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54

Oceanographic data: Enderby Land region - Antarctic Division BIOMASS Experiment III, MV Nella Dan, September-December 1985

E.J. Woehler, K.R. Kerry, S.E. Humphries and M.S. Robb

ANTARCTIC DIVISION
DEPARTMENT OF SCIENCE

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Since the summer season of 1980-81, six cruises have been undertaken by Australia to obtain data to contribute to the international BIOMASS (Biological Investigation of Marine Antarctic Systems and Stocks) program.

Cruise	Dates in study area	Principal objectives
FIBEX	20 Jan 1981 - 15 Mar 1981	Acoustic survey for krill
GEOSCIENCE	20 Jan 1982 - 3 Mar 1982	Seismic survey
ADBEX I	19 Nov 1982 - 17 Dec 1982	Krill biology, oceanography
ADBEX II (= SIBEX I)	7 Jan 1984 - 12 Feb 1984	Krill biology
SIBEX II	3 Jan 1985 - 26 Jan 1985	Krill distribution, phytoplankton
ADBEX III	21 Sep 1985 - 13 Dec 1985	Seal survey

This issue is one of a number of reports dealing with oceanographic data from these cruises that will appear in the ANARE Research Notes series.

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2. The following are the main features of the proposed system:

- (a) The system will consist of a central computer connected to a number of peripheral terminals.
- (b) The system will be designed to handle all the data processing requirements of the organization.
- (c) The system will be designed to handle all the data processing requirements of the organization.
- (d) The system will be designed to handle all the data processing requirements of the organization.
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- (s) The system will be designed to handle all the data processing requirements of the organization.
- (t) The system will be designed to handle all the data processing requirements of the organization.
- (u) The system will be designed to handle all the data processing requirements of the organization.
- (v) The system will be designed to handle all the data processing requirements of the organization.
- (w) The system will be designed to handle all the data processing requirements of the organization.
- (x) The system will be designed to handle all the data processing requirements of the organization.
- (y) The system will be designed to handle all the data processing requirements of the organization.
- (z) The system will be designed to handle all the data processing requirements of the organization.

OCEANOGRAPHIC DATA: ENDERBY LAND REGION -
ANTARCTIC DIVISION BIOMASS EXPERIMENT III,
MV NELLA DAN, SEPTEMBER-DECEMBER 1985

by

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ABSTRACT

Fifty CTD stations were taken during the ADBEX III cruise, September-December 1985 between the northernmost margin of the sea-ice and the Antarctic coast when the sea-ice was near its maximum extent. Casts were made to 2000 m or to near bottom over the continental shelf. In situ salinity, temperature and sigma-t are tabulated for standard depths, and shown graphically. T/S plots for stations are given.

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1. INTRODUCTION

Oceanographic data were obtained during the Antarctic Division BIOMASS Experiment III (ADBEX III) cruise on MV Nella Dan September-December 1985. The principal aim of the cruise was to undertake a survey of Crabeater seals (Lobodon carcinophagus) in the pack-ice adjacent to the Antarctic continent. The opportunity was taken to conduct oceanographic studies in the pack-ice zone when the sea-ice was near to its maximum northern extent (Jacka 1983). The cruise track is given in Figures 1(a) and 1(b). The area surveyed was south of 50°S to the Antarctic coast and between 50°E and 70°E.

A series of CTD stations was taken in late September at the outer margin of the pack-ice. A second series of stations was taken during October as ice conditions permitted and the ship progressed towards the coast (Figure 2(a)). The ship was beset from 28 October to 14 December 1985 near Cape Ann, Enderby Land and drifted within the pack-ice with wind and ocean currents (Figure 1(b)). During this time CTD stations were taken through the ice to the north and south of the shelf break as the ship drifted on and off the continental shelf (Figure 2(b)).

Ice conditions prevailing are described by Jacka and Allison (in press), and meteorology by Wilson (1986). Nutrient data obtained on the cruise are reported by Humphries (1987).

This Research Note is the fifth of a series presenting oceanographic data collected on an annual basis since 1980-81.

The oceanographic program was usually subordinate to other programs and so the location, timing and depth of stations was not always ideal for oceanographic purposes.

