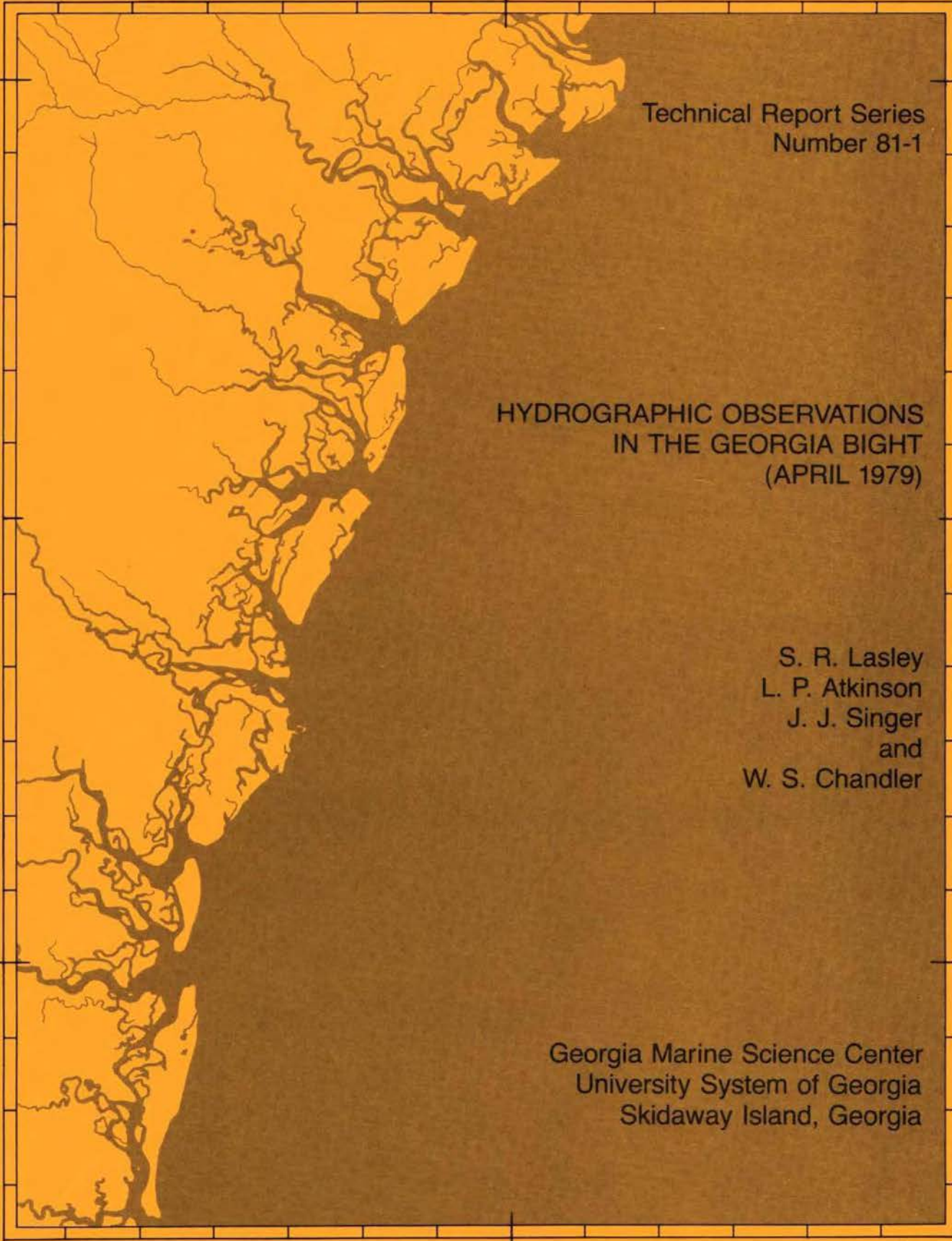


A map of the Georgia Bight coastline, showing the intricate network of rivers and bays. The map is oriented with the coastline on the left and the open ocean on the right. The coastline is depicted in a light tan color against a darker tan background. The map is framed by a grid with latitude and longitude markings. Latitude 32 is marked at the top and bottom, and longitude 81 is marked on the left and right sides.

Technical Report Series
Number 81-1

HYDROGRAPHIC OBSERVATIONS
IN THE GEORGIA BIGHT
(APRIL 1979)

S. R. Lasley
L. P. Atkinson
J. J. Singer
and
W. S. Chandler

Georgia Marine Science Center
University System of Georgia
Skidaway Island, Georgia

HYDROGRAPHIC OBSERVATIONS IN THE
GEORGIA BIGHT (APRIL 1979)

by

S.R. Lasley, L.P. Atkinson,
J.J. Singer and W.S. Chandler

Skidaway Institute of Oceanography
P.O. Box 13687
Savannah, Georgia 31406

October 1980

The Technical Report Series of the Georgia Marine Science Center is issued by the Georgia Sea Grant Program and the Marine Extension Service of the University of Georgia on Skidaway Island (P.O. Box 13687, Savannah, Georgia 31406). It was established to provide dissemination of technical information and progress reports resulting from marine studies and investigations mainly by staff and faculty of the University System of Georgia. In addition, it is intended for the presentation of techniques and methods, reduced data and general information of interest to industry, local, regional, and state governments and the public. Information contained in these reports is in the public domain. If this prepublication copy is cited, it should be cited as an unpublished manuscript.

TABLE OF CONTENTS

	<u>page</u>
List of Figures	ii
List of Tables	vi
Acknowledgements	1
Abstract	2
Introduction	3
Methods	3
CTD Data Acquisition and Processing	7
XBT Data Acquisition and Processing	11
Physical and Chemical Procedures	11
Results and Discussion	13
References	108
Appendix I. Calibration Data	109
Appendix II. Hydrographic Data	113

LIST OF FIGURES

	<u>page</u>
1. Station Grid, April 1979	4
2. Time Series Stations, April 1979	6
3. CTD Data Acquisition System	9
4. Broenkow's Salinity Equation and Flow Diagram	12
5. St. Augustine Section Temperature, 20 April	14
6. Jacksonville Section Temperature, 20-21 April	15
7. Jacksonville Section Salinity, 20-21 April	16
8. Jacksonville Section Sigma-T, 20-21 April	17
9. Jacksonville Section Nitrate, 20-21 April	18
10. Jacksonville Section Phosphate, 20-21 April	19
11. Jacksonville Section Silicate, 20-21 April	20
12. Amelia Island Section Temperature, 21 April	21
13. Amelia Island Section Salinity, 21 April	22
14. Amelia Island Section Sigma-T, 21 April	23
15. Amelia Island Section Nitrate, 21 April	24
16. Amelia Island Section Phosphate, 21 April	25
17. Amelia Island Section Silicate, 21 April	26
18. St. Simon Section Temperature, 22 April	27
19. Time Series #1 Temperature, 21-22 April	28
20. Time Series #1 Salinity, 21-22 April	29
21. Time Series #1 Sigma-T, 21-22 April	30
22. Time Series #1 Nitrate, 21-22 April	31
23. Time Series #1 Phosphate, 21-22 April	32
24. Time Series #1 Silicate, 21-22 April	33
25. Time Series #2 Temperature, 22-23 April	34
26. Time Series #2 Salinity, 22-23 April	35

LIST OF FIGURES (continued)

	<u>page</u>
27. Time Series #2 Sigma-T, 22-23 April	36
28. Time Series #2 Oxygen, 22-23 April	37
29. Time Series #2 Nitrate, 22-23 April	38
30. Time Series #2 Phosphate, 22-23 April	39
31. Time Series #2 Silicate, 22-23 April	40
32. Time Series #3 Temperature, 23 April	41
33. Time Series #4 Temperature, 23-24 April	42
34. Time Series #4 Salinity, 23-24 April	43
35. Time Series #4 Sigma-T, 23-24 April	44
36. Time Series #4 Nitrate, 23-24 April	45
37. Time Series #4 Phosphate, 23-24 April	46
38. Time Series #4 Silicate, 23-24 April	47
39. Time Series #5 Temperature, 24 April	48
40. Time Series #5 Salinity, 24 April	49
41. Time Series #5 Sigma-T, 24 April	50
42. Time Series #5 Oxygen, 24 April	51
43. Time Series #5 Nitrate, 24 April	52
44. Time Series #5 Phosphate, 24 April	53
45. Time Series #5 Silicate, 24 April	54
46. Time Series #6 Temperature, 24-25 April	55
47. Time Series #6 Salinity, 24-25 April	56
48. Time Series #6 Sigma-T, 24-25 April	57
49. Time Series #6 Nitrate, 24-25 April	58
50. Time Series #6 Phosphate, 24-25 April	59
51. Time Series #6 Silicate, 24-25 April	60
52. Time Series #7 Temperature, 27 April	61
53. Time Series #7 Salinity, 27 April	62

LIST OF FIGURES (continued)

	<u>page</u>
54. Time Series #7 Sigma-T, 27 April	63
55. Time Series #7 Nitrate, 27 April	64
56. Time Series #7 Phosphate, 27 April	65
57. Time Series #7 Silicate, 27 April	66
58. Time Series #8 Temperature, 27-28 April	67
59. Time Series #8 Salinity, 27-28 April	68
60. Time Series #8 Sigma-T, 27-28 April	69
61. Time Series #8 Nitrate, 27-28 April	70
62. Time Series #8 Phosphate, 27-28 April	71
63. Time Series #8 Silicate, 27-28 April	72
64. Time Series #9 Temperature, 28 April	73
65. Time Series #9 Salinity, 28 April	74
66. Time Series #9 Sigma-T, 28 April	75
67. Time Series #9 Nitrate, 28 April	76
68. Time Series #9 Phosphate, 28 April	77
69. Time Series #9 Silicate, 28 April	78
70. Time Series #10 Temperature, 28 April	79
71. Time Series #11 Temperature, 29 April	80
72. Time Series #13 Temperature, 30 April	81
73. Station 3 Time Series Temperature, 23-28 April	82
74. Station 5 Time Series Temperature, 21-29 April	83
75. Station 5 Time Series Salinity, 21-29 April	84
76. Station 5 Time Series Sigma-T, 21-29 April	85
77. Station 5 Time Series Nitrate, 21-29 April	86
78. Station 5 Time Series Phosphate, 21-29 April	87
79. Station 5 Time Series Silicate, 21-29 April	88

LIST OF FIGURES (continued)

	<u>page</u>
80. Station 7 Time Series Temperature, 22-29 April	89
81. Station 7 Time Series Salinity, 22-29 April	90
82. Station 7 Time Series Sigma-T, 22-29 April	91
83. Station 7 Time Series Nitrate, 22-29 April	92
84. Station 7 Time Series Phosphate, 22-29 April	93
85. Station 7 Time Series Silicate, 22-29 April	94
86. Station 9 Time Series Temperature, 22-30 April	95
87. Station 9 Time Series Salinity, 22-30 April	96
88. Station 9 Time Series Sigma-T, 22-30 April	97
89. Station 9 Time Series Nitrate, 22-30 April	98
90. Station 9 Time Series Phosphate, 22-30 April	99
91. Station 9 Time Series Silicate, 22-30 April	100
92. Station 11 Time Series Temperature, 22-30 April	101
93. Station 11 Time Series Salinity, 22-30 April	102
94. Station 11 Time Series Sigma-T, 22-30 April	103
95. Station 11 Time Series Nitrate, 22-30 April	104
96. Station 11 Time Series Phosphate, 22-30 April	105
97. Station 11 Time Series Silicate, 22-30 April	106
98. Temperature-Salinity Diagram of All Stations (42C-254C), April 1979	107
99. Time-dependent Plot of Bottle-CTD Salinity	111

LIST OF TABLES

	<u>page</u>
Table 1. Summary Station Listing - April, 1979	5
Table 2. Summary of Time Series Stations	8
Table 3. CTD/Data Flow. Shipboard Acquisition to NODC Submission	10

ACKNOWLEDGEMENTS

The following people participated in the cruise and their help was appreciated: S. Bishop, C. Bowen, J. McCarthy, D. Deibel, D. Herring, E. Hofmann, L. Kessler, T. Lee, G. Paffenhofer, L. Pomeroy, L. Rubicam, and J. Yoder. We would also like to thank the Captain and crew of the R/V Gilliss for their efforts and Lucretia Garrigan for the nutrient analysis. Cammy Cordes and Tom Orlando are thanked for assisting in the preparation of the graphics and Linda Land is thanked for typing this report.

Funding for this research is provided by the Department of Energy (under contract EY-76-S-09-0889).

This report is published as a part of the Georgia Marine Science Center's Technical Report Series issued by the Georgia Sea Grant Program under NOAA Office of Sea Grant #04-6-158-44115.

ABSTRACT

During a cruise in the Georgia Bight in April 1979, an onshore-offshore hydrographic section of thirteen stations was repeated thirteen times. Four additional onshore-offshore hydrographic sections were completed north and south of the main section. Temperature, salinity, dissolved oxygen, and nutrient (NO_3 , PO_4 , and SiO_2) data were collected.

Two spin-off eddies were observed at the Gulf Stream front at the shelfbreak. These eddies resulted in the upwelling of nutrient-enriched North Atlantic Central water. A period of downwelling was observed between the two upwelling events. The cycling between upwelling and downwelling was relatively rapid. The immediate effects of the upwelling and downwelling events were confined to the narrow area of the shelfbreak.

INTRODUCTION

This report contains chemical and physical data obtained during the Georgia Bight Cruise GI-02-79 (20-30 April, 1979) aboard the R/V Gilliss. The investigation was part of a larger multi-institutional Department of Energy (DOE) program to understand event scale, physical, chemical and biological processes of the South Atlantic Bight, the continental shelf region from Cape Hatteras to Cape Canaveral. The study reported here was concentrated at the continental shelf break off Jacksonville, Florida. Specifically, the objectives were to collect physical and chemical data so as to locate and track Gulf Stream upwelling events and determine their effect on the shelf waters. In addition, the hydrographic data were used to compare with those of moored instruments deployed by the University of Miami and to provide background hydrographic data for the study of biological processes related to Shelf-Gulf Stream water interactions.

METHODS

Seventeen onshore-offshore hydrographic sections (Figure 1) were completed as part of the April 79 sampling grid. Five XBT stations were completed off St. Augustine on 20 April (Table 1) and eight stations (4CTD/4XBT) were occupied off Jacksonville from 20-21 April. Ten stations (5CTD/5XBT) were completed off Amelia Island on 21 April and an XBT section, consisting of nine stations was completed off St. Simons Island on 22 April. The remaining thirteen onshore-offshore sections were completed on an established time series grid (Figure 2) from 21-30 April. The thirteen stations making up the time series section

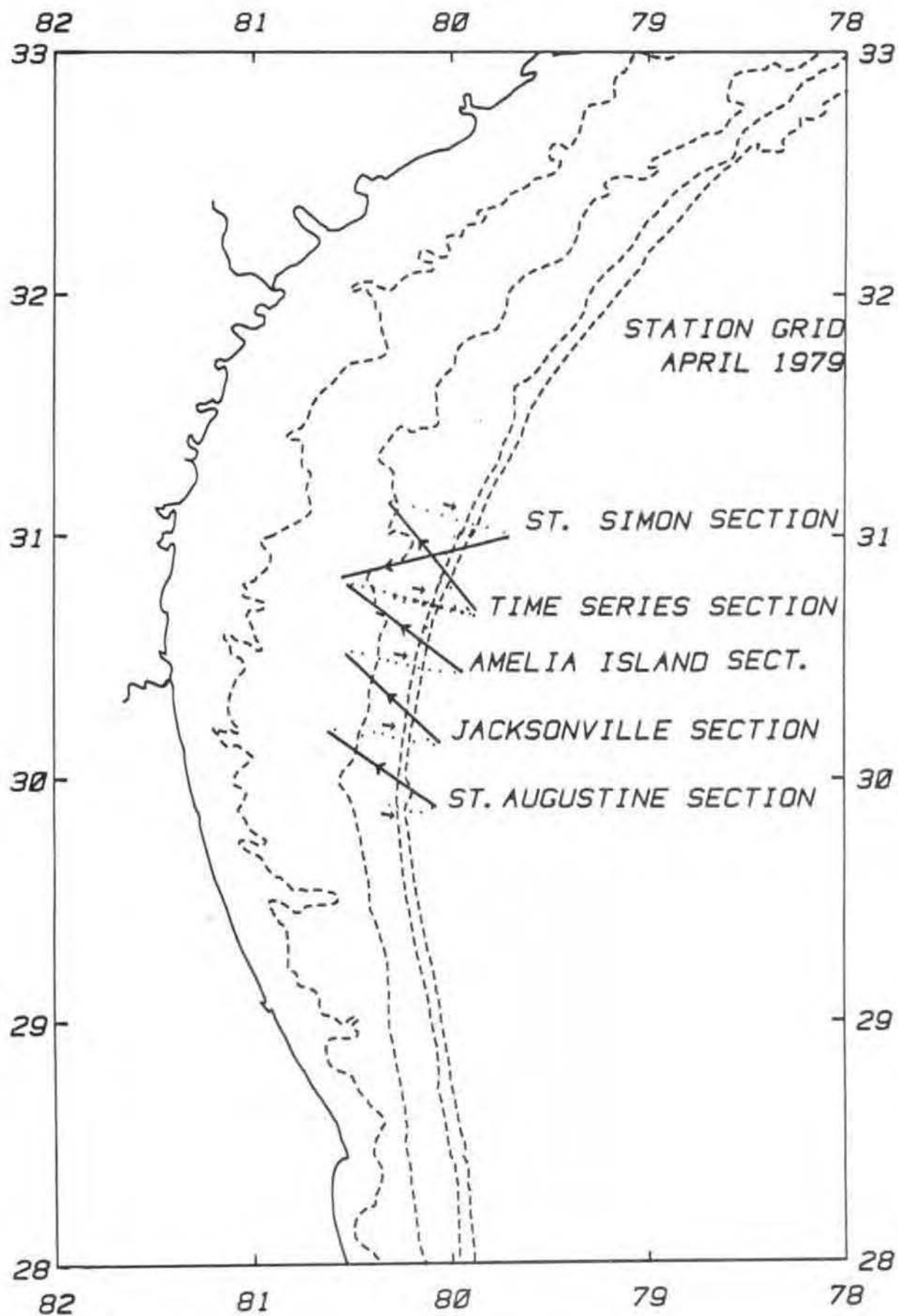


Figure 1. Station Grid, April 1979

Table 1. Summary Station Listing - April 1979

Stn. Nos.	Section	Date
1-40	Horizontal Mapping	20 April, 79
41X-45X 46-49 50X	St. Augustine Section Horizontal Mapping	20 April, 79
51C, 52X, 53C 54X, 55C, 56X 57C, 58X	Jax. Beach Section	20-21 April, 79
59-63	Horizontal Mapping	21 April, 79
64C, 65X, 66C 67X, 68C, 69X 70C, 71X, 72C 73X	Amelia Island Section	21 April, 79
74-77	Horizontal Mapping	21 April, 79
78C-87X	Time Series #1	21 April, 79
88-92	Horizontal Mapping	21-22 April, 79
93X-101X	St. Simon Section	22 April, 79
102-110	Horizontal Mapping	22 April, 79
111C-119C 120C, 121*	Time Series #2 Productivity Stn. 9	22 April, 79
122X-134X 135C, 135 Y00 136C	Time Series #3 Productivity Stn. 9	23 April, 79
137C-147C 148*	Time Series #4	23 April, 79
149X-153C 153C, 153 Y00 154C	Time Series #5 Productivity Stn. 9	24 April, 79
155X-160X	Time Series #6	24 April, 79 (Note: Storm Starts)

Stn. Nos.	Section	Date
161-165	Horizontal Mapping	26 April, 79
166X-169X	Alongshore Section	26 April, 79
170C, 170 Y00	Productivity Stn. 9	26 April, 79
171-173	Horizontal Mapping (Alongshore)	26 April, 79
174X, 175*, 176C- 180C, 180 Y00 181*, 182*	Time Series #7 Productivity Stn. 9	26-27 April, 79
183C	Special Cast west of Prod. 9	27 April, 79
184X, 185*, 186C- 188C, 189*-191* 192C, 192 Y00	Time Series #8 Productivity Stn. 9	27 April, 79
193X-197C 198C, 199C	Time Series #9 Productivity Stn. 9	28 April, 79
200-208	Horizontal Mapping (for U-2)	28 April, 79
209C	Special U-2 Stn.	28 April, 79
210X-216X 217C	Time Series #10 Productivity Stn. 9	28 April, 79
218X-224X 225C, 226C	Time Series #11 Productivity Stn. 9	29 April, 79
227C 228-236, 237C 238C	Time Series #12 Horizontal Mapping Productivity Stn. 8	29 April, 79
239X-244X 245C	Time Series #13 Productivity Stn. 8	30 April, 79

*Assigned station numbers with no data collected.

SUMMARY:

No. of CTD Stations:	77	Station Nos. with no data: 9 (121, 148, 175, 181, 182, 185, 189, 190, 191)
No. of PET Stations:	69	
No. of Hor. Map. Stations:	93	
Total No. of Stations:	239	

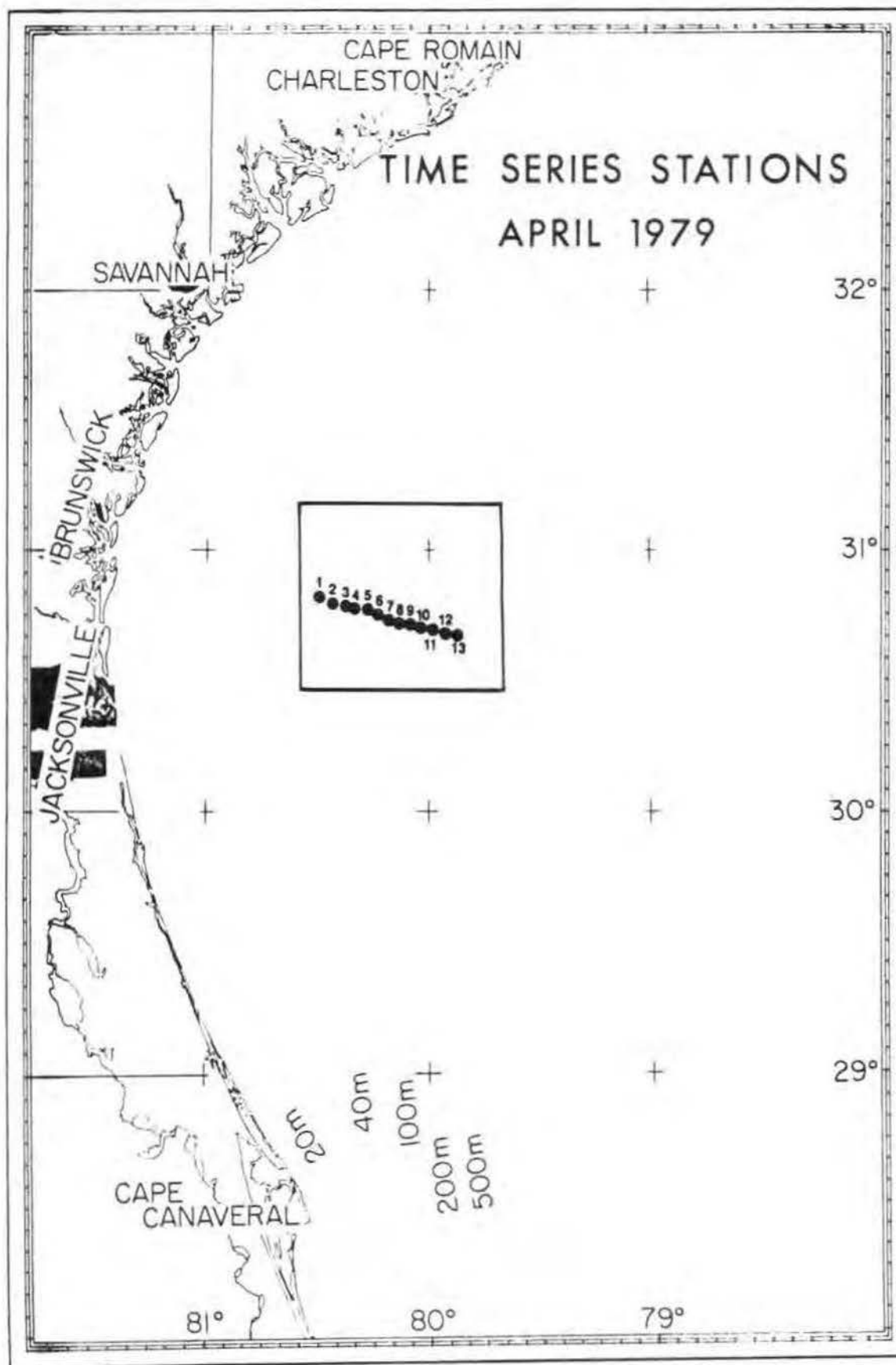


Figure 2. Time Series Station, April 1979

(Table 2) were sampled repeatedly over the nine day period. Grid station 9 and later station 8, were subject to intensive hydrographic and biological sampling. Additional surface mapping of temperature and salinity (Tom Lee, Univ. of Miami) and fluorescence (Jim Yoder, Skidaway Institute of Oceanography) was completed between the hydrographic sections. Two additional stations (183C, 209C) were sampled to complement airborne remote sensing flyovers.

CTD Data Acquisition and Processing

The CTD Data Acquisitions System (Figure 3) consists of a Plessey Model 9400 CTD sensor system, a Model 8400 Digital Logger, and a Hewlett-Packard 9825A Calculator. Data were stored on flexible disks and redundant plots were produced for each cast on a Hewlett-Packard XYY⁺ Plotter and Model 9862A Plotter.

Digitized data were collected as the CTD sensor unit was lowered at 15 m/min. on a four conductor cable. All three parameters (C,T, and D) were sampled once each 405 milliseconds or every 10 cm at the 15 m/min. lowering rate. For primary calibration of temperature and salinity, a Niskin Bottle equipped with paired protected deep-sea reversing thermometers was tripped after a four-minute equilibration period at the maximum sample depth in mixed layers. Other water samples were collected during ascent at depths selected after examination of the downcast temperature structure.

All data recorded on HP flexible disks were processed according to the methods described by Chandler, et al. (1978) in the sequence shown in Table 3. Salinity was calculated from conductivity according to the

Table 2. Summary Listing of Time Series Stations

Grid. Stn. #	Time Series No.												
	1 21/4	2 22/4	3 23/4	4 23/4	5 24/4	6 24/4	7 26/4	8 27/4	9 28/4	10 28/4	11 29/4	12 29/4	13 30/4
1	-	-	122X	137X	-	-	-	-	-	-	-	-	-
2	-	-	123X	138X	-	-	-	-	-	-	-	227C	-
3	-	-	124X	139C	149X	155X	174X	184X	193X	-	-	Hor. Map.	-
4	78C	-	125X	140X	-	-	-	-	-	-	-	-	-
5	79X	111C	126X	141X	150C	156C	176C	186C	194C	216X	218X	-	-
6	80C	112X	127X	142X	-	-	-	-	-	215X	219X	-	239X
7	81X	113C	128X	143C	151C	157C	177C	187C	195C	214X	220X	-	240X
8	82C	114X	129X	144X	-	-	-	-	-	213X	221X	-	241X
9	83X	115C	130X	147C*	153C*	160X	180C*	192C*	196X	212X	222X	-	242X
10	84C	116X	131X	145X	-	-	-	-	-	211X	223X	-	243X
11	85X	117C	132X	146X	152C	158C	178C	188C	197C	210X	224X	237C	244X
12	86X	118X	133X	-	-	-	-	-	-	-	-	-	-
13	87X	119C	134X	-	-	-	179X	-	-	-	-	-	-
Productivity Stations	-	120C(9)	135C(9) 135Y00(9) 136C(9)	147C(9)	153C(9) 153Y00(9) 154C	-	180C(9) 180Y00(9)	192C(9) 192Y00(9)	198C(9) 199C(9)	217C(9)	225C(9) 226C(9)	238C(8)	245C(8)

*Time Series Grid Stations done out of order.

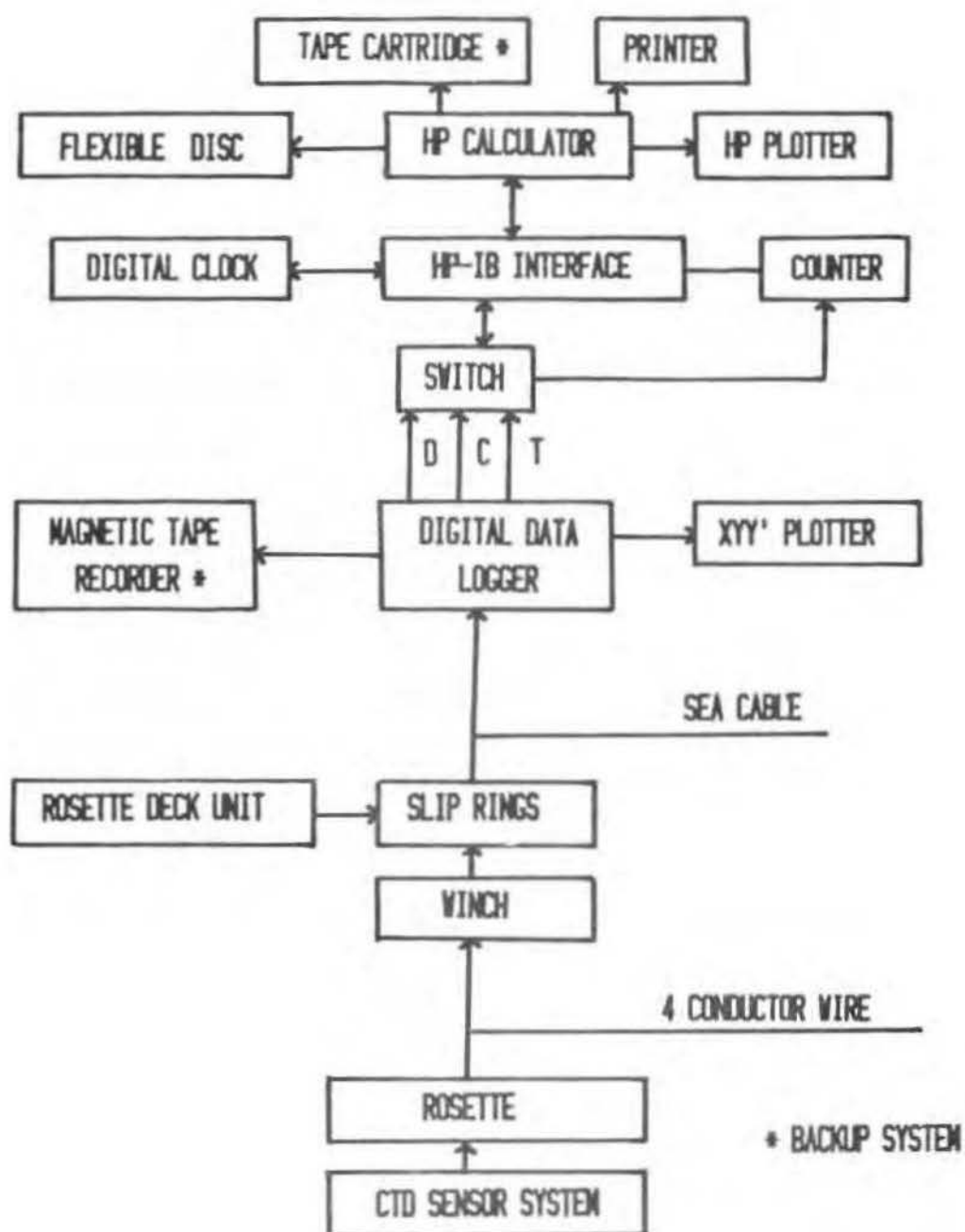


Figure 3. CTD Data Acquisition System

Table 3. CTD/Data Flow. Shipboard Acquisition to NODC Submission.

Data Source/Disposition	Program	Data File
HP Disk	MASTER (CTD and XBT controller and data acquisition)	001, 002, ETC. (Consecutive Station #)
Bridge Log	STALOG (Enter bridge log data)	LOG
	CREATE (Convert bridge log data to NODC headers)	HEAD
Calibration from bottle cast data	REDUCE (Combine headers with data in NODC format, depth latch and average CTDs, interpolate depth for .5°C on XBTs, add salinity and temperature offsets)	001, 002, ETC.
Nutrient analysis	TEK-ED (Add nutrient data and edit all station data)	001, 002, ETC.
	CEMLST (Calculates sigma-t, specific volume anomaly, oxygen utilization and prints technical report pages)	
	STALST (Prints station list for technical report)	
Submit to NODC	HPCYB (Data transfer to Cyber to create a tape to send to NODC)	GIL002 TECHNICAL REPORT

equations of Broenkow, et al. (1977). Broenkow's equation and a flow diagram showing its use is presented in Figure 4.

The CTD system was calibrated only against bottle samples in mixed layers to insure that the sensors and the bottles were sampling in the same water. However, since a mixed layer was not always observed, comparisons could not be made at every station. Salinity and temperature calibration data are included in Appendix I.

XBT Data Acquisition and Processing

A Sippican Model LM3A handheld launcher and a MK2A-1 recorder were used for XBT casts. The temperature/depth plots were manually digitized, and these data were placed in NODC format and merged with processed CTD data. Depths at which temperature is a whole or half degree are reported as are depths at which a significant mixed layer begins and ends.

During this cruise, the XBT system was not calibrated against CTD casts. Previous comparisons yielded a 0.1°C difference which is in the range of accuracy of the system.

Physical and Chemical Procedures

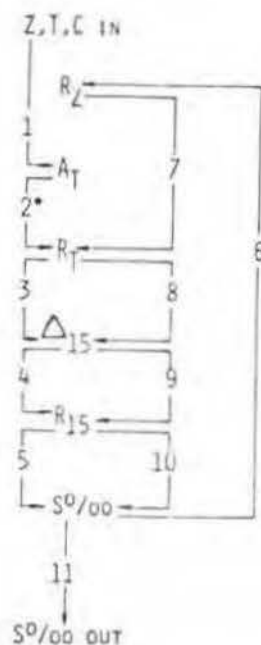
Salinity samples collected for calibrating the CTD system were analyzed ashore using a Plessey Model 6230N induction salinometer.

Dissolved oxygen samples were analyzed during the cruise by the modified Winkler method outlined by Strickland and Parsons (1972).

The nutrient analysis was performed using Technicon Autoanalyzer procedures as outlined by Glibert and Loder (1977). The procedures are based on the manual method of Murphy and Riley (1962) for reactive phosphate and Armstrong, Stearns and Strickland (1967) for dissolved silicate and nitrate.

$$\begin{aligned}
R_2 &= 1 + .01[(1.551 - .0453T + 59 \times 10^{-5}T^2) \\
&\quad + \frac{1}{4}(35-S)(.43 - .0017T + 23 \times 10^{-6}T^2)][1.037 \times 10^{-3}Z \\
&\quad - 32 \times 10^{-9}Z^2] \\
A_T &= (676547 + 20131.5T + 99.89T^2 - .1943T^3 - .00672T^4) 10^{-6} \\
R_T &= \frac{C(S,T,Z)}{R_2 A_T 42.896} \\
\Delta_{15} &= R_T(R_T - 1)(T - 15) [96.7 - 72R_T + 37.3R_T^2 \\
&\quad - (.63 + .21R_T^2)(T - 15)] 10^{-5} \\
R_{15} &= R_T + \Delta_{15} \\
S^0/00 &= .08996 + 28.2972R_{15} + 12.80832R_{15}^2 - 10.67869R_{15}^3 \\
&\quad + 5.98624R_{15}^4 - 1.32313R_{15}^5
\end{aligned}$$

where: R = conductivity ratio
 Z = depth (meters)
 T = temperature ($^{\circ}\text{C}$)
 C = measured conductivity (mhos/cm)
 S = salinity ($^{\circ}/00$)



*without the R_2 term

R_2 = pressure effect on conductivity

A_T = temperature effect

R_T = $R(S, t, p)$ conductivity ratio

Δ_{15} = t_{15} correction (International Oceanographic Tables, 1966)

R_{15} = $R(S, 15^{\circ}\text{C}, 0)$

Figure 4. Broenkow's salinity equation and flow diagram

RESULTS AND DISCUSSION

Upwelling at the shelfbreak has been related to easterly movements of the Gulf Stream front (Atkinson, 1977). Thus, any observed offshore meander should coincide with the lowering of temperature at the shelfbreak. Conversely, the onshore movement of the Gulf Stream would result in downwelling and a rise in temperature at the shelfbreak.

During the April 1979 cruise, the meandering of the Gulf Stream resulted in two spin-off eddies (Lee and Mayer, 1977) along the Gulf Stream front at the shelfbreak. The first eddy was observed on 22 April. Observations through the eddy core indicated considerable upwelling, reaching inshore as far as time series station 7 (40 m isobath) (Figures 19-31). A second eddy was observed between 27-30 April. Upwelling was observed, but was less intense than the first upwelling event. The upwelled water did not reach inshore as far as station 7 (Figures 52-72).

The four day period between the occurrence of the spin-off eddies was dominated by downwelling conditions shown by the downward movement of the sigma-t gradients (Figures 32-51).

Upwelling and downwelling events were confined to a relatively narrow zone at the shelfbreak. Observations at shelf stations 3 and 5 showed no evidence of the shelfbreak upwelling events (Figures 73-79). Upwelling was observed at station 7 (40 m isobath) during the first eddy (upwelling) event but not during the later period (27-30 April) (Figures 80-85). Shelfbreak stations 9 and 11 clearly show both of the upwelling events as well as the intervening downwelling period (Figures 86-97).

