Water Density and Suspended Sediment Concentrations in Western Long Island Sound: 1986 - 1987

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Approved for Distribution

J.R. Schubel

J.R. Schubel, Director
October 1989

Special Report #88
Reference #89-9

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INTRODUCTION

One element of the Long Island Sound Study began in August of 1986 to examine the distribution of suspended particles in the Long Island Sound. Both seasonal and monthly hydrographic surveys were conducted in order to measure the concentration and distribution of suspended sediment. These surveys also provide information on the distribution of temperature, salinity, and sigma-t, paramters useful in aiding in the interpretation of the suspended sediment data. The purpose of this report is to present that data and discuss the more prominent patterns and trends.

STUDY AREA

Long Island Sound is a large estuary located between the Connecticut coastline to the north, and Long Island to the south (figure 1). It is 130 km long and 36 km wide at its widest point, and occupies an area of about 3200 square kilometers. The mean water depth of the Sound is about 20 meters. The Sound opens to the Race at its eastern end, and connects through the East River to New York Harbor in the west. The tide in the western Sound is a standing wave characterized by a relatively large range (2 meters), and a relatively low maximum tidal current (0.5 knots). Slack tide occurs very near the time of high and low tide and all phases of the tide, high and low tide for instance, occur nearly simultaneously through the region. Saline bottom water is transported from east to west through Long Island Sound from the Race in a classical estuarine circulation. This westward flow continues into the East River. There is a general freshening of the waters in the Sound to the west due to the fresh water inputs of the Connecticut, Thames and Housatonic Rivers entering from the Connecticut coast, the influence of the East River, and to a lesser degree, from groundwater inputs along the northern Long Island shoreline. A more detailed description with emphasis on the Sound's sedimentary system is given by Bokuniewicz (1988).

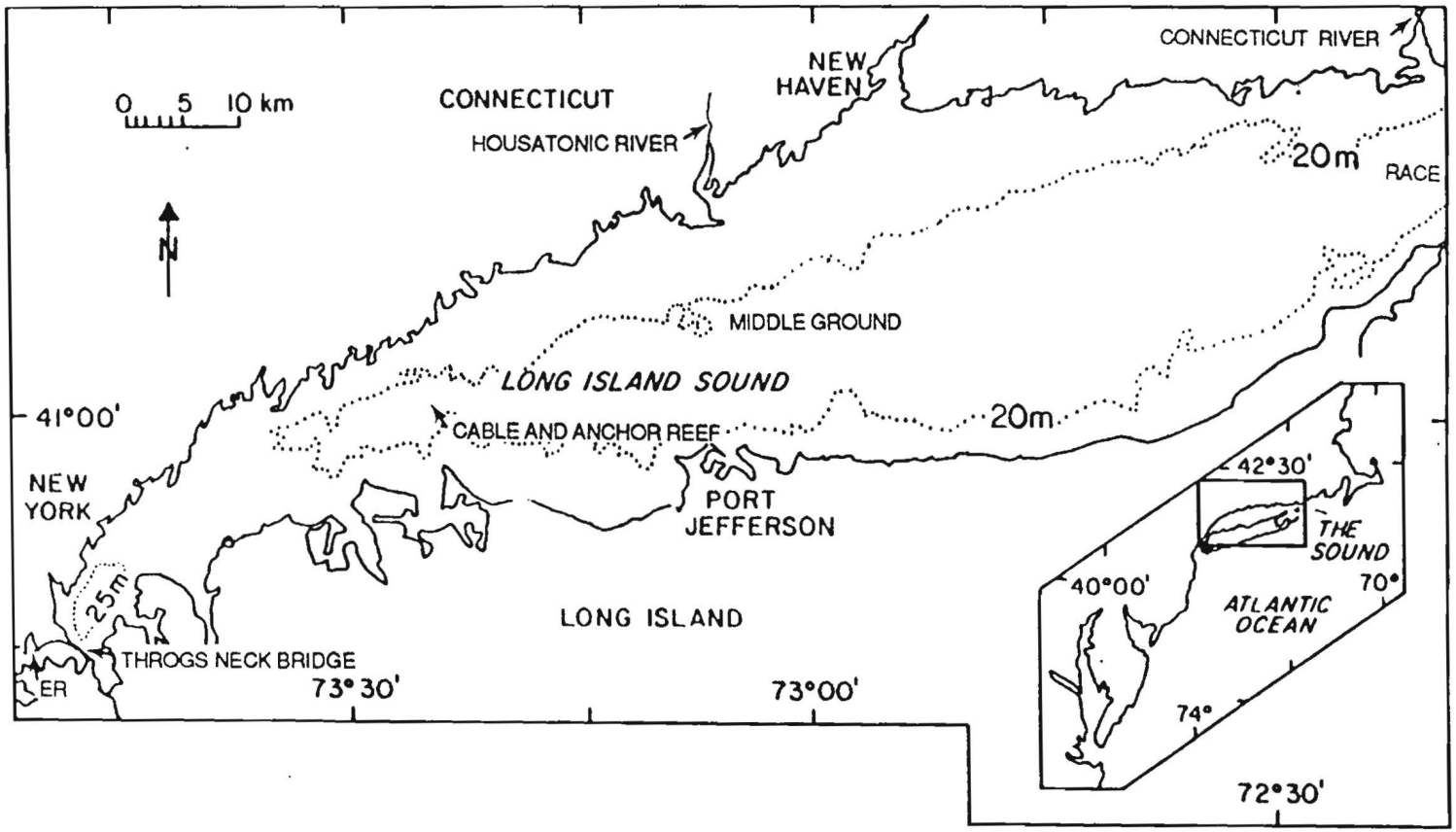

Figure 1. Location map. ER indicates the East River.

METHODS

The measurements of total suspended solids discussed in this report covered the area from the Throgs Neck Bridge east to Middle Ground (figure 1) and were made by personnel of the Marine Sciences Research Center of the State University of New York. Data for the section of the Sound from Middle Ground east to the Connecticut River were collected by the Marine Sciences Institute of the University of Connecticut and examples of these measurements are included in the appendices.

Eleven cruises were conducted between August 1986 and December 1987. Combined lateral (north/south transects) and axial (along the east/west length of the Sound) surveys were done in August and December 1986, and April 1987. Axial surveys alone were done in January, February, March, August, September, October, November and December 1987. Tables 1a and 1b list the latitude and longitude coordinates for both the lateral and axial stations sampled within the Sound. Figure 2 shows the sampling locations for the above listed stations. Sampling was done regardless of the phase of the tide.

The sampling procedure described below was that used by the Marine Sciences Research Center aboard the R/V Onrust. At each station, a Martek Multiparameter Mark VI Sensor was used to make in-situ measurements of depth, temperature, conductivity, and dissolved oxygen concentration. The calibration data for the Martek sensors are given in Appendix I. The temperature, depth and conductivity measurements were used to calculate salinity and sigma-t. Since water samples were also taken during the casts,

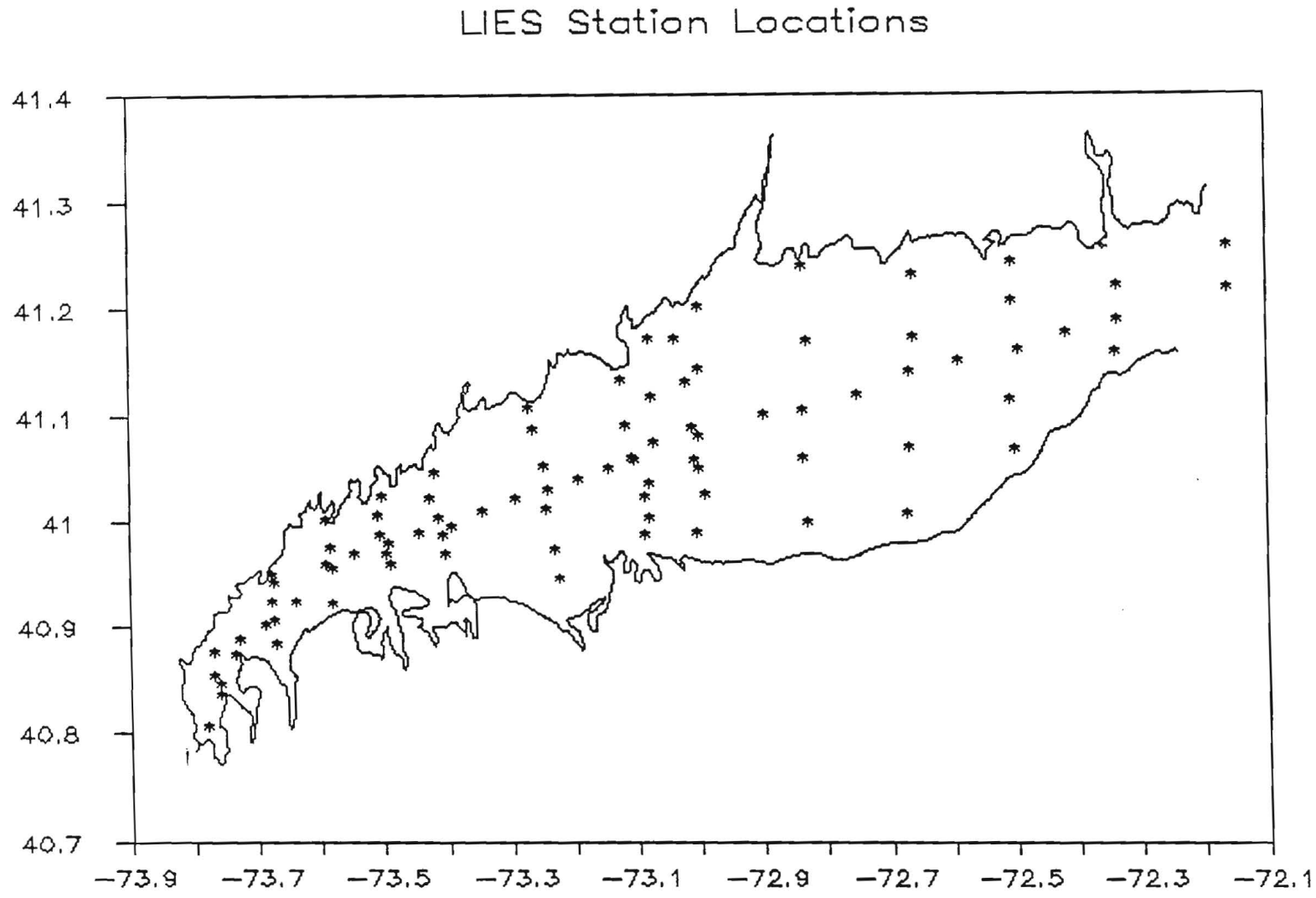

Figure 2. Station locations.

Table 1A. MSRC station locations in Western Long Island Sound.

Axial Stations

Sta #	Longitude deg	min	sec	Latitude deg	min	sec
AX 1	41	3	5	73	5	5
AX 2	41	3	0	73	9	0
AX 3	41	2	0	73	11	8
AX 4	41	2	0	73	15	0
AX 5	41	1	3	73	17	8
AX 6	41	0	6	73	20	8
AX 7	41	0	0	73	23	8
AX 8	40	59	5	73	26	8
AX 9	40	58	7	73	29	8
AX 10	40	58	3	73	33	0
AX 11	40	57	3	73	35	2
AX 12	40	55	3	73	38	7
AX 13	40	54	0	73	41	4
AX 14	40	52	5	73	44	5
AX 15	40	50	0	73	46	2
AX 16	40	48	1	73	47	5

Lateral Stations

Sta #	Latitude deg	min	sec	Longitude deg	min	sec
T 2-1	40	50	39	73	45	37
T 2-2	40	50	70	73	45	71
T 2-3	40	51	91	73	45	74
T 3-1	40	52	71	73	42	94
T 4-2	40	52	59	73	39	66
T 4-3	40	53	75	73	39	80
T 4-4	40	54	79	73	39	94
T 4-5	40	55	85	73	40	23
T 4-6	40	56	56	73	40	30
T 5-1	40	55	16	73	34	46
T 5-2	40	57	31	73	34	87
T 5-3	40	58	30	73	35	3
T 5-4	40	59	61	73	35	29
T 6-1	40	56	91	73	29	20
T 6-2	40	57	67	73	29	43
T 6-3	40	58	72	73	29	74
T 6-4	40	59	76	73	29	92
T 6-5	41	0	84	73	30	2
T 7-1	40	58	5	73	23	65
T 7-2	40	59	12	73	24	18
T 7-3	41	0	12	73	24	50
T 7-4	41	1	16	73	24	91
T 7-5	41	2	40	73	25	6
T 9-1	40	56	38	73	13	21
T 9-2	40	58	19	73	13	49
T 9-3	41	0	38	73	13	97
T 9-4	41	2	63	73	14	58
T 9-5	41	4	67	73	15	50
T 9-6	41	6	22	73	16	21
T 11-1	40	59	12	73	4	78
T 11-2	41	0	86	73	5	6
T 11-3	41	2	93	73	5	81
T 11-4	41	5	19	73	6	59
T 11-5	41	7	56	73	7	30
T 12-1	41	0	87	73	58	83
T 12-2	41	2	87	73	59	87
T 12-3	41	5	15	73	0	38
T 12-4	41	7	42	73	1	16
T 12-5	41	4	67	73	1	85

Table 1B. UCONN station locations in Eastern Long Island Sound.

Sta #	Longitude deg	min	sec	Latitude deg	min	sec
1	41	3	86	73	4	19
1(2)	41	3	86	73	4	19
2	41	4	48	72	59	66
2(2)	41	4	48	72	59	66
3	41	5	54	72	53	53
4	41	6	15	72	49	73
4(3)	41	6	15	72	49	73
5	41	7	3	72	44	61
6	41	7	82	72	39	71
7	41	8	61	72	34	88
8	41	9	52	72	29	69
8(2)	41	9	52	72	29	69
9	41	10	34	72	24	70
10	41	11	16	72	19	74
10(2)	41	16	16	72	19	74
A	41	13	9	72	19	66
B	41	9	24	72	19	79
C	41	3	63	72	29	65
D	41	6	50	72	29	82
E	41	12	20	72	29	73
F	41	14	34	72	29	79
G	41	13	81	72	39	68
H	41	10	34	72	39	67
I	41	4	10	72	39	71
J	40	59	86	72	39	74
K	40	59	88	72	49	84
L	41	3	35	72	49	68
M	41	10	2	72	49	68
N	41	13	78	72	49	74
O	41	11	61	72	59	60
P	41	8	32	72	59	65
Q	41	2	60	72	59	65
R	40	59	21	72	59	71
S	41	9	7	73	4	53
T	41	6	56	73	4	39
U	41	2	5	73	4	51
V	40	59	71	73	4	51

as much as 30 minutes may elapse between the surface and bottom measurements. Occasionally an inverted density or salinity structure appears in a profile; this is likely to be an artifact due to advection during the sampling period rather than a vertical physical anomaly. Water was pumped onboard in order to collect samples to measure water column turbidity and total suspended solids. Through January 1987, turbidity was measured by use of a Turner Designs benchtop nephelometer; after January 1987, a Hydroproducts in-situ transmissometer with a 10-cm path length was used. Correlations between turbidity measured with the nephelometer and the transmissometer showed strong agreement (correlation coefficient = -0.82 for n= 48) (figure 3). Pumped samples for filtering suspended sediment were collected one meter above the bottom, mid-depth in the water column and at one meter below the surface. All other measurements were made at five equally spaced intervals in the water column from one meter above the bottom to one meter below the water surface.

Water used for the suspended solids analysis was collected in three 500 milliliter aliqouts for each of the three sampling depths at each station. Individual samples were filtered through pre-weighed 47-millimeter diameter Nuclepore polycarbonate filters with a 0.4-micometer diameter pore size. The samples were rinsed three times with distilled water to remove any salt and to ensure that none of the suspended material had adhered to the sides of the Pyrex filter funnels. After the filters had been thoroughly rinsed, they were dryed by placing them in

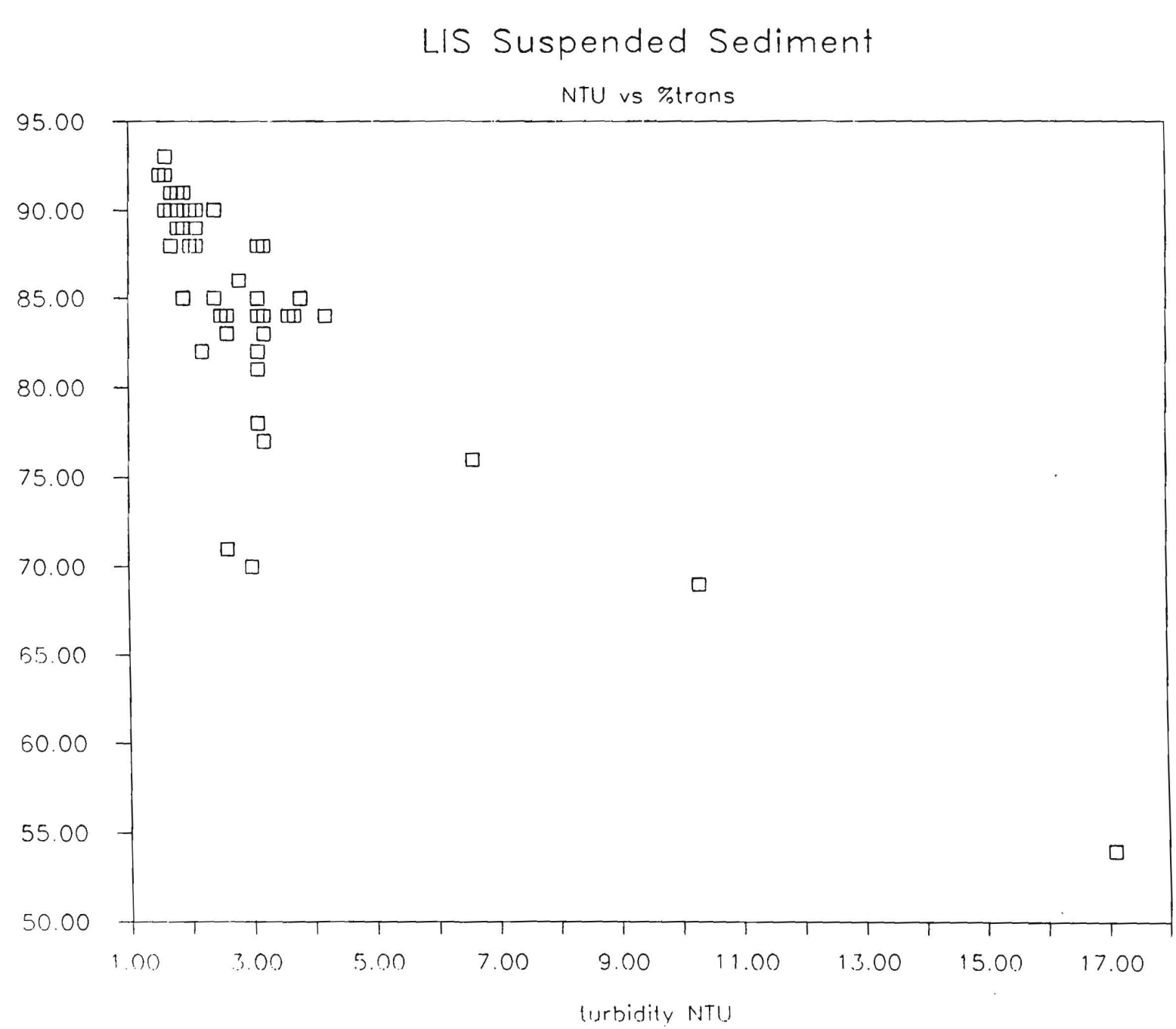

Figure 3. Correlation between turbidity measured by the transmissometer and nephelometer. Nephelometric turbidity units are on the abcissa, percent transmittance on the ordinate. R equals -0.82 for n of 48.

individual jars with silica gel dessicant. Once dry, the filters were reweighed and an estimate of the gross dry weight of suspended material was made by subtracting the filters' initial weight from that of the weight of the filter and the sediment. The replicate weights for each of the samples was compared, and if any of the three were anomolously high or low, that replicate was discarded. The numbers were averaged, and a value was calculated for the gross dry weight of suspended material for each sample depth collected.

The filtered total suspended solids concentration was then correlated with the results obtained by either the nephelometer (for August and December 1986, January, February, March and April 1987) or the transmissometer (August, September, October, November and December 1987) for each cruise (Appendix II) in order to arrive at a value for calculated total suspended solids. Because filtered samples were only available for three depths in the water column, these calculations give a reasonable estimate of the total suspended solids concentration for each depth where a turbidity measurement was recorded.

RESULTS

Tables in the appendices list the values measured for temperature, salinity, conductivity, sigma-t, dissolved oxygen and total suspended solids for each of the sample locations for each cruise conducted between August 1986 and December 1987. We will discuss patterns that emerged in the salinity, temperature, density and total suspended solids data in the following sections.

Salinity. Figures 4a through j show the values for salinity measured between September 1986 and December 1987. A consistent west to east gradient in salinity was noted across western Long Island Sound from Throgs Neck to Middle Ground. The greatest salinity difference between the two ends of the section was 2.4 parts per thousand (ppt) in the surface waters in April 1987. Often the gradients were slightly steeper within 20 km of the Throgs Neck Bridge. The minimum difference was 0.7 ppt in the surface waters in February 1987. These patterns were in turn superimposed on seasonal fluctuations in salinity within Long Island Sound.

In September 1986, water column stratification was evident within 20 km of the Throgs Neck Bridge, but it was well mixed to the east. Surface values of salinity ranged for example from about 25.6 ppt in the western reaches to about 28.0 ppt near Middle Ground; mid-depth and bottom waters had salinities in the west of 26.3 and 27.0 ppt respectively, increasing to about 28.0 in the central Sound. By December 1986, the water column was well mixed, overall salinity had decreased (to about 25 ppt in the western Sound, for example) although the west to east gradient in salinity was still evident. A low salinity gradient was maintained in February 1987, with the average salinity throughout Long Island Sound of about 26 ppt and ranging from an average of 25.6 ppt in the east to 26.6 parts per thousand in the west. The water column began to show evidence of salinity

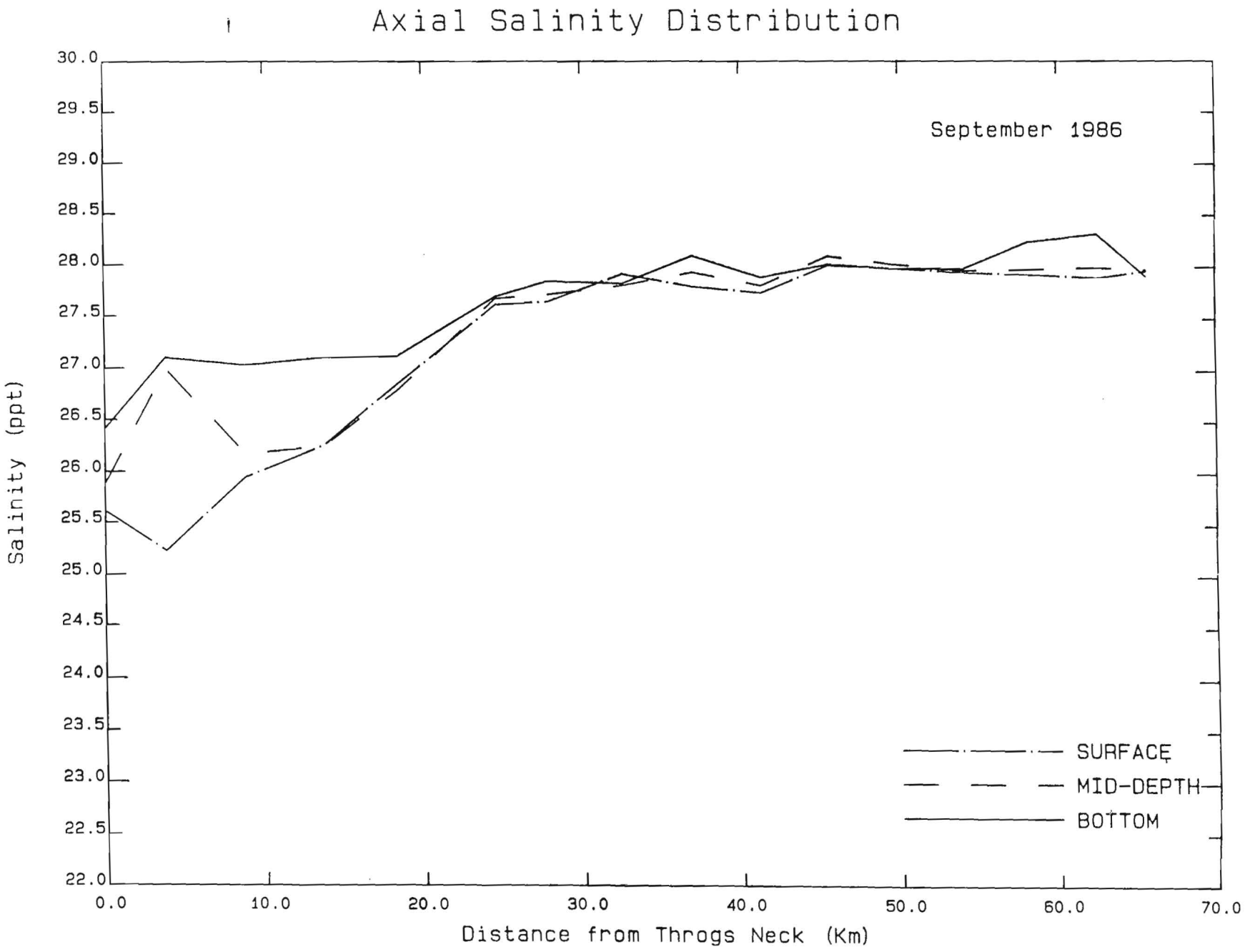

Figure 4a. Axial salinity distribution September 1986.

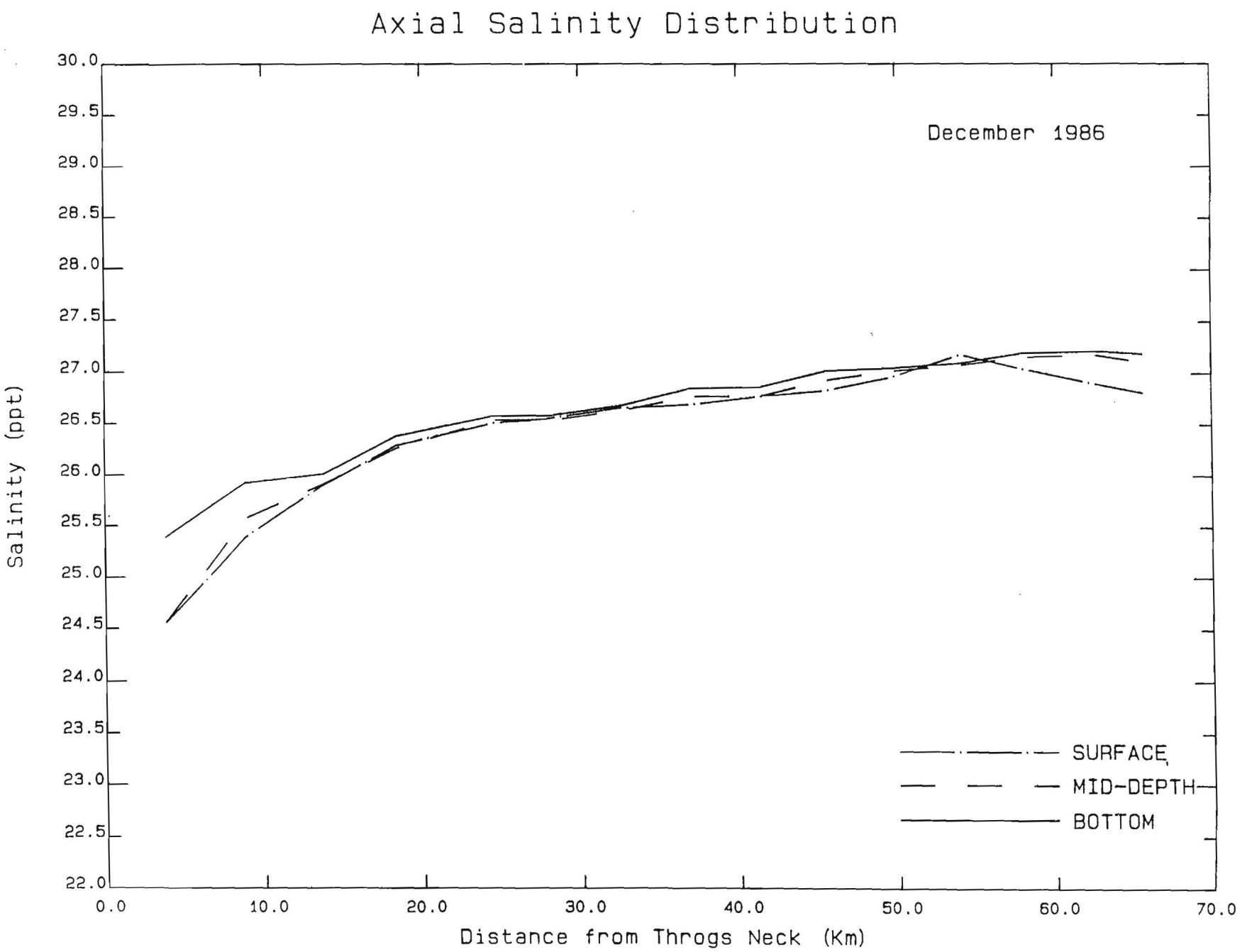

Figure 4b. Axial salinity distribution December 1986.

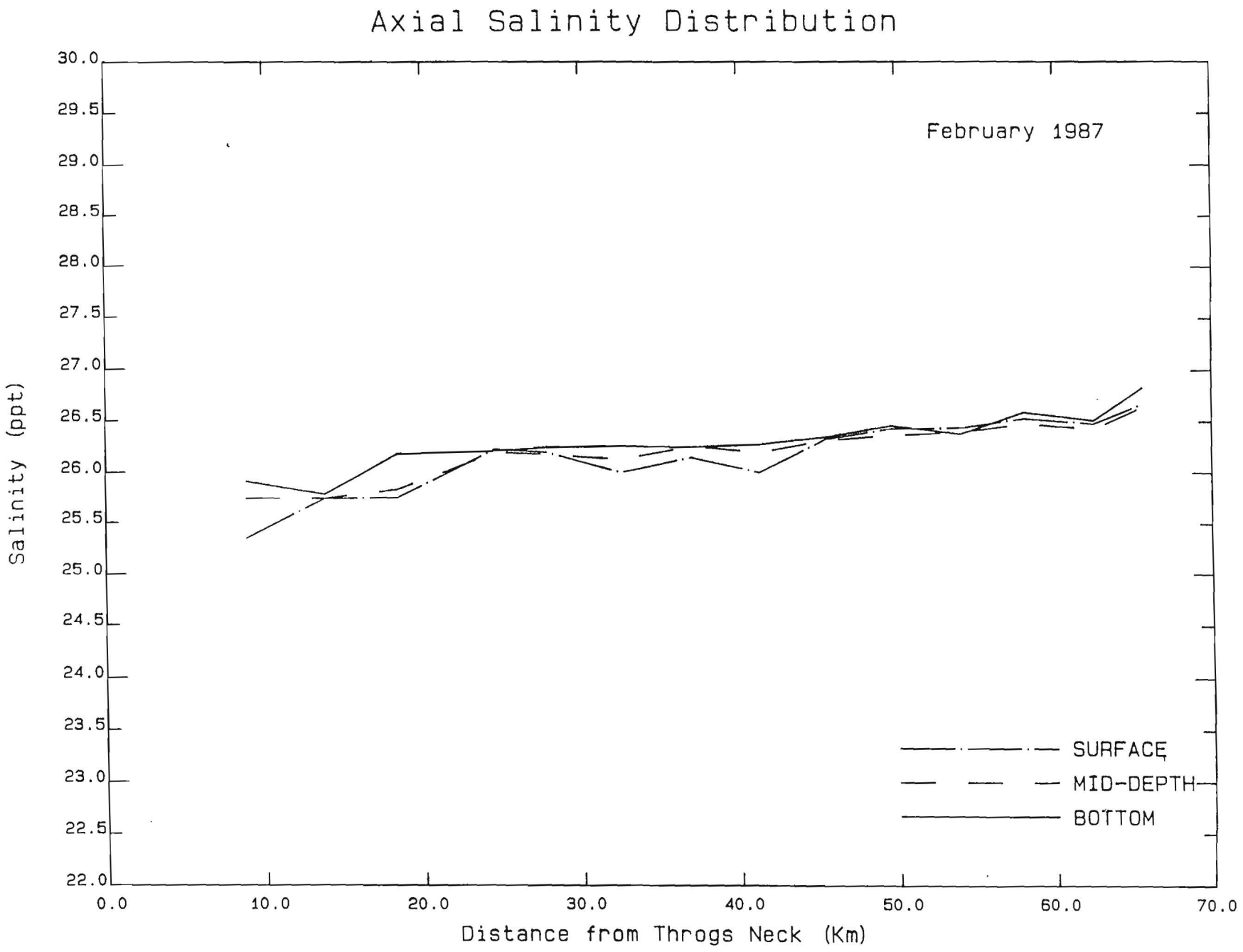

Figure 4c. Axial salinity distribution February 1987.

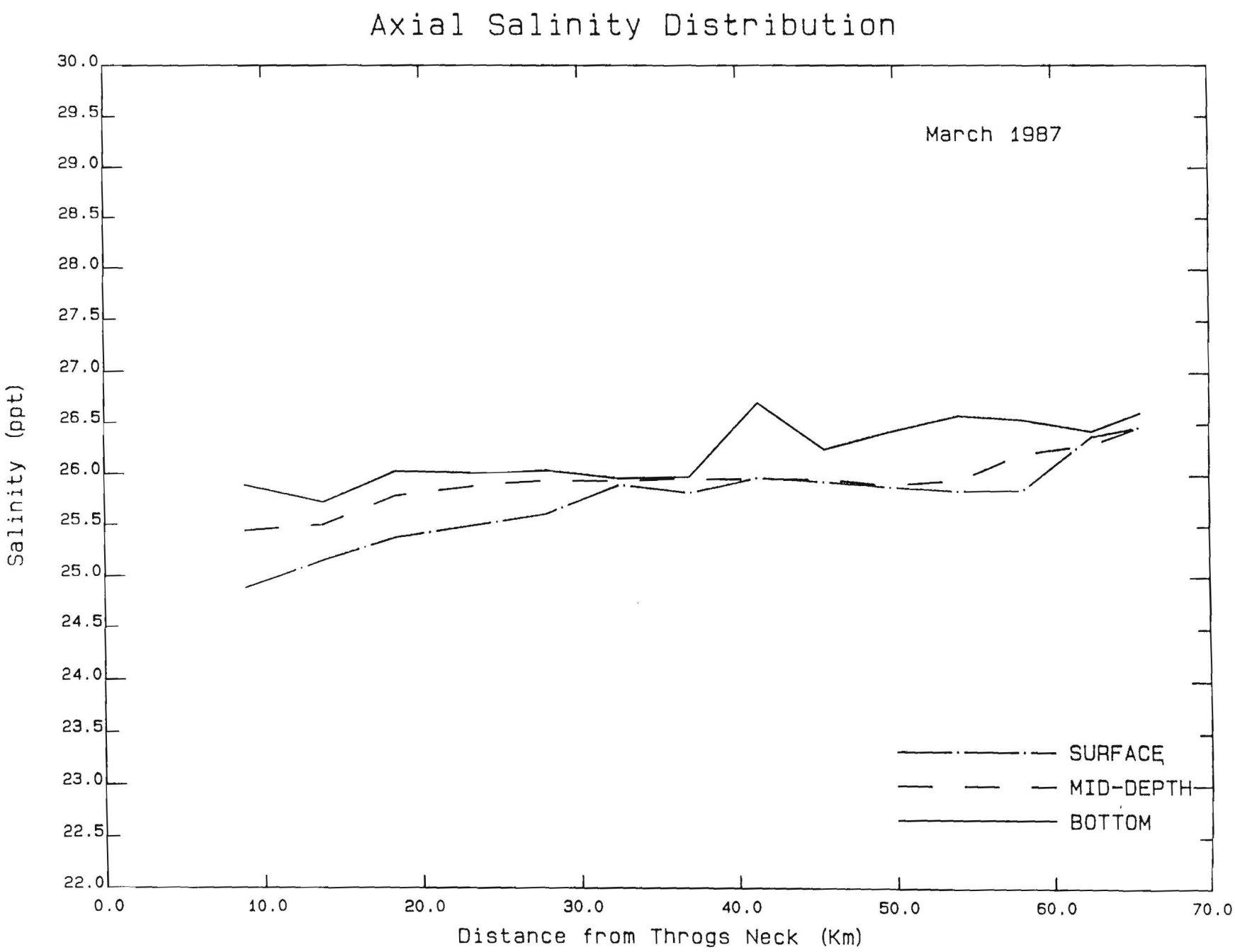

Figure 4d. Axial salinity distribution March 1987.

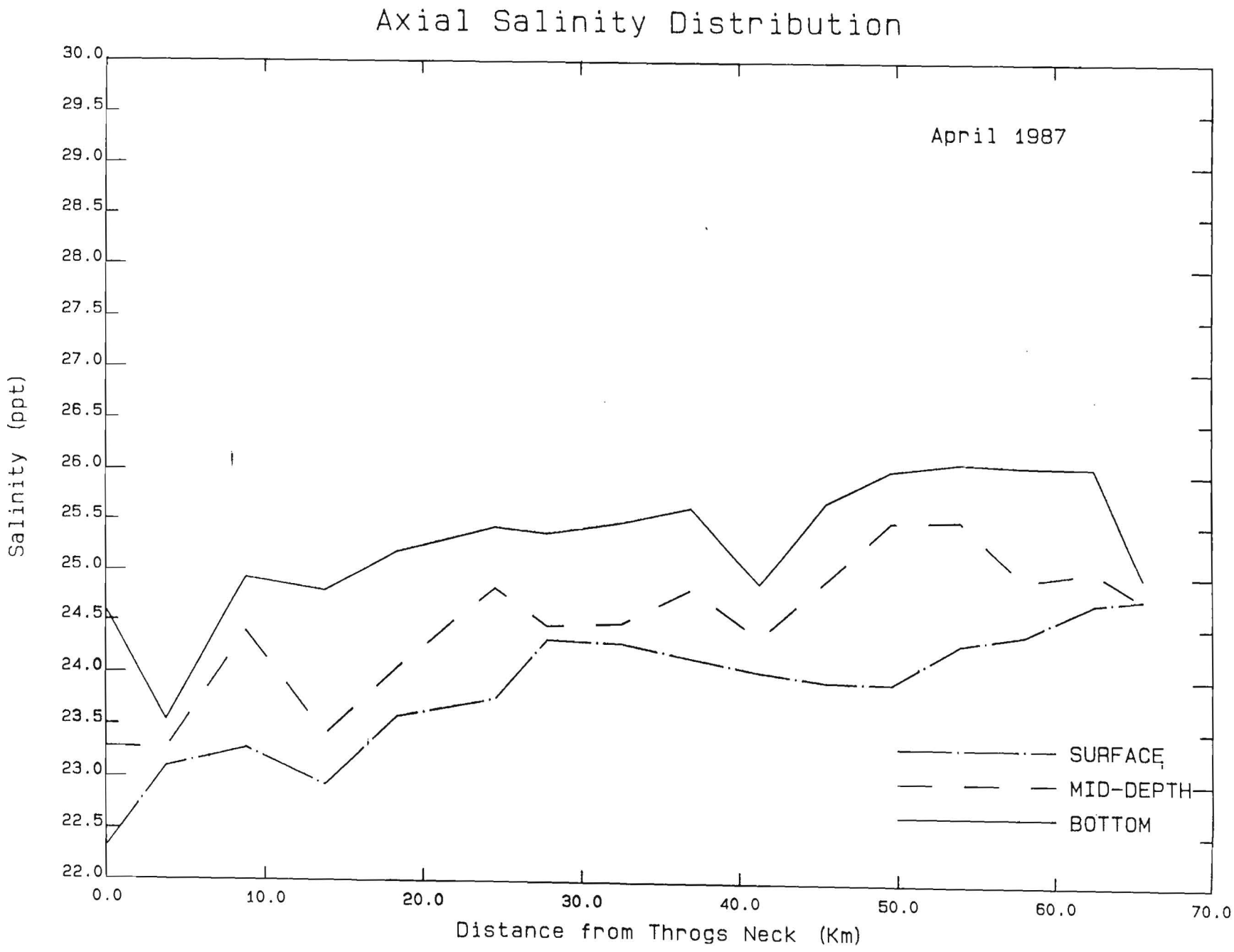

Figure 4e. Axial salinity distribution April 1987.

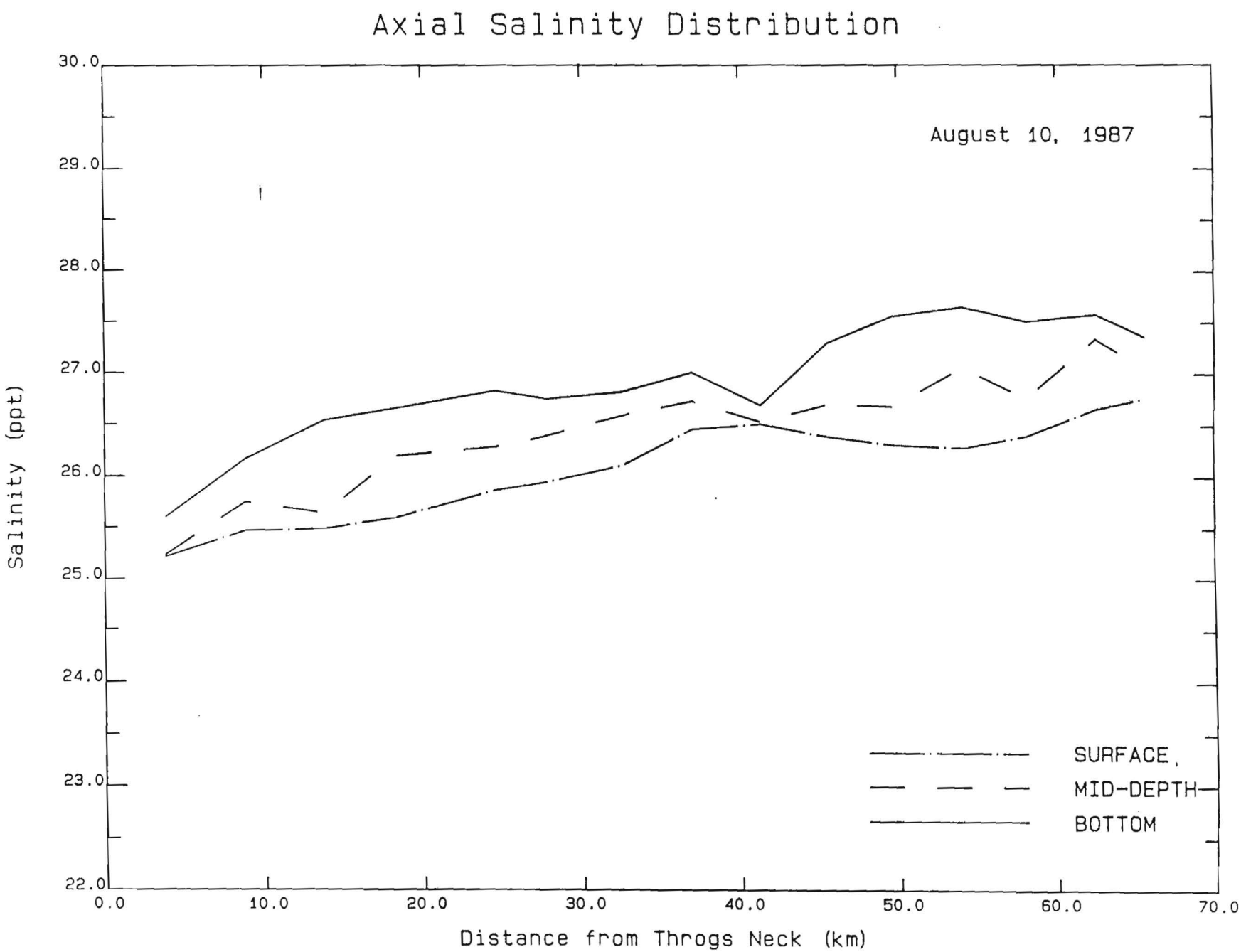

Figure 4f. Axial salinity distribution August 1987.

