424	435	420	440	420	421	460	
6	486	500	466	462	440	468	515	
5	572	598	553	535	499	526	600	

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE OTEC-JULY 78						
XBT NO.	82	83	84	85	86	87	88	
DATE (GMT)	8/ 4	8/ 4	8/ 4	8/ 4	8/ 4	8/ 4	8/ 4	
TIME (GMT)	340	11 0	13 0	1457	1610	2025	2150	
LATITUDE	03	03	03	03	03	04	04	
	01	14	30	44	58	15	30	
LONGITUDE	025	025	024	024	024	025	024	
	01	03	59	59	58	00	59	
SURF T (C)	25.0	24.9	24.9	25.1	25.2	25.3	25.5	
29								
28								
27								
26								
25					31	70	99	
24	71	74	70	74	83	80	96	
23	76	79	71	76	87	84	100	
22	81	82	75	83	91	92	112	
21	85	88	80	91	101	103	123	
20	88	89	89	98	103	106	128	
19	90	92	91	106	104	110	130	
18	92	98	96	112	116	120	135	
17	98	100	101	117	120	125	139	
16	100	104	109	123	128	138	148	
15	104	108	121	129	134	148	153	
14	116	128	132	136	140	151	164	
13	161	160	150	145	153	160	169	
12	232	230	200	190	176	173	188	
11	271	285	265	238	221	210	210	
10	350	345	310	279	271	257	262	
9	403	398	370	332	331	320	322	
8	488	441	435	399	411	390	390	
7	512	512	478	480	470	470	474	
6	562	580	510	535	535	545	550	

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE OTEC-JULY 78						
XBT NO.	89	90	91	92	93	94	95	
DATE (GMT)	8/ 5	8/ 5	8/ 5	8/ 5	8/ 5	8/ 5	8/ 5	
TIME (GMT)	0 0	130	545	718	927	1045	1454	
LATITUDE	04	05	05	05	05	06	06	
	46	00	15	30	46	00	15	
LONGITUDE	024	024	025	025	024	024	024	
	59	59	01	00	58	58	58	
SURF T (C)	25.5	25.5	25.6	25.6	25.6	25.5	25.5	
29								
28								
27								
26								
25	83	87	103	104	109	107	112	
24	102	100	117	110	120	113	120	
23	109	105	121	121	125	118	127	
22	113	112	124	122	128	121	130	
21	118	121	127	128	132	123	134	
20	130	125	133	131	140	128	137	
19	133	128	140	134	148	140	139	
18	139	132	144	149	149	142	149	
17	140	138	149	154	153	147	151	
16	149	140	154	156	161	151	157	
15	156	150	161	161	169	158	166	
14	165	165	172	168	174	161	174	
13	179	171	185	182	186	173	183	
12	199	185	192	201	202	180	195	
11	205	199	212	224	209	201	224	
10	260	241	253	272	271	240	265	
9	323	320	345	343	343	320	350	
8	395	400	428	415	410	397	418	
7	478	490	505	506	511	487	505	
6	570	665	625	605	600	588	617	

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER		CRUISE OTEC-JULY 78						
XBT NO.	96	97	98	99	100	101	102	
DATE (GMT)	8/ 5	8/ 5	8/ 5	8/ 6	8/ 6	8/ 6	8/ 6	
TIME (GMT)	16 2	1830	2045	0 0	110	332	448	
LATITUDE	06	06	06	07	07	07	08	
	30	46	59	15	30	45	00	
LONGITUDE	024	024	024	024	024	024	024	
	58	59	59	58	58	59	59	
SURF T (C)	25.5	25.6	25.6	26.0	26.2	26.2	26.1	
29								
28								
27								
26								
25	100	105	102		90	91	90	
24	111	112	119	105	98	97	99	
23	118	124	129	111	102	107	102	
22	124	131	135	128	112	116	107	
21	128	141	142	131	125	124	115	
20	132	143	148	138	131	136	124	
19	139	147	150	140	139	144	129	
18	143	151	155	150	148	150	136	
17	148	153	164	152	151	156	145	
16	159	160	174	158	158	165	161	
15	168	164	180	165	165	173	175	
14	178	171	188	168	172	185	190	
13	189	183	198	175	186	198	204	
12	201	203	214	185	200	209	226	
11	221	221	235	198	210	226	244	
10	270	249	265	218	233	240	267	
9	359	311	312	235	252	263	306	
8	463	410	399	275	279	301	358	
7	550	499	477	460	450	453	427	
6	635	599	624	600	570	572	563	

ISOTHERM DEPTHS (M)

SHIP		RV RESEARCHER		CRUISE OTEC-JULY 78				
XBT NO.	103	104	105	106	107	108	109	
DATE (GMT)	8/ 6	8/ 6	8/ 6	8/ 6	8/ 6	8/ 6	8/ 6	
TIME (GMT)	850	1040	1310	1428	1830	1942	2235	
LATITUDE	08 09	08 30	08 45	09 00	09 14	09 30	09 48	
LONGITUDE	024 59	025 00	024 58	024 58	024 58	024 59	025 01	
SURF T (C)	26.1	26.2	26.0	26.1	25.9	25.8	25.5	
29								
28								
27								
26	83	102						
25	93	106	97	91	89	75	97	
24	99	111	102	97	96	84	99	
23	110	117	110	104	102	95	110	
22	121	125	122	119	112	105	118	
21	128	132	130	129	122	117	121	
20	133	140	135	135	131	125	133	
19	140	145	141	138	140	130	141	
18	152	151	150	150	154	142	150	
17	162	158	158	156	162	150	158	
16	169	169	169	167	178	160	172	
15	181	178	178	178	175	166	188	
14	189	190	188	191	195	178	190	
13	208	199	204	203	211	187	207	
12	222	210	221	216	222	207	220	
11	245	225	235	227	245	229	240	
10	268	252	269	245	268	263	261	
9	309	286	300	274	300	304	298	
8	365	350	369	345	351	353	360	
7	455	476	469	451	470	452	460	
6	590	578	610	590	600	582	570	

ISOTHERM DEPTHS (M)

SHIP		RV RESEARCHER		CRUISE OTEC-JULY 78				
XBT NO.	110	111	112	113	114	115	116	
DATE (GMT)	8/ 6	8/ 7	8/ 7	8/ 7	8/ 7	8/ 7	8/ 7	
TIME (GMT)	2335	335	445	725	842	1525	1637	
LATITUDE	10 00	10 14	10 29	10 45	11 02	11 02	11 01	
LONGITUDE	025 00	025 00	024 59	024 59	025 00	025 16	025 32	
SURF T (C)	25.6	25.7	25.6	25.2	25.2	25.4	25.3	
29								
28								
27								
26								
25	90	100	109	99	92	100	83	
24	99	103	110	100	95	103	97	
23	110	120	116	105	106	111	105	
22	120	127	123	121	120	120	122	
21	130	143	132	141	132	131	130	
20	137	150	141	151	137	140	138	
19	148	155	150	159	145	149	150	
18	161	158	154	161	158	161	156	
17	165	164	164	168	164	168	161	
16	175	174	171	179	186	187	176	
15	181	180	182	197	199	196	189	
14	187	196	191	208	211	215	196	
13	200	213	209	223	230	231	215	
12	220	240	235	255	247	250	236	
11	245	258	253	289	271	275	261	
10	268	292	234	323	301	306	292	
9	298	324	313	351	345	344	330	
8	340	360	356	395	377	388	381	
7	425	434	411	454	425	455	447	
6	540	535	501	539	542	553	559	

ISOTHERM DEPTHS (M)

SHIP		RV RESEARCHER		CRUISE OTEC-JULY 78				
XBT NO.	117	118	119	120	121	122	123	
DATE (GMT)	8/ 7	8/ 7	8/ 7	8/ 8	8/ 8	8/ 8	8/ 8	
TIME (GMT)	1737	2045	2237	040	340	515	756	
LATITUDE	11 01	10 40	10 21	10 00	09 40	09 18	08 59	
LONGITUDE	025 45	026 02	026 16	026 29	026 30	026 29	026 31	
SURF T (C)	25.2	25.4	25.4	25.3	25.5	25.7	25.4	
29								
28								
27								
26								
25	83	101	102	101	110	109	101	
24	103	106	105	103	113	112	104	
23	109	112	112	116	121	119	118	
22	124	123	128	127	132	131	128	
21	137	139	131	138	138	136	132	
20	142	148	141	145	144	143	134	
19	151	153	152	152	150	148	138	
18	163	162	161	160	163	156	149	
17	168	169	171	165	171	169	158	
16	178	181	180	173	177	176	162	
15	193	196	191	188	190	184	174	
14	206	212	201	197	205	196	187	
13	226	231	215	210	221	210	209	
12	250	253	231	228	239	228	219	
11	280	274	251	243	255	259	232	
10	310	301	283	272	274	282	250	
9	341	335	317	315	321	315	285	
8	382	375	369	368	383	371	345	
7	444	438	428	470	481	463	453	
6	512	589	522	570	591	546	568	

ISOTHERM DEPTHS (M)

SHIP		RV RESEARCHER		CRUISE OTEC-JULY 78				
XBT NO.	124	125	126	127	128	129	130	
DATE (GMT)	8/ 8	8/ 8	8/ 8	8/ 8	8/ 8	8/ 8	8/ 8	
TIME (GMT)	10 5	1137	1313	1647	1820	1955	2327	
LATITUDE	08 40	08 21	07 59	07 40	07 20	07 00	06 39	
LONGITUDE	026 29	026 29	026 30	026 30	026 30	026 30	026 40	
SURF T (C)	25.7	25.9	26.1	26.1	26.2	26.2	25.6	
29								
28								
27								
26			87	91	93			
25	91	97	102	101	96	99	98	
24	97	104	108	111	103	110	100	
23	107	116	112	119	116	118	109	
22	112	125	123	124	125	122	119	
21	117	128	129	131	129	126	126	
20	123	136	132	135	132	133	128	
19	132	142	139	144	139	138	130	
18	139	148	145	150	144	143	135	
17	149	154	152	160	148	149	140	
16	155	162	157	171	158	152	145	
15	166	176	165	182	166	158	152	
14	175	188	176	190	177	164	161	
13	185	196	191	202	189	173	170	
12	205	215	207	215	200	185	185	
11	221	231	228	231	217	207	209	
10	251	252	257	255	238	230	255	
9	289	285	296	283	283	303	330	
8	362	350	360	335	360	401	420	
7	458	460	451	450	478	507	510	
6	588	570	567	585	599	629	630	

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER

CRUISE OTEC-JULY 78

XBT NO.	131	132	133	134	135	136	137
DATE (GMT)	8/ 9	8/ 9	8/ 9	8/10	8/10	8/10	8/10
TIME (GMT)	1 0	5 3	17 7	145	5 5	1050	14 2
LATITUDE	06 20	06 00	06 00	06 15	06 45	07 24	07 45
LONGITUDE	026 50	027 00	027 32	028 01	028 00	028 01	028 00
SURF T (C)	25.5	25.5	26.2	26.0	26.2	26.4	26.3

29							
28							
27							
26			59	94	97	96	89

25	98	106	104	95	100	105	95
24	103	109	108	104	103	114	101
23	106	114	113	109	110	118	107
22	117	121	119	114	118	123	117

21	124	124	124	118	122	131	121
20	131	126	131	125	128	135	129
19	136	128	138	131	138	141	138
18	147	134	144	139	138	148	145

17	153	140	147	148	142	151	150
16	157	145	152	155	146	158	152
15	163	152	161	166	156	168	168
14	173	162	178	170	176	175	180

13	178	179	176	178	186	190	198
12	187	197	188	183	203	209	210
11	202	220	211	201	226	231	230
10	260	259	248	250	270	279	252

9	330	319	314	315	333	360	312
8	400	397	394	405	408	440	390
7	483	490	501	490	516	532	502
6	607	598	611	605	633	630	610

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER

CRUISE OTEC-JULY 78

XBT NO.	138	139	140	141	142	143	144
DATE (GMT)	8/10	8/10	8/11	8/11	8/11	8/11	8/12
TIME (GMT)	1827	2255	428	840	14 0	1750	8/12 135
LATITUDE	08 16	08 45	09 15	09 45	10 15	10 45	11 00
LONGITUDE	028 00	028 00	028 01	028 00	028 00	028 00	028 22
SURF T (C)	26.0	26.0	25.7	25.9	25.8	25.6	25.6

29							
28							
27							
26	108						

25	113	111	108	101	99	100	98
24	120	114	115	106	105	103	102
23	126	121	121	119	110	118	116
22	132	129	130	129	125	137	127

21	135	136	137	133	131	144	135
20	137	141	143	142	136	150	145
19	140	147	150	150	150	158	153
18	144	153	154	157	164	166	161

17	149	160	162	168	167	177	174
16	150	170	172	173	173	187	185
15	170	182	188	180	182	197	200
14	178	198	198	199	194	206	215

13	200	210	210	213	215	223	227
12	216	229	227	235	240	241	247
11	236	245	247	255	264	268	271
10	268	269	267	279	281	302	303

9	300	301	299	314	315	332	335
8	360	360	358	350	365	375	370
7	460	450	460	441	450	424	435
6	565	560	560	551	550	521	522

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER

CRUISE OTEC-JULY 78

XBT NO.	145	146	147	148	149	150	151
DATE (GMT)	8/12	8/12	8/12	8/12	8/12	8/13	8/13
TIME (GMT)	628	1220	1352	1945	2117	352	522
LATITUDE	11 00	10 40	10 20	09 40	09 04	08 40	08 20
LONGITUDE	029 15	029 31	029 30	029 30	029 03	029 02	029 30
SURF T (C)	25.8	25.9	26.1	26.2	26.3	26.3	26.3

29							
28							
27							
26		80	93	97	95	101	91

25	101	102	101	100	99	107	99
24	106	110	109	109	103	116	110
23	118	121	120	118	123	124	118
22	130	135	131	131	140	139	129

21	140	142	140	145	150	145	137
20	150	149	146	150	156	148	143
19	159	155	155	160	162	155	150
18	168	168	163	168	174	160	155

17	173	173	171	178	181	167	163
16	189	182	183	193	190	175	172
15	202	199	195	205	200	183	184
14	218	215	209	212	212	190	191

13	231	229	225	228	220	199	202
12	249	250	245	251	232	212	219
11	271	276	266	275	252	231	241
10	307	309	294	292	274	264	262

9	341	334	330	325	311	290	285
8	387	386	360	370	372	340	334
7	434	450	415	451	461	430	434
6	522	525	518	561	581	544	540

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER

CRUISE OTEC-JULY 78

XBT NO.	152
DATE (GMT)	8/13
TIME (GMT)	725
LATITUDE	08 00
LONGITUDE	029 30
SURF T (C)	26.4

29	
28	
27	
26	100

25	101
24	106
23	112
22	126

21	135
20	145
19	153
18	162

17	171
16	175
15	185
14	198

13	215
12	230
11	249
10	268

9	299
8	364
7	454
6	565

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-AUG. 78

XBT NO.	1	2	3	4	5	6	7
DATE (GMT)	8/18	8/19	8/19	8/19	8/19	8/19	8/19
TIME (GMT)	20 0	0 0	1330	4 0	8 0	12 0	16 0
LATITUDE	27 32	27 37	27 39	27 39	27 32	27 38	27 38
LONGITUDE	85 30	85 25	85 23	85 31	85 31	85 32	85 32
SURF T (C)	30.1	30.0	29.2	29.8	29.5	29.5	29.9
29	28	24	27	23	20	26	28
28	32	29	31	29	30	33	30
27	34	33	34	32	32	35	32
26	40	36	37	36	38	39	37
25	44	40	41	40	43	46	42
24	49	47	48	47	49	50	47
23	52	54	54	52	53	53	50
22	62	62	62	62	63	64	60
21	75	74	71	71	72	72	72
20	88	91	87	87	86	80	83
19	112	111	111	107	111	110	106
18	140	145	143	140	133	138	142
17	162	180	168	172	172	183	171
16	188	211	208	214	208	213	206
15	229	242	255	245	241	245	238
14	254	286	291	274	274	276	270
13	286	322	322	312	309	315	308
12	328	357	359	346	340	350	339
11	363	393	393	382	387	391	380
10	410	443	441	443	432	429	428
9	472	505	481	492	492	480	476
8	537	566	545	554	548	550	547
7	613	626	585	630	630	632	620
6	730	743	660	750	750	760	725

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-AUG. 78

XBT NO.	8	9	10	11	12	13	14
DATE (GMT)	8/19	8/20	8/20	8/20	8/20	8/20	8/20
TIME (GMT)	20 0	0 0	4 0	8 0	12 0	16 0	20 0
LATITUDE	27 38	27 37	27 37	27 36	27 40	27 39	27 39
LONGITUDE	85 32	85 32	85 32	85 32	85 32	85 32	85 39
SURF T (C)	30.2	30.3	30.2	29.1	29.9	30.2	30.2
29	24	25	31	31	27	26	22
28	30	32	33	33	29	30	28
27	33	36	35	35	32	33	32
26	39	40	39	39	37	38	35
25	46	44	46	45	43	42	40
24	50	51	52	49	49	49	47
23	55	57	56	50	52	53	53
22	65	67	68	62	58	62	64
21	75	76	75	72	69	72	78
20	86	86	86	83	82	83	92
19	109	109	110	106	100	102	113
18	146	146	137	138	132	138	149
17	175	181	175	172	164	168	178
16	208	215	210	205	206	208	160
15	243	249	244	241	237	238	240
14	277	280	279	273	267	271	276
13	313	322	315	308	309	308	315
12	344	354	350	350	350	348	348
11	384	393	385	389	388	387	398
10	433	448	438	441	430	425	438
9	484	500	499	491	489	485	503
8	555	563	554	555	552	555	566
7	629	641	628	642	636	634	649
6	737	745	750	785	736	728	780

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-AUG. 78

XBT NO.	15	16	17	18	19	20	21
DATE (GMT)	8/21	8/21	8/21	8/21	8/21	8/21	8/21
TIME (GMT)	0 0	226	445	7 0	920	1121	1340
LATITUDE	27 44	27 57	28 09	28 20	28 32	28 43	28 54
LONGITUDE	85 32	85 50	86 07	86 25	86 40	87 02	87 21
SURF T (C)	29.9	29.7	29.7	29.8	29.6	29.6	29.4
29	23	20	25	27	25	27	32
28	30	32	32	31	29	31	35
27	33	36	34	35	34	32	39
26	36	40	37	39	38	34	40
25	40	44	43	43	41	40	42
24	47	48	49	48	47	43	48
23	52	57	54	53	51	48	52
22	60	63	60	62	59	53	56
21	70	75	71	73	68	65	65
20	86	91	85	86	87	74	79
19	107	105	107	111	102	90	99
18	130	144	139	145	121	120	121
17	162	173	173	170	149	140	144
16	194	201	203	205	182	163	171
15	226	231	236	235	200	190	200
14	261	269	270	265	238	230	232
13	310	306	307	301	270	264	264
12	359	347	352	343	309	303	299
11	398	388	413	389	353	352	338
10	439	429	468	449	397	400	390
9	499	489	537	507	454	462	450
8	564	552	592	577	518	528	519
7	625	636	608	589	607	620	616
6	717	750	642			720	756

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-AUG. 78

XBT NO.	22	23	24	25	26	27	28
DATE (GMT)	8/21	8/21	8/21	8/22	8/22	8/22	8/22
TIME (GMT)	17 0	20 0	23 0	3 0	7 0	11 0	15 0
LATITUDE	29 05	29 11	29 11	29 13	29 14	29 10	29 10
LONGITUDE	87 38	87 30	87 38	87 38	87 36	87 37	87 35
SURF T (C)	30.6	30.4	30.8	31.0	30.6	30.0	30.4
29	24	23	26	27	29	29	30
28	28	29	30	30	32	32	32
27	32	32	32	32	34	33	36
26	35	35	34	34	36	36	38
25	40	40	36	38	40	39	39
24	44	46	40	39	43	42	43
23	47	50	46	42	46	47	49
22	51	53	52	53	49	51	52
21	58	61	61	59	58	57	59
20	70	69	72	70	67	69	71
19	87	85	85	87	84	81	90
18	100	105	100	101	116	96	106
17	151	131	142	139	141	152	153
16	172	153	163	160	161	175	172
15	196	188	187	185	184	201	194
14	227	209	216	210	203	223	222
13	262	244	247	246	226	251	246
12	302	281	285	270	262	281	285
11	357	320	321	309	302	319	330
10	414	374	378	358	338	377	380
9	476	439	429	429	409	442	429
8	572	506	506	508	520	504	510
7	736	600	611	600	591	598	598
6		721	740	720	725	738	742

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-AUG. 78						
XBT NO.	29	30	31	32	33	34	35	
DATE (GMT)	8/22	8/22	8/23	8/23	8/23	8/23	8/23	
TIME (GMT)	19 0	23 0	3 0	7 0	11 30	15 0	18 0	
LATITUDE	29 10	29 11	29 10	29 09	29 11	29 10	29 11	
LONGITUDE	87 34	87 35	87 37	87 36	87 36	87 39	87 46	
SURF T (C)	30.7	31.2	31.2	30.1	29.6	30.2	30.5	
29	33	28	25	24	31	31	21	
28	36	31	29	27	35	33	26	
27	38	35	31	30	38	35	29	
26	40	37	37	34	40	38	31	
25	42	40	41	38	42	42	34	
24	45	44	43	42	46	47	38	
23	50	48	47	45	50	49	43	
22	56	54	51	51	57	52	49	
21	67	63	59	60	64	59	55	
20	78	74	70	72	77	68	68	
19	94	88	88	89	92	87	83	
18	110	107	100	100	108	111	108	
17	158	147	148	151	152	151	136	
16	176	169	171	176	181	174	163	
15	202	195	198	201	205	202	189	
14	229	219	221	229	230	226	221	
13	256	250	256	254	250	252	252	
12	292	283	286	286	285	288	283	
11	332	320	320	323	324	328	318	
10	389	371	371	378	370	378	355	
9	443	430	441	434	425	439	433	
8	517	507	507	512	516	528	511	
7	626	605	608	610	620	627	626	
6	763	730	750	760	760	762	764	

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-AUG. 78						
XBT NO.	36	37	38	39	40	41	42	
DATE (GMT)	8/25	8/25	8/25	8/25	8/25	8/25	8/25	
TIME (GMT)	358	615	920	12 2	1420	1638	1855	
LATITUDE	28 52	28 35	28 17	27 59	27 41	27 29	27 05	
LONGITUDE	87 43	87 33	87 22	87 10	87 01	86 49	86 42	
SURF T (C)	29.6	29.6	29.5	29.4	29.4	29.4	29.3	
29	32	33	30	27	25	22	32	
28	36	40	33	30	31	27	35	
27	38	42	36	33	34	30	37	
26	40	47	40	37	38	33	38	
25	43	51	47	40	44	41	46	
24	50	55	51	47	49	48	50	
23	55	58	56	54	57	53	54	
22	61	62	67	66	67	66	64	
21	68	70	74	78	76	74	70	
20	79	79	92	87	90	89	79	
19	101	96	106	107	114	107	95	
18	121	117	129	144	150	134	111	
17	155	154	154	180	189	163	137	
16	180	183	179	209	222	198	158	
15	210	210	213	242	250	235	190	
14	241	240	240	269	282	275	216	
13	280	277	270	303	312	301	263	
12	318	316	303	330	361	330	300	
11	353	351	350	369	396	371	338	
10	403	397	402	432	439	424	385	
9	467	462	470	517	497	491	460	
8	546	538	538	575	566	551	524	
7	635	619	630	650	636	628	610	
6	780	745	760	786	777	744	723	

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-AUG. 78						
XBT NO.	43	44	45	46	47	48	49	
DATE (GMT)	8/25	8/25	8/26	8/26	8/26	8/26	8/26	
TIME (GMT)	2125	2357	222	515	8 0	1024	1233	
LATITUDE	26 50	26 31	26 10	25 56	25 42	25 32	25 25	
LONGITUDE	86 29	86 18	86 05	85 56	85 41	85 22	85 02	
SURF T (C)	29.2	29.0	28.2	28.6	28.4	28.7	28.2	
29	29	21			19	22		
28	31	25	20	16	21	25	40	
27	32	27	22	18	22	28	50	
26	35	30	26	20	26	30	61	
25	39	35	30	22	28	35	75	
24	42	39	33	27	30	39	80	
23	49	46	38	31	32	46	98	
22	51	54	42	38	36	51	106	
21	63	60	51	43	41	59	117	
20	75	69	64	53	49	66	127	
19	86	89	81	64	53	76	142	
18	110	111	105	83	63	85	152	
17	142	141	141	102	71	100	170	
16	164	160	165	125	90	122	191	
15	195	187	192	143	112	146	216	
14	226	220	219	171	137	176	238	
13	276	277	252	211	168	205	280	
12	319	333	297	252	209	242	325	
11	369	391	339	302	248	280	357	
10	417	445	396	351	303	338	405	
9	476	494	450	413	354	409	458	
8	550	560	513	491	439	470	561	
7	643	670	610	522	548	580	623	
6	775	786	750	709	660	690	763	

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-AUG. 78			
XBT NO.	50	51	52	53	
DATE (GMT)	8/26	8/26	8/26	8/26	
TIME (GMT)	15 3	1716	1935	2121	
LATITUDE	25 07	24 40	24 40	24 30	
LONGITUDE	84 49	83 34	84 15	83 59	
SURF T (C)	28.2	28.6	28.4	28.4	
29		41	44		
28	53	76	80	75	
27	78	86	96	98	
26	87	102	110	116	
25	109	126	132	131	
24	123	139	145	143	
23	138	153	155	158	
22	151	168	178	172	
21	168	186	196	191	
20	181	200	211	206	
19	200	216	227	227	
18	231	250	253	250	
17	257	306	287	264	
16	301	360	309	283	
15	324	376	339	313	
14	368	410	374	338	
13	394	440	409	360	
12	424	479	434	382	
11	491	502	467	409	
10	536	547	507	437	
9	576	609	549	455	
8	622	668	597	508	
7	698	749	668	558	
6			754	650	

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER				CRUISE RI/SEPT, 78			
XBT NO.	1	2	3	4	5	6	7
DATE (GMT)	9/15	9/15	9/15	9/15	9/15	9/15	9/15
TIME (GMT)	3 5	5 0	7 0	9 0	11 0	1545	1640
LATITUDE	25 ' 48	26 ' 06	26 ' 26	26 ' 43	27 ' 03	27 ' 17	27 ' 17
LONGITUDE	84 ' 43	85 ' 04	85 ' 27	85 ' 50	86 ' 11	86 ' 25	86 ' 24
SURF T (C)	29.9	29.5	29.2	29.5	29.9	29.5	29.5
29	19	27	20	18	31	32	31
28	22	28	22	21	34	38	36
27	25	30	22	26	38	42	39
26	27	31	27	30	42	47	44
25	30	34	30	32	47	51	49
24	33	38	33	38	51	58	54
23	39	42	38	42	59	62	59
22	45	44	40	51	66	69	70
21	51	48	46	63	76	82	78
20	70	50	50	78	98	92	91
19	82	52	60	91	116	118	112
18	97	67	77	105	142	135	140
17	119	79	93	130	171	167	163
16	144	94	116	153	197	189	188
15	186	120	141	173	231	221	217
14	213	143	176	222	268	250	246
13	253	186	209	266	310	286	280
12	295	222	240	313	338	318	313
11	352	268	291	343	384	362	356
10	408	280	360	382	432	419	421
9	476	327	437	442	496	477	471
8	548	408	518	542	570	531	532
7	651	497	580	640	651	610	605
6	800	635	760			738	730

ISOTHERM DEPTHS (M)

SHIP RV RESEARCHER				CRUISE RI/SEPT, 78			
XBT NO.	8	9	10	11	12	13	14
DATE (GMT)	9/15	9/16	9/16	9/16	9/16	9/17	9/17
TIME (GMT)	22 0	0 0	2 0	4 0	6 0	345	6 0
LATITUDE	27	27	27	28	28	28	28
	24	24	59	18	37	49	49
LONGITUDE	86	86	87	87	88	88	80
	34	34	22	45	08	20	20
SURF T (C)	29.8	29.4	29.3	29.4	29.2	29.3	29.2
29	44	38	33	23	39	31	28
28	46	40	36	27	40	38	37
27	49	42	39	31	42	40	41
26	51	45	40	38	46	42	43
25	58	49	47	43	49	49	50
24	61	54	50	49	53	51	53
23	69	62	58	55	58	58	58
22	78	71	67	62	62	63	62
21	88	78	78	71	71	71	69
20	99	93	91	84	80	87	79
19	114	112	115	99	99	101	98
18	139	140	153	150	128	122	122
17	171	171	197	182	150	151	148
16	190	201	234	214	179	178	173
15	224	230	262	242	211	208	205
14	260	262	288	275	245	240	240
13	298	300	321	308	280	270	271
12	336	340	359	345	322	311	307
11	375	382	392	386	365	352	352
10	428	431	442	429	418	405	405
9	478	488	484	481	468	463	465
8	550	550	555	560	583	585	532
7	612	628	636	643		628	626
6	738	750	780	765		742	752

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-OCT. 78

XBT NO.	1	2	3	4	5	6	7
DATE (GMT)	10/25	10/25	10/25	10/25	10/25	10/25	10/26
TIME (GMT)	4 0	7 0	1035	1430	1830	23 0	3 5
LATITUDE	27 33	27 39	27 39	27 39	27 39	27 39	27 42
LONGITUDE	85 32	85 22	85 31	85 31	85 30	85 32	85 36
SURF T (C)	25.8	25.7	25.8	25.8	26.0	25.9	25.5
29							
28							
27							
26					001		
25	042	046	045	046	049	048	046
24	047	047	049	048	052	051	049
23	050	049	052	052	053	053	052
22	055	055	056	057	056	056	059
21	065	064	062	062	066	065	064
20	072	077	075	073	076	076	079
19	095	088	086	088	089	093	102
18	113	111	120	116	121	116	119
17	140	141	140	137	143	138	134
16	166	166	165	168	167	161	161
15	192	194	195	192	193	186	187
14	225	229	225	228	228	216	222
13	262	266	262	258	260	255	268
12	305	302	299	298	306	294	299
11	345	348	338	346	351	348	336
10	398	400	390	394	402	387	382
9	450	468	445	453	470	452	450
8	521	548	520	527	540	520	525
7	602	628	612	621	621	595	604
6	735	752	740	750	760	735	742

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-OCT. 78

XBT NO.	8	9	10	11	12	13	14
DATE (GMT)	10/26	10/26	10/26	10/26	10/26	10/28	10/28
TIME (GMT)	7 0	1114	15 0	19 0	2259	15 0	1926
LATITUDE	27 43	27 39	27 41	27 40	27 39	27 39	27 40
LONGITUDE	85 39	85 33	85 38	85 40	85 30	85 24	85 35
SURF T (C)	25.6	25.8	25.9	25.7	25.5	25.6	25.7
29							
28							
27							
26							
25	047	044	047	038	048	049	052
24	049	047	049	046	049	051	054
23	051	050	051	049	052	054	057
22	059	056	056	058	059	057	059
21	064	062	063	062	066	062	066
20	079	078	076	074	077	069	078
19	098	095	093	089	097	086	091
18	118	116	111	109	119	108	108
17	143	142	133	128	140	139	127
16	169	161	161	149	164	172	148
15	193	191	184	176	194	196	173
14	224	221	212	200	224	229	207
13	257	261	254	237	256	262	248
12	300	296	292	275	298	307	286
11	336	339	339	322	346	352	323
10	392	391	389	378	394	400	380
9	452	450	447	444	458	459	444
8	525	525	521	516	531	537	520
7	610	611	611	609	612	650	611
6	748	739	752	724	740	768	732

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-OCT. 78

XBT NO.	15	16	17	18	19	20	21
DATE (GMT)	10/28	10/29	10/29	10/29	10/29	10/29	10/29
TIME (GMT)	23 8	3 7	810	1015	1233	1449	17 0
LATITUDE	27 40	27 40	27 46	27 52	28 09	28 20	28 32
LONGITUDE	85 34	85 30	85 30	85 50	86 08	86 26	86 45
SURF T (C)	25.7	25.7	25.6	25.6	25.6	25.4	25.3
29							
28							
27							
26					030		
25	049	050	047	046	035	032	039
24	051	052	050	048	040	036	041
23	053	054	052	050	042	039	048
22	059	056	054	058	049	048	051
21	063	068	061	064	054	052	060
20	078	076	072	073	070	061	068
19	089	088	092	090	080	081	074
18	107	109	106	107	098	104	105
17	127	137	131	133	128	138	129
16	149	161	159	162	152	170	151
15	175	183	190	195	205	202	181
14	203	208	224	231	250	241	229
13	246	256	262	268	309	281	262
12	277	297	298	308	344	327	302
11	320	346	335	341	400	388	345
10	378	396	385	404	459	443	403
9	440	450	445	469	511	492	460
8	510	528	524	549	600	557	552
7	595	615	625	633	695	649	627
6	728	760	745	778	775		

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-OCT. 78

XBT NO.	22	23	24	25	26	27	28
DATE (GMT)	10/29	10/29	10/30	10/30	10/30	10/30	10/30
TIME (GMT)	1914	2134	24 0	032	4 0	830	12 0
LATITUDE	28 43	28 55	29 04	29 04	29 12	29 15	29 12
LONGITUDE	87 03	87 27	87 37	87 38	87 29	87 42	87 44
SURF T (C)	24.8	25.5	25.6	25.7	25.5	25.3	25.3
29							
28							
27							
26		049	052	051	051	041	045
25	038	052	055	053	056	044	050
24	044	055	057	055	058	046	052
23	048	061	059	059	059	049	054
22	052	065	064	062	065	058	061
21	061	078	070	070	072	062	071
20	073	092	081	081	080	078	080
19	099	111	103	102	092	089	092
18	124	131	127	123	115	121	115
17	151	154	154	151	151	159	155
16	174	183	183	182	180	196	195
15	202	212	214	211	213	318	231
14	237	245	245	247	248	340	312
13	277	290		277	290	350	340
12	311	330		319	328	361	370
11	358	375		368	369	372	390
10	409	423		415	412	389	431
9	468	485		467	468	422	469
8	549	554		530	539	487	545
7	669	642		645	645		650
6	788	771		767	749		770

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-OCT. 78

XBT NO.	29	30	31	32	33	34	35
DATE (GMT)	10/30	10/30	10/31	10/31	10/31	10/31	10/31
TIME (GMT)	16 0	2044	24 0	4 0	8 0	12 0	16 0
LATITUDE	29 09	29 10	29 09	29 10	29 10	29 11	29 09
LONGITUDE	87 38	87 38	87 38	87 38	87 37	87 37	87 40
SURF T (C)	25.7	25.8	25.8	25.8	25.8	25.7	25.8
29							
28							
27							
26	050	049	051	049			
25	056	055	052	055	057	057	052
24	057	056	055	056	058	059	056
23	058	060	056	058	061	062	059
22	062	069	066	064	068	067	066
21	076	073	071	072	072	072	074
20	086	084	080	079	084	082	081
19	099	099	099	096	099	096	097
18	125	120	124	121	121	117	119
17	151	155	158	158	155	152	154
16	191	188	192	196	199	191	193
15	230	220	231	227	232	231	232
14	258	268	268	276	274	271	270
13	308	315	317	315	321	314	309
12	342	348	342	353	351	355	354
11	380	385	384	392	396	392	389
10	422	430	429	430	433	436	441
9	483	494	482	489	489	490	488
8	544	550	558	555	553	558	556
7	631	651	650	645	651	644	652
6	770	775	784	781	787	788	775

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-OCT. 78

XBT NO.	36	37	38	39	40	41	42
DATE (GMT)	10/31	11/ 1	11/ 1	11/ 1	11/ 1	11/ 2	11/ 2
TIME (GMT)	20 0	016	1215	1556	22 0	2 8	6 0
LATITUDE	29 11	29 11	29 11	29 12	29 11	29 11	29 09
LONGITUDE	87 38	87 38	87 38	87 38	87 38	87 37	87 37
SURF T (C)	25.2	25.7	25.2	25.1	25.3	25.3	25.4
29							
28							
27							
26	016			008	004	027	
25	052	049	055	009	046	048	048
24	056	052	057	008	051	050	050
23	060	056	059	008	054	056	055
22	066	062	064	011	058	060	061
21	072	068	069	015	069	067	067
20	078	073	082	021	076	075	076
19	097	091	093	022	089	086	089
18	115	112	115	044	118	107	110
17	150	148	150	070	148	139	141
16	173	178	176	079	172	166	167
15	244	230	228	108	212	201	220
14	281	266	274	158	267	263	257
13	322	304	313	195	303	295	297
12	357	343	350	226	334	330	333
11	390	378	386	262	373	372	374
10	439	431	437	323	419	416	420
9	495	478	485	376	485	468	472
8	554	549	551	445	550	534	546
7	650	643	652	557	648	633	650
6	790	778	785	667	778	752	778

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-OCT. 78

XBT NO.	43	44	45	46	47	48	49
DATE (GMT)	11/ 2	11/ 2	11/ 2	11/ 2	11/ 3	11/ 4	11/ 4
TIME (GMT)	10 0	14 0	1815	22 0	2254	1 8	311
LATITUDE	29 10	29 09	29 09	29 07	29 13	29 57	28 42
LONGITUDE	87 37	87 37	87 37	87 36	87 37	87 22	87 09
SURF T (C)	25.5	25.6	25.4	25.5	25.3	25.2	24.7
29							
28							
27							
26							
25	048	043	046	052	046	50	048
24	052	049	050	055	049	51	047
23	058	059	054	060	051	55	050
22	063	064	059	065	058	60	053
21	069	068	067	070	061	66	061
20	079	080	075	079	072	80	071
19	089	091	089	092	097	99	088
18	115	113	112	110	118	120	114
17	147	146	144	141	149	151	141
16	174	172	168	165	192	174	165
15	215	211	218	208	239	204	188
14	260	246	249	239	251	236	216
13	299	291	293	288	287	267	248
12	333	331	330	330	318	308	308
11	371	366	365	371	356	351	355
10	426	417	410	422	402	410	409
9	487	470	474	473	458	472	452
8	552	542	543	544	534	542	510
7	652	647	625	638	643	629	652
6	790	770	756	771	742	762	788

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY CRUISE OTEC-OCT. 78

XBT NO.	50	51	52	53	54	55	56
DATE (GMT)	11/ 4	11/ 4	11/ 4	11/ 4	11/ 4	11/ 4	11/ 4
TIME (GMT)	520	740	918	1022	1133	1241	1349
LATITUDE	28 27	28 11	28 00	27 51	27 43	27 34	27 26
LONGITUDE	86 55	86 40	86 30	86 24	86 18	86 11	86 04
SURF T (C)	24.8	25.3	25.3	25.2	25.3	25.3	25.3
29							
28							
27							
26							
25	044	045	036	039	039	051	051
24	049	048	040	041	048	052	052
23	051	050	042	045	050	056	053
22	058	057	051	049	058	059	054
21	066	066	059	054	072	068	059
20	078	077	068	065	078	076	074
19	088	089	072	081	090	093	096
18	111	118	103	102	110	108	112
17	137	144	126	131	143	129	132
16	164	172	158	161	174	152	150
15	187	205	192	197	208	194	228
14	219	233	219	227	246	228	255
13	257	269	270	278	283	286	280
12	298	310	323	327	329	322	313
11	343	350	386	400	376	358	351
10	388	400	448	472	432	412	410
9	442	453	512	530	506	465	472
8	513	524	567	600	582	542	543
7	598	598	648	682	701	617	642
6	720	730	760	795		760	768

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-OCT. 78						
XBT NO.	57	58	59	60	61	62	63	
DATE (GMT)	11/ 4	11/ 4	11/ 4	11/ 4	11/ 4	11/ 4	11/ 4	
TIME (GMT)	15 0	16 2	17 6	18 5	19 12	20 24	21 31	
LATITUDE	27 18	27 09	27 00	26 52	26 43	26 34	26 26	
LONGITUDE	85 57	85 50	85 45	85 36	85 38	85 27	85 19	
SURF T (C)	25.0	25.8	26.3	26.3	25.9	25.5	25.7	
29								
28								
27								
26			039	038				
25	050	050	041	039	045	039	045	
24	051	051	045	039	048	040	046	
23	052	055	049	051	052	045	048	
22	056	060	056	058	053	050	051	
21	062	067	079	081	075	061	065	
20	071	078	098	103	097	092	082	
19	093	096	117	129	120	111	104	
18	109	121	138	161	151	146	147	
17	145	158	176	195	193	181	155	
16	168	178	202	230	225	212	183	
15	195	213	235	260	256	245	215	
14	232	241	263	297	289	272	253	
13	274	274	300	325	329	310	302	
12	313	317	342	360	362	359	354	
11	360	364	382	397	401	409	404	
10	408	408	443	445	454	461	473	
9	461	475	498	515	519	530	534	
8	530	550	578	585	615	610	604	
7	600	633	643	666	692	710	698	
6		752	755	815	808		830	

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-OCT. 78						
XBT NO.	64	65	66	67	68	69	70	
DATE (GMT)	11/ 4	11/ 4	11/ 5	11/ 5	11/ 5	11/ 5	11/ 5	
TIME (GMT)	2236	2341	1 0	319	541	8 2	1026	
LATITUDE	26 18	26 10	26 00	25 52	25 43	25 35	25 26	
LONGITUDE	85 13	85 06	85 00	84 39	84 20	83 59	83 40	
SURF T (C)	26.3	26.3	26.6	26.9	26.5	27.0	26.4	
29								
28								
27				047		071		
26	046	055	052	055	066	087	063	
25	047	056	053	062	065	090	065	
24	047	057	054	64	071	092	067	
23	049	059	058	070	074	098	075	
22	066	067	067	085	085	107	076	
21	070	076	072	093	100	113	077	
20	079	082	086	112	126	124		
19	099	104	102	122	136	137		
18	117	116	117	155	159			
17	143	148	137	177				
16	179	180	169	210				
15	217	229	212	232				
14	263	269	257	296				
13	298	308	297	259				
12	367	353	345	287				
11	422	396	393	325				
10	467	448	432	352				
9	525	513	487	412				
8	595	581	542	489				
7	666	648	627	578				
6	805	786	755					

ISOTHERM DEPTHS (M)

SHIP RV VIRGINIA KEY		CRUISE OTEC-OCT. 78						
XBT NO.	71							
DATE (GMT)	11/ 5							
TIME (GMT)	13 2							
LATITUDE	25 16							
LONGITUDE	83 18							
SURF T (C)	25.8							
29								
28								
27								
26								
25	046							
24	046							
23	046							
22	047							
21	049							
20	051							
19	054							
18								
17								
16								
15								
14								
13								
12								
11								
10								
9								
8								
7								
6								

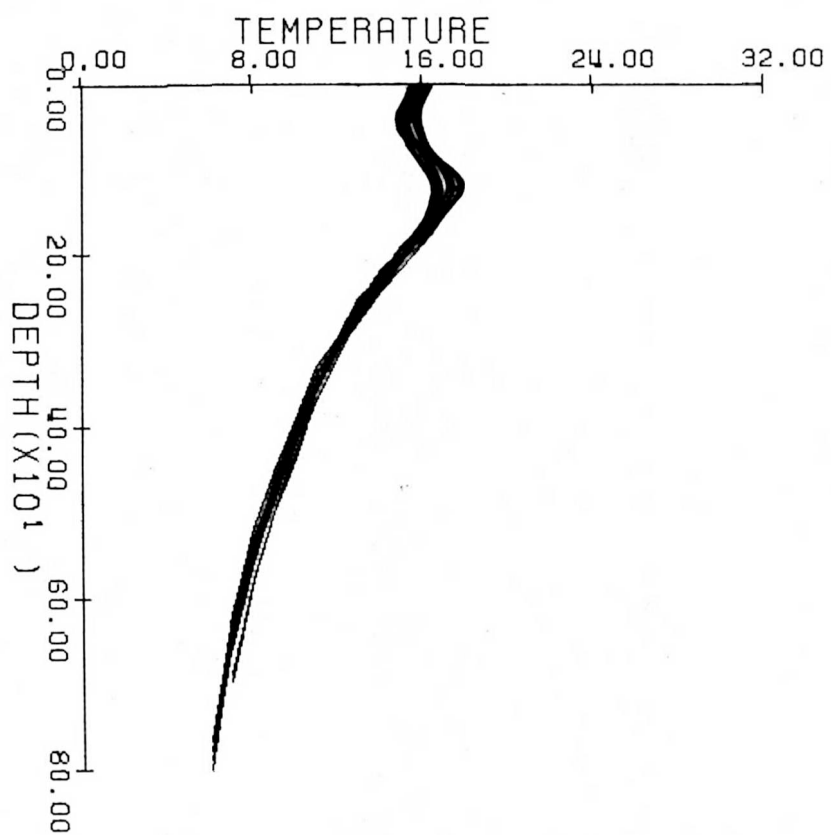
Appendix 4

Composite plots of XBT traces.

XBT OVERLAYS

MOBILE

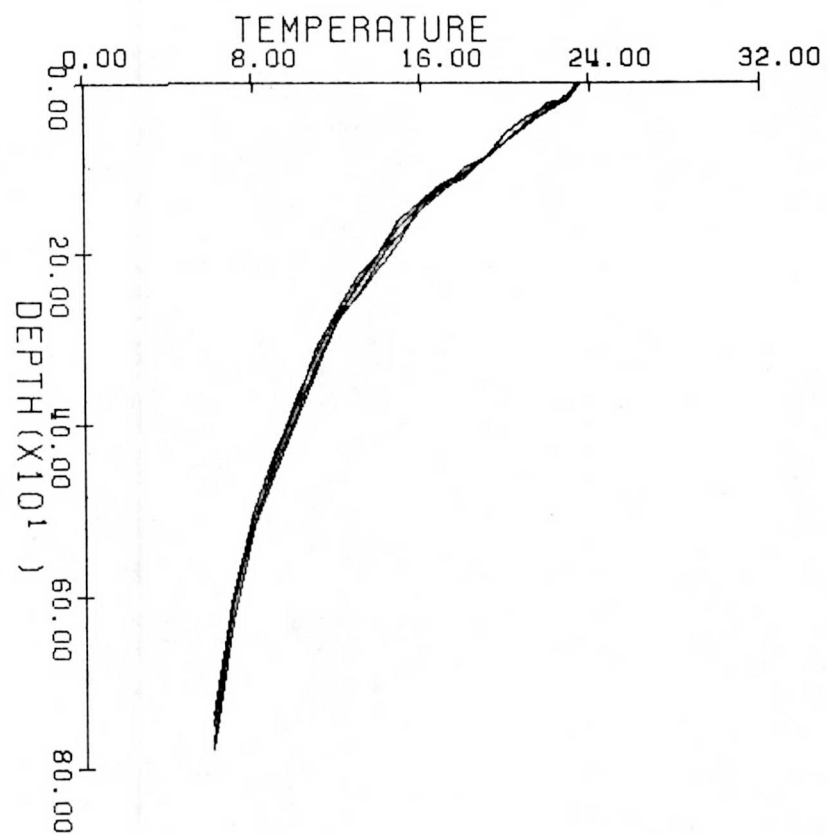
OTEC-FEB. 78



XBT OVERLAYS

TAMPA

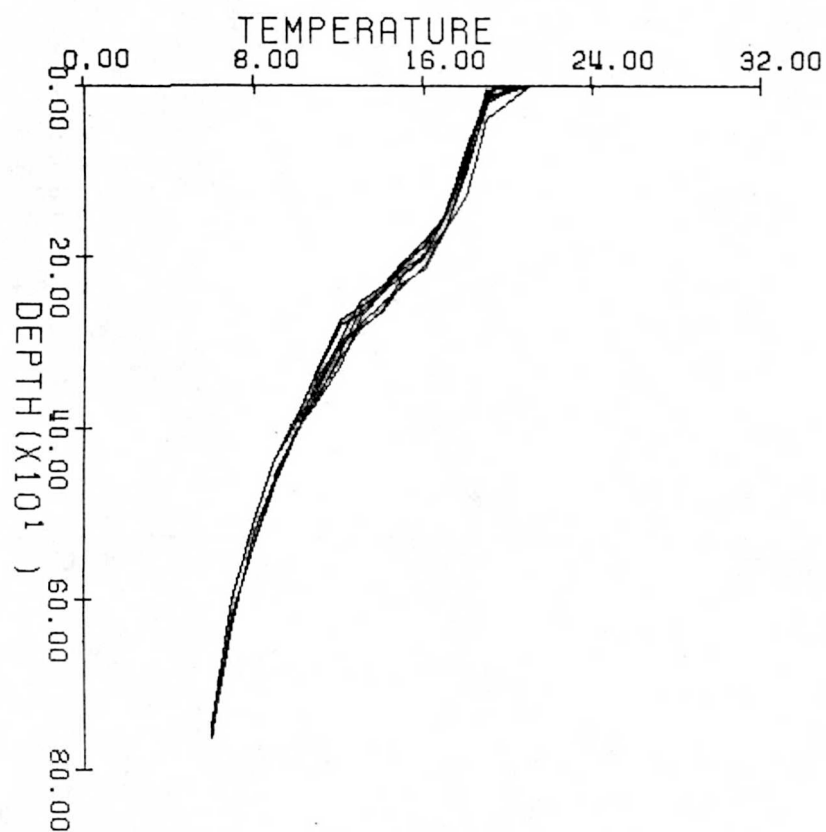
OTEC-MAR. 78



XBT OVERLAYS

TAMPA

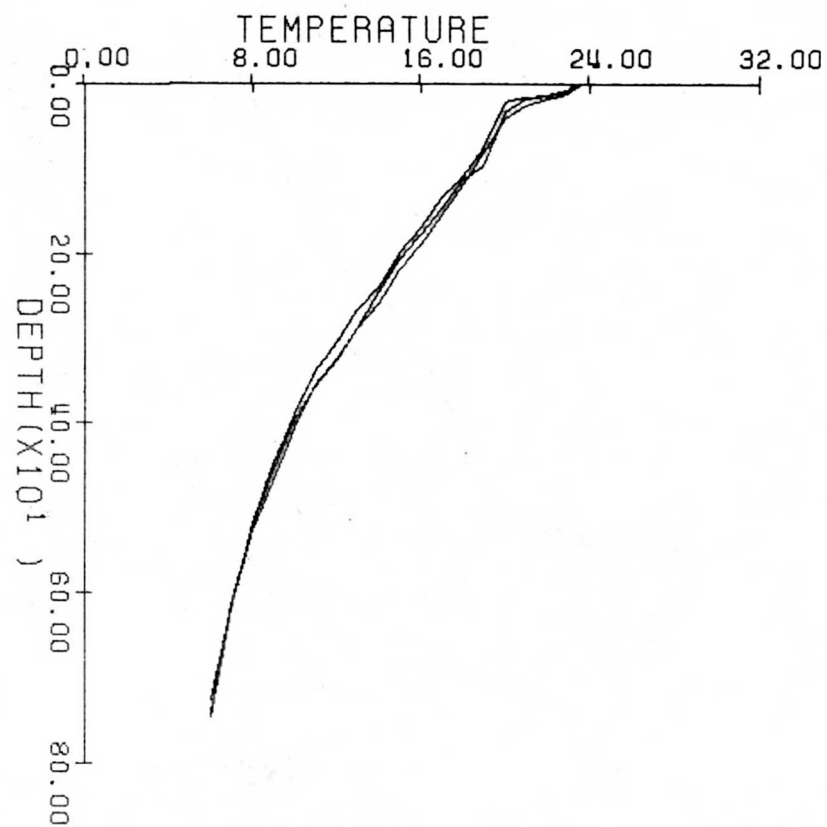
OTEC-MAR. 78



XBT OVERLAYS

TAMPA

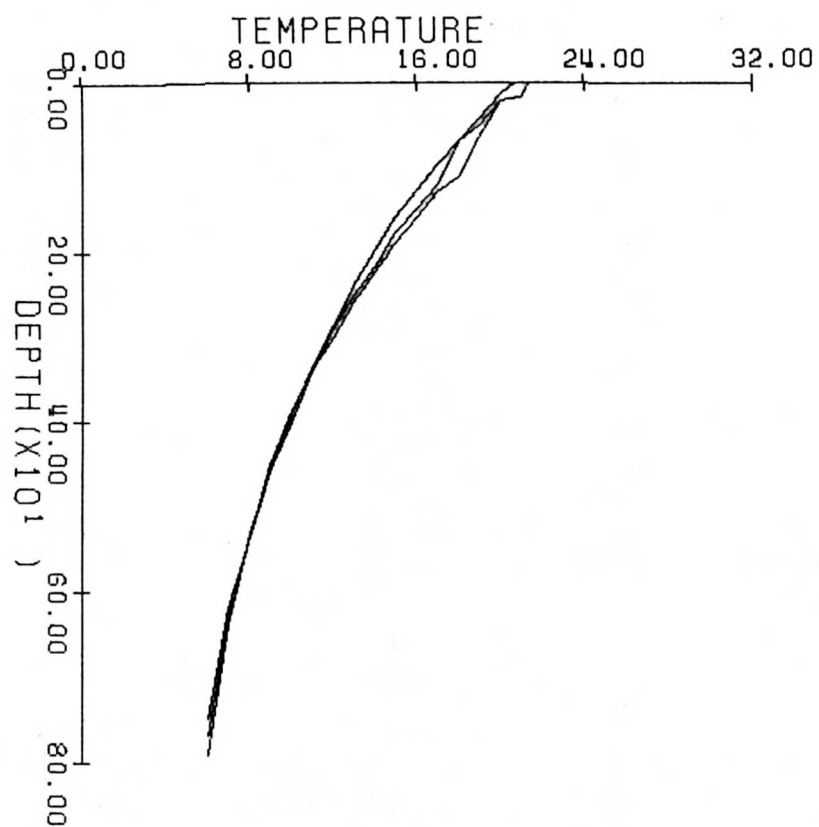
OTEC-APRIL 78



XBT OVERLAYS

TAMPA

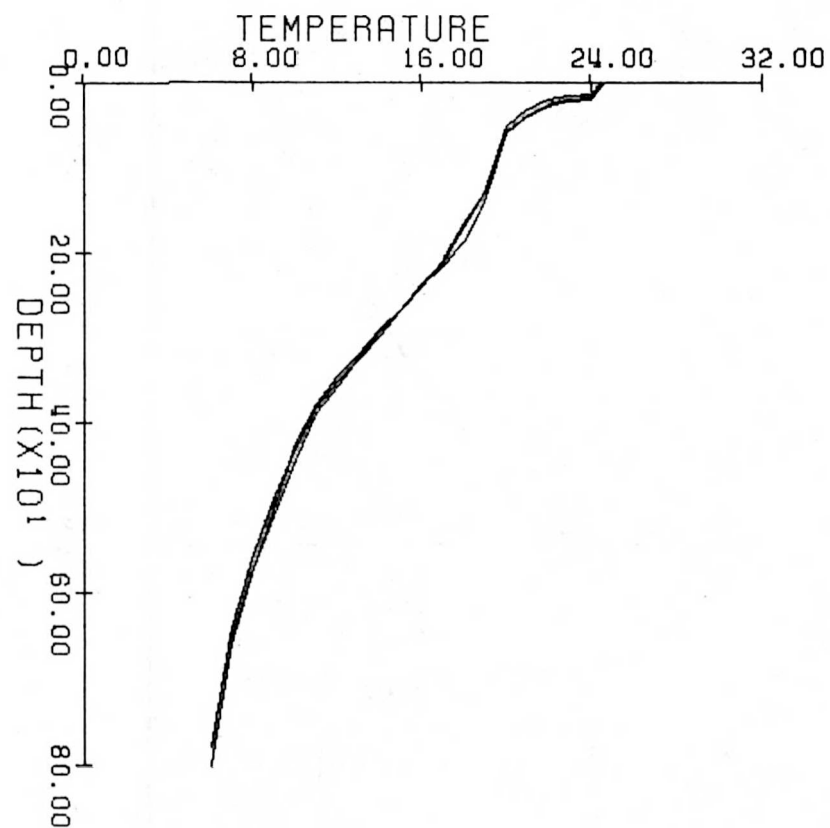
OTEC-APRIL 78



XBT OVERLAYS

TAMPA

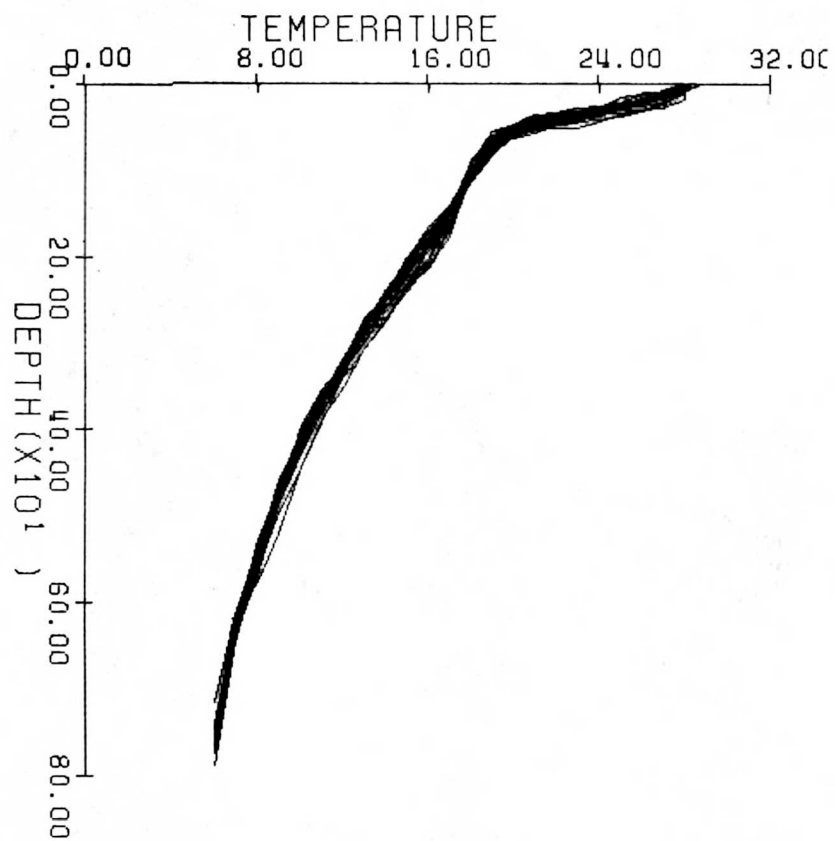
OTEC-APRIL 78



XBT OVERLAYS

TAMPA

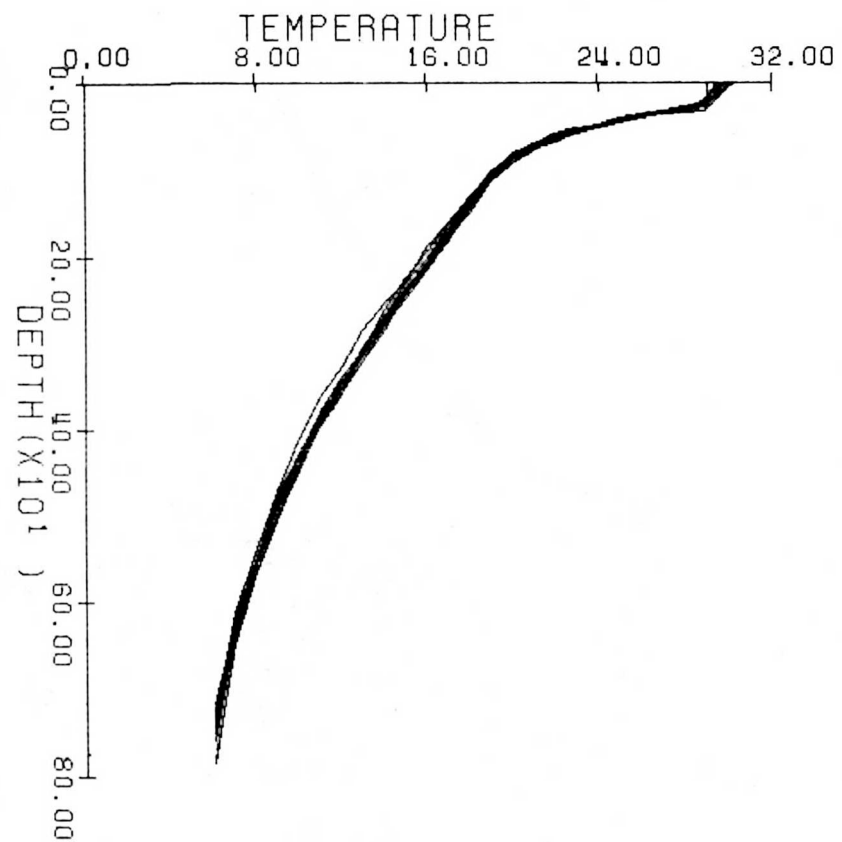
OTEC-JUNE 78



XBT OVERLAYS

TAMPA

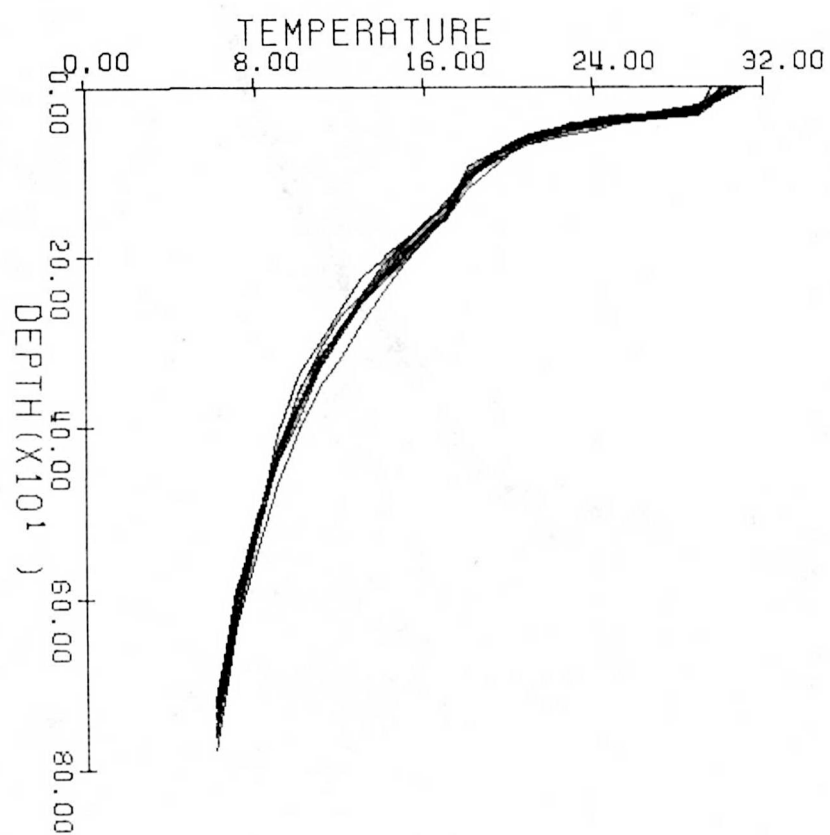
OTEC-AUG. 78



XBT OVERLAYS

MOBILE

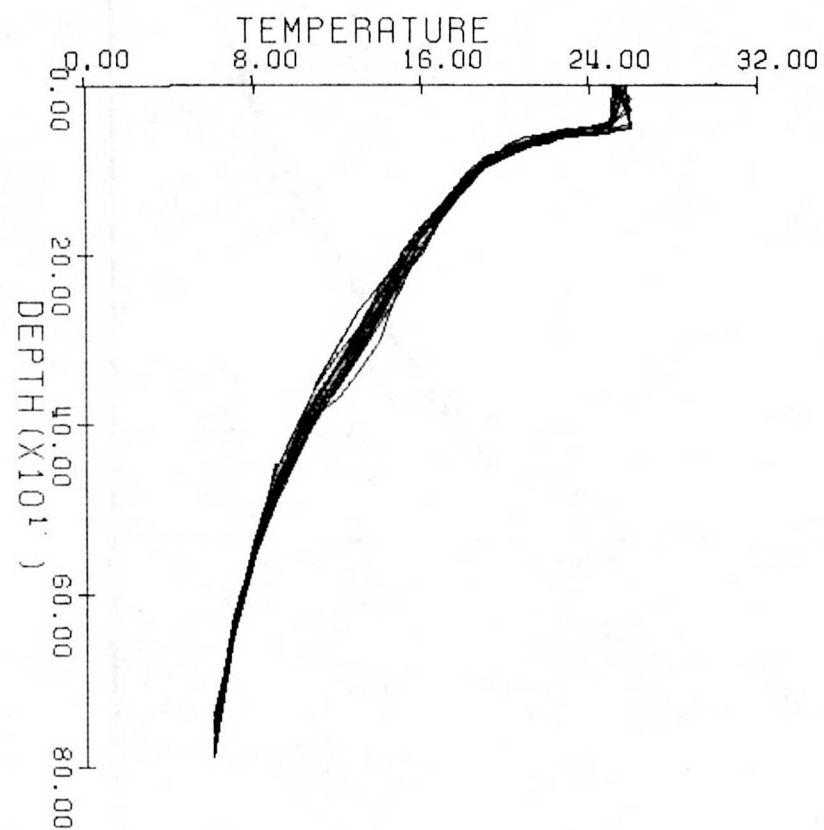
OTEC-AUG. 78



XBT OVERLAYS

MOBILE

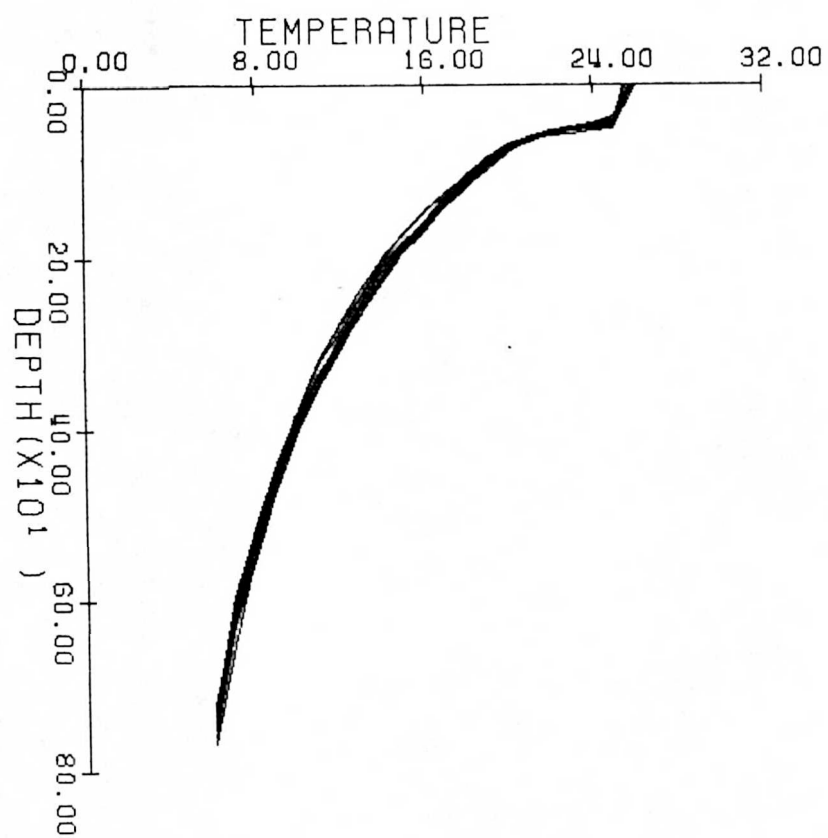
OTEC-OCT. 78



XBT OVERLAYS

TAMPA

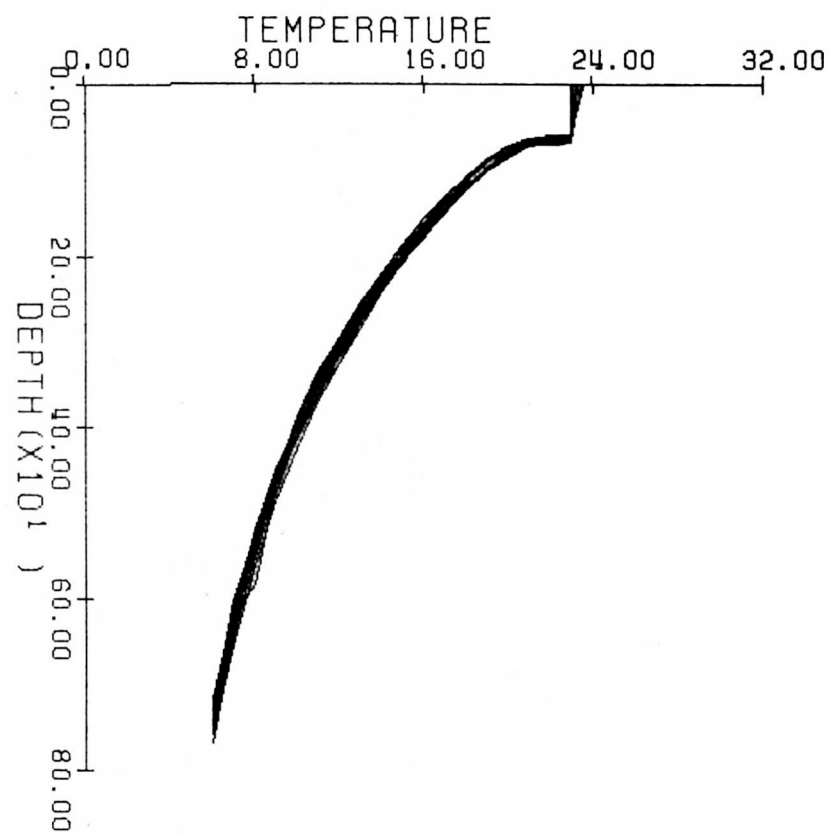
ØTEC-OCT. 78



XBT OVERLAYS

TAMPA

ØTEC-DEC. 78



Appendix 5

Temperature ($^{\circ}\text{C}$) and salinity ($^{\circ}/\text{‰}$) obtained by bottle for use as calibration data for the STD's. Those temperatures marked XBT were taken from XBT traces at the corresponding depth, in order to verify the salinity values by T-S plots. Depths marked as wire out, were not determined thermometrically but from meter wheel readings. Bottles were tripped at all depths indicated for chemical as well as salinity samples. Chemistry data are to be given in another report.

SHIP R/V VIRGINIA KEY

Station 1 (29°00'N, 88°00'W)

Date 28 February, 1978, 1520Z

<u>Depth</u>	<u>T</u>	<u>S</u>
75		
100	17.51	35.004
150	16.94	35.288
200	15.6*	35.952
250	13.48	35.722
300	12.35	35.247
350	11.6*	35.362
400	10.24	35.218
500	8.48	35.026

Station 2 (28°59'N, 87°58'W)

Date 28 February, 1978, 2320Z

<u>Depth</u>	<u>T</u>	<u>S</u>
25		
25		
25		
25		
1000	5.14	
1000	5.16	

Station 3 (28°58'N, 87°59'W)

Date 1 March, 1978, 0100Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0		
25		
25		
50		
75		
100	16.68	
125		

Station 4 (29°00'N, 88°00'W)

Date 1 March, 1978, 0230Z

<u>Depth</u>	<u>T</u>	<u>S</u>
25	16.3*	35.775
50	17.1*	35.383
75	16.9*	35.970
150	16.3*	36.225
200		
250	13.33	35.670
300	8.88	

Station 5 (29°00'N, 88°00'W)

Date 2 March, 1978, 0815Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	16.8*	33.735
47	17.0*	35.511
95	17.7*	36.191
190	15.6*	35.971
286	11.98	35.489
477	10.08	35.028
715	6.25	
965	5.18	

*XBT Temperature

Station 6 (29°08'N, 87°38'W)

Date 15 June, 1978, 1130Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	27.70	32.962
25	25.0*	35.844
50	20.8*	36.088
75	18.4*	36.272
100	17.7*	36.267
125	17.3*	36.270
150	17.06	36.283
200	15.59	36.049
250	14.03	35.820
300	12.65	35.599
400		
500	8.66	35.077

SHIP R/V VIRGINIA KEYStation 1 (27°39'N, 85°32'W)Date 12 June, 1978, 1000Z

Depth	T	S
0	27.90	36.025
22	25.0*	36.022
25	24.6*	35.965
28	24.0*	35.964
44	21.3*	36.858
98	18.2*	36.362
139	17.3*	36.317
186	15.97	36.138
283	13.03	35.656
380	10.52	35.263
576	7.62	34.921
967		
972	4.78	34.929

Station 2 (27°38'N, 85°34'N)Date 12 June, 1978, 1732Z

Depth	T	S
0	28.00	35.676
25		
50	20.4*	36.445
75	19.0*	36.462
100	18.2*	36.292
125	17.4*	36.290
150	16.78	36.251
198	16.83	35.996
247	13.89	35.779
297	12.60	35.586
395		
490	8.69	35.030

Station 3 (27°37'N, 85°35'W)Date 13 June, 1978, 0310Z

Depth	T	S
0	28.0	35.620
25	24.5*	35.931
50	19.8*	36.361
75	18.5*	36.318
100	17.8*	36.365
125	17.6	36.353
150	16.7	36.226
200	15.4*	36.007
250	13.8*	35.772
300	12.5*	35.570
400	10.2*	35.235
500	8.7*	35.031

Station 4 (29°10'N, 87°38'W)Date 15 June, 1978, 0200Z

Depth	T	S
0	28.3*	33.148
22		
25	24.9*	35.842
28	22.5*	35.826
50	19.6*	36.216
100	17.9*	36.309
150	16.8*	36.216
200	15.9*	36.144
300	12.7*	35.608
400	10.7*	35.256
600	7.3*	34.903
995		34.929
1000		34.936

* XBT Temperature

SHIP R/V VIRGINIA KEYStation 1 (27°38'N, 85°34'W)Date 19 August, 1978, 0800Z

Depth	T	S
0	29.6*	36.127
1000		

Station 2 (27°38'N, 85°34'W)Date 19 August, 1978, 1430Z

Depth	T	S
0	29.60	
50	32.00	36.326
75	19.80	36.388
100	19.5*	36.466
125	18.25	36.428
150	17.68	36.344
175	17.07	36.295
200	16.20	36.170
225	15.7*	36.040
250	14.65	35.920
275	14.0*	35.800
300	13.4*	35.700

Station 3 (27°38'N, 85°34'W)Date 19 August, 1978, 2217Z

Depth	T	S
0	30.57	36.104
1000	4.99	

Station 4 (27°38'N, 85°34'W)Date 20 August, 1978, 0150Z

Depth	T	S
0	30.77	36.159
1000		

Station 5 (27°36'N, 85°34'W)Date 20 August, 1978 0540Z

Depth	T	S
0	29.9*	36.161
1000		34.917

Station 6 (27°36'N, 85°34'W)Date 20 August, 1978, 0850Z

Depth	T	S
0	29.78	36.226
1000		

*XBT Temperature

SHIP R/V VIRGINIA KEY

Station 7 (27°40'N, 85°32'W)

Date 20 August, 1978, 1525Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	29.8*	36.291
25	27.24	36.402
50	21.02	36.475
75	20.5*	36.475
100	19.05	36.404
150	17.54	36.323
200	16.06	36.171
300	13.33	35.703
400	10.59	35.307
600	7.47	34.906
800	5.53	34.895
1000	5.02	

Station 9 (29°10'N, 87°34'W)

Date 22 August, 1978, 1032Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	30.15	
918	5.08	

Station 8 (29°13'N, 87°38'W)

Date 22 August, 1978 0230Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	30.2*	32.321
23	29.28	36.389
47	22.45	36.467
71	19.87	36.473
85	18.4*	36.320
144	16.69	36.238
192	14.51	35.937
292	11.59	35.436
390	9.57	35.141
590	7.22	34.897
790	5.71	34.886
990	5.09	

Station 10 (29°12'N, 87°35'W)

Date 22 August, 1978, 1438Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	30.31	34.282
935	5.05	34.919

Station 11 (29°10'N, 87°34'W)

Date 22 August, 1978, 2117Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	30.71	34.637
995	5.06	

Station 12 (29°10'N, 87°37'W)

Date 23 August, 1978, 0130Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	30.76	34.894
1000	5.06	34.918

*XBT Temperature

SHIP R/V VIRGINIA KEY

Station 13 (29°10'N, 87°36'W)

Date 23 August, 1978, 0538Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	30.21	35.343
1000	5.08	34.918

Station 14 (29°10'N, 87°35'W)

Date 23 August, 1978, 0917Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	30.17	34.718
998	5.05	34.919

Station _____

Date _____

<u>Depth</u>	<u>T</u>	<u>S</u>

Station _____

Date _____

<u>Depth</u>	<u>T</u>	<u>S</u>

Station _____

Date _____

<u>Depth</u>	<u>T</u>	<u>S</u>

Station _____

Date _____

<u>Depth</u>	<u>T</u>	<u>S</u>

*XBT Temperature

SHIP R/V VIRGINIA KEY

Station 15 (29°11'N, 87°38'W)

Date 23 August 1978, 1328Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	30.24	33.50
50	22.71	36.403
75	20.1 *	36.422
100	18.3 *	36.398
125	17.6 *	36.283
144	17.3 *	36.255
166	16.6 *	36.204
188	15.51	36.060
213	14.92	35.964
238	13.31	35.733
263	12.6 *	35.583
288	12.2 *	35.488

Station 1 (27°39'N, 85°33'W)

Date 26 October 1978, 1137Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.66	35.985
800	5.7*	34.876

Station 2 (27°40'N, 85°24'W)

Date 28 October 1978, 1602Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.54	35.508
24	25.37	36.324
48	25.05	36.433
73	19.95	36.534
97	18.51	36.457
147	15.97	36.123
196	14.46	35.891
295	11.74	35.455
395	9.87	35.184
494	8.45	34.999
644	6.74	34.868
796	5.69	34.886

Station 3 (27°40'N, 85°35'W)

Date 28 October 1978, 1832Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.64	
50	24.88	36.457
75	20.00	36.508
100	18.19	36.414
125	16.87	36.269
150	16.02	36.130
175	15.09	36.000
200	14.12	35.841
225	13.68	35.760
250	12.8*	35.665
275	12.36	35.552
300	11.4*	35.467

Station 4 (27°40'N, 85°31'W)

Date 29 October 1978, 0112Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.57	35.560
800	5.86	34.882

*' XBT Temperature

SHIP R/V VIRGINIA KEY

Station 5 (27°40'N, 85°31'W)

Date 29 October 1978, 0315Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.7*	35.533
23	25.43	36.251
46	25.13	36.466
70	20.12	36.491
94	18.57	36.454
141	16.37	36.186
190	14.49	35.902
287	12.10	35.507
386	10.11	35.207
485	7.8*	35.011
634	6.87	34.896
784	5.86	34.904

Station 6 (29°11'N, 87°38'W)

Date 30 October 1978, 2105Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.62	35.839
800	6.36	34.872

Station 7 (29°11'N, 87°38'W)

Date October 1978, 0908Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.73	35.977
800	6.20	34.892

Station 8 (29°11'N, 87°38'W)

Date 31 October 1978, 0355Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.63	35.904
23	25.67	35.907
45	25.53	36.110
69	20.64	36.416
92	18.93	36.405
138	17.27	36.319
186	16.06	36.159
282	13.54	35.741
379	11.28	35.385
477	9.31	35.100
625	7.26	34.898
773	6.04	34.881

Station 9 (29°11'N, 87°38'W)

Date 31 October 1978, 0908Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.63	35.851
796	6.35	34.871

*XBT Temperature

SHIP R/V VIRGINIA KEYStation 10 (29°10'N, 87°37'W)Date 31 October 1978, 1403Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.70	35.966
791	6.39	34.875

Station 11 (29°10'N, 87°40'W)Date 1 November 1978, 0360Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.34	35.589
800	6.08	34.911

Station 12 (29°11'N, 87°38'W)Date 1 November 1978, 0642Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.09	35.314
795	5.91	34.884

Station 13 (29°11'N, 87°38'W)Date 1 November 1978, 0902Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.05	35.312
800	6.03	34.879

SHIP R/V VIRGINIA KEY

Station 14

Date 2 November 1978, 2100Z

29° 08'N 87° 36'W

<u>Depth</u>	<u>T</u>	<u>S</u>
0	25.28	35.509
25	25.75	36.086
50	24.89	36.118
75	20.35	36.424
100	18.27	36.364
125	17.39	36.304
150	16.47	36.222
175	15.86	36.122
200	15.18	36.008
225	14.33	35.880
250	13.69	35.768
300		35.614

Station 3- 2315Z; 4= 0030Z

Date 18 December 1978

27° 29'N 85° 29'W

<u>Depth</u>	<u>T</u>	<u>S</u>
2	23.1*	36.353
25	23.03	36.369
50	23.01	36.344
75	20.4*	36.474
100	18.67	36.422
125	17.62	36.370
151	16.57	36.245
184	15.70	36.099
217	15.15	36.011
225	14.3*	35.891
253	13.39	35.724
312	12.10	35.551

Station 1-1552Z ; 2-1729Z

Date 18 December 1978,

27° 40'N 85° 32' W

<u>Depth</u>	<u>T</u>	<u>S</u>
2	23.3*	36.380
29	23.14	36.380
54	23.14	36.379
81	20.2*	36.450
103	18.62	36.412
156	16.60	36.211
208	15.02	35.986
304	12.02	35.499
423	9.93	35.216
608	7.24	34.903
797	5.82	34.913
1025	5.19	34.953

Station 13

Date 19 December 1978, 0651Z

27° 40'N 85° 31'W

<u>Depth</u>	<u>T</u>	<u>S</u>
200	15.04	35.988
297	12.13	35.525
413	10.13	35.229
599	7.34	34.909
792	5.68	34.909
1015	5.02	34.937

*XBT Temperature

SHIP R/V RESEARCHER

Station 1 (2°59.6'S, 28°45.8'W)

Date 25 July 1978, 185Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30	26.33	36.053
100	24.65	36.582
249		35.117
354	10.35	34.968
502	7.00	34.624
998	4.26	34.640

Station 2 (3°31.4'S, 28°45.2'W)

Date 26 July 1978, 0208Z

<u>Depth</u>	<u>T</u>	<u>S</u>
0		
493	6.77	34.616

Station

Date

<u>Depth</u>	<u>T</u>	<u>S</u>
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Station

Date

<u>Depth</u>	<u>T</u>	<u>S</u>
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SHIP R/V RESEARCHERStation 3 (4°00.3'S, 28°47.0'W) Station 5 (4°55.8'S, 28°46.4'W)Date 26 July, 1978 0726ZDate 26 July 1978, 1805Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		35.900
100*		36.161
250*		34.958
350*		34.782
500	6.59	34.589
998	4.21	34.642

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		35.881
100*		35.868
250*		
350*		
500*		34.618
1020*		34.659

Station 6 (5°30.7'S, 28°46.1'W) Station 7 (6°00.5'S, 28°45.9'W)Date 26 July 1978, 2325ZDate 27 July 1978, 0329Z

<u>Depth</u>	<u>T</u>	<u>S</u>
118	25.16	36.316
307	9.40	34.850
519	6.99	34.624

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		
100*		
256	10.13	34.923
356	8.78	34.790
496	6.99	34.607
1007	4.07	34.590

Station 8 (5°59.7'S, 28°01.4'W)Station 10 (5°01.5'S, 28°03.2'W)Date 27 July 1978, 0943ZDate 27 July 1978, 2106Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		36.019
100*		36.020
250*		34.985
356	8.92	34.805
491	7.25	34.639
1023	4.08	

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		36.066
100*		36.089
250*		34.895
350*		34.779
514	6.73	34.597
977	4.16	34.655

*Wire Out

SHIP R/V RESEARCHER

Station 11 (4°00.8'S, 28°02.7'W)

Date 28 July 1978, 0354Z

<u>Depth</u>	<u>T</u>	<u>S</u>
27	26.08	35.923
102	23.31	36.183
250	10.28	34.934
357	8.76	34.797
498	6.93	34.616
998	4.26	34.652

Station 12 (3°00.0'S, 28°04.5'W)

Date 28 July 1978, 1232Z

<u>Depth</u>	<u>T</u>	<u>S</u>
27	26.05	35.984
103	16.84	
252	11.55	35.096
355	10.02	34.928
496	7.08	34.634
1014	4.38	34.690

Station 13 (2°59.4'S, 27°00.4'W)

Date 28 July 1978, 2156Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30	25.94	
94	18.62	
242	11.53	
400		
600	5.63	
1019	4.23	

Station 14 (4°02.1'S, 26°59.1'W)

Date 29 July 1978, 0837Z

<u>Depth</u>	<u>T</u>	<u>S</u>
27	26.15	35.966
101	20.07	36.186
242	11.20	35.058
355	9.45	34.868
497	6.87	34.612
1009	4.32	34.674

Station 15 (4°58.1'S, 27°00.1'W)

Date 29 July 1978, 1832Z

<u>Depth</u>	<u>T</u>	<u>S</u>
25	26.30	35.970
98	23.21	36.264
248	9.72	34.887
344	8.49	34.764
494	6.65	34.597
1020*		34.696

Station 16 (6°00.5'S, 26°58.4'W)

Date 30 July 1978, 0514Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		36.134
100*		36.797
250*		34.943
349	8.79	34.797
500*		34.634
999	4.02	34.611

*Wire Out

SHIP R/V RESEARCHER

Station 17 (5°59.2'S, 26°00.7'W)

Date 30 July 1978, 1403Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		36.010
100*		36.661
250*		34.910
350*		34.756
500*		34.613
1020*		34.612

Station 18 (4°58.8'S, 26°02.8'W)

Date 30 July 1978, 2343Z

<u>Depth</u>	<u>T</u>	<u>S</u>
32	25.58	36.132
100	22.24	
257	9.72	34.883
351	8.36	34.753
500	6.58	34.583
1019	4.19	34.658

Station 19 (3°58.9'S, 25°58.2'W)

Date 31 July 1978, 0620Z

<u>Depth</u>	<u>T</u>	<u>S</u>
20	25.67	36.120
87	22.97	36.213
205	11.39	35.080
346	9.14	34.818
492	6.97	34.613
1014	4.23	34.625

Station 20 (3°00.4'S, 26°04.5'W)

Date 31 July 1978, 1822Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		35.095
250*		36.166
500*		34.639
1010	4.26	
1007	4.26	

Station 21 (1°59.7'S, 26°00.5'W)

Date 1 August 1978, 0051Z

<u>Depth</u>	<u>T</u>	<u>S</u>
100*		35.547
249	11.22	35.070
354	10.27	34.971
466	9.01	34.821
1008	4.24	34.637

Station 22 (0°59.0'S, 25°59.7'W)

Date 1 August 1978, 0926Z

<u>Depth</u>	<u>T</u>	<u>S</u>
1008	4.40	34.658

*Wire Out

SHIP R/V RESEARCHERStation 23 (0°01.8'N, 26°01.7'W)Date 1 August 1978, 1704Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		36.051
100*		36.247
250*		35.125
350*		34.881
493	6.50	34.565
994	4.42	34.740

Station 24 (0°58.5'N, 26°00.5'W)Date 2 August 1978, 0301Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30	24.45	35.520
91	18.44	35.772
247	11.72	35.123
347	9.44	34.873
489	6.99	34.618
1000	4.52	34.672

Station 25 (1°01.0'N, 24°58.7'W)Date 2 August 1978, 1054Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*	25.54	35.692
100*	19.26	35.983
252	11.83	35.138
354	9.42	34.870
498	6.21	34.562
777	4.94	34.505

Station 26 (0°00.8'S, 25°01.0'W)Date 3 August 1978, 0239Z

<u>Depth</u>	<u>T</u>	<u>S</u>
98	17.43	
247	11.94	35.147
351	9.51	34.882
485	6.79	34.620
1000	4.42	
997	4.42	34.600

Station 27 (1°00.5'S, 25°00.3'W)Date 3 August 1978, 1158Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		36.152
100*		35.936
250*		35.147
350*		34.680
495	6.00	34.536
774	4.71	34.567

Station 28 (1°58.3'S, 25°00.0'W)Date 3 August 1978, 2010Z

<u>Depth</u>	<u>T</u>	<u>S</u>
27	25.19	35.914
88	15.23	35.504
245	11.49	35.099
345	9.99	34.932
486	6.04	34.513
1017	4.35	34.617

*Wire Out

SHIP R/V RESEARCHERStation 30 (3°58.3'S, 24°58.7'W)Date 4 August 1978, 1617Z

<u>Depth</u>	<u>T</u>	<u>S</u>
246	10.46	34.968
341	8.86	34.789
349	8.82	34.789
488	6.74	34.601
972	4.19	34.556
964	4.19	34.555

Station 32 (6°00.7'S, 24°58.0'W)Date 5 August 1978, 1101Z

<u>Depth</u>	<u>T</u>	<u>S</u>
33	25.48	35.858
107	25.25	36.049
258	10.07	34.921
342	8.92	34.800
972	4.02	34.610

Station 33 (6°59.8'S, 24°59.1'W)Date 5 August 1978, 2007Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		35.987
100*		
250*		34.969
350*		34.767
490	6.88	34.602
992	4.04	

Station 34 (8°00.0'S, 24°59.0'W)Date 6 August 1978, 0457Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		36.235
100*		36.804
250*		35.061
350*		34.739
481	6.62	
1020*		34.618

Station 35 (9°00.4'S, 24°58.5'W)Date 6 August 1978, 1436Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30	26.01	36.389
101	23.42	36.797
245	10.37	34.956
348	8.04	34.695
490	6.75	34.588
964	4.08	34.574

Station 36 (10°00.5'S, 25°00.2'W)Date 6 August 1978, 2340Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		36.408
100*		36.810
250*		35.068
350*		34.558
493	6.51	34.561
1010	3.94	34.559

*Wire Out

SHIP R/V RESEARCHER

Station 39 (10°00.7'S, 26°29.7'W)

Date 8 August 1978, 0037Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		36.741
100*		36.754
250*		35.023
350*		34.750
490	7.01	34.615
1006	3.89	34.561

Station 40 (8°59.2'S, 26°31.2'W)

Date 8 August 1978, 0704Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30	25.92	36.493
105	25.55	
233	11.80	35.136
349	8.03	34.706
497	6.65	34.582
1013	4.00	34.589

Station 41 (7°59.9'S, 26°30.7'W)

Date 8 August 1978, 1320Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		
100*		
250*		
350*		
436	7.04	34.615
1020*		34.598

Station 42 (7°00.0'S, 26°30.4'W)

Date 8 August 1978, 2007Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		
30*		36.061
248		
248	9.70	34.870
1014		
1014	4.02	

Station 44 (5°59.4'S, 27°31.9'W)

Date 9 August 1978, 1802Z

<u>Depth</u>	<u>T</u>	<u>S</u>
26	26.11	
122	25.14	
254	9.96	

Station 45 (6°01.0'S, 28°02.3'W)

Date 9 August 1978, 2143Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30	26.26	36.146
102	24.65	36.490
248	10.25	34.954
349*		34.797
501	7.16	34.641
1013	4.03	34.603

*Wire Out

SHIP R/V RESEARCHER

Station 47 (7°01.8'S, 27°59.9'W)

Date 10 August 1978, 0623Z

<u>Depth</u>	<u>T</u>	<u>S</u>
35	26.33	36.177
134	24.32	36.664
245	10.38	34.969
350*		34.791
498	7.34	34.648
1005	3.89	34.562

Station 48 (7°59.2'S, 28°01.2'W)

Date 10 August 1978, 1518Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*		36.355
100*		36.905
250*		35.014
350*		34.686
500*		34.561
1020*		34.578

Station 49 (9°01.2'S, 28°01.2'W)

Date 11 August 1978, 0013Z

<u>Depth</u>	<u>T</u>	<u>S</u>
27	26.02	36.542
100	25.99	36.546
254	10.77	35.012
350*		34.734
494	6.73	34.593
1013	4.03	34.601

Station 50 (9°58.5'S, 28°00.5'W)

Date 11 August 1978, 0943Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30	25.87	36.543
102	23.86	36.861
247	11.10	35.038
350*		
491	6.64	
1014	3.87	

Station 51 (11°01.0'S, 28°02.1'W)

Date 11 August 1978, 2229Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*	25.45	36.751
101	25.48	
229	13.00	
350*		34.780
486	6.54	34.530
1002	3.93	34.533

Station 53 (11°01.3'S, 29°31.0'W)

Date 12 August 1978, 0748Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*	25.78	36.510
106	25.25	36.983
241	12.69	35.238
350*		34.804
495	6.46	34.546
1016	3.83	34.543

*Wire Out

SHIP R/V RESEARCHERStation 54 (9°59.9'S, 29°30.0'W)Date 12 August 1978, 1528Z

<u>Depth</u>	<u>T</u>	<u>S</u>
33	26.06	36.552
107	25.55	36.733
244	11.96	
338	8.27	
1010	3.89	34.582

Station 55 (9°01.0'S, 29°29.5'W)Date 12 August 1978, 2251Z

<u>Depth</u>	<u>T</u>	<u>S</u>
30*	26.26	36.404
114	24.03	36.929
244	11.19	35.060
350*		34.711
498	6.62	34.538
1012	4.08	

Station 56 (8°02.5'S, 29°30.8'W)Date 13 August 1978, 1028Z

<u>Depth</u>	<u>T</u>	<u>S</u>
31	26.37	36.290
95	26.40	36.316
248	11.26	35.071
350*		34.740
497	6.65	34.580
1007	4.09	34.601

Station Date

<u>Depth</u>	<u>T</u>	<u>S</u>
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Appendix 6

Corrected 9040 STD listings and temperature, salinity and sigma-t profiles. Depth is in m, temperature in °C, salinity in ‰, and Nyquist frequency in sec^{-1} .

STATION 1 OTECVK7823
12-18-1978 1657 GMT
27 40.80N 85 32.10W

Z	TEMP	SAL	SIG-T
0	23.13	36.36	24.95
20	23.13	36.37	24.96
40	23.13	36.37	24.96
60	23.09	36.37	24.97
80	20.30	36.48	25.83
100	19.04	36.44	26.13
120	18.29	36.41	26.29
140	17.41	36.33	26.45
160	16.52	36.19	26.56
180	15.89	36.12	26.65
200	15.40	36.04	26.70
220	14.78	35.93	26.76
240	14.07	35.84	26.84
260	13.53	35.72	26.86
280	12.97	35.64	26.92
300	12.39	35.55	26.96
320	12.01	35.50	26.99
340	11.54	35.41	27.02
360	11.10	35.35	27.04
380	10.71	35.29	27.07
400	10.32	35.24	27.10
450	9.49	35.12	27.15
500	8.76	35.03	27.20
550	8.05	34.95	27.25
600	7.43	34.91	27.31
650	6.89	34.88	27.36
700	6.52	34.88	27.41
750	6.18	34.89	27.46
800	5.85	34.89	27.51
900	5.51	34.90	27.56
1000	5.22	34.92	27.61

STATION 2 OTECVK7823
12-18-1978 1815 GMT
27 41.12N 85 32.72W

Z	TEMP	SAL	SIG-T
0	23.18	36.40	24.96
20	23.18	36.40	24.96
40	23.18	36.40	24.97
60	23.17	36.41	24.97
80	19.95	36.47	25.91
100	18.85	36.45	26.19
120	17.96	36.38	26.36
140	17.16	36.29	26.49

ION 3 OTECVK7823
12-19-1978 0 5 GMT
27 39.12N 85 29.94W

Z	TEMP	SAL	SIG-T
0	23.14	36.36	24.94
20	23.13	36.37	24.96
40	23.06	36.36	24.97
60	23.04	36.37	24.98
80	20.10	36.48	25.88
100	19.03	36.46	26.14
120	18.06	36.38	26.33
140	17.25	36.31	26.47
160	16.57	36.21	26.57
180	15.94	36.12	26.64
200	15.34	36.04	26.71
220	14.83	35.95	26.76
240	14.20	35.85	26.82
260	13.52	35.73	26.87
280	13.07	35.67	26.91
300	12.63	35.59	26.95

STATION 4 OTECVK7823
12-19-1978 112 GMT
27 39.12N 85 29.94W

Z	TEMP	SAL	SIG-T
0	23.07	36.34	24.95
20	23.08	36.37	24.96
40	23.04	36.36	24.97
60	23.03	36.37	24.98
80	19.82	36.47	25.95
100	18.79	36.43	26.18
120	17.97	36.38	26.36

STATION 5 OTECVK7823
12-19-1978 145 GMT
27 39.12N 85 30.69W

Z	TEMP	SAL	SIG-T
0	23.06	36.36	24.97
20	23.07	36.36	24.96
40	23.05	36.36	24.97
60	23.04	36.37	24.98
80	19.94	36.45	25.90
100	18.80	36.40	26.16
120	17.97	36.37	26.35
140	17.30	36.32	26.47
160	16.61	36.23	26.57
180	15.88	36.10	26.64
200	15.20	36.00	26.72
220	14.61	35.90	26.77
240	13.94	35.80	26.83
260	13.41	35.71	26.88
280	12.95	35.64	26.92
300	12.45	35.56	26.95
320	11.88	35.46	26.99
340	11.44	35.40	27.02
360	10.94	35.32	27.05
380	10.54	35.27	27.09
400	10.22	35.22	27.10
450	9.51	35.12	27.15
500	8.79	35.03	27.20
550	7.99	34.95	27.26
600	7.49	34.91	27.30
650	6.91	34.88	27.36
700	6.56	34.88	27.40
750	6.08	34.89	27.47
800	5.78	34.89	27.52
900	5.35	34.91	27.59
1000	5.19	34.92	27.61

STATION 6 OTECVK7823
12-19-1978 210 GMT
27 39.35N 85 30.85W

Z	TEMP	SAL	SIG-T
0	23.03	36.36	24.98
20	23.05	36.36	24.97
40	23.03	36.37	24.98
60	22.98	36.39	25.01
80	20.09	36.52	25.91
100	18.86	36.46	26.19
120	17.98	36.39	26.36
140	17.21	36.34	26.51
160	16.51	36.24	26.60
180	15.72	36.13	26.70
200	15.06	36.00	26.75
220	14.42	35.91	26.82
240	13.77	35.81	26.88
260	13.25	35.71	26.91
280	12.74	35.62	26.94
300	12.26	35.56	26.99
320	11.79	35.48	27.02
340	11.32	35.40	27.05
360	10.87	35.33	27.07
380	10.49	35.28	27.11
400	10.17	35.23	27.12
450	9.46	35.12	27.16
500	8.76	35.06	27.22
550	7.99	34.96	27.27
600	7.48	34.92	27.31
650	6.93	34.89	27.36
700	6.54	34.88	27.41
750	6.09	34.89	27.47
800	5.78	34.90	27.52
900	5.35	34.91	27.59
1000	5.19	34.92	27.61

STATION 7 OTECVK7823
12-19-1978 240 GMT
27 39.43N 85 30.96W

Z	TEMP	SAL	SIG-T
0	23.01	36.36	24.98
20	23.05	36.36	24.97
40	23.06	36.36	24.97
60	23.03	36.37	24.98
80	20.17	36.46	25.85
100	19.04	36.42	26.11
120	18.19	36.37	26.29
140	17.40	36.33	26.46
160	16.70	36.22	26.54
180	15.98	36.12	26.63
200	15.27	36.01	26.71
220	14.61	35.90	26.77
240	13.92	35.79	26.84
260	13.28	35.69	26.89
280	12.85	35.62	26.92
300	12.40	35.55	26.96
320	11.89	35.47	26.99
340	11.41	35.39	27.02
360	10.96	35.33	27.06
380	10.55	35.27	27.08
400	10.25	35.23	27.11
450	9.58	35.14	27.15
500	8.89	35.05	27.19
550	8.08	34.96	27.25
600	7.51	34.92	27.30
650	6.98	34.88	27.35
700	6.55	34.88	27.40
750	6.07	34.88	27.47
800	5.77	34.89	27.52
900	5.39	34.91	27.58
1000	5.19	34.92	27.61

STATION 8 OTECVK7823
12-19-1978 3 4 GMT
27 39.54N 85 31.12W

Z	TEMP	SAL	SIG-T
0	23.01	36.36	24.98
20	23.03	36.37	24.98
40	23.03	36.37	24.98
60	23.00	36.38	25.00
80	20.14	36.50	25.89
100	18.98	36.46	26.16
120	18.13	36.42	26.34
140	17.31	36.35	26.49
160	16.65	36.25	26.58
180	15.95	36.15	26.66
200	15.17	36.03	26.75
220	14.40	35.91	26.82
240	13.76	35.80	26.88
260	13.22	35.70	26.91
280	12.77	35.63	26.95
300	12.20	35.53	26.98
320	11.75	35.46	27.01
340	11.27	35.40	27.05
360	10.85	35.32	27.07
380	10.46	35.26	27.10
400	10.20	35.23	27.12
450	9.52	35.13	27.16
500	8.76	35.03	27.20
550	8.04	34.96	27.26
600	7.45	34.92	27.31
650	6.88	34.88	27.36
700	6.51	34.88	27.41
750	6.04	34.89	27.48
800	5.75	34.89	27.52
900	5.38	34.91	27.58
1000	5.17	34.92	27.62

STATION 10 OTECVK7823
12-19-1978 4 2 GMT
27 39.80N 85 31.42W

Z	TEMP	SAL	SIg-T
0	23.03	36.36	24.97
20	23.04	36.37	24.98
40	23.04	36.37	24.98
60	23.00	36.37	24.99
80	20.18	36.51	25.88
100	19.00	36.47	26.16
120	18.20	36.46	26.36
140	17.34	36.33	26.47
160	16.59	36.24	26.58
180	15.94	36.16	26.67
200	15.19	36.02	26.73
220	14.47	35.91	26.81
240	13.85	35.81	26.86
260	13.37	35.73	26.90
280	12.79	35.63	26.94
300	12.26	35.54	26.97
320	11.83	35.48	27.01
340	11.27	35.38	27.04
360	10.91	35.33	27.07
380	10.58	35.28	27.09
400	10.27	35.24	27.11
450	9.50	35.13	27.16
500	8.75	35.04	27.20
550	8.06	34.97	27.26
600	7.44	34.92	27.31
650	6.87	34.88	27.36
700	6.45	34.88	27.42
750	6.00	34.89	27.48
800	5.72	34.89	27.53
900	5.38	34.91	27.58
1000	5.14	34.92	27.62

STATION 11 OTECVK7823
12-19-1978 431 GMT
27 39.92N 85 31.51W

Z	TEMP	SAL	SIg-T
0	23.04	36.36	24.98
20	23.05	36.37	24.98
40	23.06	36.37	24.98
60	23.04	36.38	24.99
80	19.96	36.47	25.91
100	18.82	36.43	26.18
120	18.10	36.41	26.34
140	17.35	36.33	26.47
160	16.53	36.22	26.58
180	15.93	36.13	26.65
200	15.26	36.01	26.71
220	14.59	35.91	26.78
240	13.94	35.81	26.84
260	13.49	35.73	26.88
280	12.95	35.65	26.92
300	12.41	35.55	26.96
320	11.94	35.47	26.99
340	11.42	35.39	27.02
360	10.96	35.33	27.06
380	10.62	35.28	27.08
400	10.33	35.24	27.10
450	9.56	35.13	27.15
500	8.89	35.05	27.19
550	8.09	34.96	27.25
600	7.47	34.91	27.30
650	6.89	34.88	27.36
700	6.46	34.88	27.42
750	6.00	34.89	27.48
800	5.70	34.90	27.53
900	5.38	34.91	27.58
1000	5.12	34.93	27.62

STATION 12 OTECVK7823
12-19-1978 5 1 GMT
27 40.12N 85 31.64W

Z	TEMP	SAL	SIg-T
0	23.03	36.38	24.99
20	23.04	36.37	24.98
40	23.04	36.37	24.98
60	23.01	36.38	25.00
80	20.36	36.48	25.81
100	19.06	36.47	26.15
120	18.28	36.45	26.33
140	17.31	36.36	26.50
160	16.48	36.22	26.59
180	15.83	36.13	26.67
200	15.18	36.03	26.75
220	14.57	35.93	26.80
240	13.93	35.82	26.86
260	13.39	35.75	26.92
280	12.87	35.66	26.95
300	12.31	35.56	26.98
320	11.86	35.49	27.01
340	11.36	35.42	27.06
360	10.96	35.34	27.07
380	10.54	35.28	27.09
400	10.29	35.24	27.11
450	9.50	35.13	27.16
500	8.82	35.05	27.21
550	7.96	34.96	27.27
600	7.40	34.91	27.31
650	6.86	34.88	27.36
700	6.42	34.88	27.43
750	6.03	34.89	27.49
800	5.70	34.90	27.53
900	5.39	34.91	27.58
1000	5.11	34.93	27.62

STATION 13 OTECVK7823
12-19-1978 652 GMT
27 40.40N 85 31.94W

Z	TEMP	SAL	SIg-T
0	23.08	36.39	24.99
20	23.08	36.40	24.99
40	23.07	36.40	24.99
60	23.04	36.39	24.99
80	19.95	36.45	25.90
100	18.87	36.45	26.18
120	18.01	36.40	26.36
140	17.16	36.31	26.50
160	16.42	36.21	26.60
180	15.79	36.12	26.67
200	15.21	36.03	26.73
220	14.53	35.91	26.79
240	14.02	35.83	26.84
260	13.43	35.74	26.90
280	12.85	35.65	26.94
300	12.40	35.57	26.97
320	11.90	35.49	27.00
340	11.38	35.40	27.03
360	10.97	35.34	27.06
380	10.61	35.29	27.09
400	10.33	35.25	27.11
450	9.48	35.13	27.16
500	8.79	35.04	27.20
550	8.07	34.97	27.26
600	7.41	34.90	27.30
650	6.87	34.88	27.36
700	6.45	34.88	27.42
750	6.01	34.88	27.48
800	5.78	34.89	27.52
900	5.34	34.91	27.59
1000	5.12	34.92	27.62

STATION 1 RP10 RE 78
7-24-1978 19 0 GMT
2 59.60S 28 45.80W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.33	36.04	23.74	.000
20	26.32	36.02	23.72	.084
40	26.25	36.03	23.75	.167
60	25.74	36.05	23.93	.250
80	25.09	36.40	24.39	.327
100	17.88	35.78	25.92	.384
120	14.50	35.41	26.42	.422
140	13.55	35.32	26.55	.453
160	13.01	35.26	26.61	.483
180	12.54	35.20	26.66	.512
200	12.06	35.14	26.71	.541
220	12.06	35.15	26.71	.569
240	11.83	35.13	26.74	.596
260	11.65	35.11	26.76	.624
280	11.47	35.08	26.77	.651
300	11.27	35.06	26.79	.678
320	10.99	35.02	26.81	.704
340	10.79	35.00	26.83	.731
360	10.39	34.96	26.87	.756
380	9.62	34.87	26.94	.781
400	9.09	34.81	26.98	.805
450	8.33	34.75	27.05	.862
500	7.17	34.64	27.13	.914
550	6.36	34.57	27.19	.964
600	5.65	34.51	27.23	1.011
650	5.06	34.47	27.27	1.057
700	4.76	34.46	27.30	1.100
750	4.45	34.47	27.34	1.142
800	4.34	34.51	27.38	1.182
900	4.23	34.56	27.43	1.258

STATION 2 RP10 RE 78
7-25-1978 2 0 GMT
3 31.40S 28 45.20W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.01	35.90	23.73	.000
20	26.02	35.90	23.72	.084
40	26.02	35.90	23.73	.168
60	25.98	35.91	23.75	.251
80	25.71	36.08	23.96	.334
100	23.73	36.61	24.96	.405
120	17.91	35.82	25.94	.455
140	14.95	35.50	26.39	.493
160	13.73	35.36	26.54	.525
180	12.79	35.22	26.63	.555
200	12.27	35.16	26.68	.584
220	11.76	35.11	26.73	.612
240	11.27	35.05	26.79	.639
260	11.04	35.03	26.81	.665
280	10.88	35.01	26.83	.691
300	10.34	34.95	26.87	.717
320	10.10	34.92	26.89	.742
340	9.43	34.84	26.94	.766
360	9.22	34.83	26.97	.790
380	8.87	34.79	27.00	.813
400	8.52	34.77	27.03	.836
450	7.71	34.69	27.10	.890

STATION 3 RP10 RE 78
7-25-1978 8 0 GMT
4 29.20S 28 48.20W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.97	35.88	23.73	.000
20	25.99	35.89	23.73	.084
40	25.99	35.89	23.73	.167
60	25.96	35.91	23.75	.251
80	25.43	36.01	23.99	.333
100	23.32	36.58	25.05	.403
120	19.93	36.19	25.71	.456
140	16.55	35.68	26.16	.497
160	15.22	35.48	26.31	.534
180	13.73	35.32	26.51	.567
200	12.06	35.09	26.67	.598
220	11.22	35.03	26.78	.625
240	10.55	34.96	26.85	.651
260	10.22	34.93	26.88	.676
280	9.81	34.89	26.92	.701
300	9.59	34.86	26.93	.725
320	9.21	34.82	26.97	.748
340	8.97	34.80	26.99	.771
360	8.74	34.78	27.00	.794
380	8.52	34.76	27.03	.817
400	8.22	34.74	27.05	.839
450	7.36	34.65	27.12	.891
500	6.65	34.60	27.17	.941
550	6.05	34.55	27.21	.989
600	5.41	34.50	27.25	1.035
650	4.86	34.48	27.30	1.079
700	4.61	34.49	27.33	1.121
750	4.38	34.49	27.36	1.161
800	4.32	34.51	27.39	1.200
900	4.18	34.55	27.43	1.277

STATION 4 RP10 RE 78
7-25-1978 14 0 GMT
4 56.05S 28 46.80W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.25	35.96	23.70	.000
20	26.24	35.97	23.71	.084
40	26.23	35.97	23.71	.168
60	26.24	35.98	23.71	.252
80	26.26	35.99	23.72	.337
100	24.61	36.21	24.39	.418
120	20.50	36.28	25.62	.476
140	16.68	35.73	26.17	.519
160	13.80	35.34	26.51	.554
180	12.18	35.14	26.68	.583
200	11.39	35.08	26.78	.611
220	10.94	35.02	26.82	.637
240	10.56	34.98	26.86	.663
260	10.28	34.95	26.88	.687
280	9.88	34.90	26.92	.712
300	9.45	34.85	26.95	.736
320	9.21	34.83	26.97	.759
340	8.98	34.81	26.99	.782
360	8.70	34.78	27.02	.805
380	8.37	34.75	27.04	.827
400	8.16	34.73	27.06	.849
450	7.41	34.67	27.12	.901
500	6.63	34.60	27.18	.951

STATION 5
7-25-1978
4 55.805

RP10 RE 78
19 0 GMT
28 46.40W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.07	35.85	23.67	.000
20	26.03	35.85	23.69	.085
40	25.98	35.85	23.70	.169
60	25.99	35.86	23.70	.253
80	25.99	35.86	23.71	.338
100	24.84	36.17	24.29	.419
120	21.47	36.34	25.40	.480
140	18.04	35.87	25.95	.527
160	15.25	35.53	26.35	.565
180	13.64	35.34	26.54	.598
200	12.50	35.19	26.66	.628
220	11.41	35.08	26.78	.655
240	10.58	34.98	26.86	.681
260	10.23	34.94	26.88	.705
280	9.79	34.89	26.92	.730
300	9.48	34.85	26.94	.754
320	9.18	34.83	26.97	.777
340	8.88	34.79	26.99	.800
360	8.58	34.77	27.02	.822
380	8.45	34.75	27.03	.845
400	8.17	34.73	27.06	.867
450	7.49	34.67	27.11	.920
500	6.89	34.62	27.16	.971
550	6.29	34.57	27.20	1.019
600	5.74	34.52	27.23	1.066
650	5.31	34.50	27.27	1.112
700	4.89	34.47	27.29	1.156
750	4.26	34.43	27.32	1.198
800	4.04	34.45	27.37	1.239
900	4.11	34.57	27.45	1.314

STATION 6
7-26-1978
5 30.705

RP10 RE 78
0 0 GMT
28 46.10W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.09	35.89	23.70	.000
20	26.10	35.90	23.70	.084
40	26.10	35.90	23.70	.169
60	26.11	35.90	23.70	.253
80	26.19	36.07	23.80	.338
100	23.93	36.53	24.84	.411
120	19.92	36.18	25.70	.466
140	15.98	35.60	26.23	.507
160	13.57	35.32	26.54	.541
180	11.98	35.12	26.70	.571
200	11.25	35.04	26.78	.598
220	11.03	35.02	26.81	.624
240	10.42	34.95	26.86	.650
260	10.08	34.92	26.89	.674
280	9.75	34.88	26.92	.699
300	9.50	34.85	26.94	.723
320	9.24	34.83	26.96	.746
340	8.99	34.80	26.98	.769
360	8.73	34.77	27.00	.792
380	8.44	34.74	27.03	.815
400	8.23	34.72	27.04	.837
450	7.75	34.68	27.08	.891
500	7.26	34.63	27.11	.944

STATION 7
7-26-1978
6 0.505

RP10 RE 78
4 0 GMT
28 45.90W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.58	36.06	23.67	.000
20	26.58	36.06	23.67	.085
40	26.59	36.06	23.67	.170
60	26.60	36.07	23.67	.255
80	26.60	36.07	23.67	.340
100	26.55	36.09	23.70	.425
120	23.88	36.64	24.94	.499
140	19.16	36.09	25.83	.552
160	14.21	35.40	26.47	.590
180	12.87	35.24	26.63	.620
200	11.98	35.12	26.70	.649
220	11.24	35.04	26.78	.676
240	10.60	34.96	26.84	.702
260	10.14	34.91	26.88	.727
280	9.87	34.89	26.91	.752
300	9.60	34.86	26.93	.776
320	9.32	34.84	26.96	.799
340	9.09	34.81	26.97	.823
360	8.81	34.78	27.00	.846
380	8.53	34.76	27.02	.868
400	8.13	34.71	27.05	.890
450	7.65	34.67	27.09	.944
500	7.03	34.62	27.13	.996
550	6.60	34.59	27.17	1.046
600	6.09	34.55	27.21	1.095
650	5.77	34.53	27.23	1.142
700	5.31	34.49	27.26	1.188
750	5.09	34.49	27.28	1.233
800	4.77	34.47	27.31	1.276
900	4.25	34.50	27.38	1.359
1000	4.07	34.58	27.47	1.434

STATION 8
7-26-1978
5 59.705

RP10 RE 78
10 0 GMT
28 1.40W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.40	36.01	23.69	.000
20	26.41	36.02	23.69	.084
40	26.41	36.02	23.69	.169
60	26.42	36.02	23.69	.253
80	26.43	36.02	23.69	.338
100	24.40	36.59	24.75	.418
120	20.08	36.11	25.61	.475
140	15.69	35.59	26.29	.516
160	13.19	35.29	26.60	.549
180	12.06	35.16	26.72	.577
200	11.37	35.07	26.78	.604
220	10.87	35.01	26.83	.630
240	10.50	34.97	26.86	.656
260	10.11	34.92	26.89	.681
280	9.83	34.89	26.91	.705
300	9.52	34.86	26.95	.729
320	9.26	34.83	26.96	.752
340	9.06	34.81	26.98	.775
360	8.86	34.80	27.00	.798
380	8.55	34.76	27.02	.821
400	8.33	34.74	27.04	.843
450	7.79	34.69	27.08	.897
500	7.28	34.65	27.12	.950
550	6.77	34.60	27.16	1.001
600	6.32	34.58	27.20	1.050
650	5.85	34.54	27.23	1.097
700	5.31	34.50	27.26	1.143
750	4.87	34.47	27.29	1.187
800	4.64	34.48	27.32	1.230
900	4.18	34.51	27.40	1.311
1000	4.06	34.59	27.47	1.385

STATION 9 RP10 RE 78
7-26-1978 15 0 GMT
5 32.05 28 0.40W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.29	36.00	23.72	.000
20	26.29	36.00	23.72	.084
40	26.29	36.01	23.72	.168
60	26.29	36.01	23.72	.252
80	26.29	36.01	23.73	.336
100	24.66	36.18	24.35	.416
120	19.86	36.14	25.69	.478
140	14.66	35.48	26.43	.516
160	12.86	35.25	26.64	.547
180	11.83	35.12	26.73	.575
200	11.23	35.05	26.79	.602
220	10.60	34.98	26.85	.627
240	10.31	34.95	26.88	.652
260	10.07	34.92	26.90	.677
280	9.77	34.89	26.92	.701
300	9.43	34.85	26.95	.725
320	9.20	34.83	26.97	.748
340	8.89	34.79	26.99	.771
360	8.68	34.77	27.01	.794
380	8.45	34.75	27.03	.816
400	8.18	34.73	27.05	.838
450	7.57	34.65	27.08	.892
500	7.08	34.62	27.13	.944