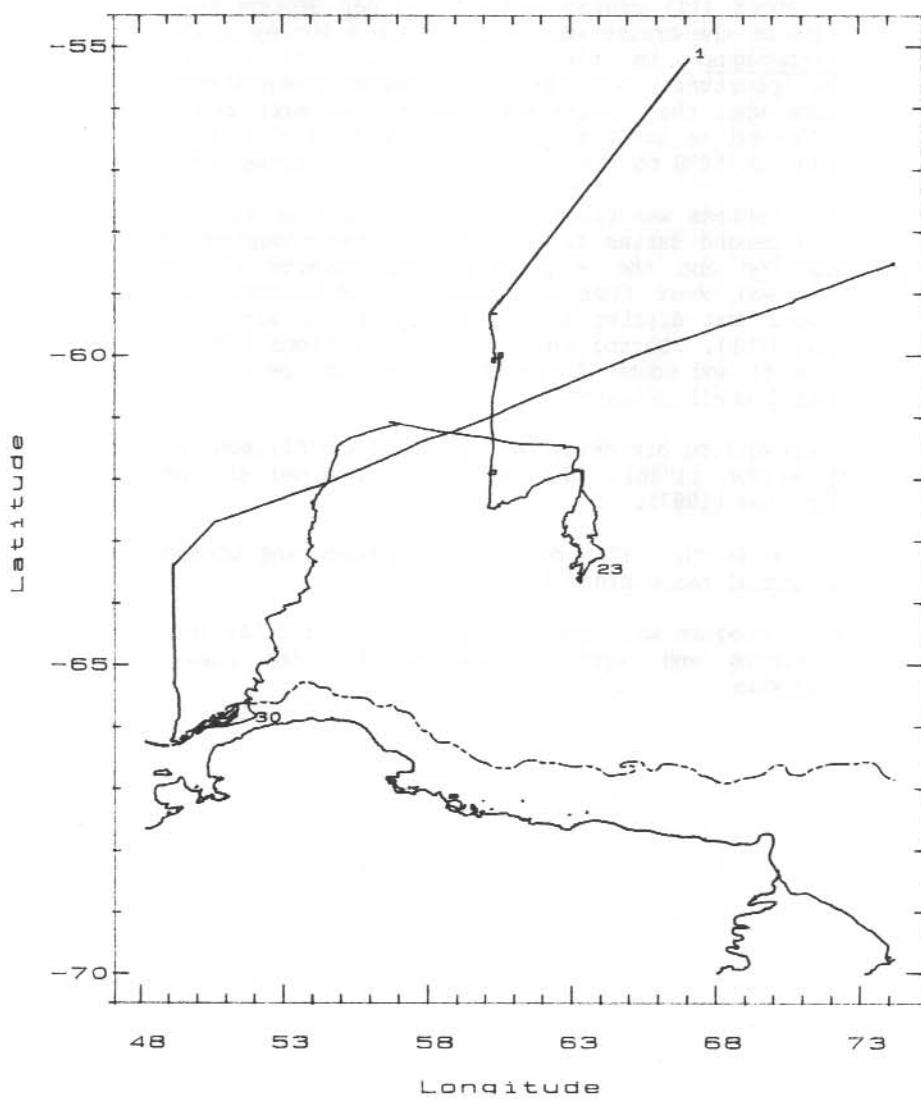


Figure 1(a). ADBEX III cruise track.

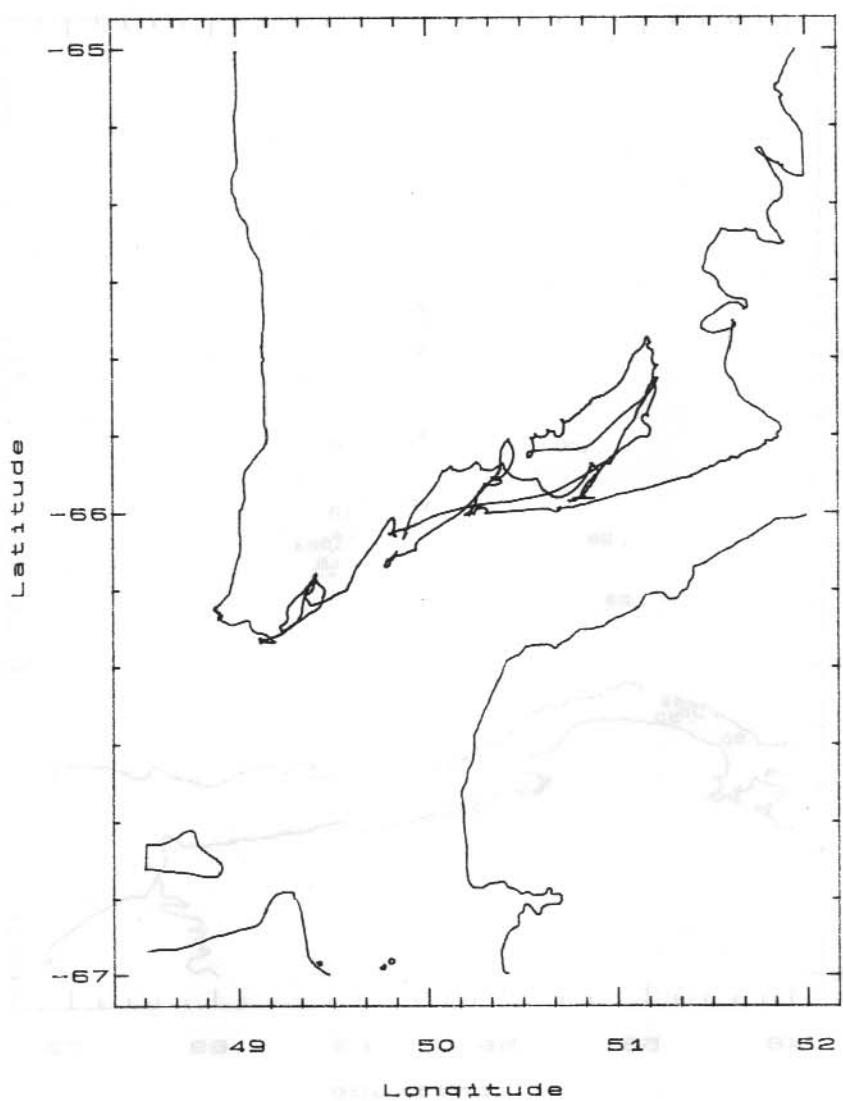


Figure 1(b). ADBEX III cruise track during besetment.