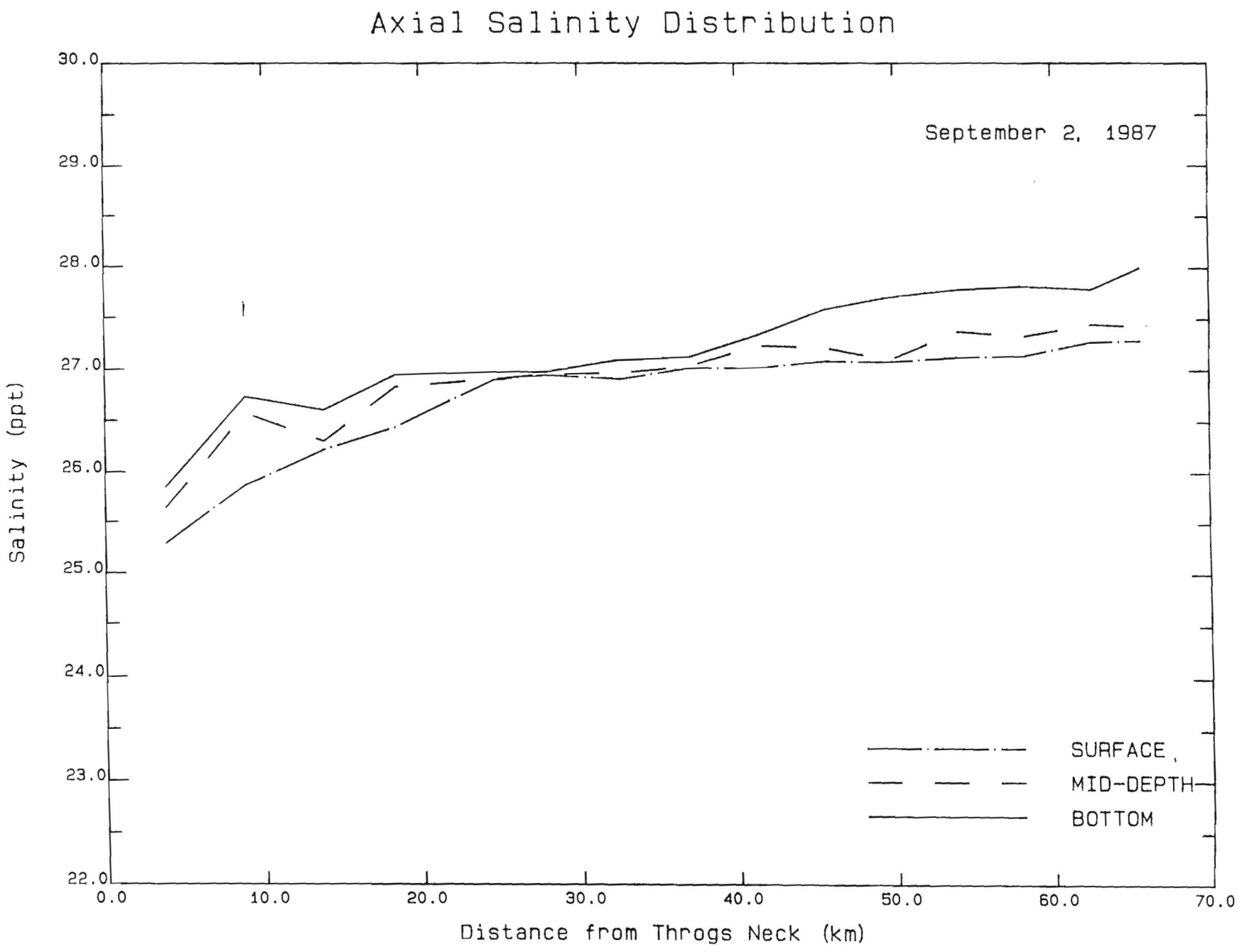

Figure 4g. Axial salinity distribution September 1987.

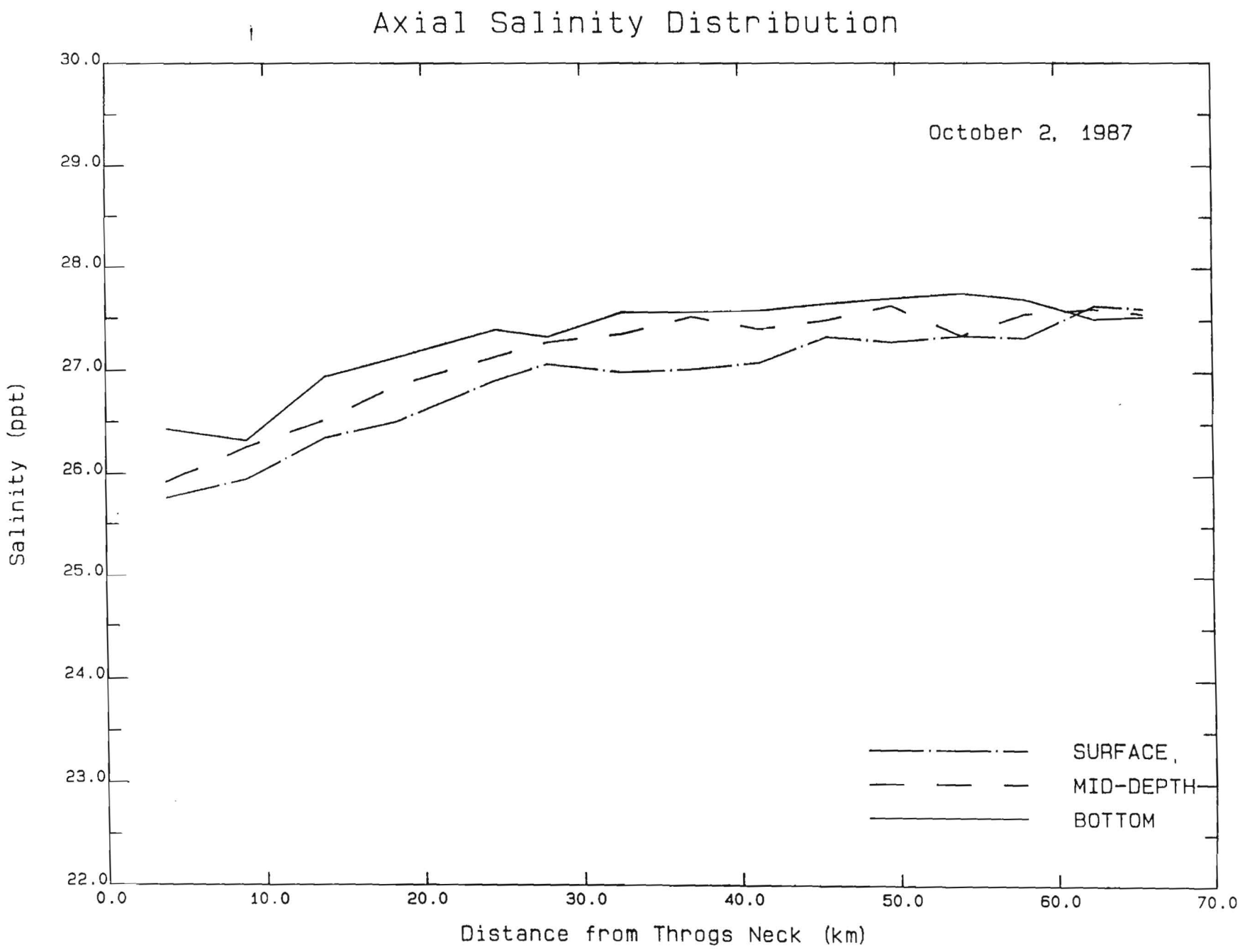

Figure 4h. Axial salinity distribution October 1987.

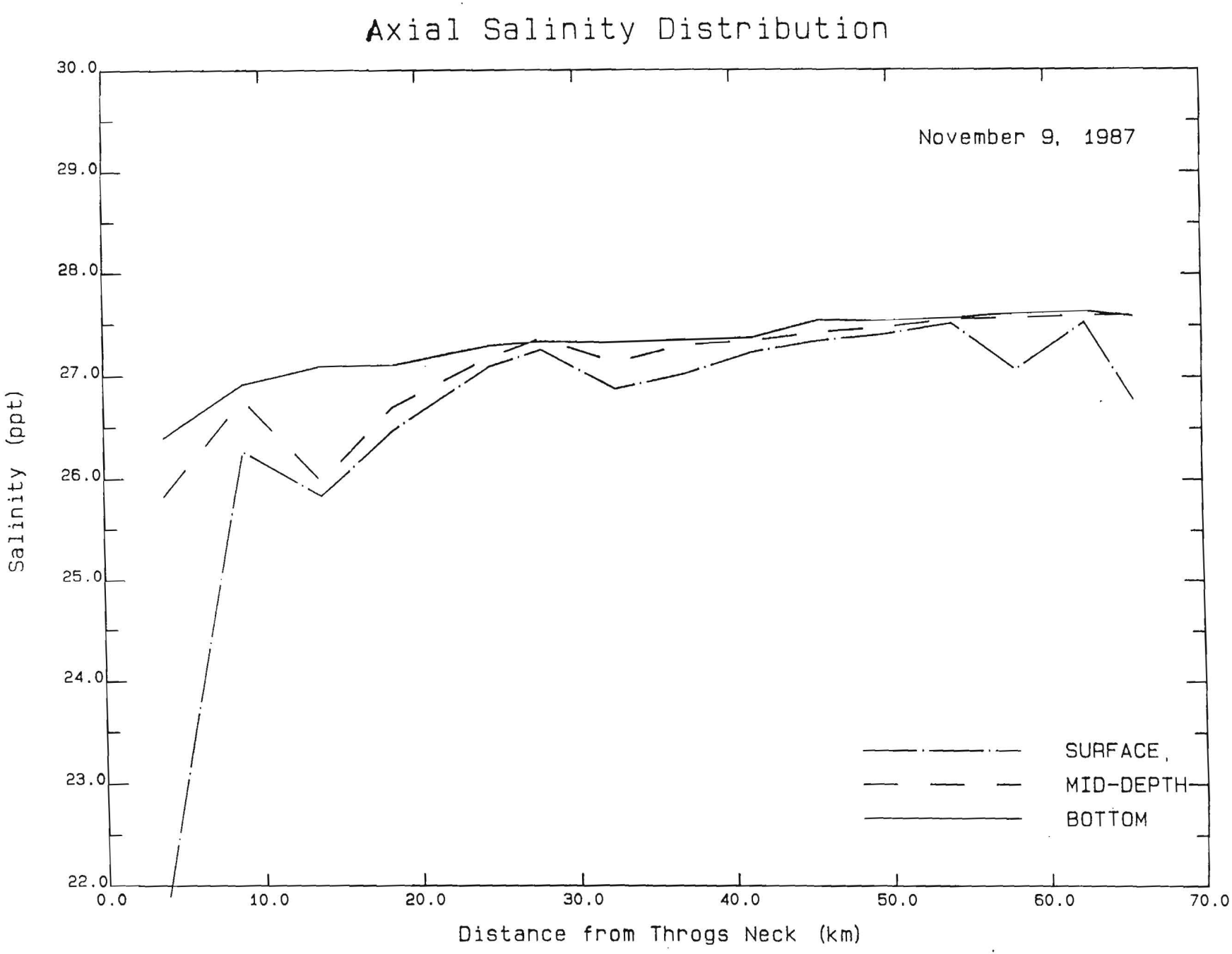

Figure 4i. Axial salinity distribution November 1987.

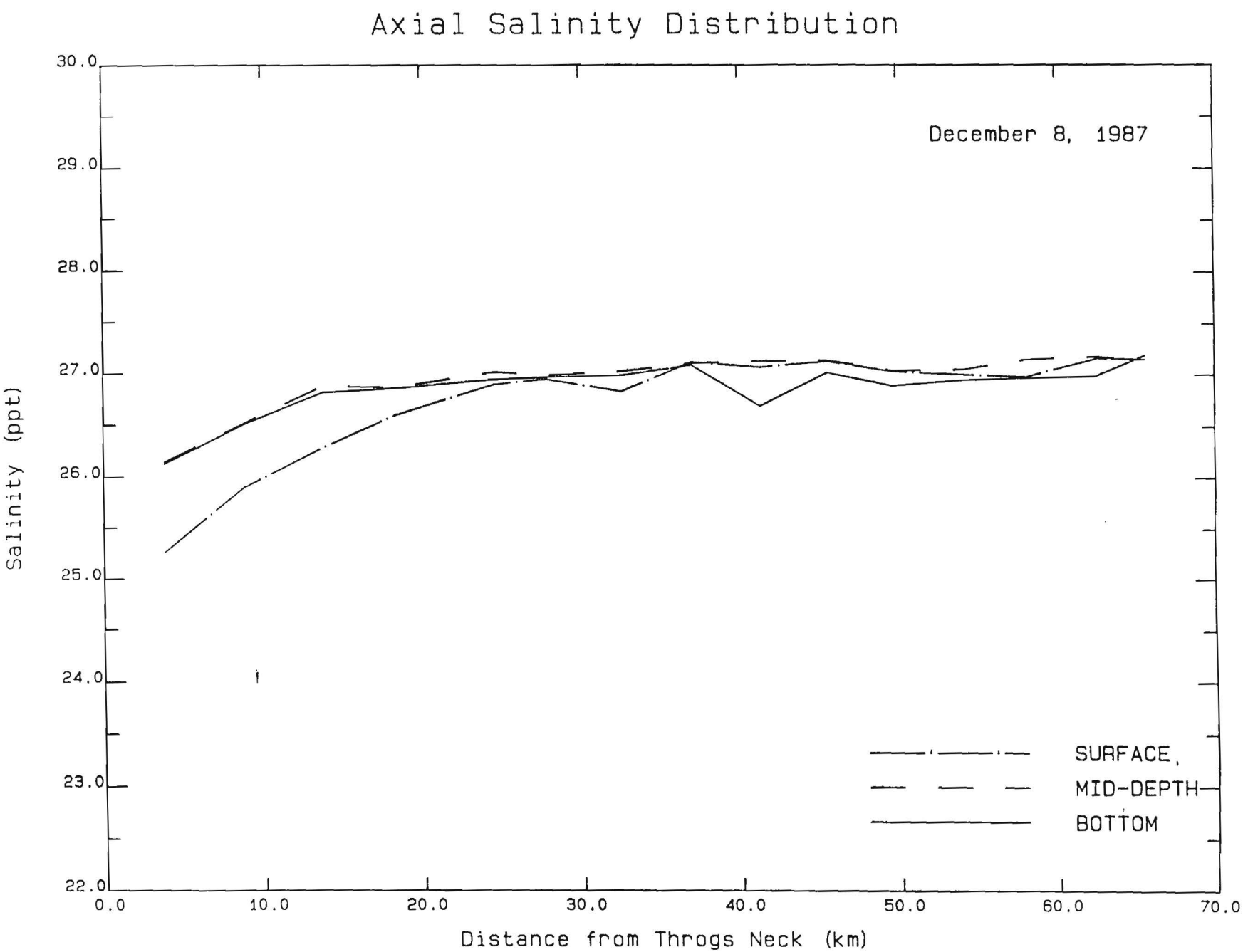

Figure 4j. Axial salinity distribution December 1987.

stratification in March although the absolute level of salinity continued to decline. There was a marked decrease in salinity between March and April 1987; for example, salinity at the surface decreased from an average of about 25.5 ppt to about 24.5 ppt. This was most probably due to the influence of the spring freshet. In addition, there was the development of strong salininty stratification across the Sound as well as an increase in the west to east salinity gradient from about 22.3 ppt to 24.7 ppt in the surface waters. By August, the overall salinities in the surface, mid-depth and bottom waters of Long Island Sound had increased as would be expected due to a decrease in river discharge coupled with an increase in evaporation in the warmer summer months. The water column continued to be stratified. Measurements of salinity at the surface ranged from 25.2 ppt at Throgs Neck to about 26.6 ppt at Middle Ground. Mid-depth salinity varied from about 25.5 ppt in the western reaches to about 27.0 ppt in the central Sound and the bottom water increased from about 25.9 ppt to 27.4 ppt from west to east. In September and October, stratification began to break down as the water column showed early signs of mixing. By December 1987, the water column in the middle and eastern reaches of western Long Island Sound were well mixed although some salinity stratification still existed within 20 km of Throgs Neck.

Temperature. Figures 5a through j represent the values measured for temperature in western Long Island Sound between August 1986 and December 1987. There was no evidence of a west to east

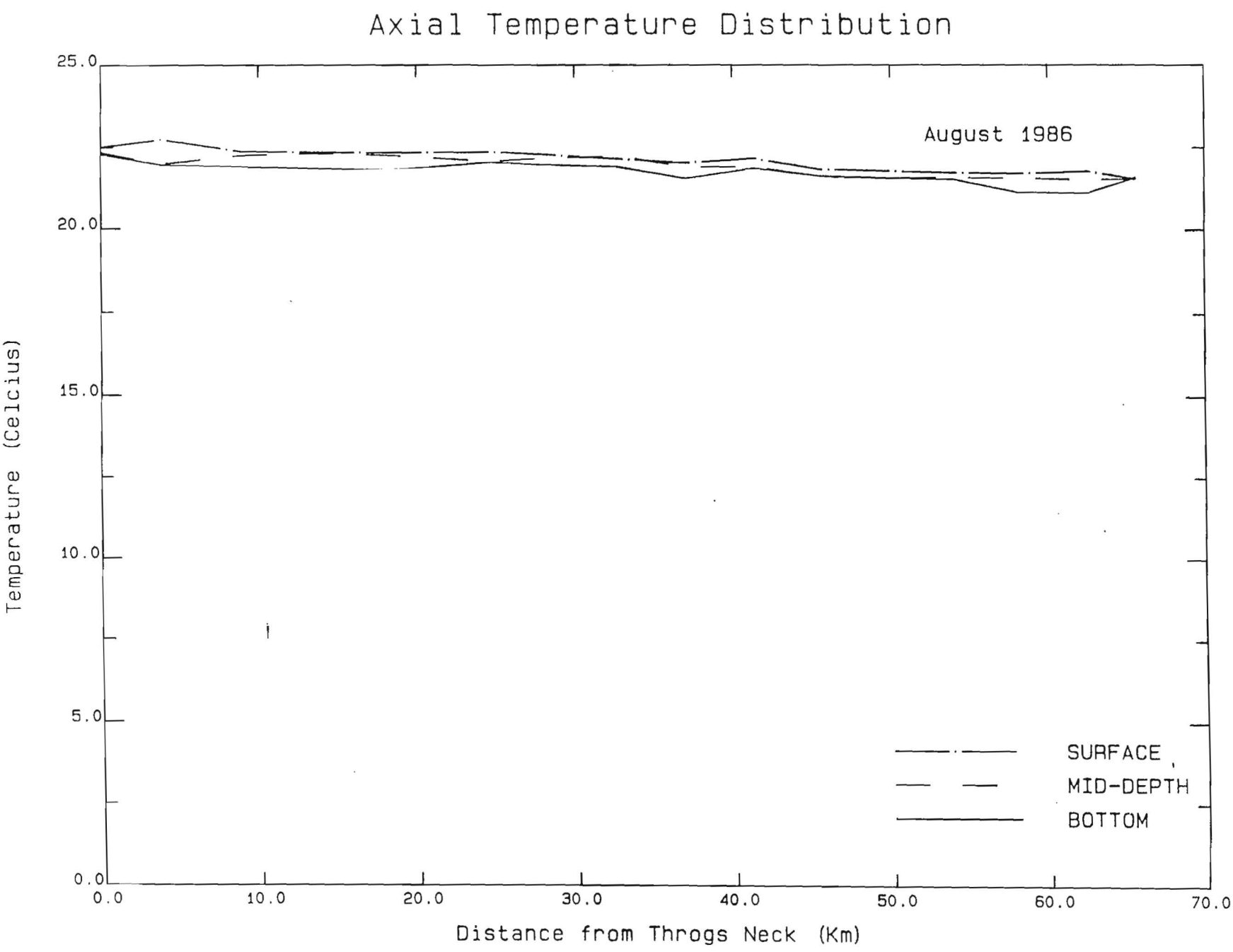

Figure 5a. Axial temperature distribution August 1986.

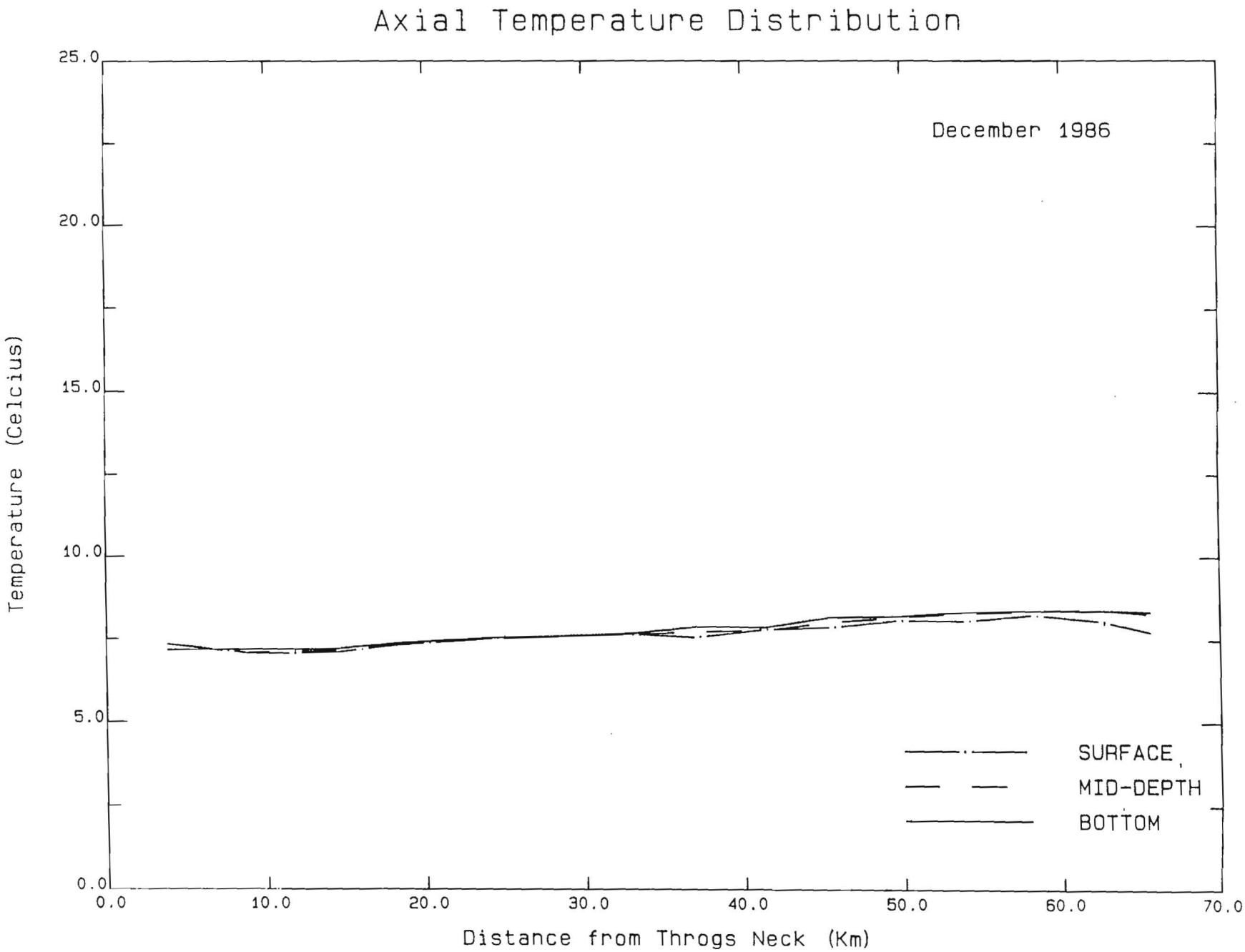

Figure 5b. Axial temperature distribution December 1986.

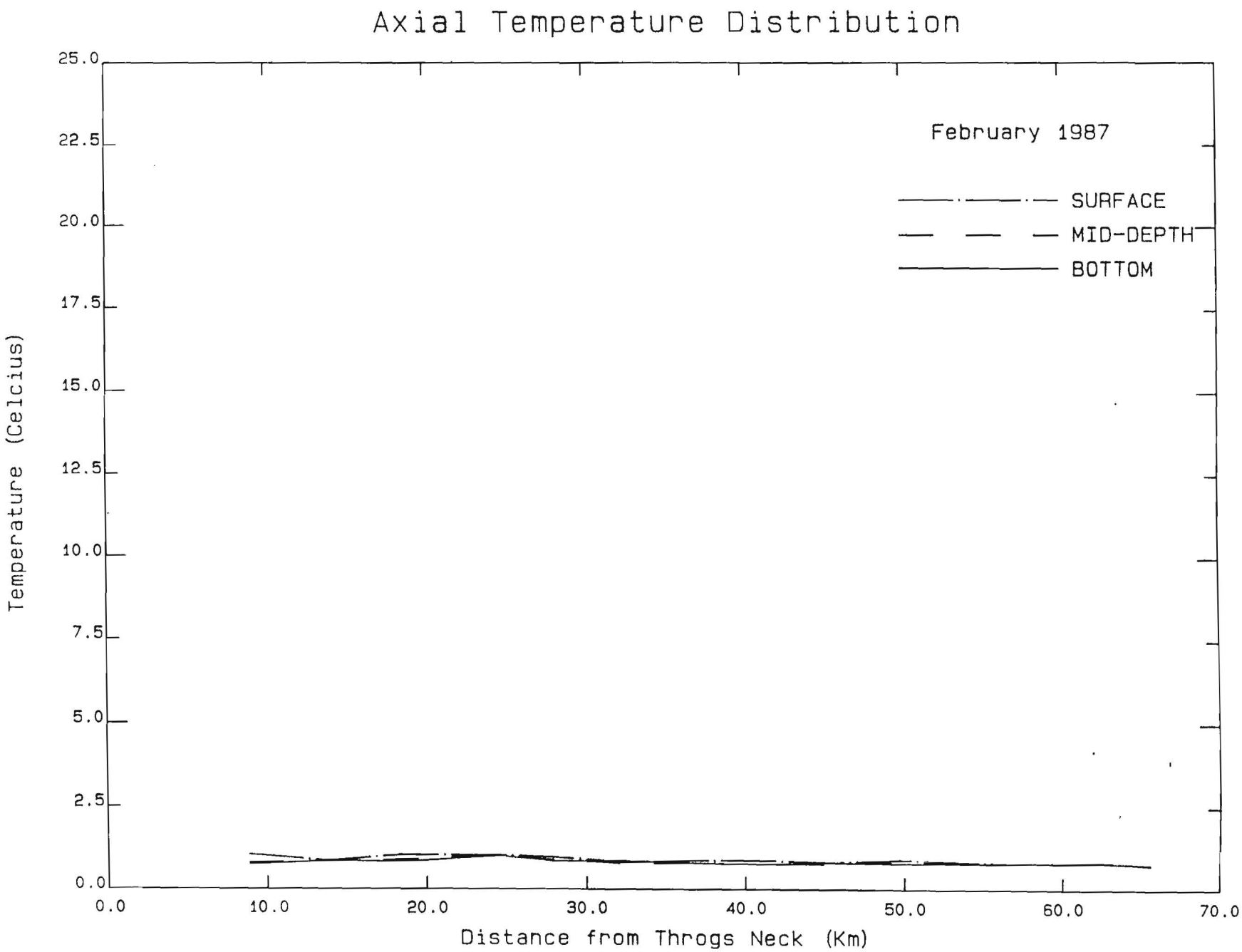

Figure 5c. Axial temperature distribution February 1987.

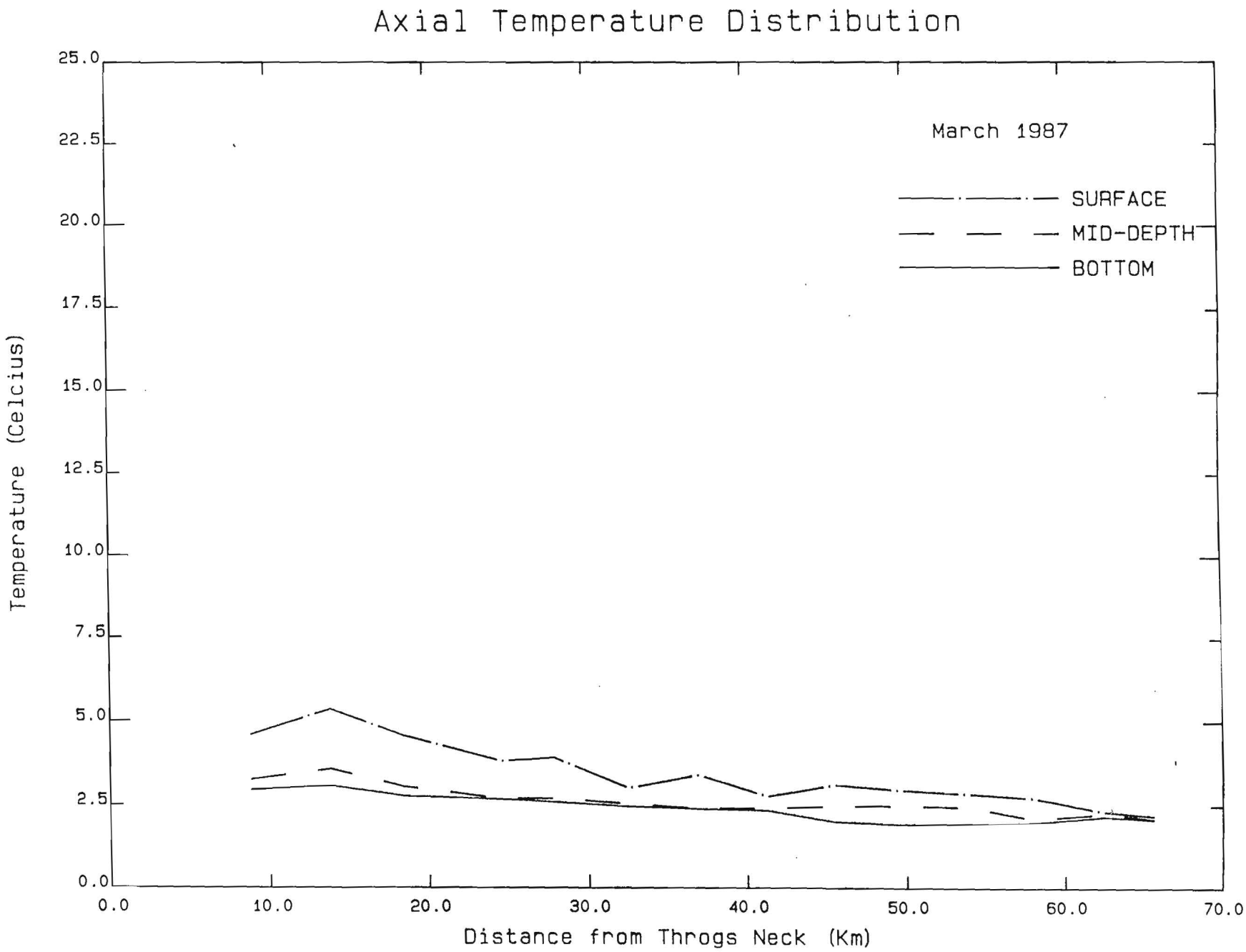

Figure 5d. Axial temperature distribution March 1987.

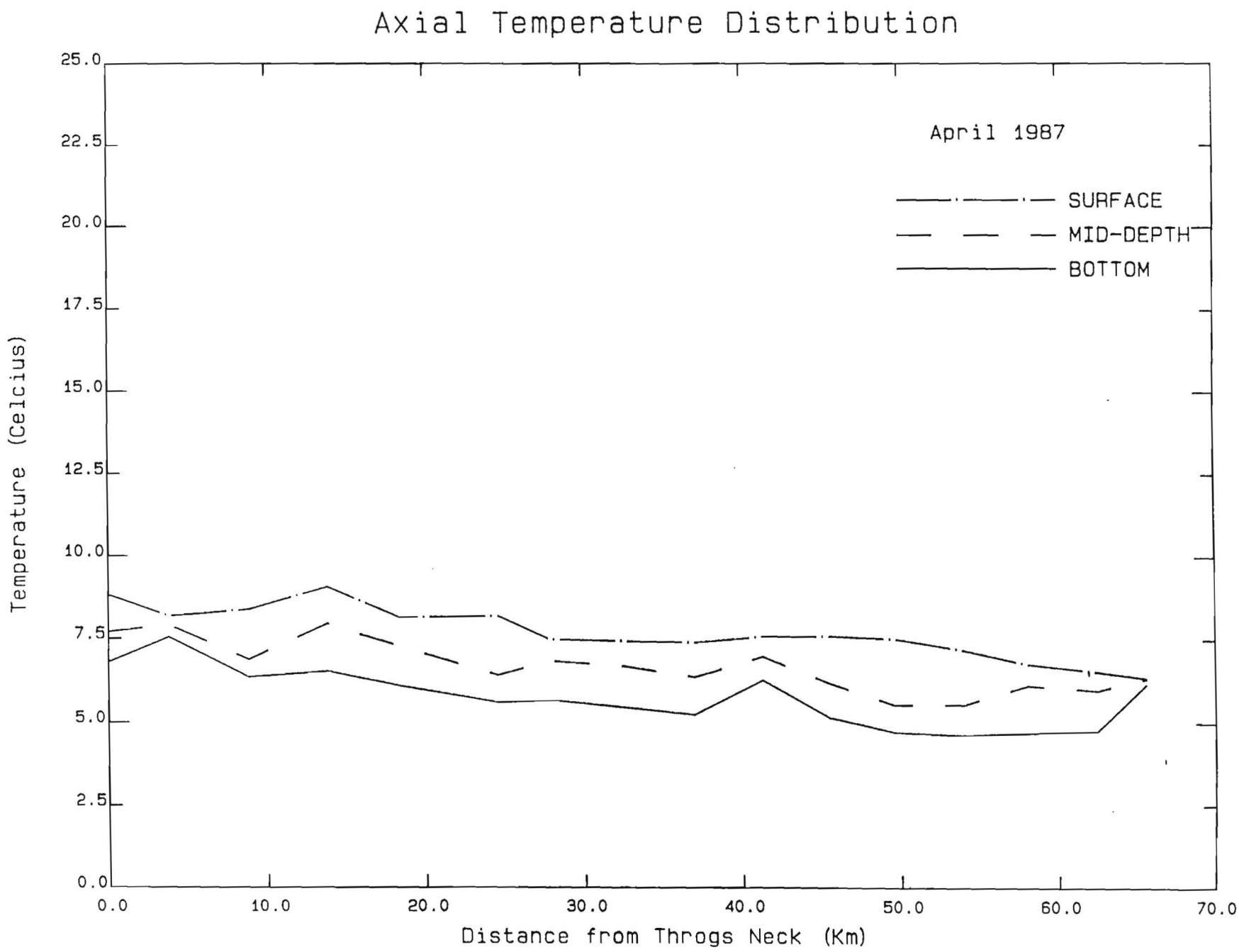

Figure 5e. Axial temperature distribution April 1987.

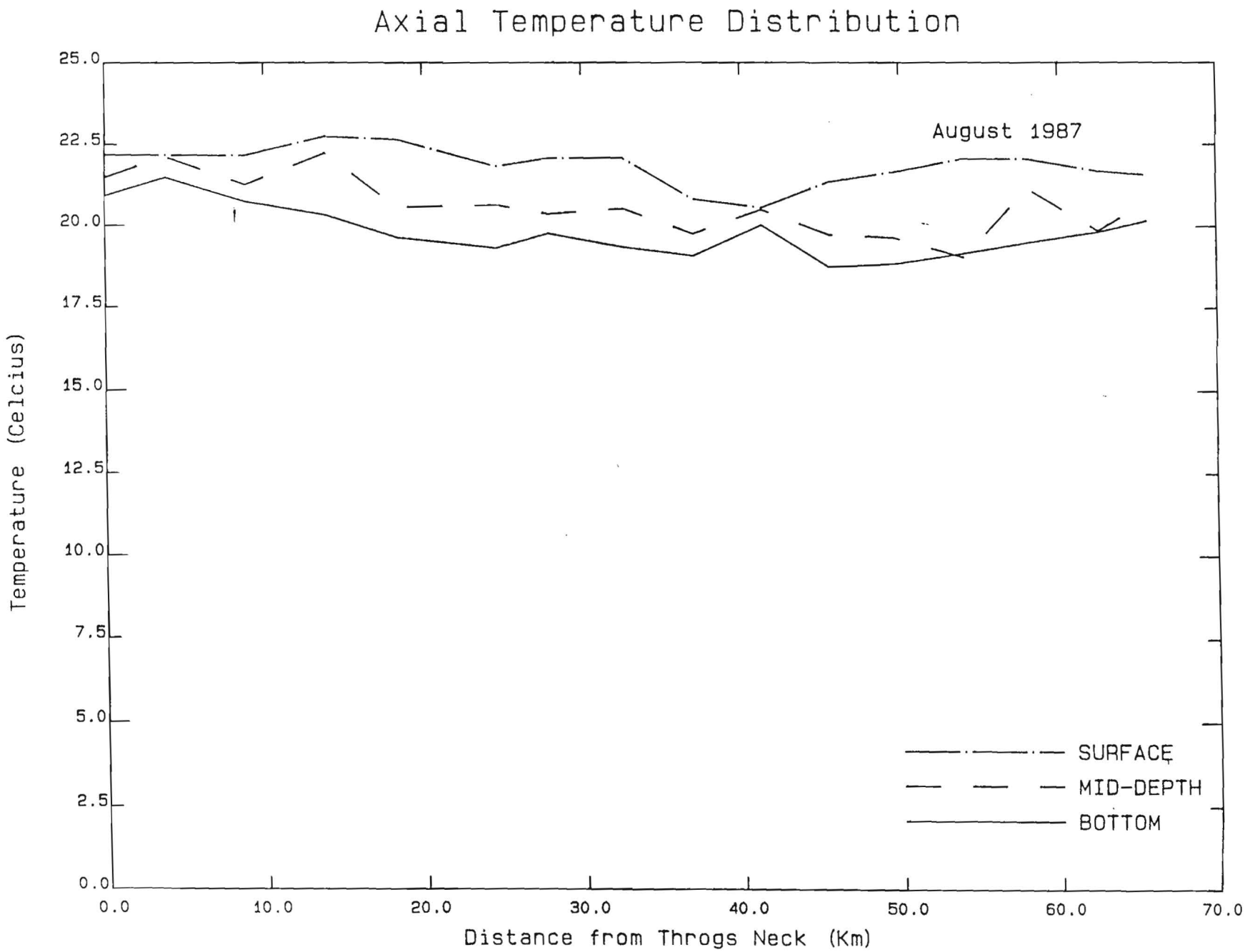

Figure 5f. Axial temperature distribution August 1987.

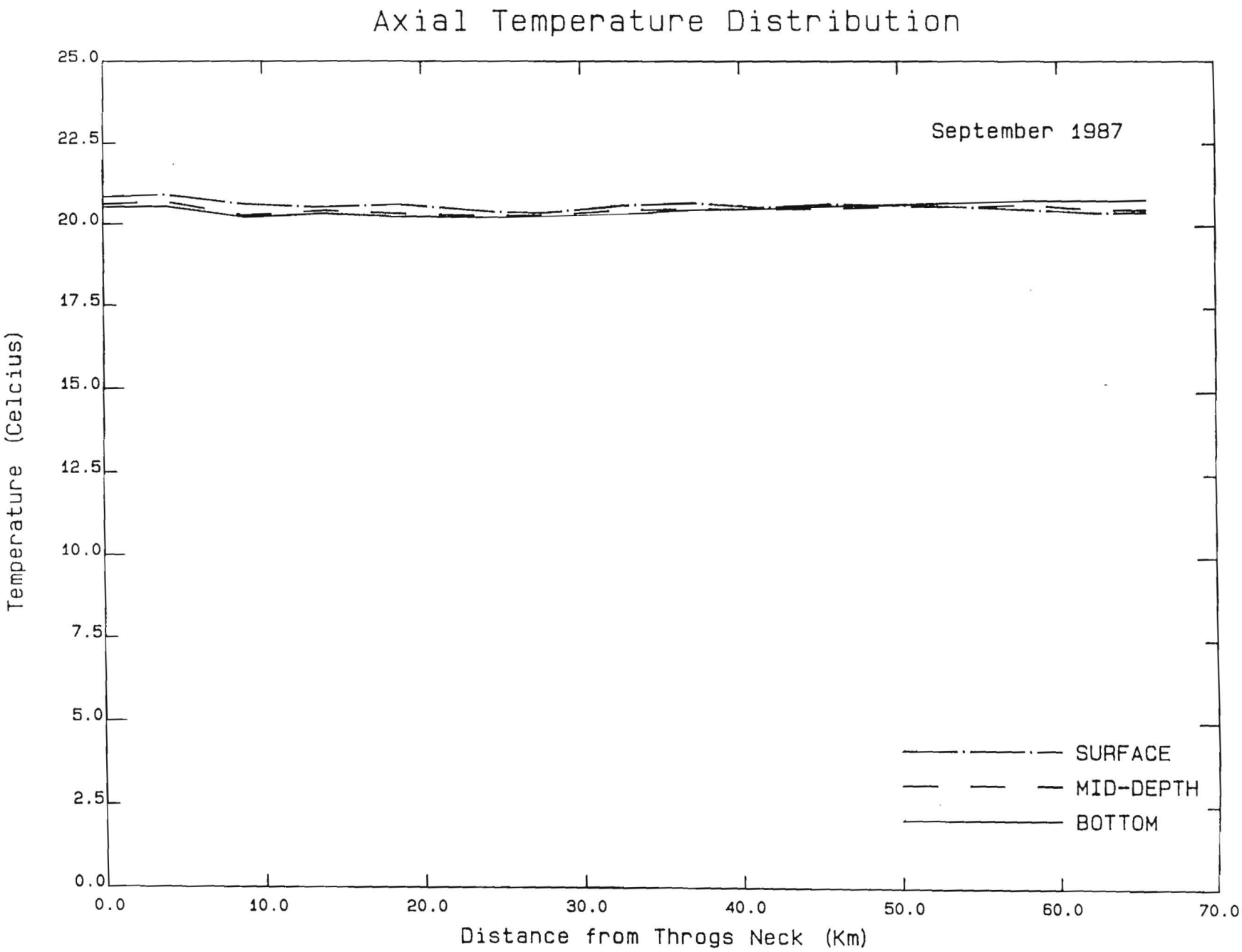

Figure 5g. Axial temperature distribution September 1987.

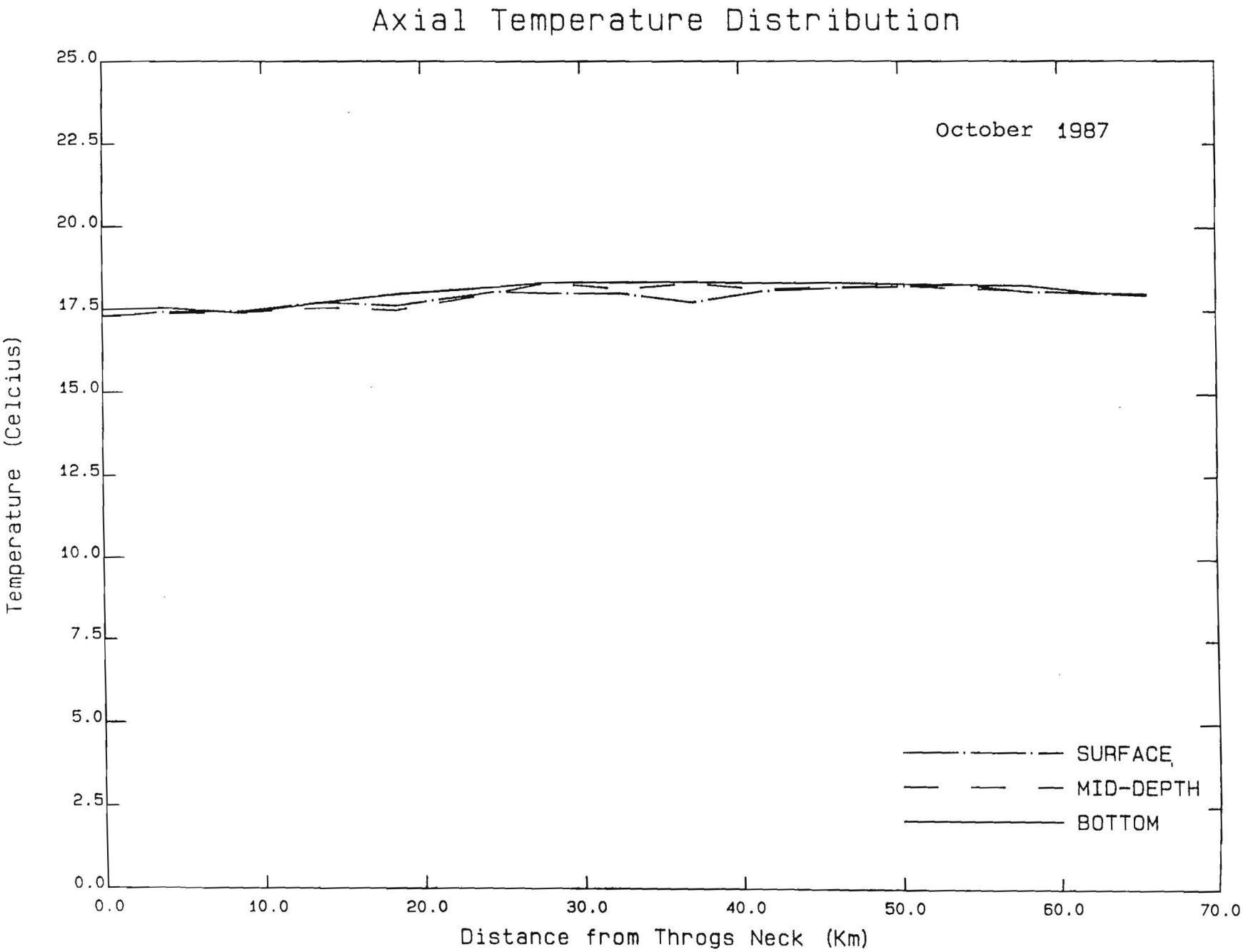

Figure 5h. Axial temperature distribution October 1987.