STATION 10 RP10 RE 78
7-26-1978 22 0 GMT
5 1.50S 28 3.20W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.37	36.05	23.73	.000
20	26.39	36.06	23.73	.084
40	26.38	36.06	23.74	.167
60	26.37	36.07	23.75	.251
80	26.37	36.08	23.75	.335
100	23.74	36.10	24.57	.414
120	19.01	36.05	25.84	.470
140	15.47	35.59	26.34	.508
160	13.24	35.29	26.59	.540
180	12.09	35.17	26.72	.569
200	11.23	35.05	26.79	.596
220	10.63	34.97	26.84	.622
240	10.14	34.92	26.88	.647
260	9.75	34.88	26.92	.671
280	9.49	34.85	26.94	.695
300	9.25	34.83	26.96	.718
320	9.02	34.81	26.98	.741
340	8.77	34.79	27.01	.764
360	8.52	34.76	27.02	.787
380	8.24	34.74	27.05	.809
400	7.92	34.71	27.08	.830
450	7.45	34.68	27.12	.882
500	6.86	34.62	27.16	.933
550	6.39	34.58	27.19	.982
600	5.88	34.54	27.23	1.029
650	5.39	34.51	27.26	1.075
700	5.06	34.49	27.29	1.119
750	4.65	34.46	27.31	1.163
800	4.19	34.45	27.35	1.204
900	3.83	34.50	27.43	1.282
1000	4.21	34.66	27.52	1.352

STATION 11 RP10 RE 78
7-27-1978 4 0 GMT
4 0.80S 28 2.70W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.04	35.92	23.73	.000
20	26.06	35.92	23.73	.084
40	26.02	35.92	23.74	.167
60	25.80	35.95	23.83	.251
80	24.15	36.13	24.48	.328
100	20.70	36.28	25.57	.387
120	17.05	35.75	26.09	.431
140	14.86	35.49	26.39	.467
160	13.44	35.29	26.54	.499
180	12.25	35.15	26.68	.529
200	11.67	35.09	26.74	.557
220	10.98	35.01	26.81	.584
240	10.67	34.98	26.84	.609
260	10.33	34.94	26.87	.635
280	10.00	34.91	26.90	.659
300	9.80	34.88	26.91	.684
320	9.40	34.85	26.95	.708
340	9.14	34.82	26.98	.731
360	8.75	34.78	27.01	.754
380	8.50	34.76	27.03	.776
400	8.28	34.75	27.05	.798
450	7.66	34.69	27.10	.852
500	6.97	34.63	27.15	.903
550	6.19	34.56	27.20	.952
600	5.53	34.50	27.23	.998
650	5.05	34.49	27.29	1.043
700	4.61	34.47	27.32	1.085
750	4.35	34.48	27.36	1.126
800	4.27	34.50	27.38	1.166
900	4.15	34.54	27.43	1.242

STATION 12 RP10 RE 78
7-27-1978 13 0 GMT
3 0.05 28 4.50W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.04	35.98	23.78	.000
20	26.02	35.98	23.78	.083
40	26.02	35.98	23.79	.165
60	24.20	36.31	24.59	.244
80	19.09	35.84	25.66	.301
100	16.25	35.57	26.15	.343
120	14.03	35.37	26.49	.376
140	13.58	35.33	26.55	.408
160	12.98	35.26	26.62	.438
180	12.60	35.21	26.66	.467
200	12.36	35.18	26.68	.495
220	12.07	35.15	26.71	.523
240	11.79	35.12	26.74	.551
260	11.52	35.10	26.77	.578
280	11.29	35.07	26.80	.605
300	10.89	35.02	26.83	.632
320	10.71	35.00	26.85	.657
340	10.45	34.97	26.87	.683
360	9.88	34.91	26.92	.708
380	9.34	34.84	26.96	.732
400	8.97	34.81	26.99	.755
450	8.03	34.73	27.08	.810
500	7.09	34.64	27.14	.862
550	6.18	34.56	27.20	.911
600	5.43	34.51	27.25	.957
650	4.87	34.46	27.29	1.001
700	4.63	34.47	27.32	1.044
750	4.50	34.49	27.35	1.085
800	4.38	34.51	27.38	1.125
900	4.27	34.58	27.44	1.201
1000	4.30	34.67	27.51	1.272

STATION 13 RP10 RE 78
7-27-197A 22 0 GMT
2 59.40S 27 0.40W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.94	36.08	23.89	.000
20	25.94	36.08	23.89	.001
40	25.88	36.08	23.91	.161
60	21.94	36.08	25.07	.234
80	16.30	35.55	26.12	.280
100	14.21	35.39	26.46	.315
120	13.26	35.30	26.59	.346
140	12.98	35.26	26.62	.375
160	12.65	35.23	26.66	.404
180	12.42	35.20	26.68	.433
200	12.24	35.19	26.71	.461
220	11.84	35.14	26.75	.489
240	11.65	35.12	26.76	.516
260	11.44	35.09	26.79	.542
280	11.19	35.07	26.81	.569
300	11.06	35.06	26.83	.595
320	10.71	35.02	26.86	.621
340	10.53	35.00	26.88	.646
360	10.40	34.98	26.89	.671
380	10.01	34.92	26.91	.696
400	9.58	34.87	26.94	.721
450	8.88	34.80	27.00	.780
500	7.55	34.67	27.10	.835
550	6.65	34.59	27.16	.886
600	5.71	34.52	27.23	.934
650	5.07	34.49	27.29	.979
700	4.70	34.48	27.32	1.022
750	4.51	34.49	27.35	1.063
800	4.36	34.51	27.38	1.103
900	4.32	34.58	27.44	1.179
1000	4.25	34.64	27.49	1.251

STATION 14 RP10 RE 78
7-28-197A 9 0 GMT
4 2.10S 26 59.10W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.15	35.93	23.71	.000
20	26.16	35.94	23.71	.004
40	26.16	35.94	23.71	.168
60	26.17	35.94	23.71	.252
80	22.43	36.25	25.06	.326
100	19.82	36.12	25.68	.377
120	15.68	35.58	26.28	.418
140	13.33	35.29	26.57	.450
160	12.29	35.17	26.69	.479
180	12.05	35.14	26.71	.506
200	11.90	35.12	26.72	.534
220	11.56	35.09	26.76	.561
240	11.27	35.06	26.79	.588
260	11.06	35.04	26.81	.614
280	10.87	35.02	26.83	.640
300	10.38	34.96	26.87	.666
320	10.09	34.92	26.89	.691
340	9.69	34.88	26.93	.715
360	9.30	34.84	26.96	.739
380	9.05	34.82	26.99	.762
400	8.77	34.79	27.01	.785
450	7.83	34.71	27.09	.840
500	6.80	34.61	27.16	.891
550	5.84	34.54	27.23	.938
600	5.14	34.48	27.27	.984
650	4.80	34.48	27.31	1.027
700	4.58	34.49	27.34	1.068
750	4.41	34.50	27.37	1.109
800	4.38	34.52	27.39	1.148
900	4.26	34.57	27.44	1.223
1000	4.30	34.65	27.50	1.295

STATION 15 RP10 RE 78
7-28-1978 19 0 GMT
4 58.10S 27 0.10W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.36	35.95	23.66	.000
20	26.35	35.96	23.67	.005
40	26.29	35.97	23.69	.169
60	26.29	35.97	23.69	.254
80	26.29	36.06	23.76	.339
100	21.71	36.20	25.23	.407
120	17.76	35.83	25.98	.456
140	15.88	35.61	26.26	.495
160	13.60	35.31	26.53	.528
180	12.44	35.20	26.67	.558
200	11.62	35.11	26.77	.585
220	10.78	35.00	26.83	.611
240	10.26	34.95	26.88	.636
260	9.89	34.91	26.92	.661
280	9.66	34.89	26.94	.684
300	9.46	34.86	26.96	.708
320	9.08	34.81	26.97	.731
340	8.78	34.80	27.02	.754
360	8.48	34.77	27.04	.776
380	8.22	34.75	27.06	.798
400	7.97	34.72	27.08	.819
450	7.50	34.68	27.12	.872
500	6.69	34.61	27.17	.922
550	6.06	34.56	27.22	.970
600	5.59	34.53	27.25	1.016
650	5.11	34.49	27.28	1.060
700	4.85	34.49	27.31	1.103
750	4.40	34.47	27.35	1.145
800	4.17	34.49	27.39	1.185
900	3.89	34.54	27.46	1.259
1000	4.25	34.69	27.53	1.328

STATION 16 RP10 RE 78
7-29-197A 6 0 GMT
6 0.50S 26 58.40W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.47	36.11	23.74	.000
20	26.48	36.11	23.74	.083
40	26.49	36.12	23.74	.167
60	26.49	36.12	23.74	.251
80	25.31	36.71	24.56	.329
100	21.32	36.18	25.32	.390
120	18.11	35.84	25.90	.438
140	14.55	35.38	26.38	.476
160	13.05	35.23	26.58	.507
180	11.92	35.11	26.71	.536
200	11.15	35.03	26.79	.563
220	10.83	35.00	26.83	.589
240	10.34	34.94	26.87	.614
260	10.01	34.91	26.90	.639
280	9.75	34.88	26.92	.663
300	9.43	34.84	26.94	.687
320	9.16	34.82	26.97	.710
340	8.95	34.80	26.99	.733
360	8.71	34.77	27.00	.756
380	8.44	34.74	27.02	.778
400	8.14	34.71	27.05	.800
450	7.60	34.66	27.09	.854
500	7.16	34.63	27.12	.906
550	6.67	34.59	27.17	.957
600	6.18	34.55	27.20	1.006
650	5.79	34.53	27.23	1.053
700	5.47	34.51	27.25	1.100
750	5.06	34.49	27.29	1.144
800	4.73	34.48	27.31	1.188
900	4.10	34.50	27.40	1.270
1000	4.03	34.61	27.49	1.342

STATION 17 RP10 RE 78
7-29-1978 15 0 GMT
5 59.205 26 0.70W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.31	36.00	23.71	.000
20	26.27	36.00	23.72	.084
40	26.27	36.00	23.72	.168
60	26.27	36.00	23.72	.252
80	24.54	36.79	24.85	.328
100	21.01	36.36	25.55	.383
120	17.95	35.94	26.02	.428
140	15.55	35.61	26.34	.465
160	13.33	35.31	26.59	.498
180	11.84	35.14	26.75	.526
200	11.03	35.03	26.81	.553
220	10.46	34.97	26.87	.578
240	10.07	34.93	26.91	.603
260	9.76	34.89	26.92	.627
280	9.50	34.85	26.94	.650
300	9.21	34.82	26.96	.674
320	8.77	34.78	27.00	.697
340	8.56	34.76	27.02	.719
360	8.42	34.75	27.03	.741
380	8.24	34.73	27.04	.763
400	8.04	34.72	27.07	.785
450	7.37	34.66	27.12	.838
500	6.68	34.60	27.17	.888
550	6.16	34.57	27.21	.936
600	5.81	34.54	27.23	.982
650	5.51	34.52	27.26	1.028
700	5.22	34.50	27.28	1.073
750	5.01	34.50	27.30	1.117
800	4.80	34.49	27.31	1.160
900	4.22	34.48	27.37	1.243
1000	4.03	34.59	27.48	1.318

STATION 18 RP10 RE 78
7-30-1978 0 0 GMT
4 58.805 26 2.80W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.60	36.12	24.02	.000
20	25.59	36.13	24.03	.078
40	25.57	36.13	24.04	.156
60	25.52	36.13	24.05	.234
80	23.25	36.15	24.76	.306
100	19.63	35.96	25.61	.362
120	16.62	35.68	26.14	.406
140	13.09	35.23	26.57	.440
160	11.98	35.14	26.72	.468
180	11.61	35.10	26.76	.495
200	11.05	35.03	26.81	.522
220	10.75	35.01	26.85	.547
240	10.02	34.91	26.90	.572
260	9.69	34.88	26.93	.596
280	9.39	34.85	26.96	.620
300	9.16	34.83	26.98	.643
320	8.79	34.80	27.01	.665
340	8.61	34.78	27.03	.688
360	8.36	34.75	27.04	.710
380	8.13	34.74	27.07	.731
400	7.97	34.72	27.08	.752
450	7.31	34.66	27.13	.804
500	6.61	34.60	27.18	.854
550	6.17	34.57	27.21	.902
600	5.68	34.52	27.24	.949
650	5.36	34.51	27.26	.994
700	4.99	34.49	27.29	1.038
750	4.65	34.48	27.33	1.081
800	4.39	34.48	27.35	1.122
900	3.85	34.52	27.45	1.199
1000	4.17	34.65	27.51	1.268

STATION 19 RP10 RE 78
7-30-1978 7 0 GMT
3 58.905 25 58.20W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.66	36.10	23.99	.000
20	25.67	36.10	23.99	.079
40	25.68	36.11	23.99	.158
60	25.31	36.11	24.10	.236
80	21.93	36.18	25.15	.301
100	17.50	35.68	25.94	.352
120	15.46	35.54	26.30	.389
140	13.22	35.23	26.55	.422
160	12.57	35.19	26.65	.451
180	12.20	35.15	26.69	.480
200	11.94	35.12	26.72	.508
220	11.69	35.09	26.74	.535
240	11.29	35.05	26.78	.562
260	10.84	35.00	26.82	.588
280	10.56	34.97	26.85	.614
300	10.28	34.94	26.88	.639
320	9.91	34.91	26.91	.664
340	9.45	34.85	26.94	.688
360	9.10	34.82	26.98	.712
380	8.82	34.80	27.01	.735
400	8.44	34.75	27.03	.757
450	7.60	34.68	27.10	.811
500	6.88	34.62	27.15	.862
550	6.09	34.56	27.22	.911
600	5.42	34.51	27.26	.956
650	5.01	34.49	27.29	1.000
700	4.74	34.48	27.32	1.043
750	4.61	34.49	27.34	1.084
800	4.41	34.50	27.36	1.125
900	4.26	34.56	27.43	1.202
1000	4.24	34.61	27.48	1.275

STATION 20 RP10 RE 78
7-30-1978 19 0 GMT
3 0.405 26 4.50W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.70	36.16	24.02	.000
20	25.55	36.16	24.07	.078
40	25.53	36.16	24.07	.155
60	25.52	36.16	24.08	.232
80	21.22	36.12	25.31	.299
100	15.13	35.43	26.29	.343
120	13.71	35.32	26.51	.376
140	13.34	35.31	26.58	.406
160	12.99	35.27	26.62	.436
180	12.56	35.22	26.67	.465
200	12.32	35.19	26.70	.493
220	12.08	35.17	26.72	.521
240	11.85	35.14	26.75	.549
260	11.43	35.09	26.79	.576
280	11.21	35.07	26.81	.602
300	10.93	35.02	26.83	.628
320	10.60	35.00	26.87	.654
340	10.26	34.97	26.90	.679
360	10.13	34.95	26.91	.704
380	9.86	34.92	26.93	.728
400	9.56	34.87	26.95	.752
450	8.62	34.77	27.01	.811
500	7.47	34.67	27.11	.866
550	6.07	34.55	27.21	.916
600	5.41	34.50	27.25	.962
650	5.00	34.49	27.29	1.006
700	4.70	34.49	27.33	1.048
750	4.51	34.50	27.36	1.089
800	4.33	34.51	27.38	1.129
900	4.35	34.55	27.42	1.206
1000	4.27	34.60	27.46	1.281

STATION 21 RP10 RE 78
7-31-1978 1 0 GMT
1 59.70S 26 0.50W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.57	36.14	24.05	.000
20	25.58	36.15	24.05	.078
40	25.50	36.15	24.08	.155
60	25.32	36.16	24.14	.232
80	16.21	35.55	26.14	.288
100	14.05	35.38	26.49	.323
120	13.33	35.29	26.57	.354
140	12.84	35.24	26.63	.383
160	12.65	35.22	26.65	.412
180	12.35	35.18	26.68	.441
200	12.09	35.15	26.71	.469
220	11.89	35.14	26.73	.497
240	11.64	35.11	26.76	.524
260	11.32	35.07	26.79	.551
280	11.12	35.05	26.81	.577
300	11.03	35.06	26.83	.603
320	10.87	35.03	26.84	.629
340	10.70	35.02	26.86	.655
360	10.36	34.97	26.89	.680
380	10.10	34.95	26.92	.705
400	9.92	34.93	26.93	.729
450	9.26	34.84	26.97	.790
500	7.58	34.66	27.09	.847
550	5.82	34.50	27.20	.898
600	5.18	34.50	27.28	.943
650	5.14	34.52	27.30	.986
700	5.14	34.52	27.30	1.029
750	4.98	34.52	27.32	1.071
800	4.78	34.52	27.34	1.114
900	4.26	34.53	27.40	1.194
1000	4.28	34.64	27.49	1.268

STATION 22 RP10 RE 78
7-31-1978 10 0 GMT
0 59.05 25 59.70W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.17	36.08	24.13	.000
20	25.13	36.09	24.15	.076
40	24.94	36.10	24.21	.151
60	23.78	36.00	24.48	.225
80	18.03	35.76	25.86	.280
100	15.45	35.53	26.30	.319
120	14.19	35.38	26.46	.353
140	13.27	35.27	26.56	.384
160	12.75	35.23	26.64	.414
180	12.51	35.21	26.67	.442
200	12.42	35.22	26.70	.471
220	12.23	35.19	26.71	.499
240	11.95	35.15	26.73	.527
260	11.21	35.07	26.81	.553
280	10.92	35.04	26.84	.579
300	10.40	34.99	26.89	.605
320	10.18	34.96	26.91	.629
340	9.99	34.93	26.92	.654
360	9.65	34.88	26.94	.678
380	9.21	34.84	26.98	.701
400	8.74	34.79	27.01	.724
450	7.46	34.65	27.10	.779
500	6.11	34.53	27.19	.829
550	5.77	34.54	27.24	.876
600	5.65	34.53	27.25	.921
650	5.57	34.53	27.26	.967
700	5.20	34.52	27.29	1.011
750	5.02	34.51	27.31	1.055
800	4.79	34.51	27.34	1.097
900	4.39	34.58	27.43	1.176
1000	4.40	34.65	27.49	1.249

STATION 23 RP10 RE 78
7-31-1978 18 0 GMT
0 1.80N 26 1.70W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.21	36.05	24.09	.000
20	24.95	36.04	24.16	.076
40	24.75	36.03	24.22	.151
60	24.14	36.22	24.54	.223
80	22.70	36.61	25.26	.285
100	18.89	36.01	25.84	.335
120	15.86	35.62	26.28	.374
140	14.21	35.38	26.45	.408
160	13.34	35.33	26.60	.439
180	13.15	35.31	26.62	.469
200	12.59	35.23	26.67	.498
220	12.30	35.19	26.70	.526
240	12.02	35.17	26.73	.554
260	11.71	35.12	26.76	.582
280	11.43	35.08	26.78	.609
300	11.01	35.04	26.83	.635
320	10.33	34.95	26.88	.661
340	10.05	34.96	26.93	.686
360	9.33	34.86	26.98	.710
380	8.94	34.81	27.00	.733
400	8.09	34.70	27.04	.755
450	7.63	34.69	27.10	.808
500	6.50	34.57	27.17	.859
550	6.00	34.55	27.22	.906
600	5.76	34.54	27.24	.953
650	5.51	34.53	27.26	.998
700	4.88	34.52	27.33	1.042
750	4.77	34.52	27.34	1.083
800	4.59	34.54	27.38	1.123
900	4.53	34.57	27.41	1.202

STATION 24 RP10 RE 78
8-1-1978 4 0 GMT
0 58.50N 26 0.50W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.55	35.51	23.26	.000
20	26.55	35.51	23.27	.093
40	25.27	35.66	23.78	.181
60	21.72	35.84	24.95	.255
80	17.05	35.63	26.00	.305
100	15.25	35.51	26.33	.342
120	14.54	35.46	26.45	.375
140	14.14	35.42	26.50	.407
160	13.47	35.33	26.57	.439
180	12.32	35.19	26.70	.467
200	12.01	35.16	26.73	.495
220	11.86	35.14	26.75	.523
240	11.77	35.14	26.76	.550
260	11.64	35.13	26.77	.577
280	11.25	35.08	26.81	.603
300	10.83	35.03	26.85	.629
320	10.62	35.01	26.87	.655
340	9.73	34.90	26.94	.680
360	9.31	34.86	26.98	.703
380	9.12	34.85	27.00	.726
400	8.91	34.82	27.01	.749
450	7.70	34.70	27.10	.803
500	6.93	34.61	27.14	.854
550	6.11	34.56	27.21	.903
600	5.66	34.54	27.25	.949
650	5.42	34.53	27.27	.994
700	5.16	34.52	27.29	1.038
750	4.97	34.52	27.32	1.081
800	4.84	34.55	27.36	1.122
900	4.67	34.61	27.42	1.202

STATION 25 RP10 RE 78
8- 1-1978 11 0 GMT
1 1. 0N 24 58.70W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.49	35.69	23.73	.000
20	25.36	35.81	23.86	.083
40	24.67	35.93	24.16	.161
60	19.41	35.87	25.60	.224
80	15.89	35.60	26.25	.266
100	15.09	35.51	26.37	.301
120	14.18	35.41	26.48	.334
140	13.03	35.26	26.61	.364
160	12.34	35.18	26.68	.393
180	12.22	35.16	26.69	.421
200	12.07	35.15	26.71	.449
220	12.01	35.15	26.72	.477
240	11.89	35.14	26.74	.505
260	11.68	35.11	26.76	.532
280	11.47	35.10	26.78	.559
300	10.92	35.03	26.83	.586
320	10.65	35.01	26.86	.611
340	9.71	34.89	26.94	.636
360	8.94	34.81	27.00	.659
380	8.44	34.76	27.04	.682
400	8.32	34.77	27.06	.704
450	6.89	34.64	27.17	.756
500	6.42	34.58	27.19	.805
550	6.01	34.56	27.23	.852
600	5.58	34.53	27.26	.897
650	5.39	34.53	27.28	.942
700	5.16	34.52	27.30	.986

STATION 26 RP10 RE 78
8- 2-1978 3 0 GMT
0 0.80S 25 1. 0W

Z	TEMP	SAL	SIG-T	DYNHGT
0	24.97	36.04	24.16	.000
20	24.98	36.04	24.16	.076
40	24.79	36.07	24.23	.151
60	23.90	36.27	24.65	.221
80	18.16	35.84	25.89	.277
100	15.90	35.64	26.28	.315
120	15.39	35.61	26.38	.350
140	13.78	35.36	26.53	.382
160	13.64	35.35	26.55	.413
180	13.15	35.28	26.60	.443
200	12.88	35.25	26.63	.473
220	12.61	35.20	26.65	.502
240	12.42	35.19	26.67	.531
260	11.98	35.13	26.71	.560
280	11.57	35.10	26.76	.587
300	10.82	34.99	26.82	.614
320	10.25	34.96	26.90	.640
340	9.75	34.86	26.91	.664
360	9.41	34.86	26.96	.688
380	9.18	34.83	26.97	.712
400	8.69	34.78	27.01	.735
450	7.51	34.66	27.10	.789
500	6.69	34.61	27.18	.840
550	6.21	34.55	27.19	.888
600	5.88	34.54	27.22	.936
650	5.67	34.52	27.24	.982
700	5.10	34.51	27.30	1.027
750	4.93	34.50	27.31	1.071
800	4.72	34.51	27.34	1.112
900	4.57	34.55	27.39	1.194

STATION 27 RP10 RE 78
8- 2-1978 12 0 GMT
1 0.50S 25 0.30W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.29	36.13	24.13	.000
20	25.28	36.13	24.13	.076
40	25.02	36.14	24.21	.152
60	22.70	36.20	24.95	.222
80	18.55	35.88	25.82	.274
100	15.50	35.48	26.25	.314
120	13.81	35.35	26.52	.346
140	13.44	35.31	26.56	.377
160	13.18	35.28	26.59	.407
180	13.00	35.26	26.61	.437
200	12.79	35.24	26.64	.467
220	12.44	35.19	26.67	.496
240	12.20	35.17	26.70	.524
260	11.79	35.12	26.74	.552
280	11.34	35.08	26.79	.579
300	10.70	34.99	26.84	.605
320	10.30	34.96	26.89	.631
340	10.02	34.91	26.90	.656
360	9.69	34.88	26.93	.680
380	9.33	34.84	26.96	.704
400	8.45	34.73	27.01	.727
450	6.84	34.57	27.12	.781
500	6.09	34.54	27.20	.830
550	5.98	34.54	27.21	.877
600	5.72	34.53	27.24	.924
650	5.47	34.52	27.26	.969
700	5.10	34.50	27.29	1.014
750	4.85	34.51	27.32	1.057
800	4.73	34.51	27.34	1.099
900	4.43	34.55	27.40	1.180
1000	4.39	34.64	27.48	1.254

STATION 28 RP10 RE 78
8- 2-1978 21 0 GMT
1 58.30S 25 0. 0W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.19	35.90	23.98	.000
20	25.21	35.91	23.98	.079
40	24.82	36.00	24.17	.156
60	22.91	36.01	24.75	.229
80	15.08	35.44	26.31	.277
100	13.48	35.31	26.55	.309
120	13.15	35.28	26.60	.339
140	13.08	35.28	26.61	.369
160	12.95	35.27	26.63	.398
180	12.82	35.25	26.64	.427
200	12.54	35.22	26.67	.456
220	12.00	35.15	26.73	.484
240	11.57	35.11	26.78	.511
260	11.29	35.08	26.80	.538
280	10.95	35.05	26.84	.564
300	10.47	34.99	26.88	.589
320	10.26	34.96	26.90	.614
340	10.04	34.94	26.92	.639
360	9.92	34.93	26.93	.663
380	9.76	34.91	26.94	.687
400	9.35	34.85	26.96	.711
450	7.52	34.66	27.09	.768
500	5.86	34.51	27.21	.817
550	5.51	34.52	27.26	.863
600	5.38	34.53	27.28	.907
650	5.29	34.52	27.28	.951
700	5.03	34.52	27.31	.994
750	4.97	34.52	27.32	1.037
800	4.76	34.52	27.34	1.079
900	4.34	34.53	27.40	1.160
1000	4.35	34.60	27.46	1.235

STATION 29 RP10 RE 78
8- 3-1978 5 0 GMT
3 1.10S 25 1.30W

Z	TEMP	SAL	SIG-T	DYNHGT
0	24.85	35.86	24.06	.000
20	24.85	35.86	24.06	.077
40	24.42	35.95	24.26	.153
60	22.84	36.06	24.80	.224
80	16.55	35.66	26.14	.273
100	14.14	35.37	26.46	.308
120	13.58	35.33	26.55	.339
140	13.42	35.31	26.57	.369
160	13.03	35.27	26.61	.399
180	12.70	35.24	26.65	.428
200	12.48	35.21	26.68	.457
220	12.24	35.18	26.70	.486
240	11.87	35.13	26.73	.513
260	11.31	35.07	26.79	.540
280	11.02	35.04	26.82	.567
300	10.58	34.99	26.86	.592
320	10.29	34.96	26.89	.618
340	10.10	34.93	26.90	.642
360	9.92	34.91	26.92	.667
380	9.56	34.87	26.94	.691
400	9.20	34.82	26.96	.715
450	7.97	34.69	27.06	.772
500	7.22	34.62	27.11	.826
550	6.39	34.56	27.18	.876
600	5.49	34.48	27.23	.924
650	5.01	34.46	27.27	.969
700	4.73	34.48	27.31	1.012
750	4.58	34.49	27.34	1.054
800	4.41	34.51	27.37	1.094
900	4.27	34.54	27.41	1.172

STATION 30 RP10 RE 78
8- 3-1978 17 0 GMT
3 58.30S 24 58.70W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.16	35.88	23.98	.000
20	24.98	35.89	24.04	.078
40	24.85	35.89	24.08	.156
60	24.21	36.14	24.46	.230
80	20.98	35.96	25.25	.298
100	17.46	35.79	26.03	.347
120	17.44	35.88	26.10	.388
140	15.10	35.55	26.39	.424
160	13.34	35.32	26.59	.456
180	12.40	35.19	26.68	.484
200	11.60	35.10	26.76	.512
220	11.20	35.04	26.79	.539
240	10.65	34.98	26.85	.564
260	10.38	34.95	26.87	.590
280	9.96	34.90	26.90	.614
300	9.66	34.87	26.92	.639
320	9.40	34.84	26.95	.662
340	9.06	34.82	26.98	.686
360	8.78	34.79	27.01	.708
380	8.57	34.77	27.03	.731
400	8.32	34.75	27.05	.753
450	7.56	34.68	27.11	.806
500	6.69	34.60	27.17	.857
550	5.90	34.53	27.22	.905
600	5.37	34.50	27.26	.950
650	4.93	34.49	27.30	.994
700	4.77	34.49	27.32	1.036
750	4.61	34.50	27.34	1.078
800	4.53	34.51	27.36	1.118
900	4.30	34.53	27.40	1.197

STATION 31 RP10 RE 78
8- 4-1978 2 0 GMT
5 0.20S 24 59.60W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.40	35.78	23.83	.000
20	25.41	35.78	23.83	.082
40	25.40	35.79	23.83	.164
60	25.33	35.82	23.88	.245
80	24.02	35.92	24.35	.323
100	21.29	36.05	25.23	.387
120	16.66	35.63	26.09	.435
140	14.67	35.42	26.39	.470
160	14.04	35.40	26.50	.503
180	12.28	35.17	26.69	.533
200	10.89	35.00	26.81	.560
220	10.41	34.95	26.86	.585
240	10.15	34.93	26.89	.610
260	9.83	34.89	26.91	.634
280	9.43	34.84	26.94	.658
300	9.24	34.83	26.96	.681
320	9.03	34.81	26.98	.705
340	8.84	34.79	27.00	.727
360	8.61	34.75	27.01	.750
380	8.30	34.73	27.04	.772
400	8.06	34.72	27.07	.794
450	7.54	34.67	27.11	.847
500	6.99	34.61	27.14	.898
550	6.39	34.56	27.18	.948
600	5.93	34.54	27.22	.996
650	5.50	34.51	27.25	1.042
700	5.01	34.48	27.28	1.087
750	4.67	34.49	27.33	1.130
800	4.46	34.48	27.35	1.171
900	4.07	34.50	27.41	1.250

STATION 32 RP10 RE 78
8- 4-1978 12 0 GMT
6 0.70S 24 58. 0W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.43	35.85	23.87	.000
20	25.44	35.85	23.87	.081
40	25.32	35.93	23.96	.161
60	25.28	35.97	24.01	.240
80	25.23	36.06	24.09	.318
100	23.08	36.18	24.82	.391
120	19.38	35.95	25.67	.445
140	15.65	35.54	26.26	.487
160	13.25	35.28	26.58	.520
180	11.83	35.12	26.73	.549
200	11.02	35.03	26.81	.575
220	10.44	34.96	26.86	.601
240	10.18	34.92	26.88	.625
260	9.91	34.90	26.91	.650
280	9.65	34.87	26.93	.674
300	9.37	34.84	26.96	.697
320	9.10	34.82	26.98	.721
340	8.89	34.81	27.01	.743
360	8.62	34.78	27.02	.766
380	8.34	34.75	27.04	.788
400	8.12	34.74	27.07	.810
450	7.60	34.68	27.11	.862
500	7.04	34.63	27.14	.914
550	6.53	34.59	27.18	.963
600	6.00	34.55	27.22	1.011
650	5.61	34.52	27.24	1.058
700	5.35	34.50	27.26	1.103
750	5.08	34.49	27.28	1.148
800	4.77	34.47	27.31	1.192
900	4.15	34.50	27.39	1.274
1000	4.03	34.61	27.50	1.347

STATION 33		RP10 RE 78		
8- 4-1978		21 0 GMT		
6 59.80S		24 59.10W		
Z	TEMP	SAL	SIG-T	DYNHGT
0	25.43	35.98	23.97	.000
20	25.41	35.98	23.98	.079
40	25.39	35.99	23.99	.158
60	25.39	35.99	23.99	.237
80	25.32	36.05	24.06	.315
100	24.44	36.83	24.91	.386
120	22.60	36.61	25.29	.444
140	18.44	35.95	25.91	.493
160	15.88	35.69	26.33	.532
180	13.51	35.30	26.54	.565
200	12.26	35.17	26.68	.594
220	11.47	35.07	26.76	.622
240	10.56	34.95	26.84	.648
260	10.13	34.92	26.88	.673
280	9.51	34.84	26.93	.698
300	9.09	34.80	26.97	.721
320	8.79	34.78	27.00	.744
340	8.61	34.76	27.02	.766
360	8.33	34.74	27.04	.789
380	8.07	34.71	27.06	.810
400	7.85	34.69	27.07	.832
450	7.28	34.64	27.12	.884
500	6.80	34.61	27.16	.934
550	6.45	34.59	27.19	.983
600	6.06	34.56	27.21	1.031
650	5.66	34.52	27.24	1.078
700	5.17	34.49	27.28	1.123
750	4.81	34.48	27.31	1.167
800	4.60	34.49	27.34	1.209
900	4.22	34.52	27.40	1.289
1000	4.04	34.59	27.48	1.363

STATION 34		RP10 RE 78		
8- 5-1978		5 0 GMT		
8 0. 0S		24 59. 0W		
Z	TEMP	SAL	SIG-T	DYNHGT
0	25.99	36.22	23.98	.000
20	26.00	36.23	23.98	.079
40	26.01	36.23	23.98	.158
60	25.90	36.44	24.17	.237
80	23.91	36.75	25.02	.303
100	20.71	36.33	25.60	.356
120	18.08	35.98	26.02	.401
140	16.81	35.81	26.20	.439
160	15.19	35.59	26.40	.475
180	14.04	35.41	26.51	.508
200	12.99	35.28	26.63	.538
220	12.19	35.18	26.71	.567
240	11.17	35.05	26.80	.594
260	10.50	34.97	26.86	.620
280	9.74	34.88	26.92	.644
300	9.19	34.82	26.97	.668
320	8.83	34.79	27.00	.691
340	8.43	34.75	27.03	.713
360	8.09	34.72	27.06	.735
380	7.89	34.68	27.06	.756
400	7.54	34.66	27.09	.777
450	6.97	34.61	27.14	.828
500	6.52	34.58	27.17	.877
550	6.11	34.55	27.21	.926
600	5.81	34.52	27.22	.973
650	5.57	34.52	27.25	1.019
700	5.26	34.49	27.26	1.064
750	4.88	34.49	27.31	1.108
800	4.54	34.49	27.34	1.150
900	4.20	34.53	27.41	1.229
1000	4.07	34.60	27.48	1.302

STATION 35		RP10 RE 78		
8- 5-1978		15 0 GMT		
9 0.40S		24 58.50W		
Z	TEMP	SAL	SIG-T	DYNHGT
0	26.00	36.37	24.09	.000
20	26.00	36.37	24.09	.077
40	26.00	36.38	24.10	.154
60	25.92	36.47	24.19	.230
80	23.97	36.75	24.99	.301
100	22.14	36.64	25.44	.355
120	18.76	36.07	25.92	.404
140	16.49	35.72	26.21	.444
160	14.78	35.49	26.41	.479
180	13.57	35.34	26.56	.511
200	12.60	35.20	26.64	.541
220	11.28	35.02	26.76	.569
240	10.33	34.92	26.85	.595
260	9.51	34.82	26.91	.620
280	8.98	34.77	26.96	.643
300	8.61	34.74	27.00	.666
320	8.36	34.71	27.01	.689
340	8.11	34.69	27.04	.711
360	7.83	34.67	27.06	.732
380	7.76	34.67	27.07	.754
400	7.55	34.65	27.08	.775
450	7.13	34.62	27.12	.827
500	6.65	34.59	27.16	.877
550	6.24	34.55	27.19	.926
600	5.95	34.55	27.22	.973
650	5.58	34.52	27.25	1.019
700	5.26	34.51	27.28	1.064
750	4.89	34.49	27.30	1.108
800	4.56	34.49	27.34	1.151
900	4.23	34.54	27.42	1.230

STATION 36		RP10 RE 78		
8- 6-1978		0 0 GMT		
10 0.50S		25 0.20W		
Z	TEMP	SAL	SIG-T	DYNHGT
0	25.64	36.39	24.21	.000
20	25.64	36.40	24.22	.074
40	25.65	36.40	24.22	.149
60	25.65	36.50	24.29	.223
80	24.44	36.78	24.88	.292
100	22.58	36.70	25.36	.349
120	20.71	36.40	25.66	.399
140	18.46	36.08	26.00	.444
160	15.79	35.66	26.32	.482
180	13.55	35.34	26.56	.515
200	12.67	35.23	26.65	.545
220	11.66	35.10	26.75	.572
240	10.90	35.01	26.82	.599
260	10.33	34.94	26.87	.624
280	9.74	34.88	26.92	.649
300	9.02	34.79	26.97	.672
320	8.60	34.75	27.01	.695
340	8.30	34.72	27.03	.717
360	8.00	34.70	27.05	.739
380	7.73	34.67	27.08	.760
400	7.42	34.64	27.09	.781
450	6.93	34.59	27.13	.833
500	6.53	34.57	27.17	.883
550	6.21	34.55	27.19	.931
600	5.72	34.51	27.23	.979
650	5.41	34.50	27.25	1.025
700	5.06	34.48	27.27	1.069
750	4.76	34.46	27.30	1.113
800	4.46	34.46	27.33	1.156
900	4.09	34.49	27.39	1.237
1000	3.96	34.54	27.44	1.312

STATION	37	RP10 RE 78			
8-	6-1978	12	0	GMT	
11	2.50S	25	0.70W		

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.40	36.65	24.48	.000
20	25.39	36.65	24.49	.069
40	25.40	36.66	24.49	.139
60	25.40	36.67	24.50	.208
80	23.69	36.77	25.09	.273
100	22.13	36.68	25.48	.327
120	20.89	36.52	25.70	.375
140	19.34	36.23	25.89	.421
160	16.99	35.85	26.19	.461
180	15.71	35.67	26.35	.497
200	13.87	35.36	26.51	.530
220	12.49	35.21	26.67	.560
240	11.60	35.08	26.75	.588
260	11.04	35.02	26.80	.615
280	10.13	34.91	26.88	.641
300	9.60	34.86	26.93	.665
320	9.11	34.81	26.97	.689
340	8.58	34.75	27.01	.712
360	8.18	34.71	27.04	.734
380	7.81	34.67	27.07	.755
400	7.50	34.65	27.09	.776
450	6.91	34.59	27.13	.828
500	6.41	34.56	27.17	.878
550	5.98	34.53	27.20	.926
600	5.57	34.51	27.24	.972
650	5.28	34.49	27.26	1.018
700	4.95	34.48	27.29	1.062
750	4.66	34.47	27.32	1.105
800	4.47	34.48	27.34	1.146
900	4.16	34.51	27.40	1.226
1000	3.96	34.57	27.47	1.301

STATION	38	RP10 RE 78			
8-	6-1978	18	0	GMT	
11	1.30S	25	45.70W		

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.27	36.75	24.60	.000
20	25.30	36.76	24.60	.067
40	25.30	36.77	24.61	.134
60	25.28	36.77	24.61	.201
80	24.84	36.90	24.84	.267
100	23.64	36.79	25.13	.329
120	22.05	36.60	25.44	.383
140	20.35	36.33	25.70	.432
160	18.56	36.09	25.98	.477
180	16.45	35.70	26.20	.517
200	14.89	35.53	26.42	.552
220	13.55	35.33	26.55	.584
240	12.45	35.18	26.66	.614
260	11.59	35.09	26.76	.642
280	11.02	35.01	26.80	.669
300	10.48	34.95	26.85	.695
320	9.87	34.88	26.90	.720
340	9.27	34.81	26.94	.744
360	8.71	34.76	26.99	.768
380	8.44	34.73	27.01	.790
400	8.12	34.69	27.04	.813
450	7.15	34.60	27.10	.866
500	6.45	34.55	27.16	.917
550	5.89	34.51	27.20	.965
600	5.54	34.49	27.23	1.012
650	5.22	34.48	27.26	1.058
700	4.95	34.47	27.28	1.102
750	4.74	34.47	27.31	1.146
800	4.49	34.47	27.34	1.188
900	4.14	34.50	27.39	1.268

STATION	39	RP10 RE 78			
8-	7-1978	1	0	GMT	
10	0.70S	26	29.70W		

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.47	36.73	24.53	.000
20	25.48	36.74	24.53	.068
40	25.49	36.74	24.53	.137
60	25.50	36.75	24.53	.206
80	25.00	36.79	24.72	.274
100	22.46	36.69	25.39	.332
120	20.79	36.45	25.67	.382
140	18.30	36.02	26.00	.427
160	15.85	35.68	26.33	.465
180	14.56	35.49	26.47	.499
200	13.13	35.30	26.62	.530
220	12.21	35.18	26.71	.559
240	11.23	35.06	26.80	.586
260	10.50	34.98	26.87	.612
280	10.06	34.93	26.91	.636
300	9.64	34.89	26.95	.660
320	9.16	34.84	26.98	.684
340	8.70	34.80	27.03	.706
360	8.31	34.75	27.05	.728
380	8.05	34.73	27.07	.749
400	7.87	34.71	27.09	.771
450	7.37	34.67	27.13	.823
500	6.92	34.63	27.16	.873
550	6.36	34.58	27.19	.922
600	5.77	34.53	27.23	.969
650	5.37	34.51	27.26	1.015
700	5.08	34.49	27.29	1.059
750	4.61	34.47	27.32	1.102
800	4.40	34.48	27.35	1.143
900	4.07	34.50	27.41	1.222
1000	3.88	34.56	27.47	1.296

STATION	40	RP10 RE 78			
8-	7-1978	8	0	GMT	
8	59.20S	26	31.20W		

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.88	36.49	24.21	.000
20	25.90	36.49	24.21	.074
40	25.91	36.49	24.21	.149
60	25.91	36.51	24.22	.224
80	24.27	36.78	24.93	.294
100	22.20	36.65	25.43	.349
120	18.45	36.08	26.01	.395
140	15.84	35.66	26.31	.434
160	14.83	35.55	26.45	.467
180	13.98	35.42	26.53	.499
200	12.80	35.28	26.67	.529
220	11.39	35.08	26.79	.557
240	10.26	34.94	26.88	.582
260	9.75	34.90	26.94	.606
280	9.24	34.85	26.98	.630
300	8.93	34.82	27.01	.652
320	8.45	34.76	27.04	.674
340	8.17	34.73	27.06	.696
360	8.00	34.72	27.07	.717
380	7.85	34.71	27.09	.739
400	7.71	34.68	27.08	.760
450	7.24	34.64	27.12	.811
500	6.80	34.61	27.16	.861
550	6.32	34.57	27.19	.910
600	5.95	34.55	27.23	.958
650	5.56	34.54	27.26	1.003
700	5.09	34.50	27.29	1.048
750	4.77	34.49	27.32	1.091
800	4.58	34.49	27.34	1.133
900	4.14	34.50	27.40	1.213
1000	4.01	34.59	27.48	1.287

STATION	41	RP10 RE 78			
8- 7-1978		14 0 GMT			
7 59.90S		26 30.70W			

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.12	36.18	23.91	.000
20	26.11	36.21	23.94	.080
40	26.12	36.22	23.94	.160
60	26.06	36.58	24.23	.236
80	25.21	36.72	24.60	.309
100	22.23	36.61	25.39	.368
120	18.81	36.03	25.87	.416
140	16.39	35.70	26.22	.457
160	14.48	35.47	26.46	.491
180	13.41	35.31	26.57	.522
200	12.50	35.20	26.67	.552
220	11.49	35.09	26.77	.580
240	10.83	34.99	26.82	.606
260	10.12	34.92	26.89	.631
280	9.84	34.91	26.93	.655
300	9.14	34.81	26.97	.679
320	8.78	34.78	27.00	.702
340	8.49	34.74	27.02	.724
360	8.19	34.71	27.04	.746
380	7.99	34.70	27.06	.768
400	7.74	34.68	27.08	.789
450	7.07	34.61	27.12	.841
500	6.62	34.58	27.16	.891
550	6.22	34.55	27.19	.940
600	5.71	34.51	27.23	.988
650	5.30	34.49	27.26	1.033
700	5.06	34.49	27.29	1.078
750	4.71	34.48	27.32	1.121
800	4.50	34.49	27.35	1.162
900	4.24	34.52	27.40	1.242
1000	4.07	34.59	27.48	1.315

STATION	42	RP10 RE 78			
8- 7-1978		21 0 GMT			
7 0. 0S		26 30.40W			

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.13	36.06	23.81	.000
20	25.73	36.07	23.95	.081
40	25.64	36.08	23.98	.160
60	25.63	36.11	24.01	.239
80	24.37	36.76	24.89	.311
100	21.99	36.46	25.35	.369
120	18.67	36.04	25.92	.416
140	15.17	35.53	26.36	.455
160	13.10	35.20	26.55	.487
180	11.92	35.11	26.71	.516
200	11.20	35.04	26.79	.543
220	10.35	34.93	26.85	.569
240	9.79	34.88	26.91	.593
260	9.55	34.86	26.94	.617
280	9.22	34.82	26.96	.641
300	8.99	34.80	26.98	.663
320	8.71	34.78	27.01	.686
340	8.51	34.76	27.03	.708
360	8.29	34.74	27.04	.730
380	8.09	34.73	27.07	.752
400	7.95	34.72	27.08	.773
450	7.44	34.68	27.12	.825
500	7.01	34.64	27.15	.876
550	6.64	34.61	27.18	.925
600	6.07	34.55	27.21	.973
650	5.71	34.53	27.24	1.020
700	5.40	34.52	27.27	1.066
750	5.08	34.49	27.29	1.110
800	4.75	34.49	27.32	1.153
900	4.20	34.50	27.39	1.235
1000	4.05	34.58	27.47	1.310

STATION	43	RP10 RE 78			
8- 8-1978		6 0 GMT			
6 5.20S		26 58.50W			

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.52	35.99	23.95	.000
20	25.54	36.00	23.95	.079
40	25.53	36.02	23.97	.159
60	25.55	36.05	23.99	.238
80	25.60	36.08	23.99	.317
100	22.77	36.28	24.99	.388
120	17.73	35.86	26.02	.439
140	14.98	35.53	26.41	.475
160	13.86	35.41	26.55	.507
180	12.55	35.26	26.70	.536
200	12.04	35.17	26.73	.564
220	11.27	35.07	26.80	.591
240	10.73	35.02	26.86	.616
260	10.24	34.96	26.90	.641
280	9.87	34.91	26.92	.666
300	9.58	34.88	26.95	.689
320	9.34	34.85	26.96	.713
340	8.96	34.81	27.00	.736
360	8.70	34.79	27.02	.758
380	8.37	34.76	27.05	.780
400	8.14	34.74	27.07	.802
450	7.57	34.69	27.12	.855
500	7.07	34.65	27.15	.906
550	6.52	34.60	27.19	.955
600	6.14	34.57	27.22	1.003
650	5.73	34.54	27.24	1.050
700	5.38	34.52	27.27	1.095
750	5.08	34.50	27.29	1.140
800	4.84	34.50	27.32	1.183
900	4.37	34.50	27.37	1.266
1000	4.05	34.60	27.49	1.341

STATION	44	RP10 RE 78			
8- 8-1978		19 0 GMT			
5 59.40S		27 31.90W			

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.25	36.07	23.78	.000
20	26.22	36.09	23.81	.082
40	26.27	36.13	23.82	.165
60	26.14	36.10	23.84	.247
80	25.89	36.07	23.89	.328
100	25.32	36.45	24.36	.407
120	21.16	36.08	25.29	.468
140	18.72	35.95	25.83	.518
160	15.96	35.66	26.28	.558
180	13.98	35.37	26.50	.593
200	12.39	35.20	26.69	.622
220	11.21	35.07	26.81	.649
240	10.65	35.00	26.86	.675
260	10.07	34.94	26.91	.699
280	9.68	34.90	26.95	.723
300	9.30	34.85	26.97	.747
320	9.09	34.83	26.99	.769
340	8.83	34.81	27.02	.792
360	8.45	34.77	27.04	.814
380	8.31	34.75	27.05	.836
400	8.07	34.74	27.08	.857
450	7.59	34.69	27.11	.910
500	7.08	34.65	27.15	.961
550	6.69	34.62	27.18	1.011
600	6.22	34.57	27.21	1.059
650	5.88	34.55	27.23	1.106
700	5.39	34.51	27.27	1.152
750	5.10	34.50	27.29	1.196
800	4.75	34.49	27.32	1.240
900	4.18	34.52	27.41	1.320
1000	4.03	34.58	27.47	1.393

STATION 45		RP10 RE 78		
8- 8-1978		22 0 GMT		
6 7. 05		28 2.30W		

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.31	36.16	23.83	.000
20	26.33	36.16	23.83	.082
40	26.24	36.14	23.84	.164
60	26.34	36.19	23.84	.245
80	24.75	36.72	24.74	.319
100	22.57	36.57	25.27	.379
120	18.29	35.84	25.86	.428
140	14.91	35.50	26.40	.467
160	12.73	35.16	26.59	.498
180	11.53	35.09	26.77	.526
200	10.95	35.04	26.84	.552
220	10.69	34.99	26.84	.577
240	10.44	34.97	26.87	.602
260	10.08	34.93	26.90	.627
280	9.77	34.89	26.93	.651
300	9.52	34.87	26.95	.675
320	9.29	34.84	26.96	.698
340	9.07	34.82	26.98	.721
360	8.81	34.80	27.01	.744
380	8.58	34.77	27.03	.766
400	8.31	34.74	27.05	.789
450	7.68	34.70	27.10	.842
500	7.17	34.65	27.14	.894
550	6.67	34.61	27.18	.943
600	6.24	34.57	27.21	.992
650	5.78	34.54	27.24	1.039
700	5.38	34.51	27.26	1.084
750	5.03	34.49	27.29	1.129
800	4.68	34.48	27.32	1.172
900	4.04	34.48	27.39	1.254
1000	4.05	34.60	27.49	1.328

STATION 46		RP10 RE 78		
8- 9-1978		4 0 GMT		
6 30. 05		28 0.10W		

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.23	36.09	23.80	.000
20	26.25	36.09	23.80	.082
40	26.26	36.10	23.80	.165
60	26.26	36.10	23.80	.247
80	25.75	36.29	24.10	.329
100	22.55	36.53	25.24	.393
120	17.56	35.81	26.02	.440
140	15.08	35.53	26.38	.477
160	13.26	35.31	26.60	.508
180	12.28	35.20	26.71	.537
200	11.34	35.07	26.79	.564
220	10.88	35.03	26.84	.590
240	10.44	34.98	26.88	.615
260	10.11	34.94	26.91	.640
280	9.81	34.91	26.93	.664
300	9.51	34.87	26.95	.687
320	9.24	34.84	26.98	.711
340	8.97	34.82	27.00	.733
360	8.69	34.79	27.02	.756
380	8.53	34.77	27.03	.778
400	8.27	34.75	27.06	.800
450	7.81	34.71	27.09	.853
500	7.13	34.65	27.14	.905
550	6.53	34.60	27.19	.954
600	6.04	34.56	27.22	1.002
650	5.65	34.52	27.24	1.048
700	5.29	34.51	27.27	1.094
750	4.95	34.49	27.30	1.138
800	4.61	34.48	27.33	1.180
900	4.23	34.50	27.39	1.262
1000	4.05	34.59	27.48	1.335

STATION 47		RP10 RE 78		
8- 9-1978		7 0 GMT		
7 1.80S		27 59.90W		

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.35	36.16	23.82	.000
20	26.38	36.17	23.82	.082
40	26.39	36.17	23.82	.164
60	26.39	36.18	23.82	.246
80	23.74	36.73	25.04	.320
100	20.21	36.20	25.63	.374
120	17.30	35.86	26.12	.417
140	15.43	35.60	26.36	.454
160	14.06	35.43	26.53	.487
180	12.59	35.21	26.65	.517
200	11.96	35.14	26.73	.545
220	11.29	35.07	26.80	.572
240	10.75	35.02	26.85	.598
260	10.42	34.99	26.89	.623
280	10.17	34.95	26.91	.648
300	9.86	34.91	26.93	.672
320	9.58	34.88	26.95	.696
340	9.18	34.84	26.98	.719
360	8.93	34.81	27.00	.742
380	8.76	34.80	27.02	.764
400	8.57	34.78	27.03	.787
450	8.05	34.73	27.08	.841
500	7.39	34.67	27.13	.894
550	6.88	34.63	27.16	.945
600	6.41	34.59	27.19	.994
650	5.98	34.55	27.22	1.042
700	5.47	34.51	27.25	1.089
750	5.07	34.49	27.29	1.133
800	4.74	34.48	27.32	1.177
900	4.29	34.51	27.39	1.259
1000	3.92	34.56	27.47	1.334

STATION 48		RP10 RE 78		
8- 9-1978		16 0 GMT		
7 59.20S		28 1.20W		

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.33	36.35	23.97	.000
20	26.26	36.35	23.99	.079
40	26.26	36.36	24.00	.158
60	26.28	36.39	24.01	.236
80	25.34	36.87	24.67	.312
100	22.62	36.69	25.35	.371
120	20.24	36.33	25.73	.421
140	17.45	35.90	26.12	.464
160	14.95	35.56	26.43	.500
180	13.36	35.30	26.57	.532
200	12.64	35.21	26.65	.561
220	11.92	35.15	26.74	.590
240	11.17	35.07	26.82	.616
260	10.43	34.95	26.86	.642
280	9.62	34.83	26.91	.667
300	9.08	34.80	26.97	.690
320	8.65	34.75	27.00	.713
340	8.34	34.70	27.01	.736
360	8.04	34.69	27.05	.758
380	7.83	34.68	27.07	.779
400	7.59	34.67	27.09	.800
450	7.12	34.63	27.14	.852
500	6.60	34.58	27.17	.902
550	6.18	34.56	27.20	.950
600	5.94	34.55	27.23	.997
650	5.58	34.53	27.25	1.043
700	5.15	34.49	27.28	1.088
750	4.89	34.49	27.30	1.132
800	4.65	34.48	27.33	1.174
900	4.21	34.50	27.39	1.256
1000	4.03	34.57	27.46	1.331

STATION	49	RP10 RE 78		
	8-10-1978	1	0	GMT
	9 1.20S	28	1.20W	

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.01	36.54	24.21	.000
20	26.03	36.54	24.21	.075
40	26.03	36.54	24.21	.149
60	26.03	36.55	24.21	.224
80	26.02	36.55	24.22	.299
100	23.60	36.79	25.14	.368
120	21.01	36.38	25.56	.421
140	17.79	35.97	26.09	.466
160	15.38	35.58	26.35	.503
180	13.71	35.34	26.53	.536
200	12.61	35.24	26.68	.566
220	11.62	35.11	26.77	.593
240	10.84	35.01	26.83	.620
260	10.17	34.94	26.89	.645
280	9.65	34.89	26.94	.669
300	9.23	34.84	26.97	.692
320	8.70	34.77	27.01	.715
340	8.45	34.76	27.04	.737
360	8.21	34.74	27.06	.759
380	7.95	34.71	27.08	.780
400	7.68	34.69	27.10	.801
450	7.29	34.66	27.13	.852
500	6.71	34.61	27.17	.902
550	6.24	34.57	27.20	.950
600	5.72	34.56	27.26	.996
650	5.36	34.51	27.27	1.041
700	4.99	34.51	27.31	1.085
750	4.69	34.48	27.32	1.127
800	4.42	34.49	27.36	1.168
900	4.11	34.54	27.43	1.246
1000	4.04	34.60	27.49	1.318

STATION	50	RP10 RE 78		
	8-10-1978	10	0	GMT
	9 58.50S	28	0.50W	

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.88	36.53	24.24	.000
20	25.89	36.54	24.25	.074
40	25.90	36.54	24.25	.148
60	25.90	36.54	24.25	.222
80	23.74	36.83	25.12	.290
100	22.87	36.81	25.36	.345
120	20.85	36.47	25.67	.396
140	18.96	36.16	25.94	.441
160	16.71	35.80	26.22	.481
180	15.07	35.55	26.40	.516
200	13.57	35.31	26.54	.548
220	12.57	35.23	26.67	.578
240	11.70	35.10	26.74	.606
260	10.76	34.99	26.83	.633
280	10.13	34.92	26.88	.658
300	9.51	34.84	26.93	.682
320	8.89	34.78	26.99	.706
340	8.65	34.76	27.01	.728
360	8.28	34.73	27.04	.750
380	7.96	34.70	27.07	.772
400	7.67	34.68	27.09	.793
450	7.07	34.62	27.13	.845
500	6.63	34.59	27.17	.895
550	6.21	34.56	27.20	.944
600	5.78	34.52	27.22	.991
650	5.39	34.49	27.25	1.037
700	5.06	34.48	27.28	1.082
750	4.74	34.47	27.30	1.125
800	4.43	34.46	27.34	1.167
900	4.08	34.49	27.39	1.247
1000	3.89	34.54	27.46	1.322

STATION	51	RP10 RE 78		
	8-10-1978	23	0	GMT
	11 1. 0S	28	2.10W	

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.45	36.73	24.53	.000
20	25.48	36.75	24.54	.068
40	25.49	36.75	24.54	.137
60	25.31	36.81	24.63	.205
80	24.98	36.89	24.79	.270
100	23.38	36.84	25.23	.330
120	22.51	36.76	25.43	.384
140	20.10	36.30	25.74	.433
160	18.76	36.13	25.97	.477
180	16.53	35.75	26.22	.517
200	14.57	35.49	26.46	.552
220	13.43	35.31	26.56	.583
240	12.48	35.21	26.68	.613
260	11.78	35.12	26.74	.641
280	10.92	35.01	26.82	.668
300	10.20	34.92	26.88	.693
320	9.73	34.87	26.92	.718
340	9.36	34.83	26.95	.742
360	8.85	34.78	26.99	.765
380	8.48	34.75	27.02	.788
400	8.03	34.70	27.05	.810
450	7.07	34.61	27.12	.863
500	6.36	34.55	27.17	.913
550	5.80	34.51	27.21	.961
600	5.48	34.50	27.24	1.007
650	5.22	34.49	27.26	1.052
700	4.94	34.47	27.29	1.096
750	4.64	34.46	27.31	1.139
800	4.41	34.47	27.34	1.181
900	4.10	34.49	27.39	1.261
1000	3.93	34.54	27.45	1.337

STATION	52	RP10 RE 78		
	8-11-1978	4	0	GMT
	11 0.50S	28	46. 0W	

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.74	36.72	24.43	.000
20	25.75	36.72	24.43	.070
40	25.76	36.72	24.43	.141
60	25.77	36.73	24.43	.211
80	25.77	36.74	24.44	.282
100	23.63	36.85	25.17	.347
120	22.78	36.80	25.38	.401
140	21.38	36.56	25.59	.453
160	18.81	36.12	25.94	.498
180	17.34	35.92	26.15	.538
200	15.73	35.67	26.34	.575
220	14.10	35.45	26.53	.609
240	12.93	35.27	26.63	.639
260	12.14	35.17	26.71	.668
280	11.39	35.08	26.79	.695
300	10.70	34.99	26.84	.722
320	10.13	34.92	26.88	.747
340	9.49	34.84	26.94	.771
360	8.91	34.78	26.98	.795
380	8.04	34.69	27.05	.817
400	7.65	34.65	27.07	.839
450	6.82	34.59	27.14	.890
500	6.31	34.55	27.18	.940
550	5.87	34.52	27.21	.988
600	5.54	34.50	27.24	1.034
650	5.20	34.48	27.26	1.079
700	4.87	34.46	27.29	1.123
750	4.67	34.46	27.31	1.167
800	4.49	34.47	27.33	1.209
900	4.16	34.49	27.39	1.290
1000	3.92	34.54	27.45	1.366

STATION 53 RP10 RE 78
8-11-1978 8 0 GMT
11 1.30S 29 31. 0W

Z	TEMP	SAL	SIG-T	DYNHGT
0	25.79	36.50	24.25	.000
20	25.81	36.50	24.25	.074
40	25.80	36.63	24.34	.148
60	25.63	36.90	24.61	.216
80	24.80	36.93	24.88	.281
100	23.13	36.80	25.28	.339
120	22.05	36.68	25.50	.392
140	19.84	36.28	25.80	.440
160	17.09	35.85	26.16	.481
180	15.97	35.69	26.30	.518
200	14.62	35.49	26.45	.552
220	13.58	35.34	26.56	.584
240	12.49	35.20	26.67	.614
260	11.66	35.10	26.75	.642
280	11.05	35.03	26.81	.669
300	10.53	34.97	26.86	.695
320	9.98	34.90	26.90	.720
340	9.36	34.83	26.95	.744
360	8.76	34.77	27.00	.768
380	8.22	34.71	27.04	.790
400	7.87	34.68	27.06	.812
450	7.03	34.60	27.12	.864
500	6.54	34.56	27.16	.914
550	6.04	34.54	27.20	.963
600	5.64	34.51	27.23	1.010
650	5.26	34.48	27.26	1.055
700	4.92	34.47	27.29	1.100
750	4.67	34.47	27.31	1.143
800	4.40	34.47	27.34	1.184
900	4.07	34.49	27.40	1.264
1000	3.88	34.54	27.45	1.339

STATION 54 RP10 RE 78
8-11-1978 16 0 GMT
10 0. 0S 29 30. 0W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.18	36.55	24.16	.000
20	26.08	36.55	24.20	.075
40	26.08	36.55	24.20	.150
60	26.08	36.56	24.21	.225
80	25.65	36.73	24.47	.298
100	24.09	36.87	25.05	.362
120	21.61	36.59	25.55	.417
140	19.33	36.22	25.89	.463
160	16.99	35.81	26.16	.504
180	15.74	35.66	26.33	.541
200	14.56	35.49	26.47	.575
220	13.39	35.27	26.54	.606
240	12.22	35.15	26.68	.636
260	11.40	35.07	26.77	.664
280	10.77	34.97	26.81	.691
300	10.11	34.93	26.90	.716
320	9.56	34.85	26.93	.740
340	8.97	34.80	26.98	.764
360	8.27	34.73	27.04	.786
380	7.83	34.68	27.07	.808
400	7.62	34.66	27.08	.829
450	6.91	34.60	27.13	.881
500	6.38	34.56	27.17	.930
550	5.87	34.51	27.21	.978
600	5.49	34.50	27.24	1.025
650	5.15	34.47	27.26	1.070
700	4.85	34.46	27.28	1.114
750	4.51	34.45	27.32	1.157
800	4.25	34.46	27.35	1.198
900	4.00	34.52	27.43	1.276
1000	3.89	34.59	27.49	1.348

STATION 55 RP10 RE 78
8-11-1978 23 0 GMT
9 1. 0S 29 29.50W

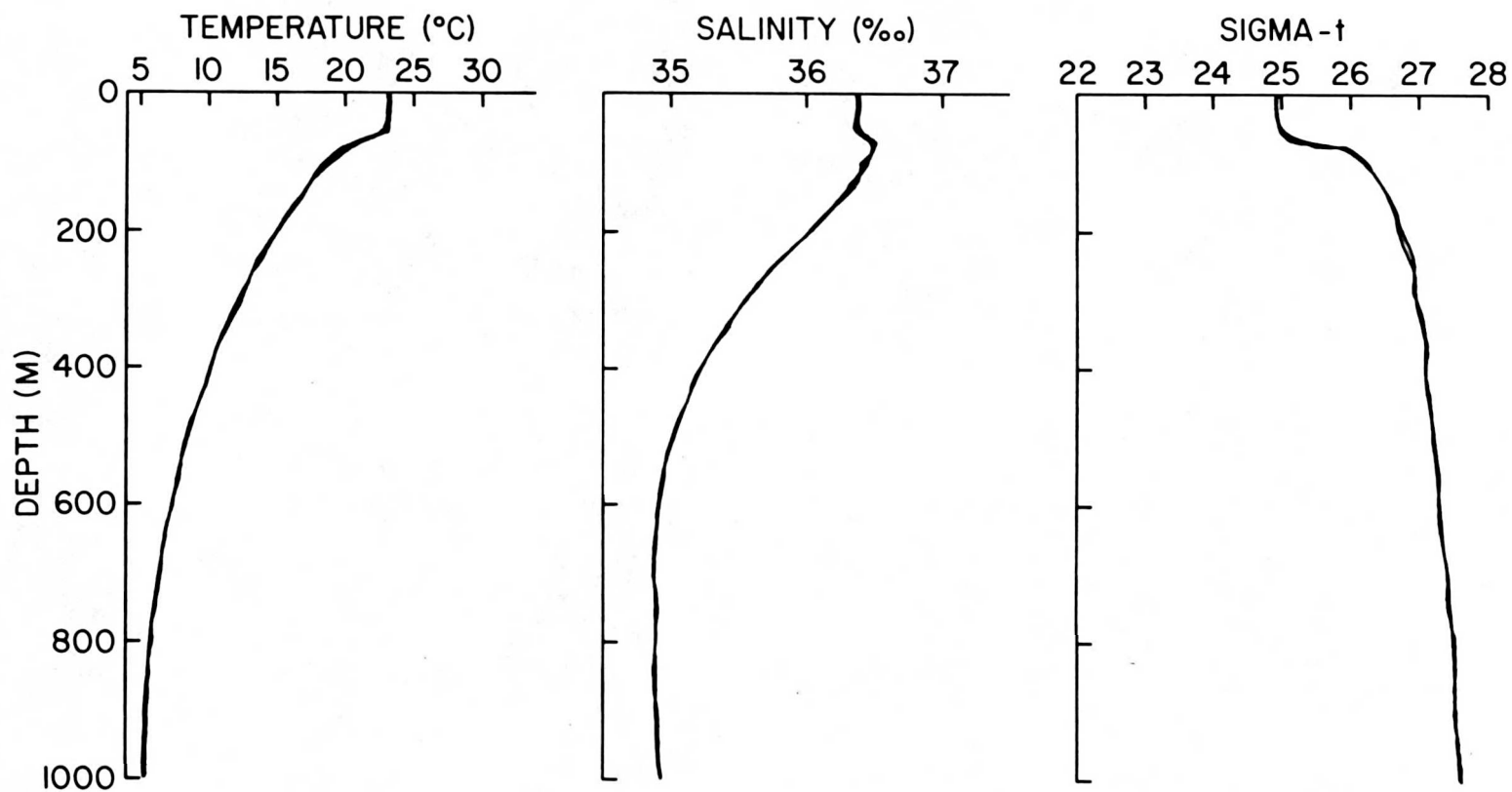
Z	TEMP	SAL	SIG-T	DYNHGT
0	26.32	36.40	24.01	.000
20	26.31	36.40	24.01	.078
40	26.30	36.42	24.03	.157
60	25.90	36.68	24.35	.233
80	23.38	36.82	25.22	.294
100	22.01	36.67	25.50	.347
120	19.60	36.21	25.80	.396
140	17.73	35.97	26.10	.437
160	15.58	35.57	26.29	.475
180	14.10	35.40	26.49	.509
200	13.19	35.31	26.61	.540
220	12.15	35.14	26.69	.569
240	11.42	35.06	26.76	.597
260	10.74	34.99	26.83	.623
280	9.98	34.90	26.89	.648
300	9.11	34.81	26.97	.672
320	8.64	34.76	27.01	.695
340	8.31	34.73	27.03	.717
360	8.08	34.71	27.06	.739
380	7.83	34.69	27.08	.760
400	7.67	34.68	27.10	.781
450	7.18	34.64	27.13	.833
500	6.74	34.60	27.16	.883
550	6.22	34.56	27.20	.931
600	5.78	34.53	27.23	.978
650	5.34	34.50	27.26	1.024
700	5.03	34.48	27.28	1.069
750	4.78	34.49	27.31	1.112
800	4.55	34.49	27.34	1.154
900	4.22	34.51	27.40	1.234
1000	4.06	34.58	27.46	1.308

STATION 56 RP10 RE 78
8-12-1978 11 0 GMT
8 2.50S 29 30.80W

Z	TEMP	SAL	SIG-T	DYNHGT
0	26.37	36.29	23.91	.000
20	26.38	36.29	23.91	.080
40	26.39	36.29	23.91	.161
60	26.40	36.30	23.91	.241
80	26.43	36.40	23.97	.322
100	23.65	36.79	25.12	.389
120	21.83	36.62	25.52	.443
140	20.00	36.25	25.74	.491
160	17.55	35.94	26.12	.534
180	14.93	35.54	26.42	.571
200	13.63	35.39	26.58	.602
220	12.42	35.21	26.69	.632
240	11.67	35.11	26.76	.660
260	10.99	35.04	26.82	.686
280	10.26	34.95	26.89	.712
300	9.56	34.87	26.94	.736
320	9.03	34.82	26.99	.759
340	8.63	34.78	27.02	.781
360	8.20	34.73	27.05	.803
380	8.00	34.72	27.07	.825
400	7.69	34.69	27.09	.846
450	7.19	34.64	27.13	.897
500	6.60	34.59	27.17	.947
550	6.27	34.57	27.20	.995
600	5.75	34.53	27.23	1.042
650	5.42	34.51	27.26	1.087
700	5.03	34.51	27.30	1.131
750	4.75	34.49	27.32	1.174
800	4.44	34.49	27.35	1.215
900	4.14	34.53	27.42	1.294
1000	4.03	34.60	27.48	1.366

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TAMPA 18-19 DECEMBER 1978



Appendix 7

Corrected 9060 listings and temperature, salinity and sigma-t profiles. Depth is in m, temperature in °C and salinity in ‰.

STATION 1 OTECVK7814
6-12-1978 10 0 GMT
27 39.17N 85 32.33W

Z	TEMP	SAL	SIG-T
0	27.90	35.89	23.11
20	26.09	36.28	23.99
40	22.12	36.36	25.23
60	19.71	36.45	25.96
80	18.85	36.40	26.14
100	18.18	36.42	26.33
120	17.65	36.37	26.42
140	17.24	36.34	26.49
160	16.81	36.29	26.56
180	16.09	36.18	26.65
200	15.31	36.09	26.76
220	14.53	35.99	26.85
240	13.96	35.93	26.92
260	13.23	35.84	27.01
280	12.71	35.73	27.03
300	12.17	35.66	27.08
320	11.61	35.61	27.15
340	11.17	35.55	27.18
360	10.53	35.45	27.22
380	10.13	35.37	27.23
400	9.77	35.33	27.26
500	8.35	35.15	27.35
600	7.11	35.01	27.43
700	6.19	34.91	27.47
800	5.64	34.87	27.51

STATION 2 OTECVK7814
6-12-1978 1730 GMT
27 38.17N 85 34.42W

Z	TEMP	SAL	SIG-T
0	28.00	35.68	22.92
20	25.43	36.00	23.98
40	21.70	36.07	25.13
60	19.55	36.27	25.86
80	18.81	36.29	26.07
100	18.06	36.32	26.28
120	17.75	36.32	26.36
140	17.36	36.31	26.44
160	16.69	36.25	26.56
180	15.85	36.13	26.67
200	15.10	36.06	26.78
220	14.43	35.97	26.86
240	13.80	35.87	26.91
260	13.11	35.82	27.02
280	12.55	35.71	27.05
300	12.15	35.62	27.05
320	11.71	35.56	27.09
340	11.31	35.47	27.10
360	10.63	35.39	27.16
380	10.29	35.28	27.13
400	9.91	35.23	27.16

STATION 3 OTECVK7814
6-13-1978 310 GMT
27 37.24N 85 35.14W

Z	TEMP	SAL	SIG-T
0	28.08	35.61	22.84
20	25.13	35.83	23.94
40	20.44	36.19	25.56
60	19.01	36.28	26.01
80	18.22	36.30	26.22
100	17.96	36.35	26.33
120	17.61	36.35	26.41
140	17.04	36.31	26.52
160	16.31	36.22	26.63
180	15.67	36.14	26.71
200	15.02	36.07	26.80
220	14.15	35.98	26.92
240	13.52	35.88	26.98
260	12.87	35.81	27.06
280	12.27	35.69	27.09
300	11.89	35.65	27.13
320	11.39	35.59	27.17
340	11.03	35.47	27.15
360	10.53	35.43	27.21
380	10.13	35.35	27.22
400	9.81	35.30	27.23

STATION 4 OTECVK7814
6-15-1978 2 0 GMT
29 10.52N 87 37.88W

Z	TEMP	SAL	SIG-T
0	28.10	33.72	21.42
20	24.73	35.88	24.10
40	20.04	35.90	25.45
60	18.37	36.21	26.12
80	17.83	36.25	26.28
100	17.40	36.30	26.43
120	16.97	36.29	26.52
140	16.64	36.23	26.55
160	16.29	36.20	26.62
180	15.73	36.15	26.71
200	14.26	36.07	26.97
220	13.71	35.91	26.96
240	13.30	35.82	26.98
260	12.51	35.79	27.12
280	11.85	35.64	27.13
300	11.39	35.55	27.15
320	10.77	35.53	27.24
340	9.99	35.43	27.31
360	9.75	35.35	27.28
380	9.47	35.31	27.30
400	8.99	35.28	27.35
500	7.69	35.10	27.41

STATION 6 OTECVK7814
 6-15-1978 1130 GMT
 29 8.20N 87 38.9W

Z	TEMP	SAL	SIG-T
0	28.34	33.62	21.26
20	24.75	35.91	24.12
40	21.36	36.01	25.18
60	19.09	36.27	25.98
80	18.35	36.35	26.23
100	17.86	36.39	26.38
120	17.49	36.38	26.47
140	17.24	36.37	26.52
160	16.89	36.33	26.58
180	16.21	36.25	26.67
200	15.44	36.12	26.75
220	14.53	36.00	26.86
240	14.06	35.93	26.90
260	13.35	35.84	26.99
280	12.69	35.72	27.03
300	12.33	35.68	27.07
320	11.75	35.60	27.11
340	11.31	35.55	27.16
360	10.93	35.46	27.16
380	10.37	35.42	27.23
400	10.19	35.33	27.19

STATION 1 OTECVK7817
8-19-1978 8 0 GMT
27 38.59N 85 34.3W

Z	TEMP	SAL	SIG-T
0	29.82	36.12	22.64
20	29.29	36.19	22.88
40	25.30	36.27	24.22
60	22.26	36.33	25.17
80	20.31	36.37	25.74
100	19.62	36.43	25.96
120	18.58	36.38	26.19
140	17.93	36.34	26.32
160	17.51	36.27	26.38
180	16.88	36.21	26.48
200	16.22	36.14	26.59
220	15.80	36.09	26.64
240	15.14	35.96	26.69
260	14.52	35.89	26.78
280	13.92	35.79	26.83
300	13.48	35.67	26.83
320	12.92	35.58	26.87
340	12.26	35.47	26.91
360	11.72	35.39	26.96
380	11.46	35.38	27.00
400	11.00	35.28	27.01
500	9.24	35.09	27.16
600	7.68	34.96	27.31
700	6.68	34.89	27.39

STATION 2 OTECVK7817
8-19-1978 1430 GMT
27 38.51N 85 34.91W

Z	TEMP	SAL	SIG-T
0	29.70	36.11	22.68
20	29.31	36.29	22.95
40	25.42	36.40	24.29
60	22.08	36.35	25.24
80	20.07	36.38	25.81
100	19.22	36.36	26.01
120	18.44	36.34	26.20
140	18.01	36.30	26.27
160	17.53	36.24	26.35
180	16.92	36.14	26.42
200	16.24	36.02	26.49
220	15.54	35.89	26.55
240	14.90	35.82	26.64

STATION 3 OTECVK7817
8-19-1978 2217 GMT
27 38.97N 85 34.31W

Z	TEMP	SAL	SIG-T
0	29.93	36.09	22.58
20	29.40	36.25	22.88
40	25.62	36.37	24.20
60	22.69	36.39	25.09
80	20.57	36.38	25.67
100	19.52	36.43	25.99
120	18.64	36.40	26.19
140	18.19	36.39	26.30
160	17.67	36.33	26.39
180	17.02	36.27	26.50
200	16.50	36.18	26.55
220	15.90	36.13	26.65
240	15.32	35.99	26.67
260	14.40	35.88	26.80
280	14.12	35.81	26.80
300	13.66	35.72	26.83
320	13.08	35.59	26.84
340	12.54	35.56	26.93
360	12.00	35.47	26.97
380	11.50	35.41	27.02
400	11.10	35.37	27.06
500	9.30	35.14	27.19
600	7.98	34.98	27.28
700	6.68	34.90	27.40
800	5.96	34.88	27.48
900	5.60	34.86	27.51

STATION 4 OTECVK7817
8-20-1978 150 GMT
27 38.59N 85 34.3W

Z	TEMP	SAL	SIG-T
0	29.75	36.04	22.61
20	29.22	36.18	22.89
40	24.64	36.24	24.40
60	22.12	36.37	25.24
80	20.27	36.35	25.73
100	19.22	36.35	26.01
120	18.48	36.34	26.19
140	17.97	36.33	26.31
160	17.35	36.31	26.45
180	16.74	36.28	26.57
200	16.34	36.21	26.61
220	15.86	36.17	26.69
240	15.20	36.07	26.76
260	14.46	36.03	26.90
280	13.92	35.86	26.88
300	13.46	35.77	26.91
320	12.88	35.70	26.97
340	12.32	35.59	27.00
360	11.70	35.50	27.05
380	11.22	35.40	27.06
400	10.80	35.35	27.10
500	9.06	35.12	27.22
600	7.64	34.98	27.33
700	6.52	34.90	27.42
800	5.94	34.88	27.48
900	5.54	34.85	27.51

STATION 5 OTECVK7817
8-20-1978 540 GMT
27 36.66N 85 34.23W

Z	TEMP	SAL	SIG-T
0	29.92	36.07	22.57
20	29.40	36.19	22.84
40	25.32	36.35	24.28
60	22.10	36.36	25.24
80	20.05	36.35	25.79
100	19.38	36.43	26.03
120	18.50	36.36	26.20
140	17.86	36.34	26.34
160	17.21	36.28	26.46
180	16.68	36.21	26.53
200	16.22	36.15	26.59
220	15.54	36.06	26.68
240	15.00	35.96	26.72
260	14.36	35.86	26.79
280	13.78	35.77	26.84
300	13.30	35.69	26.88
320	12.76	35.57	26.89
340	12.22	35.49	26.94
360	11.74	35.43	26.99
380	11.30	35.37	27.02
400	10.80	35.28	27.04
500	9.08	35.10	27.20
600	7.54	34.95	27.32
700	6.62	34.88	27.39
800	5.94	34.88	27.48

STATION 6 OTECVK7817
8-20-1978 850 GMT
27 36.10N 85 34.28W

Z	TEMP	SAL	SIG-T
0	29.76	36.17	22.70
20	29.27	36.20	22.89
40	24.28	36.35	24.59
60	21.69	36.38	25.37
80	19.65	36.37	25.91
100	18.98	36.44	26.14
120	18.24	36.39	26.29
140	17.62	36.37	26.43
160	17.11	36.31	26.51
180	16.42	36.26	26.63
200	15.92	36.16	26.67
220	15.28	36.05	26.73
240	14.86	35.94	26.74
260	14.06	35.84	26.84
280	13.60	35.79	26.90
300	13.06	35.68	26.92
320	12.48	35.57	26.95
340	12.08	35.52	26.99
360	11.56	35.45	27.04
380	11.18	35.37	27.04
400	10.68	35.32	27.10
500	8.76	35.08	27.23
600	7.34	34.96	27.35
700	6.44	34.87	27.41
800	5.74	34.85	27.48
900	5.10	34.80	27.52

STATION 7 OTECVK7817
8-20-1978 1525 GMT
27 40.20N 85 32.10W

Z	TEMP	SAL	SIG-T
0	29.93	36.19	22.66
20	29.05	36.23	22.99
40	24.60	36.35	24.50
60	21.43	36.37	25.43
80	20.01	36.39	25.83
100	19.06	36.37	26.06
120	18.44	36.40	26.24
140	17.86	36.32	26.33
160	17.15	36.29	26.48
180	16.70	36.25	26.56
200	16.12	36.16	26.62
220	15.52	36.06	26.68
240	14.72	35.94	26.77
260	14.28	35.85	26.80
280	13.82	35.80	26.86
300	13.30	35.67	26.86
320	12.74	35.62	26.94
340	12.24	35.55	26.98
360	11.72	35.47	27.02
380	11.32	35.37	27.02
400	10.70	35.34	27.11
500	8.82	35.10	27.24
600	7.64	34.97	27.32
700	6.48	34.88	27.41
800	5.72	34.85	27.49
900	5.38	34.84	27.52

STATION 8 OTECVK7817
8-22-1978 230 GMT
29 13.20N 87 38.40W

Z	TEMP	SAL	SIG-T
0	30.55	35.46	21.90
20	29.53	36.29	22.87
40	24.10	36.31	24.62
60	21.28	36.37	25.47
80	19.37	36.40	26.01
100	18.26	36.35	26.25
120	17.62	36.32	26.39
140	16.89	36.26	26.52
160	16.23	36.12	26.57
180	15.35	36.02	26.69

STATION 9 OTECVK7817
8-22-1978 1032 GMT
29 10.30N 87 37.70W

Z	TEMP	SAL	SIG-T
0	30.45	35.21	21.74
20	29.87	36.25	22.73
40	24.86	36.34	24.41
60	20.99	36.37	25.55
80	19.25	36.28	25.95
100	18.06	36.28	26.25
120	17.82	36.26	26.29
140	17.53	36.22	26.33
160	16.79	36.10	26.42
180	15.76	35.98	26.57
200	14.92	35.87	26.69
220	14.26	35.76	26.73
240	13.58	35.68	26.81
260	12.84	35.58	26.89
280	12.24	35.49	26.94
300	11.64	35.41	26.99
320	11.22	35.34	27.01
340	10.98	35.30	27.03
360	10.70	35.21	27.01
380	10.34	35.19	27.06
400	9.94	35.18	27.12
500	8.48	34.99	27.21
600	7.40	34.90	27.30
700	6.68	34.88	27.38
800	6.10	34.87	27.45
900	5.70	34.88	27.51

STATION 10 OTECVK7817
8-22-1978 1438 GMT
29 12.0N 87 35.62W

Z	TEMP	SAL	SIG-T
0	30.55	35.22	21.72
20	30.18	36.20	22.58
40	24.50	36.34	24.52
60	20.97	36.37	25.56
80	19.49	36.35	25.94
100	18.28	36.34	26.24
120	17.84	36.31	26.33
140	17.47	36.30	26.41
160	16.83	36.18	26.48
180	15.90	36.05	26.59
200	15.06	35.93	26.69
220	14.32	35.81	26.76
240	13.38	35.69	26.86
260	12.72	35.63	26.95
280	12.30	35.52	26.95
300	11.88	35.46	26.98
320	11.44	35.41	27.03
340	10.94	35.35	27.07
360	10.62	35.28	27.08
380	10.22	35.24	27.12
400	9.88	35.19	27.13
500	8.34	35.03	27.26
600	7.26	34.94	27.35
700	6.48	34.88	27.41
800	5.90	34.87	27.48
900	5.52	34.86	27.52

STATION 11 OTECVK7817
8-22-1978 2117 GMT
29 10.70N 87 34.96W

Z	TEMP	SAL	SIG-T
0	30.53	35.27	21.76
20	29.70	36.27	22.79
40	25.66	36.45	24.25
60	21.43	36.42	25.47
80	19.75	36.37	25.89
100	18.34	36.34	26.22
120	17.90	36.29	26.30
140	17.49	36.26	26.37
160	16.83	36.19	26.48
180	15.90	36.09	26.62
200	14.90	35.91	26.71
220	14.20	35.79	26.77
240	13.56	35.70	26.83
260	12.90	35.60	26.89
280	12.42	35.54	26.94
300	12.04	35.43	26.93
320	11.36	35.34	26.99
340	10.92	35.31	27.04
360	10.62	35.22	27.03
380	10.24	35.18	27.06
400	9.88	35.13	27.09
500	8.50	34.98	27.20
600	7.44	34.90	27.29
700	6.60	34.88	27.39
800	6.08	34.85	27.44
900	5.70	34.81	27.46

STATION 12 OTECVK7817
8-23-1978 130 GMT
29 10.51N 87 37.79W

Z	TEMP	SAL	SIG-T
0	30.33	35.66	22.12
20	29.35	36.20	22.86
40	25.00	36.32	24.35
60	20.95	36.35	25.55
80	19.63	36.31	25.87
100	18.26	36.28	26.20
120	17.78	36.25	26.29
140	17.43	36.20	26.34
160	16.51	36.10	26.49
180	15.80	35.97	26.55
200	14.92	35.85	26.66
220	14.10	35.77	26.77
240	13.46	35.69	26.84
260	13.04	35.59	26.86
280	12.40	35.48	26.90
300	11.92	35.43	26.95
320	11.32	35.35	27.00
340	10.62	35.30	27.09
360	10.62	35.25	27.05
380	10.32	35.21	27.07
400	9.96	35.15	27.09
500	8.48	34.98	27.20
600	7.54	34.91	27.29
700	6.66	34.86	27.37
800	6.10	34.85	27.44
900	5.70	34.84	27.48

STATION 13 OTECVK7817
8-23-1978 538 GMT
29 10.73N 87 36.19W

Z	TEMP	SAL	SIG-T
0	30.50	35.64	22.05
20	29.53	36.19	22.80
40	25.28	36.34	24.28
60	21.34	36.37	25.46
80	19.83	36.39	25.88
100	18.40	36.32	26.19
120	17.92	36.30	26.30
140	17.55	36.22	26.33
160	16.87	36.09	26.40
180	16.07	36.03	26.54
200	15.10	35.92	26.67
220	14.46	35.81	26.73
240	13.72	35.73	26.82
260	13.12	35.61	26.86
280	12.38	35.52	26.93
300	12.04	35.43	26.93
320	11.48	35.38	26.99
340	11.06	35.32	27.02
360	10.74	35.26	27.04
380	10.36	35.20	27.06
400	10.16	35.18	27.08
500	8.62	35.01	27.20
600	7.58	34.93	27.30
700	6.74	34.97	27.45
800	6.26	34.93	27.48
900	5.82	34.93	27.54

STATION 14 OTECVK7817
8-23-1978 917 GMT
29 10.98N 87 35.83W

Z	TEMP	SAL	SIG-T
0	30.37	35.58	22.05
20	29.66	36.28	22.82
40	24.12	36.31	24.61
60	21.28	36.38	25.48
80	19.67	36.35	25.89
100	18.40	36.32	26.19
120	17.84	36.30	26.32
140	17.47	36.27	26.38
160	16.93	36.16	26.44
180	16.09	36.05	26.55
200	15.20	35.95	26.67
220	14.48	35.83	26.74
240	13.60	35.73	26.84
260	12.90	35.59	26.89
280	12.30	35.53	26.96
300	11.88	35.46	26.98
320	11.28	35.38	27.03
340	10.90	35.33	27.06
360	10.52	35.26	27.08
380	10.22	35.21	27.09
400	9.76	35.15	27.12
500	8.48	35.02	27.23
600	7.44	34.93	27.32
700	6.68	34.89	27.39
800	6.12	34.85	27.43
900	5.70	34.85	27.49

STATION 15 OTECVK7817
8-23-1978 1328 GMT
29 11.29N 87 38.13W

Z	TEMP	SAL	SIG-T
0	30.56	35.68	22.06
20	29.77	36.30	22.80
40	25.30	36.41	24.33
60	21.34	36.34	25.43
80	19.59	36.37	25.93
100	18.46	36.31	26.17
120	17.98	36.27	26.26
140	17.51	36.17	26.30
160	17.03	36.07	26.34
180	16.16	35.96	26.46
200	15.26	35.86	26.59
220	14.50	35.75	26.67
240	13.50	35.60	26.76
260	12.88	35.49	26.81
280	12.42	35.41	26.84

STATION 1
10-26-1978
27 39.14N

OTECVK7820
1137 GMT
85 32.48W

Z	TEMP	SAL	SIG-T
0	25.67	35.97	23.88
20	25.56	36.19	24.09
40	25.32	36.37	24.29
60	20.80	36.39	25.62
80	19.78	36.42	25.92
100	18.57	36.41	26.22
120	17.80	36.34	26.36
140	17.20	36.28	26.46
160	16.38	36.14	26.55
180	15.33	36.07	26.74
200	14.57	35.92	26.79
220	13.83	35.84	26.88
240	13.48	35.78	26.91
260	13.01	35.71	26.96
280	12.38	35.57	26.97
300	11.95	35.54	27.03
320	11.40	35.41	27.03
340	11.02	35.36	27.06
360	10.73	35.32	27.09
380	10.32	35.24	27.10
400	9.92	35.19	27.13
500	8.44	35.03	27.25
600	7.28	34.92	27.33
700	6.45	34.86	27.40

STATION 2
10-28-1978
27 40.7N

OTECVK7820
16 2 GMT
85 31.60W

Z	TEMP	SAL	SIG-T
0	25.40	35.71	23.77
20	25.33	36.01	24.02
40	25.05	36.35	24.36
60	21.37	36.52	25.56
80	19.62	36.47	26.00
100	18.19	36.43	26.33
120	17.23	36.32	26.48
140	16.28	36.13	26.56
160	15.14	36.07	26.74
180	14.64	36.00	26.83
200	14.12	35.91	26.88
220	13.48	35.81	26.93
240	12.93	35.74	26.99
260	12.58	35.72	27.05
280	11.98	35.57	27.05
300	11.53	35.47	27.06
320	11.18	35.43	27.09
340	10.74	35.36	27.12
360	10.38	35.30	27.13
380	10.08	35.24	27.14
400	9.77	35.20	27.16
500	8.38	35.06	27.28
600	7.32	34.93	27.33
700	6.42	34.87	27.41

STATION 3
10-28-1978
27 40.59N

OTECVK7820
1832 GMT
85 34.21W

Z	TEMP	SAL	SIG-T
0	25.42	35.75	23.79
20	25.35	36.21	24.16
40	25.08	36.35	24.35
60	21.78	36.48	25.42
80	19.62	36.48	26.00
100	18.30	36.39	26.27
120	17.17	36.34	26.51
140	16.35	36.12	26.54
160	15.31	36.01	26.70
180	14.39	35.91	26.82
200	13.92	35.83	26.86
220	13.46	35.74	26.88

STATION 4
10-29-1978
27 40.71N

OTECVK7820
112 GMT
85 35.99W

Z	TEMP	SAL	SIG-T
0	25.55	35.80	23.79
20	25.40	36.20	24.14
40	24.20	36.43	24.68
60	20.80	36.47	25.68
80	18.83	36.48	26.21
100	17.65	36.38	26.43
120	16.72	36.24	26.54
140	15.97	36.11	26.62
160	14.95	36.01	26.78
180	14.35	35.94	26.85
200	13.87	35.85	26.88
220	13.20	35.76	26.95
240	12.68	35.68	26.99
260	11.97	35.58	27.06
280	11.50	35.50	27.09
300	11.15	35.44	27.10
320	10.78	35.35	27.10
340	10.35	35.30	27.14
360	10.18	35.21	27.10
380	9.73	35.18	27.15
400	9.30	35.12	27.18
500	7.92	34.96	27.27
600	6.95	34.90	27.36
700	6.18	34.86	27.43

STATION 5 OTECVK7820
10-29-1978 315 GMT
27 40.56N 85 32.11W

Z	TEMP	SAL	SIG-T
0	25.52	35.72	23.74
20	25.33	36.19	24.16
40	25.05	36.29	24.32
60	20.78	36.47	25.69
80	19.06	36.35	26.05
100	18.12	36.38	26.31
120	17.25	36.30	26.46
140	16.40	36.21	26.59
160	15.55	36.09	26.70
180	14.33	35.93	26.85
200	13.78	35.84	26.89
220	13.30	35.78	26.95
240	12.75	35.69	26.99
260	12.30	35.58	27.00
280	12.00	35.57	27.05
300	11.41	35.45	27.06
320	11.02	35.38	27.08
340	10.68	35.36	27.12
360	10.37	35.32	27.15
380	9.98	35.20	27.13
400	9.65	35.19	27.17
500	8.18	35.03	27.29
600	7.08	34.93	27.37
700	6.32	34.87	27.42

STATION 6 OTECVK7820
10-30-1978 21 5 GMT
29 9.72N 87 38.78W

Z	TEMP	SAL	SIG-T
0	25.60	35.92	23.87
20	25.58	35.96	23.91
40	25.45	36.22	24.02
60	21.81	36.42	25.36
80	19.65	36.45	25.97
100	18.47	36.45	26.28
120	17.70	36.36	26.40
140	17.19	36.39	26.54
160	16.57	36.26	26.60
180	15.97	36.17	26.67
200	15.28	36.09	26.76
220	14.80	36.01	26.81
240	14.38	35.94	26.84
260	13.94	35.88	26.90
280	13.48	35.79	26.92
300	13.10	35.70	26.93
320	12.58	35.63	26.98
340	11.96	35.51	27.00
360	11.38	35.40	27.03

STATION 7 OTECVK7820
10-31-1978 1 0 GMT
29 9.71N 87 38.49W

Z	TEMP	SAL	SIG-T
0	25.70	35.97	23.87
20	25.72	36.04	23.92
40	25.93	36.21	23.98
60	21.49	36.39	25.46
80	19.53	36.36	25.94
100	18.48	36.33	26.18
120	17.70	36.31	26.36
140	17.15	36.24	26.44
160	16.63	36.12	26.48
180	16.02	36.06	26.57
200	15.26	35.97	26.67
220	14.78	35.88	26.71
240	14.23	35.80	26.77
260	13.80	35.75	26.82
280	13.33	35.68	26.87
300	12.95	35.53	26.83
320	12.40	35.48	26.90
340	11.73	35.39	26.95
360	11.30	35.33	26.99
380	10.90	35.29	27.03
400	10.45	35.20	27.04
500	8.58	35.04	27.23
600	7.42	34.92	27.31
700	6.53	34.85	27.38

STATION 8 OTECVK7820
10-31-1978 355 GMT
29 9.94N 87 38.70W

Z	TEMP	SAL	SIG-T
0	25.60	36.00	23.93
20	25.62	36.02	23.94
40	25.70	36.20	24.05
60	22.83	36.39	25.05
80	19.93	36.46	25.91
100	18.61	36.46	26.25
120	18.08	36.38	26.32
140	17.07	36.33	26.53
160	16.50	36.28	26.63
180	16.01	36.23	26.70
200	15.50	36.15	26.76
220	14.75	36.02	26.82
240	14.29	35.96	26.88
260	13.90	35.91	26.93
280	13.50	35.78	26.91
300	13.10	35.69	26.92
320	12.80	35.60	26.91
340	12.20	35.55	26.99
360	11.70	35.49	27.04
380	11.35	35.41	27.04
400	10.90	35.32	27.06
500	9.00	35.12	27.23
600	7.45	34.96	27.34
700	6.85	34.88	27.36

STATION 9 OTECVK7820
10-31-1978 9 8 GMT
29 9.71N 87 3A.40W

Z	TEMP	SAL	SIG-T
0	25.59	35.89	23.85
20	25.62	35.96	23.89
40	25.68	36.05	23.94
60	21.49	36.40	25.44
80	19.55	36.40	25.96
100	18.47	36.41	26.24
120	17.62	36.34	26.40
140	17.05	36.30	26.51
160	16.58	36.25	26.59
180	16.20	36.18	26.62
200	15.72	36.10	26.67
220	14.95	35.98	26.75
240	14.38	35.88	26.79
260	14.00	35.82	26.84
280	13.52	35.74	26.87
300	13.18	35.70	26.91
320	12.57	35.63	26.98
340	12.08	35.57	27.03
360	11.61	35.48	27.05
380	11.10	35.40	27.08
400	10.77	35.30	27.06
500	8.85	35.08	27.22
600	7.55	34.99	27.35
700	6.58	34.87	27.39

STATION 10 OTECVK7820
10-31-1978 14 3 GMT
29 9.47N 87 37.33W

Z	TEMP	SAL	SIG-T
0	25.45	35.83	23.85
20	25.53	35.87	23.85
40	25.60	36.05	23.97
60	22.67	36.40	25.10
80	20.15	36.39	25.79
100	18.92	36.39	26.11
120	17.75	36.35	26.38
140	17.37	36.32	26.45
160	16.76	36.25	26.55
180	16.05	36.19	26.66
200	15.55	36.07	26.69
220	14.98	36.01	26.77
240	14.48	35.92	26.80
260	13.82	35.84	26.89
280	13.40	35.74	26.90
300	13.12	35.70	26.92
320	12.51	35.60	26.97
340	11.95	35.50	27.00
360	11.53	35.41	27.01
380	11.00	35.35	27.06
400	10.62	35.35	27.13
500	8.85	35.07	27.21
600	7.53	34.94	27.31
700	6.60	34.88	27.39

STATION 11 OTECVK7820
11- 1-1978 3 0 GMT
29 9. 6N 87 40.34W

Z	TEMP	SAL	SIG-T
0	25.45	35.79	23.82
20	25.53	35.83	23.82
40	25.54	35.98	23.93
60	22.10	36.44	25.30
80	19.70	36.33	25.87
100	18.67	36.36	26.16
120	17.59	36.28	26.36
140	16.97	36.24	26.48
160	16.50	36.12	26.51
180	15.87	36.11	26.65
200	15.50	36.02	26.66
220	14.68	35.91	26.75
240	14.23	35.89	26.83
260	13.88	35.83	26.87
280	13.50	35.73	26.87
300	12.94	35.63	26.91
320	12.70	35.57	26.91
340	12.10	35.50	26.97
360	11.54	35.41	27.01
380	11.19	35.36	27.03
400	10.70	35.33	27.10
500	8.94	35.07	27.20
600	7.45	34.93	27.32
700	6.50	34.87	27.40

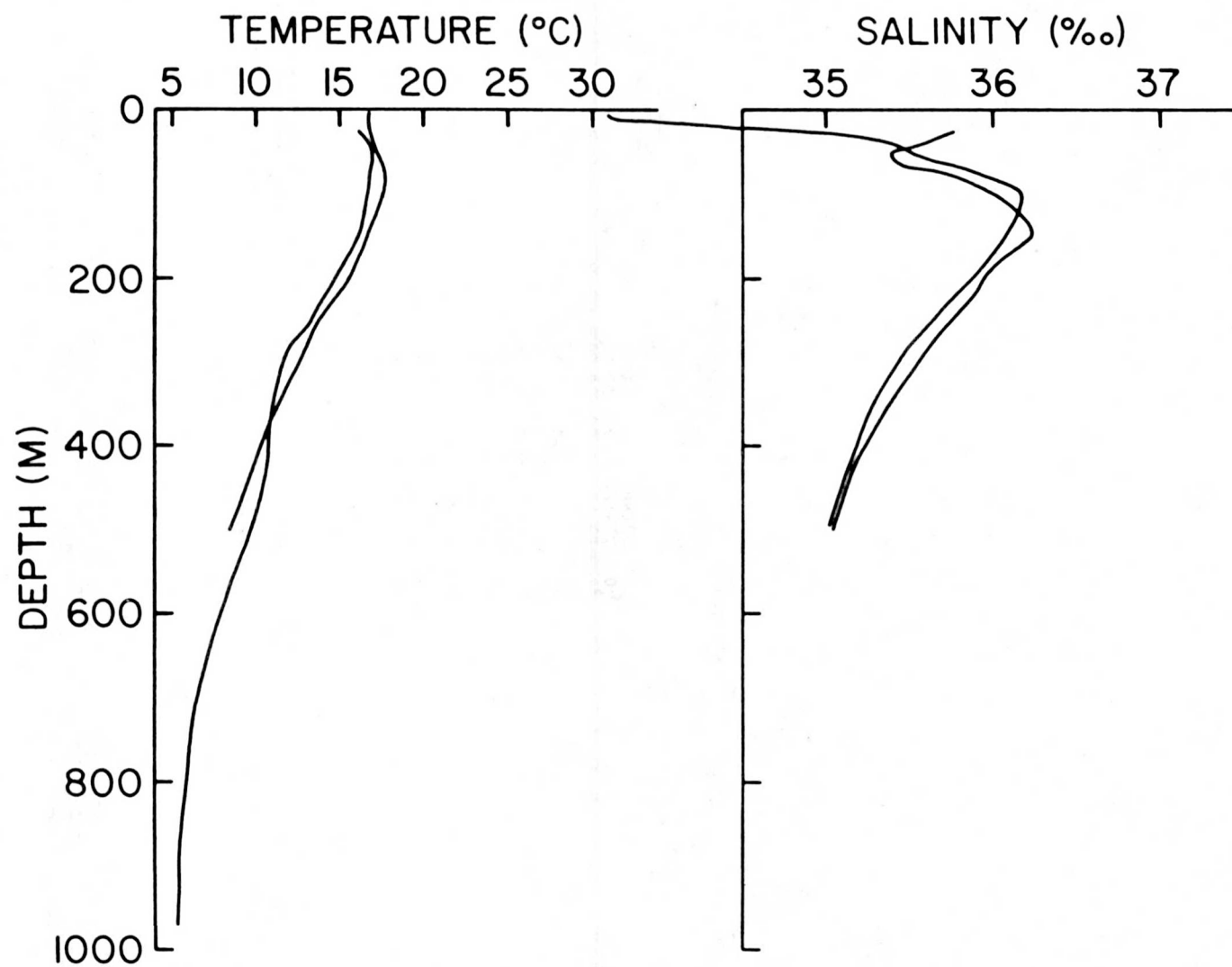
STATION 13 OTECVK7820
11- 1-1978 9 2 GMT
29 9.94N 87 38.32W

Z	TEMP	SAL	SIG-T
0	24.85	35.76	23.98
20	25.52	35.91	23.89
40	25.53	35.88	23.86
60	24.78	36.02	24.20
80	20.53	36.32	25.64
100	18.00	36.40	26.13
120	17.73	36.39	26.41
140	17.26	36.31	26.46
160	16.50	36.29	26.64
180	15.63	36.21	26.78
200	15.25	36.07	26.75
220	15.04	36.01	26.75
240	14.74	35.98	26.79
260	14.22	35.90	26.85
280	13.89	35.92	26.94
300	13.30	35.77	26.94
320	12.93	35.67	26.94
340	12.33	35.60	27.00
360	11.80	35.50	27.03
380	11.33	35.43	27.06
400	10.80	35.35	27.10
500	9.08	35.12	27.21
600	7.70	34.95	27.29
700	6.75	34.92	27.41

STATION 14 OTECVK7820
 11- 2-1978 21 0 GMT
 29 7.20N 87 36.92W

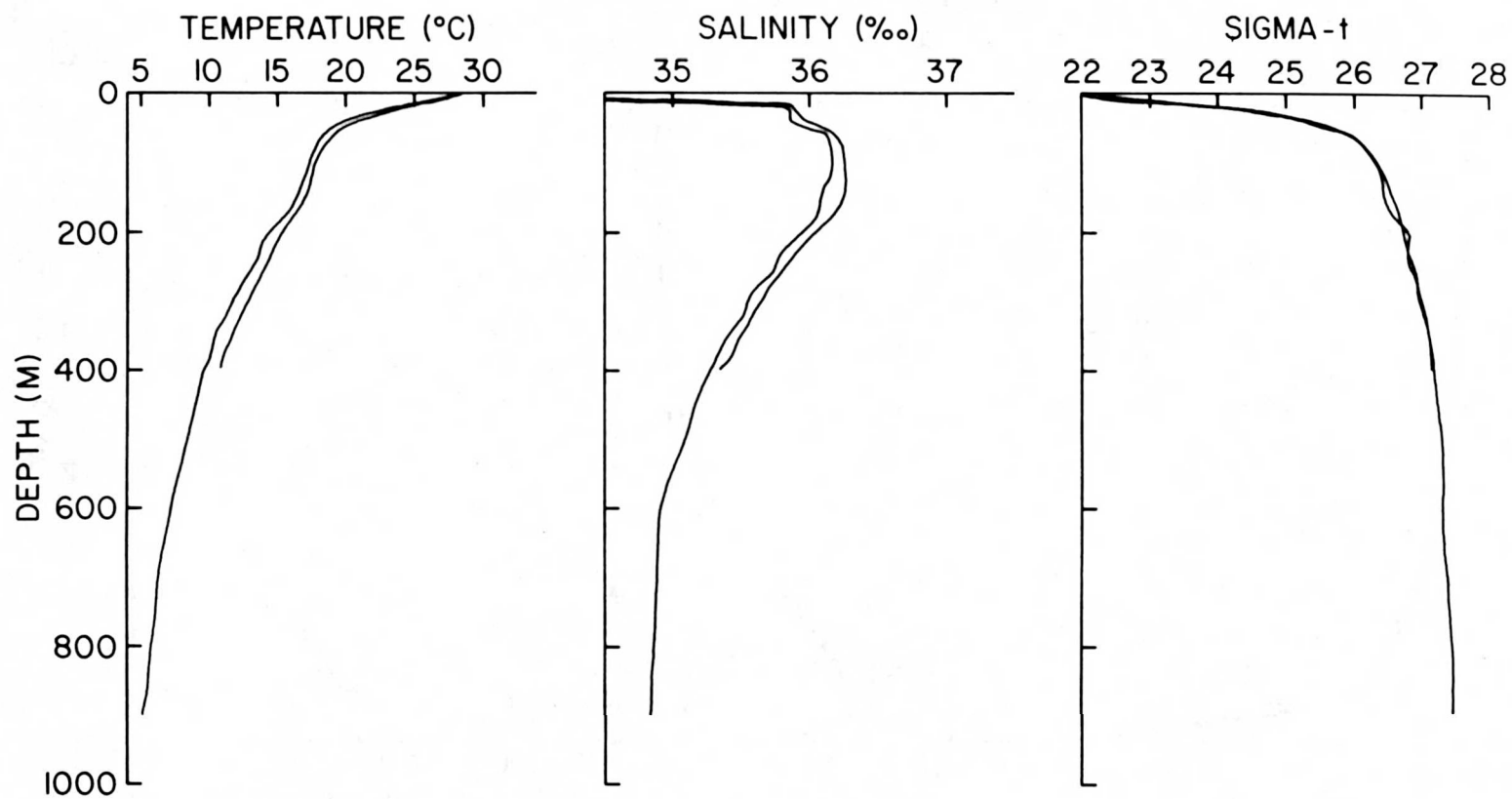
Z	TEMP	SAL	SIG-T
0	25.15	35.55	23.73
20	25.61	36.00	23.93
40	25.65	36.12	24.00
60	22.47	36.35	25.12
80	19.80	36.39	25.89
100	18.25	36.36	26.26
120	17.45	36.33	26.44
140	16.87	36.29	26.54
160	16.27	36.17	26.60
180	15.75	36.08	26.65
200	15.09	36.03	26.76
220	14.42	35.94	26.83
240	13.80	35.81	26.86

MOBILE 28 FEBRUARY - 2 MARCH 1978

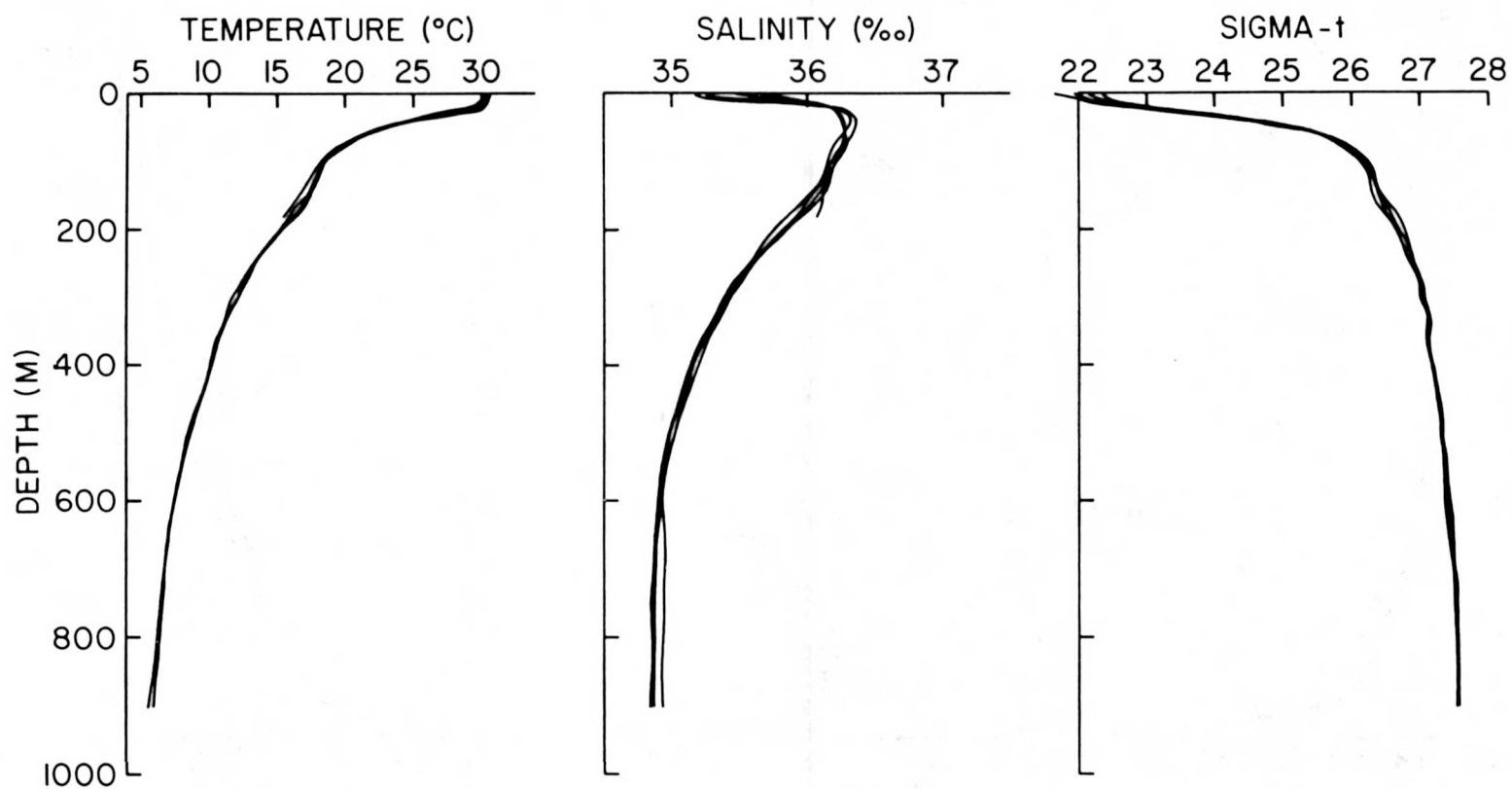


7-13

MOBILE 15 JUNE 1978

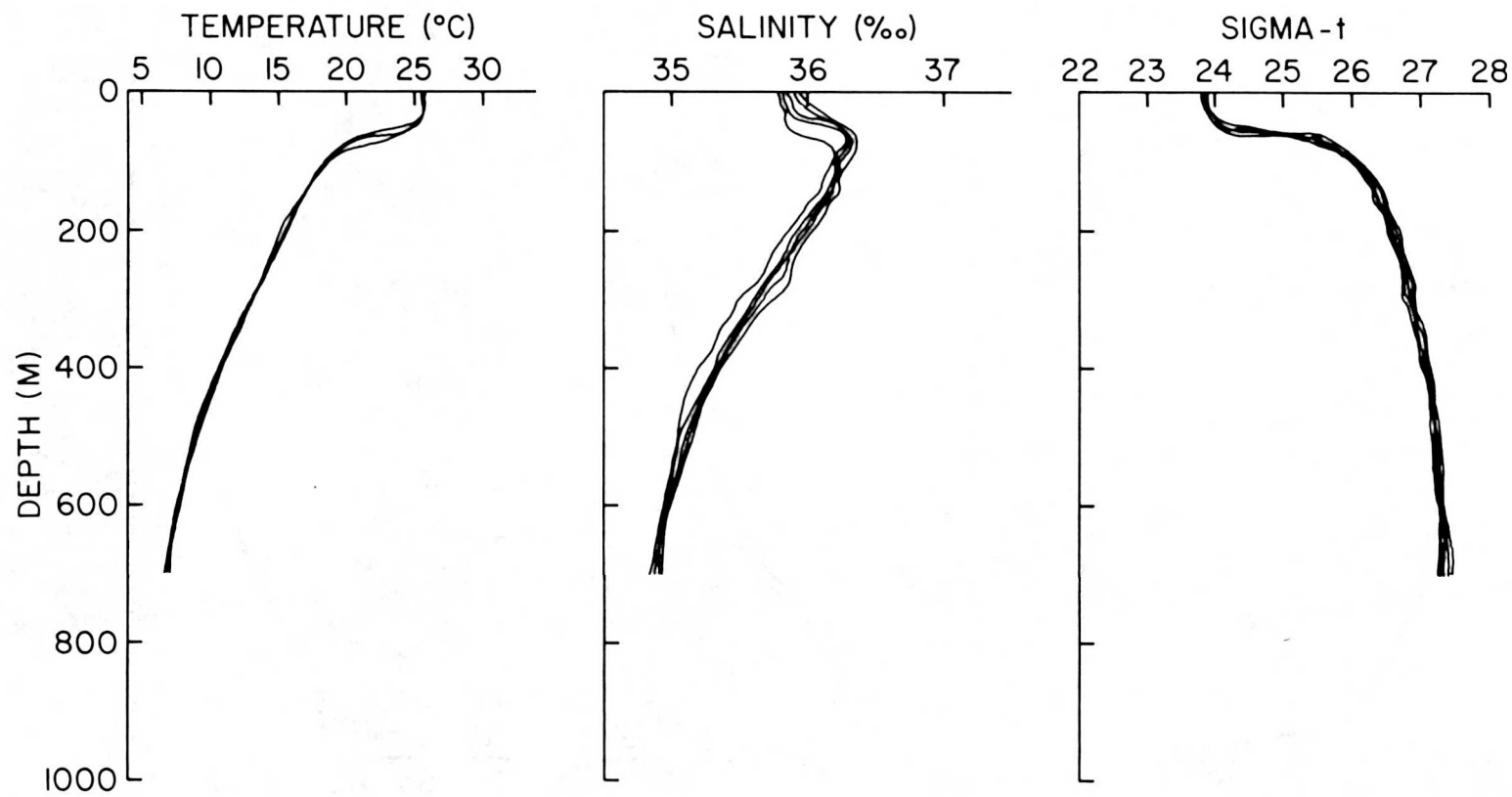


MOBILE 22, 23 AUGUST 1978

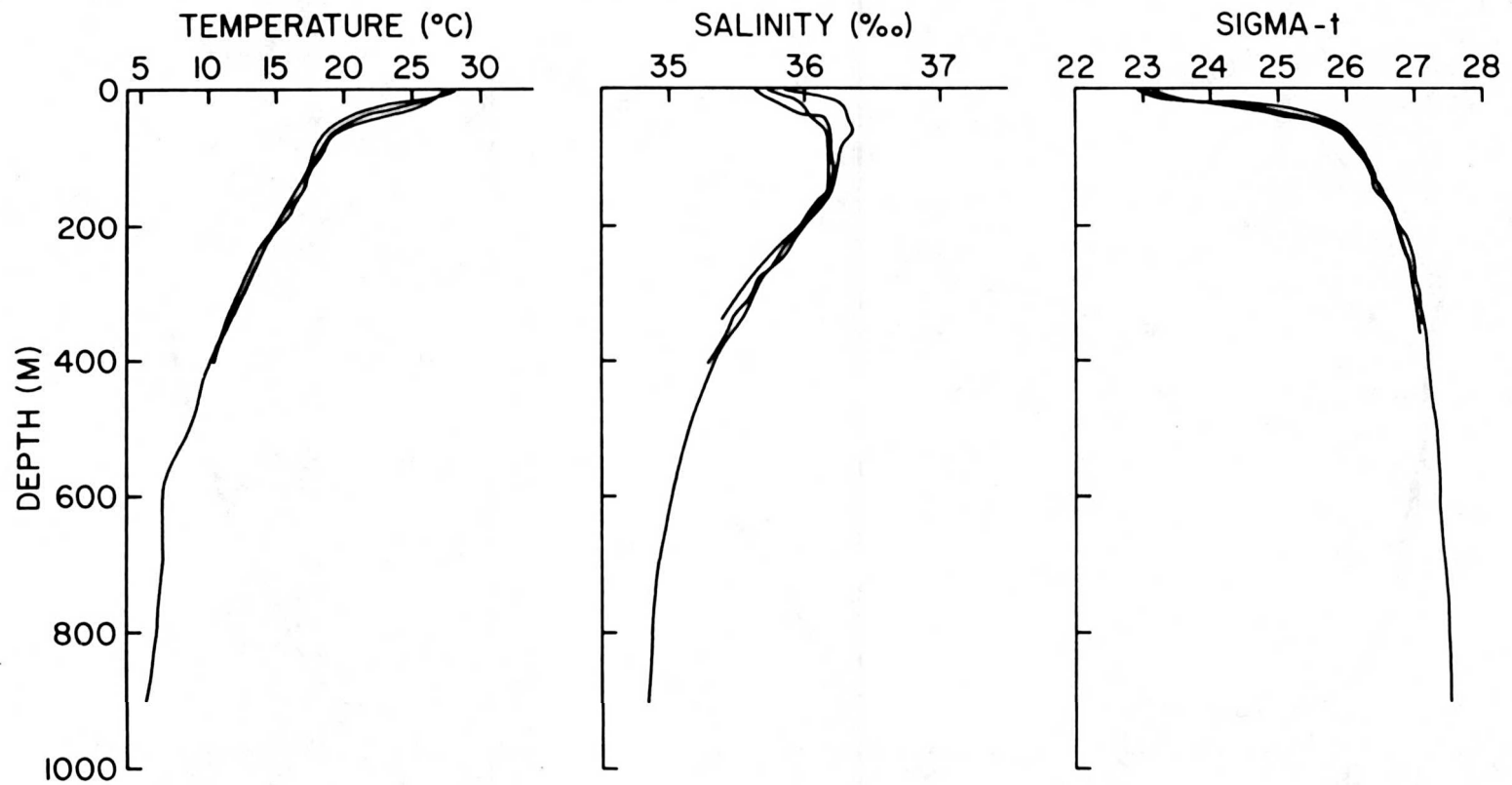


7-15

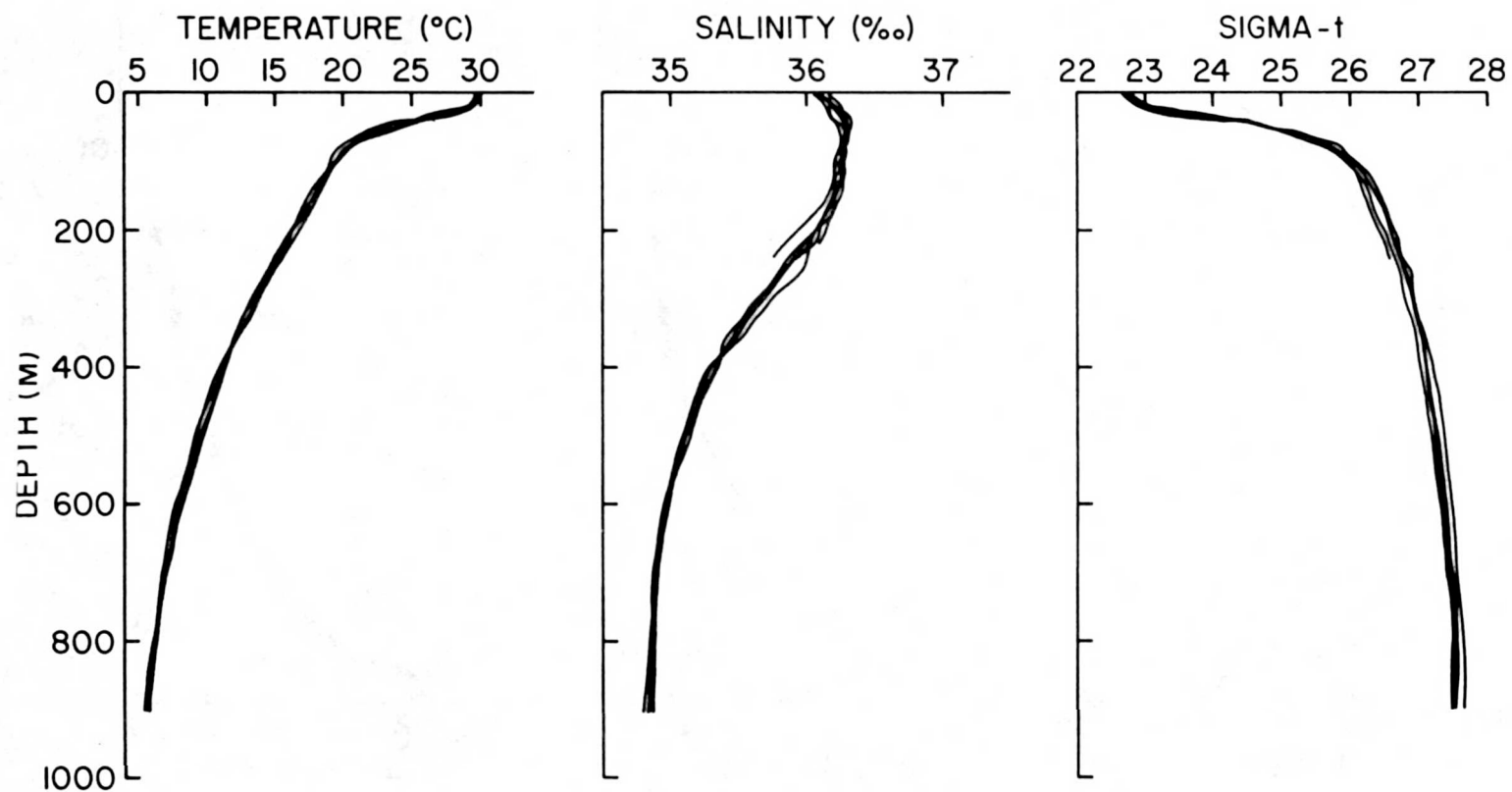
MOBILE OCTOBER 1978



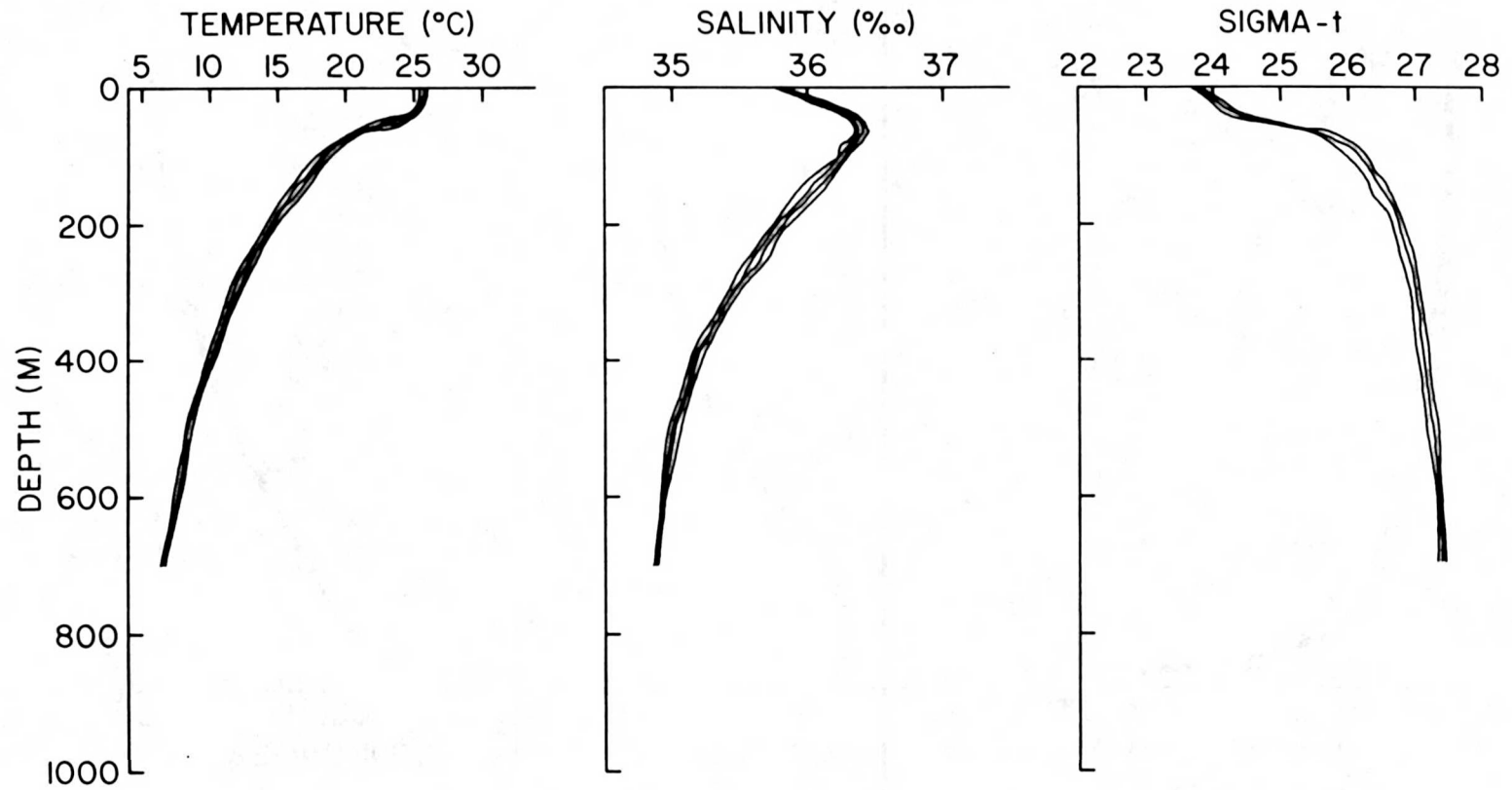
TAMPA 12, 13 JUNE 1978



TAMPA 19, 20 AUGUST 1978



TAMPA OCTOBER 1978



Appendix 8

Cyclesonde listings and plots. Also given are the ship drift corrections applied to the data, taken as the uncorrected mean velocity of the bottom 30 m of a 500 m cast. Average ship-drift values are also given but are of insufficient precision to use as ship-drift corrections. Depth is in m, and speed components in cm/sec.

