FIELD OBSERVATIONS OF FLOW PATTERNS GENERATED BY AN ICE KEEL IN STRATIFIED FLOW

by

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Les établissements des Sciences et levés océaniques dans les régions et à l'administration centrale ont cessé de publier leurs diverses séries de rapports en décembre 1981. Une liste complète de ces publications figure dans le volume 39, Index des publications 1982, du *Journal canadien des sciences halieutiques et aquatiques*. La série actuelle a commencé avec la publication du rapport numéro 1 en janvier 1982.

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Field Observations of Flow Patterns Generated by An Ice Keel in Stratified Flow

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PREFACE

This "Ice Keel '85 Experiment" is part of the "Small Scale Ice/Ocean Interaction Project" (PERD 67113), supported by the Federal Panel on Energy Research and Development.

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Can. Data Rep. Hydrogr. Ocean Sci. No. 57:230 p.

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This data report was prepared by Arctic Sciences Ltd. of Sidney, B.C., who produced all the data plots contained within and coordinated the production of the report. Arctic Sciences Ltd. was also responsible for the translation of the data into GF-3 format for archival purposes. The credit and responsibility of the field program and the data collected however, remains with the Institute of Ocean Sciences.

This work was supported by the Federal Panel on Energy Research and Development (PERD).

ABSTRACT

Topham, D.R., H.D. Pite, P. Johnston, D.L. Richards, and J.R. Birch, 1987. Field Observations of Flow Patterns Generated by an Ice Keel in Stratified Flow.
Can. Data Rep. Hydrogr. Ocean Sci. No. 57:230 p.

This report contains oceanographic data obtained during the Ice Keel '85 Experiment, April-May, 1985. The data were required to better understand the momentum exchange which occurs when an ice keel protrudes into an underlying stratified water mass. Nineteen current records and fifty-one CTD profiles were obtained, as well as detailed acoustic data to help visualize the flow dynamics. Much of the backscatter is thought to be from temperature microstructure due to shear flow, while other scatterers are of biological origin. Plankton tows were conducted to better quantify the biological scatterers.

Key words: Ice keel, stratified flow.

RÉSUMÉ

Topham, D.R., H.D. Pite, P. Johnston, D.L. Richards, and J.R. Birch, 1987. Field Observations of Flow Patterns Generated by an Ice Keel in Stratified Flow. Can. Data Rep. Hydrogr. Ocean Sci. No. 57:230 p.

Le présent rapport contient des données oceanographiques recueillies en avril et mai 1985 au cours de l'expérience Ice Keel '85. Ces données étaient nécessaires à une meilleure compréhension de la compensation des quantités de mouvement qui a lieu quand une crête de pression sous glace fait saillie dans la masse aqueuse stratifiée sous-jacente. On a recueilli 19 données sur les courants et 51 profils CTP ainsi que des données acoustiques detaillees afin de representer la dynamique du flux. On croit que la plus grande partie de la rétrodiffusion provient de la microstructure thermique causée par le flux de cesaillement tandis que les autres diffuseurs sont d'origine biologique. On a aussi effectué des traits d'énchantillonnage du plancton afin de mieux quantifier les diffuseurs biologiques.

Mots-clés: crête de pression sous glace, flux stratifié

1. INTRODUCTION

The extensive ice cover over the Arctic Ocean plays a dominant role in the transfer of heat and momentum between the atmosphere and the underlying water column. In both these cases the mechanical mixing energy supplied by relative motion between the water and the ice cover is crucial to the transfer rates; Lemke and Manley (1984) for example estimate that during the 1975-76 Arctic Ice Dynamics Joint Experiment (AIDJEX) in the Beaufort Sea, mechanical mixing was responsible for maintaining the mixed layer during summer and accounted for about 30% of the winter deepening during ice growth.

The upper layer of the Arctic ocean is commonly described in terms of a planetary boundary layer model: the work of McPhee and Smith (1976) showed that this was justified in an area of smooth multi-year ice with low to moderate relief. In such cases the momentum exchange is described by means of a drag coefficient defined at a standard reference height above the surface, and a quadratic variation with velocity at the reference height. In areas with significant ice ridging however, the downward protruding ice keels represent large perturbations of the boundary layer. The conventional representation of surface roughness by a roughness parameter requires that there be a large separation in scales between the roughness elements and the outer scale of the boundary layer. In the case of the atmosphere where the outerscale is of the order of 1000 m, surface features such as bushes, fences, low buildings, etc. satisfy this condition. For the Arctic Ocean however, with a typical mixed layer depth of about 30 m, almost any piece of ice remnant at the ice/water interface fails to satisfy the criterion of a wide separation of scales. This is particularly so with first year ridged ice where there has been little opportunity for melting to smooth features.

The combination of relatively steep-sided ice keels and underlying stratified water column takes us out of a conventional boundary layer regime into one of stratified flow over obstacles with the resulting emphasis on wave related phenomena.

There have been at least two attempts in the past to investigate keel flows, both in the Beaufort Sea during the AIDJEX program. These suffered from restrictions on their choice of site, being constrained to the vicinity of the AIDJEX camps and from unpredictability of the ensuing water motion relative to the ice, both regarding speed and direction. With this in mind it was decided to seek an isolated keel in fixed ice with well defined tidal flows such that the desired range of Froude numbers was reproduced on a regular basis. A survey of historical ice data (Marko and Fissel, 1984) suggested that the Barrow Strait area of the Northwest Passage had a high probability of furnishing such conditions.

Two potential sites were examined. CTD profiles and 3 days of current data from each site showed that the flow at one of the sites was too fast and the stratification too weak, resulting in a Froude number range that was too high. Site 1 however, just east of Lowther Island in Barrow Strait, had a more suitable combination of conditions and was selected for the main experiment.

2. PHYSICAL SETTING

The site chosen for the Ice Keel '85 Experiment is near Lowther Island in Barrow Strait, approximately 5 km southwest of Lowther Shoal (Figure 1). Geographic coordinates are 75° 27.7' North, 97° 10.8' West.

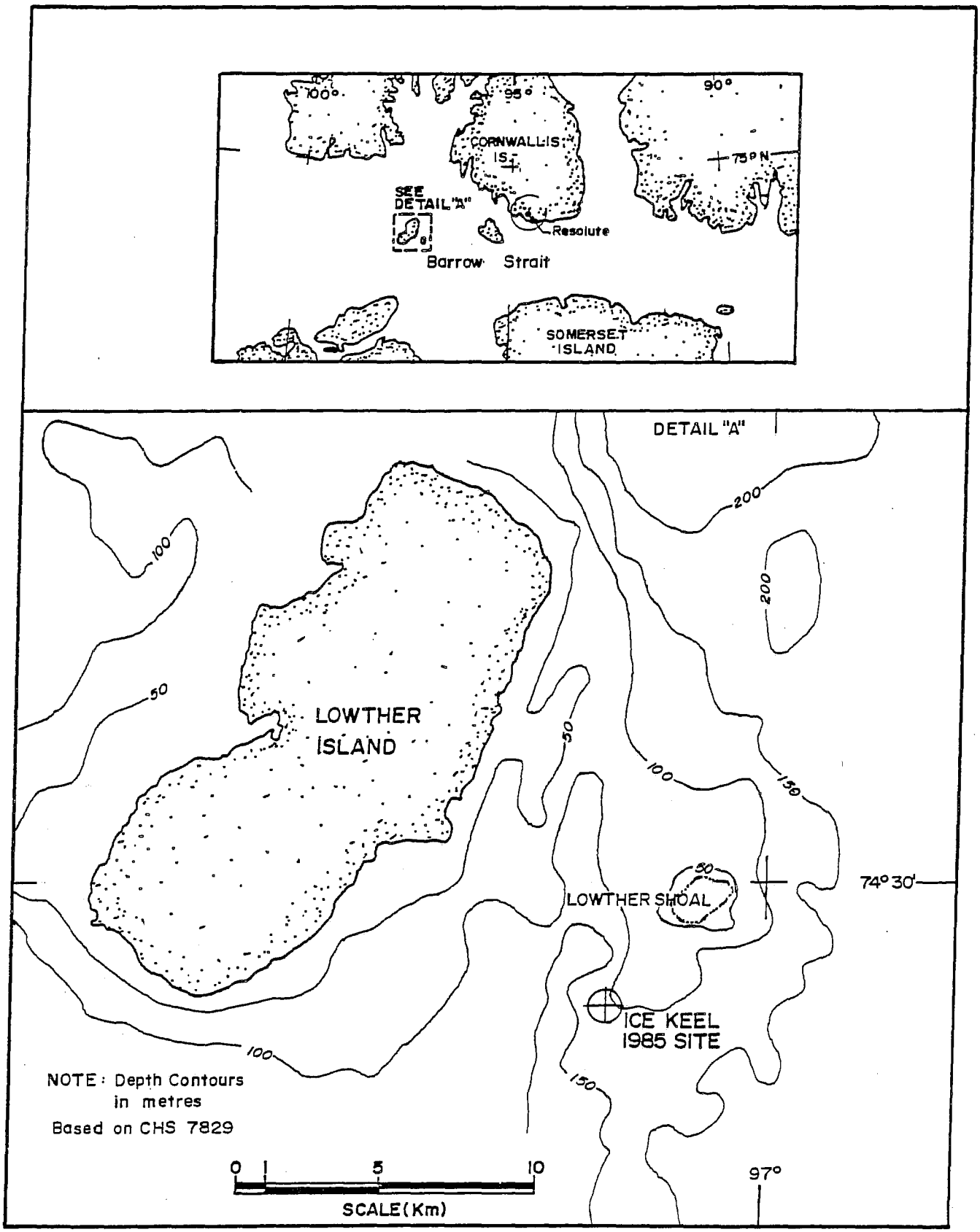

Figure 1. Site of ice keel 1985 experiment.

Currents

Barrow Strait has a sill depth of 125 m, separating the deeper channels of Viscount Melville Sound to the West and Lancaster Sound to the east. The bathymetry in the immediate area of the study site is oriented north-south, shoaling to the northeast towards Lowther Shoal. The depth at the study site was 114 m.

Ice Conditions

The experiment site was located in landfast, immobile ice which had formed and consolidated that year (first-year ice). The under-ice topography was mapped by Offshore Survey and Positioning Services Ltd. of Vancouver using a single beam Mesotech 971 sonar unit operating at 330 kHz with a 1.7° beam angle (Lyall, 1985). The beam is automatically indexed through 360° in the vertical plane, with manual indexing in the horizontal. The acoustic head was mounted 40 m below the ice surface on a rotationally rigid aluminum pole, and from this position an area about 80 m in diameter could be surveyed on both the ice surface and the seabed. Two reflectors at 40 m depth, set to form a 90° angle with the sonar head, provided a reference check at the beginning and end of each vertical sweep. Ten overlapping survey positions were laid out to cover approximately 240 m of keel length. The ten sets of data were combined after removing positioning errors to yield a smoothed data set of contours covering the entire length of keel. The keel survey technique and data processing details are available in the form of a contract report, (Lyall 1985). The desired accuracy was to obtain vertical depths to within 50 cm and horizontal positions to within 1 m.

Figure 2 shows a smoothed contour map of the merged data sets with 1 m contour intervals. Most of the actual keel was covered by at least four overlapping survey positions and the smoothed contours are appropriate for overall hydrodynamic purposes. Visual examination of the keel structure with an underwater TV system revealed a typical first year formation with loosely packed slabs of ice about 50 cm in thickness, typical roughness scales being of the order of 1 m. These large scale elements were in fact resolved by the individual acoustic profiles but are submerged in the subsequent averaging. Figure 3 is a perspective view taken from beneath the ice. It can be seen that the keel is reasonably symmetrical in cross section and of uniform depth along its length. Along the axis of the keel, ice depths were about 8 to 10 m near the instrument line. Away from the ice ridge, the ice was about 1.5 m thick.

3. MEASUREMENT STRATEGY

Due to the north-south orientation of the ice keel and the dominant east-west flow patterns, most of the flow is normal to the ice-keel axis. Only this normal component is available to do work against buoyancy forces; the parallel velocity component remains relatively unchanged.

The layout of the instruments was designed to provide data on the upstream and downstream flow conditions. Current meters were used to obtain flow velocities and water density, while CTD profiles produced detailed vertical profiles of water properties. In addition, ten 200 kHz acoustic transducers were mounted just below the ice in a line running normal to the keel axis. The transducers were designed to provide detailed acoustic visualization of the flow patterns, and in addition some plankton data were

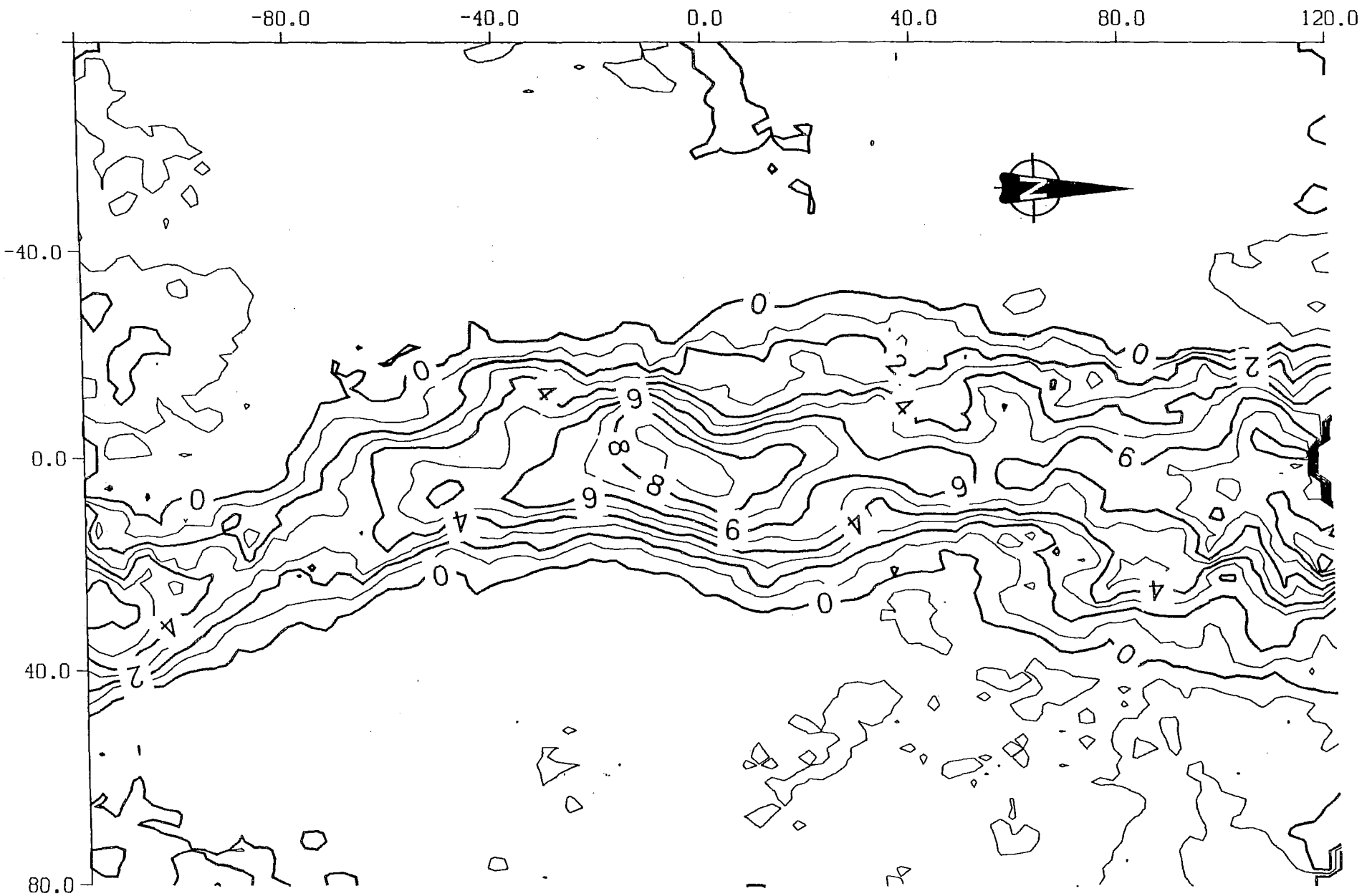

Figure 2: Ice keel contours;depths shown relative to the mean ice undersurface.

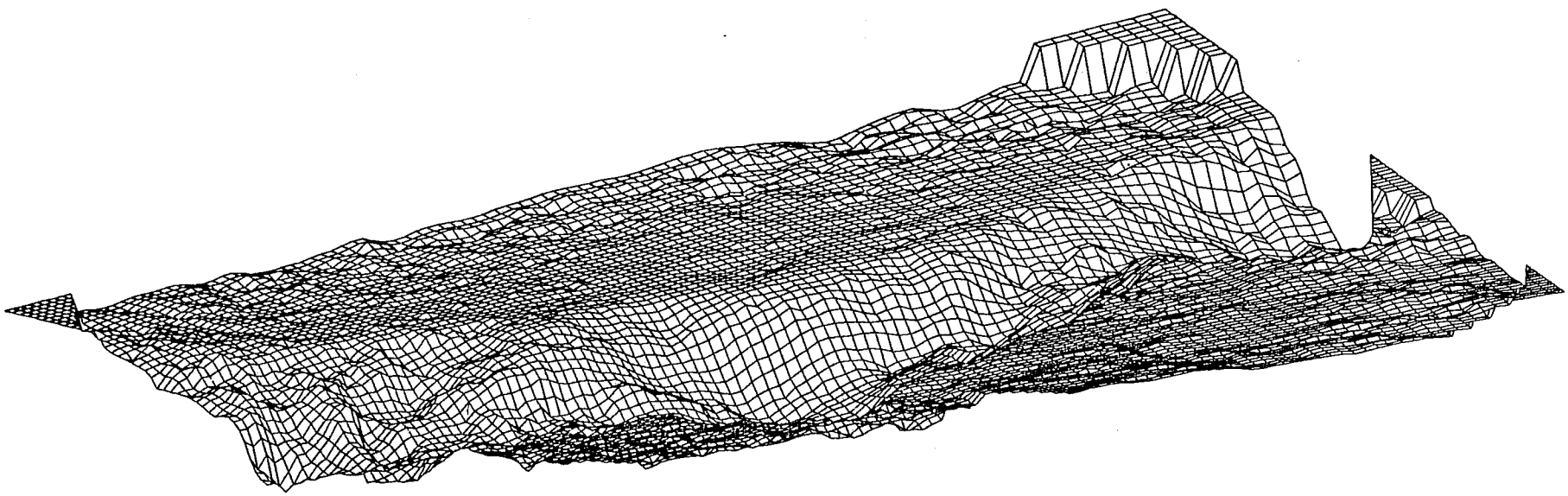

Figure 3. Perspective views of the ice keel, viewed from northeast.

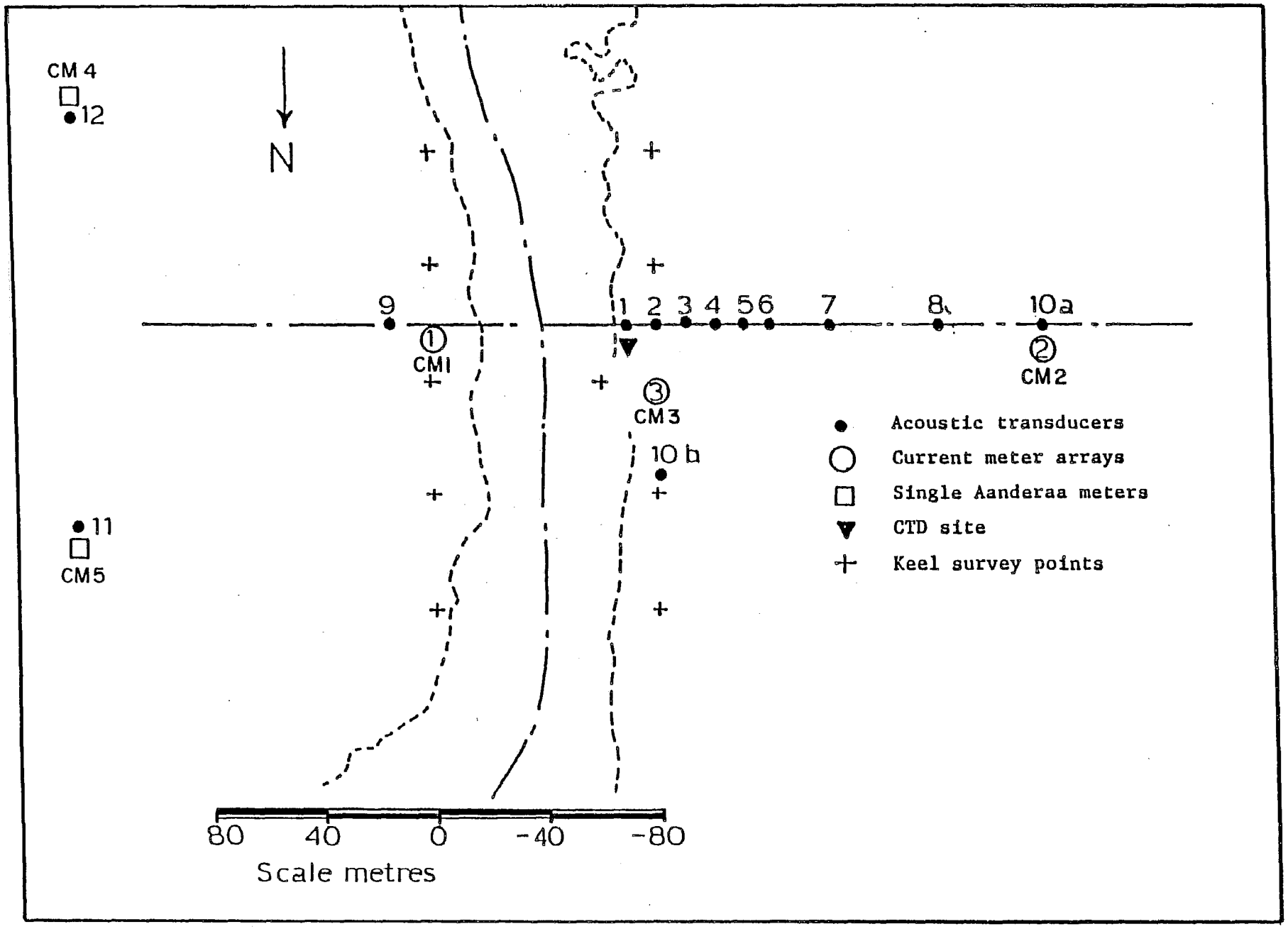

Figure 4. Instrument location sites relative to the ice keel.

collected to aid in the interpretation of the acoustic signals. The layout of the instrumentation relative to the ice keel is presented in Figure 4. The "downstream" side of the keel is to the west. The measurement techniques are described more fully in the following sections (current meter, section 4; CTD, section 5; acoustic, section 6; and plankton, section 7), along with discussion of data processing and presentation.

4. CURRENT METER DATA

4.1 Current Meter Instrumentation

Current meters were deployed as three arrays in a line perpendicular to the keel axis and singly at 10 m depth in a triangular array (Figure 4). All the measurement locations fell within a circle of about 400 m radius. CM sites 1, 2 and 3 and 10 of the transducer sites were located on the main instrument line which ran from west to east, perpendicular to the axis of the keel. CM1 was immediately east of the keel; CM3 was immediately west, 80 m from CM1 and CM2 was the most westerly, 220 m from CM1. Sites CM4 and CM5 were 138.6 m east of CM1, offset by 85 m to the south and north respectively of the main instrument line.

The three current meter arrays each consisted of 6 meters spaced approximately logarithmically in depth down to 32 m on rotationally rigid pole mountings, recording flow speed and direction together with water temperature and conductivity. These provided vertical profiles immediately upstream and downstream of the keel and farther downstream in the wake region. In addition to these, three single meters moored at 10 m depth on hydraulic hose formed a triangular array about 160 m on a side to provide information on the direction of any significant free running internal waves intersecting the keel. The current meters recorded at 2 minute intervals for up to 12 days, the duration of the actual experiment. The deployment of the current meters is summarized in Table 4-1. No current data were recovered from the instrument at 10 m depth at site CM2.

Table 4.1

Summary of Current meter deployments: Ice Keel '85 Experiment, Spring, 1985. All CM at 75° 27.7 min N; 97° 10.8 min W; Water depth = 114 m; Sample interval = 2 min. Instrument depths are relative to water surface level.

STN.	INSTR TYPE	SERIAL NO.	INSTR. DEPTH (M)	SENSORS	START (GMT) 1985	STOP
CM1	RCM4	7919	2.60	S,D,T-HR*,C	23:14 APR 22	03:26 MAY 3
CM1	RCM4	3494	4.10	S,D,T-HR*,C	23:14 APR 22	03:26 MAY 3
CM1	RCM4	6561	5.60	S,D,T-HR*,C	23:14 APR 22	03:26 MAY 3
CM1	RCM4	4400	9.60	S,D,T-HR*,C	23:14 APR 22	03:26 MAY 3
CM1	RCM4	4401	17.60	S,D,T-HR*,C	23:14 APR 22	03:26 MAY 3
CM1	RCM4	4402	33.60	S,D,T-HR*,C	23:14 APR 22	03:26 MAY 3
CM2	RCM4	6527	2.60	S,D,T-HR*,C	03:04 APR 23	00:48 MAY 3
CM2	RCM4	1386	4.10	S,D,T-HR*,C	03:04 APR 23	00:48 MAY 3
CM2	RCM4	5971	5.60	S,D,T-HR*,C	03:04 APR 23	00:48 MAY 3(1)
CM2	RCM4	CM FLOODED, NO DATA				
CM2	RCM4	637	17.60	S,D,T-HR*,C	03:04 APR 23	04:44 MAY 2(2)
CM2	RCM4	1936	33.60	S,D,T-HR*,C	03:04 APR 23	00:48 MAY 3
CM3	VACM	211	2.77	S,D,T,C	00:39 APR 27	21:29 MAY 2
CM3	VACM	121	4.27	S,D,T,C	00:39 APR 27	21:29 MAY 2(3)
CM3	VACM	122	5.77	S,D,T,C	00:39 APR 27	21:29 MAY 2
CM3	VACM	218	10.47	S,D,T,C	00:39 APR 27	21:29 MAY 2
CM3	VACM	216	17.77	S,D,T,C	00:39 APR 27	21:29 MAY 2
CM3	VACM	217	34.47	S,D,T,C	00:39 APR 27	21:29 MAY 2
CM4	RCM4	1935	10.10	S,D,T-HR*,C	18:27 APR 27	05:33 MAY 3
CM5	RCM4	738	10.10	S,D,T-HR*,C	17:04 APR 27	05:34 MAY 3

*High Resolution Temperature Sensor
(1) Direction channel suspect
(2) Speed channel suspect for records 2800-3799.
(3) Salinity channel adjusted for drift.

The current meters were deployed through holes in the ice and rigidly connected to the surface for orientation. Refer to section 4.2 for more detail.

A combination of Aanderaa RCM-4 and Applied Microsystems Ltd. (AML) vector-averaging current meters (VACM) were used. In standard form the RCM-4 units count rotor revolutions for speed determination, and a vane aligns the instrument case in the flow direction. The rotors were redesigned to remove azimuthal variations in speed calibration introduced by the standard rotor supports when the meter was held in a fixed orientation relative to the ice (Pite, 1986). The standard 1-metre long vanes were replaced by smaller 10 cm long vanes which were mounted beneath the pressure case. This allowed the arrays to fit through a 23 cm diameter hole drilled on the ice.

The AML vector-averaging current meters (VACM) use the same rotor and record format as the Aanderaa RCM-4. A small vane 4.5 cm long by 11.4 cm deep is used to determine flow direction. The determination of current flow differs from the RCM-4 in that the VACM computes north and east components of the flow after each rotor revolution. The vectors are summed and averaged over the selected averaging interval, in this case two minutes. The RCM-4 uses the rotor counts over the two minutes to compute an average speed, and the current direction is derived from one instantaneous measurement every two minutes.

Both the RCM-4s and the VACMs were equipped with temperature and conductivity sensors. The RCM-4 sensors were equipped with high resolution circuits.

The manufacturer's specifications for the RCM-4 and VACM are tabulated below.

Table 4.2 Manufacturer's specifications

Aanderaa RCM-4.	Resolution	Accuracy
Speed (cm/s)	±0.25	±1.0
Direction (deg)	±0.35	±5.0
Temperature (°C)		
-2.5 to 21.5°C	±0.02	±0.15
-2.1 to 2.9°C	±0.005	±0.01
Salinity	±0.01	±0.02
AML VACM		
Speed (cm/s)	±0.25	±2.5 or ±2%
Direction (deg)	±1.4	±3.0
Temperature (°C)	±0.01	±0.05
Salinity	± .06	± .1

4.2 Directional Orientation

Due to the proximity of the north magnetic pole, the horizontal component of the magnetic field is too weak for reliable orientation using a

Rigid moorings, oriented from surface, have become the standard method for current meter mooring near the magnetic pole. This system has been used successfully since the late 1970's by the Canada Centre for Inland Waters (CCIW), the Institute of Ocean Sciences (IOS), and the Defense Research Establishment Pacific (DREP).

The current meters are fixed to a torsionally rigid pole, and lowered to the appropriate depth. A reference line is marked along the length of the pole for alignment in the desired direction. Magnets within the current meter vane couple the vane motion to an internal magnetic follower. With the instrument rigidly coupled to surface, the current flow direction is recorded relative to the current meter case. For the present experiments the current meters were oriented with respect to the line of multiplexed acoustic transducers set normal to the keel axis. The currents are presented as components normal and parallel to the keel, whose geographical orientation was coincidentally directly H-S as determined by sun compass.

4.3 Calibration of Current Meter Sensors

Rotors

The current meter arrays were in all cases suspended from fixed points in landfast ice and oriented with respect to the axis of the ice keel. The rotor assemblies on the Aanderaa RCM-4s were rebuilt to provide a speed sensitivity independent of current direction relative to the current meter case. This design is also used on the Applied Microsystems vector-averaging current meters. The design technique is described by Pite (1986).

The rotor is a double Savonius design having a 3-part speed calibration as follows:

Modified Aanderaa MK 4s:

If $N < OR = 10$; Speed = 2.5
If $10 < N < 120$; Speed = $1 + 0.152\ N$
If $N > OR = 120$; Speed = $3.5 + 0.131\ N$

AML Vector Averaging:

If $N < OR = 16$; Speed = 2.5
If $16 < N < 200$; Speed = $1 + .0912\ N$
If $N > OR = 200$; Speed = $3.5 + .0787\ N$

Where N is the number recorded by the current meter and speeds are in cm per second.

Direction Vanes

The standard Aanderaa direction vane was replaced by a small 10 cm long vane mounted on the end of the current meter case with a magnetic coupling to give direction relative to case, as used in earlier work (Greisman and Lake, 1978). The magnetic follower system was calibrated for each meter on site. A correction table was constructed and recorded values were modified by interpolation.

Conductivity and Temperature Sensor Calibration

These sensors were calibrated *in situ* by comparison with the CTD profiles. The highly variable nature of the conditions at shallow depth made direct comparison between the current meters and the CTD difficult and the following procedure was adopted. From a preliminary analysis of the speed data and acoustic data, it was known that conditions on the upstream side of the keel were relatively steady and uniform, while those on the downstream side were highly variable and non-uniform. The series of CTD profiles contained periods corresponding to both conditions: however, the resulting temperature-salinity relationship was almost unaffected by the actual flow field.

For array No. 3, positioned close to the CTD, a direct comparison was made between the sensors and the CTD for periods corresponding to upstream conditions. During similar periods the sensors on array No. 2 were calibrated by comparing T-S characteristics with the T-S curve derived from the CTD profiles with the freezing point providing an additional reference condition. Likewise a T-S comparison was made for array No. 1 and the single remote current meters (738 and 1935) during 'upstream' conditions on that side of the keel. The conductivity sensor on VACM No. 121 showed a drift with time and this has been partially compensated for by a linear time dependence applied to the calibration equation.

4.4 Current Meter Data Presentation

The calibrated and corrected current-meter data are presented in Appendix 1. The time-series plots of the 2-minute data include the velocity components (normal and parallel to the keel) temperature, and salinity.

The orientation of the two velocity components normal and parallel to the ice keel, is illustrated in Figure 5. The normal component is positive "downstream" or to the west, while the parallel component is positive towards the north.

5.0 CTD DATA

Conductivity-temperature-depth (CTD) data were required to determine the stratification and density structure of the flow. Fifty-one CTD profiles were collected, all at the same site, during April 2 - May 1, 1985.

5.1 CTD Instrument System

A Guildline 8706 digital CTD probe was used to obtain vertical profiles of temperature, salinity and density. The CTD probe has three sensors: A thermometer, a pressure transducer and a conductivity cell. In addition, a pair of high precision, high stability pressure protected thermistors were fitted to provide *in situ* calibration of the CTD temperature probe. The sample interval was .04 seconds (25 times per second), which at a typical descent rate of 1.5 m/s translated to a vertical sampling resolution of about 6 cm.

The water depth at the ice keel site was 114 m, however, CTD profiles were stopped at 80 m, since perturbations due to the 8 to 10 m deep ice keel did not exceed this depth.

CTD profiles were collected every half hour over specific periods: 28 profiles during 06:18 - 22:20 April 28; 1 profile on April 29; 5 profiles

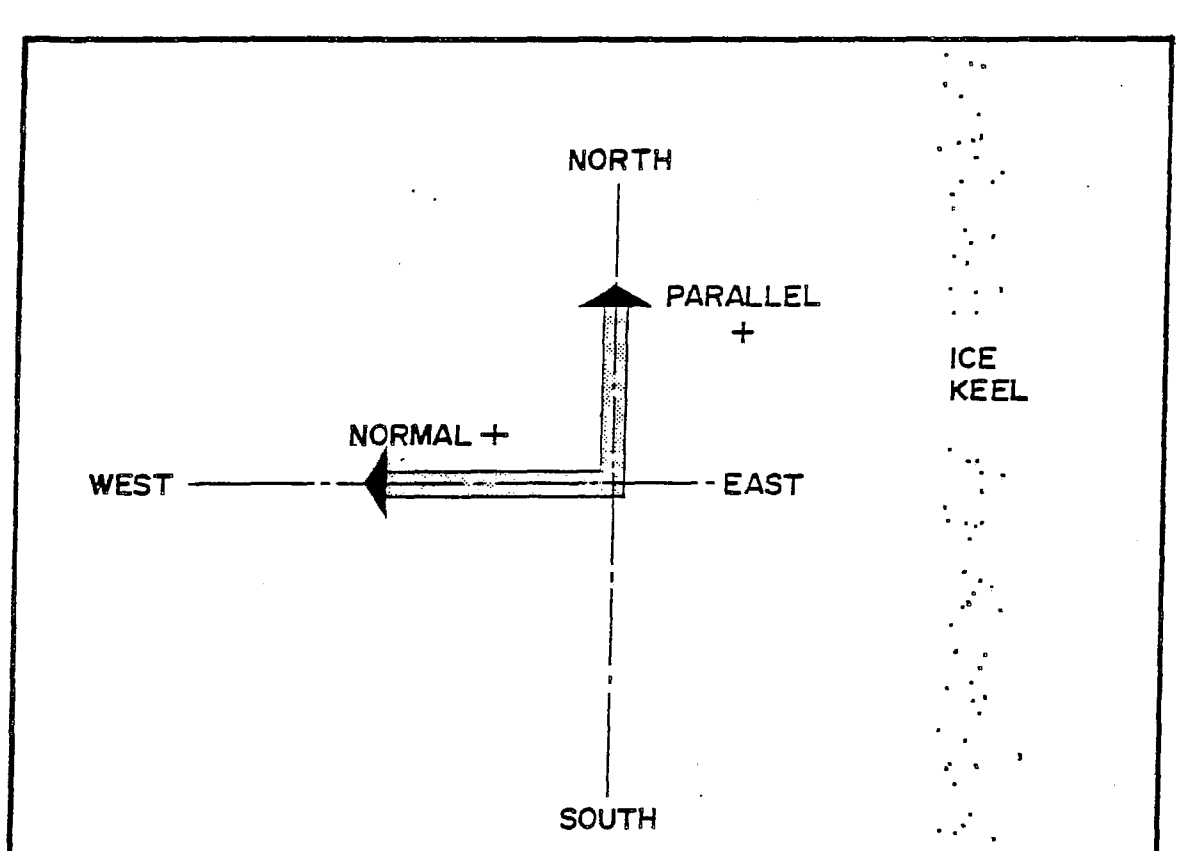

Figure 5. Orientation of the normal and parallel velocity component axes. The directions of positive normal and parallel flows are towards the west and north, respectively. The axis of the ice keel is very close to true north-south.

during 01:14 - 01:56 May 1, and 17 profiles during 14:20 - 19:48 May 1. Table 4-1 summarizes the CTD casts and indicates where water samples were collected for calibration.

The manufacturer's specifications for the Guildline CTD are provided in Table 5.2.

Table 5.1 Summary of CTD profiles

Exp. No.	Date Time 1985 GMT	Profile Depth (Metres)	Bottle Depth (Metres)
5631	Apr. 28	06:18 78.7	25.5
5632	Apr. 28	06:46 78.9	
5634	Apr. 28	07:20 78.6	
5635	Apr. 28	07:46 78.8	
5636	Apr. 28	08:09 78.8	
5637	Apr. 28	09:08 78.8	
5638	Apr. 28	09:49 78.7	60.5
5639	Apr. 28	10:13 78.9	
5640	Apr. 28	10:49 79.0	
5641	Apr. 28	11:18 78.9	
5642	Apr. 28	11:45 77.9	
5643	Apr. 28	12:20 78.7	
5645	Apr. 28	13:15 77.1	
5646	Apr. 28	13:50 78.4	
5647	Apr. 28	14:12 78.6	51.5
5648	Apr. 28	14:48 79.1	
5649	Apr. 28	15:23 79.1	
5650	Apr. 28	15:47 78.6	
5651	Apr. 28	16:15 78.8	
5652	Apr. 28	16:40 78.7	
5654	Apr. 28	17:25 78.9	
5655	Apr. 28	17:39 79.0	49.5
5656	Apr. 28	18:13 79.2	
5657	Apr. 28	19:02 83.1	
5658	Apr. 28	20:08 78.3	
5659	Apr. 28	20:37 78.2	
5660	Apr. 28	21:07 78.4	
5661	Apr. 28	22:20 78.8	67.0
5664	Apr. 29	22:14 78.8	
5666	May 1	01:14 80.3	
5667	May 1	01:29 78.3	
5668	May 1	01:39 77.8	
5669	May 1	01:48 78.8	
5670	May 1	01:56 79.5	
5673	May 1	14:20 77.3	
5674	May 1	15:02 78.8	
5675	May 1	15:19 79.0	
5676	May 1	15:33 78.7	
5677	May 1	15:45 79.4	
5678	May 1	16:01 83.0	
5679	May 1	16:14 77.6	
5680	May 1	16:24 78.4	
5681	May 1	16:49 79.7	67.7
5682	May 1	17:01 79.5	
5683	May 1	17:20 80.1	
5684	May 1	17:38 78.7	
5685	May 1	17:49 78.5	
5686	May 1	18:07 78.7	
5687	May 1	18:15 78.6	
5688	May 1	18:43 79.1	
5689	May 1	19:48 77.9	

Table 5.2 Specifications for Guildline CTD

Function					
C*	0.1 to 40	±0.005	±0.001	±0.002/6 mos.	<50ms
T	-2°C to 30°C	±0.005°C	±0.0005°C	±0.005°C/6 mos ±0.002°C/30 days	<50ms
P	to 1500 dbar	±0.15%F.S	±0.01%F.S.		<50ms

*Specifications for conductivity are given as equivalent salinities.

5.2 CTD Calibration

The digital data from the CTD were converted to engineering units using calibration curves determined in the laboratory. Field checks were also made to monitor instrument performance and adjustments.

The pressures from the CTD sensor were checked in the field at a standard depth of 15 m and a mean offset of +1.014 decibars (dbar) was applied to all the values.

The fast response Guildline temperature sensor was calibrated *in situ* by comparison with the high stability thermistors, after appropriate low pass filtering of the signal of the former. A comparison of the two data sets identified a 0.002° offset and this value was subtracted from all CTD temperatures.

Similarly, conductivity ratios determined from the water bottle salinity and CTD temperature were compared to those of the CTD. Based on this a slope correction of 0.99960 was applied to the conductivity ratio data.

5.3 CTD Data Processing

After applying the calibration corrections outlined above, the CTD data consisted of temperature and conductivity ratio data as a function of pressure. A further correction was then made to compensate for the descent-rate dependent difference in the response characteristics of the temperature and conductivity sensors. The raw data were adjusted using an algorithm of Perkin and Lewis (1982).

Salinities were computed from the pressure, temperature and conductivity ratio data using the Practical Salinity Scale 1978 (Lewis, 1980). The salinities are given in practical salinity units. [Note: The following corrections should be made to Lewis, 1980. In equation (8), the coefficient C_3 should read -6.9698×10^{-7} and in equation (9), the variable corresponding to the coefficient b_3 should be $R_T^{3/2}$.]

Surface freezing point temperatures were computed from the expression of Millero (1978) and density from that of Millero and Poisson (1981).

The velocity of sound was computed using the algorithm of Wilson (1960). The CTD data were checked for spikes both automatically by the computer and then manually. The density inversions which occasionally occur are felt to be real, and a consequence of vigorous mixing.

5.4 CTD Data Presentation

Listings and profile plots of the CTD data are included in Appendix 2. The listed data have been interpolated to integral depths. The corresponding profile plots of the vertical water structure are on the facing page.

The CTD data are also presented as temperature versus salinity (T-S) plots in Appendix 3. Each 10 decibar increment in depth is indicated with an 'x'.

6.0 ACOUSTIC DATA

6.1 Acoustic Sounder System

The acoustic instrumentation consisted of twelve 200 kHz transducers mounted vertically through the ice, up to 8 of which could be multiplexed to a Furuno FCV 201 sounder/monitor unit. Their positions are numbered 1 through 12 on Figure 4 and the multiplexed group is shown relative to the keel contours on Figure 2. Stations 10A and 10B mark alternative sites of the same transducer which was re-positioned during the course of the experiment. This multiplexed data was recorded on standard half hour audio magnetic cassette tapes, with the capability for realtime display of two sequential channels in hardcopy form. An acoustic pulse length of 150 microseconds was used throughout and with eight transducers multiplexed, each transducer fired at three second intervals. This repetition rate is fixed by the water depth and the time required for multiple reflections to decay. With the relatively low flow speeds at the experimental site, 10 to 20 cm/sec, this repetition rate is sufficient to resolve the flow features of interest. The remaining 4 transducers were powered by stand alone Furuno 606 sounders. In practice most of the acoustic data was taken with the multiplexed system alone because of mutual interference between separate sounder systems. The half hour audio cassettes were later copied onto VHS video tapes via a Sony digital audio processor PCM 501ES unit to give 6 hour continuous recordings. The original Fuji audio cassettes were recorded alternately on a pair of Sony TCK61 machines to provide approximately one minute of overlap between tapes. On the video copies each separate tape copy is separated by a section of blank tape.

6.2 Acoustic Data Presentation and Discussion

It is not practical to present all the acoustic data here. An index of the data tapes is included in Appendix 4.

We have chosen two segments of data for discussion here for which the array of acoustic sounders lies in the lee of the keel. In general the oncoming flow is not normal to the keel center line and experiences drastic direction changes as the keel is traversed. Simple considerations of the kinetic energy of the flow suggests a decomposition into components normal and parallel to the keel axis, only the former being available to work against buoyancy forces. This gives a satisfactory description of the angular deviations of the flow, the normal component being modified as dictated by the corresponding Froude number regime, whilst the parallel component remains relatively unchanged. Flows have been classified on the basis of an equivalent single layer representation of the system with Froude numbers based on the normal component of flow measured at 8m depth far upstream. In the absence of more complete information the upper layer depth has been taken from densities calculated using the temperatures and conductivities obtained from

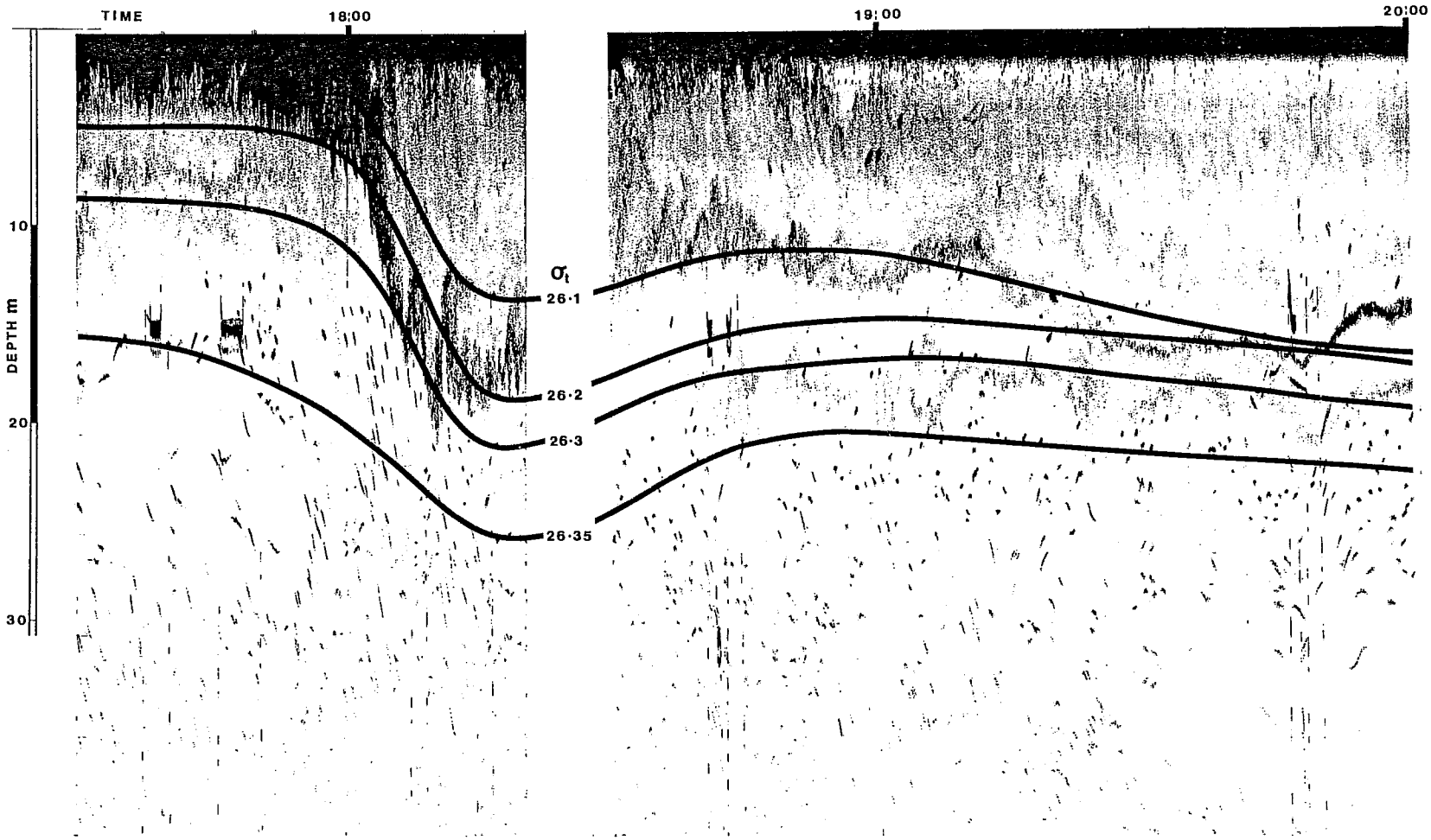

Figure 6: acoustic record from transducer #2 on May 1. Isopycnal lines derived from CTD records.

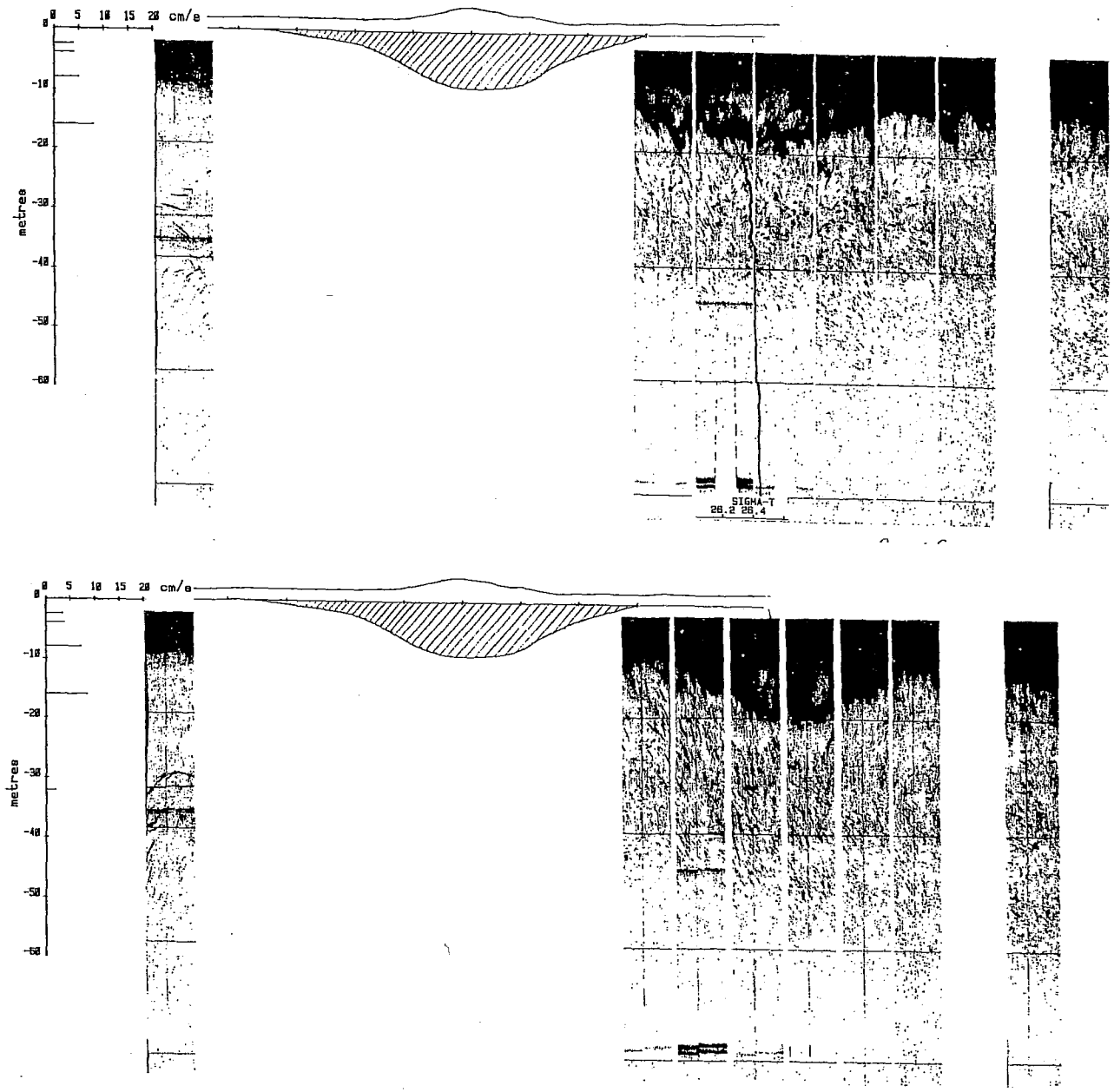

Figure 7:Reconstructed acoustic images from timeseries segments.

the near upstream current meter array. Blockage effects will yield an overestimate of this depth and Froude numbers will be correspondingly low.

Figure 6 shows an acoustic record from transducer no. 2 in the lee during a period of decelerating flow, starting from an upstream Froude number of 0.43 and reducing to 0.20 in about 1 hour. The strong continuous acoustic signal results from the temperature microstructure generated in regions of high shear. For these Froude numbers the flow is expected to be of the crest controlled type with a far downstream lee jump. The depth increase of the reflecting layer shown on the acoustic charts is interpreted as a steep breaking lee wave or internal hydraulic jump passing the sensor position as the upstream flow slows. The interpretation of the acoustic signal in terms of the flow dynamics is confirmed by a comparison with accompanying changes in the density field. The isopycnal lines superimposed on the acoustic record are derived from a series of CTD profiles and clearly show the downward displacement of fluid associated with the passage of the large structure. There is a lateral offset between the positions of the CTD and the acoustic transducer which accounts for the difference in shape between the isopycnals and the strongly reflecting layer. It should be noted that the density at the start of this period is higher in the lee than typical surface values in front of the keel, suggesting either that some upstream blockage or mixing has occurred.

By displaying small sections of records from the multiplexed sounders, a pseudo-spatial picture of the flow can be constructed. Figure 7 shows two such examples, the upper at 16:20, has the upstream interface at 16m and a steady upstream Froude number of 0.5; the lower at 17:40, shortly after the start of a deceleration period, has an interface depth of 12m and a Froude number of 0.4. The normal components of the measured velocity profiles have been superimposed and on the picture at 16:20 clearly demonstrate the strong supercritical lee jet. The accompanying acoustic records show an extended hydraulic jump extending to the subcritical flow shown by the far downstream velocity profile. The velocity field at 17:40, is similar with a slightly reduced lee jet, but the acoustic records show the internal hydraulic jump to have grown to a large amplitude wave like feature.

7.0 PLANKTON DATA

The echo sounders record returns from scatterers within the water column. Sound speed microstructure, in regions of high shear flow, is responsible for much of the diffuse backscatter. However, the strong isolated scatterers are of biological origin or suspended matter.

In order to better quantify the scatterers present, a series of vertical plankton tows was obtained using a 505 micron (0.0505 cm) mesh net. This is a relatively large mesh size and will capture only the larger biological scatterers.

Eleven vertical tows were made and are tabulated below. A description of the contents retrieved by each tow is included in Appendix 5. Analyses of the contents were performed by Mr. L. Harris of the Marine Ecology Laboratory at the Bedford Institute of Oceanography.

Table 7.1 Vertical Plankton Tows, April 29, 1985

Tow #	Max. Depth (m)	Start (GMT)	Stop (GMT)	Comments
1	115 (bottom)	16:45	16:55	Hand wound
2	75	17:33	17:39	Power, 1 m/s
3	15	17:45	---	Power, 1 m/s
4	75	18:03	18:08	Power, 1 m/s
5	15	18:13	18:16	Power, 1 m/s
6	115 (bottom)	18:29	18:33	Power, 1 m/s
7	75	19:50	19:52	Power, 0.5 m/s
8	35	---	20:05	Power, 0.5 m/s
9	75	20:15	---	Power, 0.5 m/s
10	15	20:22	20:26	Power, 0.5 m/s
11	50	20:27	---	High speed

8.0 DATA ARCHIVAL IN GF3-FORMAT

The current meter and CTD data have been archived on two 9-track, ASCII-coded computer tapes in the GF-3 format. GF-3 is the standard format used for the international exchange of oceanographic data (UNESCO, 1980). Copies of these tapes may be obtained from:

Marine Environmental Data Services Branch
Dept. of Fisheries and Oceans
200 Kent Street, 12th Floor
Ottawa, Ontario
Canada, K1A 0E6

The data are contained on two tapes:

Tape No.	Contents
ASLGF3147001	CTD profiles; exp. no. 5631 through 5689
ASLGF3147002	Current meter data; 19 records

Preceeding the data on the GF-3 tapes is documentation, largely extracted verbatim from this data report. The data in ASCII code, are arranged as multiple files; each CTD profile or current meter record makes up one file. Quality control flags are included with the current data as some of the values are suspect. This is not the case with the CTD data.

9.0 CHRONOLOGICAL INDEX OF EXPERIMENT NUMBERS

EXPT. NO.	DATE	DESCRIPTION	
5600	April 12	CTD initial exploration Site 1 (Lowther Is.)	
5601	April 12	CTD initial exploration Site 2 (Griffith Island)	
5602	April 12	Modified RCM-4 S/N 1936, 10m depth, Site 1.	
5603	April 12	Modified RCM-4 S/N 5971, 10m depth, Site 2.	
5604	April 19	RCM-4 S/N 3388, 10m, Site 1.	
5605	April 24	All night run, Furuno 606 sounders, Site 1.	
5606	April 25	Multiplexed sounders, Series 0. Site 1.	
5607	April 26	Overnight run transducer No. 1 on EDO chart, Site 1.	
5608	April 26	RCM-4 S/N 4402	Array No. 1
5609	April 26	RCM-4 S/N 4401	Array No. 1
5610	April 26	RCM-4 S/N 4400	Array No. 1
5611	April 26	RCM-4 S/N 6561	Array No. 1
5612	April 26	RCM-4 S/N 3494	Array No. 1
5613	April 26	RCM-4 S/N 7919	Array No. 1
5614	April 26	RCM-4 S/N 1936	Array No. 2
5615	April 26	RCM-4 S/N 637	Array No. 2
5616	April 26	RCM-4 S/N 2470	Array No. 2
5617	April 26	RCM-4 S/N 5971	Array No. 2
5618	April 26	RCM-4 S/N 1386	Array No. 2
5619	April 26	RCM-4 S/N 6527	Array No. 2
5620	April 26	VACM S/N 217	Array No. 3
5621	April 26	VACM S/N 216	Array No. 3
5622	April 26	VACM S/N 218	Array No. 3
5623	April 26	VACM S/N 122	Array No. 3
5624	April 26	VACM S/N 121	Array No. 3
5625	April 26	VACM S/N 211	Array No. 3
5626	April 27	Furuno 606 Sounder No. 1	Series 1
5627	April 27	Furuno 606 Sounder No. 3	Series 1
5628	April 27	Multiplexed sounder	Series 1
5629	April 28	CTD profiles at 1/2 hour intervals	
5630	April 28	CTD profiles at 1/2 hour intervals	
5631	April 28	CTD profiles at 1/2 hour intervals	
5632	April 28	CTD profiles at 1/2 hour intervals	
5633	April 28	CTD profiles at 1/2 hour intervals	
5634	April 28	CTD profiles at 1/2 hour intervals	
5635	April 28	CTD profiles at 1/2 hour intervals	
5636	April 28	CTD profiles at 1/2 hour intervals	
5637	April 28	CTD profiles at 1/2 hour intervals	
5638	April 28	CTD profiles at 1/2 hour intervals	
5639	April 28	CTD profiles at 1/2 hour intervals	
5640	April 28	CTD profiles at 1/2 hour intervals	
5641	April 28	CTD profiles at 1/2 hour intervals	
5642	April 28	CTD profiles at 1/2 hour intervals	
5643	April 28	CTD profiles at 1/2 hour intervals	
5644	April 28	CTD profiles at 1/2 hour intervals	
5645	April 28	CTD profiles at 1/2 hour intervals	
5646	April 28	CTD profiles at 1/2 hour intervals	
5647	April 28	CTD profiles at 1/2 hour intervals	
5648	April 28	CTD profiles at 1/2 hour intervals	
5649	April 28	CTD profiles at 1/2 hour intervals	
5650	April 28	CTD profiles at 1/2 hour intervals	
5651	April 28	CTD profiles at 1/2 hour intervals	
5652	April 28	CTD profiles at 1/2 hour intervals	
5653	April 28	CTD profiles at 1/2 hour intervals	
5654	April 28	CTD profiles at 1/2 hour intervals	

EXPT. NO.	DATE	DESCRIPTION
5655	April 28	CTD profiles at 1/2 hour intervals.
5656	April 28	
5657	April 28	
5658	April 28	
5659	April 28	
5660	April 28	
5661	April 28	
5662	April 29	multiplexed sounder series 2
5663	April 29	multiplexed sounder series 3, abandaoned due to noise
5664	April 29	CTD
5665	April 30	multiplexed sounder series 4
5666	May 1	CTD
5667	May 1	
5668	May 1	
5669	May 1	
5670	May 1	
5671	May 1	multiplexed sounder, Transducer 1, series 5
5672	May 1	multiplexed sounder, series 6
5673	May 1	CTD at 1/2 hour intervals.
5674	May 1	
5675	May 1	
5676	May 1	
5677	May 1	
5678	May 1	
5679	May 1	
5680	May 1	
5681	May 1	
5682	May 1	
5683	May 1	
5684	May 1	
5685	May 1	
5686	May 1	
5687	May 1	
5688	May 1	
5689	May 1	
5690	May 1	multiplex sounder, series 7.

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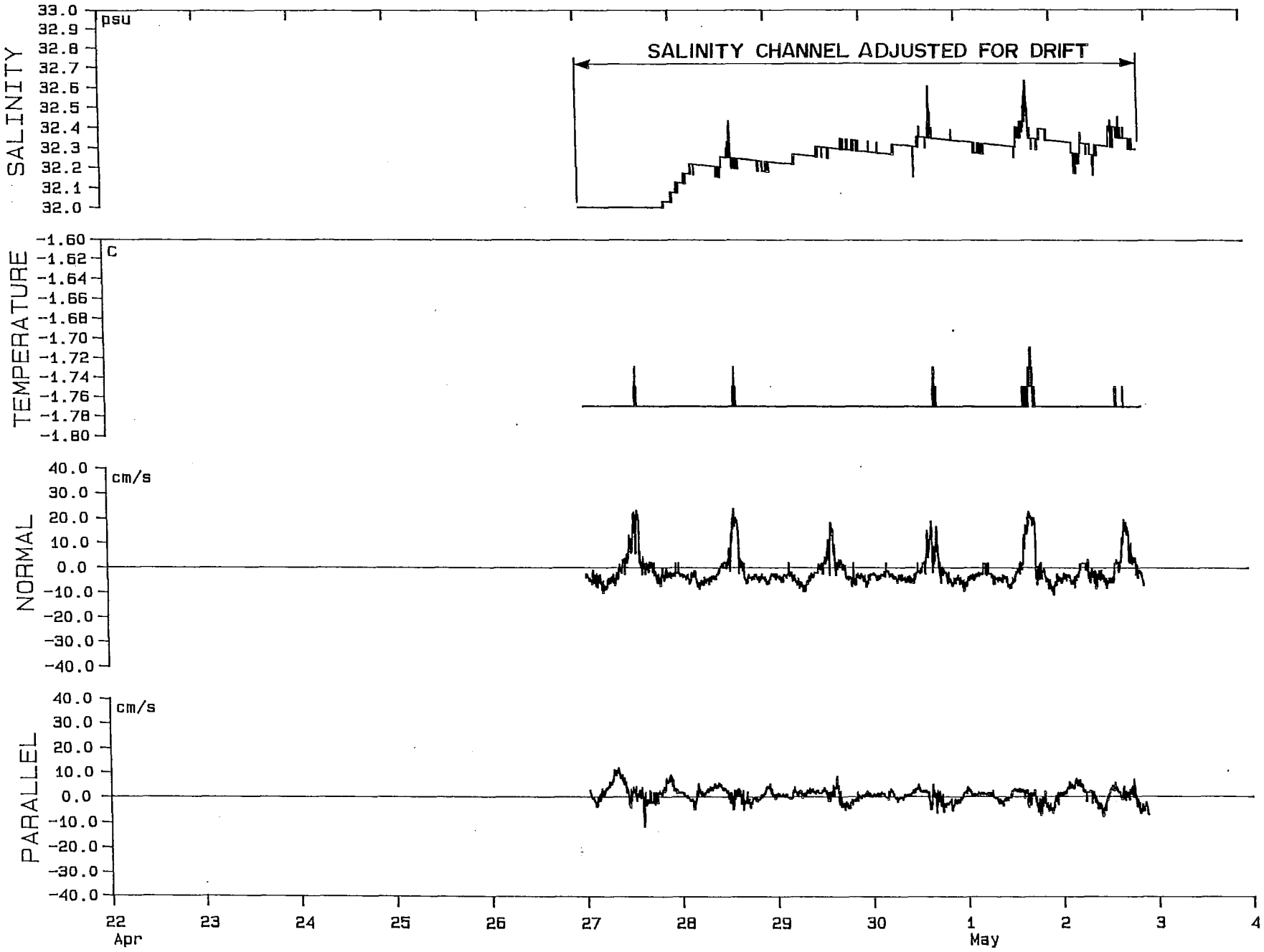
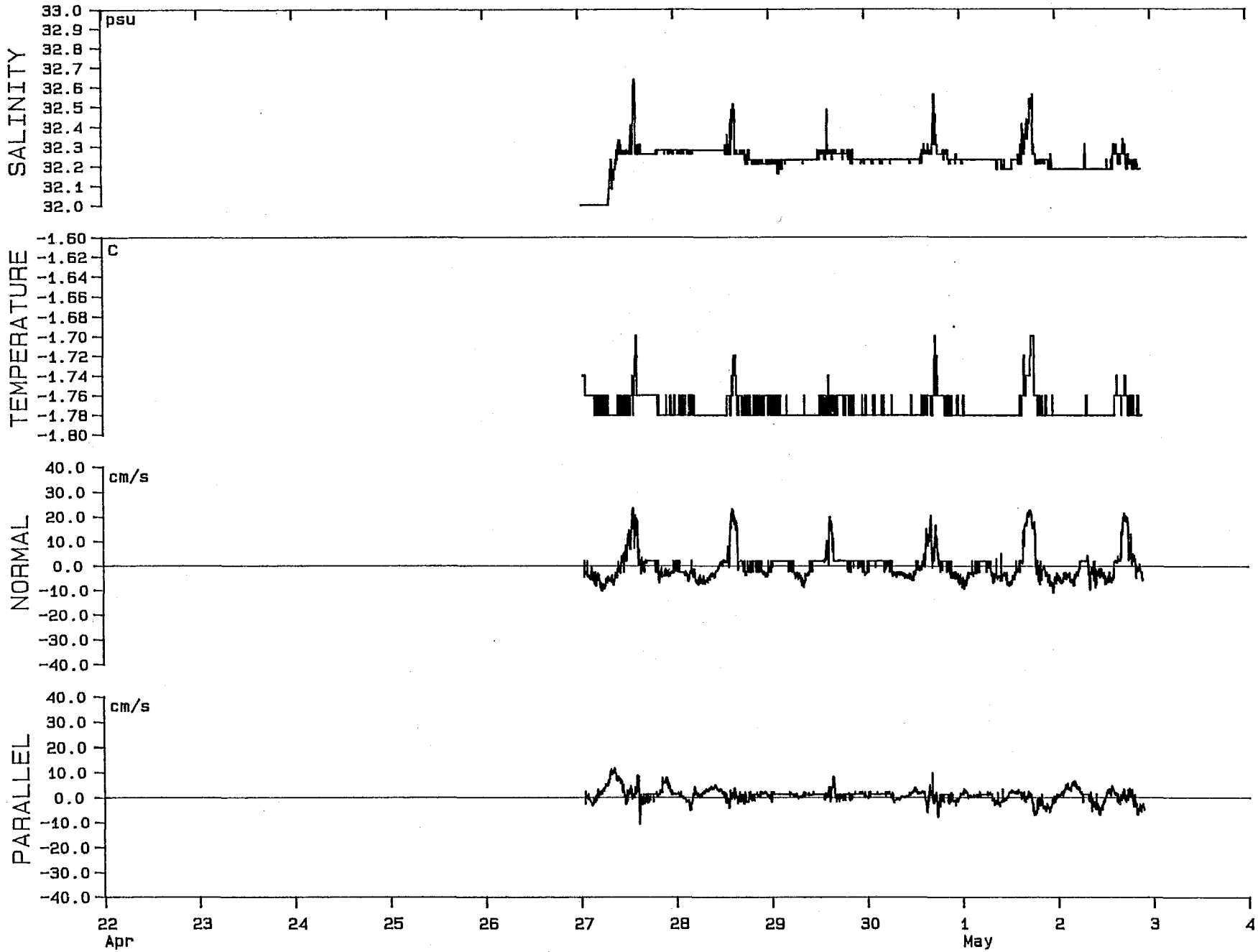
Appendix 1

Current meter data time series plots

CURRENT METER S/N 121
Instrument depth: 4.27 m



CURRENT METER S/N 122
Instrument depth: 5.77 m



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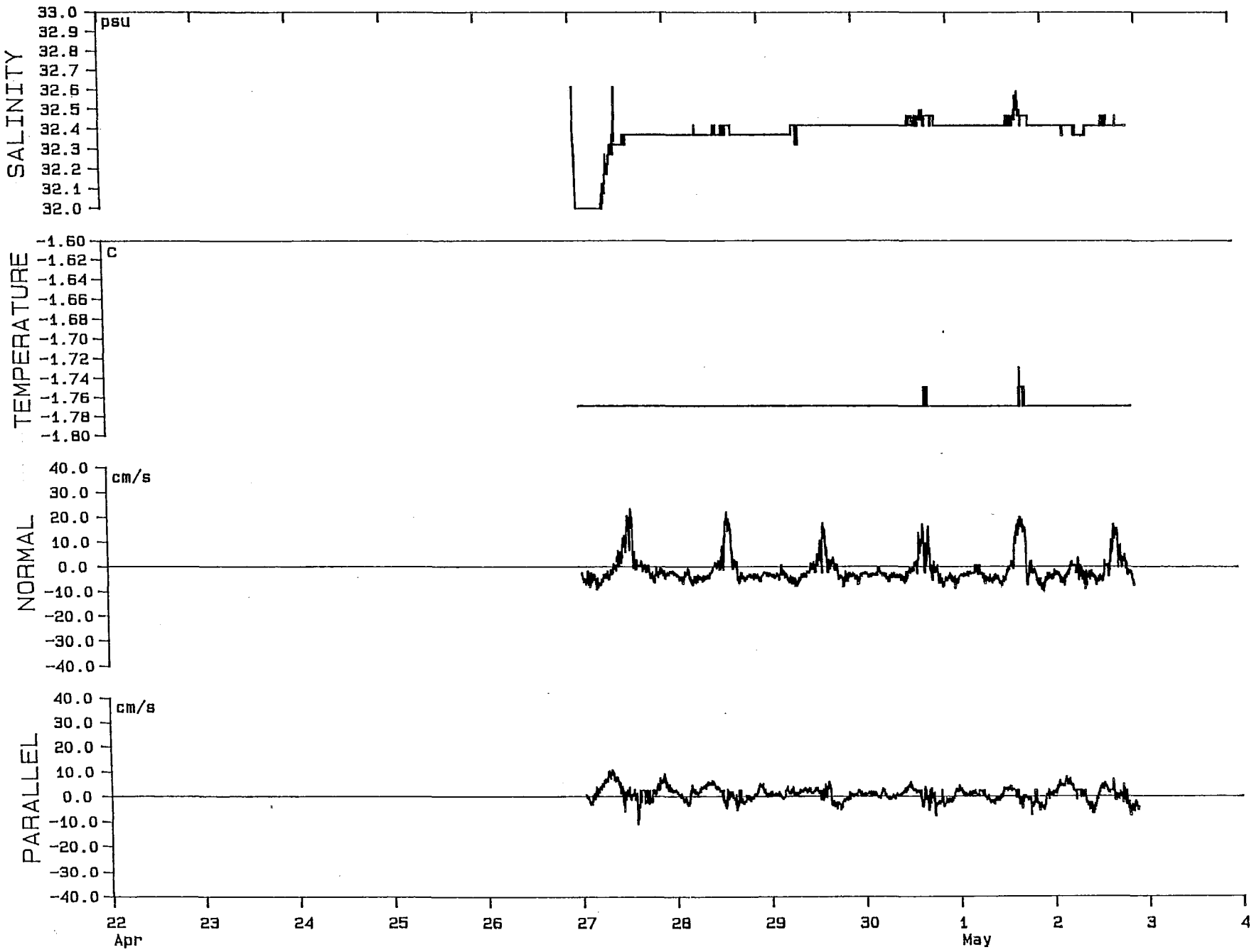
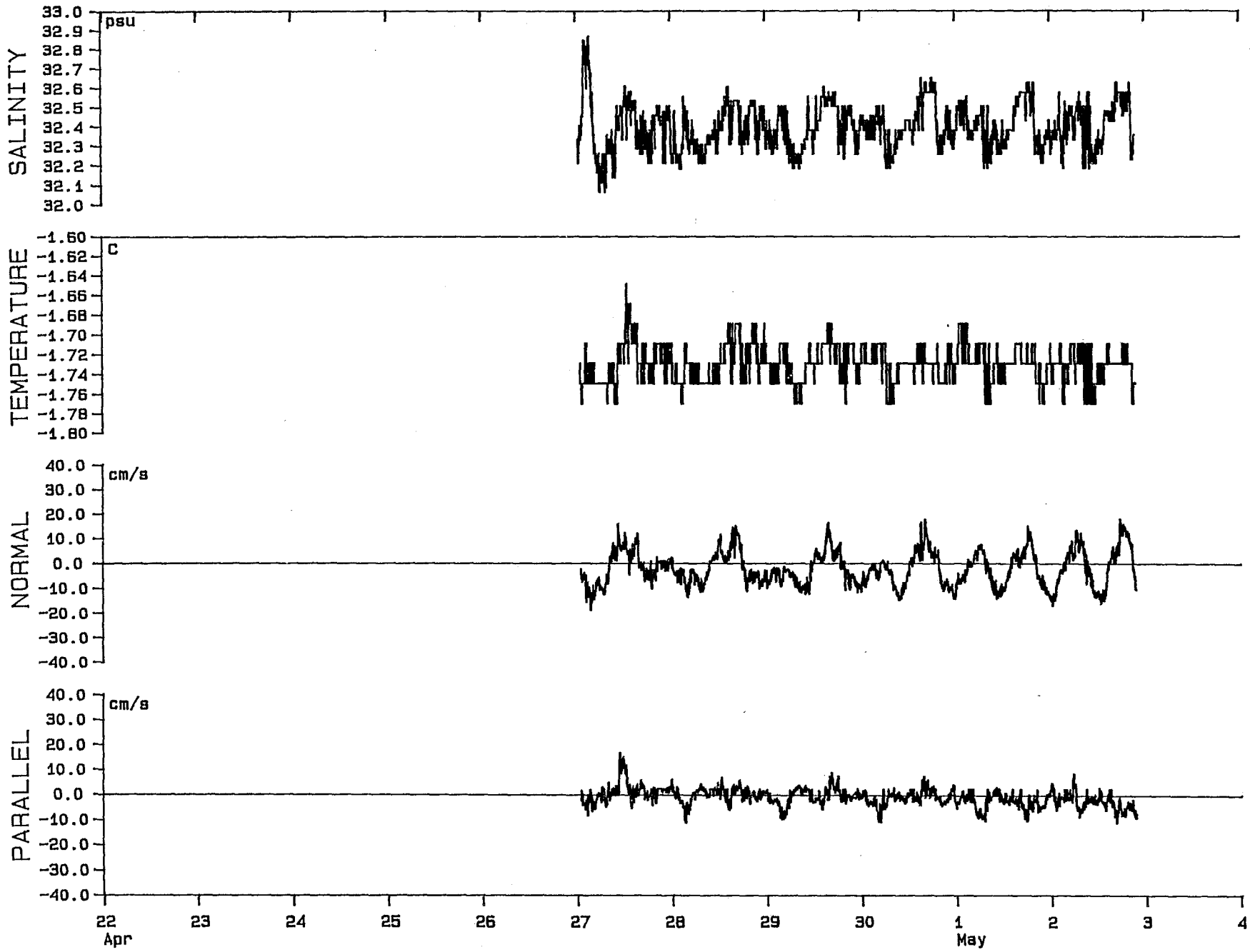
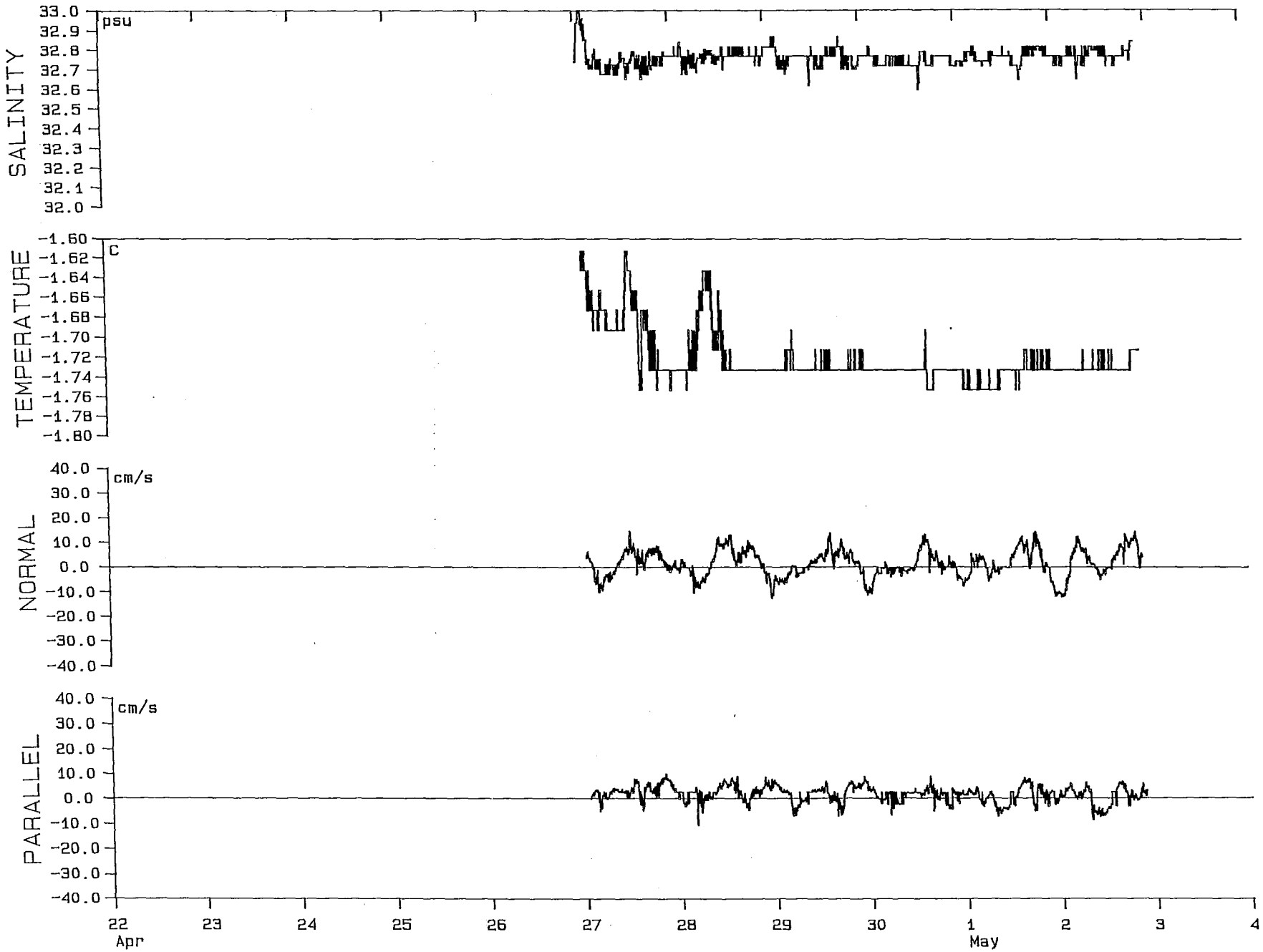
Instrument depth: 2.77 m



CURRENT METER S/N 216
Instrument depth: 17.77 m



CURRENT METER S/N 217
Instrument depth: 34.77 m



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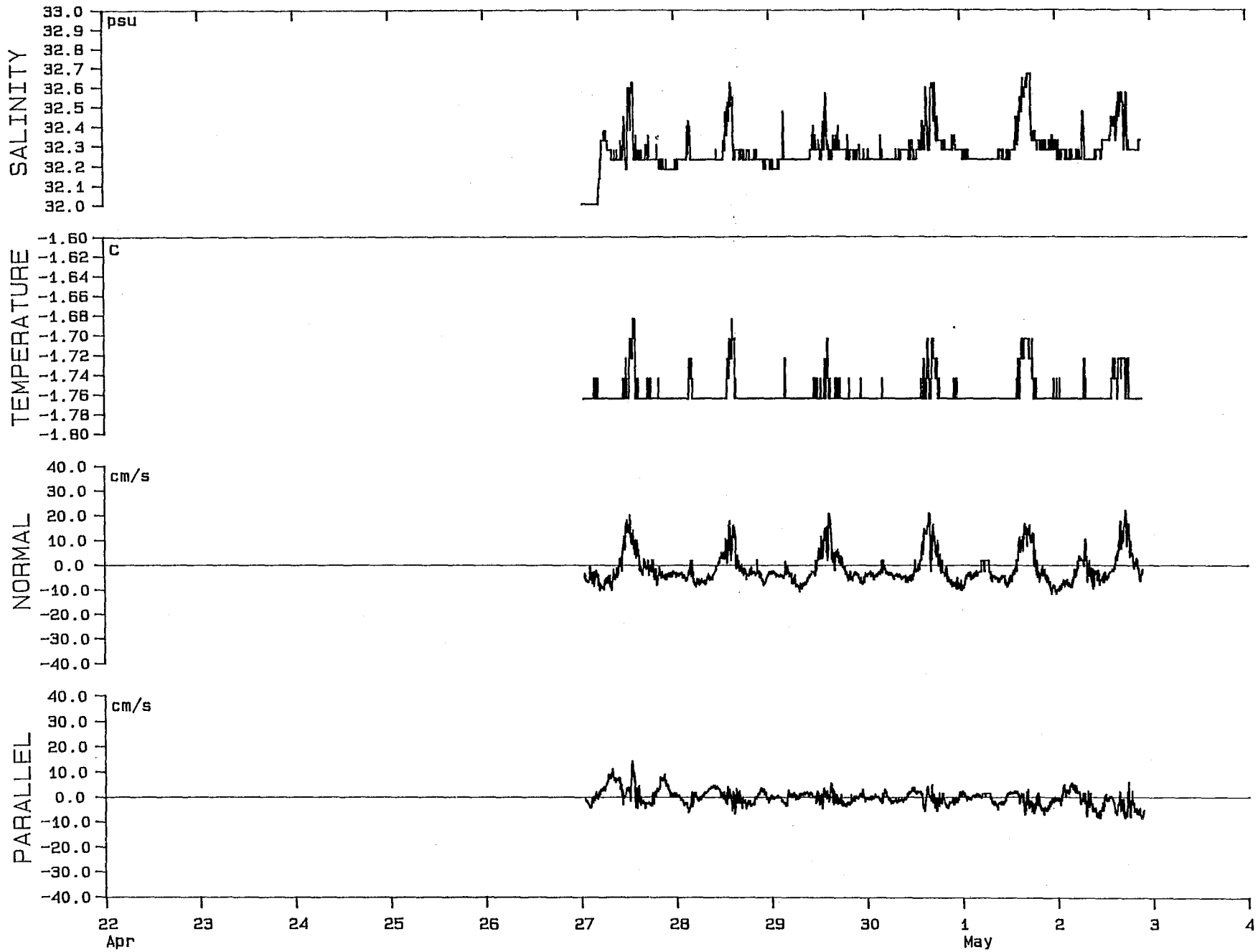

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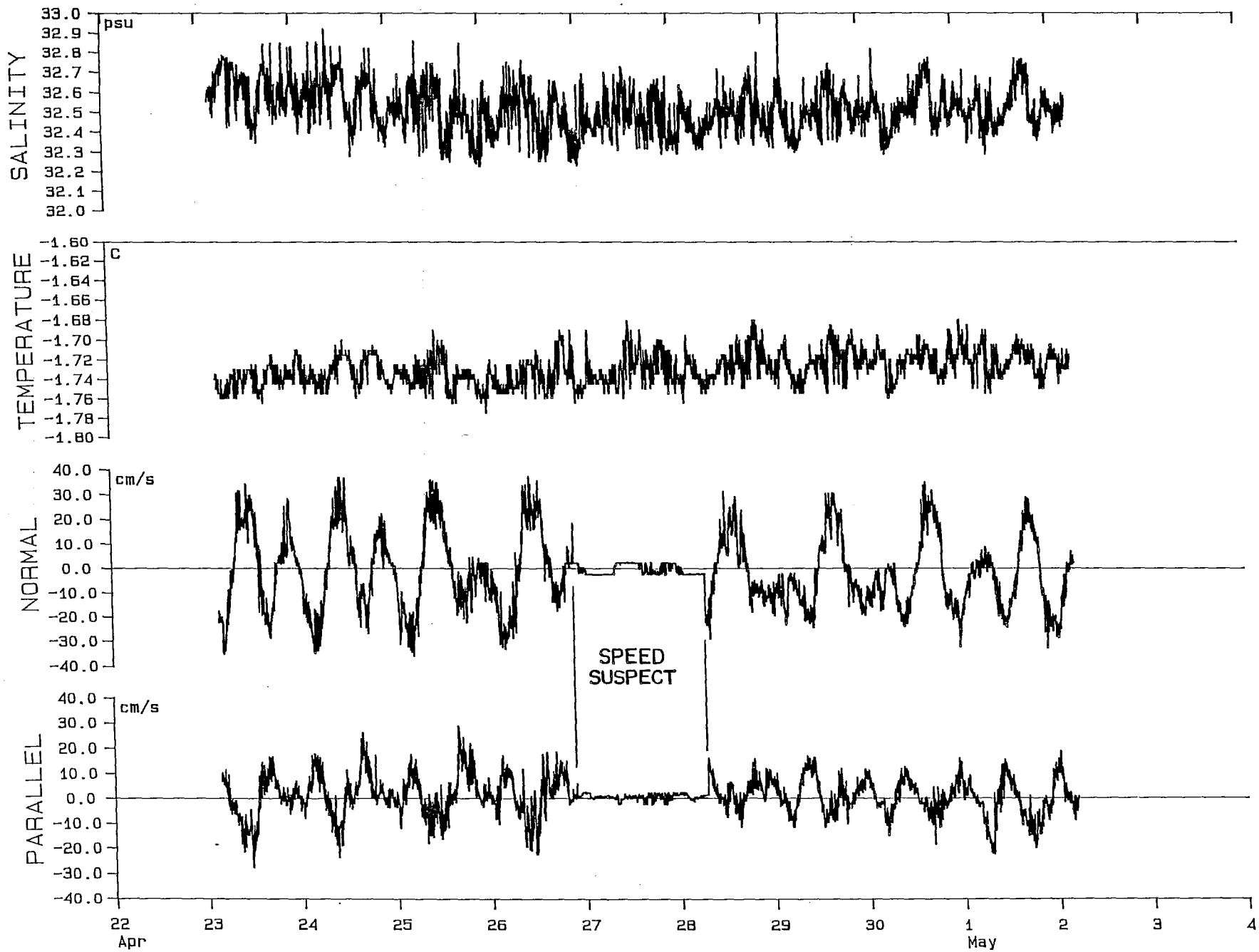