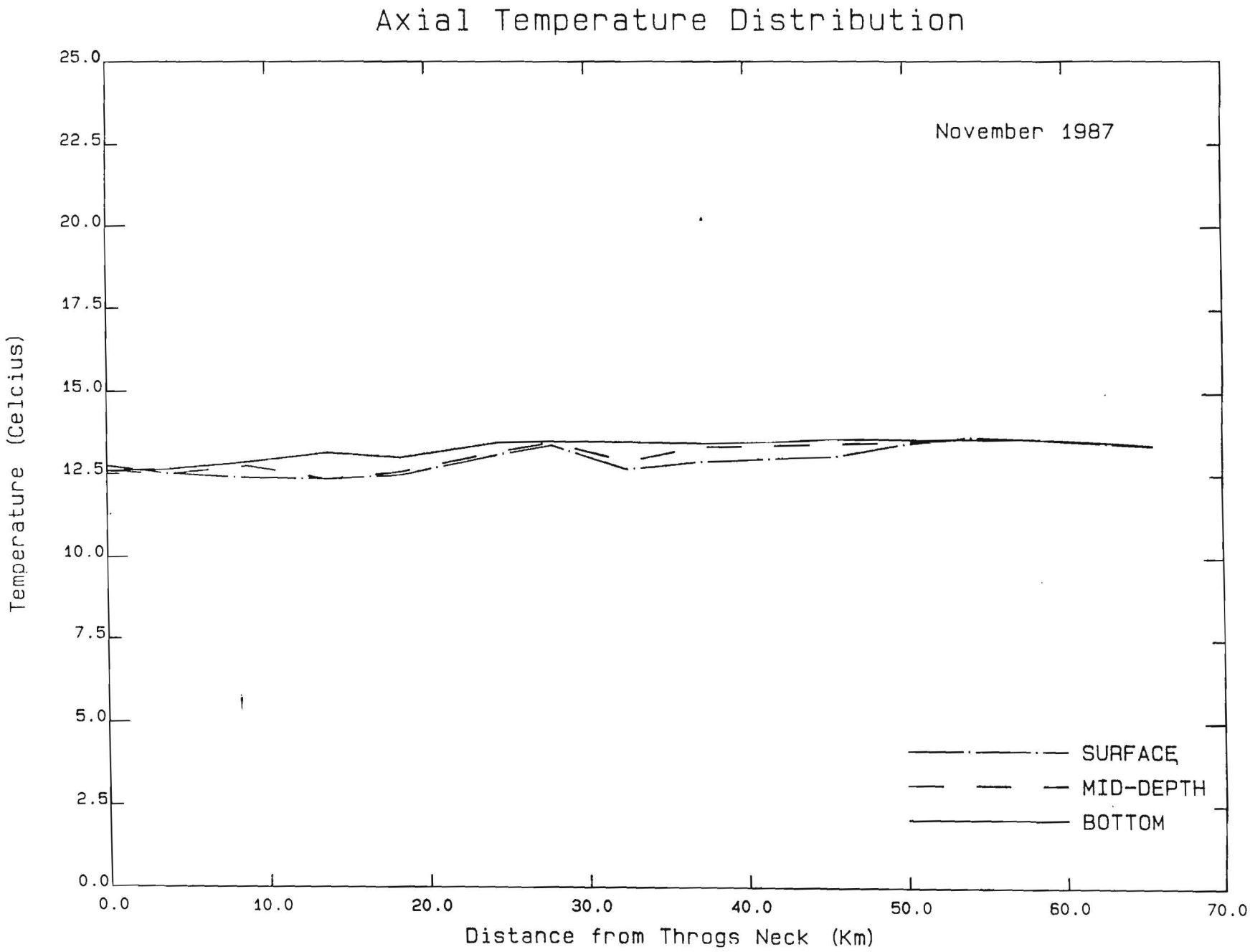

Figure 5i. Axial temperature distribution November 1987.

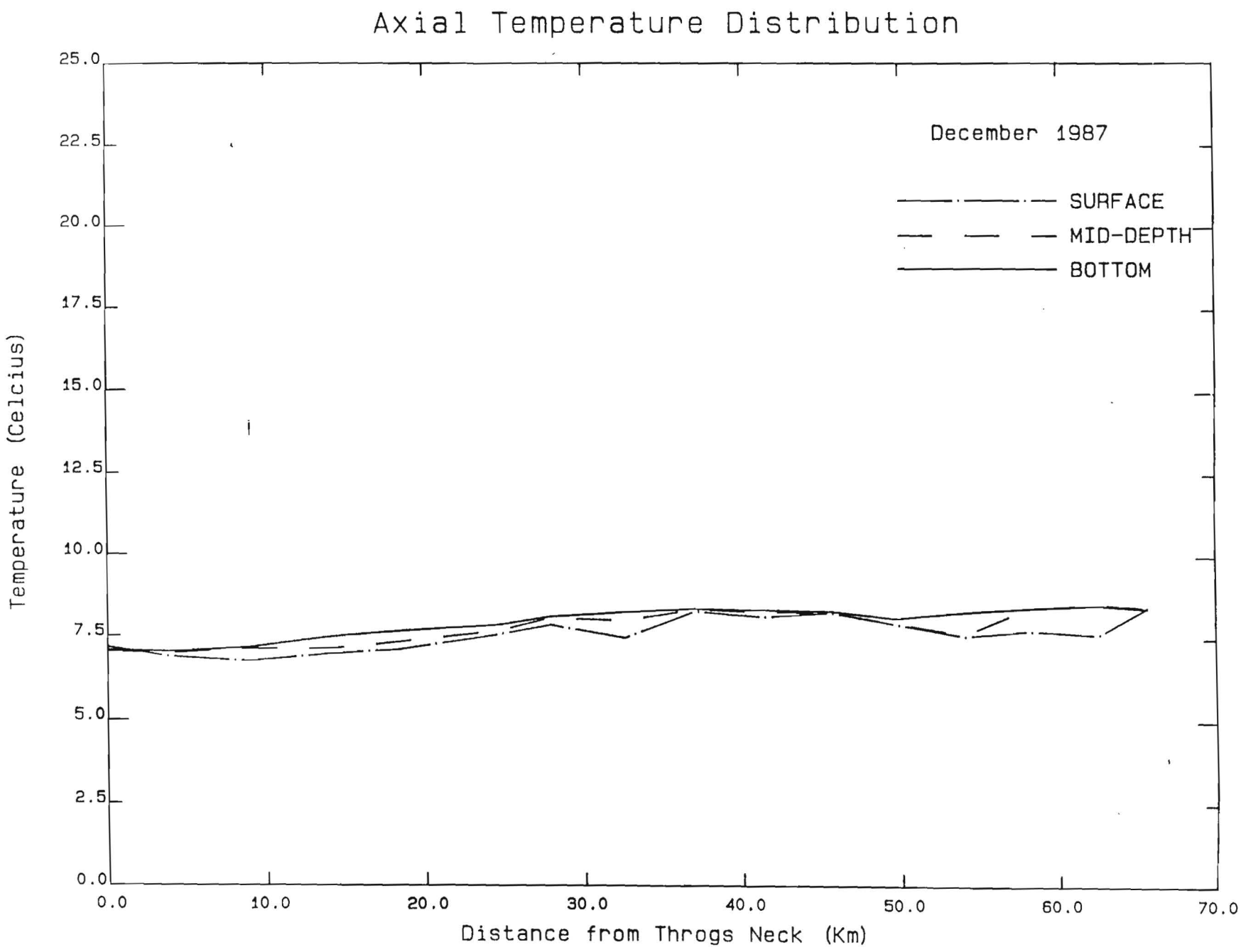

Figure 5j. Axial temperature distribution December 1987.

gradient. There were, however, strong seasonal fluctuations in temperature across the western Sound. When the study was begun in August 1986, the water column was only slightly stratified, with differences in temperature between surface and bottom waters on the average of about 0.25 degree; the average water temperature was about 22.5 degrees centigrade, the highest temperature reached over the course of the study. By December 1986, water temperature had dropped to an average of about 7.5 degrees and the water column was well mixed. The lowest temperatures over the study period were noted in February 1987, when the average water temperature was on the order of 1 degree C. In March 1987, the water column began to show signs of stratification as temperatures began to increase. For example, average surface water temperature was about 3.5 degrees centigrade, decreasing to about 2.5 degrees in the bottom waters. Temperature stratification was quite evident in April 1987 as the water temperature continued to rise to about 7.5 degrees at the surface and about 6 degrees at depth. By August, the overall temperature in the surface, mid and bottom waters of Long Island Sound had increased to about 22.0, 21.0 and 20 degrees centigrade respectively, as would be expected in the summer months. The water column continued to be stratified. In September, the water column had become well mixed although temperature remained high. Through December, water temperature continued to decrease, from about 17.5 degrees centigrade in October, to 13.0 in November and continuing to decrease to about 7.5 degrees centigrade in December 1987.

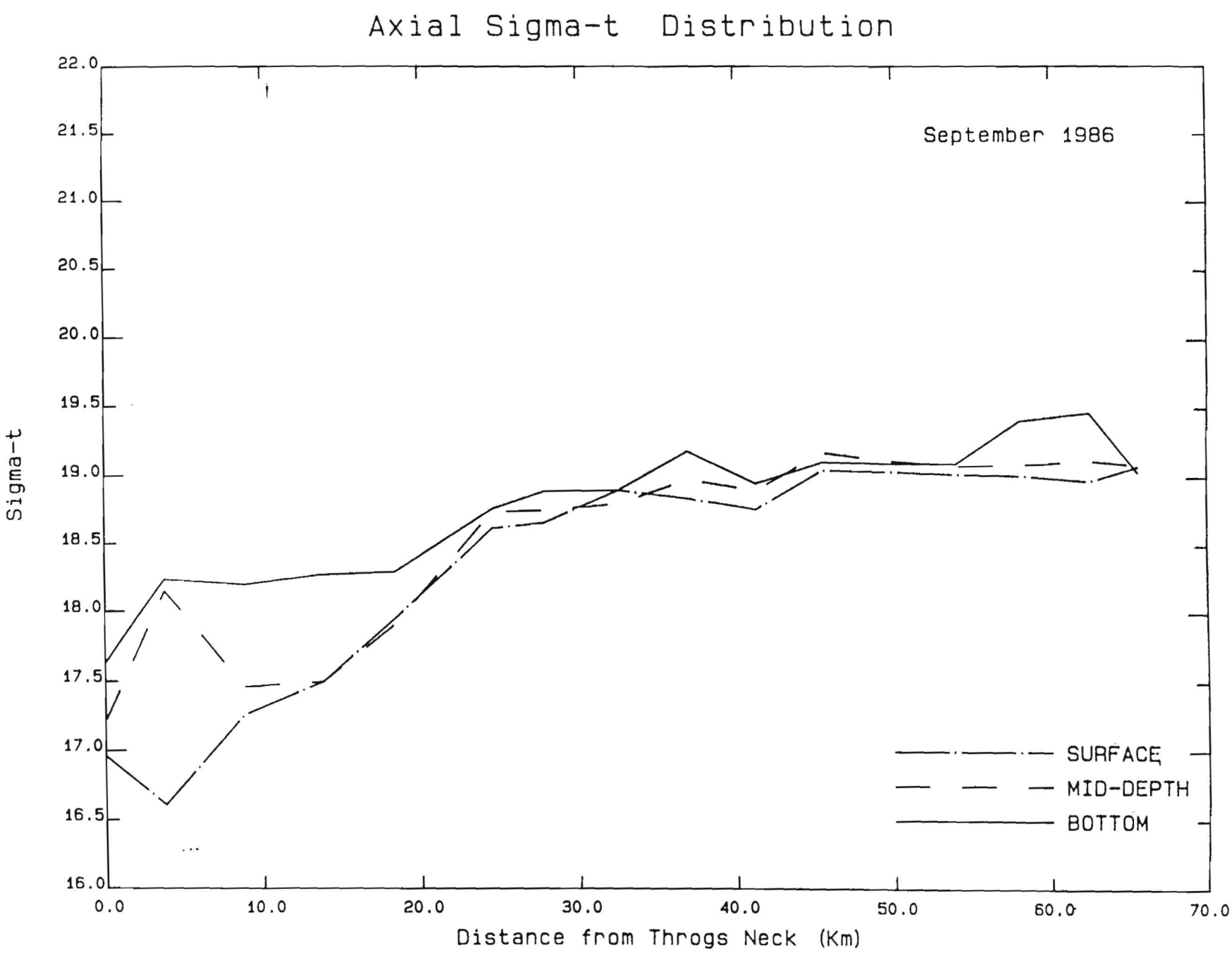

Figure 6a. Axial sigma-t distribution September 1986.

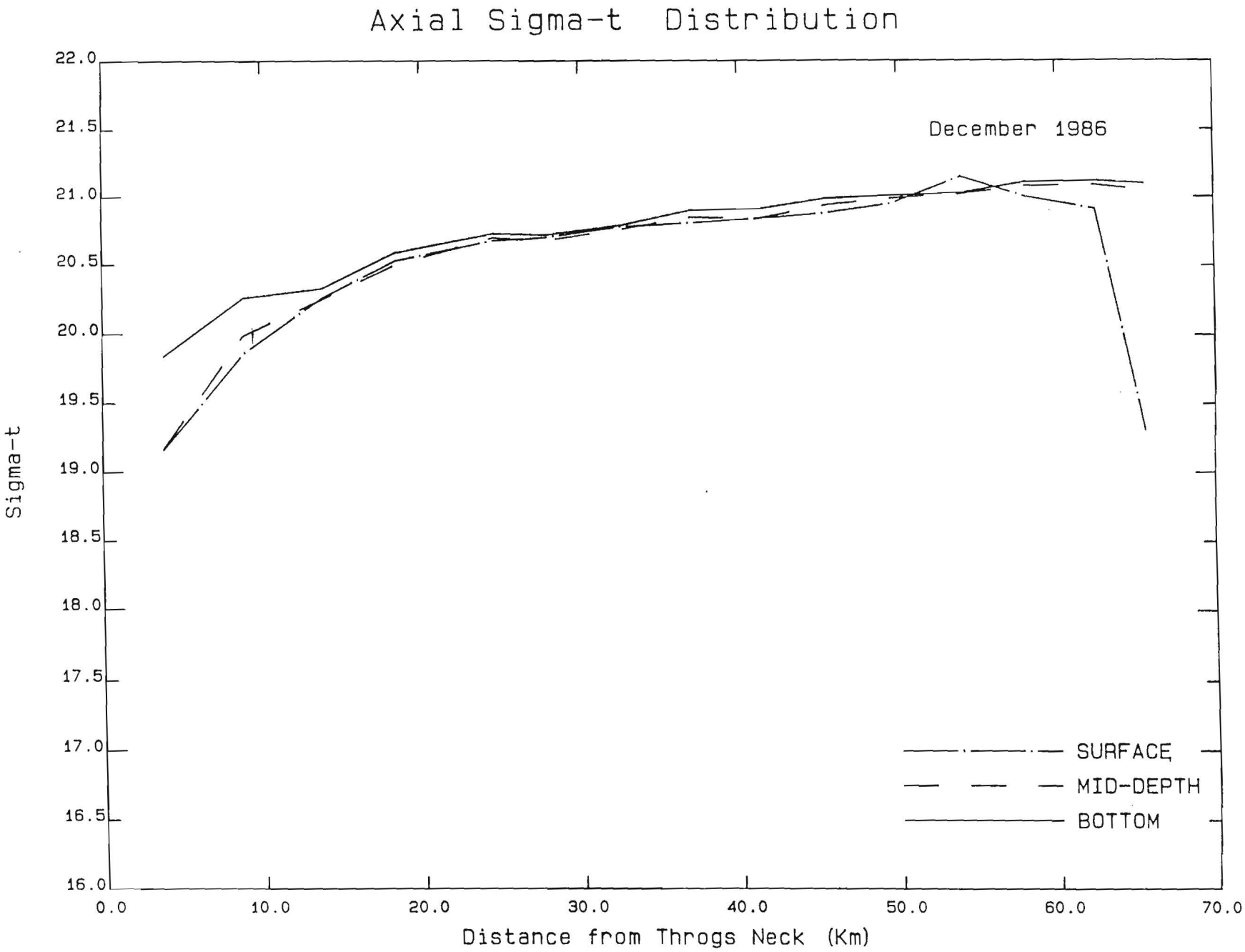

Figure 6b. Axial sigma-t distribution December 1986.

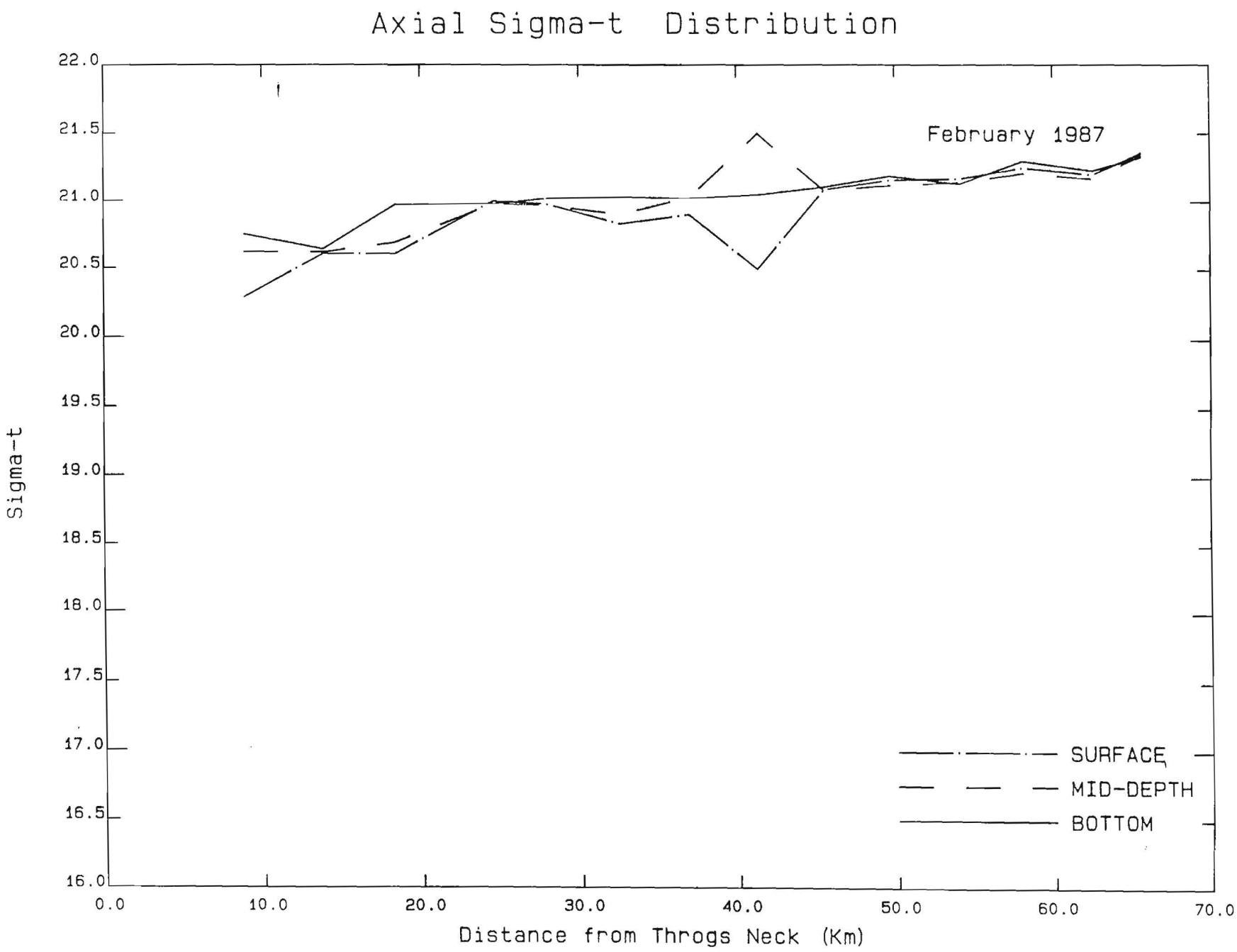

Figure 6c. Axial sigma-t distribution February 1987.

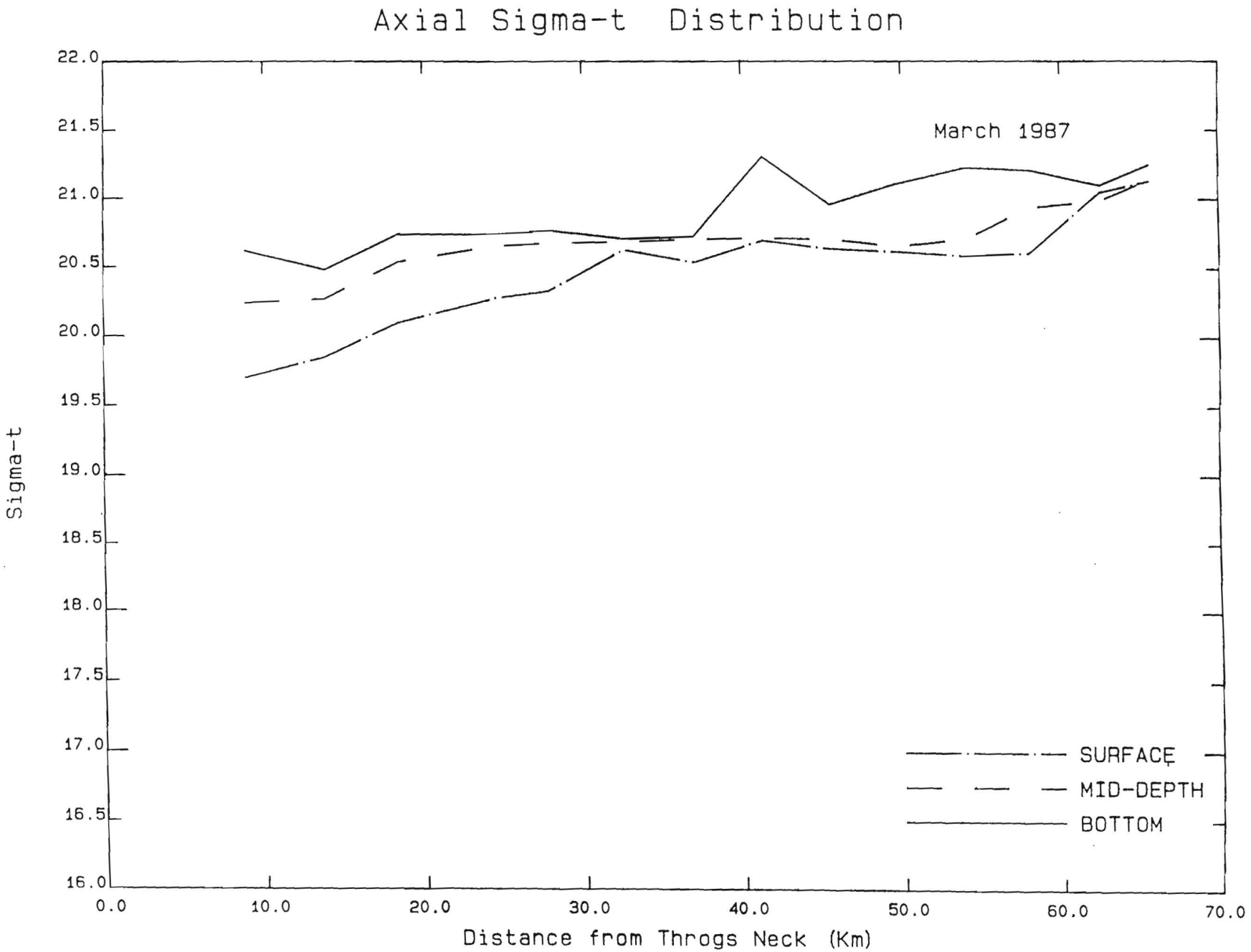

Figure 6d. Axial sigma-t distribution March 1987.

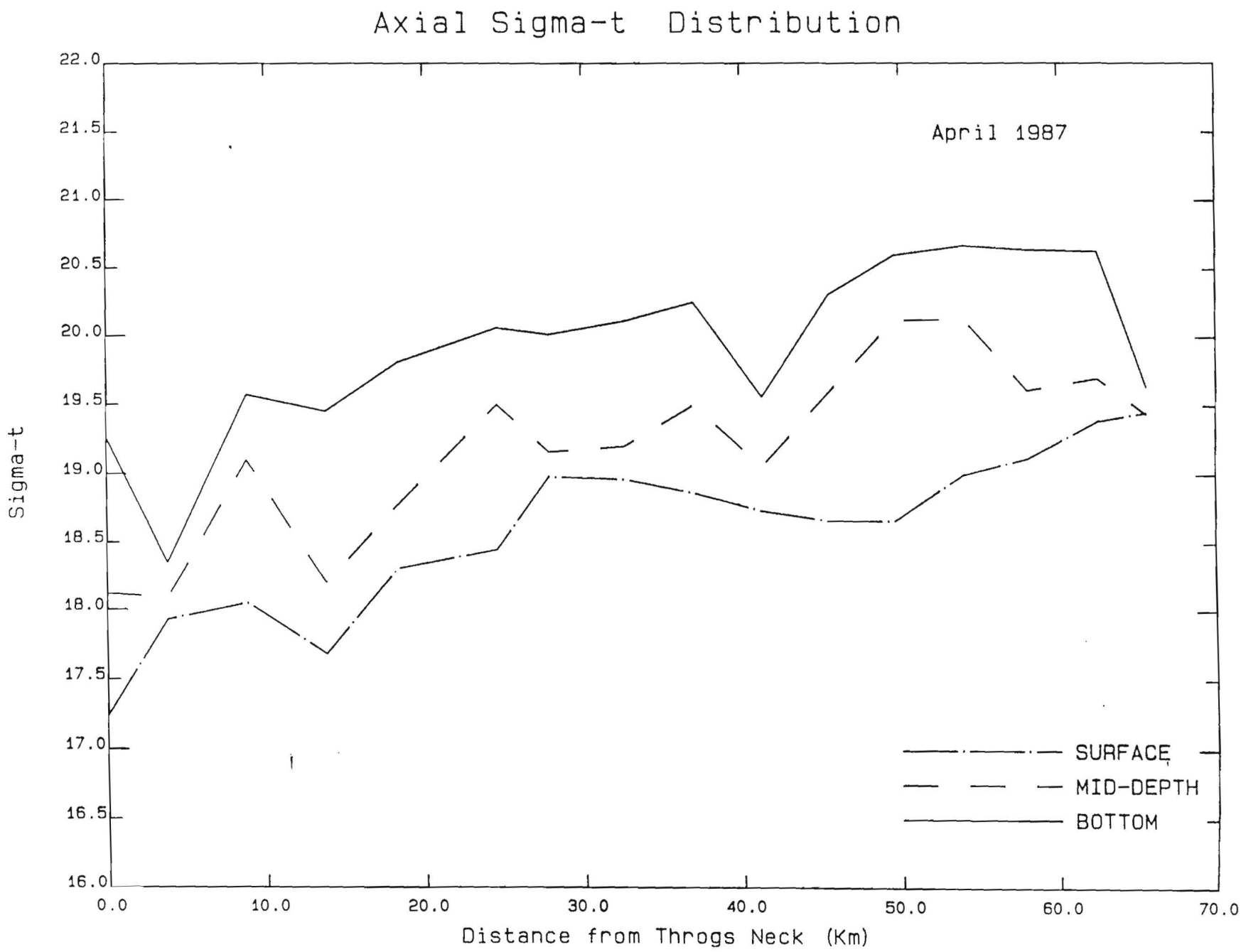

Figure 6e. Axial sigma-t distribution April 1987.

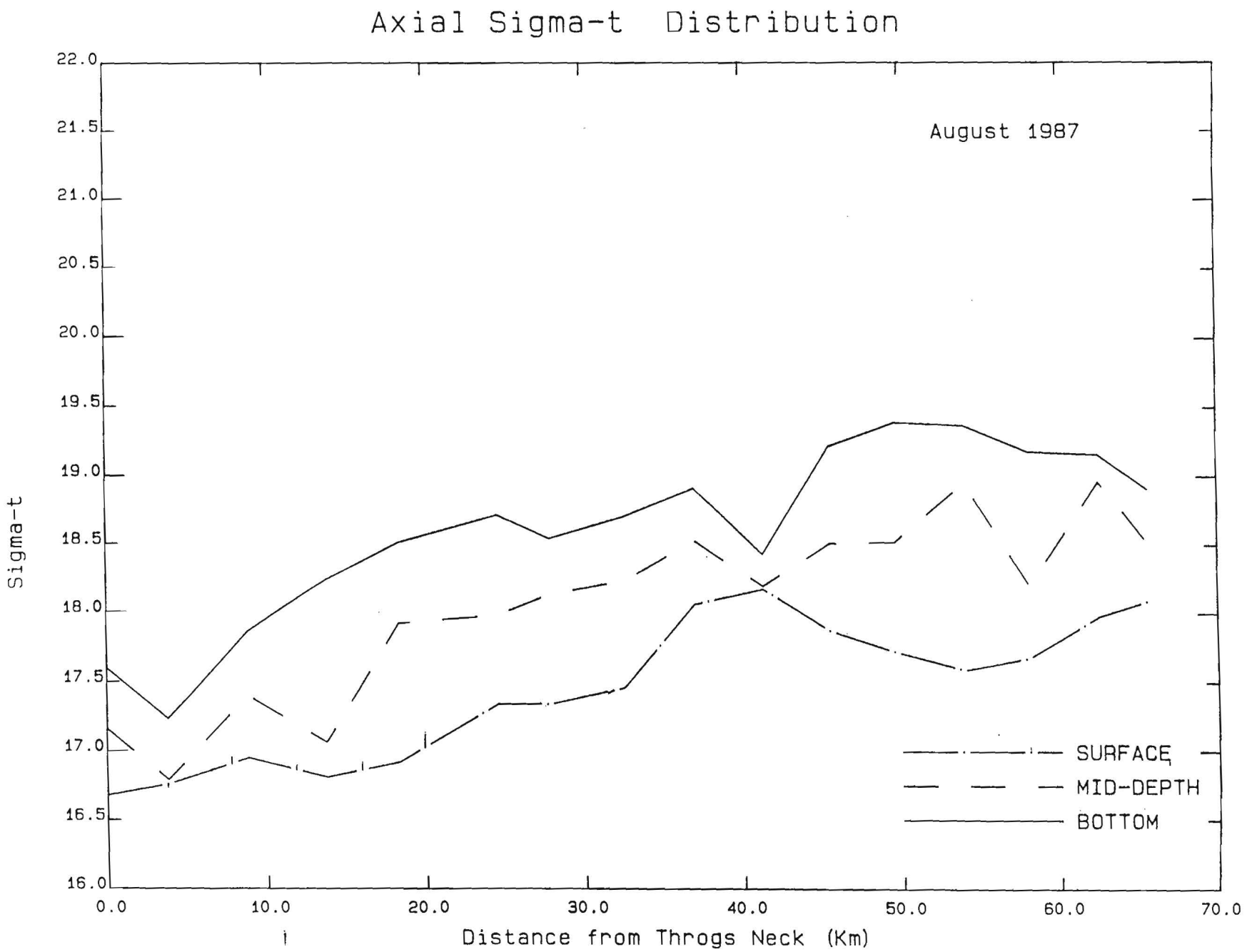

Figure 6f. Axial sigma-t distribution August 1987.

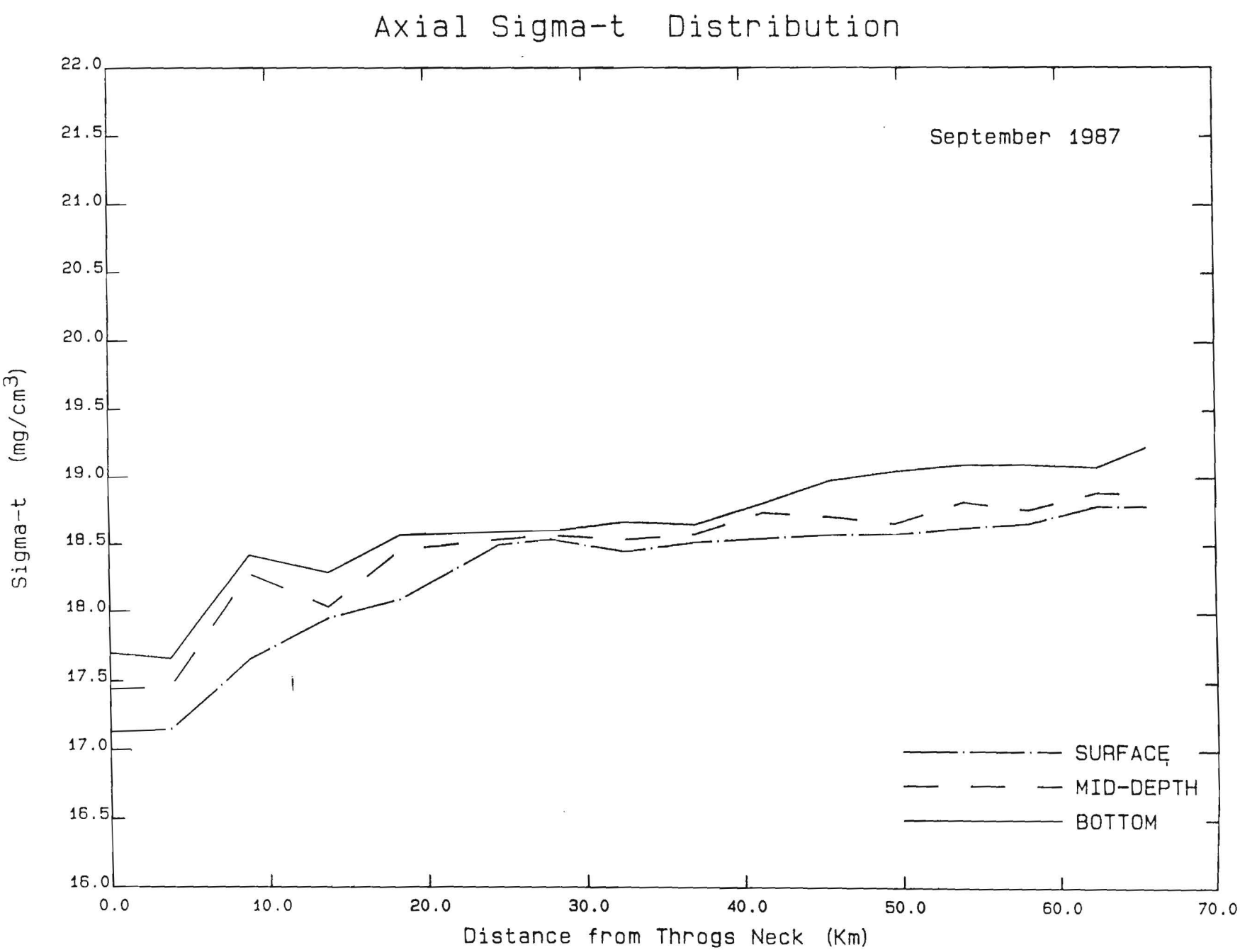

Figure 6g. Axial sigma-t distribution September 1987.

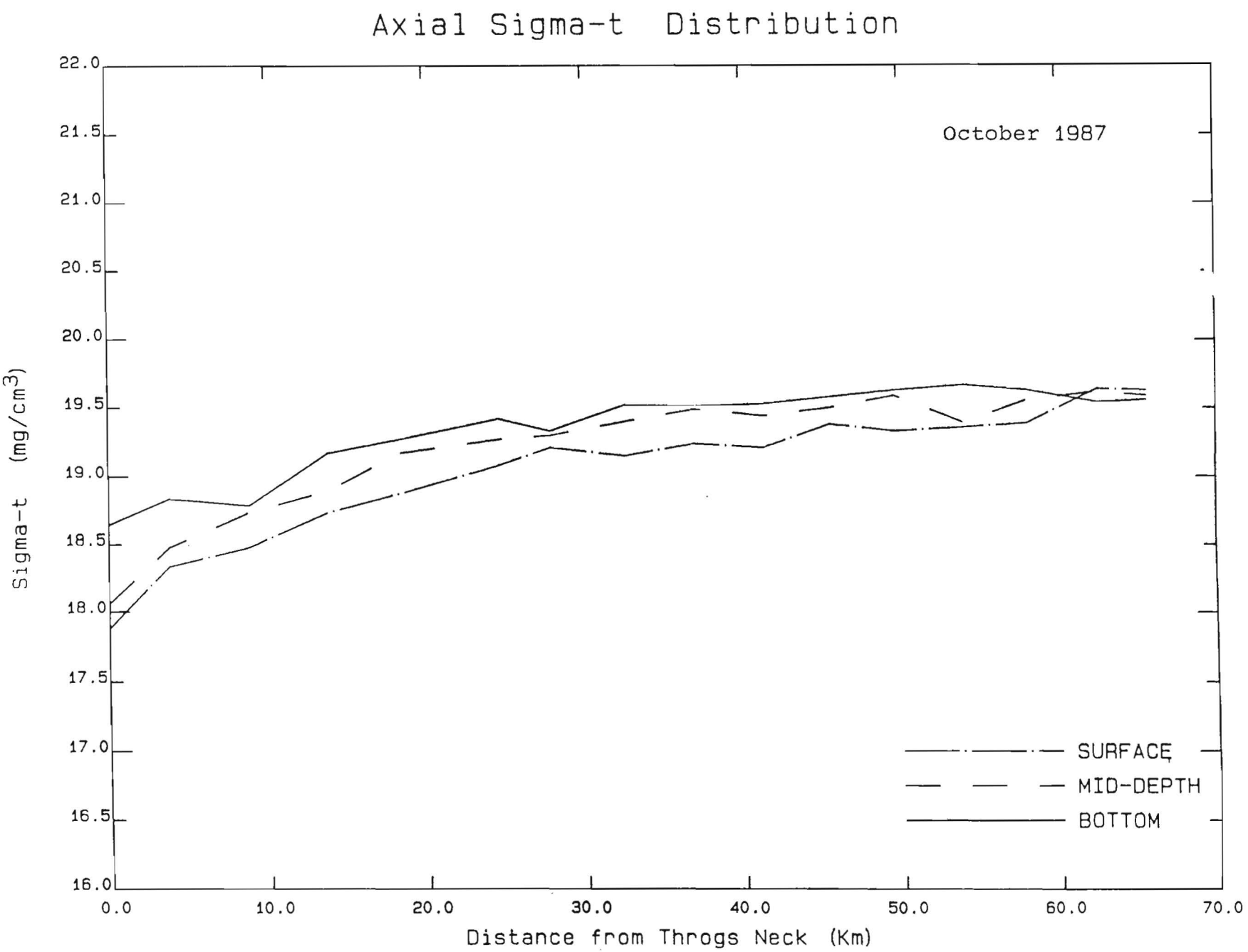

Figure 6h. Axial sigma-t distribution October 1987.

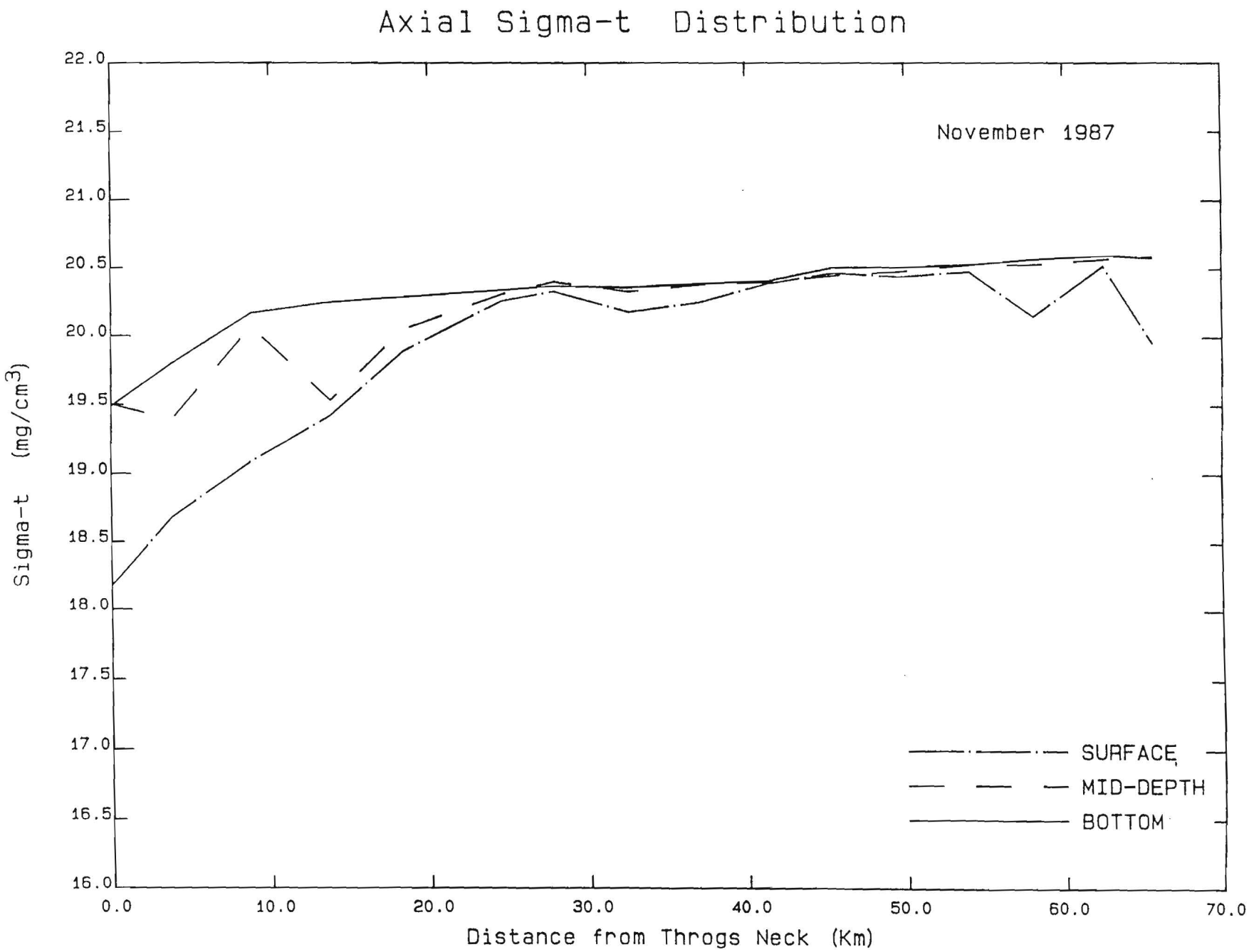

Figure 6i. Axial sigma-t distribution November 1987.

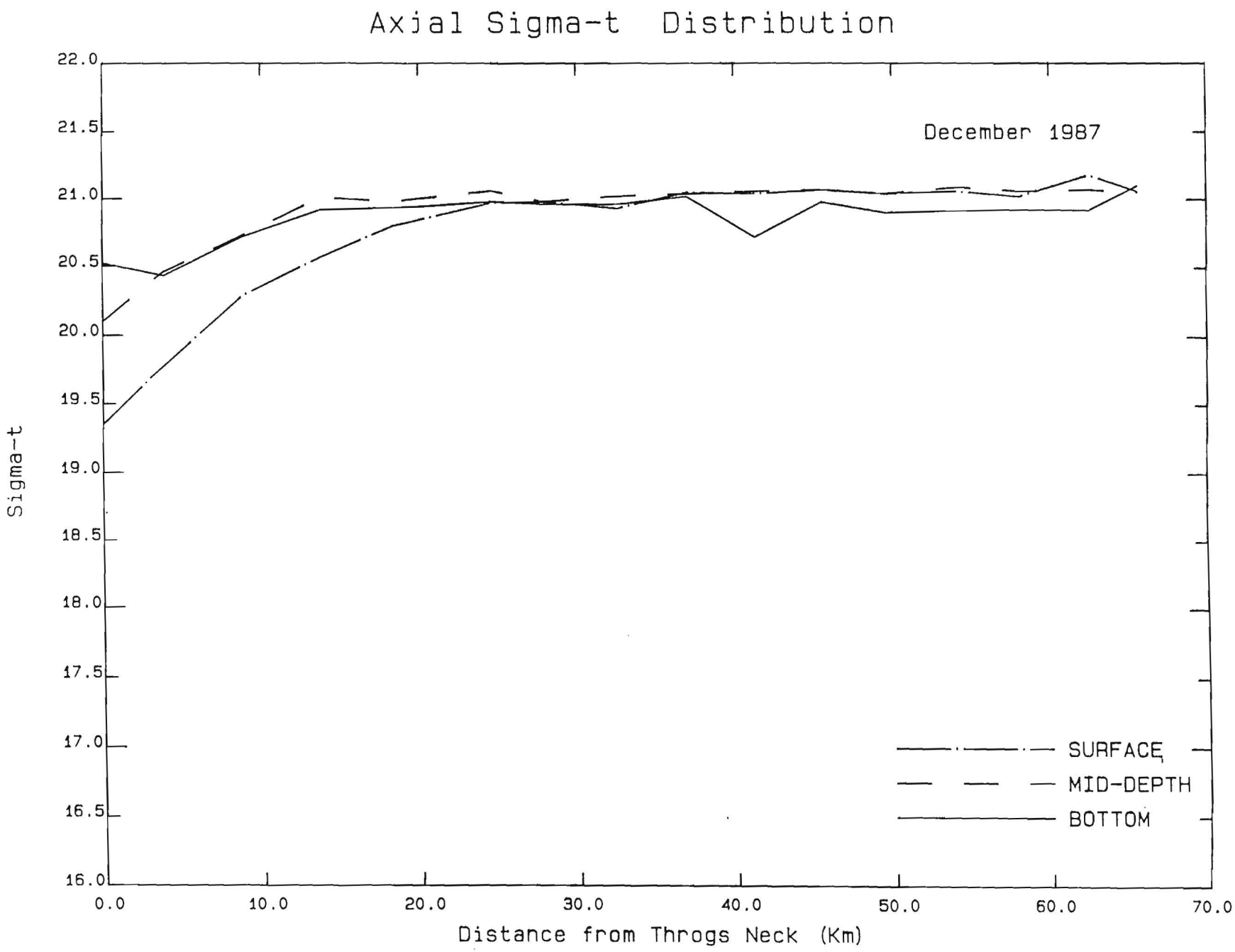

Figure 6j. Axial sigma-t distribution December 1987.

