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PHYSICAL OCEANOGRAPHY REPORT

STD DATA FROM

DRIFTING ICE STATION FRAM I

prepared by

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TECHNICAL REPORT

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TABLE OF CONTENTS

PAGE

ABSTRACT.....iii

LIST OF FIGURES.....iv

LIST OF TABLES.....iv

INTRODUCTION.....1

PHYSICAL OCEANOGRAPHY PROGRAM.....4

DATA PROCESSING.....7

 Dynamic Calibration.....7

 CTD Static Calibration Procedures.....13

 Subsequent Processing.....16

ACCURACY OF THE DATA.....17

METEOROLOGY DATA.....17

POSITION ESTIMATES AND ASSOCIATED ERRORS.....18

REFERENCES.....19

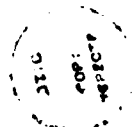
STATION INFORMATION.....21

OUTPUT FORMAT OF FINAL DATA.....24

RESULTS.....28

 Section 1 - Time Series Data.....29

 Section 2 - STD Data.....35



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Abstract

From April 29, 1979 to May 6, 1979 a total of 88 casts were made with a CTD (Conductivity, Temperature and Depth) instrument at the drifting ice station Fram I. Profiles were taken at least twice a day from the surface to 700 m and at more closely spaced intervals during special phases of the experiment. A separate helicopter C/STD survey was also conducted during the experiment and the resulting data were reported separately.

Data obtained from the camp-based Plessey 9040 CTD were simultaneously recorded digitally on magnetic tape and on analog charts. Profile data from the digital tapes were smoothed using a running average. Response time of the temperature sensor was corrected for thermal lag by varying a lag constant (τ) until descending and ascending parts of the cast on a T-S diagram were nearly congruent. No lag correction was applied to the conductivity data because of the rapid response time of the conductivity cell. A small drift that occurred when both sensors were stopped for bottle sampling was also taken into account during data reduction.

Static calibration of the temperature, conductivity and depth sensors was provided by bottle and reversing thermometer data. Least squares, best-fit polynomials, whose parameters were temperature (T), conductivity (C) and depth (D), converted the observed data to final data.

Standard level listings of temperature, potential temperature, salinity, sigma-t, specific volume anomaly, dynamic height and sound velocity are given for each cast along with plotted profiles of temperature, salinity and sigma-t. Nested profiles of temperature and salinity are also provided.

LIST OF FIGURES

	PAGE
1. Drift track of Fram I and positions of helicopter ODE C/STD stations superimposed on the bathymetry of the Arctic Ocean.....	2
2. A detailed plot of the drift track of Fram I.....	5
3. CTD cast numbers along the drift track of Fram I.....	6
4. CTD Calibration Flow Diagram.....	8
5. Normal S-T- σ_t profiles from Fram I.....	10

LIST OF TABLES

	PAGE
1. Station Information.....	21
2. Definitions and meanings of abbreviated terms in the station listing.....	26

Introduction

After completion of the Arctic Ice Dynamics Joint Experiment (AIDJEX) in the Beaufort Sea in 1976 which emphasized ice mechanics in the central pack, scientific interest grew in the eastern Arctic Ocean and the Eurasian Basin within which the waters of the Atlantic Ocean mix with those of the Arctic. Although the ice-free region off the coast of Svalbard in the eastern Arctic Ocean has been sampled frequently, and even the ice covered areas near Greenland have been sampled occasionally, few data have been collected in the Eurasian Basin north of the Fram Strait.

Beginning in 1979, the United States along with Denmark, Norway and Canada began a concerted effort to begin oceanographic and geophysical investigations in this relatively unexplored region of the Arctic Ocean north of Greenland by initiating the Fram series of experiments. These were designed to echo the drift of Fridtjof Nansen's specially designed ship, FRAM, which in 1893 was frozen into the pack ice of the New Siberian Islands and allowed to drift until it broke free of the ice in 1896. During this drift an unprecedented amount of data were collected over the deep ocean of the Eurasian Basin.

Fram I, the first of the four planned U. S. manned ice camps was established on March 11, 1979, at $84^{\circ}24'N$ and $6^{\circ}00'W$ (Fig. 1). During the next two months, until May 13th when data collection ended, studies in chemical and physical oceanography, low-frequency underwater acoustics, geophysics and the mechanics of wave propagation through sea ice were successfully completed and results of some of these investigations have been published (Kristoffersen, 1979; Hunkins et al., 1979a, b).

It was the goal of the Lamont physical oceanography program to collect data which would help provide insight into the origin and effects of the steep

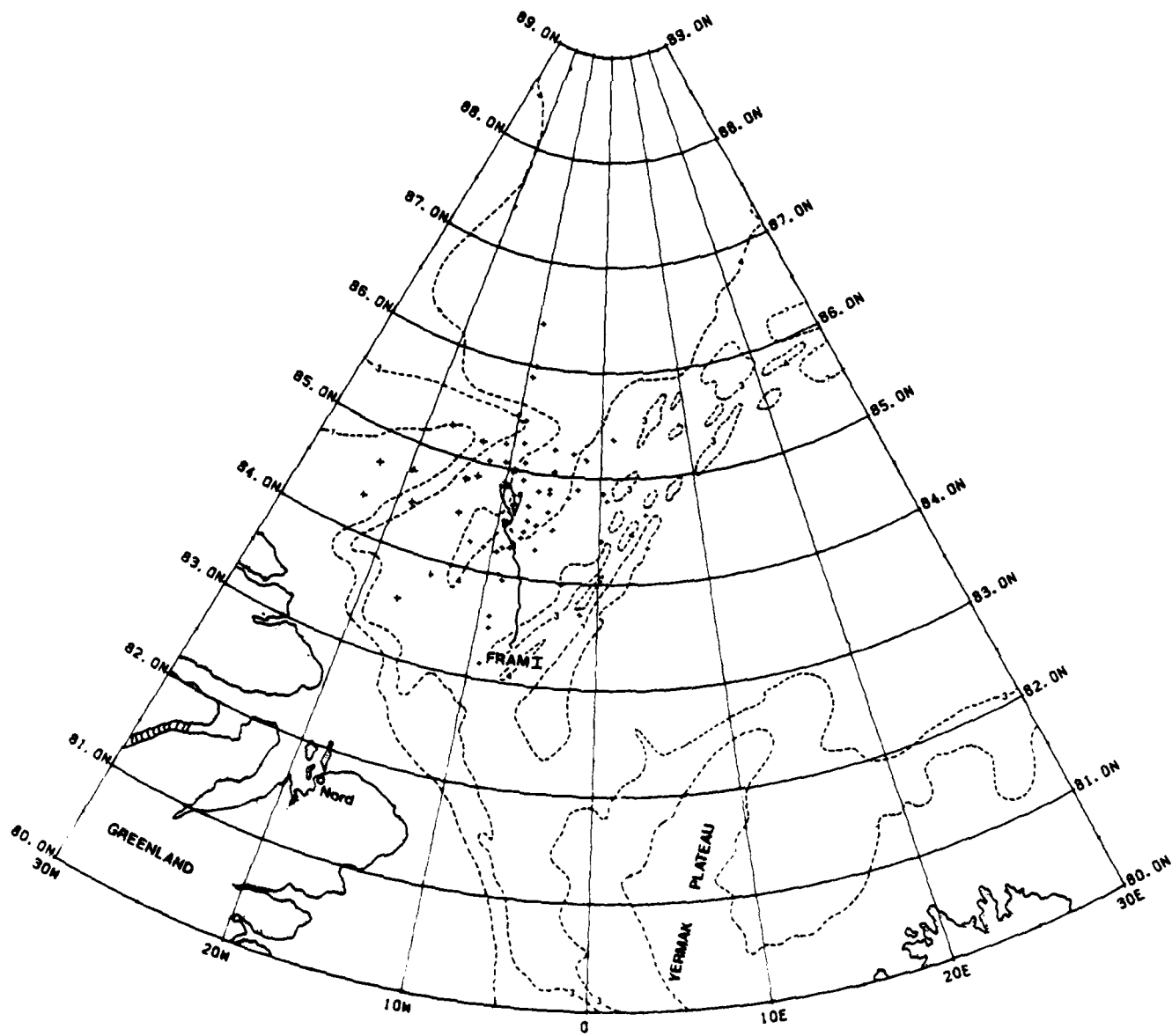


Fig. 1 - Drift track of Fram I and positions of helicopter ODE/C/STD stations superimposed on the bathymetry of the Arctic Ocean.

pycnocline that lies directly beneath the mixed layer (50 m) and the upper extent of the Atlantic water (200 m). Current theory suggests that this pycnocline layer results from the formation of ice during wintertime on the shelves surrounding the Arctic Ocean. The resulting cold, saline shelf water is then later advected into the Arctic Ocean on layers of constant density between 50 m and 200 m. It was also hoped that the program would collect data which might reveal the unique salinity and temperature structures characteristic of the mesoscale eddies reported from the central regions of the Beaufort Sea (Manley, 1981). To accomplish these goals, both helicopter-portable and camp-based CTD's were utilized to collect data.

The area of observations was expanded by using a portable C/STD (Ocean Data Equipment model 202) along with a Bell 204 helicopter to take casts up to 150 km away from the main camp. Nominal sampling depths during these surveys were 270 m. Figure 1 shows the drift track of Fram I and the locations of the portable C/STD stations superimposed on the bathymetry of the Arctic Ocean. Data from these stations currently reside at NODC, and were reported on by McPhee (1980a, b).

The camp-based CTD (a Plessey model 9040) was used to sample the salinity and temperature structure to a depth of 700 m at least twice a day. During selected times, more frequent observations were taken to gain more information on the variability of fine structure and to provide concurrent observations at those times when the helicopter C/STD was actively taking stations. This report pertains only to this camp-based data.

Physical Oceanography Program

Upon completion of the basic operations of establishing camp, a 1 1/2 m by 1 1/2 m hydrohole through which the CTD would be lowered was cut through the 2 m thick ice floe. An small heated hut was then constructed over the hydrohole. The CTD, a small gas-powered winch holding 750 m of cable and associated electronic equipment were then assembled inside the hut as an integrated unit.

A General Oceanics rosette system holding 12 Niskin bottles was also used with the CTD in order to obtain water samples and reversing thermometer data. Water samples taken during the experiment were later analyzed in a single batch using a Guildline Model 8000 salinometer. Originally, the salinometer was located in the CTD hut, but because heat generated from the gas powered winch caused large ambient temperature fluctuations and made it difficult to maintain the water bath temperature in the instrument, the salinometer was moved to another hut which provided the necessary environment for proper operation.

A minimum of two CTD casts were conducted each day to a nominal depth of 700 m. More casts were taken 1) if interesting features within the water column were observed, or 2) to supply concurrent information at the camp when the helicopter C/STD was on a survey. Data pertaining to each cast were recorded digitally as well as on an x-x-y analog chart recorder. Camp-based CTD stations were abruptly terminated when a sheet of ice from a nearby lead unexpectedly underthrust and closed off the hydrohole toward the end of the experiment. At that time a total of 88 casts had been taken at Fram I. The sensor unit was being lowered when the hole was closed and considerable effort was necessary to extricate it. Although the instrument was finally recovered without damage, the hole was unusable. Figure 2 shows a more detailed plot of the drift track of Fram I, and Figure 3 shows the positions of the casts and their numbers along the drift track.

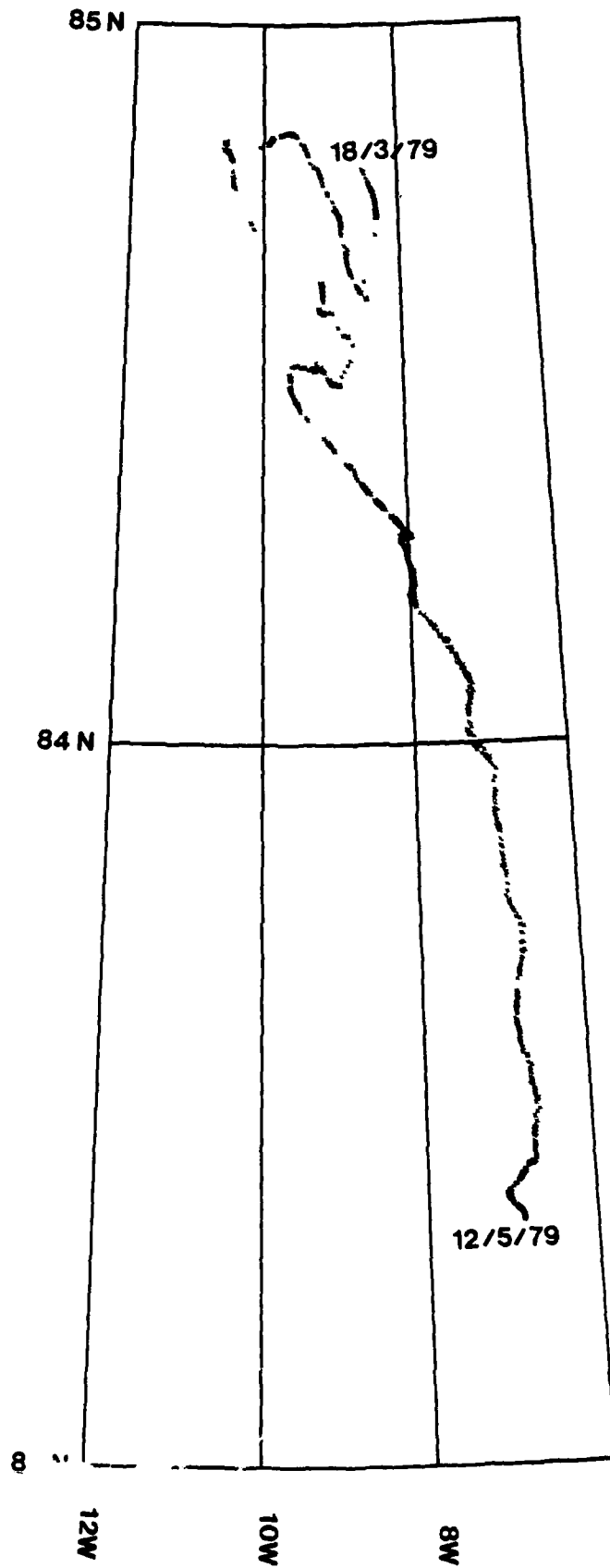


Fig. 2 - A detailed plot of the drift track of Fram I.

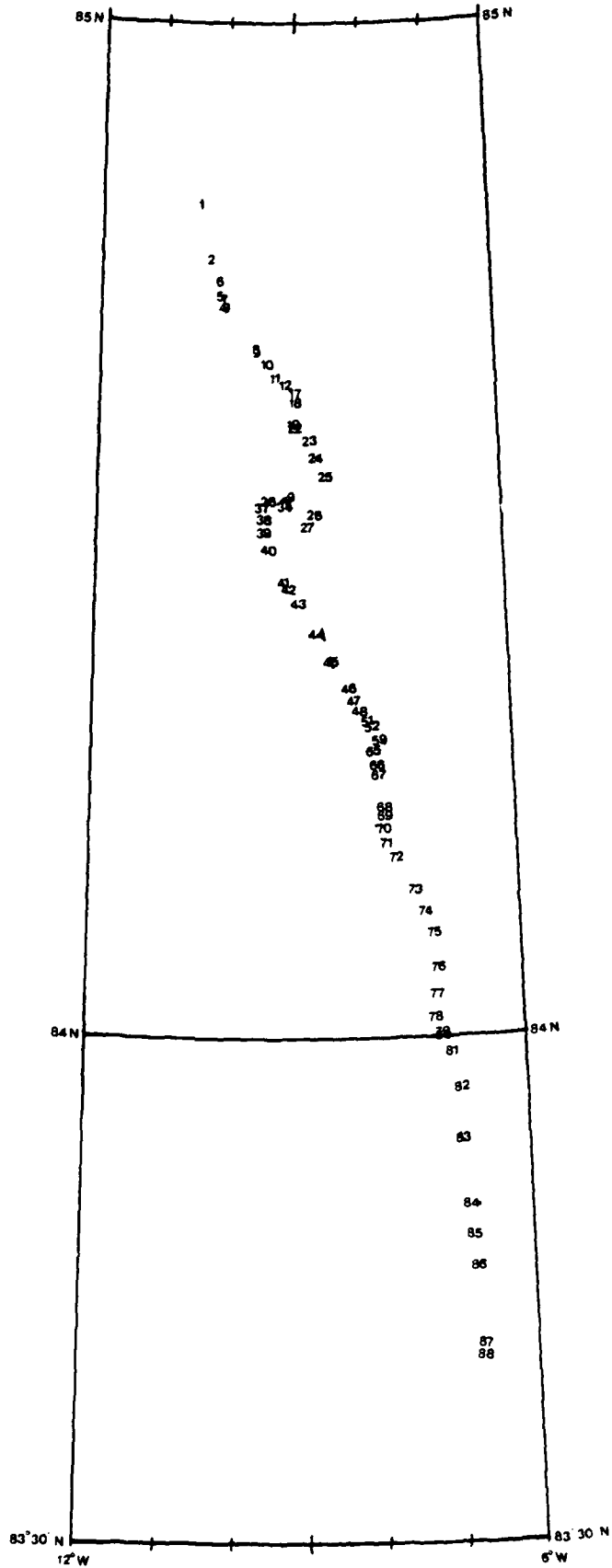


Fig. 3 - CTD cast numbers along the drift track of Fram I.

Dynamic Calibration

Figure 4 shows the flow of the CTD data processing stages. Initial screening of the raw data to remove spikes and discontinuities was done by computer so as to keep the data in a time series to correct for temperature lag. Bad data were either replaced by interpolated data or, if extensive, the time series was terminated and restarted when good data were again available. Thus, some gaps appear. Smoothing was done by applying a 3-point running mean to the temperature and salinity data and a 7-point running mean to the depth data. The larger depth window was chosen because of the relation between digital resolution of the depth channel (0.3 m) and the slowest lowering rate.

In general, the dynamic response characteristics of a CTD sensor depend primarily on the time constant of the temperature compensation probe since that of the conductivity cell is negligible by comparison. In practice, however, although the probe constant for the model 9040 CTD is quoted as 0.35 seconds by the manufacturer, analysis of output data by different investigators using different methods has yielded estimates ranging from about 0.2 to 3.0 seconds. (Scarlet, 1975; Goulet and Culverhouse, 1972). Apparently, a certain variability can also result when the same method is applied to different sensors under different conditions.

The bias associated with the dynamic response of individual sensors is, in fact, detectable and a method which aims at compensation has been incorporated in the data reduction procedure. The screened, smoothed raw data are retained as an evenly spaced time-series in conductivity, temperature and depth (C, T, D) so that the time-rate-of-change of sensed temperatures ($\partial T/\partial t$) can be computed.

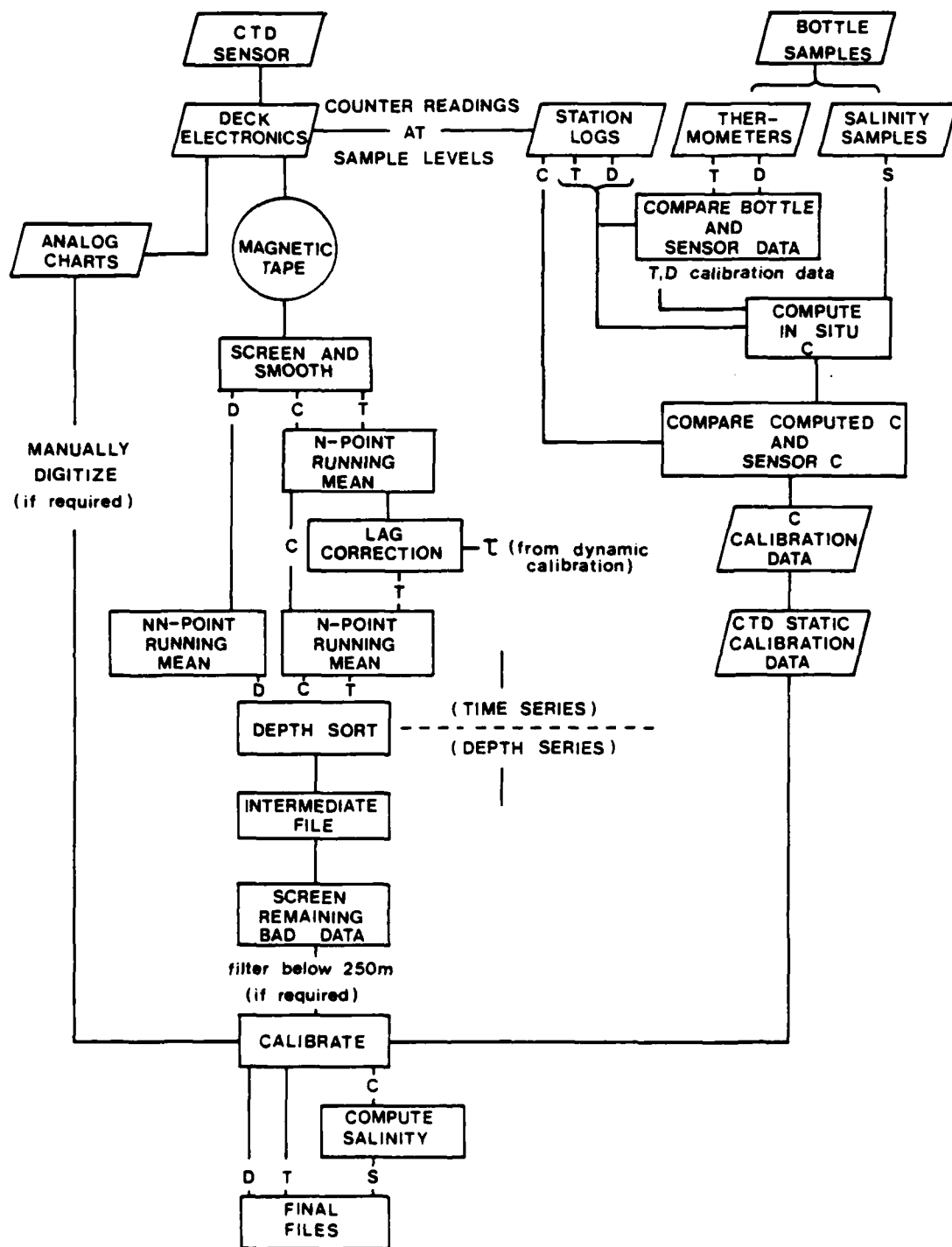


Fig. 4 - CTD Calibration Flow Diagram.

A correction for the time response lag of the temperature sensors is then applied to temperature before the series is sorted for increasing depth. The correction is based on the assumption (suggested by Scarlet, [1975]) that response is exponential with a time constant, τ , such that

$$T' = T + \tau \frac{\partial T}{\partial t} \quad (1)$$

where T and T' are the sensed and corrected parameters, respectively. The major source of error is in the computing of $\partial T/\partial t$. DDL (digital data logger) resolution in temperature is $\pm .003^\circ\text{C}$ but this may be degraded somewhat by noise. However, careful consideration of the sample rate and the range for smoothing and computing the temperature slope can give a workable computer approximation of equation 1. Once the correction model is established, we can return to the data for an estimate of what τ should be.

A typical STD profile of the water column in the Fram I area is shown in Figure 5. The trace is relatively free of the "spiking" normally associated with accelerations of a ship's motion and rapid drop rates of a ship-launched cast. What is usually produced, however, is an apparent offset, primarily in salinity, which is related to the response lag of the temperature sensor and which is sustained until the temperature gradient subsides. Dantzler (1974) in particular has pointed out the importance of this kind of systematic error. A typical raw data printout will show the onset of an interface as two distinct events, one in conductivity and then one in temperature lagging one or more scan intervals behind. (Scan intervals were generally 0.5 sec; occasionally 0.1 or 1.0 sec.). Downtrace and uptrace T-S diagrams of the same profile were compared for a number of stations while the time constant τ was adjusted so as to minimize the offset between traces (Bauer, et. al., 1980a, b, c, d).

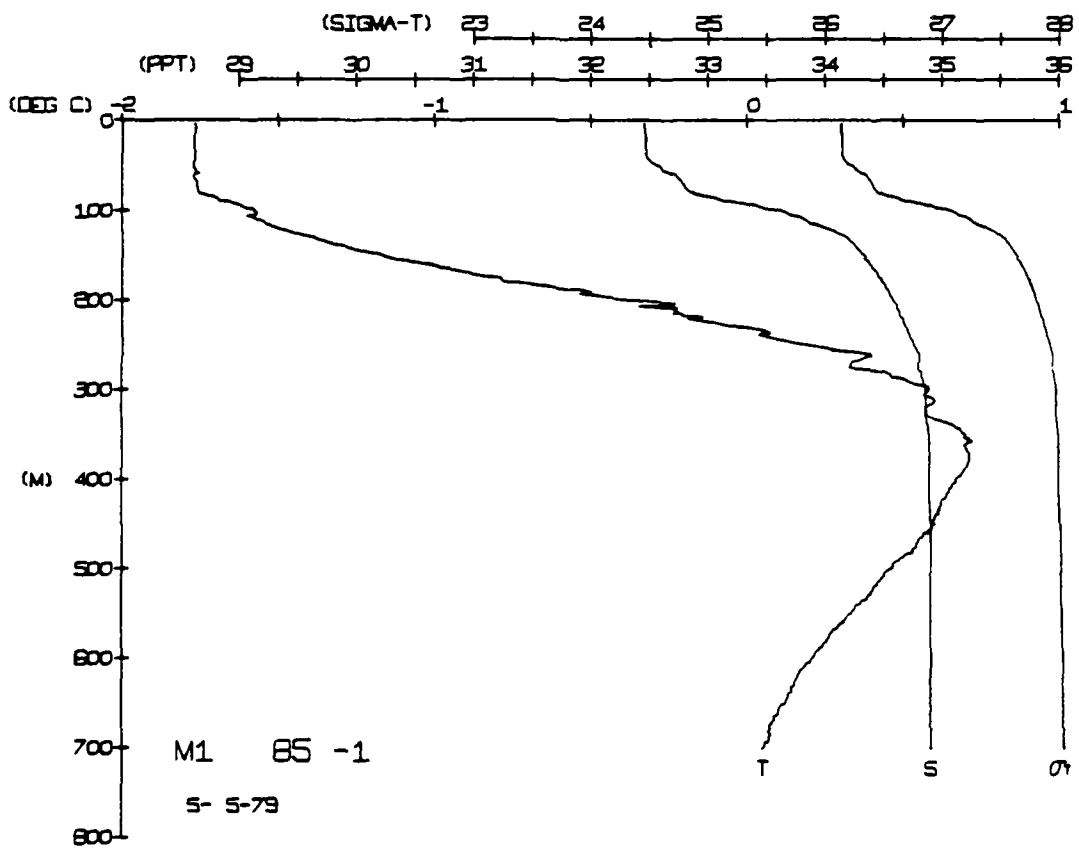


Fig. 5 - Normal S-T-c_t profiles from Fram I.

This approach is readily implemented as a calibration procedure using a CRT computer terminal to monitor T-S diagrams. The time constant for the correction model is adjusted at selected station intervals in the data set to compensate for observed trends in the sensor response. Results for this instrument indicated a best temperature lag coefficient (τ) to be 0.5 sec which is consistent with the coefficient determined during the AIDJEX Experiment for this instrument (Bauer, et. al., 1980a).

The extent to which the τ value can be interpreted as a valid indication of sensor dynamic response depends, of course, on certain assumptions. The intermediate scale features are regarded as unchanged over the lapse of time (generally one hour) between downtrace and uptrace of any given station. Moreover, short-term changes would cause erratic adjustment of τ , and this is not observed. The assumption that response lag in temperature is the dominant cause of offset between downtrace and uptrace also ignores other kinds of hysteresis and the effect of mixing by movement of the instrument package through the interface. In the case of mixing it might be proposed that the maximum effect occurs on the uptrace when the instrument wake precedes the sensors, entraining saltier water at the interface. The observed offset is toward lower salinity, however, and argues against the significance of this process.

Once the determination of τ was completed, uptraces were eliminated from the data set. As can be seen from equation 1, temperature lag corrections no longer become necessary as the temperature gradient becomes very small and varies smoothly with depth. Below 400 m temperature lag corrections rarely attain a magnitude of 0.0004°C, and in the vast majority of cases it is less than 0.002°C which is less than the resolution of the DDL temperature and salinity data. As a result, no temperature lag corrections were made below

400 m. It should be stressed, however, in other parts of the Arctic Ocean this step might not be applicable because of the dynamic structure of the temperature gradient above 1000 m.

The time lag corrections were then applied to the smoothed temperature data, and the data then sorted according to increasing depth.

CTD Static Calibration Procedures

Bottle data consisting of protected and unprotected thermometer readings, and salinity determinations from the water taken near the surface, the temperature maximum of the Atlantic Water and the bottom of the cast provided the bulk of the data necessary for the calibration of the conductivity, temperature and depth sensors. Recorded information pertaining to the output of the three sensors taken from the deck unit at the instant that the instrument was stopped provided the remaining data required for the calibration procedure. The information mentioned above was punched onto computer cards along with their appropriate station identification parameters and stored in the computer. Delta values between the recorded values and the bottle data were then calculated and stored on file along with the original input data.

Preliminary quality control checks were done on the calibration data after it had been stored on file. These checks consisted of looking for the delta values of temperature and depth outside a given tolerance range for each parameter. When data of this type were found, it became necessary to evaluate the validity of the values on the basis of technical logs and other possible sources of error, such as incorrectly punched input. In the majority of cases, an explanation for the excessive delta values was found and the data were repunched and again submitted to the data set. Of the 5 per cent of the calibration data set that required this special editing, less than 10 per cent of the data points were rejected because of technical problems.

Depth dependency of the various sensors within every calibration period was also calculated using least squares, best-fit polynomials. Their associated standard deviations and plots of the polynomial against the delta values were the criteria used to determine the polynomial of least degree that

would fit the data. In practice, the temperature sensor calibration was found not to be depth-dependent which agrees with previous work done with the Plessey CTD.

Depth, however, was always found to be quadratically depth-dependent. There were special cases for the depth and conductivity sensors where, depending on the number of points, linear to cubic fits were considered the best choice.

At the end of the calibration procedure, there were 3 delta functions for every point in time that would convert intermediate temperature and depth values to final calibrated data as shown in equation 2.

$$S_f = S_i = P_{sn}(d,t) \quad (2)$$

Using the polynomial equations for temperature and depth, it was then possible to calibrate the conductivity sensor.

The problem of conductivity calibration is two-fold: 1) to convert bottle data salinities obtained from the salinometer to in situ conductivities, and 2) to insure continuity between Plessey and salinometer conductivities before comparison.

To convert conductivities derived from salinometer measurements to salinities at the correct temperature and pressure observed by the sensor, the selection of a transfer equation (f), as shown by equation 3, was used:

$$c = f(s,t,p(z)) \quad (3)$$

where c = conductivity
 s = precise measurement of salinity (salinometer)
 t = actual temperature of water at depth z
 p = pressure at depth of observation, z.

All salinity data are currently based on lab salinometer results as computed by the Practical Salinity Scale, 1978.

Bottle data readings were placed in permanent files in the computer as described previously. Final equations for the calibration of temperature and depth were calculated prior to the conductivity calibration procedure. These values were required as input parameters to the reversed Practical Salinity Scale equation to accurately provide the in situ conductivity given the precise values of salinity, temperature and the depth of observation.

Delta values in conductivity were then calculated for all the bottle data in the CTD set. Once the calibration polynomial had been formulated for conductivity, it became a straightforward process to calculate salinity-temperature-depth data from the intermediate CTD data. The order of progression is very important and is as follows:

- a) correct temperature to produce final temperature, t_f
- b) correct depth to produce final depth, d_f
- c) correct conductivity to produce final conductivity, c_f
- d) compute salinity with Practical Salinity Scale-78 using t_f , d_f , c_f

Final conductivity values were not saved during the processing and are, therefore, not reported.

Subsequent Processing

Even though conductivity, temperature and depth had been converted into final calibrated data, errors still existed. A combination of several checks involving the plotting of the data in various forms and the sorting of various parameters revealed errors that were previously unnoticed.

The deletion of data while the sensors were in the hydrohole, where the water is unnaturally heated and freshened, and the addition of weather and position information for the individual stations were also a part of this procedure.

T-S diagrams were employed on large groups of stations to show stations which deviated from the mean. Stations that were flagged in this manner were rechecked for validity. If the data turned out to be in error and the error resulted from processing, the station was reworked from the point at which the error occurred.

Nested temperature and salinity traces plotted in this report were also a useful quality control to observe stations that did not follow the mean trends of the other plotted profiles. If a station was considered questionable, the original analog chart was used as the basis for the deletion or acceptance of the profile. Sequential sorting of the recorded dates and times of the stations was also done and stations that were out of order were resubmitted to the data set.

Temperature and salinity values taken while the sensor was in the hydrohole (ice thickness of 2 m) were then removed.

As a final indication of the quality of the salinity and temperature data, averaged values of the bottle and reversing thermometer at the various sampling depths are shown in the profiles as "x's" and "+s", respectively.

ACCURACY OF THE DATA

Tests were run to determine the accuracy of the DDL. The bottle data were used as the standard against which the final salinities and temperatures were checked. The final salinity and temperature data were then subtracted from the observed bottle data at the various tripping depths. Mean differences and associated standard deviations for conductivity and temperature were $.004 \pm .006$ and $.004 \pm .005$ respectively.

METEOROLOGY DATA

Periodic surface observations and continuous digital recordings of meteorological sensors at a fixed height above the surface of the ice were maintained at Fram I. From the original data, three-hourly averages of surface barometric pressure, and half-hourly averages of wind speed, and direction at 9.2 meters and air temperature at 7.8 meters above the surface were obtained for Fram I.

Data which were closest in time to each station were recorded along with the station data in permanent files on the computer (blanks implying no data available for that parameter).

POSITION ESTIMATES AND ASSOCIATED ERRORS

Filtered and smoothed estimates for position and velocity through time were computed from the original edited satellite navigation in a similar manner as that of Thorndike and Manley (1980a, b).

Position estimates were not regularly spaced in time nor did they correspond to the starting times of stations; thus reliable estimates of the position and ice velocity, as well as associated errors at the time of the CTD stations were made through quadratic interpolations in the same manner as that described by Manley et. al. (1980a, b, c, d), and Bauer et. al. (1980a, b, c, d). Normally, 25 to 30 position fixes were recorded per day, but this could rise to close to 60 and for a period of approximately 2 days the number dropped to zero.

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TABLE 1

STATION INFORMATION

In this section is a brief listing of all the CTD station taken on Fram I along with other pertinent information. A list of the terms and their meanings is shown below:

CAMP	Name of Camp
STAT	CTD Station
MODE	1 implies downtrace 2 implies uptrace
DAY	Day of Station
MON	Month of Station
YR	Year of Station
TIME	GMT Time of Station
CODE	Processing Code, see Table 2
JULDAY	Julian Day (decimal) of station
D. MIN	Minimum Depth (meters) of station
D. MAX	Maximum Depth reached at station
LATITUDE	Latitude of station in decimal degrees
LONGITUDE	Longitude of station in decimal degrees (- indicates west longitude)
LT. ERR	Error of Latitude Position in meters
LG. ERR	Error of Longitude Position in meters

TABLE I

CAMP	STAT	MODE	DY	MON	YR	TIME	CODE	AJXDAY	D MIN	D MAX	LATITUDE	LONGITUDE	LAT	FHR	LNG	ERR
FRAM	1	2	29	MAR	79	2200	1	88	4	488	84	10	0	9	14	7
FRAM	1	3	30	MAR	79	1627	1	89	10	700	84	-10	18	0	34	5
FRAM	1	4	31	MAR	79	1430	1	90	10	740	84	-10	10	29	0	2
FRAM	1	5	1	APR	79	1100	1	91	10	697	84	-10	98	11	2	5
FRAM	1	6	2	APR	79	1740	1	92	10	697	84	-10	35	0	2	7
FRAM	1	7	3	APR	79	1807	1	93	10	701	84	-9	10	5	0	9
FRAM	1	8	4	APR	79	1835	1	94	10	704	84	-9	14	0	4	4
FRAM	1	9	5	APR	79	1837	1	94	10	701	84	-9	10	4	4	4
FRAM	1	10	6	APR	79	1839	1	95	10	702	84	-9	10	4	4	4
FRAM	1	11	7	APR	79	1839	1	95	10	702	84	-9	10	4	4	4
FRAM	1	12	8	APR	79	1833	1	96	10	836	84	-9	10	4	4	4
FRAM	1	13	9	APR	79	654	1	96	10	700	84	-9	10	4	4	4
FRAM	1	14	10	APR	79	1903	1	97	10	699	84	-9	10	4	4	4
FRAM	1	15	11	APR	79	1933	1	98	10	699	84	-9	10	4	4	4
FRAM	1	16	12	APR	79	1923	1	99	10	702	84	-9	10	4	4	4
FRAM	1	17	13	APR	79	1923	1	99	10	699	84	-9	10	4	4	4
FRAM	1	18	14	APR	79	1821	1	99	10	699	84	-9	10	4	4	4
FRAM	1	19	15	APR	79	1837	1	100	10	699	84	-9	10	4	4	4
FRAM	1	20	16	APR	79	1821	1	101	10	699	84	-9	10	4	4	4
FRAM	1	21	17	APR	79	1837	1	101	10	699	84	-9	10	4	4	4
FRAM	1	22	18	APR	79	1821	1	102	10	699	84	-9	10	4	4	4
FRAM	1	23	19	APR	79	1834	1	102	10	699	84	-9	10	4	4	4
FRAM	1	24	20	APR	79	1828	1	103	10	698	84	-9	10	4	4	4
FRAM	1	25	21	APR	79	1830	1	104	10	698	84	-9	10	4	4	4
FRAM	1	26	22	APR	79	1828	1	105	10	699	84	-9	10	4	4	4
FRAM	1	27	23	APR	79	1830	1	105	10	699	84	-9	10	4	4	4
FRAM	1	28	24	APR	79	1817	1	106	10	699	84	-9	10	4	4	4
FRAM	1	29	25	APR	79	1837	1	107	10	699	84	-9	10	4	4	4
FRAM	1	30	26	APR	79	1837	1	108	10	699	84	-9	10	4	4	4
FRAM	1	31	27	APR	79	1837	1	109	10	699	84	-9	10	4	4	4
FRAM	1	32	28	APR	79	1901	1	109	10	699	84	-9	10	4	4	4
FRAM	1	33	29	APR	79	1901	1	109	10	699	84	-9	10	4	4	4
FRAM	1	34	30	APR	79	1924	1	109	10	699	84	-9	10	4	4	4
FRAM	1	35	31	APR	79	1901	1	109	10	699	84	-9	10	4	4	4
FRAM	1	36	1	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	37	2	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	38	3	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	39	4	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	40	5	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	41	6	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	42	7	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	43	8	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	44	9	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	45	10	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	46	11	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	47	12	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	48	13	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	49	14	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	50	15	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	51	16	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	52	17	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	53	18	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	54	19	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	55	20	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	56	21	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	57	22	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	58	23	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	59	24	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	60	25	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	61	26	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	62	27	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	63	28	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	64	29	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	65	30	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	66	31	MAY	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	67	1	JUN	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	68	2	JUN	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	69	3	JUN	79	1916	1	110	10	699	84	-9	10	4	4	4
FRAM	1	70	4	JUN	79	1916	1	110	10	699	84	-9	10	4	4	4

TABLE 1 (cont'd)

CAMP	STAT	MODE	DY	MON	VR	TIME	CODE	AJXDAY	D	MIN	D	MAX	LATITUDE	LONGITUDE	LAT	ENR	LNG	ERR	
FRAM	71	1	30	APR	79	1301	1	120	5424	3	0	697	84	-7	91530	3	7	11	3
FRAM	72	1	31	APR	79	1912	1	120	8000	3	0	696	84	-7	78710	0	4	1	2
FRAM	73	1	1	MAY	79	1254	1	121	5375	3	1	698	84	-7	53610	0	0	0	5
FRAM	74	1	1	MAY	79	1900	1	121	7917	3	1	704	84	-7	33650	0	0	1	4
FRAM	75	1	1	MAY	79	1226	1	122	3097	3	0	699	84	-7	24610	0	0	1	5
FRAM	76	1	2	MAY	79	1338	1	122	5681	3	0	699	84	-7	27010	0	0	2	2
FRAM	77	1	2	MAY	79	1906	1	122	7958	3	0	698	84	-7	24980	0	0	2	1
FRAM	78	1	3	MAY	79	1008	1	123	2951	3	0	704	84	-7	22190	0	0	2	1
FRAM	79	1	3	MAY	79	1911	1	123	4222	3	0	698	83	-7	07200	0	0	2	1
FRAM	80	1	3	MAY	79	1712	1	123	7993	3	0	698	83	-7	02270	0	0	2	1
FRAM	81	1	4	MAY	79	1911	1	124	3000	3	0	697	83	-6	97640	0	0	0	0
FRAM	82	1	4	MAY	79	1730	1	124	8125	3	0	700	83	-6	91740	0	0	0	0
FRAM	83	1	5	MAY	79	1756	1	125	3305	3	0	700	83	-6	87640	0	0	0	0
FRAM	84	1	5	MAY	79	1241	1	125	5285	3	1	704	83	-6	87830	0	0	1	6
FRAM	85	1	5	MAY	79	1828	1	125	7694	3	0	704	83	-6	87570	0	0	1	6
FRAM	86	1	6	MAY	79	1703	1	126	2938	3	0	698	83	-6	76730	0	0	0	0
FRAM	87	1	6	MAY	79	925	1	126	3924	3	1	698	83	-6	78740	0	0	0	0
FRAM	88	1	6	MAY	79	925	1	126	3924	3	1	698	83	-6	78740	0	0	0	0

OUTPUT FORMAT OF FINAL DATA

This report contains salinity and temperature profile data from surface to 700 m taken at drifting ice station Fram I with a Plessey 9040 CTD.

Station information is provided in three different formats consisting of 1) monthly times series of nested temperature or salinity profiles, 2) numerical listings and 3) profiles of temperature, salinity and sigma-t ($T-S-\sigma_t$) versus depth.

Time series of temperature or salinity profiles to a maximum of 700 m nested into one month blocks are presented in "Results - Section 1". Station numbers are indicated at the end of each trace; all other labelling is self explanatory.

In general, two profiles of $T-S-\sigma_t$ are graphically shown on one page of the data report. On the facing page, the corresponding numerical listings of the station are shown. The numerical data consist of the parameters relating to the station and in some cases are abbreviated to save space. A listing of these abbreviated terms and their meanings can be found in Table 2. The main body of the numerical listings consists of values of temperature, potential temperature, salinity, sigma-t (σ_t), specific volume anomaly, dynamic height and sound velocity against various interpolated levels of depth. Since upper surface layer data are omitted from the data set (the sensor being in the hydrohale), surface readings of temperature and salinity are duplicated from the first data seen in the cast. The first and last data of the station are shown as one of the first values below the depth of 0.0 meters and the last values of the listing respectively.

Some station listings will show nothing for dynamic height. This implies that either the segment of missing data in the profile was too large to interpolate over, or only temperature or salinity data were available.

Average values of the bottle data at a particular depth level are also listed at the bottom of the data listing.

Corresponding profiles of temperature, salinity and sigma-t for the station listing are shown on the facing page.

The label at the end of each trace (T-S- σ_t) indicates the parameter of temperature, salinity and sigma-t respectively. Scales at the upper part of the diagram are labeled to correspond to the parameters and are also shifted with respect to one another to provide the maximum amount of clarity of the traces. Depth is in meters. Station identification and data are in the lower left hand corner in the following format:

M1 STN-MOD
MONTH - DAY - YEAR

where

M1 is the camp identifier for Fram I

STN is the station number

MOD is the mode

1 = downtrace

2 = uptrace

Salinity values obtained from the bottle data are plotted on the traces as an "X" and temperature values obtained from reversing thermometers are indicated on the traces as a "+".

TABLE 2

Definition and Meanings of Abbreviated Terms in the Station Listing

Station xxx (y)	Station number (xxx) and mode of trace (y) where:
CTD	Station taken with CTD y = 1 indicates downtrace y = 2 indicates uptrace
GMT	Times shown are Greenwich Mean Time
Code = I	Processing Code where if I =
	A) 1 → 5 profile contains both temperature and salinity data.
	1) data from magnetic tape
	2) data from manual digitization of analog charts
	3) subsequent filtering below 250 m in salinity only
	4) subsequent filtering below 250 m in temperature only
	5) subsequent filtering below 250 m in both temperature and salinity
	B) 11 → 13 profile is in salinity only
	11) data from magnetic tape
	12) data from manual digitization of analog charts
	13) filtered below 250 meters
	C) 21 → 23 profile in temperature only
	21) data from magnetic tape
	22) data from manual digitization of analog charts
	23) filtered below 250 meters
LAT	Latitude in decimal degrees N (North)
LONG	Longitude in decimal degrees W (West)
LTER	Estimate of positional error for latitude in meters
LGER	Estimate of positional error for longitude in meters
AIR TEMP	Air temperature in degrees C at 7.8 meters above surface of ice
BAROM	Barometric pressure in millibars, taken at surface
WIND	Wind direction in degrees true north, taken at 9.2 meters above surface of ice
SPEED	Wind speed in meters/sec., taken at 9.2 meters above surface of ice.

TABLE 2 (cont'd)

LISTING PARAMETERS

DEPTH	Depth in meters
TEMP	Temperature in degrees C
PTEMP	Potential temperature in degrees C
SALIN	Salinity in parts per thousand
SIG T	Sigma-t density where: density (ρ) = $1.0 + ((\text{Sig T}) * 1000.0)$
SPVOL	Specific volume anomaly ($\times 10^{-5} \text{cm}^3/\text{gm}$)
DYNHT	Dynamic height (dynamic meters)
SOUND	Sound velocity in meters/sec., calculated from Matthews equation

BOTTLE DATA LISTING

DEPTH	Depth in meters at which bottle was tripped
TEMP	Average temperature of reversing thermometer in degrees C
SAL	Determined salinity of water sample taken at depth indicated; in ppt

RESULTS

Section 1 (Nested Vertical Profiles)

This section contains the plots of temperature and salinity to a depth of 700 m nested into a monthly time series.

TEMPERATURE PROFILES AT CAMP FRAM 1
MAR 1, 1979 TO MAR 31, 1979

11 12 13 14 15 16 17 18 19 20 21 22 23 24



1

2

20 21 22 23 24 25 26 27 28 29 30 31

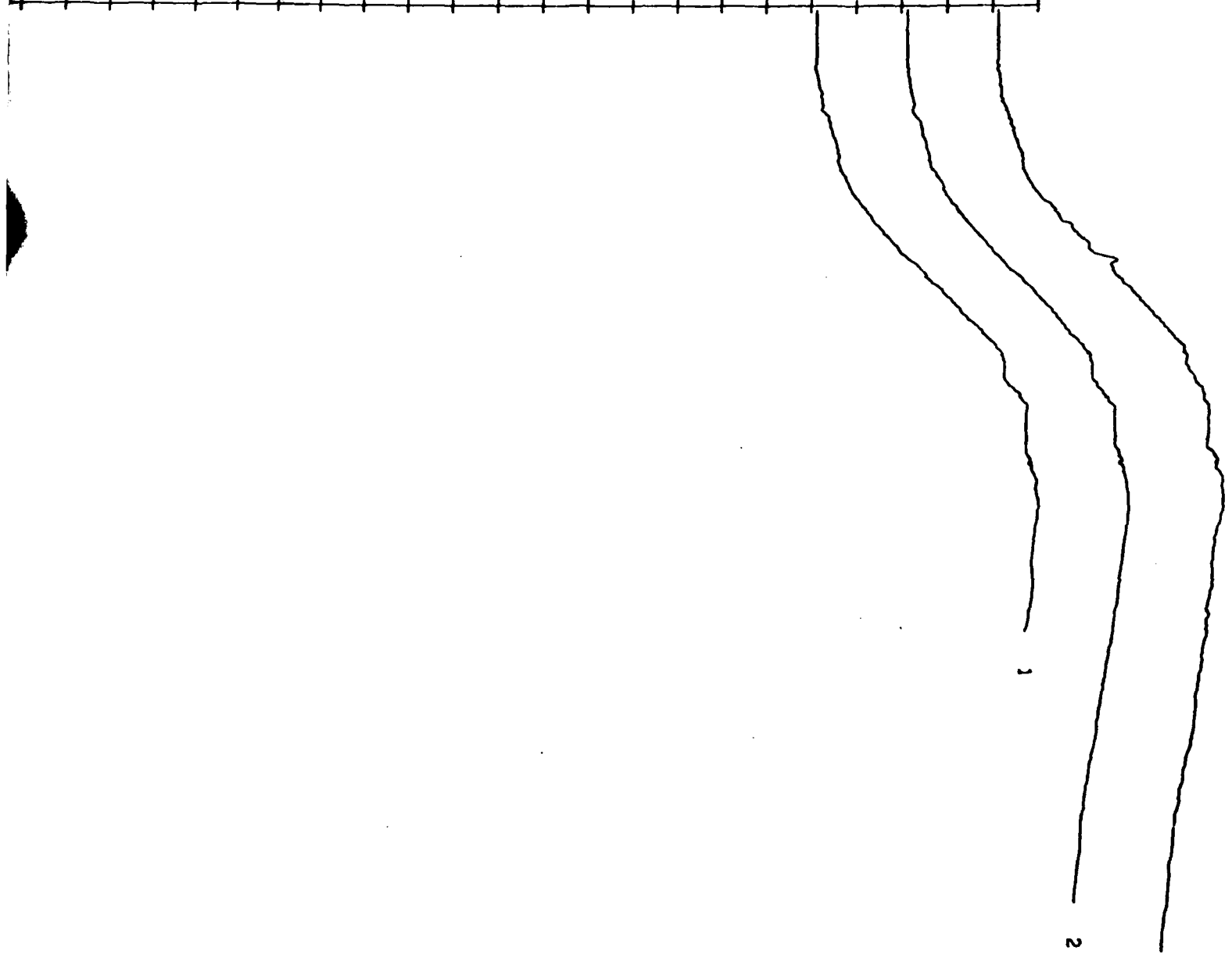
3

1

2

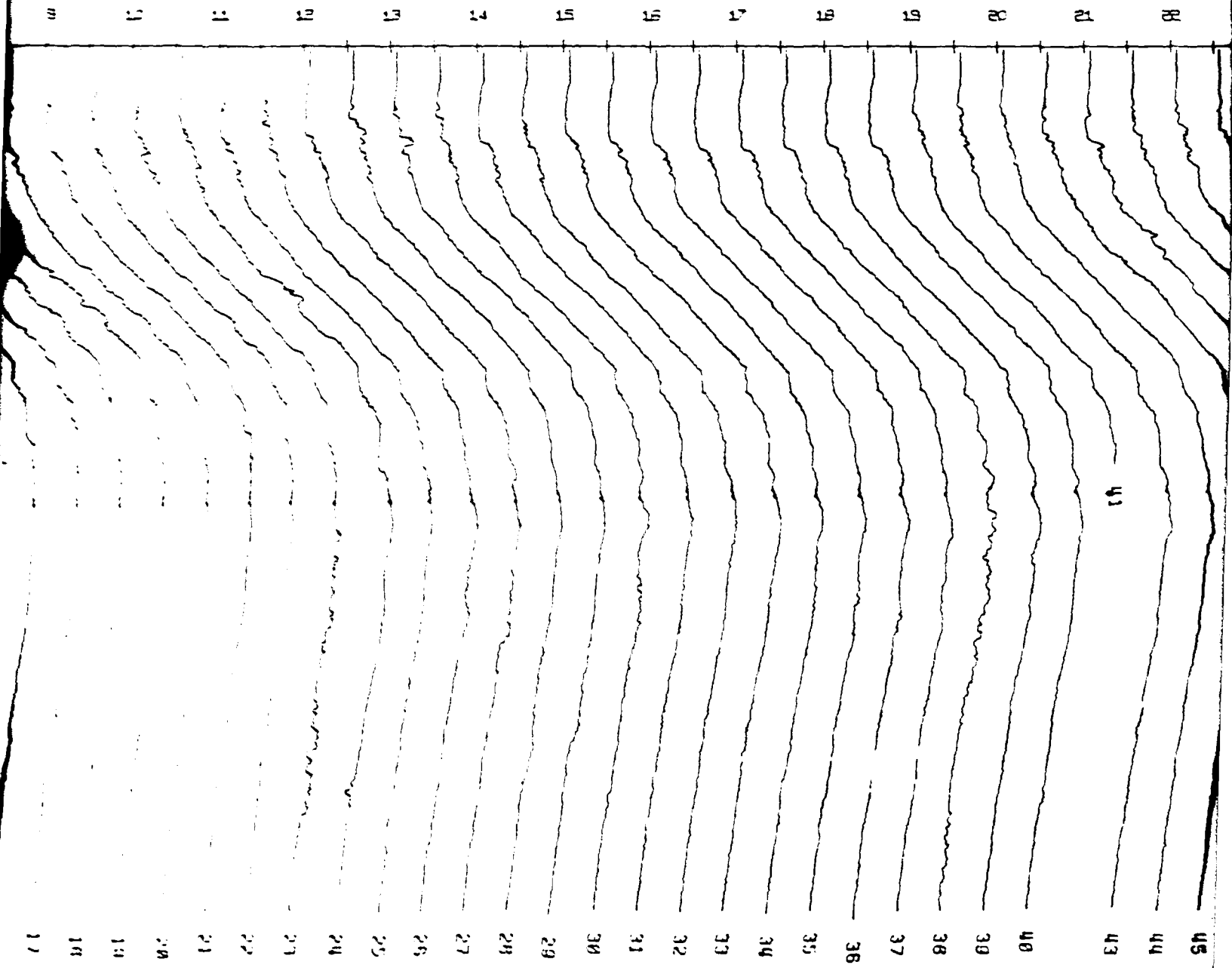
3

1

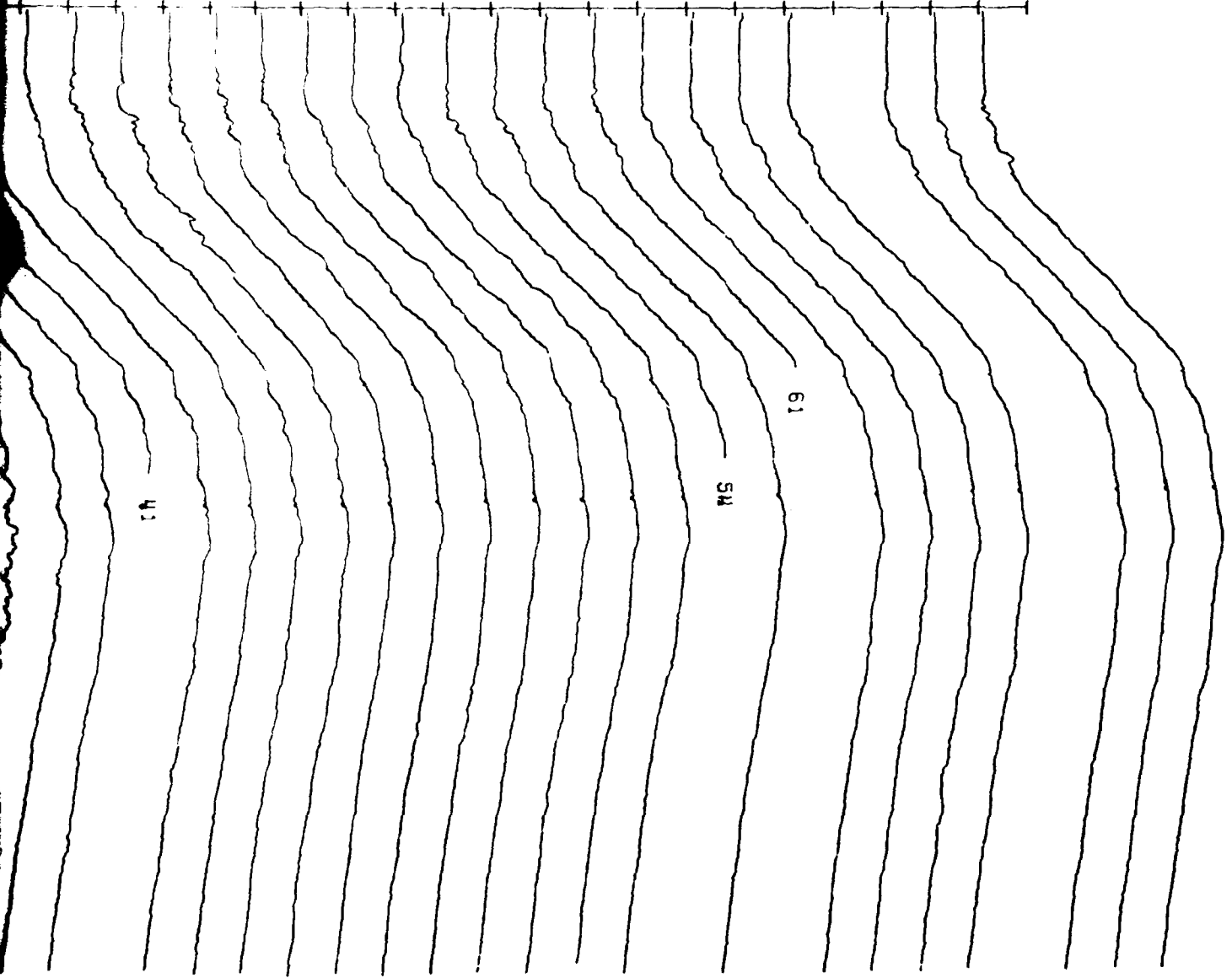


TEMPERATURE PROFILES AT CAMP FRAM 1
APR 1, 1979 TO APR 30, 1979

ITEM
1-1.8 DEG. C.
PER HOUR DAY



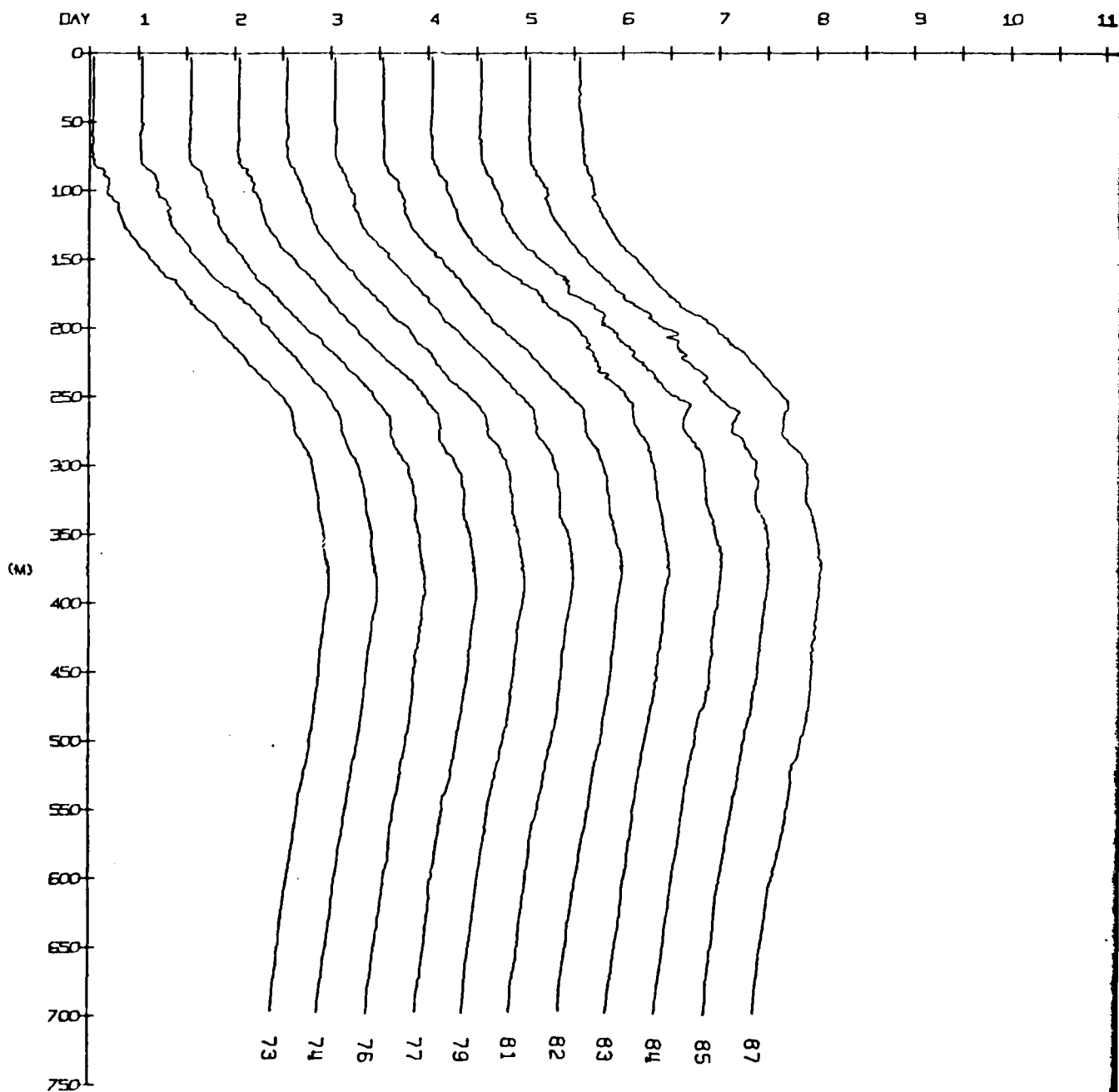
20 21 22 23 24 25 26 27 28 29 30



40 43 44 45 46 47 48 49 50 51 52 53 60 63 64 65 66 68 70 71

M

- NO MORE THAN ONE PROFILE PER HALF DAY (AM/PM GMT) IS PLOTTED
- EACH PROFILE PLOTTED WITH RESPECT TO LEFT DIVISION MARK (-1.8 DEG. C.)
- TEMPERATURE SCALE SHIFTS RIGHT 1 DIVISION (0.5 DEG. C.) PER HALF DAY