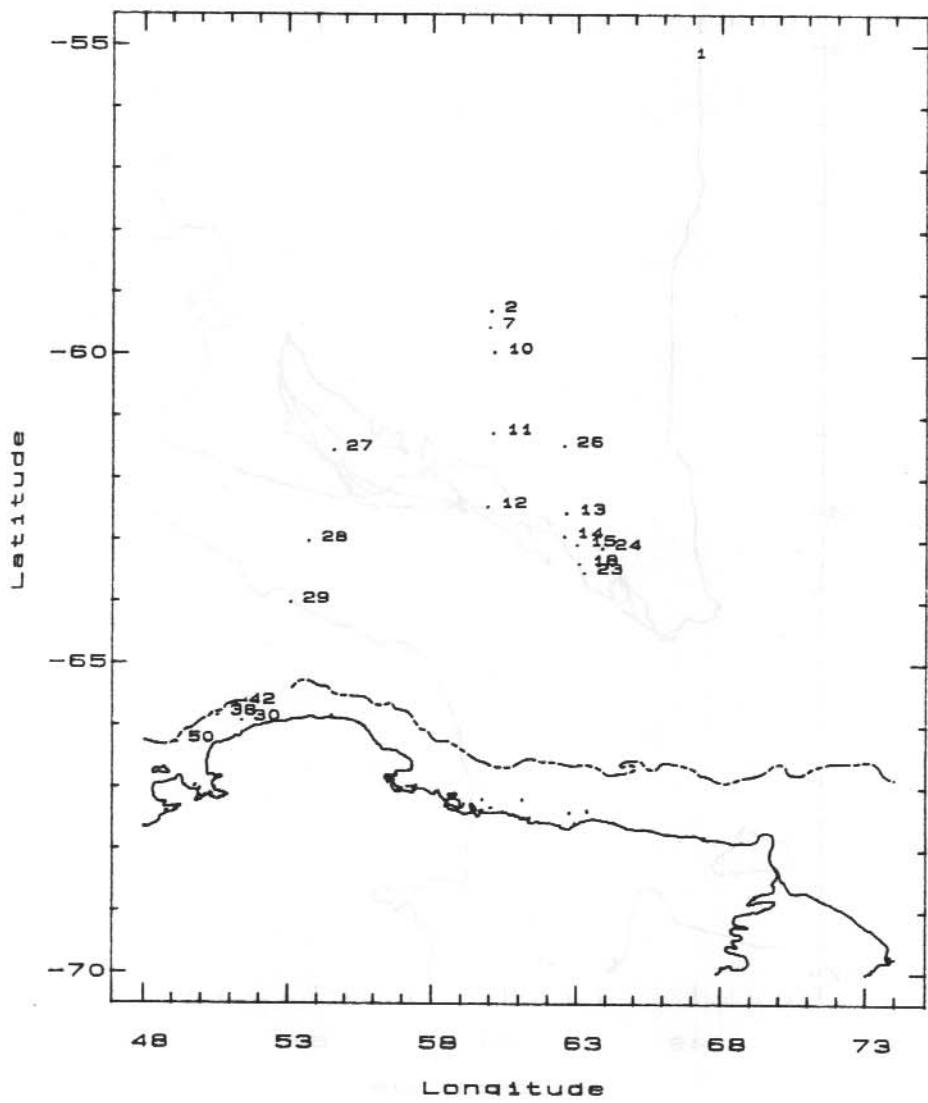


Figure 2(a). Location of CTD stations. Due to the proximity of some stations to each other, it was not possible to show some stations on the map, but their exact locations are given in Table 1. The station numbers of the excluded stations are given here in brackets following the number of the proximate mapped station: 7(8), 10(9), 15(16, 17, 19 to 22), 26(25); details of stations 30 and following are shown in Figure 2(b).