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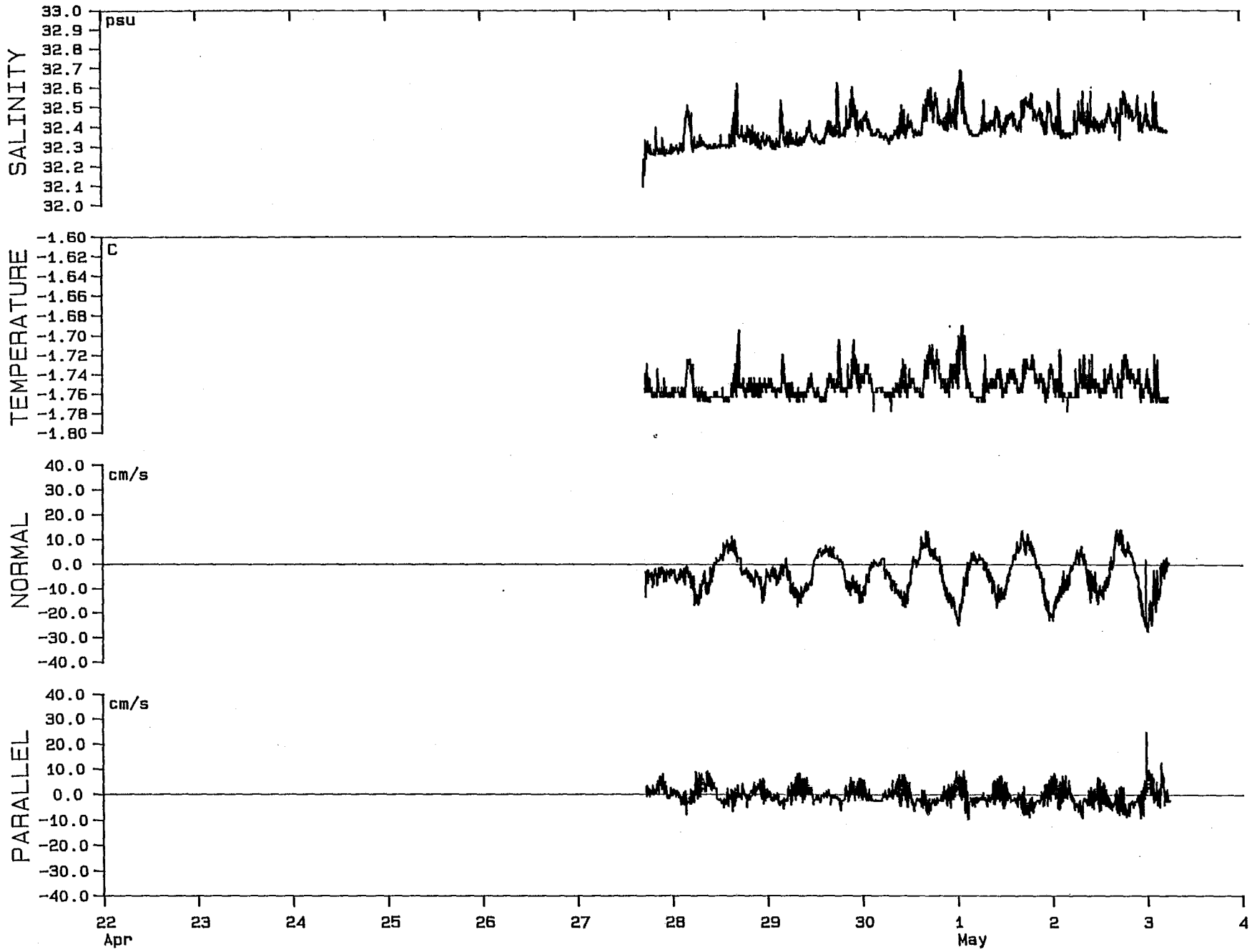

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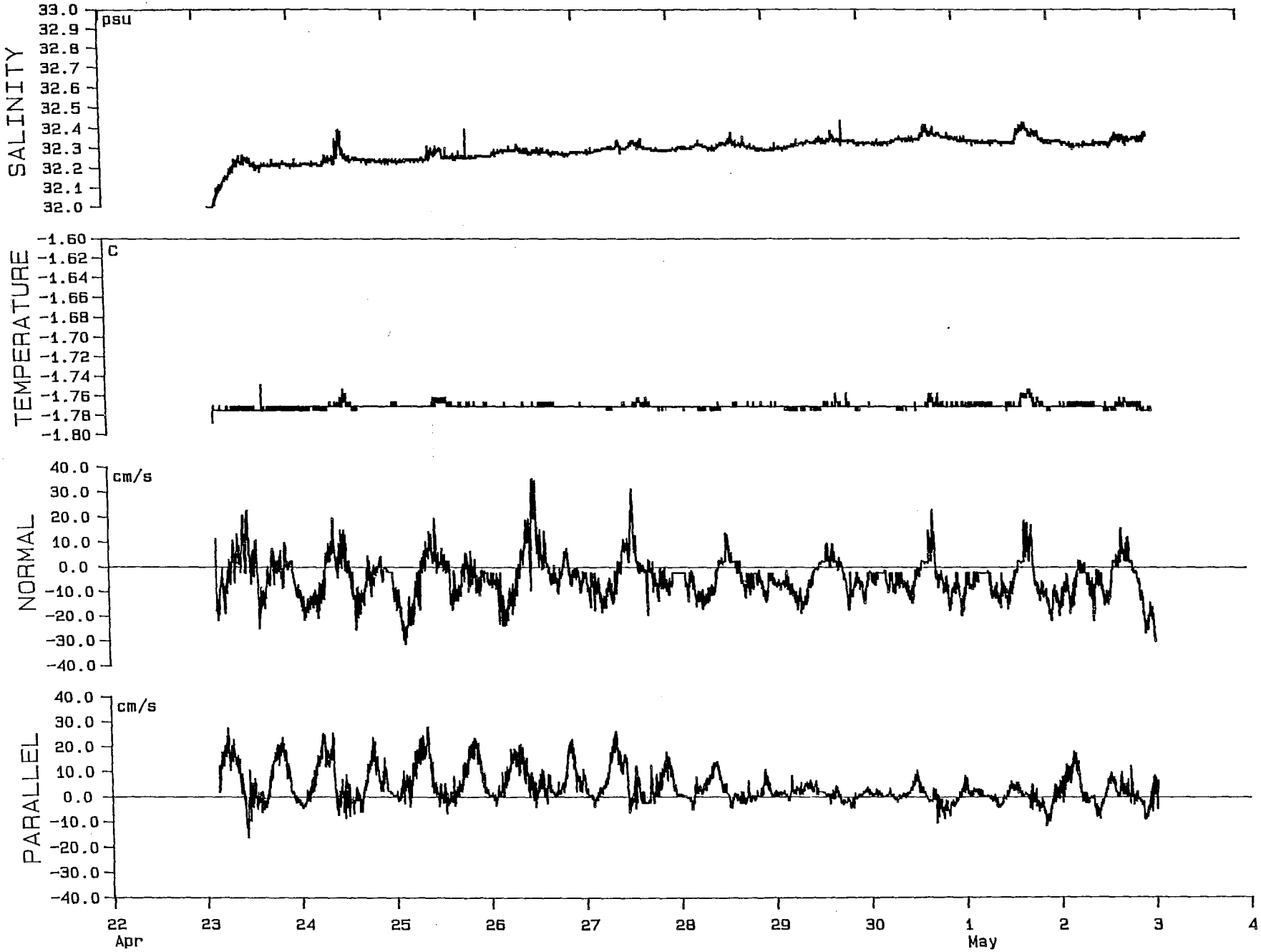

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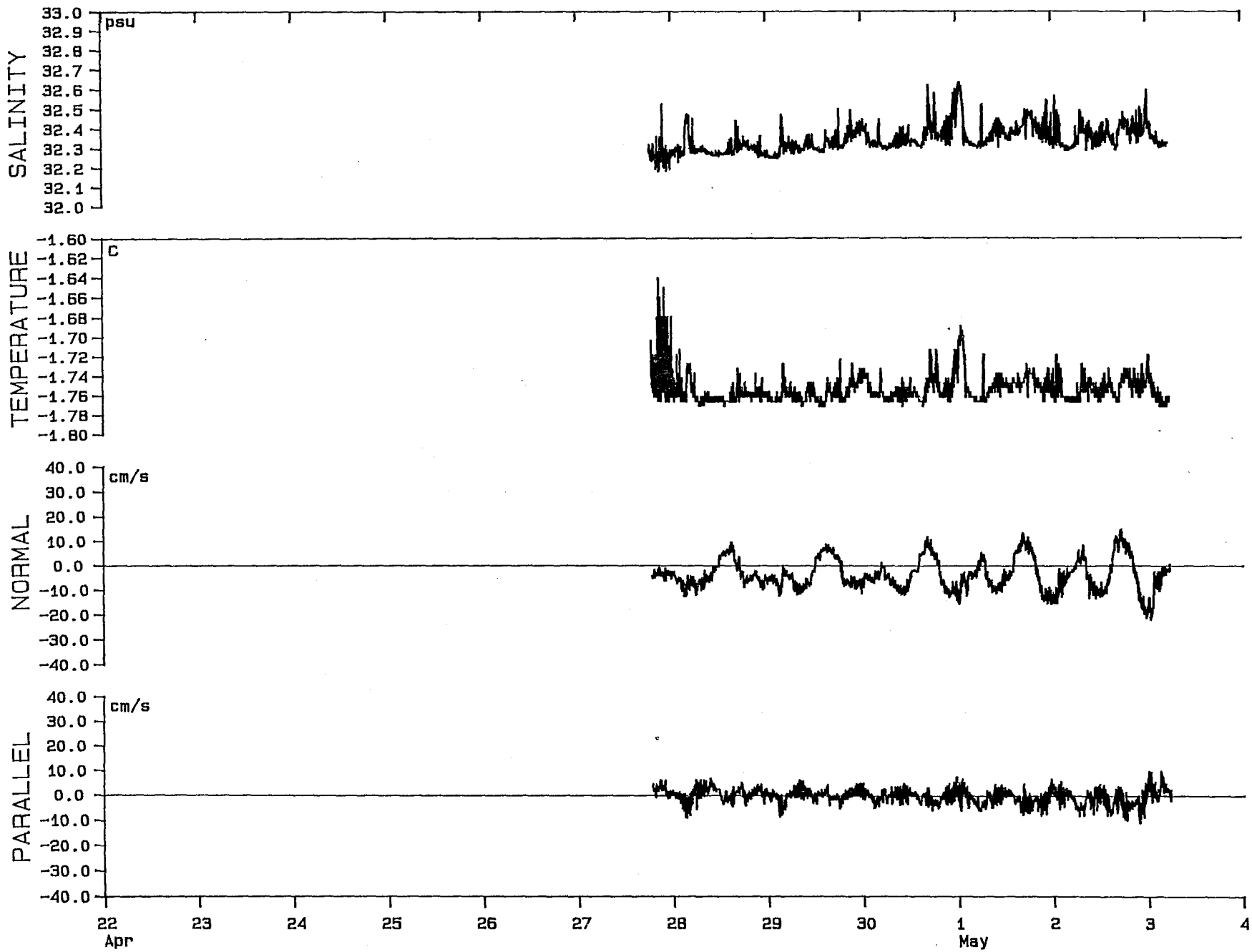

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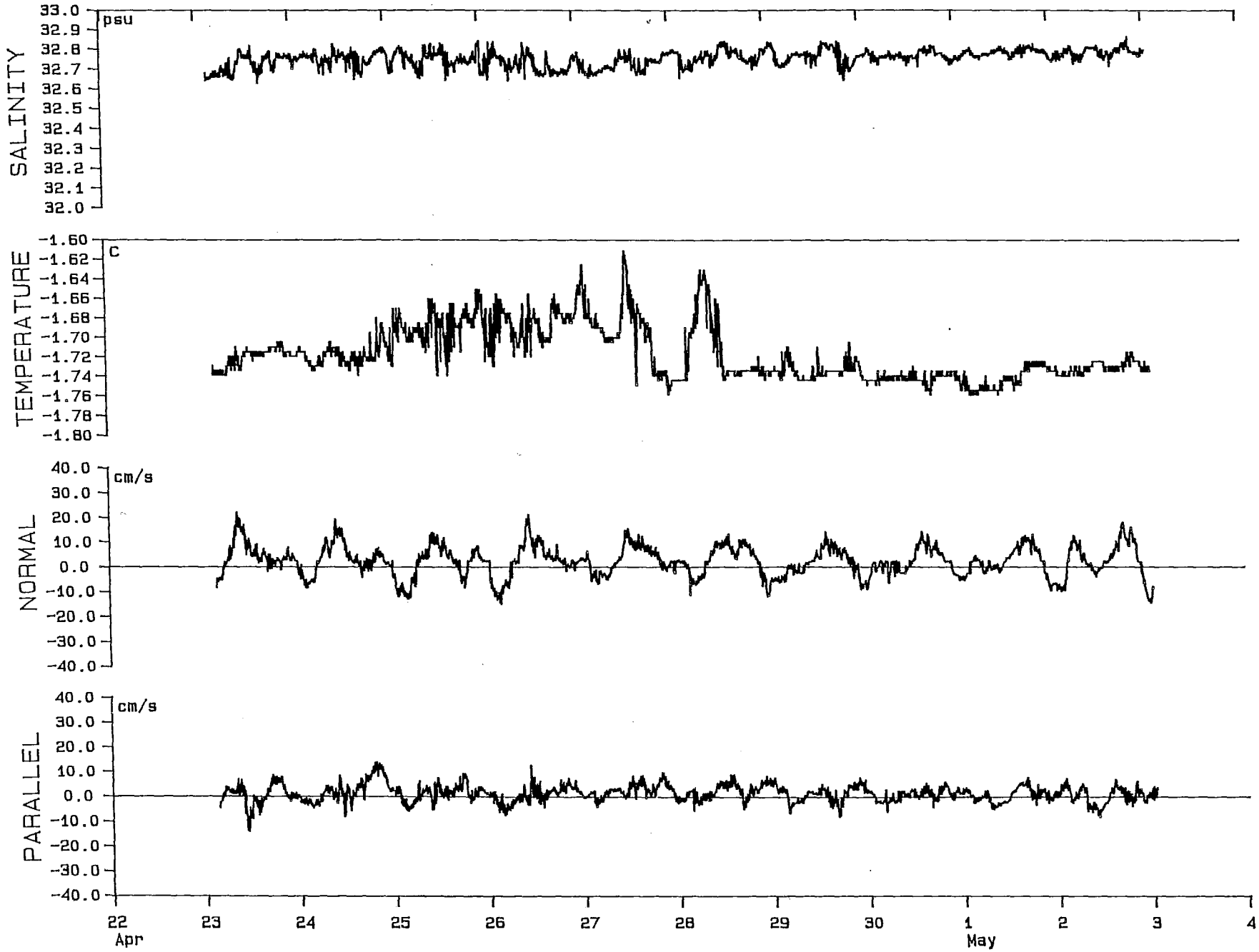

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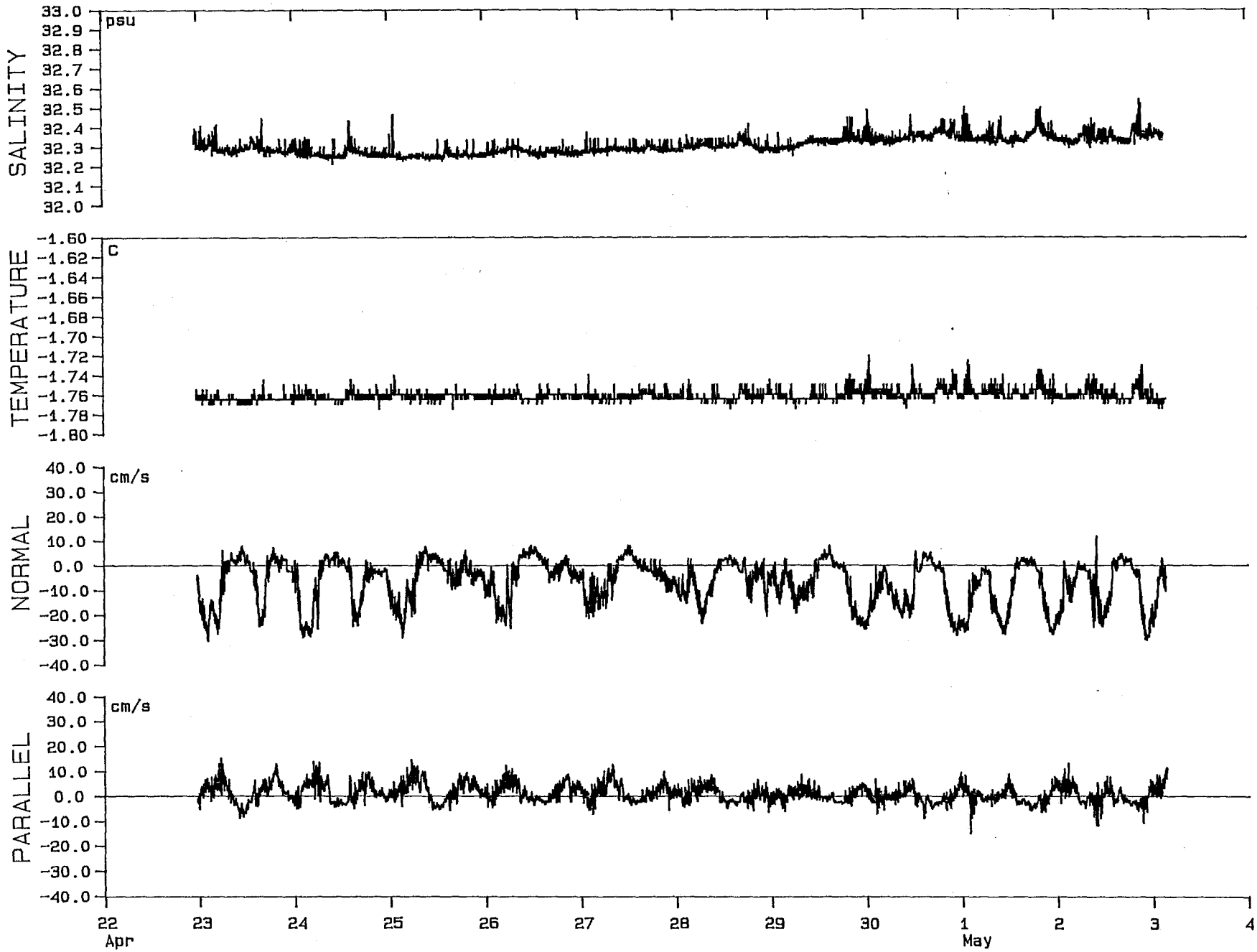

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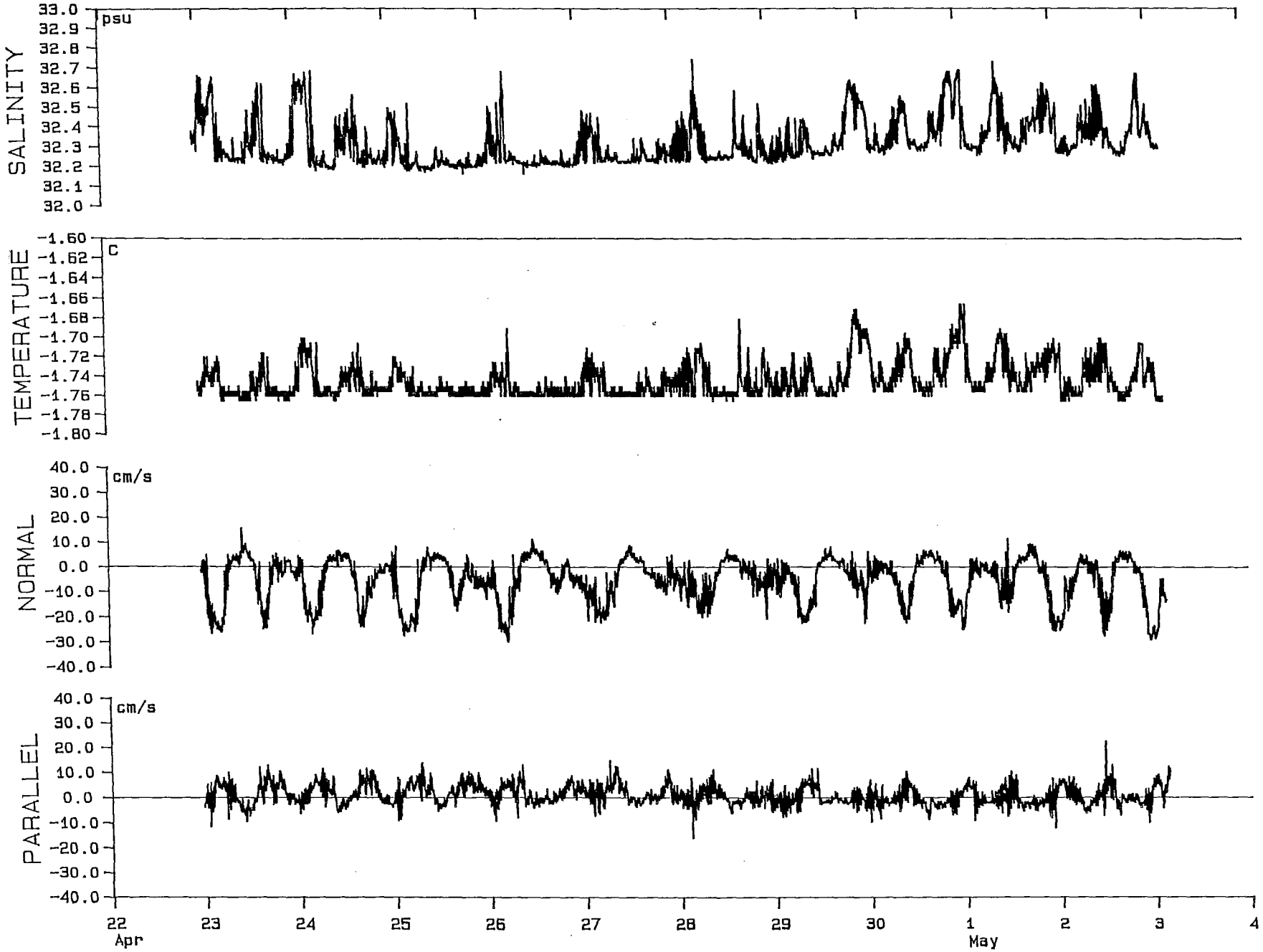

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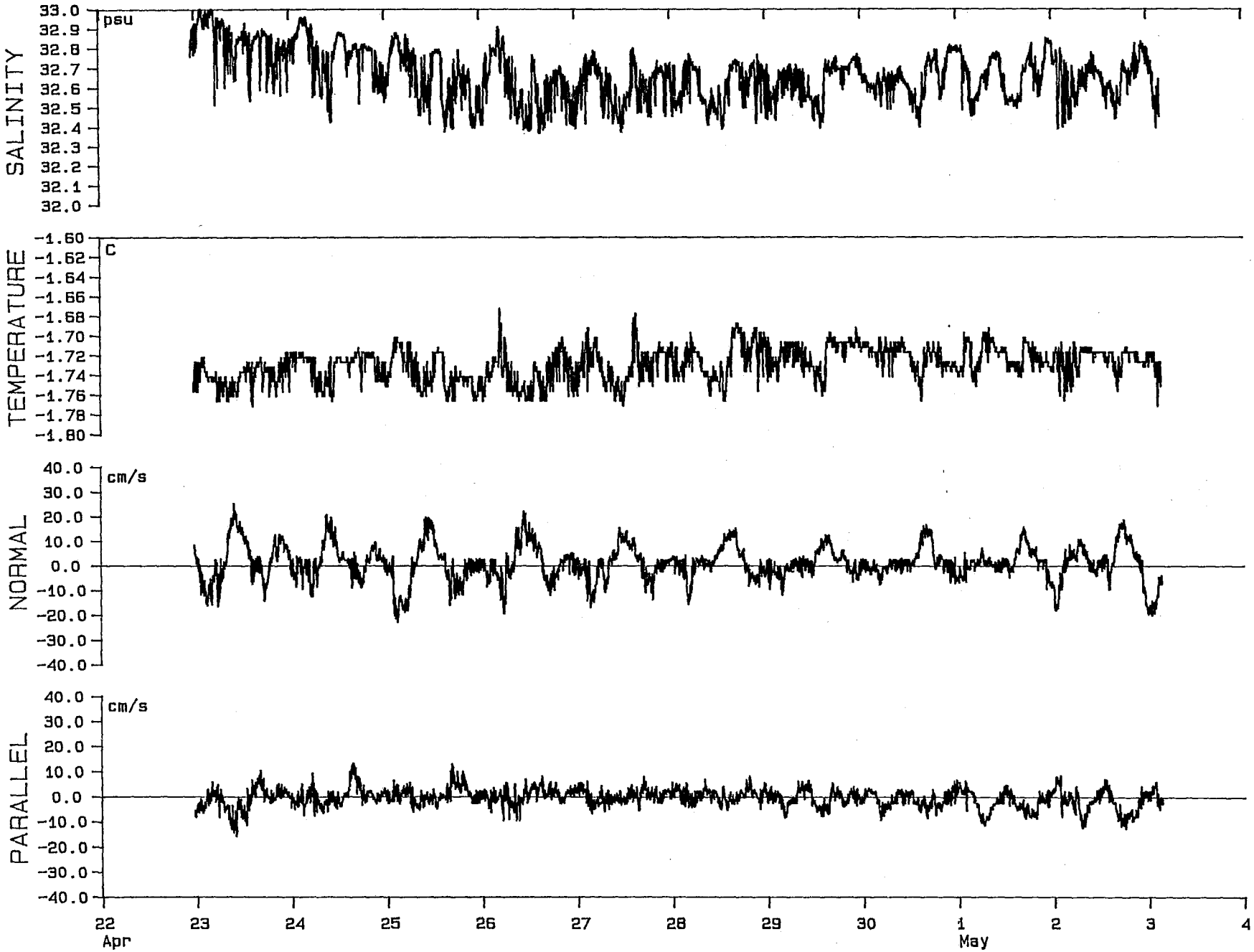

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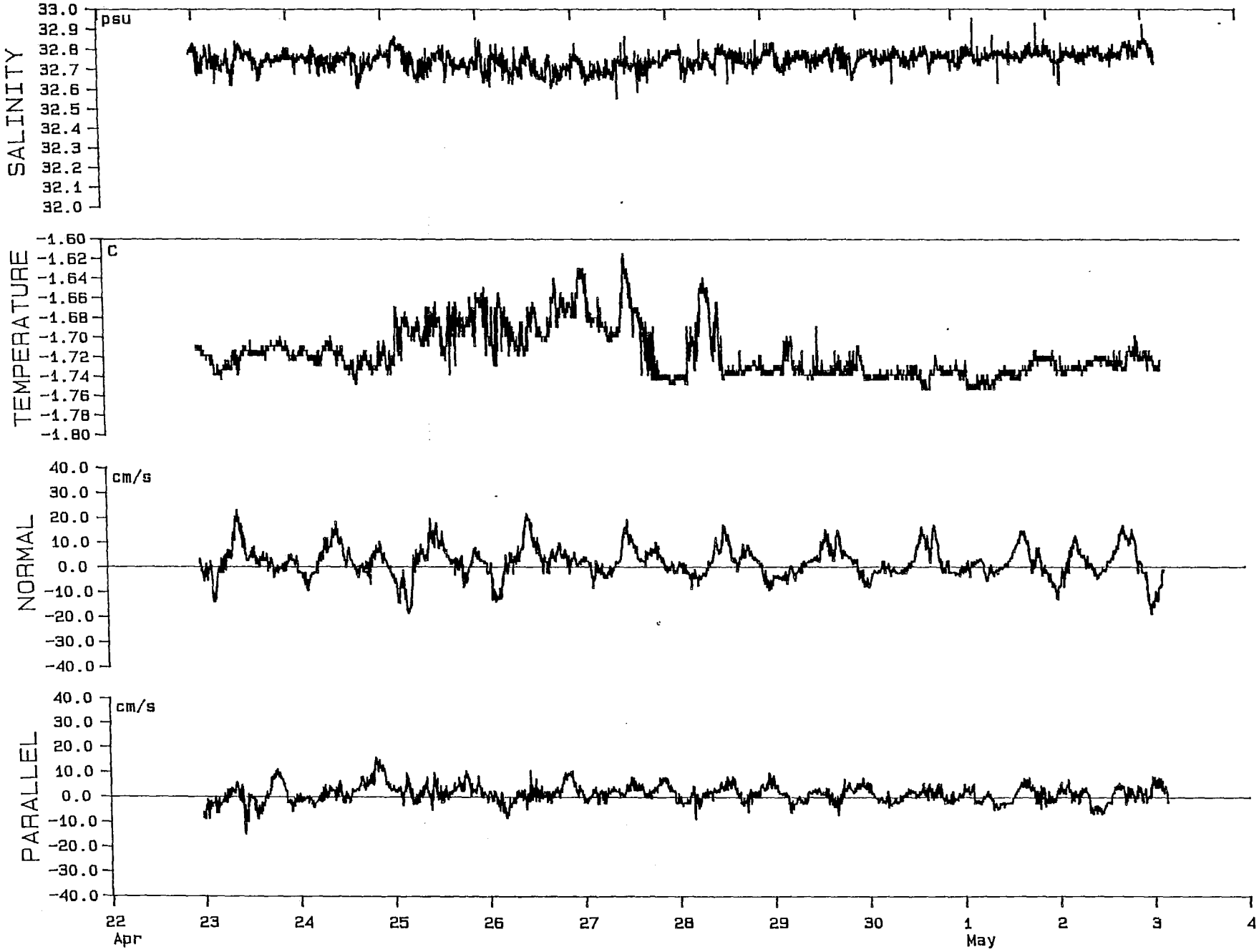
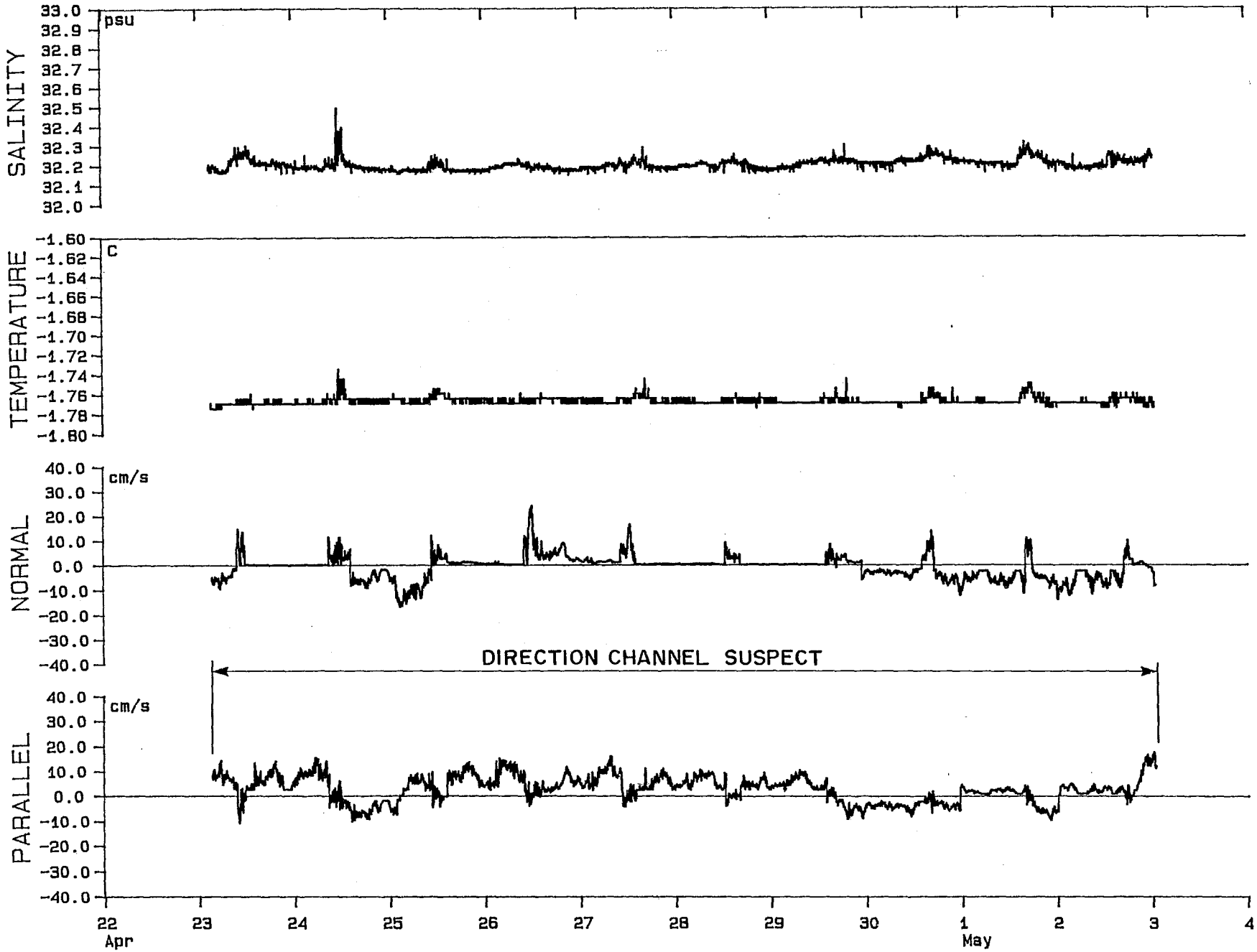


CURRENT METER S/N 5971
Instrument depth: 5.60 m



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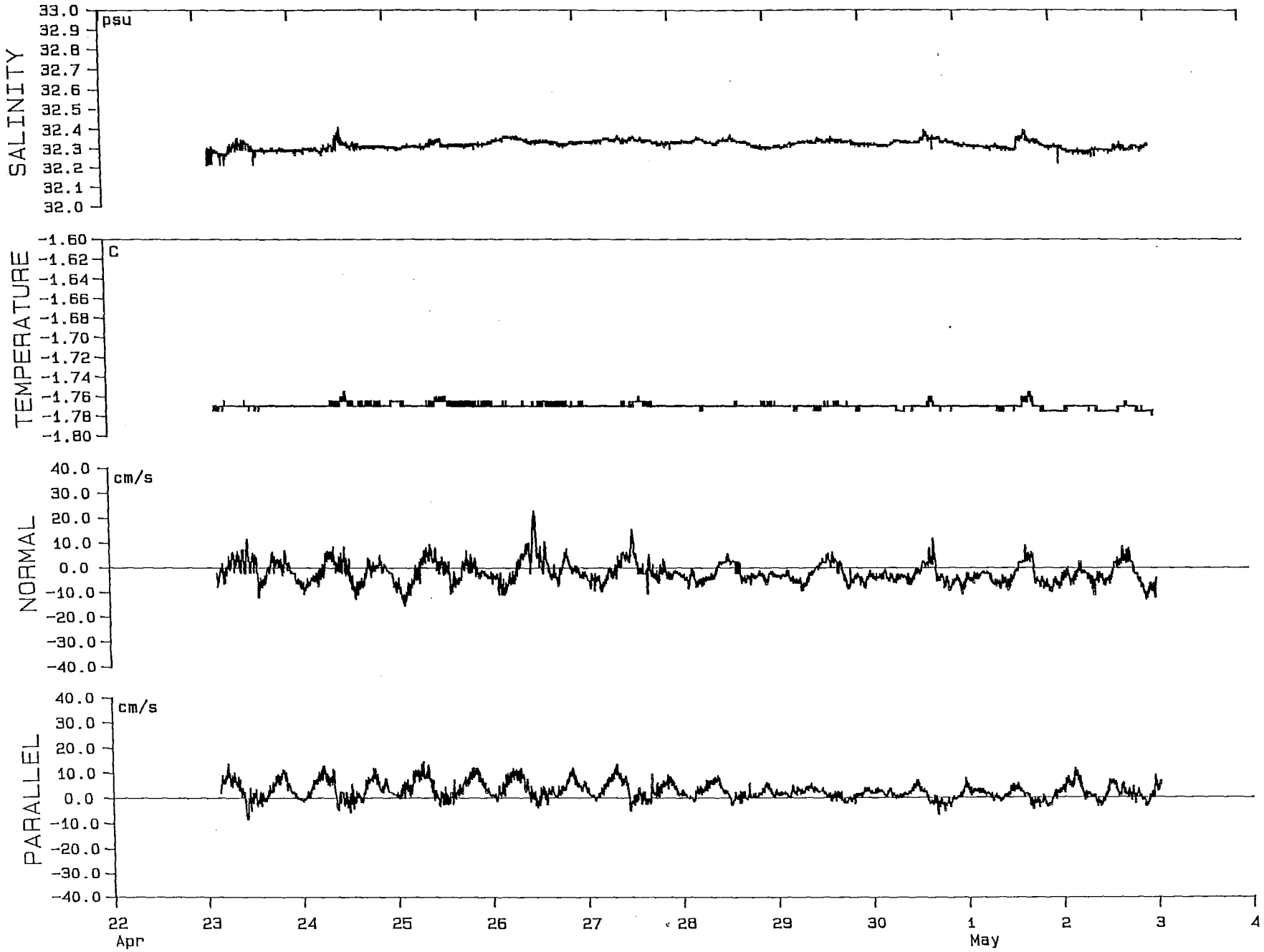

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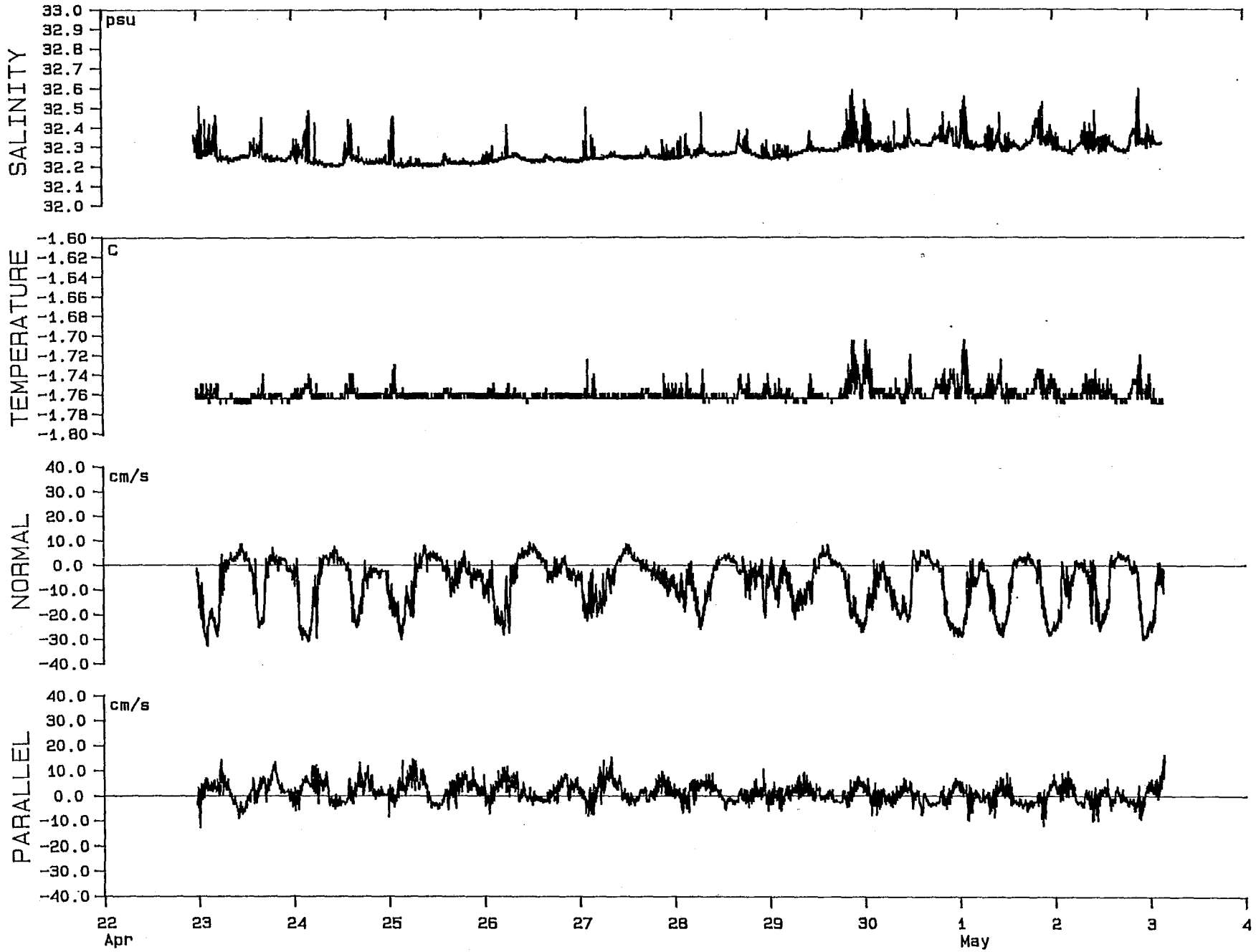

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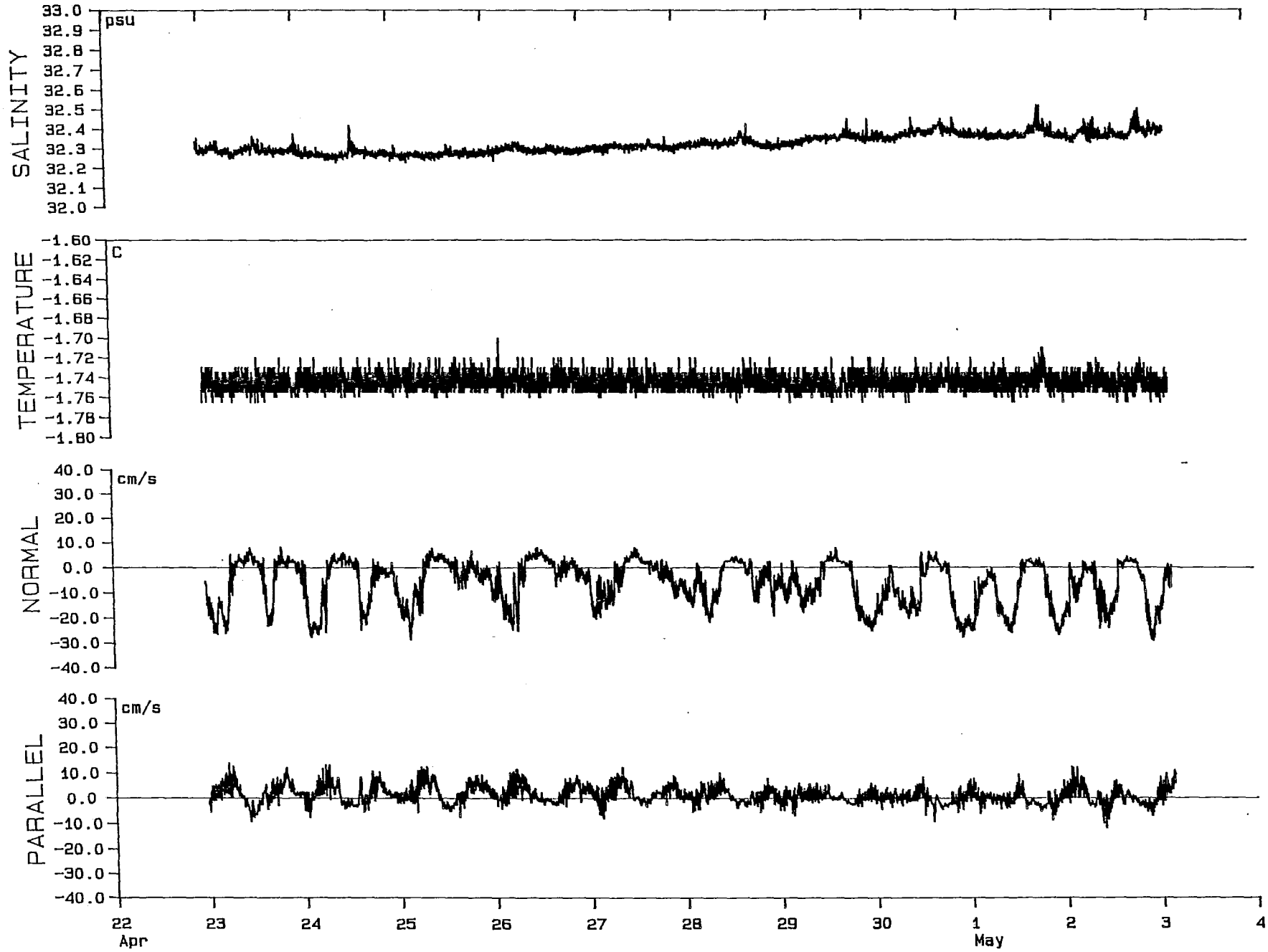


Appendix 2

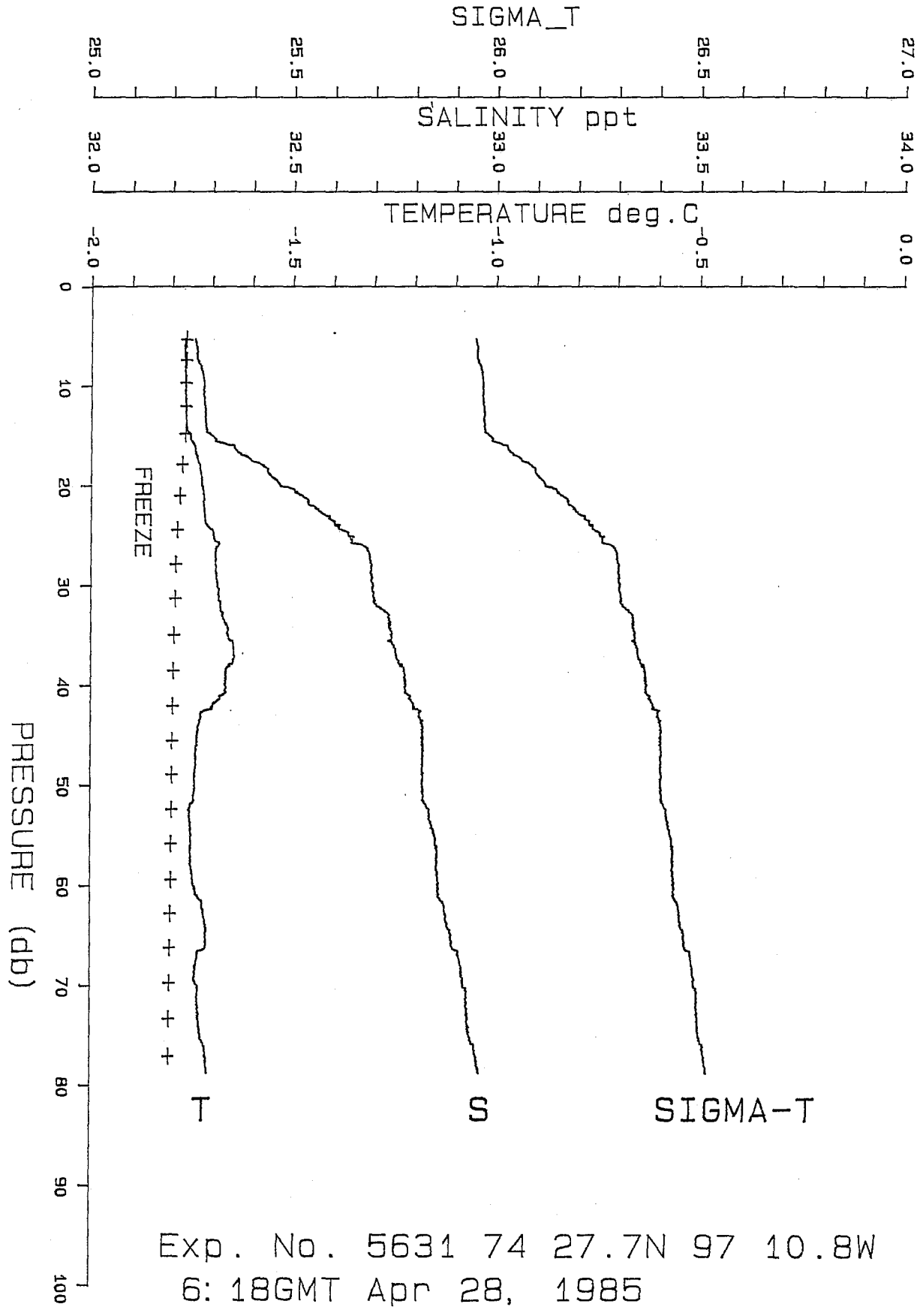
CTD listings and profile plots

Ice Keel '85 Experiment Barrow Strait Exp. No. 5631

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0618

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.2	-1.771	0.59562	32.256	25.949	1437.2
6.0	-1.772	0.59570	32.261	25.953	1437.2
7.0	-1.769	0.59572	32.259	25.952	1437.2
8.0	-1.769	0.59591	32.270	25.960	1437.3
9.0	-1.769	0.59604	32.277	25.966	1437.3
10.0	-1.768	0.59607	32.277	25.966	1437.3
11.0	-1.768	0.59612	32.279	25.968	1437.3
12.0	-1.766	0.59619	32.280	25.969	1437.4
13.0	-1.765	0.59622	32.281	25.969	1437.4
14.0	-1.765	0.59627	32.283	25.971	1437.4
15.0	-1.753	0.59679	32.300	25.985	1437.5
16.0	-1.743	0.59787	32.353	26.027	1437.6
17.0	-1.737	0.59848	32.382	26.051	1437.7
18.0	-1.730	0.59940	32.428	26.089	1437.8
19.0	-1.727	0.59978	32.447	26.104	1437.9
20.0	-1.725	0.60021	32.470	26.122	1437.9
21.0	-1.720	0.60123	32.523	26.166	1438.1
22.0	-1.720	0.60168	32.551	26.188	1438.1
23.0	-1.719	0.60234	32.588	26.218	1438.2
24.0	-1.711	0.60281	32.606	26.233	1438.3
25.0	-1.696	0.60362	32.637	26.257	1438.4
26.0	-1.686	0.60446	32.675	26.288	1438.5
27.0	-1.691	0.60460	32.688	26.299	1438.5
28.0	-1.690	0.60468	32.692	26.302	1438.5
29.0	-1.687	0.60477	32.693	26.303	1438.6
30.0	-1.687	0.60486	32.698	26.306	1438.6
31.0	-1.681	0.60498	32.699	26.307	1438.6
32.0	-1.678	0.60521	32.708	26.315	1438.7
33.0	-1.673	0.60581	32.737	26.338	1438.8
34.0	-1.662	0.60606	32.739	26.339	1438.8
35.0	-1.658	0.60621	32.743	26.343	1438.9
37.5	-1.648	0.60674	32.763	26.358	1439.0
40.0	-1.665	0.60673	32.779	26.372	1439.0
42.5	-1.719	0.60642	32.818	26.405	1438.8
45.0	-1.736	0.60619	32.822	26.409	1438.8
47.5	-1.739	0.60616	32.822	26.409	1438.8
50.0	-1.743	0.60614	32.823	26.410	1438.8
55.0	-1.750	0.60653	32.851	26.433	1438.9
60.0	-1.740	0.60694	32.862	26.441	1439.0
65.0	-1.713	0.60803	32.894	26.466	1439.3
70.0	-1.732	0.60824	32.924	26.491	1439.3
75.0	-1.726	0.60868	32.940	26.504	1439.5
78.7	-1.710	0.60941	32.964	26.523	1439.6



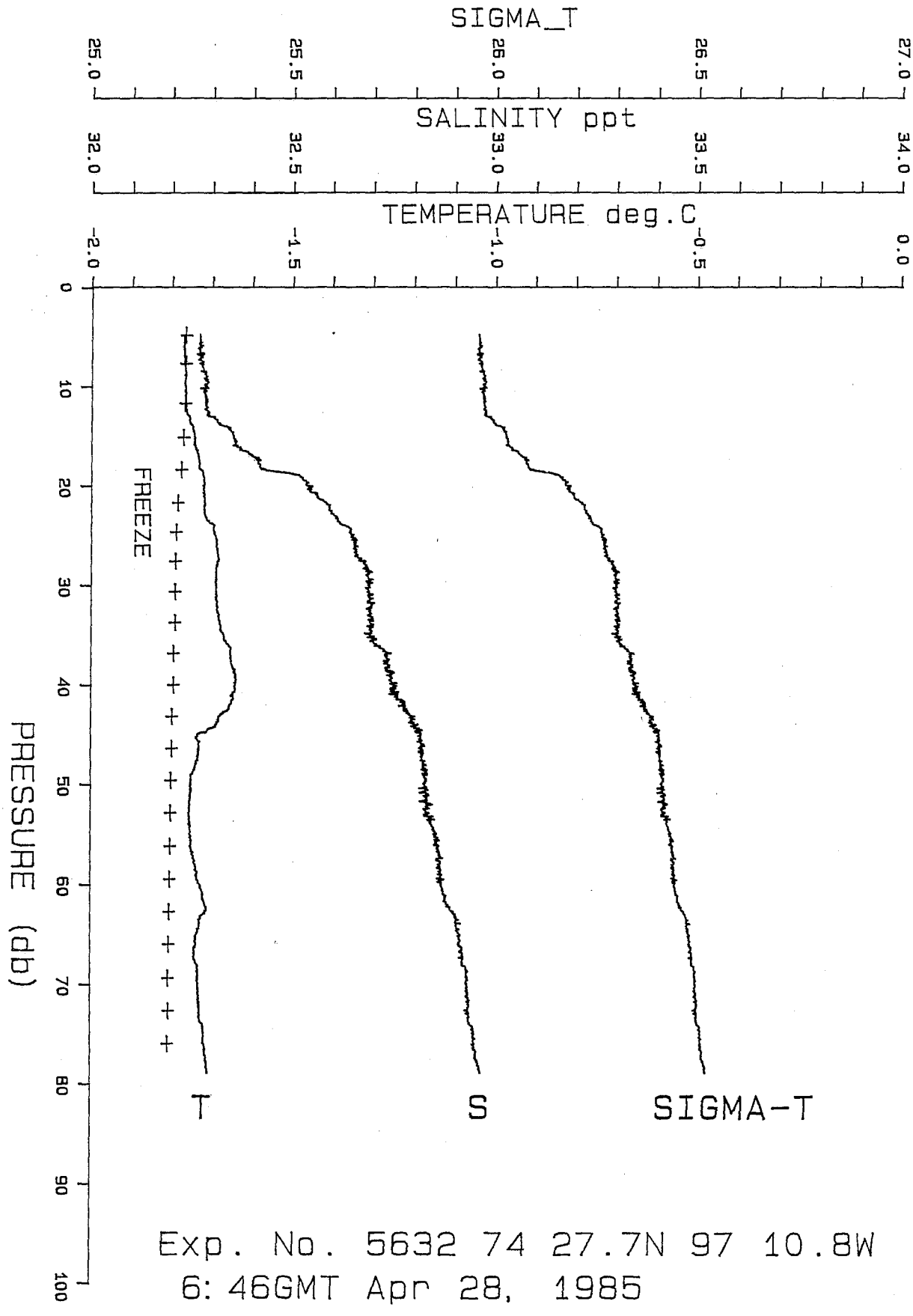
Exp. No. 5631 74 27.7N 97 10.8W
6: 18GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5632

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0646

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
4.8	-1.771	0.59580	32.267	25.959	1437.2
5.0	-1.772	0.59581	32.268	25.959	1437.2
6.0	-1.771	0.59583	32.268	25.959	1437.2
7.0	-1.770	0.59595	32.274	25.964	1437.2
8.0	-1.768	0.59602	32.274	25.964	1437.3
9.0	-1.767	0.59618	32.283	25.971	1437.3
10.0	-1.766	0.59625	32.285	25.973	1437.3
11.0	-1.767	0.59618	32.282	25.970	1437.3
12.0	-1.767	0.59626	32.285	25.973	1437.4
13.0	-1.757	0.59661	32.294	25.980	1437.4
14.0	-1.747	0.59747	32.335	26.013	1437.6
15.0	-1.744	0.59785	32.353	26.027	1437.6
16.0	-1.743	0.59803	32.362	26.035	1437.6
17.0	-1.735	0.59885	32.402	26.067	1437.8
18.0	-1.732	0.59921	32.419	26.081	1437.8
19.0	-1.721	0.60109	32.518	26.162	1438.0
20.0	-1.722	0.60148	32.541	26.180	1438.1
21.0	-1.721	0.60186	32.563	26.198	1438.1
22.0	-1.719	0.60237	32.590	26.220	1438.2
23.0	-1.716	0.60272	32.607	26.233	1438.2
24.0	-1.695	0.60355	32.632	26.253	1438.4
25.0	-1.690	0.60390	32.648	26.266	1438.4
26.0	-1.690	0.60407	32.657	26.273	1438.5
27.0	-1.684	0.60422	32.659	26.275	1438.5
28.0	-1.688	0.60453	32.681	26.293	1438.5
29.0	-1.688	0.60465	32.688	26.298	1438.6
30.0	-1.690	0.60468	32.691	26.301	1438.6
31.0	-1.687	0.60470	32.689	26.299	1438.6
32.0	-1.688	0.60487	32.698	26.307	1438.6
33.0	-1.683	0.60491	32.695	26.304	1438.7
34.0	-1.678	0.60501	32.695	26.304	1438.7
35.0	-1.669	0.60518	32.695	26.304	1438.8
37.5	-1.651	0.60623	32.735	26.336	1438.9
40.0	-1.642	0.60672	32.752	26.350	1439.0
42.5	-1.661	0.60680	32.777	26.370	1439.0
45.0	-1.734	0.60617	32.819	26.406	1438.8
47.5	-1.734	0.60629	32.824	26.410	1438.8
50.0	-1.751	0.60609	32.830	26.415	1438.8
55.0	-1.749	0.60662	32.856	26.436	1438.9
60.0	-1.726	0.60734	32.871	26.448	1439.1
65.0	-1.737	0.60798	32.917	26.486	1439.2
70.0	-1.731	0.60844	32.935	26.500	1439.4
75.0	-1.717	0.60905	32.953	26.514	1439.5
78.9	-1.707	0.60955	32.969	26.528	1439.7



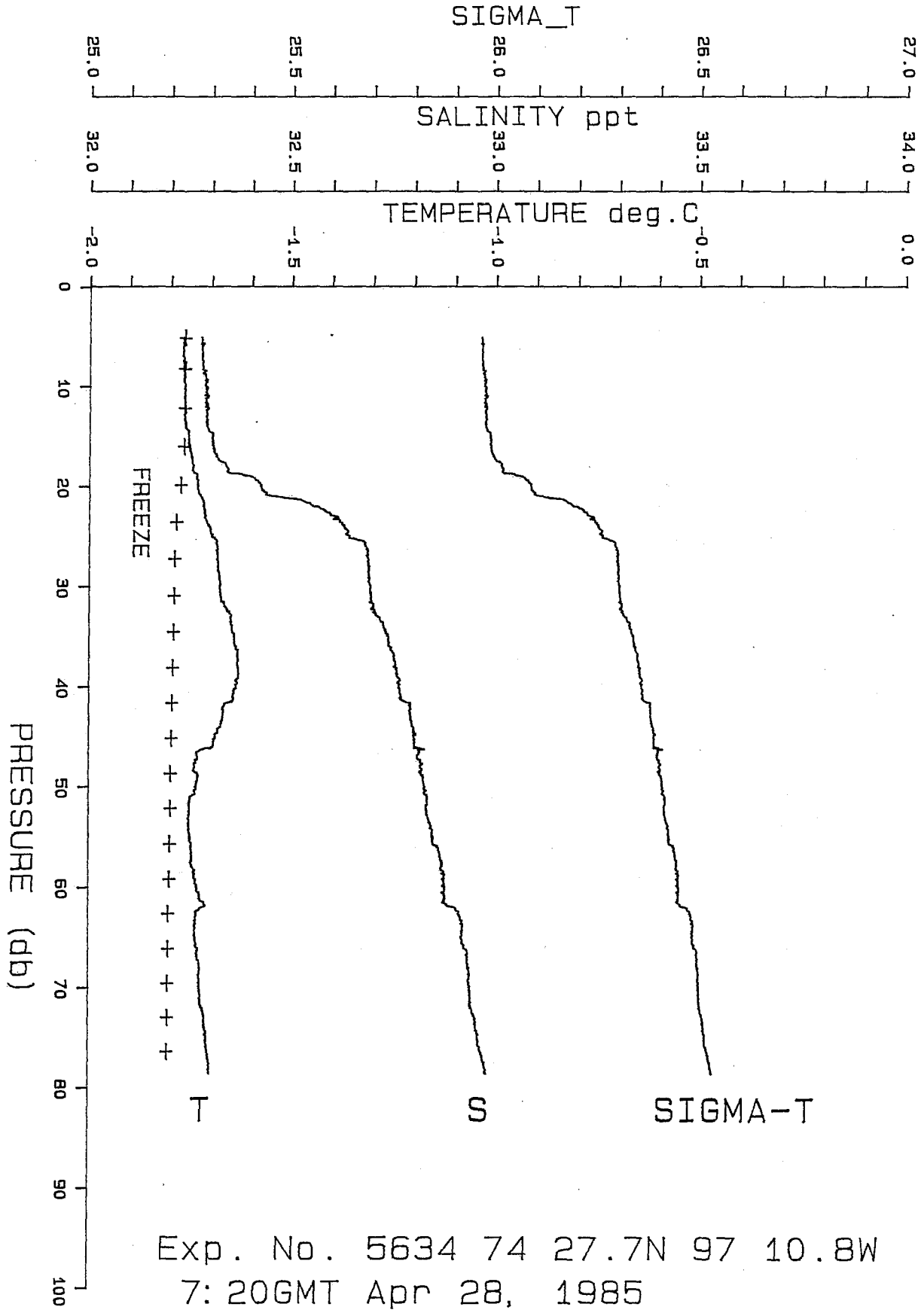
Exp. No. 5632 74 27.7N 97 10.8W
6:46GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5634

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0720

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.1	-1.770	0.59593	32.273	25.963	1437.2
6.0	-1.770	0.59594	32.274	25.964	1437.2
7.0	-1.772	0.59595	32.275	25.965	1437.2
8.0	-1.772	0.59600	32.278	25.967	1437.3
9.0	-1.768	0.59616	32.283	25.971	1437.3
10.0	-1.768	0.59622	32.285	25.973	1437.3
11.0	-1.766	0.59629	32.287	25.974	1437.3
12.0	-1.767	0.59629	32.287	25.975	1437.4
13.0	-1.767	0.59629	32.286	25.974	1437.4
14.0	-1.765	0.59635	32.287	25.974	1437.4
15.0	-1.759	0.59673	32.303	25.987	1437.5
16.0	-1.756	0.59681	32.304	25.988	1437.5
17.0	-1.750	0.59704	32.310	25.993	1437.6
18.0	-1.746	0.59759	32.338	26.015	1437.6
19.0	-1.738	0.59872	32.396	26.062	1437.8
20.0	-1.735	0.59928	32.425	26.086	1437.8
21.0	-1.726	0.60003	32.459	26.114	1437.9
22.0	-1.720	0.60175	32.554	26.191	1438.1
23.0	-1.716	0.60276	32.609	26.235	1438.2
24.0	-1.704	0.60331	32.629	26.251	1438.3
25.0	-1.697	0.60367	32.642	26.261	1438.4
26.0	-1.685	0.60457	32.681	26.293	1438.5
27.0	-1.685	0.60468	32.687	26.298	1438.5
28.0	-1.685	0.60475	32.691	26.301	1438.6
29.0	-1.679	0.60487	32.690	26.300	1438.6
30.0	-1.680	0.60494	32.695	26.304	1438.6
31.0	-1.675	0.60504	32.695	26.304	1438.7
32.0	-1.665	0.60533	32.700	26.308	1438.7
33.0	-1.650	0.60582	32.713	26.318	1438.8
34.0	-1.649	0.60611	32.729	26.331	1438.9
35.0	-1.645	0.60639	32.739	26.339	1438.9
37.5	-1.635	0.60686	32.755	26.352	1439.0
40.0	-1.638	0.60698	32.763	26.359	1439.1
42.5	-1.669	0.60688	32.791	26.382	1439.0
45.0	-1.689	0.60670	32.800	26.390	1439.0
47.5	-1.737	0.60611	32.817	26.404	1438.8
50.0	-1.739	0.60631	32.829	26.415	1438.8
55.0	-1.751	0.60642	32.846	26.429	1438.9
60.0	-1.734	0.60733	32.878	26.454	1439.1
65.0	-1.736	0.60801	32.919	26.487	1439.2
70.0	-1.726	0.60861	32.940	26.504	1439.4
75.0	-1.711	0.60931	32.961	26.521	1439.6
78.6	-1.703	0.60985	32.982	26.538	1439.7



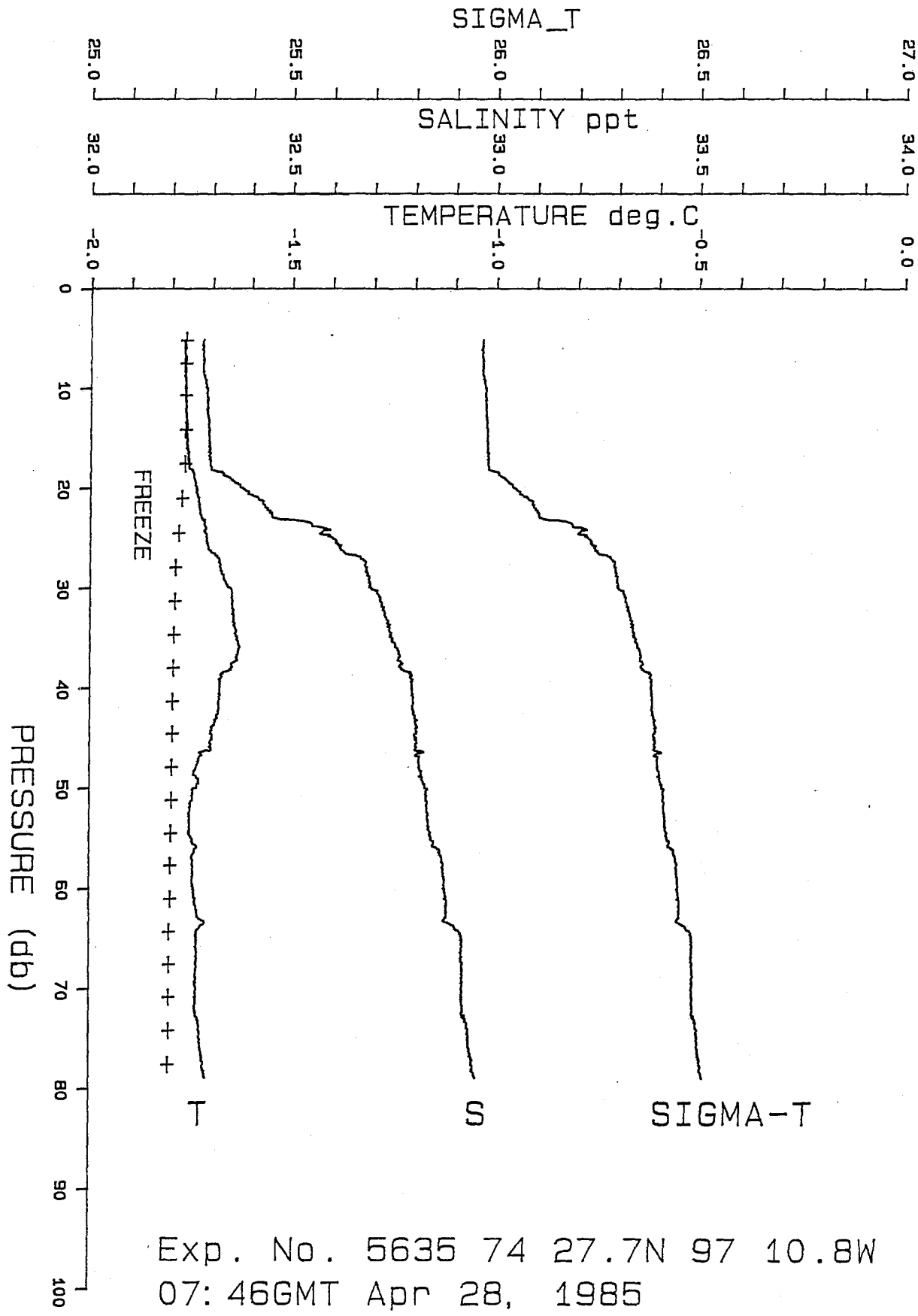
Exp. No. 5634 74 27.7N 97 10.8W
7:20GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5635

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0746

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.1	-1.771	0.59595	32.276	25.966	1437.2
6.0	-1.769	0.59595	32.273	25.963	1437.2
7.0	-1.772	0.59599	32.277	25.967	1437.2
8.0	-1.770	0.59601	32.276	25.966	1437.3
9.0	-1.768	0.59611	32.280	25.969	1437.3
10.0	-1.768	0.59622	32.285	25.973	1437.3
11.0	-1.769	0.59624	32.287	25.974	1437.3
12.0	-1.768	0.59625	32.286	25.973	1437.4
13.0	-1.767	0.59635	32.290	25.977	1437.4
14.0	-1.767	0.59638	32.291	25.978	1437.4
15.0	-1.764	0.59644	32.291	25.978	1437.4
16.0	-1.763	0.59646	32.291	25.977	1437.4
17.0	-1.759	0.59657	32.292	25.978	1437.5
18.0	-1.757	0.59669	32.296	25.982	1437.5
19.0	-1.745	0.59776	32.346	26.022	1437.7
20.0	-1.740	0.59841	32.379	26.049	1437.7
21.0	-1.734	0.59918	32.418	26.080	1437.8
22.0	-1.731	0.59960	32.439	26.097	1437.9
23.0	-1.725	0.60015	32.464	26.118	1438.0
24.0	-1.716	0.60236	32.585	26.215	1438.2
25.0	-1.714	0.60267	32.601	26.229	1438.3
26.0	-1.709	0.60308	32.619	26.243	1438.3
27.0	-1.682	0.60443	32.669	26.283	1438.5
28.0	-1.678	0.60475	32.683	26.294	1438.6
29.0	-1.670	0.60501	32.689	26.299	1438.6
30.0	-1.652	0.60545	32.695	26.303	1438.8
31.0	-1.648	0.60589	32.716	26.321	1438.8
32.0	-1.647	0.60605	32.723	26.326	1438.9
33.0	-1.644	0.60626	32.732	26.334	1438.9
34.0	-1.640	0.60646	32.739	26.339	1438.9
35.0	-1.637	0.60669	32.748	26.347	1439.0
37.5	-1.651	0.60684	32.771	26.365	1439.0
40.0	-1.679	0.60671	32.794	26.384	1438.9
42.5	-1.684	0.60674	32.799	26.389	1438.9
45.0	-1.698	0.60657	32.803	26.392	1438.9
47.5	-1.735	0.60608	32.813	26.401	1438.8
50.0	-1.745	0.60627	32.834	26.419	1438.8
55.0	-1.747	0.60647	32.844	26.427	1438.9
60.0	-1.745	0.60715	32.880	26.456	1439.0
65.0	-1.738	0.60805	32.923	26.490	1439.2
70.0	-1.737	0.60809	32.921	26.489	1439.3
75.0	-1.727	0.60862	32.938	26.503	1439.5
78.8	-1.713	0.60920	32.955	26.516	1439.6



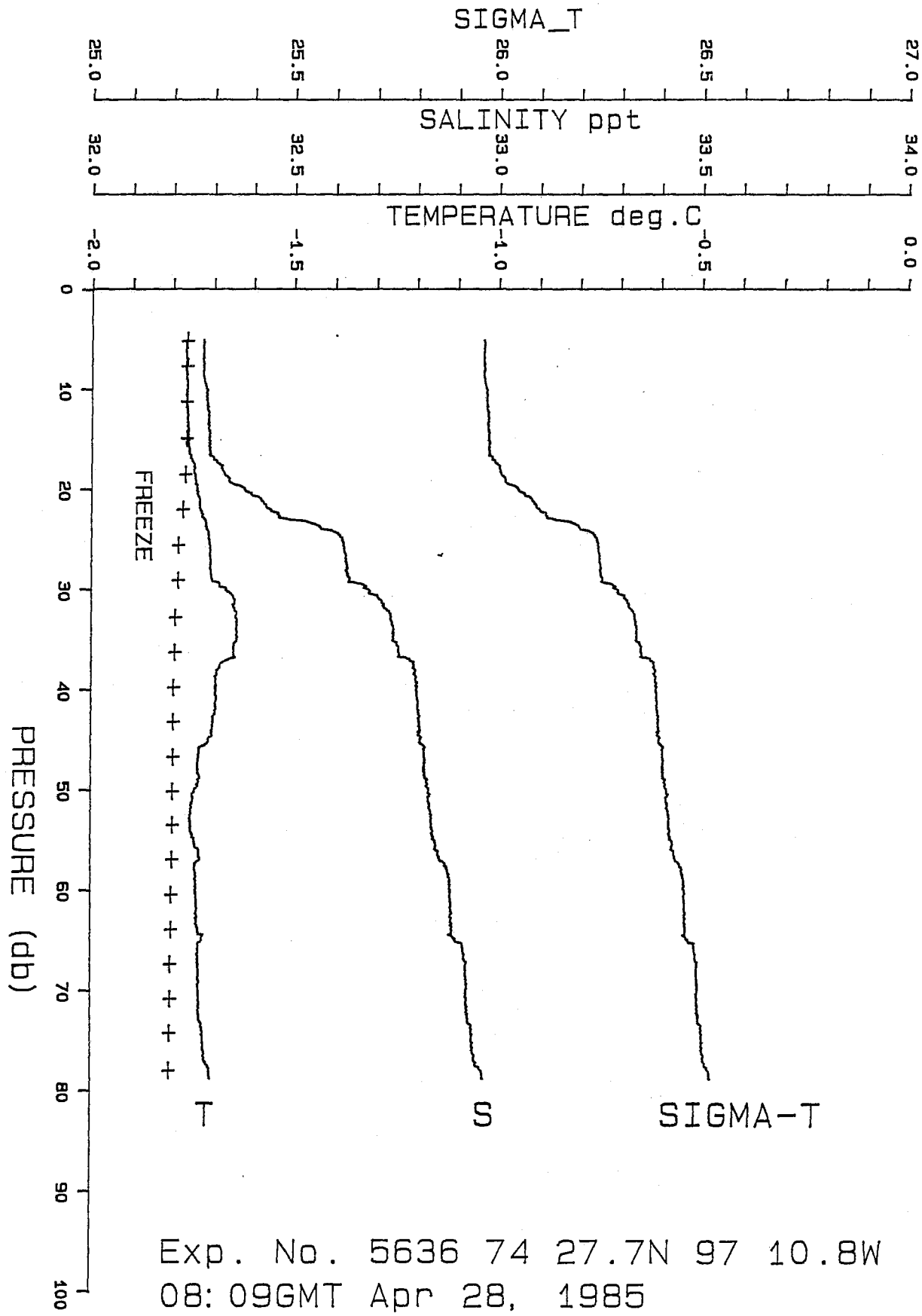
Exp. No. 5635 74 27.7N 97 10.8W
07:46GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5636

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0809

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.1	-1.770	0.59593	32.273	25.963	1437.2
6.0	-1.771	0.59593	32.274	25.964	1437.2
7.0	-1.769	0.59595	32.272	25.962	1437.2
8.0	-1.770	0.59597	32.274	25.964	1437.3
9.0	-1.767	0.59604	32.275	25.965	1437.3
10.0	-1.770	0.59614	32.282	25.971	1437.3
11.0	-1.767	0.59616	32.281	25.969	1437.3
12.0	-1.767	0.59623	32.283	25.971	1437.4
13.0	-1.765	0.59630	32.286	25.973	1437.4
14.0	-1.764	0.59635	32.286	25.973	1437.4
15.0	-1.763	0.59638	32.286	25.974	1437.4
16.0	-1.761	0.59646	32.289	25.976	1437.5
17.0	-1.754	0.59677	32.299	25.984	1437.5
18.0	-1.749	0.59727	32.322	26.003	1437.6
19.0	-1.745	0.59760	32.337	26.015	1437.6
20.0	-1.743	0.59835	32.379	26.048	1437.7
21.0	-1.735	0.59921	32.420	26.082	1437.8
22.0	-1.733	0.59963	32.442	26.100	1437.9
23.0	-1.721	0.60067	32.491	26.139	1438.0
24.0	-1.718	0.60217	32.576	26.209	1438.2
25.0	-1.712	0.60296	32.616	26.240	1438.3
26.0	-1.708	0.60313	32.621	26.245	1438.3
27.0	-1.708	0.60321	32.625	26.248	1438.3
28.0	-1.706	0.60327	32.626	26.249	1438.4
29.0	-1.704	0.60347	32.635	26.256	1438.4
30.0	-1.669	0.60493	32.682	26.293	1438.7
31.0	-1.646	0.60582	32.710	26.315	1438.8
32.0	-1.647	0.60612	32.727	26.330	1438.9
33.0	-1.642	0.60639	32.737	26.338	1438.9
34.0	-1.642	0.60648	32.742	26.341	1438.9
35.0	-1.640	0.60648	32.740	26.339	1439.0
37.5	-1.684	0.60660	32.794	26.385	1438.9
40.0	-1.692	0.60656	32.799	26.389	1438.9
42.5	-1.699	0.60661	32.808	26.396	1438.9
45.0	-1.711	0.60642	32.809	26.397	1438.9
47.5	-1.737	0.60615	32.819	26.407	1438.8
50.0	-1.747	0.60620	32.831	26.416	1438.8
55.0	-1.746	0.60654	32.847	26.429	1438.9
60.0	-1.743	0.60731	32.887	26.462	1439.1
65.0	-1.727	0.60784	32.898	26.470	1439.2
70.0	-1.735	0.60822	32.926	26.493	1439.3
75.0	-1.723	0.60873	32.941	26.505	1439.5
78.8	-1.706	0.60957	32.969	26.527	1439.7



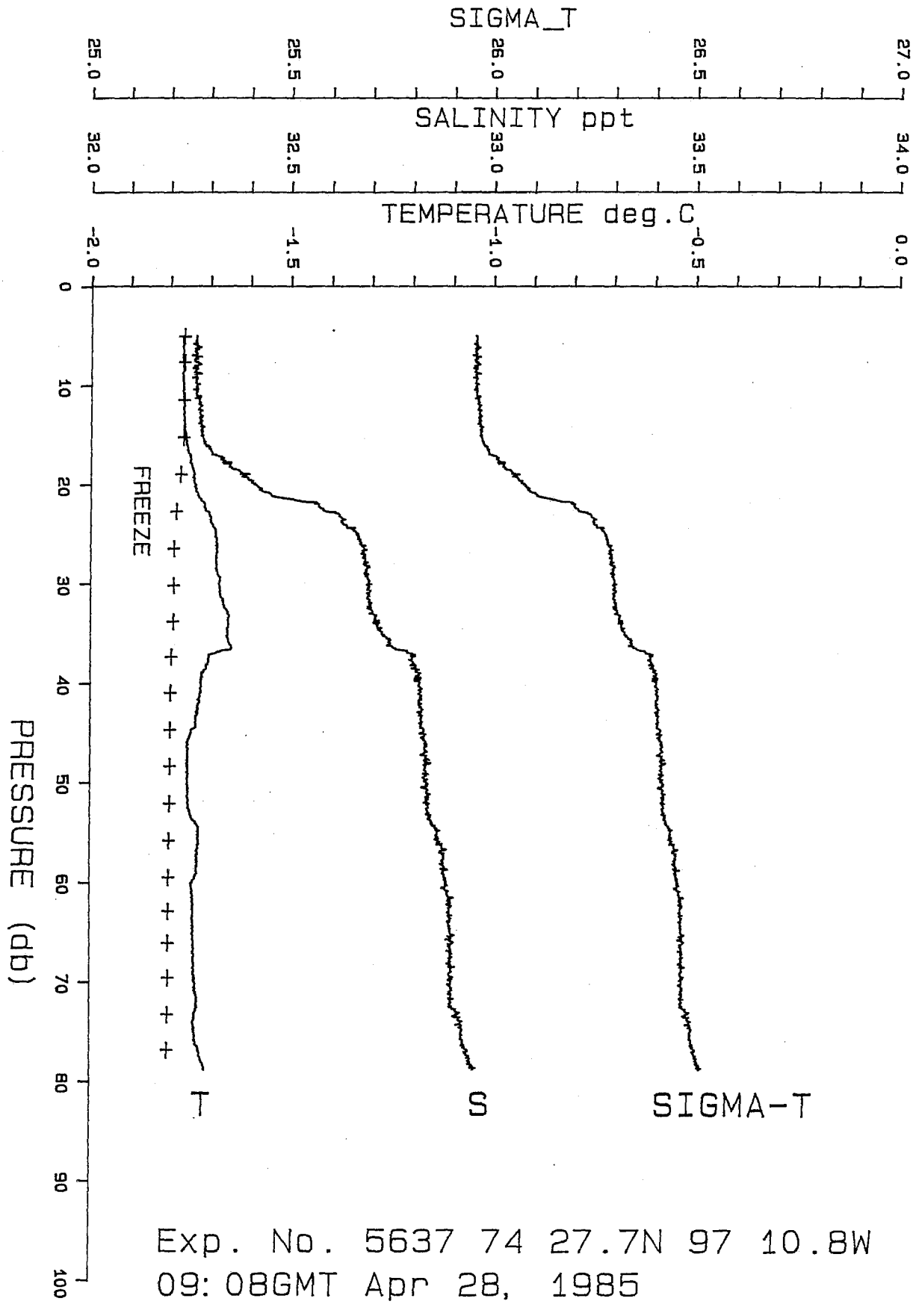
Exp. No. 5636 74 27.7N 97 10.8W
08:09GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5637

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0908

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.770	0.59578	32.264	25.956	1437.2
6.0	-1.771	0.59577	32.264	25.956	1437.2
7.0	-1.769	0.59578	32.262	25.954	1437.2
8.0	-1.770	0.59570	32.258	25.951	1437.2
9.0	-1.769	0.59583	32.264	25.956	1437.3
10.0	-1.769	0.59585	32.265	25.956	1437.3
11.0	-1.767	0.59592	32.266	25.958	1437.3
12.0	-1.766	0.59607	32.273	25.963	1437.3
13.0	-1.767	0.59617	32.279	25.968	1437.4
14.0	-1.766	0.59619	32.280	25.968	1437.4
15.0	-1.761	0.59631	32.280	25.969	1437.4
16.0	-1.758	0.59658	32.292	25.978	1437.5
17.0	-1.749	0.59712	32.314	25.996	1437.6
18.0	-1.747	0.59775	32.348	26.024	1437.6
19.0	-1.742	0.59844	32.384	26.053	1437.7
20.0	-1.736	0.59913	32.417	26.079	1437.8
21.0	-1.731	0.59983	32.453	26.109	1437.9
22.0	-1.713	0.60209	32.568	26.201	1438.2
23.0	-1.701	0.60321	32.620	26.243	1438.3
24.0	-1.693	0.60361	32.633	26.254	1438.4
25.0	-1.685	0.60432	32.667	26.281	1438.5
26.0	-1.683	0.60448	32.674	26.287	1438.5
27.0	-1.684	0.60466	32.684	26.296	1438.5
28.0	-1.684	0.60467	32.685	26.296	1438.6
29.0	-1.680	0.60480	32.687	26.298	1438.6
30.0	-1.676	0.60507	32.698	26.306	1438.6
31.0	-1.675	0.60502	32.694	26.303	1438.7
32.0	-1.666	0.60523	32.695	26.304	1438.7
33.0	-1.654	0.60558	32.703	26.310	1438.8
34.0	-1.654	0.60582	32.716	26.321	1438.8
35.0	-1.655	0.60598	32.726	26.328	1438.9
37.5	-1.704	0.60635	32.801	26.391	1438.8
40.0	-1.721	0.60634	32.818	26.405	1438.8
42.5	-1.729	0.60633	32.824	26.410	1438.8
45.0	-1.748	0.60598	32.823	26.410	1438.7
47.5	-1.754	0.60611	32.836	26.420	1438.7
50.0	-1.755	0.60616	32.838	26.422	1438.8
55.0	-1.726	0.60717	32.863	26.442	1439.0
60.0	-1.744	0.60730	32.887	26.462	1439.1
65.0	-1.740	0.60760	32.898	26.470	1439.2
70.0	-1.734	0.60777	32.899	26.471	1439.3
75.0	-1.737	0.60823	32.926	26.494	1439.4
78.8	-1.710	0.60923	32.954	26.515	1439.6