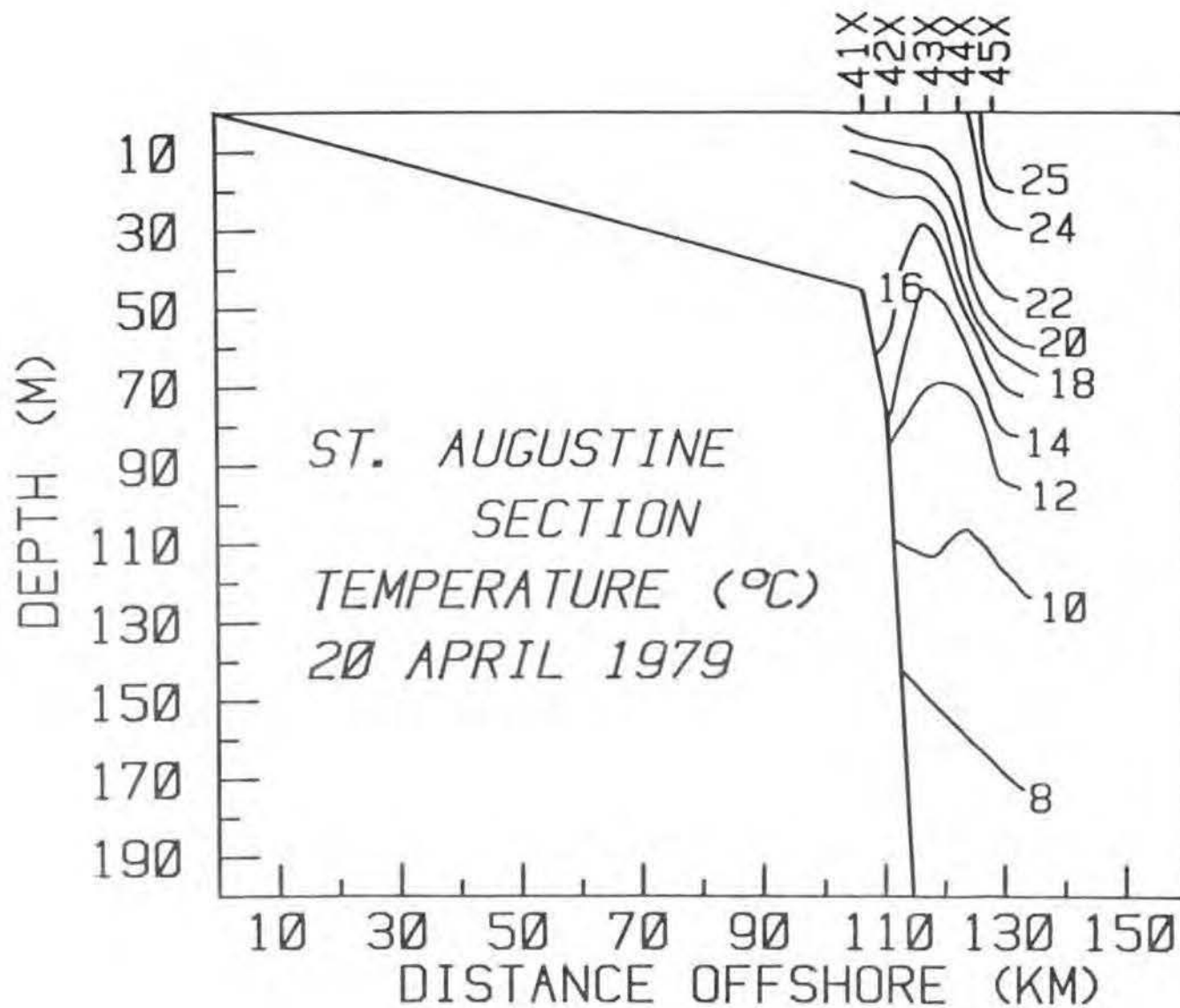


Figure 5. St. Augustine Section Temperature, 20 April

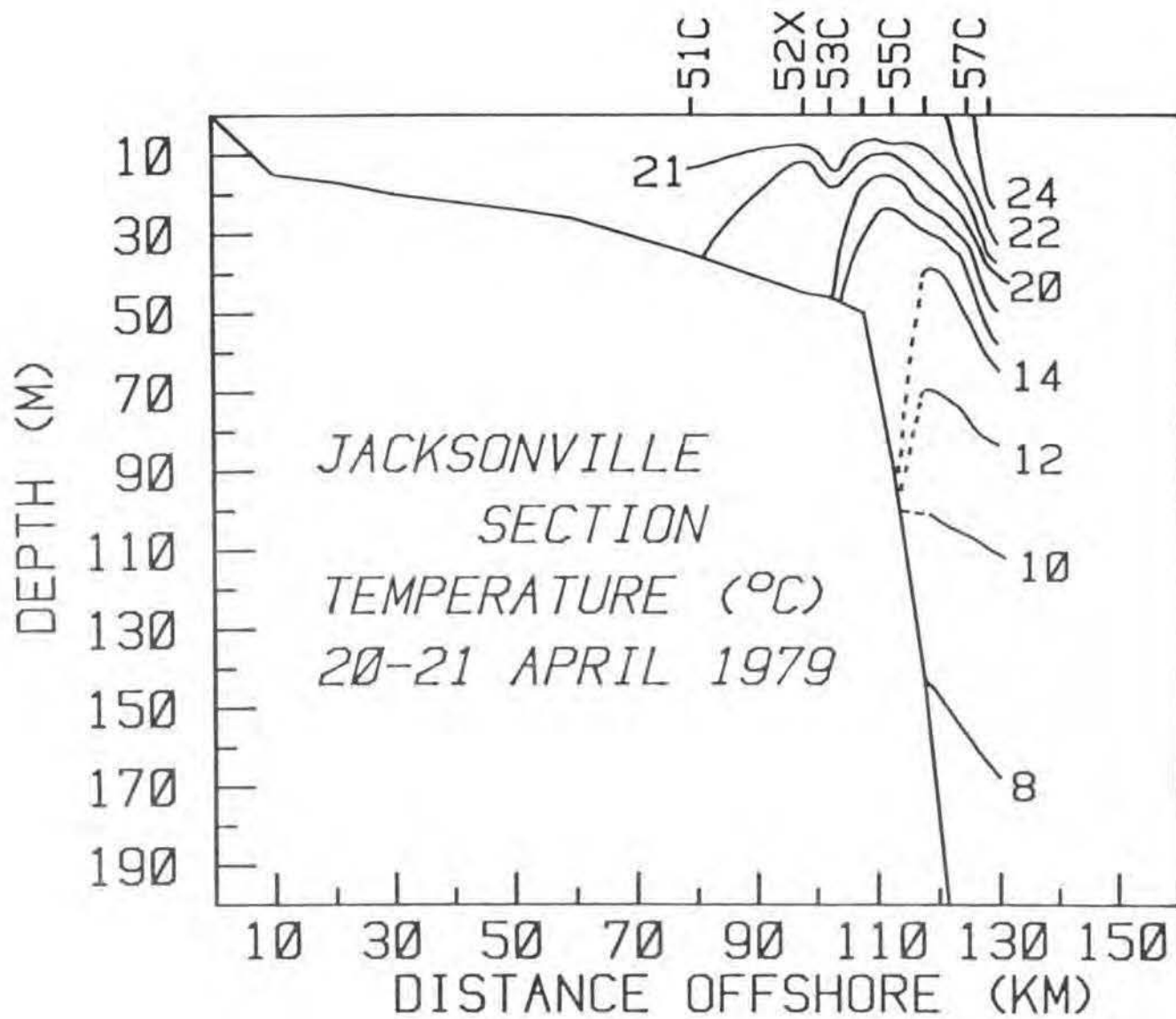


Figure 6. Jacksonville Section Temperature, 20-21 April

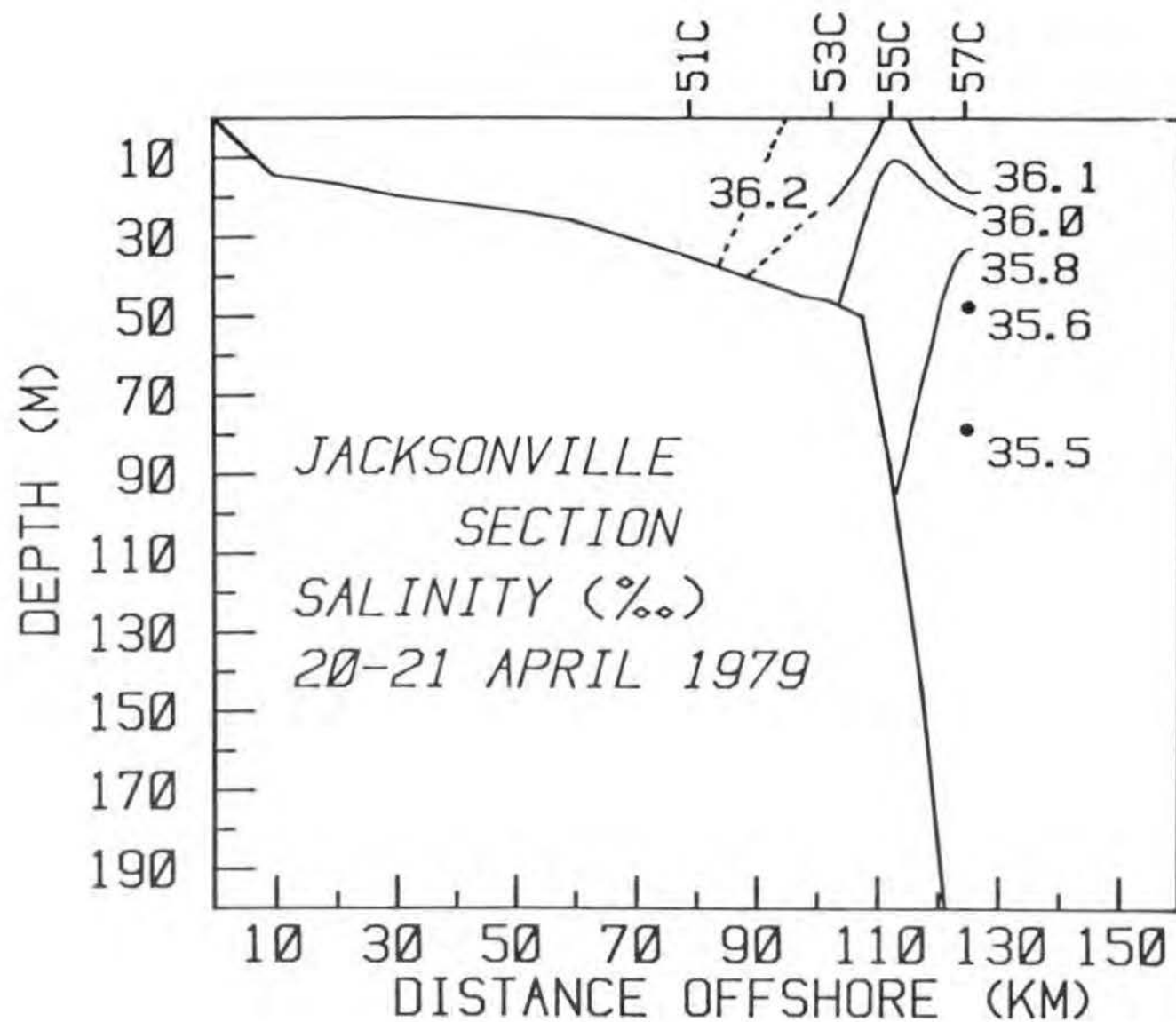


Figure 7. Jacksonville Section Salinity, 20-21 April

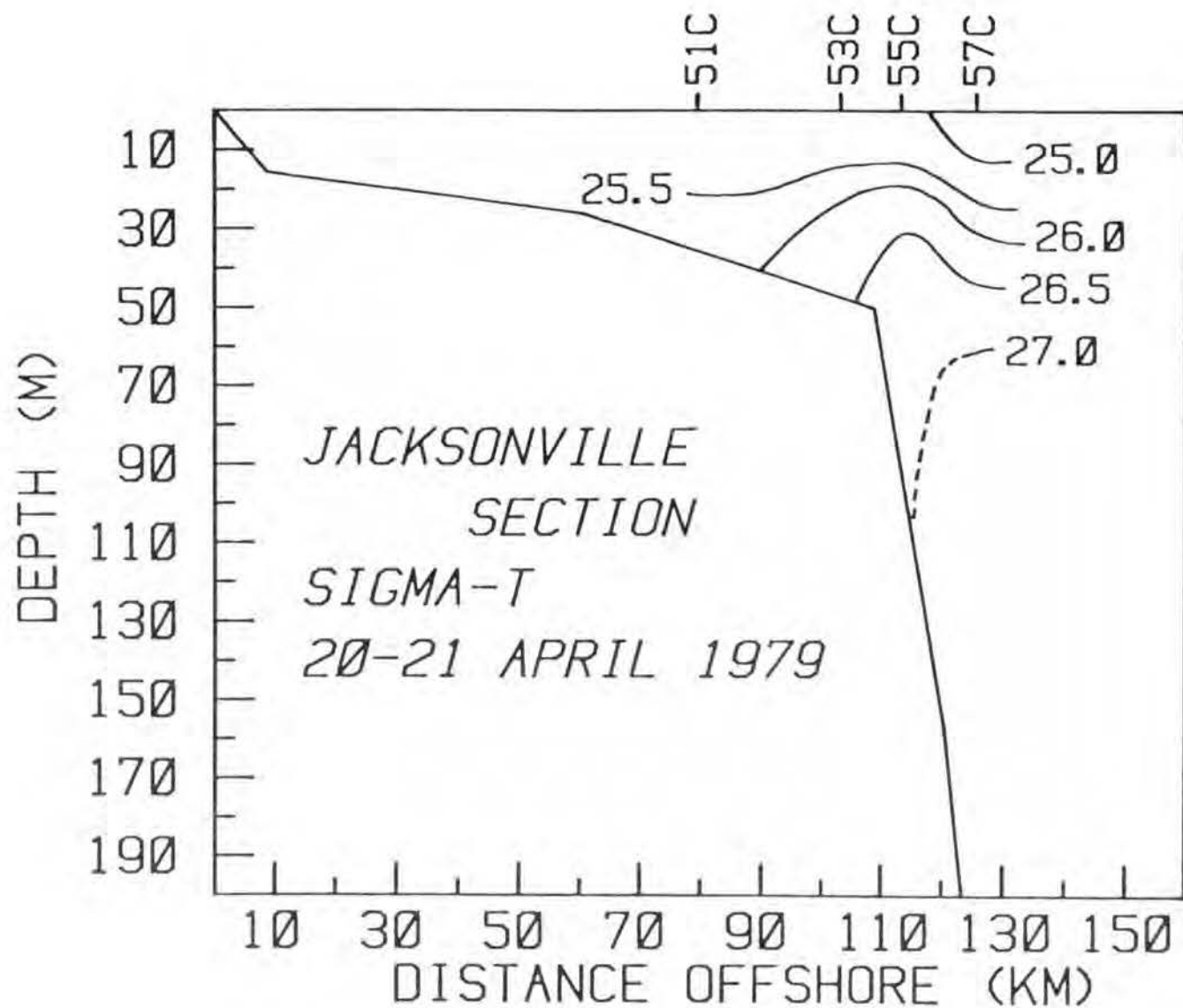


Figure 8. Jacksonville Section Sigma-T, 20-21 April

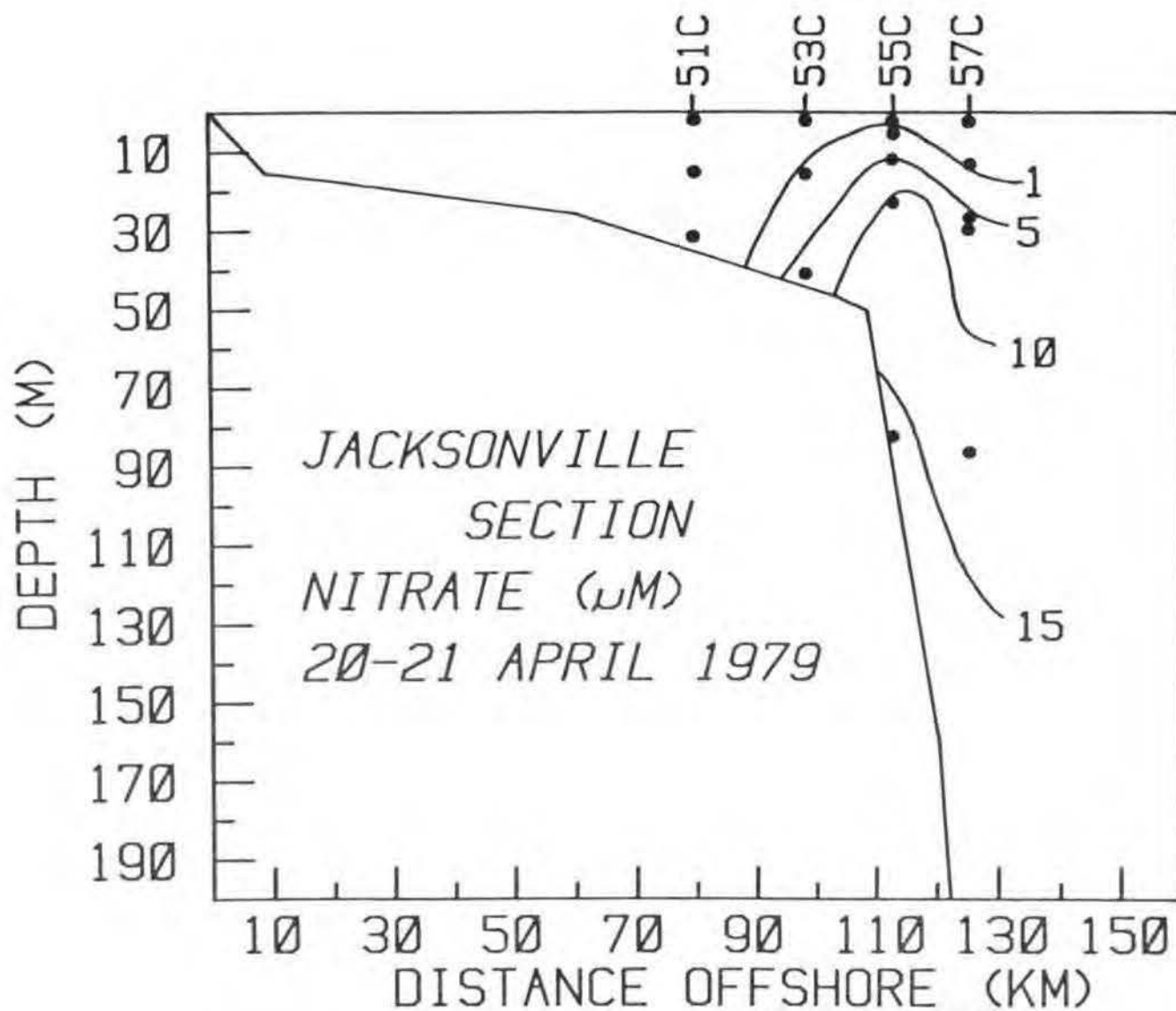


Figure 9. Jacksonville Section Nitrate, 20-21 April

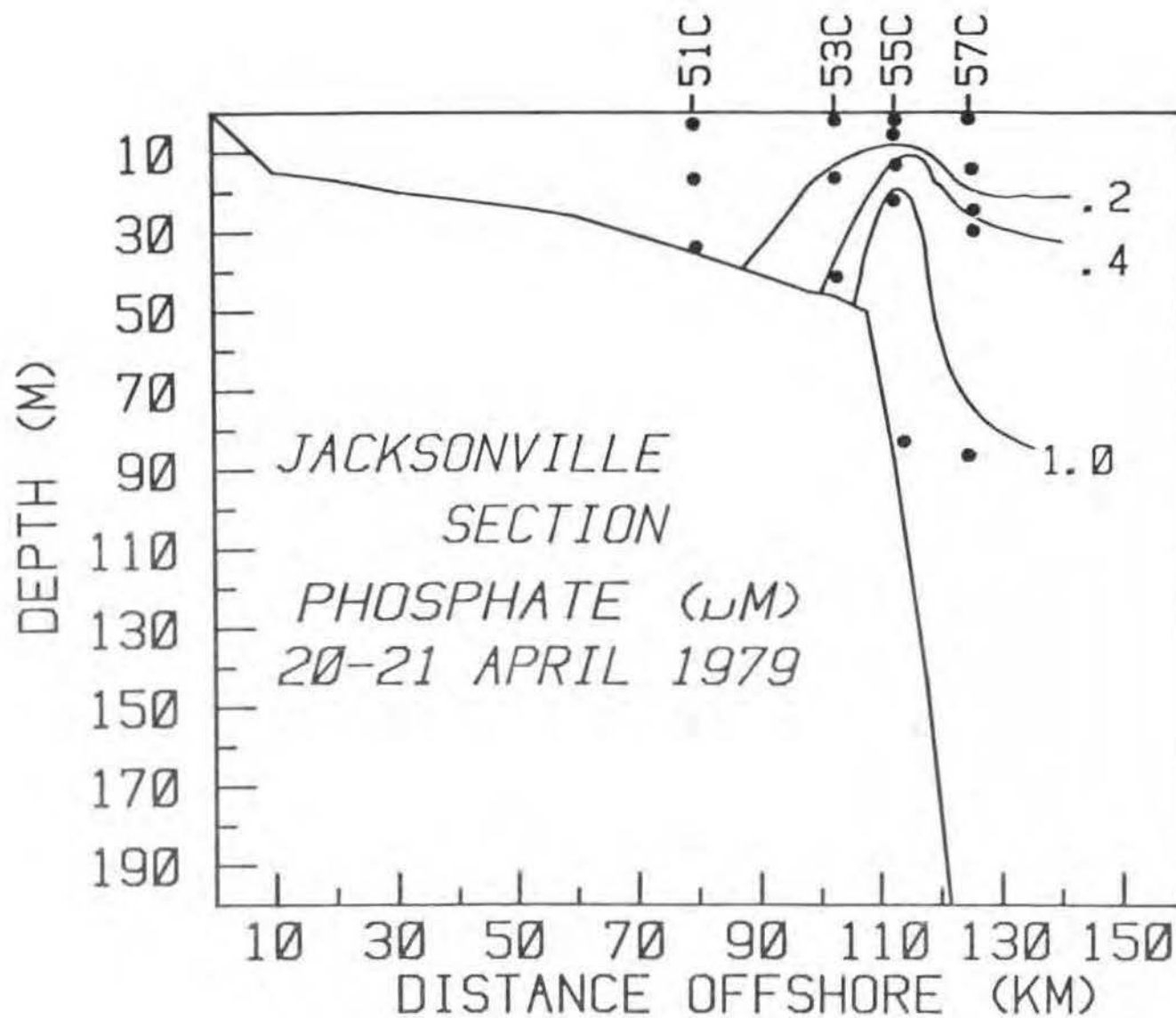


Figure 10. Jacksonville Section Phosphate, 20-21 April

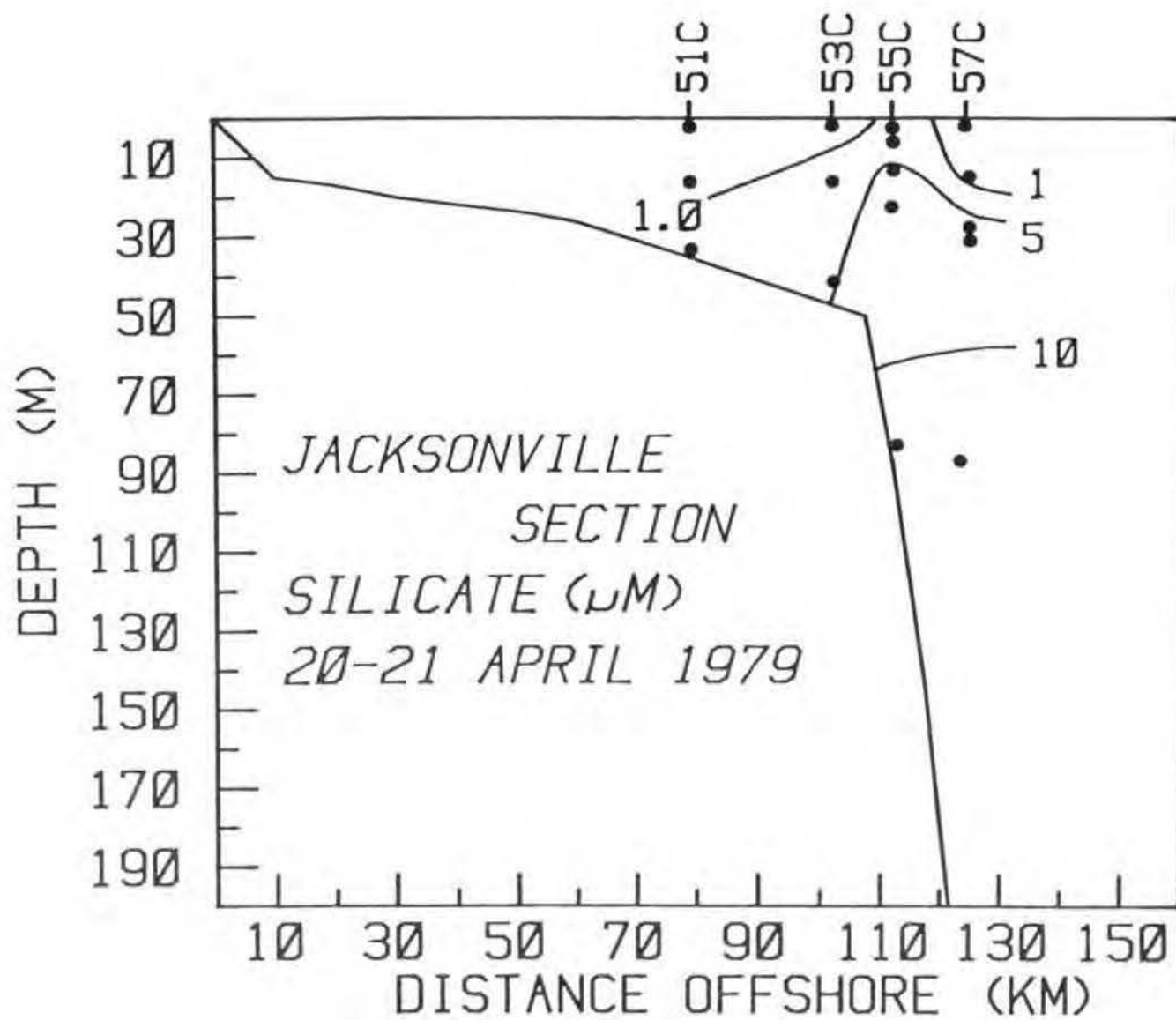


Figure 11. Jacksonville Section Silicate, 20-21 April

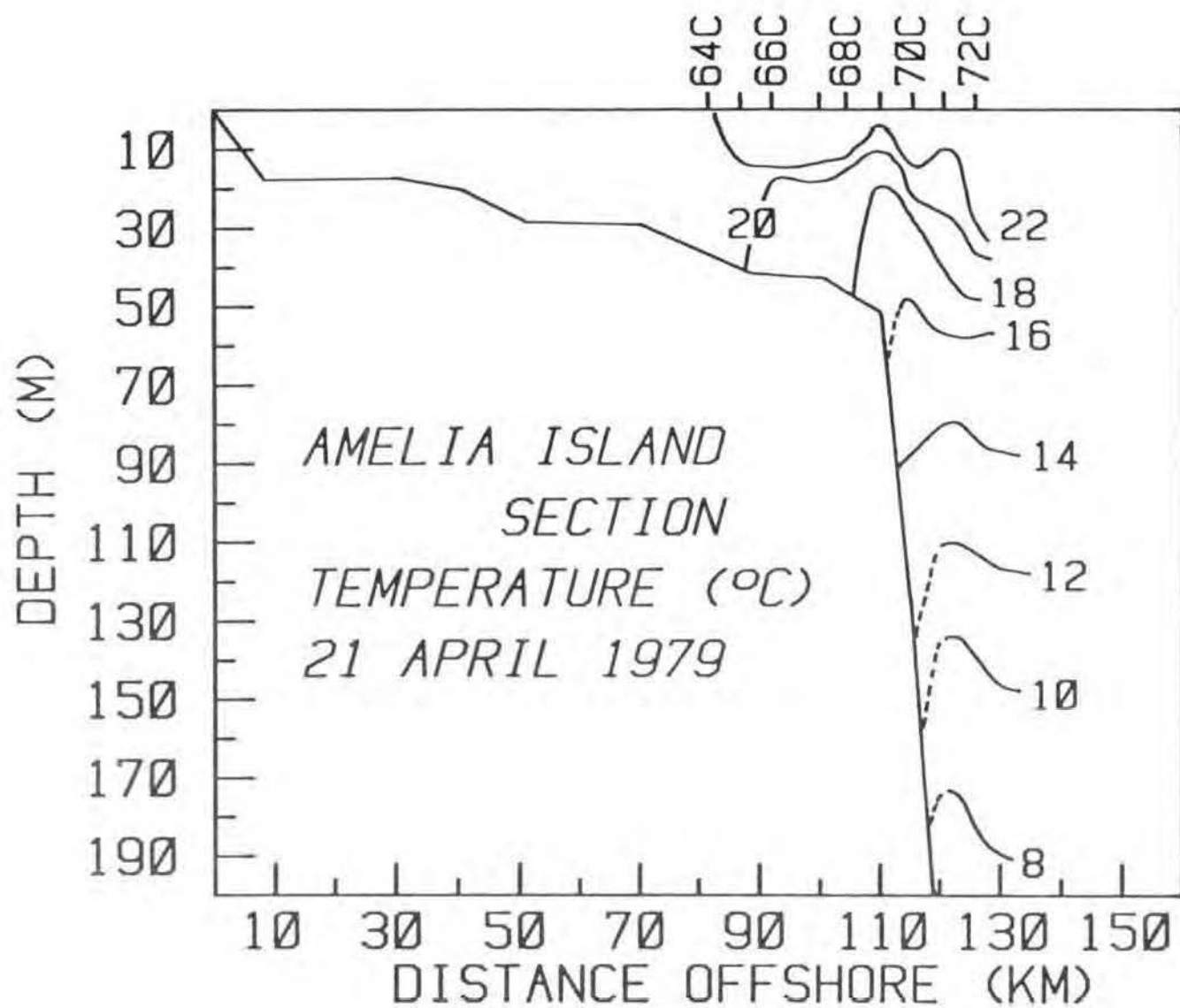


Figure 12. Amelia Island Section Temperature, 21 April

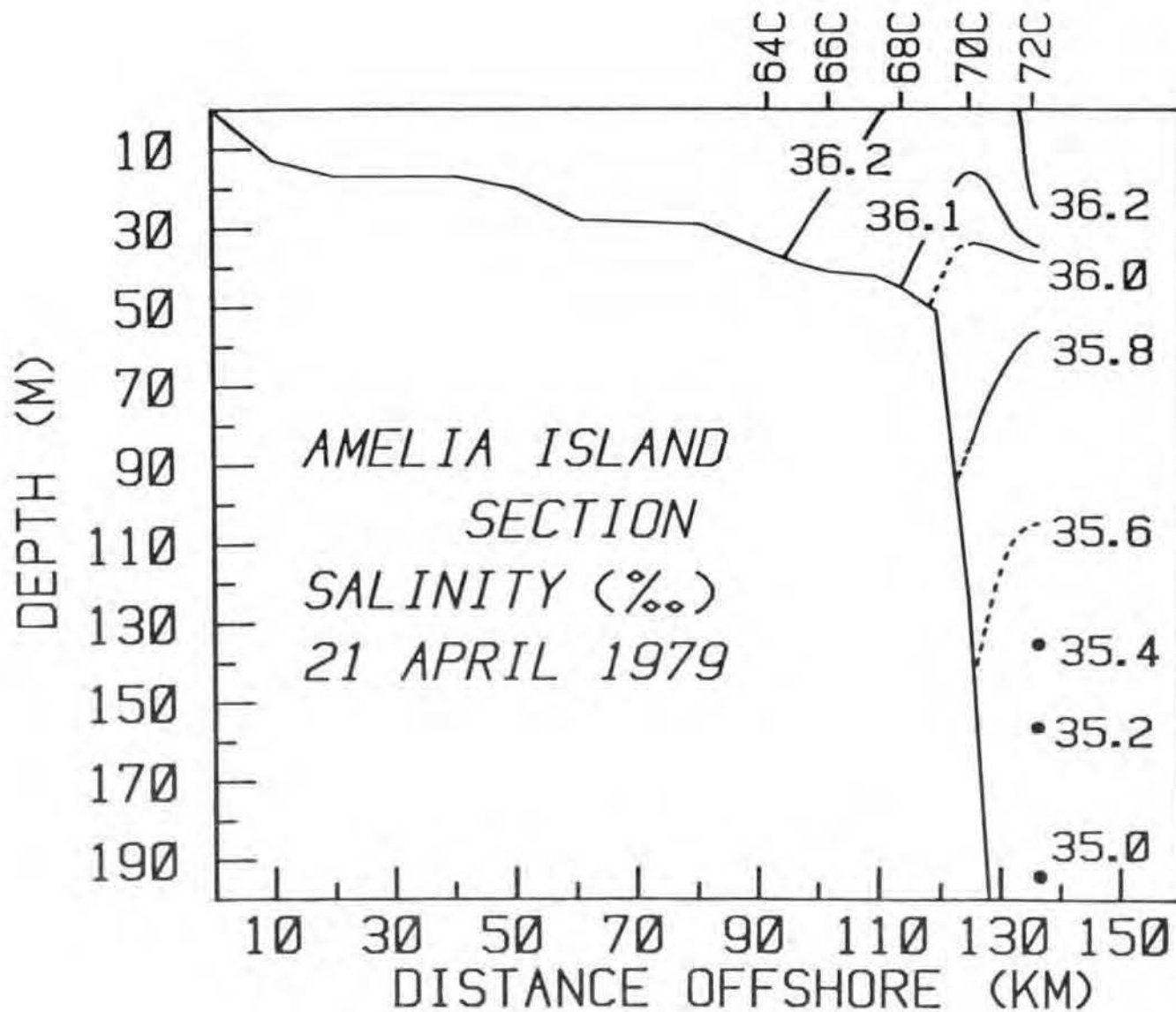


Figure 13. Amelia Island Section Salinity, 21 April

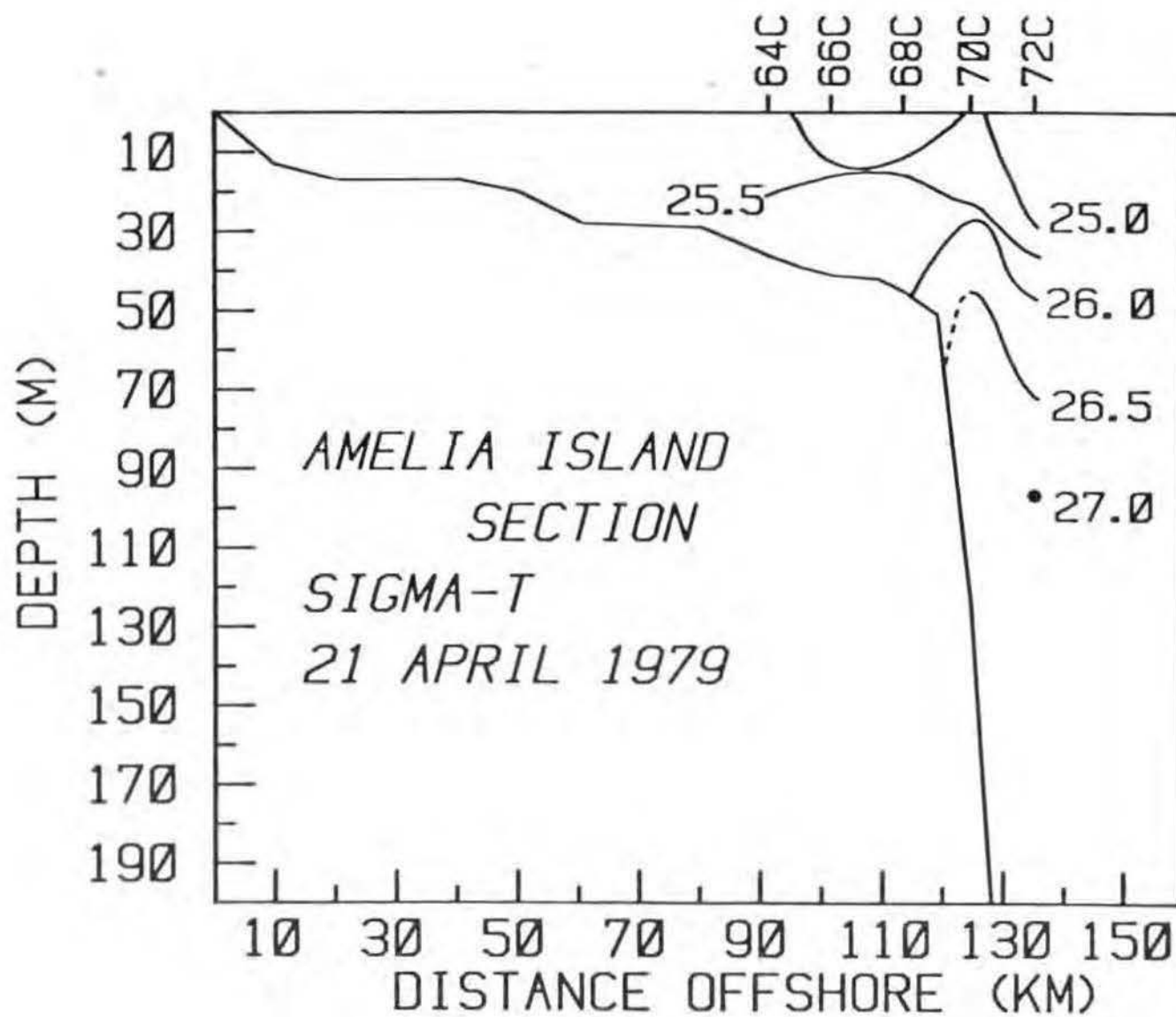


Figure 14. Amelia Island Section Sigma-T, 21 April

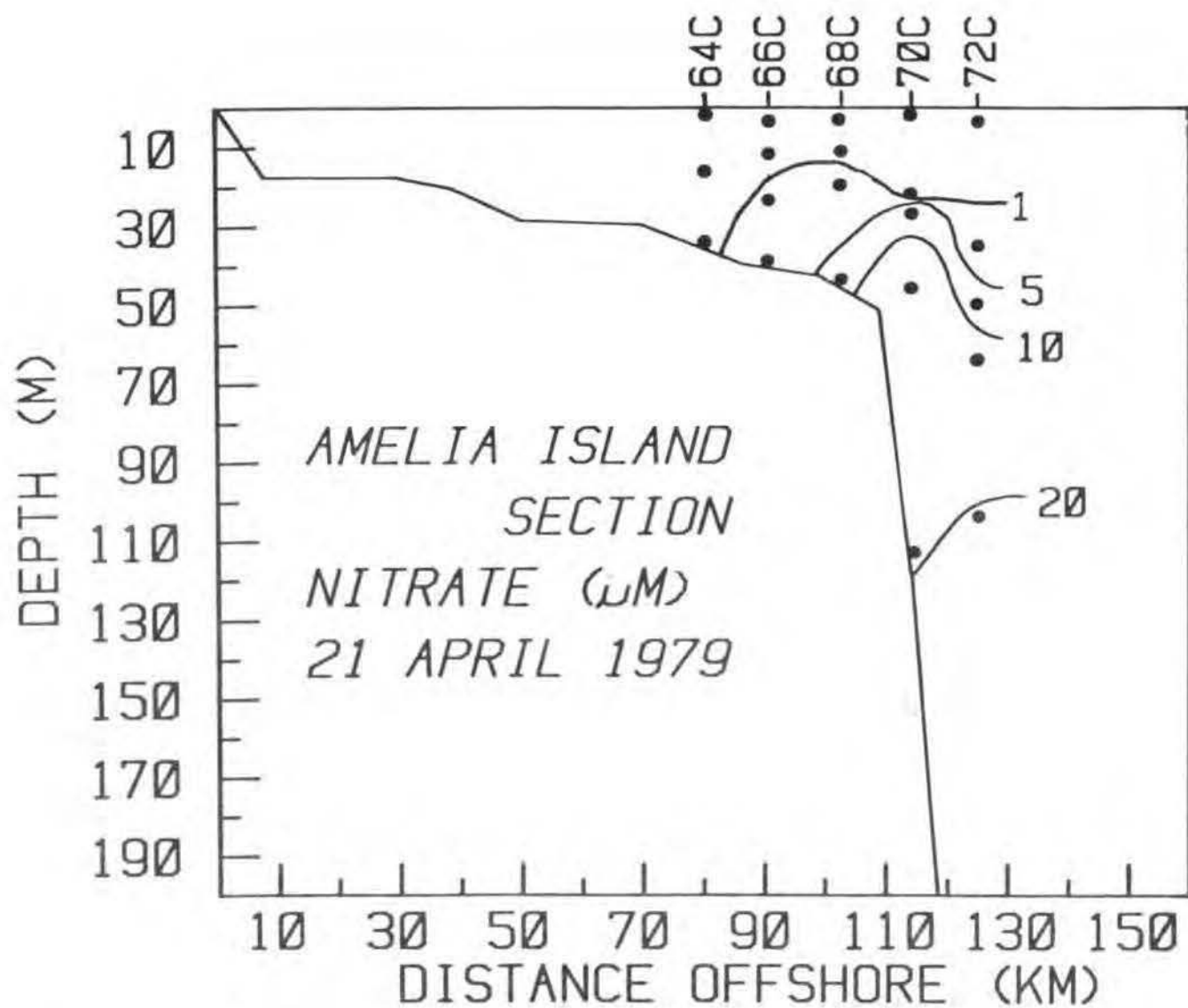


Figure 15. Amelia Island Section Nitrate, 21 April

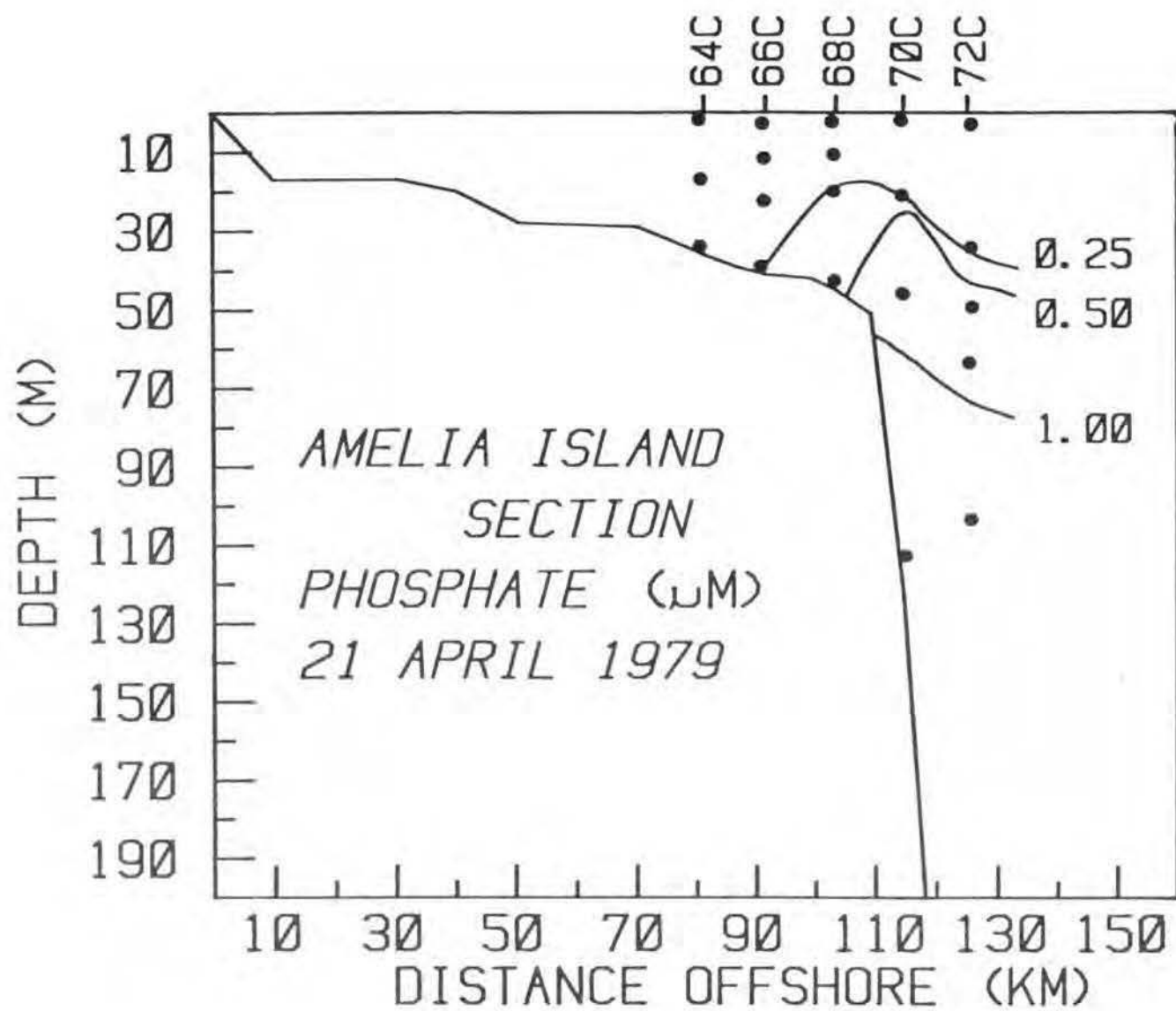


Figure 16. Amelia Island Section Phosphate, 21 April

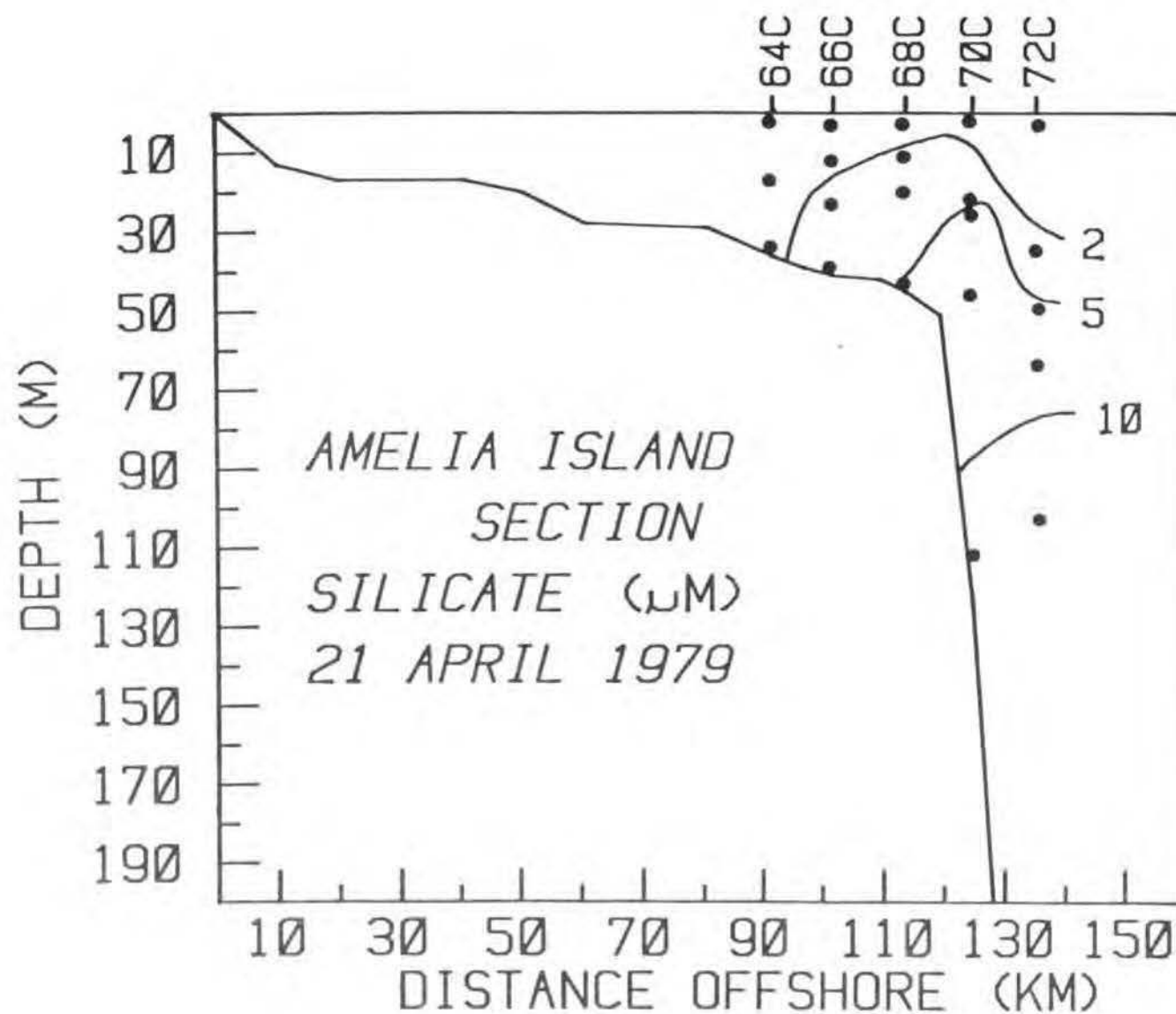


Figure 17. Amelia Island Section Silicate, 21 April

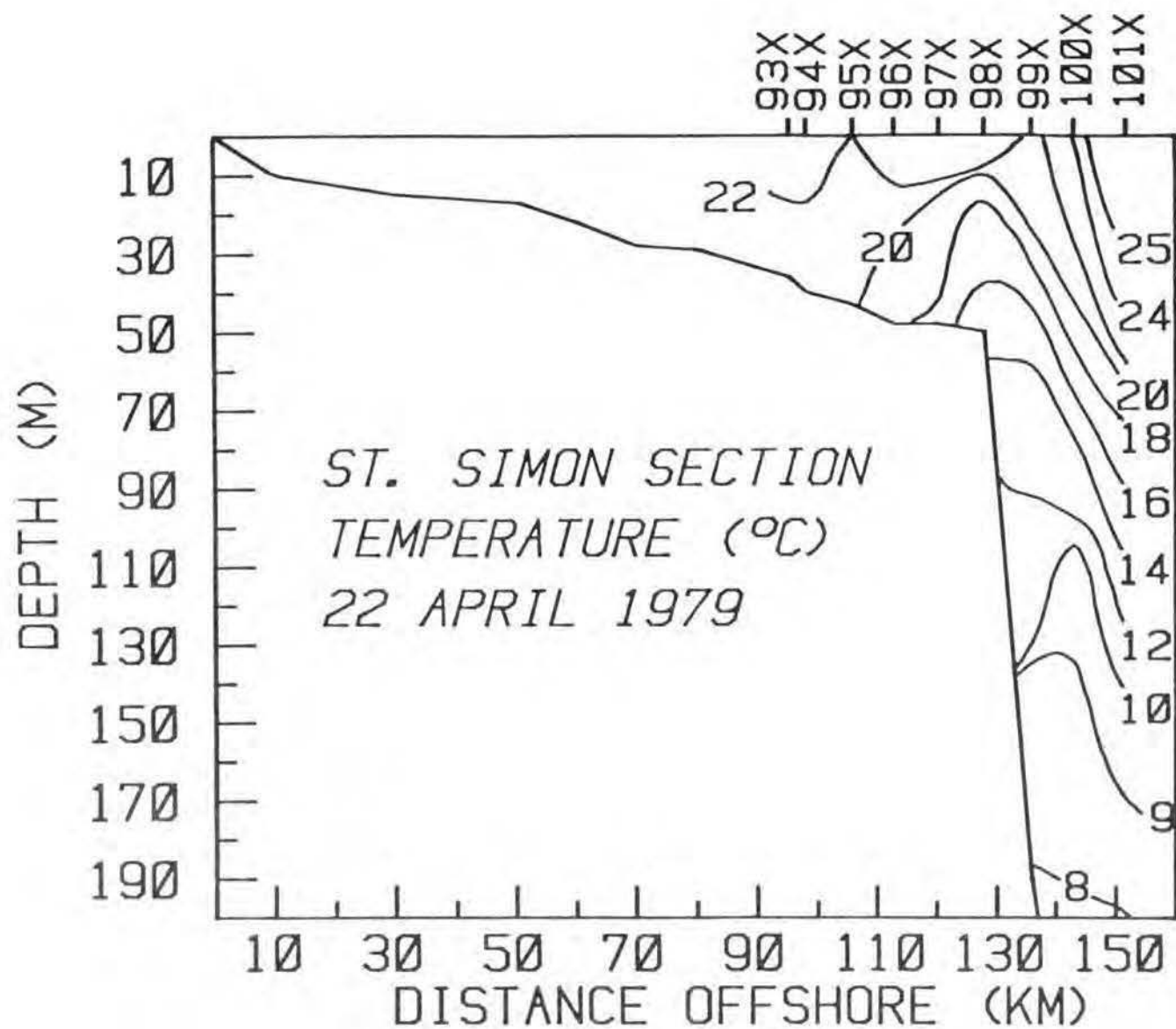


Figure 18. St. Simon Section Temperature , 22 April

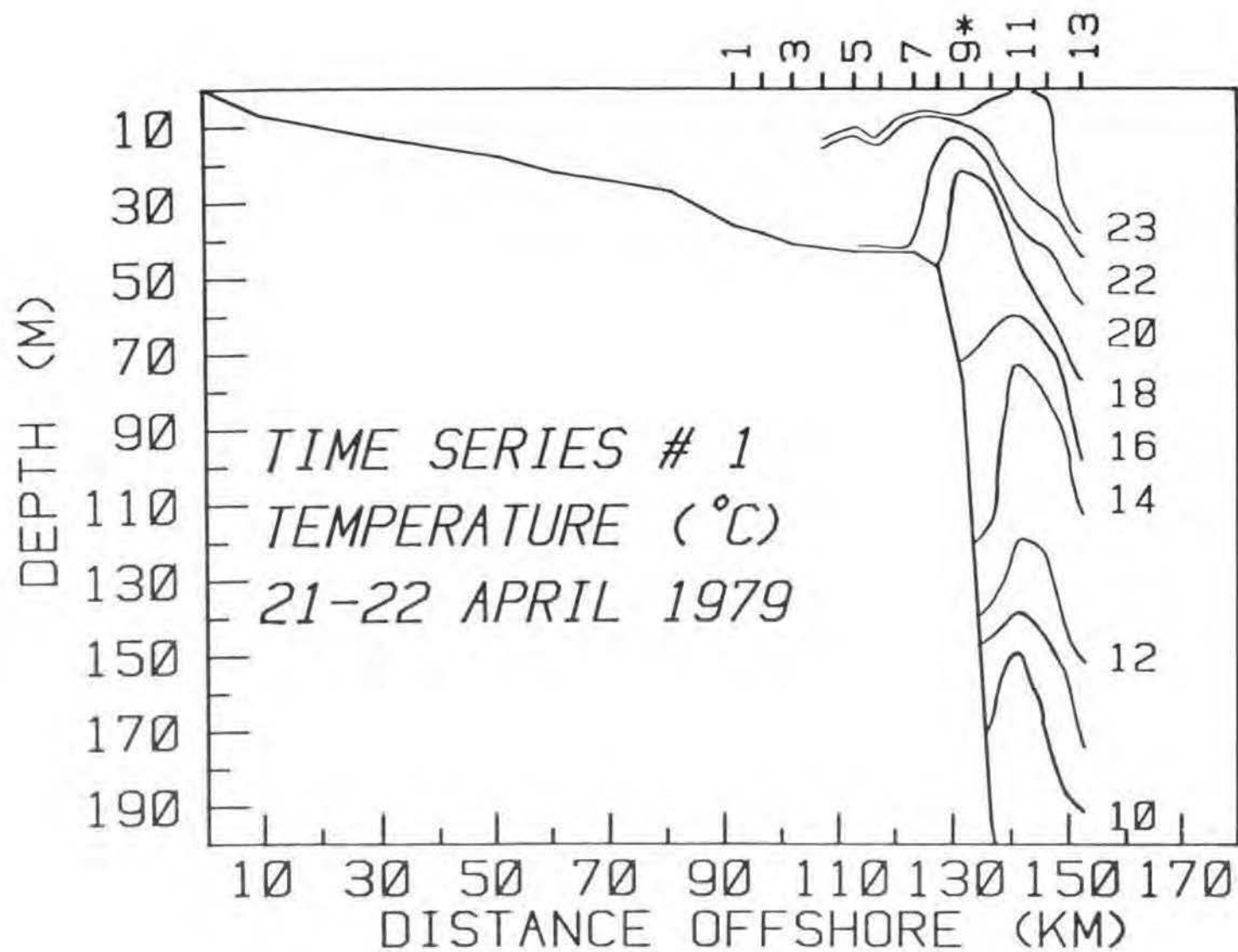


Figure 19. Time Series #1 Temperature, 21-22 April

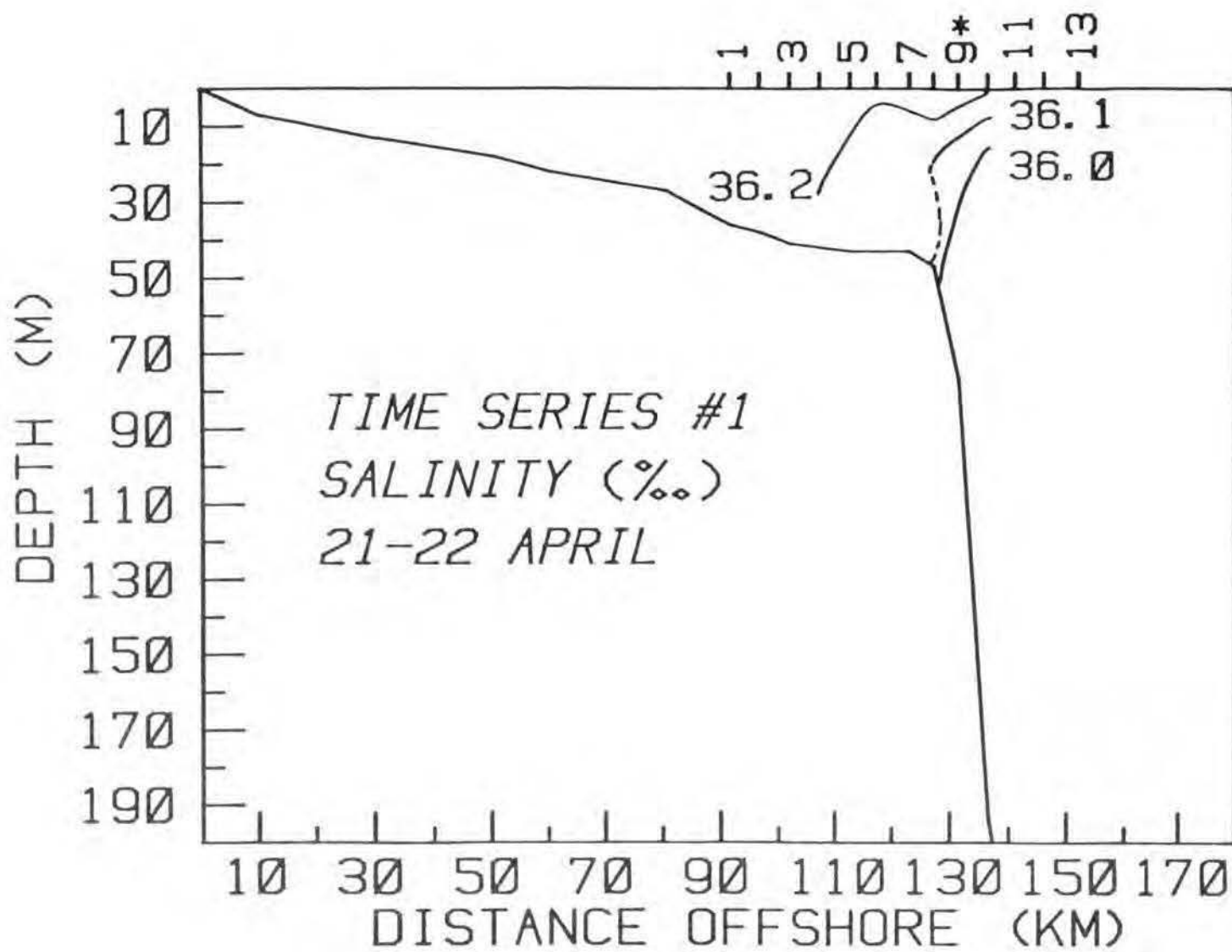


Figure 20. Time Series #1 Salinity, 21-22 April

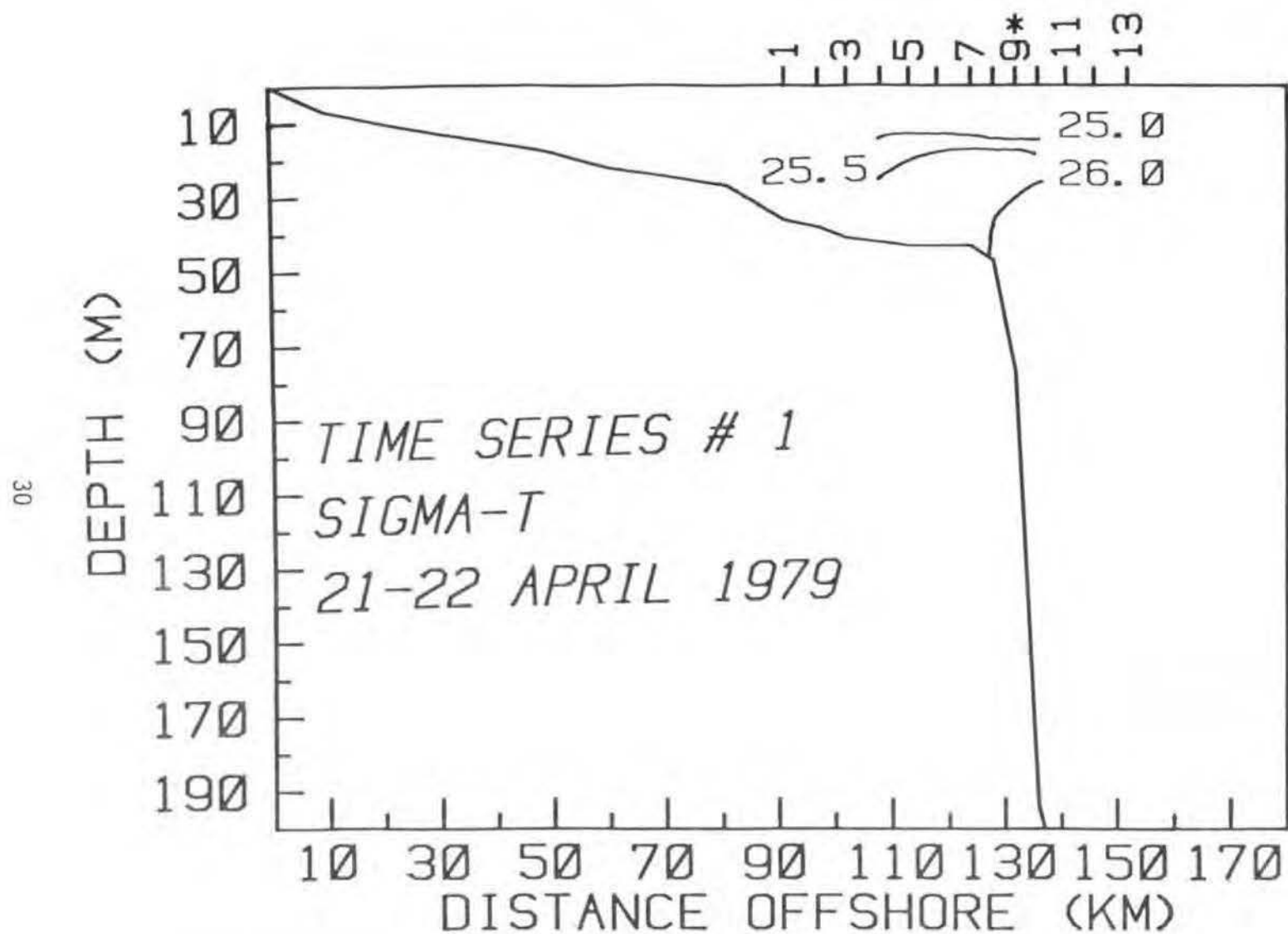


Figure 21. Time Series #1 Sigma-T, 21-22 April

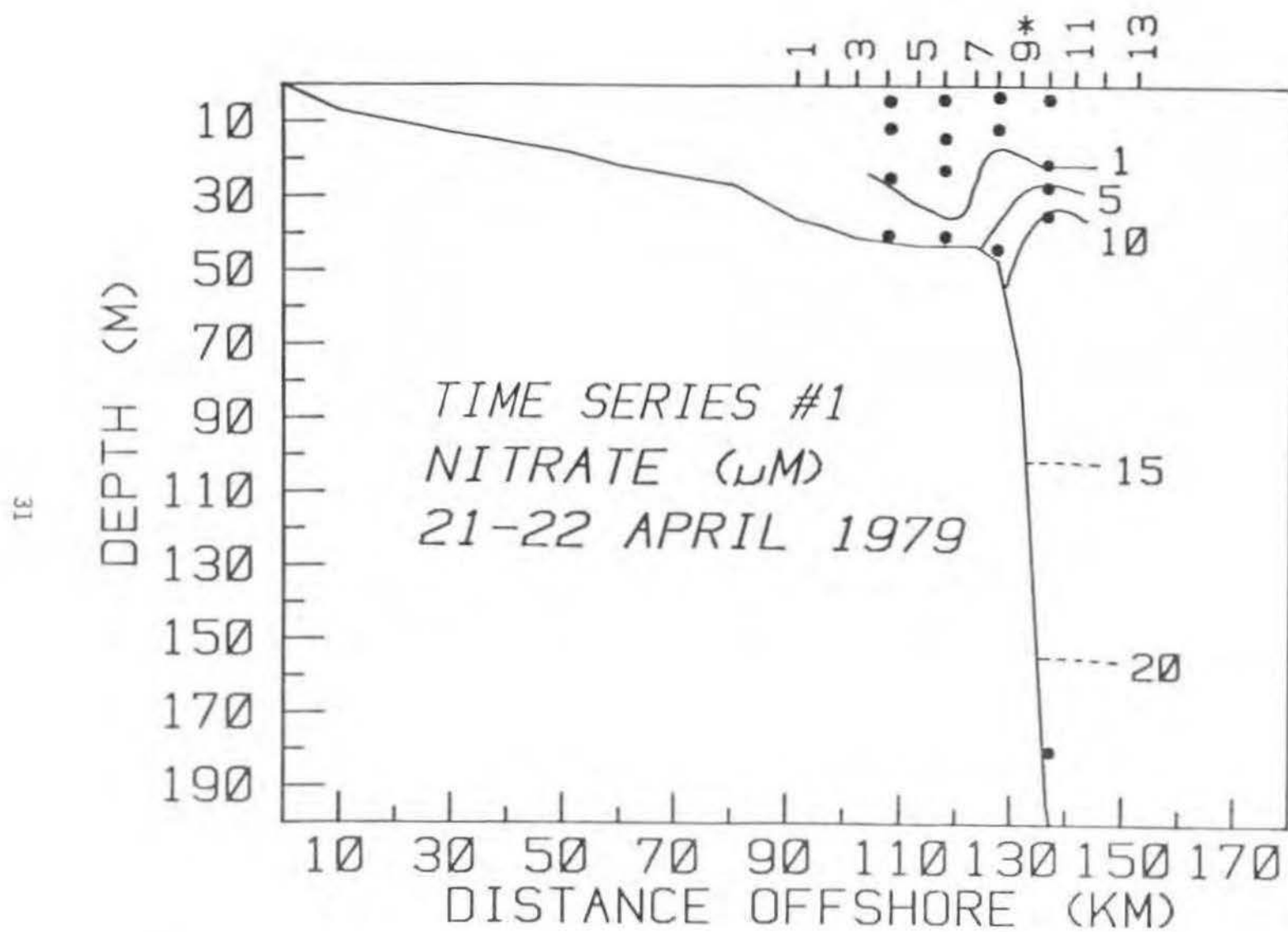


Figure 22. Time Series #1 Nitrate, 21-22 April

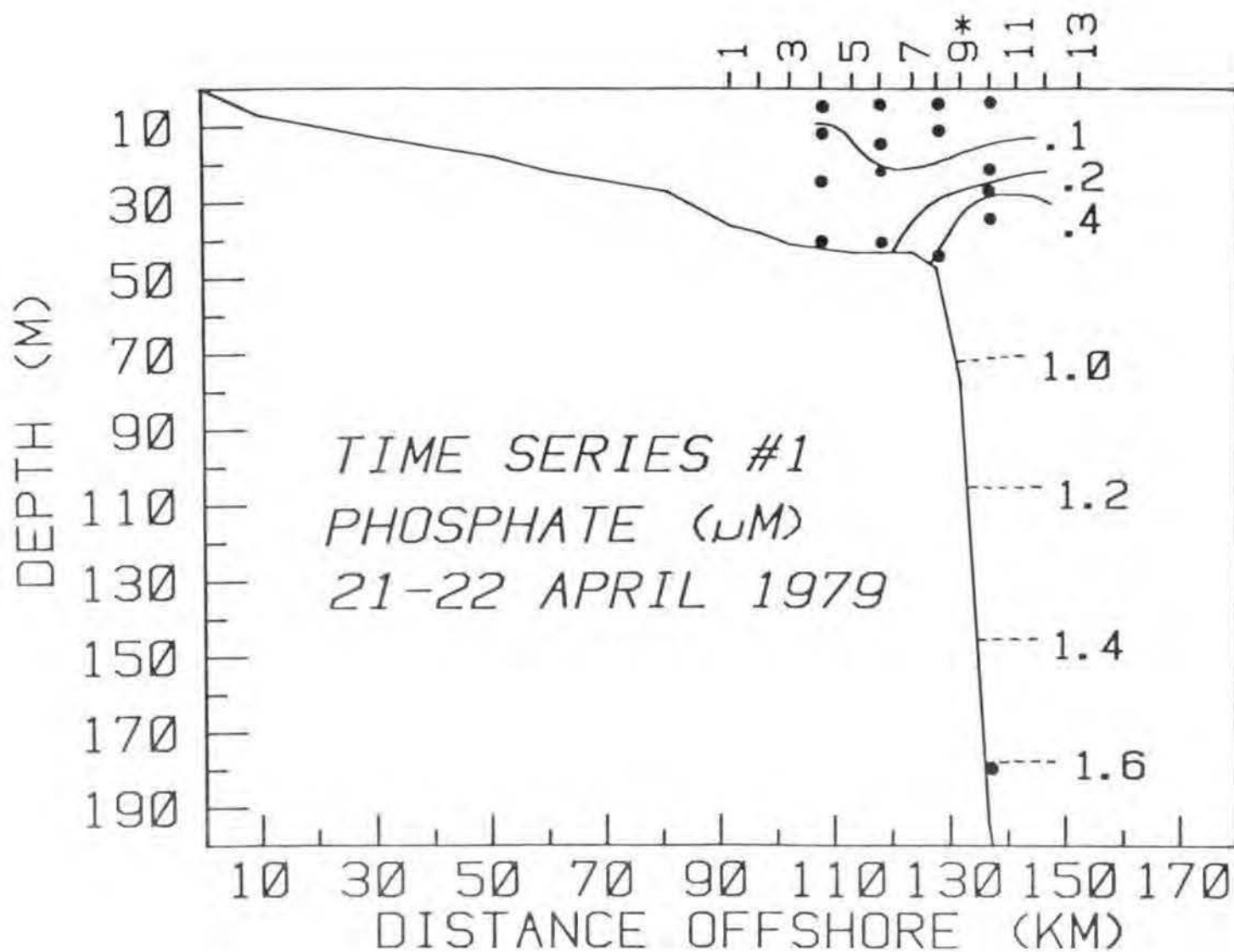


Figure 23. Time Series #1 Phosphate, 21-22 April

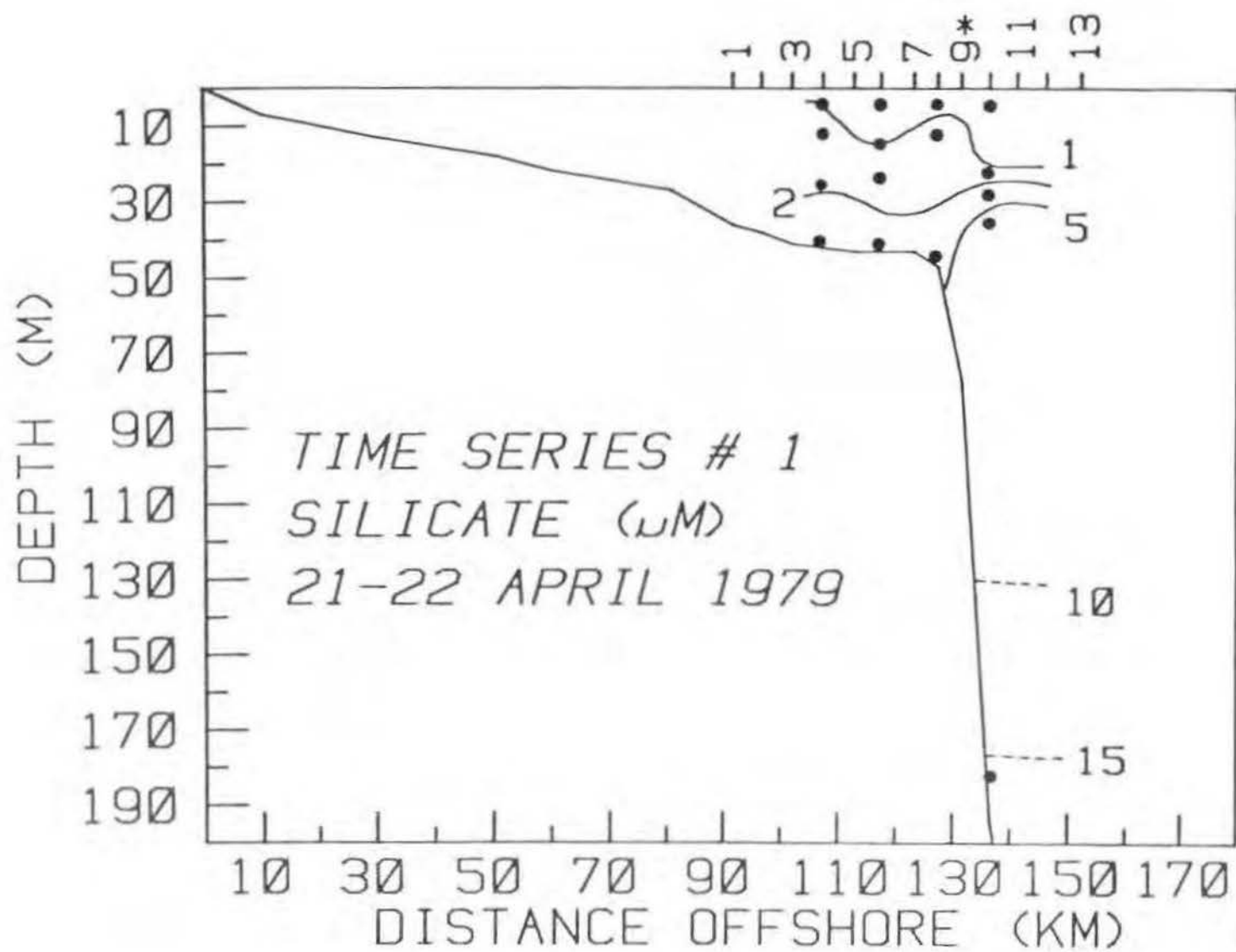


Figure 24. Time Series #1 Silicate, 21-22 April

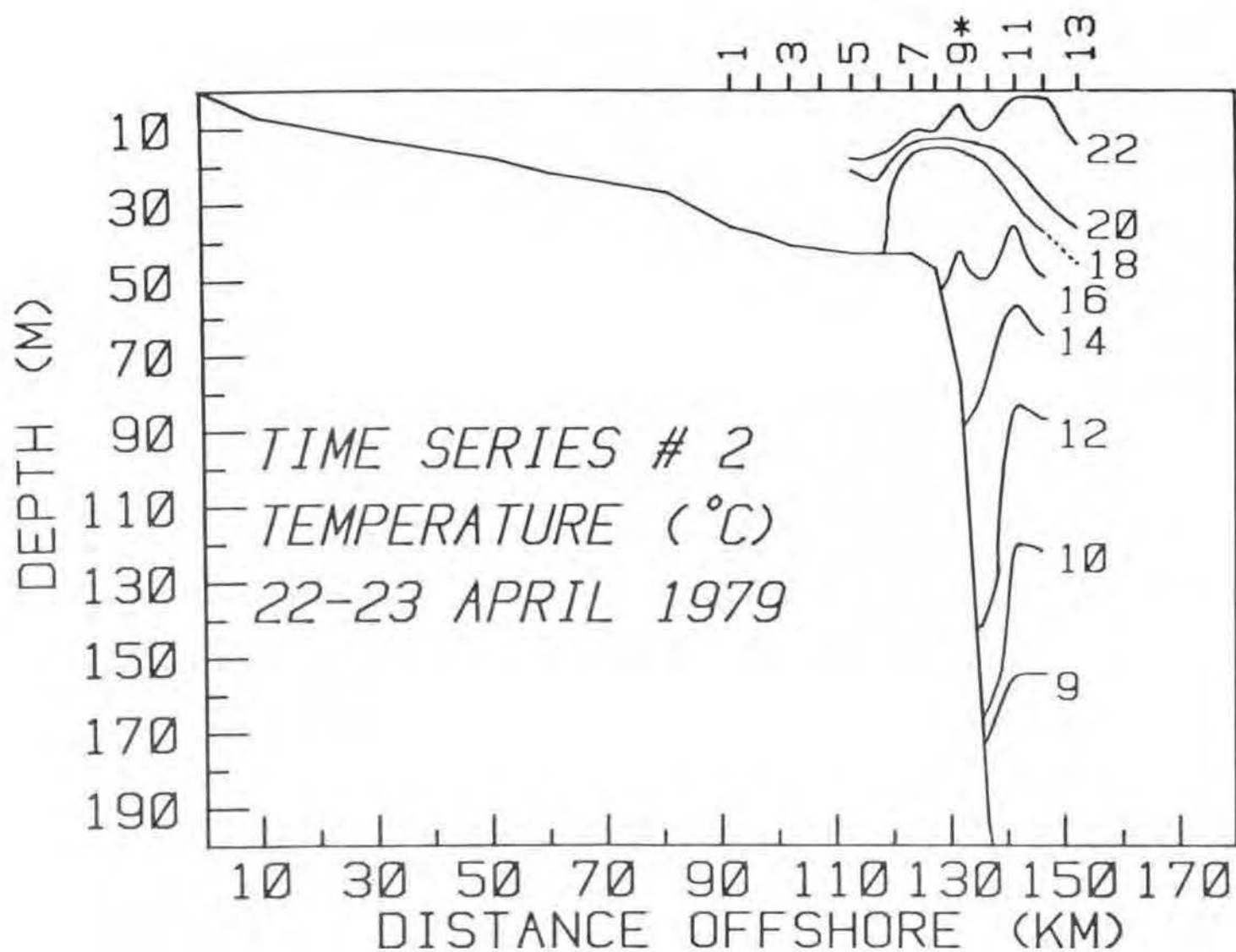


Figure 25. Time Series #2 Temperature, 22-23 April

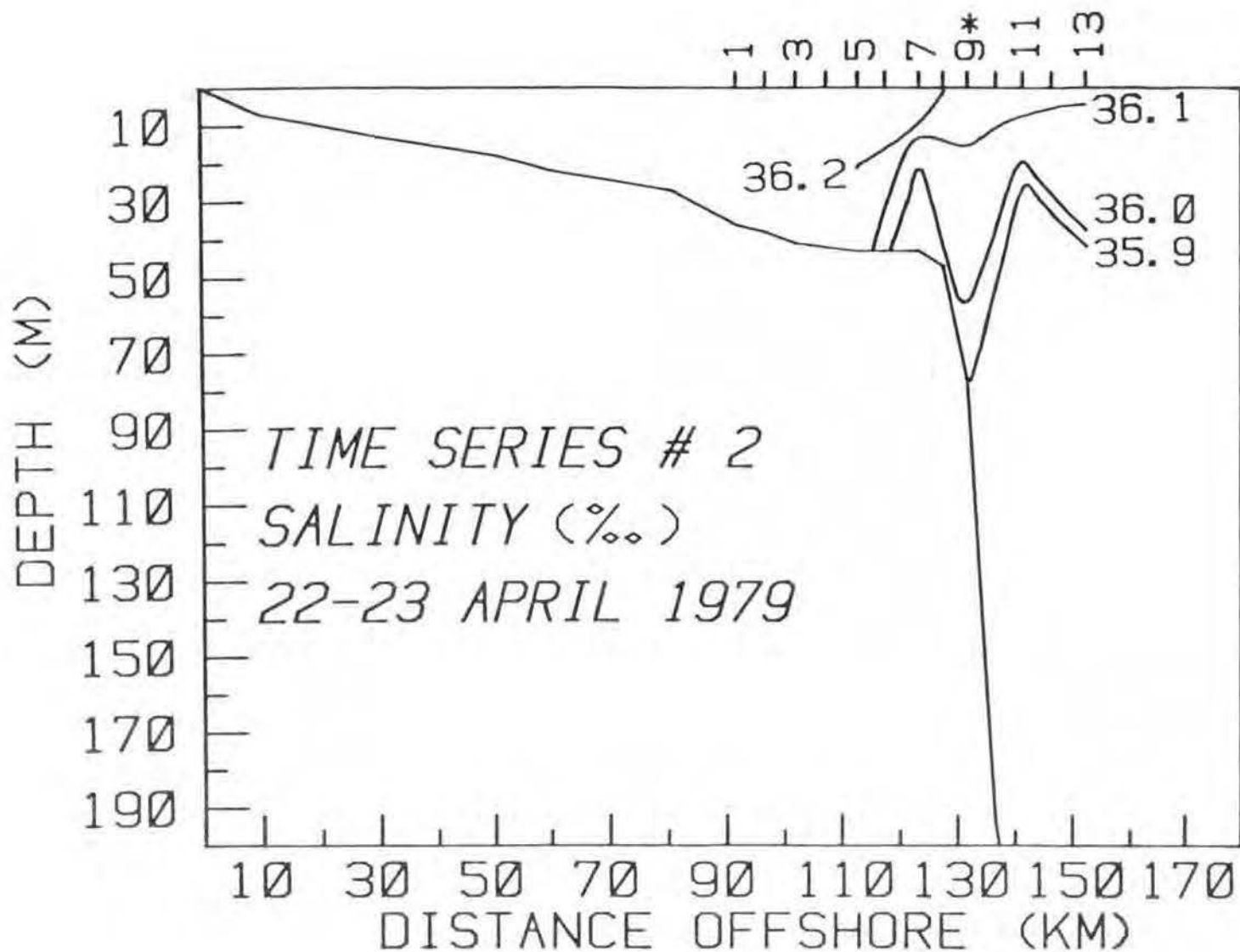


Figure 26. Time Series #2 Salinity, 22-23 April

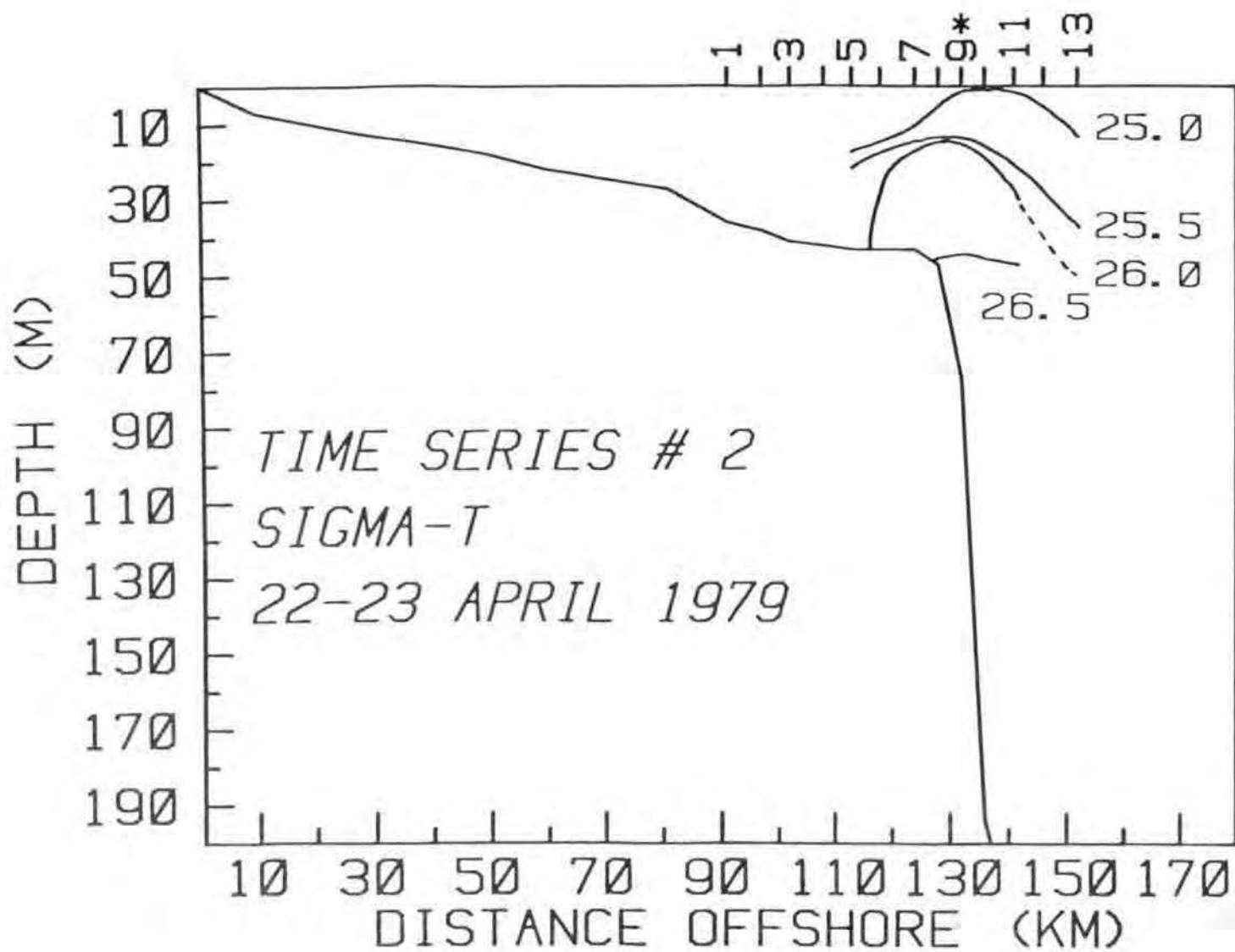


Figure 27. Time Series #2 Sigma-T, 22-23 April

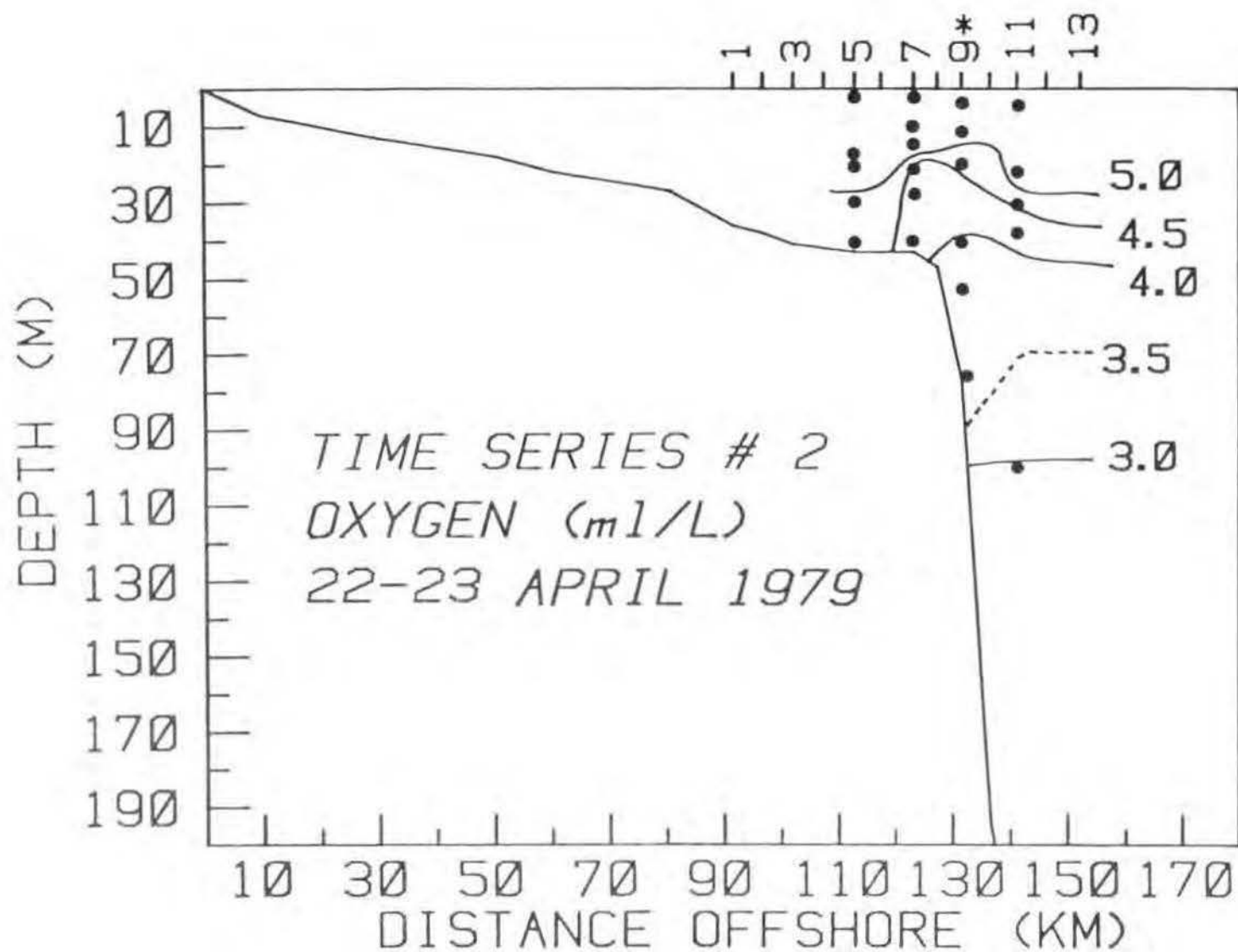


Figure 28. Time Series #2 Oxygen, 22-23 April

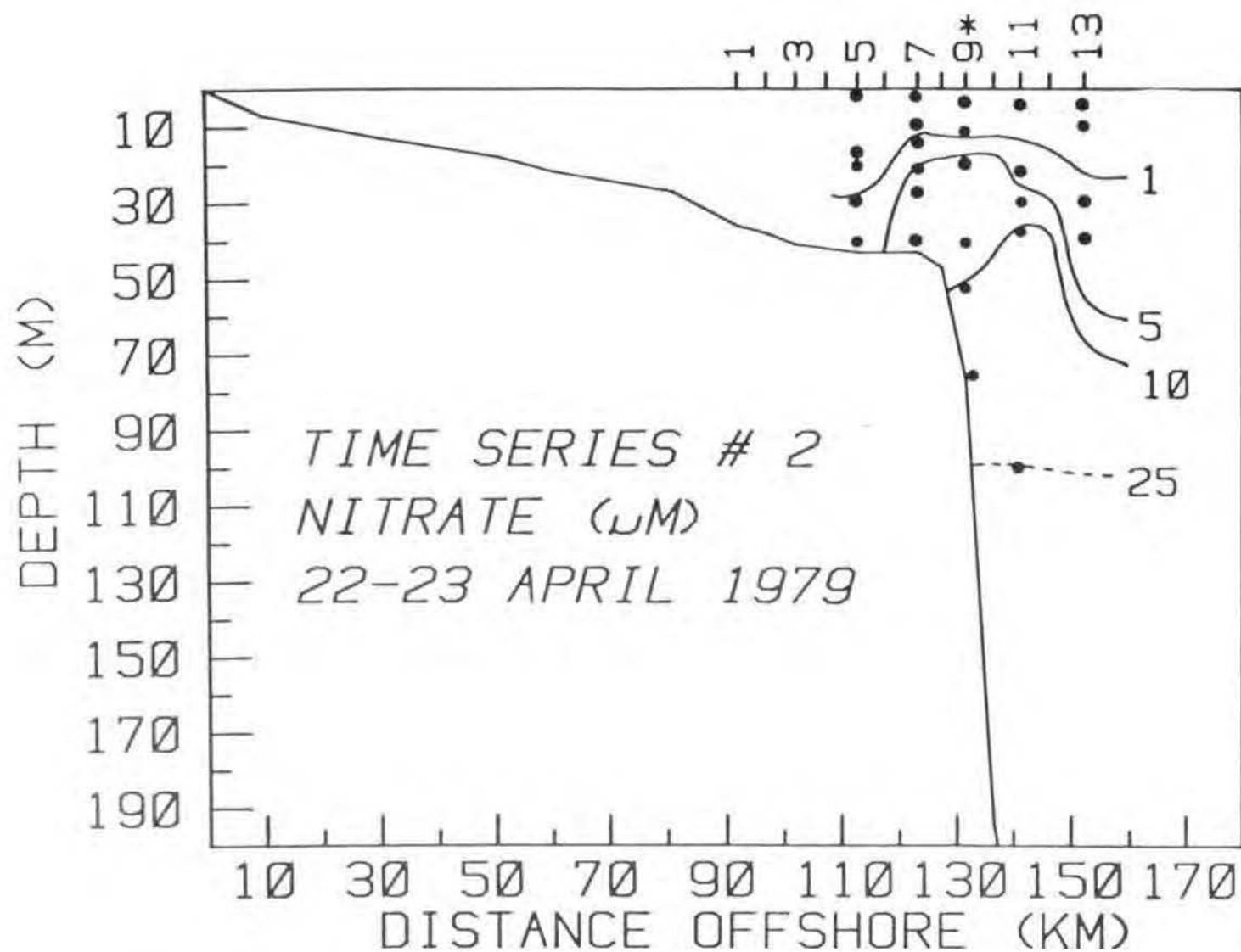


Figure 29. Time Series #2 Nitrate, 22-23 April

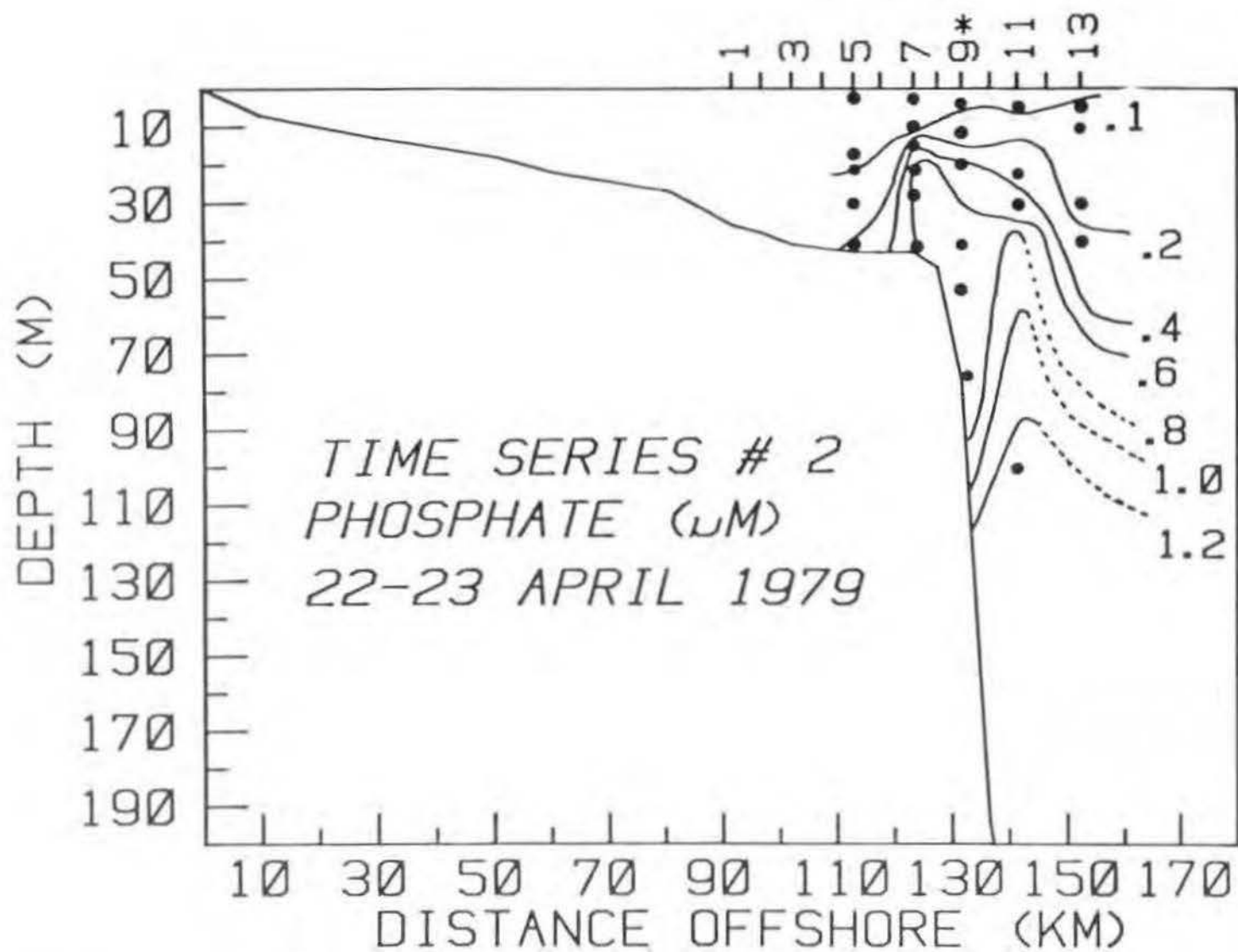


Figure 30. Time Series #2 Phosphate, 22-23 April

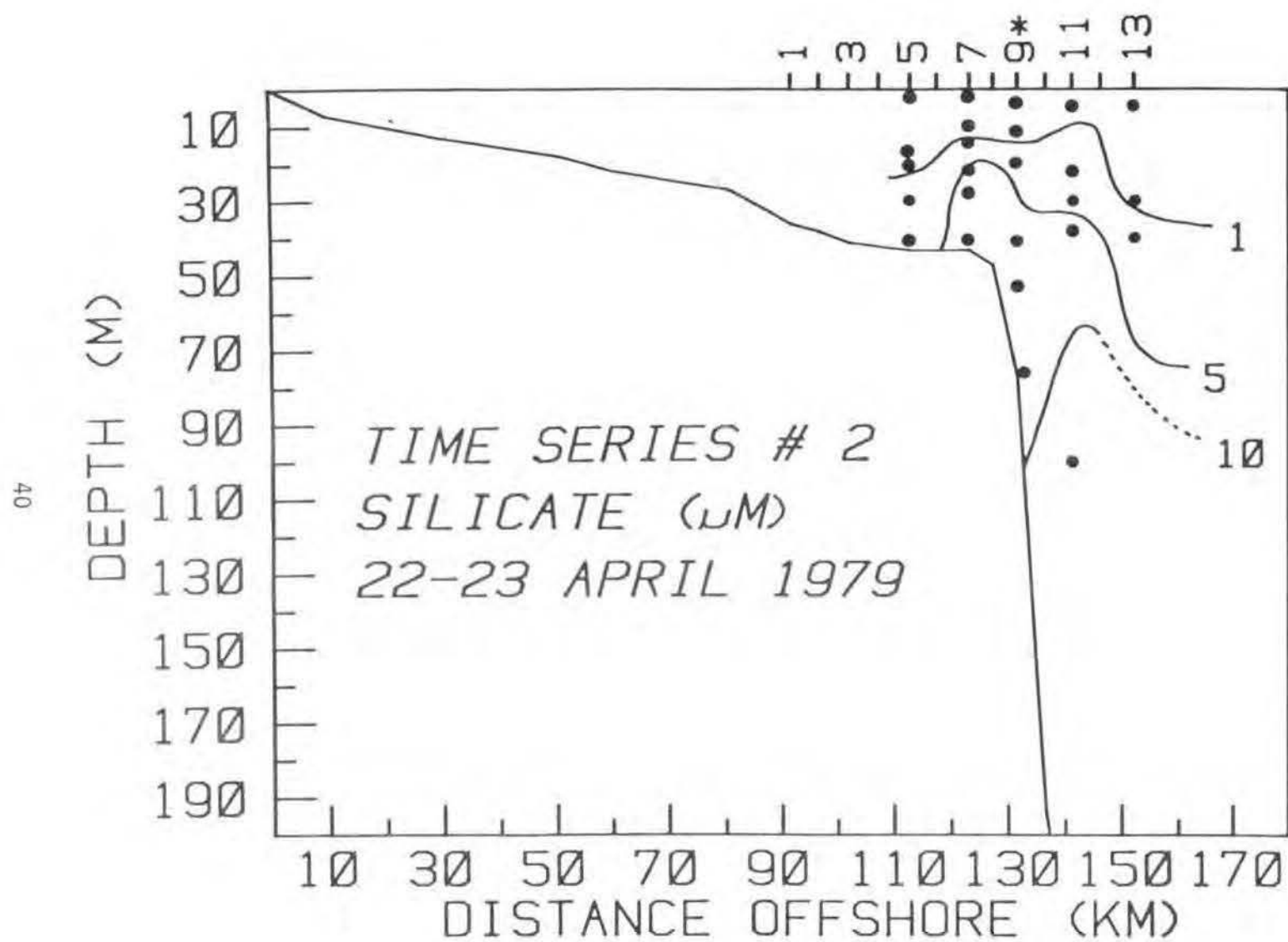


Figure 31. Time Series #2 Silicate, 22-23 April

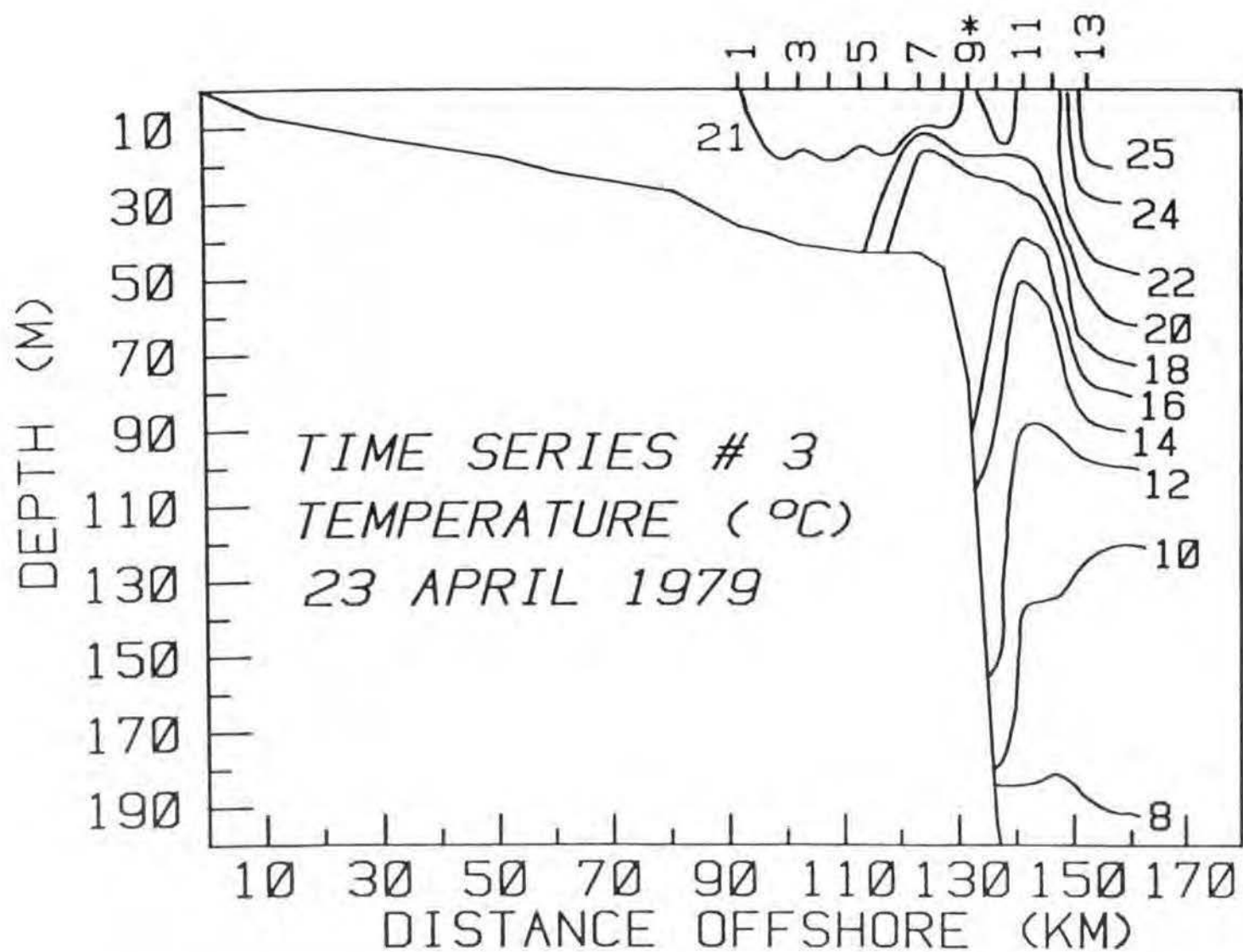


Figure 32. Time Series #3 Temperature, 23 April

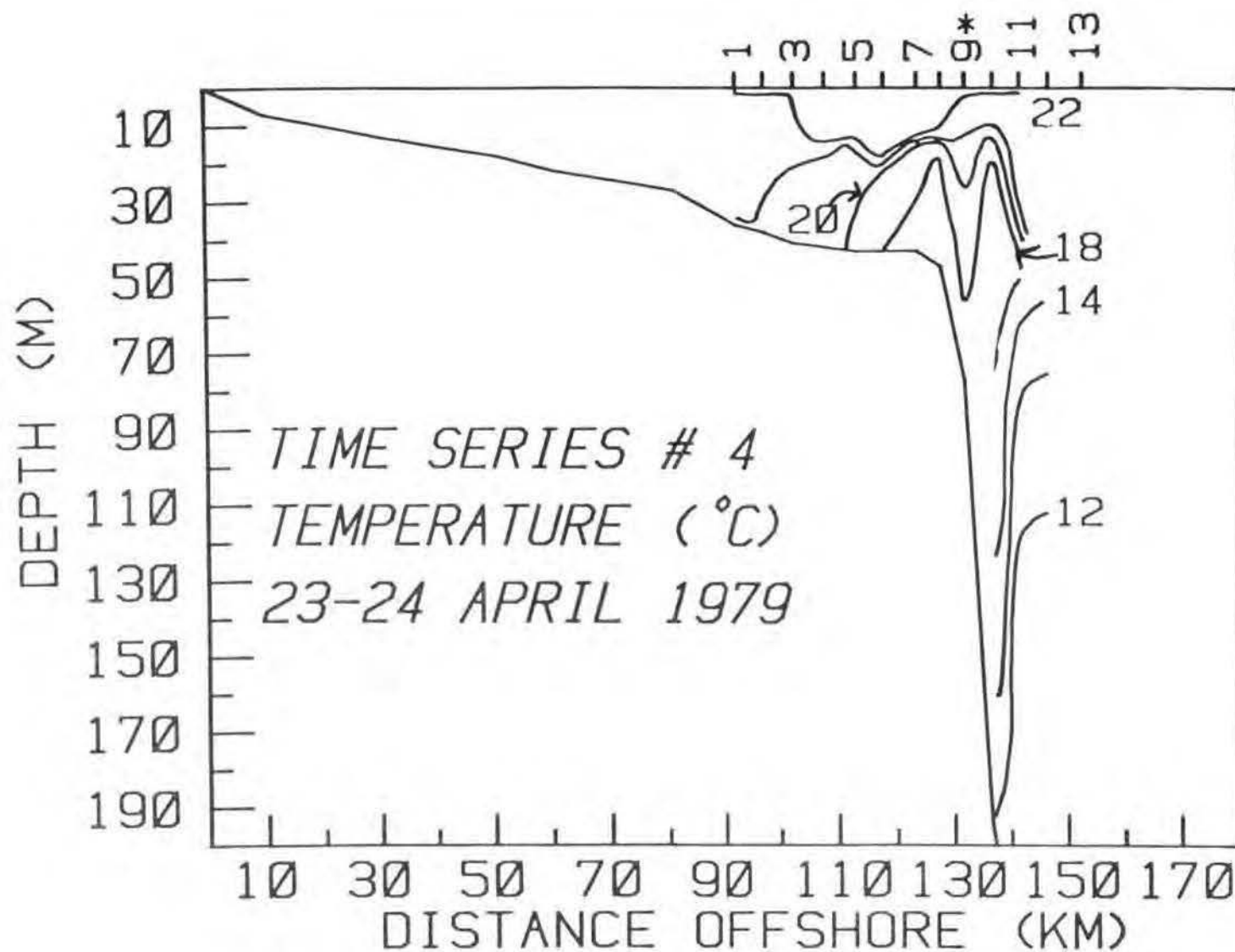


Figure 33. Time Series #4 Temperature, 23-24 April

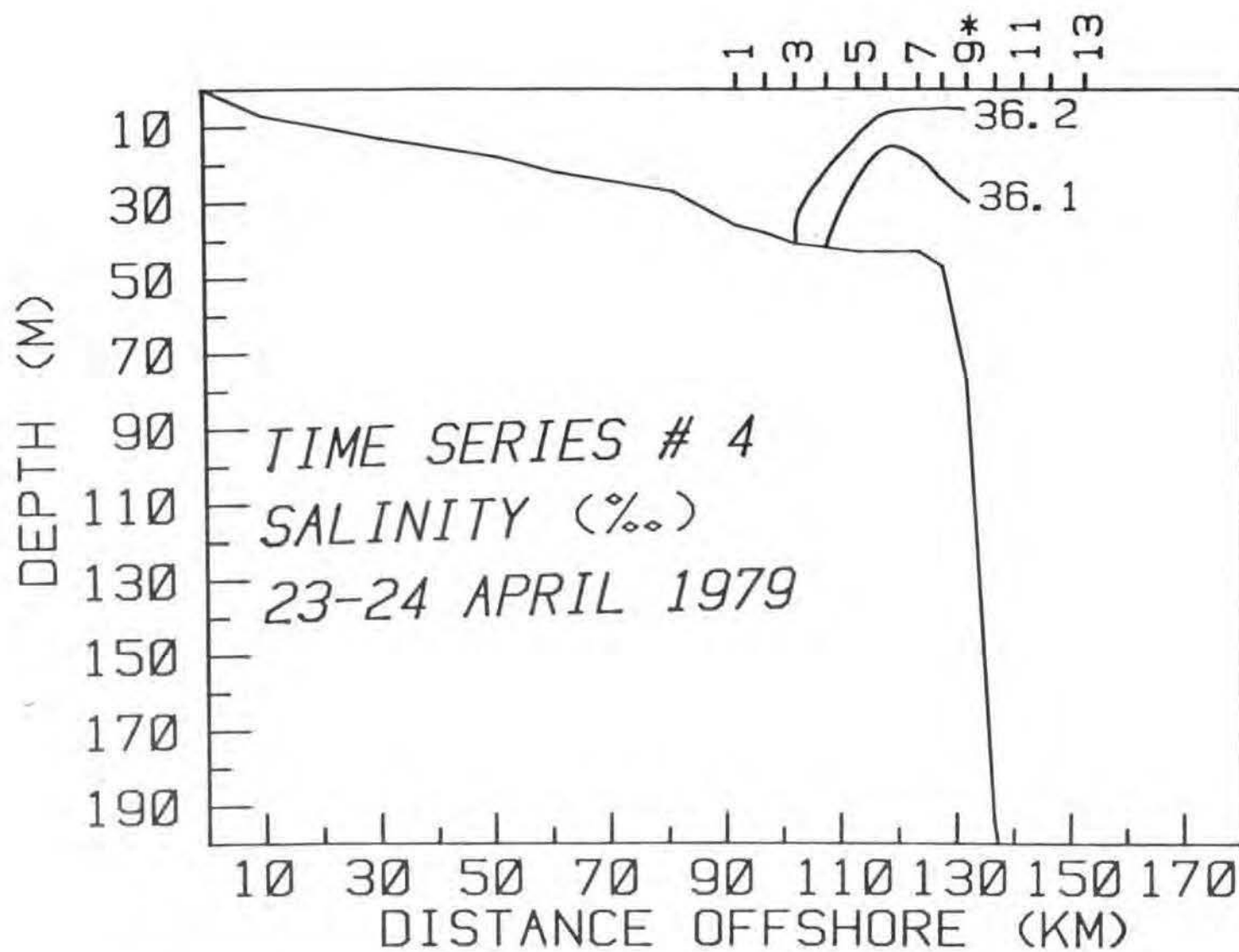


Figure 34. Time Series #4 Salinity, 23-24 April

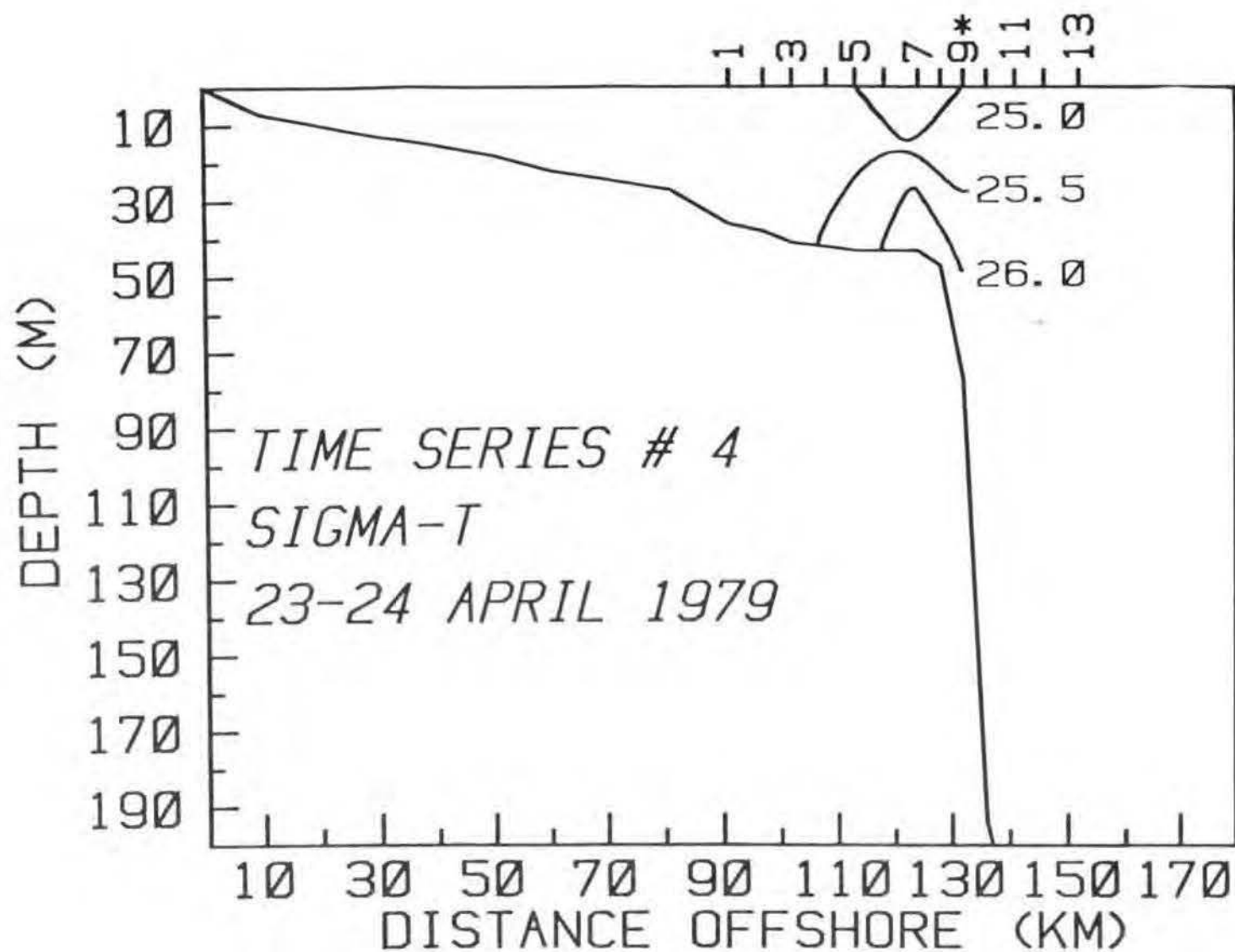


Figure 35. Time Series #4 Sigma-T, 23-24 April

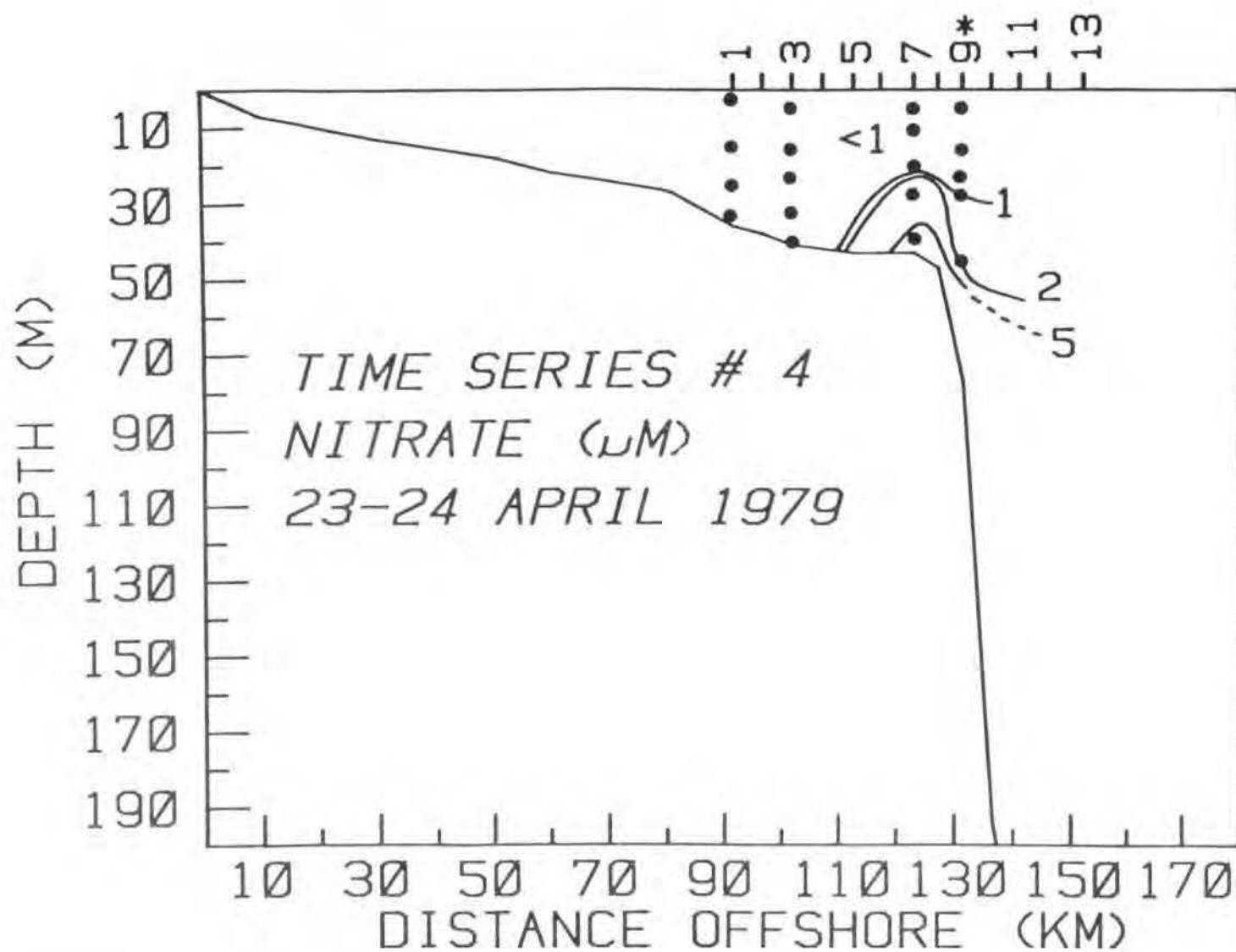


Figure 36. Time Series #4 Nitrate, 23-24 April

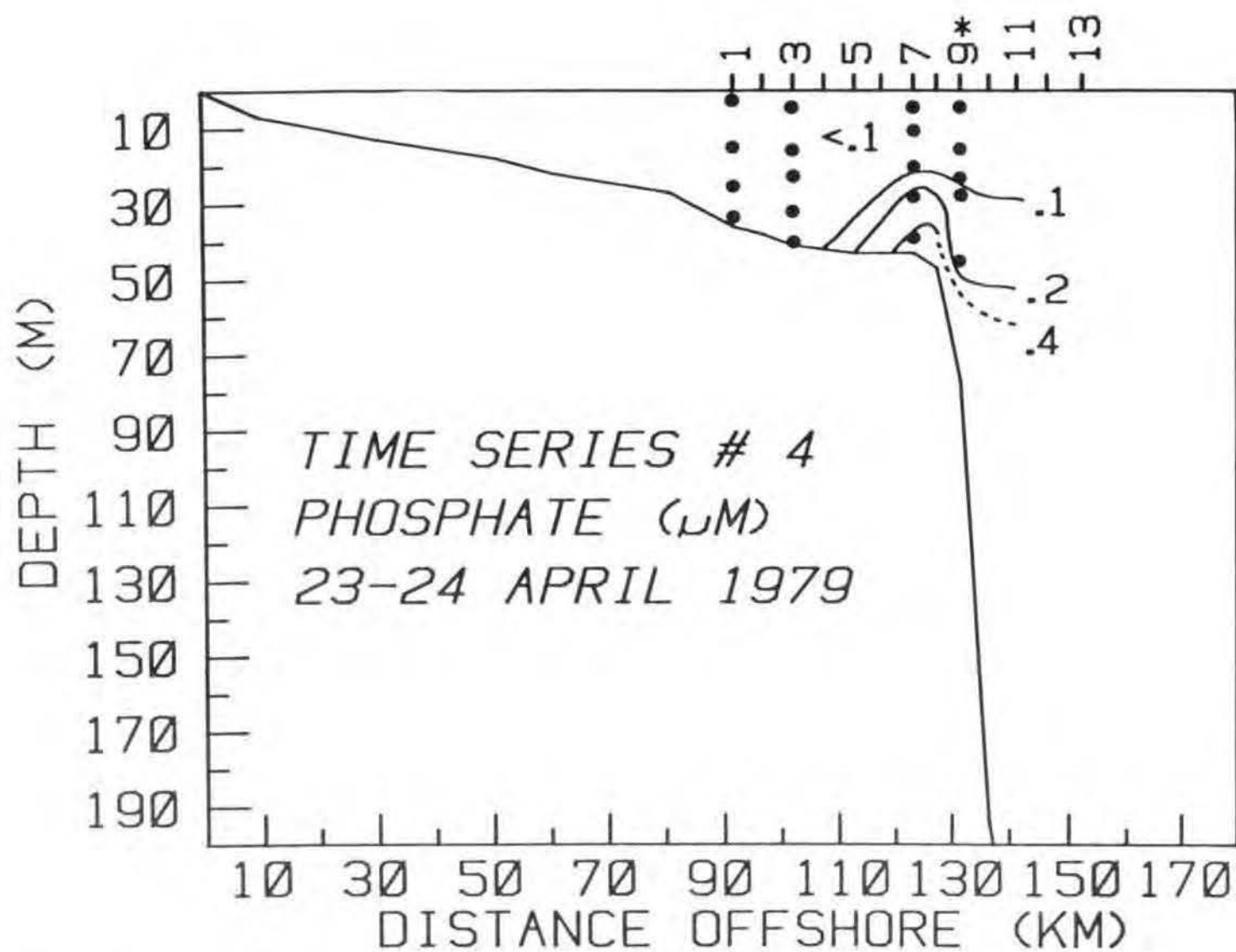


Figure 37. Time Series #4 Phosphate, 23-24 April

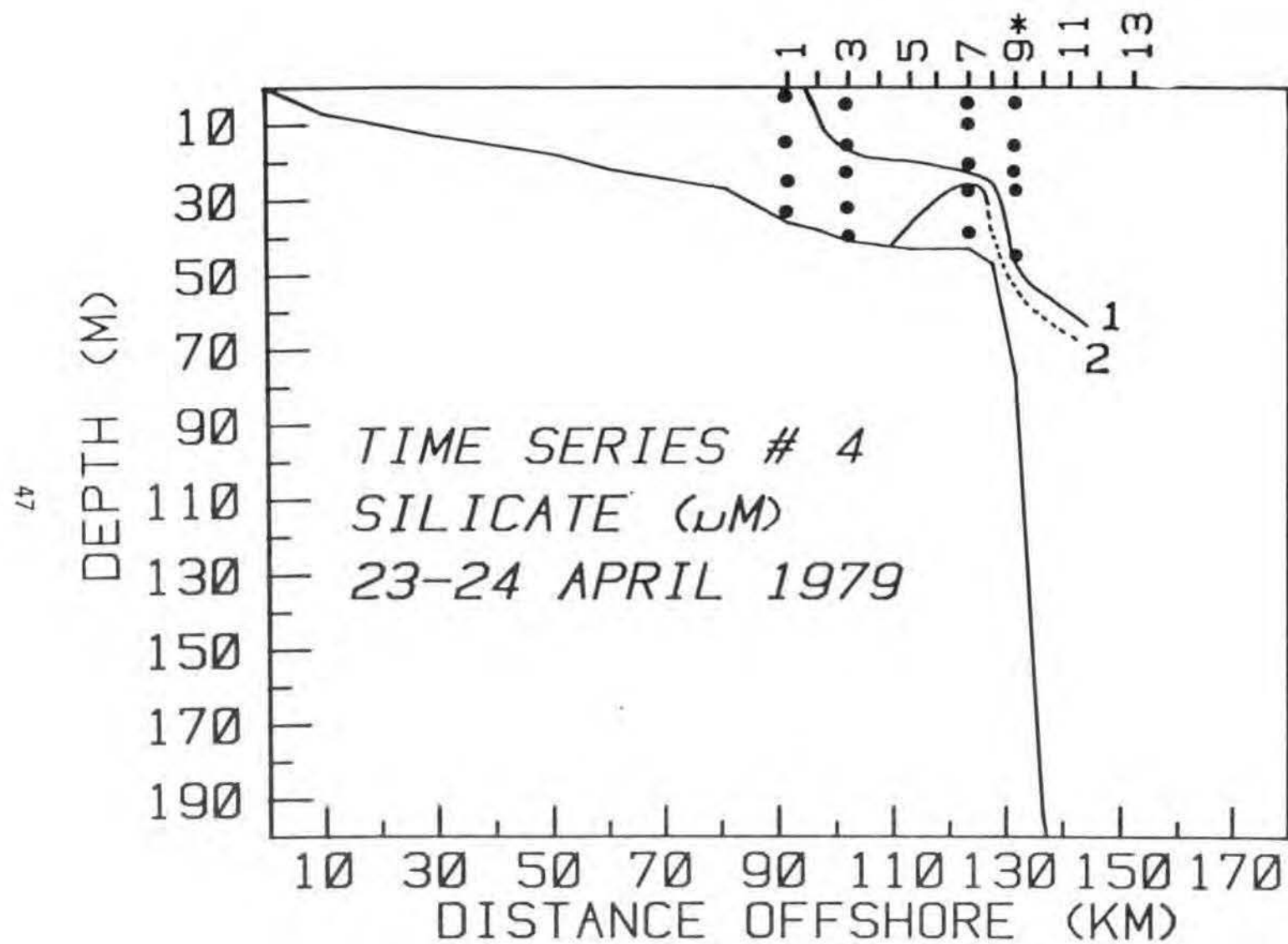


Figure 38. Time Series #4 Silicate, 23-24 April

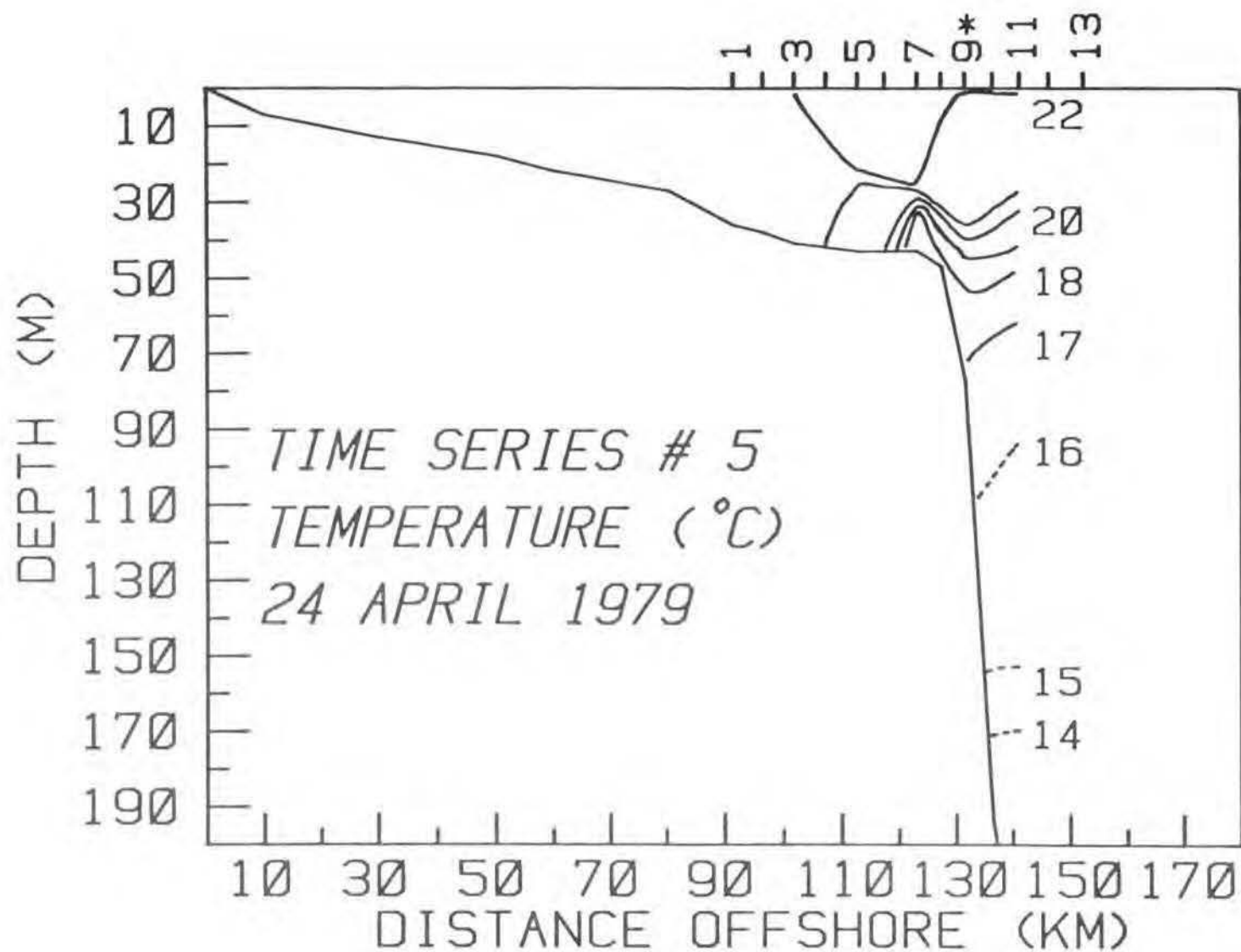


Figure 39. Time Series #5 Temperature, 24 April

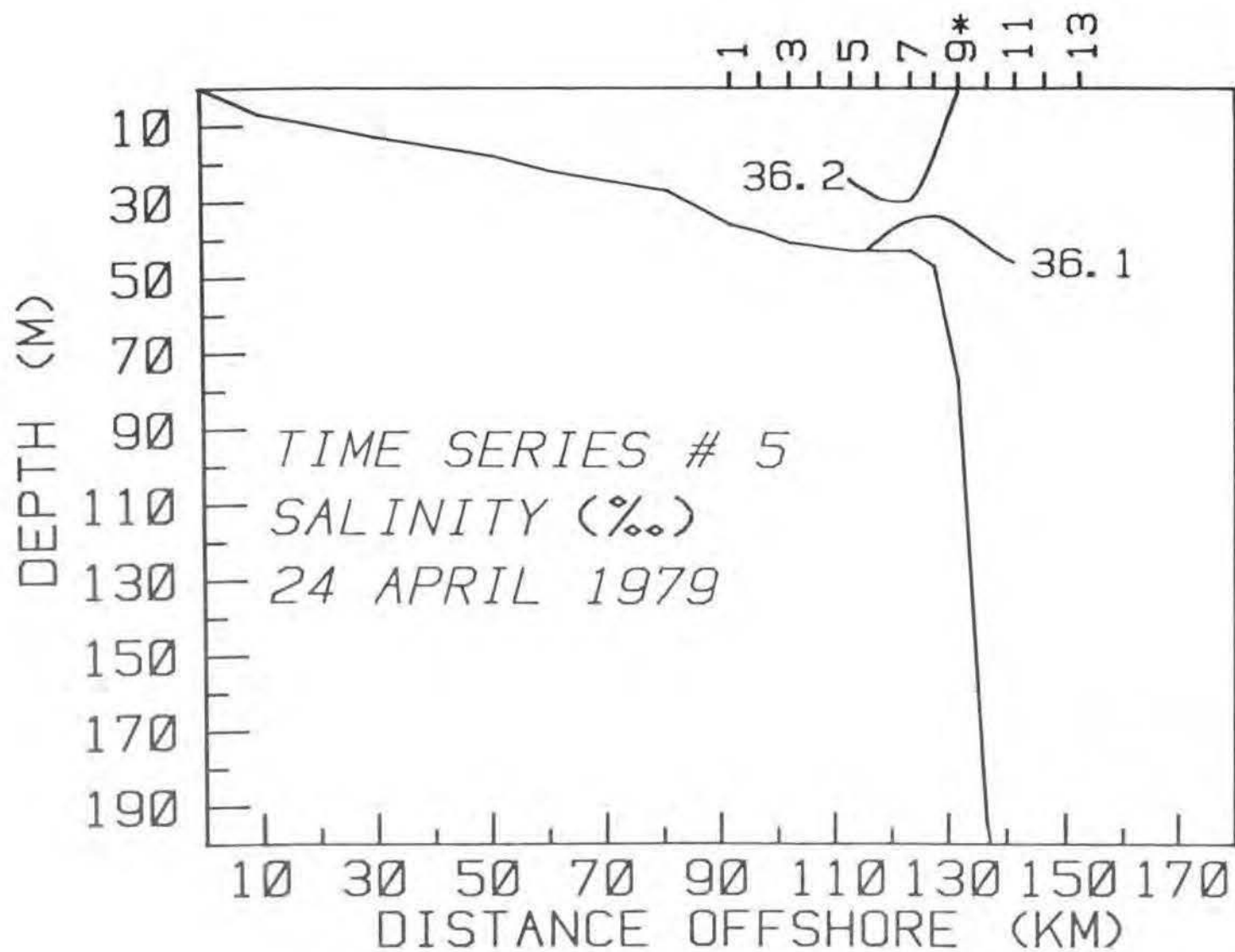


Figure 40. Time Series #5 Salinity, 24 April

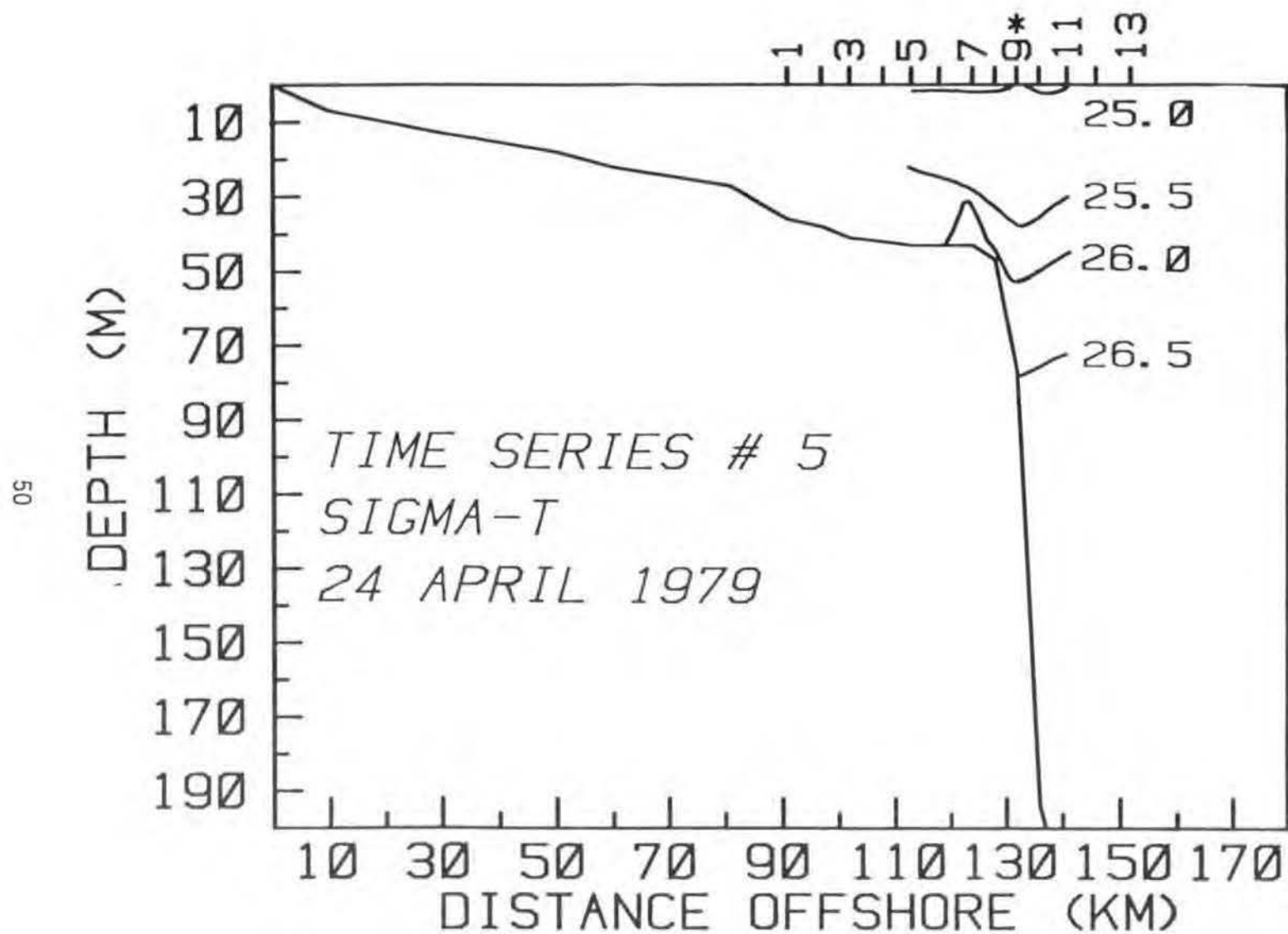


Figure 41. Time Series #5 Sigma-T, 24 April

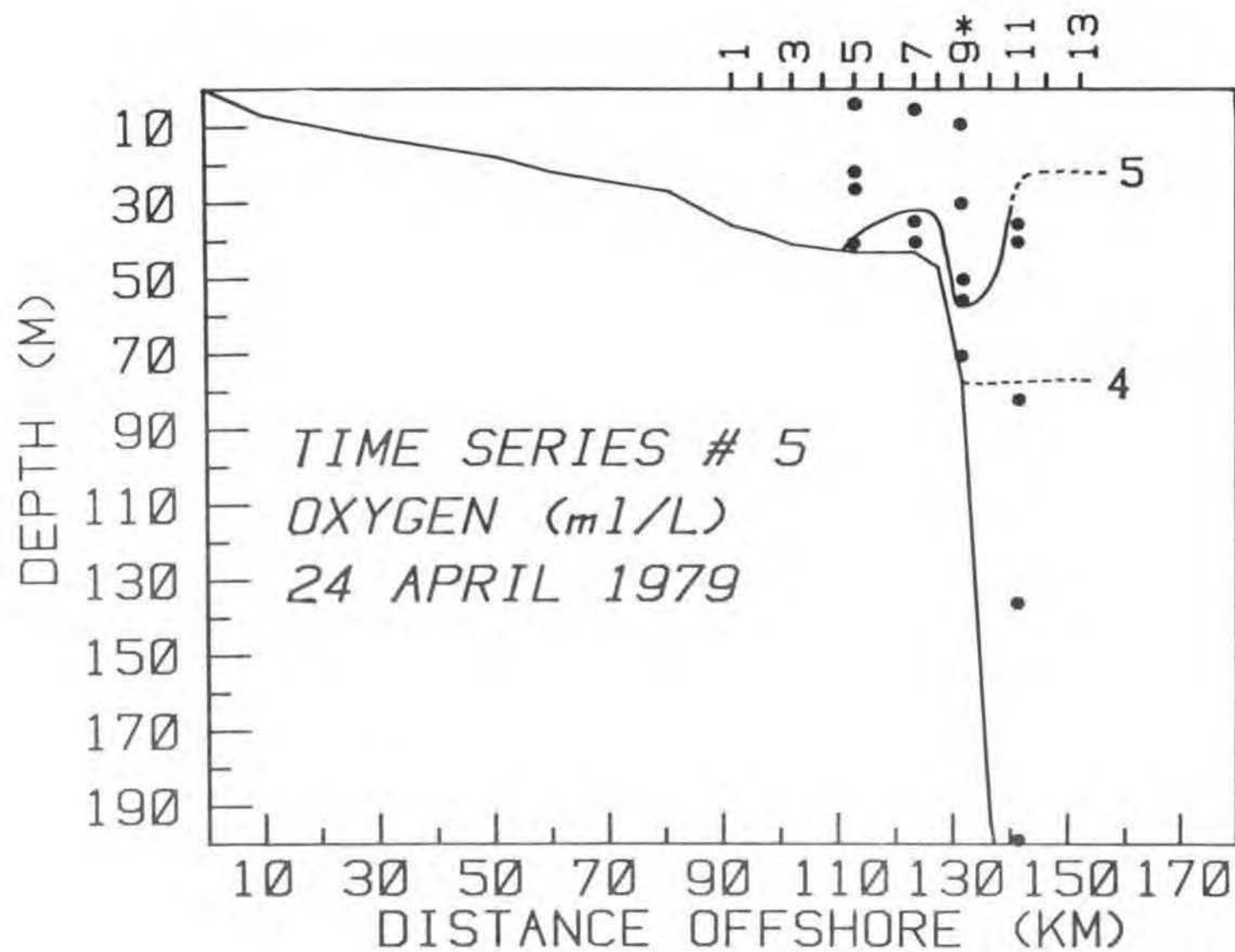


Figure 42. Time Series #5 Oxygen, 24 April

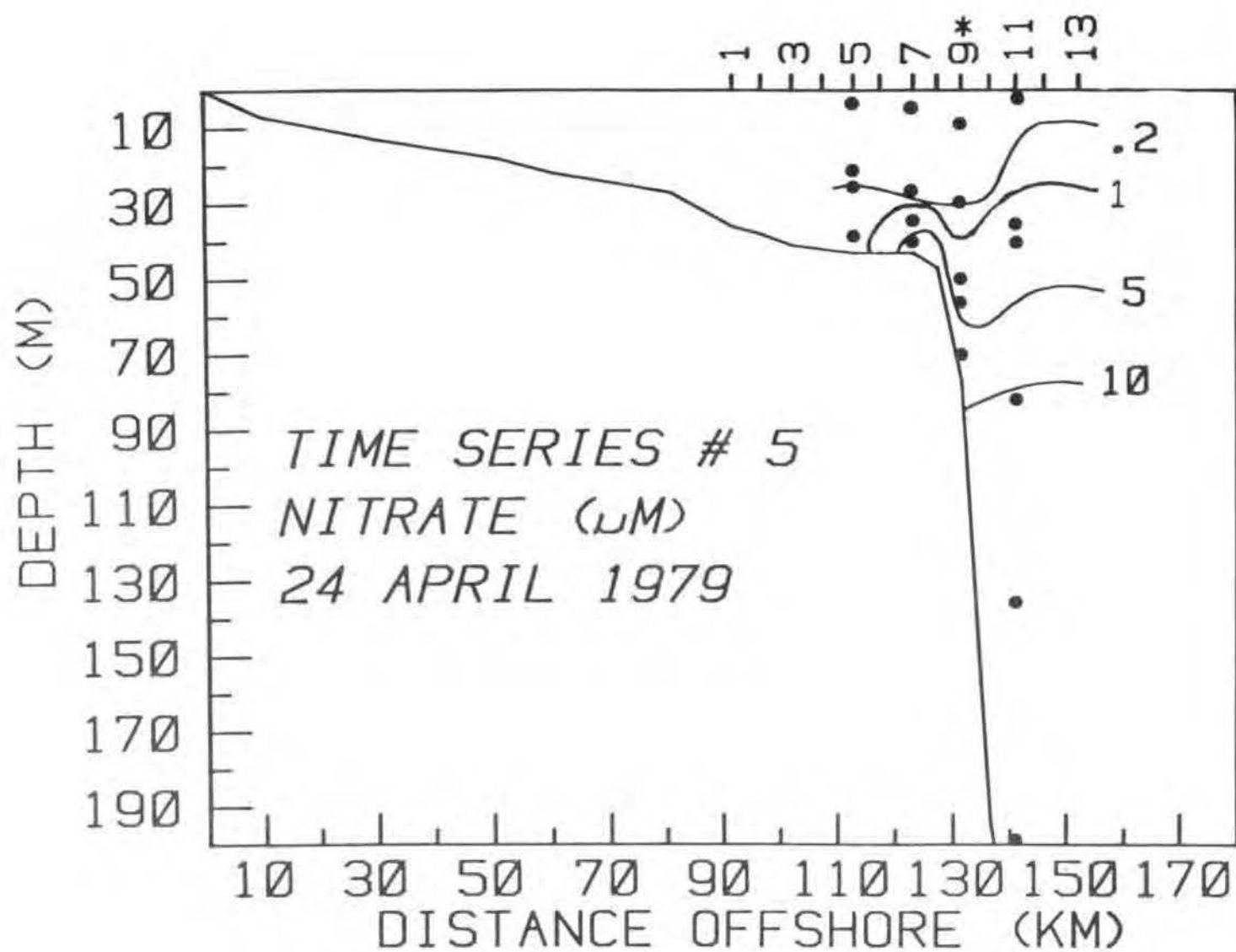


Figure 43. Time Series #5 Nitrate, 24 April

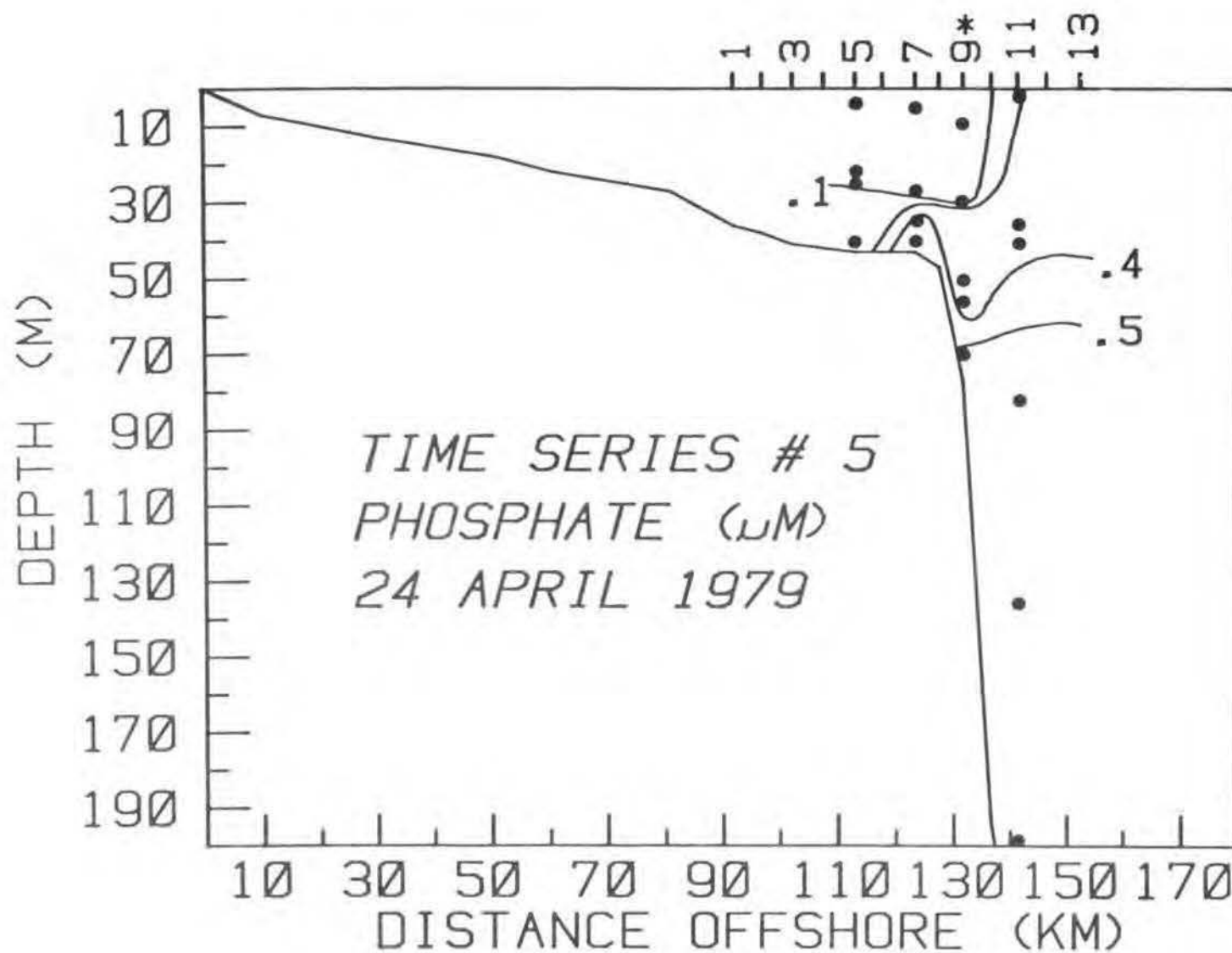


Figure 44. Time Series #5 Phosphate, 24 April

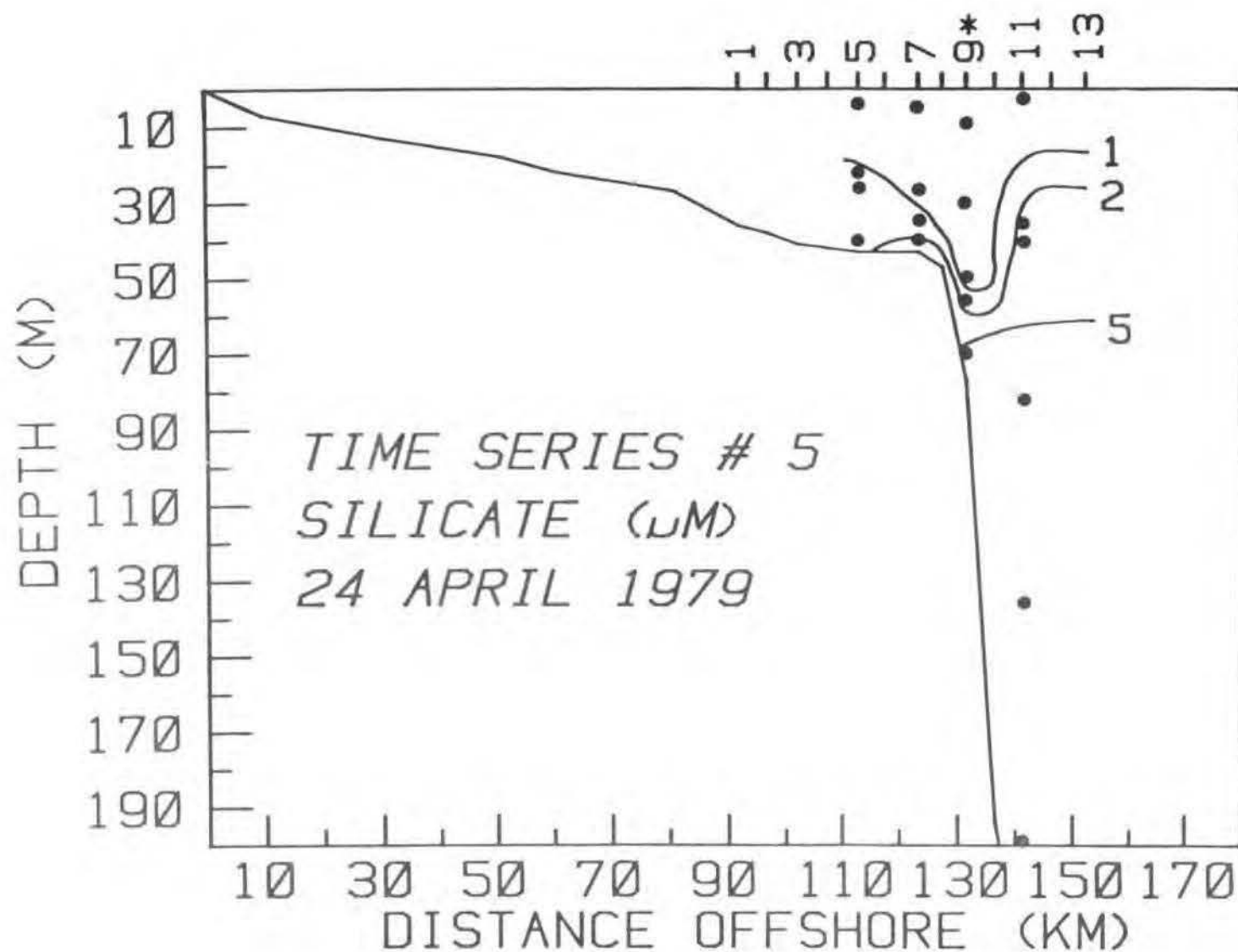


Figure 45. Time Series #5 Silicate, 24 April

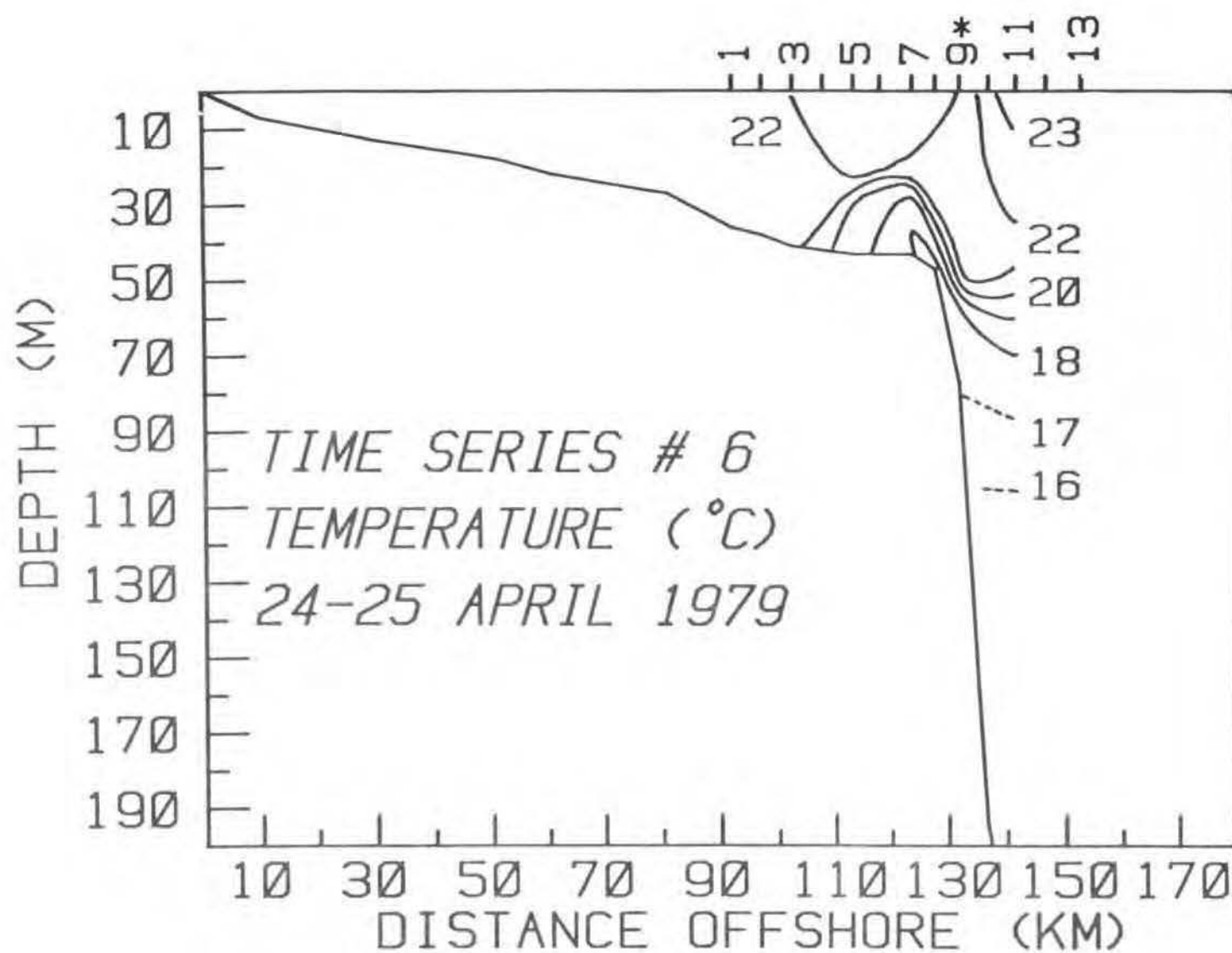


Figure 46. Time Series #6 Temperature, 24-25 April

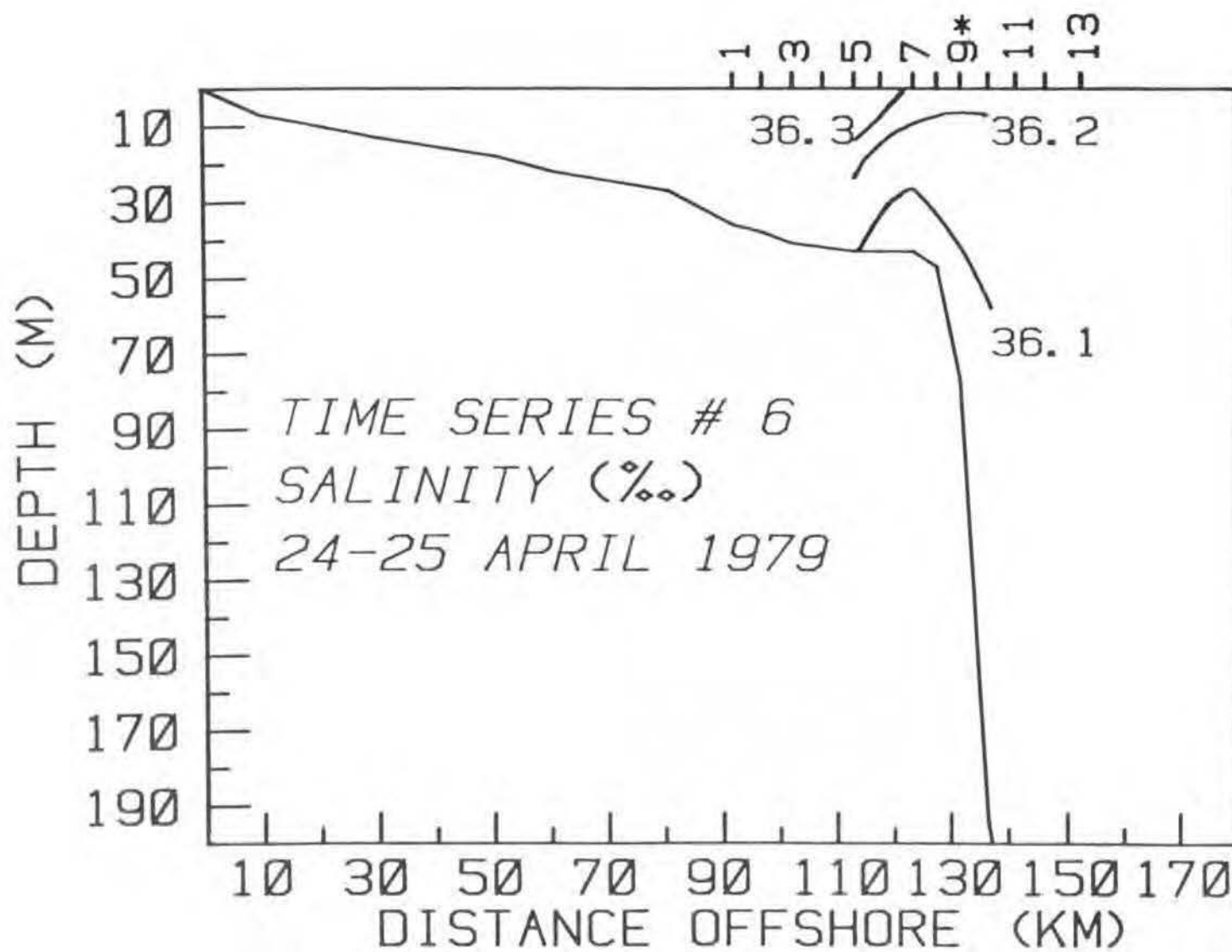


Figure 47. Time Series #6 Salinity, 24-25 April

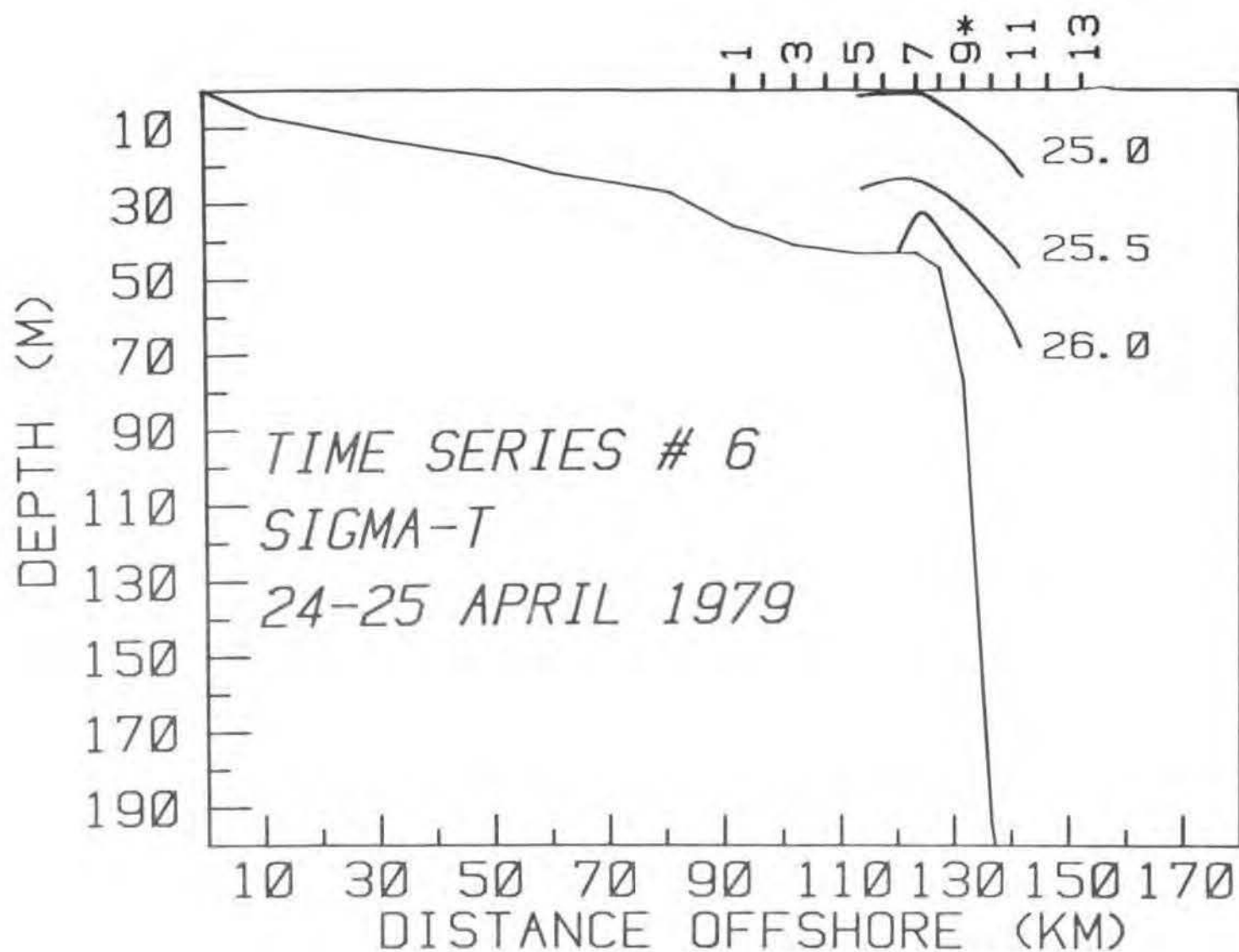


Figure 48. Time Series #6 Sigma-T, 24-25 April

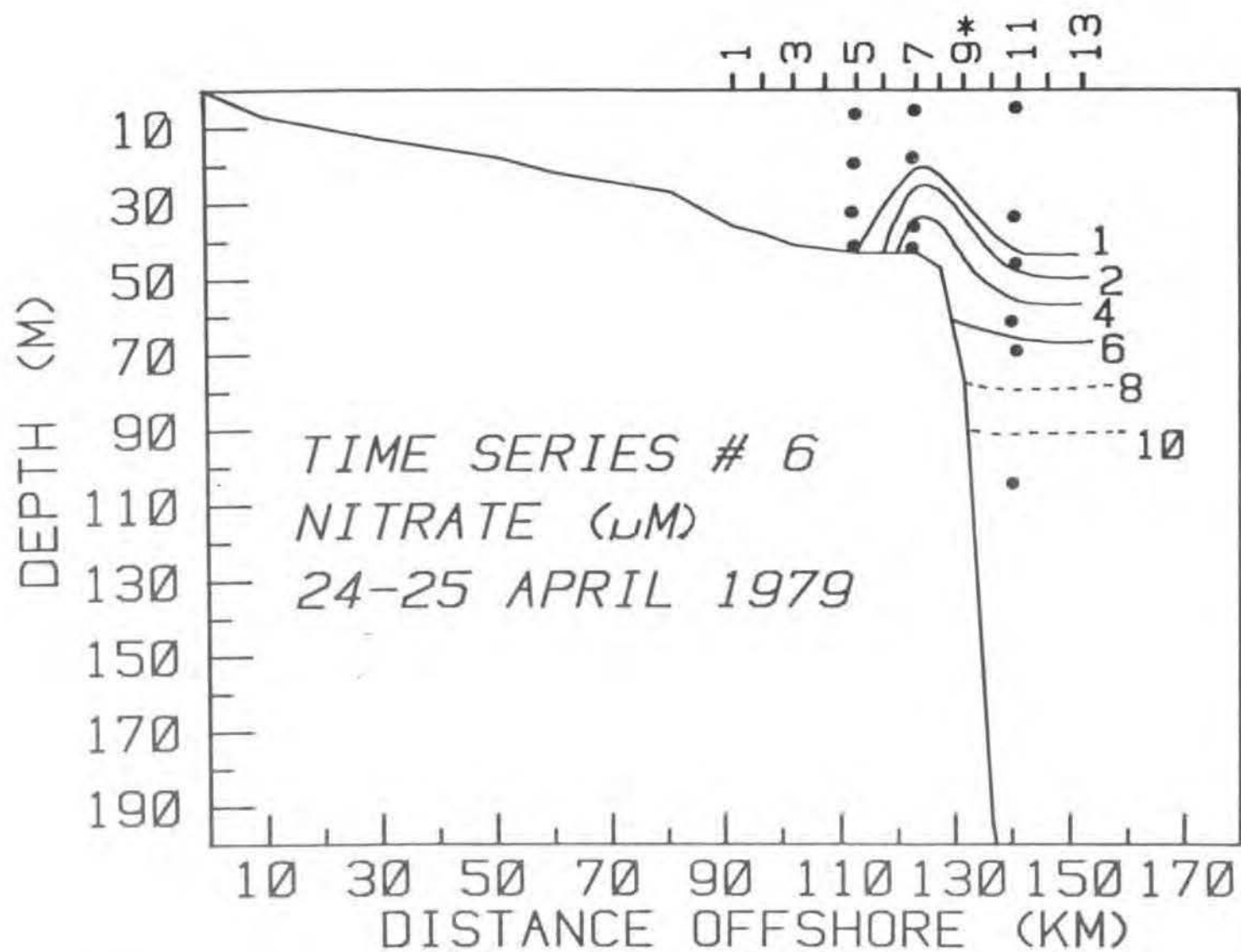


Figure 49. Time Series #6 Nitrate, 24-25 April

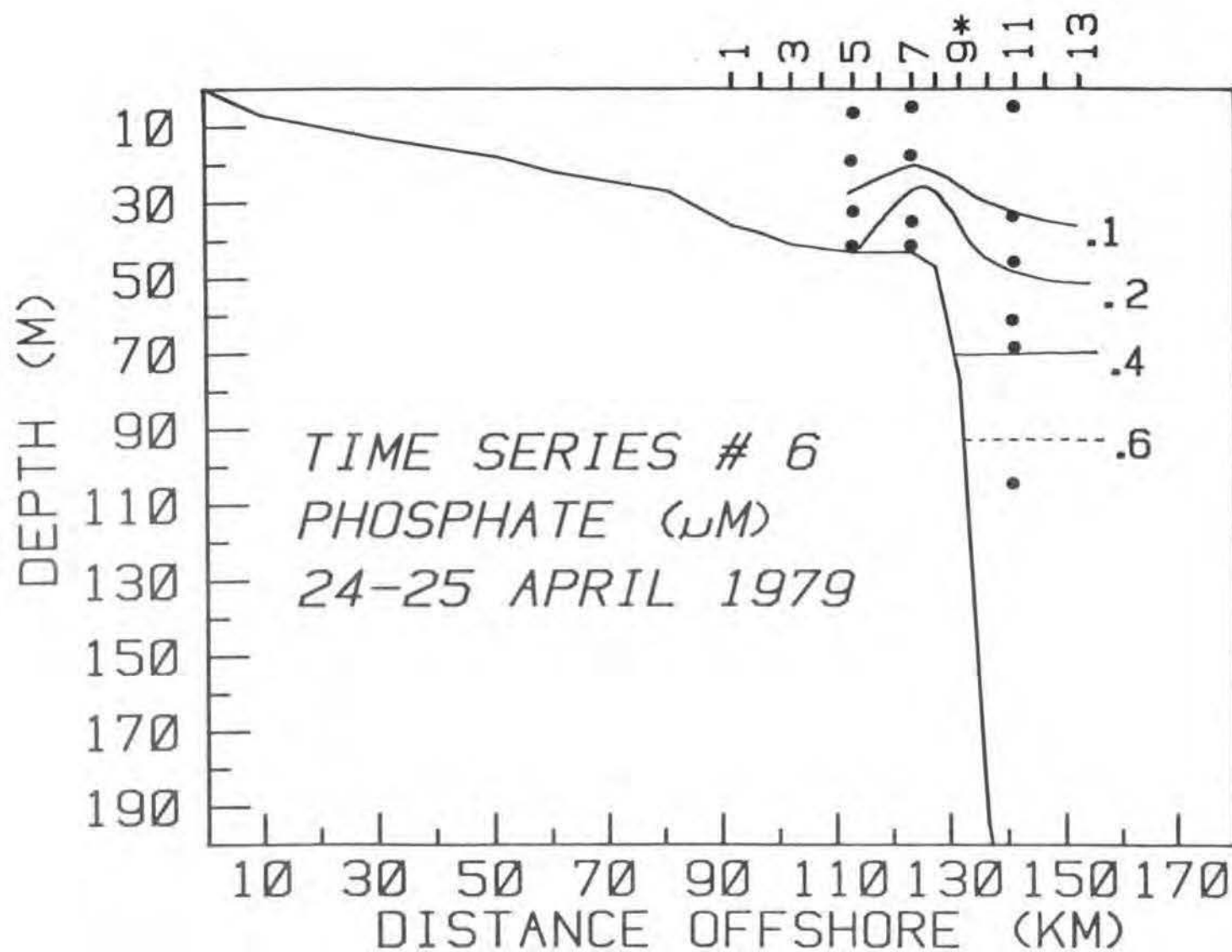


Figure 50. Time Series #6 Phosphate, 24-25 April

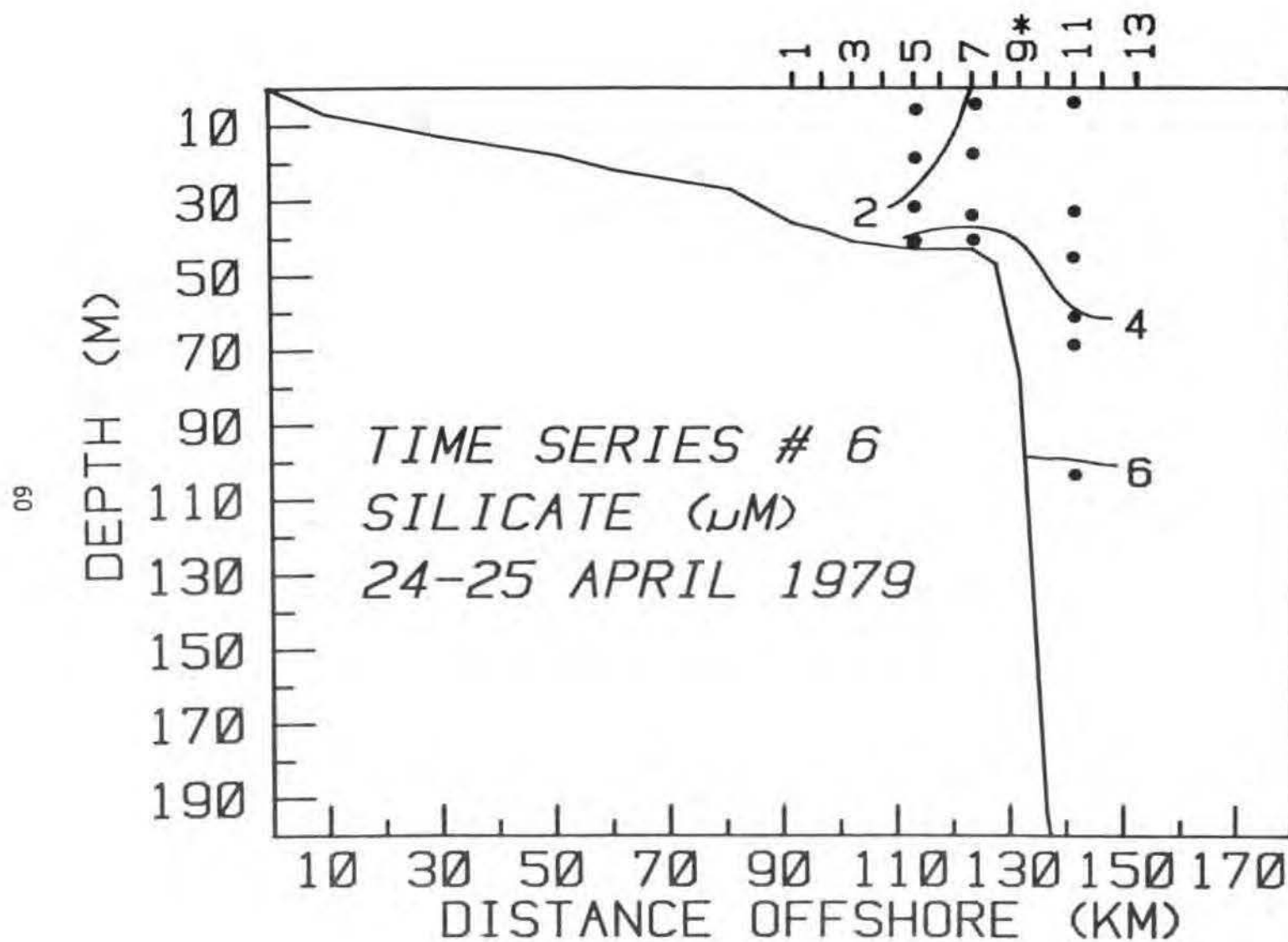


Figure 51. Time Series #6 Silicate, 24-25 April

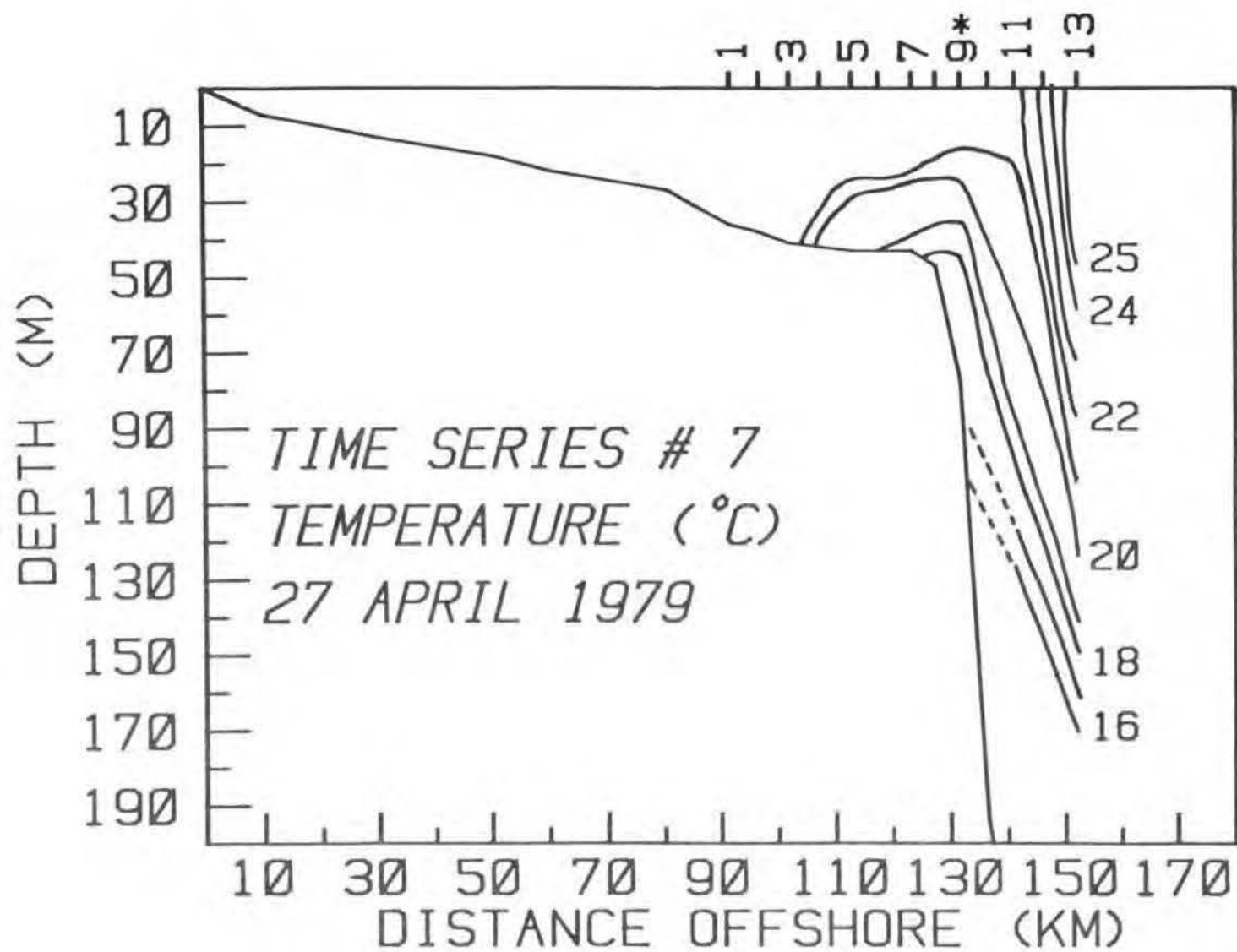


Figure 52. Time Series #7 Temperature, 27 April

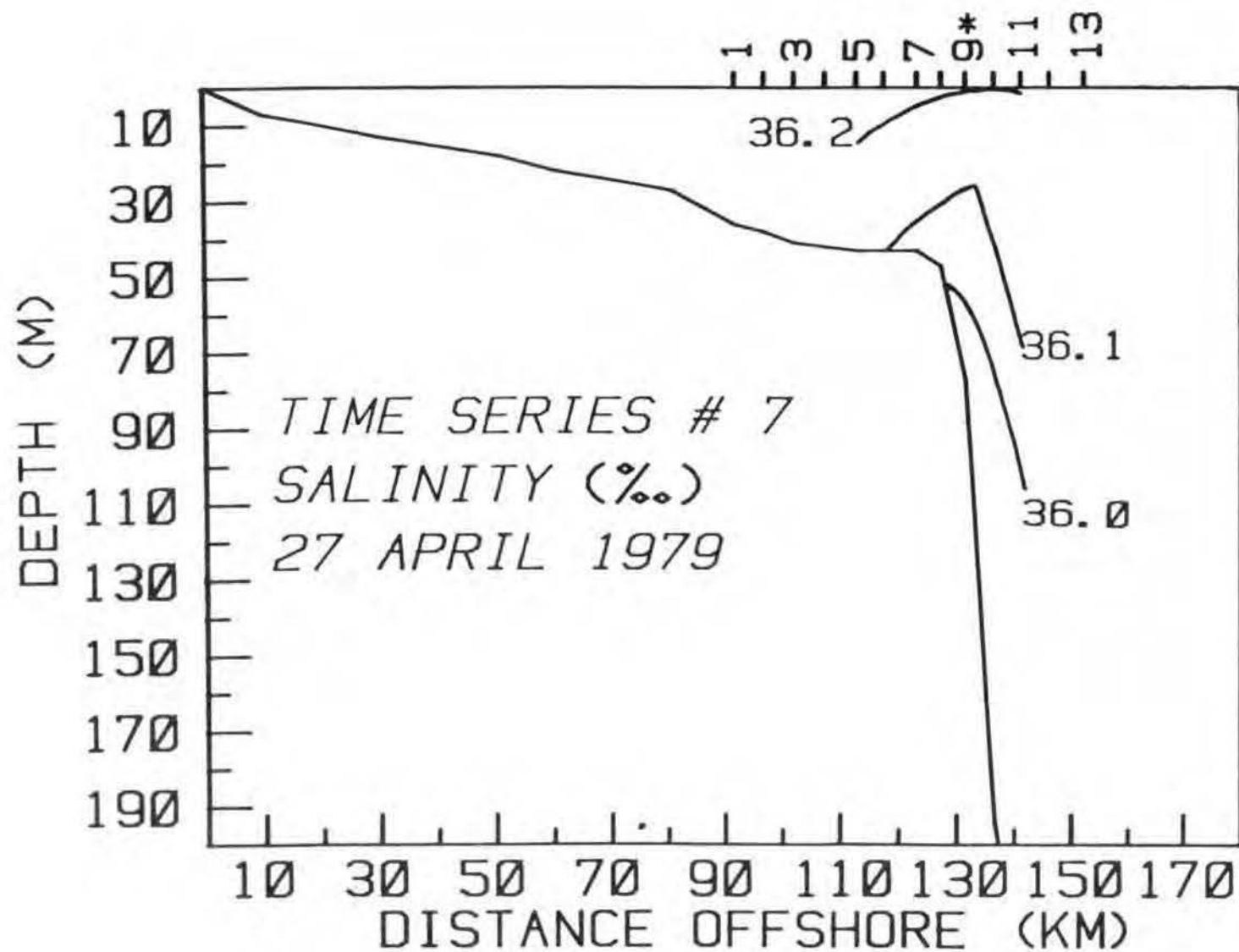


Figure 53. Time Series #7 Salinity, 27 April

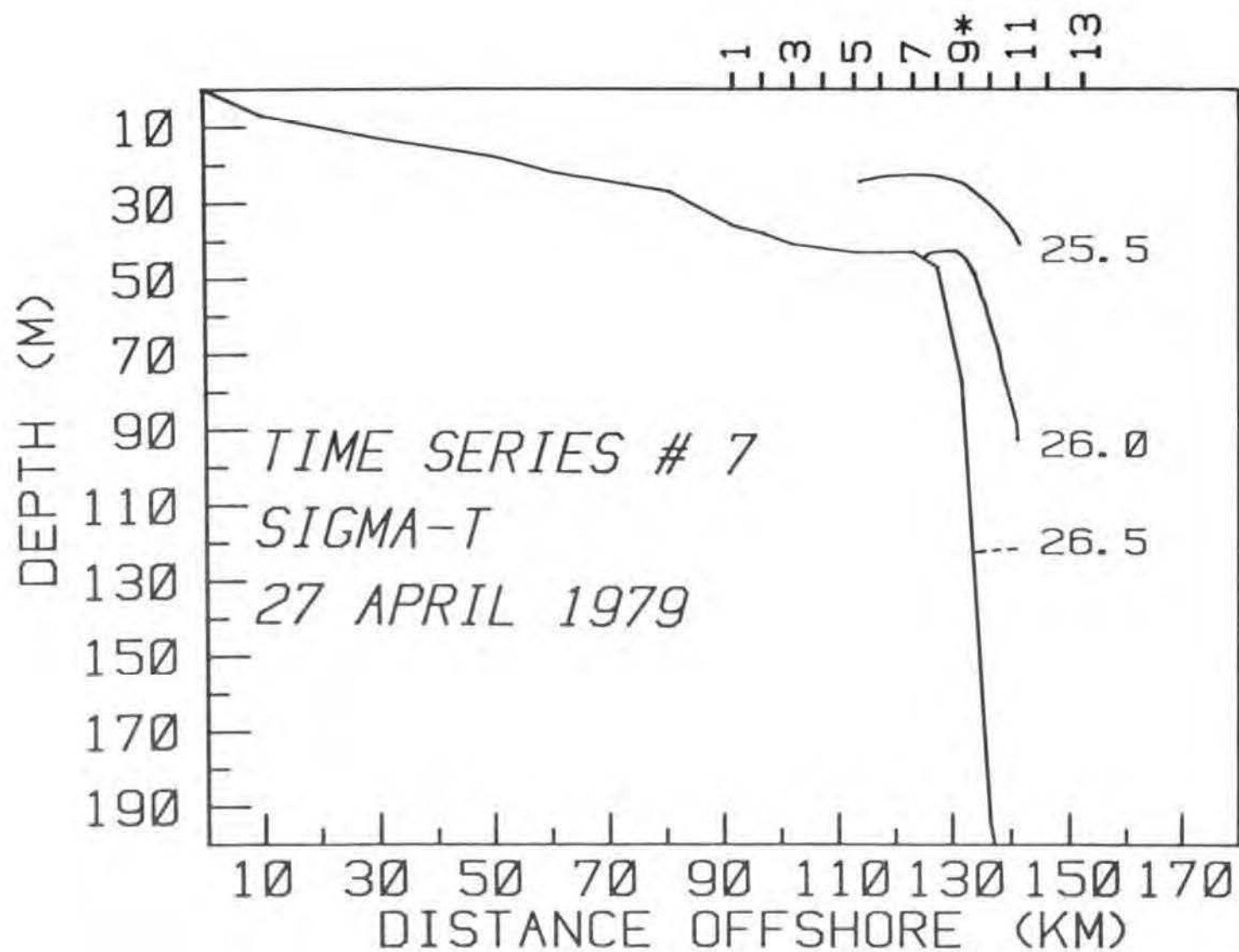


Figure 54. Time Series #7 Sigma-T, 27 April

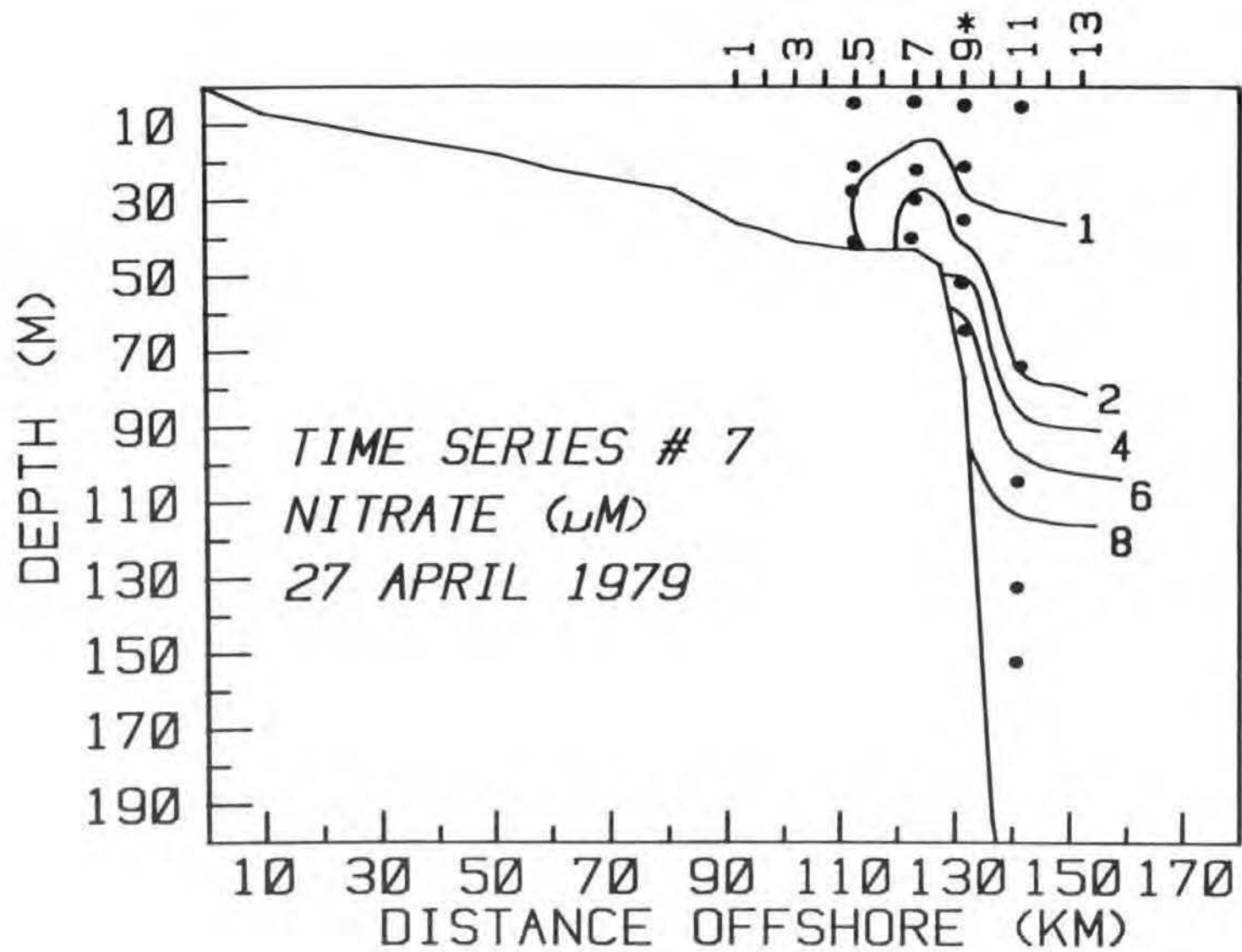


Figure 55. Time Series #7 Nitrate, 27 April

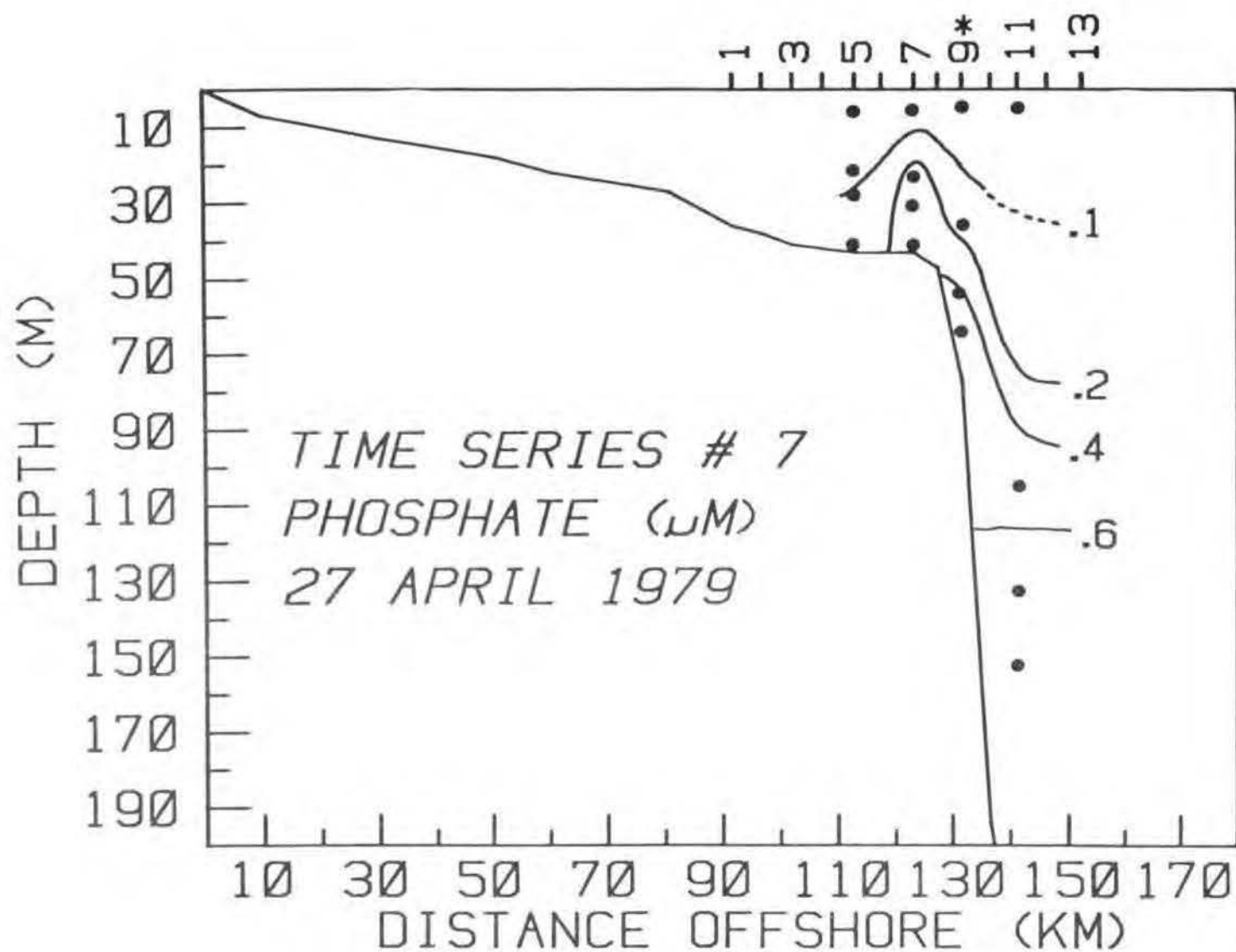


Figure 56. Time Series #7 Phosphate, 27 April

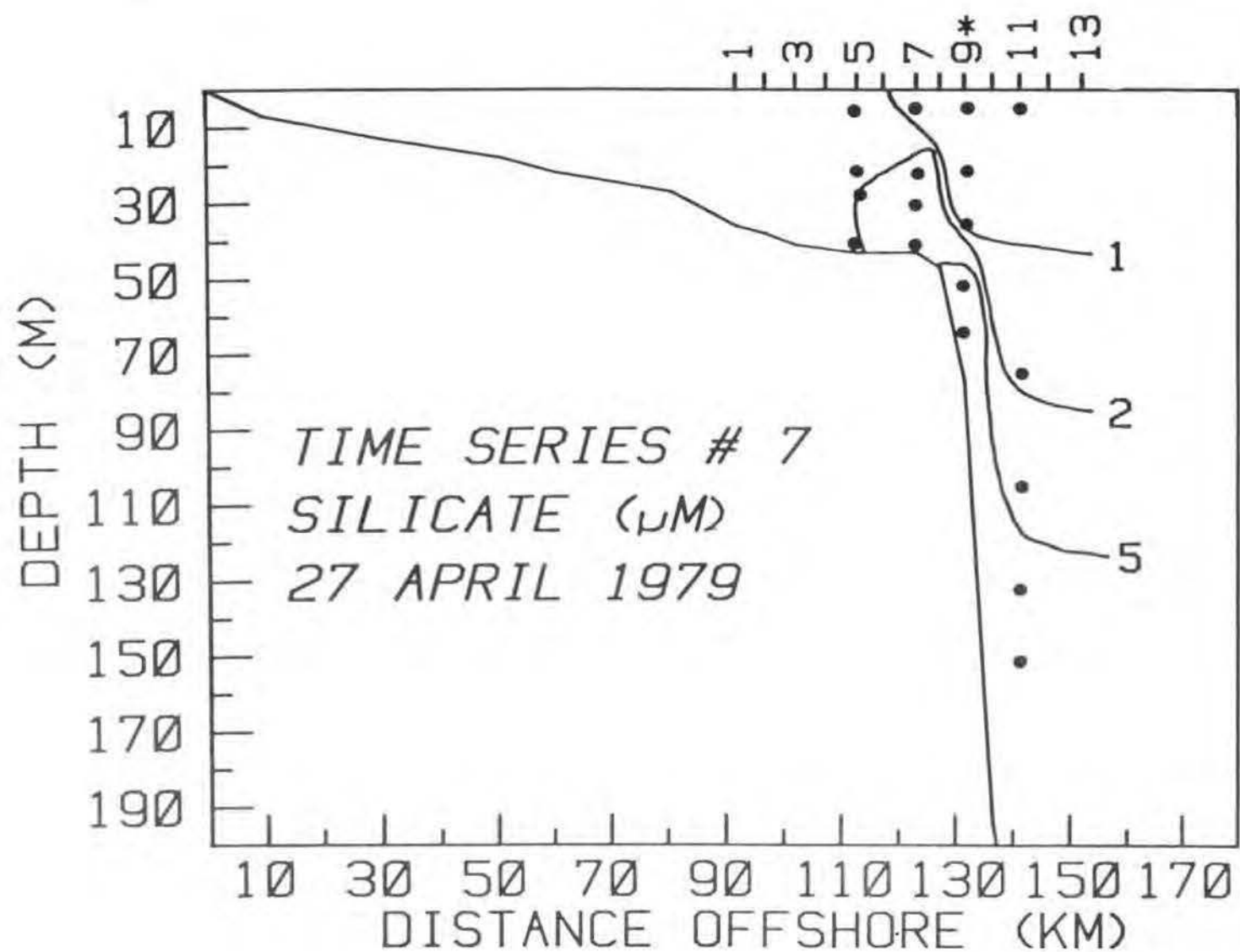


Figure 57. Time Series #7 Silicate, 27 April

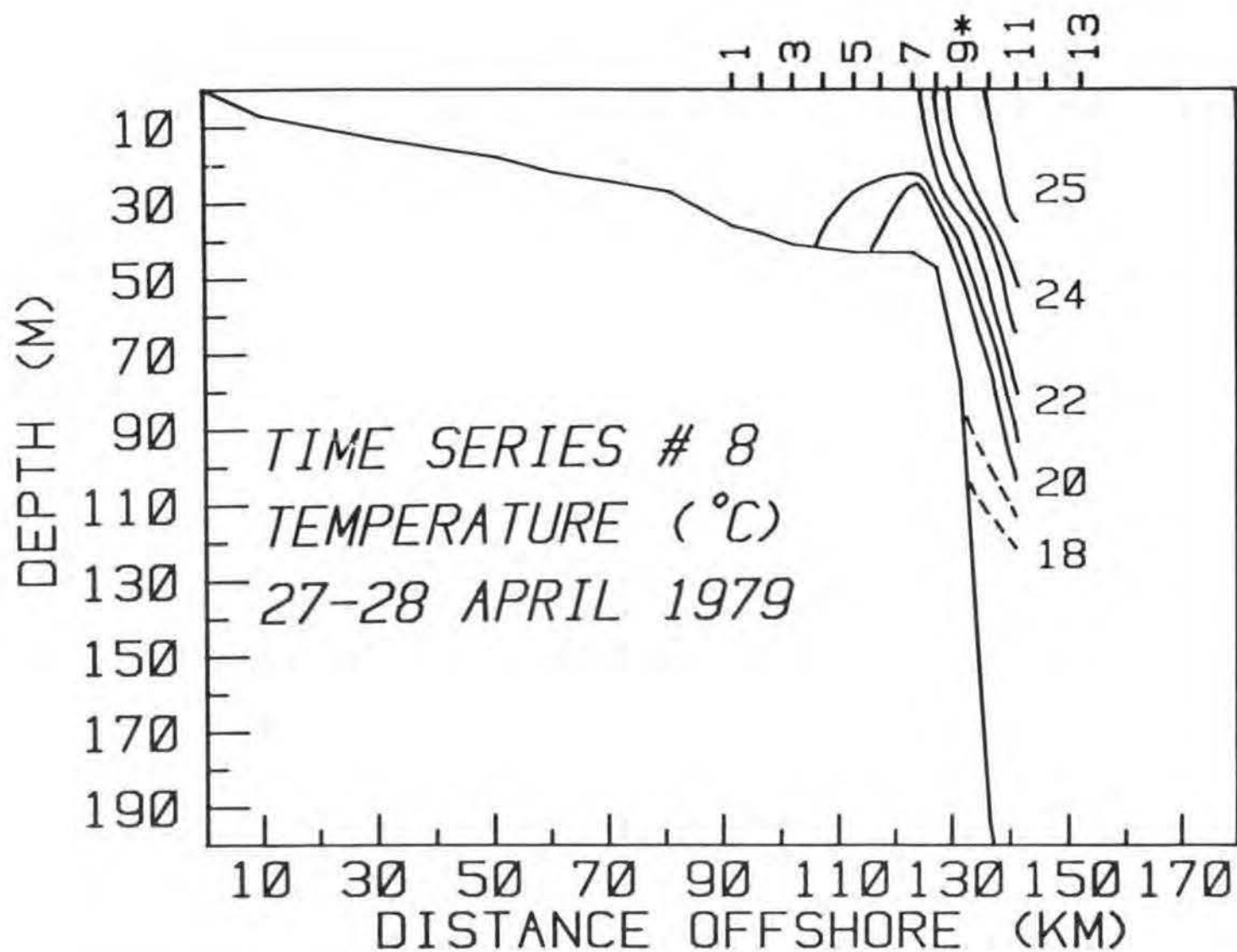


Figure 58. Time Series #8 Temperature, 27-28 April

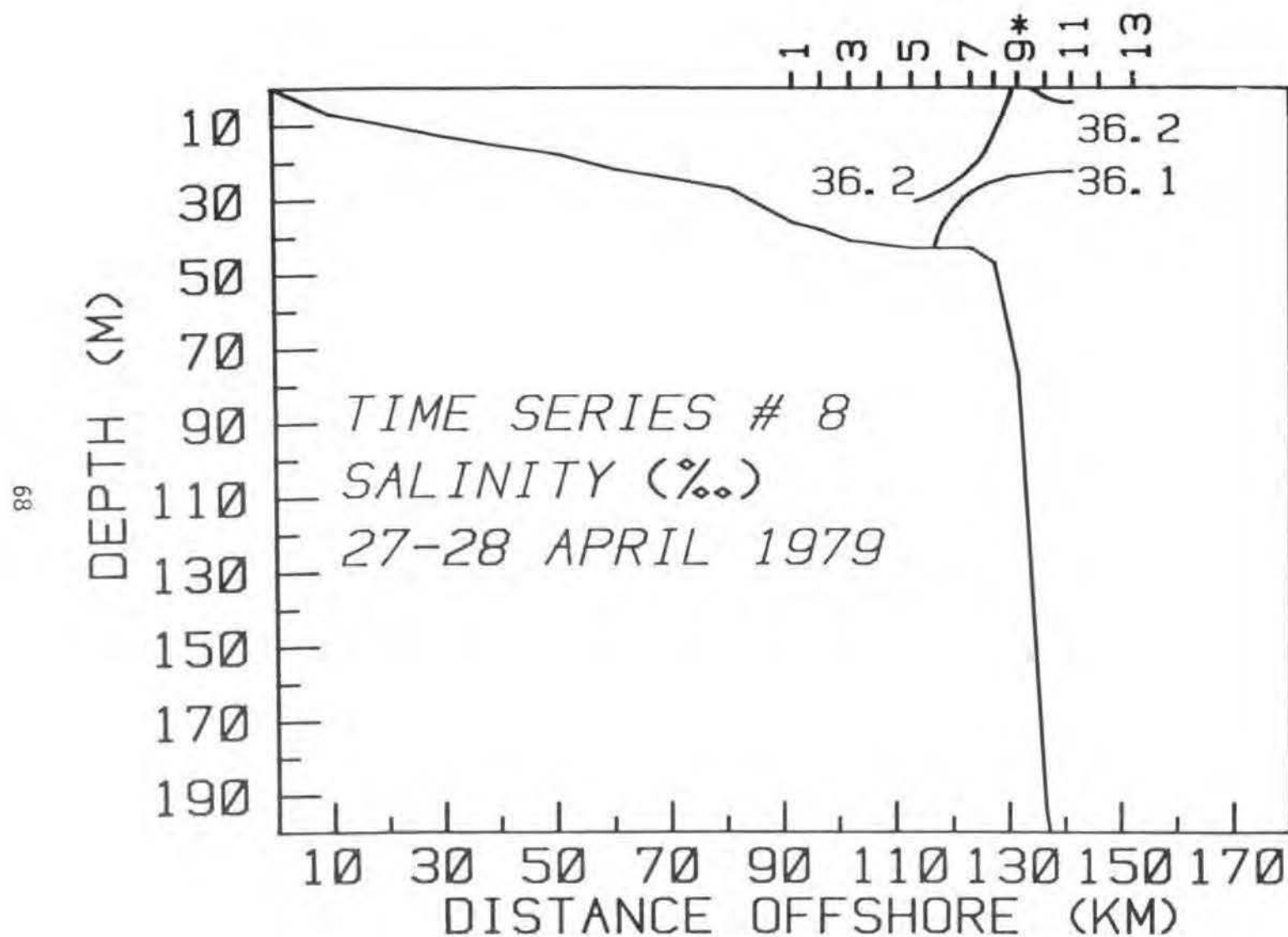


Figure 59. Time Series #8 Salinity, 27-28 April

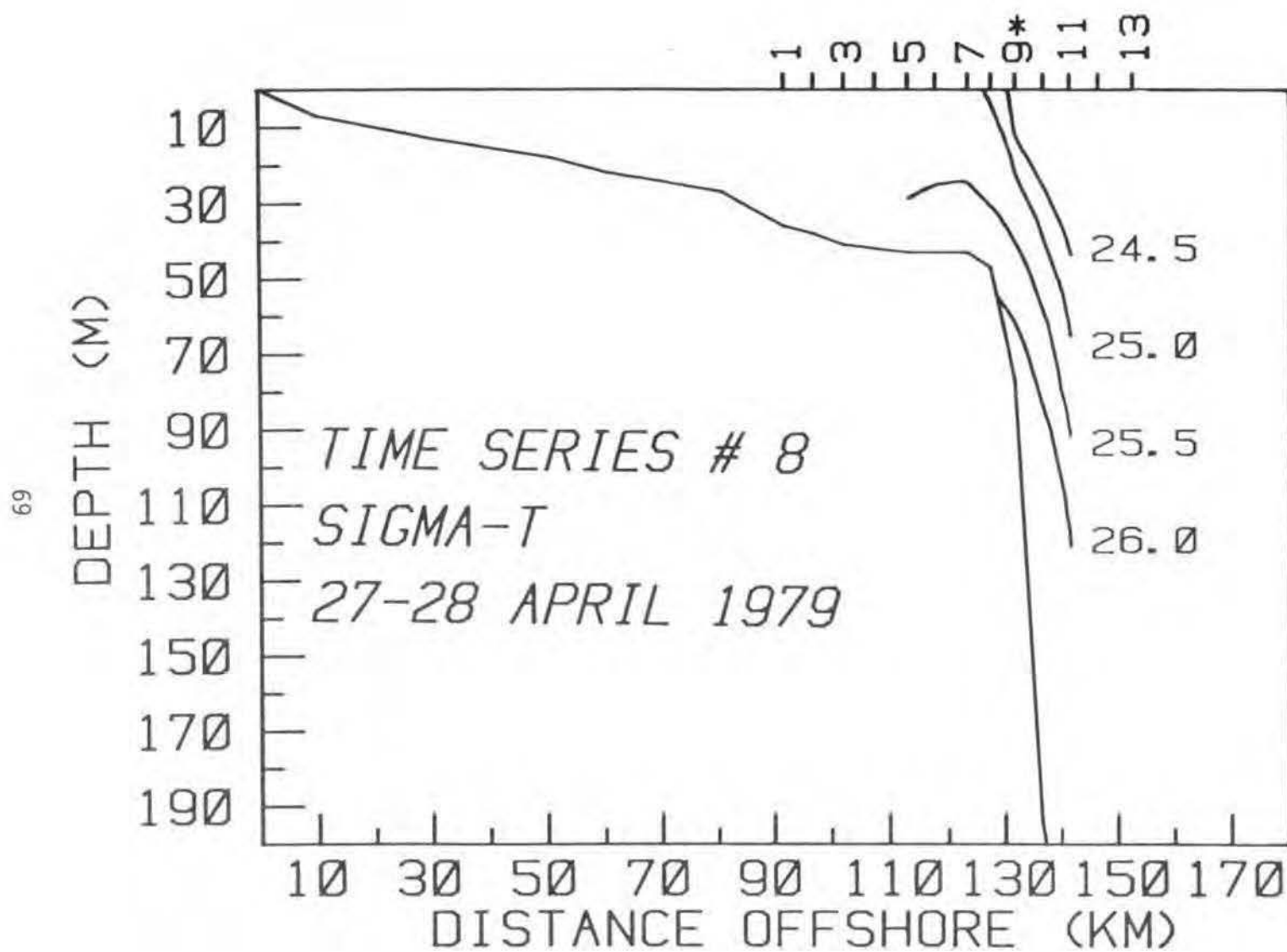


Figure 60. Time Series #8 Sigma-T, 27-28 April

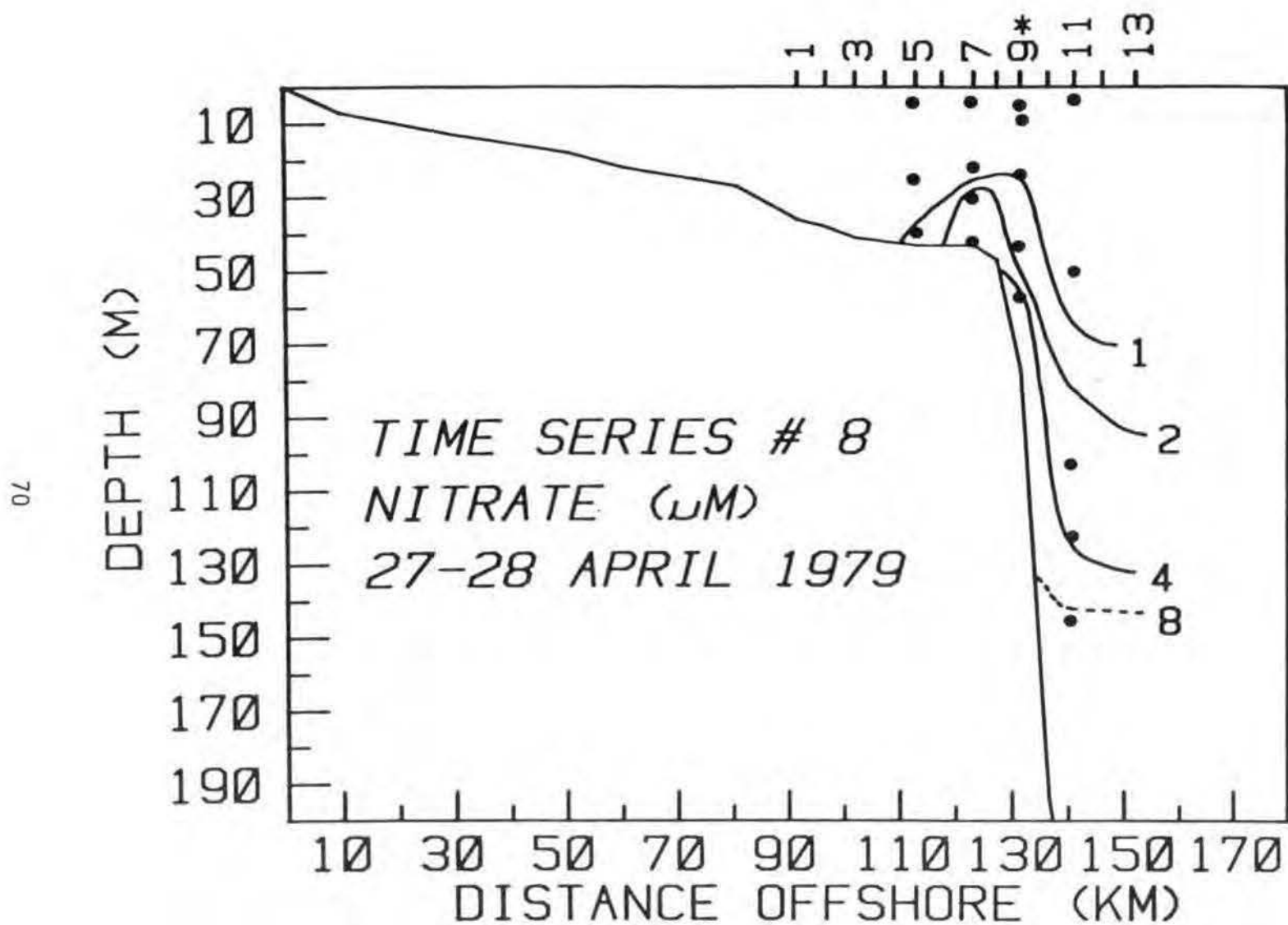


Figure 61. Time Series #8 Nitrate, 27-28 April

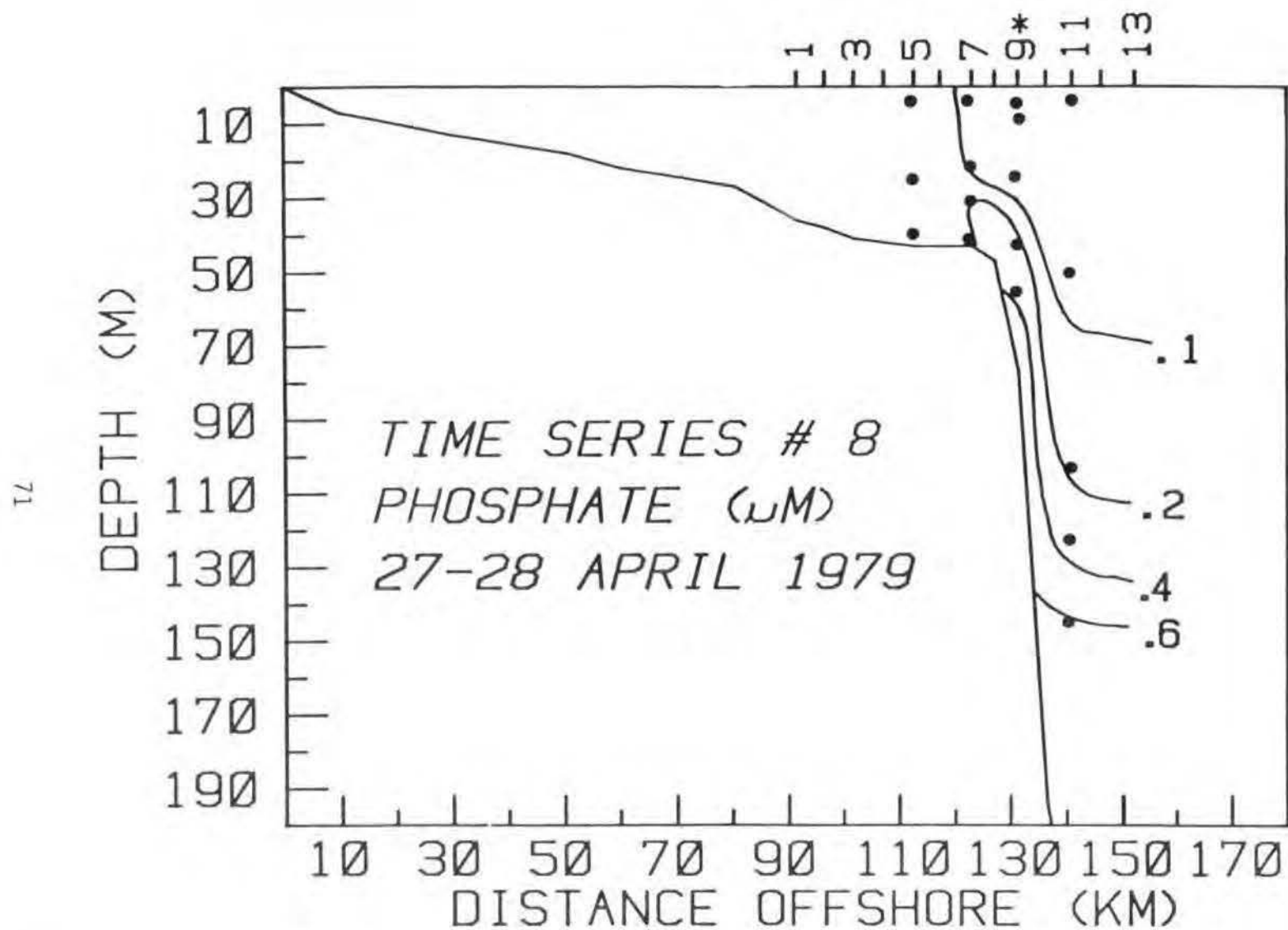


Figure 62. Time Series #8 Phosphate, 27-28 April

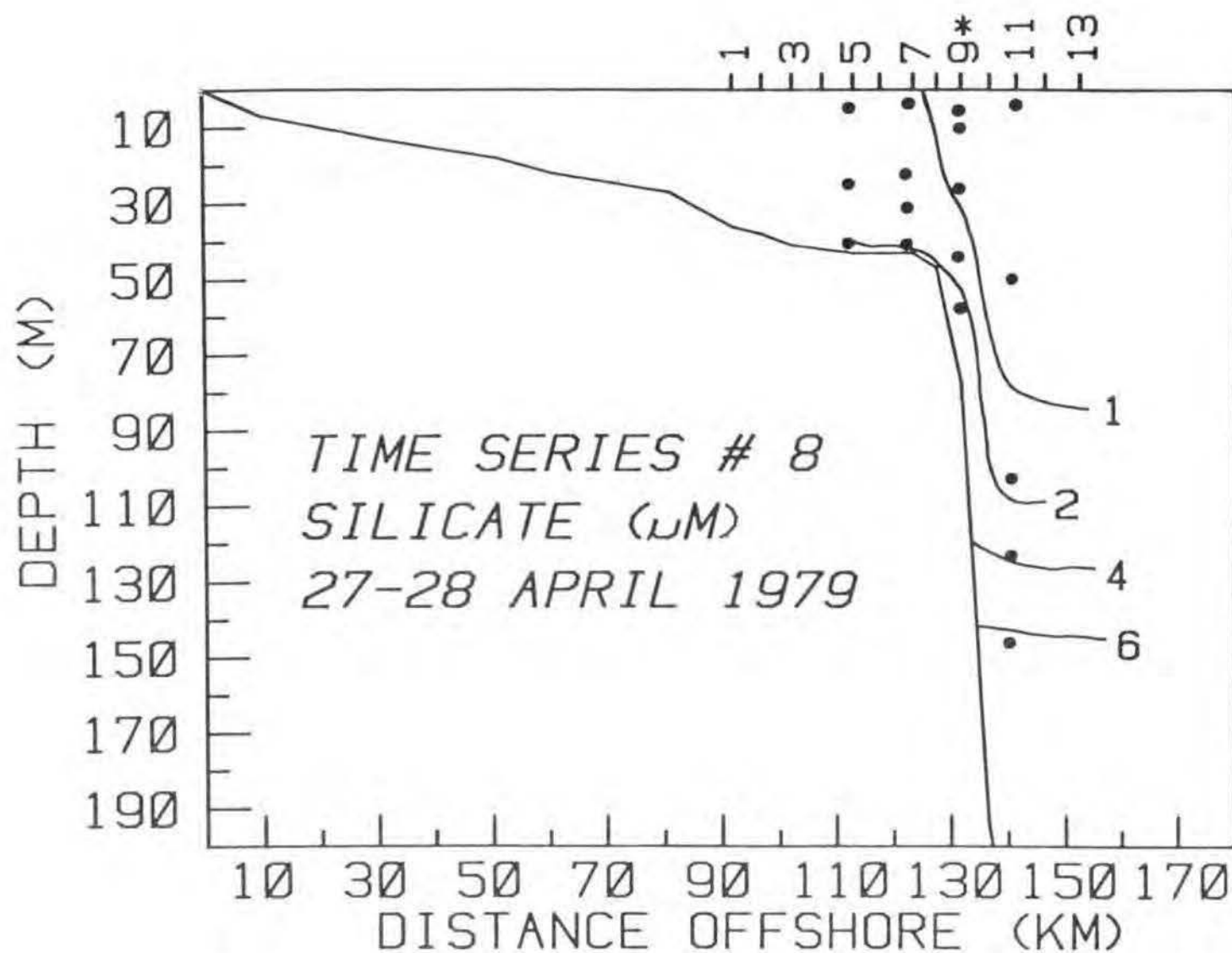


Figure 63. Time Series #8 Silicate, 27-28 April

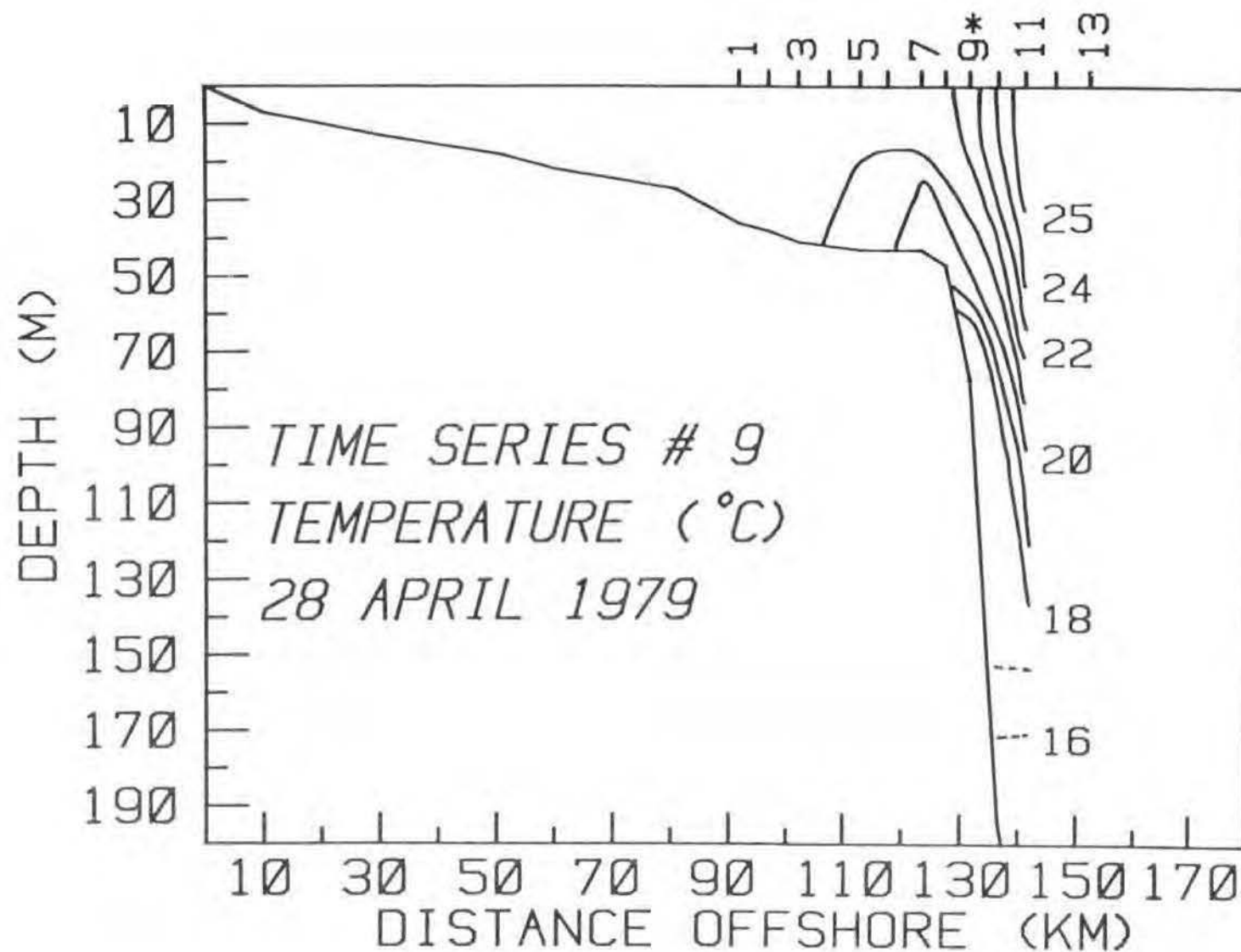


Figure 64. Time Series #9 Temperature, 28 April

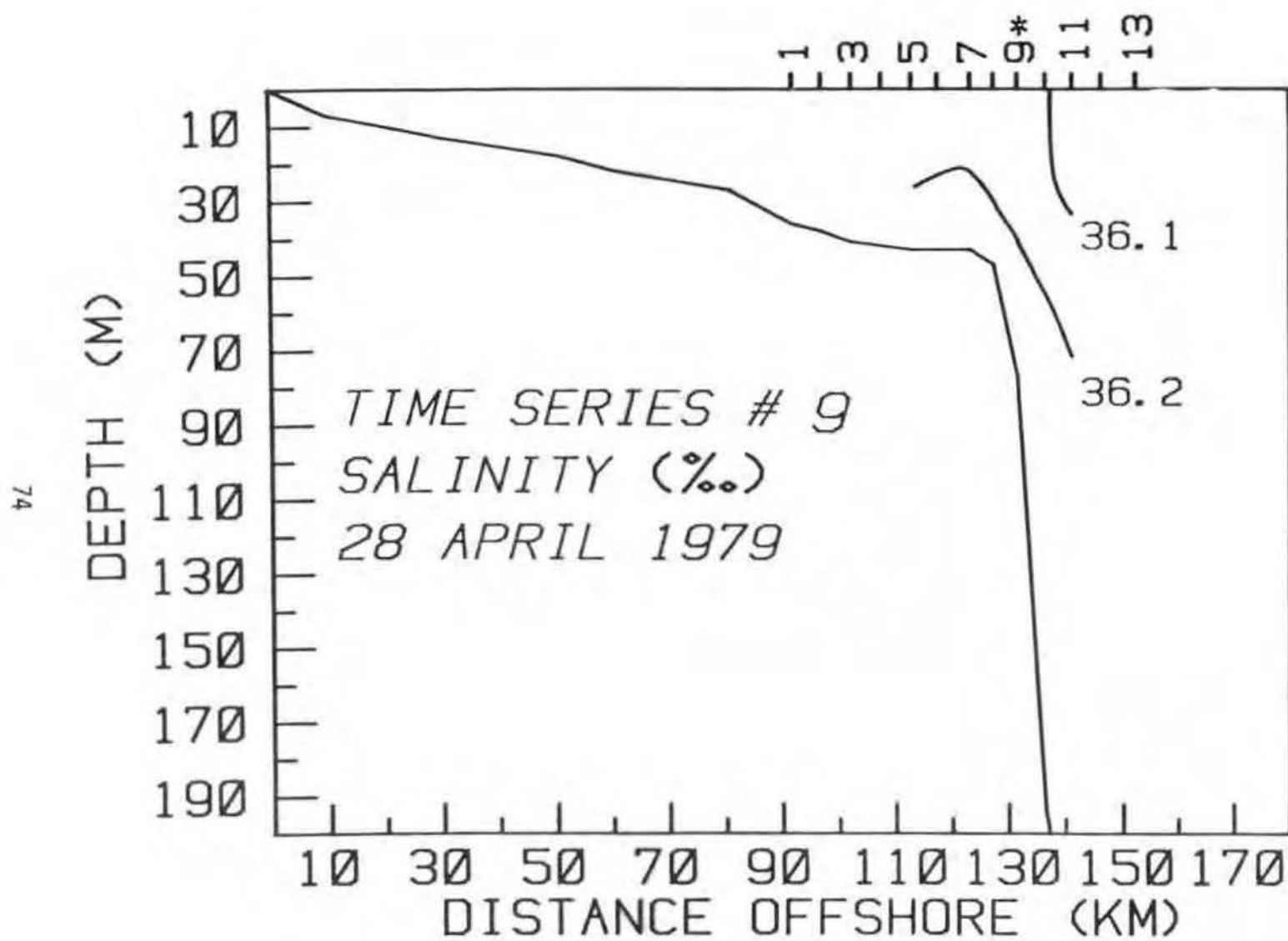


Figure 65. Time Series #9 Salinity, 28 April

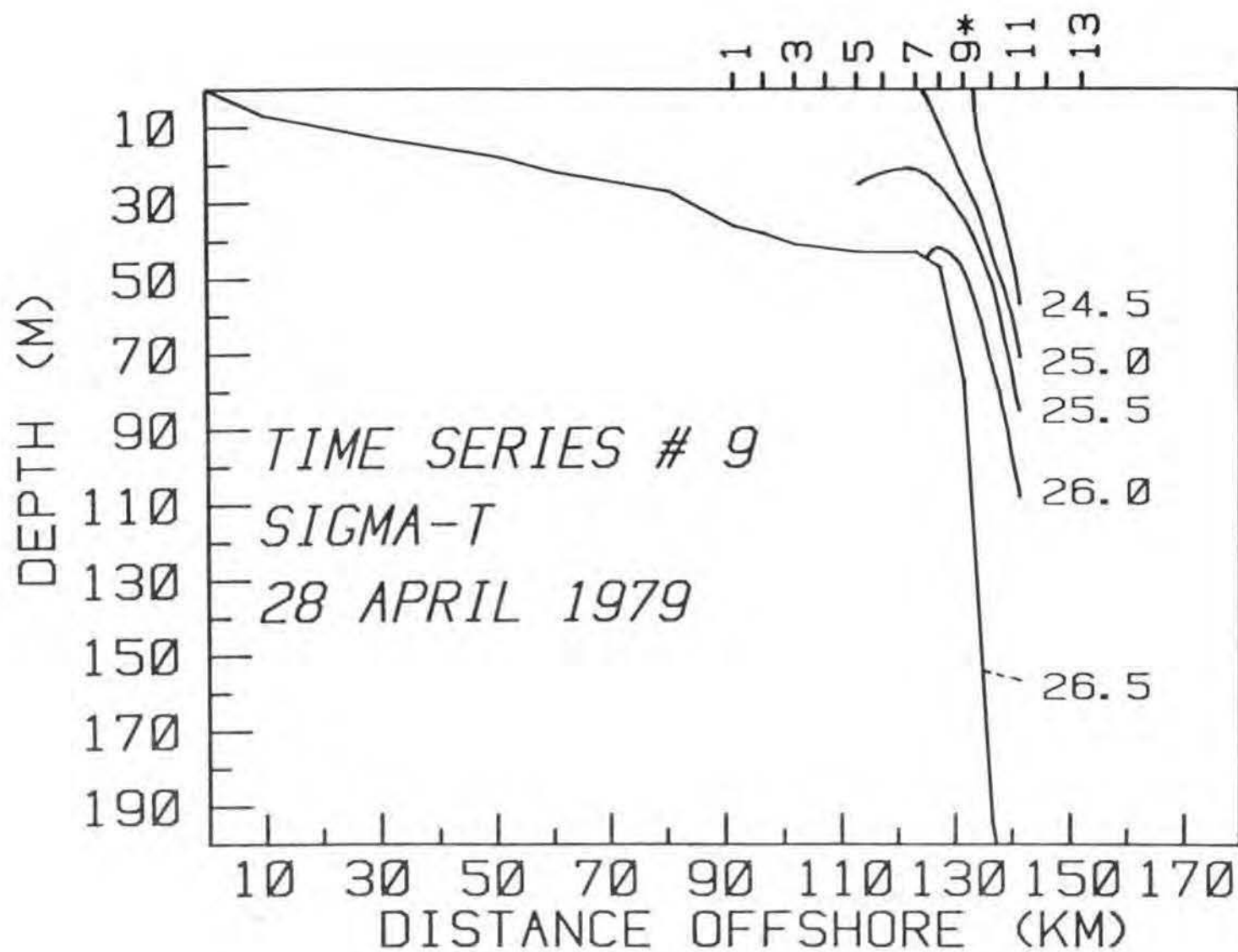


Figure 66. Time Series #9 Sigma-T, 28 April

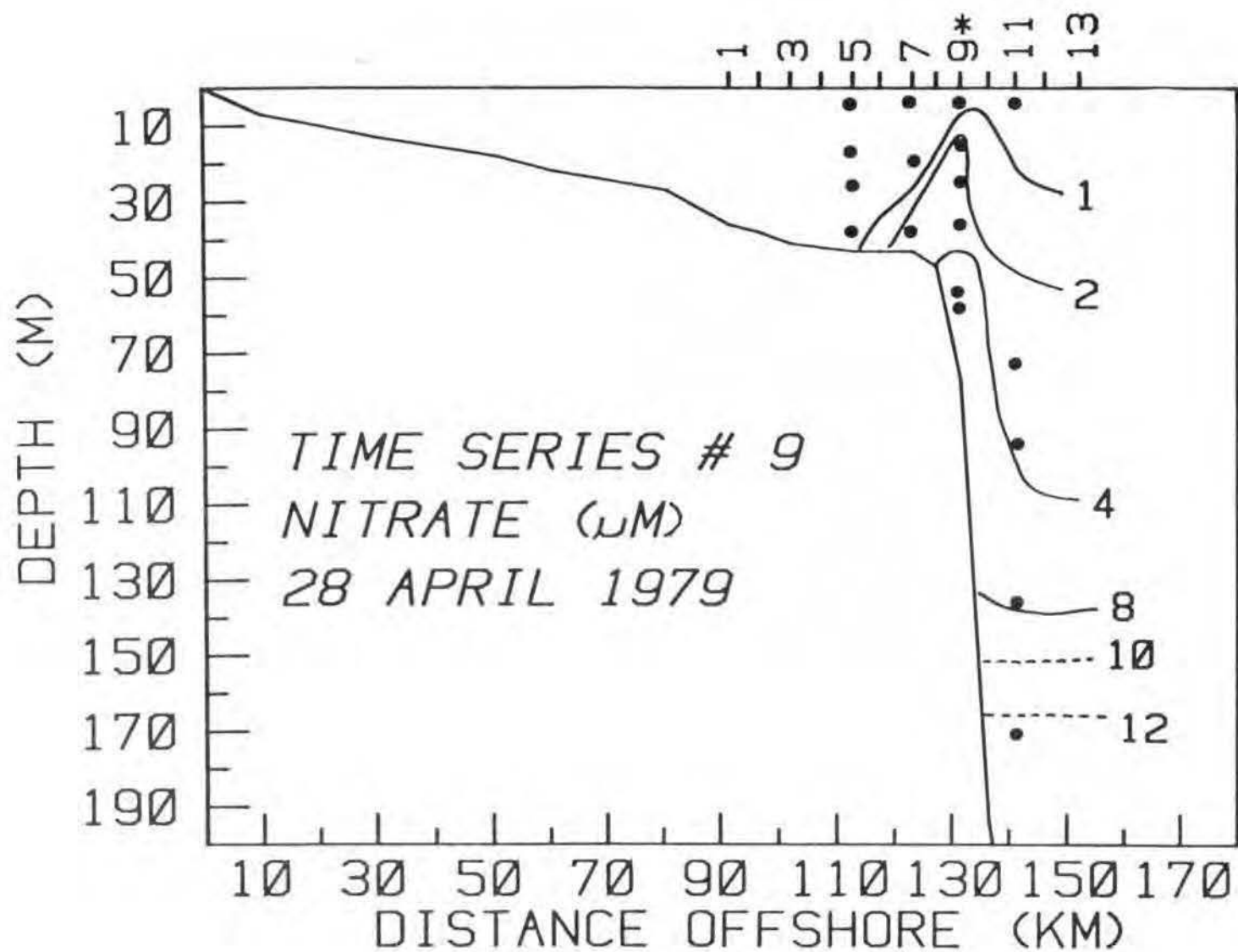


Figure 67. Time Series #9 Nitrate, 28 April

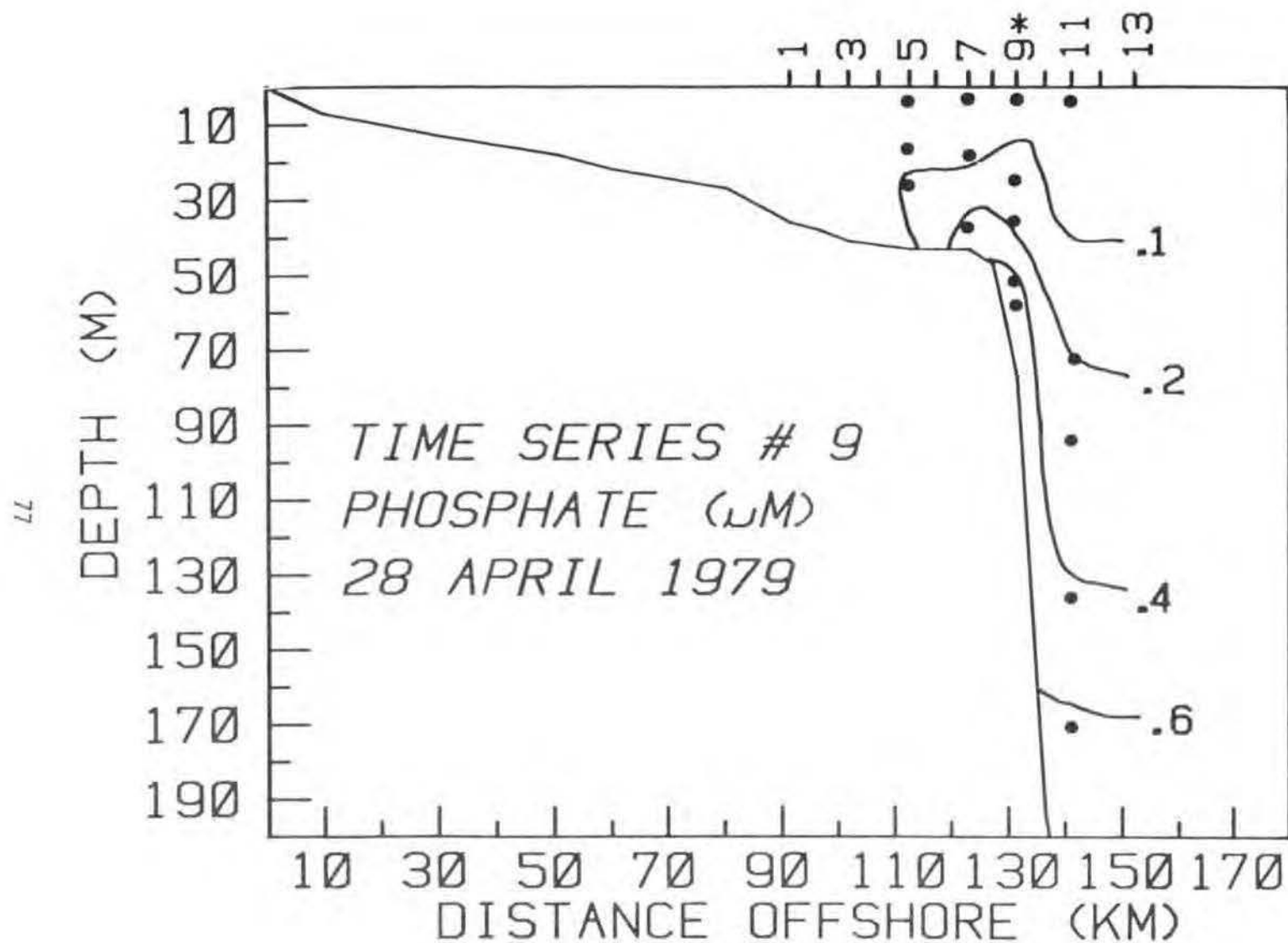


Figure 68. Time Series #9 Phosphate, 28 April

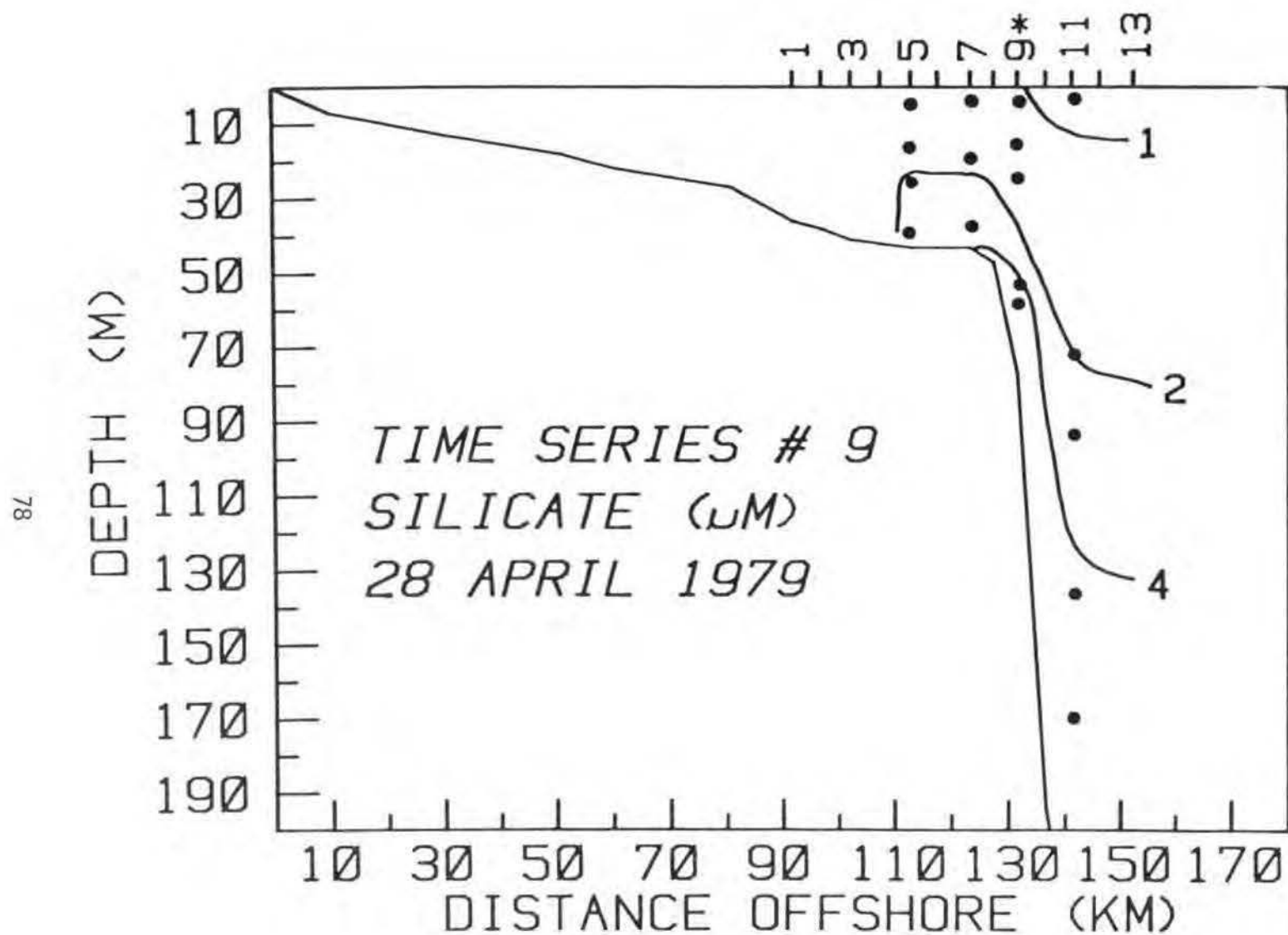


Figure 69. Time Series #9 Silicate, 28 April

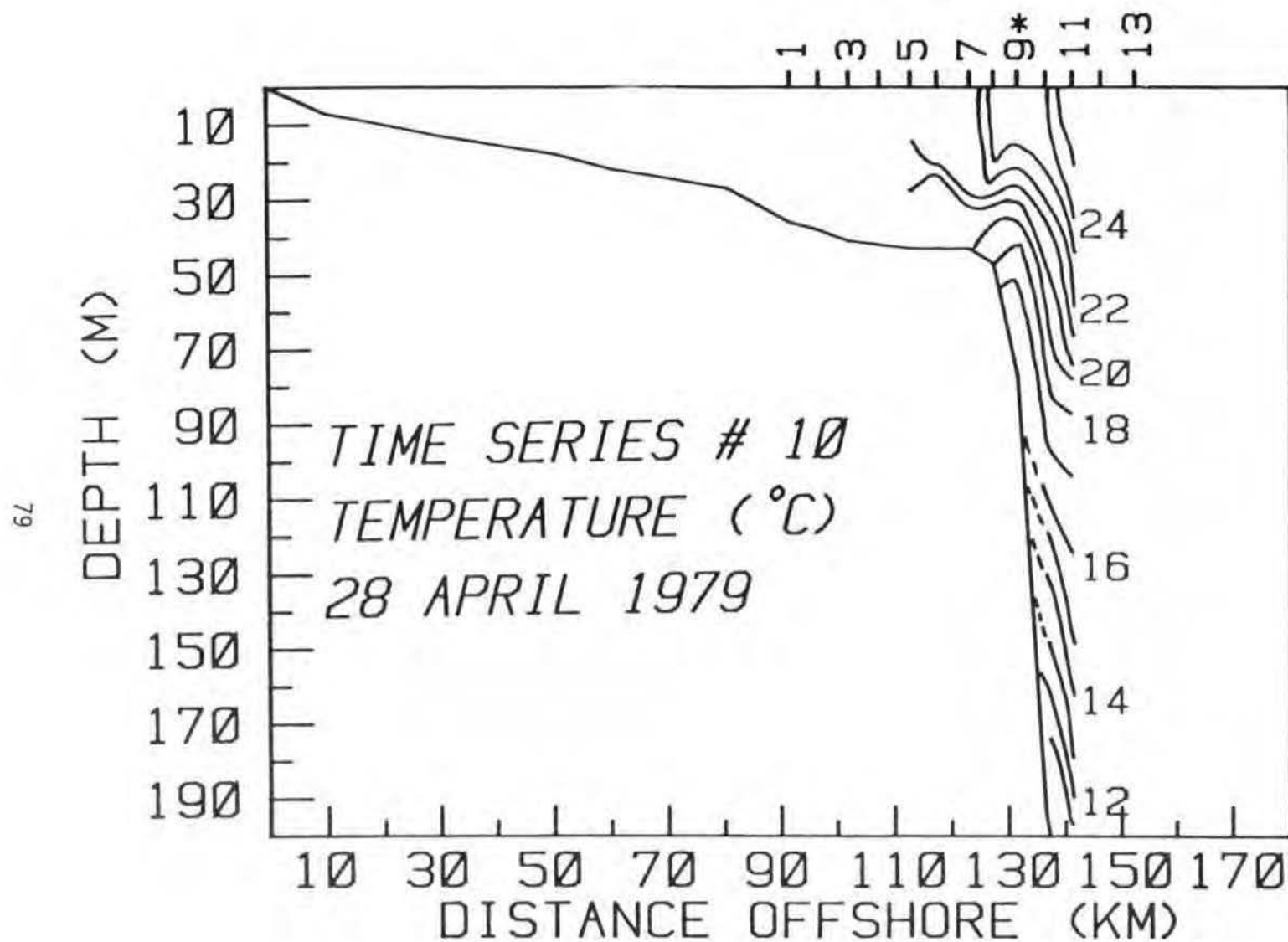


Figure 70. Time Series #10 Temperature, 28 April

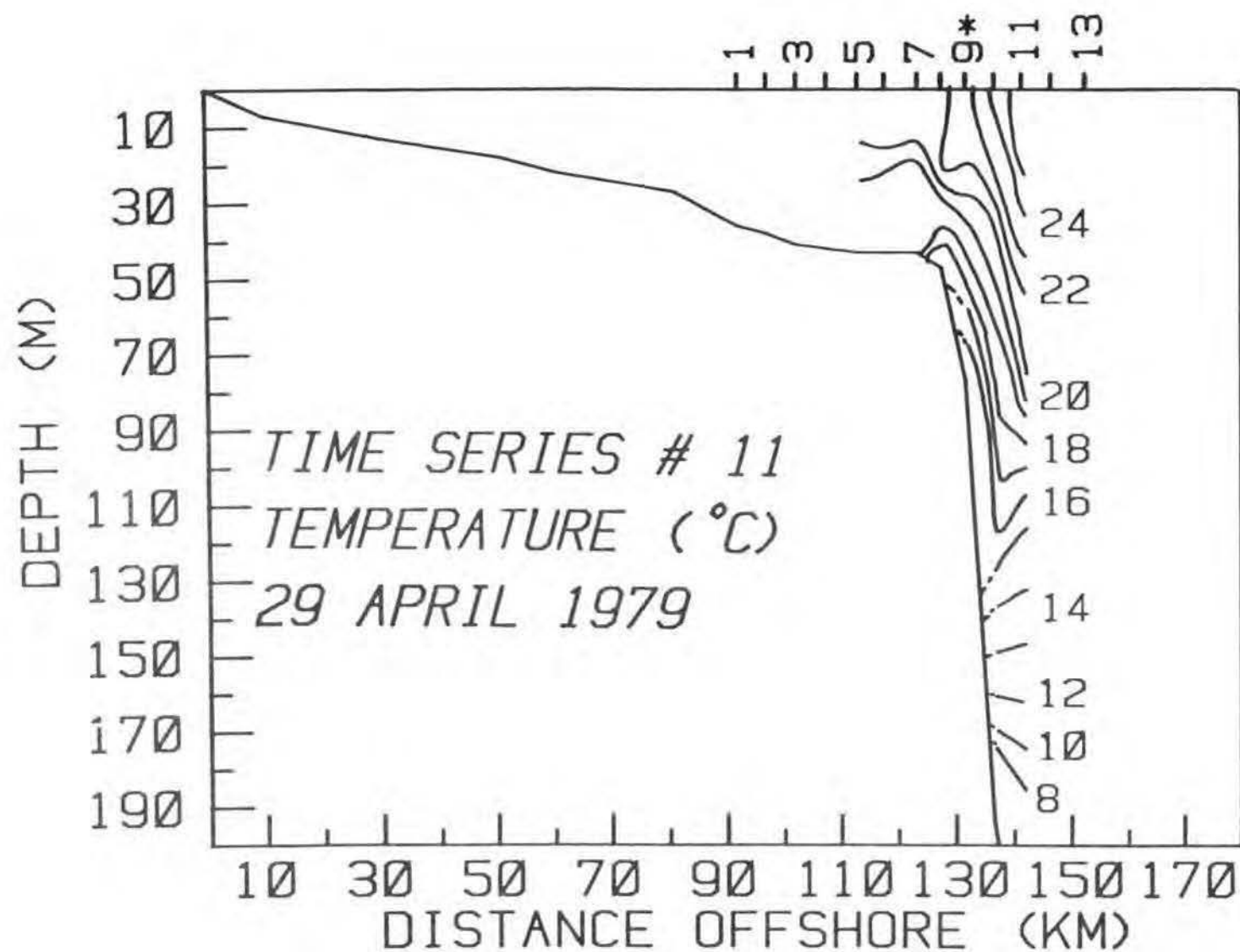


Figure 71. Time Series #11 Temperature, 29 April

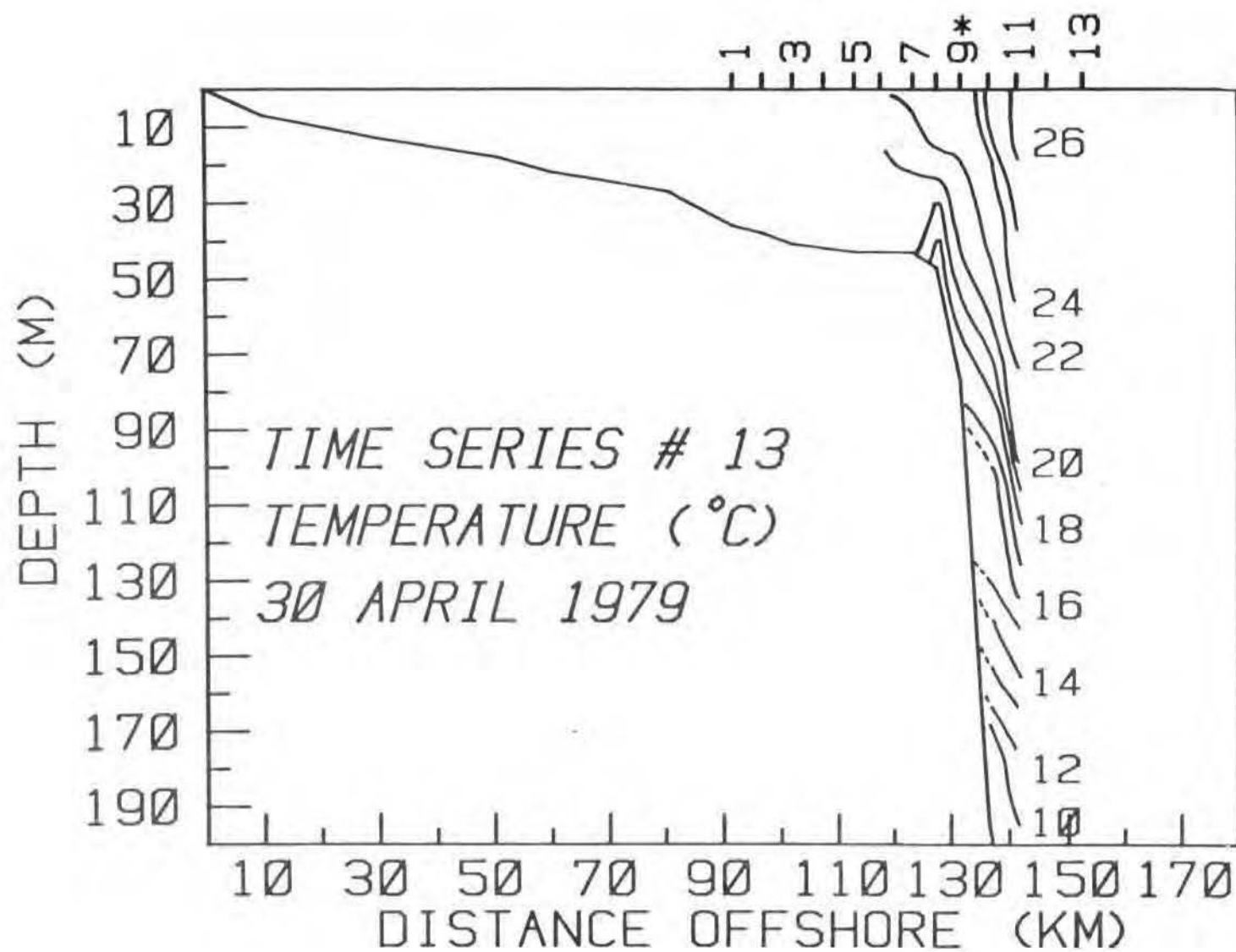


Figure 72. Time Series #13 Temperature, 30 April

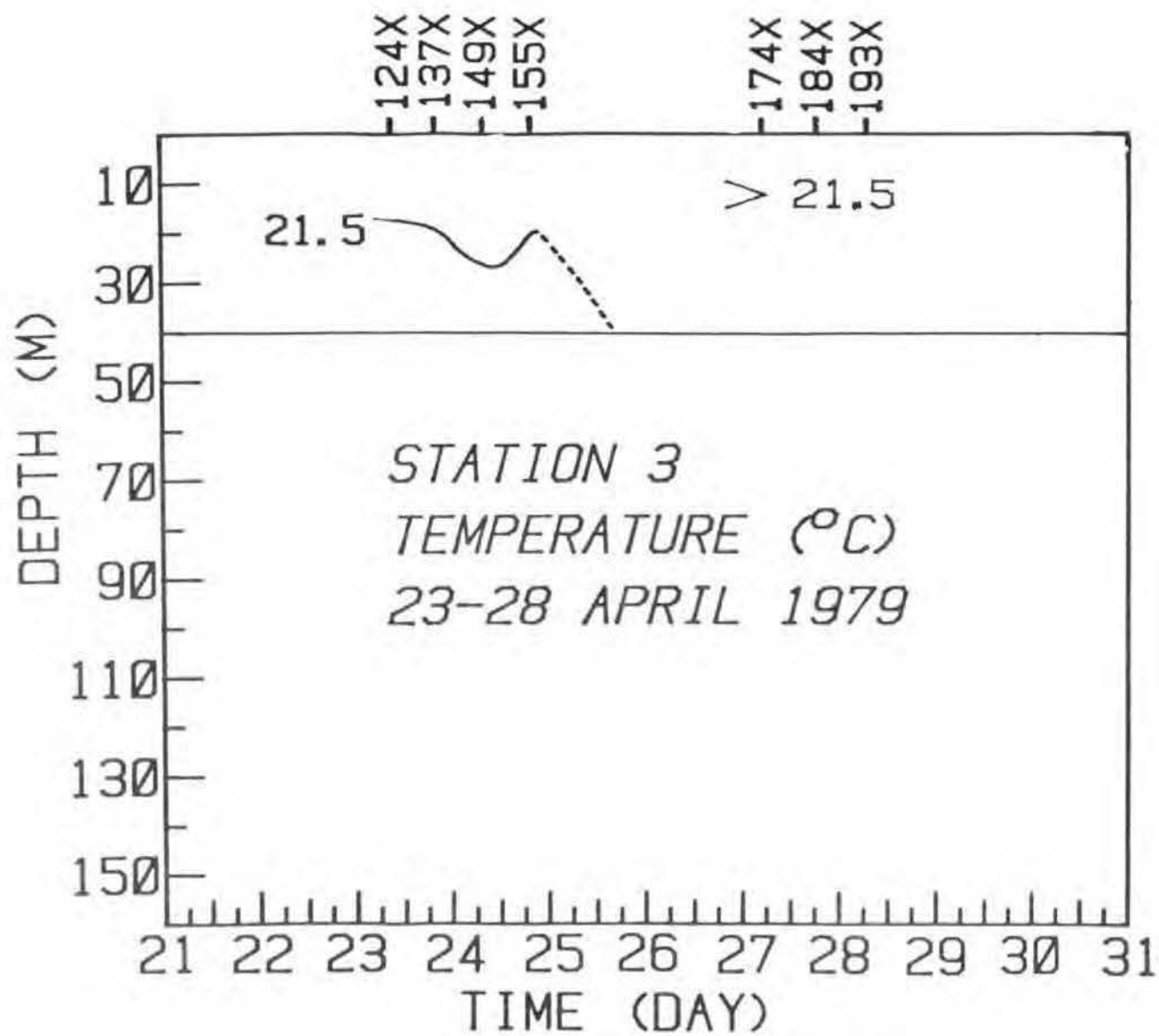


Figure 73. Station 3 Time Series Temperature, 23-28 April

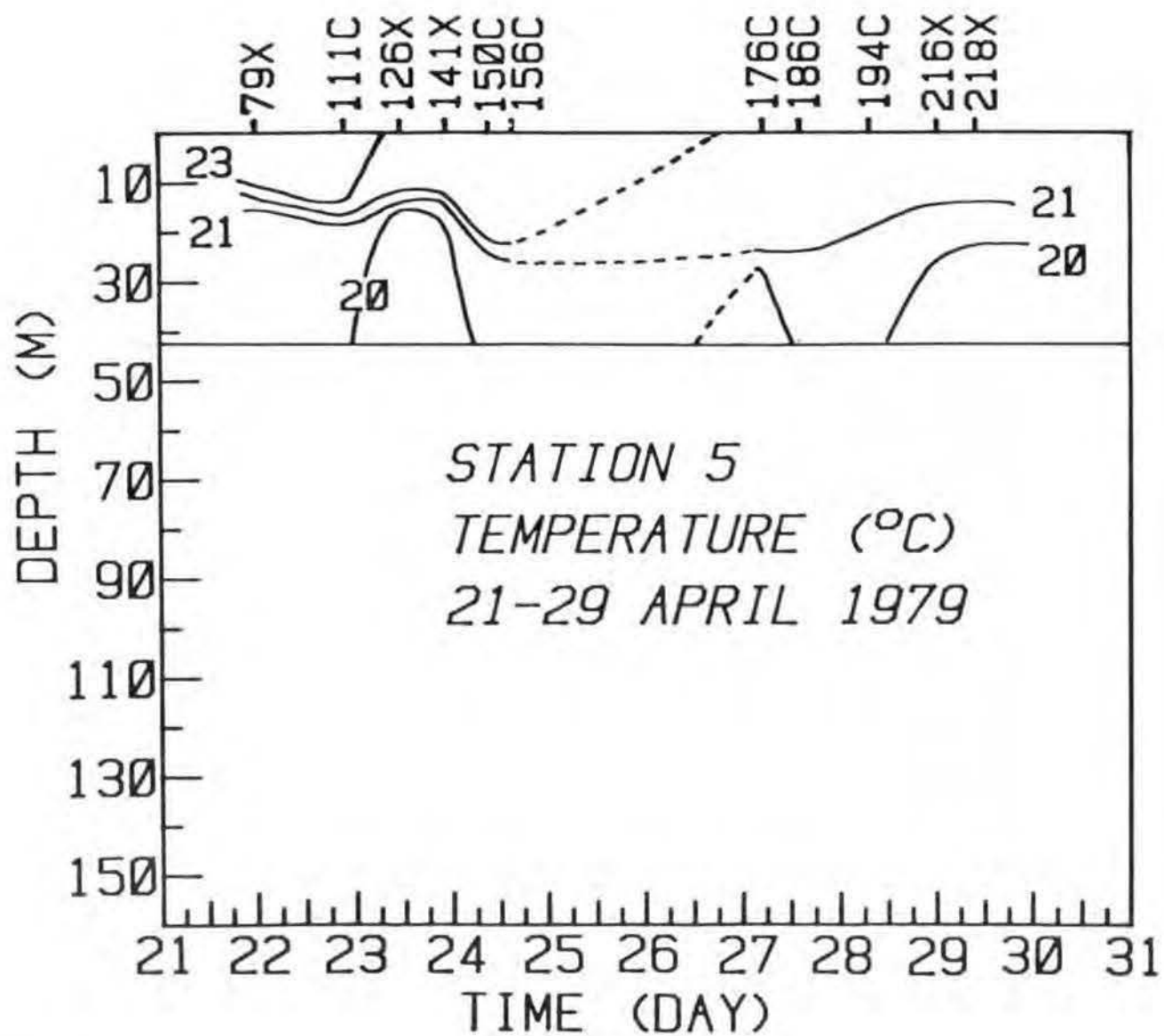


Figure 74. Station 5 Time Series Temperature, 21-29 April

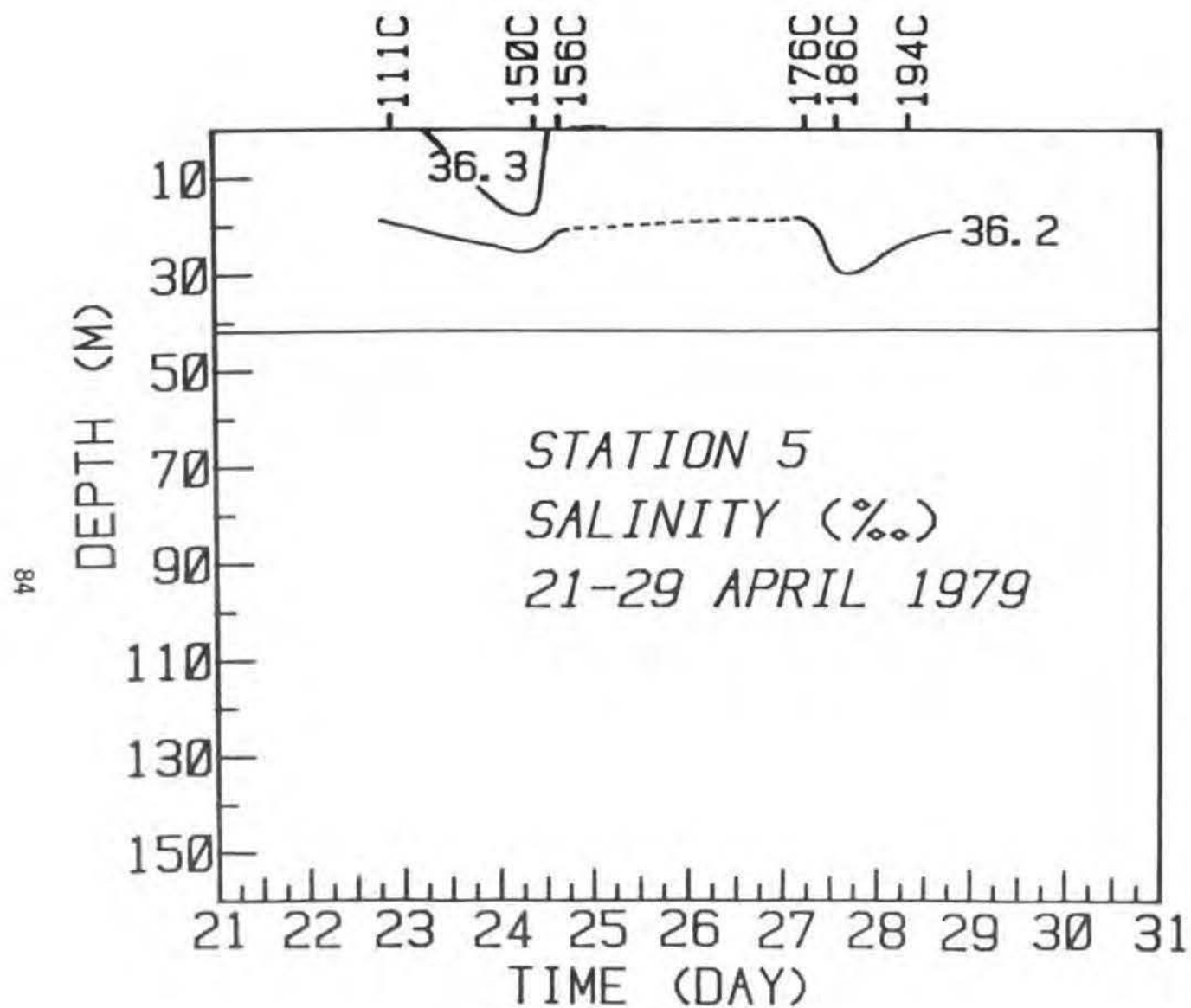


Figure 75. Station 5 Time Series Salinity, 21-29 April

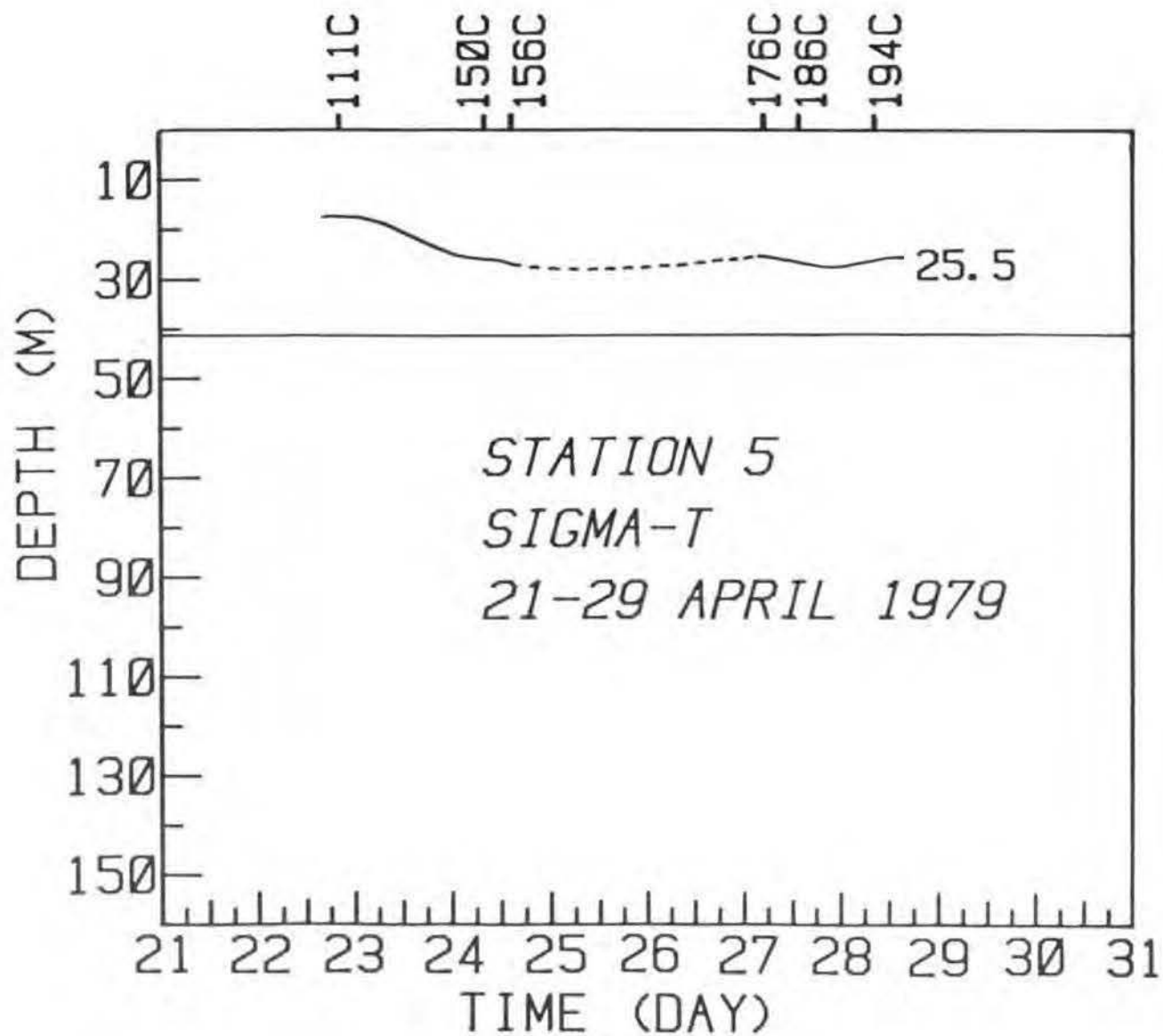


Figure 76. Station 5 Time Series Sigma-T, 21-29 April

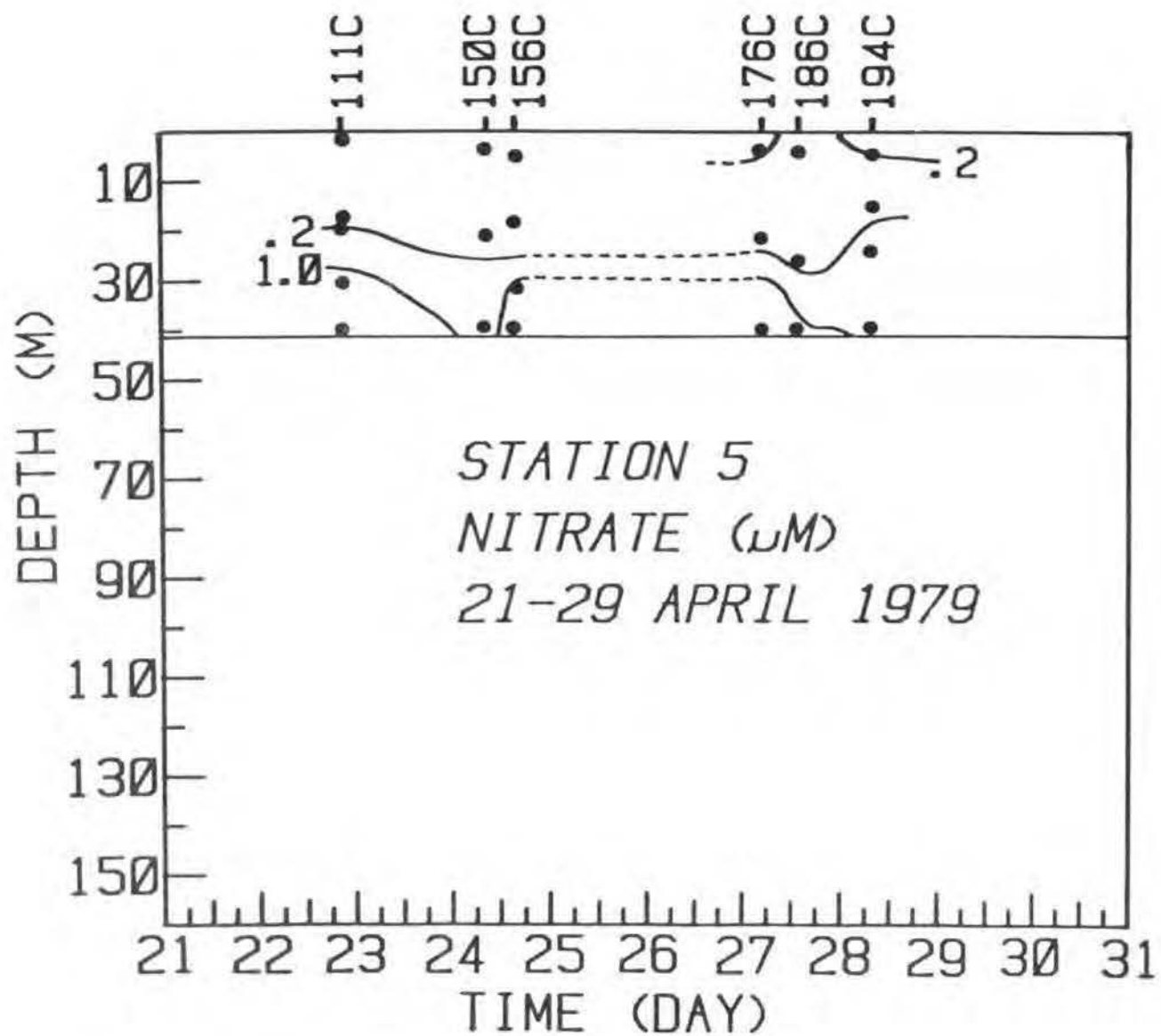


Figure 77. Station 5 Time Series Nitrate, 21-29 April

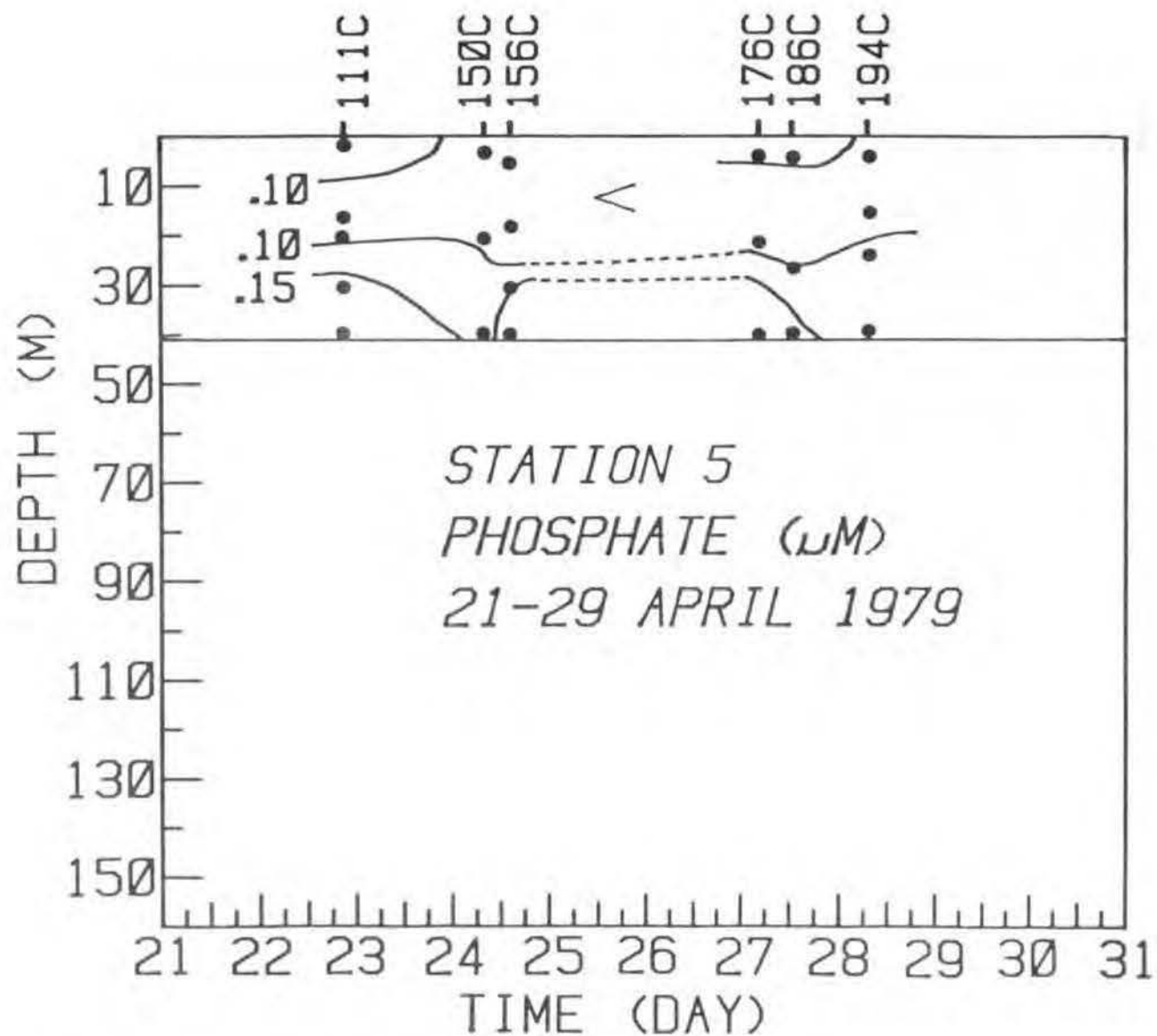


Figure 78. Station 5 Time Series Phosphate, 21-29 April

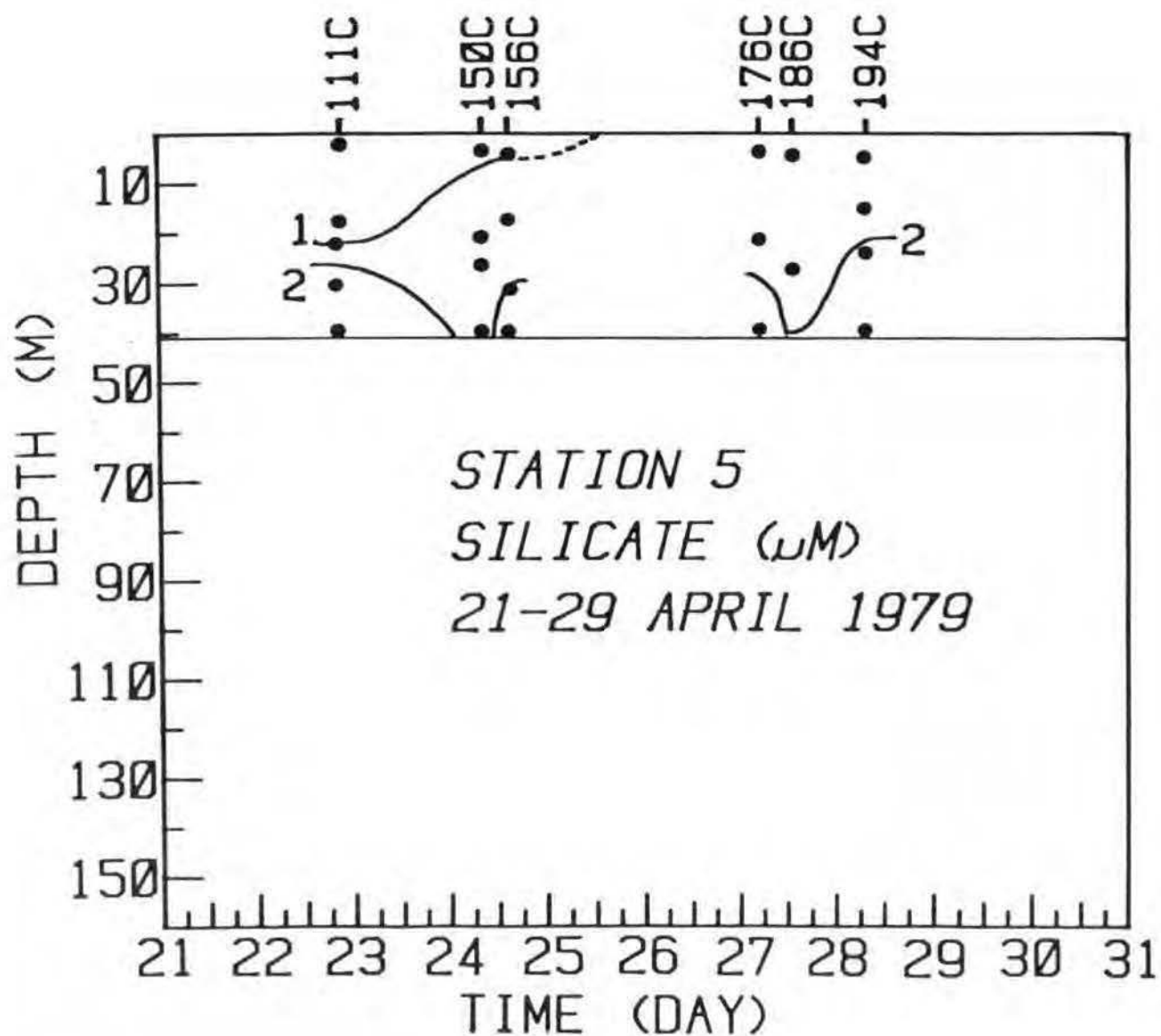


Figure 79. Station 5 Time Series Silicate, 21-29 April

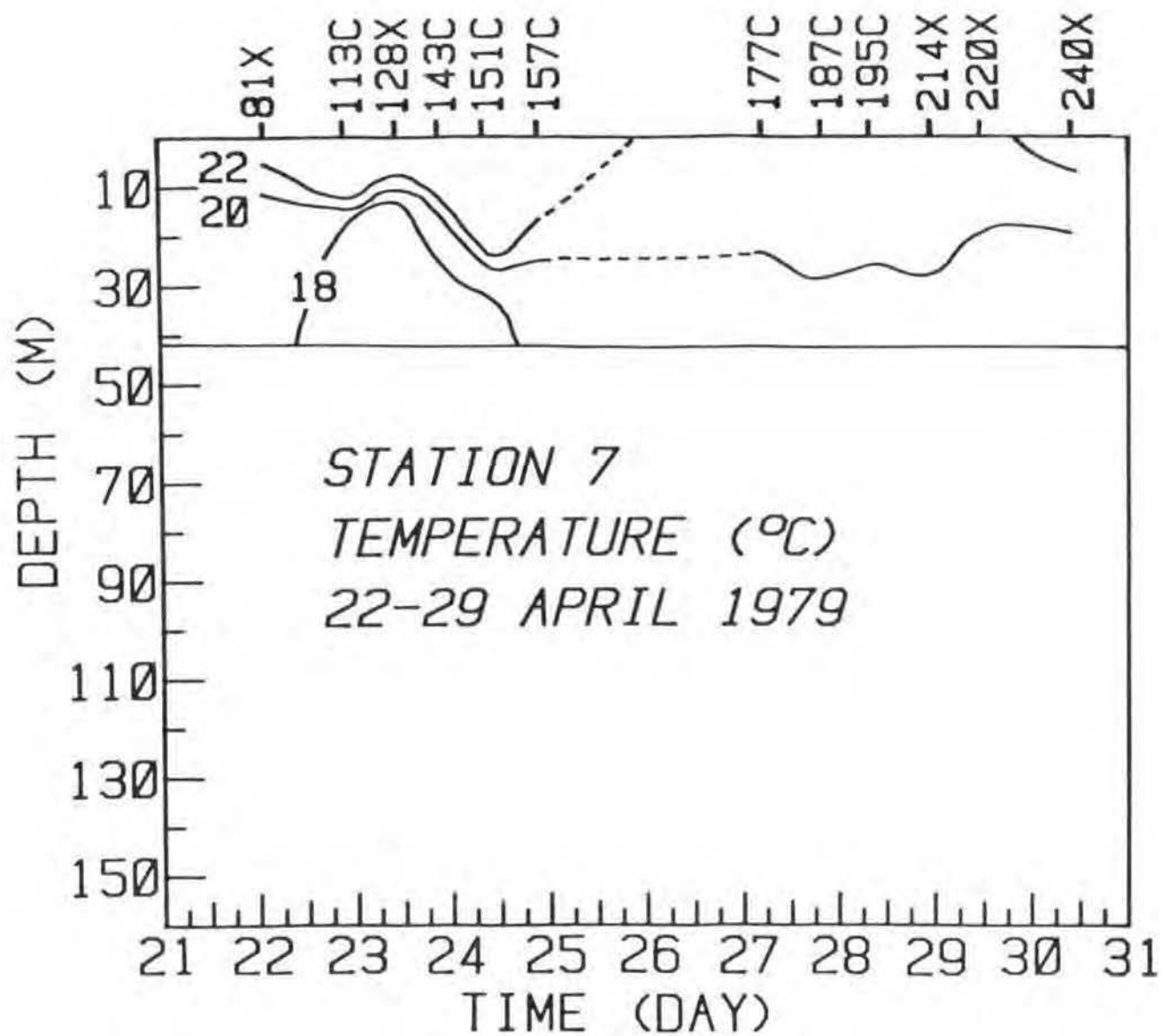


Figure 80. Station 7 Time Series Temperature, 22-29 April

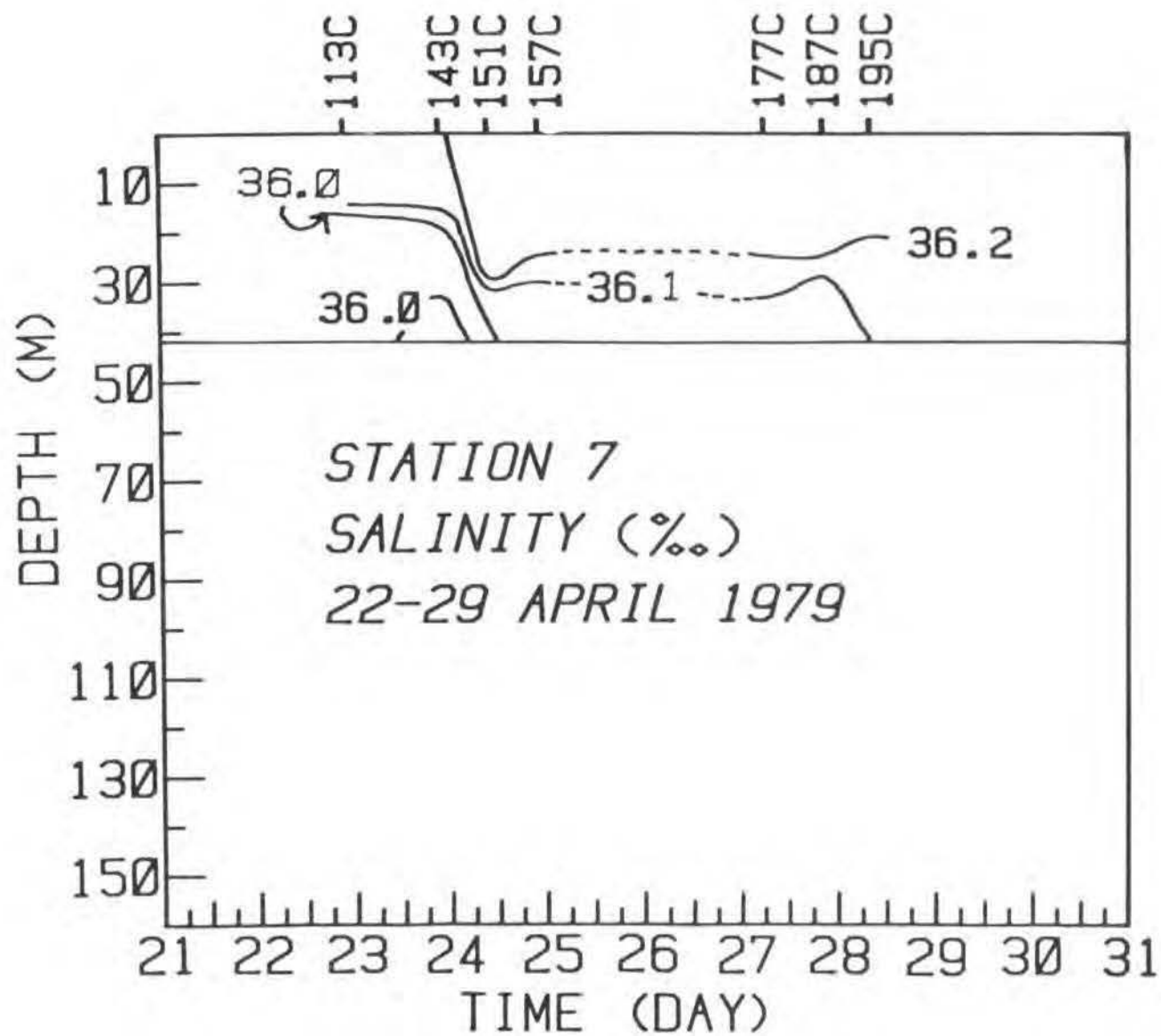


Figure 81. Station 7 Time Series Salinity, 22-29 April

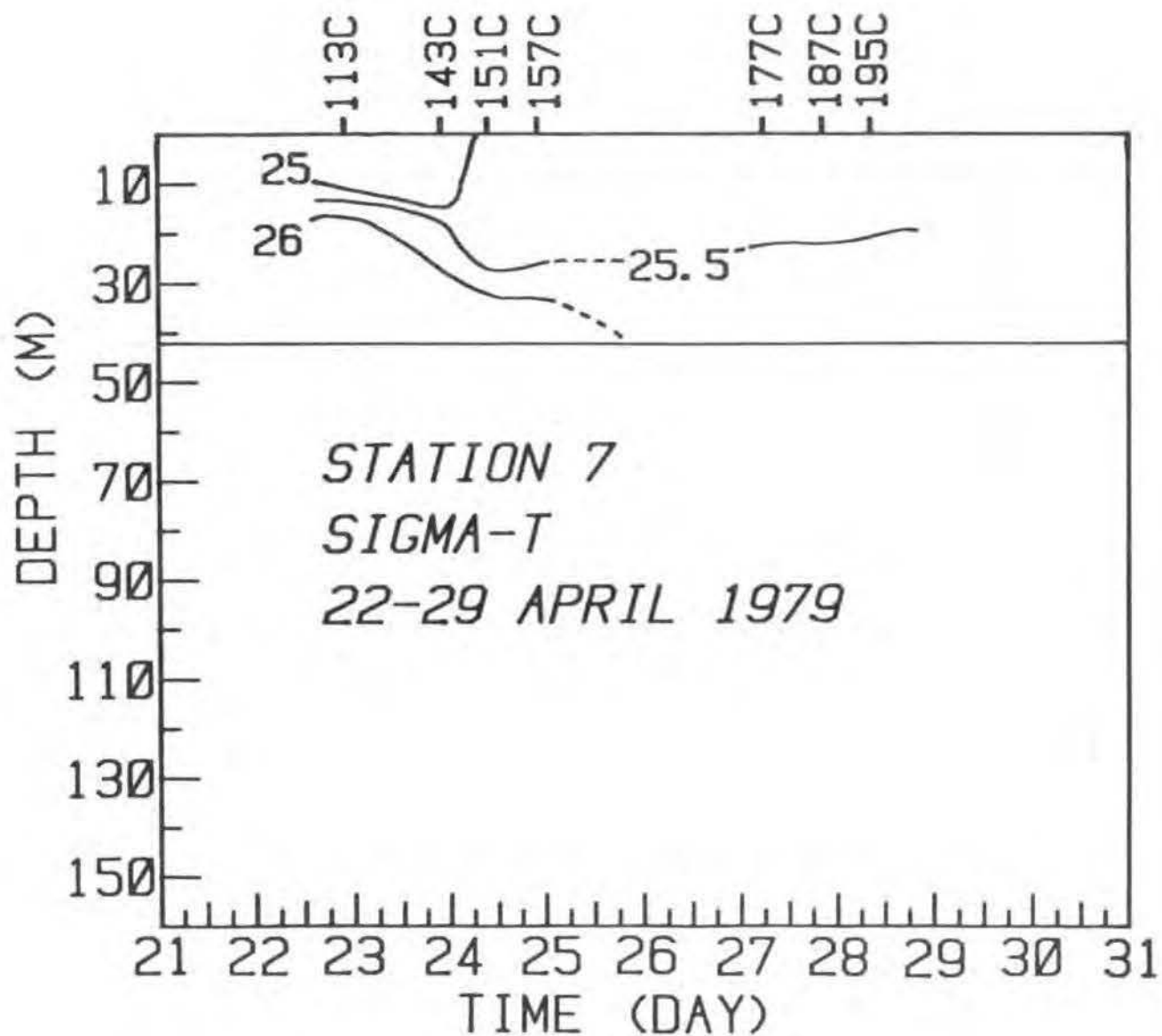


Figure 82. Station 7 Time Series Sigma-T, 22-29 April

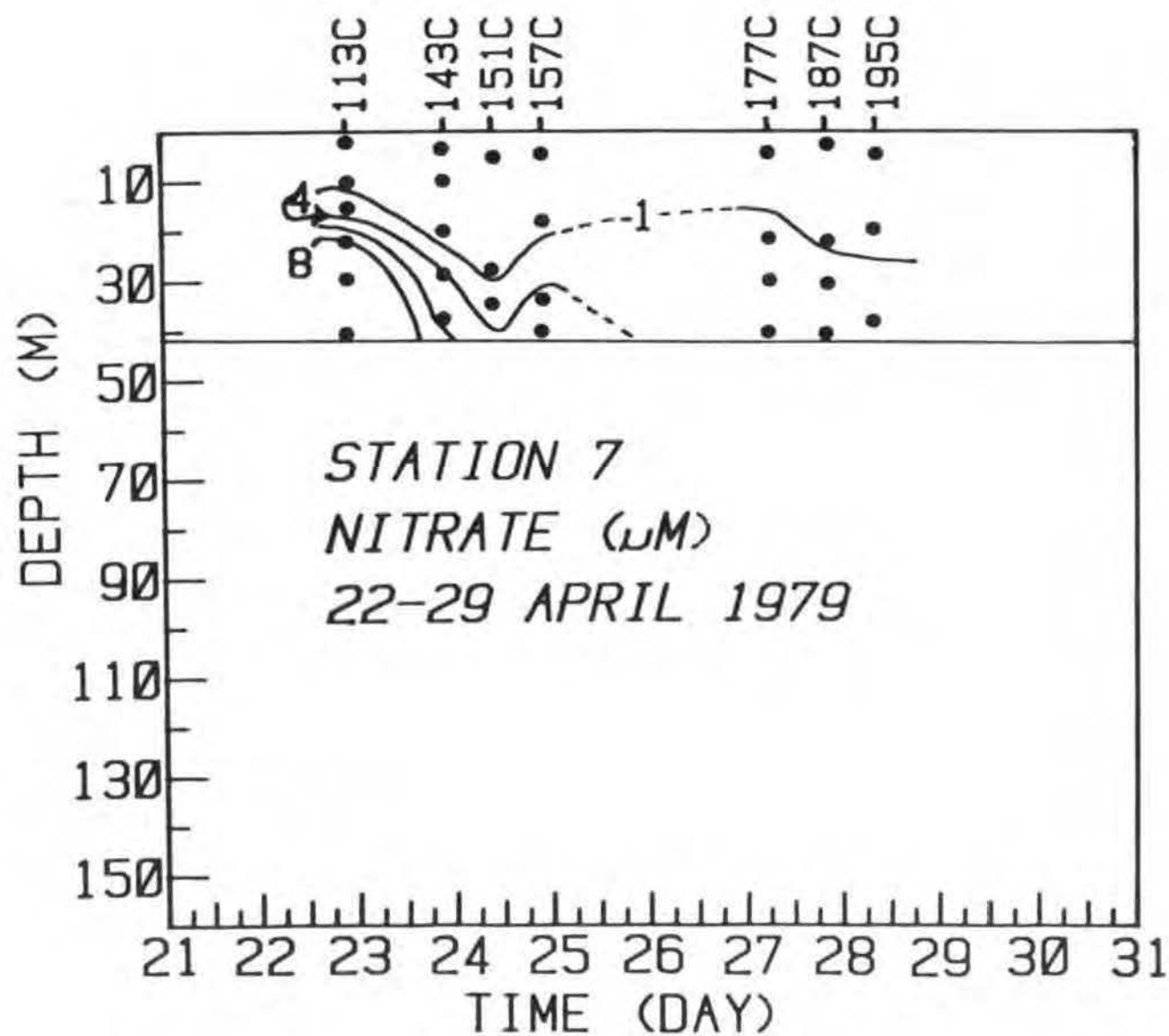


Figure 83. Station 7 Time Series Nitrate, 22-29 April

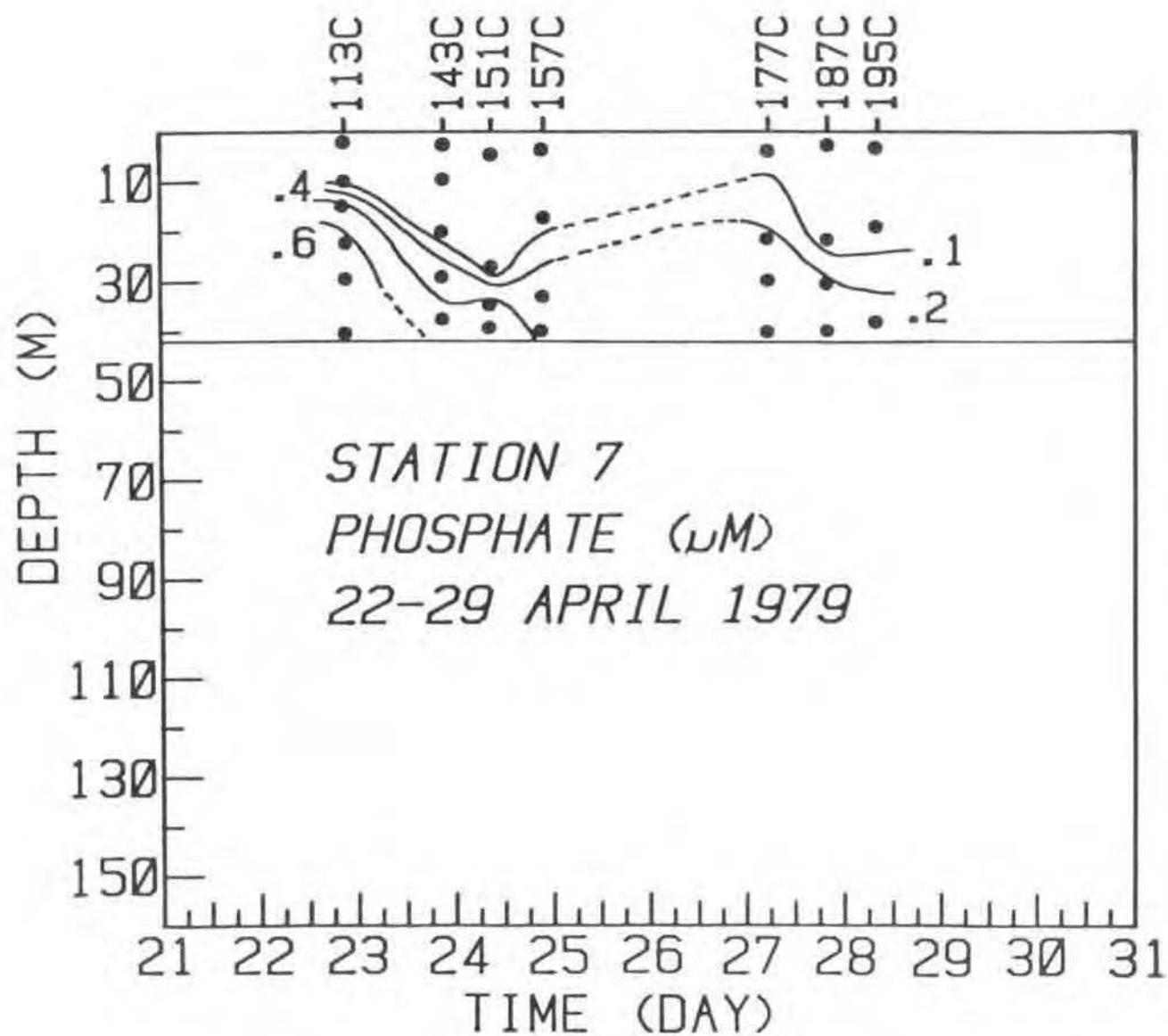


Figure 84. Station 7 Time Series Phosphate, 22-29 April

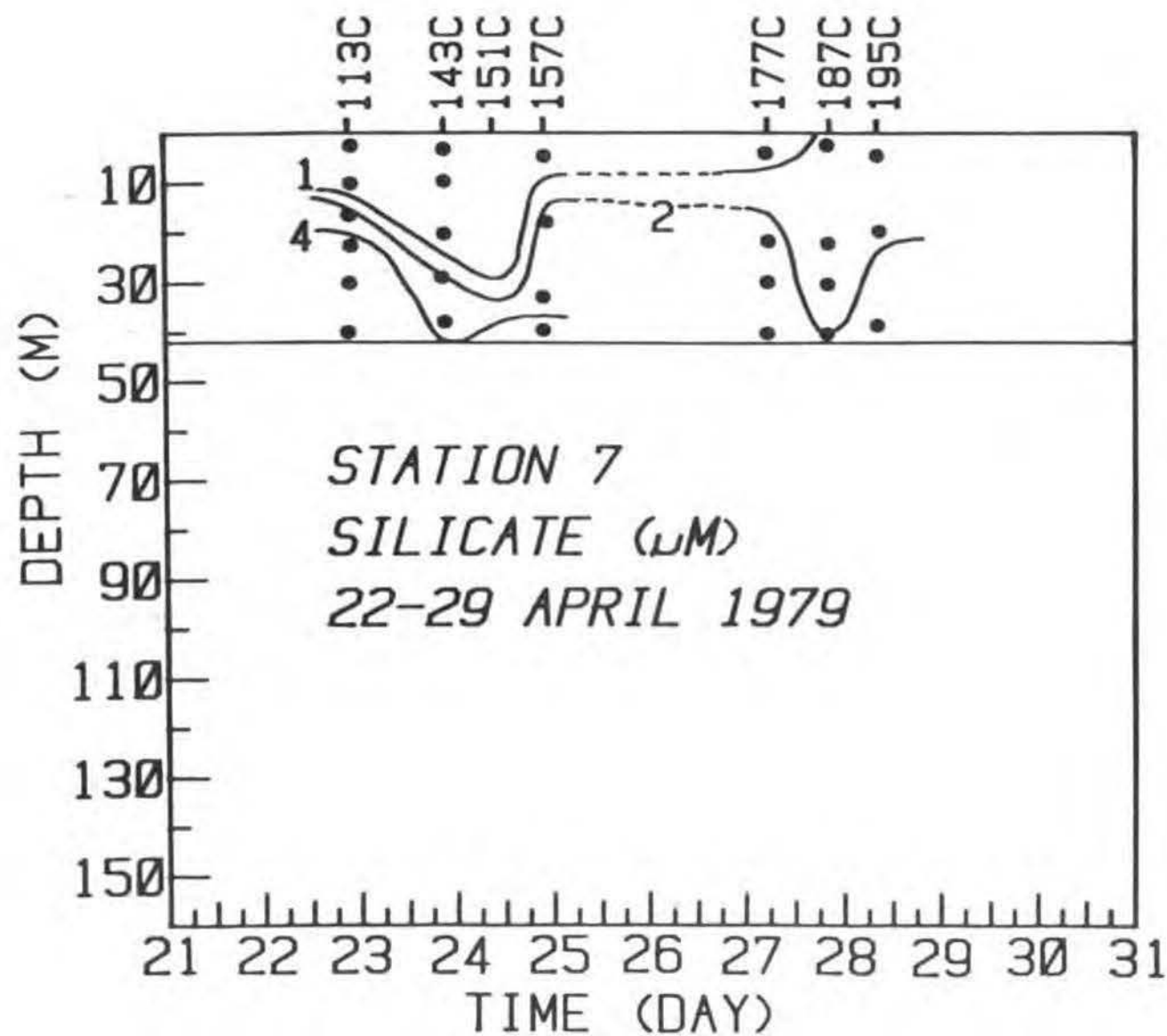


Figure 85. Station 7 Time Series Silicate, 22-29 April

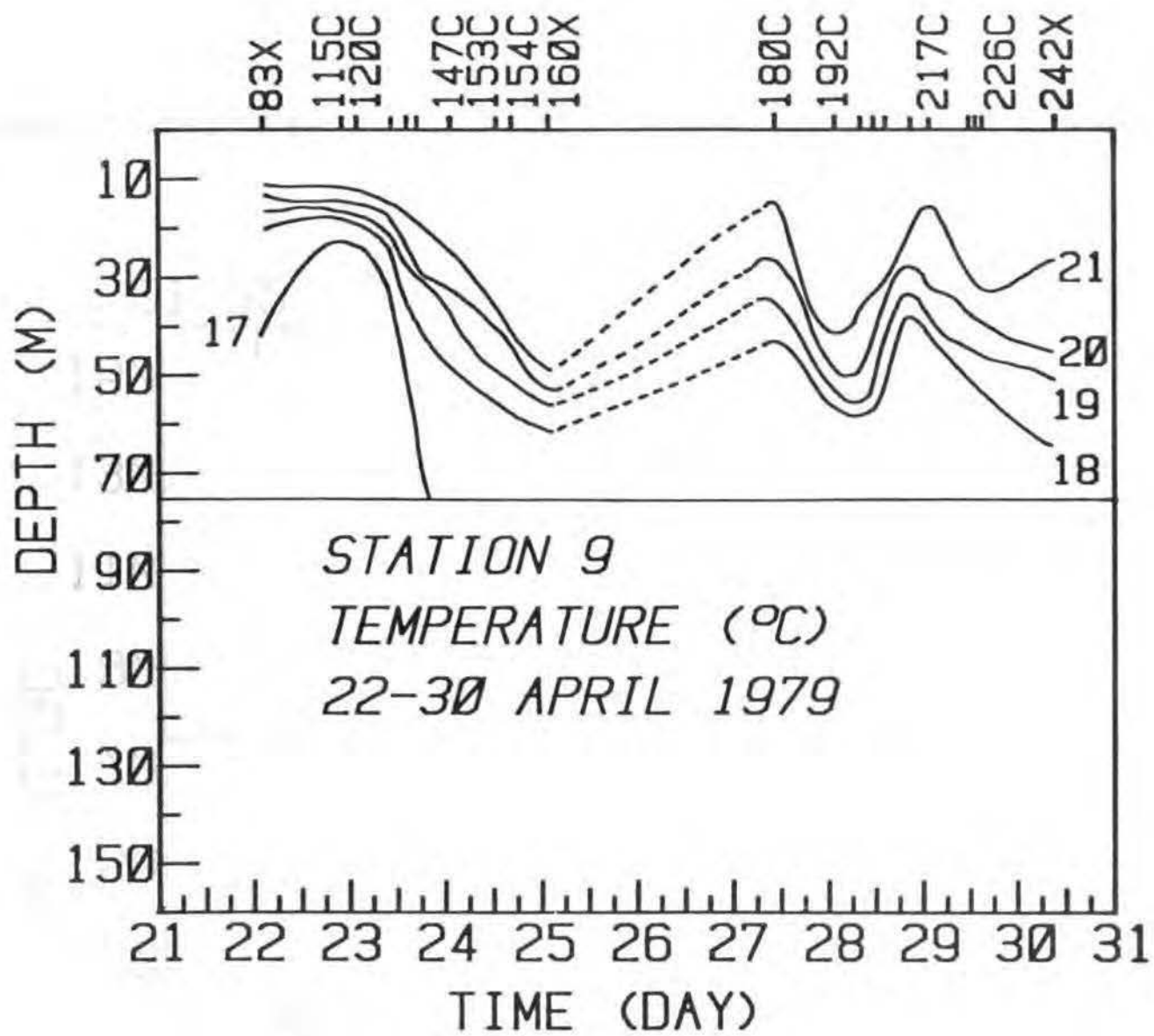


Figure 86. Station 9 Time Series Temperature, 22-30 April

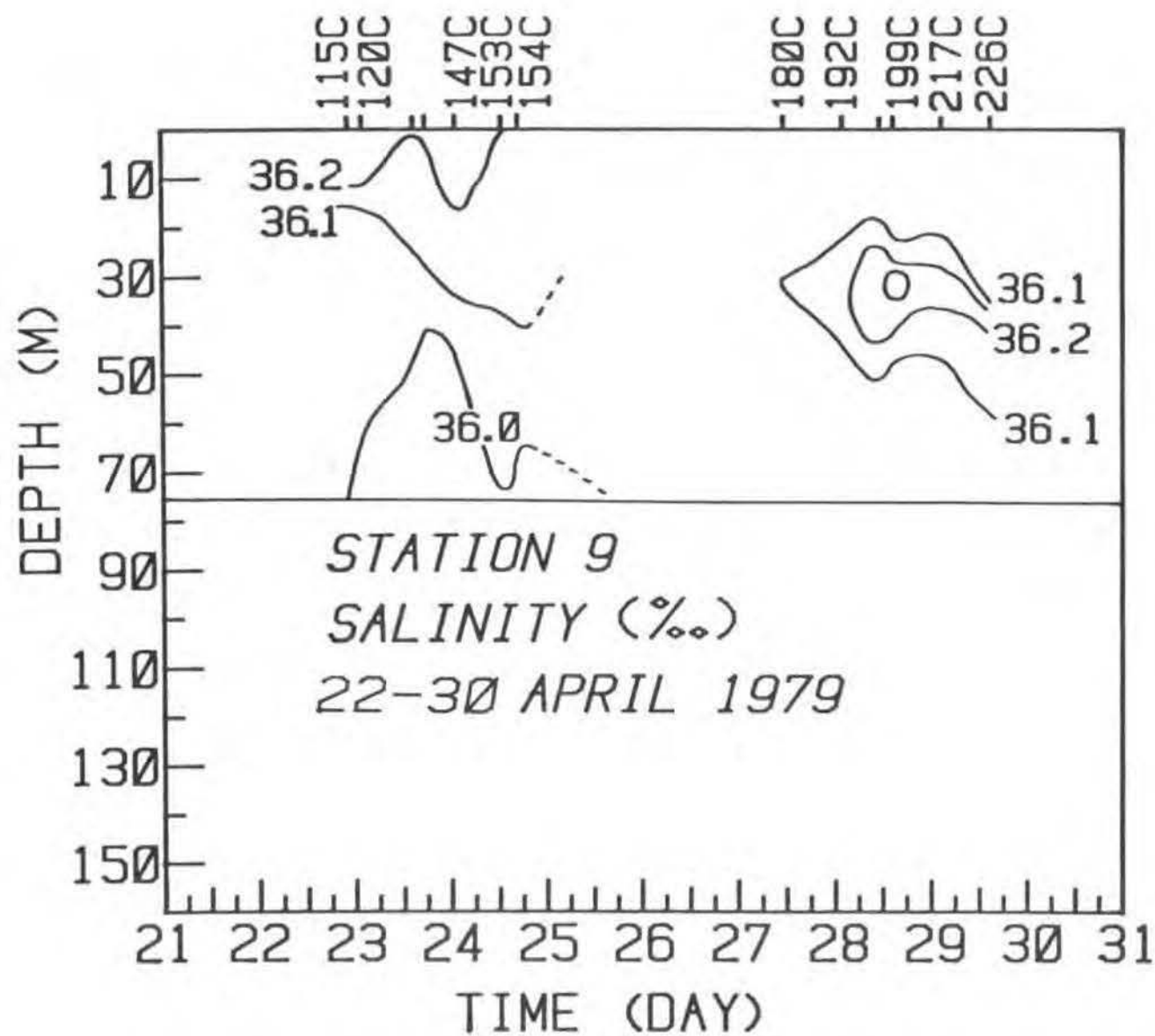


Figure 87. Station 9 Time Series Salinity, 22-30 April

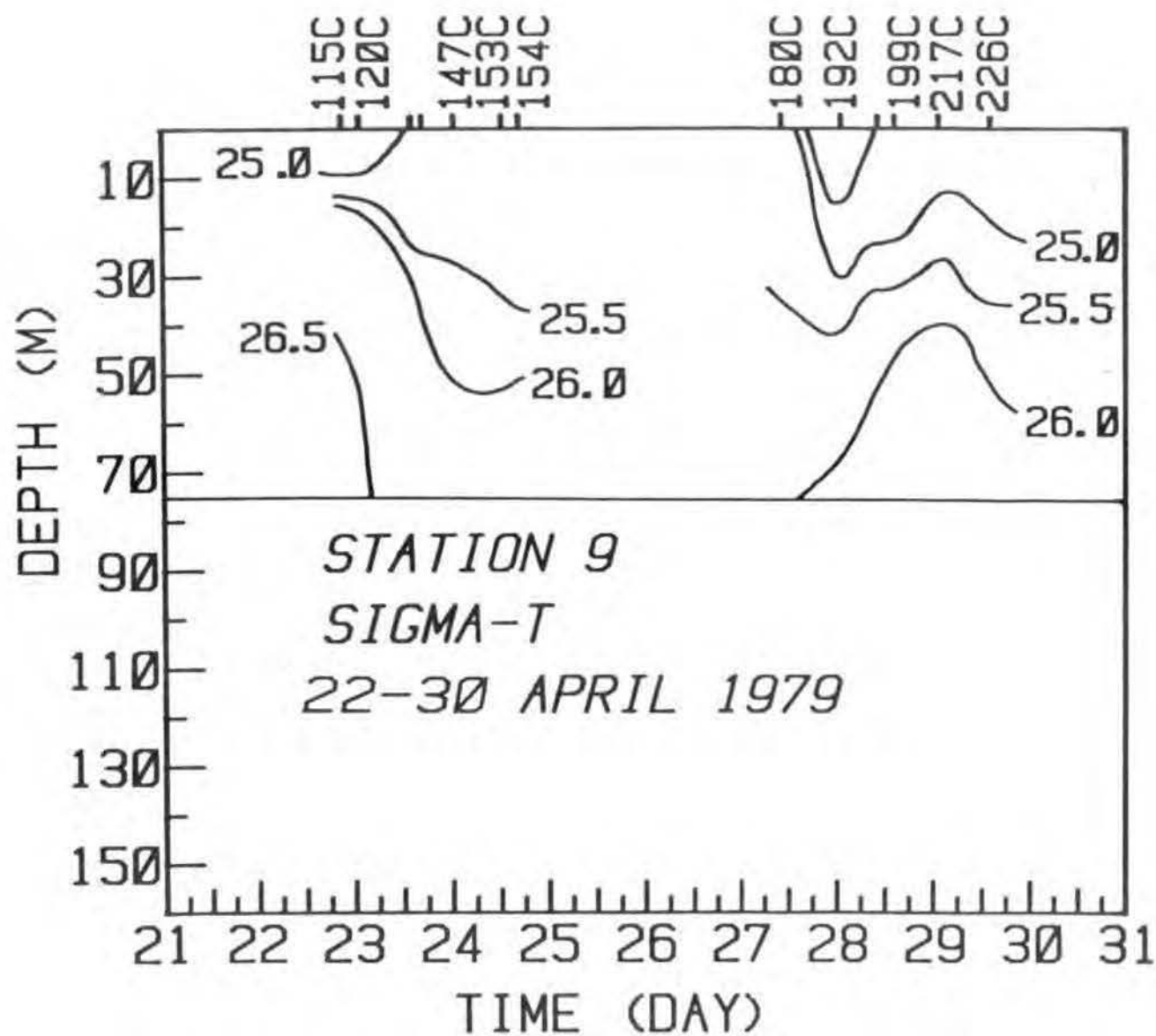


Figure 88. Station 9 Time Series Sigma-T, 22-30 April

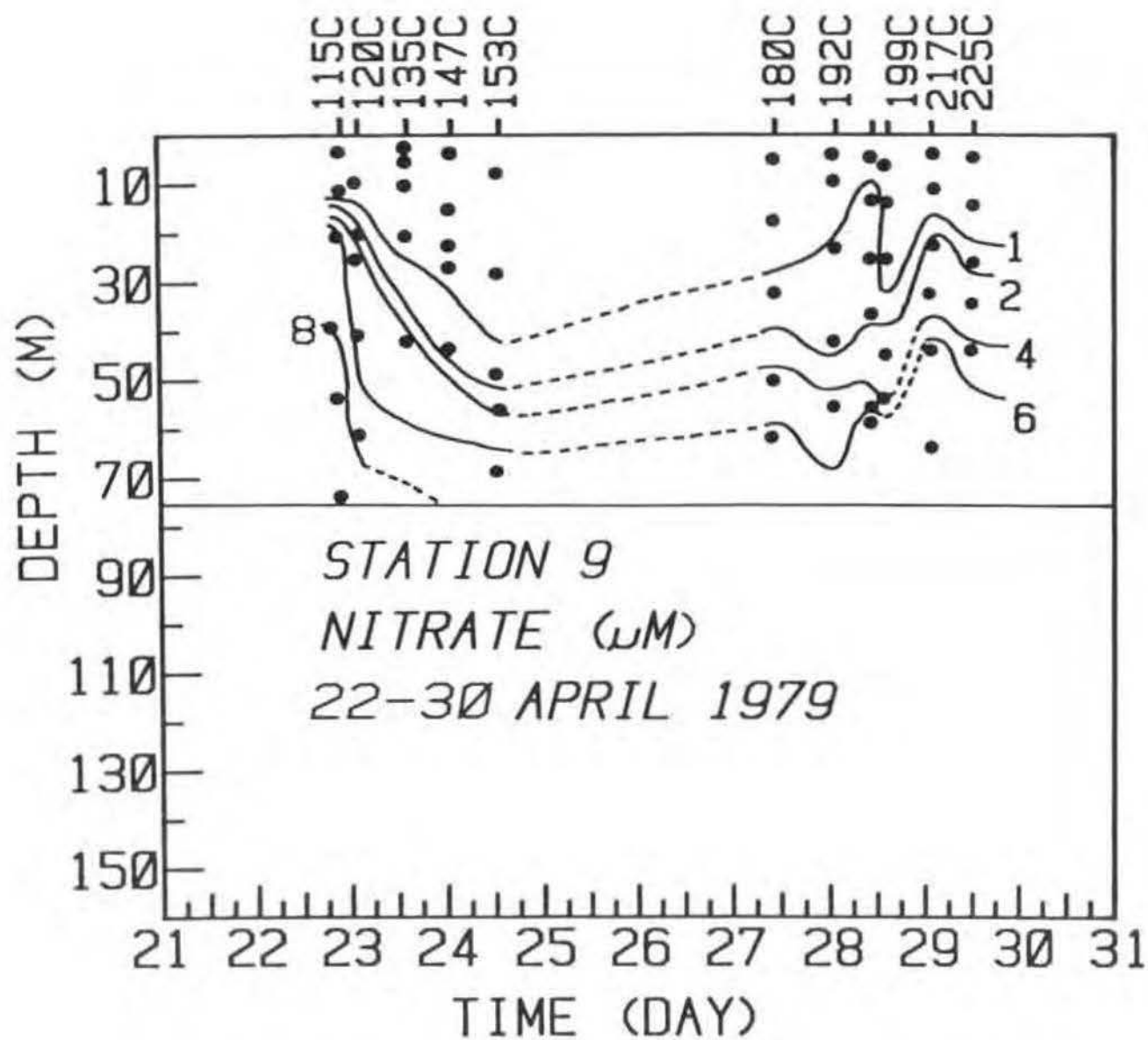


Figure 89. Station 9 Time Series Nitrate, 22-30 April

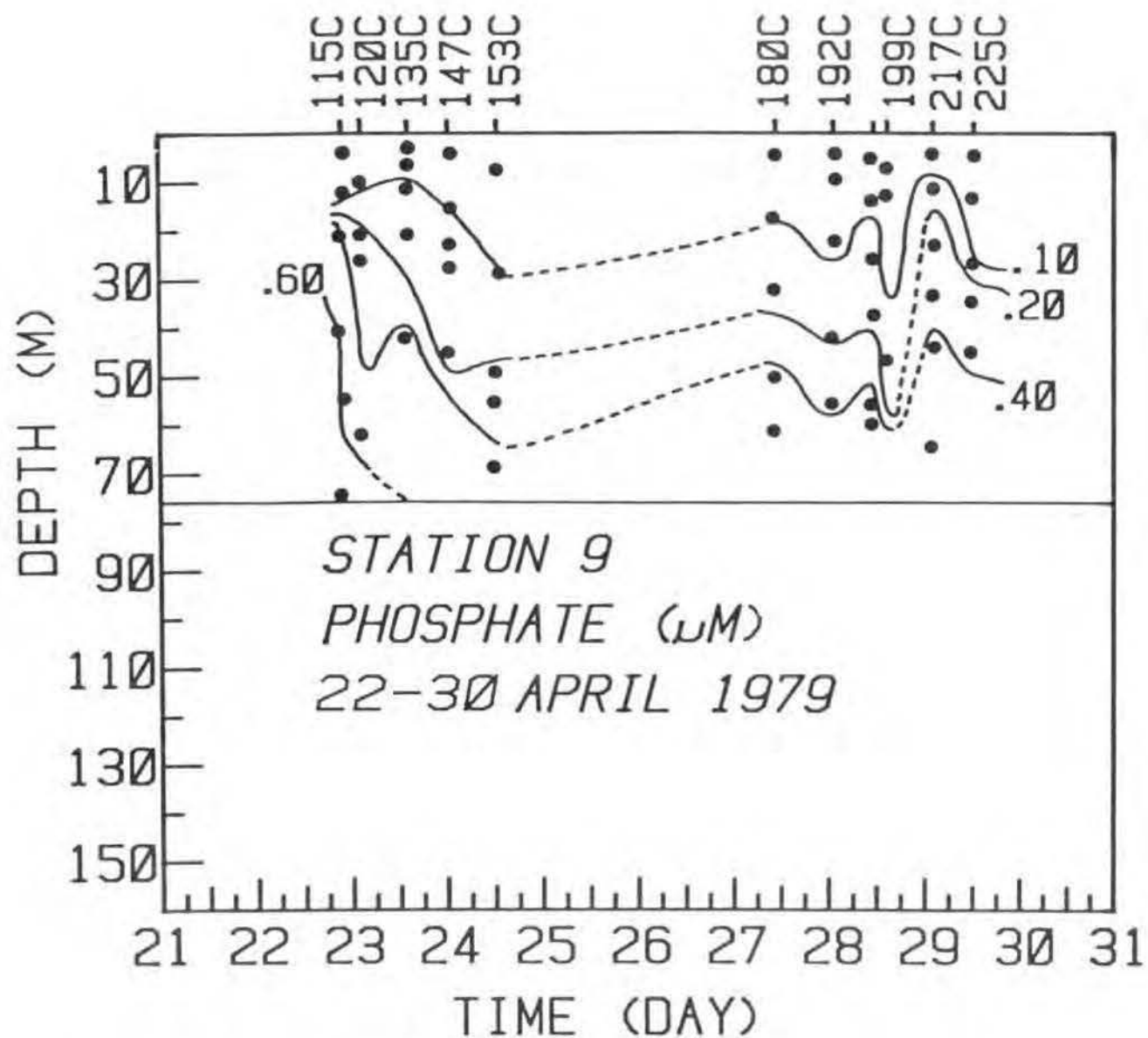


Figure 90. Station 9 Time Series Phosphate, 22-30 April

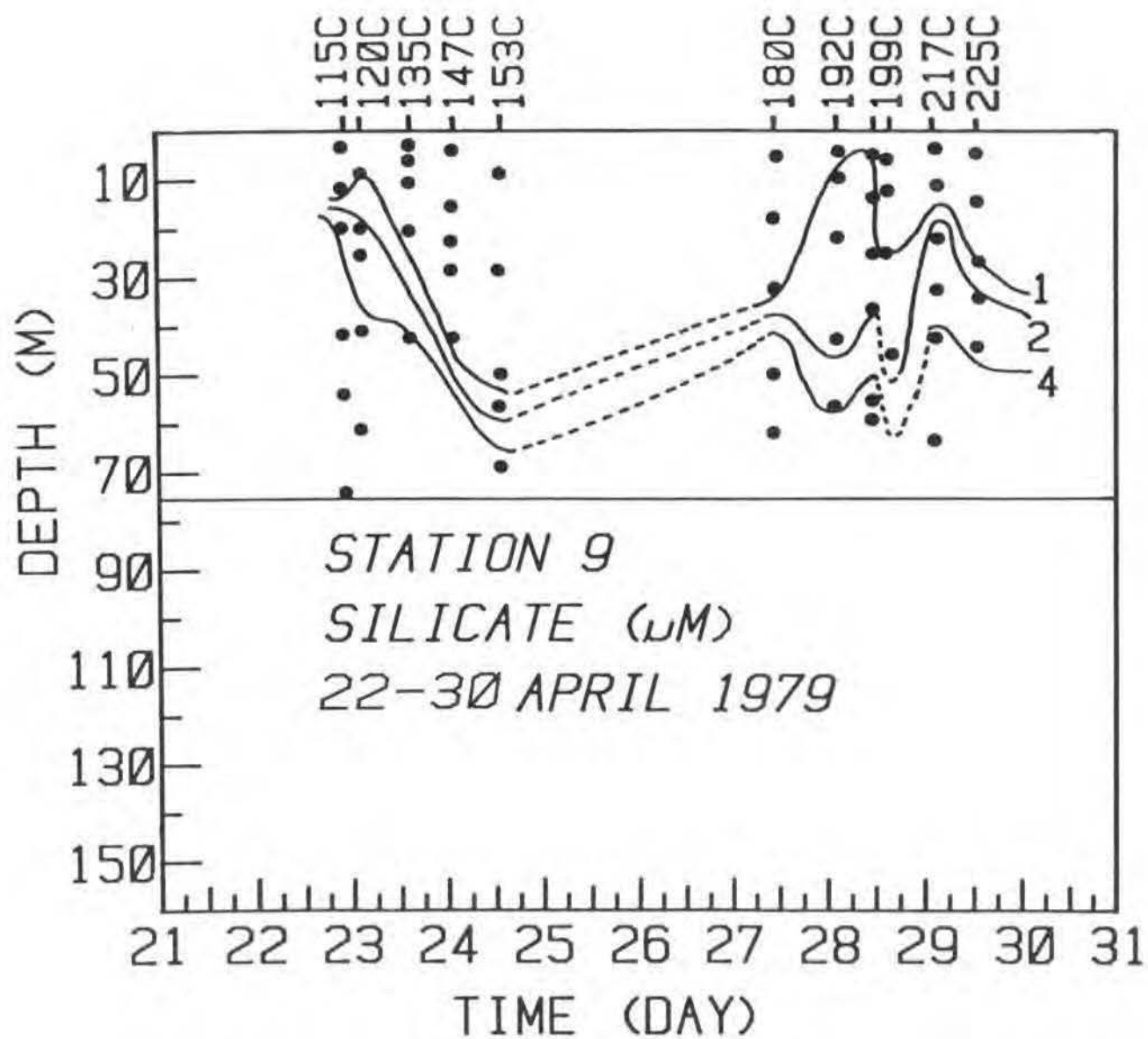


Figure 91. Station 9 Time Series Silicate, 22-30 April

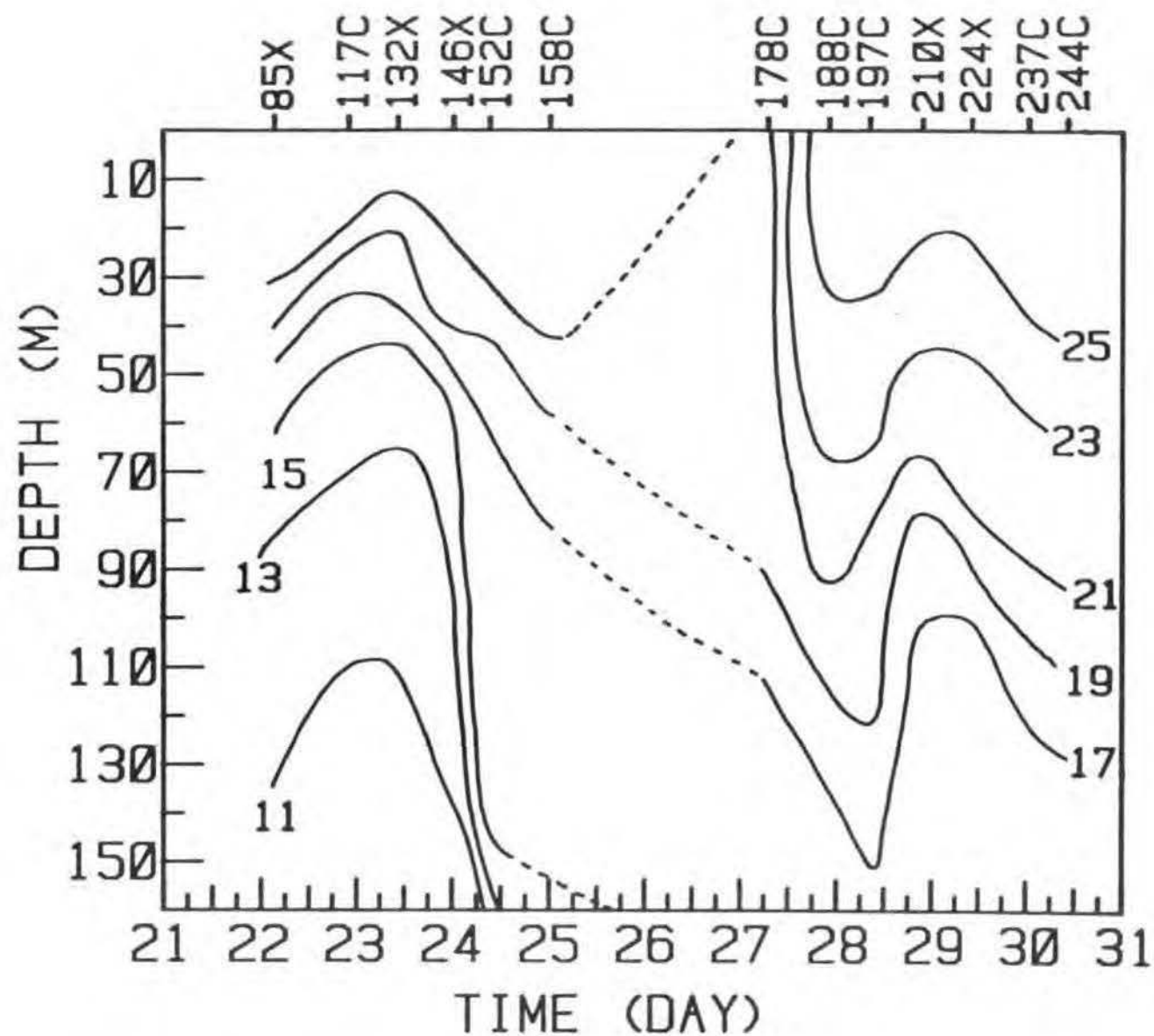


Figure 92. Station 11 Time Series Temperature, 22-30 April

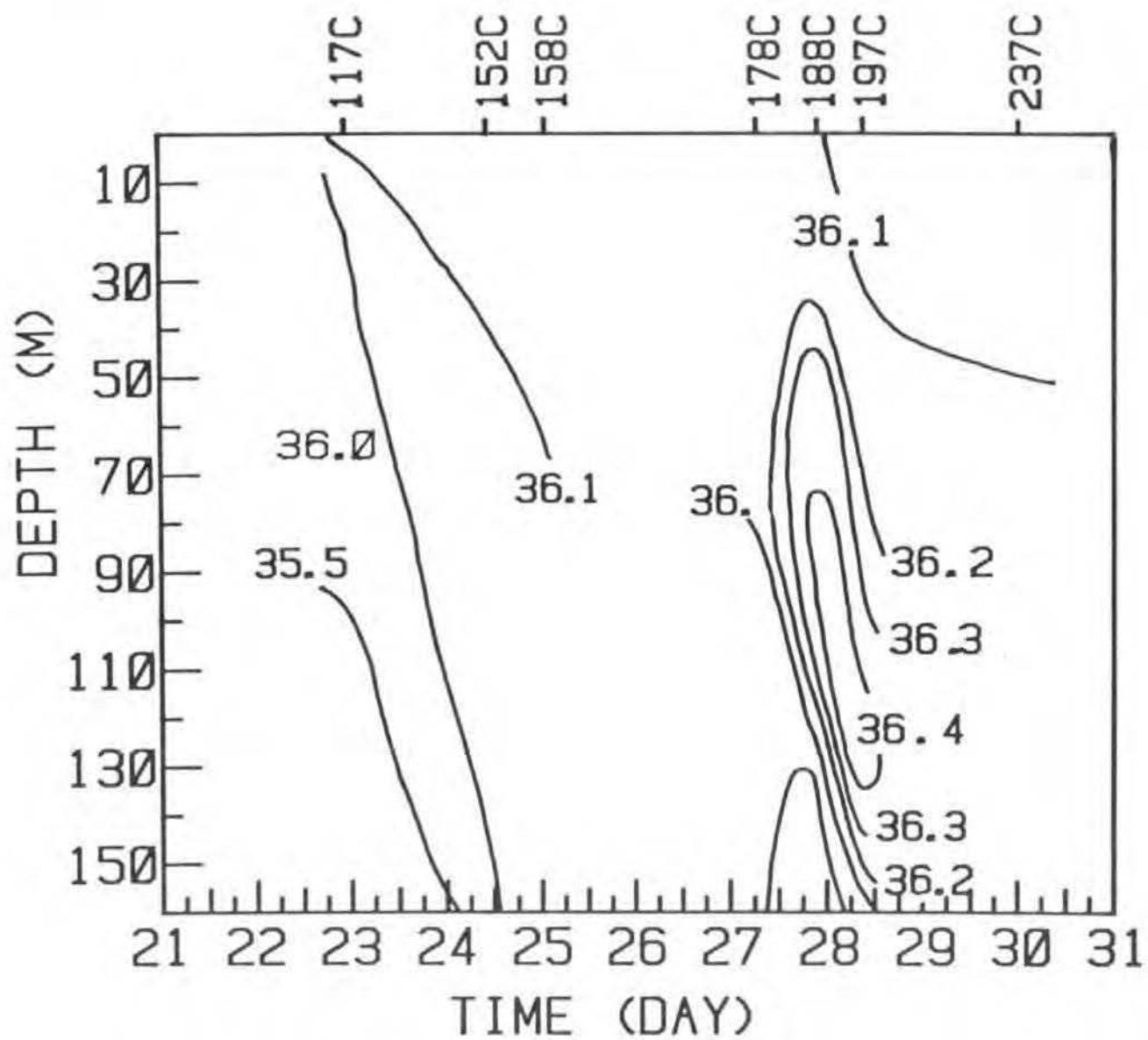


Figure 93. Station 11 Time Series Salinity, 22-30 April

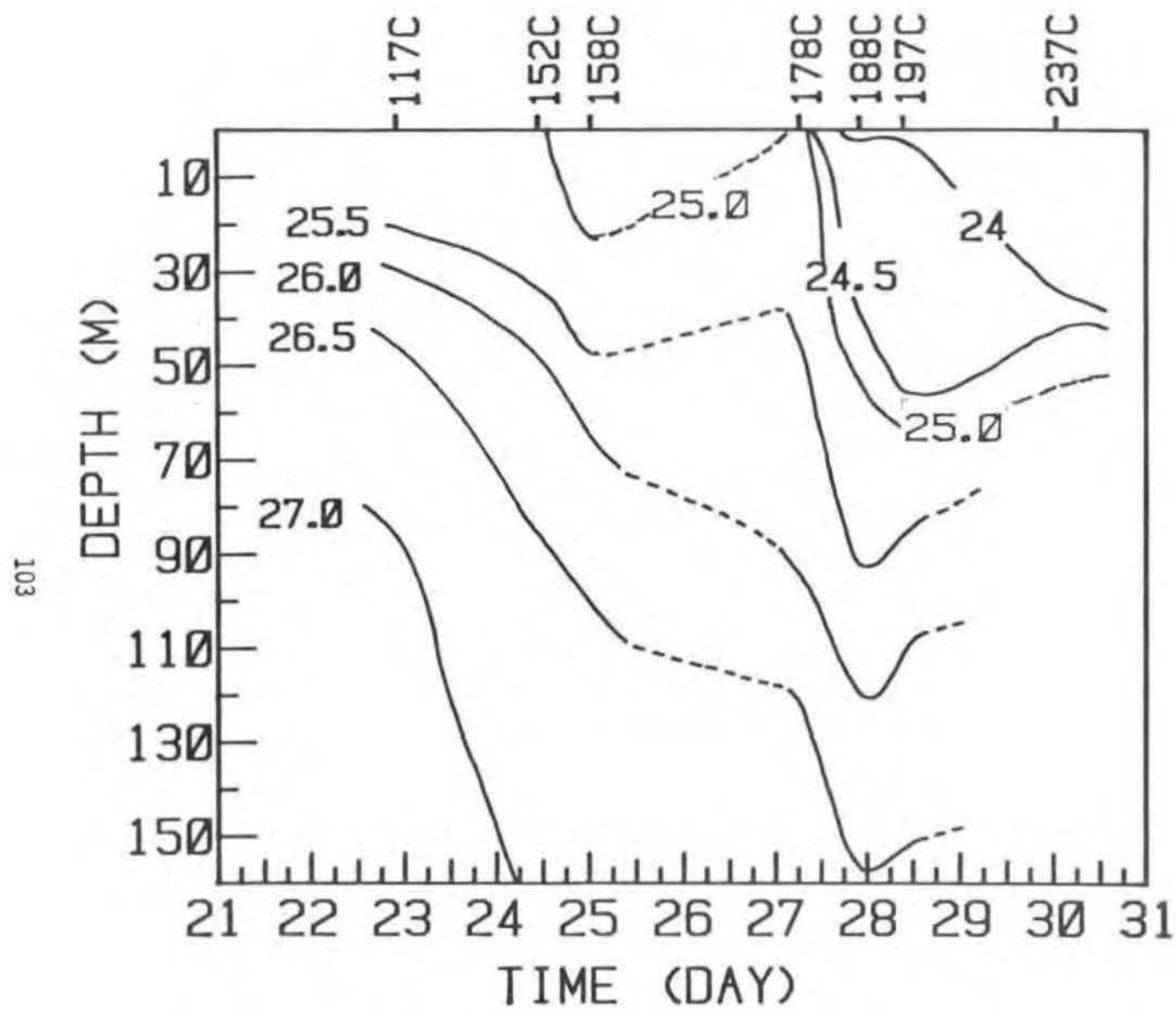


Figure 94. Station 11 Time Series Sigma-T, 22-30 April

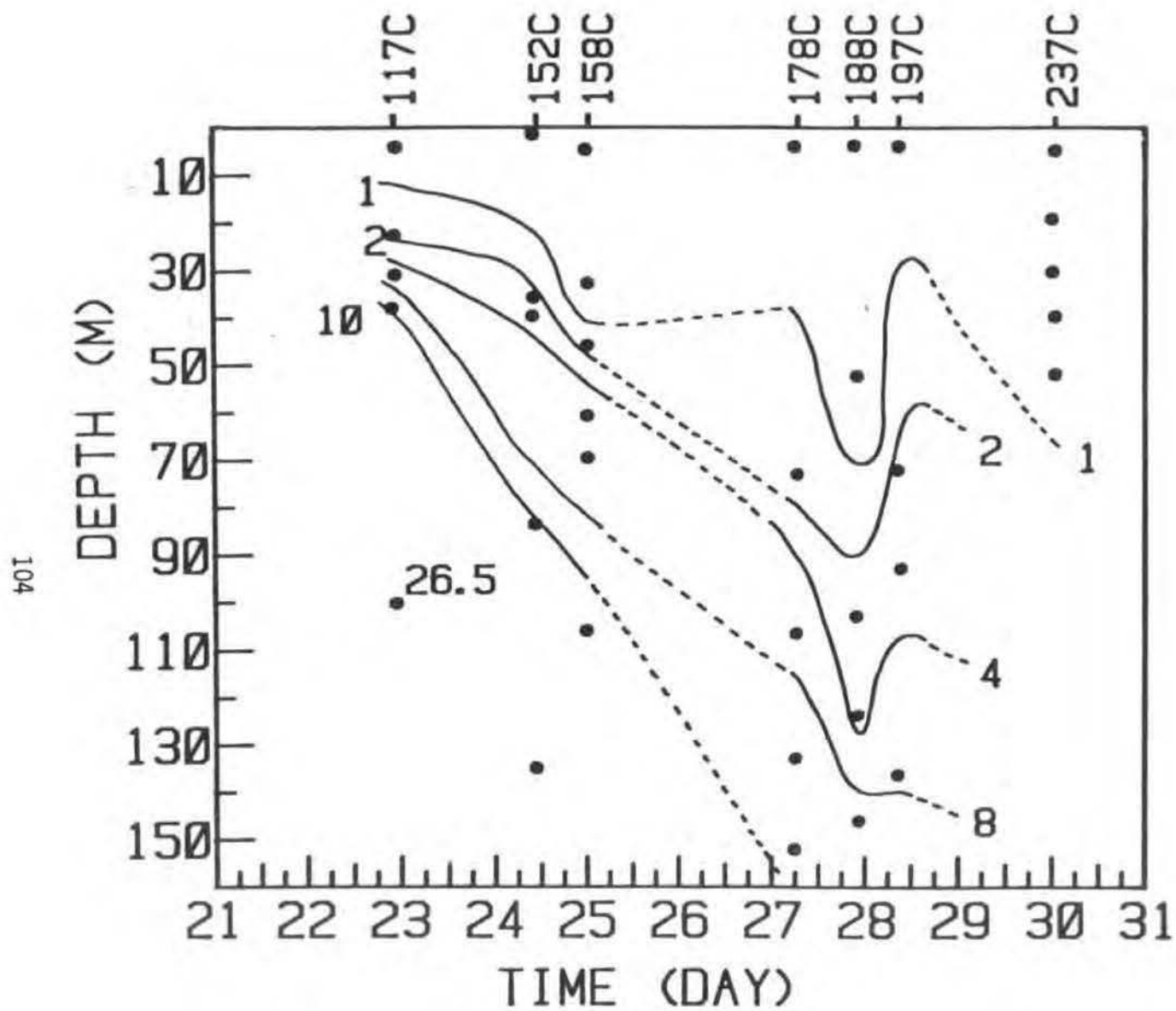


Figure 95. Station 11 Time Series Nitrate, 22-30 April

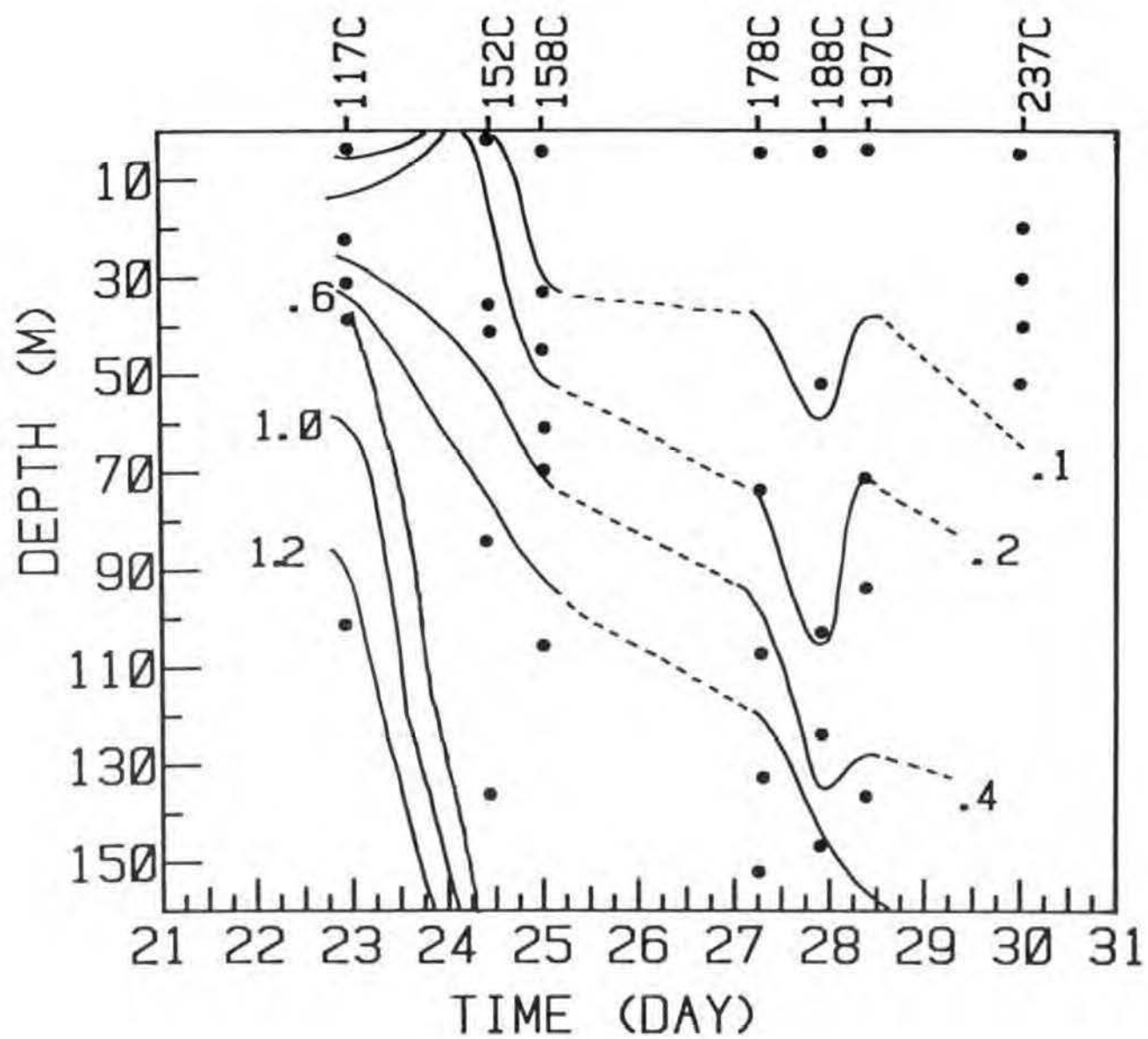


Figure 96. Station 11 Time Series Phosphate, 22-30 April

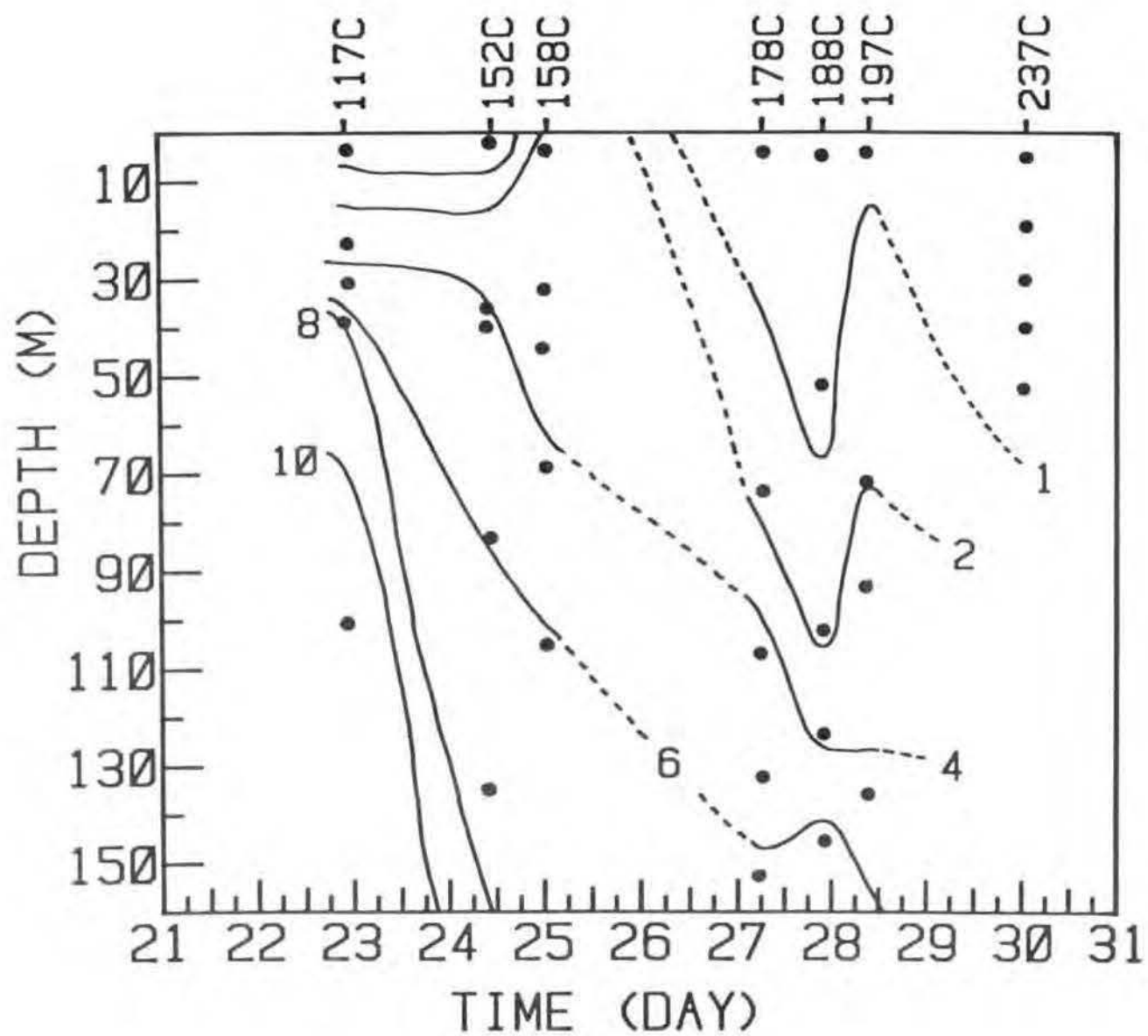


Figure 97. Station 11 Time Series Silicate, 22-30 April

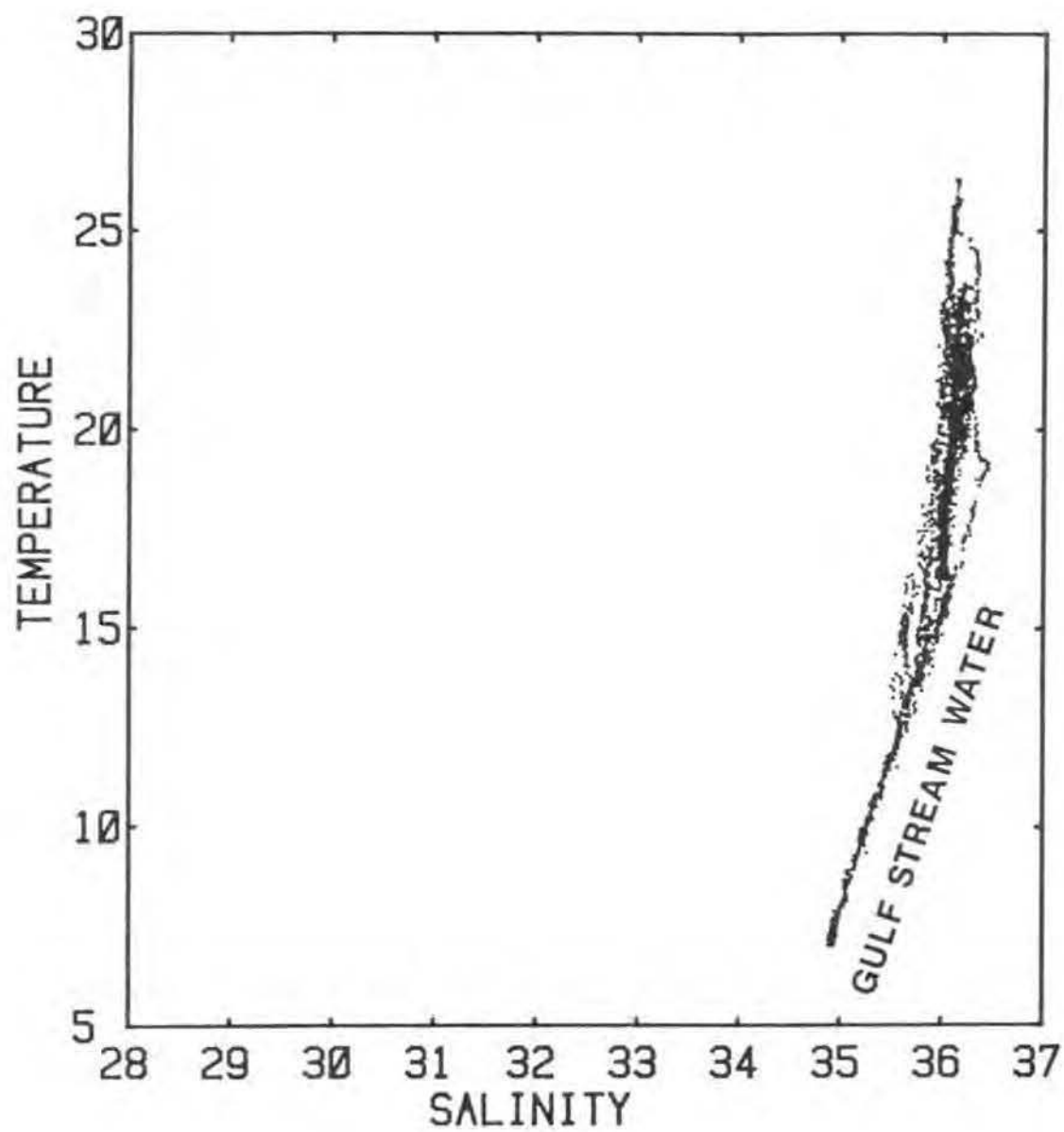


Figure 98. Temperature-Salinity Diagram of All Stations (42C-254C), April 1979

REFERENCES

- Armstrong, F.A.J., C.R. Stearns, and J.D.H. Strickland. 1967. The measurement of upwelling and subsequent biological processes by means of the Technicon Autoanalyzer and associated equipment. *Deep-Sea Res.*, 14, pp. 381-389.
- Atkinson, L.P. 1977. Modes of Gulf Stream intrusion into the South Atlantic Bight shelf waters. *Geophysical Research Letters*, 4(12): 583-586.
- Broenkow, W.W., W.B. Abrahams, and R.R. McInnis. 1977. A CTD Data Acquisition System for Coastal Applications. Preprint: Proceedings Fourth STD/Ocean Systems Conference, January 19-27, 1977. Plessey Environmental Systems, San Diego, California.
- Chandler, W.S., L.P. Atkinson, J.J. Singer, P.G. O'Malley, and C.V. Baker. 1978. A CTD System: Description, Operation, Data Acquisition and Processing. Georgia Marine Science Center Technical Report 78-7.
- Glibert, P.M. and T.C. Loder. 1977. Automated analysis of nutrients in seawater: A manual of techniques, Woods Hole Oceanographic Institution Technical Report, WHOI-77-47.
- Lee, T.N. and D.A. Mayer. 1977. Low-frequency current variability and spin-off eddies along the shelf off southeast Florida. *Journal of Marine Research*, 35(1): 193-220.
- Murphy, J. and J.P. Riley. 1962. A modified single solution method for the determination of phosphate in natural waters. *Anal. Chim. Acta*, 27: 31-36.
- Strickland, J.D.H. and T.R. Parsons. 1972. A manual of seawater analysis. Fish. Res. Bd. Canada, Bull. No. 167 (2nd ed.), Ottawa.

APPENDIX I

Calibration Data

SALINITY CALIBRATION DATA:

Station	Depth	Bottle Salinity	CTD Salinity	Difference
51C	32	36.276	36.138	+ .138
53C	41	36.087	35.933	+ .154
64C	35	36.261	36.129	+ .132
66C	39	36.155	36.041	+ .114
68C	43	36.092	35.963	+ .129
70C	2	36.204	36.050	+ .154
72C	3	36.236	36.119	+ .117
78C	41	36.196	36.070	+ .126
82C	45	36.091	35.975	+ .116
111C	40	36.182	36.056	+ .126
113C	41	35.996	35.839	+ .157
115C	3	36.204	36.084	+ .120
113C	2	36.198	36.038	+ .160
117C	218	34.967	34.859	+ .108
120C	61	35.996	35.902	+ .094
135C	72	36.025	35.900	+ .125
137C	32	36.266	36.134	+ .132
139C	40	36.221	36.096	+ .125
143C	38	36.012	35.862	+ .150
147C	3	36.198	36.070	+ .128
151C	40	36.005	35.881	+ .124
152C	135	36.113	35.983	+ .130
153C	9	36.161	36.039	+ .122
156C	40	36.135	36.018	+ .117
157C	40	36.017	35.923	+ .094
170C	60	35.993	35.883	+ .110
176C	3	36.198	36.093	+ .105
177C	40	36.084	35.973	+ .111
178C	151	36.051	35.945	+ .106
180C	64	36.009	35.897	+ .112
187C	41	36.075	35.960	+ .115
188C	217	35.896	35.801	+ .095
188C	4	36.186	36.073	+ .113
195C	38	36.138	36.013	+ .125
197C	170	36.118	36.008	+ .110
217C	66	35.908	35.800	+ .108
225C	3	36.038	35.909	+ .129
237C	3	36.170	36.035	+ .135

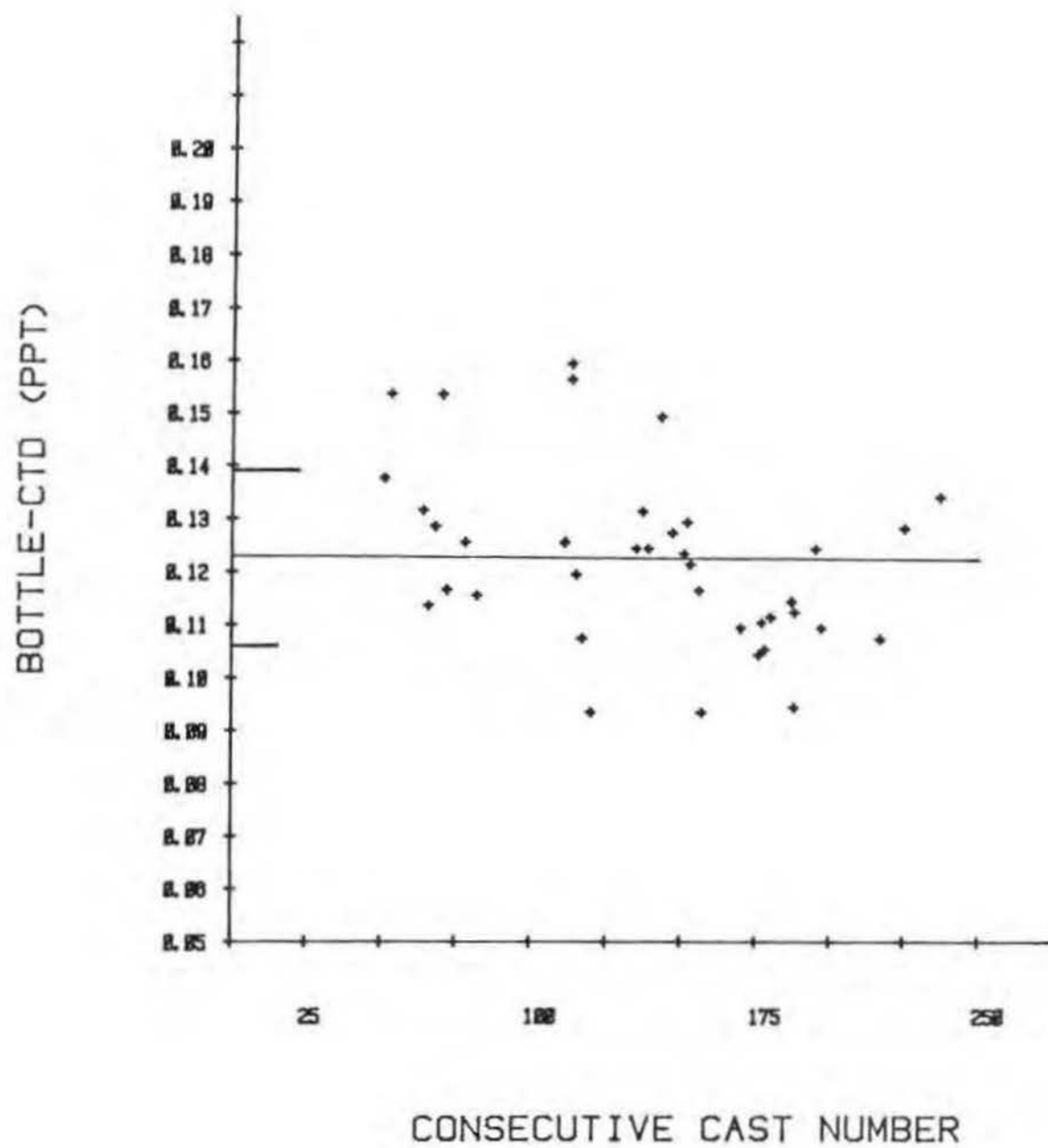


Figure 99. Time-dependent Plot of Bottle-CTD Salinity

TEMPERATURE CALIBRATION DATA:

Station	Depth	Reversing Thermometer Temperature			CTD Temperature	Difference
		1	2	Ave		
51C	32	20.83	20.81	20.820	20.79	+ .030
64C	35	20.81	20.82	20.815	20.79	+ .025
66C	39	19.62	19.60	19.610	19.56	+ .050
111C	40	23.32		23.320	20.30	+ .020
137C	32	21.40	21.39	21.395	21.38	+ .015
157C	40	18.13	18.15	18.140	18.11	+ .030
170C	60	16.93	16.94	16.935	16.90	+ .035
187C	41	19.20	19.16	19.180	19.14	+ .040

APPENDIX II
Hydrographic Data

HYDROGRAPHIC DATA

Vertical profiles of salinity, temperature, sigma-t, DO, and nutrients

The symbols used in the following listings are defined as follows:

Header Data: Times are GMT (EST + 5 or EDT + 4)
Latitude and Longitude are from Loran C

Weather Data: These data are taken from the ship's log.

Wind speed (knots)
Wind direction (degrees)
Air temperature ($^{\circ}\text{C}$)
Weather (WMO code 4501)
Barometric pressure (mb)
Sea State (WMO 3700)
Wave direction (degrees)
Cloud type (not given)
Cloud amount (not given)
Visibility code (not given)

Observations: Z = Depth in meters
T = Temperature in $^{\circ}\text{C}$
S = Salinity in o/oo
D = Density in sigma-t units
SVA = Specific volume anomaly $\times 10^5$
O₂ = Dissolved oxygen in ml/liter
O₂ = Oxygen saturation in ml/liter
AOU = Apparent oxygen utilization in ml/liter
PO₄ = Phosphate concentration in $\mu\text{mole/liter}$
NO₃ = Nitrate concentration in $\mu\text{mole/liter}$
Si = Silicate concentration in $\mu\text{mole/liter}$

STATION SUMMARY FOR GILLISS CRUISE 002 APRIL 1979

CRUISE	STATION	LATITUDE	LONGITUDE	YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
002	041X	29 53.5N	80 18.5W	79	04	21	0.5	61	41
002	042X	29 53.0N	80 16.0W	79	04	21	0.8	77	42
002	043X	29 51.9N	80 12.1W	79	04	21	1.1	255	43
002	044X	29 51.7N	80 08.9W	79	04	21	1.3	350	44
002	045X	29 52.8N	80 05.6W	79	04	21	1.6	425	45
002	050X	30 10.5N	80 26.7W	79	04	21	3.9	39	50
002	051C	30 12.0N	80 34.9W	79	04	21	4.8	35	51
002	052X	30 11.3N	80 23.1W	79	04	21	6.5	42	52
002	053C	30 10.9N	80 20.5W	79	04	21	7.1	46	53
002	054X	30 10.0N	80 17.2W	79	04	21	7.9	50	54
002	055C	30 09.5N	80 14.4W	79	04	21	8.3	87	55
002	056X	30 09.0N	80 11.0W	79	04	21	9.1	213	56
002	057C	30 09.5N	80 06.8W	79	04	21	9.4	240	57
002	058X	30 08.2N	80 05.0W	79	04	21	10.7	305	58
002	064C	30 31.1N	80 29.8W	79	04	21	14.0	36	64
002	065X	30 30.6N	80 26.5W	79	04	21	14.7	35	65
002	066C	30 29.3N	80 21.4W	79	04	21	15.2	41	66
002	067X	30 28.9N	80 18.8W	79	04	21	15.8	43	67
002	068C	30 28.3N	80 16.3W	79	04	21	16.1	45	68
002	069X	30 27.7N	80 12.8W	79	04	21	16.7	49	69
002	070X	30 27.5N	80 10.8W	79	04	21	17.1	123	70
002	070C	30 27.0N	80 09.5W	79	04	21	17.6	123	71
002	071X	30 26.5N	80 06.2W	79	04	21	18.6	233	72