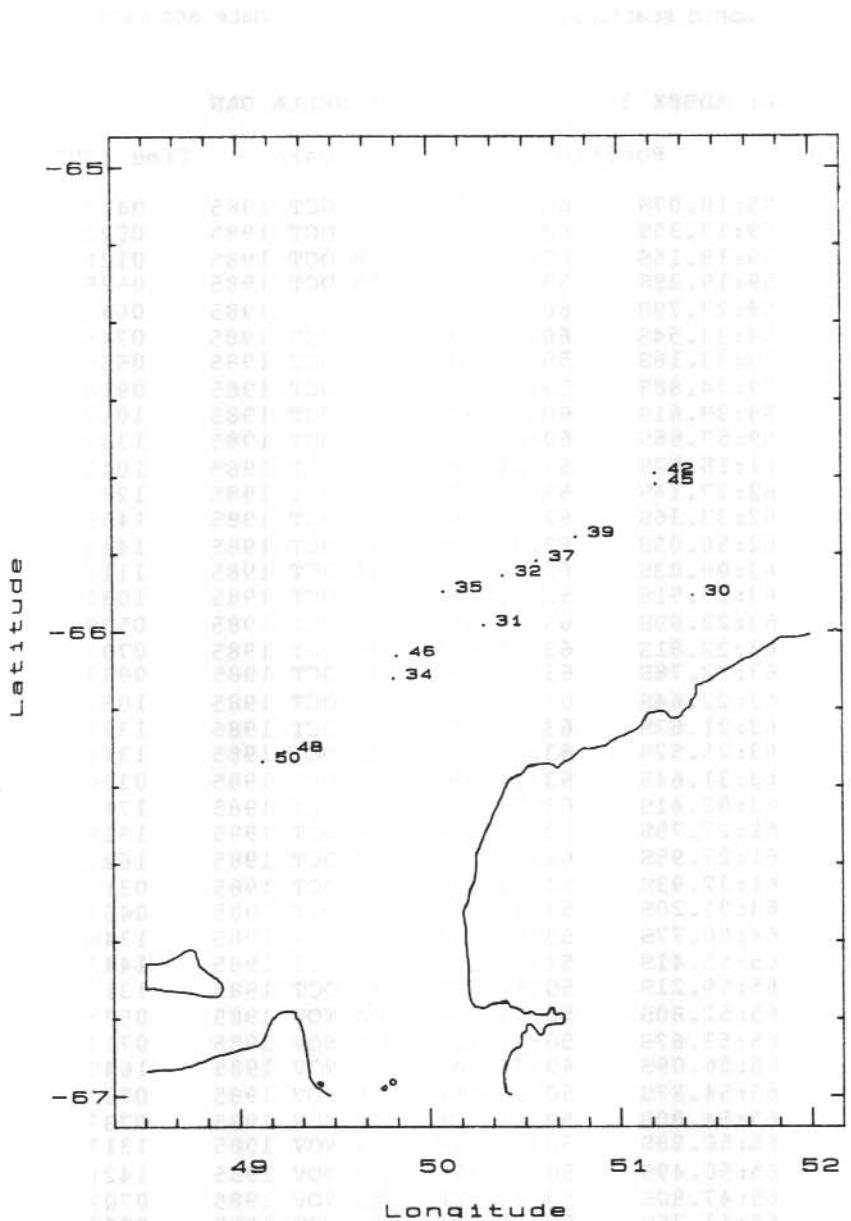


Figure 2(b). Location of CTD stations in the region where Nella Dan was beset; the area within the triangle of stations marked by stations 30, 42 and 50 in Figure 2(a). The excluded stations are given here following the format described for Figure 2(a): 32(33), 35(36), 37(38), 39(41), 42(43, 44), 46(47), 48(49).

Table 1. Hydrographic stations, giving position, GMT date and time.

Cruise: ADBEX 3		Vessel: NELLA DAN		
CTD Station	Position	Date	Time (GMT)	
1	55:10.07S	66:35.49E	06 OCT 1985	0417
2	59:17.35S	60:00.73E	08 OCT 1985	0022
3	59:19.15S	60:01.43E	08 OCT 1985	0121
4	59:19.29S	59:58.19E	08 OCT 1985	0525
5	59:27.79S	60:00.77E	08 OCT 1985	0644
6	59:31.54S	60:00.88E	08 OCT 1985	0746
7	59:33.16S	59:57.64E	08 OCT 1985	0830
8	59:34.88S	59:58.07E	08 OCT 1985	0914
9	59:39.61S	60:03.95E	08 OCT 1985	1019
10	59:57.66S	60:07.13E	08 OCT 1985	1339
11	61:15.87S	60:04.88E	09 OCT 1985	1045
12	62:27.14S	59:53.78E	10 OCT 1985	1239
13	62:33.36S	62:37.16E	12 OCT 1985	1455
14	62:56.05S	62:31.97E	13 OCT 1985	1443
15	63:04.03S	62:59.04E	14 OCT 1985	1117
16	63:25.51S	62:51.08E	15 OCT 1985	1034
17	63:22.69S	63:02.53E	16 OCT 1985	0509
18	63:22.81S	63:03.86E	16 OCT 1985	0703
19	63:22.78S	63:06.66E	16 OCT 1985	0959
20	63:22.64S	63:07.14E	16 OCT 1985	1037
21	63:21.63S	63:09.89E	16 OCT 1985	1321
22	63:21.52S	63:10.29E	16 OCT 1985	1344
23	63:31.64S	63:14.09E	18 OCT 1985	0356
24	63:07.41S	63:51.61E	18 OCT 1985	1746
25	61:27.75S	62:33.47E	20 OCT 1985	1528
26	61:27.95S	62:31.60E	20 OCT 1985	1622
27	61:32.93S	54:34.18E	22 OCT 1985	0317
28	63:01.20S	53:42.87E	23 OCT 1985	0457
29	64:00.77S	53:04.32E	24 OCT 1985	1346
30	65:55.41S	51:22.89E	27 OCT 1985	1442
31	65:59.21S	50:17.08E	30 OCT 1985	1310
32	65:52.80S	50:23.13E	04 NOV 1985	0538
33	65:53.62S	50:23.12E	04 NOV 1985	0713
34	66:06.09S	49:48.74E	06 NOV 1985	1648
35	65:54.87S	50:04.58E	09 NOV 1985	0723
36	65:54.80S	50:04.67E	09 NOV 1985	0737
37	65:50.88S	50:33.91E	19 NOV 1985	1313
38	65:50.49S	50:33.32E	19 NOV 1985	1421
39	65:47.80S	50:46.28E	22 NOV 1985	0702
41	65:47.75S	50:46.38E	22 NOV 1985	0800
42	65:39.55S	51:11.46E	25 NOV 1985	0905
43	65:40.61S	51:11.35E	25 NOV 1985	1308
44	65:40.64S	51:11.34E	25 NOV 1985	1315
45	65:40.99S	51:11.48E	25 NOV 1985	1442
46	66:03.15S	49:49.78E	29 NOV 1985	1310
47	66:03.13S	49:49.85E	29 NOV 1985	1356
48	66:15.41S	49:14.20E	06 DEC 1985	0939
49	66:15.45S	49:14.19E	06 DEC 1985	1110
50	66:16.79S	49:07.32E	13 DEC 1985	1023