Station 1

25 July 1978, 2150Z

3 01'S

28 46'W

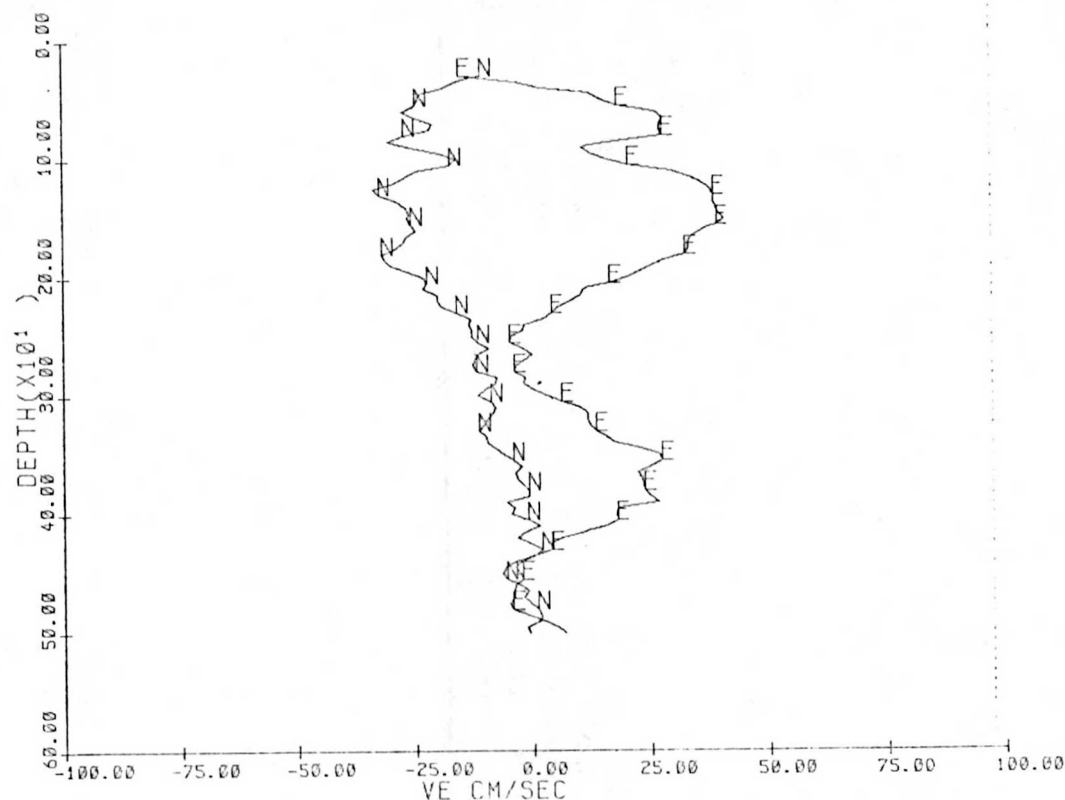
East correction = 19.61 cm/sec

North correction = 42.94 cm/sec

East ship drift = -27.3 cm/sec

North ship drift = -46.8 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
30.00	18.67	234.78	-15.25	-10.76
40.00	18.74	172.81	2.35	-18.59
50.00	28.26	147.91	15.01	-23.94
60.00	37.87	135.95	26.33	-27.22
70.00	34.31	127.55	27.20	-20.91
80.00	38.68	134.05	27.80	-26.89
90.00	27.65	157.39	10.63	-25.53
100.00	22.69	134.71	16.12	-15.96
110.00	38.48	129.36	29.75	-24.40
120.00	46.19	128.92	35.94	-29.02
130.00	50.23	130.13	38.41	-32.37
140.00	47.22	124.35	38.98	-26.64
150.00	48.59	122.87	40.81	-26.37
160.00	43.54	124.30	35.97	-24.53
170.00	42.87	129.29	33.18	-27.15
180.00	45.42	134.27	32.52	-31.70
190.00	39.07	139.36	25.45	-29.65
200.00	30.63	138.60	20.26	-22.98
210.00	25.50	154.34	11.04	-22.99
220.00	21.75	157.50	8.32	-20.09
230.00	16.59	165.56	4.14	-16.06
240.00	13.37	187.42	-1.73	-13.26
250.00	13.47	199.53	-4.50	-12.69
260.00	9.34	191.41	-1.85	-9.16
270.00	12.38	187.88	-1.70	-12.26
280.00	12.23	197.45	-3.67	-11.66
290.00	7.86	192.04	-1.64	-7.69
300.00	11.97	164.33	3.23	-11.52
310.00	12.89	126.42	10.37	-7.65
320.00	15.00	128.89	11.67	-9.42
330.00	17.51	129.73	13.46	-11.19
340.00	19.89	118.25	17.52	-9.41
350.00	27.70	102.55	27.04	-6.02
360.00	25.39	95.17	25.29	-2.29
370.00	23.58	97.93	23.36	-3.25
380.00	23.79	91.69	23.78	-0.70
390.00	27.29	101.70	26.72	-5.53
400.00	18.37	104.54	17.78	-4.61
410.00	15.75	84.89	15.69	1.40
420.00	6.98	117.01	6.22	-3.17
430.00	4.56	63.67	4.08	2.02
440.00	4.57	212.91	-2.48	-3.84
450.00	7.11	201.74	-2.63	-6.60
460.00	4.37	236.80	-3.66	-2.39
470.00	4.45	243.77	-3.99	-1.97
480.00	4.28	285.02	-4.13	1.11
490.00	2.83	57.55	2.39	1.52
500.00	6.68	95.99	6.64	-0.70



Station 2

26 July 1978, 0330Z

3 32'S

28 46'W

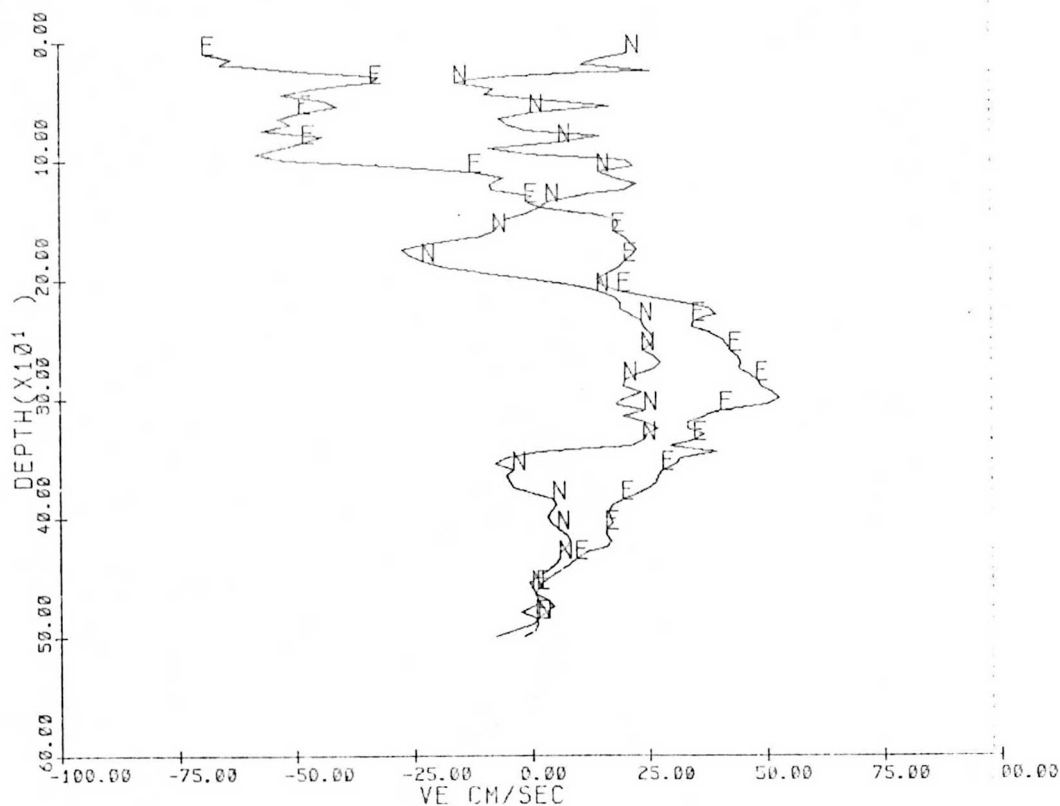
East correction = 10.19 cm/sec

North correction = 11.39 cm/sec

East ship drift = 0

North ship drift = 0

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
10.00	72.47	286.43	-69.51	20.49
20.00	66.85	279.15	-66.00	10.64
30.00	33.12	256.32	-32.18	-7.84
40.00	47.09	260.21	-46.41	-8.01
50.00	43.93	275.63	-43.72	4.31
60.00	48.93	270.02	-48.93	0.02
70.00	51.24	264.13	-50.97	-5.24
80.00	46.57	288.00	-44.29	14.39
90.00	54.27	260.39	-53.51	-9.06
100.00	55.60	291.02	-51.90	19.94
110.00	19.16	317.61	-12.92	14.15
120.00	23.83	338.49	-8.73	22.17
130.00	10.06	0.37	0.07	10.06
140.00	2.65	51.92	2.08	1.63
150.00	18.96	103.00	18.03	-5.86
160.00	19.06	114.83	17.30	-8.00
170.00	29.99	135.83	20.90	-21.51
180.00	33.60	140.73	21.27	-26.01
190.00	26.17	134.79	18.57	-18.44
200.00	13.79	89.10	13.79	0.22
210.00	23.15	53.14	18.53	13.89
220.00	37.25	59.87	32.22	18.70
230.00	44.32	61.61	38.99	21.03
240.00	41.38	55.15	33.96	23.65
250.00	47.71	57.50	40.24	25.63
260.00	48.17	60.70	42.01	23.58
270.00	51.98	58.35	44.25	27.27
280.00	51.22	64.36	46.17	22.16
290.00	52.53	68.18	48.77	19.53
300.00	56.14	69.03	52.42	20.09
310.00	46.78	58.99	40.09	24.10
320.00	40.83	53.99	33.03	24.01
330.00	43.91	56.06	36.43	24.52
340.00	36.02	53.72	29.04	21.31
350.00	32.05	100.25	31.54	-5.71
360.00	27.94	98.23	27.65	-4.00
370.00	26.94	100.26	26.51	-4.80
380.00	22.55	89.95	22.55	0.02
390.00	17.61	73.80	16.91	4.91
400.00	16.74	78.62	16.41	3.30
410.00	16.74	71.20	15.85	5.40
420.00	18.53	64.63	16.74	7.94
430.00	12.71	62.66	11.29	5.84
440.00	9.09	57.78	7.69	4.84
450.00	3.92	74.12	3.77	1.07
460.00	1.05	96.40	1.04	-0.12
470.00	3.57	21.79	1.33	3.31
480.00	3.60	318.22	-2.40	2.69
490.00	1.12	90.05	1.12	-0.00
500.00	7.97	191.90	-1.64	-7.80



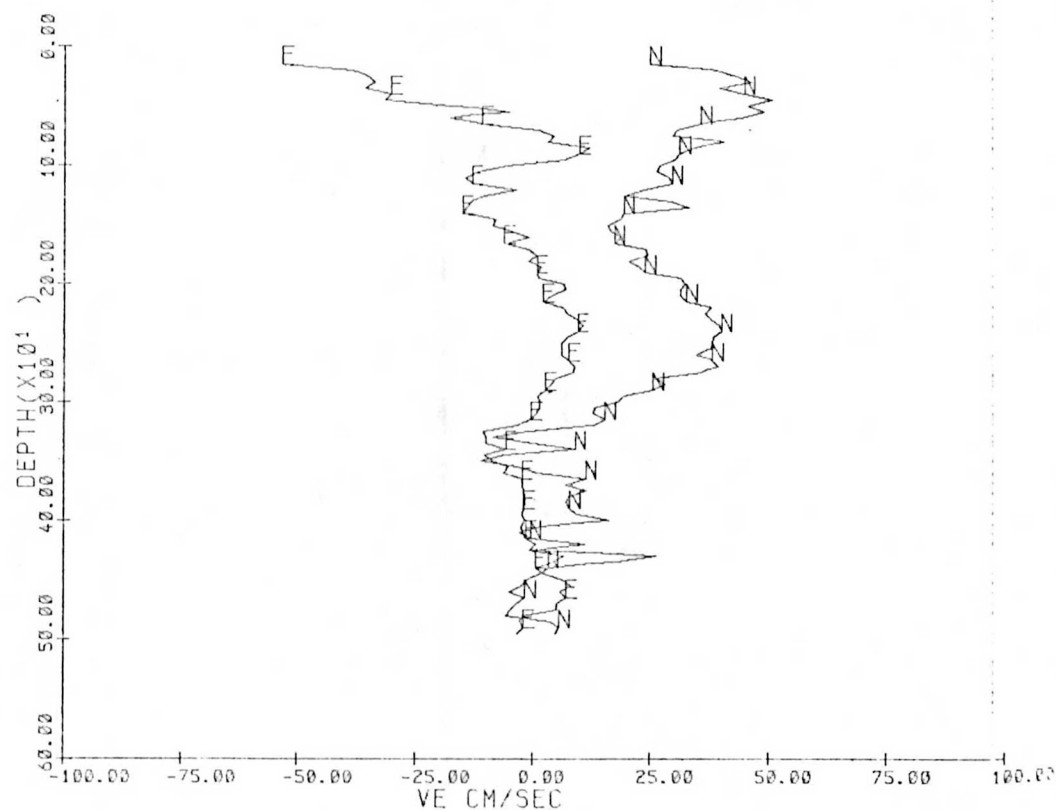
Station 3 26 July 1978, 0937Z

4 02'S 28 48'W

East correction = 4.47 cm/sec North correction = 16.98 cm/sec

East ship drift = -27.0 cm/sec North ship drift = -48.6 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	54.72	315.22	-38.54	38.84
30.00	56.93	323.70	-33.70	45.88
40.00	53.88	325.95	-30.17	44.64
50.00	48.83	338.96	-17.53	45.58
60.00	47.55	337.94	-17.86	44.07
70.00	30.45	1.68	0.89	30.44
80.00	40.35	4.28	3.01	40.24
90.00	32.62	17.50	9.81	31.11
100.00	27.39	347.96	-5.71	26.78
110.00	32.16	333.40	-14.40	28.75
120.00	23.92	350.81	-3.82	23.62
130.00	32.07	335.62	-13.24	29.21
140.00	24.39	321.70	-15.12	19.14
150.00	18.11	330.91	-8.80	15.82
160.00	18.45	357.03	-0.96	18.43
170.00	23.95	357.61	-1.00	23.93
180.00	20.39	357.43	-0.91	20.37
190.00	23.78	1.56	0.65	23.77
200.00	32.79	11.36	6.46	32.15
210.00	31.38	6.68	3.65	31.17
220.00	38.26	9.53	6.34	37.74
230.00	38.83	13.71	9.20	37.72
240.00	40.97	13.23	9.38	39.88
250.00	38.37	9.16	6.11	37.88
260.00	35.01	9.86	5.99	34.49
270.00	40.25	12.58	8.77	39.29
280.00	26.49	10.10	4.65	26.08
290.00	25.69	5.50	2.46	25.57
300.00	17.99	3.86	1.21	17.95
310.00	12.77	2.24	0.50	12.76
320.00	13.55	344.80	-3.55	13.07
330.00	13.03	229.76	-9.95	-8.42
340.00	10.65	326.87	-5.82	8.92
350.00	14.04	218.84	-8.80	-10.93
360.00	6.18	277.05	-6.13	0.76
370.00	7.30	342.43	-2.20	6.96
380.00	7.81	346.22	-1.86	7.59
390.00	8.11	346.01	-1.96	7.87
400.00	16.36	353.65	-1.81	16.25
410.00	3.62	220.46	-2.35	-2.75
420.00	11.03	3.21	0.62	11.01
430.00	27.04	13.75	6.43	26.27
440.00	3.20	7.57	0.42	3.17
450.00	6.31	103.62	6.13	-1.48
460.00	7.49	131.26	5.63	-4.94
470.00	6.09	123.80	5.06	-3.39
480.00	6.23	201.39	-2.27	-5.80
490.00	5.84	340.29	-1.97	5.50



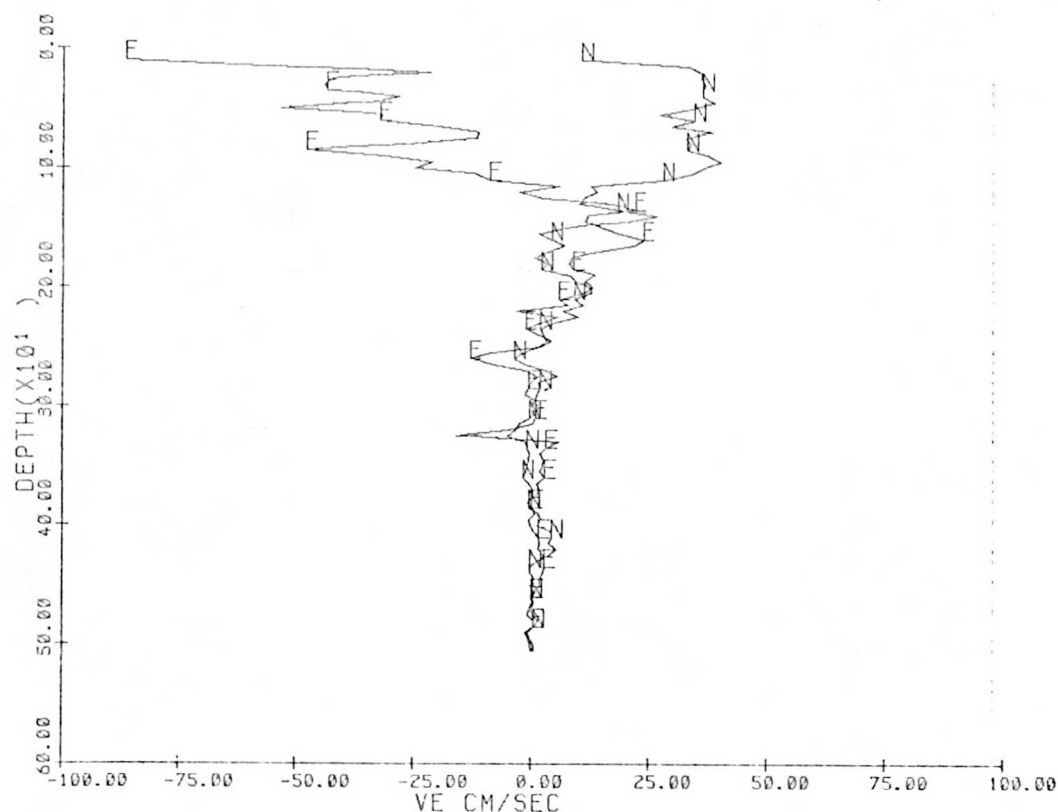
Station 4 26 July 1978, 1422Z

4 29'S 28 48'W

East correction = 17.33 cm/sec North correction = 5.60 cm/sec

East ship drift = 13.8 cm/sec North ship drift = 0

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
10.00	87.25	276.94	-86.61	10.54
20.00	41.96	328.78	-21.74	35.88
30.00	57.31	309.73	-44.07	36.63
40.00	45.99	322.02	-28.31	36.25
50.00	63.21	302.55	-53.28	34.01
60.00	47.26	316.94	-32.27	34.53
70.00	39.89	343.42	-11.38	38.23
80.00	42.88	321.90	-26.46	33.75
90.00	49.05	320.26	-31.36	37.71
100.00	44.35	325.51	-25.11	36.55
110.00	29.31	342.06	-9.03	27.89
120.00	14.14	348.51	-2.82	13.86
130.00	19.79	59.35	17.02	10.09
140.00	28.93	24.03	11.78	26.43
150.00	16.58	65.47	15.09	6.88
160.00	24.04	79.99	23.67	4.18
170.00	14.53	76.41	14.13	3.42
180.00	8.37	66.63	7.68	3.32
190.00	15.54	58.94	13.31	8.02
200.00	17.60	46.15	12.69	12.19
210.00	10.55	32.45	5.66	8.90
220.00	7.24	333.47	-3.23	6.47
230.00	5.08	19.30	1.68	4.79
240.00	2.85	33.60	1.58	2.38
250.00	2.38	50.38	1.83	1.52
260.00	13.63	254.28	-13.12	-3.69
270.00	3.14	331.83	-1.48	2.77
280.00	1.40	348.68	-0.27	1.37
290.00	1.81	308.25	-1.42	1.12
300.00	0.93	1.75	0.03	0.93
310.00	0.98	122.50	0.83	-0.53
320.00	6.07	233.58	-4.88	-3.60
330.00	5.86	101.49	5.75	-1.17
340.00	1.84	105.57	1.77	-0.49
350.00	2.47	111.91	2.29	-0.92
360.00	3.37	123.60	2.81	-1.87
370.00	1.79	80.19	1.77	0.31
380.00	1.11	221.74	-0.74	-0.83
390.00	1.64	26.75	0.74	1.46
400.00	1.33	347.11	-0.30	1.30
410.00	4.49	19.03	1.46	4.25
420.00	5.41	16.21	1.51	5.20
430.00	3.11	65.35	2.83	1.30
440.00	2.46	96.96	2.44	-0.30
450.00	1.67	94.57	1.67	-0.13
460.00	0.32	76.10	0.31	0.08
470.00	0.41	175.79	0.03	-0.41
480.00	1.48	69.62	1.39	0.52
490.00	1.46	236.40	-1.22	-0.81
500.00	0.71	329.37	-0.36	0.61



Station 5

27 July 1978, 1940Z

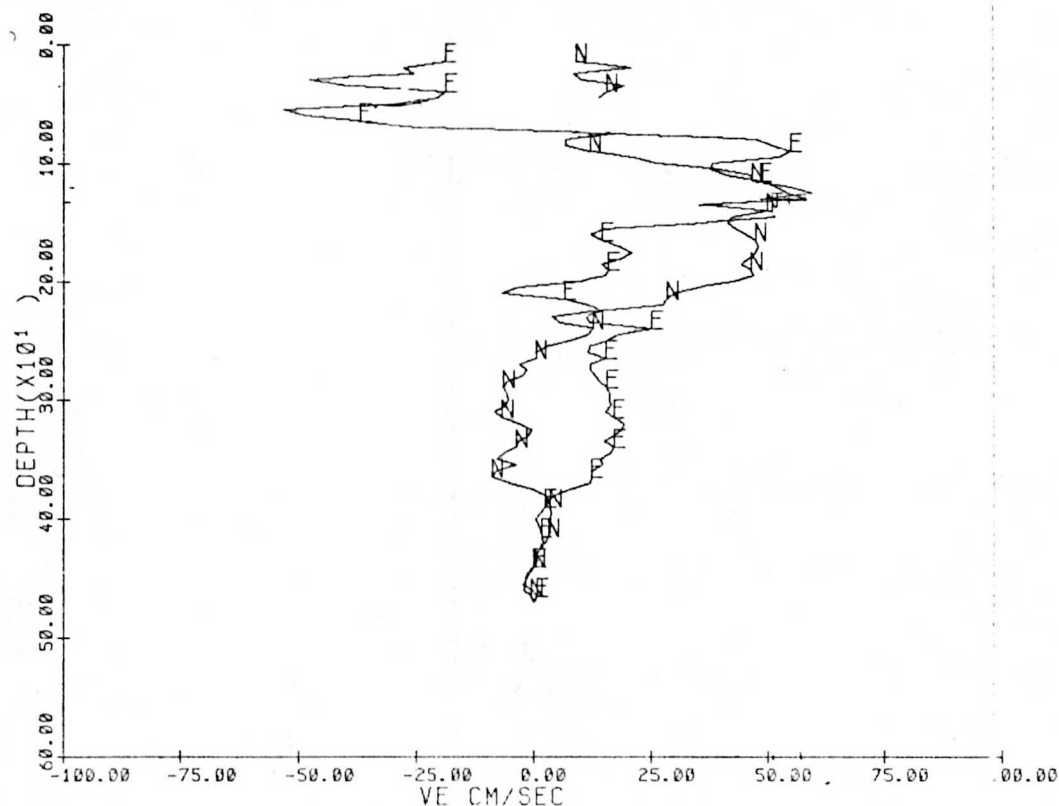
5 01'S

28 01'W

East correction = 3.84 cm/sec North correction = 17.34 cm/sec

East ship drift = -11.8 cm/sec North ship drift = -47.4 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	34.33	306.75	-27.51	20.54
30.00	48.47	282.03	-47.41	10.10
40.00	24.29	309.36	-18.78	15.41
50.00	27.95	254.65	-26.95	-7.40
60.00	50.66	253.62	-48.60	-14.28
70.00	26.43	290.31	-24.79	9.17
80.00	48.10	81.87	47.61	6.80
90.00	56.09	77.75	54.82	11.91
100.00	46.30	55.31	38.07	26.36
110.00	61.83	41.55	41.01	46.27
120.00	75.36	43.45	51.83	54.71
130.00	75.72	50.31	58.27	48.35
140.00	71.09	45.68	50.86	49.67
150.00	54.93	41.50	36.39	41.14
160.00	46.80	15.20	12.27	45.16
170.00	51.02	20.62	17.97	47.75
180.00	49.52	22.14	18.66	45.87
190.00	48.91	18.93	15.86	46.26
200.00	43.73	13.09	9.90	42.59
210.00	30.59	347.45	-6.64	29.86
220.00	29.58	22.72	11.43	27.29
230.00	11.89	70.35	11.20	4.00
240.00	27.99	63.76	25.11	12.38
250.00	17.40	63.57	15.53	7.75
260.00	11.53	88.06	11.52	0.39
270.00	12.34	103.92	11.98	-2.97
280.00	13.26	101.01	13.02	-2.53
290.00	16.81	112.30	15.56	-6.38
300.00	16.90	103.62	16.01	-5.40
310.00	17.28	118.88	15.13	-8.35
320.00	19.24	99.83	18.95	-3.30
330.00	16.97	93.76	16.94	-1.11
340.00	17.42	102.28	17.02	-3.71
350.00	16.21	118.71	14.22	-7.79
360.00	14.95	122.40	12.62	-8.01
370.00	13.06	112.35	12.03	-4.97
380.00	5.27	60.24	4.53	2.62
390.00	4.29	35.82	2.51	3.48
400.00	3.61	6.38	0.40	3.59
410.00	3.75	24.00	1.52	3.43
420.00	3.12	37.21	1.89	2.48
430.00	0.87	71.81	0.82	0.27
440.00	0.30	74.94	0.29	0.08
450.00	2.39	222.43	-1.61	-1.76
460.00	2.10	187.15	-0.26	-2.08
470.00	0.00	60.29	0.00	0.00



Station 6

28 July 1978, 0605Z

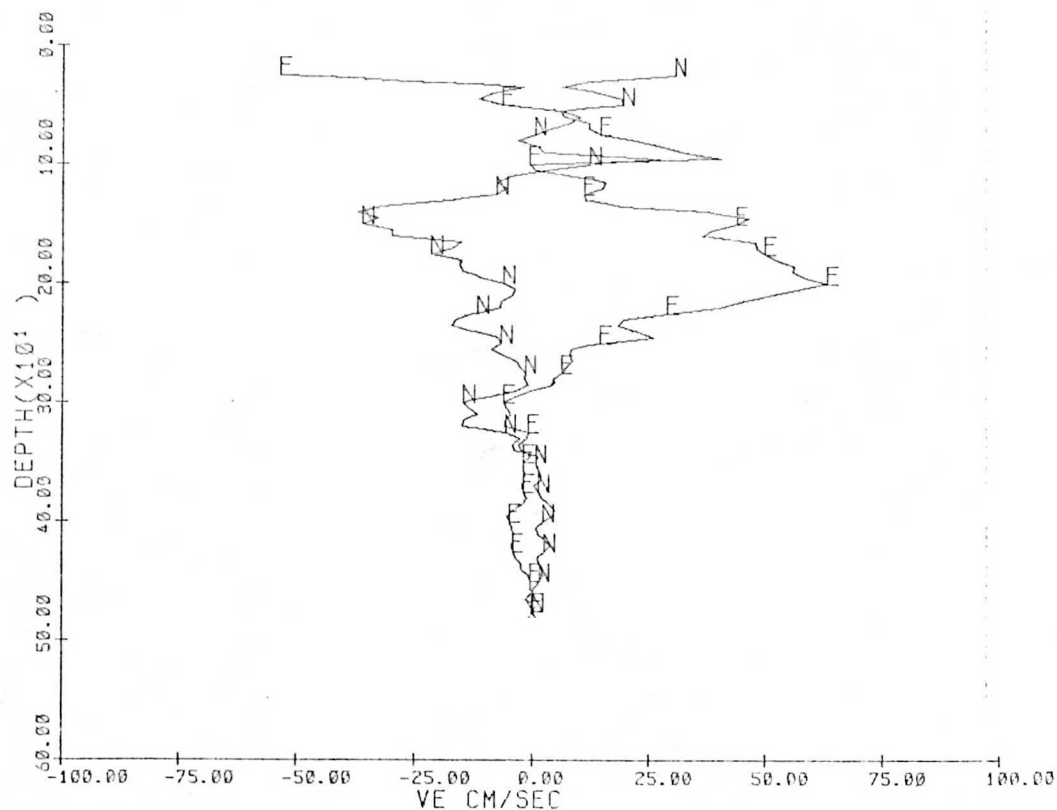
4 00' S

28 02'W

East correction = 7.80 cm/sec North correction = 18.31 cm/sec

East ship drift = -29.0 cm/sec North ship drift = 0

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
30.00	29.95	295.15	-27.11	12.73
40.00	16.27	328.62	-5.47	13.89
50.00	20.42	341.55	-6.46	19.37
60.00	12.10	33.81	6.73	10.05
70.00	12.66	72.70	12.09	3.76
80.00	22.15	98.18	21.93	-3.15
90.00	32.70	86.18	32.62	2.18
100.00	12.33	356.58	-0.73	12.31
110.00	9.98	118.03	8.80	-4.70
120.00	16.01	111.19	14.93	-5.79
130.00	21.07	147.96	11.18	-17.86
140.00	53.04	134.34	37.93	-37.07
150.00	56.52	129.42	43.67	-35.89
160.00	46.95	129.44	36.26	-29.82
170.00	50.90	109.44	47.99	-16.94
180.00	54.40	106.29	52.21	-15.26
190.00	57.79	104.80	55.87	-14.76
200.00	63.41	95.67	63.10	-6.26
210.00	50.51	95.24	50.29	-4.61
220.00	40.69	100.04	40.06	-7.09
230.00	25.29	129.83	19.42	-16.20
240.00	26.03	120.06	22.53	-13.04
250.00	16.02	114.45	14.58	-6.63
260.00	10.45	129.27	8.09	-6.61
270.00	7.77	111.13	7.25	-2.80
280.00	4.72	111.68	4.38	-1.74
290.00	3.61	187.83	-0.49	-3.57
300.00	15.87	202.79	-6.15	-14.63
310.00	12.64	202.28	-4.79	-11.70
320.00	16.09	201.79	-5.97	-14.94
330.00	3.11	205.11	-1.32	-2.81
340.00	4.73	213.59	-2.62	-3.94
350.00	2.02	289.46	-1.91	0.67
360.00	2.54	317.40	-1.72	1.87
370.00	2.29	274.35	-2.28	0.17
380.00	2.43	325.96	-1.36	2.02
390.00	6.36	316.88	-4.35	4.64
400.00	5.49	293.88	-5.02	2.22
410.00	4.26	282.00	-4.16	0.83
420.00	5.81	311.14	-4.38	3.82
430.00	3.78	286.37	-3.63	1.07
440.00	3.33	308.22	-2.62	2.06
450.00	1.53	337.77	-0.58	1.41
460.00	0.55	212.12	-0.29	-0.47
470.00	0.89	330.48	-0.44	0.77
480.00	1.01	141.68	0.63	-0.79



Station 7

28 July 1978, 1442Z

2 57'S

28 06'W

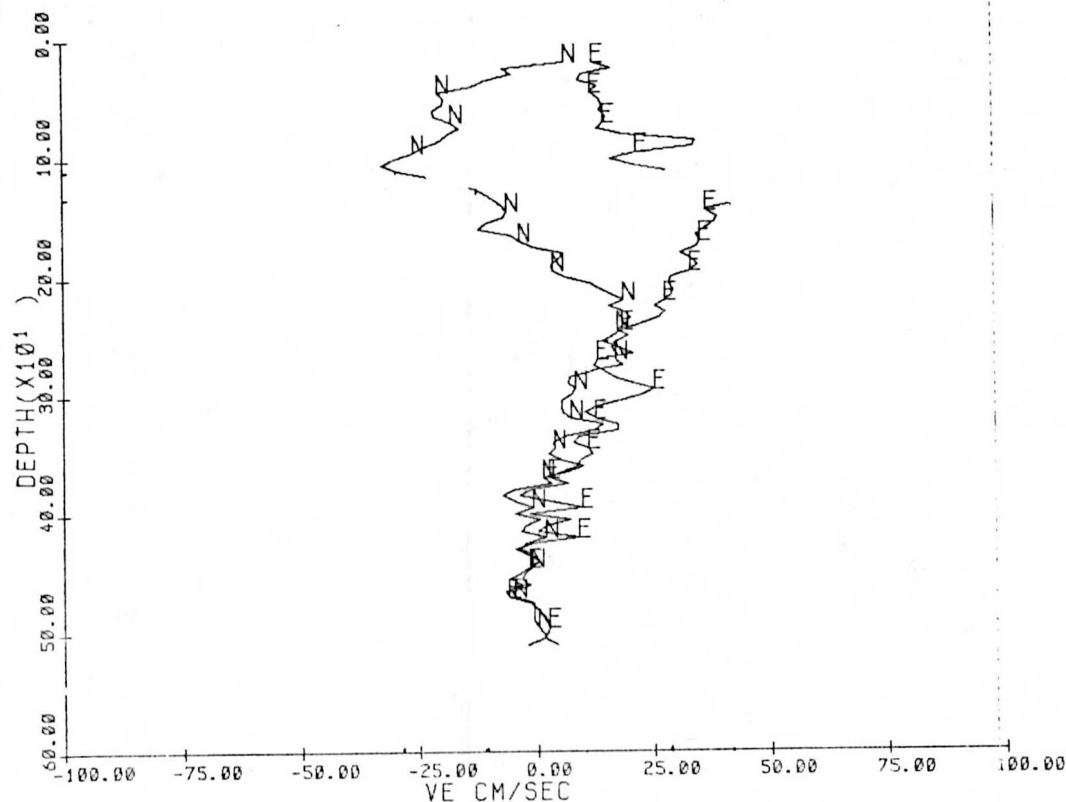
East correction = 15.28 cm/sec

North correction = 12.51 cm/sec

East ship drift = 20.6 cm/sec

North ship drift = 50.8 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	14.13	62.09	12.49	6.61
30.00	10.97	115.02	9.94	-4.64
40.00	18.74	134.26	13.42	-13.08
50.00	23.51	144.31	13.72	-19.10
60.00	25.57	146.58	14.08	-21.34
70.00	22.90	140.09	14.69	-17.56
80.00	26.31	133.83	18.98	-18.22
90.00	40.93	124.33	33.80	-23.08
100.00	33.57	151.17	16.19	-29.41
110.00	40.06	135.66	28.00	-28.65
130.00	43.59	104.24	42.25	-10.72
140.00	41.89	99.45	41.32	-6.88
150.00	39.39	99.54	38.84	-6.53
160.00	37.74	108.03	35.89	-11.68
170.00	35.18	95.42	35.02	-3.32
180.00	31.46	78.94	30.88	6.03
190.00	34.74	84.16	34.56	3.53
200.00	29.58	77.74	28.90	6.28
210.00	32.27	64.87	29.21	13.70
220.00	33.40	55.66	27.58	18.84
230.00	33.49	55.37	27.56	19.03
240.00	29.66	49.30	22.49	19.34
250.00	25.87	39.91	16.60	19.85
260.00	23.99	47.43	17.67	16.23
270.00	21.59	37.75	13.21	17.07
280.00	19.18	50.21	14.74	12.28
290.00	21.85	71.60	20.73	6.90
300.00	23.79	71.40	22.55	7.59
310.00	13.83	66.53	12.69	5.51
320.00	14.73	58.98	12.63	7.59
330.00	21.39	54.64	17.45	12.38
340.00	8.76	64.26	7.89	3.80
350.00	12.39	76.70	12.06	2.85
360.00	13.37	41.21	8.81	10.06
370.00	3.01	62.07	2.66	1.41
380.00	4.67	194.31	-1.15	-4.52
390.00	5.57	143.86	3.29	-4.50
400.00	4.69	198.49	-1.49	-4.44
410.00	3.07	135.74	2.14	-2.20
420.00	9.24	76.82	8.99	2.11
430.00	5.65	231.48	-4.42	-3.52
440.00	0.69	43.98	0.48	0.50
450.00	4.32	234.35	-3.51	-2.52
460.00	3.41	241.82	-3.00	-1.61
470.00	7.55	232.13	-5.96	-4.64
480.00	0.71	189.29	-0.11	-0.70
490.00	2.38	107.52	2.27	-0.72
500.00	2.60	62.86	2.31	1.19
510.00	4.74	334.19	-2.06	4.26



Station 8

29 July 1978, 0015Z

3 00'S

27 01'W

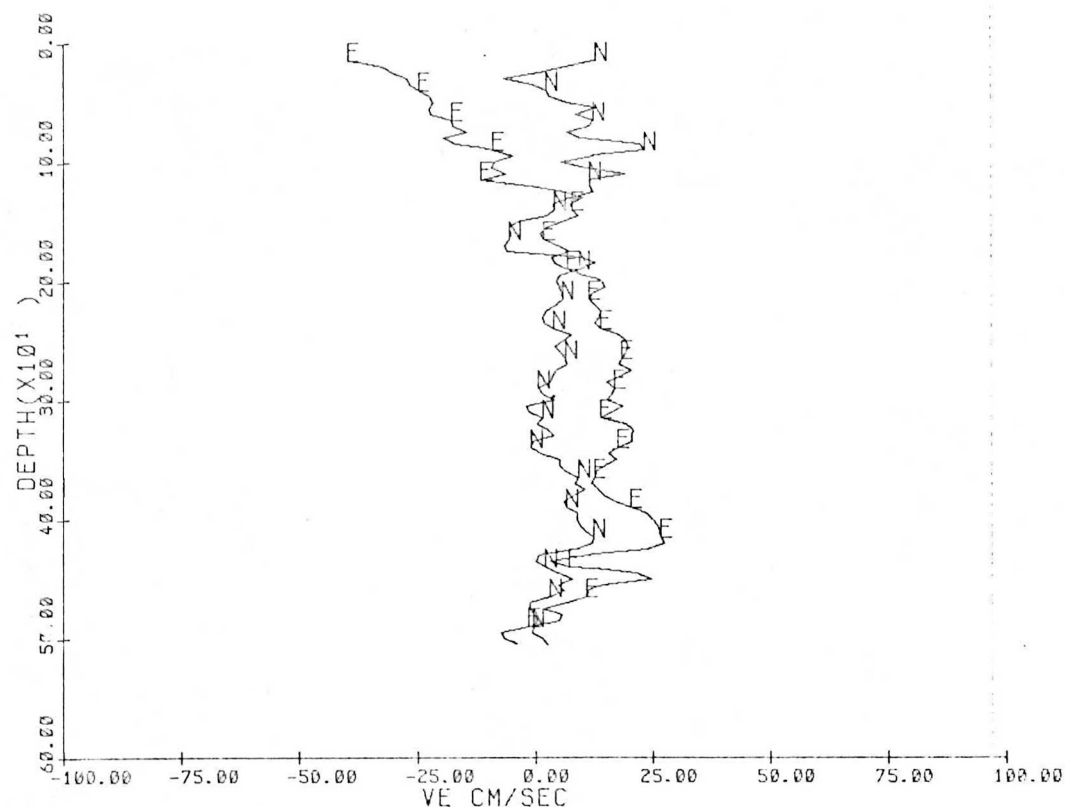
East correction = 41.62 cm/sec

North correction = 14.83 cm/sec

East ship drift = -43.2 cm/sec

North ship drift = -43.2 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	33.04	280.97	-32.43	6.29
30.00	28.18	256.09	-27.35	-6.77
40.00	24.94	275.34	-24.83	2.32
50.00	22.87	286.98	-21.87	6.68
60.00	23.84	290.86	-22.28	8.49
70.00	20.80	302.94	-17.46	11.31
80.00	21.81	295.92	-19.62	9.53
90.00	25.00	339.17	-8.89	23.37
100.00	10.22	302.18	-8.65	5.45
110.00	19.94	342.01	-6.16	18.96
120.00	11.70	353.28	-1.37	11.62
130.00	12.27	54.83	10.03	7.07
140.00	8.77	62.04	7.74	4.11
150.00	6.71	125.34	5.48	-3.88
160.00	5.43	168.85	1.05	-5.33
170.00	7.90	146.16	4.40	-6.56
180.00	10.43	20.21	3.60	9.78
190.00	11.38	36.18	6.72	9.19
200.00	14.67	71.96	13.95	4.54
210.00	13.19	65.18	11.97	5.54
220.00	13.16	71.46	12.48	4.19
230.00	13.63	83.94	13.56	1.44
240.00	14.26	74.31	13.72	3.85
250.00	20.04	73.59	19.22	5.66
260.00	20.01	74.50	19.29	5.35
270.00	18.97	69.96	17.82	6.50
280.00	18.42	78.69	18.06	3.61
290.00	16.75	88.25	16.74	0.51
300.00	15.35	75.82	14.88	3.76
310.00	16.40	95.30	16.33	-1.52
320.00	19.31	89.05	19.31	0.32
330.00	20.87	79.52	20.53	3.80
340.00	17.61	93.37	17.58	-1.03
350.00	18.02	73.51	17.28	5.11
360.00	14.24	63.69	12.77	6.31
370.00	14.43	54.79	11.79	8.32
380.00	16.50	60.96	14.42	8.01
390.00	21.29	72.21	20.27	6.50
400.00	26.61	70.70	25.12	8.80
410.00	23.41	68.38	26.41	10.47
420.00	30.13	66.40	27.61	12.06
430.00	10.95	85.57	10.92	0.85
440.00	7.20	73.88	6.92	2.00
450.00	25.81	72.81	24.66	7.63
460.00	12.61	61.51	11.08	6.02
470.00	6.92	100.80	6.80	-1.30
480.00	5.51	91.39	5.51	-0.13
490.00	1.55	248.12	-1.44	-0.58
500.00	6.72	232.13	-6.57	1.41



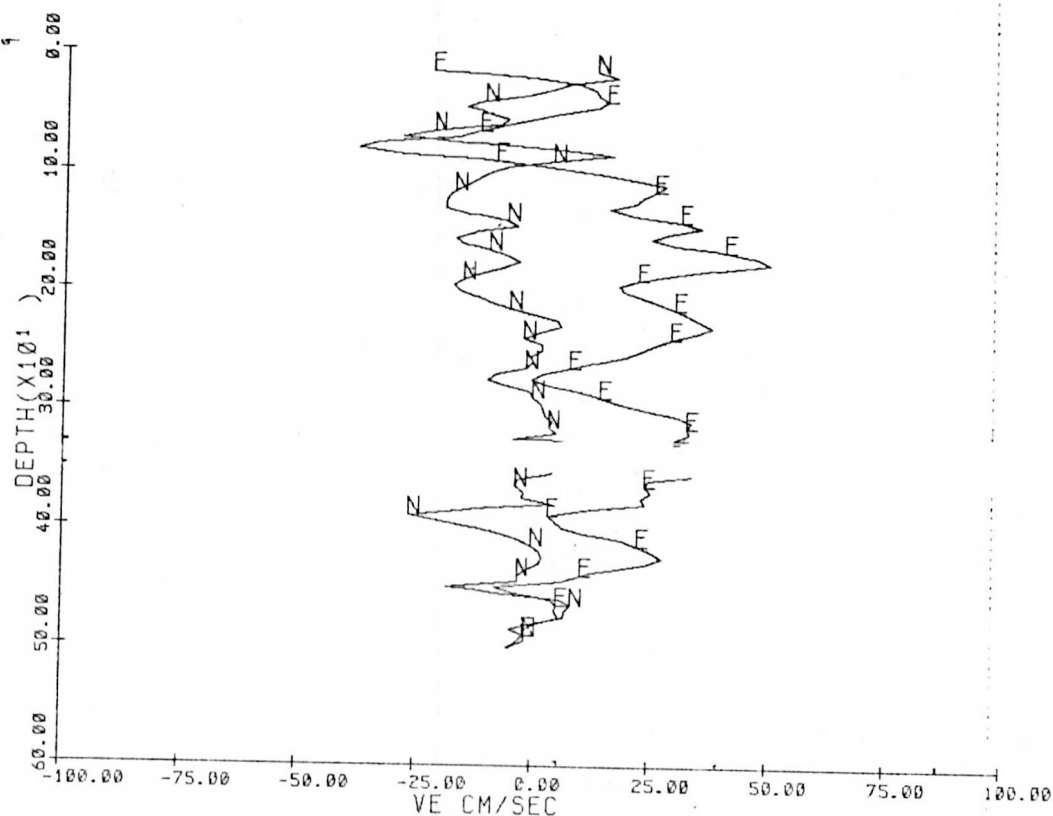
Station 9 29 July 1978, 0430Z

3 30'S 27 00'W

East correction = -1.82 cm/sec North correction = 28.88 cm/sec

East ship drift = 9.1 cm/sec North ship drift = 6.1cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	16.66	355.95	-1.17	16.62
30.00	12.17	76.80	11.84	2.78
40.00	18.19	127.75	14.39	-11.14
50.00	11.86	157.36	4.57	-10.95
60.00	10.61	222.09	-7.12	-7.88
70.00	33.27	210.34	-16.81	-28.72
80.00	38.38	277.30	-38.06	4.88
90.00	9.40	290.74	-8.79	3.33
100.00	16.02	129.63	12.34	-10.22
110.00	30.71	118.61	26.96	-14.71
120.00	29.35	130.65	22.27	-19.12
130.00	24.77	142.32	15.14	-19.60
140.00	31.04	101.59	30.41	-6.24
150.00	30.86	114.82	28.01	-12.95
160.00	33.14	117.80	29.31	-15.45
170.00	47.13	97.39	46.74	-6.06
180.00	39.78	100.62	39.10	-7.33
190.00	26.55	125.44	21.63	-15.39
200.00	24.73	131.20	18.61	-16.29
210.00	27.86	109.82	26.21	-9.45
220.00	32.59	90.45	32.59	-0.26
230.00	37.54	82.07	37.18	5.18
240.00	28.78	94.98	28.68	-2.50
250.00	22.36	87.06	22.33	1.15
260.00	13.06	93.01	13.04	-0.69
270.00	8.50	169.22	1.59	-8.35
280.00	6.82	154.41	2.94	-6.15
290.00	13.71	92.00	13.70	-0.48
300.00	23.89	85.92	23.83	1.70
310.00	33.46	84.08	33.28	3.45
320.00	33.04	82.23	32.73	4.47
360.00	24.57	98.86	24.27	-3.78
370.00	24.75	95.08	24.65	-2.19
380.00	23.86	80.10	23.50	4.10
390.00	26.60	173.75	2.89	-26.45
400.00	14.36	155.79	5.89	-13.09
410.00	19.06	100.13	18.76	-3.35
420.00	25.16	87.40	25.13	1.14
430.00	23.85	87.14	23.82	1.19
440.00	10.60	108.44	10.06	-3.35
450.00	19.93	203.63	-7.99	-18.26
460.00	6.61	33.45	3.65	5.52
470.00	8.19	35.76	4.79	6.65
480.00	1.05	79.10	1.03	0.20
490.00	2.54	227.74	-1.88	-1.71
500.00	6.93	222.50	-4.72	-5.15



Station 10

29 July 1978, 1057Z

4 01'S

27 00'W

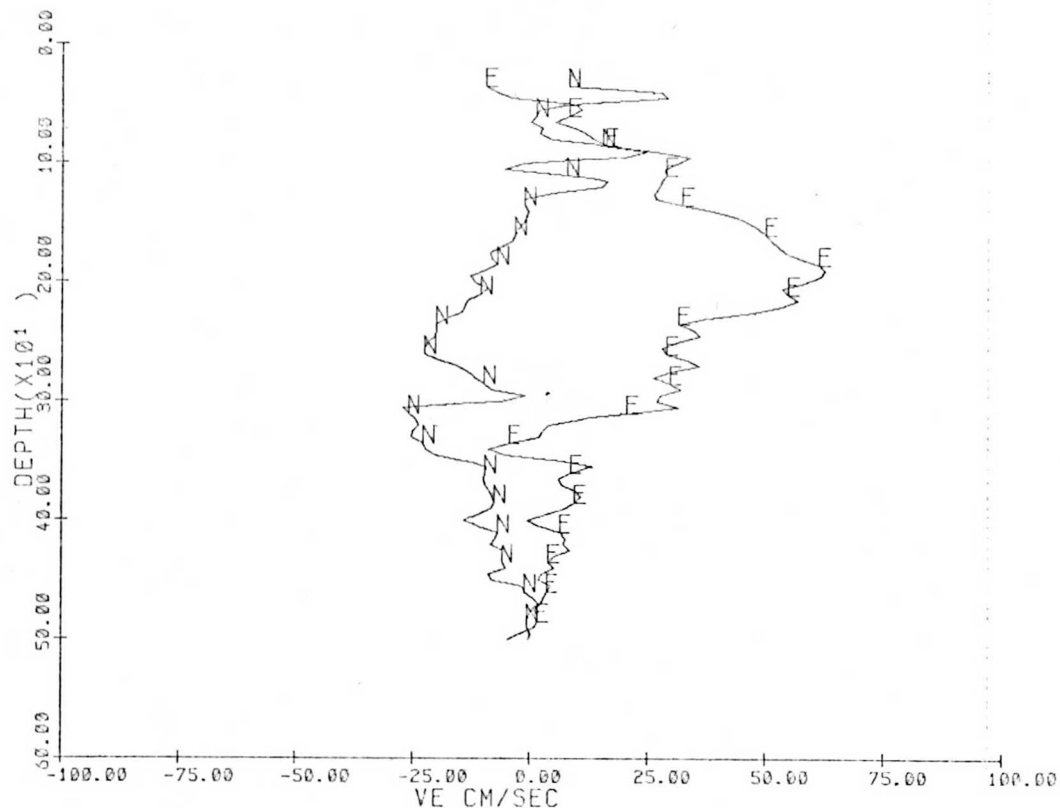
East correction = 11.24 cm/sec

North correction = 23.09 cm/sec

East ship drift = -17 cm/sec

North ship drift = 3 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
40.00	28.40	344.86	-7.42	27.42
50.00	12.69	47.27	9.32	8.61
60.00	8.18	82.54	8.11	1.06
70.00	9.23	76.13	8.96	2.21
80.00	14.03	71.66	13.32	4.41
90.00	35.60	47.15	26.10	24.21
100.00	30.82	93.18	30.77	-1.71
110.00	29.43	75.23	28.46	7.50
120.00	30.65	61.33	26.89	14.70
130.00	26.27	93.09	26.23	-1.42
140.00	38.30	91.20	38.29	-0.81
150.00	46.37	92.09	46.34	-1.69
160.00	49.85	93.98	49.73	-3.46
170.00	52.77	96.83	52.40	-6.27
180.00	57.98	98.48	57.34	-8.55
190.00	62.95	98.95	62.18	-9.80
200.00	59.19	101.97	57.90	-12.27
210.00	55.52	101.06	54.48	-10.65
220.00	55.19	104.95	53.32	-14.24
230.00	41.76	115.53	37.68	-18.00
240.00	39.93	120.38	34.45	-20.19
250.00	37.99	125.20	31.04	-21.90
260.00	36.57	128.27	28.71	-22.65
270.00	39.11	113.67	35.82	-15.70
280.00	28.63	114.63	26.03	-11.93
290.00	32.84	105.22	31.69	-8.62
300.00	27.45	103.83	26.65	-6.56
310.00	33.05	142.20	20.25	-26.11
320.00	24.33	171.08	3.77	-24.04
330.00	25.56	176.26	1.67	-25.51
340.00	24.16	201.61	-8.90	-22.46
350.00	15.74	154.29	6.83	-14.18
360.00	12.89	139.34	8.40	-9.78
370.00	11.63	145.95	6.51	-9.64
380.00	13.42	127.63	10.62	-8.20
390.00	11.07	139.45	7.20	-8.41
400.00	14.32	182.76	-0.69	-14.31
410.00	9.31	138.51	6.17	-6.97
420.00	11.02	139.80	7.11	-8.42
430.00	7.82	141.34	4.89	-6.11
440.00	7.34	136.67	5.04	-5.34
450.00	8.37	167.24	1.85	-8.17
460.00	3.58	109.43	3.38	-1.19
470.00	2.89	49.78	2.20	1.86
480.00	1.48	106.61	1.41	-0.42
490.00	1.11	128.87	0.87	-0.70
500.00	4.88	265.40	-4.86	-0.39



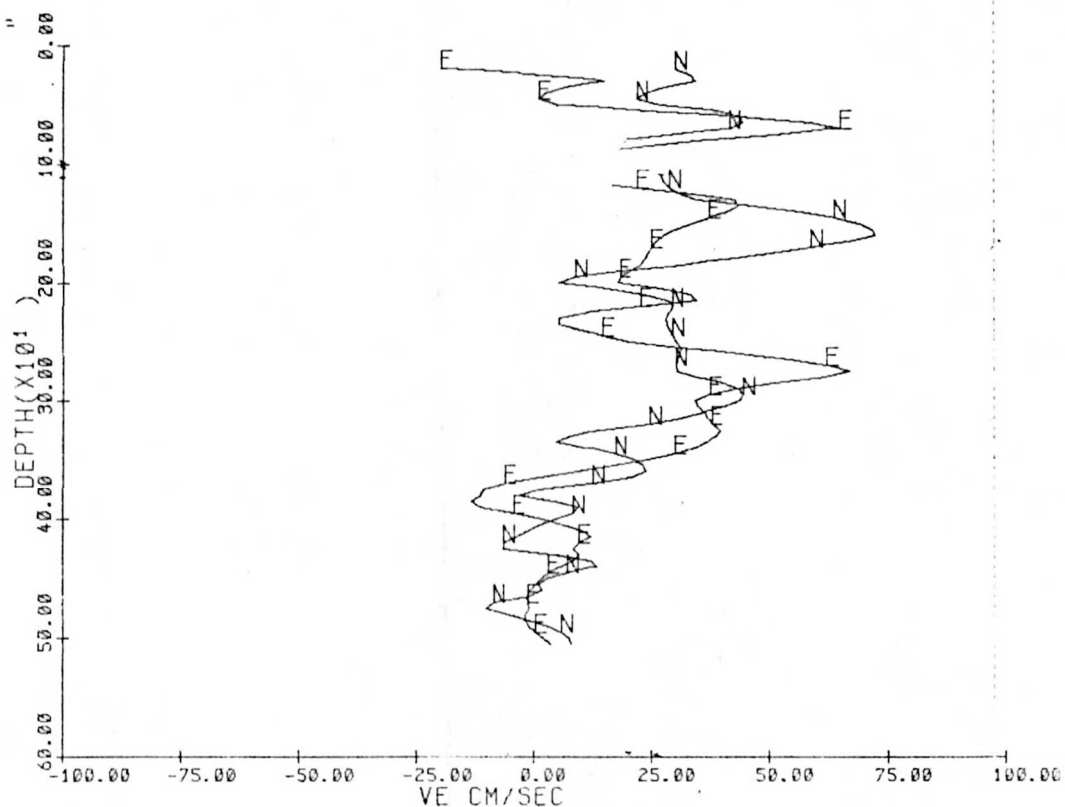
Station 11 29 July 1978, 1501Z

4 30'S 27 00'W

East correction = -2.55 cm/sec North correction = 20.26 cm/sec

East ship drift = -13 cm/sec North ship drift = -62 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	36.03	326.70	-19.78	30.12
30.00	37.33	23.78	15.05	34.16
40.00	23.75	6.30	2.60	23.60
50.00	27.24	11.23	5.30	26.71
60.00	61.93	44.93	43.74	43.84
70.00	76.86	57.40	64.75	41.41
80.00	37.83	65.18	34.34	15.88
90.00	13.90	61.14	12.18	6.71
120.00	36.32	37.36	22.04	28.86
130.00	54.88	50.99	42.65	34.55
140.00	69.56	36.09	40.98	56.21
150.00	76.38	25.97	33.44	68.67
160.00	76.97	20.84	27.38	71.94
170.00	63.91	23.13	25.11	58.77
180.00	47.11	29.82	23.43	40.87
190.00	27.36	48.25	20.41	18.22
200.00	18.72	72.99	17.90	5.48
210.00	40.42	55.09	33.15	23.13
220.00	37.09	37.63	22.65	29.38
230.00	28.61	11.11	5.51	28.07
240.00	30.47	18.92	9.88	28.82
250.00	36.58	33.95	20.43	30.34
260.00	53.44	54.47	43.49	31.06
270.00	69.04	64.08	62.09	30.17
280.00	70.90	60.88	61.94	34.51
290.00	61.17	44.74	43.06	43.45
300.00	55.48	38.00	34.16	43.71
310.00	51.27	44.92	36.20	36.30
320.00	45.27	56.84	37.89	24.76
330.00	39.93	78.41	39.12	8.02
340.00	36.07	72.09	34.32	11.09
350.00	32.43	48.33	24.23	21.56
360.00	25.43	21.70	9.40	23.63
370.00	14.22	334.51	-6.12	12.84
380.00	11.74	254.55	-11.32	-3.13
390.00	14.81	310.50	-11.26	9.62
400.00	5.17	22.01	1.94	4.79
410.00	10.66	97.27	10.57	-1.35
420.00	11.76	123.27	9.84	-6.45
430.00	10.72	67.12	9.87	4.17
440.00	14.80	23.01	5.79	13.62
450.00	3.29	32.91	1.79	2.76
460.00	1.73	337.16	-0.69	1.64
470.00	8.70	187.47	-1.13	-8.62
480.00	5.69	197.66	-1.73	-5.43
490.00	3.29	343.97	-0.91	3.16
500.00	7.98	15.57	2.14	7.68



Station 12

29 July 1978, 2042Z

4 58'S

27 01'W

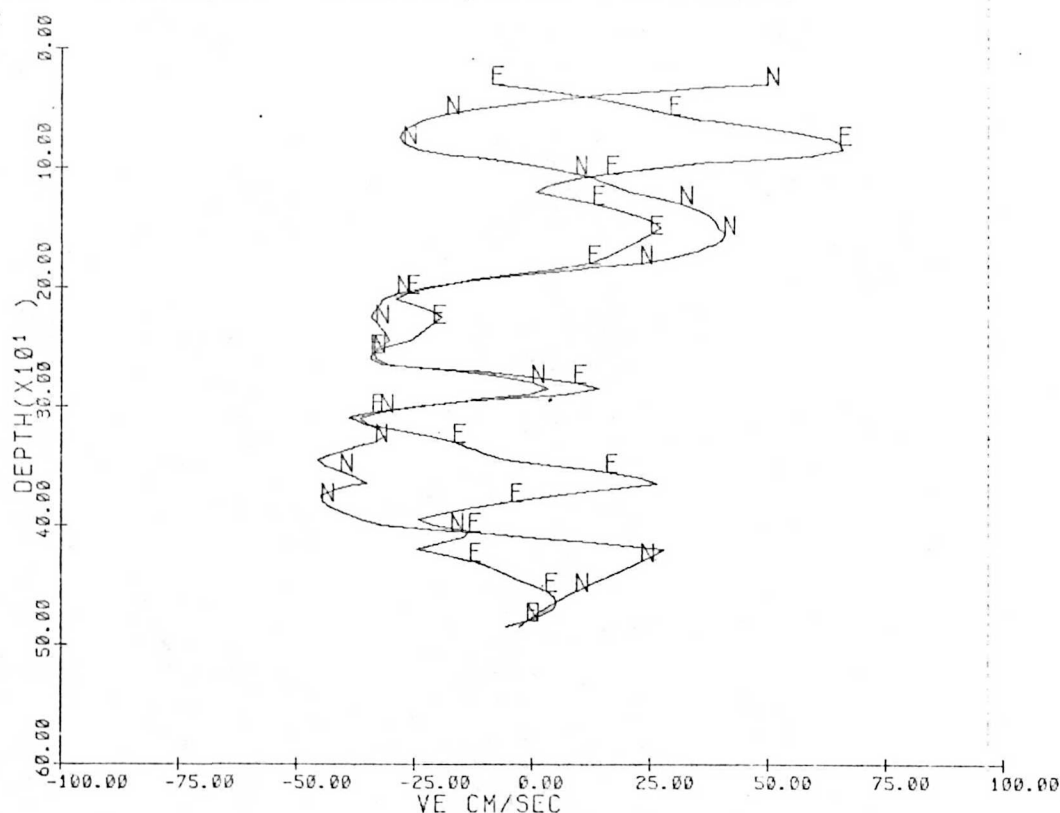
East correction = 44.79 cm/sec

North correction = 41.19 cm/sec

East ship drift = -26.2 cm/sec

North ship drift = -14.6 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
30.00	50.32	350.05	-8.69	49.57
40.00	16.14	40.59	10.50	12.25
50.00	25.72	114.26	23.45	-10.57
60.00	42.56	123.30	35.57	-23.37
70.00	61.99	116.55	55.45	-27.71
80.00	70.51	112.65	65.07	-27.16
90.00	61.16	106.45	58.66	-17.32
100.00	26.52	83.04	26.32	3.22
110.00	15.90	31.47	8.30	13.56
120.00	20.46	1.24	0.44	20.46
130.00	33.75	22.45	12.89	31.19
140.00	43.33	30.82	22.20	37.21
150.00	47.54	34.65	27.03	39.10
160.00	46.12	29.63	22.80	40.09
170.00	38.89	27.49	17.95	34.50
180.00	25.83	27.62	11.98	22.89
190.00	6.99	238.16	-5.93	-3.69
200.00	31.30	223.25	-21.45	-22.80
210.00	43.02	222.40	-29.01	-31.76
220.00	39.88	212.72	-21.56	-33.56
230.00	39.12	212.56	-21.05	-32.97
240.00	39.49	218.06	-24.34	-31.09
250.00	45.00	223.83	-31.16	-32.46
260.00	47.72	225.96	-34.30	-33.17
270.00	22.76	220.20	-14.69	-17.38
280.00	8.94	90.31	8.94	-0.05
290.00	6.82	97.48	6.77	-0.89
300.00	34.60	225.95	-24.87	-24.06
310.00	53.15	226.76	-38.72	-36.41
320.00	43.39	221.49	-28.75	-32.50
330.00	37.09	206.92	-16.79	-33.07
340.00	43.26	193.69	-10.24	-42.03
350.00	44.33	173.73	4.84	-44.07
360.00	43.76	148.22	23.04	-37.20
370.00	44.42	159.86	15.30	-41.70
380.00	44.74	185.92	-4.62	-44.50
390.00	43.91	205.47	-18.88	-39.65
400.00	37.97	213.57	-20.99	-31.64
410.00	14.83	266.56	-14.81	-0.89
420.00	37.09	318.53	-24.56	27.79
430.00	26.78	330.11	-13.34	23.22
440.00	18.77	340.71	-6.20	17.72
450.00	12.26	359.99	-0.00	12.26
460.00	8.56	34.56	4.86	7.05
470.00	5.20	58.47	4.43	2.72
480.00	1.43	231.52	-1.12	-0.89



Station 16

30 July 1978, 2225Z

4 58'S

26 01'W

East correction = 37.16 cm/sec

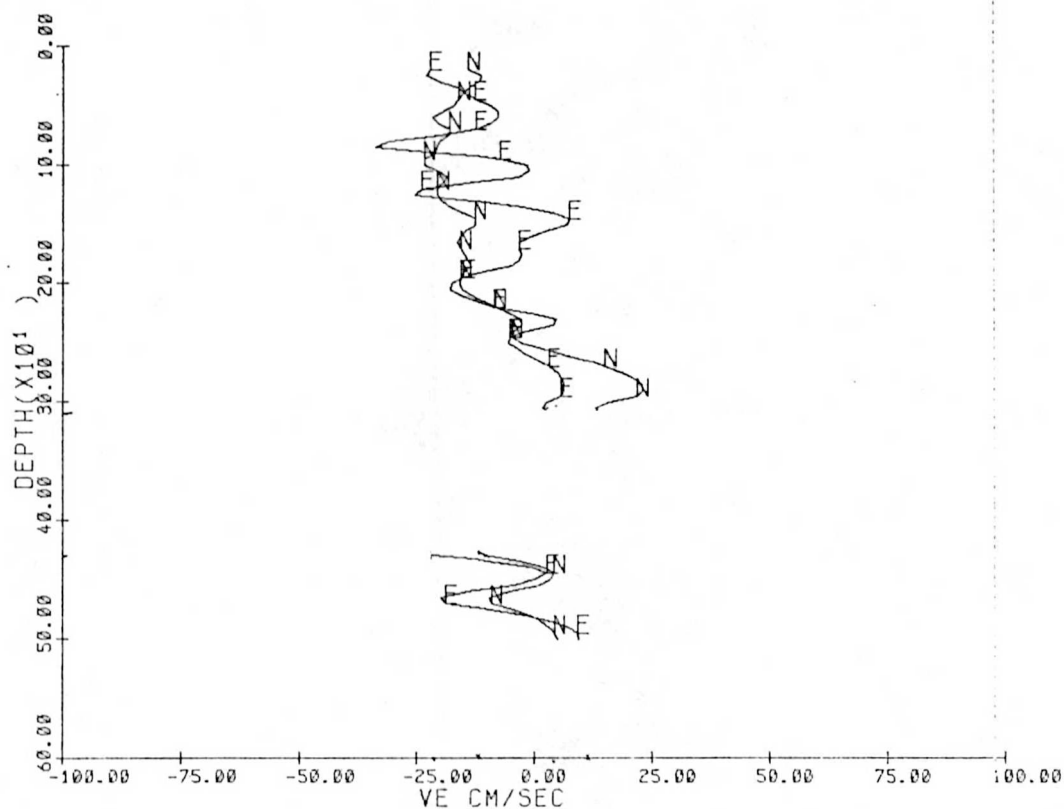
North correction = 21.05 cm/sec

East ship drift = -36 cm/sec

North ship drift = -22 cm/sec

8-14

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	26.08	237.58	-22.01	-13.98
30.00	23.42	240.40	-20.36	-11.57
40.00	20.99	224.20	-14.64	-15.05
50.00	19.30	208.63	-9.25	-16.94
60.00	22.78	199.72	-7.69	-21.44
70.00	21.73	214.60	-12.34	-17.89
80.00	36.77	236.92	-30.82	-20.07
90.00	28.71	222.95	-19.56	-21.01
100.00	23.27	183.66	-1.49	-23.23
110.00	18.82	190.09	-3.30	-18.53
120.00	31.24	229.20	-23.65	-20.41
130.00	23.46	213.80	-13.05	-19.50
140.00	15.53	165.11	3.99	-15.01
150.00	14.37	151.10	6.95	-12.58
160.00	15.67	182.36	-0.65	-15.06
170.00	15.90	191.37	-3.14	-15.59
180.00	14.40	193.44	-3.35	-14.01
190.00	18.29	215.66	-10.66	-14.86
200.00	23.54	227.75	-17.42	-15.82
210.00	20.32	229.45	-15.44	-13.21
220.00	11.86	225.46	-8.45	-8.32
230.00	5.52	121.67	4.70	-2.90
240.00	4.83	201.11	-1.74	-4.51
250.00	6.11	243.42	-5.47	-2.73
260.00	6.38	344.33	-1.72	6.14
270.00	15.35	11.89	3.16	15.02
280.00	21.85	15.96	6.01	21.01
290.00	23.84	15.27	6.28	23.00
300.00	16.23	9.55	2.69	16.00
440.00	2.13	342.06	-0.65	2.02
450.00	3.46	358.10	-0.11	3.46
460.00	14.96	249.01	-13.97	-5.36
470.00	20.73	243.96	-18.63	-9.10
480.00	2.19	245.18	-1.99	-0.92
490.00	8.19	66.11	7.49	3.32
500.00	10.80	62.06	9.55	5.06



Station 17

31 July 1978, 0818Z

4 00'S

25 59'W

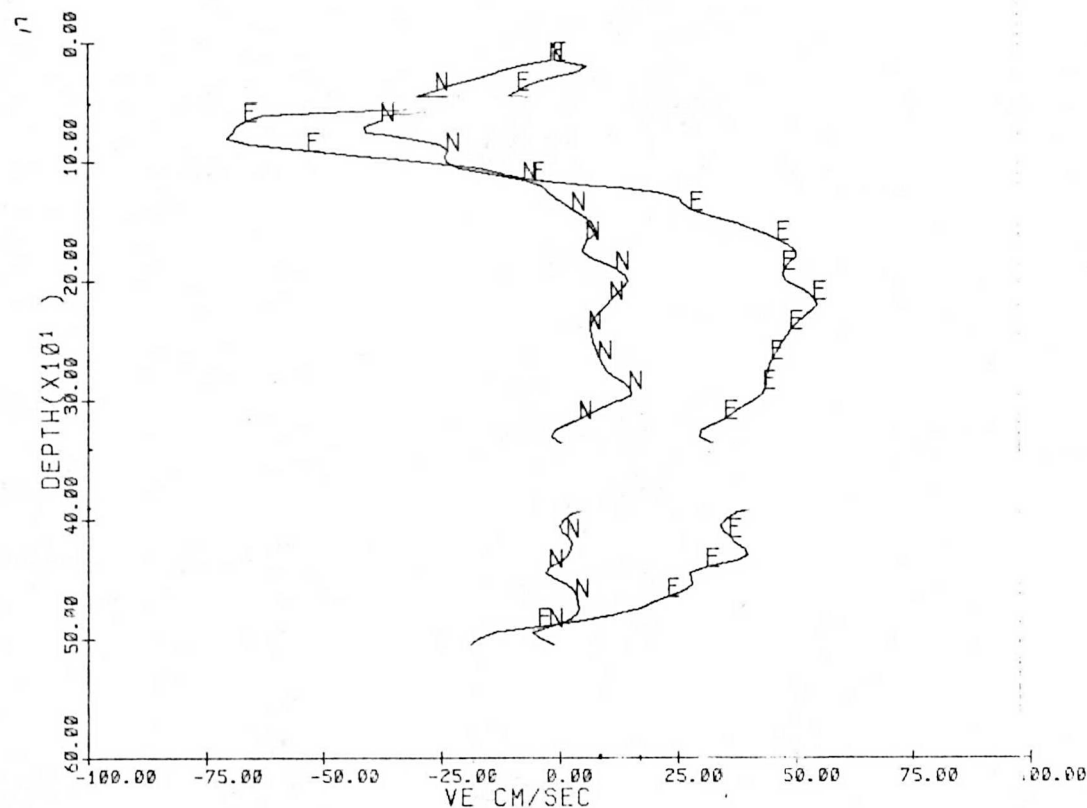
East correction = 13.20 cm/sec

North correction = 36.22 cm/sec

East ship drift = -17 cm/sec

North ship drift = -40 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	10.49	146.97	5.72	-8.80
30.00	17.00	186.49	-1.92	-16.89
40.00	27.26	198.43	-8.62	-25.86
60.00	72.29	239.06	-62.00	-37.17
70.00	79.85	239.02	-68.46	-41.10
80.00	77.26	246.00	-70.53	-31.42
90.00	57.98	246.17	-53.04	-23.43
100.00	36.67	229.80	-23.00	-23.67
110.00	18.63	220.39	-12.07	-14.19
120.00	8.55	114.01	7.81	-3.48
130.00	25.22	91.77	25.21	-0.78
140.00	23.28	83.68	28.11	3.11
150.00	36.82	79.58	36.21	6.66
160.00	44.12	80.03	43.45	7.64
170.00	48.77	83.91	48.49	5.18
180.00	50.37	82.46	49.94	6.61
190.00	49.09	75.46	47.52	12.32
200.00	50.18	73.18	48.04	14.53
210.00	54.17	76.93	52.77	12.25
220.00	55.54	79.57	54.62	10.05
230.00	52.23	81.65	51.68	7.58
240.00	49.47	82.57	49.06	6.40
250.00	47.83	81.56	47.31	7.02
260.00	46.50	80.10	45.81	8.00
270.00	45.42	78.22	44.46	9.27
280.00	45.13	75.26	43.64	11.48
290.00	45.96	70.84	43.41	15.09
300.00	43.09	72.28	41.04	13.11
310.00	37.45	79.68	36.84	6.71
320.00	32.53	87.33	32.49	1.51
330.00	29.75	92.79	29.72	-1.45
400.00	35.17	88.52	35.16	0.91
410.00	34.43	89.54	34.43	0.28
420.00	37.18	86.25	37.10	2.43
430.00	39.69	87.60	39.65	1.66
440.00	31.34	93.47	31.29	-1.90
450.00	27.75	92.02	27.74	-0.98
460.00	26.52	83.53	26.35	2.99
470.00	19.98	79.16	19.62	3.76
480.00	12.56	74.04	12.08	3.45
490.00	4.62	244.48	-4.17	-1.99
500.00	17.61	256.97	-17.16	-3.97



8-15

Station 19

1 August 1978, 0315Z

1 58'S

26 00'W

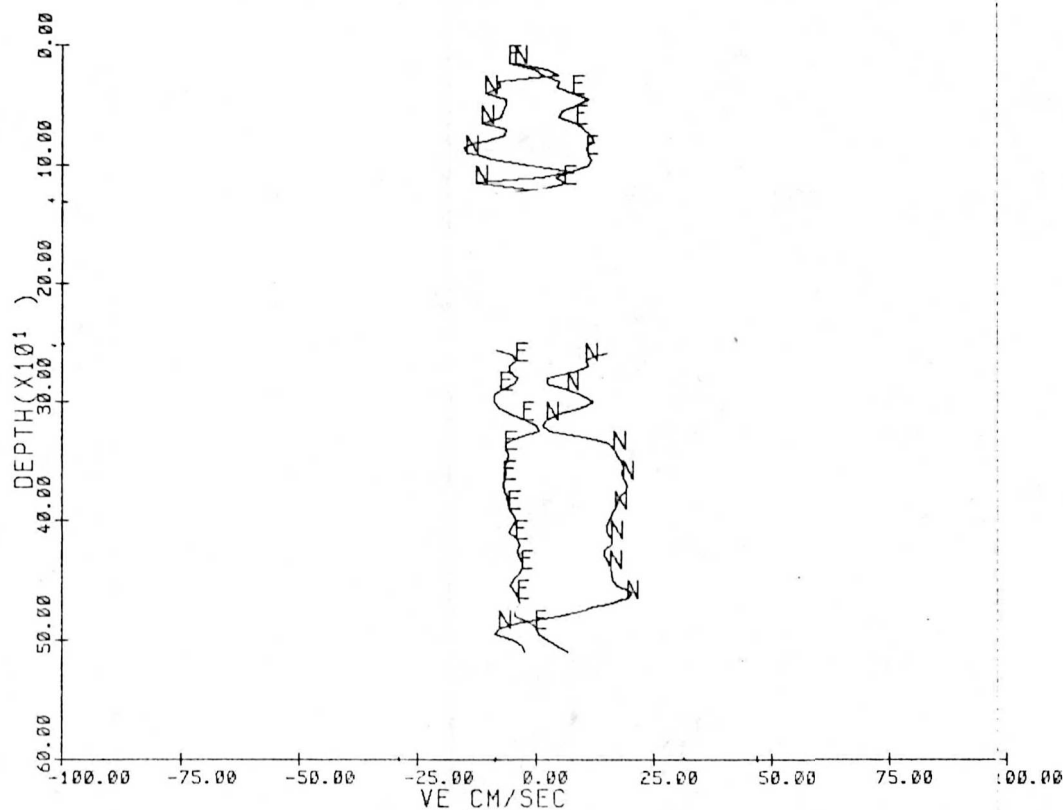
East correction = -8.47 cm/sec

North correction = 18.94 cm/sec

East ship drift = -25.7 cm/sec

North ship drift = 8 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	2.03	344.57	-0.54	1.96
30.00	9.18	149.24	4.70	-7.89
40.00	13.23	144.01	7.78	-10.71
50.00	10.63	127.31	8.45	-6.44
60.00	8.91	147.72	4.76	-7.53
70.00	11.92	123.30	9.97	-6.55
80.00	15.99	132.03	11.88	-10.71
90.00	18.12	143.98	10.65	-14.66
100.00	11.09	97.94	10.98	-1.53
110.00	4.10	76.89	3.99	0.93
120.00	1.85	167.70	0.39	-1.80
260.00	14.51	338.99	-5.20	13.55
270.00	12.39	332.82	-5.66	11.02
280.00	4.74	299.98	-4.11	2.37
290.00	10.01	311.65	-7.48	6.65
300.00	15.09	323.20	-9.04	12.09
310.00	7.66	311.84	-5.71	5.11
320.00	1.15	356.93	-0.06	1.15
330.00	10.48	340.97	-3.42	9.91
340.00	17.75	338.68	-6.45	16.54
350.00	19.05	340.56	-6.34	17.96
360.00	19.45	340.25	-6.57	18.30
370.00	20.41	340.03	-6.97	19.19
380.00	18.89	340.39	-6.34	17.79
390.00	17.72	341.14	-5.73	16.77
400.00	15.96	344.58	-4.24	15.39
410.00	16.00	339.24	-5.67	14.96
420.00	16.50	347.37	-3.61	16.10
430.00	14.91	345.56	-3.72	14.44
440.00	16.10	349.00	-3.07	15.81
450.00	17.04	343.26	-4.91	16.32
460.00	20.85	347.58	-4.48	20.36
470.00	15.59	346.56	-3.62	15.17
480.00	6.43	316.05	-4.46	4.63
490.00	7.81	180.67	-0.09	-7.81
500.00	5.28	152.51	2.44	-4.69
510.00	7.31	110.76	6.83	-2.59



Station 20

1 August 1978, 1038Z

0 58'S

26 00'W

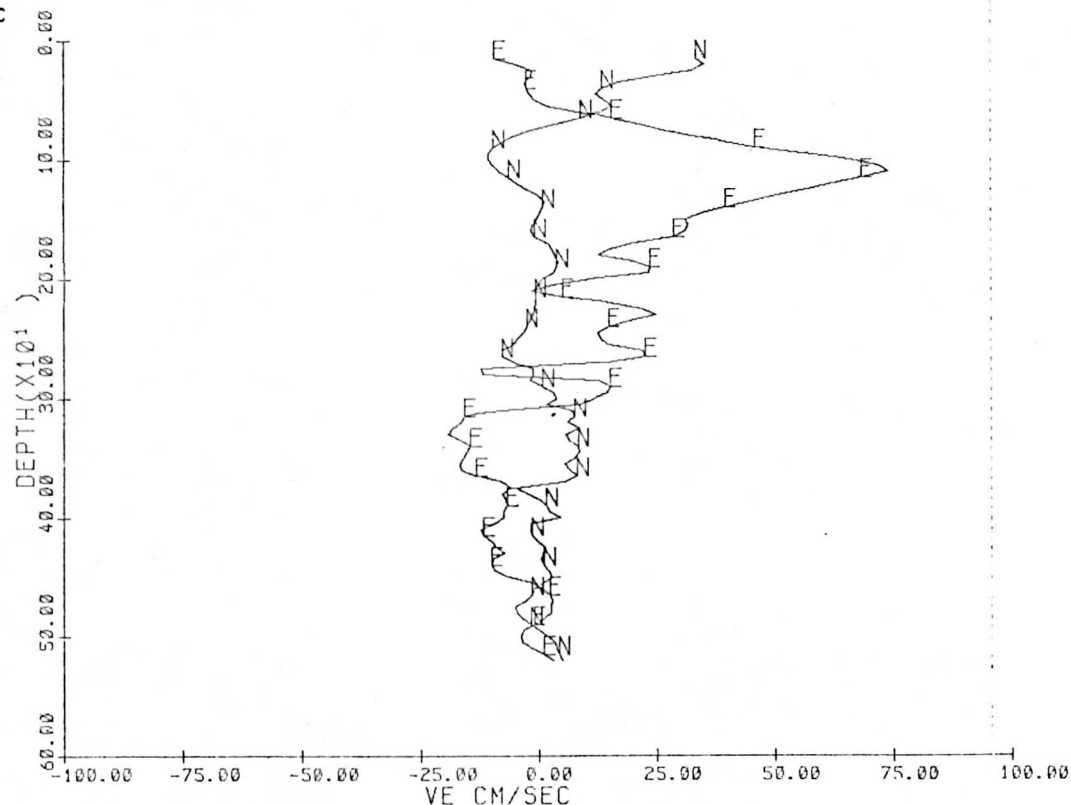
East correction = 15.79 cm/sec

North correction = 1.12 cm/sec

East ship drift = -8 cm/sec

North ship drift = -43 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	35.33	351.86	-5.00	34.98
30.00	23.96	355.77	-1.77	23.90
40.00	13.59	347.84	-2.86	13.29
50.00	13.86	356.06	-0.95	13.82
60.00	15.36	31.38	8.00	13.12
70.00	21.19	80.47	20.89	3.51
80.00	32.63	99.36	32.20	-5.31
90.00	46.67	102.13	45.63	-9.80
100.00	66.60	99.25	65.74	-10.71
110.00	74.23	96.50	73.76	-8.40
120.00	62.63	94.30	62.45	-4.69
130.00	50.61	90.29	50.61	-0.25
140.00	39.41	88.88	39.40	0.77
150.00	31.10	91.12	31.09	-0.61
160.00	30.99	93.07	30.94	-1.66
170.00	20.02	85.25	19.95	1.66
180.00	12.90	75.17	12.47	3.30
190.00	23.74	80.70	23.43	3.84
200.00	10.91	85.93	10.88	0.77
210.00	1.68	240.37	-1.46	-0.83
220.00	15.11	92.76	15.09	-0.73
230.00	24.82	93.17	24.78	-1.37
240.00	14.91	100.02	14.63	-2.59
250.00	13.78	109.16	13.02	-4.52
260.00	23.24	109.53	21.90	-7.77
270.00	15.25	110.27	14.30	-5.23
280.00	11.90	264.46	-11.85	-1.15
290.00	15.07	87.16	15.06	0.75
300.00	12.27	71.79	11.66	3.84
310.00	10.74	311.18	-8.09	7.07
320.00	17.43	289.97	-16.38	5.95
330.00	20.05	286.66	-19.21	5.75
340.00	16.56	299.44	-14.42	8.14
350.00	17.70	294.97	-16.05	7.47
360.00	17.69	291.69	-16.44	6.54
370.00	9.29	304.80	-7.63	5.30
380.00	8.17	252.76	-7.80	-2.42
390.00	6.87	283.66	-6.67	1.62
400.00	8.77	301.18	-7.50	4.54
410.00	12.47	261.48	-12.34	-1.85
420.00	9.89	263.67	-9.88	-0.23
430.00	7.34	276.05	-7.30	0.77
440.00	10.14	275.47	-10.10	0.97
450.00	7.10	292.92	-6.54	2.76
460.00	1.15	151.24	0.55	-1.01
470.00	3.96	134.24	2.84	-2.76
480.00	5.42	153.68	2.41	-4.86
490.00	2.03	211.90	-1.07	-1.73
500.00	4.02	295.17	-3.64	1.71
510.00	4.12	339.14	-1.47	3.85
520.00	5.81	31.86	3.07	4.94



Station 21

1 August 1978, 1426Z

0 28'S

25 59'W

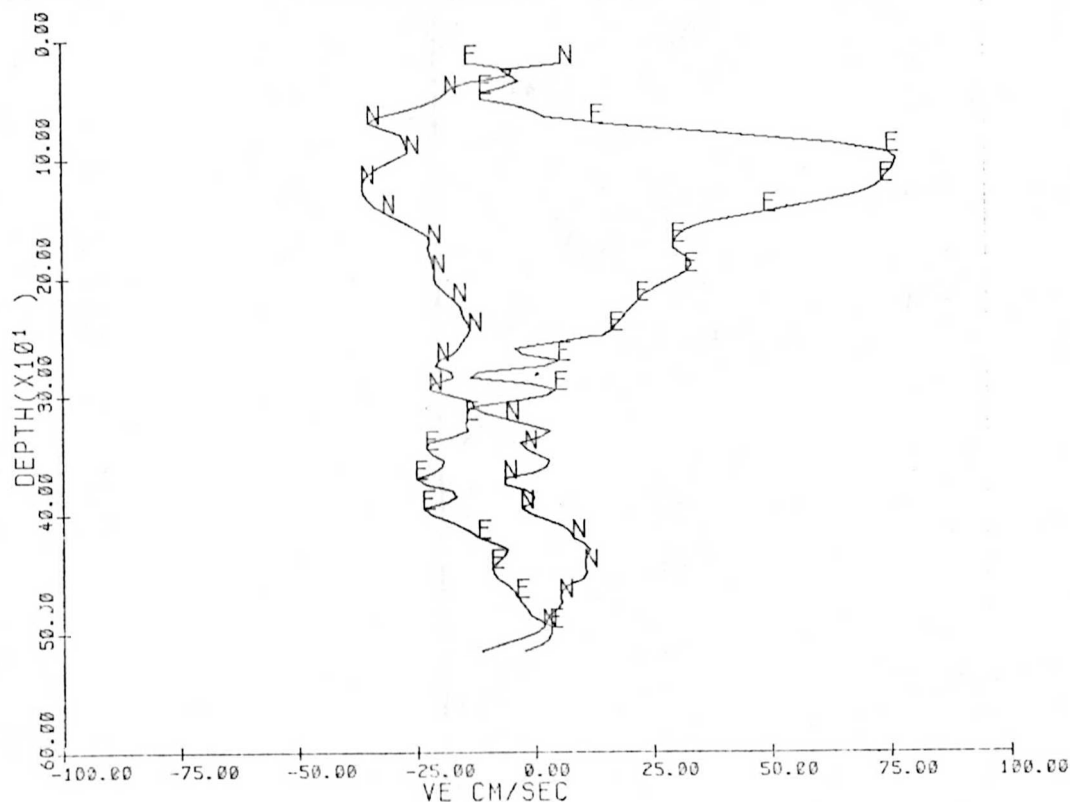
East correction = 18.61 cm/sec

North correction = 16.18 cm/sec

East ship drift = 0

North ship drift = -33 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	15.17	293.47	-13.92	6.04
30.00	6.89	223.07	-4.71	-5.04
40.00	13.18	200.77	-6.45	-16.99
50.00	22.80	209.14	-11.10	-19.91
60.00	27.44	180.19	-0.09	-27.44
70.00	36.88	160.06	12.58	-34.67
80.00	50.98	122.99	42.76	-27.76
90.00	72.05	111.75	66.92	-26.70
100.00	81.52	110.81	76.21	-28.96
110.00	82.40	114.22	75.15	-33.80
120.00	81.66	116.12	73.32	-35.95
130.00	76.95	117.65	68.16	-35.71
140.00	64.80	121.10	55.49	-33.47
150.00	50.78	124.85	41.67	-29.02
160.00	40.19	127.06	32.07	-24.22
170.00	36.88	126.74	29.55	-22.06
180.00	38.16	125.17	31.19	-21.98
190.00	39.39	122.64	33.17	-21.24
200.00	36.81	124.92	30.18	-21.07
210.00	31.91	127.87	25.19	-19.59
220.00	27.55	127.25	21.93	-16.68
230.00	24.91	128.08	19.61	-15.37
240.00	21.96	128.47	17.19	-13.66
250.00	20.07	134.83	14.24	-14.15
260.00	16.58	194.15	-4.05	-16.08
270.00	21.00	165.68	5.20	-20.35
280.00	21.12	213.83	-11.76	-17.54
290.00	21.49	182.65	-0.99	-21.47
300.00	17.61	171.71	2.54	-17.42
310.00	18.43	226.56	-13.38	-12.67
320.00	15.24	248.25	-14.15	-5.65
330.00	14.30	282.75	-13.95	3.16
340.00	22.59	262.48	-22.40	-2.96
350.00	21.46	271.64	-21.45	0.61
360.00	19.72	277.46	-19.56	2.56
370.00	25.71	256.01	-24.94	-6.22
380.00	17.50	264.52	-17.42	-1.67
390.00	18.44	268.11	-18.43	-0.61
400.00	22.01	267.96	-22.00	-0.78
410.00	16.63	289.85	-15.70	5.67
420.00	14.24	304.74	-11.70	8.11
430.00	12.86	332.84	-5.87	11.44
440.00	13.08	324.21	-7.65	10.61
450.00	13.83	320.63	-8.80	10.74
460.00	8.99	319.77	-5.81	6.86
470.00	6.53	325.00	-3.75	5.35
480.00	4.96	338.92	-1.78	4.62
490.00	2.71	29.61	1.34	2.35
500.00	3.20	89.25	3.20	0.04
510.00	7.62	171.39	1.14	-7.53



Station 22

1 August 1978, 1950Z

0 02'N

26 00'N

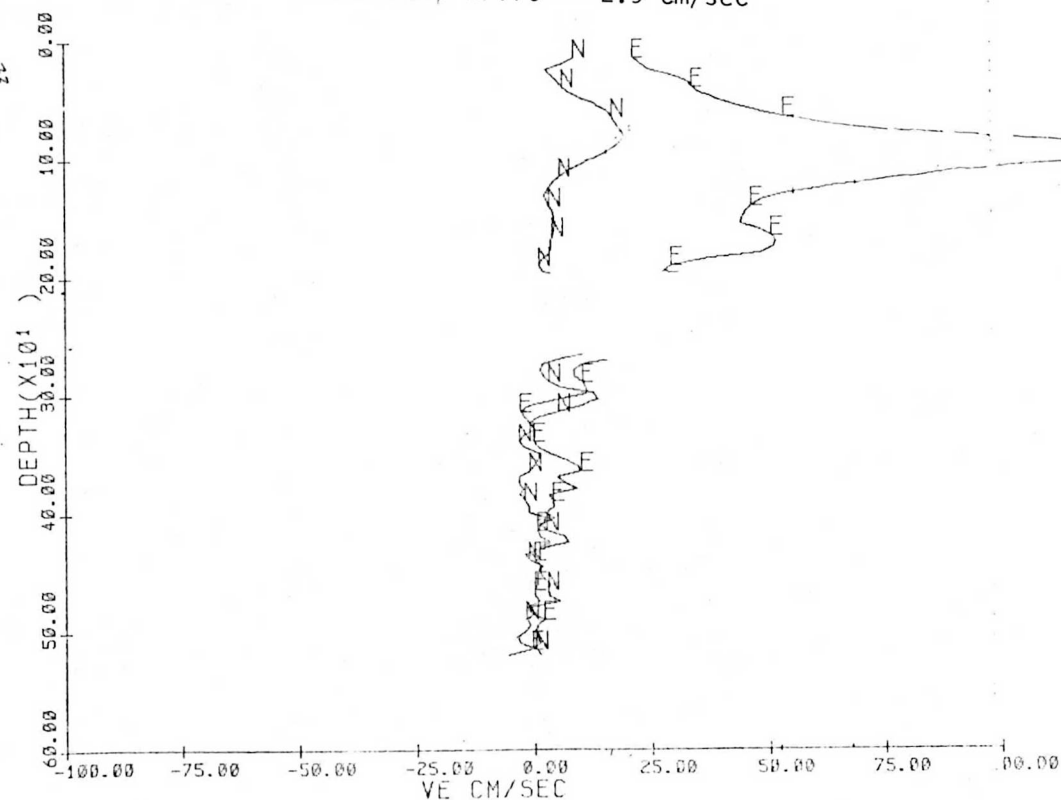
East correction = .88 cm/sec

North correction = 4.44 cm/sec

East ship drift = 0

North ship drift = -2.9 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	23.68	74.22	22.79	6.44
30.00	29.54	82.16	29.27	4.03
40.00	34.26	79.33	33.66	6.34
50.00	40.24	74.57	38.79	10.71
60.00	50.13	71.54	47.55	15.87
70.00	62.49	73.69	59.97	17.55
80.00	85.92	76.90	83.68	19.47
90.00	115.85	81.13	114.47	17.87
100.00	129.04	84.25	128.39	12.92
110.00	103.05	85.78	102.77	7.58
120.00	73.33	86.72	73.21	4.20
130.00	53.18	87.31	53.12	2.50
140.00	46.48	85.64	46.34	3.53
150.00	44.41	84.10	44.18	4.56
160.00	48.24	84.75	48.04	4.42
170.00	51.58	85.82	51.44	3.76
180.00	48.01	85.77	47.88	3.54
190.00	29.22	87.37	29.19	1.34
200.00	39.32	77.79	38.43	8.32
270.00	10.62	72.56	18.71	5.88
230.00	8.56	80.58	8.45	1.40
290.00	10.67	71.71	10.13	3.35
300.00	16.71	41.21	11.01	12.57
310.00	10.38	354.24	-1.04	10.33
320.00	1.88	297.45	-1.67	0.87
330.00	0.36	20.27	0.13	0.34
340.00	3.04	178.31	0.09	-3.04
350.00	3.50	74.37	3.37	0.94
360.00	8.90	88.66	8.90	0.21
370.00	5.85	120.70	5.03	-2.98
380.00	9.21	103.65	8.95	-2.17
390.00	4.38	114.03	4.00	-1.78
400.00	2.98	110.36	2.79	-1.04
410.00	1.83	50.93	1.42	1.15
420.00	6.57	10.42	1.19	6.46
430.00	1.98	27.35	0.91	1.76
440.00	0.97	162.56	0.29	-0.92
450.00	1.44	33.16	0.79	1.20
460.00	3.38	11.99	0.70	3.31
470.00	3.17	4.02	0.22	3.16
480.00	1.50	234.46	-1.22	-0.87
490.00	2.79	122.78	2.35	-1.51
500.00	1.85	161.18	0.60	-1.75
510.00	3.00	153.80	1.33	-2.69
520.00	5.45	286.31	-5.23	1.53



Station 23

2 August 1978, 2326Z

0 30'N

26 00'W

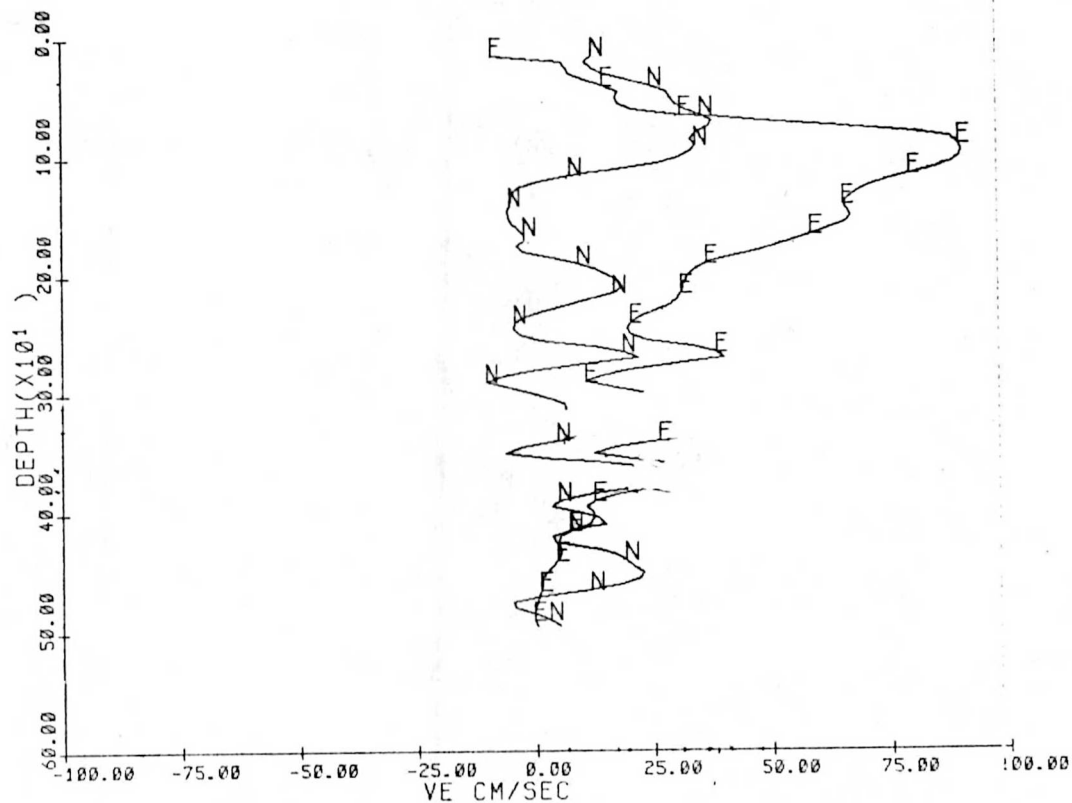
East correction = .88 cm/sec

North correction = 22.37 cm/sec

East ship drift = -10 cm/sec

North ship drift = 3.3 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	12.14	27.97	5.70	10.72
30.00	16.62	27.02	7.55	14.80
40.00	23.39	30.49	14.40	24.46
50.00	33.53	30.93	17.24	28.76
60.00	37.88	33.23	20.78	31.66
70.00	60.87	52.06	48.01	37.42
80.00	86.85	67.01	79.95	33.92
90.00	95.73	69.21	89.50	33.97
100.00	94.71	71.28	89.70	30.40
110.00	86.22	78.42	84.46	17.30
120.00	74.06	89.45	74.05	0.71
130.00	67.80	94.02	67.63	-4.75
140.00	65.15	94.70	64.93	-5.33
150.00	66.70	94.81	66.46	-5.59
160.00	62.18	93.14	62.08	-3.40
170.00	54.55	92.33	54.51	-2.22
180.00	46.22	93.22	46.15	-2.60
190.00	37.31	75.53	36.13	9.29
200.00	35.93	64.18	32.34	15.65
210.00	36.34	59.30	31.25	18.55
220.00	32.19	69.04	30.06	11.51
230.00	25.37	85.97	25.31	1.78
240.00	20.64	102.11	20.18	-4.33
250.00	20.52	98.83	20.27	-3.15
260.00	34.99	70.46	32.98	11.71
270.00	45.35	61.51	39.86	21.63
280.00	20.08	89.42	20.08	0.20
290.00	14.98	133.60	10.85	-10.33
300.00	24.03	90.96	24.03	-0.40
340.00	26.64	79.69	26.21	4.77
350.00	14.04	116.00	12.62	-6.16
380.00	31.16	50.80	24.15	19.69
390.00	13.46	68.24	12.50	4.99
400.00	15.59	51.40	12.18	9.73
410.00	18.69	37.39	11.35	14.85
420.00	6.33	56.37	5.27	3.51
430.00	12.87	23.80	5.19	11.77
440.00	19.55	13.32	4.51	19.03
450.00	22.68	5.40	2.15	22.58
460.00	18.40	3.62	1.16	18.36
470.00	1.31	27.71	0.61	1.16
480.00	4.19	181.94	-0.14	-4.19
490.00	3.13	351.44	-0.47	3.10



Station 25

2 August 1978, 1707 Z

1 00'N

24 58'W

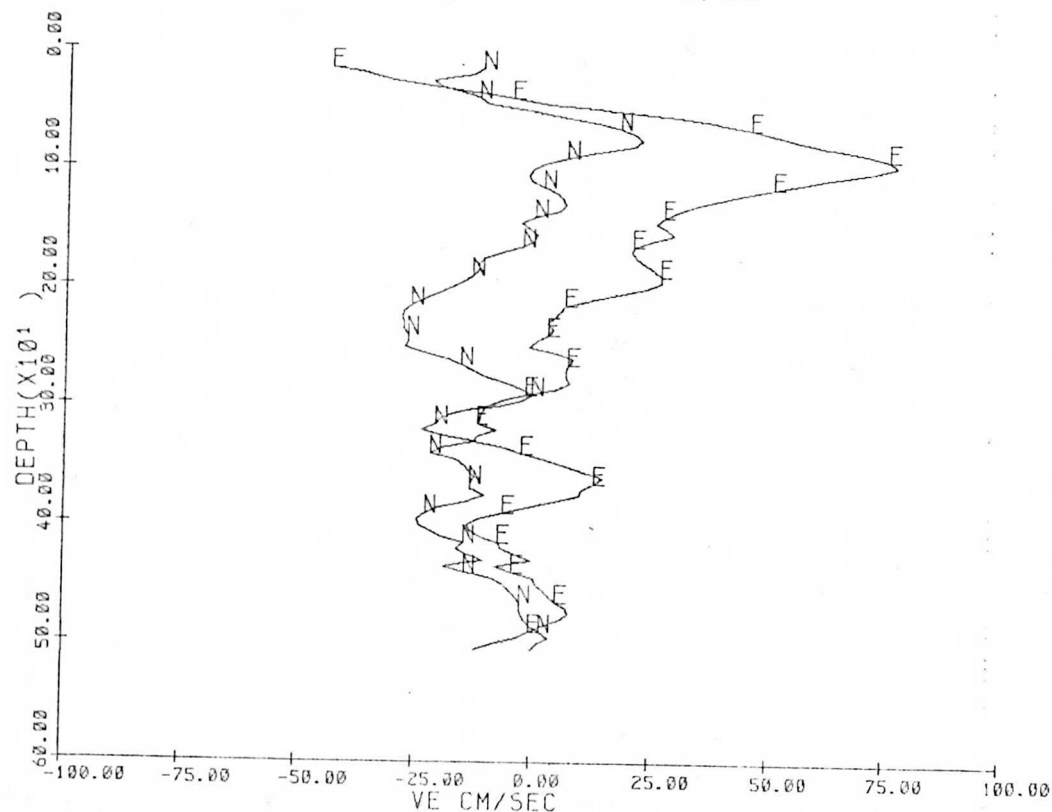
East correction = 1.76 cm/sec

North correction = 27.57 cm/sec

East ship drift = 0

North ship drift = -4.6 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	33.29	248.91	-35.73	-13.78
30.00	30.57	227.41	-22.51	-20.69
40.00	13.40	203.16	-5.27	-12.32
50.00	16.22	96.43	16.12	-1.82
60.00	39.98	72.27	38.08	12.18
70.00	54.74	67.60	50.61	20.86
80.00	64.88	71.86	61.65	20.20
90.00	75.46	85.29	75.21	6.20
100.00	71.91	90.70	71.90	-0.88
110.00	57.21	91.29	57.20	-1.29
120.00	44.26	84.55	44.06	4.20
130.00	34.01	79.82	33.48	6.01
140.00	26.89	90.28	26.89	-0.13
150.00	27.62	93.37	27.57	-1.62
160.00	24.31	90.94	24.31	-0.40
170.00	21.31	109.02	20.15	-6.95
180.00	25.84	117.52	22.92	-11.94
190.00	29.57	116.69	26.42	-13.28
200.00	29.40	127.55	23.31	-17.92
210.00	26.55	153.61	11.80	-23.79
220.00	28.48	169.33	5.27	-27.99
230.00	28.06	174.95	2.47	-27.95
240.00	27.21	174.25	2.73	-27.08
250.00	27.46	182.80	-1.34	-27.43
260.00	20.24	156.75	7.99	-18.59
270.00	14.43	152.95	6.56	-12.85
280.00	9.48	130.67	7.19	-6.18
290.00	1.87	253.26	-1.79	-0.54
300.00	12.50	232.27	-9.88	-7.65
310.00	22.74	209.46	-11.18	-19.80
320.00	25.20	198.79	-8.12	-23.86
330.00	17.42	226.87	-12.71	-11.91
340.00	22.00	186.60	-2.53	-21.86
350.00	15.96	155.09	6.72	-14.48
360.00	19.11	130.96	14.43	-12.52
370.00	16.90	142.13	10.37	-13.34
380.00	14.21	162.22	4.34	-13.53
390.00	23.67	195.27	-6.23	-22.83
400.00	27.95	209.54	-13.78	-24.32
410.00	22.14	209.96	-11.06	-19.18
420.00	17.15	201.97	-6.42	-15.91
430.00	10.22	181.64	-0.29	-10.21
440.00	14.97	196.24	-4.19	-14.37
450.00	6.09	171.89	0.86	-6.03
460.00	5.06	134.40	3.61	-3.54
470.00	7.71	109.04	7.29	-2.51
480.00	6.02	104.35	5.83	-1.49
490.00	1.69	346.38	-0.40	1.64
500.00	8.05	279.83	-7.93	1.37



Station 26

2 August 1978, 2053 Z

0 29'N

24 59'W

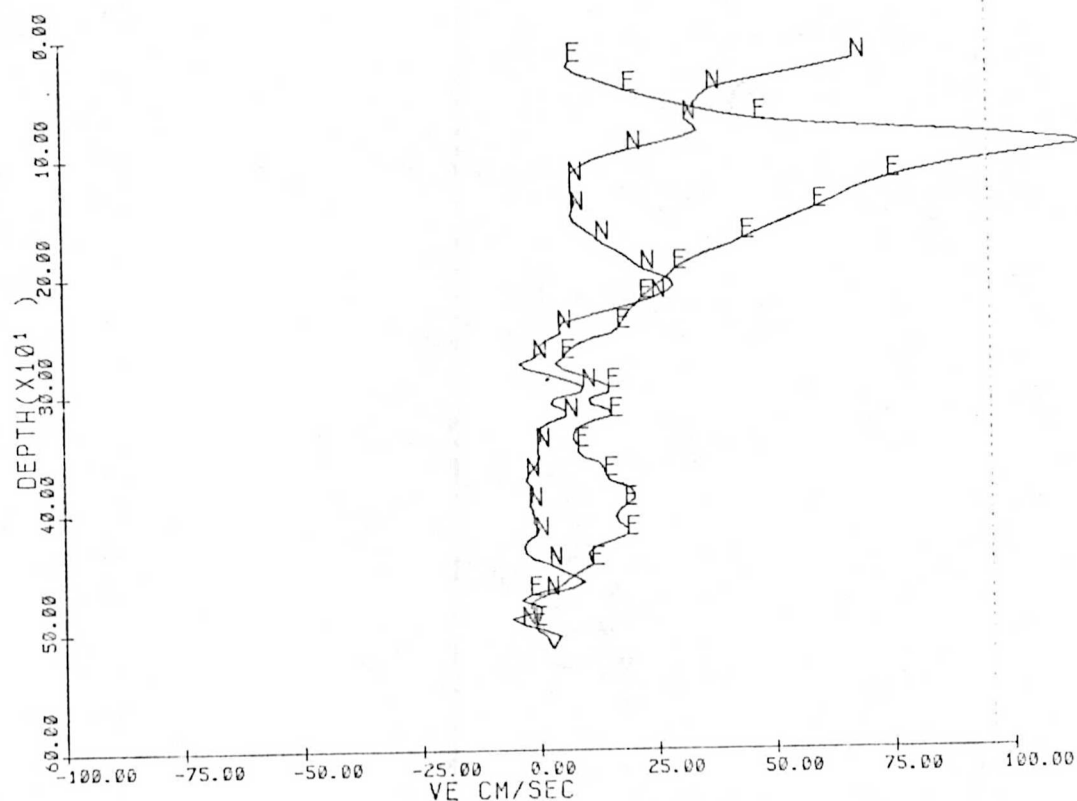
East correction = -0.46 cm/sec

North correction = 8.44 cm/sec

East ship drift = -11.1 cm/sec

North ship drift = 11.1 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	68.03	6.36	7.53	67.61
30.00	55.61	8.66	8.38	54.97
40.00	44.30	20.84	15.76	41.40
50.00	42.54	33.92	23.74	35.30
60.00	47.49	45.45	33.84	33.32
70.00	56.73	55.82	46.93	31.88
80.00	89.18	67.19	82.21	34.58
90.00	114.49	76.98	111.54	25.79
100.00	105.85	81.84	104.77	15.02
110.00	86.99	84.08	86.52	8.97
120.00	75.16	84.27	74.78	7.50
130.00	67.48	83.54	67.06	7.59
140.00	62.67	82.40	62.12	8.28
150.00	56.57	82.46	56.08	7.42
160.00	50.68	78.87	49.73	9.78
170.00	45.98	73.58	44.10	13.00
180.00	41.21	65.30	37.44	17.22
190.00	37.78	56.73	31.59	20.73
200.00	38.34	47.25	28.16	26.02
210.00	38.33	41.00	25.15	28.93
220.00	33.34	42.11	22.36	24.73
230.00	25.46	50.98	19.78	16.03
240.00	18.94	72.05	18.02	5.84
250.00	16.50	72.51	15.74	4.96
260.00	7.94	86.56	7.92	0.48
270.00	5.47	93.95	5.46	-0.38
280.00	5.79	109.34	5.47	-1.92
290.00	13.97	61.37	12.27	6.70
300.00	17.61	58.81	15.07	9.12
310.00	11.75	75.18	11.36	3.01
320.00	16.67	68.46	15.51	6.12
330.00	8.25	86.89	8.24	0.45
340.00	7.49	86.72	7.47	0.43
350.00	8.56	89.21	8.56	0.12
360.00	13.07	90.85	13.07	-0.19
370.00	14.38	98.73	14.21	-2.18
380.00	18.92	93.73	18.88	-1.23
390.00	20.22	94.28	20.16	-1.51
400.00	16.98	94.52	16.93	-1.34
410.00	16.91	93.50	16.88	-1.03
420.00	18.72	91.28	18.71	-0.42
430.00	12.30	104.03	11.93	-2.98
440.00	10.76	96.27	10.69	-1.18
450.00	10.11	61.59	8.90	4.81
460.00	11.03	29.59	5.45	9.59
470.00	2.46	312.11	-1.82	1.65
480.00	2.02	170.79	0.32	-1.99
490.00	5.78	181.03	-0.10	-5.78
500.00	1.33	340.88	-0.43	1.25
510.00	3.94	28.90	1.90	3.45