TEMPERATURE PROFILES AT CAMP TEAM 1
MAY 15, 1979 TO MAY 31, 1979

DEPTH
ALL DAY

10 11 12 13 14 15 16 17 18 19 20 21 22 23

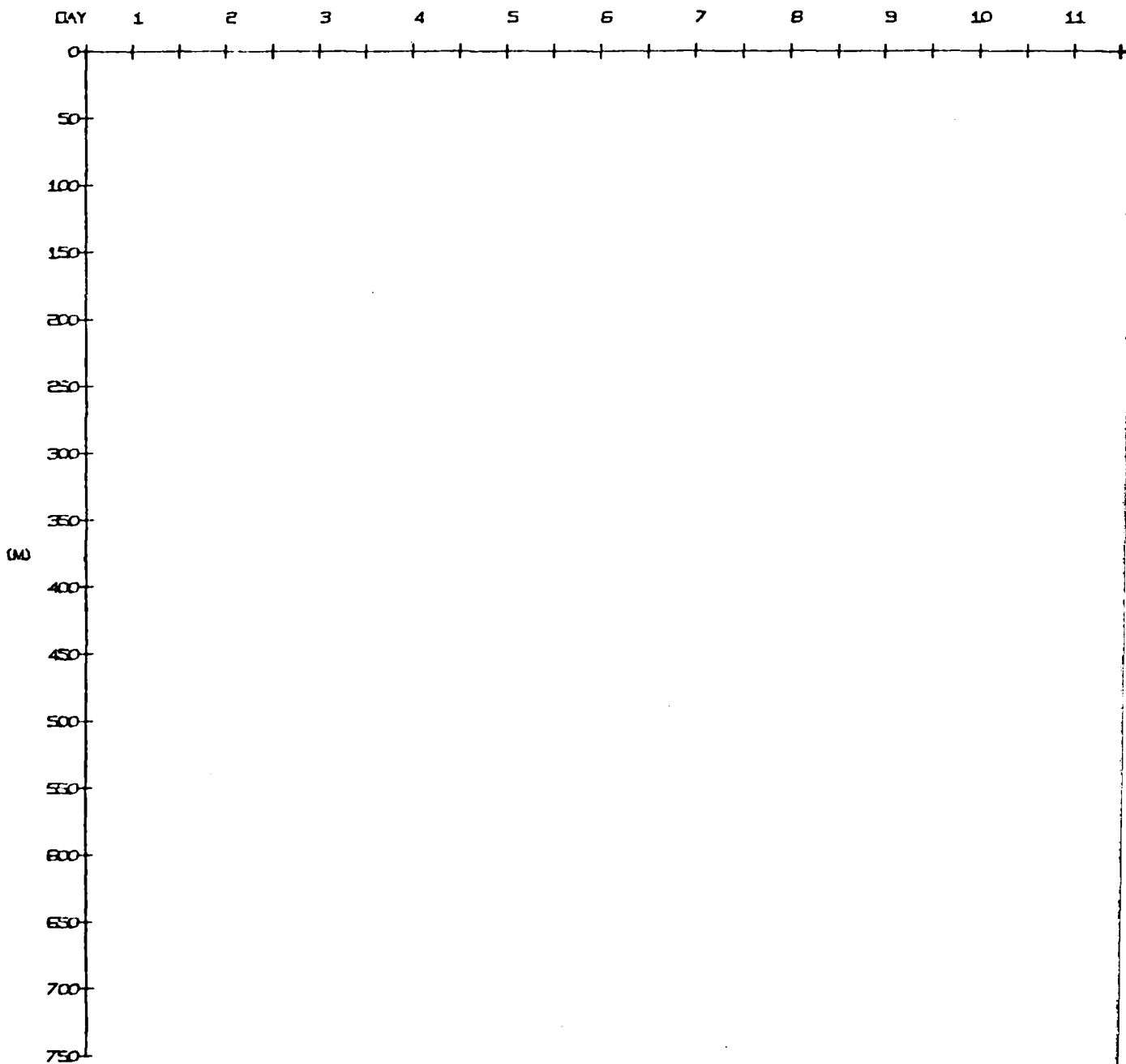
1

2

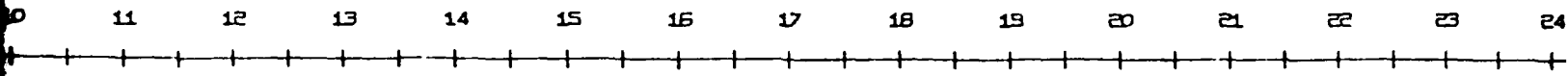
20 21 22 23 24 25 26 27 28 29 30 31

3

- NO MORE THAN ONE PROFILE PER HALF DAY (AM/PM GMT) IS PLOTTED
- EACH PROFILE PLOTTED WITH RESPECT TO LEFT DIVISION MARK (30.0 PPT)
- SALINITY SCALE SHIFTS RIGHT 1 DIVISION (1.0 PPT) PER HALF DAY



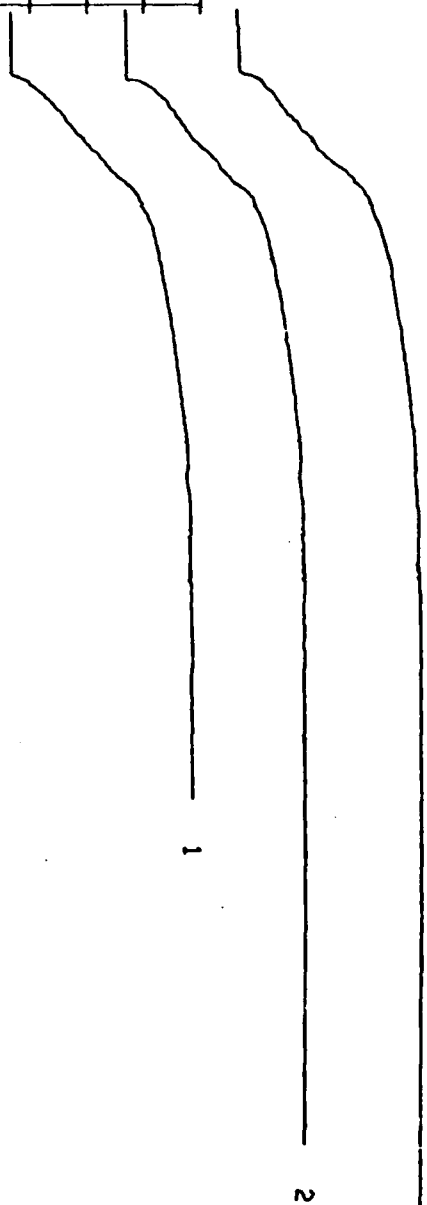
SALINITY PROFILES AT CAMP FRAM 1
MAR 1, 1979 TO MAR 31, 1979



N

2

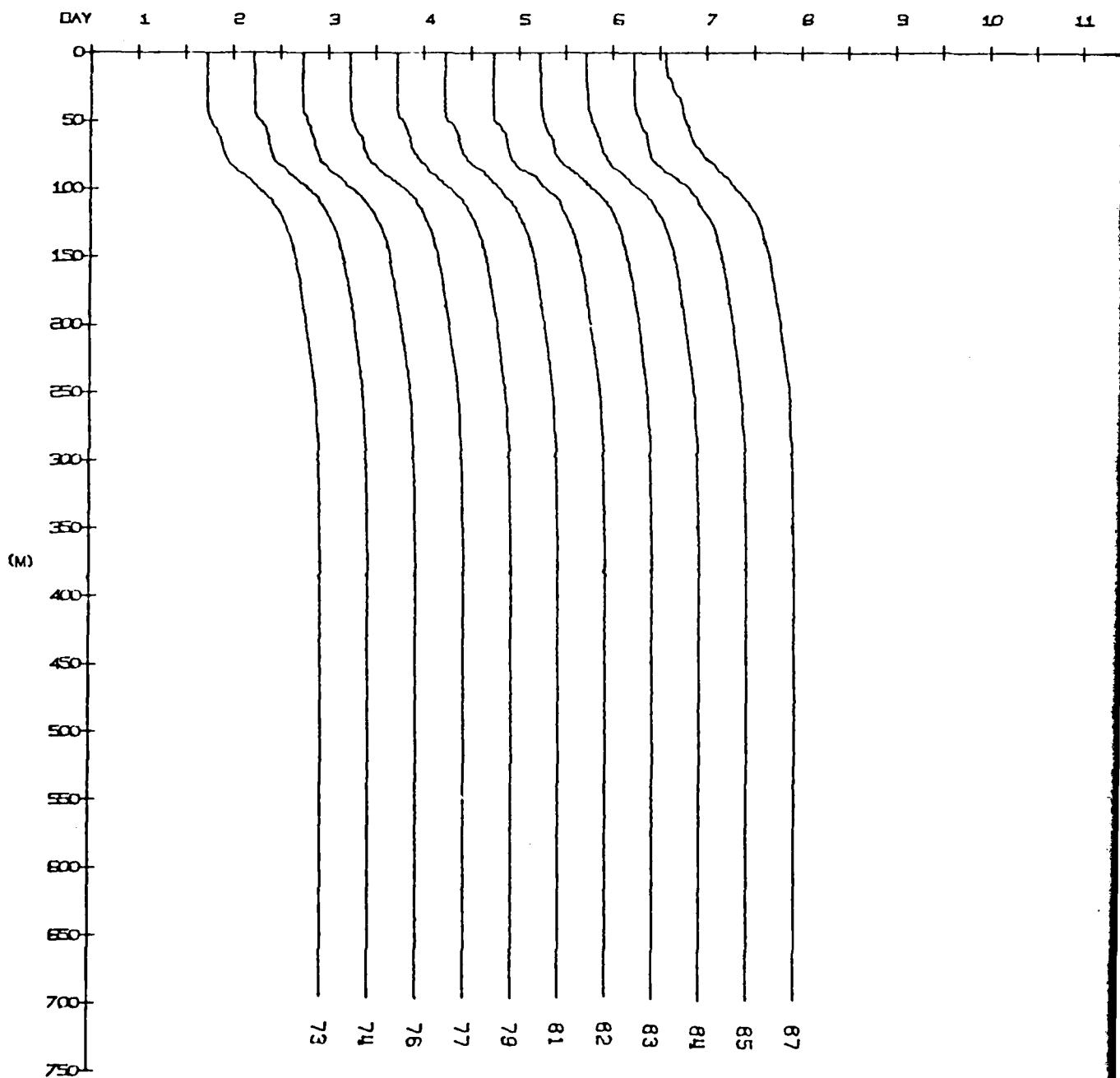
20 21 22 23 24 25 26 27 28 29 30 31



1
2
3

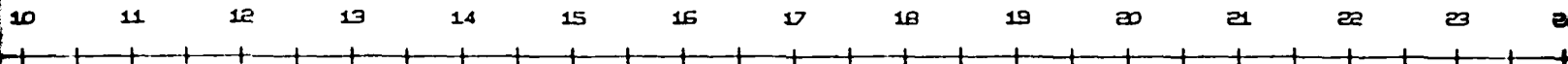
3

- NO MORE THAN ONE PROFILE PER HALF DAY (AM/PM GMT) IS PLOTTED
- EACH PROFILE PLOTTED WITH RESPECT TO LEFT DIVISION MARK (30.0 PPT)
- SALINITY SCALE SHIFTS RIGHT 1 DIVISION (1.0 PPT) PER HALF DAY



SALINITY PROFILES AT CAMP FRAM 1
MAY 1, 1979 TO MAY 31, 1979

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

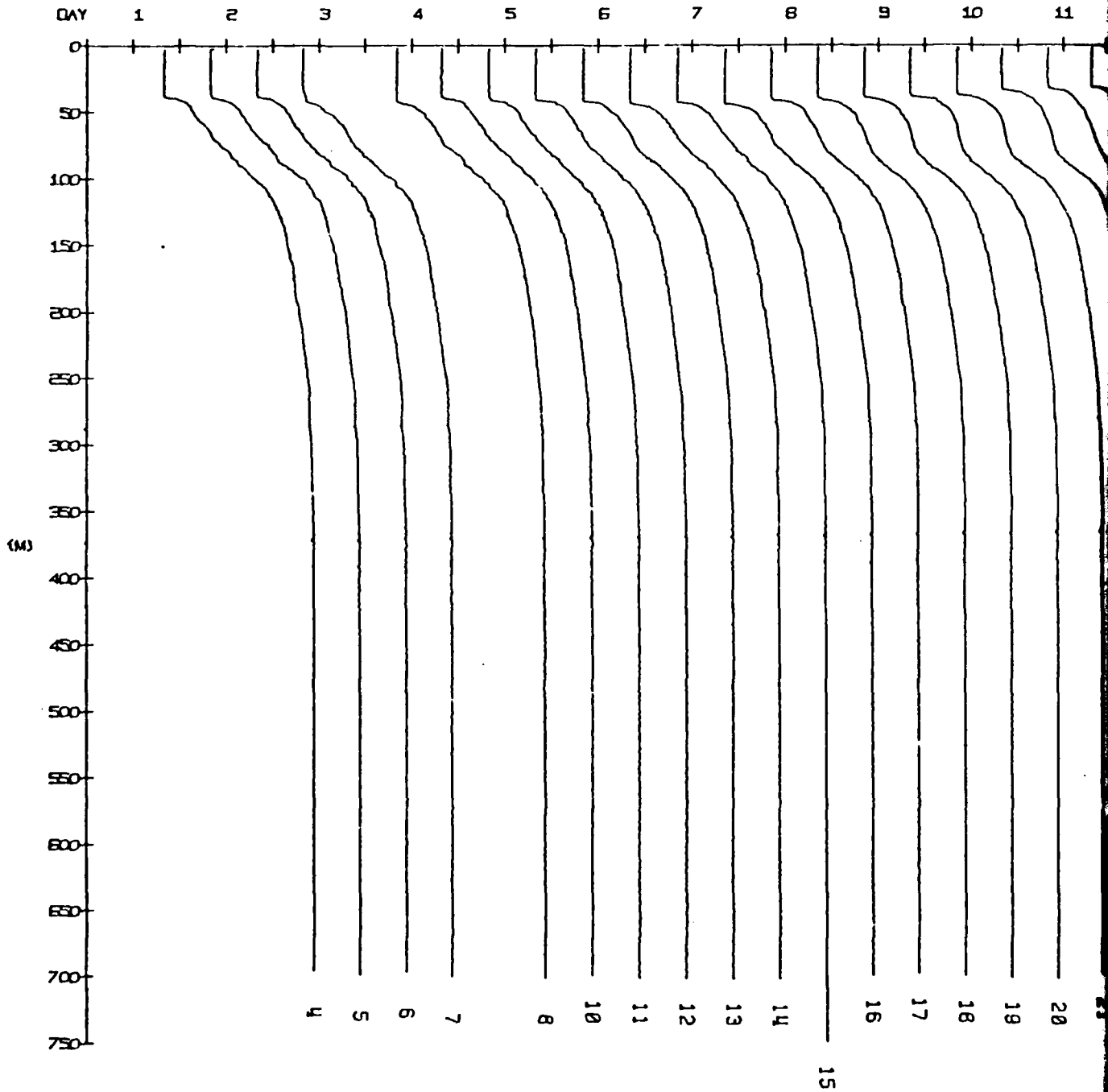


21 22 23 24 25 26 27 28 29 30 31

v

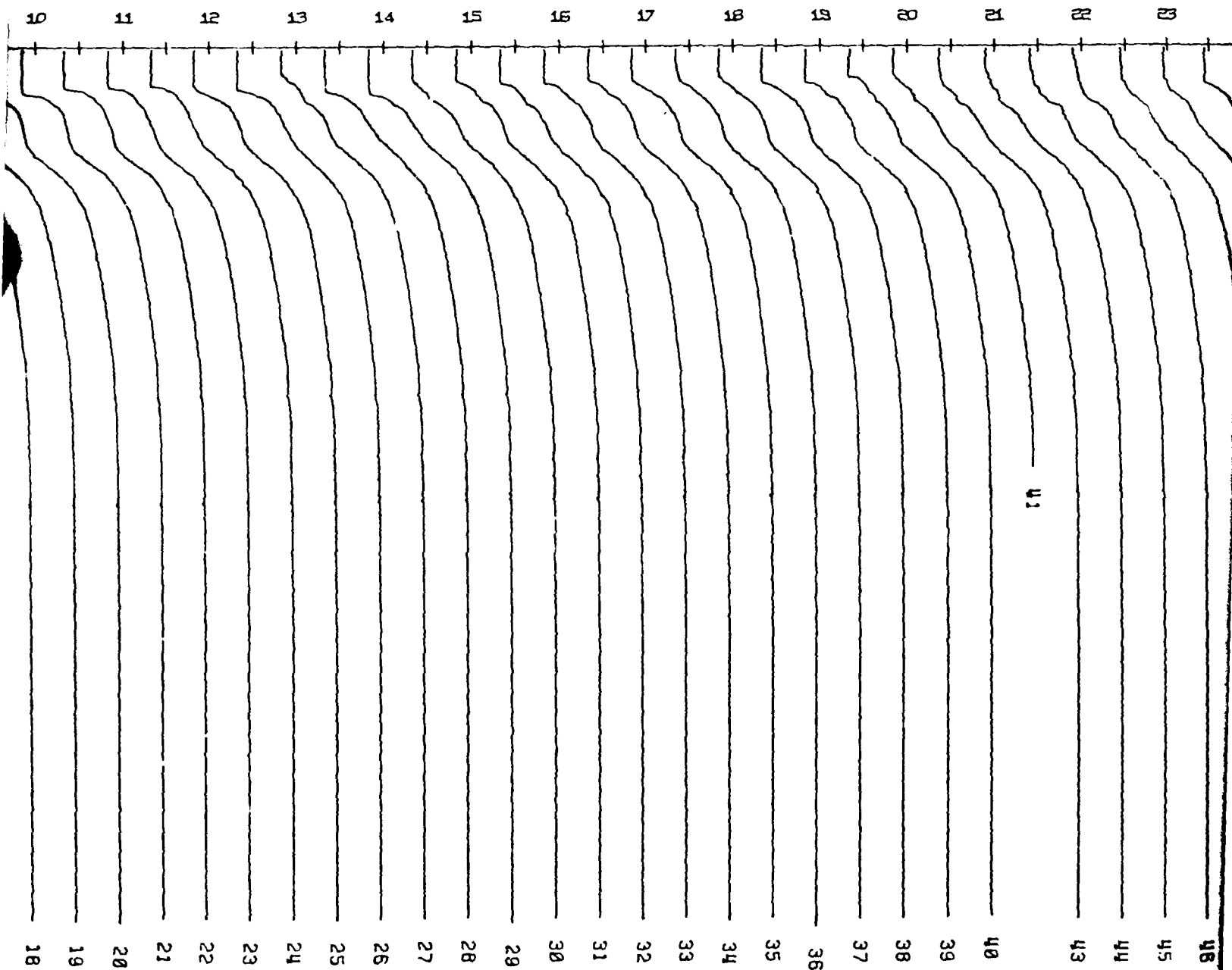
3

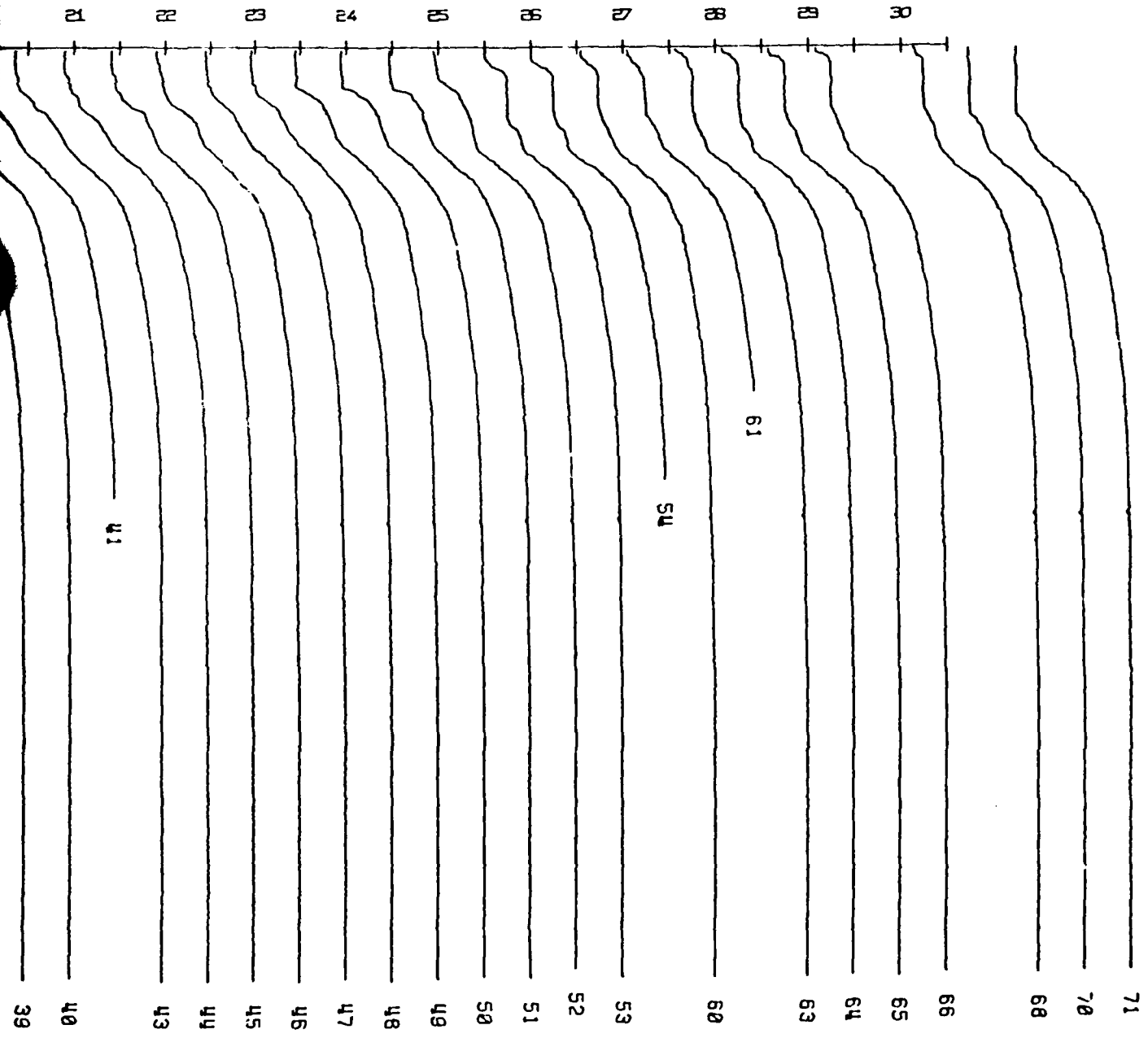
- NO MORE THAN ONE PROFILE PER HALF DAY (AM/PM GMT) IS PLOTTED
- EACH PROFILE PLOTTED WITH RESPECT TO LEFT DIVISION MARK (30.0 PPT)
- SALINITY SCALE SHIFTS RIGHT 1 DIVISION (1.0 PPT) FOR HALF DAY



SALINITY PROFILES AT CAMP FRAM 1
APR 1, 1979 TO APR 30, 1979

7)

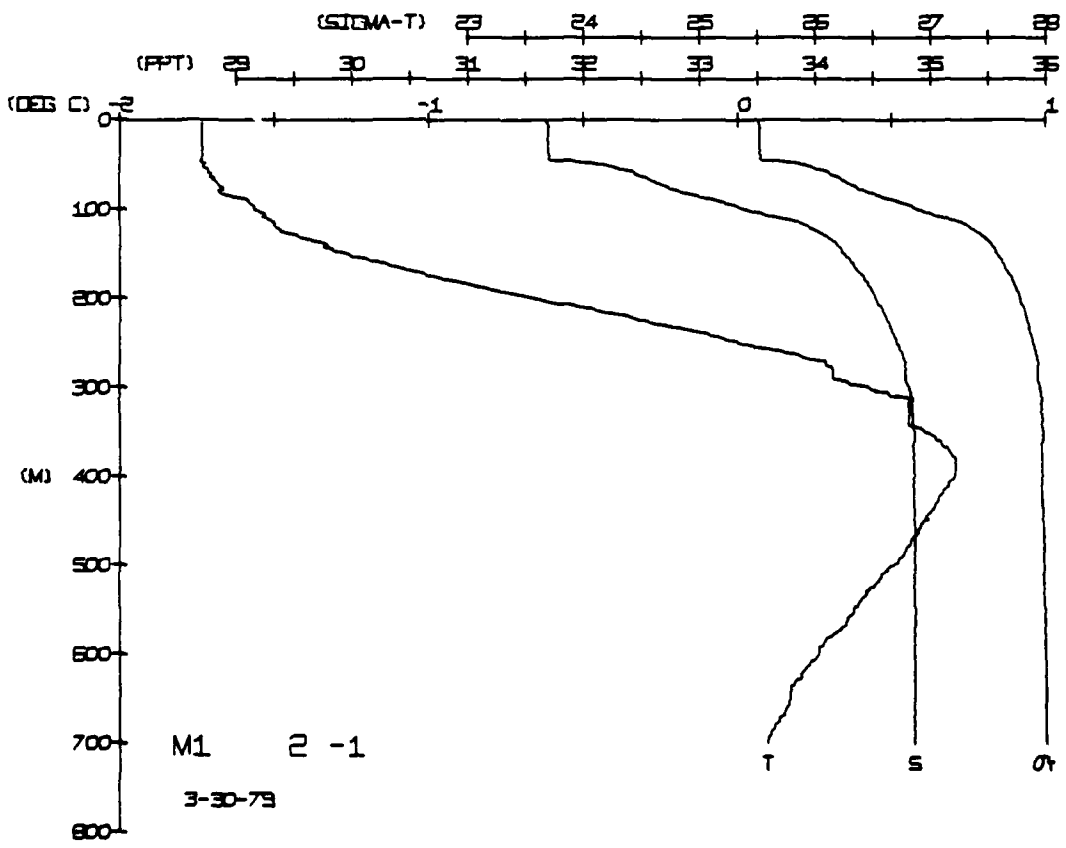
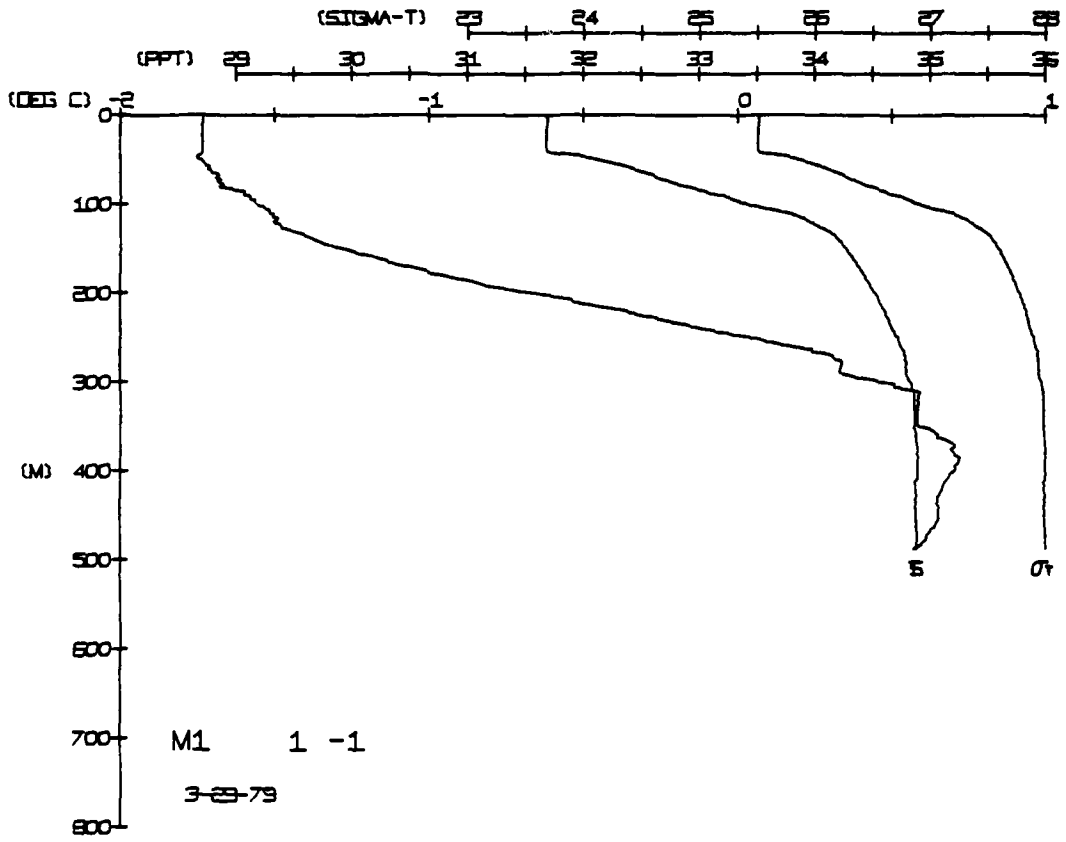


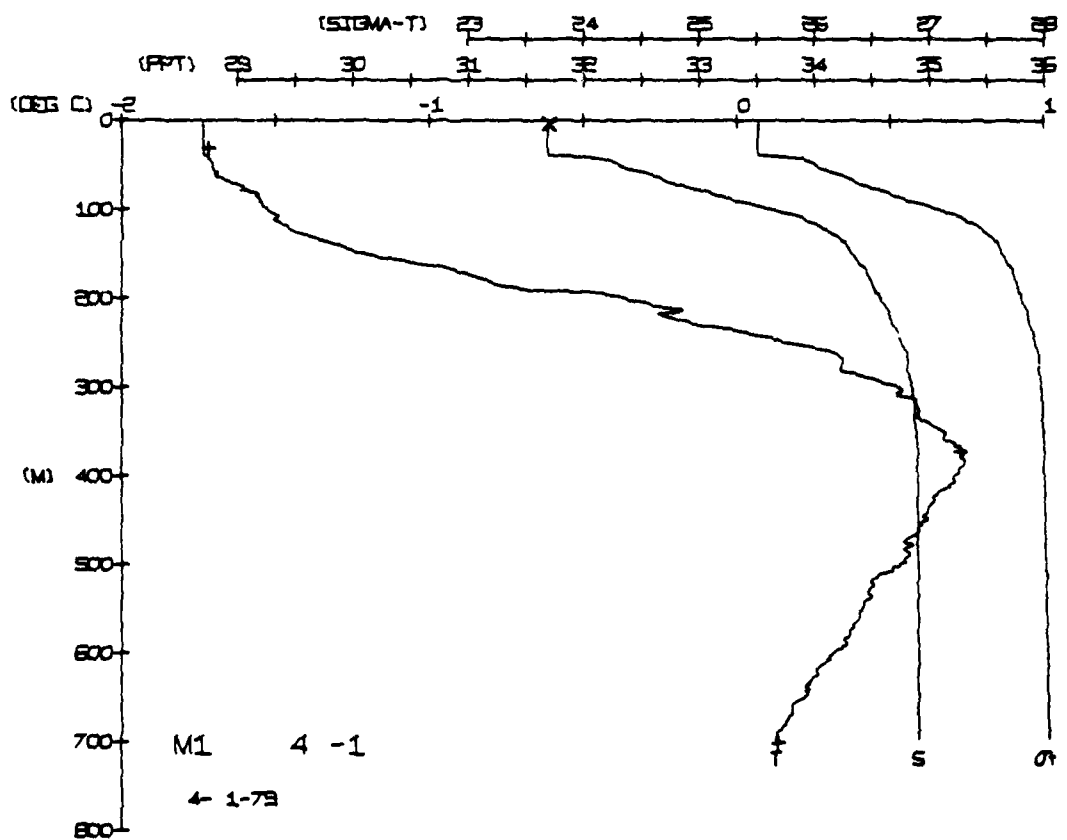
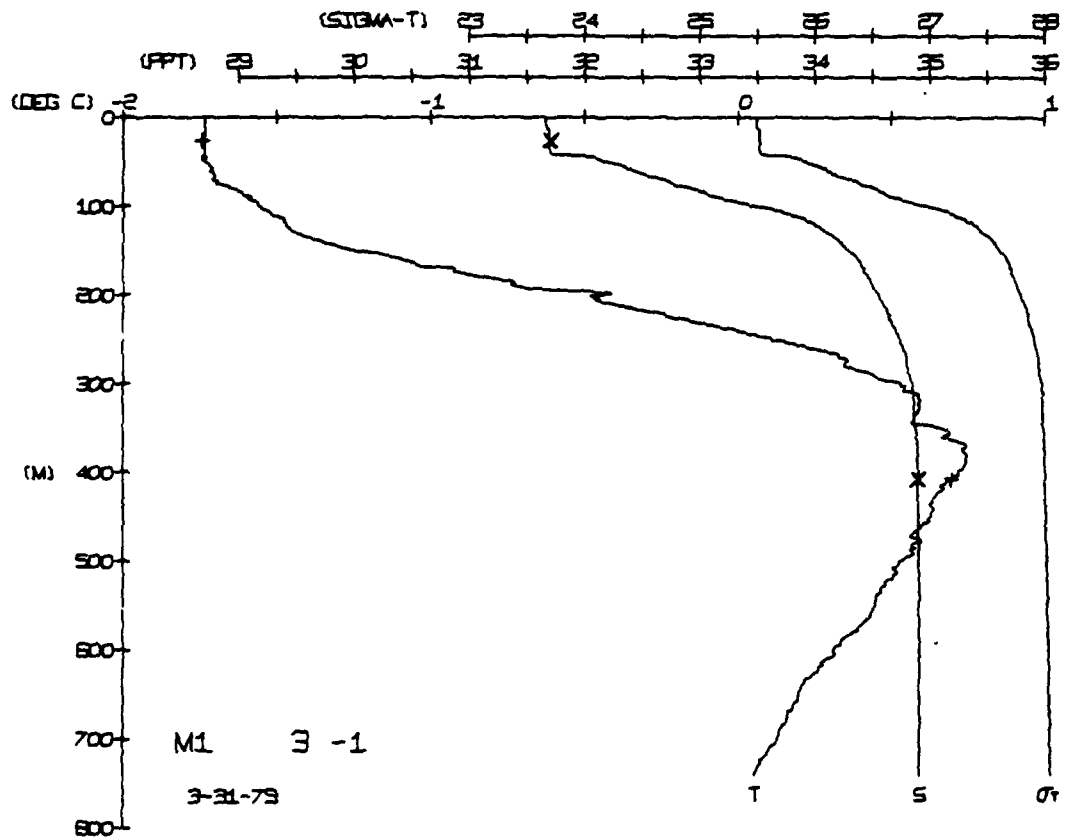


RESULTS

Section 2 (STD Data)

This section provides all of the STD Data taken at Fram I.
The numerical listings and corresponding plots are given.





FRAM 1 STATION 5(1) CTD 1/APR/1979 1707 GMT CODE = 1
 LAT = 84 727N LNG = 10 233W LTER = 10 LGER = 29
 AIR TEMP = 21.7 BARMOM = 1019.8 WIND = 113.0 SPEED =

FRAM 1 STATION 6(1) CTD 2/APR/1979 740 GMT CODE = 1
 LAT = 84 741N LNG = 10 232W LTER = 99 LGER = 120.4
 AIR TEMP = 28.5 BARMOM = 1018.5 WIND = 192.0 SPEED = 2.4

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYHNT	SOUND
0	73	73	31	76	25	37	242
1	73	73	31	75	25	37	44
2	73	73	31	68	25	37	48
3	73	73	31	69	25	37	48
4	73	73	31	67	25	37	48
5	73	73	31	67	25	37	48
6	73	73	31	67	25	37	48
7	73	73	31	67	25	37	48
8	73	73	31	67	25	37	48
9	73	73	31	67	25	37	48
10	73	73	31	67	25	37	48
11	73	73	31	67	25	37	48
12	73	73	31	67	25	37	48
13	73	73	31	67	25	37	48
14	73	73	31	67	25	37	48
15	73	73	31	67	25	37	48
16	73	73	31	67	25	37	48
17	73	73	31	67	25	37	48
18	73	73	31	67	25	37	48
19	73	73	31	67	25	37	48
20	73	73	31	67	25	37	48
21	73	73	31	67	25	37	48
22	73	73	31	67	25	37	48
23	73	73	31	67	25	37	48
24	73	73	31	67	25	37	48
25	73	73	31	67	25	37	48
26	73	73	31	67	25	37	48
27	73	73	31	67	25	37	48
28	73	73	31	67	25	37	48
29	73	73	31	67	25	37	48
30	73	73	31	67	25	37	48
31	73	73	31	67	25	37	48
32	73	73	31	67	25	37	48
33	73	73	31	67	25	37	48
34	73	73	31	67	25	37	48
35	73	73	31	67	25	37	48
36	73	73	31	67	25	37	48
37	73	73	31	67	25	37	48
38	73	73	31	67	25	37	48
39	73	73	31	67	25	37	48
40	73	73	31	67	25	37	48
41	73	73	31	67	25	37	48
42	73	73	31	67	25	37	48
43	73	73	31	67	25	37	48
44	73	73	31	67	25	37	48
45	73	73	31	67	25	37	48
46	73	73	31	67	25	37	48
47	73	73	31	67	25	37	48
48	73	73	31	67	25	37	48
49	73	73	31	67	25	37	48
50	73	73	31	67	25	37	48
51	73	73	31	67	25	37	48
52	73	73	31	67	25	37	48
53	73	73	31	67	25	37	48
54	73	73	31	67	25	37	48
55	73	73	31	67	25	37	48
56	73	73	31	67	25	37	48
57	73	73	31	67	25	37	48
58	73	73	31	67	25	37	48
59	73	73	31	67	25	37	48
60	73	73	31	67	25	37	48
61	73	73	31	67	25	37	48
62	73	73	31	67	25	37	48
63	73	73	31	67	25	37	48
64	73	73	31	67	25	37	48
65	73	73	31	67	25	37	48
66	73	73	31	67	25	37	48
67	73	73	31	67	25	37	48
68	73	73	31	67	25	37	48
69	73	73	31	67	25	37	48
70	73	73	31	67	25	37	48

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYHNT	SOUND
0	74	74	31	70	25	37	246
1	74	74	31	70	25	37	42
2	74	74	31	69	25	37	47
3	74	74	31	69	25	37	47
4	74	74	31	69	25	37	47
5	74	74	31	69	25	37	47
6	74	74	31	69	25	37	47
7	74	74	31	69	25	37	47
8	74	74	31	69	25	37	47
9	74	74	31	69	25	37	47
10	74	74	31	69	25	37	47
11	74	74	31	69	25	37	47
12	74	74	31	69	25	37	47
13	74	74	31	69	25	37	47
14	74	74	31	69	25	37	47
15	74	74	31	69	25	37	47
16	74	74	31	69	25	37	47
17	74	74	31	69	25	37	47
18	74	74	31	69	25	37	47
19	74	74	31	69	25	37	47
20	74	74	31	69	25	37	47
21	74	74	31	69	25	37	47
22	74	74	31	69	25	37	47
23	74	74	31	69	25	37	47
24	74	74	31	69	25	37	47
25	74	74	31	69	25	37	47
26	74	74	31	69	25	37	47
27	74	74	31	69	25	37	47
28	74	74	31	69	25	37	47
29	74	74	31	69	25	37	47
30	74	74	31	69	25	37	47
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32	74	74	31	69	25	37	47
33	74	74	31	69	25	37	47
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36	74	74	31	69	25	37	47
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38	74	74	31	69	25	37	47
39	74	74	31	69	25	37	47
40	74	74	31	69	25	37	47
41	74	74	31	69	25	37	47
42	74	74	31	69	25	37	47
43	74	74	31	69	25	37	47
44	74	74	31	69	25	37	47
45	74	74	31	69	25	37	47
46	74	74	31	69	25	37	47
47	74	74	31	69	25	37	47
48	74	74	31	69	25	37	47
49	74	74	31	69	25	37	47
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52	74	74	31	69	25	37	47
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66	74	74	31	69	25	37	47
67	74	74	31	69	25	37	47
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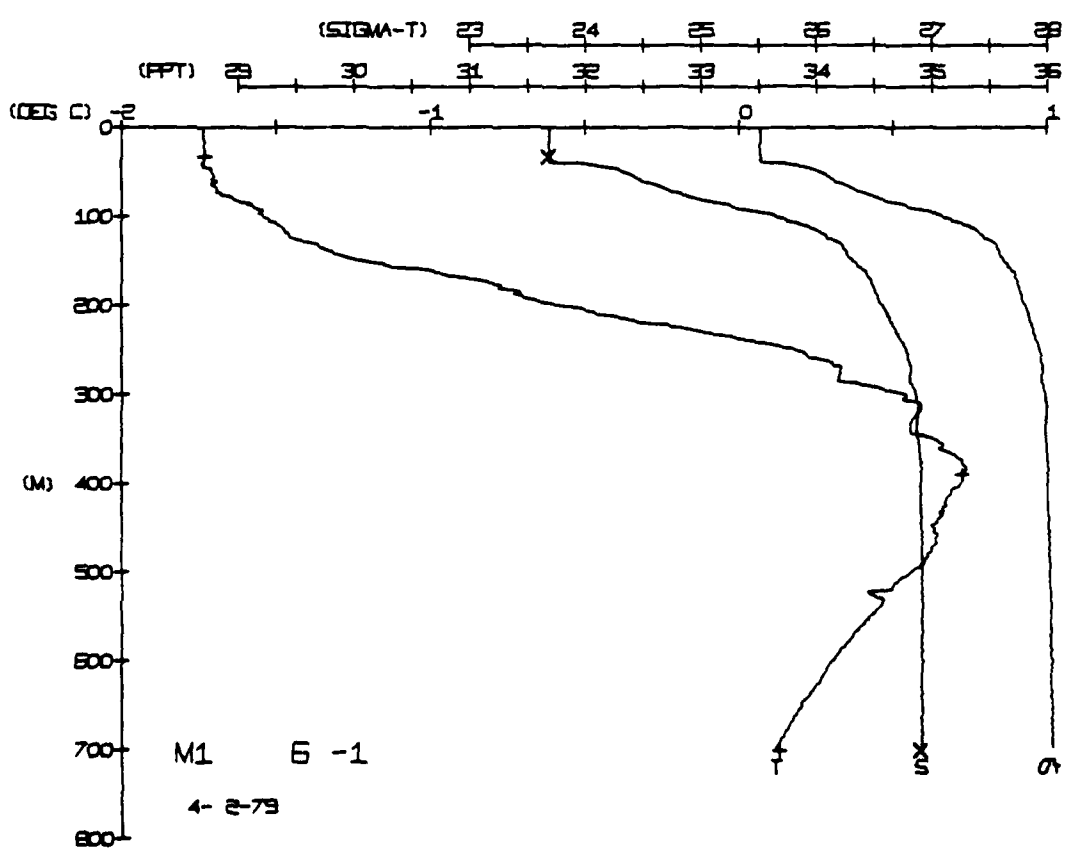
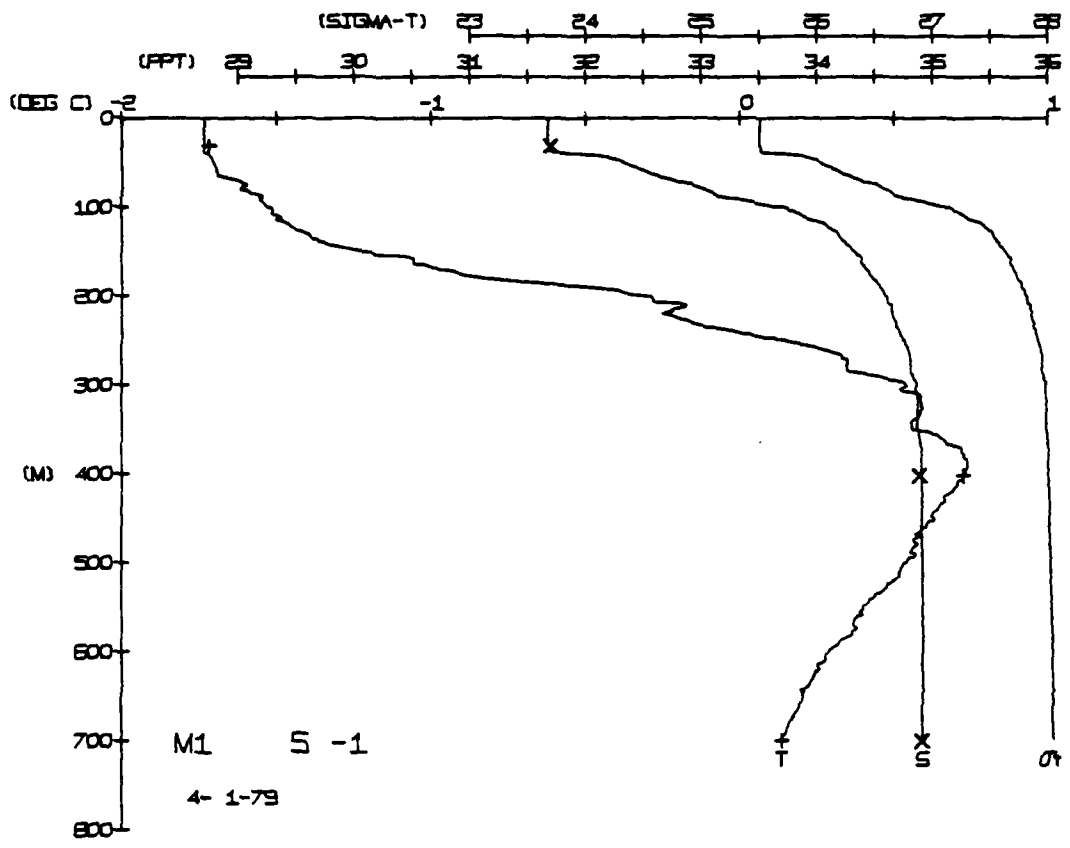
BOT NUM = 1
 BOT NUM = 3
 BOT NUM = 4

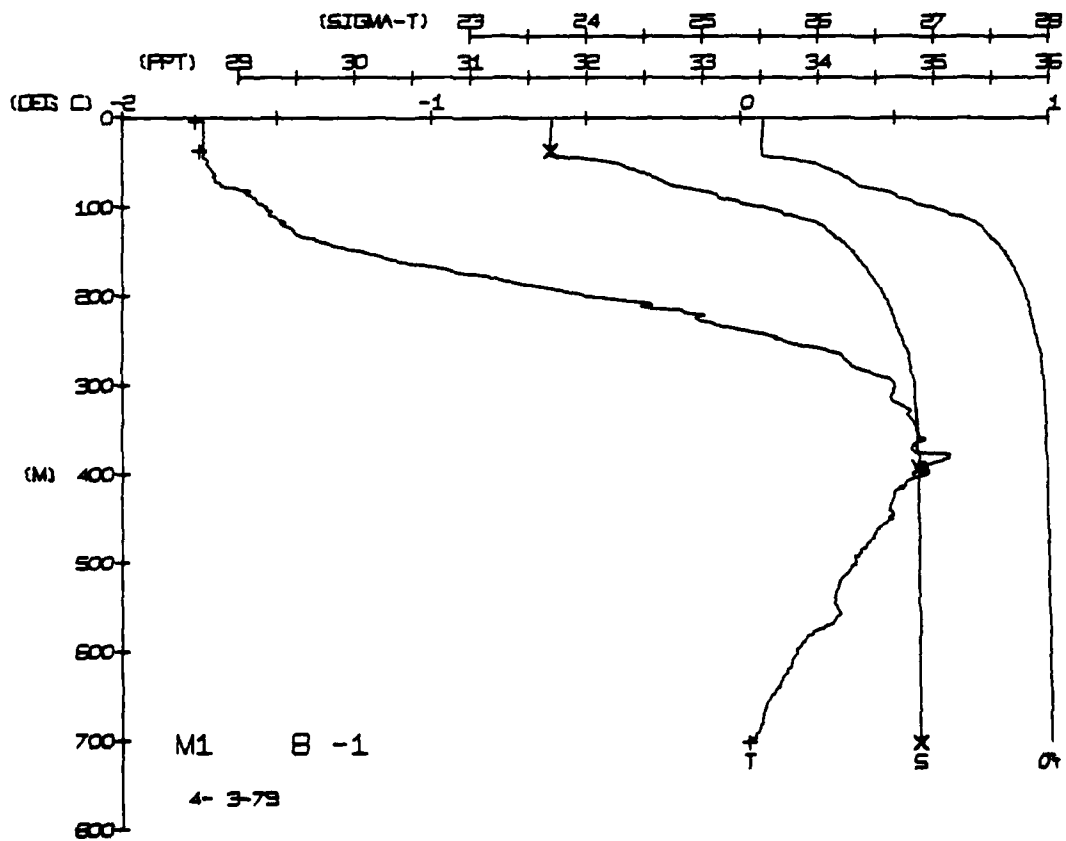
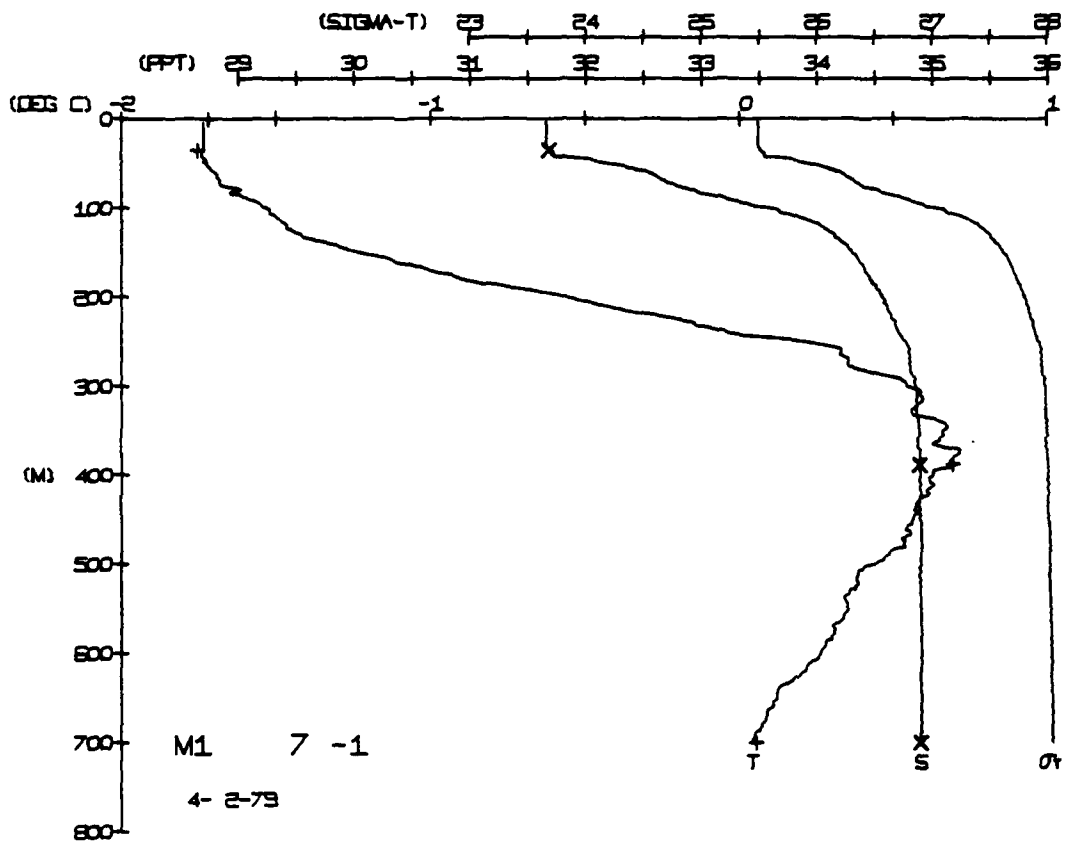
BOT NUM = 1
 BOT NUM = 3
 BOT NUM = 4

DEPTH 3 0
 390 3
 700 4

TEMP -1.74
 0.73
 0.13

SALIN 31.67
 34.90





FRAM 1 STATION 9(1) CTD 3/APR/1979 1835 GMT CODE = 1
 LAT = 84 6716N LNG = 9 6581W LTER = 0 LGER = 0
 AIR TEMP = -27.0 BAROM = 1035.4 WIND = 261.0 SPEED = 5.8

FRAM 1 STATION 10(1) CTD 4/APR/1979 700 GMT CODE = 1
 LAT = 84 6601N LNG = 9 5517W LTER = 15 LGER = 27
 AIR TEMP = -28.3 BAROM = 1038.5 WIND = 218.0 SPEED = 4.2

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DWHT	SOUND
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2	74	74	31.69	23	4	0	1436
3	74	74	31.69	23	4	0	1436
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8	74	74	31.69	23	4	0	1436
9	74	74	31.69	23	4	0	1436
10	74	74	31.69	23	4	0	1436
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76	74	74	31.69	23	4	0	1436
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78	74	74	31.69	23	4	0	1436
79	74	74	31.69	23	4	0	1436
80	74	74	31.69	23	4	0	1436
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97	74	74	31.69	23	4	0	1436
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99	74	74	31.69	23	4	0	1436
100	74	74	31.69	23	4	0	1436