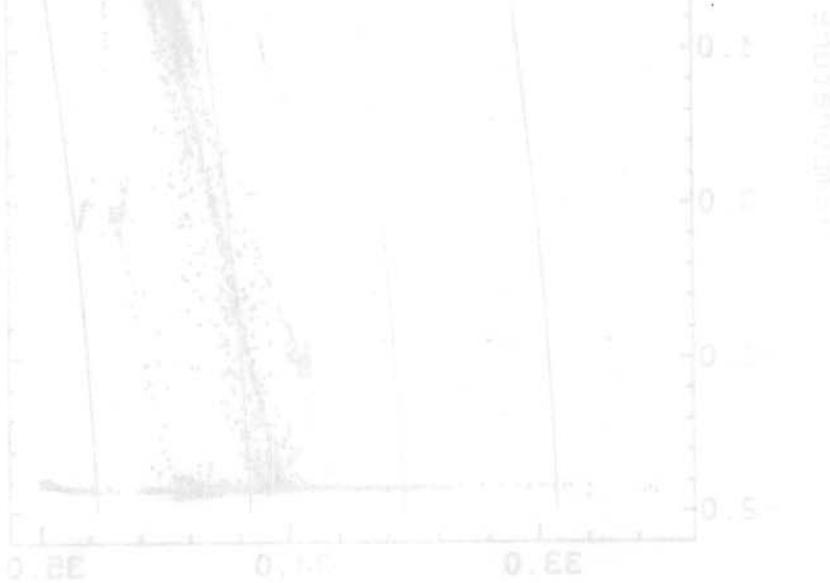
2. METHODS

2.1 INSTRUMENTATION AND SAMPLING PROCEDURES/COLLECTION OF DATA

Continuous vertical profiles of conductivity and temperature were obtained using a Neil Brown Mark III CTD (conductivity, temperature, depth probe #1103) system attached to a rosette water sampler (General Oceanics). Some problems were experienced with the salinity cell becoming blocked with ice following deployment. The effect is apparent on the near-surface data on casts 14, 27, 33, 38, 41, 42, 43, 44, 47, 48 and 50. Interpretation of these data should be undertaken with caution.

Procedures for the collection and processing of data are described in Kerry et al. (1987), utilising the techniques of Fofonoff and Millard (1983), Millard (1982) and Perkins and Lewis (1980).

Measurements were made on the downcast and water samples taken on the upcast. An attempt was made to lower the CTD as close as possible to 1 m/sec. Depending on the readings obtained on the downcast, depths were chosen for water sampling on the upcast. Between sampling the CTD was raised at variable speeds between 1 and 2 m/sec. At each water sampling station readings of conductivity and temperature were made. Samples were taken for later analysis of nitrate, nitrite and silicate (Humphries 1987). Hydrographic stations are listed in Table 1. The depth of each cast was usually to 2000 m or to near bottom over the continental shelf. Deep stations were not possible due to time constraints.



(X) VERTCAST

Location 16 east area 2.7 - 3.0 nautical miles

3. PRESENTATION OF RESULTS

The header information for all profile and data listings consists of cruise and station number, GMT date and time, position, CTD depth and bottom depth. The data listing for each station presents values for temperature, salinity and sigma-t at NODC standard depths and shallowest observed depth. A t/s profile for all stations is given in Figure 3, as well as individual stations. CTD profiles are presented in two sections, 0-600 m and 600 m - bottom.