Station 27

3 August 1978, 0428Z

0 00'N

25 01'W

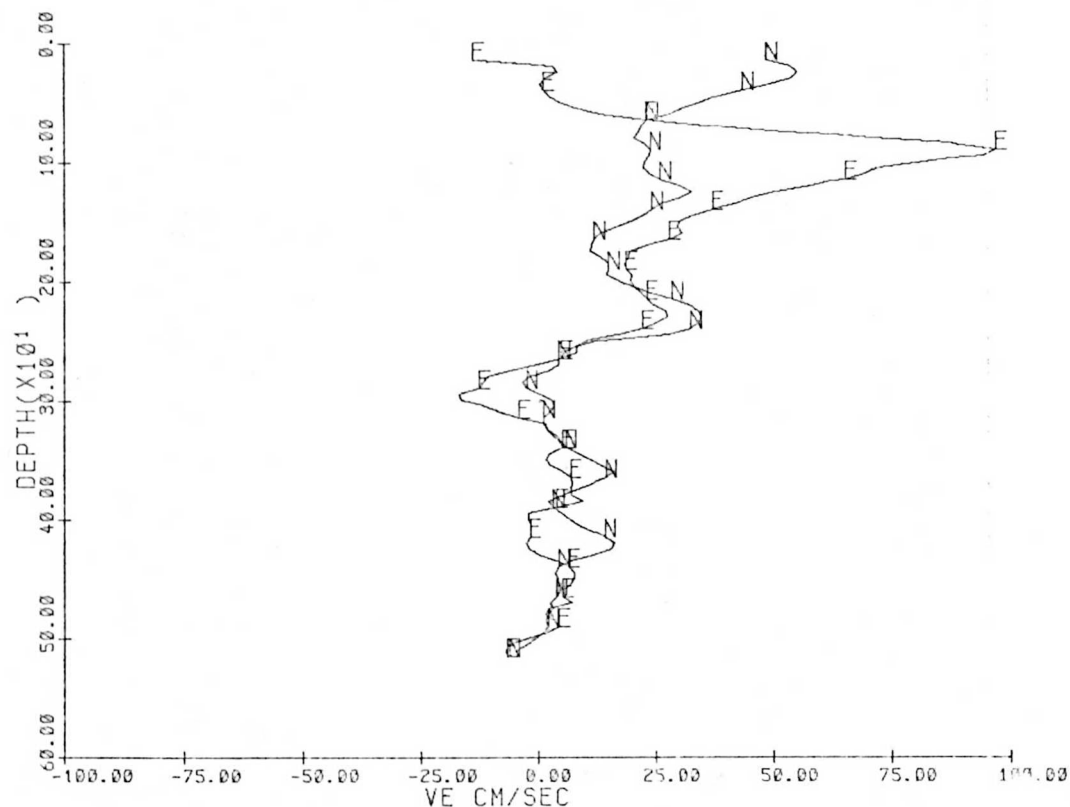
East correction = -9.61 cm/sec

North correction = -2.16 cm/sec

East ship drift = -19 cm/sec

North ship drift = -6.3 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	53.54	3.52	3.28	53.44
30.00	53.86	1.58	1.48	53.84
40.00	43.56	1.63	1.24	43.54
50.00	34.93	7.46	4.53	34.63
60.00	30.82	24.91	12.98	27.95
70.00	41.83	58.35	35.61	21.95
80.00	73.63	73.80	70.71	20.54
90.00	99.76	76.14	96.86	23.90
100.00	84.78	74.50	81.70	22.65
110.00	73.10	71.03	69.13	23.76
120.00	65.43	62.67	58.13	30.04
130.00	54.91	56.12	45.59	30.61
140.00	44.39	56.87	37.18	24.26
150.00	35.88	56.59	29.95	19.76
160.00	33.56	66.60	30.80	13.33
170.00	25.99	63.68	23.29	11.52
180.00	23.53	54.99	19.31	13.53
190.00	24.03	51.30	18.75	15.02
200.00	26.18	48.84	19.71	17.23
210.00	32.61	42.51	22.04	24.04
220.00	40.45	37.18	24.45	32.23
230.00	44.28	38.43	27.52	34.68
240.00	39.44	34.56	22.37	32.48
250.00	16.93	36.84	10.15	13.55
260.00	9.84	34.21	5.53	8.14
270.00	4.50	359.72	-0.02	4.50
280.00	10.87	260.48	-10.72	-1.80
290.00	12.70	259.34	-12.48	-2.35
300.00	16.49	280.06	-16.24	2.88
310.00	8.37	286.71	-8.02	2.41
320.00	2.20	54.07	1.78	1.29
330.00	5.05	39.75	3.23	3.88
340.00	7.93	41.92	5.30	5.90
350.00	11.06	9.32	1.79	10.91
360.00	16.87	18.25	5.28	16.02
370.00	13.70	31.77	7.21	11.65
380.00	8.72	54.57	7.10	5.05
390.00	5.27	51.52	4.12	3.28
400.00	6.97	342.81	-2.06	6.66
410.00	11.16	352.85	-1.39	11.07
420.00	16.48	351.39	-2.47	16.29
430.00	12.10	1.37	0.29	12.10
440.00	7.97	55.73	6.58	4.49
450.00	8.76	60.64	7.64	4.30
460.00	7.15	47.84	5.30	4.80
470.00	7.82	69.86	7.34	2.69
480.00	2.81	35.98	1.65	2.28
490.00	5.04	64.29	4.54	2.19
500.00	2.24	257.95	-2.19	-0.47
510.00	8.04	235.57	-6.63	-4.55



Station 28

3 August 1978, 0830Z

0 29'S

25 00'W

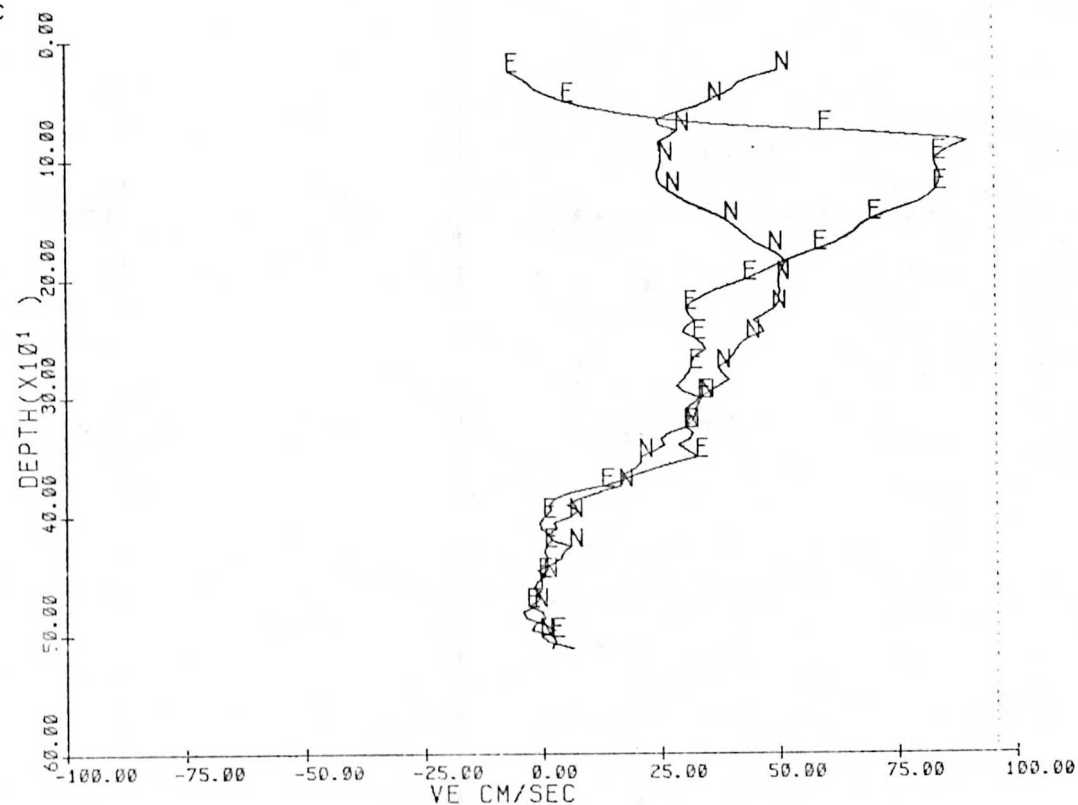
East correction = -5.80 cm/sec

North correction = 6.64 cm/sec

East ship drift = 0

North ship drift = -36 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
25.00	50.52	270.29	-7.12	50.02
35.00	41.89	270.29	-2.85	41.79
45.00	38.49	89.71	1.18	38.47
55.00	34.11	89.71	9.15	32.86
65.00	35.11	89.71	25.26	24.39
75.00	65.77	89.71	59.10	28.85
85.00	93.33	89.71	90.00	24.68
95.00	83.30	89.71	84.62	25.23
105.00	86.86	89.71	83.22	24.89
115.00	87.82	89.71	84.33	24.52
125.00	87.52	89.71	83.31	26.81
135.00	85.66	89.71	79.91	30.87
145.00	81.22	89.71	72.52	36.57
155.00	78.62	89.71	67.22	40.77
165.00	77.58	89.71	64.04	43.77
175.00	75.32	89.71	57.77	48.33
185.00	72.44	89.71	51.00	51.44
195.00	67.99	89.71	45.78	50.26
205.00	63.74	89.71	39.39	50.11
215.00	60.33	89.71	33.82	49.96
225.00	57.74	89.71	30.41	49.08
235.00	55.12	89.71	32.20	44.74
245.00	55.37	89.71	29.68	46.75
255.00	54.00	89.71	34.01	41.95
265.00	51.77	89.71	32.56	40.25
275.00	48.80	89.71	31.54	37.24
285.00	49.45	89.71	29.79	39.48
295.00	46.21	89.71	29.78	35.34
305.00	45.95	89.71	32.00	32.98
315.00	44.94	89.71	31.33	32.22
325.00	42.87	89.71	30.15	30.48
335.00	40.13	89.71	31.37	25.03
345.00	38.79	89.71	30.73	23.67
355.00	34.91	89.71	28.09	20.72
365.00	25.99	89.71	19.77	16.88
375.00	20.96	89.71	12.78	16.61
385.00	8.47	89.71	2.74	8.02
395.00	7.62	89.71	1.73	7.42
405.00	2.50	270.29	-0.44	2.46
415.00	2.05	89.71	1.62	1.25
425.00	6.02	89.71	0.82	5.96
435.00	4.12	89.71	0.95	4.01
445.00	1.43	90.29	0.97	-1.06
455.00	1.32	269.71	-0.17	-1.31
465.00	1.43	269.71	-0.83	-1.22
475.00	3.33	269.71	-3.02	-1.38
485.00	3.56	90.29	0.56	-3.52
495.00	3.60	270.29	-2.31	2.77
505.00	3.02	89.71	2.69	1.37



Station 29

3 August 1978, 1358Z

0 59'S

25 01'S

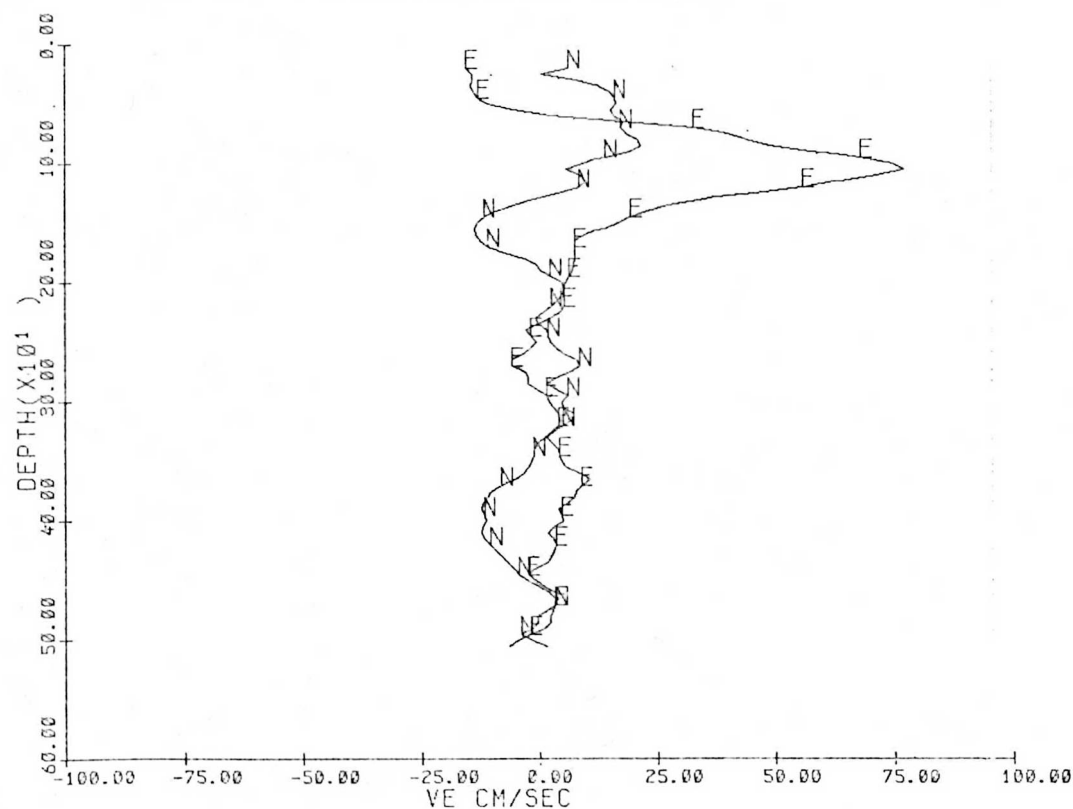
East correction = 20.32 cm/sec

North correction = 15.90 cm/sec

East ship drift = -11 cm/sec

North ship drift = 5 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	16.57	270.29	-15.23	6.54
30.00	16.22	270.29	-14.08	8.06
40.00	20.44	270.29	-13.65	15.21
50.00	19.63	270.29	-10.78	16.40
60.00	16.24	89.71	2.87	15.99
70.00	37.08	89.71	32.64	17.60
80.00	48.72	89.71	44.01	20.91
90.00	60.59	89.71	57.41	19.38
100.00	74.97	89.71	74.38	9.44
110.00	71.48	89.71	70.91	9.01
120.00	56.50	89.71	55.82	8.69
130.00	35.15	90.29	35.14	-0.95
140.00	24.82	90.29	23.09	-9.11
150.00	21.44	90.29	17.10	-12.93
160.00	16.55	90.29	9.79	-13.34
170.00	13.12	90.29	7.70	-10.63
180.00	8.22	90.29	7.69	-2.90
190.00	7.17	89.71	7.16	0.41
200.00	7.57	89.71	5.75	4.93
210.00	7.19	89.71	5.25	4.91
220.00	6.07	89.71	5.45	2.68
230.00	2.57	90.29	2.49	-0.63
240.00	3.12	270.29	-2.65	1.65
250.00	2.55	270.29	-0.59	2.48
260.00	6.14	270.29	-3.19	5.25
270.00	10.45	270.29	-5.72	8.74
280.00	4.29	270.29	-2.16	3.70
290.00	4.10	270.29	-0.17	4.10
300.00	5.57	89.71	2.37	5.03
310.00	8.60	89.71	4.16	7.52
320.00	6.69	89.71	4.17	5.23
330.00	2.24	89.71	1.78	1.36
340.00	4.42	90.29	4.23	-1.09
350.00	5.25	90.29	5.06	-1.42
360.00	9.56	90.29	9.00	-3.23
370.00	12.12	90.29	9.14	-7.96
380.00	13.59	90.29	7.84	-11.09
390.00	12.93	90.29	4.19	-12.24
400.00	12.36	90.29	5.37	-11.13
410.00	12.29	90.29	1.91	-12.14
420.00	10.93	90.29	3.86	-10.23
430.00	8.24	90.29	2.77	-7.77
440.00	5.43	269.71	-0.88	-5.35
450.00	2.23	269.71	-0.61	-2.14
460.00	4.21	89.71	3.62	2.15
470.00	5.19	89.71	3.50	3.84
480.00	2.42	90.29	2.40	-0.32
490.00	1.82	90.29	1.24	-1.34
500.00	4.80	269.71	-4.52	-1.60



Station 30

3 August 1978, 2150Z

1 58'S

25 01'W

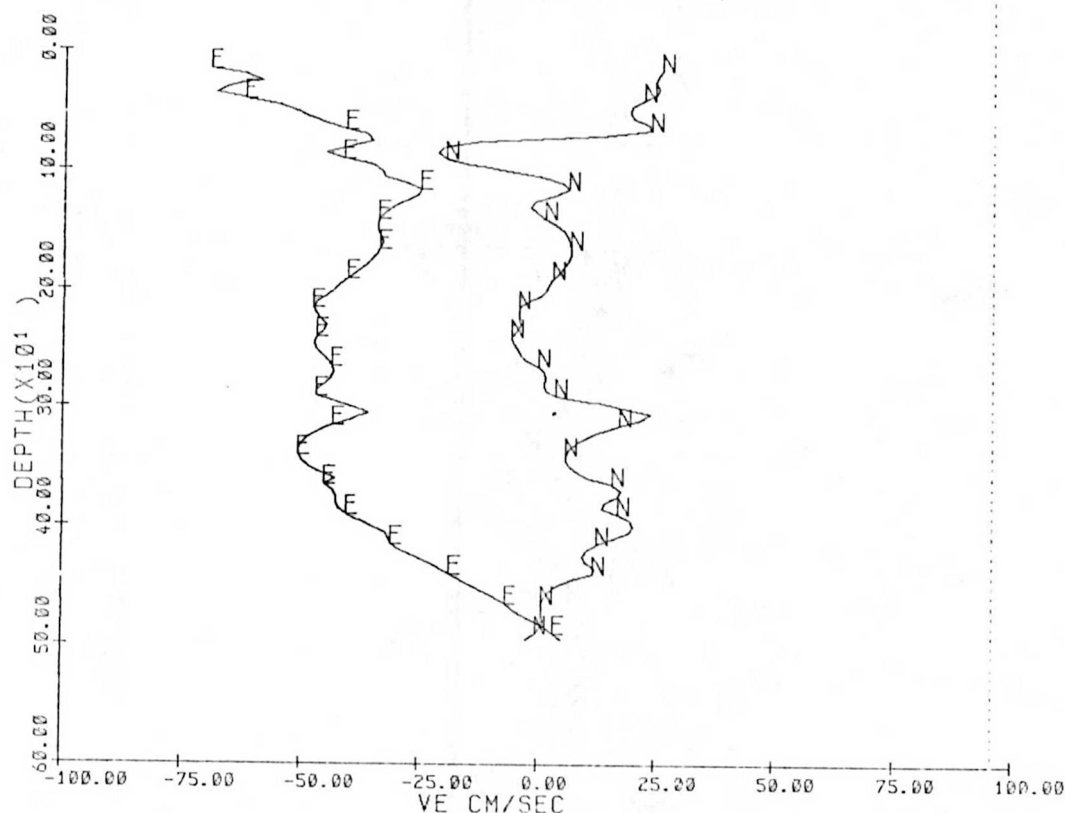
East correction = 62.85 cm/sec

North correction = 24.08 cm/sec

East ship drift = -29 cm/sec

North ship drift = -12 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
15.00	74.22	270.29	-69.57	25.85
25.00	63.63	270.29	-58.86	24.19
35.00	72.71	270.29	-68.42	24.61
45.00	58.53	270.29	-55.26	19.30
55.00	52.59	270.29	-48.81	19.60
65.00	47.22	270.29	-40.96	23.49
75.00	37.50	269.71	-35.57	-11.88
85.00	50.14	269.71	-45.17	-21.76
95.00	33.34	269.71	-35.18	-15.26
105.00	32.64	270.29	-32.64	0.53
115.00	25.84	270.29	-25.16	5.93
125.00	28.50	269.71	-28.48	-1.25
135.00	32.86	269.71	-32.85	-0.71
145.00	34.28	270.29	-34.13	3.23
155.00	34.07	270.29	-33.58	5.73
165.00	34.40	270.29	-33.77	6.56
175.00	36.20	270.29	-35.71	5.97
185.00	38.88	270.29	-38.68	3.89
195.00	42.24	270.29	-42.20	1.74
205.00	44.93	269.71	-44.98	-0.07
215.00	43.00	269.71	-42.78	-4.60
225.00	46.39	269.71	-46.17	-4.46
235.00	45.73	269.71	-45.45	-5.05
245.00	47.79	269.71	-47.45	-5.71
255.00	46.21	269.71	-46.01	-4.28
265.00	43.83	269.71	-43.83	-0.26
275.00	43.93	270.29	-43.91	1.14
285.00	47.09	270.29	-47.07	1.30
295.00	44.32	270.29	-42.90	11.13
305.00	43.11	270.29	-35.93	23.82
315.00	46.78	270.29	-43.44	17.34
325.00	49.81	270.29	-48.71	10.38
335.00	51.11	270.29	-50.70	6.46
345.00	50.31	270.29	-49.97	5.86
355.00	46.99	270.29	-46.23	8.44
365.00	47.82	270.29	-45.16	15.75
375.00	45.92	270.29	-42.64	17.04
385.00	44.31	270.29	-42.19	13.54
395.00	43.09	270.29	-38.37	19.62
405.00	37.65	270.29	-32.34	19.28
415.00	33.48	270.29	-31.04	12.53
425.00	28.02	270.29	-26.05	9.51
435.00	24.21	270.29	-21.09	11.90
445.00	17.98	270.29	-16.48	7.19
455.00	11.90	270.29	-11.67	2.20
465.00	7.17	270.29	-7.12	0.84
475.00	3.53	270.29	-3.46	0.70
485.00	1.56	89.71	1.46	0.57
495.00	5.46	90.29	4.88	-2.47



Station 31

4 August 1978, 0600Z

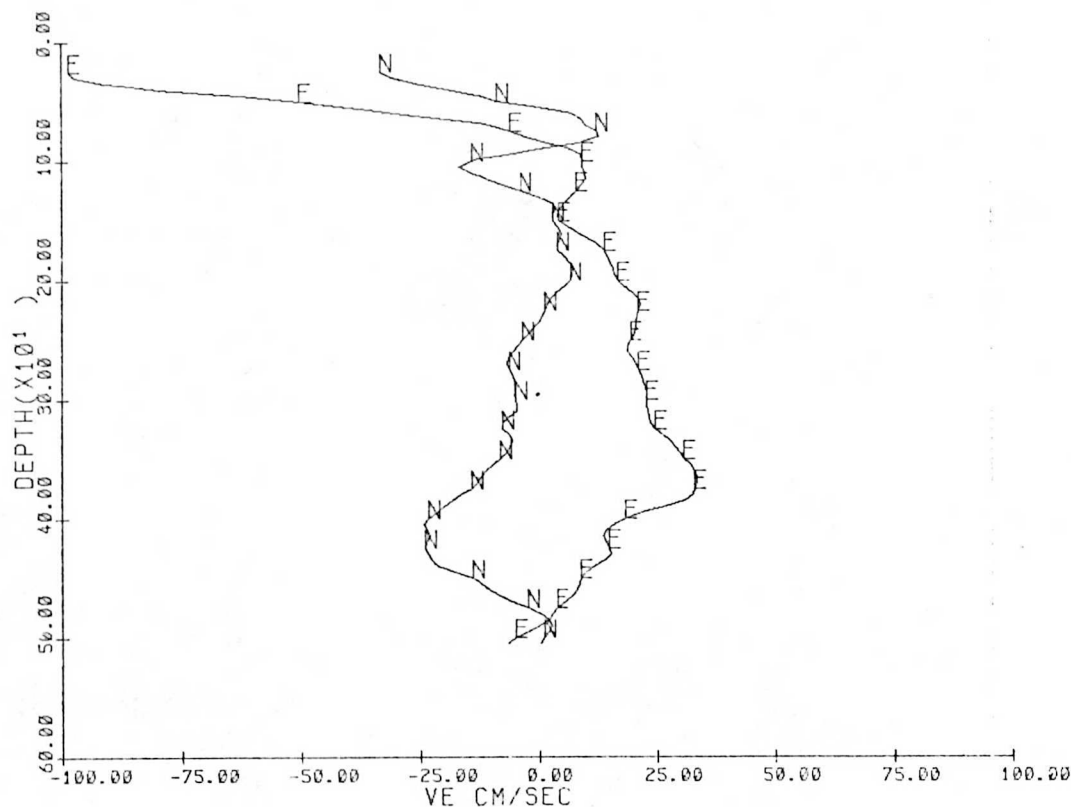
3 00'S

25 02'W

East correction = 16.04 cm/sec North correction = 40.34 cm/sec

East ship drift = -68 cm/sec North ship drift = -14 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
25.00	104.01	269.71	-98.55	-33.20
35.00	94.61	269.71	-90.95	-26.00
45.00	64.42	269.71	-63.10	-12.97
55.00	40.20	269.71	-40.20	-0.01
65.00	21.60	270.29	-19.59	9.12
75.00	13.53	270.29	-5.98	12.21
85.00	8.76	89.71	1.84	8.56
95.00	11.37	90.29	9.10	-6.82
105.00	19.17	90.29	9.18	-16.83
115.00	14.96	90.29	10.00	-11.12
125.00	8.86	90.29	7.97	-3.87
135.00	6.22	89.71	5.59	2.73
145.00	4.97	89.71	3.93	3.03
155.00	7.45	89.71	6.30	3.98
165.00	11.36	89.71	10.43	4.38
175.00	14.51	89.71	13.95	4.00
185.00	16.51	89.71	15.14	6.57
195.00	17.62	89.71	16.12	7.12
205.00	18.87	89.71	18.02	5.62
215.00	21.23	89.71	21.10	2.42
225.00	21.06	89.71	21.01	1.36
235.00	20.53	90.29	20.53	-0.06
245.00	20.34	90.29	20.21	-2.26
255.00	19.40	90.29	18.86	-4.55
265.00	20.71	90.29	19.70	-6.38
275.00	22.06	90.29	21.12	-6.35
285.00	22.66	90.29	22.07	-5.13
295.00	23.28	90.29	22.63	-5.23
305.00	23.28	90.29	22.81	-4.65
315.00	24.03	90.29	23.14	-6.48
325.00	25.78	90.29	24.58	-7.78
335.00	28.34	90.29	27.76	-5.70
345.00	30.47	90.29	29.63	-7.10
355.00	33.34	90.29	31.89	-9.72
365.00	35.45	90.29	33.30	-12.16
375.00	35.75	90.29	32.81	-14.21
385.00	35.88	90.29	30.83	-18.36
395.00	30.49	90.29	21.68	-21.45
405.00	28.95	90.29	15.90	-24.19
415.00	26.61	90.29	13.53	-22.88
425.00	28.21	90.29	14.82	-24.00
435.00	26.41	90.29	13.83	-22.47
445.00	20.40	90.29	10.06	-17.74
455.00	14.86	90.29	8.46	-12.21
465.00	10.96	90.29	6.95	-8.47
475.00	4.41	90.29	3.65	-2.48
485.00	2.82	89.71	1.94	2.05
495.00	3.15	270.29	-2.35	2.10
505.00	6.55	270.29	-6.54	0.31



Station 32

4 August 1978, 1250Z

3 30'S

24 59'W

East correction = -2.21 cm/sec

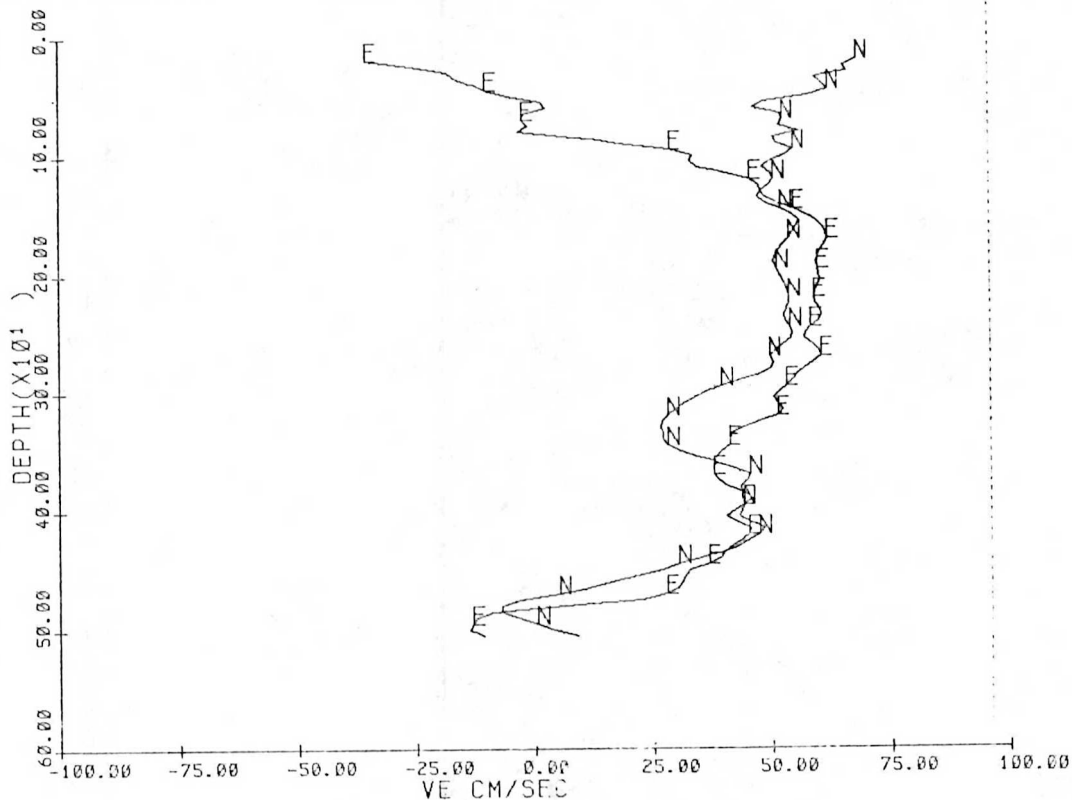
North correction = -26.87 cm/sec

East ship drift = -7 cm/sec

North ship drift = 7 cm/sec

8-28

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	76.58	270.29	-35.34	67.94
30.00	68.47	270.29	-17.93	66.08
40.00	62.24	270.29	-13.71	60.83
50.00	58.09	270.29	-5.22	57.85
60.00	46.41	89.71	2.63	46.33
70.00	52.43	270.29	-2.29	52.38
80.00	56.06	270.29	-3.06	55.98
90.00	54.34	89.71	18.12	51.23
100.00	62.77	89.71	33.47	53.10
110.00	59.46	89.71	34.61	48.35
120.00	63.12	89.71	45.62	50.59
130.00	67.64	89.71	47.83	47.84
140.00	70.75	89.71	51.24	48.79
150.00	79.14	89.71	57.40	54.48
160.00	82.10	89.71	60.64	55.34
170.00	81.92	89.71	61.80	53.77
180.00	79.26	89.71	60.29	51.45
190.00	78.04	89.71	59.42	50.59
200.00	79.38	89.71	60.12	51.84
210.00	73.82	89.71	59.67	53.01
220.00	79.81	89.71	58.99	53.76
230.00	80.25	89.71	60.14	53.13
240.00	80.13	89.71	60.08	53.01
250.00	78.96	89.71	57.24	54.38
260.00	78.80	89.71	58.73	52.55
270.00	78.22	89.71	60.41	49.69
280.00	75.77	89.71	57.03	49.89
290.00	69.62	89.71	54.49	43.33
300.00	63.24	89.71	51.76	36.32
310.00	60.34	89.71	51.39	31.62
320.00	58.62	89.71	51.38	28.21
330.00	51.76	89.71	44.28	26.80
340.00	49.53	89.71	41.30	27.34
350.00	50.18	89.71	39.50	30.96
360.00	53.92	89.71	38.07	38.18
370.00	59.19	89.71	37.06	45.50
380.00	59.64	89.71	40.72	43.58
390.00	63.28	89.71	45.65	43.82
400.00	60.93	89.71	42.35	43.80
410.00	62.39	89.71	42.64	45.54
420.00	65.58	89.71	45.13	47.53
430.00	60.08	89.71	41.70	43.25
440.00	52.63	89.71	39.31	35.00
450.00	42.36	89.71	32.72	26.90
460.00	35.22	89.71	31.21	16.34
470.00	28.43	89.71	27.91	5.38
480.00	9.63	90.29	6.74	-6.87
490.00	12.33	269.71	-11.93	-3.12
500.00	14.15	270.29	-12.48	4.29



Station 33

4 August 1978, 1810Z

3 58'S

25 00'W

East correction = 16.29 cm/sec

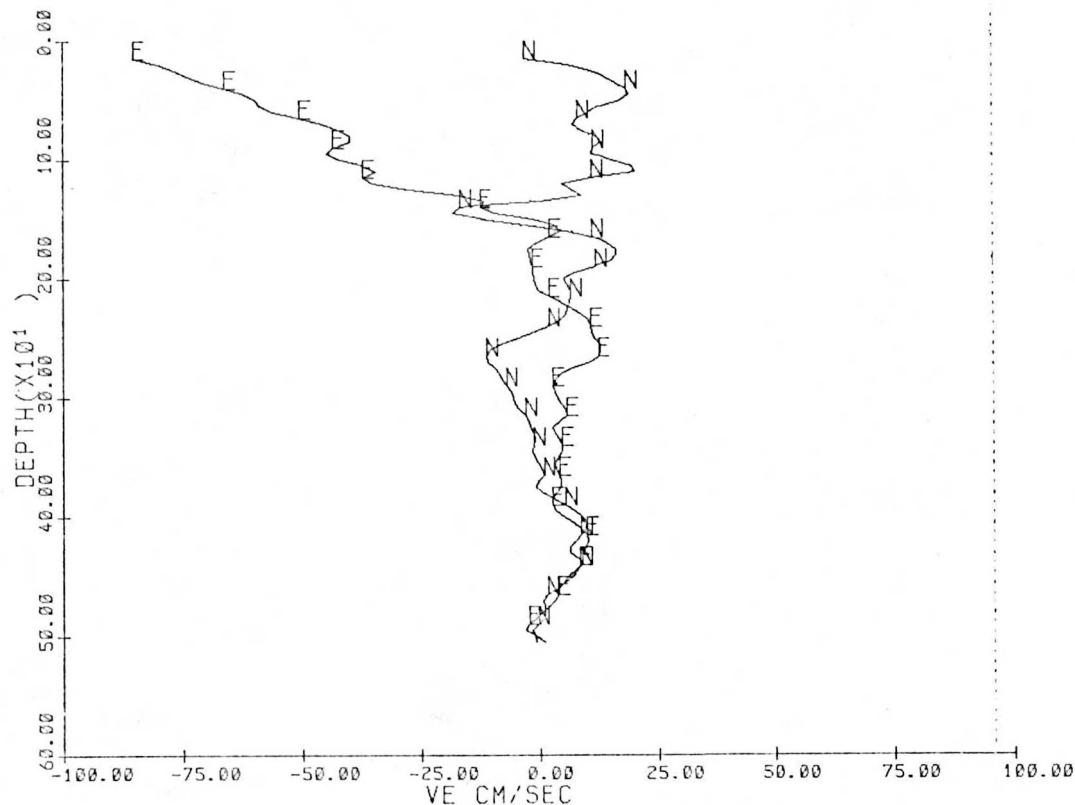
North correction = 35.17 cm/sec

East ship drift = -8 cm/sec

North ship drift = 0

8-29

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	80.28	274.09	-80.08	5.73
30.00	75.33	280.45	-74.07	13.67
40.00	68.59	285.39	-66.13	18.20
50.00	62.20	285.91	-59.82	17.05
60.00	57.01	280.41	-56.07	10.30
70.00	46.20	278.78	-45.66	7.05
80.00	41.70	286.78	-39.92	12.04
90.00	44.85	284.55	-43.41	11.26
100.00	44.62	289.98	-41.93	15.25
110.00	39.93	299.90	-34.62	19.90
120.00	35.55	277.86	-35.22	4.86
130.00	19.14	297.50	-16.93	8.84
140.00	20.99	216.81	-12.58	-16.81
150.00	12.43	187.13	-1.54	-12.34
160.00	6.88	36.86	4.13	5.51
170.00	14.18	357.11	-0.71	14.16
180.00	16.24	351.79	-2.32	16.07
190.00	11.84	352.22	-1.60	11.73
200.00	5.19	346.98	-1.17	5.06
210.00	6.40	358.77	-0.14	6.40
220.00	7.76	35.32	4.48	6.33
230.00	10.39	57.63	8.78	5.56
240.00	10.99	80.18	10.83	1.88
250.00	12.39	111.45	11.54	-4.53
260.00	16.52	129.01	12.84	-10.40
270.00	15.37	135.92	10.69	-11.04
280.00	9.68	152.05	4.54	-8.55
290.00	7.60	159.02	2.72	-7.10
300.00	6.75	145.68	3.81	-5.58
310.00	6.94	128.23	5.45	-4.30
320.00	4.91	118.50	4.31	-2.34
330.00	3.43	112.31	3.17	-1.30
340.00	4.88	104.10	4.73	-1.19
350.00	4.19	103.94	4.07	-1.01
360.00	3.64	83.43	3.61	0.42
370.00	4.49	92.15	4.48	-0.17
380.00	3.65	76.37	3.55	0.86
390.00	6.20	27.46	2.86	5.51
400.00	10.42	30.09	5.22	9.02
410.00	13.11	42.31	8.82	9.69
420.00	12.82	53.44	10.30	7.64
430.00	11.20	54.73	9.14	6.47
440.00	12.34	43.80	8.54	8.90
450.00	9.30	49.69	7.09	6.02
460.00	5.54	47.55	4.09	3.74
470.00	3.43	77.43	3.35	0.75
480.00	1.17	26.54	0.52	1.05
490.00	2.30	260.64	-2.27	-0.37
500.00	1.23	224.37	-0.86	-0.88



Station 34

4 August 1978, 2158Z

4 30'S

24 59'W

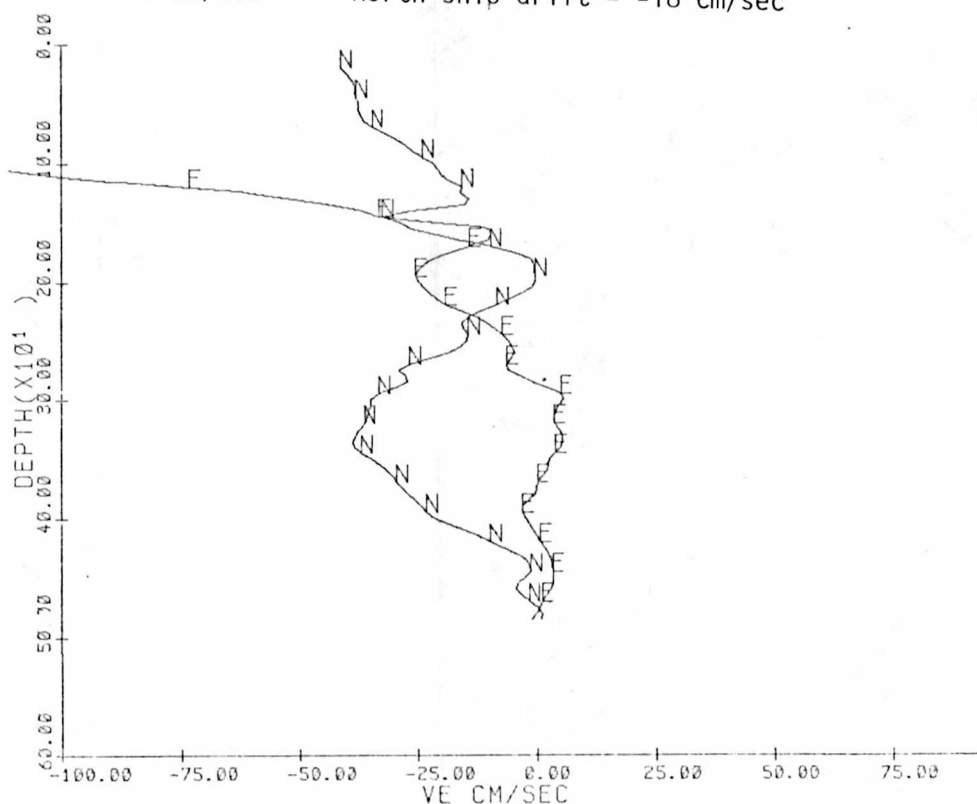
East correction = 39.95 cm/sec

North correction = 49.68 cm/sec

East ship drift = -24 cm/sec

North ship drift = -18 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	126.27	250.97	-119.37	-41.18
30.00	126.15	251.97	-119.96	-39.05
40.00	125.30	252.28	-119.35	-38.15
50.00	124.54	252.43	-118.73	-37.59
60.00	126.22	252.91	-120.65	-37.09
70.00	125.18	253.96	-120.31	-34.59
80.00	119.54	255.68	-115.82	-29.57
90.00	120.98	257.64	-118.18	-25.91
100.00	118.74	259.47	-116.75	-21.69
110.00	104.29	258.96	-102.36	-19.97
120.00	74.82	257.89	-73.15	15.69
130.00	53.27	254.56	-51.34	-14.18
140.00	45.19	234.29	-36.69	-26.38
150.00	35.44	216.25	-20.96	-28.58
160.00	23.19	204.84	-9.74	-21.05
170.00	17.32	235.39	-14.25	-9.84
180.00	21.71	266.20	-21.67	-1.44
190.00	25.09	268.50	-25.08	-0.66
200.00	24.85	268.97	-24.85	-0.45
210.00	22.75	261.83	-22.51	-3.23
220.00	20.94	246.09	-19.14	-8.49
230.00	19.30	222.80	-13.12	-14.16
240.00	17.84	209.97	-8.91	-15.46
250.00	15.96	203.37	-6.33	-14.65
260.00	18.85	195.24	-4.96	-18.19
270.00	27.55	193.53	-6.45	-26.79
280.00	27.71	187.81	-3.77	-27.45
290.00	30.13	176.02	2.09	-30.06
300.00	35.37	170.94	5.57	-34.93
310.00	35.58	173.95	3.75	-35.38
320.00	36.52	174.31	3.62	-36.34
330.00	38.26	172.16	5.22	-37.90
340.00	38.87	172.64	4.98	-38.55
350.00	34.87	175.76	2.58	-34.78
360.00	31.49	176.39	1.98	-31.43
370.00	29.40	180.19	-0.10	-29.40
380.00	26.93	180.89	-0.42	-26.93
390.00	24.49	187.80	-3.32	-24.26
400.00	21.69	186.46	-2.44	-21.55
410.00	15.19	184.19	-1.11	-15.14
420.00	9.93	176.80	0.56	-9.92
430.00	5.03	152.40	2.33	-4.46
440.00	3.48	118.77	3.05	-1.68
450.00	4.25	129.61	3.27	-2.71
460.00	5.43	148.19	2.86	-4.62
470.00	2.07	153.40	0.93	-1.85
480.00	1.08	350.59	-0.18	1.07



U2-8

Station 35

5 August 1978, 0330Z

5 00'S

25 00'W

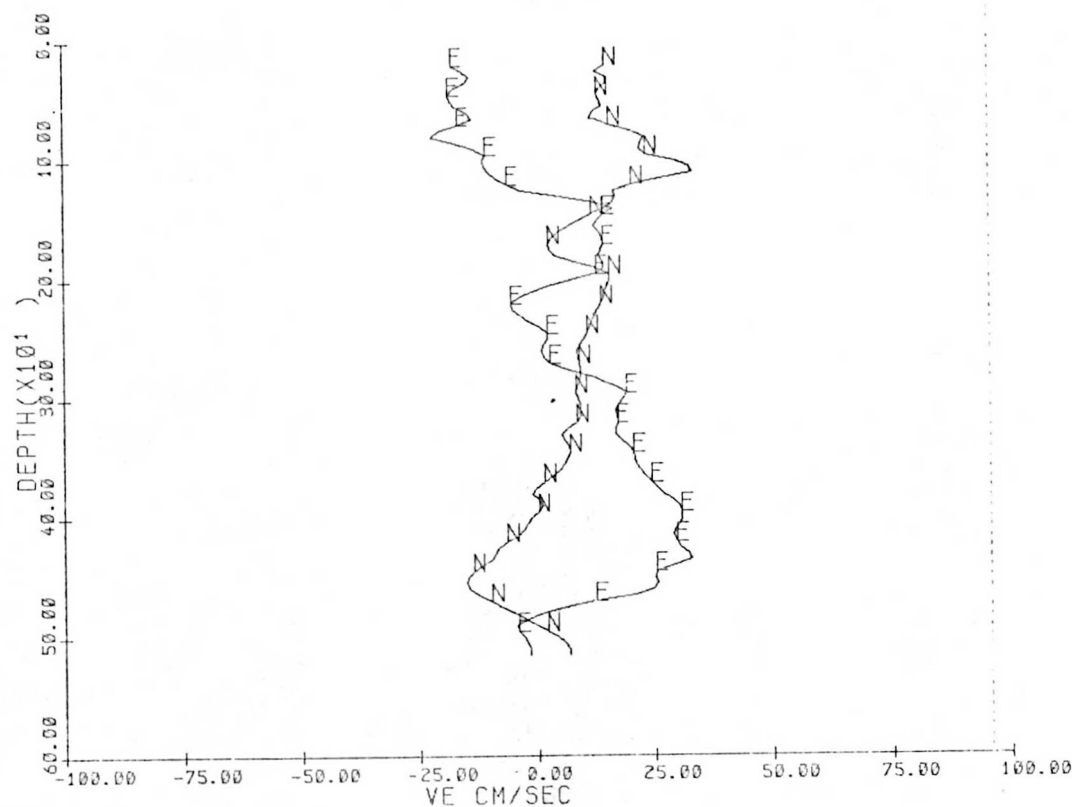
East correction = 12.62 cm/sec

North correction = 31.49 cm/sec

East ship drift = 0

North ship drift = 0

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	23.15	309.57	-17.85	14.75
30.00	20.50	316.93	-14.00	14.93
40.00	22.15	307.94	-17.47	13.62
50.00	22.61	307.59	-17.92	13.80
60.00	18.75	309.48	-14.47	11.92
70.00	22.75	313.15	-16.60	15.56
80.00	31.79	316.46	-21.90	23.05
90.00	25.54	329.03	-13.14	21.90
100.00	31.53	338.92	-11.34	29.42
110.00	34.43	343.29	-9.90	32.97
120.00	21.27	342.69	-6.33	20.31
130.00	17.39	16.40	4.91	16.68
140.00	22.05	47.60	16.28	14.87
150.00	15.79	54.84	12.91	9.09
160.00	14.20	71.48	13.46	4.51
170.00	14.37	79.77	14.14	2.55
180.00	13.90	73.40	13.32	3.97
190.00	19.01	49.13	14.37	12.44
200.00	17.18	25.10	7.31	15.54
210.00	14.51	356.09	-0.99	14.47
220.00	14.82	338.14	-5.52	13.75
230.00	12.85	344.20	-3.50	12.37
240.00	11.25	3.46	0.68	11.23
250.00	10.15	13.00	2.28	9.89
260.00	8.66	7.38	1.11	8.58
270.00	9.46	17.45	2.84	9.02
280.00	13.73	47.75	10.17	9.23
290.00	19.01	63.21	16.97	8.57
300.00	20.21	64.03	18.17	8.85
310.00	19.26	60.95	16.84	9.35
320.00	19.14	63.54	17.13	8.53
330.00	17.58	72.79	16.80	5.20
340.00	20.63	70.97	19.51	6.73
350.00	21.65	72.30	20.63	6.58
360.00	22.48	78.03	21.99	4.66
370.00	24.28	86.22	24.23	1.60
380.00	26.70	92.47	26.67	-1.15
390.00	30.09	88.22	30.07	0.94
400.00	30.58	92.22	30.56	-1.18
410.00	29.24	96.09	29.07	-3.10
420.00	30.23	102.49	29.51	-6.54
430.00	33.21	105.71	31.97	-8.99
440.00	31.24	111.97	28.98	-11.69
450.00	29.07	120.52	25.04	-14.76
460.00	28.39	120.40	24.49	-14.36
470.00	15.93	127.65	12.61	-9.73
480.00	5.30	167.61	1.14	-5.17
490.00	4.46	264.85	-4.45	-0.40
500.00	5.10	325.07	-2.92	4.18
510.00	7.05	344.74	-1.86	6.80



Station 36

5 August 1978, 0730Z

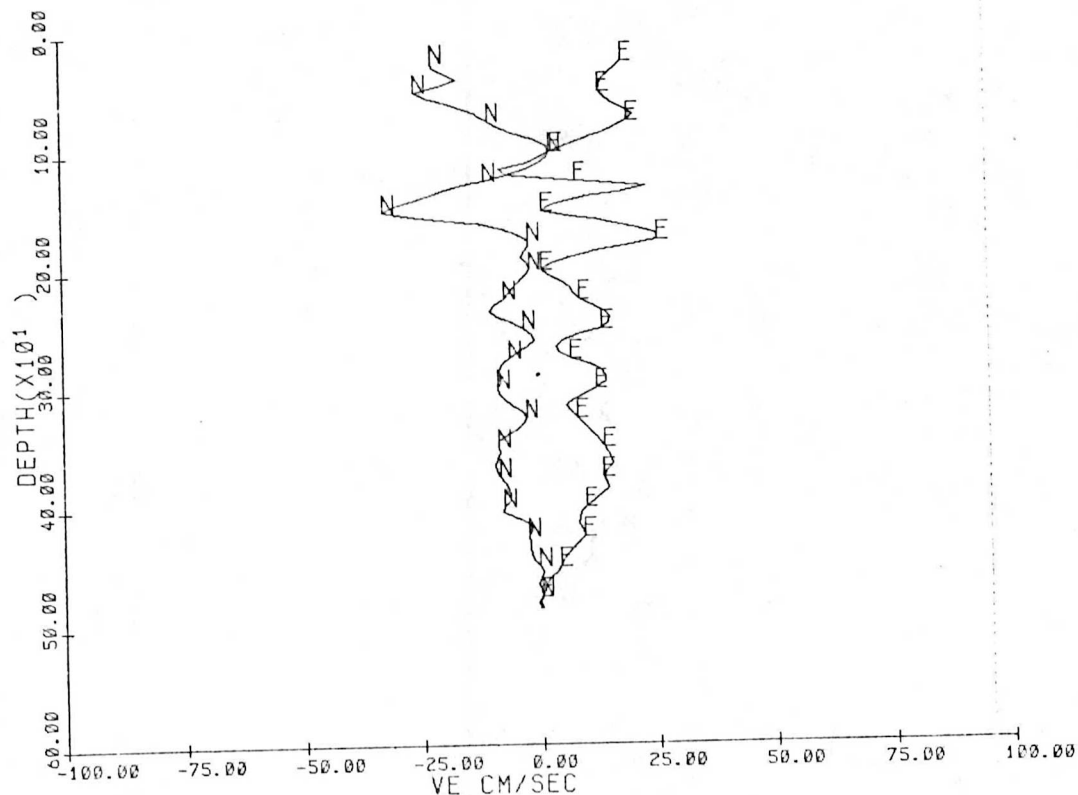
5 30'S

25 00'W

East correction = 9.14 cm/sec North correction = 43.67 cm/sec

East ship drift = -26.5 cm/sec North ship drift = -17.7 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
30.00	27.40	140.55	17.41	-21.16
40.00	21.84	133.07	14.59	-18.25
50.00	28.67	151.37	13.74	-25.17
60.00	24.58	137.97	16.46	-18.26
70.00	24.10	119.97	20.88	-12.04
80.00	18.99	114.29	17.30	-7.81
90.00	10.55	93.37	10.53	-0.62
100.00	4.59	48.80	3.46	3.02
110.00	1.70	298.67	-1.49	0.82
120.00	8.59	226.83	-6.26	-5.88
130.00	29.11	126.26	23.47	-17.22
140.00	26.71	161.07	8.66	-25.27
150.00	32.17	177.85	1.21	-32.15
160.00	20.98	131.25	15.78	-13.84
170.00	25.96	98.94	25.65	-4.03
180.00	19.15	95.28	19.07	-1.76
190.00	7.73	114.58	7.03	-3.22
200.00	1.87	148.83	0.97	-1.60
210.00	6.36	126.18	5.13	-3.75
220.00	9.75	128.06	7.67	-6.01
230.00	14.76	127.34	11.73	-8.95
240.00	17.64	119.11	15.41	-8.58
250.00	14.05	102.07	13.74	-2.94
260.00	5.29	98.18	5.24	-0.75
270.00	6.09	133.51	4.42	-4.19
280.00	13.34	124.72	10.97	-7.60
290.00	16.65	118.73	14.60	-8.00
300.00	15.01	124.30	12.40	-8.46
310.00	10.21	133.49	7.41	-7.03
320.00	7.84	117.43	6.96	-3.61
330.00	10.15	108.60	9.62	-3.24
340.00	13.83	119.55	12.04	-6.82
350.00	16.37	121.27	13.99	-8.50
360.00	17.75	119.53	15.44	-8.75
370.00	17.12	121.40	14.61	-8.92
380.00	16.25	116.85	14.50	-7.34
390.00	14.64	114.93	13.28	-6.17
400.00	12.45	127.22	9.91	-7.53
410.00	9.64	118.83	8.45	-4.65
420.00	9.38	102.37	9.16	-2.01
430.00	8.67	105.68	8.35	-2.34
440.00	6.14	109.18	5.80	-2.02
450.00	4.24	93.30	4.23	-0.24
460.00	2.11	93.11	2.10	-0.11
470.00	0.66	92.98	0.66	-0.03
480.00	0.66	241.70	-0.59	-0.32



Station 37

5 August 1978, 1250Z

6 00'S

24 57'W

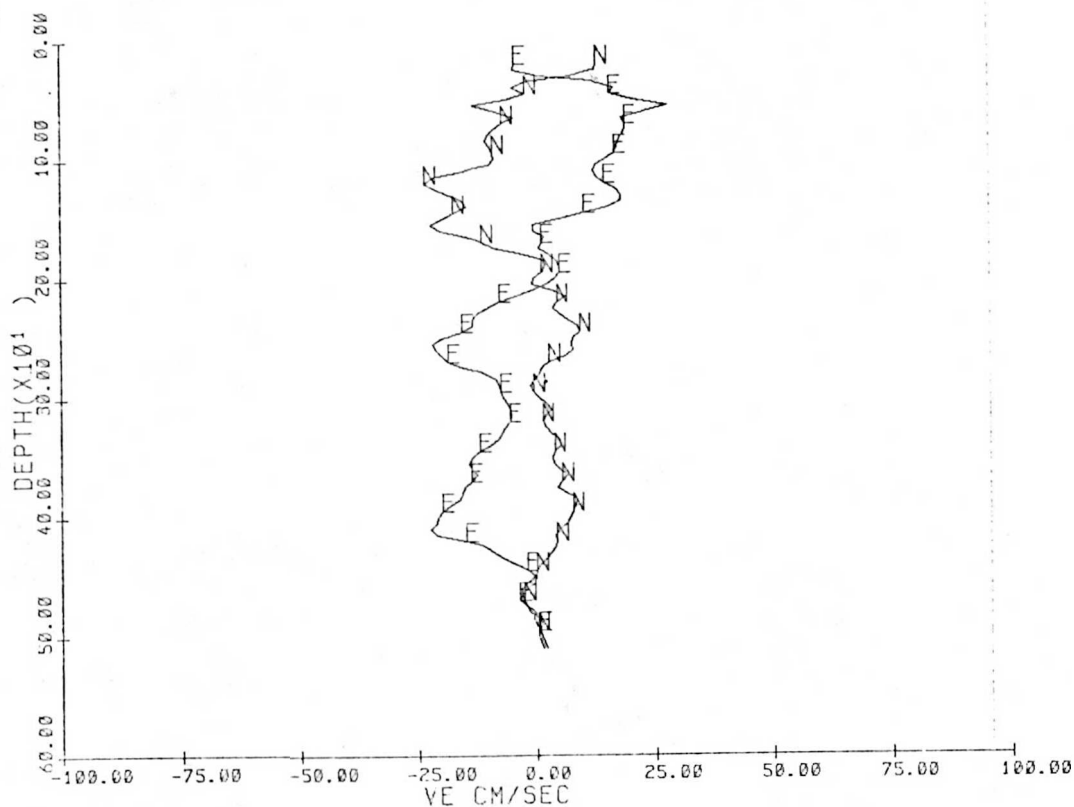
East correction = 18.65 cm/sec

North correction = 29.19 cm/sec

East ship drift = 21 cm/sec

North ship drift = -35 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	13.83	342.99	-4.05	13.22
30.00	7.91	9.98	1.37	7.79
40.00	17.69	104.96	17.09	-4.57
50.00	21.99	104.89	21.25	-5.65
60.00	24.68	108.77	23.37	-7.94
70.00	20.32	109.27	19.18	-6.70
80.00	20.87	117.49	18.52	-9.63
90.00	19.84	117.96	17.52	-9.30
100.00	17.17	119.38	14.96	-8.42
110.00	19.44	140.03	12.49	-14.90
120.00	27.53	147.30	14.87	-23.17
130.00	25.67	134.48	18.31	-17.98
140.00	21.42	132.92	15.69	-14.58
150.00	20.30	164.63	5.36	-19.58
160.00	19.88	180.95	-0.33	-19.88
170.00	11.23	172.36	1.49	-11.13
180.00	3.98	130.69	3.02	-2.59
190.00	5.79	66.21	5.30	2.34
200.00	4.26	92.42	4.25	-0.18
210.00	3.78	353.09	-0.45	3.75
220.00	8.83	301.71	-7.51	4.64
230.00	13.28	293.50	-12.18	5.30
240.00	16.07	304.32	-13.27	9.06
250.00	21.44	292.11	-19.87	8.07
260.00	22.46	291.07	-20.96	8.07
270.00	18.65	279.30	-18.41	3.01
280.00	10.46	276.00	-10.40	1.09
290.00	7.64	263.16	-7.59	-0.91
300.00	6.85	277.37	-6.79	0.88
310.00	6.19	303.46	-5.16	3.41
320.00	5.61	287.28	-5.36	1.67
330.00	7.79	296.30	-6.99	3.45
340.00	10.84	299.94	-9.40	5.41
350.00	13.66	285.43	-13.17	3.63
360.00	14.40	291.42	-13.40	5.26
370.00	14.74	292.83	-13.58	5.72
380.00	16.79	293.65	-15.38	6.74
390.00	19.93	295.47	-17.99	8.57
400.00	21.94	289.79	-20.64	7.43
410.00	22.88	283.26	-22.27	5.25
420.00	15.39	287.15	-14.70	4.54
430.00	9.31	290.43	-8.73	3.25
440.00	4.33	283.30	-4.21	1.00
450.00	0.12	162.90	0.04	-0.12
460.00	3.49	208.16	-1.65	-3.08
470.00	4.15	234.73	-3.39	-2.40
480.00	1.33	195.90	-0.36	-1.28
490.00	1.42	358.66	-0.03	1.42
500.00	1.32	69.90	1.24	0.45
510.00	2.66	55.17	2.19	1.52



Station 38

5 August 1978, 1623Z

6 30'S

24 58'W

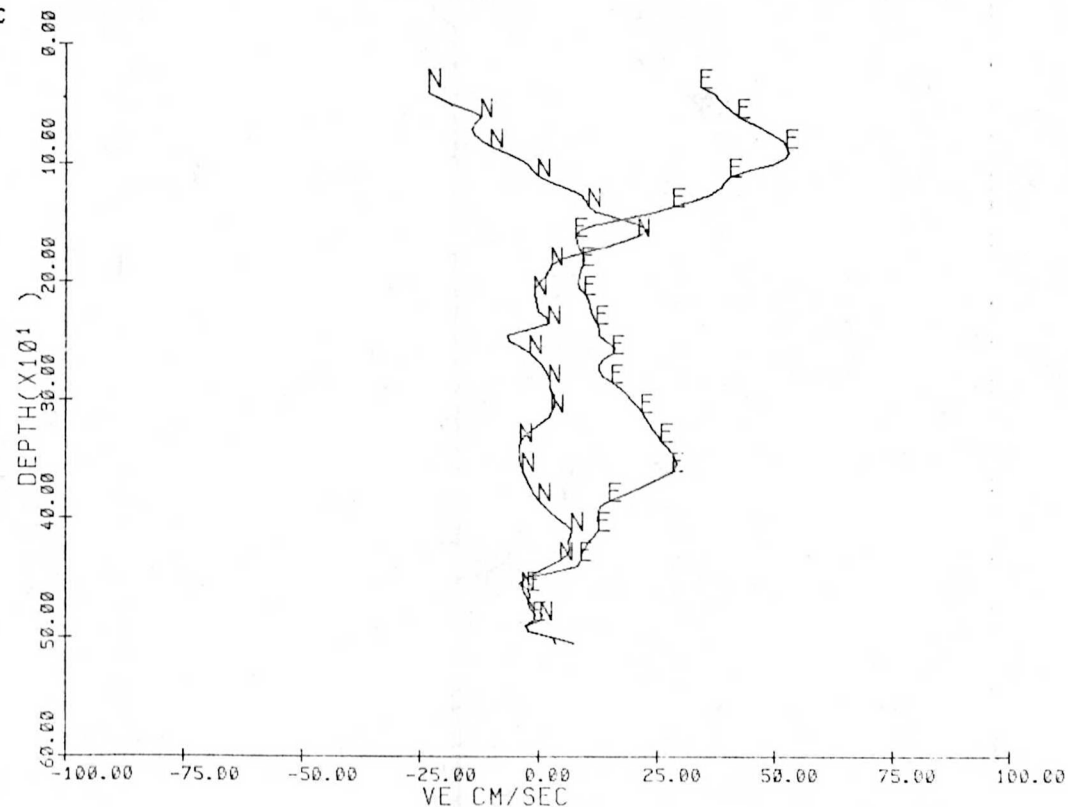
East correction = -1.68 cm/sec

North correction = 40.76 cm/sec

East ship drift = -9 cm/sec

North ship drift = 9 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
40.00	43.41	122.21	36.72	-23.14
50.00	43.12	115.16	39.03	-18.33
60.00	43.79	106.37	42.01	-12.34
70.00	49.34	106.85	47.22	-14.30
80.00	52.84	103.37	51.41	-12.21
90.00	53.20	97.84	52.70	-7.26
100.00	49.06	92.83	49.00	-2.43
110.00	40.26	90.42	40.26	-0.30
120.00	38.66	81.28	38.21	5.86
130.00	34.11	73.20	32.66	9.86
140.00	26.92	63.70	24.14	11.93
150.00	24.41	31.81	12.87	20.74
160.00	22.30	20.18	7.69	20.93
170.00	16.18	30.80	8.29	13.90
180.00	10.56	64.83	9.55	4.49
190.00	8.94	76.39	8.69	2.10
200.00	8.29	90.77	8.29	-0.11
210.00	9.68	95.25	9.64	-0.89
220.00	10.66	93.16	10.65	-0.59
230.00	11.64	82.71	11.55	1.48
240.00	12.87	99.96	12.68	-2.23
250.00	15.66	114.99	14.19	-6.61
260.00	15.79	97.18	15.67	-1.97
270.00	12.76	88.22	12.75	0.40
280.00	13.57	81.83	13.43	1.93
290.00	17.34	82.20	17.18	2.35
300.00	19.86	80.52	19.59	3.27
310.00	21.84	82.52	21.66	2.84
320.00	23.28	89.60	23.28	0.16
330.00	25.12	96.63	24.95	-2.90
340.00	27.30	99.14	26.95	-4.33
350.00	28.97	98.36	28.66	-4.21
360.00	28.37	97.19	28.14	-3.55
370.00	23.73	95.66	23.61	-2.34
380.00	18.08	93.32	18.05	-1.05
390.00	13.12	84.86	13.06	1.18
400.00	13.12	72.44	12.51	3.96
410.00	14.59	60.89	12.74	7.10
420.00	12.31	58.93	10.54	6.35
430.00	10.85	54.90	8.88	6.24
440.00	8.58	74.01	8.25	2.36
450.00	4.17	225.15	-2.96	-2.94
460.00	4.13	213.03	-2.25	-3.47
470.00	2.98	228.44	-2.23	-1.98
480.00	1.12	313.19	-0.82	0.77
490.00	4.16	228.30	-3.11	-2.77
500.00	4.58	49.17	3.47	3.00



Station 39

5 August 1978, 2150Z

7 00'S

24 58'W

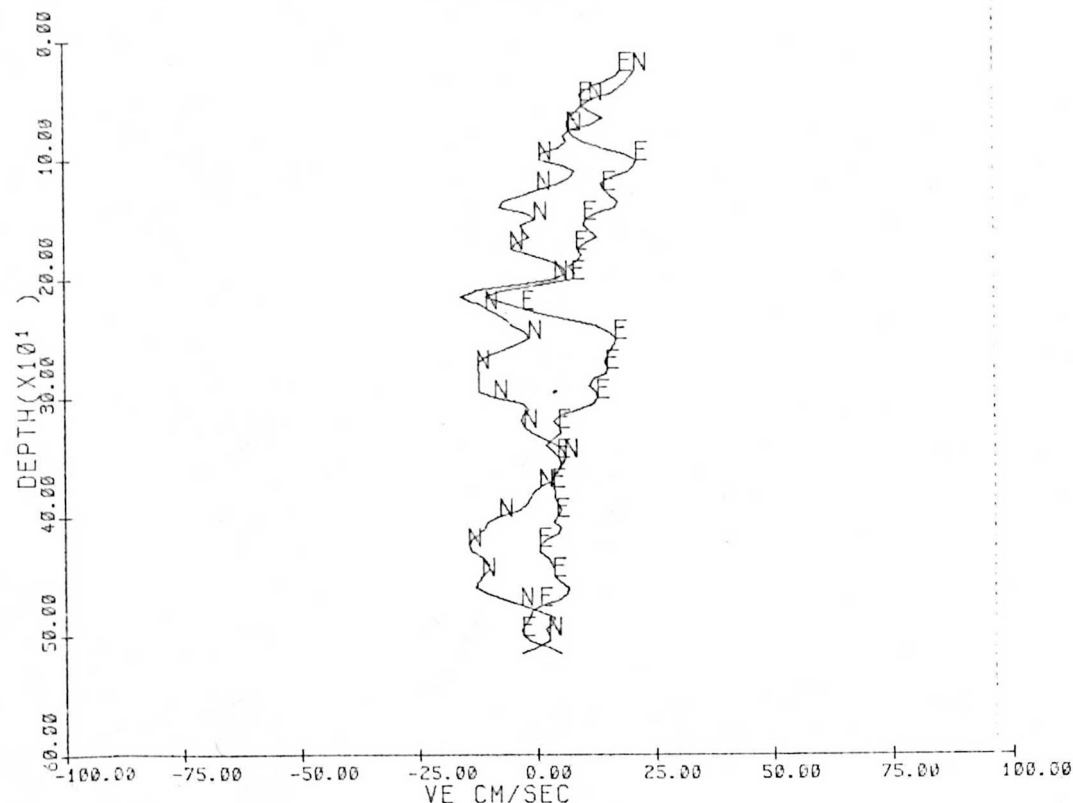
East correction = 17.41 cm/sec

North correction = 21.89 cm/sec

East ship drift = 35 cm/sec

North ship drift = -29 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
30.00	25.89	39.96	16.63	19.84
40.00	20.58	32.49	11.05	17.36
50.00	15.00	39.30	9.50	11.61
60.00	14.12	35.74	8.25	11.46
70.00	13.36	28.62	6.40	11.73
80.00	9.67	53.08	7.73	5.81
90.00	14.22	70.98	13.44	4.63
100.00	21.00	88.01	20.99	0.73
110.00	20.86	67.38	19.25	8.02
120.00	14.17	70.75	13.38	4.67
130.00	15.76	101.02	15.47	-3.01
140.00	18.27	115.52	16.48	-7.87
150.00	10.20	91.55	10.19	-0.28
160.00	11.65	103.29	11.33	-2.68
170.00	11.13	112.63	10.27	-4.29
180.00	9.52	97.38	9.44	-1.22
190.00	8.72	51.99	6.87	5.37
200.00	8.82	62.47	7.82	4.08
210.00	14.90	210.64	-7.60	-12.82
220.00	14.92	207.68	-6.93	-13.21
230.00	8.45	169.25	1.58	-8.30
240.00	13.39	111.67	12.44	-4.94
250.00	16.59	95.17	16.52	-1.50
260.00	17.01	115.43	15.37	-7.30
270.00	18.89	130.81	14.30	-12.34
280.00	18.92	130.39	14.41	-12.26
290.00	16.47	138.58	10.90	-12.35
300.00	15.47	124.18	12.80	-8.69
310.00	8.85	101.44	8.68	-1.76
320.00	4.80	133.19	3.50	-3.29
330.00	5.06	102.01	4.95	-1.05
340.00	4.33	26.00	1.90	3.89
350.00	7.55	36.95	4.54	6.04
360.00	6.60	46.03	4.75	4.58
370.00	4.25	47.38	3.12	2.88
380.00	3.76	99.58	3.71	-0.63
390.00	5.09	116.97	4.53	-2.31
400.00	8.81	151.19	4.24	-7.72
410.00	12.23	155.46	5.08	-11.12
420.00	14.01	172.50	1.83	-13.89
430.00	13.86	177.85	0.52	-13.85
440.00	10.76	164.09	2.95	-10.35
450.00	12.05	162.68	3.59	-11.50
460.00	14.43	153.25	6.49	-12.89
470.00	8.48	146.36	4.70	-7.06
480.00	1.28	279.31	-1.26	0.21
490.00	3.96	322.64	-2.40	3.15
500.00	4.00	310.34	-3.05	2.59
510.00	2.35	88.72	2.35	0.05



Station 40

6 August 1978, 0130Z

7 30'S

24 58'S

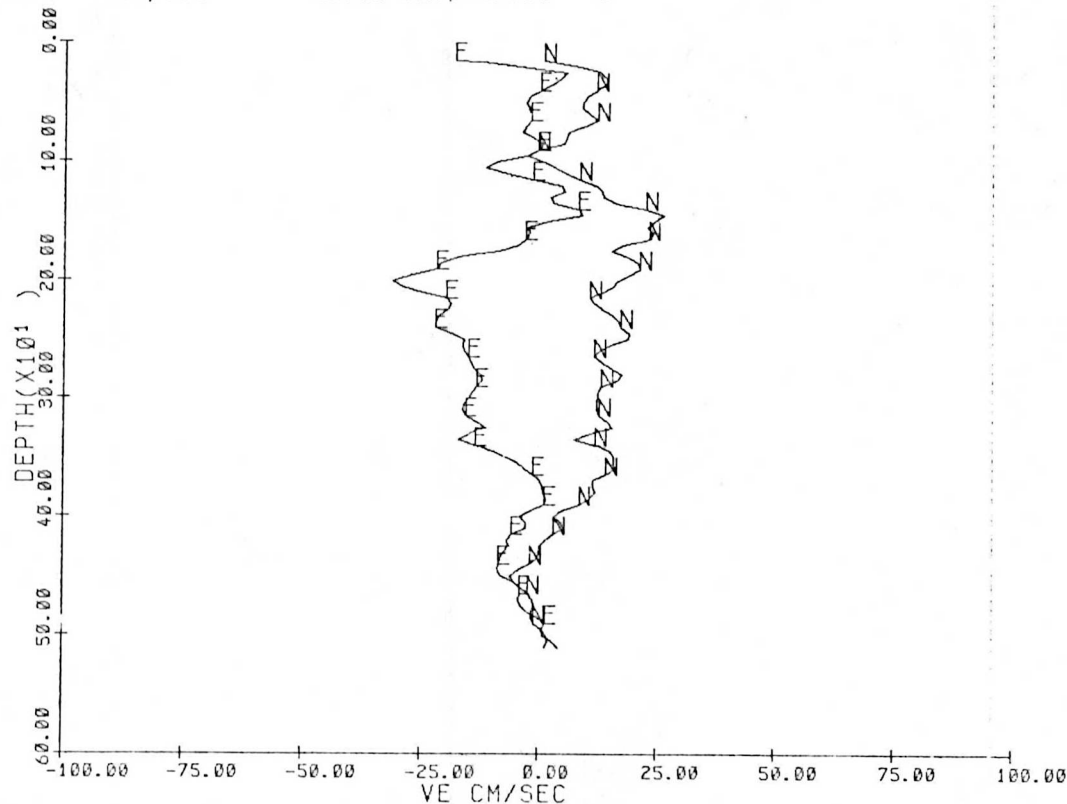
East correction = 29.63 cm/sec

North correction = 9.15 cm/sec

East ship drift = -5 cm/sec

North ship drift = 0

DEPTH	SPEED	HEADING	VE	VP
20.00	9.40	332.84	-4.29	8.37
30.00	14.62	16.66	4.19	14.00
40.00	12.10	359.44	-0.12	12.09
50.00	9.52	342.36	-2.88	9.07
60.00	10.76	348.95	-2.06	10.56
70.00	10.00	342.78	-2.96	9.55
80.00	5.81	345.00	-1.50	5.61
90.00	0.50	202.49	-0.19	-0.47
100.00	9.32	273.86	-9.29	0.63
110.00	8.96	308.46	-7.01	5.57
120.00	12.64	20.29	4.39	11.86
130.00	13.63	9.20	2.18	13.45
140.00	24.06	20.11	8.27	22.59
150.00	24.41	3.93	1.67	24.35
160.00	24.01	354.39	-2.35	23.89
170.00	17.97	345.86	-4.39	17.43
180.00	25.50	317.61	-17.19	18.83
190.00	30.44	314.40	-21.75	21.30
200.00	35.23	297.94	-31.12	16.50
210.00	28.25	298.79	-24.76	13.60
220.00	22.17	301.70	-18.86	11.65
230.00	26.20	306.25	-21.13	15.49
240.00	27.97	308.27	-21.96	17.33
250.00	24.70	319.61	-16.00	18.81
260.00	20.36	308.55	-15.92	12.69
270.00	19.69	313.05	-14.39	13.44
280.00	21.44	324.45	-12.47	17.45
290.00	18.82	315.08	-13.29	13.33
300.00	19.53	309.66	-15.03	12.46
310.00	20.35	307.27	-16.20	12.32
320.00	19.81	316.72	-13.58	14.43
330.00	18.37	306.49	-14.77	10.92
340.00	17.98	311.62	-13.44	11.94
350.00	17.20	336.10	-6.97	15.72
360.00	16.21	349.42	-2.98	15.94
370.00	11.60	1.48	0.30	11.60
380.00	12.06	4.25	0.89	12.03
390.00	8.76	7.91	1.20	8.67
400.00	5.07	308.53	-3.96	3.16
410.00	5.86	332.29	-2.73	5.19
420.00	6.87	282.79	-6.70	1.52
430.00	7.40	270.34	-7.40	0.04
440.00	8.75	258.06	-8.56	-1.81
450.00	10.03	233.57	-8.07	-5.96
460.00	5.59	226.85	-4.08	-3.82
470.00	4.50	254.99	-4.35	-1.17
480.00	2.86	238.47	-2.44	-1.49
490.00	1.88	123.44	1.57	-1.03
500.00	2.11	29.27	1.03	1.84
510.00	4.58	70.01	4.30	1.56



Station 42

6 August 1978, 1104Z

8 30'S

25 00'W

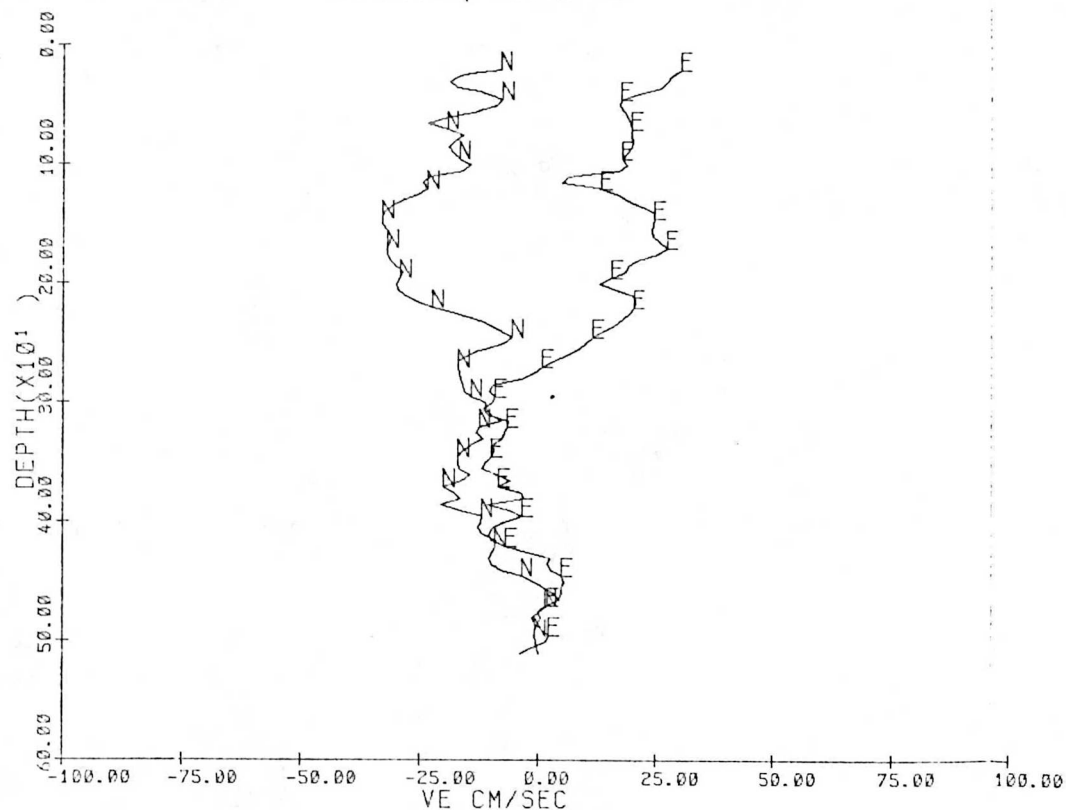
East correction = 14.89 cm/sec

North correction = 23.32 cm/sec

East ship drift = 0

North ship drift = 0

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	31.19	104.99	30.13	-8.07
30.00	33.10	124.28	27.35	-18.64
40.00	24.03	118.02	21.22	-11.29
50.00	19.36	117.55	17.17	-8.96
60.00	27.16	135.30	19.10	-19.30
70.00	27.69	134.34	19.81	-19.36
80.00	26.86	131.60	20.08	-17.83
90.00	25.89	133.68	18.73	-17.88
100.00	23.83	127.75	18.84	-14.59
110.00	23.89	165.13	6.13	-23.09
120.00	26.96	150.54	13.26	-23.48
130.00	34.66	146.86	18.94	-29.02
140.00	40.83	143.08	24.53	-32.64
150.00	40.83	143.69	24.17	-32.90
160.00	39.63	142.30	24.23	-31.35
170.00	41.92	139.60	27.17	-31.92
180.00	37.88	146.45	20.94	-31.57
190.00	34.28	147.12	18.61	-28.79
200.00	32.62	156.56	12.98	-29.93
210.00	34.62	144.45	20.13	-28.17
220.00	30.16	138.05	20.16	-22.43
230.00	22.25	127.02	17.77	-13.40
240.00	15.97	119.72	13.87	-7.92
250.00	12.57	126.75	10.07	-7.52
260.00	16.17	158.52	5.92	-15.05
270.00	16.93	177.41	0.76	-16.91
280.00	16.87	192.45	-3.64	-16.48
290.00	18.91	213.38	-10.40	-15.79
300.00	14.99	221.97	-10.03	-11.15
310.00	14.81	227.14	-10.85	-10.07
320.00	14.27	207.98	-6.70	-12.60
330.00	14.13	213.39	-7.78	-11.80
340.00	18.72	210.57	-9.52	-16.12
350.00	20.35	213.38	-11.20	-17.00
360.00	17.00	211.30	-8.83	-14.53
370.00	21.68	202.78	-8.39	-19.99
380.00	16.71	190.44	-3.03	-16.43
390.00	17.60	200.61	-6.19	-16.47
400.00	14.15	210.35	-7.15	-12.21
410.00	15.86	221.94	-10.60	-11.80
420.00	11.58	217.03	-6.97	-9.25
430.00	10.75	165.87	2.62	-10.42
440.00	8.33	161.54	2.64	-7.90
450.00	5.61	96.96	5.57	-0.68
460.00	6.14	54.87	5.02	3.53
470.00	2.55	52.54	2.02	1.55
480.00	1.29	287.89	-1.23	0.40
490.00	0.94	133.25	0.68	-0.64
500.00	1.89	102.90	1.84	-0.42
510.00	3.70	269.08	-3.70	-0.06



Station 44

6 August 1978, 2000Z

9 30'S

24 59'W

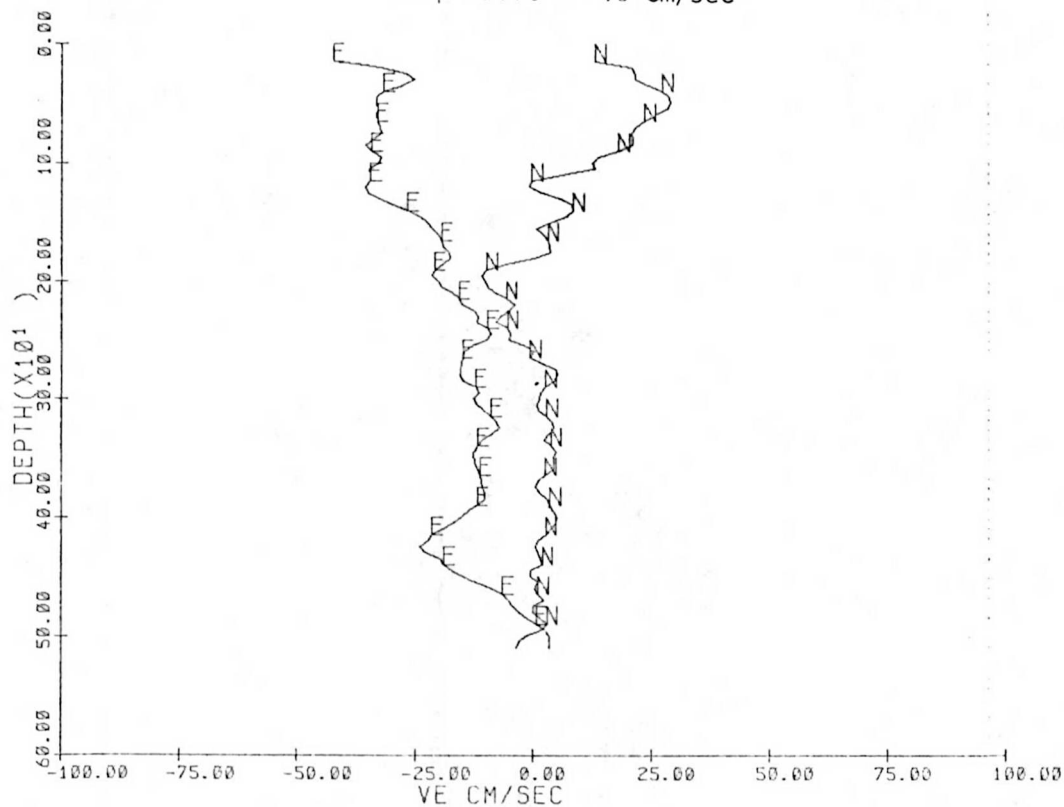
East correction = 37.29 cm/sec

North correction = 33.61 cm/sec

East ship drift = -10 cm/sec

North ship drift = -10 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	38.37	302.17	-32.48	20.43
30.00	33.07	310.26	-25.24	21.37
40.00	41.66	310.49	-31.63	27.05
50.00	43.94	310.97	-33.18	28.81
60.00	41.80	307.52	-33.15	25.46
70.00	38.96	303.57	-32.46	21.54
80.00	39.57	301.56	-33.71	20.71
90.00	38.59	297.52	-34.22	17.83
100.00	35.06	290.64	-32.81	12.36
110.00	35.05	279.64	-34.56	5.87
120.00	35.47	268.36	-35.46	-1.02
130.00	33.31	279.53	-32.85	5.52
140.00	27.99	287.28	-26.73	8.31
150.00	22.69	278.15	-22.46	3.22
160.00	20.29	275.49	-20.19	1.94
170.00	19.41	279.51	-19.15	3.21
180.00	17.80	270.12	-17.80	0.04
190.00	23.32	244.80	-21.11	-9.93
200.00	22.62	243.21	-20.19	-10.20
210.00	19.01	244.57	-17.17	-8.16
220.00	15.84	254.92	-15.29	-4.12
230.00	13.73	239.35	-11.81	-7.00
240.00	11.30	240.18	-9.80	-5.62
250.00	11.25	242.46	-9.97	-5.20
260.00	14.76	270.09	-14.76	0.02
270.00	15.41	276.52	-15.31	1.75
280.00	16.39	287.63	-15.62	4.96
290.00	12.58	281.23	-12.34	2.45
300.00	12.80	275.07	-12.75	1.13
310.00	10.62	275.30	-10.57	0.93
320.00	8.79	296.65	-7.86	3.94
330.00	9.36	289.91	-8.80	3.19
340.00	12.37	287.28	-11.81	3.67
350.00	13.51	288.57	-12.81	4.30
360.00	12.45	289.75	-11.72	4.21
370.00	11.09	274.66	-11.05	0.90
380.00	10.32	277.99	-10.22	1.43
390.00	12.39	286.96	-11.85	3.61
400.00	16.01	288.42	-15.19	5.06
410.00	19.49	281.11	-19.12	3.75
420.00	22.16	272.46	-22.14	0.95
430.00	22.88	272.25	-22.86	0.90
440.00	19.05	275.80	-18.95	1.92
450.00	15.01	268.48	-15.00	-0.40
460.00	8.64	271.31	-8.64	0.20
470.00	5.60	292.46	-5.17	2.14
480.00	2.91	268.06	-2.91	-0.10
490.00	2.99	13.54	0.70	2.91
500.00	3.88	112.51	3.58	-1.48
510.00	5.00	136.47	3.44	-3.62



Station 45

7 August 1978, 0125Z

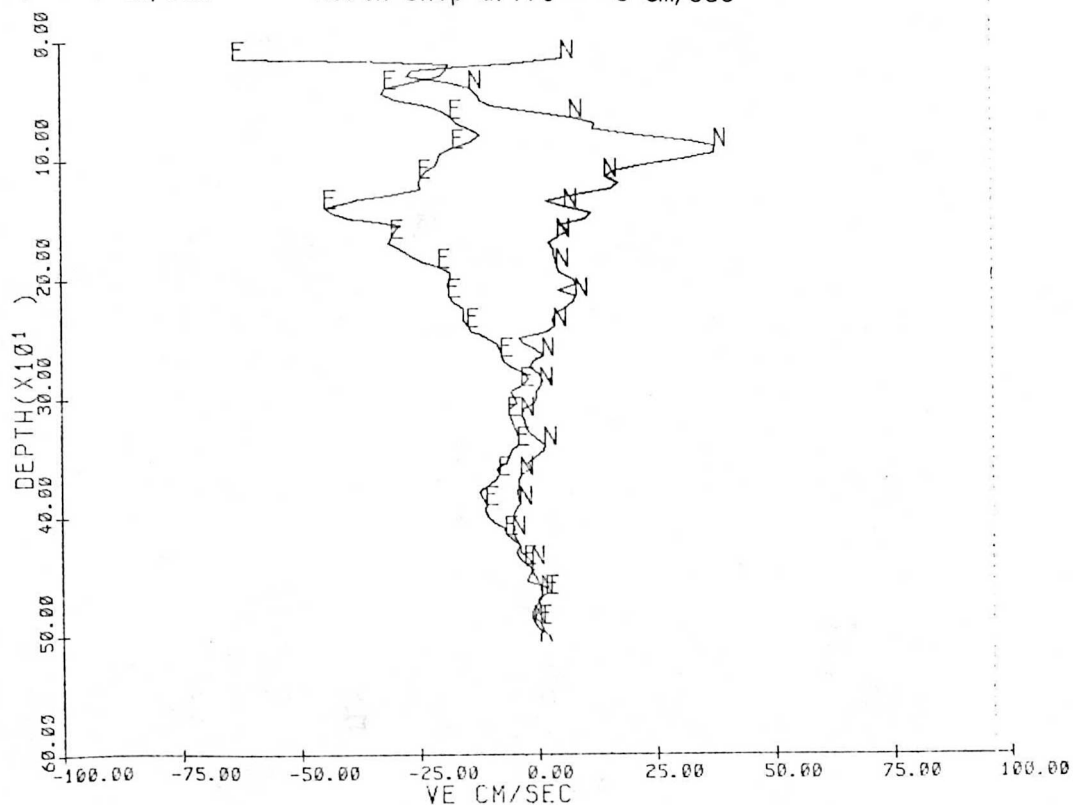
10 00'S

25 00'W

East correction = 41.41 cm/sec North correction = 12.64 cm/sec

East ship drift = -6 cm/sec North ship drift = -8 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	19.93	251.11	-18.85	-6.45
30.00	34.25	216.92	-20.57	-27.38
40.00	35.00	246.20	-32.02	-14.13
50.00	32.17	247.73	-29.77	-12.19
60.00	19.70	265.65	-19.64	-1.49
70.00	20.85	304.82	-17.12	11.91
80.00	24.46	329.83	-12.29	21.15
90.00	41.41	334.51	-17.82	37.38
100.00	37.13	325.54	-21.01	30.62
110.00	28.43	304.32	-23.48	16.03
120.00	30.35	304.14	-25.12	17.03
130.00	32.36	284.30	-31.36	7.99
140.00	45.12	277.47	-44.73	5.86
150.00	40.08	284.45	-38.81	10.00
160.00	30.95	281.91	-30.29	6.39
170.00	31.61	273.96	-31.54	2.18
180.00	27.32	277.06	-27.11	3.36
190.00	21.21	281.02	-20.82	4.06
200.00	19.95	291.62	-18.54	7.35
210.00	19.32	282.76	-18.85	4.27
220.00	19.10	292.42	-17.66	7.28
230.00	16.06	282.72	-15.67	3.54
240.00	15.24	283.58	-14.82	3.58
250.00	11.59	249.70	-10.37	-4.02
260.00	8.05	267.02	-8.04	-0.42
270.00	7.47	260.29	-7.36	-1.26
280.00	2.68	268.03	-2.68	-0.09
290.00	3.43	279.67	-3.38	0.58
300.00	5.38	263.40	-5.34	-0.62
310.00	6.98	243.01	-6.22	-3.17
320.00	6.35	241.51	-5.58	-3.03
330.00	4.98	247.37	-4.60	-1.92
340.00	4.51	286.54	-4.32	1.28
350.00	6.35	262.63	-6.30	-0.82
360.00	8.99	258.00	-8.79	-1.87
370.00	10.12	245.78	-9.23	-4.15
380.00	13.25	249.72	-12.42	-4.59
390.00	11.77	250.03	-11.06	-4.02
400.00	12.13	242.63	-10.77	-5.58
410.00	8.98	233.63	-7.23	-5.33
420.00	7.28	229.26	-5.52	-4.75
430.00	6.08	229.58	-4.63	-3.94
440.00	3.47	243.57	-3.11	-1.54
450.00	2.43	245.41	-2.21	-1.01
460.00	1.53	83.57	1.52	0.17
470.00	0.41	307.11	-0.33	0.25
480.00	1.44	189.12	-0.23	-1.42
490.00	1.08	172.00	0.15	-1.07
500.00	2.04	9.97	0.35	2.01



02-8

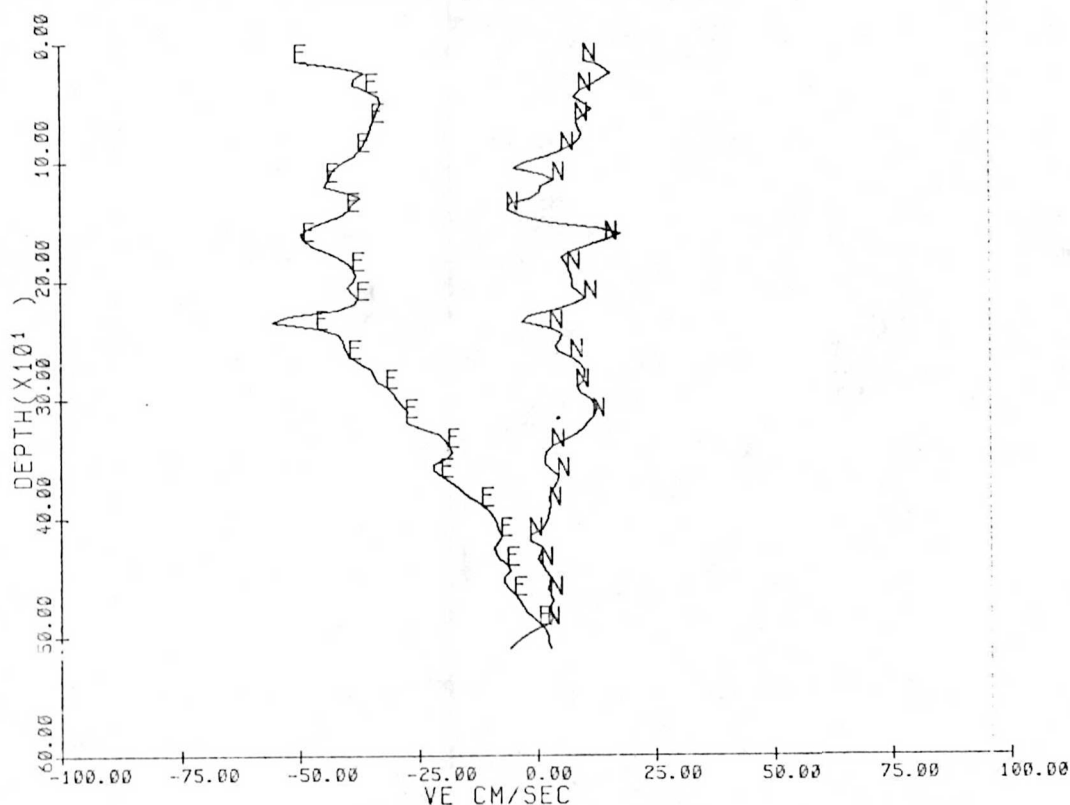
Station 46 7 August 1978, 0516Z

10 29'S 24 59'W

East correction = 42.18 cm/sec North correction = 34.50 cm/sec

East ship drift = -7 cm/sec North ship drift = 7 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	43.90	288.63	-41.60	14.03
30.00	40.60	289.71	-38.23	13.69
40.00	36.70	284.79	-35.48	9.37
50.00	34.17	286.85	-32.71	9.90
60.00	35.32	286.93	-33.79	10.29
70.00	35.78	284.24	-34.68	8.80
80.00	36.81	284.57	-35.63	9.26
90.00	37.58	278.44	-37.17	5.52
100.00	40.73	266.82	-40.66	-2.26
110.00	43.21	271.51	-43.19	1.14
120.00	44.54	271.35	-44.53	1.05
130.00	36.98	268.59	-36.97	-0.91
140.00	39.86	261.23	-39.39	-6.07
150.00	44.73	271.93	-44.71	1.51
160.00	52.59	289.85	-49.46	17.86
170.00	48.43	283.18	-47.15	11.04
180.00	41.89	277.27	-41.55	5.30
190.00	39.00	280.12	-38.39	6.85
200.00	39.22	281.00	-38.50	7.48
210.00	39.75	283.27	-38.69	9.12
220.00	39.28	281.09	-38.55	7.56
230.00	52.04	268.04	-52.01	-1.78
240.00	46.20	273.86	-46.10	3.11
250.00	41.10	276.82	-40.81	4.88
260.00	40.29	276.51	-40.03	4.57
270.00	38.01	283.76	-36.92	9.04
280.00	35.73	286.34	-34.28	10.05
290.00	32.68	285.03	-31.56	8.47
300.00	31.52	290.99	-29.43	11.29
310.00	30.07	294.56	-27.35	12.50
320.00	29.45	291.50	-27.40	10.79
330.00	22.20	291.93	-20.59	8.29
340.00	18.90	279.89	-18.62	3.25
350.00	19.04	274.95	-18.97	1.64
360.00	21.92	278.12	-21.70	3.10
370.00	18.72	283.05	-18.24	4.23
380.00	15.50	280.03	-15.26	2.70
390.00	11.76	282.95	-11.46	2.64
400.00	9.38	283.51	-9.12	2.19
410.00	8.29	277.03	-8.23	1.01
420.00	8.06	259.90	-7.94	-1.41
430.00	8.90	274.61	-8.87	0.72
440.00	6.37	278.20	-6.30	0.91
450.00	7.57	290.88	-7.07	2.70
460.00	6.46	289.42	-6.09	2.15
470.00	4.86	311.06	-3.67	3.19
480.00	3.31	319.52	-2.15	2.52
490.00	2.22	16.20	0.62	2.14
500.00	3.61	142.61	2.19	-2.87
510.00	6.34	155.17	2.66	-5.76



Station 47

7 August 1978, 1313Z

11 03'S

25 01'W

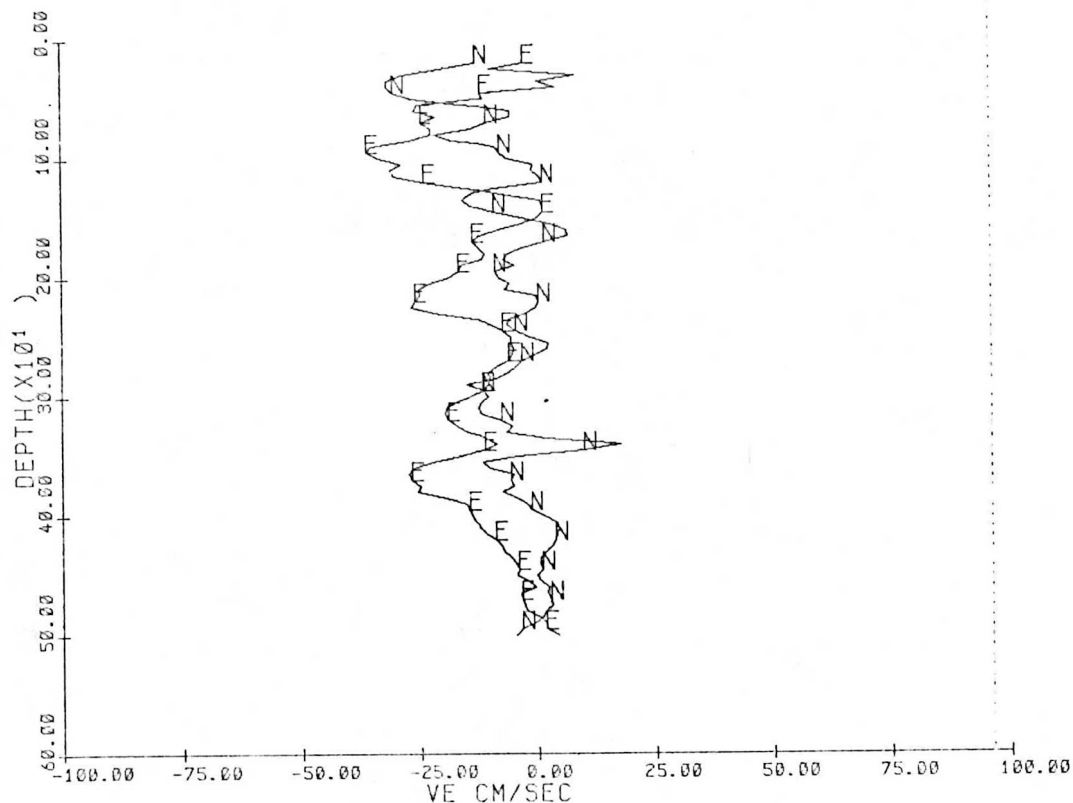
East correction = 22.45 cm/sec

North correction = 34.26 cm/sec

East ship drift = 11 cm/sec

North ship drift = 11 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	13.00	192.18	-2.74	-12.70
30.00	23.35	163.91	8.14	-28.20
40.00	31.68	172.75	4.00	-31.43
50.00	23.47	203.16	-11.20	-26.17
60.00	26.37	257.97	-25.79	-5.49
70.00	26.55	246.56	-24.35	-10.56
80.00	30.85	225.83	-22.13	-21.49
90.00	35.73	255.82	-34.64	-8.75
100.00	33.52	259.29	-32.94	-6.23
110.00	30.87	268.11	-30.85	-1.02
120.00	23.74	272.77	-23.71	1.15
130.00	15.79	207.89	-7.39	-13.95
140.00	14.01	174.76	1.28	-13.95
150.00	2.94	181.33	-0.07	-2.94
160.00	10.21	308.54	-7.98	6.36
170.00	13.51	276.57	-13.42	1.55
180.00	12.51	241.17	-10.96	-6.03
190.00	16.58	253.54	-15.90	-4.70
200.00	20.24	246.59	-18.53	-8.04
210.00	25.81	254.96	-24.93	-6.70
220.00	25.81	270.72	-25.81	0.32
230.00	21.95	263.86	-21.82	-2.35
240.00	11.44	236.15	-9.50	-6.37
250.00	5.75	253.70	-5.52	-1.61
260.00	5.46	290.42	-5.12	1.90
270.00	6.81	241.55	-5.98	-3.24
280.00	12.00	239.63	-10.35	-6.07
290.00	17.89	214.72	-10.19	-14.70
300.00	17.41	233.98	-14.08	-10.24
310.00	23.05	236.84	-19.30	-12.61
320.00	20.14	248.34	-18.72	-7.43
330.00	16.18	245.85	-14.76	-6.62
340.00	19.39	333.99	-8.50	17.43
350.00	16.66	255.32	-16.12	-4.22
360.00	28.15	249.10	-26.30	-10.04
370.00	26.95	258.15	-26.38	-5.54
380.00	26.32	254.21	-25.33	-7.16
390.00	15.08	261.06	-14.90	-2.34
400.00	13.75	275.93	-13.68	1.42
410.00	12.68	290.39	-11.89	4.42
420.00	9.59	293.58	-8.79	3.84
430.00	7.15	283.29	-6.96	1.64
440.00	4.52	277.04	-4.49	0.55
450.00	4.37	265.48	-4.36	-0.34
460.00	2.26	344.61	-0.60	2.18
470.00	4.37	310.40	-3.33	2.83
480.00	2.70	305.80	-2.19	1.58
490.00	1.77	112.82	1.63	-0.69
500.00	6.28	136.38	4.33	-4.54



Station 48

9 August 1978, 2330Z

6 01'S

28 02'W

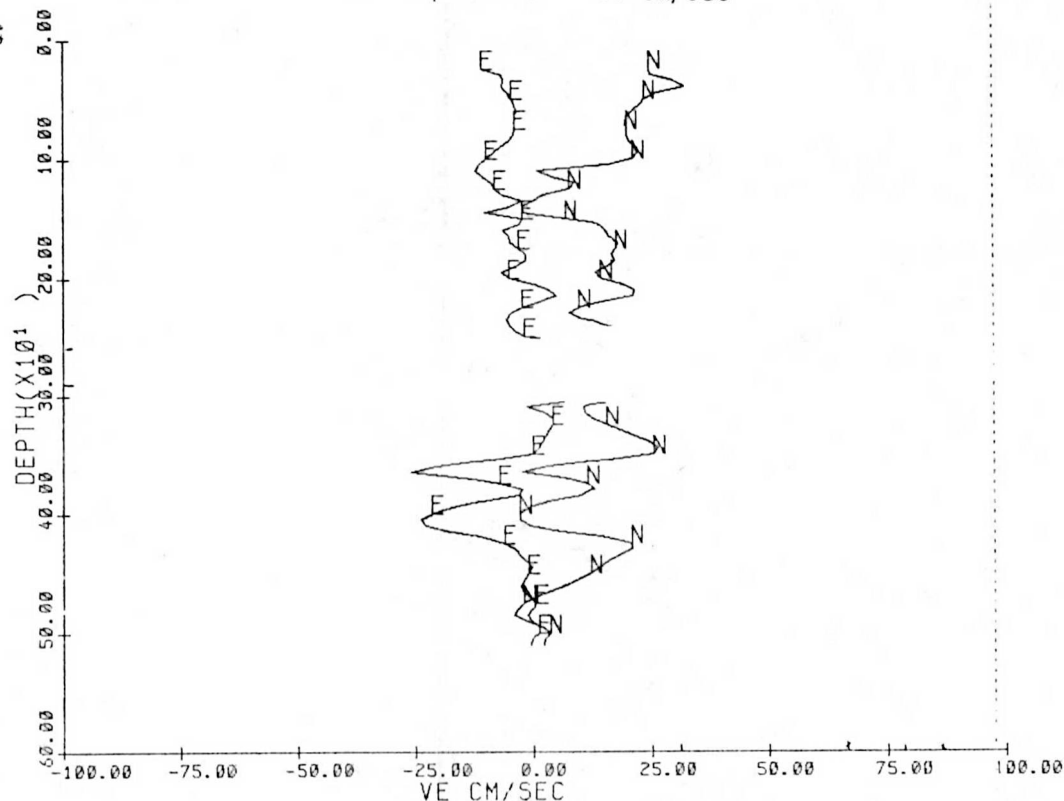
East correction = 31.28 cm/sec

North correction = 7.92 cm/sec

East ship drift = -30 cm/sec

North ship drift = -30 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
30.00	25.56	345.29	-6.49	24.72
40.00	32.52	348.62	-6.42	31.88
50.00	23.83	349.21	-4.46	23.41
60.00	21.28	350.26	-3.60	20.98
70.00	19.88	349.04	-3.78	19.51
80.00	20.11	348.60	-3.98	19.72
90.00	22.48	342.46	-6.78	21.43
100.00	23.13	334.90	-9.81	20.95
110.00	12.14	275.19	-12.09	1.10
120.00	12.41	314.93	-8.79	8.76
130.00	6.81	289.71	-6.41	2.30
140.00	5.34	245.80	-4.87	-2.19
150.00	7.25	342.56	-2.17	6.91
160.00	16.46	338.14	-6.13	15.28
170.00	18.28	344.88	-4.77	17.64
180.00	16.67	355.17	-1.40	16.51
190.00	16.15	347.17	-3.58	15.75
200.00	15.17	340.47	-5.07	14.30
210.00	21.41	9.28	3.45	21.13
220.00	14.61	5.58	1.42	14.54
230.00	9.01	329.48	-4.57	7.76
240.00	15.95	341.41	-5.08	15.11
250.00	26.96	356.47	-1.66	26.91
300.00				
310.00	10.81	353.04	-1.31	10.73
320.00	13.34	19.15	4.37	12.60
330.00	18.87	10.68	3.50	18.54
340.00	24.86	4.73	2.05	24.77
350.00	25.46	0.22	0.10	25.46
360.00	20.76	279.13	-20.49	3.29
370.00	16.36	293.41	-15.01	6.50
380.00	13.30	350.18	-2.27	13.11
390.00	11.35	286.09	-10.90	3.14
400.00	21.71	263.00	-21.55	-2.64
410.00	22.77	268.17	-22.76	-0.73
420.00	18.61	326.20	-10.35	15.46
430.00	21.14	349.84	-3.73	20.81
440.00	15.87	354.53	-1.51	15.80
450.00	12.20	355.85	-0.88	12.17
460.00	7.53	340.99	-2.45	7.12
470.00	0.86	304.73	-0.71	0.49
480.00	3.32	183.25	-0.19	-3.32
490.00	1.45	194.39	-0.36	-1.40
500.00	3.84	18.98	1.25	3.63
510.00	2.28	349.00	-0.43	2.23



Station 50

10 August 1978, 1143Z

7 29'S

28 00'W

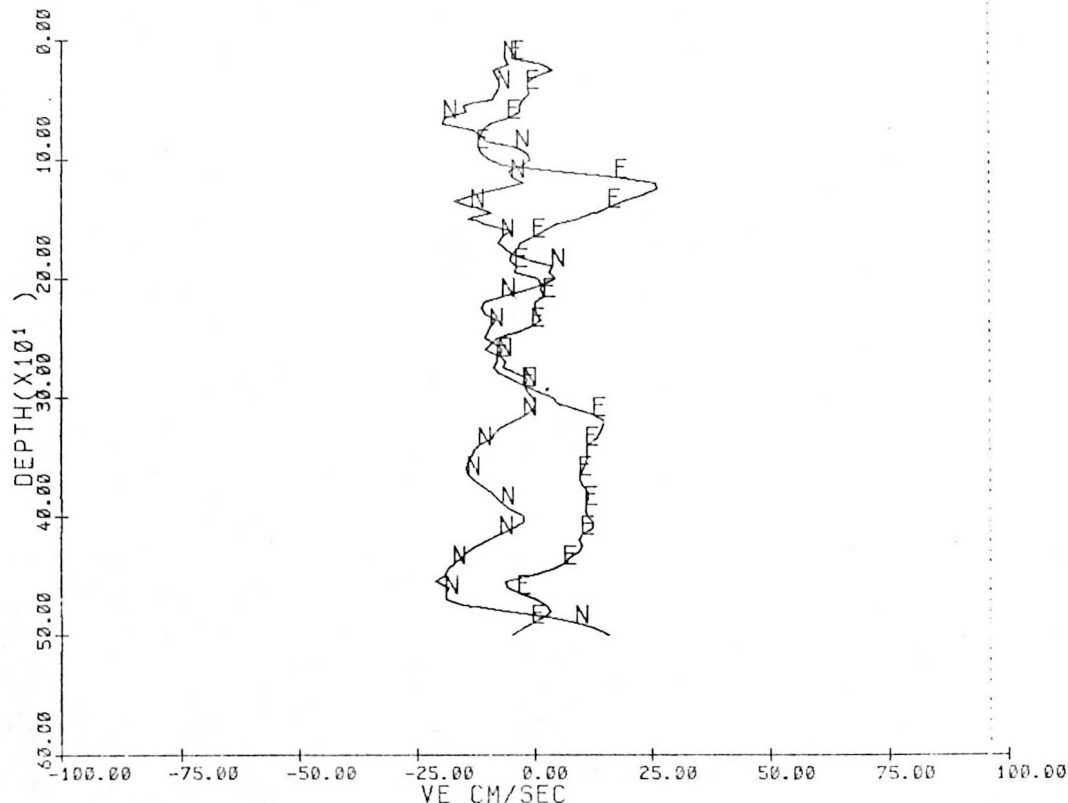
East correction = 21.25 cm/sec

North correction = 25.74 cm/sec

East ship drift = 0

North ship drift = -5 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	5.76	161.76	1.80	-5.47
30.00	7.89	177.94	0.28	-7.88
40.00	7.75	190.91	-1.47	-7.61
50.00	9.42	195.59	-2.53	-9.07
60.00	14.75	192.41	-3.17	-14.41
70.00	21.75	206.12	-9.57	-19.53
80.00	16.05	225.38	-11.42	-11.27
90.00	12.67	252.64	-12.10	-3.78
100.00	9.91	264.31	-9.86	-0.98
110.00	7.20	141.21	4.51	-5.61
120.00	25.66	95.71	25.54	-2.55
130.00	26.07	119.14	22.77	-12.69
140.00	20.55	130.24	15.69	-13.28
150.00	16.69	146.89	9.12	-13.98
160.00	5.55	159.24	1.97	-5.19
170.00	8.25	202.11	-3.11	-7.64
180.00	6.99	226.60	-5.08	-4.80
190.00	5.51	313.41	-4.00	3.78
200.00	4.29	5.14	0.38	4.28
210.00	2.56	143.17	1.35	-2.17
220.00	10.83	180.25	-0.05	-10.83
230.00	10.49	178.52	0.27	-10.48
240.00	9.29	182.33	-0.38	-9.28
250.00	13.23	216.82	-7.93	-10.59
260.00	12.69	236.49	-10.58	-7.00
270.00	10.21	232.18	-8.07	-6.26
280.00	8.45	243.38	-7.56	-3.79
290.00	3.29	228.55	-2.46	-2.17
300.00	3.70	96.41	3.68	-0.41
310.00	8.71	93.90	8.69	-0.59
320.00	15.34	107.51	14.63	-4.61
330.00	16.12	122.11	13.65	-8.57
340.00	16.06	137.01	10.95	-11.75
350.00	17.48	140.82	11.04	-13.55
360.00	17.77	145.18	10.15	-14.59
370.00	15.94	143.00	9.59	-12.73
380.00	14.43	129.51	11.14	-9.18
390.00	12.83	122.23	10.85	-6.84
400.00	11.33	102.29	11.07	-2.41
410.00	13.15	110.40	12.32	-4.58
420.00	13.44	136.49	9.25	-9.75
430.00	17.12	146.85	9.36	-14.33
440.00	18.19	159.93	6.24	-17.09
450.00	19.09	182.08	-0.69	-19.08
460.00	19.24	198.34	-6.05	-18.26
470.00	18.65	178.86	0.37	-18.64
480.00	7.08	151.59	3.37	-6.23
490.00	8.76	357.11	-0.44	8.75
500.00	16.51	343.09	-4.80	15.80