BOT NUM = 1
 BOT NUM = 2

DEPTH 3.7
 397.1

TEMP -1.74
 0.61

SALIN 31.68
 34.88

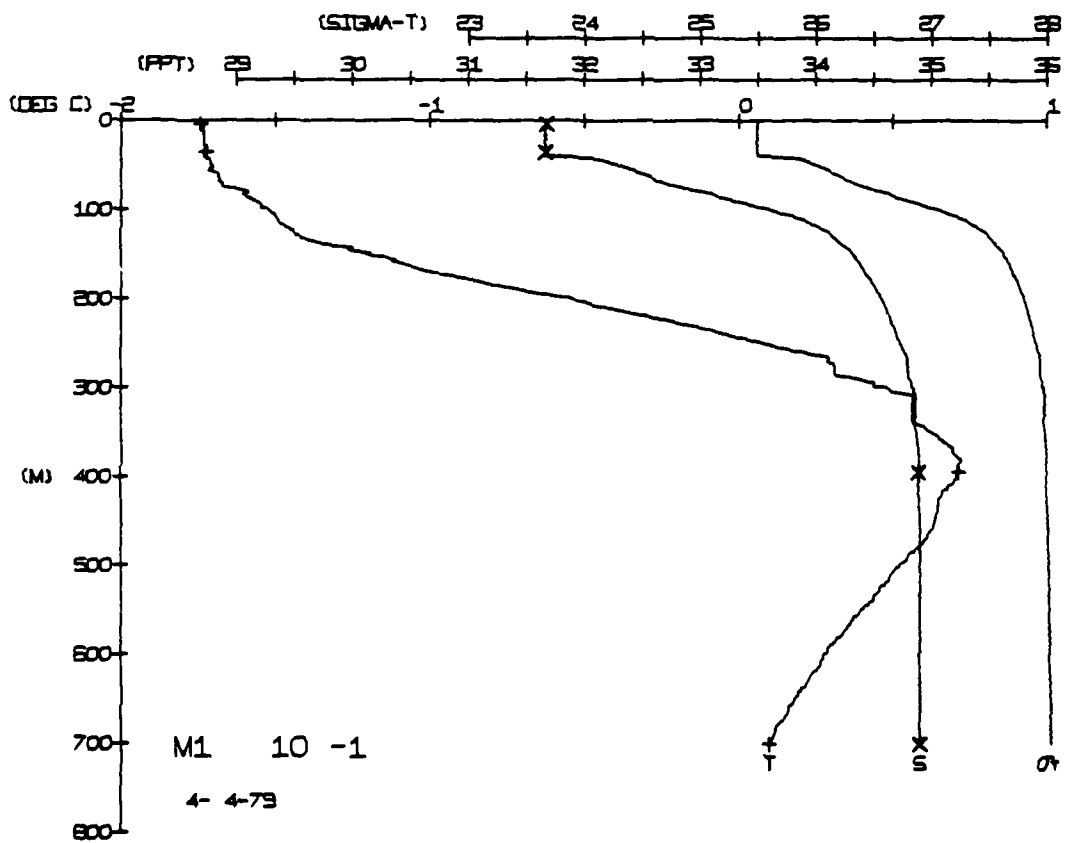
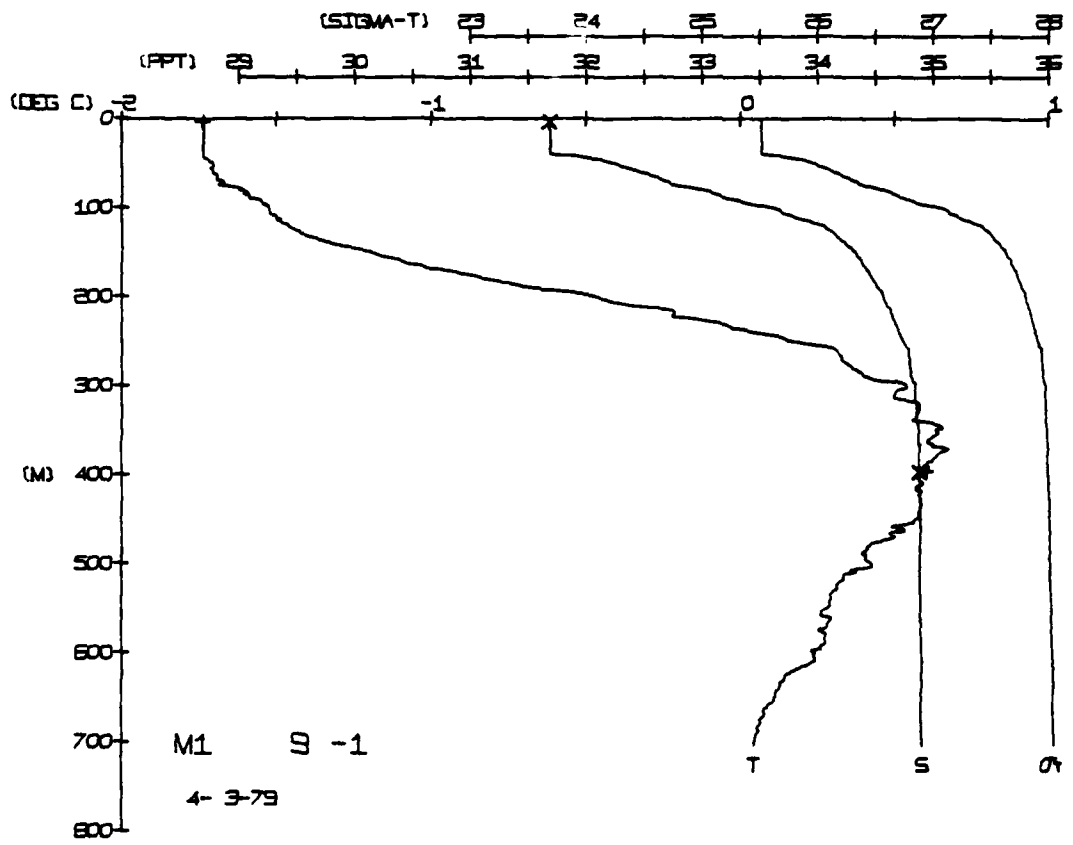
BOT NUM = 1
 BOT NUM = 2
 BOT NUM = 4

DEPTH 3.7
 374.1
 699.9

TEMP -1.75
 0.72

SALIN 31.66
 31.66
 34.90

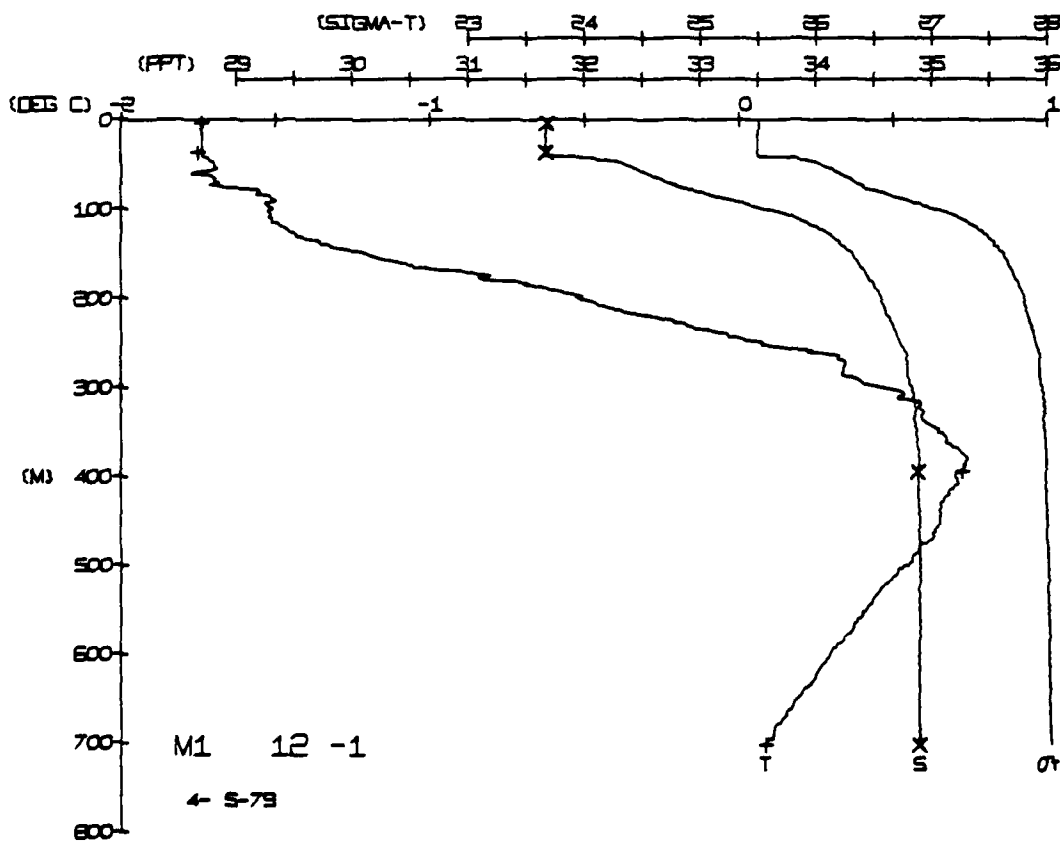
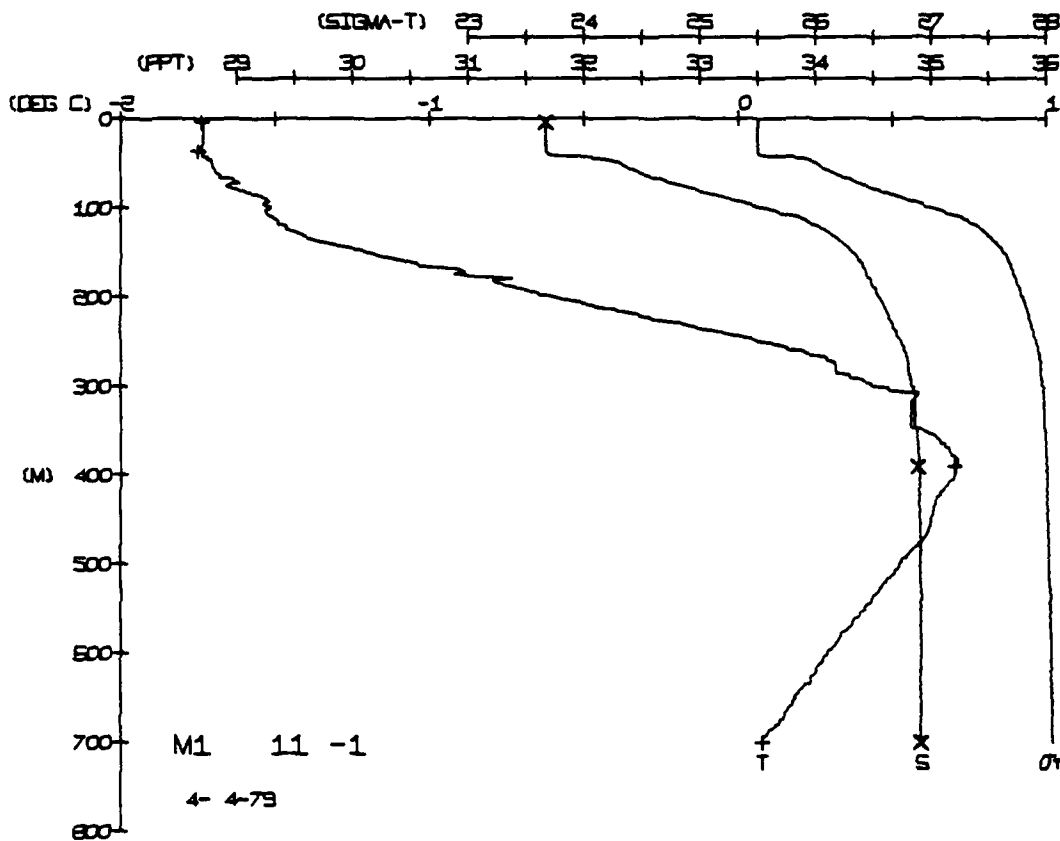
DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DWHT	SOUND
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4	73	73	31.65	23	5	0	1436
5	73	73	31.65	23	5	0	1436
6	73	73	31.65	23	5	0	1436
7	73	73	31.65	23	5	0	1436
8	73	73	31.65	23	5	0	1436
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10	73	73	31.65	23	5	0	1436
11	73	73	31.65	23	5	0	1436
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39	73	73	31.65	23	5	0	1436
40	73	73	31.65	23	5	0	1436
41	73	73	31.65	23	5	0	1436
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46	73	73	31.65	23	5	0	1436
47	73	73	31.65	23	5	0	1436
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74	73	73	31.65	23	5	0	1436
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76	73	73	31.65	23	5	0	1436
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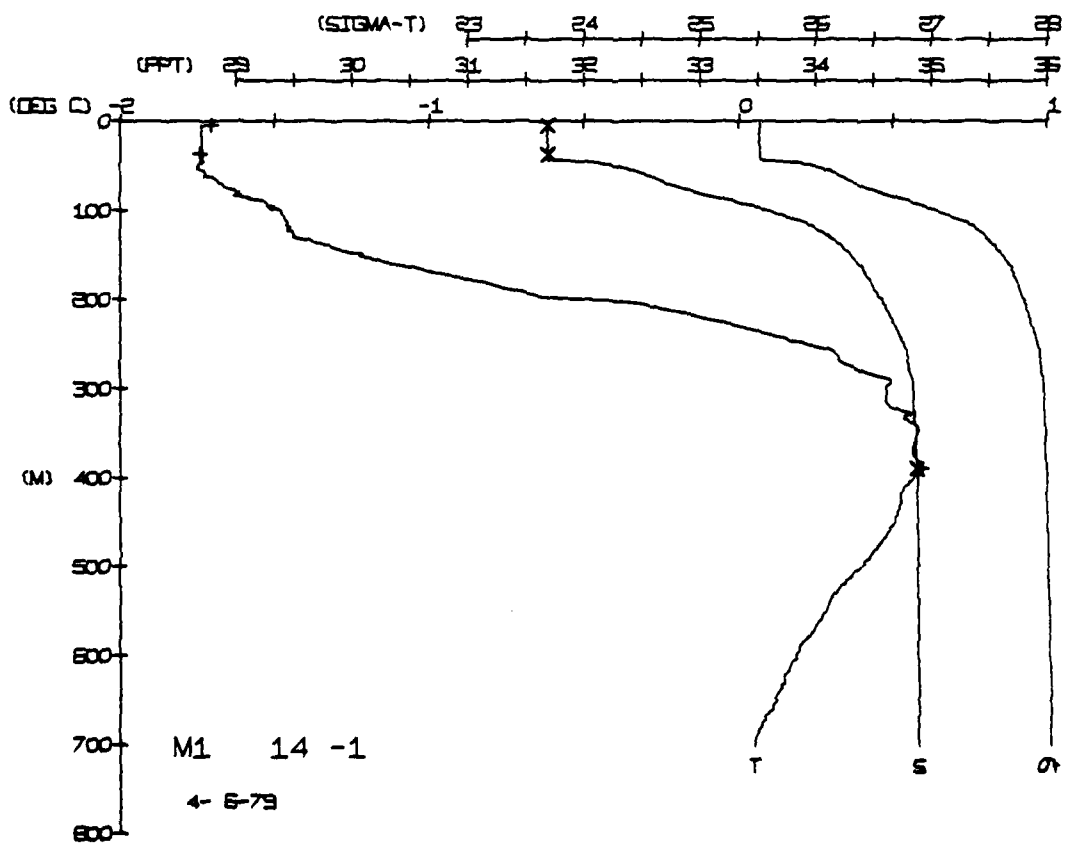
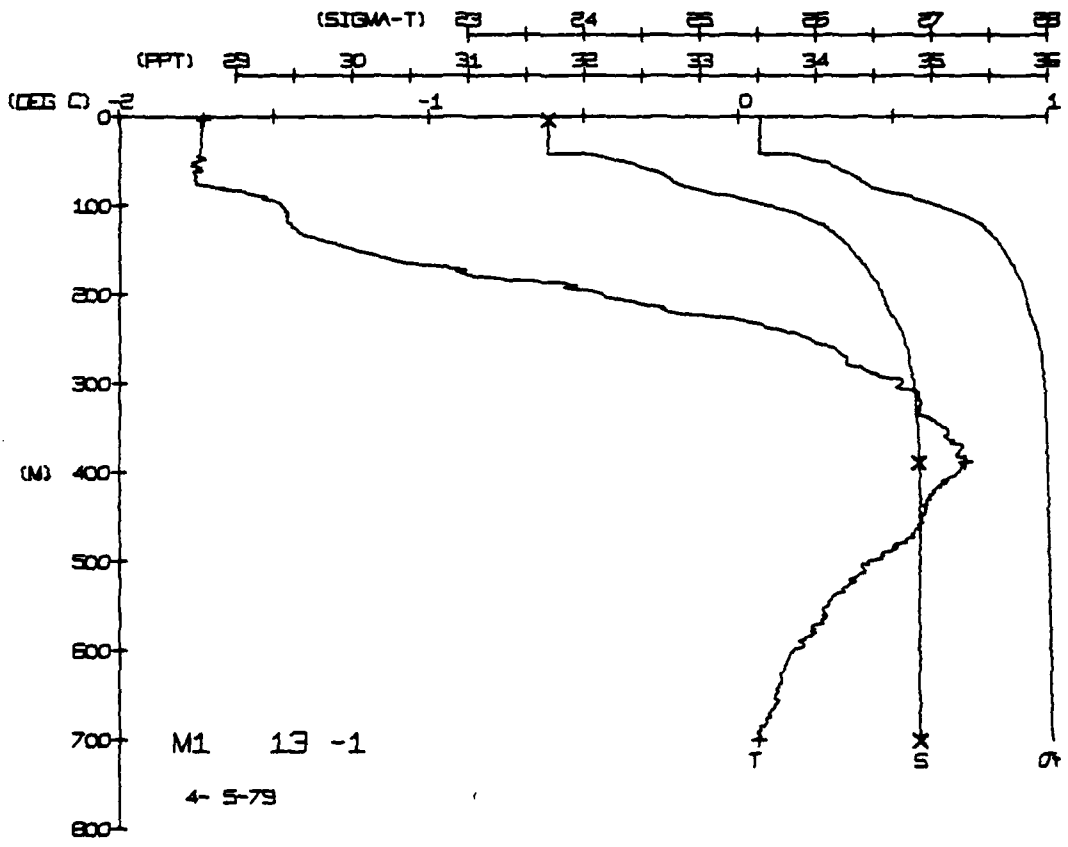


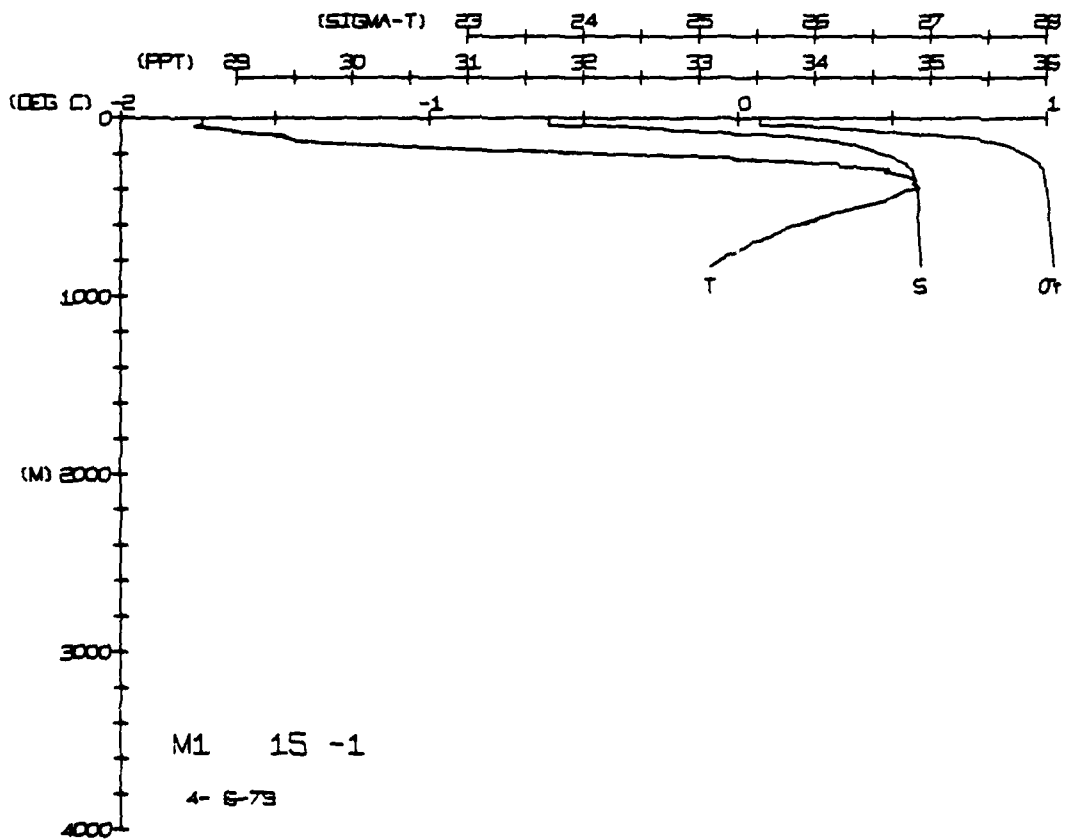
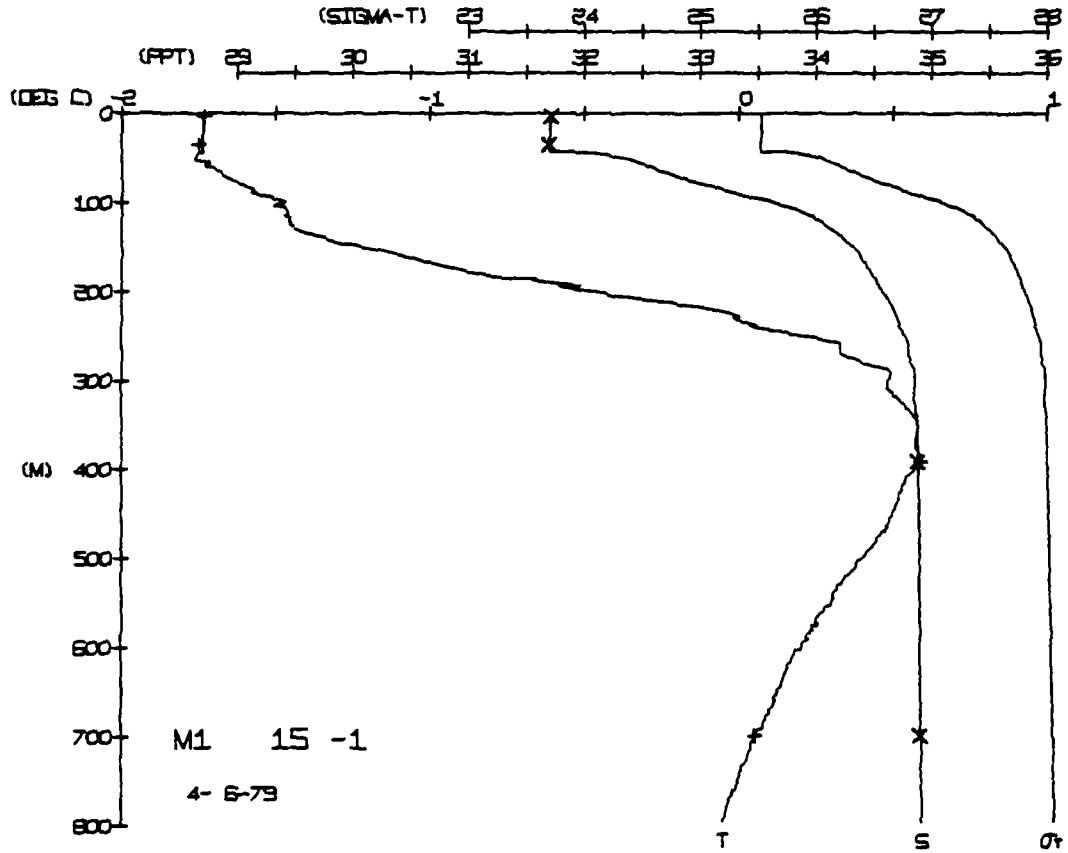
FRAM 1 STATION 11(1) CTD 4/APR/1979 1837 GMT CODE = 1
 LAT = 84 8472N LNG = 9 4235W LTER = 0 LGER = 0
 AIR TEMP = -28.3 BAROM = 1038.7 WIND = 218.0 SPEED = 4.2

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DVWHT	SOUND
0	74	74	31.68	25.50	248.7	0.008	1436.5
1	74	74	31.68	25.50	248.7	0.008	1436.5
3	74	74	31.67	25.50	248.8	0.013	1436.6
5	74	74	31.67	25.50	248.8	0.025	1436.6
10	73	73	31.67	25.50	248.9	0.038	1436.6
15	73	73	31.67	25.50	248.9	0.050	1436.6
20	73	73	31.67	25.50	248.9	0.063	1436.6
25	73	73	31.67	25.50	248.9	0.075	1436.6
30	73	73	31.67	25.50	248.9	0.088	1436.6
35	73	73	31.67	25.50	248.9	0.100	1436.6
40	73	73	31.67	25.50	248.9	0.112	1436.6
45	72	72	31.69	25.51	248.6	0.122	1436.6
50	72	72	31.69	25.51	248.6	0.132	1436.6
55	70	70	31.70	26.06	199.0	0.142	1436.6
60	69	69	31.69	26.46	188.0	0.151	1436.6
65	68	68	31.69	26.86	180.0	0.160	1436.6
70	68	68	31.69	27.26	170.0	0.170	1436.6
75	68	68	31.69	27.66	160.0	0.180	1436.6
80	63	63	31.69	28.06	150.0	0.190	1436.6
85	63	63	31.69	28.46	140.0	0.202	1436.6
90	52	52	31.69	28.86	106.6	0.212	1436.6
95	52	52	31.69	29.26	69.7	0.220	1436.6
100	48	48	31.69	29.66	42.0	0.226	1436.6
110	42	42	31.69	30.06	22.0	0.232	1436.6
120	34	34	31.69	30.46	12.0	0.237	1436.6
130	24	24	31.69	30.86	6.0	0.242	1436.6
140	14	14	31.69	31.26	2.0	0.247	1436.6
150	09	09	31.69	31.66	0.0	0.252	1436.6
160	09	09	31.69	32.06	0.0	0.257	1436.6
170	09	09	31.69	32.46	0.0	0.262	1436.6
180	09	09	31.69	32.86	0.0	0.267	1436.6
190	09	09	31.69	33.26	0.0	0.272	1436.6
200	09	09	31.69	33.66	0.0	0.277	1436.6
210	09	09	31.69	34.06	0.0	0.282	1436.6
220	09	09	31.69	34.46	0.0	0.287	1436.6
230	09	09	31.69	34.86	0.0	0.292	1436.6
240	09	09	31.69	35.26	0.0	0.297	1436.6
250	09	09	31.69	35.66	0.0	0.302	1436.6
260	09	09	31.69	36.06	0.0	0.307	1436.6
270	09	09	31.69	36.46	0.0	0.312	1436.6
280	09	09	31.69	36.86	0.0	0.317	1436.6
290	09	09	31.69	37.26	0.0	0.322	1436.6
300	09	09	31.69	37.66	0.0	0.327	1436.6
310	09	09	31.69	38.06	0.0	0.332	1436.6
320	09	09	31.69	38.46	0.0	0.337	1436.6
330	09	09	31.69	38.86	0.0	0.342	1436.6
340	09	09	31.69	39.26	0.0	0.347	1436.6
350	09	09	31.69	39.66	0.0	0.352	1436.6
360	09	09	31.69	40.06	0.0	0.357	1436.6
370	09	09	31.69	40.46	0.0	0.362	1436.6
380	09	09	31.69	40.86	0.0	0.367	1436.6
390	09	09	31.69	41.26	0.0	0.372	1436.6
400	09	09	31.69	41.66	0.0	0.377	1436.6
410	09	09	31.69	42.06	0.0	0.382	1436.6
420	09	09	31.69	42.46	0.0	0.387	1436.6
430	09	09	31.69	42.86	0.0	0.392	1436.6
440	09	09	31.69	43.26	0.0	0.397	1436.6
450	09	09	31.69	43.66	0.0	0.402	1436.6
460	09	09	31.69	44.06	0.0	0.407	1436.6
470	09	09	31.69	44.46	0.0	0.412	1436.6
480	09	09	31.69	44.86	0.0	0.417	1436.6
490	09	09	31.69	45.26	0.0	0.422	1436.6
500	09	09	31.69	45.66	0.0	0.427	1436.6
510	09	09	31.69	46.06	0.0	0.432	1436.6
520	09	09	31.69	46.46	0.0	0.437	1436.6
530	09	09	31.69	46.86	0.0	0.442	1436.6
540	09	09	31.69	47.26	0.0	0.447	1436.6
550	09	09	31.69	47.66	0.0	0.452	1436.6
560	09	09	31.69	48.06	0.0	0.457	1436.6
570	09	09	31.69	48.46	0.0	0.462	1436.6
580	09	09	31.69	48.86	0.0	0.467	1436.6
590	09	09	31.69	49.26	0.0	0.472	1436.6
600	09	09	31.69	49.66	0.0	0.477	1436.6
610	09	09	31.69	50.06	0.0	0.482	1436.6
620	09	09	31.69	50.46	0.0	0.487	1436.6
630	09	09	31.69	50.86	0.0	0.492	1436.6
640	09	09	31.69	51.26	0.0	0.497	1436.6
650	09	09	31.69	51.66	0.0	0.502	1436.6
660	09	09	31.69	52.06	0.0	0.507	1436.6
670	09	09	31.69	52.46	0.0	0.512	1436.6
680	09	09	31.69	52.86	0.0	0.517	1436.6
690	09	09	31.69	53.26	0.0	0.522	1436.6
700	09	09	31.69	53.66	0.0	0.527	1436.6

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DVWHT	SOUND
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1	74	74	31.68	25.50	248.7	0.007	1436.5
3	74	74	31.67	25.50	248.8	0.025	1436.6
5	74	74	31.67	25.50	248.8	0.038	1436.6
10	73	73	31.67	25.50	248.9	0.050	1436.6
15	73	73	31.67	25.50	248.9	0.063	1436.6
20	73	73	31.67	25.50	248.9	0.075	1436.6
25	73	73	31.67	25.50	248.9	0.088	1436.6
30	73	73	31.67	25.50	248.9	0.100	1436.6
35	73	73	31.67	25.50	248.9	0.112	1436.6
40	73	73	31.67	25.50	248.9	0.122	1436.6
45	72	72	31.69	25.51	248.6	0.132	1436.6
50	72	72	31.69	25.51	248.6	0.142	1436.6
55	70	70	31.70	26.06	182.2	0.151	1436.6
60	69	69	31.69	26.46	170.0	0.160	1436.6
65	68	68	31.69	26.86	159.0	0.170	1436.6
70	68	68	31.69	27.26	149.0	0.180	1436.6
75	68	68	31.69	27.66	139.0	0.190	1436.6
80	63	63	31.69	28.06	128.0	0.202	1436.6
85	63	63	31.69	28.46	118.0	0.212	1436.6
90	52	52	31.69	28.86	106.5	0.220	1436.6
95	52	52	31.69	29.26	95.0	0.226	1436.6
100	48	48	31.69	29.66	83.0	0.232	1436.6
110	42	42	31.69	30.06	71.0	0.237	1436.6
120	34	34	31.69	30.46	59.0	0.242	1436.6
130	24	24	31.69	30.86	47.0	0.247	1436.6
140	14	14	31.69	31.26	35.0	0.252	1436.6
150	09	09	31.69	31.66	23.0	0.257	1436.6
160	09	09	31.69	32.06	11.0	0.262	1436.6
170	09	09	31.69	32.46	0.0	0.267	1436.6
180	09	09	31.69	32.86	0.0	0.272	1436.6
190	09	09	31.69	33.26	0.0	0.277	1436.6
200	09	09	31.69	33.66	0.0	0.282	1436.6
210	09	09	31.69	34.06	0.0	0.287	1436.6
220	09	09	31.69	34.46	0.0	0.292	1436.6
230	09	09	31.69	34.86	0.0	0.297	1436.6
240	09	09	31.69	35.26	0.0	0.302	1436.6
250	09	09	31.69	35.66	0.0	0.307	1436.6
260	09	09	31.69	36.06	0.0	0.312	1436.6
270	09	09	31.69	36.46	0.0	0.317	1436.6
280	09	09	31.69	36.86	0.0	0.322	1436.6
290	09	09	31.69	37.26	0.0	0.327	1436.6
300	09	09	31.69	37.66	0.0	0.332	1436.6
310	09	09	31.69	38.06	0.0	0.337	1436.6
320	09	09	31.69	38.46	0.0	0.342	1436.6
330	09	09	31.69	38.86	0.0	0.347	1436.6
340	09	09	31.69	39.26	0.0	0.352	1436.6
350	09	09	31.69	39.66	0.0	0.357	1436.6
360	09	09	31.69	40.06	0.0	0.362	1436.6
370	09	09	31.69	40.46	0.0	0.367	1436.6
380	09	09	31.69	40.86	0.0	0.372	1436.6
390	09	09	31.69	41.26	0.0	0.377	1436.6
400	09	09	31.69	41.66	0.0	0.382	1436.6
410	09	09	31.69	42.06	0.0	0.387	1436.6
420	09	09	31.69	42.46	0.0	0.392	1436.6
430	09	09	31.69	42.86	0.0	0.397	1436.6
440	09	09	31.69	43.26	0.0	0.402	1436.6
450	09	09	31.69	43.66	0.0	0.407	1436.6
460	09	09	31.69	44.06	0.0	0.412	1436.6
470	09	09	31.69	44.46	0.0	0.417	1436.6
480	09	09	31.69	44.86	0.0	0.422	1436.6
490	09	09	31.69	45.26	0.0	0.427	1436.6
500	09	09	31.69	45.66	0.0	0.432	1436.6
510	09	09	31.69	46.06	0.0	0.437	1436.6
520	09	09	31.69	46.46	0.0	0.442	1436.6
530	09	09	31.69	46.86	0.0	0.447	1436.6
540	09	09	31.69	47.26	0.0	0.452	1436.6
550	09	09	31.69	47.66	0.0	0.457	1436.6
560	09	09	31.69	48.06	0.0	0.462	1436.6
570	09	09	31.69	48.46	0.0	0.467	1436.6
580	09	09	31.69	48.86	0.0	0.472	1436.6
590	09	09	31.69	49.26	0.0	0.477	1436.6
600	09	09	31.69	49.66	0.0	0.482	1436.6
610	09	09	31.69	50.06	0.0	0.487	1436.6
620	09	09	31				







FRAM 1 STATION 16(1) CTD 7/APR/1979 654 GMT CODE = 1
 LAT = 84 4366N LNG = 9 1475W LITER = 1.0 LGER =
 AIR TEMP = -26.6 BAROM = 1028.3 WIND = 175.0 SPEED = 3.1

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DVHNT	SOUND
0	74	74	31	72	25	54	1436
1	74	74	31	72	25	54	1436
2	74	74	31	72	25	54	1436
3	74	74	31	72	25	54	1436
4	74	74	31	72	25	54	1436
5	74	74	31	72	25	54	1436
6	74	74	31	72	25	54	1436
7	74	74	31	72	25	54	1436
8	74	74	31	72	25	54	1436
9	74	74	31	72	25	54	1436
10	74	74	31	72	25	54	1436
11	74	74	31	72	25	54	1436
12	74	74	31	72	25	54	1436
13	74	74	31	72	25	54	1436
14	74	74	31	72	25	54	1436
15	74	74	31	72	25	54	1436
16	74	74	31	72	25	54	1436
17	74	74	31	72	25	54	1436
18	74	74	31	72	25	54	1436
19	74	74	31	72	25	54	1436
20	74	74	31	72	25	54	1436
21	74	74	31	72	25	54	1436
22	74	74	31	72	25	54	1436
23	74	74	31	72	25	54	1436
24	74	74	31	72	25	54	1436
25	74	74	31	72	25	54	1436
26	74	74	31	72	25	54	1436
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32	74	74	31	72	25	54	1436
33	74	74	31	72	25	54	1436
34	74	74	31	72	25	54	1436
35	74	74	31	72	25	54	1436
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42	74	74	31	72	25	54	1436
43	74	74	31	72	25	54	1436
44	74	74	31	72	25	54	1436
45	74	74	31	72	25	54	1436
46	74	74	31	72	25	54	1436
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63	74	74	31	72	25	54	1436
64	74	74	31	72	25	54	1436
65	74	74	31	72	25	54	1436
66	74	74	31	72	25	54	1436
67	74	74	31	72	25	54	1436
68	74	74	31	72	25	54	1436
69	74	74	31	72	25	54	1436
70	74	74	31	72	25	54	1436

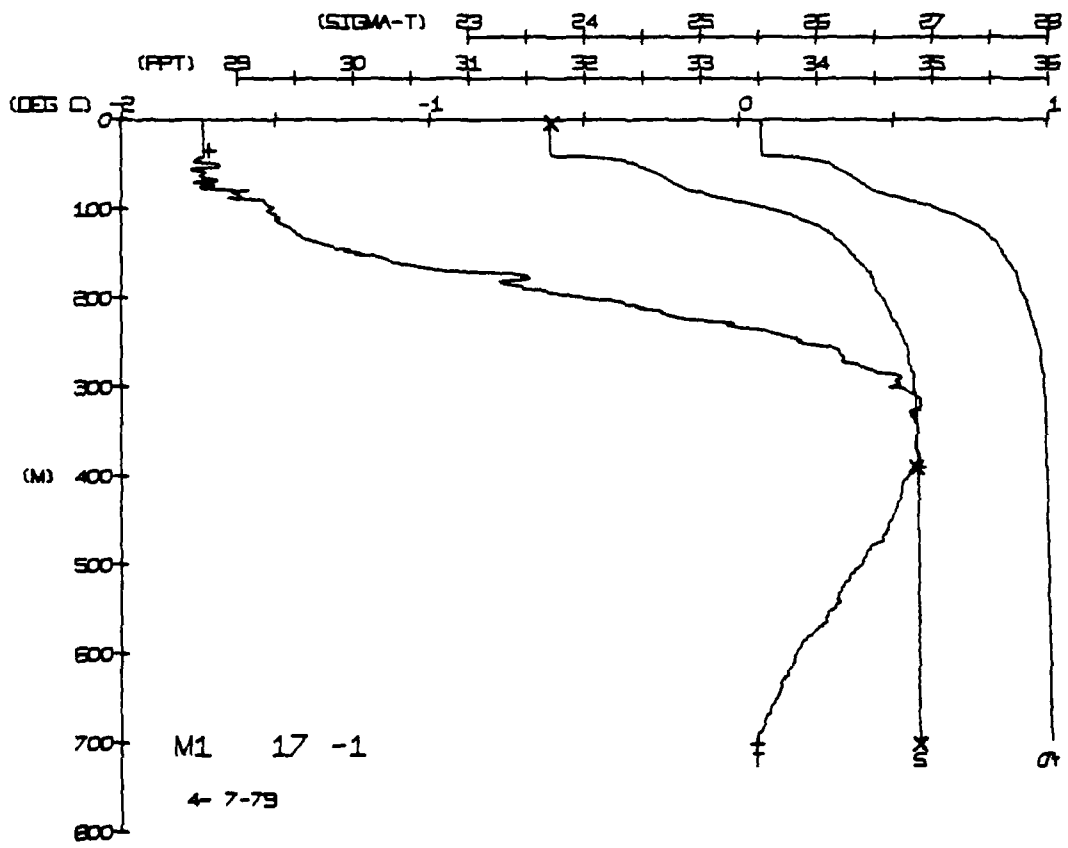
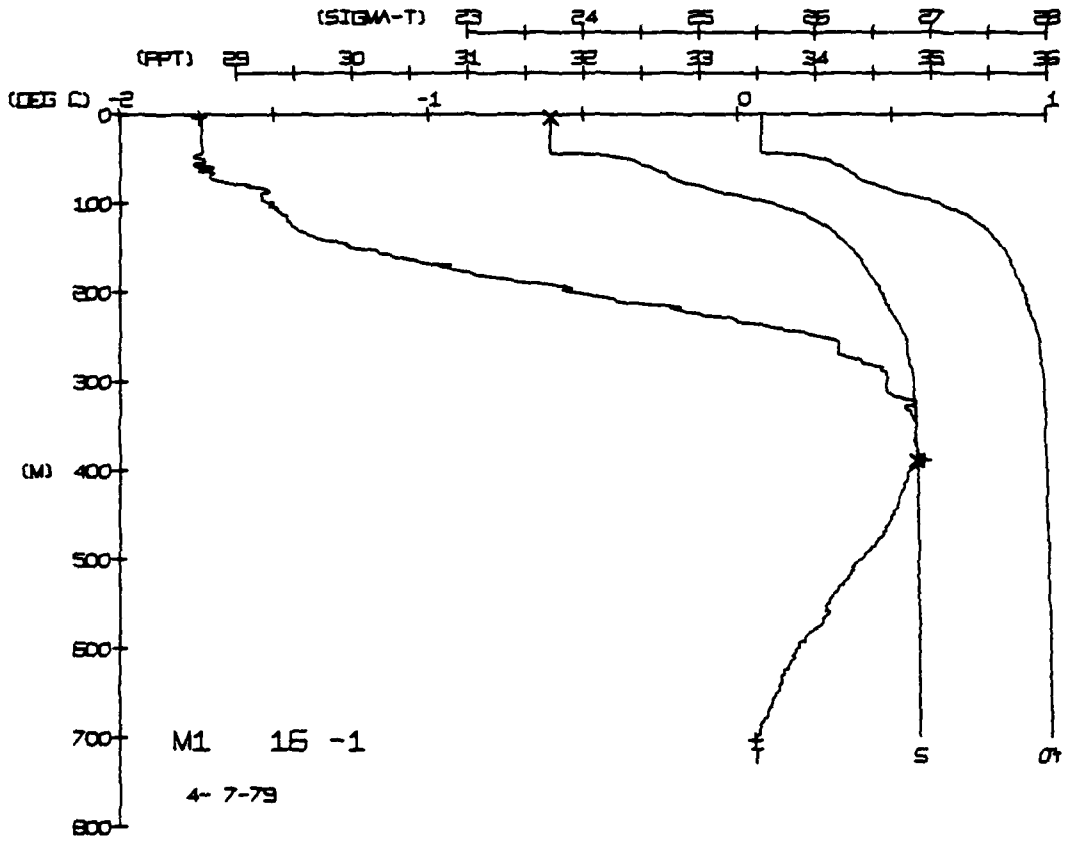
DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DVHNT	SOUND
0	73	73	31	69	25	52	1436
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2	73	73	31	69	25	52	1436
3	73	73	31	69	25	52	1436
4	73	73	31	69	25	52	1436
5	73	73	31	69	25	52	1436
6	73	73	31	69	25	52	1436
7	73	73	31	69	25	52	1436
8	73	73	31	69	25	52	1436
9	73	73	31	69	25	52	1436
10	73	73	31	69	25	52	1436
11	73	73	31	69	25	52	1436
12	73	73	31	69	25	52	1436
13	73	73	31	69	25	52	1436
14	73	73	31	69	25	52	1436
15	73	73	31	69	25	52	1436
16	73	73	31	69	25	52	1436
17	73	73	31	69	25	52	1436
18	73	73	31	69	25	52	1436
19	73	73	31	69	25	52	1436
20	73	73	31	69	25	52	1436
21	73	73	31	69	25	52	1436
22	73	73	31	69	25	52	1436
23	73	73	31	69	25	52	1436
24	73	73	31	69	25	52	1436
25	73	73	31	69	25	52	1436
26	73	73	31	69	25	52	1436
27	73	73	31	69	25	52	1436
28	73	73	31	69	25	52	1436
29	73	73	31	69	25	52	1436
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33	73	73	31	69	25	52	1436
34	73	73	31	69	25	52	1436
35	73	73	31	69	25	52	1436
36	73	73	31	69	25	52	1436
37	73	73	31	69	25	52	1436
38	73	73	31	69	25	52	1436
39	73	73	31	69	25	52	1436
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41	73	73	31	69	25	52	1436
42	73	73	31	69	25	52	1436
43	73	73	31	69	25	52	1436
44	73	73	31	69	25	52	1436
45	73	73	31	69	25	52	1436
46	73	73	31	69	25	52	1436
47	73	73	31	69	25	52	1436
48	73	73	31	69	25	52	1436
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62	73	73	31	69	25	52	1436
63	73	73	31	69	25	52	1436
64	73	73	31	69	25	52	1436
65	73	73	31	69	25	52	1436
66	73	73	31	69	25	52	1436
67	73	73	31	69	25	52	1436
68	73	73	31	69	25	52	1436
69	73	73	31	69	25	52	1436
70	73	73	31	69	25	52	1436

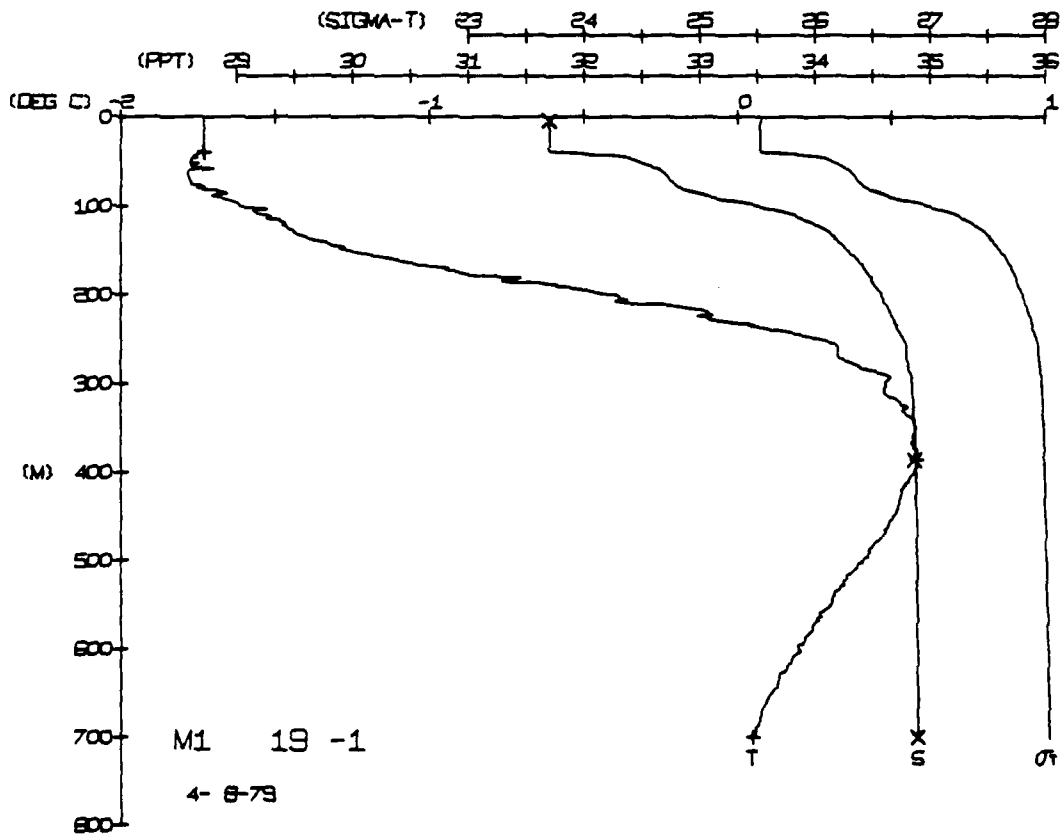
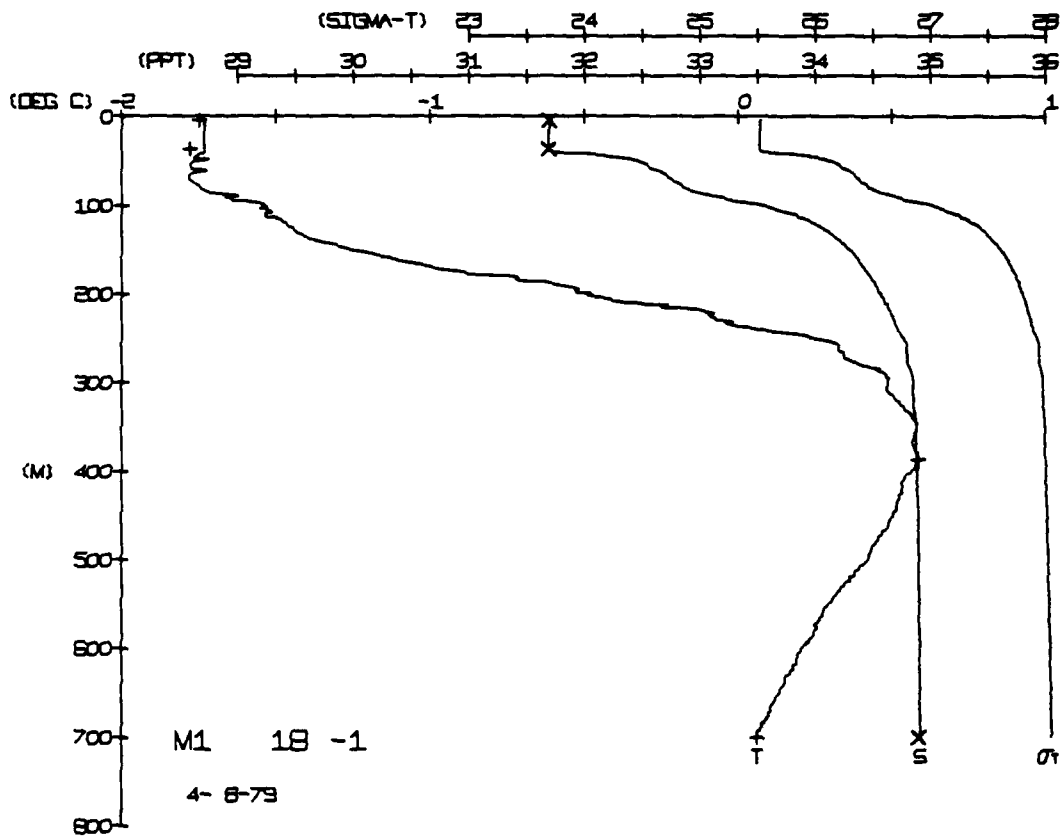
FRAM 1 STATION 17(1) CTD 7/APR/1979 1903 GMT CODE = 1
 LAT = 84 6224N LNG = 9 1386W LITER = 1.0 LGER =
 AIR TEMP = -24.8 BAROM = 1030.0 WIND = 198.0 SPEED = 1.4

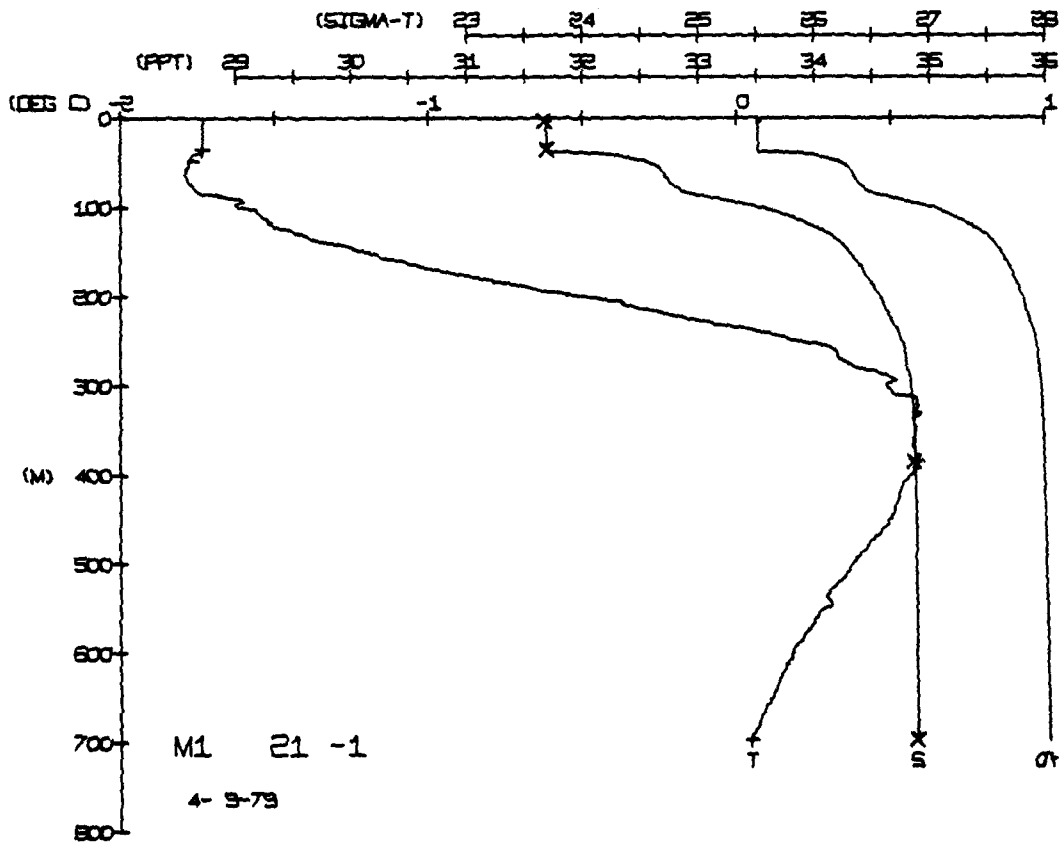
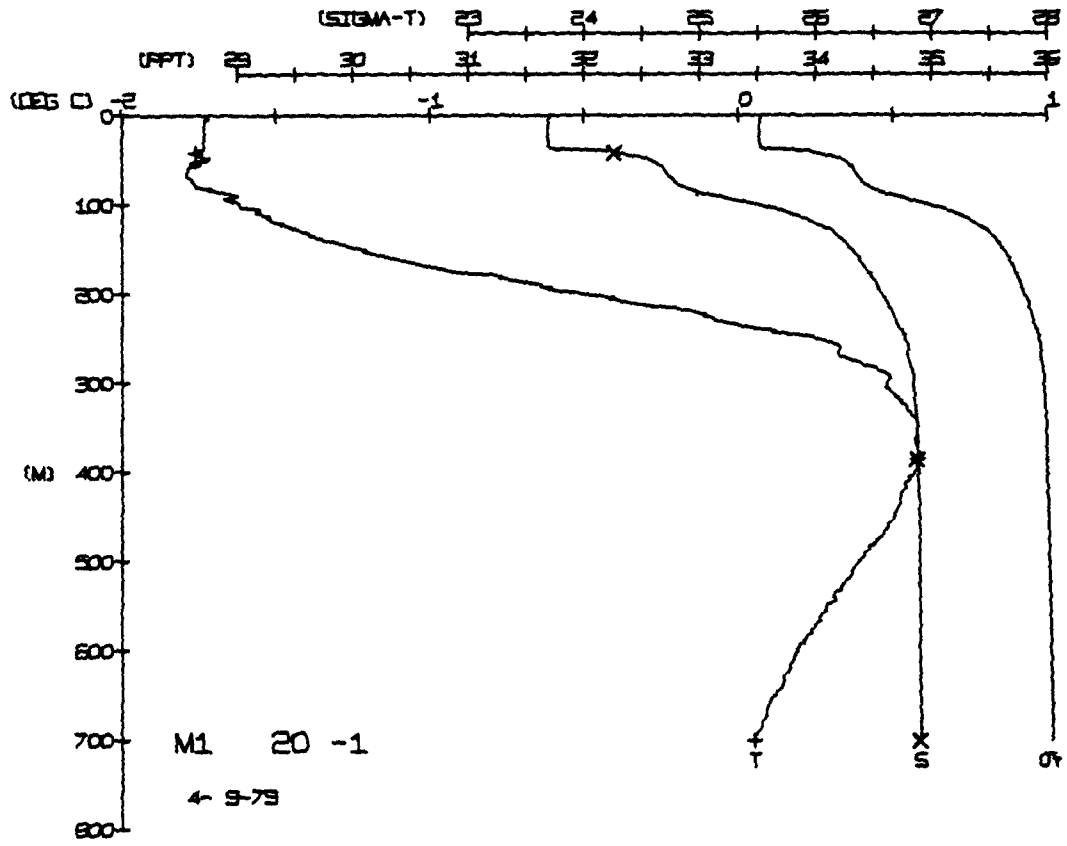
BOT NUM = 1
 BOT NUM = 3