002	072C	30 26.2N	80 03.0W	79	04	21	19.0	305	73
002	073X	30 25.8N	79 58.5W	79	04	21	20.3	299	74
002	078C	30 46.1N	80 20.0W	79	04	21	23.4	43	79
002	079X	30 45.2N	80 17.0W	79	04	21	23.9	41	80
002	080C	30 44.7N	80 14.0W	79	04	22	0.4	43	81
002	081X	30 44.1N	80 11.0W	79	04	22	1.0	40	82
002	082C	30 43.5N	80 08.1W	79	04	22	1.4	45	83
002	083X	30 43.0N	80 05.4W	79	04	22	1.9	70	84
002	084C	30 42.3N	80 02.5W	79	04	22	2.2	185	85
002	085X	30 41.6N	79 59.5W	79	04	22	3.1	232	86
002	086X	30 41.1N	79 56.5W	79	04	22	3.4	291	87
002	087X	30 40.4N	79 54.0W	79	04	22	3.6	300	88
002	093X	31 08.6N	80 17.8W	79	04	22	6.8	35	94
002	094X	31 08.5N	80 16.0W	79	04	22	7.0	39	95
002	095X	31 07.3N	80 11.2W	79	04	22	7.4	44	96
002	096X	31 06.3N	80 07.0W	79	04	22	7.8	48	97
002	097X	31 05.1N	80 02.5W	79	04	22	8.1	48	98
002	098X	31 03.9N	79 58.0W	79	04	22	8.6	48	99
002	099X	31 02.8N	79 53.2W	79	04	22	9.1	190	100
002	100X	31 02.0N	79 48.8W	79	04	22	9.3	260	101
002	101X	31 00.7N	79 43.6W	79	04	22	9.7	305	102
002	106C	30 47.1N	79 59.9W	79	04	22	13.3	75	107
002	111C	30 45.4N	80 16.7W	79	04	22	19.6	43	112
002	112X	30 44.5N	80 13.5W	79	04	22	20.5	42	113
002	113C	30 43.9N	80 10.9W	79	04	22	20.8	43	114
002	114X	30 43.5N	80 08.0W	79	04	22	21.4	47	115
002	115C	30 42.9N	80 05.0W	79	04	22	21.9	79	116
002	116X	30 42.4N	80 02.5W	79	04	22	22.6	190	117
002	117C	30 41.5N	79 59.5W	79	04	22	23.0	245	118
002	117X	30 41.5N	79 59.5W	79	04	22	23.7	245	119
002	118X	30 40.8N	79 56.1W	79	04	23	0.2	310	120
002	119C	30 41.5N	79 54.5W	79	04	23	0.4	330	121
002	120C	30 42.8N	80 05.2W	79	04	23	1.9	73	122
002	122X	30 48.1N	80 29.6W	79	04	23	8.6	36	124
002	123X	30 47.4N	80 26.5W	79	04	23	8.9	38	125
002	124X	30 47.0N	80 23.2W	79	04	23	9.2	41	126
002	125X	30 46.1N	80 20.0W	79	04	23	9.5	42	127
002	126X	30 45.1N	80 16.8W	79	04	23	9.8	42	128
002	127X	30 44.6N	80 13.9W	79	04	23	10.1	45	129
002	128X	30 43.6N	80 10.5W	79	04	23	10.3	41	130

STATION SUMMARY

[CONTINUED]

CRUISE	STATION	LATITUDE		LONGITUDE		YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
002	129X	30	43.0N	80	08.0W	79	04	23	10.6	46	131
002	130X	30	42.7N	80	05.4W	79	04	23	10.8	77	132
002	131X	30	42.0N	80	02.4W	79	04	23	11.0	194	133
002	132X	30	41.5N	79	59.5W	79	04	23	11.3	235	134
002	133X	30	40.6N	79	56.5W	79	04	23	11.6	300	135
002	134X	30	40.0N	79	52.8W	79	04	23	11.9	380	136
002	135C	30	42.7N	80	05.3W	79	04	23	13.4	75	137
002	135C	30	42.7N	80	05.3W	79	04	23	14.0	75	138
002	136C	30	42.6N	80	05.5W	79	04	23	16.0	75	139
002	137C	30	48.5N	80	03.0W	79	04	23	19.4	37	140
002	138X	30	47.4N	80	26.5W	79	04	23	20.4	38	141
002	139C	30	47.2N	80	23.3W	79	04	23	20.8	42	142
002	140X	30	46.1N	80	19.9W	79	04	23	21.7	42	143
002	141X	30	45.3N	80	17.0W	79	04	23	22.1	42	144
002	142X	30	44.6N	80	13.9W	79	04	23	22.4	46	145
002	143CU	30	43.7N	80	10.8W	79	04	23	22.7	43	146
002	144X	30	42.8N	80	08.3W	79	04	23	23.6	47	147
002	145X	30	42.4N	80	02.5W	79	04	24	0.1	191	148
002	146X	30	41.1N	79	59.8W	79	04	24	0.4	233	149
002	147C	30	42.9N	80	05.2W	79	04	24	1.3	75	150
002	149X	30	46.9N	80	23.5W	79	04	24	7.1	41	152
002	150C	30	45.3N	80	16.5W	79	04	24	8.0	47	153
002	151C	30	44.1N	80	10.6W	79	04	24	9.3	43	154
002	152C	30	41.7N	79	59.5W	79	04	24	11.1	232	155
002	153C	30	42.8N	80	05.0W	79	04	24	12.9	80	156
002	153C	30	42.8N	80	05.0W	79	04	24	13.5	79	157
002	154C	30	42.5N	80	03.0W	79	04	24	17.0	75	158
002	155X	30	47.0N	80	23.3W	79	04	24	19.5	40	159
002	156C	30	45.3N	80	16.8W	79	04	24	20.6	43	160
002	157C	30	43.8N	80	10.6W	79	04	24	21.8	44	161
002	158C	30	42.4N	79	58.5W	79	04	25	0.1	235	162
002	159X	30	42.0N	79	54.9W	79	04	25	1.8	320	163
002	160X		N		W	79	04	25	3.9	73	164
002	166X	30	59.8N	79	58.8W	79	04	26	21.7	51	170
002	167X	30	55.5N	80	01.3W	79	04	26	22.2	49	171
002	168X	30	52.0N	80	02.5W	79	04	26	22.6	51	172
002	169X	30	47.5N	80	03.7W	79	04	26	23.0	65	173
002	170C	30	42.7N	80	06.0W	79	04	26	23.8	70	174
002	170C	30	42.5N	80	05.8W	79	04	27	1.6	65	175
002	174X	30	46.9N	80	23.4W	79	04	27	4.2	55	179
002	176C	30	45.2N	80	16.4W	79	04	27	5.1	43	181
002	177C	30	43.8N	80	11.0W	79	04	27	5.9	41	182
002	178C	30	41.6N	79	59.2W	79	04	27	7.3	242	183
002	179X	30	40.0N	79	52.9W	79	04	27	8.6	370	184
002	180C	30	42.4N	80	05.3W	79	04	27	11.2	70	185
002	180C	30	42.4N	80	05.3W	79	04	27	13.4	72	186
002	183C	30	43.5N	80	06.8W	79	04	27	15.8	49	189
002	184X	30	46.7N	80	23.6W	79	04	27	18.0	41	190
002	186C	30	45.2N	80	16.4W	79	04	27	18.9	41	192
002	187C	30	44.0N	80	10.9W	79	04	27	19.7	43	193
002	188C	30	41.9N	79	58.5W	79	04	27	22.1	247	194
002	192C	30	43.2N	80	05.1W	79	04	28	1.2	73	198
002	192C	30	43.2N	80	05.1W	79	04	28	2.2	70	199
002	193X	30	47.0N	80	23.2W	79	04	28	5.9	39	200
002	194C	30	44.6N	80	16.8W	79	04	28	6.5	41	201
002	195C	30	43.7N	80	11.0W	79	04	28	7.6	42	202
002	196X	30	42.6N	80	05.5W	79	04	28	8.4	72	203
002	197C	30	42.5N	79	58.5W	79	04	28	9.4	232	204
002	198C	30	42.4N	80	05.3W	79	04	28	10.9	71	205
002	199C	30	42.9N	80	05.3W	79	04	28	13.7	71	206
002	209C	30	37.0N	80	07.2W	79	04	28	20.3	65	216
002	210X	30	41.5N	79	59.0W	79	04	28	22.0	250	217
002	211X	30	42.0N	80	02.9W	79	04	28	22.5	185	218

STATION SUMMARY

[CONTINUED]

CRUISE	STATION	LATITUDE	LONGITUDE	YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
002	212X	30 42.8N	80 05.0W	79	04	28	22.9	64	219
002	213X	30 42.8N	80 07.8W	79	04	28	23.1	45	220
002	214X	30 44.1N	80 11.0W	79	04	28	23.3	43	221
002	215X	30 43.5N	80 14.0W	79	04	28	23.6	41	222
002	216X	30 45.0N	80 16.5W	79	04	28	23.8	45	223
002	217C	30 42.9N	80 05.4W	79	04	29	1.1	72	224
002	218X	30 44.8N	80 16.9W	79	04	29	8.5	41	225
002	219X	30 44.3N	80 13.7W	79	04	29	8.8	43	226
002	220X	30 43.9N	80 10.8W	79	04	29	9.1	40	227
002	221X	30 43.5N	80 07.5W	79	04	29	9.3	44	228
002	222X	30 42.7N	80 04.9W	79	04	29	9.7	74	229
002	223X	30 42.1N	80 03.0W	79	04	29	9.9	195	230
002	224X	30 41.6N	79 59.2W	79	04	29	10.5	240	231
002	225C	30 42.6N	80 04.2W	79	04	29	12.2	52	232
002	226C	30 42.9N	80 05.4W	79	04	29	13.0	67	233
002	227C	30 47.8N	80 30.0W	79	04	29	18.1	36	234
002	237C	30 41.5N	79 58.5W	79	04	30	0.1	219	244
002	238C	30 43.8N	80 09.8W	79	04	30	4.5	47	245
002	239X	30 44.6N	80 13.8W	79	04	30	8.5	40	246
002	240X	30 43.6N	80 11.0W	79	04	30	8.8	44	247
002	241X	30 43.2N	80 07.5W	79	04	30	9.1	42	248
002	242X	30 43.2N	80 05.1W	79	04	30	9.4	91	249
002	243X	30 42.2N	80 02.5W	79	04	30	9.6	193	250
002	244X	30 41.5N	79 59.5W	79	04	30	10.0	238	251
002	245C	30 43.0N	80 08.1W	79	04	30	12.5	43	252

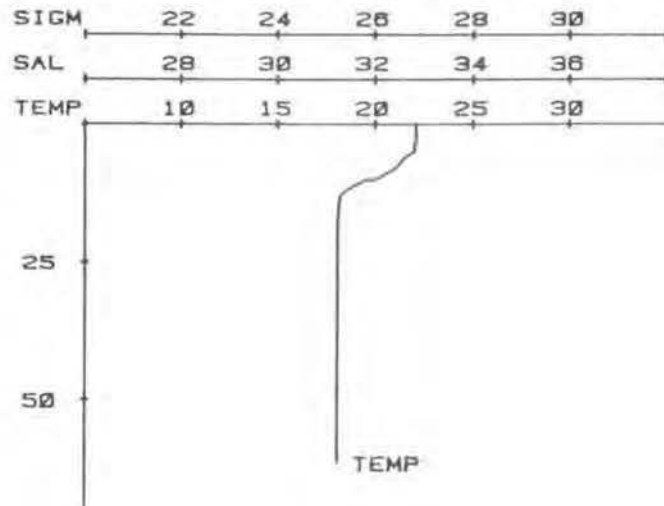
GILLISS CRUISE STA 041X 21/04/79 00.5 GHT CONSEC STA 41
LAT 29 53.5N LONG 80 10.5W DEPTH = 61M DIST LAST STA = 0.0KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 100
AIR TEMP = 21.7C
WEATHER CODE = X1
BAROMETRIC PRES = 1019.3

SEA STATE = 3
WAVE DIRECTION = 100
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	22.1									
2.0	22.1									
5.0	22.0									
6.0	21.5									
8.0	21.0									
9.0	20.5									
10.0	20.0									
10.0	19.5									
11.0	19.0									
12.0	18.5									
13.0	18.2									
17.0	18.1									
61.0	18.1									

STATION 41X



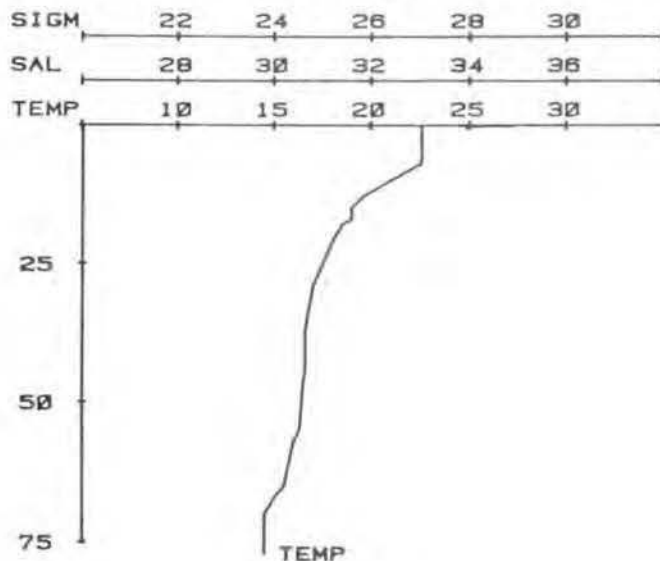
GILLISS CRUISE STA 042X 21/04/79 00.0 GHT CONSEC STA 42
LAT 29 53.0N LONG 80 16.0W DEPTH = 77M DIST LAST STA = 4.1KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 100
AIR TEMP = 21.7C
WEATHER CODE = X1
BAROMETRIC PRES = 1019.3

SEA STATE = 3
WAVE DIRECTION = 100
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	22.6									
0.0	22.6									
7.0	22.5									
8.0	22.0									
9.0	21.5									
10.0	21.0									
11.0	20.5									
12.0	20.0									
13.0	19.5									
15.0	19.0									
17.0	19.0									
18.0	18.5									
21.0	18.0									
25.0	17.5									
29.0	17.0									
37.0	16.6									
45.0	16.0									
46.0	16.5									
55.0	16.3									
57.0	16.0									
65.0	15.5									
67.0	15.0									
70.0	14.5									
77.0	14.5									

STATION 42X



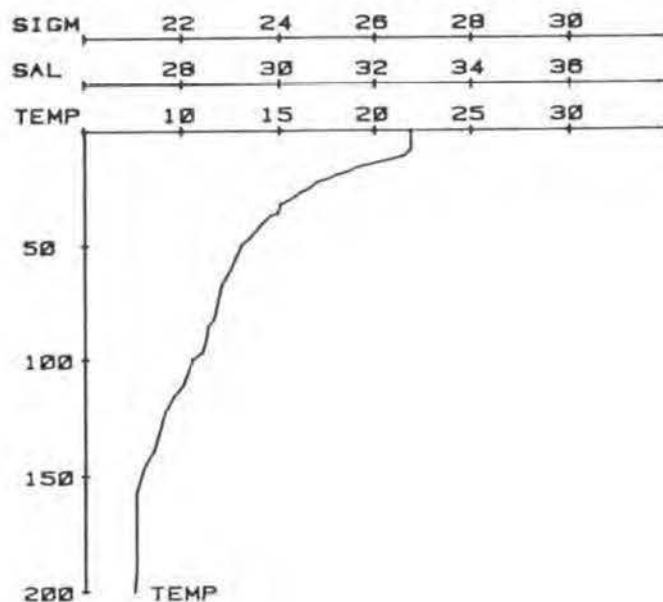
GILLISS CRUISE STA 043X 21/04/79 01.1 GWT CONSEC STA 43
LAT 29 51.9N LONG 00 52.1W DEPTH = 255M DIST LAST STA = 6.6KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 180
AIR TEMP = 22.2C
WEATHER CODE = 01
BAROMETRIC PRES = 1019.3

SEA STATE = 3
WAVE DIRECTION = 180
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	21.9									
0.0	21.9									
11.0	21.5									
12.0	21.0									
13.0	20.5									
14.0	20.0									
15.0	19.5									
16.0	19.0									
18.0	18.5									
19.0	18.0									
21.0	17.5									
22.0	17.0									
25.0	16.5									
27.0	16.0									
30.0	15.5									
32.0	15.0									
36.0	14.9									
37.0	14.5									
41.0	14.0									
46.0	13.5									
50.0	13.0									
60.0	12.5									
68.0	12.0									
83.0	11.6									
84.0	11.5									
86.0	11.3									
91.0	11.2									
97.0	11.0									
100.0	10.5									
111.0	10.0									
116.0	9.5									
124.0	9.0									
139.0	8.5									
146.0	8.0									
152.0	7.6									
190.0	7.6									
200.0	7.5									

STATION 43X



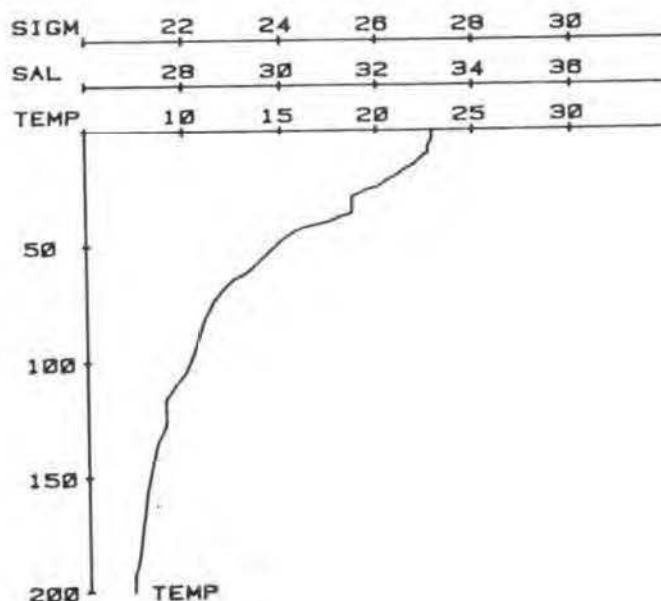
GILLISS CRUISE STA 044X 21/04/79 01.3 GWT CONSEC STA 44
LAT 29 51.7N LONG 00 48.9W DEPTH = 350M DIST LAST STA = 5.2KM

WEATHER DATA
WIND SPEED = 17KTS
WIND DIRECTION = 180
AIR TEMP = 22.2C
WEATHER CODE = 01
BAROMETRIC PRES = 1019.3

SEA STATE = 3
WAVE DIRECTION = 180
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	22.9									
4.0	22.9									
7.0	22.7									
10.0	22.7									
11.0	22.5									
15.0	22.0									
17.0	21.5									
20.0	21.0									
22.0	20.5									
25.0	20.0									
26.0	19.5									
28.0	19.0									
29.0	18.7									
36.0	18.7									
37.0	18.5									
38.0	18.0									
40.0	17.5									
41.0	17.0									
42.0	16.5									
43.0	16.0									
45.0	15.5									
48.0	15.0									
52.0	14.5									
56.0	14.0									
60.0	13.5									
63.0	13.0									
65.0	12.5									
69.0	12.0									
74.0	11.5									
82.0	11.0									
95.0	10.5									
105.0	10.0									
110.0	9.5									
116.0	9.0									
127.0	9.0									
136.0	8.5									
155.0	8.0									
187.0	7.5									
193.0	7.3									
200.0	7.3									

STATION 44X



GILLISS CRUISE STA 445X 21/04/79 01.6 GMT CONSEC STA 45

LAT 29 52.0N LONG 01 05.6W DEPTH = 425M DIST LAST STA = 5.7KM

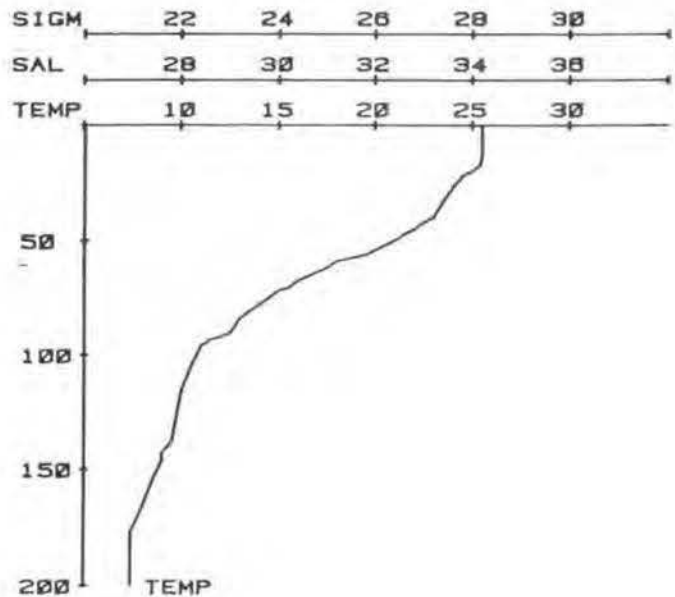
WEATHER DATA

WIND SPEED = 16KTS
WIND DIRECTION = 180
AIR TEMP = 22.2C
WEATHER CODE = 81
BAROMETRIC PRES = 1019.3

SEA STATE = 3
WAVE DIRECTION = 180
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	D	SVA	O2	O2'	AQU	PO4	NO3
0.0	25.5								
13.0	25.5								
17.0	25.4								
20.0	25.0								
22.0	24.5								
27.0	24.0								
33.0	23.5								
40.0	23.0								
42.0	22.5								
45.0	22.0								
47.0	21.5								
50.0	21.0								
52.0	20.5								
54.0	20.0								
56.0	19.5								
57.0	19.0								
58.0	18.5								
59.0	18.0								
62.0	17.5								
64.0	17.0								
66.0	16.5								
68.0	16.0								
71.0	15.5								
72.0	15.0								
75.0	14.5								
78.0	14.0								
81.0	13.5								
84.0	13.0								
90.0	12.5								
92.0	12.0								
93.0	11.5								
96.0	11.0								
105.0	10.5								
116.0	10.0								
138.0	9.5								
143.0	9.0								
146.0	9.0								
155.0	8.5								
166.0	8.0								
175.0	7.5								
176.0	7.4								
206.0	7.4								

STATION 45X



GILLISS CRUISE STA 450X 21/04/79 03.9 GMT CONSEC STA 50

LAT 30 10.5N LONG 01 26.7W DEPTH = 39M DIST LAST STA = 47.1KM

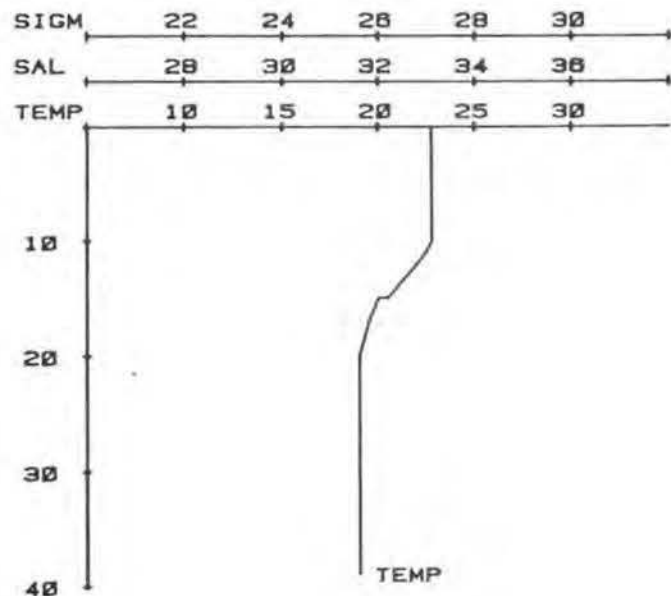
WEATHER DATA

WIND SPEED = 16KTS
WIND DIRECTION = 130
AIR TEMP = 21.1C
WEATHER CODE = 81
BAROMETRIC PRES = 1019.6

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	D	SVA	O2	O2'	AQU	PO4	NO3
0.0	22.0								
10.0	22.0								
11.0	22.5								
12.0	22.0								
13.0	21.5								
14.0	21.0								
15.0	20.5								
16.0	20.0								
17.0	19.5								
20.0	19.0								
39.0	19.0								

STATION 50X



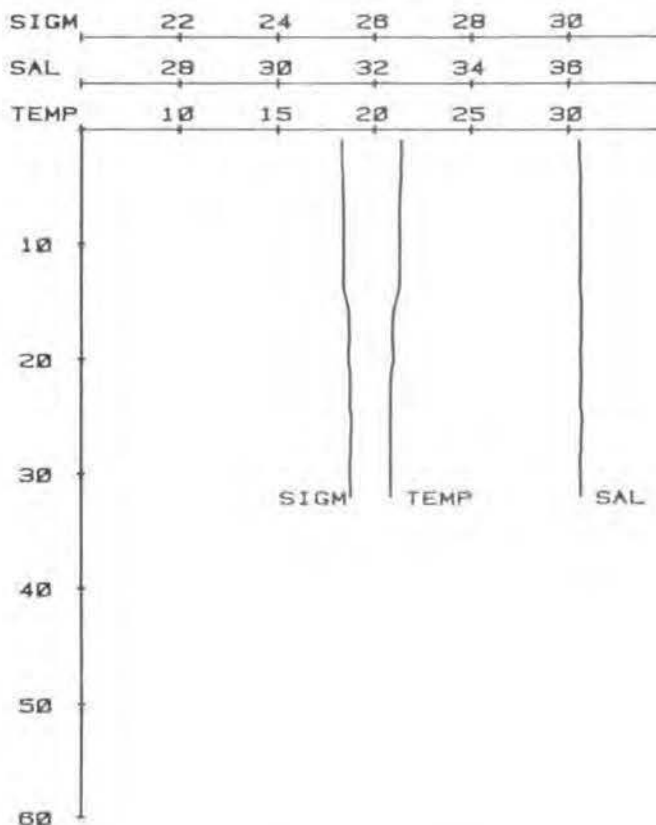
GILLISS CRUISE STA #51C 21/04/79 04:00 GWT CONSEC STA 51
LAT 38 12.0N LONG 00 34.9W DEPTH = 35M DIST LAST STA = 13.4KM

WEATHER DATA
WIND SPEED = 14KTS
WIND DIRECTION = 130
AIR TEMP = 21.1C
WEATHER CODE = 88
BAROMETRIC PRES = 1019.6

SEA STATE = 3
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	ADU	PD4	MD3	SI
1.0	21.41	36.22	25.32	267						
2.0	21.41	36.22	25.32	267						
3.0	21.38	36.23	25.33	265						
4.0	21.40	36.25	25.34	264						
5.0	21.34	36.24	25.35	263						
6.0	21.32	36.25	25.37	262						
7.0	21.31	36.25	25.37	262						
8.0	21.31	36.25	25.37	262						
9.0	21.31	36.25	25.37	262						
10.0	21.31	36.25	25.37	262						
11.0	21.31	36.25	25.37	262						
12.0	21.31	36.25	25.37	262						
13.0	21.31	36.24	25.36	263						
14.0	21.28	36.25	25.38	261						
15.0	21.12	36.27	25.44	256						
16.0	20.96	36.27	25.48	252						
17.0	20.93	36.26	25.48	252						
18.0	20.92	36.27	25.49	251						
19.0	20.96	36.25	25.46	253						
20.0	20.99	36.26	25.46	253						
21.0	20.86	36.27	25.51	249						
22.0	20.82	36.26	25.51	249						
23.0	20.82	36.25	25.58	250						
24.0	20.82	36.25	25.54	250						
25.0	20.81	36.28	25.53	247						
26.0	20.81	36.27	25.52	248						
27.0	20.82	36.26	25.51	249						
28.0	20.82	36.26	25.51	249						
29.0	20.82	36.24	25.49	251						
30.0	20.82	36.25	25.51	250						
31.0	20.82	36.26	25.51	249						
32.0	20.82	36.26	25.51	249						

STATION 51C



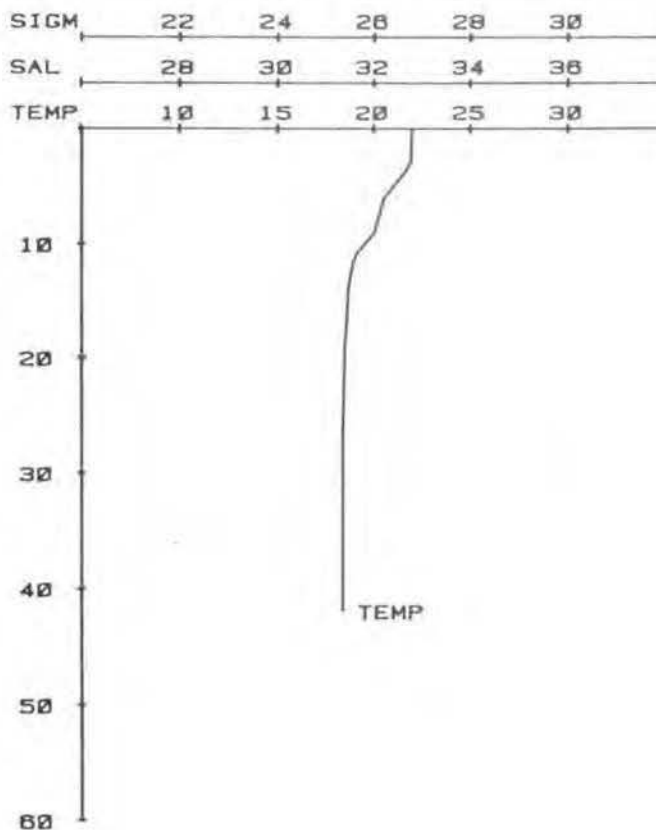
GILLISS CRUISE STA #52X 21/04/79 06:05 GWT CONSEC STA 52
LAT 38 11.3N LONG 00 23.1W DEPTH = 42M DIST LAST STA = 10.9KM

WEATHER DATA
WIND SPEED = 14KTS
WIND DIRECTION = 110
AIR TEMP = 21.9C
WEATHER CODE = 88
BAROMETRIC PRES = 1018.6

SEA STATE = 3
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	ADU	PD4	MD3	SI
1.0	22.0									
3.0	21.9									
4.0	21.5									
5.0	21.0									
6.0	20.5									
7.0	20.0									
8.0	19.5									
9.0	19.0									
10.0	18.0									
11.0	18.0									
12.0	18.0									
13.0	18.6									
14.0	18.5									
15.0	18.4									
16.0	18.3									
17.0	18.3									

STATION 52X

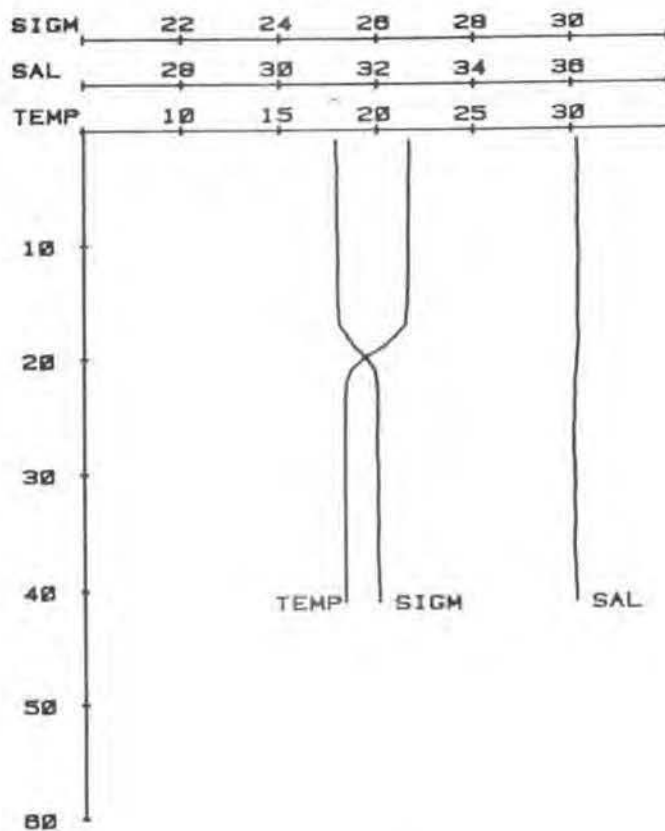


GILLISS CRUISE STA 53C 21/84/79 07.1 GNT CONSEC STA 53
LAT 38 18.9N LONG 08 20.5W DEPTH = 46M DIST LAST STA = 4.2KM

WEATHER DATA
WIND SPEED = 14KTS
WIND DIRECTION = 140
AIR TEMP = 21.9C
WEATHER CODE = 28
BAROMETRIC PRES = 1010.6
SEA STATE = 3
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	MOU	PO4	NO3	SI
1.0	21.68	36.11	25.16	282						
2.0	21.68	36.11	25.16	282						
3.0	21.65	36.13	25.18	279				0.85	0.1	0.3
4.0	21.61	36.11	25.18	280						
5.0	21.63	36.12	25.18	280						