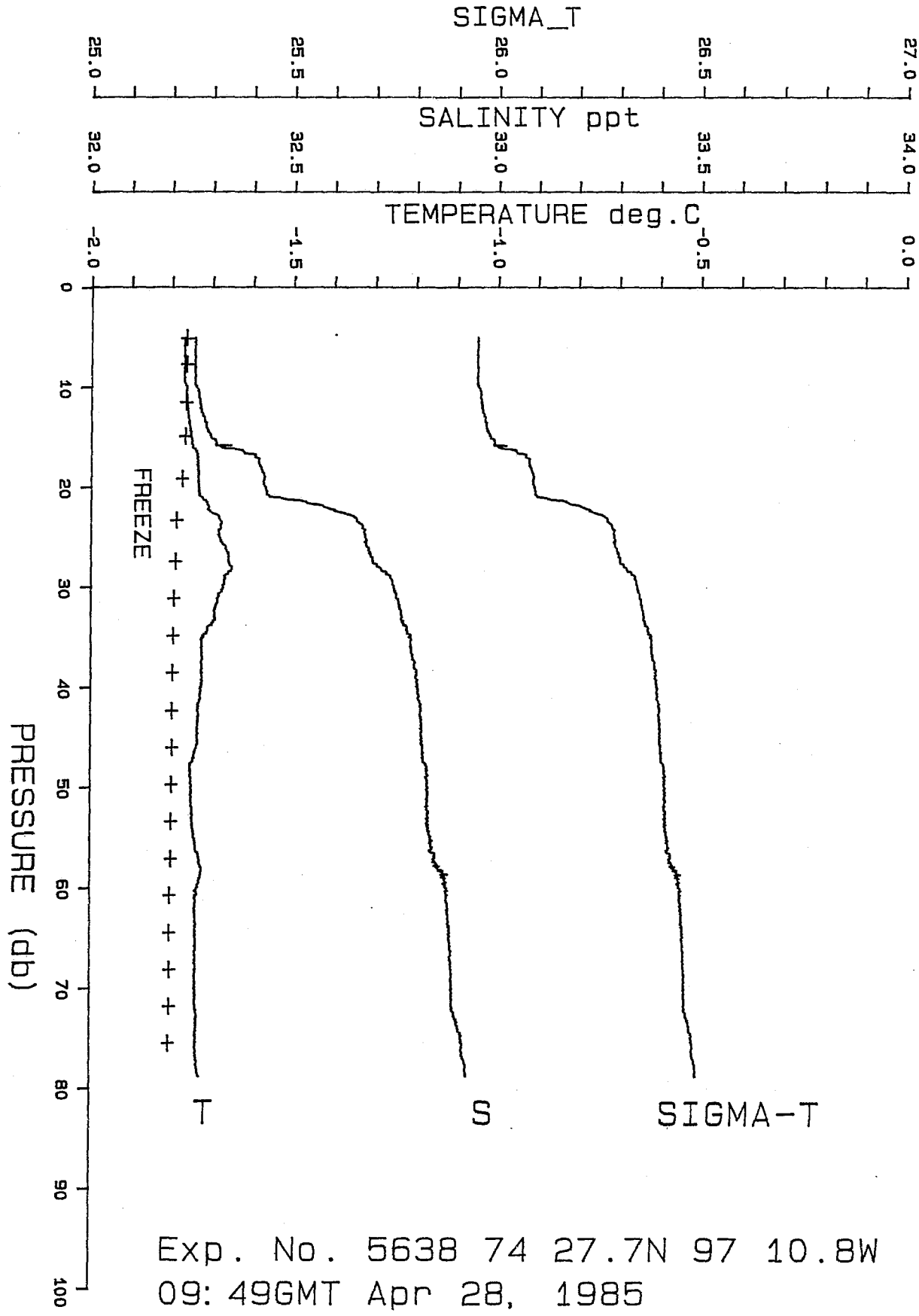
Exp. No. 5637 74 27.7N 97 10.8W
09:08GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5638

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0949

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.771	0.59561	32.255	25.949	1437.2
6.0	-1.771	0.59562	32.256	25.949	1437.2
7.0	-1.772	0.59562	32.256	25.949	1437.2
8.0	-1.771	0.59564	32.256	25.949	1437.2
9.0	-1.770	0.59565	32.254	25.948	1437.3
10.0	-1.765	0.59584	32.260	25.952	1437.3
11.0	-1.763	0.59599	32.266	25.957	1437.3
12.0	-1.763	0.59606	32.269	25.960	1437.4
13.0	-1.760	0.59629	32.279	25.968	1437.4
14.0	-1.756	0.59646	32.283	25.971	1437.4
15.0	-1.752	0.59675	32.297	25.982	1437.5
16.0	-1.751	0.59721	32.322	26.003	1437.6
17.0	-1.737	0.59889	32.406	26.070	1437.7
18.0	-1.736	0.59916	32.421	26.083	1437.8
19.0	-1.736	0.59928	32.427	26.088	1437.8
20.0	-1.734	0.59941	32.432	26.092	1437.8
21.0	-1.725	0.60000	32.456	26.111	1437.9
22.0	-1.709	0.60242	32.582	26.213	1438.2
23.0	-1.684	0.60406	32.652	26.269	1438.4
24.0	-1.678	0.60448	32.669	26.283	1438.5
25.0	-1.681	0.60455	32.676	26.289	1438.5
26.0	-1.668	0.60492	32.683	26.294	1438.6
27.0	-1.662	0.60524	32.695	26.304	1438.7
28.0	-1.653	0.60572	32.713	26.318	1438.7
29.0	-1.668	0.60587	32.738	26.339	1438.7
30.0	-1.674	0.60590	32.746	26.345	1438.7
31.0	-1.686	0.60582	32.754	26.352	1438.7
32.0	-1.694	0.60582	32.761	26.358	1438.7
33.0	-1.692	0.60592	32.765	26.361	1438.7
34.0	-1.712	0.60582	32.780	26.374	1438.7
35.0	-1.723	0.60573	32.786	26.379	1438.6
37.5	-1.726	0.60591	32.799	26.390	1438.7
40.0	-1.727	0.60603	32.806	26.395	1438.7
42.5	-1.733	0.60606	32.812	26.401	1438.7
45.0	-1.736	0.60610	32.816	26.404	1438.8
47.5	-1.751	0.60598	32.824	26.411	1438.7
50.0	-1.751	0.60612	32.832	26.417	1438.8
55.0	-1.740	0.60650	32.839	26.422	1438.9
60.0	-1.736	0.60732	32.880	26.456	1439.1
65.0	-1.737	0.60743	32.885	26.460	1439.2
70.0	-1.740	0.60757	32.893	26.467	1439.3
75.0	-1.736	0.60804	32.914	26.483	1439.4
78.7	-1.729	0.60848	32.929	26.496	1439.5



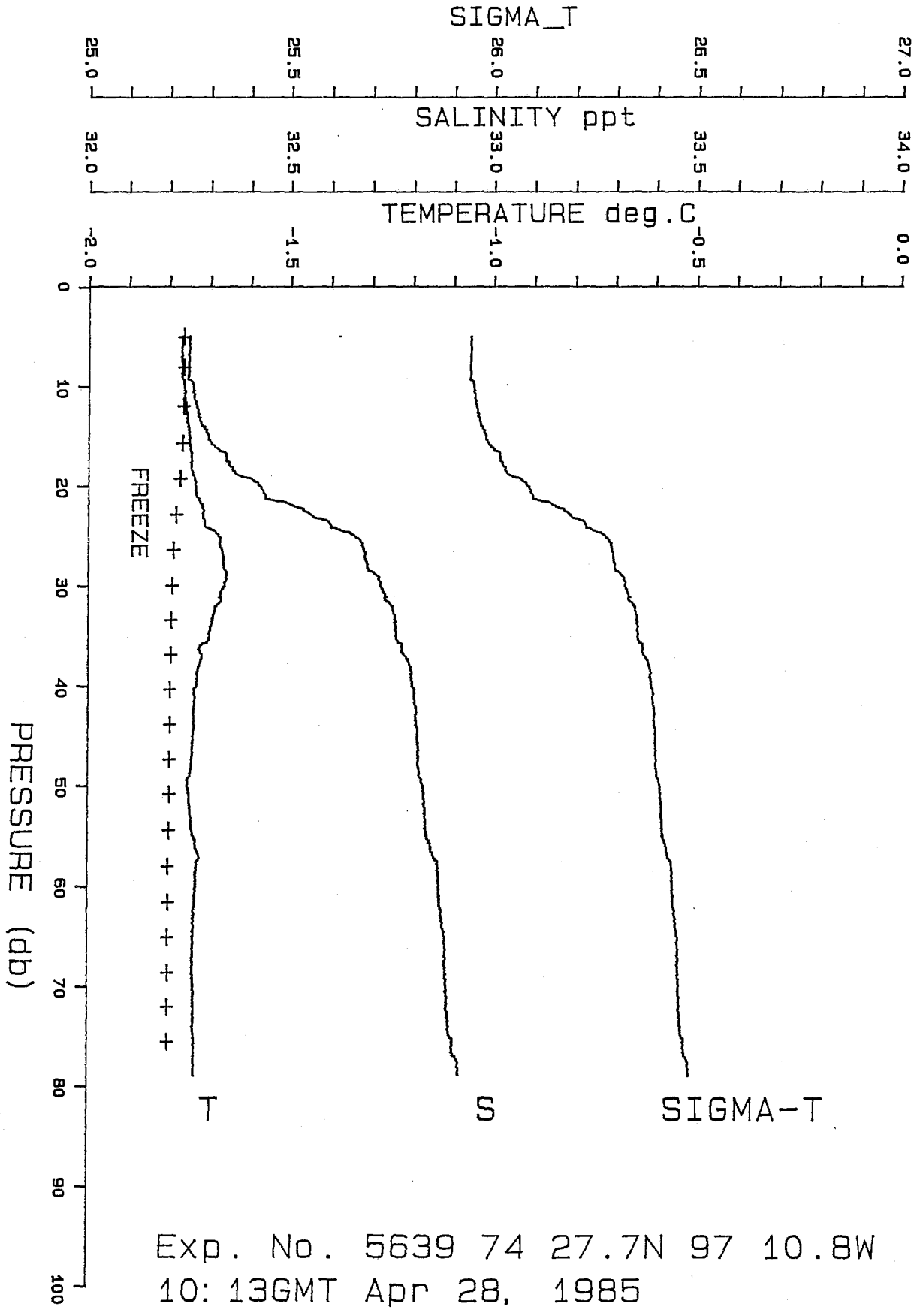
Exp. No. 5638 74 27.7N 97 10.8W
09: 49GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5639

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1013

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.772	0.59547	32.248	25.943	1437.2
6.0	-1.772	0.59548	32.248	25.943	1437.2
7.0	-1.772	0.59549	32.248	25.943	1437.2
8.0	-1.768	0.59550	32.244	25.940	1437.2
9.0	-1.770	0.59550	32.245	25.941	1437.2
10.0	-1.764	0.59580	32.256	25.949	1437.3
11.0	-1.762	0.59589	32.259	25.952	1437.3
12.0	-1.760	0.59607	32.266	25.957	1437.4
13.0	-1.757	0.59621	32.271	25.962	1437.4
14.0	-1.756	0.59648	32.285	25.973	1437.4
15.0	-1.751	0.59673	32.294	25.980	1437.5
16.0	-1.750	0.59705	32.311	25.994	1437.5
17.0	-1.748	0.59757	32.339	26.016	1437.6
18.0	-1.745	0.59778	32.349	26.024	1437.6
19.0	-1.739	0.59840	32.378	26.048	1437.7
20.0	-1.734	0.59928	32.424	26.085	1437.8
21.0	-1.732	0.59957	32.438	26.097	1437.9
22.0	-1.718	0.60101	32.509	26.154	1438.1
23.0	-1.718	0.60182	32.556	26.192	1438.1
24.0	-1.713	0.60269	32.601	26.229	1438.2
25.0	-1.676	0.60437	32.660	26.276	1438.5
26.0	-1.675	0.60469	32.677	26.290	1438.6
27.0	-1.667	0.60497	32.684	26.295	1438.6
28.0	-1.666	0.60506	32.689	26.299	1438.6
29.0	-1.661	0.60563	32.715	26.320	1438.7
30.0	-1.664	0.60566	32.721	26.325	1438.7
31.0	-1.674	0.60568	32.732	26.334	1438.7
32.0	-1.688	0.60576	32.751	26.350	1438.7
33.0	-1.693	0.60576	32.757	26.355	1438.7
34.0	-1.697	0.60571	32.757	26.355	1438.7
35.0	-1.703	0.60566	32.761	26.358	1438.7
37.5	-1.723	0.60581	32.790	26.382	1438.7
40.0	-1.732	0.60581	32.798	26.389	1438.7
42.5	-1.739	0.60589	32.809	26.398	1438.7
45.0	-1.742	0.60596	32.815	26.403	1438.7
47.5	-1.745	0.60594	32.816	26.404	1438.8
50.0	-1.755	0.60600	32.829	26.415	1438.8
55.0	-1.740	0.60649	32.838	26.422	1438.9
60.0	-1.732	0.60716	32.866	26.444	1439.1
65.0	-1.740	0.60734	32.883	26.459	1439.2
70.0	-1.739	0.60750	32.888	26.462	1439.2
75.0	-1.737	0.60776	32.898	26.470	1439.4
78.9	-1.736	0.60815	32.918	26.486	1439.4



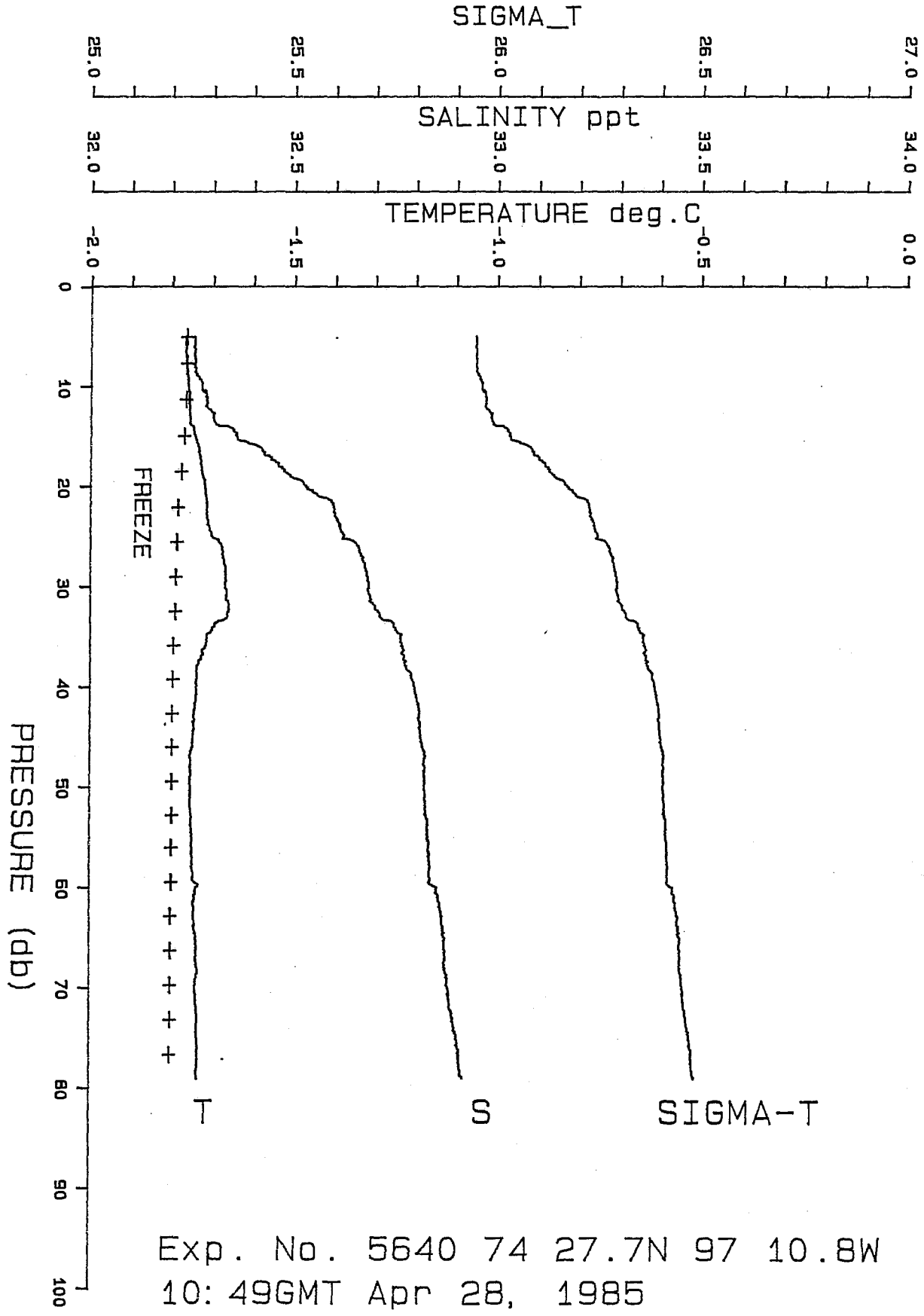
Exp. No. 5639 74 27.7N 97 10.8W
10: 13GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5640

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1049

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.769	0.59561	32.253	25.947	1437.2
6.0	-1.767	0.59560	32.250	25.945	1437.2
7.0	-1.767	0.59565	32.253	25.946	1437.2
8.0	-1.767	0.59569	32.254	25.948	1437.3
9.0	-1.763	0.59593	32.263	25.955	1437.3
10.0	-1.762	0.59609	32.272	25.962	1437.3
11.0	-1.759	0.59632	32.281	25.969	1437.4
12.0	-1.758	0.59637	32.283	25.971	1437.4
13.0	-1.757	0.59669	32.299	25.984	1437.4
14.0	-1.750	0.59748	32.338	26.015	1437.5
15.0	-1.744	0.59796	32.359	26.033	1437.6
16.0	-1.734	0.59905	32.414	26.077	1437.8
17.0	-1.731	0.59960	32.442	26.099	1437.8
18.0	-1.727	0.60005	32.464	26.117	1437.9
19.0	-1.725	0.60059	32.493	26.141	1438.0
20.0	-1.720	0.60134	32.531	26.172	1438.0
21.0	-1.717	0.60192	32.562	26.197	1438.1
22.0	-1.716	0.60253	32.596	26.225	1438.2
23.0	-1.715	0.60266	32.602	26.230	1438.2
24.0	-1.710	0.60293	32.613	26.238	1438.3
25.0	-1.700	0.60327	32.620	26.244	1438.3
26.0	-1.676	0.60434	32.658	26.274	1438.5
27.0	-1.675	0.60459	32.671	26.285	1438.6
28.0	-1.668	0.60479	32.675	26.287	1438.6
29.0	-1.669	0.60492	32.683	26.294	1438.6
30.0	-1.669	0.60497	32.685	26.296	1438.7
31.0	-1.666	0.60508	32.687	26.298	1438.7
32.0	-1.661	0.60541	32.701	26.309	1438.8
33.0	-1.665	0.60557	32.714	26.319	1438.8
34.0	-1.697	0.60556	32.748	26.348	1438.7
35.0	-1.715	0.60550	32.764	26.361	1438.6
37.5	-1.734	0.60533	32.773	26.369	1438.6
40.0	-1.740	0.60569	32.800	26.390	1438.6
42.5	-1.745	0.60581	32.811	26.400	1438.7
45.0	-1.748	0.60588	32.817	26.404	1438.7
47.5	-1.753	0.60593	32.824	26.411	1438.7
50.0	-1.754	0.60597	32.826	26.412	1438.8
55.0	-1.749	0.60624	32.833	26.418	1438.9
60.0	-1.740	0.60685	32.857	26.437	1439.0
65.0	-1.740	0.60725	32.878	26.454	1439.1
70.0	-1.741	0.60741	32.885	26.460	1439.2
75.0	-1.735	0.60792	32.905	26.476	1439.4
79.0	-1.735	0.60824	32.922	26.490	1439.5



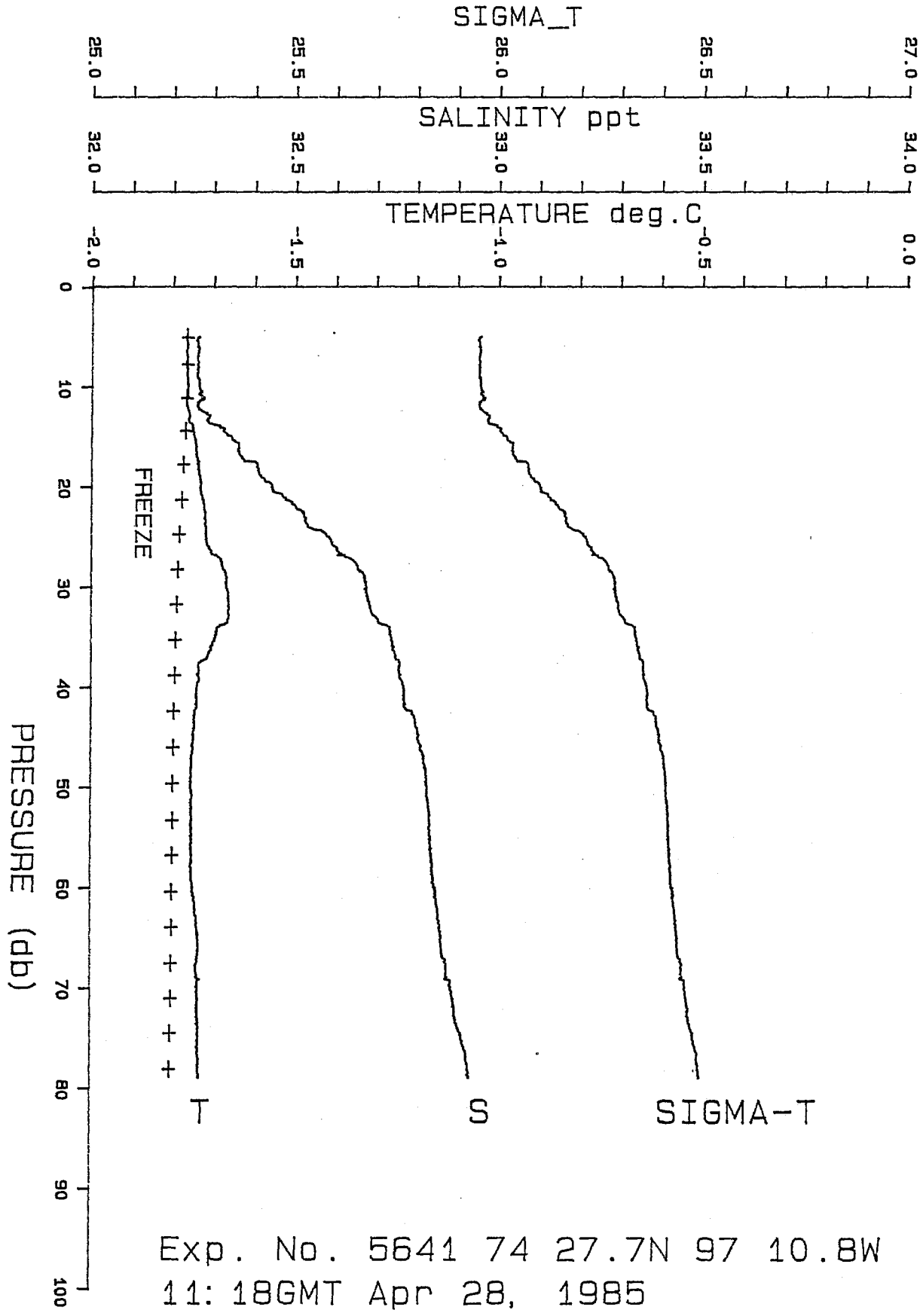
Exp. No. 5640 74 27.7N 97 10.8W
10: 49GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5641

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1118

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.769	0.59578	32.264	25.955	1437.2
6.0	-1.767	0.59574	32.258	25.951	1437.2
7.0	-1.766	0.59577	32.258	25.951	1437.2
8.0	-1.767	0.59579	32.260	25.953	1437.3
9.0	-1.765	0.59581	32.258	25.951	1437.3
10.0	-1.764	0.59592	32.264	25.955	1437.3
11.0	-1.764	0.59608	32.272	25.962	1437.3
12.0	-1.765	0.59589	32.261	25.953	1437.3
13.0	-1.761	0.59645	32.289	25.976	1437.4
14.0	-1.752	0.59703	32.314	25.996	1437.5
15.0	-1.747	0.59763	32.343	26.020	1437.6
16.0	-1.743	0.59802	32.362	26.035	1437.6
17.0	-1.743	0.59819	32.370	26.042	1437.7
18.0	-1.736	0.59892	32.407	26.071	1437.8
19.0	-1.733	0.59920	32.419	26.081	1437.8
20.0	-1.731	0.59968	32.445	26.102	1437.9
21.0	-1.727	0.60024	32.473	26.125	1438.0
22.0	-1.723	0.60080	32.502	26.148	1438.0
23.0	-1.720	0.60125	32.525	26.167	1438.1
24.0	-1.718	0.60146	32.533	26.174	1438.1
25.0	-1.717	0.60236	32.585	26.216	1438.2
26.0	-1.709	0.60278	32.601	26.229	1438.3
27.0	-1.686	0.60367	32.627	26.249	1438.5
28.0	-1.677	0.60430	32.655	26.272	1438.6
29.0	-1.666	0.60479	32.671	26.284	1438.6
30.0	-1.669	0.60486	32.678	26.290	1438.7
31.0	-1.664	0.60500	32.681	26.293	1438.7
32.0	-1.661	0.60516	32.686	26.296	1438.7
33.0	-1.663	0.60541	32.702	26.310	1438.8
34.0	-1.690	0.60550	32.737	26.338	1438.7
35.0	-1.696	0.60545	32.740	26.341	1438.7
37.5	-1.732	0.60511	32.759	26.357	1438.6
40.0	-1.739	0.60522	32.771	26.367	1438.6
42.5	-1.745	0.60550	32.793	26.385	1438.6
45.0	-1.747	0.60573	32.806	26.396	1438.7
47.5	-1.752	0.60592	32.822	26.409	1438.7
50.0	-1.755	0.60603	32.830	26.416	1438.8
55.0	-1.752	0.60626	32.838	26.422	1438.9
60.0	-1.750	0.60658	32.852	26.433	1439.0
65.0	-1.735	0.60716	32.866	26.445	1439.2
70.0	-1.735	0.60759	32.889	26.463	1439.3
75.0	-1.734	0.60811	32.916	26.485	1439.4
78.9	-1.731	0.60850	32.933	26.499	1439.5



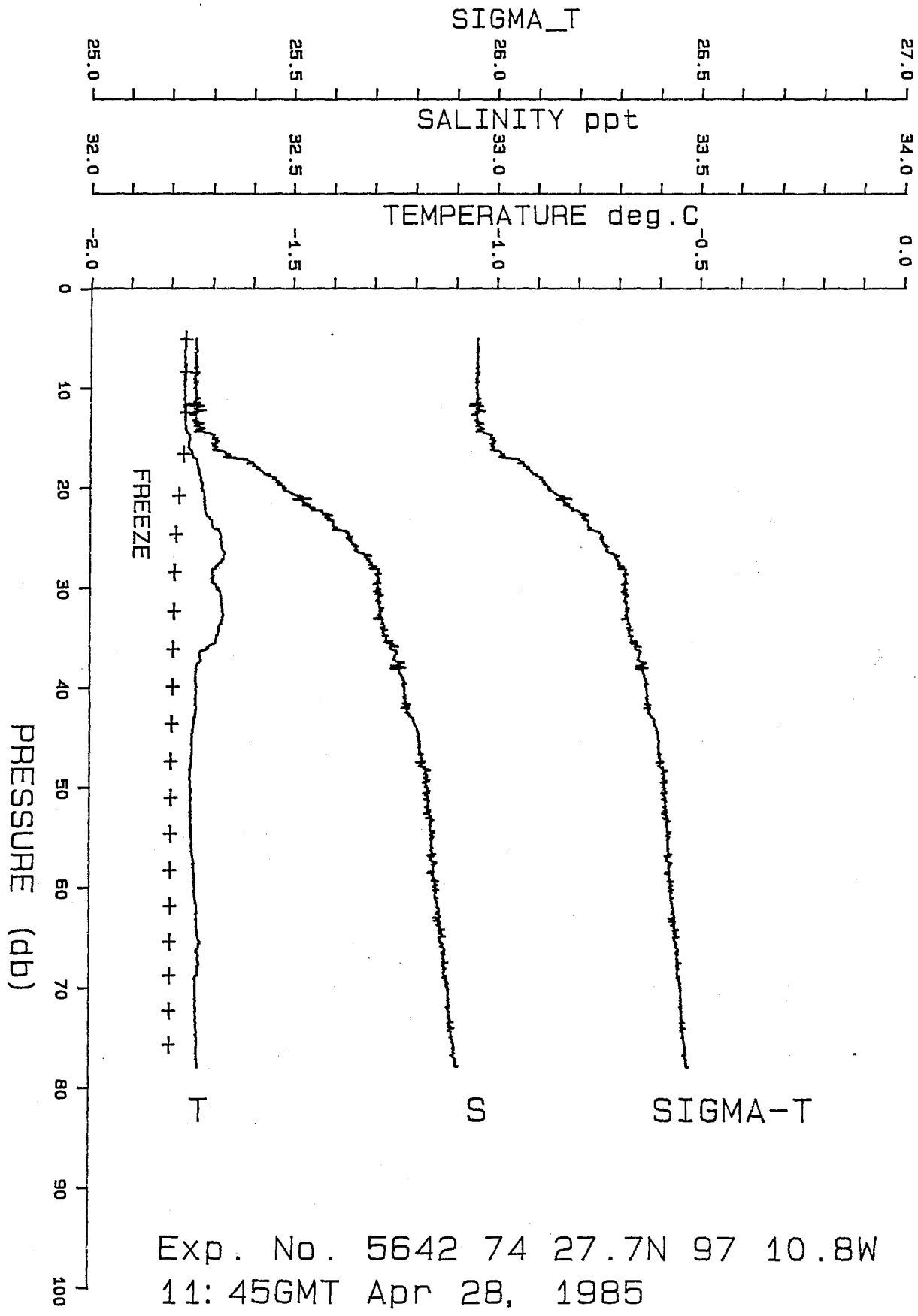
Exp. No. 5641 74 27.7N 97 10.8W
11:18GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5642

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1145

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.770	0.59570	32.260	25.952	1437.2
6.0	-1.768	0.59570	32.257	25.950	1437.2
7.0	-1.768	0.59572	32.257	25.950	1437.2
8.0	-1.767	0.59571	32.256	25.949	1437.3
9.0	-1.769	0.59571	32.256	25.950	1437.3
10.0	-1.769	0.59570	32.255	25.949	1437.3
11.0	-1.771	0.59583	32.264	25.956	1437.3
12.0	-1.768	0.59573	32.255	25.948	1437.3
13.0	-1.767	0.59581	32.258	25.951	1437.3
14.0	-1.768	0.59615	32.278	25.967	1437.4
15.0	-1.757	0.59689	32.310	25.993	1437.5
16.0	-1.756	0.59685	32.306	25.990	1437.5
17.0	-1.742	0.59773	32.342	26.019	1437.6
18.0	-1.735	0.59906	32.413	26.076	1437.8
19.0	-1.729	0.59992	32.457	26.112	1437.9
20.0	-1.728	0.60038	32.482	26.132	1437.9
21.0	-1.720	0.60121	32.523	26.165	1438.1
22.0	-1.718	0.60159	32.543	26.181	1438.1
23.0	-1.706	0.60259	32.589	26.219	1438.2
24.0	-1.697	0.60307	32.606	26.233	1438.3
25.0	-1.679	0.60389	32.634	26.255	1438.5
26.0	-1.677	0.60430	32.656	26.273	1438.5
27.0	-1.672	0.60486	32.684	26.295	1438.6
28.0	-1.694	0.60474	32.699	26.308	1438.5
29.0	-1.699	0.60487	32.713	26.319	1438.5
30.0	-1.684	0.60506	32.707	26.314	1438.6
31.0	-1.678	0.60526	32.712	26.318	1438.7
32.0	-1.676	0.60548	32.721	26.326	1438.7
33.0	-1.675	0.60537	32.713	26.319	1438.7
34.0	-1.683	0.60537	32.721	26.326	1438.7
35.0	-1.691	0.60537	32.730	26.333	1438.7
37.5	-1.733	0.60534	32.773	26.369	1438.6
40.0	-1.739	0.60532	32.777	26.372	1438.6
42.5	-1.738	0.60547	32.783	26.377	1438.7
45.0	-1.747	0.60579	32.811	26.400	1438.7
47.5	-1.750	0.60600	32.825	26.411	1438.7
50.0	-1.753	0.60616	32.837	26.421	1438.8
55.0	-1.749	0.60645	32.846	26.428	1438.9
60.0	-1.740	0.60678	32.852	26.433	1439.0
65.0	-1.732	0.60720	32.865	26.443	1439.2
70.0	-1.739	0.60746	32.886	26.460	1439.2
75.0	-1.735	0.60776	32.895	26.468	1439.4
77.9	-1.735	0.60797	32.907	26.477	1439.4



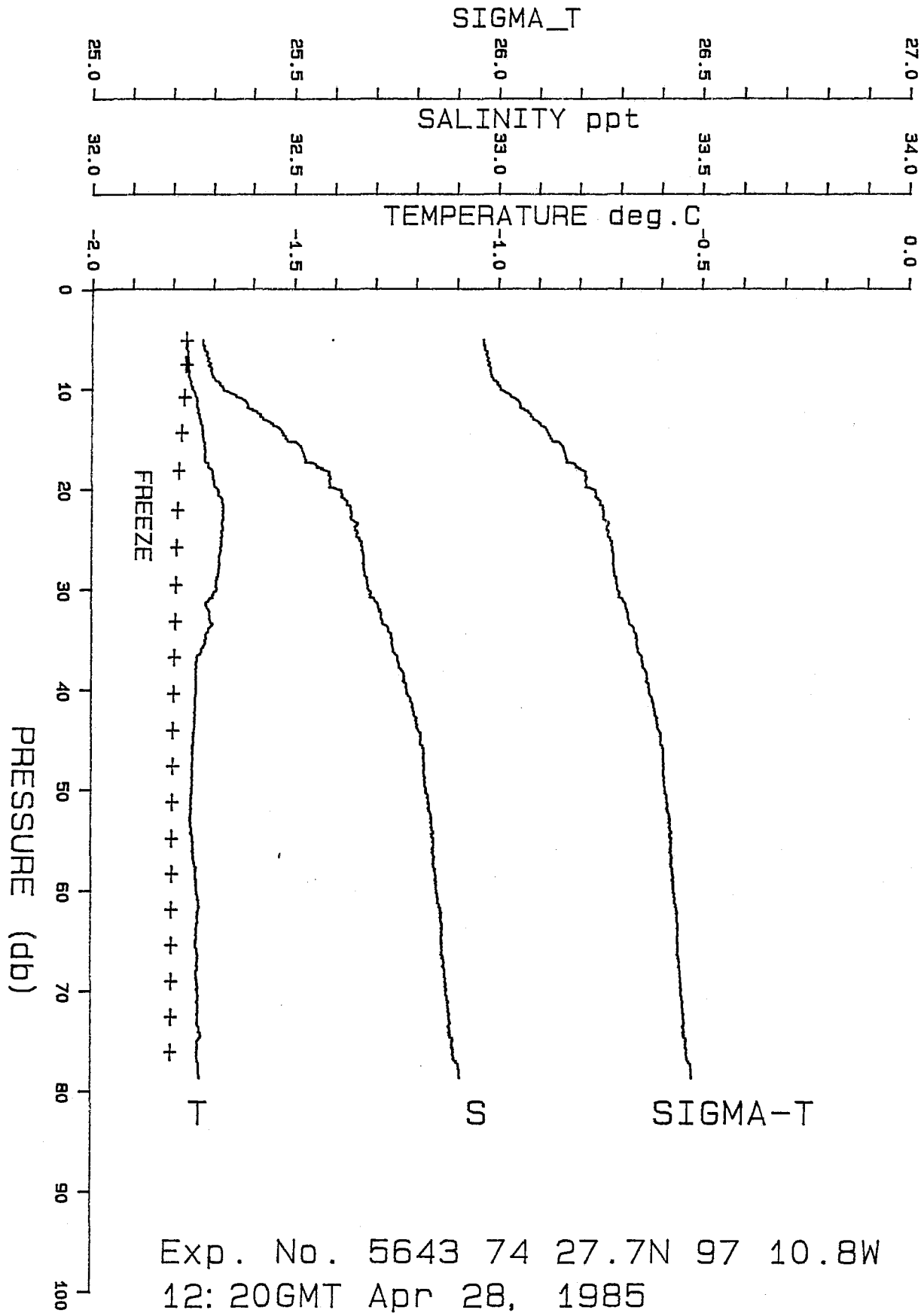
Exp. No. 5642 74 27.7N 97 10.8W
11:45GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5643

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1220

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.1	-1.766	0.59600	32.273	25.963	1437.2
6.0	-1.766	0.59608	32.278	25.967	1437.3
7.0	-1.763	0.59630	32.287	25.974	1437.3
8.0	-1.763	0.59645	32.295	25.981	1437.3
9.0	-1.759	0.59667	32.303	25.988	1437.4
10.0	-1.752	0.59717	32.324	26.004	1437.5
11.0	-1.742	0.59817	32.373	26.044	1437.6
12.0	-1.737	0.59869	32.398	26.064	1437.7
13.0	-1.731	0.59928	32.425	26.086	1437.7
14.0	-1.727	0.60005	32.466	26.119	1437.8
15.0	-1.725	0.60036	32.482	26.132	1437.9
16.0	-1.720	0.60109	32.518	26.161	1438.0
17.0	-1.719	0.60126	32.528	26.169	1438.0
18.0	-1.703	0.60226	32.568	26.202	1438.1
19.0	-1.699	0.60268	32.588	26.218	1438.2
20.0	-1.687	0.60325	32.609	26.234	1438.3
21.0	-1.677	0.60372	32.626	26.248	1438.4
22.0	-1.675	0.60399	32.638	26.258	1438.4
23.0	-1.674	0.60408	32.642	26.261	1438.5
24.0	-1.676	0.60420	32.651	26.268	1438.5
25.0	-1.678	0.60436	32.662	26.278	1438.5
26.0	-1.680	0.60443	32.668	26.282	1438.5
27.0	-1.685	0.60444	32.672	26.286	1438.5
28.0	-1.686	0.60445	32.674	26.287	1438.5
29.0	-1.691	0.60449	32.681	26.293	1438.5
30.0	-1.691	0.60457	32.686	26.297	1438.6
31.0	-1.710	0.60449	32.700	26.309	1438.5
32.0	-1.711	0.60468	32.713	26.319	1438.5
33.0	-1.707	0.60483	32.716	26.322	1438.6
34.0	-1.712	0.60506	32.735	26.337	1438.6
35.0	-1.720	0.60507	32.744	26.345	1438.6
37.5	-1.741	0.60499	32.762	26.360	1438.5
40.0	-1.739	0.60536	32.780	26.374	1438.6
42.5	-1.743	0.60564	32.799	26.390	1438.7
45.0	-1.747	0.60584	32.814	26.402	1438.7
47.5	-1.749	0.60597	32.822	26.409	1438.7
50.0	-1.749	0.60607	32.827	26.413	1438.8
55.0	-1.748	0.60650	32.847	26.430	1438.9
60.0	-1.739	0.60686	32.856	26.436	1439.0
65.0	-1.741	0.60709	32.869	26.447	1439.1
70.0	-1.735	0.60741	32.879	26.455	1439.3
75.0	-1.734	0.60772	32.893	26.466	1439.4
78.7	-1.729	0.60820	32.913	26.482	1439.5



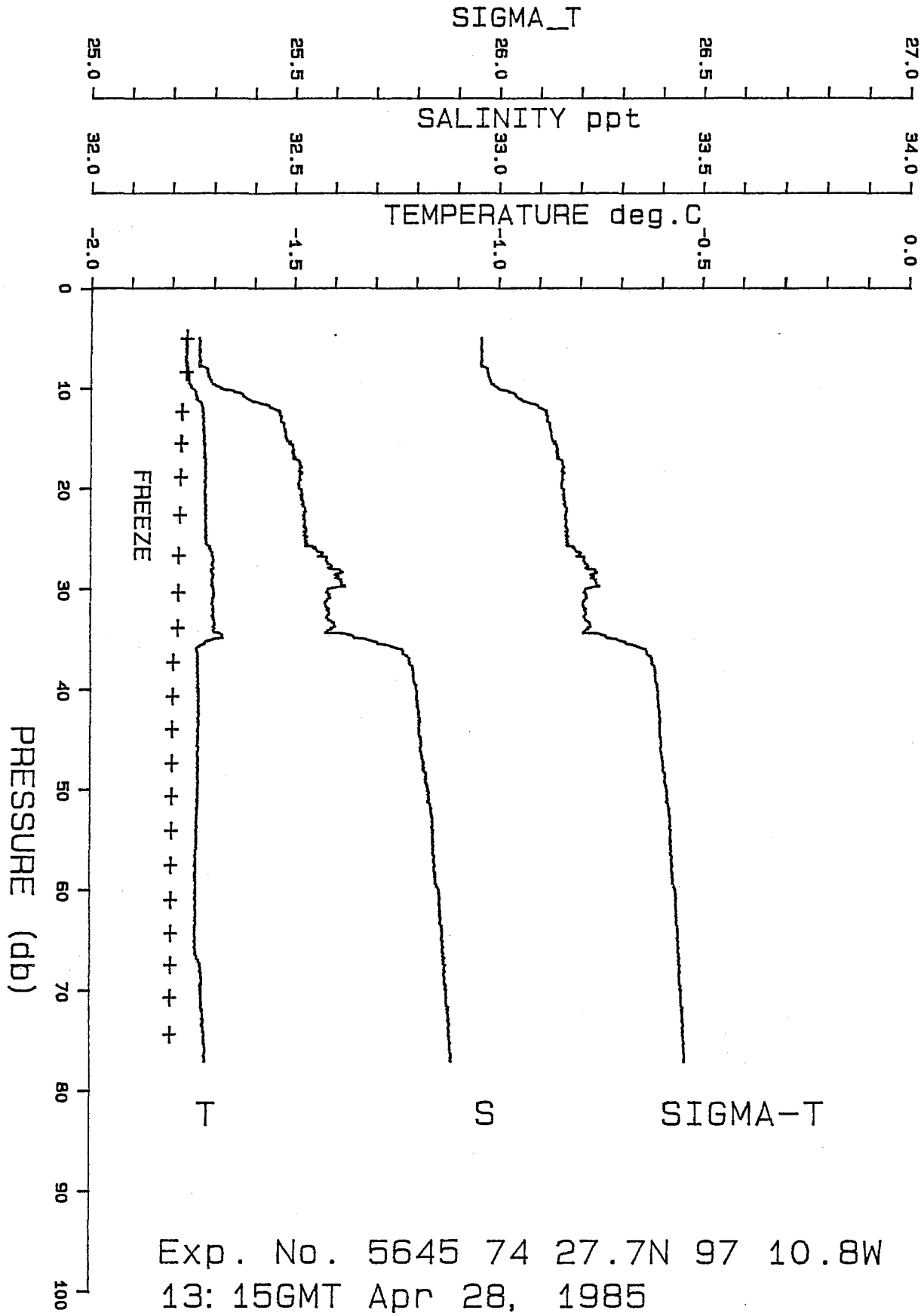
Exp. No. 5643 74 27.7N 97 10.8W
12: 20GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5645

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1315

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.769	0.59580	32.264	25.956	1437.2
6.0	-1.770	0.59580	32.265	25.957	1437.2
7.0	-1.768	0.59586	32.266	25.957	1437.2
8.0	-1.764	0.59625	32.284	25.972	1437.3
9.0	-1.761	0.59641	32.290	25.977	1437.3
10.0	-1.752	0.59709	32.319	26.000	1437.4
11.0	-1.740	0.59837	32.382	26.051	1437.6
12.0	-1.727	0.59977	32.450	26.106	1437.8
13.0	-1.725	0.60007	32.466	26.119	1437.8
14.0	-1.725	0.60025	32.475	26.127	1437.9
15.0	-1.724	0.60036	32.481	26.131	1437.9
16.0	-1.724	0.60066	32.497	26.144	1437.9
17.0	-1.721	0.60073	32.498	26.145	1437.9
18.0	-1.721	0.60097	32.512	26.156	1438.0
19.0	-1.719	0.60105	32.514	26.158	1438.0
20.0	-1.721	0.60107	32.517	26.160	1438.0
21.0	-1.720	0.60114	32.519	26.162	1438.0
22.0	-1.719	0.60132	32.528	26.170	1438.1
23.0	-1.718	0.60127	32.523	26.165	1438.1
24.0	-1.719	0.60136	32.530	26.171	1438.1
25.0	-1.718	0.60135	32.527	26.168	1438.1
26.0	-1.708	0.60199	32.554	26.190	1438.2
27.0	-1.700	0.60260	32.580	26.211	1438.3
28.0	-1.703	0.60276	32.592	26.221	1438.3
29.0	-1.704	0.60306	32.611	26.236	1438.4
30.0	-1.700	0.60269	32.584	26.214	1438.4
31.0	-1.703	0.60263	32.582	26.213	1438.4
32.0	-1.700	0.60279	32.588	26.218	1438.4
33.0	-1.699	0.60281	32.587	26.217	1438.4
34.0	-1.698	0.60292	32.593	26.222	1438.5
35.0	-1.699	0.60437	32.679	26.291	1438.6
37.5	-1.737	0.60553	32.788	26.381	1438.6
40.0	-1.735	0.60584	32.803	26.393	1438.7
42.5	-1.734	0.60597	32.809	26.398	1438.7
45.0	-1.735	0.60608	32.814	26.402	1438.8
47.5	-1.735	0.60620	32.820	26.407	1438.8
50.0	-1.737	0.60641	32.834	26.418	1438.9
55.0	-1.740	0.60661	32.845	26.428	1438.9
60.0	-1.741	0.60688	32.859	26.439	1439.0
65.0	-1.742	0.60704	32.867	26.445	1439.1
70.0	-1.727	0.60757	32.878	26.454	1439.3
75.0	-1.720	0.60791	32.888	26.462	1439.4
77.1	-1.719	0.60800	32.890	26.464	1439.5



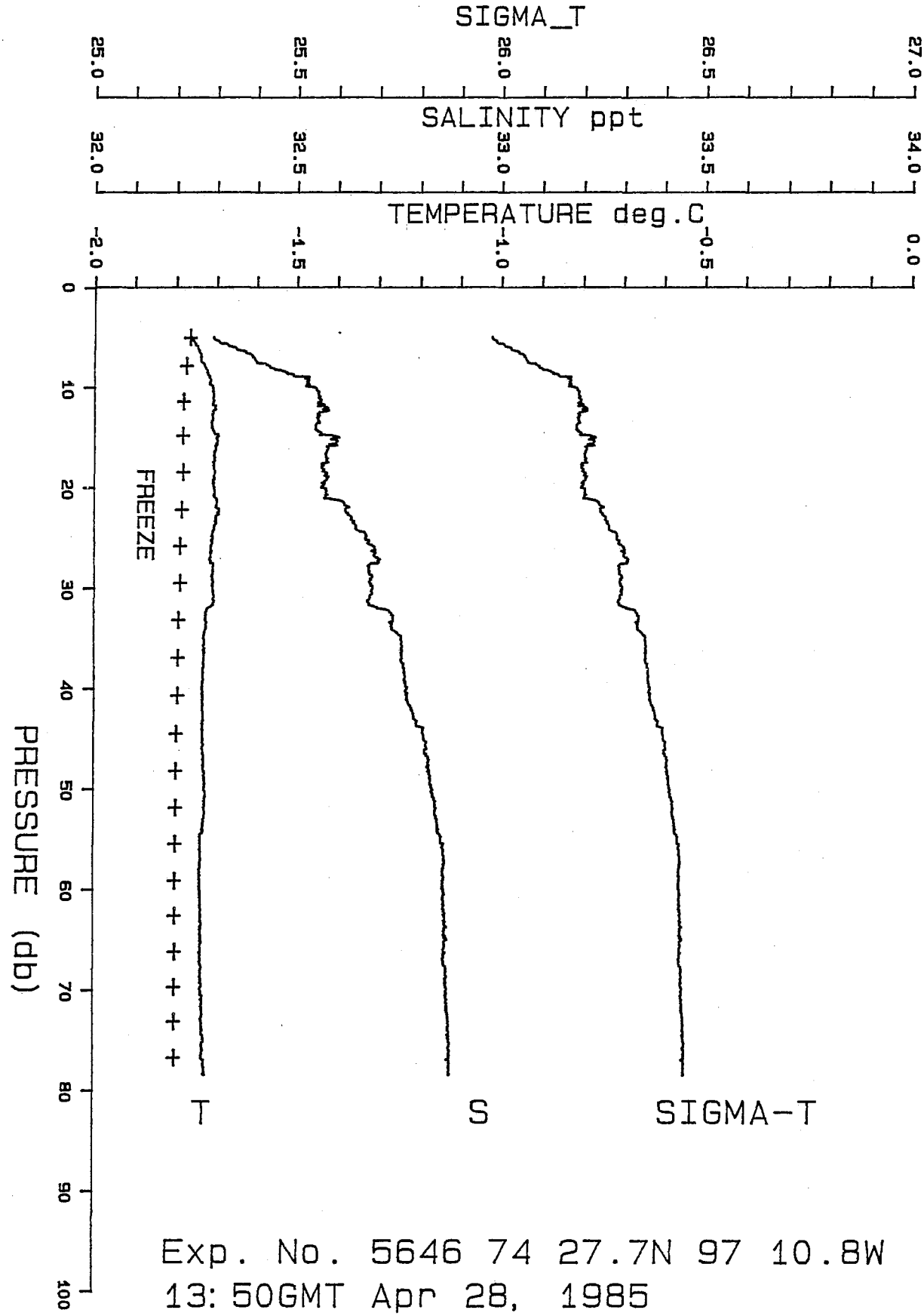
Exp. No. 5645 74 27.7N 97 10.8W
13: 15GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5646

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1350

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.766	0.59628	32.290	25.977	1437.3
6.0	-1.750	0.59751	32.344	26.021	1437.4
7.0	-1.741	0.59848	32.392	26.059	1437.5
8.0	-1.729	0.59946	32.437	26.095	1437.7
9.0	-1.718	0.60112	32.523	26.165	1437.9
10.0	-1.710	0.60165	32.545	26.183	1438.0
11.0	-1.710	0.60180	32.554	26.190	1438.0
12.0	-1.706	0.60224	32.575	26.207	1438.0
13.0	-1.711	0.60172	32.548	26.185	1438.0
14.0	-1.714	0.60163	32.546	26.184	1438.0
15.0	-1.703	0.60270	32.596	26.224	1438.1
16.0	-1.705	0.60234	32.576	26.208	1438.1
17.0	-1.706	0.60223	32.571	26.204	1438.1
18.0	-1.707	0.60204	32.560	26.195	1438.1
19.0	-1.705	0.60231	32.573	26.206	1438.2
20.0	-1.706	0.60219	32.566	26.200	1438.2
21.0	-1.702	0.60229	32.568	26.201	1438.2
22.0	-1.699	0.60326	32.621	26.245	1438.3
23.0	-1.704	0.60341	32.635	26.256	1438.3
24.0	-1.707	0.60351	32.644	26.263	1438.3
25.0	-1.710	0.60388	32.668	26.283	1438.4
26.0	-1.714	0.60418	32.690	26.301	1438.4
27.0	-1.719	0.60429	32.701	26.310	1438.4
28.0	-1.709	0.60406	32.676	26.289	1438.4
29.0	-1.711	0.60413	32.681	26.294	1438.4
30.0	-1.711	0.60421	32.685	26.297	1438.5
31.0	-1.709	0.60415	32.679	26.292	1438.5
32.0	-1.723	0.60436	32.707	26.315	1438.5
33.0	-1.729	0.60475	32.736	26.338	1438.5
34.0	-1.726	0.60475	32.733	26.336	1438.5
35.0	-1.733	0.60504	32.756	26.355	1438.5
37.5	-1.733	0.60517	32.762	26.360	1438.6
40.0	-1.735	0.60526	32.769	26.366	1438.6
42.5	-1.734	0.60560	32.786	26.379	1438.7
45.0	-1.733	0.60609	32.813	26.401	1438.8
47.5	-1.731	0.60632	32.823	26.410	1438.8
50.0	-1.731	0.60654	32.834	26.418	1438.9
55.0	-1.740	0.60676	32.854	26.435	1439.0
60.0	-1.740	0.60696	32.864	26.443	1439.0
65.0	-1.739	0.60716	32.871	26.448	1439.1
70.0	-1.737	0.60725	32.871	26.448	1439.2
75.0	-1.729	0.60752	32.875	26.452	1439.4
78.4	-1.727	0.60761	32.876	26.452	1439.4



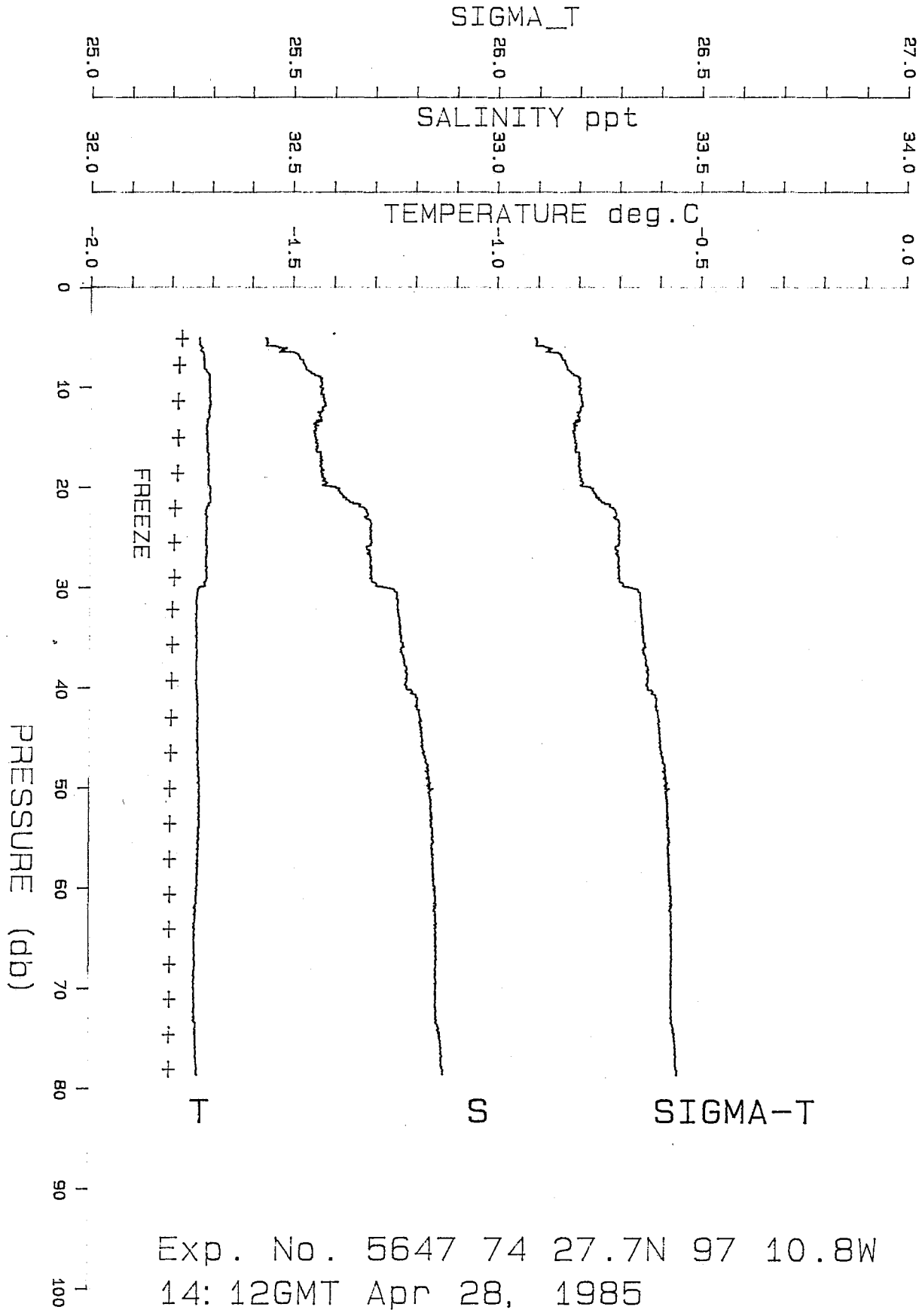
Exp. No. 5646 74 27.7N 97 10.8W
13:50GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5647

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1412

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.1	-1.732	0.59933	32.434	26.094	1437.6
6.0	-1.725	0.59999	32.465	26.118	1437.7
7.0	-1.721	0.60094	32.517	26.160	1437.8
8.0	-1.720	0.60124	32.533	26.173	1437.9
9.0	-1.706	0.60210	32.567	26.201	1438.0
10.0	-1.705	0.60212	32.568	26.201	1438.0
11.0	-1.706	0.60224	32.575	26.207	1438.0
12.0	-1.706	0.60221	32.573	26.205	1438.0
13.0	-1.707	0.60216	32.570	26.203	1438.1
14.0	-1.713	0.60181	32.555	26.191	1438.0
15.0	-1.712	0.60188	32.558	26.194	1438.0
16.0	-1.711	0.60196	32.561	26.196	1438.1
17.0	-1.710	0.60216	32.571	26.204	1438.1
18.0	-1.709	0.60219	32.571	26.204	1438.1
19.0	-1.708	0.60228	32.575	26.207	1438.1
20.0	-1.703	0.60289	32.605	26.231	1438.2
21.0	-1.702	0.60324	32.624	26.247	1438.3
22.0	-1.713	0.60383	32.670	26.285	1438.3
23.0	-1.712	0.60399	32.678	26.291	1438.3
24.0	-1.712	0.60421	32.691	26.301	1438.4
25.0	-1.713	0.60426	32.695	26.305	1438.4
26.0	-1.711	0.60410	32.682	26.294	1438.4
27.0	-1.714	0.60426	32.694	26.304	1438.4
28.0	-1.710	0.60429	32.691	26.302	1438.4
29.0	-1.713	0.60432	32.695	26.305	1438.5
30.0	-1.731	0.60456	32.729	26.333	1438.4
31.0	-1.735	0.60499	32.758	26.356	1438.5
32.0	-1.735	0.60505	32.760	26.359	1438.5
33.0	-1.737	0.60509	32.765	26.362	1438.5
34.0	-1.736	0.60516	32.767	26.364	1438.5
35.0	-1.737	0.60519	32.770	26.366	1438.5
37.5	-1.735	0.60537	32.776	26.372	1438.6
40.0	-1.735	0.60549	32.783	26.377	1438.6
42.5	-1.732	0.60610	32.813	26.401	1438.7
45.0	-1.731	0.60627	32.822	26.408	1438.8
47.5	-1.729	0.60652	32.833	26.417	1438.9
50.0	-1.726	0.60671	32.839	26.422	1438.9
55.0	-1.729	0.60685	32.847	26.429	1439.0
60.0	-1.735	0.60694	32.857	26.437	1439.1
65.0	-1.740	0.60692	32.857	26.437	1439.1
70.0	-1.740	0.60697	32.857	26.437	1439.2
75.0	-1.735	0.60731	32.869	26.447	1439.3
78.6	-1.731	0.60754	32.876	26.452	1439.4



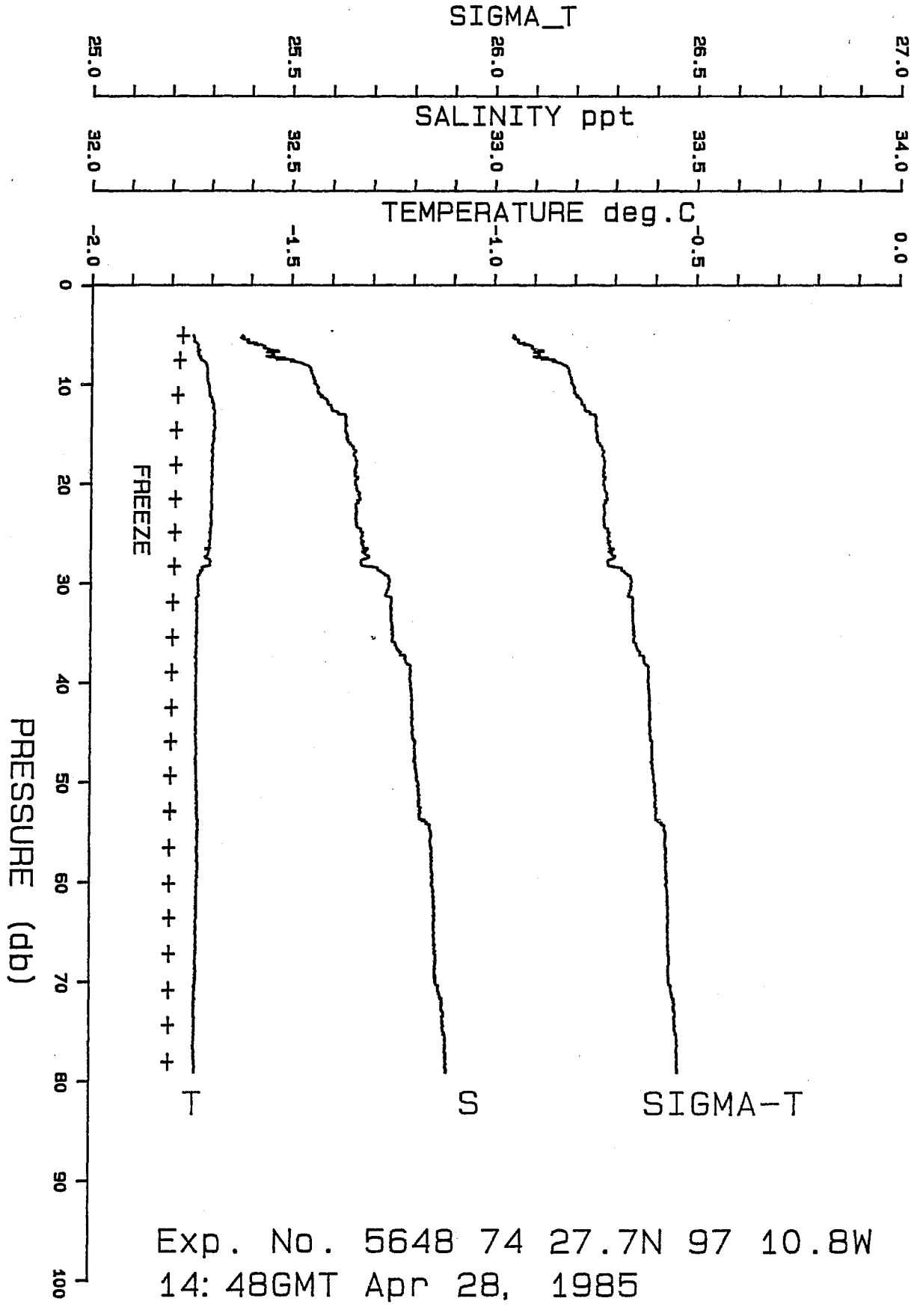
Exp. No. 5647 74 27.7N 97 10.8W
14: 12GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5648

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1448

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.746	0.59813	32.378	26.048	1437.5
6.0	-1.734	0.59907	32.420	26.082	1437.6
7.0	-1.732	0.59965	32.452	26.108	1437.7
8.0	-1.712	0.60138	32.532	26.172	1437.9
9.0	-1.710	0.60175	32.552	26.188	1437.9
10.0	-1.707	0.60197	32.560	26.195	1438.0
11.0	-1.704	0.60223	32.573	26.205	1438.0
12.0	-1.694	0.60276	32.592	26.221	1438.1
13.0	-1.693	0.60322	32.618	26.242	1438.2
14.0	-1.693	0.60351	32.634	26.255	1438.2
15.0	-1.694	0.60356	32.638	26.258	1438.2
16.0	-1.696	0.60365	32.645	26.264	1438.3
17.0	-1.695	0.60383	32.653	26.270	1438.3
18.0	-1.699	0.60390	32.661	26.277	1438.3
19.0	-1.696	0.60389	32.656	26.273	1438.3
20.0	-1.695	0.60392	32.657	26.274	1438.3
21.0	-1.698	0.60406	32.668	26.282	1438.4
22.0	-1.697	0.60392	32.659	26.275	1438.4
23.0	-1.698	0.60391	32.658	26.275	1438.4
24.0	-1.699	0.60396	32.661	26.277	1438.4
25.0	-1.700	0.60416	32.674	26.288	1438.4
26.0	-1.701	0.60416	32.675	26.288	1438.4
27.0	-1.706	0.60424	32.684	26.296	1438.4
28.0	-1.701	0.60417	32.674	26.288	1438.5
29.0	-1.727	0.60465	32.730	26.334	1438.4
30.0	-1.730	0.60478	32.741	26.342	1438.4
31.0	-1.730	0.60469	32.734	26.337	1438.5
32.0	-1.734	0.60486	32.748	26.349	1438.5
33.0	-1.732	0.60488	32.748	26.348	1438.5
34.0	-1.734	0.60491	32.750	26.350	1438.5
35.0	-1.732	0.60494	32.750	26.350	1438.5
37.5	-1.734	0.60548	32.781	26.376	1438.6
40.0	-1.735	0.60576	32.799	26.390	1438.7
42.5	-1.733	0.60584	32.800	26.390	1438.7
45.0	-1.733	0.60589	32.801	26.392	1438.8
47.5	-1.733	0.60604	32.808	26.397	1438.8
50.0	-1.733	0.60624	32.819	26.406	1438.9
55.0	-1.729	0.60689	32.850	26.431	1439.0
60.0	-1.731	0.60700	32.856	26.436	1439.1
65.0	-1.734	0.60709	32.861	26.440	1439.2
70.0	-1.733	0.60718	32.862	26.441	1439.2
75.0	-1.737	0.60753	32.884	26.459	1439.3
79.1	-1.736	0.60769	32.890	26.464	1439.4



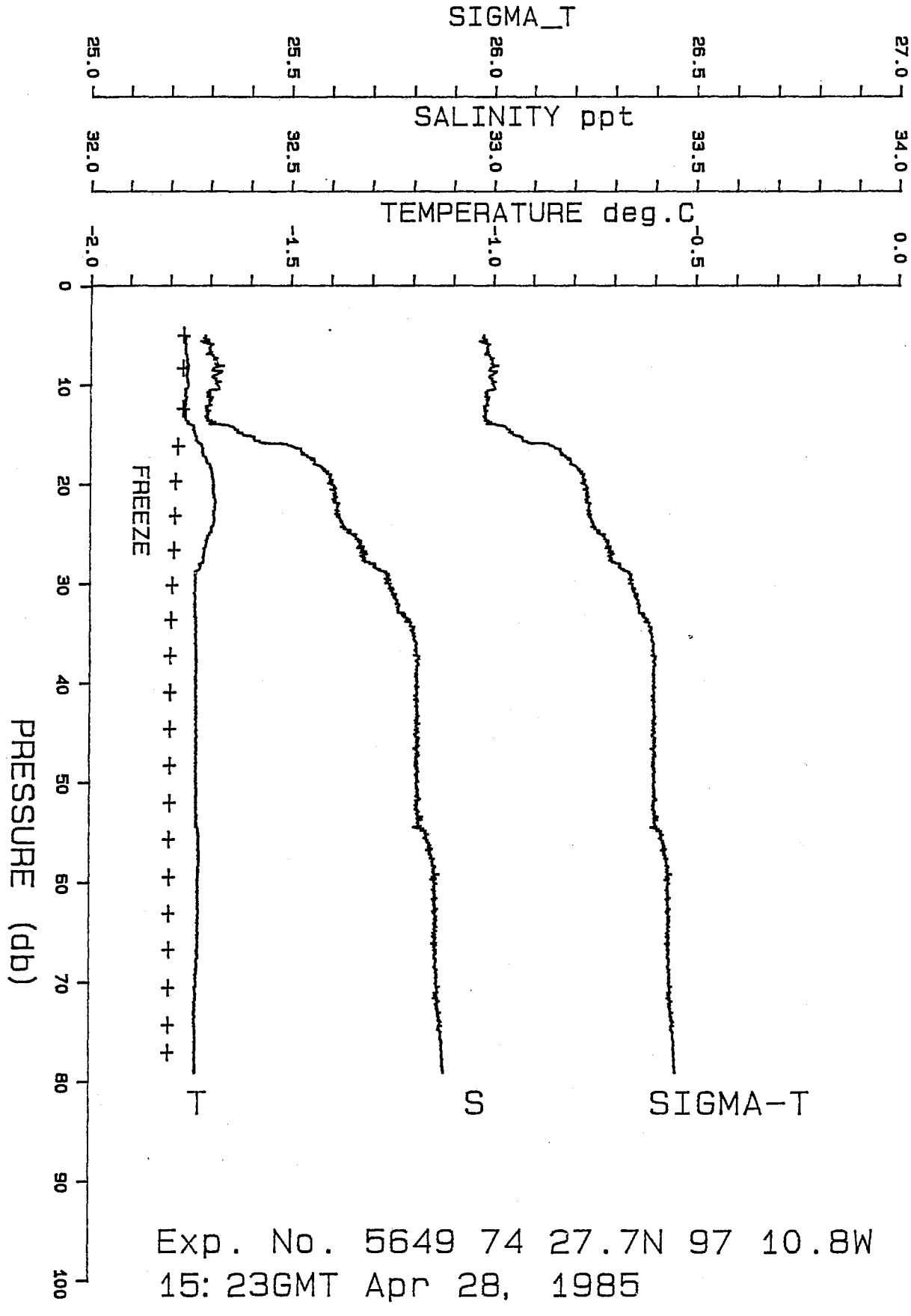
Exp. No. 5648 74 27.7N 97 10.8W
14: 48GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5649

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1523

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.766	0.59622	32.286	25.974	1437.3
6.0	-1.764	0.59649	32.299	25.984	1437.3
7.0	-1.760	0.59668	32.305	25.989	1437.3
8.0	-1.755	0.59695	32.316	25.998	1437.4
9.0	-1.760	0.59679	32.311	25.994	1437.4
10.0	-1.756	0.59697	32.317	25.999	1437.4
11.0	-1.764	0.59653	32.299	25.984	1437.4
12.0	-1.765	0.59656	32.301	25.986	1437.4
13.0	-1.762	0.59650	32.293	25.979	1437.4
14.0	-1.746	0.59732	32.324	26.005	1437.5
15.0	-1.737	0.59846	32.382	26.051	1437.7
16.0	-1.721	0.60059	32.490	26.138	1437.9
17.0	-1.718	0.60131	32.529	26.170	1438.0
18.0	-1.701	0.60217	32.561	26.196	1438.1
19.0	-1.694	0.60294	32.599	26.226	1438.2
20.0	-1.691	0.60303	32.600	26.227	1438.3
21.0	-1.692	0.60320	32.610	26.236	1438.3
22.0	-1.688	0.60337	32.616	26.240	1438.3
23.0	-1.691	0.60333	32.616	26.240	1438.4
24.0	-1.692	0.60355	32.629	26.251	1438.4
25.0	-1.702	0.60374	32.651	26.269	1438.4
26.0	-1.709	0.60393	32.670	26.284	1438.4
27.0	-1.714	0.60408	32.684	26.296	1438.4
28.0	-1.724	0.60427	32.706	26.314	1438.4
29.0	-1.736	0.60460	32.737	26.340	1438.4
30.0	-1.737	0.60472	32.744	26.346	1438.4
31.0	-1.736	0.60493	32.756	26.355	1438.5
32.0	-1.737	0.60505	32.763	26.361	1438.5
33.0	-1.736	0.60539	32.781	26.376	1438.5
34.0	-1.734	0.60569	32.796	26.388	1438.6
35.0	-1.735	0.60582	32.805	26.395	1438.6
37.5	-1.735	0.60602	32.815	26.403	1438.6
40.0	-1.733	0.60604	32.813	26.401	1438.7
42.5	-1.732	0.60607	32.812	26.400	1438.7
45.0	-1.732	0.60611	32.812	26.401	1438.8
47.5	-1.732	0.60612	32.812	26.400	1438.8
50.0	-1.731	0.60616	32.812	26.400	1438.9
55.0	-1.726	0.60668	32.834	26.418	1439.0
60.0	-1.727	0.60715	32.859	26.439	1439.1
65.0	-1.725	0.60718	32.856	26.436	1439.2
70.0	-1.731	0.60721	32.862	26.441	1439.3
75.0	-1.735	0.60742	32.875	26.452	1439.3
79.1	-1.735	0.60757	32.882	26.457	1439.4



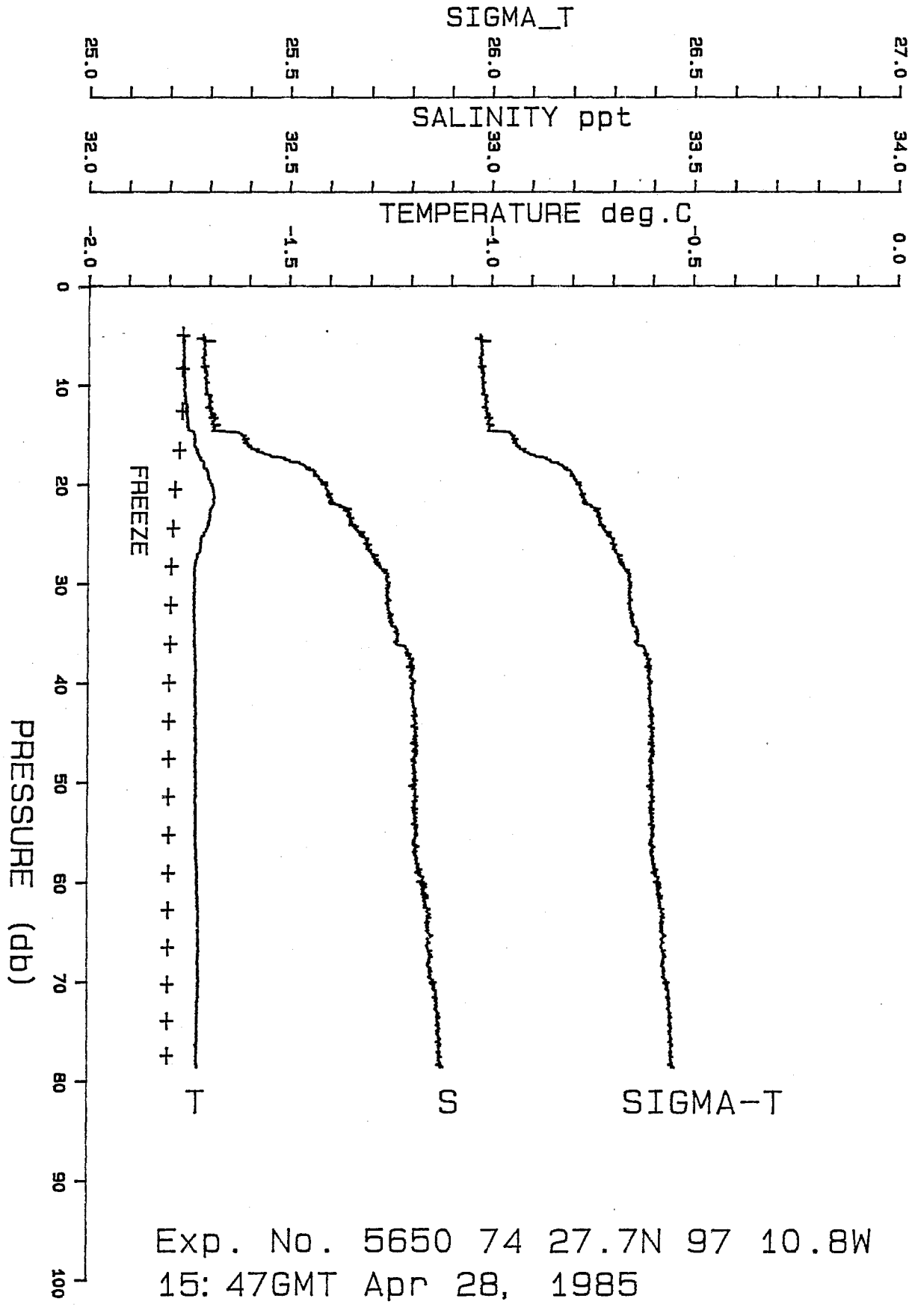
Exp. No. 5649 74 27.7N 97 10.8W
15: 23GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5650

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1547

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
4.9	-1.765	0.59617	32.283	25.971	1437.2
5.0	-1.765	0.59619	32.283	25.971	1437.3
6.0	-1.767	0.59624	32.288	25.975	1437.3
7.0	-1.765	0.59627	32.287	25.974	1437.3
8.0	-1.763	0.59631	32.286	25.974	1437.3
9.0	-1.764	0.59642	32.294	25.980	1437.3
10.0	-1.763	0.59641	32.291	25.978	1437.4
11.0	-1.763	0.59662	32.303	25.987	1437.4
12.0	-1.757	0.59671	32.301	25.986	1437.4
13.0	-1.756	0.59692	32.312	25.995	1437.5
14.0	-1.755	0.59704	32.317	25.999	1437.5
15.0	-1.736	0.59844	32.380	26.049	1437.7
16.0	-1.738	0.59869	32.396	26.063	1437.7
17.0	-1.726	0.59973	32.445	26.102	1437.8
18.0	-1.714	0.60147	32.533	26.174	1438.0
19.0	-1.702	0.60229	32.568	26.202	1438.2
20.0	-1.692	0.60269	32.581	26.212	1438.2
21.0	-1.688	0.60309	32.600	26.227	1438.3
22.0	-1.690	0.60322	32.609	26.234	1438.3
23.0	-1.699	0.60375	32.649	26.268	1438.4
24.0	-1.701	0.60379	32.654	26.271	1438.4
25.0	-1.713	0.60396	32.676	26.289	1438.4
26.0	-1.722	0.60405	32.691	26.302	1438.4
27.0	-1.729	0.60420	32.707	26.315	1438.4
28.0	-1.735	0.60427	32.717	26.323	1438.4
29.0	-1.737	0.60469	32.744	26.345	1438.4
30.0	-1.736	0.60473	32.744	26.346	1438.4
31.0	-1.736	0.60469	32.741	26.343	1438.4
32.0	-1.735	0.60476	32.744	26.346	1438.5
33.0	-1.736	0.60489	32.752	26.352	1438.5
34.0	-1.736	0.60490	32.752	26.351	1438.5
35.0	-1.735	0.60521	32.769	26.365	1438.5
37.5	-1.736	0.60571	32.798	26.389	1438.6
40.0	-1.734	0.60597	32.810	26.399	1438.7
42.5	-1.732	0.60608	32.813	26.401	1438.7
45.0	-1.732	0.60614	32.815	26.403	1438.8
47.5	-1.732	0.60608	32.809	26.398	1438.8
50.0	-1.731	0.60616	32.812	26.400	1438.9
55.0	-1.731	0.60631	32.817	26.404	1438.9
60.0	-1.729	0.60674	32.838	26.422	1439.1
65.0	-1.725	0.60703	32.847	26.429	1439.2
70.0	-1.724	0.60732	32.860	26.440	1439.3
75.0	-1.727	0.60756	32.875	26.452	1439.4
78.6	-1.727	0.60765	32.878	26.454	1439.4



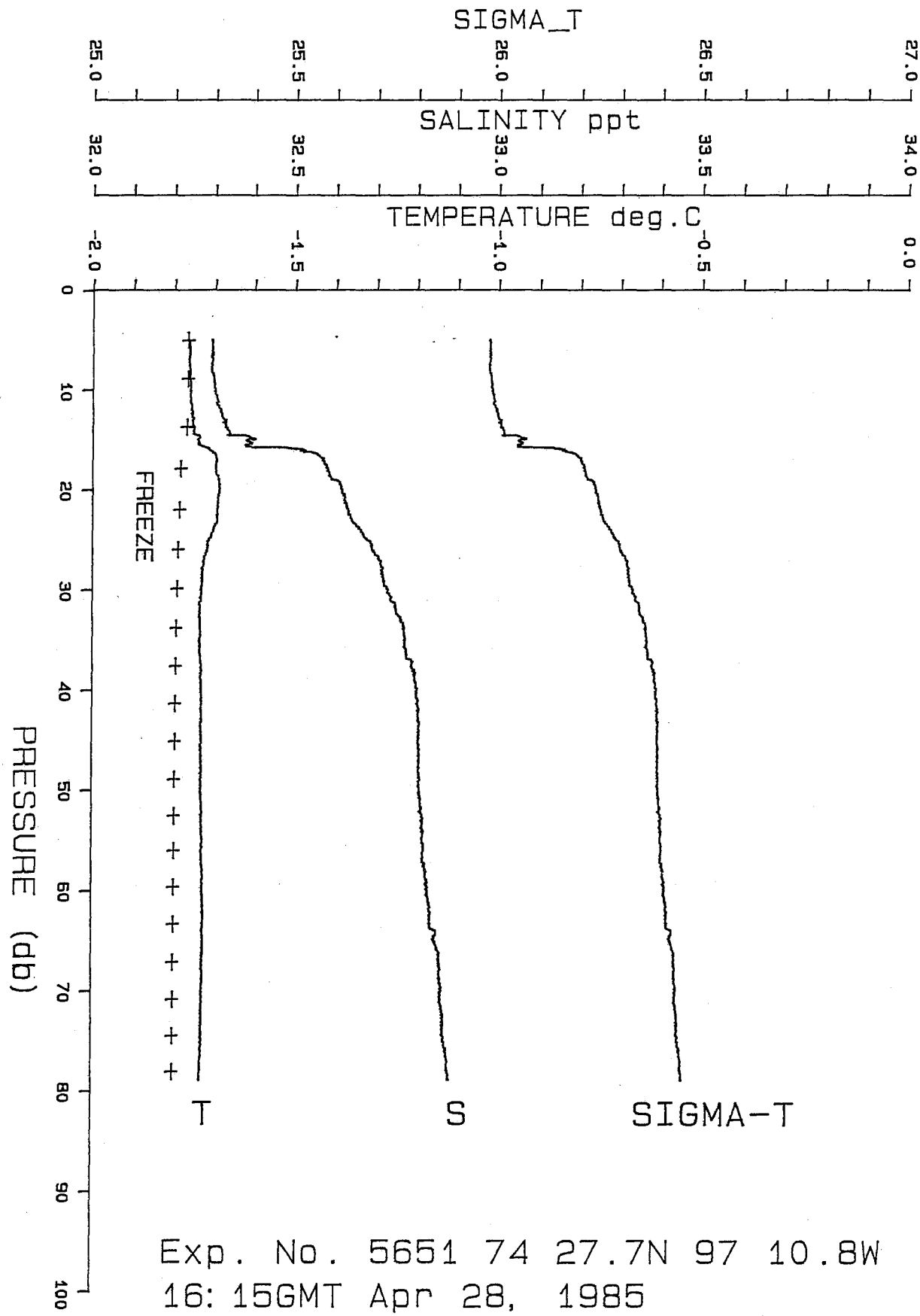
Exp. No. 5650 74 27.7N 97 10.8W
15: 47GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5651

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1615

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.765	0.59630	32.290	25.977	1437.3
6.0	-1.764	0.59634	32.291	25.977	1437.3
7.0	-1.764	0.59636	32.292	25.978	1437.3
8.0	-1.762	0.59639	32.290	25.977	1437.3
9.0	-1.762	0.59649	32.296	25.981	1437.3
10.0	-1.762	0.59656	32.299	25.984	1437.4
11.0	-1.762	0.59670	32.307	25.990	1437.4
12.0	-1.757	0.59688	32.311	25.994	1437.4
13.0	-1.757	0.59715	32.326	26.006	1437.5
14.0	-1.754	0.59734	32.334	26.012	1437.5
15.0	-1.742	0.59832	32.379	26.048	1437.7
16.0	-1.713	0.60114	32.514	26.158	1438.0
17.0	-1.696	0.60235	32.566	26.200	1438.2
18.0	-1.697	0.60254	32.579	26.210	1438.2
19.0	-1.691	0.60304	32.601	26.228	1438.3
20.0	-1.690	0.60329	32.614	26.239	1438.3
21.0	-1.692	0.60337	32.620	26.244	1438.3
22.0	-1.695	0.60347	32.629	26.251	1438.3
23.0	-1.694	0.60364	32.638	26.258	1438.4
24.0	-1.707	0.60381	32.661	26.277	1438.4
25.0	-1.715	0.60397	32.679	26.292	1438.4
26.0	-1.720	0.60408	32.690	26.301	1438.4
27.0	-1.727	0.60422	32.706	26.314	1438.4
28.0	-1.729	0.60428	32.711	26.319	1438.4
29.0	-1.731	0.60435	32.716	26.323	1438.4
30.0	-1.735	0.60449	32.729	26.333	1438.4
31.0	-1.734	0.60462	32.735	26.338	1438.4
32.0	-1.736	0.60482	32.748	26.348	1438.5
33.0	-1.736	0.60502	32.760	26.358	1438.5
34.0	-1.736	0.60517	32.767	26.364	1438.5
35.0	-1.736	0.60521	32.770	26.366	1438.5
37.5	-1.733	0.60556	32.786	26.379	1438.6
40.0	-1.734	0.60584	32.802	26.392	1438.7
42.5	-1.731	0.60595	32.804	26.394	1438.7
45.0	-1.732	0.60594	32.804	26.394	1438.8
47.5	-1.732	0.60603	32.806	26.396	1438.8
50.0	-1.734	0.60606	32.809	26.398	1438.8
55.0	-1.729	0.60633	32.816	26.404	1439.0
60.0	-1.729	0.60661	32.830	26.415	1439.1
65.0	-1.728	0.60700	32.849	26.431	1439.2
70.0	-1.729	0.60726	32.863	26.442	1439.3
75.0	-1.729	0.60742	32.869	26.447	1439.4
78.8	-1.734	0.60763	32.884	26.459	1439.4