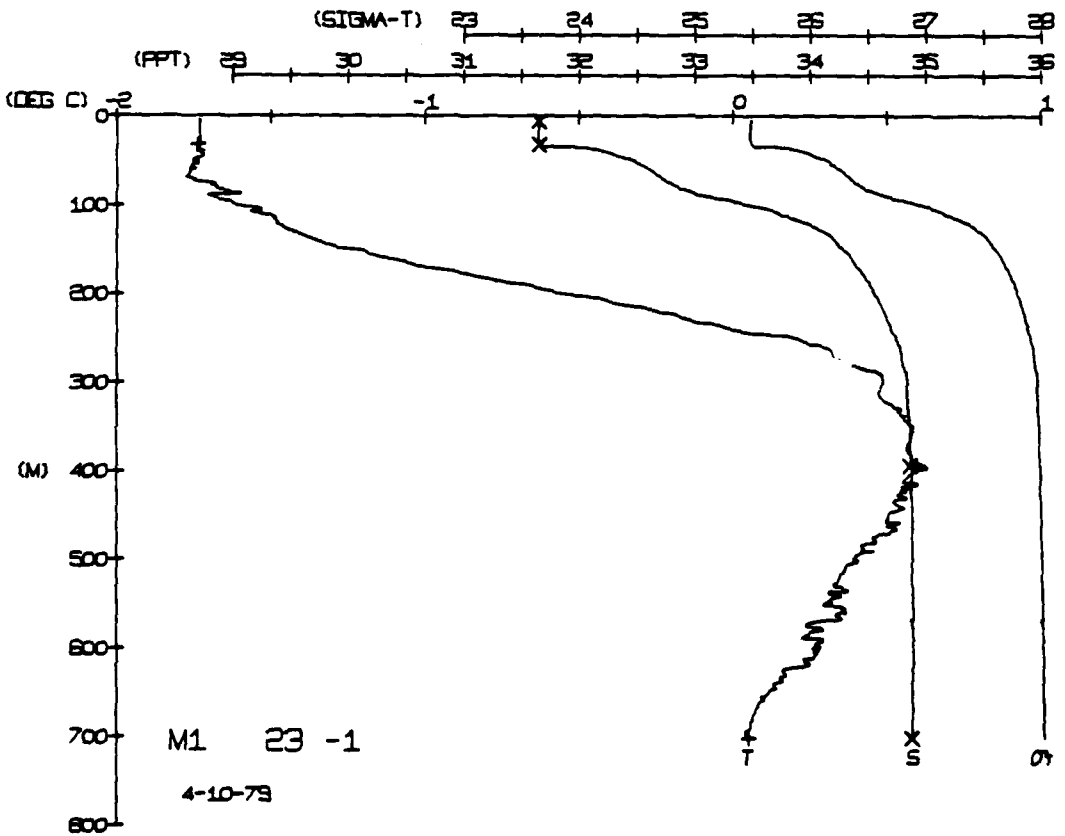
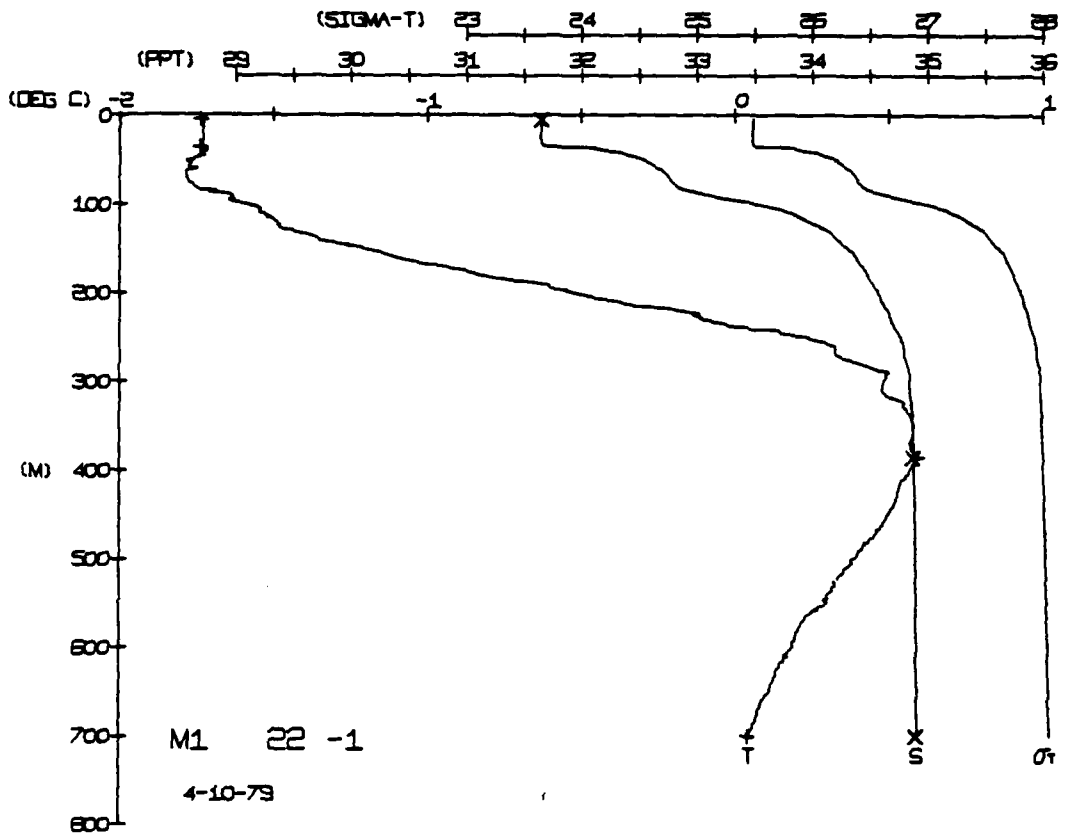
BOT NUM = 1
 BOT NUM = 2

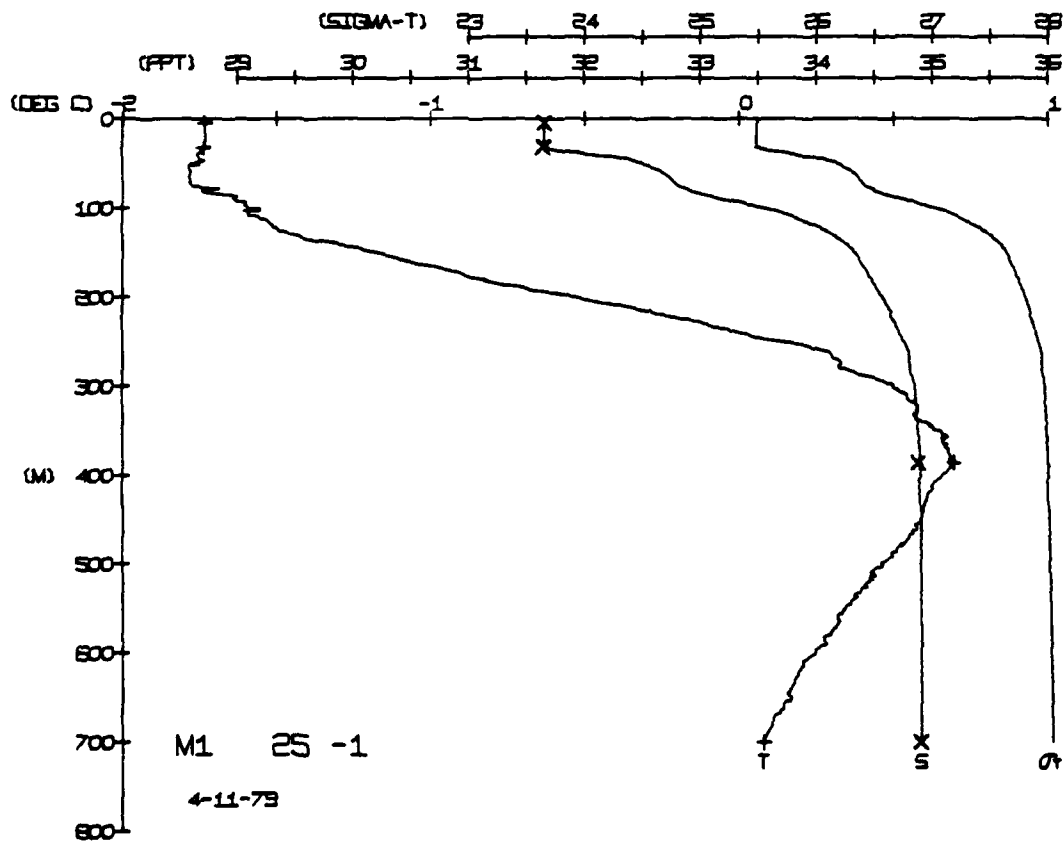
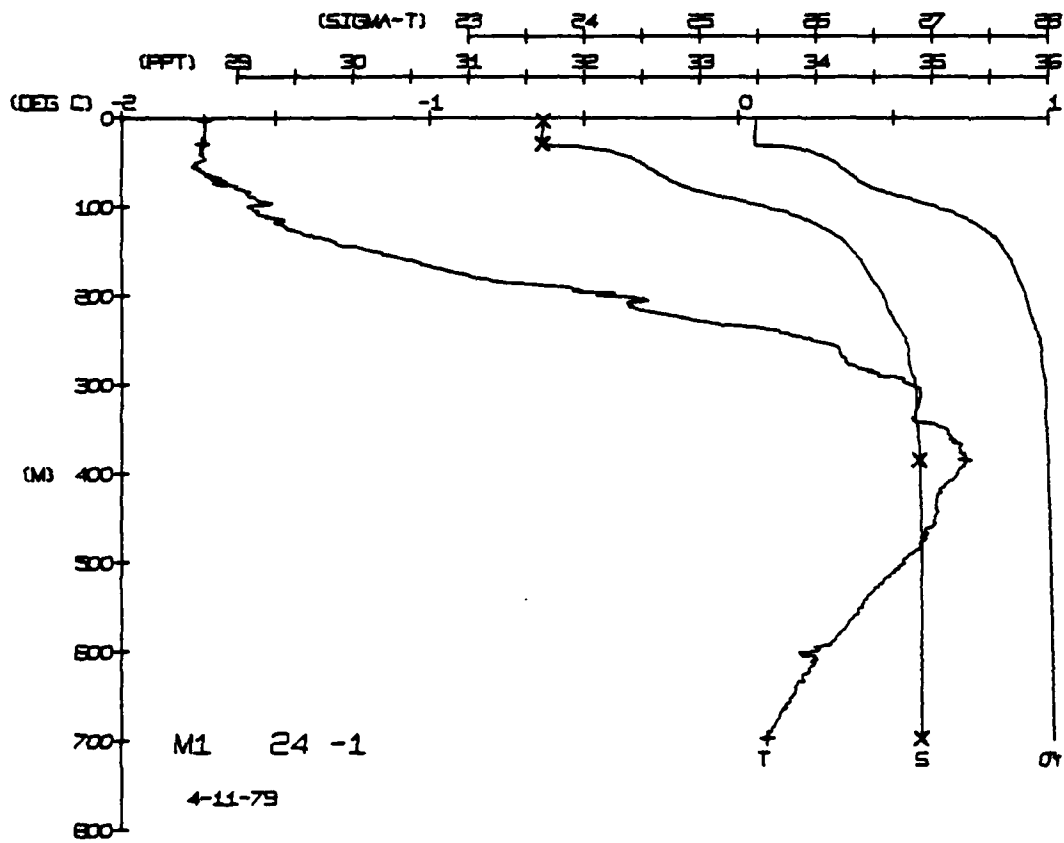
BOT NUM = 1
 BOT NUM = 2

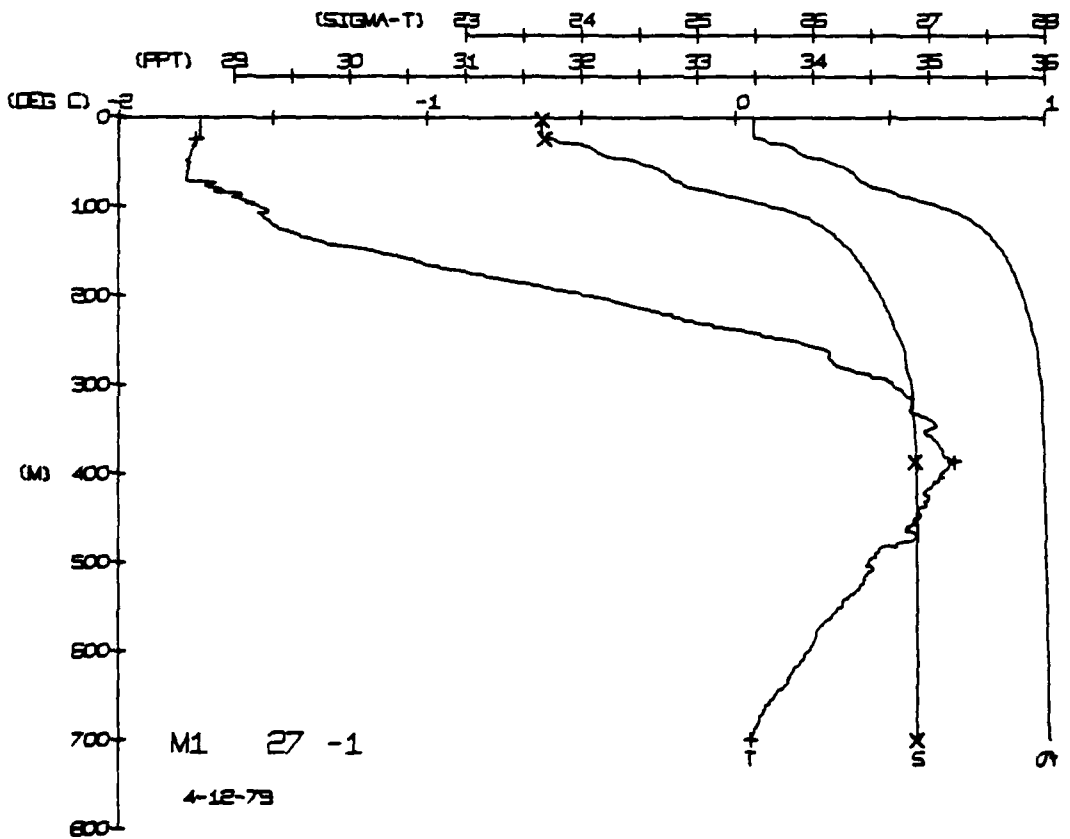
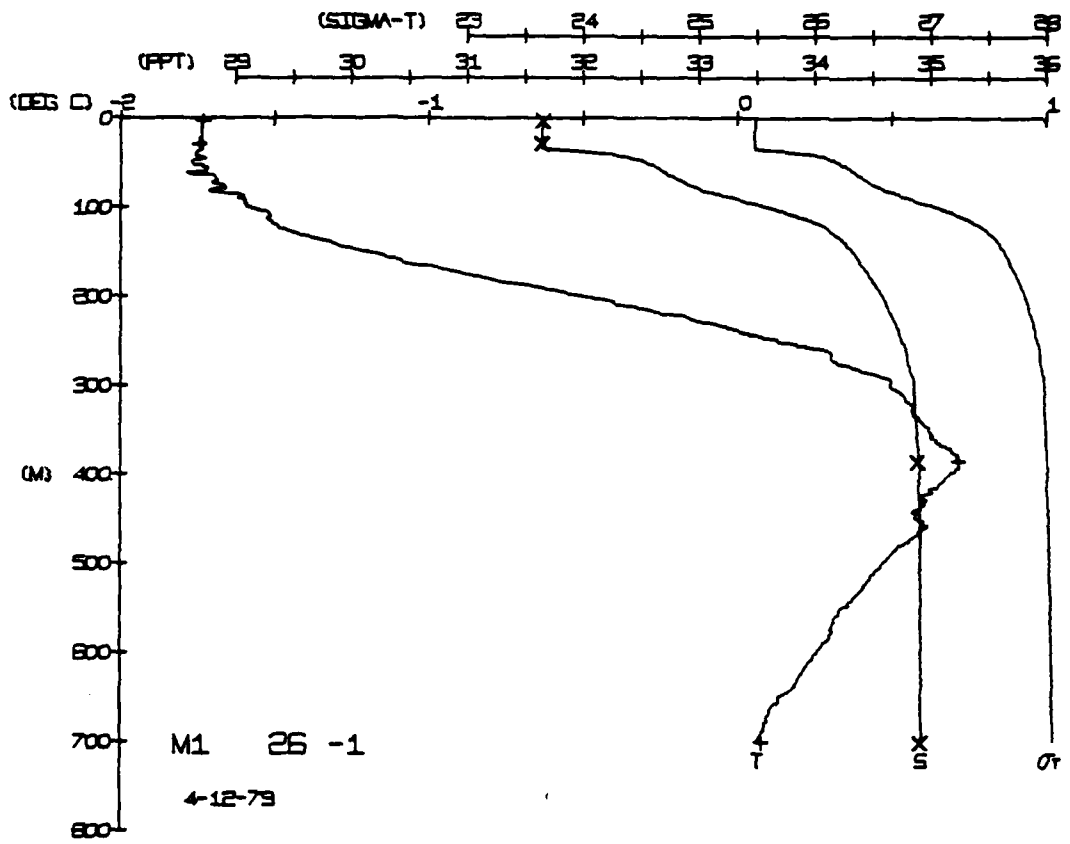








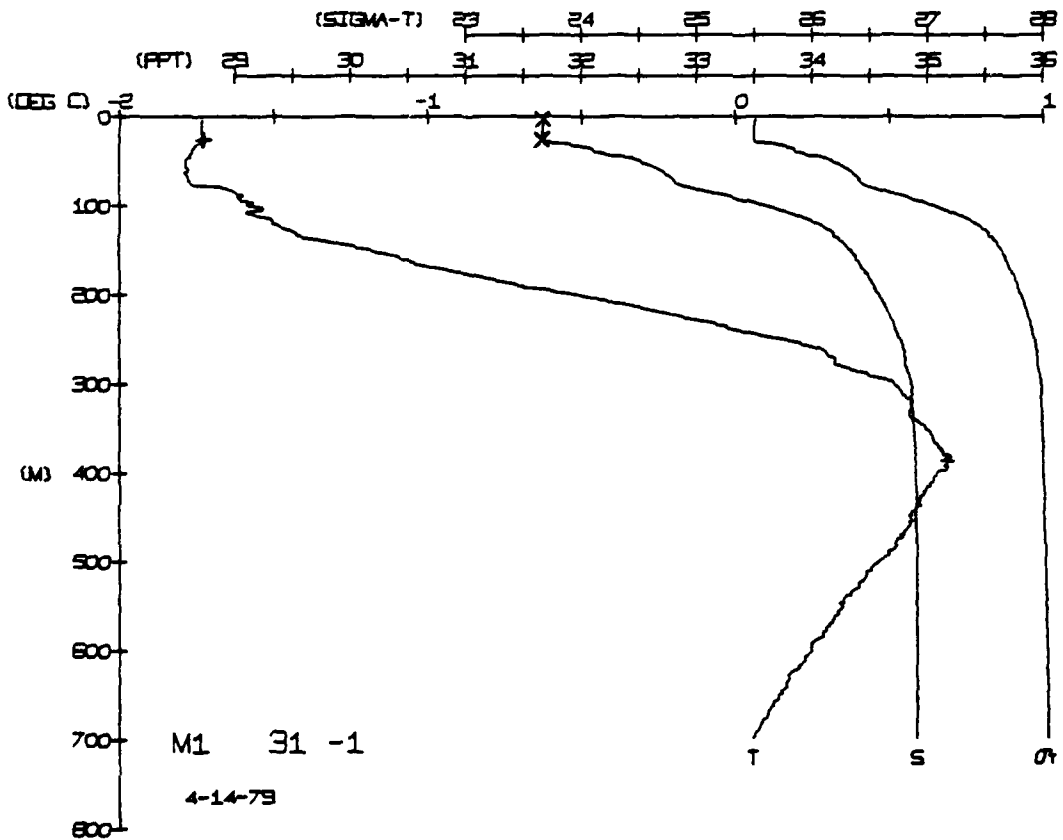
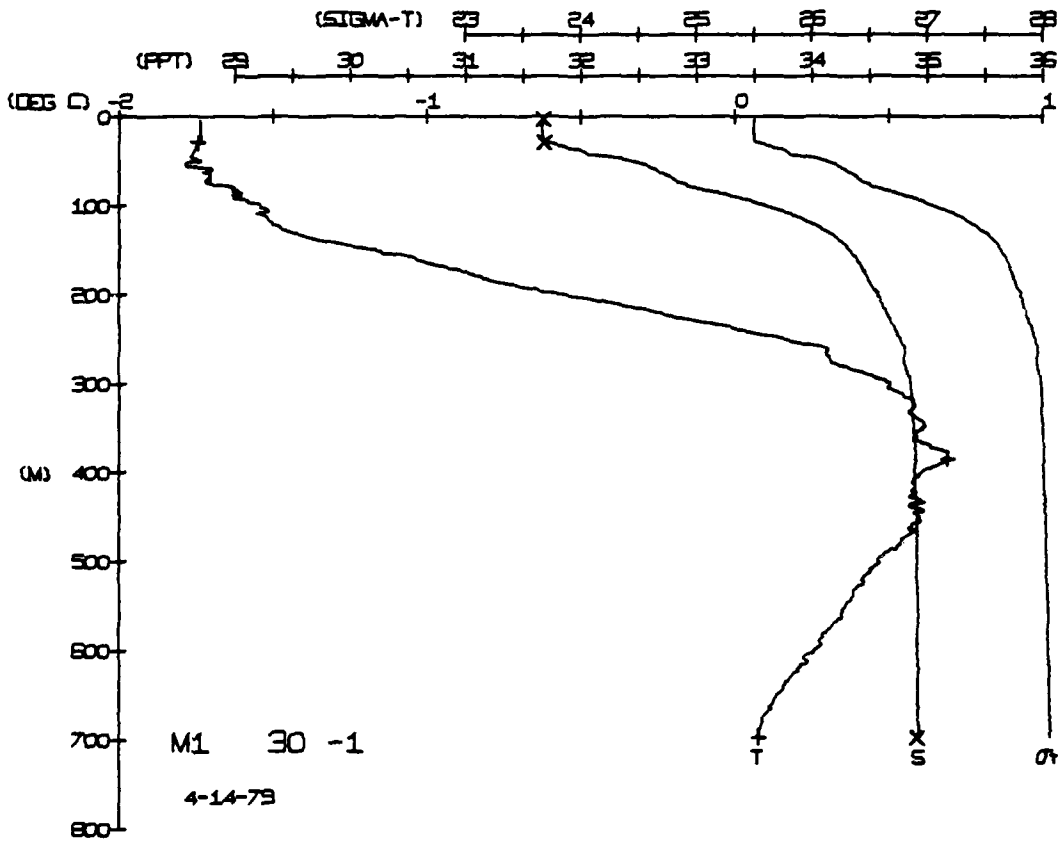




FRAM 1 STATION 30(1) CTD 14/APR/1979 724 GMT CODE = 1
 LAT = 84 5236N LNG = 9 2397W LTER = 12 LGER = 30
 AIR TEMP = -28.9 BAROM = 1040.8 WIND = 97.0 SPEED = 4.6

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYNHT	SOUND
0	74	74	31.67	249	0	000	1436
1	74	74	31.67	249	0	008	1436
2	74	74	31.67	249	0	015	1436
3	74	74	31.67	249	0	023	1436
4	74	74	31.67	249	0	030	1436
5	74	74	31.67	249	0	038	1436
6	74	74	31.67	249	0	045	1436
7	74	74	31.67	249	0	053	1436
8	74	74	31.67	249	0	060	1436
9	74	74	31.67	249	0	068	1436
10	74	74	31.67	249	0	075	1436
11	74	74	31.67	249	0	083	1436
12	74	74	31.67	249	0	090	1436
13	74	74	31.67	249	0	098	1436
14	74	74	31.67	249	0	105	1436
15	74	74	31.67	249	0	113	1436
16	74	74	31.67	249	0	120	1436
17	74	74	31.67	249	0	128	1436
18	74	74	31.67	249	0	135	1436
19	74	74	31.67	249	0	143	1436
20	74	74	31.67	249	0	150	1436
21	74	74	31.67	249	0	158	1436
22	74	74	31.67	249	0	165	1436
23	74	74	31.67	249	0	173	1436
24	74	74	31.67	249	0	180	1436
25	74	74	31.67	249	0	188	1436
26	74	74	31.67	249	0	195	1436
27	74	74	31.67	249	0	203	1436
28	74	74	31.67	249	0	210	1436
29	74	74	31.67	249	0	218	1436
30	74	74	31.67	249	0	225	1436
31	74	74	31.67	249	0	233	1436
32	74	74	31.67	249	0	240	1436
33	74	74	31.67	249	0	248	1436
34	74	74	31.67	249	0	255	1436
35	74	74	31.67	249	0	263	1436
36	74	74	31.67	249	0	270	1436
37	74	74	31.67	249	0	278	1436
38	74	74	31.67	249	0	285	1436
39	74	74	31.67	249	0	293	1436
40	74	74	31.67	249	0	300	1436
41	74	74	31.67	249	0	308	1436
42	74	74	31.67	249	0	315	1436
43	74	74	31.67	249	0	323	1436
44	74	74	31.67	249	0	330	1436
45	74	74	31.67	249	0	338	1436
46	74	74	31.67	249	0	345	1436
47	74	74	31.67	249	0	353	1436
48	74	74	31.67	249	0	360	1436
49	74	74	31.67	249	0	368	1436
50	74	74	31.67	249	0	375	1436
51	74	74	31.67	249	0	383	1436
52	74	74	31.67	249	0	390	1436
53	74	74	31.67	249	0	398	1436
54	74	74	31.67	249	0	405	1436
55	74	74	31.67	249	0	413	1436
56	74	74	31.67	249	0	420	1436
57	74	74	31.67	249	0	428	1436
58	74	74	31.67	249	0	435	1436
59	74	74	31.67	249	0	443	1436
60	74	74	31.67	249	0	450	1436
61	74	74	31.67	249	0	458	1436
62	74	74	31.67	249	0	465	1436
63	74	74	31.67	249	0	473	1436
64	74	74	31.67	249	0	480	1436
65	74	74	31.67	249	0	488	1436
66	74	74	31.67	249	0	495	1436
67	74	74	31.67	249	0	503	1436
68	74	74	31.67	249	0	510	1436
69	74	74	31.67	249	0	518	1436
70	74	74	31.67	249	0	525	1436
71	74	74	31.67	249	0	533	1436
72	74	74	31.67	249	0	540	1436
73	74	74	31.67	249	0	548	1436
74	74	74	31.67	249	0	555	1436
75	74	74	31.67	249	0	563	1436
76	74	74	31.67	249	0	570	1436
77	74	74	31.67	249	0	578	1436
78	74	74	31.67	249	0	585	1436
79	74	74	31.67	249	0	593	1436
80	74	74	31.67	249	0	600	1436
81	74	74	31.67	249	0	608	1436
82	74	74	31.67	249	0	615	1436
83	74	74	31.67	249	0	623	1436
84	74	74	31.67	249	0	630	1436
85	74	74	31.67	249	0	638	1436
86	74	74	31.67	249	0	645	1436
87	74	74	31.67	249	0	653	1436
88	74	74	31.67	249	0	660	1436
89	74	74	31.67	249	0	668	1436
90	74	74	31.67	249	0	675	1436
91	74	74	31.67	249	0	683	1436
92	74	74	31.67	249	0	690	1436
93	74	74	31.67	249	0	698	1436
94	74	74	31.67	249	0	705	1436
95	74	74	31.67	249	0	713	1436
96	74	74	31.67	249	0	720	1436
97	74	74	31.67	249	0	728	1436
98	74	74	31.67	249	0	735	1436
99	74	74	31.67	249	0	743	1436
100	74	74	31.67	249	0	750	1436

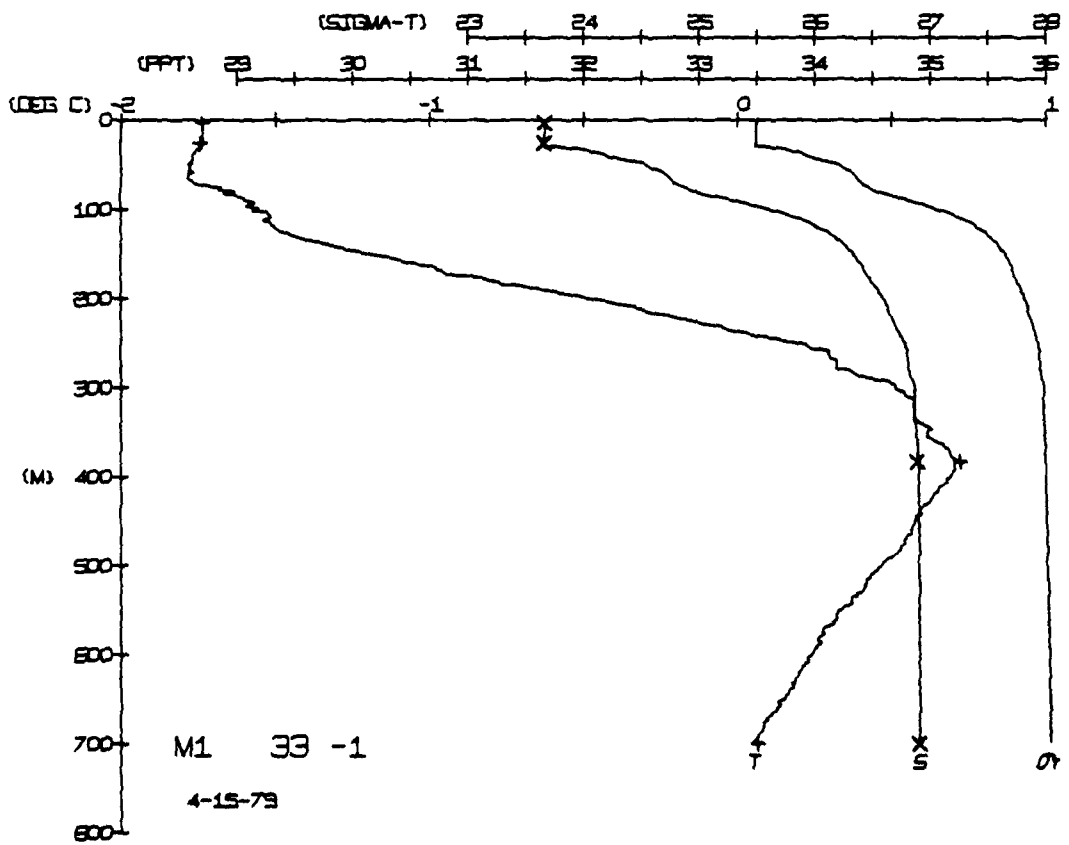
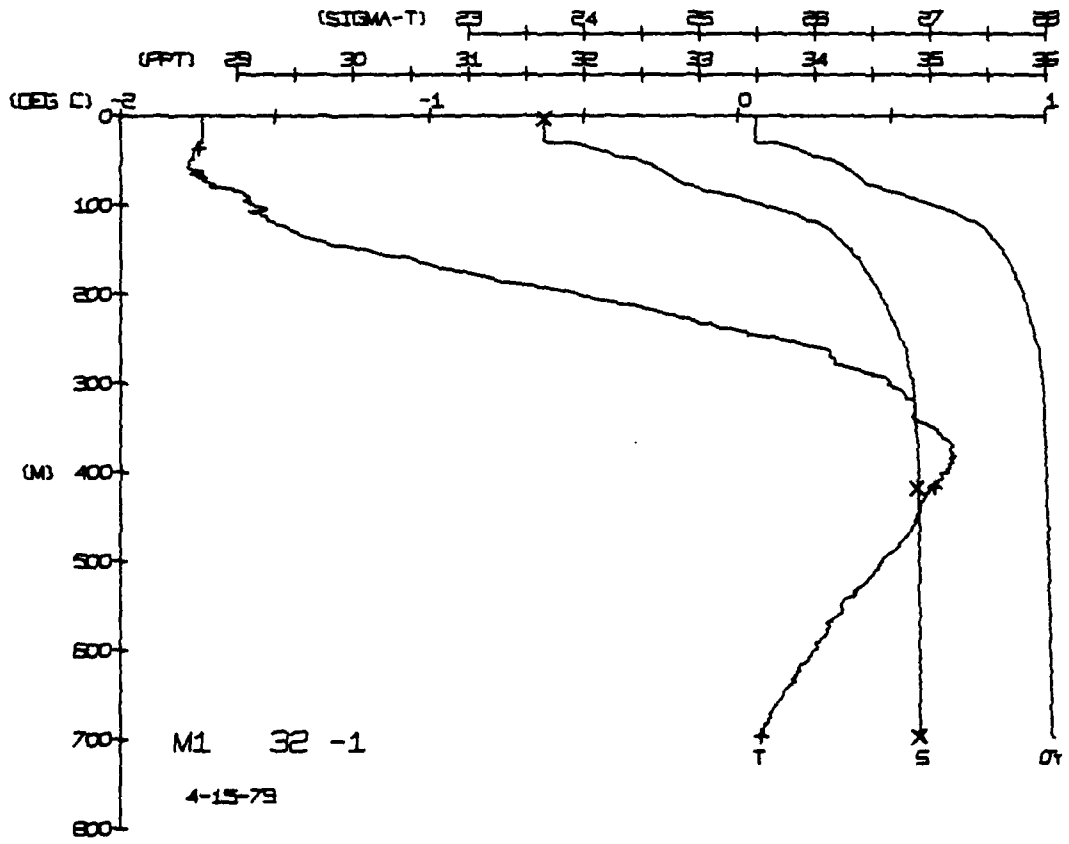
DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYNHT	SOUND
0	73	73	31.68	248	0	000	1436
1	73	73	31.68	248	0	008	1436
2	73	73	31.68	248	0	015	1436
3	73	73	31.68	248	0	023	1436
4	73	73	31.68	248	0	030	1436
5	73	73	31.68	248	0	038	1436
6	73	73	31.68	248	0	045	1436
7	73	73	31.68	248	0	053	1436
8	73	73	31.68	248	0	060	1436
9	73	73	31.68	248	0	068	1436
10	73	73	31.68	248	0	075	1436
11	73	73	31.68	248	0	083	1436
12	73	73	31.68	248	0	090	1436
13	73	73	31.68	248	0	098	1436
14	73	73	31.68	248	0	105	1436
15	73	73	31.68	248	0	113	1436
16	73	73	31.68	248	0	120	1436
17	73	73	31.68	248	0	128	1436
18	73	73	31.68	248	0	135	1436
19	73	73	31.68	248	0	143	1436
20	73	73	31.68	248	0	150	1436
21	73	73	31.68	248	0	158	1436
22	73	73	31.68	248	0	165	1436
23	73	73	31.68	248	0	173	1436
24	73	73	31.68	248	0	180	1436
25	73	73	31.68	248	0	188	1436
26	73	73	31.68	248	0	195	1436
27	73	73	31.68	248	0	203	1436
28	73	73	31.68	248	0	210	1436
29	73	73	31.68	248	0	218	1436
30	73	73	31.68	248	0	225	1436
31	73	73	31.68	248	0	233	1436
32	73	73	31.68	248	0	240	1436
33	73	73	31.68	248	0	248	1436
34	73	73	31.68	248	0	255	1436
35	73	73	31.68	248	0	263	1436
36	73	73	31.68	248	0	270	1436
37	73	73	31.68	248	0	278	1436
38	73	73	31.68	248	0	285	1436
39	73	73	31.68	248	0	293	1436
40	73	73	31.68	248	0	300	1436
41	73	73	31.68	248	0	308	1436
42	73	73	31.68	248	0	315	1436
43	73	73	31.68	248	0	323	1436
44	73	73	31.68	248	0	330	1436
45	73	73	31.68	248	0	338	1436
46	73	73	31.68	248	0	345	1436
47	73	73	31.68	248	0	353	1436
48	73	73	31.68	248	0	360	1436
49	73	73	31.68	248	0	368	1436
50	73	73	31.68	248	0	375	1436
51	73	73	31.68	248	0	383	1436
52	73	73	31.68	248	0	390	1436
53	73	73	31.68	248	0	398	1436
54	73	73	31.68	248	0	405	1436
55	73	73	31.68	248	0	413	1436
56	73	73	31.68	248	0	420	1436
57	73	73	31.68	248	0	428	1436
58	73	73	31.68	248	0	435	1436
59	73	73	31.68	248	0	443	1436
60	73	73	31.68	248	0	450	1436
61	73	73	31.68	248	0	458	1436
62	73	73	31.68	248	0	465	1436
63	73	73	31.68	248	0	473	1436
64	73	73	31.68	248	0	480	1436
65	73	73	31.68	248	0	488	1436
66	73	73	31.68	248	0	495	1436
67	73	73	31.68	248	0	503	1436
68	73	73	31.68	248	0	510	1436
69	73	73	31.68	248	0	518	1436
70	73	73	31.68	248	0	525	1436
71	73	73	31.68	248	0	533	1436
72	73	73	31.68	248	0	540	1436
73	73	73	31.68	248	0	548	1436
74	73	73	31.68	248	0	555	1436
75	73	73	31.68	248	0	563	1436
76	73	73	31.68	248	0	570	1436
77	73	73	31.68	248	0	578	1436
78	73	73	31.6				

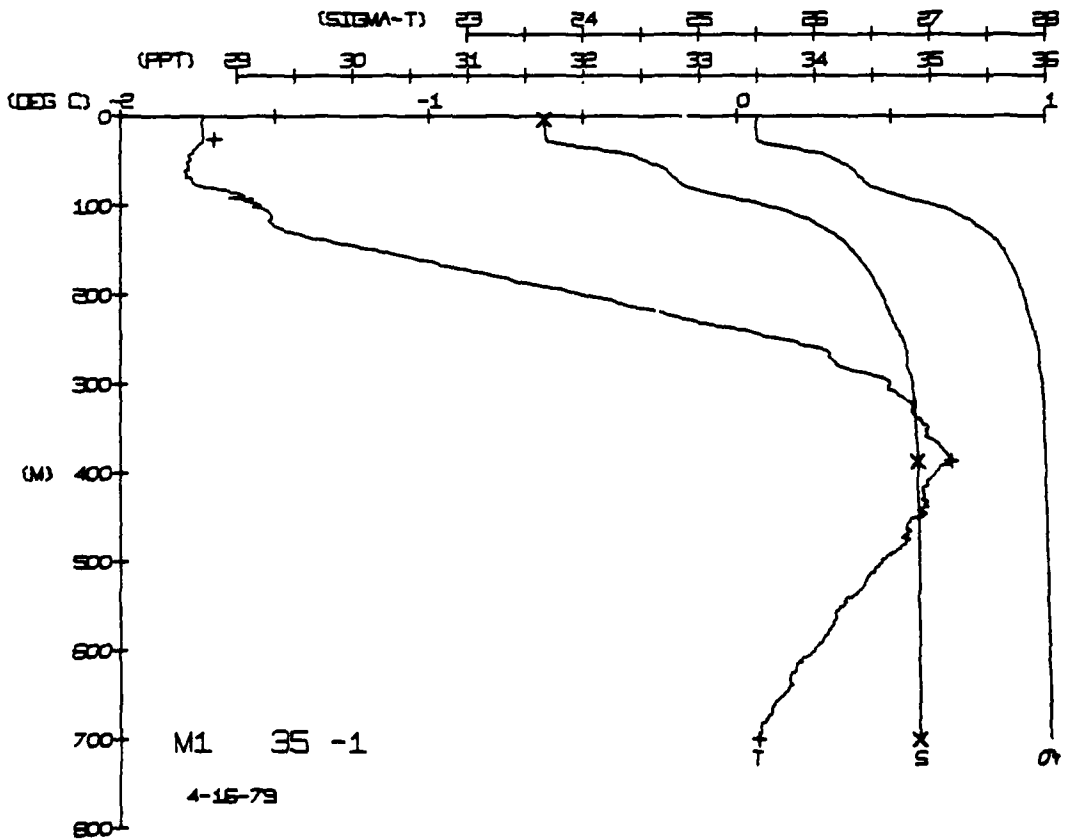
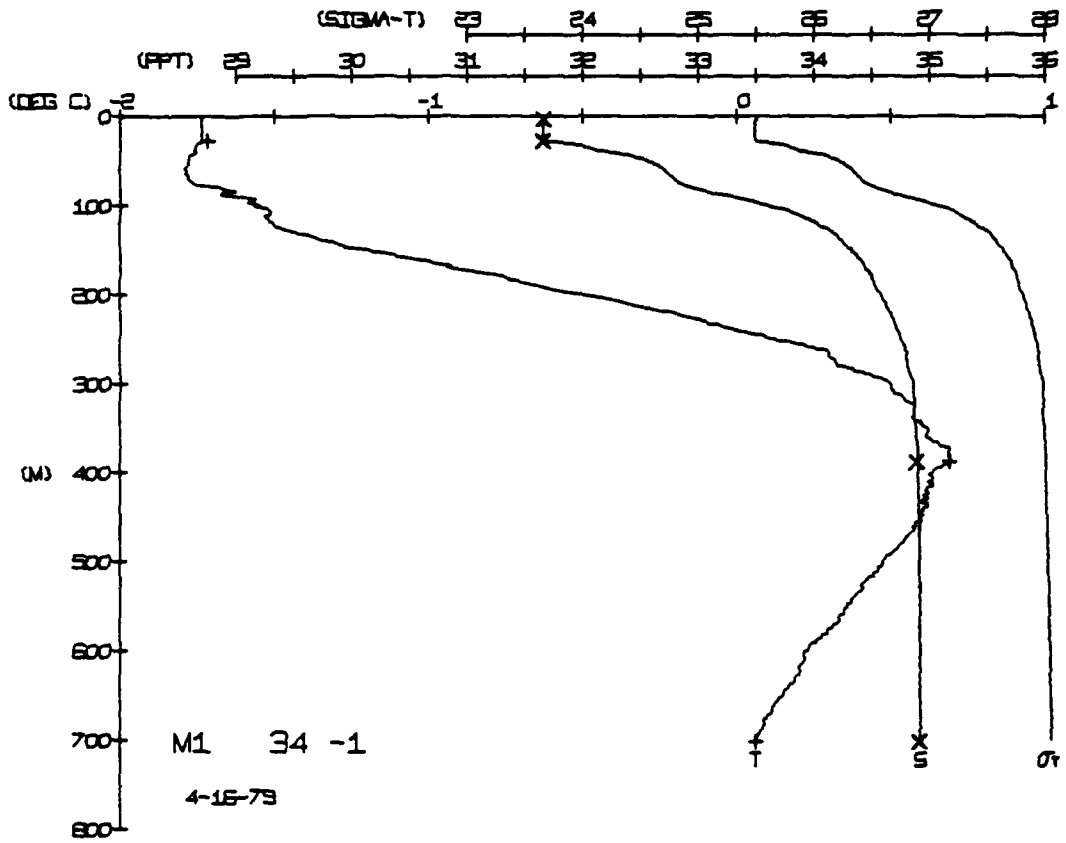


FRAM 1 STATION 32(1) CTD 15/APR/1979 928 GMT CODE = 1
 LAT = 84 5187N LNG = 9 2420W LTER = 1.0 L/SR = 1.3
 AIR TEMP = -29.3 BAROM = 1041.3 WIND = 87.0 SPEED = 2.3

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DVHNT	SOUND
0	73	73	31.67	25	3	0	1436.4
1	73	73	31.67	25	3	0	1436.5
2	73	73	31.67	25	3	0	1436.6
3	73	73	31.67	25	3	0	1436.7
4	73	73	31.67	25	3	0	1436.8
5	73	73	31.67	25	3	0	1436.9
6	73	73	31.67	25	3	0	1437.0
7	73	73	31.67	25	3	0	1437.1
8	73	73	31.67	25	3	0	1437.2
9	73	73	31.67	25	3	0	1437.3
10	73	73	31.67	25	3	0	1437.4
11	73	73	31.67	25	3	0	1437.5
12	73	73	31.67	25	3	0	1437.6
13	73	73	31.67	25	3	0	1437.7
14	73	73	31.67	25	3	0	1437.8
15	73	73	31.67	25	3	0	1437.9
16	73	73	31.67	25	3	0	1438.0
17	73	73	31.67	25	3	0	1438.1
18	73	73	31.67	25	3	0	1438.2
19	73	73	31.67	25	3	0	1438.3
20	73	73	31.67	25	3	0	1438.4
21	73	73	31.67	25	3	0	1438.5
22	73	73	31.67	25	3	0	1438.6
23	73	73	31.67	25	3	0	1438.7
24	73	73	31.67	25	3	0	1438.8
25	73	73	31.67	25	3	0	1438.9
26	73	73	31.67	25	3	0	1439.0
27	73	73	31.67	25	3	0	1439.1
28	73	73	31.67	25	3	0	1439.2
29	73	73	31.67	25	3	0	1439.3
30	73	73	31.67	25	3	0	1439.4
31	73	73	31.67	25	3	0	1439.5
32	73	73	31.67	25	3	0	1439.6
33	73	73	31.67	25	3	0	1439.7
34	73	73	31.67	25	3	0	1439.8
35	73	73	31.67	25	3	0	1439.9
36	73	73	31.67	25	3	0	1440.0
37	73	73	31.67	25	3	0	1440.1
38	73	73	31.67	25	3	0	1440.2
39	73	73	31.67	25	3	0	1440.3
40	73	73	31.67	25	3	0	1440.4
41	73	73	31.67	25	3	0	1440.5
42	73	73	31.67	25	3	0	1440.6
43	73	73	31.67	25	3	0	1440.7
44	73	73	31.67	25	3	0	1440.8
45	73	73	31.67	25	3	0	1440.9
46	73	73	31.67	25	3	0	1441.0
47	73	73	31.67	25	3	0	1441.1
48	73	73	31.67	25	3	0	1441.2
49	73	73	31.67	25	3	0	1441.3
50	73	73	31.67	25	3	0	1441.4
51	73	73	31.67	25	3	0	1441.5
52	73	73	31.67	25	3	0	1441.6
53	73	73	31.67	25	3	0	1441.7
54	73	73	31.67	25	3	0	1441.8
55	73	73	31.67	25	3	0	1441.9
56	73	73	31.67	25	3	0	1442.0
57	73	73	31.67	25	3	0	1442.1
58	73	73	31.67	25	3	0	1442.2
59	73	73	31.67	25	3	0	1442.3
60	73	73	31.67	25	3	0	1442.4
61	73	73	31.67	25	3	0	1442.5
62	73	73	31.67	25	3	0	1442.6
63	73	73	31.67	25	3	0	1442.7
64	73	73	31.67	25	3	0	1442.8
65	73	73	31.67	25	3	0	1442.9
66	73	73	31.67	25	3	0	1443.0
67	73	73	31.67	25	3	0	1443.1
68	73	73	31.67	25	3	0	1443.2
69	73	73	31.67	25	3	0	1443.3
70	73	73	31.67	25	3	0	1443.4
71	73	73	31.67	25	3	0	1443.5
72	73	73	31.67	25	3	0	1443.6
73	73	73	31.67	25	3	0	1443.7
74	73	73	31.67	25	3	0	1443.8
75	73	73	31.67	25	3	0	1443.9
76	73	73	31.67	25	3	0	1444.0
77	73	73	31.67	25	3	0	1444.1
78	73	73	31.67	25	3	0	1444.2
79	73	73	31.67	25	3	0	1444.3
80	73	73	31.67	25	3	0	1444.4
81	73	73	31.67	25	3	0	1444.5
82	73	73	31.67	25	3	0	1444.6
83	73	73	31.67	25	3	0	1444.7
84	73	73	31.67	25	3	0	1444.8
85	73	73	31.67	25	3	0	1444.9
86	73	73	31.67	25	3	0	1445.0
87	73	73	31.67	25	3	0	1445.1
88	73	73	31.67	25	3	0	1445.2
89	73	73	31.67	25	3	0	1445.3
90	73	73	31.67	25	3	0	1445.4
91	73	73	31.67	25	3	0	1445.5
92	73	73	31.67	25	3	0	1445.6
93	73	73	31.67	25	3	0	1445.7
94	73	73	31.67	25	3	0	1445.8
95	73	73	31.67	25	3	0	1445.9
96	73	73	31.67	25	3	0	1446.0
97	73	73	31.67	25	3	0	1446.1
98	73	73	31.67	25	3	0	1446.2
99	73	73	31.67	25	3	0	1446.3
100	73	73	31.67	25	3	0	1446.4

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DVHNT	SOUND
0	74	74	31.67	25	3	0	1436.4
1	74	74	31.67	25	3	0	1436.5
2	74	74	31.67	25	3	0	1436.6
3	74	74	31.67	25	3	0	1436.7
4	74	74	31.67	25	3	0	1436.8
5	74	74	31.67	25	3	0	1436.9
6	74	74	31.67	25	3	0	1437.0
7	74	74	31.67	25	3	0	1437.1
8	74	74	31.67	25	3	0	1437.2
9	74	74	31.67	25	3	0	1437.3
10	74	74	31.67	25	3	0	1437.4
11	74	74	31.67	25	3	0	1437.5
12	74	74	31.67	25	3	0	1437.6
13	74	74	31.67	25	3	0	1437.7
14	74	74	31.67	25	3	0	1437.8
15	74	74	31.67	25	3	0	1437.9
16	74	74	31.67	25	3	0	1438.0
17	74	74	31.67	25	3	0	1438.1
18	74	74	31.67	25	3	0	1438.2
19	74	74	31.67	25	3	0	1438.3
20	74	74	31.67	25	3	0	1438.4
21	74	74	31.67	25	3	0	1438.5
22	74	74	31.67	25	3	0	1438.6
23	74	74	31.67	25	3	0	1438.7
24	74	74	31.67	25	3	0	1438.8
25	74	74	31.67	25	3	0	1438.9
26	74	74	31.67	25	3	0	1439.0
27	74	74	31.67	25	3	0	1439.1
28	74	74	31.67	25	3	0	1439.2
29	74	74	31.67	25	3	0	1439.3
30	74	74	31.67	25	3	0	1439.4
31	74	74	31.67	25	3	0	1439.5
32	74	74	31.67	25	3	0	1439.6
33	74	74	31.67	25	3	0	1439.7
34	74	74	31.67	25	3	0	1439.8
35	74	74	31.67	25	3	0	1439.9
36	74	74	31.67	25	3	0	1440.0
37	74	74	31.67	25	3	0	1440.1
38	74	74	31.67	25	3	0	1440.2
39	74	74	31.67	25	3	0	1440.3
40	74	74	31.67	25	3	0	1440.4
41	74	74	31.67	25	3	0	1440.5
42	74	74	31.67	25	3	0	1440.6
43	74	74	31.67	25	3	0	1440.7
44	74	74	31.67	25	3	0	1440.8
45	74	74	31.67	25	3	0	1440.9
46	74	74	31.67	25	3	0	1441.0
47	74	74	31.67	25	3	0	1441.1
48	74	74	31.67	25	3	0	1441.2
49	74	74	31.67	25	3	0	1441.3
50	74	74	31.67	25	3	0	1441.4
51	74	74	31.67	25	3	0	1441.5
52	74	74	31.67	25	3	0	1441.6
53	74	74	31.67	25	3	0	1441.7
54	74	74	31.67	25	3	0	1441.8
55	74	74	31.67	25	3	0	1441.9
56	74	74	31.67	25	3	0	1442.0
57	74	74	31.67	25	3	0	1442.1
58	74	74	31.67	25	3	0	1442.2
59	74	74	31.67	25	3	0	1442.3
60	74	74	31.67	25	3	0	1442.4
61	74	74	31.67	25	3	0	1442.5
62	74	74	31.67	25	3	0	1442.6
63	74	74	31.67	25	3	0	1442.7
64	74	74	31.67	25	3	0	1442.8
65	74	74	31.67	25	3	0	1442.9
66	74	74	31.67	25	3	0	1443.0
67	74	74	31.67	25	3	0	1443.1
68	74	74	31.67	25	3	0	1443.2
69	74	74	31.67	25	3	0	1443.3
70	74	74	31.67	25	3	0	1443.4
71	74	74	31.67	25	3	0	1443.5
72	74	74	31.67	25	3	0	1443.6
73	74	74	31.67	25	3	0	1443.7
74	74	74	31.67	25	3	0	1443.8
75	74	74	31.67	25	3	0	1443.9
76	74	74	31.67	25	3	0	1444.0
77	74	74	31.67	25	3	0	1444.1
78	74	74	31.67	25	3	0	1444.2
79	74	74	31.67	25	3	0	1444.3
80	74	74	31.67	25	3	0	1444.4
81							



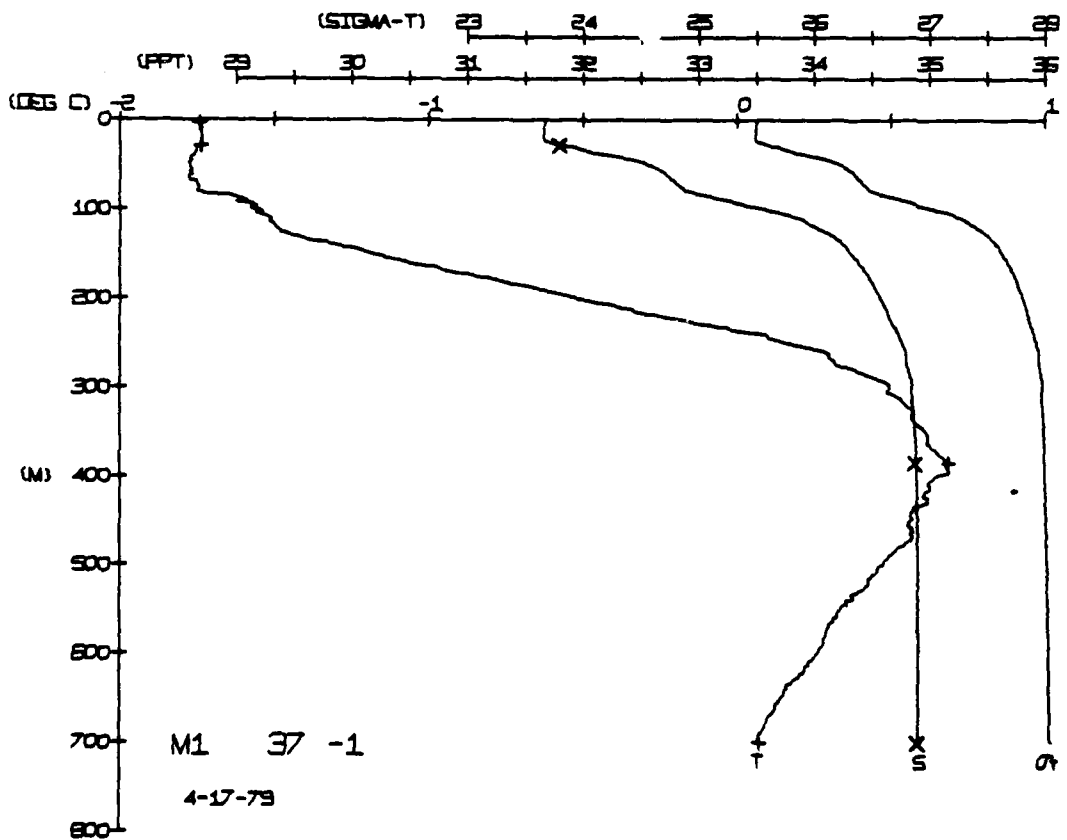
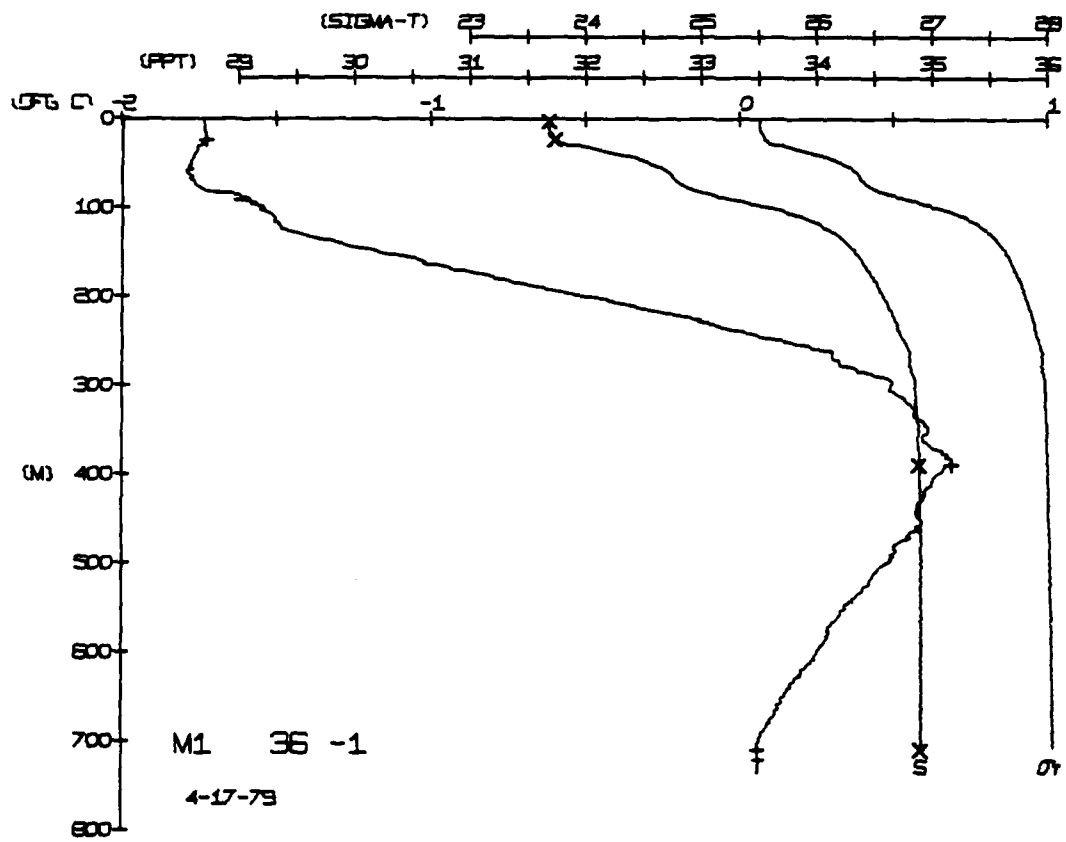