6.0	21.62	36.12	25.18	279						
7.0	21.61	36.12	25.19	279						
8.0	21.61	36.11	25.18	280						
9.0	21.59	36.13	25.20	278						
10.0	21.64	36.13	25.20	278						
11.0	21.64	36.14	25.21	278						
12.0	21.64	36.13	25.20	278						
13.0	21.58	36.12	25.19	279						
14.0	21.56	36.13	25.21	277						
15.0	21.56	36.13	25.21	277						
16.0	21.47	36.12	25.22	276				0.27	2.9	2.2
17.0	21.44	36.12	25.23	275						
18.0	20.94	36.14	25.39	261						
19.0	20.29	36.12	25.55	245						
20.0	19.24	36.10	25.81	221						
21.0	18.59	36.09	25.97	205						
22.0	18.36	36.06	26.08	202						
23.0	18.31	36.07	26.02	200						
24.0	18.34	36.05	26.01	202						
25.0	18.38	36.06	26.02	201						
26.0	18.29	36.03	26.00	203						
27.0	18.29	36.04	26.00	202						
28.0	18.29	36.03	26.00	203						
29.0	18.29	36.06	26.02	201						
30.0	18.29	36.06	26.02	201						
31.0	18.29	36.07	26.03	200						
32.0	18.29	36.05	26.01	202						
33.0	18.29	36.06	26.02	201						
34.0	18.29	36.07	26.03	200						
35.0	18.29	36.05	26.01	202						
36.0	18.29	36.04	26.00	202						
37.0	18.29	36.05	26.01	202						
38.0	18.29	36.07	26.03	201						
39.0	18.29	36.07	26.03	200						
40.0	18.29	36.09	26.04	199						
41.0	18.29	36.09	26.04	199				0.40	6.1	4.6

STATION 53C

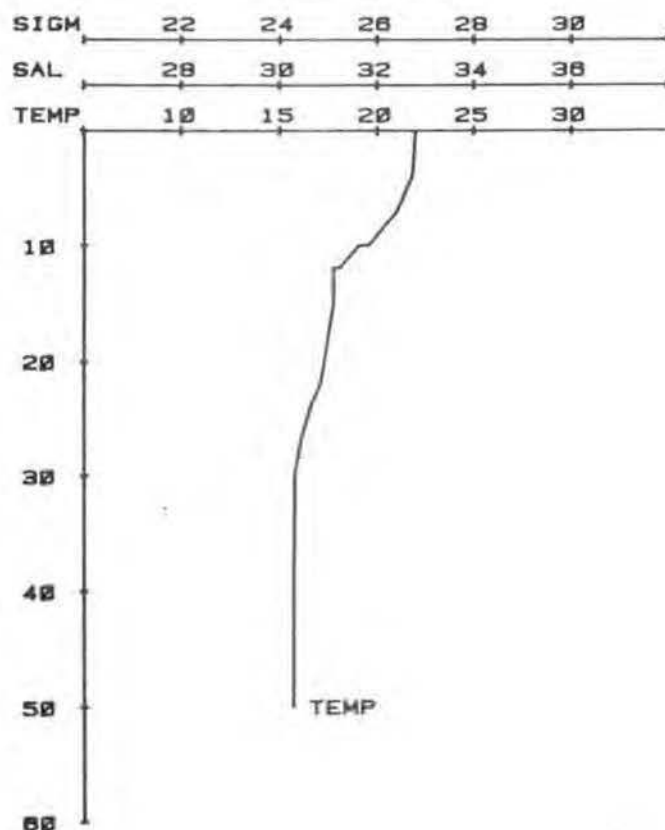


GILLISS CRUISE STA 54X 21/84/79 07.0 GNT CONSEC STA 54
LAT 38 18.8N LONG 08 17.2W DEPTH = 56M DIST LAST STA = 5.5KM

WEATHER DATA
WIND SPEED = 14KTS
WIND DIRECTION = 140
AIR TEMP = 21.9C
WEATHER CODE = 28
BAROMETRIC PRES = 1019.0
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

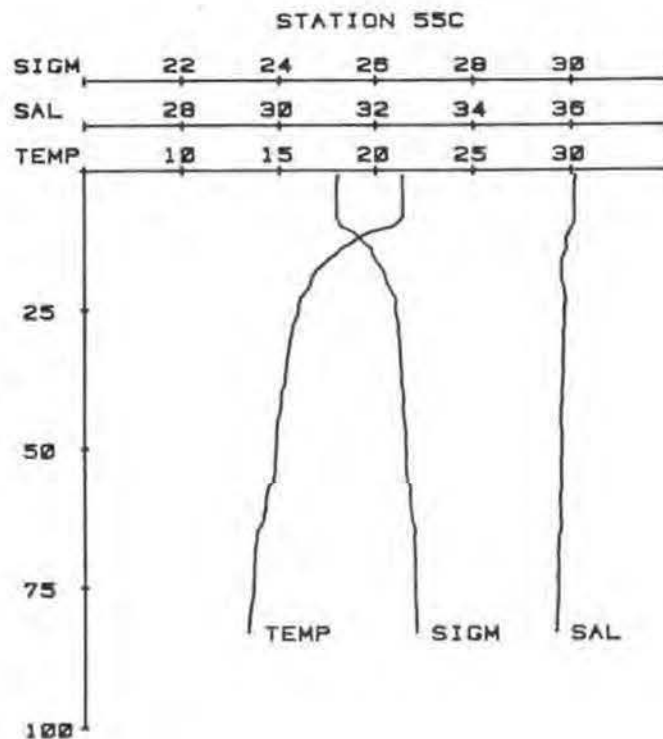
OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	MOU	PO4	NO3	SI
1.0	22.0									
4.0	21.8									
5.0	21.5									
7.0	21.0									
8.0	20.5									
9.0	20.0									
10.0	19.5									
11.0	19.0									
12.0	18.5									
13.0	18.0									
14.0	17.7									
15.0	17.7									
17.0	17.5									
22.0	17.0									
24.0	16.5									
27.0	16.0									
30.0	15.7									
50.0	15.6									

STATION 54X



GILLISS CRUISE STA 55C 21/04/79 00.3 CNT COMSEC STA 55
 LAT 30 09.54 LONG 08 14.4W DEPTH = 07M DIST LAST STA = 4.6KM
 WEATHER DATA
 WIND SPEED = 18KTS
 WIND DIRECTION = 110
 AIR TEMP = 21.7C
 WEATHER CODE = 21
 BAROMETRIC PRES = 1019.8
 SEA STATE = 3
 WAVE DIRECTION = 120
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	0	SVA	02	02'	AOU	PO4	NO3
1.0	21.39	36.48	25.22	276					
2.0	21.39	36.45	25.19	278					
3.0	21.40	36.45	25.19	279				0.07	1.0
4.0	21.41	36.45	25.19	279					
5.0	21.40	36.45	25.19	279					
6.0	21.39	36.46	25.20	278				0.09	0.7
7.0	21.40	36.45	25.19	279					1.1
8.0	21.40	36.45	25.19	279					
9.0	21.22	36.46	25.25	273					
10.0	21.08	36.48	25.30	269					
11.0	19.69	35.94	25.57	243					
12.0	19.85	35.68	25.69	232					
13.0	18.74	35.89	25.78	223				0.52	0.6
14.0	18.18	35.94	25.93	209					7.2
15.0	17.92	35.84	25.94	207					
16.0	17.49	35.79	26.01	201					
17.0	17.19	35.80	26.09	194					
18.0	16.88	35.80	26.17	186					
19.0	16.68	35.80	26.21	182					
20.0	16.62	35.81	26.23	180					
21.0	16.51	35.85	26.26	175					
22.0	16.29	35.84	26.35	169					
23.0	16.05	35.89	26.43	162					
24.0	15.97	35.84	26.42	162					
25.0	15.95	35.85	26.42	162					
26.0	15.90	35.84	26.44	161					
27.0	15.88	35.84	26.46	158					
28.0	15.85	35.84	26.50	155					
29.0	15.82	35.83	26.48	157					
30.0	15.84	35.84	26.50	155					
31.0	15.80	35.84	26.52	154					
32.0	15.47	35.84	26.52	153					
33.0	15.43	35.83	26.52	153					
34.0	15.37	35.83	26.54	152					
35.0	15.36	35.83	26.54	151					
36.0	15.33	35.84	26.55	154					
37.0	15.28	35.83	26.56	154					
38.0	15.29	35.83	26.56	150					
39.0	15.22	35.82	26.56	149					
40.0	15.08	35.81	26.59	147					
41.0	15.06	35.82	26.60	146					
42.0	15.06	35.81	26.59	147					
43.0	15.03	35.79	26.58	148					
44.0	14.98	35.84	26.60	146					
45.0	14.88	35.78	26.61	145					
46.0	14.86	35.68	26.63	143					
47.0	14.83	35.82	26.65	141					
48.0	14.85	35.81	26.64	142					
49.0	14.82	35.81	26.64	142					
50.0	14.80	35.81	26.65	141					
51.0	14.78	35.81	26.65	141					
52.0	14.75	35.79	26.64	142					
53.0	14.75	35.80	26.65	141					
54.0	14.74	35.80	26.65	141					
55.0	14.69	35.80	26.67	140					
56.0	14.64	35.81	26.68	138					
57.0	14.41	35.81	26.73	134					
58.0	14.34	35.78	26.73	134					
59.0	14.28	35.77	26.73	134					
60.0	14.27	35.77	26.73	134					
61.0	14.26	35.79	26.75	132					
62.0	14.17	35.78	26.76	131					
63.0	14.15	35.79	26.77	130					
64.0	14.01	35.80	26.81	126					
65.0	13.82	35.78	26.84	124					
66.0	13.80	35.74	26.81	127					
67.0	13.78	35.74	26.81	126					
68.0	13.71	35.74	26.83	125					
69.0	13.74	35.72	26.82	126					
70.0	13.69	35.74	26.83	124					
71.0	13.67	35.73	26.83	125					
72.0	13.67	35.74	26.84	124					
73.0	13.66	35.72	26.82	125					
74.0	13.65	35.73	26.83	125					
75.0	13.64	35.73	26.84	124					
76.0	13.63	35.72	26.83	125					
77.0	13.60	35.73	26.84	124					
78.0	13.52	35.71	26.85	124					
79.0	13.48	35.71	26.85	123					
80.0	13.44	35.78	26.85	123					
81.0	13.42	35.78	26.86	122					
82.0	13.39	35.78	26.87	122					
83.0	13.38	35.68	26.85	123				1.09	10.1

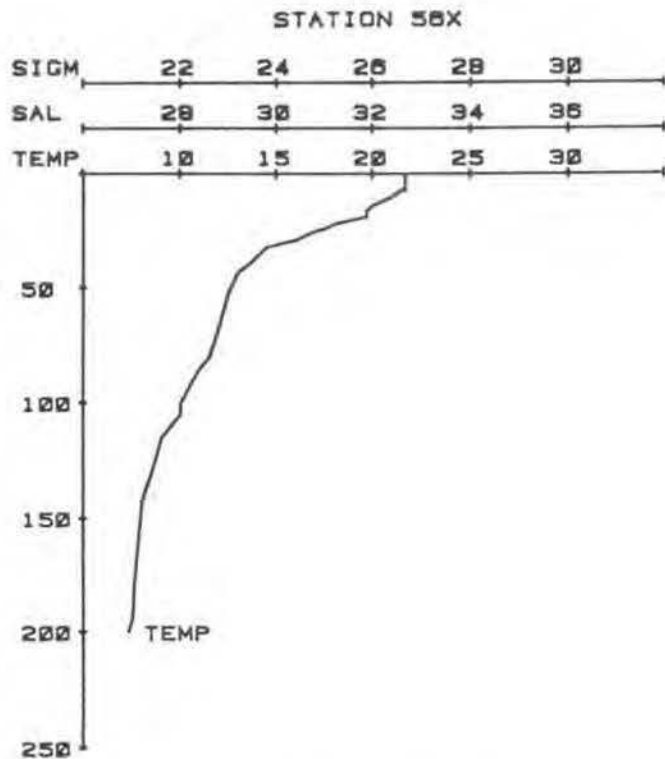


GILLISS CRUISE STA #56X 21/04/79 09.1 CMT CONSEC STA 56
 LAT 30 09.8N LONG 00 11.0W DEPTH = 213M DIST LAST STA = 5.5KM

WEATHER DATA
 WIND SPEED = 0KTS
 WIND DIRECTION = 118
 AIR TEMP = 21.7C
 WEATHER CODE = 01
 BAROMETRIC PRES = 1019.0

SEA STATE
 WAVE DIRECTION = 120
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

Z	T	S	0	SVA	Q2	Q2'	ADU	P04	W03	ST
0.0	21.7									
2.0	21.7									
4.0	21.5									
6.0	21.0									
8.0	20.5									
10.0	20.0									
12.0	19.7									
14.0	19.5									
16.0	19.2									
18.0	19.0									
20.0	18.8									
22.0	18.5									
24.0	18.0									
26.0	17.5									
28.0	17.0									
30.0	16.5									
32.0	16.0									
34.0	15.5									
36.0	15.0									
38.0	14.5									
40.0	14.0									
42.0	13.5									
44.0	13.0									
46.0	12.5									
48.0	12.0									
50.0	11.5									
52.0	11.0									
54.0	10.5									
56.0	10.0									
58.0	9.5									
60.0	9.0									
62.0	8.5									
64.0	8.0									
66.0	7.5									
68.0	7.0									
70.0	6.5									
72.0	6.0									
74.0	5.5									
76.0	5.0									
78.0	4.5									
80.0	4.0									
82.0	3.5									
84.0	3.0									
86.0	2.5									
88.0	2.0									
90.0	1.5									
92.0	1.0									
94.0	0.5									
96.0	0.0									
98.0	0.0									
100.0	0.0									
102.0	0.0									
104.0	0.0									
106.0	0.0									
108.0	0.0									
110.0	0.0									
112.0	0.0									
114.0	0.0									
116.0	0.0									
118.0	0.0									
120.0	0.0									
122.0	0.0									
124.0	0.0									
126.0	0.0									
128.0	0.0									
130.0	0.0									
132.0	0.0									
134.0	0.0									
136.0	0.0									
138.0	0.0									
140.0	0.0									
142.0	0.0									
144.0	0.0									
146.0	0.0									
148.0	0.0									
150.0	0.0									
152.0	0.0									
154.0	0.0									
156.0	0.0									
158.0	0.0									
160.0	0.0									
162.0	0.0									
164.0	0.0									
166.0	0.0									
168.0	0.0									
170.0	0.0									
172.0	0.0									
174.0	0.0									
176.0	0.0									
178.0	0.0									
180.0	0.0									
182.0	0.0									
184.0	0.0									
186.0	0.0									
188.0	0.0									
190.0	0.0									
192.0	0.0									
194.0	0.0									
196.0	0.0									
198.0	0.0									
200.0	0.0									

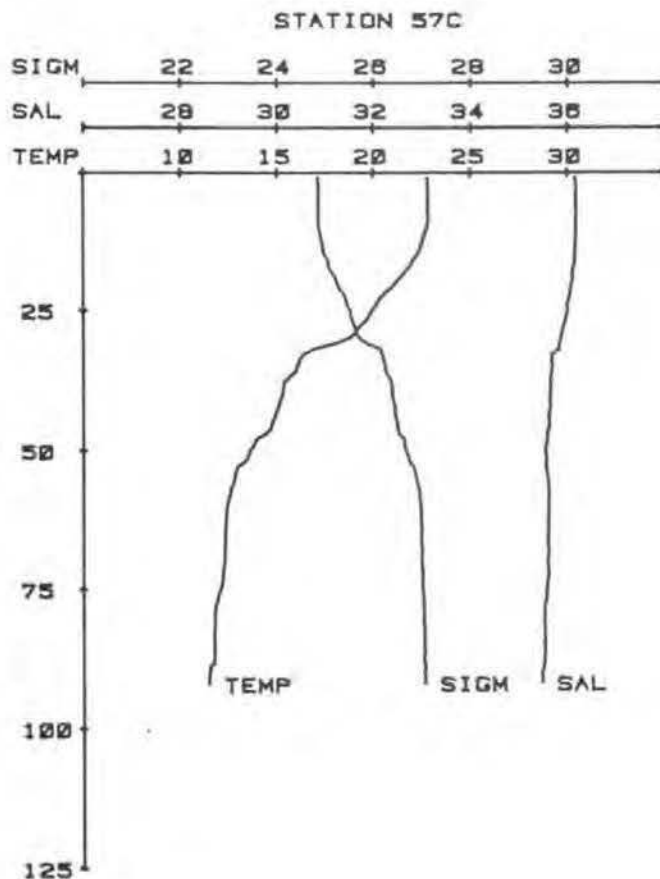


GILLISS CRUISE STA #57C 21/04/79 09.4 CMT CONSEC STA 57
 LAT 30 09.5N LONG 00 06.0W DEPTH = 240M DIST LAST STA = 6.8KM

WEATHER DATA
 WIND SPEED = 0KTS
 WIND DIRECTION = 118
 AIR TEMP = 21.7C
 WEATHER CODE = 01
 BAROMETRIC PRES = 1019.0

SEA STATE
 WAVE DIRECTION = 120
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

Z	T	S	0	SVA	Q2	Q2'	ADU	P04	W03	ST
1.0	22.02	36.16	24.87	389						
2.0	22.02	36.18	24.89	387						
3.0	22.04	36.18	24.89	388						
4.0	22.03	36.18	24.89	388						
5.0	22.03	36.18	24.89	388						
6.0	22.03	36.18	24.89	388						
7.0	22.03	36.18	24.89	387						
8.0	22.04	36.18	24.89	388						
9.0	22.03	36.18	24.89	388						
10.0	22.76	36.18	24.91	386						
11.0	22.66	36.18	24.93	383						
12.0	22.57	36.17	24.95	382						
13.0	22.47	36.17	24.98	399						
14.0	22.41	36.16	24.99	298						
15.0	22.26	36.15	25.03	295						
16.0	22.03	36.16	25.18	208						
17.0	21.92	36.13	25.11	287						
18.0	21.64	36.18	25.16	282						
19.0	21.43	36.12	25.24	275						
20.0	21.18	36.09	25.29	271						
21.0	20.93	36.06	25.33	266						
22.0	20.68	36.06	25.42	258						
23.0	20.32	36.03	25.47	253						
24.0	20.15	35.99	25.48	251						
25.0	19.95	36.01	25.55	245						
26.0	19.78	35.97	25.57	244						
27.0	19.59	35.95	25.64	248						
28.0	19.38	35.92	25.65	235						
29.0	19.12	35.88	25.67	234						
30.0	18.82	35.87	25.74	227						
31.0	18.13	35.83	25.80	214						
32.0	16.94	35.83	26.17	186						
33.0	16.34	35.69	26.21	183						
34.0	16.16	35.67	26.23	188						
35.0	16.05	35.68	26.27	177						
36.0	15.95	35.67	26.29	176						
37.0	15.63	35.65	26.34	178						
38.0	15.37	35.65	26.40	165						
39.0	15.32	35.65	26.41	164						
40.0	15.29	35.64	26.41	164						
41.0	15.18	35.63	26.43	162						
42.0	15.09	35.65	26.46	159						
43.0	14.97	35.62	26.47	159						
44.0	14.87	35.61	26.48	157						
45.0	14.76	35.62	26.51	154						
46.0	14.68	35.61	26.52	153						
47.0	14.41	35.57	26.55	151						
48.0	13.92	35.58	26.66	149						
49.0	13.79	35.55	26.67	148						
50.0	13.61	35.53	26.69	138						
51.0	13.52	35.54	26.73	134						
52.0	13.33	35.55	26.76	131						
53.0	12.96	35.54	26.84	123						
54.0	12.84	35.57	26.88	128						
55.0	12.84	35.59	26.91	118						

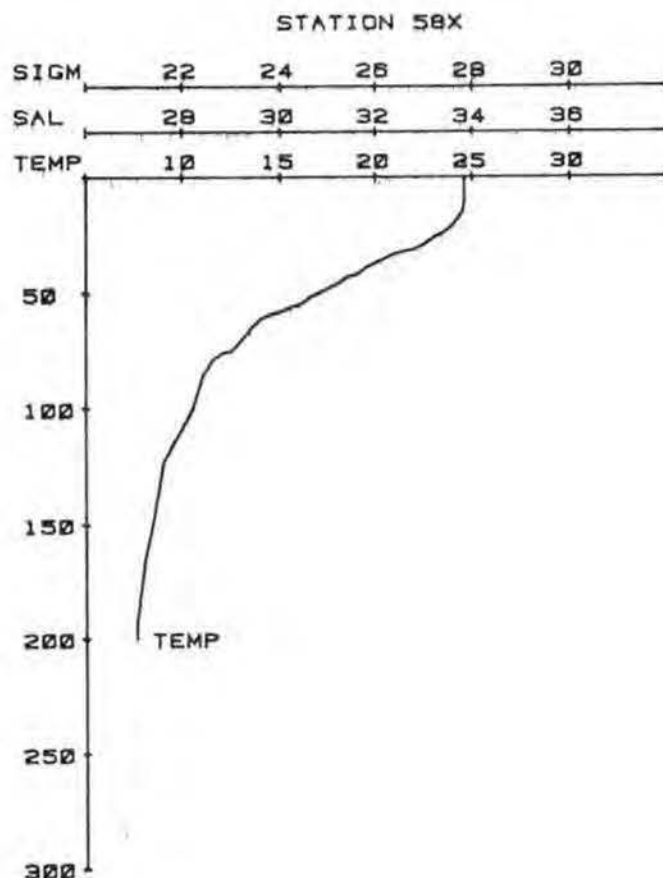


56.0	12.72	35.60	26.92	115	1	1	1	1	1	1
57.0	12.59	35.61	26.96	112	1	1	1	1	1	1
58.0	12.54	35.61	26.96	112	1	1	1	1	1	1
59.0	12.44	35.60	26.98	110	1	1	1	1	1	1
60.0	12.38	35.60	26.99	109	1	1	1	1	1	1
61.0	12.37	35.60	26.99	109	1	1	1	1	1	1
62.0	12.35	35.60	27.00	109	1	1	1	1	1	1
63.0	12.33	35.59	26.99	109	1	1	1	1	1	1
64.0	12.32	35.60	27.00	108	1	1	1	1	1	1
65.0	12.31	35.59	27.00	109	1	1	1	1	1	1
66.0	12.31	35.59	27.00	109	1	1	1	1	1	1
67.0	12.29	35.58	26.99	109	1	1	1	1	1	1
68.0	12.28	35.61	27.02	107	1	1	1	1	1	1
69.0	12.28	35.59	27.00	108	1	1	1	1	1	1
70.0	12.26	35.58	27.00	109	1	1	1	1	1	1
71.0	12.23	35.59	27.01	107	1	1	1	1	1	1
72.0	12.19	35.60	27.03	106	1	1	1	1	1	1
73.0	12.17	35.59	27.02	106	1	1	1	1	1	1
74.0	12.15	35.57	27.01	107	1	1	1	1	1	1
75.0	12.07	35.56	27.02	107	1	1	1	1	1	1
76.0	11.94	35.55	27.04	105	1	1	1	1	1	1
77.0	11.91	35.55	27.04	114	1	1	1	1	1	1
78.0	11.79	35.51	27.04	105	1	1	1	1	1	1
79.0	11.75	35.52	27.05	104	1	1	1	1	1	1
80.0	11.77	35.51	27.04	105	1	1	1	1	1	1
81.0	11.75	35.51	27.04	105	1	1	1	1	1	1
82.0	11.74	35.53	27.06	103	1	1	1	1	1	1
83.0	11.74	35.51	27.05	104	1	1	1	1	1	1
84.0	11.74	35.53	27.06	103	1	1	1	1	1	1
85.0	11.74	35.51	27.05	105	1	1	1	1	1	1
86.0	11.74	35.53	27.06	103	1	1	1	1	1	1
87.0	11.74	35.51	27.05	105	1	1	1	1	1	1
88.0	11.71	35.51	27.05	104	1	1	1	1	1	1
89.0	11.51	35.49	27.07	102	1	1	1	1	1	1
90.0	11.48	35.46	27.06	104	1	1	1	1	1	1
91.0	11.45	35.47	27.07	102	1	1	1	1	1	1
92.0	11.44	35.46	27.06	103	1	1	1	1	1	1

GILLISS CRUISE STA 58X 21/04/79 10.7 GMT COMSEC STA 58
LAT 38 08.2N LONG 01 05.0W DEPTH = 305M DIST LAST STA = 3.0KM

WEATHER DATA
WIND SPEED = 0 KTS
WIND DIRECTION = 110
AIR TEMP = 21.7C
WEATHER CODE = 11
BAROMETRIC PRESS = 1019.0
SEA STATE = 3
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	D	SVA	O2	O2'	AQU	P04	NO3	SI
1.0	24.6									
11.0	24.6									
15.0	24.5									
21.0	24.0									
24.0	23.5									
26.0	23.0									
29.0	22.5									
31.0	22.0									
32.0	21.5									
33.0	21.0									
35.0	20.5									
37.0	20.0									
39.0	19.5									
42.0	19.0									
43.0	18.5									
45.0	18.0									
48.0	17.5									
50.0	17.0									
52.0	16.5									
55.0	16.0									
56.0	15.5									
58.0	15.0									
59.0	14.5									
61.0	14.0									
65.0	13.5									
70.0	13.0									
75.0	12.5									
76.0	12.0									
79.0	11.5									
86.0	11.0									
100.0	10.5									
105.0	10.0									
115.0	9.5									
123.0	9.0									
147.0	8.5									
166.0	8.0									
193.0	7.6									
200.0	7.6									

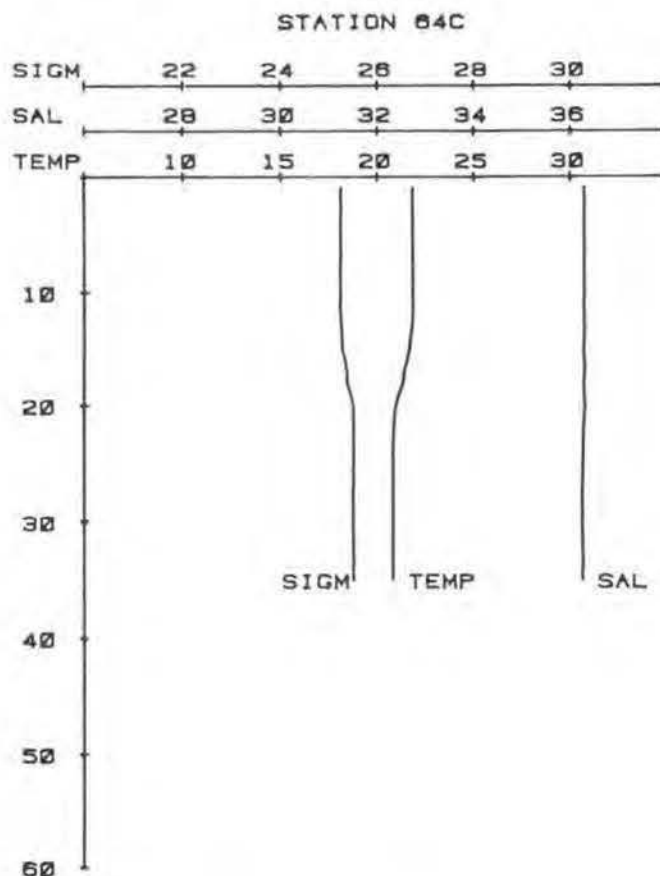


GILLISS CRUISE STA 864C 21/04/79 14.8 GMT CONSEC STA 84
LAT 34 31.1N LONG 00 29 04W DEPTH = 34M DIST LAST STA = 58.1KM

WEATHER DATA
WIND SPEED = 11KTS
WIND DIRECTION = 130
AIR TEMP = 23.9C
WEATHER CODE = XI
BAROMETRIC PRES = 1020.3

SEA STATE = 3
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	D	SVA	D2	D2'	AQU	P04	M03
1.0	21.85	36.28	25.24	274					
2.0	21.85	36.29	25.25	273					
3.0	21.85	36.28	25.24	274					
4.0	21.86	36.28	25.24	274					
5.0	21.86	36.28	25.24	274					
6.0	21.86	36.29	25.25	274					
7.0	21.86	36.28	25.24	274					
8.0	21.87	36.28	25.23	275					
9.0	21.87	36.28	25.23	275					
10.0	21.86	36.29	25.25	274					
11.0	21.86	36.27	25.23	275					
12.0	21.85	36.29	25.25	274					
13.0	21.81	36.38	25.27	272					
14.0	21.72	36.28	25.28	271					
15.0	21.67	36.27	25.29	270					
16.0	21.54	36.38	25.34	265					
17.0	21.39	36.38	25.38	261					
18.0	21.33	36.28	25.39	261					
19.0	21.14	36.38	25.45	254					
20.0	20.96	36.31	25.51	249					
21.0	20.89	36.29	25.51	249					
22.0	20.85	36.28	25.52	248					
23.0	20.83	36.27	25.51	249					
24.0	20.82	36.27	25.52	248					
25.0	20.82	36.25	25.51	249					
26.0	20.82	36.28	25.51	249					
27.0	20.82	36.25	25.54	250					
28.0	20.82	36.25	25.58	250					
29.0	20.82	36.25	25.51	249					
30.0	20.82	36.25	25.58	250					
31.0	20.82	36.26	25.51	249					
32.0	20.82	36.26	25.51	249					
33.0	20.82	36.27	25.52	249					
34.0	20.82	36.26	25.51	249					
35.0	20.82	36.26	25.51	249					

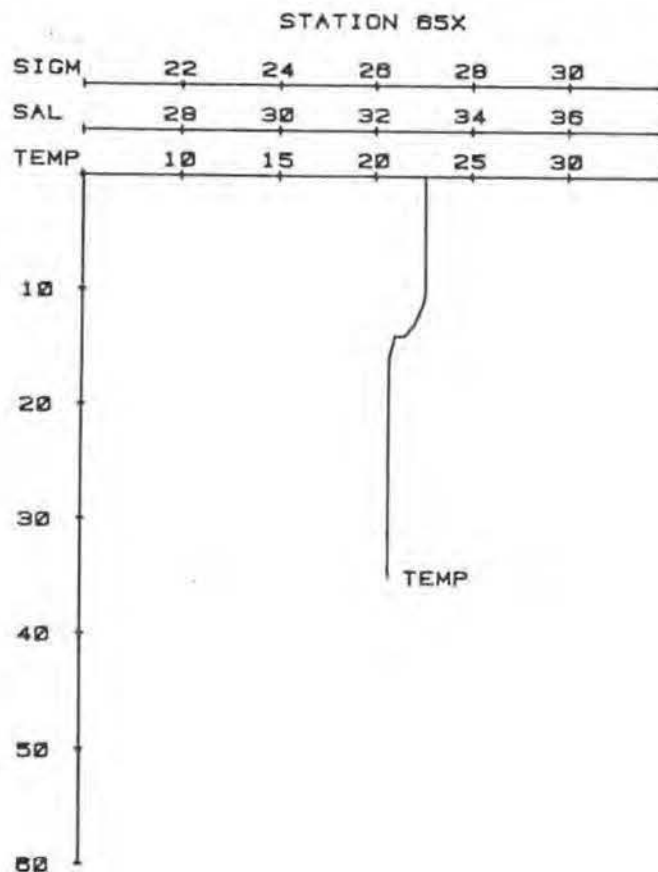


GILLISS CRUISE STA 865X 21/04/79 14.7 GMT CONSEC STA 85
LAT 30 30.6N LONG 00 26.5W DEPTH = 35M DIST LAST STA = 5.3KM

WEATHER DATA
WIND SPEED = 11KTS
WIND DIRECTION = 130
AIR TEMP = 23.3C
WEATHER CODE = XI
BAROMETRIC PRES = 1020.3

SEA STATE = 3
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	D	SVA	D2	D2'	AQU	P04	M03
1.0	22.6								
10.0	22.6								
11.0	22.5								
13.0	22.0								
14.0	21.5								
15.0	21.0								
16.0	20.7								
35.0	20.7								



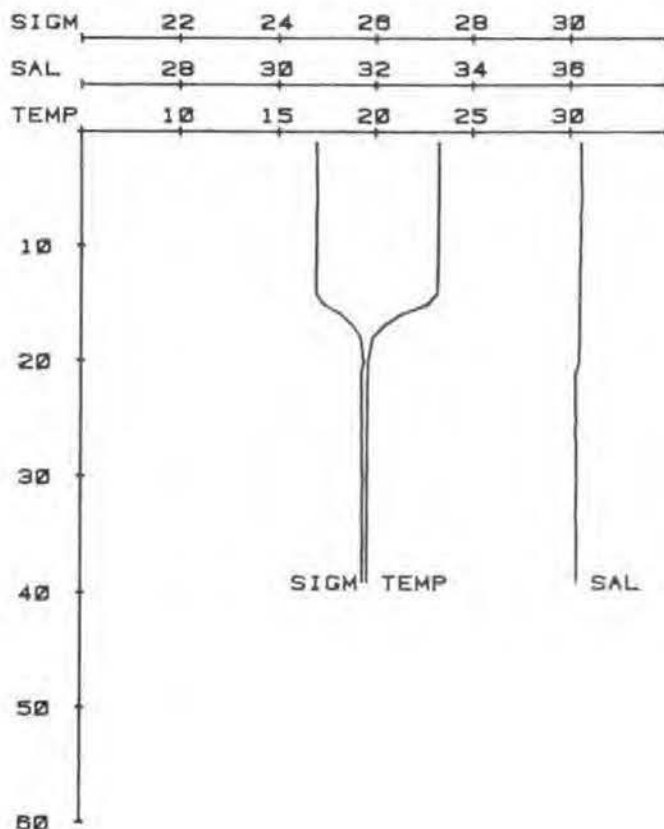
GILLISS CRUISE STA 866C 21/04/79 15.2 GMT CONSEC STA 66
LAT 38 29.3N LONG 01 21.4W DEPTH = 41M DIST LAST STA = 8.5KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 134
AIR TEMP = 23.3C
WEATHER CODE = 01
BAROMETRIC PRES = 1021.0