Sigma-t. Figures 6a through j represent values for sigma-t measured in western Long Island Sound from September 1986 through December 1987. In general, there was a consistent gradient in density from west to east. Lower values were measured at Throgs Neck and increased to the east at a rate of about 0.015 sigma-t units per kilometer. The most marked gradient in density was noted at the surface, with lesser, though still pronounced gradients observed in the mid-depth and bottom waters. Measurements of sigma-t at the surface were, for example, about 17.3 at Throgs Neck increasing to about 19.5 near Middle Ground. Mid-depth measurements varied from about 18.1 in the western reaches to about 19.5 in the central Sound and the bottom water was noted to vary from about 18.5 to 20.0 from west to east.

Water column stratification in the western Sound varied seasonally, however, the west to east gradient remained superimposed on these changes. When the study was begun in September of 1986, water column stratification across western Long Island Sound had begun to break down while the water column was still stratified within 20 km of the Throgs Neck Bridge. By February 1987, the water column had become well mixed although evidence of the west to east gradient in density was still present though not pronounced. Sigma-t values were measured to be at their yearly maxima, averaging about 20.5 at Throgs Neck and 21 at Middle Ground. Through March and April 1987, the water column became increasingly well stratified as overall sigma-t values across the Sound decreased. The density difference

between the surface and bottom waters was greatest in April. At this time the temperature diference between the surface and bottom was as much as 1.5 degrees centigrade, corresponding to a density difference due to temperature alone of 0.18 sigma-t units. The salinity difference was as much as 1.7 ppt corresponding to a density difference of 1.33 sigma-t units. So, about 12% of the total vertical density gradient was due to temperature differences and about 88% due to salinity differences. Although the water column across the Sound remained well stratified by August 1987, a density minima was reached with the lowest values being about 16.7 at Throgs Neck and increasing to about 18.0 at Middle Ground. At this time the maximum vertical temperature difference was about 3 degrees and the maximum salinity difference was about 1.25 ppt. Thus about 46% of the vertical density gradient was due to temperature differnces in August. The water column was essentially destratified in September; overall sigma-t values began to increase as the water temperature decreased. By November 1987, stratification was still evident in the western reaches of the Sound near Throgs Neck, though the central Sound was well mixed. The water column continued to be well mixed in December 1987 at density levels comparable to those in December 1986, although there was still evidence of a western stratified zone within 20 km of the Bridge.

Suspended Sediment. Figures 7a through j represent axial total suspended solids concentration with depth for Long Island Sound from September 1986 through December 1987. The variation in the

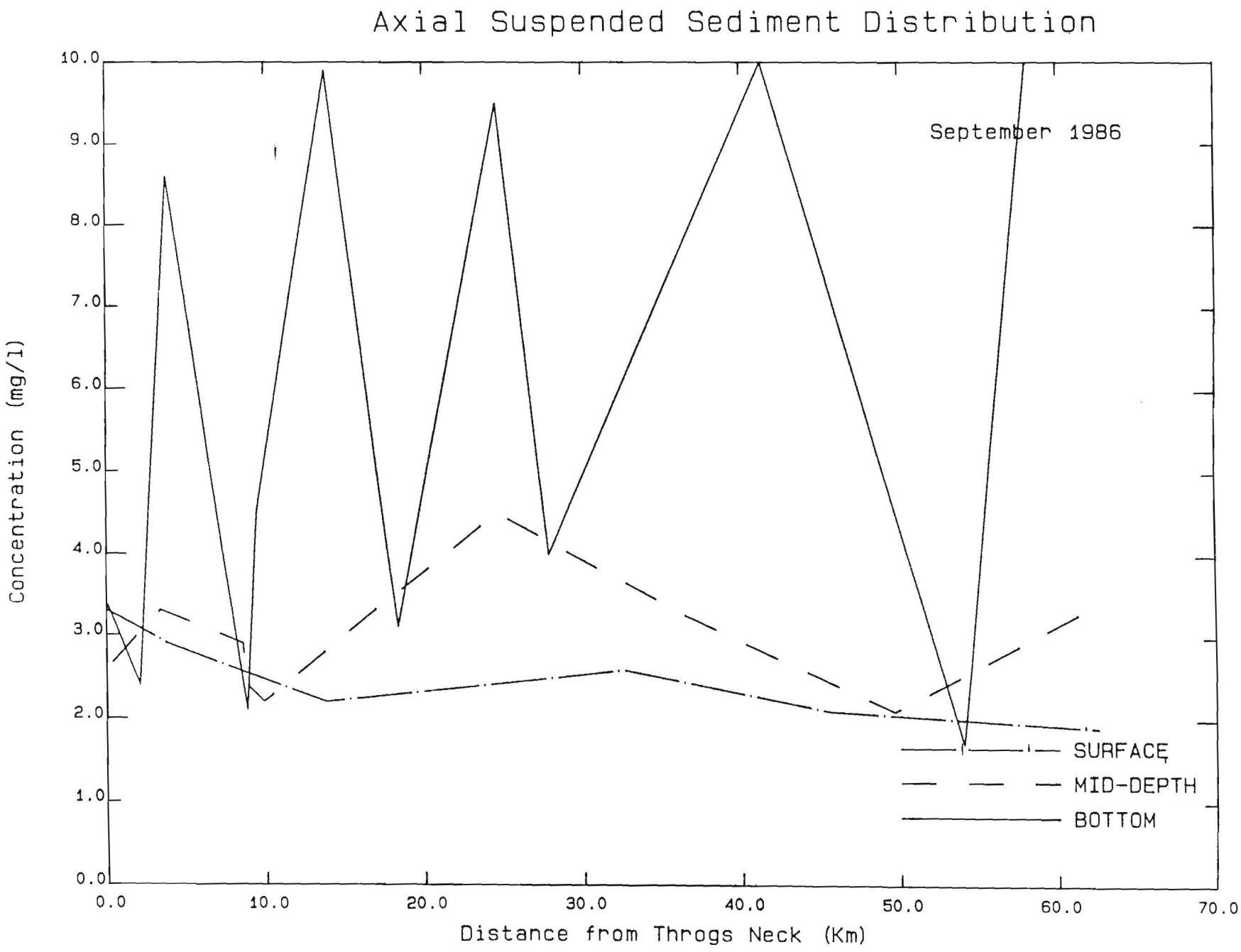

Figure 7a. Axial suspended sediment distribution September 1986.

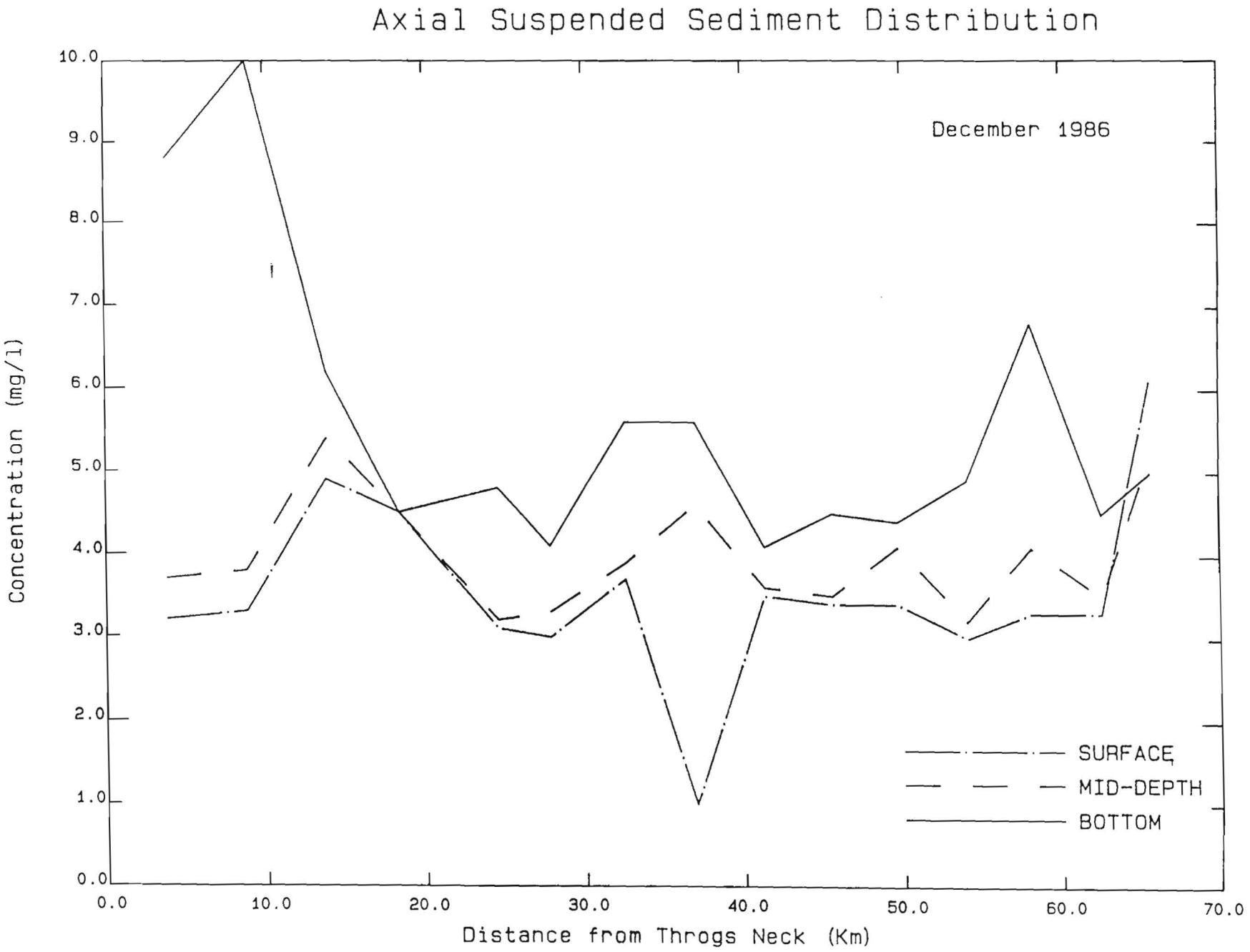

Figure 7b. Axial suspended sediment distribution December 1986.

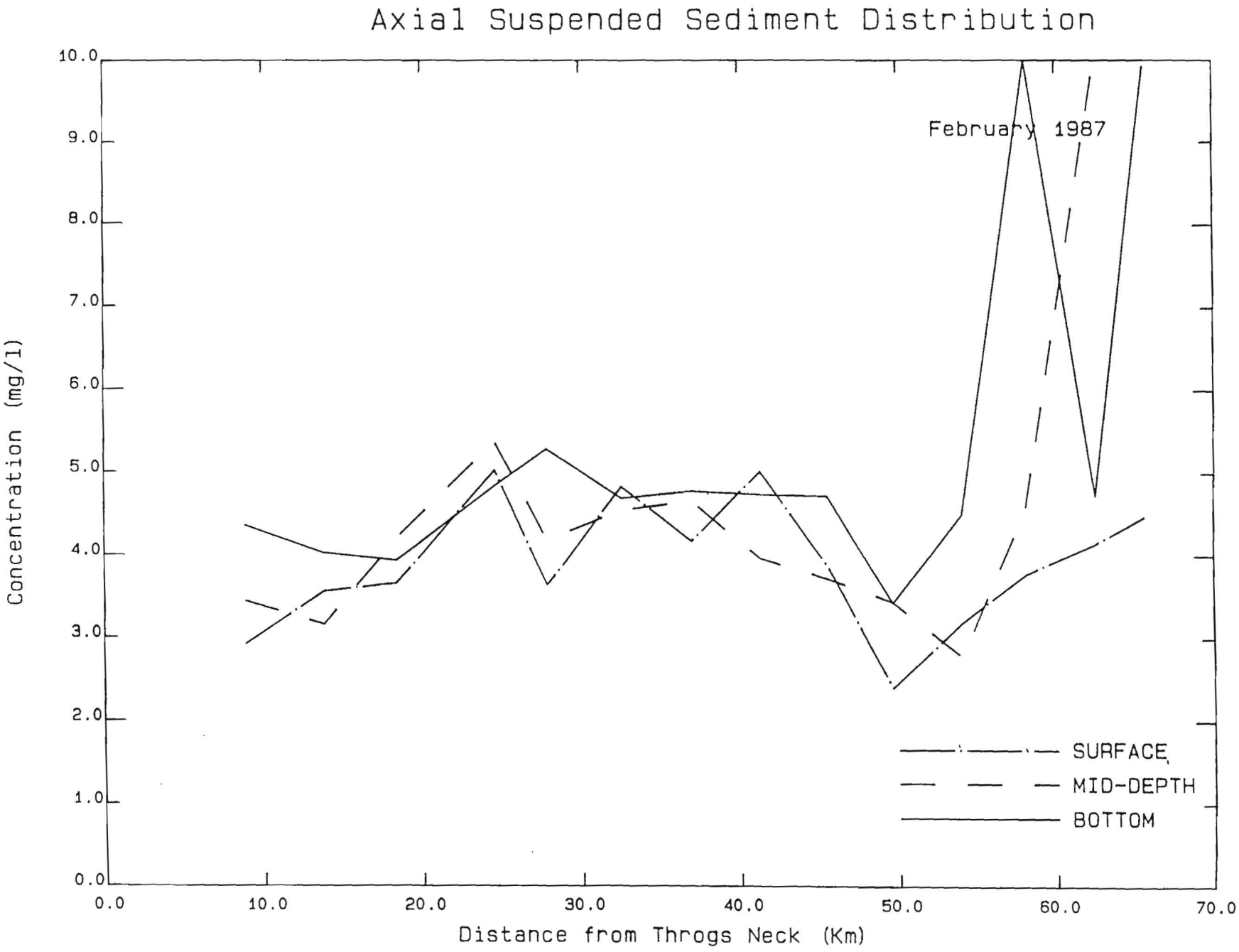

Figure 7c. Axial suspended sediment distribution February 1987.

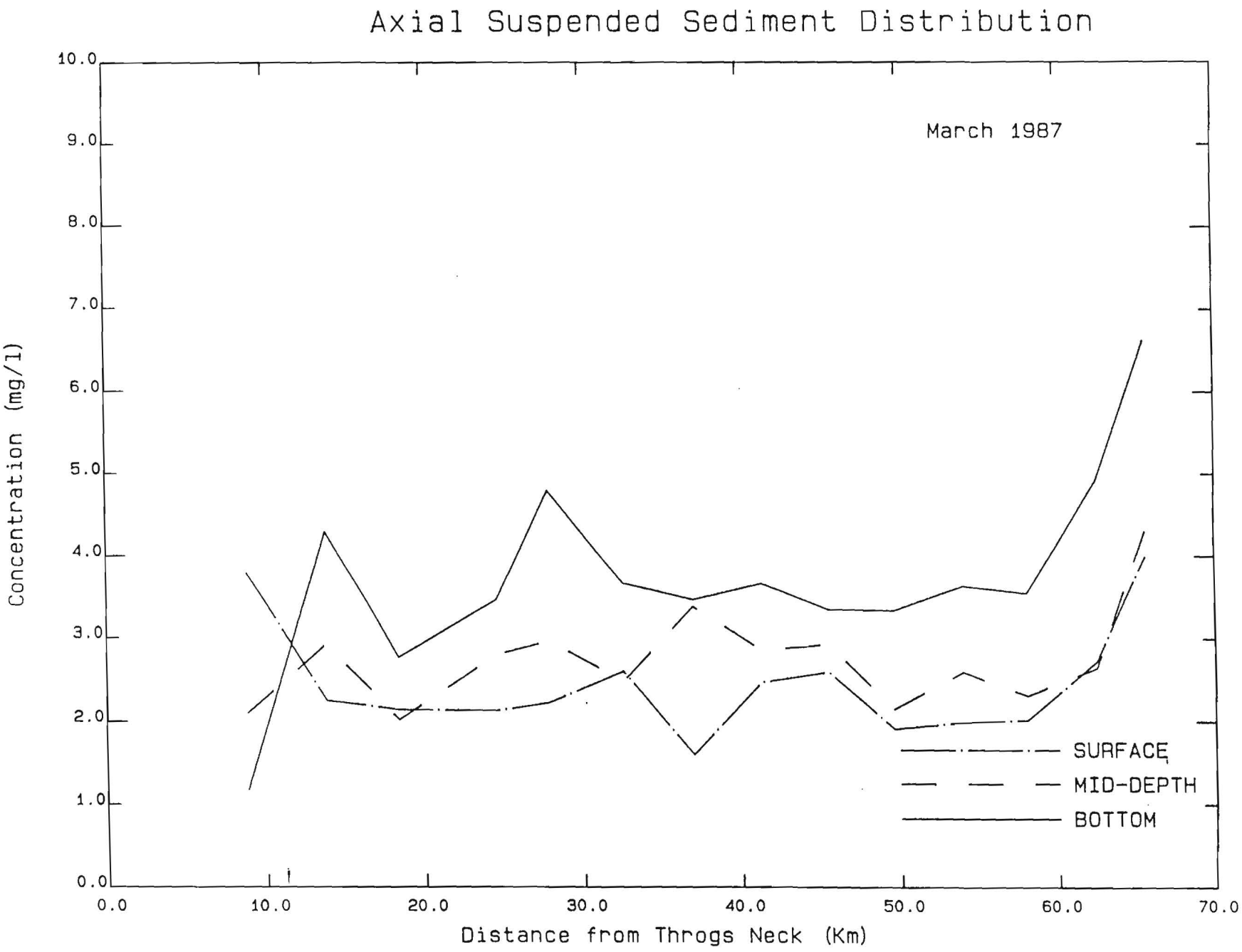

Figure 7d. Axial suspended sediment distribution March 1987.

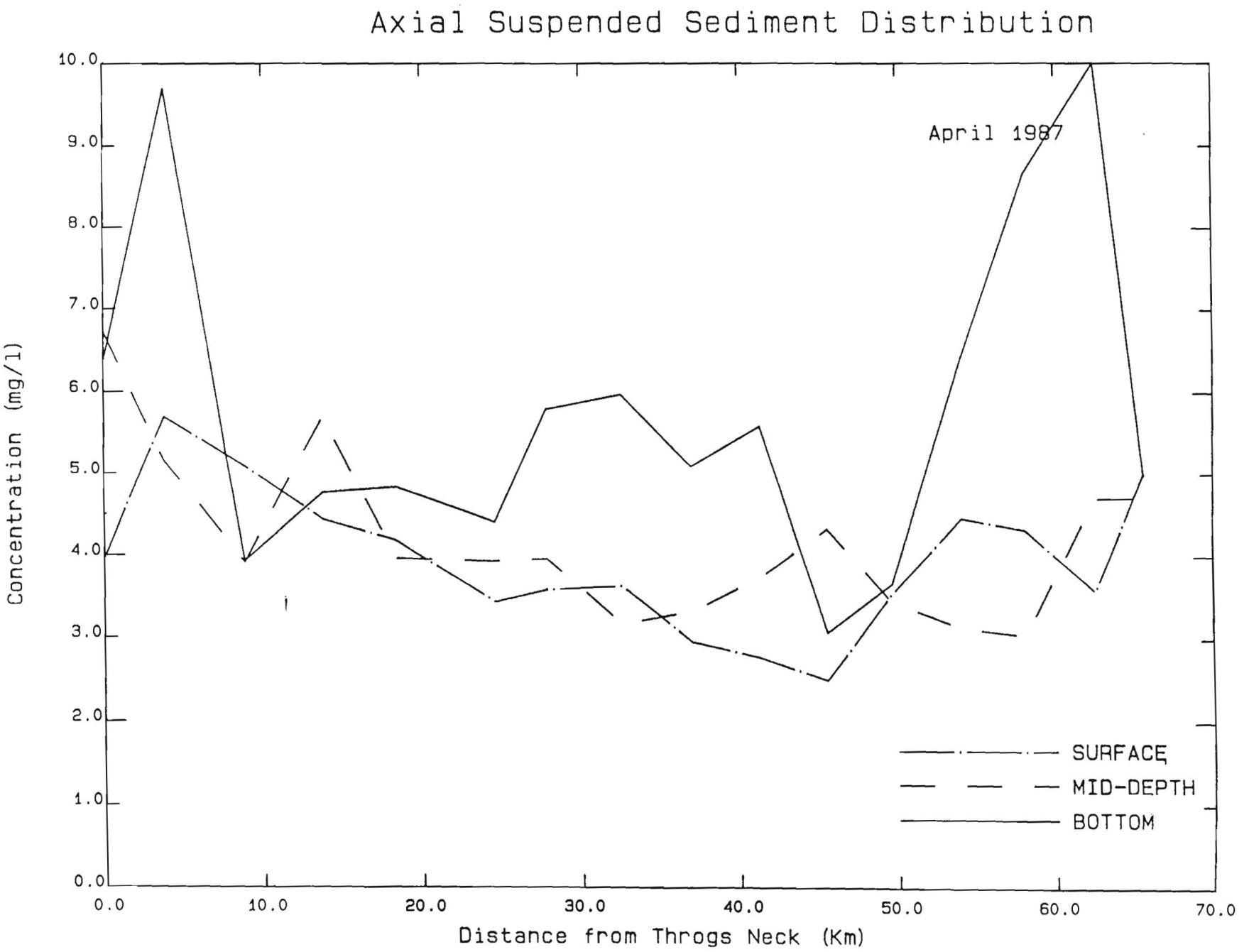

Figure 7e. Axial suspended sediment distribution April 1987.

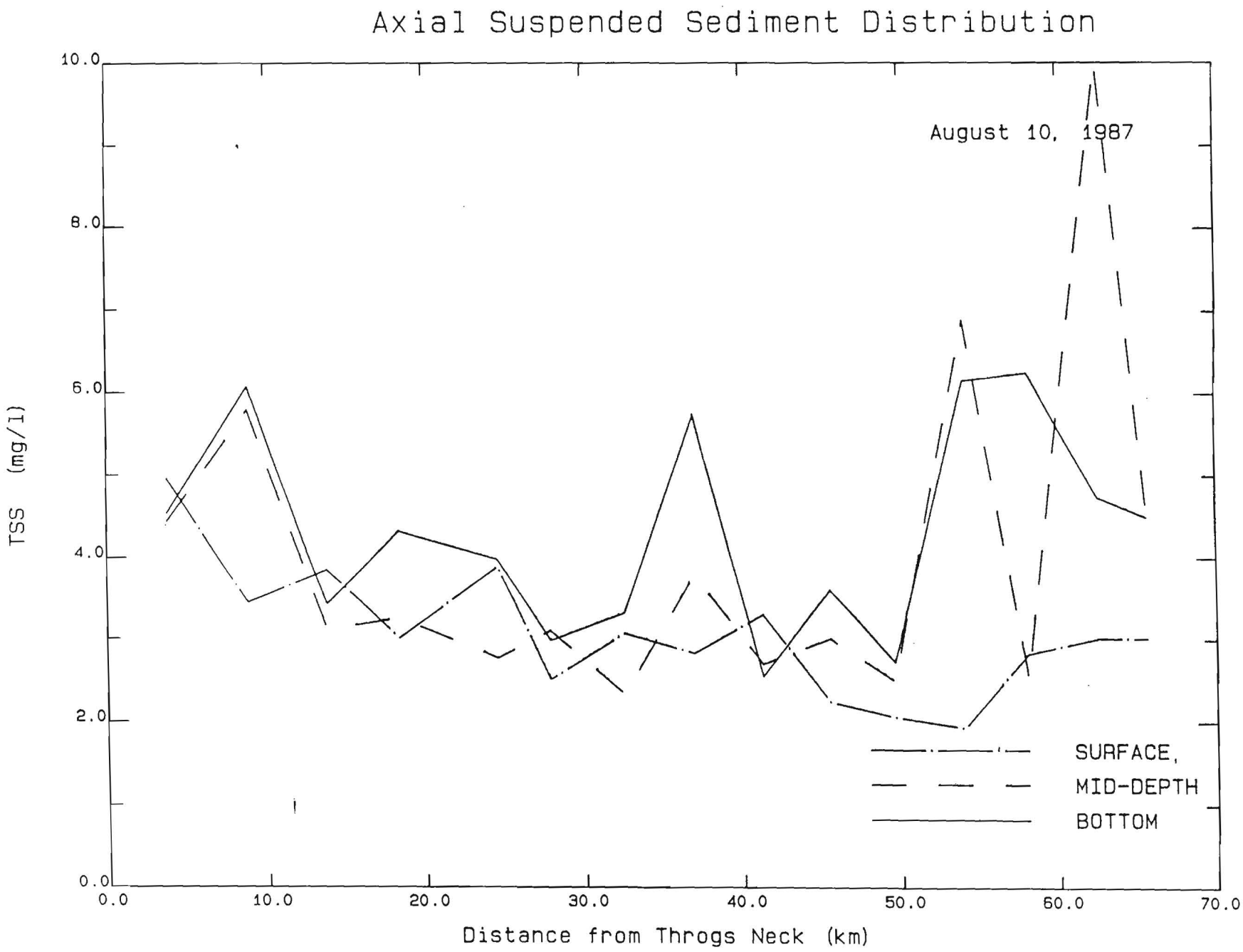

Figure 7f. Axial suspended sediment distribution August 1987.

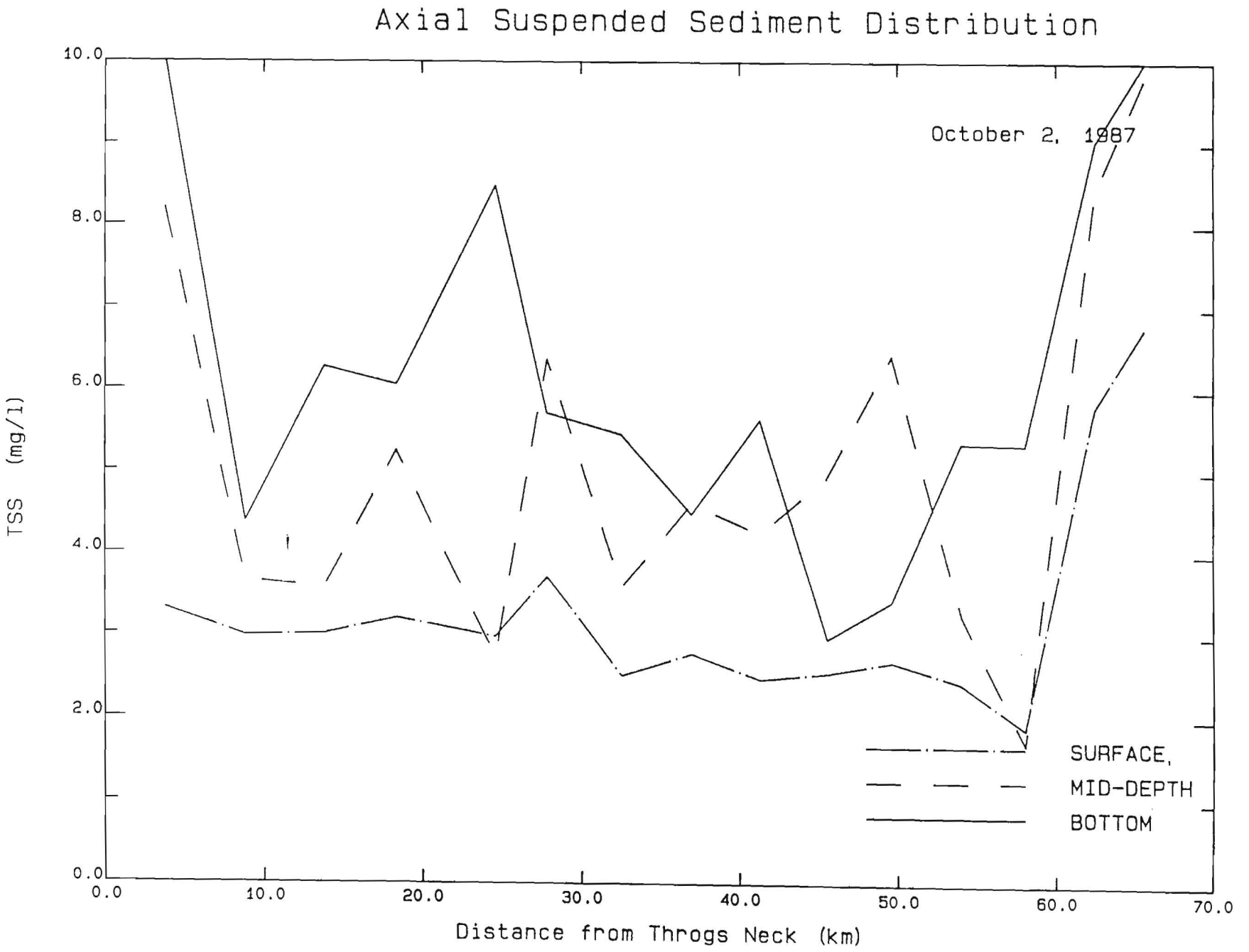

Figure 7h. Axial suspended sediment distribution October 1987.

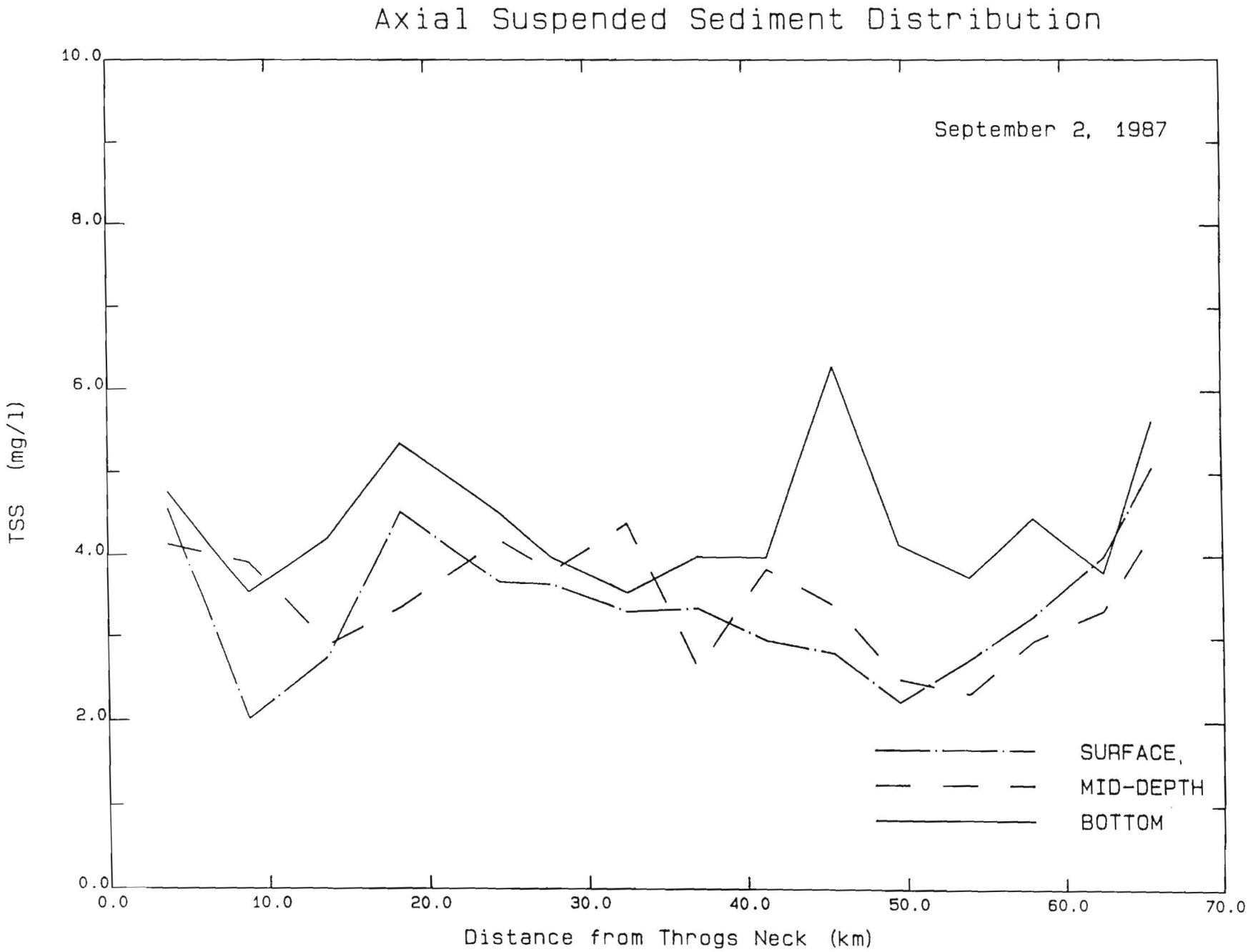

Figure 7g. Axial suspended sediment distribution September 1987.

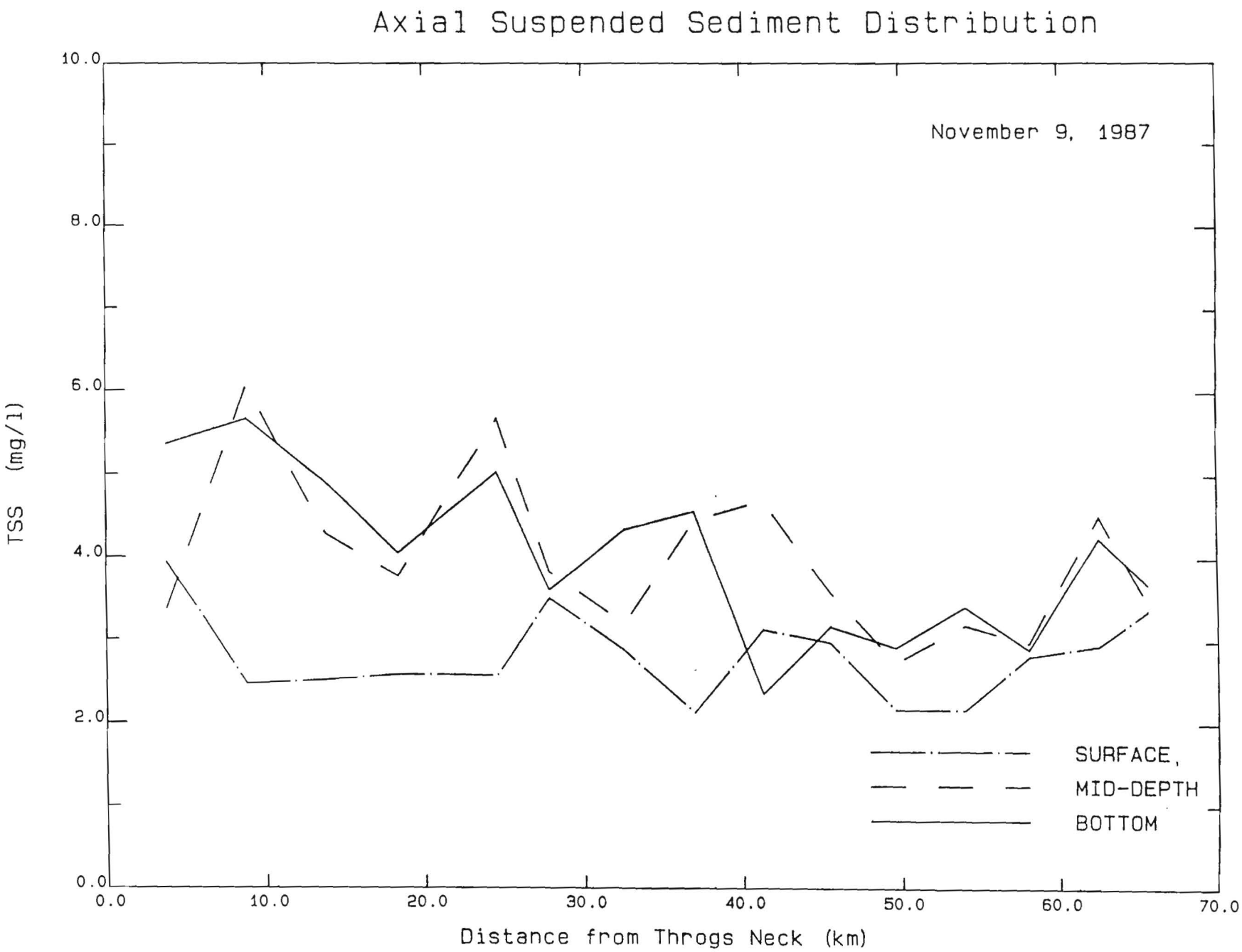

Figure 7i. Axial suspended sediment distribution November 1987.

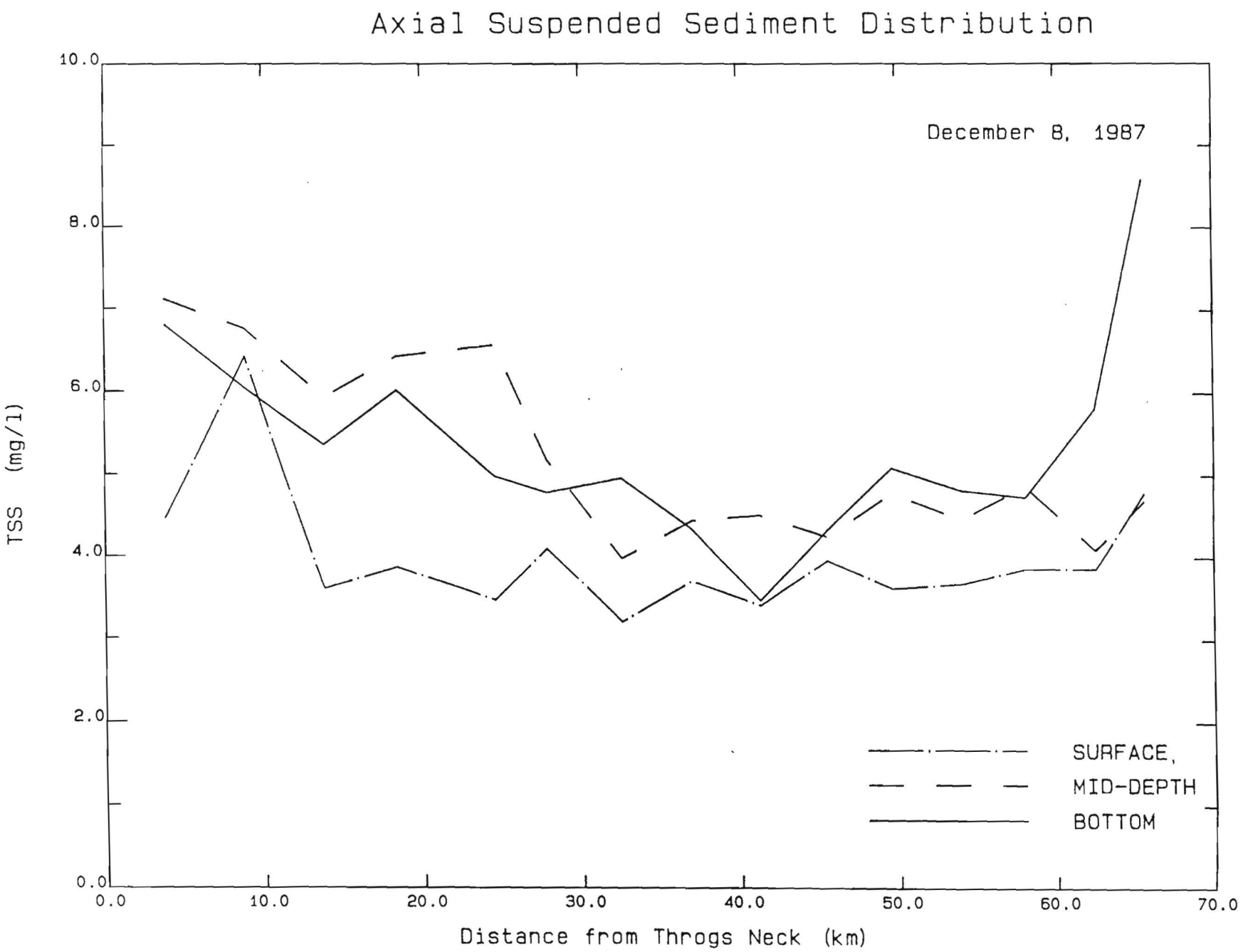

Figure 7j. Axial suspended sediment distribution December 1987.

near-bottom suspended solids concentration in September 1986 was very likely due equipment problems rather than to real physical anomalies. In general, there was no strong pattern of a west to east gradient in suspended solids as we had noted in the density and salinity data. As expected, however, suspended solids concentration were consistently higher near the bottom. For example, in February 1987 surface values for suspended solids in the area of the Sound near Throgs Neck averaged about 2.9 milligrams per liter, increasing to about 4.4 milligrams per liter near the bottom.

There was often a local maximum in near-bottom suspended solids concentration in the area between 25 and 50 kilometers east of Throgs Neck. For example, in August 1987, the suspended solids concentration of the bottom waters 37 kilometers from the Bridge reached values of about 5.8 milligrams per liter. In September 1987, near-bottom suspended solids were measured to be as high as about 6.1 milligrams per liter at a distance of 46 kilometers from Throgs Neck. In October 1987, this peak was noted at a distance of about 26 km from the Throgs Neck Bridge, when near-bottom values were as high as about 8.5 milligrams per liter. These local increases in suspended solids concentration may be due to the influence of tides over Cable and Anchor Reef, which lies at a distance of about 42 kilometers from the Throgs Neck Bridge. In some cases there appears to be a decrease in suspended solids concentration west from the East River and occassionally an increase at Middle Ground (e.g. December 1987).

At Middle Ground we may have seen the effects of local tidal resuspension or the input from the Housatonic River or both. Anomously high values for suspended solids noted in the western reaches of the Sound in December 1986, April and October 1987 may be the result of urban inputs.

Over the course of the August 1986 through December 1987 study period, the average total suspended solids concentration across western Long Island Sound was on the order of 4.4 milligrams per liter (table 2). This ranged from a low of 3.0 milligrams per liter in March 1987 to a high of about 5.3 milligrams per liter in December 1987. This was comparable to the suspended material concentration of about 5.2 milligrams per liter noted in October 1987. There was no clear pattern of seasonal variability evident in these data. Additionally, there was no strong east-west component in the distribution of suspended solids within the Sound. The average difference in suspended solids concentration measured between the data collected by UCONN (available through April 1987) in the eastern Sound and that collected by the MSRC in the western Sound was on the order of 0.6 milligrams per liter.

A plan view of the suspended sediment distribution in the Long Island Sound from the data collected on the combined lateral/axial cruises showed a small influence of local inputs on a more or less uniform pattern in the suspended sediment load. Figures 8a and b are representative views of suspended sediment across Long Island Sound at 1 meter below the surface and at 1 meter above the bottom. There was a small increase in sediment

Table 2. Measured Total Suspended Solids
(in milligrams/liter)

DATE		Average TSS MSRC	UCONN
09 Sep 86		4.97	4.28
10 Dec 86		4.76	5.15
15 Jan 87	*	2.82	4.05
25 Feb 87		4.94	4.40
23 Mar 87		2.99	2.33
14 Apr 87		4.93	5.04
10 Aug 87		3.98	
02 Sep 87		3.97	
02 Oct 87		5.22	
09 Nov 87		4.08	
09 Dec 87		5.31	

* denotes only 4 stations measured

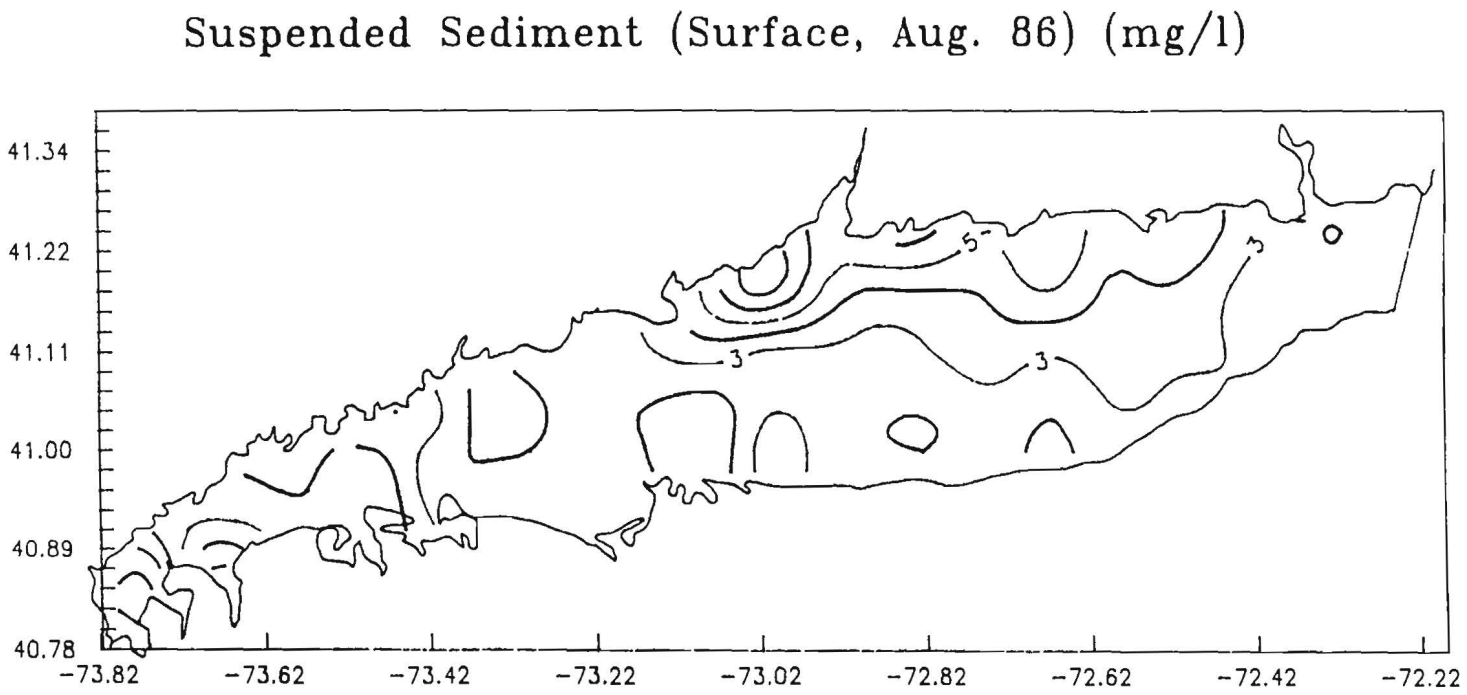

Figure 8a. Plan view of suspended sediment distribution 1 meter below the surface.