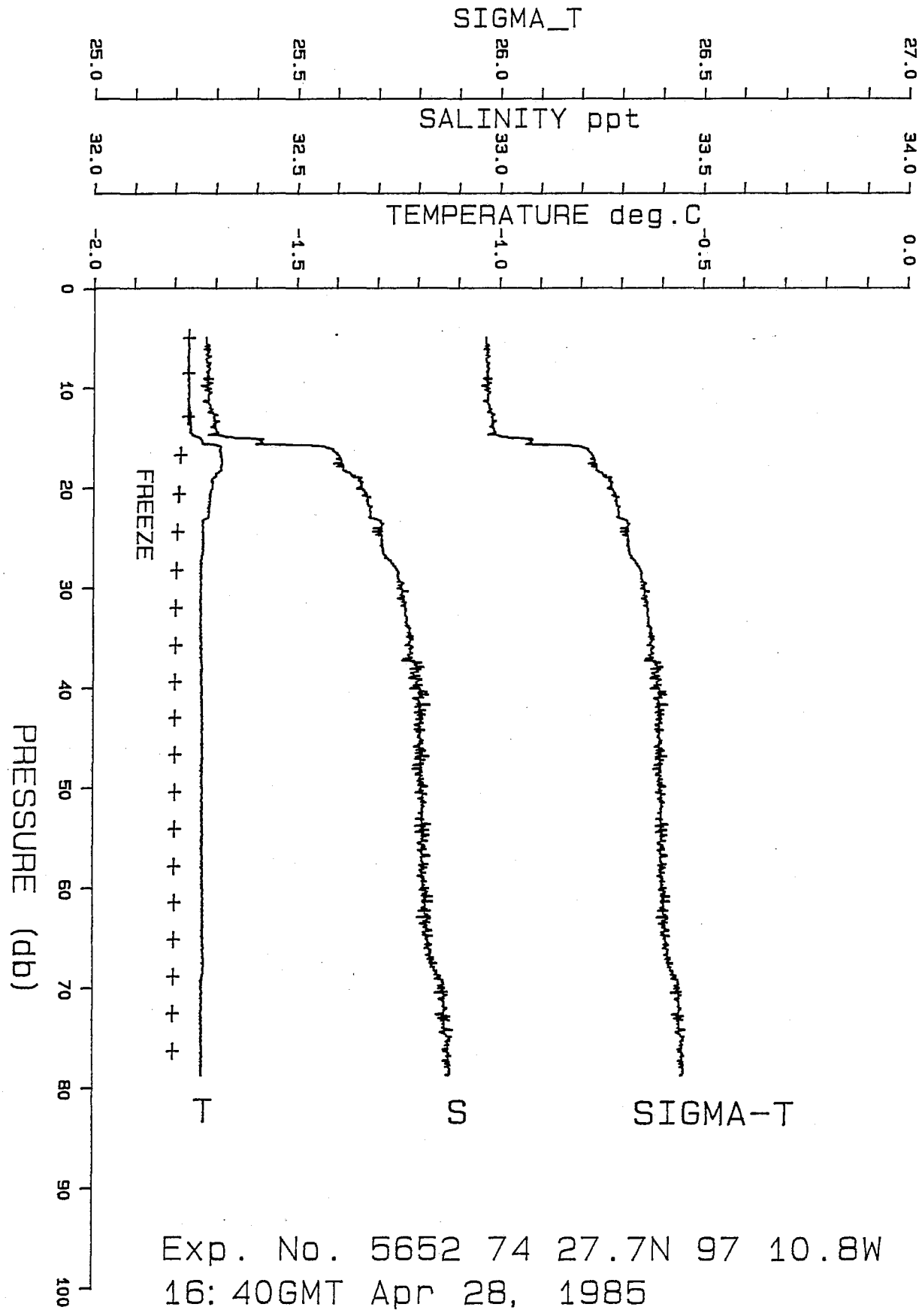
Exp. No. 5651 74 27.7N 97 10.8W
16: 15GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5652

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1640

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
4.9	-1.770	0.59597	32.276	25.965	1437.2
5.0	-1.768	0.59599	32.275	25.965	1437.2
6.0	-1.767	0.59607	32.278	25.967	1437.2
7.0	-1.768	0.59604	32.276	25.965	1437.3
8.0	-1.769	0.59618	32.286	25.973	1437.3
9.0	-1.766	0.59604	32.274	25.964	1437.3
10.0	-1.766	0.59627	32.287	25.974	1437.3
11.0	-1.768	0.59618	32.283	25.971	1437.3
12.0	-1.767	0.59629	32.287	25.975	1437.4
13.0	-1.763	0.59652	32.296	25.982	1437.4
14.0	-1.761	0.59659	32.298	25.983	1437.4
15.0	-1.737	0.59802	32.355	26.029	1437.6
16.0	-1.688	0.60272	32.580	26.211	1438.2
17.0	-1.685	0.60327	32.610	26.235	1438.3
18.0	-1.685	0.60336	32.615	26.239	1438.3
19.0	-1.706	0.60374	32.660	26.276	1438.3
20.0	-1.707	0.60375	32.660	26.277	1438.3
21.0	-1.714	0.60389	32.675	26.289	1438.3
22.0	-1.718	0.60394	32.683	26.295	1438.3
23.0	-1.722	0.60398	32.689	26.300	1438.3
24.0	-1.731	0.60414	32.708	26.316	1438.3
25.0	-1.729	0.60424	32.711	26.318	1438.3
26.0	-1.732	0.60428	32.715	26.322	1438.3
27.0	-1.733	0.60445	32.727	26.331	1438.4
28.0	-1.736	0.60477	32.748	26.348	1438.4
29.0	-1.734	0.60490	32.753	26.352	1438.4
30.0	-1.735	0.60489	32.753	26.352	1438.4
31.0	-1.735	0.60501	32.760	26.358	1438.5
32.0	-1.735	0.60524	32.773	26.368	1438.5
33.0	-1.735	0.60529	32.775	26.370	1438.5
34.0	-1.736	0.60544	32.784	26.378	1438.5
35.0	-1.735	0.60544	32.782	26.376	1438.6
37.5	-1.733	0.60586	32.804	26.394	1438.6
40.0	-1.732	0.60579	32.797	26.388	1438.7
42.5	-1.731	0.60608	32.811	26.400	1438.7
45.0	-1.732	0.60606	32.809	26.398	1438.8
47.5	-1.730	0.60611	32.809	26.398	1438.8
50.0	-1.731	0.60616	32.812	26.400	1438.9
55.0	-1.732	0.60628	32.816	26.404	1438.9
60.0	-1.731	0.60659	32.831	26.416	1439.0
65.0	-1.727	0.60668	32.829	26.414	1439.1
70.0	-1.732	0.60734	32.871	26.448	1439.3
75.0	-1.733	0.60757	32.882	26.458	1439.4
78.7	-1.731	0.60753	32.876	26.452	1439.4



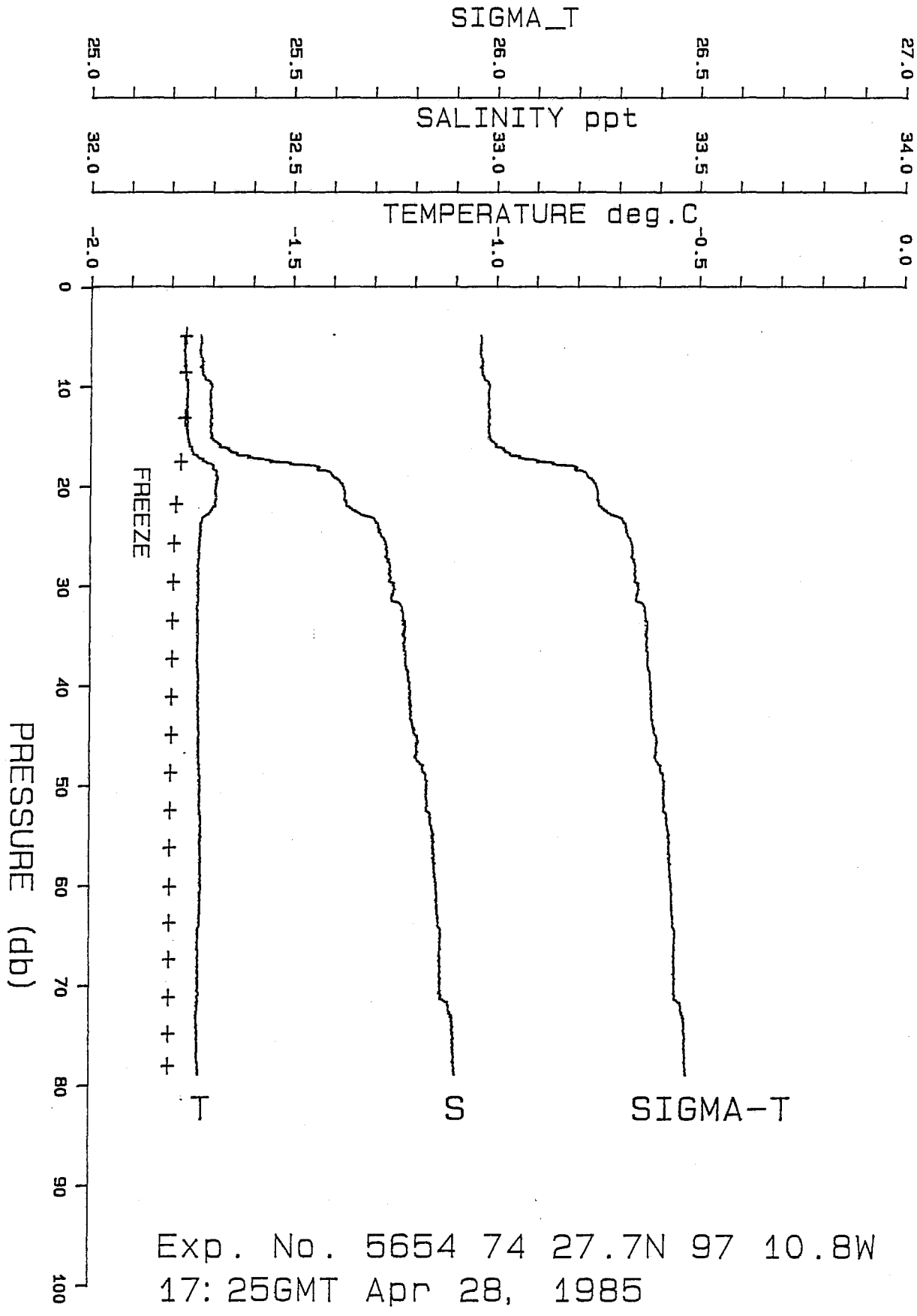
Exp. No. 5652 74 27.7N 97 10.8W
16: 40GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5654

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1725

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
4.9	-1.770	0.59587	32.270	25.960	1437.2
5.0	-1.770	0.59587	32.270	25.961	1437.2
6.0	-1.769	0.59588	32.268	25.959	1437.2
7.0	-1.768	0.59595	32.271	25.961	1437.3
8.0	-1.767	0.59595	32.269	25.960	1437.3
9.0	-1.768	0.59614	32.281	25.970	1437.3
10.0	-1.765	0.59650	32.299	25.984	1437.4
11.0	-1.762	0.59649	32.294	25.980	1437.4
12.0	-1.762	0.59652	32.296	25.981	1437.4
13.0	-1.763	0.59652	32.296	25.982	1437.4
14.0	-1.763	0.59650	32.294	25.980	1437.4
15.0	-1.761	0.59658	32.296	25.982	1437.4
16.0	-1.754	0.59706	32.316	25.998	1437.5
17.0	-1.736	0.59866	32.392	26.059	1437.7
18.0	-1.697	0.60226	32.563	26.197	1438.2
19.0	-1.687	0.60309	32.600	26.227	1438.3
20.0	-1.692	0.60344	32.626	26.248	1438.3
21.0	-1.691	0.60352	32.628	26.250	1438.3
22.0	-1.695	0.60364	32.639	26.259	1438.3
23.0	-1.719	0.60404	32.690	26.301	1438.3
24.0	-1.729	0.60425	32.712	26.319	1438.3
25.0	-1.729	0.60441	32.720	26.326	1438.3
26.0	-1.730	0.60458	32.732	26.335	1438.4
27.0	-1.730	0.60457	32.730	26.334	1438.4
28.0	-1.735	0.60469	32.742	26.343	1438.4
29.0	-1.735	0.60471	32.743	26.344	1438.4
30.0	-1.734	0.60489	32.752	26.352	1438.4
31.0	-1.733	0.60482	32.745	26.346	1438.5
32.0	-1.737	0.60520	32.772	26.368	1438.5
33.0	-1.735	0.60528	32.774	26.370	1438.5
34.0	-1.735	0.60539	32.780	26.375	1438.5
35.0	-1.736	0.60534	32.778	26.372	1438.5
37.5	-1.735	0.60544	32.781	26.376	1438.6
40.0	-1.732	0.60567	32.790	26.382	1438.7
42.5	-1.733	0.60578	32.797	26.388	1438.7
45.0	-1.731	0.60606	32.809	26.398	1438.8
47.5	-1.731	0.60618	32.815	26.402	1438.8
50.0	-1.727	0.60658	32.832	26.416	1438.9
55.0	-1.725	0.60693	32.847	26.429	1439.0
60.0	-1.726	0.60713	32.858	26.438	1439.1
65.0	-1.732	0.60724	32.867	26.446	1439.2
70.0	-1.731	0.60730	32.867	26.445	1439.3
75.0	-1.734	0.60787	32.901	26.473	1439.4
78.9	-1.730	0.60805	32.905	26.476	1439.5



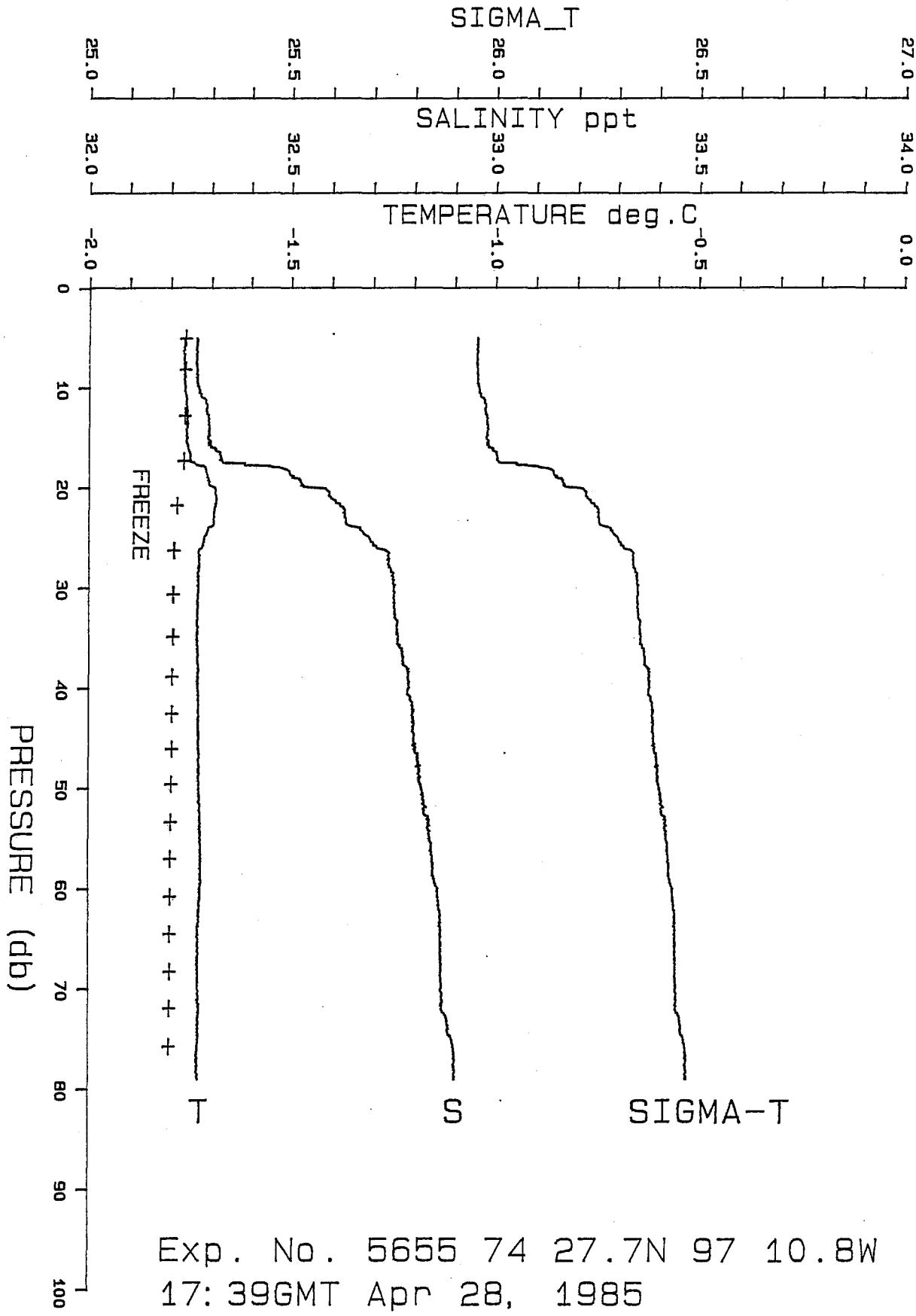
Exp. No. 5654 74 27.7N 97 10.8W
17:25GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5655

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1739

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.768	0.59577	32.261	25.954	1437.2
6.0	-1.769	0.59577	32.262	25.954	1437.2
7.0	-1.769	0.59577	32.261	25.953	1437.2
8.0	-1.770	0.59579	32.263	25.955	1437.2
9.0	-1.769	0.59582	32.264	25.955	1437.3
10.0	-1.767	0.59593	32.267	25.958	1437.3
11.0	-1.764	0.59625	32.282	25.970	1437.4
12.0	-1.763	0.59633	32.286	25.973	1437.4
13.0	-1.763	0.59647	32.293	25.979	1437.4
14.0	-1.763	0.59650	32.294	25.980	1437.4
15.0	-1.761	0.59651	32.292	25.978	1437.4
16.0	-1.759	0.59686	32.310	25.993	1437.5
17.0	-1.755	0.59722	32.326	26.006	1437.6
18.0	-1.716	0.60045	32.475	26.126	1438.0
19.0	-1.708	0.60125	32.514	26.157	1438.1
20.0	-1.692	0.60249	32.569	26.202	1438.2
21.0	-1.688	0.60305	32.597	26.225	1438.3
22.0	-1.693	0.60346	32.626	26.249	1438.3
23.0	-1.695	0.60355	32.634	26.255	1438.4
24.0	-1.709	0.60389	32.668	26.283	1438.4
25.0	-1.718	0.60412	32.691	26.302	1438.4
26.0	-1.727	0.60431	32.712	26.319	1438.4
27.0	-1.731	0.60471	32.739	26.341	1438.4
28.0	-1.734	0.60473	32.743	26.344	1438.4
29.0	-1.732	0.60483	32.747	26.347	1438.4
30.0	-1.734	0.60488	32.751	26.351	1438.4
31.0	-1.734	0.60489	32.751	26.351	1438.5
32.0	-1.735	0.60491	32.754	26.353	1438.5
33.0	-1.734	0.60500	32.757	26.356	1438.5
34.0	-1.735	0.60503	32.759	26.357	1438.5
35.0	-1.737	0.60505	32.761	26.359	1438.5
37.5	-1.733	0.60532	32.772	26.368	1438.6
40.0	-1.733	0.60560	32.787	26.380	1438.7
42.5	-1.732	0.60583	32.798	26.389	1438.7
45.0	-1.732	0.60590	32.801	26.391	1438.8
47.5	-1.731	0.60612	32.811	26.399	1438.8
50.0	-1.730	0.60629	32.819	26.406	1438.9
55.0	-1.726	0.60677	32.839	26.422	1439.0
60.0	-1.727	0.60714	32.860	26.439	1439.1
65.0	-1.731	0.60725	32.867	26.445	1439.2
70.0	-1.732	0.60730	32.868	26.446	1439.3
75.0	-1.732	0.60783	32.896	26.469	1439.4
79.0	-1.733	0.60796	32.903	26.474	1439.4



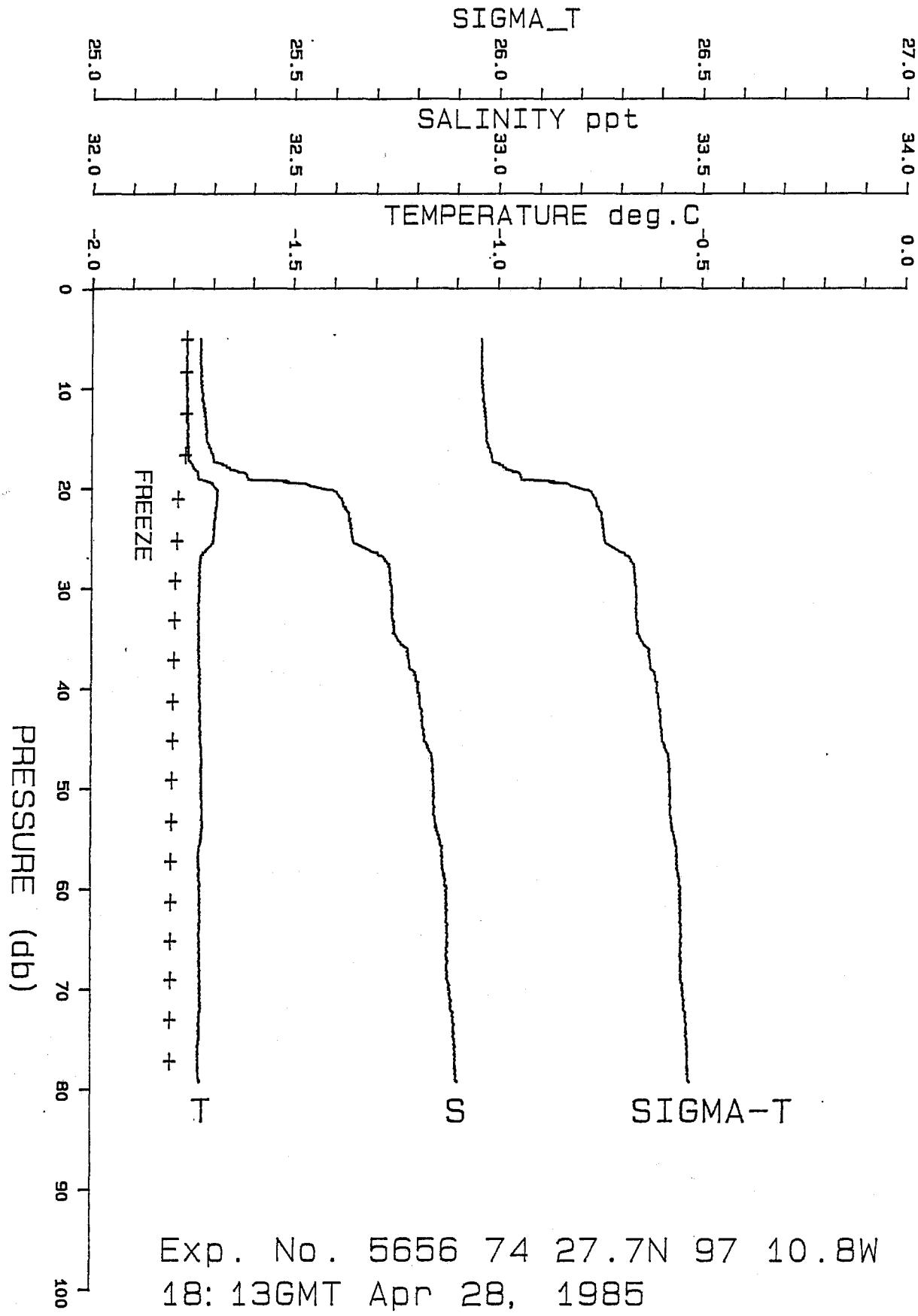
Exp. No. 5655 74 27.7N 97 10.8W
17:39GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5656

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1813

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.767	0.59589	32.267	25.959	1437.2
6.0	-1.767	0.59591	32.269	25.960	1437.2
7.0	-1.766	0.59593	32.267	25.958	1437.3
8.0	-1.766	0.59597	32.269	25.960	1437.3
9.0	-1.765	0.59598	32.269	25.959	1437.3
10.0	-1.767	0.59603	32.273	25.963	1437.3
11.0	-1.764	0.59607	32.271	25.962	1437.3
12.0	-1.765	0.59617	32.278	25.967	1437.4
13.0	-1.764	0.59622	32.279	25.968	1437.4
14.0	-1.762	0.59629	32.281	25.969	1437.4
15.0	-1.764	0.59633	32.285	25.973	1437.4
16.0	-1.761	0.59657	32.295	25.981	1437.5
17.0	-1.762	0.59669	32.302	25.987	1437.5
18.0	-1.747	0.59767	32.343	26.020	1437.6
19.0	-1.735	0.59864	32.389	26.056	1437.8
20.0	-1.691	0.60252	32.570	26.203	1438.2
21.0	-1.691	0.60336	32.619	26.242	1438.3
22.0	-1.691	0.60346	32.625	26.248	1438.3
23.0	-1.697	0.60361	32.639	26.259	1438.4
24.0	-1.699	0.60366	32.644	26.263	1438.4
25.0	-1.699	0.60370	32.645	26.264	1438.4
26.0	-1.715	0.60397	32.678	26.291	1438.4
27.0	-1.730	0.60445	32.723	26.328	1438.4
28.0	-1.732	0.60464	32.735	26.338	1438.4
29.0	-1.732	0.60466	32.737	26.339	1438.4
30.0	-1.733	0.60474	32.742	26.343	1438.4
31.0	-1.733	0.60474	32.742	26.343	1438.4
32.0	-1.734	0.60476	32.743	26.344	1438.5
33.0	-1.734	0.60481	32.745	26.346	1438.5
34.0	-1.733	0.60486	32.747	26.348	1438.5
35.0	-1.735	0.60504	32.758	26.357	1438.5
37.5	-1.735	0.60554	32.787	26.380	1438.6
40.0	-1.732	0.60599	32.809	26.398	1438.7
42.5	-1.730	0.60620	32.817	26.404	1438.8
45.0	-1.729	0.60633	32.822	26.409	1438.8
47.5	-1.727	0.60678	32.845	26.427	1438.9
50.0	-1.726	0.60686	32.848	26.430	1438.9
55.0	-1.728	0.60714	32.863	26.442	1439.0
60.0	-1.731	0.60743	32.881	26.456	1439.1
65.0	-1.729	0.60753	32.881	26.457	1439.2
70.0	-1.729	0.60769	32.888	26.462	1439.3
75.0	-1.732	0.60793	32.902	26.474	1439.4
79.2	-1.729	0.60811	32.908	26.478	1439.5



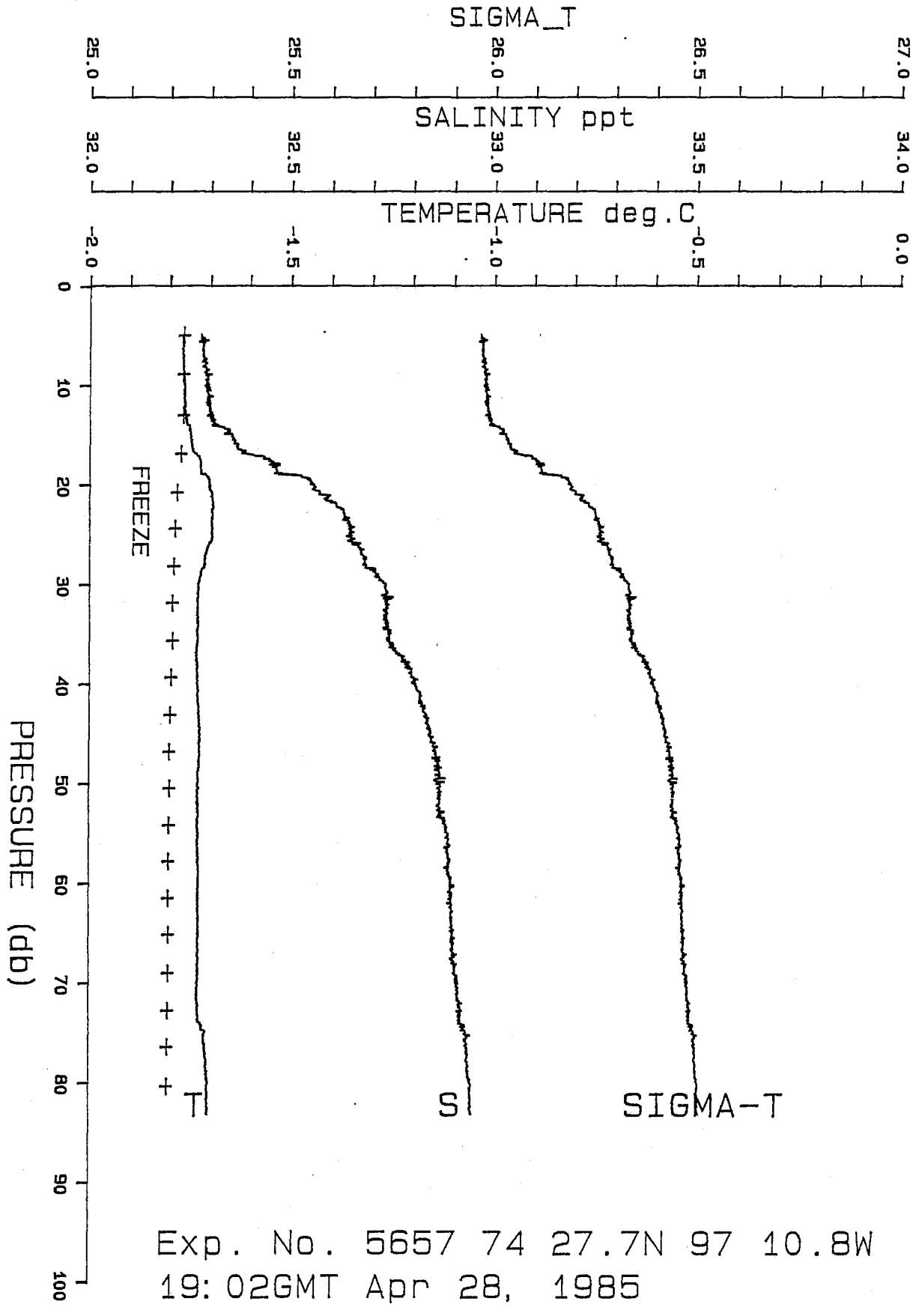
Exp. No. 5656 74 27.7N 97 10.8W
18:13GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5657

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1902

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
4.9	-1.769	0.59597	32.275	25.965	1437.2
5.0	-1.771	0.59597	32.277	25.966	1437.2
6.0	-1.768	0.59606	32.279	25.968	1437.2
7.0	-1.768	0.59614	32.283	25.971	1437.3
8.0	-1.769	0.59619	32.286	25.974	1437.3
9.0	-1.767	0.59636	32.293	25.979	1437.3
10.0	-1.765	0.59628	32.285	25.973	1437.3
11.0	-1.765	0.59641	32.293	25.979	1437.4
12.0	-1.764	0.59648	32.296	25.981	1437.4
13.0	-1.760	0.59672	32.305	25.989	1437.4
14.0	-1.753	0.59696	32.310	25.993	1437.5
15.0	-1.749	0.59774	32.352	26.027	1437.6
16.0	-1.746	0.59802	32.365	26.037	1437.6
17.0	-1.732	0.59904	32.410	26.074	1437.8
18.0	-1.725	0.60017	32.468	26.121	1437.9
19.0	-1.710	0.60113	32.508	26.153	1438.0
20.0	-1.701	0.60206	32.554	26.190	1438.2
21.0	-1.698	0.60269	32.586	26.216	1438.2
22.0	-1.693	0.60319	32.611	26.236	1438.3
23.0	-1.695	0.60353	32.632	26.253	1438.4
24.0	-1.697	0.60373	32.646	26.264	1438.4
25.0	-1.696	0.60383	32.650	26.268	1438.4
26.0	-1.705	0.60393	32.664	26.280	1438.4
27.0	-1.712	0.60402	32.678	26.291	1438.4
28.0	-1.716	0.60410	32.686	26.298	1438.4
29.0	-1.724	0.60443	32.714	26.321	1438.4
30.0	-1.730	0.60466	32.734	26.337	1438.4
31.0	-1.729	0.60462	32.730	26.334	1438.4
32.0	-1.730	0.60472	32.735	26.338	1438.5
33.0	-1.733	0.60467	32.735	26.338	1438.5
34.0	-1.731	0.60470	32.734	26.337	1438.5
35.0	-1.730	0.60484	32.742	26.343	1438.5
37.5	-1.735	0.60546	32.781	26.376	1438.6
40.0	-1.731	0.60597	32.806	26.396	1438.7
42.5	-1.728	0.60640	32.827	26.412	1438.8
45.0	-1.725	0.60677	32.844	26.426	1438.9
47.5	-1.727	0.60711	32.865	26.444	1438.9
50.0	-1.731	0.60706	32.865	26.444	1438.9
55.0	-1.730	0.60753	32.889	26.463	1439.1
60.0	-1.728	0.60771	32.895	26.468	1439.1
65.0	-1.729	0.60782	32.899	26.471	1439.2
70.0	-1.731	0.60808	32.914	26.483	1439.3
75.0	-1.713	0.60882	32.934	26.499	1439.5
80.0	-1.703	0.60922	32.944	26.507	1439.7
83.1	-1.706	0.60925	32.948	26.510	1439.7



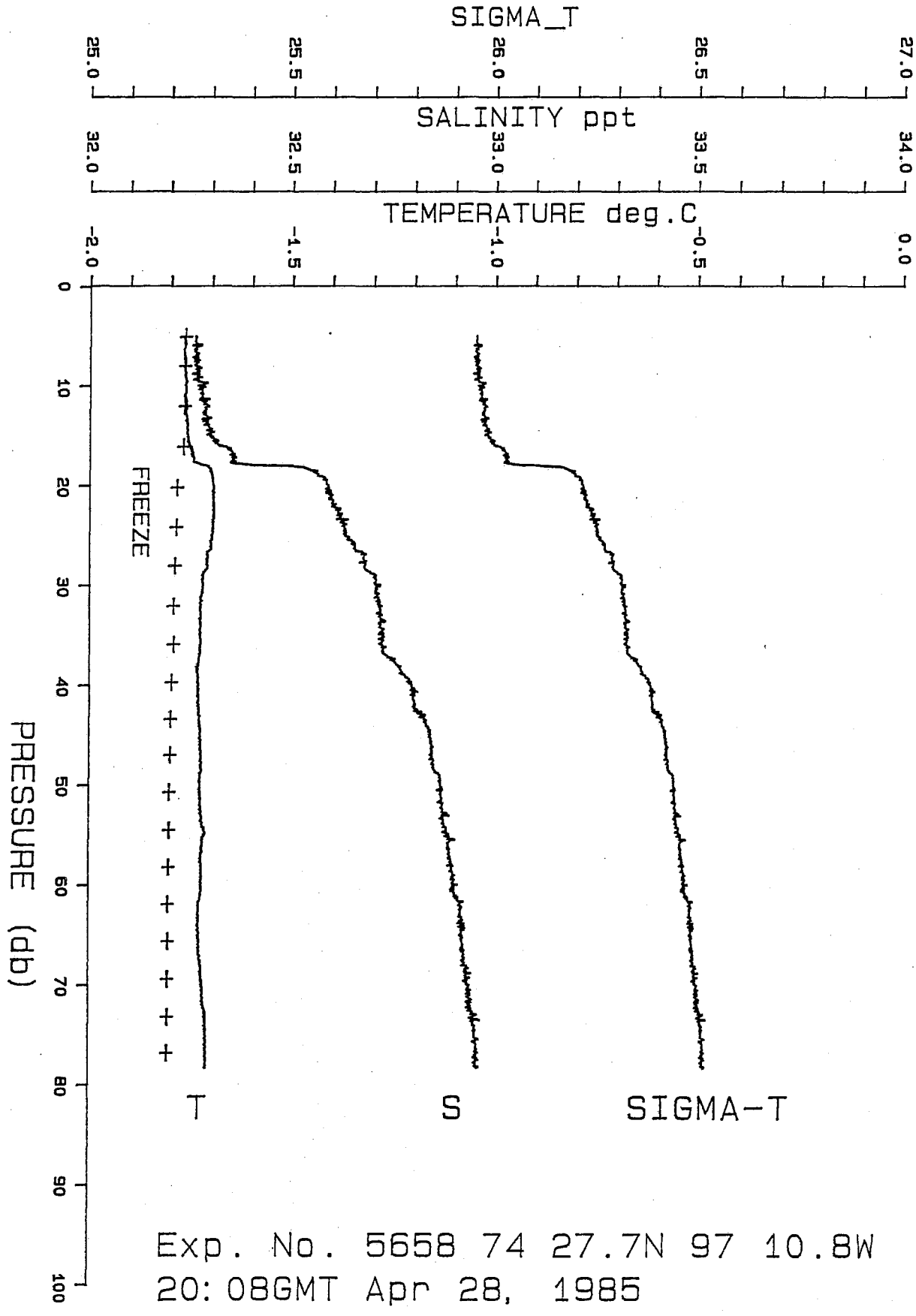
Exp. No. 5657 74 27.7N 97 10.8W
19:02GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5658

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 2008

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.769	0.59573	32.260	25.952	1437.2
6.0	-1.768	0.59588	32.267	25.958	1437.2
7.0	-1.766	0.59577	32.258	25.951	1437.2
8.0	-1.769	0.59582	32.264	25.955	1437.3
9.0	-1.765	0.59590	32.264	25.956	1437.3
10.0	-1.764	0.59608	32.273	25.963	1437.3
11.0	-1.768	0.59605	32.275	25.965	1437.3
12.0	-1.764	0.59641	32.291	25.978	1437.4
13.0	-1.761	0.59642	32.287	25.975	1437.4
14.0	-1.760	0.59649	32.291	25.977	1437.4
15.0	-1.759	0.59662	32.296	25.982	1437.5
16.0	-1.753	0.59711	32.318	25.999	1437.5
17.0	-1.749	0.59782	32.356	26.030	1437.6
18.0	-1.714	0.59989	32.440	26.097	1437.9
19.0	-1.698	0.60233	32.567	26.201	1438.2
20.0	-1.695	0.60278	32.589	26.218	1438.2
21.0	-1.697	0.60284	32.595	26.223	1438.3
22.0	-1.698	0.60299	32.603	26.230	1438.3
23.0	-1.696	0.60325	32.617	26.241	1438.3
24.0	-1.697	0.60338	32.625	26.247	1438.3
25.0	-1.699	0.60349	32.633	26.254	1438.4
26.0	-1.701	0.60385	32.656	26.273	1438.4
27.0	-1.711	0.60405	32.678	26.291	1438.4
28.0	-1.710	0.60408	32.679	26.291	1438.4
29.0	-1.723	0.60432	32.706	26.314	1438.4
30.0	-1.722	0.60436	32.708	26.315	1438.4
31.0	-1.725	0.60437	32.710	26.317	1438.4
32.0	-1.726	0.60449	32.718	26.324	1438.5
33.0	-1.726	0.60449	32.717	26.323	1438.5
34.0	-1.726	0.60452	32.719	26.325	1438.5
35.0	-1.727	0.60460	32.723	26.328	1438.5
37.5	-1.731	0.60504	32.752	26.352	1438.6
40.0	-1.731	0.60580	32.797	26.388	1438.7
42.5	-1.730	0.60597	32.804	26.394	1438.7
45.0	-1.725	0.60670	32.841	26.424	1438.8
47.5	-1.726	0.60689	32.851	26.432	1438.9
50.0	-1.726	0.60721	32.868	26.446	1439.0
55.0	-1.716	0.60769	32.883	26.458	1439.1
60.0	-1.724	0.60787	32.900	26.472	1439.2
65.0	-1.731	0.60818	32.923	26.490	1439.3
70.0	-1.720	0.60877	32.943	26.506	1439.4
75.0	-1.711	0.60923	32.956	26.517	1439.6
78.3	-1.712	0.60931	32.961	26.521	1439.6



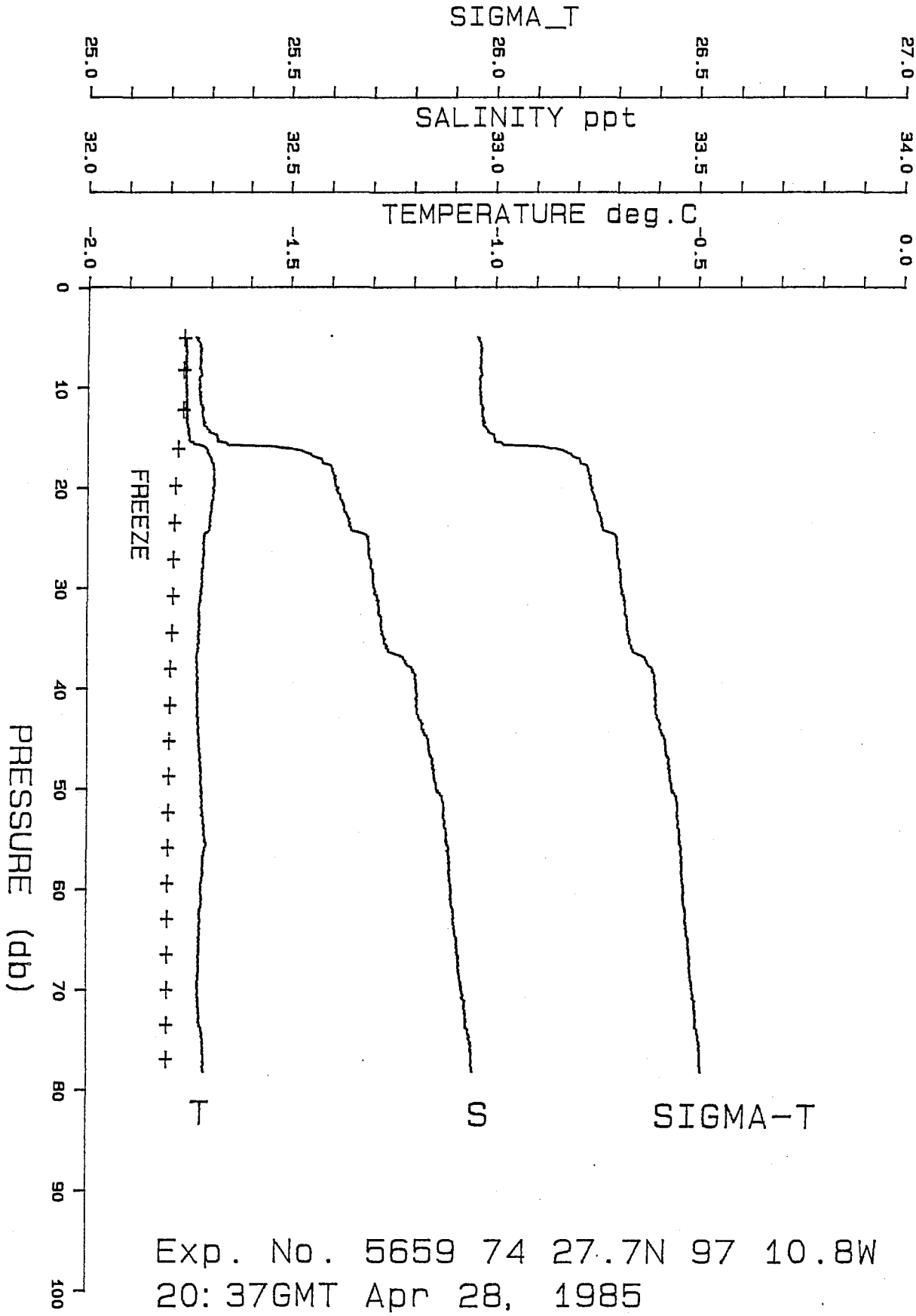
Exp. No. 5658 74 27.7N 97 10.8W
20:08GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5659

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 2037

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.765	0.59582	32.262	25.954	1437.2
6.0	-1.764	0.59608	32.276	25.965	1437.3
7.0	-1.761	0.59610	32.272	25.963	1437.3
8.0	-1.760	0.59611	32.272	25.962	1437.3
9.0	-1.761	0.59609	32.270	25.961	1437.3
10.0	-1.762	0.59610	32.272	25.962	1437.3
11.0	-1.760	0.59617	32.273	25.963	1437.4
12.0	-1.763	0.59627	32.281	25.970	1437.4
13.0	-1.761	0.59631	32.281	25.969	1437.4
14.0	-1.755	0.59658	32.290	25.977	1437.5
15.0	-1.753	0.59706	32.316	25.997	1437.5
16.0	-1.711	0.60060	32.480	26.130	1438.0
17.0	-1.700	0.60226	32.565	26.199	1438.1
18.0	-1.692	0.60300	32.600	26.228	1438.2
19.0	-1.691	0.60311	32.605	26.232	1438.3
20.0	-1.694	0.60324	32.616	26.240	1438.3
21.0	-1.694	0.60334	32.621	26.244	1438.3
22.0	-1.698	0.60342	32.630	26.251	1438.3
23.0	-1.701	0.60356	32.641	26.261	1438.3
24.0	-1.704	0.60363	32.647	26.266	1438.3
25.0	-1.716	0.60408	32.686	26.298	1438.4
26.0	-1.719	0.60412	32.692	26.302	1438.4
27.0	-1.718	0.60414	32.692	26.302	1438.4
28.0	-1.720	0.60422	32.697	26.307	1438.4
29.0	-1.721	0.60426	32.700	26.310	1438.4
30.0	-1.724	0.60430	32.706	26.314	1438.4
31.0	-1.725	0.60440	32.712	26.319	1438.4
32.0	-1.728	0.60444	32.717	26.323	1438.5
33.0	-1.726	0.60456	32.722	26.327	1438.5
34.0	-1.726	0.60457	32.722	26.327	1438.5
35.0	-1.729	0.60468	32.730	26.334	1438.5
37.5	-1.732	0.60558	32.786	26.379	1438.6
40.0	-1.731	0.60602	32.809	26.398	1438.7
42.5	-1.730	0.60611	32.813	26.401	1438.7
45.0	-1.728	0.60666	32.841	26.424	1438.8
47.5	-1.723	0.60694	32.851	26.432	1438.9
50.0	-1.720	0.60719	32.861	26.440	1439.0
55.0	-1.712	0.60781	32.886	26.460	1439.1
60.0	-1.720	0.60791	32.897	26.470	1439.2
65.0	-1.724	0.60811	32.911	26.480	1439.3
70.0	-1.728	0.60833	32.924	26.492	1439.4
75.0	-1.715	0.60894	32.944	26.508	1439.5
78.2	-1.713	0.60911	32.950	26.512	1439.6



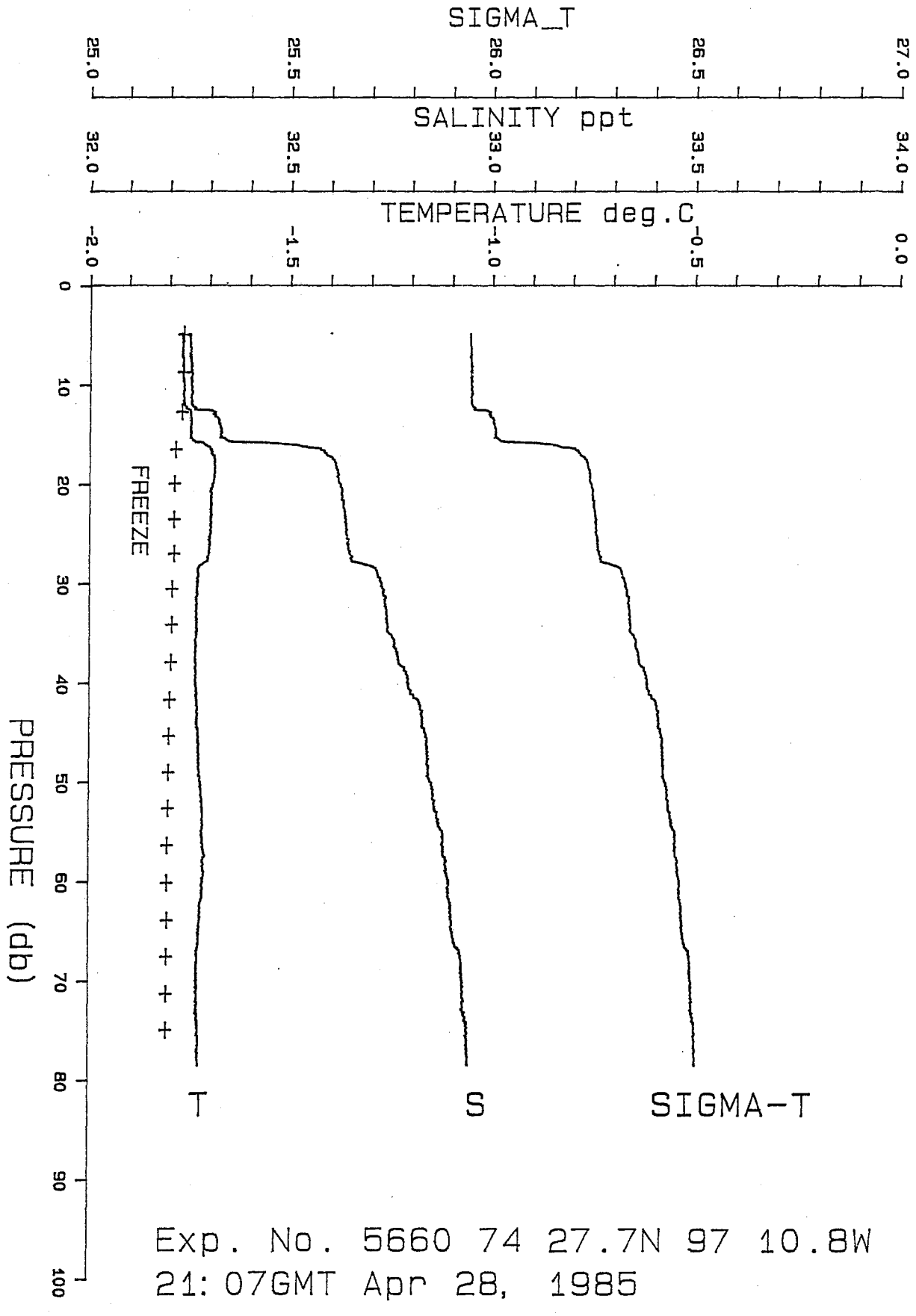
Exp. No. 5659 74 27.7N 97 10.8W
20:37GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5660

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 2107

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
4.9	-1.770	0.59552	32.249	25.944	1437.2
5.0	-1.770	0.59554	32.250	25.945	1437.2
6.0	-1.768	0.59558	32.249	25.944	1437.2
7.0	-1.769	0.59560	32.252	25.946	1437.2
8.0	-1.769	0.59569	32.256	25.949	1437.2
9.0	-1.768	0.59570	32.255	25.948	1437.3
10.0	-1.764	0.59575	32.253	25.947	1437.3
11.0	-1.764	0.59576	32.253	25.947	1437.3
12.0	-1.762	0.59587	32.257	25.950	1437.3
13.0	-1.748	0.59710	32.314	25.996	1437.5
14.0	-1.748	0.59730	32.325	26.005	1437.5
15.0	-1.747	0.59737	32.328	26.007	1437.6
16.0	-1.708	0.60110	32.507	26.152	1438.0
17.0	-1.691	0.60283	32.590	26.219	1438.2
18.0	-1.688	0.60326	32.612	26.237	1438.3
19.0	-1.689	0.60338	32.619	26.243	1438.3
20.0	-1.694	0.60342	32.626	26.248	1438.3
21.0	-1.696	0.60341	32.628	26.250	1438.3
22.0	-1.697	0.60349	32.633	26.254	1438.3
23.0	-1.695	0.60356	32.634	26.255	1438.4
24.0	-1.697	0.60362	32.639	26.259	1438.4
25.0	-1.699	0.60363	32.641	26.261	1438.4
26.0	-1.700	0.60365	32.643	26.263	1438.4
27.0	-1.702	0.60372	32.649	26.267	1438.4
28.0	-1.718	0.60401	32.683	26.295	1438.4
29.0	-1.726	0.60444	32.717	26.323	1438.4
30.0	-1.729	0.60456	32.727	26.331	1438.4
31.0	-1.729	0.60464	32.731	26.334	1438.5
32.0	-1.729	0.60475	32.737	26.339	1438.5
33.0	-1.730	0.60480	32.740	26.342	1438.5
34.0	-1.732	0.60483	32.743	26.345	1438.5
35.0	-1.732	0.60493	32.748	26.349	1438.5
37.5	-1.734	0.60528	32.771	26.367	1438.6
40.0	-1.733	0.60576	32.797	26.388	1438.7
42.5	-1.728	0.60636	32.825	26.411	1438.8
45.0	-1.726	0.60664	32.838	26.421	1438.8
47.5	-1.724	0.60678	32.842	26.425	1438.9
50.0	-1.721	0.60706	32.854	26.434	1439.0
55.0	-1.716	0.60766	32.881	26.456	1439.1
60.0	-1.714	0.60801	32.897	26.469	1439.2
65.0	-1.723	0.60806	32.907	26.478	1439.3
70.0	-1.727	0.60846	32.932	26.498	1439.4
75.0	-1.724	0.60874	32.942	26.506	1439.5
78.4	-1.725	0.60886	32.948	26.511	1439.5



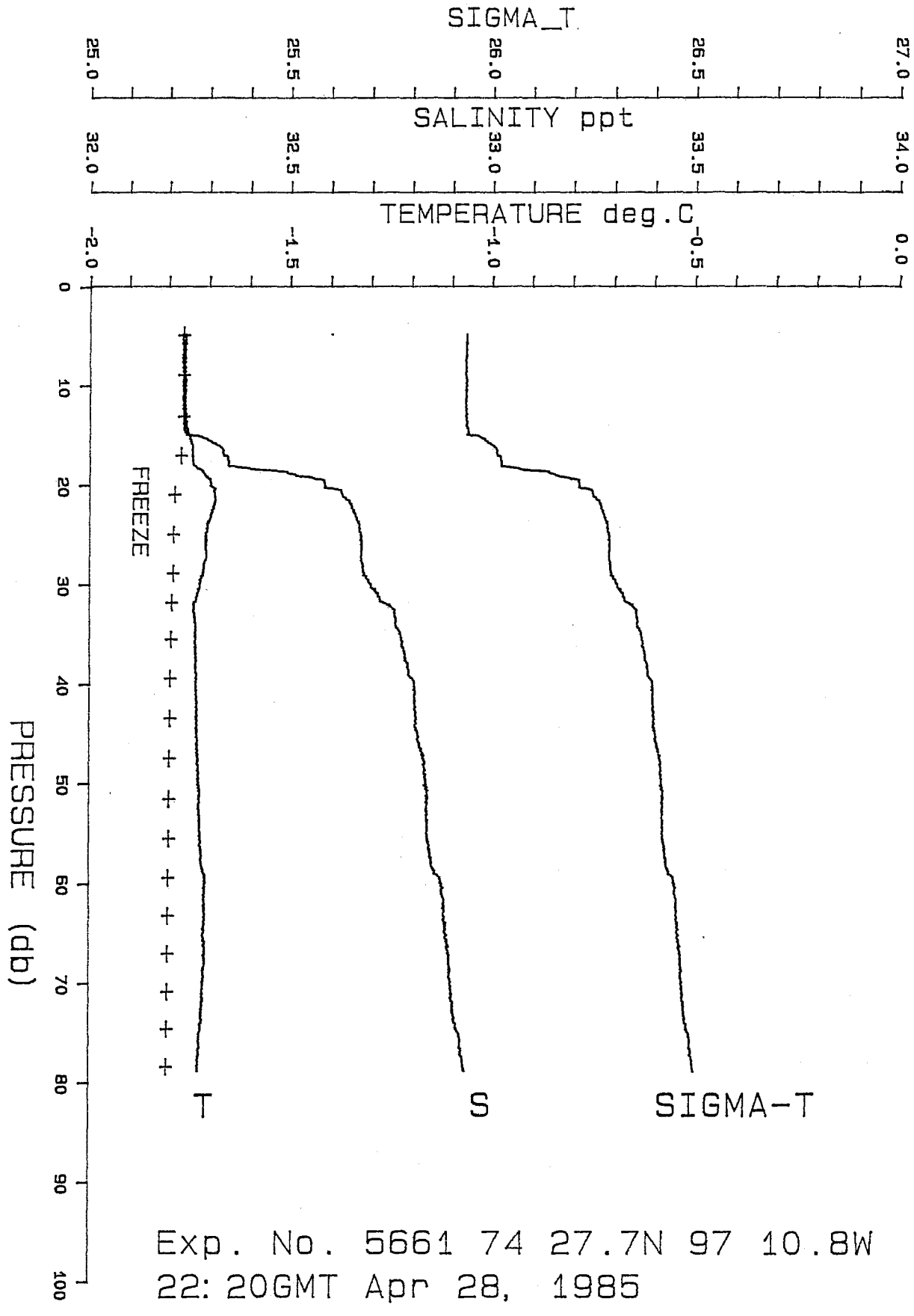
Exp. No. 5660 74 27.7N 97 10.8W
21:07GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5661

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 2220

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
4.8	-1.768	0.59539	32.240	25.936	1437.2
5.0	-1.768	0.59539	32.239	25.936	1437.2
6.0	-1.766	0.59540	32.237	25.934	1437.2
7.0	-1.765	0.59541	32.236	25.933	1437.2
8.0	-1.765	0.59543	32.237	25.934	1437.2
9.0	-1.765	0.59545	32.237	25.934	1437.3
10.0	-1.766	0.59544	32.238	25.934	1437.3
11.0	-1.766	0.59547	32.238	25.935	1437.3
12.0	-1.764	0.59549	32.236	25.933	1437.3
13.0	-1.763	0.59551	32.236	25.933	1437.3
14.0	-1.762	0.59559	32.240	25.936	1437.4
15.0	-1.748	0.59633	32.268	25.958	1437.5
16.0	-1.742	0.59739	32.323	26.003	1437.6
17.0	-1.741	0.59765	32.337	26.014	1437.6
18.0	-1.735	0.59792	32.346	26.022	1437.7
19.0	-1.708	0.60128	32.516	26.159	1438.1
20.0	-1.698	0.60267	32.586	26.216	1438.2
21.0	-1.687	0.60357	32.628	26.250	1438.4
22.0	-1.691	0.60390	32.650	26.268	1438.4
23.0	-1.698	0.60394	32.659	26.276	1438.4
24.0	-1.705	0.60399	32.670	26.284	1438.4
25.0	-1.710	0.60401	32.676	26.289	1438.4
26.0	-1.709	0.60400	32.674	26.288	1438.4
27.0	-1.708	0.60403	32.673	26.287	1438.4
28.0	-1.713	0.60402	32.679	26.292	1438.4
29.0	-1.715	0.60403	32.680	26.293	1438.4
30.0	-1.724	0.60418	32.699	26.308	1438.4
31.0	-1.731	0.60433	32.715	26.322	1438.4
32.0	-1.740	0.60470	32.746	26.347	1438.4
33.0	-1.737	0.60498	32.758	26.357	1438.5
34.0	-1.734	0.60507	32.760	26.358	1438.5
35.0	-1.737	0.60525	32.774	26.369	1438.5
37.5	-1.733	0.60553	32.785	26.378	1438.6
40.0	-1.733	0.60594	32.807	26.396	1438.7
42.5	-1.730	0.60603	32.808	26.397	1438.7
45.0	-1.730	0.60622	32.817	26.405	1438.8
47.5	-1.729	0.60649	32.831	26.416	1438.9
50.0	-1.728	0.60664	32.837	26.420	1438.9
55.0	-1.722	0.60684	32.839	26.422	1439.0
60.0	-1.711	0.60774	32.878	26.453	1439.2
65.0	-1.715	0.60790	32.888	26.462	1439.3
70.0	-1.714	0.60814	32.898	26.470	1439.4
75.0	-1.724	0.60838	32.921	26.489	1439.4
78.8	-1.727	0.60863	32.937	26.502	1439.5



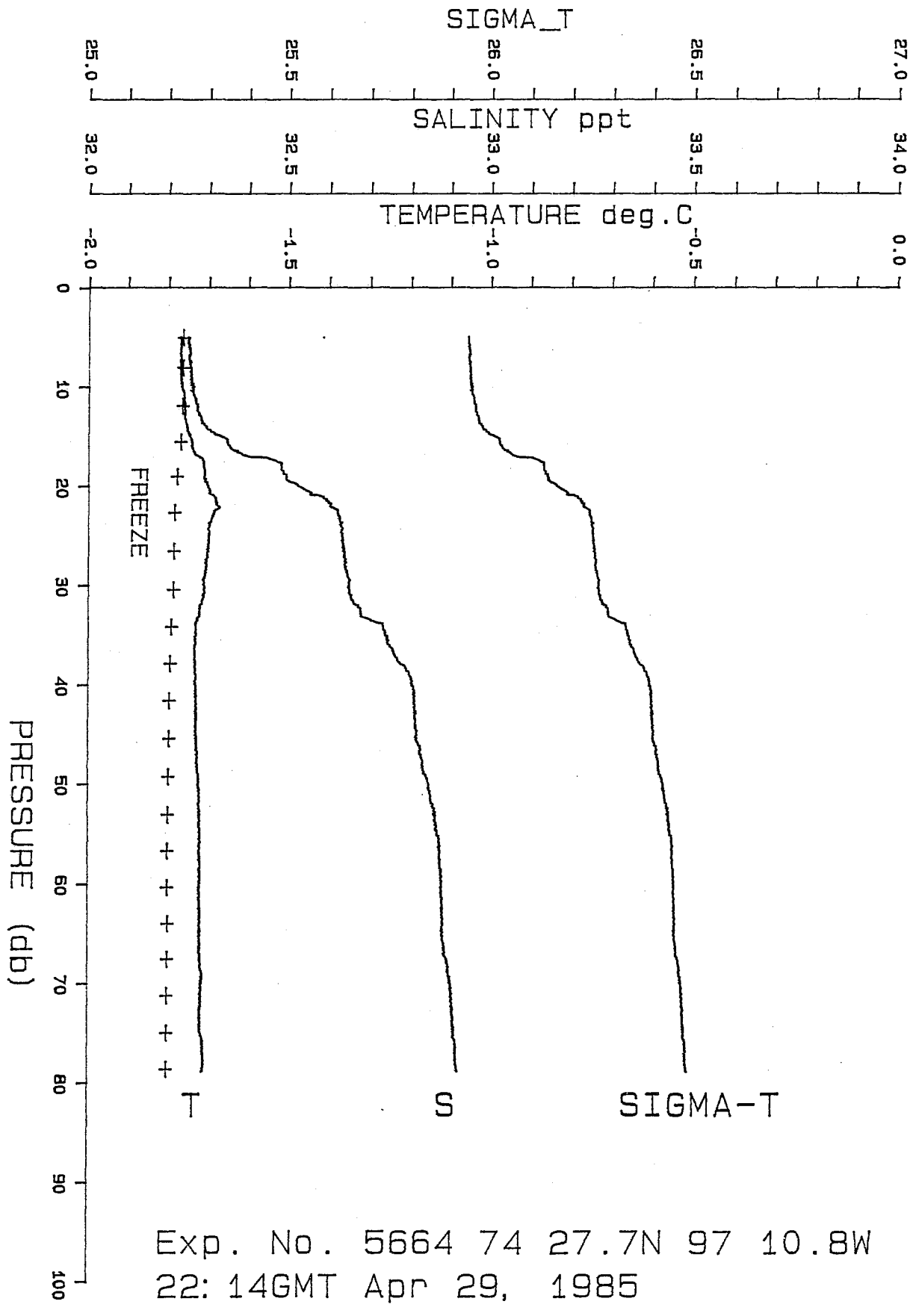
Exp. No. 5661 74 27.7N 97 10.8W
22: 20GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5664

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 29/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 2214

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.773	0.59543	32.246	25.942	1437.2
6.0	-1.773	0.59548	32.249	25.944	1437.2
7.0	-1.771	0.59551	32.248	25.943	1437.2
8.0	-1.774	0.59557	32.254	25.948	1437.2
9.0	-1.772	0.59561	32.255	25.948	1437.2
10.0	-1.770	0.59571	32.257	25.950	1437.3
11.0	-1.763	0.59596	32.264	25.956	1437.3
12.0	-1.763	0.59610	32.271	25.961	1437.4
13.0	-1.762	0.59625	32.279	25.968	1437.4
14.0	-1.757	0.59657	32.292	25.978	1437.4
15.0	-1.747	0.59743	32.331	26.010	1437.6
16.0	-1.743	0.59785	32.352	26.027	1437.6
17.0	-1.724	0.59901	32.399	26.065	1437.8
18.0	-1.714	0.60058	32.481	26.131	1438.0
19.0	-1.712	0.60082	32.492	26.140	1438.0
20.0	-1.702	0.60154	32.524	26.165	1438.1
21.0	-1.687	0.60278	32.580	26.211	1438.3
22.0	-1.677	0.60333	32.601	26.228	1438.4
23.0	-1.692	0.60342	32.623	26.246	1438.4
24.0	-1.700	0.60340	32.629	26.251	1438.3
25.0	-1.701	0.60341	32.630	26.252	1438.4
26.0	-1.703	0.60344	32.634	26.255	1438.4
27.0	-1.707	0.60344	32.637	26.258	1438.4
28.0	-1.706	0.60346	32.638	26.258	1438.4
29.0	-1.710	0.60351	32.643	26.263	1438.4
30.0	-1.712	0.60354	32.647	26.266	1438.4
31.0	-1.714	0.60359	32.652	26.270	1438.4
32.0	-1.723	0.60376	32.672	26.286	1438.4
33.0	-1.724	0.60386	32.678	26.291	1438.4
34.0	-1.733	0.60459	32.730	26.334	1438.5
35.0	-1.733	0.60471	32.737	26.339	1438.5
37.5	-1.734	0.60524	32.767	26.364	1438.6
40.0	-1.731	0.60590	32.802	26.393	1438.7
42.5	-1.731	0.60606	32.810	26.399	1438.7
45.0	-1.732	0.60617	32.816	26.404	1438.8
47.5	-1.730	0.60645	32.830	26.415	1438.8
50.0	-1.727	0.60684	32.847	26.429	1438.9
55.0	-1.720	0.60736	32.868	26.446	1439.1
60.0	-1.723	0.60757	32.880	26.456	1439.2
65.0	-1.721	0.60768	32.882	26.457	1439.2
70.0	-1.718	0.60814	32.903	26.474	1439.4
75.0	-1.718	0.60830	32.910	26.480	1439.5
78.8	-1.716	0.60858	32.921	26.489	1439.5



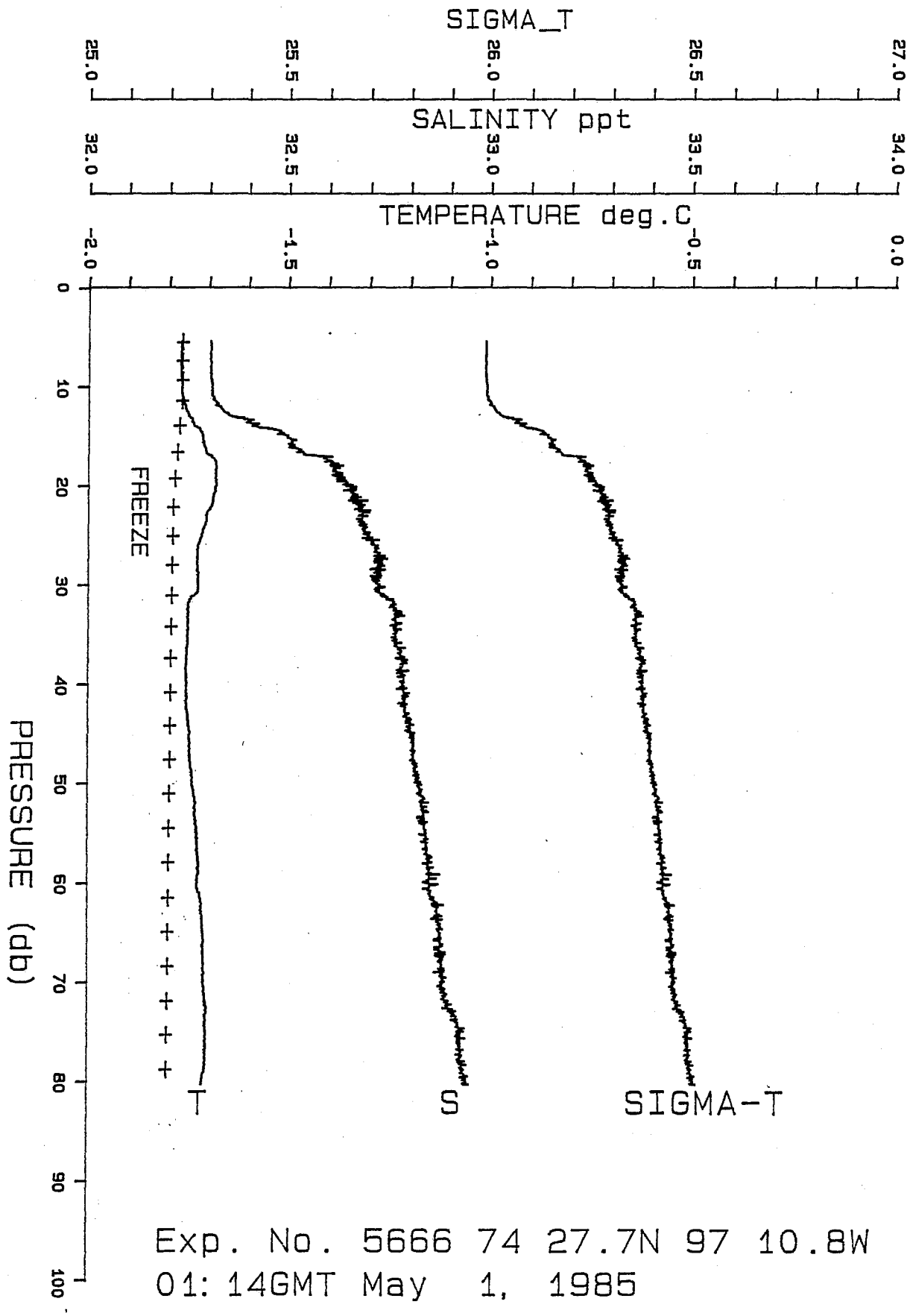
Exp. No. 5664 74 27.7N 97 10.8W
22: 14GMT Apr 29, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5666

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0114

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.4	-1.771	0.59638	32.302	25.986	1437.3
6.0	-1.773	0.59640	32.304	25.988	1437.3
7.0	-1.772	0.59641	32.303	25.988	1437.3
8.0	-1.772	0.59642	32.302	25.987	1437.3
9.0	-1.772	0.59644	32.303	25.988	1437.3
10.0	-1.770	0.59653	32.306	25.990	1437.3
11.0	-1.766	0.59667	32.310	25.993	1437.4
12.0	-1.760	0.59709	32.328	26.008	1437.4
13.0	-1.749	0.59779	32.357	26.031	1437.6
14.0	-1.733	0.59916	32.420	26.082	1437.7
15.0	-1.717	0.60074	32.496	26.143	1437.9
16.0	-1.712	0.60113	32.512	26.157	1438.0
17.0	-1.693	0.60248	32.571	26.204	1438.2
18.0	-1.682	0.60371	32.631	26.253	1438.3
19.0	-1.684	0.60365	32.629	26.251	1438.3
20.0	-1.684	0.60388	32.643	26.262	1438.4
21.0	-1.689	0.60421	32.667	26.281	1438.4
22.0	-1.694	0.60419	32.671	26.285	1438.4
23.0	-1.709	0.60392	32.671	26.286	1438.3
24.0	-1.711	0.60401	32.678	26.291	1438.4
25.0	-1.718	0.60418	32.695	26.305	1438.4
26.0	-1.730	0.60430	32.714	26.321	1438.3
27.0	-1.730	0.60440	32.719	26.325	1438.4
28.0	-1.728	0.60443	32.719	26.324	1438.4
29.0	-1.729	0.60439	32.717	26.323	1438.4
30.0	-1.728	0.60451	32.722	26.327	1438.4
31.0	-1.737	0.60443	32.727	26.332	1438.4
32.0	-1.753	0.60459	32.754	26.353	1438.4
33.0	-1.753	0.60479	32.765	26.362	1438.4
34.0	-1.753	0.60481	32.766	26.363	1438.4
35.0	-1.754	0.60480	32.765	26.363	1438.4
37.5	-1.756	0.60505	32.781	26.376	1438.5
40.0	-1.756	0.60510	32.782	26.376	1438.5
42.5	-1.755	0.60525	32.789	26.382	1438.6
45.0	-1.748	0.60575	32.810	26.399	1438.7
47.5	-1.747	0.60582	32.810	26.399	1438.7
50.0	-1.741	0.60618	32.824	26.411	1438.8
55.0	-1.728	0.60675	32.840	26.423	1439.0
60.0	-1.728	0.60700	32.852	26.433	1439.1
65.0	-1.714	0.60779	32.880	26.455	1439.3
70.0	-1.712	0.60789	32.880	26.456	1439.4
75.0	-1.705	0.60880	32.924	26.491	1439.5
80.0	-1.715	0.60902	32.946	26.509	1439.6
80.3	-1.715	0.60912	32.952	26.514	1439.6



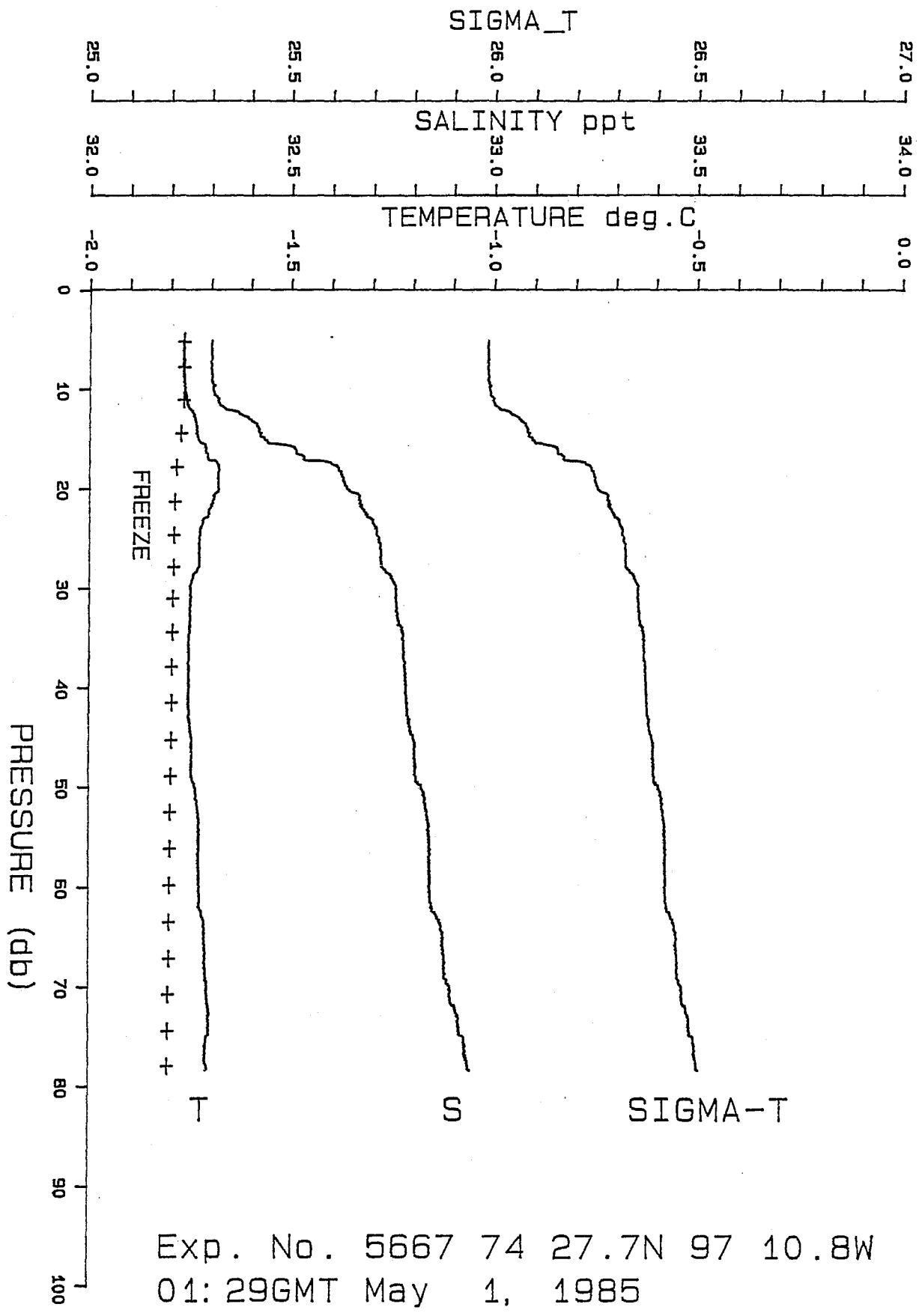
Exp. No. 5666 74 27.7N 97 10.8W
01: 14GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5667

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0129

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.1	-1.771	0.59636	32.300	25.985	1437.2
6.0	-1.770	0.59635	32.298	25.984	1437.3
7.0	-1.771	0.59637	32.299	25.985	1437.3
8.0	-1.771	0.59639	32.300	25.985	1437.3
9.0	-1.768	0.59643	32.299	25.984	1437.3
10.0	-1.766	0.59658	32.305	25.989	1437.4
11.0	-1.763	0.59685	32.317	25.999	1437.4
12.0	-1.752	0.59741	32.337	26.015	1437.5
13.0	-1.742	0.59863	32.398	26.064	1437.6
14.0	-1.738	0.59909	32.421	26.083	1437.7
15.0	-1.733	0.59942	32.434	26.093	1437.8
16.0	-1.714	0.60106	32.510	26.155	1438.0
17.0	-1.707	0.60150	32.529	26.170	1438.1
18.0	-1.681	0.60346	32.615	26.239	1438.3
19.0	-1.682	0.60363	32.626	26.248	1438.3
20.0	-1.681	0.60384	32.637	26.257	1438.4
21.0	-1.694	0.60410	32.666	26.281	1438.4
22.0	-1.704	0.60407	32.675	26.288	1438.4
23.0	-1.720	0.60417	32.697	26.307	1438.3
24.0	-1.728	0.60425	32.711	26.318	1438.3
25.0	-1.729	0.60432	32.715	26.322	1438.3
26.0	-1.729	0.60438	32.718	26.324	1438.4
27.0	-1.729	0.60443	32.721	26.326	1438.4
28.0	-1.733	0.60445	32.726	26.331	1438.4
29.0	-1.747	0.60456	32.747	26.348	1438.4
30.0	-1.750	0.60469	32.758	26.357	1438.4
31.0	-1.751	0.60470	32.759	26.357	1438.4
32.0	-1.753	0.60471	32.761	26.360	1438.4
33.0	-1.751	0.60480	32.763	26.361	1438.4
34.0	-1.754	0.60492	32.773	26.370	1438.4
35.0	-1.753	0.60496	32.774	26.370	1438.5
37.5	-1.757	0.60505	32.782	26.376	1438.5
40.0	-1.754	0.60514	32.783	26.377	1438.5
42.5	-1.754	0.60526	32.788	26.381	1438.6
45.0	-1.746	0.60568	32.803	26.393	1438.7
47.5	-1.747	0.60578	32.808	26.397	1438.7
50.0	-1.739	0.60622	32.824	26.411	1438.8
55.0	-1.727	0.60684	32.844	26.427	1439.0
60.0	-1.725	0.60693	32.845	26.427	1439.1
65.0	-1.713	0.60777	32.878	26.453	1439.3
70.0	-1.707	0.60825	32.897	26.469	1439.4
75.0	-1.707	0.60887	32.931	26.497	1439.5
78.3	-1.709	0.60914	32.947	26.509	1439.6



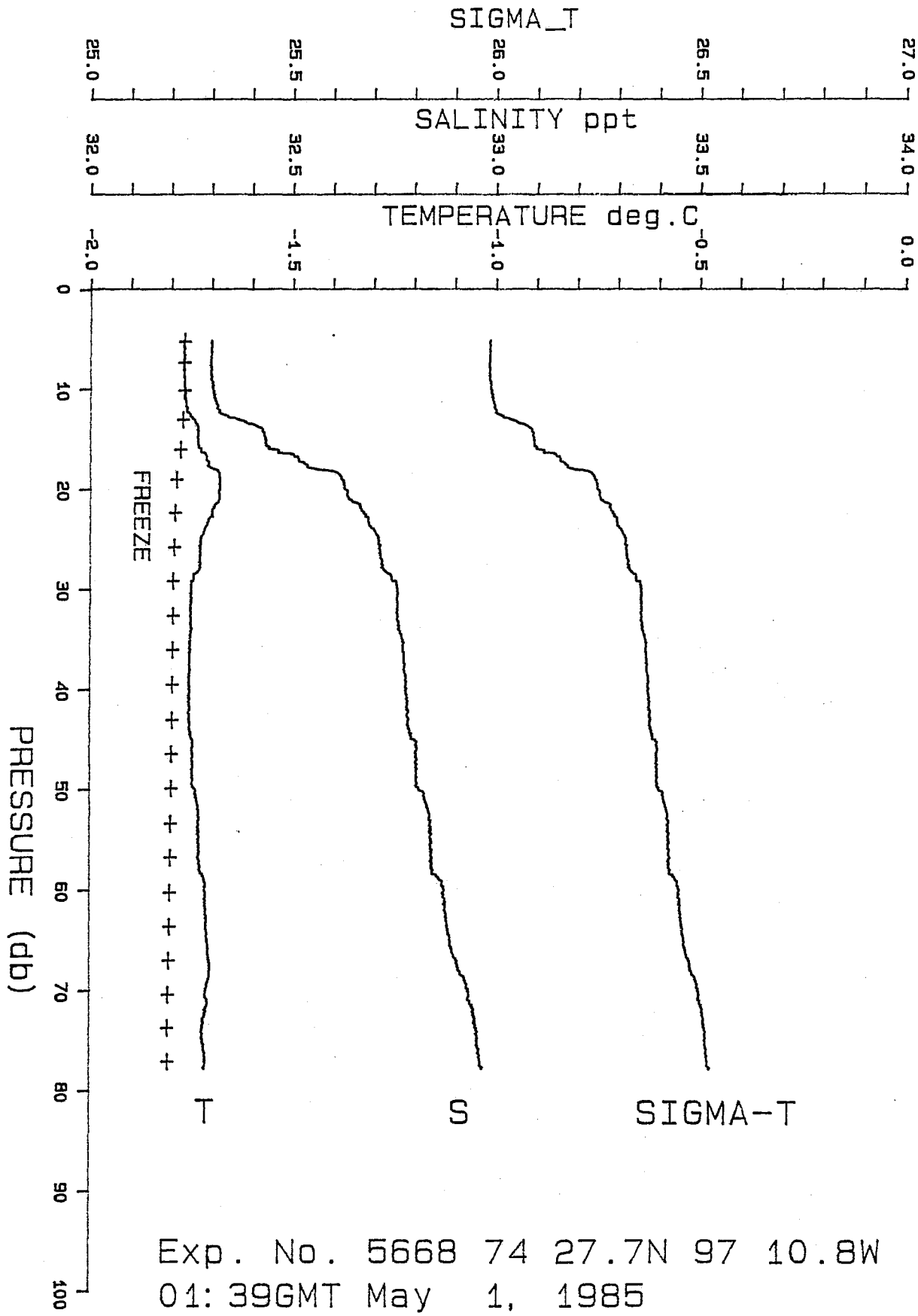
Exp. No. 5667 74 27.7N 97 10.8W
01:29GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5668