SEA STATE = 3
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	P04	N03	SI
1.0	23.26	36.22	24.79	317						
2.0	23.26	36.23	24.80	316						
3.0	23.26	36.23	24.80	316						
4.0	23.26	36.24	24.81	315						
5.0	23.26	36.25	24.81	315						
6.0	23.26	36.25	24.81	315						
7.0	23.26	36.23	24.80	316						
8.0	23.26	36.24	24.81	315						
9.0	23.26	36.24	24.81	315						
10.0	23.26	36.23	24.80	316						
11.0	23.25	36.24	24.81	315						
12.0	23.25	36.22	24.79	317						
13.0	23.23	36.23	24.81	316						
14.0	23.23	36.23	24.81	316						
15.0	22.21	36.23	24.96	301						
16.0	21.28	36.23	25.36	263						
17.0	20.44	36.23	25.59	241						
18.0	19.88	36.23	25.74	227						
19.0	19.76	36.22	25.76	225						
20.0	19.64	36.22	25.79	222						
21.0	19.62	36.14	25.74	227						
22.0	19.61	36.15	25.75	226						
23.0	19.61	36.15	25.75	226						
24.0	19.61	36.15	25.75	226						
25.0	19.60	36.16	25.76	225						
26.0	19.59	36.14	25.75	227						
27.0	19.60	36.16	25.76	225						
28.0	19.60	36.16	25.76	225						
29.0	19.60	36.16	25.76	225						
30.0	19.59	36.17	25.77	225						
31.0	19.59	36.16	25.76	225						
32.0	19.59	36.16	25.76	225						
33.0	19.59	36.15	25.75	226						
34.0	19.59	36.16	25.76	225						
35.0	19.58	36.17	25.77	224						
36.0	19.58	36.16	25.76	225						
37.0	19.58	36.16	25.76	225						
38.0	19.58	36.16	25.76	225						
39.0	19.58	36.16	25.76	225						

STATION 866C



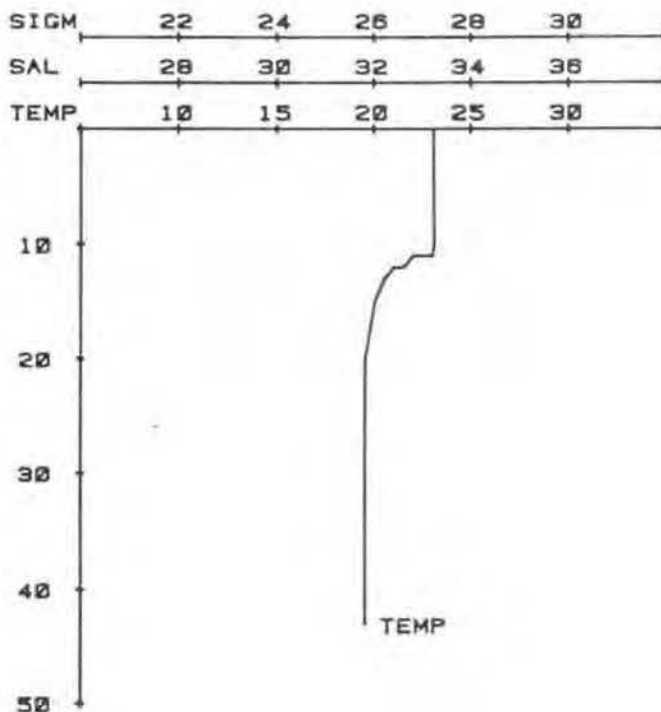
GILLISS CRUISE STA 867X 21/04/79 15.0 GMT CONSEC STA 67
LAT 38 28.9N LONG 01 19.8W DEPTH = 43M DIST LAST STA = 4.2KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 130
AIR TEMP = 23.3C
WEATHER CODE = 01
BAROMETRIC PRES = 1020.3

SEA STATE = 3
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	P04	N03	SI
1.0	23.1									
2.0	23.1									
3.0	23.0									
4.0	22.5									
5.0	22.0									
6.0	21.5									
7.0	21.0									
8.0	20.5									
9.0	20.0									
10.0	19.5									
11.0	19.5									

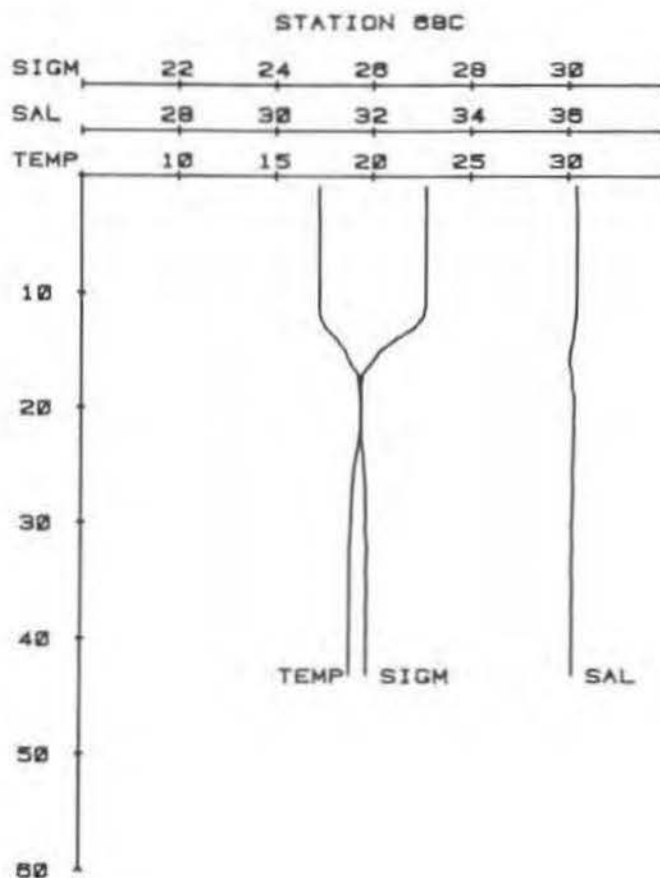
STATION 87X



COLLIS CRUISE STA 88C 21/04/79 16.3 GMT CONSEC STA 68
LAT 38 28.3N LONG 08 16.3W DEPTH = 45M DIST LAST STA = 4.1KM

WEATHER DATA
WIND SPEED = 12KTS
WIND DIRECTION = 120
AIR TEMP = 21.9C
WEATHER CODE = 11
BAROMETRIC PRESS = 1028.9
SEA STATE = 3
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	Y	S	B	SIG	OBSERVATIONS	Q2	Q2'	ADU	P04	M03	S1
1.8	22.72	36.16	24.98	385							
2.8	22.72	36.17	24.91	385							
3.8	22.72	36.18	24.92	385				0.47	0.8	1.2	
4.8	22.71	36.18	24.92	384							
5.8	22.71	36.18	24.92	384							
6.8	22.71	36.18	24.92	385							
7.8	22.72	36.18	24.92	385							
8.8	22.71	36.18	24.92	385							
9.8	22.74	36.18	24.92	384							
10.8	22.71	36.18	24.92	385							
11.8	22.70	36.17	24.92	385				0.89	0.8	5.3	
12.8	22.58	36.16	24.94	383							
13.8	22.17	36.13	25.85	292							
14.8	21.17	36.18	25.29	269							
15.8	20.20	36.85	25.47	253							
16.8	19.87	36.82	25.56	244							
17.8	19.58	36.89	25.72	220							
18.8	19.42	36.89	25.75	226							
19.8	19.45	36.14	25.70	223							
20.8	19.44	36.14	25.79	223				0.29	3.4	1.8	
21.8	19.43	36.13	25.70	223							
22.8	19.48	36.14	25.80	222							
23.8	19.29	36.12	25.81	228							
24.8	19.21	36.12	25.84	218							
25.8	19.89	36.11	25.85	216							
26.8	19.83	36.11	25.87	215							
27.8	18.98	36.12	25.89	212							
28.8	18.95	36.11	25.89	212							
29.8	18.93	36.11	25.90	213							
30.8	18.91	36.89	25.89	214							
31.8	18.88	36.10	25.98	212							
32.8	18.84	36.11	25.92	218							
33.8	18.84	36.89	25.98	212							
34.8	18.85	36.89	25.98	212							
35.8	18.84	36.18	25.91	211							
36.8	18.84	36.18	25.91	211							
37.8	18.85	36.89	25.98	212							
38.8	18.85	36.18	25.91	212							
39.8	18.84	36.18	25.91	211							
40.8	18.84	36.18	25.91	211							
41.8	18.85	36.18	25.91	212							
42.8	18.84	36.18	25.91	212							
43.8	18.84	36.18	25.91	212				0.38	S.S	S.8	

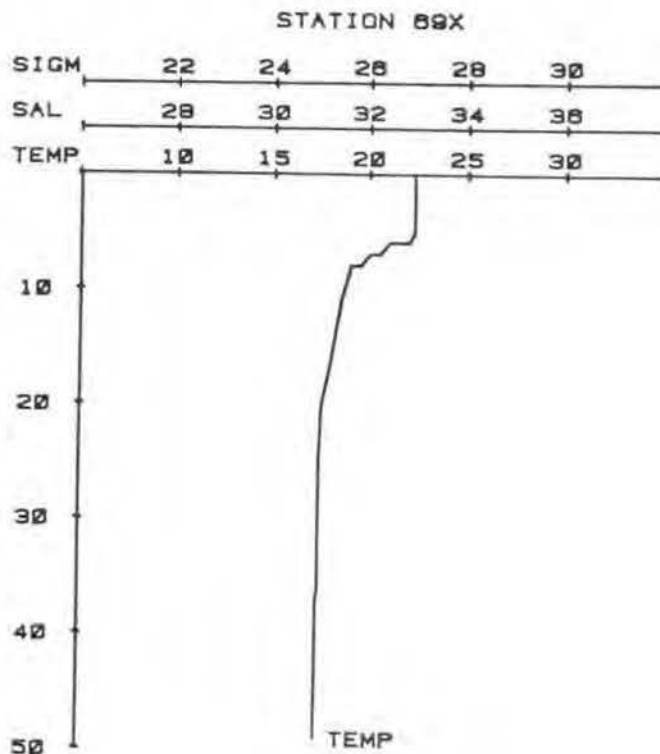


GILLISS CRUISE STA 86X 21/04/79 16.7 GMT CONSEC STA 49
LAT 38 27.7N LONG 08 12.0W DEPTH = 49M DIST LAST STA = 5.7KM

WEATHER DATA
WIND SPEED = 12KTS
WIND DIRECTION = 120
AIR TEMP = 23.9C
WEATHER CODE = 01
BAROMETRIC PRES = 1020.3

SEA STATE = 3
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	0	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	22.3									
5.0	22.3									
6.0	22.0									
6.0	21.5									
6.0	21.0									
7.0	20.5									
7.0	20.0									
8.0	19.5									
8.0	19.0									
11.0	18.5									
16.0	18.0									
20.0	17.5									
25.0	17.4									
36.0	17.4									
37.0	17.3									
49.0	17.3									

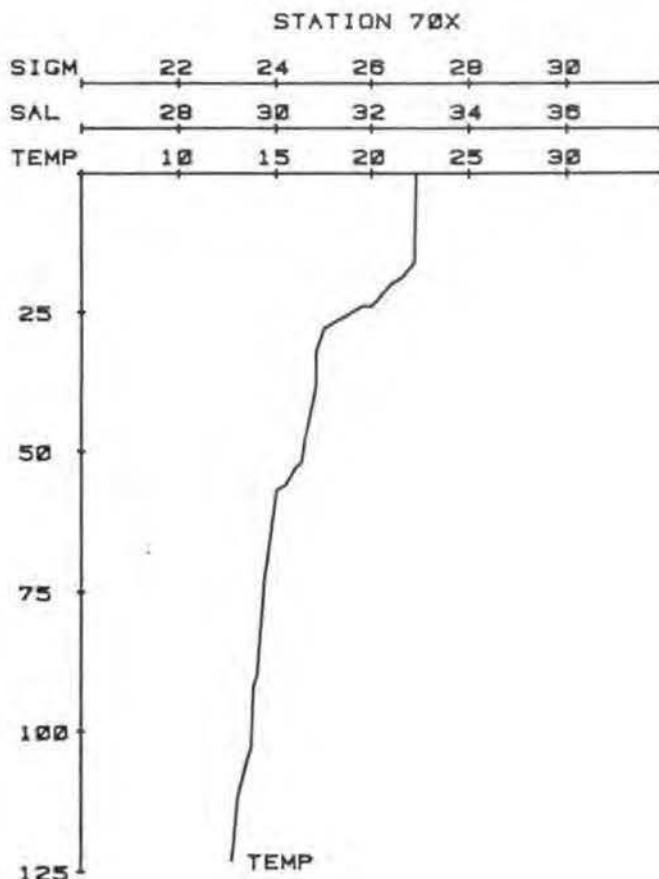


GILLISS CRUISE STA 87X 21/04/79 17.1 GMT CONSEC STA 70
LAT 38 27.5N LONG 08 10.0W DEPTH = 123M DIST LAST STA = 3.2KM

WEATHER DATA
WIND SPEED = 12KTS
WIND DIRECTION = 120
AIR TEMP = 23.9C
WEATHER CODE = 01
BAROMETRIC PRES = 1020.3

SEA STATE = 3
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

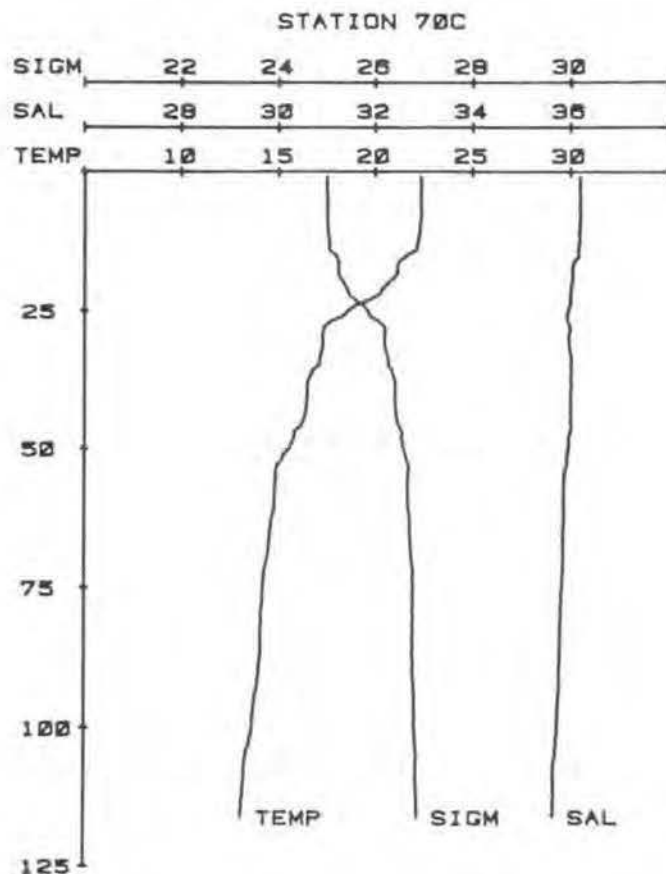
Z	T	S	0	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	22.3									
16.0	22.2									
17.0	22.0									
19.0	21.5									
20.0	21.0									
22.0	20.5									
24.0	20.0									
24.0	19.5									
25.0	19.0									
26.0	18.5									
27.0	18.0									
28.0	17.5									
32.0	17.1									
36.0	17.0									
49.0	16.5									
52.0	16.3									
53.0	16.0									
56.0	15.5									
57.0	15.0									
70.0	14.5									
72.0	14.4									
90.0	14.0									
92.0	13.8									
103.0	13.7									
105.0	13.5									
112.0	13.0									
123.0	12.7									



GILLISS CRUISE STA 70C 21/04/79 17.6 GAT CONSEC STA 71
LAT 34 27.00 LONG 88 09.50 DEPTH = 123M DIST LAST STA = 2.30N

WEATHER DATA
WIND SPEED = 12KTS
WIND DIRECTION = 114
AIR TEMP = 23.3C
WEATHER CODE = XI
BAROMETRIC PRES = 1028.3
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	U	SVA	O2	O2'	AOK	P04	NO3	SI
1.0	22.38	36.18	25.01	295						
2.0	22.38	36.18	25.01	295						
3.0	22.38	36.18	25.01	295				0.14	0.8	0.5
4.0	22.37	36.19	25.03	294						
5.0	22.36	36.19	25.03	294						
6.0	22.37	36.18	25.02	295						
7.0	22.38	36.19	25.02	295						
8.0	22.37	36.19	25.03	295						
9.0	22.33	36.18	25.03	294						
10.0	22.31	36.18	25.04	294						
11.0	22.28	36.17	25.04	294						
12.0	22.21	36.18	25.06	291						
13.0	22.17	36.16	25.06	292						
14.0	22.11	36.15	25.07	298						
15.0	21.63	36.16	25.21	277						
16.0	21.24	36.07	25.26	273						
17.0	21.12	36.03	25.25	273						
18.0	21.13	36.03	25.25	274						
19.0	20.95	36.03	25.30	269						
20.0	20.65	36.02	25.37	262						
21.0	20.35	36.00	25.44	256						
22.0	20.18	35.99	25.48	252				0.25	0.9	0.9
23.0	19.78	35.99	25.60	248						
24.0	18.96	35.98	25.79	223						
25.0	18.56	35.94	25.86	216						
26.0	18.28	35.92	25.91	211				0.57	2.5	6.5
27.0	17.67	35.94	26.08	195						
28.0	17.35	36.00	26.21	183						
29.0	17.26	35.97	26.24	183						
30.0	17.20	35.96	26.28	184						
31.0	17.26	35.97	26.29	183						
32.0	17.24	35.98	26.22	182						
33.0	17.16	36.00	26.25	179						
34.0	17.09	36.02	26.28	176						
35.0	17.07	36.00	26.27	177						
36.0	16.77	36.01	26.35	169						
37.0	16.60	36.00	26.38	166						
38.0	16.47	36.01	26.42	163						
39.0	16.46	36.01	26.43	162						
40.0	16.45	36.00	26.42	163						
41.0	16.44	36.00	26.42	163						
42.0	16.41	36.01	26.44	161						
43.0	16.39	36.00	26.43	162						
44.0	16.33	36.01	26.46	160						
45.0	16.24	36.00	26.47	158						
46.0	16.12	36.01	26.50	155				0.85	10.6	7.4
47.0	15.79	35.99	26.57	149						
48.0	15.70	35.96	26.55	151						
49.0	15.65	35.96	26.57	149						
50.0	15.62	35.96	26.60	146						
51.0	15.25	35.93	26.64	142						
52.0	15.16	35.93	26.66	140						
53.0	14.89	35.92	26.71	135						
54.0	14.84	35.88	26.69	137						
55.0	14.82	35.87	26.69	138						
56.0	14.81	35.86	26.69	138						
57.0	14.79	35.86	26.69	138						
58.0	14.79	35.86	26.69	138						
59.0	14.72	35.86	26.69	137						
60.0	14.72	35.86	26.69	137						
61.0	14.74	35.87	26.71	136						
62.0	14.64	35.87	26.73	134						
63.0	14.58	35.86	26.74	134						
64.0	14.56	35.85	26.73	133						
65.0	14.53	35.85	26.74	133						
66.0	14.51	35.85	26.74	133						
67.0	14.46	35.85	26.75	132						
68.0	14.44	35.85	26.76	132						
69.0	14.41	35.85	26.77	131						
70.0	14.36	35.85	26.78	130						
71.0	14.27	35.85	26.80	128						
72.0	14.22	35.85	26.81	127						
73.0	14.20	35.83	26.79	128						
74.0	14.17	35.83	26.80	128						
75.0	14.14	35.83	26.81	127						
76.0	14.13	35.81	26.79	128						
77.0	14.12	35.82	26.80	127						
78.0	14.11	35.81	26.80	128						
79.0	14.17	35.80	26.80	128						
80.0	14.19	35.82	26.81	127						
81.0	14.17	35.84	26.80	128						
82.0	14.05	35.81	26.80	128						
83.0	14.05	35.84	26.80	128						
84.0	14.05	35.79	26.80	128						
85.0	14.05	35.80	26.80	128						
86.0	14.05	35.79	26.80	128						
87.0	14.03	35.79	26.80	128						
88.0	13.99	35.79	26.81	127						
89.0	13.96	35.78	26.81	128						
90.0	13.96	35.78	26.81	128						
91.0	13.91	35.78	26.82	127						
92.0	13.89	35.79	26.83	125						
93.0	13.85	35.78	26.83	125						
94.0	13.76	35.77	26.84	124						
95.0	13.74	35.76	26.84	125						

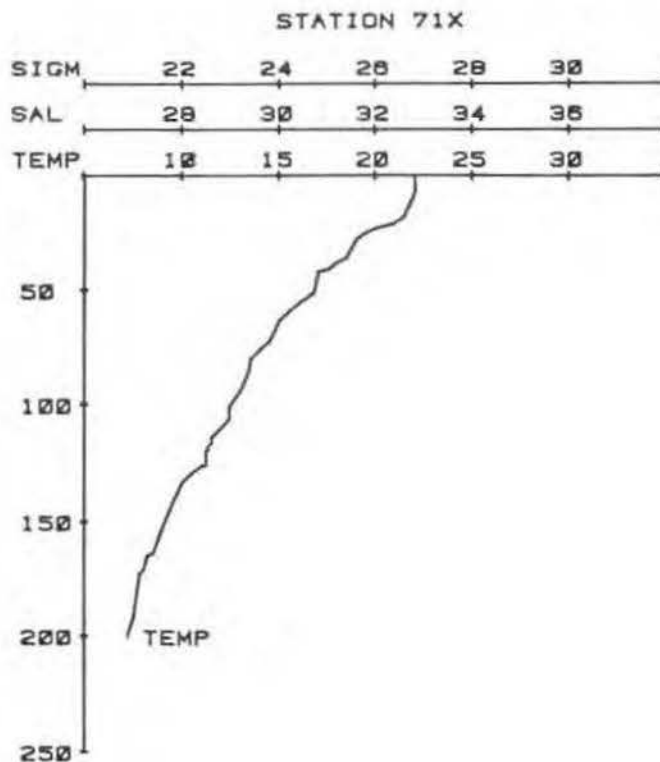


96.0	13.74	35.75	26.84	125						
97.0	13.69	35.75	26.84	125						
98.0	13.65	35.75	26.85	124						
99.0	13.65	35.74	26.84	125						
100.0	13.63	35.74	26.85	124						
101.0	13.59	35.74	26.85	123						
102.0	13.54	35.72	26.86	123						
103.0	13.47	35.73	26.87	122						
104.0	13.33	35.74	26.88	121						
105.0	13.30	35.71	26.89	120						
106.0	13.25	35.67	26.87	122						
107.0	13.23	35.67	26.87	122						
108.0	13.21	35.66	26.87	122						
109.0	13.22	35.67	26.88	121						
110.0	13.18	35.67	26.89	121						
111.0	13.17	35.67	26.89	120						
112.0	13.16	35.68	26.90	120						
113.0	13.11	35.67	26.91	119						
114.0	13.12	35.67	26.90	120						
115.0	13.08	35.67	26.91	119						
116.0	13.08	35.66	26.90	120						

GILLISS CRUISE STA 071X 21/04/79 18.6 DMT CONSEC STA 72
LAT 34 26.5N LONG 00 06.2W DEPTH = 233M DIST LAST STA = 5.4KM

WEATHER DATA
WIND SPEED = 12KTS
WIND DIRECTION = 110
AIR TEMP = 23.9C
WEATHER CODE = XI
BAROMETRIC PRESS = 1028.0
SEA STATE = 4
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	D	SVA	O2	O2'	ADJ	PO4	NO3
8.0	22.1								
7.0	22.1								
9.0	22.0								
10.0	21.5								
21.0	21.0								
22.0	20.5								
23.0	20.0								
25.0	19.5								
26.0	19.0								
36.0	18.5								
38.0	18.0								
41.0	17.5								
42.0	17.0								
51.0	16.0								
53.0	16.5								
56.0	16.0								
60.0	15.5								
64.0	15.0								
73.0	14.5								
77.0	14.0								
81.0	13.5								
86.0	13.4								
94.0	13.0								
100.0	12.5								
101.0	12.4								
106.0	12.0								
118.0	12.0								
114.0	11.5								
116.0	11.5								
120.0	11.2								
126.0	11.2								
126.0	11.0								
129.0	10.5								
133.0	10.0								
142.0	9.5								
152.0	9.0								
164.0	8.5								
165.0	8.2								
171.0	8.0								
173.0	7.8								
191.0	7.5								
200.0	7.2								



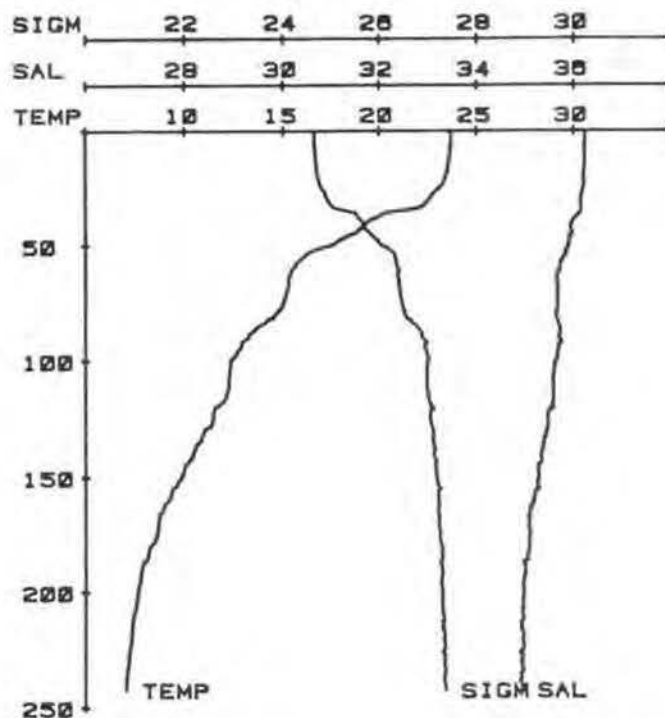
GILLISS CRUISE STA #72C 21/04/79 19.0 GMT CONSEC STA 73
LAT 30 26.2N LONG 01 03.0W DEPTH = 305M DIST LAST STA = 5.1KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 110
AIR TEMP = 24.8C
WEATHER CODE = 01
BAROMETRIC PRES = 1024.0

SEA STATE = 4
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

				OBSERVATIONS						
Z	T	S	D	SVA	Q2	Q2'	AQU	P04	M03	S1
1.0	23.71	36.24	24.67	320						
2.0	23.71	36.24	24.67	320						
3.0	23.71	36.24	24.68	320						
4.0	23.69	36.24	24.68	327						
5.0	23.74	36.23	24.67	320						
6.0	23.69	36.24	24.68	327						
7.0	23.69	36.23	24.67	320						
8.0	23.64	36.24	24.69	326						
9.0	23.63	36.23	24.69	327						
10.0	23.66	36.24	24.69	327						
11.0	23.66	36.24	24.69	327						
12.0	23.58	36.24	24.71	325						
13.0	23.58	36.23	24.70	325						
14.0	23.58	36.24	24.71	325						
15.0	23.55	36.24	24.72	324						
16.0	23.51	36.23	24.73	323						
17.0	23.51	36.22	24.72	324						
18.0	23.51	36.22	24.72	324						
19.0	23.43	36.22	24.74	322						
20.0	23.39	36.21	24.75	322						
21.0	23.36	36.22	24.76	320						
22.0	23.31	36.22	24.78	319						
23.0	23.29	36.22	24.78	318						
24.0	23.18	36.22	24.81	316						
25.0	23.17	36.20	24.83	314						
26.0	22.92	36.19	24.87	310						
27.0	22.81	36.19	24.91	307						
28.0	22.74	36.16	24.91	307						
29.0	22.66	36.16	24.92	305						
30.0	22.54	36.16	24.95	302						
31.0	22.48	36.16	24.97	301						
32.0	22.35	36.16	25.01	297						
33.0	22.27	36.16	25.03	295						
34.0	21.94	36.16	25.12	286						
35.0	21.84	36.16	25.35	265						
36.0	21.34	36.13	25.54	247			0.24	1.4	2.2	
37.0	21.11	36.09	25.57	244						
38.0	19.91	36.03	25.58	243						
39.0	19.54	36.00	25.65	236						
40.0	19.38	35.97	25.67	234						
41.0	19.29	35.95	25.68	233						
42.0	19.24	35.95	25.69	232						
43.0	19.00	35.94	25.75	227						
44.0	18.09	35.90	25.81	222						
45.0	18.76	35.90	25.84	218						
46.0	18.48	35.92	25.88	214						
47.0	18.17	35.92	25.94	209						
48.0	17.95	35.92	26.00	204						
49.0	17.75	35.89	26.02	201						
50.0	17.62	35.91	26.07	197			0.70	0.8	5.9	
51.0	17.86	35.89	26.19	185						
52.0	16.76	35.85	26.23	181						
53.0	16.42	35.85	26.31	174						
54.0	16.25	35.85	26.35	170						
55.0	16.18	35.84	26.35	170						
56.0	15.92	35.78	26.37	168						
57.0	15.86	35.74	26.34	169						
58.0	15.60	35.72	26.38	167						
59.0	15.64	35.72	26.39	166						
60.0	15.57	35.73	26.42	164						
61.0	15.45	35.73	26.44	161						
62.0	15.43	35.67	26.48	165						
63.0	15.37	35.67	26.41	164						
64.0	15.35	35.66	26.41	164			0.94	12.2	9.0	
65.0	15.34	35.68	26.44	162						
66.0	15.31	35.67	26.43	163						
67.0	15.31	35.66	26.42	164						
68.0	15.29	35.69	26.45	161						
69.0	15.27	35.67	26.44	162						
70.0	15.24	35.69	26.46	160						
71.0	15.17	35.68	26.47	159						
72.0	15.16	35.68	26.47	159						
73.0	15.12	35.68	26.48	158						
74.0	15.09	35.67	26.48	159						
75.0	15.03	35.68	26.51	157						
76.0	15.00	35.68	26.51	156						
77.0	14.96	35.68	26.51	155						
78.0	14.91	35.67	26.52	155						
79.0	14.77	35.68	26.56	151						
80.0	14.74	35.64	26.54	153						
81.0	14.57	35.65	26.58	149						
82.0	14.53	35.66	26.59	148						
83.0	14.19	35.68	26.60	139						
84.0	14.11	35.70	26.72	136						
85.0	13.87	35.72	26.78	131						
86.0	13.72	35.73	26.82	126						
87.0	13.56	35.73	26.85	123						
88.0	13.42	35.74	26.89	120						
89.0	13.28	35.72	26.91	118						
90.0	13.26	35.71	26.89	119						
91.0	13.13	35.75	26.96	113						
92.0	12.95	35.74	27.11	109						
93.0	12.91	35.71	26.97	112						
94.0	12.89	35.69	26.96	113						
95.0	12.84	35.71	26.99	111						

STATION 72C

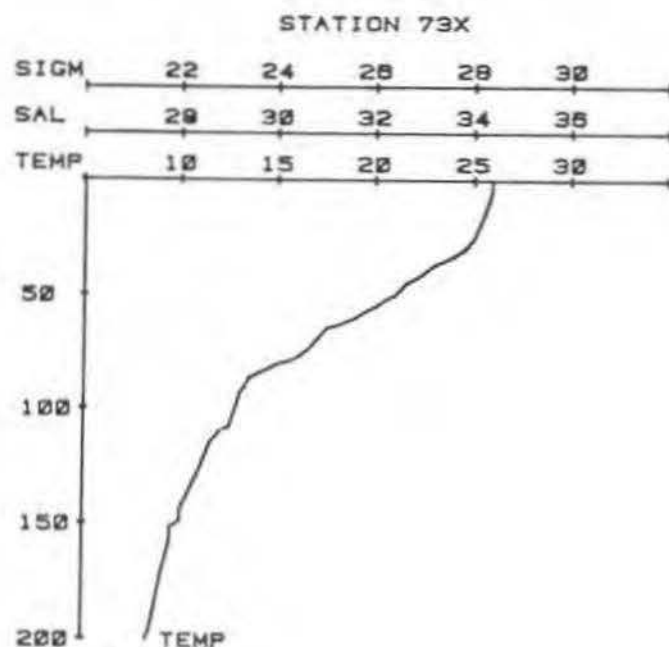


96.0	12.69	35.68	26.99	110						
97.0	12.67	35.67	26.99	110						
98.0	12.57	35.68	27.02	108						
99.0	12.49	35.69	27.04	106						
100.0	12.36	35.64	27.03	107						
101.0	12.36	35.62	27.01	108						
102.0	12.36	35.61	27.00	109						
103.0	12.34	35.61	27.01	109						
104.0	12.32	35.60	27.00	109						
105.0	12.31	35.60	27.01	109						
106.0	12.31	35.60	27.01	109						
107.0	12.28	35.58	27.00	110						
108.0	12.26	35.59	27.01	109						
109.0	12.27	35.59	27.01	109						
110.0	12.27	35.58	27.00	110						
111.0	12.26	35.59	27.01	109						
112.0	12.22	35.58	27.01	109						
113.0	12.19	35.59	27.02	108						
114.0	12.17	35.60	27.03	107						
115.0	12.11	35.59	27.04	106						
116.0	12.08	35.58	27.03	106						
117.0	12.04	35.59	27.05	105						
118.0	11.89	35.58	27.07	103						
119.0	11.77	35.56	27.08	102						
120.0	11.57	35.59	27.14	96						
121.0	11.50	35.51	27.09	101						
122.0	11.49	35.48	27.07	103						
123.0	11.47	35.47	27.07	104						

GILLISS CRUISE STA 873X 21/04/79 28.3 GMT CONSEC STA 74
LAT 38 25.04 LONG 78 58.5W DEPTH = 299M DIST LAST STA = 183.6KM

WEATHER DATA
WIND SPEED = 14KTS
WIND DIRECTION = 118
AIR TEMP = 24.2C
WEATHER CODE = X1
BAROMETRIC PRESS = 1019.6
SEA STATE = 4
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

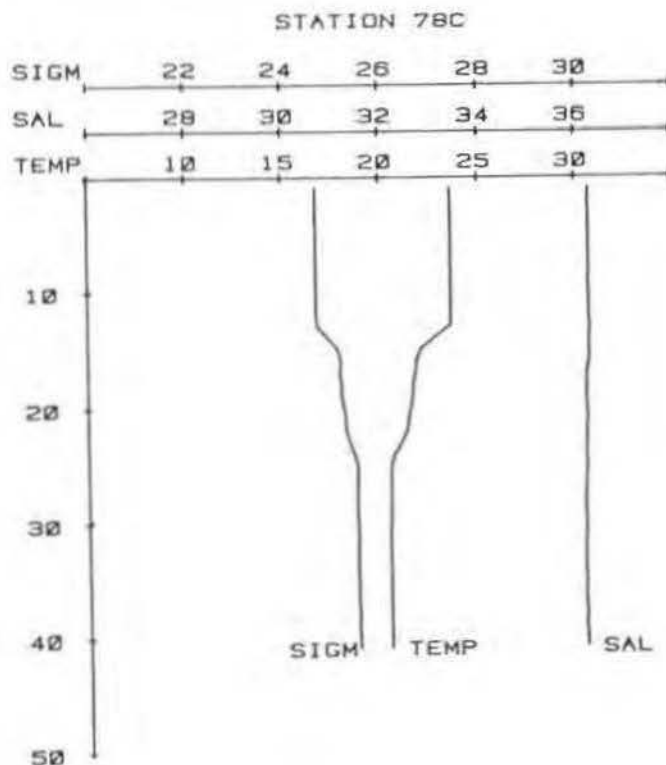
Z	T	S	B	SVA	O2	O2'	ADU	PO4	NO3	SI
0.0	25.9									
1.0	25.9									
2.0	25.9									
3.0	25.9									
4.0	25.9									
5.0	25.9									
6.0	25.9									
7.0	25.9									
8.0	25.9									
9.0	25.9									
10.0	25.9									
11.0	25.9									
12.0	25.9									
13.0	25.9									
14.0	25.9									
15.0	25.9									
16.0	25.9									
17.0	25.9									
18.0	25.9									
19.0	25.9									
20.0	25.9									
21.0	25.9									
22.0	25.9									
23.0	25.9									
24.0	25.9									
25.0	25.9									
26.0	25.9									
27.0	25.9									
28.0	25.9									
29.0	25.9									
30.0	25.9									
31.0	25.9									
32.0	25.9									
33.0	25.9									
34.0	25.9									
35.0	25.9									
36.0	25.9									
37.0	25.9									
38.0	25.9									
39.0	25.9									
40.0	25.9									
41.0	25.9									
42.0	25.9									
43.0	25.9									
44.0	25.9									
45.0	25.9									
46.0	25.9									
47.0	25.9									
48.0	25.9									
49.0	25.9									
50.0	25.9									
51.0	25.9									
52.0	25.9									
53.0	25.9									
54.0	25.9									
55.0	25.9									
56.0	25.9									
57.0	25.9									
58.0	25.9									
59.0	25.9									
60.0	25.9									
61.0	25.9									
62.0	25.9									
63.0	25.9									
64.0	25.9									
65.0	25.9									
66.0	25.9									
67.0	25.9									
68.0	25.9									
69.0	25.9									
70.0	25.9									
71.0	25.9									
72.0	25.9									
73.0	25.9									
74.0	25.9									
75.0	25.9									
76.0	25.9									
77.0	25.9									
78.0	25.9									
79.0	25.9									
80.0	25.9									
81.0	25.9									
82.0	25.9									
83.0	25.9									
84.0	25.9									
85.0	25.9									
86.0	25.9									
87.0	25.9									
88.0	25.9									
89.0	25.9									
90.0	25.9									
91.0	25.9									
92.0	25.9									
93.0	25.9									
94.0	25.9									
95.0	25.9									
96.0	25.9									
97.0	25.9									
98.0	25.9									
99.0	25.9									
100.0	25.9									



GILLISS CRUISE STA 878C 21/04/79 23.4 GMT CONSEC STA 79
LAT 38 46.1N LONG 78 28.4W DEPTH = 43M DIST LAST STA = 135.3KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 118
AIR TEMP = 23.9C
WEATHER CODE = X1
BAROMETRIC PRESS = 1019.6
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	B	SVA	O2	O2'	ADU	PO4	NO3	SI
1.0	23.63	36.29	24.74	322						
2.0	23.63	36.29	24.73	323						
3.0	23.64	36.29	24.73	322						
4.0	23.63	36.29	24.74	322						
5.0	23.64	36.29	24.73	322						
6.0	23.64	36.29	24.73	322						
7.0	23.63	36.29	24.74	322						
8.0	23.63	36.29	24.74	322						
9.0	23.62	36.29	24.73	323						
10.0	23.62	36.29	24.74	322						
11.0	23.62	36.29	24.74	322						
12.0	23.62	36.29	24.74	322						
13.0	23.64	36.31	24.74	328						
14.0	22.80	36.29	24.97	388						
15.0	22.11	36.29	25.17	281						
16.0	21.80	36.29	25.24	274						
17.0	21.87	36.24	25.22	277						
18.0	21.78	36.24	25.25	273						
19.0	21.67	36.23	25.25	273						
20.0	21.57	36.25	25.38	268						
21.0	21.44	36.26	25.34	265						
22.0	21.37	36.24	25.34	265						
23.0	21.17	36.24	25.41	258						
24.0	20.77	36.23	25.58	254						
25.0	20.56	36.24	25.57	244						
26.0	20.55	36.22	25.55	245						
27.0	20.54	36.21	25.55	246						
28.0	20.53	36.21	25.54	246						
29.0	20.52	36.21	25.55	246						
30.0	20.51	36.21	25.56	245						
31.0	20.48	36.21	25.56	244						
32.0	20.48	36.19	25.55	246						
33.0	20.49	36.19	25.55	246						
34.0	20.48	36.18	25.54	247						
35.0	20.48	36.18	25.56	245						
36.0	20.47	36.18	25.54	246						
37.0	20.47	36.19	25.55	246						
38.0	20.46	36.18	25.56	245						
39.0	20.47	36.18	25.54	246						
40.0	20.46	36.18	25.56	245						
41.0	20.46	36.18	25.56	245						

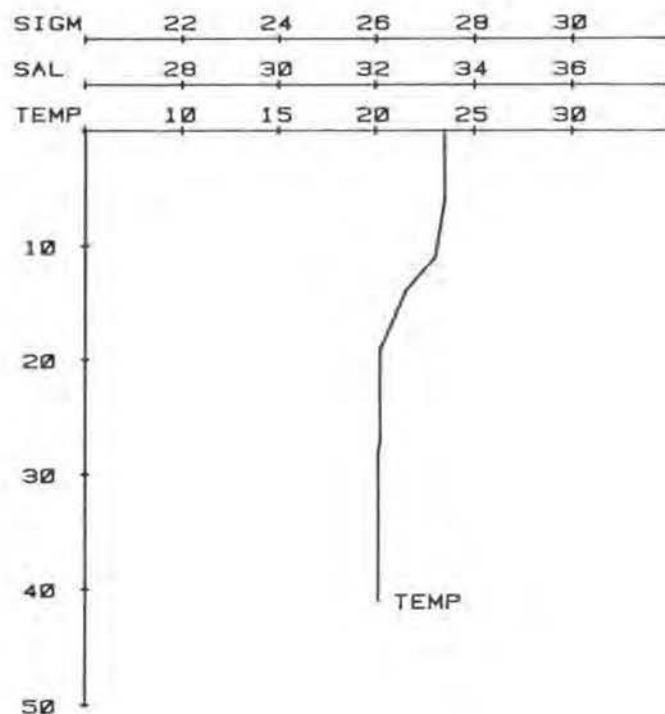


GILLISS CRUISE STA 879X 21/04/79 23.9 GMT CONSEC STA 88
LAT 38 45.2N LONG 08 17.8W DEPTH = 41M DIST LAST STA = 5.1KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 110
AIR TEMP = 23.9C
WEATHER CODE = 12
BAROMETRIC PRES = 1019.6
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	B	SVA	O2	O2'	AOU	PO4	NO3
0.0	23.5								
1.0	23.5								
2.0	23.5								
3.0	23.4								
4.0	23.4								
5.0	23.4								
6.0	23.4								
7.0	23.4								
8.0	23.4								
9.0	23.4								
10.0	23.4								
11.0	23.4								
12.0	23.4								
13.0	23.4								
14.0	23.4								
15.0	23.4								
16.0	23.4								
17.0	23.4								
18.0	23.4								
19.0	23.4								
20.0	23.4								
21.0	23.4								
22.0	23.4								
23.0	23.4								
24.0	23.4								
25.0	23.4								
26.0	23.4								
27.0	23.4								
28.0	23.4								
29.0	23.4								
30.0	23.4								
31.0	23.4								
32.0	23.4								
33.0	23.4								
34.0	23.4								
35.0	23.4								
36.0	23.4								
37.0	23.4								
38.0	23.4								
39.0	23.4								
40.0	23.4								
41.0	23.4								

STATION 79X

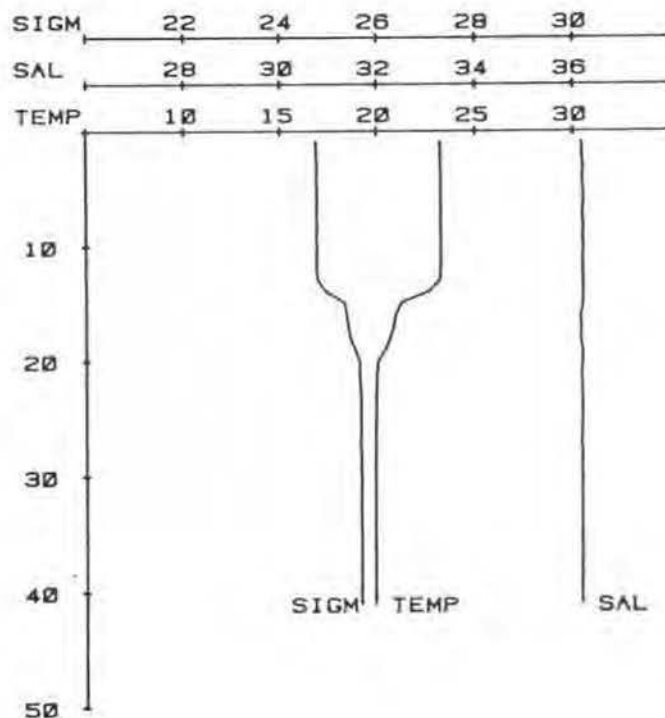


GILLISS CRUISE STA 880C 22/04/79 00.4 GMT CONSEC STA 81
LAT 38 44.7N LONG 08 14.8W DEPTH = 43M DIST LAST STA = 4.9KM

WEATHER DATA
WIND SPEED = 16KTS
WIND DIRECTION = 110
AIR TEMP = 22.8C
WEATHER CODE = 12
BAROMETRIC PRES = 1019.6
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	B	SVA	O2	O2'	AOU	PO4	NO3
1.0	23.24	36.18	24.77	319					
2.0	23.24	36.18	24.77	319					
3.0	23.24	36.20	24.78	318				0.15	0.1
4.0	23.24	36.18	24.77	319					
5.0	23.24	36.20	24.78	318					
6.0	23.24	36.20	24.78	318					
7.0	23.24	36.16	24.77	319					
8.0	23.24	36.24	24.78	318					
9.0	23.24	36.19	24.77	319					
10.0	23.24	36.24	24.78	318					
11.0	23.24	36.19	24.77	319					
12.0	23.23	36.19	24.79	318					
13.0	23.19	36.20	24.80	317					
14.0	22.61	36.20	24.96	301				0.04	0.1
15.0	21.28	36.19	25.35	264					
16.0	20.92	36.15	25.40	259					
17.0	20.83	36.16	25.43	256					
18.0	20.66	36.15	25.47	253					
19.0	20.42	36.19	25.56	244					
20.0	20.84	36.18	25.66	235					
21.0	19.98	36.17	25.67	234					
22.0	19.97	36.18	25.68	233					
23.0	19.95	36.19	25.69	232				0.13	0.5
24.0	19.95	36.19	25.69	232					
25.0	19.93	36.18	25.69	232					
26.0	19.93	36.18	25.69	232					
27.0	19.93	36.17	25.68	233					
28.0	19.92	36.19	25.70	231					
29.0	19.91	36.18	25.69	232					
30.0	19.91	36.19	25.70	231					
31.0	19.91	36.18	25.69	232					
32.0	19.91	36.18	25.69	232					
33.0	19.91	36.18	25.69	232					
34.0	19.90	36.18	25.70	232					
35.0	19.90	36.18	25.70	232					
36.0	19.90	36.18	25.70	232					
37.0	19.90	36.18	25.70	232					
38.0	19.90	36.18	25.70	232					
39.0	19.90	36.17	25.69	233					
40.0	19.90	36.17	25.69	233					
41.0	19.89	36.18	25.70	232				0.20	1.9

STATION 80C

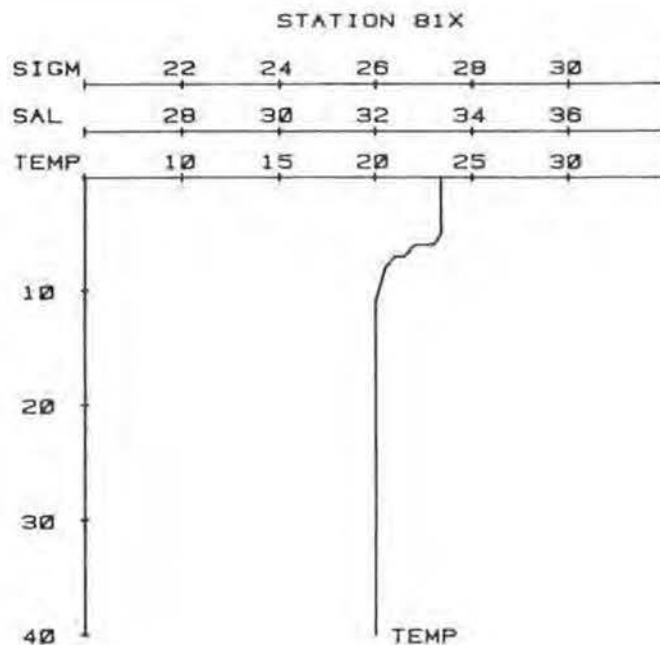


GILLISS CRUISE STA 81X 22/04/79 01.0 GMT CONSEC STA 82
LAT 30 44.1N LONG 01 11.0W DEPTH = 40M DIST LAST STA = 4.9KM

WEATHER DATA
WIND SPEED = 16KTS
WIND DIRECTION = 130
AIR TEMP = 22.8C
WEATHER CODE = X1
BAROMETRIC PRES = 1024.7

SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	D	SVA	D2	D2'	ADU	P04	M03	SI
1.0	23.4									
2.0	23.4									
3.0	23.4									
4.0	22.5									
5.0	22.0									
6.0	21.5									
7.0	21.0									
8.0	20.5									
9.0	20.0									
10.0	20.0									
11.0	20.0									
12.0	20.0									

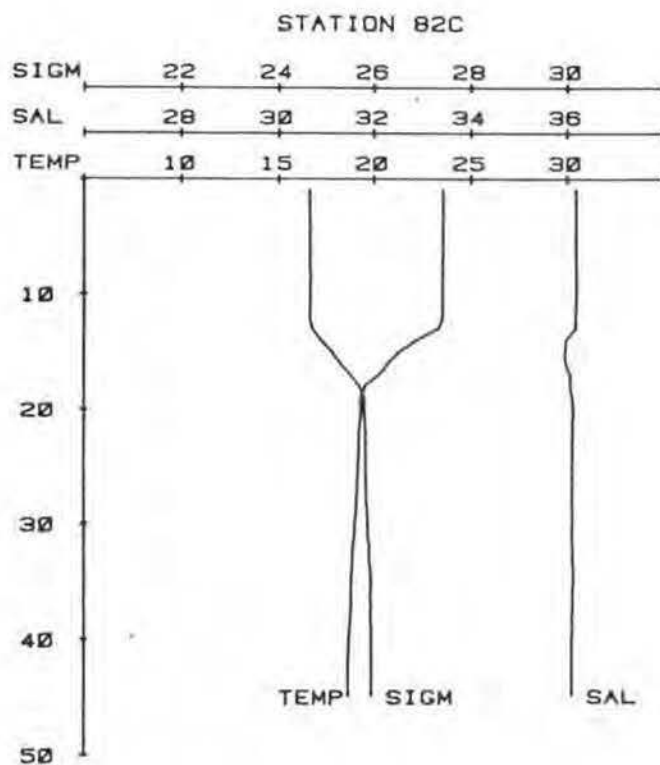


GILLISS CRUISE STA 82C 22/04/79 01.4 GMT CONSEC STA 83
LAT 30 43.5N LONG 01 08.1W DEPTH = 45M DIST LAST STA = 4.8KM

WEATHER DATA
WIND SPEED = 16KTS
WIND DIRECTION = 130
AIR TEMP = 22.8C
WEATHER CODE = X1
BAROMETRIC PRES = 1024.7

SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

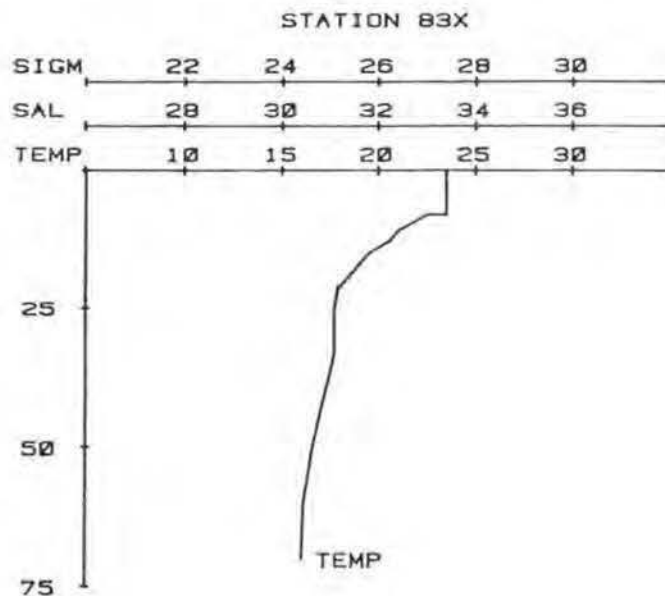
Z	T	S	D	SVA	D2	D2'	ADU	P04	M03	SI
1.0	23.57	36.18	24.67	328						
2.0	23.57	36.18	24.67	328						
3.0	23.57	36.19	24.68	327						
4.0	23.55	36.19	24.68	327						
5.0	23.55	36.18	24.68	328						
6.0	23.55	36.19	24.68	327						
7.0	23.55	36.19	24.68	327						
8.0	23.55	36.20	24.69	326						
9.0	23.55	36.20	24.69	326						
10.0	23.55	36.20	24.69	326						
11.0	23.55	36.19	24.68	327						
12.0	23.55	36.18	24.68	328						
13.0	23.34	36.18	24.74	322						
14.0	22.17	35.98	24.92	315						
15.0	21.34	35.96	25.15	283						
16.0	20.73	35.97	25.31	267						
17.0	20.25	36.08	25.53	247						
18.0	19.54	36.07	25.72	229						
19.0	19.29	36.12	25.81	220						
20.0	19.38	36.14	25.83	219						
21.0	19.25	36.13	25.83	219						
22.0	19.24	36.13	25.84	217						
23.0	19.19	36.12	25.84	218						
24.0	19.18	36.13	25.85	217						
25.0	19.15	36.12	25.85	217						
26.0	19.13	36.12	25.85	217						
27.0	19.10	36.12	25.86	216						
28.0	19.06	36.11	25.86	216						
29.0	19.04	36.13	25.88	214						
30.0	18.98	36.12	25.89	213						
31.0	18.96	36.11	25.89	213						
32.0	18.87	36.13	25.93	211						
33.0	18.86	36.12	25.92	210						
34.0	18.83	36.14	25.94	208						
35.0	18.78	36.14	25.96	207						
36.0	18.78	36.12	25.94	208						
37.0	18.77	36.13	25.95	208						
38.0	18.75	36.11	25.94	209						
39.0	18.71	36.12	25.96	207						
40.0	18.67	36.10	25.95	207						
41.0	18.65	36.10	25.96	206						
42.0	18.63	36.10	25.96	206						
43.0	18.63	36.10	25.96	207						
44.0	18.63	36.10	25.96	207						
45.0	18.63	36.10	25.96	207						



GILLISS CRUISE STA 83X 22/04/79 01.9 GWT CONSEC STA 04
LAT 30 43.0N LONG 00 05.4W DEPTH = 70M DIST LAST STA = 4.4KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 130
AIR TEMP = 22.2C
WEATHER CODE = 21
BAROMETRIC PRES = 1020.7
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	Q2	Q2'	AQU	PD4	W03	ST
0.0	23.5									
0.0	23.5									
0.0	23.0									
0.0	22.5									
9.0	22.0									
10.0	21.5									
11.0	21.0									
13.0	20.5									
14.0	20.0									
15.0	19.5									
17.0	19.0									
19.0	18.5									
21.0	18.0									
25.0	17.7									
33.0	17.7									
36.0	17.5									
43.0	17.0									
51.0	16.5									
60.0	16.1									
70.0	16.0									

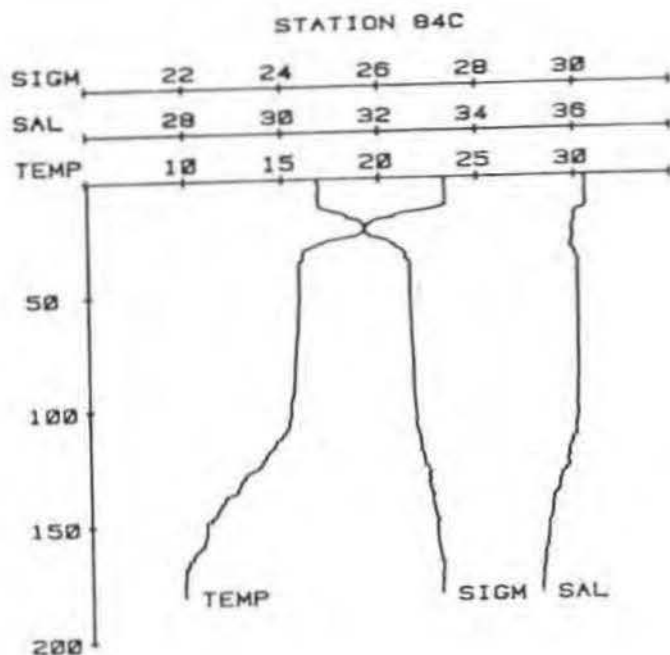


KILLISS CRUISE STA 84C 22/04/79 02.2 GHT CONSEC STA 05
LAT 38 42.3N LONG 08 02.5W DEPTH = 105M DIST LAST STA = 4.0KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 130
AIR TEMP = 22.2C
WEATHER CODE = 01
BAROMETRIC PRESS = 1020.7

SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SW	Q2	Q2*	AOU	PO4	NO3	SI
1.0	23.37	36.28	24.74	320						
2.0	23.37	36.21	24.75	320						
3.0	23.35	36.22	24.76	319				0.11	0.1	0.0
4.0	23.36	36.21	24.75	320						
5.0	23.36	36.20	24.75	321						
6.0	23.37	36.20	24.74	321						
7.0	23.37	36.19	24.74	322						
8.0	23.37	36.20	24.74	321						
9.0	23.37	36.21	24.75	321						
10.0	23.38	36.21	24.75	321						
11.0	23.37	36.21	24.75	321						
12.0	23.38	36.22	24.77	319						
13.0	23.38	36.20	24.85	311						
14.0	22.48	36.17	25.88	297						
15.0	21.21	36.88	25.21	270						
16.0	19.74	35.90	25.32	267						
17.0	18.68	35.97	25.31	264						
18.0	19.02	35.97	25.56	244						
19.0	19.56	35.98	25.43	237						
20.0	19.34	35.96	25.60	233						
21.0	19.25	35.95	25.69	232				0.10	1.0	1.0
22.0	19.25	35.92	25.60	233						
23.0	19.19	35.93	25.69	232						
24.0	19.83	35.95	25.75	226						
25.0	18.75	35.94	25.81	229						
26.0	18.82	35.94	26.88	243						
27.0	17.20	35.93	26.17	186						
28.0	17.88	35.92	26.23	181				0.40	6.3	4.8
29.0	16.72	35.92	26.38	175						
30.0	16.44	35.89	26.34	178						
31.0	16.89	35.92	26.44	161						
32.0	16.83	35.96	26.49	156						
33.0	16.81	35.99	26.52	154						
34.0	16.81	36.88	26.52	152						
35.0	16.81	35.99	26.52	154				0.74	12.3	6.4
36.0	15.89	36.86	26.68	146						
37.0	15.88	36.85	26.61	145						
38.0	15.88	36.85	26.61	145						
39.0	15.89	36.84	26.68	146						
40.0	15.85	36.84	26.68	146						
41.0	15.88	36.84	26.68	146						
42.0	15.88	36.85	26.61	145						
43.0	15.88	36.84	26.68	146						
44.0	15.88	36.85	26.61	145						
45.0	15.88	36.84	26.68	146						
46.0	15.88	36.85	26.61	145						
47.0	15.88	36.84	26.68	146						
48.0	15.88	36.85	26.61	145						
49.0	15.88	36.84	26.68	146						
50.0	15.79	36.85	26.61	145						
51.0	15.79	36.85	26.61	145						
52.0	15.79	36.85	26.61	145						
53.0	15.78	36.85	26.61	145						
54.0	15.76	36.85	26.62	145						
55.0	15.76	36.85	26.62	145						
56.0	15.75	36.85	26.62	144						



57.0	15.74	36.85	26.62	144
58.0	15.73	36.85	26.63	144
59.0	15.73	36.85	26.63	144
60.0	15.73	36.85	26.63	144
61.0	15.72	36.85	26.63	144
62.0	15.71	36.85	26.63	144
63.0	15.70	36.85	26.63	144
64.0	15.70	36.85	26.63	144
65.0	15.70	36.85	26.63	144
66.0	15.69	36.84	26.63	144
67.0	15.69	36.84	26.63	144
68.0	15.67	36.85	26.64	143
69.0	15.65	36.84	26.64	143
70.0	15.63	36.84	26.64	143
71.0	15.62	36.84	26.64	143
72.0	15.59	36.84	26.65	142
73.0	15.58	36.84	26.65	142
74.0	15.58	36.84	26.65	142
75.0	15.57	36.83	26.65	143
76.0	15.57	36.85	26.66	141
77.0	15.57	36.84	26.65	142
78.0	15.56	36.84	26.66	142
79.0	15.54	36.84	26.66	141
80.0	15.53	36.85	26.67	140
81.0	15.52	36.85	26.67	140
82.0	15.52	36.83	26.66	142
83.0	15.52	36.84	26.67	141
84.0	15.51	36.84	26.67	141
85.0	15.51	36.84	26.67	141
86.0	15.50	36.84	26.67	141
87.0	15.49	36.83	26.66	141
88.0	15.48	36.83	26.67	140
89.0	15.46	36.84	26.68	140
90.0	15.47	36.82	26.66	142
91.0	15.45	36.82	26.67	141
92.0	15.44	36.83	26.68	140
93.0	15.43	36.82	26.67	141
94.0	15.41	36.82	26.68	140
95.0	15.39	36.82	26.68	140
96.0	15.34	36.81	26.68	140
97.0	15.29	36.81	26.69	139
98.0	15.29	36.80	26.69	139
99.0	15.29	36.82	26.70	138
100.0	15.28	36.80	26.69	139
101.0	15.28	36.83	26.71	137
102.0	15.28	36.82	26.70	138
103.0	15.27	36.82	26.71	138
104.0	15.24	36.82	26.71	137
105.0	15.18	36.82	26.73	136
106.0	15.17	35.99	26.71	138
107.0	15.16	35.98	26.70	138
108.0	15.15	36.88	26.72	137
109.0	15.06	35.97	26.72	137
110.0	14.99	35.98	26.74	135
111.0	14.91	35.97	26.75	134
112.0	14.83	35.99	26.78	131
113.0	14.73	35.98	26.80	129
114.0	14.58	35.89	26.78	131
115.0	14.48	35.91	26.80	129
116.0	14.38	35.89	26.80	129
117.0	14.34	35.88	26.80	129
118.0	14.21	35.83	26.79	130
119.0	14.08	35.83	26.82	127
120.0	13.97	35.83	26.84	125
121.0	13.94	35.84	26.86	124
122.0	13.86	35.82	26.86	124
123.0	13.74	35.80	26.87	123
124.0	13.73	35.78	26.86	124
125.0	13.65	35.82	26.90	119
126.0	13.51	35.83	26.94	116
127.0	13.21	35.77	26.96	114
128.0	13.12	35.77	27.00	111

129.0	12.86	35.67	26.95	115
130.0	12.89	35.66	26.94	116
131.0	12.71	35.67	26.98	112
132.0	12.66	35.62	26.95	115
133.0	12.62	35.63	26.97	113
134.0	12.53	35.62	26.98	112
135.0	12.51	35.60	26.97	113
136.0	12.46	35.62	26.99	111
137.0	12.23	35.58	27.01	110
138.0	11.87	35.54	27.04	106
139.0	11.84	35.49	27.01	109
140.0	11.82	35.50	27.02	108
141.0	11.78	35.48	27.03	107
142.0	11.65	35.47	27.03	107
143.0	11.53	35.47	27.05	105
144.0	11.47	35.46	27.06	105
145.0	11.42	35.46	27.07	104
146.0	11.37	35.46	27.08	103
147.0	11.18	35.44	27.10	101
148.0	11.18	35.43	27.09	102
149.0	10.88	35.42	27.14	97
150.0	10.89	35.38	27.10	101
151.0	10.90	35.38	27.10	101
152.0	10.89	35.39	27.11	100
153.0	10.88	35.38	27.10	100
154.0	10.86	35.38	27.11	100
155.0	10.83	35.36	27.10	101
156.0	10.79	35.37	27.11	100
157.0	10.76	35.38	27.13	98
158.0	10.73	35.35	27.11	100
159.0	10.69	35.35	27.12	99
160.0	10.55	35.34	27.13	98
161.0	10.49	35.34	27.14	97
162.0	10.30	35.30	27.15	97
163.0	10.20	35.29	27.16	96
164.0	10.21	35.30	27.16	95
165.0	10.12	35.30	27.18	94
166.0	9.93	35.28	27.19	92
167.0	10.00	35.27	27.18	94
168.0	9.87	35.30	27.22	89
169.0	9.80	35.27	27.21	91
170.0	9.79	35.26	27.20	91
171.0	9.77	35.27	27.21	90
172.0	9.79	35.24	27.19	93
173.0	9.79	35.23	27.18	93
174.0	9.78	35.25	27.20	92
175.0	9.74	35.24	27.20	92
176.0	9.76	35.23	27.19	93
177.0	9.73	35.22	27.18	93
178.0	9.74	35.22	27.18	93
181.0	9.74	35.22	27.18	93

1.62 21.3 16.2

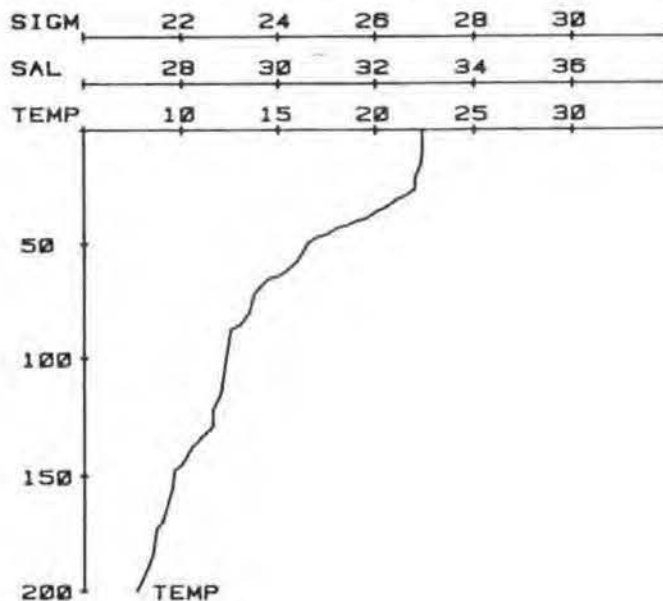
GILLISS CRUISE STA 85X 22/04/79 03.1 GMT CONSEC STA 86
LAT 38 41.6N LONG 79 59.5W DEPTH = 232M DIST LAST STA = 5.0KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 140
AIR TEMP = 22.2C
WEATHER CODE = X1
BAROMETRIC PRES = 1021.7

SEA STATE = 3
WAVE DIRECTION = 140
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	D	SVA	O2	O2'	ADU	P04	M03
8.0	22.4								
9.0	22.4								
15.0	22.3								
21.0	22.0								
26.0	22.0								
29.0	21.5								
31.0	21.0								
34.0	20.5								
36.0	20.0								
39.0	19.5								
40.0	19.0								
42.0	18.5								
43.0	18.0								
46.0	17.5								
47.0	17.0								
54.0	16.5								
58.0	16.0								
62.0	15.5								
65.0	15.0								
66.0	14.5								
70.0	14.0								
73.0	13.5								
80.0	13.5								
86.0	13.0								
88.0	12.5								
115.0	12.0								
122.0	11.5								
128.0	11.0								
130.0	11.5								
134.0	11.0								
138.0	10.5								
145.0	10.0								
148.0	9.5								
155.0	9.5								
170.0	9.0								
173.0	8.7								
185.0	8.5								
195.0	8.0								
200.0	7.7								

STATION 85X



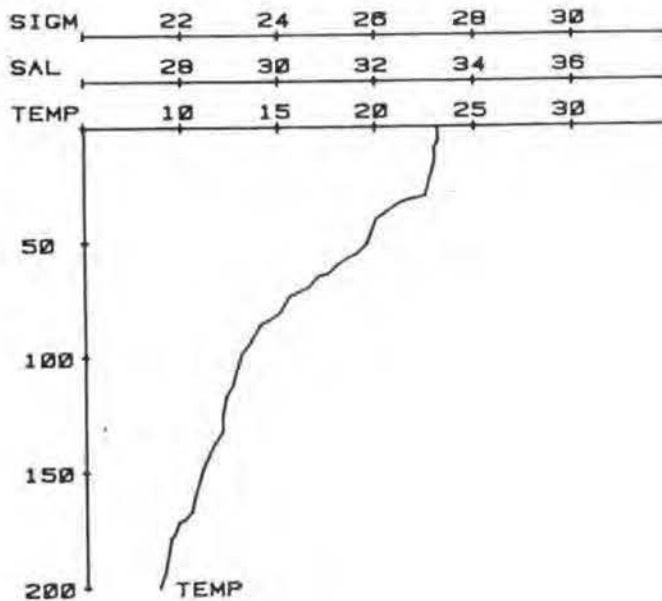
GILLISS CRUISE STA 86X 22/04/79 03.4 GMT CONSEC STA 87
LAT 38 41.1N LONG 79 56.5W DEPTH = 291M DIST LAST STA = 4.9KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 140
AIR TEMP = 22.2C
WEATHER CODE = X1
BAROMETRIC PRES = 1021.0

SEA STATE = 3
WAVE DIRECTION = 140
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	D	SVA	O2	O2'	ADU	P04	M03
8.0	23.2								
6.0	23.2								
9.0	23.0								
15.0	23.0								
30.0	22.5								
31.0	22.0								
32.0	21.5								
34.0	21.0								
37.0	20.5								
40.0	20.0								
51.0	19.5								
55.0	19.0								
57.0	18.5								
60.0	18.0								
64.0	17.5								
65.0	17.0								
70.0	16.5								
72.0	16.0								
74.0	15.5								
81.0	15.0								
84.0	14.5								
86.0	14.0								
93.0	13.5								
99.0	13.0								
113.0	12.5								
117.0	12.2								
125.0	12.0								
132.0	12.0								
139.0	11.5								
148.0	11.0								
162.0	10.5								
167.0	10.0								
171.0	10.0								
172.0	9.7								
177.0	9.5								
179.0	9.3								
193.0	9.0								
200.0	8.7								

STATION 86X



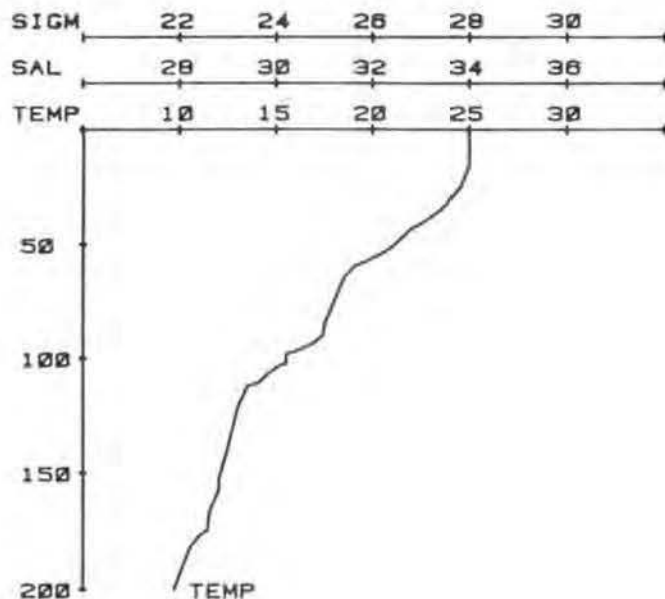
GILLISS CRUISE STA 87X 22/04/79 03.6 GMT CONSEC STA 86
LAT 38 48.4N LONG 79 54.8W DEPTH = 300K DIST LAST STA = 4.2KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 140
AIR TEMP = 22.2C
WEATHER CODE = 11
BAROMETRIC PRES = 1021.0

SEA STATE = 3
WAVE DIRECTION = 140
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SVA	O2	O2'	AOI	PO4	NO3	SI
8.0	25.0									
15.0	25.0									
25.0	24.5									
38.0	24.0									
35.0	23.5									
30.0	23.0									
41.0	22.5									
43.0	22.0									
47.0	21.5									
51.0	21.0									
54.0	20.5									
56.0	20.0									
58.0	19.5									
68.0	19.0									
65.0	18.5									
75.0	18.0									
85.0	17.5									
98.0	17.0									
93.0	16.5									
95.0	16.0									
97.0	15.0									
98.0	14.5									
102.0	14.0									
104.0	13.5									
107.0	13.0									
111.0	12.5									
112.0	12.0									
121.0	11.5									
137.0	11.0									
152.0	10.5									
157.0	10.0									
167.0	9.5									
175.0	9.0									
177.0	8.5									
182.0	8.0									
193.0	7.5									
200.0	7.0									

STATION 87X



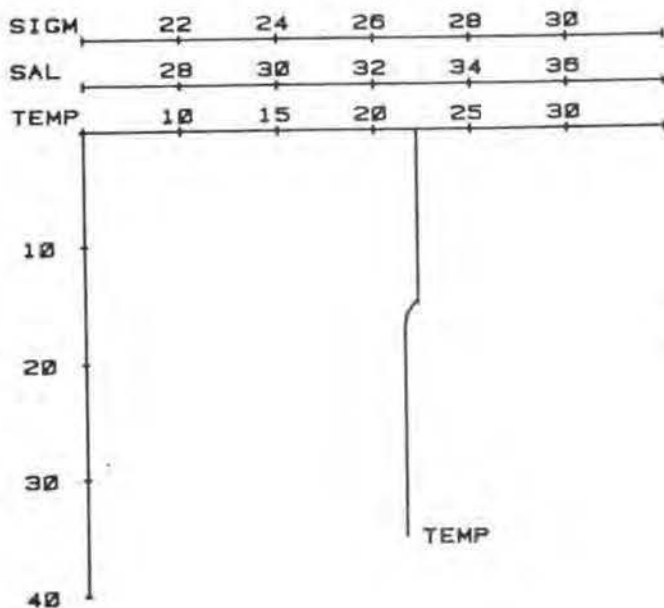
GILLISS CRUISE STA 893X 22/04/79 06.0 GMT CONSEC STA 94
LAT 31 00.0N LONG 80 17.0W DEPTH = 35K DIST LAST STA = 64.5KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 130
AIR TEMP = 21.9C
WEATHER CODE = 11
BAROMETRIC PRES = 1021.0

SEA STATE = 3
WAVE DIRECTION = 140
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SVA	O2	O2'	AOI	PO4	NO3	SI
8.0	22.2									
15.0	22.2									
15.0	22.0									
16.0	21.8									
17.0	21.5									
35.0	21.5									

STATION 893X

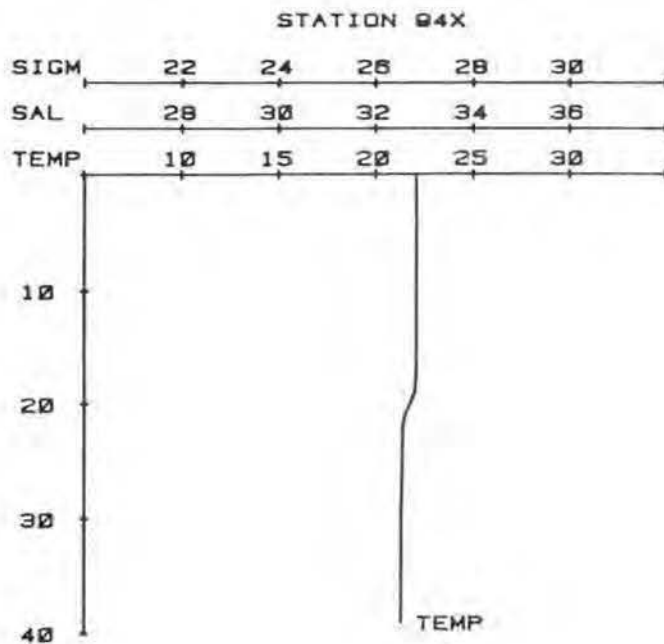


GILLISS CRUISE STA 894X 22/04/79 07.0 GMT CONSEC STA 95
LAT 31 00.5N LONG 00 16.0W DEPTH = 39M DIST LAST STA = 2.9KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 130
AIR TEMP = 22.2C
WEATHER CODE = 01
BAROMETRIC PRES = 1020.3

SEA STATE = 3
WAVE DIRECTION = 140
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	22.1									
17.0	22.1									
19.0	22.0									
21.0	21.5									
22.0	21.4									
29.0	21.3									
39.0	21.3									

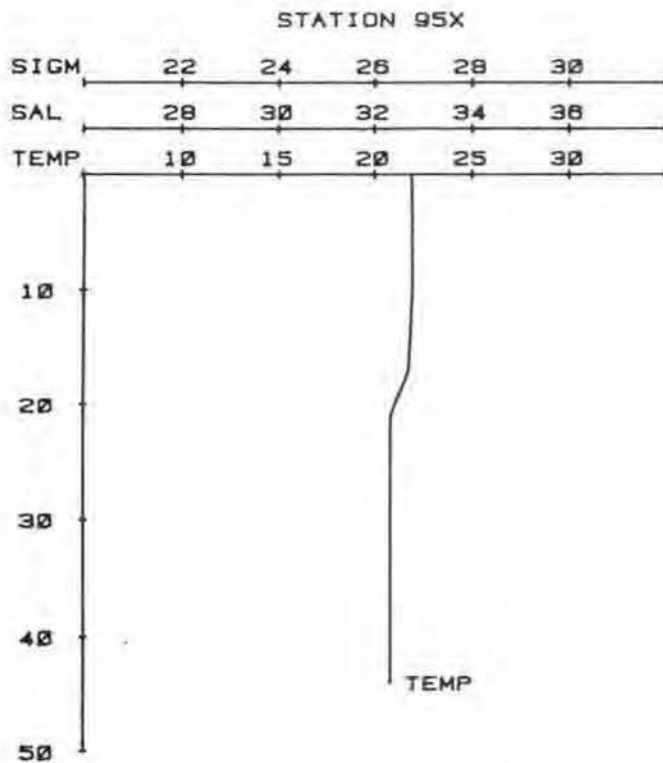


GILLISS CRUISE STA 895X 22/04/79 07.4 GMT CONSEC STA 96
LAT 31 07.3N LONG 00 11.2W DEPTH = 44M DIST LAST STA = 7.9KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 130
AIR TEMP = 22.2C
WEATHER CODE = 01
BAROMETRIC PRES = 1020.3

SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	21.9									
10.0	21.9									
17.0	21.7									
18.0	21.5									
20.0	21.0									
21.0	20.8									
44.0	20.8									

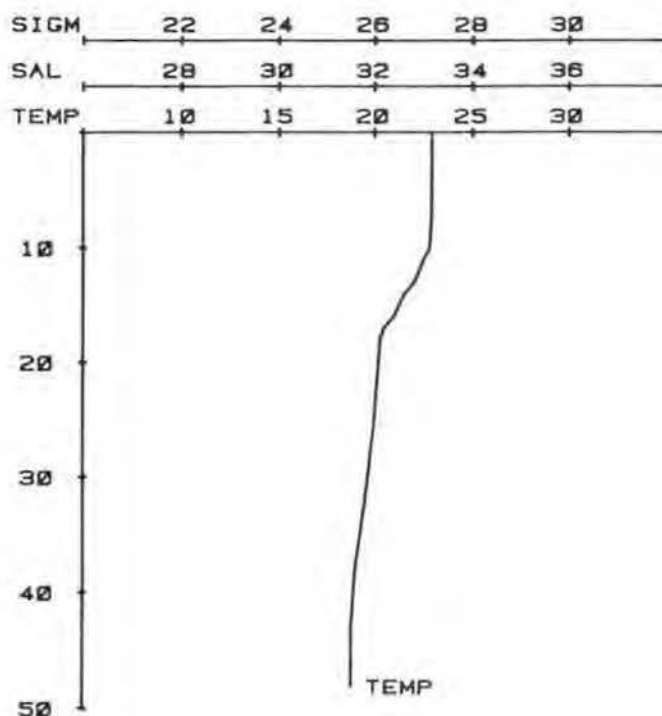


WILLISS CRUISE STA 896X 22/04/79 07.0 GHT CONSEC STA 07
LAT 31 06.3N LONG 00 07.1W DEPTH = 40M DIST LAST STA = 6.9KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 130
AIR TEMP = 22.2C
WEATHER CODE = 01
BAROMETRIC PRES = 1020.0
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	D	SVA	O2	O2'	ADU	P04	M03	SI
0.0	22.9									
1.0	22.9									
2.0	22.9									
3.0	22.9									
4.0	22.9									
5.0	22.9									
6.0	22.9									
7.0	22.9									
8.0	22.9									
9.0	22.9									
10.0	22.9									
11.0	22.9									
12.0	22.9									
13.0	22.9									
14.0	22.9									
15.0	22.9									
16.0	22.9									
17.0	22.9									
18.0	22.9									
19.0	22.9									
20.0	22.9									
21.0	22.9									
22.0	22.9									
23.0	22.9									
24.0	22.9									
25.0	22.9									
26.0	22.9									
27.0	22.9									
28.0	22.9									
29.0	22.9									
30.0	22.9									
31.0	22.9									
32.0	22.9									
33.0	22.9									
34.0	22.9									
35.0	22.9									
36.0	22.9									
37.0	22.9									
38.0	22.9									
39.0	22.9									
40.0	22.9									

STATION 86X

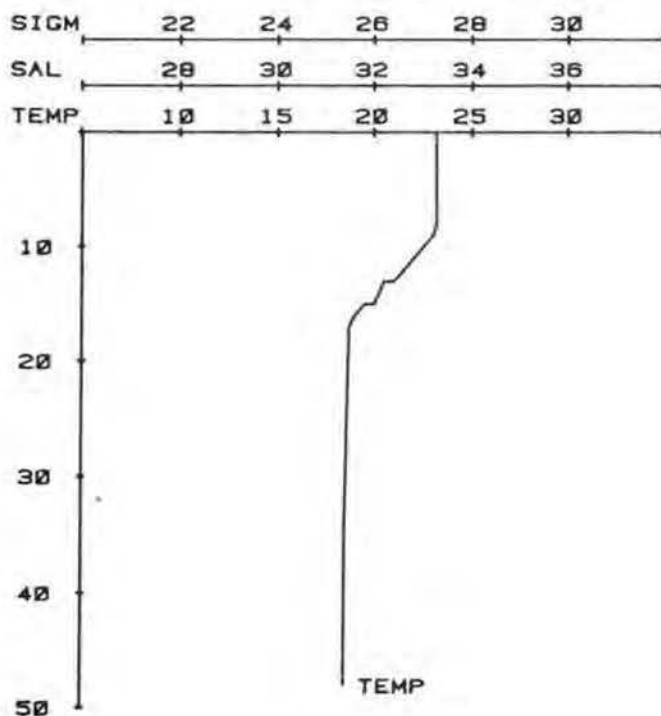


WILLISS CRUISE STA 897X 22/04/79 08.1 GHT CONSEC STA 08
LAT 31 05.1N LONG 00 02.5W DEPTH = 40M DIST LAST STA = 7.5KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 130
AIR TEMP = 22.2C
WEATHER CODE = 01
BAROMETRIC PRES = 1020.0
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	D	SVA	O2	O2'	ADU	P04	M03	SI
0.0	23.2									
1.0	23.2									
2.0	23.2									
3.0	23.2									
4.0	23.2									
5.0	23.2									
6.0	23.2									
7.0	23.2									
8.0	23.2									
9.0	23.2									
10.0	23.2									
11.0	23.2									
12.0	23.2									
13.0	23.2									
14.0	23.2									
15.0	23.2									
16.0	23.2									
17.0	23.2									
18.0	23.2									
19.0	23.2									
20.0	23.2									
21.0	23.2									
22.0	23.2									
23.0	23.2									
24.0	23.2									
25.0	23.2									
26.0	23.2									
27.0	23.2									
28.0	23.2									
29.0	23.2									
30.0	23.2									
31.0	23.2									
32.0	23.2									
33.0	23.2									
34.0	23.2									
35.0	23.2									
36.0	23.2									
37.0	23.2									
38.0	23.2									
39.0	23.2									
40.0	23.2									

STATION 87X

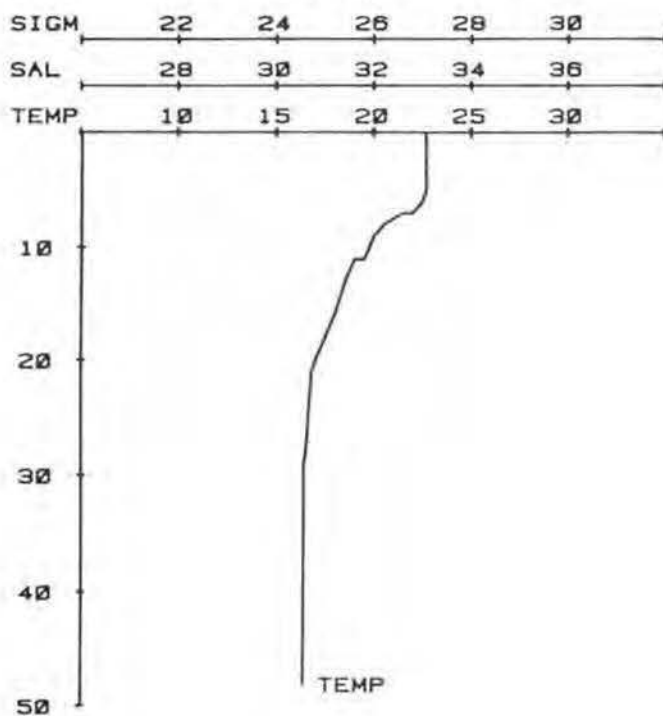


GILLISS CRUISE STA 898X 22/84/79 88.6 GWT CONSEC STA 99
LAT 31 03.9N LONG 79 58.8W DEPTH = 48M DIST LAST STA = 7.5KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 130
AIR TEMP = 22.2C
WEATHER CODE = X1
BAROMETRIC PRES = 1028.0
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	22.7	-	-	-	-	-	-	-	-	-
5.0	22.7	-	-	-	-	-	-	-	-	-
6.0	22.5	-	-	-	-	-	-	-	-	-
7.0	22.0	-	-	-	-	-	-	-	-	-
7.0	21.5	-	-	-	-	-	-	-	-	-
8.0	20.5	-	-	-	-	-	-	-	-	-
9.0	20.0	-	-	-	-	-	-	-	-	-
11.0	19.5	-	-	-	-	-	-	-	-	-
11.0	19.0	-	-	-	-	-	-	-	-	-
13.0	18.5	-	-	-	-	-	-	-	-	-
16.0	18.0	-	-	-	-	-	-	-	-	-
18.0	17.5	-	-	-	-	-	-	-	-	-
20.0	17.0	-	-	-	-	-	-	-	-	-
21.0	16.0	-	-	-	-	-	-	-	-	-
28.0	16.5	-	-	-	-	-	-	-	-	-
29.0	16.4	-	-	-	-	-	-	-	-	-
40.0	16.4	-	-	-	-	-	-	-	-	-

STATION 98X

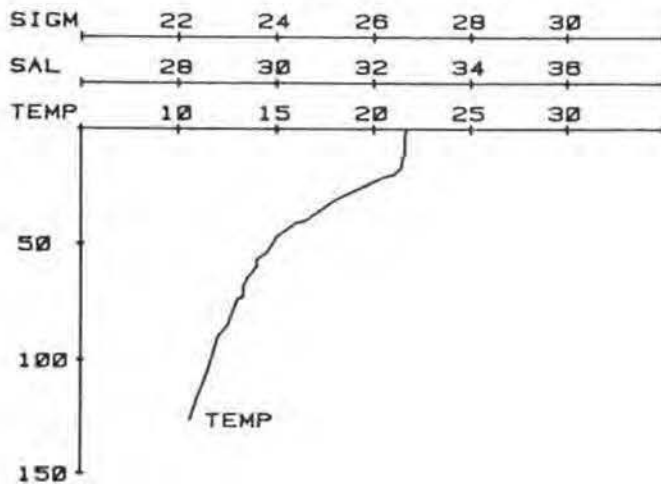


GILLISS CRUISE STA 899X 22/84/79 89.1 GWT CONSEC STA 100
LAT 31 02.8N LONG 79 53.2W DEPTH = 190M DIST LAST STA = 7.9KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 130
AIR TEMP = 22.2C
WEATHER CODE = X1
BAROMETRIC PRES = 1028.0
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

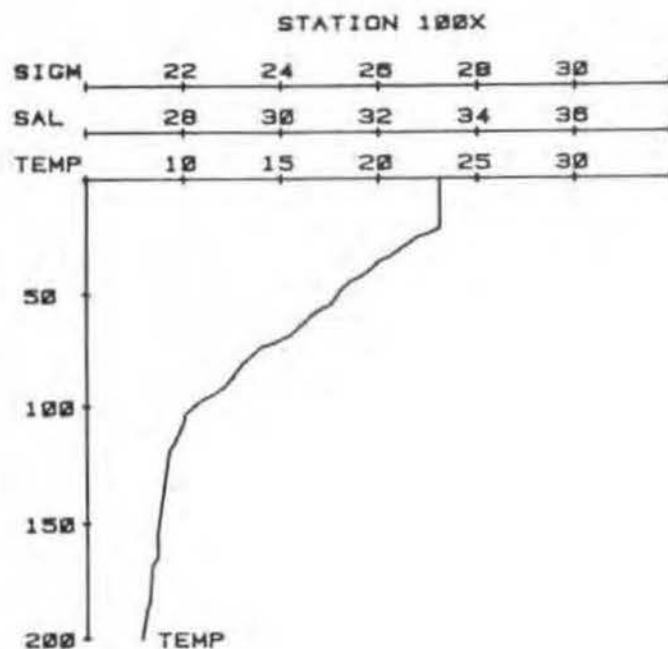
OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	21.7	-	-	-	-	-	-	-	-	-
3.0	21.6	-	-	-	-	-	-	-	-	-
11.0	21.6	-	-	-	-	-	-	-	-	-
12.0	21.5	-	-	-	-	-	-	-	-	-
17.0	21.4	-	-	-	-	-	-	-	-	-
20.0	21.0	-	-	-	-	-	-	-	-	-
21.0	20.5	-	-	-	-	-	-	-	-	-
23.0	20.0	-	-	-	-	-	-	-	-	-
25.0	19.5	-	-	-	-	-	-	-	-	-
27.0	19.0	-	-	-	-	-	-	-	-	-
29.0	18.5	-	-	-	-	-	-	-	-	-
31.0	18.0	-	-	-	-	-	-	-	-	-
34.0	17.5	-	-	-	-	-	-	-	-	-
37.0	17.0	-	-	-	-	-	-	-	-	-
40.0	16.5	-	-	-	-	-	-	-	-	-
41.0	16.0	-	-	-	-	-	-	-	-	-
46.0	15.5	-	-	-	-	-	-	-	-	-
47.0	15.4	-	-	-	-	-	-	-	-	-
54.0	14.5	-	-	-	-	-	-	-	-	-
57.0	14.0	-	-	-	-	-	-	-	-	-
60.0	14.0	-	-	-	-	-	-	-	-	-
65.0	13.5	-	-	-	-	-	-	-	-	-
68.0	13.3	-	-	-	-	-	-	-	-	-
73.0	13.3	-	-	-	-	-	-	-	-	-
74.0	13.0	-	-	-	-	-	-	-	-	-
85.0	12.5	-	-	-	-	-	-	-	-	-
90.0	12.0	-	-	-	-	-	-	-	-	-
105.0	11.5	-	-	-	-	-	-	-	-	-
116.0	11.0	-	-	-	-	-	-	-	-	-
126.0	10.4	-	-	-	-	-	-	-	-	-

STATION 99X



STILLISS CRUISE STA 100X 22/04/79 09.3 GMT CONSEC STA 101
 LAT 31 02.00 LONG 79 40.00 DEPTH = 2600 DIST LAST STA = 7.100
 WEATHER DATA
 WIND SPEED = 13KTS
 WIND DIRECTION = 130
 AIR TEMP = 22.20
 WEATHER CODE = 01
 BAROMETRIC PRES = 1024.0
 SEA STATE = 3
 WAVE DIRECTION = 130
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	B	SVA	O2	O2'	AOI	PO4	NO3
0.0	23.1								
1.0	23.1								
2.0	23.0								
3.0	22.5								
4.0	22.8								
5.0	21.5								
6.0	21.8								
7.0	21.5								
8.0	21.5								
9.0	21.5								
10.0	21.5								
11.0	21.5								
12.0	21.5								
13.0	21.5								
14.0	21.5								
15.0	21.5								
16.0	21.5								
17.0	21.5								
18.0	21.5								
19.0	21.5								
20.0	21.5								
21.0	21.5								
22.0	21.5								
23.0	21.5								
24.0	21.5								
25.0	21.5								
26.0	21.5								
27.0	21.5								
28.0	21.5								
29.0	21.5								
30.0	21.5								
31.0	21.5								
32.0	21.5								
33.0	21.5								
34.0	21.5								
35.0	21.5								
36.0	21.5								
37.0	21.5								
38.0	21.5								
39.0	21.5								
40.0	21.5								
41.0	21.5								
42.0	21.5								
43.0	21.5								
44.0	21.5								
45.0	21.5								
46.0	21.5								
47.0	21.5								
48.0	21.5								
49.0	21.5								
50.0	21.5								
51.0	21.5								
52.0	21.5								
53.0	21.5								
54.0	21.5								
55.0	21.5								
56.0	21.5								
57.0	21.5								
58.0	21.5								
59.0	21.5								
60.0	21.5								
61.0	21.5								
62.0	21.5								
63.0	21.5								
64.0	21.5								
65.0	21.5								
66.0	21.5								
67.0	21.5								
68.0	21.5								
69.0	21.5								
70.0	21.5								
71.0	21.5								
72.0	21.5								
73.0	21.5								
74.0	21.5								
75.0	21.5								
76.0	21.5								
77.0	21.5								
78.0	21.5								
79.0	21.5								
80.0	21.5								
81.0	21.5								
82.0	21.5								
83.0	21.5								
84.0	21.5								
85.0	21.5								
86.0	21.5								
87.0	21.5								
88.0	21.5								
89.0	21.5								
90.0	21.5								
91.0	21.5								
92.0	21.5								
93.0	21.5								
94.0	21.5								
95.0	21.5								
96.0	21.5								
97.0	21.5								
98.0	21.5								
99.0	21.5								
100.0	21.5								



STILLISS CRUISE STA 101X 22/04/79 09.7 GMT CONSEC STA 102
 LAT 31 00.70 LONG 79 43.00 DEPTH = 3050 DIST LAST STA = 0.000
 WEATHER DATA
 WIND SPEED = 13KTS
 WIND DIRECTION = 130
 AIR TEMP = 22.20
 WEATHER CODE = 01
 BAROMETRIC PRES = 1024.0
 SEA STATE = 3
 WAVE DIRECTION = 130
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

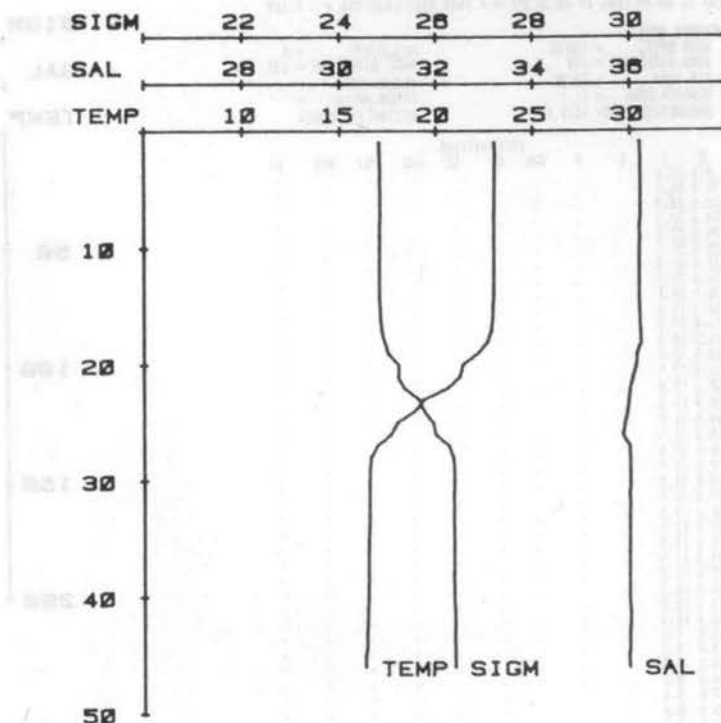
OBSERVATIONS										
Z	T	S	B	SVA	O2	O2'	AOI	PO4	NO3	ST
0.0	25.7									
1.0	25.7									
2.0	25.5									
3.0	25.5									
4.0	25.5									
5.0	24.5									
6.0	24.5									
7.0	23.5									
8.0	23.5									
9.0	22.5									
10.0	22.5									
11.0	22.5									
12.0	22.5									
13.0	21.5									
14.0	21.5									
15.0	20.5									
16.0	20.5									
17.0	20.5									
18.0	20.5									
19.0	19.5									
20.0	19.5									
21.0	18.5									
22.0	18.5									
23.0	17.5									
24.0	17.5									
25.0	17.5									
26.0	17.5									
27.0	17.5									
28.0	17.5									
29.0	17.5									
30.0	17.5									
31.0	17.5									
32.0	17.5									
33.0	17.5									
34.0	17.5									
35.0	17.5									
36.0	17.5									
37.0	17.5									
38.0	17.5									
39.0	17.5									
40.0	17.5									
41.0	17.5									
42.0	17.5									
43.0	17.5									
44.0	17.5									
45.0	17.5									
46.0	17.5									
47.0	17.5									
48.0	17.5									
49.0	17.5									
50.0	17.5									
51.0	17.5									
52.0	17.5									
53.0	17.5									
54.0	17.5									
55.0	17.5									
56.0	17.5									
57.0	17.5									
58.0	17.5									
59.0	17.5									
60.0	17.5									
61.0	17.5									
62.0	17.5									
63.0	17.5									
64.0	17.5									
65.0	17.5									
66.0	17.5									
67.0	17.5									
68.0	17.5									
69.0	17.5									
70.0	17.5									
71.0	17.5									
72.0	17.5									
73.0	17.5									
74.0	17.5									
75.0	17.5									
76.0	17.5									
77.0	17.5									
78.0	17.5									
79.0	17.5									
80.0	17.5									
81.0	17.5									
82.0	17.5									
83.0	17.5									
84.0	17.5									
85.0	17.5									
86.0	17.5									
87.0	17.5									
88.0	17.5									
89.0	17.5									
90.0	17.5									
91.0	17.5									
92.0	17.5									
93.0	17.5									
94.0	17.5									
95.0	17.5									
96.0	17.5									
97.0	17.5									
98.0	17.5									
99.0	17.5									
100.0	17.5									

GILLISS CRUISE STA 106C 22/04/79 13.3 GMT CONSEC STA 107
LAT 30 47.1N LONG 79 59.9W DEPTH = 75M DIST LAST STA = 36.2KM

WEATHER DATA
WIND SPEED = KTS
WIND DIRECTION =
AIR TEMP = C
WEATHER CODE =
BAROMETRIC PRES = 10
SEA STATE =
WAVE DIRECTION =
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	0	SVA	Q2	Q2'	ADU	P04	M03	SI
1.0	23.05	36.20	24.04	312	.	.	.	.	.	.
2.0	23.05	36.21	24.04	312	.	.	.	.	.	.
3.0	23.02	36.21	24.05	311	5.23	4.07	-0.36	0.05	0.0	0.3
4.0	23.03	36.21	24.05	311	.	.	.	.	.	.
5.0	23.01	36.21	24.04	311	.	.	.	.	.	.
6.0	23.01	36.21	24.04	311	.	.	.	.	.	.
7.0	23.00	36.21	24.04	310	.	.	.	.	.	.
8.0	23.00	36.19	24.04	312	.	.	.	.	.	.
9.0	23.00	36.20	24.05	311	.	.	.	.	.	.
10.0	23.00	36.19	24.04	312	.	.	.	.	.	.
11.0	23.00	36.19	24.04	312	.	.	.	.	.	.
12.0	23.00	36.19	24.04	312	.	.	.	.	.	.
13.0	22.99	36.19	24.05	312	.	.	.	.	.	.
14.0	22.99	36.19	24.05	312	.	.	.	.	.	.
15.0	22.95	36.20	24.07	310	5.25	4.08	-0.37	0.07	0.0	0.9
16.0	22.94	36.21	24.08	309	.	.	.	.	.	.
17.0	22.00	36.22	24.08	307	5.46	4.08	-0.50	0.07	0.1	1.0
18.0	22.69	36.23	24.06	301	.	.	.	.	.	.
19.0	22.19	36.14	25.04	294	5.43	4.94	-0.49	0.23	1.9	3.0
20.0	21.40	36.13	25.25	273	.	.	.	.	.	.
21.0	21.26	36.06	25.24	275	.	.	.	.	.	.
22.0	20.61	36.00	25.37	262	.	.	.	.	.	.
23.0	19.36	35.97	25.68	233	.	.	.	.	.	.
24.0	18.05	35.94	25.79	223	.	.	.	.	.	.
25.0	17.98	35.89	25.97	204	.	.	.	.	.	.
26.0	17.64	35.85	26.02	201	.	.	.	.	.	.
27.0	16.93	35.99	26.30	174	.	.	.	.	.	.
28.0	16.60	36.00	26.38	166	.	.	.	.	.	.
29.0	16.54	36.00	26.40	165	.	.	.	.	.	.
30.0	16.53	36.00	26.40	164	.	.	.	.	.	.
31.0	16.54	35.98	26.38	166	.	.	.	.	.	.
32.0	16.54	35.99	26.39	165	.	.	.	.	.	.
33.0	16.53	35.98	26.39	166	.	.	.	.	.	.
34.0	16.51	35.98	26.39	166	.	.	.	.	.	.
35.0	16.49	35.98	26.40	165	.	.	.	.	.	.
36.0	16.48	35.97	26.39	166	.	.	.	.	.	.
37.0	16.49	35.98	26.40	165	.	.	.	.	.	.
38.0	16.50	35.97	26.39	166	.	.	.	.	.	.
39.0	16.47	35.97	26.39	166	.	.	.	.	.	.
40.0	16.47	35.97	26.39	166	.	.	.	.	.	.
41.0	16.44	35.99	26.41	164	.	.	.	.	.	.
42.0	16.42	35.99	26.42	163	.	.	.	.	.	.
43.0	16.40	35.97	26.41	164	.	.	.	.	.	.
44.0	16.40	35.98	26.42	163	3.84	5.52	1.68	0.67	10.0	6.0
45.0	16.32	35.96	26.42	163	.	.	.	.	.	.
46.0	16.35	35.97	26.42	163	.	.	.	.	.	.