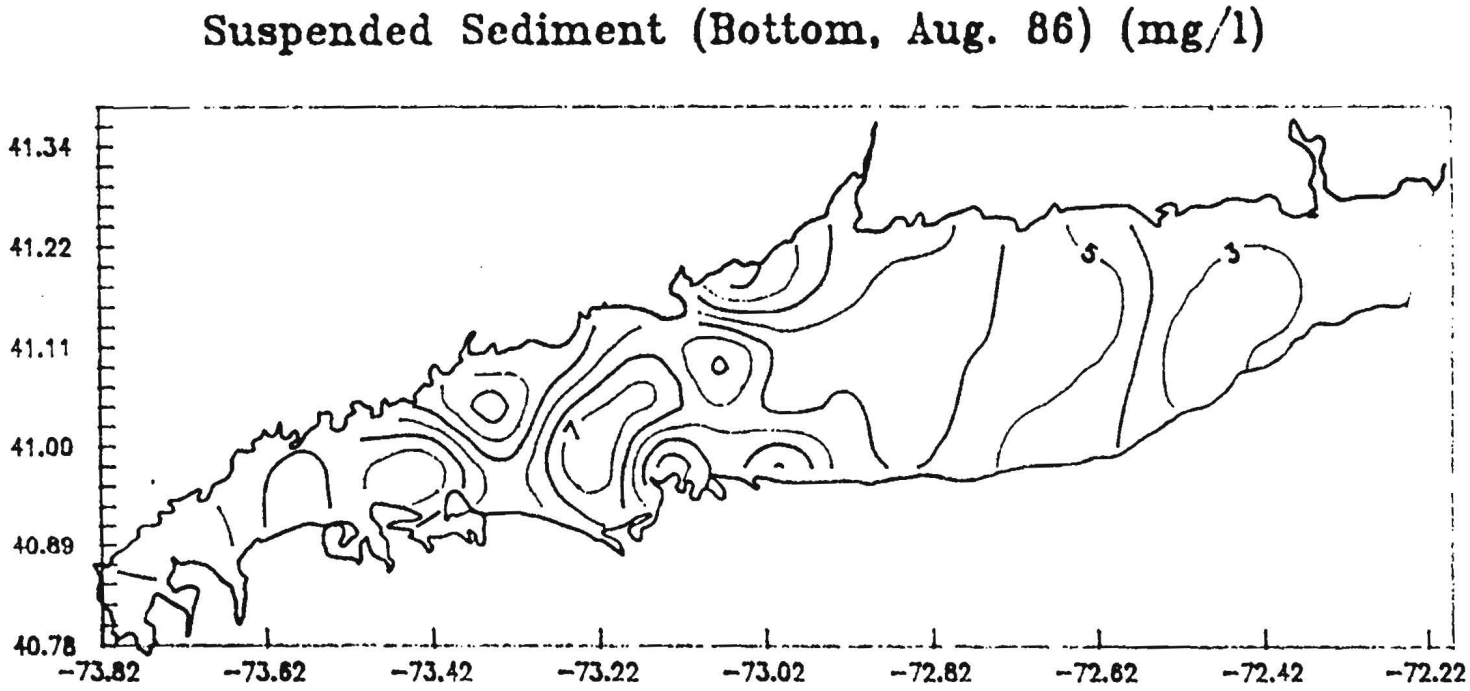

Figure 8b. Plan view of suspended sediment distribution 1 meter above the bottom.

concentration near the mouths of the Housatonic, Quinipiac and Norwalk Rivers. Though the freshwater inputs from riverine sources were high, the suspended sediment signatures from these sources were not strong.

SUMMARY

A review of the physical and suspended solids data collected in western Long Island Sound between August 1986 and December 1987 showed:

1. There was a persistent axial salinity gradient which averaged about 1.5 ppt from the Throgs Neck Bridge to the central Sound but was often slightly steeper within 20 km of the Bridge. The seasonal salinity changes were characterized by (a) a general drop in salinity between March and April and the onset of salinity stratification in April (this was probably due to the impact of the spring freshet), (b) a rise in salinity over the summer while maintaining some salinity stratification, and (c) a breakdown of the stratification by September.

2. In the cold winter months, water temperature was uniformly low and the water column was well mixed. As the air temperature moderated in the spring and summer, water temperature increased and temperature stratification became more important. In the fall, as air temperature began to drop, water temperature decreased and the water column destratified. There was no evidence of a west to east gradient present in the temperature data.

3. Density as measured by sigma-t, varied seasonally. During the colder winter months the water column was uniformly well mixed and sigma-t values were high. In the spring, the water column began to show evidence of early stratification as sigma-t values began to decline. About 12% of the vertical stratification in April was due to temperature changes. The stratification intensified over the summer due to temperature changes. By August as much as 46% of the vertical stratifcation was due to temperature differences. In the fall, as temperatures began to drop, the Sound gradually became well mixed. The vertical gradient in sigma-t varied seasonally and thus appears to be primarily controlled by temperature, whereas the horizontal density gradient is controlled by salinity differences.

4. Other than the expected vertical gradient, there were no strong, persistent patterns in the suspended sediment distribution or its seasonal variation. Fluvial inputs could be recognized in the suspended sediment distribution but the gradients were small and local. Along an axial section local maxima generally appeared near the East River, Cable and Anchor Reef and Middle Ground. These may be, in part, due to local shoreline sources and, in part, to local resuspension around shoals. There was no evidence of a turbidity maximum that may have been controlled by the estuarine circulation.

Appendix I. Calibration coefficients for Martek Mark VI sensors.

ELECTRONICS AND OCEAN INSTRUMENT FACILITY
MARINE SCIENCES RESEARCH CENTER
STATE UNIVERSITY OF NEW YORK, STONY BROOK, NY 11794-5000

CALIBRATION REPORT

INSTRUMENT: Martek Mark VI Water Quality Analyzer.
SERIAL NUMBER: 178.
USED FOR FIELD DATES BETWEEN: 2/18/86 and 3/4/88.
REPORT DATE: 9 March 1989.

GENERAL INFORMATION

Generalized Polynomial Translation Equation:

$$P_c = A_0 + A_1 * P_r + A_2 * (P_r)^2 + A_3 * (P_r)^3$$

Where: P_c= Translated parameter (corrected data).
P_r= Observed parameter (reading or observed data).
A_0, A_1, A_2, A_3= constant calibration coefficients.

Calibration Standards: Temperature and conductivity calibrations were conducted in the MSRC high precision temperature and conductivity calibration facility.

Temperature was measured with a Thermometrics Model S-10 standard thermistor, S/N 554, and a General Radio Wheatstone bridge. A Hewlett Packard Model 2801A Quartz thermometer was used as a secondary temperature standard. Temperature was calculated to 0.001 deg. C, with stability of better than 0.003 C and accuracy of better than 0.01 C.

Salinity was measured using a Guildline AutoSal salinometer calibrated with IAPSO standard "Copenhagen" seawater. Calculations of salinity and nominal conductivity were made using algorithms developed by Dr. Donald W. Pritchard that conform to the standards set by the Practical Salinity Scale of 1978 and the Universal Equation of State of Seawater of 1980. The scale factor used to convert between nominal conductivity and conductivity ratio was 42.9192 mmho/cm for seawater of salinity 35 at temperature 15 C and atmospheric pressure.

Martek Mark VI cal. report, S/N 178, 2/18/86 - 3/4/88 , report 3/9/89, pa

PARAMETER: Temperature, degrees centigrade.
(measured from recorder voltage output).
CALIBRATION DATE: 2/11/86.

CALIBRATION DATA

Observed Output Voltage, volts	Temperature degrees C	Temperature calc. from regression	Error degrees C
2.3000E-05	0.005	0.017	0.012
1.0058E-01	5.037	5.014	-0.023
2.0022E-01	9.976	9.972	-0.004
3.0162E-01	15.007	15.023	0.016
4.0069E-01	19.949	19.964	0.015
5.0171E-01	25.021	25.009	-0.012
6.0036E-01	29.954	29.940	-0.014
7.0191E-01	35.012	35.021	0.009

Regression coefficients:

A_0= 1.5699E-02 A_1= 4.9665E+01
A_2= 3.1279E-01 A_3= -2.6357E-02

The standard error of the regression fit is 1.65E-2 degrees C.

PARAMETER: Conductivity, millimho/centimeter.
(measured from recorder voltage output).
CALIBRATION DATE: 2/11/86.

CALIBRATION DATA AND ANALYSIS

Observed Output Voltage, volts	Conductivity mmho/cm	Conductivity calc. from regression	Error, mmho/cm
3.5471E-01	24.697	24.721	0.024
4.0970E-01	28.504	28.478	-0.026
4.6590E-01	32.422	32.389	-0.033
5.2553E-01	36.591	36.586	-0.005
5.8650E-01	40.824	40.893	0.069
6.4981E-01	45.305	45.344	0.039
7.1223E-01	49.780	49.672	-0.108
7.8480E-01	54.538	54.577	0.039

Regression coefficients:

A_0= 3.9602E+00 A_1= 4.6186E+01
A_2= 4.4261E+01 A_3= -2.6669E+01

The standard error of the regression fit is 6.03E-2 mmho/cm.

Approved for use: 3/9/89.

Thomas C. Wilson, Jr.
MSRC Ocean Instrument Engineer

PARAMETER: Temperature, degrees centigrade.
(measured from recorder voltage output).
CALIBRATION DATE: 1/20/88.

CALIBRATION DATA

Observed Output Voltage, volts	Temperature degrees C	Temperature calc. from regression	Error degrees C
7.0000E-04	0.058	0.069	0.011
1.0080E-01	5.066	5.044	-0.022
2.0150E-01	10.053	10.054	0.001
3.0290E-01	15.095	15.104	0.009
4.0850E-01	20.355	20.372	0.017
5.0240E-01	25.075	25.065	-0.010
6.0130E-01	30.034	30.018	-0.016
7.0080E-01	35.002	35.011	0.009

Regression coefficients:

A_0= 3.4192E-02 A_1= 4.9680E+01
A_2= 1.7123E-01 A_3= 2.2503E-01

The standard error of the regression fit is 1.56E-2 degrees C.

PARAMETER: Conductivity, millimho/centimeter.
(measured from recorder voltage output).
CALIBRATION DATE: 1/20/88.

CALIBRATION DATA AND ANALYSIS

Observed Output Voltage, volts	Conductivity mmho/cm	Conductivity calc. from regression	Error, mmho/cm	
3.4680E-01	24.597	24.592	-0.005	
3.9920E-01	28.363	28.365	0.002	
4.5500E-01	32.296	32.323	0.027	
5.1310E-01	36.432	36.399	-0.033	
5.7510E-01	40.904	40.722	-0.182	DATUM EXCLUDED
6.3630E-01	44.974	44.987	0.013	
6.9930E-01	49.404	49.403	-0.001	
7.6330E-01	53.945	53.943	-0.002	

DATUM EXCLUDED: The datum at conductivity = 40.904 mmho/cm was examined and considered to be an outlier when compared to the rest of the data. This point was judged to be in error and was not used in the calculation of the regression coefficients below.

Regression coefficients:

A_0= -2.9055E-00 A_1= 8.8169E+01
A_2= -3.1991E+01 A_3= 1.8411E+01

The standard error of the regression fit is 2.00E-2 mmho/cm.

Approved for use: 3/9/89.

Thomas C. Wilson, Jr.
MSRC Ocean Instrument Engineer

The standard error of the regression fit is 2.00E-2 mmho/cm.

ELECTRONICS AND OCEAN INSTRUMENT FACILITY
MARINE SCIENCES RESEARCH CENTER
STATE UNIVERSITY OF NEW YORK, STONY BROOK, NY 11794-5000

CALIBRATION REPORT

INSTRUMENT: Martek Mark VI Water Quality Analyzer.
SERIAL NUMBER: 178.
USED FOR FIELD DATES BETWEEN: 3/5/88 until superceded.
REPORT DATE: 9 March 1989.

GENERAL INFORMATION

Generalized Polynomial Translation Equation:

$$P_c = A_0 + A_1 * P_r + A_2 * (P_r)^2 + A_3 * (P_r)^3$$

Where: P_c= Translated parameter (corrected data).
P_r= Observed parameter (reading or observed data).
A_0, A_1, A_2, A_3= constant calibration coefficients.

Calibration Standards: Temperature and conductivity calibrations were conducted in the MSRC high precision temperature and conductivity calibration facility.

Temperature was measured with a Thermometrics Model S-10 standard thermistor, S/N 554, and a General Radio Wheatstone bridge. A Hewlett Packard Model 2801A Quartz thermometer was used as a secondary temperature standard. Temperature was calculated to 0.001 deg. C, with stability of better than 0.003 C and accuracy of better than 0.01 C.

Salinity was measured using a Guildline AutoSal salinometer calibrated with IAPSO standard "Copenhagen" seawater. Calculations of salinity and nominal conductivity were made using algorithms developed by Dr. Donald W. Pritchard that conform to the standards set by the Practical Salinity Scale of 1978 and the Universal Equation of State of Seawater of 1980. The scale factor used to convert between nominal conductivity and conductivity ratio was 42.9192 mmho/cm for seawater of salinity 35 at temperature 15 C and atmospheric pressure.

ELECTRONICS AND OCEAN INSTRUMENT FACILITY
MARINE SCIENCES RESEARCH CENTER
STATE UNIVERSITY OF NEW YORK, STONY BROOK, NY 11794-5000

CALIBRATION REPORT

INSTRUMENT: Martek Mark VI Water Quality Analyzer.
SERIAL NUMBER: 211.
USED FOR FIELD DATES BETWEEN: 8 January 1985 - 4 March 1988.
REPORT DATE: 7 March 1989.

GENERAL INFORMATION

Generalized Polynomial Translation Equation:

$$P_c = A_0 + A_1 * P_r + A_2 * (P_r)^2 + A_3 * (P_r)^3$$

Where: P_c= Translated parameter (corrected data).
P_r= Observed parameter (reading or observed data).
A_0, A_1, A_2, A_3= constant calibration coefficients.

Calibration Standards: Temperature and conductivity calibrations were conducted in the MSRC high precision temperature and conductivity calibration facility.

Temperature was measured with a Thermometrics Model S-10 standard thermistor, S/N 554, and a General Radio Wheatstone bridge. A Hewlett Packard Model 2801A Quartz thermometer was used as a secondary temperature standard. Temperature was calculated to 0.001 deg. C, with stability of better than 0.003 C and accuracy of better than 0.01 C.

Salinity was measured using a Guildline AutoSal salinometer calibrated with IAPSO standard "Copenhagen" seawater. Calculations of salinity and nominal conductivity were made using algorithms developed by Dr. Donald W. Pritchard that conform to the standards set by the Practical Salinity Scale of 1978 and the Universal Equation of State of Seawater of 1980. The scale factor used to convert between nominal conductivity and conductivity ratio was 42.9192 mmho/cm for seawater of salinity 35 at temperature 15 C and atmospheric pressure.

PARAMETER: Temperature, degrees centigrade.
(measured from recorder voltage output).
CALIBRATION DATE: 12/13/84.

CALIBRATION DATA

Observed Output Voltage, volts	Temperature degrees C	Temperature calc. from regression	Error degrees C
3.5000E-04	-0.006	0.041	0.047
1.0386E-01	5.020	4.989	-0.031
2.0770E-01	9.954	9.962	0.008
3.1250E-01	14.979	14.991	0.012
4.1590E-01	19.950	19.960	0.010
5.2010E-01	24.980	24.975	-0.005
6.2400E-01	29.998	29.981	-0.017
7.2720E-01	34.949	34.959	0.010

Regression coefficients:
A_0= 2.4489E-02 A_1= 4.7749E+01
A_2= 5.0275E-01 A_3= -1.4109E-01
The standard error of the regression fit is 1.7700E-02 degrees C.

PARAMETER: Conductivity, millimho/centimeter.
(measured from recorder voltage output).
CALIBRATION DATE: 12/13/84.

CALIBRATION DATA AND ANALYSIS

Observed Output Voltage, volts	Conductivity mmho/cm	Conductivity calc. from regression	Error, mmho/cm
3.7090E-01	25.882	25.887	0.005
4.2760E-01	29.860	29.866	0.006
4.8520E-01	33.957	33.949	-0.008
5.4560E-01	38.305	38.259	-0.046
6.0880E-01	42.762	42.786	0.024
6.7630E-01	47.505	47.621	0.116
7.3980E-01	52.289	52.151	-0.138
8.1050E-01	57.110	57.152	0.042

Regression coefficients:
A0= 1.6907E+00 A1= 5.9165E+01
A2= 2.0534E+01 A3= -1.1233E+01
The standard error of the regression fit is 7.8600E-02 mmho/cm.

Approved for use: 3/7/89.

Thomas C. Wilson, Jr.
MSRC Ocean Instrument Engineer

ELECTRONICS AND OCEAN INSTRUMENT FACILITY
MARINE SCIENCES RESEARCH CENTER
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CALIBRATION REPORT

INSTRUMENT: Martek Mark VI Water Quality Analyzer.
SERIAL NUMBER: 211.
USED FOR FIELD DATES BETWEEN: 5 March 1988 until superceded.
REPORT DATE: 7 March 1989.

GENERAL INFORMATION

Generalized Polynomial Translation Equation:

$$P_c = A_0 + A_1 * P_r + A_2 * (P_r)^2 + A_3 * (P_r)^3$$

Where: P_c= Translated parameter (corrected data).
P_r= Observed parameter (reading or observed data).
A_0, A_1, A_2, A_3= constant calibration coefficients.

Calibration Standards: Temperature and conductivity calibrations were conducted in the MSRC high precision temperature and conductivity calibration facility.

Temperature was measured with a Thermometrics Model S-10 standard thermistor, S/N 554, and a General Radio Wheatstone bridge. A Hewlett Packard Model 2801A Quartz thermometer was used as a secondary temperature standard. Temperature was calculated to 0.001 deg. C, with stability of better than 0.003 C and accuracy of better than 0.01 C.

Salinity was measured using a Guildline AutoSal salinometer calibrated with IAPSO standard "Copenhagen" seawater. Calculations of salinity and nominal conductivity were made using algorithms developed by Dr. Donald W. Pritchard that conform to the standards set by the Practical Salinity Scale of 1978 and the Universal Equation of State of Seawater of 1980. The scale factor used to convert between nominal conductivity and conductivity ratio was 42.9192 mmho/cm for seawater of salinity 35 at temperature 15 C and atmospheric pressure.

PARAMETER: Temperature, degrees centigrade.
(measured from recorder voltage output).
CALIBRATION DATE: 1/26/88.

CALIBRATION DATA

Observed Output Voltage, volts	Temperature degrees C	Temperature calc. from regression	Error degrees C
8.0000E-04	0.058	0.063	0.005
1.0480E-01	5.066	5.034	-0.032
2.0910E-01	10.053	10.029	-0.024
3.1450E-01	15.095	15.087	-0.008
4.2460E-01	20.355	20.379	0.024
5.2160E-01	25.075	25.047	-0.028
6.2430E-01	30.034	29.996	-0.038
7.2760E-01	35.002	34.978	-0.024

Regression coefficients:

A_0= 3.0020E-02 A_1= 4.7890E+01
A_2= -4.1051E-02 A_3= 4.1843E-01

The standard error of the regression fit is 2.0000E-02 degrees C.

PARAMETER: Conductivity, millimho/centimeter.
(measured from recorder voltage output).
CALIBRATION DATE: 1/26/88.

CALIBRATION DATA AND ANALYSIS

Observed Output Voltage, volts	Conductivity mmho/cm	Conductivity calc. from regression	Error, mmho/cm	
3.4890E-01	24.597	24.594	-0.003	
4.0170E-01	28.363	28.365	0.002	
4.5680E-01	32.296	32.308	0.012	
5.1420E-01	36.432	36.420	-0.012	
5.7600E-01	40.904	40.852	-0.052	DATUM EXCLUDED
6.3340E-01	44.974	44.967	-0.007	
6.9550E-01	49.404	49.417	0.013	
7.5870E-01	53.945	53.940	-0.005	

DATUM EXCLUDED: The datum at conductivity = 40.904 mmho/cm was examined and considered to be an outlier when compared to the rest of the data. This point was judged to be in error and was not used in the calculation of the regression coefficients below.

Regression coefficients:

A_0= -6.1405E-03 A_1= 6.9386E+01
A_2= 4.0220E+00 A_3= -2.3182E+00

The standard error of the regression fit is 1.0000E-2 mmho/cm.

Approved for use: 3/7/89.

Thomas C. Wilson, Jr.

Appendix II. Total suspended solids correlation.

DATE	N	r	slope	y-intercept	note
AUG 86	33	0.91	1.48	-1.49	1
DEC 86	76	0.91	1.59	-1.20	1
JAN 87	12	0.95	1.24	-0.13	1
FEB 87	37	0.58	1.45	0.51	1
MAR 87	42	0.66	1.12	0.46	1
APR 87	86	0.83	1.54	0.45	1
AUG 87	48	0.24	0.04	1.04	2
SEP 87	48	-0.34	-0.07	9.88	2
OCT 87	48	-0.19	-0.16	14.74	2
NOV 87	38	-0.38	-0.08	10.21	2
DEC 87	48	-0.42	-0.23	22.87	2

1. Total suspeded solids correlated with nephelometric turbidity units.
2. Total suspended solids correlated with percent transmittance.

The unexpected negative correlations and poor linear correlation coefficients for the later cruises are largely the result of the small range of concentrations encountered on these cruises and used for the correlations.

Appendix III. Cruise data for Western Long Island Sound.

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PHYSICAL DATA WORKSHEET

site: LIS Axial stations 1 - 16 and Lateral Stations 1 - 11

date: Axials: 25 & 26 August 1986
Laterals: 8 & 9 September 1986

STA #	TOTAL Z	SAMPLE Z	NTU	[SS] mg/l	[SS] calc'd*	TEMP degC	SAL ppt	SIGMA-T kg/m^3	D.O. ug/l
AX-1	13.8	12.8	10.0		13.3	21.58	27.91	19.04	N.A.
		9.8	3.9	3.1	4.3	21.50	28.02	19.14	N.A.
		6.8	4.7		5.5	21.54	27.97	19.09	N.A.
		3.8	3.2		3.2	21.48	28.10	19.21	N.A.
		1.0	3.5		3.7	21.54	27.96	19.08	N.A.
AX-2	27.0	26.0	3.4		3.5	21.10	28.32	19.47	N.A.
		23.0	7.5		9.6	21.27	28.24	19.37	N.A.
		20.0	7.8		10.0	21.37	28.21	19.33	N.A.
		17.0	3.1		3.1	21.40	28.10	19.23	N.A.
		14.0	11.5		15.5	21.51	27.99	19.12	N.A.
		11.0	12.0	3.4	16.2	21.54	28.00	19.11	N.A.
		8.0	10.1		13.4	21.54	28.01	19.12	N.A.
		5.0	15.6		21.6	21.60	27.99	19.10	N.A.
		1.0	23.0	1.9	32.5	21.77	27.89	18.97	N.A.
AX-3	24.0	23.0	12.3	17.9	16.7	21.12	28.24	19.41	N.A.
		19.0	6.6		8.3	21.50	28.05	19.17	N.A.
		13.0	7.2		9.2	21.56	27.97	19.09	N.A.
		8.0	7.2		9.2	21.58	27.97	19.08	N.A.
		1.0	8.3		10.8	21.70	27.92	19.01	N.A.
AX-4	26.0	25.0	2.1		1.6	21.52	27.98	19.10	N.A.
		20.0	2.3	1.7	1.9	21.56	27.95	19.07	N.A.
		15.0	2.1		1.6	21.57	27.96	19.08	N.A.
		10.0	2.0		1.5	21.48	28.01	19.14	N.A.
		5.0	4.8		5.6	21.68	27.95	19.04	N.A.
		1.0	2.3		1.9	21.72	27.94	19.02	N.A.
AX-5	30.1	25.0	2.6		2.4	21.56	27.98	19.10	N.A.
		20.0	2.4		2.1	21.56	27.99	19.10	N.A.
		15.0	3.2	2.1	3.2	21.56	28.02	19.12	N.A.
		10.0	2.9		2.8	21.68	27.93	19.02	N.A.
		5.0	2.7		2.5	21.78	27.94	19.01	N.A.
		1.0	2.6		2.4	21.78	27.98	19.04	N.A.
AX-6	32.3	25.0	3.1		3.1	21.62	28.02	19.11	N.A.
		20.0	2.4		2.1	21.58	28.11	19.19	N.A.
		15.0	2.5		2.2	21.60	28.10	19.18	N.A.
		10.0	3.2		3.2	21.70	28.07	19.13	N.A.
		5.0	3.4		3.5	21.74	28.05	19.10	N.A.
		1.0	2.9	2.1	2.8	21.82	28.01	19.05	N.A.

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STA #	TOTAL Z	SAMPLE Z	NTU	[SS] mg/l	[SS] calc'd*	TEMP degC	SAL ppt	SIGMA-T kg/m^3	D.O. ug/l
AX-8	27.0	25.0	5.5		6.6	21.54	28.10	19.19	N.A.
		20.0	6.3		7.8	21.72	27.87	18.97	N.A.
		15.0	5.1		6.0	21.90	27.94	18.98	N.A.
		10.0	4.4	3.2	5.0	21.90	27.87	18.92	N.A.
		5.0	4.5		5.2	21.98	27.82	18.87	N.A.
		1.0	4.5		5.2	22.02	27.80	18.84	N.A.
AX-9	21.5	20.0	4.5		5.2	21.90	27.83	18.90	N.A.
		16.0	2.9		2.8	22.08	27.85	18.86	N.A.
		12.0	2.7		2.5	22.22	27.81	18.80	N.A.
		8.0	2.3		1.9	22.12	27.87	18.87	N.A.
		4.0	5.4	2.6	6.5	22.26	27.88	18.84	N.A.
		1.0	2.5		2.2	22.14	27.92	18.90	N.A.
AX-10	12.0	11.0	3.5	4.0	3.7	21.96	27.85	18.89	N.A.
		8.0	2.7		2.5	22.08	27.71	18.76	N.A.
		5.0	3.1		3.1	22.16	27.72	18.75	N.A.
		2.0	3.0		2.9	22.20	27.70	18.72	N.A.
		1.0	3.0		2.9	22.28	27.65	18.66	N.A.
AX-11	21.0	20.0	5.0	9.5	5.9	22.04	27.70	18.76	N.A.
		17.0	5.0		5.9	22.12	27.68	18.73	N.A.
		14.0	4.6		5.3	22.14	27.64	18.69	N.A.
		11.0	4.9	4.5	5.8	22.06	27.68	18.74	N.A.
		8.0	3.2		3.2	22.12	27.67	18.72	N.A.
		5.0	3.3		3.4	22.24	27.75	18.75	N.A.
		1.0	2.6		2.4	22.36	27.62	18.62	N.A.
AX-12	19.1	18.0	12.3		16.7	21.79	27.12	18.30	7.01
		13.5	3.7	3.1	4.0	22.03	26.88	18.05	7.27
		10.0	3.4		3.5	22.24	26.77	17.91	7.70
		7.0	2.5		2.2	22.27	26.79	17.91	8.02
		4.0	2.5		2.2	22.32	26.80	17.91	8.12
		1.0	2.6		2.4	22.33	26.85	17.95	8.48
AX-13	13.5	12.5	10.5	9.9	14.0	21.83	27.11	18.28	6.04
		10.0	13.0		17.7	22.26	26.35	17.58	7.16
		7.0	19.9		27.9	22.31	26.25	17.50	7.38
		4.0	16.0		22.2	22.31	26.27	17.52	7.37
		1.0	17.0	2.2	23.6	22.34	26.26	17.50	7.40
AX-14	27.0	26.0	26.0	2.1	36.9	21.89	27.03	18.20	5.80
		22.0	20.0		28.1	21.94	26.90	18.09	5.34
		19.0	21.0		29.5	21.96	26.62	17.87	5.32
		16.0	19.0		26.6	21.96	26.56	17.82	5.34
		13.0	22.0		31.0	22.25	26.17	17.46	6.44
		10.0	5.0	2.4	5.9	22.28	25.96	17.28	6.57
		7.0	8.0		10.3	22.27	25.95	17.28	6.36
		4.0	2.0		1.5	22.33	25.94	17.26	6.41
		1.0	4.0		4.4	22.37	25.95	17.26	6.70
AX-15	22.0	21.0	25.0		35.5	21.95	27.10	18.24	5.65
		18.5	20.0	8.6	28.1	21.95	27.04	18.19	5.62
		16.0	17.0		23.6	21.95	27.04	18.19	5.38

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STA #	TOTAL Z	SAMPLE Z	NTU	[SS] mg/l	[SS] calc'd*	TEMP degC	SAL ppt	SIGMA-T kg/m^3	D.O. ug/l
		13.0	14.0		19.2	21.97	26.99	18.15	5.60
		10.0	12.0		16.2	22.02	26.90	18.07	5.56
		7.0	13.0		17.7	22.13	26.67	17.86	5.76
		4.0	12.0	2.9	16.2	22.49	25.71	17.04	6.04
		1.0	12.0		16.2	22.73	25.23	16.61	6.59
AX-16	29.4	28.3	21.0		29.5	22.28	26.41	17.63	5.21
		25.0	6.0	3.4	7.4	22.37	26.24	17.47	5.67
		22.0	6.0		7.4	22.36	25.93	17.24	5.28
		19.0	6.0		7.4	22.35	25.88	17.20	5.32
		16.0	7.0		8.9	22.35	25.87	17.20	5.26
		13.0	7.0		8.9	22.34	25.88	17.21	5.33
		10.0	10.0		13.3	22.32	25.90	17.23	5.32
		7.0	6.0		7.4	22.32	25.92	17.24	5.23
		4.0	5.0	3.3	5.9	22.33	25.91	17.24	5.40
		1.0	8.0		10.3	22.51	25.61	16.96	5.63
T1-1	B 5.9	4.8	5.8		7.1	21.02	25.39	17.18	5.07
T1-1	S	1.1	3.1		3.1	20.87	25.03	16.95	5.02
T1-2	B14.2	13.2	7.5	8.6	9.6	21.06	26.32	17.88	5.33
T1-2	S	1.0	2.5		2.2	21.09	25.98	17.62	5.25
T1-3	B18.0	17.0	8.1		10.5	21.04	26.39	17.94	5.35
T1-3	S	1.0	2.6		2.4	21.07	26.06	17.68	5.68
T2-1	B11.5	10.5	6.7		8.4	20.99	26.12	17.75	5.40
T2-1	S	1.0	2.3	1.9	1.9	20.94	25.62	17.38	5.29
T2-2	B21.5	20.5	5.6		6.8	21.02	26.50	18.03	5.57
T2-2	S	1.0	2.2		1.8	20.94	25.56	17.34	5.34
T2-3	B21.0	20.0	4.5	4.3	5.2	20.97	26.77	18.25	7.20
T2-3	S	1.0	2.8		2.6	21.84	25.72	17.22	5.77
T3-3	B10.3	9.3	5.2		6.2	20.84	26.95	18.42	5.64
T3-3	S	1.0	4.2		4.7	21.25	26.66	18.09	6.59
T3-2	B13.8	12.8	7.3		9.3	20.85	26.79	18.30	6.73
T3-2	S	1.0	4.1	7.0	4.6	21.40	26.49	17.92	6.48
T3-1	B10.0	9.0	5.6		6.8	20.89	26.51	18.07	7.30
T3-1	S	1.0	4.2		4.7	21.33	26.44	17.90	6.31
T4-1	B 9.3	8.3	12.2	15.3	16.5	21.03	26.45	17.98	7.18
T4-1	S	1.0	7.9	6.2	10.2	21.36	26.39	17.85	10.42
T4-2	B12.1	11.1	12.0		16.2	20.92	26.63	18.15	7.28
T4-2	S	1.0	6.3		7.8	21.58	26.32	17.75	9.08
T4-3	B13.0	12.0	13.9	22.8	19.1	20.87	26.86	18.34	6.87
T4-3	S	1.0	5.2		6.2	20.96	26.80	18.27	7.09
T4-4	B16.0	15.0	9.2		12.1	20.86	26.84	18.33	6.59
T4-4	S	1.0	4.1		4.6	21.16	26.74	18.18	7.69
T4-5	B18.0	17.0	13.2		18.0	20.82	27.16	18.58	5.42
T4-5	S	1.0	3.8		4.1	21.08	26.83	18.27	6.99
T4-6	B13.2	12.2	13.7		18.8	20.73	27.07	18.53	8.35
T4-6	S	1.0	3.5	3.8	3.7	21.29	26.62	18.05	7.27
T5-4	B11.2	10.2	5.8		7.1	20.69	27.34	18.75	6.12
T5-4	S	1.0	3.1	2.1	3.1	21.05	27.28	18.61	6.11

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STA #	TOTAL Z	SAMPLE Z	NTU	[SS] mg/l	[SS] calc'd*	TEMP degC	SAL ppt	SIGMA-T kg/m^3	D.O. ug/l
T5-3 B19.6	18.6	4.8			5.6	20.75	27.28	18.69	8.50
T5-3 S	1.0	3.9			4.3	21.54	27.16	18.39	6.54
T5-2 B19.7	18.7	4.7	5.0		5.5	20.78	27.20	18.62	7.97
T5-2 M	9.4	3.5	2.7		3.7	20.80	27.30	18.69	6.78
T5-2 S	1.0	3.1	2.4		3.1	21.92	27.26	18.37	7.14
T5-1 B 6.4	5.4	4.5			5.2	20.77	26.86	18.37	7.36
T5-1 S	1.0	4.0			4.4	21.06	26.84	18.28	7.76
OYBA~B13.0	12.0	4.8	6.3		5.6	20.76	27.19	18.62	6.35
OYBA~S	1.0	4.7			5.5	21.67	26.85	18.12	8.20
T6-1 B 7.3	6.3	5.8			7.1	20.87	27.23	18.62	6.28
T6-1 S	1.0	5.0			5.9	20.91	27.05	18.48	6.97
T6-2 B11.5	10.5	8.9			11.7	20.75	27.13	18.57	6.28
T6-2 S	1.0	5.1	3.9		6.0	20.98	27.18	18.56	7.15
T6-3 B24.2	23.2	3.4			3.5	20.72	27.48	18.85	6.29
T6-3 S	1.0	2.8			2.6	21.40	27.39	18.60	6.78
T6-4 B26.3	25.3	3.9			4.3	20.66	27.49	18.87	5.74
T6-4 S	1.0	3.5			3.7	21.51	27.27	18.48	6.58
T6-5 B10.9	9.9	5.6	6.8		6.8	20.56	27.51	18.92	6.72
T6-5 S	1.0	3.0			2.9	21.11	27.23	18.55	6.05
LNPT~B16.6	15.6	3.0			2.9	20.56	27.47	18.88	6.39
LNPT~S	1.0	2.5			2.2	21.09	27.46	18.74	6.51
T7-5 B14.3	13.3	3.3			3.4	20.88	27.45	18.78	6.72
T7-5 S	1.0	3.4	2.7		3.5	21.14	27.43	18.70	7.46
T7-4 B21.6	20.6	2.7			2.5	20.61	27.62	18.98	6.30
T7-4 S	1.0	2.0			1.5	21.06	27.58	18.84	6.49
T7-3 B29.9	28.9	2.9	1.9		2.8	20.67	27.63	18.98	5.93
T7-3 S	1.0	2.1			1.6	21.21	27.34	18.62	6.70
T7-2 B28.7	27.7	7.8	10.0		10.0	20.74	27.51	18.87	6.14
T7-2 S	1.0	2.5			2.2	20.91	27.44	18.77	6.27
T7-1 B 8.0	7.0	3.9			4.3	20.76	27.45	18.81	6.43
T7-1 S	1.0	3.0			2.9	20.88	27.44	18.77	6.34
NOBA~B10.2	9.2	3.3			3.4	20.67	27.42	18.82	7.36
NOBA~S	1.0	2.3	2.8		1.9	21.07	27.37	18.67	7.10
T8-1 B 6.2	5.2	2.2	2.4		1.8	20.93	27.29	18.65	6.97
T8-1 S	1.0	2.6			2.4	21.02	27.42	18.73	6.75
T8-2 B17.2	16.2	7.1			9.0	20.63	27.43	18.83	6.93
T8-2 S	1.0	2.9			2.8	20.67	27.41	18.81	6.38
T8-3 B21.4	20.4	3.1			3.1	20.65	27.46	18.85	6.45
T8-3 S	1.0	2.8	2.1		2.6	20.68	27.50	18.88	6.47
T8-4 B34.3	33.3	3.8			4.1	20.76	27.64	18.96	5.41
T8-4 S	1.0	1.8			1.2	20.70	27.56	18.92	6.07
T8-5 B13.3	12.3	1.9	1.9		1.3	20.47	27.42	18.87	6.73
T8-5 S	1.0	1.8			1.2	20.53	27.54	18.95	6.46
T8-6 B 8.0	7.0	2.3			1.9	20.16	27.27	18.83	6.65
T8-6 S	1.0	2.2			1.8	20.30	27.35	18.86	6.77
SOPO~B11.0	10.0	8.4	11.2		10.9	20.23	27.42	18.93	6.56
SOPO~S	1.0	2.8			2.6	20.32	27.47	18.94	6.58

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STA #	TOTAL Z	SAMPLE Z	NTU	[SS] mg/l	[SS] calc'd*	TEMP degC	SAL ppt	SIGMA-T kg/m^3	D.O. ug/l
T9-6	B 8.3	7.3	2.8		2.6	19.97	27.41	18.99	6.72
T9-6	S	1.0	2.9		2.8	20.12	27.38	18.93	6.33
T9-5	B16.5	15.5	3.9	6.3	4.3	20.51	27.44	18.87	6.85
T9-5	S	1.0	2.6		2.4	20.65	27.55	18.92	6.86
T9-4	B22.4	21.4	3.6		3.8	20.61	27.44	18.85	6.34
T9-4	S	1.0	2.3		1.9	20.78	27.64	18.96	6.48
T9-3	B27.8	26.8	6.9		8.7	20.73	27.61	18.95	5.50
T9-3	S	1.0	2.0	2.0	1.5	20.91	27.47	18.79	6.62
T9-2	B18.1	17.1	6.8		8.6	20.69	27.32	18.74	6.28
T9-2	S	1.0	3.1		3.1	20.88	27.37	18.73	6.49
T9-1	B11.9	10.9	4.2	6.5	4.7	20.75	27.00	18.48	6.77
T9-1	S	1.0	2.4		2.1	20.94	26.97	18.41	9.43
SMBA~B	17.6	16.6	6.5		8.1	20.74	27.49	18.85	6.65
SMBA~S		1.0	3.5		3.7	21.12	27.32	18.63	7.69
T10-1B	16.3	15.3	2.0		1.5	20.80	27.51	18.86	8.44
T10-1S		1.0	2.2	1.7	1.8	21.12	27.57	18.81	7.20
T10-2B	33.6	32.6	7.0		8.9	20.60	28.17	19.40	5.74
T10-2S		1.0	2.8		2.6	21.05	27.79	19.00	7.00
T10-3B	22.3	21.3	8.0	10.1	10.3	20.59	27.87	19.18	6.21
T10-3S		1.0	2.6		2.4	20.91	27.63	18.91	7.08
T10-4B	16.1	15.1	5.1		6.0	20.41	27.54	18.98	6.60
T10-4S		1.0	2.5		2.2	20.88	27.54	18.85	7.34
T10-5B	7.2	6.2	2.8		2.6	20.20	27.45	18.96	6.75
T10-5S		1.0	2.7	3.3	2.5	20.86	27.33	18.70	8.65
BRPT~B	7.7	6.7	3.7		4.0	20.54	27.06	18.58	7.42
BRPT~S		1.0	3.5		3.7	20.50	27.15	18.66	7.51
T11-5B	8.0	7.0	5.4	5.6	6.5	20.47	27.55	18.97	6.47
T11-5S		1.0	3.5		3.7	20.73	27.47	18.84	6.93
HURV~B	10.0	9.0	3.2		3.2	20.37	27.63	19.05	6.62
HURV~S		1.0	2.7	3.5	2.5	20.83	27.55	18.87	6.77
T11-4B	28.0	26.5	3.6		3.8	20.56	27.80	19.14	6.34
T11-4S		1.0	2.0		1.5	20.94	27.53	18.83	7.30
T11-3B	19.9	18.9	5.6	6.6	6.8	20.49	28.22	19.47	5.70
T11-3S		1.0	1.9		1.3	20.74	27.86	19.13	6.60
T11-2B	28.7	27.7	4.3		4.9	20.35	28.60	19.80	6.06
T11-2S		1.0	1.2		0.3	21.08	27.79	18.99	7.89
T11-1B	9.7	8.7	1.7		1.0	20.84	27.46	18.80	7.51
T11-1S		1.0	1.8	1.7	1.2	21.08	27.51	18.78	7.75

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PHYSICAL DATA WORKSHEET

site: LIS Axial stations -2 - 15 and Lateral Stations 2 - 11

date: Axials: 10 December 1986
Laterals: 11 December 1986 (2-7)
12 December 1986 (9-11)

STA #	TOTAL Z	SAMPL Z	NTU	[SS] mg/l	[SS] calc'd	TEMP degC	SAL ppt	SIGMA-T kg/m^3	D.O. ug/l
AX(-2)	29.0	28.0	4.2	4.6	4.8	8.41	27.14	21.085	10.03
AX(-2)		21.0	3.8		4.2	8.40	27.17	21.078	9.33
AX(-2)		14.5	3.5	4.2	3.9	8.40	27.18	21.089	9.06
AX(-2)		7.7	3.2		3.5	8.38	27.15	21.065	8.75
AX(-2)		1.0	3.2	3.7	3.5	8.37	27.17	21.082	8.38
AX1	18.5	17.5	4.7	5.0	5.4	8.34	27.19	21.099	11.16
AX1		13.5	4.5		5.1	8.32	27.18	21.099	10.80
AX1		9.3	4.5	5.2	5.1	8.28	27.11	21.049	10.49
AX1		5.1	4.3		4.9	8.21	27.06	21.020	10.16
AX1		1.0	3.9	6.1	4.4	7.74	24.81	19.314	9.97
AX2	26.0	25.0	4.9	4.5	5.7	8.38	27.22	21.124	9.28
AX2		19.1	3.5		3.9	8.37	27.19	21.101	9.01
AX2		13.1	3.3	3.5	3.6	8.40	27.18	21.089	8.72
AX2		7.0	3.4		3.7	8.30	27.13	21.059	8.48
AX2		1.0	4.1	3.3	4.6	8.06	26.90	20.912	8.19
AX3	27.5	26.5	5.6	6.8	6.5	8.37	27.20	21.107	8.91
AX3		20.1	4.6		5.3	8.36	27.17	21.084	8.72
AX3		13.7	4.0	4.1	4.5	8.36	27.16	21.078	8.51
AX3		7.4	3.3		3.6	8.38	27.10	21.024	8.27
AX3		1.0	3.4	3.3	3.7	8.25	27.04	21.000	7.97
AX4	29.0	28.0	4.8	4.9	5.5	8.35	27.10	21.033	8.75
AX4		21.3	4.1		4.6	8.34	27.11	21.042	8.51
AX4		14.5	3.2	3.2	3.5	8.29	27.08	21.024	8.36
AX4		7.8	3.0		3.2	8.17	27.04	21.008	8.19
AX4		1.0	2.7	3.0	2.8	8.07	27.18	21.152	7.90
AX5	~38.0	31.0	4.3	4.4	4.9	8.20	27.05	21.012	8.75
AX5		22.8	3.9		4.4	8.19	27.03	20.997	8.54
AX5		15.5	3.8	4.1	4.2	8.18	27.02	20.991	8.32
AX5		8.3	3.3		3.6	8.18	27.01	20.985	8.17
AX5		1.0	2.9	3.4	3.1	8.08	26.96	20.954	7.94
AX6	30.0	28.7	4.4	4.5	5.0	8.18	27.02	20.993	8.50
AX6		20.0	4.5		5.1	8.15	26.99	20.971	8.36
AX6		15.2	4.4	3.5	5.0	8.03	26.93	20.938	8.22
AX6		8.0	4.1		4.6	7.88	26.85	20.894	8.08
AX6		1.0	3.9	3.4	4.4	7.88	26.83	20.880	7.82
AX7	18.5	17.5	NG		4.1	7.87	26.86	20.907	8.24
AX7		13.4	NG	3.7		7.80	26.77	20.844	8.06
AX7		9.3	NG	3.6		7.78	26.77	20.844	8.02
AX7		5.1	NG	3.6		7.80	26.74	20.822	7.95
AX7		1.0	NG	3.5		7.81	26.77	20.841	7.85