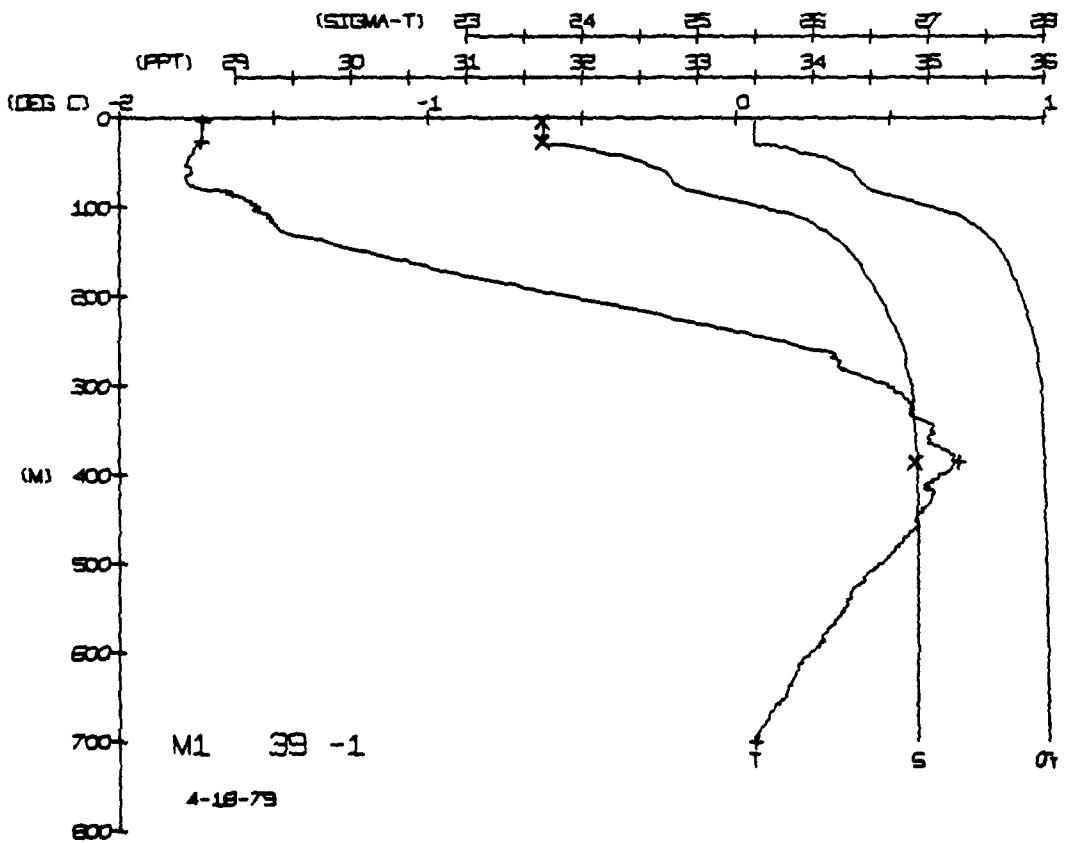
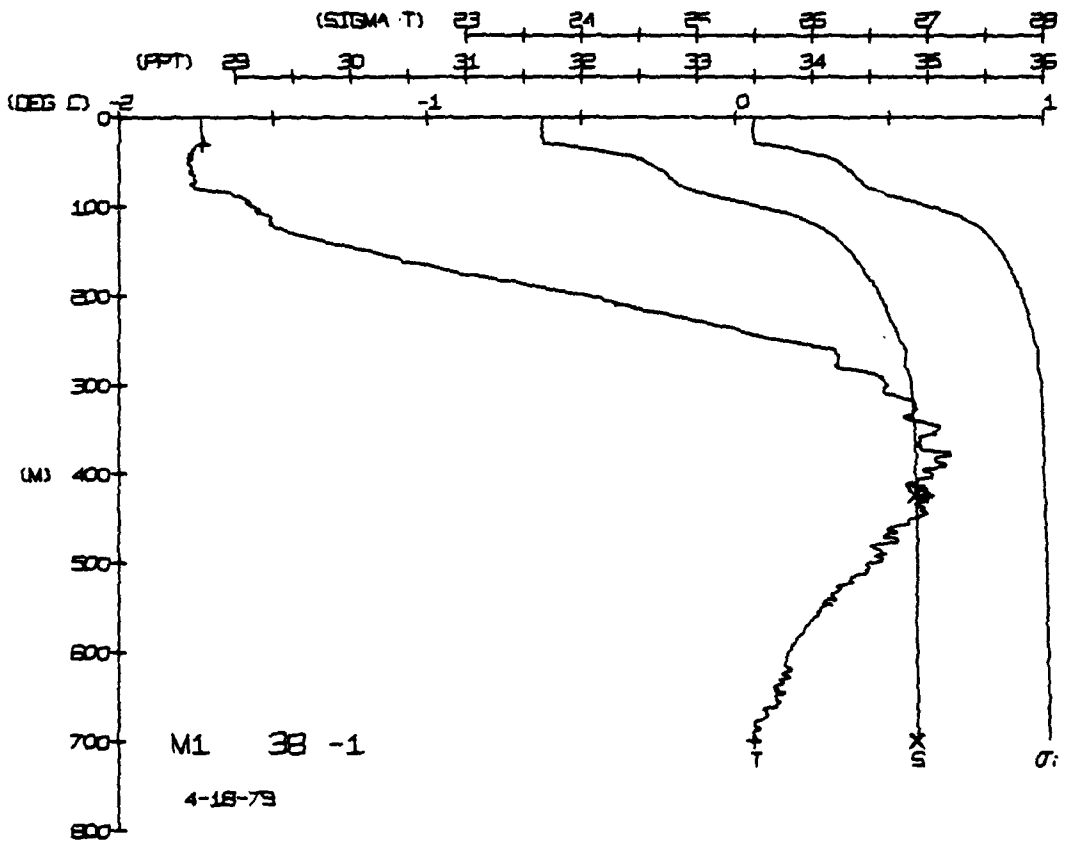
FRAM 1 STATION 36(1) CTD 17/APR/1979 709 GMT CODE = 1
 LAT = 84 5254N LNG = 9 5358W LTER = 1. LGER = 3.6
 AIR TEMP = -31.7 BAROM = 1030.6 WIND = 80.0 SPEED = 3.6

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYNHT	SOUND
0	74	74	31.68	25.51	248	0.000	1436.5
1	74	74	31.67	25.50	248	0.008	1436.2
2	74	74	31.68	25.51	248	0.025	1436.6
3	74	74	31.69	25.52	248	0.037	1436.6
4	73	73	31.71	25.53	245	0.070	1436.6
5	74	74	31.76	25.53	245	0.072	1437.8
6	74	74	31.83	25.53	235	0.086	1437.0
7	76	76	32.07	25.58	205	0.096	1437.1
8	77	77	32.24	25.64	192	0.106	1437.7
9	78	78	32.41	25.71	182	0.116	1438.8
10	78	78	32.57	25.77	175	0.125	1438.8
11	78	78	32.73	25.83	169	0.134	1438.8
12	78	78	32.89	25.89	165	0.142	1438.8
13	78	78	33.05	25.95	163	0.150	1439.7
14	77	77	33.21	26.01	163	0.156	1439.7
15	77	77	33.37	26.07	163	0.162	1440.5
16	77	77	33.53	26.13	162	0.168	1441.1
17	77	77	33.69	26.19	162	0.174	1441.1
18	77	77	33.85	26.25	162	0.180	1441.1
19	77	77	34.01	26.31	162	0.186	1441.1
20	77	77	34.17	26.37	162	0.192	1441.1
21	77	77	34.33	26.43	162	0.198	1441.1
22	77	77	34.49	26.49	162	0.204	1441.1
23	77	77	34.65	26.55	162	0.210	1441.1
24	77	77	34.81	26.61	162	0.216	1441.1
25	77	77	34.97	26.67	162	0.222	1441.1
26	77	77	35.13	26.73	162	0.228	1441.1
27	77	77	35.29	26.79	162	0.234	1441.1
28	77	77	35.45	26.85	162	0.240	1441.1
29	77	77	35.61	26.91	162	0.246	1441.1
30	77	77	35.77	26.97	162	0.252	1441.1
31	77	77	35.93	27.03	162	0.258	1441.1
32	77	77	36.09	27.09	162	0.264	1441.1
33	77	77	36.25	27.15	162	0.270	1441.1
34	77	77	36.41	27.21	162	0.276	1441.1
35	77	77	36.57	27.27	162	0.282	1441.1
36	77	77	36.73	27.33	162	0.288	1441.1
37	77	77	36.89	27.39	162	0.294	1441.1
38	77	77	37.05	27.45	162	0.300	1441.1
39	77	77	37.21	27.51	162	0.306	1441.1
40	77	77	37.37	27.57	162	0.312	1441.1
41	77	77	37.53	27.63	162	0.318	1441.1
42	77	77	37.69	27.69	162	0.324	1441.1
43	77	77	37.85	27.75	162	0.330	1441.1
44	77	77	38.01	27.81	162	0.336	1441.1
45	77	77	38.17	27.87	162	0.342	1441.1
46	77	77	38.33	27.93	162	0.348	1441.1
47	77	77	38.49	27.99	162	0.354	1441.1
48	77	77	38.65	28.05	162	0.360	1441.1
49	77	77	38.81	28.11	162	0.366	1441.1
50	77	77	38.97	28.17	162	0.372	1441.1
51	77	77	39.13	28.23	162	0.378	1441.1
52	77	77	39.29	28.29	162	0.384	1441.1
53	77	77	39.45	28.35	162	0.390	1441.1
54	77	77	39.61	28.41	162	0.396	1441.1
55	77	77	39.77	28.47	162	0.402	1441.1
56	77	77	39.93	28.53	162	0.408	1441.1
57	77	77	40.09	28.59	162	0.414	1441.1
58	77	77	40.25	28.65	162	0.420	1441.1
59	77	77	40.41	28.71	162	0.426	1441.1
60	77	77	40.57	28.77	162	0.432	1441.1
61	77	77	40.73	28.83	162	0.438	1441.1
62	77	77	40.89	28.89	162	0.444	1441.1
63	77	77	41.05	28.95	162	0.450	1441.1
64	77	77	41.21	29.01	162	0.456	1441.1
65	77	77	41.37	29.07	162	0.462	1441.1
66	77	77	41.53	29.13	162	0.468	1441.1
67	77	77	41.69	29.19	162	0.474	1441.1
68	77	77	41.85	29.25	162	0.480	1441.1
69	77	77	42.01	29.31	162	0.486	1441.1
70	77	77	42.17	29.37	162	0.492	1441.1
71	77	77	42.33	29.43	162	0.498	1441.1
72	77	77	42.49	29.49	162	0.504	1441.1
73	77	77	42.65	29.55	162	0.510	1441.1
74	77	77	42.81	29.61	162	0.516	1441.1
75	77	77	42.97	29.67	162	0.522	1441.1
76	77	77	43.13	29.73	162	0.528	1441.1
77	77	77	43.29	29.79	162	0.534	1441.1
78	77	77	43.45	29.85	162	0.540	1441.1
79	77	77	43.61	29.91	162	0.546	1441.1
80	77	77	43.77	29.97	162	0.552	1441.1
81	77	77	43.93	30.03	162	0.558	1441.1
82	77	77	44.09	30.09	162	0.564	1441.1
83	77	77	44.25	30.15	162	0.570	1441.1
84	77	77	44.41	30.21	162	0.576	1441.1
85	77	77	44.57	30.27	162	0.582	1441.1
86	77	77	44.73	30.33	162	0.588	1441.1
87	77	77	44.89	30.39	162	0.594	1441.1
88	77	77	45.05	30.45	162	0.600	1441.1
89	77	77	45.21	30.51	162	0.606	1441.1
90	77	77	45.37	30.57	162	0.612	1441.1
91	77	77	45.53	30.63	162	0.618	1441.1
92	77	77	45.69	30.69	162	0.624	1441.1
93	77	77	45.85	30.75	162	0.630	1441.1
94	77	77	46.01	30.81	162	0.636	1441.1
95	77	77	46.17	30.87	162	0.642	1441.1
96	77	77	46.33	30.93	162	0.648	1441.1
97	77	77	46.49	30.99	162	0.654	1441.1
98	77	77	46.65	31.05	162	0.660	1441.1
99	77	77	46.81	31.11	162	0.666	1441.1
100	77	77	46.97	31.17	162	0.672	1441.1

FRAM 1 STATION 37(1) CTD 17/APR/1979 1837 GMT CODE = 1
 LAT = 84 5182N LNG = 9 6351W LTER = 2. LGER = 2.9
 AIR TEMP = -26.9 BAROM = 1022.8 WIND = 336.0 SPEED = 2.9

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYNHT	SOUND
0	74	74	31.67	25.50	249	0.000	1436.5
1	74	74	31.67	25.50	249	0.008	1436.2
2	74	74	31.67	25.50	249	0.013	1436.6
3	74	74	31.67	25.50	249	0.025	1436.6
4	74	74	31.67	25.50	249	0.037	1436.6
5	74	74	31.67	25.50	249	0.050	1436.6
6	74	74	31.67	25.50	249	0.063	1436.6
7	74	74	31.67	25.50	249	0.075	1436.6
8	74	74	31.67	25.50	249	0.087	1436.6
9	74	74	31.67	25.50	249	0.099	1436.6
10	74	74	31.67	25.50	249	0.111	1436.6
11	74	74	31.67	25.50	249	0.123	1436.6
12	74	74	31.67	25.50	249	0.135	1436.6
13	74	74	31.67	25.50	249	0.147	1436.6
14	74	74	31.67	25.50	249	0.159	1436.6
15	74	74	31.67	25.50	249	0.171	1436.6
16	74	74	31.67	25.50	249	0.183	1436.6
17	74	74	31.67	25.50	249	0.195	1436.6
18	74	74	31.67	25.50	249	0.207	1436.6
19	74	74	31.67	25.50	249	0.219	1436.6
20	74	74	31.67	25.50	249	0.231	1436.6
21	74	74	31.67	25.50	249	0.243	1436.6
22	74	74	31.67	25.50	249	0.255	1436.6
23	74	74	31.67	25.50	249	0.267	1436.6
24	74	74	31.67	25.50	249	0.279	1436.6
25	74	74	31.67	25.50	249	0.291	1436.6
26	74	74	31.67	25.50	249	0.303	1436.6
27	74	74	31.67	25.50	249	0.315	1436.6
28	74	74	31.67	25.50	249	0.327	1436.6
29	74	74	31.67	25.50	249	0.339	1436.6
30	74	74	31.67	25.50	249	0.351	1436.6
31	74	74	31.67	25.50	249	0.363	1436.6
32	74	74	31.67	25.50	249	0.375	1436.6
33	74	74	31.67	25.50	249	0.387	1436.6
34	74	74	31.67	25.50	249	0.399	1436.6
35	74	74	31.67	25.50	249	0.411	1436.6
36	74	74	31.67	25.50	249	0.423	1436.6
37	74	74	31.67	25.50	249	0.435	1436.6
38	74	74	31.67	25.50	249	0.447	1436.6
39	74	74	31.67	25.50	249	0.459	1436.6
40	74	74	31.67	25.50	249	0.471	1436.6
41	74	74	31.67	25.50	249	0.483	1436.6
42	74	74	31.67	25.50	249	0.495	1436.6
43	74	74	31.67	25.50	249	0.507	1436.6
44	74	74	31.67	25.50	249	0.519	1436.6
45	74	74	31.67	25.50	249	0.531	1436.6
46	74	74	31.67	25.50	249	0.543	1436.6
47	74	74	31.67	25.50	249	0.555	1436.6
48	74	74	31.67	25.50	249	0.567	1436.6
49	74	74	31.67	25.50	249	0.579	1436.6
50	74	74	31.67	25.50	249	0.591	1436.6
51	74	74	31.67	25.50	249	0.603	1436.6
52	74	74	31.67	25.50	249	0.615	1436.6
53	74	74	31.67	25.50	249	0.627	1436.6
54	74	74	31.67	25.50	249	0.639	1436.6
55	74	74	31.67	25.50	249	0.651	1436.6
56	74	74	31.67	25.50	249	0.663	1436.6
57	74	74	31				





FRAM 1 STATION 40(1) CTD 19/APR/1979 708 GMT CODE = 1
 LAT = 84.4722N LNG = 9.5460M LTER = 1. LGER = 1.5
 AIR TEMP = -26.7 BAROM = 1018.6 WIND = 321.0 SPEED = 3.5

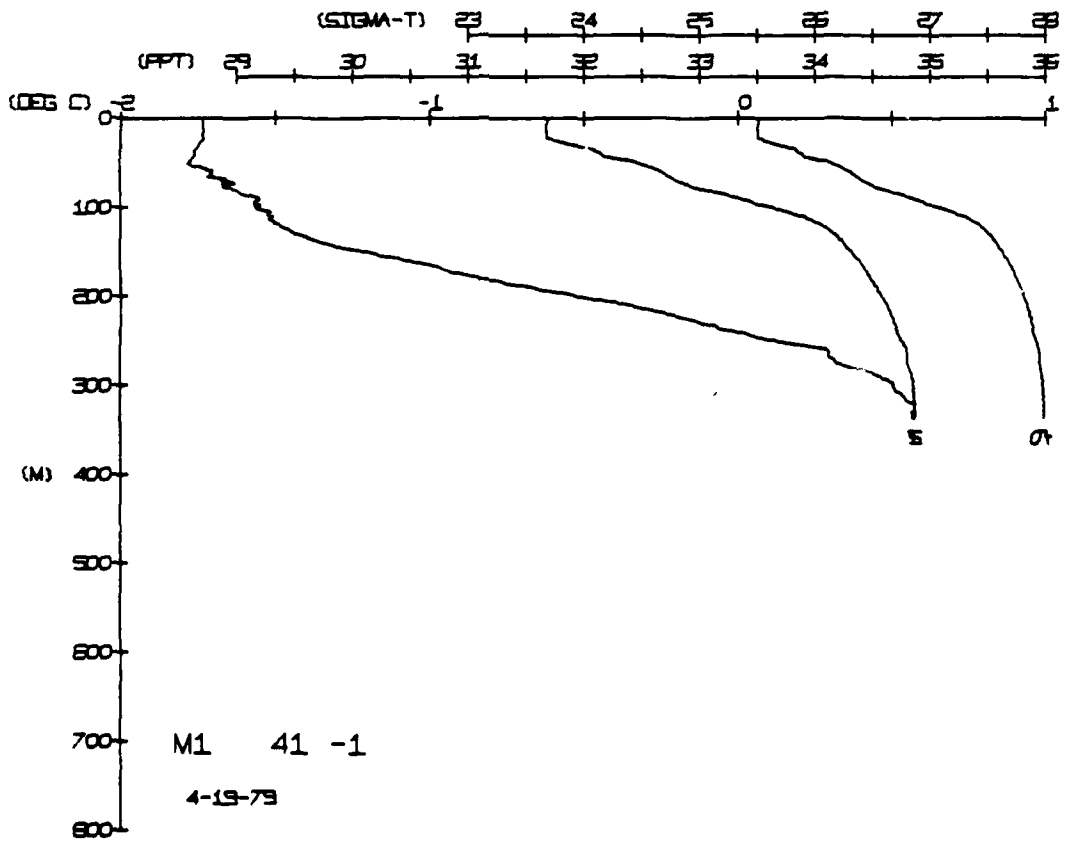
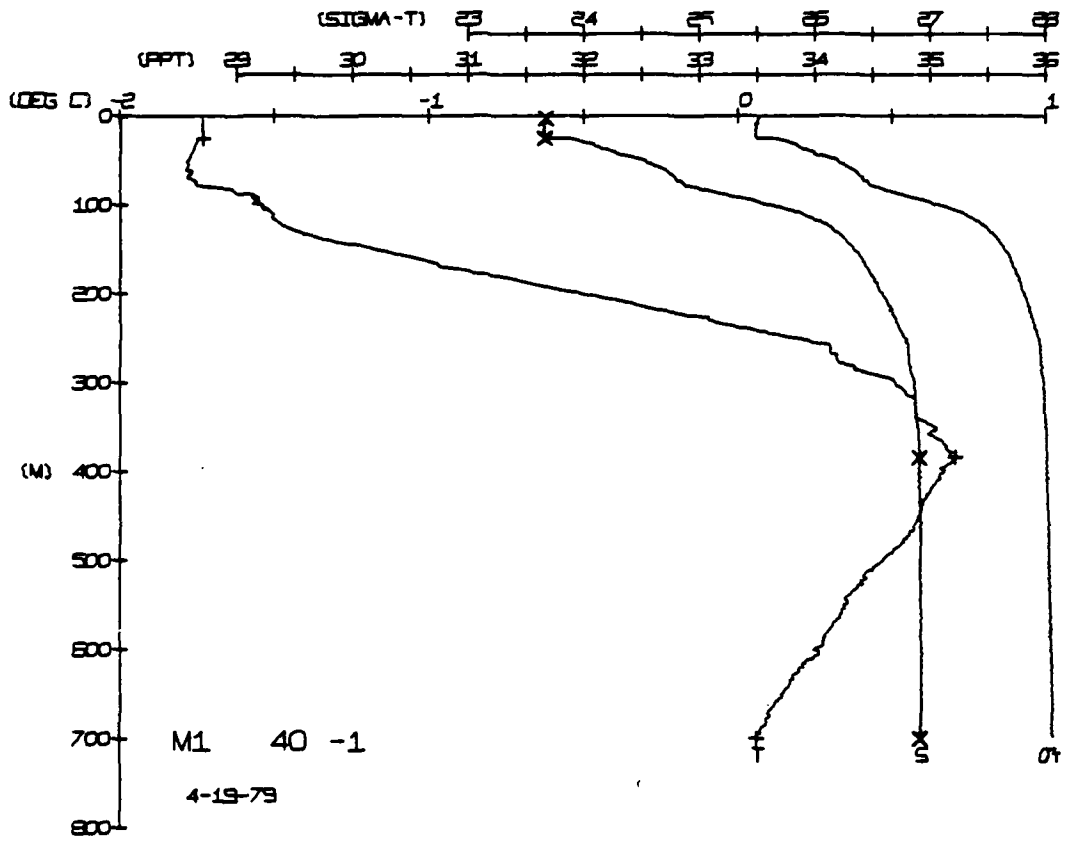
DEPTH	TEMP	PTEMP	SALIN	SIO T	SPVOL	DYNHT	SOUND
0	73	73	331	50	248	000	1436
1	73	73	331	50	248	000	1436
2	73	73	331	50	248	000	1436
3	73	73	331	50	248	000	1436
4	73	73	331	50	248	000	1436
5	73	73	331	50	248	000	1436
6	73	73	331	50	248	000	1436
7	73	73	331	50	248	000	1436
8	73	73	331	50	248	000	1436
9	73	73	331	50	248	000	1436
10	73	73	331	50	248	000	1436
11	73	73	331	50	248	000	1436
12	73	73	331	50	248	000	1436
13	73	73	331	50	248	000	1436
14	73	73	331	50	248	000	1436
15	73	73	331	50	248	000	1436
16	73	73	331	50	248	000	1436
17	73	73	331	50	248	000	1436
18	73	73	331	50	248	000	1436
19	73	73	331	50	248	000	1436
20	73	73	331	50	248	000	1436
21	73	73	331	50	248	000	1436
22	73	73	331	50	248	000	1436
23	73	73	331	50	248	000	1436
24	73	73	331	50	248	000	1436
25	73	73	331	50	248	000	1436
26	73	73	331	50	248	000	1436
27	73	73	331	50	248	000	1436
28	73	73	331	50	248	000	1436
29	73	73	331	50	248	000	1436
30	73	73	331	50	248	000	1436
31	73	73	331	50	248	000	1436
32	73	73	331	50	248	000	1436
33	73	73	331	50	248	000	1436
34	73	73	331	50	248	000	1436
35	73	73	331	50	248	000	1436
36	73	73	331	50	248	000	1436
37	73	73	331	50	248	000	1436
38	73	73	331	50	248	000	1436
39	73	73	331	50	248	000	1436
40	73	73	331	50	248	000	1436
41	73	73	331	50	248	000	1436
42	73	73	331	50	248	000	1436
43	73	73	331	50	248	000	1436
44	73	73	331	50	248	000	1436
45	73	73	331	50	248	000	1436
46	73	73	331	50	248	000	1436
47	73	73	331	50	248	000	1436
48	73	73	331	50	248	000	1436
49	73	73	331	50	248	000	1436
50	73	73	331	50	248	000	1436

BOT NUM = 1
 BOT NUM = 2
 BOT NUM = 3
 BOT NUM = 4
 DEPTH = 3.4
 TEMP = -1.74
 SALIN = 31.66

FRAM 1 STATION 41(1) CTD 19/APR/1979 1901 GMT CODE = 1
 LAT = 84.4450N LNG = 9.3125M LTER = 0. LGER = 0.7
 AIR TEMP = -26.4 BAROM = 1019.5 WIND = 294.0 SPEED = 5.7

DEPTH	TEMP	PTEMP	SALIN	SIO T	SPVOL	DYNHT	SOUND
0	74	74	31	51	248	000	1436
1	74	74	31	51	248	000	1436
2	74	74	31	51	248	000	1436
3	74	74	31	51	248	000	1436
4	74	74	31	51	248	000	1436
5	74	74	31	51	248	000	1436
6	74	74	31	51	248	000	1436
7	74	74	31	51	248	000	1436
8	74	74	31	51	248	000	1436
9	74	74	31	51	248	000	1436
10	74	74	31	51	248	000	1436
11	74	74	31	51	248	000	1436
12	74	74	31	51	248	000	1436
13	74	74	31	51	248	000	1436
14	74	74	31	51	248	000	1436
15	74	74	31	51	248	000	1436
16	74	74	31	51	248	000	1436
17	74	74	31	51	248	000	1436
18	74	74	31	51	248	000	1436
19	74	74	31	51	248	000	1436
20	74	74	31	51	248	000	1436
21	74	74	31	51	248	000	1436
22	74	74	31	51	248	000	1436
23	74	74	31	51	248	000	1436
24	74	74	31	51	248	000	1436
25	74	74	31	51	248	000	1436
26	74	74	31	51	248	000	1436
27	74	74	31	51	248	000	1436
28	74	74	31	51	248	000	1436
29	74	74	31	51	248	000	1436
30	74	74	31	51	248	000	1436
31	74	74	31	51	248	000	1436
32	74	74	31	51	248	000	1436
33	74	74	31	51	248	000	1436
34	74	74	31	51	248	000	1436
35	74	74	31	51	248	000	1436
36	74	74	31	51	248	000	1436
37	74	74	31	51	248	000	1436
38	74	74	31	51	248	000	1436
39	74	74	31	51	248	000	1436
40	74	74	31	51	248	000	1436
41	74	74	31	51	248	000	1436
42	74	74	31	51	248	000	1436
43	74	74	31	51	248	000	1436
44	74	74	31	51	248	000	1436
45	74	74	31	51	248	000	1436
46	74	74	31	51	248	000	1436
47	74	74	31	51	248	000	1436
48	74	74	31	51	248	000	1436
49	74	74	31	51	248	000	1436
50	74	74	31	51	248	000	1436

DEPTH = 3.4
 TEMP = -1.74
 SALIN = 31.66



FRAM 1 STATION 42(1) CTD 19/APR/1979 2214 GMT CODE = 1
 LAT = 84 430N LNG = 9 2314W LTER = 23 LGR = 48
 AIR TEMP = -26.4 BAROM = 1019.4 WIND = 294.0 SPEED = 5.7

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DVHHT	SOUND
0	73	73	31.68	25	248	0.008	1436
1	73	73	31.68	51	248	0.008	1436
2	73	73	31.68	51	248	0.008	1436
3	73	73	31.68	51	248	0.008	1436
4	73	73	31.68	51	248	0.008	1436
5	73	73	31.68	51	248	0.008	1436
6	73	73	31.68	51	248	0.008	1436
7	73	73	31.68	51	248	0.008	1436
8	73	73	31.68	51	248	0.008	1436
9	73	73	31.68	51	248	0.008	1436
10	73	73	31.68	51	248	0.008	1436
11	73	73	31.68	51	248	0.008	1436
12	73	73	31.68	51	248	0.008	1436
13	73	73	31.68	51	248	0.008	1436
14	73	73	31.68	51	248	0.008	1436
15	73	73	31.68	51	248	0.008	1436
16	73	73	31.68	51	248	0.008	1436
17	73	73	31.68	51	248	0.008	1436
18	73	73	31.68	51	248	0.008	1436
19	73	73	31.68	51	248	0.008	1436
20	73	73	31.68	51	248	0.008	1436
21	73	73	31.68	51	248	0.008	1436
22	73	73	31.68	51	248	0.008	1436
23	73	73	31.68	51	248	0.008	1436
24	73	73	31.68	51	248	0.008	1436
25	73	73	31.68	51	248	0.008	1436
26	73	73	31.68	51	248	0.008	1436
27	73	73	31.68	51	248	0.008	1436
28	73	73	31.68	51	248	0.008	1436
29	73	73	31.68	51	248	0.008	1436
30	73	73	31.68	51	248	0.008	1436
31	73	73	31.68	51	248	0.008	1436
32	73	73	31.68	51	248	0.008	1436
33	73	73	31.68	51	248	0.008	1436
34	73	73	31.68	51	248	0.008	1436
35	73	73	31.68	51	248	0.008	1436
36	73	73	31.68	51	248	0.008	1436
37	73	73	31.68	51	248	0.008	1436
38	73	73	31.68	51	248	0.008	1436
39	73	73	31.68	51	248	0.008	1436
40	73	73	31.68	51	248	0.008	1436
41	73	73	31.68	51	248	0.008	1436
42	73	73	31.68	51	248	0.008	1436
43	73	73	31.68	51	248	0.008	1436
44	73	73	31.68	51	248	0.008	1436
45	73	73	31.68	51	248	0.008	1436
46	73	73	31.68	51	248	0.008	1436
47	73	73	31.68	51	248	0.008	1436
48	73	73	31.68	51	248	0.008	1436
49	73	73	31.68	51	248	0.008	1436
50	73	73	31.68	51	248	0.008	1436
51	73	73	31.68	51	248	0.008	1436
52	73	73	31.68	51	248	0.008	1436
53	73	73	31.68	51	248	0.008	1436
54	73	73	31.68	51	248	0.008	1436
55	73	73	31.68	51	248	0.008	1436
56	73	73	31.68	51	248	0.008	1436
57	73	73	31.68	51	248	0.008	1436
58	73	73	31.68	51	248	0.008	1436
59	73	73	31.68	51	248	0.008	1436
60	73	73	31.68	51	248	0.008	1436
61	73	73	31.68	51	248	0.008	1436
62	73	73	31.68	51	248	0.008	1436
63	73	73	31.68	51	248	0.008	1436
64	73	73	31.68	51	248	0.008	1436
65	73	73	31.68	51	248	0.008	1436
66	73	73	31.68	51	248	0.008	1436
67	73	73	31.68	51	248	0.008	1436
68	73	73	31.68	51	248	0.008	1436
69	73	73	31.68	51	248	0.008	1436
70	73	73	31.68	51	248	0.008	1436

BOT NUM = 1
 BOT NUM = 2
 BOT NUM = 3
 BOT NUM = 4

DEPTH 3.6
 23.4
 383.6
 699.1

TEMP -1.74
 0.70
 0.07

SALIN 31.67
 31.71
 34.88
 34.91

FRAM 1 STATION 43(1) CTD 20/APR/1979 647 GMT CODE = 1
 LAT = 84 423N LNG = 9 1207W LTER = 12 LGR = 37
 AIR TEMP = -27.3 BAROM = 1018.1 WIND = 299.0 SPEED = 5.6

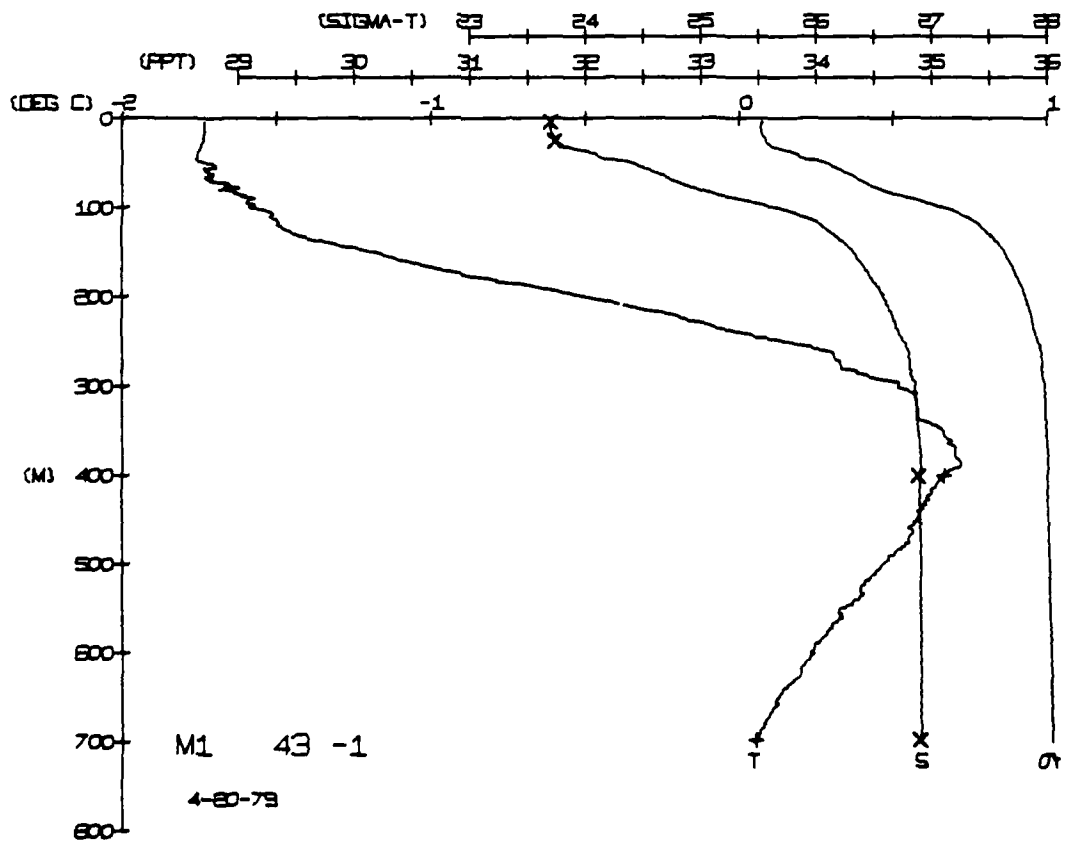
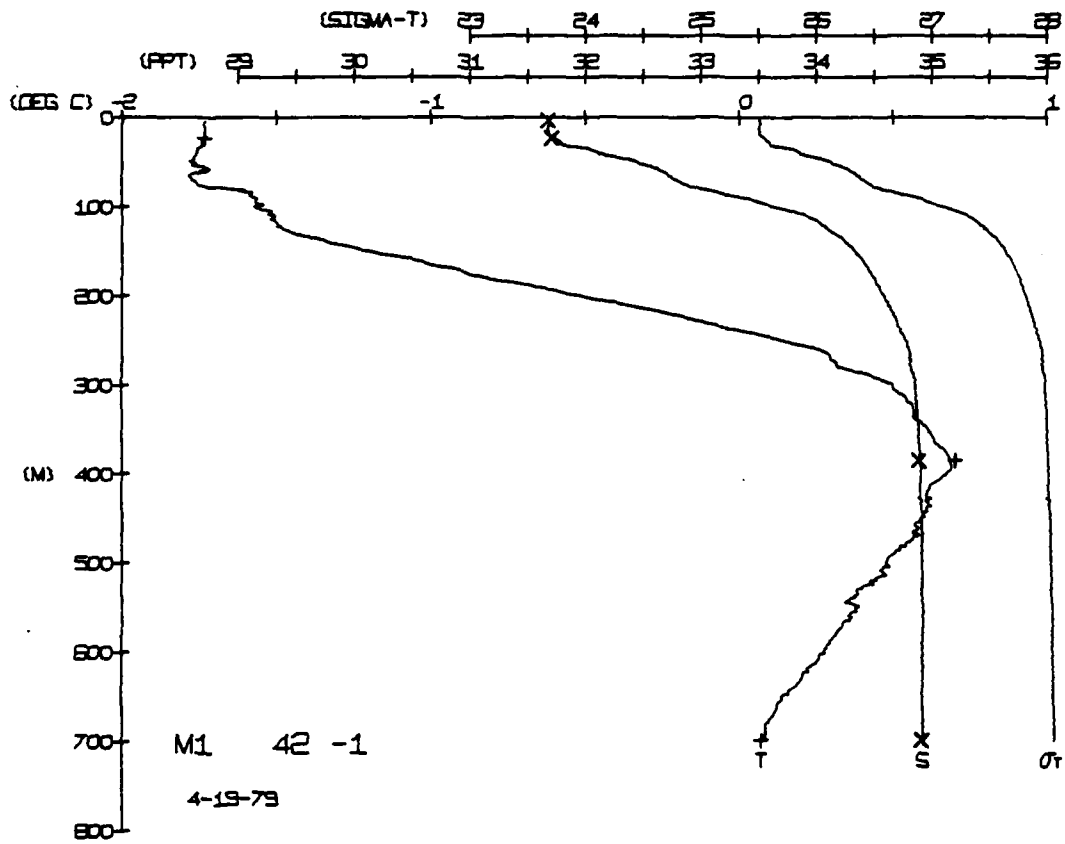
DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DVHHT	SOUND
0	73	73	31.71	53	246	0.008	1436
1	73	73	31.71	53	246	0.008	1436
2	73	73	31.71	53	246	0.008	1436
3	73	73	31.71	53	246	0.008	1436
4	73	73	31.71	53	246	0.008	1436
5	73	73	31.71	53	246	0.008	1436
6	73	73	31.71	53	246	0.008	1436
7	73	73	31.71	53	246	0.008	1436
8	73	73	31.71	53	246	0.008	1436
9	73	73	31.71	53	246	0.008	1436
10	73	73	31.71	53	246	0.008	1436
11	73	73	31.71	53	246	0.008	1436
12	73	73	31.71	53	246	0.008	1436
13	73	73	31.71	53	246	0.008	1436
14	73	73	31.71	53	246	0.008	1436
15	73	73	31.71	53	246	0.008	1436
16	73	73	31.71	53	246	0.008	1436
17	73	73	31.71	53	246	0.008	1436
18	73	73	31.71	53	246	0.008	1436
19	73	73	31.71	53	246	0.008	1436
20	73	73	31.71	53	246	0.008	1436
21	73	73	31.71	53	246	0.008	1436
22	73	73	31.71	53	246	0.008	1436
23	73	73	31.71	53	246	0.008	1436
24	73	73	31.71	53	246	0.008	1436
25	73	73	31.71	53	246	0.008	1436
26	73	73	31.71	53	246	0.008	1436
27	73	73	31.71	53	246	0.008	1436
28	73	73	31.71	53	246	0.008	1436
29	73	73	31.71	53	246	0.008	1436
30	73	73	31.71	53	246	0.008	1436
31	73	73	31.71	53	246	0.008	1436
32	73	73	31.71	53	246	0.008	1436
33	73	73	31.71	53	246	0.008	1436
34	73	73	31.71	53	246	0.008	1436
35	73	73	31.71	53	246	0.008	1436
36	73	73	31.71	53	246	0.008	1436
37	73	73	31.71	53	246	0.008	1436
38	73	73	31.71	53	246	0.008	1436
39	73	73	31.71	53	246	0.008	1436
40	73	73	31.71	53	246	0.008	1436
41	73	73	31.71	53	246	0.008	1436
42	73	73	31.71	53	246	0.008	1436
43	73	73	31.71	53	246	0.008	1436
44	73	73	31.71	53	246	0.008	1436
45	73	73	31.71	53	246	0.008	1436
46	73	73	31.71	53	246	0.008	1436
47	73	73	31.71	53	246	0.008	1436
48	73	73	31.71	53	246	0.008	1436
49	73	73	31.71	53	246	0.008	1436
50	73	73	31.71	53	246	0.008	1436
51	73	73	31.71	53	246	0.008	1436
52	73	73	31.71	53	246	0.008	1436
53	73	73	31.71	53	246	0.008	1436
54	73	73	31.71	53	246	0.008	1436
55	73	73	31.71	53	246	0.008	1436
56	73	73	31.71	53	246	0.008	1436
57	73	73	31.71	53	246	0.008	1436
58	73	73	31.71	53	246	0.008	1436
59	73	73	31.71	53	246	0.008	1436
60	73	73	31.71	53	246	0.008	1436
61	73	73	31.71	53	246	0.008	1436
62	73	73	31.71	53	246	0.008	1436
63	73	73	31.71	53	246	0.008	1436
64	73	73	31.71	53	246	0.008	1436
65	73	73	31.71	53	246	0.008	1436
66	73	73	31.71	53	246	0.008	1436
67	73	73	31.71	53	246	0.008	1436
68	73	73	31.71	53	246	0.008	1436
69	73	73	31.71	53	246	0.008	1436
70	73	73	31.71	53	246	0.008	1436

BOT NUM = 1
 BOT NUM = 2
 BOT NUM = 3
 BOT NUM = 4

DEPTH 3.6
 23.2
 401.2
 698.0

TEMP 0.67

SALIN 31.69
 31.73
 34.88
 34.90



FRAM 1 STATION 44(1) CTD 20/APR/1979 1901 GMT CODE = 1
 LAT = 84 3936N LNG = 8 8689M LTER = 23 LGER = 40.6
 AIR TEMP = -27.3 BAROM = 1017.3 WIND = 299.0 SPEED = 9.6

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVCL	DVHNT	SOUND
0	73	73	31.78	58	241.1	000	1436.7
1	73	73	31.77	58	241.1	000	1436.7
2	73	73	31.77	58	241.1	000	1436.7
3	73	73	31.77	58	241.1	000	1436.7
4	73	73	31.77	58	241.1	000	1436.7
5	73	73	31.77	58	241.1	000	1436.7
6	73	73	31.77	58	241.1	000	1436.7
7	73	73	31.77	58	241.1	000	1436.7
8	73	73	31.77	58	241.1	000	1436.7
9	73	73	31.77	58	241.1	000	1436.7
10	73	73	31.77	58	241.1	000	1436.7
11	73	73	31.77	58	241.1	000	1436.7
12	73	73	31.77	58	241.1	000	1436.7
13	73	73	31.77	58	241.1	000	1436.7
14	73	73	31.77	58	241.1	000	1436.7
15	73	73	31.77	58	241.1	000	1436.7
16	73	73	31.77	58	241.1	000	1436.7
17	73	73	31.77	58	241.1	000	1436.7
18	73	73	31.77	58	241.1	000	1436.7
19	73	73	31.77	58	241.1	000	1436.7
20	73	73	31.77	58	241.1	000	1436.7
21	73	73	31.77	58	241.1	000	1436.7
22	73	73	31.77	58	241.1	000	1436.7
23	73	73	31.77	58	241.1	000	1436.7
24	73	73	31.77	58	241.1	000	1436.7
25	73	73	31.77	58	241.1	000	1436.7
26	73	73	31.77	58	241.1	000	1436.7
27	73	73	31.77	58	241.1	000	1436.7
28	73	73	31.77	58	241.1	000	1436.7
29	73	73	31.77	58	241.1	000	1436.7
30	73	73	31.77	58	241.1	000	1436.7
31	73	73	31.77	58	241.1	000	1436.7
32	73	73	31.77	58	241.1	000	1436.7
33	73	73	31.77	58	241.1	000	1436.7
34	73	73	31.77	58	241.1	000	1436.7

BOT NUM = 1
 BOT NUM = 2
 BOT NUM = 4

DEPTH 3.9
 27.1
 386.3
 699.0

TEMP -1.75
 0.70
 0.07

SALIN 31.76
 31.88
 34.90

FRAM 1 STATION 45(1) CTD 21/APR/1979 705 GMT CODE = 1
 LAT = 84 3660N LNG = 8 6588M LTER = 0 LGER = 1.8
 AIR TEMP = -27.0 BAROM = 1015.9 WIND = 295.0 SPEED = 6.8

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVCL	DVHNT	SOUND
0	73	73	31.80	61	239.9	000	1436.7
1	73	73	31.80	61	239.9	000	1436.7
2	73	73	31.80	61	239.9	000	1436.7
3	73	73	31.80	61	239.9	000	1436.7
4	73	73	31.80	61	239.9	000	1436.7
5	73	73	31.80	61	239.9	000	1436.7
6	73	73	31.80	61	239.9	000	1436.7
7	73	73	31.80	61	239.9	000	1436.7
8	73	73	31.80	61	239.9	000	1436.7
9	73	73	31.80	61	239.9	000	1436.7
10	73	73	31.80	61	239.9	000	1436.7
11	73	73	31.80	61	239.9	000	1436.7
12	73	73	31.80	61	239.9	000	1436.7
13	73	73	31.80	61	239.9	000	1436.7
14	73	73	31.80	61	239.9	000	1436.7
15	73	73	31.80	61	239.9	000	1436.7
16	73	73	31.80	61	239.9	000	1436.7
17	73	73	31.80	61	239.9	000	1436.7
18	73	73	31.80	61	239.9	000	1436.7
19	73	73	31.80	61	239.9	000	1436.7
20	73	73	31.80	61	239.9	000	1436.7
21	73	73	31.80	61	239.9	000	1436.7
22	73	73	31.80	61	239.9	000	1436.7
23	73	73	31.80	61	239.9	000	1436.7
24	73	73	31.80	61	239.9	000	1436.7
25	73	73	31.80	61	239.9	000	1436.7
26	73	73	31.80	61	239.9	000	1436.7
27	73	73	31.80	61	239.9	000	1436.7
28	73	73	31.80	61	239.9	000	1436.7
29	73	73	31.80	61	239.9	000	1436.7
30	73	73	31.80	61	239.9	000	1436.7
31	73	73	31.80	61	239.9	000	1436.7
32	73	73	31.80	61	239.9	000	1436.7
33	73	73	31.80	61	239.9	000	1436.7
34	73	73	31.80	61	239.9	000	1436.7

BOT NUM = 1
 BOT NUM = 2
 BOT NUM = 4

DEPTH 3.7
 21.6
 384.6
 698.4

TEMP -1.72
 0.70
 0.06

SALIN 31.79

AD-A134 244

PHYSICAL OCEANOGRAPHY REPORT STD DATA FROM DRIFTING ICE
STATION FRAM I(U) LAMONT-DOHERTY GEOLOGICAL OBSERVATORY
PALISADES NY T O MANLEY ET AL. SEP 83 LDGO-83-2

1/2

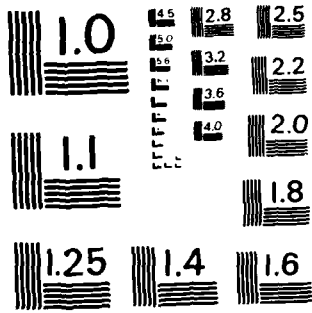
UNCLASSIFIED

N00014-76-C-0004

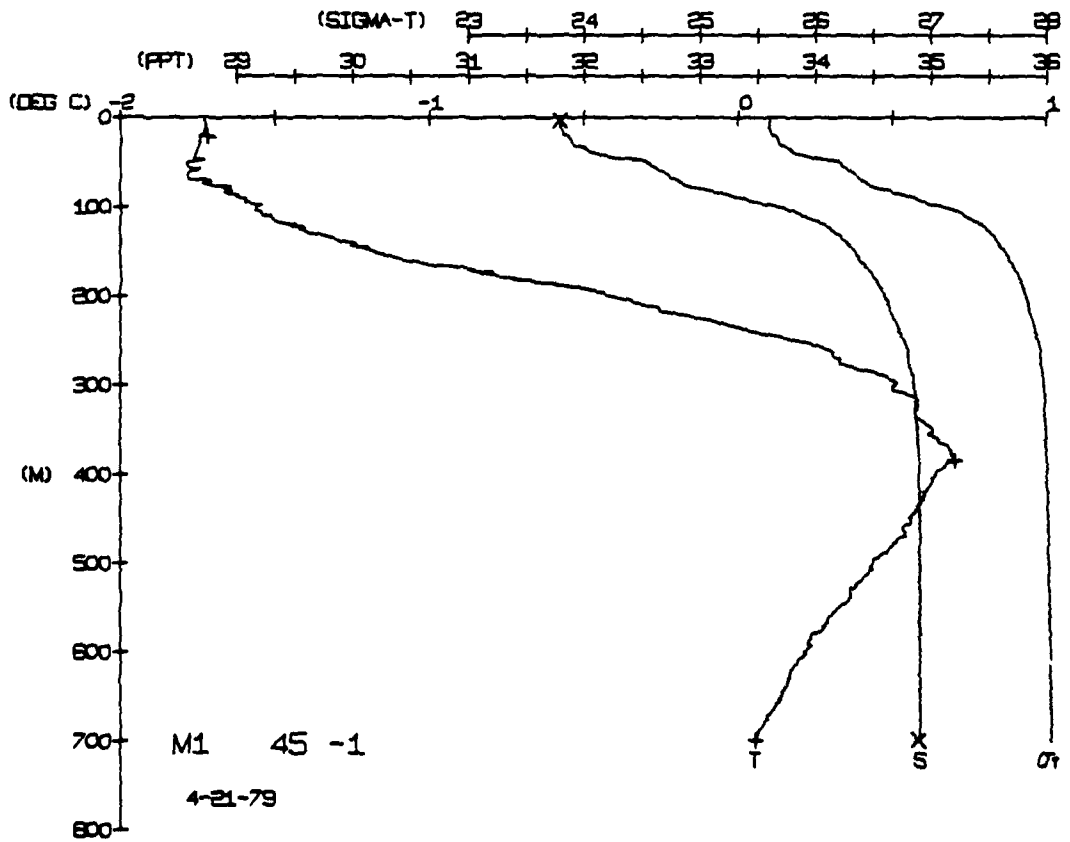
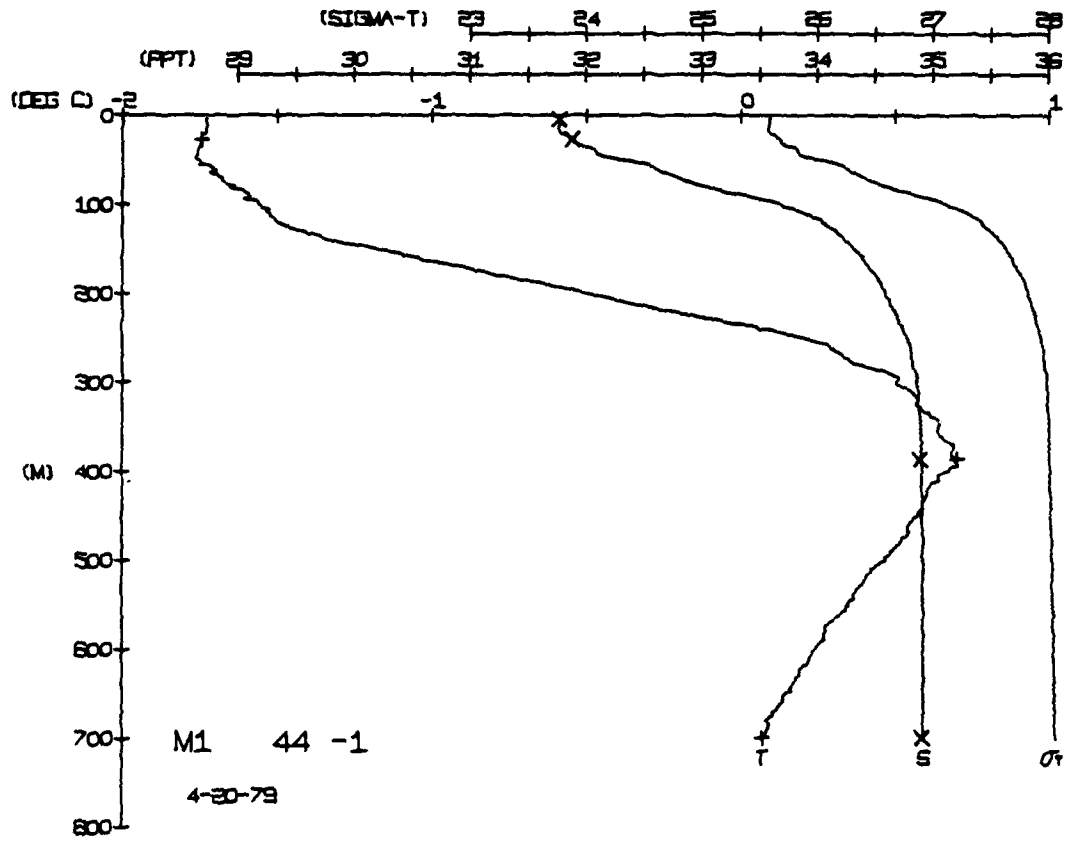
F/G 8/10

NL

END
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DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



FRAM 1 STATION 48(1) CTD 22/APR/1979 1842 GMT CODE = 1
LAT = 84.3166N LNG = 8.2522W LTER = 32. LGER = 39.
AIR TEMP = -26.6 BAROM = 1013.8 WIND = 246.0 SPEED = 2.6

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYVHT	SOUND
0	74	74	31	69	0	000	1436
3	74	74	31	69	0	007	1436
5	74	74	31	69	0	012	1436
10	74	74	31	69	0	023	1437
15	74	74	31	70	0	035	1437
20	74	74	31	70	0	048	1437
25	74	74	31	70	0	058	1437
30	74	74	31	70	0	068	1437
35	74	74	31	70	0	081	1437
40	74	74	31	70	0	091	1438
45	74	74	31	70	0	101	1438
50	74	74	31	70	0	110	1438
55	74	74	31	70	0	129	1438
60	74	74	31	70	0	137	1438
65	74	74	31	70	0	145	1440
70	74	74	31	70	0	145	1440
80	74	74	31	70	0	172	1442
90	74	74	31	70	0	182	1442
100	74	74	31	70	0	197	1444
110	74	74	31	70	0	203	1444
120	74	74	31	70	0	213	1445
130	74	74	31	70	0	217	1445
140	74	74	31	70	0	238	1453
150	74	74	31	70	0	242	1454
160	74	74	31	70	0	244	1454
170	74	74	31	70	0	221	1448
180	74	74	31	70	0	227	1448
190	74	74	31	70	0	227	1448
100	74	74	31	70	0	227	1448
110	74	74	31	70	0	227	1448
120	74	74	31	70	0	227	1448
130	74	74	31	70	0	227	1448
140	74	74	31	70	0	227	1448
150	74	74	31	70	0	227	1448
160	74	74	31	70	0	227	1448
170	74	74	31	70	0	227	1448
180	74	74	31	70	0	227	1448
190	74	74	31	70	0	227	1448
100	74	74	31	70	0	227	1448
110	74	74	31	70	0	227	1448
120	74	74	31	70	0	227	1448
130	74	74	31	70	0	227	1448
140	74	74	31	70	0	227	1448
150	74	74	31	70	0	227	1448
160	74	74	31	70	0	227	1448
170	74	74	31	70	0	227	1448
180	74	74	31	70	0	227	1448
190	74	74	31	70	0	227	1448
100	74	74	31	70	0	227	1448
110	74	74	31	70	0	227	1448
120	74	74	31	70	0	227	1448
130	74	74	31	70	0	227	1448
140	74	74	31	70	0	227	1448
150	74	74	31	70	0	227	1448
160	74	74	31	70	0	227	1448
170	74	74	31	70	0	227	1448
180	74	74	31	70	0	227	1448
190	74	74	31	70	0	227	1448
100	74	74	31	70	0	227	1448
110	74	74	31	70	0	227	1448
120	74	74	31	70	0	227	1448
130	74	74	31	70	0	227	1448
140	74	74	31	70	0	227	1448
150	74	74	31	70	0	227	1448
160	74	74	31	70	0	227	1448
170	74	74	31	70	0	227	1448
180	74	74	31	70	0	227	1448
190	74	74	31	70	0	227	1448
100	74	74	31	70	0	227	1448
110	74	74	31	70	0	227	1448
120	74	74	31	70	0	227	1448
130	74	74	31	70	0	227	1448
140	74	74	31	70	0	227	1448
150	74	74	31	70	0	227	1448
160	74	74	31	70	0	227	1448
170	74	74	31	70	0	227	1448
180	74	74	31	70	0	227	1448
190	74	74	31	70	0	227	1448
100	74	74	31	70	0	227	1448
110	74	74	31	70	0	227	1448
120	74	74	31	70	0	227	1448
130	74	74	31	70	0	227	1448
140	74	74	31	70	0	227	1448
150	74	74	31	70	0	227	1448
160	74	74	31	70	0	227	1448
170	74	74	31	70	0	227	1448
180	74	74	31	70	0	227	1448
190	74	74	31	70	0	227	1448

BOT NUM = 1
BOT NUM = 2
BOT NUM = 3
BOT NUM = 4

DEPTH 3.6
23.9
384.7
701.0

TEMP -1.72
0.68

SALIN 31.90
31.91
34.88
34.90

FRAM 1 STATION 49(1) CTD 23/APR/1979 705 GMT CODE = 1
LAT = 84.3167N LNG = 8.2307W LTER = 4. LGER = 12.
AIR TEMP = -26.0 BAROM = 1015.5 WIND = 105.0 SPEED = 2.4