STATION 106C



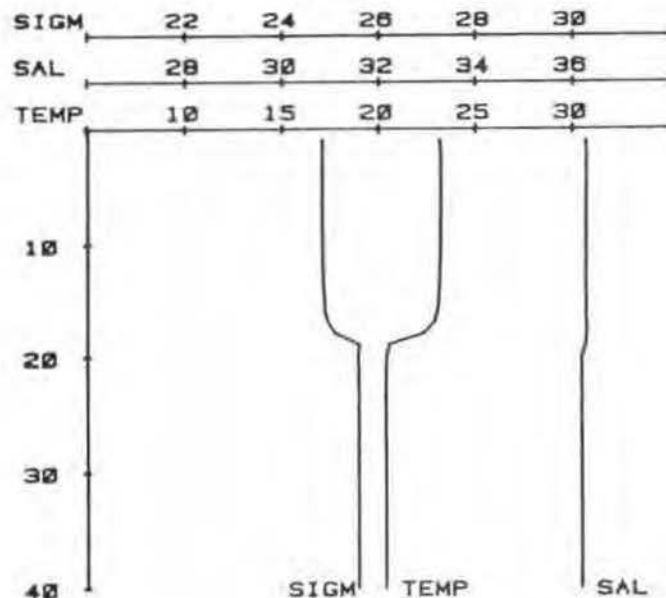
GILLISS CRUISE STA 111C 22/04/79 19.4 GMT CONSEC STA 112
LAT 38 45.4N LONG 08 16.7W DEPTH = 43M DIST LAST STA = 26.9KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 130
AIR TEMP = 23.9C
WEATHER CODE = 01
BAROMETRIC PRES = 1021.0

SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	B	SVA	O2	O2'	AOU	PO4	NO3
1.0	23.21	36.27	24.84	312					
2.0	23.24	36.28	24.84	312	5.60	4.05	-0.03	0.15	0.0
3.0	23.23	36.27	24.84	312					
4.0	23.23	36.28	24.85	312					
5.0	23.23	36.27	24.84	312					
6.0	23.22	36.27	24.84	312					
7.0	23.22	36.27	24.84	312					
8.0	23.21	36.27	24.84	312					
9.0	23.21	36.28	24.85	311					
10.0	23.20	36.27	24.85	312					
11.0	23.19	36.28	24.86	311					
12.0	23.15	36.27	24.86	310					
13.0	23.14	36.27	24.86	310					
14.0	23.11	36.28	24.88	309					
15.0	23.07	36.28	24.89	308					
16.0	23.01	36.27	24.90	307					
17.0	22.84	36.29	24.97	301					
18.0	22.80	36.28	25.12	296	5.00	4.93	-0.15	0.05	0.0
19.0	22.49	36.26	25.61	248					
20.0	22.36	36.18	25.57	243	5.14	5.11	-0.03	0.09	0.0
21.0	22.33	36.19	25.59	241					
22.0	22.32	36.18	25.58	242					
23.0	22.31	36.19	25.59	241					
24.0	22.32	36.18	25.58	242					
25.0	22.32	36.18	25.58	242					
26.0	22.31	36.18	25.59	242					
27.0	22.32	36.18	25.58	242					
28.0	22.32	36.18	25.58	242					
29.0	22.32	36.18	25.58	242					
30.0	22.32	36.18	25.58	242	4.79	5.11	0.32	0.17	1.3
31.0	22.32	36.18	25.58	242					
32.0	22.32	36.18	25.58	242					
33.0	22.32	36.18	25.58	242					
34.0	22.32	36.18	25.58	242					
35.0	22.32	36.18	25.58	242					
36.0	22.32	36.18	25.58	242					
37.0	22.32	36.18	25.58	242					
38.0	22.32	36.18	25.58	243					
39.0	22.32	36.18	25.58	243					
40.0	22.32	36.18	25.58	243	4.96	5.11	0.15	0.20	1.4

STATION 111C



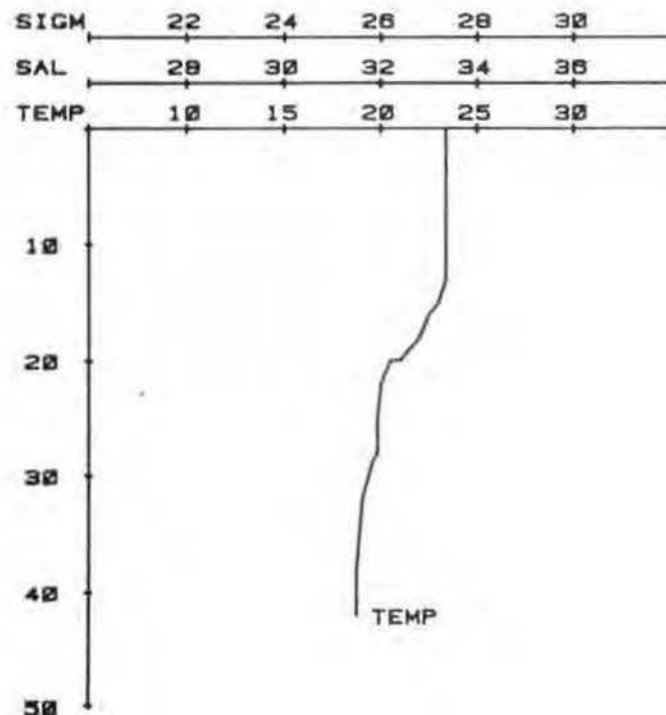
GILLISS CRUISE STA 112X 22/04/79 20.5 GMT CONSEC STA 113
LAT 38 44.5N LONG 08 13.5W DEPTH = 42M DIST LAST STA = 5.4KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 130
AIR TEMP = 23.9C
WEATHER CODE = 01
BAROMETRIC PRES = 1021.0

SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	B	SVA	O2	O2'	AOU	PO4	NO3
0.0	23.4								
1.0	23.4								
15.0	23.8								
16.0	22.5								
18.0	22.8								
19.0	21.5								
20.0	21.8								
24.0	20.5								
25.0	20.8								
26.0	19.8								
29.0	19.5								
32.0	19.8								
38.0	18.7								
42.0	18.7								

STATION 112X

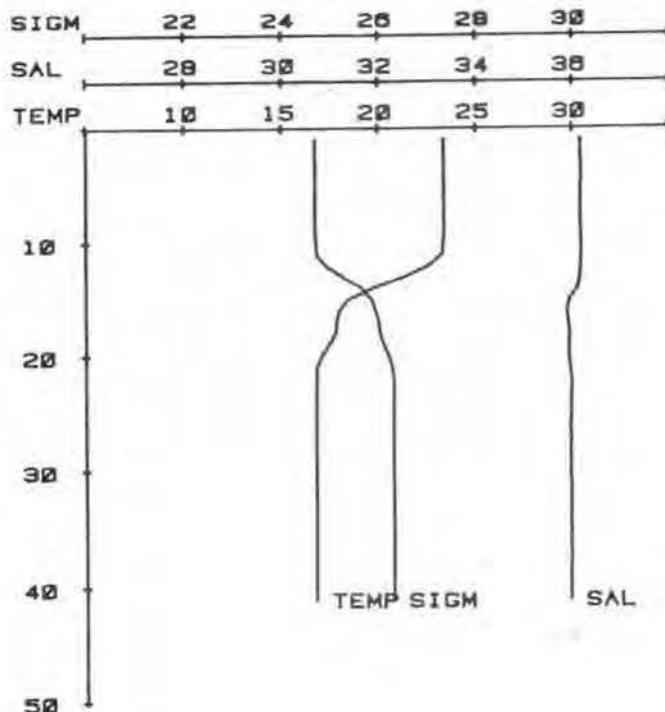


GILLISS CRUISE STA 113C 72/04/79 20.0 GWT COMSEC STA 114
LAT 38 43.7N LONG 88 18.7W DEPTH = 43M DIST LAST STA = 4.2KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 130
AIR TEMP = 23.9C
WEATHER CODE = 21
BAROMETRIC PRES = 1021.0
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	0	SVA	02	02'	AOU	PO4	NO3
1.0	23.38	36.17	24.72	324					
2.0	23.38	36.17	24.72	324	4.71	4.84	0.13	0.05	0.0
3.0	23.38	36.18	24.73	323					
4.0	23.38	36.18	24.73	323					
5.0	23.38	36.17	24.72	324					
6.0	23.38	36.17	24.72	324					
7.0	23.38	36.17	24.72	324					
8.0	23.38	36.17	24.72	324					
9.0	23.38	36.18	24.73	323					
10.0	23.33	36.19	24.75	321	5.47	4.84	-0.63	0.07	0.0
11.0	23.27	36.18	24.76	320					
12.0	22.61	36.17	24.94	303					
13.0	21.31	36.15	25.29	289					
14.0	19.65	36.18	25.70	231	5.45	5.10	-0.27	0.42	3.5
15.0	18.48	35.93	25.89	212					
16.0	17.99	35.89	25.96	206					
17.0	17.83	35.92	26.03	200					
18.0	17.79	35.94	26.05	197					
19.0	17.46	35.93	26.13	190					
20.0	17.05	35.93	26.22	181					
21.0	16.82	35.96	26.30	174	4.80	5.47	1.47	0.65	8.5
22.0	16.81	35.99	26.33	171					
23.0	16.79	35.98	26.32	172					
24.0	16.79	35.97	26.32	172					
25.0	16.78	35.97	26.32	172					
26.0	16.78	35.96	26.31	173					
27.0	16.78	35.97	26.32	172					
28.0	16.78	35.96	26.31	173					
29.0	16.78	35.96	26.31	173	3.99	5.48	1.49	0.62	8.9
30.0	16.78	35.96	26.31	173					
31.0	16.78	35.97	26.32	172					
32.0	16.78	35.97	26.32	172					
33.0	16.78	35.97	26.32	172					
34.0	16.77	35.96	26.31	171					
35.0	16.76	35.97	26.32	172					
36.0	16.76	35.96	26.32	173					
37.0	16.77	35.97	26.32	172					
38.0	16.77	35.96	26.31	173					
39.0	16.77	35.96	26.31	173					
40.0	16.77	35.96	26.31	173					
41.0	16.77	35.96	26.31	173	4.83	5.48	1.45	0.59	9.0

STATION 113C

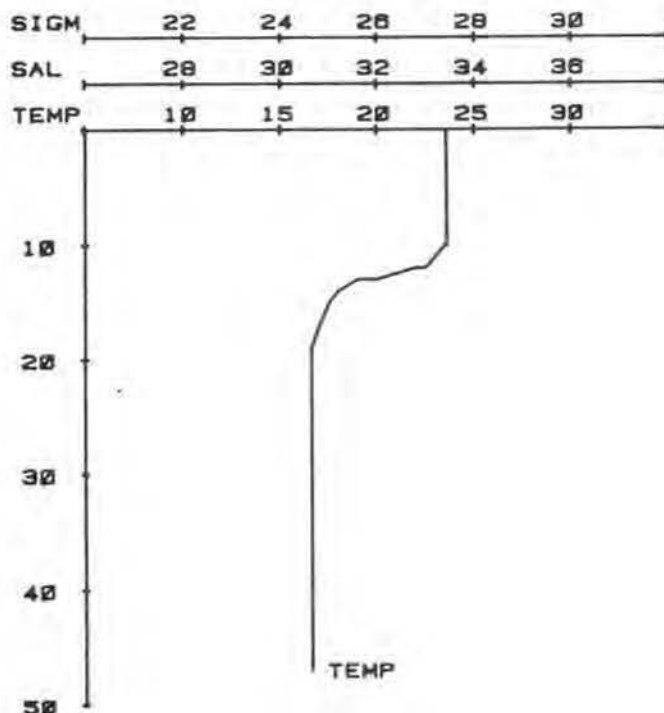


GILLISS CRUISE STA 114X 22/04/79 21.4 GWT COMSEC STA 115
LAT 38 43.5N LONG 88 00.0W DEPTH = 47M DIST LAST STA = 0.7KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 130
AIR TEMP = 23.9C
WEATHER CODE = 21
BAROMETRIC PRES = 1021.0
SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	0	SVA	02	02'	AOU	PO4	NO3
0.0	23.4								
1.0	23.6								
2.0	23.5								
3.0	23.8								
4.0	22.5								
5.0	22.0								
6.0	21.0								
7.0	19.0								
8.0	18.0								
9.0	17.5								
10.0	16.4								
11.0	16.4								

STATION 114X

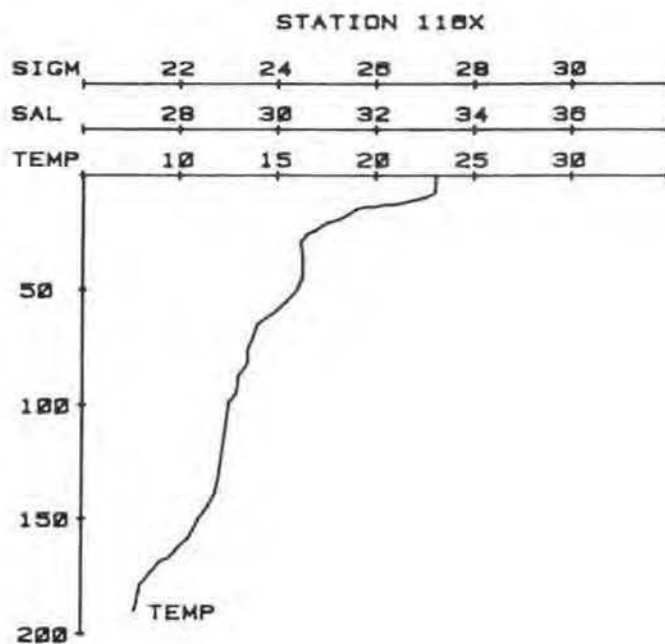


[illegible]

GILLISS CRUISE STA 116X 22/04/79 22.6 GMT CONSEC STA 117
 LAT 38 42.4N LONG 80 02.5W DEPTH = 199M DIST LAST STA = 4.1KM

WEATHER DATA
 WIND SPEED = 15KTS
 WIND DIRECTION = 130
 AIR TEMP = 23.9C
 WEATHER CODE = 02
 BAROMETRIC PRES = 1021.8
 SEA STATE = 3
 WAVE DIRECTION = 130
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SWA	O2	O2'	NOU	PO4	NO3	SI
0.0	23.1									
0.0	23.0									
10.0	22.5									
11.0	22.0									
12.0	21.5									
13.0	21.0									
13.0	20.5									
14.0	20.0									
14.0	19.5									
15.0	19.0									
18.0	18.5									
20.0	18.0									
21.0	17.5									
24.0	17.0									
26.0	16.5									
29.0	16.2									
35.0	16.3									
44.0	16.3									
50.0	16.0									
55.0	15.5									
59.0	15.0									
62.0	14.5									
65.0	14.0									
76.0	13.5									
82.0	13.5									
88.0	13.0									
95.0	12.9									
99.0	12.5									
132.0	12.0									
139.0	11.0									
144.0	11.5									
150.0	11.0									
158.0	10.5									
162.0	10.0									
167.0	9.5									
169.0	9.0									
174.0	8.5									
179.0	8.0									
188.0	7.0									
190.0	7.7									



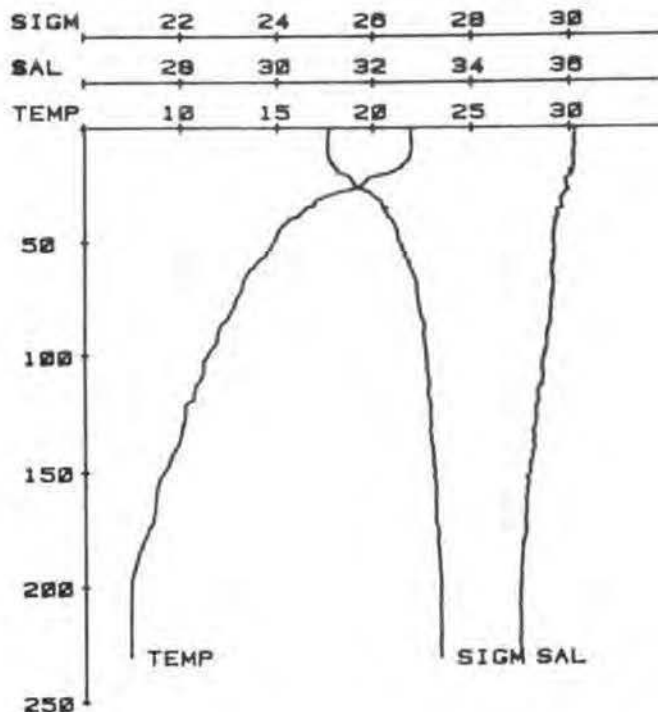
GILLISS CRUISE STA 117C 22/04/79 23.0 GMT CONSEC STA 110
 LAT 38 41.5N LONG 79 59.5W DEPTH = 245M DIST LAST STA = 5.1KM

WEATHER DATA
 WIND SPEED = 15KTS
 WIND DIRECTION = 130
 AIR TEMP = 23.9C
 WEATHER CODE = X2
 BAROMETRIC PRES = 1021.0

SEA STATE = 3
 WAVE DIRECTION = 130
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	B	SVA	D2	D2'	AQU	P04	MO3
1.0	21.96	36.11	25.18	289					
2.0	21.96	36.11	25.18	289					
3.0	21.96	36.11	25.18	289					
4.0	21.96	36.11	25.18	289					
5.0	21.96	36.11	25.18	289					
6.0	21.96	36.11	25.18	289					
7.0	21.97	36.11	25.18	289					
8.0	21.97	36.11	25.18	289					
9.0	21.97	36.11	25.18	289					
10.0	21.96	36.11	25.18	289					
11.0	21.91	36.11	25.18	289					
12.0	21.87	36.11	25.18	289					
13.0	21.82	36.11	25.18	289					
14.0	21.76	36.11	25.18	289					
15.0	21.66	36.11	25.18	289					
16.0	21.59	36.11	25.18	289					
17.0	21.46	36.11	25.18	277					
18.0	21.22	36.11	25.26	272					
19.0	21.83	35.99	25.25	274					
20.0	20.71	34.84	25.37	262					
21.0	20.11	35.18	25.51	241					
22.0	19.72	35.94	25.56	244					
23.0	19.65	35.91	25.56	245					
24.0	19.54	35.93	25.64	248					
25.0	19.48	35.92	25.63	238					
26.0	19.25	35.94	25.68	233					
27.0	18.96	35.97	25.70	223					
28.0	18.24	35.93	25.93	209					
29.0	17.89	35.87	25.97	205					
30.0	17.51	35.84	26.05	198					
31.0	17.27	35.82	26.09	194					
32.0	16.97	35.83	26.17	187					
33.0	16.93	35.83	26.18	186					
34.0	16.86	35.83	26.19	184					
35.0	16.52	35.84	26.20	176					
36.0	16.48	35.73	26.22	181					
37.0	16.25	35.74	26.27	177					
38.0	16.14	35.75	26.30	174					
39.0	16.85	35.74	26.31	173					
40.0	15.55	35.69	26.39	166					
41.0	15.53	35.71	26.41	164					
42.0	15.34	35.69	26.44	161					
43.0	15.23	35.69	26.46	159					
44.0	15.11	35.69	26.49	157					
45.0	15.85	35.66	26.48	158					
46.0	14.97	35.67	26.51	155					
47.0	14.95	35.66	26.50	155					
48.0	14.91	35.68	26.51	155					
49.0	14.85	35.65	26.52	154					
50.0	14.88	35.67	26.54	152					
51.0	14.66	35.68	26.58	148					
52.0	14.62	35.68	26.59	147					
53.0	14.58	35.66	26.58	148					
54.0	14.47	35.68	26.63	143					
55.0	14.37	35.66	26.63	144					
56.0	14.32	35.68	26.65	141					
57.0	14.12	35.66	26.68	139					
58.0	13.95	35.68	26.73	134					
59.0	13.85	35.62	26.71	134					
60.0	13.75	35.64	26.74	131					
61.0	13.68	35.63	26.75	132					
62.0	13.47	35.63	26.79	128					
63.0	13.44	35.64	26.81	127					
64.0	13.33	35.63	26.82	125					
65.0	13.28	35.66	26.86	122					
66.0	13.21	35.66	26.87	121					
67.0	13.16	35.65	26.87	121					
68.0	13.13	35.67	26.90	119					
69.0	13.11	35.65	26.88	120					
70.0	13.09	35.66	26.91	119					
71.0	13.06	35.65	26.89	119					
72.0	12.96	35.62	26.89	119					
73.0	12.93	35.64	26.91	117					
74.0	12.84	35.61	26.91	117					
75.0	12.79	35.61	26.92	117					
76.0	12.76	35.61	26.92	116					
77.0	12.72	35.62	26.94	115					
78.0	12.69	35.61	26.94	115					
79.0	12.64	35.61	26.95	114					
80.0	12.59	35.61	26.96	113					
81.0	12.51	35.61	26.97	112					
82.0	12.44	35.59	26.97	112					
83.0	12.38	35.59	26.98	110					
84.0	12.31	35.61	27.01	108					
85.0	12.25	35.59	27.01	100					
86.0	12.16	35.61	27.05	104					
87.0	11.96	35.54	27.04	105					
88.0	11.94	35.54	27.03	106					
89.0	11.89	35.53	27.03	106					
90.0	11.88	35.52	27.03	106					
91.0	11.84	35.52	27.03	106					
92.0	11.82	35.52	27.04	105					
93.0	11.81	35.52	27.04	105					
94.0	11.77	35.53	27.06	104					
95.0	11.71	35.52	27.06	103					

STATION 117C



96.0	11.63	35.51	27.07	102					
97.0	11.64	35.51	27.08	101					
98.0	11.44	35.47	27.07	102					
99.0	11.37	35.46	27.08	102					
100.0	11.34	35.46	27.08	101					
101.0	11.20	35.45	27.07	101					
102.0	11.16	35.42	27.08	101					
103.0	11.13	35.43	27.18	100					
104.0	11.12	35.42	27.09	101					
105.0	11.12	35.42	27.09	101					
106.0	11.12	35.41	27.08	101					
107.0	11.11	35.44	27.11	99					
108.0	11.09	35.44	27.11	99					
109.0	11.01	35.44	27.13	97					
110.0	10.98	35.43	27.13	97					
111.0	10.99	35.43	27.14	96					
112.0	10.98	35.43	27.14	94					
113.0	10.91	35.34	27.12	98					
114.0	10.88	35.37	27.13	97					
115.0	10.88	35.34	27.11	99					
116.0	10.82	35.32	27.18	99					
117.0	10.81	35.34	27.12	98					
118.0	10.88	35.35	27.13	97					
119.0	10.57	35.36	27.15	96					
120.0	10.33	35.33	27.16	94					
121.0	10.19	35.31	27.17	93					
122.0	10.19	35.31	27.17	92					
123.0	10.19	35.29	27.16	95					

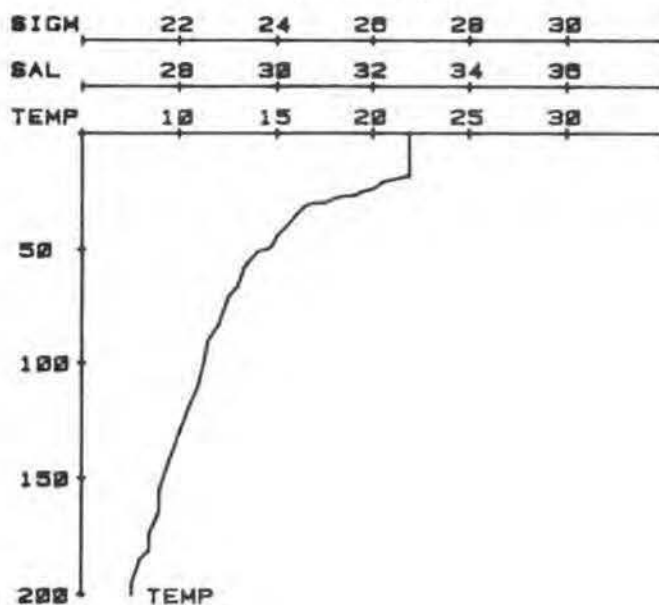
GILLISS CRUISE STA 117X 22/04/79 23.7 GWT CONSEC STA 119
LAT 30 41.5N LONG 79 59.5W DEPTH = 245M DIST LAST STA = 8.0KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 130
AIR TEMP = 23.0C
WEATHER CODE = 02
BAROMETRIC PRES = 1021.0

SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	B	SWA	O2	O2'	ADU	PO4	NO3	SI
0.0	21.9	x	x	x	x	x	x	x	x	x
10.0	21.0	x	x	x	x	x	x	x	x	x
19.0	21.5	x	x	x	x	x	x	x	x	x
20.0	21.0	x	x	x	x	x	x	x	x	x
21.0	20.5	x	x	x	x	x	x	x	x	x
24.0	20.0	x	x	x	x	x	x	x	x	x
25.0	19.5	x	x	x	x	x	x	x	x	x
27.0	19.0	x	x	x	x	x	x	x	x	x
27.0	18.5	x	x	x	x	x	x	x	x	x
28.0	18.0	x	x	x	x	x	x	x	x	x
30.0	17.5	x	x	x	x	x	x	x	x	x
30.0	17.0	x	x	x	x	x	x	x	x	x
31.0	16.5	x	x	x	x	x	x	x	x	x
35.0	16.0	x	x	x	x	x	x	x	x	x
40.0	15.5	x	x	x	x	x	x	x	x	x
44.0	15.0	x	x	x	x	x	x	x	x	x
49.0	14.7	x	x	x	x	x	x	x	x	x
50.0	14.5	x	x	x	x	x	x	x	x	x
51.0	14.0	x	x	x	x	x	x	x	x	x
56.0	13.5	x	x	x	x	x	x	x	x	x
58.0	13.2	x	x	x	x	x	x	x	x	x
66.0	13.0	x	x	x	x	x	x	x	x	x
71.0	12.5	x	x	x	x	x	x	x	x	x
84.0	12.0	x	x	x	x	x	x	x	x	x
90.0	11.5	x	x	x	x	x	x	x	x	x
109.0	11.0	x	x	x	x	x	x	x	x	x
119.0	10.5	x	x	x	x	x	x	x	x	x
130.0	10.0	x	x	x	x	x	x	x	x	x
142.0	9.5	x	x	x	x	x	x	x	x	x
155.0	9.0	x	x	x	x	x	x	x	x	x
164.0	9.0	x	x	x	x	x	x	x	x	x
174.0	8.5	x	x	x	x	x	x	x	x	x
181.0	8.5	x	x	x	x	x	x	x	x	x
185.0	8.0	x	x	x	x	x	x	x	x	x
195.0	7.4	x	x	x	x	x	x	x	x	x
200.0	7.4	x	x	x	x	x	x	x	x	x

STATION 117X



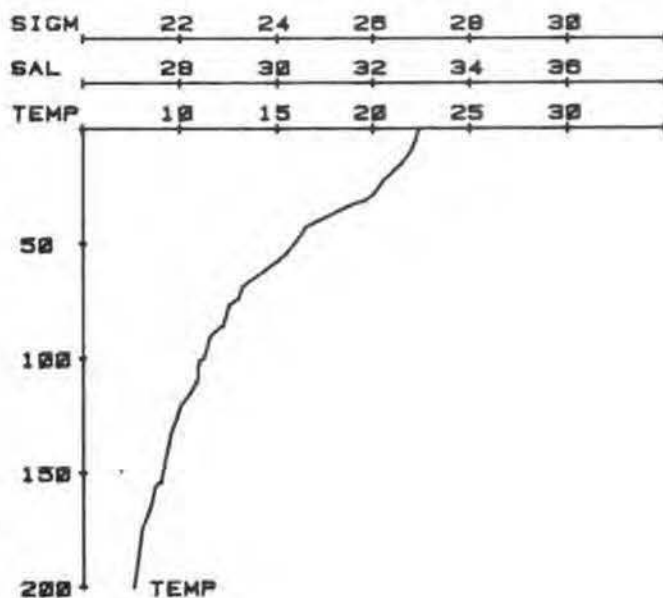
GILLISS CRUISE STA 118X 23/04/79 08.2 GWT CONSEC STA 120
LAT 30 40.8N LONG 79 56.1W DEPTH = 310M DIST LAST STA = 5.6KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 130
AIR TEMP = 22.0C
WEATHER CODE = 02
BAROMETRIC PRES = 1021.0

SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	B	SWA	O2	O2'	ADU	PO4	NO3	SI
0.0	22.4	x	x	x	x	x	x	x	x	x
9.0	22.0	x	x	x	x	x	x	x	x	x
15.0	21.5	x	x	x	x	x	x	x	x	x
19.0	21.0	x	x	x	x	x	x	x	x	x
23.0	20.5	x	x	x	x	x	x	x	x	x
29.0	20.0	x	x	x	x	x	x	x	x	x
32.0	19.5	x	x	x	x	x	x	x	x	x
33.0	19.0	x	x	x	x	x	x	x	x	x
35.0	18.5	x	x	x	x	x	x	x	x	x
37.0	18.0	x	x	x	x	x	x	x	x	x
39.0	17.5	x	x	x	x	x	x	x	x	x
41.0	17.0	x	x	x	x	x	x	x	x	x
43.0	16.5	x	x	x	x	x	x	x	x	x
49.0	16.0	x	x	x	x	x	x	x	x	x
54.0	15.5	x	x	x	x	x	x	x	x	x
58.0	15.0	x	x	x	x	x	x	x	x	x
61.0	14.5	x	x	x	x	x	x	x	x	x
64.0	14.0	x	x	x	x	x	x	x	x	x
67.0	13.5	x	x	x	x	x	x	x	x	x
69.0	13.2	x	x	x	x	x	x	x	x	x
74.0	13.0	x	x	x	x	x	x	x	x	x
77.0	12.5	x	x	x	x	x	x	x	x	x
86.0	12.2	x	x	x	x	x	x	x	x	x
87.0	12.0	x	x	x	x	x	x	x	x	x
91.0	11.5	x	x	x	x	x	x	x	x	x
100.0	11.2	x	x	x	x	x	x	x	x	x
101.0	11.0	x	x	x	x	x	x	x	x	x
103.0	10.9	x	x	x	x	x	x	x	x	x
109.0	10.9	x	x	x	x	x	x	x	x	x
115.0	10.5	x	x	x	x	x	x	x	x	x
121.0	10.0	x	x	x	x	x	x	x	x	x
133.0	9.5	x	x	x	x	x	x	x	x	x
154.0	9.0	x	x	x	x	x	x	x	x	x
156.0	8.7	x	x	x	x	x	x	x	x	x
164.0	8.5	x	x	x	x	x	x	x	x	x
175.0	8.0	x	x	x	x	x	x	x	x	x
200.0	7.4	x	x	x	x	x	x	x	x	x

STATION 118X

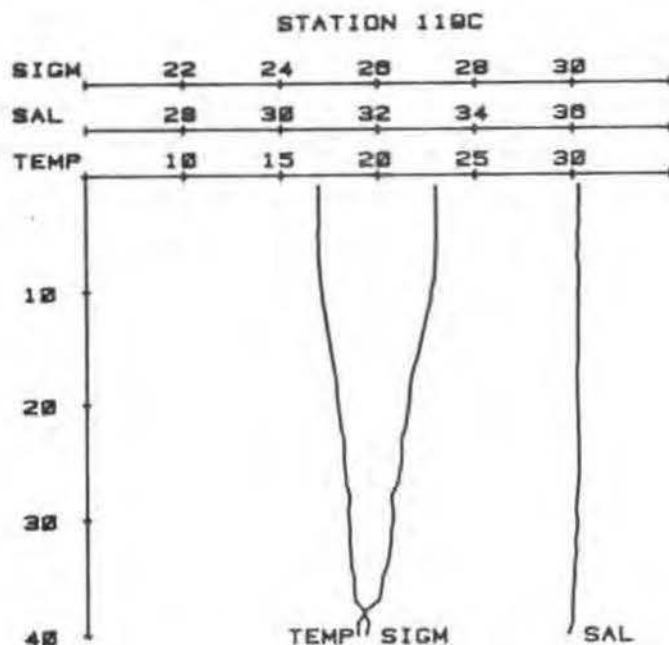


GILLISS CRUISE STA 119C 23/04/79 00.4 GMT CONSEC STA 121
LAT 38 41.5N LONG 79 54.5W DEPTH = 330M DIST LAST STA = 2.7KM

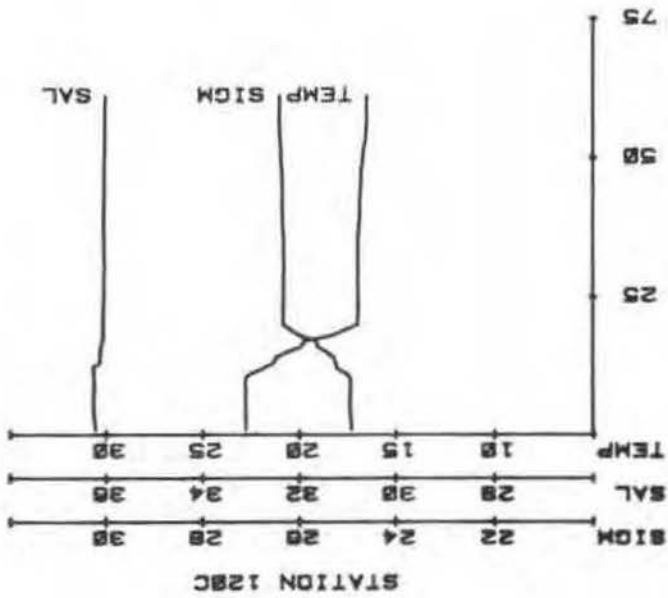
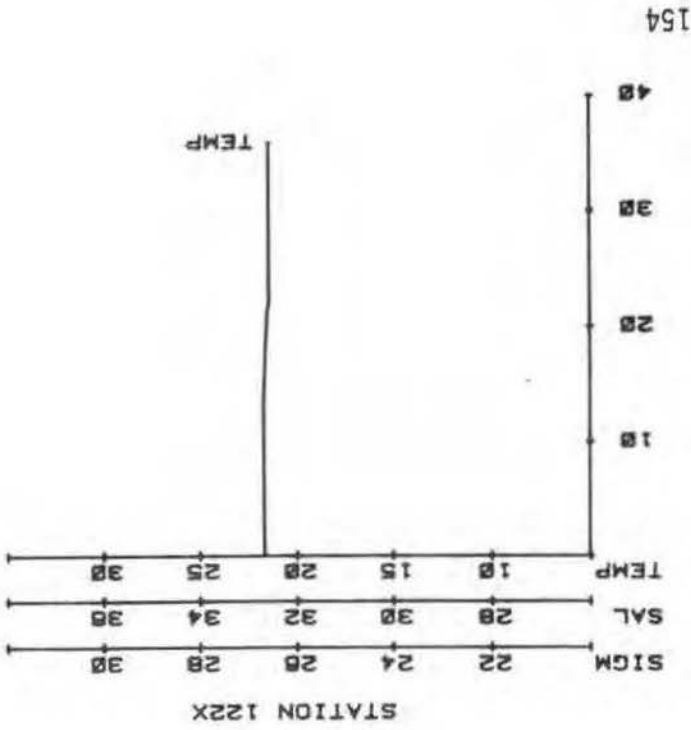
WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 120
AIR TEMP = 22.2C
WEATHER CODE = 12
BAROMETRIC PRESS = 1021.0

SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	998	Q2	Q2'	AOU	PO4	NO3	SI
1.0	22.99	36.12	24.79	316						
2.0	22.99	36.12	24.79	316						
3.0	22.98	36.11	24.79	317				0.12	0.9	0.4
4.0	22.98	36.12	24.88	316						
5.0	22.98	36.09	24.77	318						
6.0	22.97	36.11	24.79	317						
7.0	22.94	36.08	24.78	318						
8.0	22.91	36.12	24.82	314						
9.0	22.88	36.12	24.83	314						
10.0	22.71	36.18	24.86	318				0.13	0.1	1.0
11.0	22.66	36.11	24.80	309						
12.0	22.48	36.18	24.93	304						
13.0	22.36	36.18	24.96	301						
14.0	22.28	36.18	25.01	297						
15.0	22.18	36.18	25.14	294						
16.0	21.95	36.18	25.00	299						
17.0	21.77	36.08	25.11	287						
18.0	21.63	36.09	25.16	282						
19.0	21.58	36.09	25.17	281						
20.0	21.55	36.18	25.19	280						
21.0	21.45	36.11	25.22	276						
22.0	21.36	36.11	25.25	274						
23.0	21.17	36.12	25.31	268						
24.0	21.19	36.12	25.38	267						
25.0	21.17	36.12	25.31	268						
26.0	21.15	36.12	25.34	265						
27.0	20.94	36.18	25.36	264						
28.0	20.64	36.08	25.42	258						
29.0	20.72	36.06	25.39	261				0.13	1.3	0.9
30.0	20.73	36.08	25.48	260						
31.0	20.61	36.07	25.42	258						
32.0	20.48	36.04	25.48	260						
33.0	20.51	36.06	25.44	256						
34.0	20.41	36.02	25.44	256						
35.0	20.16	36.02	25.51	254						
36.0	20.08	35.99	25.58	250						
37.0	19.98	35.98	25.52	248						
38.0	19.26	35.97	25.74	231						
39.0	18.87	35.97	25.88	222						
40.0	18.09	35.89	25.74	228				0.25	2.7	1.4



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	5
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---

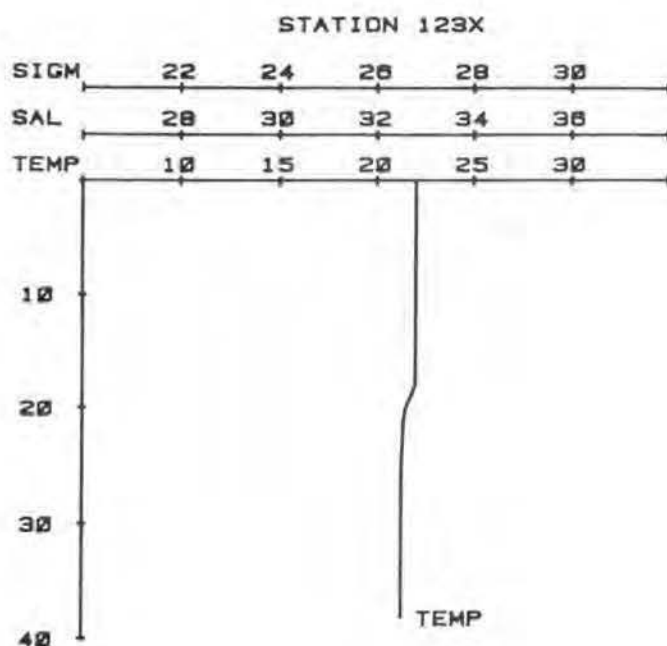


GILLISS CRUISE STA 123X 23/04/79 00.9 GMT CONSEC STA 125
LAT 30 47.4N LONG 00 26.5W DEPTH = 30M DIST LAST STA = 5.1KM

WEATHER DATA
WIND SPEED = 20KTS
WIND DIRECTION = 140
AIR TEMP = 21.1C
WEATHER CODE = 11
BAROMETRIC PRES = 1020.3

SEA STATE = 4
WAVE DIRECTION = 130
CLOUD TYPE = *
CLOUD AMOUNT = *
VISIBILITY CODE = *

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
0.0	22.0									
10.0	22.0									
20.0	21.5									
21.0	21.4									
25.0	21.3									
30.0	21.3									

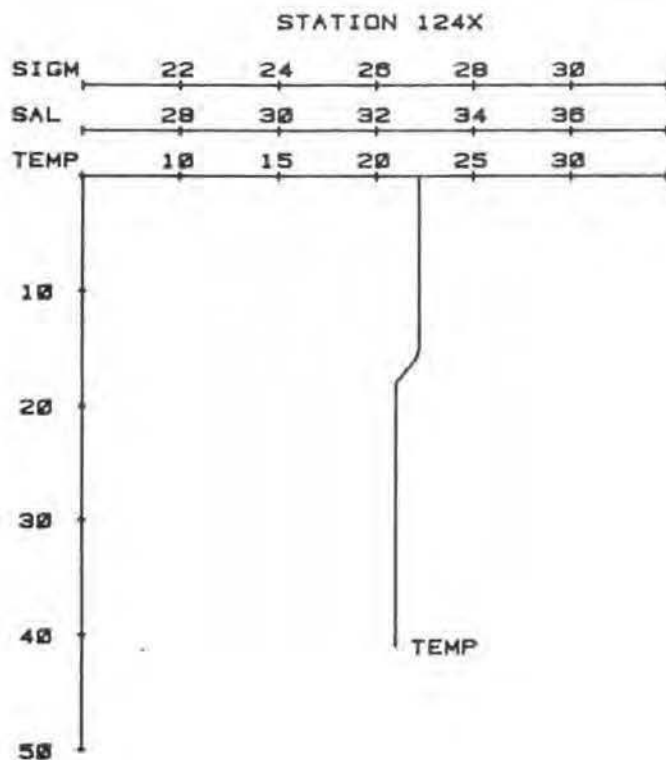


GILLISS CRUISE STA 124X 23/04/79 09.2 GMT CONSEC STA 126
LAT 30 47.0N LONG 00 23.2W DEPTH = 41M DIST LAST STA = 5.3KM

WEATHER DATA
WIND SPEED = 18KTS
WIND DIRECTION = 110
AIR TEMP = 21.7C
WEATHER CODE = 11
BAROMETRIC PRES = 1020.0

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE = *
CLOUD AMOUNT = *
VISIBILITY CODE = *

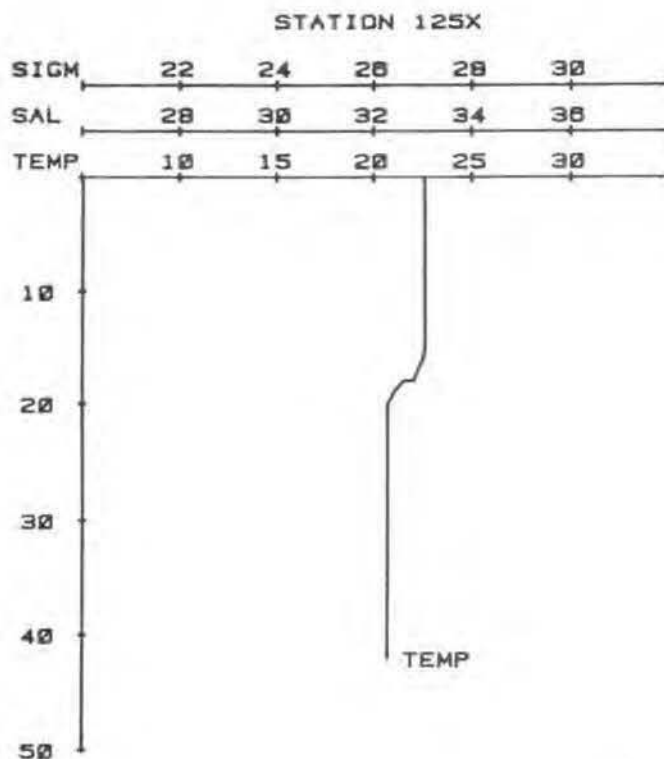
OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
0.0	22.2									
15.0	22.2									
16.0	22.0									
17.0	21.5									
18.0	21.0									
41.0	21.0									



GILLISS CRUISE STA 125X 23/04/79 09.5 GMT CONSEC STA 127
LAT 31 46.1N LONG 01 20.0W DEPTH = 42M DIST LAST STA = 5.4KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 110
AIR TEMP = 21.7C
WEATHER CODE = 01
BAROMETRIC PRES = 1020.0
SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

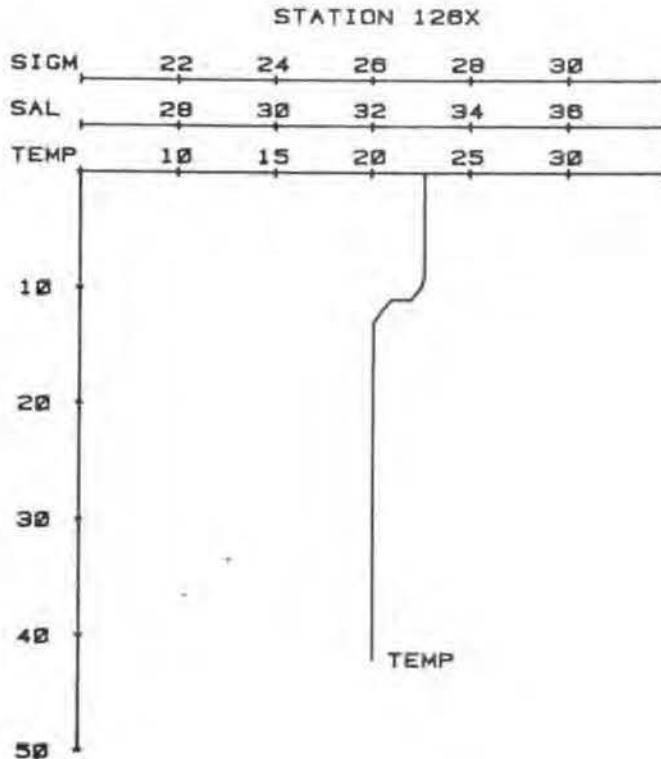
Z	T	S	0	SVA	O2	O2'	ADU	PD4	MUC	SI
0.0	22.6									
15.0	22.6									
18.0	22.5									
18.0	22.0									
18.0	21.5									
19.0	21.0									
20.0	20.7									
42.0	20.7									



GILLISS CRUISE STA 126X 23/04/79 09.8 GMT CONSEC STA 128
LAT 30 45.1N LONG 01 16.0W DEPTH = 42M DIST LAST STA = 5.4KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 110
AIR TEMP = 21.1C
WEATHER CODE = 01
BAROMETRIC PRES = 1020.0
SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	0	SVA	O2	O2'	ADU	PD4	W03	SI
0.0	22.7									
9.0	22.7									
10.0	22.5									
11.0	22.0									
11.0	21.5									
11.0	21.0									
12.0	20.5									
13.0	20.1									
42.0	20.1									



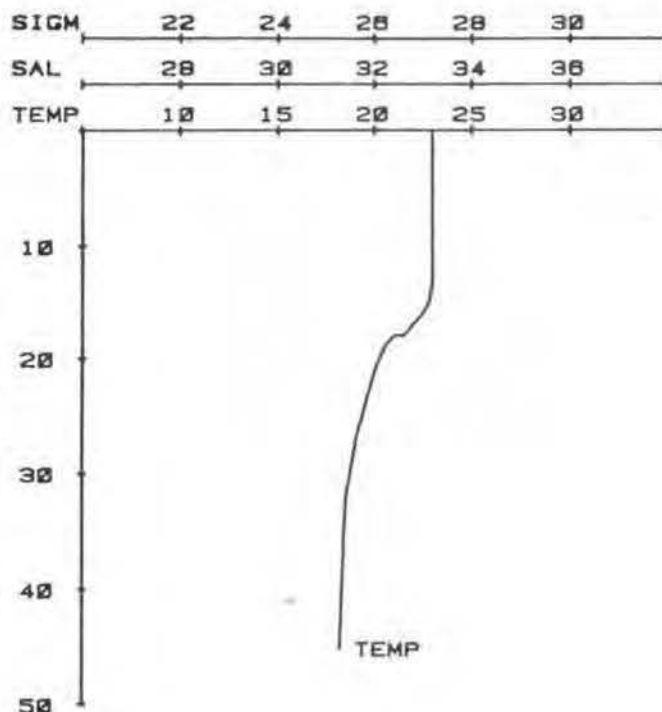
GILLISS CRUISE STA 127X 23/04/79 10.1 GMT CONSEC STA 129
LAT 30 44.6N LONG 00 13.9W DEPTH = 45M DIST LAST STA = 4.7KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 110
AIR TEMP = 21.7C
WEATHER CODE = 32
BAROMETRIC PRES = 1020.0

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	23.0									
1.0	23.0									
13.0	23.0									
15.0	22.0									
16.0	22.5									
17.0	22.0									
18.0	21.5									
19.0	21.0									
21.0	20.5									
21.0	20.0									
24.0	19.5									
27.0	19.0									
32.0	18.5									
35.0	18.4									
45.0	18.2									

STATION 127X



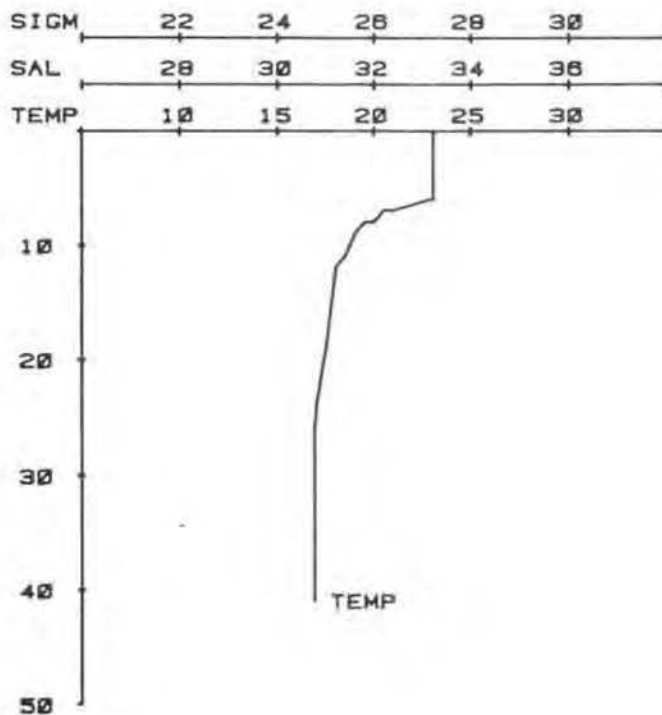
GILLISS CRUISE STA 128X 23/04/79 10.3 GMT CONSEC STA 130
LAT 30 43.6N LONG 00 10.5W DEPTH = 41M DIST LAST STA = 5.7KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 110
AIR TEMP = 21.7C
WEATHER CODE = 32
BAROMETRIC PRES = 1020.0

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	23.1									
1.0	23.1									
6.0	23.0									
7.0	21.0									
7.0	20.5									
8.0	20.0									
8.0	19.5									
9.0	19.0									
11.0	18.5									
12.0	18.0									
19.0	17.5									
24.0	17.0									
26.0	16.9									
41.0	16.9									

STATION 128X



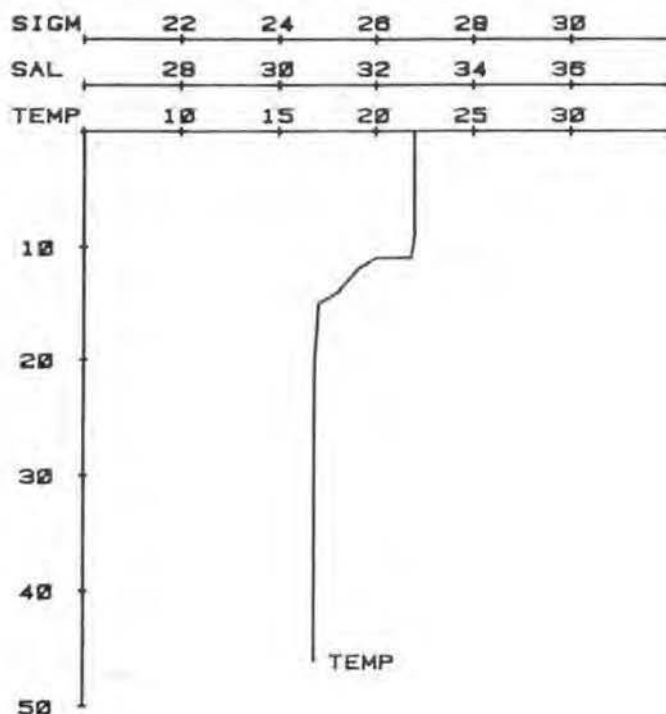
GILLISS CRUISE STA 129X 23/04/79 18.6 GMT CONSEC STA 131
LAT 38 43.8N LONG 00 08.0W DEPTH = 46M DIST LAST STA = 4.1KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 110
AIR TEMP = 21.7C
WEATHER CODE = 32
BAROMETRIC PRES = 1020.8

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	B	SWA	O2	O2'	AOU	PO4	NO3	SI
0.0	22.0									
1.0	22.0									
11.0	21.0									
11.0	21.5									
11.0	21.0									
11.0	20.0									
12.0	19.0									
14.0	18.0									
15.0	17.0									
20.0	16.0									
46.0	16.0									

STATION 129X



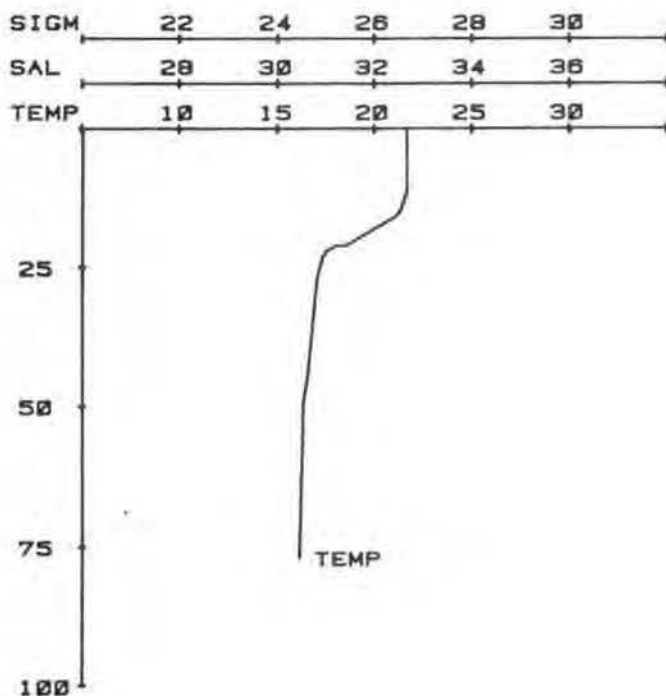
GILLISS CRUISE STA 130X 23/04/79 10.0 GMT CONSEC STA 132
LAT 38 42.7N LONG 00 05.4W DEPTH = 77M DIST LAST STA = 4.2KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 110
AIR TEMP = 21.7C
WEATHER CODE = 32
BAROMETRIC PRES = 1026.8

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	B	SWA	O2	O2'	AOU	PO4	NO3	SI
0.0	21.7									
11.0	21.7									
13.0	21.5									
15.0	21.3									
16.0	21.0									
17.0	20.5									
18.0	20.0									
19.0	19.5									
20.0	19.0									
21.0	18.5									
21.0	18.0									
22.0	17.5									
23.0	17.3									
27.0	17.0									
45.0	16.5									
49.0	16.3									
77.0	16.1									

STATION 130X



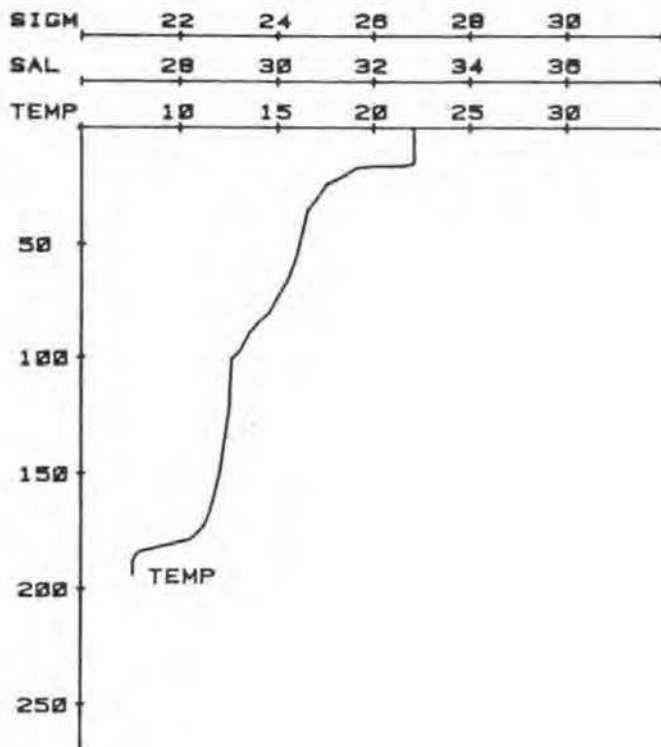
GILLISS CRUISE STA 131X 23/04/79 11.0 GMT CONSEC STA 133
LAT 38 42.0N LONG 00 42.4W DEPTH = 194M DIST LAST STA = 5.0KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 110
AIR TEMP = 21.7C
WEATHER CODE = 12
BAROMETRIC PRES = 1020.0

SEA STATE = 3
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	B	SVA	O2	O2'	AOI	P04	W03	SI
0.0	22.1									
15.0	22.1									
16.0	22.0									
17.0	21.5									
17.0	21.0									
17.0	20.0									
18.0	19.0									
21.0	18.5									
23.0	18.0									
25.0	17.5									
31.0	17.0									
34.0	16.5									
54.0	16.0									
66.0	15.5									
73.0	15.0									
81.0	14.5									
85.0	14.0									
98.0	13.5									
98.0	13.0									
101.0	12.5									
115.0	12.5									
120.0	12.5									
150.0	12.0									
167.0	11.5									
173.0	11.2									
175.0	11.0									
179.0	10.5									
180.0	10.0									
181.0	9.5									
182.0	9.0									
183.0	8.5									
184.0	8.0									
185.0	7.0									
188.0	7.0									
194.0	7.0									

STATION 131X



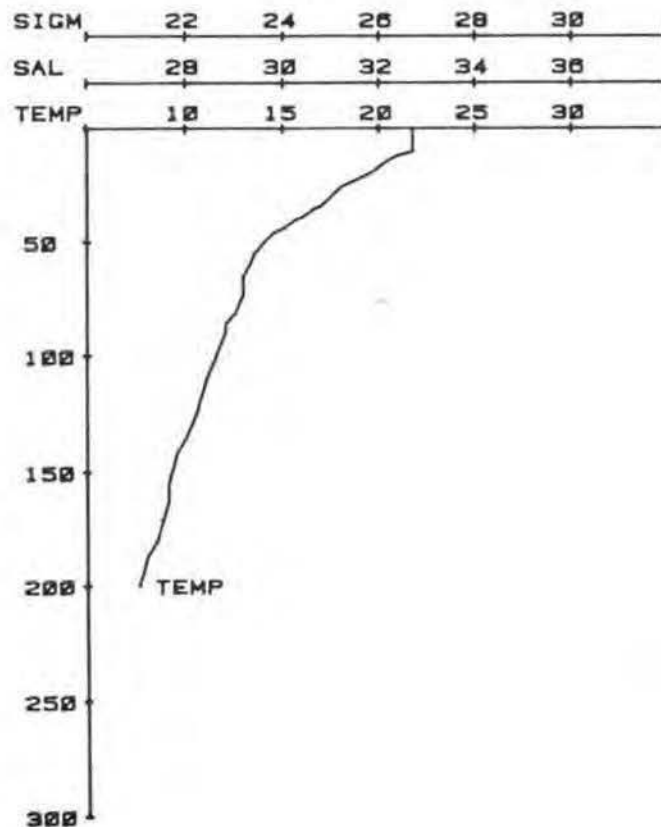
GILLISS CRUISE STA 132X 23/04/79 11.3 GMT CONSEC STA 134
LAT 38 41.5N LONG 79 59.5W DEPTH = 235M DIST LAST STA = 4.7KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 110
AIR TEMP = 21.7C
WEATHER CODE = 12
BAROMETRIC PRES = 1020.0

SEA STATE = 3
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	B	SVA	O2	O2'	AOI	P04	W03	SI
0.0	21.0									
10.0	21.0									
11.0	21.5									
12.0	21.0									
14.0	20.5									
17.0	20.0									
20.0	19.5									
22.0	19.0									
24.0	18.5									
26.0	18.0									
30.0	17.5									
34.0	17.0									
36.0	16.5									
39.0	16.0									
41.0	15.5									
44.0	15.0									
46.0	14.5									
50.0	14.0									
55.0	13.5									
64.0	13.0									
65.0	12.9									
73.0	12.9									
81.0	12.5									
86.0	12.0									
89.0	12.0									
100.0	11.5									
110.0	11.0									
125.0	10.5									
135.0	10.0									
142.0	9.5									
155.0	9.1									
162.0	9.1									
165.0	9.0									
180.0	8.0									
187.0	8.0									
210.0	7.0									

STATION 132X



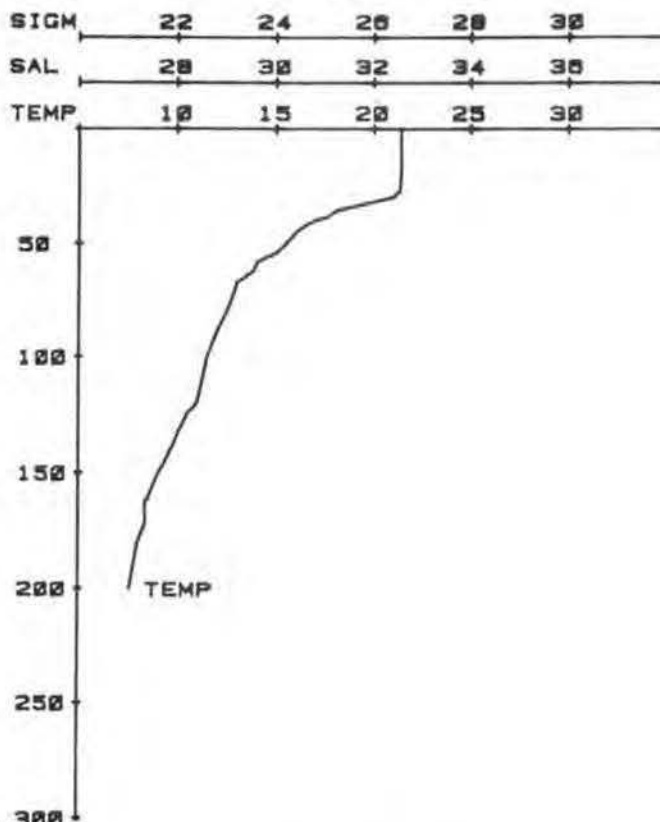
GILLISS CRUISE STA 133X 23/04/79 11.6 GMT CONSEC STA 135
LAT 38 48.6N LONG 79 56.5W DEPTH = 380M DIST LAST STA = 5.1KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 110
AIR TEMP = 22.2C
WEATHER CODE = X2
BAROMETRIC PRES = 1020.0

SEA STATE = 3
WAVE DIRECTION = 110
CLOUD TYPE = *
CLOUD AMOUNT = *
VISIBILITY CODE = *

OBSERVATIONS										
Z	T	S	D	SVA	DZ	DZ'	AQU	P04	M03	SI
8.0	21.4	*	*	*	*	*	*	*	*	*
10.0	21.4	*	*	*	*	*	*	*	*	*
27.0	21.3	*	*	*	*	*	*	*	*	*
34.0	21.0	*	*	*	*	*	*	*	*	*
31.0	20.5	*	*	*	*	*	*	*	*	*
32.0	20.0	*	*	*	*	*	*	*	*	*
33.0	19.5	*	*	*	*	*	*	*	*	*
34.0	19.0	*	*	*	*	*	*	*	*	*
35.0	18.5	*	*	*	*	*	*	*	*	*
36.0	18.0	*	*	*	*	*	*	*	*	*
39.0	17.5	*	*	*	*	*	*	*	*	*
41.0	17.0	*	*	*	*	*	*	*	*	*
42.0	16.5	*	*	*	*	*	*	*	*	*
45.0	16.0	*	*	*	*	*	*	*	*	*
50.0	15.5	*	*	*	*	*	*	*	*	*
54.0	15.0	*	*	*	*	*	*	*	*	*
56.0	14.5	*	*	*	*	*	*	*	*	*
58.0	14.0	*	*	*	*	*	*	*	*	*
62.0	13.8	*	*	*	*	*	*	*	*	*
64.0	13.5	*	*	*	*	*	*	*	*	*
67.0	13.0	*	*	*	*	*	*	*	*	*
80.0	12.5	*	*	*	*	*	*	*	*	*
89.0	12.0	*	*	*	*	*	*	*	*	*
100.0	11.5	*	*	*	*	*	*	*	*	*
120.0	11.0	*	*	*	*	*	*	*	*	*
125.0	10.5	*	*	*	*	*	*	*	*	*
134.0	10.0	*	*	*	*	*	*	*	*	*
143.0	9.5	*	*	*	*	*	*	*	*	*
151.0	9.0	*	*	*	*	*	*	*	*	*
161.0	8.5	*	*	*	*	*	*	*	*	*
162.0	8.4	*	*	*	*	*	*	*	*	*
171.0	8.4	*	*	*	*	*	*	*	*	*
180.0	8.0	*	*	*	*	*	*	*	*	*
210.0	7.4	*	*	*	*	*	*	*	*	*

STATION 133X



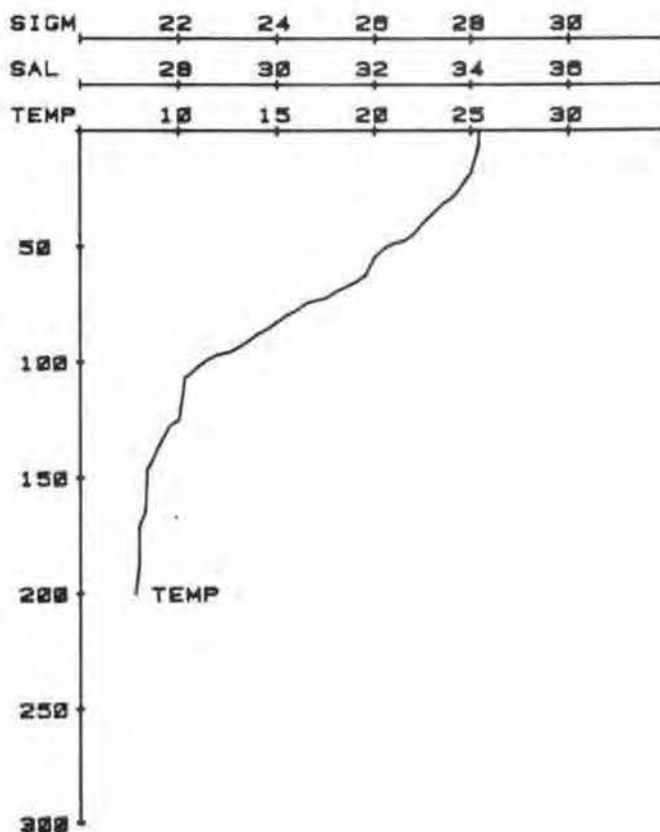
GILLISS CRUISE STA 134X 23/04/79 11.9 GMT CONSEC STA 136
LAT 38 48.0N LONG 79 52.6W DEPTH = 380M DIST LAST STA = 6.0KM

WEATHER DATA
WIND SPEED = 17KTS
WIND DIRECTION = 110
AIR TEMP = 22.2C
WEATHER CODE = X1
BAROMETRIC PRES = 1020.3

SEA STATE = 3
WAVE DIRECTION = 110
CLOUD TYPE = *
CLOUD AMOUNT = *
VISIBILITY CODE = *

OBSERVATIONS										
Z	T	S	D	SVA	DZ	DZ'	AQU	P04	M03	SI
8.0	25.4	*	*	*	*	*	*	*	*	*
10.0	25.4	*	*	*	*	*	*	*	*	*
18.0	25.0	*	*	*	*	*	*	*	*	*
24.0	24.5	*	*	*	*	*	*	*	*	*
29.0	24.0	*	*	*	*	*	*	*	*	*
32.0	23.5	*	*	*	*	*	*	*	*	*
34.0	23.0	*	*	*	*	*	*	*	*	*
40.0	22.5	*	*	*	*	*	*	*	*	*
45.0	22.0	*	*	*	*	*	*	*	*	*
48.0	21.5	*	*	*	*	*	*	*	*	*
49.0	21.0	*	*	*	*	*	*	*	*	*
51.0	20.5	*	*	*	*	*	*	*	*	*
55.0	20.0	*	*	*	*	*	*	*	*	*
63.0	19.5	*	*	*	*	*	*	*	*	*
66.0	19.0	*	*	*	*	*	*	*	*	*
68.0	18.5	*	*	*	*	*	*	*	*	*
70.0	18.0	*	*	*	*	*	*	*	*	*
73.0	17.5	*	*	*	*	*	*	*	*	*
74.0	17.0	*	*	*	*	*	*	*	*	*
75.0	16.5	*	*	*	*	*	*	*	*	*
78.0	16.0	*	*	*	*	*	*	*	*	*
80.0	15.5	*	*	*	*	*	*	*	*	*
83.0	15.0	*	*	*	*	*	*	*	*	*
86.0	14.5	*	*	*	*	*	*	*	*	*
88.0	14.0	*	*	*	*	*	*	*	*	*
91.0	13.5	*	*	*	*	*	*	*	*	*
94.0	13.0	*	*	*	*	*	*	*	*	*
96.0	12.5	*	*	*	*	*	*	*	*	*
97.0	12.0	*	*	*	*	*	*	*	*	*
99.0	11.5	*	*	*	*	*	*	*	*	*
102.0	11.0	*	*	*	*	*	*	*	*	*
106.0	10.5	*	*	*	*	*	*	*	*	*
107.0	10.0	*	*	*	*	*	*	*	*	*
125.0	10.0	*	*	*	*	*	*	*	*	*
128.0	9.5	*	*	*	*	*	*	*	*	*
136.0	9.0	*	*	*	*	*	*	*	*	*
145.0	8.5	*	*	*	*	*	*	*	*	*
146.0	8.4	*	*	*	*	*	*	*	*	*
165.0	8.3	*	*	*	*	*	*	*	*	*
171.0	8.0	*	*	*	*	*	*	*	*	*
187.0	8.0	*	*	*	*	*	*	*	*	*
200.0	7.0	*	*	*	*	*	*	*	*	*

STATION 134X



GILLISS CRUISE STA 135C 23/04/79 13.4 GMT CONSEC STA 137
LAT 30 42.7N LONG 01 05.3W DEPTH = 75M DIST LAST STA = 20.5KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 110
AIR TEMP = 22.0C
WEATHER CODE = 11
BAROMETRIC PRES = 1021.3

SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	0	SVA	02	02'	ADU	PO4	NO3
1.0	21.02	36.18	25.17	280					
2.0	21.02	36.18	25.17	280					
3.0	21.01	36.18	25.18	280					
4.0	21.01	36.18	25.18	280					
5.0	21.01	36.18	25.18	280					
6.0	21.01	36.19	25.18	279					
7.0	21.01	36.19	25.18	280					
8.0	21.01	36.18	25.18	280					
9.0	21.79	36.17	25.17	280					
10.0	21.79	36.19	25.19	279					
11.0	21.00	36.19	25.19	279					
12.0	21.01	36.19	25.18	280					
13.0	21.79	36.19	25.19	279					
14.0	21.79	36.18	25.18	280					
15.0	21.79	36.19	25.19	279					
16.0	21.78	36.17	25.18	280					
17.0	21.75	36.19	25.21	278					
18.0	21.64	36.17	25.22	277					
19.0	21.50	36.19	25.27	272					
20.0	21.33	36.19	25.32	267					
21.0	20.57	36.13	25.40	252					
22.0	20.39	36.18	25.50	249					
23.0	20.24	36.18	25.54	246					
24.0	20.15	36.18	25.57	243					
25.0	19.86	36.09	25.64	237					
26.0	19.71	36.09	25.68	233					
27.0	19.17	36.06	25.80	222					
28.0	18.76	36.03	25.80	214					
29.0	18.22	36.03	26.01	201					
30.0	17.86	36.04	26.11	192					
31.0	17.55	36.02	26.17	186					
32.0	17.48	36.01	26.18	185					
33.0	17.37	36.01	26.21	183					
34.0	17.40	36.02	26.21	183					
35.0	17.40	36.02	26.21	183					
36.0	17.31	36.04	26.25	179					
37.0	17.32	36.03	26.24	180					
38.0	17.29	36.03	26.24	180					
39.0	17.24	36.03	26.26	179					
40.0	17.23	36.03	26.26	178					
41.0	17.17	36.03	26.27	177					
42.0	17.19	36.02	26.26	178					
43.0	17.14	36.02	26.27	177					
44.0	17.17	36.02	26.26	178					
45.0	17.11	36.04	26.29	175					
46.0	17.18	36.03	26.29	176					
47.0	17.12	35.98	26.25	180					
48.0	17.12	36.02	26.28	177					
49.0	17.05	36.01	26.29	176					
50.0	17.08	36.00	26.27	178					
51.0	17.01	36.03	26.31	174					
52.0	17.00	36.02	26.31	174					
53.0	16.96	36.03	26.32	173					
54.0	16.95	36.03	26.32	173					
55.0	16.94	36.03	26.33	172					

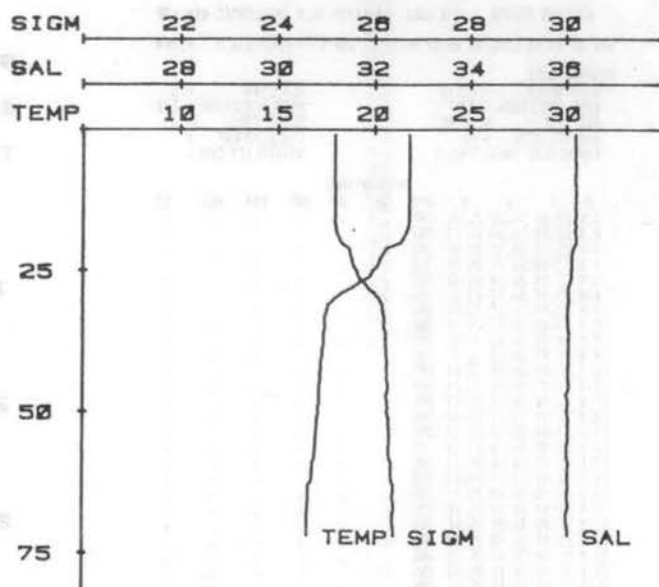
GILLISS CRUISE STA 135C 23/04/79 14.0 GMT CONSEC STA 138
LAT 30 42.7N LONG 01 05.3W DEPTH = 75M DIST LAST STA = 0.0KM

WEATHER DATA
WIND SPEED = 15KTS
WIND DIRECTION = 110
AIR TEMP = 22.0C
WEATHER CODE = 11
BAROMETRIC PRES = 1021.3

SEA STATE = 3
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	0	SVA	02	02'	ADU	PO4	NO3
1.0	21.73	36.15	25.18	280					
2.0	21.72	36.19	25.21	277					
3.0	21.72	36.19	25.21	277					
4.0	21.71	36.18	25.20	277					
5.0	21.71	36.18	25.20	277					
6.0	21.71	36.17	25.20	278					
7.0	21.71	36.17	25.20	278					
8.0	21.71	36.18	25.20	278					
9.0	21.71	36.18	25.20	278					
10.0	21.69	36.18	25.21	277					
11.0	21.69	36.18	25.21	277					
12.0	21.71	36.17	25.20	278					
13.0	21.68	36.16	25.20	278					
14.0	21.69	36.17	25.20	278					
15.0	21.68	36.18	25.21	277					
16.0	21.68	36.17	25.20	278					
17.0	21.67	36.16	25.20	278					
18.0	21.66	36.17	25.21	277					
19.0	21.66	36.16	25.20	278					
20.0	21.66	36.14	25.19	280					
21.0	21.65	36.15	25.20	279					
22.0	21.58	36.16	25.22	276					
23.0	21.32	36.17	25.30	269					
24.0	21.00	36.11	25.32	267					
25.0	20.50	36.05	25.44	256					
26.0	20.35	36.07	25.49	251					
27.0	20.07	36.06	25.05	217					
28.0	20.07	36.05	25.04	210					
29.0	20.09	36.04	25.05	217					
30.0	20.00	36.01	25.03	219					
31.0	20.76	36.01	25.06	216					
32.0	20.75	36.01	25.06	216					
33.0	20.37	35.98	25.04	219					
34.0	20.09	36.02	26.09	194					
35.0	20.06	36.03	26.10	193					

STATION 135C



56.0	16.92	36.00	26.31	174					
57.0	16.90	36.01	26.32	173					
58.0	16.88	36.01	26.33	173					
59.0	16.79	36.04	26.37	168					
60.0	16.77	36.03	26.37	169					
61.0	16.75	36.03	26.37	168					
62.0	16.73	36.03	26.38	168					
63.0	16.58	36.04	26.42	164					
64.0	16.58	36.03	26.41	164					
65.0	16.59	36.02	26.40	165					
66.0	16.55	36.04	26.43	163					
67.0	16.53	36.04	26.43	163					
68.0	16.51	36.00	26.41	165					
69.0	16.52	36.00	26.40	165					
70.0	16.51	36.02	26.42	164					
71.0	16.52	36.04	26.43	163					
72.0	16.52	36.04	26.43	163					

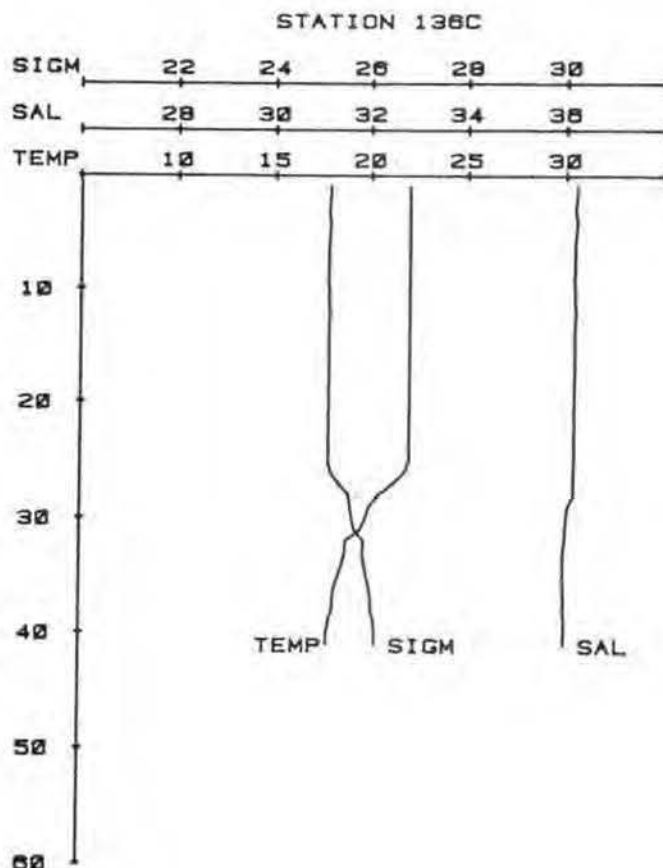
1.52 6.5 4.3

36.0	17.76	36.03	26.13	181					
37.0	17.71	36.02	26.13	180					
38.0	17.69	36.02	26.14	180					
39.0	17.67	36.03	26.15	180					
40.0	17.62	36.02	26.15	180					
41.0	17.42	36.03	26.21	183					
42.0	17.17	36.04	26.20	176					
43.0	17.15	36.03	26.20	177					
44.0	17.11	36.02	26.20	177					
45.0	17.10	36.01	26.27	177					
46.0	17.10	36.02	26.20	176					
47.0	17.09	36.02	26.20	176					

0.44 4.7 5.1

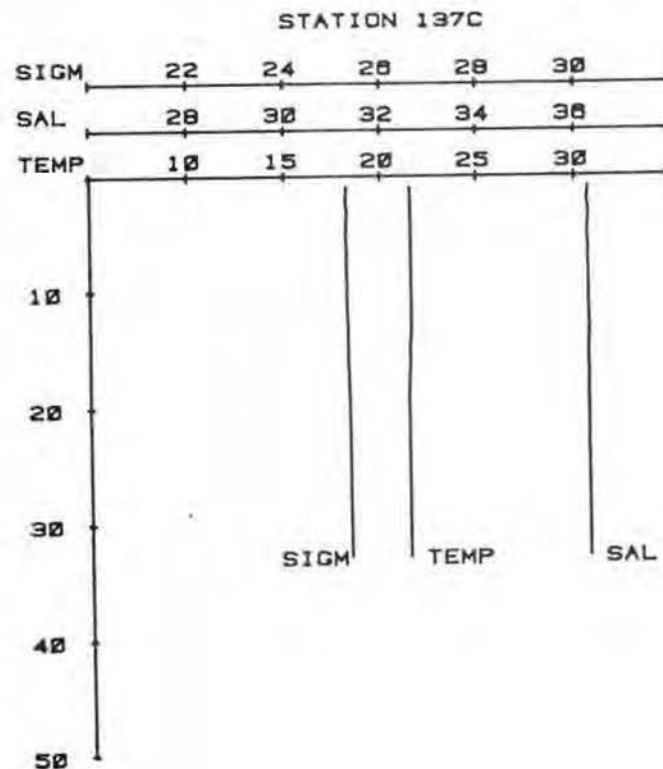
GILLISS CRUISE STA 138C 23/04/79 16.0 GMT CONSEC STA 139
 LAT 38 42.6N LONG 08 05.5W DEPTH = 75M DIST LAST STA = 0.4KM
 WEATHER DATA
 WIND SPEED = 16KTS
 WIND DIRECTION = 130
 AIR TEMP = 22.8C
 WEATHER CODE = 81
 BAROMETRIC PRES = 1021.7
 SEA STATE = 3
 WAVE DIRECTION = 120
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	0	SVA	02	02'	ADU	PD4	W03
1.0	22.80	36.21	25.15	283					
2.0	22.80	36.19	25.13	284					
3.0	22.80	36.17	25.11	286					
4.0	22.80	36.21	25.15	283					
5.0	22.80	36.19	25.13	285					
6.0	22.80	36.17	25.11	286					
7.0	22.80	36.17	25.11	286					
8.0	22.80	36.17	25.11	286					
9.0	22.80	36.16	25.11	287					
10.0	21.99	36.18	25.13	285					
11.0	21.99	36.18	25.13	285					
12.0	21.99	36.20	25.14	284					
13.0	21.99	36.18	25.13	285					
14.0	21.99	36.17	25.12	286					
15.0	22.80	36.18	25.12	286					
16.0	21.99	36.18	25.13	285					
17.0	21.99	36.18	25.13	285					
18.0	21.99	36.18	25.13	285					
19.0	21.99	36.17	25.12	286					
20.0	21.99	36.17	25.12	286					
21.0	21.99	36.17	25.12	286					
22.0	21.99	36.18	25.13	286					
23.0	21.98	36.17	25.12	286					
24.0	21.98	36.18	25.13	285					
25.0	21.98	36.17	25.12	286					
26.0	21.78	36.17	25.18	281					
27.0	21.17	36.17	25.35	245					
28.0	24.39	36.17	25.56	245					
29.0	19.91	36.05	25.59	241					
30.0	19.71	36.03	25.63	238					
31.0	19.46	36.01	25.68	233					
32.0	18.71	36.00	25.87	215					
33.0	18.67	35.97	25.85	217					
34.0	18.52	35.97	25.89	213					
35.0	18.33	35.97	25.94	208					
36.0	18.12	35.98	26.00	203					
37.0	18.01	35.99	26.04	199					
38.0	17.99	35.98	26.03	200					
39.0	17.81	36.01	26.10	193					
40.0	17.71	36.00	26.12	192					
41.0	17.69	35.99	26.11	192					

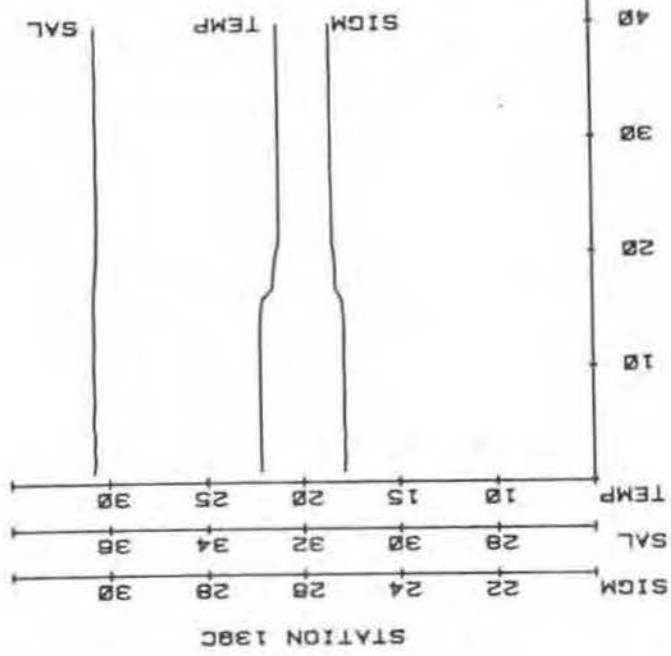


GILLISS CRUISE STA 137C 23/04/79 19.4 GMT CONSEC STA 140
 LAT 38 48.5N LONG 08 03.0W DEPTH = 37M DIST LAST STA = 11.6KM
 WEATHER DATA
 WIND SPEED = 19KTS
 WIND DIRECTION = 100
 AIR TEMP = 25.8C
 WEATHER CODE = 81
 BAROMETRIC PRES = 1020.0
 SEA STATE = 4
 WAVE DIRECTION = 120
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

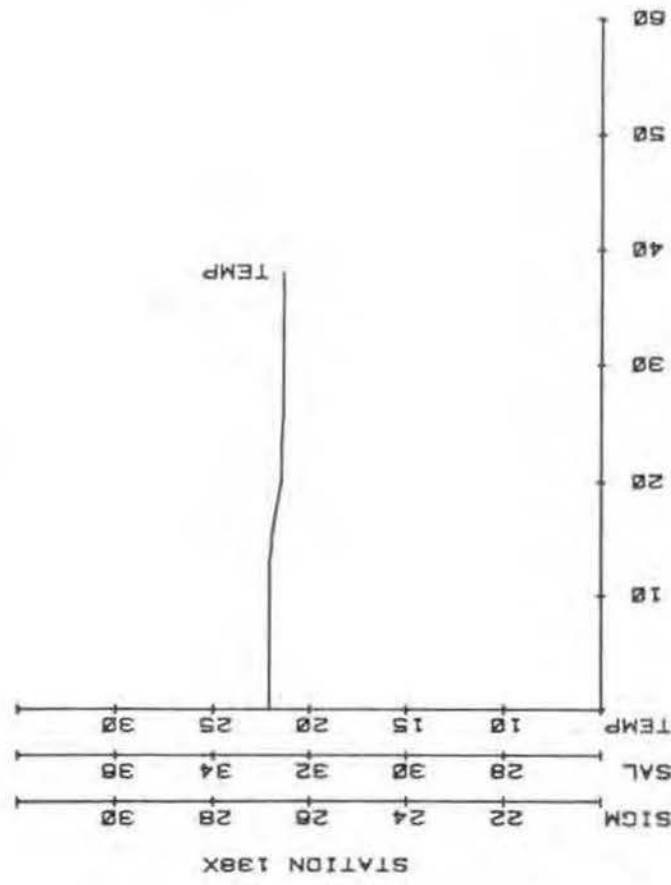
OBSERVATIONS									
Z	T	S	0	SVA	02	02'	ADU	PD4	W03
1.0	21.60	36.27	25.30	260					
2.0	21.60	36.25	25.29	269					
3.0	21.59	36.28	25.31	267					
4.0	21.60	36.26	25.30	269					
5.0	21.60	36.25	25.29	270					
6.0	21.59	36.27	25.31	268					
7.0	21.59	36.26	25.30	269					
8.0	21.59	36.27	25.31	268					
9.0	21.58	36.27	25.31	268					
10.0	21.59	36.27	25.31	268					
11.0	21.59	36.27	25.31	268					
12.0	21.58	36.28	25.32	267					
13.0	21.57	36.29	25.33	266					
14.0	21.55	36.27	25.32	267					
15.0	21.58	36.26	25.32	267					
16.0	21.51	36.26	25.32	267					
17.0	21.48	36.27	25.34	265					
18.0	21.44	36.26	25.34	265					
19.0	21.42	36.26	25.35	265					
20.0	21.43	36.26	25.34	265					
21.0	21.43	36.26	25.34	265					
22.0	21.42	36.26	25.35	265					
23.0	21.42	36.25	25.34	265					
24.0	21.42	36.26	25.35	265					
25.0	21.42	36.26	25.35	265					
26.0	21.42	36.26	25.35	265					
27.0	21.43	36.26	25.34	265					
28.0	21.42	36.26	25.35	265					
29.0	21.41	36.26	25.35	265					
30.0	21.41	36.26	25.35	265					
31.0	21.41	36.26	25.35	265					
32.0	21.41	36.26	25.35	265					
33.0	21.41	36.26	25.35	265					



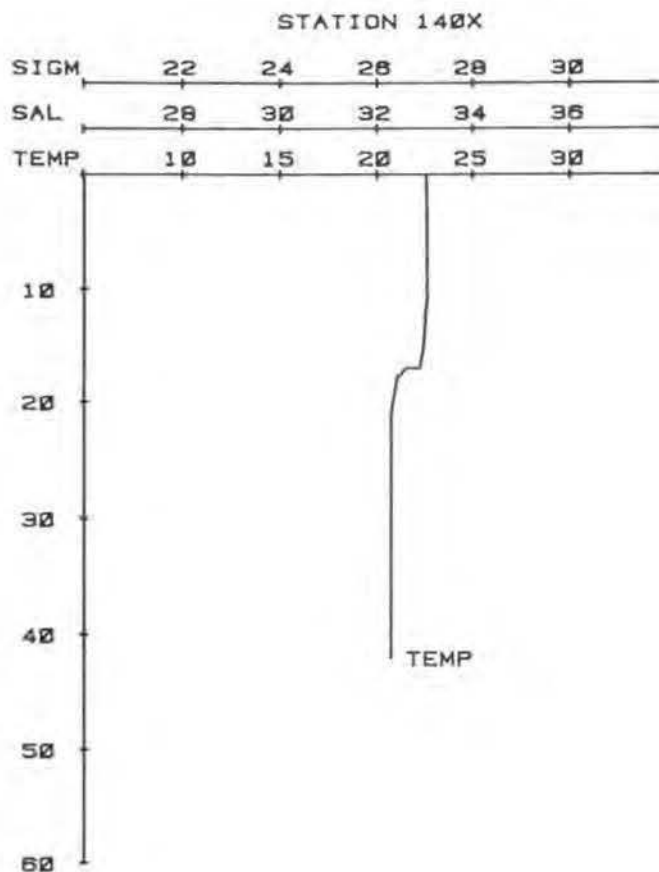
GILLISS CRUISE STA 139C 23/04/79 28.8 CNT COMSEC STA 142
 LAT 38 47.24 LONG 88 23.34 DEPTH = 42M DIST LAST STA = 5.1KM
 WEATHER DATA
 WIND SPEED = 18KTS
 WIND DIRECTION = 180
 WAVE DIRECTION = 120
 SEA STATE = 4
 CLOUD AMOUNT =
 CLOUD TYPE =
 VISIBILITY CODE =
 OBSERVATIONS
 2 1 5 0 SVA 02 021 ADV P04 W03 S1
 1 22 23 36 31 25 16 282
 2 22 23 36 31 25 16 284
 3 22 23 36 31 25 16 282
 4 22 23 36 31 25 16 284
 5 22 23 36 31 25 16 281
 6 22 23 36 31 25 16 281
 7 22 23 36 31 25 16 284
 8 22 23 36 31 25 16 281
 9 22 23 36 31 25 16 281
 10 22 23 36 31 25 16 281
 11 22 23 36 31 25 16 282
 12 22 23 36 31 25 16 284
 13 22 23 36 31 25 16 281
 14 22 23 36 31 25 16 281
 15 22 23 36 31 25 16 281
 16 22 23 36 31 25 16 281
 17 22 23 36 31 25 16 281
 18 22 23 36 31 25 16 281
 19 22 23 36 31 25 16 281
 20 22 23 36 31 25 16 281
 21 22 23 36 31 25 16 281
 22 22 23 36 31 25 16 281
 23 22 23 36 31 25 16 281
 24 22 23 36 31 25 16 281
 25 22 23 36 31 25 16 281
 26 22 23 36 31 25 16 281
 27 22 23 36 31 25 16 281
 28 22 23 36 31 25 16 281
 29 22 23 36 31 25 16 281
 30 22 23 36 31 25 16 281
 31 22 23 36 31 25 16 281
 32 22 23 36 31 25 16 281
 33 22 23 36 31 25 16 281
 34 22 23 36 31 25 16 281
 35 22 23 36 31 25 16 281
 36 22 23 36 31 25 16 281
 37 22 23 36 31 25 16 281
 38 22 23 36 31 25 16 281
 39 22 23 36 31 25 16 281
 40 22 23 36 31 25 16 281
 41 22 23 36 31 25 16 281
 42 22 23 36 31 25 16 281
 43 22 23 36 31 25 16 281
 44 22 23 36 31 25 16 281
 45 22 23 36 31 25 16 281
 46 22 23 36 31 25 16 281
 47 22 23 36 31 25 16 281
 48 22 23 36 31 25 16 281
 49 22 23 36 31 25 16 281
 50 22 23 36 31 25 16 281
 51 22 23 36 31 25 16 281
 52 22 23 36 31 25 16 281
 53 22 23 36 31 25 16 281
 54 22 23 36 31 25 16 281
 55 22 23 36 31 25 16 281
 56 22 23 36 31 25 16 281
 57 22 23 36 31 25 16 281
 58 22 23 36 31 25 16 281
 59 22 23 36 31 25 16 281
 60 22 23 36 31 25 16 281



GILLISS CRUISE STA 138X 23/04/79 28.4 CNT COMSEC STA 141
 LAT 38 47.44 LONG 88 24.54 DEPTH = 38M DIST LAST STA = 37.5KM
 WEATHER DATA
 WIND SPEED = 18KTS
 WIND DIRECTION = 180
 WAVE DIRECTION = 120
 SEA STATE = 4
 CLOUD AMOUNT =
 CLOUD TYPE =
 VISIBILITY CODE =
 OBSERVATIONS
 2 1 5 0 SVA 02 021 ADV P04 W03 S1
 1 22 23 36 31 25 16 282
 2 22 23 36 31 25 16 284
 3 22 23 36 31 25 16 282
 4 22 23 36 31 25 16 284
 5 22 23 36 31 25 16 281
 6 22 23 36 31 25 16 281
 7 22 23 36 31 25 16 284
 8 22 23 36 31 25 16 281
 9 22 23 36 31 25 16 281
 10 22 23 36 31 25 16 281
 11 22 23 36 31 25 16 282
 12 22 23 36 31 25 16 284
 13 22 23 36 31 25 16 281
 14 22 23 36 31 25 16 281
 15 22 23 36 31 25 16 281
 16 22 23 36 31 25 16 281
 17 22 23 36 31 25 16 281
 18 22 23 36 31 25 16 281
 19 22 23 36 31 25 16 281
 20 22 23 36 31 25 16 281
 21 22 23 36 31 25 16 281
 22 22 23 36 31 25 16 281
 23 22 23 36 31 25 16 281
 24 22 23 36 31 25 16 281
 25 22 23 36 31 25 16 281
 26 22 23 36 31 25 16 281
 27 22 23 36 31 25 16 281
 28 22 23 36 31 25 16 281
 29 22 23 36 31 25 16 281
 30 22 23 36 31 25 16 281
 31 22 23 36 31 25 16 281
 32 22 23 36 31 25 16 281
 33 22 23 36 31 25 16 281
 34 22 23 36 31 25 16 281
 35 22 23 36 31 25 16 281
 36 22 23 36 31 25 16 281
 37 22 23 36 31 25 16 281
 38 22 23 36 31 25 16 281
 39 22 23 36 31 25 16 281
 40 22 23 36 31 25 16 281
 41 22 23 36 31 25 16 281
 42 22 23 36 31 25 16 281
 43 22 23 36 31 25 16 281
 44 22 23 36 31 25 16 281
 45 22 23 36 31 25 16 281
 46 22 23 36 31 25 16 281
 47 22 23 36 31 25 16 281
 48 22 23 36 31 25 16 281
 49 22 23 36 31 25 16 281
 50 22 23 36 31 25 16 281
 51 22 23 36 31 25 16 281
 52 22 23 36 31 25 16 281
 53 22 23 36 31 25 16 281
 54 22 23 36 31 25 16 281
 55 22 23 36 31 25 16 281
 56 22 23 36 31 25 16 281
 57 22 23 36 31 25 16 281
 58 22 23 36 31 25 16 281
 59 22 23 36 31 25 16 281
 60 22 23 36 31 25 16 281

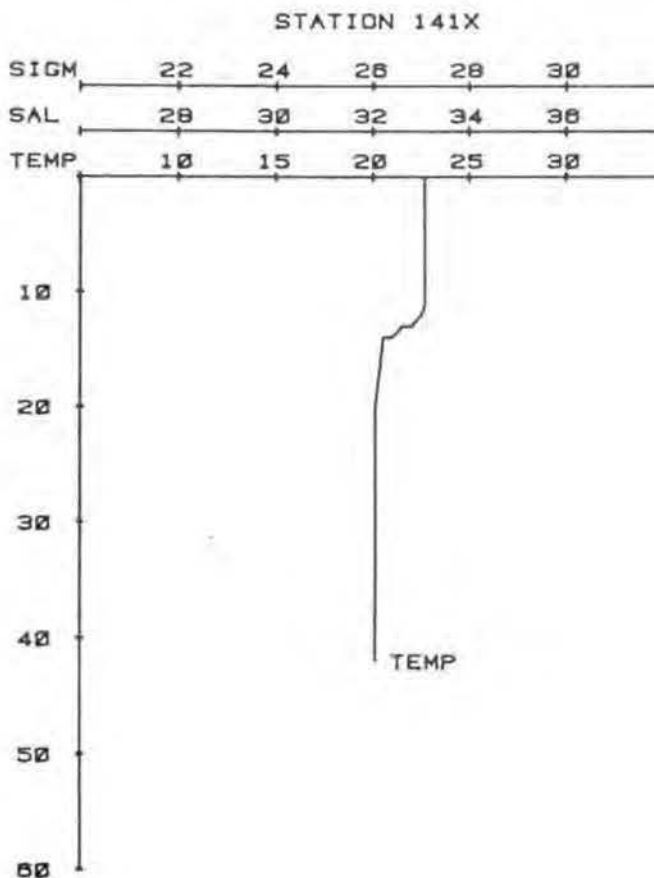


WEATHER DATA SEA STATE = A
WIND SPEED = 18KTS WAVE DIRECTION = 120
WIND DIRECTION = 180
AIR TEMP = 22.8C CLOUD TYPE =
WEATHER CODE = XI CLOUD AMOUNT =
BAROMETRIC PRES= 1019.6 VISIBILITY CODE=

[illegible]

```
WEATHER DATA
WIND SPEED      = 20KTS
WIND DIRECTION  = 120
AIR TEMP        = 23.30
WEATHER CODE    = 81
BAROMETRIC PRES= 1019.6

SEA STATE       = 4
WAVE DIRECTION  = 120
CLOUD TYPE      =
CLOUD AMOUNT    =
VISIBILITY CODE =
```

[illegible]

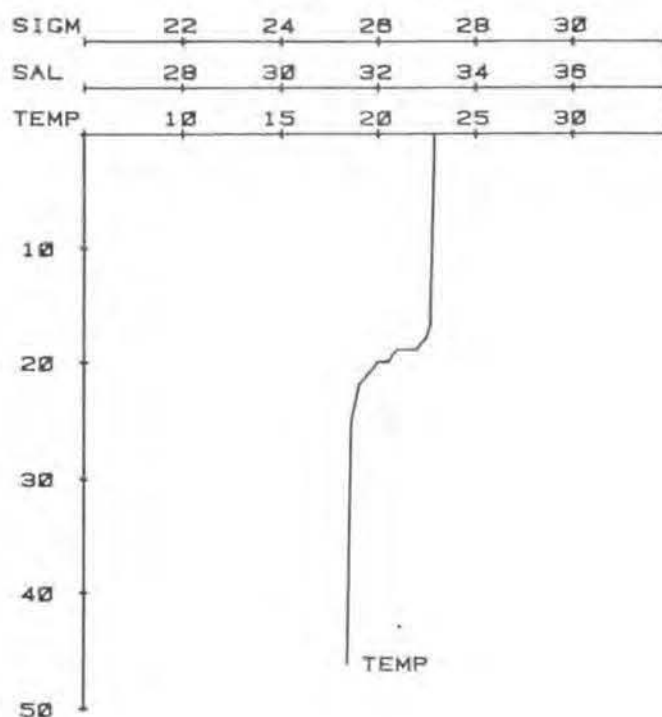
GILLISS CRUISE STA 142X 23/04/79 22.4 GMT CONSEC STA 145
LAT 38 44.6N LONG 08 13.9W DEPTH = 46M DIST LAST STA = 5.1KM

WEATHER DATA
WIND SPEED = 20KTS
WIND DIRECTION = 120
AIR TEMP = 23.3C
WEATHER CODE = 11
BAROMETRIC PRESS = 1019.6

SEA STATE = 4
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SVA	D2	D2'	AQU	PO4	NO3	SI
1.0	22.9									
17.0	22.7									
18.0	22.5									
19.0	22.0									
20.0	21.0									
21.0	20.5									
22.0	20.0									
23.0	19.5									
24.0	19.0									
25.0	18.6									
26.0	18.5									
46.0	18.4									

STATION 142X



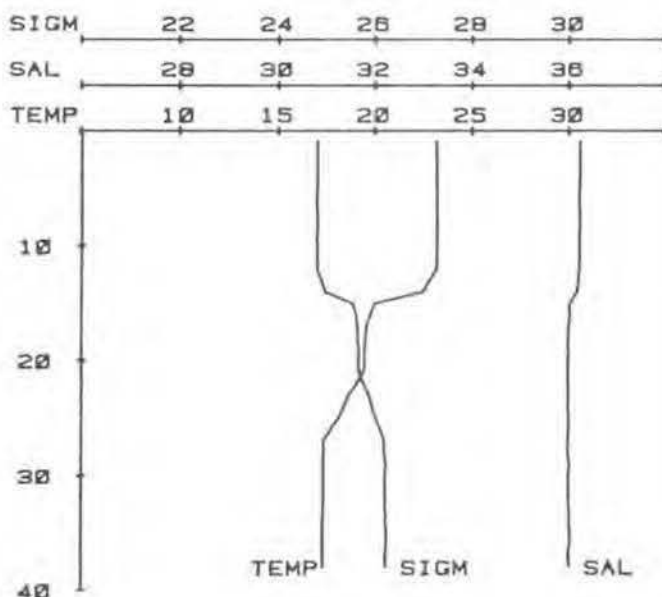
GILLISS CRUISE STA 143CU 23/04/79 22.7 GMT CONSEC STA 141
LAT 38 43.7N LONG 08 18.8W DEPTH = 43M DIST LAST STA = 5.2KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 110
AIR TEMP = 22.8C
WEATHER CODE = 11
BAROMETRIC PRESS = 1019.6

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

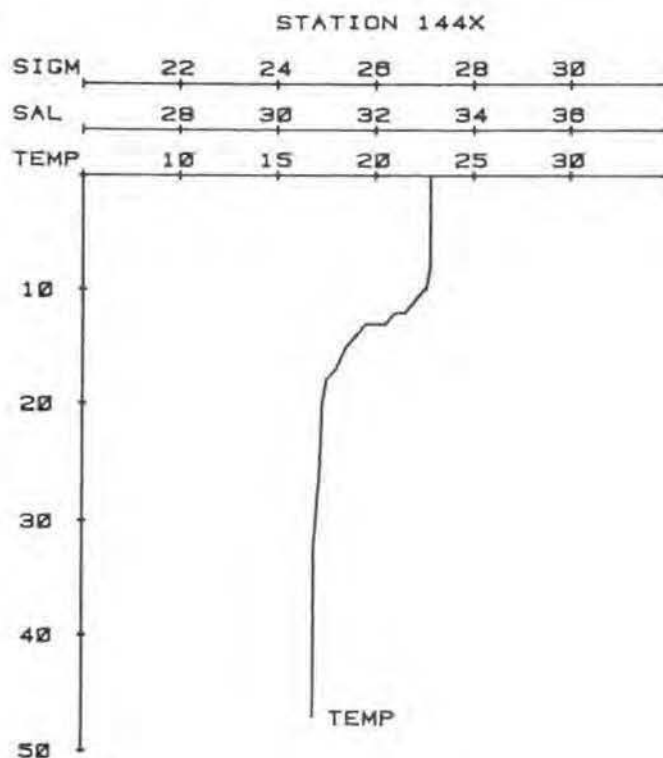
OBSERVATIONS										
Z	T	S	B	SVA	D2	D2'	AQU	PO4	NO3	SI
1.0	23.19	36.22	24.01	315						
2.0	23.19	36.22	24.01	315						
3.0	23.19	36.22	24.01	315						
4.0	23.19	36.22	24.01	315						
5.0	23.19	36.21	24.00	316						
6.0	23.19	36.24	24.01	316						
7.0	23.19	36.22	24.01	315						
8.0	23.19	36.22	24.01	315						
9.0	23.19	36.21	24.00	316						
10.0	23.18	36.21	24.01	315						
11.0	23.17	36.21	24.01	315						
12.0	23.14	36.24	24.01	315						
13.0	22.77	36.18	24.98	306						
14.0	22.44	36.16	24.98	299						
15.0	19.95	36.00	25.55	245						
16.0	19.71	36.01	25.62	239						
17.0	19.52	35.98	25.64	236						
18.0	19.45	35.97	25.65	235						
19.0	19.47	35.98	25.67	234						
20.0	19.44	35.97	25.66	235						
21.0	19.36	35.97	25.68	233						
22.0	19.00	35.97	25.77	224						
23.0	18.59	35.98	25.80	214						
24.0	18.32	35.97	25.94	200						
25.0	18.07	35.99	26.02	200						
26.0	17.65	35.98	26.12	191						
27.0	17.29	35.97	26.24	184						
28.0	17.28	35.97	26.20	184						
29.0	17.27	36.01	26.23	180						
30.0	17.27	35.98	26.21	183						
31.0	17.27	35.99	26.22	182						
32.0	17.27	35.99	26.22	182						
33.0	17.26	36.00	26.23	181						
34.0	17.25	36.00	26.23	181						
35.0	17.25	36.02	26.24	180						
36.0	17.25	36.01	26.24	180						
37.0	17.25	35.98	26.21	182						
38.0	17.25	36.01	26.24	180						

STATION 143CU



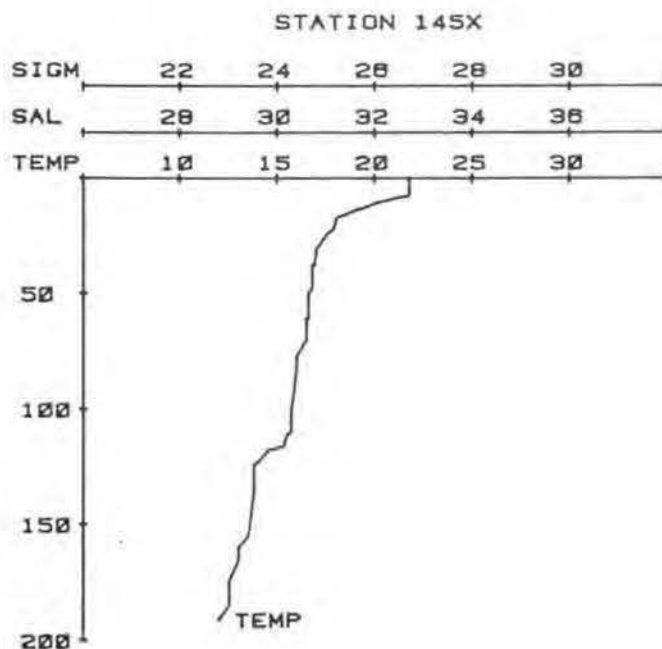
WEATHER DATA

WIND SPEED	= 18KTS	SEA STATE	= 4
WIND DIRECTION	= 110	WAVE DIRECTION	= 110
AIR TEMP	= 22.8C	CLOUD TYPE	=
WEATHER CODE	= X2	CLOUD AMOUNT	=
BAROMETRIC PRES	= 1019.6	VISIBILITY CODE	=

[illegible]

```
WEATHER DATA
WIND SPEED      = 28KTS
WIND DIRECTION  = 118
AIR TEMP        = 22.2C
WEATHER CODE    = X2
BAROMETRIC PRES= 1019.6

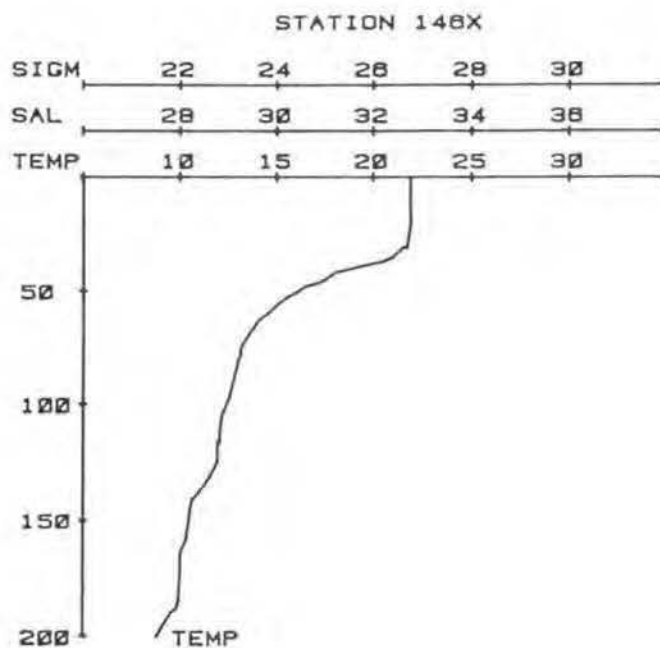
SEA STATE       = 4
WAVE DIRECTION = 110
CLOUD TYPE      =
CLOUD AMOUNT    =
VISIBILITY CODE=
```

[illegible]

GILLISS CRUISE STA 146X 24/04/79 00.4 GNT COMSEC STA 149
 LAT 30 41.1N LONG 79 59.0W DEPTH = 233M DIST LAST STA = 13.9KM

WEATHER DATA
 WIND SPEED = 20KTS
 WIND DIRECTION = 110
 AIR TEMP = 21.7C
 WEATHER CODE = 12
 BAROMETRIC PRES = 1015.9
 SEA STATE = 4
 WAVE DIRECTION = 110
 CLOUD TYPE = *
 CLOUD AMOUNT = *
 VISIBILITY CODE = *

OBSERVATIONS									
Z	T	S	B	SVN	O2	O2'	AOU	PO4	NO3
8.0	21.9								
20.0	21.9								
31.0	21.7								
31.0	21.5								
35.0	21.0								
37.0	20.5								
38.0	20.0								
39.0	19.5								
40.0	19.0								
41.0	18.5								
42.0	18.0								
45.0	17.5								
47.0	17.0								
48.0	16.5								
51.0	16.0								
53.0	15.5								
56.0	15.0								
60.0	14.5								
63.0	14.0								
69.0	13.5								
75.0	13.1								
78.0	13.1								
80.0	13.0								
97.0	12.5								
105.0	12.1								
113.0	12.0								
116.0	12.0								
116.0	11.9								
124.0	11.9								
131.0	11.5								
137.0	11.0								
141.0	10.6								
145.0	10.5								
150.0	10.3								
164.0	10.0								
167.0	10.0								
170.0	10.0								
185.0	9.9								
188.0	9.0								
190.0	9.5								
197.0	9.0								
200.0	0.0								



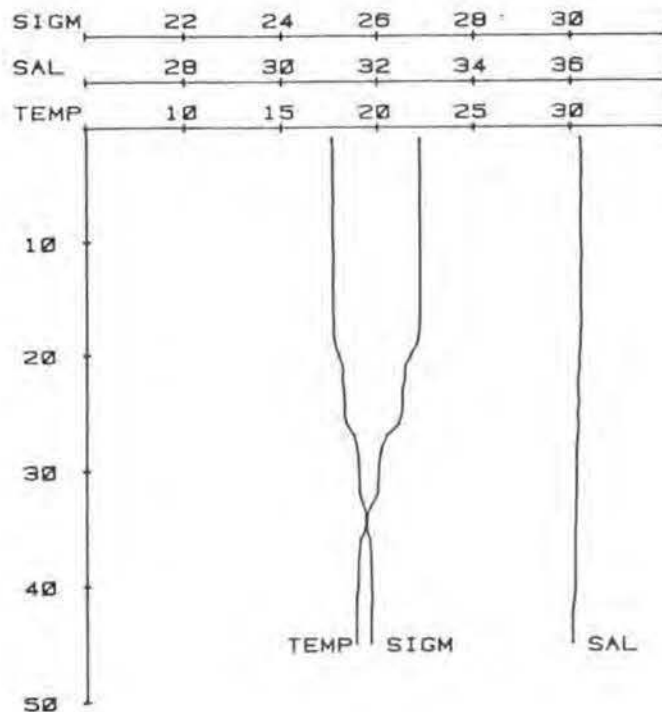
GILLISS CRUISE STA 147C 24/04/79 01.3 GMT CONSEC STA 151
LAT 38 42.9N LONG 00 05.2W DEPTH = 75M DIST LAST STA = 9.2KM

WEATHER DATA
WIND SPEED = 20KTS
WIND DIRECTION = 110
AIR TEMP = 21.7C
WEATHER CODE = 12
BAROMETRIC PRES = 1020.7

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SVA	Q2	Q2'	NOI	PO4	NO3	SI
1.0	22.24	36.19	25.07	298						
2.0	22.24	36.21	25.09	288						
3.0	22.24	36.21	25.09	288				1.88	1.0	11.5
4.0	22.24	36.21	25.09	288						
5.0	22.19	36.21	25.08	289						
6.0	22.18	36.21	25.09	288						
7.0	22.19	36.21	25.08	289						
8.0	22.19	36.21	25.08	289						
9.0	22.18	36.21	25.09	289						
10.0	22.18	36.21	25.09	288						
11.0	22.18	36.22	25.11	287						
12.0	22.17	36.21	25.09	289						
13.0	22.17	36.21	25.09	289						
14.0	22.17	36.21	25.09	289						
15.0	22.16	36.21	25.09	288				1.07	1.0	0.0
16.0	22.15	36.21	25.11	288						
17.0	22.14	36.21	25.11	287						
18.0	22.11	36.19	25.11	288						
19.0	22.01	36.19	25.13	285						
20.0	21.69	36.17	25.21	278						
21.0	21.38	36.17	25.29	278						
22.0	21.35	36.14	25.27	271				1.08	1.2	1.0
23.0	21.22	36.14	25.31	268						
24.0	21.21	36.16	25.32	267						
25.0	21.19	36.13	25.31	268						
26.0	21.05	36.15	25.36	263						
27.0	20.41	36.13	25.52	248				1.18	1.0	0.0
28.0	20.16	36.11	25.57	243						
29.0	20.04	36.11	25.61	244						
30.0	19.99	36.11	25.62	239						
31.0	19.96	36.11	25.63	238						
32.0	19.96	36.11	25.63	238						
33.0	19.63	36.18	25.71	231						
34.0	19.34	36.18	25.78	224						
35.0	19.33	36.08	25.77	225						
36.0	19.04	36.08	25.84	218						
37.0	18.99	36.08	25.86	218						
38.0	18.94	36.08	25.87	215						
39.0	18.93	36.08	25.87	215						
40.0	18.92	36.08	25.87	215						
41.0	18.84	36.07	25.89	214						
42.0	18.83	36.07	25.86	216						
43.0	18.83	36.03	25.86	216				1.17	1.0	0.0

STATION 147C



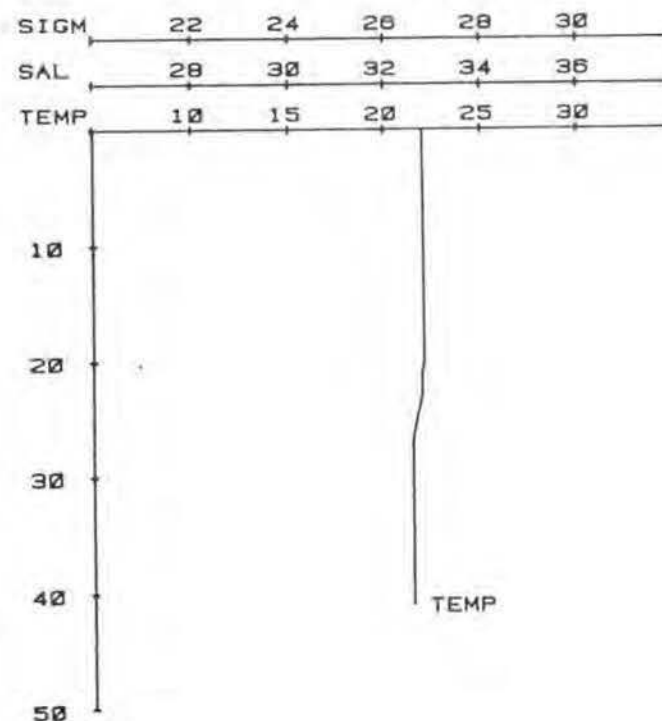
GILLISS CRUISE STA 149X 24/04/79 07.1 GMT CONSEC STA 152
LAT 38 46.9N LONG 00 23.5W DEPTH = 41M DIST LAST STA = 30.1KM

WEATHER DATA
WIND SPEED = 20KTS
WIND DIRECTION = 120
AIR TEMP = 22.2C
WEATHER CODE = 11
BAROMETRIC PRES = 1018.6

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SVA	Q2	Q2'	NOI	PO4	NO3	SI
1.0	22.0									
2.0	22.0									
21.0	21.9									
23.0	21.9									
26.0	21.5									
27.0	21.4									
41.0	21.4									

STATION 149X

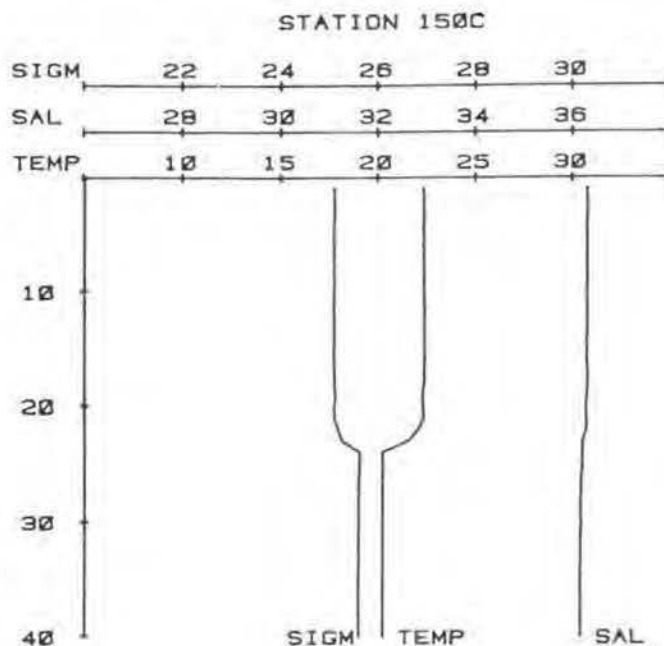


GILLISS CRUISE STA 150C 24/04/79 08.0 GMT CONSEC STA 153
LAT 30 45.3N LONG 80 16.5W DEPTH = 47M DIST LAST STA = 11.5KM

WEATHER DATA
WIND SPEED = 22KTS
WIND DIRECTION = 120
AIR TEMP = 22.2C
WEATHER CODE = 11
BAROMETRIC PRES = 1018.3

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SWA	Q2	Q2'	MOU	PO4	MO3	SI
1.0	22.38	36.38	25.11	287						
2.0	22.38	36.31	25.11	286						
3.0	22.38	36.31	25.11	286	5.11	4.92	-0.19	0.87	0.0	0.9
4.0	22.37	36.29	25.10	287						
5.0	22.37	36.38	25.11	287						
6.0	22.37	36.38	25.11	287						
7.0	22.38	36.38	25.11	287						
8.0	22.38	36.31	25.11	287						
9.0	22.38	36.31	25.11	286						
10.0	22.38	36.29	25.10	288						
11.0	22.39	36.31	25.10	287						
12.0	22.39	36.31	25.10	287						
13.0	22.38	36.34	25.11	287						
14.0	22.38	36.29	25.10	288						
15.0	22.39	36.29	25.10	288						
16.0	22.39	36.29	25.10	288						
17.0	22.37	36.31	25.12	286						
18.0	22.37	36.31	25.11	287						
19.0	22.27	36.29	25.13	285						
20.0	22.31	36.27	25.10	288						
21.0	22.33	36.28	25.10	288	5.11	4.93	-0.18	0.10	0.1	1.6
22.0	22.36	36.28	25.10	288						
23.0	21.58	36.28	25.26	273						
24.0	24.19	36.19	25.43	238						
25.0	21.22	36.24	25.43	239	5.08	5.12	0.04	0.10	0.2	1.1
26.0	20.28	36.17	25.61	240						
27.0	20.21	36.17	25.61	240						
28.0	20.24	36.16	25.60	241						
29.0	20.24	36.16	25.60	241						
30.0	20.24	36.17	25.61	240						
31.0	20.24	36.16	25.60	241						
32.0	20.21	36.16	25.60	241						
33.0	20.24	36.16	25.60	241						
34.0	20.24	36.15	25.59	241						
35.0	20.24	36.15	25.59	242						
36.0	20.24	36.15	25.59	242						
37.0	20.24	36.16	25.60	241						
38.0	20.24	36.16	25.60	241						
39.0	20.24	36.16	25.60	241						
40.0	20.24	36.16	25.60	241	4.98	5.13	0.15	0.14	0.4	1.0

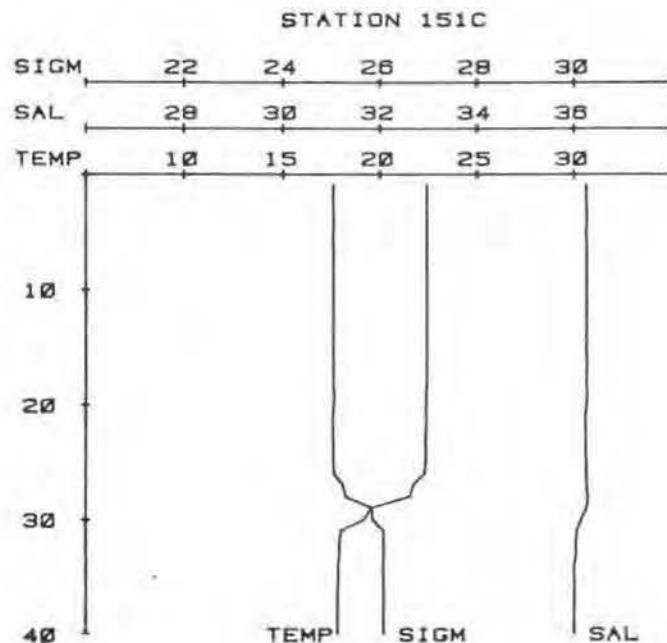


GILLISS CRUISE STA 151C 24/04/79 09.3 GMT CONSEC STA 154
LAT 30 44.1N LONG 80 10.6W DEPTH = 43M DIST LAST STA = 9.7KM

WEATHER DATA
WIND SPEED = 24KTS
WIND DIRECTION = 120
AIR TEMP = 22.2C
WEATHER CODE = 11
BAROMETRIC PRES = 1018.3

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SWA	Q2	Q2'	MOU	PO4	MO3	SI
1.0	22.44	36.25	25.05	292						
2.0	22.44	36.25	25.05	292						
3.0	22.44	36.24	25.06	291						
4.0	22.44	36.24	25.06	291	5.35	4.92	-0.43	0.45	0.0	0.7
5.0	22.44	36.25	25.05	292						
6.0	22.44	36.24	25.06	291						
7.0	22.44	36.24	25.06	291						
8.0	22.44	36.24	25.06	291						
9.0	22.44	36.24	25.06	291						
10.0	22.44	36.24	25.06	292						
11.0	22.45	36.24	25.06	292						
12.0	22.44	36.24	25.06	292						
13.0	22.44	36.24	25.06	292						
14.0	22.44	36.24	25.06	292						
15.0	22.45	36.24	25.06	292						
16.0	22.44	36.27	25.07	291						
17.0	22.44	36.27	25.07	291						
18.0	22.44	36.26	25.06	292						
19.0	22.41	36.28	25.08	290						
20.0	22.40	36.26	25.07	291						
21.0	22.42	36.24	25.05	293						
22.0	22.41	36.25	25.06	292						
23.0	22.38	36.25	25.07	291						
24.0	22.41	36.25	25.06	292						
25.0	22.39	36.26	25.07	291						
26.0	22.32	36.24	25.09	289						
27.0	21.74	36.27	25.26	273						
28.0	21.56	36.29	25.33	266				0.08	0.0	0.6
29.0	19.51	36.26	25.84	216						
30.0	19.17	36.16	25.87	215						
31.0	17.97	36.06	26.10	193						
32.0	17.96	36.04	26.10	193						
33.0	17.89	36.04	26.10	193						
34.0	17.84	36.00	26.09	195						
35.0	17.85	36.01	26.09	194	4.91	5.36	0.45	0.45	3.1	2.1
36.0	17.82	36.01	26.10	194						
37.0	17.81	36.01	26.10	193						
38.0	17.81	36.00	26.09	194						
39.0	17.81	36.00	26.09	194						
40.0	17.81	36.01	26.10	193	4.32	5.37	1.05	0.42	5.2	4.2

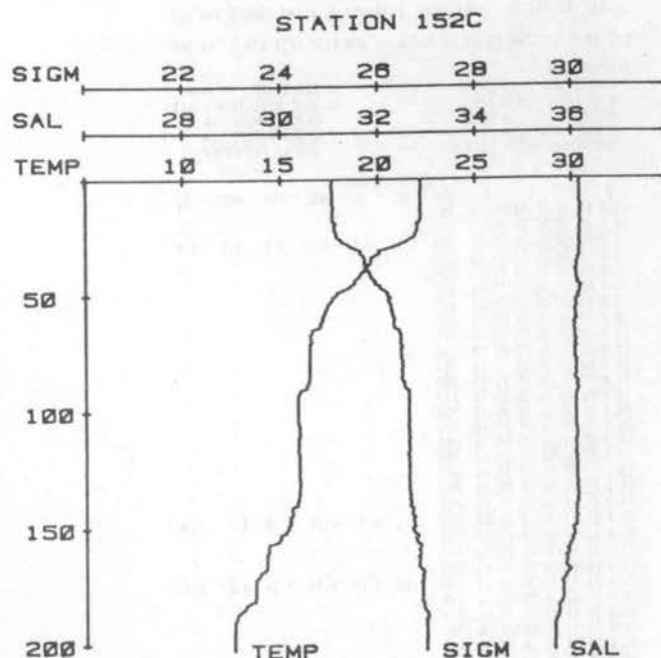


GILLISS CRUISE STA 152C 24/04/79 11.1 GMT CONSEC STA 155
LAT 30 41.7N LONG 79 59.5W DEPTH = 232M DIST LAST STA = 18.2KM

WEATHER DATA
WIND SPEED = 24KTS
WIND DIRECTION = 110
AIR TEMP = 22.2C
WEATHER CODE = X1
BAROMETRIC PRES = 1018.3

SEA STATE = 4
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

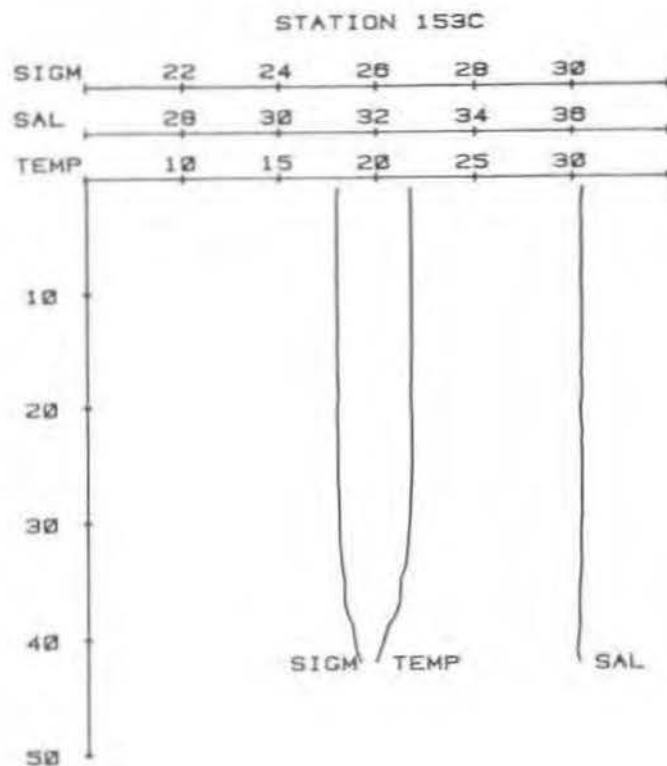
Z	T	S	D	SVA	OBSERVATIONS	Q2	Q2'	ADU	P04	H03	ST
1.0	22.17	36.16	25.86	291							
2.0	22.18	36.14	25.84	293							
3.0	22.19	36.16	25.85	292							
4.0	22.18	36.15	25.85	292							
5.0	22.15	36.15	25.86	291							
6.0	22.15	36.15	25.86	291							
7.0	22.15	36.16	25.86	291							
8.0	22.15	36.16	25.86	291							
9.0	22.15	36.15	25.86	292							
10.0	22.15	36.15	25.86	292							
11.0	22.15	36.17	25.87	290							
12.0	22.13	36.18	25.89	289							
13.0	22.13	36.16	25.87	290							
14.0	22.16	36.17	25.87	291							
15.0	22.15	36.16	25.86	291							
16.0	22.15	36.16	25.86	291							
17.0	22.14	36.16	25.87	291							
18.0	22.18	36.17	25.89	289							
19.0	21.96	36.17	25.13	285							
20.0	21.99	36.15	25.18	288							
21.0	21.96	36.15	25.11	287							
22.0	21.95	36.15	25.11	287							
23.0	21.89	36.16	25.14	284							
24.0	21.86	36.16	25.15	284							
25.0	21.77	36.14	25.16	283							
26.0	21.54	36.15	25.23	276							
27.0	21.38	36.14	25.27	272							
28.0	21.89	36.16	25.36	263							
29.0	21.88	36.15	25.43	257							
30.0	21.43	36.14	25.52	248							
31.0	19.98	36.14	25.64	237							
32.0	20.84	36.14	25.63	238							
33.0	19.84	36.15	25.69	232							
34.0	19.68	36.11	25.72	229							
35.0	19.58	36.11	25.73	229							
36.0	19.57	36.09	25.71	231	4.68	5.19	0.39	0.27	2.3	4.6	
37.0	19.47	36.09	25.74	228							
38.0	19.31	36.08	25.77	224							
39.0	19.38	36.06	25.76	226							
40.0	19.16	36.08	25.81	221	4.76	5.23	0.47	0.37	3.9	3.3	
41.0	19.06	36.08	25.84	218							
42.0	18.99	36.08	25.86	217							
43.0	18.86	36.08	25.89	214							
44.0	18.75	36.11	25.94	209							
45.0	18.76	36.18	25.93	210							
46.0	18.57	36.17	26.03	201							
47.0	18.42	36.15	26.06	198							
48.0	18.16	36.16	26.13	191							
49.0	17.85	36.14	26.19	185							
50.0	17.88	36.11	26.18	186							
51.0	17.62	36.13	26.24	181							
52.0	17.57	36.07	26.21	184							
53.0	17.58	36.07	26.22	182							
54.0	17.39	36.08	26.26	179							
55.0	17.33	36.07	26.26	178							
56.0	17.29	36.05	26.26	179							
57.0	17.22	36.06	26.28	177							
58.0	17.19	36.06	26.29	176							
59.0	17.13	36.06	26.30	175							
60.0	17.08	36.08	26.33	172							
61.0	17.07	36.05	26.31	174							
62.0	16.99	36.03	26.32	174							
63.0	17.01	36.04	26.32	173							
64.0	16.91	36.03	26.33	172							
65.0	16.56	36.04	26.43	163							
66.0	16.54	36.05	26.44	162							
67.0	16.46	36.05	26.46	160							
68.0	16.48	36.05	26.45	161							
69.0	16.50	36.07	26.46	160							
70.0	16.54	36.06	26.45	162							
71.0	16.45	36.05	26.46	160							
72.0	16.44	36.08	26.48	158							
73.0	16.43	36.04	26.46	161							
74.0	16.43	36.05	26.46	160							
75.0	16.43	36.05	26.46	160							
76.0	16.42	36.05	26.47	160							
77.0	16.42	36.05	26.47	160							
78.0	16.42	36.08	26.49	158							
79.0	16.42	36.07	26.48	158							
80.0	16.42	36.08	26.49	158							
81.0	16.42	36.07	26.48	159							
82.0	16.42	36.06	26.47	159	3.67	5.51	1.84	0.78	10.7	6.4	
83.0	16.42	36.07	26.48	159							
84.0	16.42	36.08	26.49	158							
85.0	16.41	36.05	26.47	160							
86.0	16.39	36.05	26.47	160							
87.0	16.38	36.18	26.51	154							
88.0	16.32	36.18	26.53	154							
89.0	16.28	36.09	26.53	154							
90.0	16.25	36.12	26.56	151							
91.0	15.92	36.18	26.62	146							
92.0	15.91	36.08	26.61	147							
93.0	15.82	36.07	26.62	146							
94.0	15.82	36.06	26.61	146							
95.0	15.82	36.07	26.62	146							
96.0	15.82	36.06	26.61	146							
97.0	15.82	36.06	26.61	147							
98.0	15.83	36.07	26.62	146							
99.0	15.83	36.06	26.61	147							
100.0	15.83	36.06	26.61	147							
101.0	15.83	36.07	26.62	146							
102.0	15.83	36.07	26.62	146							
103.0	15.83	36.06	26.61	147							



184.0	15.83	36.07	26.62	146							
185.0	15.86	36.06	26.60	148							
186.0	15.90	36.07	26.60	148							
187.0	15.89	36.08	26.61	147							
188.0	15.90	36.09	26.62	146							
189.0	15.91	36.09	26.61	147							
190.0	15.93	36.09	26.61	147							
191.0	15.85	36.09	26.63	145							
192.0	15.84	36.06	26.61	147							
193.0	15.83	36.06	26.61	147							
194.0	15.83	36.07	26.62	147							
195.0	15.85	36.07	26.61	147							
196.0	15.82	36.07	26.62	146							
197.0	15.84	36.07	26.62	147							
198.0	15.88	36.05	26.59	149							
199.0	15.88	36.08	26.61	147							
200.0	15.88	36.07	26.61	148							
201.0	15.88	36.08	26.61	147							
202.0	15.88	36.09	26.62	146							
203.0	15.88	36.08	26.61	147							
204.0	15.88	36.08	26.61	147							
205.0	15.88	36.09	26.62	147							
206.0	15.89	36.08	26.61	148							
207.0	15.88	36.08	26.61	147							
208.0	15.90	36.08	26.61	148							
209.0	15.92	36.08	26.60	148							
210.0	15.92	36.10	26.62	147							
211.0	15.92	36.09	26.61	148							
212.0	15.92	36.09	26.61	148							
213.0	15.89	36.10	26.63	146							
214.0	15.90	36.09	26.62	147							
215.0	15.88	36.11	26.64	145	3.64	5.57	1.93	0.70	9.0	7.0	
216.0	15.85	36.11	26.64	145							
217.0	15.85	36.09	26.63	146							
218.0	15.88	36.10	26.65	144							
219.0	15.78	36.10	26.65	144							
220.0	15.78	36.07	26.63	146							
221.0	15.52	36.07	26.69	141							
222.0	15.51	36.07	26.69	141							
223.0	15.55	36.07	26.68	141							
224.0	15.55	36.06	26.67	142							
225.0	15.45	36.09	26.72	138							
226.0	15.45	36.06	26.74	140							
227.0	15.41	36.07	26.71	138							
228.0	15.44	36.07	26.71	139							
229.0	15.34	36.07	26.73	137							
230.0	15.32	36.08	26.68	142							
231.0	15.24	36.01	26.71	139							
232.0	15.17	36.02	26.73	137							
233.0	14.91	36.03	26.75	131							
234.0	14.75	35.98	26.75	135							
235.0	14.86	35.97	26.77	133							
236.0	14.78	35.97	26.78	133							
237.0	14.32	35.93	26.85	122							
238.0	14.32	35.92	26.84	127							
239.0	14.32	35.88	26.81	134							
240.0	14.31	35.91	26.83	127							
241.0	14.24	35.91	26.84	127							
242.0	14.23	35.85	26.80	134							
243.0	14.22	35.88	26.83	128							
244.0	14.23	35.86	26.81	129							
245.0	14.22	35.86	26.81	129							
246.0	14.21	35.84	26.80	138							
247.0	14.19	35.89	26.84	124							
248.0	14.12	35.94	26.90	121							

0111100 CRUISE STA 153C 24/04/79 13.5 GHT CONSEC STA 157
 LAT 38 42.8N LONG 88 45.8W DEPTH = 798 DIST LAST STA = 8.8KM
 WEATHER DATA
 WIND SPEED = 24KTS
 WIND DIRECTION = 118
 AIR TEMP = 22.2C
 WEATHER CODE = 82
 PARANETRIC PRES = 1019.8
 SEA STATE = 4
 WAVE DIRECTION = 118
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SWA	Q2	Q2+	ADU	PGA	W03	SI
1.8	25.73	36.19	25.21	277						
2.8	25.73	36.18	25.18	279						
3.8	25.73	36.18	25.18	279						
4.8	25.73	36.17	25.19	279						
5.8	25.73	36.18	25.18	279						
6.8	25.74	36.17	25.19	279						
7.8	25.74	36.17	25.19	279						
8.8	25.73	36.18	25.18	280						
9.8	25.73	36.18	25.18	280						
10.8	25.73	36.17	25.19	279						
11.8	25.73	36.17	25.19	279						
12.8	25.71	36.17	25.24	278						
13.8	25.71	36.17	25.24	279						
14.8	25.71	36.18	25.18	280						
15.8	25.71	36.18	25.19	279						
16.8	25.71	36.17	25.24	278						
17.8	25.71	36.15	25.18	284						
18.8	25.68	36.17	25.29	278						
19.8	25.67	36.17	25.21	278						
20.8	25.71	36.14	25.18	281						
21.8	25.72	36.15	25.18	281						
22.8	25.71	36.17	25.24	279						
23.8	25.72	36.18	25.19	284						
24.8	25.72	36.17	25.19	279						
25.8	25.71	36.17	25.21	279						
26.8	25.71	36.17	25.21	279						
27.8	25.66	36.17	25.21	278						
28.8	25.64	36.17	25.22	277						
29.8	25.64	36.18	25.22	277						
30.8	25.59	36.18	25.22	277						
31.8	25.53	36.15	25.22	276						
32.8	25.54	36.15	25.24	275						
33.8	25.44	36.14	25.24	273						
34.8	25.34	36.15	25.28	271						
35.8	25.32	36.13	25.32	267						
36.8	25.31	36.12	25.32	267						
37.8	25.46	36.11	25.33	267						
38.8	25.45	36.12	25.48	264						
39.8	25.46	36.12	25.58	254						
40.8	25.29	36.09	25.52	248						
41.8	25.40	36.07	25.56	244						
42.8	19.87	36.11	25.45	234						



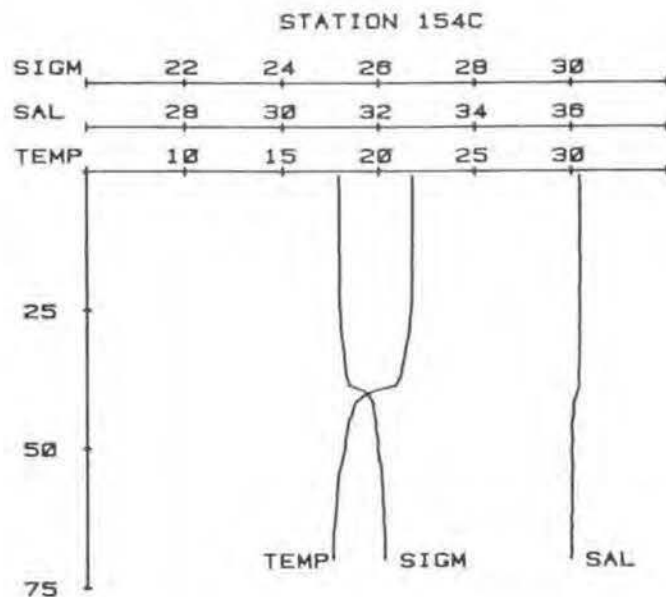
GILLISS CRUISE STA 153C 24/04/79 12.9 GMT CONSEC STA 156
 LAT 30 42.8N LONG 01 05.0W DEPTH = 80N DIST LAST STA = 9.0KM

WEATHER DATA
 WIND SPEED = 24KTS
 WIND DIRECTION = 110
 AIR TEMP = 22.2C
 WEATHER CODE = X2
 BAROMETRIC PRES = 1019.0
 SEA STATE = 4
 WAVE DIRECTION = 110
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	ADU	PD4	NO3	SI
1.0	21.66	36.20	25.23	275	.	.	.	.	.	.
2.0	21.66	36.20	25.23	275	.	.	.	.	.	.
3.0	21.66	36.16	25.20	278	.	.	.	.	.	.
4.0	21.66	36.17	25.21	277	.	.	.	.	.	.
5.0	21.66	36.16	25.20	278	.	.	.	.	.	.
6.0	21.66	36.17	25.21	277	.	.	.	.	.	.
7.0	21.66	36.16	25.20	278	.	.	.	.	.	.
8.0	21.66	36.17	25.21	277	.	.	.	.	.	.
9.0	21.66	36.17	25.21	277	5.33	4.99	-0.34	0.09	0.0	0.0
10.0	21.67	36.17	25.21	277	.	.	.	.	.	.
11.0	21.67	36.16	25.20	278	.	.	.	.	.	.
12.0	21.67	36.17	25.21	277	.	.	.	.	.	.
13.0	21.67	36.18	25.21	277	.	.	.	.	.	.
14.0	21.67	36.18	25.21	277	.	.	.	.	.	.
15.0	21.67	36.16	25.20	278	.	.	.	.	.	.
16.0	21.67	36.17	25.21	278	.	.	.	.	.	.
17.0	21.67	36.16	25.20	278	.	.	.	.	.	.
18.0	21.67	36.17	25.21	278	.	.	.	.	.	.
19.0	21.67	36.17	25.21	278	.	.	.	.	.	.
20.0	21.67	36.17	25.21	278	.	.	.	.	.	.
21.0	21.67	36.16	25.20	278	.	.	.	.	.	.
22.0	21.67	36.16	25.20	279	.	.	.	.	.	.
23.0	21.66	36.17	25.21	278	.	.	.	.	.	.
24.0	21.66	36.17	25.21	278	.	.	.	.	.	.
25.0	21.66	36.16	25.20	278	.	.	.	.	.	.
26.0	21.63	36.17	25.22	277	.	.	.	.	.	.
27.0	21.58	36.17	25.23	276	.	.	.	.	.	.
28.0	21.60	36.15	25.21	278	.	.	.	.	.	.
29.0	21.58	36.17	25.23	276	.	.	.	.	.	.
30.0	21.35	36.16	25.29	270	5.30	5.02	-0.28	0.10	0.0	0.0
31.0	21.28	36.15	25.30	269	.	.	.	.	.	.
32.0	21.16	36.14	25.33	267	.	.	.	.	.	.
33.0	21.12	36.14	25.34	266	.	.	.	.	.	.
34.0	20.89	36.12	25.38	261	.	.	.	.	.	.
35.0	20.72	36.10	25.42	258	.	.	.	.	.	.
36.0	20.71	36.10	25.42	258	.	.	.	.	.	.
37.0	20.52	36.10	25.47	253	.	.	.	.	.	.
38.0	20.29	36.12	25.55	246	.	.	.	.	.	.
39.0	19.99	36.10	25.61	240	.	.	.	.	.	.
40.0	19.51	36.09	25.73	229	.	.	.	.	.	.
41.0	19.45	36.08	25.74	228	.	.	.	.	.	.
42.0	19.28	36.03	25.74	227	.	.	.	.	.	.
43.0	19.24	36.04	25.76	226	.	.	.	.	.	.
44.0	19.09	36.05	25.81	221	.	.	.	.	.	.
45.0	19.07	36.04	25.81	222	.	.	.	.	.	.
46.0	19.05	36.05	25.82	220	.	.	.	.	.	.
47.0	19.05	36.05	25.82	220	.	.	.	.	.	.
48.0	18.95	36.05	25.84	210	.	.	.	.	.	.
49.0	18.84	36.05	25.87	215	.	.	.	.	.	.
50.0	18.76	36.06	25.90	213	5.40	5.27	-0.13	0.22	1.5	0.4
51.0	18.70	36.04	25.90	213	.	.	.	.	.	.
52.0	18.56	36.05	25.94	209	.	.	.	.	.	.
53.0	18.33	36.07	26.02	202	.	.	.	.	.	.
54.0	18.07	36.05	26.07	197	.	.	.	.	.	.
55.0	17.95	36.05	26.10	194	.	.	.	.	.	.
56.0	17.81	36.05	26.13	191	.	.	.	.	.	.
57.0	17.46	36.04	26.21	184	5.01	5.40	0.39	0.30	3.3	1.1
58.0	17.38	36.01	26.23	184	.	.	.	.	.	.
59.0	17.33	36.01	26.23	183	.	.	.	.	.	.
60.0	17.34	36.02	26.22	182	.	.	.	.	.	.
61.0	17.33	36.01	26.22	183	.	.	.	.	.	.
62.0	17.32	36.02	26.23	182	.	.	.	.	.	.
63.0	17.32	36.00	26.21	184	.	.	.	.	.	.
64.0	17.31	36.01	26.22	183	.	.	.	.	.	.
65.0	17.31	35.99	26.21	184	.	.	.	.	.	.
66.0	17.30	36.03	26.24	181	.	.	.	.	.	.
67.0	17.30	36.02	26.23	182	.	.	.	.	.	.
68.0	17.25	36.02	26.24	181	.	.	.	.	.	.
69.0	17.11	36.03	26.29	177	.	.	.	.	.	.
70.0	17.09	35.98	26.25	180	4.24	5.44	1.20	0.53	7.1	5.1
71.0	17.08	36.01	26.28	178	.	.	.	.	.	.
72.0	17.05	36.01	26.29	177	.	.	.	.	.	.