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0139

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.2	-1.772	0.59633	32.299	25.984	1437.2
6.0	-1.771	0.59634	32.298	25.983	1437.3
7.0	-1.771	0.59634	32.297	25.983	1437.3
8.0	-1.772	0.59637	32.299	25.985	1437.3
9.0	-1.769	0.59640	32.298	25.983	1437.3
10.0	-1.768	0.59650	32.302	25.987	1437.3
11.0	-1.765	0.59667	32.309	25.992	1437.4
12.0	-1.763	0.59687	32.318	25.999	1437.4
13.0	-1.745	0.59799	32.364	26.036	1437.6
14.0	-1.736	0.59921	32.426	26.087	1437.7
15.0	-1.734	0.59938	32.433	26.092	1437.8
16.0	-1.726	0.59979	32.449	26.105	1437.8
17.0	-1.715	0.60112	32.515	26.158	1438.0
18.0	-1.689	0.60235	32.558	26.193	1438.2
19.0	-1.679	0.60361	32.622	26.245	1438.3
20.0	-1.680	0.60372	32.629	26.250	1438.4
21.0	-1.682	0.60386	32.639	26.259	1438.4
22.0	-1.699	0.60410	32.670	26.285	1438.4
23.0	-1.709	0.60421	32.688	26.299	1438.4
24.0	-1.719	0.60424	32.700	26.309	1438.3
25.0	-1.727	0.60431	32.712	26.319	1438.3
26.0	-1.729	0.60434	32.716	26.322	1438.4
27.0	-1.730	0.60442	32.721	26.326	1438.4
28.0	-1.732	0.60447	32.725	26.330	1438.4
29.0	-1.745	0.60459	32.746	26.347	1438.4
30.0	-1.751	0.60469	32.759	26.358	1438.4
31.0	-1.751	0.60469	32.758	26.357	1438.4
32.0	-1.751	0.60472	32.759	26.358	1438.4
33.0	-1.751	0.60474	32.760	26.358	1438.4
34.0	-1.751	0.60482	32.764	26.362	1438.4
35.0	-1.755	0.60492	32.773	26.369	1438.5
37.5	-1.756	0.60501	32.779	26.374	1438.5
40.0	-1.753	0.60511	32.780	26.375	1438.5
42.5	-1.754	0.60520	32.785	26.379	1438.6
45.0	-1.746	0.60568	32.803	26.393	1438.7
47.5	-1.746	0.60581	32.809	26.398	1438.7
50.0	-1.738	0.60611	32.816	26.404	1438.8
55.0	-1.730	0.60675	32.842	26.425	1439.0
60.0	-1.715	0.60767	32.877	26.453	1439.2
65.0	-1.709	0.60809	32.893	26.466	1439.3
70.0	-1.711	0.60880	32.935	26.500	1439.4
75.0	-1.719	0.60910	32.958	26.519	1439.5
77.8	-1.715	0.60940	32.970	26.528	1439.6



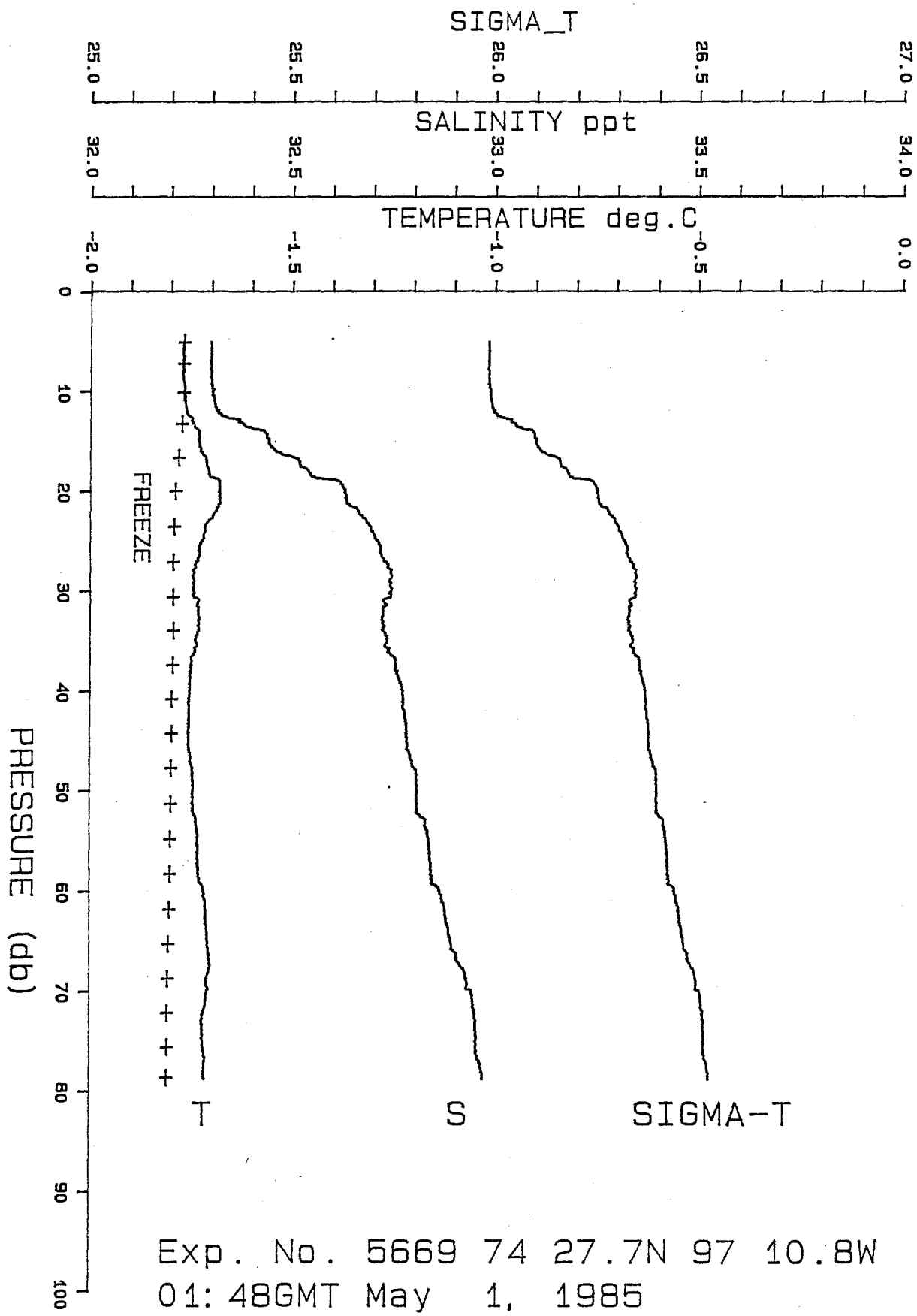
Exp. No. 5668 74 27.7N 97 10.8W
01:39GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5669

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0148

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.0	-1.772	0.59631	32.298	25.983	1437.2
6.0	-1.773	0.59631	32.299	25.984	1437.2
7.0	-1.771	0.59634	32.297	25.983	1437.3
8.0	-1.772	0.59633	32.298	25.983	1437.3
9.0	-1.770	0.59640	32.299	25.984	1437.3
10.0	-1.766	0.59652	32.302	25.986	1437.3
11.0	-1.765	0.59664	32.306	25.990	1437.4
12.0	-1.761	0.59685	32.314	25.996	1437.4
13.0	-1.747	0.59797	32.365	26.037	1437.6
14.0	-1.731	0.59941	32.432	26.092	1437.8
15.0	-1.731	0.59958	32.442	26.099	1437.8
16.0	-1.725	0.59997	32.458	26.113	1437.9
17.0	-1.714	0.60119	32.518	26.161	1438.0
18.0	-1.706	0.60171	32.539	26.178	1438.1
19.0	-1.680	0.60343	32.613	26.237	1438.3
20.0	-1.682	0.60372	32.631	26.252	1438.4
21.0	-1.680	0.60381	32.634	26.254	1438.4
22.0	-1.690	0.60414	32.664	26.279	1438.4
23.0	-1.708	0.60413	32.682	26.295	1438.4
24.0	-1.716	0.60424	32.697	26.307	1438.4
25.0	-1.725	0.60432	32.711	26.318	1438.3
26.0	-1.730	0.60438	32.719	26.325	1438.4
27.0	-1.735	0.60443	32.728	26.332	1438.4
28.0	-1.743	0.60456	32.743	26.345	1438.4
29.0	-1.741	0.60456	32.741	26.343	1438.4
30.0	-1.743	0.60459	32.744	26.346	1438.4
31.0	-1.731	0.60450	32.725	26.329	1438.4
32.0	-1.733	0.60452	32.727	26.331	1438.4
33.0	-1.731	0.60456	32.727	26.331	1438.5
34.0	-1.733	0.60454	32.727	26.332	1438.5
35.0	-1.740	0.60460	32.737	26.340	1438.5
37.5	-1.751	0.60477	32.759	26.358	1438.5
40.0	-1.754	0.60502	32.775	26.371	1438.5
42.5	-1.754	0.60511	32.779	26.374	1438.6
45.0	-1.754	0.60524	32.785	26.379	1438.6
47.5	-1.746	0.60564	32.799	26.390	1438.7
50.0	-1.745	0.60589	32.811	26.400	1438.8
55.0	-1.732	0.60665	32.839	26.422	1439.0
60.0	-1.718	0.60748	32.869	26.446	1439.2
65.0	-1.708	0.60814	32.895	26.467	1439.3
70.0	-1.709	0.60903	32.946	26.509	1439.5
75.0	-1.717	0.60909	32.956	26.517	1439.5
78.8	-1.714	0.60949	32.973	26.531	1439.6



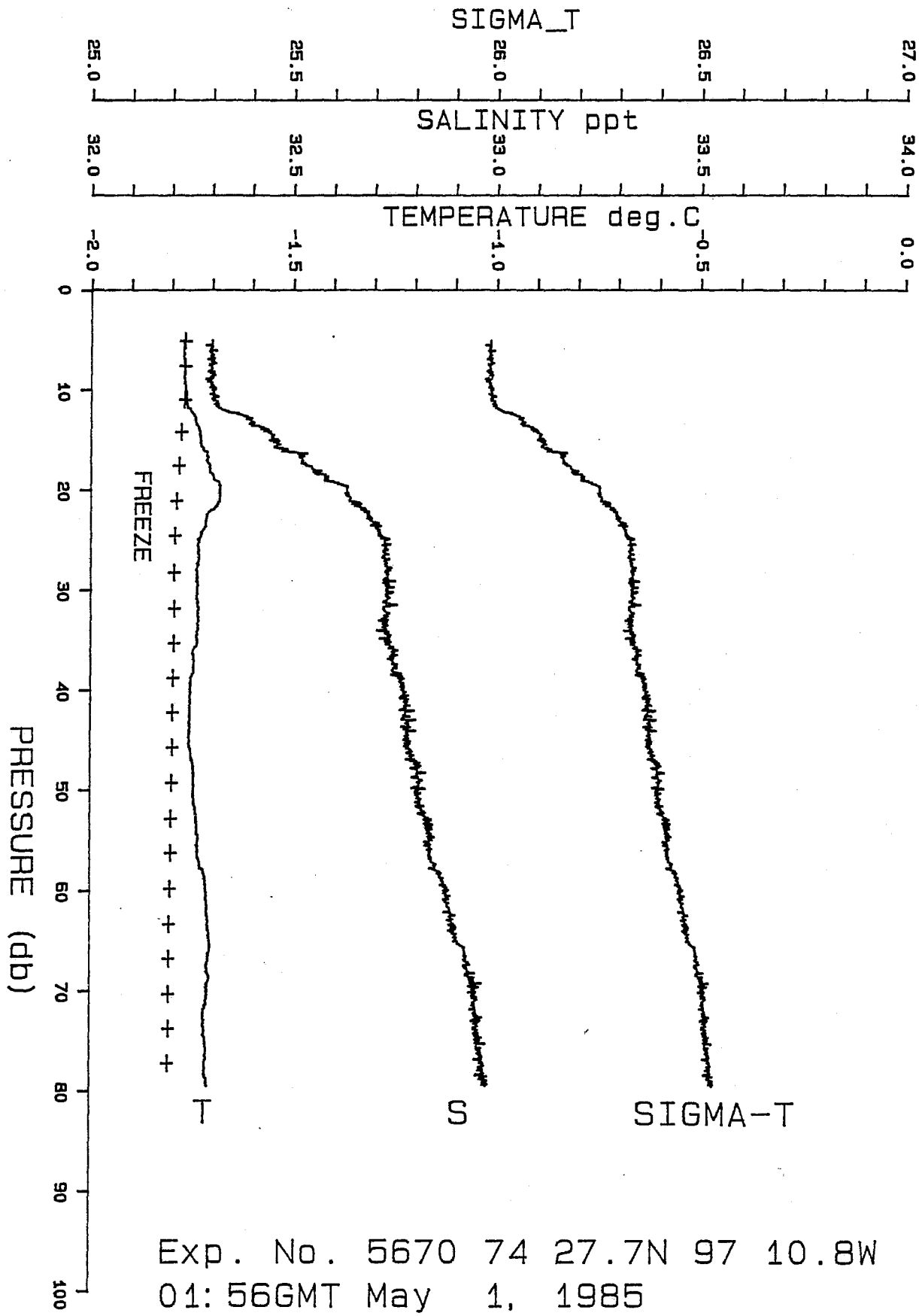
Exp. No. 5669 74 27.7N 97 10.8W
01:48GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5670

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0156

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.1	-1.772	0.59632	32.298	25.984	1437.2
6.0	-1.771	0.59635	32.299	25.984	1437.3
7.0	-1.770	0.59641	32.301	25.986	1437.3
8.0	-1.769	0.59635	32.296	25.982	1437.3
9.0	-1.768	0.59633	32.293	25.979	1437.3
10.0	-1.767	0.59648	32.299	25.984	1437.3
11.0	-1.765	0.59660	32.304	25.988	1437.4
12.0	-1.753	0.59726	32.330	26.009	1437.5
13.0	-1.741	0.59859	32.395	26.062	1437.6
14.0	-1.732	0.59951	32.439	26.097	1437.8
15.0	-1.728	0.59987	32.456	26.111	1437.8
16.0	-1.721	0.60048	32.484	26.134	1437.9
17.0	-1.713	0.60129	32.522	26.165	1438.0
18.0	-1.705	0.60194	32.552	26.188	1438.1
19.0	-1.693	0.60257	32.576	26.208	1438.2
20.0	-1.680	0.60378	32.632	26.253	1438.4
21.0	-1.681	0.60387	32.638	26.258	1438.4
22.0	-1.701	0.60413	32.675	26.289	1438.4
23.0	-1.713	0.60416	32.690	26.301	1438.3
24.0	-1.723	0.60432	32.709	26.317	1438.3
25.0	-1.733	0.60444	32.726	26.331	1438.3
26.0	-1.732	0.60456	32.732	26.335	1438.4
27.0	-1.734	0.60445	32.727	26.331	1438.4
28.0	-1.738	0.60458	32.739	26.341	1438.4
29.0	-1.737	0.60451	32.733	26.336	1438.4
30.0	-1.737	0.60450	32.732	26.335	1438.4
31.0	-1.734	0.60456	32.732	26.335	1438.4
32.0	-1.733	0.60448	32.726	26.330	1438.4
33.0	-1.732	0.60457	32.728	26.332	1438.5
34.0	-1.735	0.60440	32.721	26.327	1438.5
35.0	-1.736	0.60453	32.730	26.334	1438.5
37.5	-1.745	0.60482	32.755	26.354	1438.5
40.0	-1.752	0.60499	32.771	26.367	1438.5
42.5	-1.755	0.60505	32.777	26.373	1438.6
45.0	-1.754	0.60511	32.777	26.373	1438.6
47.5	-1.743	0.60582	32.807	26.397	1438.8
50.0	-1.745	0.60591	32.812	26.400	1438.8
55.0	-1.732	0.60666	32.839	26.423	1439.0
60.0	-1.713	0.60777	32.881	26.456	1439.2
65.0	-1.703	0.60840	32.905	26.475	1439.4
70.0	-1.711	0.60904	32.948	26.511	1439.5
75.0	-1.714	0.60924	32.961	26.521	1439.5
79.5	-1.709	0.60966	32.977	26.534	1439.7



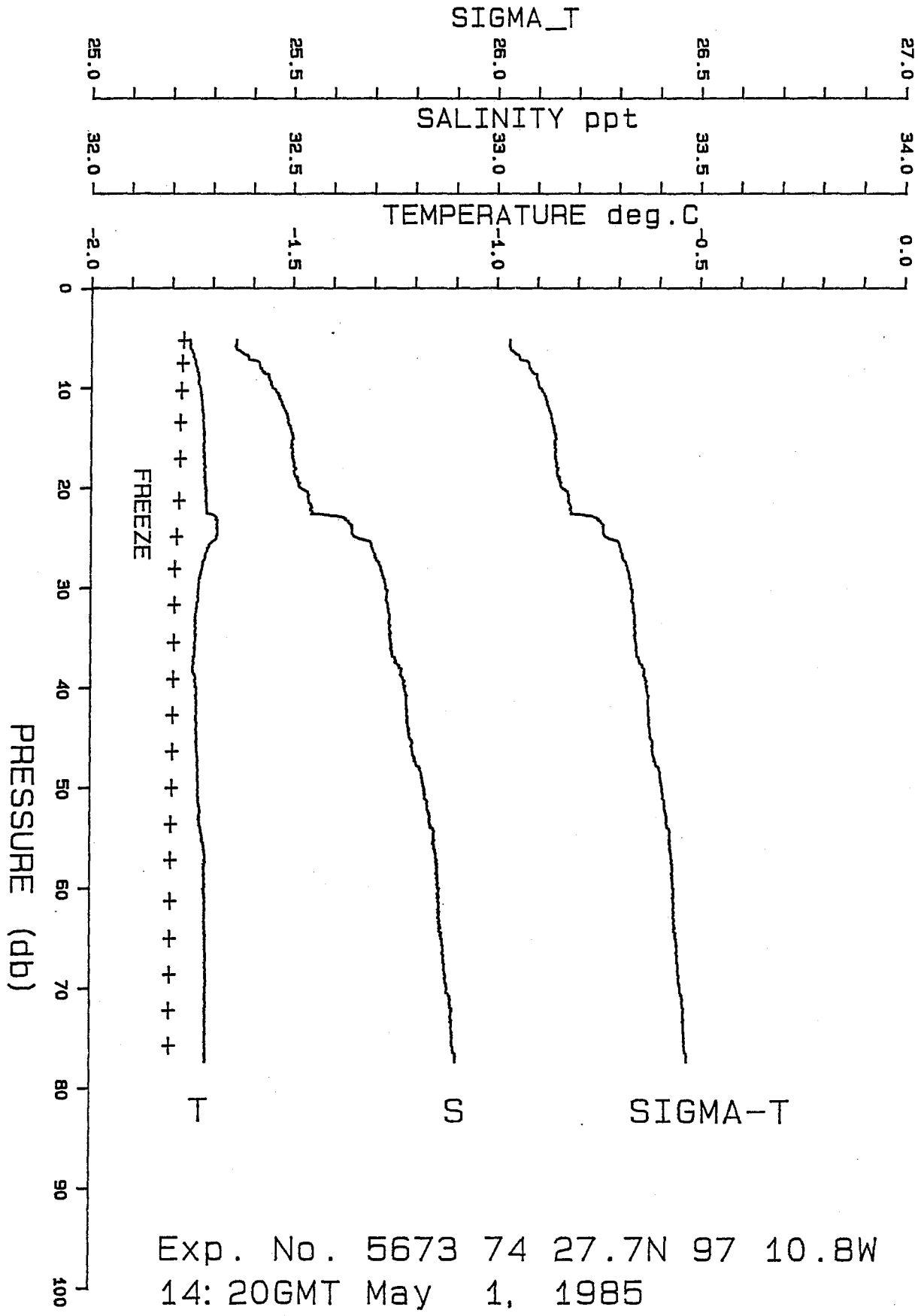
Exp. No. 5670 74 27.7N 97 10.8W
01:56GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5673

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1420

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.2	-1.757	0.59760	32.358	26.032	1437.4
6.0	-1.754	0.59763	32.357	26.031	1437.4
7.0	-1.746	0.59831	32.387	26.056	1437.5
8.0	-1.739	0.59895	32.418	26.080	1437.6
9.0	-1.734	0.59945	32.441	26.099	1437.7
10.0	-1.730	0.59969	32.451	26.107	1437.7
11.0	-1.727	0.60003	32.466	26.119	1437.8
12.0	-1.726	0.60024	32.478	26.129	1437.8
13.0	-1.722	0.60045	32.485	26.134	1437.9
14.0	-1.720	0.60063	32.493	26.141	1437.9
15.0	-1.721	0.60076	32.501	26.147	1437.9
16.0	-1.720	0.60071	32.497	26.144	1437.9
17.0	-1.719	0.60077	32.498	26.145	1438.0
18.0	-1.720	0.60091	32.507	26.152	1438.0
19.0	-1.717	0.60100	32.509	26.154	1438.0
20.0	-1.717	0.60121	32.521	26.163	1438.0
21.0	-1.714	0.60158	32.539	26.178	1438.1
22.0	-1.715	0.60174	32.548	26.185	1438.1
23.0	-1.690	0.60353	32.626	26.248	1438.4
24.0	-1.689	0.60387	32.645	26.264	1438.4
25.0	-1.690	0.60413	32.661	26.277	1438.4
26.0	-1.712	0.60433	32.697	26.306	1438.4
27.0	-1.719	0.60436	32.706	26.314	1438.4
28.0	-1.724	0.60447	32.717	26.323	1438.4
29.0	-1.731	0.60448	32.724	26.329	1438.4
30.0	-1.732	0.60453	32.728	26.333	1438.4
31.0	-1.733	0.60456	32.731	26.335	1438.4
32.0	-1.739	0.60456	32.737	26.339	1438.4
33.0	-1.741	0.60458	32.739	26.342	1438.4
34.0	-1.740	0.60462	32.740	26.342	1438.5
35.0	-1.740	0.60462	32.739	26.341	1438.5
37.5	-1.745	0.60482	32.755	26.354	1438.5
40.0	-1.737	0.60536	32.778	26.373	1438.6
42.5	-1.737	0.60547	32.781	26.376	1438.7
45.0	-1.736	0.60569	32.792	26.384	1438.7
47.5	-1.734	0.60596	32.805	26.395	1438.8
50.0	-1.731	0.60637	32.824	26.410	1438.9
55.0	-1.722	0.60700	32.849	26.430	1439.0
60.0	-1.717	0.60737	32.862	26.441	1439.2
65.0	-1.712	0.60760	32.868	26.445	1439.3
70.0	-1.712	0.60790	32.882	26.457	1439.4
75.0	-1.712	0.60816	32.895	26.467	1439.5
77.3	-1.713	0.60833	32.904	26.475	1439.5



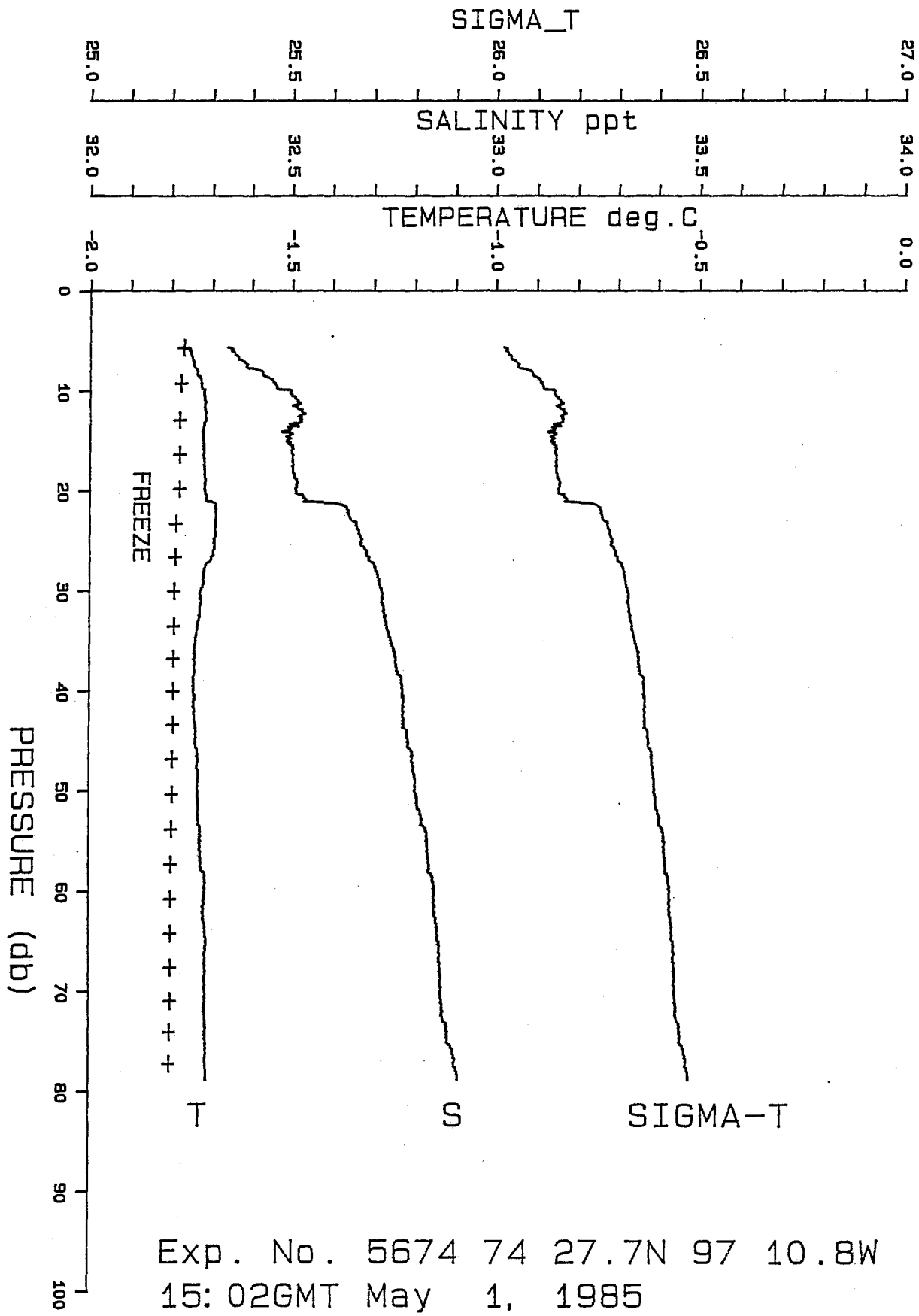
Exp. No. 5673 74 27.7N 97 10.8W
14: 20GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5674

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1502

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
5.7	-1.760	0.59725	32.340	26.018	1437.4
6.0	-1.754	0.59750	32.349	26.025	1437.4
7.0	-1.749	0.59802	32.373	26.044	1437.5
8.0	-1.737	0.59899	32.418	26.080	1437.6
9.0	-1.728	0.59977	32.453	26.109	1437.7
10.0	-1.721	0.60064	32.497	26.144	1437.8
11.0	-1.719	0.60100	32.515	26.159	1437.9
12.0	-1.718	0.60115	32.522	26.165	1437.9
13.0	-1.717	0.60114	32.521	26.163	1437.9
14.0	-1.725	0.60052	32.492	26.140	1437.9
15.0	-1.724	0.60045	32.486	26.135	1437.9
16.0	-1.722	0.60068	32.497	26.144	1437.9
17.0	-1.721	0.60081	32.503	26.149	1438.0
18.0	-1.720	0.60083	32.502	26.148	1438.0
19.0	-1.717	0.60104	32.511	26.156	1438.0
20.0	-1.718	0.60102	32.510	26.155	1438.0
21.0	-1.715	0.60147	32.532	26.173	1438.1
22.0	-1.690	0.60372	32.639	26.259	1438.4
23.0	-1.694	0.60385	32.650	26.268	1438.4
24.0	-1.693	0.60413	32.665	26.280	1438.4
25.0	-1.694	0.60422	32.671	26.285	1438.4
26.0	-1.699	0.60437	32.684	26.296	1438.5
27.0	-1.705	0.60436	32.691	26.301	1438.4
28.0	-1.720	0.60439	32.707	26.315	1438.4
29.0	-1.721	0.60446	32.712	26.319	1438.4
30.0	-1.729	0.60447	32.721	26.326	1438.4
31.0	-1.728	0.60451	32.721	26.326	1438.4
32.0	-1.729	0.60455	32.725	26.330	1438.5
33.0	-1.733	0.60456	32.729	26.333	1438.5
34.0	-1.739	0.60459	32.737	26.339	1438.5
35.0	-1.741	0.60463	32.741	26.343	1438.5
37.5	-1.745	0.60484	32.757	26.356	1438.5
40.0	-1.746	0.60510	32.772	26.368	1438.6
42.5	-1.744	0.60520	32.774	26.369	1438.6
45.0	-1.740	0.60549	32.785	26.379	1438.7
47.5	-1.735	0.60584	32.798	26.389	1438.8
50.0	-1.732	0.60598	32.802	26.392	1438.8
55.0	-1.726	0.60666	32.833	26.417	1439.0
60.0	-1.717	0.60721	32.853	26.433	1439.1
65.0	-1.714	0.60752	32.864	26.442	1439.3
70.0	-1.715	0.60761	32.868	26.445	1439.3
75.0	-1.712	0.60799	32.884	26.459	1439.5
78.8	-1.712	0.60848	32.911	26.480	1439.6

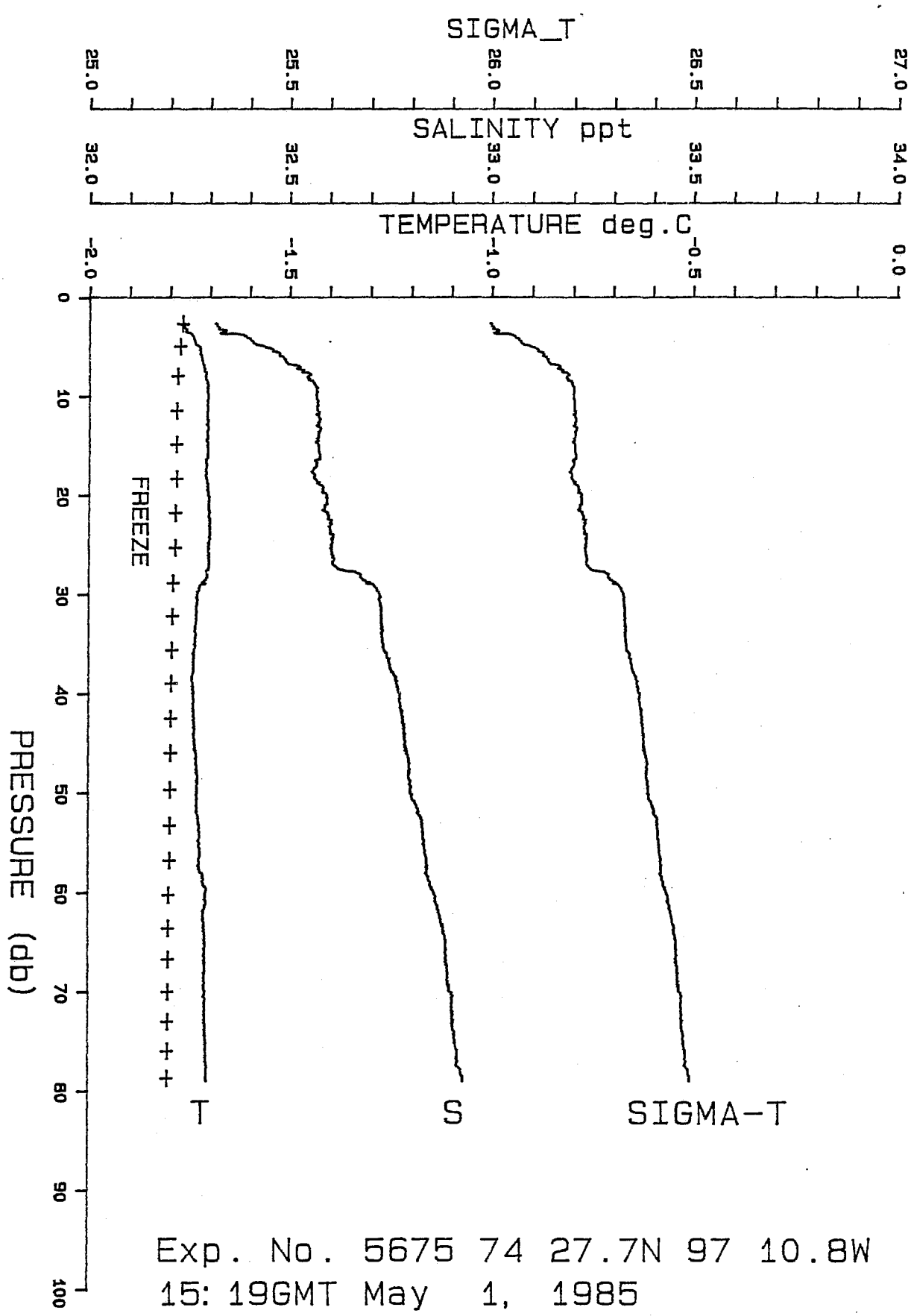


Exp. No. 5674 74 27.7N 97 10.8W
15: 02GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5675

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1519

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.6	-1.765	0.59665	32.313	25.995	1437.3
3.0	-1.765	0.59680	32.322	26.003	1437.3
4.0	-1.743	0.59837	32.390	26.058	1437.5
5.0	-1.727	0.59945	32.436	26.095	1437.6
6.0	-1.723	0.60029	32.480	26.131	1437.7
7.0	-1.717	0.60114	32.524	26.166	1437.8
8.0	-1.712	0.60157	32.544	26.182	1437.9
9.0	-1.705	0.60206	32.565	26.199	1438.0
10.0	-1.706	0.60210	32.567	26.201	1438.0
11.0	-1.706	0.60213	32.568	26.202	1438.0
12.0	-1.707	0.60218	32.572	26.205	1438.0
13.0	-1.705	0.60214	32.567	26.200	1438.1
14.0	-1.706	0.60222	32.572	26.205	1438.1
15.0	-1.707	0.60222	32.572	26.205	1438.1
16.0	-1.706	0.60228	32.574	26.207	1438.1
17.0	-1.709	0.60213	32.568	26.202	1438.1
18.0	-1.711	0.60202	32.563	26.198	1438.1
19.0	-1.705	0.60242	32.580	26.211	1438.2
20.0	-1.704	0.60269	32.594	26.223	1438.2
21.0	-1.703	0.60264	32.589	26.219	1438.2
22.0	-1.701	0.60280	32.596	26.224	1438.3
23.0	-1.701	0.60290	32.602	26.229	1438.3
24.0	-1.700	0.60304	32.608	26.234	1438.3
25.0	-1.701	0.60296	32.603	26.230	1438.3
26.0	-1.702	0.60300	32.606	26.232	1438.3
27.0	-1.703	0.60304	32.609	26.235	1438.4
28.0	-1.706	0.60414	32.677	26.291	1438.4
29.0	-1.722	0.60434	32.706	26.314	1438.4
30.0	-1.731	0.60447	32.723	26.328	1438.4
31.0	-1.731	0.60451	32.726	26.330	1438.4
32.0	-1.734	0.60451	32.727	26.332	1438.4
33.0	-1.735	0.60452	32.729	26.333	1438.5
34.0	-1.734	0.60454	32.728	26.333	1438.5
35.0	-1.738	0.60455	32.733	26.336	1438.5
37.5	-1.741	0.60483	32.751	26.351	1438.5
40.0	-1.740	0.60522	32.773	26.369	1438.6
42.5	-1.738	0.60542	32.780	26.375	1438.7
45.0	-1.736	0.60558	32.786	26.379	1438.7
47.5	-1.731	0.60590	32.798	26.389	1438.8
50.0	-1.729	0.60600	32.800	26.391	1438.9
55.0	-1.724	0.60674	32.835	26.419	1439.0
60.0	-1.709	0.60749	32.860	26.439	1439.2
65.0	-1.710	0.60801	32.889	26.463	1439.3
70.0	-1.710	0.60829	32.903	26.474	1439.4
75.0	-1.707	0.60858	32.914	26.483	1439.5
79.0	-1.705	0.60899	32.933	26.498	1439.6

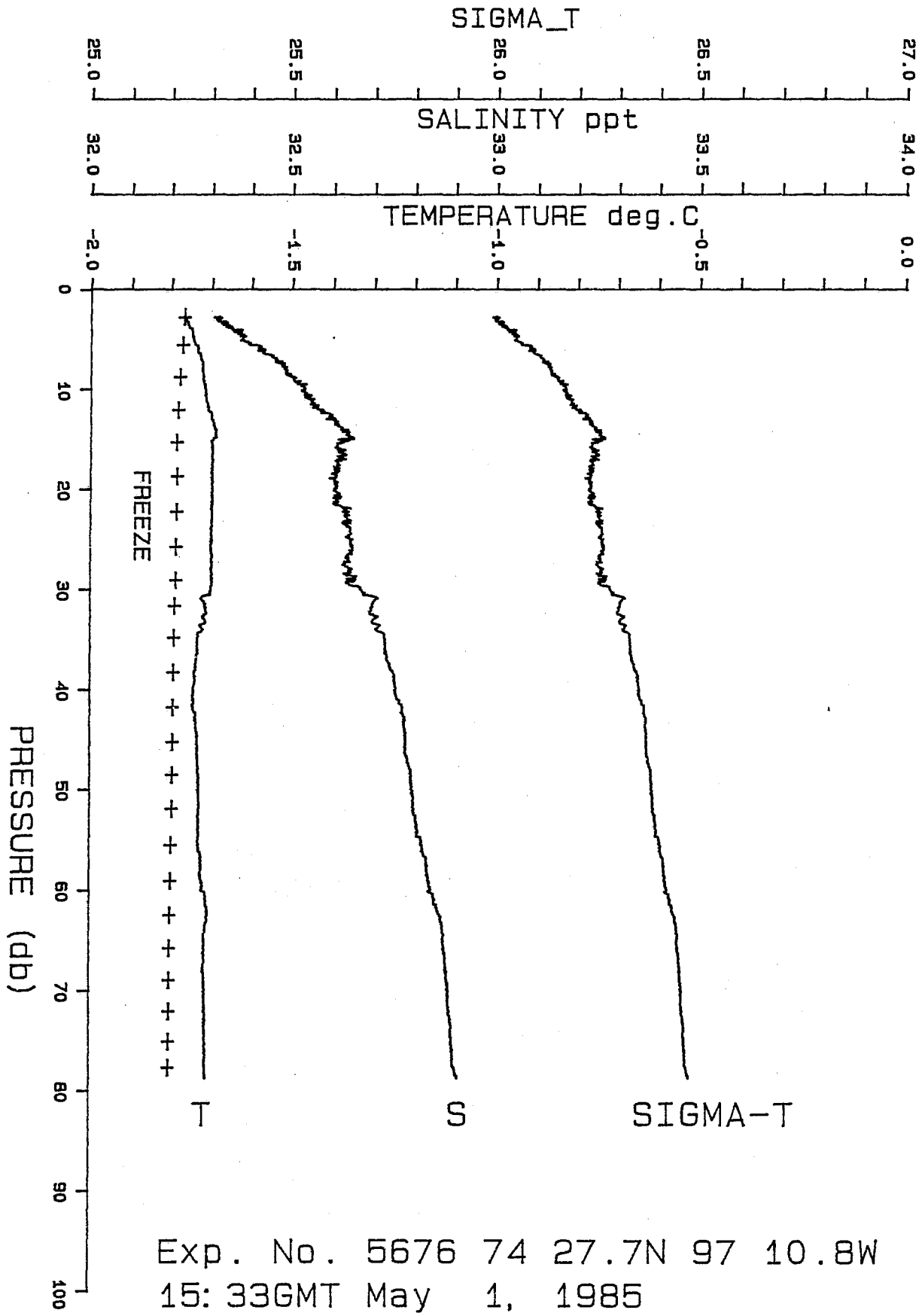


Exp. No. 5675 74 27.7N 97 10.8W
15: 19GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5676

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1533

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.8	-1.767	0.59670	32.317	25.999	1437.3
3.0	-1.766	0.59661	32.311	25.994	1437.3
4.0	-1.751	0.59753	32.349	26.024	1437.4
5.0	-1.748	0.59804	32.375	26.046	1437.5
6.0	-1.737	0.59919	32.431	26.091	1437.6
7.0	-1.727	0.59983	32.458	26.112	1437.7
8.0	-1.724	0.60027	32.479	26.130	1437.8
9.0	-1.723	0.60068	32.502	26.148	1437.8
10.0	-1.716	0.60126	32.528	26.170	1437.9
11.0	-1.715	0.60152	32.542	26.180	1437.9
12.0	-1.709	0.60195	32.561	26.196	1438.0
13.0	-1.699	0.60264	32.590	26.219	1438.1
14.0	-1.690	0.60326	32.617	26.241	1438.2
15.0	-1.697	0.60334	32.628	26.250	1438.2
16.0	-1.699	0.60308	32.614	26.239	1438.2
17.0	-1.699	0.60333	32.629	26.251	1438.2
18.0	-1.699	0.60292	32.604	26.230	1438.2
19.0	-1.699	0.60293	32.603	26.230	1438.2
20.0	-1.698	0.60297	32.604	26.231	1438.3
21.0	-1.699	0.60298	32.605	26.231	1438.3
22.0	-1.701	0.60340	32.631	26.253	1438.3
23.0	-1.700	0.60348	32.634	26.255	1438.3
24.0	-1.702	0.60356	32.641	26.261	1438.3
25.0	-1.699	0.60369	32.645	26.264	1438.4
26.0	-1.702	0.60366	32.646	26.265	1438.4
27.0	-1.701	0.60351	32.635	26.256	1438.4
28.0	-1.700	0.60363	32.641	26.261	1438.4
29.0	-1.701	0.60381	32.651	26.269	1438.4
30.0	-1.702	0.60406	32.667	26.282	1438.5
31.0	-1.722	0.60431	32.704	26.313	1438.4
32.0	-1.715	0.60428	32.693	26.303	1438.5
33.0	-1.716	0.60436	32.698	26.308	1438.5
34.0	-1.720	0.60440	32.705	26.313	1438.5
35.0	-1.735	0.60452	32.728	26.332	1438.5
37.5	-1.740	0.60467	32.741	26.343	1438.5
40.0	-1.745	0.60484	32.755	26.354	1438.6
42.5	-1.738	0.60531	32.773	26.369	1438.7
45.0	-1.734	0.60550	32.779	26.374	1438.7
47.5	-1.732	0.60572	32.788	26.381	1438.8
50.0	-1.730	0.60592	32.797	26.388	1438.8
55.0	-1.730	0.60635	32.819	26.406	1439.0
60.0	-1.721	0.60696	32.842	26.424	1439.1
65.0	-1.716	0.60769	32.876	26.452	1439.3
70.0	-1.715	0.60794	32.888	26.462	1439.4
75.0	-1.712	0.60820	32.897	26.469	1439.5
78.7	-1.710	0.60852	32.911	26.481	1439.6

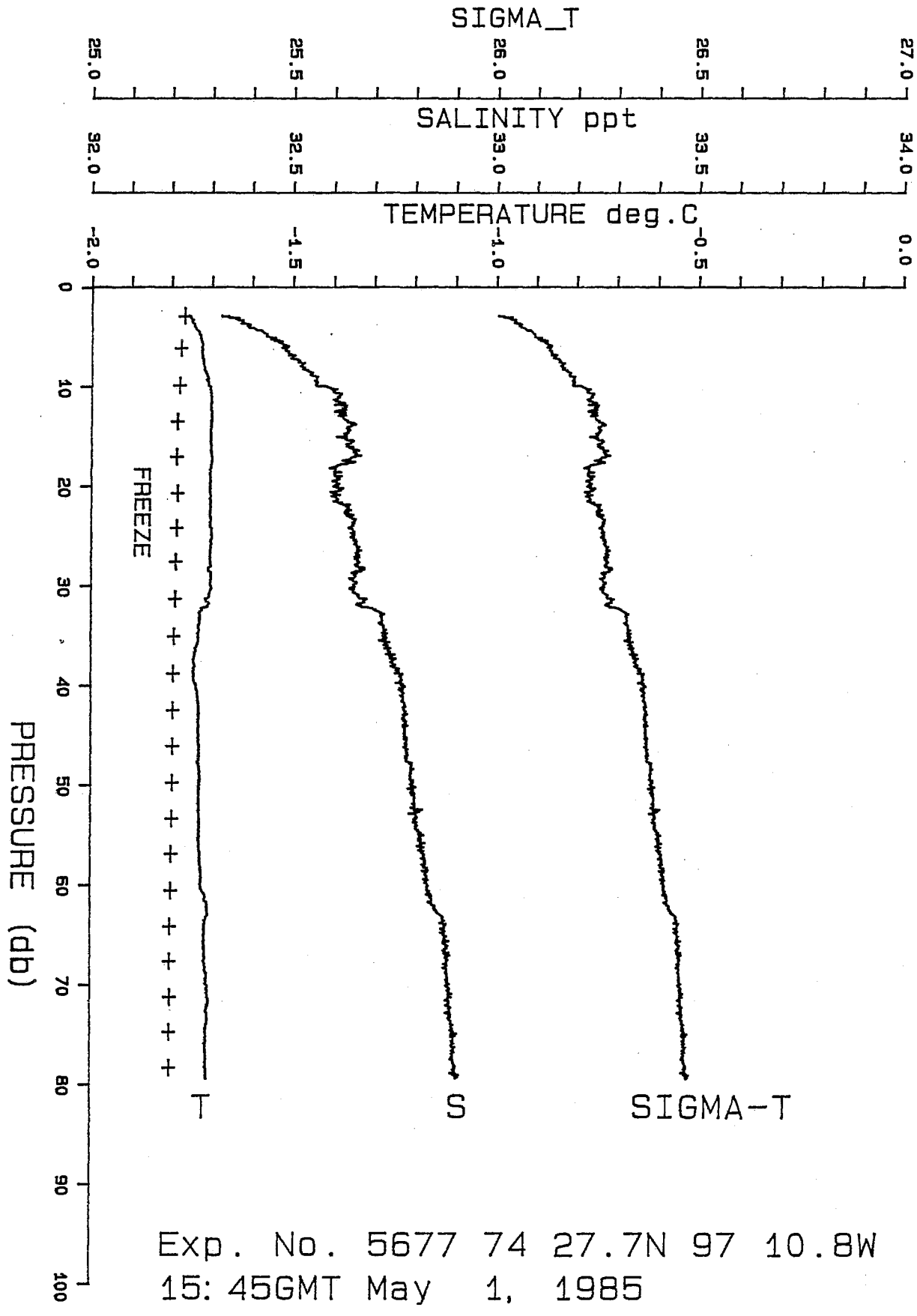


Exp. No. 5676 74 27.7N 97 10.8W
15: 33GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5677

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1545

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.9	-1.758	0.59695	32.322	26.003	1437.3
3.0	-1.756	0.59724	32.338	26.016	1437.3
4.0	-1.745	0.59835	32.391	26.059	1437.5
5.0	-1.731	0.59941	32.438	26.096	1437.6
6.0	-1.726	0.60023	32.481	26.131	1437.7
7.0	-1.725	0.60055	32.498	26.145	1437.8
8.0	-1.719	0.60104	32.520	26.163	1437.8
9.0	-1.713	0.60181	32.558	26.194	1437.9
10.0	-1.706	0.60234	32.581	26.212	1438.0
11.0	-1.701	0.60288	32.608	26.234	1438.1
12.0	-1.703	0.60313	32.624	26.247	1438.1
13.0	-1.701	0.60312	32.621	26.244	1438.1
14.0	-1.703	0.60341	32.639	26.260	1438.2
15.0	-1.704	0.60317	32.626	26.248	1438.2
16.0	-1.702	0.60332	32.631	26.253	1438.2
17.0	-1.701	0.60373	32.654	26.271	1438.3
18.0	-1.703	0.60286	32.605	26.231	1438.2
19.0	-1.704	0.60292	32.608	26.234	1438.2
20.0	-1.704	0.60295	32.609	26.235	1438.2
21.0	-1.703	0.60271	32.594	26.222	1438.2
22.0	-1.704	0.60331	32.630	26.252	1438.3
23.0	-1.704	0.60345	32.638	26.258	1438.3
24.0	-1.705	0.60360	32.647	26.266	1438.3
25.0	-1.701	0.60368	32.647	26.265	1438.4
26.0	-1.704	0.60379	32.656	26.273	1438.4
27.0	-1.703	0.60381	32.656	26.273	1438.4
28.0	-1.702	0.60394	32.661	26.277	1438.4
29.0	-1.703	0.60380	32.653	26.271	1438.4
30.0	-1.701	0.60378	32.650	26.268	1438.5
31.0	-1.705	0.60390	32.660	26.277	1438.5
32.0	-1.710	0.60399	32.670	26.284	1438.5
33.0	-1.729	0.60443	32.717	26.323	1438.5
34.0	-1.733	0.60451	32.725	26.330	1438.5
35.0	-1.733	0.60447	32.722	26.328	1438.5
37.5	-1.746	0.60466	32.746	26.347	1438.5
40.0	-1.738	0.60530	32.774	26.370	1438.6
42.5	-1.732	0.60549	32.777	26.372	1438.7
45.0	-1.731	0.60554	32.778	26.372	1438.7
47.5	-1.731	0.60564	32.782	26.376	1438.8
50.0	-1.730	0.60592	32.796	26.387	1438.8
55.0	-1.730	0.60643	32.823	26.409	1439.0
60.0	-1.726	0.60676	32.835	26.419	1439.1
65.0	-1.716	0.60767	32.876	26.452	1439.3
70.0	-1.709	0.60799	32.884	26.458	1439.4
75.0	-1.712	0.60822	32.897	26.469	1439.5
79.4	-1.710	0.60841	32.905	26.475	1439.6

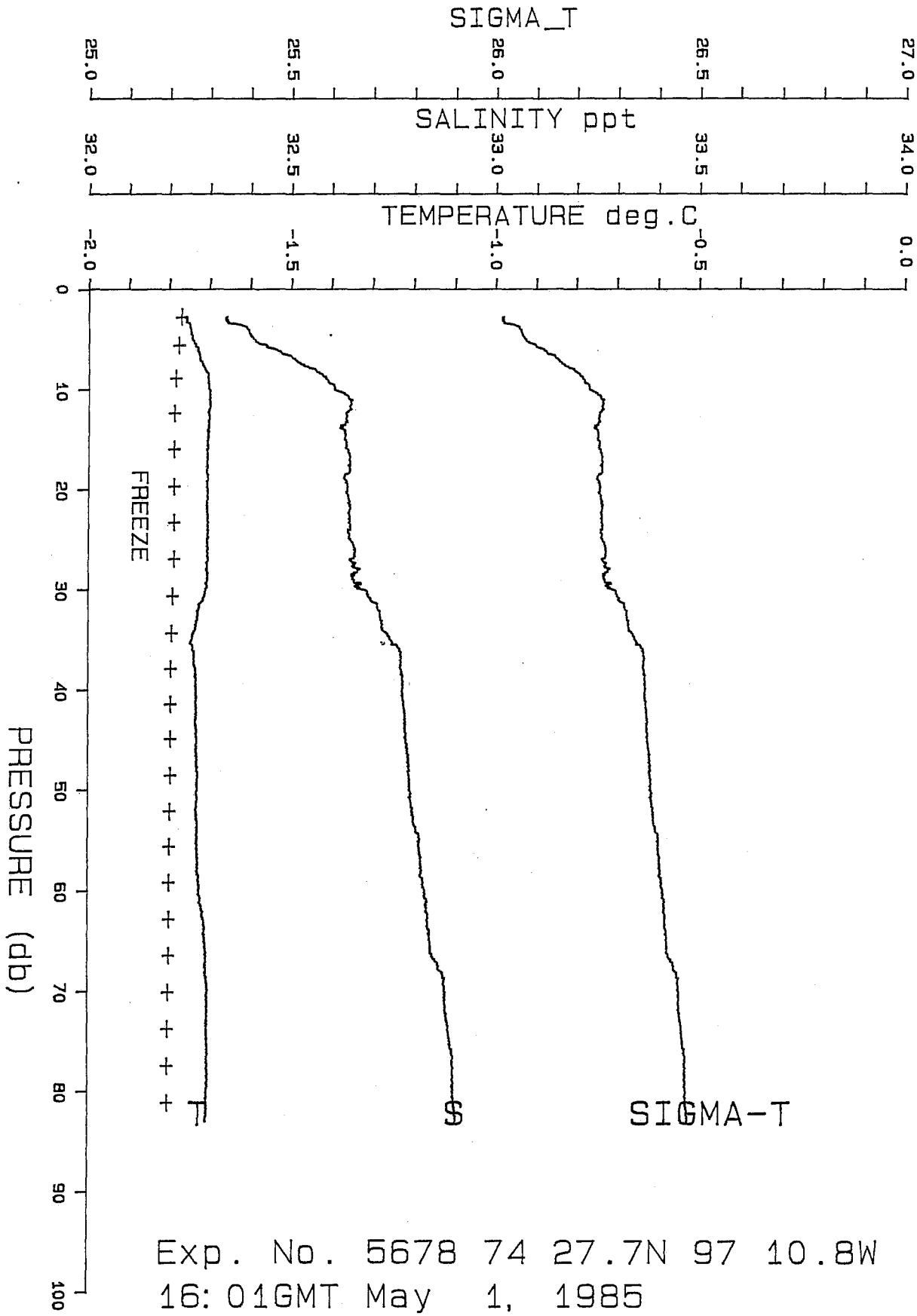


Exp. No. 5677 74 27.7N 97 10.8W
15: 45GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5678

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1601

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.8	-1.758	0.59727	32.342	26.019	1437.3
3.0	-1.757	0.59724	32.338	26.016	1437.3
4.0	-1.747	0.59835	32.393	26.060	1437.5
5.0	-1.744	0.59868	32.409	26.073	1437.5
6.0	-1.730	0.59985	32.462	26.116	1437.7
7.0	-1.724	0.60075	32.509	26.154	1437.8
8.0	-1.713	0.60179	32.558	26.194	1437.9
9.0	-1.703	0.60249	32.588	26.217	1438.0
10.0	-1.700	0.60285	32.605	26.232	1438.1
11.0	-1.702	0.60350	32.646	26.265	1438.1
12.0	-1.702	0.60353	32.647	26.266	1438.2
13.0	-1.702	0.60334	32.635	26.256	1438.2
14.0	-1.706	0.60317	32.628	26.251	1438.2
15.0	-1.704	0.60324	32.630	26.252	1438.2
16.0	-1.708	0.60336	32.640	26.260	1438.2
17.0	-1.705	0.60346	32.643	26.262	1438.2
18.0	-1.706	0.60346	32.644	26.263	1438.2
19.0	-1.705	0.60331	32.632	26.254	1438.2
20.0	-1.705	0.60340	32.637	26.258	1438.3
21.0	-1.705	0.60349	32.642	26.262	1438.3
22.0	-1.706	0.60353	32.644	26.264	1438.3
23.0	-1.707	0.60354	32.646	26.265	1438.3
24.0	-1.706	0.60357	32.646	26.265	1438.3
25.0	-1.705	0.60360	32.646	26.265	1438.4
26.0	-1.704	0.60378	32.655	26.272	1438.4
27.0	-1.704	0.60361	32.645	26.264	1438.4
28.0	-1.707	0.60388	32.663	26.279	1438.4
29.0	-1.706	0.60377	32.655	26.272	1438.4
30.0	-1.711	0.60405	32.676	26.290	1438.4
31.0	-1.716	0.60429	32.696	26.306	1438.5
32.0	-1.728	0.60441	32.715	26.322	1438.5
33.0	-1.730	0.60446	32.721	26.326	1438.5
34.0	-1.736	0.60448	32.727	26.332	1438.5
35.0	-1.744	0.60465	32.745	26.346	1438.5
37.5	-1.735	0.60523	32.769	26.365	1438.6
40.0	-1.732	0.60541	32.774	26.370	1438.6
42.5	-1.732	0.60552	32.779	26.374	1438.7
45.0	-1.731	0.60562	32.783	26.377	1438.7
47.5	-1.731	0.60578	32.790	26.383	1438.8
50.0	-1.729	0.60587	32.792	26.384	1438.8
55.0	-1.729	0.60632	32.815	26.403	1439.0
60.0	-1.725	0.60669	32.830	26.415	1439.1
65.0	-1.710	0.60724	32.844	26.426	1439.2
70.0	-1.704	0.60800	32.879	26.454	1439.4
75.0	-1.705	0.60826	32.893	26.466	1439.5
80.0	-1.705	0.60844	32.900	26.471	1439.6
83.0	-1.707	0.60852	32.905	26.475	1439.6

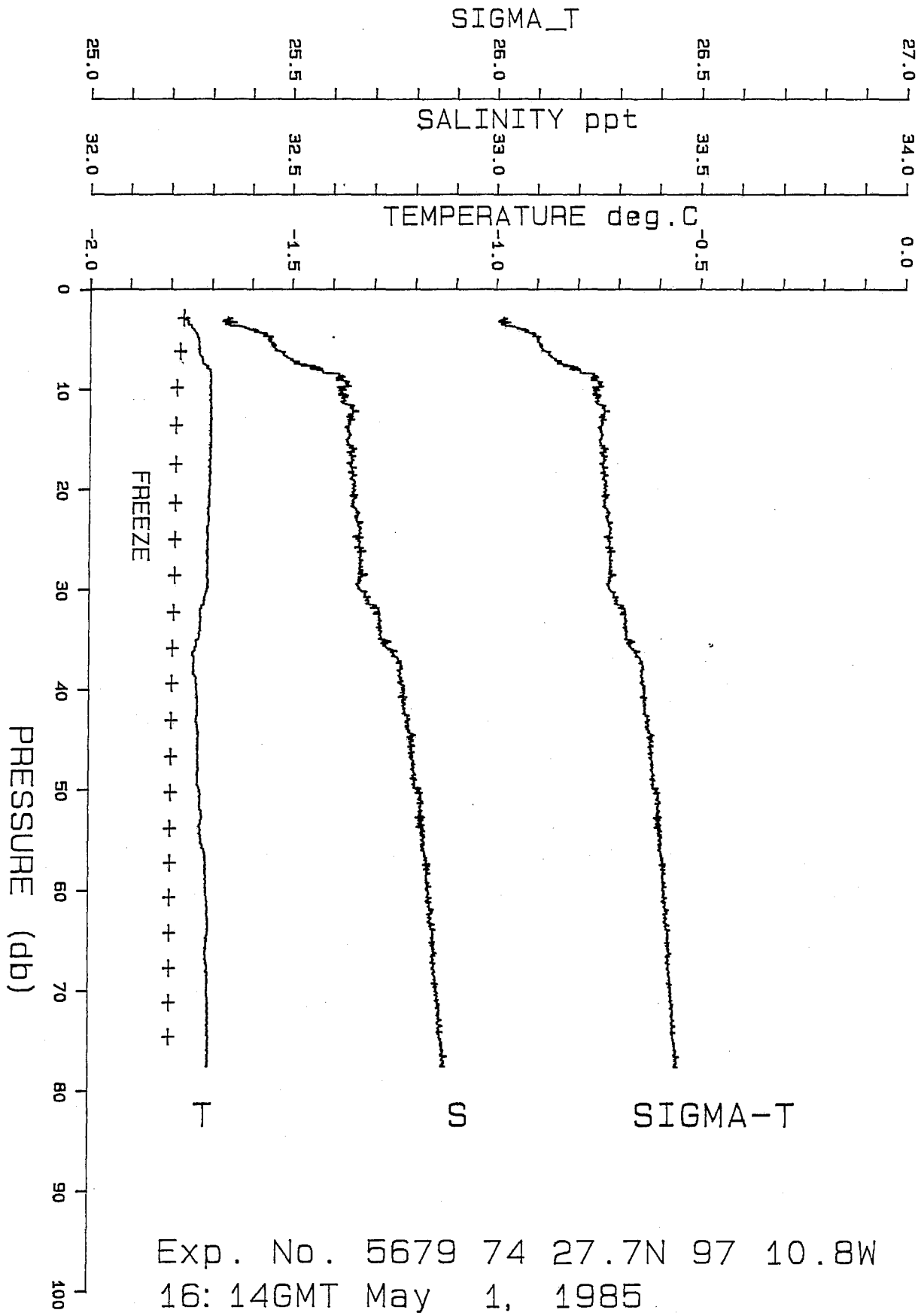


Exp. No. 5678 74 27.7N 97 10.8W
16:01GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5679

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1614

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.8	-1.762	0.59716	32.339	26.017	1437.3
3.0	-1.764	0.59709	32.337	26.015	1437.3
4.0	-1.745	0.59846	32.397	26.064	1437.5
5.0	-1.735	0.59943	32.444	26.101	1437.6
6.0	-1.733	0.59975	32.460	26.114	1437.7
7.0	-1.725	0.60056	32.499	26.146	1437.8
8.0	-1.706	0.60200	32.563	26.197	1438.0
9.0	-1.703	0.60288	32.611	26.236	1438.1
10.0	-1.702	0.60303	32.618	26.242	1438.1
11.0	-1.704	0.60316	32.627	26.250	1438.1
12.0	-1.704	0.60352	32.648	26.267	1438.2
13.0	-1.702	0.60358	32.649	26.268	1438.2
14.0	-1.701	0.60338	32.635	26.256	1438.2
15.0	-1.702	0.60337	32.635	26.256	1438.2
16.0	-1.704	0.60354	32.647	26.265	1438.2
17.0	-1.704	0.60363	32.652	26.270	1438.2
18.0	-1.703	0.60359	32.648	26.266	1438.3
19.0	-1.705	0.60359	32.649	26.268	1438.3
20.0	-1.706	0.60367	32.654	26.272	1438.3
21.0	-1.704	0.60366	32.651	26.269	1438.3
22.0	-1.707	0.60372	32.657	26.274	1438.3
23.0	-1.706	0.60377	32.658	26.275	1438.3
24.0	-1.710	0.60385	32.667	26.282	1438.3
25.0	-1.708	0.60384	32.664	26.280	1438.4
26.0	-1.708	0.60389	32.666	26.281	1438.4
27.0	-1.711	0.60391	32.670	26.284	1438.4
28.0	-1.708	0.60392	32.667	26.282	1438.4
29.0	-1.707	0.60393	32.665	26.281	1438.4
30.0	-1.710	0.60395	32.670	26.284	1438.4
31.0	-1.715	0.60414	32.685	26.297	1438.5
32.0	-1.728	0.60434	32.711	26.319	1438.4
33.0	-1.726	0.60441	32.713	26.319	1438.5
34.0	-1.727	0.60442	32.714	26.320	1438.5
35.0	-1.734	0.60452	32.727	26.331	1438.5
37.5	-1.744	0.60505	32.767	26.364	1438.5
40.0	-1.735	0.60532	32.772	26.368	1438.6
42.5	-1.732	0.60557	32.783	26.377	1438.7
45.0	-1.732	0.60584	32.796	26.388	1438.8
47.5	-1.731	0.60590	32.797	26.388	1438.8
50.0	-1.725	0.60629	32.813	26.401	1438.9
55.0	-1.723	0.60658	32.824	26.410	1439.0
60.0	-1.711	0.60709	32.839	26.422	1439.2
65.0	-1.708	0.60735	32.848	26.429	1439.3
70.0	-1.707	0.60760	32.858	26.437	1439.4
75.0	-1.705	0.60789	32.870	26.447	1439.5
77.6	-1.707	0.60806	32.881	26.456	1439.5

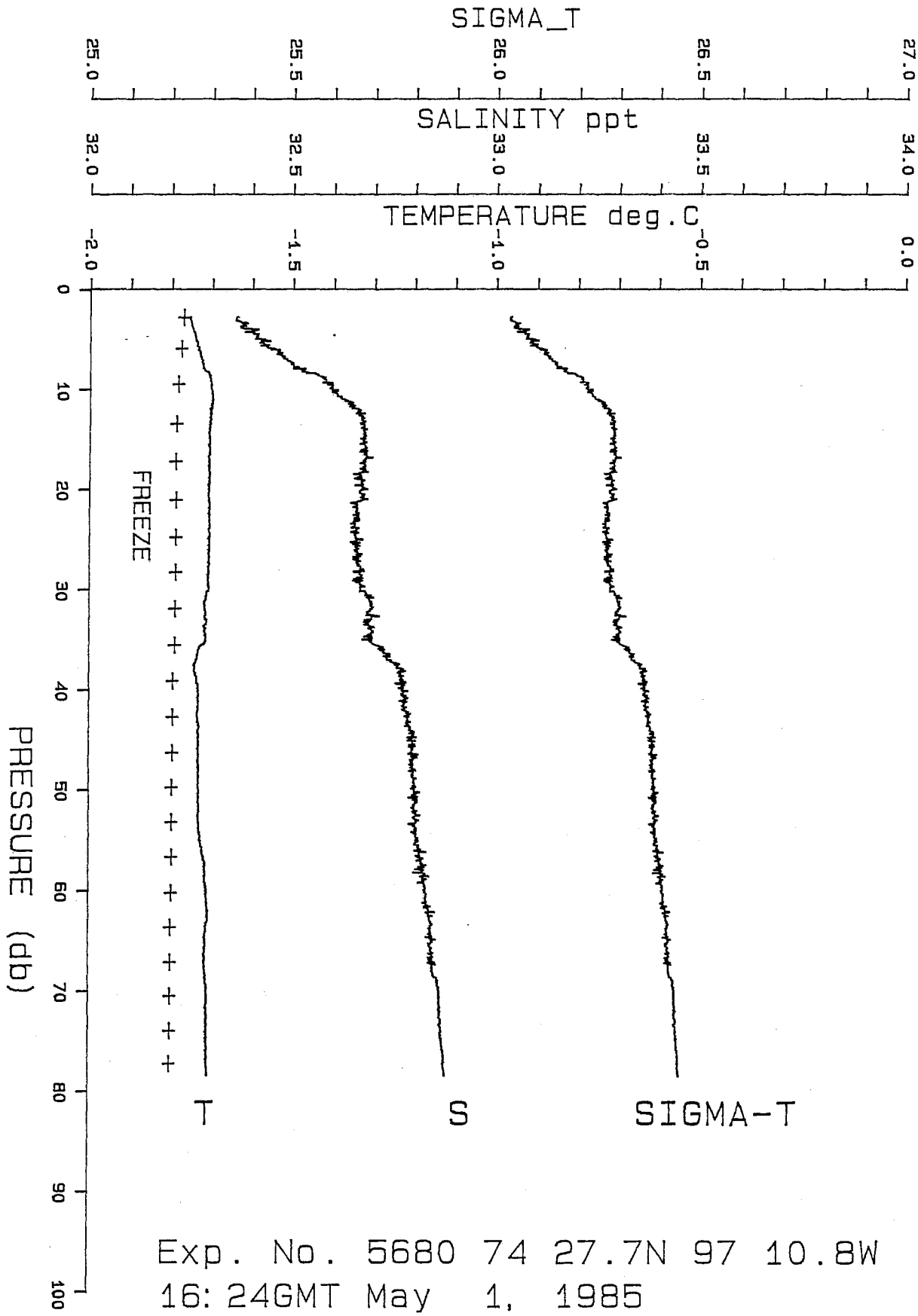


Exp. No. 5679 74 27.7N 97 10.8W
16: 14GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5680

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1624

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.8	-1.756	0.59766	32.363	26.036	1437.4
3.0	-1.755	0.59760	32.358	26.032	1437.4
4.0	-1.748	0.59852	32.403	26.069	1437.5
5.0	-1.742	0.59901	32.427	26.087	1437.6
6.0	-1.735	0.59960	32.454	26.109	1437.6
7.0	-1.727	0.60029	32.485	26.134	1437.7
8.0	-1.720	0.60100	32.518	26.162	1437.8
9.0	-1.704	0.60234	32.580	26.211	1438.0
10.0	-1.701	0.60263	32.594	26.222	1438.1
11.0	-1.701	0.60318	32.625	26.248	1438.1
12.0	-1.703	0.60374	32.661	26.277	1438.2
13.0	-1.704	0.60388	32.669	26.284	1438.2
14.0	-1.707	0.60401	32.679	26.292	1438.2
15.0	-1.706	0.60392	32.673	26.287	1438.2
16.0	-1.707	0.60390	32.671	26.286	1438.2
17.0	-1.706	0.60401	32.677	26.290	1438.3
18.0	-1.707	0.60401	32.677	26.290	1438.3
19.0	-1.706	0.60384	32.665	26.281	1438.3
20.0	-1.709	0.60407	32.681	26.294	1438.3
21.0	-1.707	0.60406	32.678	26.291	1438.3
22.0	-1.706	0.60371	32.656	26.273	1438.3
23.0	-1.707	0.60361	32.650	26.268	1438.3
24.0	-1.709	0.60365	32.654	26.271	1438.3
25.0	-1.705	0.60398	32.669	26.283	1438.4
26.0	-1.707	0.60374	32.656	26.274	1438.4
27.0	-1.709	0.60367	32.653	26.270	1438.4
28.0	-1.708	0.60396	32.669	26.284	1438.4
29.0	-1.709	0.60381	32.661	26.277	1438.4
30.0	-1.707	0.60393	32.666	26.281	1438.5
31.0	-1.715	0.60421	32.689	26.300	1438.5
32.0	-1.718	0.60421	32.692	26.303	1438.5
33.0	-1.712	0.60417	32.683	26.295	1438.5
34.0	-1.717	0.60428	32.694	26.304	1438.5
35.0	-1.714	0.60401	32.675	26.289	1438.5
37.5	-1.742	0.60486	32.754	26.354	1438.5
40.0	-1.733	0.60537	32.772	26.368	1438.6
42.5	-1.735	0.60559	32.786	26.380	1438.7
45.0	-1.732	0.60571	32.789	26.382	1438.7
47.5	-1.731	0.60585	32.795	26.386	1438.8
50.0	-1.729	0.60603	32.802	26.392	1438.9
55.0	-1.724	0.60629	32.808	26.397	1439.0
60.0	-1.712	0.60692	32.829	26.414	1439.1
65.0	-1.714	0.60725	32.848	26.430	1439.2
70.0	-1.710	0.60767	32.866	26.444	1439.4
75.0	-1.710	0.60784	32.873	26.450	1439.4
78.4	-1.707	0.60805	32.880	26.455	1439.5

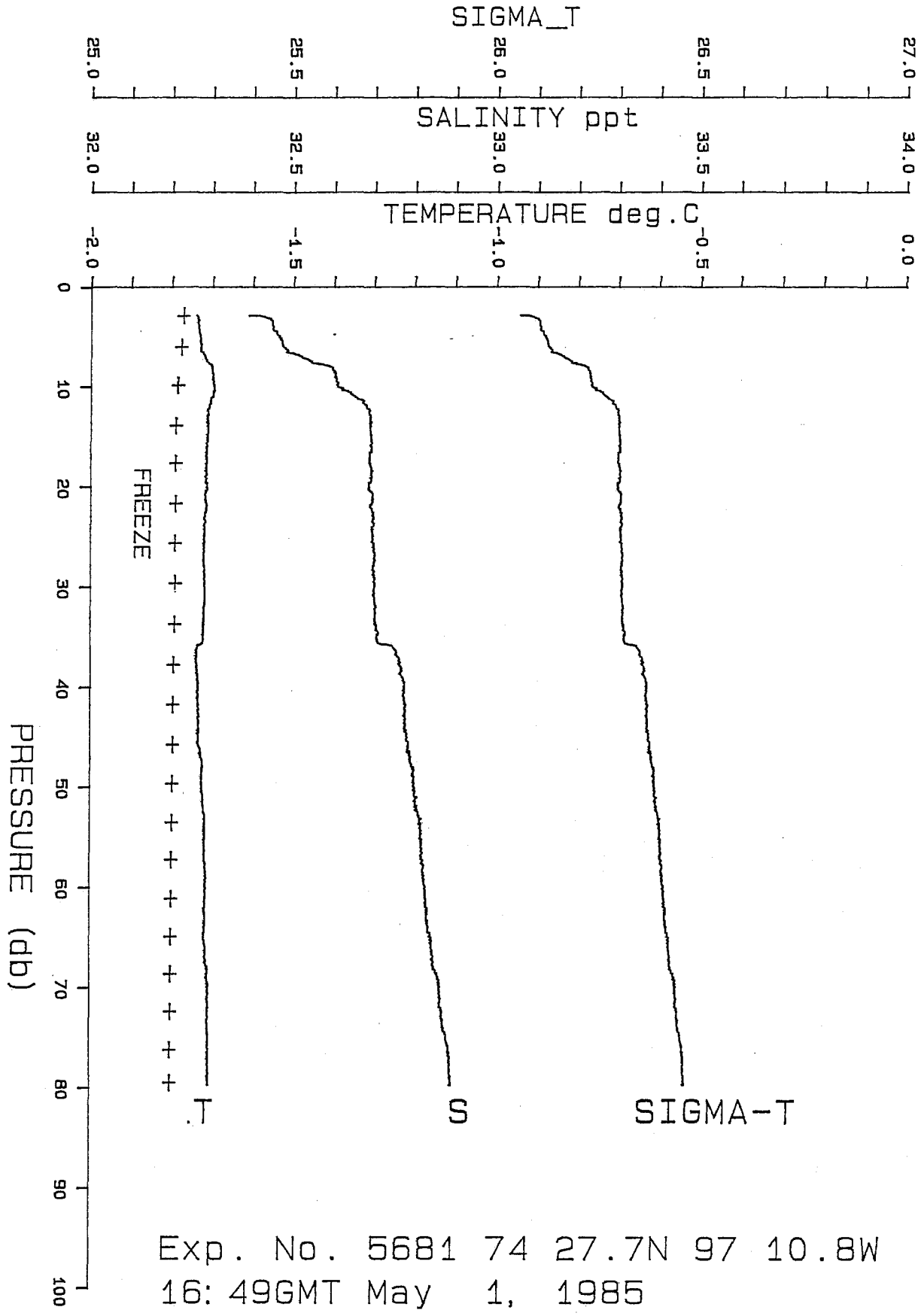


Exp. No. 5680 74 27.7N 97 10.8W
16: 24GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5681

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1649

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.8	-1.740	0.59839	32.389	26.057	1437.5
3.0	-1.737	0.59915	32.431	26.091	1437.6
4.0	-1.736	0.59949	32.449	26.105	1437.6
5.0	-1.731	0.59984	32.464	26.117	1437.7
6.0	-1.730	0.60008	32.476	26.128	1437.7
7.0	-1.719	0.60103	32.520	26.163	1437.8
8.0	-1.701	0.60260	32.593	26.222	1438.0
9.0	-1.698	0.60279	32.600	26.228	1438.1
10.0	-1.696	0.60301	32.611	26.236	1438.1
11.0	-1.703	0.60362	32.653	26.271	1438.2
12.0	-1.709	0.60395	32.680	26.292	1438.2
13.0	-1.713	0.60404	32.689	26.300	1438.2
14.0	-1.711	0.60406	32.687	26.299	1438.2
15.0	-1.714	0.60408	32.691	26.302	1438.2
16.0	-1.715	0.60411	32.693	26.303	1438.2
17.0	-1.714	0.60404	32.687	26.299	1438.2
18.0	-1.716	0.60409	32.692	26.303	1438.3
19.0	-1.718	0.60410	32.693	26.304	1438.3
20.0	-1.715	0.60406	32.687	26.299	1438.3
21.0	-1.717	0.60415	32.694	26.304	1438.3
22.0	-1.715	0.60409	32.689	26.300	1438.3
23.0	-1.721	0.60415	32.698	26.308	1438.3
24.0	-1.718	0.60416	32.694	26.304	1438.3
25.0	-1.719	0.60416	32.695	26.305	1438.4
26.0	-1.720	0.60420	32.698	26.307	1438.4
27.0	-1.720	0.60425	32.700	26.309	1438.4
28.0	-1.719	0.60422	32.697	26.307	1438.4
29.0	-1.718	0.60428	32.698	26.308	1438.4
30.0	-1.719	0.60430	32.700	26.309	1438.4
31.0	-1.718	0.60433	32.700	26.309	1438.5
32.0	-1.722	0.60433	32.704	26.313	1438.5
33.0	-1.721	0.60434	32.703	26.312	1438.5
34.0	-1.722	0.60436	32.705	26.313	1438.5
35.0	-1.721	0.60441	32.706	26.314	1438.5
37.5	-1.740	0.60509	32.766	26.363	1438.6
40.0	-1.735	0.60536	32.775	26.371	1438.6
42.5	-1.733	0.60547	32.777	26.372	1438.7
45.0	-1.735	0.60558	32.784	26.378	1438.7
47.5	-1.723	0.60596	32.792	26.384	1438.8
50.0	-1.724	0.60615	32.803	26.393	1438.9
55.0	-1.717	0.60654	32.816	26.403	1439.0
60.0	-1.714	0.60686	32.829	26.414	1439.1
65.0	-1.719	0.60710	32.845	26.427	1439.2
70.0	-1.707	0.60768	32.864	26.442	1439.4
75.0	-1.707	0.60805	32.882	26.456	1439.5
79.7	-1.707	0.60823	32.889	26.463	1439.6

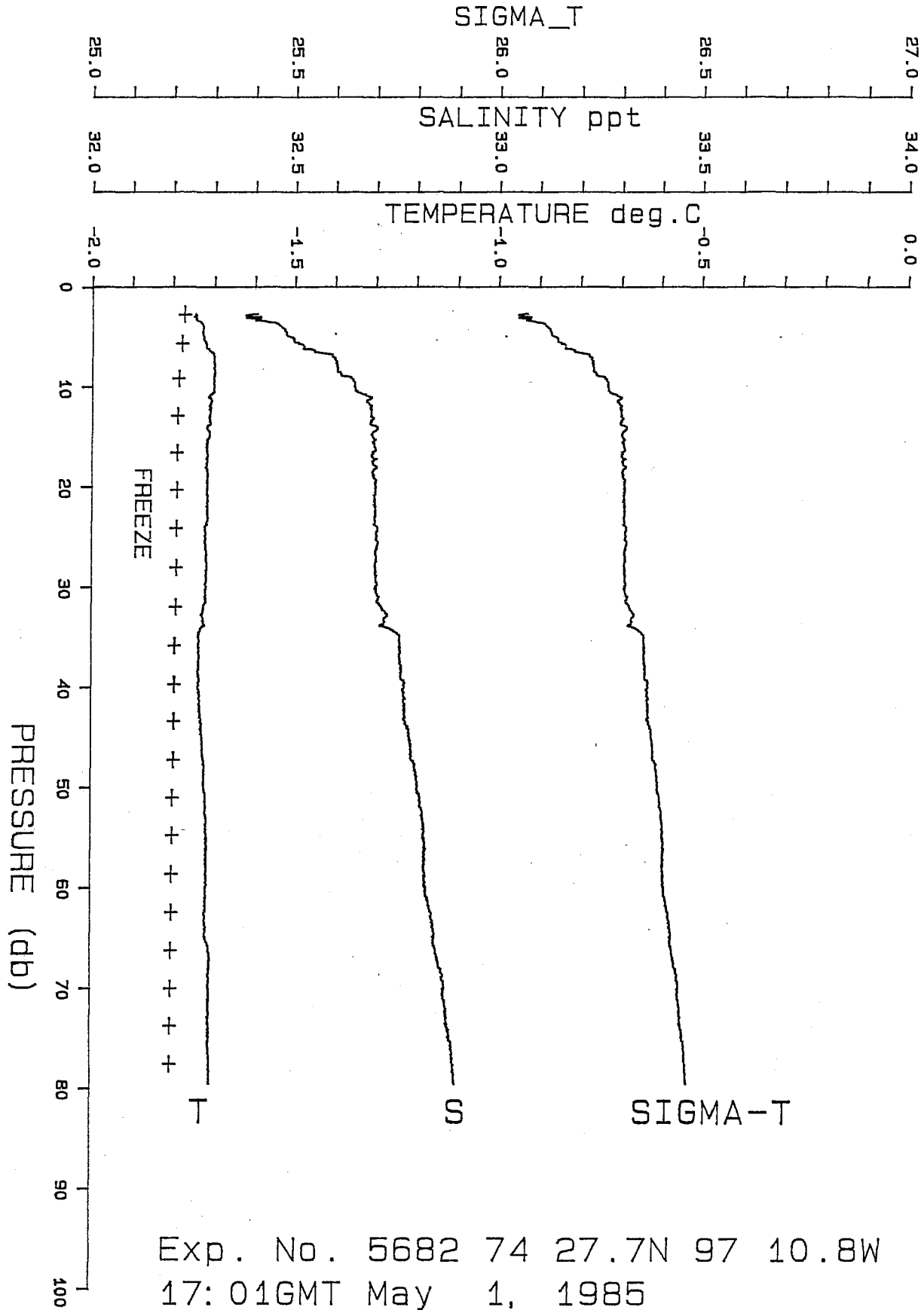


Exp. No. 5681 74 27.7N 97 10.8W
16: 49GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5682

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1701

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.7	-1.747	0.59851	32.404	26.069	1437.5
3.0	-1.750	0.59864	32.414	26.077	1437.5
4.0	-1.729	0.59990	32.465	26.119	1437.7
5.0	-1.728	0.60037	32.492	26.140	1437.7
6.0	-1.721	0.60099	32.520	26.163	1437.8
7.0	-1.701	0.60262	32.595	26.223	1438.0
8.0	-1.701	0.60280	32.605	26.231	1438.0
9.0	-1.702	0.60334	32.637	26.258	1438.1
10.0	-1.701	0.60354	32.647	26.266	1438.1
11.0	-1.715	0.60398	32.689	26.300	1438.1
12.0	-1.710	0.60402	32.685	26.297	1438.2
13.0	-1.714	0.60405	32.691	26.301	1438.2
14.0	-1.719	0.60418	32.703	26.312	1438.2
15.0	-1.714	0.60410	32.692	26.303	1438.2
16.0	-1.719	0.60412	32.698	26.307	1438.2
17.0	-1.719	0.60405	32.693	26.303	1438.2
18.0	-1.721	0.60419	32.703	26.311	1438.2
19.0	-1.717	0.60413	32.694	26.304	1438.3
20.0	-1.717	0.60421	32.699	26.308	1438.3
21.0	-1.717	0.60419	32.696	26.306	1438.3
22.0	-1.716	0.60421	32.697	26.307	1438.3
23.0	-1.716	0.60421	32.696	26.306	1438.3
24.0	-1.724	0.60423	32.705	26.314	1438.3
25.0	-1.720	0.60424	32.701	26.310	1438.4
26.0	-1.720	0.60427	32.702	26.310	1438.4
27.0	-1.719	0.60427	32.700	26.309	1438.4
28.0	-1.718	0.60428	32.699	26.309	1438.4
29.0	-1.719	0.60428	32.699	26.308	1438.4
30.0	-1.721	0.60429	32.701	26.310	1438.4
31.0	-1.721	0.60439	32.706	26.314	1438.5
32.0	-1.724	0.60449	32.716	26.322	1438.5
33.0	-1.726	0.60459	32.723	26.328	1438.5
34.0	-1.731	0.60464	32.731	26.334	1438.5
35.0	-1.737	0.60503	32.761	26.359	1438.5
37.5	-1.736	0.60506	32.759	26.358	1438.6
40.0	-1.738	0.60527	32.772	26.368	1438.6
42.5	-1.732	0.60540	32.773	26.368	1438.7
45.0	-1.727	0.60572	32.784	26.377	1438.8
47.5	-1.723	0.60605	32.798	26.389	1438.8
50.0	-1.721	0.60622	32.805	26.394	1438.9
55.0	-1.714	0.60664	32.819	26.406	1439.0
60.0	-1.718	0.60676	32.827	26.412	1439.1
65.0	-1.718	0.60718	32.848	26.430	1439.2
70.0	-1.709	0.60776	32.871	26.448	1439.4
75.0	-1.708	0.60809	32.886	26.460	1439.5
79.5	-1.707	0.60836	32.898	26.470	1439.6

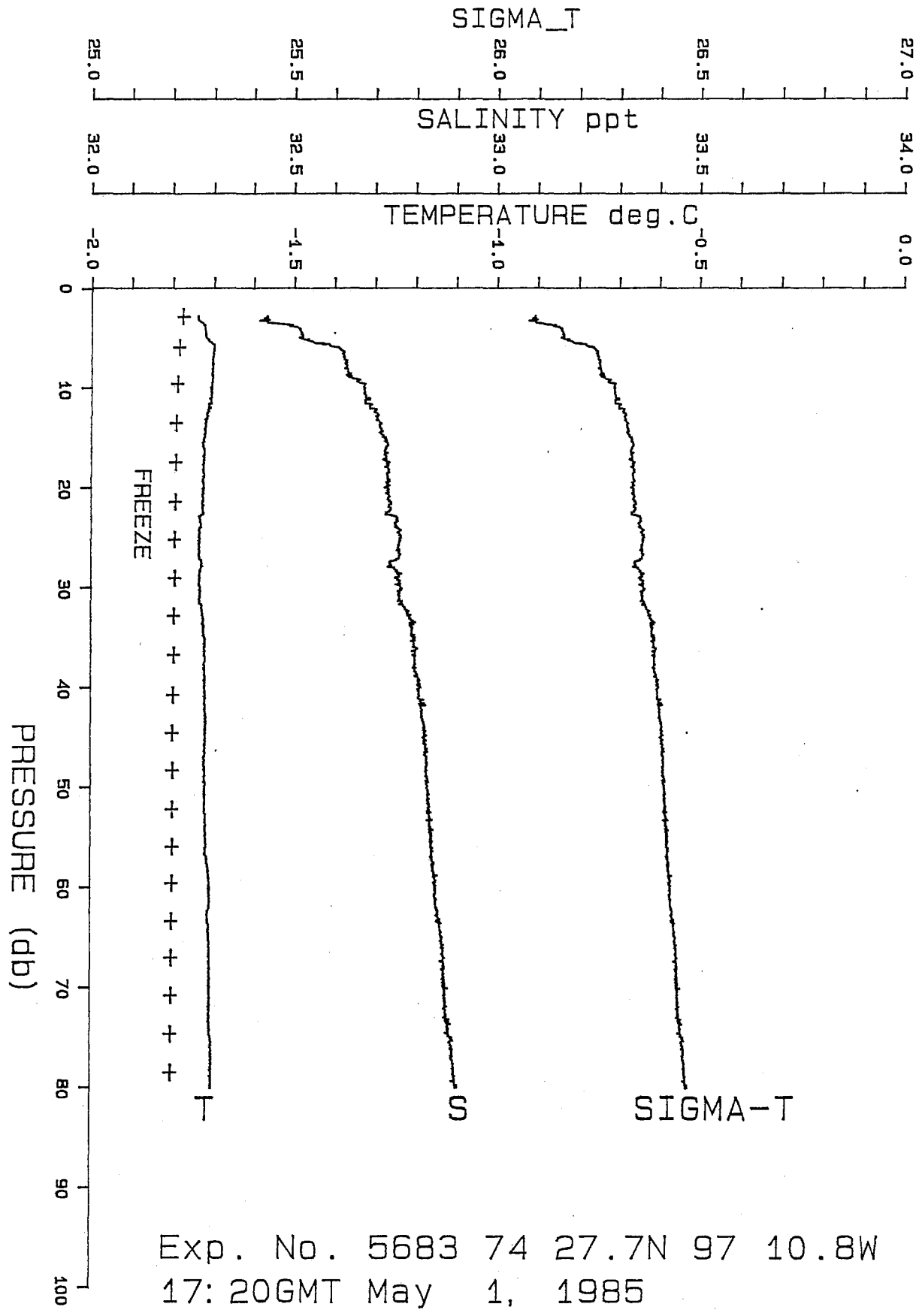


Exp. No. 5682 74 27.7N 97 10.8W
17:01GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5683