Station 52

10 August 1978, 2030Z

8° 01'S

28 01'W

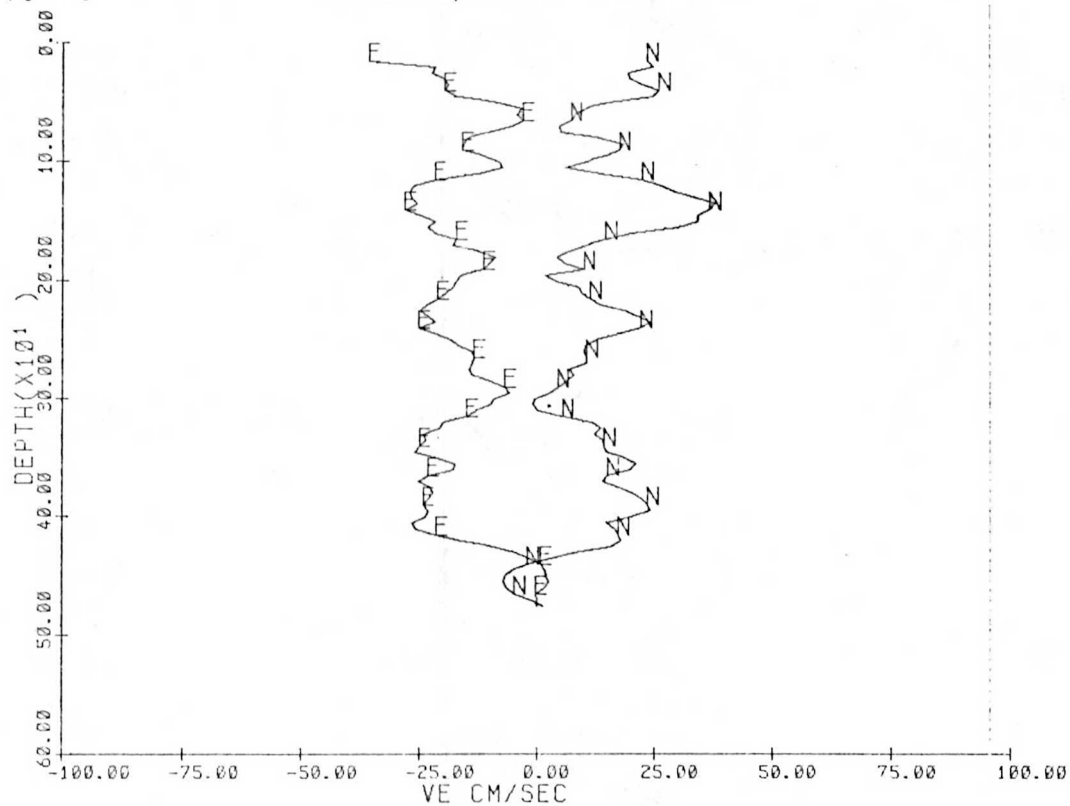
East correction = 19.46 cm/sec

North correction = 4.63 cm/sec

East ship drift = 0

North ship drift = -17 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	32.66	318.60	-21.60	24.50
30.00	27.72	314.35	-19.82	19.38
40.00	32.28	323.00	-19.42	25.78
50.00	17.25	331.12	-8.33	15.11
60.00	9.00	331.08	-4.35	7.88
70.00	7.17	312.71	-5.27	4.87
80.00	19.82	311.90	-14.75	13.24
90.00	23.40	318.06	-15.64	17.41
100.00	13.25	322.83	-8.01	10.56
110.00	18.13	317.03	-12.36	13.27
120.00	36.95	315.54	-25.88	26.37
130.00	42.92	321.77	-26.56	33.71
140.00	45.98	322.47	-28.01	36.46
150.00	40.30	327.60	-21.60	34.02
160.00	29.29	312.77	-21.50	19.89
170.00	20.63	300.20	-17.83	10.38
180.00	9.79	296.07	-8.79	4.30
190.00	14.98	311.43	-11.23	9.91
200.00	17.43	283.56	-16.94	4.09
210.00	21.60	296.31	-19.36	9.57
220.00	26.69	299.65	-23.20	13.21
230.00	31.39	312.64	-23.09	21.26
240.00	33.30	311.39	-24.98	22.02
250.00	21.79	304.69	-17.92	12.40
260.00	16.72	306.42	-13.45	9.92
270.00	17.12	307.46	-13.59	10.41
280.00	15.46	299.63	-13.44	7.64
290.00	8.00	303.33	-6.68	4.39
300.00	9.02	266.18	-9.00	-0.60
310.00	12.74	270.56	-12.74	0.13
320.00	22.73	300.11	-19.66	11.40
330.00	26.92	296.94	-24.00	12.20
340.00	28.63	299.92	-24.81	14.28
350.00	28.15	311.44	-21.10	18.63
360.00	26.37	318.26	-17.56	19.68
370.00	28.70	299.40	-25.00	14.09
380.00	30.04	312.61	-22.11	20.34
390.00	33.68	314.38	-24.07	23.56
400.00	30.94	310.50	-23.53	20.09
410.00	30.29	302.95	-25.42	16.48
420.00	23.64	318.26	-15.74	17.64
430.00	9.26	330.56	-4.55	8.06
440.00	2.15	156.80	0.85	-1.97
450.00	7.08	164.35	1.91	-6.82
460.00	6.35	167.36	1.39	-6.20
470.00	1.21	179.78	0.00	-1.21



8-4A

Station 53

11 August 1978, 0211Z

90.3'S

28 01'W

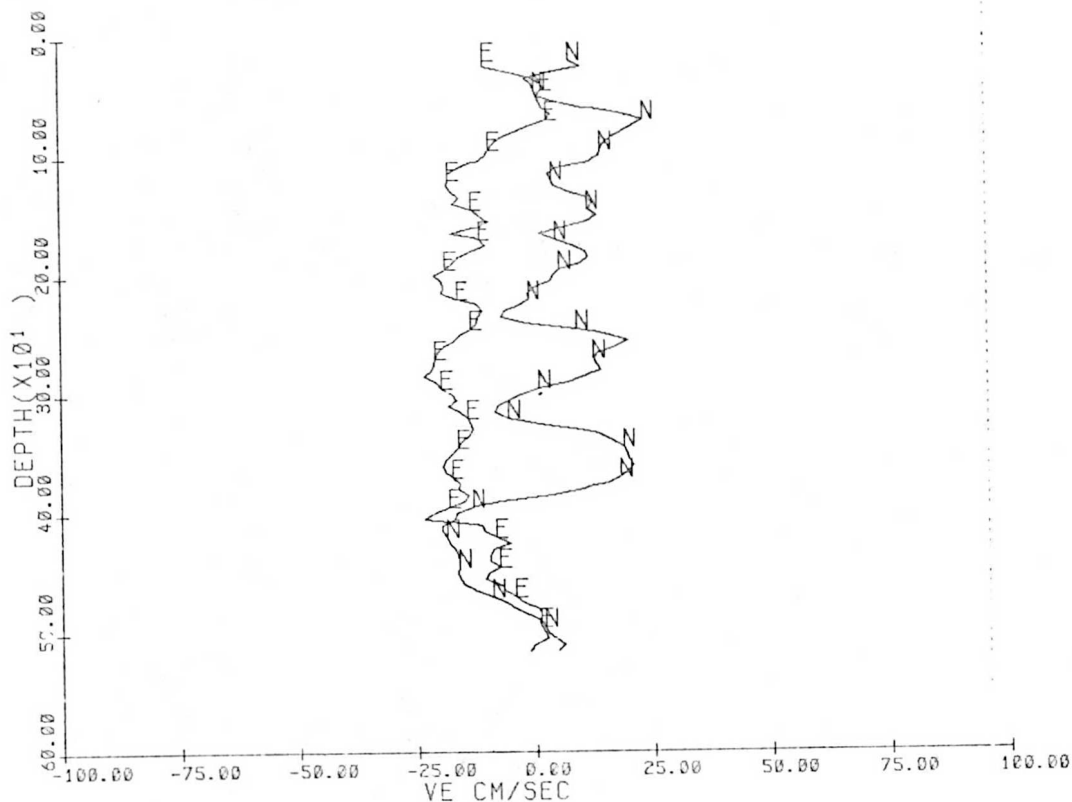
East correction = 33.04 cm/sec

North correction = 13.81 cm/sec

East ship drift = -3 cm/sec

North ship drift = -20 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	12.82	307.64	-10.15	7.83
30.00	5.82	305.47	-4.74	3.37
40.00	2.01	91.25	2.01	-0.04
50.00	1.54	44.79	1.08	1.09
60.00	10.98	11.88	2.26	10.75
70.00	23.37	7.26	2.95	23.18
80.00	19.11	348.42	-3.84	18.72
90.00	17.23	330.94	-8.37	15.06
100.00	17.26	324.24	-10.09	14.00
110.00	16.49	287.70	-15.71	5.01
120.00	18.19	282.39	-17.77	3.90
130.00	18.59	294.04	-16.98	7.57
140.00	20.92	306.60	-16.80	12.48
150.00	17.56	320.58	-11.15	13.56
160.00	13.01	297.99	-11.49	6.11
170.00	12.25	292.50	-11.32	4.69
180.00	16.88	310.11	-12.91	10.88
190.00	19.67	300.40	-16.97	9.95
200.00	21.27	281.61	-20.84	4.28
210.00	18.95	269.64	-18.95	-0.12
220.00	16.11	266.11	-16.07	-1.09
230.00	12.35	239.56	-10.65	-6.26
240.00	12.15	262.03	-12.03	-1.68
250.00	22.04	315.29	-15.51	15.67
260.00	25.61	312.21	-18.97	17.21
270.00	24.31	301.26	-20.78	12.61
280.00	25.64	303.03	-21.49	13.98
290.00	21.75	288.82	-20.58	7.02
300.00	17.36	260.61	-17.13	-2.83
310.00	19.60	246.49	-17.98	-7.82
320.00	15.05	248.95	-14.04	-5.40
330.00	16.35	306.63	-13.12	9.76
340.00	22.69	317.85	-15.22	16.82
350.00	25.98	318.74	-17.14	19.53
360.00	28.29	316.80	-19.37	20.63
370.00	25.00	316.15	-17.32	18.03
380.00	18.92	302.73	-15.91	10.23
390.00	16.44	244.21	-14.80	-7.15
400.00	26.99	232.35	-21.37	-16.49
410.00	22.46	210.06	-11.25	-19.44
420.00	20.20	204.27	-8.30	-18.41
430.00	18.84	207.51	-8.70	-16.71
440.00	18.59	211.03	-9.58	-15.93
450.00	19.03	210.88	-9.77	-16.34
460.00	16.51	206.41	-7.34	-14.79
470.00	9.88	205.24	-4.21	-8.94
480.00	4.38	169.92	0.77	-4.31
490.00	1.19	36.56	0.71	0.95
500.00	3.32	39.47	2.11	2.56
510.00	5.96	356.68	-0.35	5.95



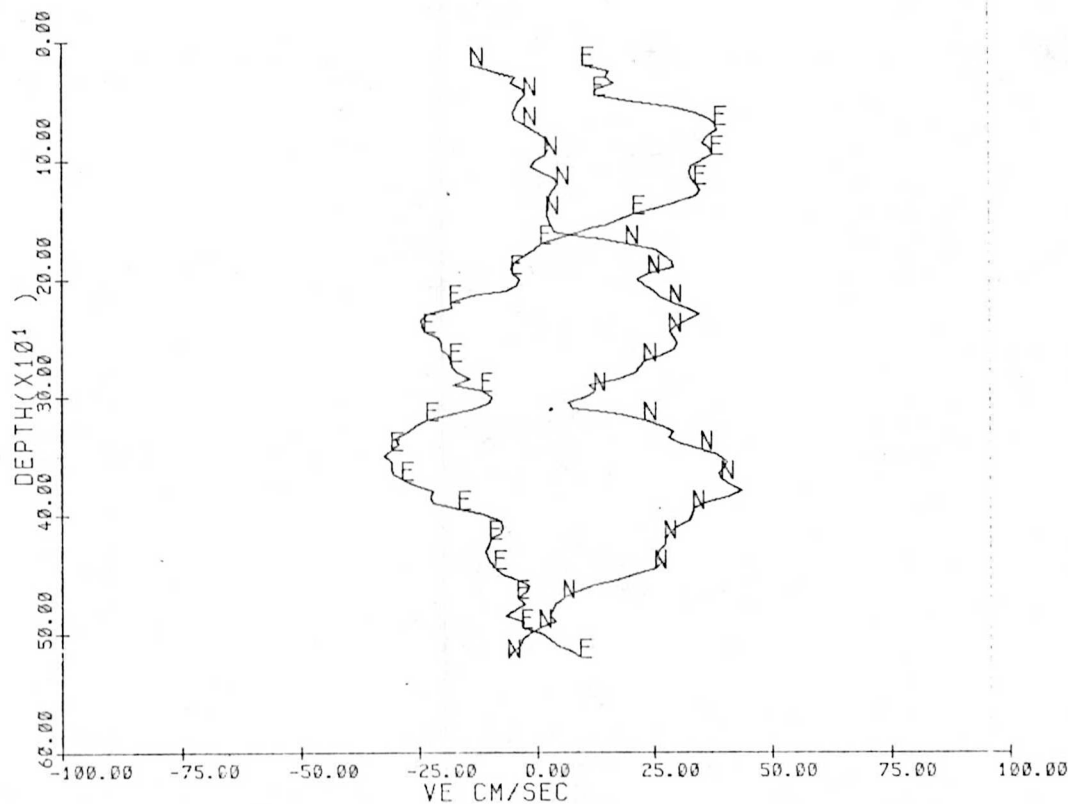
Station 55 11 August 1978, 1130 Z

09 9 'S 28 00'W

East correction = 13.80 cm/sec North correction = -1.07 cm/sec

East ship drift = -60 cm/sec North ship drift = -80 cm/sec

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	16.94	143.82	10.00	-13.67
30.00	15.50	106.82	14.84	-4.48
40.00	13.16	102.56	12.85	-2.86
50.00	20.05	100.84	19.70	-3.77
60.00	34.17	98.59	33.79	-5.10
70.00	38.10	93.84	38.01	-2.55
80.00	36.20	87.80	36.17	1.39
90.00	36.79	86.12	36.71	2.49
100.00	35.02	90.41	35.02	-0.25
110.00	32.47	88.11	32.45	1.07
120.00	34.17	82.23	33.86	4.62
130.00	33.84	85.24	33.72	2.81
140.00	25.82	84.50	25.70	2.48
150.00	17.64	81.90	17.46	2.48
160.00	10.05	68.31	9.34	3.72
170.00	19.28	2.61	0.88	19.26
180.00	27.22	354.51	-2.60	27.10
190.00	29.51	349.08	-5.53	28.97
200.00	21.87	349.81	-3.87	21.53
210.00	25.84	345.67	-6.39	25.04
220.00	33.80	327.13	-18.32	28.41
230.00	41.53	326.29	-23.05	34.55
240.00	38.26	320.50	-24.34	29.52
250.00	35.95	324.60	-20.82	29.30
260.00	35.43	325.31	-20.17	29.13
270.00	29.40	321.77	-18.19	23.09
280.00	26.83	321.38	-16.74	20.96
290.00	20.94	302.38	-17.69	11.22
300.00	14.50	318.36	-9.64	10.84
310.00	15.03	300.79	-12.91	7.69
320.00	32.71	314.85	-23.19	23.07
330.00	39.71	316.83	-27.17	28.96
340.00	42.39	316.35	-29.26	30.67
350.00	50.12	319.98	-32.23	38.38
360.00	50.15	322.33	-30.65	39.70
370.00	48.48	324.08	-28.44	39.26
380.00	48.76	333.08	-22.08	43.48
390.00	42.03	328.42	-22.04	35.85
400.00	34.88	341.68	-10.97	33.11
410.00	30.54	345.62	-7.59	29.58
420.00	28.92	339.74	-10.01	27.13
430.00	28.10	337.19	-10.89	25.90
440.00	28.27	339.33	-9.98	26.45
450.00	22.15	340.22	-7.50	20.85
460.00	11.94	351.23	-1.82	11.80
470.00	7.07	323.52	-4.20	5.68
480.00	5.63	304.35	-4.64	3.17
490.00	4.99	322.13	-3.06	3.94
500.00	2.12	150.86	1.03	-1.85
510.00	5.72	130.72	4.33	-3.73
520.00	11.15	123.86	9.26	-6.21



Station 56

11 August 1978, 1530Z

10 2 'S

28 00'W

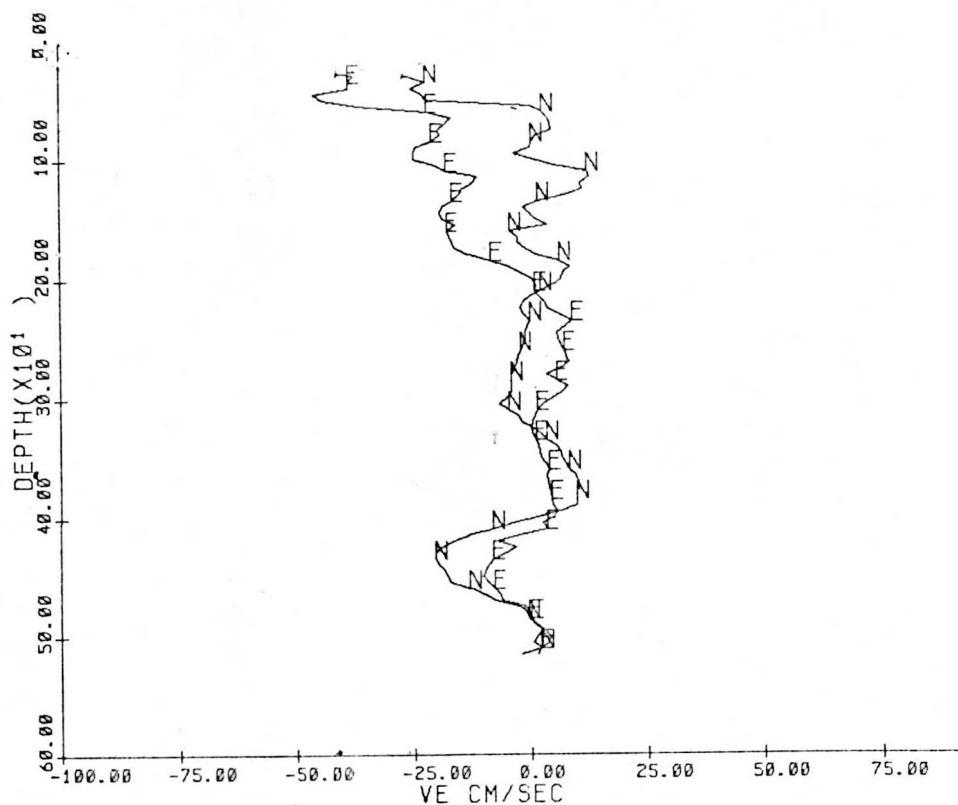
East correction = 30.07 cm/sec

North correction = 14.56 cm/sec

East ship drift = 0

North ship drift = 0

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	48.91	236.61	-40.84	-26.92
30.00	45.37	235.23	-37.27	-25.87
40.00	45.67	236.84	-38.23	-24.98
50.00	48.88	243.53	-43.78	-21.74
60.00	22.00	277.26	-21.82	2.78
70.00	18.37	283.88	-17.84	4.41
80.00	18.98	274.35	-18.92	1.44
90.00	24.23	270.85	-24.23	0.36
100.00	24.40	272.34	-24.38	1.00
110.00	21.58	304.61	-17.77	12.26
120.00	16.28	311.96	-12.10	10.88
130.00	16.69	296.50	-14.94	7.45
140.00	18.54	265.97	-18.49	-1.30
150.00	18.43	273.98	-18.39	1.28
160.00	18.08	256.79	-17.61	-4.13
170.00	16.60	261.62	-16.42	-2.42
180.00	13.38	275.54	-13.32	1.29
190.00	9.52	333.93	-4.19	8.56
200.00	6.86	3.33	0.40	6.84
210.00	2.53	24.97	1.07	2.30
220.00	3.47	114.59	3.15	-1.44
230.00	6.49	101.21	6.36	-1.26
240.00	7.40	93.65	7.38	-0.47
250.00	6.20	100.22	6.10	-1.10
260.00	7.46	106.24	7.17	-2.09
270.00	8.68	108.81	8.22	-2.80
280.00	5.31	139.94	3.42	-4.06
290.00	8.95	116.56	8.01	-4.00
300.00	7.00	136.33	4.84	-5.07
310.00	4.67	160.38	1.57	-4.40
320.00	1.86	164.25	0.50	-1.79
330.00	2.28	11.96	0.47	2.23
340.00	5.87	17.95	1.81	5.58
350.00	7.01	17.73	2.13	6.68
360.00	9.28	25.55	4.00	8.37
370.00	10.87	19.60	3.65	10.24
380.00	10.83	23.51	4.32	9.93
390.00	10.98	25.37	4.70	9.92
400.00	5.13	73.55	4.92	1.45
410.00	8.69	157.09	3.38	-8.01
420.00	17.71	203.83	-7.15	-16.20
430.00	20.80	194.32	-5.14	-20.16
440.00	21.53	205.02	-9.10	-19.51
450.00	20.30	209.55	-10.01	-17.66
460.00	15.14	211.18	-7.84	-12.95
470.00	10.05	219.33	-6.37	-7.78
480.00	1.11	197.64	-0.34	-1.05
490.00	1.21	39.79	0.78	0.93
500.00	4.18	18.20	1.31	3.97



Station 60

13 August 1978, 0019Z

9 01'S

29 29'W

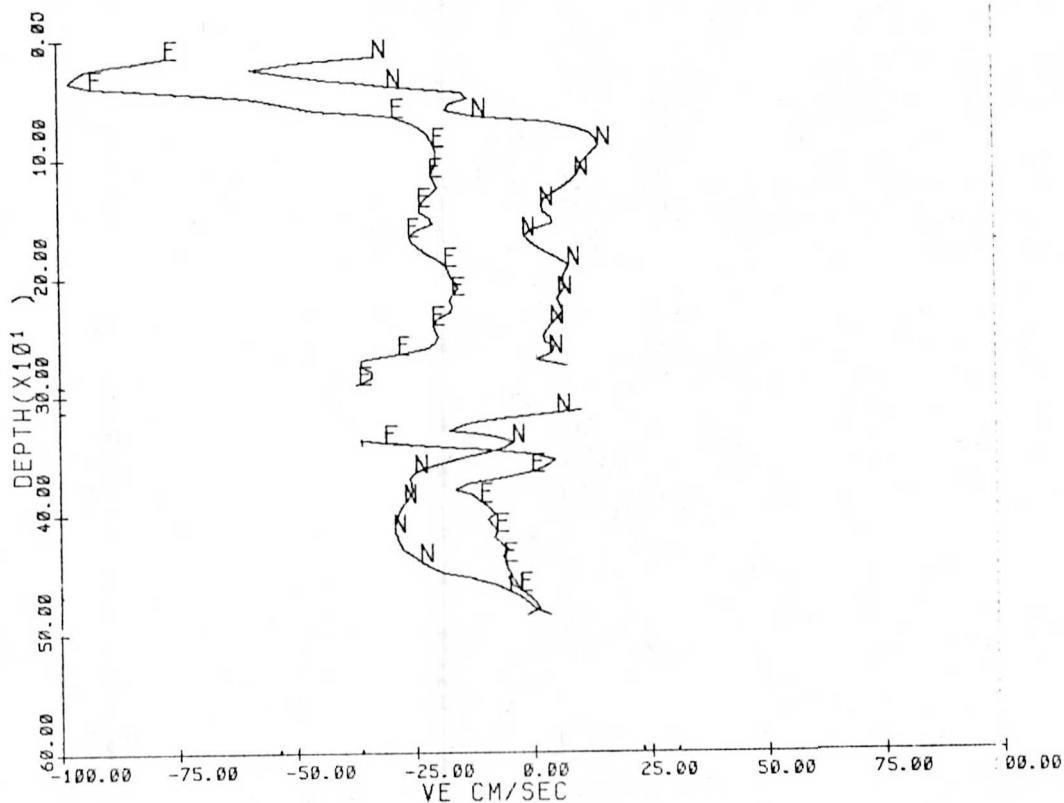
East correction = 45.30 cm/sec

North correction = 21.59 cm/sec

East ship drift = 0

North ship drift = 0

DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
20.00	98.45	239.29	-84.64	-50.28
30.00	108.75	242.05	-96.07	-50.96
40.00	97.39	252.22	-92.74	-29.73
50.00	59.52	257.24	-58.05	-13.15
60.00	48.54	248.41	-45.13	-17.86
70.00	25.94	278.56	-25.65	3.86
80.00	25.12	300.52	-21.64	12.76
90.00	24.98	305.43	-20.35	14.48
100.00	23.24	300.79	-19.96	11.90
110.00	23.27	296.87	-20.76	10.52
120.00	22.01	292.61	-20.32	8.46
130.00	21.46	282.68	-20.94	4.71
140.00	23.55	275.47	-23.44	2.24
150.00	21.96	281.13	-21.55	4.24
160.00	24.06	270.74	-24.06	0.31
170.00	25.16	269.48	-25.16	-0.23
180.00	22.37	278.68	-22.12	3.38
190.00	19.70	293.64	-18.05	7.90
200.00	18.30	291.23	-17.05	6.63
210.00	17.02	294.33	-15.51	7.01
220.00	18.08	287.73	-17.22	5.50
230.00	18.28	290.53	-17.12	6.41
240.00	21.09	281.94	-20.63	4.36
250.00	19.99	277.46	-19.82	2.60
260.00	22.13	282.12	-21.64	4.65
270.00	35.97	271.51	-35.96	0.95
280.00	38.15	298.01	-33.68	17.92
290.00	43.28	311.33	-36.26	31.88
310.00				
320.00				
330.00	49.74	249.46	-46.58	-17.46
340.00	31.30	262.46	-31.03	-4.11
350.00	10.99	180.68	-0.13	-10.99
360.00	21.61	171.90	3.04	-21.40
370.00	26.64	192.76	-5.88	-25.98
380.00	30.35	212.51	-16.31	-25.59
390.00	29.17	201.87	-10.86	-27.07
400.00	29.73	195.76	-8.07	-28.61
410.00	30.52	196.30	-8.56	-29.29
420.00	29.80	195.83	-8.13	-28.67
430.00	27.96	190.68	-5.18	-27.48
440.00	24.55	194.14	-6.00	-23.81
450.00	19.50	194.89	-5.01	-18.84
460.00	8.86	210.54	-4.50	-7.63
470.00	2.95	194.54	-0.74	-2.86
480.00	1.35	75.54	1.31	0.34



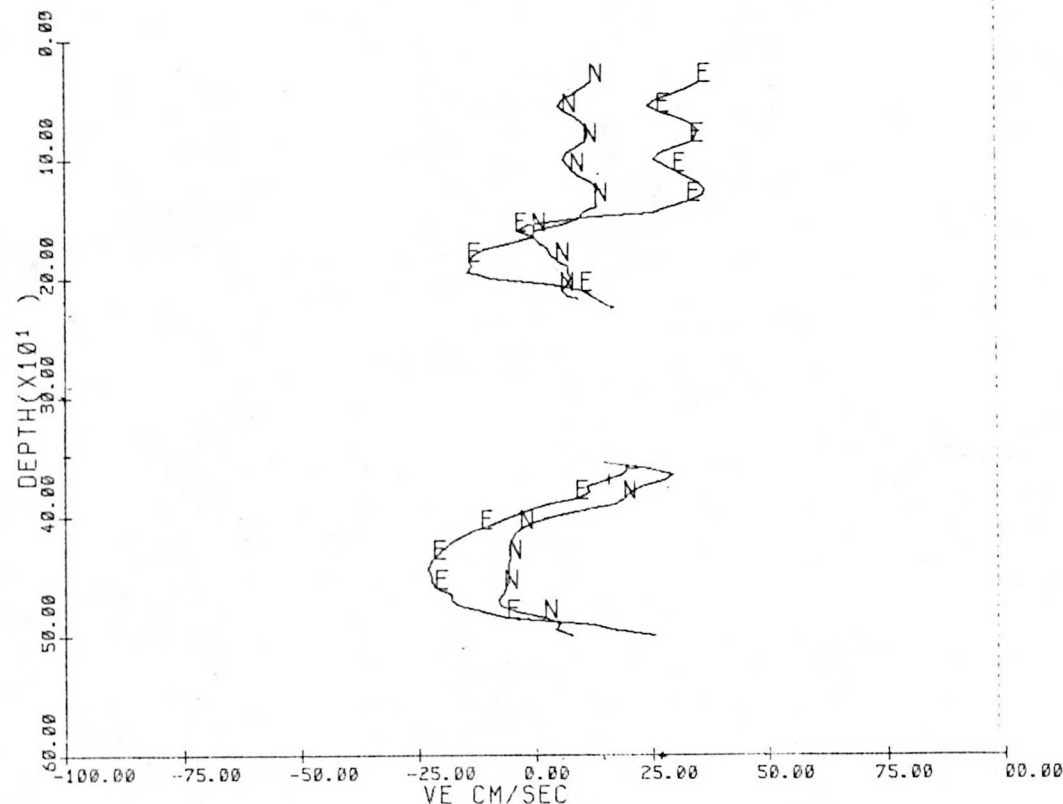
Station 61 13 August 1978, 0905Z

8 02'S 29 30'W

East correction = -15.24 cm/sec North correction = -0.28 cm/sec

East ship drift = -3 cm/sec North ship drift = -9 cm/sec

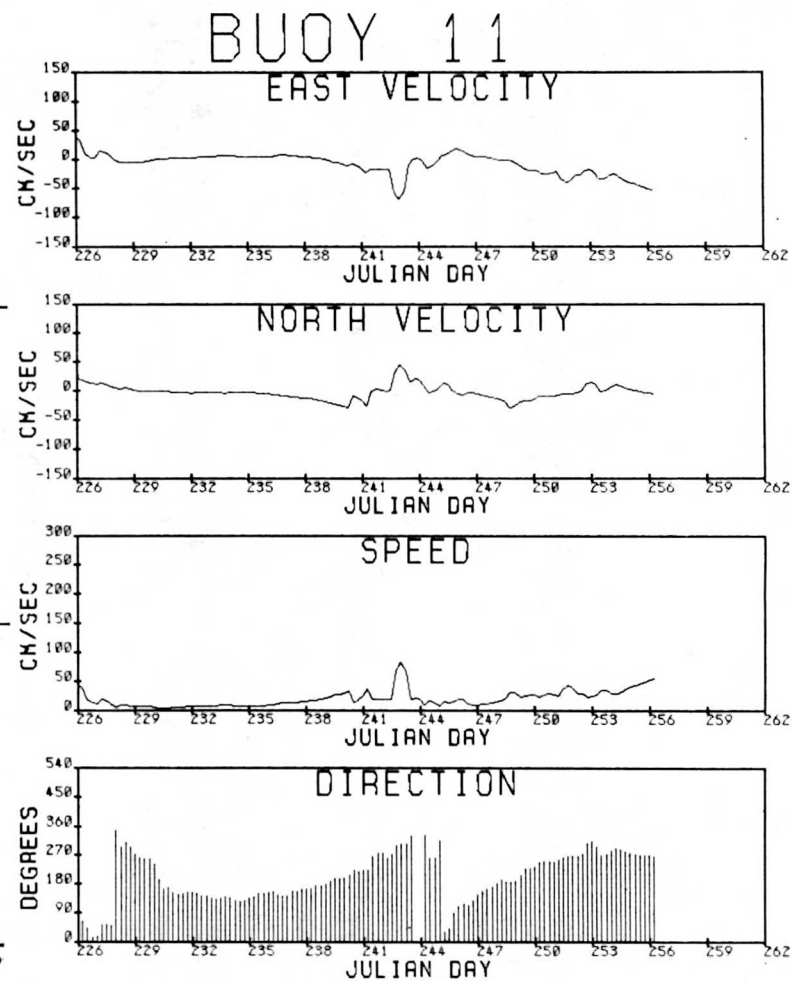
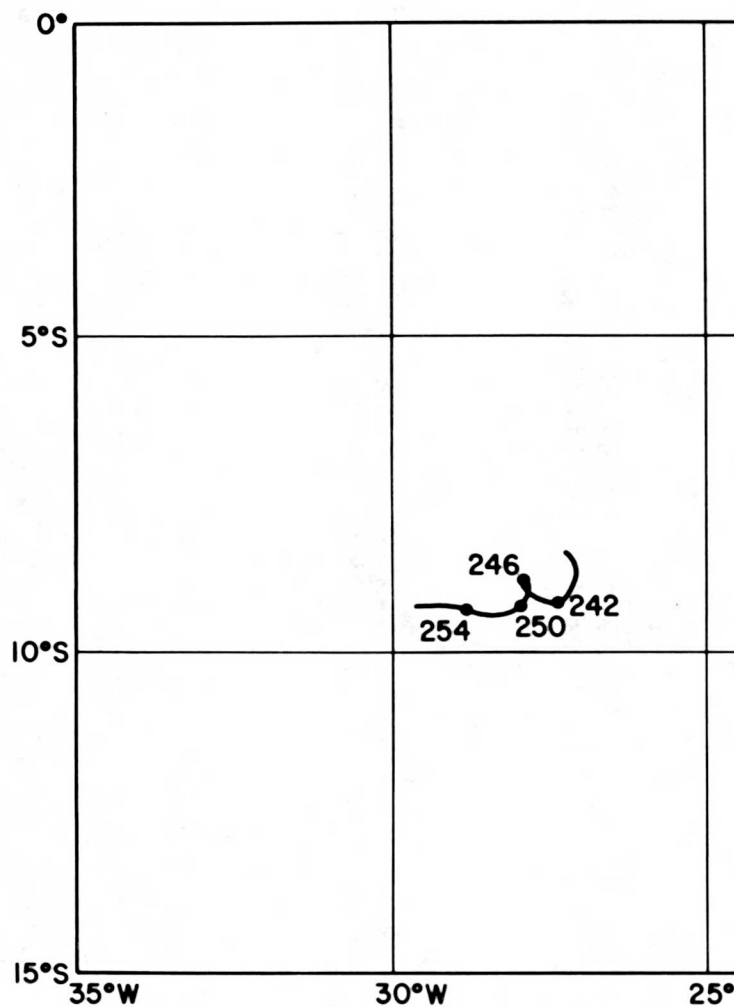
DEPTH	SPEED	HEADING	VE CM/SEC	VN CM/SEC
40.00	34.45	72.76	32.91	10.21
50.00	26.66	76.90	25.97	6.04
60.00	27.26	76.56	26.52	6.34
70.00	34.96	72.79	33.40	10.35
80.00	36.41	71.91	34.61	11.31
90.00	31.22	73.90	29.99	8.66
100.00	26.24	76.77	25.54	6.01
110.00	30.98	74.98	29.92	8.03
120.00	37.08	70.82	35.02	12.18
130.00	38.26	69.97	35.95	13.11
140.00	31.64	65.36	28.76	13.19
150.00	12.05	39.83	7.72	9.25
160.00	4.09	266.38	-4.08	-0.26
170.00	4.87	279.39	-4.80	0.79
180.00	13.34	283.75	-12.96	3.17
190.00	15.26	297.21	-13.57	6.98
200.00	12.18	308.64	-9.51	7.60
210.00	11.50	59.49	9.90	5.84
220.00	18.72	47.55	13.81	12.64
230.00	20.02	55.71	16.54	11.28
240.00	56.52	28.73	27.16	49.56
250.00	33.40	40.96	21.89	25.22
350.00	24.19	51.03	13.81	15.22
360.00	31.42	38.66	19.63	24.53
370.00	31.19	28.15	14.71	27.50
380.00	23.23	29.60	11.47	20.20
390.00	17.07	7.31	2.17	16.93
400.00	6.31	305.70	-5.13	3.68
410.00	12.02	254.27	-11.57	-3.26
420.00	18.37	253.07	-17.57	-5.35
430.00	21.16	254.36	-20.38	-5.71
440.00	23.40	255.34	-22.64	-5.92
450.00	23.09	255.01	-22.31	-5.97
460.00	22.15	253.18	-21.20	-6.41
470.00	19.66	245.91	-17.95	-8.03
480.00	12.03	250.27	-11.32	-4.06
490.00	11.12	61.24	9.75	5.35
500.00	26.75	72.95	25.57	7.84



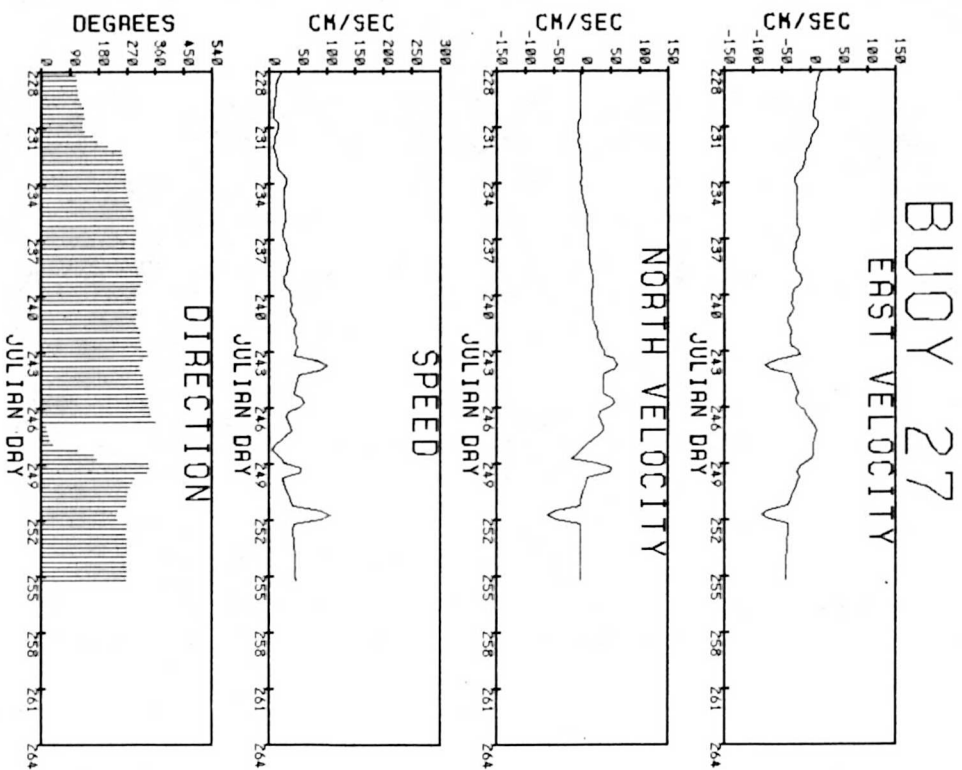
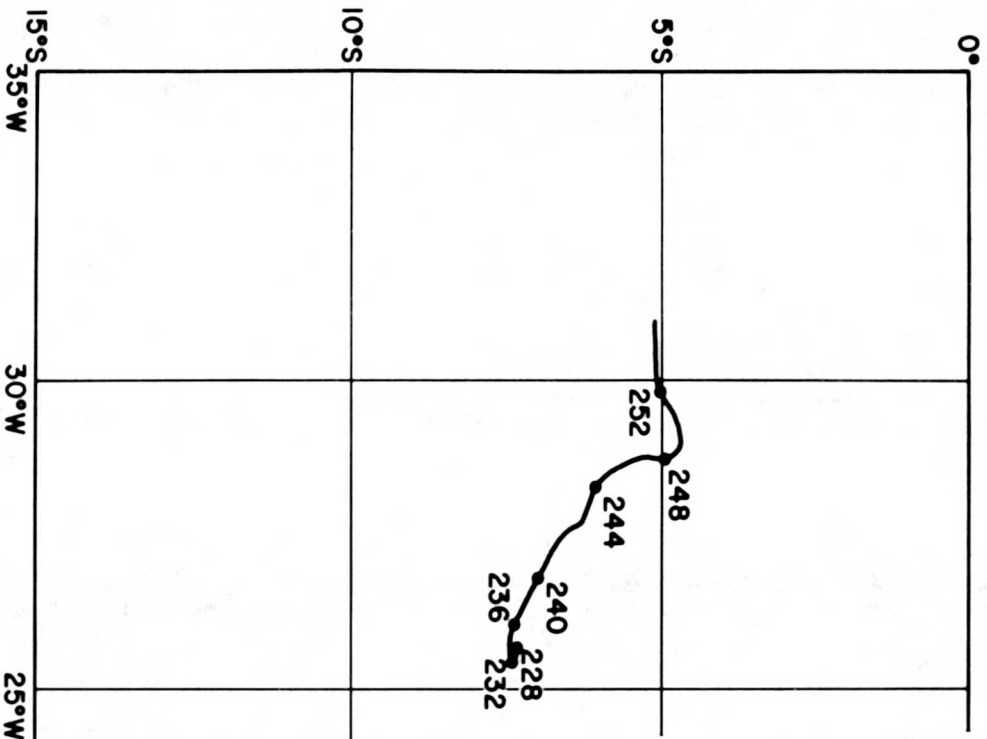
Appendix 9

Drifting buoy data listings and plots of trajectories and velocities. Data have been smoothed according to the method of Herman and Cardwell (1977).

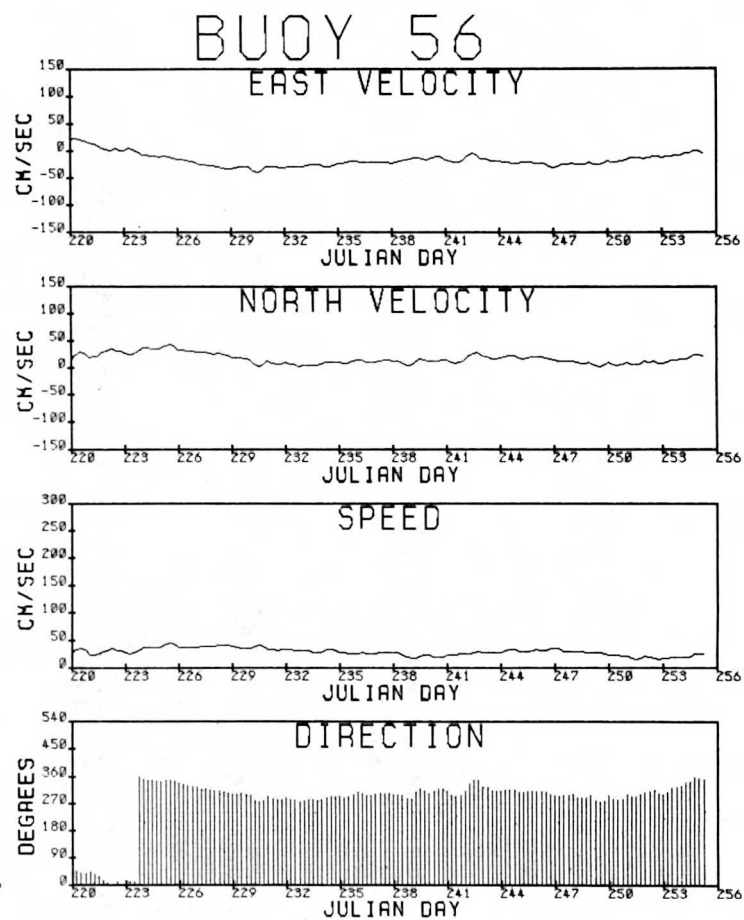
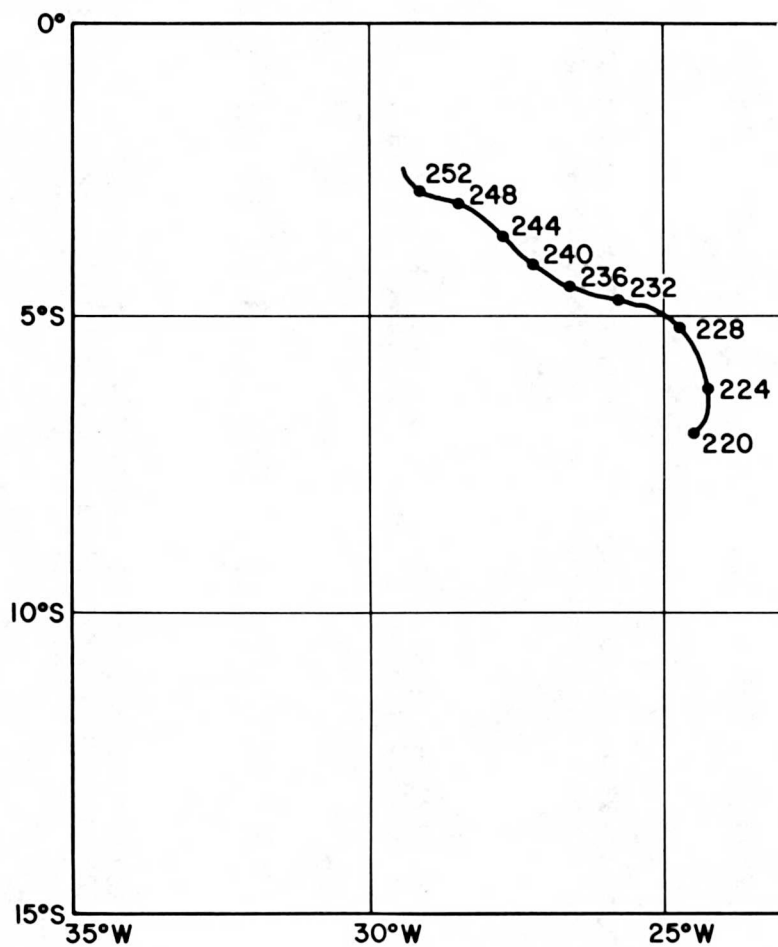
ID #	JULIAN DAY	YEAR	LATITUDE N	LONGITUDE W					
11	225.55	1978	-8.69	27.37	11	241.05	1978	-9.22	27.29
11	225.80	1978	-8.65	27.30	11	241.30	1978	-9.24	27.32
11	226.05	1978	-8.61	27.24	11	241.55	1978	-9.21	27.36
11	226.30	1978	-8.58	27.18	11	241.80	1978	-9.22	27.40
11	226.55	1978	-8.57	27.24	11	242.05	1978	-9.22	27.43
11	226.80	1978	-8.54	27.20	11	242.30	1978	-9.22	27.47
11	227.05	1978	-8.52	27.18	11	242.55	1978	-9.21	27.50
11	227.30	1978	-8.50	27.16	11	242.80	1978	-9.01	27.87
11	227.55	1978	-8.48	27.13	11	243.05	1978	-9.00	27.90
11	227.80	1978	-8.48	27.14	11	243.30	1978	-8.99	27.93
11	228.05	1978	-8.47	27.16	11	243.55	1978	-8.92	27.92
11	228.30	1978	-8.46	27.17	11	243.80	1978	-8.89	27.91
11	228.55	1978	-8.45	27.18	11	244.05	1978	-8.88	27.93
11	228.80	1978	-8.45	27.19	11	244.30	1978	-8.88	27.94
11	229.05	1978	-8.45	27.20	11	244.55	1978	-8.92	28.00
11	229.30	1978	-8.44	27.21	11	244.80	1978	-8.88	27.99
11	229.55	1978	-8.44	27.23	11	245.05	1978	-8.86	27.98
11	229.80	1978	-8.43	27.23	11	245.30	1978	-8.84	27.96
11	230.05	1978	-8.44	27.23	11	245.55	1978	-8.83	27.95
11	230.30	1978	-8.43	27.24	11	245.80	1978	-8.86	27.90
11	230.55	1978	-8.43	27.25	11	246.05	1978	-8.86	27.87
11	230.80	1978	-8.44	27.25	11	246.30	1978	-8.87	27.85
11	231.05	1978	-8.44	27.25	11	246.55	1978	-8.88	27.84
11	231.30	1978	-8.44	27.25	11	246.80	1978	-8.89	27.83
11	231.55	1978	-8.44	27.25	11	247.05	1978	-8.91	27.83
11	231.80	1978	-8.45	27.25	11	247.30	1978	-8.93	27.82
11	232.05	1978	-8.45	27.25	11	247.55	1978	-8.95	27.82
11	232.30	1978	-8.45	27.25	11	247.80	1978	-8.98	27.83
11	232.55	1978	-8.46	27.24	11	248.05	1978	-9.00	27.84
11	232.80	1978	-8.47	27.24	11	248.30	1978	-9.04	27.85
11	233.05	1978	-8.47	27.23	11	248.55	1978	-9.10	27.84
11	233.30	1978	-8.47	27.22	11	248.80	1978	-9.18	27.85
11	233.55	1978	-8.48	27.22	11	249.05	1978	-9.20	27.87
11	233.80	1978	-8.48	27.22	11	249.30	1978	-9.22	27.90
11	234.05	1978	-8.49	27.21	11	249.55	1978	-9.28	27.95
11	234.30	1978	-8.49	27.21	11	249.80	1978	-9.30	27.98
11	234.55	1978	-8.50	27.20	11	250.05	1978	-9.32	28.02
11	234.80	1978	-8.50	27.19	11	250.30	1978	-9.33	28.07
11	235.05	1978	-8.51	27.19	11	250.55	1978	-9.36	28.13
11	235.30	1978	-8.52	27.19	11	250.80	1978	-9.38	28.17
11	235.55	1978	-8.53	27.18	11	251.05	1978	-9.39	28.21
11	235.80	1978	-8.53	27.17	11	251.30	1978	-9.40	28.26
11	236.05	1978	-8.55	27.17	11	251.55	1978	-9.42	28.38
11	236.30	1978	-8.57	27.16	11	251.80	1978	-9.42	28.44
11	236.55	1978	-8.58	27.14	11	252.05	1978	-9.42	28.49
11	236.80	1978	-8.60	27.12	11	252.30	1978	-9.42	28.54
11	237.05	1978	-8.62	27.11	11	252.55	1978	-9.41	28.60
11	237.30	1978	-8.65	27.11	11	252.80	1978	-9.34	28.60
11	237.55	1978	-8.67	27.10	11	253.05	1978	-9.34	28.67
11	237.80	1978	-8.70	27.10	11	253.30	1978	-9.34	28.74
11	238.05	1978	-8.72	27.09	11	253.55	1978	-9.34	28.81
11	238.30	1978	-8.76	27.10	11	253.80	1978	-9.33	28.87
11	238.55	1978	-8.79	27.10	11	254.05	1978	-9.30	28.90
11	238.80	1978	-8.83	27.10	11	254.30	1978	-9.29	28.97
11	239.05	1978	-8.87	27.11	11	254.55	1978	-9.28	29.04
11	239.30	1978	-8.92	27.12	11	254.80	1978	-9.27	29.12
11	239.55	1978	-8.97	27.13	11	255.05	1978	-9.27	29.20
11	239.80	1978	-9.02	27.14	11	255.30	1978	-9.27	29.29
11	240.05	1978	-9.08	27.17	11	255.55	1978	-9.27	29.39
11	240.30	1978	-9.14	27.21	11	255.80	1978	-9.27	29.49
11	240.55	1978	-9.07	27.18	11	256.05	1978	-9.28	29.59
11	240.80	1978	-9.20	27.25					



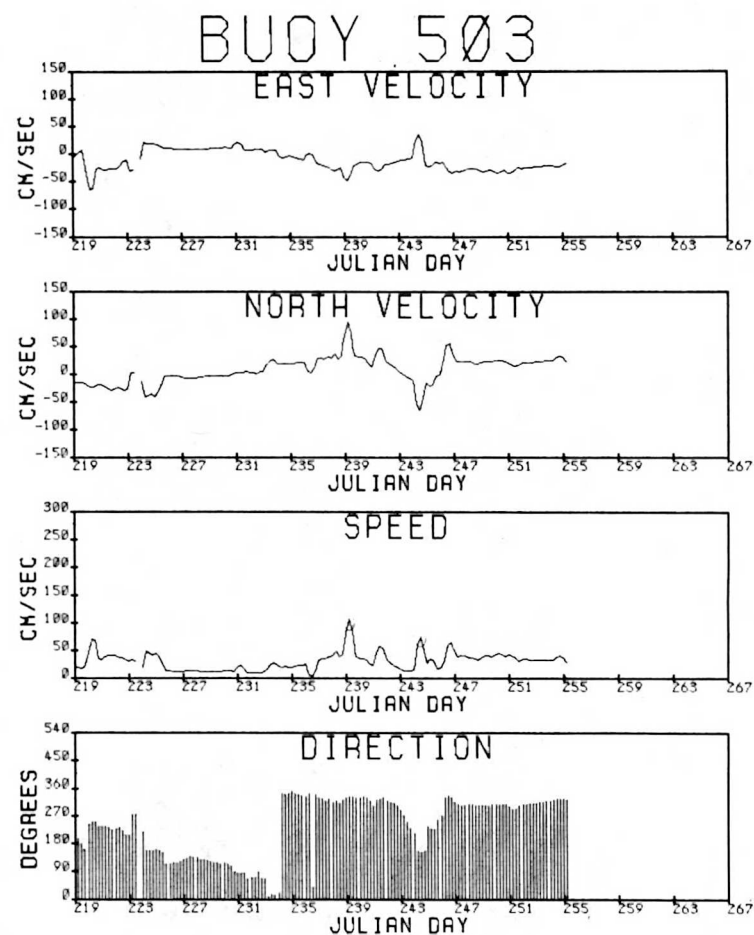
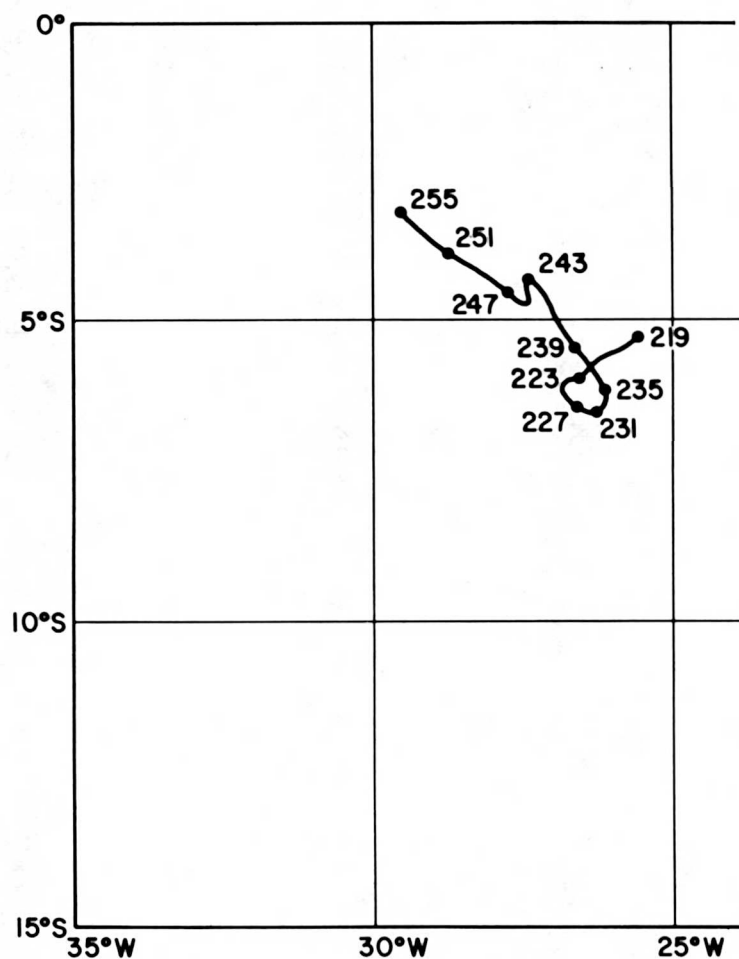
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27	228.32	1978	-7.33	25.59	27	243.82	1978	-5.99	28.34	
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27	230.82	1978	-7.38	25.43	27	246.32	1978	-5.22	28.78	
27	231.07	1978	-7.38	25.44	27	246.57	1978	-5.18	28.79	
27	231.32	1978	-7.38	25.44	27	246.82	1978	-5.00	28.77	
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27	231.82	1978	-7.41	25.44	27	247.32	1978	-4.97	28.73	
27	232.07	1978	-7.41	25.46	27	247.57	1978	-4.93	28.72	
27	232.32	1978	-7.41	25.47	27	247.82	1978	-4.91	28.71	
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27	236.07	1978	-7.34	26.13	27	251.57	1978	-5.01	29.83	
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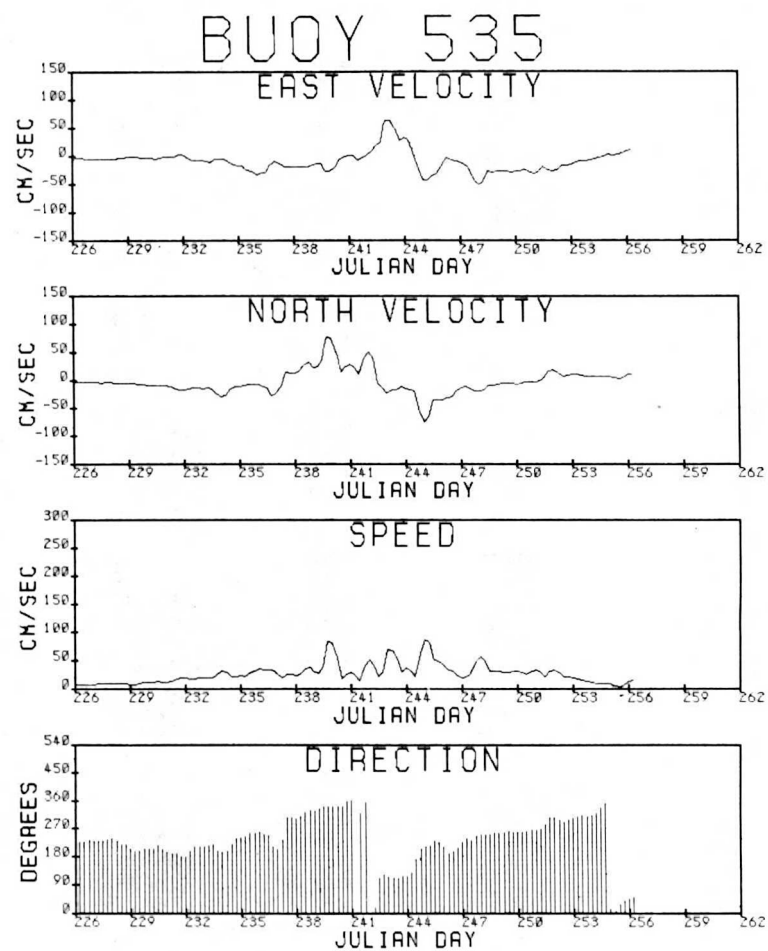
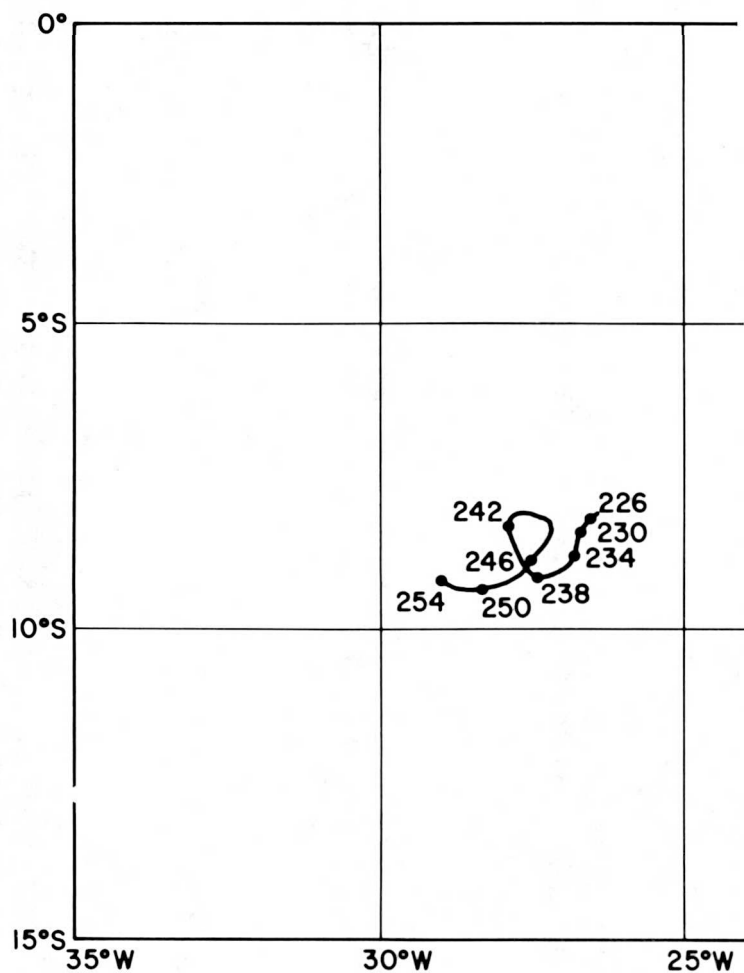
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56	220.49	1978	-6.92	24.45	56	238.49	1978	-4.23	27.05
56	220.74	1978	-6.83	24.39	56	238.74	1978	-4.21	27.08
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56	221.49	1978	-6.73	24.31	56	239.49	1978	-4.18	27.18
56	221.74	1978	-6.69	24.29	56	239.74	1978	-4.14	27.20
56	221.99	1978	-6.65	24.27	56	239.99	1978	-4.12	27.24
56	222.24	1978	-6.56	24.29	56	240.24	1978	-4.10	27.27
56	222.49	1978	-6.52	24.28	56	240.49	1978	-4.07	27.31
56	222.74	1978	-6.45	24.28	56	240.74	1978	-4.05	27.31
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56	223.24	1978	-6.35	24.23	56	241.24	1978	-3.99	27.38
56	223.49	1978	-6.29	24.23	56	241.49	1978	-3.96	27.41
56	223.74	1978	-6.26	24.26	56	241.74	1978	-3.96	27.47
56	223.99	1978	-6.19	24.27	56	241.99	1978	-3.93	27.50
56	224.24	1978	-6.13	24.29	56	242.24	1978	-3.91	27.54
56	224.49	1978	-6.06	24.30	56	242.49	1978	-3.88	27.57
56	224.74	1978	-5.99	24.32	56	242.74	1978	-3.80	27.55
56	224.99	1978	-5.92	24.34	56	242.99	1978	-3.77	27.59
56	225.24	1978	-5.85	24.36	56	243.24	1978	-3.71	27.61
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56	225.99	1978	-5.61	24.44	56	243.99	1978	-3.61	27.72
56	226.24	1978	-5.55	24.46	56	244.24	1978	-3.58	27.77
56	226.49	1978	-5.49	24.50	56	244.49	1978	-3.55	27.81
56	226.74	1978	-5.43	24.53	56	244.74	1978	-3.49	27.85
56	226.99	1978	-5.37	24.57	56	244.99	1978	-3.46	27.89
56	227.24	1978	-5.32	24.61	56	245.24	1978	-3.42	27.94
56	227.49	1978	-5.26	24.66	56	245.49	1978	-3.39	27.99
56	227.74	1978	-5.21	24.72	56	245.74	1978	-3.36	28.03
56	227.99	1978	-5.16	24.77	56	245.99	1978	-3.32	28.07
56	228.24	1978	-5.11	24.82	56	246.24	1978	-3.28	28.12
56	228.49	1978	-5.07	24.88	56	246.49	1978	-3.24	28.16
56	228.74	1978	-5.01	24.94	56	246.74	1978	-3.20	28.21
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56	229.24	1978	-4.94	25.08	56	247.24	1978	-3.15	28.34
56	229.49	1978	-4.90	25.14	56	247.49	1978	-3.12	28.39
56	229.74	1978	-4.87	25.20	56	247.74	1978	-3.10	28.44
56	229.99	1978	-4.84	25.25	56	247.99	1978	-3.07	28.49
56	230.24	1978	-4.81	25.31	56	248.24	1978	-3.05	28.54
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56	233.74	1978	-4.62	26.18	56	251.74	1978	-2.87	29.13
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56	236.49	1978	-4.42	26.70	56	254.49	1978	-2.61	29.39
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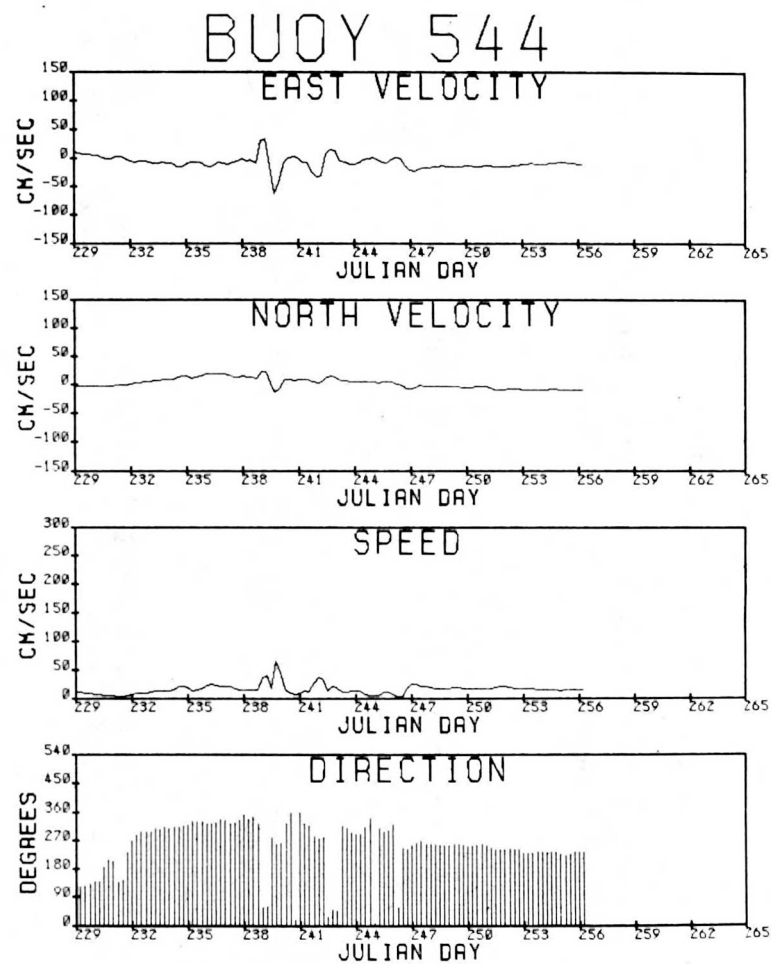
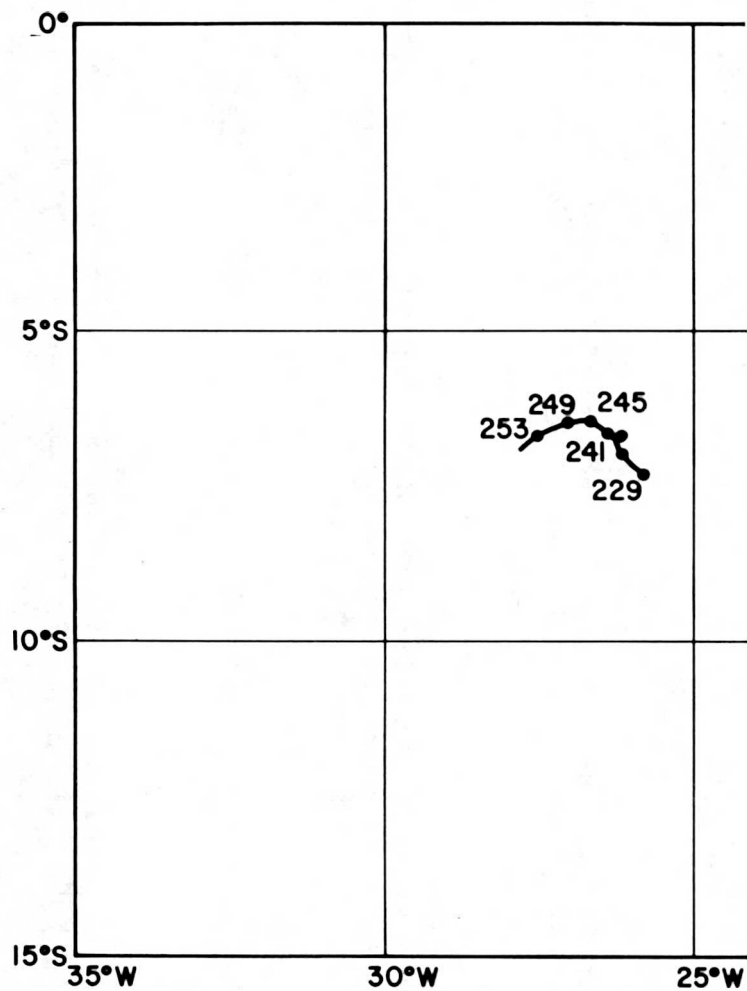
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503	220.84	1978	-5.54	26.11	503	239.59	1978	-5.07	26.81
503	221.09	1978	-5.58	26.16	503	239.84	1978	-4.97	26.86
503	221.34	1978	-5.62	26.21	503	240.09	1978	-4.92	26.90
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503	221.84	1978	-5.71	26.34	503	240.59	1978	-4.79	26.96
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503	225.34	1978	-6.24	26.75	503	243.84	1978	-4.31	27.46
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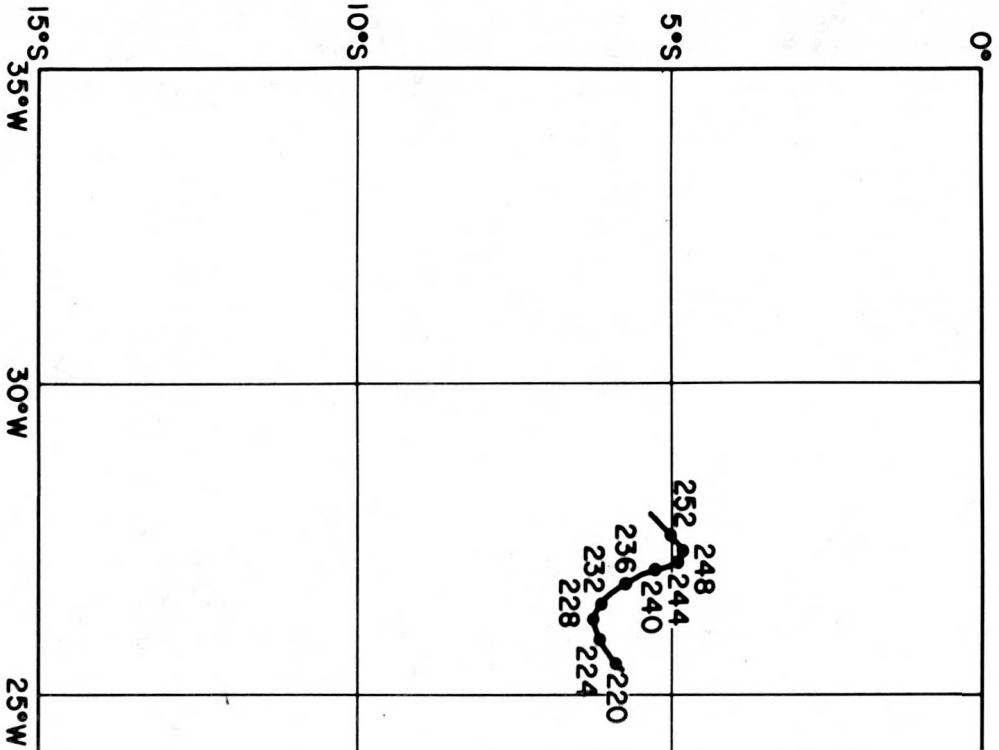
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535	226.30	1978	-8.22	26.57	535	241.80	1978	-8.05	27.87
535	226.55	1978	-8.23	26.58	535	242.05	1978	-8.03	27.87
535	226.80	1978	-8.24	26.59	535	242.30	1978	-8.02	27.86
535	227.05	1978	-8.25	26.60	535	242.55	1978	-8.09	27.76
535	227.30	1978	-8.26	26.61	535	242.80	1978	-8.09	27.76
535	227.55	1978	-8.27	26.62	535	243.05	1978	-8.17	27.32
535	227.80	1978	-8.27	26.63	535	243.30	1978	-8.18	27.32
535	228.05	1978	-8.29	26.65	535	243.55	1978	-8.20	27.31
535	228.30	1978	-8.30	26.65	535	243.80	1978	-8.23	27.17
535	228.55	1978	-8.31	26.66	535	244.05	1978	-8.27	27.16
535	228.80	1978	-8.32	26.67	535	244.30	1978	-8.30	27.16
535	229.05	1978	-8.33	26.67	535	244.55	1978	-8.35	27.16
535	229.30	1978	-8.35	26.68	535	244.80	1978	-8.63	27.33
535	229.55	1978	-8.37	26.69	535	245.05	1978	-8.70	27.39
535	229.80	1978	-8.38	26.69	535	245.30	1978	-8.75	27.43
535	230.05	1978	-8.40	26.70	535	245.55	1978	-8.84	27.55
535	230.30	1978	-8.42	26.71	535	245.80	1978	-8.90	27.56
535	230.55	1978	-8.44	26.73	535	246.05	1978	-8.97	27.57
535	230.80	1978	-8.46	26.72	535	246.30	1978	-9.03	27.58
535	231.05	1978	-8.48	26.73	535	246.55	1978	-9.08	27.61
535	231.30	1978	-8.51	26.74	535	246.80	1978	-9.08	27.62
535	231.55	1978	-8.55	26.73	535	247.05	1978	-9.11	27.66
535	231.80	1978	-8.59	26.72	535	247.30	1978	-9.14	27.70
535	232.05	1978	-8.62	26.73	535	247.55	1978	-9.17	27.75
535	232.30	1978	-8.64	26.75	535	247.80	1978	-9.23	27.93
535	232.55	1978	-8.67	26.77	535	248.05	1978	-9.25	27.98
535	232.80	1978	-8.70	26.78	535	248.30	1978	-9.28	28.03
535	233.05	1978	-8.73	26.80	535	248.55	1978	-9.29	28.10
535	233.30	1978	-8.76	26.82	535	248.80	1978	-9.31	28.15
535	233.55	1978	-8.79	26.85	535	249.05	1978	-9.32	28.20
535	233.80	1978	-8.87	26.83	535	249.30	1978	-9.33	28.26
535	234.05	1978	-8.93	26.86	535	249.55	1978	-9.34	28.31
535	234.30	1978	-8.95	26.88	535	249.80	1978	-9.37	28.38
535	234.55	1978	-8.97	26.91	535	250.05	1978	-9.37	28.42
535	234.80	1978	-9.00	26.96	535	250.30	1978	-9.38	28.47
535	235.05	1978	-9.02	26.99	535	250.55	1978	-9.38	28.52
535	235.30	1978	-9.03	27.02	535	250.80	1978	-9.39	28.60
535	235.55	1978	-9.06	27.11	535	251.05	1978	-9.39	28.65
535	235.80	1978	-9.07	27.14	535	251.30	1978	-9.39	28.69
535	236.05	1978	-9.08	27.22	535	251.55	1978	-9.35	28.71
535	236.30	1978	-9.13	27.28	535	251.80	1978	-9.30	28.80
535	236.55	1978	-9.13	27.32	535	252.05	1978	-9.29	28.84
535	236.80	1978	-9.26	27.32	535	252.30	1978	-9.28	28.87
535	237.05	1978	-9.24	27.36	535	252.55	1978	-9.26	28.91
535	237.30	1978	-9.21	27.40	535	252.80	1978	-9.25	28.94
535	237.55	1978	-9.18	27.44	535	253.05	1978	-9.22	28.96
535	237.80	1978	-9.17	27.48	535	253.30	1978	-9.21	28.98
535	238.05	1978	-9.14	27.51	535	253.55	1978	-9.19	29.00
535	238.30	1978	-9.09	27.56	535	253.80	1978	-9.18	29.02
535	238.55	1978	-9.02	27.60	535	254.05	1978	-9.17	29.03
535	238.80	1978	-8.96	27.64	535	254.30	1978	-9.15	29.04
535	239.05	1978	-8.96	27.64	535	254.55	1978	-9.14	29.04
535	239.30	1978	-8.86	27.68	535	254.80	1978	-9.13	29.05
535	239.55	1978	-8.76	27.72	535	255.05	1978	-9.11	29.04
535	239.80	1978	-8.50	27.82	535	255.30	1978	-9.12	29.05
535	240.05	1978	-8.47	27.83	535	255.55	1978	-9.10	29.04
535	240.30	1978	-8.44	27.85	535	255.80	1978	-9.08	29.03
535	240.55	1978	-8.42	27.85	535	256.05	1978	-9.07	29.01
535	240.80	1978	-8.32	27.84					



ID #	JULIAN DAY	YEAR	LATITUDE N	LONGITUDE W					
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544	228.86	1978	-7.32	25.79	544	244.36	1978	-6.46	26.69
544	229.11	1978	-7.33	25.78	544	244.61	1978	-6.45	26.67
544	229.36	1978	-7.33	25.76	544	244.86	1978	-6.44	26.68
544	229.61	1978	-7.34	25.75	544	245.11	1978	-6.43	26.69
544	229.86	1978	-7.34	25.74	544	245.36	1978	-6.43	26.70
544	230.11	1978	-7.34	25.74	544	245.61	1978	-6.41	26.74
544	230.36	1978	-7.35	25.73	544	245.86	1978	-6.40	26.74
544	230.61	1978	-7.36	25.75	544	246.11	1978	-6.40	26.74
544	230.86	1978	-7.36	25.75	544	246.36	1978	-6.39	26.75
544	231.11	1978	-7.36	25.76	544	246.61	1978	-6.39	26.76
544	231.36	1978	-7.35	25.76	544	246.86	1978	-6.43	26.82
544	231.61	1978	-7.35	25.76	544	247.11	1978	-6.42	26.87
544	231.86	1978	-7.35	25.78	544	247.36	1978	-6.43	26.90
544	232.11	1978	-7.34	25.80	544	247.61	1978	-6.44	26.94
544	232.36	1978	-7.33	25.81	544	247.86	1978	-6.45	26.97
544	232.61	1978	-7.33	25.82	544	248.11	1978	-6.45	27.00
544	232.86	1978	-7.32	25.84	544	248.36	1978	-6.46	27.03
544	233.11	1978	-7.31	25.86	544	248.61	1978	-6.47	27.06
544	233.36	1978	-7.29	25.87	544	248.86	1978	-6.48	27.09
544	233.61	1978	-7.28	25.89	544	249.11	1978	-6.49	27.13
544	233.86	1978	-7.26	25.91	544	249.36	1978	-6.50	27.16
544	234.11	1978	-7.25	25.93	544	249.61	1978	-6.50	27.19
544	234.36	1978	-7.23	25.95	544	249.86	1978	-6.52	27.22
544	234.61	1978	-7.19	26.00	544	250.11	1978	-6.53	27.25
544	234.86	1978	-7.17	26.02	544	250.36	1978	-6.54	27.27
544	235.11	1978	-7.15	26.03	544	250.61	1978	-6.54	27.31
544	235.36	1978	-7.13	26.04	544	250.86	1978	-6.55	27.33
544	235.61	1978	-7.10	26.07	544	251.11	1978	-6.56	27.36
544	235.86	1978	-7.07	26.08	544	251.36	1978	-6.58	27.39
544	236.11	1978	-7.02	26.13	544	251.61	1978	-6.60	27.42
544	236.36	1978	-6.99	26.15	544	251.86	1978	-6.62	27.46
544	236.61	1978	-6.97	26.16	544	252.11	1978	-6.64	27.49
544	236.86	1978	-6.91	26.18	544	252.36	1978	-6.65	27.51
544	237.11	1978	-6.89	26.21	544	252.61	1978	-6.67	27.54
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544	237.61	1978	-6.84	26.23	544	253.11	1978	-6.71	27.58
544	237.86	1978	-6.82	26.26	544	253.36	1978	-6.73	27.60
544	238.11	1978	-6.79	26.25	544	253.61	1978	-6.75	27.63
544	238.36	1978	-6.77	26.28	544	253.86	1978	-6.77	27.65
544	238.61	1978	-6.74	26.28	544	254.11	1978	-6.78	27.67
544	238.86	1978	-6.73	26.32	544	254.36	1978	-6.80	27.69
544	239.11	1978	-6.64	26.08	544	254.61	1978	-6.82	27.71
544	239.36	1978	-6.63	26.14	544	254.86	1978	-6.83	27.73
544	239.61	1978	-6.72	26.39	544	255.11	1978	-6.86	27.74
544	239.86	1978	-6.70	26.41	544	255.36	1978	-6.87	27.76
544	240.11	1978	-6.69	26.42	544	255.61	1978	-6.89	27.78
544	240.36	1978	-6.67	26.43	544	255.86	1978	-6.91	27.81
544	240.61	1978	-6.66	26.40	544	256.11	1978	-6.93	27.83
544	240.86	1978	-6.64	26.42					
544	241.11	1978	-6.63	26.43					
544	241.36	1978	-6.61	26.45					
544	241.61	1978	-6.60	26.46					
544	241.86	1978	-6.60	26.60					
544	242.11	1978	-6.59	26.63					
544	242.36	1978	-6.58	26.66					
544	242.61	1978	-6.53	26.55					
544	242.86	1978	-6.52	26.58					
544	243.11	1978	-6.50	26.58					
544	243.36	1978	-6.49	26.60					
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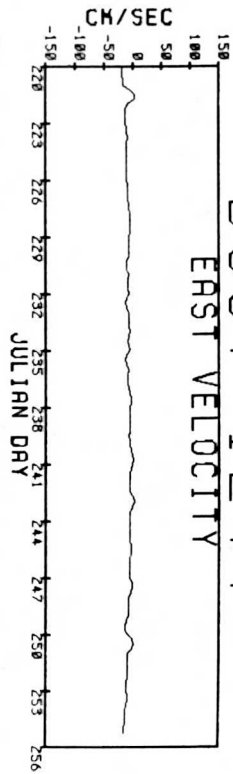


ID #	JULIAN DAY	YEAR	LATITUDE N	LONGITUDE W					
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1244	220.49	1978	-5.93	25.60	1244	238.49	1978	-5.43	26.94
1244	220.74	1978	-5.95	25.64	1244	238.74	1978	-5.39	26.95
1244	220.99	1978	-5.98	25.68	1244	238.99	1978	-5.37	26.96
1244	221.24	1978	-6.00	25.71	1244	239.24	1978	-5.3	26.97
1244	221.49	1978	-6.02	25.75	1244	239.49	1978	-5.31	26.99
1244	221.74	1978	-6.00	25.70	1244	239.74	1978	-5.28	27.00
1244	221.99	1978	-6.00	25.71	1244	239.99	1978	-5.25	27.01
1244	222.24	1978	-6.02	25.73	1244	240.24	1978	-5.21	27.03
1244	222.49	1978	-6.04	25.76	1244	240.49	1978	-5.17	27.04
1244	222.74	1978	-6.05	25.79	1244	240.74	1978	-5.14	27.04
1244	222.99	1978	-6.07	25.81	1244	240.99	1978	-5.12	27.05
1244	223.24	1978	-6.08	25.84	1244	241.24	1978	-5.09	27.04
1244	223.49	1978	-6.10	25.87	1244	241.49	1978	-5.07	27.06
1244	223.74	1978	-6.11	25.88	1244	241.74	1978	-5.04	27.07
1244	223.99	1978	-6.13	25.91	1244	241.99	1978	-5.03	27.08
1244	224.24	1978	-6.14	25.92	1244	242.24	1978	-5.00	27.09
1244	224.49	1978	-6.15	25.95	1244	242.49	1978	-4.97	27.10
1244	224.74	1978	-6.16	25.97	1244	242.74	1978	-4.96	27.11
1244	224.99	1978	-6.17	25.99	1244	242.99	1978	-4.94	27.12
1244	225.24	1978	-6.18	26.01	1244	243.24	1978	-4.91	27.10
1244	225.49	1978	-6.19	26.04	1244	243.49	1978	-4.89	27.11
1244	225.74	1978	-6.19	26.06	1244	243.74	1978	-4.88	27.13
1244	225.99	1978	-6.20	26.08	1244	243.99	1978	-4.86	27.14
1244	226.24	1978	-6.20	26.10	1244	244.24	1978	-4.85	27.15
1244	226.49	1978	-6.21	26.12	1244	244.49	1978	-4.84	27.16
1244	226.74	1978	-6.22	26.14	1244	244.74	1978	-4.83	27.17
1244	226.99	1978	-6.22	26.16	1244	244.99	1978	-4.82	27.18
1244	227.24	1978	-6.22	26.18	1244	245.24	1978	-4.81	27.19
1244	227.49	1978	-6.23	26.20	1244	245.49	1978	-4.81	27.20
1244	227.74	1978	-6.22	26.22	1244	245.74	1978	-4.80	27.21
1244	227.99	1978	-6.22	26.23	1244	245.99	1978	-4.80	27.22
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1244	229.74	1978	-6.20	26.32	1244	247.74	1978	-4.79	27.29
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1244	231.74	1978	-6.11	26.47	1244	249.74	1978	-4.87	27.44
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1244	232.24	1978	-6.08	26.51	1244	250.24	1978	-4.89	27.48
1244	232.49	1978	-6.06	26.52	1244	250.49	1978	-4.90	27.49
1244	232.74	1978	-6.05	26.57	1244	250.74	1978	-4.91	27.46
1244	232.99	1978	-6.03	26.58	1244	250.99	1978	-4.93	27.48
1244	233.24	1978	-6.01	26.59	1244	251.24	1978	-4.94	27.50
1244	233.49	1978	-5.99	26.61	1244	251.49	1978	-4.96	27.52
1244	233.74	1978	-5.97	26.62	1244	251.74	1978	-4.98	27.54
1244	233.99	1978	-5.95	26.64	1244	251.99	1978	-5.00	27.56
1244	234.24	1978	-5.93	26.65	1244	252.24	1978	-5.02	27.58
1244	234.49	1978	-5.91	26.66	1244	252.49	1978	-5.04	27.60
1244	234.74	1978	-5.89	26.69	1244	252.74	1978	-5.06	27.62
1244	234.99	1978	-5.86	26.70	1244	252.99	1978	-5.08	27.64
1244	235.24	1978	-5.84	26.71	1244	253.24	1978	-5.10	27.66
1244	235.49	1978	-5.81	26.73	1244	253.49	1978	-5.13	27.69
1244	235.74	1978	-5.78	26.77	1244	253.74	1978	-5.16	27.70
1244	235.99	1978	-5.75	26.78	1244	253.99	1978	-5.18	27.73
1244	236.24	1978	-5.73	26.80	1244	254.24	1978	-5.21	27.76
1244	236.49	1978	-5.70	26.82	1244	254.49	1978	-5.24	27.78
1244	236.74	1978	-5.67	26.85	1244	254.74	1978	-5.26	27.81
1244	236.99	1978	-5.65	26.86	1244	254.99	1978	-5.29	27.84
1244	237.24	1978	-5.61	26.88	1244	255.24	1978	-5.32	27.87
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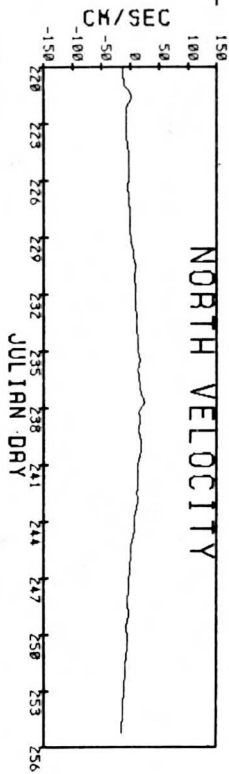


BUOY 1244

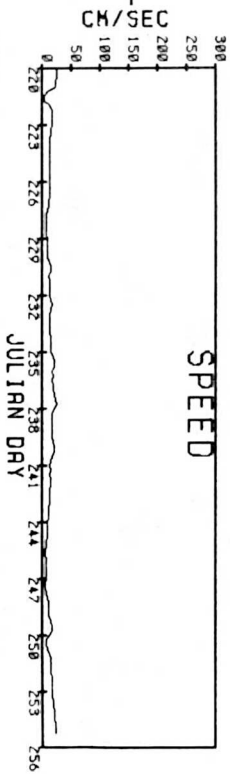
EAST VELOCITY



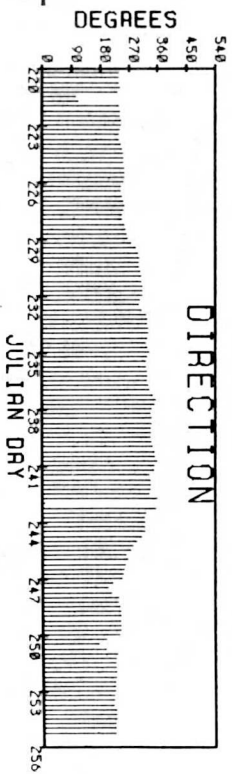
NORTH VELOCITY



SPEED

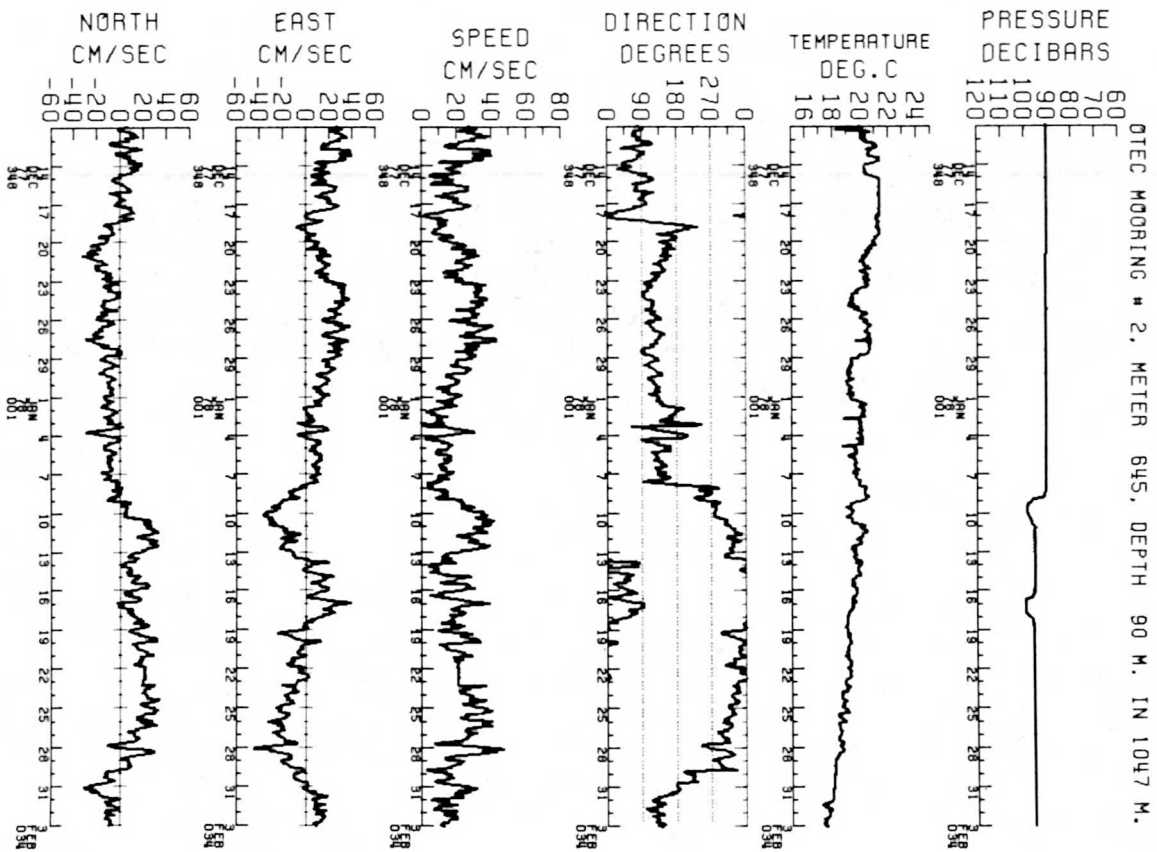
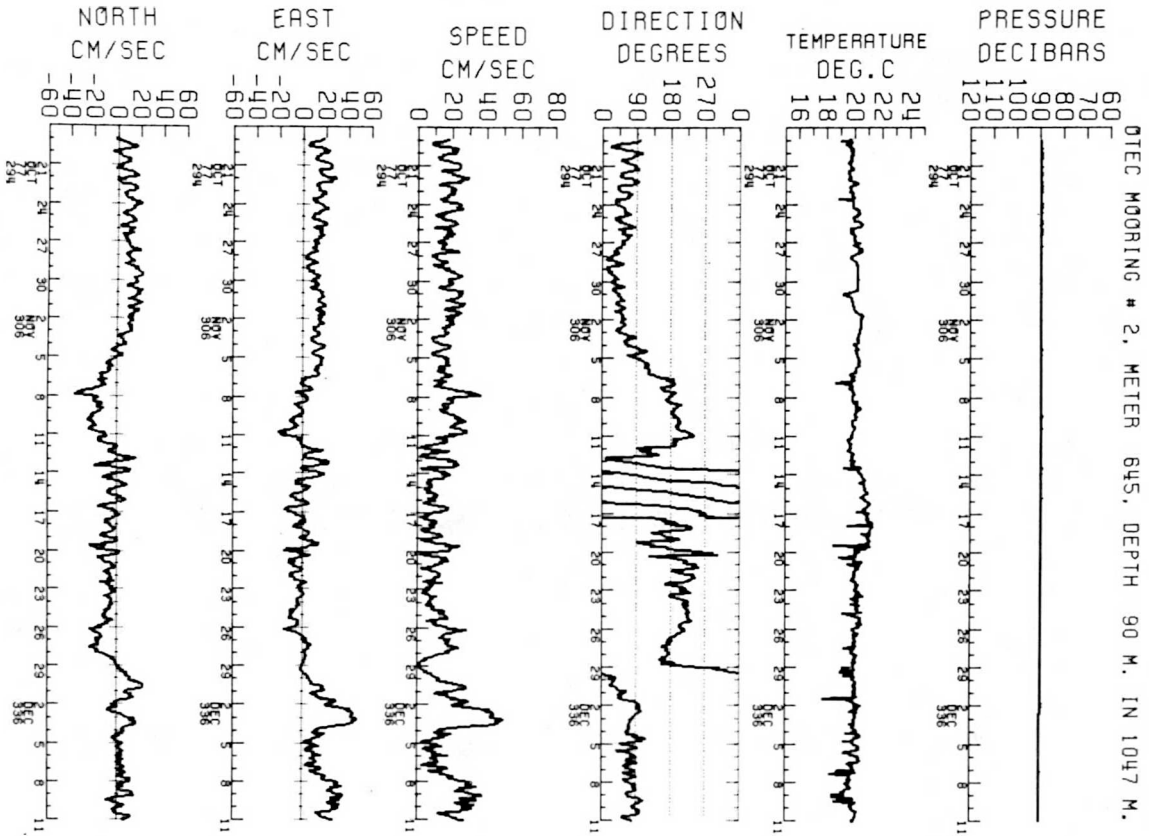


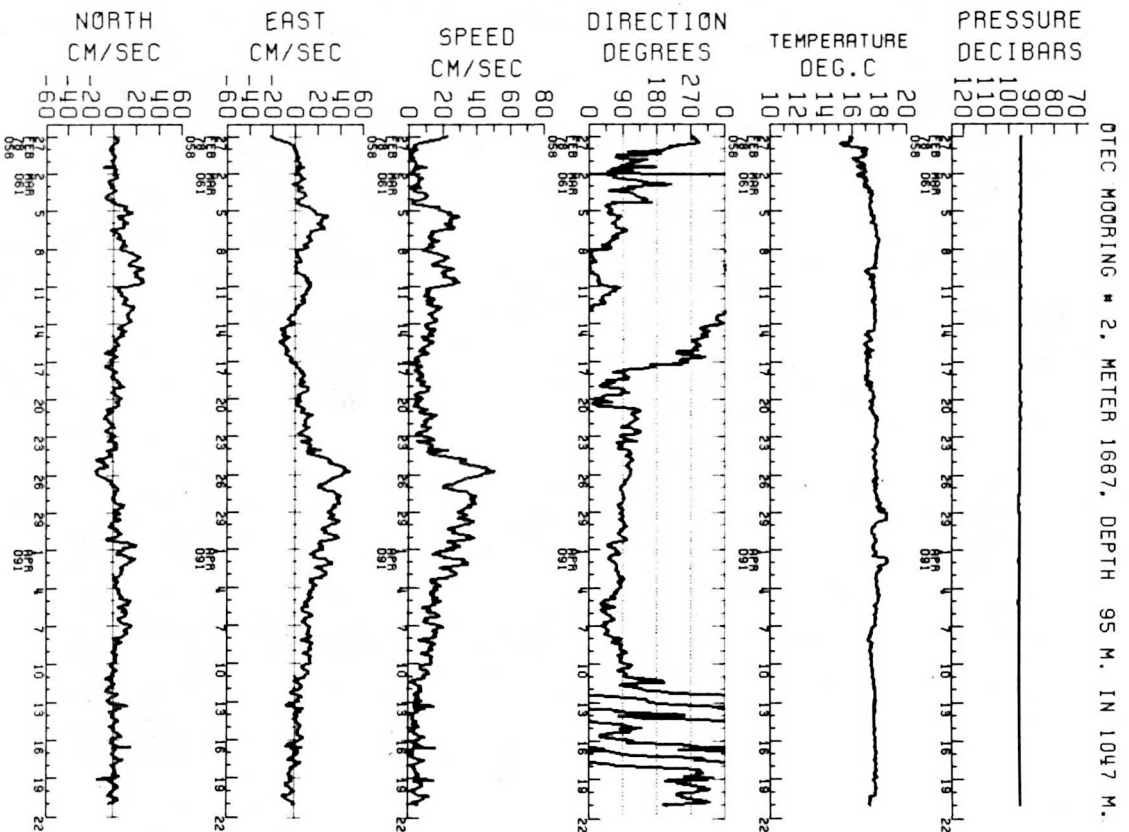
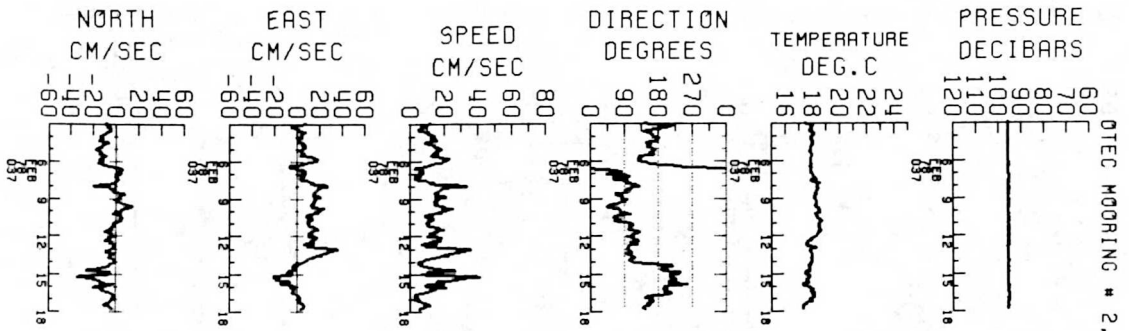
DIRECTION

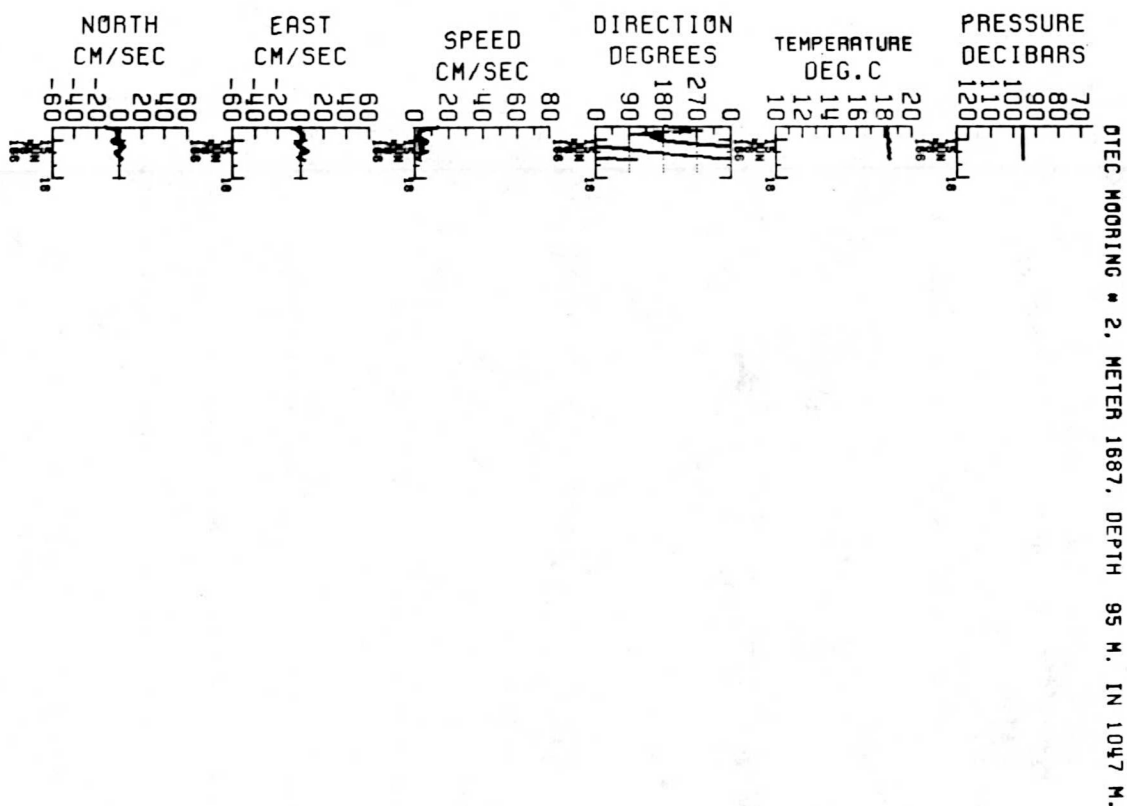
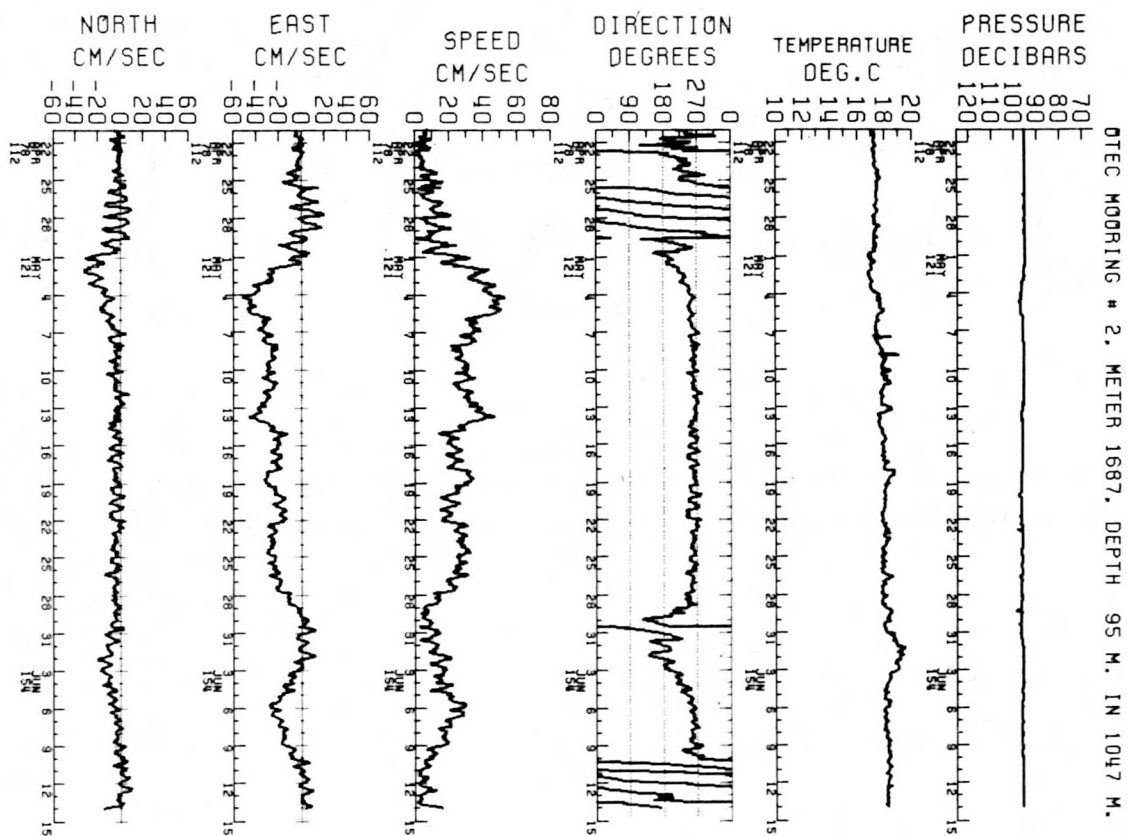


Appendix 10

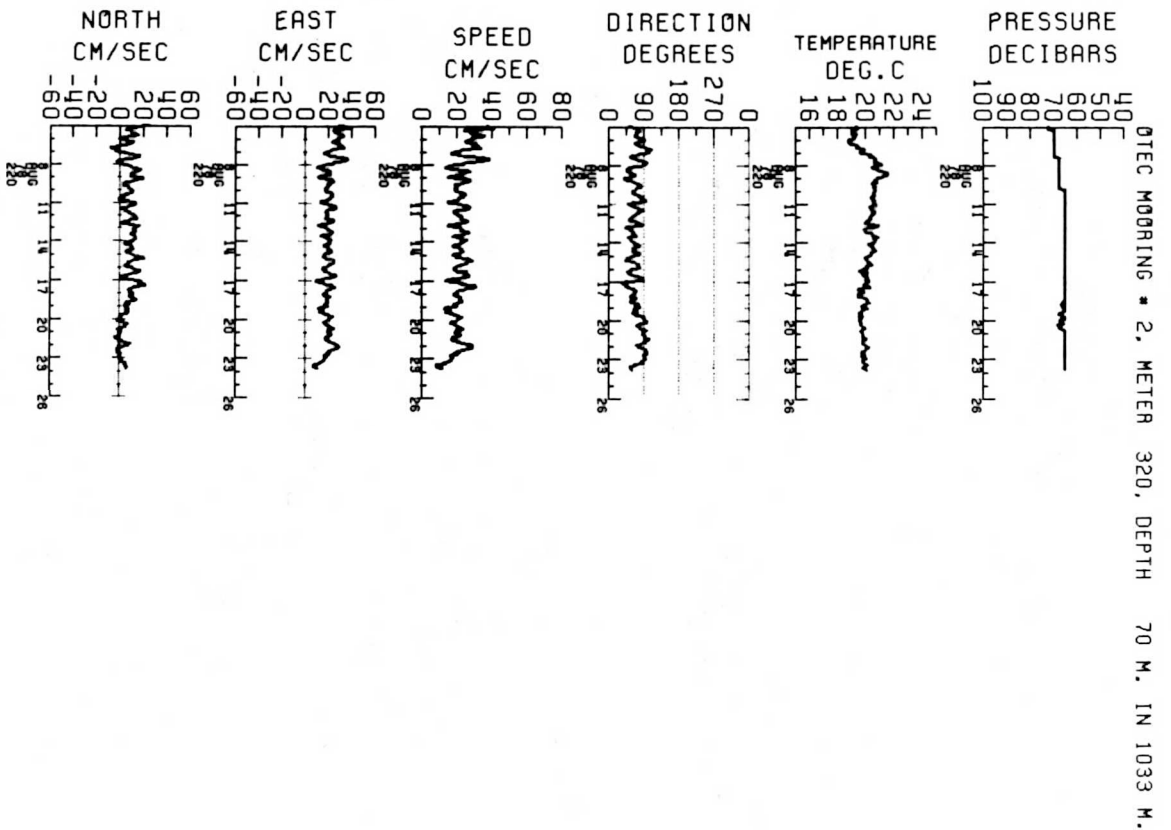
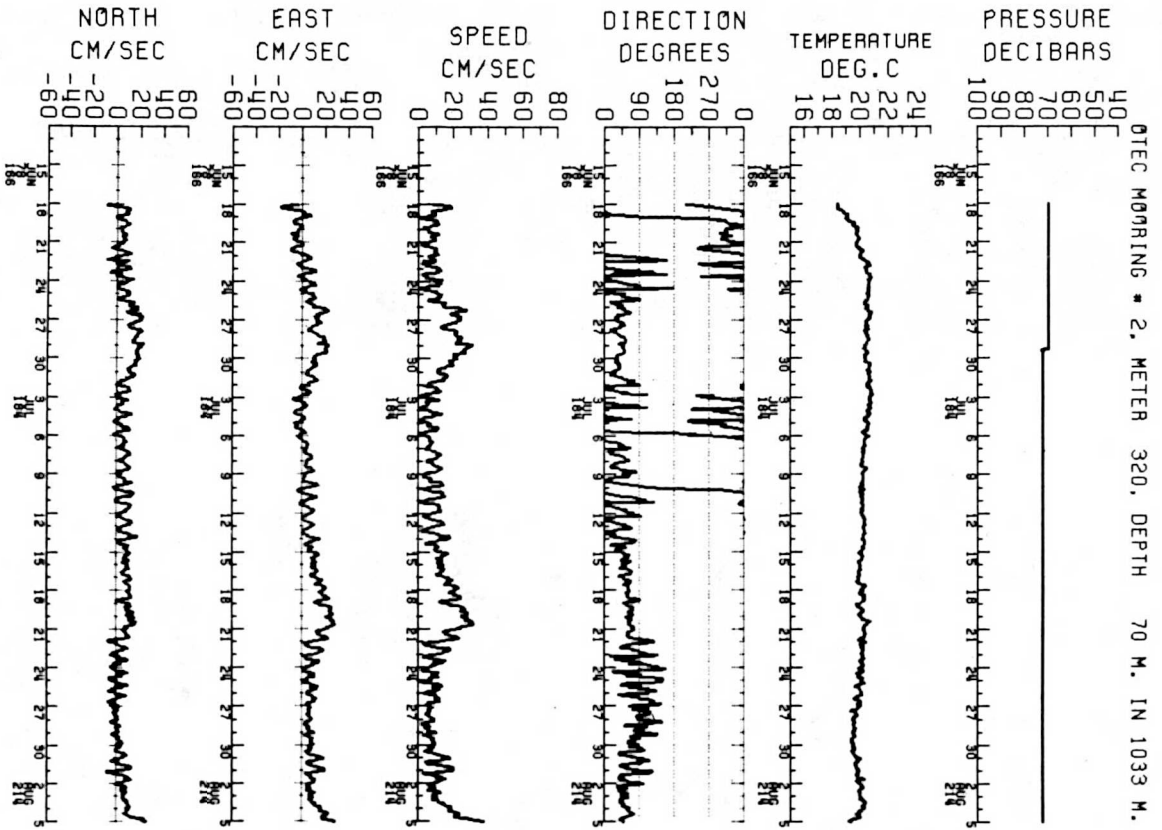
Current meter data given as time-series plots of calibrated and edited raw data and stick plots of 40-hour low pass filtered data. Also given are histograms of speed, direction and displacement in polar coordinates, histograms of current speed during the deployment interval, and the temperature data obtained from the current meters.