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STA #	TOTAL Z	SAMPL Z	NTU	[SS] mg/l	[SS] calc'd	TEMP degC	SAL ppt	SIGMA-T kg/m^3	D.O. ug/l
T6-5		3.9	3.9		5.6	7.10	26.65	20.834	10.87
T6-5		1.0	3.9	6.1	5.6	7.09	26.65	20.834	9.10
T7-1	7.0	6.0	3.2	6.2	4.4	7.19	26.52	20.727	7.18
T7-1		3.5	4.3		6.3	7.21			7.10
T7-1		1.0	4.1	6.0	6.0	7.22	26.55	20.7482	7.07
T7-2	29.5	28.5	3.4		4.7	7.72	26.72	20.816	8.95
T7-2		15.0	3.0		4.0	7.52	26.69	20.817	7.47
T7-2		1.0	3.0		4.0	7.45	26.67	20.814	7.15
T7-3	26.0	25.0	3.3	3.7	4.5	7.67	26.73	20.829	7.37
T7-3		13.0	2.9		3.8	7.66	26.78	20.872	7.29
T7-3		1.0	2.5	3.0	3.1	7.61	26.79	20.888	7.22
T7-4	18.7	17.7	4.5		6.7	7.53	26.70	20.825	12.32
T7-4		9.5	3.5		4.9	7.49	26.35	20.160	11.82
T7-4		1.0	3.3		4.5	7.39	26.80	20.924	9.00
T7-5	12.0	11.0	7.5	11.5	12.0	7.15	26.69	20.862	7.50
T7-5		6.0	6.8		10.8	7.15	26.71	20.881	7.32
T7-5		1.0	5.1	6.2	7.7	7.01	26.71	20.197	7.23
T9-1	12.0	11.0	2.8	3.2	3.6	7.19	26.70	20.867	7.34
T9-1		6.0	2.3		2.8	7.17	26.70	20.866	7.20
T9-1		1.6	2.1	2.2	2.4	7.14	26.70	20.873	7.28
T9-2	11.0	18.0	3.0		4.0	7.54	26.86	20.950	7.22
T9-2		9.5	2.4		2.9	7.55	26.88	20.962	7.20
T9-2		1.5	2.1		2.4	7.56	26.88	20.966	7.25
T9-3	~30.0	28.0	2.7	2.1	3.5	8.08	27.05	21.028	7.35
T9-3		14.0	2.5		3.1	8.07	27.05	21.031	7.24
T9-3		1.0	2.4	2.1	2.9	8.06	27.07	21.043	7.33
T9-4	25.0	24.0	5.1		7.7	8.27	27.08	21.028	7.83
T9-4		12.5	2.8		3.6	7.79	26.88	20.934	7.80
T9-4		1.5	2.6		3.3	7.74	26.88	20.941	7.50
T9-5	18.5	17.5	4.3	4.7	6.3	8.12	26.99	20.977	7.30
T9-5		9.3	2.6		3.3	7.50	26.96	21.032	7.23
T9-5		1.8	2.4	2.3	2.9	7.27	26.65	20.820	7.25
T9-6	12.5	11.5	6.0		9.3	7.72	26.74	20.829	8.24
T9-6		6.6	4.4		6.5	7.46	26.46	20.648	7.27
T9-6		1.0	4.2		6.1	7.06	26.24	20.521	7.25
T11-1	~30.0	18.0	4.5	5.2	6.7	7.53	26.91	20.991	7.50
T11-1		10.0	3.1		4.2	7.59	26.95	21.015	7.15
T11-1		1.0	3.2	3.5	4.4	7.58	26.95	21.017	7.00
T11-2	~33.0	25.0	3.1		4.2	8.07	27.08	21.052	6.82
T11-2		12.5	2.3		2.8	7.72	27.07	21.092	6.96
T11-2		1.5	2.1		2.4	7.67	26.98	21.025	7.05
T11-3	19.0	18.0	2.9	2.9	3.8	8.17	27.10	21.054	6.83
T11-3		8.0	2.3		2.8	8.09	27.02	21.002	6.89
T11-3		1.2	2.3	2.0	2.8	7.82	26.95	20.981	7.00
T11-4	~30.0	26.0	6.0		9.3	8.22	27.07	21.023	6.84
T11-4		13.0	3.0		4.0	7.99			6.82
T11-4		1.0	2.5		3.1	7.51	27.19	21.151	6.97

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STA #	TOTAL Z	SAMPL Z	NTU	[SS] mg/l	[SS] calc'd	TEMP degC	SAL ppt	SIGMA-T kg/m^3	D.O. ug/l
T11-5	6.0	5.0	9.4	15.9	15.4	6.99	25.86	20.227	7.08
T11-5		3.0	8.8		14.3	7.01	25.88	20.247	6.97
T11-5		1.0	9.3	15.3	15.2	7.01	25.90	20.256	6.99

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PHYSICAL DATA WORKSHEET

site: LIS Axial stations 12 - 15 comments:

date: 15 Jan 1987

STATION #	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. (mg/l)	NTU	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	COND mmho	SAL ppt	SIGMA T
AX-12	17.0	16.0	4.50	3.6	4.31	8.26	3.78	2497	26.199	20.810
		12.3		3.0	3.57	8.24	3.67	2476	26.045	20.697
		8.5	2.48	1.8	2.09	8.25	3.59	2461	25.937	20.617
		4.8		1.7	1.97	8.23	3.57	2448	25.803	20.512
		1.0	1.82	1.6	1.84	8.28	3.67	2444	25.680	20.406
AX-13	13.0	12.0	5.03	4.1	4.93	8.72	3.71	2494	26.222	20.834
		9.3		3.8	4.56	8.50	3.71	2494		
		6.5	2.72	2.1	2.46	8.38	3.50	2465	26.056	20.718
		3.8		1.6	1.84	8.31	3.51	2430	25.642	20.388
		1.0	2.21	1.7	1.97	8.21	3.60	2423	25.492	20.262
AX-14	14.2	13.1	2.45	2.8	3.33	8.28	3.36	2412	25.547	20.323
		10.0		2.1	2.46	8.23	3.37	2409	25.505	20.289
		7.0	2.16	1.9	2.21	8.22	3.38	2407	25.476	20.265
		4.0		2.2	2.59	8.19	3.41	2405	25.430	20.227
		1.0	1.78	1.8	2.09	8.17	3.53	2403	25.314	20.126
AX-15	7.3	6.0	3.96	3.1	3.70	8.30	3.49	2461	26.018	20.688
		4.8		2.9	3.45	8.30	3.47	2421	25.569	20.333
		3.5	2.53	2.3	2.71	8.25	3.48	2410	25.434	20.225
		2.3		2.2	2.59	8.28	3.51	2391	25.190	20.029
		1.0	2.21	1.9	2.21	8.18	3.63	2371	24.868	19.764

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PHYSICAL DATA WORKSHEET

site: LIS Axial stations 1 -14 comments:

date: 25 Feb 1987

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	NTU	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	COND mmho	SAL ppt	SIGMA T
AX-1	19	18.0	9.92	3.4	5.45	11.62	0.76	2325	26.828	21.328
		13.8		5.3	8.21	11.62	0.75	2324	26.626	21.327
		9.5	12.71	4.2	6.61	11.66	0.75	2325	26.641	21.339
		5.3		12.4	18.52	12.87	0.74	2323	26.626	21.328
		1.0	4.47	3.3	5.30	11.69	0.75	2327	26.670	21.362
Ax-2	22	21.0	4.72	4.3	6.75	12.39	0.82	2320	26.513	21.233
		16.0		3.1	5.01	11.91	0.82	2316	26.465	21.195
		11.0	14.03	2.9	4.72	11.79	0.82	2313	26.429	21.166
		6.0		3.0	4.87	11.84	0.82	2314	26.444	21.179
		1.0	4.15	3.1	5.01	11.89	0.83	2317	26.476	21.203
AX-3	25	24.0	14.19	4.2	6.61	12.03	0.80	2325	26.591	21.297
		18.3		3.4	5.45	11.90	0.79	2324	26.590	21.296
		12.5	4.57	3.1	5.01	11.89	0.78	2314	26.475	21.205
		6.9		2.4	4.00	11.86	0.79	2315	26.482	21.210
		1.0	3.77	2.4	4.00	11.69	0.80	2319	26.527	21.245
AX-4	26	25.0	4.50	3.1	5.01	18.75	0.80	2308	26.377	21.125
		19.0		3.2	5.16	17.92	0.78	2307	26.384	21.132
		13.0	2.78	2.2	3.71	16.67	0.80	2309	26.395	21.140
		7.0		2.7	4.43	14.48	0.82	2310	26.394	21.138
		1.0	3.19			13.13	0.83	2314	26.438	21.173
AX-5	~35	30.0	3.42	2.3	4.95	20.42	0.79	2314	26.459	21.191
	can't	22.8		2.9	4.97	19.56	0.79	2306	26.362	21.113
	get	15.5	3.43	2.1	4.95	18.50	0.84	2310	26.373	21.120
	to	8.3		2.0	4.94	16.13	0.88	2314	26.392	21.134
	bottom	1.0	2.40	1.9	4.94	13.50	0.90	2318	26.429	21.163
AX-6	~35	30.0	4.71	2.0	4.94	11.75	0.81	2307	26.354	21.106
		22.8		2.5	4.96	9.60	0.78	2304	26.345	21.100
	"	15.5	3.71	2.6	4.96	9.16	0.76	2300	26.315	21.077
		8.3		3.1	4.98	8.83	0.78	2300	26.302	21.065
		1.0	3.87	3.0	4.98	7.90	0.81	2304	26.330	21.087
AX-7	~31	30.0	4.73	5.3	5.05	10.60	0.76	2298	26.283	21.051
		22.8		3.2	4.98	8.40	0.76	2293	26.224	21.004
		15.5	3.96	2.7	4.97	8.31	0.77	2290		
	"	8.3		2.9	4.97	8.32	0.79	2287	26.130	20.927
		1.0	5.01	3.1	4.98	8.02	0.87	2291		
AX-8	28	27.0	4.77	2.4	4.96	8.27	0.79	2297	26.247	21.021
		20.5		3.6	5.00	7.97	0.79	2298	26.262	21.033
		14.0	4.65	3.0	4.98	7.96	0.77	2296	26.257	21.030
		7.5		3.0	4.98	7.96	0.82	2295	26.205	20.987
		1.0	4.17	3.2	4.98	7.93	0.88	2299		

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STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	NTU	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	COND mmho	SAL ppt	SIGMA T
AX-9	23	22.0	4.68	2.8	4.97	11.35	0.85	2302	26.261	21.030
		16.8		2.7	4.97	10.68	0.83	2296		
		11.5	4.54	3.0	4.98	10.07	0.77	2282		
		6.3		3.1	4.98	9.46	0.77	2276		
		1.0	4.82	3.4	4.99	8.53	0.81	2278	26.004	20.825
AX-10	17	16.0	5.28	5.0	5.04	10.58	0.85	2301	26.251	21.022
		12.3		4.0	5.01	9.73	0.87	2297	26.186	20.969
		8.5	4.18	2.9	4.97	9.10	0.89	2298	26.184	20.966
		4.8		3.4	4.99	8.70	0.94	2301	26.181	20.962
		1.0	3.63	2.9	4.97	8.07	0.98	2305	26.199	20.975
AX-11	16	15.0	4.83	2.9	4.97	8.33	1.01	2309	26.208	20.981
		11.5		3.0	4.98	8.06	1.02	2308	26.198	20.972
		8.0	5.37	3.7	5.00	8.00	1.03	2309	26.203	20.977
		4.5		3.9	5.01	7.99	1.01	2309	26.222	20.992
		1.0	5.02	3.4	4.99	7.93	1.03	2311	26.231	20.999
AX-12	16	15.0	3.93	3.4	4.99	8.04	0.83	2294	26.181	20.967
		11.5		4.3	5.02	8.02	0.79	2278	26.016	20.835
		8.0	4.19	3.7	5.00	8.05	0.89	2270	25.834	20.686
		4.5		3.1	4.98	8.10	0.98	2269	25.748	20.614
		1.0	3.65	2.2	4.95	8.09	1.04	2273	25.750	20.613
AX-13	10	9.0	4.02	2.7	4.97	11.02	0.87	2264	25.775	20.639
		7.0		2.9	4.97	10.52	0.84	2260	25.751	20.621
		5.0	3.15	3.2	4.98	10.08	0.85	2260	25.744	20.615
		3.0		3.3	4.99	9.60	0.83	2259	25.749	20.619
		1.0	3.55	2.7	4.97	8.89	0.86	2260	25.737	20.609
AX-14	30	29.0	4.35	3.3	4.99	8.64	0.74	2267	25.912	20.753
		22.0		3.2	4.98	8.31	0.76	2259	25.798	20.661
		15.0	3.43	2.5	4.96	8.24	0.80	2257	25.743	20.616
		8.0		2.8	4.97	8.24	0.70	2241	25.629	20.528
		1.0	2.92	2.7	4.97	8.12	1.05	2241	25.345	20.287

Marine Sciences Research Center

PHYSICAL DATA WORKSHEET

site: LIS Axial stations 1 - 14 comments:

date: 23 March 1987

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	NTU	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	COND mmho	SAL ppt	SIGMA T
AX-1	18	17.0	6.62	4.1	5.10	9.08	2.08	2414	26.608	21.250
		13.0		3.2	4.09	8.95	2.11	2409	26.525	21.182
		9.0	4.30	2.9	3.75	8.90	2.10	2404	26.474	21.142
		5.0		3.2	4.09	8.85	2.15	2405		
		1.0	3.99	2.7	3.53	8.80	2.20	2410	26.467	21.131
AX-2	25.5	24.5	4.92	3.1	3.98	8.90	2.18	2406	26.425	21.098
		18.6		3.0	3.87	8.85	2.20	2405	26.399	21.076
		12.8	2.65	1.7	2.41	8.80	2.27	2401	26.295	20.989
		6.9		2.0	2.74	8.80	2.29	2405	26.330	21.016
		1.0	2.73	1.9	2.63	8.76	2.32	2411	26.380	21.054
AX-3	25.5	24.5	3.54	3.0	3.87	11.86	1.99	2403	26.544	21.206
		18.6		2.2	2.97	10.78	2.04	2388	26.326	21.027
		12.8	2.31	2.0	2.74	10.15	2.09	2382	26.214	20.935
		6.9		1.9	2.63	9.50	2.37	2379	25.951	20.709
		1.0	2.02	1.5	2.18	8.73	2.72	2394	25.850	20.607
AX-4	28.5	27.5	3.63	2.5	3.31	17.13	1.94	2402	26.575	21.231
		20.9		2.0	2.74	17.16	2.01	2382	26.277	20.989
		14.3	2.60	1.8	2.52	17.16	2.44	2384	25.951	20.705
		7.6		1.9	2.63	15.00	2.57	2384	25.849	20.615
		1.0	1.99	1.4	2.07	10.36	2.84	2401	25.836	20.589
AX-5	30	29.0	3.33	2.6	3.42	16.80	1.92	2388	26.421	21.109
		22.0		2.0	2.74	15.86	2.06	2370	26.090	20.837
		15.0	2.15	1.7	2.41	15.99	2.48	2382	25.895	20.657
		8.0		1.3	1.96	14.47	2.56	2387	25.893	20.651
		1.0	1.91	1.4	2.07	10.20	2.95	2412	25.878	20.615
AX-6	30	29.0	3.34	2.7	3.53	19.06	2.00	2379	26.245	20.964
		22.0		2.7	3.53	18.12	2.21	2377	26.051	20.798
		15.0	2.93	1.9	2.63	16.62	2.47	2387	25.962	20.712
		8.0		1.6	2.29	14.16	2.58	2394	25.960	20.703
		1.0	2.60	1.8	2.52	9.87	3.11	2427	25.926	20.642
AX-7	25.5	24.5	3.66	2.2	2.97	15.12	2.33	2439	26.698	21.307
		18.6		2.3	3.08	14.26	2.40	2383	25.970	20.722
		12.8	2.86	2.1	2.86	14.08	2.41	2383	25.964	20.717
		6.9		2.1	2.86	12.87	2.47	2388	25.978	20.724
		1.0	2.48	1.9	2.63	10.23	2.76	2407	25.972	20.702
AX-8	26.5	25.5	3.46	3.2	4.09	16.33	2.38	2383	25.983	20.734
		19.4		2.4	3.19	15.90	2.38	2386	26.022	20.765
		13.3	3.38	1.9	2.63	15.42	2.39	2381	25.956	20.712
		7.1		1.8	2.52	13.89	2.63	2393	25.908	20.659
		1.0	1.60	1.5	2.18	10.20	3.40	2438	25.824	20.540

Marine Sciences Research Center

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	NTU	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	COND mmho	SAL ppt	SIGMA T
AX-9	23.5	22.5	3.66	3.1	3.98	18.23	2.45	2386	25.963	20.714
		17.1		3.0	3.87	17.57	2.47	2385	25.938	20.692
		11.8	2.49	2.1	2.86	16.62	2.53	2389	25.939	20.690
		6.4		1.4	2.07	14.72	2.70	2396	25.887	20.638
		1.0	2.61	1.4	2.07	10.56	3.00	2417	25.897	20.626
Ax-10	17.5	16.5	4.79	2.4	3.19	14.68	2.58	2401	26.040	20.767
		12.6		3.2	4.09	14.09	2.61	2400	26.005	20.737
		8.8	2.97	2.2	2.97	13.46	2.69	2400	25.942	20.682
		4.9		1.8	2.52	12.54	3.13	2412	25.732	20.487
		1.0	2.23	1.7	2.41	10.21	3.91	2454	25.607	20.330
AX-11	16.5	15.5	3.46	2.2	2.97	18.02	2.66	2404	26.011	20.739
		11.9		2.3	3.08	17.17	2.65	2400	25.973	20.709
		8.3	2.81	2.2	2.97	15.76	2.67	2396	25.911	20.659
		4.6		1.6	2.29	13.21	3.24	2412	25.645	20.410
		1.0	2.13	2.4	3.19	10.53	3.80	2440	25.532	20.279
AX-12	16.5	15.5	2.77	1.8	2.52	17.57	2.76	2412	26.025	20.744
		11.9		1.5	2.18	17.10	2.80	2403	25.887	20.632
		8.3	2.02	2.1	2.86	15.81	3.04	2411	25.791	20.539
		4.6		1.8	2.52	13.24	3.45	2415	25.515	20.291
		1.0	2.14	1.9	2.63	10.36	4.56	2478	25.377	20.095
AX-13	10.5	9.5	4.29	2.8	3.64	10.17	3.07	2407	25.720	20.480
		7.4		1.6	2.29	10.29	3.35	2412	25.662	20.416
		5.3	2.93	2.4	3.19	10.23	3.57	2422	25.502	20.272
		3.1		1.9	2.63	10.10	3.88	2439	25.457	20.213
		1.0	2.25	2.4	3.19	10.02	5.35	2512	25.158	19.851
AX-14	32	31.0	1.18	2.8	3.64	19.16	2.95	2414	25.889	20.623
		23.5		3.2	4.09	18.14	3.03	2397	25.628	20.410
		16.0	2.10	2.6	3.42	17.22	3.26	2396	25.438	20.243
		8.5		2.5	3.31	15.32	3.51	2404	25.338	20.147
		1.0	3.78	1.3	1.96	10.11	4.59	2436	24.881	19.700

Marine Sciences Research Center

PHYSICAL DATA WORKSHEET

site: LIS Axial stations 1 - 16 and Lateral stations 2 - 12

date: 14 April 1987 comments:

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	NTU	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	COND mmho	SAL ppt	SIGMA T
AX-1	17	16.0	4.99	3.2	5.37	13.20	6.17	2553	24.992	19.638
		12.3		2.6	4.45	11.50	6.32	2542	24.765	19.444
		8.5	4.71	2.8	4.76	10.53	6.34	2543	24.763	19.440
		4.8		2.4	4.14	9.26	6.34	2543	24.765	19.441
		1.0	5.00	2.5	4.30	7.24	6.35	2545	24.780	19.453
AX-2	27	26.0	18.60	9.9	15.69	6.88	4.76	2554	26.069	20.625
		19.8		4.3	7.07	6.74	5.00	2553	25.873	20.448
		13.5	4.70	2.3	3.99	6.99	5.98	2545	25.046	19.700
		7.3		2.0	3.53	6.90	6.47	2547	24.712	19.386
		1.0	3.57	1.7	3.06	6.75	6.54	2553	24.728	19.392
AX-3	27	26.0	8.67	5.2	8.45	7.05	4.70	2551	26.082	20.641
		19.8		3.8	6.30	6.73	5.13	2555	25.795	20.374
		13.5	3.04	2.9	4.91	7.05	6.13	2546	24.947	19.607
		7.3		2.1	3.68	7.06	6.61	2540	24.537	19.233
		1.0	4.32	1.7	3.06	7.08	6.77	2539	24.415	19.120
AX-4	30	29.0	6.42	4.1	6.76	6.94	4.61	2547	26.106	20.668
		22.0		3.2	5.37	6.91	4.89	2550	25.924	20.499
		15.0	3.13	1.2	2.29	6.95	5.54	2560	25.539	20.133
		8.0		2.0	3.53	7.48	7.05	2545	24.278	18.981
		1.0	4.46	1.9	3.37	7.38	7.18	2558	24.326	19.004
AX-5	30	29.0	3.66	2.3	3.99	9.90	4.71	2547	26.028	20.597
		22.0		2.2	3.83	9.73	4.94	2545	25.829	20.419
		15.0	3.43	2.3	3.99	9.68	5.53	2558	25.524	20.122
		8.0		1.2	2.29	9.53	7.56	2561	24.089	18.774
		1.0	3.54	1.3	2.45	7.40	7.51	2543	23.940	18.662
AX-6	29	28.0	3.07	2.3	3.99	10.09	5.15	2549	25.709	20.305
		21.3		2.4	4.14	8.59	5.34	2551	25.589	20.192
		15.4	4.33	1.8	3.22	8.31	6.18	2549	24.942	19.598
		7.8		1.8	3.22	8.61	7.33	2553	24.166	18.861
		1.0	2.50	1.2	2.29	7.40	7.59	2549	23.947	18.659
AX-7	17	16.0	5.59	1.9	3.37	7.34	6.29	2553	24.904	19.556
		12.3		1.8	3.22	7.47	6.56	2552	24.699	19.366
		8.5	3.74	1.6	2.91	7.55	6.99	2550	24.372	19.062
		4.8		1.5	2.76	7.67	7.34	2550	24.129	18.831
		1.0	2.77	1.6	2.91	7.66	7.58	2557	24.037	18.730
AX-8	29	28.0	5.09	3.2	5.37	8.91	5.23	2549	25.648	20.249
		21.3		2.7	4.60	7.03	5.38	2547	25.514	20.129
		14.5	3.32	1.6	2.91	7.39	6.36	2552	24.843	19.501
		7.8		1.8	3.22	7.56	6.84	2550	24.479	19.162
		1.0	2.96	1.3	2.45	7.63	7.39	2557	24.168	18.856

Marine Sciences Research Center

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	NTU	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	COND mmho	SAL ppt	SIGMA T
AX-9	25	24.0	5.97	3.3	5.53	12.36	5.45	2551	25.504	20.114
		18.3		2.3	3.99	10.30	5.82	2548	25.195	19.834
		12.5	3.17	2.4	4.14	9.82	6.69	2542	24.499	19.195
		6.8		1.8	3.22	9.25	6.91	2549	24.419	19.108
		1.0	3.63	1.5	2.76	7.57	7.43	2573	24.307	18.960
AX-10	21	20.0	5.79	4.0	6.61	9.27	5.67	2556	25.394	20.006
		15.3		2.5	4.30	8.73	6.25	2552	24.923	19.575
		10.5	3.96	2.4	4.14	8.43	6.85	2550	24.471	19.155
		5.8		2.2	3.83	8.14	7.07	2553	24.349	19.034
		1.0	3.58	1.6	2.91	7.53	7.48	2579	24.335	18.976
AX-11	20	19.0	4.40	2.4	4.14	6.73	5.60	2556	25.448	20.055
		14.5		2.1	3.68	6.70	5.68	2557	25.400	20.010
		10.0	3.93	1.7	3.06	7.09	6.42	2556	24.844	19.495
		5.5		1.9	3.37	8.02	7.71	2557	23.946	18.643
		1.0	3.43	1.8	3.22	8.15	8.17	2570	23.768	18.448
AX-12	18	17.0	4.83	3.2	5.37	6.83	6.09	2567	25.202	19.812
		13.0		2.4	4.14	7.03	6.77	2559	24.622	19.283
		9.0	3.96	2.7	4.60	7.42	7.26	2538	24.057	18.784
		5.0		2.4	4.14	7.75	7.49	2541	23.931	18.658
		1.0	4.18	1.8	3.22	8.21	8.12	2549	23.587	18.313
AX-13	14	13.0	4.76	3.4	5.68	11.70	6.53	2559	24.795	19.445
		10.0		2.5	4.30	11.17	6.77	2560	24.634	19.292
		7.0	5.70	2.3	3.99	11.24	7.94	2520	23.409	18.195
		4.0		2.3	3.99	11.13	8.35	2530	23.240	18.013
		1.0	4.43	2.2	3.83	10.67	9.05	2544	22.927	17.677
AX-14	30	29.0	3.93	3.2	5.37	14.60	6.35	2560	24.931	19.571
		22.0		3.0	5.07	11.46	6.47	2556	24.803	19.458
		15.0	3.91	3.1	5.22	10.12	6.87	2545	24.402	19.099
		8.0		3.0	5.07	10.52	8.00	2516	23.328	18.125
		1.0	5.09	2.7	4.60	10.40	8.35	2534	23.282	18.045
AX-15	8	7.0	9.69	2.8	4.76	11.86	7.54	2507	23.544	18.349
		5.5		3.0	5.07	11.47	7.88	2498	23.224	18.058
		4.0	5.15	3.2	5.37	11.24	7.89	2503	23.269	18.092
		2.5		3.1	5.22	10.87	7.96	2499	23.182	18.016
		1.0	5.69	3.0	5.07	10.21	8.15	2503	23.099	17.927
Ax-16	30	29.0	6.37	6.2	9.99	11.10	6.81	2560	24.598	19.260
		22.0		5.0	8.15	10.70	7.26	2510	23.760	18.551
		15.0	6.72	3.5	5.84	10.60	7.70	2492	23.279	18.122
		8.0		3.2	5.37	10.00	8.18	2485	22.894	17.763
		1.0	3.95	2.9	4.91	8.99	8.80	2467	22.319	17.236
T2-1	10	9.0	5.27	3.3	5.53	14.00	7.13	2585	24.642	19.257
		5.0		3.6	5.99	12.13	7.48	2517	23.689	18.469
		1.0	5.00	2.8	4.76	10.06	8.14	2499	23.064	17.901
T2-2	30	29.0		4.8	7.84	11.86	6.34	2563	24.970	19.603
		15.0		3.0	5.07	10.56	7.21	2550	24.216	18.914
		1.0		3.5	5.84	10.17	8.38	2515	23.070	17.876

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STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	NTU	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	COND mmho	SAL ppt	SIGMA T
T2-3	11.5	10.5	3.64	2.9	4.91	15.64	8.02	2534	23.498	18.255
		5.8		2.9	4.91	13.08	8.13	2530	23.385	18.153
		1.0	3.92	2.1	3.68	9.91	9.73	2587	22.916	17.576
T3-1	13	12.0	3.69	3.6	5.99	10.64	7.00	2551	24.375	19.063
		6.5		3.0	5.07	11.11	7.82	2514	23.428	18.225
		1.0	3.86	3.0	5.07	10.41	6.60	2526	23.037	17.822
T4-2	9	8.0	3.71	3.0	5.07	11.60	7.89	2527	23.514	18.284
		4.5		2.2	3.83	11.21	8.17	2531	23.369	18.136
		1.0	5.14	3.2	5.37	10.81	8.50	2520	23.042	17.839
T4-3	11	13.0		2.6	4.45	13.64	7.60	2527	23.709	18.471
		7.0		3.1	5.22	12.05	8.22	2530	23.325	18.096
		1.0		3.1	5.22	9.76	8.33	2534	23.295	18.058
T4-4	14	13.0	3.53	3.2	5.37	9.13	6.22	2566	25.097	19.715
		7.0		2.6	4.45	10.66	8.39	2544	23.354	18.097
		1.0	2.34	2.5	4.30	10.25	8.97	2550	23.038	17.774
T4-5	16	15.0		3.6	5.99	10.90	5.90	2581	25.497	20.064
		8.0		1.9	3.37	10.07	7.34	2569	24.326	18.985
		1.0		3.1	5.22	10.06	8.84	2541	23.032	17.787
T4-6	12	11.0	4.11	2.6	4.45	8.44	6.19	2566	25.120	19.737
		6.0		1.7	3.06	9.90	7.74	2551	23.863	18.575
		1.0	2.71	2.4	4.14	10.46	8.54	2554	23.359	18.081
T5-1	6	5.0		2.0	3.53	10.56	8.34	2577	23.723	18.391
		3.0		2.1	3.68	10.70	8.37	2580	23.734	18.396
		1.0		1.9	3.37	10.56	8.53	2578	23.607	18.277
T5-2	19	18.0	5.09	3.8	6.30	11.09	5.90	2566	25.332	19.934
		9.5		1.7	3.06	11.33	7.39	2563	24.228	18.902
		1.0	1.80	1.7	3.06	9.59	8.47	2570	23.567	18.252
T5-3	19	18.0		6.6	10.61	11.63	5.88	2572	25.413	20.000
		9.5		3.1	5.22	10.98	6.77	2576	24.804	19.426
		1.0		2.1	3.68	9.76	8.07	2576	23.897	18.561
T5-4	16	15.0	49.22	17.1	26.78	8.83	6.22	2572	25.161	19.766
		8.0		4.2	6.91	9.29	6.97	2571	24.608	19.250
		1.0	3.04	2.1	3.68	10.01	7.84	2579	24.085	18.737
T6-1	8	7.0	3.20	3.2	5.37	10.13	8.12	2586	23.963	18.607
		4.0		1.7	3.06	10.15	8.13	2586	23.957	18.601
		1.0	3.01	1.8	3.22	10.17	8.16	2586	23.938	18.582
T6-2	11	10.0		10.3	16.31	9.33	6.90	2570	24.647	19.288
		5.5		3.1	5.22	9.42	7.04	2570	24.549	19.195
		1.0		2.4	4.14	9.33	6.90	2586	24.143	18.780
T6-3	21	20.0	5.38	3.1	5.22	16.66	5.98	2561	25.217	19.835
		10.5		2.0	3.53	14.31	7.15	2572	24.490	19.136
		1.0	1.76	1.5	2.76	9.89	8.20	2601	24.064	18.676
T6-4	24	23.0		3.7	6.14	10.04	5.76	2563	25.402	20.004
		12.0		1.8	3.22	10.29	7.33	2573	24.373	19.024
		1.0		1.6	2.91	9.77	7.85	2575	24.037	18.698
T6-5	10	9.0	5.48	3.2	5.37	9.51	7.33	2570	24.343	19.000

Marine Sciences Research Center

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	NTU	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	COND mmho	SAL ppt	SIGMA T
		5.0		1.8	3.22	9.68	7.55	2553	24.014	18.716
		1.0	2.09	1.6	2.91	9.96	8.14	2568	23.768	18.451
T7-1	7	6.0	9.91	5.2	8.45	9.00	6.33	2567	25.029	19.651
		3.5		4.3	7.07	9.34	6.69	2575	24.854	19.474
		1.0	2.57	2.4	4.14	9.72	7.25	2589	24.601	19.212
T7-2	30	29.0		3.8	6.30	9.36	5.28	2566	25.798	20.363
		15.0		3.3	5.53	9.57	6.69	2570	24.796	19.428
		1.0		2.4	4.14	9.43	7.12	2583	24.631	19.250
T7-3	28	27.0	2.69	2.1	3.68	11.60	5.98	2582	25.443	20.013
		14.0		1.7	3.06	10.12	6.70	2569	24.779	19.413
		1.0	1.54	1.2	2.29	9.64	7.64	2583	24.265	18.902
T7-4	22	21.0		1.9	3.37	11.86	6.07	2570	25.248	19.850
		11.0		1.7	3.06	9.47	6.56	2580	24.999	19.602
		1.0		1.6	2.91	9.96	7.97	2567	23.873	18.555
T7-5	14	13.0	5.54	2.8	4.76	12.16	7.38	2551	24.108	18.810
		7.0		2.1	3.68	11.28	7.60	2547	23.920	18.634
		1.0	2.24	1.6	2.91	9.77	7.83	2546	23.752	18.477
T9-1	12	11.0	5.66	4.0	6.61	8.66	5.97	2576	25.391	19.974
		6.0		1.8	3.22	8.94	6.44	2561	24.885	19.525
		1.0	2.04	2.0	3.53	10.09	8.10	2565	23.764	18.453
T9-2	19	18.0		3.6	5.99	10.30	5.44	2600	26.056	20.551
		9.5		1.9	3.37	9.71	6.95	2565	24.559	19.213
		1.0		1.5	2.76	10.06	9.26	2657	23.912	18.417
T9-3	32	31.0	11.90	6.9	11.07	9.01	5.19	2574	26.205	20.723
		15.5		2.5	4.30	8.98	6.57	2553	24.882	19.536
		1.0	1.24	1.6	2.91	9.28	7.67	2610	23.657	18.261
T9-4	23	22.0		2.0	3.53	8.70	5.19	2579	26.015	20.543
		11.5		2.5	4.30	8.98	6.57	2551	24.681	19.351
		1.0		1.7	3.06	9.28	7.67	2568	24.089	18.760
T9-5	17	16.0	7.44	2.7	4.60	8.75	6.37	2564	24.964	19.595
		8.5		2.2	3.83	9.00	6.72	2555	24.617	19.285
		1.0	2.97	2.0	3.53	9.38	8.13	2593	24.030	18.658
T9-6	11	10.0		4.1	6.76	9.02	6.99	2551	24.382	19.070
		5.5		2.4	4.14	9.79	7.94	2516	23.369	18.164
		1.0		2.3	3.99	10.10	9.04	2451	22.011	16.964
T11-1	26	25.0	6.09	3.9	6.45	9.31	5.86	2570	25.403	19.994
		13.0		1.9	3.37	9.87	7.05	2577	24.613	19.244
		1.0	2.76	1.6	2.91	10.15	7.34	2581	24.454	19.086
T11-2	~30	29.0		3.8	6.30	16.75	4.77	2573	26.274	20.786
		15.0		2.1	3.68	10.45	5.73	2560	25.395	20.001
		1.0		1.8	3.22	9.92	7.45	2563	24.189	18.865
T11-3	19	18.0	4.56	4.1	6.76	9.65	5.70	2590	25.746	20.280
		9.5		2.7	4.60	9.07	6.00	2570	25.304	19.902
		1.0	11.41	1.4	2.60	9.70	7.09	2581	24.631	19.254
T11-4	25	24.0		7.8	12.46	13.60	5.34	2508	25.865	20.410
		12.5		10.1	16.00	12.71	5.80	2513	25.442	20.031

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STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	NTU	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	COND mmho	SAL ppt	SIGMA T
		1.0		2.6	4.45	9.63	7.56	2508	24.123	18.800
T11-5	6	5.0	16.40	9.4	14.92	9.51	7.49	2508	23.589	18.390
		3.0		8.2	13.07	9.21	7.51	2513	23.628	18.418
		1.0	10.28	6.3	10.15	9.23	7.59	2508	23.523	18.326
T12-1	24	23.0	11.97	8.1	12.92	9.03	4.69	2594	26.577	21.034
		12.0		2.9	4.91	8.93	5.44	2556	25.572	20.169
		1.0	2.34	1.7	3.06	9.91	7.23	2572	24.437	19.085
T12-2	~30	29.0		4.4	7.22	11.01	4.54	2593	26.683	21.131
	not on	15.0		2.6	4.45	9.72	5.74	2579	25.596	20.158
	bottom	1.0		1.9	3.37	8.81	7.83	2553	23.824	18.534
T12-3	24	23.0	11.35	7.0	11.23	12.88	4.86	2588	26.374	20.857
		12.0		2.5	4.30	9.43	6.37	2570	25.030	19.647
		1.0	2.09	1.7	3.06	9.57	7.86	2576	24.040	18.699
T12-4	17	16.0		8.1	12.92	8.66	5.23	2597	26.186	20.675
		8.5		2.1	3.68	8.77	6.63	2563	24.767	19.412
		1.0		1.7	3.06	9.06	7.88	2547	23.728	18.453
T12-5	11	10.0	11.08	7.3	11.69	8.55	6.46	2597	25.255	19.814
		5.5		2.4	4.14	8.76	7.58	2563	24.097	18.778
		1.0	2.81	2.0	3.53	9.22	8.85	2555	23.165	17.890

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PHYSICAL DATA WORKSHEET

site: LIS Axial stations 1 - 16

date: 10 August 1987 comments:

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S. ug/l	D.O. mg/l	TEMP degC	SAL ppt	SIGMA T
Ax1	19.5	18.4	4.495	96.5	4.71	4.7	20.1	27.3	18.907
		16.4		99.2	4.81	4.7	20.2	27.2	18.832
		16.2		98.9	4.80	4.7	20.2	27.3	18.852
		14.4		99.5	4.82	4.7	20.2	27.3	18.842
		12.4		100.2	4.85	4.8	20.2	27.2	18.817
		10.3		97.1	4.73	4.8	20.5	27.1	18.635
		9.1	4.608	99.1	4.81	4.9	20.7	27.0	18.522
		8.2		98.4	4.78	5.3	21.1	26.8	18.296
		6.4		95.1	4.66	6.3	21.5	26.7	18.1
		4.6		95.3	4.66	6.5	21.5	26.7	18.085
		2.4		95.4	4.67	6.5	21.5	26.7	18.087
		1		95.4	4.67	6.5	21.5	26.7	18.087
Ax2	27.5	26.4	4.74	83.7	4.22	16.9	19.8	27.5	19.159
		24.8		89.2	4.43	15.9	19.8	27.5	19.166
		23.3		90.6	4.48	15.7	19.8	27.5	19.177
		21		94.6	4.64	15.5	19.8	27.5	19.153
		18.9		97.5	4.75	15.1	19.7	27.5	19.132
		17.1		98.2	4.77	14.9	19.7	27.4	19.056
		14.9		98.7	4.79	14.5	19.7	27.3	19.016
		13.4	14.84	101.1	4.88	14.1	19.8	27.3	18.963
		13.2		101.1	4.88	13.5	20.6	27.0	18.505
		11		99.8	4.83	12.8	20.9	26.8	18.341
		8.7		98.8	4.80	11.9	21.1	26.8	18.289
		7.2		97.4	4.74	10.8	21.4	26.7	18.135
		5		88.7	4.41	9.6	21.6	26.6	18.015
		3.2		91.5	4.52	9	21.6	26.6	17.994
		0.9	3.019	92.3	4.55	7.3	21.6	26.6	17.984
Ax3	27	25.8	6.25	62.3	3.41	14.1	19.5	27.5	19.183
		23.6		76.3	3.94	13.5	19.5	27.5	19.174
		21.9		80.8	4.11	13.7	19.5	27.5	19.188
		20		87.8	4.38	13.2	19.5	27.4	19.122
		17.8		89.5	4.44	13.1	19.5	27.4	19.098
		15.7		91.2	4.51	13	19.5	27.3	19.073
		14		92.1	4.54	12.6	21.1	26.7	18.226
		12.8	2.53	92.2	4.55	12.3	21.1	26.7	18.198
		11.9		92.5	4.56	11.4	21.2	26.8	18.222
		9.8		91.4	4.52	11	21.3	26.8	18.174
		7.8		90	4.46	10	21.7	26.6	17.961
		5.9		90.2	4.47	9.9	21.8	26.6	17.936
		3.7		89.4	4.44	8.5	22.0	26.4	17.705

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STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S. ug/l	D.O. mg/l	TEMP degC	SAL ppt	SIGMA T
		1.9		89.7	4.45	7.5	22.0	26.4	17.692
		0.7	2.83	85.6	4.29	7	22.0	26.3	17.682
Ax4	29	27.8	6.16	88.6	4.41	16.9	19.1	27.6	19.372
		25.7		88.7	4.41	16.6	19.1	27.5	19.28
		23.9		90.4	4.48	16.6	19.1	27.5	19.29
		21.8		91.5	4.52	16.2	19.2	27.5	19.257
		19.7		92.5	4.56	16	19.2	27.5	19.251
		17.9		93.6	4.60	15.9	19.1	27.5	19.266
		16		94.4	4.63	15.4	19.1	27.4	19.227
		13.9	6.89	99.3	4.82	14.9	19.0	27.0	18.953
		11.9		97.4	4.74	13.9	19.6	26.6	18.486
		9.9		92.1	4.54	12.2	21.5	26.2	17.723
		7.8		92.2	4.55	11.3	21.7	26.2	17.669
		5.7		90.7	4.49	9.8	21.9	26.1	17.495
		4		88	4.39	8.7	22.0	26.2	17.565
		1.9		90.4	4.48	7.8	22.0	26.2	17.605
		0.9	1.93	90.4	4.48	7.1	22.0	26.2	17.59
Ax5	28	27.2	2.72	91.2	4.51	16.9	18.8	27.5	19.387
		25		91.1	4.50	16.8	18.8	27.4	19.317
		23		92	4.54	16.6	18.8	27.4	19.279
		21.1		92.8	4.57	16.4	18.7	27.4	19.344
		19		94.5	4.63	16.1	18.4	27.2	19.236
		17.1		95	4.65	16	18.4	27.0	19.109
		15.2		95.3	4.66	15.4	18.7	27.0	19.004
		13.5	2.49	94.1	4.62	14.5	19.6	26.6	18.521
		12.8		94.1	4.62	14.1	19.6	26.7	18.538
		11		91.9	4.53	13.3	20.2	26.5	18.271
		8.9		90.4	4.48	11.7	21.4	26.1	17.688
		7		89	4.42	10.8	21.5	26.3	17.747
		5		87.9	4.38	9.6	21.6	26.2	17.691
		3		87.9	4.38	8.5	21.6	26.3	17.728
		1.1	2.06	88	4.39	7.8	21.6	26.3	17.724
Ax6	34	33.3	3.60	78.3	4.02	17	18.7	27.3	19.217
		31.1		78.1	4.01	16.8	18.7	27.2	19.178
		29.1		78.2	4.01	16.7	18.7	27.2	19.176
		26.9		78.3	4.02	16.6	18.7	27.2	19.183
		25.2		78.9	4.04	16.4	18.7	27.2	19.147
		23		79.3	4.06	16.2	18.7	27.2	19.142
		20.7		80.4	4.10	16.1	18.7	27.1	19.135
		19.2		81.4	4.14	15.8	18.8	27.1	19.08
		17		81.9	4.15	15.3	19.0	26.9	18.889
		16.5	3.01	80.6	4.10	15	19.7	26.6	18.51
		14.9		79.9	4.08	14.3	20.6	26.4	18.106
		12.9		78.1	4.01	13.2	21.1	26.3	17.893
		10.9		78.1	4.01	12.3	21.2	26.3	17.848
		9		77.9	4.00	11.5	21.2	26.3	17.89

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STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
		22.4		87.3	3.42	4.4	20.52	27.41	18.855
		20.9		87.3	3.42	4.3	20.48	27.39	18.848
		19.2	3.38	87.5	3.41	4.6	20.50	27.22	18.713
		16.7		87.1	3.44	5.1	20.51	27.16	18.663
		15.2		85.9	3.53	5.4	20.53	27.14	18.647
		12.9		84.3	3.65	6.5	20.56	27.10	18.607
		10.9		84.2	3.65	6.6	20.56	27.10	18.608
		9.4		83.9	3.68	6.6	20.56	27.12	18.622
		7.1		83.7	3.69	6.7	20.56	27.12	18.623
		5.3		83.8	3.68	6.7	20.57	27.10	18.607
		3.4		83.3	3.72	6.8	20.57	27.11	18.609
		1.0	2.81	83.7	3.69	7.1	20.65	27.09	18.575
AX7	31.5	30.6	3.98	84.4	3.64	4.4	20.49	27.34	18.808
		26.3		84.9	3.60	4.3	20.50	27.33	18.794
		24.4		85.2	3.58	4.4	20.48	27.34	18.811
		22.6		85.9	3.53	4.4	20.45	27.37	18.841
		21.6		86.1	3.51	4.5	20.49	27.33	18.801
		20.4		86.8	3.46	4.5	20.49	27.31	18.783
		18.7		86.8	3.46	4.4	20.47	27.35	18.817
		17.5		86.2	3.51	4.6	20.46	27.31	18.790
		16.2	3.83	85.9	3.53	5.0	20.47	27.24	18.740
		15.3		86.2	3.51	4.8	20.48	27.24	18.734
		13.1		84.6	3.62	5.3	20.49	27.19	18.696
		11.3		84.2	3.65	5.5	20.48	27.19	18.698
		9.5		83.7	3.69	5.6	20.48	27.15	18.661
		7.4		80.7	3.91	6.0	20.50	27.12	18.635
		5.5		80.1	3.96	6.7	20.46	27.10	18.633
		3.8		79.7	3.99	6.8	20.48	27.05	18.591
		0.9	2.96	78.0	4.11	7.1	20.53	27.02	18.551
AX8	23.5	22.4	3.99	86.1	3.51	18.7	20.48	27.13	18.647
		20.3		85.8	3.53	18.6	20.50	27.14	18.655
		18.9		83.7	3.69	18.4	20.49	27.14	18.655
		16.8		82.1	3.81	18.1	20.51	27.11	18.629
		14.9		81.7	3.84	17.6	20.50	27.07	18.597
		12.6		81.2	3.88	16.9	20.51	27.05	18.582
		11.4	2.62	81.1	3.88	16.1	20.50	27.04	18.575
		10.8		80.2	3.95	15.7	20.49	27.06	18.592
		8.8	—	80.4	3.93	14.8	20.47	27.06	18.597
		6.9		78.9	4.05	13.6	20.56	27.03	18.553
		5.0		79.5	4.00	11.9	20.57	27.03	18.547
		2.8		79.5	4.00	11.0	20.60	27.02	18.534
		1.0	3.34	79.5	4.00	9.0	20.67	27.02	18.517
AX9	21.5	20.5	3.53	80.3	3.94	13.7	20.31	27.10	18.671
		18.5		79.8	3.98	11.5	20.31	27.06	18.639
		16.7		80.0	3.96	12.4	20.39	27.01	18.583
		14.8		80.0	3.96	12.3	20.41	26.99	18.562