WILLISS CRUISE STA 154C 24/04/79 17.0 GHT CONSEC STA 158
 LAT. 31 42.5N LONG 08 03.0W DEPTH = 75M DIST LAST STA = 3.2KM
 WEATHER DATA: WIND SPEED = 21KTS WIND DIRECTION = 110 AIR TEMP = 21.3C WEATHER CODE = 02 BAROMETRIC PRES = 1018.6
 SEA STATE = 4 WAVE DIRECTION = 130 CLOUD TYPE = CLOUD AMOUNT = VISIBILITY CODE =

		OBSERVATIONS								
		Z	Y	S	0	SVA	Q2	Q2'	ADU	PO4
1.0	21.76	36.17	25.18	279						
2.0	21.76	36.18	25.19	279						
3.0	21.76	36.19	25.20	278						
4.0	21.76	36.18	25.19	279						
5.0	21.76	36.19	25.20	278						
6.0	21.76	36.18	25.19	279						
7.0	21.76	36.19	25.20	278						
8.0	21.76	36.18	25.19	279						
9.0	21.76	36.19	25.20	278						
10.0	21.76	36.18	25.19	279						
11.0	21.76	36.19	25.20	278						
12.0	21.75	36.18	25.19	279						
13.0	21.76	36.18	25.19	279						
14.0	21.75	36.17	25.18	280						
15.0	21.75	36.19	25.20	278						
16.0	21.74	36.24	25.21	277						
17.0	21.74	36.19	25.20	278						
18.0	21.74	36.19	25.20	278						
19.0	21.74	36.19	25.20	278						
20.0	21.73	36.19	25.21	278						
21.0	21.73	36.19	25.21	279						
22.0	21.73	36.19	25.21	279						
23.0	21.73	36.18	25.21	278						
24.0	21.74	36.18	25.21	278						
25.0	21.68	36.18	25.21	277						
26.0	21.64	36.18	25.22	276						
27.0	21.61	36.18	25.23	276						
28.0	21.60	36.17	25.23	276						
29.0	21.57	36.18	25.24	275						
30.0	21.53	36.18	25.25	274						
31.0	21.44	36.18	25.28	271						
32.0	21.41	36.17	25.28	271						
33.0	21.34	36.18	25.31	269						
34.0	21.31	36.17	25.31	269						
35.0	21.25	36.17	25.32	267						
36.0	21.18	36.16	25.34	266						
37.0	21.15	36.16	25.34	265						
38.0	21.04	36.16	25.37	263						
39.0	20.98	36.17	25.42	258						
40.0	19.78	36.14	25.72	234						
41.0	19.15	36.18	25.83	219						
42.0	18.75	36.05	25.98	213						
43.0	18.60	36.05	26.05	211						
44.0	18.08	36.05	26.15	209						
45.0	18.48	36.02	26.26	207						
46.0	18.30	36.01	26.25	206						
47.0	18.35	36.01	26.27	206						
48.0	18.27	36.02	26.29	204						
49.0	18.24	36.03	26.31	202						
50.0	18.23	36.01	26.29	204						
51.0	18.15	36.01	26.32	202						
52.0	18.11	36.01	26.32	201						
53.0	18.02	36.03	26.36	197						
54.0	17.95	36.02	26.37	196						
55.0	17.88	36.01	26.38	196						
56.0	17.86	36.01	26.39	195						
57.0	17.84	36.01	26.39	195						
58.0	17.81	36.01	26.38	194						
59.0	17.81	36.01	26.38	194						
60.0	17.79	36.01	26.38	194						
61.0	17.75	36.02	26.32	192						
62.0	17.72	36.01	26.32	192						
63.0	17.69	35.98	26.31	194						
64.0	17.68	36.01	26.33	191						
65.0	17.61	35.99	26.33	191						
66.0	17.61	36.01	26.34	191						
67.0	17.61	35.99	26.34	191						
68.0	17.59	36.01	26.35	191						
69.0	17.59	36.01	26.35	191						
70.0	17.59	35.98	26.33	191						

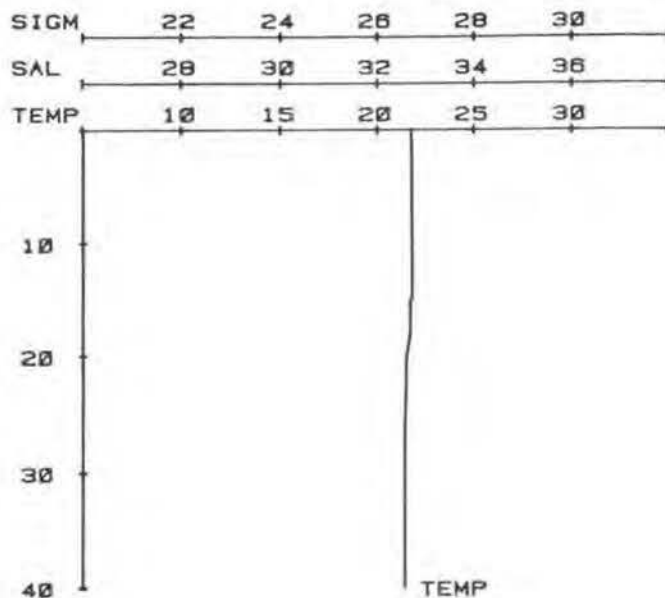


GILLISS CRUISE STA 155X 24/04/79 19.5 GMT CONSEC STA 159
LAT 39 47.0N LONG 01 23.3W DEPTH = 40M DIST LAST STA = 33.4KM

WEATHER DATA
WIND SPEED = 21KTS
WIND DIRECTION = 110
AIR TEMP = 23.3C
WEATHER CODE = X2
BAROMETRIC PRES = 1016.0
SEA STATE = 4
WAVE DIRECTION = 130
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	D	SVA	O2	O2'	AQU	PO4	NO3	SI
1.0	21.8	1	4	2	2	2	2	2	2	2
15.0	21.8	1	4	2	2	2	2	2	2	2
15.0	21.7	1	4	2	2	2	2	2	2	2
18.0	21.7	1	4	2	2	2	2	2	2	2
20.0	21.5	1	4	2	2	2	2	2	2	2
26.0	21.4	1	4	2	2	2	2	2	2	2
40.0	21.4	1	4	2	2	2	2	2	2	2

STATION 155X

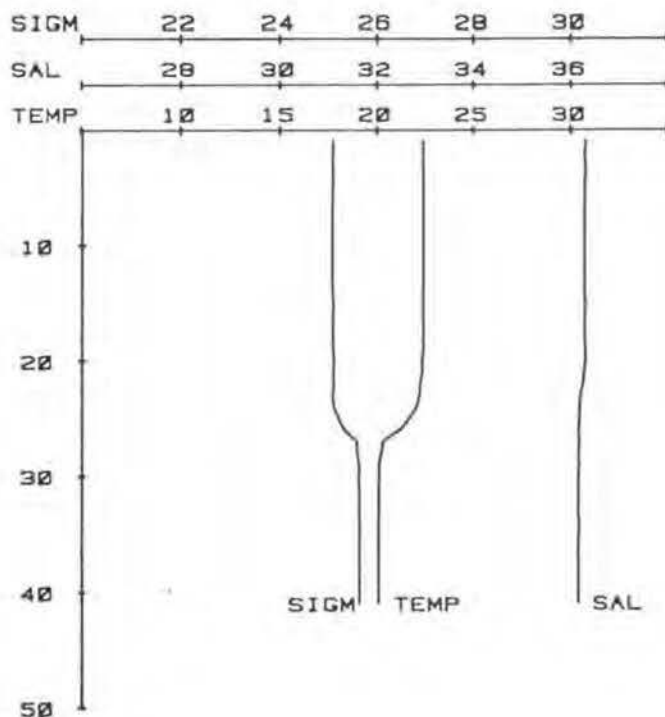


GILLISS CRUISE STA 156C 24/04/79 20.6 GMT CONSEC STA 160
LAT 39 45.3N LONG 01 16.0W DEPTH = 43M DIST LAST STA = 18.0KM

WEATHER DATA
WIND SPEED = 24KTS
WIND DIRECTION = 110
AIR TEMP = 22.0C
WEATHER CODE = X2
BAROMETRIC PRES = 1016.0
SEA STATE = 5
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	D	SVA	O2	O2'	AQU	PO4	NO3	SI
1.0	22.41	34.29	25.89	288	1	1	1	1	1	1
2.0	22.41	34.28	25.88	289	1	1	1	1	1	1
3.0	22.41	34.29	25.89	288	1	1	1	1	1	1
4.0	22.41	34.29	25.89	288	1	1	1	1	1	1
5.0	22.41	34.28	25.88	289	1	1	1	1	1	1
6.0	22.41	34.28	25.88	289	1	1	1	1	1	1
7.0	22.42	34.27	25.87	290	1	1	1	1	1	1
8.0	22.41	34.28	25.88	289	1	1	1	1	1	1
9.0	22.41	34.27	25.87	290	1	1	1	1	1	1
10.0	22.41	34.27	25.87	290	1	1	1	1	1	1
11.0	22.41	34.28	25.88	289	1	1	1	1	1	1
12.0	22.41	34.27	25.87	290	1	1	1	1	1	1
13.0	22.40	34.28	25.88	289	1	1	1	1	1	1
14.0	22.39	34.27	25.88	289	1	1	1	1	1	1
15.0	22.38	34.18	25.11	287	1	1	1	1	1	1
16.0	22.39	34.28	25.89	289	1	1	1	1	1	1
17.0	22.40	34.28	25.88	289	1	1	1	1	1	1
18.0	22.39	34.28	25.89	289	1	1	1	1	1	1
19.0	22.37	34.29	25.18	288	1	1	1	1	1	1
20.0	22.33	34.29	25.11	287	1	1	1	1	1	1
21.0	22.33	34.26	25.09	289	1	1	1	1	1	1
22.0	22.22	34.24	25.11	287	1	1	1	1	1	1
23.0	22.17	34.18	25.07	290	1	1	1	1	1	1
24.0	22.03	34.17	25.11	287	1	1	1	1	1	1
25.0	21.63	34.14	25.21	278	1	1	1	1	1	1
26.0	21.18	34.15	25.33	266	1	1	1	1	1	1
27.0	20.27	34.16	25.58	242	1	1	1	1	1	1
28.0	20.18	34.15	25.68	241	1	1	1	1	1	1
29.0	20.07	34.16	25.64	237	1	1	1	1	1	1
30.0	20.08	34.14	25.62	239	1	1	1	1	1	1
31.0	20.05	34.15	25.63	238	1	1	1	1	1	1
32.0	20.05	34.14	25.63	238	1	1	1	1	1	1
33.0	20.05	34.14	25.63	238	1	1	1	1	1	1
34.0	20.04	34.16	25.64	237	1	1	1	1	1	1
35.0	20.04	34.15	25.64	237	1	1	1	1	1	1
36.0	20.04	34.14	25.63	238	1	1	1	1	1	1
37.0	20.04	34.14	25.63	238	1	1	1	1	1	1
38.0	20.03	34.15	25.64	237	1	1	1	1	1	1
39.0	20.04	34.14	25.63	238	1	1	1	1	1	1
40.0	20.04	34.14	25.63	238	1	1	1	1	1	1
41.0	20.04	34.14	25.63	238	1	1	1	1	1	1

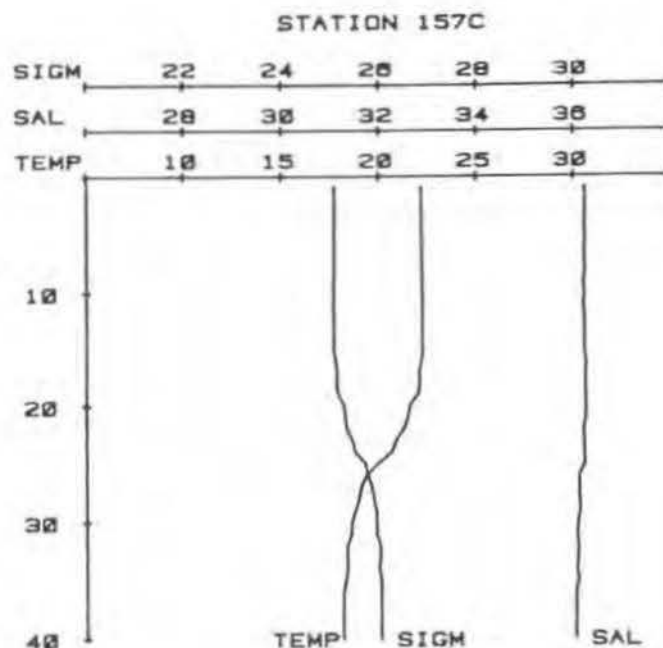
STATION 156C



GILLISS CRUISE STA 157C 24/04/79 21.8 GAT CONSEC STA 141
LAT 38 43.84 LONG 08 18.64 DEPTH = 44M DIST LAST STA = 18.34M

WEATHER DATA
WIND SPEED = 22KTS
WIND DIRECTION = 110
AIR TEMP = 22.0C
WEATHER CODE = 02
BAROMETRIC PRESS = 1016.6
SEA STATE = 5
WAVE DIRECTION = 120
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	B	SW	Q2	Q2'	ADU	PO4	NO3
1.8	22.28	36.23	25.18	287					
2.8	22.28	36.23	25.18	287					
3.8	22.28	36.23	25.18	287					
4.8	22.28	36.23	25.18	288	5.33	4.94	-0.39	0.45	0.8
5.8	22.21	36.23	25.18	287					
6.8	22.21	36.23	25.18	288					
7.8	22.21	36.23	25.18	288					
8.8	22.21	36.23	25.18	287					
9.8	22.21	36.23	25.18	294					
10.8	22.21	36.23	25.18	288					
11.8	22.21	36.23	25.18	298					
12.8	22.21	36.23	25.18	288					
13.8	22.21	36.23	25.18	288					
14.8	22.21	36.23	25.18	288					
15.8	22.21	36.23	25.18	288					
16.8	22.15	36.23	25.13	285					
17.8	22.13	36.24	25.16	282					
18.8	22.15	36.24	25.15	283	5.19	4.95	-0.24	0.40	0.1
19.8	21.97	36.25	25.10	284					
20.8	21.54	36.25	25.14	268					
21.8	21.43	36.25	25.33	266					
22.8	21.21	36.28	25.36	263					
23.8	21.02	36.22	25.48	262					
24.8	20.62	36.22	25.53	247					
25.8	19.89	36.23	25.74	228					
26.8	19.31	36.11	25.84	222					
27.8	19.05	36.11	25.84	215					
28.8	18.94	36.12	25.91	212					
29.8	18.75	36.13	25.96	247					
30.8	18.58	36.18	25.96	286					
31.8	18.57	36.17	25.96	287					
32.8	18.34	36.19	26.03	288					
33.8	18.34	36.18	26.02	281					
34.8	18.33	36.16	26.01	282	4.67	5.21	0.44	0.32	4.1
35.8	18.25	36.19	26.05	198					
36.8	18.13	36.14	26.04	199					
37.8	18.14	36.14	26.04	199					
38.8	18.12	36.14	26.05	198					
39.8	18.13	36.13	26.04	199					
40.8	18.12	36.14	26.05	199	4.55	5.33	0.78	0.32	4.4

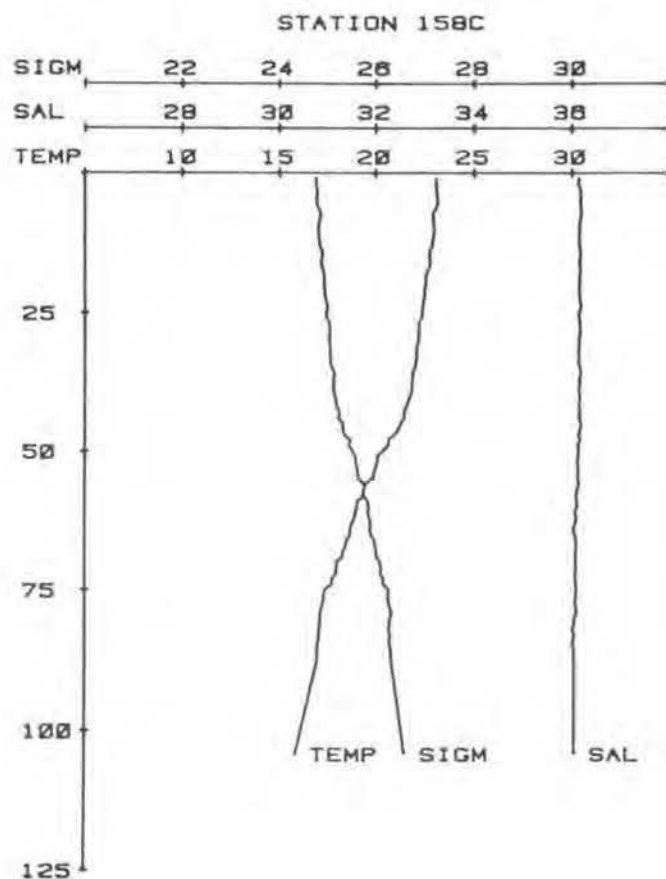


GILLISS CRUISE STA 158C 25/04/79 10.1 GMT CONSEC STA 162
LAT 30 42.4N LONG 79 58.5W DEPTH = 235M DIST LAST STA = 19.5KM

WEATHER DATA
WIND SPEED = 25KTS
WIND DIRECTION = 110
AIR TEMP = 22.8C
WEATHER CODE = 12
BAROMETRIC PRES = 1016.3

SEA STATE = 5
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	D	SWA	Q2	Q2'	MOU	PO4	NO3
1.0	23.07	36.14	24.79	317					
2.0	23.07	36.14	24.79	317					
3.0	23.09	36.18	24.81	315					
4.0	23.11	36.18	24.81	315			0.09	0.1	3.0
5.0	23.14	36.18	24.81	314					
6.0	23.08	36.19	24.82	314					
7.0	22.91	36.20	24.88	309					
8.0	22.91	36.19	24.86	311					
9.0	22.93	36.16	24.84	312					
10.0	22.96	36.16	24.83	313					
11.0	22.93	36.16	24.84	312					
12.0	22.87	36.16	24.86	311					
13.0	22.85	36.16	24.86	311					
14.0	22.73	36.18	24.91	305					
15.0	22.74	36.18	24.91	306					
16.0	22.76	36.18	24.89	308					
17.0	22.73	36.18	24.91	305					
18.0	22.56	36.17	24.96	302					
19.0	22.53	36.16	24.96	302					
20.0	22.54	36.16	24.95	302					
21.0	22.47	36.16	24.97	300					
22.0	22.47	36.16	24.97	300					
23.0	22.41	36.18	25.01	297					
24.0	22.37	36.19	25.03	295					
25.0	22.36	36.15	25.00	298					
26.0	22.32	36.15	25.01	297					
27.0	22.15	36.17	25.07	291					
28.0	22.17	36.18	25.07	291					
29.0	22.14	36.17	25.08	291					
30.0	22.14	36.15	25.06	292					
31.0	22.06	36.16	25.09	289					
32.0	22.04	36.14	25.08	290			0.10	0.7	1.0
33.0	22.04	36.16	25.10	289					
34.0	22.01	36.14	25.09	289					
35.0	21.99	36.17	25.12	287					
36.0	21.86	36.19	25.17	282					
37.0	21.87	36.17	25.15	284					
38.0	21.83	36.17	25.16	283					
39.0	21.85	36.16	25.15	284					
40.0	21.77	36.17	25.18	281					
41.0	21.67	36.18	25.21	278					
42.0	21.56	36.15	25.22	277					
43.0	21.44	36.18	25.28	272					
44.0	21.44	36.15	25.26	274					
45.0	21.25	36.20	25.35	265			0.12	1.1	2.5
46.0	21.15	36.18	25.36	264					
47.0	21.09	36.15	25.38	262					
48.0	20.65	36.18	25.51	251					
49.0	20.63	36.14	25.47	254					
50.0	20.37	36.15	25.55	246					
51.0	20.09	36.13	25.61	241					
52.0	20.07	36.13	25.61	240					
53.0	19.98	36.14	25.64	237					
54.0	19.90	36.13	25.66	236					
55.0	19.05	36.14	25.68	234					
56.0	19.44	36.15	25.79	223					
57.0	19.39	36.11	25.78	225					
58.0	19.34	36.18	25.78	224					
59.0	19.06	36.11	25.86	217					
60.0	19.02	36.12	25.88	215			0.35	5.3	4.4
61.0	18.95	36.07	25.86	217					
62.0	18.89	36.10	25.91	213					
63.0	18.76	36.08	25.92	212					
64.0	18.68	36.14	25.91	213					
65.0	18.69	36.07	25.93	211					
66.0	18.51	36.18	25.99	204					
67.0	18.43	36.18	26.01	203					
68.0	18.31	36.09	26.04	200					
69.0	18.28	36.09	26.04	200			0.39	6.2	3.7
70.0	18.01	36.09	26.11	193					
71.0	17.96	36.18	26.13	191					
72.0	17.96	36.08	26.12	193					
73.0	17.75	36.09	26.10	187					
74.0	17.74	36.09	26.10	187					
75.0	17.38	36.11	26.28	177					
76.0	17.31	36.09	26.28	177					
77.0	17.31	36.08	26.28	178					
78.0	17.19	36.18	26.32	174					
79.0	17.15	36.12	26.35	171					
80.0	17.14	36.07	26.31	175					
81.0	17.12	36.06	26.31	175					
82.0	17.09	36.03	26.29	177					
83.0	17.08	36.06	26.32	174					
84.0	17.15	36.14	26.31	175					
85.0	17.08	36.14	26.33	174					
86.0	17.08	36.17	26.34	172					
87.0	17.08	36.06	26.34	173					
88.0	16.96	36.07	26.35	171					
89.0	15.87	36.07	26.41	147			0.70	11.6	6.2



GILLISS CRUISE STA 159X 25/04/79 01.0 GMT CONSEC STA 163
LAT 30 42.0N LONG 79 54.9W DEPTH = 320M DIST LAST STA = 5.0KM

WEATHER DATA
WIND SPEED = 23KTS
WIND DIRECTION = 110
AIR TEMP = 22.0C
WEATHER CODE = 12
BAROMETRIC PRES = 1016.0
SEA STATE = 5
WAVE DIRECTION = 110
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	25.0									
2.0	25.3									
3.0	25.4									
4.0	25.4									
5.0	25.4									
6.0	25.4									
7.0	25.4									
8.0	25.4									
9.0	25.4									
10.0	25.4									
11.0	25.4									
12.0	25.4									
13.0	25.4									
14.0	25.4									
15.0	25.4									
16.0	25.4									
17.0	25.4									
18.0	25.4									
19.0	25.4									
20.0	25.4									
21.0	25.4									
22.0	25.4									
23.0	25.4									
24.0	25.4									
25.0	25.4									
26.0	25.4									
27.0	25.4									
28.0	25.4									
29.0	25.4									
30.0	25.4									
31.0	25.4									
32.0	25.4									
33.0	25.4									
34.0	25.4									
35.0	25.4									
36.0	25.4									
37.0	25.4									
38.0	25.4									
39.0	25.4									
40.0	25.4									
41.0	25.4									
42.0	25.4									
43.0	25.4									
44.0	25.4									
45.0	25.4									
46.0	25.4									
47.0	25.4									
48.0	25.4									
49.0	25.4									
50.0	25.4									
51.0	25.4									
52.0	25.4									
53.0	25.4									
54.0	25.4									
55.0	25.4									
56.0	25.4									
57.0	25.4									
58.0	25.4									
59.0	25.4									
60.0	25.4									
61.0	25.4									
62.0	25.4									
63.0	25.4									
64.0	25.4									
65.0	25.4									
66.0	25.4									
67.0	25.4									
68.0	25.4									
69.0	25.4									
70.0	25.4									
71.0	25.4									
72.0	25.4									
73.0	25.4									
74.0	25.4									
75.0	25.4									
76.0	25.4									
77.0	25.4									
78.0	25.4									
79.0	25.4									
80.0	25.4									
81.0	25.4									
82.0	25.4									
83.0	25.4									
84.0	25.4									
85.0	25.4									
86.0	25.4									
87.0	25.4									
88.0	25.4									
89.0	25.4									
90.0	25.4									
91.0	25.4									
92.0	25.4									
93.0	25.4									
94.0	25.4									
95.0	25.4									
96.0	25.4									
97.0	25.4									
98.0	25.4									
99.0	25.4									
100.0	25.4									
101.0	25.4									
102.0	25.4									
103.0	25.4									
104.0	25.4									
105.0	25.4									
106.0	25.4									
107.0	25.4									
108.0	25.4									
109.0	25.4									
110.0	25.4									
111.0	25.4									
112.0	25.4									
113.0	25.4									
114.0	25.4									
115.0	25.4									
116.0	25.4									
117.0	25.4									
118.0	25.4									
119.0	25.4									
120.0	25.4									
121.0	25.4									
122.0	25.4									
123.0	25.4									
124.0	25.4									
125.0	25.4									
126.0	25.4									
127.0	25.4									
128.0	25.4									
129.0	25.4									
130.0	25.4									
131.0	25.4									
132.0	25.4									
133.0	25.4									
134.0	25.4									
135.0	25.4									
136.0	25.4									
137.0	25.4									
138.0	25.4									
139.0	25.4									
140.0	25.4									
141.0	25.4									
142.0	25.4									
143.0	25.4									
144.0	25.4									
145.0	25.4									
146.0	25.4									
147.0	25.4									
148.0	25.4									
149.0	25.4									
150.0	25.4									
151.0	25.4									
152.0	25.4									
153.0	25.4									
154.0	25.4									
155.0	25.4									
156.0	25.4									
157.0	25.4									
158.0	25.4									
159.0	25.4									
160.0	25.4									
161.0	25.4									
162.0	25.4									
163.0	25.4									
164.0	25.4									
165.0	25.4									
166.0	25.4									
167.0	25.4									
168.0	25.4									
169.0	25.4									
170.0	25.4									
171.0	25.4									
172.0	25.4									
173.0	25.4									
174.0	25.4									
175.0	25.4									
176.0	25.4									
177.0	25.4									
178.0	25.4									
179.0	25.4									
180.0	25.4									
181.0	25.4									
182.0	25.4									
183.0	25.4									
184.0	25.4									
185.0	25.4									
186.0	25.4									
187.0	25.4									
188.0	25.4									
189.0	25.4									
190.0	25.4									
191.0	25.4									
192.0	25.4									
193.0	25.4									
194.0	25.4									
195.0	25.4									
196.0	25.4									
197.0	25.4									
198.0	25.4									
199.0	25.4									
200.0	25.4									

STATION 15

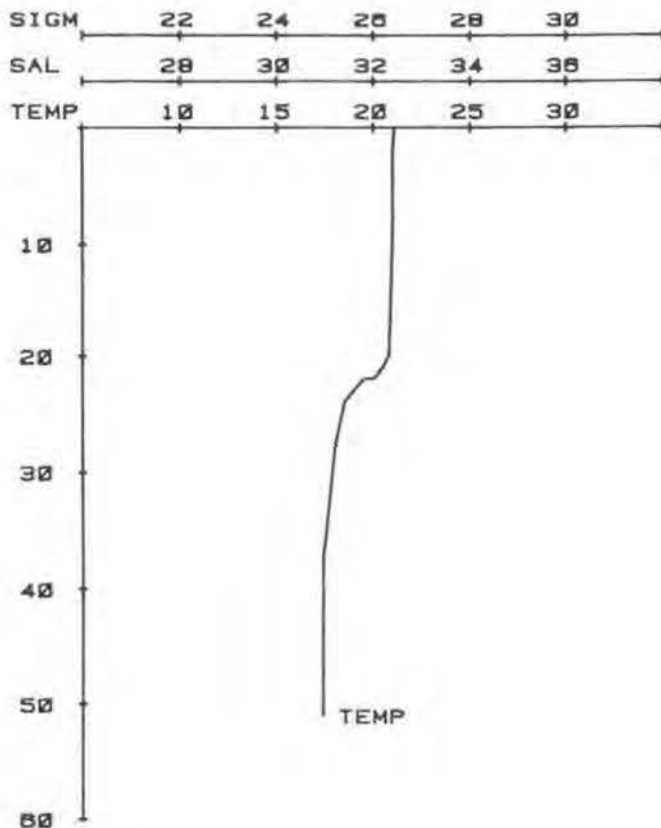
GILLISS CRUISE STA 166Z 26/04/79 21.7 GMT CONSEC STA 170
LAT 30 59.0N LONG 79 58.0W DEPTH = 51M DIST LAST STA = 0.9KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 210
AIR TEMP = 23.3C
WEATHER CODE = X1
BAROMETRIC PRES = 1007.1

SEA STATE = 4
WAVE DIRECTION = 210
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	21.1									
2.0	21.0									
0.0	21.0									
21.0	20.0									
21.0	20.5									
22.0	20.0									
22.0	19.5									
23.0	19.0									
24.0	18.5									
26.0	18.0									
36.0	17.5									
37.0	17.4									
51.0	17.4									

STATION 166X



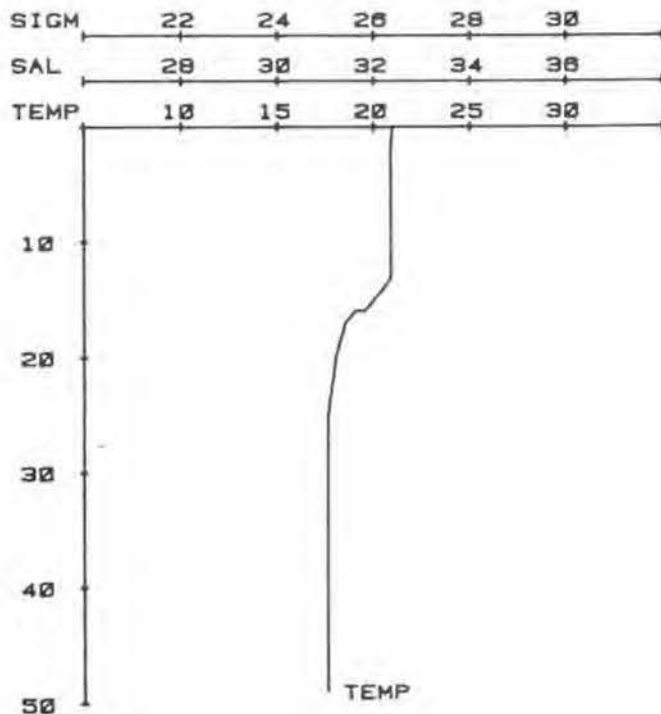
GILLISS CRUISE STA 167X 26/04/79 22.2 GMT CONSEC STA 171
LAT 30 55.5N LONG 80 01.3W DEPTH = 49M DIST LAST STA = 0.9KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 210
AIR TEMP = 22.2C
WEATHER CODE = X2
BAROMETRIC PRES = 1007.1

SEA STATE = 4
WAVE DIRECTION = 190
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	21.0									
2.0	20.9									
13.0	20.9									
14.0	20.5									
15.0	20.0									
16.0	19.5									
16.0	19.0									
17.0	18.5									
28.0	18.0									
25.0	17.4									
49.0	17.6									

STATION 167X



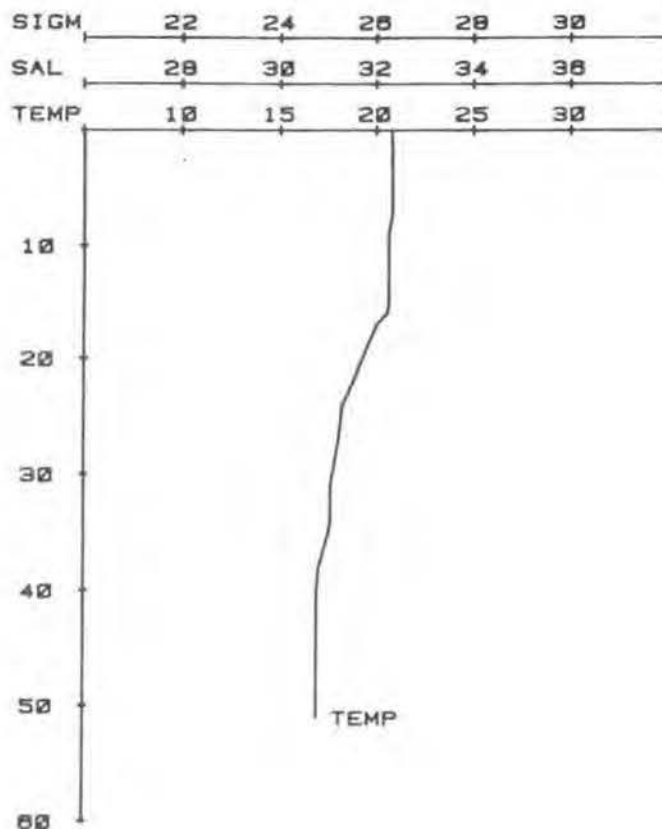
GILLISS CRUISE STA 168X 26/04/79 22.6 GMT CONSEC STA 172
LAT 38 52.0N LONG 04 02.5W DEPTH = 51M DIST LAST STA = 6.8KM

WEATHER DATA
WIND SPEED = 16KTS
WIND DIRECTION = 280
AIR TEMP = 22.2C
WEATHER CODE = 32
BAROMETRIC PRES = 1017.1

SEA STATE = 4
WAVE DIRECTION = 190
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	NOU	PO4	NO3	SI
8.0	28.0	*	*	*	*	*	*	*	*	*
7.0	28.0	*	*	*	*	*	*	*	*	*
9.0	28.0	*	*	*	*	*	*	*	*	*
15.0	28.6	*	*	*	*	*	*	*	*	*
16.0	29.5	*	*	*	*	*	*	*	*	*
17.0	21.0	*	*	*	*	*	*	*	*	*
19.0	19.5	*	*	*	*	*	*	*	*	*
21.0	19.0	*	*	*	*	*	*	*	*	*
23.0	18.5	*	*	*	*	*	*	*	*	*
24.0	18.2	*	*	*	*	*	*	*	*	*
27.0	18.0	*	*	*	*	*	*	*	*	*
31.0	17.1	*	*	*	*	*	*	*	*	*
34.0	17.6	*	*	*	*	*	*	*	*	*
35.0	17.5	*	*	*	*	*	*	*	*	*
38.0	17.0	*	*	*	*	*	*	*	*	*
48.0	16.9	*	*	*	*	*	*	*	*	*
51.0	16.9	*	*	*	*	*	*	*	*	*

STATION 168X



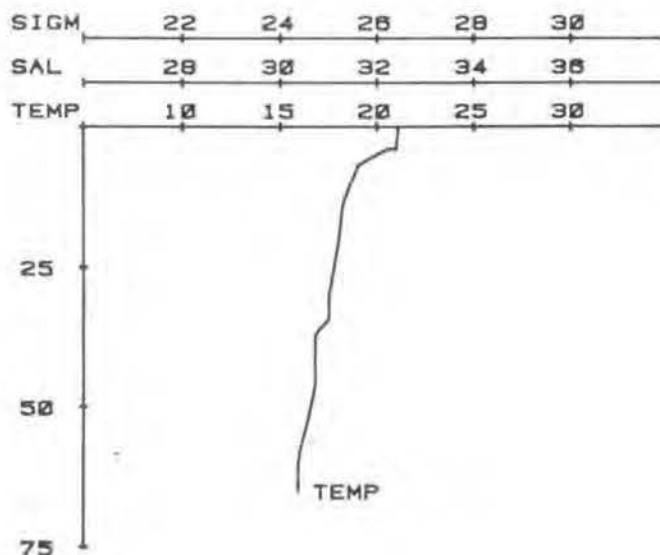
GILLISS CRUISE STA 169X 26/04/79 23.0 GMT CONSEC STA 173
LAT 38 47.5N LONG 04 03.7W DEPTH = 65M DIST LAST STA = 8.6KM

WEATHER DATA
WIND SPEED = 16KTS
WIND DIRECTION = 280
AIR TEMP = 22.2C
WEATHER CODE = 32
BAROMETRIC PRES = 1017.1

SEA STATE = 4
WAVE DIRECTION = 190
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	NOU	PO4	NO3	SI
8.0	21.1	*	*	*	*	*	*	*	*	*
4.0	21.0	*	*	*	*	*	*	*	*	*
4.0	20.5	*	*	*	*	*	*	*	*	*
5.0	20.0	*	*	*	*	*	*	*	*	*
6.0	19.5	*	*	*	*	*	*	*	*	*
7.0	19.0	*	*	*	*	*	*	*	*	*
11.0	18.5	*	*	*	*	*	*	*	*	*
14.0	18.2	*	*	*	*	*	*	*	*	*
20.0	18.0	*	*	*	*	*	*	*	*	*
30.0	17.5	*	*	*	*	*	*	*	*	*
34.0	17.5	*	*	*	*	*	*	*	*	*
36.0	17.0	*	*	*	*	*	*	*	*	*
37.0	16.0	*	*	*	*	*	*	*	*	*
46.0	16.0	*	*	*	*	*	*	*	*	*
51.0	16.5	*	*	*	*	*	*	*	*	*
58.0	16.0	*	*	*	*	*	*	*	*	*
60.0	15.9	*	*	*	*	*	*	*	*	*
65.0	15.9	*	*	*	*	*	*	*	*	*

STATION 169X

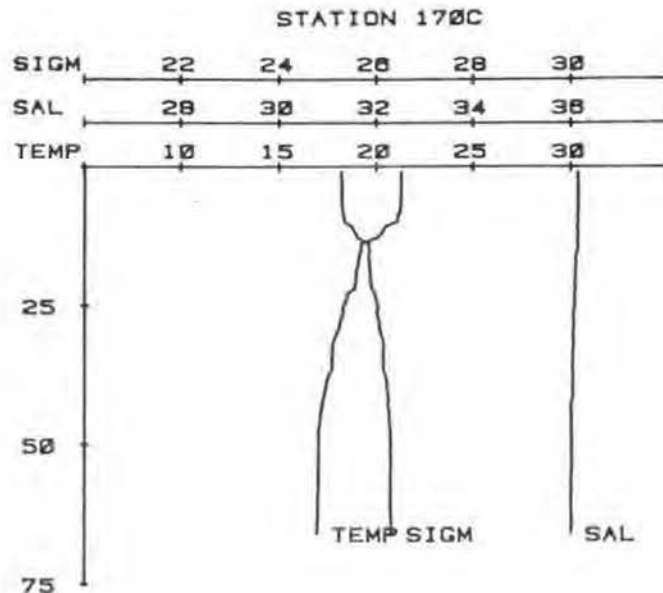


GILLISS CRUISE STA 170C 26/04/79 23.0 GHT CONSEC STA 17A
 LAT 38 42.7N LONG 08 06.0W DEPTH = 70M DIST LAST STA = 9.6KM

WEATHER DATA
 WIND SPEED = 16KTS
 WIND DIRECTION = 200
 AIR TEMP = 22.2C
 WEATHER CODE = X1
 BAROMETRIC PRES = 1007.1

SEA STATE = 3
 WAVE DIRECTION = 190
 CLOUD TYPE = 4
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	AQU	PD4	NO3	SI
1.0	21.29	36.14	25.29	269						
2.0	21.29	36.15	25.30	268						
3.0	21.28	36.15	25.30	268						
4.0	21.28	36.15	25.30	268				0.00	0.0	0.0
5.0	21.28	36.15	25.30	268						
6.0	21.27	36.15	25.30	268						
7.0	21.24	36.15	25.31	267						
8.0	21.21	36.14	25.31	267						
9.0	21.19	36.14	25.34	264						
10.0	21.08	36.15	25.36	263						
11.0	20.44	36.13	25.51	248				0.09	0.0	0.0
12.0	20.27	36.15	25.57	242						
13.0	20.03	36.14	25.63	237						
14.0	19.28	36.14	25.85	216				0.19	1.0	1.0
15.0	19.10	36.15	25.86	215						
16.0	19.10	36.18	25.84	217						
17.0	19.04	36.18	25.86	214						
18.0	18.99	36.18	25.87	214						
19.0	18.92	36.09	25.80	213						
20.0	18.92	36.18	25.89	213						
21.0	18.88	36.08	25.89	213						
22.0	18.82	36.18	25.92	210				0.37	4.5	3.2
23.0	18.46	36.07	25.98	204						
24.0	18.45	36.08	25.99	203						
25.0	18.28	36.00	26.04	190						
26.0	18.27	36.05	26.02	201						
27.0	18.18	36.05	26.04	199						
28.0	18.08	36.06	26.07	196						
29.0	18.05	36.05	26.07	196						
30.0	17.91	36.04	26.10	193						
31.0	17.79	36.05	26.10	190						
32.0	17.71	36.05	26.10	188						
33.0	17.70	36.04	26.15	188						
34.0	17.69	36.04	26.15	188						
35.0	17.69	36.04	26.15	188						
36.0	17.68	36.03	26.15	189						
37.0	17.67	36.04	26.16	188						
38.0	17.49	36.05	26.21	183						
39.0	17.39	36.04	26.23	181						
40.0	17.37	36.04	26.23	181						
41.0	17.31	36.04	26.25	179						
42.0	17.25	36.05	26.27	178						
43.0	17.18	36.08	26.25	180						
44.0	17.12	36.01	26.27	178						
45.0	17.08	36.01	26.28	177				0.44	6.2	4.2
46.0	17.06	36.01	26.28	176						
47.0	17.00	36.01	26.30	175						
48.0	17.00	36.01	26.30	175						
49.0	16.99	36.02	26.31	174						
50.0	17.00	36.02	26.31	174						
51.0	17.00	36.01	26.30	175						
52.0	17.00	36.02	26.31	174						
53.0	17.00	36.02	26.31	174						
54.0	16.98	36.02	26.31	174						
55.0	16.99	36.01	26.30	175						
56.0	16.98	36.01	26.30	175						
57.0	16.99	36.00	26.29	174						
58.0	16.99	36.02	26.31	175						
59.0	16.96	36.00	26.30	175						
60.0	16.96	36.01	26.31	174				0.53	7.7	5.0
61.0	16.96	36.00	26.30	175						
62.0	16.96	36.01	26.31	174						
63.0	16.96	36.02	26.31	174						
64.0	16.93	36.02	26.32	173						
65.0	16.93	36.01	26.31	174						
66.0	16.89	36.00	26.32	174						

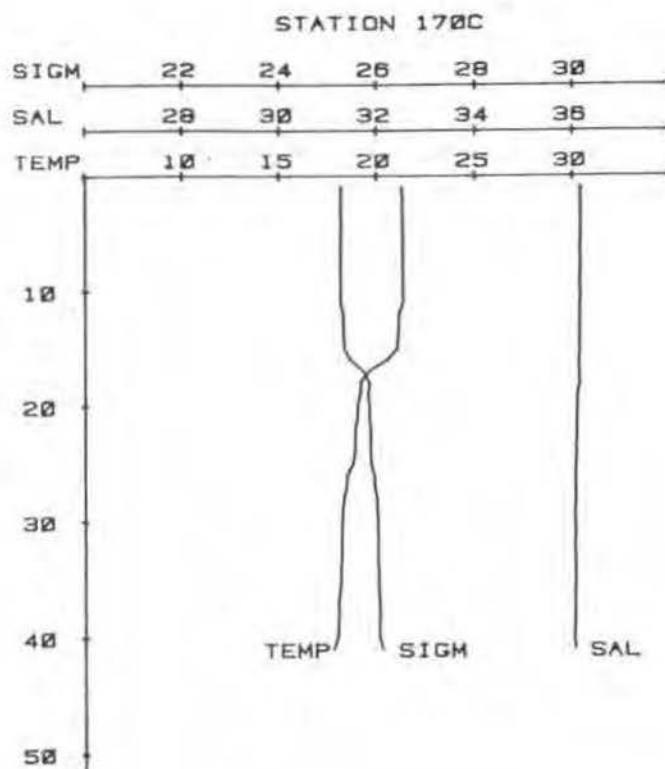


GILLISS CRUISE STA 170C 27/04/79 01.6 GMT CONSEC STA 175
LAT 38 42.5N LONG 01 05.0W DEPTH = 85M DIST LAST STA = 0.5KM

WEATHER DATA
WIND SPEED = 14KTS
WIND DIRECTION = 290
AIR TEMP = 22.2C
WEATHER CODE = XI
BAROMETRIC PRES = 1007.5

SEA STATE = 3
WAVE DIRECTION = 190
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SVA	O2	O2'	AOI	PO4	NO3	SI
1.0	21.34	36.16	25.29	269						
2.0	21.34	36.16	25.29	269						
3.0	21.34	36.16	25.29	269						
4.0	21.35	36.16	25.29	269						
5.0	21.35	36.16	25.29	269						
6.0	21.35	36.15	25.28	270						
7.0	21.35	36.16	25.29	269						
8.0	21.35	36.16	25.29	270						
9.0	21.35	36.15	25.28	270						
10.0	21.35	36.16	25.29	270						
11.0	21.35	36.15	25.28	270						
12.0	21.12	36.15	25.34	264						
13.0	21.12	36.15	25.34	264						
14.0	21.06	36.14	25.35	264						
15.0	21.03	36.15	25.37	262						
16.0	21.50	36.13	25.40	252						
17.0	19.64	36.14	25.73	227						
18.0	19.17	36.15	25.86	215						
19.0	19.14	36.18	25.83	210						
20.0	19.01	36.18	25.87	215						
21.0	18.99	36.07	25.86	215						
22.0	18.89	36.07	25.89	213						
23.0	18.88	36.08	25.87	213						
24.0	18.87	36.08	25.89	213						
25.0	18.77	36.07	25.91	211						
26.0	18.58	36.06	25.97	206						
27.0	18.44	36.06	25.98	204						
28.0	18.32	36.07	26.02	201						
29.0	18.24	36.05	26.02	200						
30.0	18.22	36.06	26.04	199						
31.0	18.20	36.06	26.04	199						
32.0	18.20	36.05	26.03	199						
33.0	18.20	36.06	26.04	199						
34.0	18.16	36.06	26.05	198						
35.0	18.17	36.06	26.05	198						
36.0	18.09	36.05	26.06	197						
37.0	18.04	36.05	26.07	196						
38.0	18.04	36.05	26.07	196						
39.0	18.02	36.04	26.07	196						
40.0	17.99	36.03	26.07	196						
41.0	17.00	36.06	26.14	190						



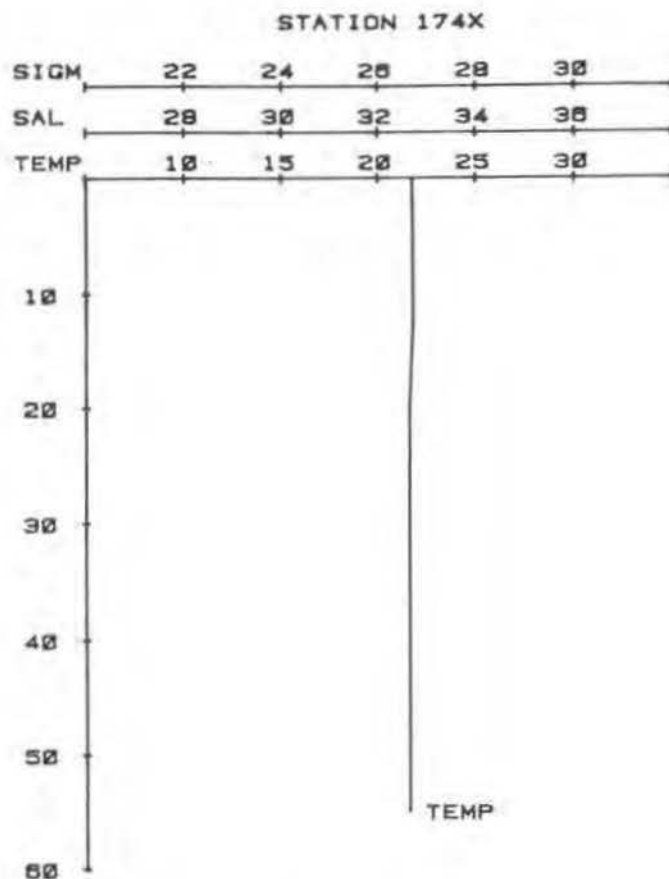
GILLISS CRUISE STA 174X 27/04/79 04.2 GMT CONSEC STA 179
LAT 31 46.9W LONG 08 23.4W DEPTH = 55M DIST LAST STA = 29.2KM

WEATHER DATA
WIND SPEED = 24KTS
WIND DIRECTION = 220
AIR TEMP = 22.2C
WEATHER CODE = 01
BAROMETRIC PRES = 1017.0

SEA STATE = 3
WAVE DIRECTION = 220
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS

Z	T	S	0	SVA	O2	O2'	AOU	P04	M03	S1
0.0	21.8									
12.0	21.8									
20.0	21.4									
55.0	21.4									



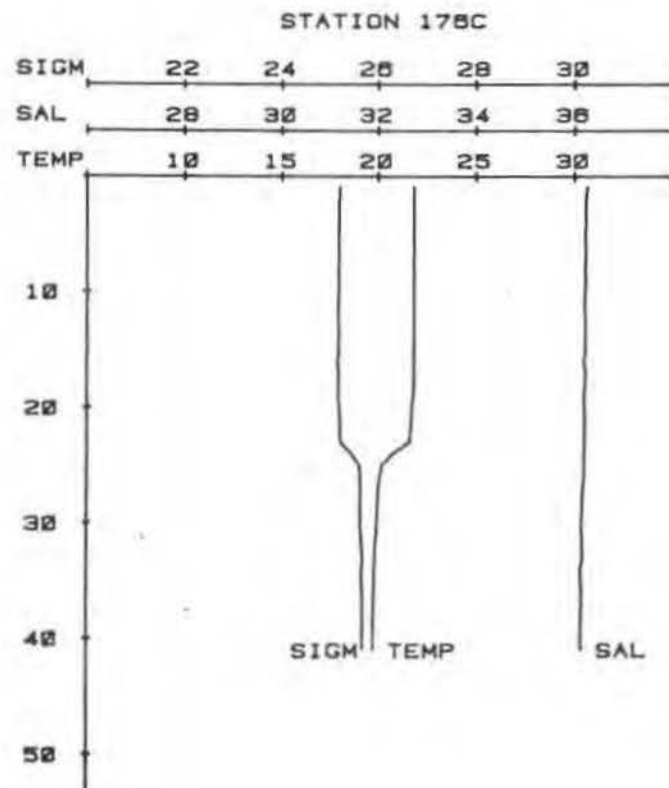
GILLISS CRUISE STA 176C 27/04/79 05.1 GMT CONSEC STA 181
LAT 31 45.2W LONG 08 16.4W DEPTH = 43M DIST LAST STA = 11.6KM

WEATHER DATA
WIND SPEED = 18KTS
WIND DIRECTION = 220
AIR TEMP = 22.2C
WEATHER CODE = 01
BAROMETRIC PRES = 1000.0

SEA STATE = 3
WAVE DIRECTION = 220
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS

Z	T	S	0	SVA	O2	O2'	AOU	P04	M03	S1
1.0	21.05	36.25	25.22	276						
2.0	21.05	36.23	25.20	277						
3.0	21.05	36.23	25.20	278						
4.0	21.05	36.23	25.20	279						
5.0	21.05	36.22	25.19	279						
6.0	21.05	36.23	25.20	278						
7.0	21.05	36.23	25.20	278						
8.0	21.05	36.22	25.19	278						
9.0	21.05	36.23	25.20	278						
10.0	21.05	36.22	25.19	277						
11.0	21.05	36.21	25.19	279						
12.0	21.05	36.22	25.19	279						
13.0	21.05	36.23	25.20	278						
14.0	21.05	36.22	25.19	279						
15.0	21.04	36.23	25.21	278						
16.0	21.05	36.21	25.18	280						
17.0	21.05	36.23	25.20	278						
18.0	21.05	36.22	25.19	279						
19.0	21.04	36.20	25.17	277						
20.0	21.24	36.21	25.22	277						
21.0	21.22	36.22	25.23	275				0.47	0.0	0.0
22.0	21.49	36.21	25.23	275						
23.0	21.43	36.21	25.25	274						
24.0	20.76	36.24	25.48	252						
25.0	20.19	36.28	25.63	237						
26.0	20.49	36.28	25.66	235						
27.0	20.81	36.17	25.66	235						
28.0	20.80	36.16	25.65	235				0.15	1.0	2.1
29.0	19.97	36.16	25.66	235						
30.0	19.93	36.14	25.66	235						
31.0	19.91	36.16	25.60	233						
32.0	19.86	36.16	25.69	232						
33.0	19.83	36.17	25.71	231						
34.0	19.81	36.13	25.60	233						
35.0	19.81	36.14	25.67	232						
36.0	19.79	36.15	25.71	231						
37.0	19.78	36.15	25.70	231						
38.0	19.77	36.14	25.70	231						
39.0	19.75	36.14	25.71	231						
40.0	19.74	36.13	25.70	232						
41.0	19.74	36.13	25.70	232				0.12	0.0	1.4

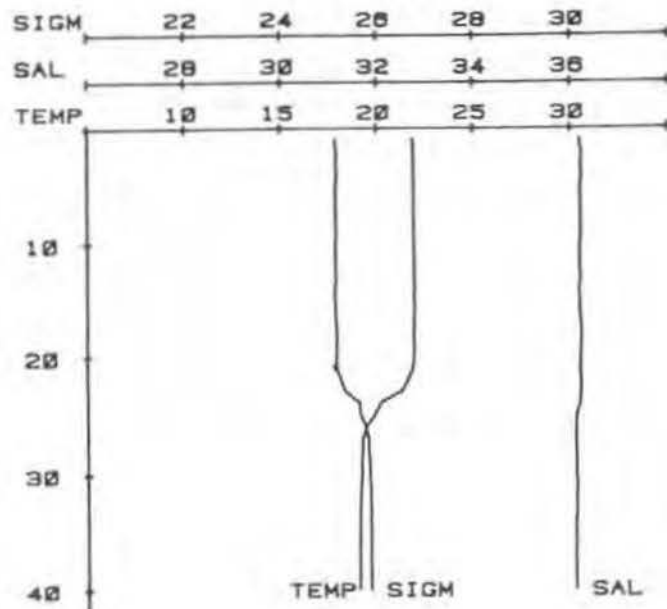


GILLISS CRUISE STA 177C 27/04/79 05.9 GMT CONSEC STA 102
LAT 38 43.0N LONG 04 11.0W DEPTH = 410 DIST LAST STA = 9.0KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 220
AIR TEMP = 22.2C
WEATHER CODE = 11
BAROMETRIC PRES = 1009.0
SEA STATE = 3
WAVE DIRECTION = 220
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	P	SWA	O2	O2'	AOI	PO4	NO3
1.0	21.93	36.19	25.15	202					
2.0	21.93	36.23	25.18	200					
3.0	21.93	36.21	25.16	201					
4.0	21.93	36.23	25.18	200					
5.0	21.93	36.24	25.16	202					
6.0	21.93	36.21	25.16	201					
7.0	21.93	36.21	25.16	201					
8.0	21.93	36.22	25.17	201					
9.0	21.93	36.22	25.17	201					
10.0	21.93	36.24	25.16	202					
11.0	21.93	36.24	25.16	202					
12.0	21.93	36.24	25.16	202					
13.0	21.93	36.22	25.17	201					
14.0	21.93	36.18	25.14	204					
15.0	21.93	36.24	25.16	202					
16.0	21.93	36.24	25.16	202					
17.0	21.92	36.22	25.18	201					
18.0	21.91	36.23	25.19	204					
19.0	21.92	36.22	25.18	201					
20.0	21.91	36.21	25.17	201					
21.0	21.84	36.24	25.18	200					
22.0	21.59	36.22	25.27	272					
23.0	21.26	36.21	25.35	264					
24.0	21.14	36.29	25.64	234					
25.0	19.84	36.12	25.67	234					
26.0	19.48	36.11	25.77	234					
27.0	19.19	36.11	25.82	219					
28.0	19.18	36.11	25.83	219					
29.0	19.14	36.12	25.85	217					
30.0	19.14	36.11	25.84	218					
31.0	19.14	36.13	25.87	215					
32.0	19.07	36.11	25.84	216					
33.0	19.05	36.12	25.87	215					
34.0	19.04	36.18	25.84	216					
35.0	19.03	36.18	25.86	216					
36.0	19.03	36.18	25.86	216					
37.0	19.02	36.07	25.86	217					
38.0	19.02	36.18	25.86	216					
39.0	19.01	36.18	25.87	216					
40.0	19.01	36.18	25.87	216					

STATION 177C



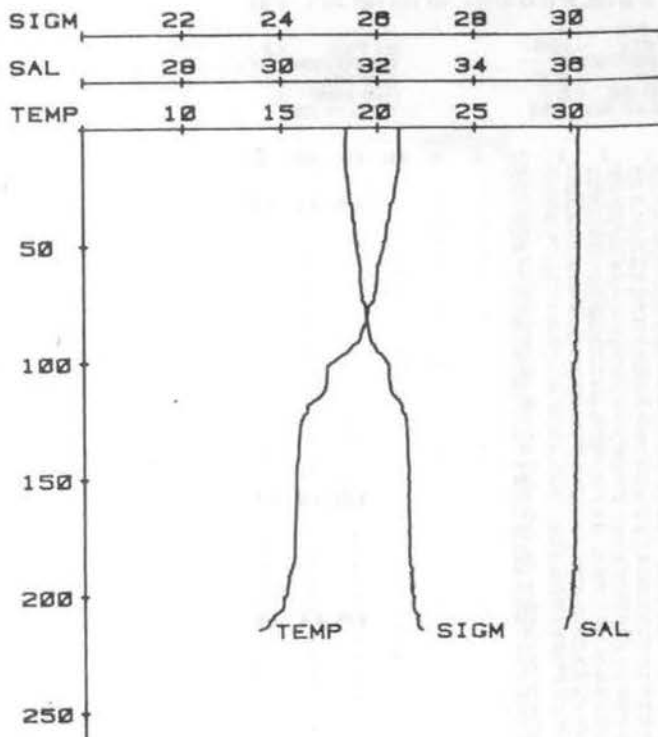
GILLISS CRUISE STA 178C 27/04/79 07.3 GMT CONSEC STA 183
LAT 39 41.6N LONG 79 59.2W DEPTH = 242M DIST LAST STA = 19.2KM

WEATHER DATA
WIND SPEED = 24KTS
WIND DIRECTION = 220
AIR TEMP = 22.2C
WEATHER CODE = 11
BAROMETRIC PRES = 1008.0

SEA STATE = 3
WAVE DIRECTION = 220
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	0	SVA	Q2	Q2'	AOU	P04	M03	SI
1.0	21.12	36.16	25.35	263						
2.0	21.12	36.16	25.35	263						
3.0	21.11	36.15	25.35	264				1.47	0.2	0.5
4.0	21.11	36.15	25.35	264						
5.0	21.11	36.14	25.34	265						
6.0	21.11	36.13	25.33	265						
7.0	21.11	36.14	25.34	265						
8.0	21.11	36.14	25.34	265						
9.0	21.11	36.14	25.34	265						
10.0	21.10	36.14	25.34	264						
11.0	21.11	36.14	25.34	265						
12.0	21.11	36.14	25.34	265						
13.0	21.11	36.14	25.34	265						
14.0	21.09	36.14	25.34	264						
15.0	21.07	36.14	25.35	264						
16.0	21.06	36.13	25.35	264						
17.0	21.07	36.14	25.35	264						
18.0	21.06	36.14	25.35	264						
19.0	21.02	36.14	25.36	263						
20.0	21.01	36.14	25.37	263						
21.0	20.95	36.14	25.38	261						
22.0	20.94	36.14	25.39	261						
23.0	20.93	36.13	25.38	261						
24.0	20.90	36.14	25.48	260						
25.0	20.89	36.13	25.39	260						
26.0	20.86	36.14	25.41	259						
27.0	20.85	36.13	25.48	259						
28.0	20.83	36.14	25.42	258						
29.0	20.82	36.14	25.42	258						
30.0	20.81	36.14	25.42	258						
31.0	20.77	36.14	25.43	257						
32.0	20.75	36.12	25.42	258						
33.0	20.64	36.14	25.47	253						
34.0	20.62	36.14	25.47	253						
35.0	20.60	36.15	25.49	252						
36.0	20.58	36.14	25.48	252						
37.0	20.57	36.13	25.48	252						
38.0	20.56	36.14	25.49	252						
39.0	20.55	36.14	25.49	251						
40.0	20.51	36.14	25.51	250						
41.0	20.45	36.15	25.53	248						
42.0	20.42	36.14	25.53	248						
43.0	20.42	36.13	25.52	249						
44.0	20.41	36.13	25.52	248						
45.0	20.39	36.13	25.53	247						
46.0	20.39	36.15	25.54	247						
47.0	20.38	36.13	25.53	248						
48.0	20.36	36.14	25.54	247						
49.0	20.29	36.15	25.57	244						
50.0	20.27	36.12	25.55	246						
51.0	20.25	36.14	25.57	244						
52.0	20.23	36.13	25.57	244						
53.0	20.19	36.13	25.58	243						
54.0	20.16	36.13	25.59	243						
55.0	20.10	36.13	25.61	241						
56.0	20.10	36.13	25.61	241						
57.0	20.04	36.13	25.62	240						
58.0	20.03	36.13	25.62	239						
59.0	19.95	36.11	25.63	239						
60.0	19.95	36.13	25.64	238						
61.0	19.94	36.12	25.64	238						
62.0	19.93	36.11	25.63	239						
63.0	19.91	36.11	25.64	238						
64.0	19.91	36.11	25.64	238						
65.0	19.91	36.09	25.62	241						
66.0	19.91	36.11	25.64	238						
67.0	19.87	36.09	25.64	237						
68.0	19.87	36.12	25.66	237						
69.0	19.86	36.10	25.65	238						
70.0	19.84	36.12	25.67	236						
71.0	19.79	36.10	25.66	234						
72.0	19.74	36.12	25.69	234						
73.0	19.76	36.10	25.67	235						
74.0	19.74	36.10	25.68	235						
75.0	19.66	36.13	25.72	231						
76.0	19.53	36.10	25.73	231						
77.0	19.46	36.12	25.77	227						
78.0	19.46	36.10	25.75	228						
79.0	19.44	36.09	25.75	227						
80.0	19.43	36.10	25.76	227						
81.0	19.41	36.09	25.76	227						
82.0	19.38	36.09	25.76	227						
83.0	19.34	36.10	25.78	225						
84.0	19.29	36.10	25.79	224						
85.0	19.21	36.09	25.81	223						
86.0	19.19	36.09	25.81	222						
87.0	19.11	36.07	25.82	222						
88.0	19.09	36.08	25.83	221						
89.0	19.04	36.07	25.84	220						
90.0	19.03	36.08	25.85	219						
91.0	18.98	36.08	25.86	218						
92.0	18.91	36.08	25.88	216						
93.0	18.67	36.05	25.92	213						
94.0	18.57	36.06	25.95	211						
95.0	18.48	36.06	25.97	208						

STATION 178C



96.0	18.38	36.06	26.00	205					
97.0	18.21	36.07	26.06	199					
98.0	18.00	36.08	26.11	195					
99.0	17.84	36.08	26.15	191					
100.0	17.78	36.07	26.17	189					
101.0	17.49	36.06	26.22	184					
102.0	17.33	36.02	26.23	184					
103.0	17.31	36.03	26.24	182					
104.0	17.31	36.03	26.24	182					
105.0	17.30	36.01	26.23	184			0.52	6.9	4.6
106.0	17.30	36.02	26.23	183					
107.0	17.30	36.02	26.23	183					
108.0	17.28	36.02	26.24	183					
109.0	17.28	36.05	26.26	180					
110.0	17.27	36.03	26.25	182					
111.0	17.22	36.05	26.28	179					
112.0	17.21	36.03	26.26	180					
113.0	17.14	36.04	26.29	178					
114.0	17.07	36.04	26.31	177					
115.0	16.95	36.06	26.35	172					
116.0	16.83	36.07	26.38	169					
117.0	16.57	36.07	26.45	163					
118.0	16.43	36.06	26.47	161					
119.0	16.28	36.04	26.49	159					
120.0	16.31	36.07	26.51	157					
121.0	16.29	36.05	26.50	158					
122.0	16.26	36.07	26.52	156					
123.0	16.18	36.08	26.56	152					
124.0	16.08	36.08	26.57	152					
125.0	15.99	36.08	26.59	151					

126.0	15.99	36.08	26.59	150	.	.	.	.	.
127.0	15.93	36.07	26.59	149	.	.	.	.	.
128.0	15.92	36.07	26.60	149	.	.	.	.	.
129.0	15.90	36.08	26.61	148	.	.	.	.	.
130.0	15.89	36.07	26.60	148	.	.	.	.	.
131.0	15.88	36.06	26.60	149	.	8.67	9.5	5.5	.
132.0	15.88	36.07	26.61	148	.	.	.	.	.
133.0	15.85	36.07	26.61	148	.	.	.	.	.
134.0	15.86	36.07	26.61	148	.	.	.	.	.
135.0	15.84	36.07	26.62	147	.	.	.	.	.
136.0	15.84	36.07	26.62	147	.	.	.	.	.
137.0	15.84	36.07	26.62	148	.	.	.	.	.
138.0	15.83	36.07	26.62	147	.	.	.	.	.
139.0	15.83	36.07	26.62	147	.	.	.	.	.
140.0	15.82	36.07	26.62	147	.	.	.	.	.
141.0	15.81	36.06	26.61	148	.	.	.	.	.
142.0	15.79	36.07	26.63	147	.	.	.	.	.
143.0	15.76	36.06	26.63	147	.	.	.	.	.
144.0	15.73	36.06	26.63	146	.	.	.	.	.
145.0	15.72	36.06	26.64	146	.	.	.	.	.
146.0	15.72	36.07	26.64	145	.	.	.	.	.
147.0	15.72	36.07	26.64	145	.	.	.	.	.
148.0	15.71	36.06	26.64	146	.	.	.	.	.
149.0	15.71	36.06	26.64	146	.	.	.	.	.
150.0	15.71	36.04	26.62	147	.	.	.	.	.
151.0	15.71	36.05	26.63	147	.	8.59	9.3	6.8	.
152.0	15.70	36.07	26.65	145	.	.	.	.	.
153.0	15.70	36.06	26.64	146	.	.	.	.	.
154.0	15.70	36.05	26.63	146	.	.	.	.	.
155.0	15.71	36.06	26.64	146	.	.	.	.	.
156.0	15.70	36.06	26.64	146	.	.	.	.	.
157.0	15.70	36.04	26.62	147	.	.	.	.	.
158.0	15.69	36.04	26.63	147	.	.	.	.	.
159.0	15.69	36.05	26.63	146	.	.	.	.	.
160.0	15.68	36.05	26.64	146	.	.	.	.	.
161.0	15.68	36.05	26.64	146	.	.	.	.	.
162.0	15.68	36.04	26.63	147	.	.	.	.	.
163.0	15.67	36.05	26.64	146	.	.	.	.	.
164.0	15.67	36.05	26.64	146	.	.	.	.	.
165.0	15.67	36.05	26.64	146	.	.	.	.	.
166.0	15.67	36.04	26.63	147	.	.	.	.	.
167.0	15.66	36.05	26.64	146	.	.	.	.	.
168.0	15.64	36.04	26.64	146	.	.	.	.	.
169.0	15.64	36.05	26.65	146	.	.	.	.	.
170.0	15.63	36.05	26.65	145	.	.	.	.	.
171.0	15.63	36.04	26.64	146	.	.	.	.	.
172.0	15.63	36.05	26.65	145	.	.	.	.	.
173.0	15.62	36.02	26.63	147	.	.	.	.	.
174.0	15.62	36.04	26.64	146	.	.	.	.	.
175.0	15.61	36.04	26.65	146	.	.	.	.	.

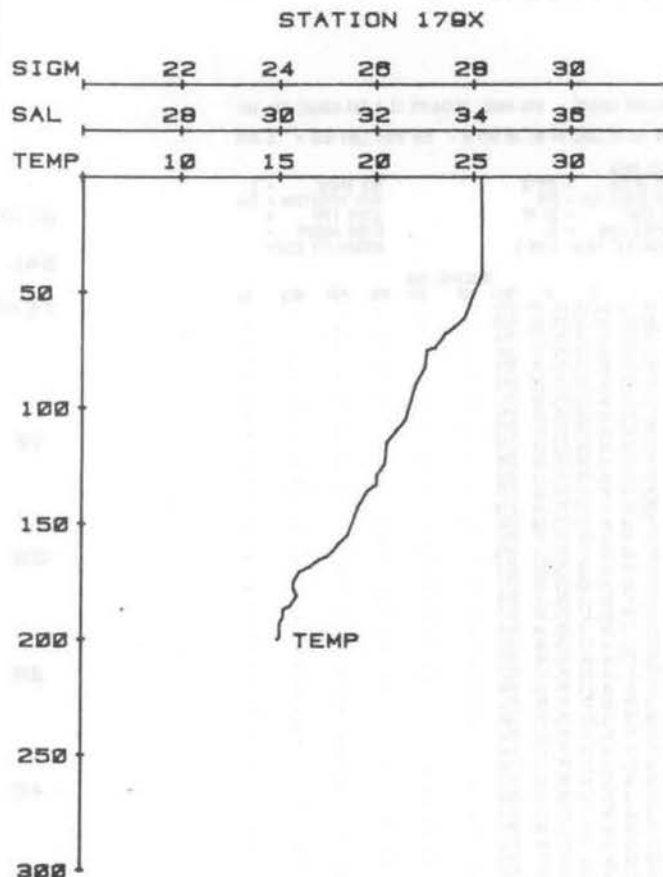
176.0	15.61	36.04	26.65	146	.	.	.	.	.
177.0	15.61	36.04	26.65	146	.	.	.	.	.
178.0	15.61	36.04	26.65	146	.	.	.	.	.
179.0	15.61	36.04	26.65	146	.	.	.	.	.
180.0	15.61	36.03	26.64	147	.	.	.	.	.
181.0	15.60	36.03	26.64	147	.	.	.	.	.
182.0	15.60	36.03	26.64	147	.	.	.	.	.
183.0	15.60	36.03	26.64	147	.	.	.	.	.
184.0	15.59	36.02	26.63	147	.	.	.	.	.
185.0	15.58	36.04	26.65	146	.	.	.	.	.
186.0	15.56	36.03	26.65	146	.	.	.	.	.
187.0	15.51	36.02	26.65	146	.	.	.	.	.
188.0	15.48	36.02	26.66	145	.	.	.	.	.
189.0	15.45	36.06	26.70	141	.	.	.	.	.
190.0	15.38	36.05	26.70	141	.	.	.	.	.
191.0	15.38	35.99	26.66	145	.	.	.	.	.
192.0	15.29	36.00	26.69	142	.	.	.	.	.
193.0	15.32	36.01	26.69	142	.	.	.	.	.
194.0	15.30	35.99	26.68	143	.	.	.	.	.
195.0	15.25	36.01	26.70	141	.	.	.	.	.
196.0	15.25	35.97	26.67	144	.	.	.	.	.
197.0	15.21	36.01	26.71	140	.	.	.	.	.
198.0	15.24	35.97	26.67	144	.	.	.	.	.
199.0	15.19	35.99	26.70	141	.	.	.	.	.
200.0	15.18	35.98	26.70	142	.	.	.	.	.
201.0	15.14	35.99	26.73	138	.	.	.	.	.
202.0	15.14	35.97	26.72	139	.	.	.	.	.
203.0	15.02	35.96	26.72	140	.	.	.	.	.
204.0	15.02	35.97	26.72	139	.	.	.	.	.
205.0	15.00	35.95	26.71	140	.	.	.	.	.
206.0	14.98	35.97	26.73	138	.	.	.	.	.
207.0	14.84	35.94	26.74	138	.	.	.	.	.
208.0	14.66	35.94	26.70	134	.	.	.	.	.
209.0	14.58	35.95	26.82	132	.	.	.	.	.
210.0	14.48	35.91	26.80	132	.	.	.	.	.
211.0	14.31	35.88	26.81	131	.	.	.	.	.
212.0	14.20	35.87	26.81	131	.	.	.	.	.
213.0	14.22	35.85	26.81	131	.	.	.	.	.
214.0	14.09	35.85	26.83	129	.	8.97	10.5	10.1	.
215.0	13.79	35.83	26.80	124	.	.	.	.	.

GILLISS CRUISE STA 179X 27/04/79 00.6 GMT CONSEC STA 184
LAT 38 48.0N LONG 79 52.9W DEPTH = 370M DIST LAST STA = 10.5KM

WEATHER DATA
WIND SPEED = 20KTS
WIND DIRECTION = 240
AIR TEMP = 22.2C
WEATHER CODE = X1
BAROMETRIC PRES = 1009.1

SEA STATE = 3
WAVE DIRECTION = 240
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SWA	O2	O2'	ADU	PO4	NO3	SI
0.0	25.4	.	.	.	.	.	.	.	.	.
42.0	25.4	.	.	.	.	.	.	.	.	.
50.0	25.0	.	.	.	.	.	.	.	.	.
61.0	24.5	.	.	.	.	.	.	.	.	.
65.0	24.0	.	.	.	.	.	.	.	.	.
68.0	23.5	.	.	.	.	.	.	.	.	.
74.0	23.0	.	.	.	.	.	.	.	.	.
75.0	22.6	.	.	.	.	.	.	.	.	.
82.0	22.5	.	.	.	.	.	.	.	.	.
90.0	22.0	.	.	.	.	.	.	.	.	.
105.0	21.5	.	.	.	.	.	.	.	.	.
110.0	21.0	.	.	.	.	.	.	.	.	.
115.0	20.5	.	.	.	.	.	.	.	.	.
124.0	20.4	.	.	.	.	.	.	.	.	.
129.0	20.0	.	.	.	.	.	.	.	.	.
133.0	20.0	.	.	.	.	.	.	.	.	.
136.0	19.5	.	.	.	.	.	.	.	.	.
143.0	19.0	.	.	.	.	.	.	.	.	.
155.0	18.5	.	.	.	.	.	.	.	.	.
159.0	18.0	.	.	.	.	.	.	.	.	.
164.0	17.5	.	.	.	.	.	.	.	.	.
166.0	17.0	.	.	.	.	.	.	.	.	.
169.0	16.5	.	.	.	.	.	.	.	.	.
171.0	16.0	.	.	.	.	.	.	.	.	.
175.0	15.7	.	.	.	.	.	.	.	.	.
178.0	15.7	.	.	.	.	.	.	.	.	.
181.0	15.9	.	.	.	.	.	.	.	.	.
186.0	15.5	.	.	.	.	.	.	.	.	.
187.0	15.2	.	.	.	.	.	.	.	.	.
190.0	15.2	.	.	.	.	.	.	.	.	.
193.0	15.0	.	.	.	.	.	.	.	.	.
199.0	15.0	.	.	.	.	.	.	.	.	.
200.0	14.9	.	.	.	.	.	.	.	.	.

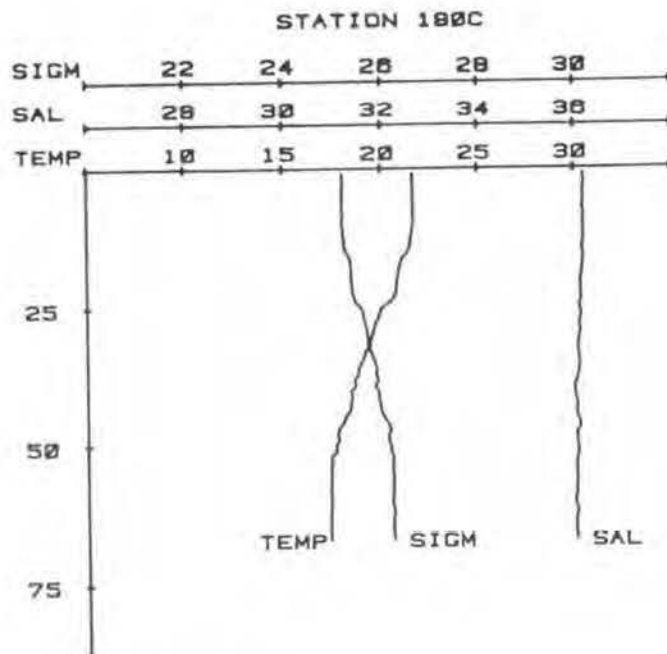


GILLISS CRUISE STA 180C 27/04/79 11.2 GWT CONSEC STA 185
LAT 38 42.4N LONG 79 05.3W DEPTH = 70M DIST LAST STA = 76.0KM

WEATHER DATA
WIND SPEED = 22KTS
WIND DIRECTION = 220
AIR TEMP = 21.7C
WEATHER CODE = 11
BAROMETRIC PRES = 1009.5

SEA STATE = 3
WAVE DIRECTION = 230
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	Q2	Q2'	MOU	PO4	NO3	SI
1.0	21.65	36.19	25.23	275						
2.0	21.65	36.20	25.24	274						
3.0	21.65	36.19	25.23	275						
4.0	21.65	36.18	25.22	276						
5.0	21.65	36.19	25.23	275						
6.0	21.64	36.18	25.22	276						
7.0	21.65	36.17	25.21	277						
8.0	21.65	36.20	25.24	275						
9.0	21.64	36.18	25.22	276						
10.0	21.64	36.19	25.23	275						
11.0	21.59	36.19	25.24	274						
12.0	21.54	36.18	25.25	273						
13.0	21.58	36.19	25.27	272						
14.0	21.45	36.16	25.26	272						
15.0	21.35	36.19	25.31	268						
16.0	21.17	36.18	25.30	261						
17.0	20.98	36.17	25.40	259						
18.0	20.79	36.16	25.41	258						
19.0	20.85	36.15	25.42	258						
20.0	20.88	36.12	25.43	257						
21.0	20.79	36.14	25.43	257						
22.0	20.75	36.13	25.43	257						
23.0	20.67	36.14	25.46	254						
24.0	20.48	36.12	25.50	254						
25.0	20.43	36.10	25.60	248						
26.0	19.91	36.14	25.66	235						
27.0	19.84	36.12	25.67	234						
28.0	19.65	36.18	25.70	231						
29.0	19.60	36.12	25.73	228						
30.0	19.51	36.14	25.74	228						
31.0	19.41	36.08	25.75	227						
32.0	19.43	36.07	25.74	228						
33.0	19.16	36.00	25.81	221						
34.0	19.00	36.18	25.85	217						
35.0	18.93	36.18	25.89	214						
36.0	18.80	36.09	25.91	211						
37.0	18.80	36.07	25.90	213						
38.0	18.61	36.04	25.94	209						
39.0	18.67	36.00	25.89	215						
40.0	18.41	36.01	25.95	207						
41.0	18.49	36.02	25.94	207						
42.0	18.40	36.05	25.98	205						
43.0	18.30	36.05	25.99	204						
44.0	18.38	36.05	26.01	202						
45.0	18.49	36.05	26.06	197						
46.0	18.81	36.11	26.13	191						
47.0	19.79	36.11	26.19	185						
48.0	17.79	36.04	26.15	189						
49.0	17.79	36.05	26.14	190						
50.0	17.63	36.06	26.18	186						
51.0	17.66	36.09	26.19	185						
52.0	17.40	36.06	26.24	181						
53.0	17.40	36.04	26.22	182						
54.0	17.34	36.03	26.23	182						
55.0	17.37	36.04	26.23	181						
56.0	17.35	36.04	26.24	181						
57.0	17.34	36.03	26.23	182						
58.0	17.35	36.03	26.23	182						
59.0	17.36	36.02	26.22	183						
60.0	17.36	36.00	26.20	184						
61.0	17.35	36.04	26.24	181						
62.0	17.33	36.06	26.26	179						
63.0	17.32	36.02	26.23	182						
64.0	17.33	36.02	26.23	182						
65.0	17.33	36.01	26.22	183						
66.0	17.33	36.04	26.24	181						
67.0	17.32	36.03	26.24	181						



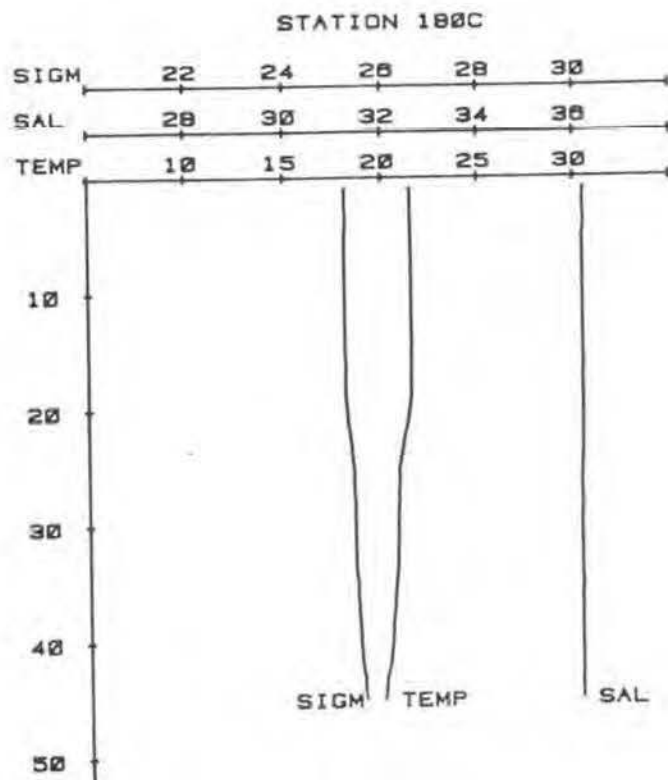
47.0	19.77	36.11	26.19	185						
48.0	17.79	36.04	26.15	189						
49.0	17.79	36.05	26.14	190						
50.0	17.63	36.06	26.18	186						
51.0	17.66	36.09	26.19	185						
52.0	17.40	36.06	26.24	181						
53.0	17.40	36.04	26.22	182						
54.0	17.34	36.03	26.23	182						
55.0	17.37	36.04	26.23	181						
56.0	17.35	36.04	26.24	181						
57.0	17.34	36.03	26.23	182						
58.0	17.35	36.03	26.23	182						
59.0	17.36	36.02	26.22	183						
60.0	17.36	36.00	26.20	184						
61.0	17.35	36.04	26.24	181						
62.0	17.33	36.06	26.26	179						
63.0	17.32	36.02	26.23	182						
64.0	17.33	36.02	26.23	182						
65.0	17.33	36.01	26.22	183						
66.0	17.33	36.04	26.24	181						
67.0	17.32	36.03	26.24	181						

GILLISS CRUISE STA 180C 27/04/79 13.4 GWT CONSEC STA 186
LAT 38 42.4N LONG 79 05.3W DEPTH = 72M DIST LAST STA = 8.0KM

WEATHER DATA
WIND SPEED = 22KTS
WIND DIRECTION = 220
AIR TEMP = 21.7C
WEATHER CODE = 11
BAROMETRIC PRES = 1009.5

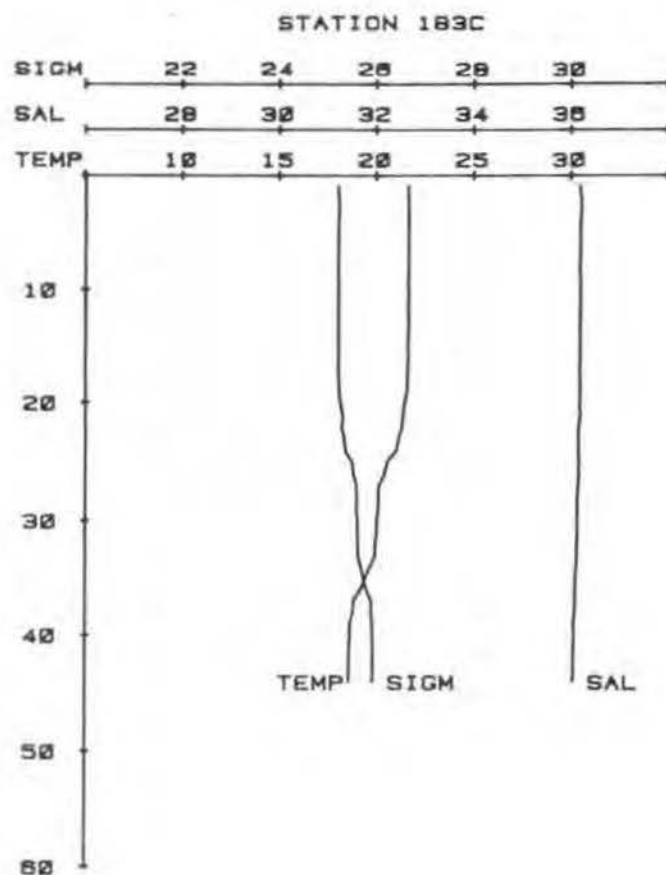
SEA STATE = 3
WAVE DIRECTION = 230
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	Q2	Q2'	MOU	PO4	NO3	SI
1.0	21.51	36.19	25.27	271						
2.0	21.51	36.18	25.26	272						
3.0	21.51	36.20	25.27	271						
4.0	21.51	36.20	25.27	271						
5.0	21.51	36.17	25.25	273						
6.0	21.52	36.17	25.25	273						
7.0	21.52	36.18	25.26	273						
8.0	21.52	36.18	25.26	273						
9.0	21.52	36.18	25.26	273						
10.0	21.51	36.18	25.26	272						
11.0	21.51	36.18	25.26	272						
12.0	21.51	36.18	25.26	272						
13.0	21.51	36.18	25.26	272						
14.0	21.51	36.18	25.26	273						
15.0	21.50	36.18	25.26	272						
16.0	21.49	36.19	25.27	271						
17.0	21.40	36.17	25.26	273						
18.0	21.49	36.18	25.26	272						
19.0	21.45	36.18	25.29	271						
20.0	21.37	36.18	25.31	267						
21.0	21.28	36.17	25.32	267						
22.0	21.13	36.17	25.36	264						
23.0	21.03	36.17	25.30	261						
24.0	20.93	36.16	25.40	259						
25.0	20.81	36.15	25.43	257						
26.0	20.81	36.14	25.42	258						
27.0	20.79	36.15	25.43	256						
28.0	20.77	36.16	25.45	255						
29.0	20.74	36.14	25.44	256						
30.0	20.74	36.14	25.44	256						
31.0	20.73	36.14	25.44	256						
32.0	20.71	36.14	25.45	255						
33.0	20.70	36.14	25.45	255						
34.0	20.66	36.14	25.46	254						
35.0	20.58	36.15	25.49	251						
36.0	20.53	36.13	25.49	251						
37.0	20.50	36.14	25.51	250						
38.0	20.43	36.13	25.52	249						
39.0	20.39	36.13	25.53	248						
40.0	20.37	36.13	25.53	247						
41.0	20.36	36.13	25.55	246						
42.0	20.25	36.13	25.54	244						
43.0	20.17	36.12	25.61	241						
44.0	20.13	36.12	25.62	240						
45.0	19.94	36.12	25.63	238						



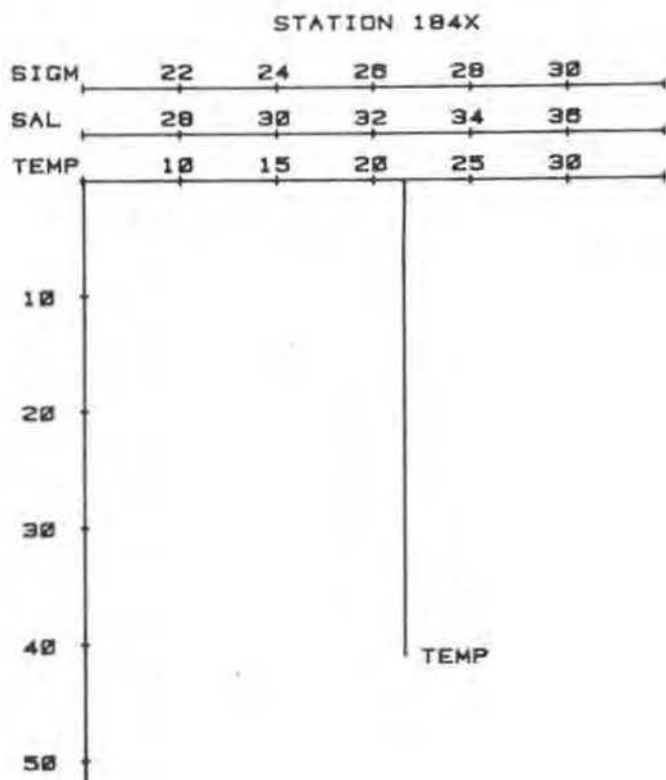
GILLISS CRUISE STA 183C 27/04/79 15.0 GWT CONSEC STA 189
 LAT 38 43.5N LONG 08 14.0W DEPTH = 490 DIST LAST STA = 10.0KM
 WEATHER DATA
 WIND SPEED = 20KTS
 WIND DIRECTION = 240
 AIR TEMP = 22.2C
 WEATHER CODE = 12
 BAROMETRIC PRES = 1010.0
 SEA STATE = 4
 WAVE DIRECTION = 230
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	B	SWA	Q2	Q2'	ADU	PO4	NO3
1.0	21.66	36.18	25.22	274					
2.0	21.66	36.21	25.24	274					
3.0	21.66	36.21	25.24	274					
4.0	21.66	36.19	25.23	275					
5.0	21.66	36.19	25.23	275					
6.0	21.66	36.19	25.23	275					
7.0	21.66	36.19	25.23	274					
8.0	21.65	36.18	25.22	274					
9.0	21.65	36.20	25.24	275					
10.0	21.65	36.20	25.24	275					
11.0	21.65	36.20	25.24	275					
12.0	21.65	36.19	25.23	275					
13.0	21.65	36.19	25.23	275					
14.0	21.62	36.19	25.24	275					
15.0	21.63	36.19	25.23	275					
16.0	21.63	36.19	25.23	275					
17.0	21.59	36.18	25.24	275					
18.0	21.58	36.19	25.25	274					
19.0	21.54	36.19	25.25	273					
20.0	21.44	36.18	25.28	271					
21.0	21.34	36.20	25.32	267					
22.0	21.31	36.16	25.34	269					
23.0	21.13	36.18	25.35	264					
24.0	21.02	36.16	25.38	261					
25.0	20.53	36.17	25.52	248					
26.0	20.41	36.17	25.55	245					
27.0	20.11	36.15	25.62	237					
28.0	20.11	36.14	25.61	240					
29.0	20.00	36.14	25.62	239					
30.0	20.02	36.14	25.63	237					
31.0	20.00	36.14	25.64	237					
32.0	19.94	36.13	25.65	236					
33.0	19.94	36.13	25.65	236					
34.0	19.68	36.12	25.71	231					
35.0	19.42	36.10	25.76	226					
36.0	19.19	36.10	25.82	224					
37.0	18.89	36.10	25.92	211					
38.0	18.76	36.09	25.92	210					
39.0	18.63	36.07	25.94	209					
40.0	18.63	36.08	25.95	208					
41.0	18.58	36.07	25.95	208					
42.0	18.58	36.07	25.95	208					
43.0	18.58	36.07	25.95	207					
44.0	18.57	36.05	25.94	209					



GILLISS CRUISE STA 184X 27/04/79 18.0 GWT CONSEC STA 194
 LAT 38 46.7N LONG 08 23.6W DEPTH = 410 DIST LAST STA = 27.4KM
 WEATHER DATA
 WIND SPEED = 10KTS
 WIND DIRECTION = 240
 AIR TEMP = 23.3C
 WEATHER CODE = 11
 BAROMETRIC PRES = 1009.0
 SEA STATE = 3
 WAVE DIRECTION = 240
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	B	SWA	Q2	Q2'	ADU	PO4	NO3
1.0	21.6								
4.0	21.5								
41.0	21.5								



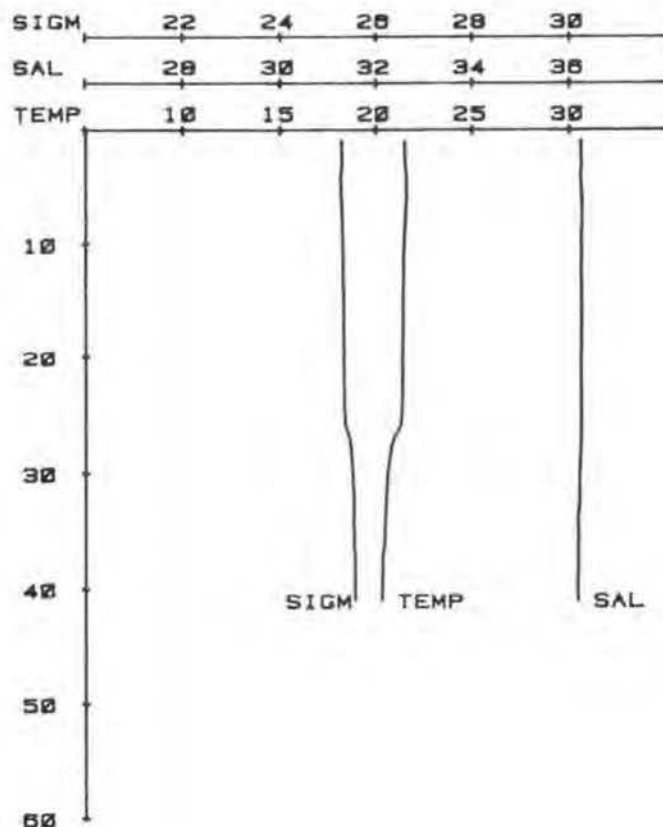
GILLISS CRUISE STA 186C 27/04/79 10.9 GWT CONSEC STA 192
LAT 30 45.2N LONG 00 16.4W DEPTH = 41M DIST LAST STA = 11.0KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 170
AIR TEMP = 23.3C
WEATHER CODE = X1
BAROMETRIC PRES = 1009.0

SEA STATE = 3
WAVE DIRECTION = 240
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	Q2	Q2'	AOI	P04	W03	SI
1.0	21.52	36.23	25.29	269						
2.0	21.53	36.24	25.30	268						
3.0	21.53	36.24	25.31	268						
4.0	21.59	36.22	25.27	271				0.12	0.1	2.1
5.0	21.58	36.24	25.29	270						
6.0	21.58	36.25	25.29	269						
7.0	21.54	36.25	25.30	268						
8.0	21.51	36.25	25.31	267						
9.0	21.47	36.24	25.32	267						
10.0	21.45	36.24	25.32	266						
11.0	21.42	36.24	25.33	266						
12.0	21.42	36.23	25.32	266						
13.0	21.41	36.24	25.33	266						
14.0	21.39	36.24	25.34	265						
15.0	21.38	36.24	25.34	265						
16.0	21.38	36.24	25.34	265						
17.0	21.38	36.24	25.34	265						
18.0	21.37	36.24	25.34	265						
19.0	21.36	36.24	25.35	264						
20.0	21.35	36.23	25.34	265						
21.0	21.35	36.23	25.34	265						
22.0	21.34	36.23	25.34	265						
23.0	21.34	36.24	25.35	264						
24.0	21.33	36.23	25.35	265						
25.0	21.30	36.24	25.36	263						
26.0	21.25	36.24	25.38	262				0.10	0.0	1.1
27.0	21.19	36.23	25.47	253						
28.0	21.15	36.22	25.51	250						
29.0	21.07	36.21	25.51	249						
30.0	21.00	36.20	25.53	247						
31.0	20.54	36.20	25.54	246						
32.0	20.50	36.20	25.55	245						
33.0	20.47	36.19	25.55	245						
34.0	20.44	36.18	25.54	247						
35.0	20.42	36.18	25.54	245						
36.0	20.42	36.17	25.55	244						
37.0	20.32	36.17	25.58	243						
38.0	20.33	36.17	25.57	243						
39.0	20.31	36.16	25.57	244						
40.0	20.30	36.16	25.57	244				0.16	1.1	2.0
41.0	20.29	36.17	25.58	243						

STATION 186C



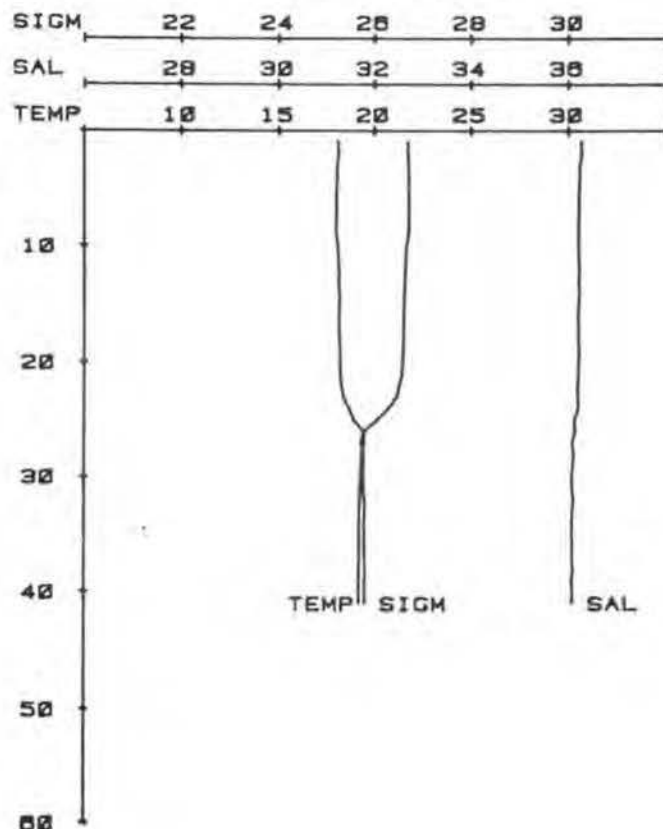
GILLISS CRUISE STA 187C 27/04/79 19.7 GWT CONSEC STA 193
LAT 30 44.0N LONG 00 18.9W DEPTH = 43M DIST LAST STA = 9.0KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 210
AIR TEMP = 23.3C
WEATHER CODE = X2
BAROMETRIC PRES = 1009.5

SEA STATE = 2
WAVE DIRECTION = 220
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	Q2	Q2'	AOI	P04	W03	SI
1.0	21.74	36.26	25.26	272						
2.0	21.75	36.27	25.26	272				0.09	0.0	1.9
3.0	21.77	36.23	25.22	275						
4.0	21.77	36.23	25.22	275						
5.0	21.78	36.22	25.21	276						
6.0	21.78	36.22	25.21	276						
7.0	21.78	36.22	25.21	277						
8.0	21.78	36.21	25.21	277						
9.0	21.74	36.21	25.22	276						
10.0	21.65	36.22	25.25	273						
11.0	21.61	36.22	25.26	272						
12.0	21.59	36.23	25.28	271						
13.0	21.57	36.23	25.27	271						
14.0	21.54	36.19	25.26	270						
15.0	21.54	36.22	25.28	270						
16.0	21.52	36.21	25.28	271						
17.0	21.51	36.22	25.29	270						
18.0	21.50	36.22	25.29	270						
19.0	21.48	36.23	25.31	268						
20.0	21.46	36.22	25.30	269						
21.0	21.43	36.22	25.31	268						
22.0	21.29	36.24	25.34	266				0.05	0.0	0.6
23.0	21.18	36.21	25.37	262						
24.0	20.75	36.22	25.50	250						
25.0	20.18	36.14	25.59	241						
26.0	19.40	36.15	25.70	223						
27.0	19.48	36.09	25.74	227						
28.0	19.33	36.12	25.81	222						
29.0	19.31	36.10	25.79	223						
30.0	19.24	36.08	25.79	223				0.20	2.5	0.2
31.0	19.24	36.09	25.80	222						
32.0	19.22	36.11	25.82	224						
33.0	19.20	36.09	25.81	221						
34.0	19.20	36.08	25.80	222						
35.0	19.19	36.08	25.81	221						
36.0	19.19	36.09	25.81	221						
37.0	19.19	36.09	25.81	221						
38.0	19.18	36.08	25.82	220						
39.0	19.17	36.08	25.81	221						
40.0	19.17	36.09	25.82	220						
41.0	19.17	36.09	25.82	220				0.19	2.4	2.0

STATION 187C



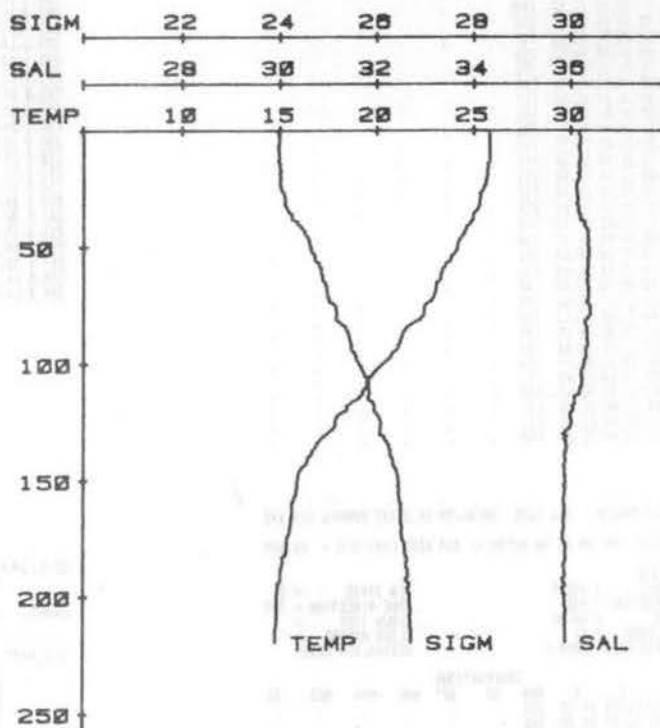
GILLISS CRUISE STA 188C 27/04/79 22.1 GHT CONSEC STA 194
LAT 38 41.9N LONG 79 58.5W DEPTH = 247M DIST LAST STA = 28.1KM