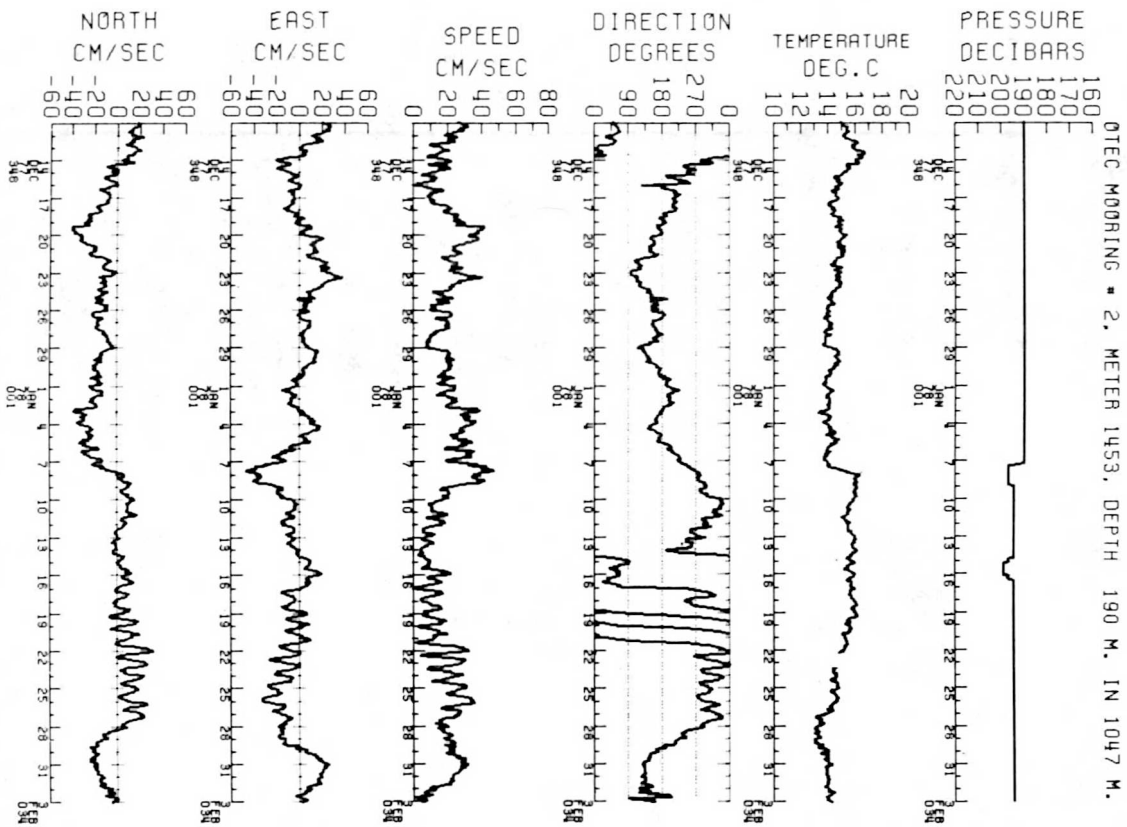
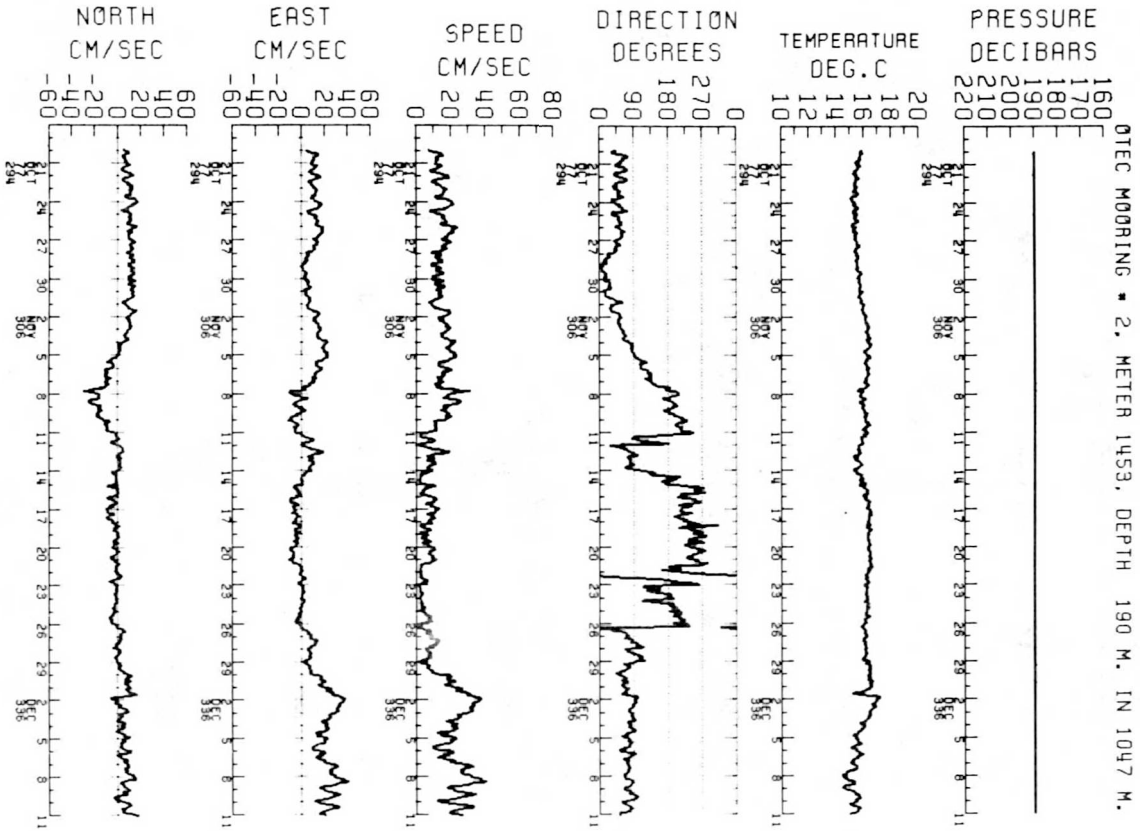




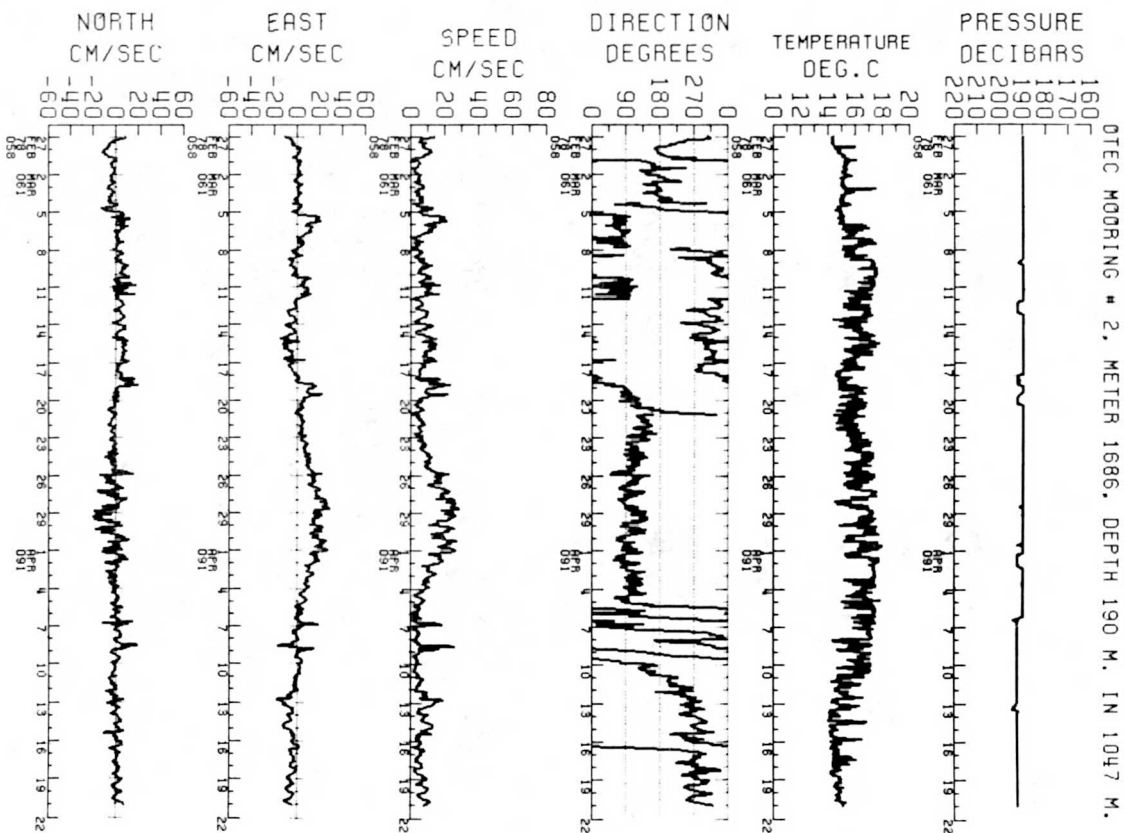
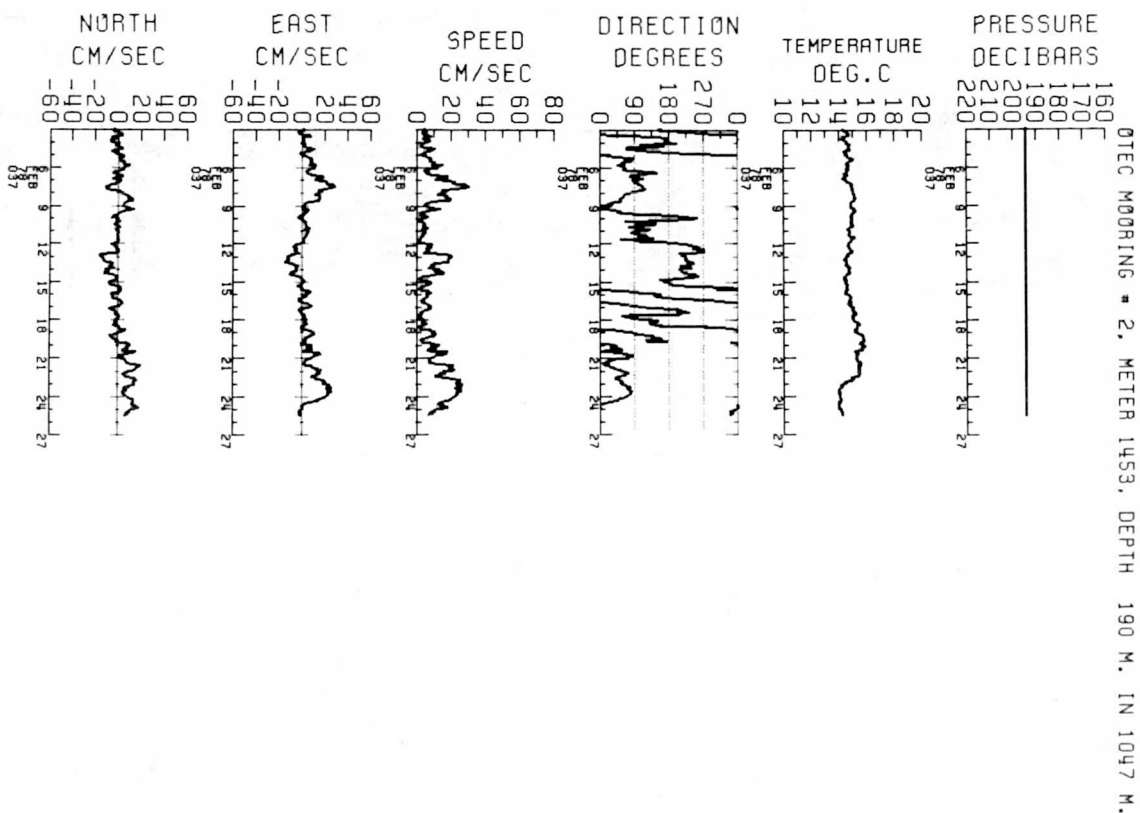


5-01

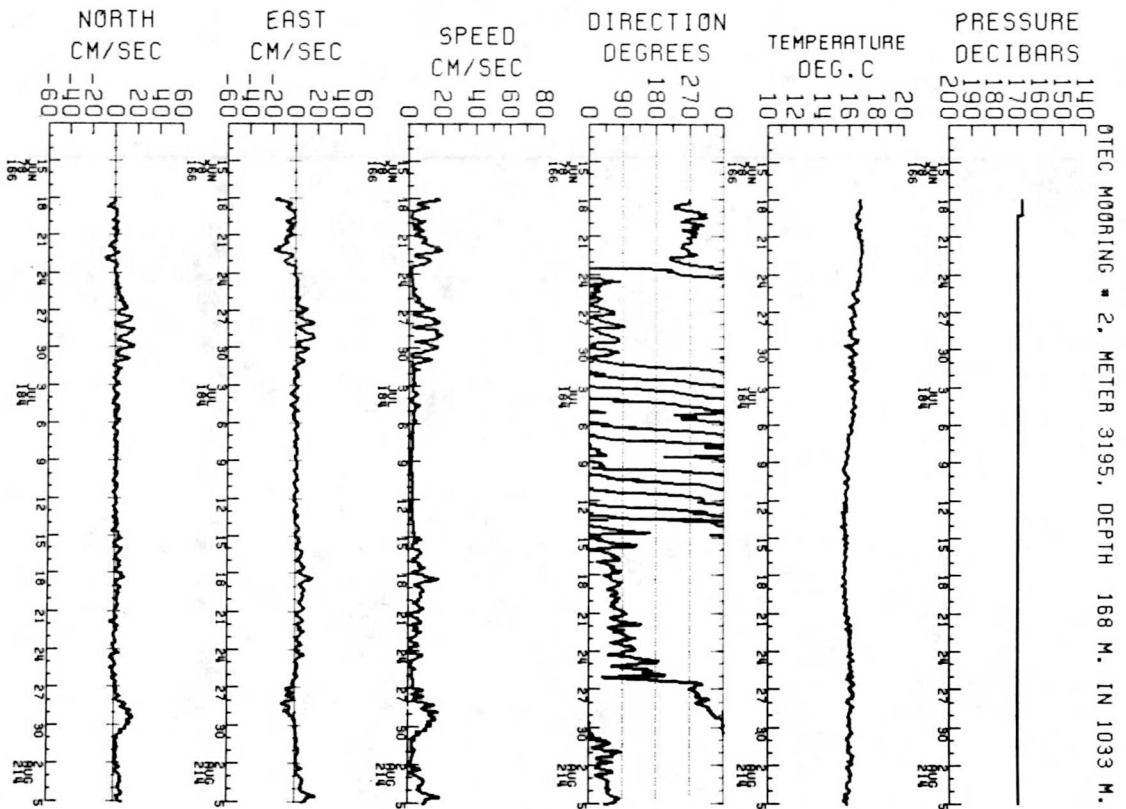
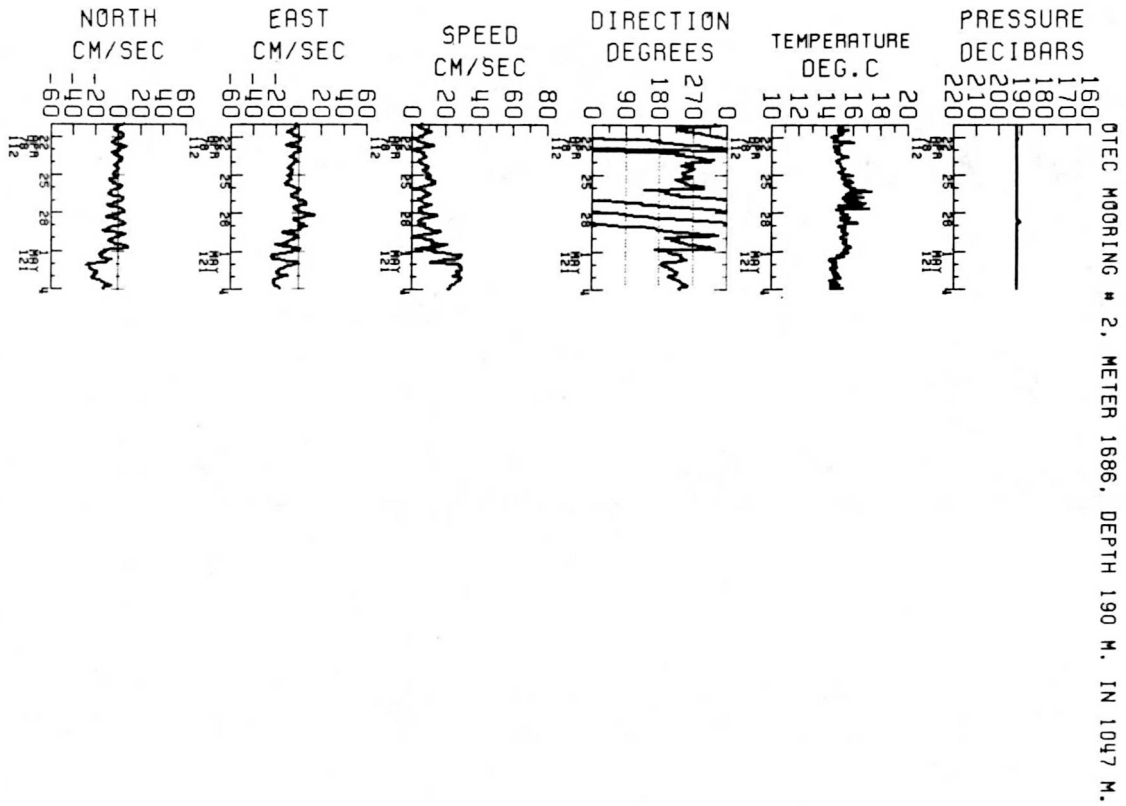




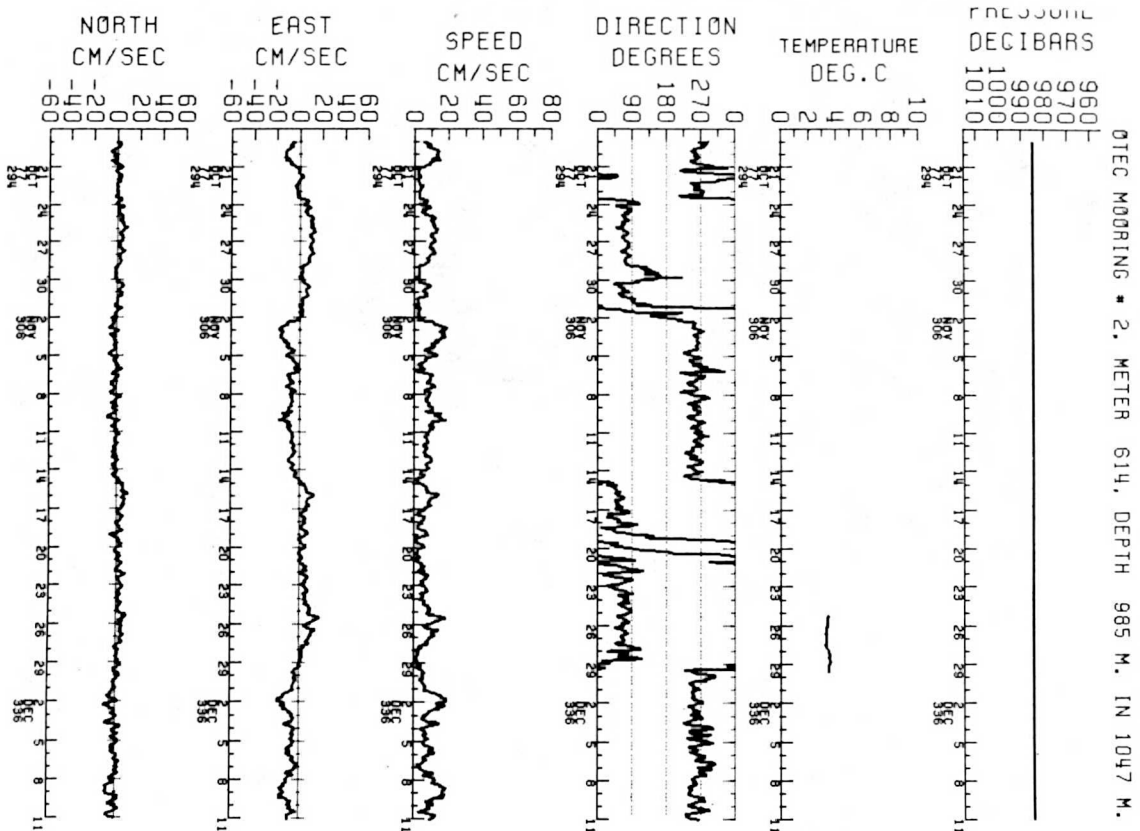
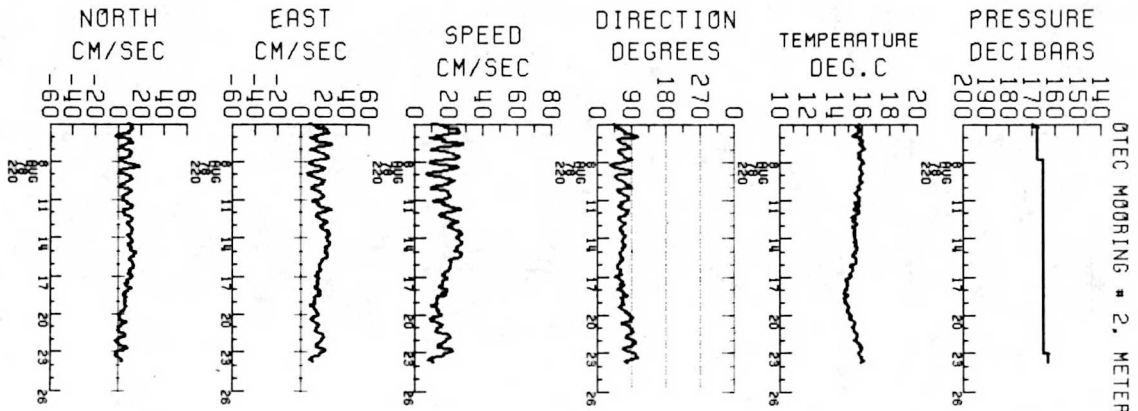
10-7



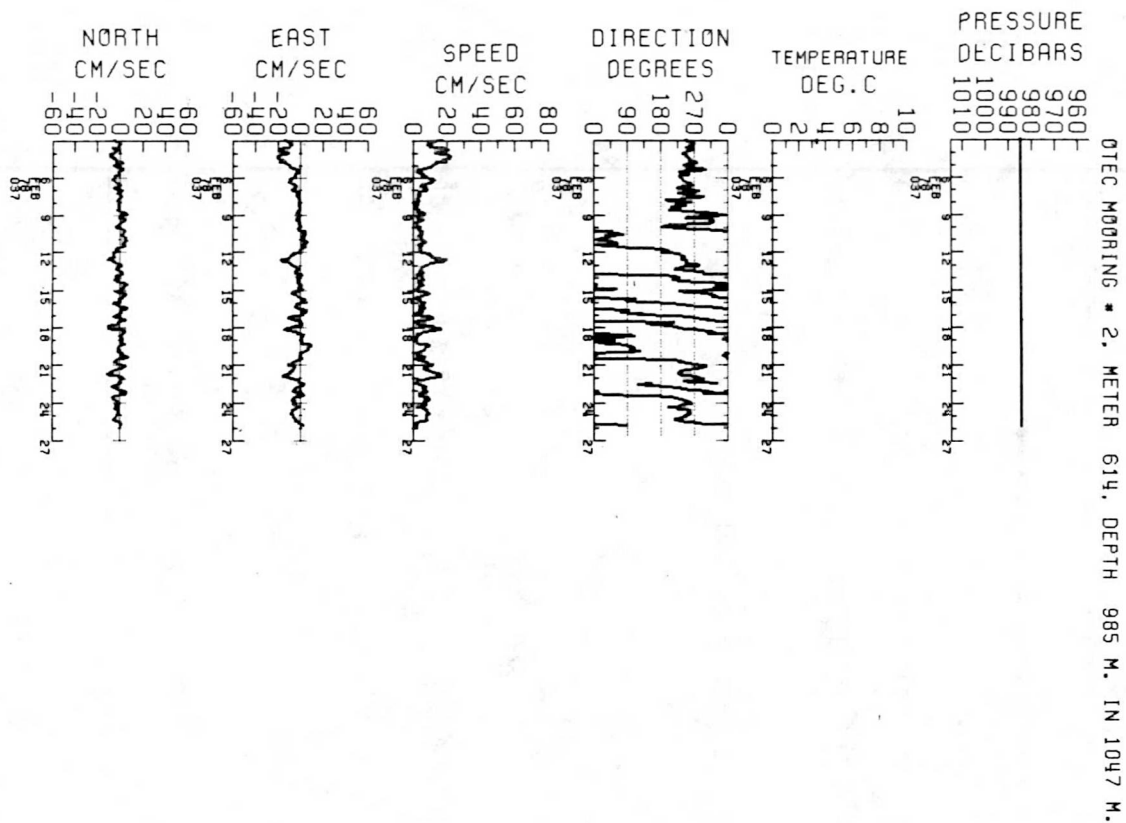
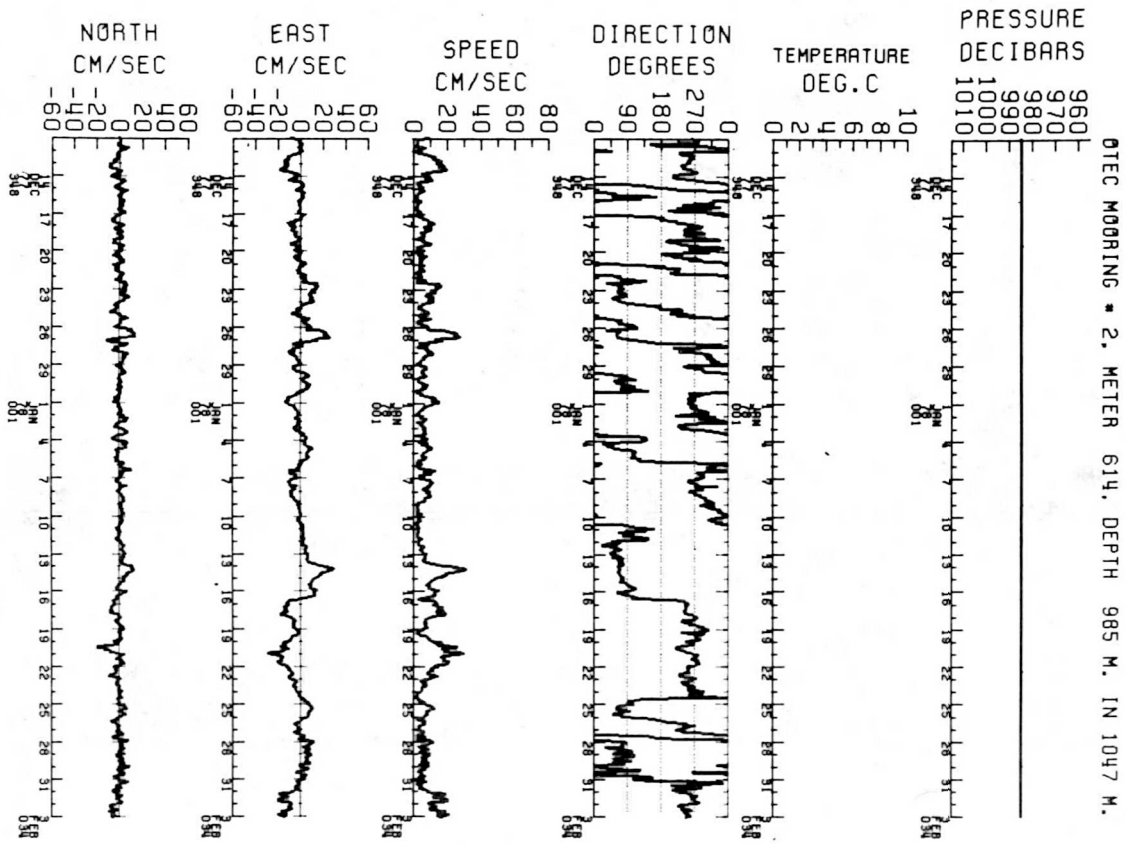
8-01



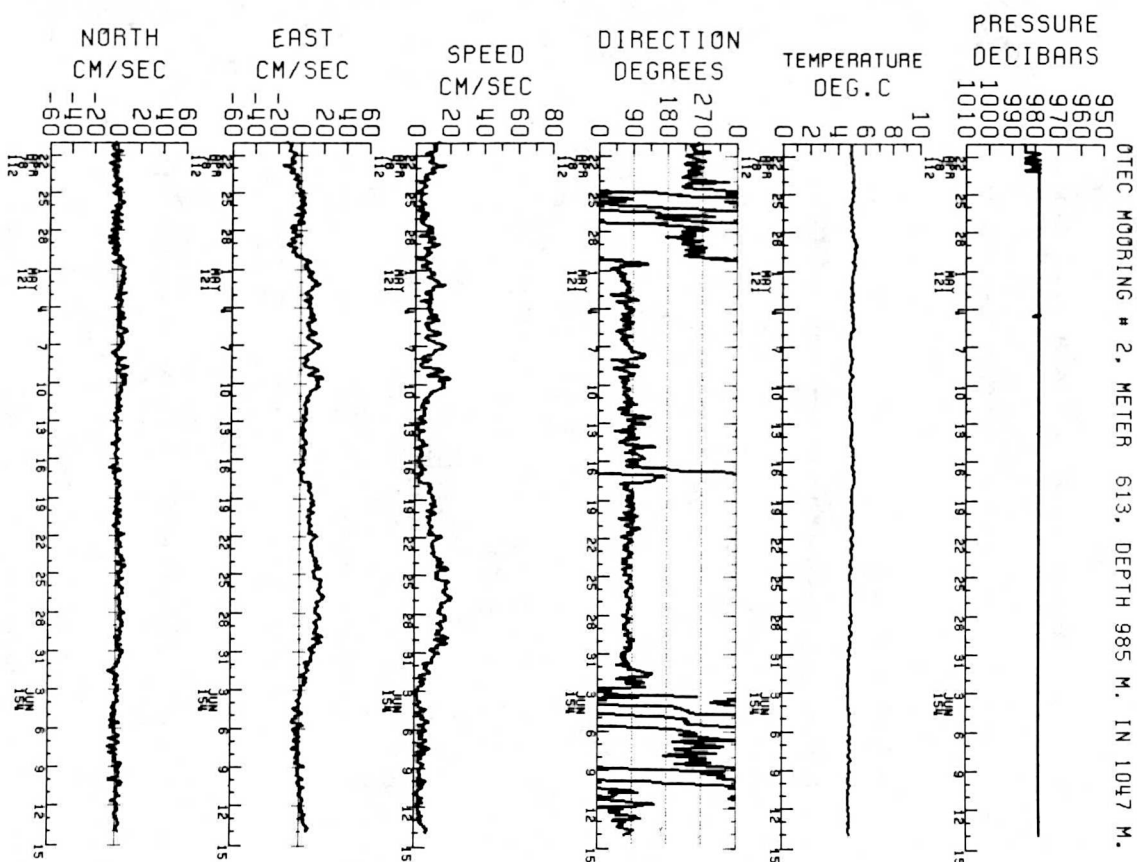
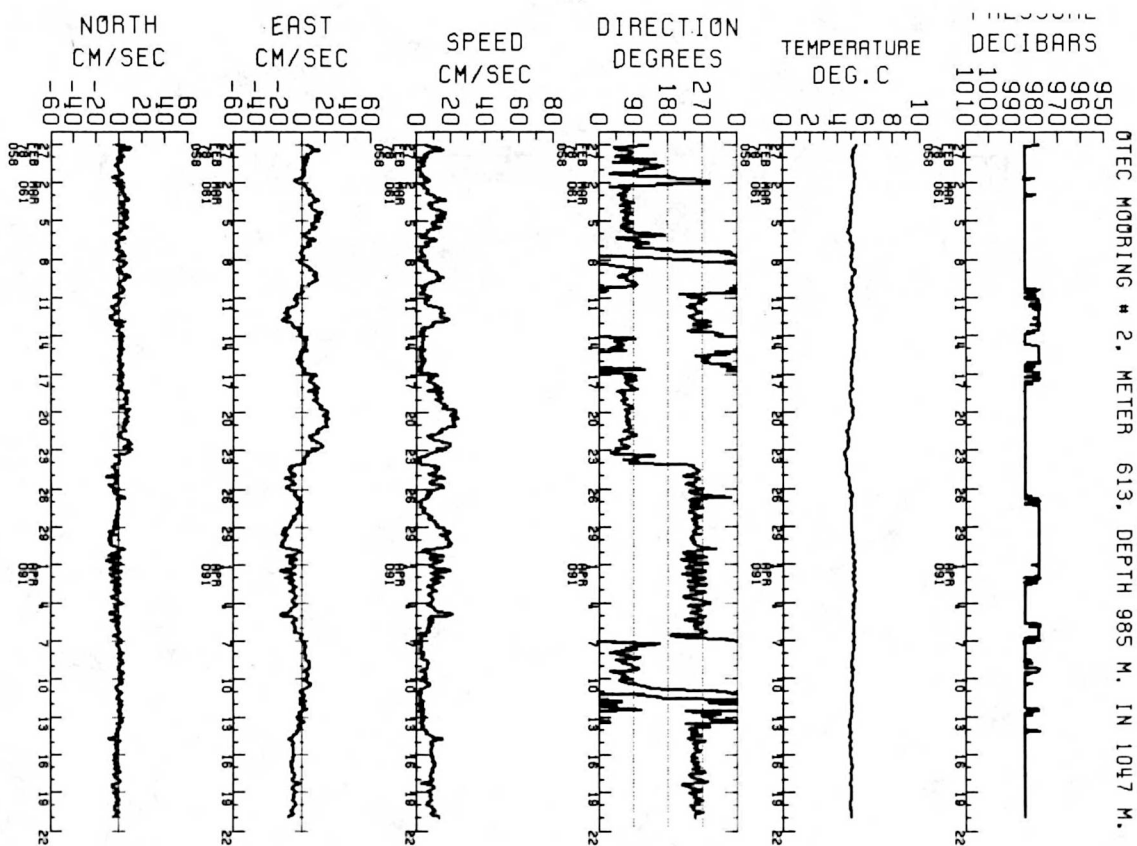
6-01



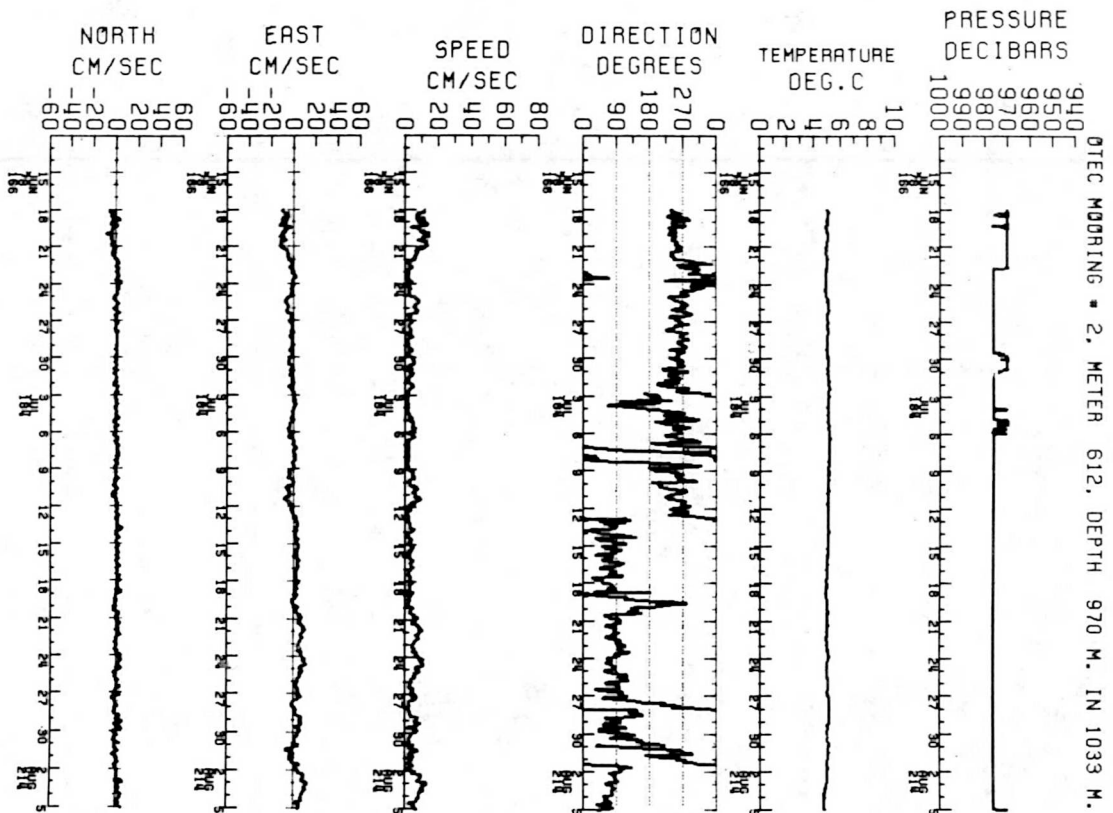
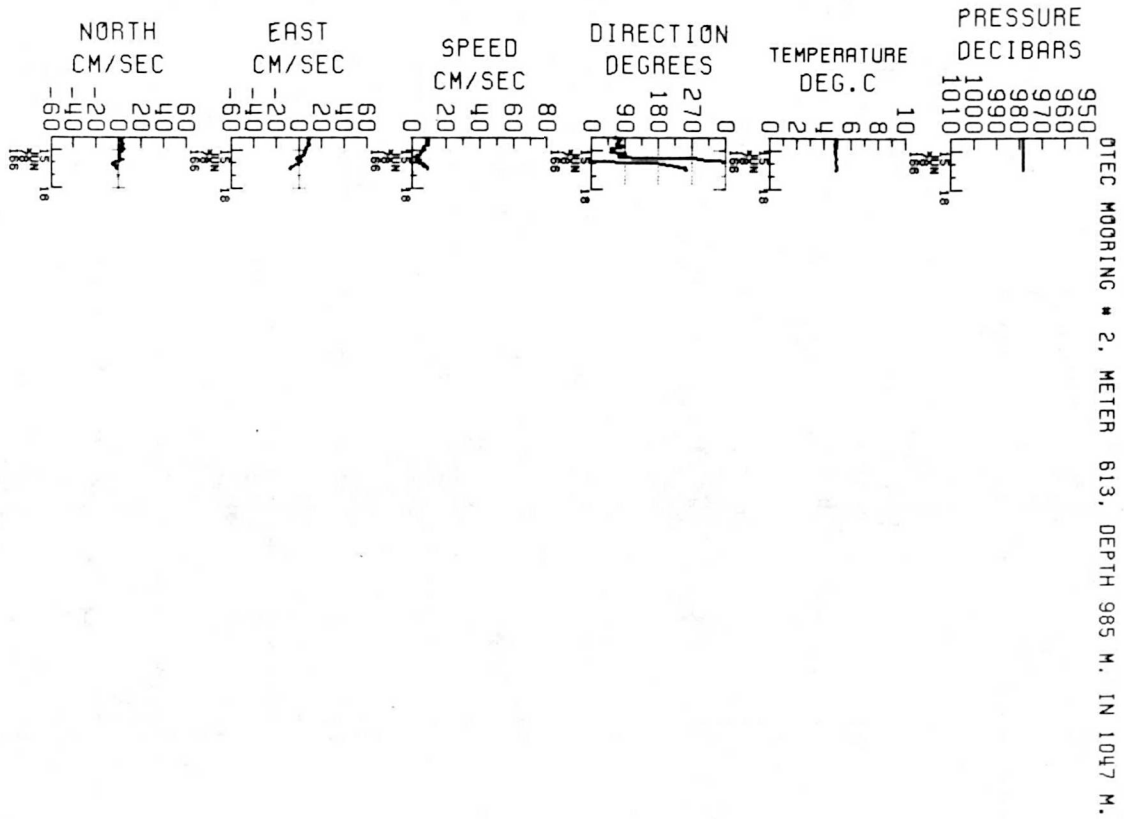
01-10



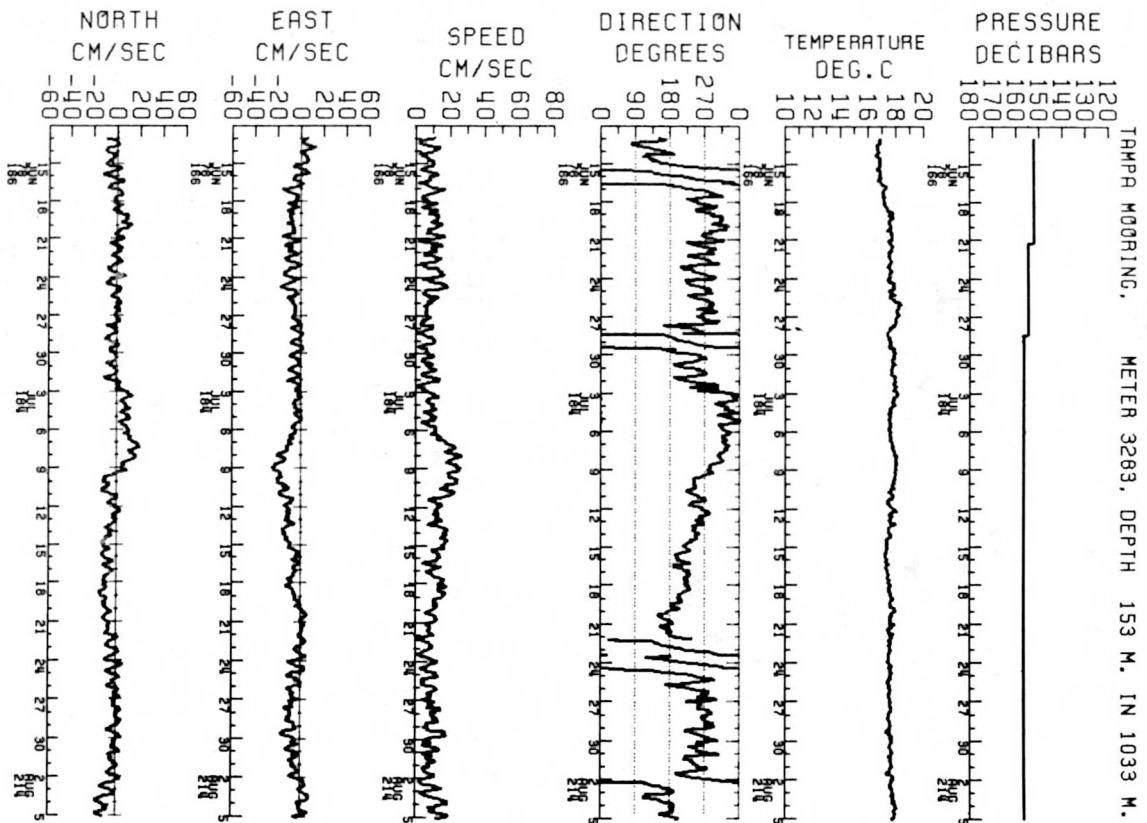
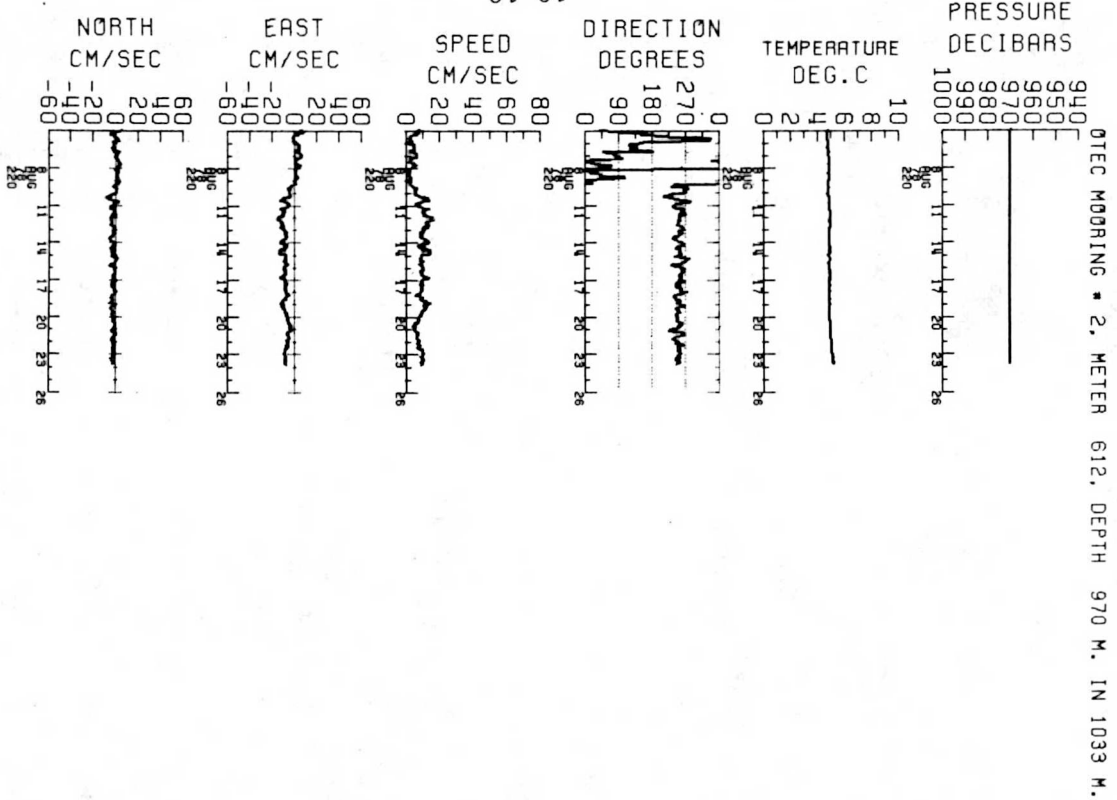
11-01



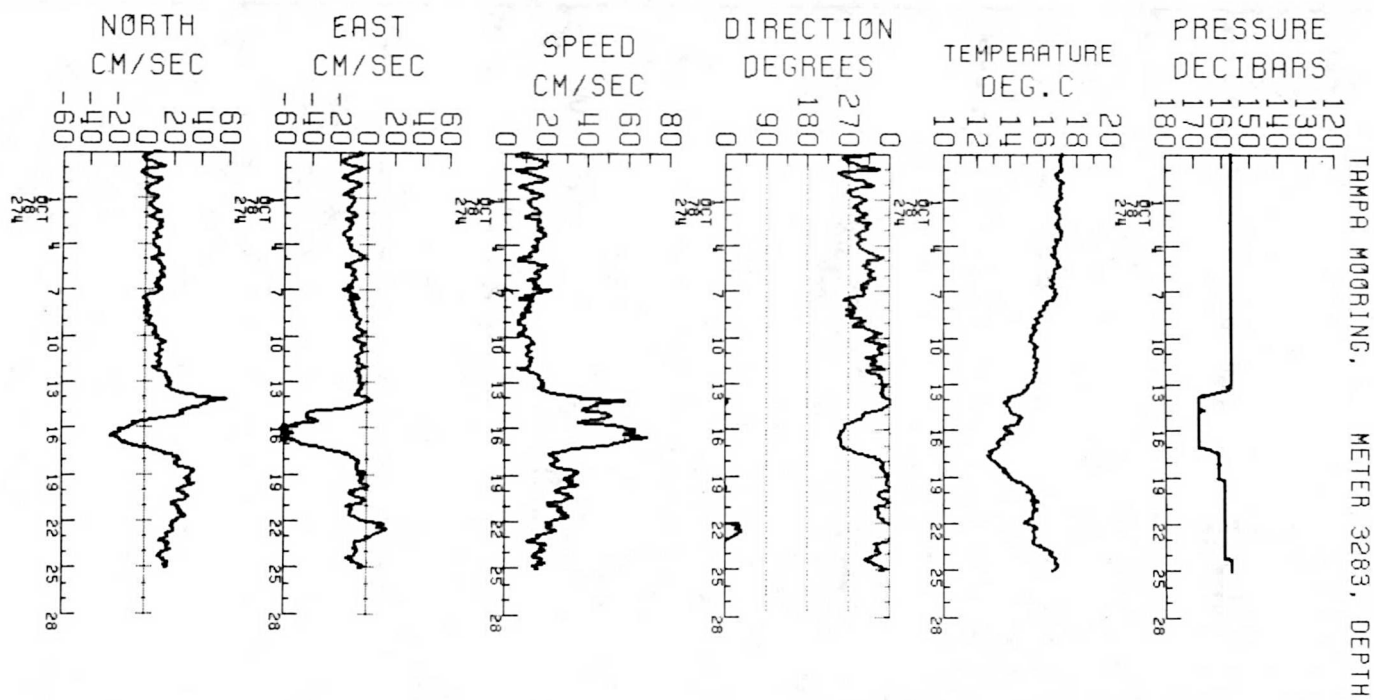
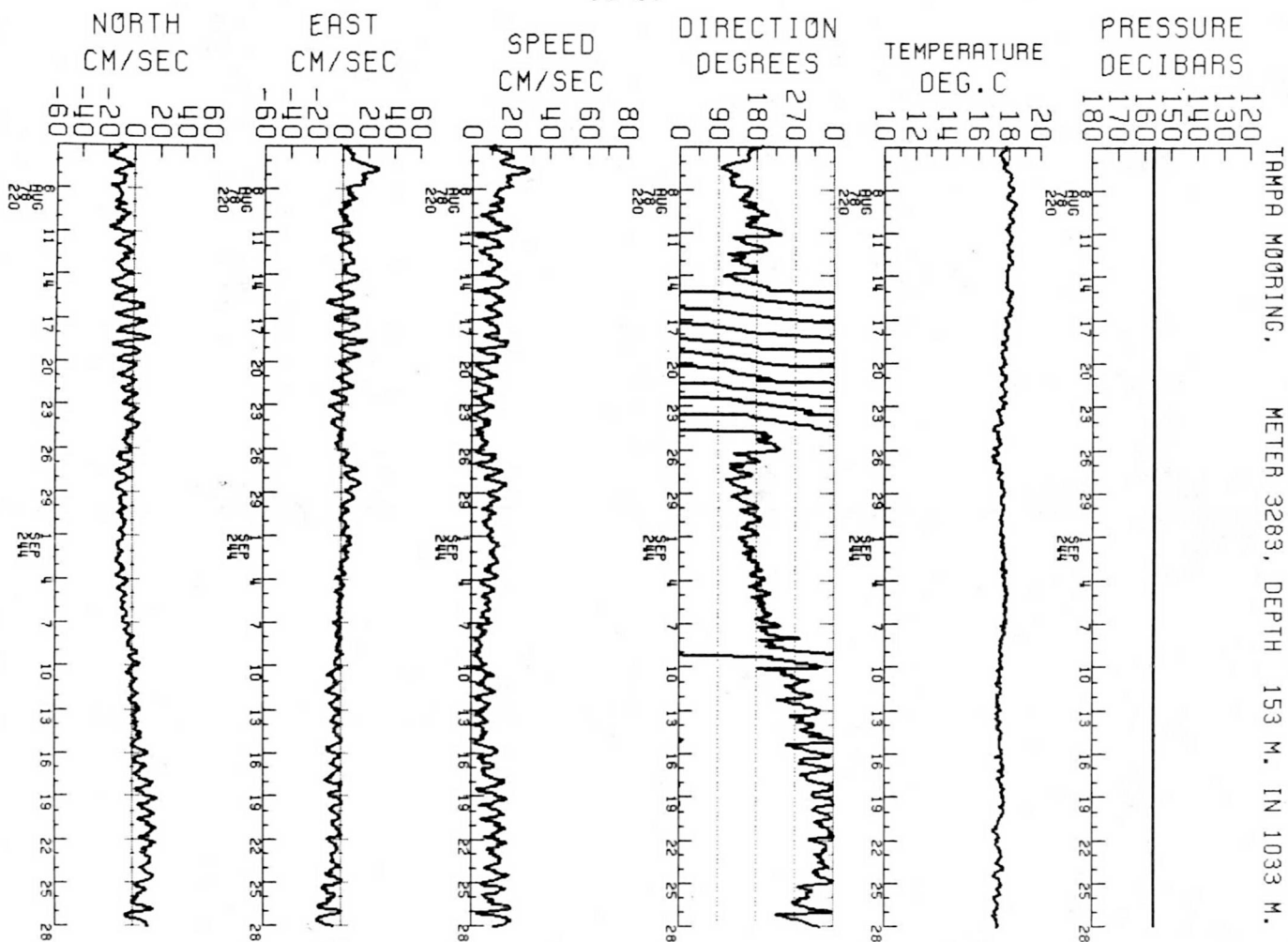
21-10



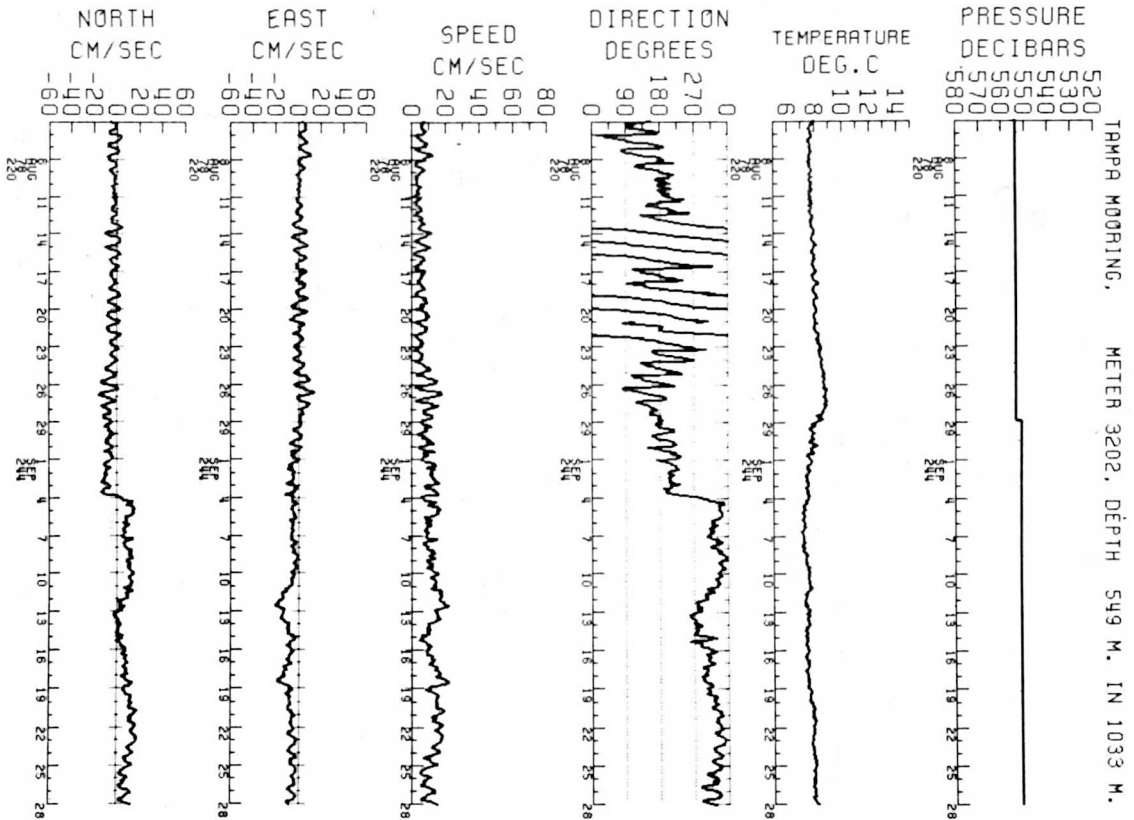
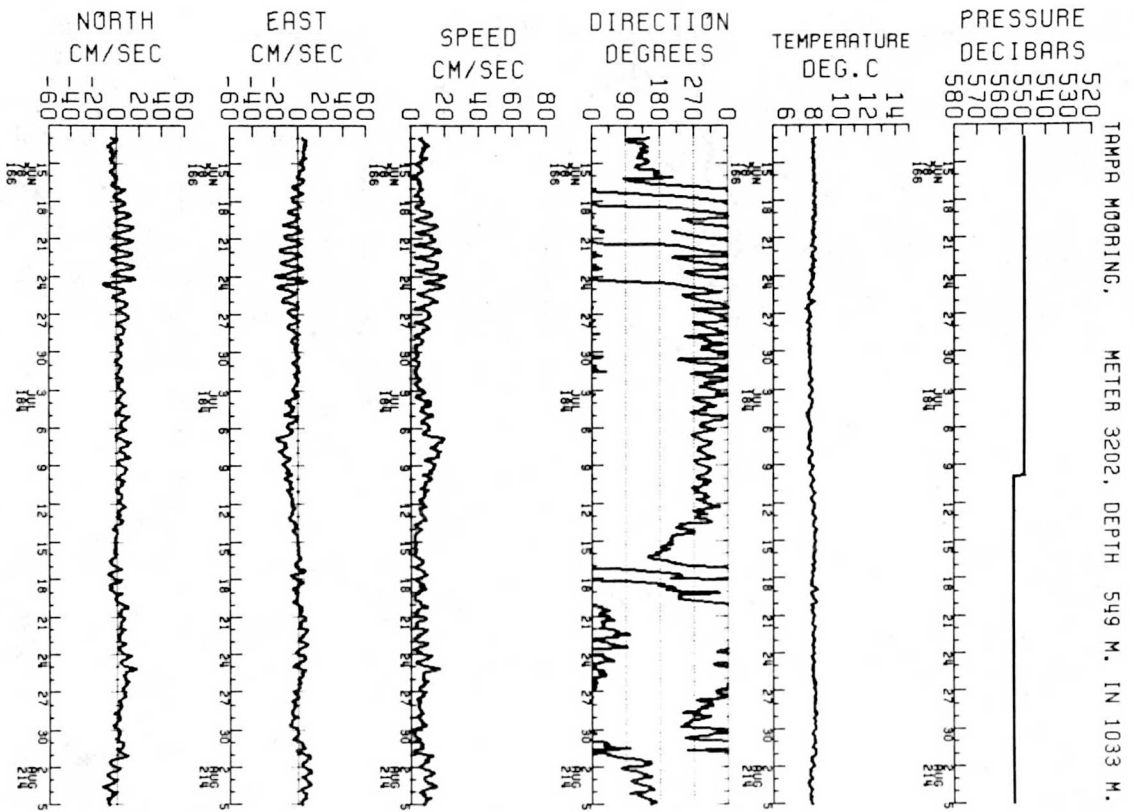
81-01



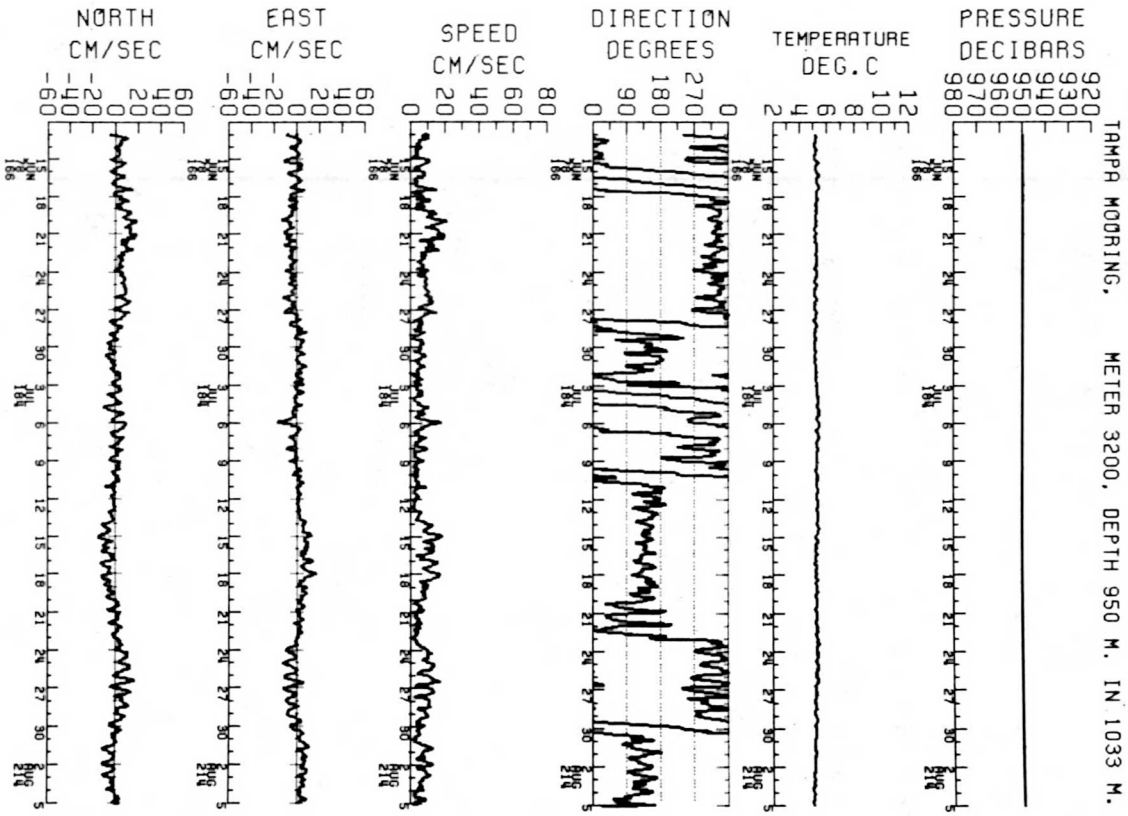
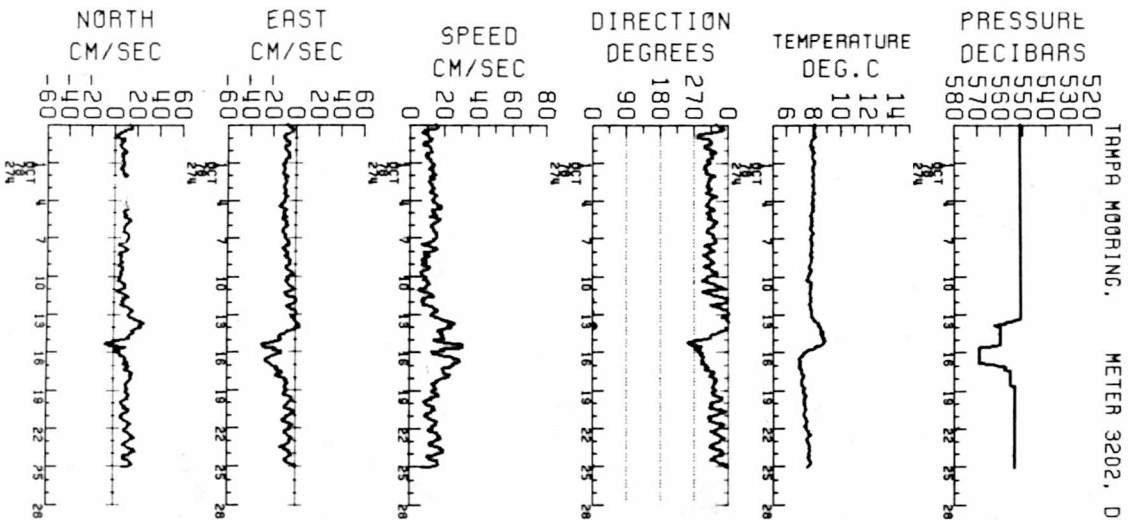
10-14



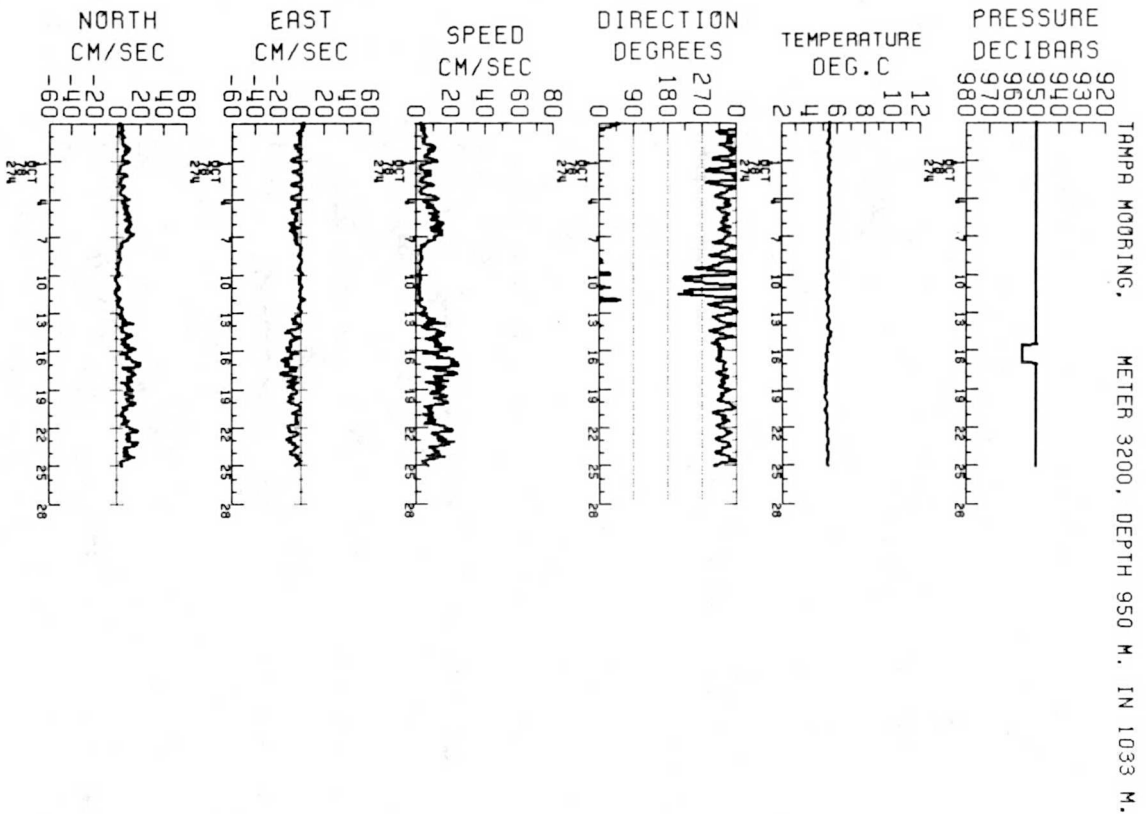
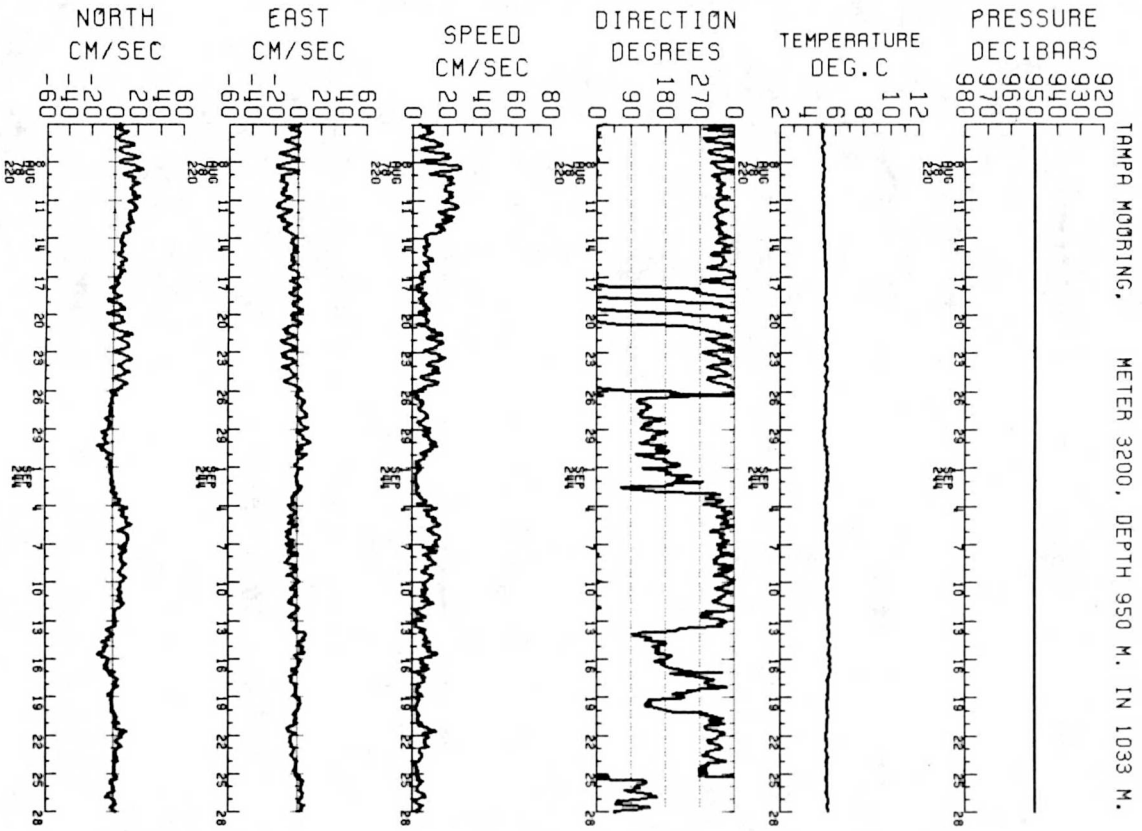
10-15

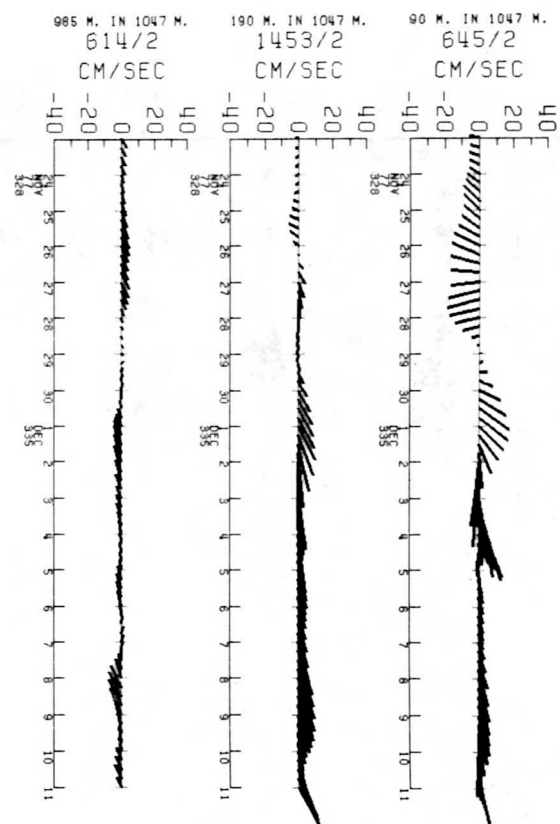
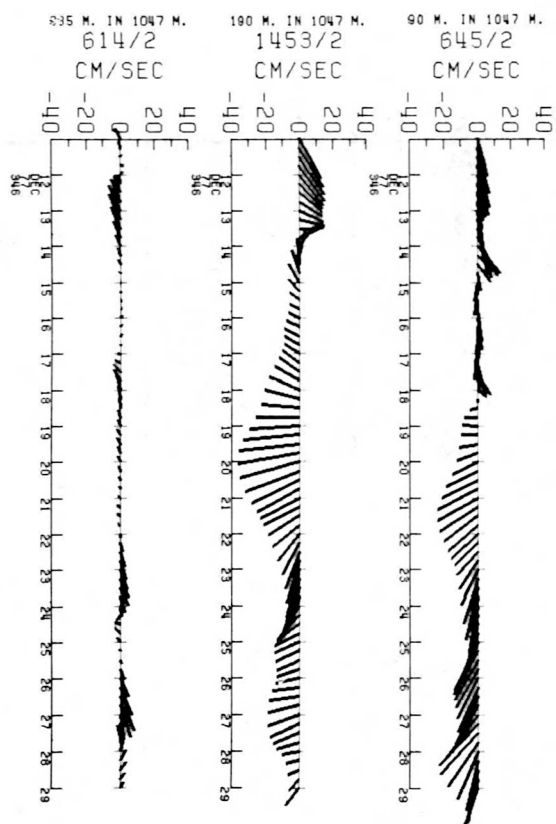
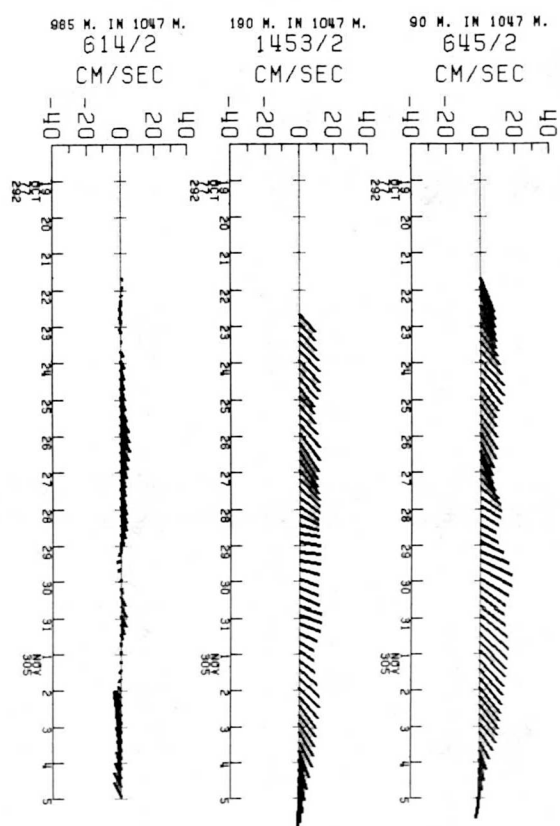
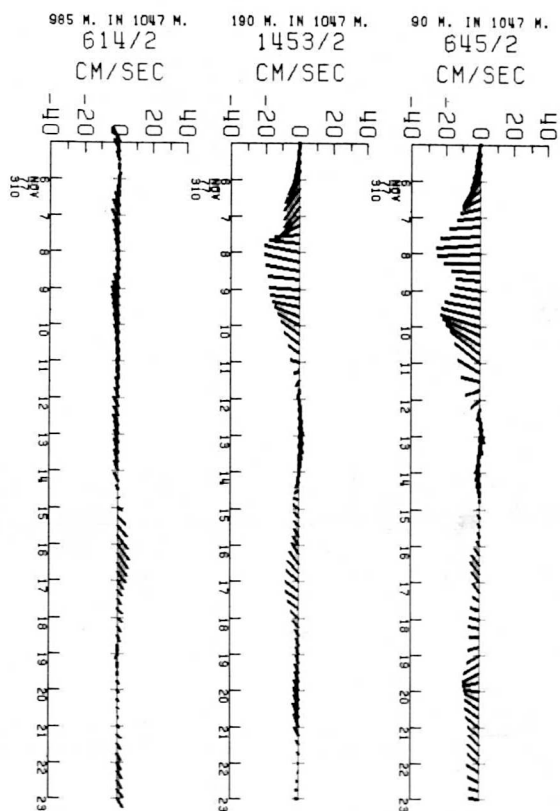


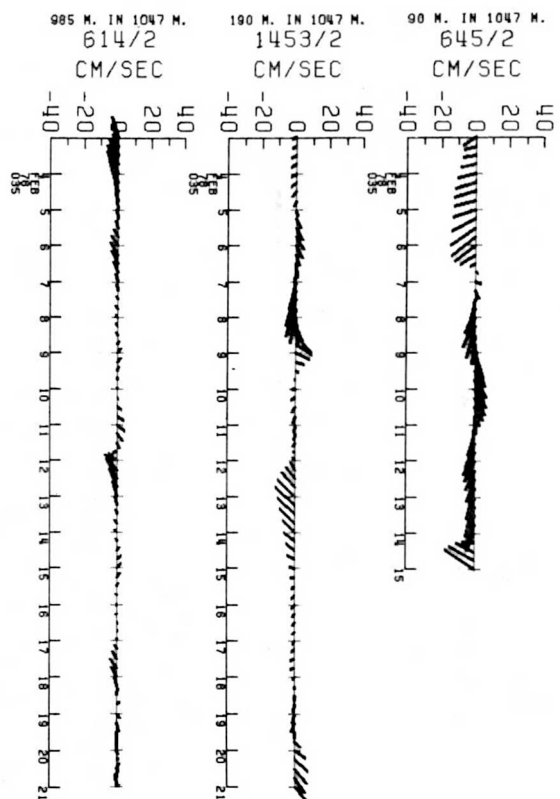
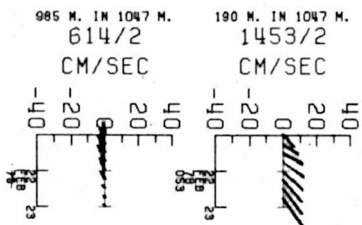
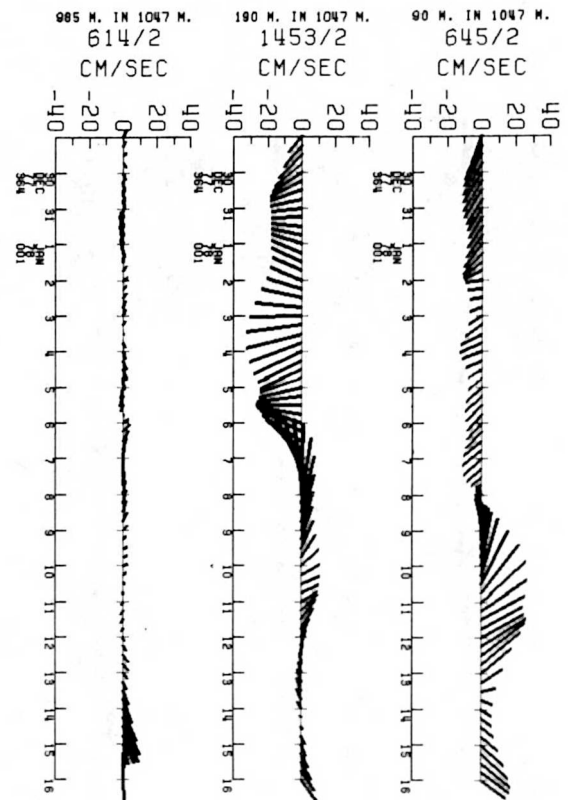
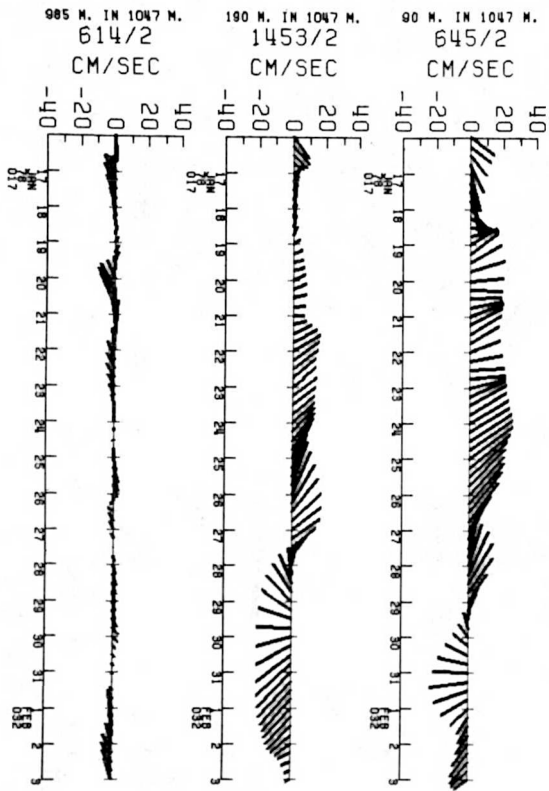
91-101

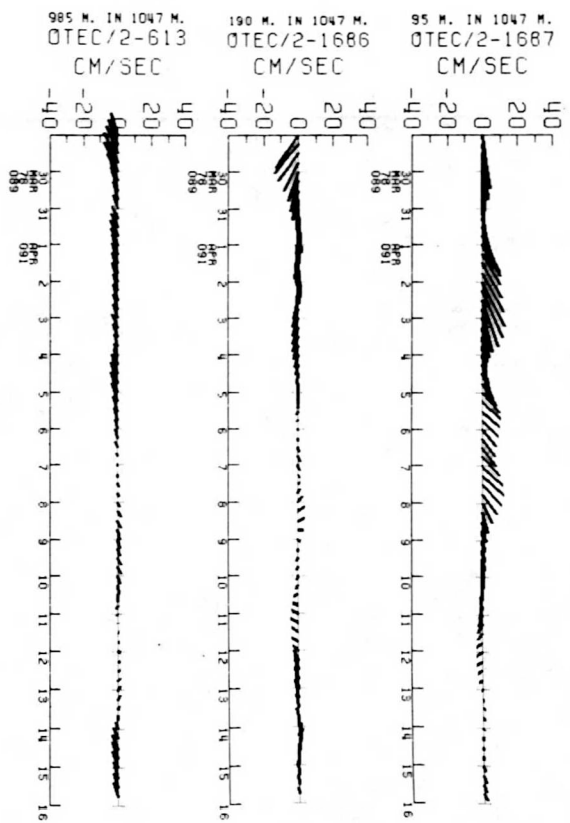
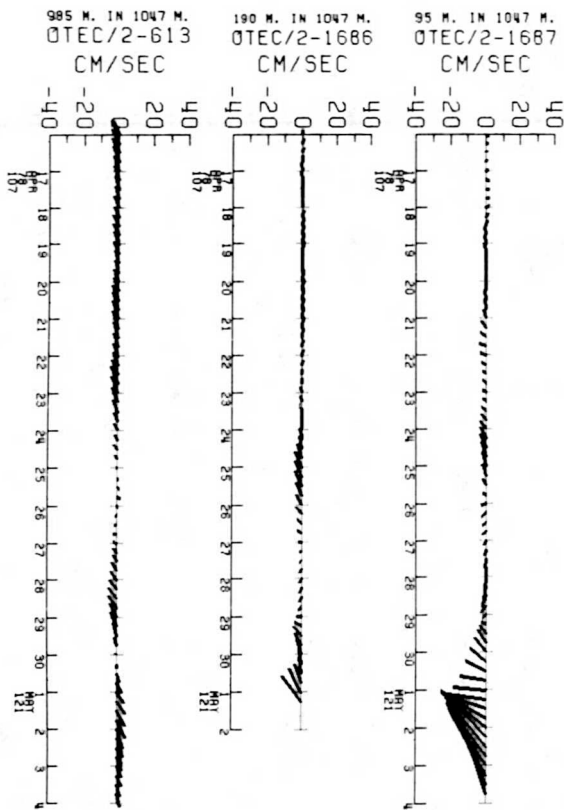
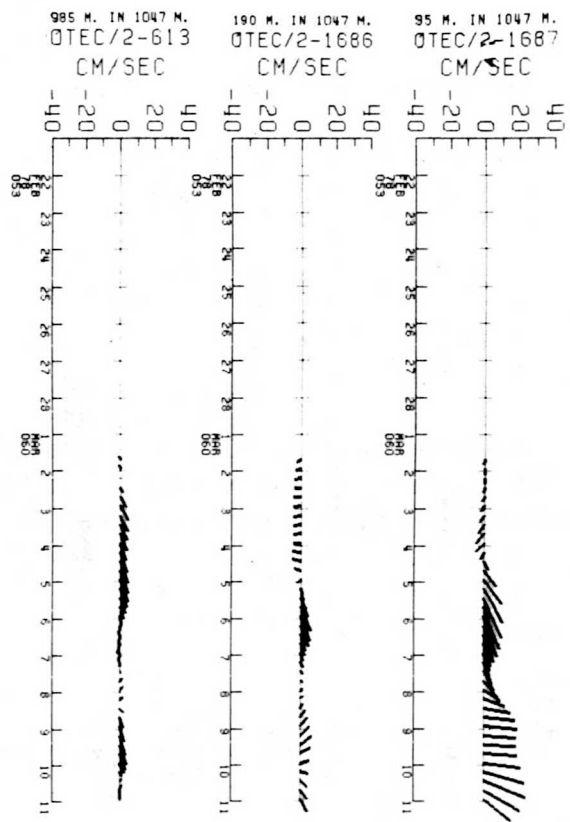
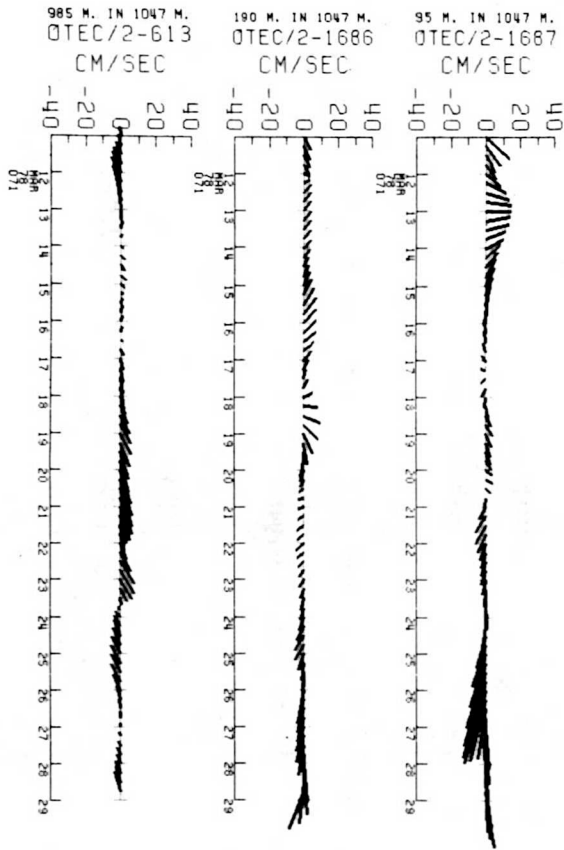


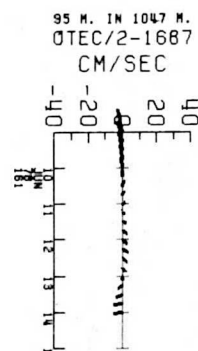
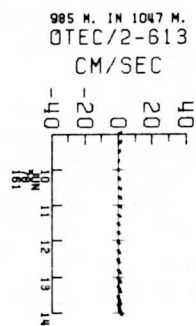
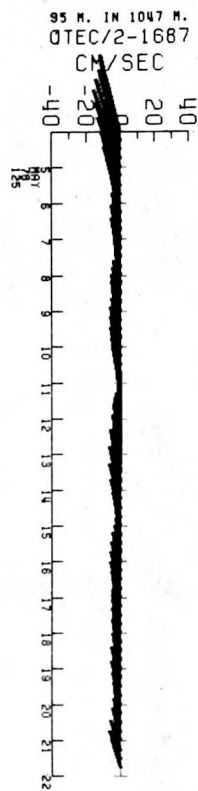
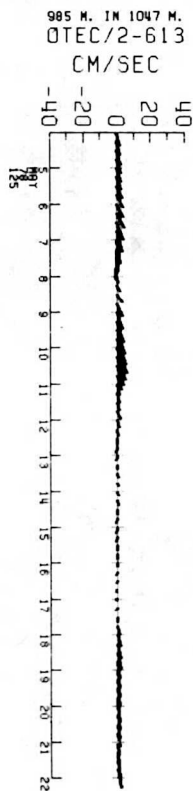
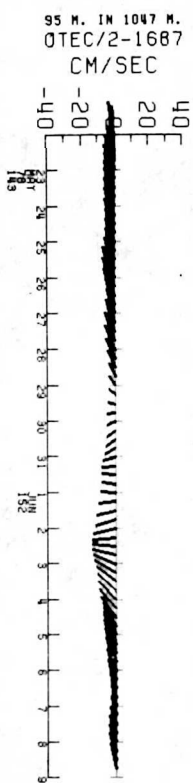
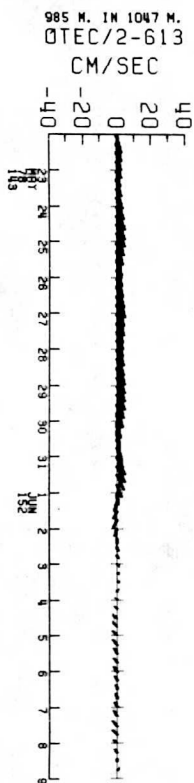
10-17



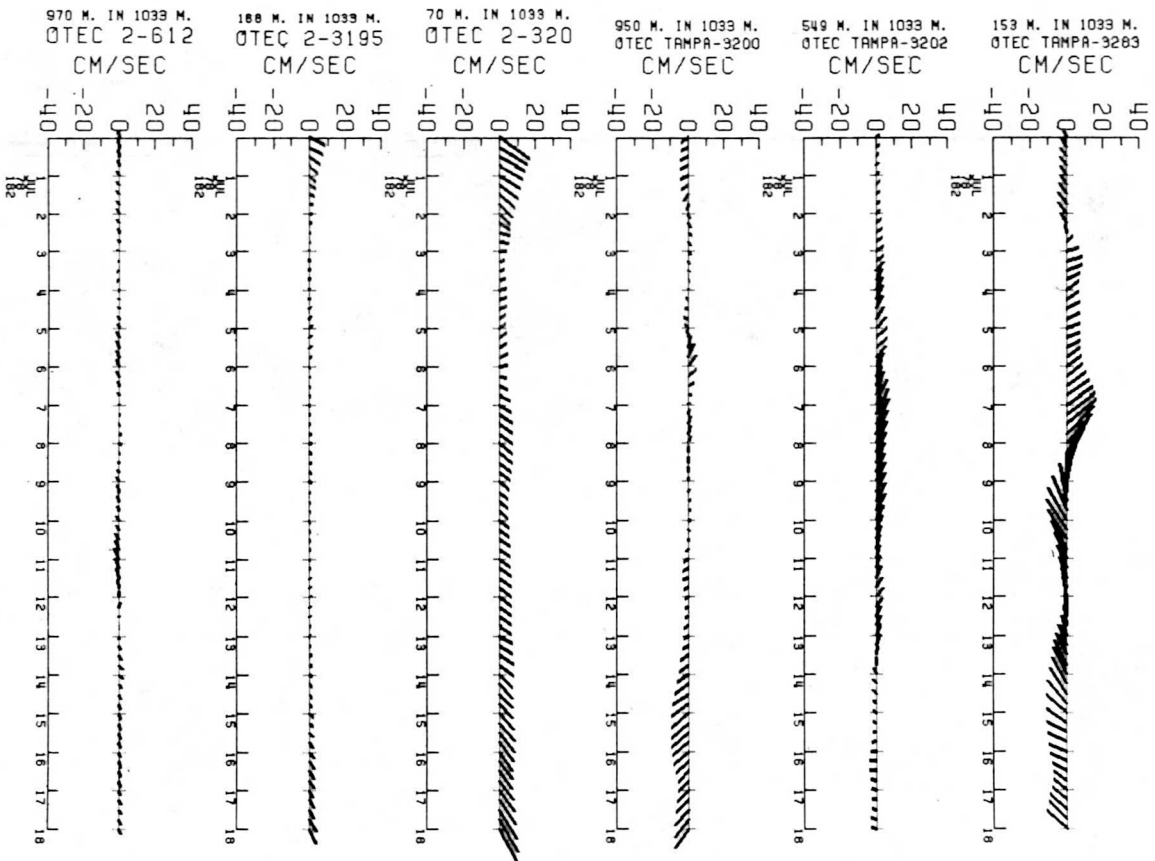
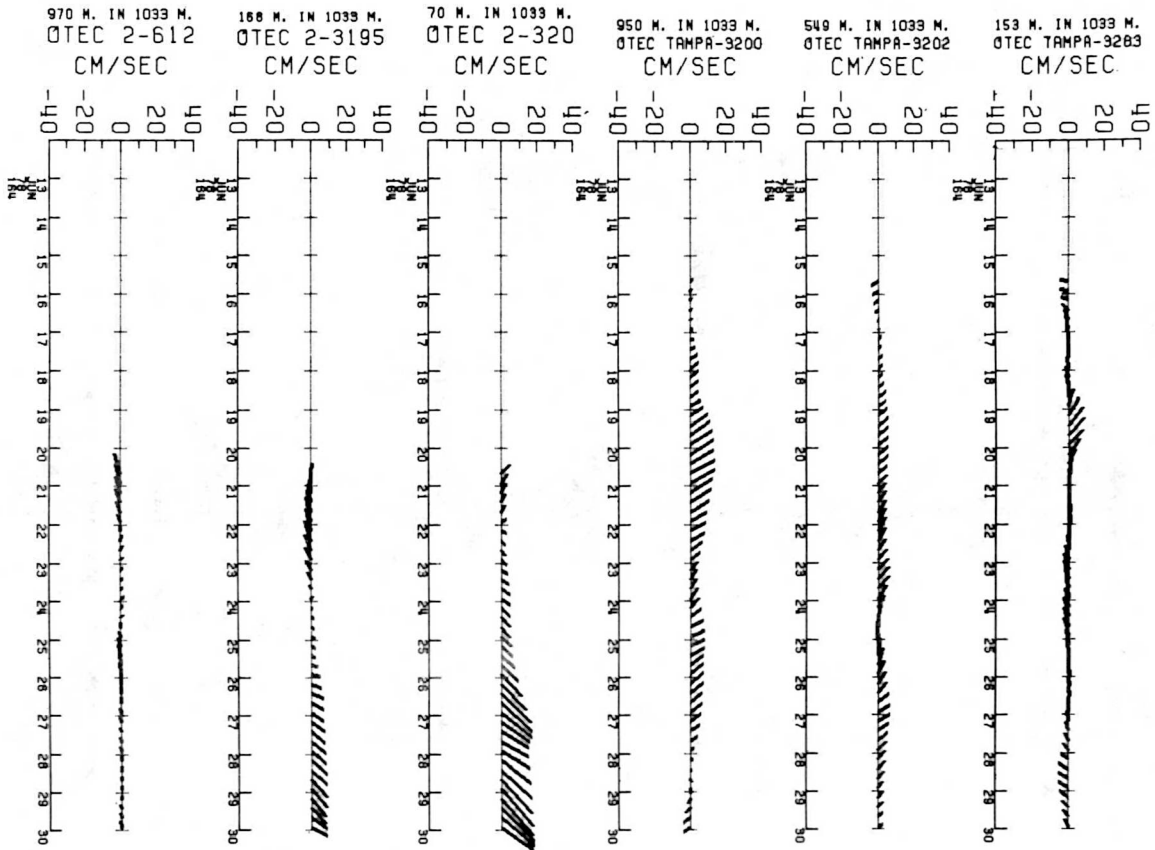


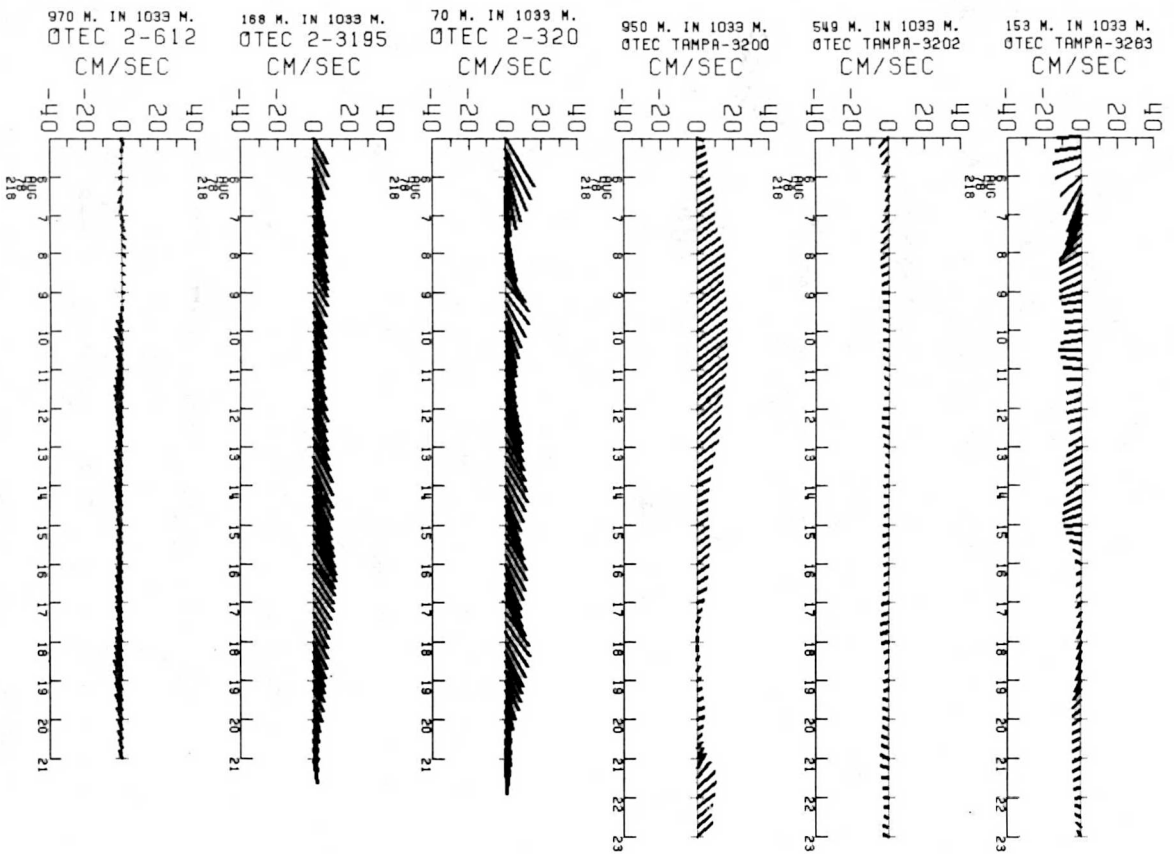
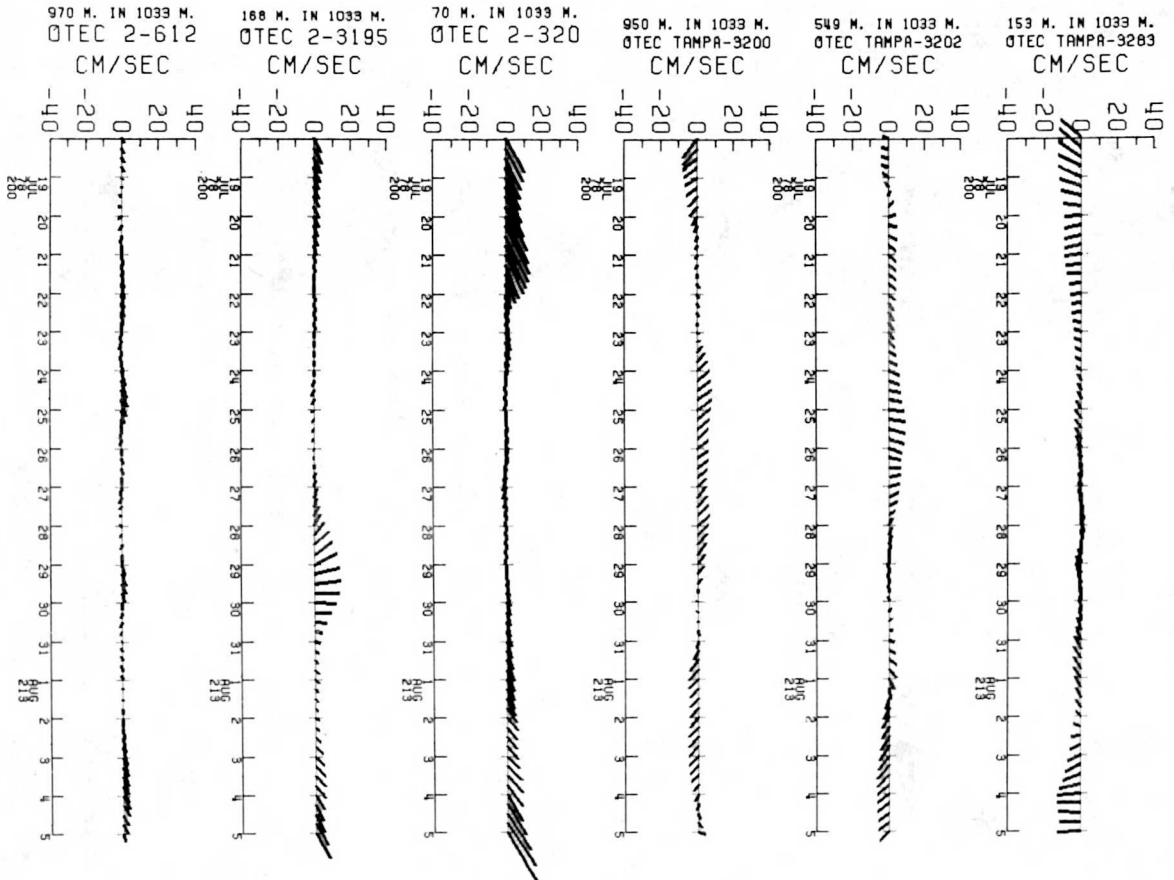


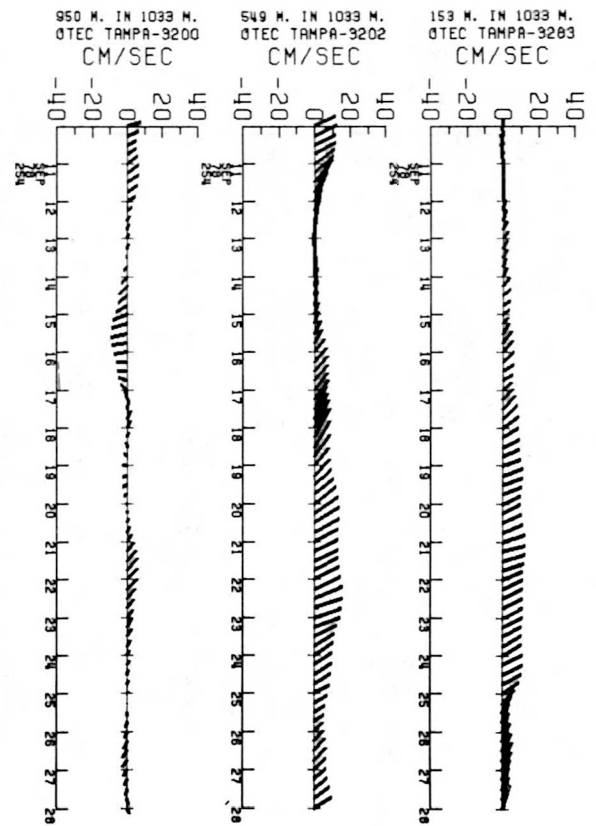
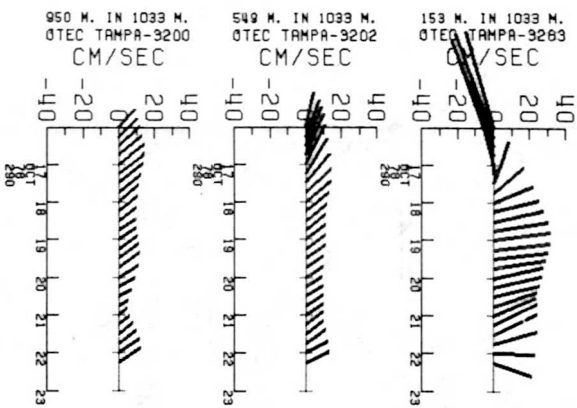
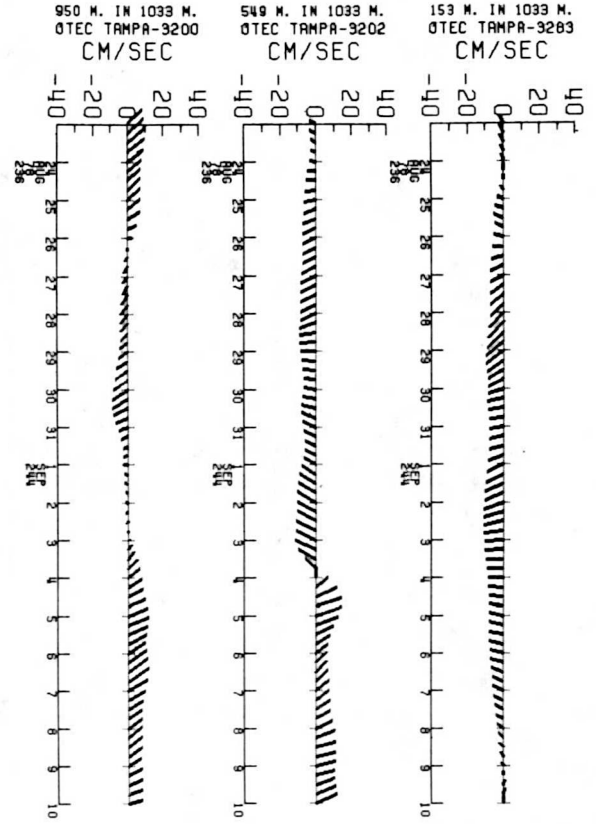
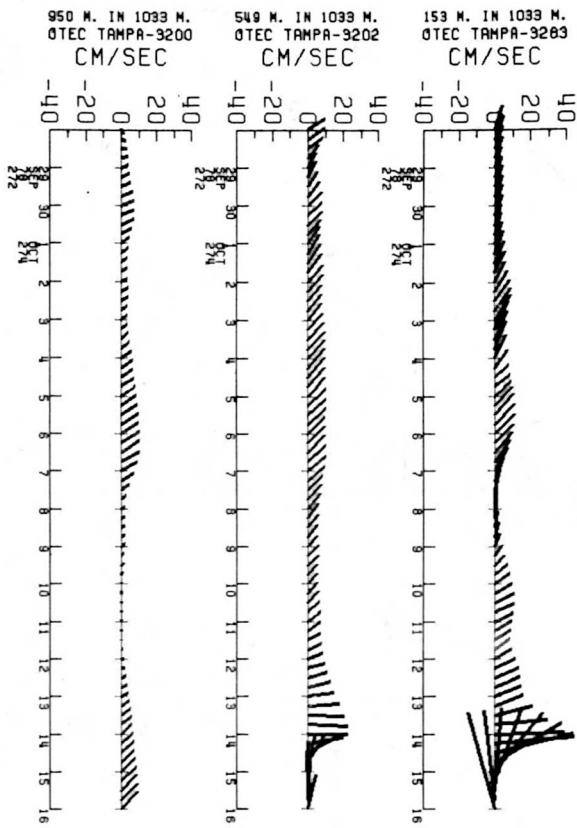




10-22





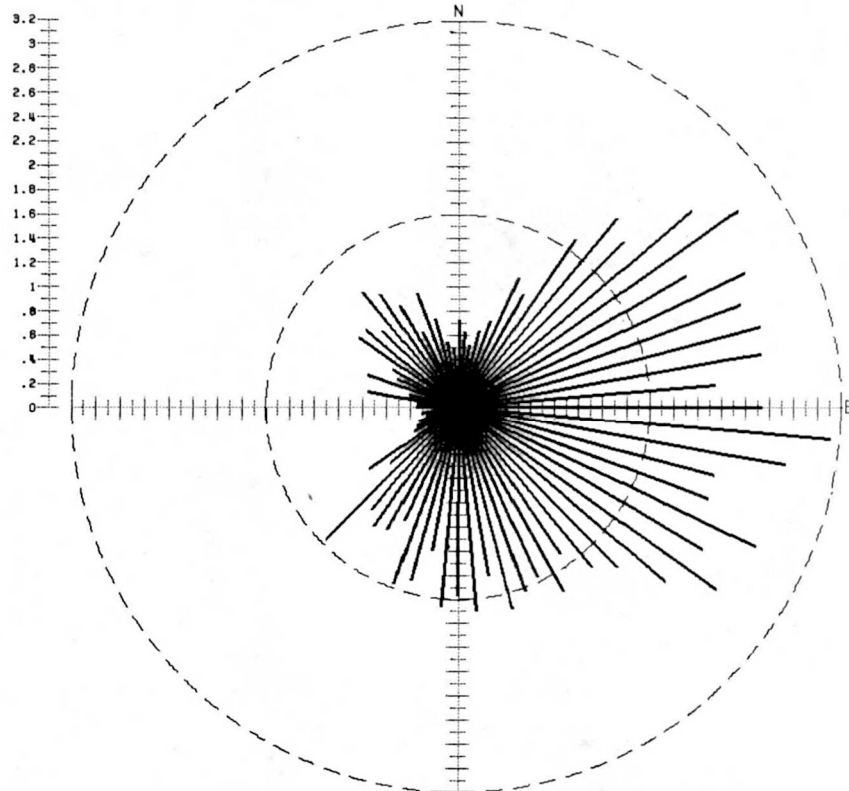


645/2

DEPTH 90 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-2924, DELTA T: 1 HOUR
BEGINNING: 1977 OCT18 (2911), 2359Z 58.000
ENDING: 1978 FEB17 (0481), 1859Z 58.000
ELAPSED TIME: 121 DAYS, 19 HOURS

% TIME

5 DEGREE SECTORS



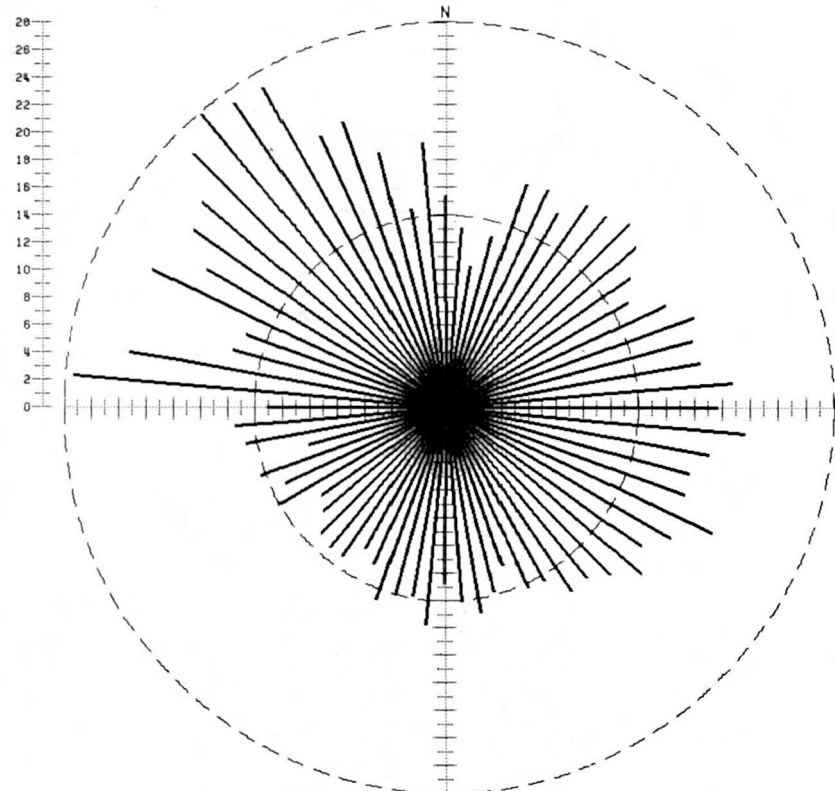
10-25

645/2

DEPTH 90 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-2924, DELTA T: 1 HOUR
BEGINNING: 1977 OCT18 (2911), 2359Z 58.000
ENDING: 1978 FEB17 (0481), 1859Z 58.000
ELAPSED TIME: 121 DAYS, 19 HOURS

AVERAGE SPEED (CM/SEC)

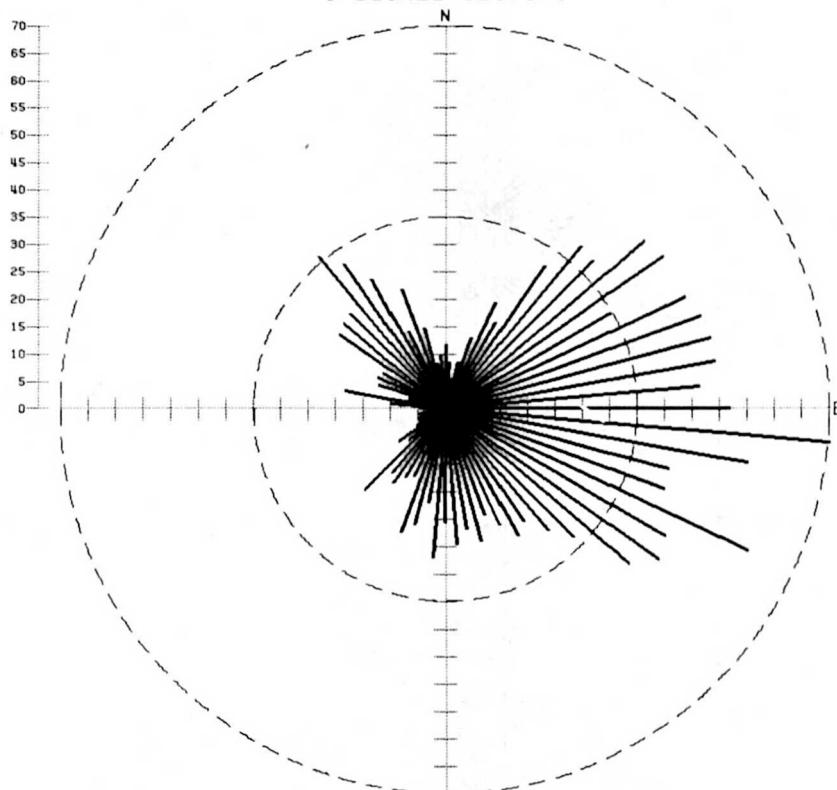
5 DEGREE SECTORS



645/2

DEPTH 90 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=2924, DELTA T: 1 HOUR
BEGINNING: 1977 OCT18 (291), 2359Z 58.000
ENDING: 1978 FEB17 (048), 1859Z 58.000
ELAPSED TIME: 121 DAYS, 19 HOURS

VIRTUAL DISPLACEMENT (KM)
5 DEGREE SECTORS

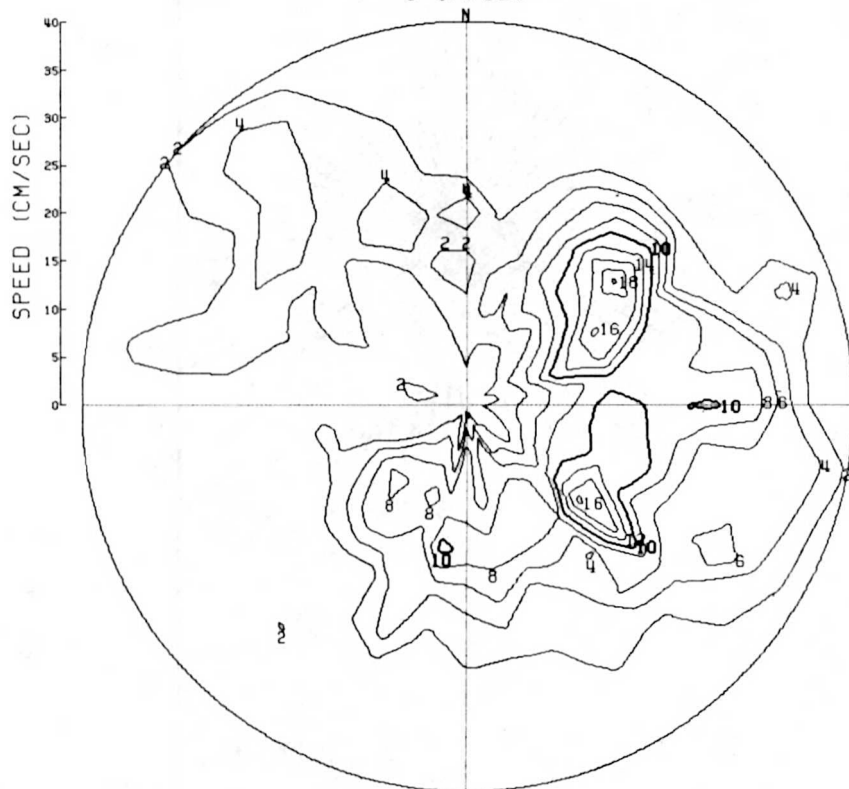


10-26

645/2

DEPTH 90 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=2924, DELTA T: 1 HOUR
BEGINNING: 1977 OCT18 (291), 2359Z 58.000
ENDING: 1978 FEB17 (048), 1859Z 58.000
ELAPSED TIME: 121 DAYS, 19 HOURS

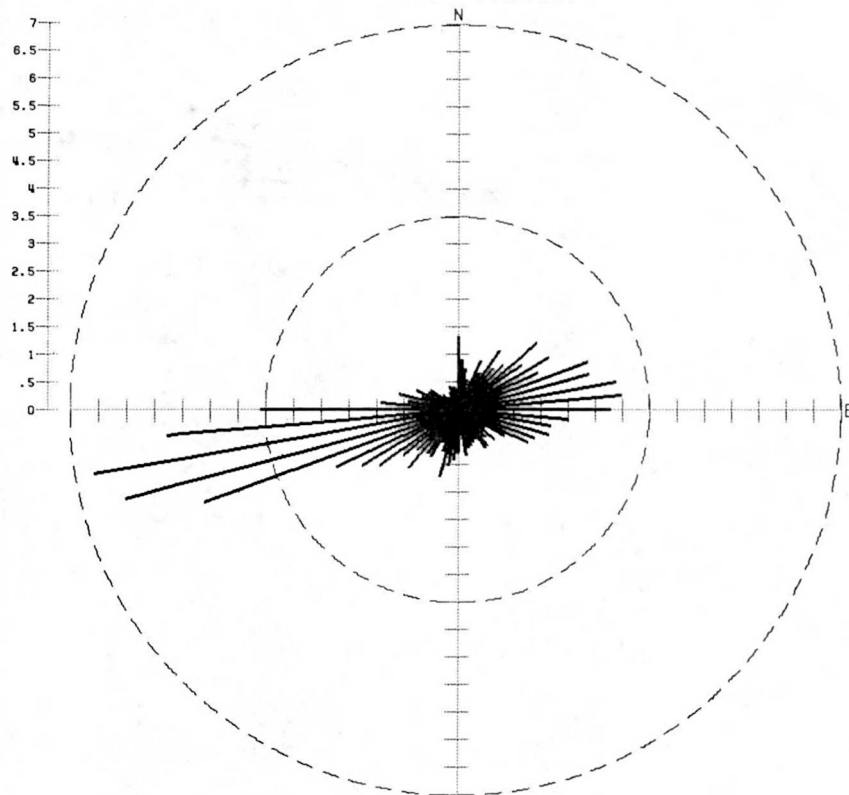
PER MIL OCCURRENCE OF
SPECIFIC DIRECTION AND SPEED
SECTOR SIZE:
10 DEGREES
5 CM/SEC



OTEC/2-1687

DEPTH 95 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-2632, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (058), 0009Z 56.000
ENDING: 1978 JUN16 (167), 1509Z 56.000
ELAPSED TIME: 109 DAYS, 15 HOURS

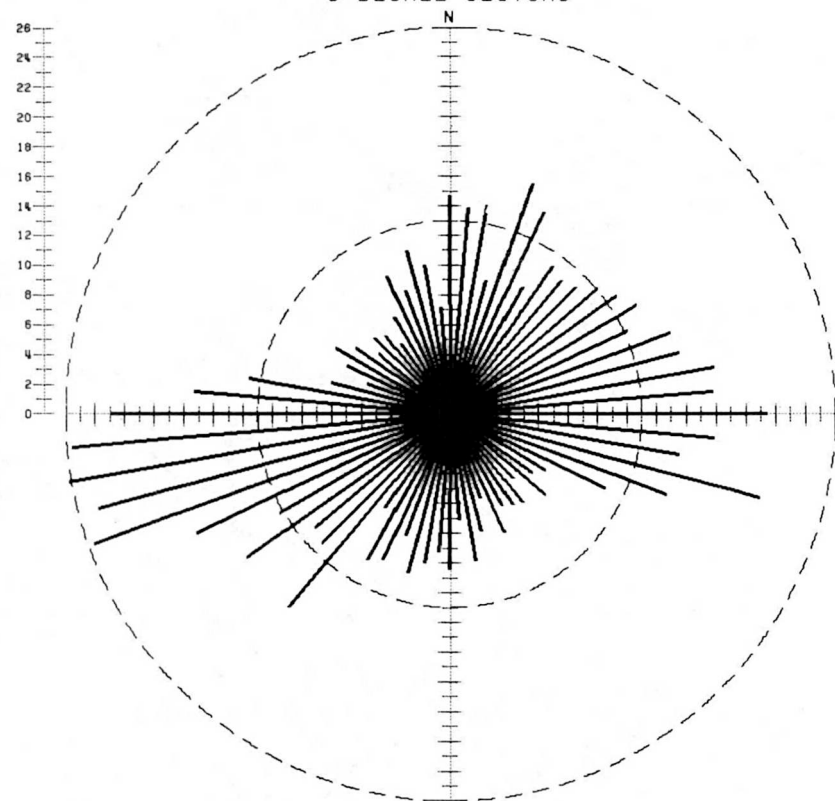
% TIME
5 DEGREE SECTORS



OTEC/2-1687

DEPTH 95 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-2632, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (058), 0009Z 56.000
ENDING: 1978 JUN16 (167), 1509Z 56.000
ELAPSED TIME: 109 DAYS, 15 HOURS

AVERAGE SPEED (CM/SEC)
5 DEGREE SECTORS

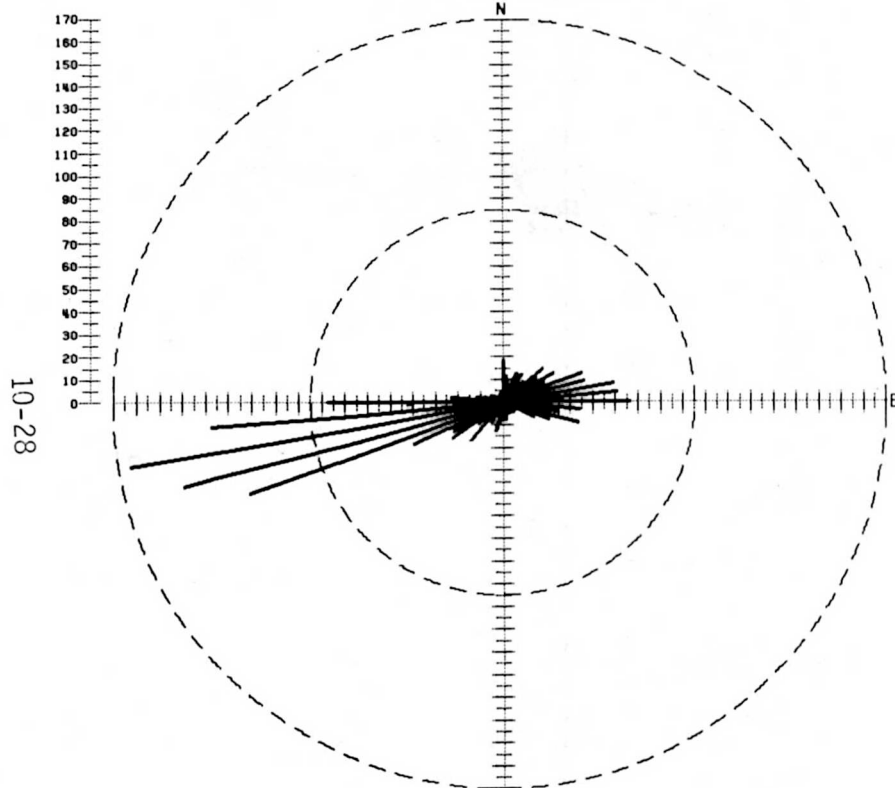


10-27

0TEC/2-1687

DEPTH 95 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=2632, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (0581).0009Z 56.000
ENDING: 1978 JUN16 (167).1509Z 56.000
ELAPSED TIME: 109 DAYS, 15 HOURS

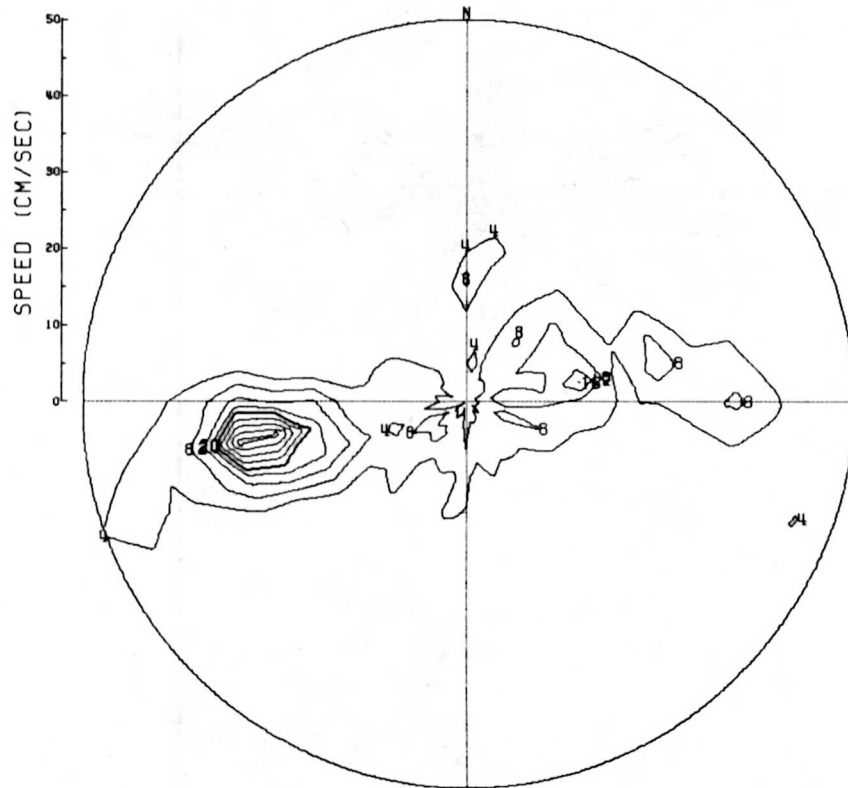
VIRTUAL DISPLACEMENT (KM)
5 DEGREE SECTORS