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1720

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.8	-1.740	0.59915	32.434	26.093	1437.5
3.0	-1.739	0.59905	32.427	26.088	1437.5
4.0	-1.723	0.60082	32.513	26.157	1437.8
5.0	-1.718	0.60099	32.517	26.161	1437.8
6.0	-1.700	0.60290	32.611	26.236	1438.0
7.0	-1.703	0.60307	32.623	26.247	1438.0
8.0	-1.702	0.60317	32.628	26.250	1438.1
9.0	-1.704	0.60342	32.644	26.263	1438.1
10.0	-1.707	0.60387	32.674	26.288	1438.1
11.0	-1.708	0.60395	32.680	26.292	1438.2
12.0	-1.710	0.60405	32.686	26.297	1438.2
13.0	-1.717	0.60425	32.705	26.313	1438.2
14.0	-1.722	0.60432	32.715	26.321	1438.2
15.0	-1.725	0.60444	32.724	26.329	1438.2
16.0	-1.724	0.60448	32.725	26.330	1438.2
17.0	-1.724	0.60452	32.726	26.331	1438.2
18.0	-1.725	0.60458	32.731	26.335	1438.3
19.0	-1.726	0.60457	32.730	26.334	1438.3
20.0	-1.724	0.60455	32.727	26.331	1438.3
21.0	-1.725	0.60463	32.732	26.336	1438.3
22.0	-1.728	0.60470	32.739	26.341	1438.3
23.0	-1.736	0.60484	32.755	26.354	1438.3
24.0	-1.734	0.60489	32.755	26.355	1438.3
25.0	-1.735	0.60503	32.764	26.362	1438.4
26.0	-1.734	0.60492	32.757	26.355	1438.4
27.0	-1.735	0.60497	32.759	26.358	1438.4
28.0	-1.732	0.60484	32.748	26.348	1438.4
29.0	-1.733	0.60488	32.751	26.351	1438.4
30.0	-1.734	0.60510	32.764	26.361	1438.5
31.0	-1.734	0.60504	32.760	26.358	1438.5
32.0	-1.730	0.60538	32.775	26.371	1438.5
33.0	-1.725	0.60565	32.786	26.379	1438.6
34.0	-1.725	0.60581	32.794	26.385	1438.6
35.0	-1.723	0.60596	32.800	26.391	1438.6
37.5	-1.722	0.60598	32.799	26.390	1438.7
40.0	-1.722	0.60627	32.814	26.402	1438.7
42.5	-1.719	0.60638	32.817	26.404	1438.8
45.0	-1.719	0.60647	32.820	26.407	1438.8
47.5	-1.722	0.60660	32.829	26.414	1438.9
50.0	-1.718	0.60670	32.830	26.415	1438.9
55.0	-1.718	0.60695	32.841	26.424	1439.0
60.0	-1.707	0.60736	32.851	26.431	1439.2
65.0	-1.710	0.60770	32.871	26.448	1439.3
70.0	-1.705	0.60789	32.874	26.450	1439.4
75.0	-1.704	0.60833	32.895	26.467	1439.5
80.0	-1.704	0.60852	32.903	26.474	1439.6
80.1	-1.704	0.60850	32.902	26.473	1439.6

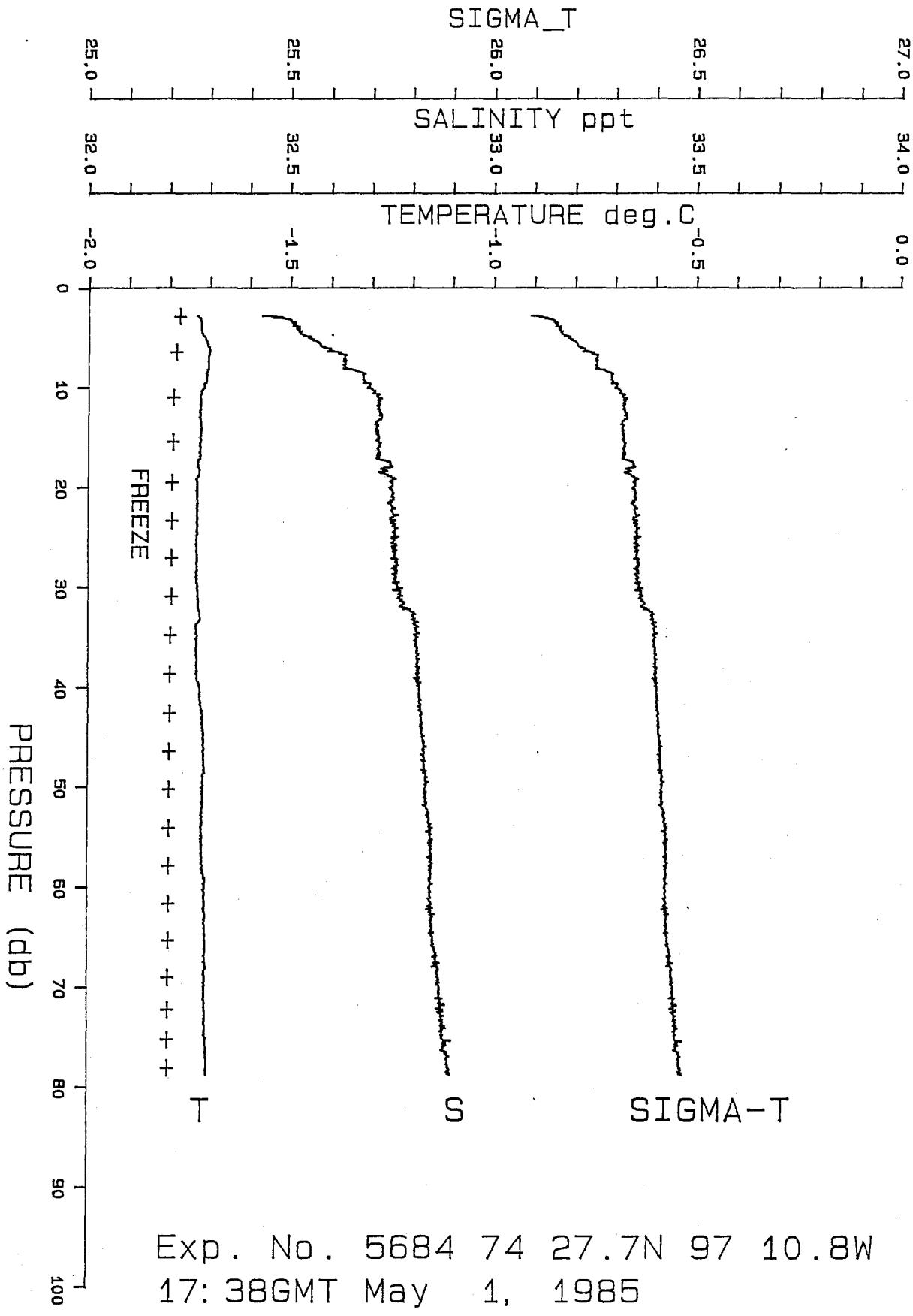


Exp. No. 5683 74 27.7N 97 10.8W
17:20GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5684

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1738

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.8	-1.733	0.59924	32.431	26.091	1437.6
3.0	-1.724	0.59991	32.461	26.115	1437.7
4.0	-1.723	0.60090	32.518	26.161	1437.8
5.0	-1.712	0.60159	32.546	26.184	1437.9
6.0	-1.702	0.60246	32.587	26.217	1438.0
7.0	-1.703	0.60324	32.633	26.255	1438.1
8.0	-1.705	0.60327	32.637	26.258	1438.1
9.0	-1.709	0.60389	32.678	26.291	1438.1
10.0	-1.715	0.60394	32.687	26.299	1438.1
11.0	-1.723	0.60428	32.715	26.322	1438.1
12.0	-1.724	0.60427	32.715	26.322	1438.1
13.0	-1.724	0.60440	32.723	26.328	1438.2
14.0	-1.720	0.60428	32.710	26.318	1438.2
15.0	-1.724	0.60431	32.716	26.322	1438.2
16.0	-1.723	0.60430	32.713	26.320	1438.2
17.0	-1.723	0.60432	32.714	26.321	1438.2
18.0	-1.727	0.60469	32.740	26.342	1438.3
19.0	-1.731	0.60477	32.747	26.348	1438.3
20.0	-1.732	0.60469	32.744	26.345	1438.3
21.0	-1.733	0.60485	32.754	26.353	1438.3
22.0	-1.733	0.60483	32.752	26.351	1438.3
23.0	-1.732	0.60475	32.746	26.346	1438.3
24.0	-1.733	0.60496	32.758	26.357	1438.4
25.0	-1.734	0.60500	32.761	26.359	1438.4
26.0	-1.731	0.60496	32.755	26.354	1438.4
27.0	-1.730	0.60496	32.754	26.353	1438.4
28.0	-1.732	0.60502	32.759	26.357	1438.4
29.0	-1.734	0.60500	32.759	26.357	1438.4
30.0	-1.731	0.60520	32.767	26.364	1438.5
31.0	-1.729	0.60521	32.765	26.362	1438.5
32.0	-1.727	0.60552	32.780	26.375	1438.5
33.0	-1.723	0.60600	32.803	26.393	1438.6
34.0	-1.733	0.60595	32.812	26.400	1438.6
35.0	-1.731	0.60606	32.815	26.403	1438.6
37.5	-1.733	0.60605	32.815	26.403	1438.7
40.0	-1.722	0.60636	32.820	26.407	1438.8
42.5	-1.718	0.60655	32.826	26.411	1438.8
45.0	-1.714	0.60671	32.829	26.414	1438.9
47.5	-1.712	0.60683	32.832	26.416	1438.9
50.0	-1.715	0.60685	32.835	26.418	1439.0
55.0	-1.717	0.60708	32.848	26.429	1439.1
60.0	-1.711	0.60723	32.847	26.428	1439.2
65.0	-1.710	0.60746	32.856	26.436	1439.3
70.0	-1.711	0.60776	32.872	26.449	1439.4
75.0	-1.706	0.60802	32.880	26.455	1439.5
78.7	-1.705	0.60843	32.900	26.471	1439.6

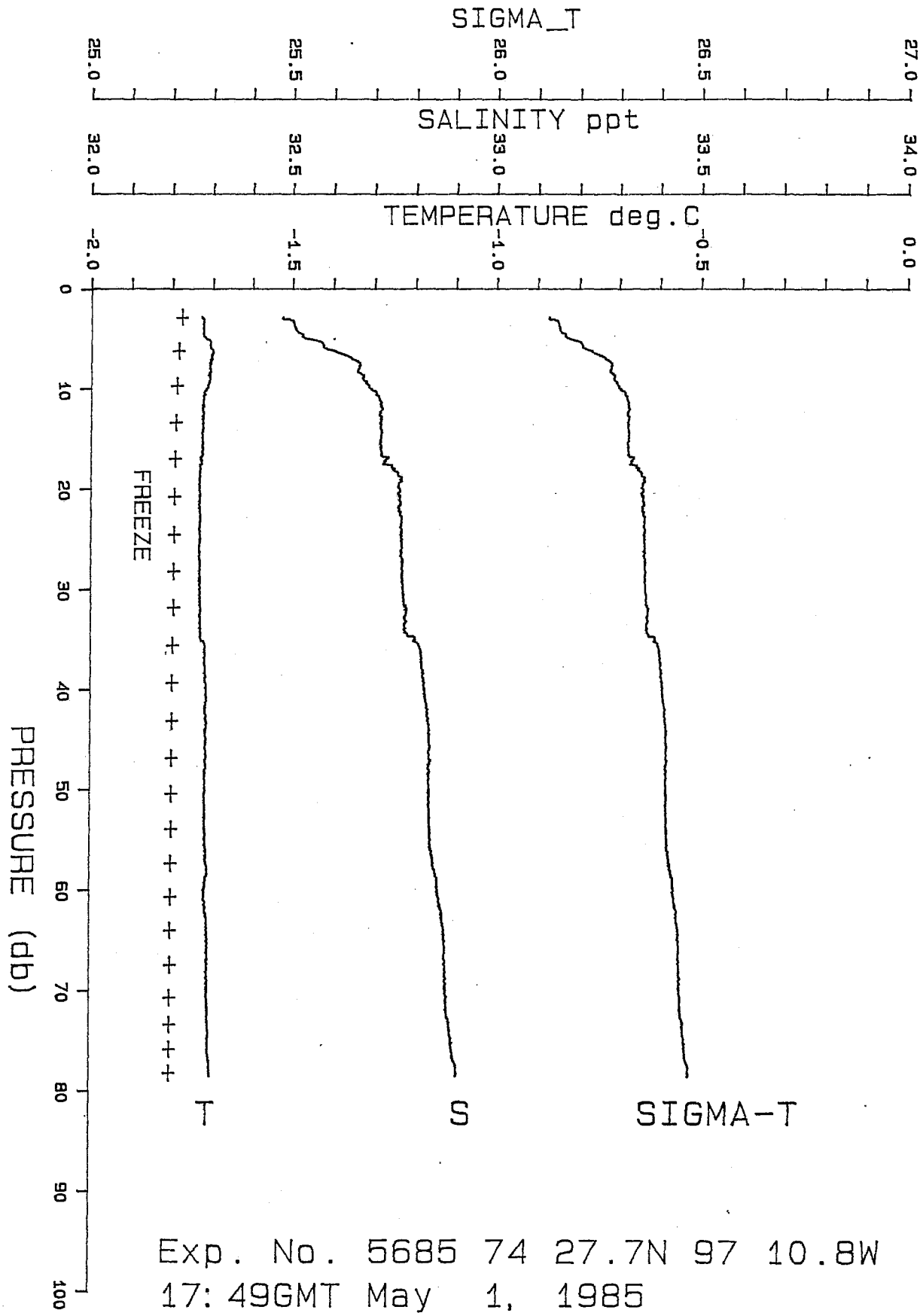


Exp. No. 5684 74 27.7N 97 10.8W
17: 38GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5685

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1749

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.8	-1.729	0.60005	32.475	26.127	1437.7
3.0	-1.726	0.60025	32.483	26.133	1437.7
4.0	-1.724	0.60068	32.506	26.152	1437.7
5.0	-1.716	0.60141	32.541	26.180	1437.8
6.0	-1.703	0.60241	32.585	26.215	1438.0
7.0	-1.703	0.60343	32.645	26.264	1438.1
8.0	-1.707	0.60362	32.660	26.276	1438.1
9.0	-1.708	0.60382	32.672	26.286	1438.1
10.0	-1.716	0.60400	32.691	26.302	1438.1
11.0	-1.724	0.60420	32.712	26.319	1438.1
12.0	-1.727	0.60426	32.718	26.324	1438.1
13.0	-1.726	0.60426	32.716	26.323	1438.2
14.0	-1.725	0.60426	32.715	26.321	1438.2
15.0	-1.725	0.60427	32.714	26.321	1438.2
16.0	-1.725	0.60427	32.714	26.320	1438.2
17.0	-1.731	0.60443	32.729	26.333	1438.2
18.0	-1.732	0.60467	32.743	26.345	1438.2
19.0	-1.734	0.60498	32.763	26.361	1438.3
20.0	-1.734	0.60495	32.761	26.359	1438.3
21.0	-1.732	0.60496	32.760	26.358	1438.3
22.0	-1.732	0.60496	32.759	26.357	1438.3
23.0	-1.731	0.60510	32.765	26.362	1438.4
24.0	-1.733	0.60509	32.767	26.364	1438.4
25.0	-1.732	0.60511	32.766	26.363	1438.4
26.0	-1.732	0.60512	32.765	26.362	1438.4
27.0	-1.731	0.60516	32.767	26.364	1438.4
28.0	-1.730	0.60520	32.767	26.364	1438.4
29.0	-1.732	0.60519	32.768	26.364	1438.5
30.0	-1.731	0.60524	32.769	26.366	1438.5
31.0	-1.731	0.60531	32.772	26.368	1438.5
32.0	-1.728	0.60541	32.775	26.370	1438.5
33.0	-1.729	0.60539	32.774	26.370	1438.5
34.0	-1.730	0.60537	32.773	26.369	1438.6
35.0	-1.726	0.60590	32.800	26.391	1438.6
37.5	-1.718	0.60637	32.817	26.404	1438.7
40.0	-1.714	0.60657	32.823	26.409	1438.8
42.5	-1.714	0.60670	32.830	26.415	1438.8
45.0	-1.714	0.60682	32.835	26.419	1438.9
47.5	-1.713	0.60683	32.833	26.417	1438.9
50.0	-1.718	0.60684	32.837	26.421	1439.0
55.0	-1.714	0.60698	32.838	26.422	1439.1
60.0	-1.719	0.60730	32.860	26.439	1439.1
65.0	-1.710	0.60778	32.876	26.452	1439.3
70.0	-1.709	0.60789	32.878	26.453	1439.4
75.0	-1.706	0.60823	32.891	26.464	1439.5
78.5	-1.702	0.60859	32.906	26.476	1439.6

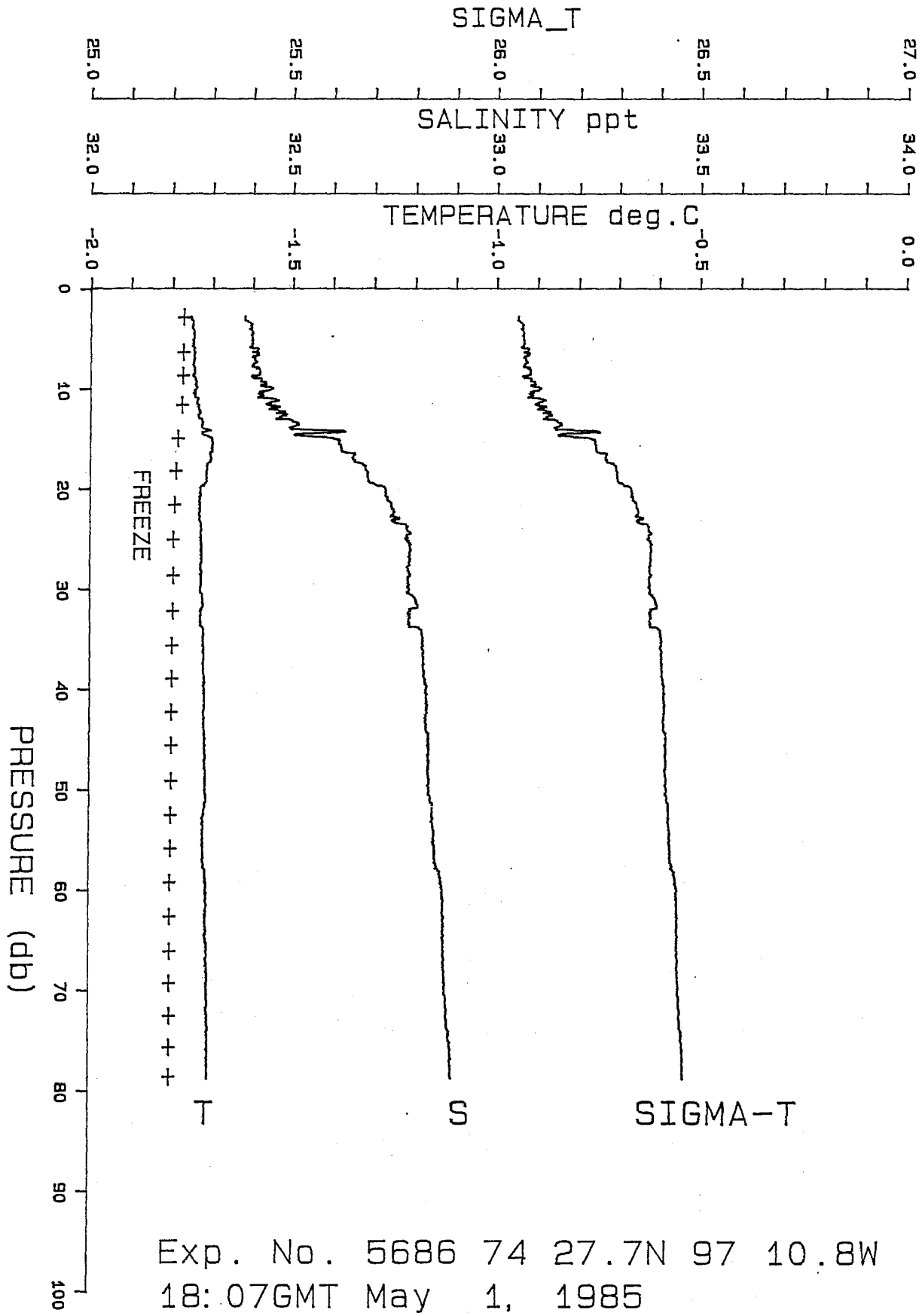


Exp. No. 5685 74 27.7N 97 10.8W
17:49GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5686

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1807

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.8	-1.755	0.59800	32.381	26.051	1437.4
3.0	-1.755	0.59799	32.381	26.050	1437.4
4.0	-1.750	0.59830	32.393	26.060	1437.5
5.0	-1.749	0.59840	32.397	26.064	1437.5
6.0	-1.749	0.59870	32.414	26.078	1437.5
7.0	-1.747	0.59860	32.406	26.070	1437.5
8.0	-1.747	0.59881	32.418	26.080	1437.6
9.0	-1.743	0.59897	32.423	26.084	1437.6
10.0	-1.743	0.59940	32.447	26.104	1437.7
11.0	-1.737	0.59968	32.456	26.112	1437.7
12.0	-1.736	0.59959	32.450	26.106	1437.7
13.0	-1.728	0.60012	32.471	26.124	1437.8
14.0	-1.714	0.60081	32.497	26.144	1437.9
15.0	-1.700	0.60293	32.607	26.233	1438.2
16.0	-1.700	0.60315	32.619	26.243	1438.2
17.0	-1.704	0.60358	32.649	26.268	1438.2
18.0	-1.714	0.60395	32.681	26.294	1438.2
19.0	-1.716	0.60402	32.687	26.298	1438.3
20.0	-1.730	0.60445	32.727	26.331	1438.3
21.0	-1.732	0.60451	32.732	26.336	1438.3
22.0	-1.733	0.60475	32.747	26.348	1438.3
23.0	-1.732	0.60486	32.753	26.352	1438.3
24.0	-1.727	0.60544	32.781	26.375	1438.4
25.0	-1.728	0.60539	32.778	26.373	1438.4
26.0	-1.728	0.60561	32.790	26.383	1438.5
27.0	-1.727	0.60561	32.788	26.381	1438.5
28.0	-1.728	0.60550	32.783	26.377	1438.5
29.0	-1.727	0.60552	32.783	26.376	1438.5
30.0	-1.730	0.60555	32.787	26.380	1438.5
31.0	-1.725	0.60594	32.804	26.393	1438.6
32.0	-1.728	0.60567	32.790	26.382	1438.6
33.0	-1.728	0.60558	32.785	26.378	1438.6
34.0	-1.721	0.60626	32.817	26.404	1438.7
35.0	-1.721	0.60633	32.820	26.406	1438.7
37.5	-1.721	0.60640	32.823	26.409	1438.7
40.0	-1.718	0.60659	32.829	26.414	1438.8
42.5	-1.720	0.60661	32.830	26.415	1438.8
45.0	-1.716	0.60679	32.836	26.419	1438.9
47.5	-1.717	0.60683	32.838	26.421	1438.9
50.0	-1.716	0.60690	32.839	26.422	1439.0
55.0	-1.720	0.60706	32.850	26.431	1439.0
60.0	-1.713	0.60764	32.874	26.450	1439.2
65.0	-1.713	0.60772	32.875	26.452	1439.3
70.0	-1.710	0.60789	32.879	26.454	1439.4
75.0	-1.707	0.60817	32.889	26.463	1439.5
78.7	-1.708	0.60828	32.894	26.467	1439.5

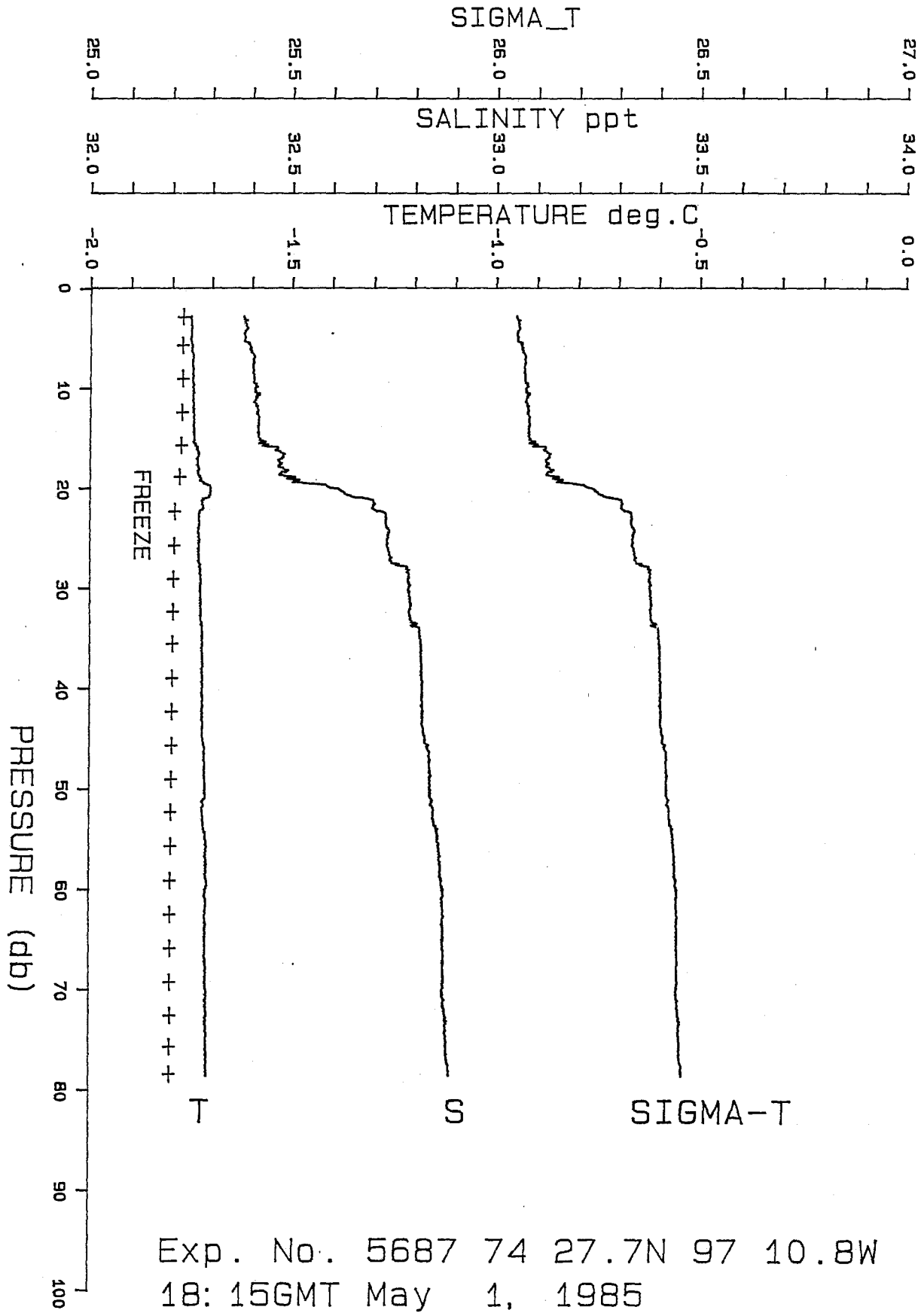


Exp. No. 5686 74 27.7N 97 10.8W
18:07GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5687

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1815

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.8	-1.753	0.59796	32.378	26.048	1437.4
3.0	-1.754	0.59800	32.380	26.050	1437.4
4.0	-1.752	0.59817	32.388	26.056	1437.4
5.0	-1.752	0.59805	32.380	26.050	1437.4
6.0	-1.752	0.59834	32.396	26.063	1437.5
7.0	-1.747	0.59855	32.403	26.068	1437.5
8.0	-1.747	0.59855	32.402	26.067	1437.6
9.0	-1.748	0.59856	32.403	26.069	1437.6
10.0	-1.746	0.59867	32.408	26.072	1437.6
11.0	-1.748	0.59868	32.409	26.073	1437.6
12.0	-1.745	0.59883	32.414	26.077	1437.6
13.0	-1.746	0.59887	32.417	26.080	1437.7
14.0	-1.745	0.59889	32.416	26.079	1437.7
15.0	-1.744	0.59900	32.421	26.083	1437.7
16.0	-1.735	0.59992	32.465	26.119	1437.8
17.0	-1.736	0.60004	32.474	26.126	1437.8
18.0	-1.731	0.60023	32.479	26.130	1437.9
19.0	-1.726	0.60051	32.490	26.139	1437.9
20.0	-1.702	0.60298	32.608	26.234	1438.2
21.0	-1.720	0.60383	32.679	26.292	1438.3
22.0	-1.722	0.60413	32.698	26.307	1438.3
23.0	-1.732	0.60448	32.730	26.334	1438.3
24.0	-1.734	0.60453	32.734	26.337	1438.3
25.0	-1.731	0.60456	32.732	26.335	1438.3
26.0	-1.733	0.60460	32.736	26.339	1438.4
27.0	-1.732	0.60469	32.739	26.341	1438.4
28.0	-1.726	0.60549	32.780	26.374	1438.5
29.0	-1.727	0.60556	32.785	26.379	1438.5
30.0	-1.727	0.60556	32.784	26.378	1438.5
31.0	-1.726	0.60566	32.789	26.381	1438.5
32.0	-1.726	0.60572	32.791	26.383	1438.6
33.0	-1.727	0.60572	32.791	26.383	1438.6
34.0	-1.722	0.60619	32.813	26.401	1438.6
35.0	-1.723	0.60623	32.816	26.404	1438.7
37.5	-1.721	0.60633	32.818	26.405	1438.7
40.0	-1.722	0.60637	32.820	26.407	1438.8
42.5	-1.722	0.60642	32.822	26.408	1438.8
45.0	-1.720	0.60661	32.829	26.414	1438.9
47.5	-1.714	0.60690	32.839	26.422	1438.9
50.0	-1.713	0.60694	32.839	26.422	1439.0
55.0	-1.711	0.60740	32.860	26.439	1439.1
60.0	-1.714	0.60765	32.875	26.452	1439.2
65.0	-1.711	0.60769	32.871	26.448	1439.3
70.0	-1.709	0.60779	32.872	26.449	1439.4
75.0	-1.709	0.60800	32.882	26.457	1439.5
78.6	-1.710	0.60817	32.890	26.463	1439.5

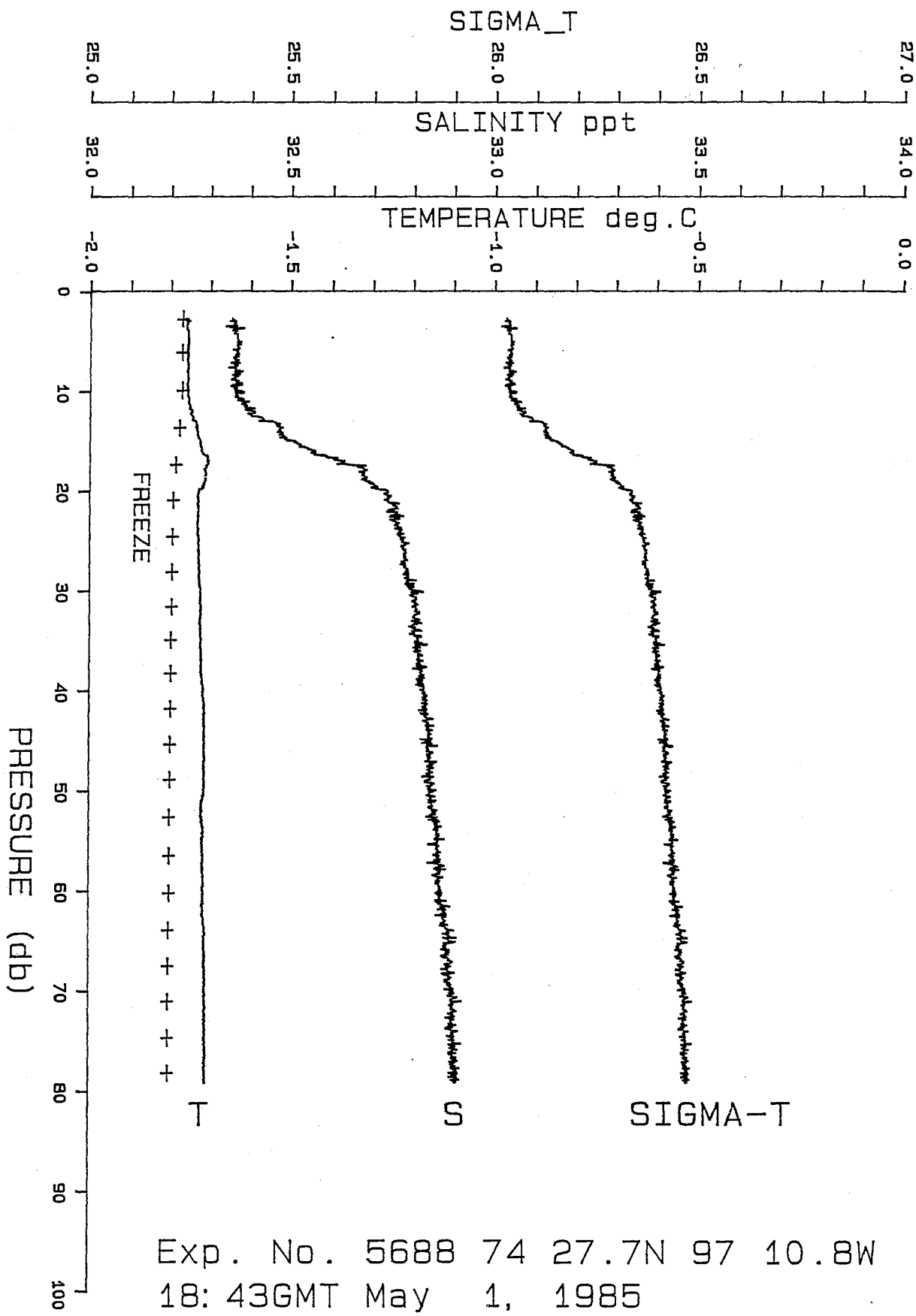


Exp. No. 5687 74 27.7N 97 10.8W
18:15GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5688

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1843

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.7	-1.763	0.59736	32.352	26.027	1437.3
3.0	-1.756	0.59756	32.357	26.031	1437.4
4.0	-1.758	0.59759	32.359	26.033	1437.4
5.0	-1.758	0.59777	32.369	26.041	1437.4
6.0	-1.759	0.59771	32.366	26.039	1437.4
7.0	-1.759	0.59764	32.362	26.035	1437.4
8.0	-1.759	0.59771	32.365	26.038	1437.4
9.0	-1.757	0.59776	32.366	26.039	1437.5
10.0	-1.758	0.59783	32.370	26.042	1437.5
11.0	-1.756	0.59797	32.376	26.046	1437.5
12.0	-1.746	0.59870	32.408	26.072	1437.6
13.0	-1.737	0.59933	32.434	26.094	1437.7
14.0	-1.733	0.59999	32.469	26.122	1437.8
15.0	-1.725	0.60081	32.508	26.153	1437.9
16.0	-1.721	0.60170	32.556	26.192	1438.0
17.0	-1.707	0.60315	32.627	26.249	1438.2
18.0	-1.712	0.60386	32.674	26.288	1438.2
19.0	-1.715	0.60405	32.688	26.299	1438.3
20.0	-1.728	0.60464	32.737	26.339	1438.3
21.0	-1.729	0.60463	32.736	26.339	1438.3
22.0	-1.730	0.60484	32.750	26.350	1438.3
23.0	-1.730	0.60490	32.753	26.352	1438.3
24.0	-1.730	0.60519	32.770	26.366	1438.4
25.0	-1.729	0.60528	32.773	26.368	1438.4
26.0	-1.729	0.60543	32.781	26.375	1438.4
27.0	-1.729	0.60534	32.775	26.371	1438.4
28.0	-1.727	0.60552	32.782	26.376	1438.5
29.0	-1.726	0.60568	32.790	26.383	1438.5
30.0	-1.724	0.60602	32.808	26.397	1438.6
31.0	-1.725	0.60587	32.799	26.390	1438.6
32.0	-1.725	0.60598	32.805	26.395	1438.6
33.0	-1.724	0.60593	32.800	26.391	1438.6
34.0	-1.724	0.60606	32.808	26.397	1438.6
35.0	-1.722	0.60618	32.812	26.400	1438.7
37.5	-1.723	0.60618	32.811	26.400	1438.7
40.0	-1.716	0.60660	32.828	26.413	1438.8
42.5	-1.714	0.60679	32.835	26.418	1438.9
45.0	-1.711	0.60704	32.845	26.427	1438.9
47.5	-1.712	0.60691	32.837	26.420	1438.9
50.0	-1.714	0.60703	32.844	26.426	1439.0
55.0	-1.715	0.60739	32.864	26.443	1439.1
60.0	-1.715	0.60752	32.869	26.446	1439.2
65.0	-1.713	0.60807	32.896	26.468	1439.3
70.0	-1.709	0.60822	32.897	26.469	1439.4
75.0	-1.709	0.60836	32.902	26.473	1439.5
79.1	-1.708	0.60853	32.909	26.479	1439.6

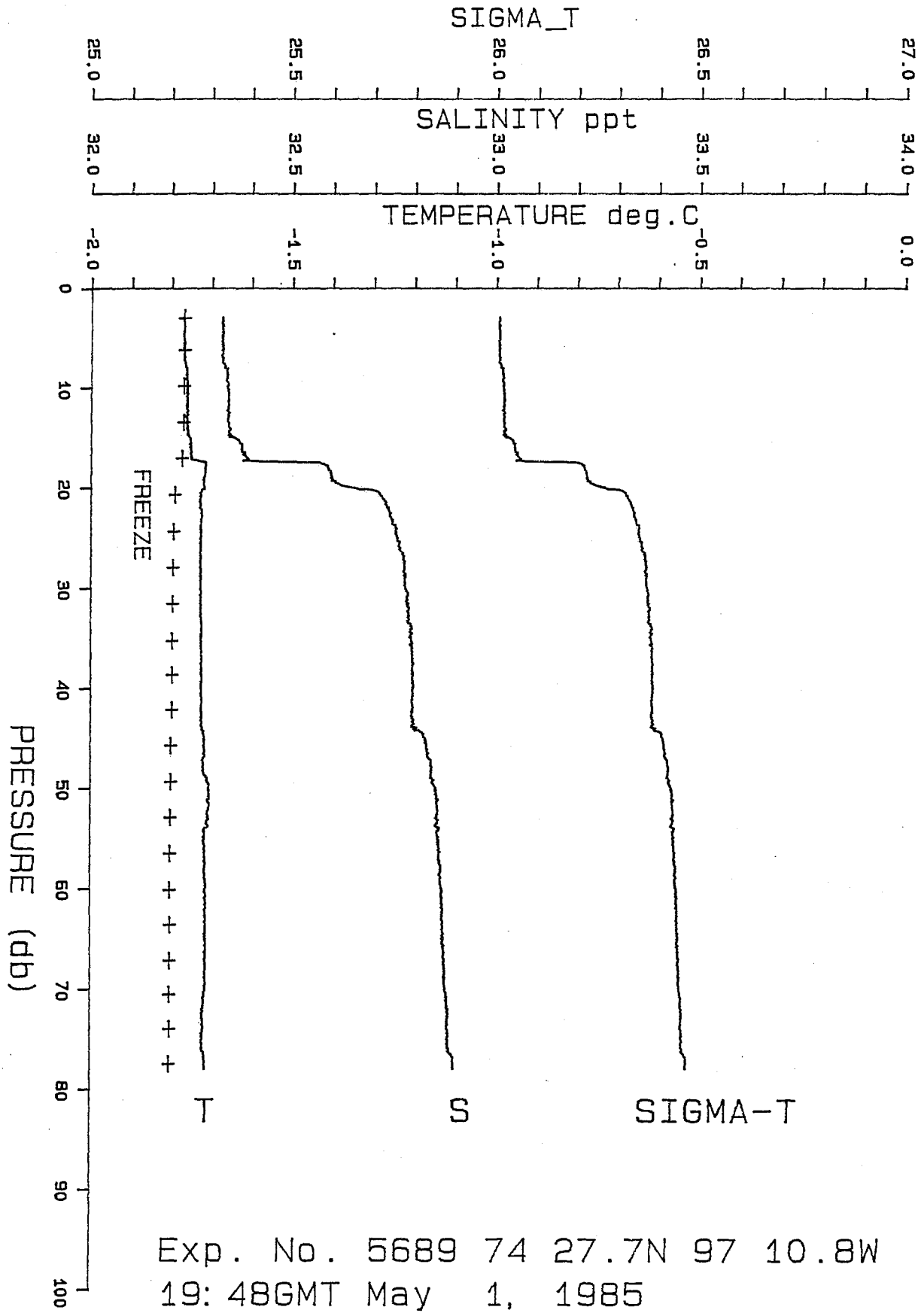


Exp. No. 5688 74 27.7N 97 10.8W
18: 43GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5689

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1948

pressure (dbars)	temp (deg.c)	conduc r	salinity	sigmat (kg/m**3)	sound (m/s)
2.9	-1.771	0.59676	32.326	26.006	1437.2
3.0	-1.771	0.59676	32.325	26.005	1437.2
4.0	-1.770	0.59678	32.325	26.006	1437.3
5.0	-1.770	0.59680	32.325	26.005	1437.3
6.0	-1.772	0.59680	32.327	26.007	1437.3
7.0	-1.769	0.59684	32.325	26.006	1437.3
8.0	-1.763	0.59713	32.335	26.014	1437.4
9.0	-1.763	0.59718	32.338	26.016	1437.4
10.0	-1.762	0.59723	32.339	26.016	1437.4
11.0	-1.761	0.59728	32.341	26.018	1437.4
12.0	-1.764	0.59725	32.341	26.019	1437.4
13.0	-1.761	0.59727	32.339	26.017	1437.5
14.0	-1.763	0.59737	32.346	26.022	1437.5
15.0	-1.753	0.59779	32.360	26.033	1437.6
16.0	-1.753	0.59807	32.375	26.046	1437.6
17.0	-1.749	0.59838	32.389	26.057	1437.7
18.0	-1.716	0.60233	32.587	26.218	1438.1
19.0	-1.718	0.60241	32.593	26.222	1438.1
20.0	-1.718	0.60343	32.654	26.271	1438.2
21.0	-1.728	0.60439	32.721	26.326	1438.3
22.0	-1.727	0.60468	32.736	26.339	1438.3
23.0	-1.725	0.60484	32.743	26.344	1438.4
24.0	-1.728	0.60499	32.754	26.353	1438.4
25.0	-1.728	0.60503	32.757	26.356	1438.4
26.0	-1.727	0.60519	32.764	26.362	1438.4
27.0	-1.728	0.60532	32.773	26.369	1438.4
28.0	-1.727	0.60541	32.776	26.371	1438.5
29.0	-1.727	0.60543	32.776	26.371	1438.5
30.0	-1.728	0.60546	32.780	26.374	1438.5
31.0	-1.727	0.60553	32.782	26.376	1438.5
32.0	-1.727	0.60563	32.787	26.380	1438.6
33.0	-1.726	0.60566	32.787	26.380	1438.6
34.0	-1.725	0.60582	32.795	26.387	1438.6
35.0	-1.727	0.60574	32.792	26.384	1438.6
37.5	-1.726	0.60590	32.798	26.389	1438.7
40.0	-1.725	0.60595	32.799	26.389	1438.7
42.5	-1.723	0.60595	32.795	26.387	1438.8
45.0	-1.718	0.60666	32.830	26.415	1438.9
47.5	-1.719	0.60688	32.843	26.425	1438.9
50.0	-1.704	0.60737	32.854	26.434	1439.0
55.0	-1.716	0.60731	32.860	26.439	1439.1
60.0	-1.713	0.60760	32.871	26.448	1439.2
65.0	-1.711	0.60772	32.872	26.449	1439.3
70.0	-1.712	0.60785	32.879	26.454	1439.4
75.0	-1.721	0.60789	32.887	26.461	1439.4
77.9	-1.714	0.60826	32.901	26.472	1439.5

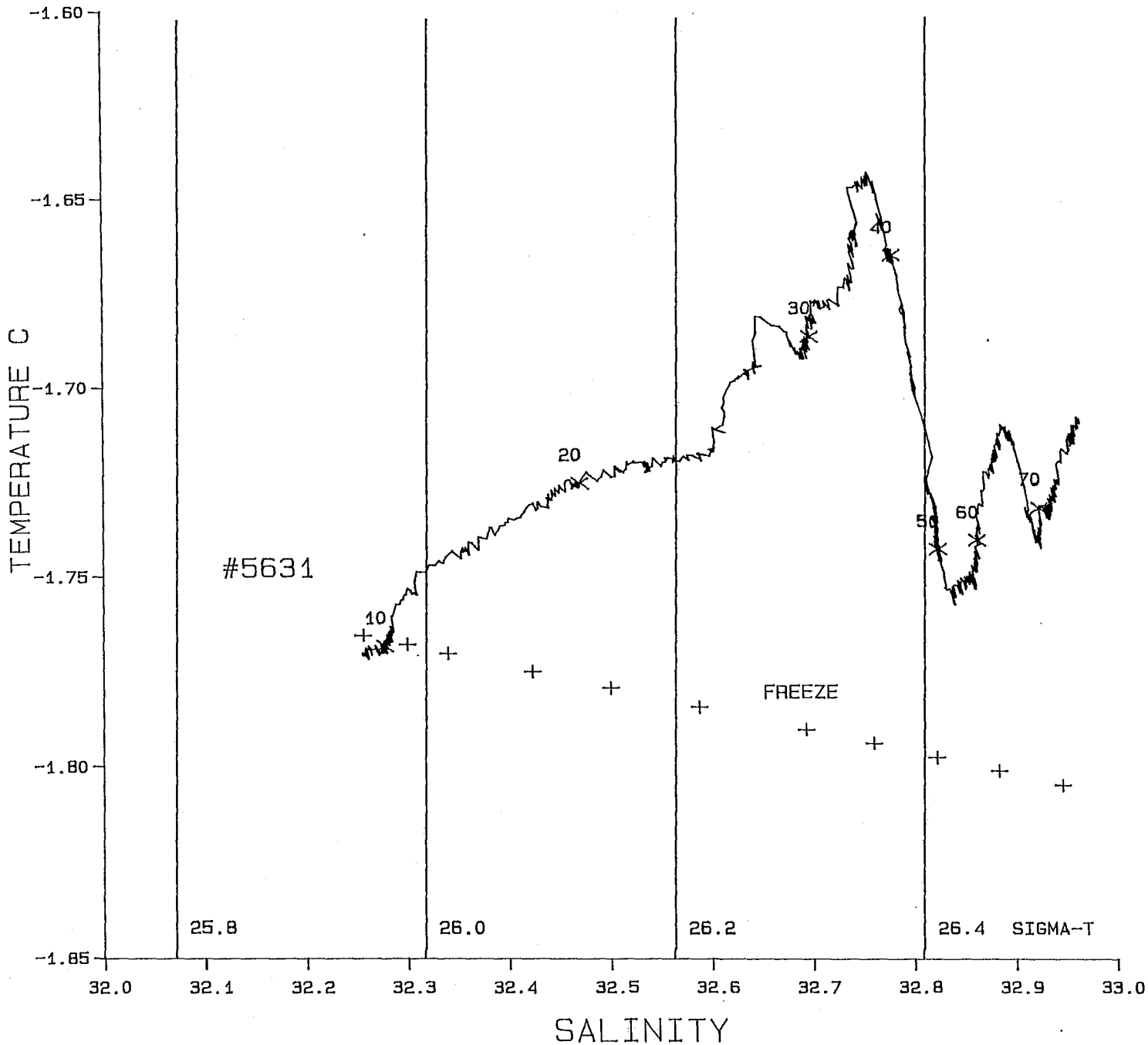


Exp. No. 5689 74 27.7N 97 10.8W
19: 48GMT May 1, 1985

Appendix 3

CTD temperature-salinity (TS) plots

T-S PLOT FOR EXP. NO. 5631



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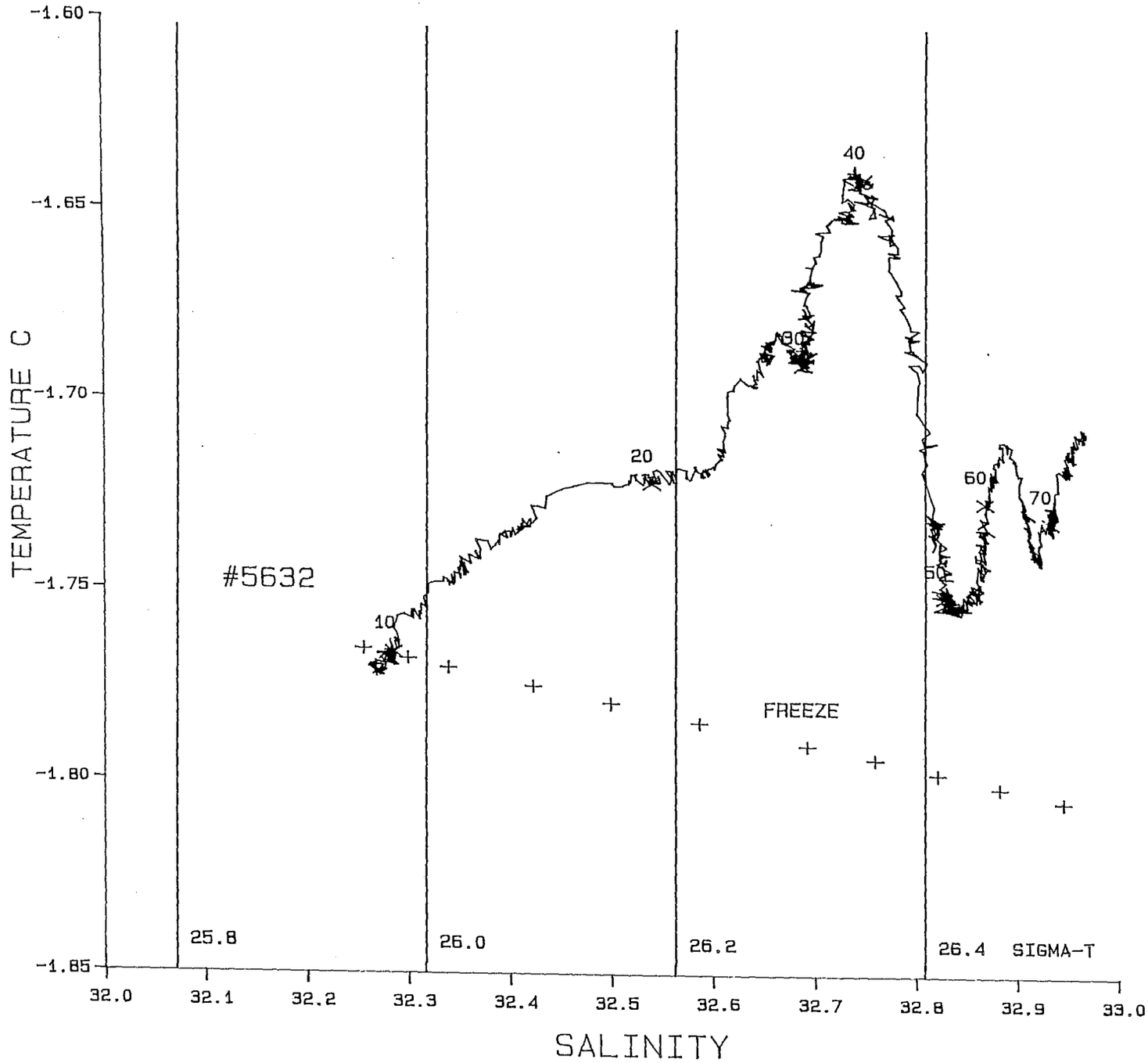

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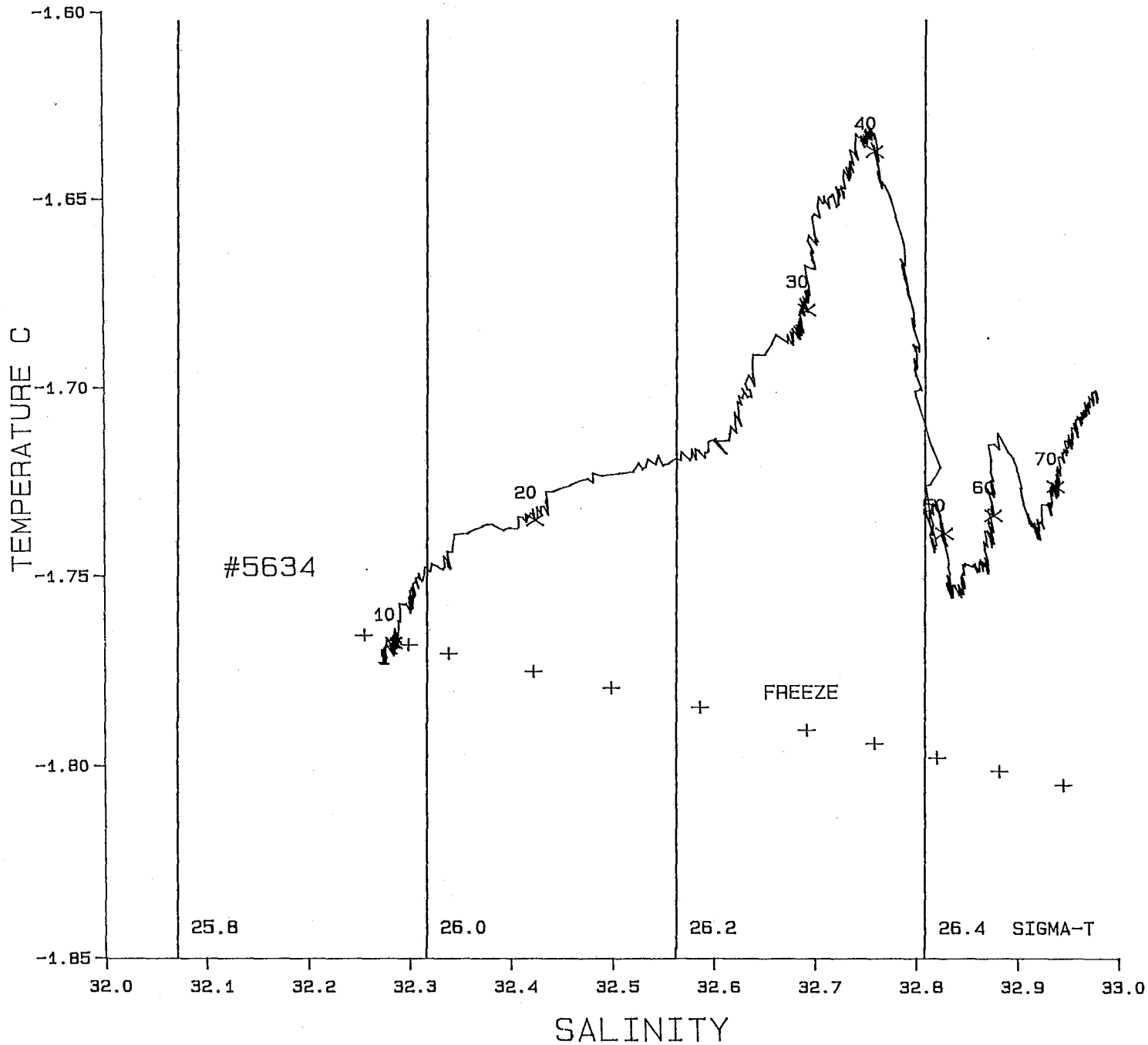
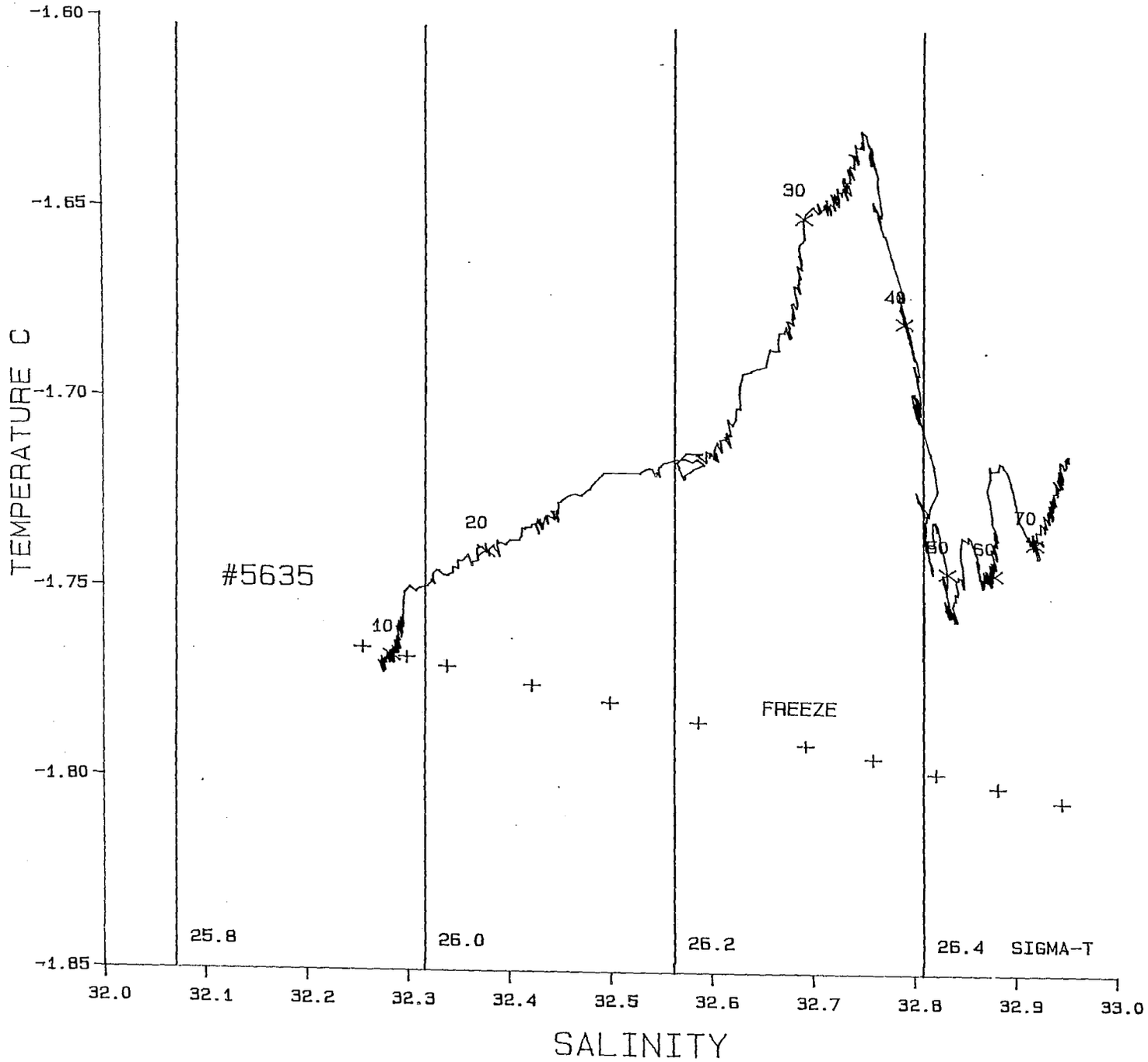
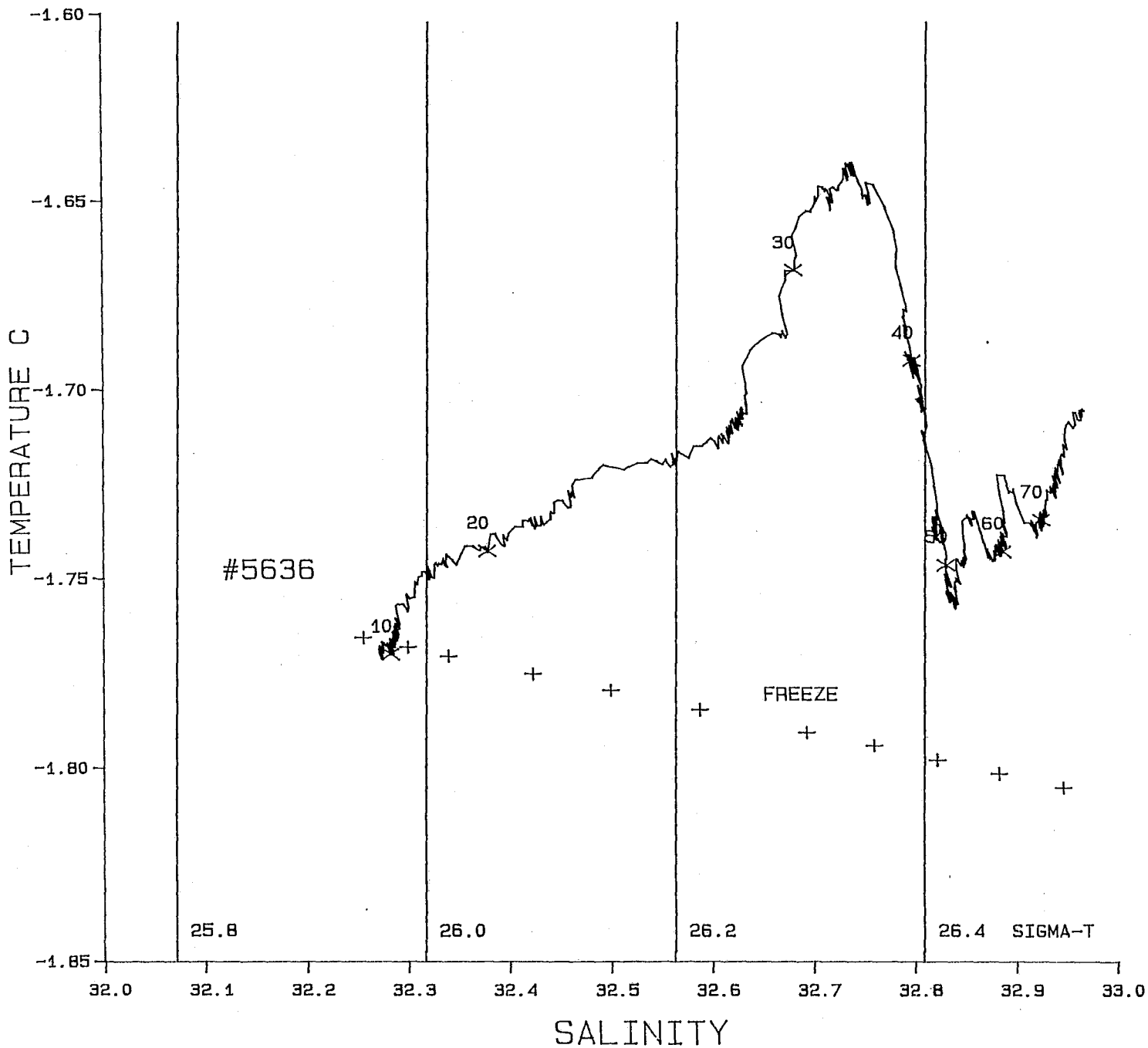


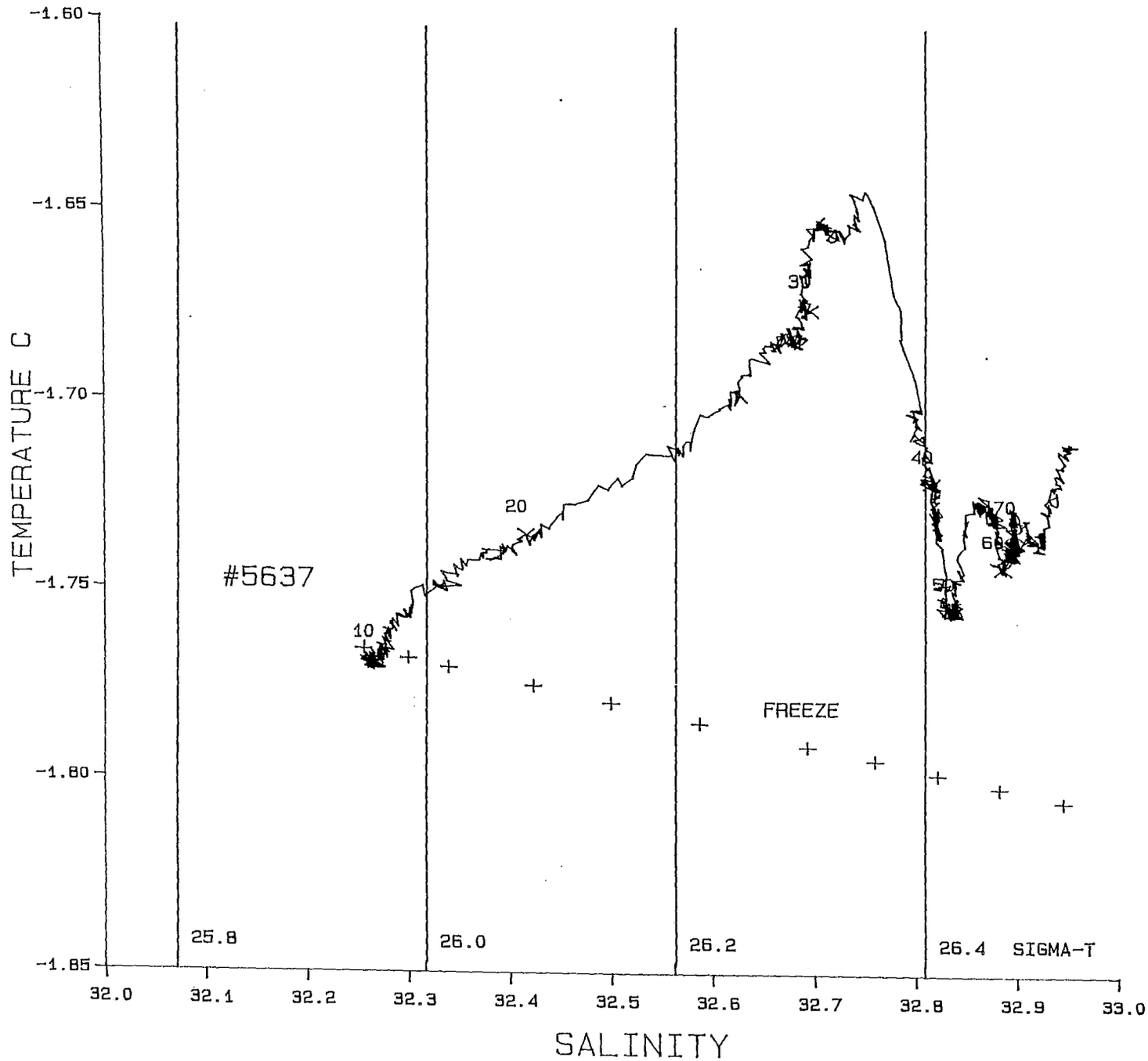
T-S PLOT FOR EXP. No. 5635



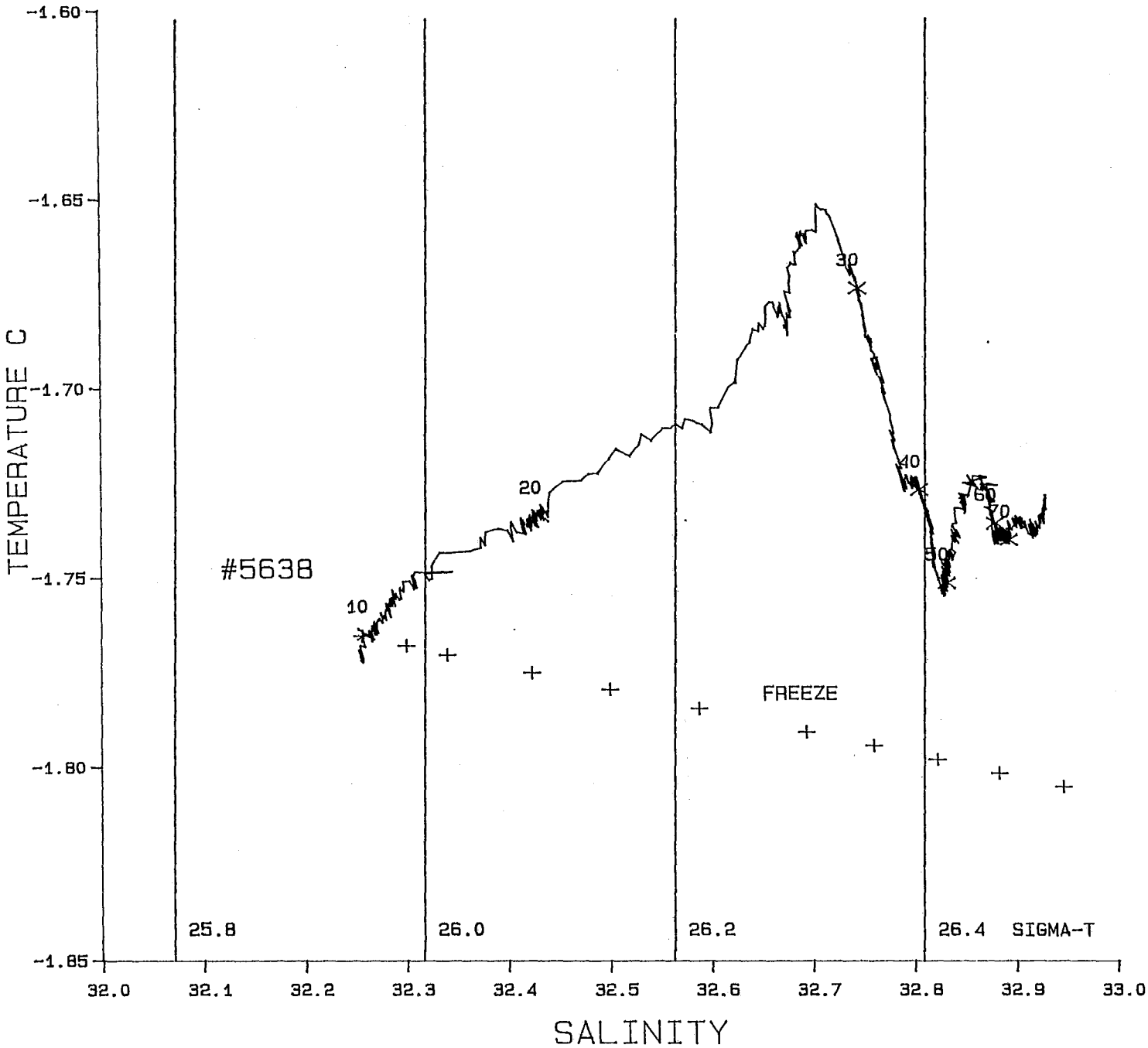
T-S PLOT FOR EXP. No. 5636



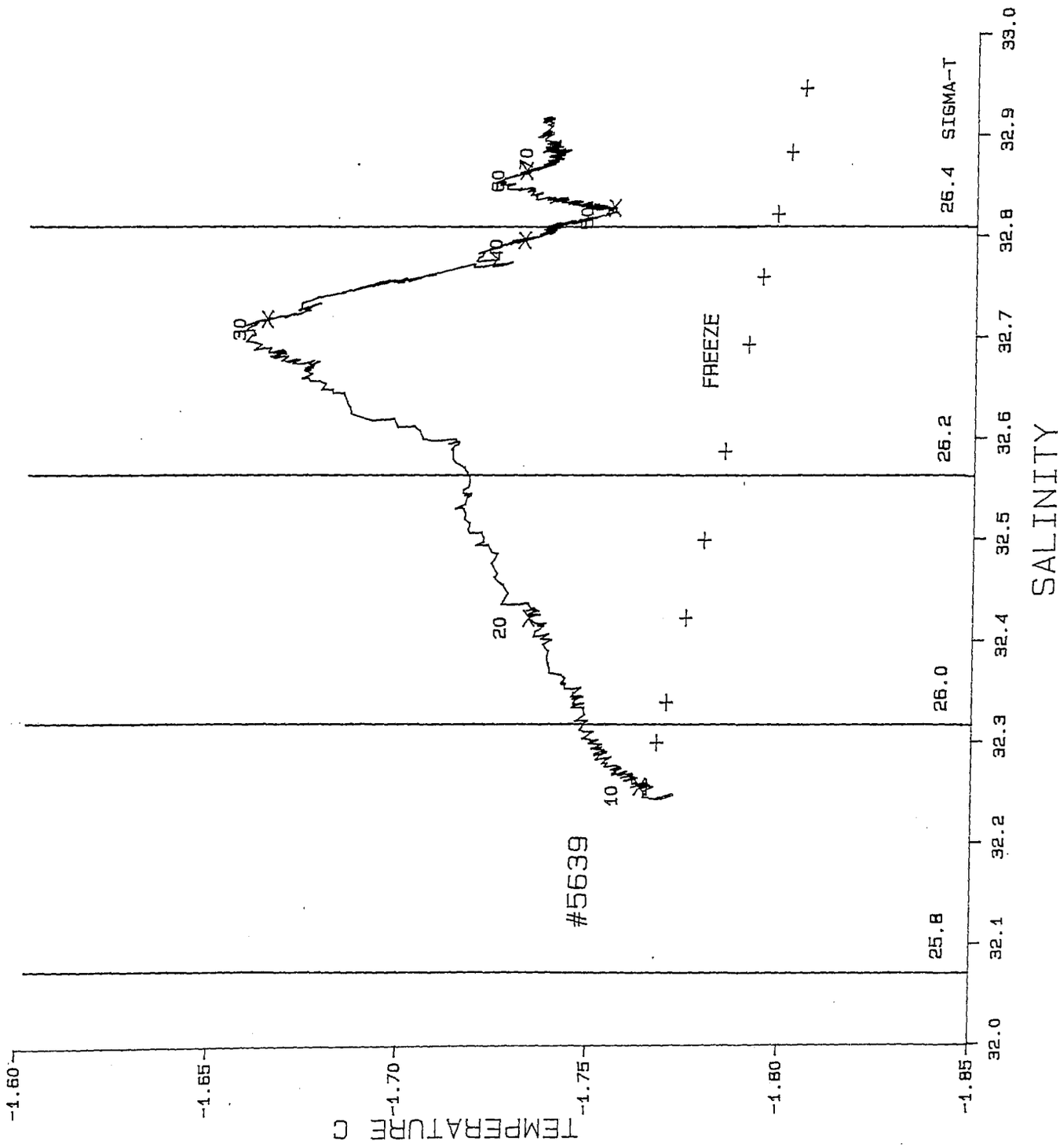
T-S PLOT FOR EXP. No. 5637



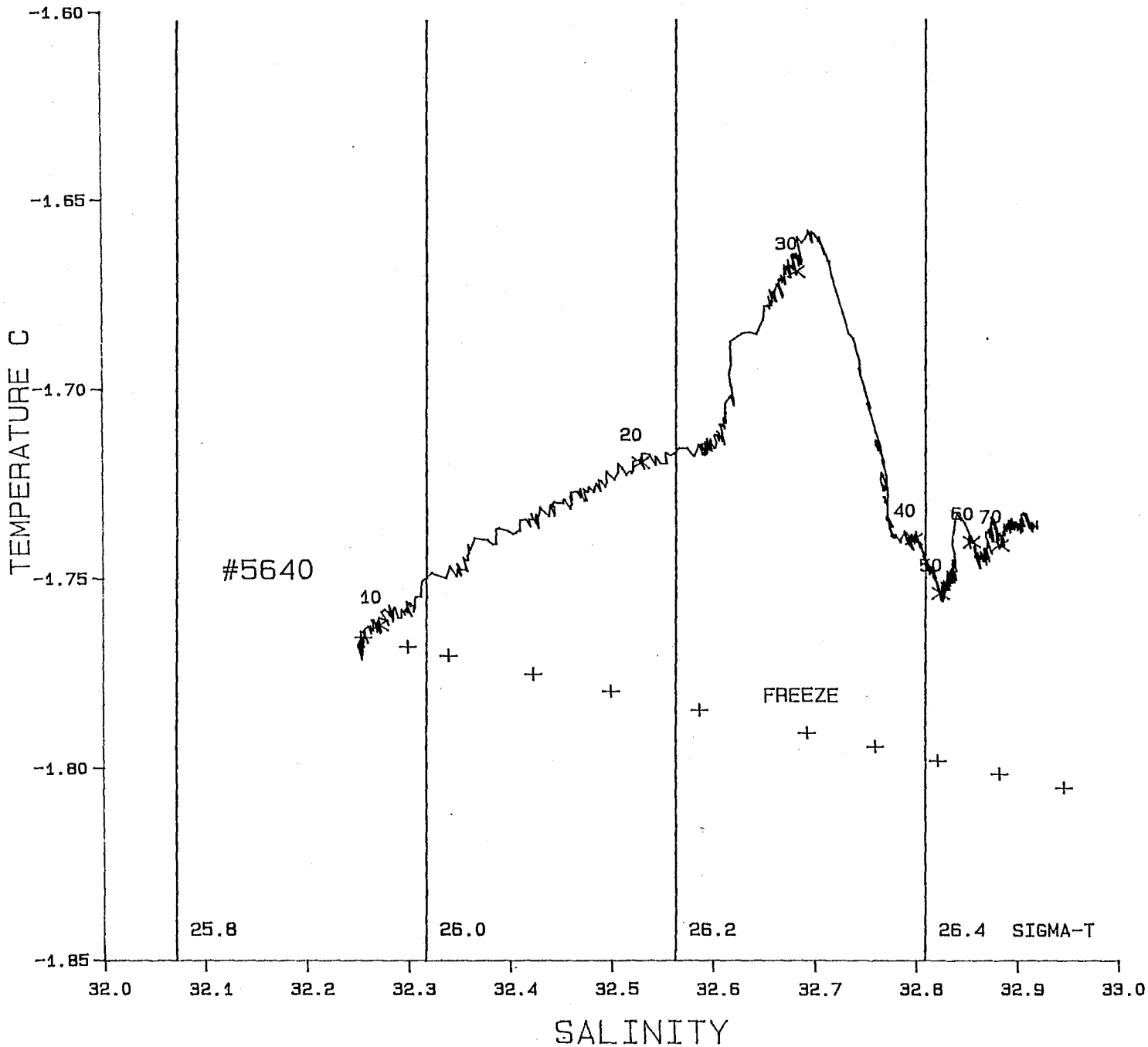
T-S PLOT FOR EXP. No. 5638



T-S PLOT FOR EXP. No. 5639



T-S PLOT FOR EXP. No. 5640



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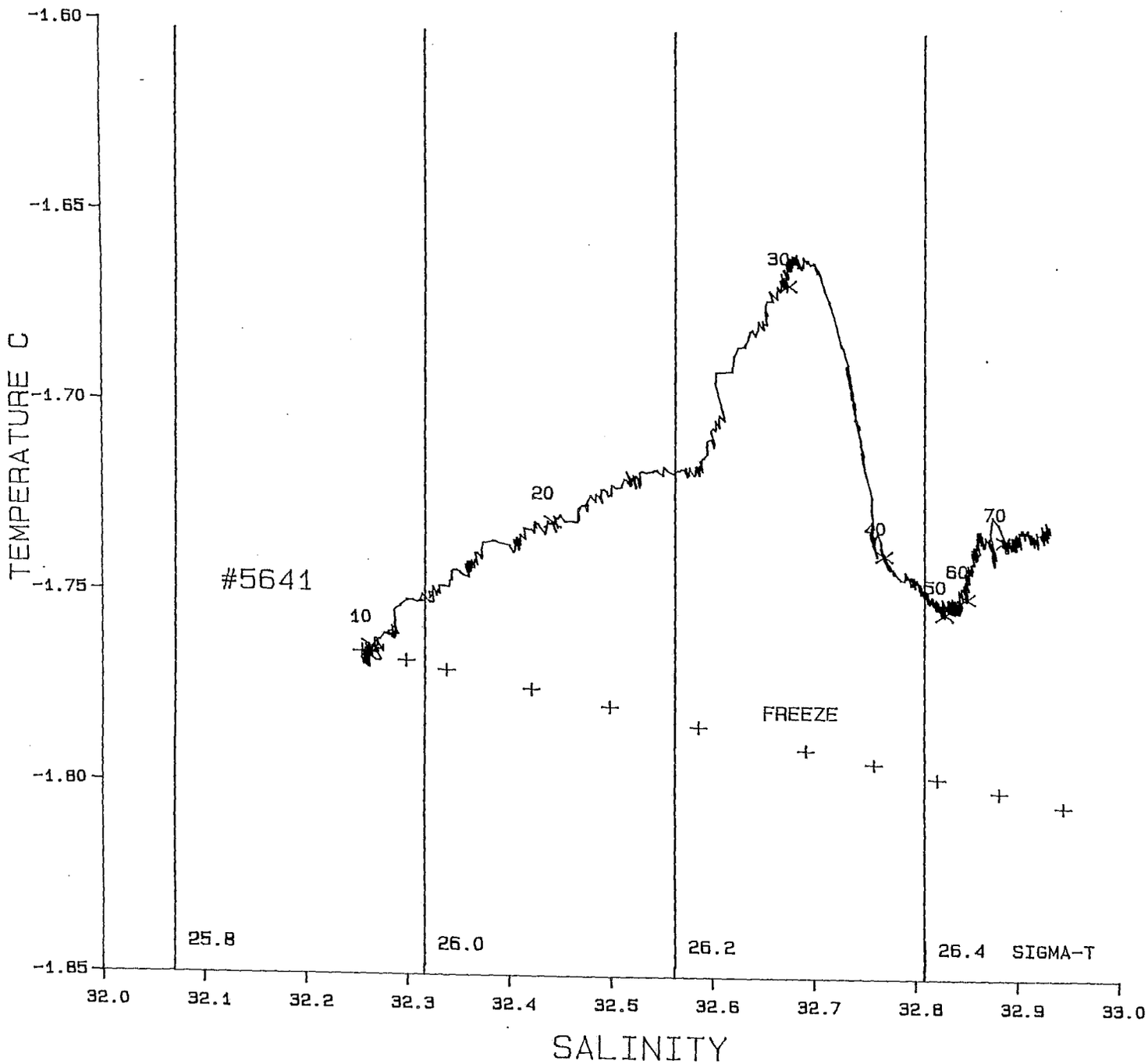