Marine Sciences Research Center

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
		5.4		82.8	3.76	12.2	20.49	27.14	18.654
		3.4		83.1	3.73	10.9	20.45	27.15	18.674
		1.6		83.5	3.71	10.0	20.47	27.15	18.666
		0.8	3.26	83.3	3.72	8.7	20.48	27.14	18.658
Ax4	30.0	29.2	3.73	87.1	3.44	17.3	20.70	27.79	19.097
		26.8		89.8	3.24	16.7	20.70	27.79	19.094
		24.9		89.7	3.25	16.4	20.73	27.77	19.069
		23.0		90.2	3.21	15.4	20.71	27.79	19.087
		20.9		90.7	3.17	15.6	20.73	27.76	19.066
		18.8		90.9	3.16	15.5	20.70	27.79	19.092
		17.0		89.7	3.25	15.4	20.64	27.69	19.030
		15.0	2.33	85.9	3.53	15.2	20.57	27.38	18.818
		12.8		85.7	3.54	14.8	20.55	27.14	18.641
		10.7		85.3	3.57	14.2	20.57	27.13	18.630
		8.6		85.6	3.55	13.3	20.53	27.16	18.659
		6.9		85.1	3.59	13.1	20.55	27.13	18.628
		4.9		85.4	3.56	11.6	20.55	27.13	18.633
		2.7		85.7	3.54	10.0	20.52	27.14	18.646
		1.2	2.74	85.4	3.56	8.7	20.56	27.13	18.631
AX5	38.5	37.6	4.14	81.5	3.85	11.1	20.63	27.71	19.054
		36.0		83.7	3.69	10.6	20.62	27.72	19.058
		33.9		83.4	3.71	10.4	20.62	27.68	19.032
		31.6		84.8	3.61	10.1	20.60	27.67	19.025
		29.8		85.2	3.58	4.9	20.61	27.64	19.007
		27.5		85.6	3.55	4.3	20.61	27.64	19.002
		25.7		86.7	3.47	4.2	20.60	27.64	19.008
		23.8		89.0	3.30	4.1	20.58	27.64	19.011
		21.5		90.3	3.20	4.2	20.50	27.38	18.837
		19.4		89.5	3.26	4.3	20.51	27.29	18.761
		19.3	2.50	87.3	3.42	5.3	20.56	27.17	18.659
		18.1		86.1	3.51	5.8	20.56	27.12	18.625
		15.8		84.9	3.60	6.5	20.55	27.11	18.615
		13.9		84.8	3.61	6.6	20.56	27.09	18.599
		11.4		84.8	3.61	6.8	20.55	27.11	18.617
		9.8		84.4	3.64	6.8	20.56	27.10	18.603
		7.8		84.3	3.65	6.8	20.58	27.08	18.585
		5.8		84.2	3.65	6.9	20.57	27.09	18.599
		3.6		84.1	3.66	6.9	20.56	27.09	18.598
		1.9		84.5	3.63	7.1	20.59	27.08	18.580
		0.9	2.23	84.8	3.61	7.1	20.61	27.08	18.579
AX6	37.0	36.1	6.29	82.3	3.79	16.5	20.58	27.59	18.978
		34.5		83.1	3.73	16.2	20.57	27.59	18.973
		31.3		84.6	3.62	16.2	20.57	27.58	18.964
		28.9		85.2	3.58	14.1	20.56	27.57	18.960
		26.3		86.2	3.51	7.9	20.54	27.53	18.940
		24.3		87.0	3.45	4.7	20.52	27.41	18.851

Marine Sciences Research Center

PHYSICAL DATA WORKSHEET

site: LIS Axial stations 1 - 16

date: 02 September 1987 comments:

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
Ax1	22.0	21.0	5.63	88.0	3.37	6.7	20.80	28.00	19.227
		19.8		87.2	3.43	6.6	20.82	27.98	19.206
		17.8		86.7	3.47	6.8	20.78	27.94	19.190
		15.8		85.9	3.53	7.2	20.74	27.86	19.138
		14.0		83.8	3.68	8.0	20.58	27.70	19.056
		11.9		83.1	3.73	8.2	20.53	27.56	18.966
		11.2	4.29	82.7	3.76	8.6	20.49	27.43	18.878
		9.9		82.3	3.79	8.5	20.48	27.38	18.839
		7.9		82.4	3.79	8.4	20.50	27.35	18.811
		5.9		82.5	3.78	8.4	20.50	27.35	18.812
		3.9		82.2	3.80	8.4	20.47	27.36	18.829
		1.8		81.6	3.85	8.7	20.41	27.31	18.801
		0.9	5.07	81.8	3.83	8.7	20.40	27.29	18.789
Ax2	29.0	28.0	3.79	86.7	3.47	6.3	20.76	27.79	19.081
		26.6		87.7	3.39	6.4	20.75	27.81	19.099
		24.5		87.7	3.39	6.5	20.74	27.79	19.084
		22.5		87.0	3.45	6.6	20.72	27.77	19.073
		20.8		86.7	3.47	6.8	20.68	27.73	19.054
		18.5		86.0	3.52	7.0	20.66	27.69	19.029
		16.2		84.7	3.62	7.6	20.54	27.58	18.975
		14.9	3.33	83.6	3.70	7.9	20.48	27.45	18.894
		12.5		83.1	3.73	8.1	20.48	27.37	18.833
		10.3		83.1	3.73	8.0	20.48	27.37	18.827
		8.4		83.3	3.72	8.1	20.50	27.35	18.815
		6.4		82.8	3.76	8.1	20.48	27.35	18.820
		4.3		82.5	3.78	8.3	20.41	27.34	18.824
		2.4		82.7	3.76	8.3	20.40	27.29	18.794
		0.8	3.99	82.5	3.78	8.2	20.38	27.28	18.787
Ax3	28.5	27.3	4.47	86.3	3.50	17.4	20.76	27.82	19.098
		25.8		89.3	3.28	17.7	20.73	27.83	19.114
		23.3		90.8	3.16	17.4	20.74	27.82	19.108
		21.4		91.0	3.15	17.6	20.72	27.83	19.117
		19.3		91.2	3.14	17.1	20.69	27.79	19.097
		17.3		89.2	3.28	16.9	20.67	27.70	19.035
		15.7		85.4	3.56	15.7	20.68	27.41	18.815
		14.2	2.97	85.1	3.59	15.3	20.63	27.33	18.763
		13.5		84.2	3.65	15.7	20.60	27.24	18.703
		11.5		83.0	3.74	15.3	20.51	27.23	18.718
		9.2		82.8	3.76	14.4	20.47	27.17	18.685
		7.1		83.1	3.73	13.6	20.48	27.17	18.681

Marine Sciences Research Center

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S. ug/l	D.O. mg/l	TEMP degC	SAL ppt	SIGMA T
		13.1		68.1	3.63	4.6	21.5	25.6	17.242
		10.9		70.9	3.74	4.5	21.5	25.6	17.251
		9.2		71.6	3.76	4.5	21.4	25.6	17.262
		7.1		71.4	3.76	4.4	21.5	25.6	17.223
		5.2		70.1	3.71	4.6	21.6	25.5	17.165
		3		69.7	3.69	4.8	21.7	25.5	17.096
		1	3.44	62	3.40	5.5	22.1	25.4	16.954
Ax15	7.5	6.5	4.53	78.5	4.03	13.4	21.4	25.5	17.228
		4.2		70.6	3.72	11.6	21.9	25.2	16.868
		3.7	4.43	66.5	3.57	10.9	22.1	25.2	16.787
		2.4		62.8	3.43	10	22.1	25.2	16.761
		0.7	4.96	59.1	3.29	8.8	22.1	25.2	16.763
Ax16	31	29.6	5.42	91.9	4.53	13.2	20.9	25.8	17.598
		28.2		85.6	4.29	12.1	20.9	25.8	17.543
		25.7		86.6	4.33	12.6	21.0	25.7	17.441
		23.9		86.7	4.34	12.6	21.1	25.6	17.394
		22.2		86.2	4.32	12.3	21.1	25.6	17.397
		20		86	4.31	12.8	21.1	25.6	17.352
		17.9		81.5	4.14	12.4	21.3	25.6	17.288
		16.1		79.9	4.08	12	21.3	25.5	17.245
		15.6	3.46	74	3.85	12.4	21.4	25.5	17.16
		14.1		78.2	4.01	10.9	21.4	25.4	17.122
		11.9		78.1	4.01	10.8	21.5	25.4	17.083
		10.2		77.7	3.99	10.6	21.6	25.3	17.02
		8		76.8	3.96	9.4	21.7	25.1	16.86
		5.8		76.3	3.94	9	21.7	25.1	16.844
		4.1		74.8	3.88	8.9	21.8	25.2	16.845
		2.1		73.2	3.82	8	22.0	25.1	16.75
		1.1	4.76	68.4	3.64	7.4	22.1	25.1	16.683

Marine Sciences Research Center

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S. ug/l	D.O. mg/l	TEMP degC	SAL ppt	SIGMA T
		18.1		73.8	3.85	16	19.8	26.5	18.407
		16.1		75	3.89	15.6	19.8	26.5	18.387
		14.1		75.4	3.91	15.1	19.9	26.4	18.289
		12.1		75.4	3.91	14.4	20.2	26.3	18.123
		11.3	3.10	73.2	3.82	14	20.3	26.4	18.129
		10.1		75	3.89	13.3	20.4	26.3	18.113
		8.2		74.6	3.88	12.3	20.6	26.2	17.967
		6.1		73.7	3.84	11.2	21.0	26.2	17.807
		4.4		69.9	3.70	9.5	21.7	25.9	17.438
		2		66	3.55	8	21.8	26.0	17.501
		0.7	2.51	58.1	3.25	7.3	22.0	25.9	17.342
Ax11	19.5	18.5	3.98	71.2	3.75	16.4	19.3	26.8	18.714
		16.5		76.2	3.94	15.6	19.4	26.5	18.51
		14.6		76.6	3.95	15	19.4	26.5	18.497
		12.4		77.1	3.97	14.4	19.6	26.5	18.387
		10.9		76.7	3.96	13.6	19.8	26.4	18.275
		9.3		76.3	3.94	12.5	20.4	26.3	18.065
		8.4	2.77	75.8	3.92	11.6	20.6	26.2	17.977
		6.3		75.8	3.92	10.5	20.7	26.2	17.946
		4.4		74.3	3.87	9.1	21.0	26.1	17.8
		2.1		68.5	3.65	7.8	21.6	25.9	17.422
		1	3.89	63.3	3.45	7.1	21.8	25.8	17.343
Ax12	17.5	16.6	4.32	78.3	4.02	2.7	19.6	26.6	18.51
		14.4		72.7	3.80	2.6	19.6	26.5	18.438
		12.4		74.2	3.86	2.6	19.7	26.4	18.315
		10.6		74.9	3.89	2.7	20.0	26.3	18.151
		8.5	3.25	70	3.70	3.1	20.5	26.1	17.924
		6.6		72.3	3.79	3.3	21.0	25.9	17.6
		4.5		69.2	3.67	4.4	21.5	25.7	17.304
		2.7		68	3.63	4.9	21.7	25.6	17.189
		0.9	3.00	53.6	3.08	7.3	22.6	25.5	16.921
Ax13	12.5	11.8	3.42	81	4.12	12.9	20.3	26.5	18.238
		9.3		79.4	4.06	10.7	20.9	26.0	17.691
		7.7		71	3.74	8.1	22.1	25.4	16.966
		6.2	3.11	66.3	3.56	6.6	22.2	25.6	17.064
		5.5		67.5	3.61	6.5	22.2	25.6	17.075
		3.3		67.3	3.60	6.5	22.4	25.6	17.021
		1	3.85	50.5	2.96	7.7	22.7	25.4	16.809
Ax14	30	28.8	6.07	80	4.08	3.1	20.7	26.1	17.855
		27.1		72.2	3.79	3	20.7	25.9	17.722
		25.1		73.2	3.82	2.9	20.7	25.9	17.725
		23.1		72.5	3.80	2.9	20.7	25.9	17.723
		21.3		71.9	3.77	3	20.7	25.9	17.688
		19.1		72.4	3.79	3	20.7	25.9	17.685
		16.8		71	3.74	3.4	21.1	25.8	17.495
		14.9	5.79	66.9	3.58	3.7	21.2	25.7	17.402

Marine Sciences Research Center

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S. ug/l	D.O. mg/l	TEMP degC	SAL ppt	SIGMA T
		6.9		77.2	3.98	10.3	21.2	26.3	17.873
		4.9		76.2	3.94	9.2	21.2	26.3	17.877
		2.8		75.4	3.91	8.1	21.3	26.3	17.84
		0.9	2.24	75.8	3.92	7	21.3	26.3	17.868
Ax7	16.5	15.7	2.55	76.6	3.95	15.2	20.0	26.6	18.43
		13.5		76.3	3.94	15	20.2	26.5	18.308
		11.6		74.3	3.87	14.3	20.4	26.4	18.161
		9.6		73.5	3.84	13.4	20.6	26.4	18.11
		7.5	2.70	74.7	3.88	12.3	20.4	26.5	18.186
		4.9		75.6	3.91	10.8	20.2	26.6	18.302
		5.6		75.6	3.91	10.7	20.3	26.5	18.283
		3.4		72.2	3.79	9.6	20.3	26.5	18.246
		1.6		72.3	3.79	9	20.4	26.5	18.215
		0.7	3.30	72.4	3.79	7.9	20.5	26.5	18.165
Ax8	30.5	29.7	5.73	68	3.63	16.9	19.0	27.0	18.914
		27.6		71.5	3.76	16.6	19.1	26.9	18.847
		25.9		72.3	3.79	16.7	19.1	26.9	18.803
		23.6		73.7	3.84	16.3	19.2	26.8	18.769
		21.5		73.7	3.84	16.4	19.2	26.8	18.769
		19.6		74.5	3.87	16.3	19.3	26.8	18.766
		17.7		74.8	3.88	15.8	19.3	26.8	18.734
		15.9		78.3	4.02	15.3	19.6	26.7	18.537
		14.8	3.78	78.4	4.02	14.8	19.7	26.7	18.532
		13.5		78.3	4.02	14.2	19.6	26.7	18.565
		11.6		77.4	3.98	13.3	20.1	26.5	18.286
		9.5		77.1	3.97	12.7	20.2	26.5	18.275
		7.7		76.8	3.96	11.5	20.4	26.5	18.204
		5.6		76.4	3.95	10.2	20.5	26.5	18.177
		3.6		75.9	3.93	9.4	20.5	26.5	18.165
		1.7		75.9	3.93	7.6	20.7	26.4	18.076
		1.2	2.83	76.8	3.96	7.1	20.8	26.4	18.056
Ax9	25	23.7	3.32	73.8	3.85	16.9	19.3	26.8	18.701
		21.7		74.3	3.87	16.5	19.3	26.8	18.689
		19.9		74.8	3.88	16.4	19.3	26.7	18.645
		17.8		75.6	3.91	15.9	19.4	26.7	18.632
		15.8		76.6	3.95	15.4	19.7	26.6	18.466
		13.9		77.2	3.98	14.7	20.3	26.5	18.248
		11.8	2.33	77	3.97	13.9	20.5	26.5	18.234
		9.9		76.9	3.96	12.8	20.6	26.5	18.166
		7.8		77.3	3.98	11.6	20.6	26.5	18.151
		5.7		77.2	3.98	10.3	21.0	26.4	17.977
		3.5		74.2	3.86	9.1	21.5	26.2	17.708
		1.8		65.8	3.54	7.8	21.8	26.0	17.489
		0.9	3.07	64.7	3.50	7.2	22.0	26.1	17.461
Ax10	23	22.1	2.98	72.7	3.80	16.8	19.7	26.7	18.544
		20.1		74.1	3.86	16.3	19.7	26.6	18.434

Marine Sciences Research Center

STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
		12.8		78.9	4.05	11.8	20.41	26.98	18.550
		11.0	4.39	79.2	4.02	11.3	20.44	26.97	18.538
		9.1		77.9	4.12	10.8	20.43	26.96	18.534
		7.3		77.7	4.13	10.3	20.47	26.93	18.499
		5.2		77.1	4.18	10.1	20.53	26.89	18.454
		2.9		76.4	4.23	9.9	20.57	26.90	18.450
		1.1	3.30	75.1	4.33	9.0	20.59	26.91	18.452
AX10	17.5	16.4	3.97	79.4	4.01	15.5	20.25	26.98	18.595
		14.5		78.9	4.05	15.4	20.26	26.97	18.582
		12.6		79.0	4.04	13.0	20.27	26.96	18.572
		10.3		79.0	4.04	8.6	20.28	26.96	18.573
		8.5	3.80	78.5	4.08	7.6	20.29	26.96	18.570
		6.6		79.0	4.04	7.3	20.28	26.96	18.568
		4.5		78.7	4.06	7.4	20.29	26.97	18.577
		3.8		79.1	4.03	7.6	20.31	26.97	18.574
		1.0	3.63	79.9	3.97	7.8	20.36	26.95	18.540
AX11	17.0	16.1	4.51	80.1	3.96	13.8	20.22	26.98	18.601
		14.0		79.7	3.99	13.2	20.23	26.90	18.541
		11.5		78.5	4.08	12.4	20.24	26.92	18.549
		9.9		78.3	4.09	12.1	20.25	26.91	18.543
		8.6	4.19	77.7	4.13	11.6	20.27	26.91	18.536
		7.0		77.2	4.17	10.8	20.30	26.92	18.532
		4.8		76.6	4.22	10.3	20.35	26.88	18.494
		2.8		77.5	4.15	9.2	20.39	26.90	18.497
		1.0	3.66	78.5	4.08	8.4	20.39	26.90	18.500
AX12	17.0	16.0	5.35	75.6	4.29	10.3	20.24	26.95	18.573
		13.6		76.8	4.20	9.3	20.26	26.91	18.542
		11.7		77.3	4.16	9.2	20.25	26.93	18.559
		9.8		79.3	4.02	8.3	20.30	26.86	18.492
		8.5	3.35	78.9	4.05	8.6	20.34	26.83	18.459
		7.2		78.8	4.05	8.5	20.36	26.81	18.436
		5.3		78.4	4.08	8.1	20.40	26.77	18.399
		2.9		75.0	4.33	8.1	20.48	26.57	18.227
		1.0	4.52	75.9	4.27	7.8	20.62	26.44	18.090
AX13	11.0	10.2	4.21	76.6	4.22	13.5	20.34	26.60	18.288
		8.3		76.1	4.25	13.6	20.36	26.58	18.259
		6.2		75.8	4.27	12.8	20.40	26.49	18.181
		5.5	2.90	75.1	4.33	11.7	20.43	26.30	18.032
		3.9		74.8	4.35	10.8	20.47	26.26	17.992
		1.8		74.9	4.34	9.6	20.50	26.22	17.956
		1.1	2.76	75.3	4.31	8.7	20.52	26.22	17.945
AX14	30.0	29.1	3.53	81.6	3.85	14.8	20.21	26.73	18.416
		27.1		83.0	3.74	15.0	20.23	26.69	18.381
		24.9		83.6	3.70	14.3	20.27	26.64	18.333
		22.5		83.5	3.71	14.2	20.25	26.62	18.318
		22.6		83.6	3.70	14.0	20.25	26.61	18.310

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STATION	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S. mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
		20.5		83.7	3.69	13.2	20.26	26.62	18.320
		18.5		83.7	3.69	12.0	20.26	26.62	18.318
		17.0		83.6	3.70	11.7	20.26	26.60	18.306
		15.3	3.91	83.0	3.74	10.8	20.27	26.57	18.279
		13.6		83.0	3.74	9.7	20.30	26.54	18.246
		11.8		81.3	3.87	9.4	20.30	26.45	18.177
		9.9		77.9	4.12	9.3	20.36	26.38	18.107
		8.1		74.0	4.41	8.9	20.42	26.29	18.030
		5.8		71.9	4.56	8.2	20.50	26.10	17.864
		3.9		69.1	4.77	7.9	20.55	26.01	17.785
		1.9		68.3	4.83	7.4	20.57	25.90	17.696
		0.9	2.02	68.7	4.80	6.7	20.61	25.87	17.660
AX15	9.0	7.9	4.75	70.6	4.66	10.4	20.55	25.85	17.660
		5.7		69.0	4.78	10.1	20.54	25.83	17.651
		4.4	4.13	69.0	4.78	8.9	20.69	25.64	17.463
		2.6		71.4	4.60	7.7	20.89	25.30	17.161
		1.1	4.55	71.2	4.62	7.4	20.90	25.29	17.145
AX16	19.0	17.9	5.06	72.9	4.49	15.2	20.52	25.89	17.699
		15.9		73.1	4.47	14.9	20.56	25.84	17.653
		13.9		74.3	4.39	15.0	20.57	25.78	17.605
		12.0		73.6	4.44	14.2	20.60	25.62	17.476
		9.7	7.90	71.0	4.63	12.7	20.61	25.58	17.436
		7.1		73.9	4.42	11.8	20.67	25.50	17.365
		4.9		74.3	4.39	10.8	20.70	25.46	17.329
		3.2		73.5	4.45	9.0	20.83	25.28	17.153
		1.1	8.83	72.8	4.50	8.4	20.83	25.24	17.129

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PHYSICAL DATA WORKSHEET

site: LIS Axial stations 1 - 16

date: 02 October 1987 comments:

STATION #	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
Ax1	21.7	19.5	14.74	102.4	2.86	16.3	18.01	27.52	19.557
		18.1		107.6	2.26	16.0	18.02	27.56	19.583
		15.6		105.3	2.52	15.8	17.99	27.59	19.611
		13.6		106.0	2.44	15.4	18.01	27.60	19.615
		11.3		106.6	2.37	15.0	18.01	27.59	19.609
		9.8	9.81	108.7	2.13	14.4	18.00	27.56	19.585
		8.8		110.5	1.92	13.8	17.98	27.62	19.64
		6.9		110.7	1.90	13.1	17.99	27.56	19.589
		6.8		110.5	1.92	12.8	18.00	27.58	19.605
		5.1		111.3	1.83	12.5	17.98	27.63	19.642
		2.6		111.8	1.77	10.7	17.98	27.58	19.61
		1.2	6.77	109.9	1.99	8.3	17.95	27.60	19.631
Ax2	28.0	25.8	9.04	113.0	1.63	17.1	18.03	27.50	19.536
		23.6		113.3	1.60	17.1	18.04	27.61	19.619
		21.8		113.8	1.54	16.9	18.03	27.64	19.641
		19.7		112.0	1.75	16.6	18.04	27.62	19.626
		17.6		112.0	1.75	16.4	18.02	27.63	19.637
		15.5		112.1	1.74	16.1	18.02	27.66	19.655
		13.5	8.44	113.4	1.58	15.5	18.02	27.60	19.615
		11.4		113.7	1.55	14.9	18.06	27.64	19.633
		9.4		113.2	1.61	14.3	18.05	27.62	19.625
		7.2		112.3	1.71	13.8	18.05	27.64	19.641
		5.5		114.1	1.50	13.0	18.04	27.64	19.64
		3.3		112.6	1.68	11.6	18.02	27.65	19.651
		1.5	5.80	115.3	1.36	10.0	18.02	27.63	19.637
Ax3	26.5	24.9	5.34	56.1	8.23	20.0	18.25	27.7	19.632
		22.5		58.2	7.99	20.0	18.25	27.72	19.652
		20.5		62.5	7.49	19.5	18.26	27.70	19.63
		18.5		64.4	7.27	19.2	18.19	27.73	19.674
		16.4		66.1	7.07	18.8	18.13	27.66	19.635
		14.7		66.8	6.99	18.3	18.10	27.57	19.569
		12.5	1.70	66.0	7.08	18.0	18.11	27.55	19.555
		12.4		66.2	7.06	17.7	18.10	27.57	19.576
		10.6		66.4	7.04	17.4	18.07	27.53	19.543
		8.3		65.7	7.12	16.0	18.10	27.38	19.426
		6.5		65.4	7.15	15.6	18.09	27.34	19.394
		4.5		65.8	7.11	13.2	18.09	27.32	19.385
		2.5		65.9	7.09	12.8	18.06	27.33	19.4
		0.8	1.89	66.0	7.08	11.4	18.07	27.32	19.39

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STATION #	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
Ax4	29.0	27.2	5.36	56.2	8.22	20.4	18.29	27.76	19.67
		24.9		61.0	7.66	20.2	18.33	27.72	19.629
		23.2		61.4	7.62	19.8	18.29	27.72	19.645
		21.3		62.3	7.51	18.2	18.31	27.72	19.637
		19.1		63.8	7.34	18.0	18.26	27.70	19.635
		17.2		63.1	7.42	17.3	18.05	27.60	19.602
		15.1		64.8	7.22	16.8	18.12	27.42	19.455
		14.2	3.25	65.5	7.14	18.7	18.15	27.35	19.39
		12.2		65.6	7.13	15.9	18.15	27.33	19.375
		9.7		65.1	7.19	13.9	18.21	27.32	19.356
		8.1		65.2	7.18	12.2	18.27	27.30	19.324
		6.1		65.2	7.18	16.1	18.28	27.33	19.343
		4.2		65.0	7.20	16.6	18.29	27.33	19.343
		2.1		65.2	7.18	8.4	18.29	27.33	19.346
		1.1	2.43	65.1	7.19	12.2	18.29	27.35	19.356
Ax5	36.1	34.0	3.42	52.7	8.63	20.9	18.31	27.71	19.629
		31.9		55.4	8.31	20.7	18.31	27.70	19.623
		29.8		55.9	8.25	20.5	18.28	27.71	19.633
		27.7		57.4	8.08	20.3	18.29	27.71	19.632
		25.9		57.6	8.06	20.0	18.26	27.70	19.636
		23.8		58.2	7.99	19.9	18.25	27.67	19.613
		21.5		58.5	7.95	19.6	18.24	27.67	19.612
		19.7		55.4	8.31	19.3	18.27	27.65	19.593
		17.7	6.43	56.6	8.17	19.0	18.25	27.64	19.588
		15.7		63.8	7.34	18.5	18.24	27.65	19.601
		13.8		64.1	7.30	18.1	18.24	27.64	19.595
		11.9		64.2	7.29	17.8	18.26	27.63	19.578
		10.0		63.7	7.35	17.3	18.30	27.59	19.541
		7.9		65.1	7.19	16.1	18.23	27.57	19.537
		5.8		65.2	7.18	14.5	18.21	27.33	19.361
		3.8		65.3	7.16	14.3	18.22	27.32	19.35
		1.8		65.4	7.15	11.7	18.23	27.29	19.328
		0.9	2.69	65.4	7.15	10.4	18.23	27.29	19.326
Ax6	29.9	27.8	2.96	62.0	7.55	20.2	18.34	27.66	19.583
		24.6		67.0	6.97	19.8	18.3	27.67	19.604
		22.3		69.8	6.64	19.4	18.25	27.65	19.599
		20.2		76.7	5.84	19.2	18.28	27.63	19.577
		18.1		77.5	5.75	18.8	18.26	27.61	19.566
		16.1		78.9	5.59	18.3	18.24	27.61	19.566
		14.7	4.94	62.0	7.55	17.5	18.19	27.50	19.496
		11.0		76.8	5.83	16.6	18.22	27.48	19.475
		9.2		77.4	5.76	16.2	18.19	27.50	19.5
		7.6		78.3	5.66	15.8	18.18	27.48	19.484
		6.4		82.1	5.22	14.4	18.18	27.37	19.399
		4.8		82.2	5.20	13.3	18.18	27.34	19.38
		3.6		82.3	5.19	12.3	18.18	27.35	19.386

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STATION #	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
		1.1	2.55	0.0	14.74	10.6	18.17	27.33	19.375
Ax7	16.5	14.5	5.64	60.6	7.71	14.4	18.31	27.59	19.534
		12.4		66.5	7.03	16.7	18.31	27.58	19.525
		10.4		71.1	6.49	19.2	18.27	27.59	19.548
		8.5		72.6	6.32	16.4	18.26	27.56	19.53
		7.5	4.25	71.0	6.50	14.9	18.14	27.41	19.438
		5.4		75.3	6.00	14.9	18.09	27.18	19.274
		3.4		75.1	6.03	13.7	18.07	27.15	19.261
		1.0	2.47	72.1	6.38	11.6	18.08	27.09	19.209
Ax8	30.9	29.4	4.48	60.8	7.69	20.5	18.36	27.57	19.508
		27.0		63.9	7.33	20.4	18.33	27.54	19.49
		24.9		63.4	7.38	20.1	18.34	27.52	19.478
		23.2		64.0	7.32	19.9	18.34	27.53	19.488
		21.1		66.0	7.08	19.8	18.34	27.53	19.483
		19.5		66.3	7.05	19.6	18.31	27.52	19.485
		17.1		66.3	7.05	19.3	18.33	27.52	19.48
		15.2	4.61	63.6	7.36	19.1	18.30	27.53	19.492
		13.3		74.6	6.09	17.9	18.31	27.49	19.46
		11.5		74.4	6.11	17.5	18.28	27.46	19.446
		9.4		74.3	6.12	16.6	18.18	27.38	19.409
		7.3		74.8	6.06	15.9	18.14	27.43	19.455
		5.3		73.8	6.18	14.8	18.03	27.37	19.439
		3.3		72.0	6.39	13.3	17.73	27.12	19.312
		0.9	2.78	69.9	6.63	11.6	17.73	27.02	19.237
Ax9	23.2	21.8	5.45	58.5	7.95	19.5	18.34	27.57	19.515
		19.8		64.0	7.32	19.4	18.34	27.49	19.456
		17.9		65.4	7.15	18.9	18.32	27.52	19.481
		15.5		69.7	6.65	18.6	18.31	27.50	19.471
		14.0		73.5	6.21	18.2	18.33	27.48	19.45
		12.4		75.1	6.03	17.8	18.33	27.47	19.442
		11.7	3.58	74.1	6.14	16.9	18.14	27.35	19.398
		9.2		71.4	6.46	16.4	18.14	27.34	19.383
		7.2		67.2	6.94	15.6	18.07	27.28	19.355
		5.2		64.2	7.29	14.2	18.02	27.18	19.293
		3.3		65.8	7.11	13.0	17.99	27.04	19.195
		0.9	2.51	62.4	7.50	10.7	17.99	26.98	19.147
Ax10	21.0	17.8	5.71	62.5	7.49	19.0	18.33	27.33	19.333
		16.2		65.8	7.11	18.5	18.30	27.35	19.357
		15.3		66.3	7.05	18.3	18.31	27.36	19.364
		13.8		67.5	6.91	18.2	18.30	27.36	19.361
		11.8		67.6	6.90	17.8	18.29	27.35	19.363
		9.9	6.37	65.8	7.11	16.6	18.31	27.27	19.297
		9.0		59.2	7.87	16.3	18.28	27.30	19.326
		6.8		69.1	6.72	15.6	18.23	27.26	19.308
		4.9		68.6	6.78	13.9	18.05	27.15	19.261
		2.9		68.3	6.82	12.8	18.02	27.05	19.191

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STATION #	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
		1.0	3.70	65.9	7.09	11.5	18.00	27.06	19.208
Ax11	20.4	17.9	8.48	54.8	8.38	19.0	18.18	27.40	19.421
		16.0		55.7	8.28	18.7	18.15	27.28	19.34
		14.1		61.0	7.66	18.4	18.15	27.31	19.358
		12.0		64.2	7.29	17.8	18.12	27.28	19.344
		10.0		65.9	7.09	17.0	18.04	27.2	19.299
		9.1	2.71	65.7	7.12	16.4	18.00	27.14	19.265
		7.2		69.6	6.67	15.7	17.99	27.12	19.249
		5.0		68.6	6.78	14.6	18.02	27.06	19.2
		3.4		69.0	6.74	12.8	18.04	27.01	19.159
		1.1	2.97	66.0	7.08	10.9	18.05	26.91	19.076
Ax12	18.8	16.2	6.05	62.4	7.50	18.6	17.96	27.13	19.266
		14.5		66.4	7.04	18.2	17.92	27.11	19.262
		12.8		63.1	7.42	18.0	17.90	27.10	19.258
		10.5		63.7	7.35	17.0	17.79	27.05	19.245
		8.6	5.25	66.5	7.03	15.8	17.47	26.85	19.17
		6.2		68.9	6.75	15.1	17.54	26.67	19.011
		4.6		69.0	6.74	14.1	17.55	26.58	18.943
		2.6		69.4	6.69	12.3	17.60	26.54	18.899
		1.1	3.19	66.9	6.98	10.9	17.61	26.51	18.873
Ax13	14.0	12.1	6.27	64.7	7.23	17.5	17.71	26.93	19.173
		10.2		68.4	6.80	16.7	17.49	26.92	19.214
		8.1		68.9	6.75	16.6	17.47	26.70	19.051
		6.3	3.56	66.1	7.07	15.1	17.55	26.52	18.894
		4.1		70.5	6.56	13.2	17.62	26.43	18.813
		2.2		70.6	6.55	11.9	17.66	26.41	18.79
		1.0	3.00	69.8	6.64	11.0	17.71	26.35	18.727
Ax14	35.1	33.7	4.37	68.2	6.83	20.9	17.38	26.32	18.78
		31.2		70.9	6.51	20.7	17.38	26.26	18.742
		29.1		73.7	6.19	20.3	17.38	26.29	18.758
		27.1		73.8	6.18	20.3	17.38	26.27	18.746
		25.1		72.9	6.28	20.0	17.35	26.28	18.757
		23.1		73.9	6.17	19.9	17.39	26.26	18.733
		20.9		73.7	6.19	19.4	17.39	26.26	18.738
		18.9		70.7	6.54	19.1	17.42	26.26	18.727
		17.1	2.97	69.2	6.71	18.7	17.40	26.25	18.727
		14.9		69.9	6.63	18.5	17.37	26.21	18.701
		14.9		70.0	6.62	18.2	17.36	26.24	18.727
		13.0		71.3	6.47	17.6	17.35	26.19	18.691
		10.9		70.2	6.60	17.3	17.37	26.17	18.672
		8.8		70.9	6.51	16.6	17.38	26.15	18.657
		6.6		70.9	6.51	15.7	17.38	26.12	18.633
		5.0		70.3	6.58	14.3	17.35	26.1	18.618
		2.9		71.9	6.40	13.1	17.37	26.06	18.585
		1.1		68.6	6.78	10.3	17.44	25.94	18.482
Ax15	11.0	9.1	11.98	65.7	7.12	15.7	17.55	26.43	18.828

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STATION #	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
		7.1		74.1	6.14	15.4	17.54	26.37	18.788
		4.7	8.20	76.5	5.87	13.1	17.37	25.92	18.478
		2.8		74.5	6.10	12.4	17.38	25.84	18.418
		1.0	3.30	75.9	5.93	10.5	17.42	25.75	18.34
Ax16	35.4	33.2		34.6	10.73	17.3	17.49	26.16	18.639
		30.8		61.0	7.66	17.1	17.39	25.89	18.45
		29.0		66.4	7.04	16.8	17.32	25.75	18.36
		26.6		67.0	6.97	17.4	17.28	25.58	18.242
		24.8		67.3	6.93	16.3	17.3	25.50	18.18
		22.8		66.4	7.04	16.5	17.32	25.44	18.124
		21.0		68.4	6.80	16.3	17.27	25.40	18.108
		19.2		69.3	6.70	16.7	17.26	25.37	18.089
		17.1		68.6	6.78	15.7	17.27	25.35	18.065
		17.0	13.05	64.8	7.22	15.5	17.29	25.35	18.062
		15.4		67.8	6.87	15.2	17.24	25.16	17.928
		13.0		58.1	8.00	14.9	17.38	25.63	18.254
		13.2		59.6	7.83	14.7	17.41	25.66	18.27
		11.0		65.4	7.15	14.7	17.31	25.47	18.147
		8.8		67.2	6.94	13.6	17.33	25.48	18.153
		6.8		69.0	6.74	13.3	17.26	25.21	17.963
		4.8		68.7	6.77	10.5	17.27	25.18	17.94
		3.3		67.8	6.87	10.3	17.28	25.14	17.908
		0.8	5.86	72.8	6.29	8.8	17.26	25.11	17.884

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PHYSICAL DATA WORKSHEET

site: LIS Axial stations 1 - 16

date: 09 November 1987 comments:

STATION #	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
Ax1	20.4	17.6	3.68	96.3	2.60	16.7	13.43	27.59	20.578
		15.8		99.2	2.37	16.5	13.42	27.61	20.596
		13.9		98.4	2.43	16.4	13.42	27.61	20.594
		12.0		100.2	2.29	16.1	13.43	27.61	20.597
		9.8	3.46	99.3	2.36	15.4	13.42	27.60	20.592
		9.2		96.3	2.60	14.7	13.42	27.59	20.578
		7.4		100.3	2.28	14.3	13.41	27.62	20.609
		5.4		100.3	2.28	13.8	13.41	27.62	20.608
		3.2		99.7	2.33	12.6	13.40	27.61	20.600
		1.2	3.36	79.1	3.96	10.3	13.40	26.78	19.962
		2.6		111.8	1.37	10.7	17.98	27.59	19.610
Ax2	27.3	25.2	4.25	0.0	10.21	17.6	13.51	27.64	20.603
		22.7		0.0	10.21	17.4	13.51	27.65	20.607
		21.0		0.0	10.21	17.2	13.50	27.65	20.611
		18.8		0.0	10.21	16.9	13.49	27.64	20.606
		16.9		0.0	10.21	16.7	13.50	27.64	20.604
		15.0		0.0	10.21	16.4	13.48	27.63	20.599
		13.3	4.51	0.0	10.21	16.2	13.50	27.60	20.571
		11.4		0.0	10.21	15.6	13.47	27.57	20.556
		9.5		0.0	10.21	15.2	13.48	27.55	20.540
		7.3		0.0	10.21	14.6	13.48	27.54	20.534
		5.4		0.0	10.21	13.6	13.46	27.54	20.536
		3.4		0.0	10.21	12.5	13.46	27.53	20.531
		1.2	2.95	0.0	10.21	9.3	13.47	27.53	20.523
		3.3		112.6	1.31	11.6	18.03	27.66	19.651
Ax3	27.6	25.6	2.90	85.3	3.47	17.5	13.60	27.62	20.573
		23.4		85.3	3.47	17.5	13.61	27.63	20.572
		21.5		85.6	3.44	17.4	13.60	27.63	20.582
		19.4		86.1	3.40	17.1	13.61	27.62	20.571
		17.4		87.4	3.30	16.9	13.59	27.63	20.577
		15.8		87.3	3.31	16.5	13.58	27.61	20.565
		13.5	2.98	87.0	3.33	15.7	13.59	27.57	20.530
		11.2		87.0	3.33	15.5	13.60	27.56	20.523
		9.5		87.6	3.28	15.0	13.60	27.55	20.518
		7.5		88.1	3.25	14.6	13.60	27.55	20.519
		5.4		88.3	3.23	13.8	13.62	27.55	20.513
		3.5		88.5	3.21	12.5	13.60	27.56	20.522
		1.4	2.82	87.7	3.28	10.2	13.60	27.07	20.148
		4.4		64.7	5.09	14.1	17.92	27.20	19.329

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STATION #	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
Ax4	30.8	28.5	3.41	85.2	3.47	17.6	13.60	27.57	20.531
		25.8		85.5	3.45	17.6	13.60	27.58	20.539
		23.9		85.9	3.42	17.4	13.60	27.59	20.548
		21.7		86.5	3.37	17.3	13.58	27.59	20.548
		19.3		87.2	3.32	17.1	13.59	27.58	20.542
		17.8		87.4	3.30	16.9	13.57	27.57	20.541
		16.8		87.4	3.30	16.8	13.57	27.56	20.528
		14.6	3.19	87.7	3.28	16.4	13.58	27.56	20.526
		12.3		87.5	3.29	15.8	13.58	27.56	20.527
		12.3		88.0	3.25	15.4	13.58	27.57	20.538
		10.2		87.8	3.27	15.3	13.58	27.56	20.529
		8.4		87.7	3.28	14.9	13.58	27.56	20.531
		6.6		88.3	3.23	14.1	13.60	27.55	20.515
		4.4		88.7	3.20	13.0	13.61	27.54	20.504
		2.1		88.6	3.21	11.7	13.62	27.54	20.503
		1.1	2.14	88.6	3.21	10.1	13.66	27.52	20.482
		12.5		66.0	4.99	18.0	18.11	27.56	19.555
Ax5	36.7	34.8	2.92	84.4	3.54	18.2	13.59	27.54	20.510
		33.5		84.8	3.51	18.2	13.59	27.58	20.542
		30.8		84.4	3.54	18.1	13.58	27.58	20.543
		28.9		85.1	3.48	18.0	13.58	27.57	20.537
		26.7		86.9	3.34	17.8	13.57	27.57	20.539
		24.7		87.8	3.27	17.7	13.52	27.58	20.551
		22.6		87.8	3.27	17.5	13.51	27.53	20.519
		20.4		87.7	3.28	17.3	13.50	27.51	20.504
		18.6	2.74	87.8	3.27	16.9	13.51	27.48	20.478
		16.4		87.6	3.28	16.5	13.49	27.49	20.491
		14.5		87.7	3.28	16.2	13.50	27.48	20.478
		12.5		87.7	3.28	15.9	13.50	27.47	20.472
		10.5		87.7	3.28	15.5	13.48	27.47	20.479
		8.5		88.0	3.25	15.0	13.47	27.46	20.471
		6.4		87.8	3.27	14.2	13.46	27.43	20.454
		4.5		88.2	3.24	13.0	13.44	27.42	20.446
		2.5		88.1	3.25	11.8	13.43	27.43	20.454
		1.3	2.17	88.2	3.24	10.4	13.43	27.41	20.438
		17.2		63.1	5.22	17.3	18.06	27.60	19.602
Ax6	37.8	35.3	3.17	80.4	3.85	18.1	13.63	27.55	20.510
		33.4		81.8	3.74	18.1	13.64	27.56	20.516
		31.9		83.4	3.62	18.1	13.62	27.56	20.519
		29.9		84.1	3.56	18.0	13.60	27.56	20.528
		27.9		84.3	3.55	17.9	13.59	27.56	20.528
		25.8		84.4	3.54	17.8	13.59	27.55	20.522
		23.8		84.5	3.53	17.5	13.58	27.54	20.517
		21.4		85.7	3.43	17.4	13.57	27.54	20.513
		19.9		87.3	3.31	17.2	13.51	27.60	20.568
		18.6		87.3	3.31	17.0	13.48	27.51	20.507