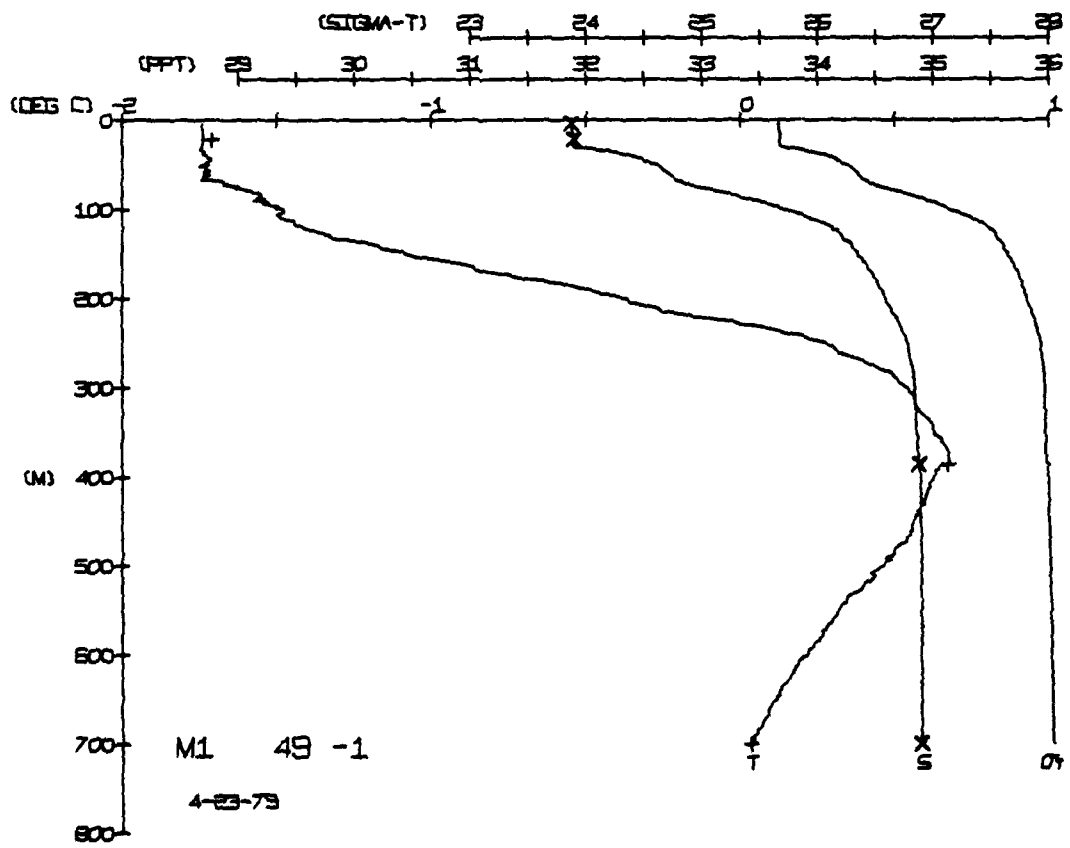
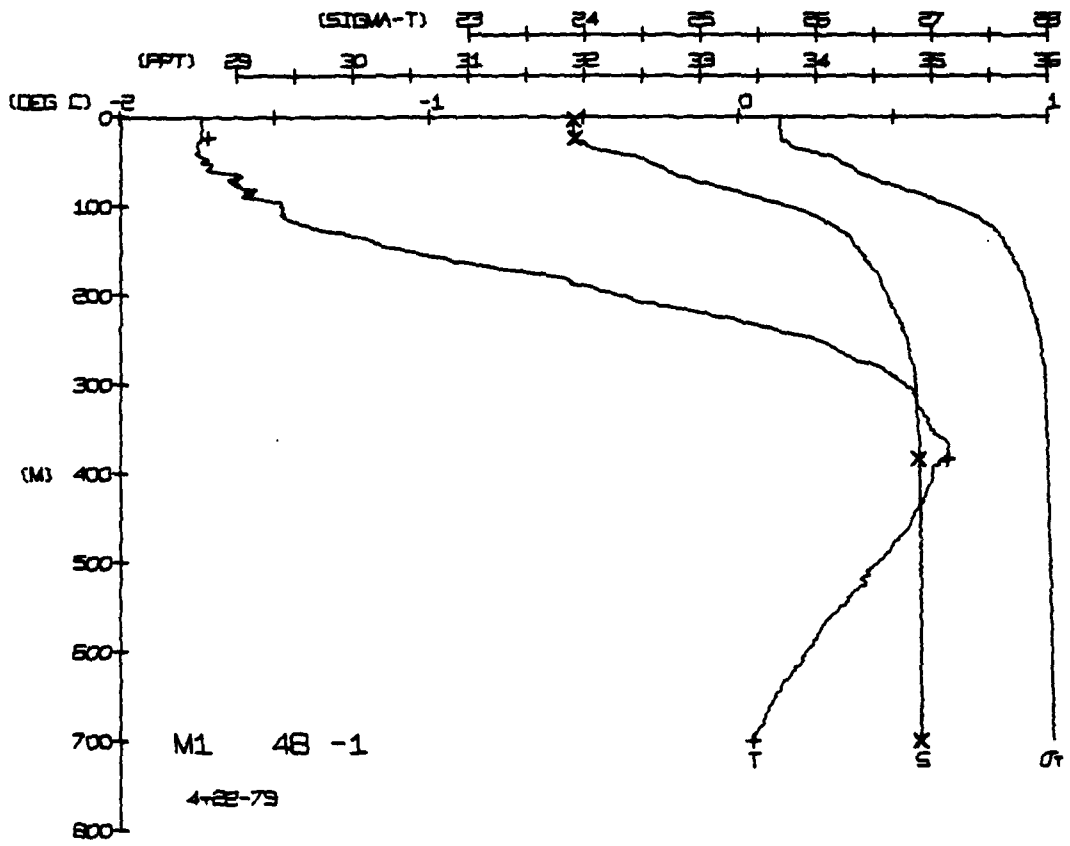
DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYVHT	SOUND
0	74	74	31	67	0	000	1436
3	74	74	31	67	0	007	1436
5	74	74	31	67	0	012	1436
10	74	74	31	68	0	023	1436
15	74	74	31	68	0	035	1437
20	74	74	31	68	0	048	1437
25	74	74	31	68	0	058	1437
30	74	74	31	68	0	068	1437
35	74	74	31	68	0	081	1437
40	74	74	31	68	0	091	1438
45	74	74	31	68	0	101	1438
50	74	74	31	68	0	110	1438
55	74	74	31	68	0	129	1438
60	74	74	31	68	0	137	1438
65	74	74	31	68	0	145	1440
70	74	74	31	68	0	145	1440
80	74	74	31	68	0	172	1442
90	74	74	31	68	0	182	1442
100	74	74	31	68	0	197	1444
110	74	74	31	68	0	203	1444
120	74	74	31	68	0	213	1445
130	74	74	31	68	0	217	1445
140	74	74	31	68	0	238	1453
150	74	74	31	68	0	242	1454
160	74	74	31	68	0	244	1454
170	74	74	31	68	0	221	1448
180	74	74	31	68	0	227	1448
190	74	74	31	68	0	227	1448
100	74	74	31	68	0	227	1448
110	74	74	31	68	0	227	1448
120	74	74	31	68	0	227	1448
130	74	74	31	68	0	227	1448
140	74	74	31	68	0	227	1448
150	74	74	31	68	0	227	1448
160	74	74	31	68	0	227	1448
170	74	74	31	68	0	227	1448
180	74	74	31	68	0	227	1448
190	74	74	31	68	0	227	1448
100	74	74	31	68	0	227	1448
110	74	74	31	68	0	227	1448
120	74	74	31	68	0	227	1448
130	74	74	31	68	0	227	1448
140	74	74	31	68	0	227	1448
150	74	74	31	68	0	227	1448
160	74	74	31	68	0	227	1448
170	74	74	31	68	0	227	1448
180	74	74	31	68	0	227	1448
190	74	74	31	68	0	227	1448
100	74	74	31	68	0	227	1448
110	74	74	31	68	0	227	1448
120	74	74	31	68	0	227	1448
130	74	74	31	68	0	227	1448
140	74	74	31	68	0	227	1448
150	74	74	31	68	0	227	1448
160	74	74	31	68	0	227	1448
170	74	74	31	68	0	227	1448
180	74	74	31	68	0	227	1448
190	74	74	31	68	0	227	1448
100	74	74	31	68	0	227	1448
110	74	74	31	68	0	227	1448
120	74	74	31	68	0	227	1448
130	74	74	31	68	0	227	1448
140	74	74	31	68	0	227	1448
150	74	74	31	68	0	227	1448
160	74	74	31	68	0	227	1448
170	74	74	31	68	0	227	1448
180	74	74	31	68	0	227	1448
190	74	74	31	68	0	227	1448
100	74	74	31	68	0	227	1448
110	74	74	31	68	0	227	1448
120	74	74	31	68	0	227	1448
130	74	74	31	68	0	227	1448
140	74	74	31	68	0	227	1448
150	74	74	31	68	0	227	1448
160	74	74	31	68	0	227	1448
170	74	74	31	68	0	227	1448
180	74	74	31	68	0	227	1448
190	74	74	31	68	0	227	1448

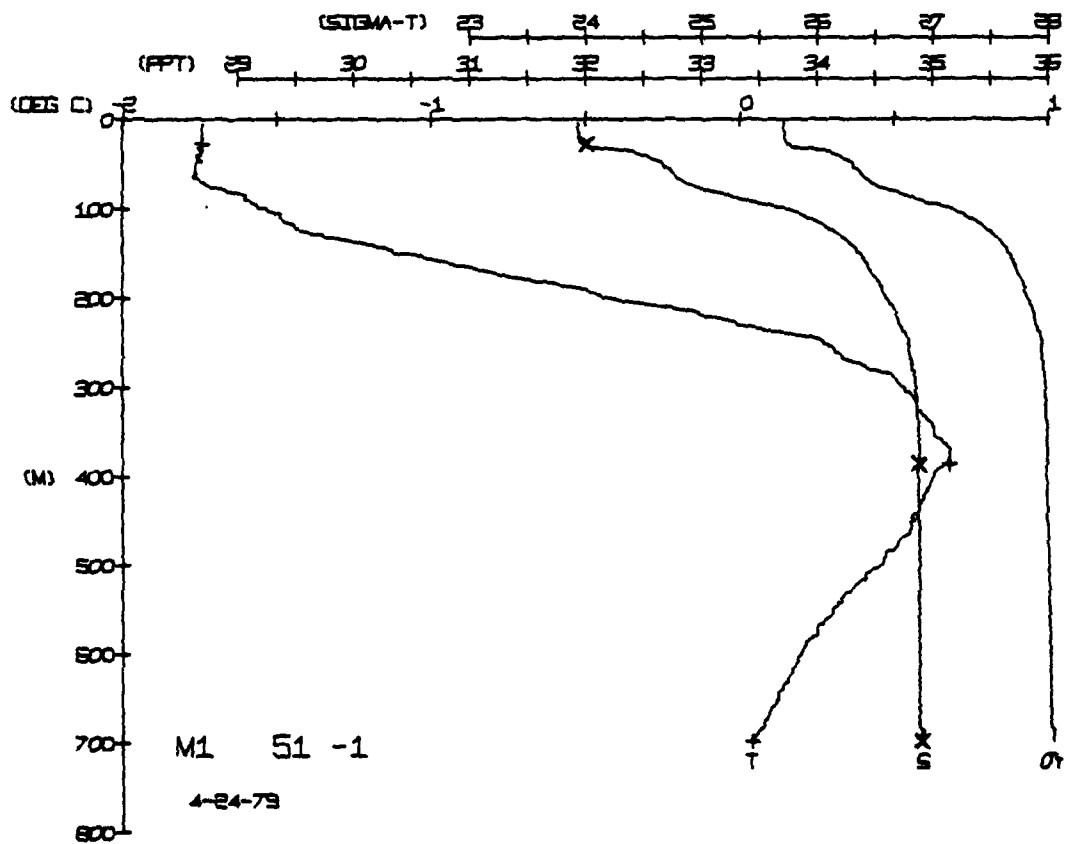
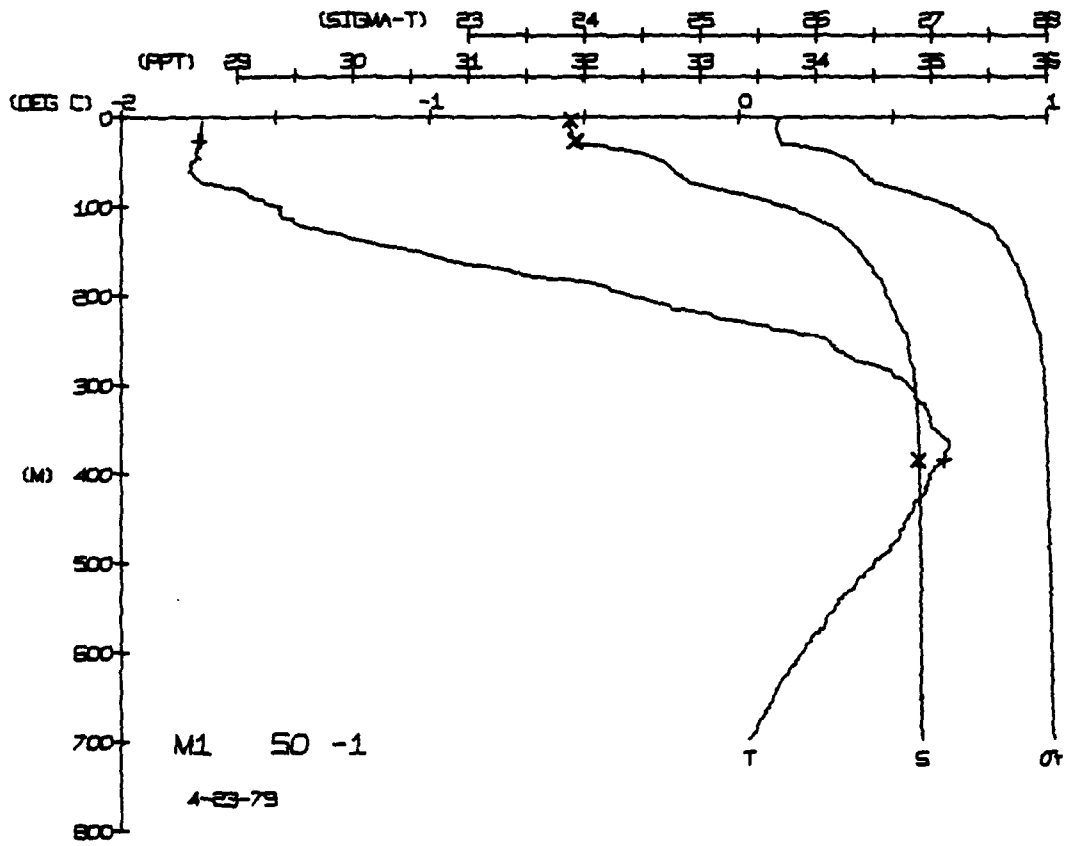
BOT NUM = 1
BOT NUM = 2
BOT NUM = 3
BOT NUM = 4

DEPTH 3.6
21.9
386.3
700.0

TEMP -1.71
0.68

SALIN 31.87
31.90
34.88
34.90





FRAM 1 STATION 52(1) CTD 24/APR/1979 1724 GMT CODE = 1
LAT = 84 3024N LNG = 8 0877W LITER = 1.0 LGER = 2.0
AIR TEMP = -25.8 BAROM = 1021.5 WIND = 51.0 SPEED = 1.6

FRAM 1 STATION 53(1) CTD 25/APR/1979 1140 GMT CODE = 1
LAT = 84 2922N LNG = 8 0162W LITER = 1.0 LGER = 2.0
AIR TEMP = -21.9 BAROM = 1050.4 WIND = 125.0 SPEED = 1.2

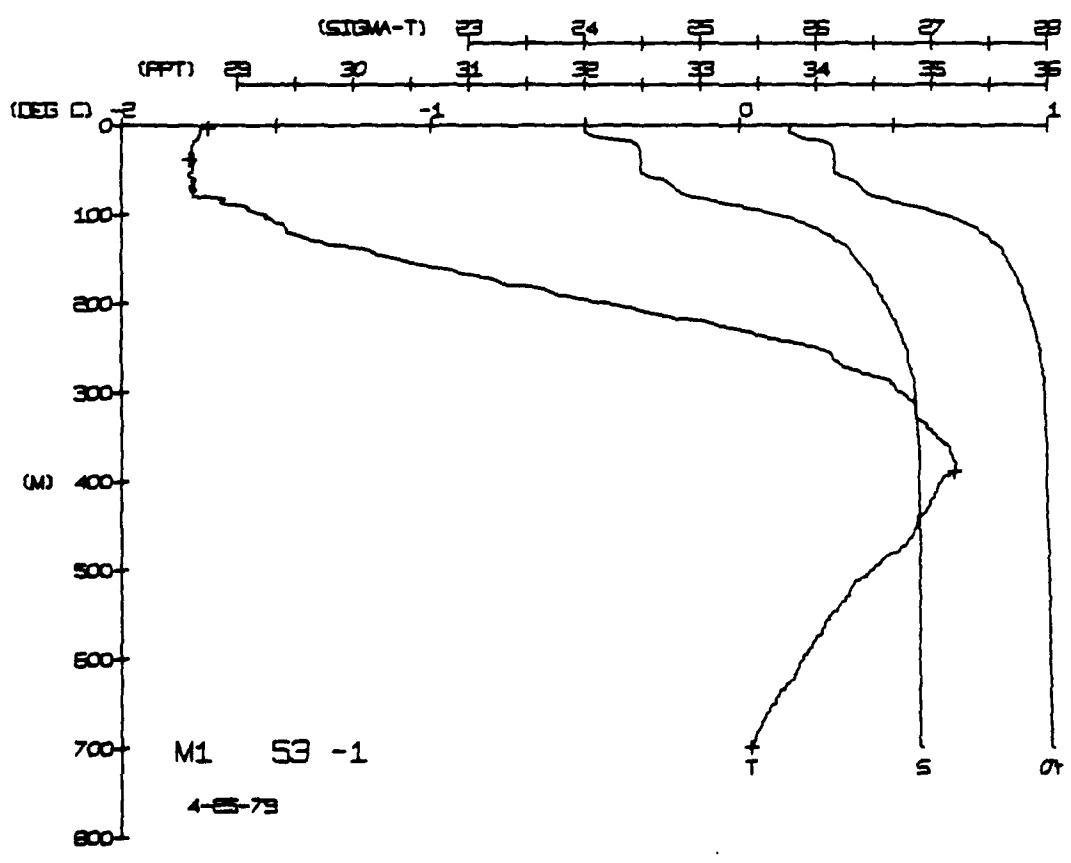
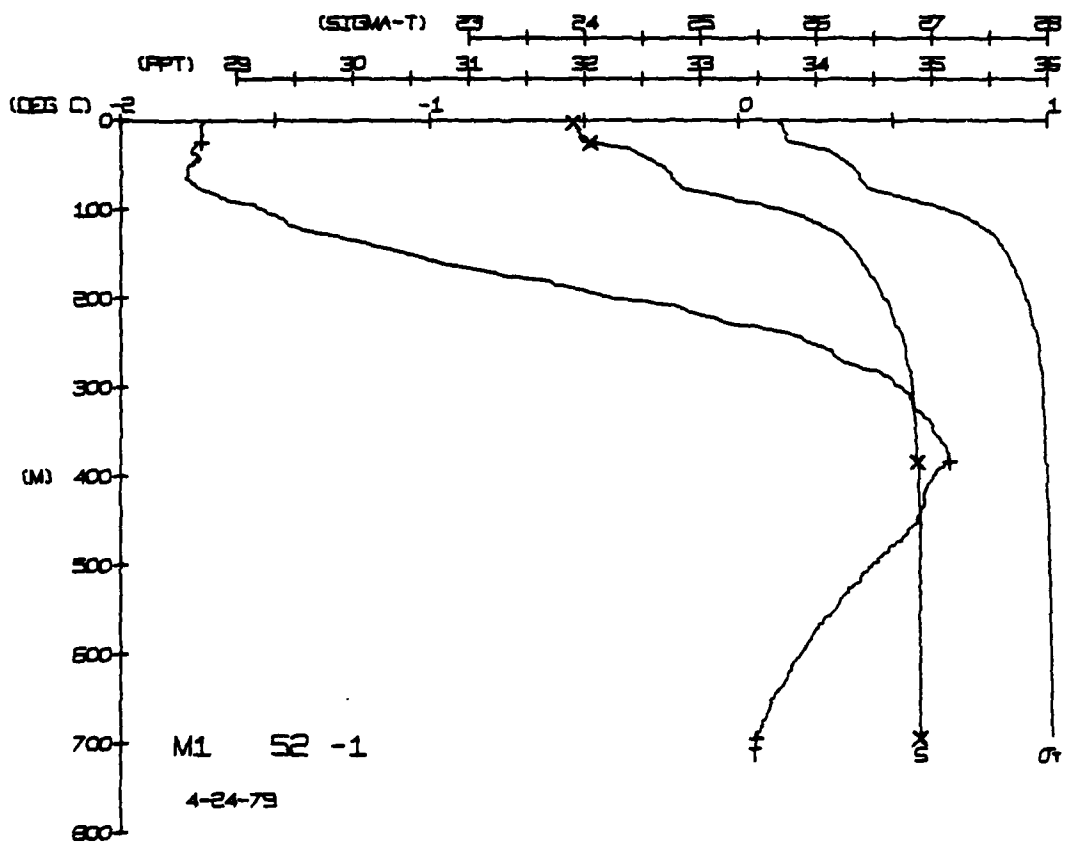
DEPTH	TEMP	PTEMP	SALIN	SIO T	SPVOL	DYNHT	SOUND
0	73.3	73.3	31.88	25.67	2332.7	0.007	1436.8
10	73.3	73.3	31.88	25.67	2322.9	0.007	1436.8
20	73.3	73.3	31.88	25.67	2313.1	0.007	1436.8
30	73.3	73.3	31.88	25.67	2303.3	0.007	1436.8
40	73.3	73.3	31.88	25.67	2293.5	0.007	1436.8
50	73.3	73.3	31.88	25.67	2283.7	0.007	1436.8
60	73.3	73.3	31.88	25.67	2273.9	0.007	1436.8
70	73.3	73.3	31.88	25.67	2264.1	0.007	1436.8
80	73.3	73.3	31.88	25.67	2254.3	0.007	1436.8
90	73.3	73.3	31.88	25.67	2244.5	0.007	1436.8
100	73.3	73.3	31.88	25.67	2234.7	0.007	1436.8
110	73.3	73.3	31.88	25.67	2224.9	0.007	1436.8
120	73.3	73.3	31.88	25.67	2215.1	0.007	1436.8
130	73.3	73.3	31.88	25.67	2205.3	0.007	1436.8
140	73.3	73.3	31.88	25.67	2195.5	0.007	1436.8
150	73.3	73.3	31.88	25.67	2185.7	0.007	1436.8
160	73.3	73.3	31.88	25.67	2175.9	0.007	1436.8
170	73.3	73.3	31.88	25.67	2166.1	0.007	1436.8
180	73.3	73.3	31.88	25.67	2156.3	0.007	1436.8
190	73.3	73.3	31.88	25.67	2146.5	0.007	1436.8
200	73.3	73.3	31.88	25.67	2136.7	0.007	1436.8
210	73.3	73.3	31.88	25.67	2126.9	0.007	1436.8
220	73.3	73.3	31.88	25.67	2117.1	0.007	1436.8
230	73.3	73.3	31.88	25.67	2107.3	0.007	1436.8
240	73.3	73.3	31.88	25.67	2097.5	0.007	1436.8
250	73.3	73.3	31.88	25.67	2087.7	0.007	1436.8
260	73.3	73.3	31.88	25.67	2077.9	0.007	1436.8
270	73.3	73.3	31.88	25.67	2068.1	0.007	1436.8
280	73.3	73.3	31.88	25.67	2058.3	0.007	1436.8
290	73.3	73.3	31.88	25.67	2048.5	0.007	1436.8
300	73.3	73.3	31.88	25.67	2038.7	0.007	1436.8
310	73.3	73.3	31.88	25.67	2028.9	0.007	1436.8
320	73.3	73.3	31.88	25.67	2019.1	0.007	1436.8
330	73.3	73.3	31.88	25.67	2009.3	0.007	1436.8
340	73.3	73.3	31.88	25.67	1999.5	0.007	1436.8
350	73.3	73.3	31.88	25.67	1989.7	0.007	1436.8
360	73.3	73.3	31.88	25.67	1979.9	0.007	1436.8
370	73.3	73.3	31.88	25.67	1970.1	0.007	1436.8
380	73.3	73.3	31.88	25.67	1960.3	0.007	1436.8
390	73.3	73.3	31.88	25.67	1950.5	0.007	1436.8
400	73.3	73.3	31.88	25.67	1940.7	0.007	1436.8
410	73.3	73.3	31.88	25.67	1930.9	0.007	1436.8
420	73.3	73.3	31.88	25.67	1921.1	0.007	1436.8
430	73.3	73.3	31.88	25.67	1911.3	0.007	1436.8
440	73.3	73.3	31.88	25.67	1901.5	0.007	1436.8
450	73.3	73.3	31.88	25.67	1891.7	0.007	1436.8
460	73.3	73.3	31.88	25.67	1881.9	0.007	1436.8
470	73.3	73.3	31.88	25.67	1872.1	0.007	1436.8
480	73.3	73.3	31.88	25.67	1862.3	0.007	1436.8
490	73.3	73.3	31.88	25.67	1852.5	0.007	1436.8
500	73.3	73.3	31.88	25.67	1842.7	0.007	1436.8
510	73.3	73.3	31.88	25.67	1832.9	0.007	1436.8
520	73.3	73.3	31.88	25.67	1823.1	0.007	1436.8
530	73.3	73.3	31.88	25.67	1813.3	0.007	1436.8
540	73.3	73.3	31.88	25.67	1803.5	0.007	1436.8
550	73.3	73.3	31.88	25.67	1793.7	0.007	1436.8
560	73.3	73.3	31.88	25.67	1783.9	0.007	1436.8
570	73.3	73.3	31.88	25.67	1774.1	0.007	1436.8
580	73.3	73.3	31.88	25.67	1764.3	0.007	1436.8
590	73.3	73.3	31.88	25.67	1754.5	0.007	1436.8
600	73.3	73.3	31.88	25.67	1744.7	0.007	1436.8
610	73.3	73.3	31.88	25.67	1734.9	0.007	1436.8
620	73.3	73.3	31.88	25.67	1725.1	0.007	1436.8
630	73.3	73.3	31.88	25.67	1715.3	0.007	1436.8
640	73.3	73.3	31.88	25.67	1705.5	0.007	1436.8
650	73.3	73.3	31.88	25.67	1695.7	0.007	1436.8
660	73.3	73.3	31.88	25.67	1685.9	0.007	1436.8
670	73.3	73.3	31.88	25.67	1676.1	0.007	1436.8
680	73.3	73.3	31.88	25.67	1666.3	0.007	1436.8
690	73.3	73.3	31.88	25.67	1656.5	0.007	1436.8
700	73.3	73.3	31.88	25.67	1646.7	0.007	1436.8
710	73.3	73.3	31.88	25.67	1636.9	0.007	1436.8
720	73.3	73.3	31.88	25.67	1627.1	0.007	1436.8
730	73.3	73.3	31.88	25.67	1617.3	0.007	1436.8
740	73.3	73.3	31.88	25.67	1607.5	0.007	1436.8
750	73.3	73.3	31.88	25.67	1597.7	0.007	1436.8
760	73.3	73.3	31.88	25.67	1587.9	0.007	1436.8
770	73.3	73.3	31.88	25.67	1578.1	0.007	1436.8
780	73.3	73.3	31.88	25.67	1568.3	0.007	1436.8
790	73.3	73.3	31.88	25.67	1558.5	0.007	1436.8
800	73.3	73.3	31.88	25.67	1548.7	0.007	1436.8
810	73.3	73.3	31.88	25.67	1538.9	0.007	1436.8
820	73.3	73.3	31.88	25.67	1529.1	0.007	1436.8
830	73.3	73.3	31.88	25.67	1519.3	0.007	1436.8
840	73.3	73.3	31.88	25.67	1509.5	0.007	1436.8
850	73.3	73.3	31.88	25.67	1499.7	0.007	1436.8
860	73.3	73.3	31.88	25.67	1489.9	0.007	1436.8
870	73.3	73.3	31.88	25.67	1480.1	0.007	1436.8
880	73.3	73.3	31.88	25.67	1470.3	0.007	1436.8
890	73.3	73.3	31.88	25.67	1460.5	0.007	1436.8
900	73.3	73.3	31.88	25.67	1450.7	0.007	1436.8
910	73.3	73.3	31.88	25.67	1440.9	0.007	1436.8
920	73.3	73.3	31.88	25.67	1431.1	0.007	1436.8
930	73.3	73.3	31.88	25.67	1421.3	0.007	1436.8
940	73.3	73.3	31.88	25.67	1411.5	0.007	1436.8
950	73.3	73.3	31.88	25.67	1401.7	0.007	1436.8
960	73.3	73.3	31.88	25.67	1391.9	0.007	1436.8
970	73.3	73.3	31.88	25.67	1382.1	0.007	1436.8
980	73.3	73.3	31.88	25.67	1372.3	0.007	1436.8
990	73.3	73.3	31.88	25.67	1362.5	0.007	1436.8
1000	73.3	73.3	31.88	25.67	1352.7	0.007	1436.8

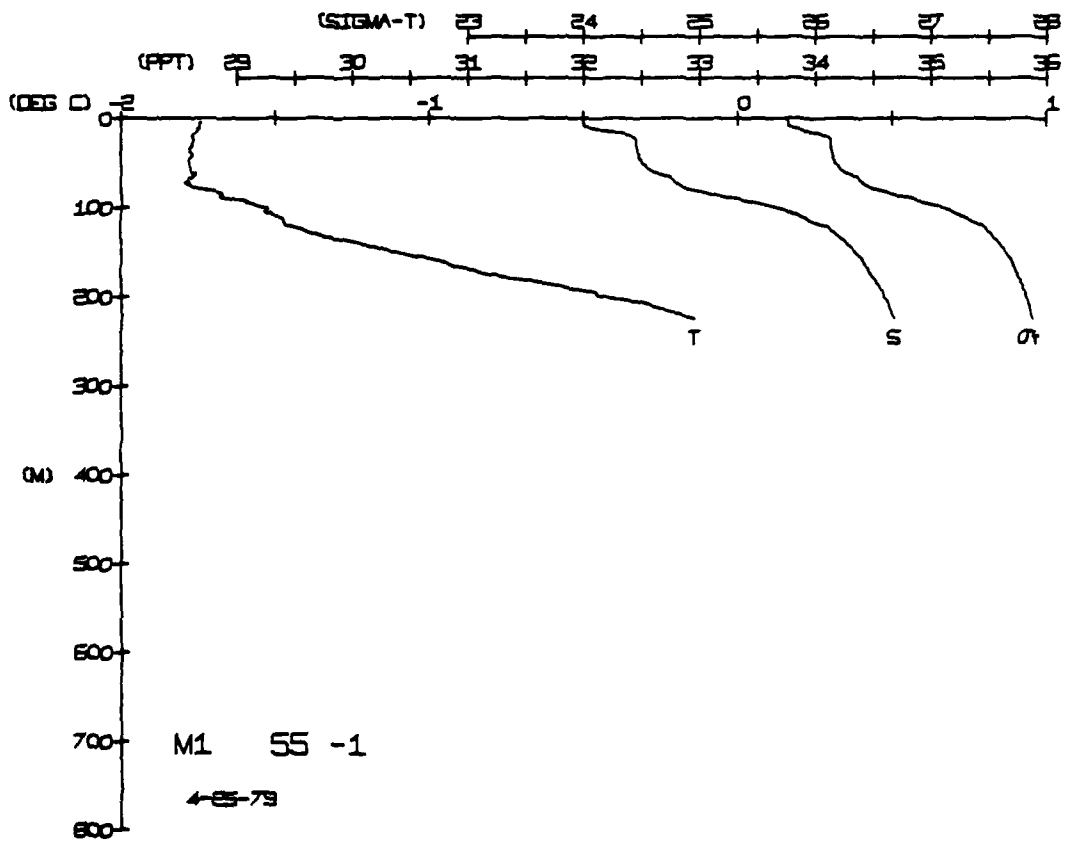
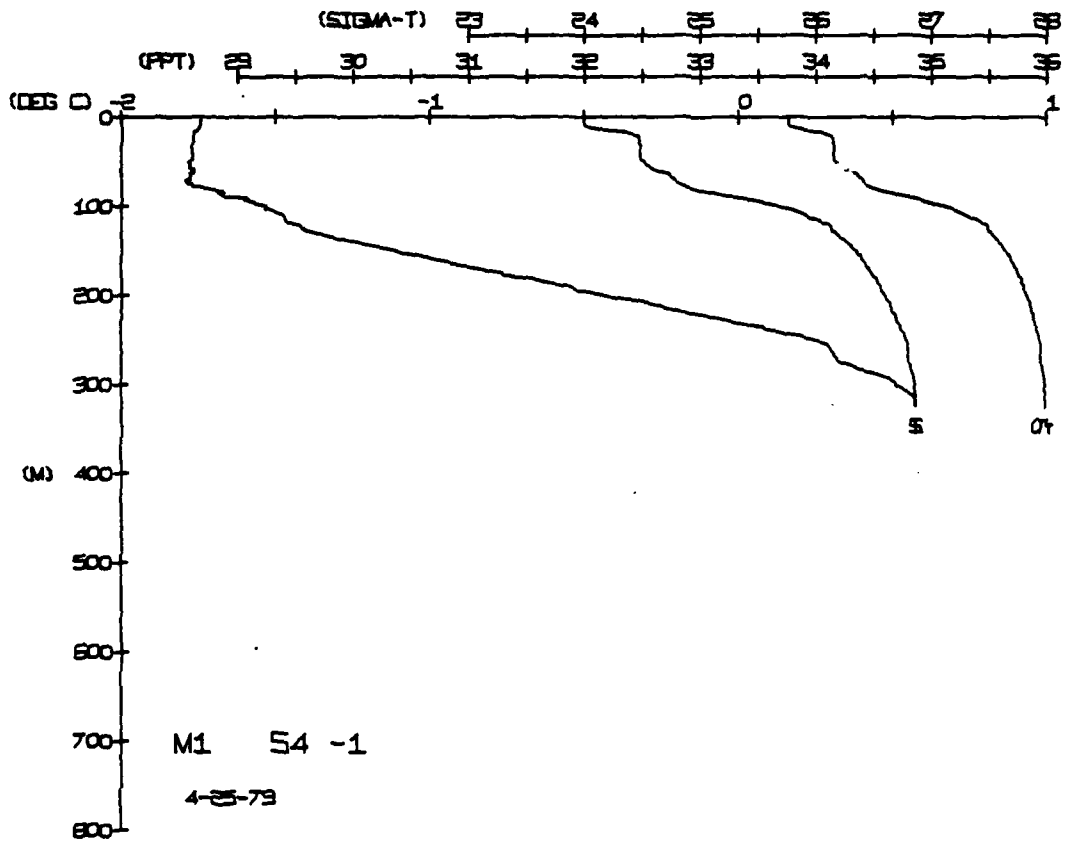
BOT NUM = 1
BOT NUM = 3
BOT NUM = 4

DEPTH = 3.4
TEMP = -1.74
SOUND = 31.90

BOT NUM = 1
BOT NUM = 3
BOT NUM = 4

DEPTH = 3.4
TEMP = -1.72
SOUND = 31.90



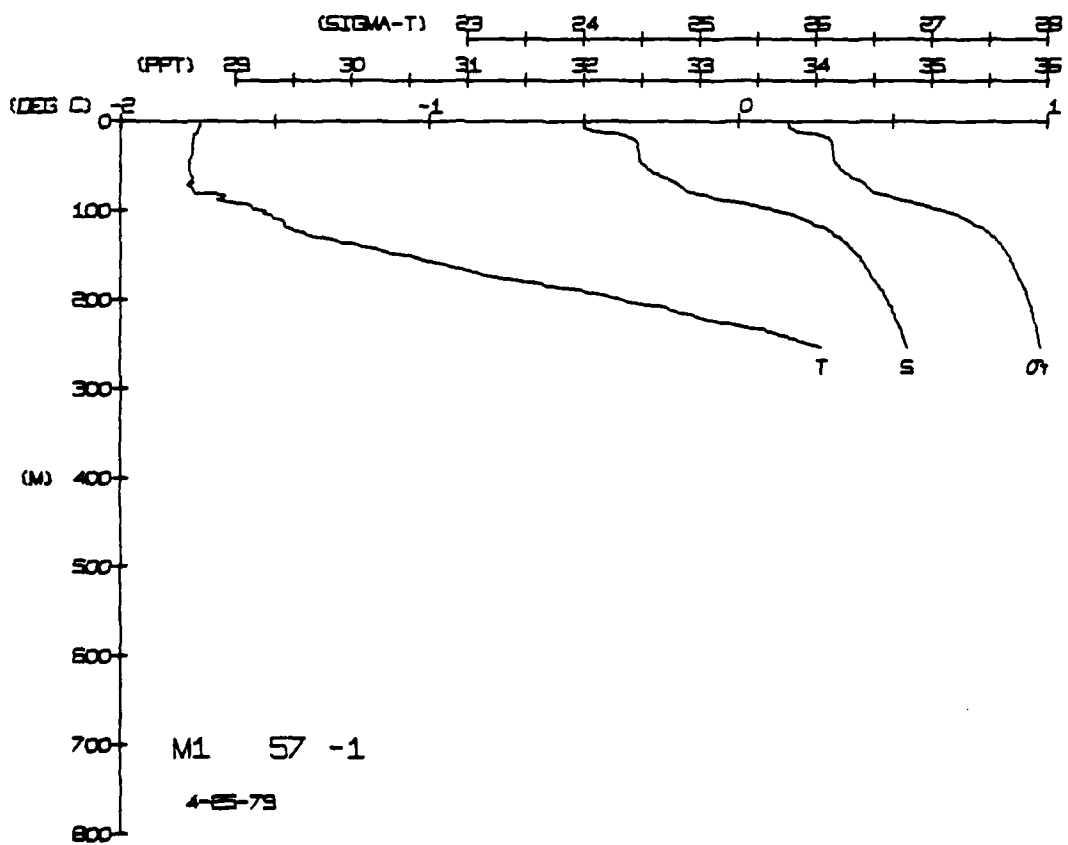
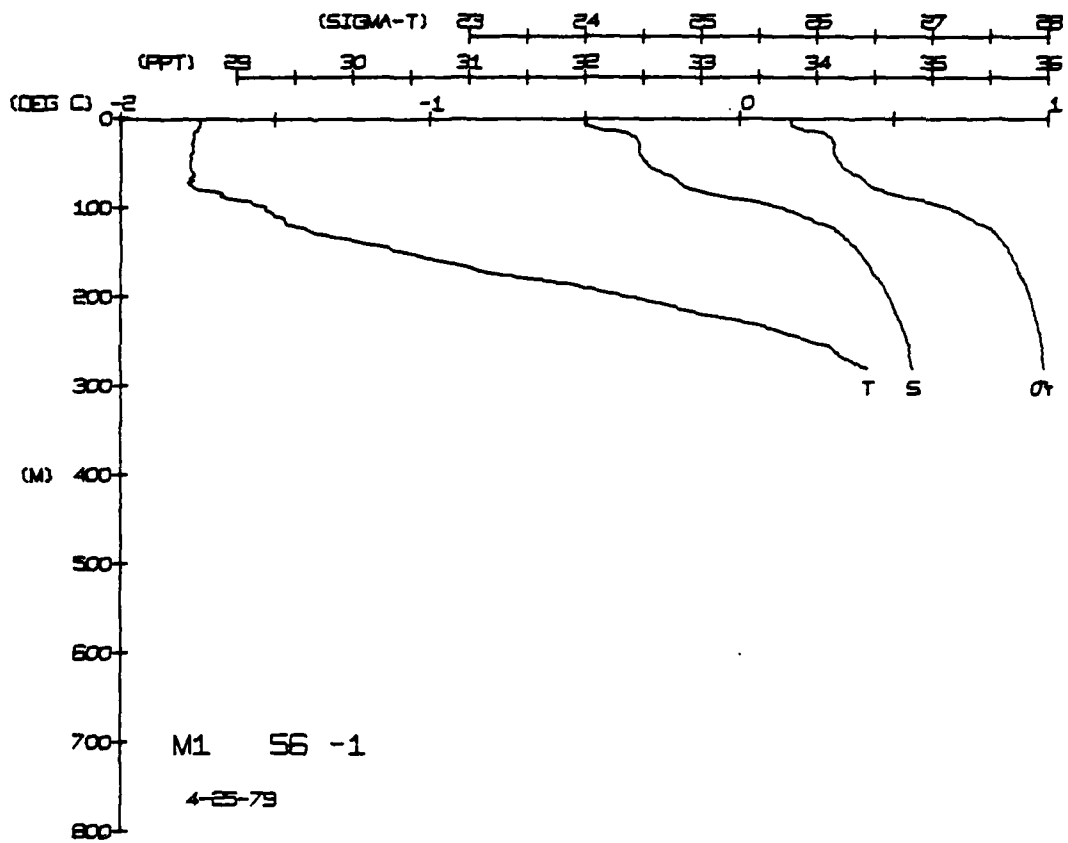


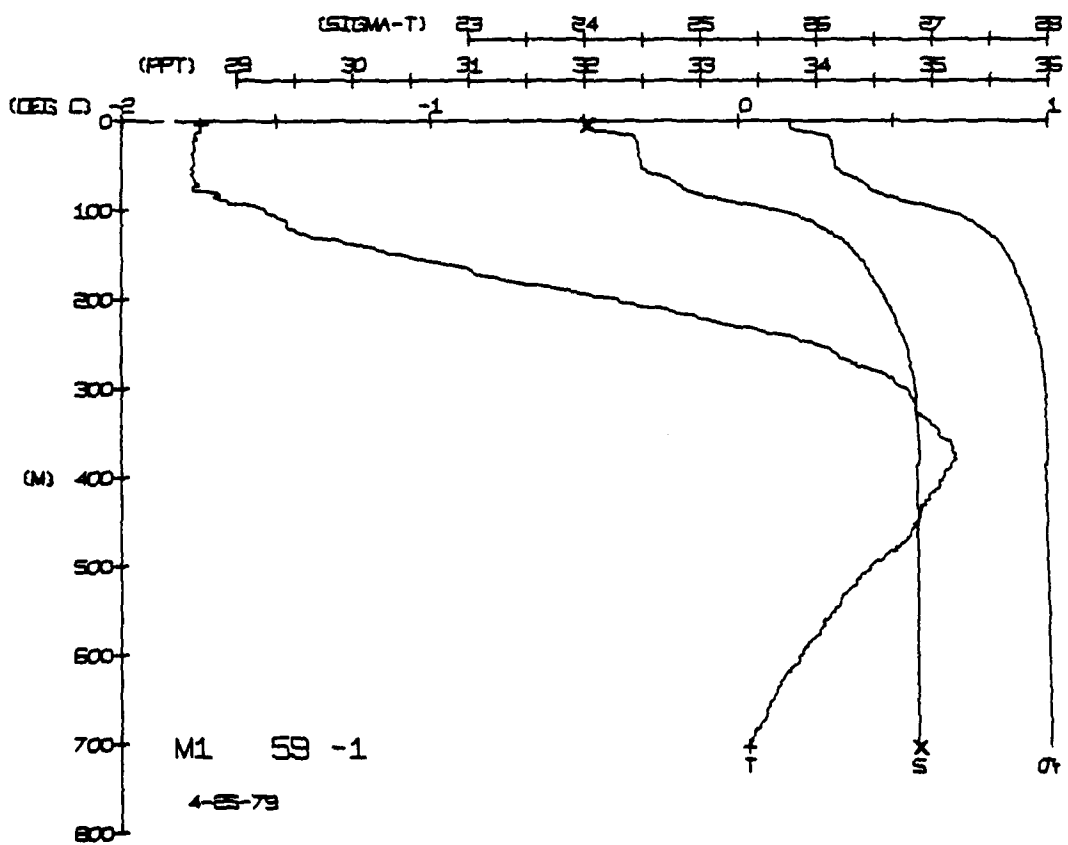
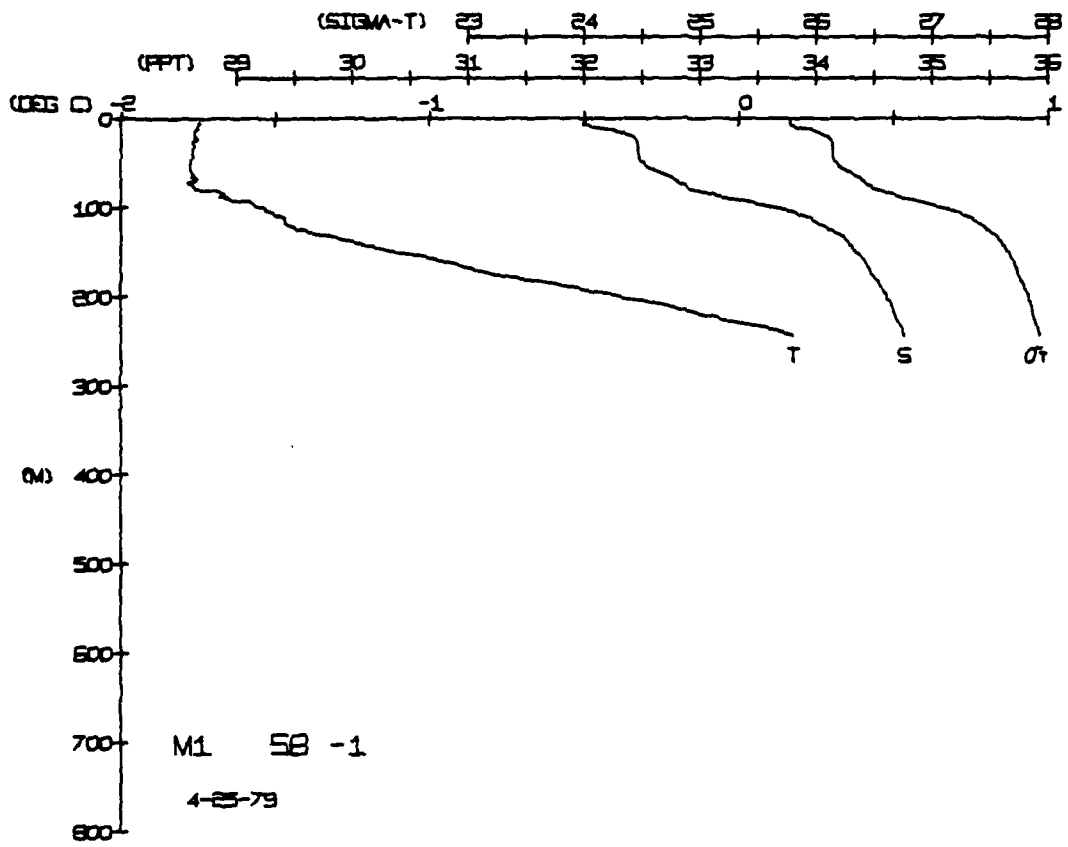
FRAM 1 STATION 56(1) CTD 25/APR/1979 1605 GMT CODE = 1
 LAT = 84 2946N LNG = 9 0132W LTER = 13 LGER = 37
 AIR TEMP = -22 0 BAROM = 1020 5 WIND = 124 0 SPEED = 0 9

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYNHT	SOUND
0	74	74	32	01	223	000	1436
3	74	74	32	01	223	007	1436
10	74	74	32	01	223	011	1437
15	76	76	32	04	220	022	1437
20	76	76	32	28	193	033	1437
25	77	77	32	45	187	043	1437
30	77	77	32	47	187	042	1437
35	77	77	32	47	187	042	1438
40	77	77	32	49	187	041	1438
45	77	77	32	49	185	040	1438
50	78	78	32	55	180	109	1438
55	78	78	32	55	174	109	1438
60	77	77	32	63	167	126	1438
65	77	77	32	72	162	118	1439
70	77	77	32	71	158	115	1439
80	79	79	32	91	128	155	1440
90	67	67	32	97	80	185	1441
100	53	53	33	87	64	192	1441
110	46	46	34	05	55	199	1443
120	37	37	34	19	44	204	1443
130	23	23	34	28	44	209	1444
140	10	10	34	35	40	213	1444
150	00	00	34	41	36	220	1444
160	00	00	34	44	33	226	1448
170	00	00	34	46	32	227	1448
180	00	00	34	52	27	227	1450
190	00	00	34	58	21	229	1451
200	00	00	34	61	25	231	1451
210	00	00	34	65	27	234	1452
220	00	00	34	68	27	234	1452
230	00	00	34	72	27	238	1453
240	00	00	34	74	27	241	1454
250	00	00	34	77	27	241	1454
260	00	00	34	80	27	243	1454
270	00	00	34	81	27	243	1454
280	00	00	34	82	27	243	1454

FRAM 1 STATION 57(1) CTD 25/APR/1979 1648 GMT CODE = 1
 LAT = 84 2943N LNG = 9 0107W LTER = 6 LGER = 16
 AIR TEMP = -21 7 BAROM = 1020 6 WIND = 51 0 SPEED = 0 9

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYNHT	SOUND
0	74	74	32	01	222	000	1436
3	74	74	32	01	222	007	1436
10	74	74	32	01	222	011	1437
15	75	75	32	05	219	022	1437
20	76	76	32	30	201	033	1437
25	76	76	32	42	197	043	1437
30	77	77	32	46	188	052	1437
35	77	77	32	47	187	052	1437
40	77	77	32	47	187	052	1438
45	78	78	32	48	186	090	1438
50	78	78	32	48	185	090	1438
55	78	78	32	52	180	109	1438
60	77	77	32	56	174	129	1438
65	76	76	32	64	168	126	1438
70	76	76	32	71	163	118	1439
80	76	76	32	79	157	135	1439
90	66	66	33	23	119	182	1440
100	53	53	33	23	77	185	1441
110	46	46	33	23	64	192	1441
120	36	36	34	07	55	198	1443
130	23	23	34	19	47	203	1444
140	10	10	34	28	44	208	1444
150	00	00	34	35	44	212	1444
160	00	00	34	42	39	216	1444
170	00	00	34	46	35	222	1448
180	00	00	34	51	33	226	1448
190	00	00	34	58	27	227	1450
200	00	00	34	61	27	227	1451
210	00	00	34	65	27	227	1451
220	00	00	34	69	27	227	1452
230	00	00	34	75	27	227	1452
240	00	00	34	78	27	227	1454
250	00	00	34	79	27	227	1454
260	00	00	34	79	27	227	1454
270	00	00	34	79	27	227	1454
280	00	00	34	79	27	227	1454





FRAM 1 STATION 60(1) CTD 26/APR/1979 705 GMT CODE = 1
 LAT = 84 2884N LNC = 7 79736W LITER = 1.0 LGER =
 AIR TEMP = -22.0 BARDM = 1020.0 WIND = 50.0 SPEED = 2.0

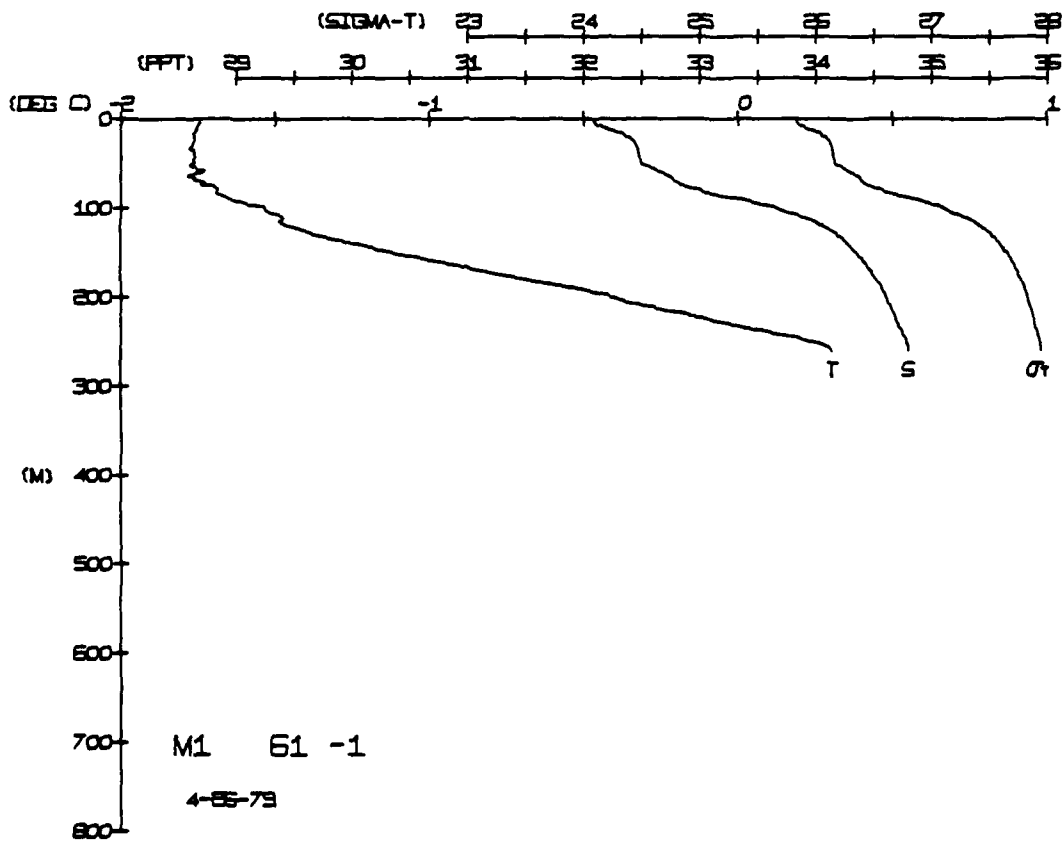
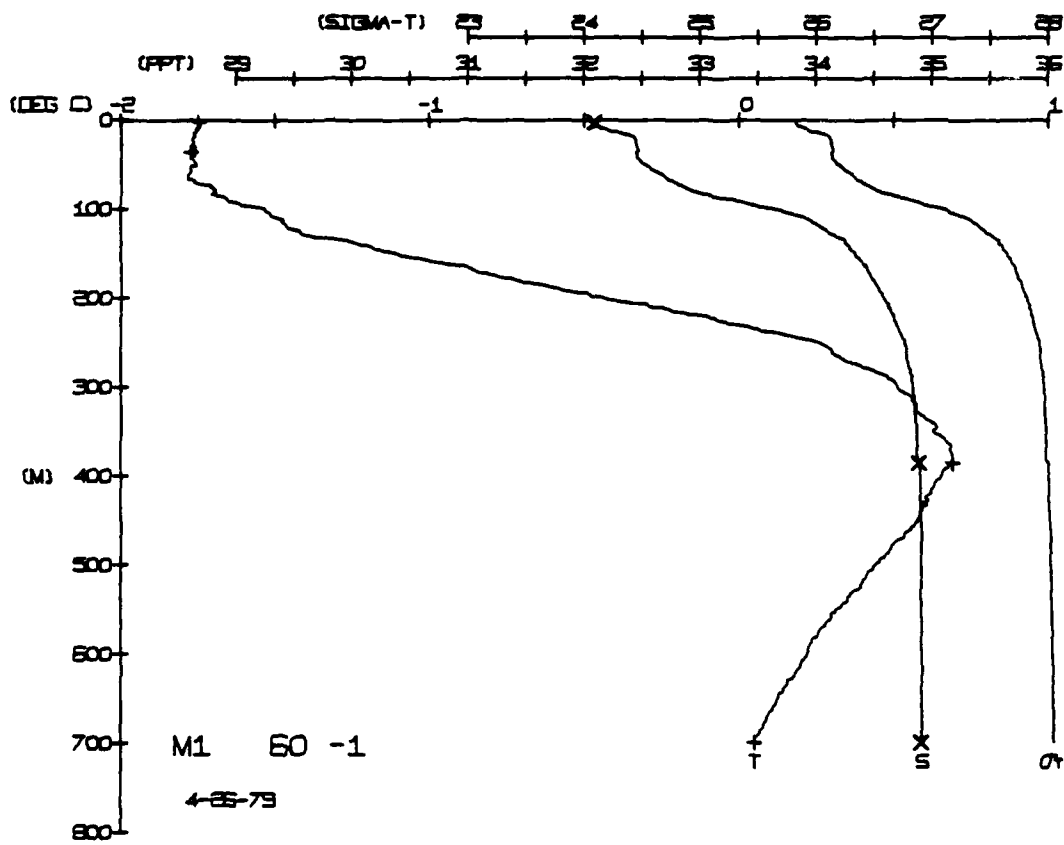
DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DVWHT	SOUND
0	74	74	32	25	218	0	1437
3	74	74	32	25	218	0	1437
5	74	74	32	25	218	0	1437
10	74	74	32	25	218	0	1437
15	74	74	32	25	218	0	1437
20	74	74	32	25	218	0	1437
25	74	74	32	25	218	0	1437
30	74	74	32	25	218	0	1437
35	74	74	32	25	218	0	1437
40	74	74	32	25	218	0	1437
45	74	74	32	25	218	0	1437
50	74	74	32	25	218	0	1437
55	74	74	32	25	218	0	1437
60	74	74	32	25	218	0	1437
65	74	74	32	25	218	0	1437
70	74	74	32	25	218	0	1437
75	74	74	32	25	218	0	1437
80	74	74	32	25	218	0	1437
85	74	74	32	25	218	0	1437
90	74	74	32	25	218	0	1437
95	74	74	32	25	218	0	1437
100	74	74	32	25	218	0	1437