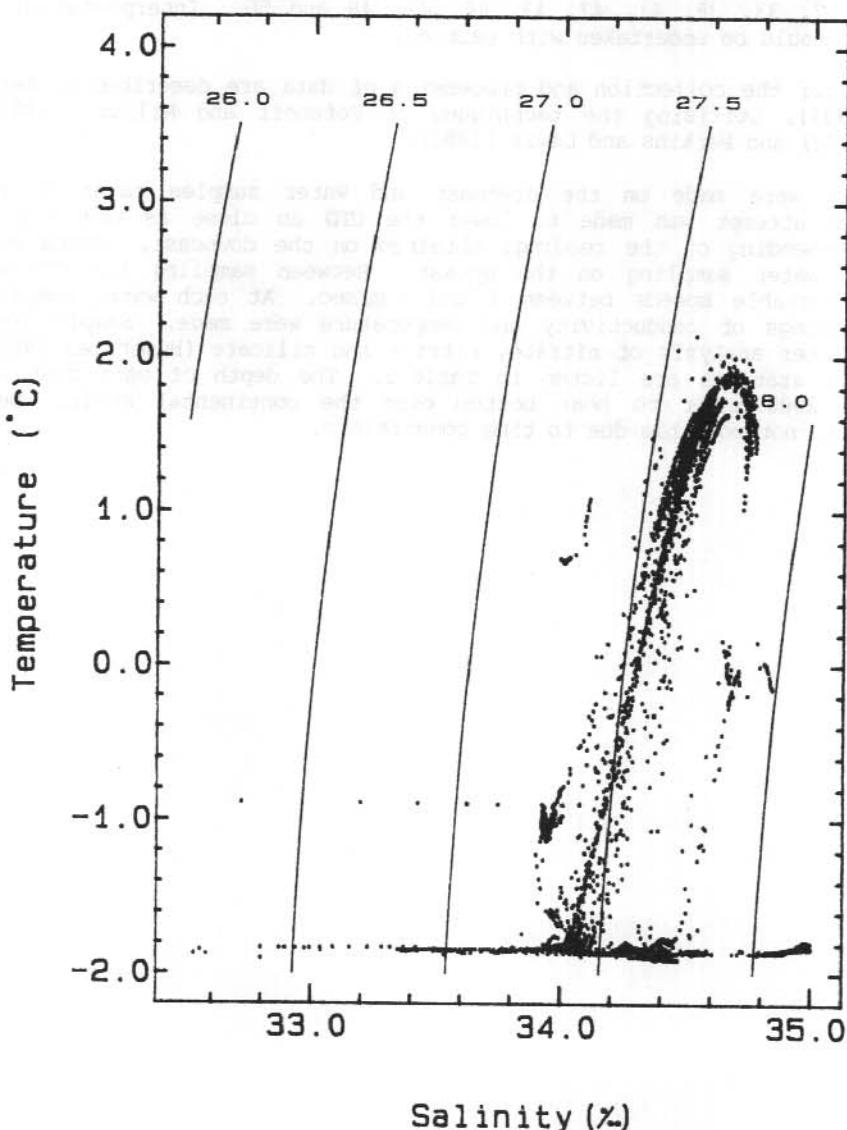
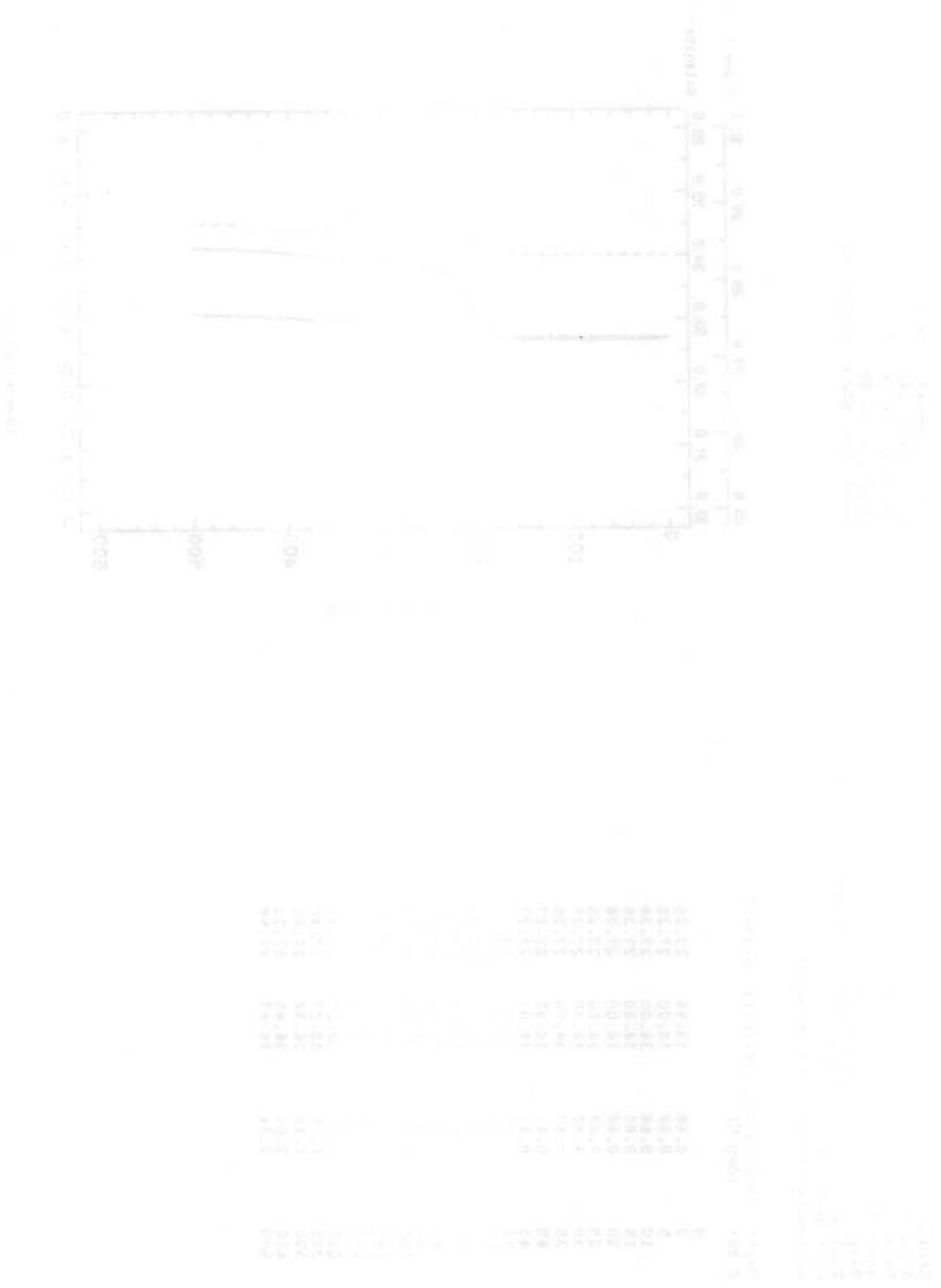
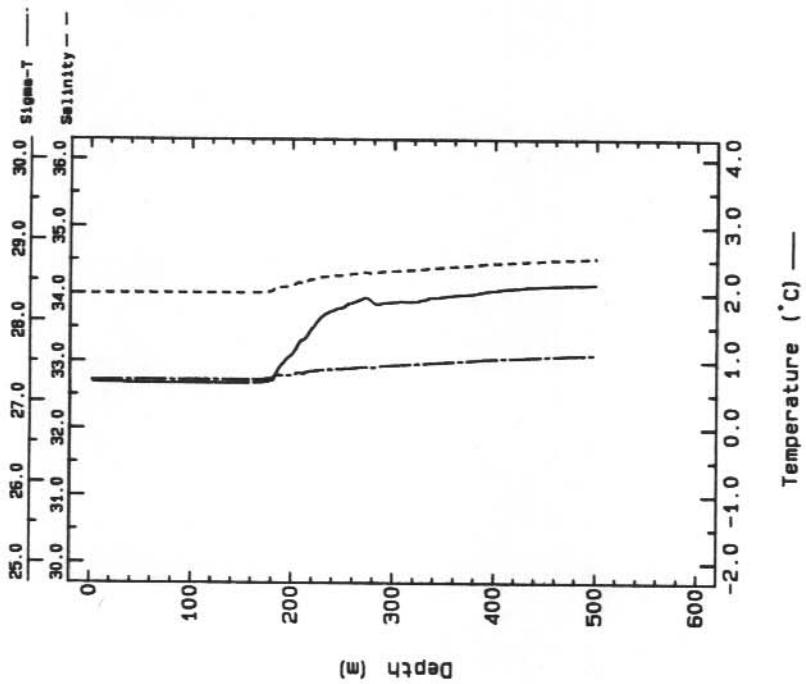


Figure 3. T/S data from all stations.