0TEC/2-1687

DEPTH 95 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=2632, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (0581).0009Z 56.000
ENDING: 1978 JUN16 (167).1509Z 56.000
ELAPSED TIME: 109 DAYS, 15 HOURS

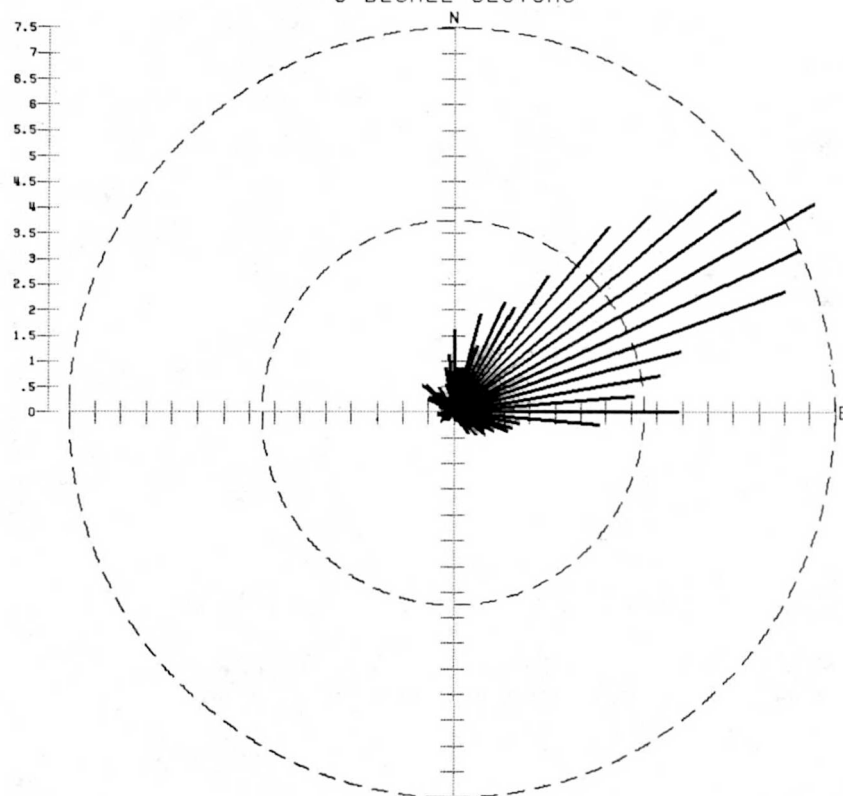
PER MIL OCCURRENCE OF
SPECIFIC DIRECTION AND SPEED
SECTOR SIZE:
10 DEGREES
5 CM/SEC



ØTEC 2-320

DEPTH 70 M. IN 1033 M.
 LAT= 29 DEG. 11.9 MIN N., LONG= 87 DEG. 38.3 MIN W.
 NO. OF POINTS=1604, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN17 (168), 2359Z 58.000
 ENDING: 1978 AUG23 (235), 1859Z 58.000
 ELAPSED TIME: 66 DAYS, 19 HOURS

% TIME
 5 DEGREE SECTORS

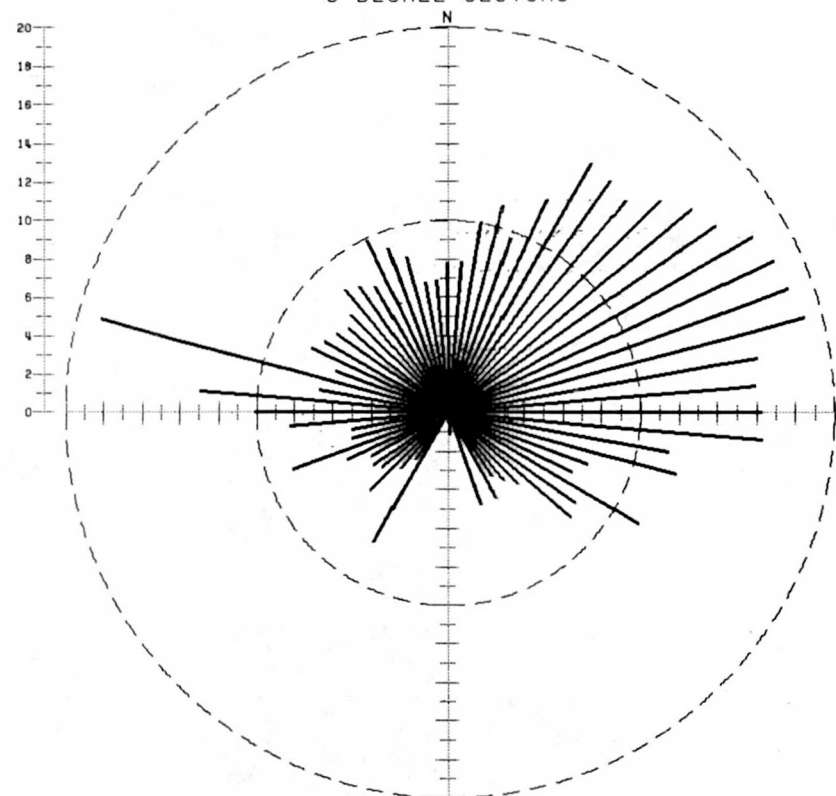


10-29

ØTEC 2-320

DEPTH 70 M. IN 1033 M.
 LAT= 29 DEG. 11.9 MIN N., LONG= 87 DEG. 38.3 MIN W.
 NO. OF POINTS=1604, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN17 (168), 2359Z 58.000
 ENDING: 1978 AUG23 (235), 1859Z 58.000
 ELAPSED TIME: 66 DAYS, 19 HOURS

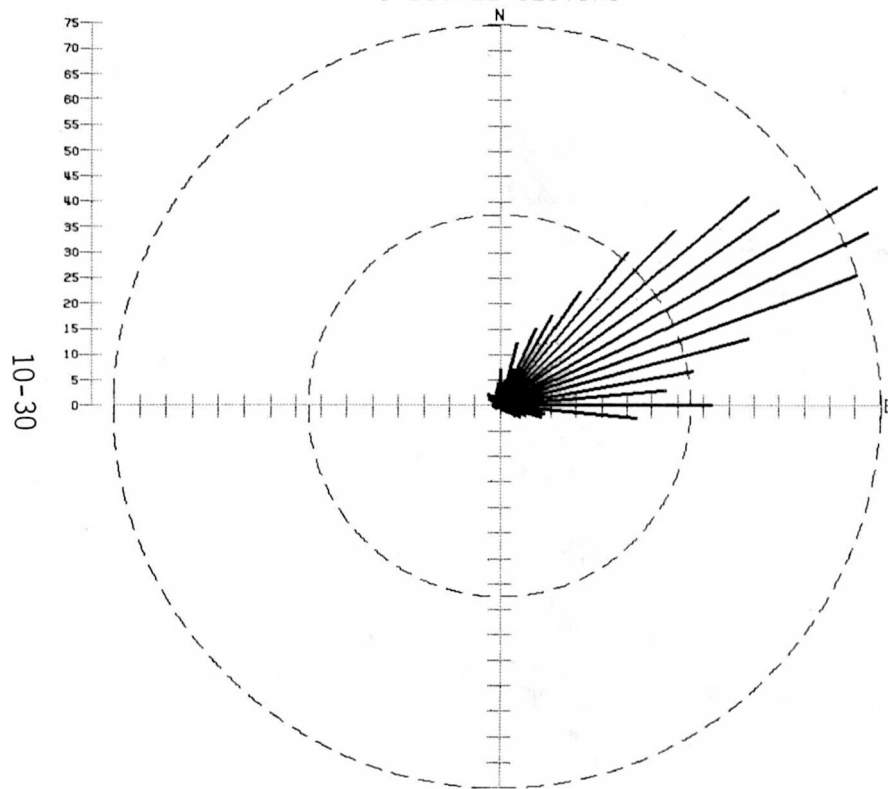
AVERAGE SPEED (CM/SEC)
 5 DEGREE SECTORS



OTEC 2-320

DEPTH 70 M. IN 1033 M.
 LAT= 29 DEG, 11.9 MIN N., LONG= 87 DEG, 38.3 MIN W.
 NO. OF POINTS=1604, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN17 (168), 2359Z 58.000
 ENDING: 1978 AUG23 (235), 1859Z 58.000
 ELAPSED TIME: 66 DAYS, 19 HOURS

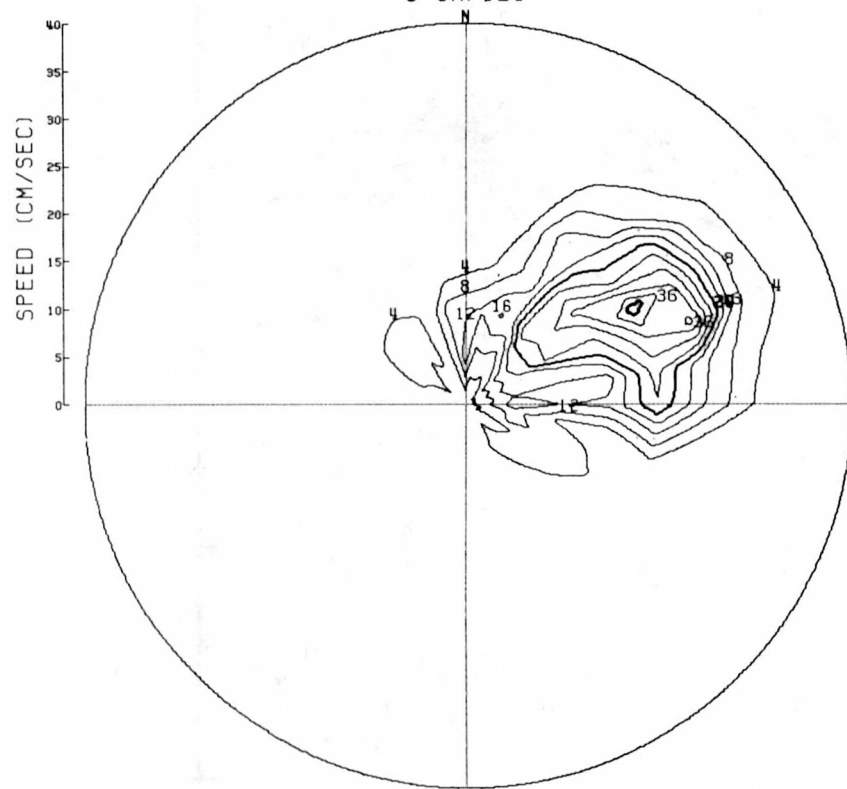
VIRTUAL DISPLACEMENT (KM)
 5 DEGREE SECTORS



OTEC 2-320

DEPTH 70 M. IN 1033 M.
 LAT= 29 DEG, 11.9 MIN N., LONG= 87 DEG, 38.3 MIN W.
 NO. OF POINTS=1604, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN17 (168), 2359Z 58.000
 ENDING: 1978 AUG23 (235), 1859Z 58.000
 ELAPSED TIME: 66 DAYS, 19 HOURS

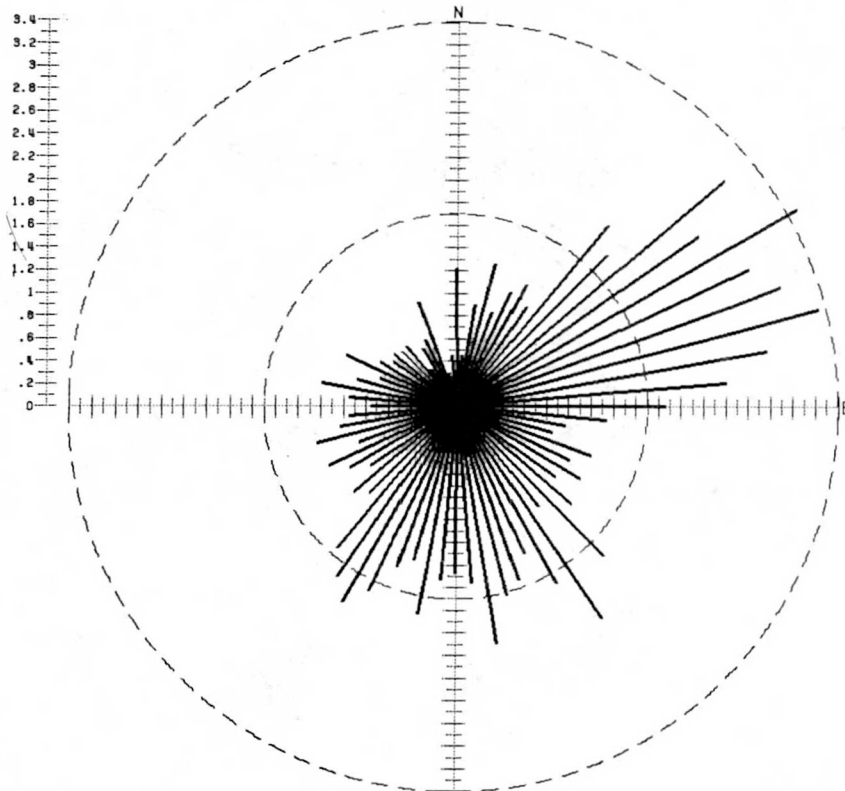
PER MIL OCCURRENCE OF
 SPECIFIC DIRECTION AND SPEED
 SECTOR SIZE:
 10 DEGREES
 5 CM/SEC



1453/2

DEPTH 190 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-3083, DELTA T: 1 HOUR
BEGINNING: 1977 OCT19 (292), 2359Z 56.000
ENDING: 1978 FEB25 (056), 0959Z 56.000
ELAPSED TIME: 126 DAYS, 10 HOURS

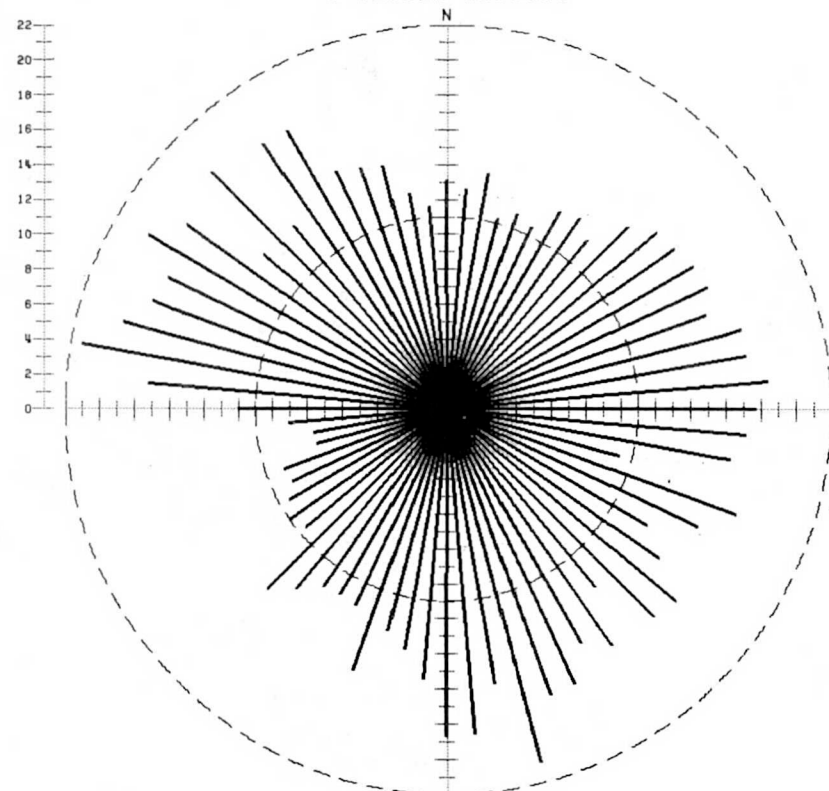
% TIME
5 DEGREE SECTORS



1453/2

DEPTH 190 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-3083, DELTA T: 1 HOUR
BEGINNING: 1977 OCT19 (292), 2359Z 56.000
ENDING: 1978 FEB25 (056), 0959Z 56.000
ELAPSED TIME: 126 DAYS, 10 HOURS

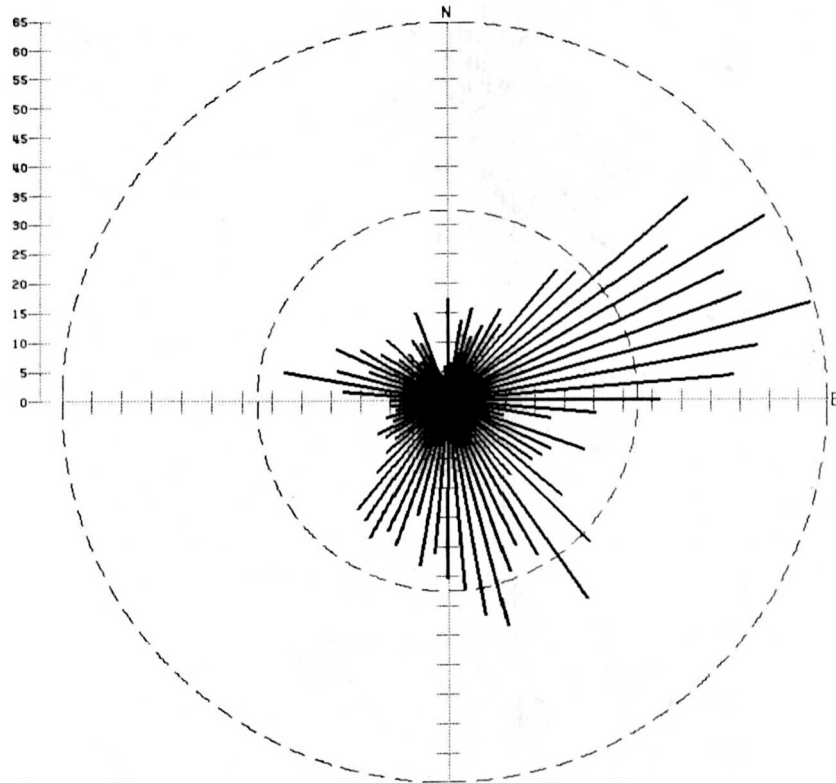
AVERAGE SPEED (CM/SEC)
5 DEGREE SECTORS



1453/2

DEPTH 190 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=3083, DELTA T: 1 HOUR
BEGINNING: 1977 OCT19 (292), 2359Z 56.000
ENDING: 1978 FEB25 (056), 0959Z 56.000
ELAPSED TIME: 128 DAYS, 10 HOURS

VIRTUAL DISPLACEMENT (KM)
5 DEGREE SECTORS

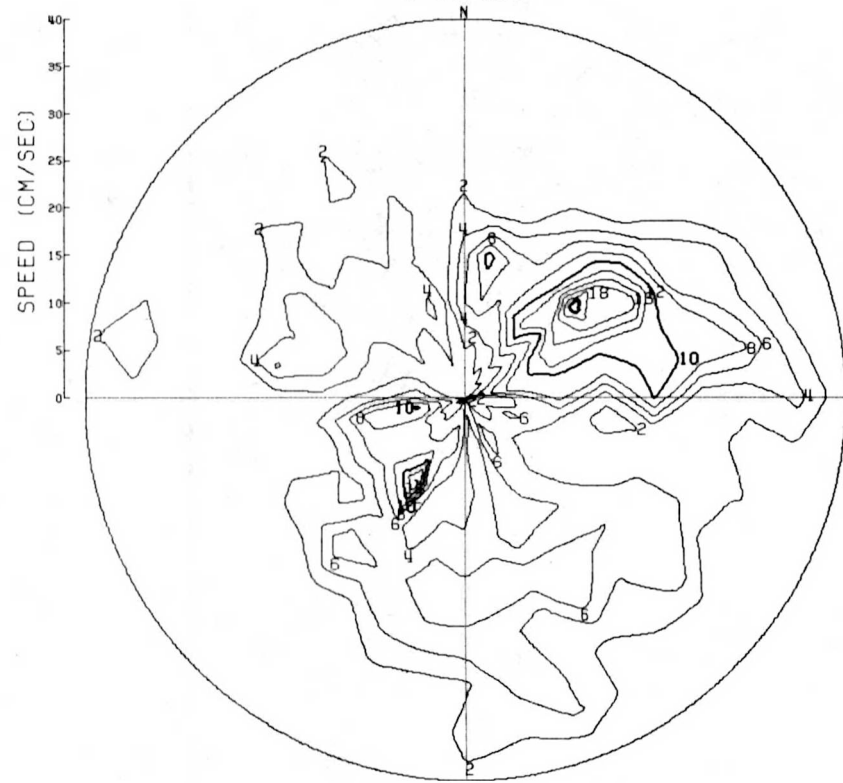


10-32

1453/2

DEPTH 190 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=3083, DELTA T: 1 HOUR
BEGINNING: 1977 OCT19 (292), 2359Z 56.000
ENDING: 1978 FEB25 (056), 0959Z 56.000
ELAPSED TIME: 128 DAYS, 10 HOURS

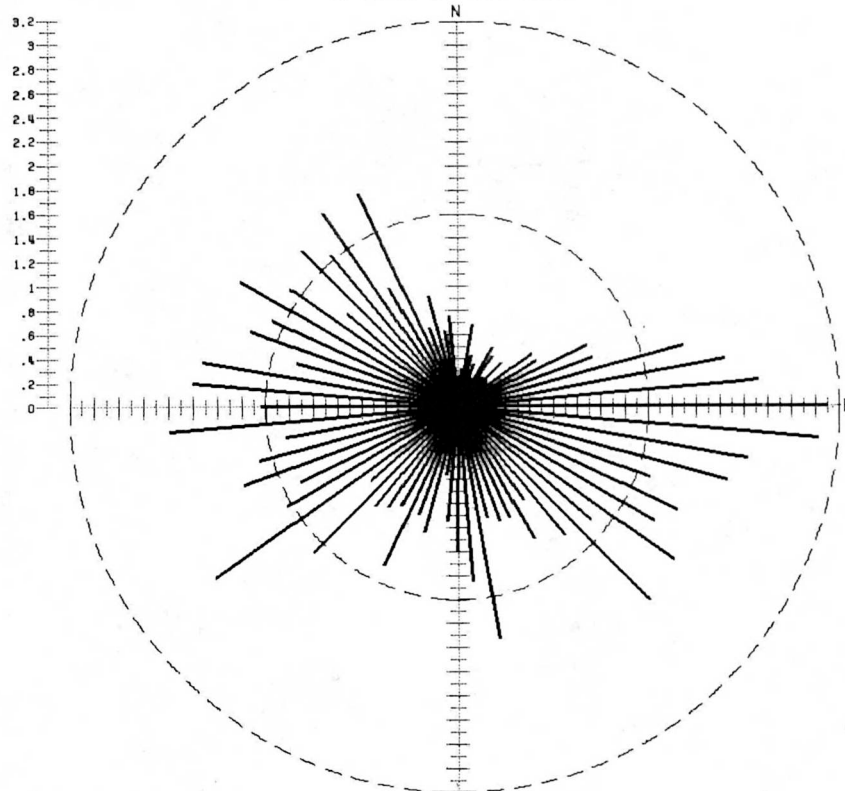
PER MIL OCCURRENCE OF
SPECIFIC DIRECTION AND SPEED
SECTOR SIZE:
10 DEGREES
5 CM/SEC



OTEC/2-1686

DEPTH 190 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-1584, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (0681) 0009Z 58.000
ENDING: 1978 MAY 3 (1231) 2309Z 58.000
ELAPSED TIME: 65 DAYS, 23 HOURS

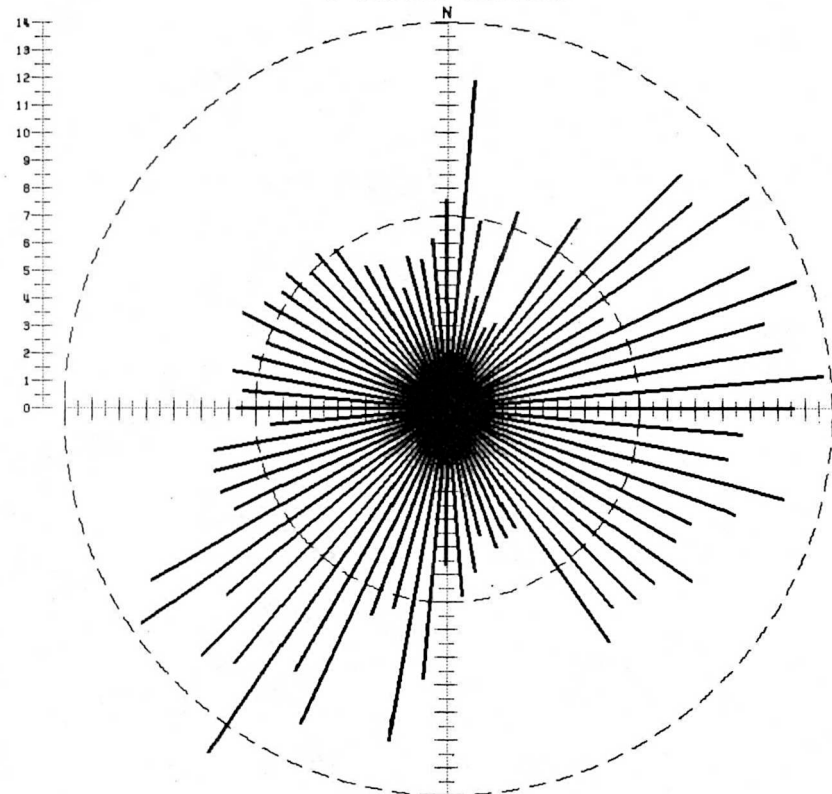
% TIME
5 DEGREE SECTORS



OTEC/2-1686

DEPTH 190 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-1584, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (0681) 0009Z 58.000
ENDING: 1978 MAY 3 (1231) 2309Z 58.000
ELAPSED TIME: 65 DAYS, 23 HOURS

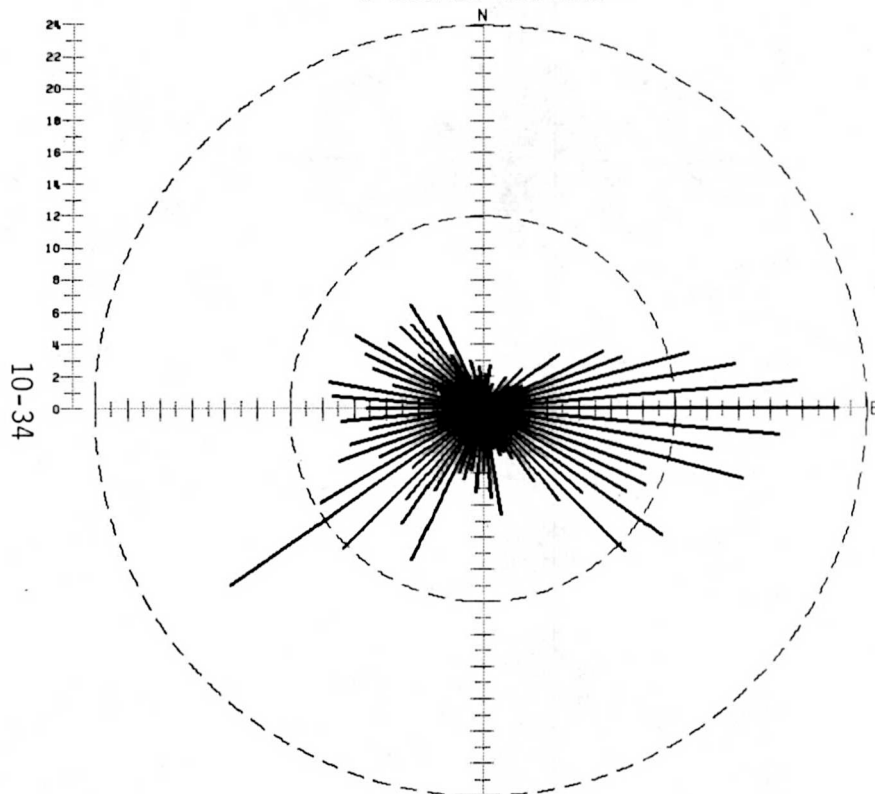
AVERAGE SPEED (CM/SEC)
5 DEGREE SECTORS



0TEC/2-1686

DEPTH 190 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=1584, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (058), 0009Z 58.000
ENDING: 1978 MAY 3 (123), 2309Z 58.000
ELAPSED TIME: 65 DAYS, 23 HOURS

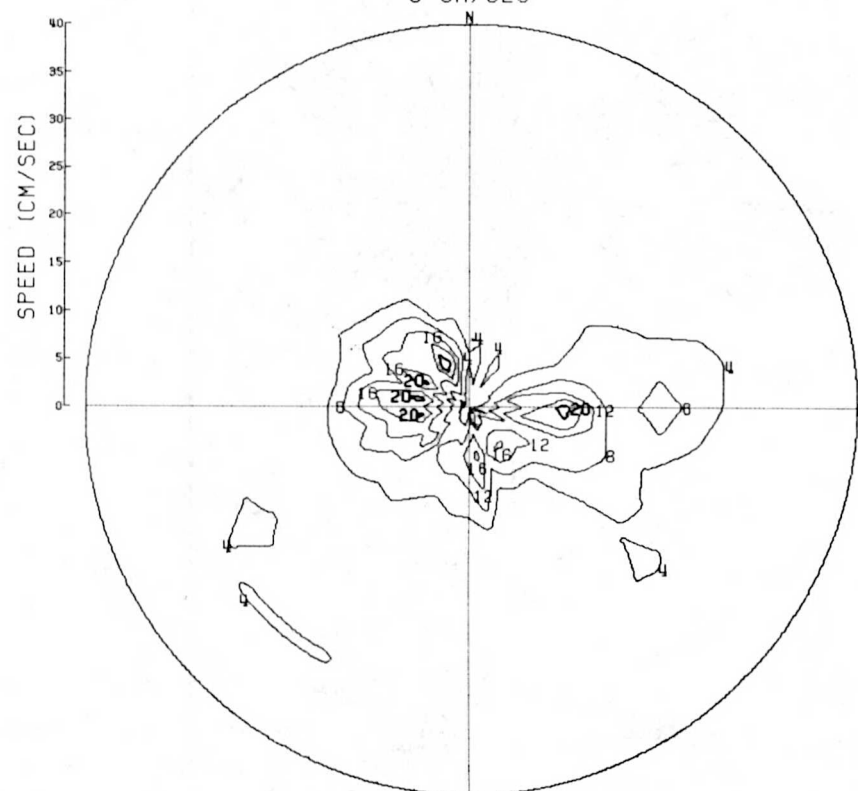
VIRTUAL DISPLACEMENT (KM)
5 DEGREE SECTORS



0TEC/2-1686

DEPTH 190 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=1584, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (058), 0009Z 58.000
ENDING: 1978 MAY 3 (123), 2309Z 58.000
ELAPSED TIME: 65 DAYS, 23 HOURS

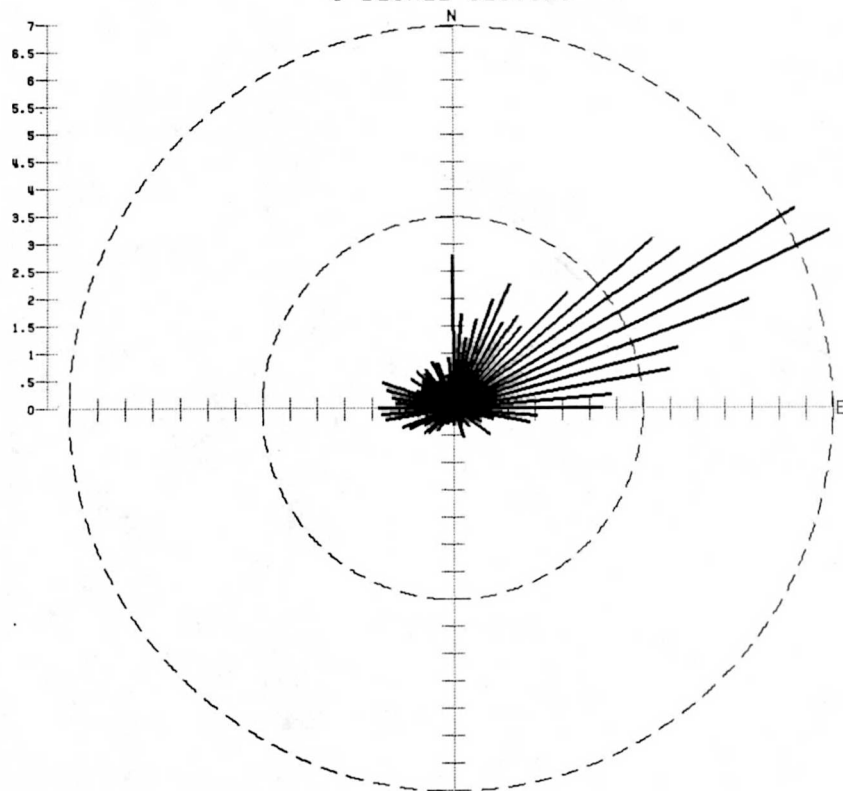
PER MIL OCCURRENCE OF
SPECIFIC DIRECTION AND SPEED
SECTOR SIZE:
10 DEGREES
5 CM/SEC



OTEC 2-3195

DEPTH 168 M. IN 1033 M.
LAT- 29 DEG, 11.9 MIN N., LONG- 87 DEG, 38.3 MIN W.
NO. OF POINTS-1604, DELTA T: 1 HOUR
BEGINNING: 1978 JUN17 (168), 2359Z 58.000
ENDING: 1978 AUG23 (235), 1859Z 58.000
ELAPSED TIME: 66 DAYS, 19 HOURS

% TIME
5 DEGREE SECTORS

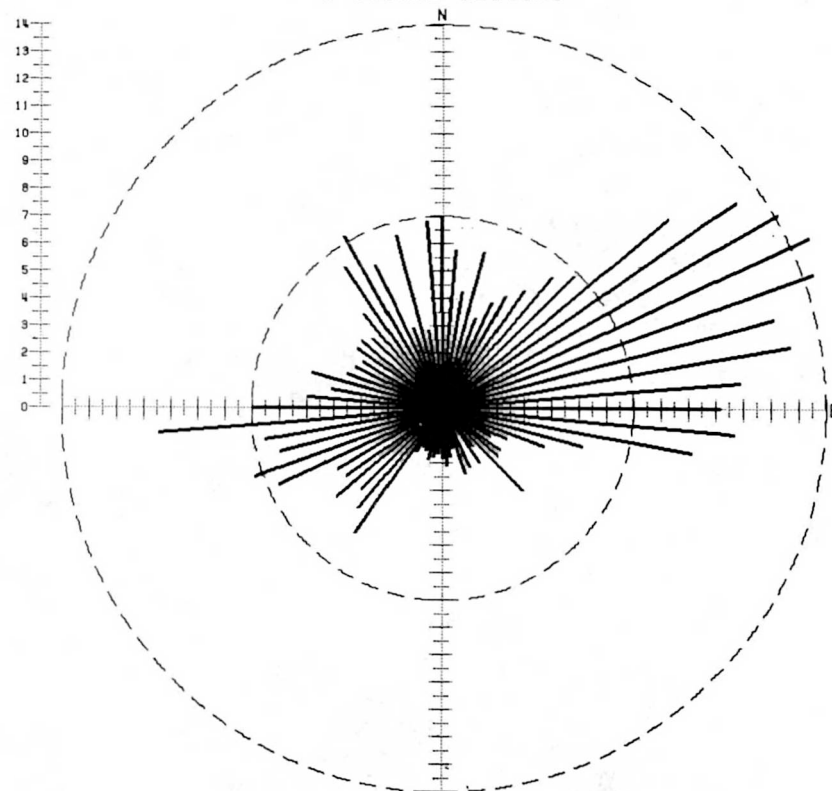


10-35

OTEC 2-3195

DEPTH 168 M. IN 1033 M.
LAT- 29 DEG, 11.9 MIN N., LONG- 87 DEG, 38.3 MIN W.
NO. OF POINTS-1604, DELTA T: 1 HOUR
BEGINNING: 1978 JUN17 (168), 2359Z 58.000
ENDING: 1978 AUG23 (235), 1859Z 58.000
ELAPSED TIME: 66 DAYS, 19 HOURS

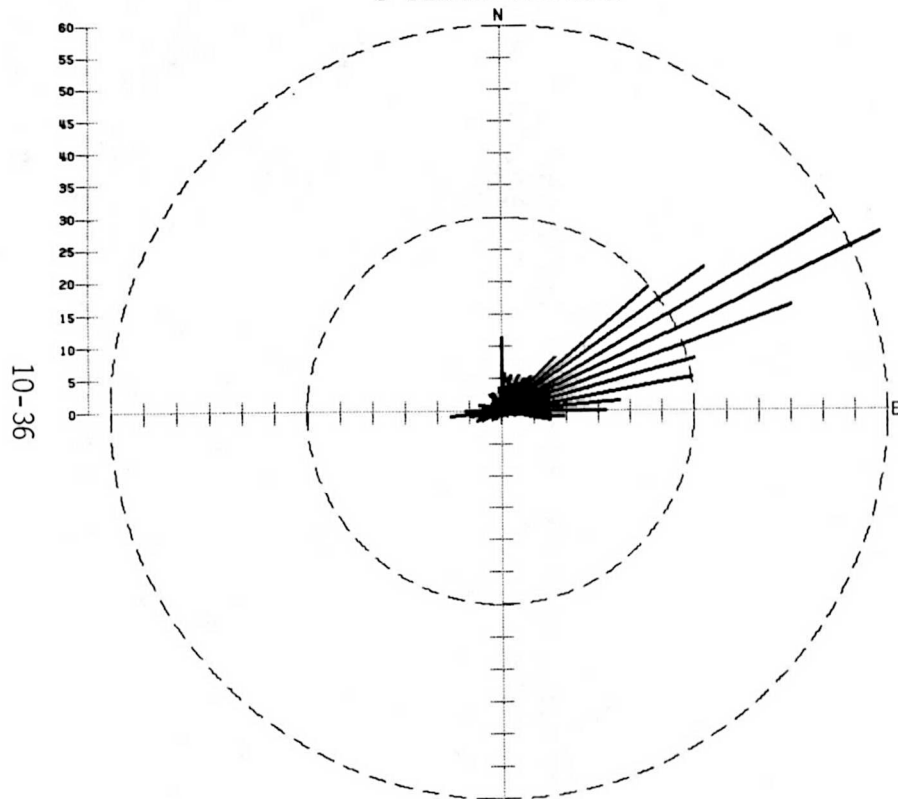
AVERAGE SPEED (CM/SEC)
5 DEGREE SECTORS



OTEC 2-3195

DEPTH 168 M. IN 1033 M.
LAT= 29 DEG. 11.9 MIN N., LONG= 87 DEG. 38.3 MIN W.
NO. OF POINTS=1604, DELTA T: 1 HOUR
BEGINNING: 1978 JUN17 (168), 2359Z 58.000
ENDING: 1978 AUG23 (235), 1859Z 58.000
ELAPSED TIME: 66 DAYS, 19 HOURS

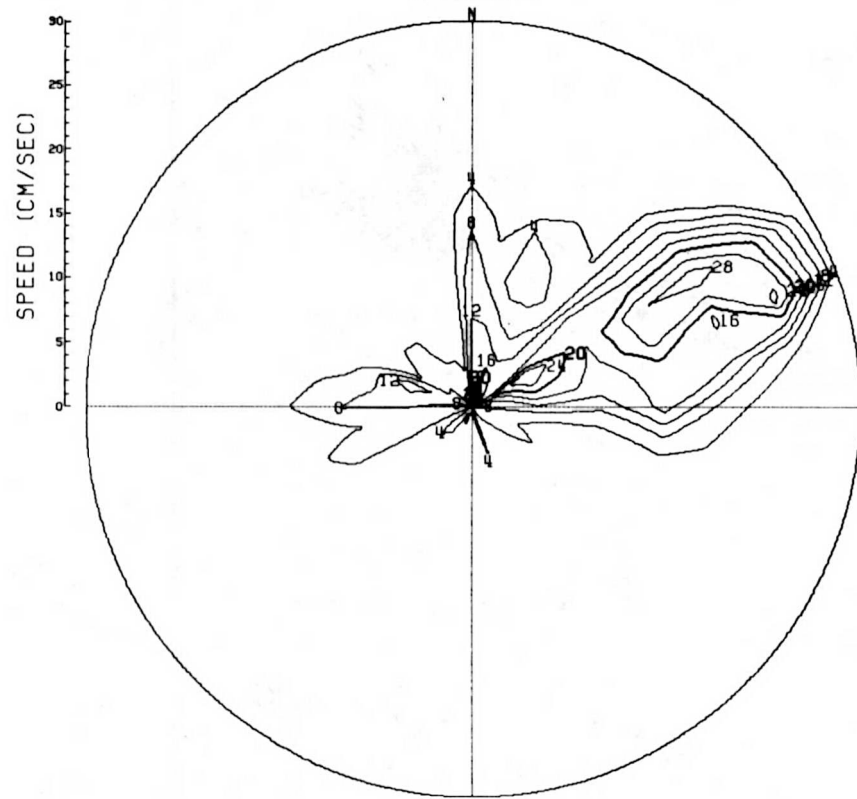
VIRTUAL DISPLACEMENT (KM)
5 DEGREE SECTORS



OTEC 2-3195

DEPTH 168 M. IN 1033 M.
LAT= 29 DEG. 11.9 MIN N., LONG= 87 DEG. 38.3 MIN W.
NO. OF POINTS=1604, DELTA T: 1 HOUR
BEGINNING: 1978 JUN17 (168), 2359Z 58.000
ENDING: 1978 AUG23 (235), 1859Z 58.000
ELAPSED TIME: 66 DAYS, 19 HOURS

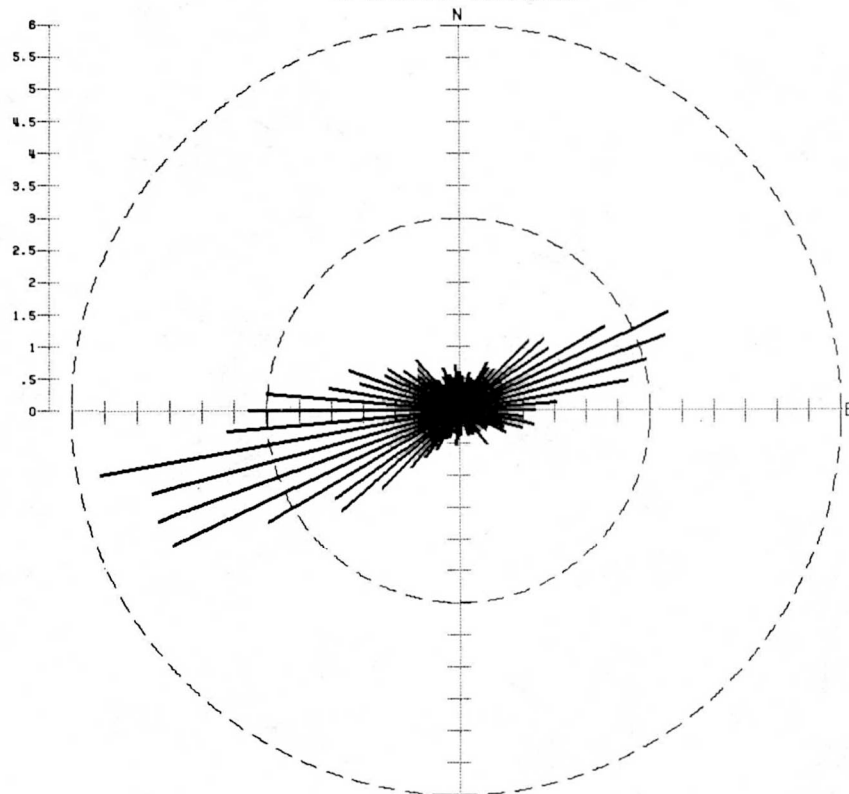
PER MIL OCCURRENCE OF
SPECIFIC DIRECTION AND SPEED
SECTOR SIZE:
10 DEGREES
5 CM/SEC



614/2

DEPTH 985 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-3116, DELTA T: 1 HOUR
BEGINNING: 1977 OCT18 (2911), 2359Z 58.000
ENDING: 1978 FEB25 (0561), 1859Z 58.000
ELAPSED TIME: 129 DAYS, 19 HOURS

% TIME
5 DEGREE SECTORS

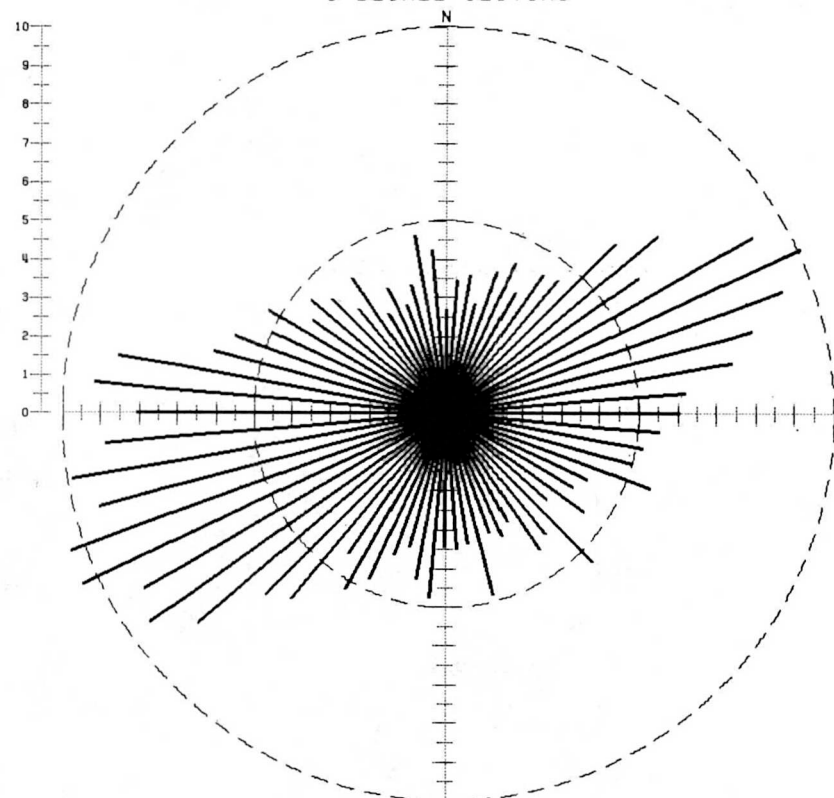


10-37

614/2

DEPTH 985 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-3116, DELTA T: 1 HOUR
BEGINNING: 1977 OCT18 (2911), 2359Z 58.000
ENDING: 1978 FEB25 (0561), 1859Z 58.000
ELAPSED TIME: 129 DAYS, 19 HOURS

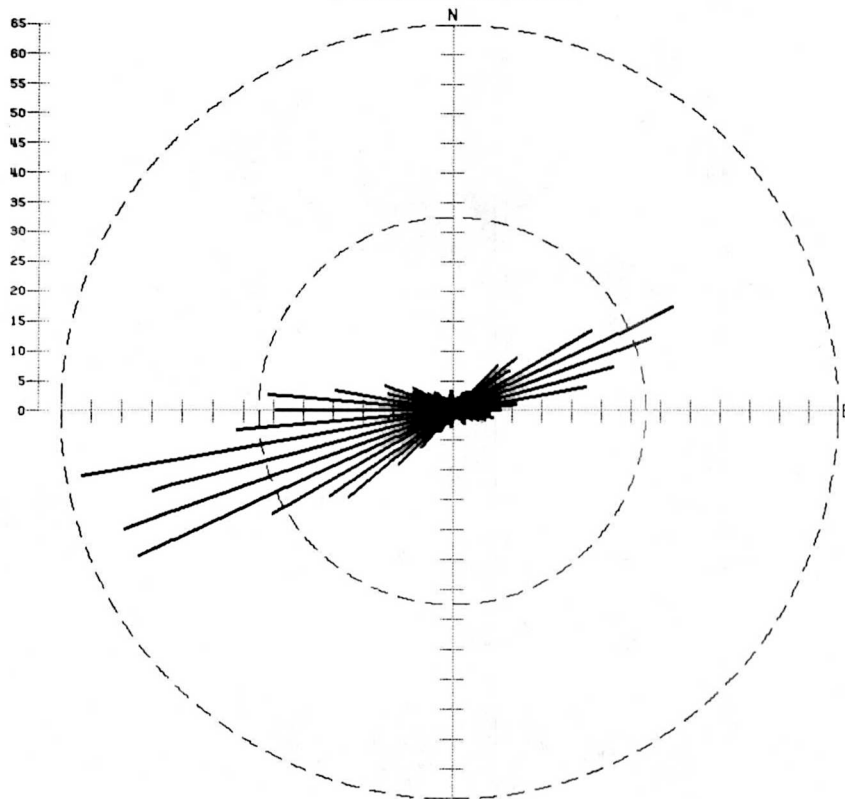
AVERAGE SPEED (CM/SEC)
5 DEGREE SECTORS



614/2

DEPTH 985 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=3116, DELTA T: 1 HOUR
BEGINNING: 1977 OCT18 (2911), 2359Z 58.000
ENDING: 1978 FEB25 (0561), 1859Z 58.000
ELAPSED TIME: 129 DAYS, 19 HOURS

VIRTUAL DISPLACEMENT (KM)
5 DEGREE SECTORS

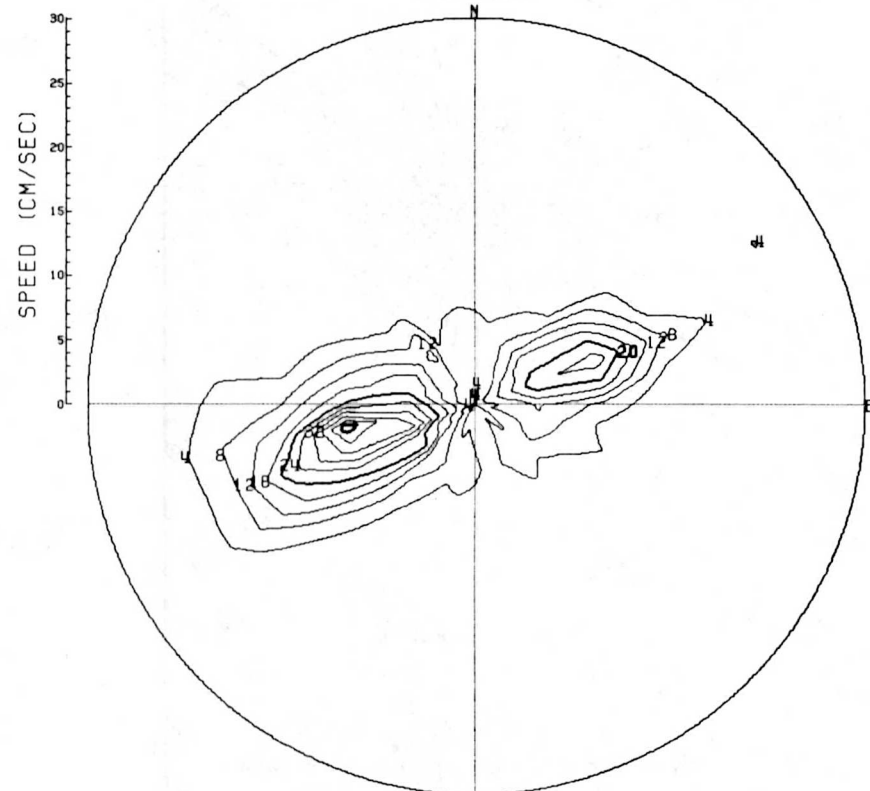


10-38

614/2

DEPTH 985 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=3116, DELTA T: 1 HOUR
BEGINNING: 1977 OCT18 (2911), 2359Z 58.000
ENDING: 1978 FEB25 (0561), 1859Z 58.000
ELAPSED TIME: 129 DAYS, 19 HOURS

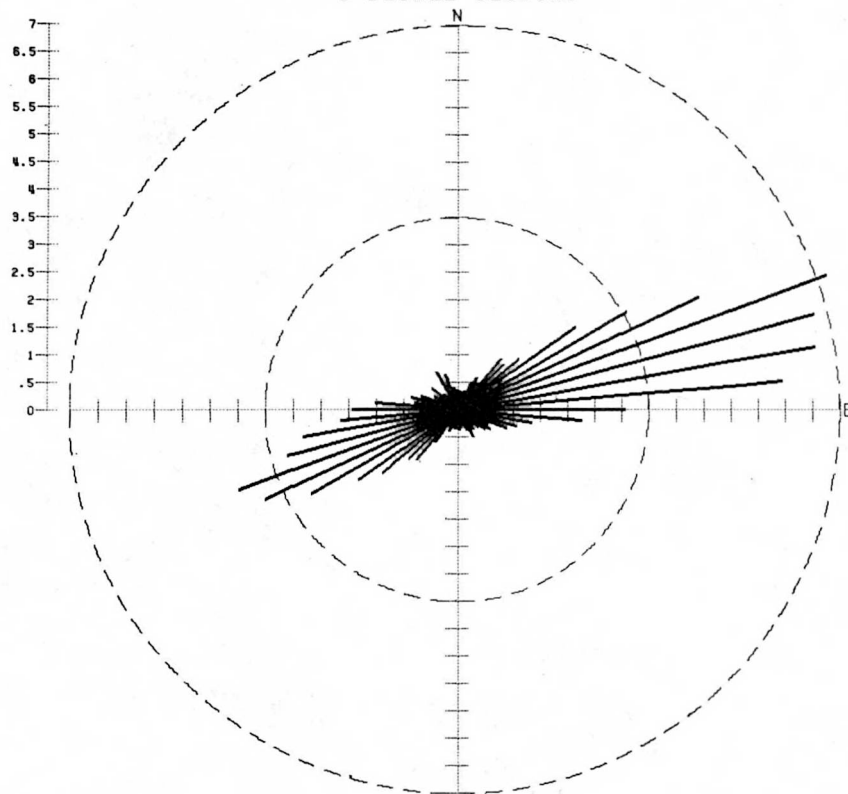
PER MIL OCCURRENCE OF
SPECIFIC DIRECTION AND SPEED
SECTOR SIZE:
10 DEGREES
5 CM/SEC



0TEC/2-613

DEPTH 985 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-2630, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (0581), 0009Z 56.000
ENDING: 1978 JUN16 (1671), 1309Z 56.000
ELAPSED TIME: 109 DAYS, 19 HOURS

% TIME
5 DEGREE SECTORS

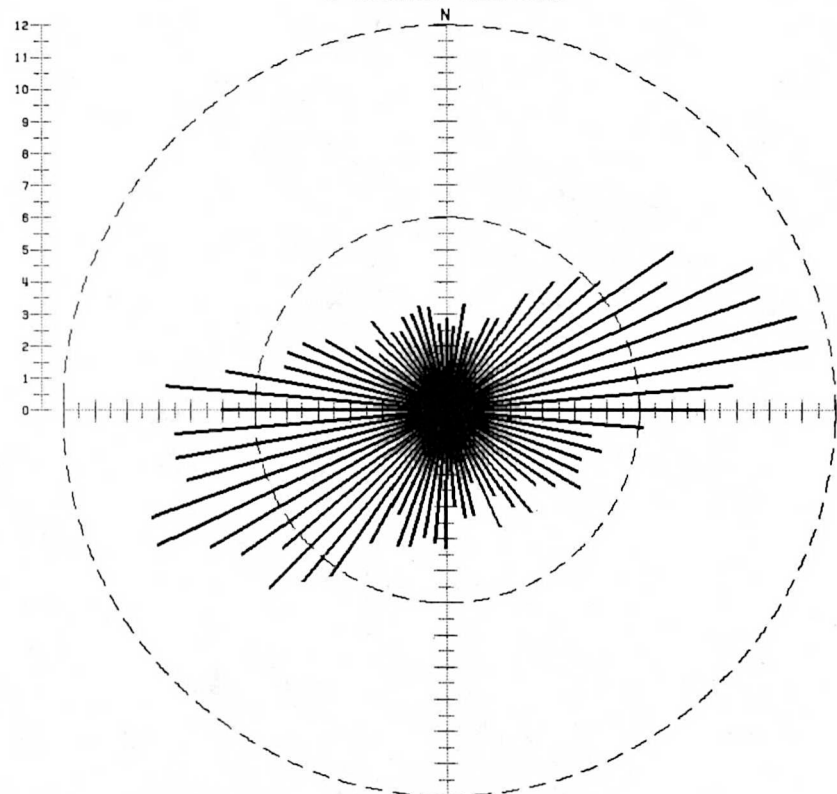


10-39

0TEC/2-613

DEPTH 985 M. IN 1047 M.
LAT- 29 DEG. 11.4 MIN N., LONG- 87 DEG. 38.2 MIN W.
NO. OF POINTS-2630, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (0581), 0009Z 56.000
ENDING: 1978 JUN16 (1671), 1309Z 56.000
ELAPSED TIME: 109 DAYS, 19 HOURS

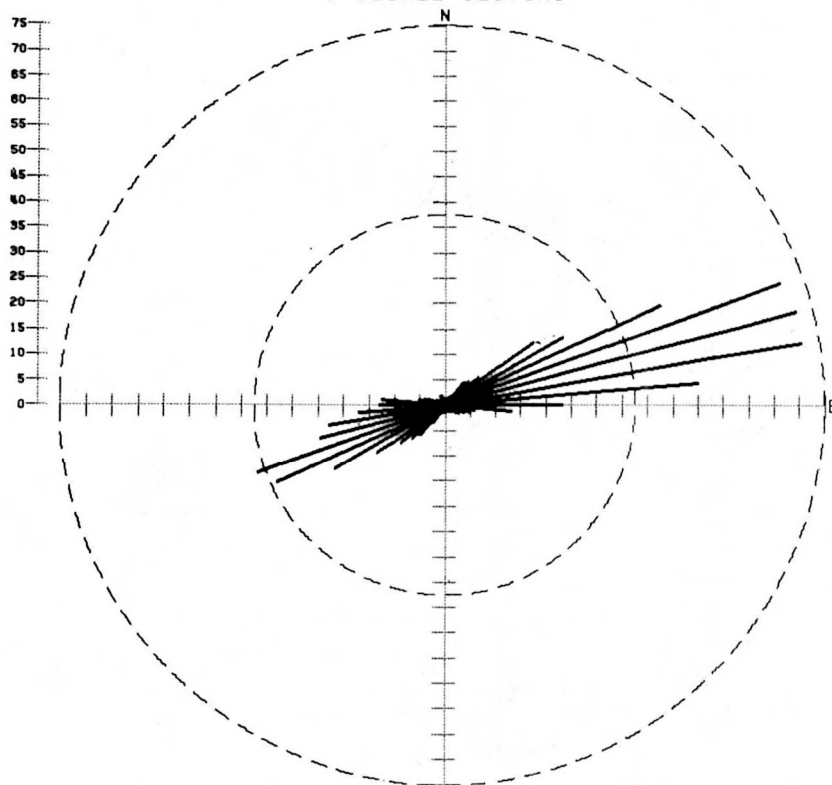
AVERAGE SPEED (CM/SEC)
5 DEGREE SECTORS



0TEC/2-613

DEPTH 985 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=2630, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (058), 0009Z 56.000
ENDING: 1978 JUN16 (167), 1309Z 56.000
ELAPSED TIME: 109 DAYS, 13 HOURS

VIRTUAL DISPLACEMENT (KM)
5 DEGREE SECTORS

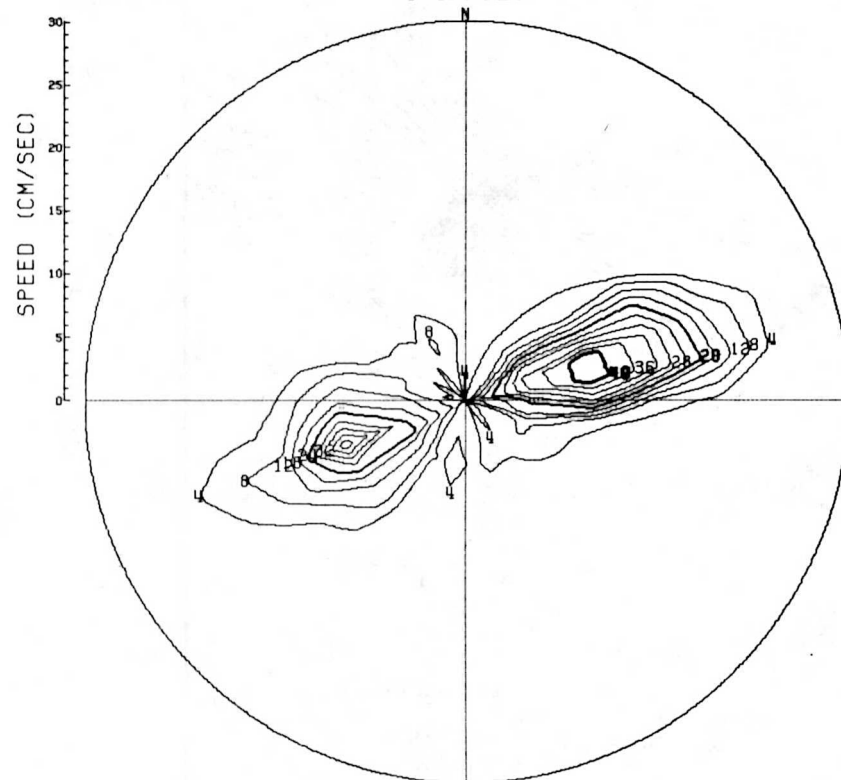


10-40

0TEC/2-613

DEPTH 985 M. IN 1047 M.
LAT= 29 DEG. 11.4 MIN N., LONG= 87 DEG. 38.2 MIN W.
NO. OF POINTS=2630, DELTA T: 1 HOUR
BEGINNING: 1978 FEB27 (058), 0009Z 56.000
ENDING: 1978 JUN16 (167), 1309Z 56.000
ELAPSED TIME: 109 DAYS, 13 HOURS

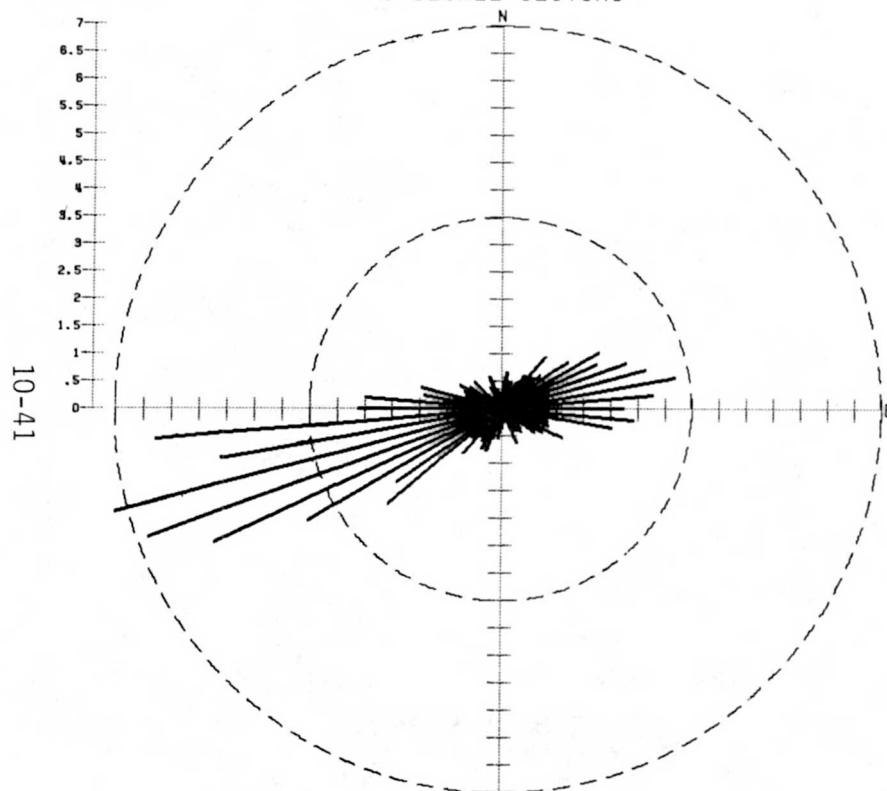
PER MIL OCCURRENCE OF
SPECIFIC DIRECTION AND SPEED
SECTOR SIZE:
10 DEGREES
5 CM/SEC



0TEC 2-612

DEPTH 970 M. IN 1033 M.
LAT- 29 DEG. 11.9 MIN N., LONG- 87 DEG. 38.3 MIN W.
NO. OF POINTS-1604, DELTA T: 1 HOUR
BEGINNING: 1978 JUN17 (168), 2359Z 58.000
ENDING: 1978 AUG23 (235), 1859Z 58.000
ELAPSED TIME: 66 DAYS, 19 HOURS

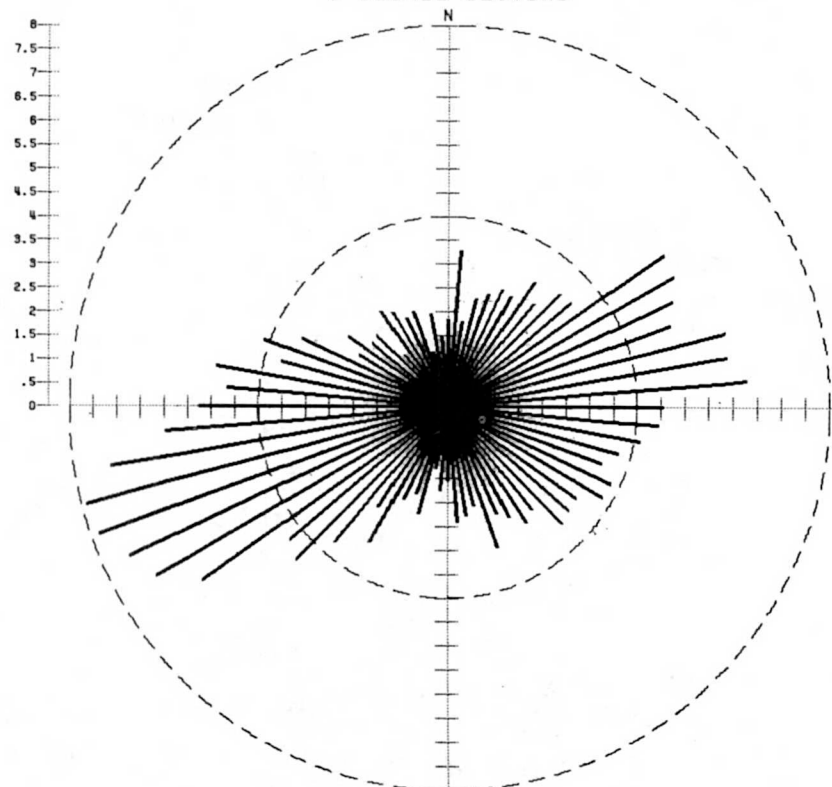
% TIME
5 DEGREE SECTORS



0TEC 2-612

DEPTH 970 M. IN 1033 M.
LAT- 29 DEG. 11.9 MIN N., LONG- 87 DEG. 38.3 MIN W.
NO. OF POINTS-1604, DELTA T: 1 HOUR
BEGINNING: 1978 JUN17 (168), 2359Z 58.000
ENDING: 1978 AUG23 (235), 1859Z 58.000
ELAPSED TIME: 66 DAYS, 19 HOURS

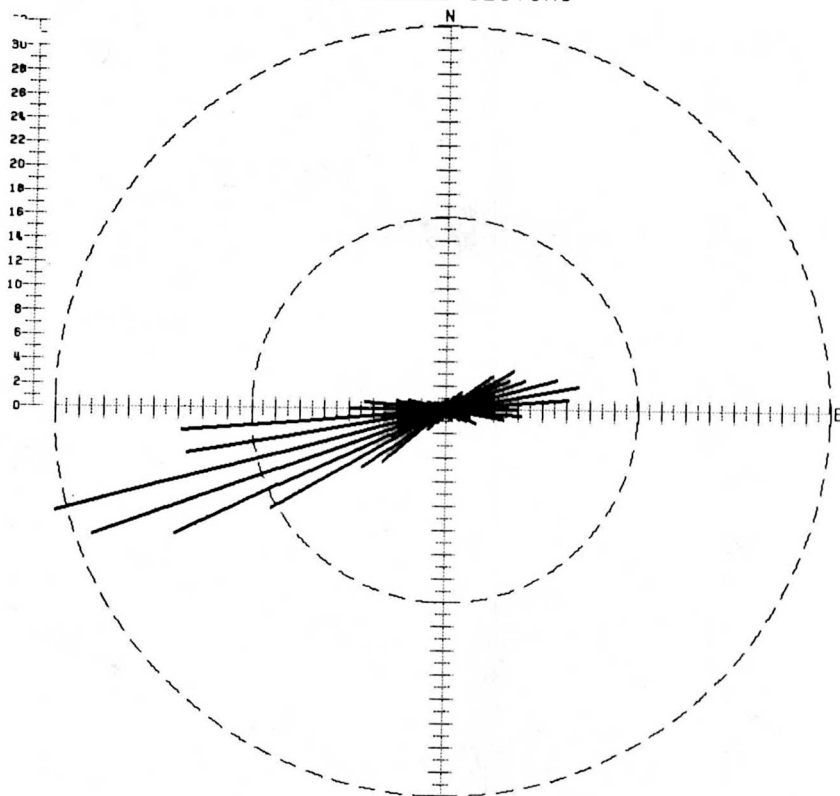
AVERAGE SPEED (CM/SEC)
5 DEGREE SECTORS



OTEC 2-612

DEPTH 970 M. IN 1033 M.
LAT= 29 DEG. 11.9 MIN N., LONG= 87 DEG. 38.3 MIN W.
NO. OF POINTS=1604, DELTA T, 1 HOUR
BEGINNING: 1978 JUN17 (168), 2359Z 58.000
ENDING: 1978 AUG23 (235), 1859Z 58.000
ELAPSED TIME: 66 DAYS, 19 HOURS

VIRTUAL DISPLACEMENT (KM)
5 DEGREE SECTORS

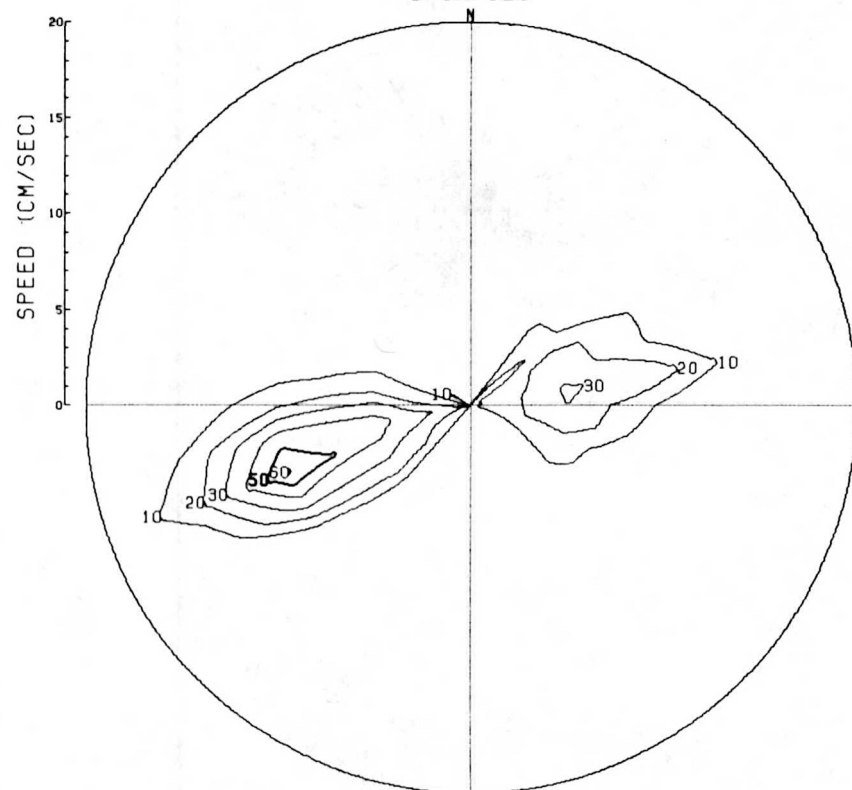


10-42

OTEC 2-612

DEPTH 970 M. IN 1033 M.
LAT= 29 DEG. 11.9 MIN N., LONG= 87 DEG. 38.3 MIN W.
NO. OF POINTS=1604, DELTA T, 1 HOUR
BEGINNING: 1978 JUN17 (168), 2359Z 58.000
ENDING: 1978 AUG23 (235), 1859Z 58.000
ELAPSED TIME: 66 DAYS, 19 HOURS

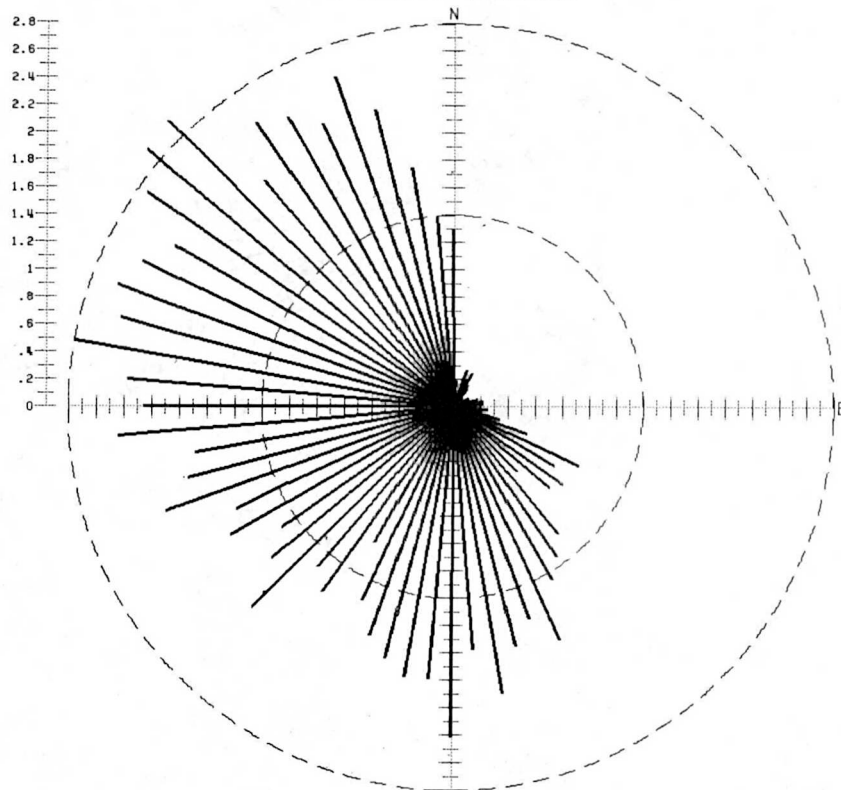
PER MIL OCCURRENCE OF
SPECIFIC DIRECTION AND SPEED
SECTOR SIZE:
10 DEGREES
5 CM/SEC



OTEC TAMPA-3283

DEPTH 153 M. IN 1033 M.
 LAT= 27 DEG, 39.8 MIN N., LONG= 85 DEG, 31 MIN W.
 NO. OF POINTS=3218, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN12 (163), 2359Z 58.000
 ENDING: 1978 OCT25 (298), 0059Z 58.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

% TIME
 5 DEGREE SECTORS

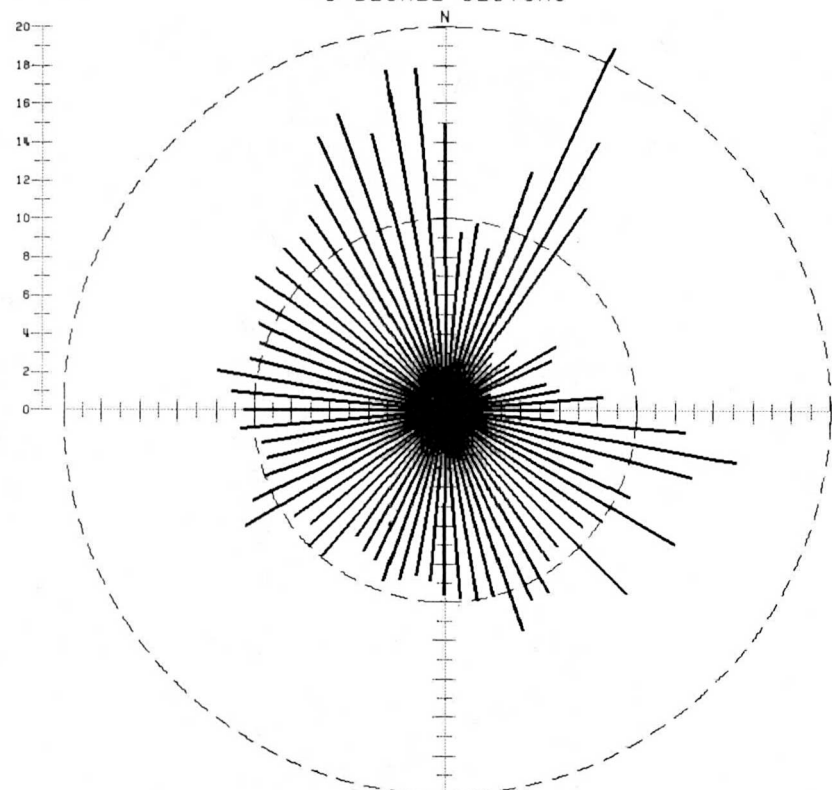


10-43

OTEC TAMPA-3283

DEPTH 153 M. IN 1033 M.
 LAT= 27 DEG, 39.8 MIN N., LONG= 85 DEG, 31 MIN W.
 NO. OF POINTS=3218, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN12 (163), 2359Z 58.000
 ENDING: 1978 OCT25 (298), 0059Z 58.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

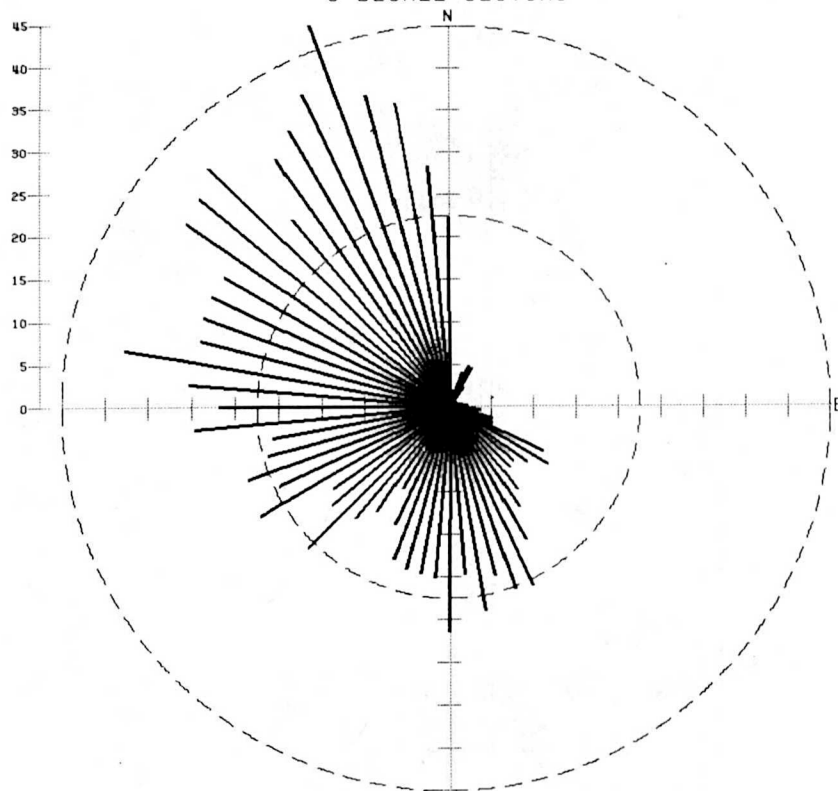
AVERAGE SPEED (CM/SEC)
 5 DEGREE SECTORS



OTEC TAMPA-3283

DEPTH 153 M. IN 1033 M.
 LAT= 27 DEG. 39.8 MIN N., LONG= 85 DEG. 31 MIN W.
 NO. OF POINTS=3218, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN12 (1631,2359Z 58.000
 ENDING: 1978 OCT25 (2981,0059Z 58.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

VIRTUAL DISPLACEMENT (KM)
 5 DEGREE SECTORS

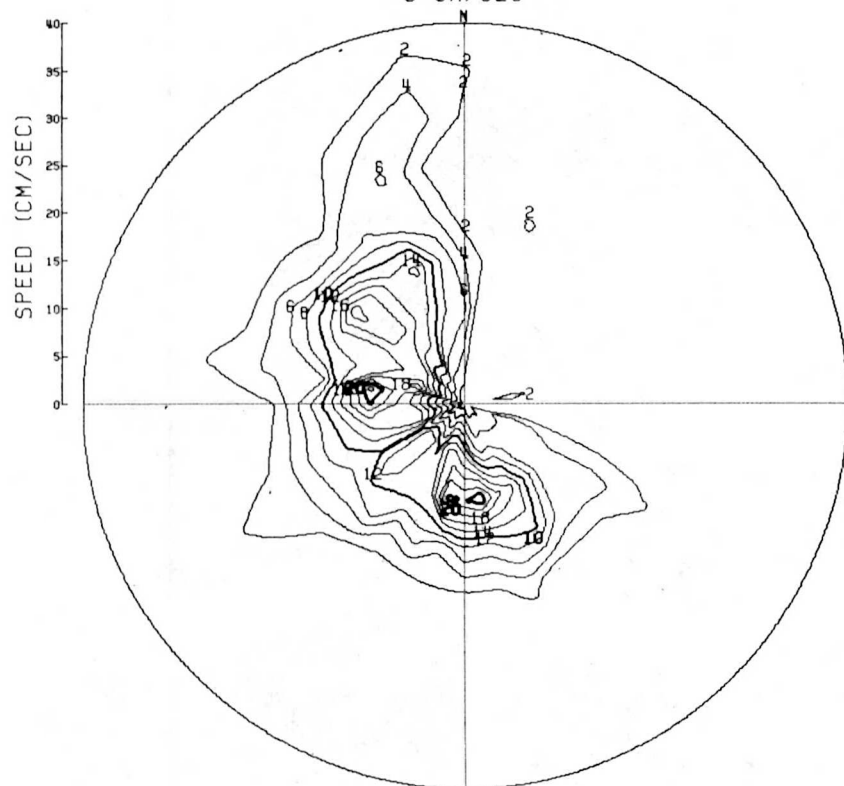


10-44

OTEC TAMPA-3283

DEPTH 153 M. IN 1033 M.
 LAT= 27 DEG. 39.8 MIN N., LONG= 85 DEG. 31 MIN W.
 NO. OF POINTS=3218, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN12 (1631,2359Z 58.000
 ENDING: 1978 OCT25 (2981,0059Z 58.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

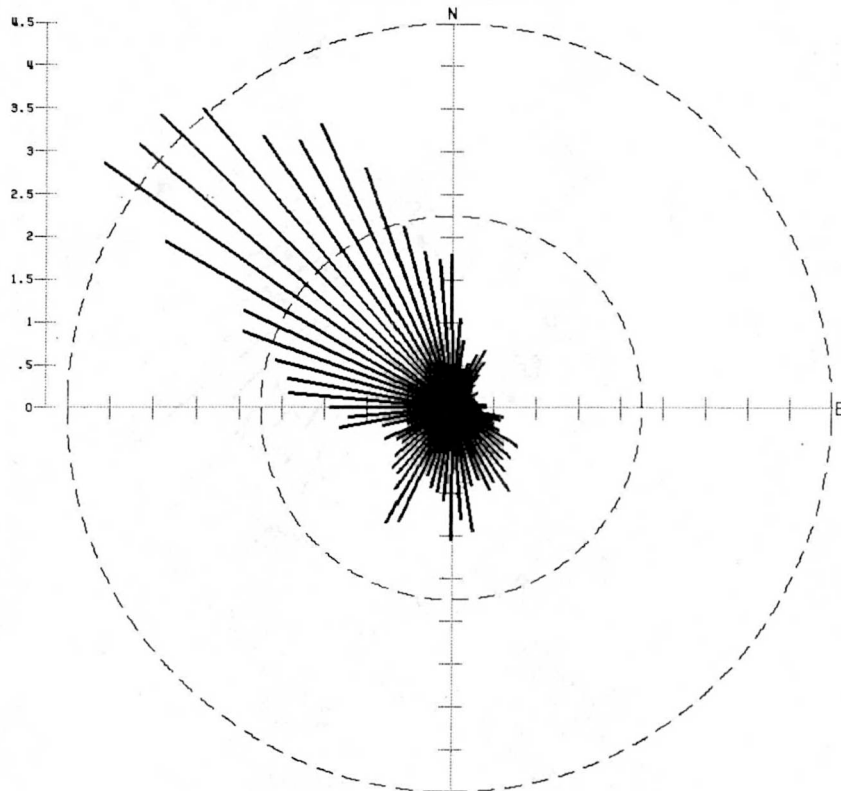
PER MIL OCCURRENCE OF
 SPECIFIC DIRECTION AND SPEED
 SECTOR SIZE:
 10 DEGREES
 5 CM/SEC



OTEC TAMPA-3202

DEPTH 549 M. IN 1033 M.
 LAT- 27 DEG, 39.8 MIN N., LONG- 85 DEG, 31 MIN W.
 NO. OF POINTS-3218, DELTA T, 1 HOUR
 BEGINNING: 1978 JUN12 (163), 2359Z 56.000
 ENDING: 1978 OCT25 (298), 0059Z 56.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

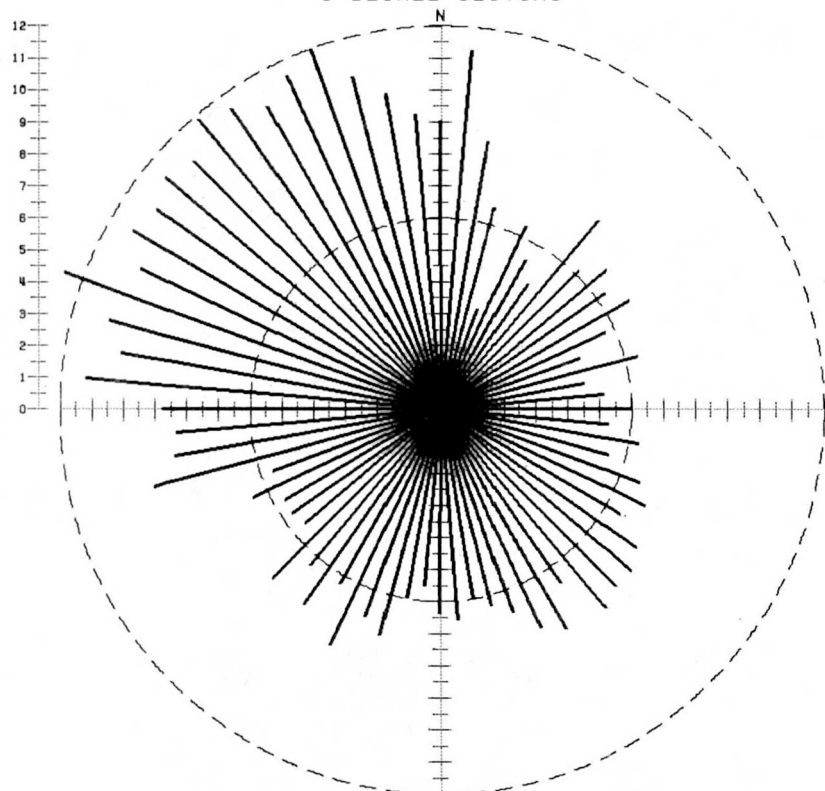
% TIME
 5 DEGREE SECTORS



OTEC TAMPA-3202

DEPTH 549 M. IN 1033 M.
 LAT- 27 DEG, 39.8 MIN N., LONG- 85 DEG, 31 MIN W.
 NO. OF POINTS-3218, DELTA T, 1 HOUR
 BEGINNING: 1978 JUN12 (163), 2359Z 56.000
 ENDING: 1978 OCT25 (298), 0059Z 56.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

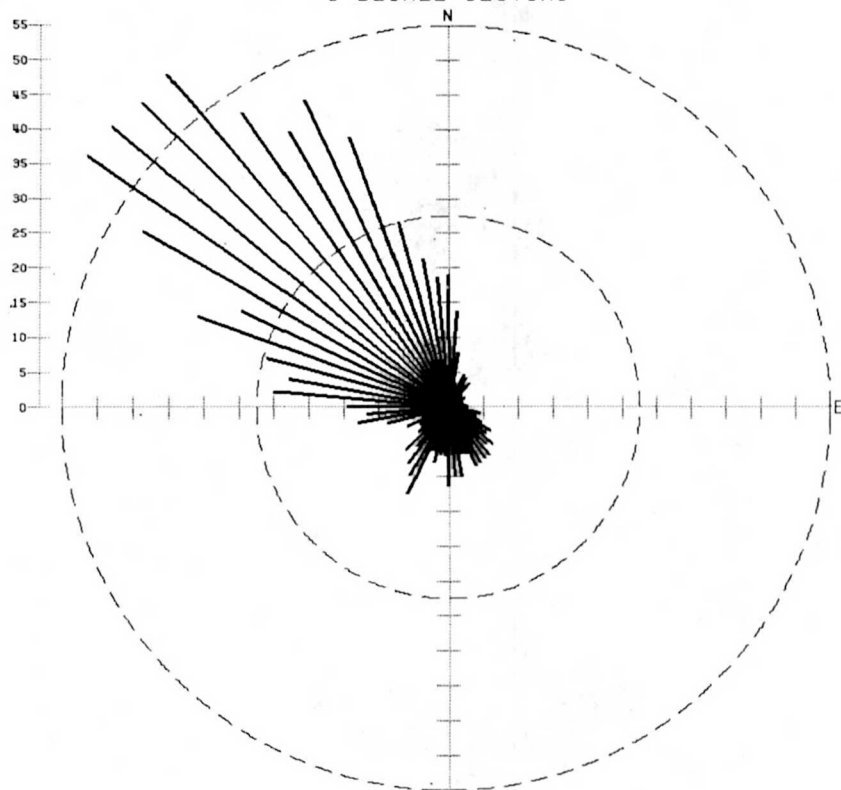
AVERAGE SPEED (CM/SEC)
 5 DEGREE SECTORS



OTEC TAMPA-3202

DEPTH 549 M. IN 1033 M.
 LAT= 27 DEG. 39.8 MIN N., LONG= 85 DEG. 31 MIN W.
 NO. OF POINTS=3218, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN12 (163), 2359Z 56.000
 ENDING: 1978 OCT25 (298), 0059Z 56.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

VIRTUAL DISPLACEMENT (KM)
 5 DEGREE SECTORS

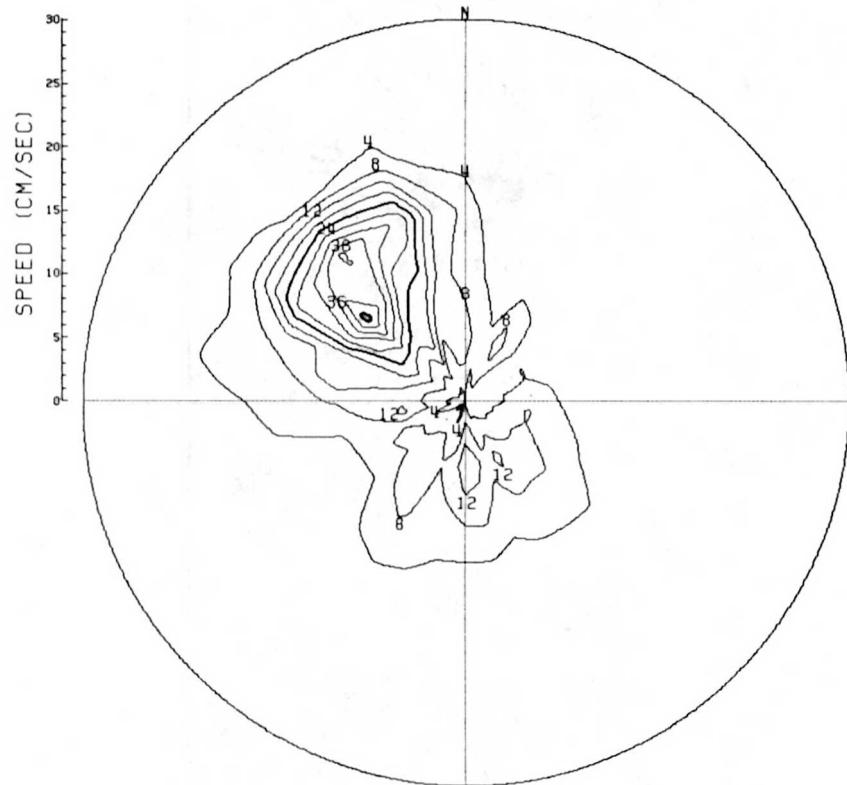


10-46

OTEC TAMPA-3202

DEPTH 549 M. IN 1033 M.
 LAT= 27 DEG. 39.8 MIN N., LONG= 85 DEG. 31 MIN W.
 NO. OF POINTS=3218, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN12 (163), 2359Z 56.000
 ENDING: 1978 OCT25 (298), 0059Z 56.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

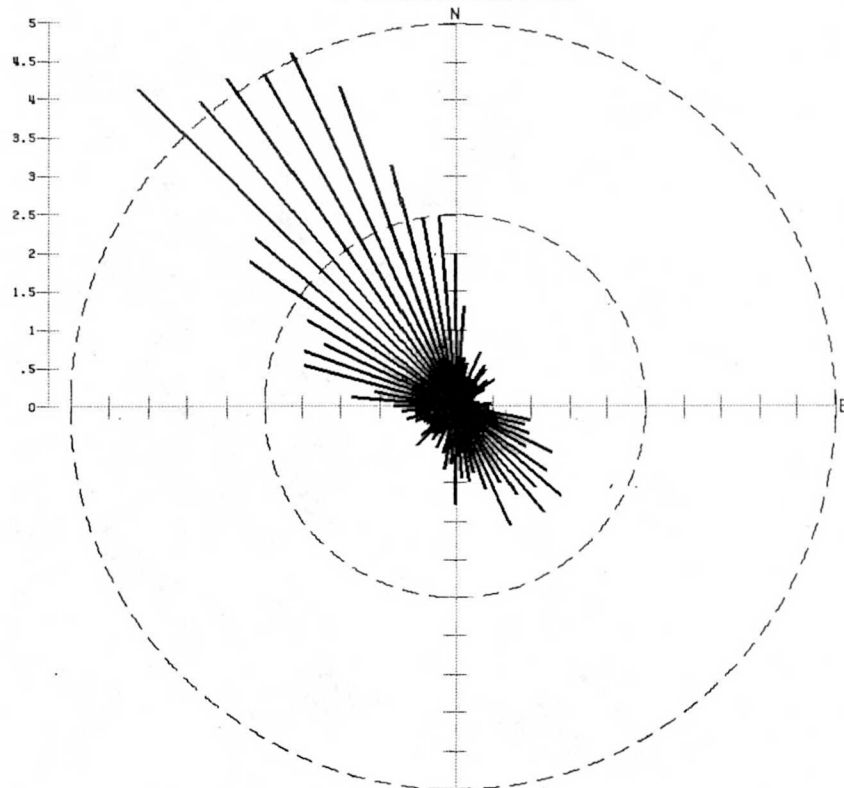
PER MIL OCCURRENCE OF
 SPECIFIC DIRECTION AND SPEED
 SECTOR SIZE:
 10 DEGREES
 5 CM/SEC



OTEC TAMPA-3200

DEPTH 950 M. IN 1033 M.
 LAT- 27 DEG, 39.8 MIN N., LONG- 85 DEG, 31 MIN W.
 NO. OF POINTS-3218, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN12 (163), 2359Z 58.000
 ENDING: 1978 OCT25 (298), 0059Z 58.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

% TIME
 5 DEGREE SECTORS

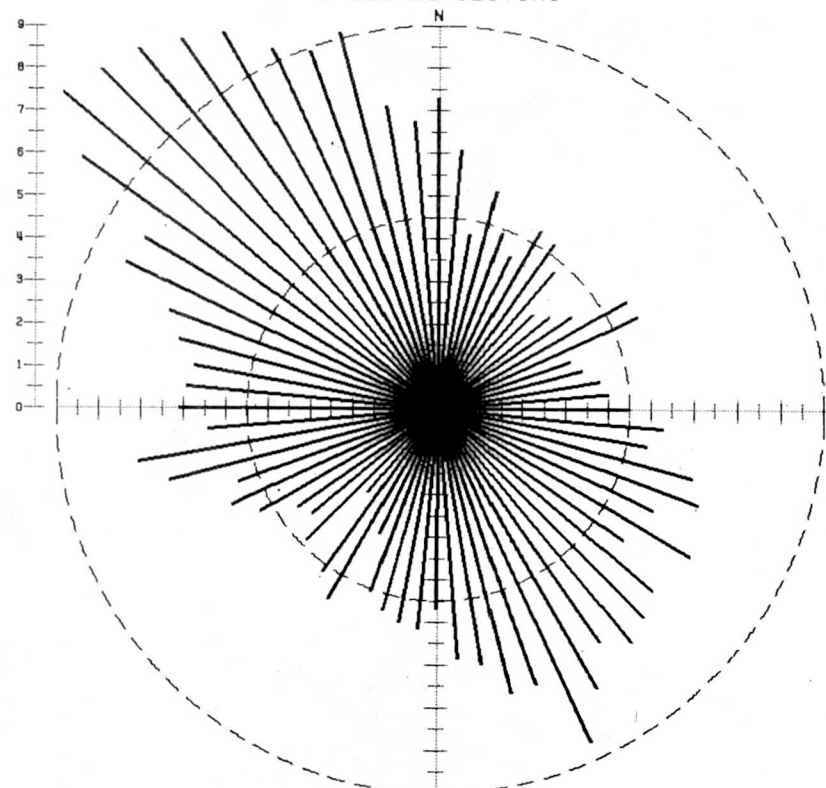


10-47

OTEC TAMPA-3200

DEPTH 950 M. IN 1033 M.
 LAT- 27 DEG, 39.8 MIN N., LONG- 85 DEG, 31 MIN W.
 NO. OF POINTS-3218, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN12 (163), 2359Z 58.000
 ENDING: 1978 OCT25 (298), 0059Z 58.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

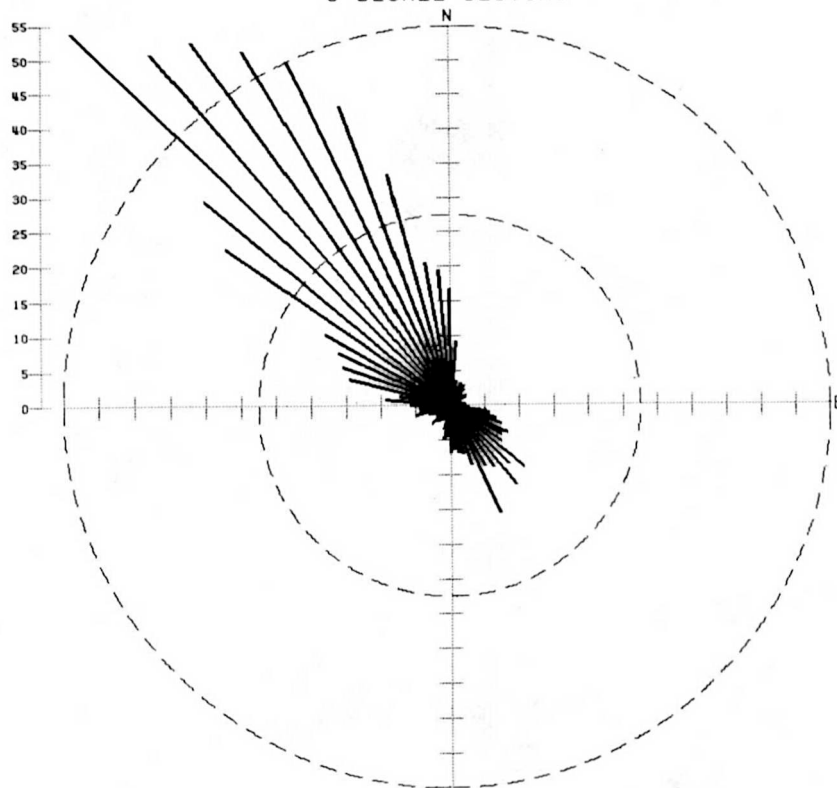
AVERAGE SPEED (CM/SEC)
 5 DEGREE SECTORS



OTEC TAMPA-3200

DEPTH 950 M. IN 1033 M.
 LAT= 27 DEG. 39.8 MIN N., LONG= 85 DEG. 31 MIN W.
 NO. OF POINTS=3218, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN12 (163), 2359Z 58.000
 ENDING: 1978 OCT25 (298), 0059Z 58.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

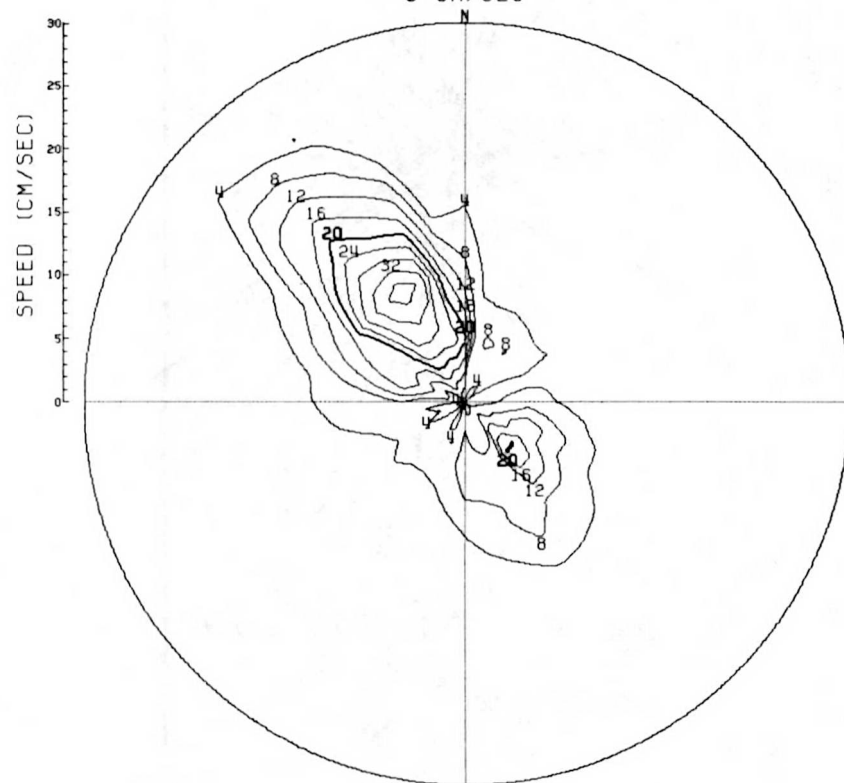
VIRTUAL DISPLACEMENT (KM)
 5 DEGREE SECTORS



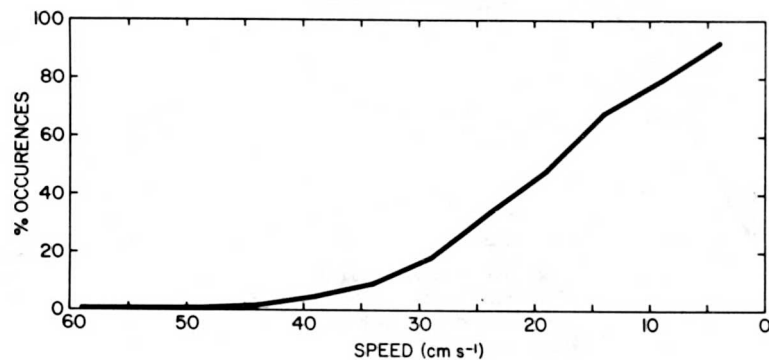
OTEC TAMPA-3200

DEPTH 950 M. IN 1033 M.
 LAT= 27 DEG. 39.8 MIN N., LONG= 85 DEG. 31 MIN W.
 NO. OF POINTS=3218, DELTA T: 1 HOUR
 BEGINNING: 1978 JUN12 (163), 2359Z 58.000
 ENDING: 1978 OCT25 (298), 0059Z 58.000
 ELAPSED TIME: 134 DAYS, 1 HOUR

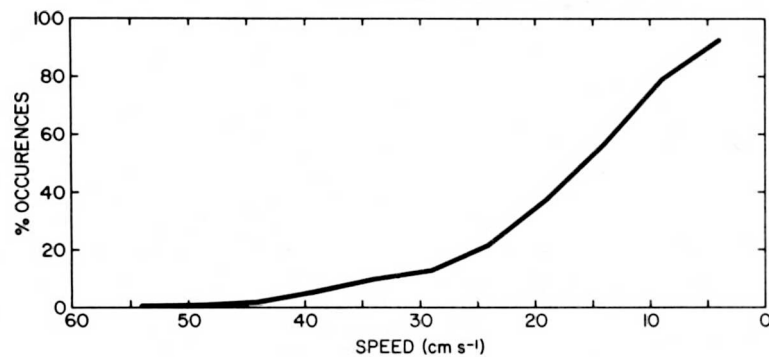
PER MIL OCCURRENCE OF
 SPECIFIC DIRECTION AND SPEED
 SECTOR SIZE:
 10 DEGREES
 5 CM/SEC



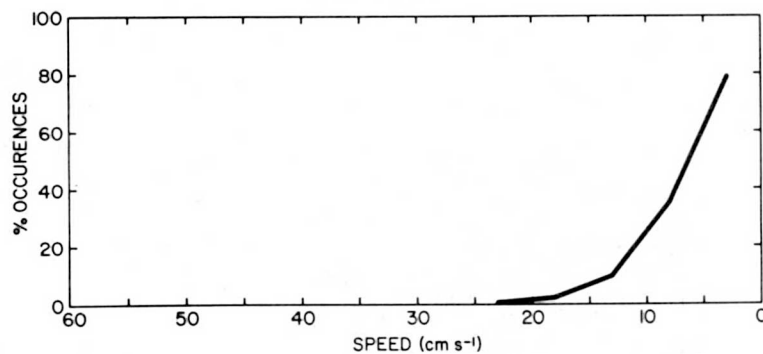
MOBILE
29° 06.5' N 87° 55.1' W
19 JULY 1977 - 18 OCTOBER 1977
METER DEPTH 95 m



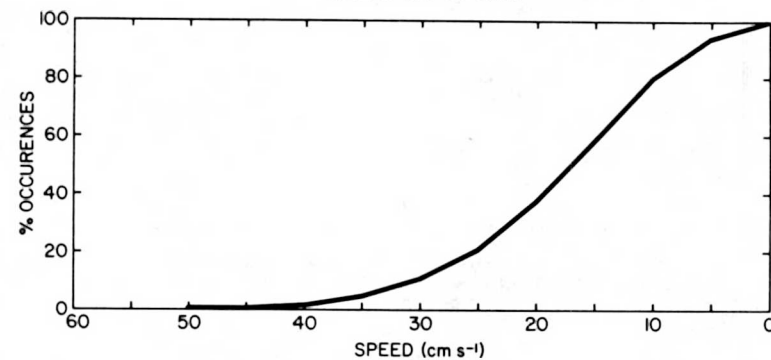
MOBILE
29° 06.5' N 87° 55.1' W
19 JULY 1977 - 17 OCTOBER 1977
METER DEPTH 195 m



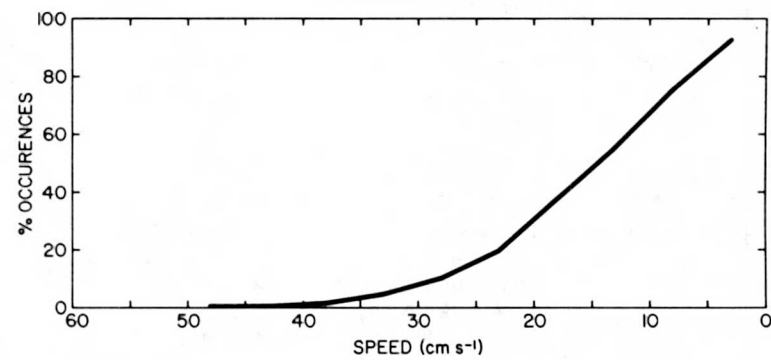
MOBILE
29° 06.5' N 87° 55.1' W
19 JULY 1977 - 18 OCTOBER 1977
METER DEPTH 974 m



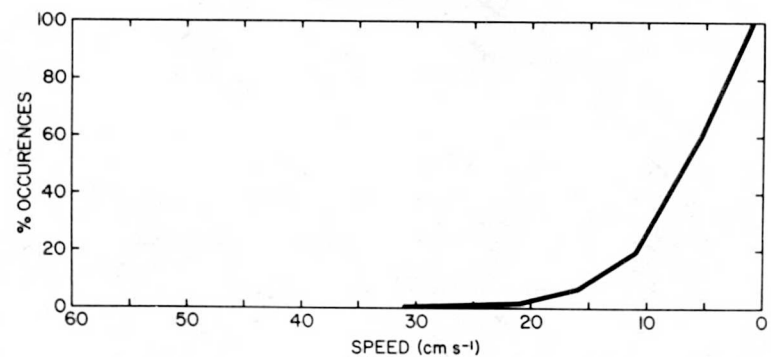
MOBILE
29° 11.4' N 87° 38.2' W
19 OCTOBER 1977 - 17 FEBRUARY 1978
METER DEPTH 90 m



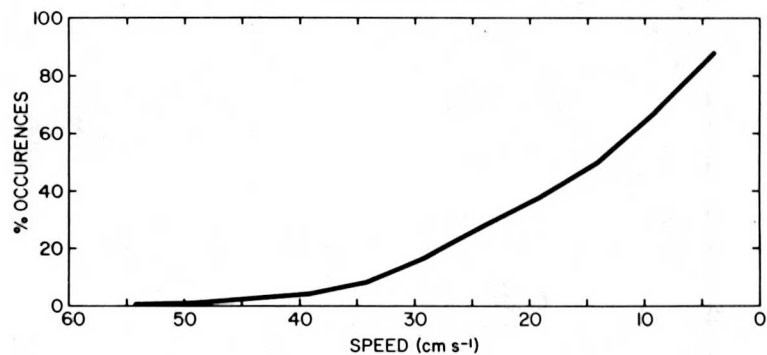
MOBILE
29° 11.4' N 87° 38.2' W
20 OCTOBER 1977 - 25 FEBRUARY 1978
METER DEPTH 190 m



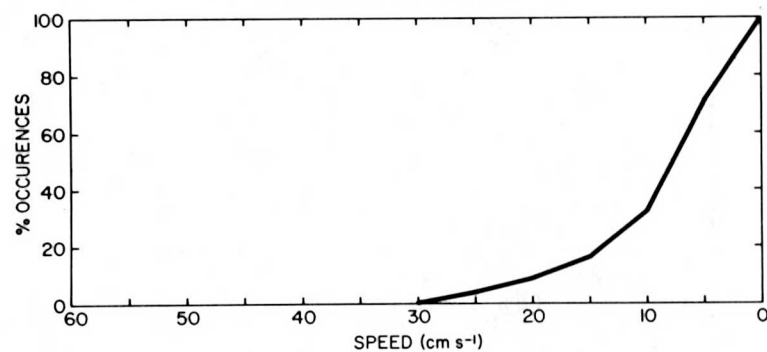
MOBILE
29° 11.4' N 87° 38.2' W
19 OCTOBER 1977 - 25 FEBRUARY 1978
METER DEPTH 985 m



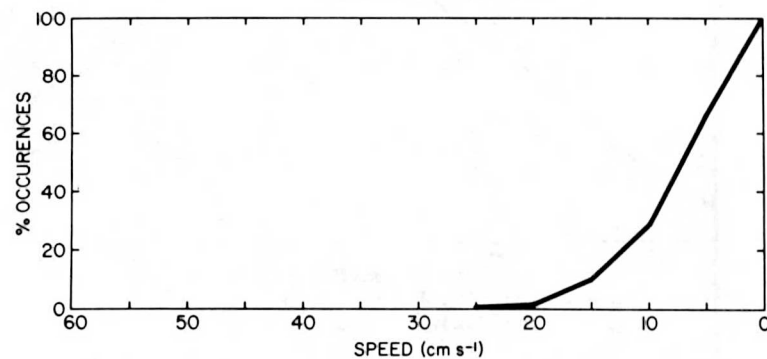
MOBILE
29°11.4'N 87°38.2'W
27 FEBRUARY 1978 - 16 JUNE 1978
METER DEPTH 95m



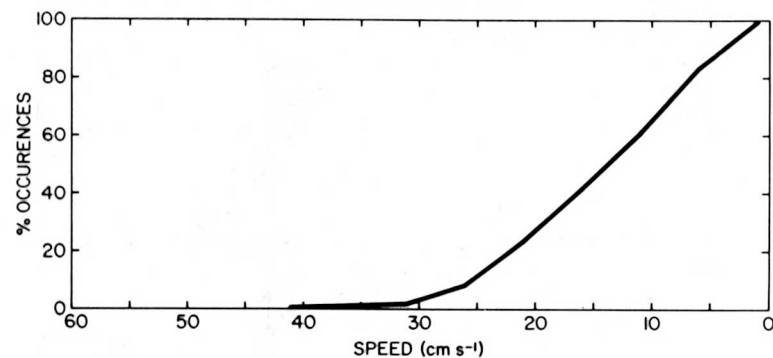
MOBILE
29°11.4'N 87°38.4'W
27 FEBRUARY 1978 - 3 MAY 1978
METER DEPTH 190m



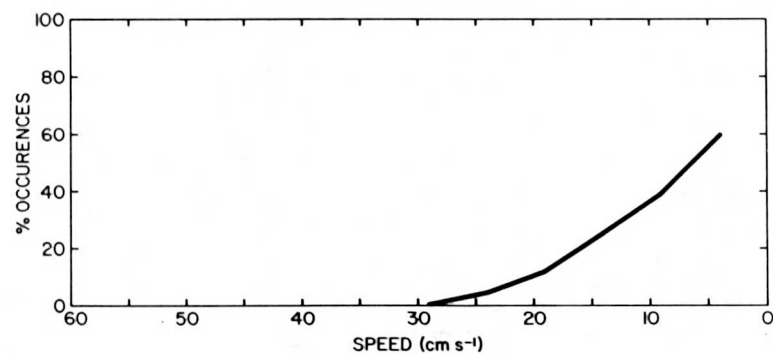
MOBILE
29°11.4'N 87°38.2'W
27 FEBRUARY 1978 - 16 JUNE 1978
METER DEPTH 985m



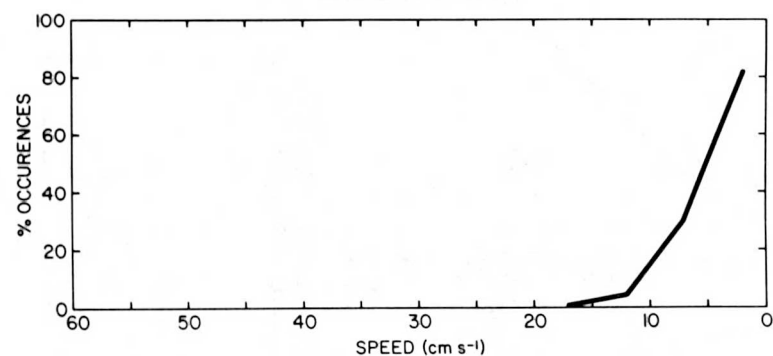
MOBILE
29°11.9'N 87°38.3'W
18 JUNE 1978 - 23 AUGUST 1978
METER DEPTH 70m



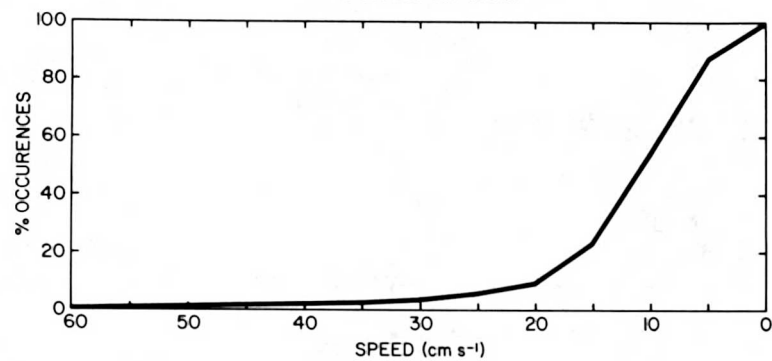
MOBILE
29°11.9'N 87°38.3'W
18 JUNE 1978 - 23 AUGUST 1978
METER DEPTH 168m



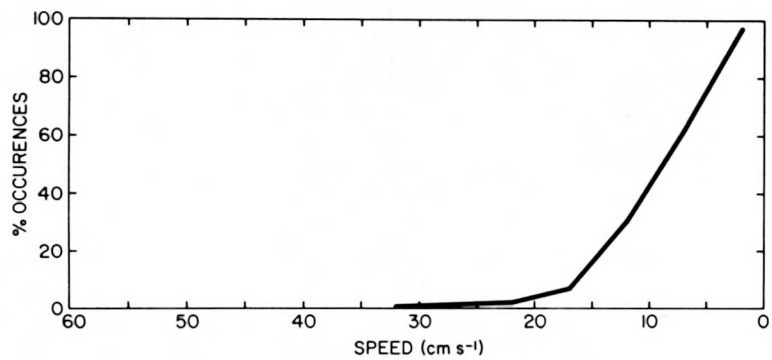
MOBILE
29°11.9'N 87°38.3'W
18 JUNE 1978 - 23 AUGUST 1978
METER DEPTH 970m



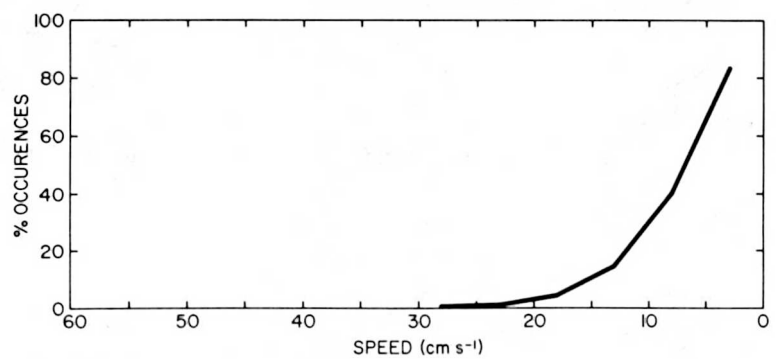
TAMPA
27° 39.8' N 85° 31.0' W
13 JUNE 1978 - 25 OCTOBER 1978
METER DEPTH 153 m



TAMPA
27° 39.8' N 85° 31.0' W
13 JUNE 1978 - 25 OCTOBER 1978
METER DEPTH 549 m



TAMPA
27° 39.8' N 85° 31.0' W
13 JUNE 1978 - 25 OCTOBER 1978
METER DEPTH 950 m



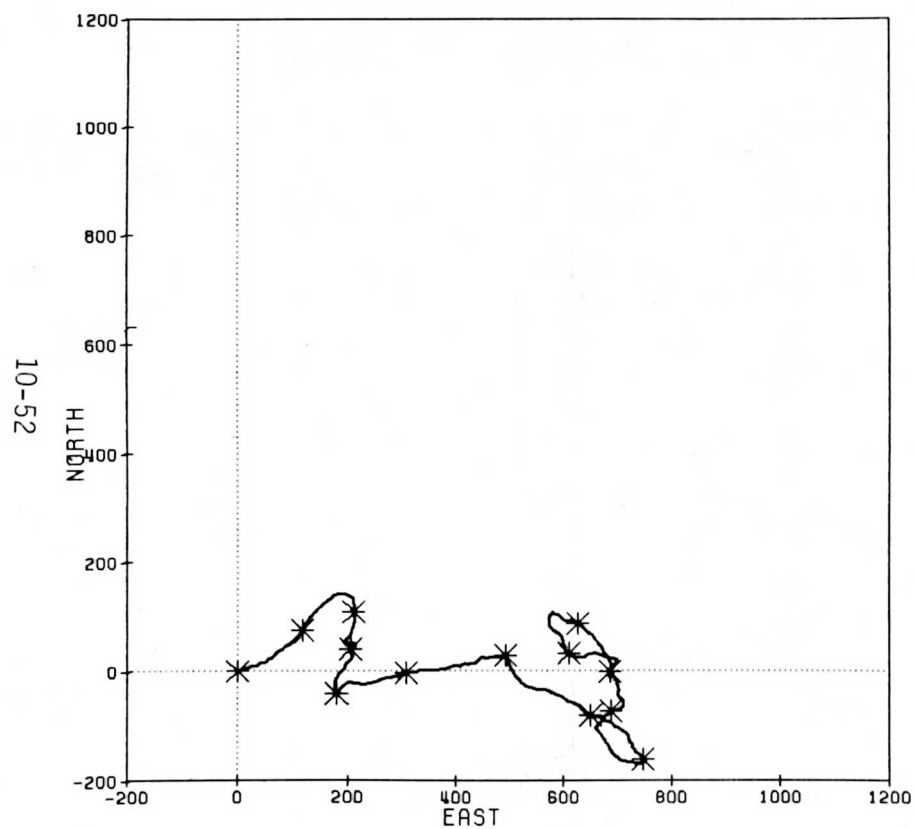
PROGRESSIVE VECTOR DIAGRAM

645/2

90 M. IN 1047 M.

SYMBOLS EVERY 10 DAYS

BEGINNING 1977 OCT18 (291), 2359Z



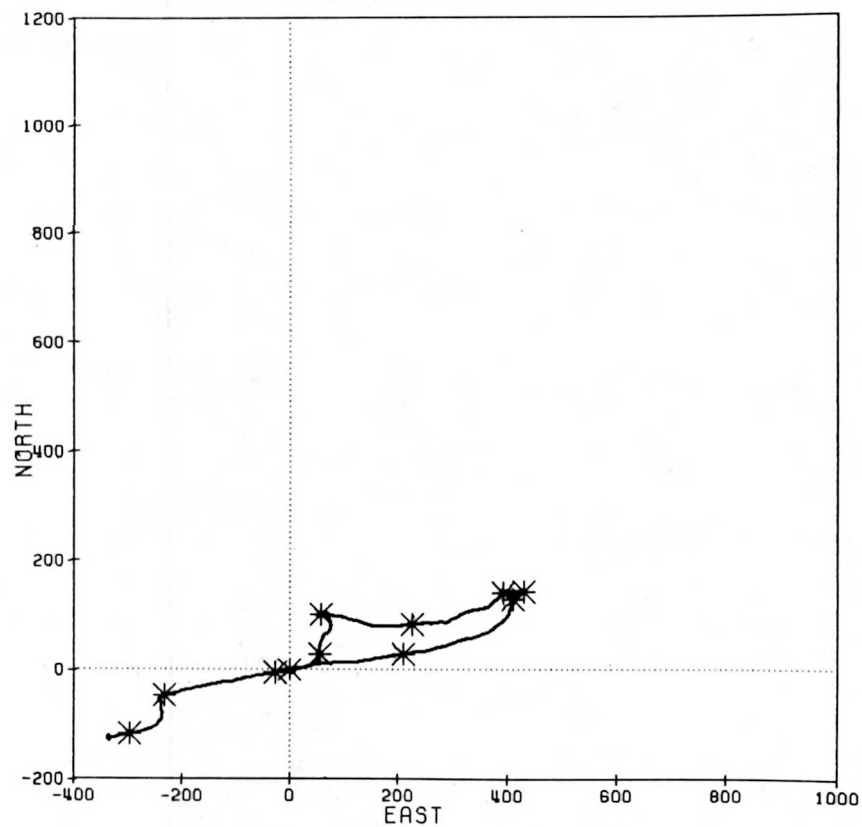
PROGRESSIVE VECTOR DIAGRAM

0TEC/2-1687

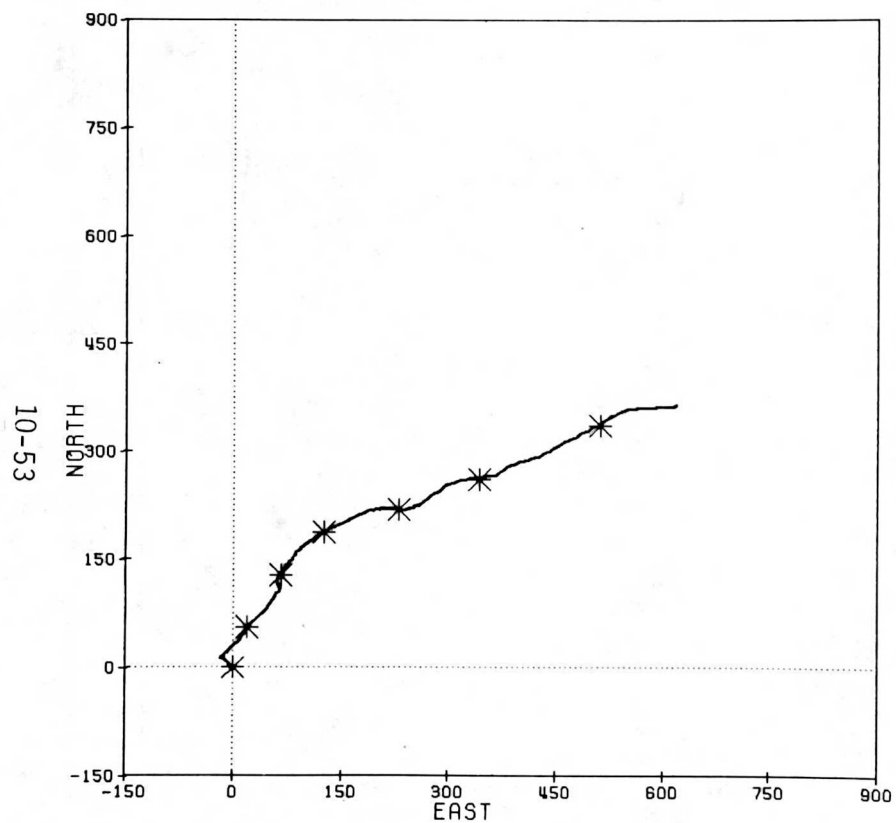
95 M. IN 1047 M.