WEATHER DATA
WIND SPEED = 17KTS
WIND DIRECTION = 220
AIR TEMP = 23.3C
WEATHER CODE = 32
BAROMETRIC PRES = 1010.0

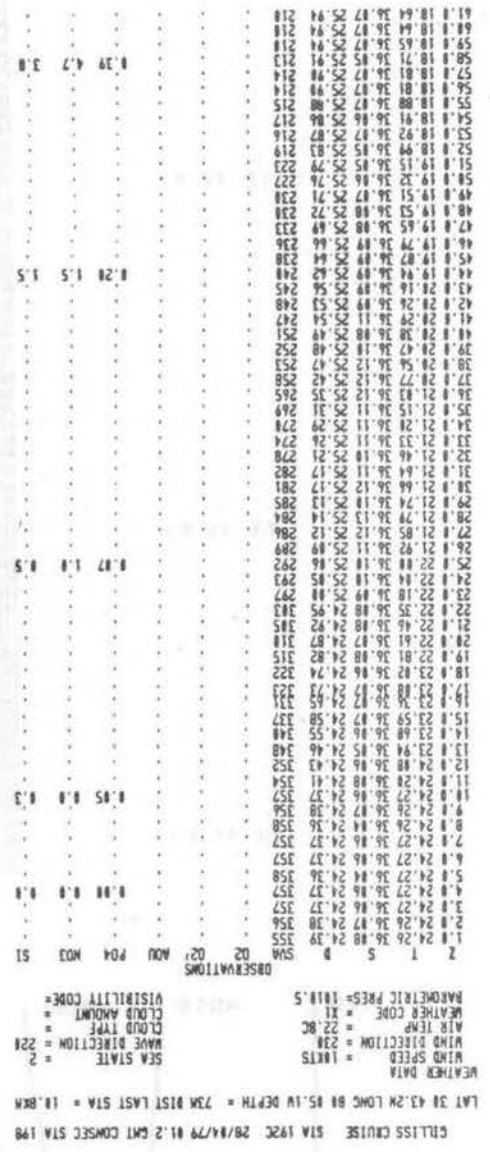
SEA STATE = 3
WAVE DIRECTION = 210
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	0	SVA	O2	O2'	AOU	P04	M03	SI
1.0	25.82	36.17	23.98	394						
2.0	25.82	36.17	23.98	394						
3.0	25.82	36.20	24.00	392						
4.0	25.82	36.19	24.00	393				0.02	0.0	0.5
5.0	25.82	36.18	23.99	393						
6.0	25.82	36.19	24.00	393						
7.0	25.82	36.16	23.97	395						
8.0	25.82	36.18	23.99	393						
9.0	25.82	36.19	24.00	393						
10.0	25.82	36.19	24.00	393						
11.0	25.82	36.19	24.00	393						
12.0	25.82	36.20	24.00	392						
13.0	25.82	36.17	23.98	394						
14.0	25.73	36.18	24.02	391						
15.0	25.73	36.18	24.00	392						
16.0	25.72	36.18	24.02	391						
17.0	25.69	36.19	24.04	389						
18.0	25.70	36.15	24.00	392						
19.0	25.60	36.17	24.02	390						
20.0	25.65	36.17	24.03	390						
21.0	25.63	36.14	24.02	391						
22.0	25.59	36.12	24.01	392						
23.0	25.58	36.11	24.01	392						
24.0	25.58	36.11	24.03	390						
25.0	25.47	36.11	24.04	389						
26.0	25.39	36.12	24.00	386						
27.0	25.31	36.13	24.11	383						
28.0	25.34	36.13	24.10	384						
29.0	25.29	36.15	24.13	381						
30.0	25.29	36.14	24.12	382						
31.0	25.28	36.12	24.11	383						
32.0	25.25	36.14	24.13	380						
33.0	25.22	36.16	24.16	378						
34.0	25.12	36.15	24.18	376						
35.0	25.03	36.16	24.22	373						
36.0	24.96	36.19	24.26	369						
37.0	24.96	36.20	24.27	368						
38.0	24.96	36.20	24.27	368						
39.0	24.84	36.29	24.37	358						
40.0	24.81	36.28	24.37	358						
41.0	24.62	36.29	24.44	352						
42.0	24.59	36.33	24.48	348						
43.0	24.51	36.36	24.53	344						
44.0	24.49	36.35	24.52	344						
45.0	24.48	36.36	24.56	340						
46.0	24.38	36.36	24.59	338						
47.0	24.23	36.37	24.62	335						
48.0	24.19	36.36	24.62	335						
49.0	24.15	36.35	24.63	334						
50.0	24.13	36.37	24.65	332				0.00	0.0	0.0
51.0	24.10	36.38	24.66	331						
52.0	24.03	36.36	24.67	328						
53.0	23.94	36.38	24.71	326						
54.0	23.82	36.36	24.73	324						
55.0	23.81	36.35	24.73	325						
56.0	23.71	36.35	24.76	322						
57.0	23.55	36.37	24.82	316						
58.0	23.51	36.35	24.82	316						
59.0	23.40	36.36	24.86	313						
60.0	23.37	36.34	24.85	313						
61.0	23.38	36.33	24.86	312						
62.0	23.29	36.36	24.89	310						
63.0	23.29	36.35	24.88	311						
64.0	23.23	36.33	24.88	310						
65.0	23.19	36.35	24.94	305						
66.0	23.05	36.35	24.95	304						
67.0	23.02	36.37	24.97	302						
68.0	23.01	36.36	24.97	302						
69.0	22.99	36.37	24.98	301						
70.0	22.94	36.37	24.99	300						
71.0	22.91	36.36	25.00	300						
72.0	22.85	36.37	25.02	297						
73.0	22.78	36.33	25.01	290						
74.0	22.55	36.34	25.09	291						
75.0	22.47	36.40	25.16	285						
76.0	22.43	36.40	25.17	284						
77.0	22.42	36.40	25.17	283						
78.0	22.41	36.41	25.18	283						
79.0	22.41	36.40	25.17	283						
80.0	22.38	36.36	25.17	283						
81.0	22.21	36.31	25.16	284						
82.0	21.95	36.29	25.22	279						
83.0	21.77	36.30	25.28	273						
84.0	21.58	36.33	25.35	266						
85.0	21.48	36.33	25.38	264						
86.0	21.38	36.33	25.41	261						
87.0	21.32	36.34	25.43	259						
88.0	21.28	36.34	25.44	258						
89.0	21.24	36.33	25.45	257						
90.0	21.18	36.33	25.47	256						
91.0	21.17	36.35	25.48	254						
92.0	21.12	36.35	25.50	253						
93.0	21.09	36.32	25.48	254						
94.0	21.01	36.31	25.50	253						
95.0	20.84	36.31	25.54	249						
96.0	20.76	36.31	25.56	247						
97.0	20.70	36.32	25.59	244						
98.0	20.57	36.28	25.59	244						
99.0	20.43	36.28	25.63	240						
100.0	20.29	36.26	25.65	238						

STATION 188C



181.0	20.17	36.26	25.69	235					
182.0	20.02	36.24	25.71	233					
183.0	19.98	36.22	25.73	231					
184.0	19.88	36.22	25.75	229			0.17	2.6	1.6
185.0	19.72	36.21	25.77	228					
186.0	19.68	36.23	25.81	223					
187.0	19.56	36.23	25.82	222					
188.0	19.58	36.22	25.81	223					
189.0	19.48	36.23	25.84	220					
190.0	19.43	36.21	25.83	221					
191.0	19.31	36.18	25.85	220					
192.0	19.23	36.17	25.86	219					
193.0	19.23	36.16	25.86	219					
194.0	19.07	36.07	25.83	222					
195.0	19.04	36.07	25.84	221					
196.0	18.72	36.07	25.92	213					
197.0	18.62	36.07	25.94	211					
198.0	18.62	36.03	25.96	209					
199.0	18.47	36.04	25.96	210					
200.0	18.41	36.03	25.97	209					
201.0	18.14	35.99	26.00	205					
202.0	17.95	35.98	26.04	202					
203.0	17.88	35.99	26.07	199					
204.0	17.83	36.01	26.09	197			0.26	1.5	1.9
205.0	17.81	36.01	26.10	196					
206.0	17.81	36.00	26.09	197					
207.0	17.78	35.98	26.08	198					
208.0	17.69	35.95	26.08	198					
209.0	17.51	35.98	26.07	199					
210.0	17.38	35.94	26.08	199					
211.0	17.24	35.92	26.17	191					
212.0	17.10	35.87	26.17	191					
213.0	16.99	35.90	26.22	186					
214.0	16.99	35.90	26.24	183					
215.0	16.83	35.92	26.27	180					
216.0	16.77	35.90	26.27	181					
217.0	16.65	35.91	26.30	177					
218.0	16.63	35.88	26.29	179					
219.0	16.54	35.87	26.30	178					
220.0	16.44	35.88	26.33	175					
221.0	16.40	35.89	26.35	173					
222.0	16.36	35.89	26.36	172					
223.0	16.31	35.86	26.35	173					
224.0	16.16	35.86	26.38	171					
225.0	16.07	35.87	26.41	167					
226.0	15.98	35.87	26.43	165			0.40	9.0	6.4
227.0	15.94	35.87	26.44	165					
228.0	15.91	35.89	26.46	162					
229.0	15.90	35.88	26.46	163					
230.0	15.80	35.89	26.47	162					
231.0	15.86	35.89	26.47	161					
232.0	15.86	35.86	26.45	164					
233.0	15.86	35.87	26.47	162					
234.0	15.83	35.88	26.47	162					
235.0	15.83	35.87	26.46	162					
236.0	15.79	35.87	26.46	162					
237.0	15.72	35.86	26.48	161					
238.0	15.72	35.86	26.48	161					
239.0	15.64	35.85	26.49	161					
240.0	15.61	35.87	26.51	160					



195.1	14.80	35.80	26.40	142
194.1	14.80	35.80	26.40	143
193.1	15.11	35.80	26.40	144
192.1	15.11	35.80	26.40	145
191.1	15.11	35.80	26.40	146
190.1	15.11	35.80	26.40	147
189.1	15.11	35.80	26.40	148
188.1	15.11	35.80	26.40	149
187.1	15.11	35.80	26.40	150
186.1	15.11	35.80	26.40	151
185.1	15.11	35.80	26.40	152
184.1	15.11	35.80	26.40	153
183.1	15.11	35.80	26.40	154
182.1	15.11	35.80	26.40	155
181.1	15.11	35.80	26.40	156
180.1	15.11	35.80	26.40	157
179.1	15.11	35.80	26.40	158
178.1	15.11	35.80	26.40	159
177.1	15.11	35.80	26.40	160
176.1	15.11	35.80	26.40	161
175.1	15.11	35.80	26.40	162
174.1	15.11	35.80	26.40	163
173.1	15.11	35.80	26.40	164
172.1	15.11	35.80	26.40	165
171.1	15.11	35.80	26.40	166
170.1	15.11	35.80	26.40	167
169.1	15.11	35.80	26.40	168
168.1	15.11	35.80	26.40	169
167.1	15.11	35.80	26.40	170
166.1	15.11	35.80	26.40	171
165.1	15.11	35.80	26.40	172
164.1	15.11	35.80	26.40	173
163.1	15.11	35.80	26.40	174
162.1	15.11	35.80	26.40	175
161.1	15.11	35.80	26.40	176

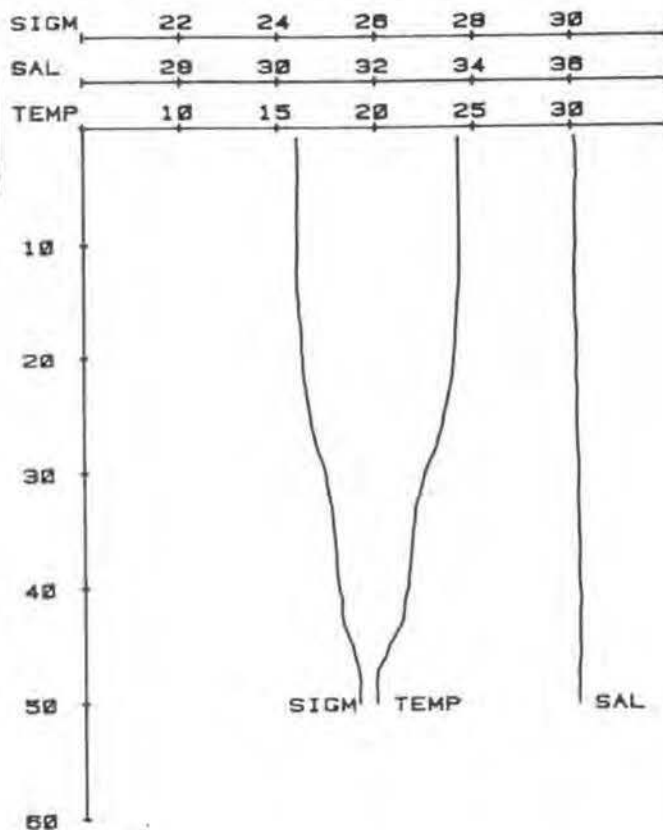
GILLISS CRUISE STA 192C 28/04/79 02.2 GMT CONSEC STA 199
LAT 38 43.2N LONG 88 05.1W DEPTH = 79M DIST LAST STA = 0.8KM

WEATHER DATA
WIND SPEED = 18KTS
WIND DIRECTION = 230
AIR TEMP = 22.8C
WEATHER CODE = 11
BAROMETRIC PRES = 1018.5

SEA STATE = 2
WAVE DIRECTION = 220
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	0	SVA	O2	O2'	ADU	PD4	NO3
1.0	24.21	36.86	24.39	355					
2.0	24.21	36.89	24.41	353					
3.0	24.21	36.89	24.41	353					
4.0	24.21	36.88	24.42	352					
5.0	24.21	36.87	24.40	354					
6.0	24.21	36.87	24.40	354					
7.0	24.21	36.86	24.39	355					
8.0	24.22	36.87	24.39	355					
9.0	24.22	36.87	24.39	355					
10.0	24.22	36.88	24.40	354					
11.0	24.21	36.86	24.39	355					
12.0	24.21	36.85	24.38	356					
13.0	24.20	36.86	24.39	355					
14.0	24.17	36.86	24.40	354					
15.0	24.09	36.87	24.43	351					
16.0	24.06	36.86	24.43	351					
17.0	24.02	36.89	24.47	348					
18.0	23.99	36.88	24.49	346					
19.0	23.96	36.89	24.49	346					
20.0	23.91	36.88	24.51	344					
21.0	23.86	36.89	24.52	344					
22.0	23.79	36.89	24.54	342					
23.0	23.68	36.88	24.58	337					
24.0	23.54	36.88	24.61	335					
25.0	23.41	36.88	24.66	330					
26.0	23.32	36.88	24.68	328					
27.0	23.13	36.88	24.75	322					
28.0	22.97	36.82	24.80	317					
29.0	22.69	36.84	24.98	308					
30.0	22.42	36.84	24.97	301					
31.0	22.38	36.83	25.00	298					
32.0	22.12	36.82	25.04	294					
33.0	21.95	36.83	25.10	289					
34.0	21.92	36.84	25.11	287					
35.0	21.81	36.83	25.14	285					
36.0	21.78	36.85	25.16	283					
37.0	21.72	36.86	25.19	280					
38.0	21.66	36.84	25.19	280					
39.0	21.59	36.84	25.21	278					
40.0	21.55	36.86	25.23	276					
41.0	21.38	36.88	25.30	270					
42.0	21.32	36.85	25.29	271					
43.0	21.23	36.85	25.31	268					
44.0	20.98	36.85	25.40	260					
45.0	20.54	36.86	25.51	254					
46.0	20.35	36.86	25.56	245					
47.0	19.99	36.82	25.63	239					
48.0	19.91	36.83	25.66	236					
49.0	19.94	36.82	25.64	238					
50.0	19.95	36.83	25.64	237					

STATION 192C



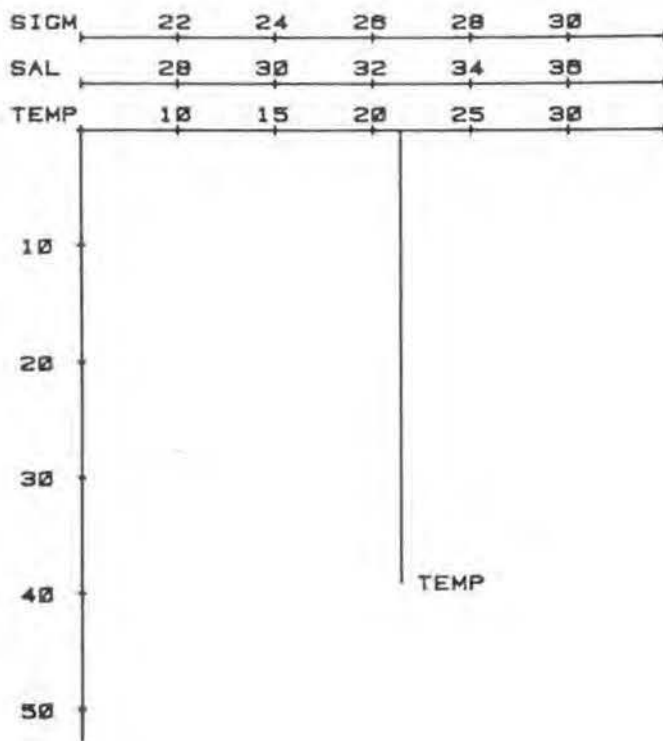
GILLISS CRUISE STA 193X 28/04/79 05.9 GMT CONSEC STA 200
LAT 38 47.0N LONG 88 23.2W DEPTH = 39M DIST LAST STA = 29.7KM

WEATHER DATA
WIND SPEED = 12KTS
WIND DIRECTION = 220
AIR TEMP = 21.7C
WEATHER CODE = 12
BAROMETRIC PRES = 1011.2

SEA STATE = 2
WAVE DIRECTION = 220
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

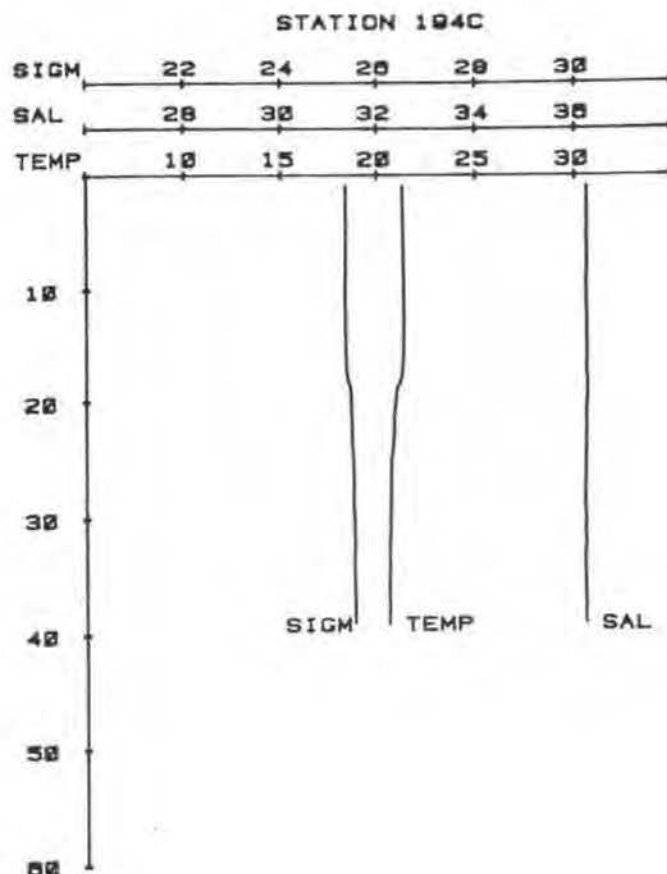
OBSERVATIONS									
Z	T	S	0	SVA	O2	O2'	ADU	PD4	NO3
0.0	21.4								
37.0	21.4								

STATION 193X



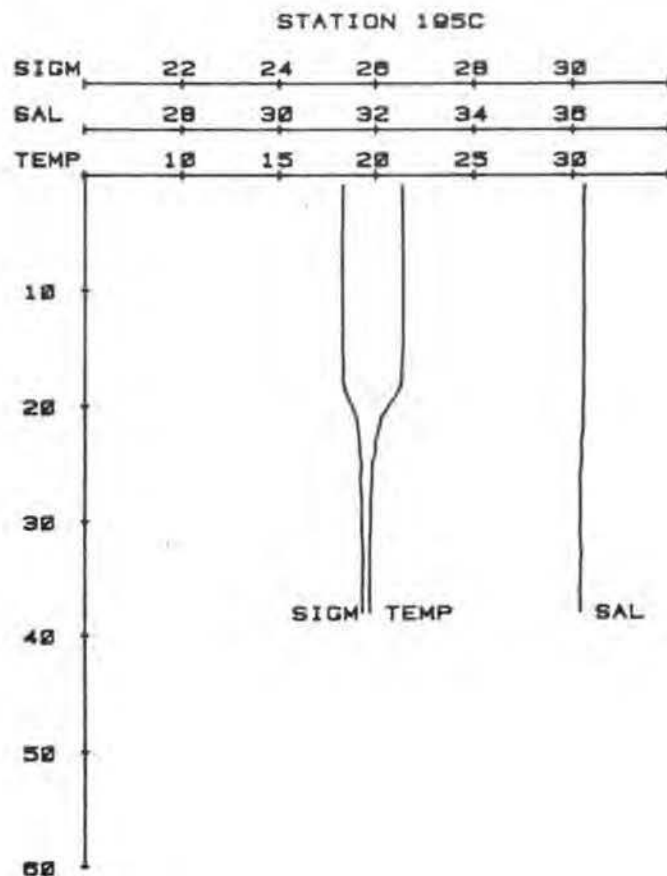
GILLISS CRUISE STA 194C 28/04/79 06.5 GHT CONSEC STA 201
 LAT 38 44.4N LONG 08 16.0W DEPTH = 41M DIST LAST STA = 11.1KM
 WEATHER DATA
 WIND SPEED = 12KTS
 WIND DIRECTION = 300
 AIR TEMP = 21.7C
 WEATHER CODE = 81
 BAROMETRIC PRES = 1018.5
 SEA STATE = 2
 WAVE DIRECTION = 300
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

Z	T	S	0	SVA	O2	O2'	NOU	PO4	NO3	SI
1.0	21.33	36.24	25.35	263						
2.0	21.33	36.24	25.35	263						
3.0	21.33	36.24	25.35	263						
4.0	21.33	36.24	25.35	263						
5.0	21.33	36.23	25.35	264						
6.0	21.33	36.24	25.35	263						
7.0	21.33	36.24	25.35	263						
8.0	21.33	36.24	25.35	263						
9.0	21.34	36.22	25.34	265						
10.0	21.34	36.23	25.34	264						
11.0	21.34	36.23	25.34	264						
12.0	21.34	36.24	25.35	264						
13.0	21.33	36.24	25.35	263						
14.0	21.33	36.24	25.35	263						
15.0	21.31	36.24	25.36	263						
16.0	21.29	36.24	25.37	262						
17.0	21.26	36.23	25.37	262						
18.0	21.28	36.25	25.40	259						
19.0	20.96	36.25	25.46	253						
20.0	20.92	36.24	25.47	253						
21.0	20.83	36.22	25.48	252						
22.0	20.83	36.23	25.48	251						
23.0	20.89	36.22	25.48	251						
24.0	20.76	36.22	25.51	251						
25.0	20.67	36.21	25.51	249						
26.0	20.66	36.21	25.52	249						
27.0	20.66	36.20	25.51	249						
28.0	20.65	36.20	25.51	249						
29.0	20.64	36.20	25.51	249						
30.0	20.60	36.22	25.53	247						
31.0	20.62	36.20	25.52	248						
32.0	20.58	36.22	25.54	246						
33.0	20.58	36.19	25.52	248						
34.0	20.59	36.19	25.52	249						
35.0	20.54	36.20	25.53	247						
36.0	20.54	36.20	25.53	247						
37.0	20.54	36.21	25.54	246						
38.0	20.55	36.20	25.54	247						
39.0	20.54	36.21	25.55	246						



GILLISS CRUISE STA 195C 28/04/79 07.6 GHT CONSEC STA 202
 LAT 38 43.7N LONG 08 11.0W DEPTH = 42M DIST LAST STA = 9.4KM
 WEATHER DATA
 WIND SPEED = 12KTS
 WIND DIRECTION = 300
 AIR TEMP = 21.7C
 WEATHER CODE = 81
 BAROMETRIC PRES = 1018.5
 SEA STATE = 2
 WAVE DIRECTION = 300
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

Z	T	S	0	SVA	O2	O2'	NOU	PO4	NO3	SI
1.0	21.39	36.23	25.33	265						
2.0	21.39	36.22	25.32	266						
3.0	21.39	36.22	25.32	266						
4.0	21.39	36.22	25.32	266						
5.0	21.40	36.21	25.31	267						
6.0	21.40	36.22	25.32	266						
7.0	21.40	36.22	25.32	266						
8.0	21.40	36.21	25.31	267						
9.0	21.40	36.22	25.32	267						
10.0	21.39	36.22	25.32	266						
11.0	21.39	36.22	25.32	266						
12.0	21.39	36.23	25.33	266						
13.0	21.39	36.22	25.32	266						
14.0	21.40	36.22	25.32	267						
15.0	21.38	36.22	25.33	266						
16.0	21.33	36.22	25.34	265						
17.0	21.31	36.21	25.34	265						
18.0	21.29	36.21	25.34	265						
19.0	21.05	36.21	25.41	258						
20.0	20.62	36.21	25.52	248						
21.0	20.25	36.20	25.62	239						
22.0	20.12	36.20	25.65	235						
23.0	19.93	36.16	25.67	234						
24.0	19.92	36.17	25.68	233						
25.0	19.77	36.16	25.72	230						
26.0	19.76	36.13	25.69	232						
27.0	19.75	36.14	25.71	231						
28.0	19.69	36.14	25.72	229						
29.0	19.69	36.14	25.72	229						
30.0	19.69	36.14	25.72	229						
31.0	19.64	36.13	25.72	229						
32.0	19.64	36.15	25.74	227						
33.0	19.64	36.16	25.75	227						
34.0	19.64	36.14	25.73	228						
35.0	19.64	36.14	25.73	228						
36.0	19.64	36.13	25.73	229						
37.0	19.64	36.14	25.73	228						
38.0	19.64	36.14	25.73	228						



GILLISS CRUISE STA 196X 26/04/79 08.4 GMT CONSEC STA 203
LAT 38 42.6N LONG 00 05.5W DEPTH = 72M DIST LAST STA = 9.0KM

WEATHER DATA
WIND SPEED = 12KTS
WIND DIRECTION = 300
AIR TEMP = 21.7C
WEATHER CODE = 01
BAROMETRIC PRES = 1010.5
SEA STATE = 2
WAVE DIRECTION = 300
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

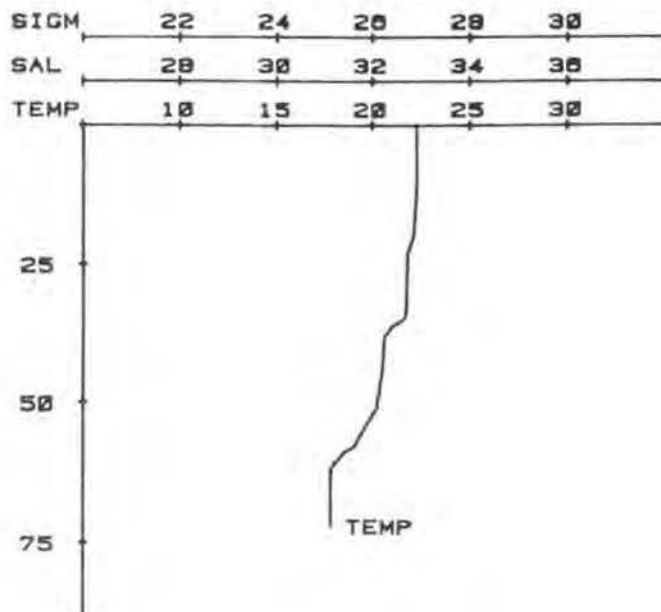
Z	T	S	D	SVA	O2	O2'	AOU	P04	M03	S1
1.0	22.3									
10.0	22.3									
20.0	22.1									
21.0	22.0									
23.0	21.8									
34.0	21.7									
35.0	21.5									
36.0	21.4									
38.0	20.6									
44.0	20.5									
51.0	20.2									
52.0	20.0									
55.0	19.5									
58.0	19.0									
59.0	18.5									
61.0	18.0									
62.0	17.0									
72.0	17.0									

GILLISS CRUISE STA 197C 26/04/79 09.4 GMT CONSEC STA 204
LAT 38 42.5N LONG 79 58.5W DEPTH = 232M DIST LAST STA = 11.2KM

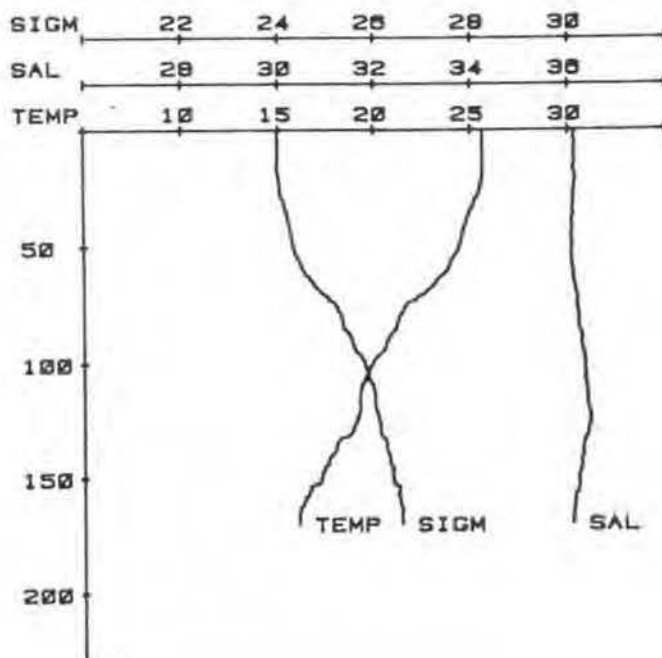
WEATHER DATA
WIND SPEED = 11KTS
WIND DIRECTION = 310
AIR TEMP = 21.7C
WEATHER CODE = 02
BAROMETRIC PRES = 1010.5
SEA STATE = 2
WAVE DIRECTION = 300
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	D	SVA	O2	O2'	AOU	P04	M03	S1
1.0	25.63	36.14	24.42	398						
2.0	25.63	36.12	24.40	392						
3.0	25.64	36.12	24.40	392						
4.0	25.62	36.13	24.41	391						
5.0	25.62	36.14	24.42	390						
6.0	25.63	36.14	24.42	391						
7.0	25.63	36.13	24.41	391						
8.0	25.63	36.13	24.41	391						
9.0	25.63	36.13	24.41	391						
10.0	25.63	36.13	24.41	391						
11.0	25.63	36.13	24.41	392						
12.0	25.63	36.13	24.41	392						
13.0	25.63	36.13	24.41	392						
14.0	25.63	36.14	24.42	391						
15.0	25.63	36.13	24.41	392						
16.0	25.63	36.11	23.99	393						
17.0	25.63	36.11	23.99	393						
18.0	25.63	36.13	24.41	392						
19.0	25.63	36.15	24.42	394						
20.0	25.62	36.16	24.44	389						
21.0	25.61	36.15	24.43	394						
22.0	25.56	36.15	24.45	388						
23.0	25.55	36.14	24.44	389						
24.0	25.54	36.14	24.46	387						
25.0	25.48	36.13	24.46	388						
26.0	25.44	36.12	24.46	387						
27.0	25.44	36.12	24.46	387						
28.0	25.37	36.11	24.47	386						
29.0	25.34	36.11	24.48	385						
30.0	25.23	36.11	24.42	382						
31.0	25.17	36.12	24.44	388						
32.0	25.12	36.12	24.46	378						
33.0	25.14	36.18	24.45	379						
34.0	25.01	36.18	24.48	374						
35.0	24.98	36.18	24.49	374						
36.0	24.92	36.12	24.22	372						
37.0	24.87	36.18	24.22	372						
38.0	24.81	36.18	24.22	373						
39.0	24.78	36.18	24.23	371						
40.0	24.76	36.19	24.25	374						
41.0	24.71	36.19	24.26	369						
42.0	24.68	36.19	24.27	368						
43.0	24.62	36.19	24.29	364						
44.0	24.60	36.19	24.29	364						
45.0	24.56	36.17	24.29	364						
46.0	24.54	36.18	24.31	365						
47.0	24.52	36.19	24.32	363						
48.0	24.51	36.18	24.32	364						
49.0	24.45	36.18	24.35	361						
50.0	24.43	36.18	24.34	362						
51.0	24.36	36.18	24.36	360						
52.0	24.34	36.18	24.37	359						
53.0	24.25	36.18	24.39	357						
54.0	24.19	36.18	24.41	355						
55.0	24.12	36.18	24.43	353						

STATION 196X



STATION 197C



56.0	24.82	36.19	24.47	358						
57.0	23.96	36.19	24.49	348						
58.0	23.93	36.18	24.51	346						
59.0	23.98	36.19	24.51	346						
60.0	23.82	36.12	24.55	342						
61.0	23.73	36.12	24.58	339						
62.0	23.65	36.11	24.59	338						
63.0	23.45	36.13	24.67	331						
64.0	23.38	36.12	24.68	331						
65.0	23.23	36.13	24.73	325						
66.0	23.21	36.16	24.76	322						
67.0	23.06	36.16	24.81	318						
68.0	22.96	36.16	24.83	315						
69.0	22.76	36.18	24.91	308						
70.0	22.68	36.18	24.93	306						

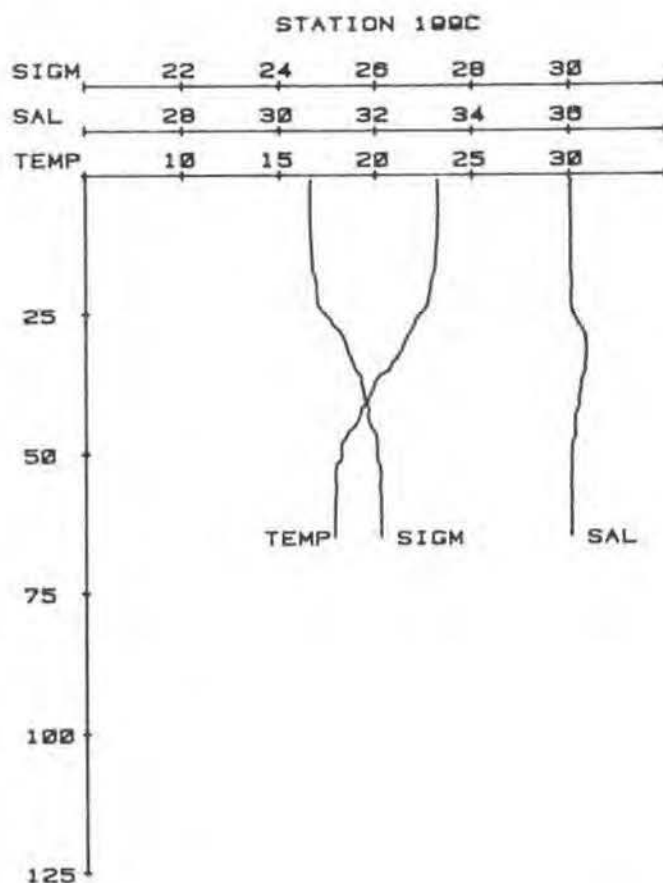
56.1	18.16	36.86	26.85	199					
57.1	18.13	36.88	26.18	194					
58.1	17.99	36.89	26.89	195			1.47	6.9	4.8
59.1	17.94	36.87	26.11	193					
60.1	17.85	36.85	26.12	192					
61.1	17.78	36.83	26.14	191					
62.1	17.66	36.85	26.17	188					
63.1	17.62	36.85	26.18	187					
64.1	17.61	36.86	26.19	186					
65.1	17.59	36.86	26.19	185					
66.1	17.59	36.86	26.19	184					
67.1	17.59	36.85	26.19	184					
68.1	17.59	36.83	26.17	180					

GYLLISS CRUISE STA 199C 28/04/79 13.7 GMT CORSEC STA 206
LAT 38 42.9N LONG 08 45.3W DEPTH = 71M DIST LAST STA = 8.9KM

WEATHER DATA
WIND SPEED * 15KTS
WIND DIRECTION * 318
AIR TEMP * 21.1C
WEATHER CODE * 11
BAROMETRIC PRES= 1012.5

SEA STATE * 3
WAVE DIRECTION * 318
CLOUD TYPE *
CLOUD AMOUNT *
VISIBILITY CODE*

Z	T	S	B	SWA	OBSERVATIONS	Q2	Q2'	AOU	PO4	NO3	SI
1.0	23.24	36.83	24.65	338							
2.0	23.24	36.81	24.64	331							
3.0	23.24	36.82	24.65	331							
4.0	23.24	36.82	24.65	331							
5.0	23.24	36.81	24.64	331							
6.0	23.24	36.82	24.65	331				0.84	0.1	0.1	
7.0	23.24	36.82	24.65	331							
8.0	23.22	36.82	24.65	338							
9.0	23.21	36.82	24.65	331							
10.0	23.19	36.82	24.66	329							
11.0	23.19	36.82	24.66	329							
12.0	23.15	36.82	24.67	328				0.85	0.4	0.3	
13.0	23.12	36.82	24.68	328							
14.0	23.18	36.82	24.69	327							
15.0	23.18	36.82	24.69	327							
16.0	23.18	36.82	24.71	326							
17.0	23.14	36.81	24.71	326							
18.0	22.92	36.84	24.75	321							
19.0	22.86	36.84	24.77	319							
20.0	22.83	36.85	24.79	318							
21.0	22.79	36.82	24.78	319							
22.0	22.72	36.83	24.80	316							
23.0	22.69	36.83	24.81	315							
24.0	22.54	36.85	24.87	311							
25.0	22.28	36.88	24.97	301				0.87	0.1	0.0	
26.0	22.14	36.14	25.88	298							
27.0	21.97	36.21	25.15	284							
28.0	21.78	36.28	25.26	273							
29.0	21.63	36.33	25.34	265							
30.0	21.47	36.33	25.38	261							
31.0	21.30	36.34	25.42	258							
32.0	21.24	36.34	25.46	255							
33.0	21.14	36.33	25.51	251							
34.0	21.09	36.31	25.54	245							
35.0	21.00	36.32	25.59	242							
36.0	20.17	36.28	25.74	231							
37.0	19.96	36.23	25.72	228							
38.0	19.89	36.23	25.74	228							
39.0	19.72	36.21	25.77	225							
40.0	19.61	36.19	25.78	224							
41.0	19.43	36.28	25.83	219							
42.0	19.28	36.17	25.87	215							
43.0	19.15	36.11	25.84	218							
44.0	19.13	36.11	25.87	216							
45.0	18.87	36.11	25.91	212				0.12	2.4	1.3	
46.0	18.56	36.11	25.99	204							
47.0	18.41	36.11	26.03	201							
48.0	18.19	36.05	26.04	200							
49.0	18.18	36.04	26.04	200							
50.0	18.18	36.04	26.03	200							
51.0	18.16	36.03	26.03	201							
52.0	17.92	36.04	26.11	194							
53.0	17.87	36.04	26.11	193							
54.0	17.87	36.03	26.11	194							
55.0	17.89	36.03	26.11	194							
56.0	17.92	36.02	26.08	196							
57.0	17.88	36.04	26.11	193							
58.0	17.85	36.04	26.11	193							
59.0	17.85	36.03	26.11	193							
60.0	17.84	36.03	26.11	193							
61.0	17.83	36.04	26.12	192							
62.0	17.83	36.03	26.11	193							
63.0	17.83	36.04	26.12	192							
64.0	17.84	36.03	26.11	193							
65.0	17.81	36.04	26.12	192							



GILLISS CRUISE STA 209C 28/04/79 20.3 GMT CONSEC STA 216

LAT 31 37.8N LONG 01 07.2W DEPTH = 45M DIST LAST STA = 11.3KM

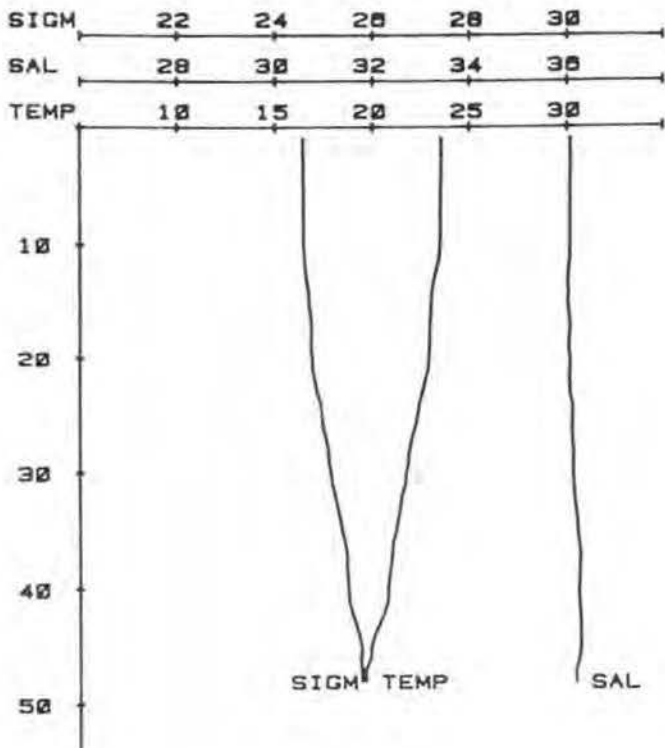
WEATHER DATA

WIND SPEED * 10KTS
WIND DIRECTION * 310
AIR TEMP * 22.2C
WEATHER CODE * 10
BAROMETRIC PRES* 1012.9

SEA STATE * 3
WAVE DIRECTION * 310
CLOUD TYPE *
CLOUD AMOUNT *
VISIBILITY CODE*

OBSERVATIONS										
Z	T	S	W	SWA	O2	O2'	AOI	PO4	NO3	SI
1.0	23.55	36.87	24.59	335						
2.0	23.55	36.87	24.59	336						
3.0	23.55	36.88	24.60	335						
4.0	23.54	36.87	24.60	335						
5.0	23.52	36.87	24.60	335						
6.0	23.52	36.87	24.60	335						
7.0	23.51	36.87	24.60	335						
8.0	23.51	36.87	24.60	335						
9.0	23.51	36.87	24.60	335						
10.0	23.49	36.87	24.61	334						
11.0	23.45	36.87	24.62	333						
12.0	23.32	36.84	24.64	332						
13.0	23.18	36.83	24.67	329						
14.0	23.07	36.84	24.71	325						
15.0	23.03	36.83	24.71	324						
16.0	23.01	36.86	24.74	322						
17.0	22.97	36.88	24.77	319						
18.0	22.97	36.88	24.75	321						
19.0	22.95	36.85	24.75	321						
20.0	22.91	36.88	24.79	318						
21.0	22.88	36.87	24.79	318						
22.0	22.72	36.87	24.83	313						
23.0	22.59	36.88	24.88	309						
24.0	22.43	36.13	24.76	311						
25.0	22.35	36.13	24.99	299						
26.0	22.21	36.12	25.02	296						
27.0	22.03	36.12	25.08	298						
28.0	21.92	36.15	25.12	286						
29.0	21.86	36.14	25.13	285						
30.0	21.73	36.14	25.17	282						
31.0	21.67	36.16	25.20	279						
32.0	21.49	36.17	25.26	273						
33.0	21.41	36.20	25.30	269						
34.0	21.38	36.23	25.36	264						
35.0	21.19	36.24	25.39	261						
36.0	21.04	36.26	25.45	255						
37.0	20.98	36.29	25.49	252						
38.0	20.92	36.27	25.49	251						
39.0	20.83	36.26	25.51	250						
40.0	20.76	36.25	25.52	249						
41.0	20.75	36.26	25.53	248						
42.0	20.57	36.28	25.59	242						
43.0	20.33	36.29	25.67	235						
44.0	20.05	36.29	25.74	228						
45.0	19.89	36.29	25.78	224						
46.0	19.85	36.25	25.76	224						
47.0	19.68	36.19	25.78	224						
48.0	19.68	36.19	25.78	224						

STATION 209C



GILLISS CRUISE STA 210X 28/04/79 22.0 GMT CONSEC STA 217

LAT 31 41.5N LONG 79 59.0W DEPTH = 250M DIST LAST STA = 15.5KM

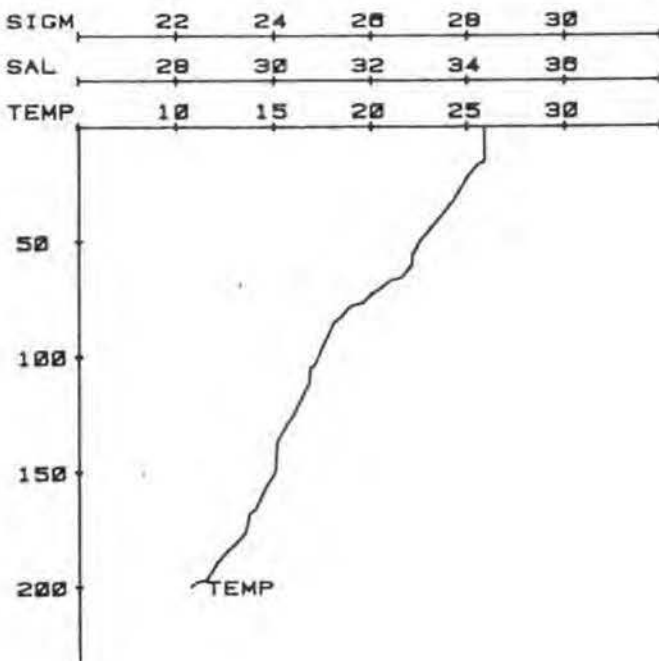
WEATHER DATA

WIND SPEED * 10KTS
WIND DIRECTION * 310
AIR TEMP * 22.0C
WEATHER CODE * 10
BAROMETRIC PRES* 1012.5

SEA STATE * 2
WAVE DIRECTION * 310
CLOUD TYPE *
CLOUD AMOUNT *
VISIBILITY CODE*

OBSERVATIONS										
Z	T	S	W	SWA	O2	O2'	AOI	PO4	NO3	SI
1.0	25.9									
15.0	25.9									
17.0	25.8									
22.0	25.8									
29.0	24.5									
35.0	24.1									
40.0	23.5									
45.0	23.0									
50.0	22.5									
54.0	22.1									
60.0	22.1									
61.0	22.0									
66.0	21.5									
67.0	21.4									
71.0	20.5									
73.0	20.0									
77.0	19.5									
78.0	19.0									
79.0	18.8									
82.0	18.5									
86.0	18.0									
95.0	17.5									
104.0	17.0									
105.0	16.8									
112.0	16.7									
115.0	16.5									
124.0	16.0									
131.0	15.5									
137.0	15.1									
151.0	15.0									
157.0	14.5									
166.0	14.0									
168.0	13.7									
176.0	13.5									
181.0	13.0									
185.0	12.5									
191.0	12.0									
197.0	11.5									
198.0	11.0									
200.0	10.7									

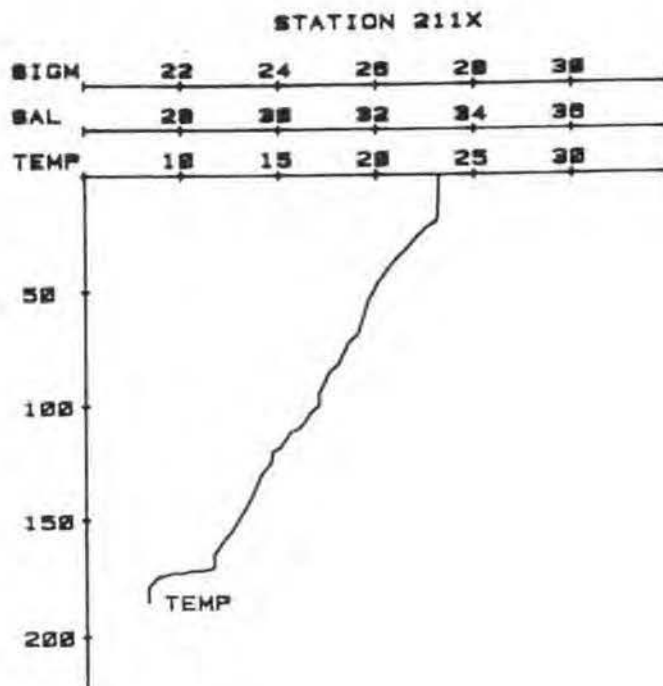
STATION 210X



GILLISS CRUISE STA 211X 20/04/79 22.5 GMT CONSEC STA 210
LAT 31 42.0N LONG 01 42.0W DEPTH = 185M DIST LAST STA = 6.30M

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 270
AIR TEMP = 22.0C
WEATHER CODE = 01
BAROMETRIC PRES = 1012.5
SEA STATE = 2
WAVE DIRECTION = 300
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

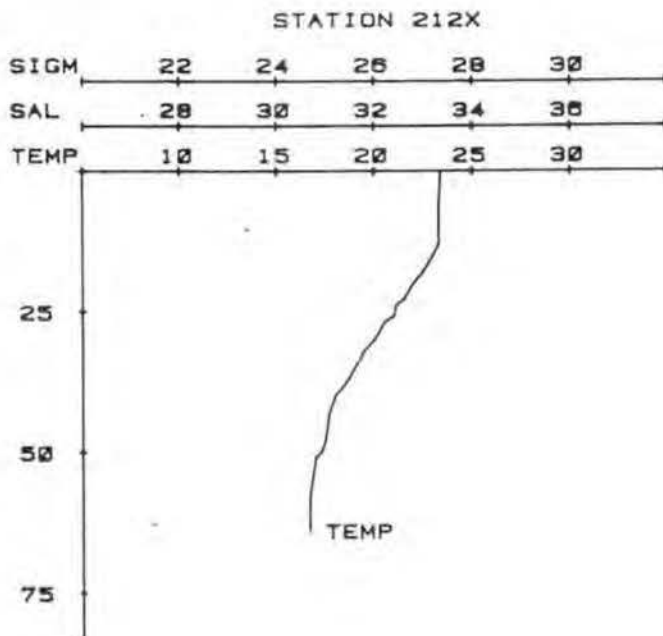
OBSERVATIONS										
Z	T	S	B	SVA	O2	O2'	NOU	PO4	NO3	SI
0.0	23.2									
10.0	23.1									
20.0	23.0									
30.0	22.5									
40.0	22.0									
50.0	21.5									
60.0	21.0									
70.0	20.5									
80.0	20.0									
90.0	19.5									
100.0	19.0									
110.0	18.5									
120.0	18.0									
130.0	17.5									
140.0	17.0									
150.0	16.5									
160.0	16.0									
170.0	15.5									
180.0	15.0									
190.0	14.5									
200.0	14.0									
210.0	13.5									
220.0	13.0									
230.0	12.5									
240.0	12.0									
250.0	11.5									
260.0	11.0									
270.0	10.5									
280.0	10.0									
290.0	9.5									
300.0	9.0									
310.0	8.5									
320.0	8.0									
330.0	7.5									
340.0	7.0									
350.0	6.5									
360.0	6.0									
370.0	5.5									
380.0	5.0									
390.0	4.5									
400.0	4.0									



GILLISS CRUISE STA 212X 20/04/79 22.9 GMT CONSEC STA 210
LAT 31 42.0N LONG 01 45.0W DEPTH = 64M DIST LAST STA = 3.70M

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 270
AIR TEMP = 22.0C
WEATHER CODE = 01
BAROMETRIC PRES = 1012.5
SEA STATE = 2
WAVE DIRECTION = 300
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SVA	O2	O2'	NOU	PO4	NO3	SI
0.0	23.4									
10.0	23.3									
20.0	23.3									
30.0	23.0									
40.0	22.5									
50.0	22.0									
60.0	21.5									
70.0	21.0									
80.0	20.5									
90.0	20.0									
100.0	19.5									
110.0	19.0									
120.0	18.5									
130.0	18.0									
140.0	17.5									
150.0	17.0									
160.0	16.5									
170.0	16.0									
180.0	15.5									
190.0	15.0									
200.0	14.5									
210.0	14.0									
220.0	13.5									
230.0	13.0									
240.0	12.5									
250.0	12.0									
260.0	11.5									
270.0	11.0									
280.0	10.5									
290.0	10.0									
300.0	9.5									
310.0	9.0									
320.0	8.5									
330.0	8.0									
340.0	7.5									
350.0	7.0									
360.0	6.5									
370.0	6.0									
380.0	5.5									
390.0	5.0									
400.0	4.5									

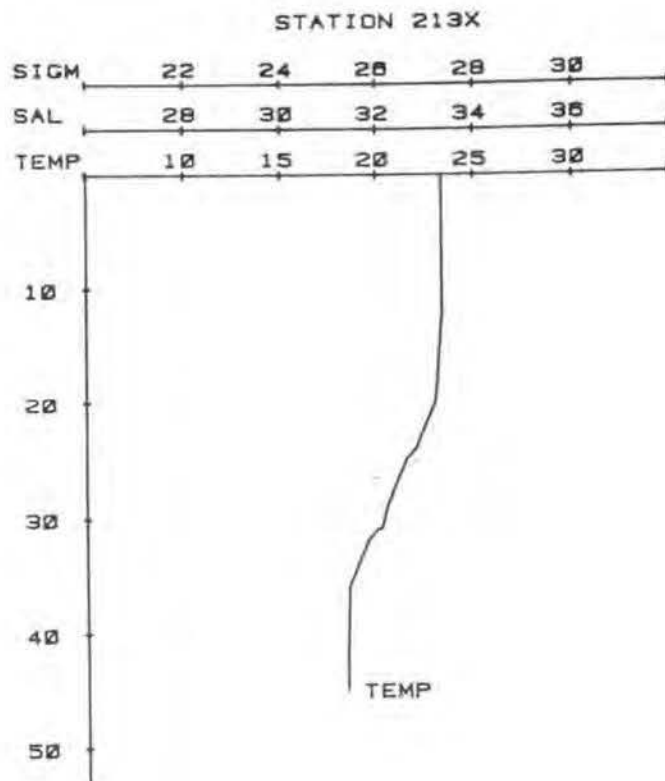


GILLISS CRUISE STA 213X 28/04/79 23.1 GMT CONSEC STA 220
LAT 38 42.0N LONG 00 07.0W DEPTH = 45M DIST LAST STA = 4.5KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 270
AIR TEMP = 22.0C
WEATHER CODE = 88
BAROMETRIC PRES = 1012.5

SEA STATE = 2
WAVE DIRECTION = 300
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SVA	Q2	Q2'	AOU	P04	M03	SI
8.0	23.4									
12.0	23.4									
16.0	23.0									
20.0	23.0									
22.0	22.5									
24.0	22.0									
25.0	21.5									
27.0	21.0									
29.0	20.5									
31.0	20.2									
33.0	19.8									
34.0	19.5									
36.0	19.0									
42.0	18.4									
45.0	18.4									

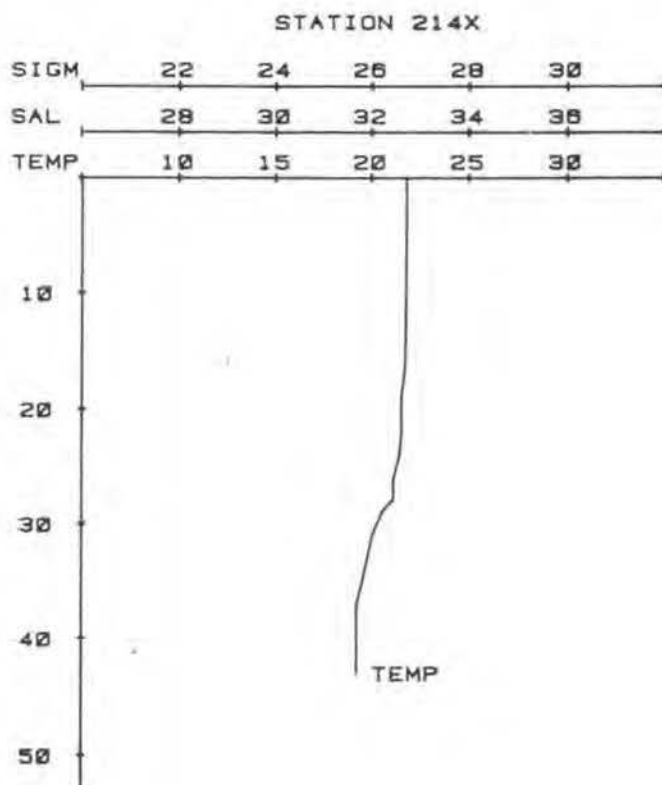


GILLISS CRUISE STA 214X 28/04/79 23.3 GMT CONSEC STA 221
LAT 38 44.1N LONG 00 11.0W DEPTH = 43M DIST LAST STA = 5.6KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 260
AIR TEMP = 22.0C
WEATHER CODE = 88
BAROMETRIC PRES = 1012.5

SEA STATE = 2
WAVE DIRECTION = 300
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

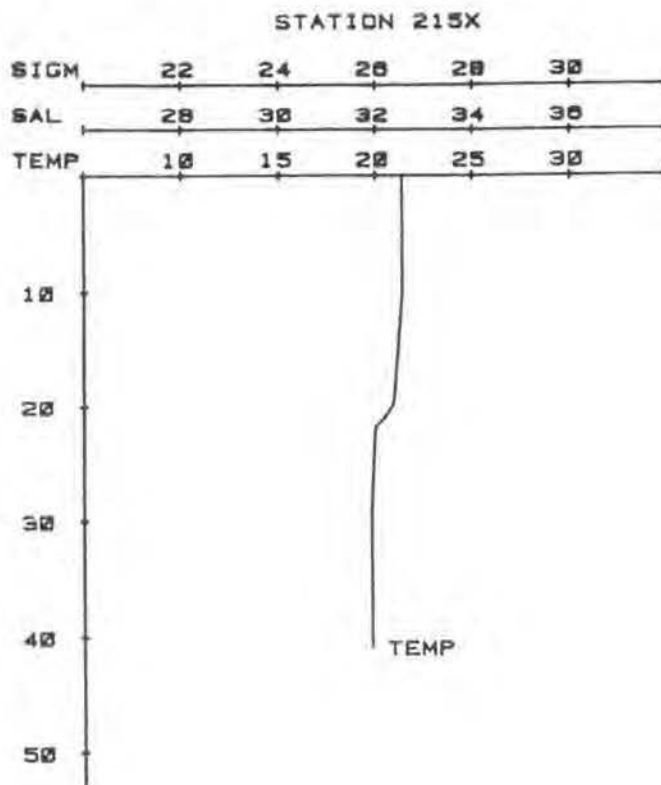
OBSERVATIONS										
Z	T	S	B	SVA	Q2	Q2'	AOU	P04	M03	SI
8.0	21.0									
16.0	21.7									
19.0	21.5									
22.0	21.5									
24.0	21.4									
26.0	21.1									
28.0	21.1									
29.0	21.0									
29.0	20.5									
31.0	20.0									
35.0	19.5									
37.0	19.2									
43.0	19.2									



GILLISS CRUISE STA 215X 28/04/79 23.6 GMT CONSEC STA 222
LAT 30 43.5N LONG 00 14.0W DEPTH = 41M DIST LAST STA = 4.9KM

WEATHER DATA
WIND SPEED = 13KTS
WIND DIRECTION = 240
AIR TEMP = 22.0C
WEATHER CODE = 10
BAROMETRIC PRES = 1012.9
SEA STATE = 2
WAVE DIRECTION = 300
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

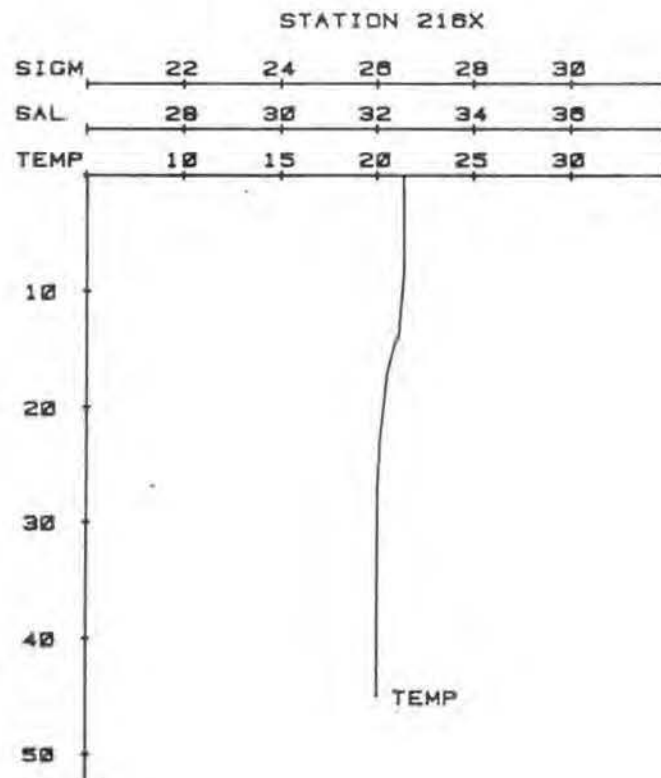
		OBSERVATIONS									
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI	
0.0	21.4	.	.	.	.	.	.	.	.	.	
10.0	21.4	.	.	.	.	.	.	.	.	.	
19.0	21.0	.	.	.	.	.	.	.	.	.	
21.0	20.9	.	.	.	.	.	.	.	.	.	
21.0	20.5	.	.	.	.	.	.	.	.	.	
22.0	20.0	.	.	.	.	.	.	.	.	.	
25.0	19.9	.	.	.	.	.	.	.	.	.	
29.0	19.0	.	.	.	.	.	.	.	.	.	
41.0	19.0	.	.	.	.	.	.	.	.	.	



GILLISS CRUISE STA 216X 28/04/79 23.8 GMT CONSEC STA 223
LAT 30 45.0N LONG 00 16.5W DEPTH = 45M DIST LAST STA = 4.9KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 250
AIR TEMP = 22.0C
WEATHER CODE = 10
BAROMETRIC PRES = 1012.9
SEA STATE = 2
WAVE DIRECTION = 300
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

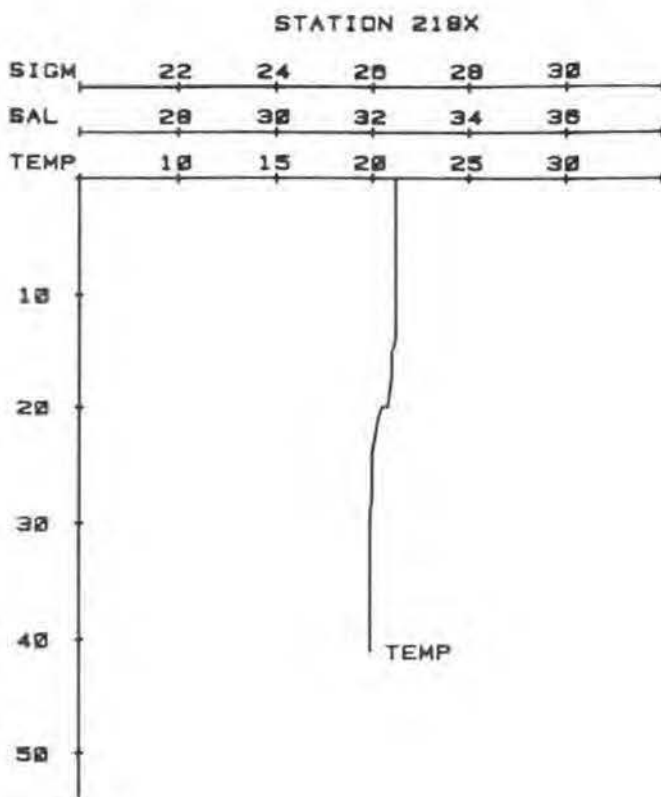
		OBSERVATIONS									
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI	
0.0	21.4	.	.	.	.	.	.	.	.	.	
0.0	21.4	.	.	.	.	.	.	.	.	.	
14.0	21.1	.	.	.	.	.	.	.	.	.	
14.0	21.0	.	.	.	.	.	.	.	.	.	
15.0	20.0	.	.	.	.	.	.	.	.	.	
17.0	20.5	.	.	.	.	.	.	.	.	.	
23.0	20.1	.	.	.	.	.	.	.	.	.	
27.0	20.0	.	.	.	.	.	.	.	.	.	
45.0	20.0	.	.	.	.	.	.	.	.	.	



GILLISS CRUISE STA 218X 29/04/79 08.5 GMT CONSEC STA 225
LAT 38 44.0N LONG 08 16.9W DEPTH = 41M DIST LAST STA = 10.7KM

WEATHER DATA
WIND SPEED = 14KTS
WIND DIRECTION = 320
AIR TEMP = 20.6C
WEATHER CODE = 30
BAROMETRIC PRES = 1015.2
SEA STATE = 1
WAVE DIRECTION =
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

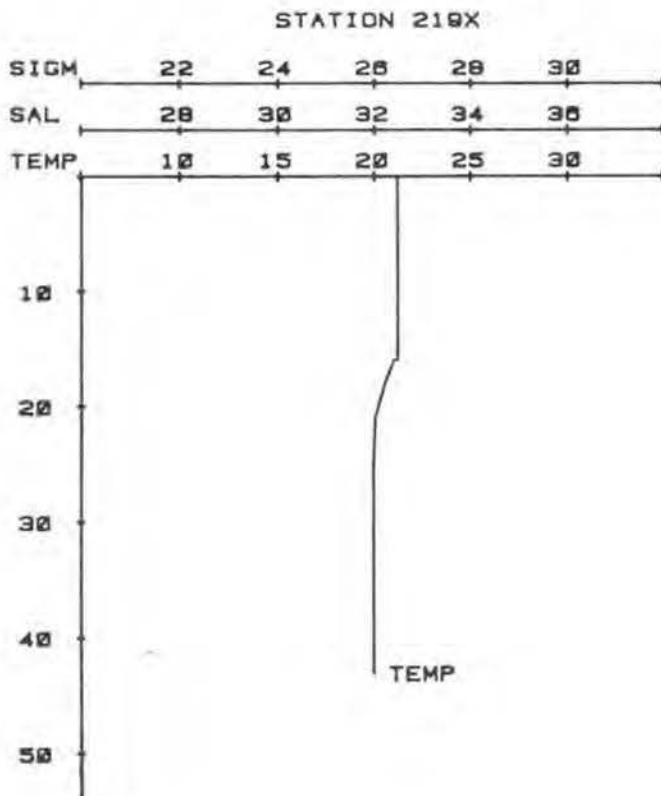
OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	21.2									
1.0	21.2									
14.0	21.2									
15.0	21.8									
17.0	21.8									
20.0	20.8									
21.0	20.5									
21.0	20.3									
24.0	20.8									
28.0	20.8									
29.0	19.9									
41.0	19.9									



GILLISS CRUISE STA 219X 29/04/79 08.8 GMT CONSEC STA 226
LAT 38 44.3N LONG 08 13.7W DEPTH = 43M DIST LAST STA = 5.2KM

WEATHER DATA
WIND SPEED = 14KTS
WIND DIRECTION = 320
AIR TEMP = 20.6C
WEATHER CODE = 30
BAROMETRIC PRES = 1015.2
SEA STATE = 1
WAVE DIRECTION =
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

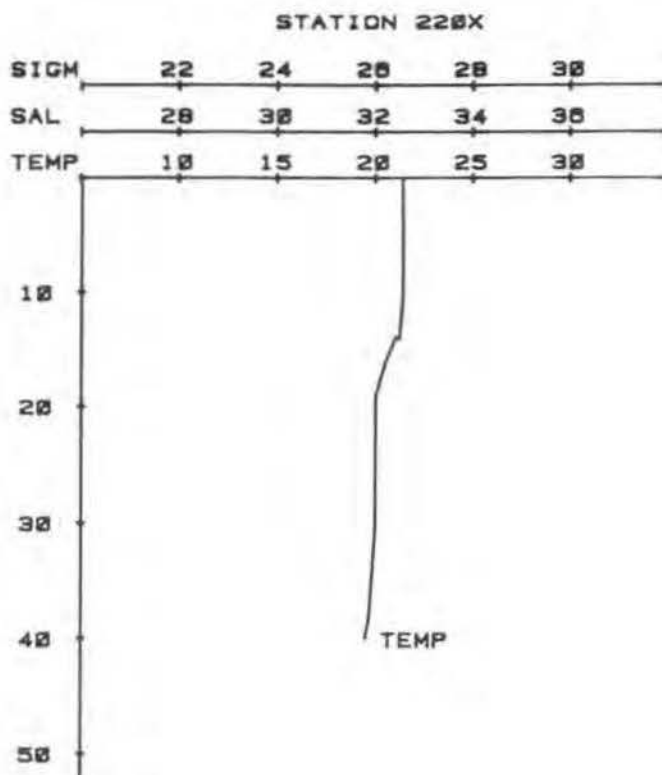
OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.0	21.2									
14.0	21.2									
16.0	21.8									
18.0	20.5									
21.0	20.8									
25.0	19.9									
43.0	19.9									



GILLISS CRUISE STA 220X 29/04/79 09.1 GRT CONSEC STA 227
LAT 38 43.7N LONG 08 18.0W DEPTH = 40M DIST LAST STA = 4.7KM

WEATHER DATA
WIND SPEED = 14KTS
WIND DIRECTION = 320
AIR TEMP = 20.0C
WEATHER CODE = 00
BAROMETRIC PRES = 1015.2
SEA STATE = 1
WAVE DIRECTION =
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

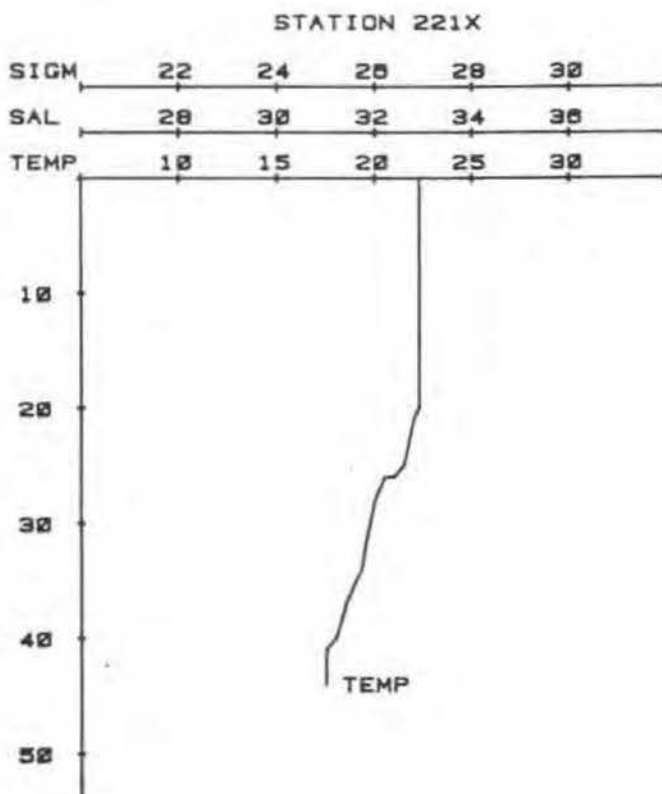
Z	T	S	Q	SUN	Q2	Q2'	NOU	P04	MO3	SI
0.0	21.4									
10.0	21.4									
14.0	21.2									
16.0	21.0									
17.0	20.8									
18.0	20.5									
20.0	20.0									
22.0	19.5									
24.0	19.2									
26.0	19.0									



GILLISS CRUISE STA 221X 29/04/79 09.3 GRT CONSEC STA 228
LAT 38 42.5N LONG 08 07.5W DEPTH = 40M DIST LAST STA = 5.3KM

WEATHER DATA
WIND SPEED = 12KTS
WIND DIRECTION = 330
AIR TEMP = 20.0C
WEATHER CODE = 00
BAROMETRIC PRES = 1015.2
SEA STATE = 1
WAVE DIRECTION =
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	Q	SUN	Q2	Q2'	NOU	P04	MO3	SI
0.0	22.3									
20.0	22.3									
21.0	22.0									
25.0	21.5									
26.0	21.0									
28.0	20.5									
29.0	20.0									
32.0	19.5									
34.0	19.3									
35.0	19.0									
37.0	18.5									
40.0	18.0									
41.0	17.5									
44.0	17.5									

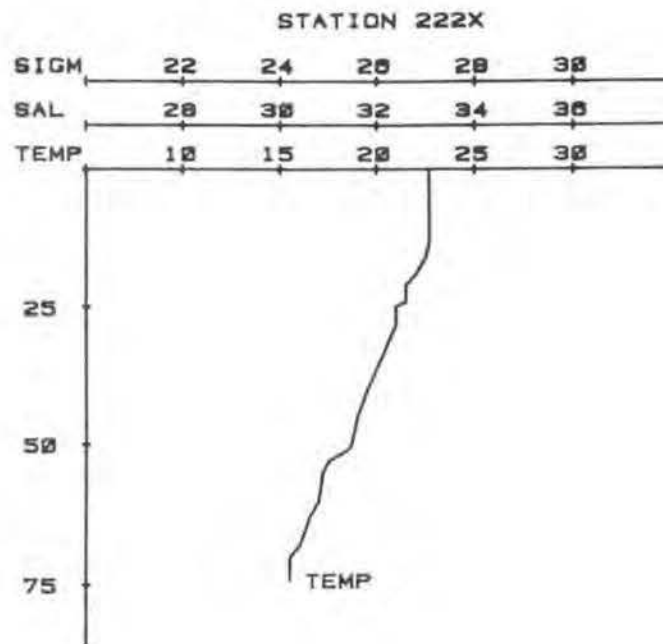


GILLISS CRUISE STA 222X 29/04/79 09.7 GMT COMSEC STA 229
LAT 39 42.7N LONG 01 04.1W DEPTH = 74M DIST LAST STA = 4.4KM

WEATHER DATA
WIND SPEED = 12KTS
WIND DIRECTION = 330
AIR TEMP = 20.0C
WEATHER CODE = 10
BAROMETRIC PRES = 1015.2

SEA STATE = 1
WAVE DIRECTION =
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	B	SVA	O2	O2'	NOJ	PO4	NO3
8.0	22.7								
13.0	22.7								
16.0	22.5								
19.0	22.0								
21.0	21.5								
24.0	21.5								
25.0	21.0								
28.0	21.0								
32.0	20.5								
36.0	20.0								
40.0	19.5								
45.0	19.0								
50.0	18.7								
51.0	18.5								
52.0	18.0								
53.0	17.5								
55.0	17.2								
60.0	17.0								
63.0	16.5								
68.0	16.0								
70.0	15.5								
74.0	15.5								

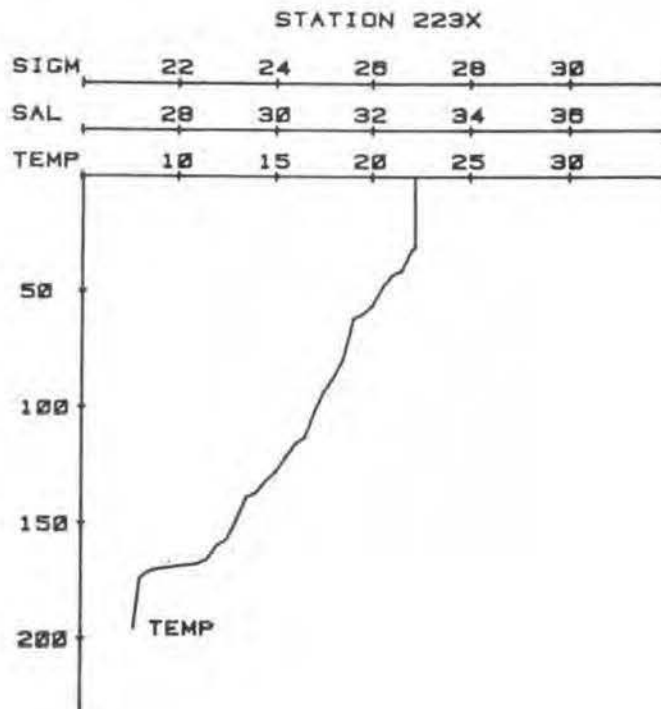


GILLISS CRUISE STA 223X 29/04/79 09.9 GMT COMSEC STA 230
LAT 39 42.1N LONG 01 03.0W DEPTH = 195M DIST LAST STA = 3.2KM

WEATHER DATA
WIND SPEED = 12KTS
WIND DIRECTION = 330
AIR TEMP = 20.0C
WEATHER CODE = 10
BAROMETRIC PRES = 1015.2

SEA STATE = 1
WAVE DIRECTION = 330
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

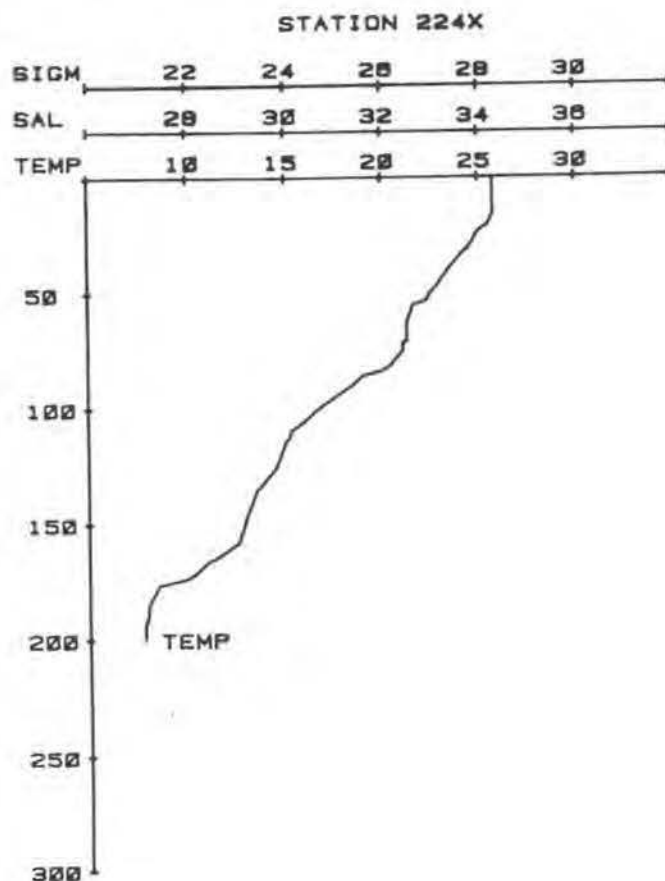
OBSERVATIONS									
Z	T	S	B	SVA	O2	O2'	NOJ	PO4	NO3
8.0	22.2								
31.0	22.2								
32.0	22.0								
41.0	21.5								
43.0	21.0								
48.0	20.5								
54.0	20.0								
60.0	19.5								
62.0	19.0								
70.0	18.5								
87.0	18.0								
93.0	17.5								
102.0	17.0								
113.0	16.5								
116.0	16.0								
122.0	15.5								
128.0	15.0								
132.0	14.5								
137.0	14.0								
139.0	13.5								
149.0	13.0								
157.0	12.5								
160.0	12.0								
166.0	11.5								
168.0	11.0								
169.0	10.0								
170.0	9.0								
171.0	8.5								
174.0	8.0								
195.0	7.7								



GILLISS CRUISE STA 224X 29/04/79 18.5 GMT CONSEC STA 231
LAT 38 41.6N LONG 79 59.2W DEPTH = 240M DIST LAST STA = 6.1NM

WEATHER DATA
WIND SPEED = 12KTS
WIND DIRECTION = 350
AIR TEMP = 20.0C
WEATHER CODE = 11
BAROMETRIC PRES = 1015.2
SEA STATE = 1
WAVE DIRECTION = 330
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

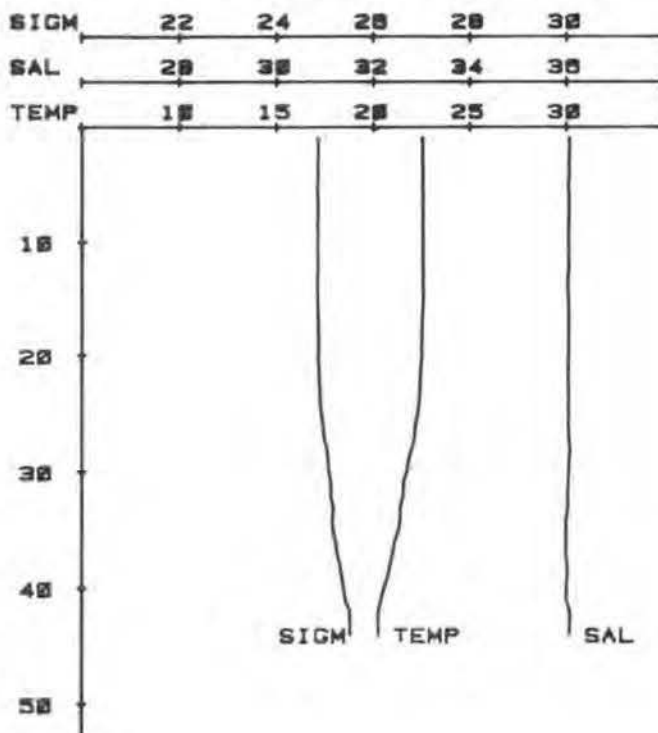
Z	T	S	B	SVA	O2	O2'	AOI	PO4	NO3	SI
1.0	25.0									
14.0	25.0									
21.0	25.5									
24.0	25.0									
31.0	24.5									
35.0	24.0									
41.0	23.5									
46.0	23.0									
51.0	22.5									
54.0	22.5									
55.0	22.0									
56.0	21.0									
59.0	21.5									
63.0	21.3									
71.0	21.2									
72.0	21.1									
75.0	21.1									
76.0	21.0									
81.0	20.5									
84.0	20.0									
85.0	19.5									
86.0	19.0									
90.0	18.5									
93.0	18.0									
96.0	17.5									
99.0	17.0									
102.0	16.5									
106.0	16.0									
109.0	15.5									
110.0	15.2									
113.0	15.2									
115.0	15.0									
126.0	14.5									
131.0	14.0									
134.0	13.5									
147.0	13.0									
150.0	12.0									
159.0	12.5									
162.0	12.0									
165.0	11.5									
167.0	11.0									
171.0	10.5									
174.0	10.0									
175.0	9.5									
176.0	9.0									
177.0	8.5									
185.0	8.0									
192.0	7.9									
193.0	7.8									
200.0	7.0									



GILLISS CRUISE STA 225C 29/04/79 12.2 GMT CONSEC STA 232
 LAT 34 42.4N LONG 01 14.2W DEPTH = 52N DIST LAST STA = 0.2NM
 WEATHER DATA
 WIND SPEED = 18KTS
 WIND DIRECTION = 354
 AIR TEMP = 21.1C
 WEATHER CODE = 11
 BAROMETRIC PRES = 1015.6
 SEA STATE = 1
 WAVE DIRECTION = 330
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

Z	T	S	B	SW	OBSERVATIONS	Q2	Q2'	ADU	PO4	NO3	SI
1.0	22.54	36.05	24.04	310							
2.0	22.54	36.05	24.04	310							
3.0	22.54	36.04	24.04	310							
4.0	22.54	36.05	24.04	310					0.07	0.0	0.0
5.0	22.54	36.03	24.05	311							
6.0	22.54	36.05	24.04	310							
7.0	22.54	36.05	24.04	310							
8.0	22.54	36.04	24.04	311							
9.0	22.54	36.04	24.04	311							
10.0	22.54	36.04	24.04	311							
11.0	22.54	36.05	24.04	310							
12.0	22.54	36.05	24.04	310							
13.0	22.54	36.03	24.05	312							
14.0	22.54	36.03	24.05	312					0.10	0.0	0.0
15.0	22.54	36.04	24.04	311							
16.0	22.52	36.05	24.07	309							
17.0	22.50	36.05	24.08	309							
18.0	22.49	36.05	24.08	308							
19.0	22.48	36.05	24.09	308							
20.0	22.49	36.04	24.08	309							
21.0	22.43	36.04	24.09	308							
22.0	22.41	36.04	24.08	307							
23.0	22.38	36.05	24.02	304							
24.0	22.35	36.05	24.02	305							
25.0	22.29	36.05	24.05	302							
26.0	22.13	36.05	24.09	299					0.10	1.0	0.4
27.0	22.11	36.04	25.01	298							
28.0	21.94	36.08	25.04	292							
29.0	21.89	36.06	25.09	289							
30.0	21.78	36.05	25.11	288							
31.0	21.53	36.04	25.15	284							
32.0	21.54	36.03	25.14	285							
33.0	21.36	36.04	25.19	279							
34.0	21.36	36.01	25.16	282							
35.0	21.27	36.01	25.19	280					0.34	3.7	1.3
36.0	21.07	36.01	25.24	275							
37.0	20.97	36.01	25.27	272							
38.0	20.84	36.03	25.33	267							
39.0	20.71	36.03	25.36	263							
40.0	20.51	36.01	25.41	264							
41.0	20.37	36.01	25.44	254							
42.0	20.23	36.00	25.53	248							
44.0	20.23	36.00	25.53	248					0.34	4.1	3.4

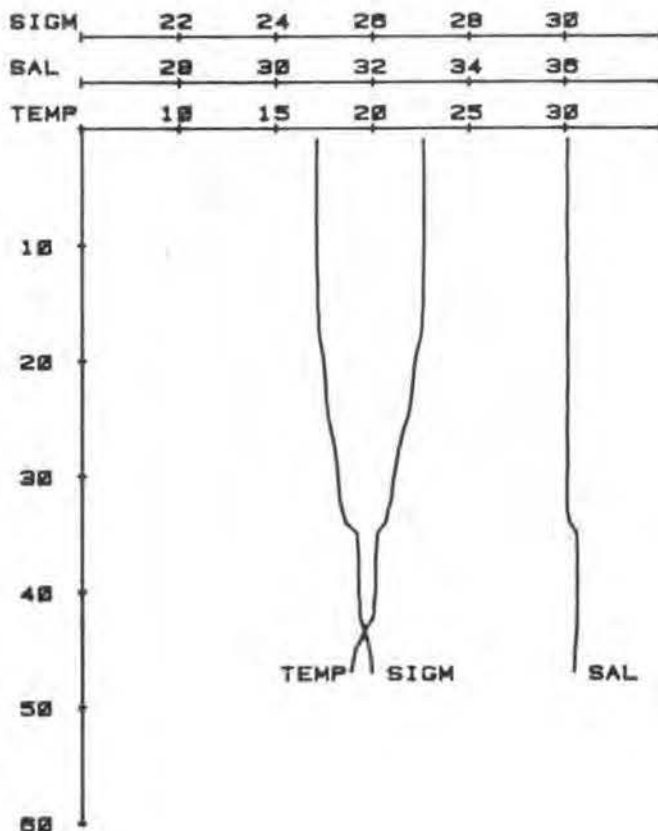
STATION 225C



GILLISS CRUISE STA 226C 29/04/79 13.0 GMT CONSEC STA 233
 LAT 30 42.9N LONG 00 05.4W DEPTH = 67N DIST LAST STA = 2.0NM
 WEATHER DATA
 WIND SPEED = 18KTS
 WIND DIRECTION = 020
 AIR TEMP = 21.1C
 WEATHER CODE = 11
 BAROMETRIC PRES = 1015.0
 SEA STATE = 2
 WAVE DIRECTION = 330
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

Z	T	S	B	SW	OBSERVATIONS	Q2	Q2'	ADU	PO4	NO3	SI
1.0	22.63	36.05	24.04	312							
2.0	22.64	36.04	24.03	313							
3.0	22.64	36.03	24.03	313							
4.0	22.64	36.04	24.03	313							
5.0	22.64	36.04	24.03	313							
6.0	22.64	36.04	24.03	313							
7.0	22.63	36.03	24.03	313							
8.0	22.63	36.03	24.03	313							
9.0	22.63	36.04	24.04	313							
10.0	22.62	36.04	24.04	312							
11.0	22.61	36.03	24.04	313							
12.0	22.59	36.04	24.05	312							
13.0	22.57	36.05	24.06	310							
14.0	22.57	36.05	24.06	310							
15.0	22.57	36.04	24.05	311							
16.0	22.51	36.05	24.08	309							
17.0	22.49	36.04	24.08	309							
18.0	22.41	36.04	24.08	307							
19.0	22.24	36.04	24.05	302							
20.0	22.12	36.05	24.09	298							
21.0	22.04	36.04	25.01	297							
22.0	21.98	36.04	25.02	295							
23.0	21.93	36.03	25.03	295							
24.0	21.86	36.04	25.04	292							
25.0	21.73	36.03	25.08	290							
26.0	21.52	36.03	25.14	284							
27.0	21.37	36.04	25.17	279							
28.0	21.23	36.04	25.23	274							
29.0	21.14	36.05	25.26	273							
30.0	21.02	36.03	25.28	271							
31.0	20.94	36.03	25.31	269							
32.0	20.89	36.03	25.33	268							
33.0	20.71	36.04	25.37	262							
34.0	20.59	36.08	25.44	257							
35.0	20.16	36.24	25.67	234							
36.0	20.11	36.24	25.69	233							
37.0	20.06	36.25	25.71	231							
38.0	20.00	36.24	25.69	232							
39.0	20.07	36.25	25.70	231							
40.0	20.07	36.24	25.71	232							
41.0	19.98	36.25	25.73	229							
42.0	19.97	36.24	25.72	229							
43.0	19.84	36.23	25.81	222							
44.0	19.34	36.22	25.87	215							
45.0	19.03	36.19	25.93	210							
46.0	18.99	36.19	25.94	207							
47.0	18.79	36.17	25.98	205							

STATION 226C



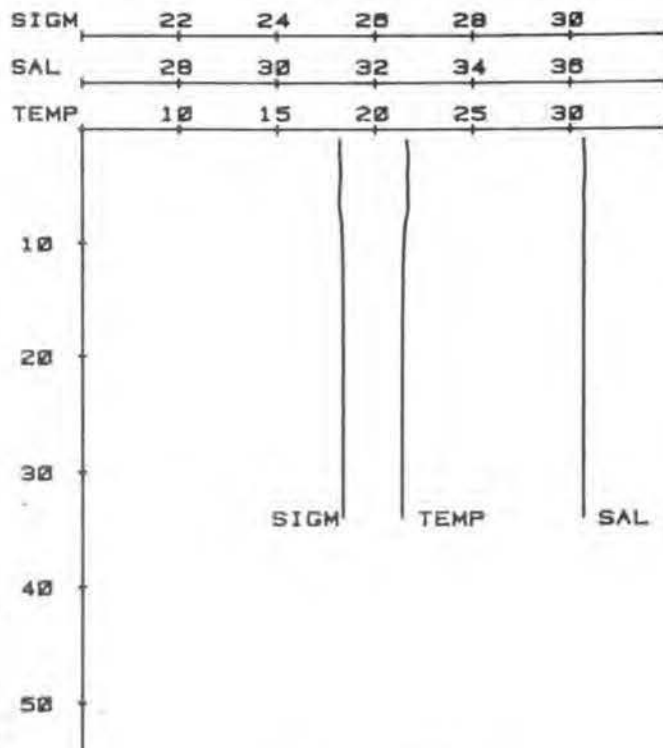
GILLISS CRUISE STA 227C 29/04/79 10.1 GWT CONSEC STA 234
LAT 38 47.0N LONG 00 31.0W DEPTH = 36M DIST LAST STA = 40.2KM

WEATHER DATA
WIND SPEED = 0KTS
WIND DIRECTION = 010
AIR TEMP = 24.6C
WEATHER CODE = 11
BAROMETRIC PRES = 1016.0

SEA STATE = 2
WAVE DIRECTION = 350
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SVA	O2	O2'	A00	P04	M03	S1
1.0	21.63	36.29	25.31	260						
2.0	21.67	36.31	25.31	260				0.04	0.1	0.5
3.0	21.60	36.31	25.31	267						
4.0	21.64	36.31	25.32	266						
5.0	21.68	36.29	25.31	269						
6.0	21.67	36.28	25.29	269						
7.0	21.74	36.31	25.31	269						
8.0	21.54	36.31	25.34	265						
9.0	21.58	36.29	25.35	264						
10.0	21.47	36.29	25.35	263				0.05	0.1	0.4
11.0	21.44	36.29	25.36	263						
12.0	21.42	36.29	25.37	262						
13.0	21.42	36.29	25.37	262						
14.0	21.41	36.29	25.37	262						
15.0	21.48	36.28	25.37	262						
16.0	21.39	36.29	25.38	261						
17.0	21.39	36.29	25.38	262						
18.0	21.39	36.29	25.38	262						
19.0	21.39	36.29	25.38	262				0.05	0.1	0.4
20.0	21.39	36.29	25.38	262						
21.0	21.39	36.29	25.38	262						
22.0	21.39	36.29	25.38	262						
23.0	21.39	36.29	25.38	262						
24.0	21.39	36.29	25.38	262						
25.0	21.39	36.29	25.38	262						
26.0	21.39	36.29	25.38	262						
27.0	21.39	36.29	25.38	262						
28.0	21.39	36.29	25.38	262						
29.0	21.39	36.29	25.38	262						
30.0	21.39	36.29	25.38	262						
31.0	21.39	36.29	25.38	262						
32.0	21.39	36.29	25.38	262						
33.0	21.39	36.29	25.38	262				0.04	0.1	0.5
34.0	21.39	36.29	25.38	262						

STATION 227C



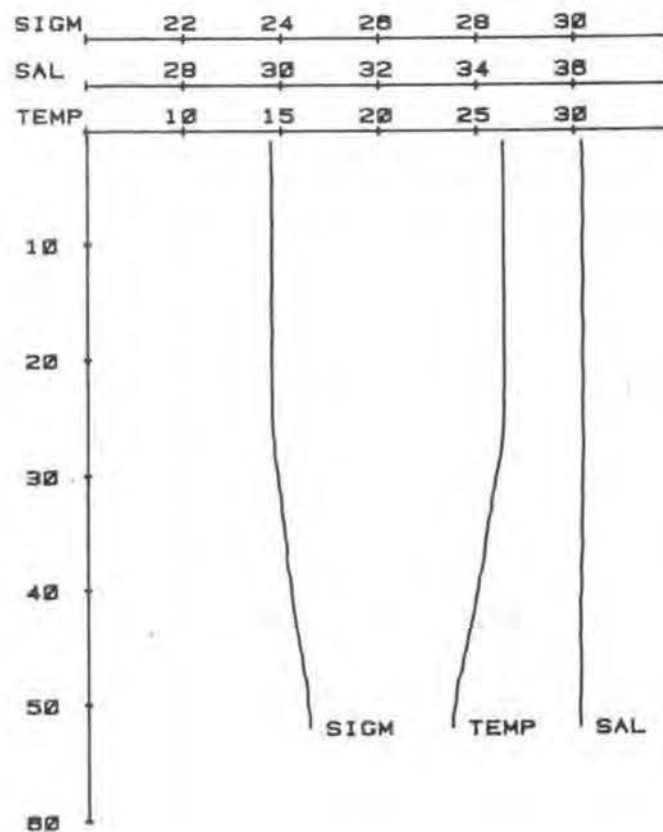
GILLISS CRUISE STA 237C 30/04/79 00.1 GWT CONSEC STA 244
LAT 38 41.5N LONG 79 50.5W DEPTH = 219M DIST LAST STA = 51.5KM

WEATHER DATA
WIND SPEED = 0KTS
WIND DIRECTION = 040
AIR TEMP = 21.7C
WEATHER CODE = 11
BAROMETRIC PRES = 1016.3

SEA STATE = 2
WAVE DIRECTION = 000
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	B	SVA	O2	O2'	A00	P04	M03	S1
1.0	26.34	36.15	23.01	411						
2.0	26.34	36.17	23.02	409						
3.0	26.35	36.16	23.01	411				0.00	0.1	0.6
4.0	26.34	36.18	23.02	409						
5.0	26.35	36.17	23.01	410						
6.0	26.34	36.16	23.01	410						
7.0	26.34	36.17	23.02	410						
8.0	26.33	36.18	23.03	409						
9.0	26.34	36.16	23.01	411						
10.0	26.34	36.16	23.01	411						
11.0	26.34	36.16	23.01	411						
12.0	26.34	36.17	23.02	410						
13.0	26.34	36.18	23.02	409						
14.0	26.35	36.16	23.01	411						
15.0	26.35	36.16	23.01	411						
16.0	26.35	36.16	23.01	411						
17.0	26.34	36.18	23.02	409						
18.0	26.34	36.17	23.02	410						
19.0	26.35	36.16	23.01	411						
20.0	26.35	36.16	23.01	411				0.00	0.1	0.5
21.0	26.35	36.17	23.01	411						
22.0	26.34	36.17	23.02	410						
23.0	26.31	36.16	23.02	410						
24.0	26.33	36.16	23.01	411						
25.0	26.33	36.17	23.02	410						
26.0	26.29	36.17	23.03	409						
27.0	26.22	36.18	23.04	406						
28.0	26.17	36.17	23.07	405				0.00	0.1	0.5
29.0	26.05	36.16	23.10	403						
30.0	25.91	36.16	23.14	398						
31.0	25.84	36.15	23.16	397						
32.0	25.78	36.16	23.18	392						
33.0	25.68	36.15	23.18	392						
34.0	25.51	36.14	23.15	389						
35.0	25.45	36.14	23.17	384						
36.0	25.35	36.16	23.12	382						
37.0	25.31	36.13	23.11	383						
38.0	25.21	36.12	23.13	381						
39.0	25.04	36.13	23.19	375						
40.0	24.99	36.13	23.21	374				0.02	0.1	0.0
41.0	24.85	36.18	23.23	372						
42.0	24.76	36.11	23.26	369						
43.0	24.63	36.11	23.28	365						
44.0	24.47	36.18	23.34	361						
45.0	24.39	36.11	23.37	358						
46.0	24.23	36.12	23.43	353						
47.0	24.15	36.11	23.45	351						
48.0	23.93	36.11	23.51	345						
49.0	23.86	36.11	23.51	343						
50.0	23.81	36.09	23.53	343						
51.0	23.67	36.18	23.58	339						
52.0	23.67	36.18	23.58	339				0.06	0.1	0.3

STATION 237C



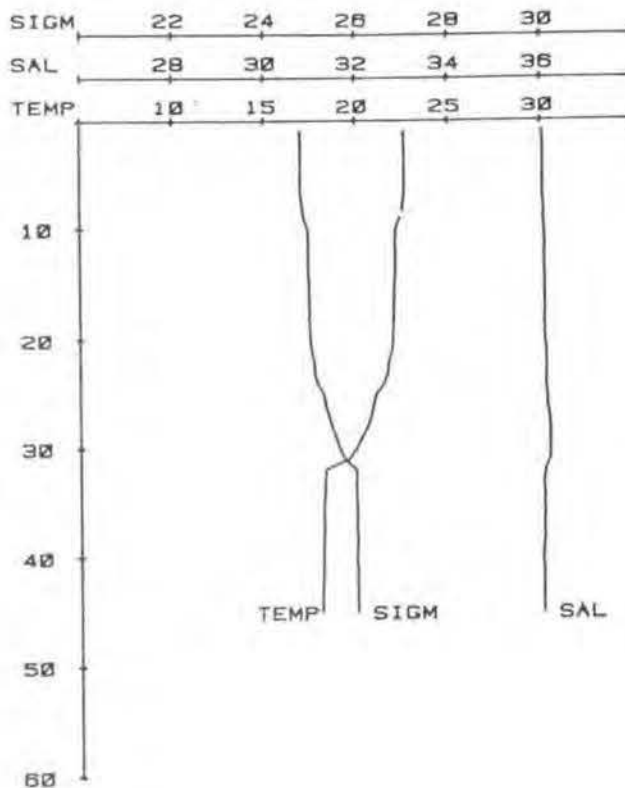
WILLISS CRUISE STA 238C 30/04/79 04.5 GAT CONSEC STA 245
LAT 30 43.8N LONG 00 09.0W DEPTH = 47M DIST LAST STA = 10.5KM

WEATHER DATA
WIND SPEED = 04KTS
WIND DIRECTION = 120
AIR TEMP = 21.7C
WEATHER CODE = 21
BAROMETRIC PRES = 1016.9

SEA STATE = 1
WAVE DIRECTION = 100
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	0	SVN	D2	D21	ADU	PD4	MO3
1.0	22.68	36.04	24.82	314					
2.0	22.67	36.06	24.84	312					
3.0	22.70	36.06	24.83	313					
4.0	22.70	36.06	24.83	313					
5.0	22.70	36.06	24.83	313					
6.0	22.70	36.06	24.83	313					
7.0	22.67	36.06	24.84	312					
8.0	22.59	36.08	24.88	309			0.07	0.1	0.1
9.0	22.47	36.07	24.91	306					
10.0	22.21	36.09	24.99	298					
11.0	22.16	36.11	25.01	296					
12.0	22.19	36.09	25.00	297					
13.0	22.18	36.09	25.00	297					
14.0	22.17	36.10	25.01	296					
15.0	22.12	36.10	25.03	295					
16.0	22.12	36.10	25.03	295					
17.0	22.09	36.10	25.04	294					
18.0	22.08	36.09	25.03	294			0.10	1.2	0.2
19.0	22.06	36.10	25.04	293					
20.0	22.03	36.10	25.05	292					
21.0	22.00	36.13	25.08	289			0.04	0.0	0.1
22.0	21.82	36.13	25.13	285					
23.0	21.78	36.13	25.15	284					
24.0	21.57	36.12	25.20	279			0.14	2.1	1.0
25.0	21.14	36.15	25.34	265					
26.0	20.99	36.15	25.38	262					
27.0	20.86	36.19	25.45	255					
28.0	20.67	36.21	25.51	249					
29.0	20.35	36.21	25.60	241					
30.0	20.05	36.21	25.68	233					
31.0	19.63	36.20	25.78	223					
32.0	19.37	36.18	26.03	200					
33.0	19.31	36.07	26.02	201					
34.0	19.30	36.08	26.03	200					
35.0	18.25	36.08	26.04	199					
36.0	18.25	36.09	26.04	199					
37.0	18.25	36.07	26.04	199					
38.0	18.23	36.08	26.05	198					
39.0	18.21	36.06	26.04	199					
40.0	18.21	36.05	26.03	200					
41.0	18.20	36.07	26.05	198					
42.0	18.18	36.06	26.05	199					
43.0	18.16	36.06	26.05	198					
44.0	18.14	36.06	26.06	198					
45.0	18.14	36.06	26.06	198			0.29	4.5	3.1

STATION 238C



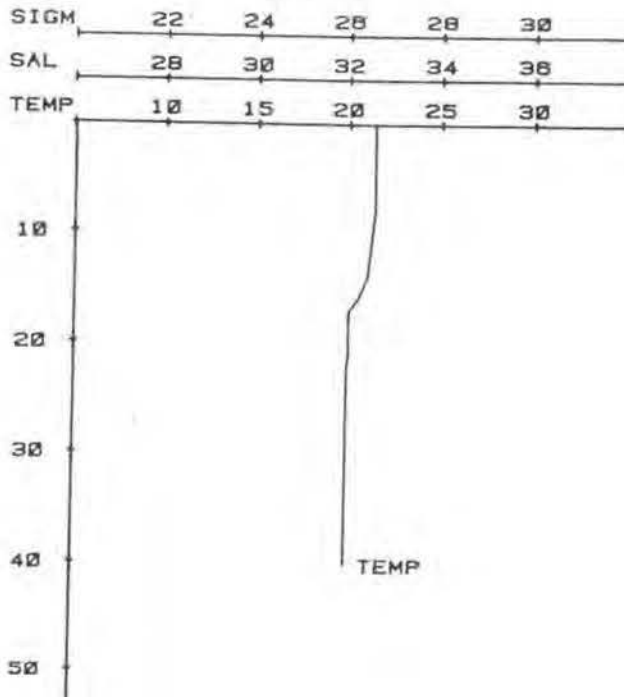
WILLISS CRUISE STA 239X 30/04/79 08.5 GAT CONSEC STA 246
LAT 30 44.6N LONG 00 13.0W DEPTH = 40M DIST LAST STA = 6.5KM

WEATHER DATA
WIND SPEED = 04KTS
WIND DIRECTION = 120
AIR TEMP = 22.2C
WEATHER CODE = 21
BAROMETRIC PRES = 1016.3

SEA STATE = 1
WAVE DIRECTION = 100
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS									
Z	T	S	0	SVN	D2	D21	ADU	PD4	MO3
0.0	21.4								
0.0	21.4								
14.0	21.0								
15.0	20.5								
17.0	20.0								
21.0	20.0								
22.0	19.9								
40.0	19.9								

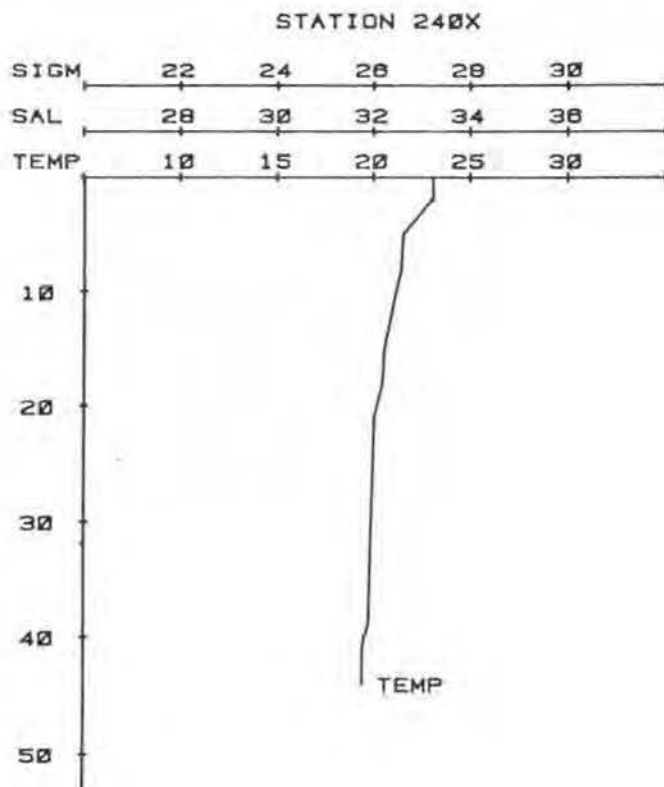
STATION 239X



GILLISS CRUISE STA 240X 30/04/79 08.6 GMT CONSEC STA 247
LAT 38 43.6N LONG 08 11.0W DEPTH = 44M DIST LAST STA = 4.0KM

WEATHER DATA
WIND SPEED = 06KTS
WIND DIRECTION = 120
AIR TEMP = 22.2C
WEATHER CODE = 10
BAROMETRIC PRES = 1016.3
SEA STATE = 1
WAVE DIRECTION = 100
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

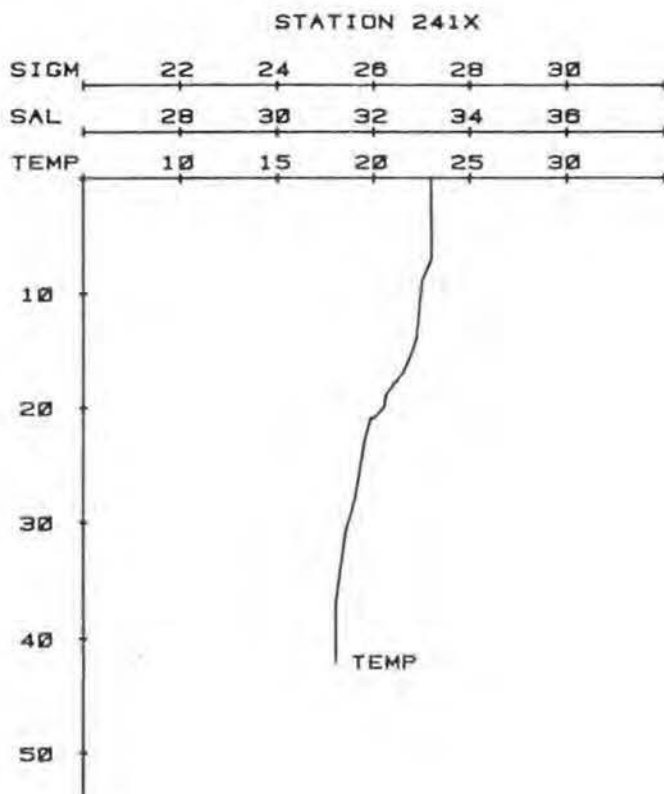
OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	AOU	P04	NO3	SI
1.0	23.1									
2.0	23.1									
3.0	23.0									
4.0	22.5									
5.0	22.0									
6.0	21.5									
8.0	21.4									
11.0	21.0									
15.0	20.5									
18.0	20.4									
21.0	20.0									
39.0	19.7									
40.0	19.5									
41.0	19.4									
44.0	19.4									



GILLISS CRUISE STA 241X 30/04/79 09.1 GMT CONSEC STA 248
LAT 38 43.2N LONG 08 07.5W DEPTH = 42M DIST LAST STA = 5.6KM

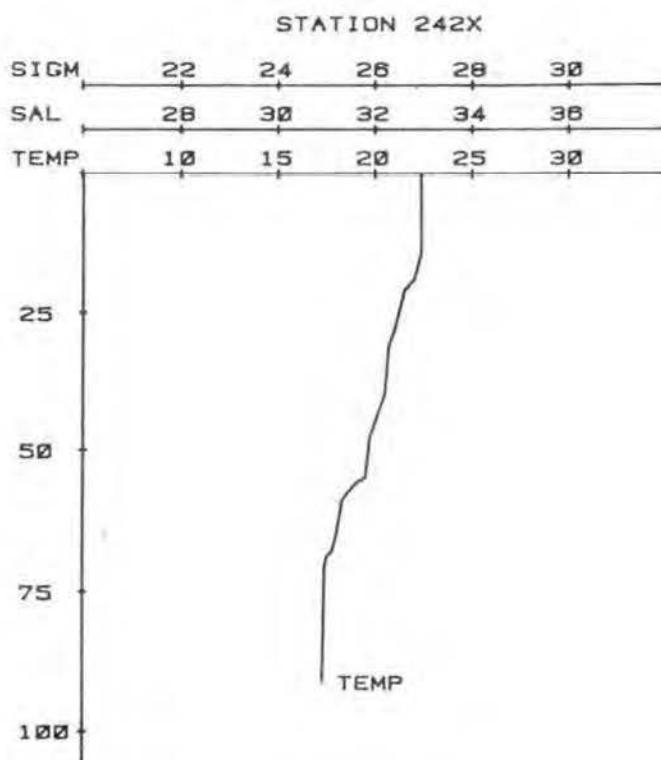
WEATHER DATA
WIND SPEED = 06KTS
WIND DIRECTION = 120
AIR TEMP = 22.2C
WEATHER CODE = 10
BAROMETRIC PRES = 1016.3
SEA STATE = 1
WAVE DIRECTION = 100
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	0	SVA	O2	O2'	AOU	P04	NO3	SI
0.0	23.0									
7.0	23.0									
9.0	22.5									
14.0	22.2									
15.0	22.0									
17.0	21.5									
18.0	21.0									
19.0	21.0									
20.0	20.5									
21.0	20.0									
21.0	19.0									
23.0	19.5									
28.0	19.0									
31.0	18.5									
37.0	18.0									
42.0	18.0									



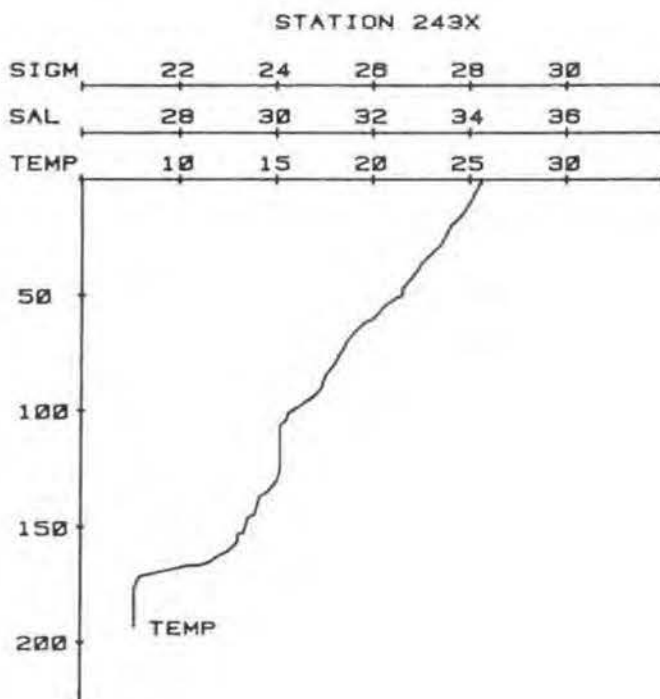
GILLISS CRUISE STA 242X 30/04/79 09.4 GMT CONSEC STA 249
 LAT 30 43.2N LONG 80 05.1W DEPTH = 91M DIST LAST STA = 3.8KM
 WEATHER DATA
 WIND SPEED = 02KTS
 WIND DIRECTION = 99
 AIR TEMP = 21.7C
 WEATHER CODE = 11
 BAROMETRIC PRES = 1016.3
 SEA STATE = 1
 WAVE DIRECTION = 000
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
0.0	22.4									
1.0	22.4									
14.0	22.4									
19.0	22.0									
21.0	21.5									
29.0	21.0									
31.0	20.7									
40.0	20.5									
45.0	20.0									
48.0	19.7									
55.0	19.5									
56.0	19.0									
58.0	18.5									
59.0	18.3									
65.0	18.0									
68.0	17.5									
69.0	17.5									
71.0	17.4									
91.0	17.3									



GILLISS CRUISE STA 243X 30/04/79 09.6 GMT CONSEC STA 250
 LAT 30 42.2N LONG 80 02.5W DEPTH = 193M DIST LAST STA = 4.5KM
 WEATHER DATA
 WIND SPEED = 02KTS
 WIND DIRECTION = 99
 AIR TEMP = 21.7C
 WEATHER CODE = 11
 BAROMETRIC PRES = 1016.3
 SEA STATE = 1
 WAVE DIRECTION = 000
 CLOUD TYPE =
 CLOUD AMOUNT =
 VISIBILITY CODE =

OBSERVATIONS										
Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
0.0	25.6									
2.0	25.6									
2.0	25.5									
10.0	25.0									
16.0	24.5									
20.0	24.0									
28.0	23.5									
32.0	23.0									
36.0	22.5									
42.0	22.0									
47.0	21.5									
54.0	21.0									
52.0	21.0									
55.0	20.5									
60.0	20.0									
62.0	19.5									
66.0	19.0									
70.0	18.5									
72.0	18.0									
79.0	18.0									
85.0	17.5									
90.0	17.3									
93.0	17.0									
96.0	16.5									
99.0	16.0									
101.0	15.6									
104.0	15.5									
106.0	15.3									
125.0	15.2									
130.0	15.0									
135.0	14.5									
137.0	14.1									
140.0	14.0									
144.0	13.9									
146.0	13.5									
152.0	13.1									
153.0	13.0									
156.0	13.0									
160.0	12.5									
162.0	12.0									
165.0	11.5									
166.0	11.0									
168.0	10.5									
167.0	10.0									
168.0	9.5									
169.0	9.0									
170.0	8.5									
171.0	8.0									
172.0	7.9									
176.0	7.7									
193.0	7.7									

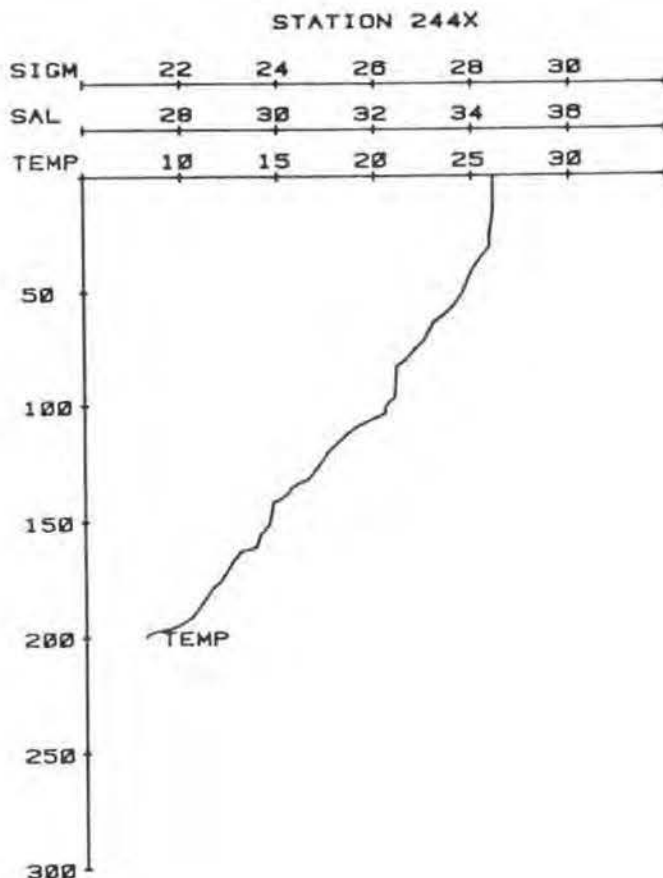


GILLISS CRUISE STA 244X 30/04/79 10.0 GNT CONSEC STA 251
LAT 34 41.5W LONG 79 59.5W DEPTH + 238N DIST LAST STA + 5.8KM

WEATHER DATA
WIND SPEED = 02KTS
WIND DIRECTION = 090
AIR TEMP = 22.2C
WEATHER CODE = 12
BAROMETRIC PRES = 1016.3

SEA STATE = 1
WAVE DIRECTION = 000
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	0	SVA	O2	O2'	ADU	P04	M03	ST
1.0	26.1									
14.0	26.1									
20.0	26.0									
25.0	25.9									
31.0	25.9									
35.0	25.5									
41.0	25.0									
51.0	24.5									
57.0	24.0									
61.0	23.5									
64.0	23.0									
72.0	22.5									
76.0	22.0									
81.0	21.5									
83.0	21.1									
97.0	21.0									
100.0	20.6									
102.0	20.5									
104.0	20.5									
106.0	20.0									
108.0	19.5									
110.0	19.0									
113.0	18.5									
117.0	18.0									
121.0	17.5									
127.0	17.0									
132.0	16.5									
134.0	16.0									
136.0	15.4									
138.0	15.5									
141.0	15.0									
142.0	14.7									
151.0	14.5									
154.0	14.0									
161.0	13.0									
162.0	13.5									
163.0	13.0									
168.0	12.5									
175.0	12.0									
179.0	11.5									
185.0	11.0									
191.0	10.5									
194.0	10.0									
196.0	9.5									
197.0	9.0									
198.0	8.5									
199.0	8.2									
200.0	8.1									



GILLISS CRUISE STA 245C 30/04/79 12.5 GNT CONSEC STA 252
LAT 31 43.0W LONG 80 08.1W DEPTH + 43N DIST LAST STA + 14.8KM

WEATHER DATA
WIND SPEED = 10KTS
WIND DIRECTION = 020
AIR TEMP = 22.2C
WEATHER CODE = 12
BAROMETRIC PRES = 1016.6

SEA STATE = 1
WAVE DIRECTION = 000
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

Z	T	S	0	SVA	O2	O2'	ADU	P04	M03	ST
1.0	22.67	36.05	24.83	313						
2.0	22.66	36.05	24.84	312						
3.0	22.66	36.05	24.84	312						
4.0	22.64	36.05	24.84	312						
5.0	22.64	36.05	24.84	312						
6.0	22.63	36.05	24.84	312						
7.0	22.63	36.06	24.85	311						
8.0	22.62	36.05	24.85	311						
9.0	22.63	36.05	24.84	312						
10.0	22.62	36.06	24.86	311						
11.0	22.56	36.05	24.86	310						
12.0	22.44	36.06	24.91	306						
13.0	22.37	36.05	24.92	305						
14.0	22.24	36.09	24.99	299						
15.0	22.21	36.09	24.99	298						
16.0	22.14	36.13	25.04	293						
17.0	22.14	36.12	25.04	294						
18.0	22.12	36.12	25.04	293						
19.0	22.12	36.12	25.04	293						
20.0	22.11	36.15	25.07	291						
21.0	22.09	36.14	25.07	291						
22.0	22.08	36.14	25.07	291						
23.0	22.07	36.13	25.06	291						
24.0	22.04	36.14	25.08	290						
25.0	21.95	36.14	25.11	288						
26.0	21.94	36.14	25.11	287						
27.0	21.80	36.15	25.13	285						
28.0	21.82	36.17	25.17	282						
29.0	21.67	36.18	25.44	254						
30.0	21.43	36.18	25.55	245						
31.0	19.31	36.18	25.95	217						
32.0	19.31	36.15	25.93	219						
33.0	19.02	36.12	25.88	214						
34.0	19.03	36.11	25.87	215						
35.0	18.45	36.18	25.96	207						
36.0	18.54	36.09	25.97	205						
37.0	18.57	36.09	25.97	204						
38.0	18.57	36.11	25.99	204						
39.0	18.27	36.06	26.02	201						
40.0	18.31	36.07	26.02	201						