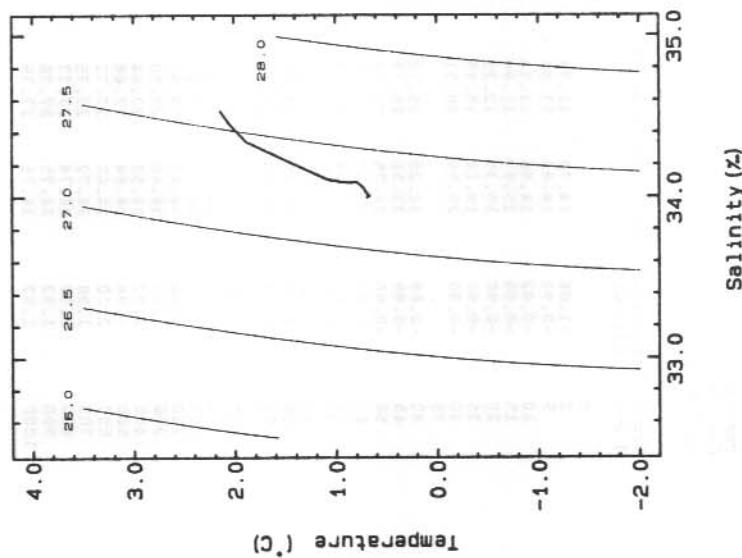


Cruise : ADBEX3
 Station number : 1
 Date : 6 OCT 1985
 Start Time : 0417 GMT
 Ship : NELIA DAN
 Position : 55.10.07S 66.35.49E
 Cast Depth (m) : 502
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	0.69	33.99	27.25
2	0.68	34.00	27.26
5	0.68	34.00	27.26
10	0.68	34.00	27.26
15	0.68	34.00	27.26
20	0.68	34.00	27.26
25	0.68	34.00	27.26
30	0.68	34.00	27.26
35	0.67	34.00	27.26
40	0.67	34.01	27.27
45	0.67	34.01	27.27
50	0.67	34.00	27.27
60	0.67	34.01	27.27
70	0.67	34.01	27.27
75	0.67	34.01	27.27
80	0.67	34.01	27.27
90	0.67	34.01	27.27
100	0.67	34.01	27.27
125	0.67	34.01	27.27
150	0.67	34.01	27.27
175	0.69	34.02	27.28
200	1.09	34.11	27.32
250	1.79	34.27	27.40
300	1.88	34.34	27.45
400	2.05	34.45	27.53
500	2.14	34.53	27.58

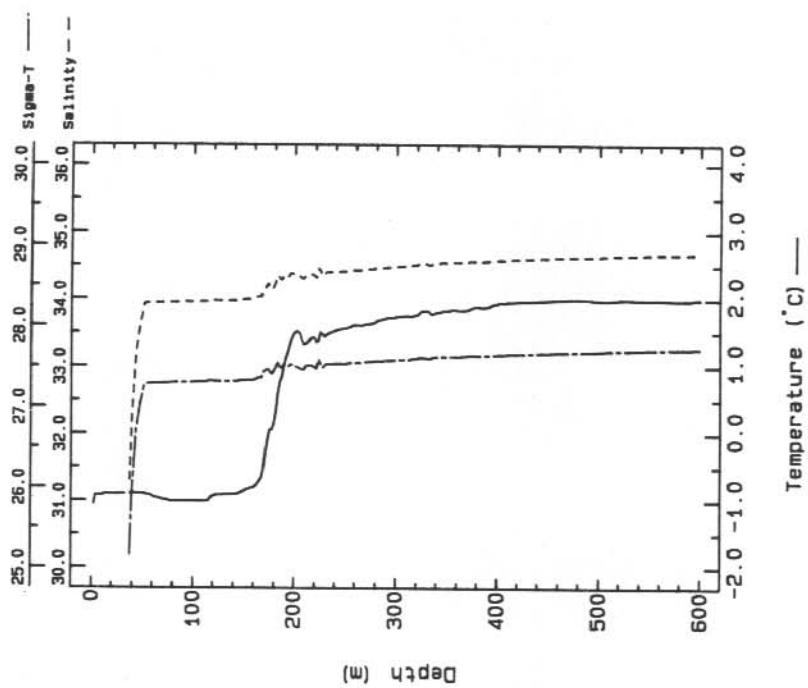


Cruise: ADBEX3 Station: 1
06 OCT 1985 0417 GMT
Latitude : 55° 10' 07S
Longitude: 66° 35' 49E
Depth: CTD 502 m Bottom NR

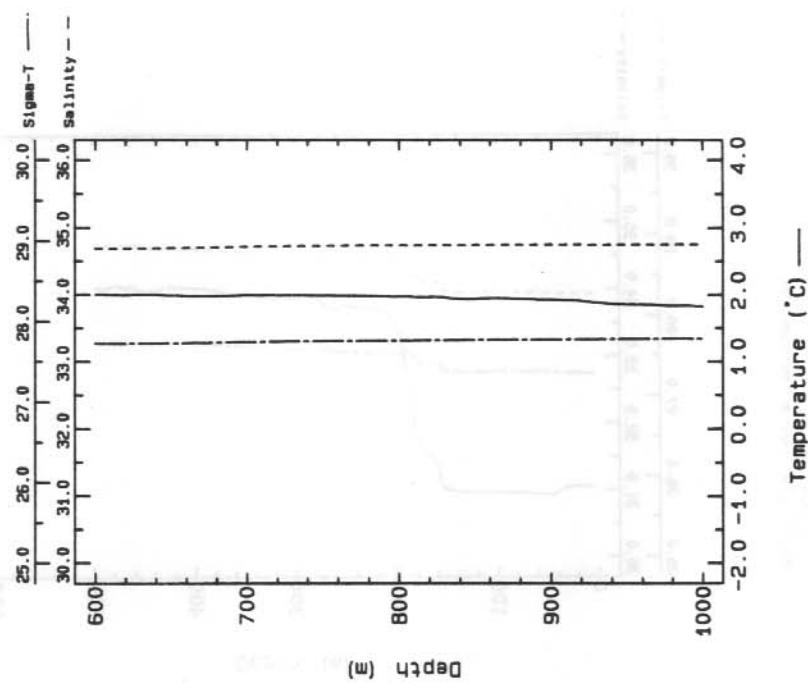


Cruise : ADBEX3 Station : 2
 Station number : 2 Date : 8 OCT 1985
 Start Time : 0022 GMT Latitude : 59:17.35S
 Ship : NELLA DAN Longitude : 60:00.73E
 Position : 59:17.35S 60:00.73E
 Cast Depth (m) : 1002 Depth: CTD 1002 m Bottom NR
 Bottom Depth (m) : Not Recorded