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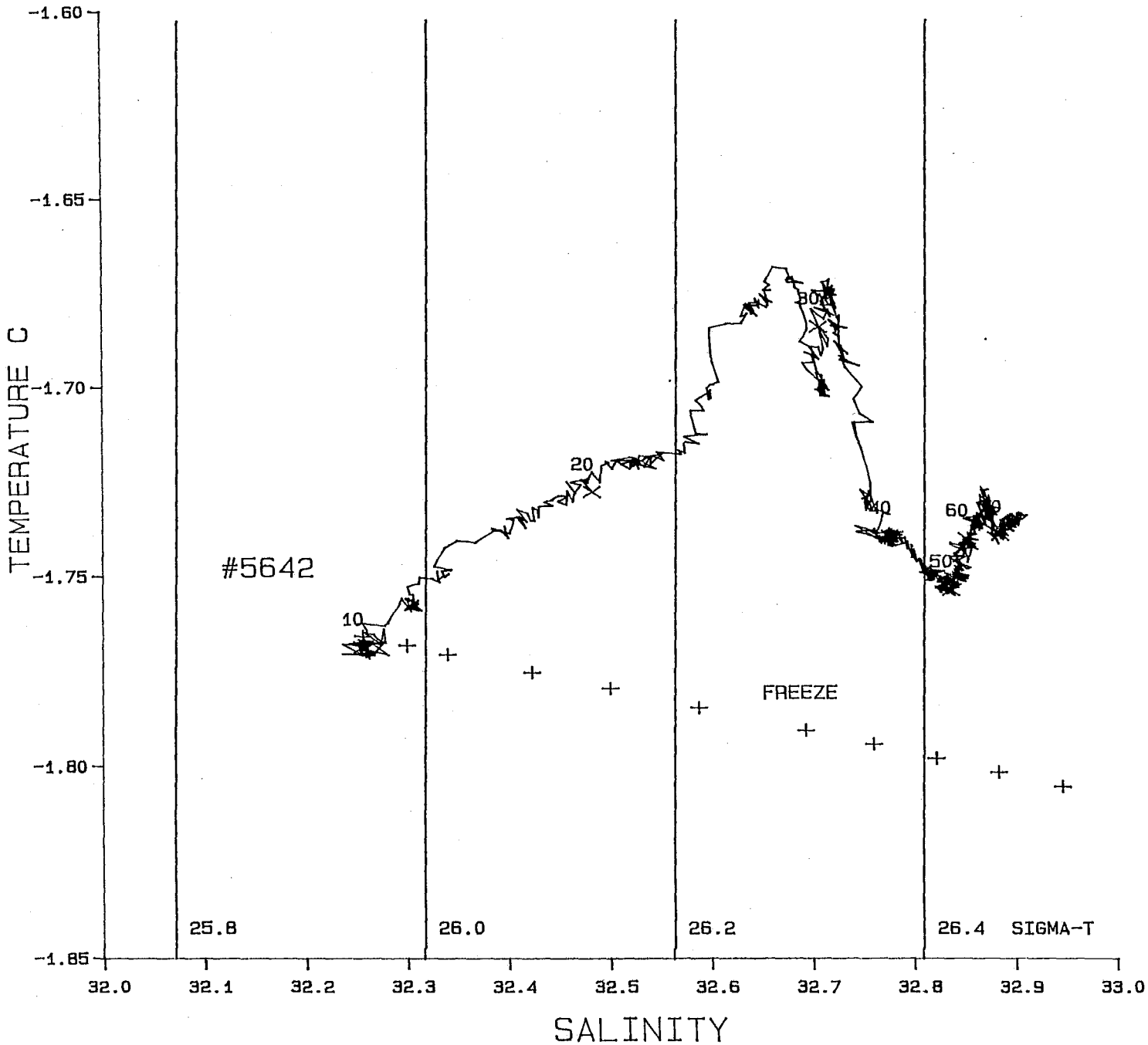
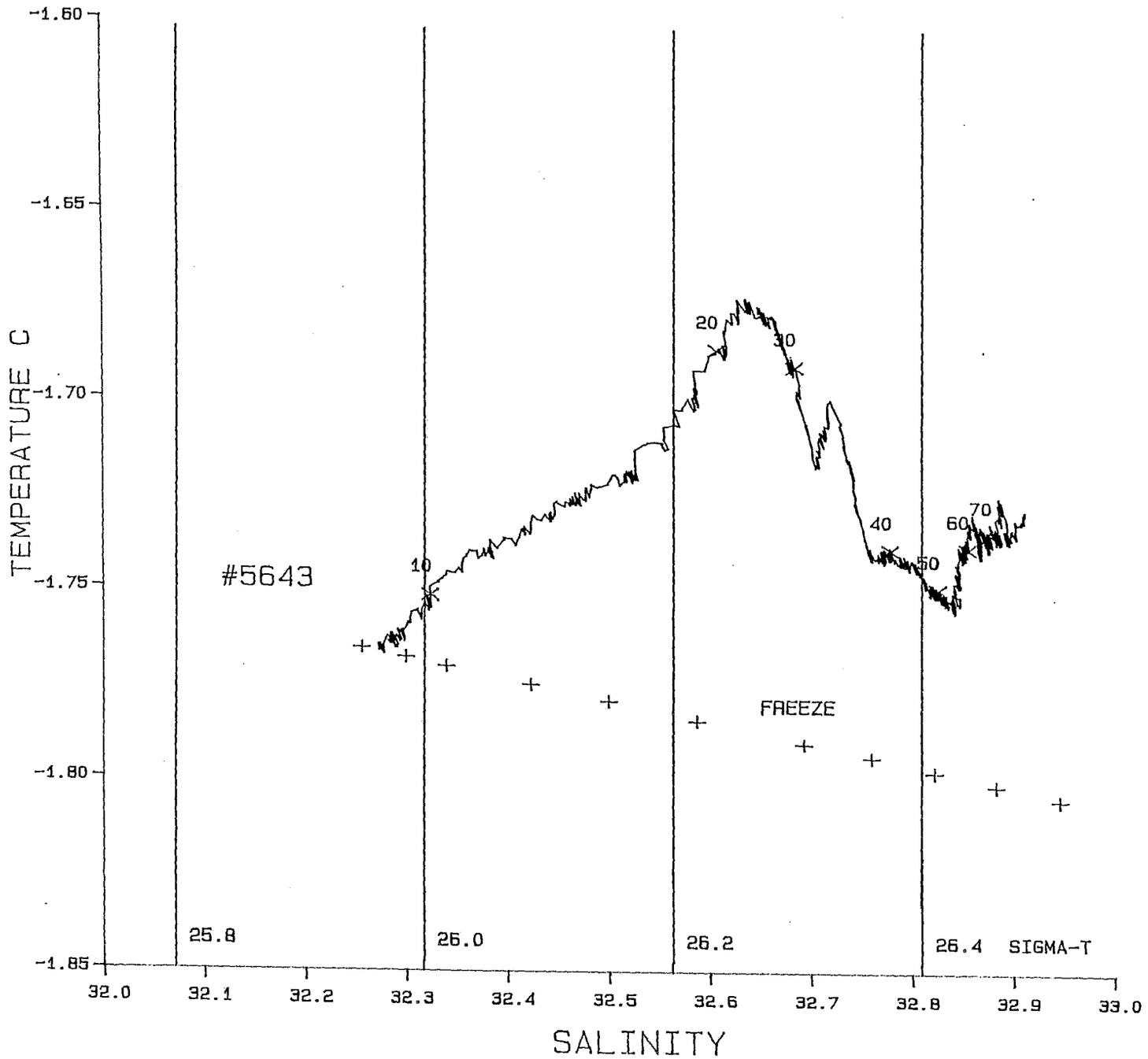
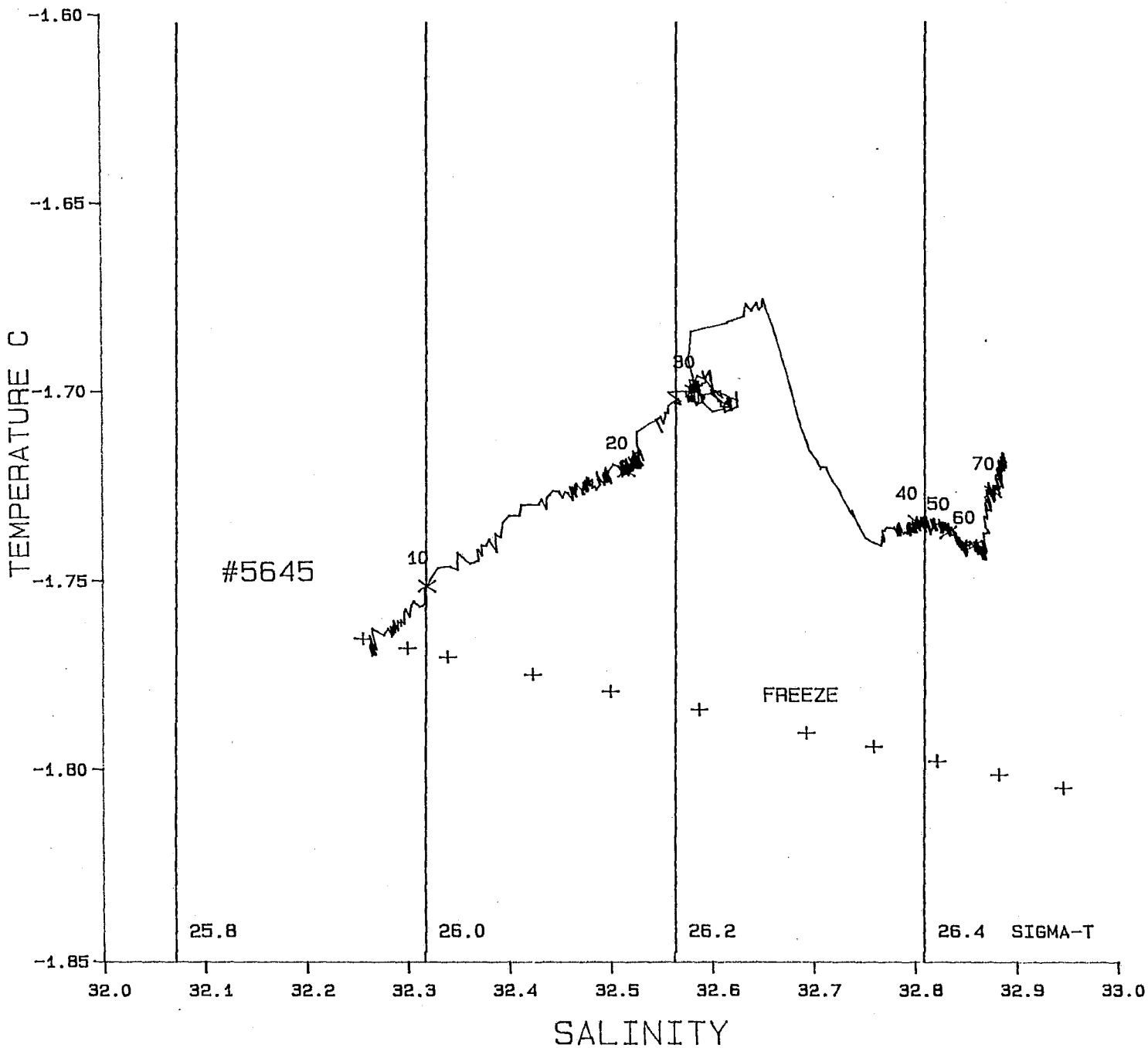


T-S PLOT FOR EXP. NO. 5643



T-S PLOT FOR EXP. NO. 5645



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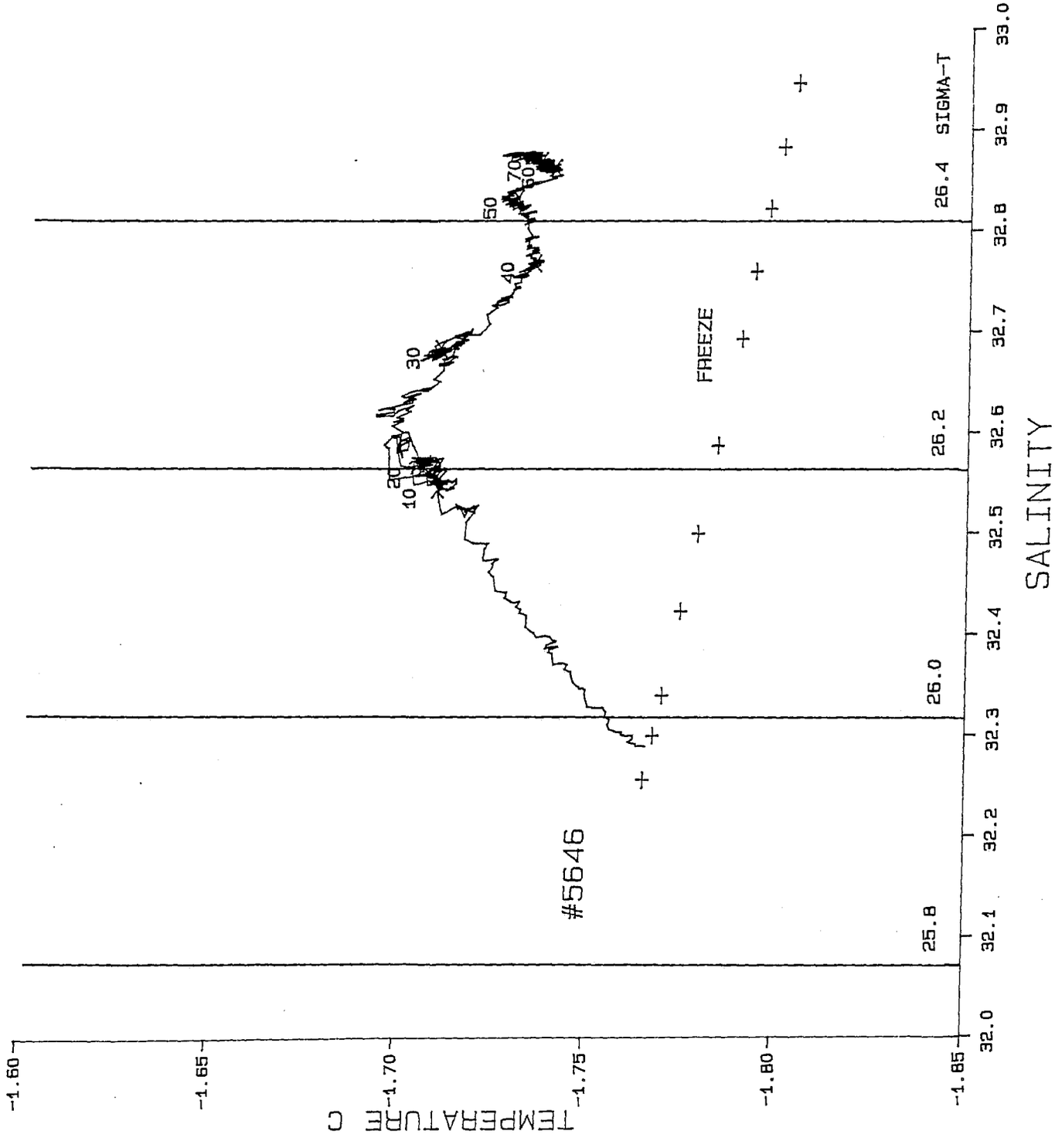

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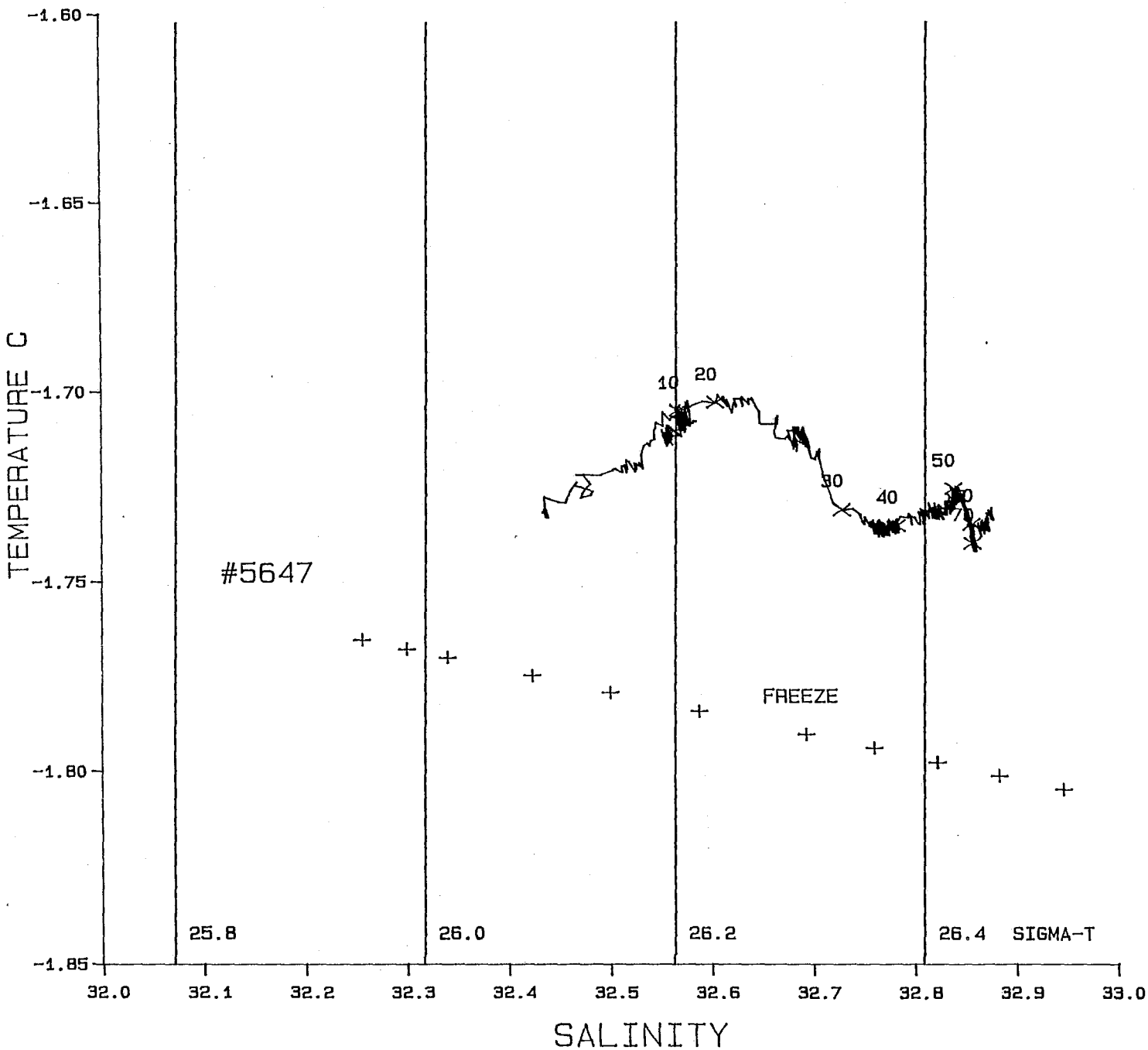

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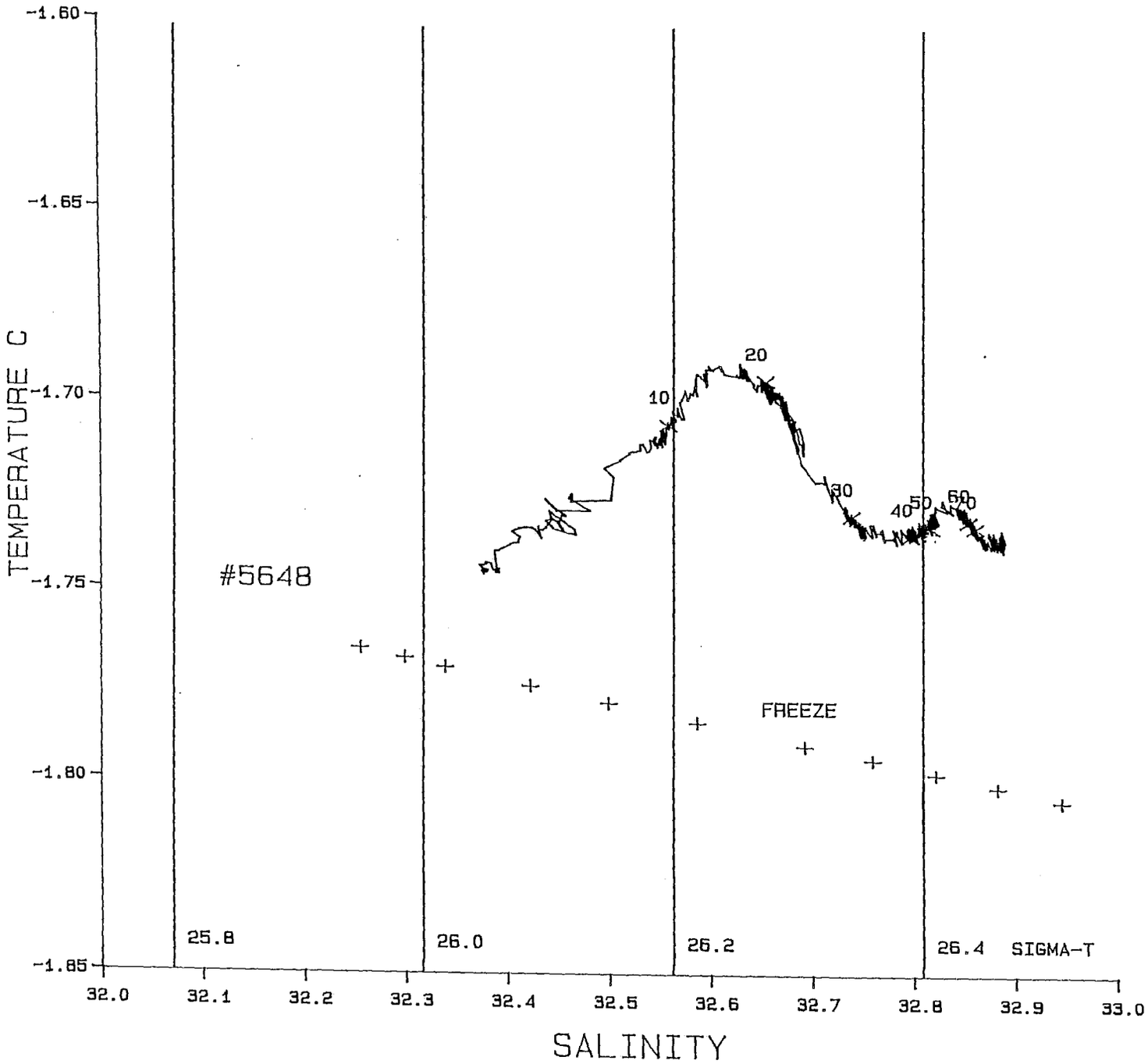

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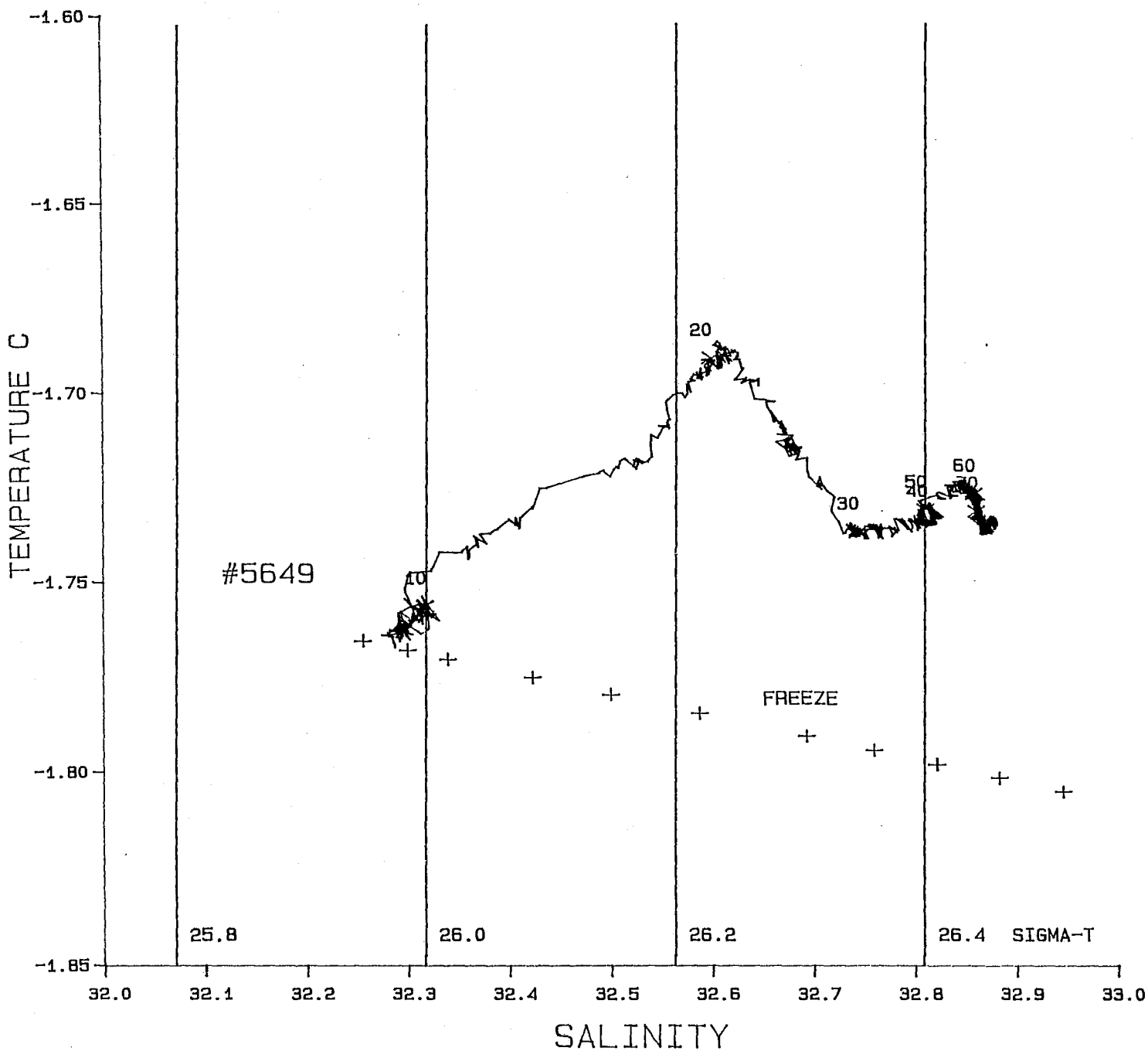

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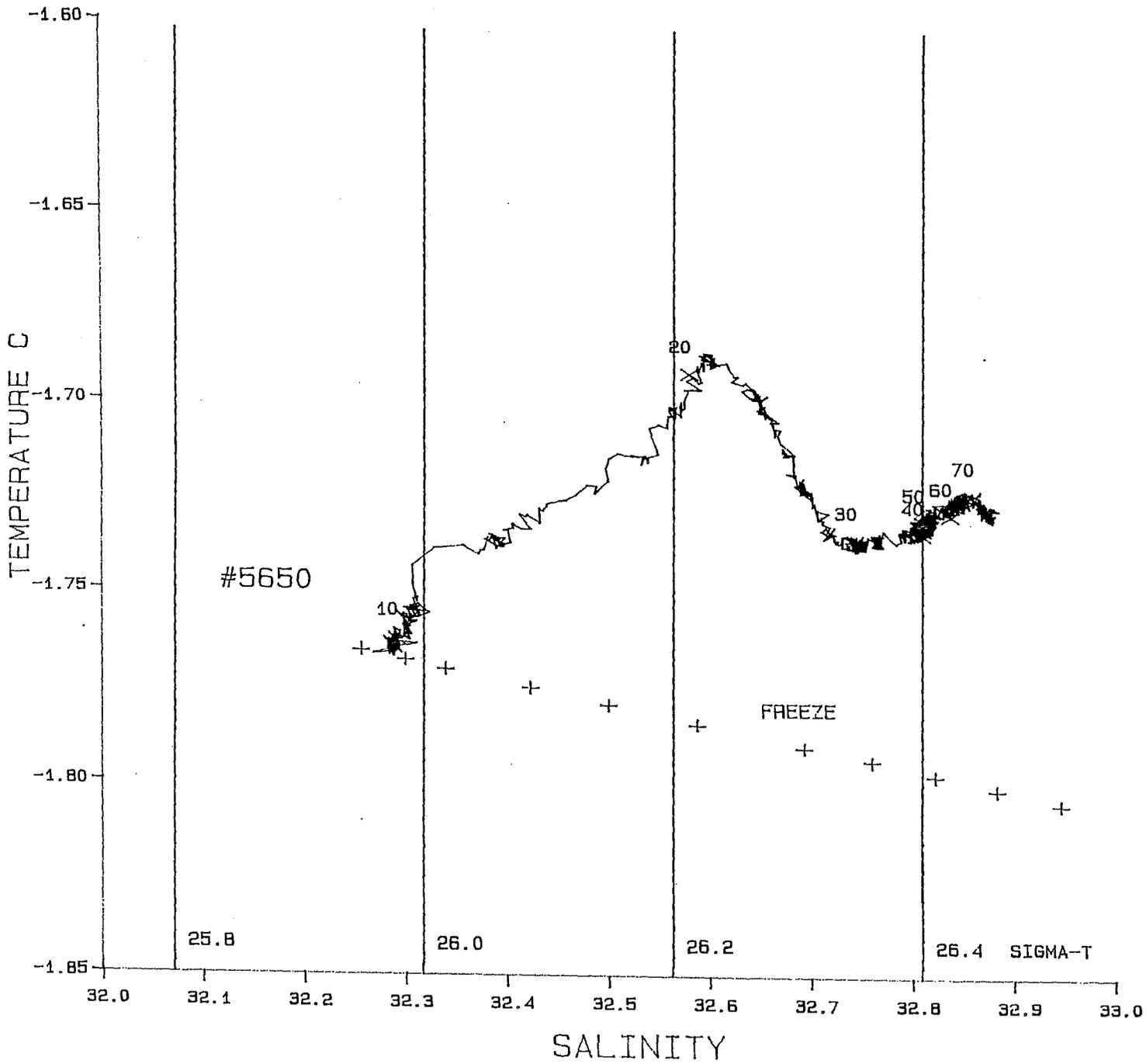

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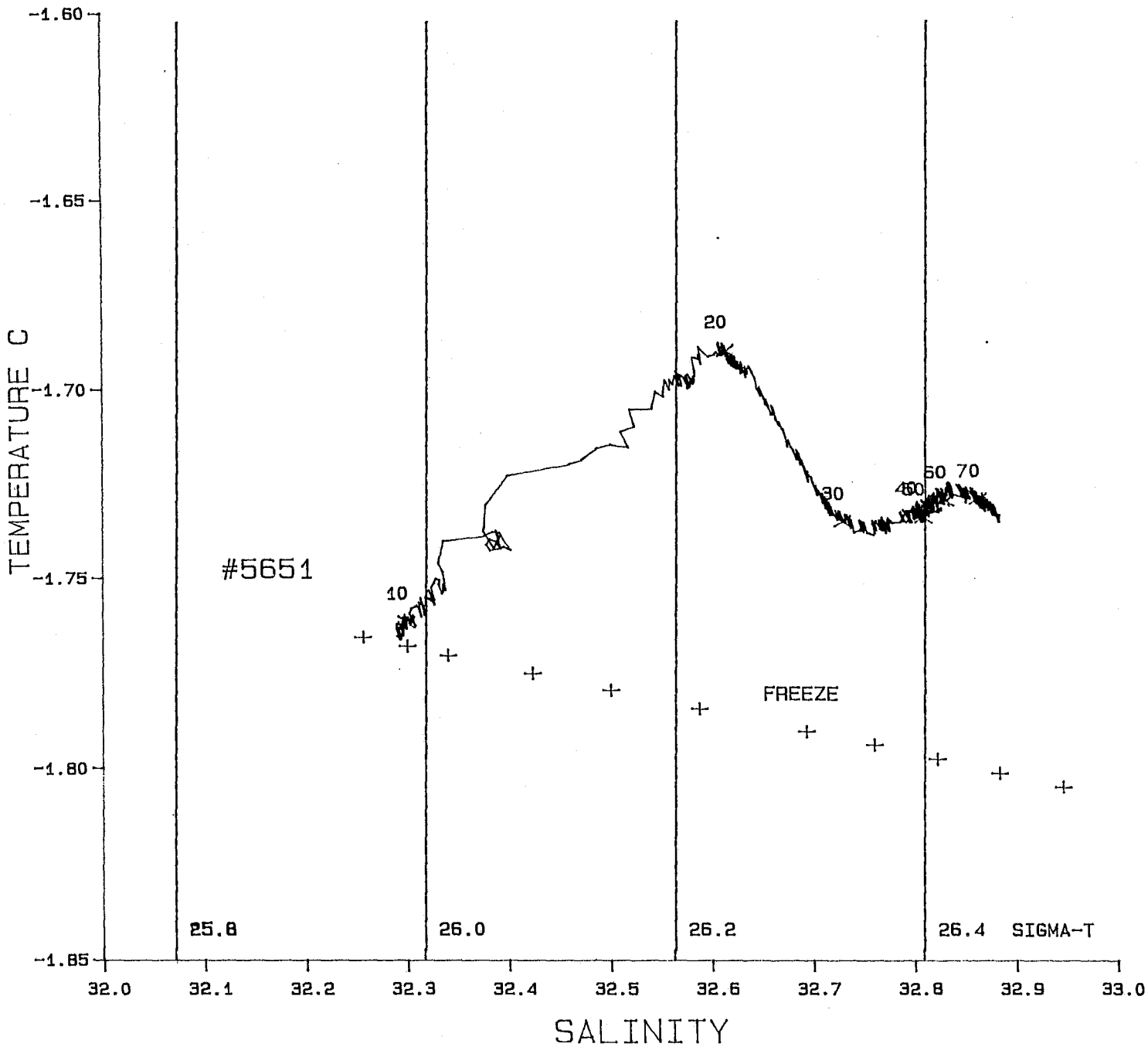
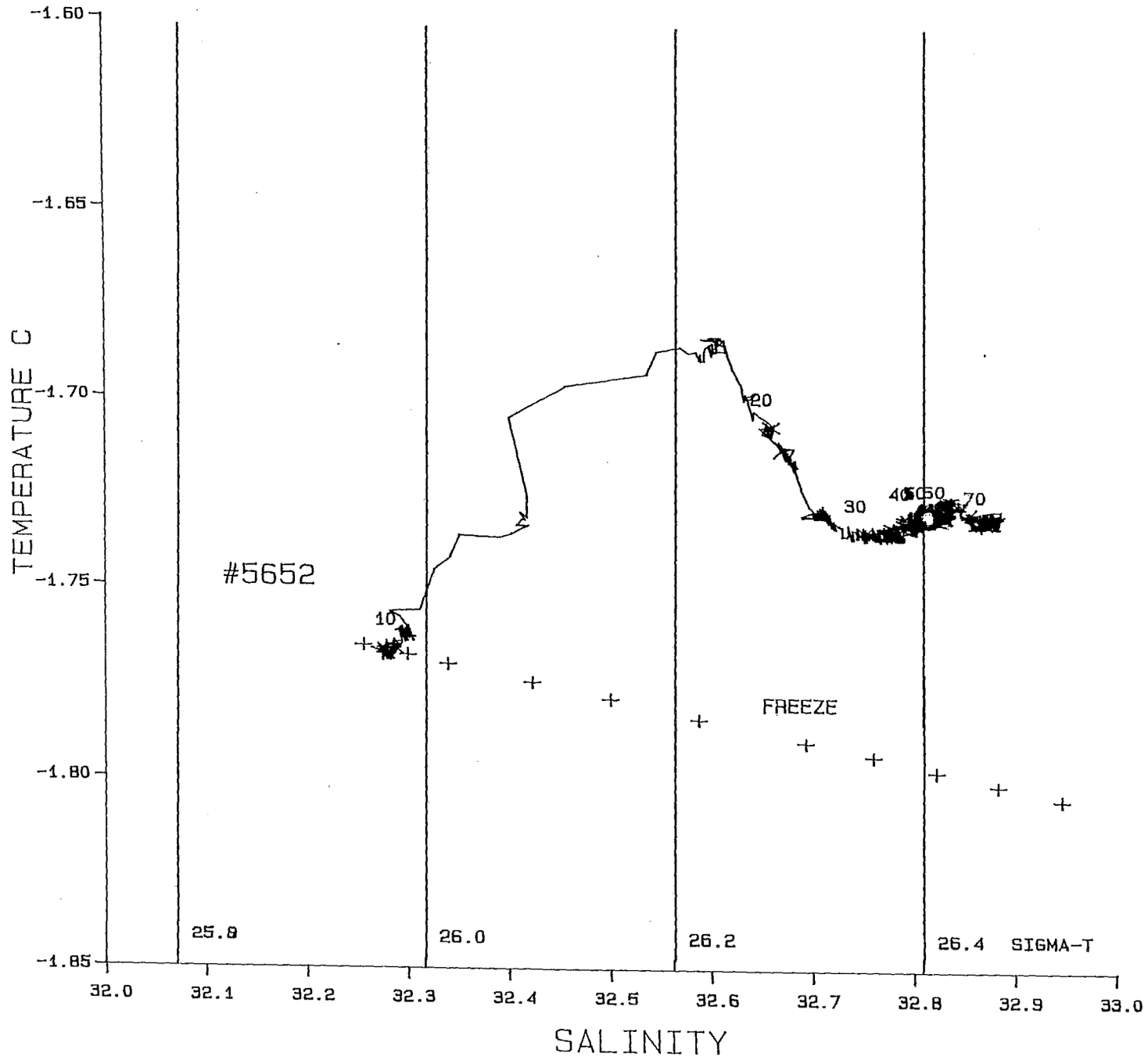


T-S PLOT FOR EXP. No. 5652



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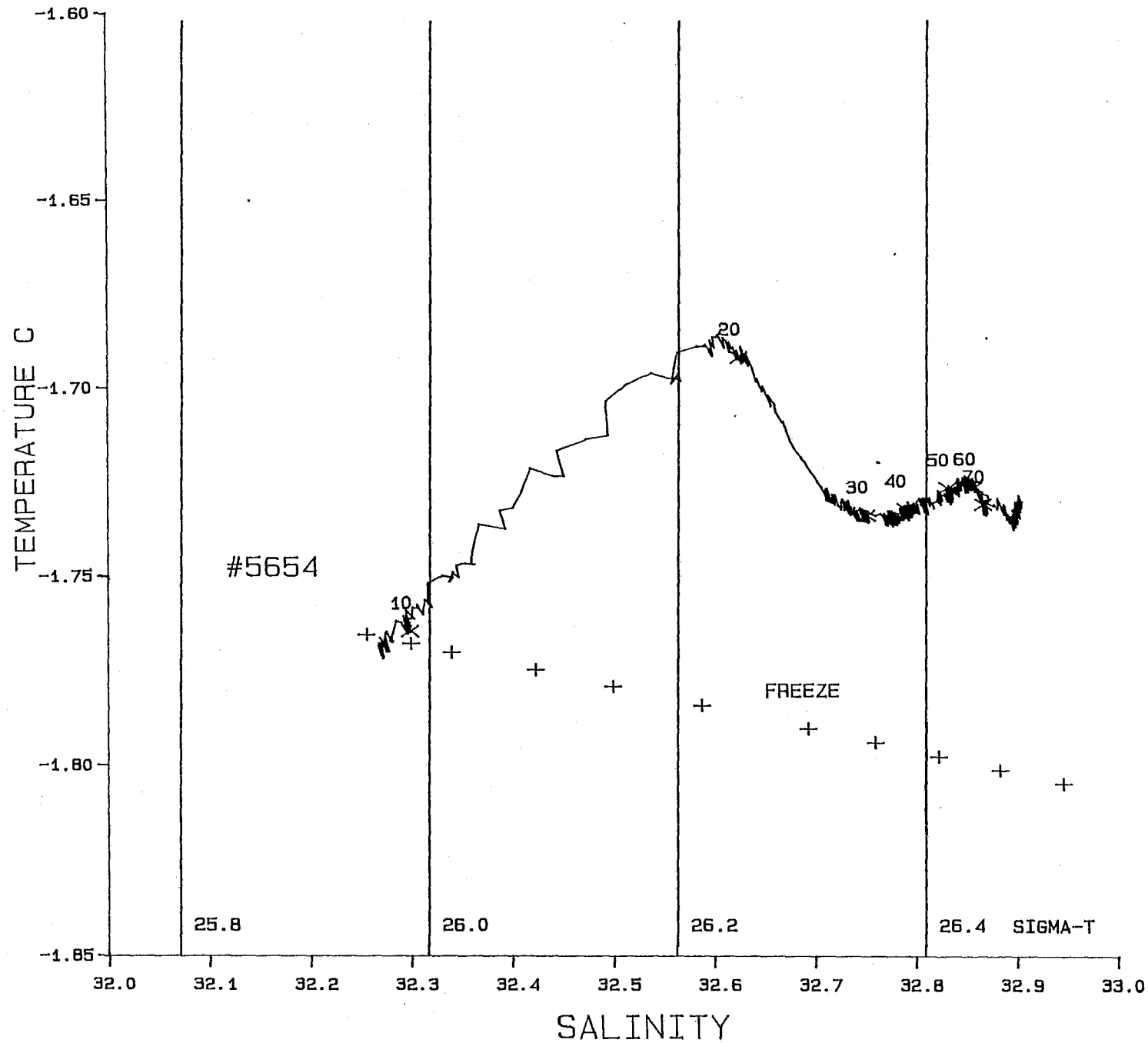

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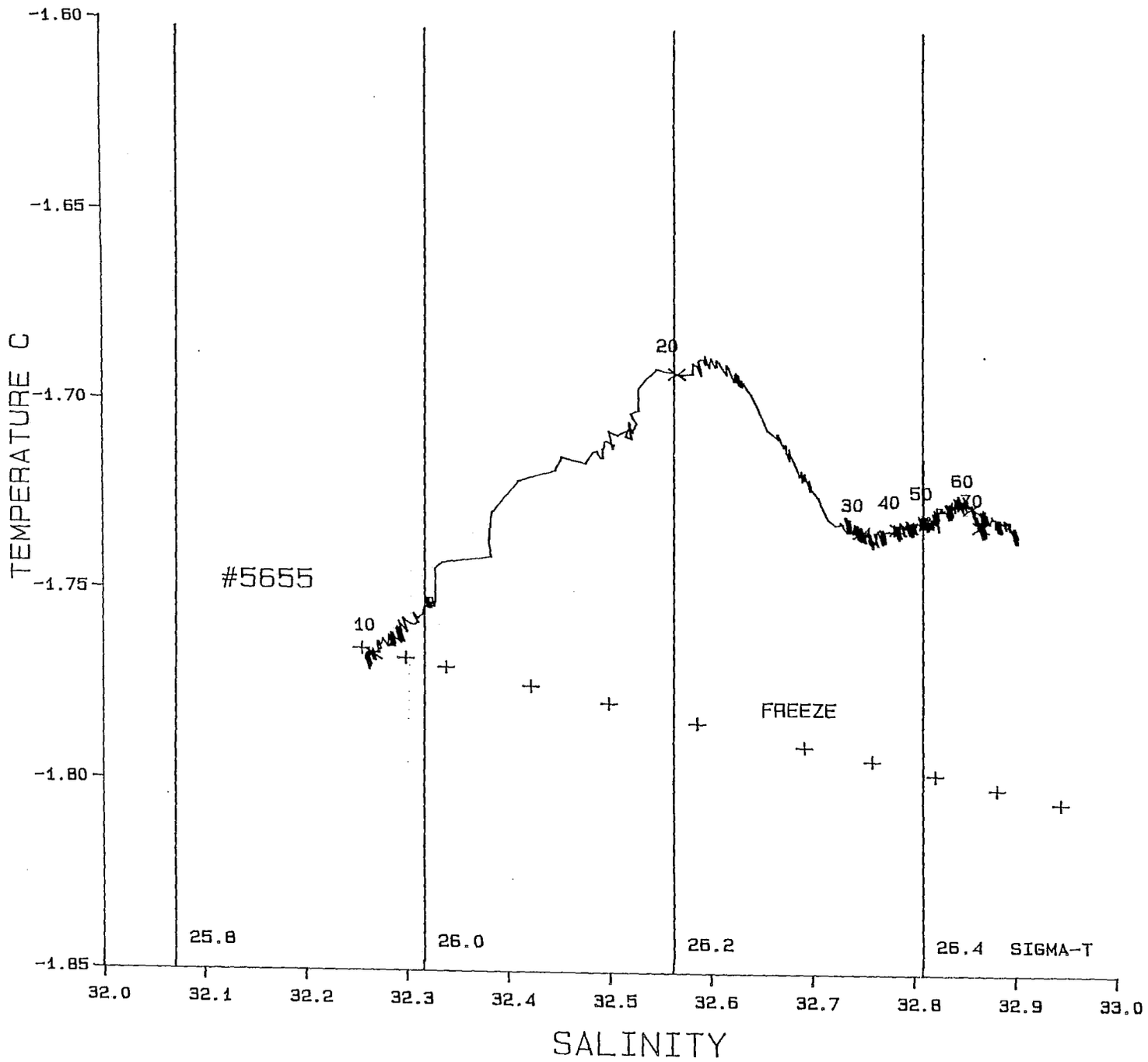

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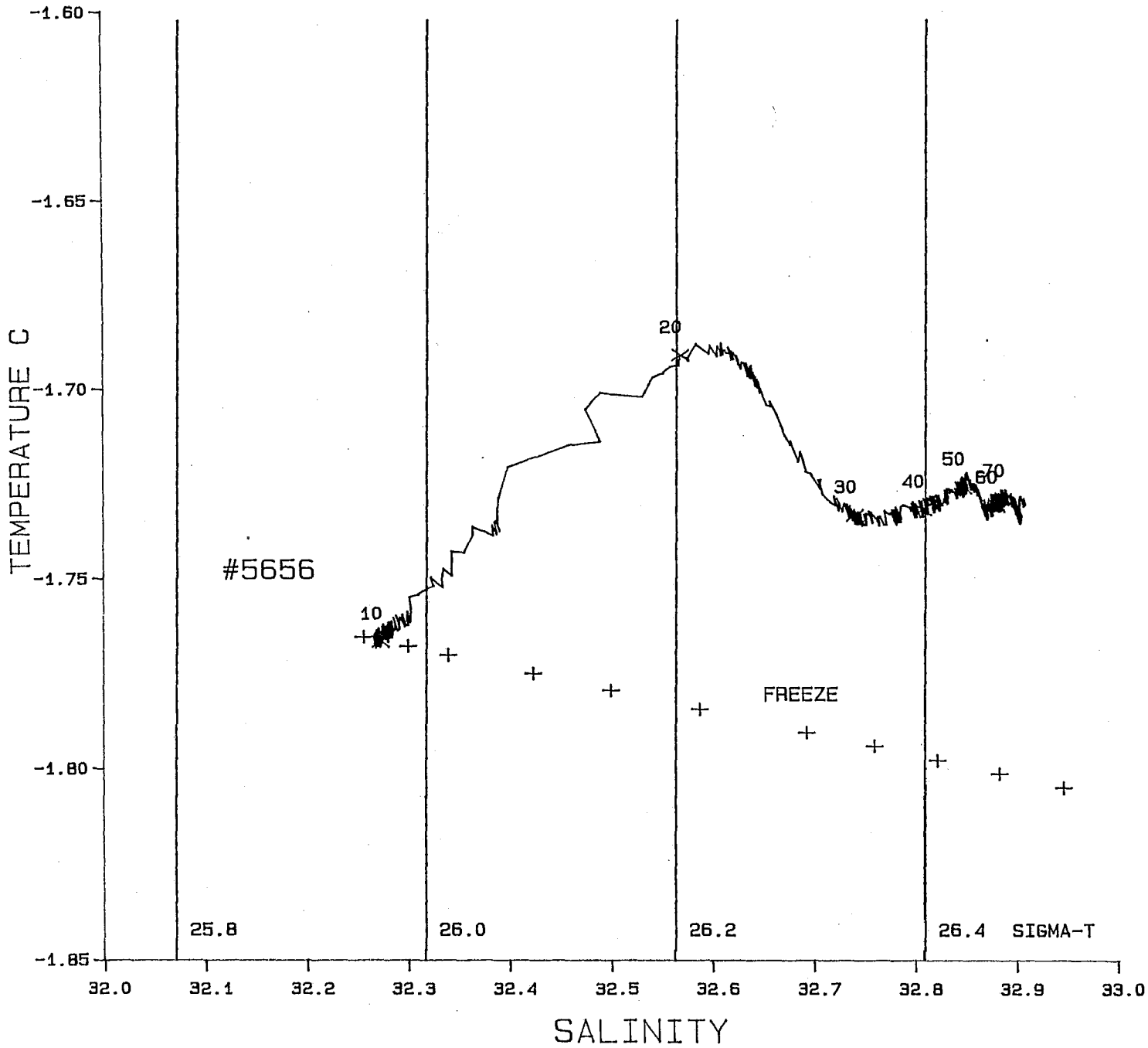
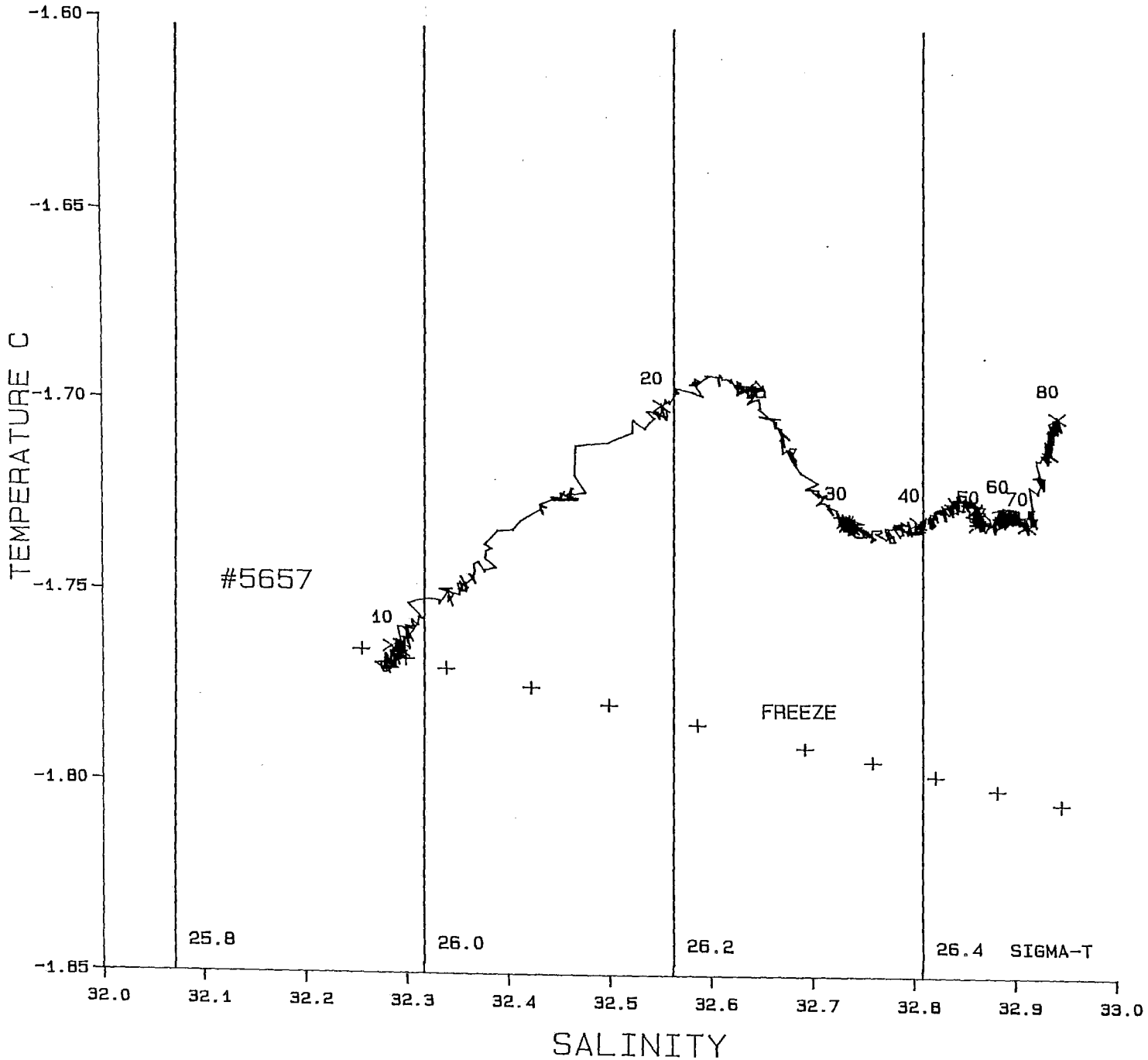


T-S PLOT FOR EXP. NO. 5657



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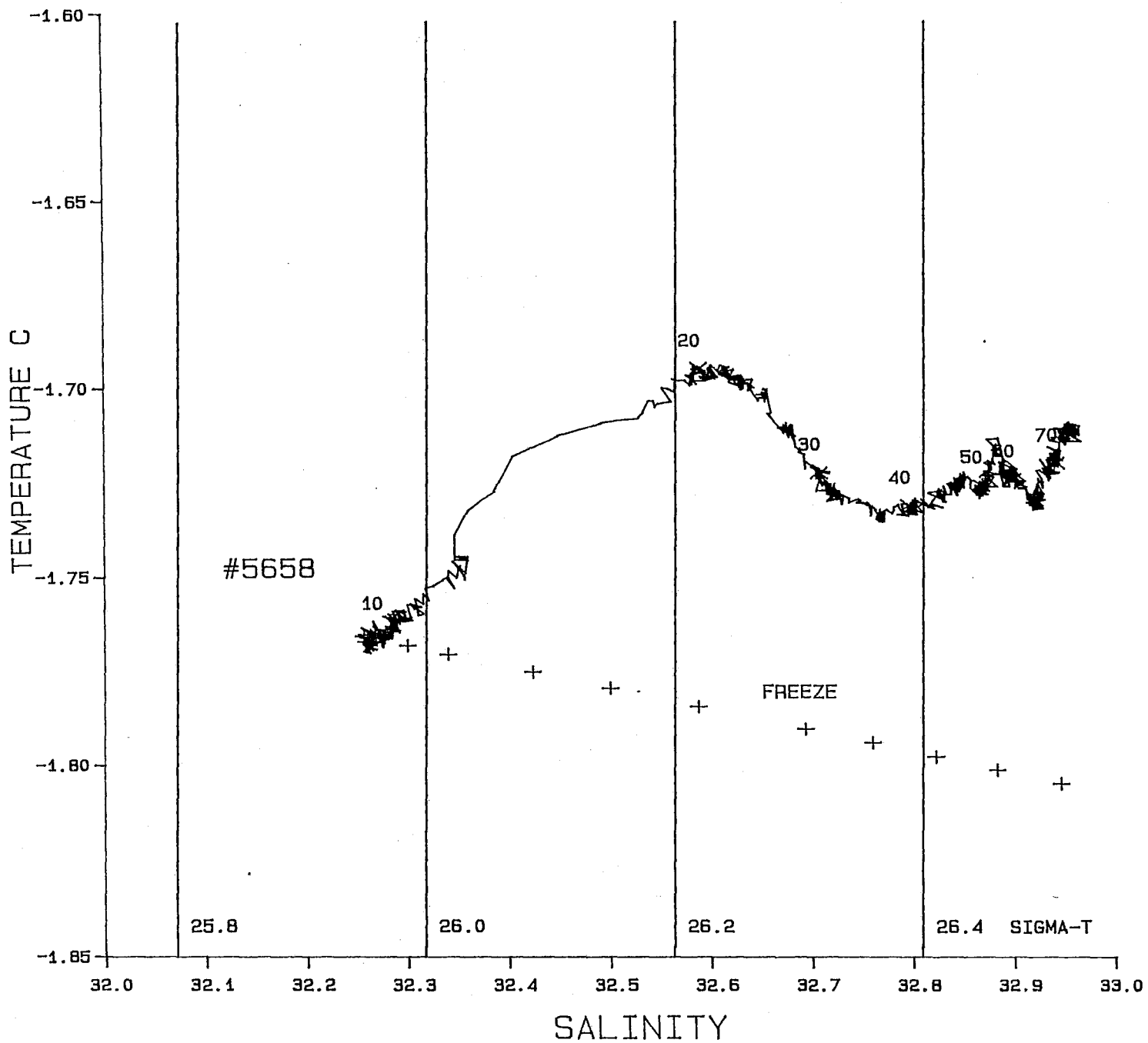

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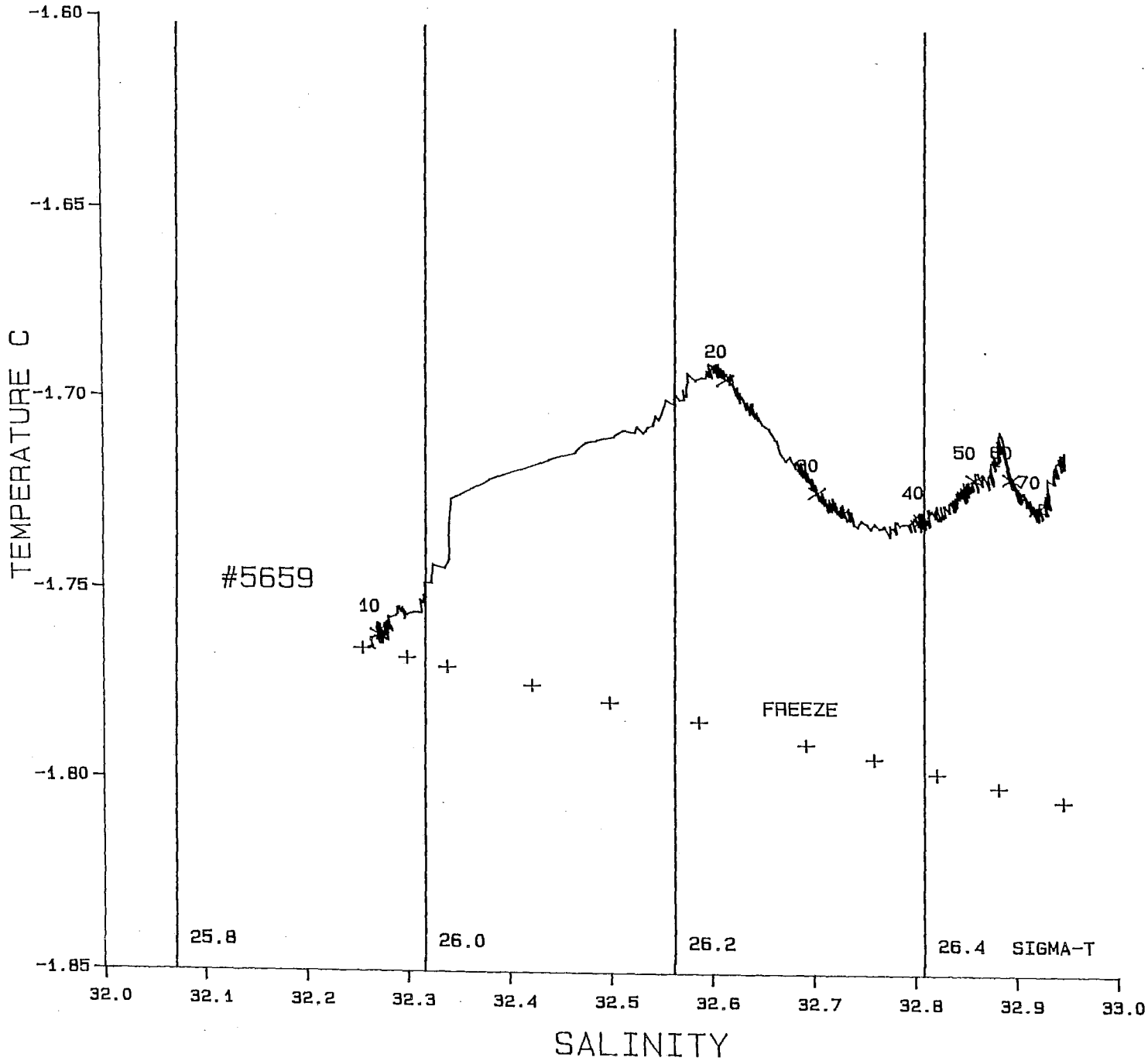

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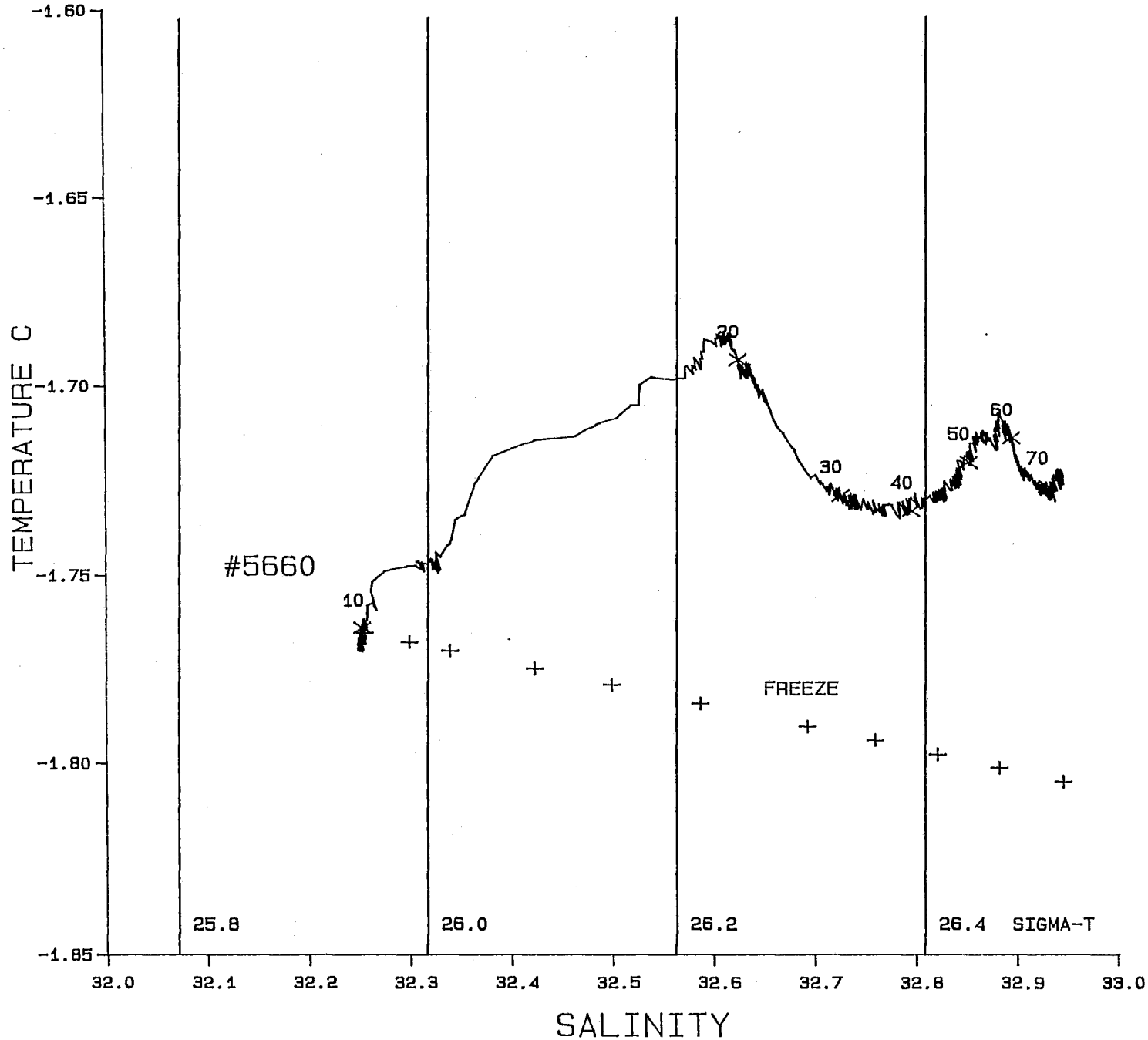
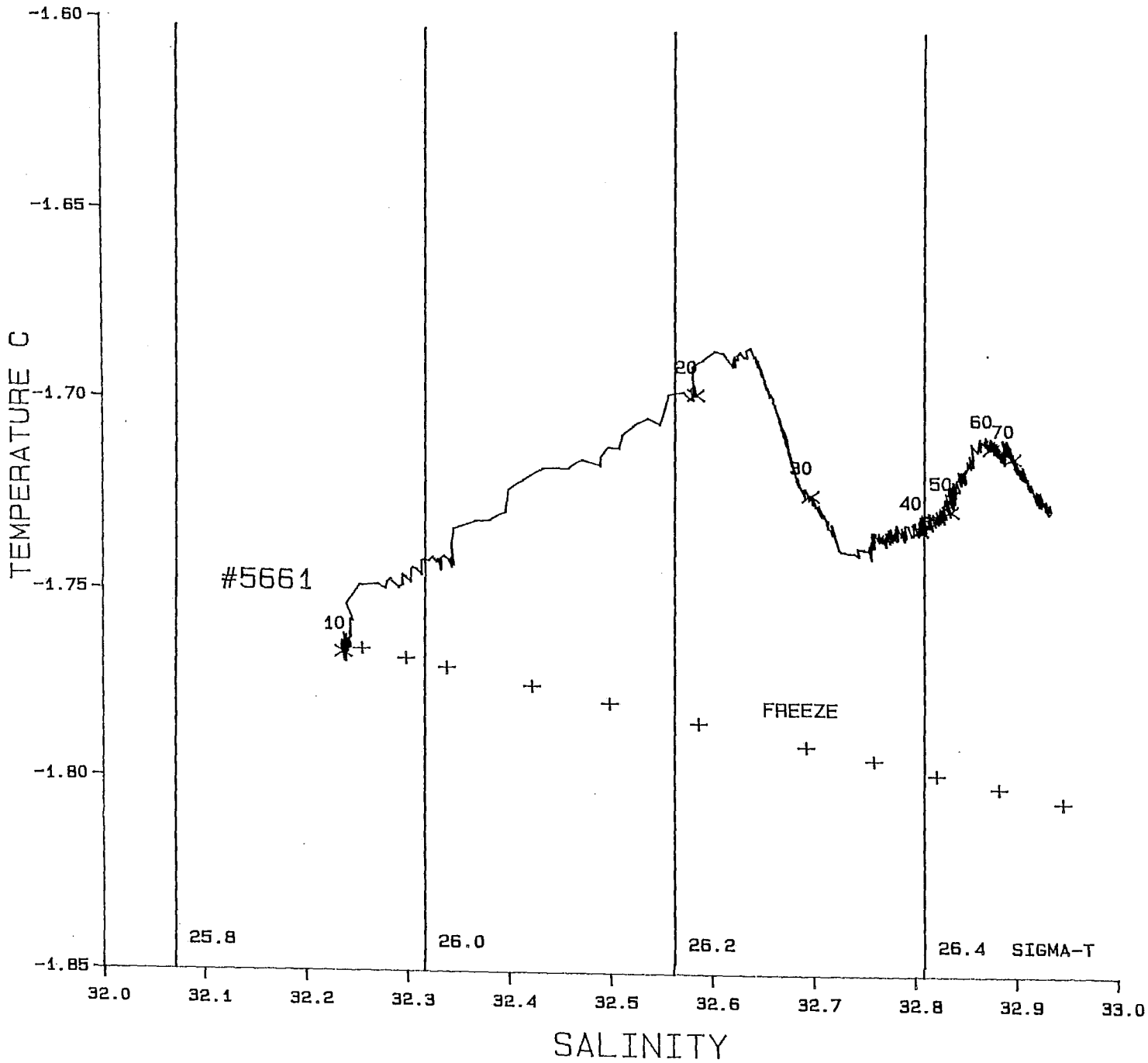
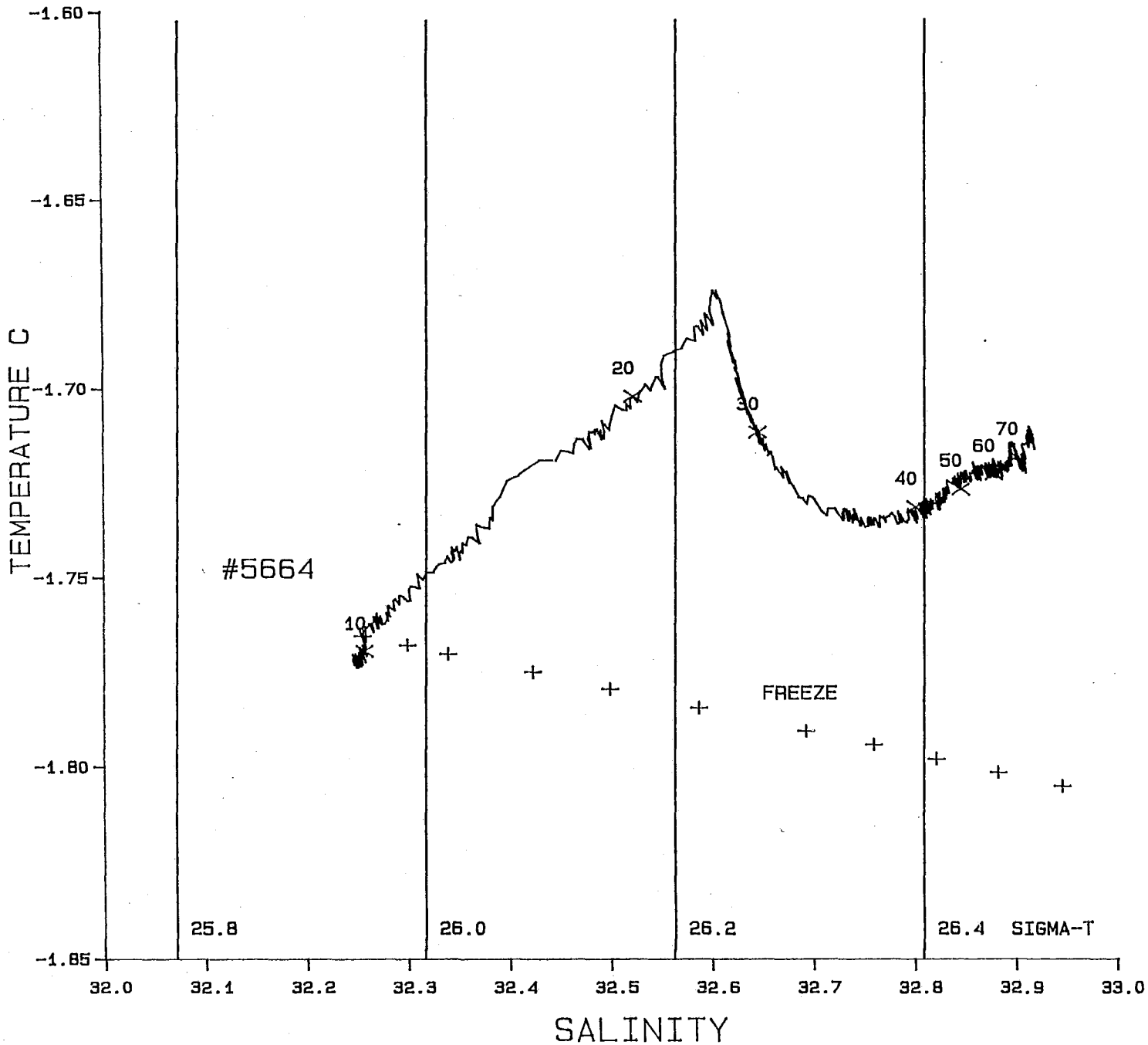