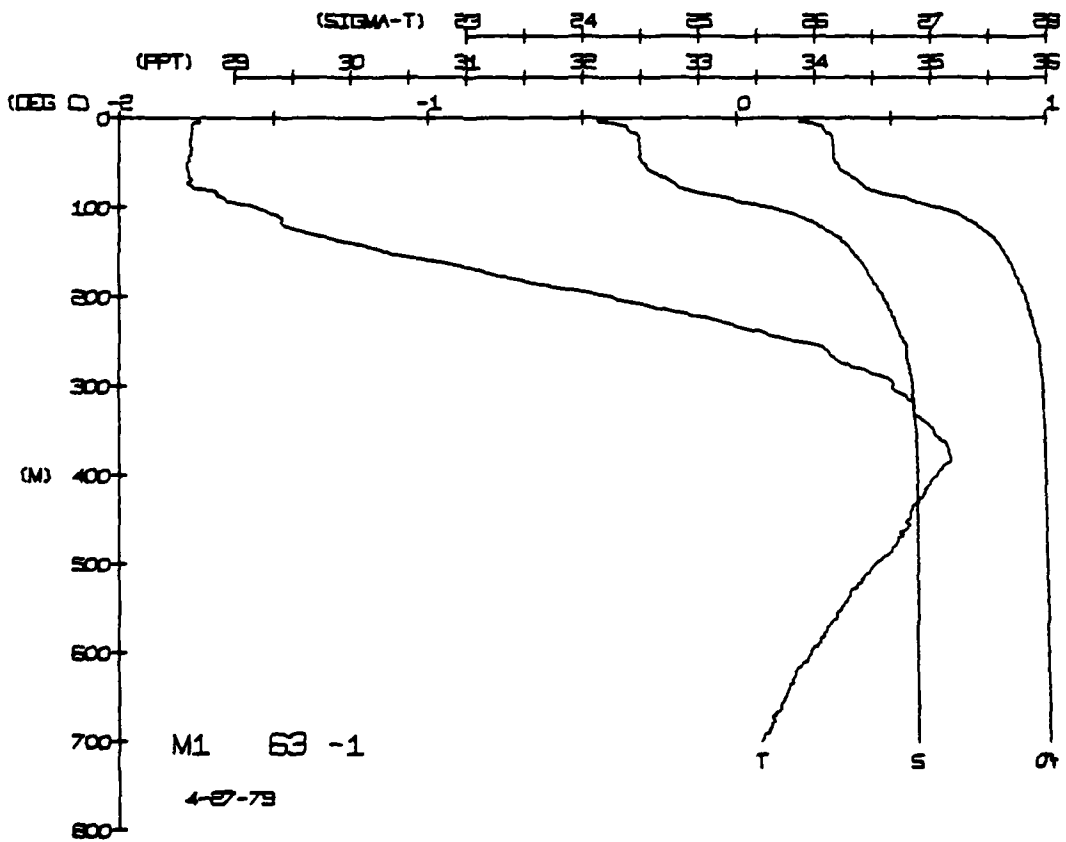
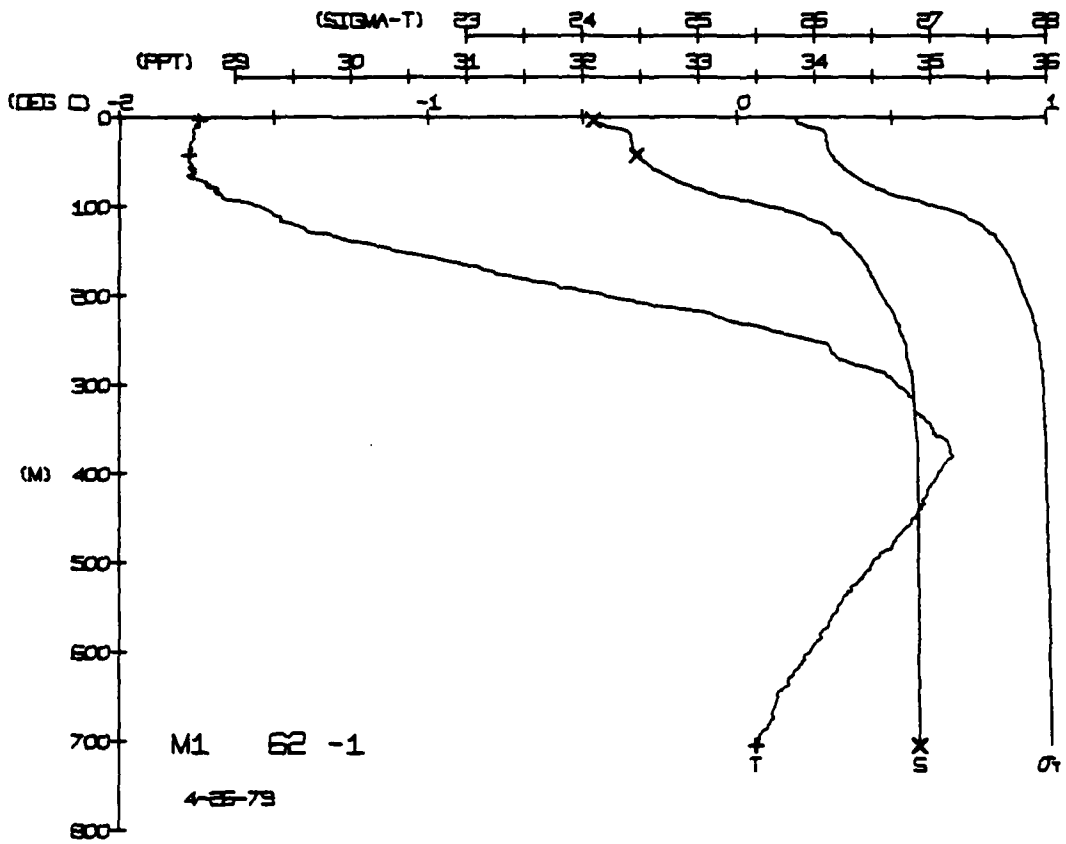
BOT NUM = 1
 BOT NUM = 3
 BOT NUM = 4
 DEPTH 3 6 9
 TEMP -1.77 0.65
 SALIN 32.08 34.88

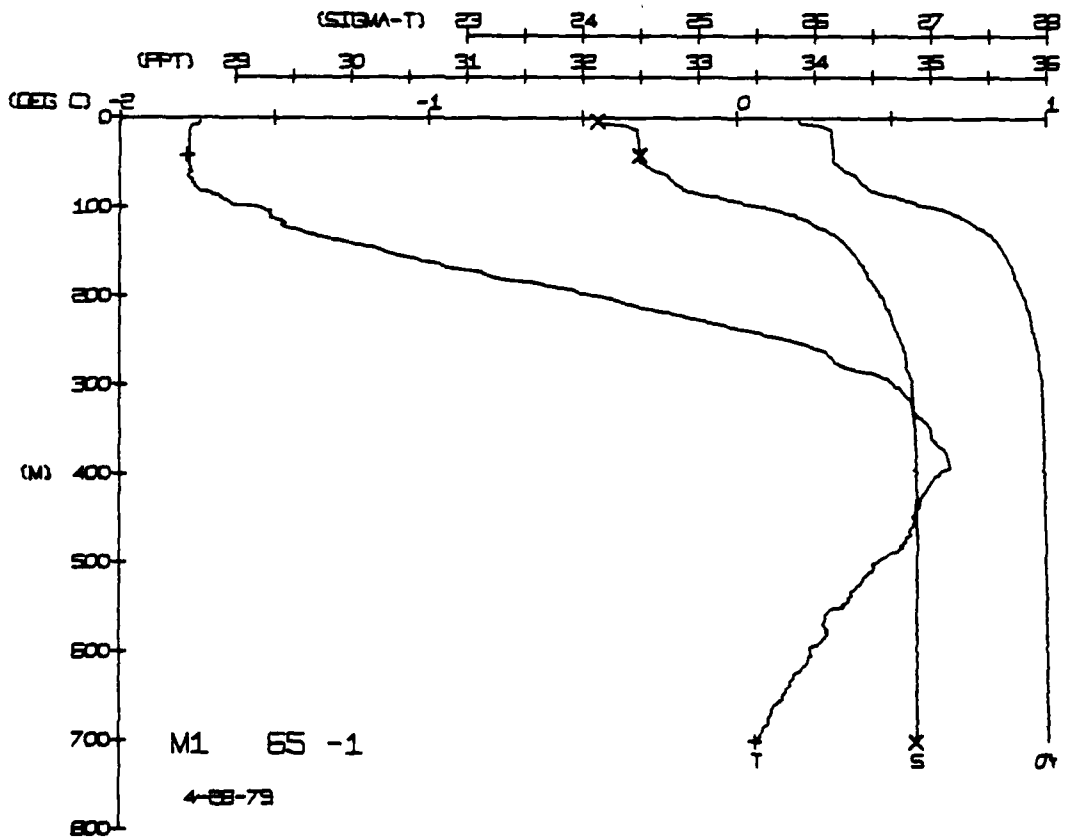
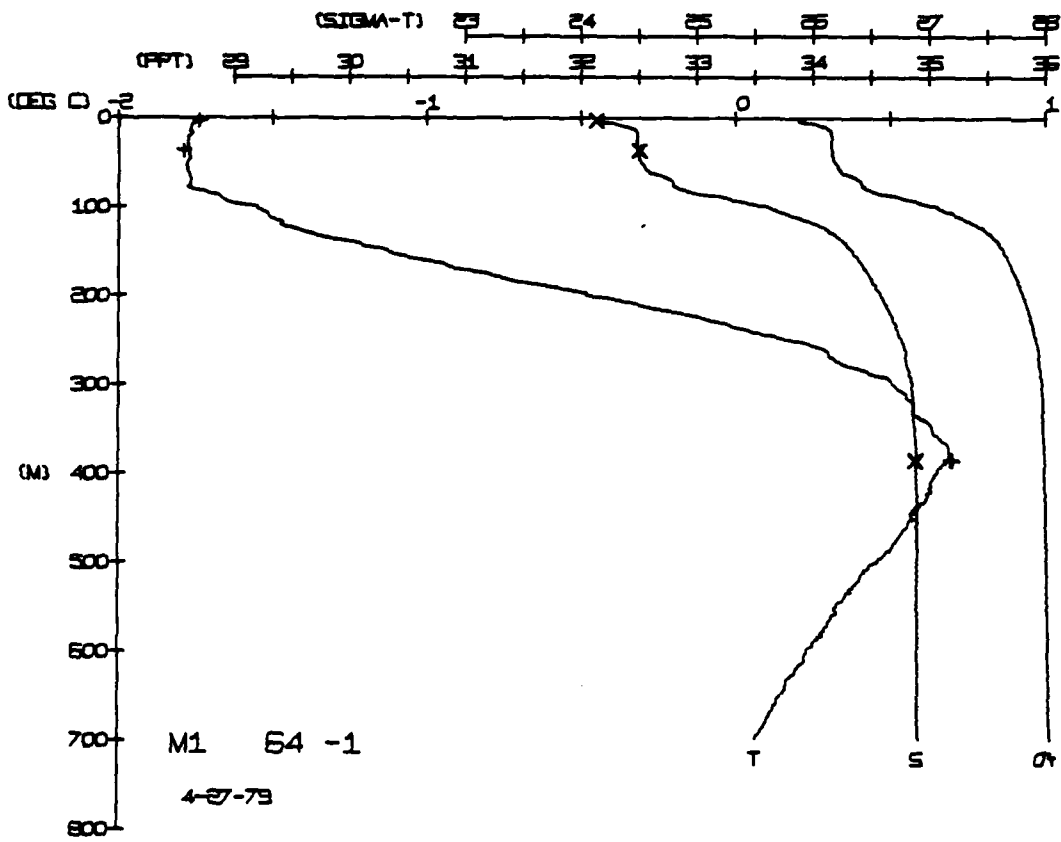
FRAM 1 STATION 61(1) CTD 26/APR/1979 1337 GMT CODE = 1
 LAT = 84 2879N LNC = 7 9507W LITER = 1.0 LGER =
 AIR TEMP = -21.3 BARDM = 1017.2 WIND = 130.0 SPEED = 2.1

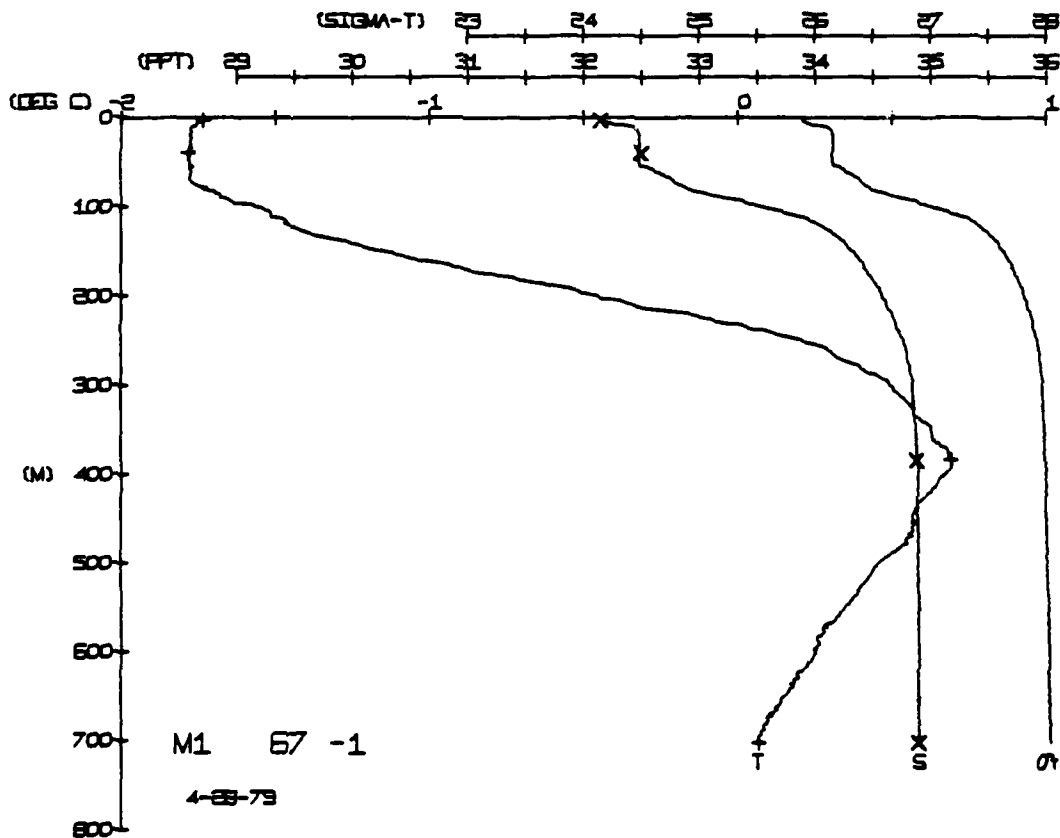
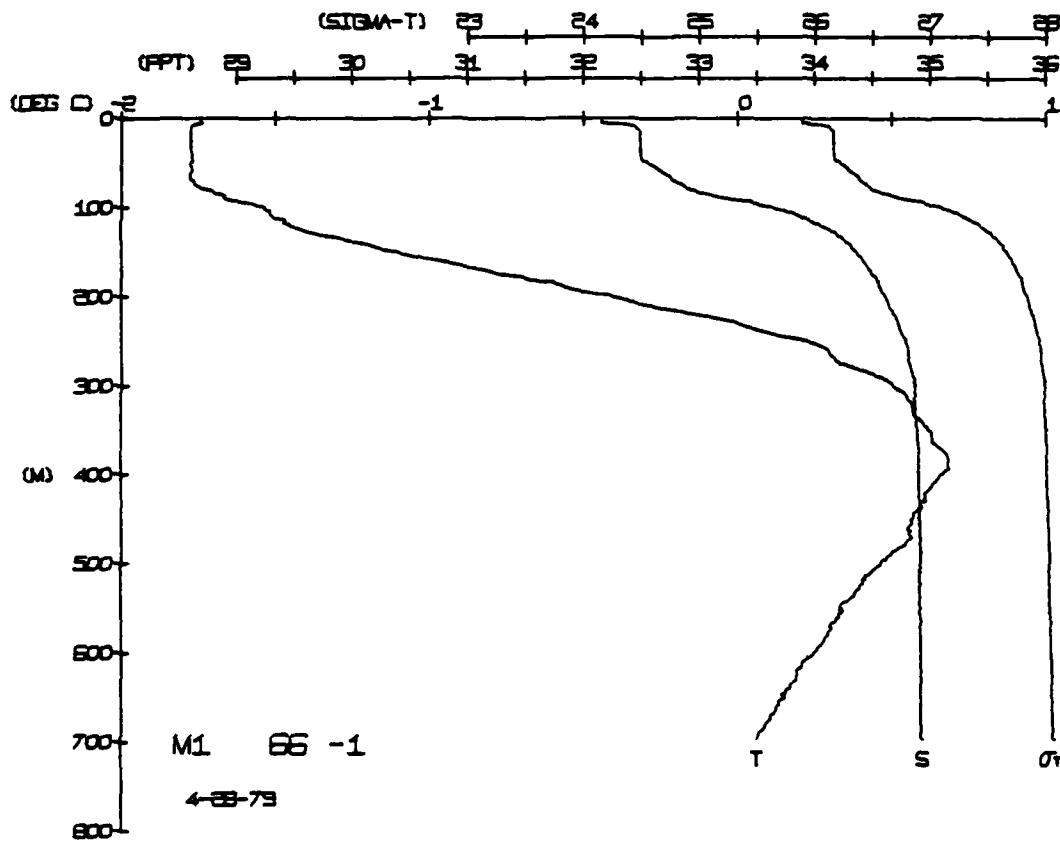
DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DVWHT	SOUND
0	74	74	32	25	217	0	1437
3	74	74	32	25	217	0	1437
5	74	74	32	25	217	0	1437
10	74	74	32	25	217	0	1437
15	74	74	32	25	217	0	1437
20	74	74	32	25	217	0	1437
25	74	74	32	25	217	0	1437
30	74	74	32	25	217	0	1437
35	74	74	32	25	217	0	1437
40	74	74	32	25	217	0	1437
45	74	74	32	25	217	0	1437
50	74	74	32	25	217	0	1437
55	74	74	32	25	217	0	1437
60	74	74	32	25	217	0	1437
65	74	74	32	25	217	0	1437
70	74	74	32	25	217	0	1437
75	74	74	32	25	217	0	1437
80	74	74	32	25	217	0	1437
85	74	74	32	25	217	0	1437
90	74	74	32	25	217	0	1437
95	74	74	32	25	217	0	1437
100	74	74	32	25	217	0	1437

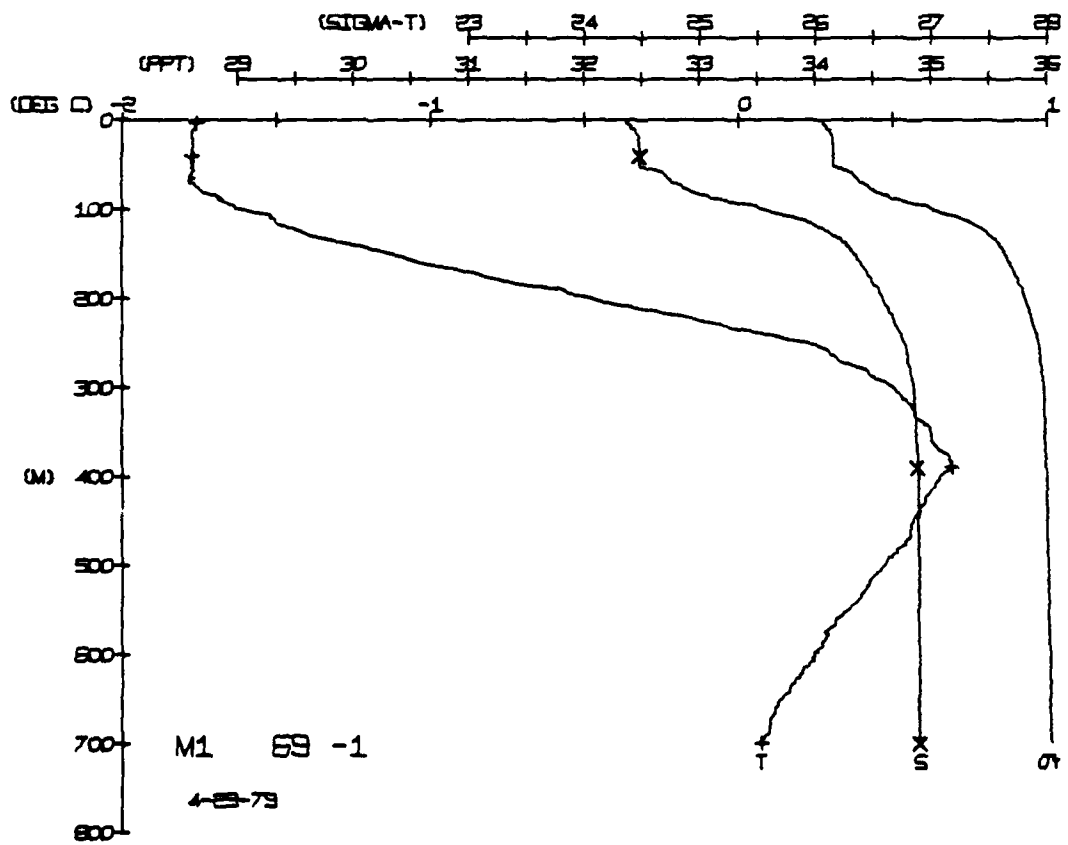
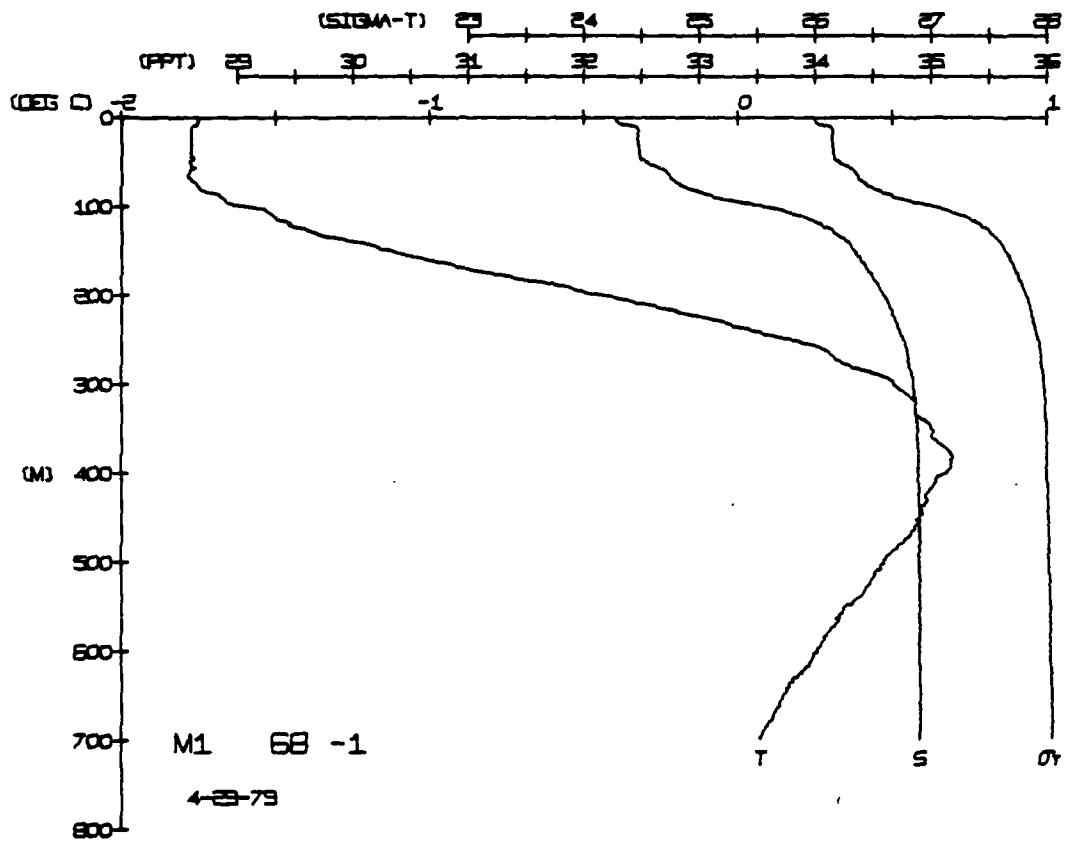
DEPTH 3 6 9
 TEMP -1.77 0.65
 SALIN 32.08 34.88

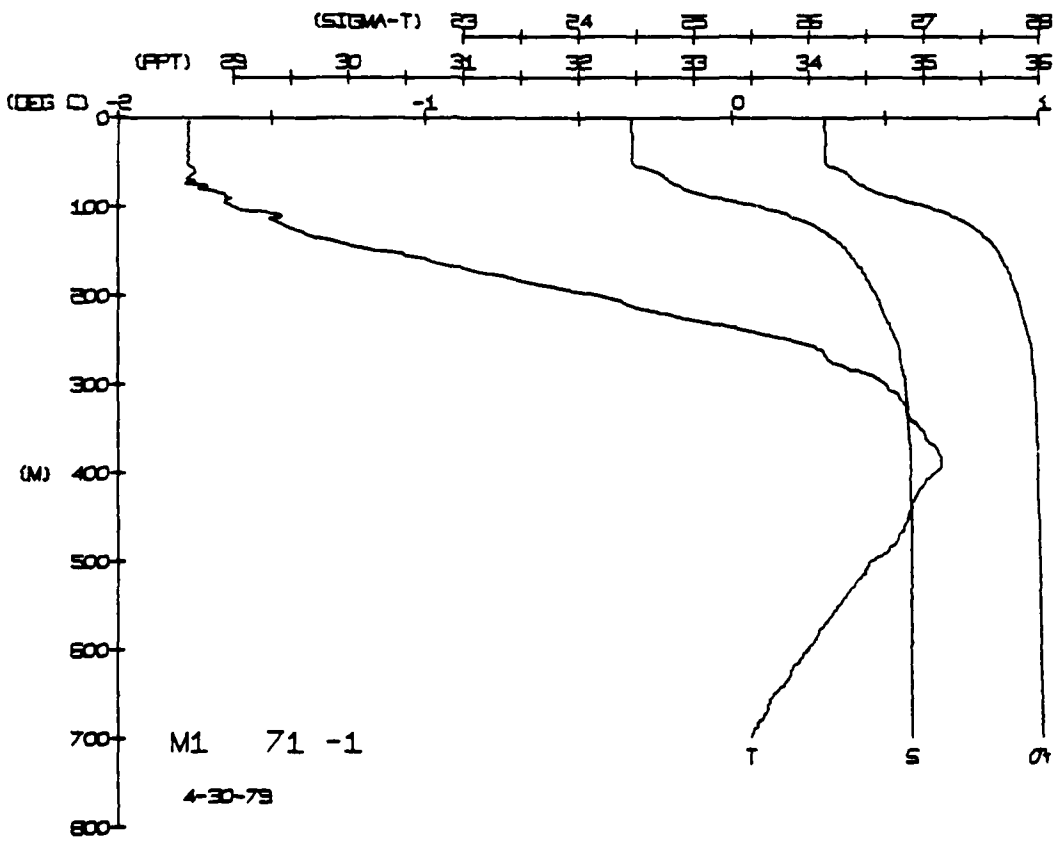
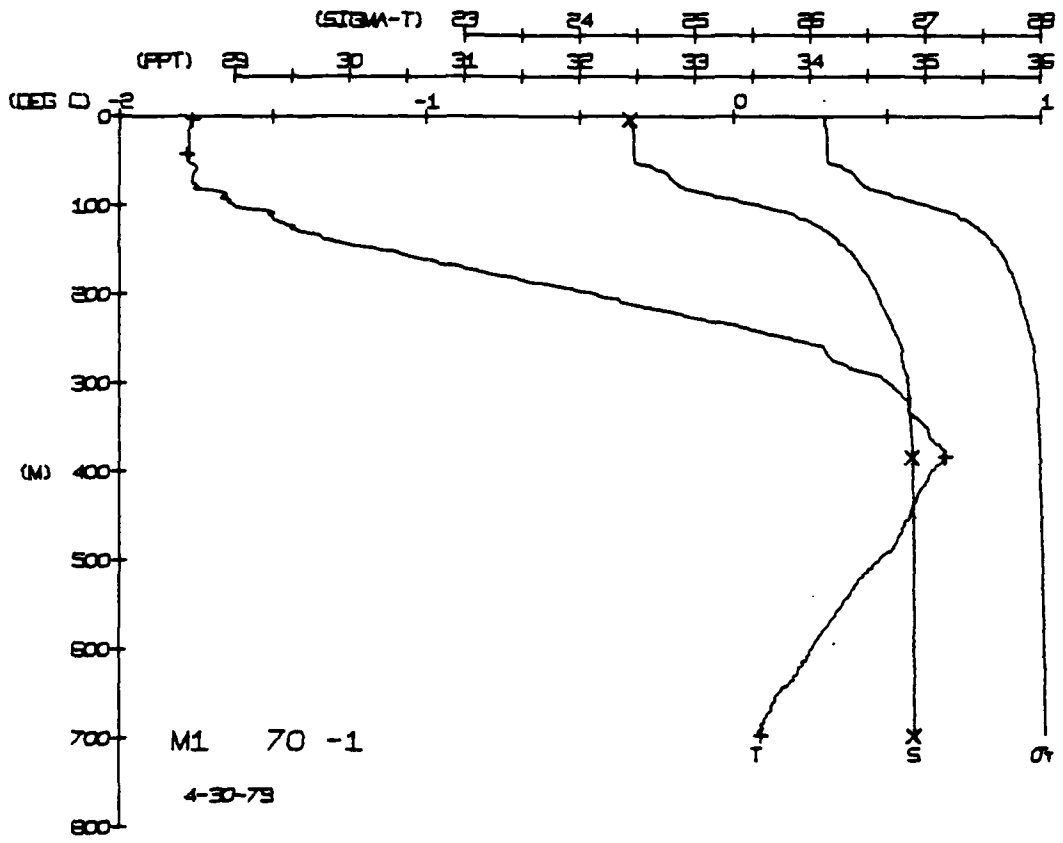












FRAM 1 STATION 72(1) CTD 30/APR/1979 1912 GMT CODE = 1
 LAT = 84 1759N LNG = 7 7871W LTER = 1. LGER = 4.7
 AIR TEMP = -21.0 BAROM = 1034.0 WIND = 283.0 SPEED = 0

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYNHT	SOUND
0	187.7	187.7	32.47	26.15	0.000	1437.4	
1	188.8	188.8	32.47	26.15	0.006	1437.5	
2	189.7	189.7	32.47	26.15	0.019	1437.6	
3	189.7	189.7	32.47	26.15	0.028	1437.7	
4	189.7	189.7	32.47	26.15	0.047	1437.8	
5	189.7	189.7	32.47	26.15	0.078	1437.9	
6	189.7	189.7	32.47	26.15	0.112	1438.0	
7	189.7	189.7	32.47	26.15	0.150	1438.1	
8	189.7	189.7	32.47	26.15	0.191	1438.2	
9	189.7	189.7	32.47	26.15	0.235	1438.3	
10	189.7	189.7	32.47	26.15	0.282	1438.4	
11	189.7	189.7	32.47	26.15	0.332	1438.5	
12	189.7	189.7	32.47	26.15	0.384	1438.6	
13	189.7	189.7	32.47	26.15	0.438	1438.7	
14	189.7	189.7	32.47	26.15	0.494	1438.8	
15	189.7	189.7	32.47	26.15	0.552	1438.9	
16	189.7	189.7	32.47	26.15	0.611	1439.0	
17	189.7	189.7	32.47	26.15	0.671	1439.1	
18	189.7	189.7	32.47	26.15	0.732	1439.2	
19	189.7	189.7	32.47	26.15	0.794	1439.3	
20	189.7	189.7	32.47	26.15	0.857	1439.4	
21	189.7	189.7	32.47	26.15	0.921	1439.5	
22	189.7	189.7	32.47	26.15	0.986	1439.6	
23	189.7	189.7	32.47	26.15	1.052	1439.7	
24	189.7	189.7	32.47	26.15	1.119	1439.8	
25	189.7	189.7	32.47	26.15	1.187	1439.9	
26	189.7	189.7	32.47	26.15	1.256	1440.0	
27	189.7	189.7	32.47	26.15	1.326	1440.1	
28	189.7	189.7	32.47	26.15	1.397	1440.2	
29	189.7	189.7	32.47	26.15	1.469	1440.3	
30	189.7	189.7	32.47	26.15	1.542	1440.4	
31	189.7	189.7	32.47	26.15	1.616	1440.5	
32	189.7	189.7	32.47	26.15	1.691	1440.6	
33	189.7	189.7	32.47	26.15	1.767	1440.7	
34	189.7	189.7	32.47	26.15	1.844	1440.8	
35	189.7	189.7	32.47	26.15	1.922	1440.9	
36	189.7	189.7	32.47	26.15	2.001	1441.0	
37	189.7	189.7	32.47	26.15	2.081	1441.1	
38	189.7	189.7	32.47	26.15	2.162	1441.2	
39	189.7	189.7	32.47	26.15	2.244	1441.3	
40	189.7	189.7	32.47	26.15	2.327	1441.4	
41	189.7	189.7	32.47	26.15	2.411	1441.5	
42	189.7	189.7	32.47	26.15	2.496	1441.6	
43	189.7	189.7	32.47	26.15	2.582	1441.7	
44	189.7	189.7	32.47	26.15	2.669	1441.8	
45	189.7	189.7	32.47	26.15	2.757	1441.9	
46	189.7	189.7	32.47	26.15	2.846	1442.0	
47	189.7	189.7	32.47	26.15	2.936	1442.1	
48	189.7	189.7	32.47	26.15	3.027	1442.2	
49	189.7	189.7	32.47	26.15	3.119	1442.3	
50	189.7	189.7	32.47	26.15	3.212	1442.4	
51	189.7	189.7	32.47	26.15	3.306	1442.5	
52	189.7	189.7	32.47	26.15	3.401	1442.6	
53	189.7	189.7	32.47	26.15	3.497	1442.7	
54	189.7	189.7	32.47	26.15	3.594	1442.8	
55	189.7	189.7	32.47	26.15	3.692	1442.9	
56	189.7	189.7	32.47	26.15	3.791	1443.0	
57	189.7	189.7	32.47	26.15	3.891	1443.1	
58	189.7	189.7	32.47	26.15	3.992	1443.2	
59	189.7	189.7	32.47	26.15	4.094	1443.3	
60	189.7	189.7	32.47	26.15	4.197	1443.4	
61	189.7	189.7	32.47	26.15	4.301	1443.5	
62	189.7	189.7	32.47	26.15	4.406	1443.6	
63	189.7	189.7	32.47	26.15	4.512	1443.7	
64	189.7	189.7	32.47	26.15	4.619	1443.8	
65	189.7	189.7	32.47	26.15	4.727	1443.9	
66	189.7	189.7	32.47	26.15	4.836	1444.0	
67	189.7	189.7	32.47	26.15	4.946	1444.1	
68	189.7	189.7	32.47	26.15	5.057	1444.2	
69	189.7	189.7	32.47	26.15	5.169	1444.3	
70	189.7	189.7	32.47	26.15	5.282	1444.4	
71	189.7	189.7	32.47	26.15	5.396	1444.5	
72	189.7	189.7	32.47	26.15	5.511	1444.6	
73	189.7	189.7	32.47	26.15	5.627	1444.7	
74	189.7	189.7	32.47	26.15	5.744	1444.8	
75	189.7	189.7	32.47	26.15	5.862	1444.9	
76	189.7	189.7	32.47	26.15	5.981	1445.0	
77	189.7	189.7	32.47	26.15	6.101	1445.1	
78	189.7	189.7	32.47	26.15	6.222	1445.2	
79	189.7	189.7	32.47	26.15	6.344	1445.3	
80	189.7	189.7	32.47	26.15	6.467	1445.4	
81	189.7	189.7	32.47	26.15	6.591	1445.5	
82	189.7	189.7	32.47	26.15	6.716	1445.6	
83	189.7	189.7	32.47	26.15	6.842	1445.7	
84	189.7	189.7	32.47	26.15	6.969	1445.8	
85	189.7	189.7	32.47	26.15	7.097	1445.9	
86	189.7	189.7	32.47	26.15	7.226	1446.0	
87	189.7	189.7	32.47	26.15	7.356	1446.1	
88	189.7	189.7	32.47	26.15	7.487	1446.2	
89	189.7	189.7	32.47	26.15	7.619	1446.3	
90	189.7	189.7	32.47	26.15	7.752	1446.4	
91	189.7	189.7	32.47	26.15	7.886	1446.5	
92	189.7	189.7	32.47	26.15	8.021	1446.6	
93	189.7	189.7	32.47	26.15	8.157	1446.7	
94	189.7	189.7	32.47	26.15	8.294	1446.8	
95	189.7	189.7	32.47	26.15	8.432	1446.9	
96	189.7	189.7	32.47	26.15	8.571	1447.0	
97	189.7	189.7	32.47	26.15	8.711	1447.1	
98	189.7	189.7	32.47	26.15	8.852	1447.2	
99	189.7	189.7	32.47	26.15	8.994	1447.3	
100	189.7	189.7	32.47	26.15	9.137	1447.4	

BOT NUM = 1
 BOT NUM = 2
 BOT NUM = 3
 BOT NUM = 4

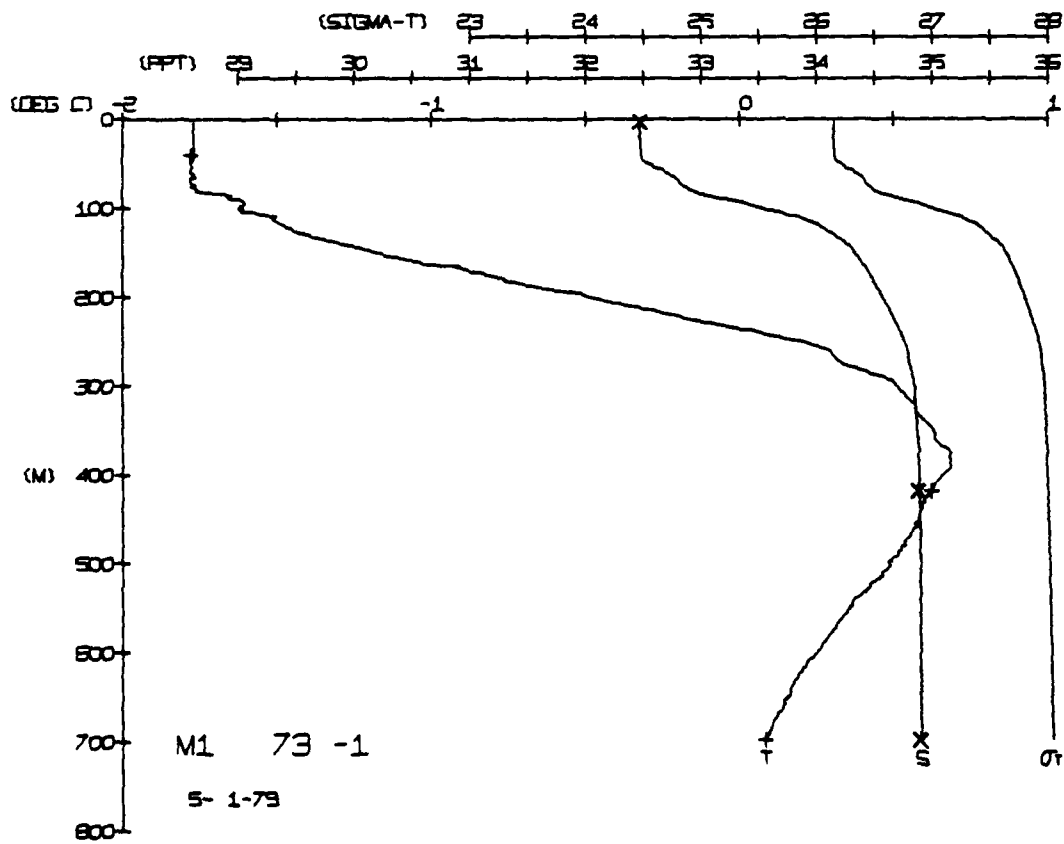
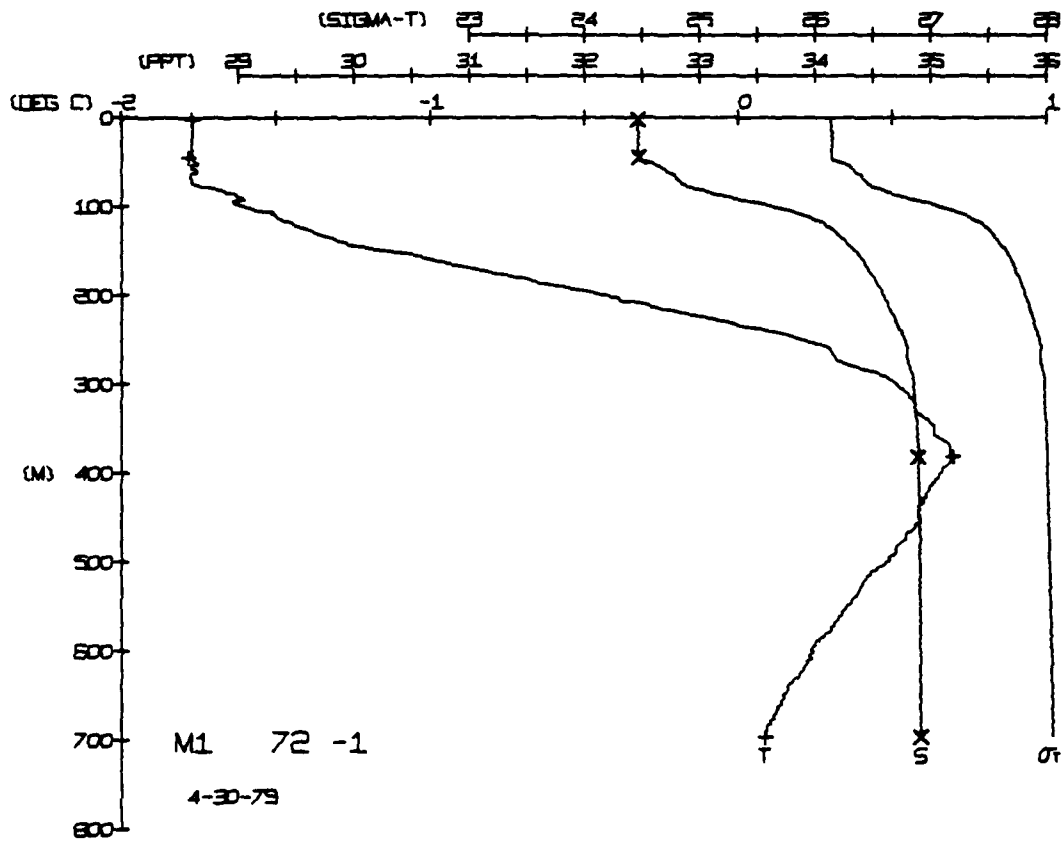
DEPTH 3 6
 45 7
 383 2
 697 7

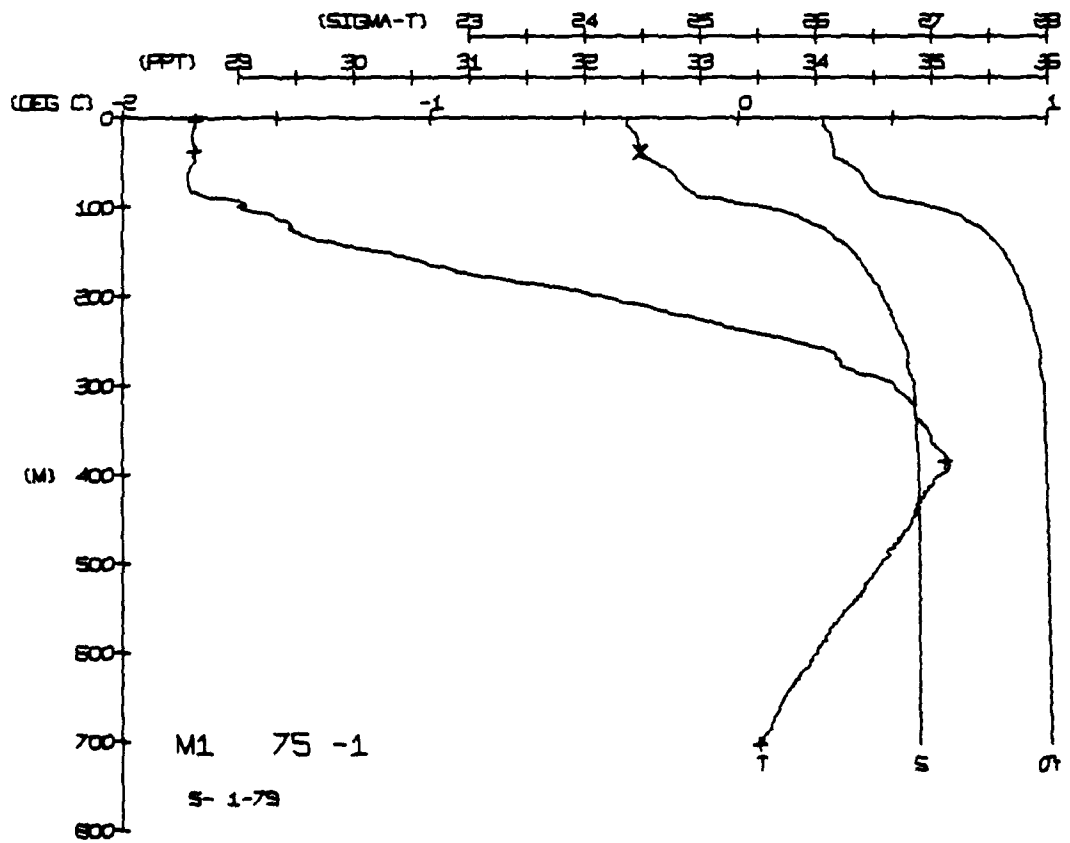
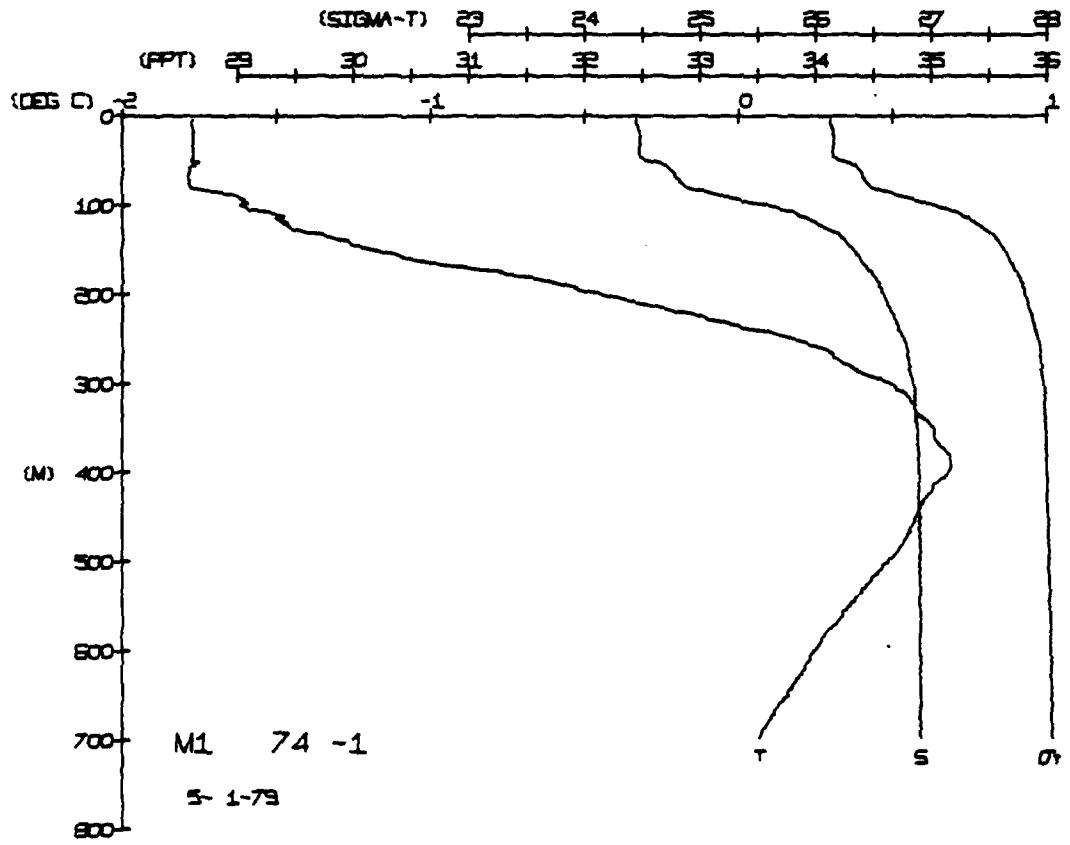
TEMP -1.77
 -1.78
 0.69
 0.09

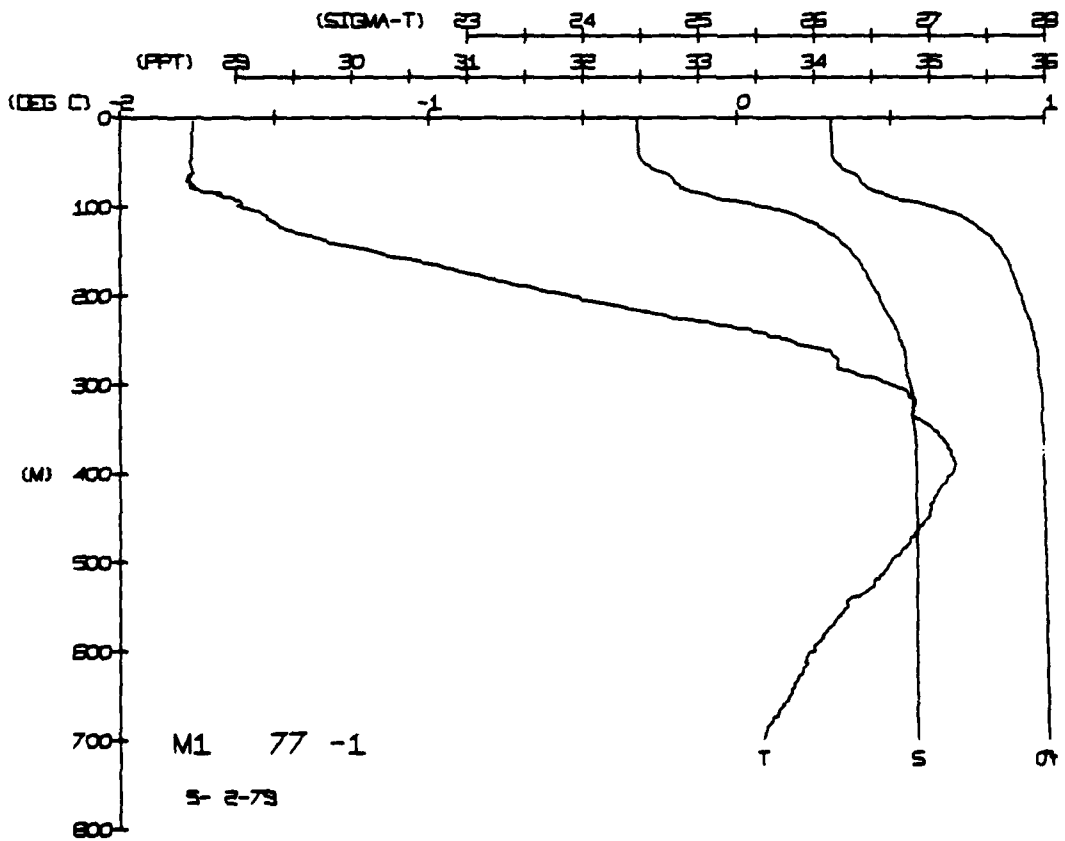
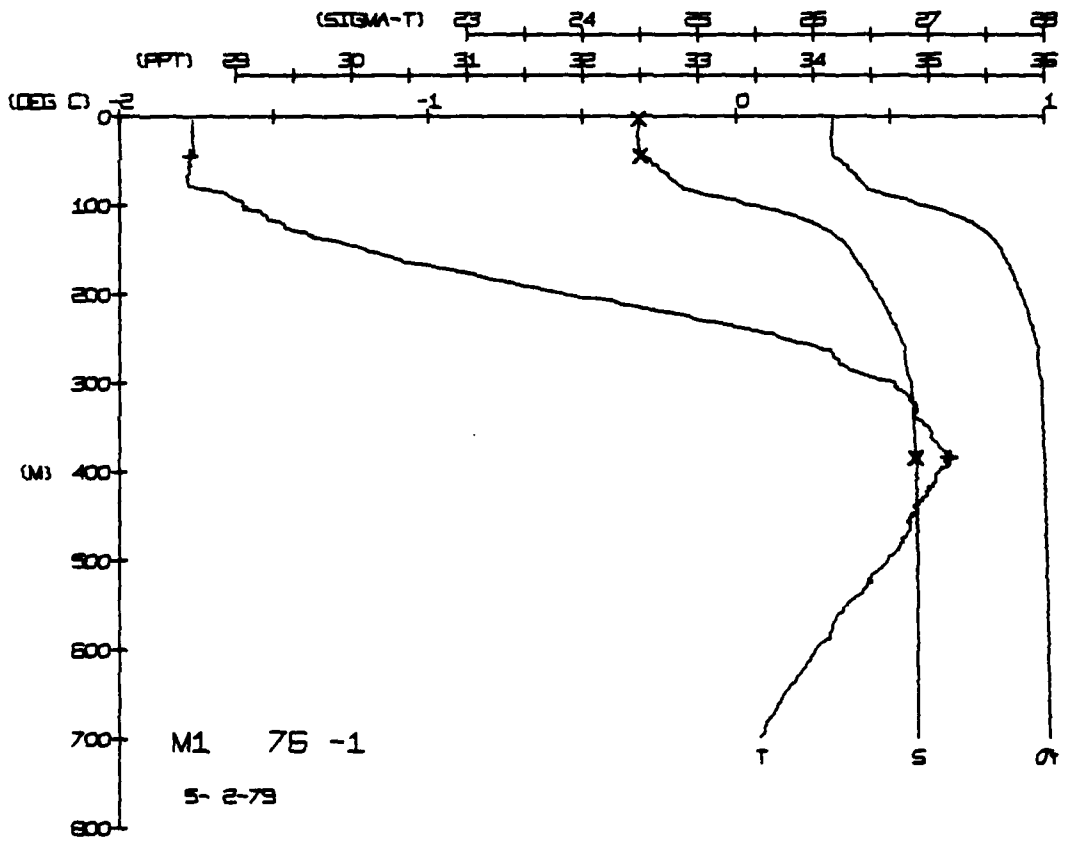
SALIN 32.46
 32.47
 34.88
 34.90

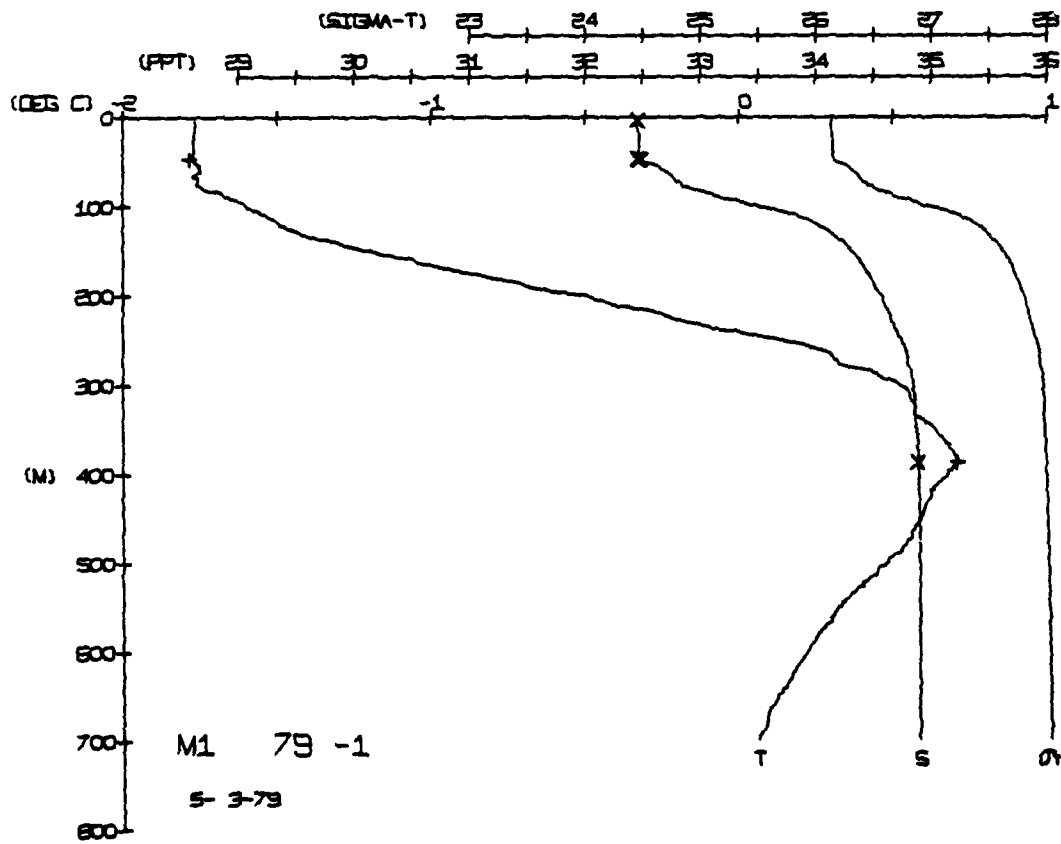
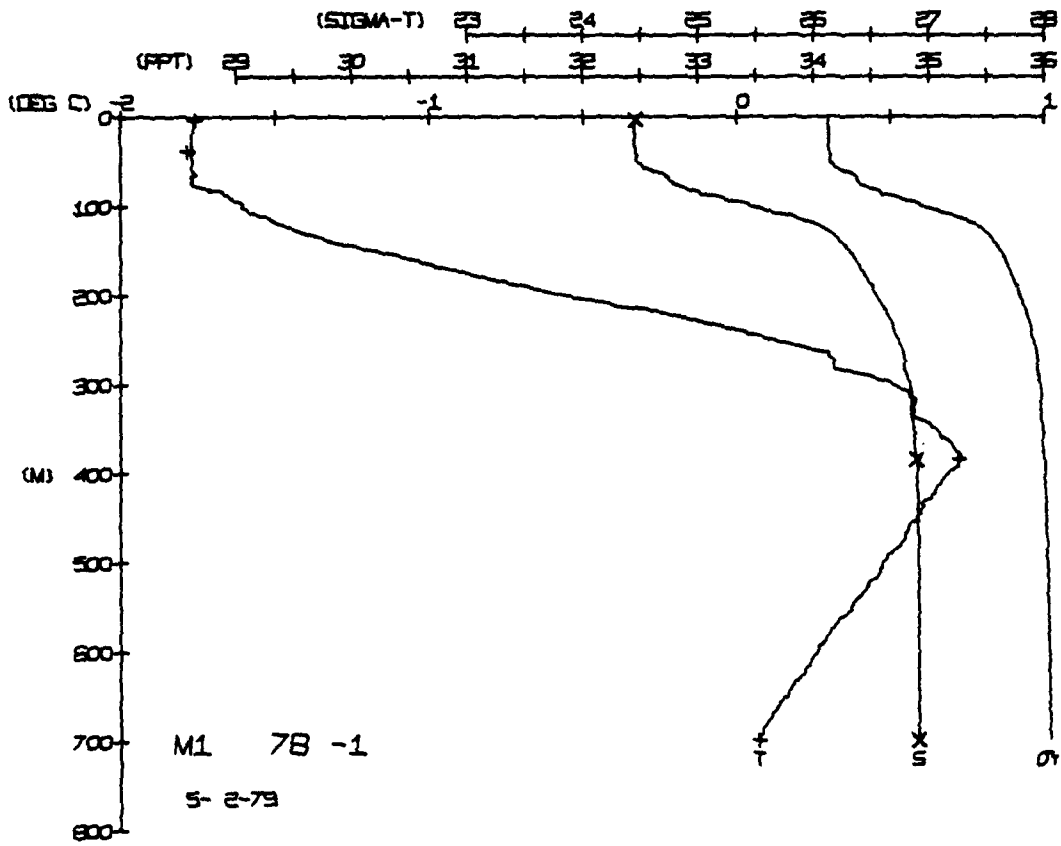
FRAM 1 STATION 73(1) CTD 1/MAY/1979 707 GMT CODE = 1
 LAT = 84 142N LNG = 7 5361W LTER = 0 LGER = 1.2
 AIR TEMP = -18.9 BAROM = 1026.5 WIND = 300.0 SPEED = 0