SYMBOLS EVERY 10 DAYS

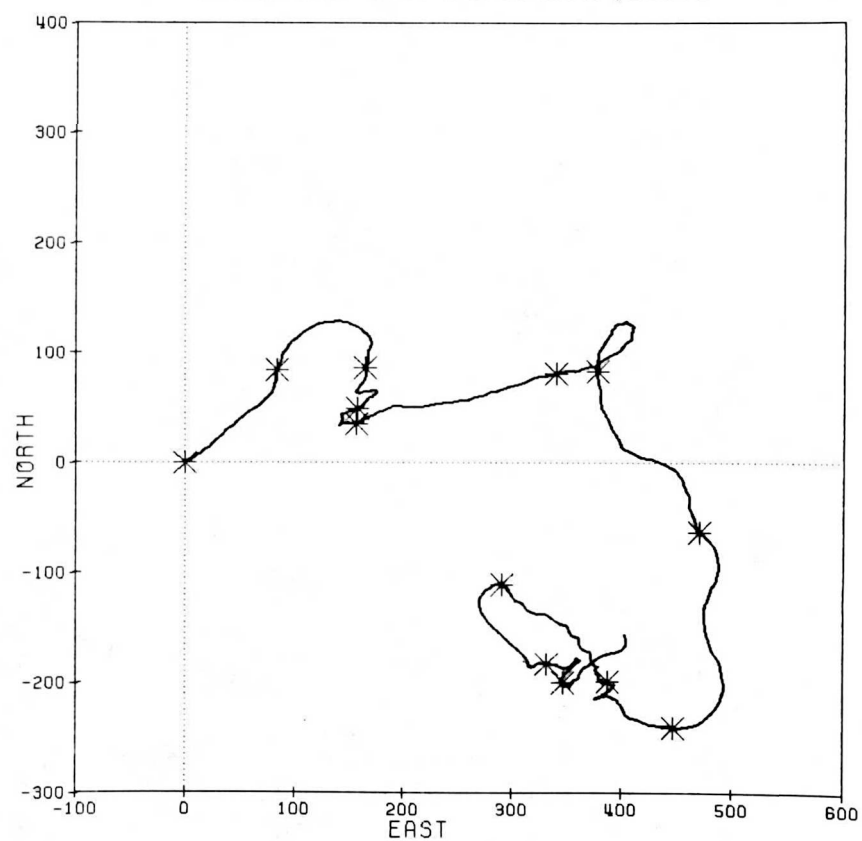
BEGINNING 1978 FEB27 (058), 0009Z



PROGRESSIVE VECTOR DIAGRAM
 0TEC 2-320
 70 M. IN 1033 M.
 SYMBOLS EVERY 10 DAYS
 BEGINNING 1978 JUN17 (168), 2359Z



PROGRESSIVE VECTOR DIAGRAM
 1453/2
 190 M. IN 1047 M.
 SYMBOLS EVERY 10 DAYS
 BEGINNING 1977 OCT19 (292), 2359Z



PROGRESSIVE VECTOR DIAGRAM

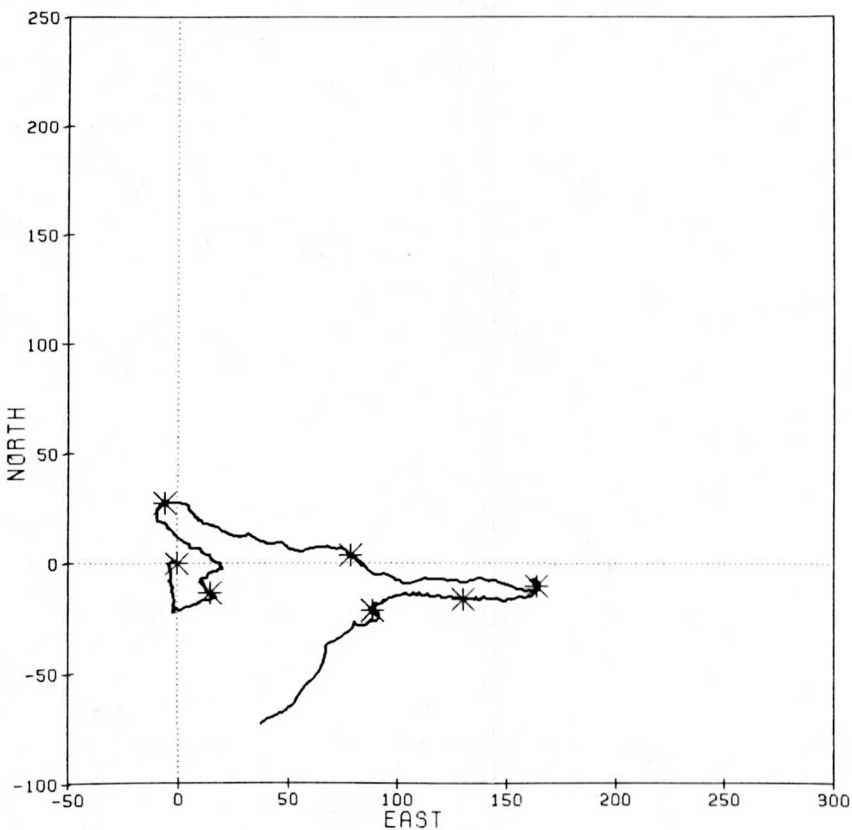
0TEC/2-1686

190 M. IN 1047 M.

SYMBOLS EVERY 10 DAYS

BEGINNING 1978 FEB27(058),0009Z

10-54



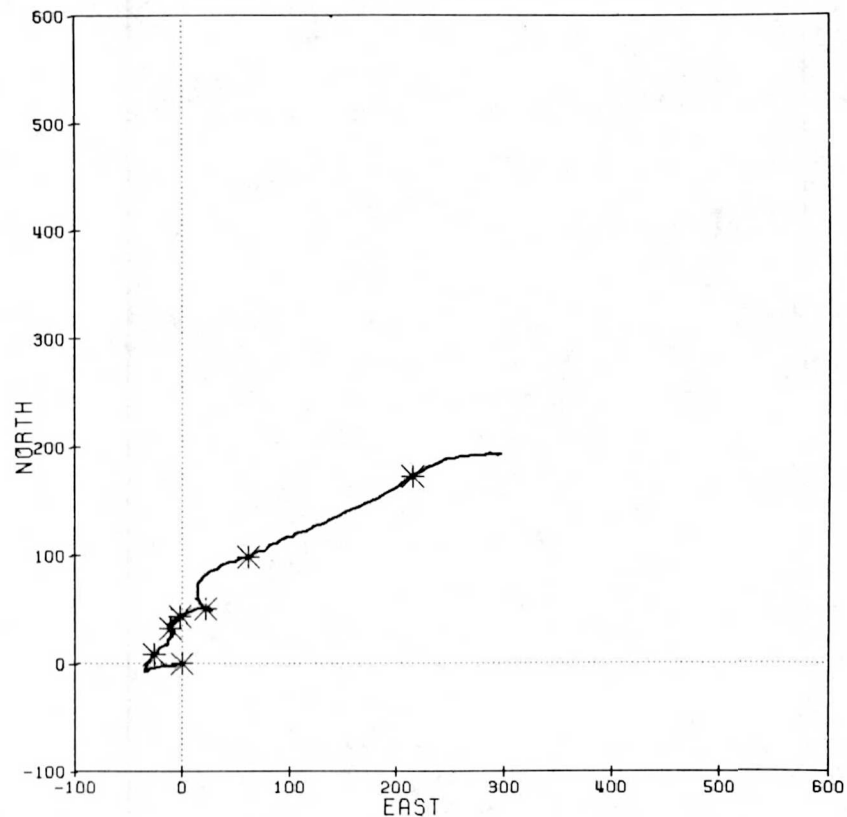
PROGRESSIVE VECTOR DIAGRAM

0TEC 2-3195

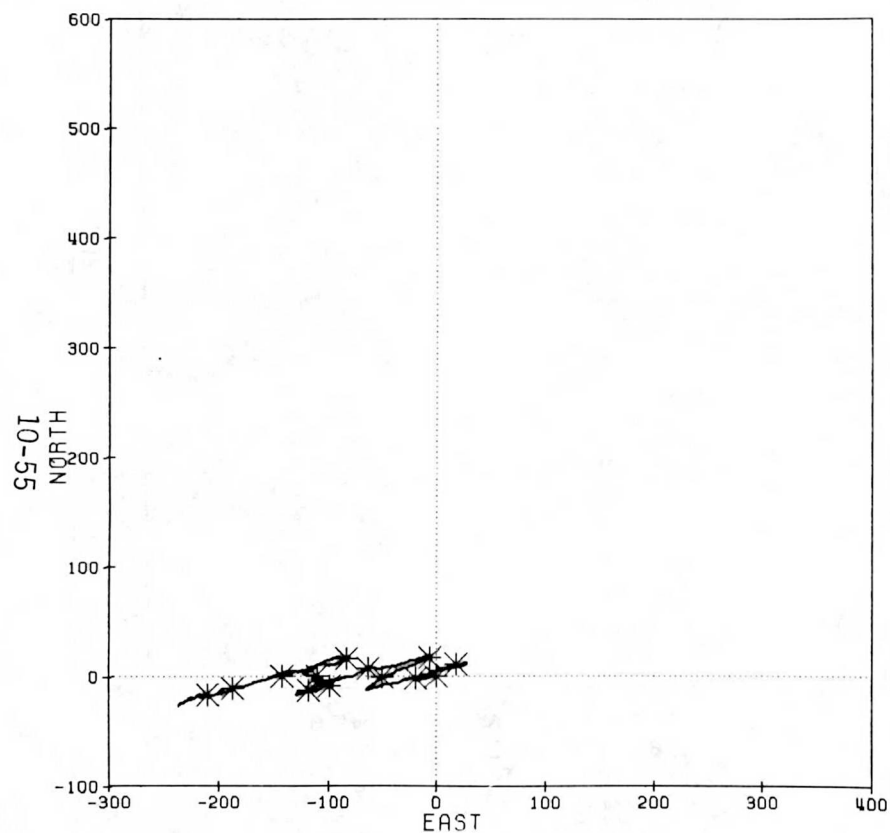
168 M. IN 1033 M.

SYMBOLS EVERY 10 DAYS

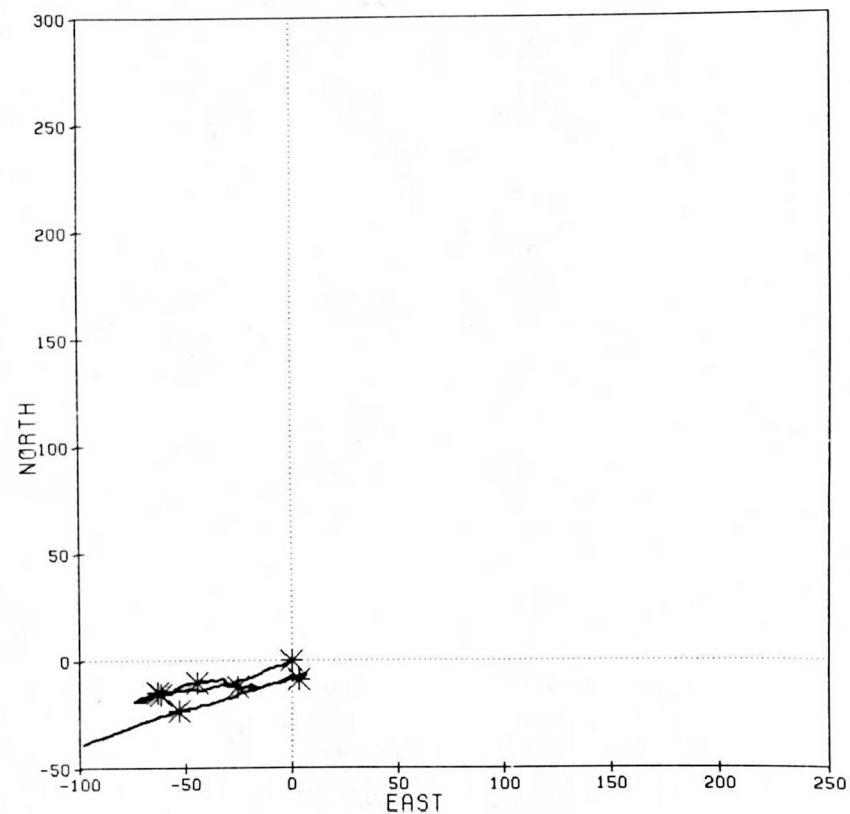
BEGINNING 1978 JUN17(168),2359Z



PROGRESSIVE VECTOR DIAGRAM
 614/2
 985 M. IN 1047 M.
 SYMBOLS EVERY 10 DAYS
 BEGINNING 1977 OCT18 (291), 2359Z

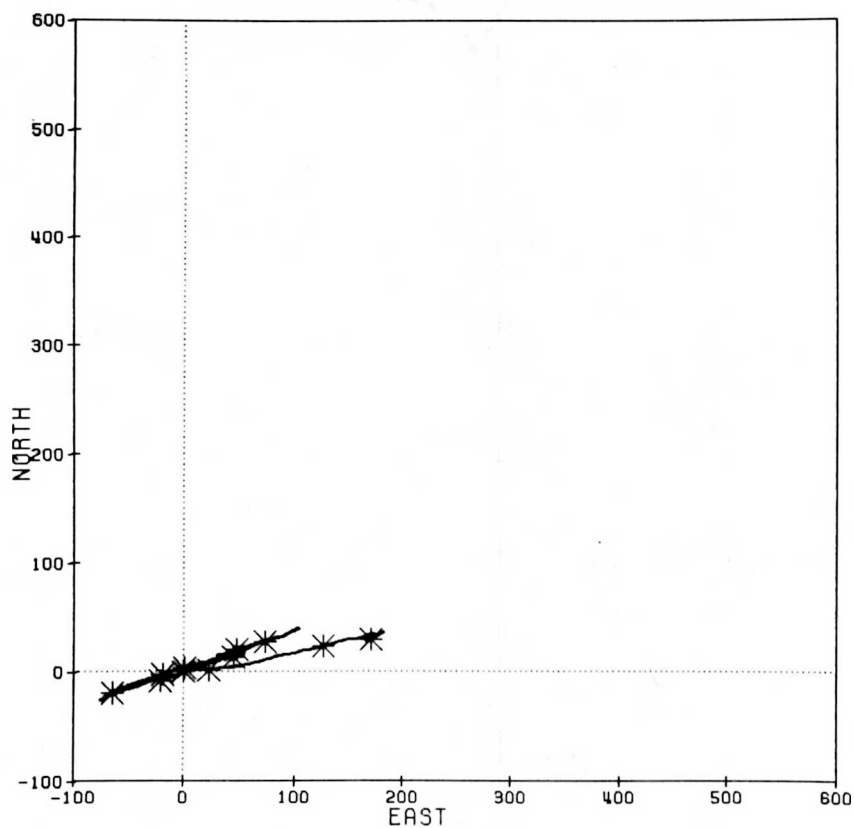


PROGRESSIVE VECTOR DIAGRAM
 0TEC 2-612
 970 M. IN 1033 M.
 SYMBOLS EVERY 10 DAYS
 BEGINNING 1978 JUN17 (168), 2359Z

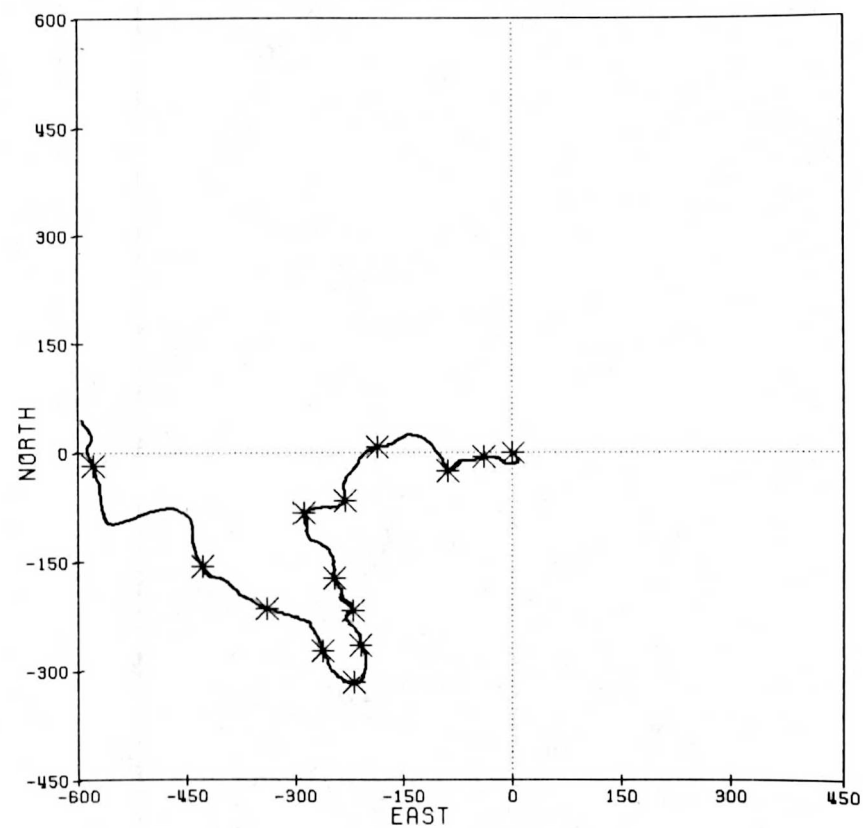


PROGRESSIVE VECTOR DIAGRAM
 OTEC/2-613
 985 M. IN 1047 M.
 SYMBOLS EVERY 10 DAYS
 BEGINNING 1978 FEB27(058),0009Z

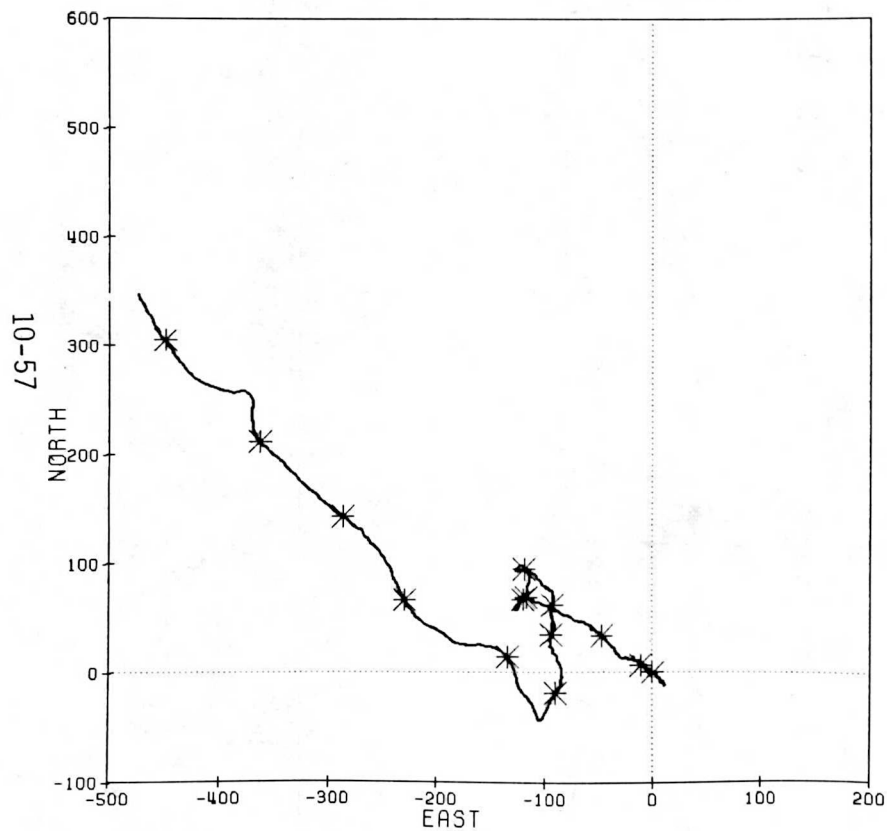
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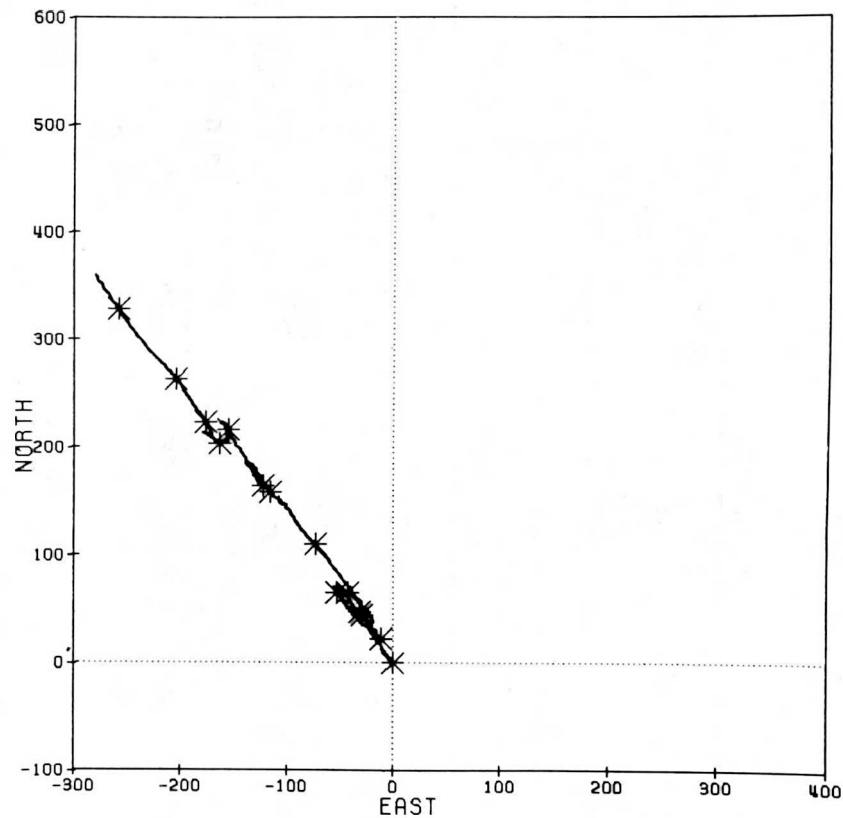
PROGRESSIVE VECTOR DIAGRAM
 OTEC TAMPA-3283
 153 M. IN 1033 M.
 SYMBOLS EVERY 10 DAYS
 BEGINNING 1978 JUN12(163),2359Z

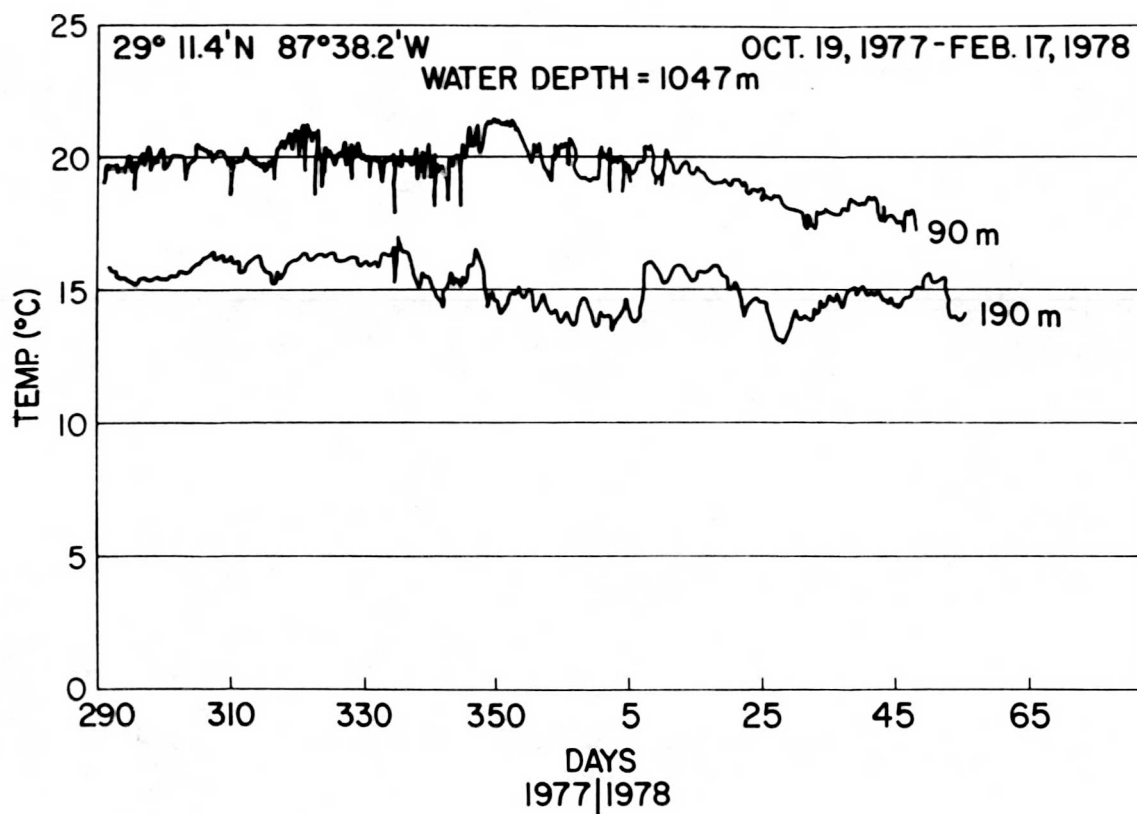
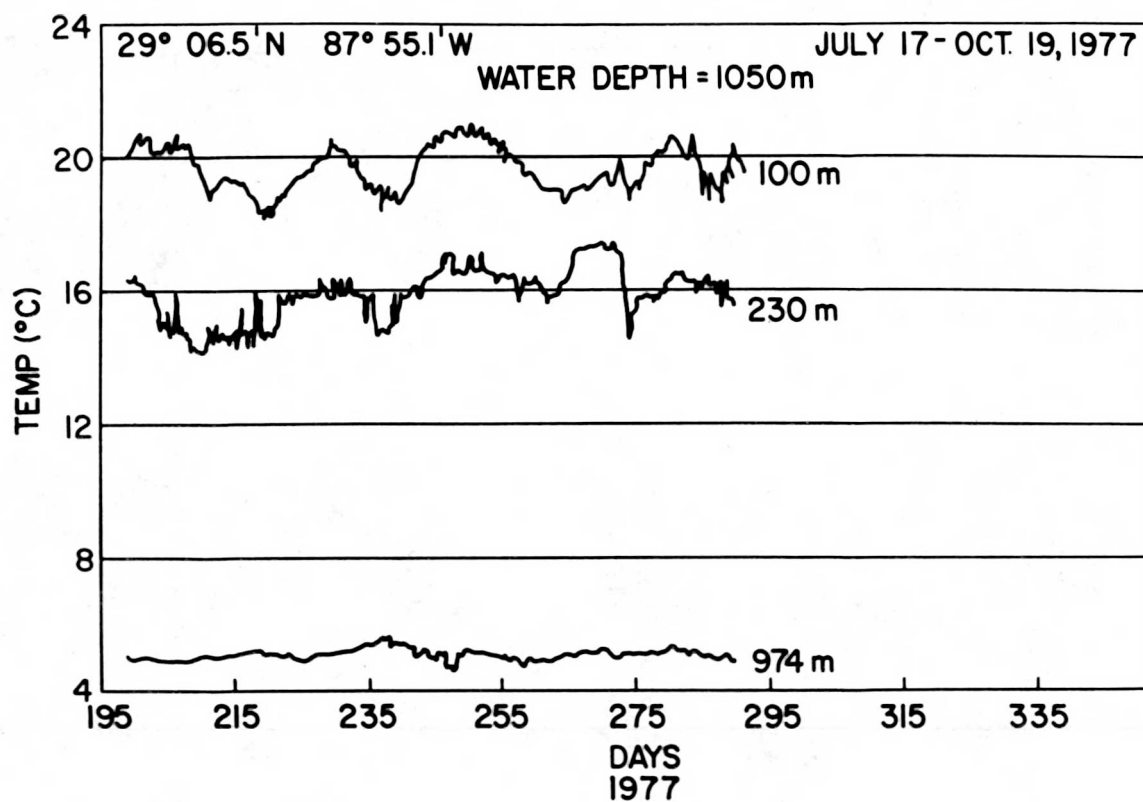


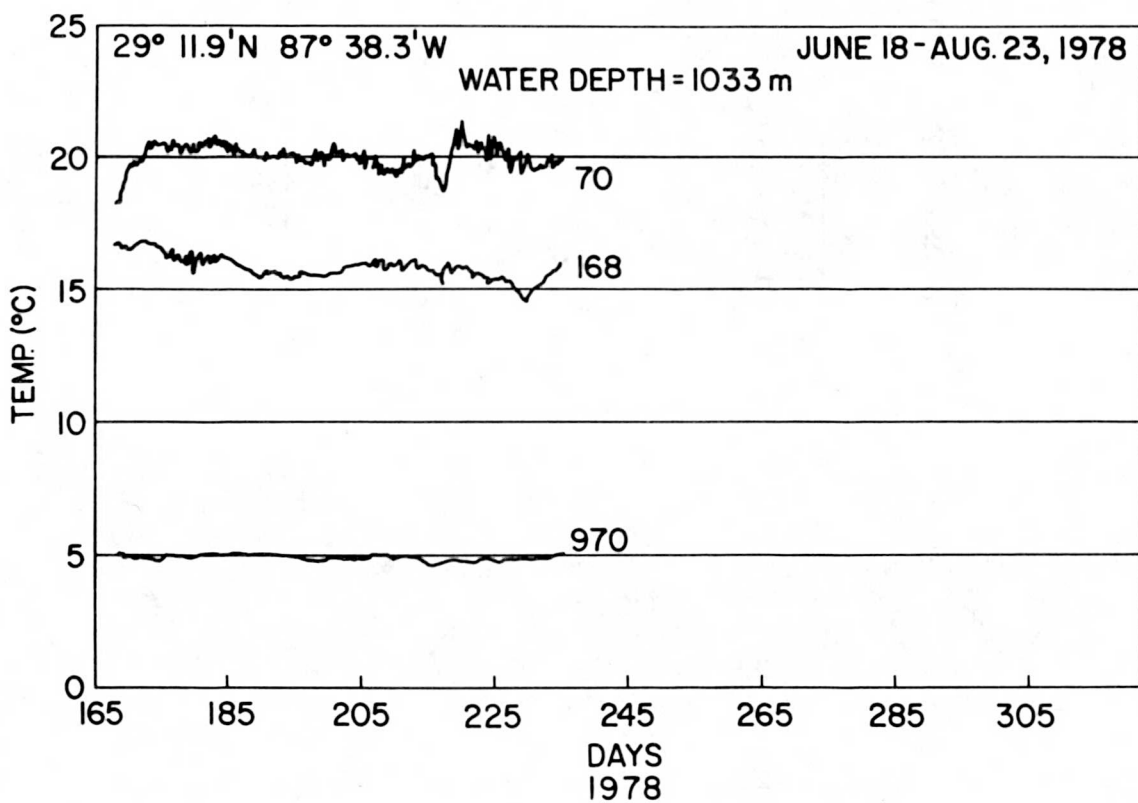
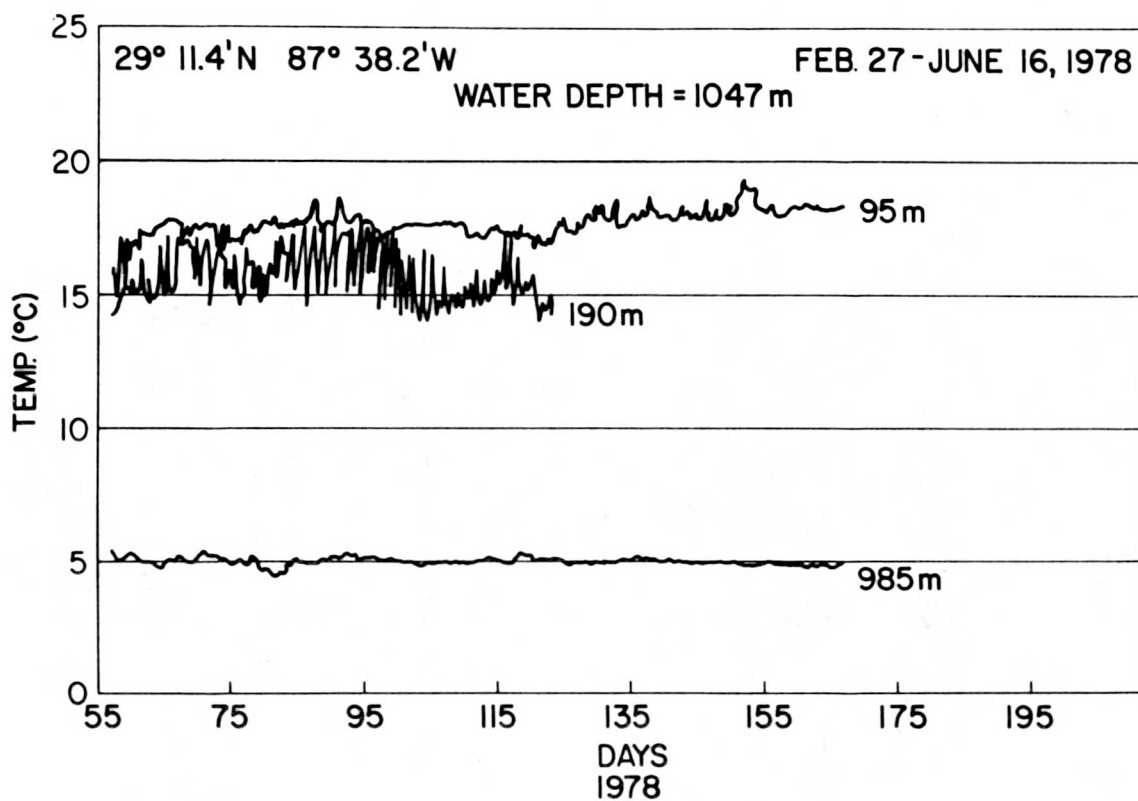
PROGRESSIVE VECTOR DIAGRAM
 OTEC TAMPA-3202
 549 M. IN 1033 M.
 SYMBOLS EVERY 10 DAYS
 BEGINNING 1978 JUN12 (163), 2359Z



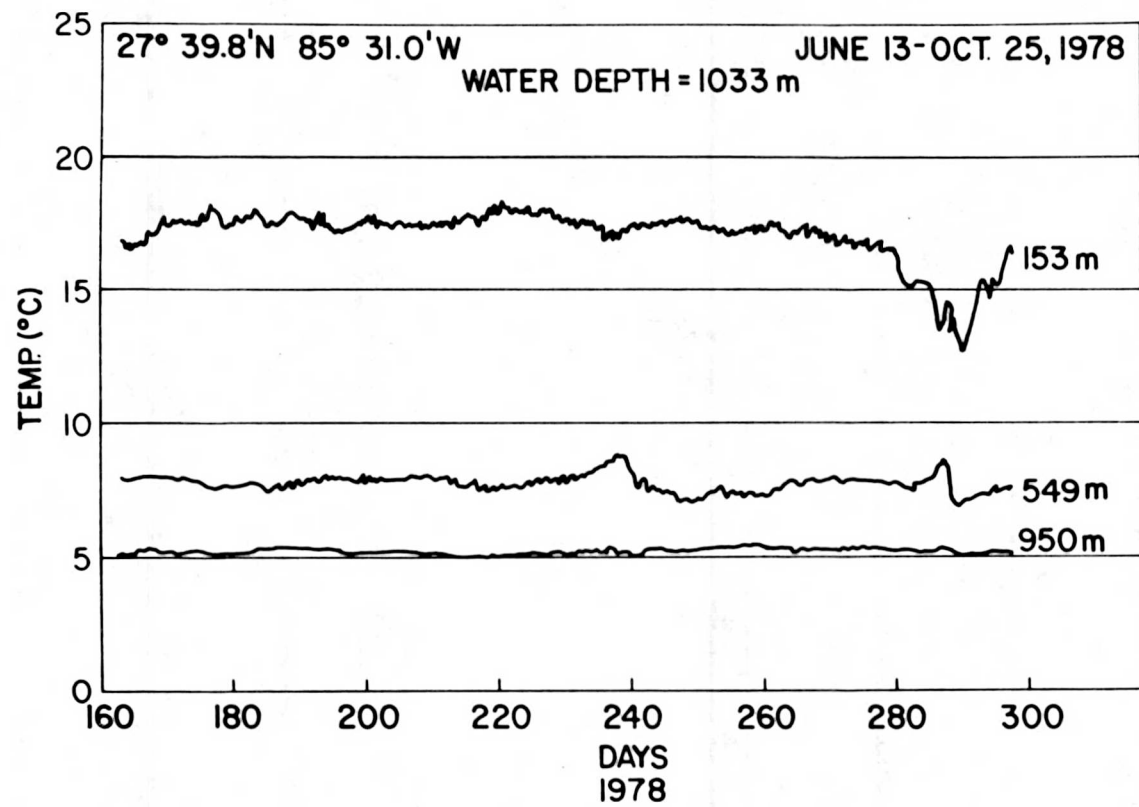
PROGRESSIVE VECTOR DIAGRAM
 OTEC TAMPA-3200
 950 M. IN 1033 M.
 SYMBOLS EVERY 10 DAYS
 BEGINNING 1978 JUN12 (163), 2359Z





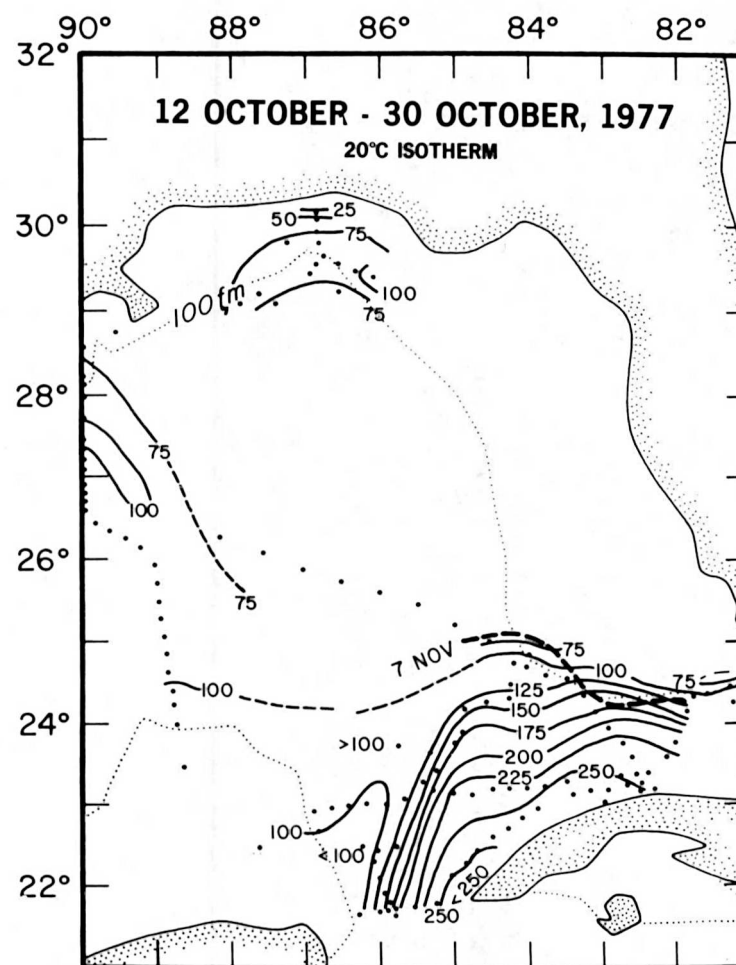
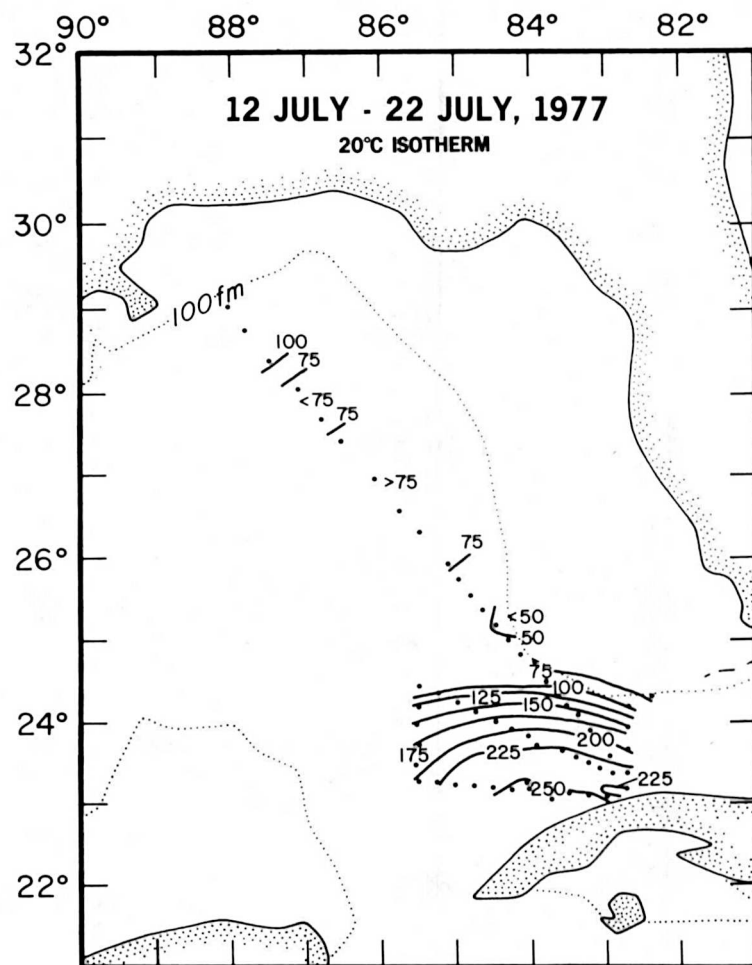


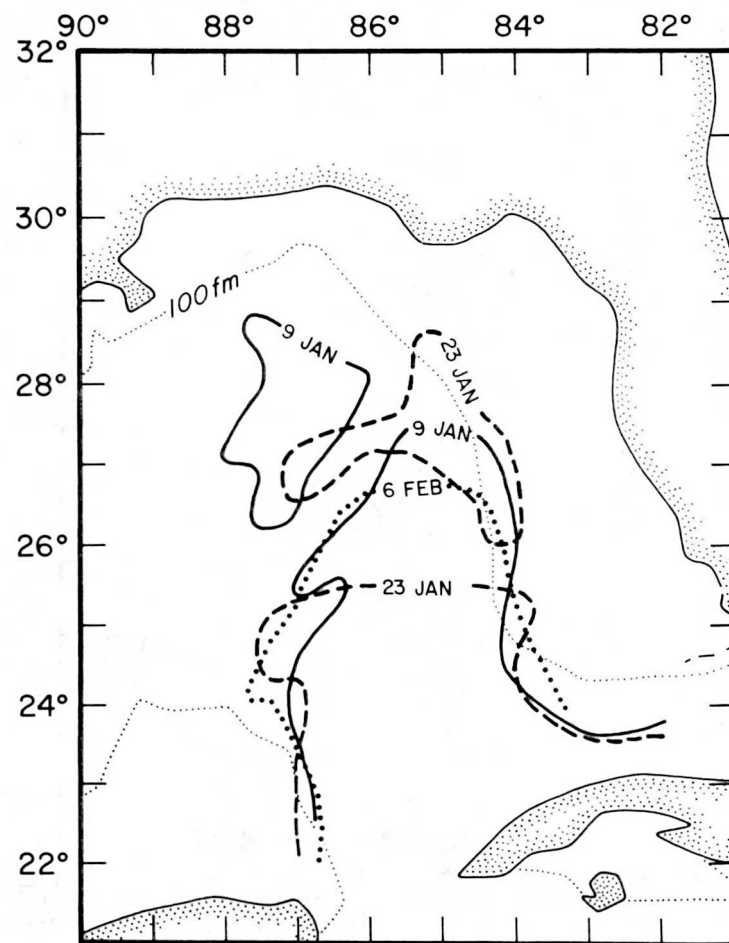
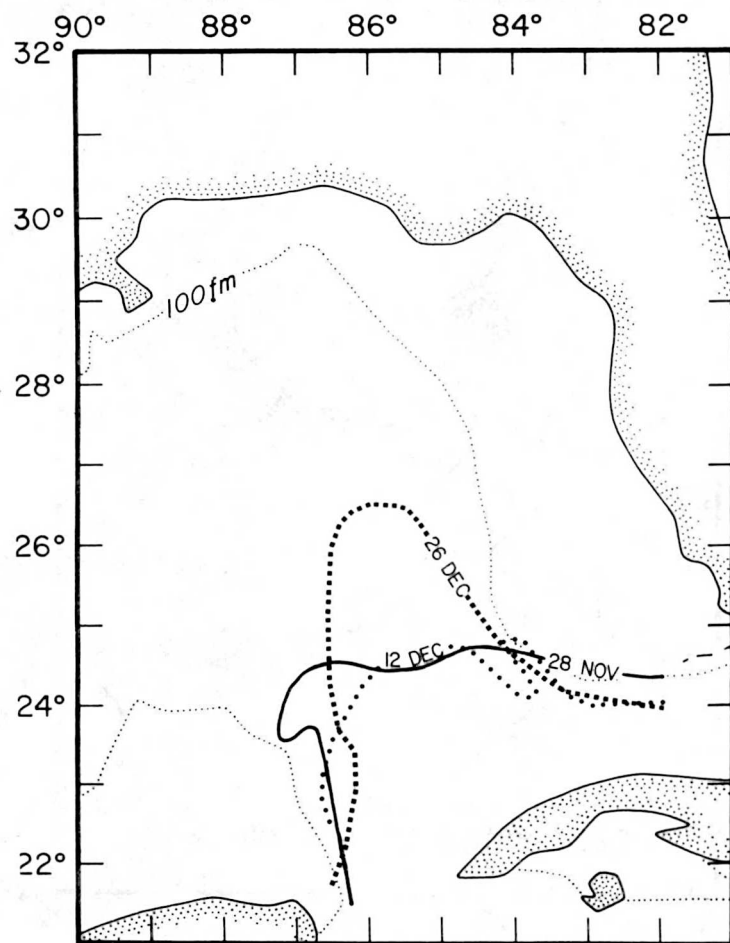
10-60

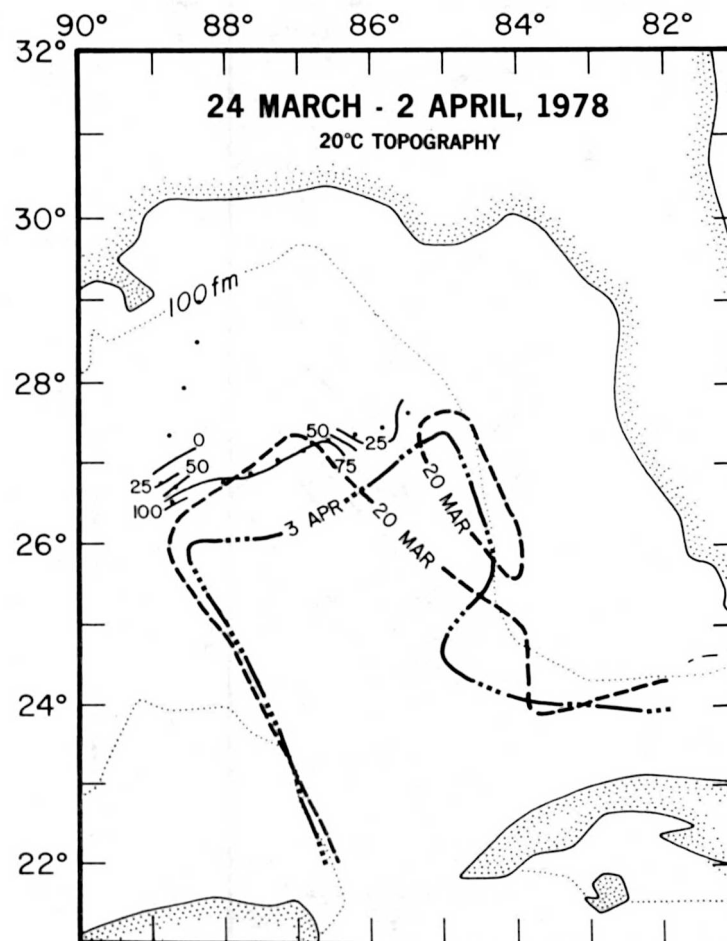
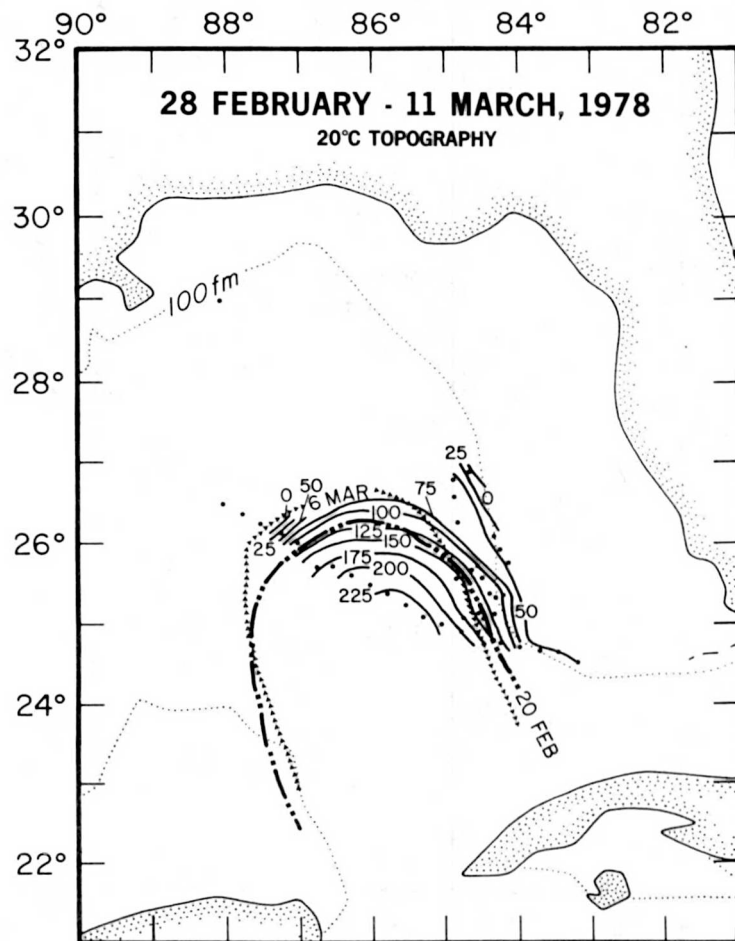


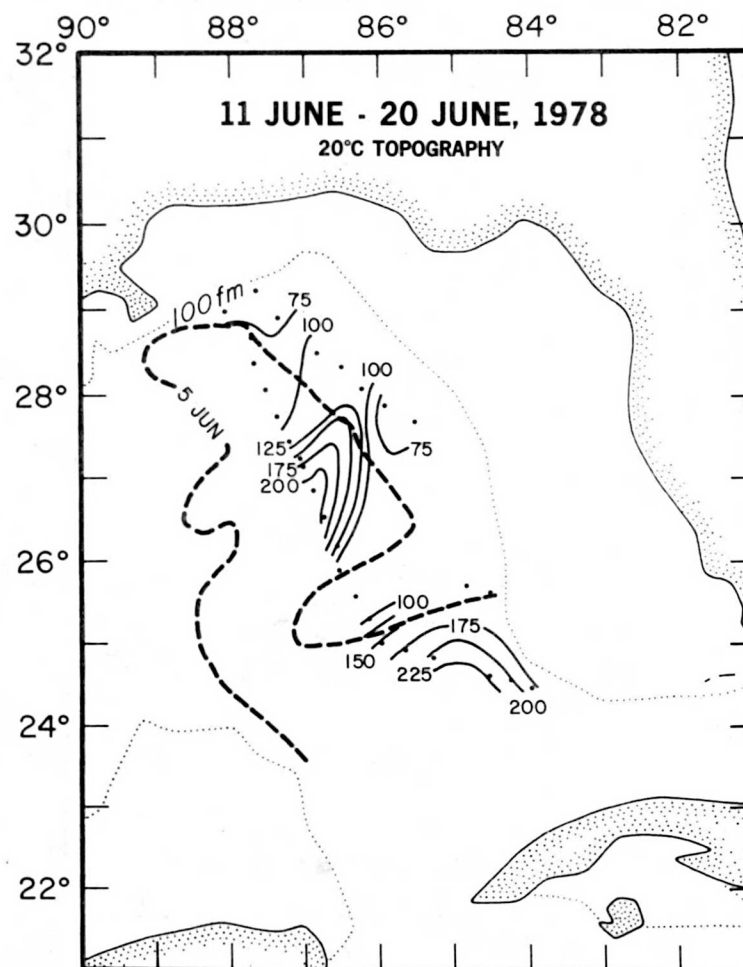
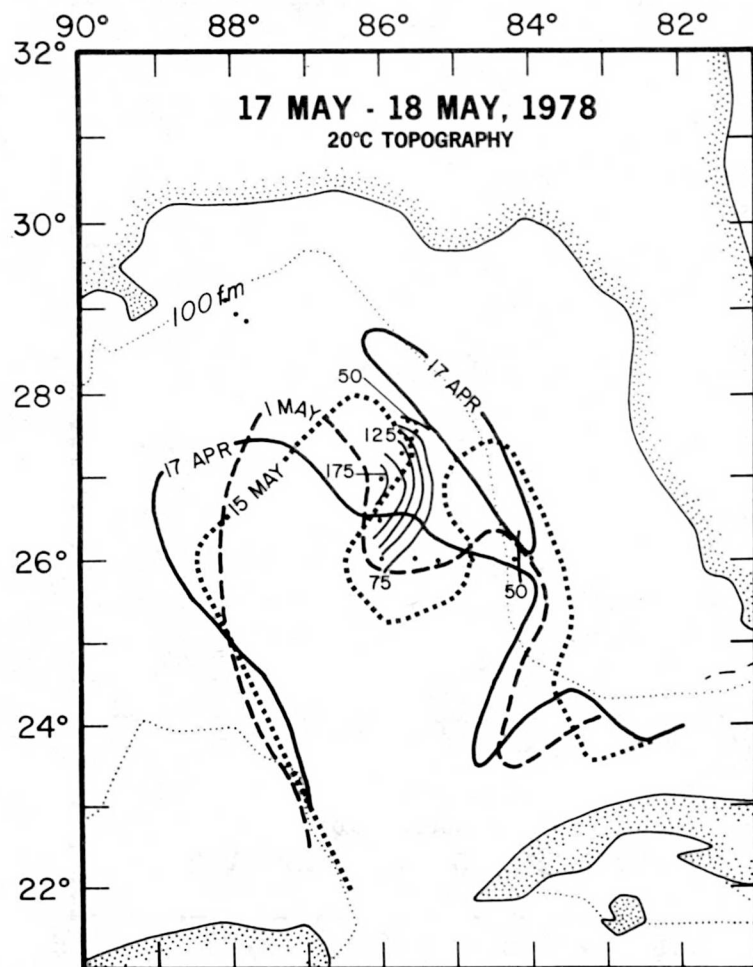
Appendix 11

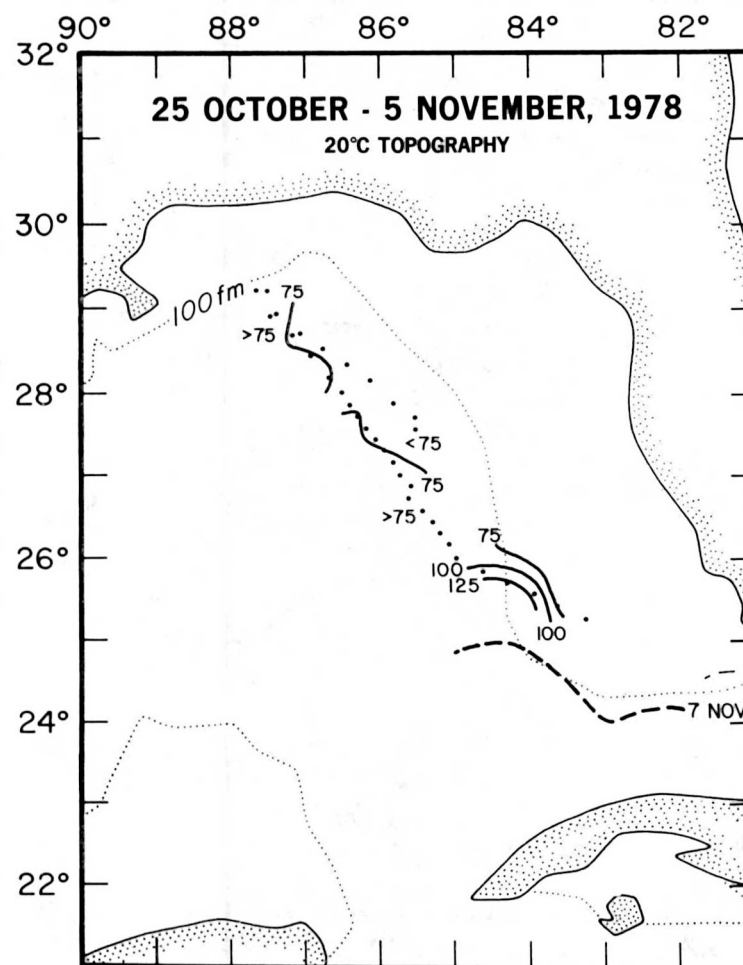
20° topographies and satellite derived Loop Current axes.
Several SST distributions are also given.

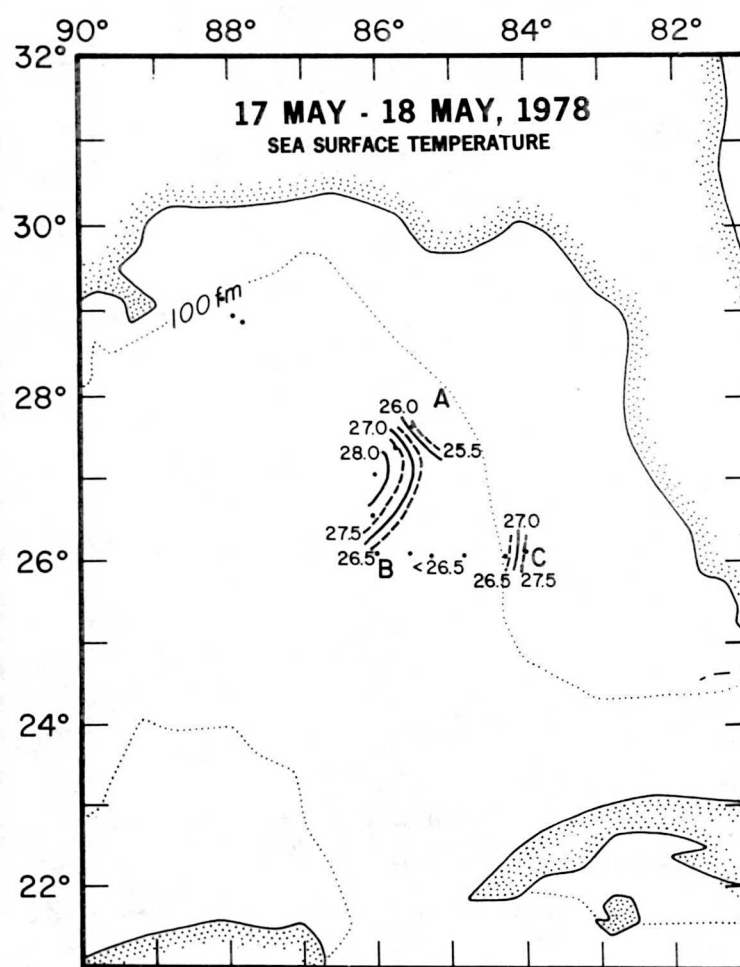
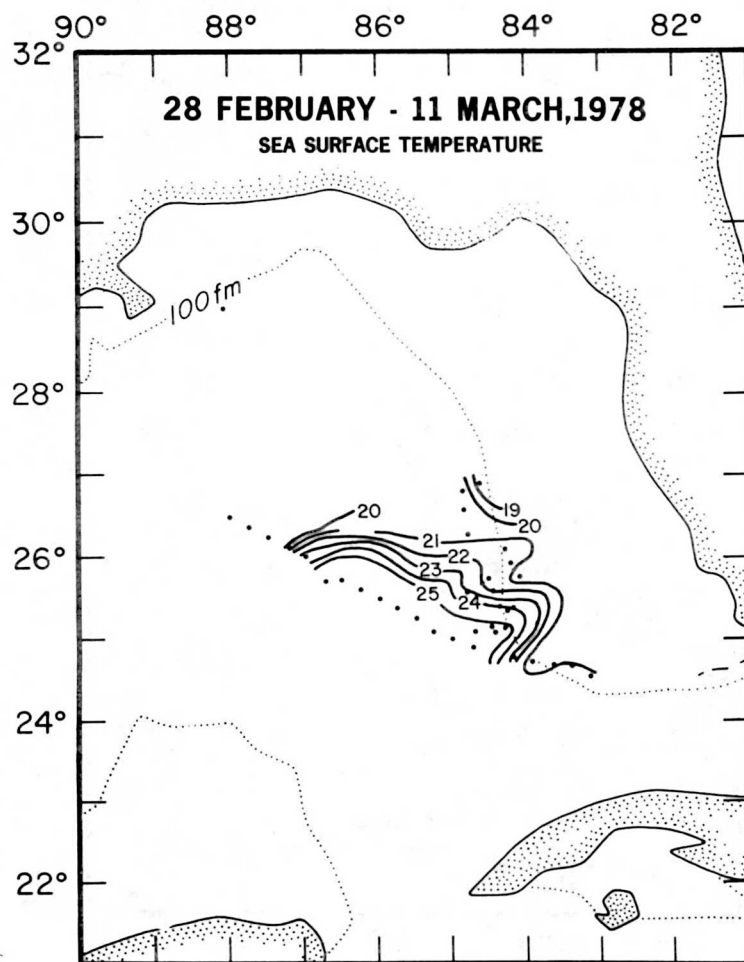


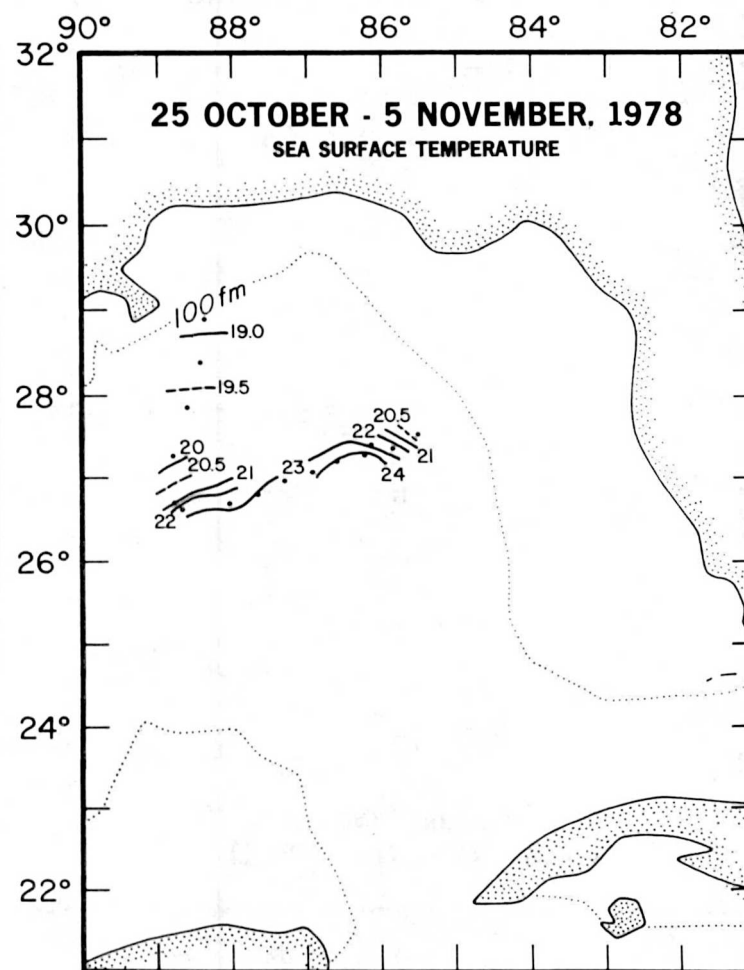
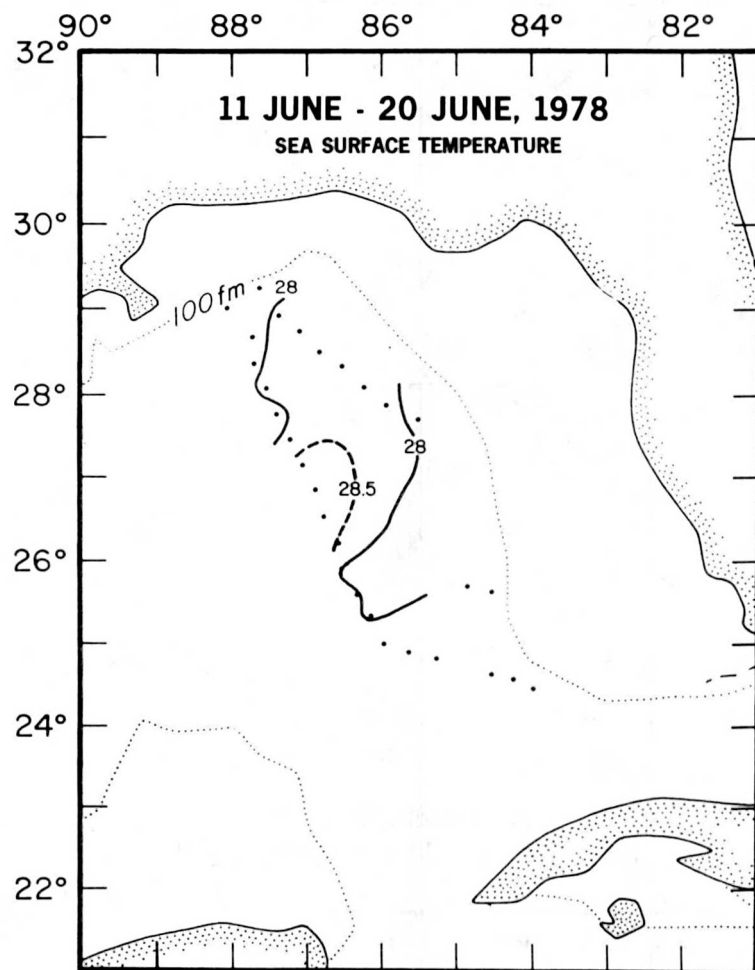






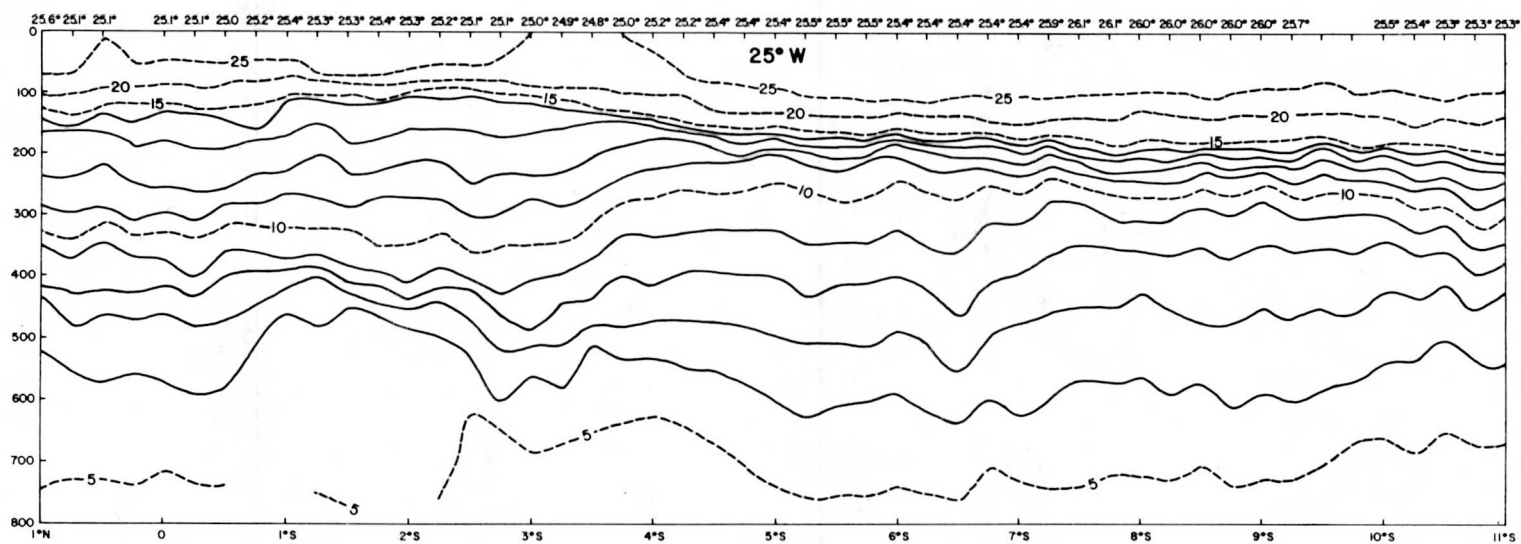




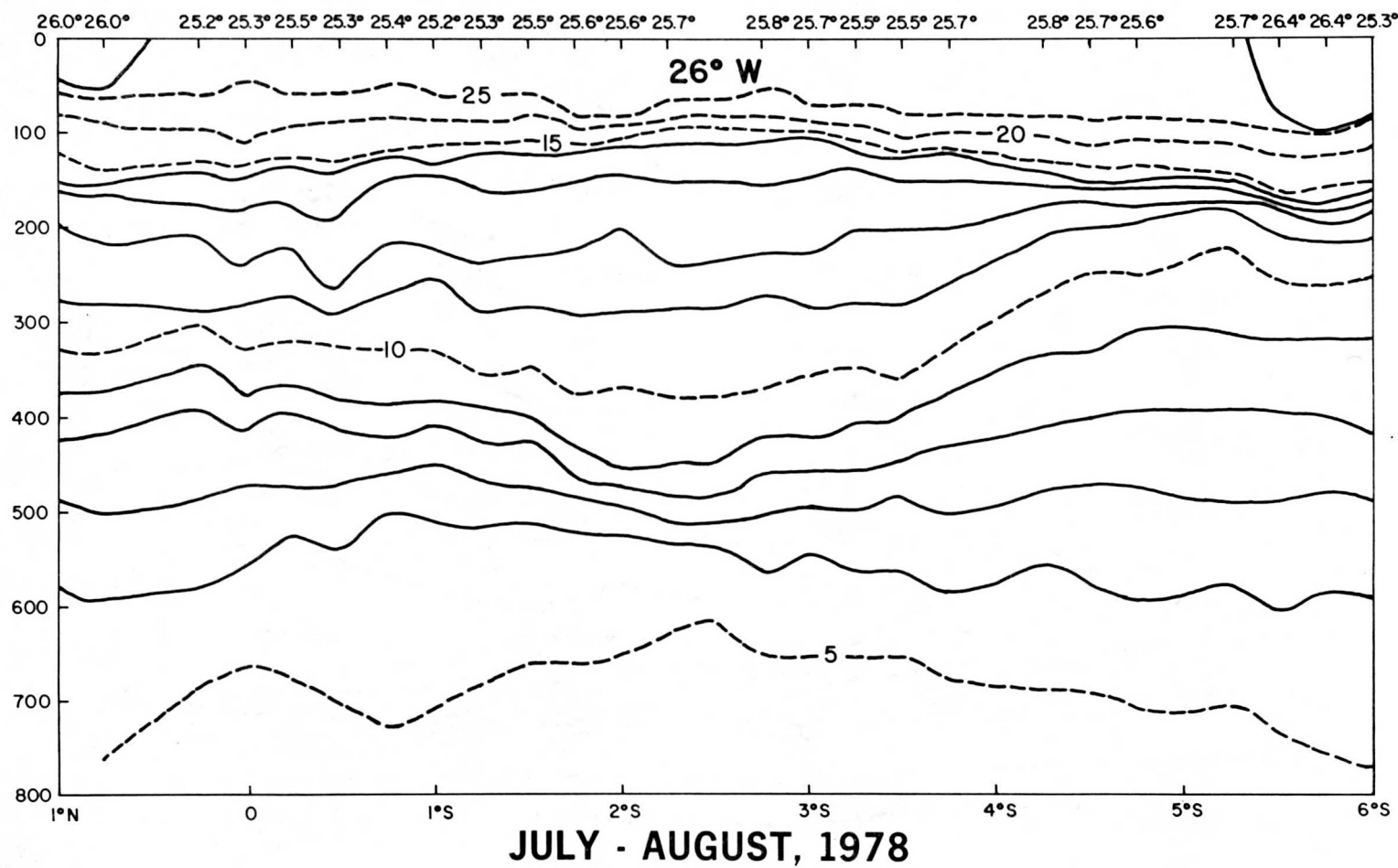


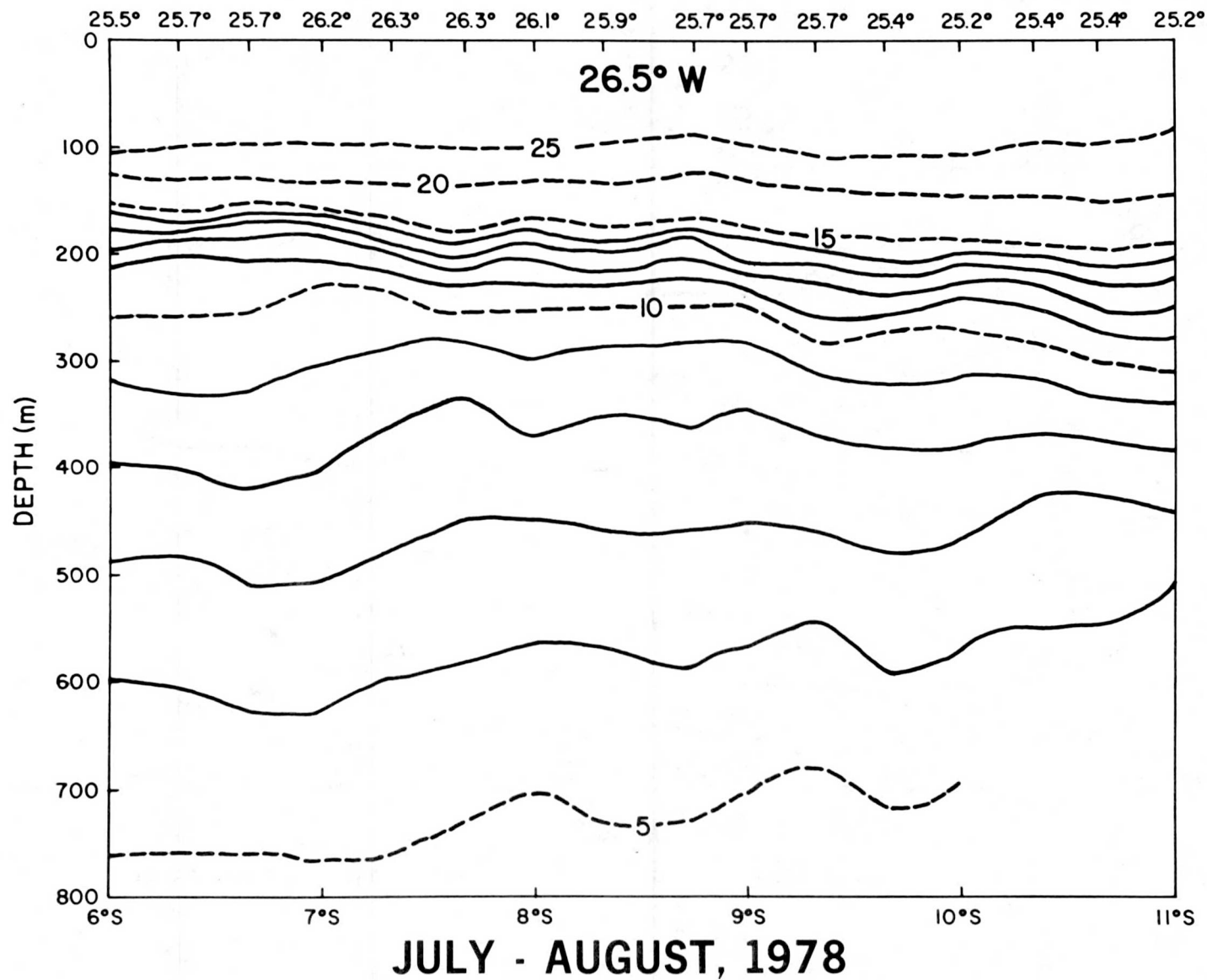
Appendix 12

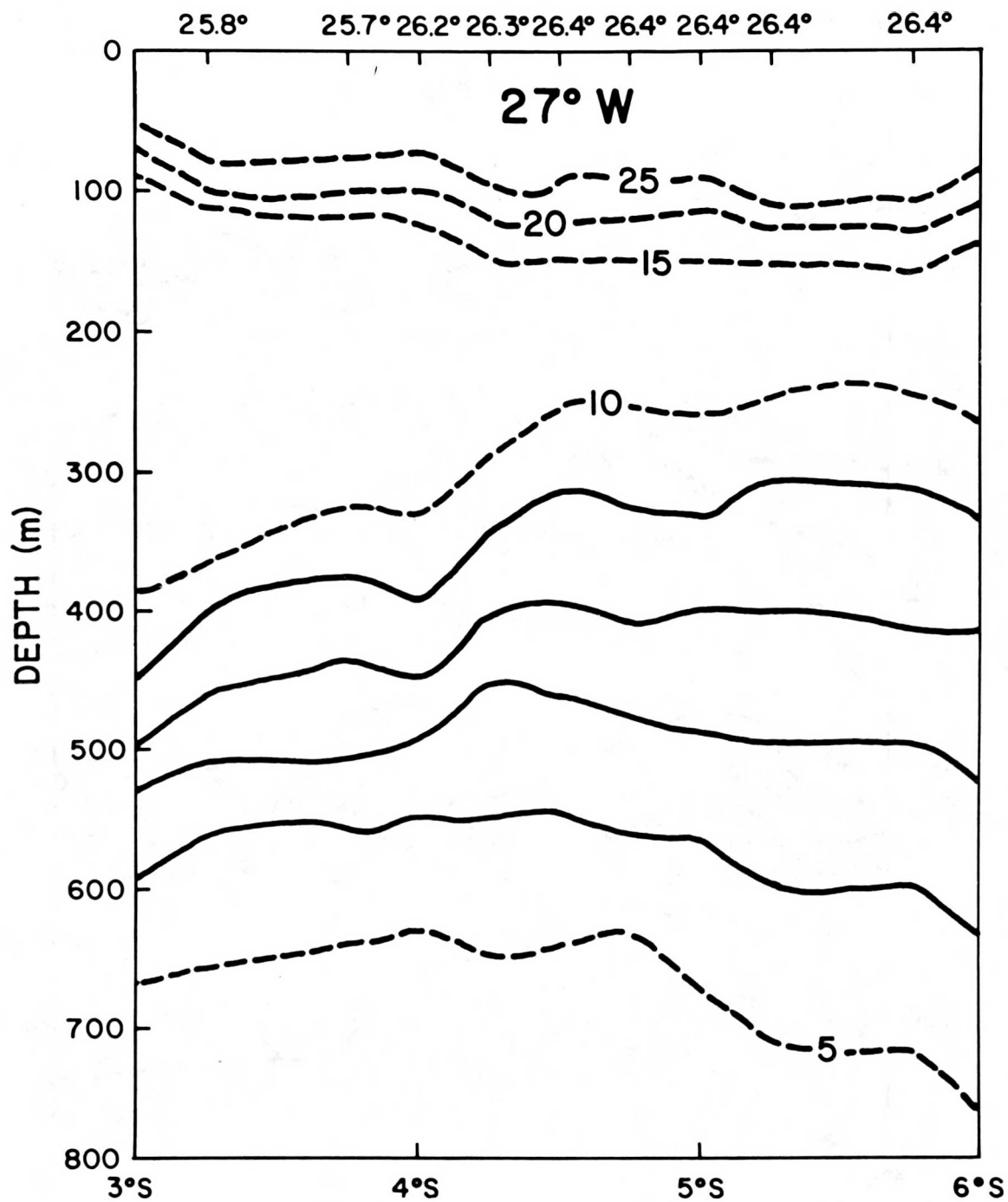
Vertical temperature sections and sections of geostrophic speed (ms^{-1}) computed relative to 900 m for data collected in the tropical South Atlantic. Shaded areas represent flow to the east.



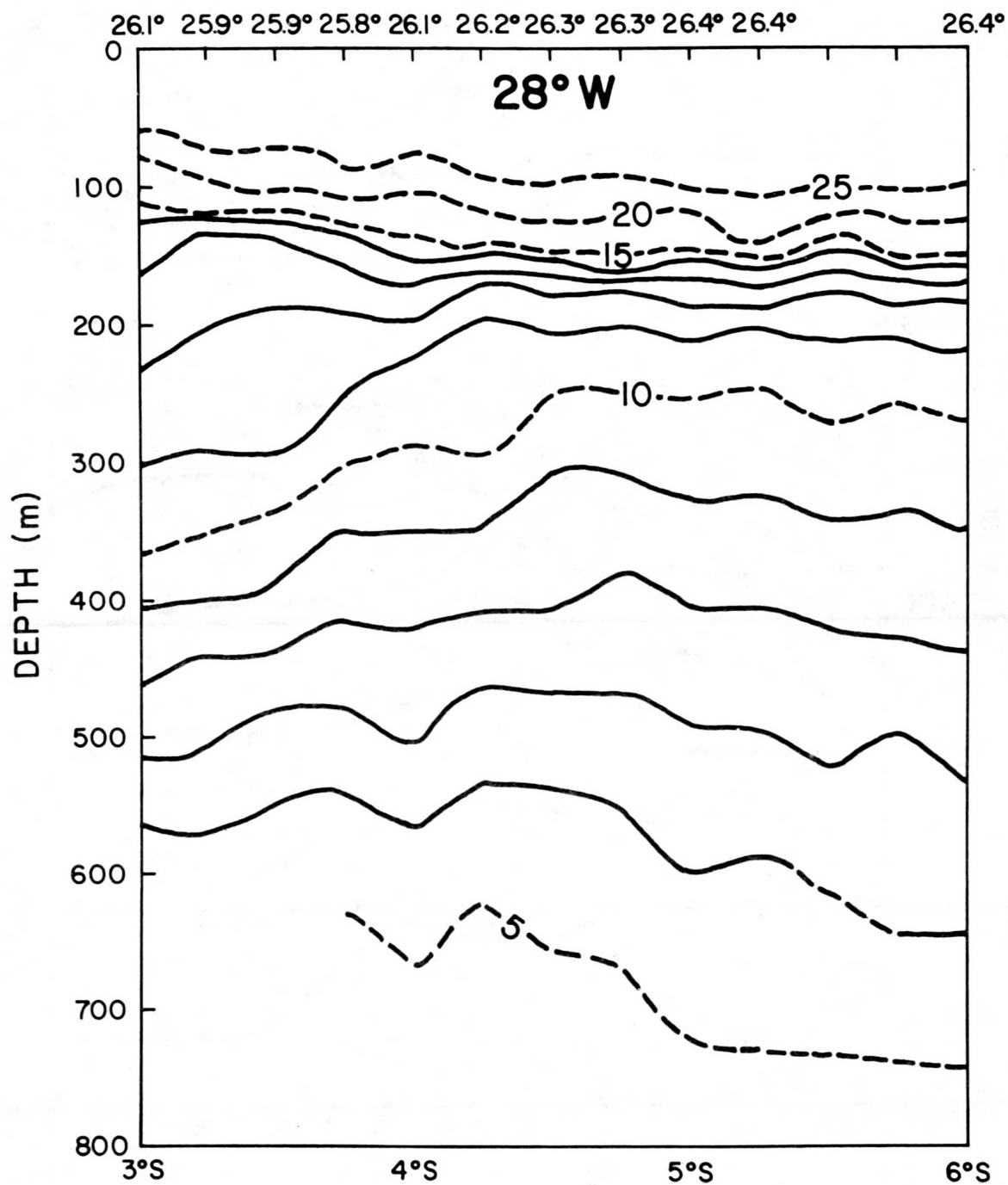
JULY - AUGUST, 1978



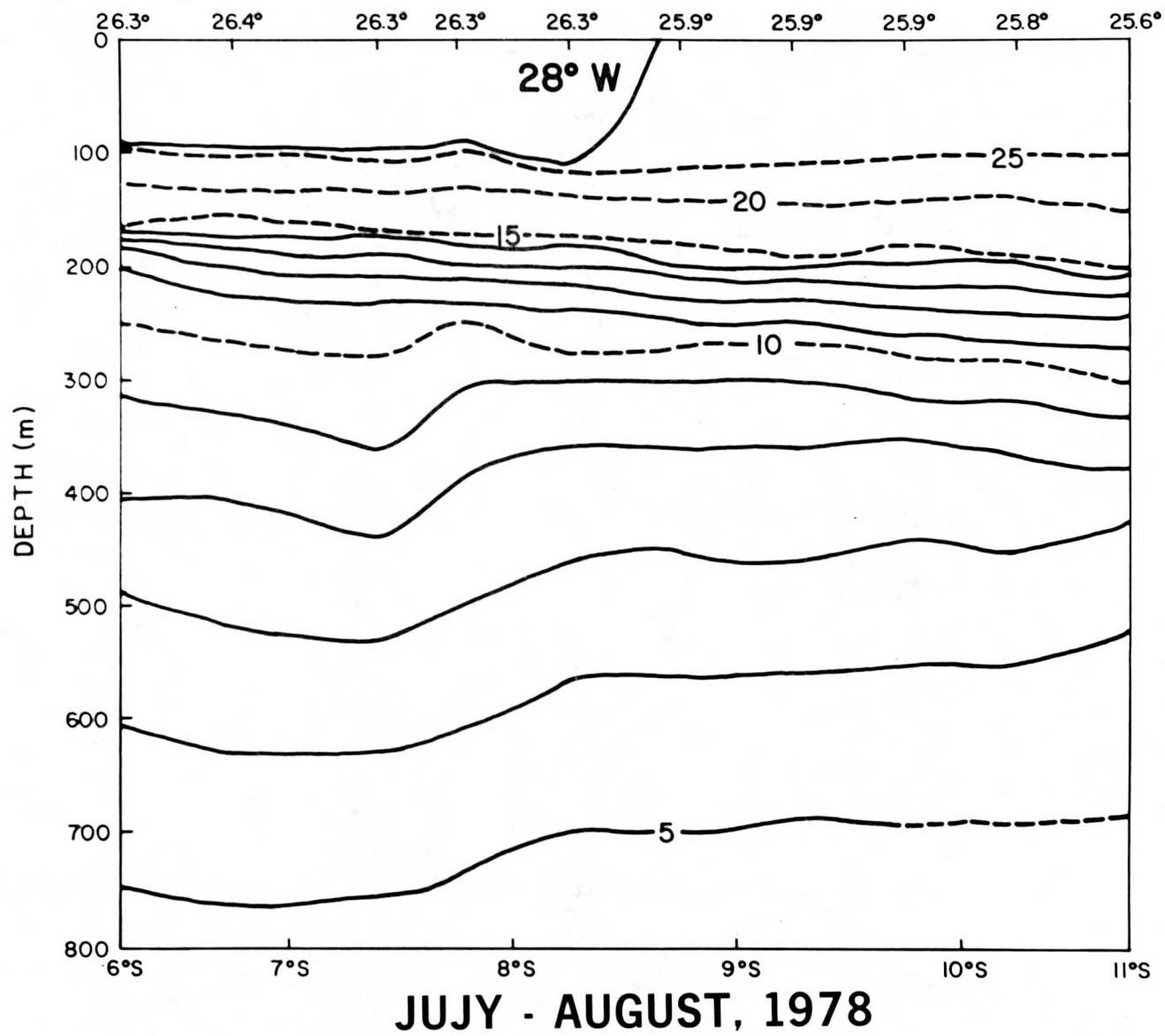


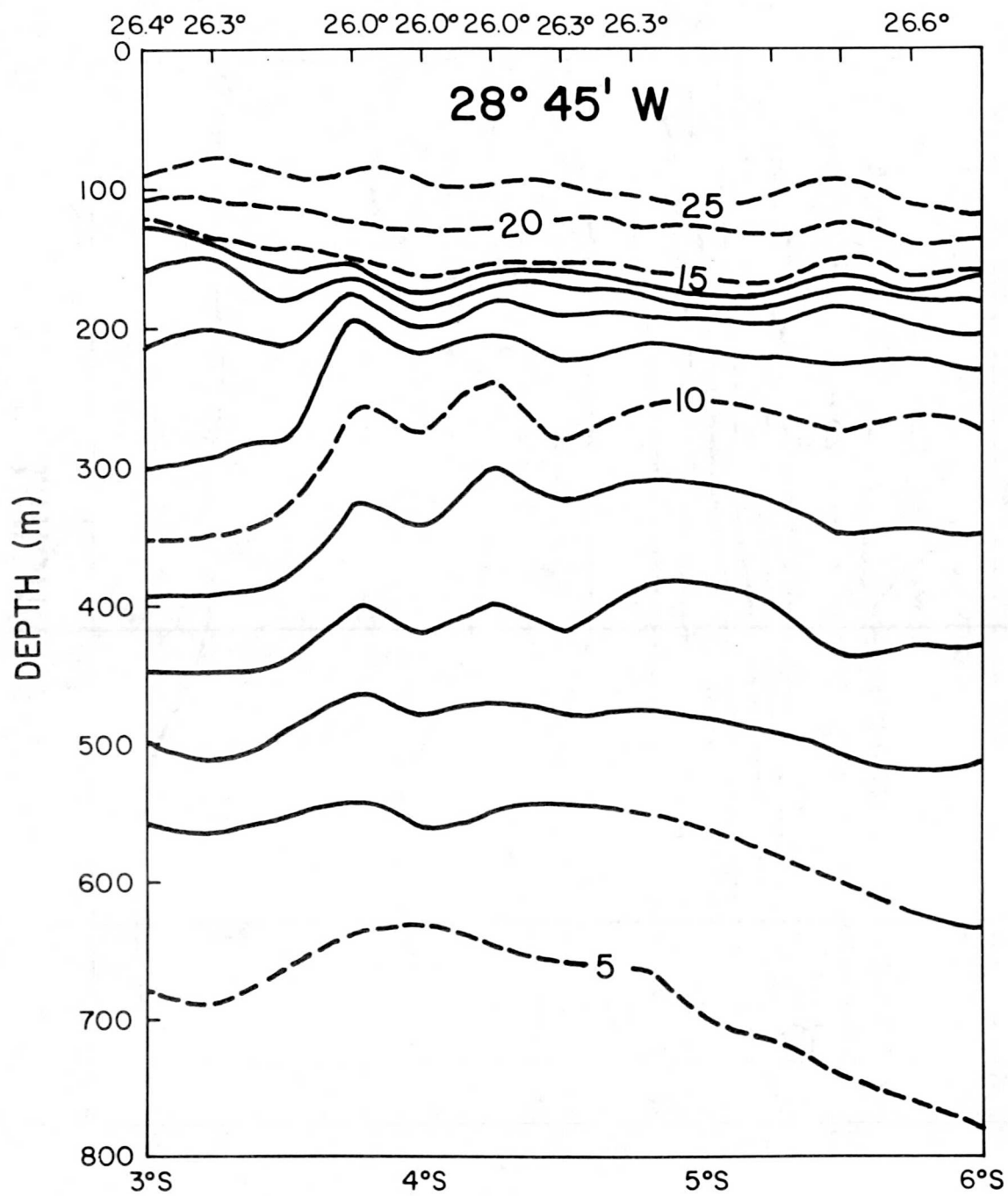


JULY - AUGUST, 1978

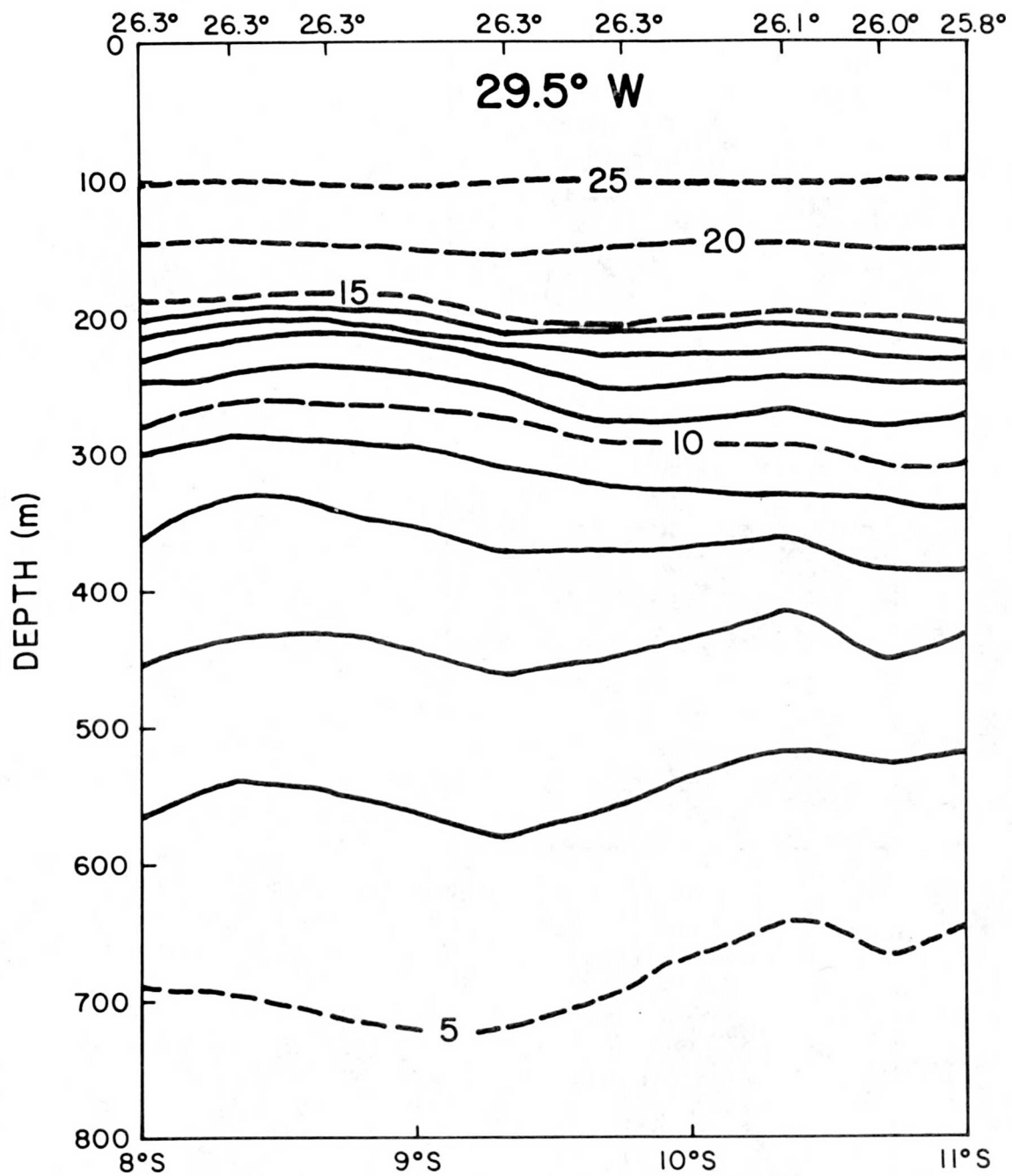


JULY - AUGUST, 1978

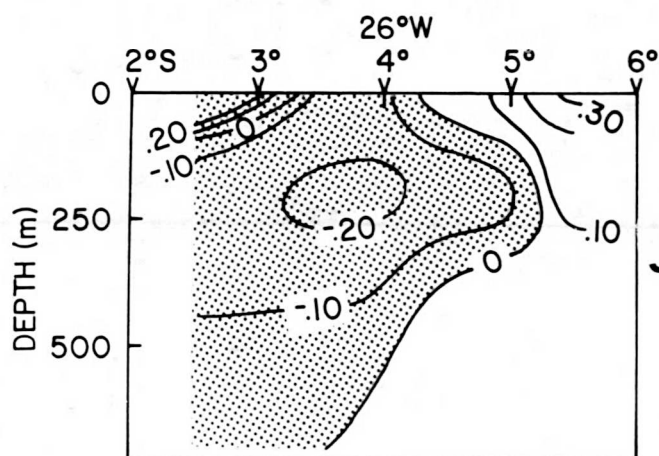
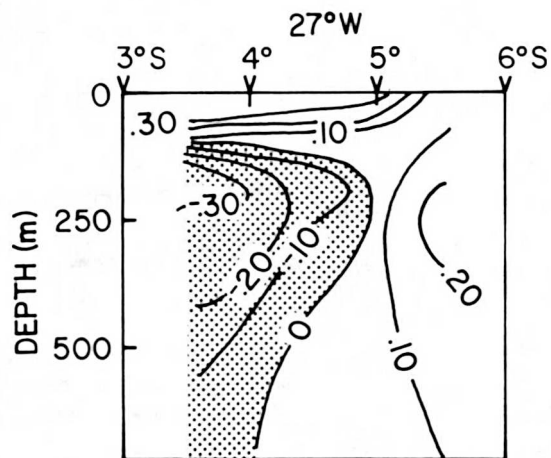




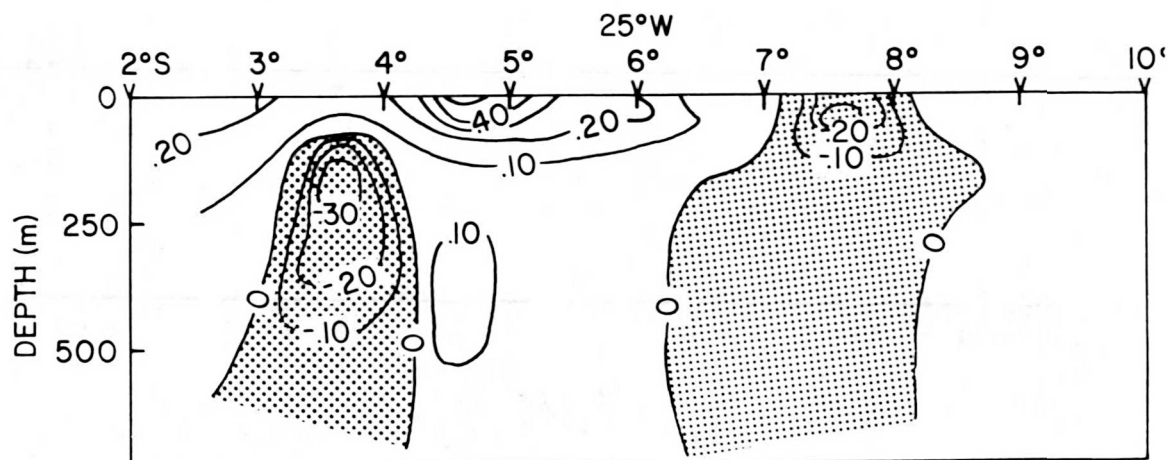
JULY - AUGUST, 1978

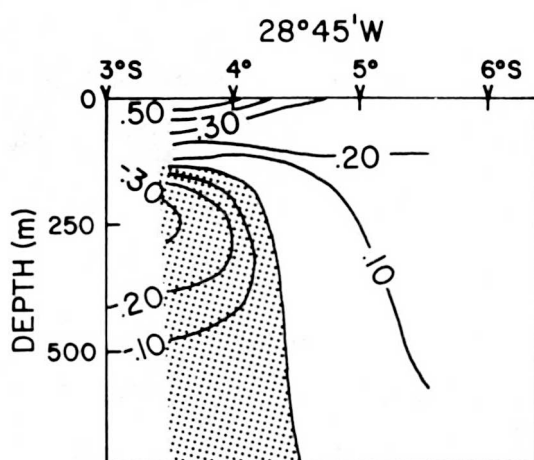
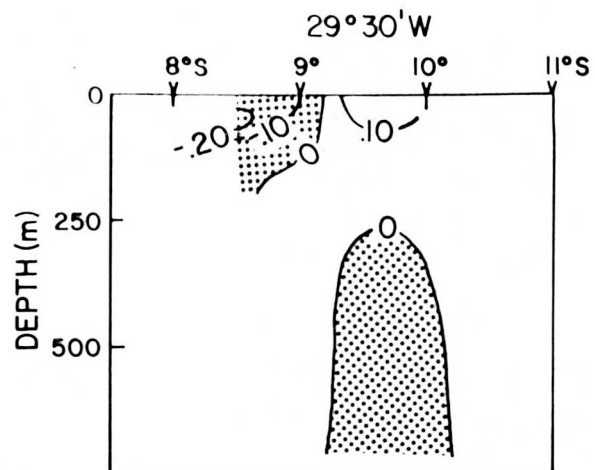


JULY - AUGUST, 1978

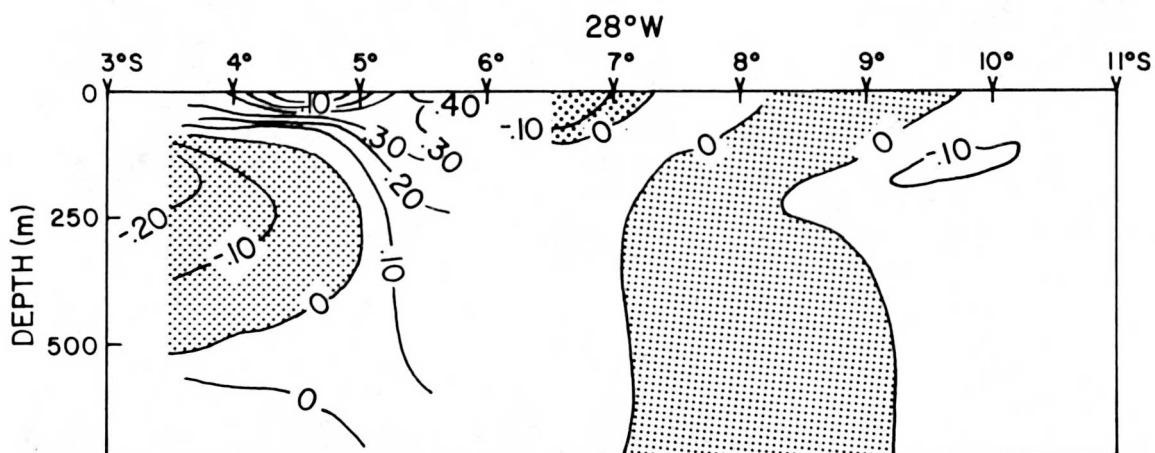


JULY - AUGUST, 1978



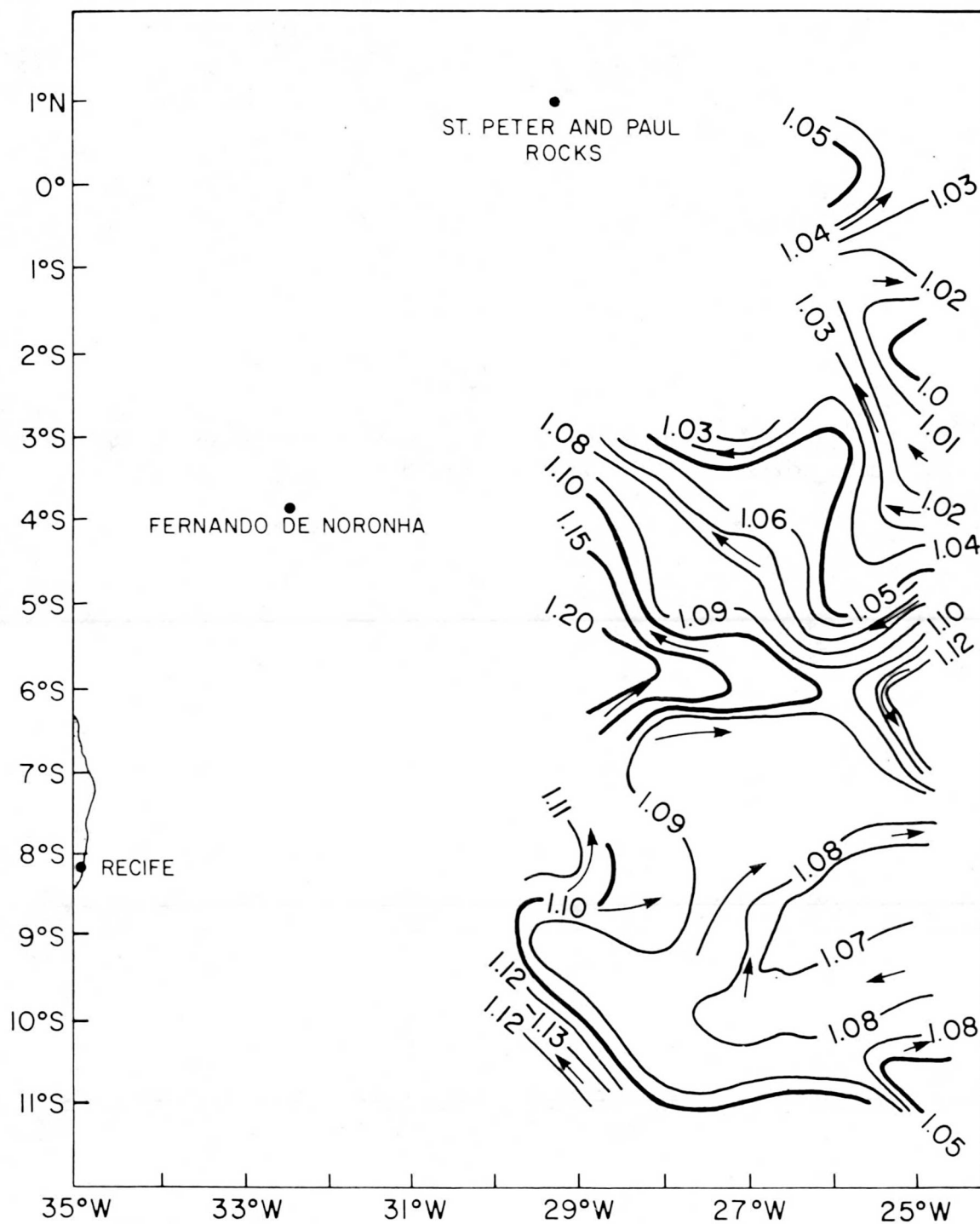


JULY - AUGUST, 1978



Appendix 13

Horizontal distribution charts of several variables derived from data collected in the South Atlantic.



Dynamic topography (dyn-m) of the sea surface computed relative to 900 m. Arrows indicate direction of geostrophic flow.