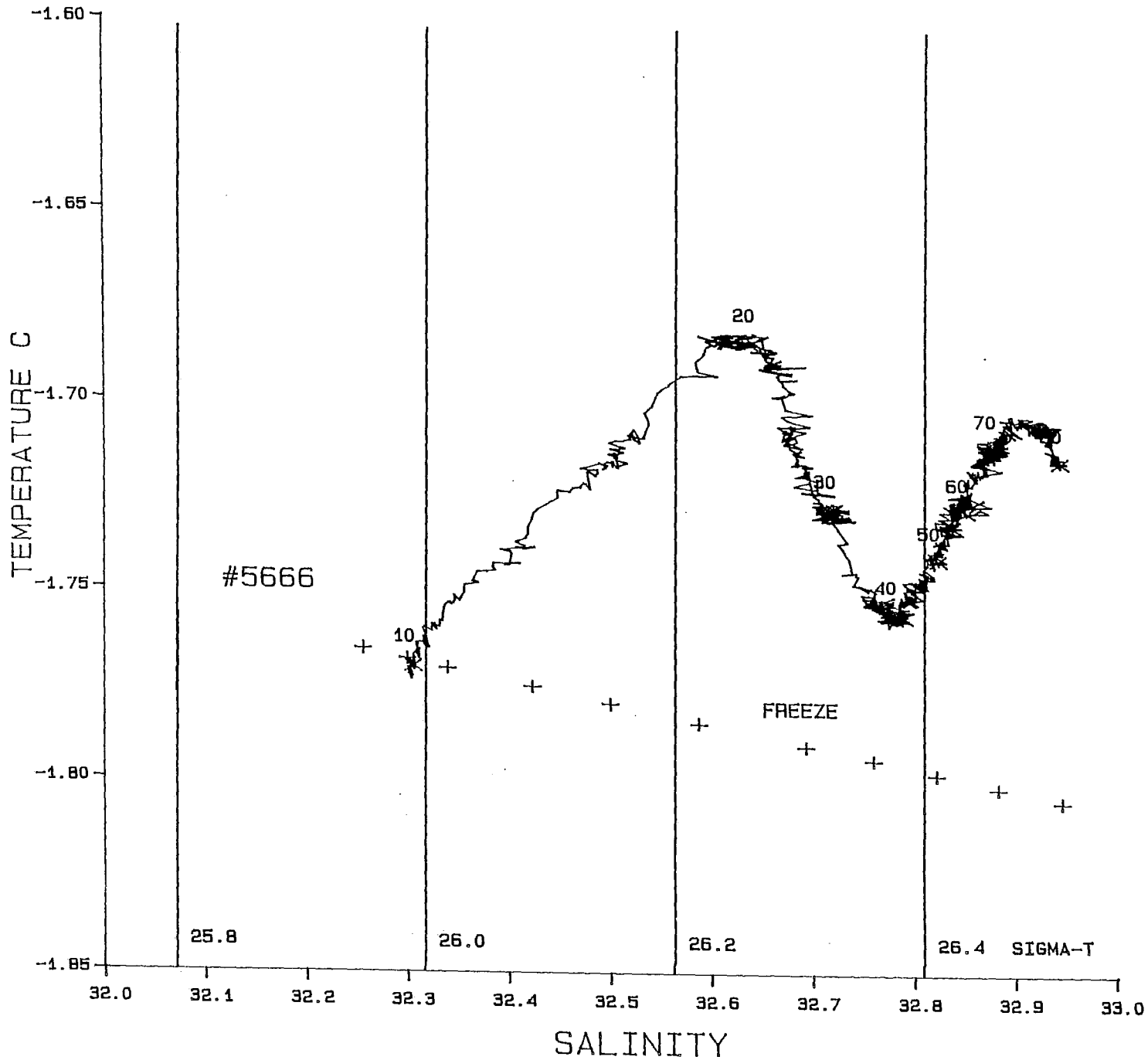
T-S PLOT FOR EXP. No. 5661



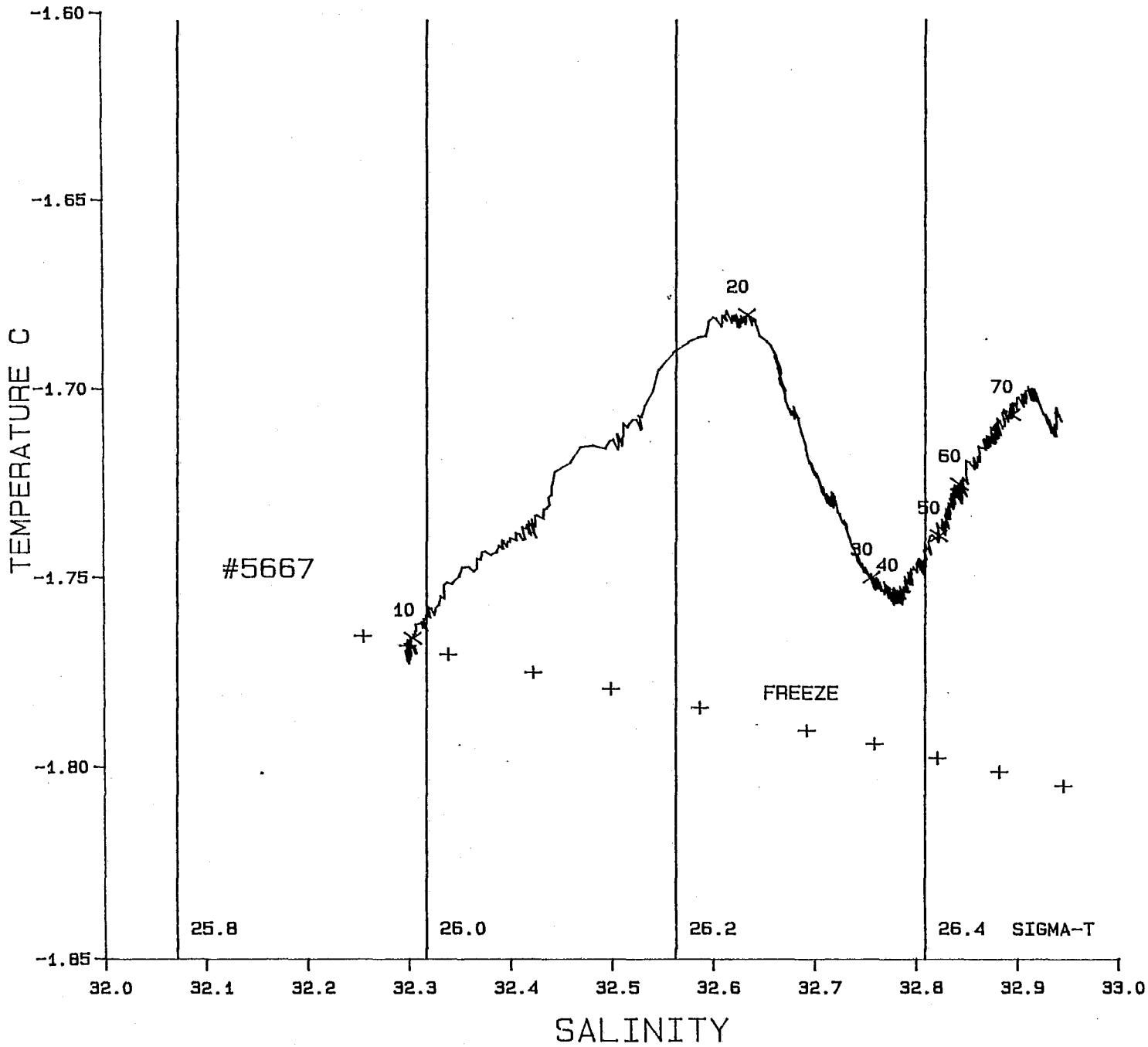
T-S PLOT FOR EXP. NO. 5664



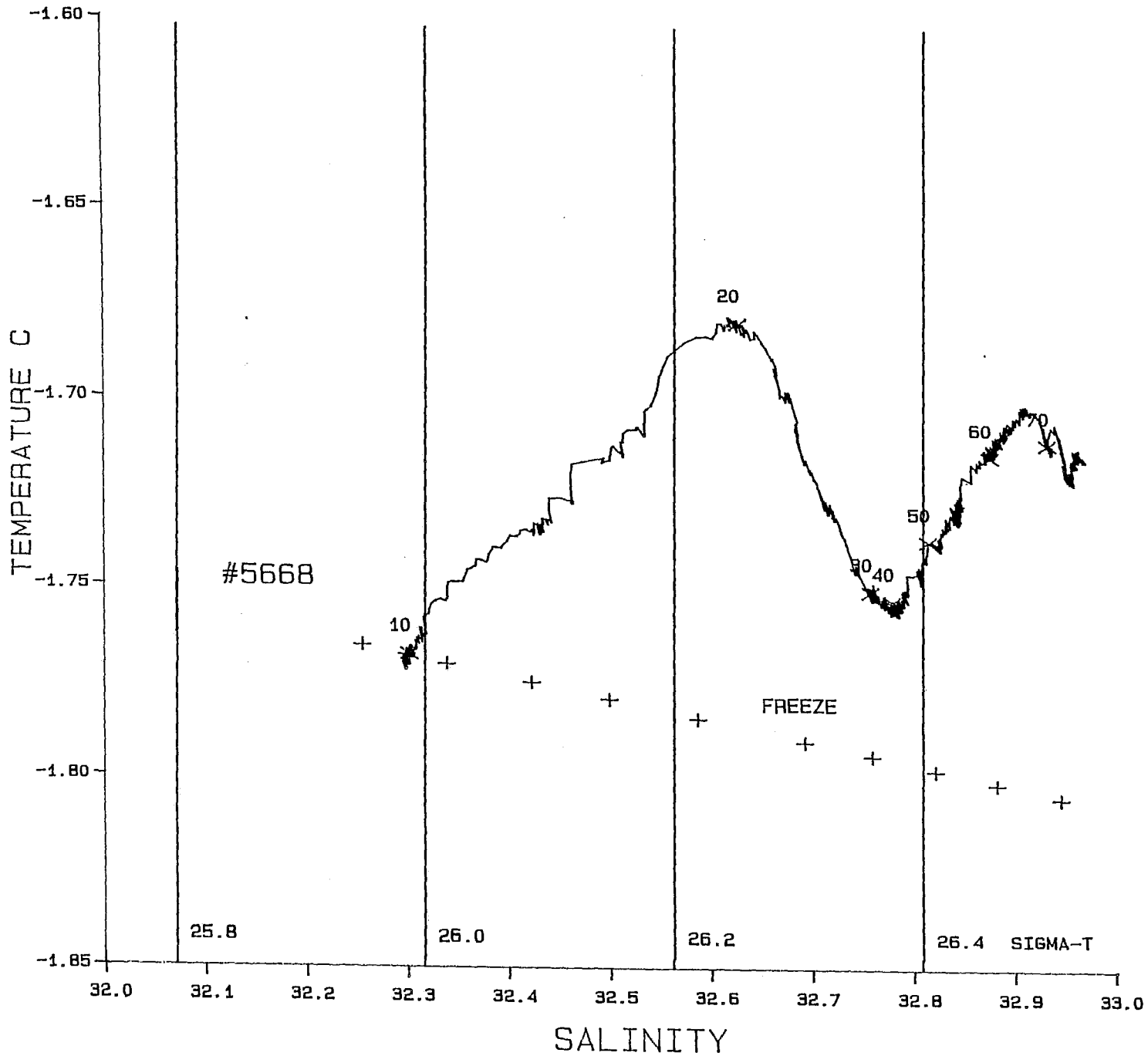
T-S PLOT FOR EXP. No. 5666



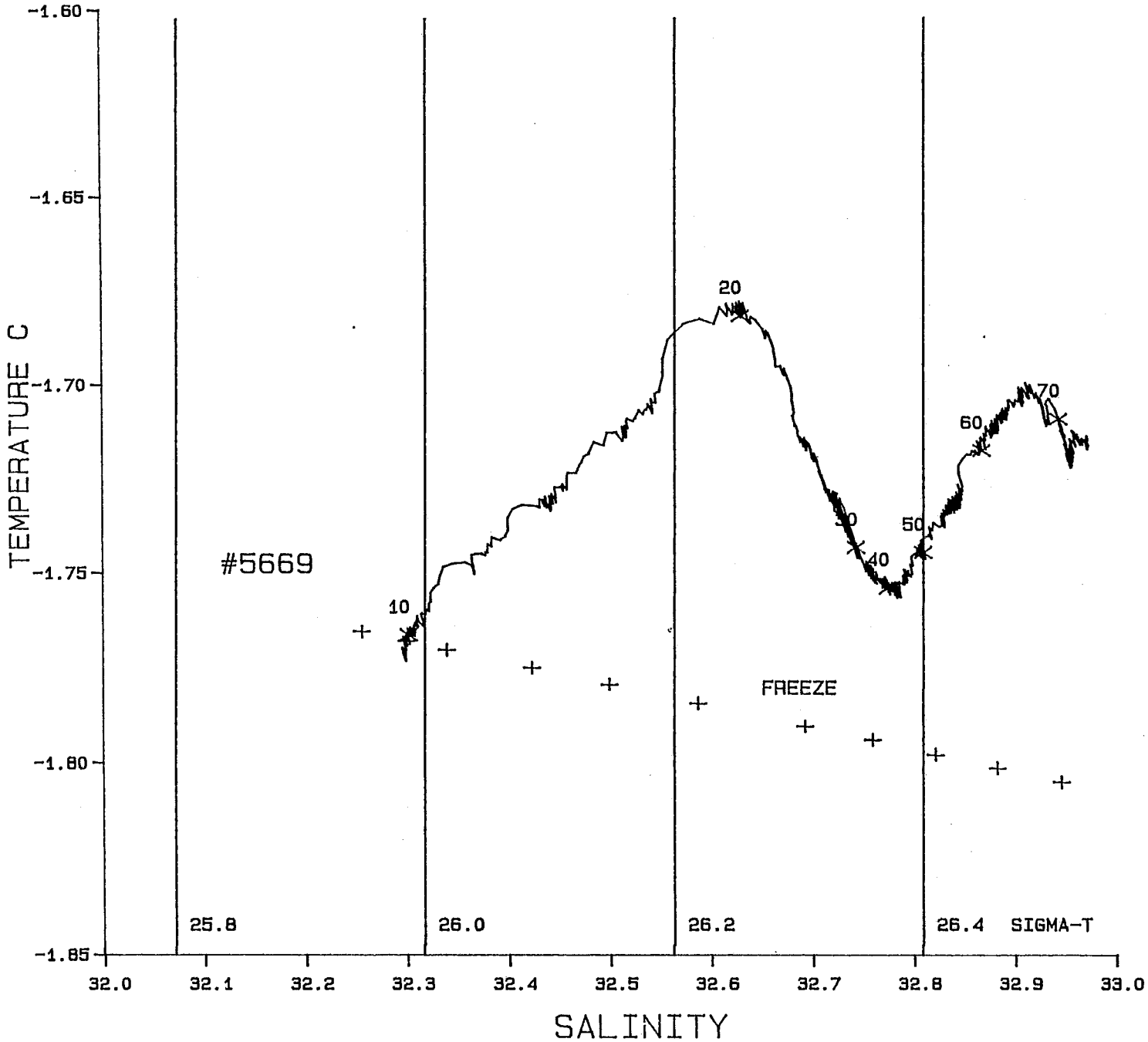
T-S PLOT FOR EXP. No. 5667



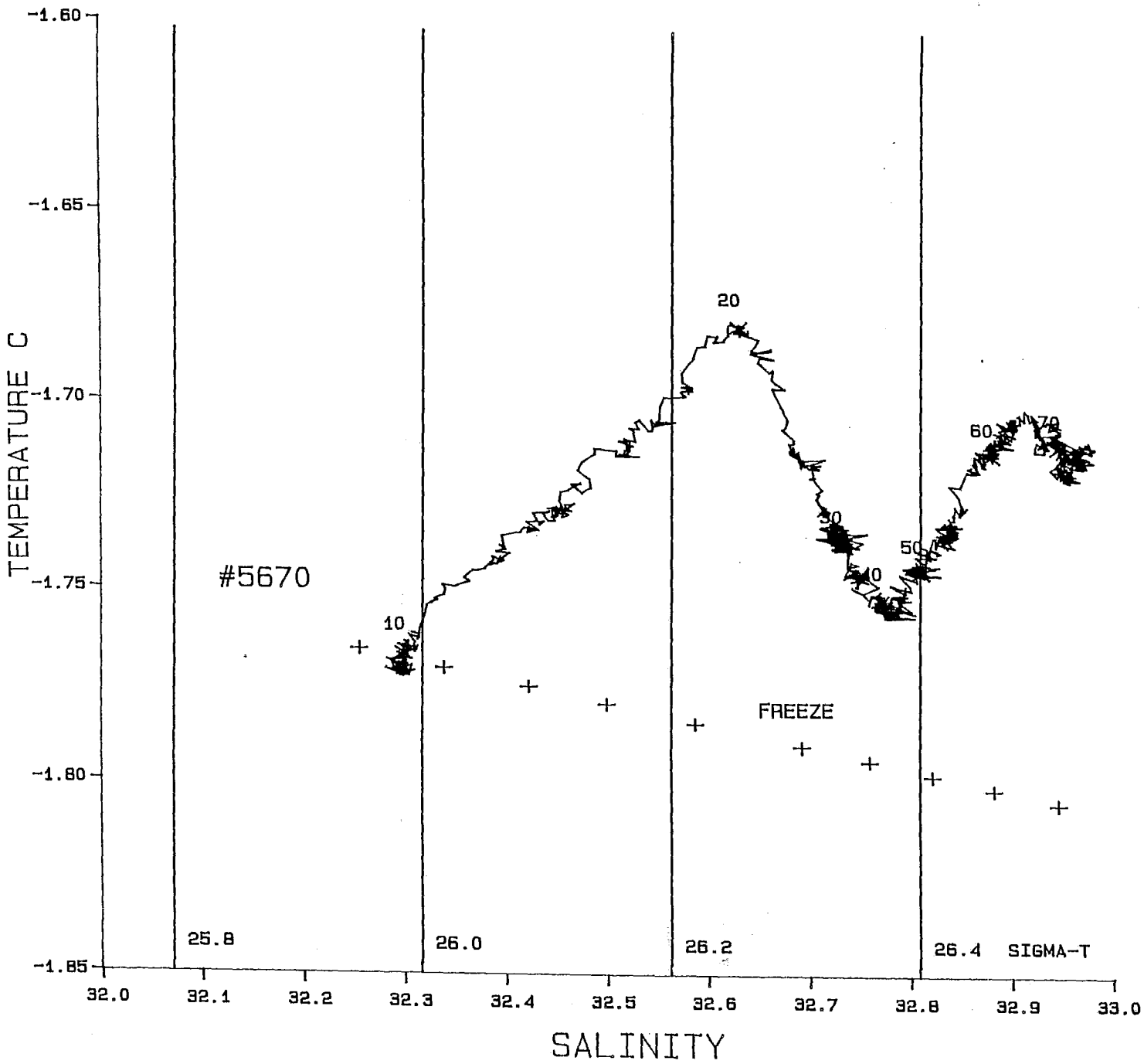
T-S PLOT FOR EXP. No. 5668



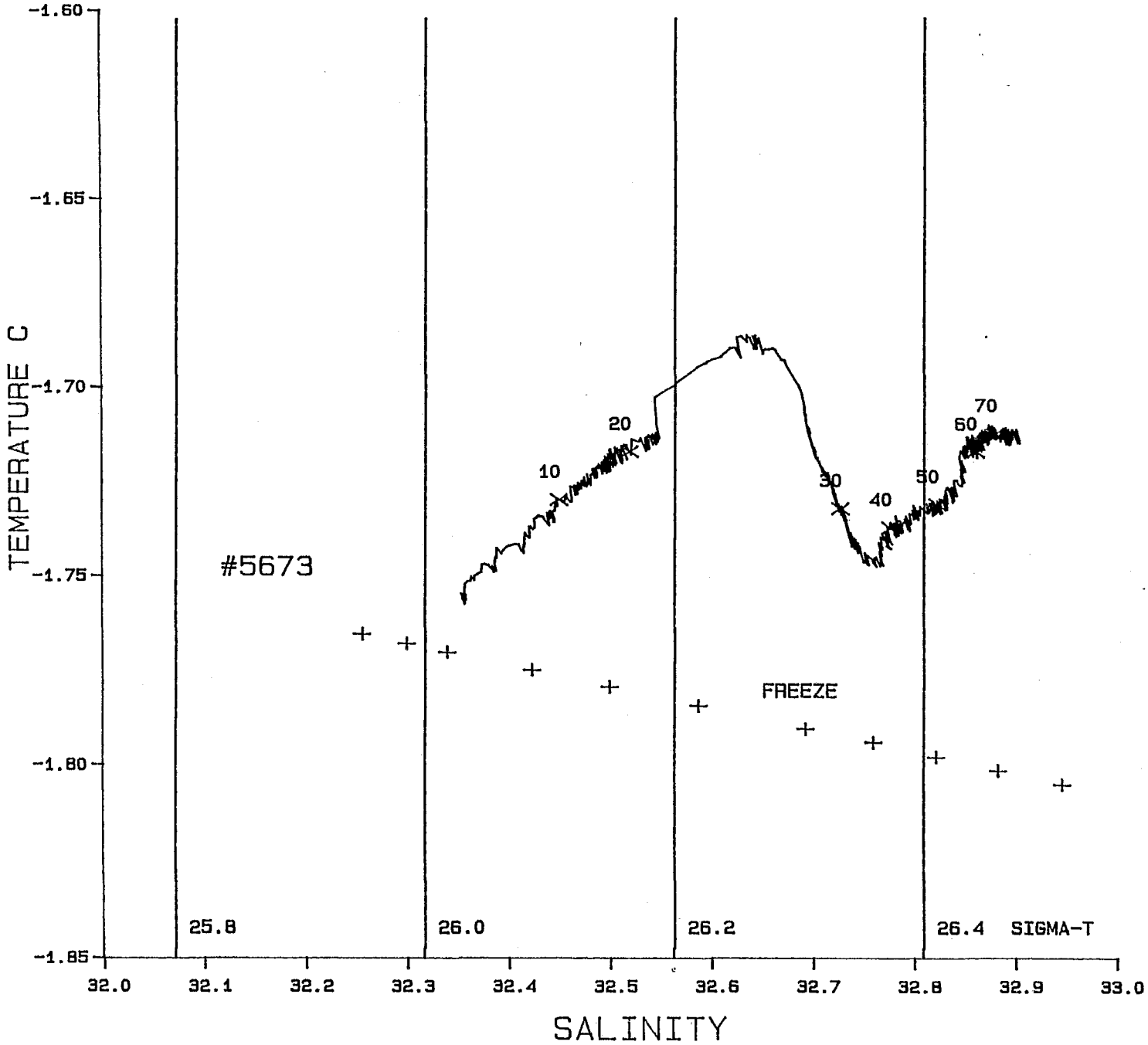
T-S PLOT FOR EXP. No. 5669



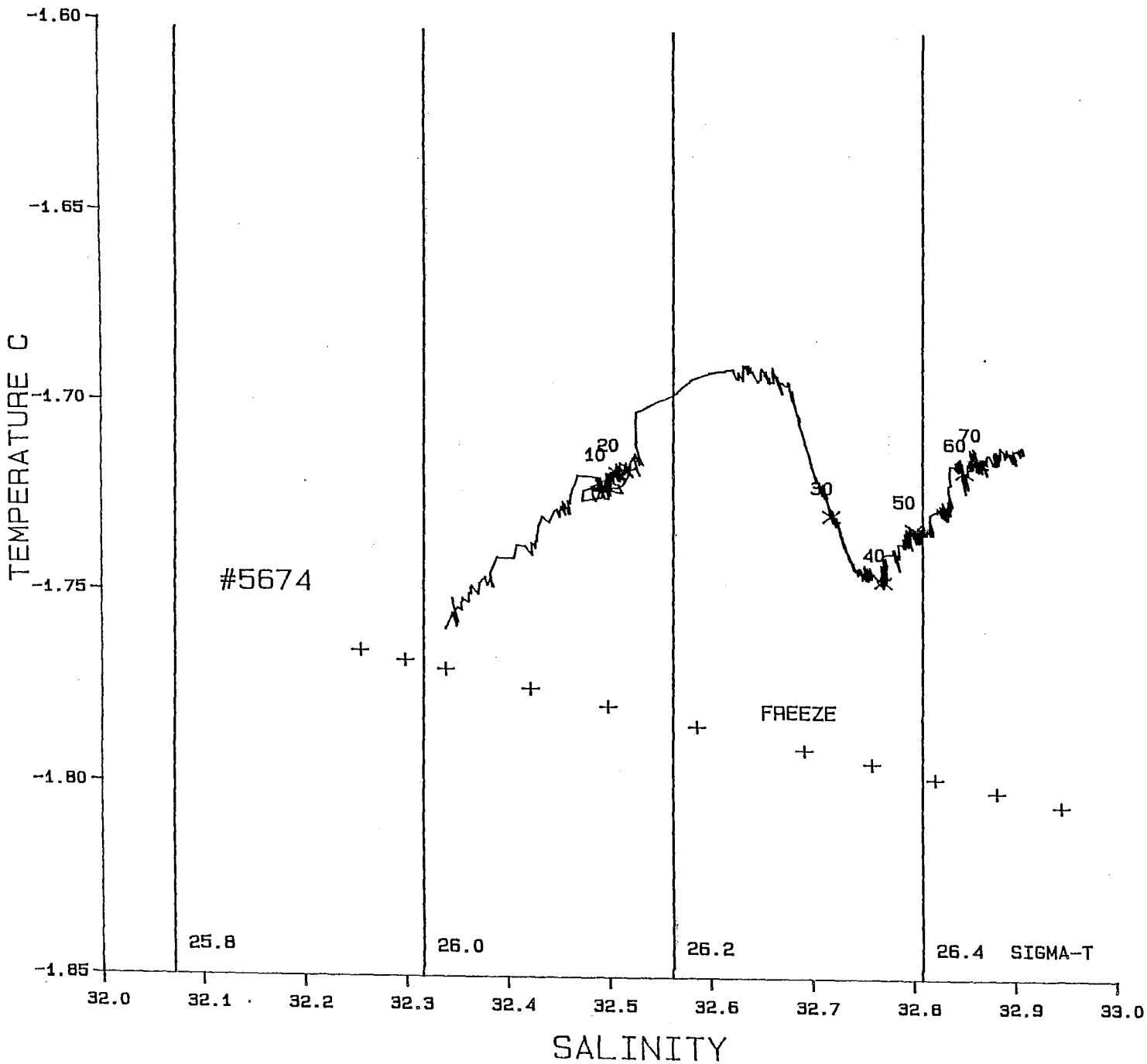
T-S PLOT FOR EXP. No. 5670



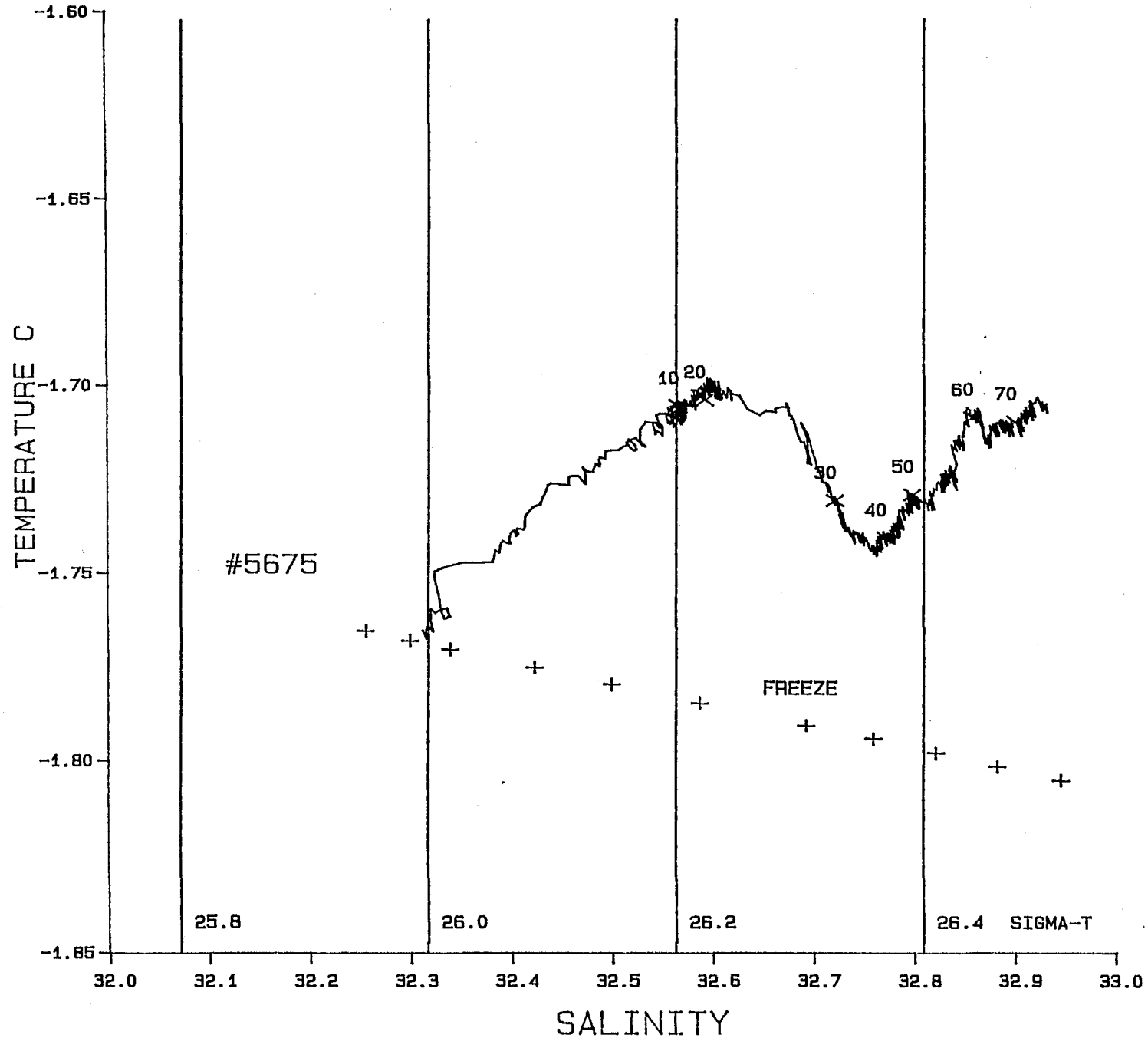
T-S PLOT FOR EXP. No. 5673



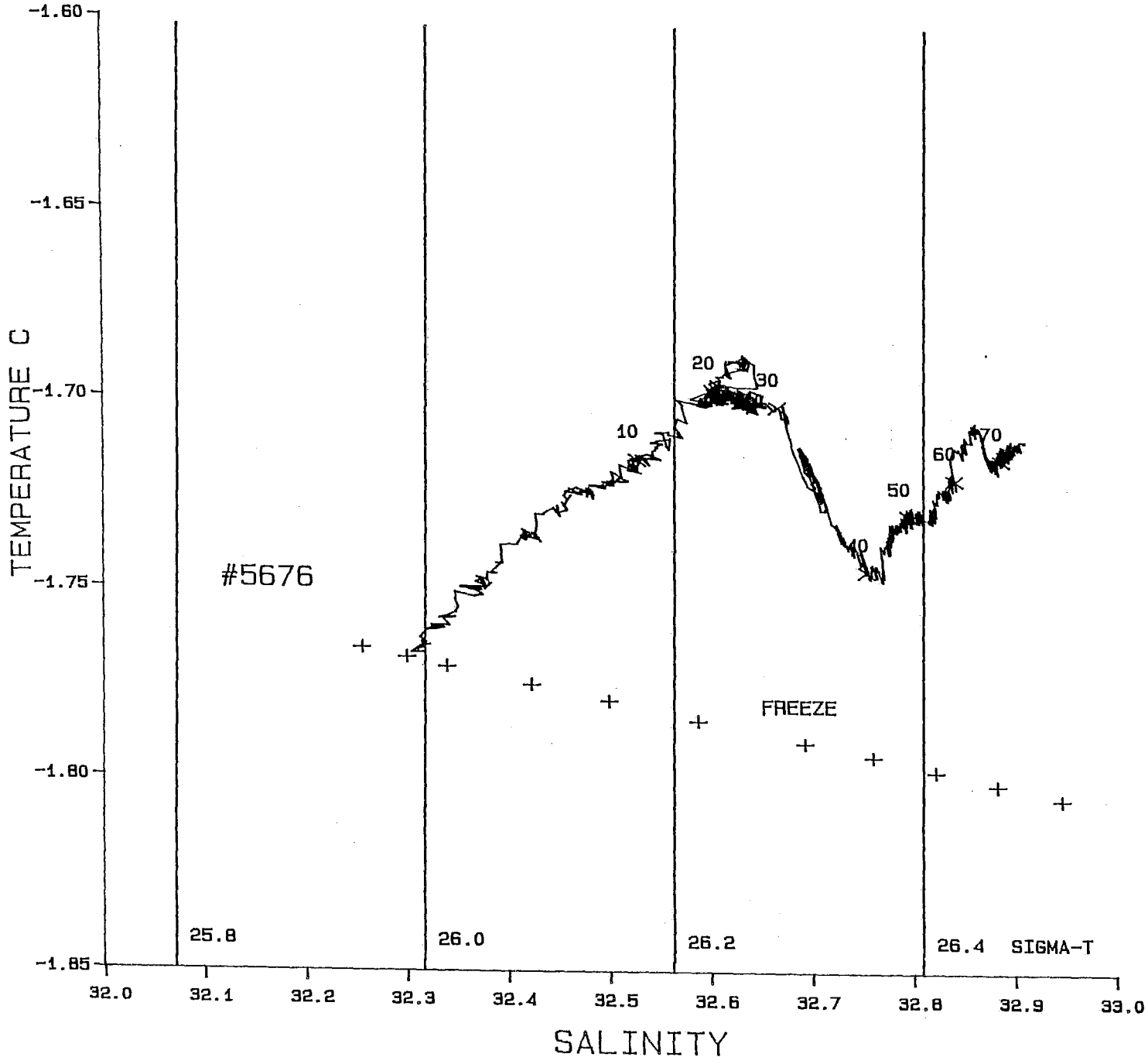
T-S PLOT FOR EXP. No. 5674



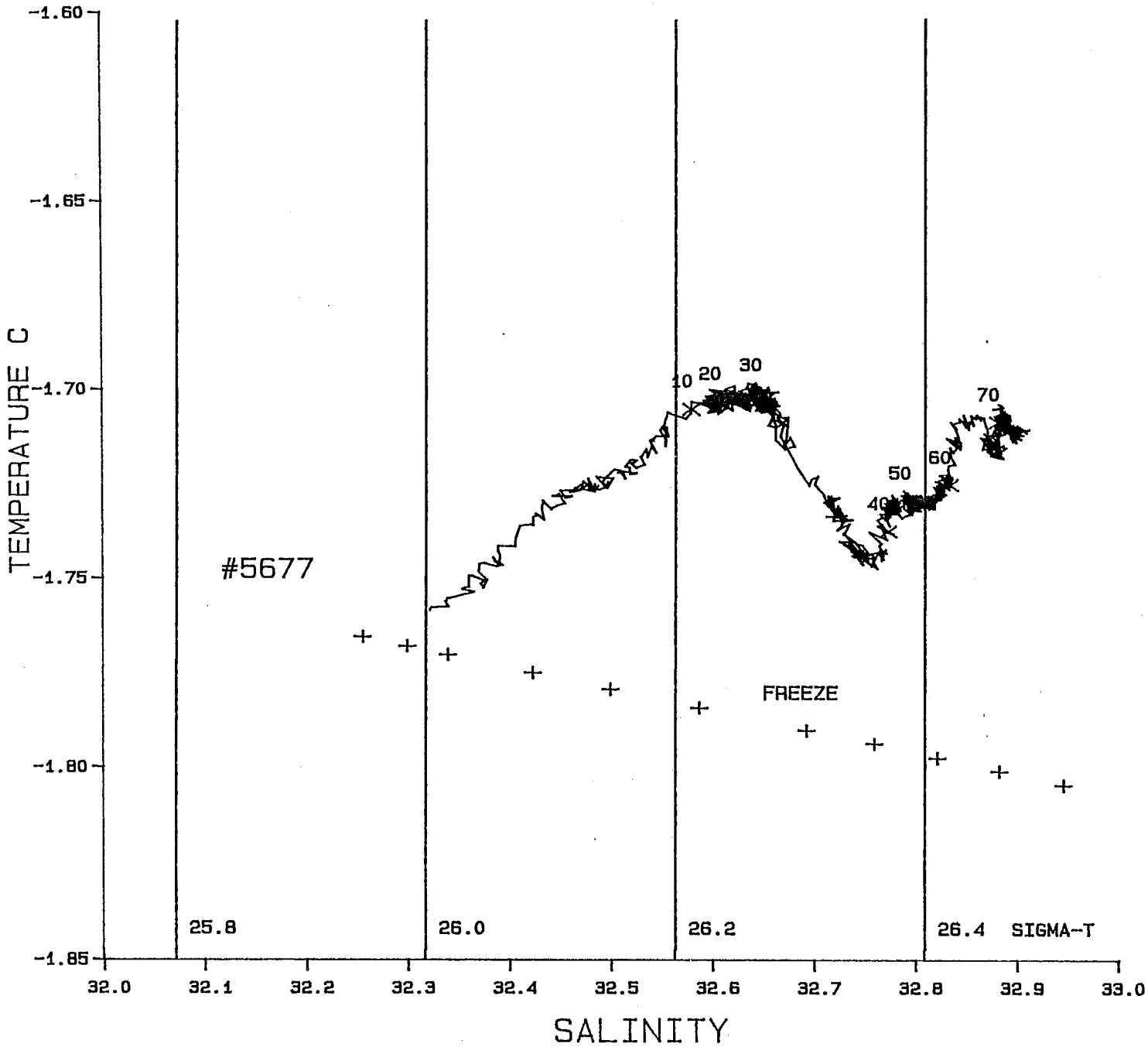
T-S PLOT FOR EXP. No. 5675



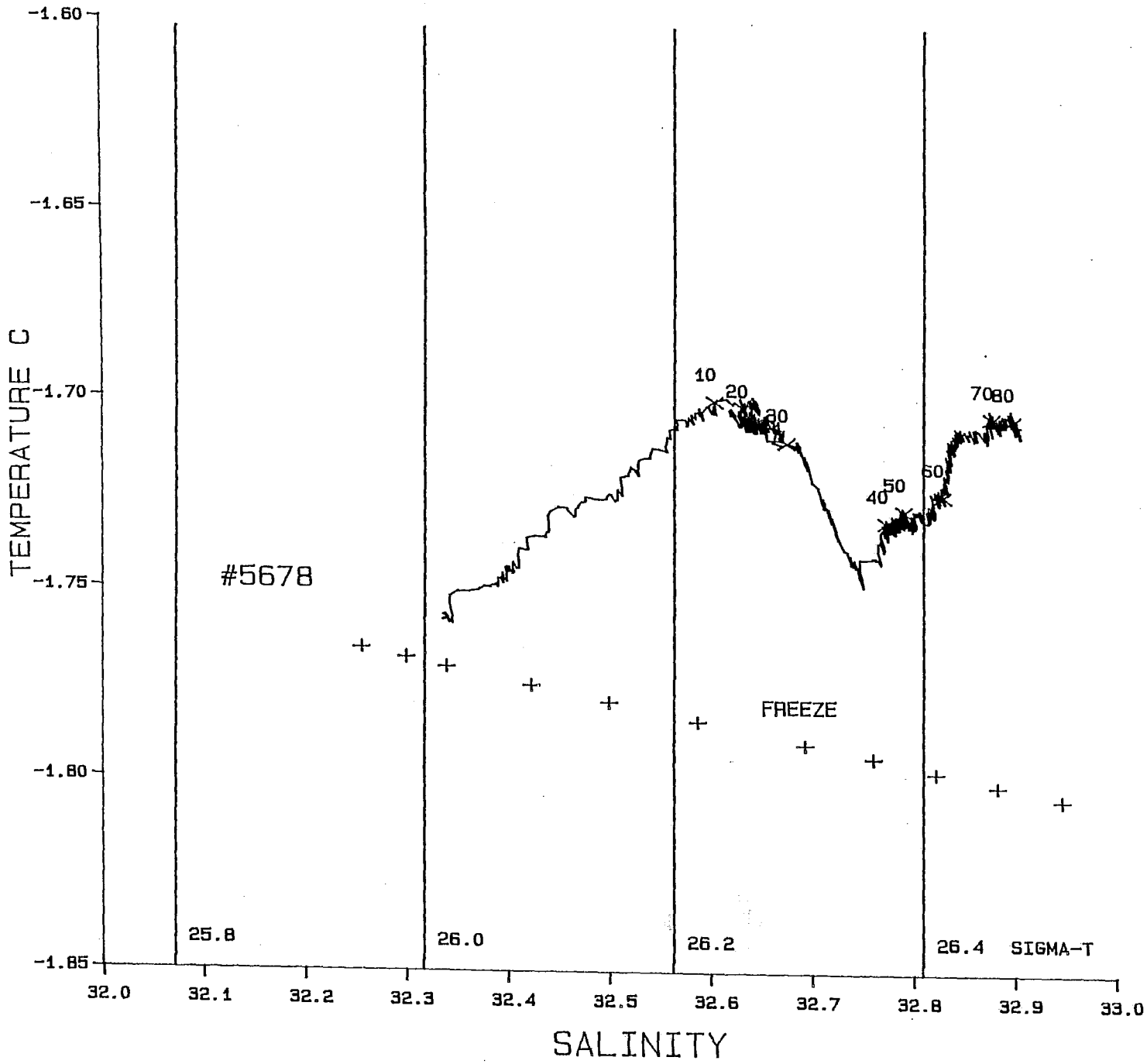
T-S PLOT FOR EXP. NO. 5676



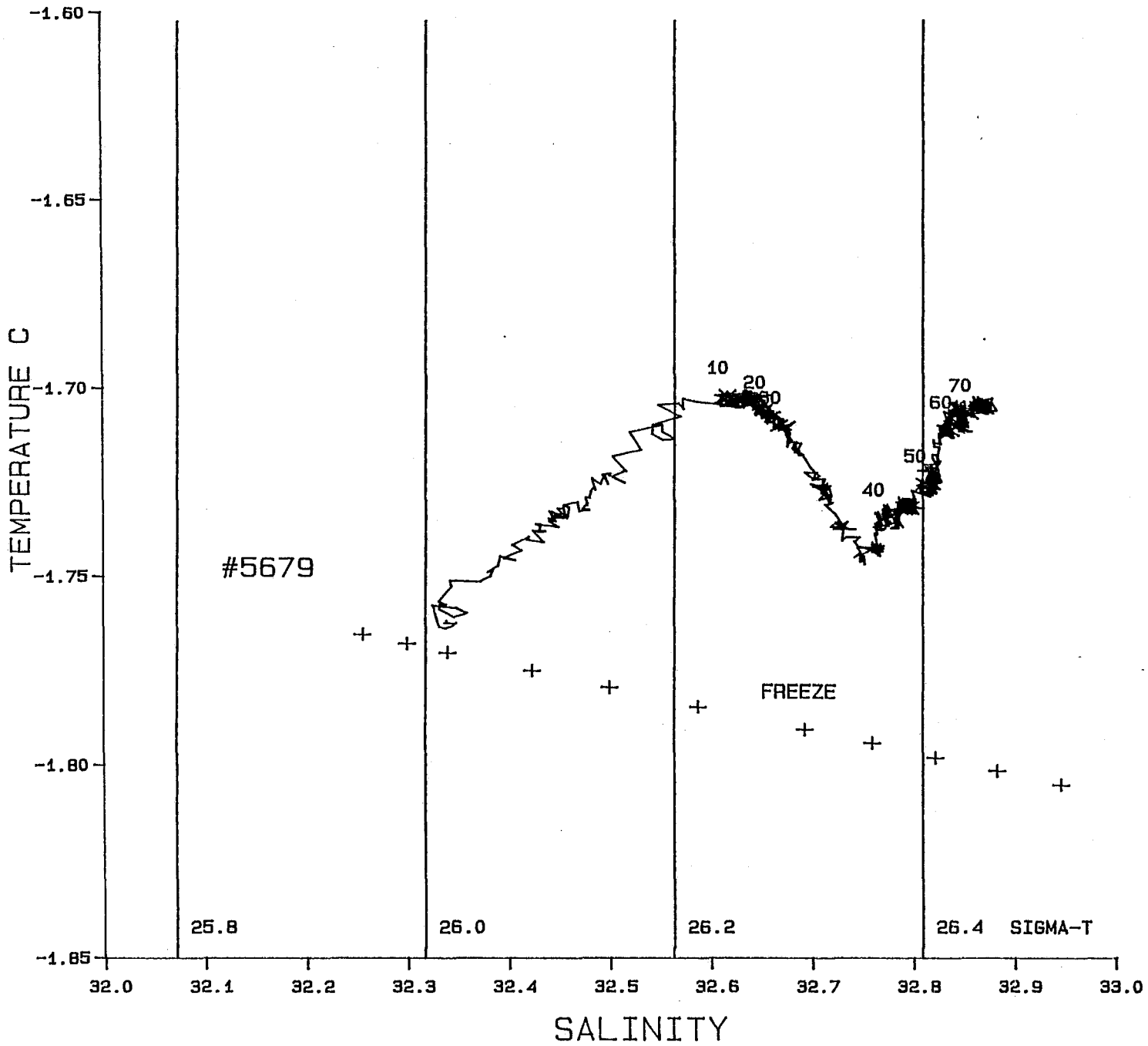
T-S PLOT FOR EXP. No. 5677



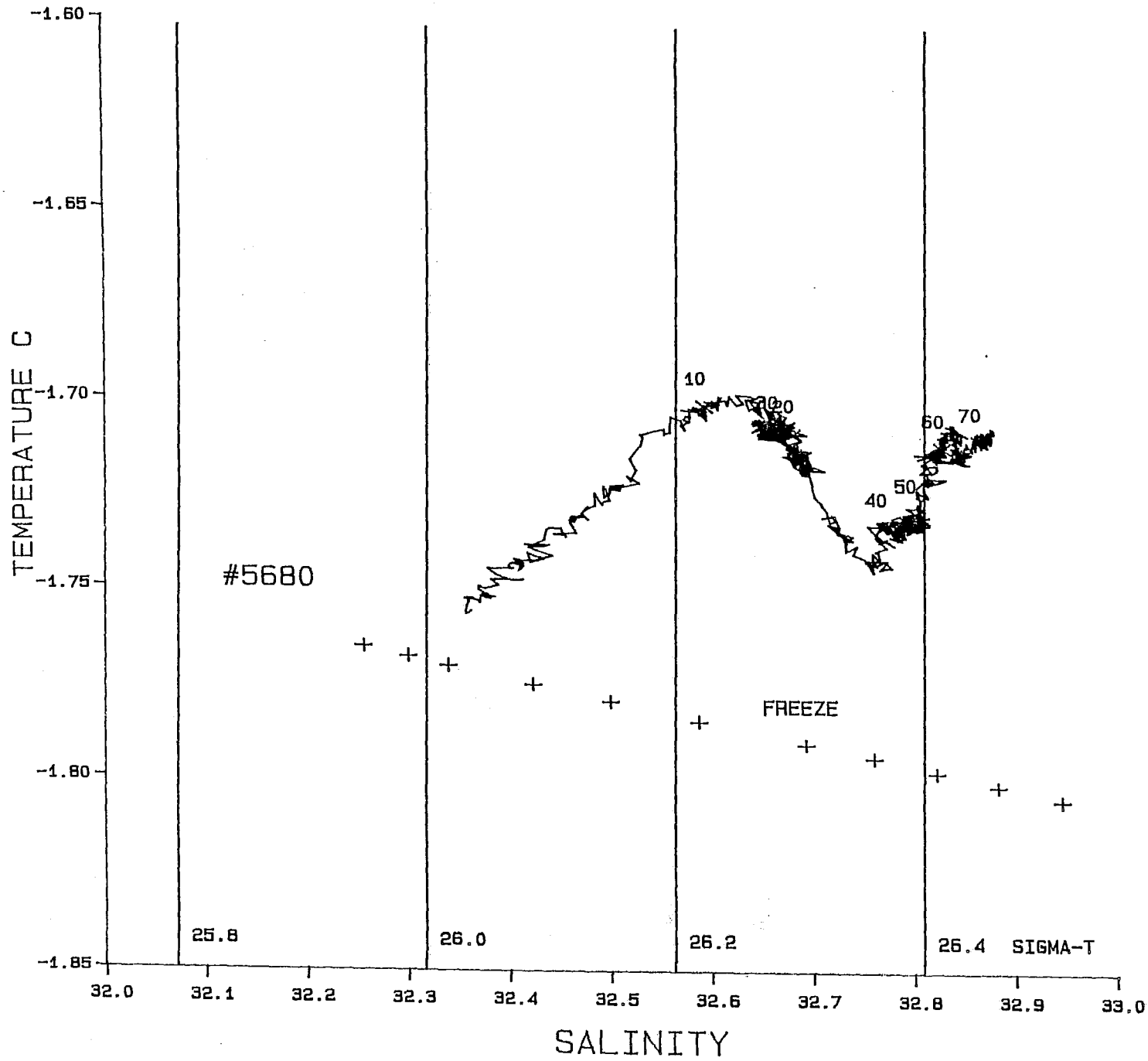
T-S PLOT FOR EXP. No. 5678



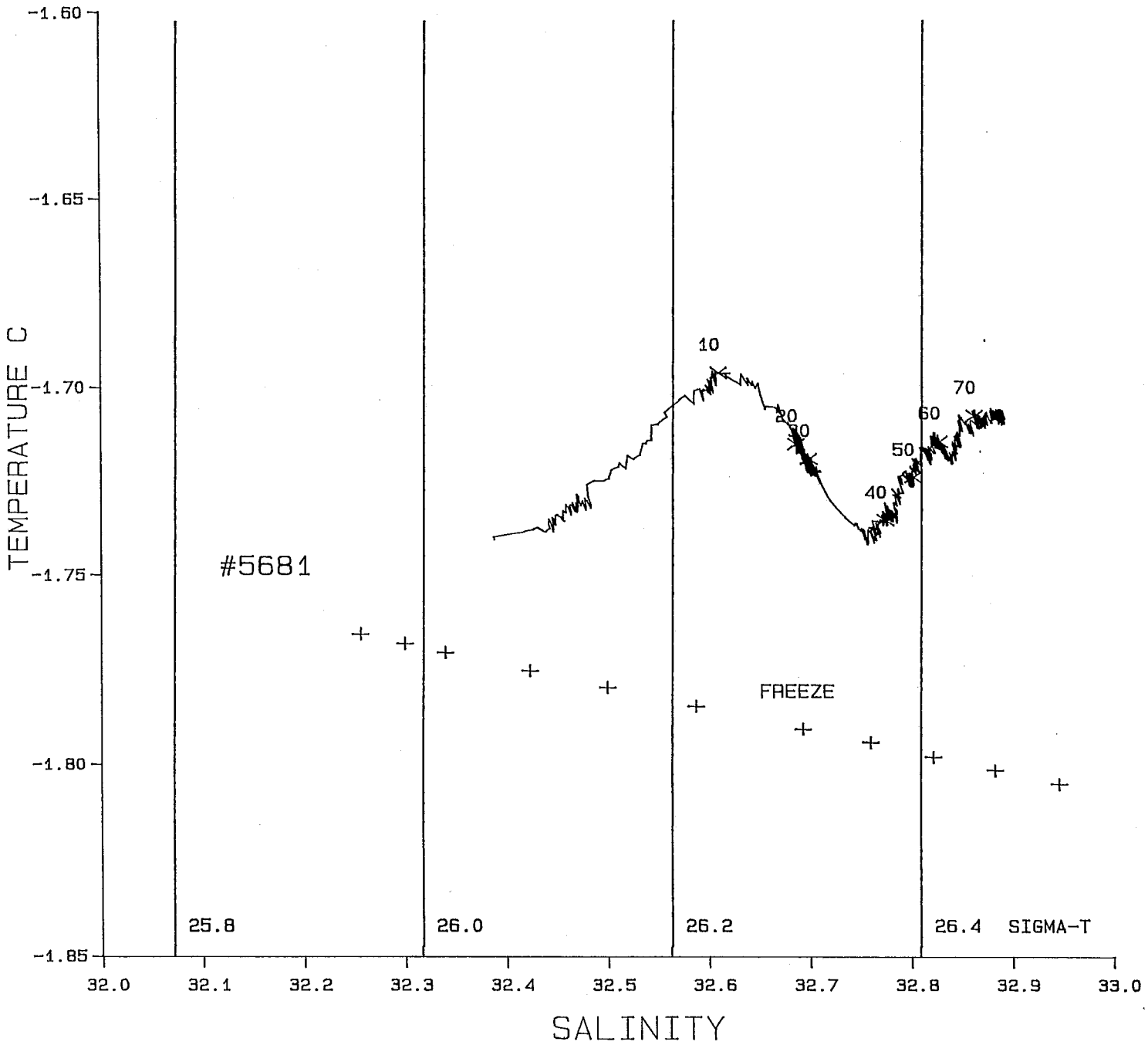
T-S PLOT FOR EXP. NO. 5679



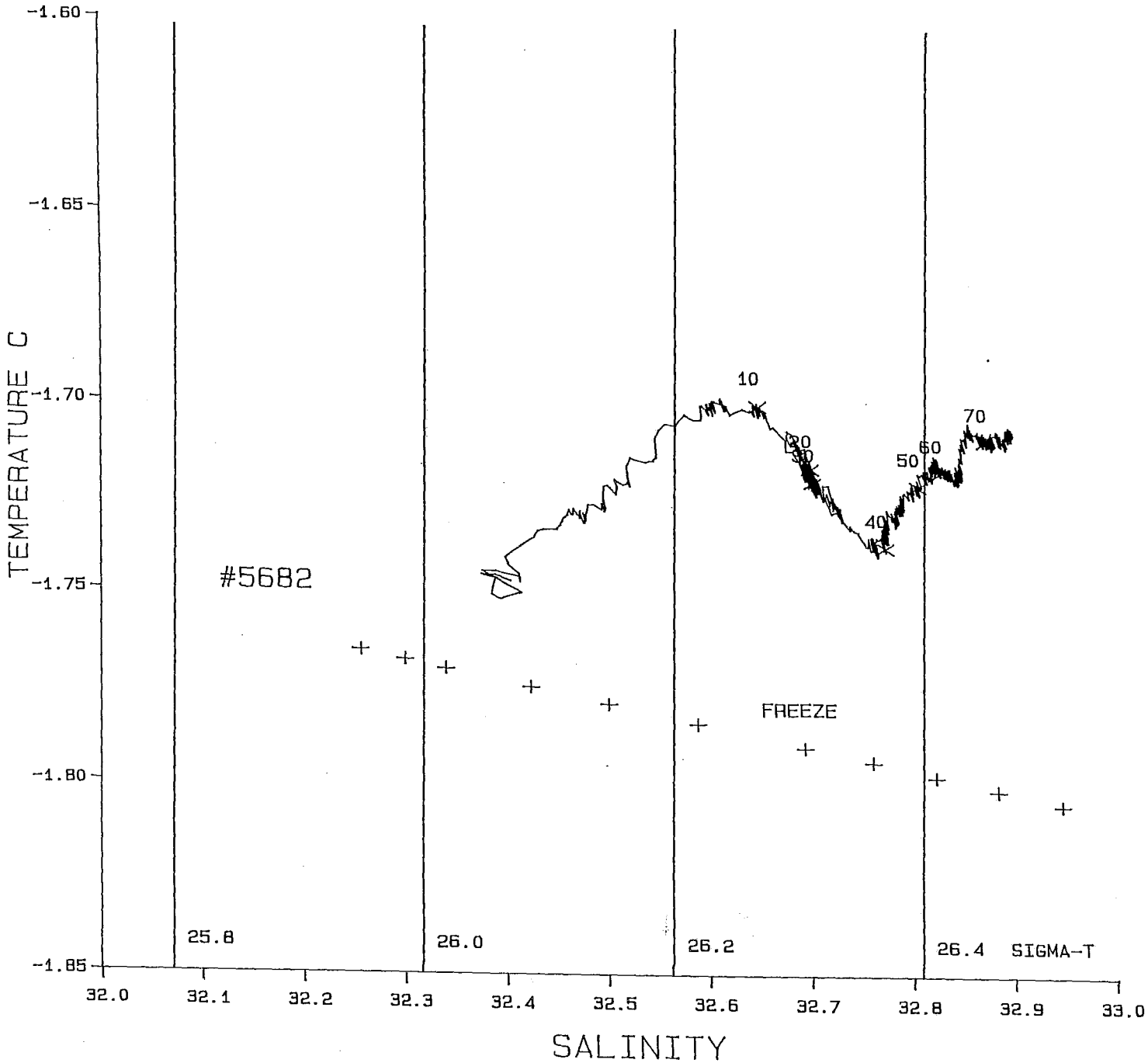
T-S PLOT FOR EXP. No. 5680



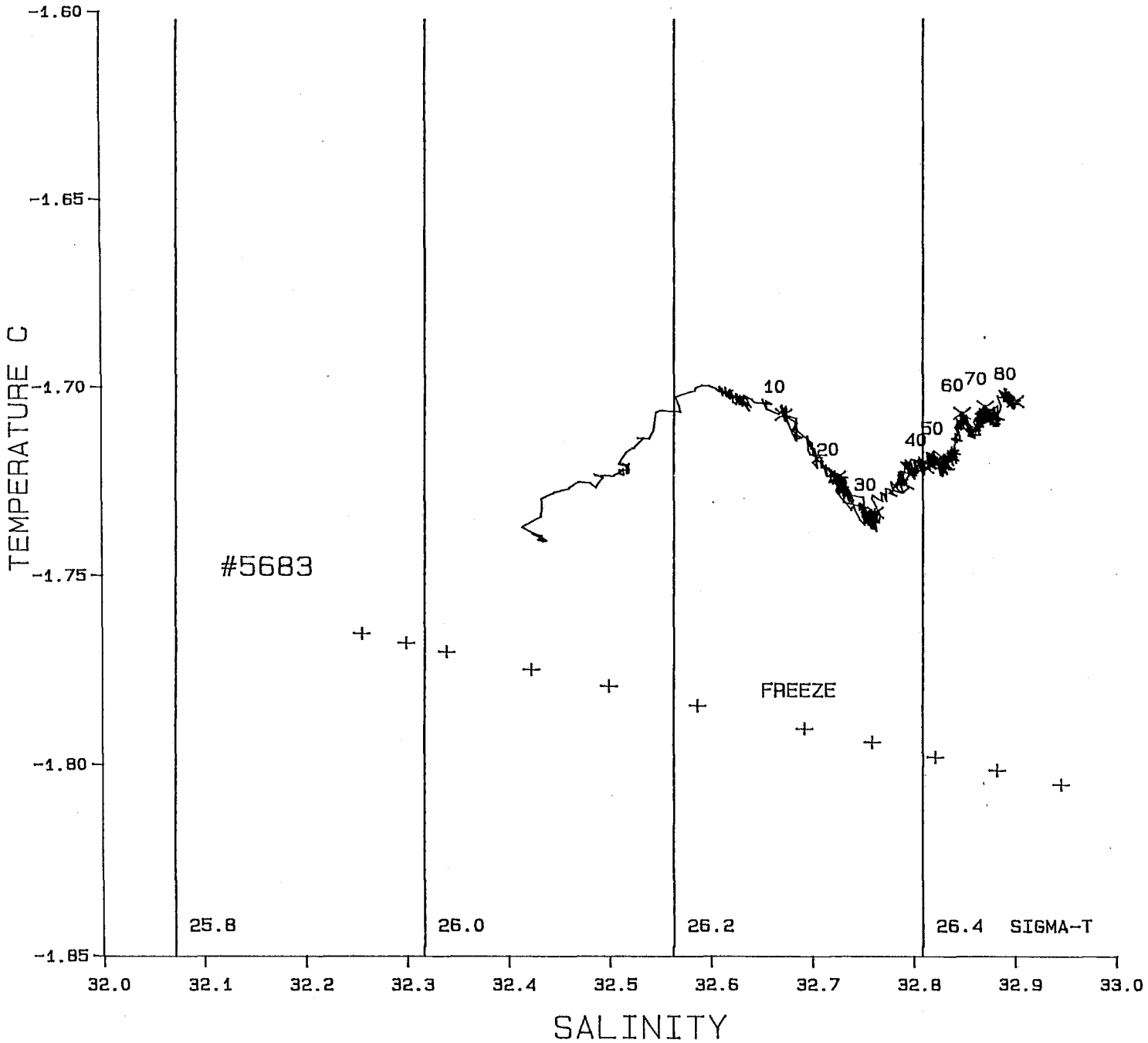
T-S PLOT FOR EXP. No. 5681



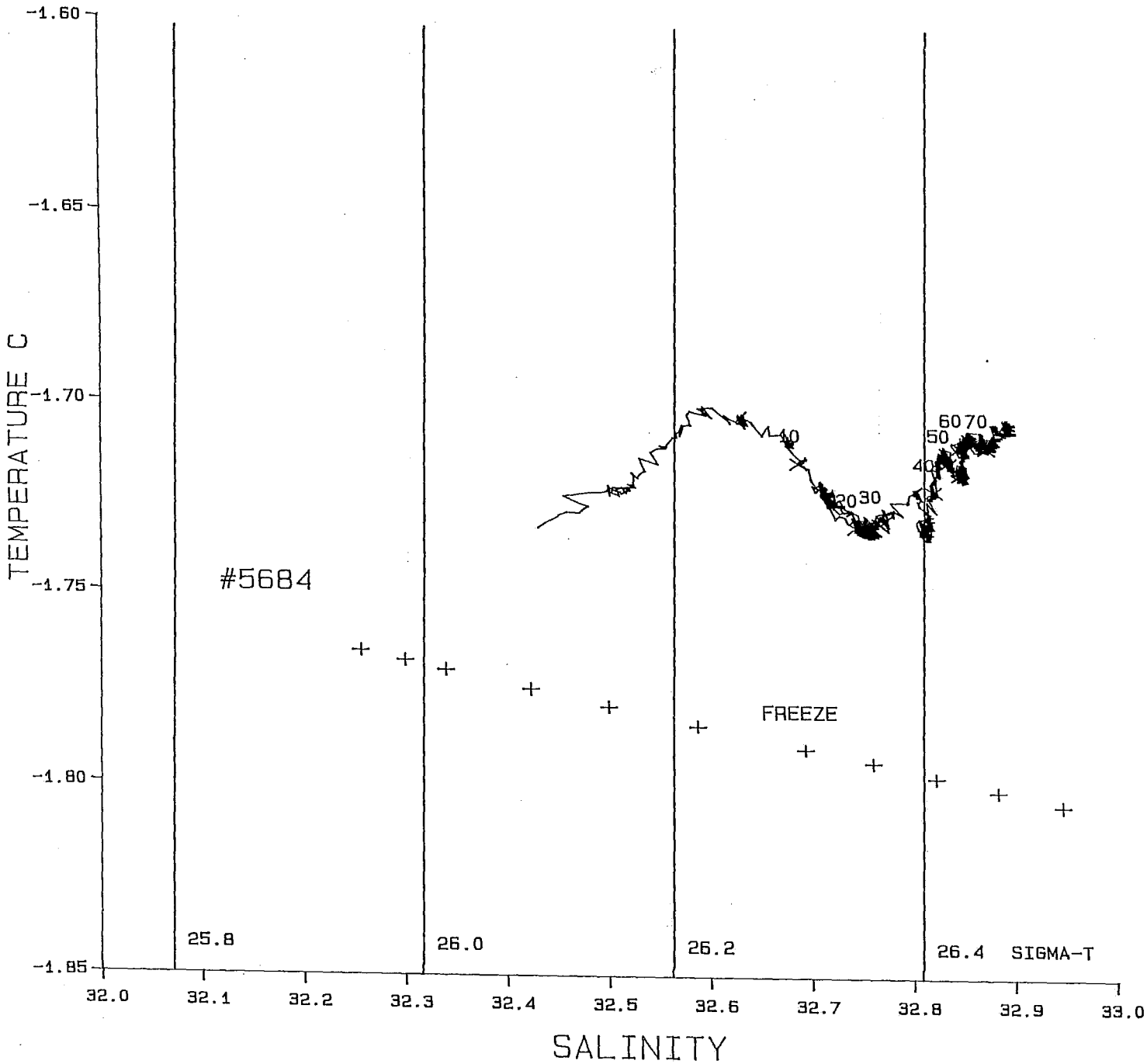
T-S PLOT FOR EXP. NO. 5682



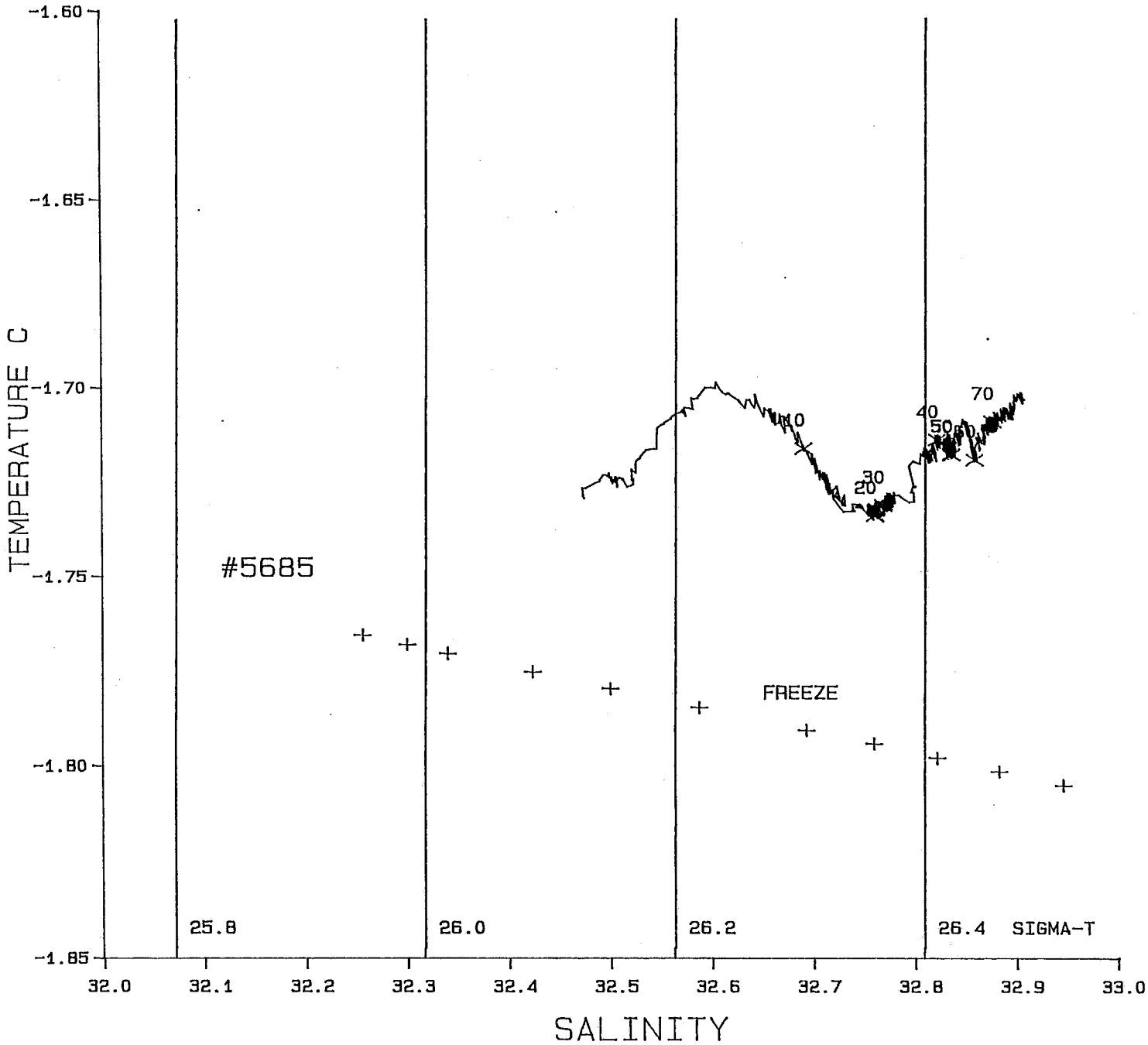
T-S PLOT FOR EXP. No. 5683



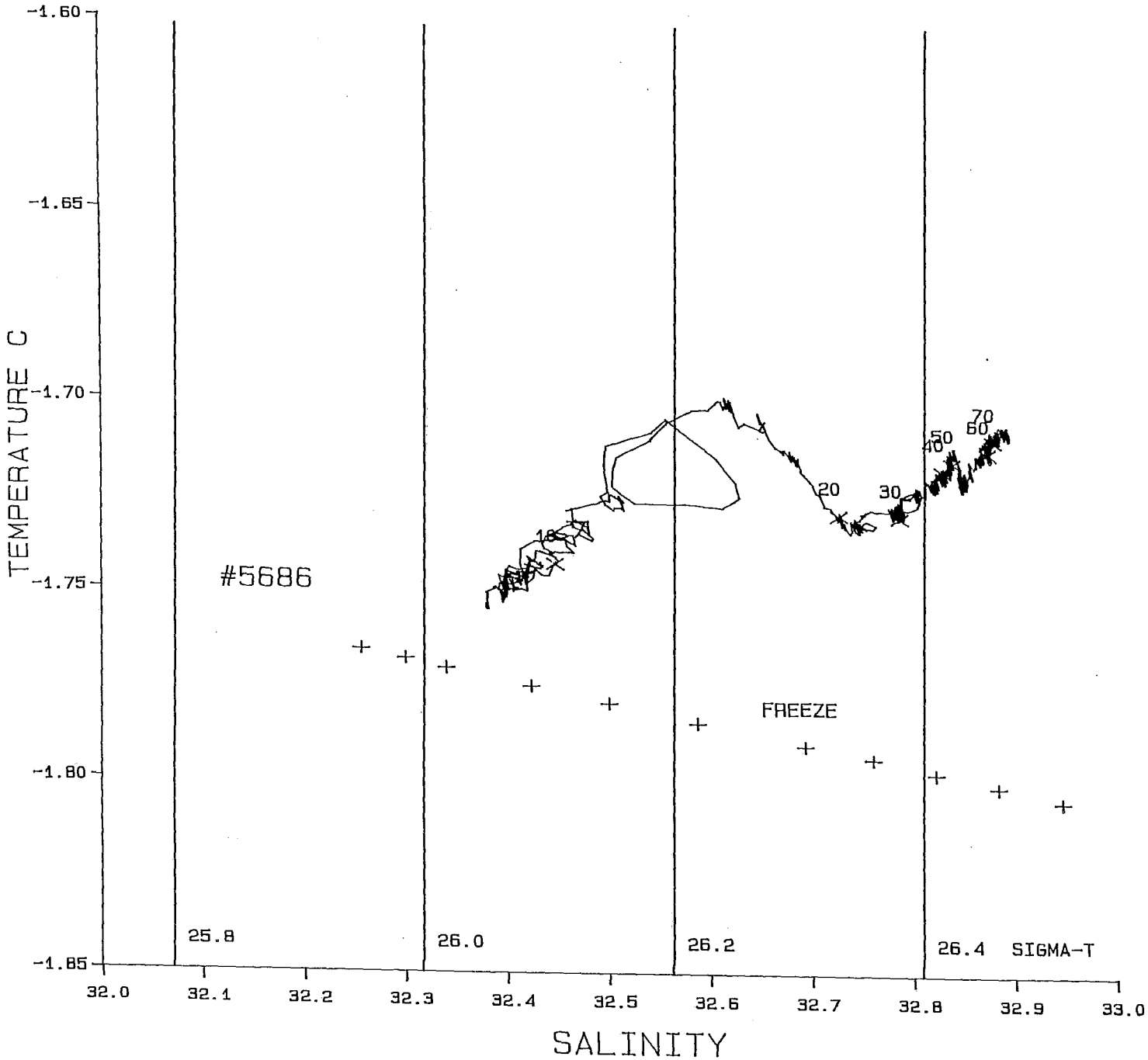
T-S PLOT FOR EXP. NO. 5684



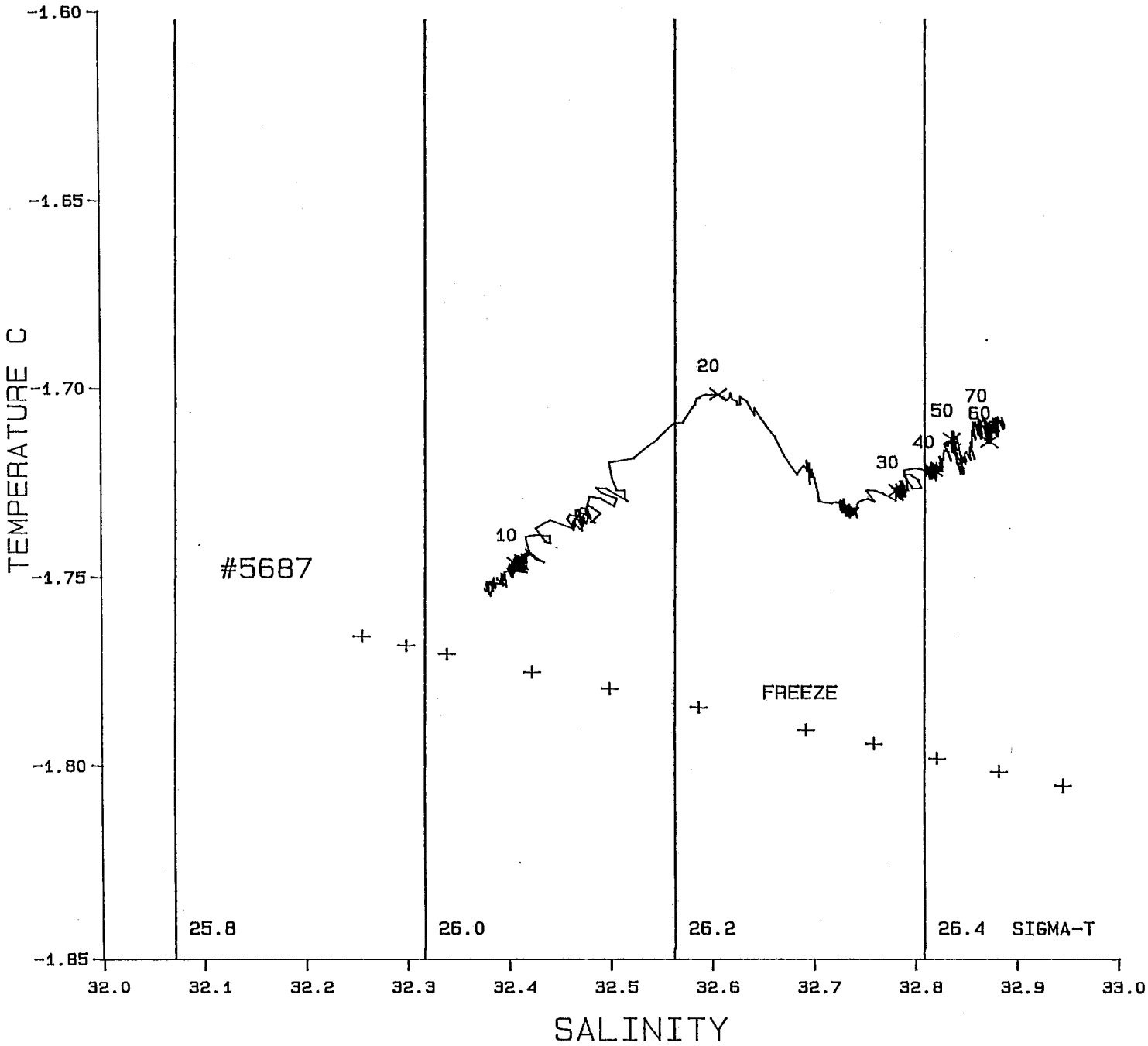
T-S PLOT FOR EXP. No. 5685



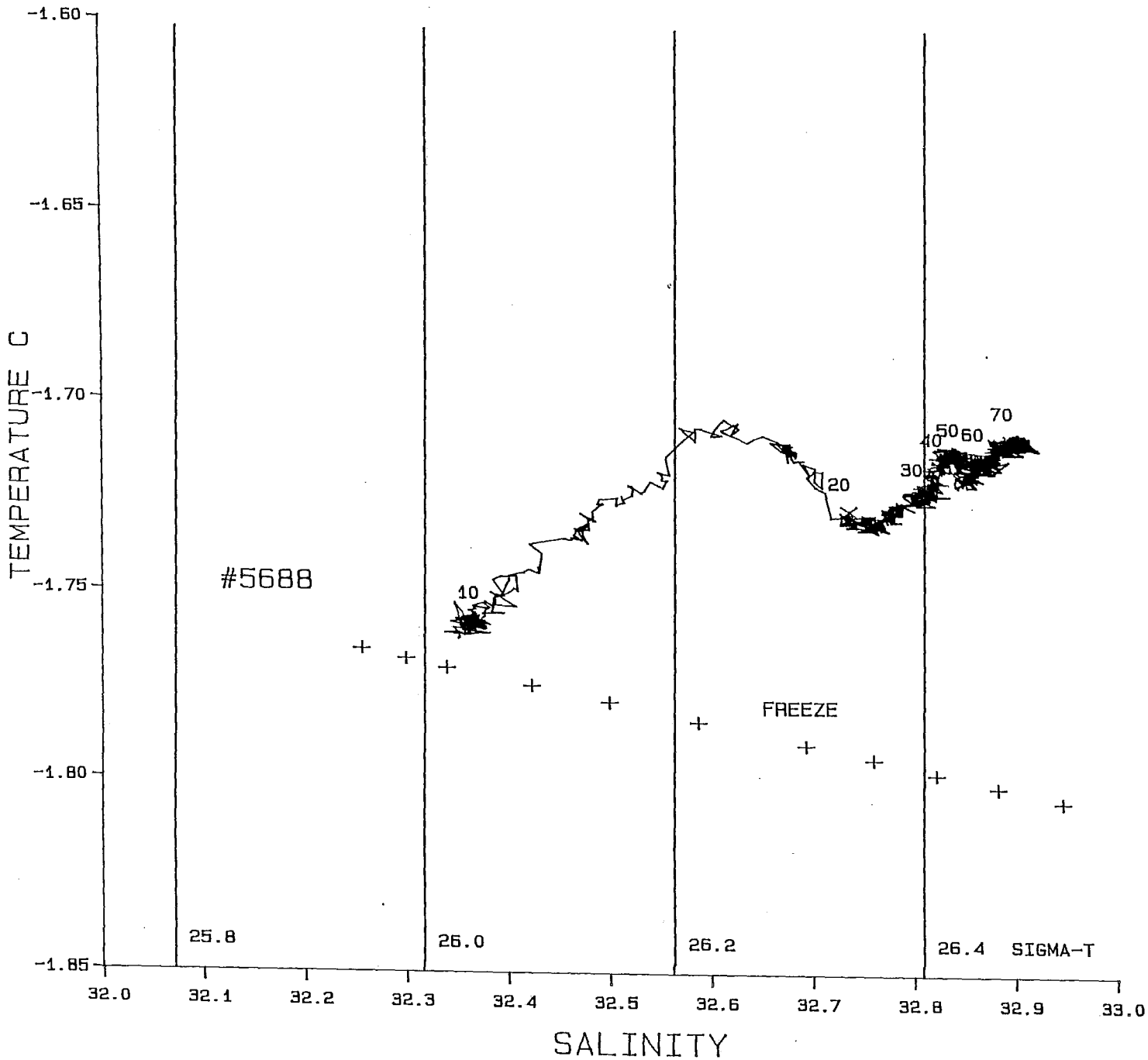
T-S PLOT FOR EXP. No. 5686



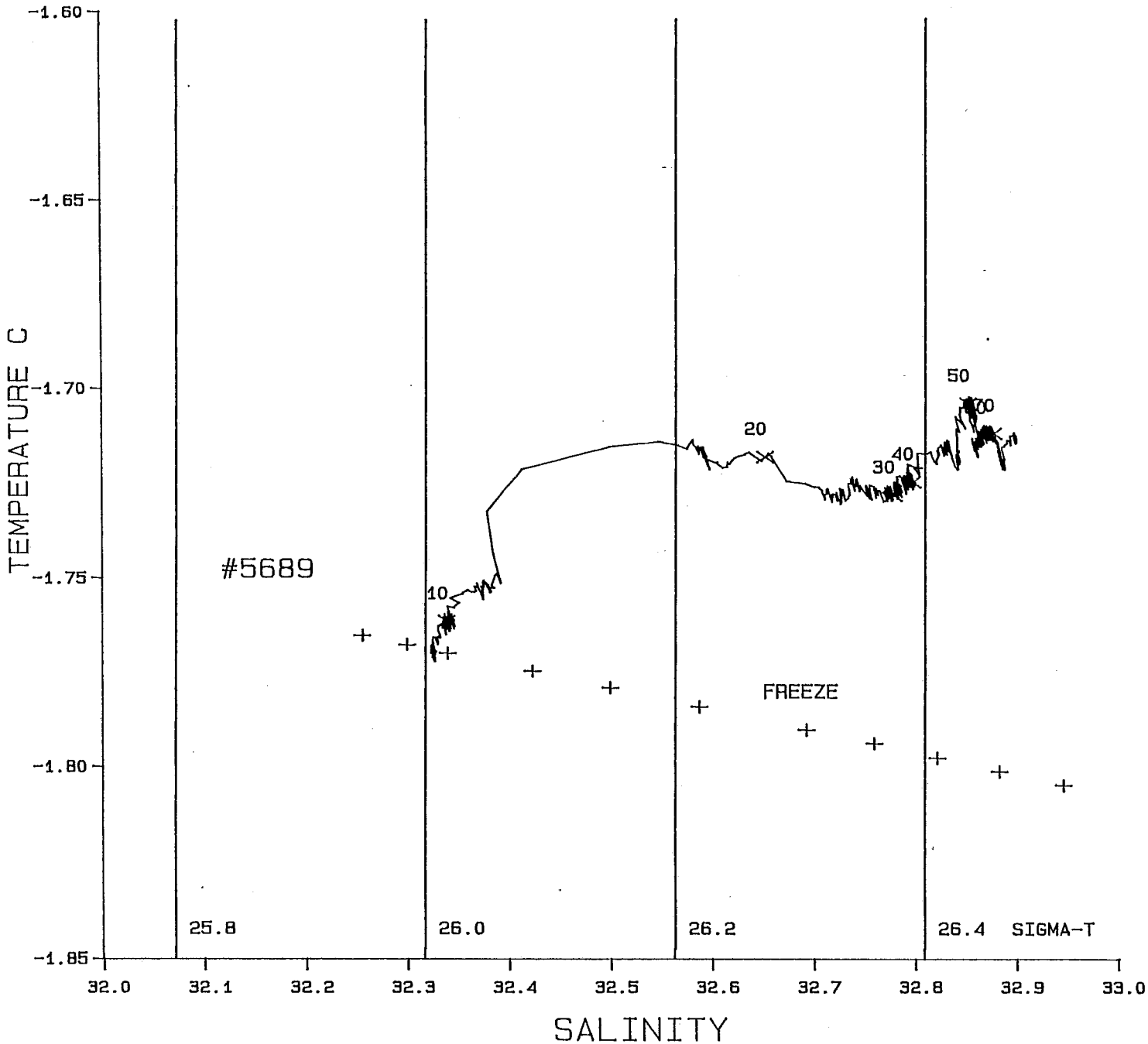
T-S PLOT FOR EXP. NO. 5687



T-S PLOT FOR EXP. No. 5688



T-S PLOT FOR EXP. No. 5689



Appendix 4

Index of acoustic data tapes

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 0 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
1A	11:10	11:40	0	877	
2A	11:40	12:12	886	1805	
1B	12:11	12:42	1614	2228	
2B	12:41	13:12	2238	2788	
3A	13:11	13:42	2793	3274	
4A	13:41	14:12	3281	3646/3724	Gap at 14:02, power out.
3B	14:11	14:42	3728	4147	
4B	14:41	15:12	4153	4551	
5A	15:11	15:42	4558	4932	Stand alond units turned on.
6A	15:41	16:12	4947	5308	
5B	16:11	16:42	5313	5653	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	2	1	3	4	5	6	7	8

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 0 TAPE: B

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
6B	16:41	17:12	0009	884	
7A	17:11	17:42	903	1595	
8A	17:41	18:12	1607	2213	
7B	18:11	18:42	2224	2755	
8B	18:41	19:12	2766	3255	
9A	19:11	19:42	3266	3721	
10A	19:41	20:12	3730	4150	
9B	20:11	20:42	4160	4551	
10B	20:41		4562	4797	Stopped at 339 counts, short record
11A	21:12	21:42	4804	5163	
12A	21:41	22:12	5165	5520	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	2	1	3	4	5	6	7	8

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 0 TAPE: C

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
11B	22:11	22:42	0011	0888	
12B	22:41	23:12	908	1600	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	2	1	3	4	5	6	7	8

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 1 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME (local)	END TIME (local)	VIDEO DATA START	COUNTS DATA END	NOTES
1A	00:00	00:31	0007	895	Small gap at start
2A	00:30	01:01	907	1608	
1B	01:00	01:31	1617	2215	
2B	01:30	02:01	2225	2763	
3A	02:00	02:31	2771	3258	
4A	02:30	03:01	3261	3713	
3B	03:00	03:31	3716	4136	
4B	03:30	04:01	4142	4538	
5A	04:00	04:31	4546	4922	
6A	04:30	05:01	4930	5286	
5B	05:00	05:31	5293	5635	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	10	2	4	6	7	8	1

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 1 TAPE: B

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
6B	05:30	06:01	0013	0888	
7A	06:00	06:31	0896	1586	
8A	06:30	07:01	1593	2193	
7B	07:00	07:31	2200	2734	
8B	07:30	08:01	2740	3229	
9A	08:00	08:31	3237	3687	
10A	08:30	09:01	3695	4112	
9B	09:00	09:31	4114	4505	
10B	09:30	10:01	4516	4892	
11A	10:00	10:31	4900	5253	
12A	10:30	11:01	5261	5600	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	10	2	4	6	7	8	1

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 1 TAPE: C

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
11B	11:00	11:31	0009	887	
12B	11:30	12:01	893	1597	
13A	12:00	12:31	1604	2218	
14A	12:30	13:01	2224	2764	
13B	13:00	13:01	2773	3273	
14B	13:30	14:01	3280	3733	
15A	14:00	14:31	3739	4148	
16A	14:30	15:01	4152	4555	
15B	15:00	15:31	4503	4939	
16B	15:30	16:01	4949	5311	
17A	16:00	16:31	5318	5666	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	10	2	4	6	7	8	1

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 1 TAPE: D

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
18A	16:30	17:01	0015	893	
17B	17:00	17:31	904	1612	
18B	17:30	18:01	1620	2226	Transducer #9 only.
19A	18:30	19:01	2237	2778	#1 and #9 only.

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	10	2	4	6	7	8	1
18B	9	9	9	9	9	9	9	9
19A	9	1	9	1	9	1	9	1

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 2 TAPE: A 29/4/85

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
1A	04:00	04:31	0011	883	
2A	04:30	05:01	892	1603	
1B	05:00	05:31	1626	2227	
2B	05:30	06:01	2291	2818	
3A	06:00	06:31	2857	3336	
4A	06:30	07:01	3343	3790	
3B	07:00	07:31	3796	4207	
4B	07:30	08:01	4214	4609	
5A	08:00	08:31	4617	4988	
6A	08:30	09:01	4995	5350	
5B	09:00	09:31	5355	5700	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	10	2	4	6	7	8	1

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 2 TAPE: B 29/4/85

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME (local)	END TIME (local)	VIDEO DATA START	COUNTS DATA END	NOTES
6B	09:31:15	10:01	0009	848	
7A	10:00	10:31	858	1567	
8A	10:30	11:01	1578	2188	
7B	11:00	11:31	2195	2732	
8B	11:30	12:01	2739	3231	
9A	12:00	12:31	3238	3690	
10A	12:30	13:01	3696	4122	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	10	2	4	6	7	8	1

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 4 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
1A	04:02	04:31	0012	889	
2A	04:30	05:01	898	1589	
1B	05:00	05:31	1596	2205	
2B	05:30	06:01	2213	2755	
3A	06:00	06:31	2761	3249	
4A	06:30	07:01	3256	3710	
3B	07:00	07:31	3715	4139	
4B	07:30	08:01	4146	4546	
5A	08:00	08:31	4551	4928	
6A	08:30	09:01	4933	5291	
5B	09:00	09:31	5297	5637	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	10	2	3	4	5	6	7

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 4 TAPE: B

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
6B	09:30	10:01	0011	885	
7A	10:00	10:31	893	1597	
8A	10:30	11:01	1605	2211	
7B	11:00	11:31	2219	2755	
8B	11:30	12:01	2762	3249	
9A	12:00	12:31	3255	3694	Recorded at "LP" speed
10A	12:30	13:01	3700	4339	" " " "
9B	13:00	13:31	4347	4921	" " " "
10B	13:30	14:01	4927	5461	" " " "

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	10	2	3	4	5	6	7

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 5 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
1A	19:00	19:31	0013	1256	Transducer 1 only
2A	19:30	20:01	1270	2213	" " "
1B	20:00	?	2221	2338	not ½ hr of data on tape.

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	–	1	–	–	–	–	–	–

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 6 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
1A	06:00	06:31	0011	882	
2A	06:30	07:01	892	1596	
1B	07:00	07:31:30	1603	2217	
2B	07:30	08:01	2224	2766	
3A	08:00	08:31	2774	3263	
4A	08:30	09:01	3269	3719	
3B	09:00	09:31	3726	4148	
4B	09:30	10:01	4153	4552	
5A	10:00	10:31	4558	4939	
6A	10:30	11:01	4947	5309	
5B	11:00	11:31	5312	5655	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	1	2	3	4	5	6	7

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 6 TAPE: B

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
6B	11:30	12:01	0012	889	
7A	12:00	*---	897	1375	*Cassette tape stopped at unknown time for some reason. Approx 10 min. data lost. Ran approx. 21 min. before stopping.
8A	12:30	13:01	1382	2013	
7B	13:00	13:31	2020	2575	
8B	13:30	14:02	2581	3094	
9A	14:02	14:31	3099	3525	
10A	14:30	15:01	3532	3970	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	1	2	3	4	5	6	7

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 7 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
1A	06:00	06:31	0007	0882	
2A	06:30	07:01	0888	1581	
1B	07:00	07:31	1586	2187	
2B	07:30	08:01	2193	2731	
3A	08:00	08:31	2743	3233	
4A	08:30	09:01	3239	3690	
3B	09:00	09:31	3696	4119	
4B	09:30	10:01	4125	4530	
5A	10:00	10:31	3536	4912	
6A *	10:30:45	11:01	4921	5272	
6B *	11:02	11:31	5279	5602	Tape not used?

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	1	2	3	4	5	6	7

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 7 TAPE: B

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
7A	11:30	12:01	0021	897	
8A	12:00	12:31	911	1614	
7B	12:30	13:01	1621	2222	
8B	13:00	13:31	2232	2766	
9A	13:30	14:01	2771	3257	Mislabel? Tape received as in series 2 #5A,B
10A	14:00	14:02	3265	3720	Mislabel? " "
9B	14:30	14:01	3227	4146	
10B	15:00	15:31	4152	4550	
11A	15:30	16:01	4554	4929	
12A	16:00	16:31	4934	5290	
11B	16:31	17:01	5293	5635	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8	
TRANSDUCER No.	9	1	2	3	4	5	6	7	
9B + part of 10B	9	(1)+	-	-	-	-	-	-	+5 min on tape 9
part of 10B-12B	9	9	9	9	9	9	9	9	

ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 7 TAPE: 6 C

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

SONY TAPE No.	START TIME(local)	END TIME(local)	VIDEO DATA START	COUNTS DATA END	NOTES
12B	17:00	17:31	0010	0881	

MULTIPLEXER SETTINGS

CHANNEL No.	1	2	3	4	5	6	7	8
TRANSDUCER No.	9	9	9	9	9	9	9	9

Appendix 5

Analyses of vertical plankton tow contents

Summary of Plankton Tows

Test No.	Depth Range	Start Time, GMT	Finish Time, GMT	Tow Speed m/s	Acoustic Record
1	115-0	16:45	16:55	Hand	Series 2 tape
2	75-0	17:33	17:39	1.0	Series 2 tape
3	15-0	---	17:45	1.0	Series 2 tape
4	75-0	18:03	18:08	1.0	Series 2 tape
5	15-0	18:13	18:16	1.0	Series 2 tape
6	115-0	18:29	18:33	1.0	Series 2 tape
7	75-0	19:50	19:52	0.5	Paper only
8	35-0	---	20:05	0.5	Paper only
9	75-0	20:15	---	0.5	Paper only
10	15-0	20:22	20:26	0.5	Paper only
11	50-0	20:27	---	1.5	Paper only

SAMPLE NO. 1 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 115-0

TOW SPEED m/s By hand

Numbers/Total Sample

	STAGE					
	II	III	IV	V	VI	TOTAL
COPEPODA						
Metridia longa	--	--	25	12	6	43
Calanus hyperboreus	--	6	6	1	--	13
Calanus glacialis	1	29	15	--	--	45
Pseudocalanus sp.						--
Euchaeta sp.						3
Acartia						1
Xanthocalanus						1
Microcalanus						--
Oithona						--
CNIDARIA						
Aglantha digitale						3
AMPHIPODA						
Parathemisto sp.						1
CTENOPHORA						
Larvae						--
MOLLUSCA						
Limacina helicina						--
Clione limacina						--
CHAETOGNATHA						
Sagitta elegans						2
UROCHORDATA						
Oikopleura labradoreinsis						1
FISH						
Larvae						--

SAMPLE NO. 2 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 75-0

TOW SPEED m/s 1.0

Numbers/Total Sample

	STAGE					
	II	III	IV	V	VI	TOTAL
COPEPODA						
Metridia longa	--	5	13	--	--	18
Calanus hyperboreus	--	4	9	--	--	13
Calanus glacialis	2	27	5	--	1	35
Pseudocalanus sp.						16
Euchaeta sp.						3
Acartia						--
Xanthocalanus						1
Microcalanus						4
Oithona						2
CNIDARIA						
Aglantha digitale						1
AMPHIPODA						
Parathemisto sp.						5
CTENOPHORA						
Larvae						2
MOLLUSCA						
Limacina helicina						6
Clione limacina						--
CHAETOGNATHA						
Sagitta elegans						--
UROCHORDATA						
Oikopleura labradoreinsis						1
FISH						
Larvae						--

SAMPLE NO. 3 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 15-0

TOW SPEED m/s 1.0

Numbers/Total Sample

	STAGE					
	II	III	IV	V	VI	TOTAL
COPEPODA						
Metridia longa						--
Calanus hyperboreus	--	2	--	--	--	2
Calanus glacialis	--	4	--	--	--	4
Pseudocalanus sp.						5
Euchaeta sp.						--
Acartia						--
Xanthocalanus						--
Microcalanus						--
Oithona						--
CNIDARIA						
Aglantha digitale						--
AMPHIPODA						
Parathemisto sp.						3
CTENOPHORA						
Larvae						--
MOLLUSCA						
Limacina helicina						--
Clione limacina						--
CHAETOGNATHA						
Sagitta elegans						--
UROCHORDATA						
Oikopleura labradoreinsis						1
FISH						
Larvae						--

SAMPLE NO. 4 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 75-0

TOW SPEED m/s 1.0

Numbers/Total Sample

	STAGE					
	II	III	IV	V	VI	TOTAL
COPEPODA						
Metridia longa	--	4	1	--	--	5
Calanus hyperboreus	--	4	3	--	--	7
Calanus glacialis	--	27	10	--	2	39
Pseudocalanus sp.						15
Euchaeta sp.						2
Acartia						--
Xanthocalanus						--
Microcalanus						--
Oithona						--
CNIDARIA						
Aglantha digitale						1
AMPHIPODA						
Parathemisto sp.						5
CTENOPHORA						
Larvae						--
MOLLUSCA						
Limacina helicina						4
Clione limacina						1
CHAETOGNATHA						
Sagitta elegans						--
UROCHORDATA						
Oikopleura labradoreinsis						3
FISH						
Larvae						--

SAMPLE NO. 5 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 15-0

TOW SPEED m/s 1.0

Numbers/Total Sample

	STAGE					
	II	III	IV	V	VI	TOTAL
COPEPODA						
Metridia longa	1	--	--	--	--	1
Calanus hyperboreus						--
Calanus glacialis	--	1	--	--	--	1
Pseudocalanus sp.						2
Euchaeta sp.						--
Acartia						--
Xanthocalanus						--
Microcalanus						--
Oithona						--
CNIDARIA						
Aglantha digitale						--
AMPHIPODA						
Parathemisto sp.						--
CTENOPHORA						
Larvae						--
MOLLUSCA						
Limacina helicina						--
Clione limacina						--
CHAETOGNATHA						
Sagitta elegans						--
UROCHORDATA						
Oikopleura labrado-reinsis						1
FISH						
Larvae						--

SAMPLE NO. 6 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 115-0

TOW SPEED m/s 1.0

Numbers/Total Sample

	STAGE					
	II	III	IV	V	VI	TOTAL
COPEPODA						
Metridia longa	--	6	23	11	7	47
Calanus hyperboreus	1	6	4	--	2	13
Calanus glacialis	2	31	13	--	3	49
Pseudocalanus sp.						18
Euchaeta sp.						1
Acartia						--
Xanthocalanus						--
Microcalanus						1
Oithona						--
CNIDARIA						
Aglantha digitale						1
AMPHIPODA						
Parathemisto sp.						3
CTENOPHORA						
Larvae						--
MOLLUSCA						
Limacina helicina						6
Clione limacina						--
CHAETOGNATHA						
Sagitta elegans						1
UROCHORDATA						
Oikopleura labradoreinsis						2
FISH						
Larvae						--

SAMPLE NO. 7 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 75-0

TOW SPEED m/s 0.5

Numbers/Total Sample

	STAGE					
	II	III	IV	V	VI	TOTAL
COPEPODA						
Metridia longa	--	2	10	7	3	22
Calanus hyperboreus	--	3	2	--	--	5
Calanus glacialis	---	14	2	--	1	17
Pseudocalanus sp.						--
Euchaeta sp.						--
Acartia						--
Xanthocalanus						--
Microcalanus						--
Oithona						--
CNIDARIA						
Aglantha digitale						1
AMPHIPODA						
Parathemisto sp.						--
CTENOPHORA						
Larvae						--
MOLLUSCA						
Limacina helicina						1
Clione limacina						--
CHAETOGNATHA						
Sagitta elegans						--
UROCHORDATA						
Oikopleura labradoreinsis						1
FISH						
Larvae						--

SAMPLE NO. 8 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 35-0

TOW SPEED m/s 0.5

Numbers/Total Sample

	STAGE					
	II	III	IV	V	VI	TOTAL
COPEPODA						
Metridia longa	--	--	6	1	--	7
Calanus hyperboreus						--
Calanus glacialis	1	6	2	--	--	9
Pseudocalanus sp.						8
Euchaeta sp.						1
Acartia						--
Xanthocalanus						--
Microcalanus						--
Oithona						--
CNIDARIA						
Aglantha digitale						--
AMPHIPODA						
Parathemisto sp.						--
CTENOPHORA						
Larvae						--
MOLLUSCA						
Limacina helicina						--
Clione limacina						--
CHAETOGNATHA						
Sagitta elegans						--
UROCHORDATA						
Oikopleura labradoreinsis						3
FISH						
Larvae						--

SAMPLE NO. 9 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 75-0

TOW SPEED m/s 0.5

Numbers/Total Sample

	STAGE					
	II	III	IV	V	VI	TOTAL
COPEPODA						
Metridia longa	--	1	12	4	3	20
Calanus hyperboreus	--	7	1	1	--	9
Calanus glacialis	--	23	7	--	2	32
Pseudocalanus sp.						11
Euchaeta sp.						3
Acartia						--
Xanthocalanus						--
Microcalanus						2
Oithona						--
CNIDARIA						
Aglantha digitale						--
AMPHIPODA						
Parathemisto sp.						--
CTENOPHORA						
Larvae						--
MOLLUSCA						
Limacina helicina						1
Clione limacina						--
CHAETOGNATHA						
Sagitta elegans						--
UROCHORDATA						
Oikopleura labrado-reinsis						--
FISH						
Larvae						--

SAMPLE NO. 10 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 15-0

TOW SPEED m/s 0.5

Numbers/Total Sample

	STAGE					
	II	III	IV	V	VI	TOTAL
COPEPODA						
Metridia longa	--	--	4	--	1	5
Calanus hyperboreus						--
Calanus glacialis	--	2	--	--	--	2
Pseudocalanus sp.						2
Euchaeta sp.						--
Acartia						--
Xanthocalanus						--
Microcalanus						--
Oithona						--
CNIDARIA						
Aglantha digitale						--
AMPHIPODA						
Parathemisto sp.						1
CTENOPHORA						
Larvae						--
MOLLUSCA						
Limacina helicina						1
Clione limacina						--
CHAETOGNATHA						
Sagitta elegans						--
UROCHORDATA						
Oikopleura labrado-reinsis						--
FISH						
Larvae						1

SAMPLE NO. 11 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 50-0

TOW SPEED m/s 1.5

Numbers/Total Sample

	STAGE					
	II	III	IV	V	VI	TOTAL
COPEPODA						
Metridia longa	---	---	2	---	---	2
Calanus hyperboreus	---	3	---	---	---	3
Calanus glacialis	1	16	1	---	---	18
Pseudocalanus sp.						---
Euchaeta sp.						---
Acartia						---
Xanthocalanus						---
Microcalanus						---
Oithona						---
CNIDARIA						
Aglantha digitale						---
AMPHIPODA						
Parathemisto sp.						---
CTENOPHORA						
Larvae						1
MOLLUSCA						
Limacina helicina						2
Clione limacina						---
CHAETOGNATHA						
Sagitta elegans						---
UROCHORDATA						
Oikopleura labradoreinsis						---
FISH						
Larvae						---