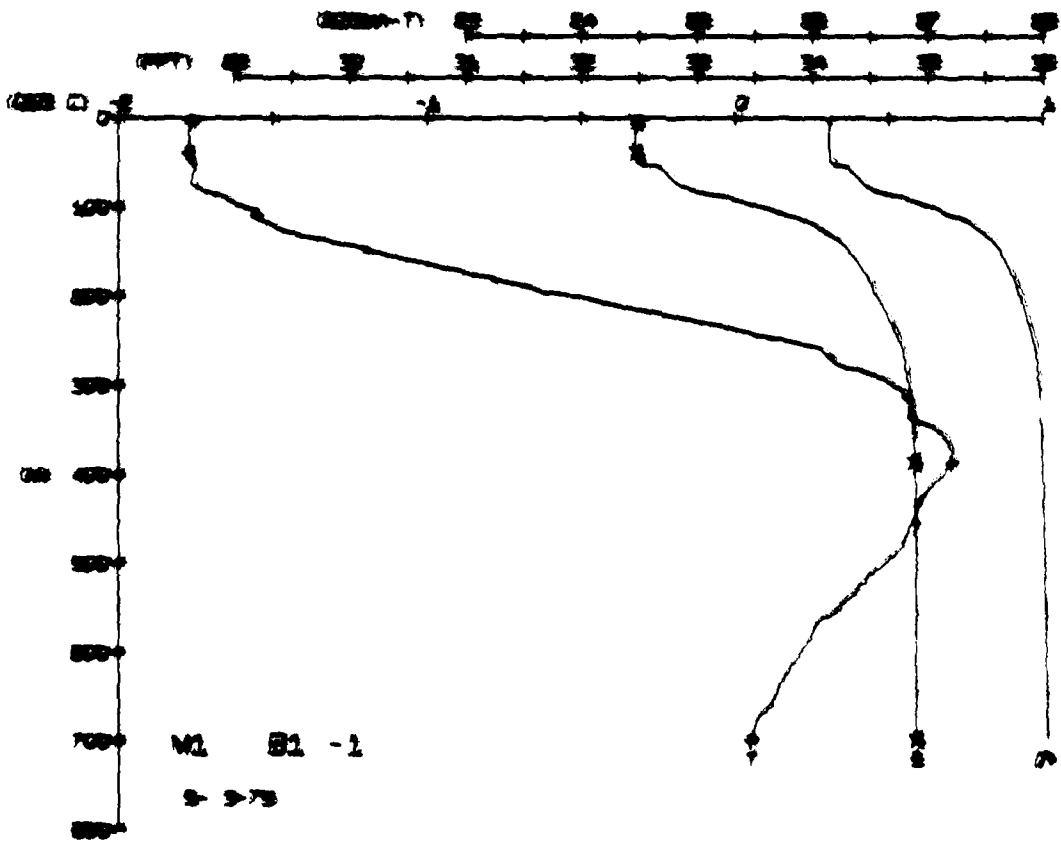
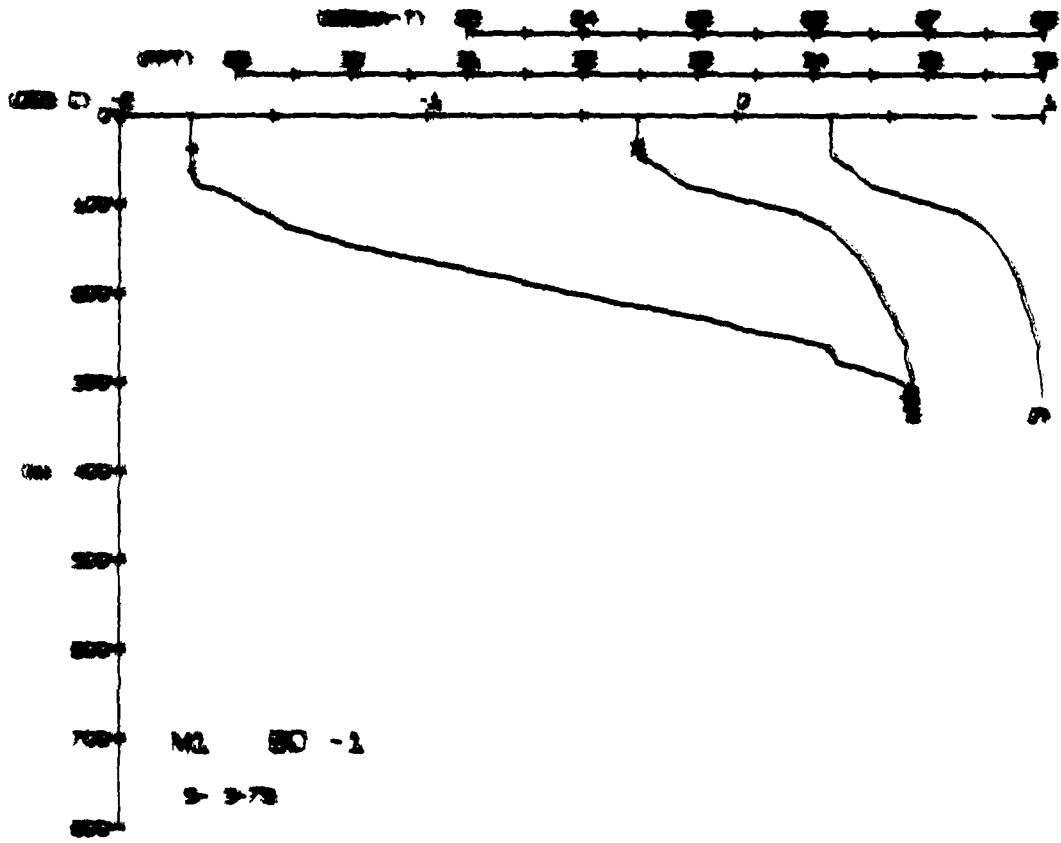
DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYNHT	SOUND
0	187.9	187.9	32.47	26.14	0.000	1437.4	
1	187.7	187.7	32.47	26.14	0.006	1437.5	
2	187.7	187.7	32.47	26.14	0.019	1437.6	
3	187.7	187.7	32.47	26.14	0.028	1437.7	
4	187.7	187.7	32.47	26.14	0.047	1437.8	
5	187.7	187.7	32.47	26.14	0.078	1437.9	
6	187.7	187.7	32.47	26.14	0.112	1438.0	
7	187.7	187.7	32.47	26.14	0.150	1438.1	
8	187.7	187.7	32.47	26.14	0.191	1438.2	
9	187.7	187.7	32.47	26.14	0.235	1438.3	
10	187.7	187.7	32.47	26.14	0.282	1438.4	
11	187.7	187.7	32.47	26.14	0.332	1438.5	
12	187.7	187.7	32.47	26.14	0.384	1438.6	
13	187.7	187.7	32.47	26.14	0.438	1438.7	
14	187.7	187.7	32.47	26.14	0.494	1438.8	
15	187.7	187.7	32.47	26.14	0.552	1438.9	
16	187.7	187.7	32.47	26.14	0.611	1439.0	
17	187.7	187.7	32.47	26.14	0.671	1439.1	
18	187.7	187.7	32.47	26.14	0.732	1439.2	
19	187.7	187.7	32.47	26.14	0.794	1439.3	
20	187.7	187.7	32.47	26.14	0.857	1439.4	
21	187.7	187.7	32.47	26.14	0.921	1439.5	
22	187.7	187.7	32.47	26.14	0.986	1439.6	
23	187.7	187.7	32.47	26.14	1.052	1439.7	
24	187.7	187.7	32.47	26.14	1.119	1439.8	
25	187.7	187.7	32.47	26.14	1.187	1439.9	
26	187.7	187.7	32.47	26.14	1.256	1440.0	
27	187.7	187.7	32.47	26.14	1.326	1440.1	
28	187.7	187.7	32.47	26.14	1.397	1440.2	
29	187.7	187.7	32.47	26.14	1.469	1440.3	
30	187.7	187.7	32.47	26.14	1.542	1440.4	
31	187.7	187.7	32.47	26.14	1.616	1440.5	
32	187.7	187.7	32.47	26.14	1.691	1440.6	
33	187.7	187.7	32.47	26.14	1.767	1440.7	
34	187.7	187.7	32.47	26.14	1.844	1440.8	
35	187.7	187.7	32.47	26.14	1.922	1440.9	
36	187.7	187.7	32.47	26.14	2.001	1441.0	
37	187.7	187.7	32.47	26.14	2.081	1441.1	
38	187.7	187.7	32.47	26.14	2.162	1441.2	
39	187.7	187.7	32.47	26.14	2.244	1441.3	
40	187.7	187.7	32.47	26.14	2.327	1441.4	
41	187.7	187.7	32.47	26.14	2.411	1441.5	
42	187.7	187.7	32.47	26.14	2.496	1441.6	
43	187.7	187.7	32.47	26.14	2.582	1441.7	
44	187.7	187.7	32.47	26.14	2.669	1441.8	
45	187.7	187.7	32.47	26.14	2.757	1441.9	
46	187.7	187.7	32.47	26.14	2.846	1442.0	
47	187.7	187.7	32.47	26.14	2.936	1442.1	
48	187.7	187.7	32.47	26.14	3.027	1442.2	
49	187.7	187.7	32.47	26.14	3.119	1442.3	
50	187.7	187.7	32.47	26.14	3.212	1442.4	
51	187.7	187.7	32.47	26.14	3.306	1442.5	
52	187.7	187.7	32.47	26.14	3.401	1442.6	
53	187.7	187.7	32.47	26.14	3.497	1442.7	
54	187.7	187.7	32.47	26.14	3.594	1442.8	
55	187.7	187.7	32.47	26.14	3.692	1442.9	
56	187.7	187.7	32.47	26.14	3.791	1443.0	
57	187.7	187.7	32.47	26.14	3.891	1443.	









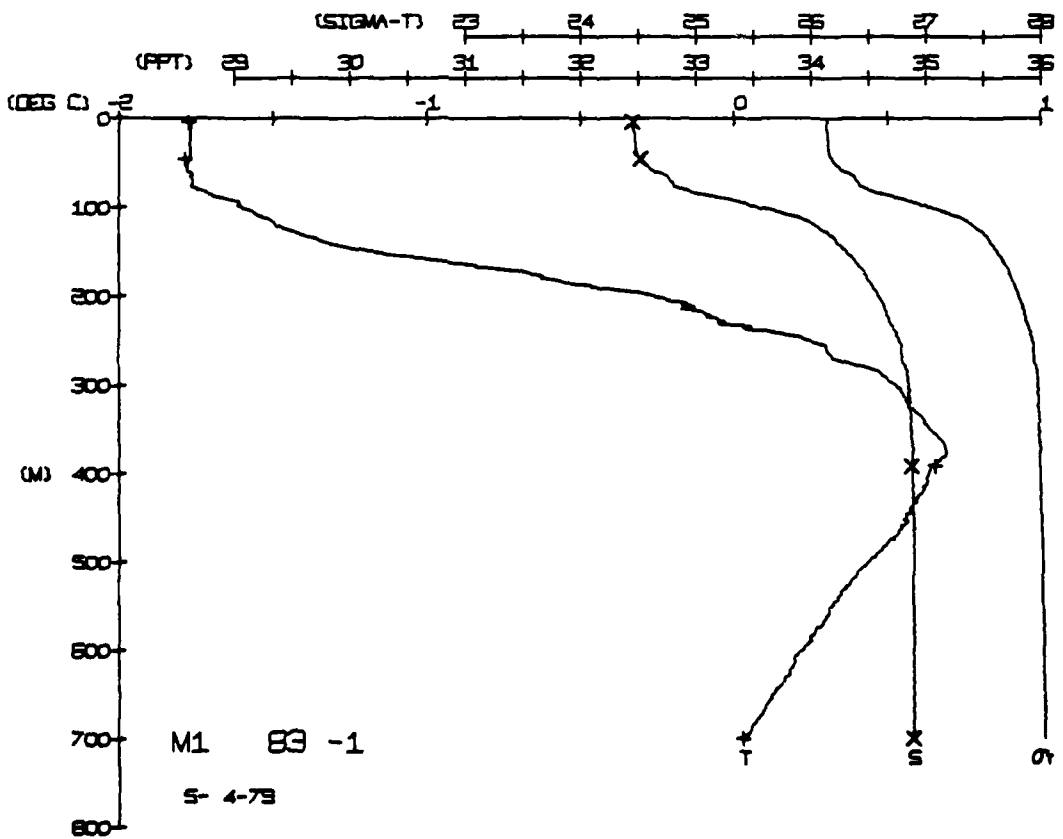
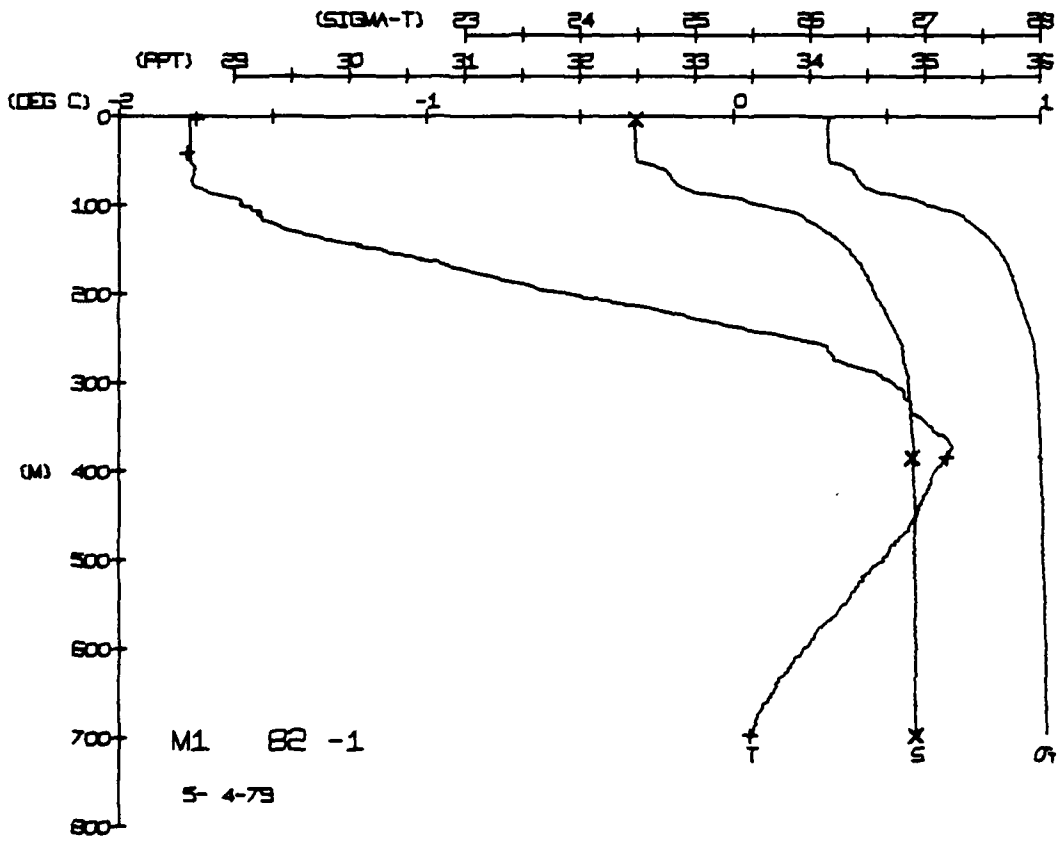


FRAM 1 STATION 82(1) CTD 4/MAY/1979 712 GMT CODE = 1
 LAT = 83 9453N LNG = 6 9927W LTER = 1. LGRED = 5.0
 AIR TEMP = -18.8 BAROM = 1025.6 WIND = 26.0

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYNHT	SOUND
0	77	77	32	26	186	0	1437
3	77	77	32	26	186	0	1437
6	77	77	32	26	187	0	1437
9	77	77	32	26	187	0	1437
12	77	77	32	26	187	0	1437
15	77	77	32	26	187	0	1437
18	77	77	32	26	185	0	1437
21	77	77	32	26	185	0	1437
24	77	77	32	26	185	0	1437
27	77	77	32	26	185	0	1437
30	77	77	32	26	185	0	1437
33	77	77	32	26	185	0	1437
36	77	77	32	26	185	0	1437
39	77	77	32	26	185	0	1437
42	77	77	32	26	185	0	1437
45	77	77	32	26	185	0	1437
48	77	77	32	26	185	0	1437
51	77	77	32	26	185	0	1437
54	77	77	32	26	185	0	1437
57	77	77	32	26	185	0	1437
60	77	77	32	26	185	0	1437
63	77	77	32	26	185	0	1437
66	77	77	32	26	185	0	1437
69	77	77	32	26	185	0	1437

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DYNHT	SOUND
0	77	77	32	26	188	0	1437
3	77	77	32	26	188	0	1437
6	77	77	32	26	188	0	1437
9	77	77	32	26	188	0	1437
12	77	77	32	26	188	0	1437
15	77	77	32	26	188	0	1437
18	77	77	32	26	188	0	1437
21	77	77	32	26	188	0	1437
24	77	77	32	26	188	0	1437
27	77	77	32	26	188	0	1437
30	77	77	32	26	188	0	1437
33	77	77	32	26	188	0	1437
36	77	77	32	26	188	0	1437
39	77	77	32	26	188	0	1437
42	77	77	32	26	188	0	1437
45	77	77	32	26	188	0	1437
48	77	77	32	26	188	0	1437
51	77	77	32	26	188	0	1437
54	77	77	32	26	188	0	1437
57	77	77	32	26	188	0	1437
60	77	77	32	26	188	0	1437
63	77	77	32	26	188	0	1437
66	77	77	32	26	188	0	1437
69	77	77	32	26	188	0	1437

FRAM 1 STATION 83(1) CTD 4/MAY/1979 1930 GMT CODE = 1
 LAT = 83 8953N LNG = 6 9764W LTER = 0. LGRED = 7.6
 AIR TEMP = -15.6 BAROM = 1028.6 WIND = 30.6



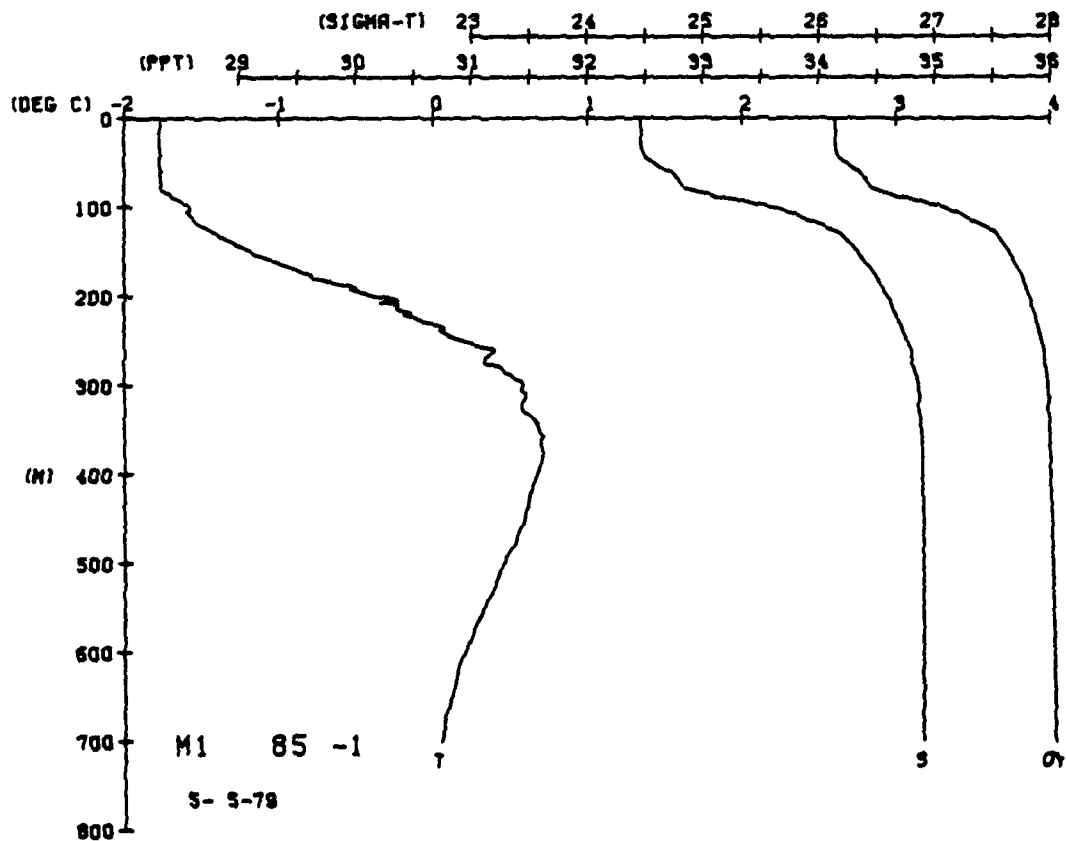
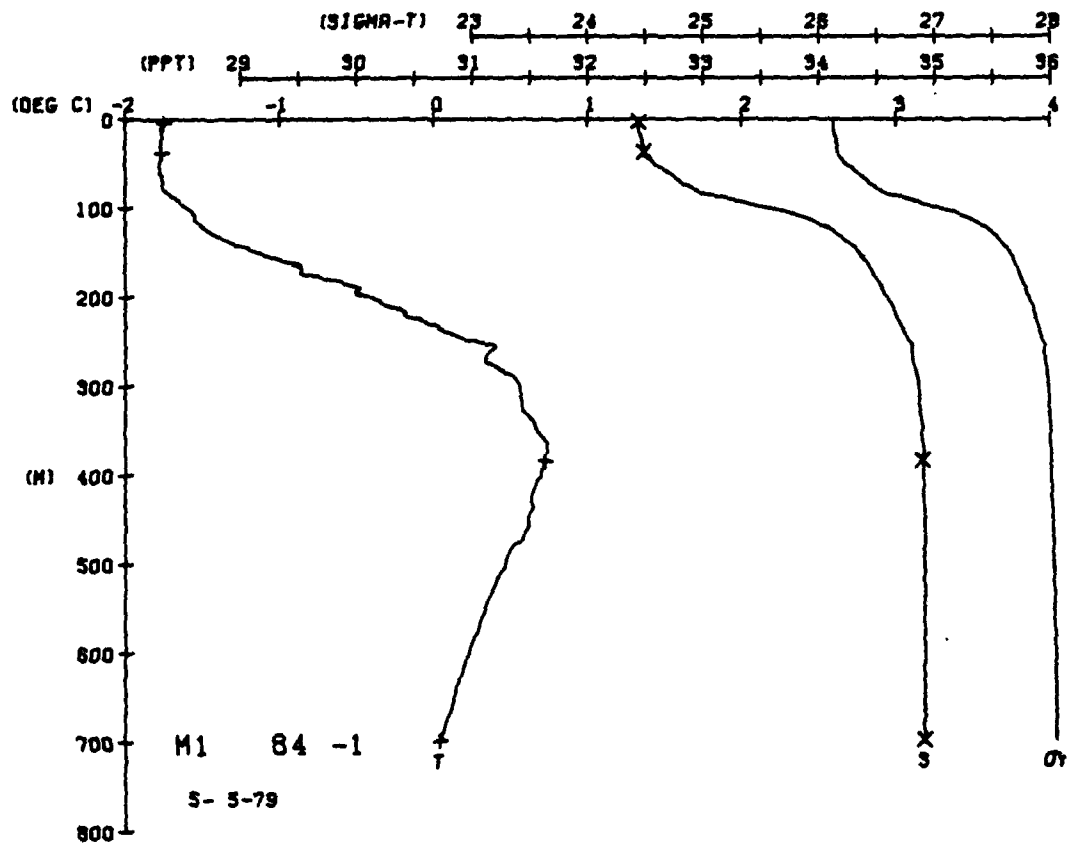
FROM 1 STATION 84(1) CTD 5/MAY/1979 756 GMT CODE = 1
 LAT = 83 8306N LNG = 6 9174W LTER = 0.0 LGER = 0.0
 AIR TEMP = -15.6 BAROM = 1027.5 WIND = 306.0 SPEED = 7.6

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DWHT	SOUND
0	1.00	1.77	32.45	26.13	189.3	0.000	1437.4
1	1.00	1.77	32.45	26.13	189.3	0.006	1437.5
2	1.00	1.77	32.45	26.13	189.3	0.010	1437.6
3	1.00	1.77	32.45	26.13	189.3	0.019	1437.7
4	1.00	1.77	32.45	26.13	189.3	0.029	1437.8
5	1.00	1.77	32.45	26.13	189.3	0.038	1437.9
6	1.00	1.77	32.45	26.13	189.3	0.048	1438.0
7	1.00	1.77	32.45	26.13	189.3	0.057	1438.1
8	1.00	1.77	32.45	26.13	189.3	0.066	1438.2
9	1.00	1.77	32.45	26.13	189.3	0.076	1438.3
10	1.00	1.77	32.45	26.13	189.3	0.085	1438.4
11	1.00	1.77	32.45	26.13	189.3	0.094	1438.5
12	1.00	1.77	32.45	26.13	189.3	0.103	1438.6
13	1.00	1.77	32.45	26.13	189.3	0.112	1438.7
14	1.00	1.77	32.45	26.13	189.3	0.121	1438.8
15	1.00	1.77	32.45	26.13	189.3	0.129	1438.9
16	1.00	1.77	32.45	26.13	189.3	0.138	1439.0
17	1.00	1.77	32.45	26.13	189.3	0.147	1439.1
18	1.00	1.77	32.45	26.13	189.3	0.155	1439.2
19	1.00	1.77	32.45	26.13	189.3	0.164	1439.3
20	1.00	1.77	32.45	26.13	189.3	0.172	1439.4
21	1.00	1.77	32.45	26.13	189.3	0.181	1439.5
22	1.00	1.77	32.45	26.13	189.3	0.189	1439.6
23	1.00	1.77	32.45	26.13	189.3	0.197	1439.7
24	1.00	1.77	32.45	26.13	189.3	0.206	1439.8
25	1.00	1.77	32.45	26.13	189.3	0.214	1439.9
26	1.00	1.77	32.45	26.13	189.3	0.221	1440.0
27	1.00	1.77	32.45	26.13	189.3	0.229	1440.1
28	1.00	1.77	32.45	26.13	189.3	0.237	1440.2
29	1.00	1.77	32.45	26.13	189.3	0.245	1440.3
30	1.00	1.77	32.45	26.13	189.3	0.252	1440.4
31	1.00	1.77	32.45	26.13	189.3	0.260	1440.5
32	1.00	1.77	32.45	26.13	189.3	0.268	1440.6
33	1.00	1.77	32.45	26.13	189.3	0.275	1440.7
34	1.00	1.77	32.45	26.13	189.3	0.283	1440.8
35	1.00	1.77	32.45	26.13	189.3	0.291	1440.9
36	1.00	1.77	32.45	26.13	189.3	0.298	1441.0
37	1.00	1.77	32.45	26.13	189.3	0.306	1441.1
38	1.00	1.77	32.45	26.13	189.3	0.314	1441.2
39	1.00	1.77	32.45	26.13	189.3	0.321	1441.3
40	1.00	1.77	32.45	26.13	189.3	0.329	1441.4
41	1.00	1.77	32.45	26.13	189.3	0.337	1441.5
42	1.00	1.77	32.45	26.13	189.3	0.344	1441.6
43	1.00	1.77	32.45	26.13	189.3	0.352	1441.7
44	1.00	1.77	32.45	26.13	189.3	0.360	1441.8
45	1.00	1.77	32.45	26.13	189.3	0.367	1441.9
46	1.00	1.77	32.45	26.13	189.3	0.375	1442.0
47	1.00	1.77	32.45	26.13	189.3	0.383	1442.1
48	1.00	1.77	32.45	26.13	189.3	0.390	1442.2
49	1.00	1.77	32.45	26.13	189.3	0.398	1442.3
50	1.00	1.77	32.45	26.13	189.3	0.406	1442.4
51	1.00	1.77	32.45	26.13	189.3	0.413	1442.5
52	1.00	1.77	32.45	26.13	189.3	0.421	1442.6
53	1.00	1.77	32.45	26.13	189.3	0.429	1442.7
54	1.00	1.77	32.45	26.13	189.3	0.436	1442.8
55	1.00	1.77	32.45	26.13	189.3	0.444	1442.9
56	1.00	1.77	32.45	26.13	189.3	0.452	1443.0
57	1.00	1.77	32.45	26.13	189.3	0.459	1443.1
58	1.00	1.77	32.45	26.13	189.3	0.467	1443.2
59	1.00	1.77	32.45	26.13	189.3	0.475	1443.3
60	1.00	1.77	32.45	26.13	189.3	0.482	1443.4
61	1.00	1.77	32.45	26.13	189.3	0.490	1443.5
62	1.00	1.77	32.45	26.13	189.3	0.498	1443.6
63	1.00	1.77	32.45	26.13	189.3	0.505	1443.7
64	1.00	1.77	32.45	26.13	189.3	0.513	1443.8
65	1.00	1.77	32.45	26.13	189.3	0.521	1443.9
66	1.00	1.77	32.45	26.13	189.3	0.528	1444.0
67	1.00	1.77	32.45	26.13	189.3	0.536	1444.1
68	1.00	1.77	32.45	26.13	189.3	0.544	1444.2
69	1.00	1.77	32.45	26.13	189.3	0.551	1444.3
70	1.00	1.77	32.45	26.13	189.3	0.559	1444.4
71	1.00	1.77	32.45	26.13	189.3	0.567	1444.5
72	1.00	1.77	32.45	26.13	189.3	0.574	1444.6
73	1.00	1.77	32.45	26.13	189.3	0.582	1444.7
74	1.00	1.77	32.45	26.13	189.3	0.590	1444.8
75	1.00	1.77	32.45	26.13	189.3	0.597	1444.9
76	1.00	1.77	32.45	26.13	189.3	0.605	1445.0
77	1.00	1.77	32.45	26.13	189.3	0.613	1445.1
78	1.00	1.77	32.45	26.13	189.3	0.620	1445.2
79	1.00	1.77	32.45	26.13	189.3	0.628	1445.3
80	1.00	1.77	32.45	26.13	189.3	0.636	1445.4
81	1.00	1.77	32.45	26.13	189.3	0.643	1445.5
82	1.00	1.77	32.45	26.13	189.3	0.651	1445.6
83	1.00	1.77	32.45	26.13	189.3	0.659	1445.7
84	1.00	1.77	32.45	26.13	189.3	0.666	1445.8
85	1.00	1.77	32.45	26.13	189.3	0.674	1445.9
86	1.00	1.77	32.45	26.13	189.3	0.682	1446.0
87	1.00	1.77	32.45	26.13	189.3	0.689	1446.1
88	1.00	1.77	32.45	26.13	189.3	0.697	1446.2
89	1.00	1.77	32.45	26.13	189.3	0.705	1446.3
90	1.00	1.77	32.45	26.13	189.3	0.712	1446.4
91	1.00	1.77	32.45	26.13	189.3	0.720	1446.5
92	1.00	1.77	32.45	26.13	189.3	0.728	1446.6
93	1.00	1.77	32.45	26.13	189.3	0.735	1446.7
94	1.00	1.77	32.45	26.13	189.3	0.743	1446.8
95	1.00	1.77	32.45	26.13	189.3	0.751	1446.9
96	1.00	1.77	32.45	26.13	189.3	0.758	1447.0
97	1.00	1.77	32.45	26.13	189.3	0.766	1447.1
98	1.00	1.77	32.45	26.13	189.3	0.774	1447.2
99	1.00	1.77	32.45	26.13	189.3	0.781	1447.3
100	1.00	1.77	32.45	26.13	189.3	0.789	1447.4

BOT NUM = 1
 BOT NUM = 2
 BOT NUM = 3
 BOT NUM = 4
 DEPTH 3.7
 DEPTH 38.4
 DEPTH 698.4
 TEMP -1.75
 TEMP -1.72
 TEMP 0.04
 SALIN 32.44
 SALIN 34.49
 SALIN 34.87
 SALIN 34.90

FROM 1 STATION 85(1) CTD 5/MAY/1979 1241 GMT CODE = 1
 LAT = 83 8008N LNG = 6 8783W LTER = 1.0 LGER = 0.0
 AIR TEMP = -13.9 BAROM = 1027.6 WIND = 310.0 SPEED = 8.9

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVOL	DWHT	SOUND
0	1.00	1.77	32.46	14.14	189.4	0.000	1437.5
1	1.00	1.77	32.46	14.14	189.4	0.006	1437.6
2	1.00	1.77	32.46	14.14	189.4	0.010	1437.7
3	1.00	1.77	32.46	14.14	189.4	0.019	1437.8
4	1.00	1.77	32.46	14.14	189.4	0.029	1437.9
5	1.00	1.77	32.46	14.14	189.4	0.038	1438.0
6	1.00	1.77	32.46	14.14	189.4	0.048	1438.1
7	1.00	1.77	32.46	14.14	189.4	0.057	1438.2
8	1.00	1.77	32.46	14.14	189.4	0.066	1438.3
9	1.00	1.77	32.46	14.14	189.4	0.076	1438.4
10	1.00	1.77	32.46	14.14	189.4	0.085	1438.5
11	1.00	1.77	32.46	14.14	189.4	0.094	1438.6
12	1.00	1.77	32.46	14.14	189.4	0.103	1438.7
13	1.00	1.77	32.46	14.14	189.4	0.112	1438.8
14	1.00	1.77	32.46	14.14	189.4	0.121	1438.9
15	1.00	1.77	32.46	14.14	189.4	0.129	1439.0
16	1.00	1.77	32.46	14.14	189.4	0.138	1439.1
17	1.00	1.77	32.46	14.14	189.4	0.147	1439.2
18	1.00	1.77	32.46	14.14	189.4	0.155	1439.3
19	1.00	1.77	32.46	14.14	189.4	0.164	1439.4
20	1.00	1.77	32.46	14.14	189.4	0.172	1439.5
21	1.00	1.77	32.46	14.14	189.4	0.181	1439.6
22	1.00	1.77	32.46	14.14	189.4	0.189	1439.7
23	1.00	1.77	32.46	14.14	189.4	0.197	1439.8
24	1.00	1.77	32.46	14.14	189.4	0.206	1439.9
25	1.00	1.77	32.46	14.14	189.4	0.214	1440.0
26	1.00	1.77	32.46	14.14	189.4	0.221	1440.1
27	1.00	1.77	32.46	14.14	189.4	0.229	1440.2
28	1.00	1.77	32.46	14.14	189.4	0.237	1440.3
29	1.00	1.77	32.46	14.14	189.4	0.245	1440.4
30	1.00	1.77	32.46	14.14	189.4	0.252	1440.5
31	1.00	1.77	32.46	14.14	189.4	0.260	1440.6
32	1.00	1.77	32.46	14.14	189.4	0.268	1440.7
33	1.00	1.77	32.46	14.14	189.4	0.275	1440.8
34	1.00	1.77	32.46	14.14	189.4	0.283	1440.9
35	1.00	1.77	32.46	14.14	189.4	0.291	1441.0
36	1.00	1.77	32.46	14.14	189.4	0.298	1441.1
37	1.00	1.77	32.46	14.14	189.4	0.306	1441.2
38	1.00	1.77	32.46	14.14	189.4	0.314	1441.3
39	1.00	1.77	32.46	14.14	189.4	0.321	1441.4
40	1.00	1.77	32.46	14.14	189.4	0.329	1441.5
41	1.00	1.77	32.46	14.14	189.4	0.337	1441.6
42	1.00	1.77	32.46	14.14	189.4	0.344	1441.7
43	1.00	1.77					



FRAM 1 STATION 86(1) CTD 5/MAY/1979 1828 GMT CODE = 1
 LAT = 83 700N LNG = 6 8357M LTER = 0 LGER = 1.9
 AIR TEMP = -13.9 BAROM = 1025.3 WIND = 310 0 SPEED = 8.9

FRAM 1 STATION 87(1) CTD 6/MAY/1979 703 GMT CODE = 1
 LAT = 83 694N LNG = 6 7673M LTER = 0 LGER = 0
 AIR TEMP = -15.1 BAROM = 1024.5 WIND = 346 0 SPEED = 8.4

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVCL	DYHHT	SOUND
0	77	77	32	46	188	000	1437
3	77	77	32	46	188	006	1437
10	77	77	32	46	188	009	1437
15	77	77	32	46	188	018	1437
20	77	77	32	45	188	028	1437
25	77	77	32	45	188	038	1437
30	77	77	32	45	188	047	1437
35	77	77	32	44	188	057	1438
40	77	77	32	44	187	066	1438
45	77	77	32	44	187	075	1438
50	77	77	32	44	184	085	1438
55	76	76	32	43	175	094	1438
60	76	76	32	43	169	104	1438
65	76	76	32	43	162	112	1438
70	76	76	32	43	155	121	1439
80	75	75	32	42	147	129	1439
90	75	75	32	42	137	140	1440
100	75	75	32	42	127	150	1441
110	75	75	32	42	117	159	1442
120	75	75	32	42	107	169	1443
130	74	74	32	41	97	178	1444
140	74	74	32	41	87	187	1444
150	74	74	32	41	77	196	1444
160	74	74	32	41	67	206	1445
170	74	74	32	41	57	210	1445
180	73	73	32	40	47	218	1447
190	73	73	32	40	37	224	1449
200	73	73	32	40	27	230	1450
210	72	72	32	39	17	237	1451
220	72	72	32	39	7	244	1452
230	72	72	32	39	0	251	1453
240	72	72	32	39	0	257	1453
250	72	72	32	39	0	264	1454
260	72	72	32	39	0	270	1455
270	72	72	32	39	0	277	1455
280	72	72	32	39	0	284	1456
290	72	72	32	39	0	291	1456
300	72	72	32	39	0	298	1457
310	72	72	32	39	0	305	1457
320	72	72	32	39	0	312	1457
330	72	72	32	39	0	319	1458
340	72	72	32	39	0	326	1458
350	72	72	32	39	0	333	1458
360	72	72	32	39	0	340	1458
370	72	72	32	39	0	347	1459
380	72	72	32	39	0	354	1459
390	72	72	32	39	0	361	1459
400	72	72	32	39	0	368	1459
410	72	72	32	39	0	375	1459
420	72	72	32	39	0	382	1459
430	72	72	32	39	0	389	1459
440	72	72	32	39	0	396	1459
450	72	72	32	39	0	403	1459
460	72	72	32	39	0	410	1459
470	72	72	32	39	0	417	1459
480	72	72	32	39	0	424	1459
490	72	72	32	39	0	431	1459
500	72	72	32	39	0	438	1459
510	72	72	32	39	0	445	1459
520	72	72	32	39	0	452	1459
530	72	72	32	39	0	459	1459
540	72	72	32	39	0	466	1459
550	72	72	32	39	0	473	1459
560	72	72	32	39	0	480	1459
570	72	72	32	39	0	487	1459
580	72	72	32	39	0	494	1459
590	72	72	32	39	0	501	1459
600	72	72	32	39	0	508	1459
610	72	72	32	39	0	515	1459
620	72	72	32	39	0	522	1459
630	72	72	32	39	0	529	1459
640	72	72	32	39	0	536	1459
650	72	72	32	39	0	543	1459
660	72	72	32	39	0	550	1459
670	72	72	32	39	0	557	1459
680	72	72	32	39	0	564	1459
690	72	72	32	39	0	571	1459

DEPTH	TEMP	PTEMP	SALIN	SIG T	SPVCL	DYHHT	SOUND
0	75	75	32	46	212	000	1437
3	75	75	32	46	212	006	1437
10	75	75	32	46	212	011	1437
15	75	75	32	46	212	021	1437
20	75	75	32	46	208	033	1437
25	75	75	32	46	208	043	1437
30	75	75	32	46	208	053	1437
35	75	75	32	46	198	063	1438
40	75	75	32	46	186	073	1438
45	75	75	32	46	181	082	1438
50	75	75	32	46	181	091	1438
55	75	75	32	46	172	101	1438
60	75	75	32	46	172	110	1438
65	75	75	32	46	163	119	1438
70	75	75	32	46	153	127	1439
80	75	75	32	46	144	136	1439
90	75	75	32	46	131	145	1440
100	75	75	32	46	121	154	1440
110	75	75	32	46	111	163	1441
120	75	75	32	46	101	172	1442
130	75	75	32	46	91	181	1442
140	75	75	32	46	81	190	1443
150	75	75	32	46	71	199	1443
160	75	75	32	46	61	209	1444
170	75	75	32	46	51	218	1445
180	75	75	32	46	41	221	1447
190	75	75	32	46	31	228	1448
200	75	75	32	46	21	235	1449
210	75	75	32	46	11	243	1450
220	75	75	32	46	1	250	1451
230	75	75	32	46	0	257	1452
240	75	75	32	46	0	264	1453
250	75	75	32	46	0	271	1453
260	75	75	32	46	0	278	1454
270	75	75	32	46	0	285	1454
280	75	75	32	46	0	292	1455
290	75	75	32	46	0	299	1455
300	75	75	32	46	0	306	1455
310	75	75	32	46	0	313	1455
320	75	75	32	46	0	320	1455
330	75	75	32	46	0	327	1455
340	75	75	32	46	0	334	1455
350	75	75	32	46	0	341	1455
360	75	75	32	46	0	348	1455
370	75	75	32	46	0	355	1455
380	75	75	32	46	0	362	1455
390	75	75	32	46	0	369	1455
400	75	75	32	46	0	376	1455
410	75	75	32	46	0	383	1455
420	75	75	32	46	0	390	1455
430	75	75	32	46	0	397	1455
440	75	75	32	46	0	404	1455
450	75	75	32	46	0	411	1455
460	75	75	32	46	0	418	1455
470	75	75	32	46	0	425	1455
480	75	75	32	46	0	432	1455
490	75	75	32	46	0	439	1455
500	75	75	32	46	0	446	1455
510	75	75	32	46	0	453	1455
520	75	75	32	46	0	460	1455
530	75	75	32	46	0	467	1455
540	75	75	32	46	0	474	1455
550	75	75	32	46	0	481	1455
560	75	75	32	46	0	488	1455
570	75	75	32	46	0	495	1455
580	75	75	32	46	0	502	1455
590	75	75	32	46	0	509	1455
600	75	75	32	46	0	516	1455
610	75	75	32	46	0	523	1455
620	75	75	32	46	0	530	1455
630	75	75	32	46	0	537	1455
640	75	75	32	46	0	544	1455
650	75	75	32	46	0	551	1455
660	75	75	32	46	0	558	1455
670	75	75	32	46	0	565	1455
680	75	75	32	46	0	572	1455
690	75	75	32	46	0	579	1455

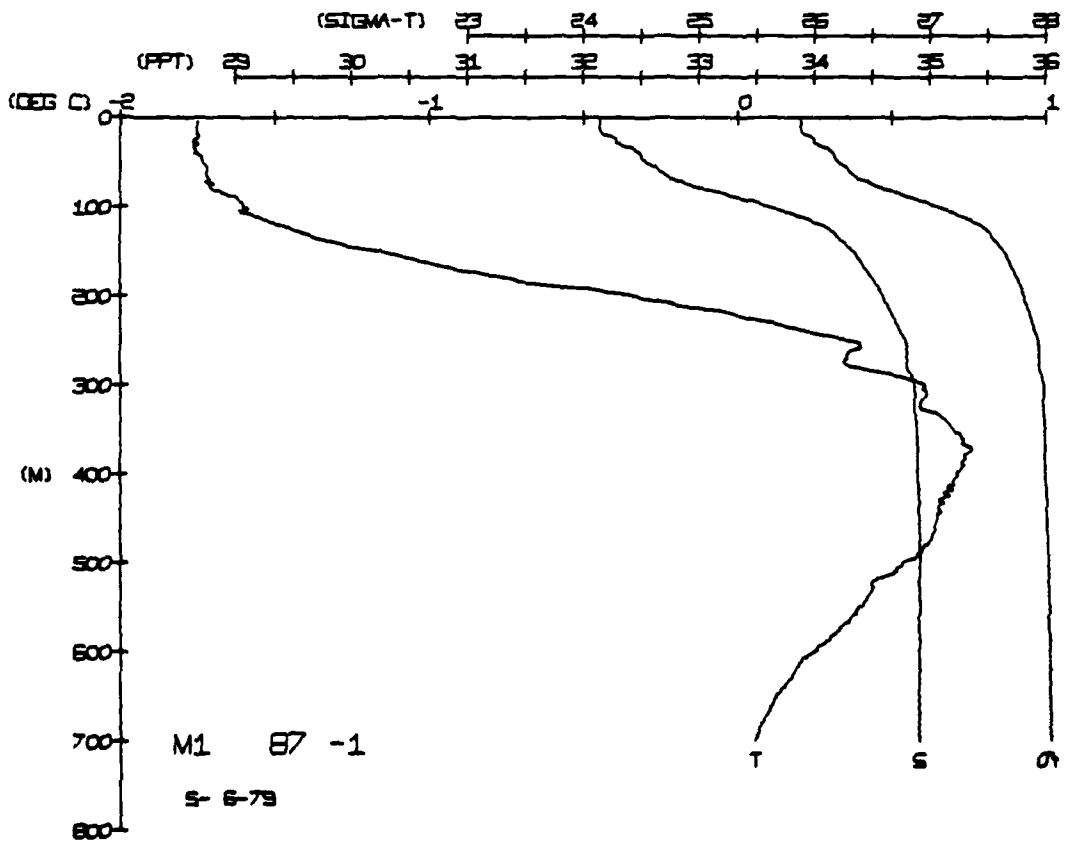
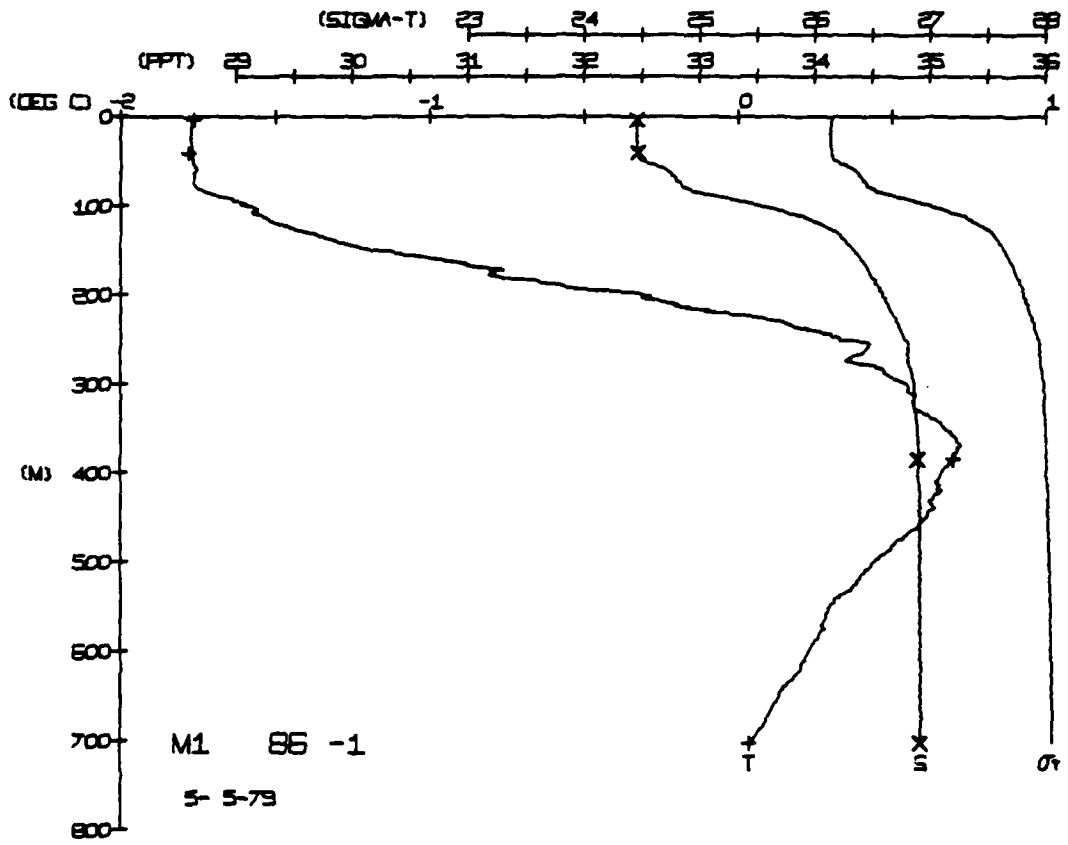
BOT NUM = 1
 BOT NUM = 2
 BOT NUM = 3
 BOT NUM = 4

DEPTH 3 4
 40 2
 384 5
 702 6

DEPTH 3 4
 40 2
 384 5
 702 6

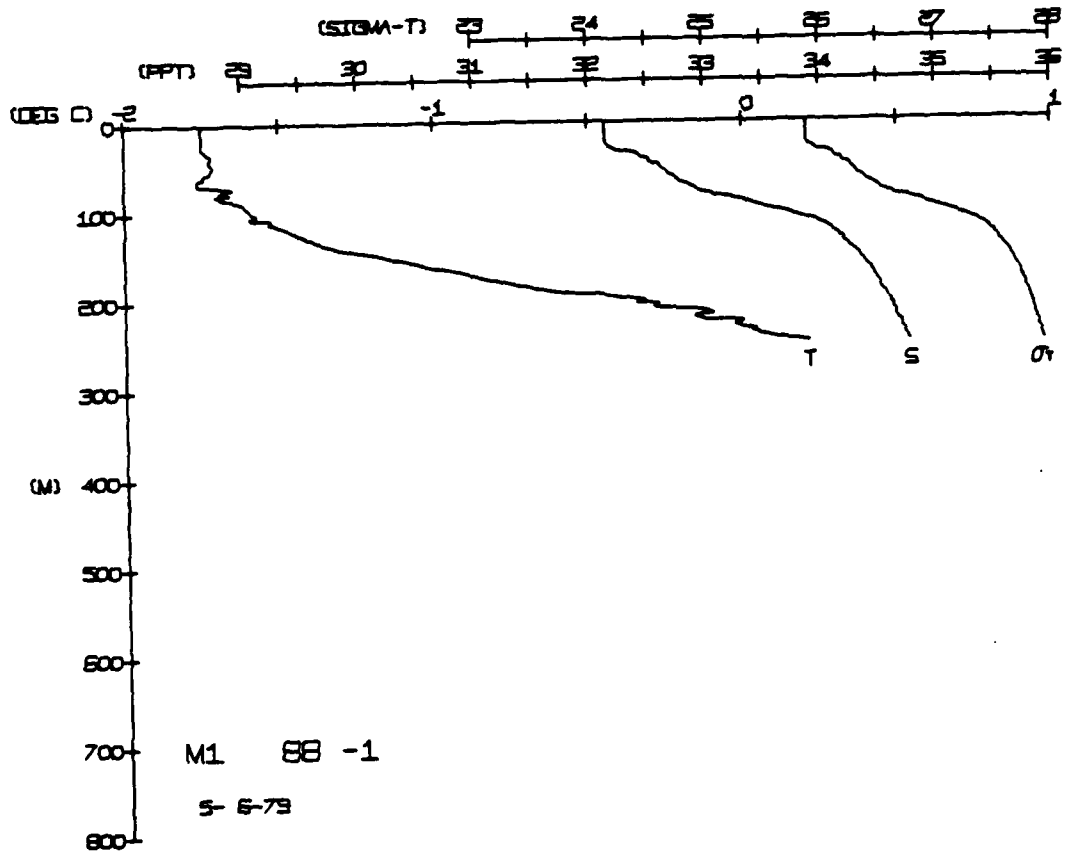
TEMP -1.76
 -1.78
 0.04

SALIN 32 45
 40 46
 384 97
 34 89



FROM 1 STATION 83(1) CTD 6/MAY/1979 925 GMT COIE = 1
 LAT = 83 6828N LNG = 6 7874W LTER = 1 LGER = 2
 AIR TEMP = 0 0 BAROM = 1026 0 WIND = 0 0 SPEED = 0 0

DEPTH	TEMP	PIEMP	SALIN	SIG T	SPVOL	DYNHT	SOUND
0	75	75	32	89	9	000	1437
1	75	75	32	89	9	007	1437
2	75	75	32	89	9	011	1437
3	75	75	32	89	9	032	1437
4	75	75	32	89	9	043	1437
5	75	75	32	89	9	053	1437
6	75	75	32	89	9	064	1437
7	75	75	32	89	9	074	1437
8	75	75	32	89	9	094	1438
9	75	75	32	89	9	103	1438
10	75	75	32	89	9	109	1438
11	75	75	32	89	9	117	1438
12	75	75	32	89	9	120	1438
13	75	75	32	89	9	128	1438
14	75	75	32	89	9	137	1439
15	75	75	32	89	9	152	1440
16	75	75	32	89	9	166	1441
17	75	75	32	89	9	177	1441
18	75	75	32	89	9	184	1442
19	75	75	32	89	9	206	1443
20	75	75	32	89	9	215	1444
21	75	75	32	89	9	219	1445
22	75	75	32	89	9	223	1446
23	75	75	32	89	9	229	1447
24	75	75	32	89	9	232	1448
25	75	75	32	89	9	237	1448
26	75	75	32	89	9	239	1449
27	75	75	32	89	9	241	1450
28	75	75	32	89	9	241	1451
29	75	75	32	89	9	241	1452
30	75	75	32	89	9	241	1453
31	75	75	32	89	9	241	1454
32	75	75	32	89	9	241	1454
33	75	75	32	89	9	241	1454
34	75	75	32	89	9	241	1454
35	75	75	32	89	9	241	1454
36	75	75	32	89	9	241	1454
37	75	75	32	89	9	241	1454
38	75	75	32	89	9	241	1454
39	75	75	32	89	9	241	1454
40	75	75	32	89	9	241	1454
41	75	75	32	89	9	241	1454
42	75	75	32	89	9	241	1454
43	75	75	32	89	9	241	1454
44	75	75	32	89	9	241	1454
45	75	75	32	89	9	241	1454
46	75	75	32	89	9	241	1454
47	75	75	32	89	9	241	1454
48	75	75	32	89	9	241	1454
49	75	75	32	89	9	241	1454
50	75	75	32	89	9	241	1454



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19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Fram Strait, conductivity, temperature, STD profiles		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) From April 29, 1979 to May 6, 1979 a total of 88 casts were made with a CTD (Conductivity, Temperature and Depth) instrument at the drifting ice station Fram I. Profiles were taken at least twice a day from the surface to 700 m and at more closely spaced intervals during special phases of the experiment. A separate helicopter C/STD survey was also conducted during the experiment, and the resulting data were reported separately. Data obtained from the camp-based Plessey 9040 CTD were simultaneously recorded digitally on magnetic tape and on analog charts. Profile data from		

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20.

the digital tapes were smoothed using a running average. Response time of the temperature sensor was corrected for thermal lag by varying a lag constant (τ) until descending and ascending parts of the cast on a T-S diagram were nearly congruent. No lag correction was applied to the conductivity data because of the rapid response time of the conductivity cell. A small drift that occurred when both sensors were stopped for bottle sampling was also taken into account during data reduction.

Static calibration of the temperature, conductivity and depth sensors was provided by bottle and reversing thermometer data. Least squares, best-fit polynomials, whose parameters were temperature (T), conductivity (C) and depth (D), converted the observed data to final data.

Standard level listings of temperature, potential temperature, salinity, sigma-t, specific volume anomaly, dynamic height and sound velocity are given for each cast along with plotted profiles of temperature, salinity and sigma-t. Nested profiles of temperature and salinity are also provided.

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