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STATION #	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
		17.8	3.58	87.1	3.32	16.6	13.45	27.43	20.454
		15.6		87.4	3.30	16.4	13.45	27.44	20.460
		13.8		87.7	3.28	16.2	13.46	27.43	20.449
		11.2		87.6	3.28	15.8	13.43	27.43	20.455
		9.5		87.7	3.28	15.4	13.41	27.43	20.460
		7.4		87.6	3.28	14.5	13.38	27.43	20.467
		5.4		87.7	3.28	13.9	13.38	27.39	20.436
		3.5		87.6	3.28	12.8	13.33	27.39	20.446
		1.2	2.98	87.7	3.28	10.7	13.06	27.35	20.467
		23.8		58.2	5.61	19.9	18.26	27.68	19.613
Ax7	36.6	34.6	2.36	78.5	4.00	18.1	13.48	27.38	20.406
		33.3		79.1	3.96	18.2	13.47	27.38	20.413
		31.2		79.2	3.95	18.1	13.47	27.39	20.419
		29.1		81.4	3.77	18.0	13.47	27.39	20.416
		27.4		82.5	3.69	17.9	13.46	27.39	20.416
		25.0		82.3	3.70	17.7	13.47	27.38	20.410
		23.4		83.5	3.61	17.6	13.45	27.39	20.421
		20.7		83.2	3.63	17.3	13.42	27.39	20.425
		18.7		83.2	3.63	17.1	13.40	27.40	20.435
		17.9		83.6	3.60	16.6	13.41	27.36	20.406
		17.2	4.69	83.3	3.62	16.5	13.40	27.35	20.402
		14.8		83.9	3.58	16.2	13.38	27.36	20.413
		12.7		83.9	3.58	16.0	13.39	27.35	20.402
		10.6		84.3	3.55	15.6	13.38	27.35	20.404
		8.8		84.7	3.51	15.1	13.33	27.36	20.418
		6.8		85.9	3.42	14.4	13.32	27.34	20.409
		4.4		86.8	3.35	13.0	13.23	27.37	20.452
		2.8		87.4	3.30	12.2	13.21	27.29	20.392
		1.4	3.13	87.5	3.29	10.1	12.99	27.24	20.390
		27.8		62.0	5.31	20.2	18.34	27.66	19.583
Ax8	34.8	31.8	4.56	82.4	3.70	18.0	13.47	27.36	20.393
		31.9		82.2	3.71	18.1	13.49	27.36	20.388
		30.2		82.1	3.72	18.0	13.48	27.36	20.396
		28.5		82.9	3.66	17.9	13.47	27.37	20.404
		27.0		83.6	3.60	17.8	13.48	27.37	20.401
		25.1		83.8	3.58	17.7	13.47	27.38	20.410
		22.4		83.0	3.65	17.4	13.47	27.37	20.402
		20.6		84.8	3.51	17.3	13.46	27.39	20.418
		18.7		85.1	3.48	17.1	13.48	27.36	20.395
		17.2		86.3	3.39	16.7	13.28	27.44	20.491
		17.2	4.45	86.1	3.40	16.5	13.35	27.31	20.378
		14.5		86.3	3.39	16.3	13.23	27.34	20.422
		12.4		86.3	3.39	16.1	13.19	27.27	20.379
		10.2		86.2	3.40	15.6	13.18	27.24	20.359
		8.4		86.2	3.40	15.1	13.15	27.23	20.358
		6.5		86.3	3.39	14.1	13.12	27.24	20.366

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STATION #	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
		4.5		86.4	3.38	12.9	13.08	27.25	20.380
		3.3		86.7	3.36	12.0	13.05	27.22	20.366
		2.2		86.8	3.35	10.9	12.96	27.27	20.425
		0.5	2.13	86.8	3.35	8.8	12.89	27.03	20.251
		23.2		64.0	5.15	19.9	18.34	27.54	19.488
Ax9	24.0	22.3	4.34	79.7	3.91	17.1	13.50	27.33	20.364
		19.8		80.1	3.88	17.2	13.50	27.38	20.404
		17.9		81.9	3.73	16.9	13.46	27.38	20.415
		15.8		85.1	3.48	16.6	13.11	27.56	20.615
		14.1		86.6	3.36	16.4	13.00	27.24	20.394
		11.4	3.19	86.5	3.37	15.9	12.91	27.14	20.329
		9.4		87.1	3.32	14.6	12.85	26.96	20.202
		7.3		86.7	3.36	14.1	12.85	26.96	20.203
		5.4		86.6	3.36	13.5	12.82	26.94	20.193
		3.3		86.3	3.39	11.9	12.73	26.96	20.225
		1.1	2.88	86.7	3.36	9.8	12.66	26.88	20.176
		1.0		65.9	5.00	11.5	18.00	27.07	19.208
Ax10	18.8	16.8	3.60	81.2	3.79	16.5	13.52	27.34	20.365
		14.6		78.6	4.00	16.4	13.52	27.37	20.394
		12.5		79.8	3.90	16.1	13.51	27.37	20.392
		10.4		82.5	3.69	15.4	13.48	27.37	20.397
		8.1	3.83	83.6	3.60	14.5	13.44	27.37	20.406
		6.2		83.8	3.58	13.8	13.48	27.30	20.345
		4.0		84.8	3.51	13.2	13.46	27.31	20.356
		2.2		84.9	3.50	11.3	13.42	27.32	20.370
		1.0	3.50	84.9	3.50	9.1	13.40	27.26	20.334
		1.1		66.0	4.99	10.9	18.05	26.91	19.076
Ax11	18.6	16.7	5.03	77.4	4.09	16.5	13.49	27.30	20.343
		14.8		78.9	3.97	16.4	13.48	27.32	20.365
		12.5		81.9	3.73	15.9	13.46	27.32	20.367
		10.5		84.6	3.52	15.6	13.32	27.37	20.433
		9.2	5.67	85.3	3.47	14.6	13.21	27.19	20.308
		6.9		85.6	3.44	14.2	13.17	27.12	20.268
		4.8		86.0	3.41	13.2	13.13	27.14	20.290
		2.7		85.9	3.42	11.8	13.11	27.14	20.290
		1.0	2.58	85.7	3.43	10.8	13.12	27.10	20.261
Ax12	19.5	16.3	4.05	75.8	4.22	16.4	13.01	27.11	20.286
		14.2		81.0	3.81	16.4	12.88	27.21	20.389
		12.0		82.4	3.70	16.0	12.67	26.99	20.260
		10.2		82.8	3.66	15.7	12.63	26.89	20.190
		8.4	3.77	82.9	3.66	14.9	12.57	26.70	20.048
		6.3		82.9	3.66	13.8	12.54	26.61	19.989
		4.3		83.0	3.65	13.1	12.53	26.59	19.978
		2.3		83.0	3.65	12.3	12.51	26.57	19.965
		0.9	2.59	83.3	3.62	10.5	12.47	26.47	19.893
Ax13	13.9	11.0	4.90	78.0	4.04	15.3	13.16	27.10	20.251

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STATION #	TOTAL Z (m)	SAMPLE Z (m)	T.S.S. mg/l	% TRANS	CALC T.S.S mg/l	D.O. ug/l	TEMP degC	SAL ppt	SIGMA T
		8.8		83.0	3.65	14.8	12.63	26.91	20.202
		6.2	4.28	83.6	3.60	13.2	12.34	25.98	19.534
		4.2		83.5	3.61	12.7	12.34	25.99	19.544
		2.1		83.5	3.61	10.6	12.35	25.91	19.481
		0.9	2.52	83.5	3.61	9.4	12.35	25.83	19.417
		2.9		71.9	4.52	13.1	17.38	26.06	18.585
Ax14	33.4	30.1	5.66	80.5	3.85	18.0	12.87	26.92	20.165
		27.4		82.6	3.68	17.8	12.82	26.89	20.151
		25.1		82.5	3.69	17.7	12.80	26.90	20.163
		23.1		82.5	3.69	17.5	12.81	26.87	20.137
		21.1		82.2	3.71	17.3	12.82	26.87	20.141
		19.0		82.4	3.70	17.1	12.79	26.85	20.127
		16.9		82.3	3.70	16.8	12.80	26.81	20.094
		14.6	5.31	83.5	3.61	16.2	12.75	26.77	20.073
		12.9		83.0	3.65	16.1	12.75	26.74	20.051
		11.2		86.3	3.39	15.6	12.64	26.79	20.109
		8.9		88.6	3.21	15.0	12.32	26.71	20.108
		6.7		88.9	3.18	13.8	12.29	26.03	19.581
		4.9		89.0	3.17	12.5	12.35	25.73	19.343
		2.8		89.0	3.17	11.2	12.36	25.56	19.206
		0.8	2.47	89.0	3.17	9.1	12.38	25.41	19.087
		20.9		73.7	4.38	19.4	17.39	26.27	18.738
Ax15	10.9	8.4	5.36	0.0	10.21	14.0	12.65	26.40	19.804
		6.2	4.17	0.1	10.20	13.2	12.51	26.35	19.792
		3.7	3.36	0.1	10.20	11.9	12.49	25.83	19.391
		1.9	6.41	0.0	10.21	10.1	12.52	24.91	18.679
		0.8	3.94	0.0	10.21	9.3	12.51	8.05	5.677
		26.6		67.0	4.91	17.4	17.29	25.59	18.242
Ax16	24.1	21.2	6.37	0.1	10.20	17.1	12.60	25.98	19.486
		19.4	6.15	0.1	10.20	16.8	12.59	25.97	19.482
		17.1	6.96	0.1	10.20	16.5	12.60	26.10	19.584
		14.8		0.0	10.21	16.3	12.61	26.24	19.692
		15.7	7.00	0.0	10.21	16.2	12.62	26.14	19.612
		13.5	7.52	0.1	10.20	16.0	12.61	26.19	19.650
		11.6	6.36	0.1	10.20	15.3	12.58	25.99	19.500
		9.6	5.45	0.1	10.20	15.0	12.61	26.00	19.501
		7.4	5.30	0.0	10.21	13.6	12.61	25.51	19.123
		5.4	4.83	0.1	10.20	12.2	12.64	25.00	18.728
		3.5	4.47	0.1	10.20	11.9	12.66	24.83	18.587
		1.0	4.17	0.1	10.20	9.9	12.74	24.31	18.175

Appendix IV. Cruise data for Eastern Long Island Sound.

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STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
1	20.0	8.0	20.42	46.94		2.84
1	15.0	12.5	20.72	47.04		2.34
1	10.0	8.5	20.92	47.04		1.52
1	5.0	8.0	21.12	47.04		2.26
1	1.0	8.5	21.12	47.04		1.89
2	24.0	12.7	20.62	48.07		2.87
2	18.0	11.5	20.92	47.66		2.37
2	12.0	11.3	21.12	47.66		1.85
2	6.0	8.3	21.12	47.25		1.70
2	1.0	8.5	21.12			0.54
3	26.0	1.5	20.11			
3	24.0	14.0	20.11	48.07		6.65
3	19.0	16.0	21.02	47.45		5.00
3	13.5	15.3	21.02			1.78
3	7.0	13.5	21.22			1.46
3	1.0	13.5	21.32	43.67		2.07
4	26.0	4.0	20.42	48.07		7.61
4	20.0	9.0	20.72	47.04		2.82
4	16.0	12.0	21.02	46.94		2.10
4	8.0	11.2	21.12	47.04		2.14
4	1.0	11.1	21.32	46.64		2.87
5	27.0	1.3	21.12	46.64		5.88
5	20.0	2.4	21.22	46.74		8.11
5	14.0	3.0	21.22	46.64		4.39
5	8.0	5.4	21.12	47.15		2.37
5	1.0	6.0	21.32	45.41		3.59
6	28.0	3.0	21.32	45.92		3.32
6	20.0	4.9	21.32			5.55
6	14.0	5.4	21.32			4.37
6	8.0	7.2	21.22			2.24
6	1.0	7.2	21.32			3.52
7	21.0	9.5	20.52	45.82		5.81
7	15.5	10.5	20.52			2.86
7	10.5	11.8	20.62			2.78
7	5.0	14.0	20.62			2.98
7	1.0	15.0	20.72			3.58

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STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
8	11.0	5.5	20.52			15.61
8	6.5	9.5	20.52			4.75
8	1.0	15.0	20.52			3.07
9	31.0	19.5	20.01			2.24
9	25.0	20.5	20.01			3.00
9	17.5	20.5	20.01			1.83
9	9.5	20.3	20.11			4.42
9	1.0	18.5	20.31			1.92
10	27.0	13.5	19.91			4.17
10	19.0	20.5	20.01			10.14
10	9.5	18.0	20.11			2.26
10	1.0	19.5	20.21			2.21
A	38.0	9.0				
A	30.0	0.6	24.03	40.08		3.88
A	24.0					
A	30.0	21.0	24.03	55.37		
A	20.0	22.0	23.52			
A	10.0	23.0	23.02			
A	5.0	21.0	22.02			
A	1.0	20.0	22.02			1.63
10(2)	33.0	9.0	22.02			5.45
10(2)	25.0	20.0				
10(2)	20.0	22.0	21.52			
10(2)	15.0	24.0				
10(2)	10.0	20.0	22.02			
10(2)	5.0	19.0				
10(2)	1.0	20.0				1.60
B	20.0	9.0	20.97	39.87	27.877	3.85
B	15.0	10.0	20.97	39.82	27.839	
B	10.0	11.4	21.01	39.80	27.799	
B	5.0	11.4	21.02	39.72	27.732	
B	1.0	12.5	21.04	39.76	27.752	2.81
C	8.0	1.8	20.52	38.84	27.366	2.71
C	5.0	3.5	20.61	38.94	27.388	

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STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
C	3.0	4.0	20.82	38.96	27.270	
C	1.5	4.5	20.80	38.90	27.237	2.69
D	32.0	4.5	21.21	39.88	27.727	2.30
D	25.0	14.5	21.28	39.84	27.653	
D	20.0	15.5	21.32	39.85	27.637	
D	15.0	16.0	21.33	39.85	27.632	
D	10.0	16.0	21.34	39.86	27.634	
D	5.0	16.0	21.35	39.86	27.629	
D	1.0	13.5	21.66	40.11	27.625	3.23
8(2)	15.0	6.0	20.62	39.73	27.996	4.11
8(2)	10.0	18.0	20.66	39.72	27.964	
8(2)	5.0	17.5	20.98	39.75	27.781	
8(2)	3.5	16.0	21.13	39.84	27.755	
8(2)	1.0	14.0	21.40	40.02	27.722	2.61
E	21.0	9.0	20.67	39.77	27.993	2.99
E	15.0	13.0	20.71	39.74	27.945	
E	10.0	9.0	20.98	39.64	27.694	
E	5.0	6.0	21.08	39.56	27.570	
E	1.0	4.0	21.38	39.68	27.473	4.02
F	16.0	0.0	20.46	39.48	27.904	38.38
F	10.0	0.0	20.46	39.46	27.890	
F	5.0	0.4	20.49	39.33	27.770	
F	2.5	2.5	20.79	39.13	27.422	
F	1.0	1.1	21.35	39.24	27.154	5.20
G	13.0	0.0	21.57	39.61	27.296	35.40
G	10.0	0.0	21.61	39.59	27.257	
G	5.0	0.0	21.61	39.59	27.258	
G	2.5	0.3	22.57	39.87	26.878	
G	1.0	0.8	22.68	40.32	27.148	6.02
H	30.0	0.0	21.33	39.78	27.573	15.16
H	25.0	1.8	21.32	39.74	27.550	
H	20.0	3.8	21.31	39.67	27.504	
H	15.0	7.0	21.31	39.60	27.452	
H	10.0	6.0	21.32	39.54	27.401	
H	5.0	2.0	21.47	39.56	27.323	
H	2.5	2.0	22.33	39.93	27.070	

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STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
H	1.0	1.8	22.43	40.35	27.325	4.99
6	27.0	1.0	21.44	39.79	27.512	8.50
6	20.0	4.5	21.44	39.77	27.499	
6	15.0	6.5	21.42	39.75	27.497	
6	10.0	7.0	21.41	39.74	27.497	
6	5.0	5.8	22.02	40.14	27.420	
6	2.5	4.6	22.31	40.38	27.421	
6	1.0	4.6	22.30	40.37	27.420	2.99
I	25.0	2.0	21.26	39.30	27.250	5.33
I	20.0	3.5	21.28	39.30	27.238	
I	15.0	4.0	21.28	39.30	27.240	
I	10.0	5.0	21.29	39.31	27.243	
I	5.0	5.0	21.35	39.36	27.245	
I	2.5	3.2	22.11	39.89	27.175	
I	1.0	3.2	22.13	39.97	27.224	1.91
J	14.0	4.0	20.88	38.72	27.043	3.44
J	10.0	8.0	20.91	38.71	27.018	
J	5.0	6.8	21.34	39.00	26.974	
J	2.5	4.8	22.01	39.30	26.791	
J	1.0	4.8	22.03	39.53	26.953	1.66
K	28.0	5.0	21.02	39.09	27.238	6.02
K	24.0	12.0	21.11	39.13	27.213	
K	20.0	11.8	21.16	39.08	27.144	
K	15.0	9.0	21.14	39.00	27.097	
K	10.0	6.0	21.13	38.91	27.035	
K	5.0	5.0	21.71	39.04	26.777	
K	2.5	4.7	21.73	39.07	26.788	
K	1.0	4.8	21.73	39.08	26.796	1.87
L	30.0	3.2	21.11	39.12	27.204	6.46
L	25.0	7.5	21.07	38.98	27.122	
L	20.0	10.5	21.04	38.76	26.972	
L	15.0	13.5	21.09	38.71	26.904	
L	10.0	11.0	21.22	38.78	26.879	
L	5.0	6.5	21.45	39.05	26.945	
L	2.5	6.0	21.47	39.07	26.948	
L	1.0	6.0	21.47	39.07	26.949	1.59

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STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
4	25.0	1.0	21.07	39.13	27.238	12.04
4	20.0	7.6	21.33	39.32	27.222	
4	15.0	12.4	21.47	39.43	27.220	
4	10.0	11.5	21.50	39.44	27.211	
4	5.0	7.0	22.08	39.90	27.201	
4	1.0	6.5	22.13	39.97	27.224	2.02
N	9.0	1.0	21.69	39.10	26.833	7.43
N	6.0	1.6	21.68	39.12	26.856	
N	3.0	1.5	21.69	39.11	26.843	
N	1.0	1.5	21.67	39.05	26.810	7.21
M	19.0	2.0	21.29	39.10	27.079	6.39
M	16.0	4.0	21.30	39.06	27.042	
M	12.0	5.5	21.32	38.99	26.977	
M	7.0	8.5	21.24	38.74	26.836	
M	2.5	8.8	21.23	38.68	26.798	
M	1.0	9.0	21.22	38.67	26.796	3.23
4(3)	28.0	0.8	21.48	39.73	27.441	11.15
4(3)	25.0	1.5	21.48	39.68	27.403	
4(3)	20.0	5.8	21.50	39.64	27.361	
4(3)	15.0	12.5	21.52	39.43	27.189	
4(3)	10.0	12.5	21.47	39.31	27.130	
4(3)	5.0	12.3	21.45	39.24	27.090	
4(3)	1.0	12.3	21.44	39.19	27.059	3.16
R	10.0	8.5	21.39	38.97	26.919	2.70
R	7.0	9.5	21.38	38.86	26.842	
R	3.5	9.5	21.37	38.83	26.826	
R	1.0	9.5	21.37	38.74	26.758	3.59
Q	30.0	7.0	20.93	38.79	27.062	6.33
Q	25.0	10.8	20.94	38.81	27.072	
Q	23.0	17.5	21.07	38.83	27.007	
Q	20.0	22.5	21.41	38.99	26.919	
Q	15.0	15.5	21.41	38.92	26.867	
Q	10.0	16.0	21.41	38.92	26.868	
Q	5.0	16.0	21.39	38.93	26.890	
Q	1.0	15.5	21.39	38.90	26.868	2.97

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STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
2(2)	28.0	3.0	20.91	39.16	27.362	2.80
2(2)	24.5	7.0	21.00	39.07	27.236	
2(2)	22.0	15.5	21.07	39.11	27.223	
2(2)	20.0	20.5	21.42	39.16	27.043	
2(2)	15.5	16.0	21.38	38.94	26.901	
2(2)	10.0	14.0	21.33	38.83	26.849	
2(2)	5.0	13.5	21.33	38.79	26.820	
2(2)	1.0	13.0	21.31	38.77	26.818	2.67
P	16.0	1.0	21.09	38.62	26.834	6.00
P	14.0	9.5	21.12	38.35	26.608	
P	10.0	10.0	21.12	38.31	26.579	
P	5.5	10.0	21.14	38.33	26.583	
P	1.0	10.0	21.12	38.35	26.612	1.93
O	9.0	0.5	21.02	38.81	27.027	11.28
O	5.5	0.9	21.01	38.72	26.964	
O	2.5	0.9	21.01	38.61	26.880	
O	1.0	1.0	21.01	38.63	26.896	9.88
S	10.0	0.5	20.98	38.11	26.511	11.91
S	7.0	1.0	20.99	38.23	26.598	
S	4.0	0.4	21.00	38.24	26.600	
S	1.0	0.8	20.99	38.25	26.615	6.45
T	14.0	3.5	21.15	38.65	26.821	4.06
T	10.0	4.0	21.12	38.51	26.733	
T	5.0	4.0	21.10	38.42	26.677	
T	1.0	3.8	21.08	38.36	26.644	3.52
1(2)	20.0	2.5	21.12	38.79	26.946	3.69
1(2)	19.0	12.8	21.27	38.64	26.738	
1(2)	15.0	13.5	21.27	38.60	26.708	
1(2)	10.0	14.0	21.27	38.60	26.709	
1(2)	5.5	13.5	21.27	38.58	26.695	
1(2)	1.0	13.5	21.24	38.55	26.692	1.68
U	28.0	18.5	21.12	38.75	26.913	4.38
U	24.0	16.5	21.32	38.71	26.759	
U	20.0	16.5	21.32	38.68	26.737	
U	15.0	16.0	21.32	38.67	26.731	
U	10.0	16.5	21.31	38.66	26.731	

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STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
U	5.0	16.0	21.31	38.66	26.732	
U	1.0	15.5	21.30	38.64	26.724	1.73
V	29.0	4.0	21.33	39.10	27.051	11.56
V	26.0	10.8	21.34	39.01	26.976	
V	20.0	13.0	21.35	38.88	26.872	
V	15.0	13.5	21.38	38.76	26.763	
V	10.0	14.5	21.33	38.57	26.649	
V	5.0	14.8	21.33	38.42	26.536	
V	1.0	14.5	21.26	38.31	26.495	2.07

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STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
2	26.7	6.0	7.512	29.178	27.890	4.44
2	13.4	7.5	7.482	29.178	27.919	3.50
2	1.2	8.5	7.382	29.218	28.047	2.46
4	28.9	5.0	7.352	28.887	27.708	4.41
4	14.5	5.5	7.342	29.007	27.850	5.67
4	1.5	5.5	6.962	28.636	27.764	3.10
6	27.5	7.0	7.542	29.108	27.792	5.14
6	22.5	10.0	7.552	29.248	27.933	
6	16.6	12.5	7.492	29.198	27.931	
6	12.5	11.0	7.532	29.238	27.943	3.02
6	1.0	12.5	7.502	29.218	27.951	2.31
8	19.8	3.5	7.502	29.128	27.848	9.27
8	9.9	4.5	7.512	29.168	27.886	10.07
8	1.0	5.5	7.512	29.188	27.911	8.38
9	41.0	3.0	8.021	29.963	28.301	12.09
9	29.6	6.0	7.911	29.832	28.257	
9	21.5	6.5	7.772	29.510	28.034	7.57
9	7.5	12.0	7.622	29.218	27.852	
9	1.0	14.5	7.512	29.027	27.741	3.18
10	34.5	1.0	8.191	30.386	28.608	16.46
10	25.0	5.0	8.151	30.305	28.559	
10	17.1	10.0	8.031	30.053	28.397	4.90
10	1.0	13.5	7.382	28.997	27.813	3.22
10A	38.1	7.5	8.231	31.042	29.257	7.06
10A	24.8	11.0	8.261	31.052	29.248	
10A	19.6	13.0	8.251	30.870	29.069	4.05
10A	1.0	15.5	7.652	29.590	28.223	2.43
11	48.0	8.5	8.141	31.123	29.412	4.82
11	26.1	10.5	7.951	30.447	28.870	
11	24.1	12.0	7.951	30.376	28.797	4.22
11	20.0	15.0	7.951	30.396	28.819	
11	14.9	18.0	7.931	30.134	28.563	
11	1.0	16.5	7.322	29.007	27.871	2.36
12C	7.5	15.5	6.832	29.792	29.111	2.31

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STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
12C	3.8	15.0	6.852	29.912	29.225	2.19
12C	1.0	16.0	6.852	29.892	29.205	2.94
12B	18.5	5.0	8.061	30.719	29.068	9.54
12B	15.1	10.0	7.891	30.759	29.252	
12B	9.5	13.5	7.652	30.316	28.986	3.81
12B	1.0	12.5	7.562	30.114	28.850	3.84
12	36.3	21.0	7.941	30.982	29.436	2.27
12	8.1	20.5	7.931	31.086	29.566	2.51
12	1.0	22.0	7.672	30.084	28.728	1.10
12A	15.6	23.5	7.642	30.648	29.343	2.24
12A	7.8	20.0	7.522	30.467	29.255	2.54
12A	1.0	19.5	7.452	30.366	29.209	3.20
11A	30.5	4.7	7.911	31.305	29.804	3.79
11A	28.5	11.0	7.921	31.325	29.817	
11A	23.3	17.5	7.921	31.355	29.851	
11A	14.8	20.0	7.852	31.086	29.630	2.72
11A	1.0	19.5	7.652	30.265	28.935	3.15
11	51.0	11.7	8.051	31.679	30.070	6.10
11	31.5	12.0	7.901	31.305	29.812	
11	25.5	9.5	7.822	31.062	29.625	7.19
11	15.0	10.0	7.732	30.790	29.418	
11	1.0	14.0	7.682	30.638	29.305	3.91
11B	8.4	12.5	6.532	29.349	28.883	2.66
11B	4.5	12.5	6.812	29.460	28.771	3.08
11B	1.0	13.0	6.872	29.480	28.744	2.54
B	22.5	5.5	7.182	29.389	28.382	7.53
B	11.6	7.5	7.202	29.379	28.359	6.13
B	1.0	11.5	7.222	29.118	28.069	4.62
10	35.0	1.0	8.031	30.540	28.898	17.18
10	25.5	4.5	8.011	30.588	28.969	
10	17.5	9.3	7.871	30.225	28.706	6.46
10	7.0	12.0	7.512	29.661	28.409	
10	1.0	10.5	7.232	28.355	27.251	3.89

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STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
A	40.2	7.5	7.941	30.546	28.977	4.10
A	27.0	12.8	7.951	30.628	29.060	
A	19.3	5.8	7.971	30.447	28.857	2.75
A	15.2	14.0	7.672	29.802	28.424	
A	8.0	9.8	7.522	29.439	28.165	
A	1.0	8.8	7.412	28.826	27.608	5.15
G	15.1	0.0	5.773	27.814	27.828	14.55
G	7.4	1.0	5.773	28.164	28.218	12.66
G	1.0	1.0	5.773	28.034	28.077	11.04
H	30.0	6.5	7.192	29.017	27.974	5.87
H	18.2	8.5	7.162	28.977	27.960	
H	12.0	10.5	7.102	28.937	27.969	3.85
H	6.0	10.3	6.842	28.846	28.084	
H	1.0	9.0	6.692	28.459	27.791	3.79
6	27.1	12.8	7.272	29.007	27.900	6.36
6	17.0	13.5	7.272	29.108	28.012	3.59
6	8.1	14.5	7.272	29.128	28.037	
6	1.0	14.5	7.272	29.168	28.082	3.85
I	25.5	12.8	7.242	28.877	27.787	4.41
I	17.5	13.0	7.242	29.118	28.046	
I	10.0	12.8	7.242	29.128	28.060	5.63
I	1.0	13.5	7.232	29.138	28.083	3.74
J	14.5	11.5	6.992	28.626	27.724	4.07
J	7.4	13.5	6.972	28.626	27.743	3.25
J	1.0	14.0	6.942	28.555	27.693	3.49
K	28.3	8.5	7.312	28.967	27.825	5.03
K	20.1	14.0	7.182	28.806	27.761	
K	10.2	14.0	7.182	28.806	27.766	2.82
K	1.0	13.8	7.182	28.806	27.769	2.53
L	28.4	2.5	7.332	29.027	27.873	8.57
L	19.9	10.5	7.322	29.067	27.927	
L	15.2	12.8	7.252	28.937	27.847	2.52
L	10.0	14.5	7.052	28.947	28.020	

University of Connecticut Hydrographic Survey
14 -16 December 1986

STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
L	4.9	13.5	6.812	28.716	27.969	
L	1.0	13.5	6.812	28.646	27.895	2.79
4	24.2	5.5	7.012	28.676	27.757	7.30
4	16.7	9.5	6.962	28.706	27.832	
4	8.2	10.0	6.792	28.616	27.876	3.20
4	1.0	10.0	6.712	28.465	27.781	3.18
M	17.3	1.0	6.992	28.224	27.293	11.13
M	12.1	2.0	7.012	28.375	27.441	
M	6.0	4.0	6.952	28.435	27.555	5.59
M	2.9	5.0	6.772	28.224	27.473	
M	1.0	5.0	6.692	28.214	27.527	3.70
N	9.2	1.0	5.643	26.854	26.876	8.39
N	7.0	2.0	5.583	26.924	27.002	
N	4.5	2.5	5.513	26.834	26.959	4.77
N	2.5	2.5	5.343	26.814	27.074	
N	1.0	2.5	5.433	26.685	26.859	5.04

University of Connecticut Hyrdrographic Survey
16 January 1987

STATION #	DEPTH (m)	% TRANS	TEMP degC	COND	SAL ppt	SMC ppt
2	27.0	4.5	4.424	26.705	27.692	5.66
2	13.3	12.0	4.404	26.595	27.589	2.22
2	1.0	13.0	4.224	26.585	27.733	2.67
4	29.3	7.0	4.314	26.496	27.543	4.31
4	14.6	9.5	4.314	26.536	27.596	4.28
4	1.0	12.0	4.184	26.406	27.561	3.21
6	26.7	11.5	4.294	26.486	27.550	5.22
6	12.9	11.5	4.294	26.496	27.567	4.46
6	1.0	12.0	4.294	26.506	27.584	2.16
8	16.8	4.0	4.993	27.944	28.625	11.94
8	8.5	18.5	5.043	27.854	28.484	4.44
8	1.0	22.0	5.043	27.624	28.228	1.50
9	50.4	20.0	5.153	28.476	29.073	11.94
9	25.0	22.0	5.043	28.325	29.009	4.44
9	1.0	22.0	4.804	27.724	28.544	1.50
10	36.1	20.5	5.173	28.676	29.288	5.03
10	19.8	21.5	5.143	28.706	29.355	4.49
10	8.0	17.0	4.904	28.185	28.978	
10	1	18.8	4.854	28.035	28.854	3.76
10A	45.2	22.0	5.343	29.259	29.791	3.72
10A	22.9	23.5	5.193	28.937	29.571	2.42
10A	7.9	23.5	4.983	28.235	28.967	
10A	1.0	23.5	4.973	28.185	28.922	1.59
11	50.0	22.5	5.503	29.601	30.032	4.06
11	27.3	23.0	5.423	29.259	29.729	3.16
11	12.0	24.0	5.173	28.877	29.526	
11	6.0	24.5	5.033	28.536	29.265	
11	1.0	23.5	5.013	28.415	29.148	2.70
12	36.2	24.0	5.623	29.641	29.976	2.92
12	15.9	24.0	5.503	29.621	30.070	3.04
12	1.0	25.0	5.393	29.420	29.949	2.46

University of Connecticut Hydrographic Survey
25 February 1987

STATION #	DEPTH meters	% TRANS	TEMP degC	COND	SAL ppt	SMC mg/l
2	25.0	5.0	0.829	23.907	27.505	5.08
2	12.4	8.7	0.879	23.818	27.354	1.88
2	1.3	9.3	0.949	23.808	27.286	1.89
4	24.5	7.3	0.889	24.203	27.830	3.28
4	12.0	10.0	0.939	23.848	27.339	1.75
4	1.5	10.3	0.969	23.818	27.281	1.87
6	23.2	4.4	0.939	24.322	27.938	6.99
6	11.6	5.0	0.999	24.114	27.626	5.70
6	1.0	5.0	1.039	24.114	27.596	5.01
8	18.3	13.7	1.648	25.560	28.862	4.61
8	10.3	15.5	1.648	25.541	28.841	5.79
8	1.4	16.5	1.658	25.531	28.824	4.69
9	46.5	14.3	1.997	26.247	29.379	5.19
9	23.4	16.5	1.987	26.147	29.277	5.92
9	1.3	19.5	1.997	26.077	29.211	3.96
10	33.4	11.5	2.087	26.625	29.769	6.86
10	17.4	15.7	1.927	26.316	29.545	3.68
10	1.5	17.0	1.827	26.087	29.362	4.14
10A	46.0	16.5	2.357	27.264	30.294	6.30
10A	22.8	21.3	2.327	27.264	30.334	3.02
10A	1.6	23.6	2.077	26.765	29.967	2.81
11	53.0	19.5	2.456	27.564	30.563	8.12
11	25.9	18.5	2.317	27.454	30.575	3.94
11	1.6	19.5	2.197	27.414	30.653	3.09

University of Connecticut Hydrographic Survey
24 March 1987

STATION #	DEPTH (m)	% TRANS	TEMP degC	D.O. mg/l	SAL ppt	SMC ppt
10	36.3		3.23	17.10	29.85	
10	36.0		3.23	17.09	29.85	
10	35.3		3.23	17.09	29.83	
10	34.2		3.23	17.09	29.84	
10	32.9		3.23	17.09	29.82	
10	31.6	25.0	3.23	17.08	29.83	2.78
10	30.0		3.23	17.08	29.81	
10	28.0		3.23	17.08	29.83	
10	26.1		3.23	17.08	29.82	
10	24.0		3.22	17.08	29.77	
10	22.2		3.22	17.09	29.72	
10	20.4		3.22	17.11	29.56	
10	18.5		3.20	17.14	29.39	
10	16.2	35.0	3.15	17.19	29.31	1.32
10	13.8		3.08	17.29	29.09	
10	11.5	37.0	3.04	17.33	28.97	
10	9.2	43.0	3.03	17.37	28.80	
10	7.0		3.02	17.40	28.66	
10	4.7		3.14	17.30	28.57	
10	2.3	13.8	3.47	17.01	28.56	1.05
9	45.0	24.5				2.49
9	29.2		2.34	18.04	27.85	
9	28.3		2.34	18.02	27.85	
9	27.0		2.34	18.02	27.85	
9	24.9		2.34	18.01	27.83	
9	22.8	33.0	2.35	18.00	27.85	2.29
9	20.6		2.35	18.00	27.85	
9	18.3		2.38	17.96	27.85	
9	16.0		2.38	17.97	27.85	
9	13.7		2.38	17.96	27.85	
9	11.3		2.38	17.96	27.85	
9	9.0		2.78	17.58	27.87	
9	6.5		3.02	17.37	27.83	
9	4.2		3.88	16.60	27.86	
9	1.7		4.43	16.14	27.86	
9	0.9	39.5	4.52	16.08	27.82	0.98
8	12.0	23.5				3.75
8	6.0	32.0				1.33
8	2.0	34.0				1.17

University of Connecticut Hydrographic Survey
24 March 1987

STATION #	DEPTH (m)	% TRANS	TEMP degC	D.O. mg/l	SAL ppt	SMC ppt
6	26.9		2.43	18.11	28.00	
6	26.7		2.43	18.09	28.00	
6	25.7		2.43	18.08	27.98	
6	25.0	6.0	2.43	18.08	27.99	24.47
6	24.4		2.43	18.09	27.99	
6	23.4		2.43	18.10	27.98	
6	22.1		2.43	18.08	27.97	
6	20.8		2.42	18.09	27.95	
6	19.0		2.40	18.11	27.88	
6	16.9		2.39	18.11	27.86	
6	14.4		2.38	18.12	27.87	
6	12.1	17.0	2.37	18.13	27.84	1.29
6	9.6		2.40	18.13	27.65	
6	7.0		2.65	17.90	27.53	
6	4.5		2.77	17.79	27.47	
6	1.9	23.0	3.99	16.70	27.36	1.15
4	29.1	2.3	2.51	17.98	28.26	9.53
4	26.8		2.51	17.96	28.25	
4	23.5		2.50	17.95	28.25	
4	20.0		2.50	17.94	28.25	
4	16.5		2.50	17.93	28.25	
4	12.7	6.0	2.50	17.92	28.25	3.93
4	8.8		2.52	17.91	28.24	
4	5.3		2.54	17.89	28.20	
4	1.4	20.5	4.01	16.64	27.38	1.04
4	0.2		5.03	15.79	27.31	
4	0.0		5.97	15.09	26.55	
2	29.2	9.8	2.34	18.04	27.85	5.38
2	28.3		2.34	18.02	27.85	
2	27.0		2.34	18.02	27.85	
2	24.9		2.34	18.01	27.83	
2	22.8		2.35	18.00	27.85	
2	20.6		2.35	18.00	27.85	
2	18.3		2.38	17.96	27.85	
2	16.0	15.3	2.38	17.97	27.85	1.81
2	13.7		2.38	17.96	27.85	
2	11.3		2.38	17.96	27.85	
2	9.0		2.78	17.58	27.87	
2	6.5		3.02	17.37	27.83	
2	4.2		3.88	16.60	27.86	

University of Connecticut Hydrographic Survey
24 March 1987

STATION #	DEPTH (m)	% TRANS	TEMP degC	D.O. mg/l	SAL ppt	SMC ppt
2	1.7	32.0	4.43	16.14	27.86	1.30
2	0.9		4.52	16.08	27.82	

University of Connecticut Hydrographic Survey
April 27 - 29, 1987

STATION #	DEPTH (m)	% TRANS	TEMP degC	D.O. mg/l	SAL ppt	SMC mg/l
2	24.0	1.5				8.58
2	12.0	18.0				2.80
2	1.0	38.0				2.00
K	26.0	2.0				6.80
K	13.0	10.0				2.10
K	1.0	10.5				1.96
L	32.7		5.27	5.93	26.86	
L	31.2		5.27	5.91	26.85	
L	31.2		5.27	5.88	26.86	
L	31.3		5.27	5.87	26.86	
L	31.3		5.27	5.85	26.86	
L	31.2		5.27	5.84	26.86	
L	30.6	3.0	5.27	5.82	26.86	6.26
L	28.3		5.27	5.82	26.85	
L	26.6		5.28	5.81	26.85	
L	26.5		5.28	5.80	26.85	
L	26.4		5.28	5.80	26.85	
L	26.5		5.28	5.80	26.85	
L	26.0		5.28	5.80	26.85	
L	24.0		5.29	5.80	26.84	
L	21.6		5.33	5.79	26.83	
L	21.3		5.67	5.76	26.61	
L	21.4		5.59	5.81	26.67	
L	21.6		5.58	5.83	26.67	
L	21.4		5.62	5.84	26.64	
L	21.2		5.66	5.83	26.63	
L	18.7		6.84	5.61	26.18	
L	16.6		7.88	5.61	25.74	
L	16.6		7.95	5.72	25.70	
L	16.6		7.95	5.83	25.71	
L	16.7		7.96	5.91	25.70	
L	16.5	14.5	7.96	5.96	25.71	2.18
L	14.3		8.00	5.99	25.70	
L	11.8		8.04	6.02	25.68	
L	11.2		8.05	6.04	25.68	
L	11.2		8.05	6.07	25.68	
L	11.3		8.05	6.09	25.68	
L	11.3		8.05	6.11	25.68	
L	9.3		8.06	6.12	25.68	
L	6.8		8.13	6.11	25.68	

University of Connecticut Hydrographic Survey
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STATION #	DEPTH (m)	% TRANS	TEMP degC	D.O. mg/l	SAL ppt	SMC mg/l
L	6.6		8.15	6.12	25.67	
L	6.6		8.16	6.14	25.67	
L	5.8		8.16	6.16	25.68	
L	3.2		8.20	6.16	25.68	
L	1.2		8.24	6.16	25.67	
L	1.5		8.27	6.15	25.67	
L	1.4		8.26	6.17	25.67	
L	1.2	7.5	8.25	6.16	25.67	1.03
L	0.2		8.23	6.16	25.67	
L	0.3		8.24	6.17	25.67	
L	0.2		8.24	6.20	25.67	
L	0.3		8.24	6.21	25.67	
4	25.0	1.5				5.32
4	11.0	17.5				1.23
4	1.0	12.5				1.91
M	20.2		7.13	6.34	26.05	
M	18.8		7.13	6.29	26.06	
M	17.3		7.14	6.26	26.06	
M	15.9	3.5	7.14	6.25	26.07	4.28
M	14.4		7.14	6.25	26.06	
M	12.7		7.15	6.24	26.05	
M	11.2		7.24	6.22	26.03	
M	9.5		7.30	6.21	26.05	
M	8.0	4.0	7.43	6.19	26.05	2.76
M	6.3		7.53	6.19	26.02	
M	4.6		7.66	6.18	26.04	
M	2.9		7.95	6.13	26.06	
M	1.5		8.35	6.13	25.93	
M	0.5	7.5	8.35	6.19	25.93	2.68
N	20.2		7.13	6.34	26.05	
N	18.8		7.13	6.29	26.06	
N	17.3		7.14	6.26	26.06	
N	15.9		7.14	6.25	26.07	
N	14.4		7.14	6.25	26.06	
N	12.7		7.15	6.24	26.05	
N	11.2		7.24	6.22	26.03	
N	9.5		7.30	6.21	26.05	
N	8.0	0.5	7.43	6.19	26.05	7.80
N	6.3		7.53	6.19	26.02	

University of Connecticut Hydrographic Survey
April 27 - 29, 1987

STATION #	DEPTH (m)	% TRANS	TEMP degC	D.O. mg/l	SAL ppt	SMC mg/l
N	4.6	0.5	7.66	6.18	26.04	7.42
N	2.9		7.95	6.13	26.06	
N	1.5		8.35	6.13	25.93	
N	0.5	1.5	8.35	6.19	25.93	8.52
G	16.0	0.0				49.60
G	14.1		7.46	5.95	25.84	
G	14.0		7.45	5.94	25.86	
G	13.7		7.46	5.92	25.86	
G	13.2		7.45	5.91	25.83	
G	12.7		7.51	5.90	25.66	
G	12.2		7.51	5.91	25.86	
G	11.6		7.51	5.93	25.86	
G	10.9		7.57	5.91	25.83	
G	10.3		7.61	5.90	25.81	
G	9.5		7.61	5.90	25.81	
G	8.9		7.66	5.88	25.78	
G	8.3	0.0	7.66	5.88	25.78	9.26
G	7.6		7.67	5.89	25.78	
G	6.7		7.68	5.91	25.78	
G	5.8		7.72	5.90	25.77	
G	4.9		7.77	5.91	25.76	
G	4.0		7.98	5.89	25.69	
G	3.1		8.04	5.90	25.67	
G	2.3		8.13	5.90	25.66	
G	1.5		8.23	5.90	25.62	
G	0.7	0.7	8.25	5.92	25.60	9.52
G	0.5		8.26	5.94	25.60	
G	0.0		8.22	5.96	24.94	
H	31.0		6.58	6.03	26.30	
H	30.2		6.58	5.99	26.31	
H	28.8		6.58	5.99	26.30	
H	27.6	1.5	6.58	5.99	26.31	10.86
H	25.9		6.58	5.99	26.34	
H	24.6		6.63	5.99	26.30	
H	23.0		6.67	5.98	26.28	
H	21.6		6.68	5.99	26.28	
H	19.8		6.69	6.00	26.31	
H	18.1		6.69	6.02	26.31	
H	16.4		6.70	6.03	26.30	
H	14.3	5.5	6.73	6.03	26.30	4.28

University of Connecticut Hydrographic Survey
April 27 - 29, 1987

STATION #	DEPTH (m)	% TRANS	TEMP degC	D.O. mg/l	SAL ppt	SMC mg/l
H	12.9		6.75	6.02	26.30	
H	11.4		6.77	6.02	26.30	
H	9.8		6.78	6.03	26.30	
H	8.0		6.78	6.05	26.32	
H	6.3		6.78	6.06	26.31	
H	4.4		6.79	6.05	26.30	
H	2.6		6.78	6.03	26.30	
H	1.0	6.5	6.79	6.01	26.30	4.30
H	0.1		6.79	6.36	17.55	
6	25.0	1.5				9.90
6	13.5	3.0				3.50
6	1.0	11.0				1.94
I	25.3		6.16	6.00	26.37	
I	24.0		6.16	5.97	26.38	
I	22.9	2.0	6.15	5.95	26.38	7.02
I	21.2		6.16	5.96	26.38	
I	19.9		6.19	5.97	26.39	
I	18.6		6.20	5.95	26.37	
I	17.2		6.32	5.91	26.36	
I	15.7		6.47	5.88	26.34	
I	14.1		6.68	5.86	26.28	
I	12.6		6.86	5.87	26.25	
I	11.3		6.90	5.90	26.22	
I	9.6	6.0	6.90	5.93	26.18	3.64
I	8.4		6.92	5.95	26.23	
I	6.8		6.93	5.96	26.19	
I	5.5		7.12	5.95	26.19	
I	4.1		7.61	5.88	26.05	
I	2.5		7.71	5.90	26.02	
I	1.2	11.0	7.73	5.93	26.01	2.31
J	13.6		5.85	6.29	26.54	
J	12.7		5.85	6.16	26.54	
J	11.7	1.0	6.32	5.97	26.46	5.18
J	10.6		7.10	5.85	26.21	
J	9.3		7.42	5.83	26.13	
J	8.1		7.58	5.87	26.06	
J	6.8		7.60	5.94	26.09	
J	5.6	6.5	7.66	5.98	26.05	3.22
J	4.2		7.67	6.03	26.06	

University of Connecticut Hydrographic Survey
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STATION #	DEPTH (m)	% TRANS	TEMP degC	D.O. mg/l	SAL ppt	SMC mg/l
J	2.6		7.69	6.04	26.07	
J	1.2	6.5	7.71	6.06	26.05	3.03
8	14.0	3.8				12.88
8	6.0	5.5				7.08
8	1.0	8.0				6.18
9	43.5	1.5				12.80
9	22.0	3.8				12.76
9	1.0	11.0				2.24
10	34.0	0.0				22.36
10	14.0	3.5				17.20
10	1.0	13.0				1.64
10A	43.0	12.5				5.22
10A	22.0	13.5				4.24
10A	1.0	16.8				2.46
11B	8.5	4.3				3.44
11B	4.0	7.0				3.14
11B	1.0	7.5				2.15
11	24.0	14.8				3.76
11	12.0	15.5				3.48
11	1.0	16.3				2.15
11A	19.0	15.5				2.72
11A	10.0	16.5				1.88
11A	2.0	19.0				0.98