Depth d-bar	Temperature (deg C)	Salinity	Sigma-T
0	-0.89	32.20	25.88
2	-1.06	14.72	11.73
5	-0.92	14.86	11.86
10	-0.92	14.96	11.94
15	-0.90	15.02	11.99
20	-0.90	15.35	12.25
25	-0.90	19.18	15.35
30	-0.90	25.56	20.51
35			
40			
45	-0.89	33.31	26.78
50	-0.90	33.75	27.14
60	-0.93	33.93	27.28
70	-0.99	33.94	27.29
75	-1.10	33.94	27.30
80	-1.01	33.95	27.30
90	-1.01	33.95	27.30
100	-1.01	33.95	27.30
125	-0.91	33.97	27.31
150	-0.86	33.99	27.33
175	-0.01	34.19	27.45
200	1.48	34.35	27.49
250	1.56	34.41	27.53
300	1.73	34.48	27.58
400	1.93	34.58	27.64
500	1.98	34.64	27.68
600	2.00	34.68	27.72
700	1.99	34.72	27.75
800	1.97	34.74	27.77
900	1.92	34.75	27.78
1000	1.82	34.75	27.79

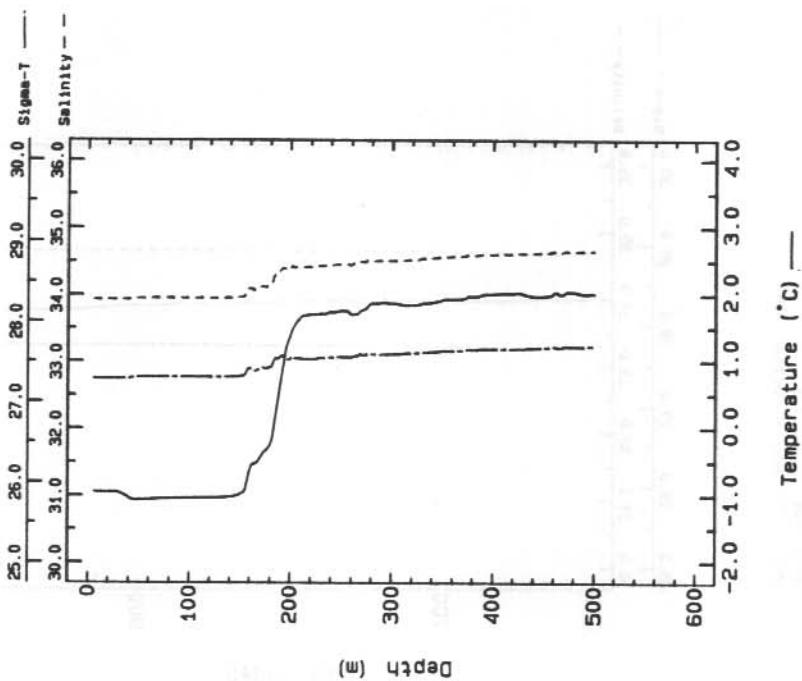


Cruise : ADBEX3 Station 2
08 OCT 1985 0022 GMT
Latitude 58° 17' 35S
Longitude 60° 00' 73E
Depth: CTD 1002 m Bottom NR

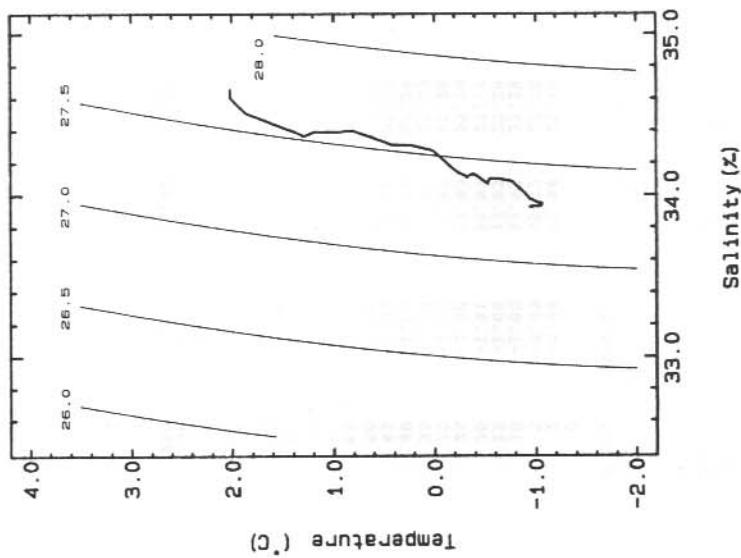


Cruise : ADBEX3 Station 3
 Station number : 3
 Date : 8 OCT 1985 0121 GMT
 Start Time : 0121 GMT
 Ship : NELLA DAN
 Position : 59:19.15S 60:01.43E
 Cast Depth (m) : 502
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0			
5	-0.94	33.93	27.28
6		33.93	27.28
10	-0.95	33.93	27.28
15	-0.95	33.93	27.28
20	-0.95	33.93	27.28
25	-0.95	33.93	27.28
30	-0.95	33.93	27.28
35	-0.98	33.93	27.29
40	-1.02	33.93	27.28
45	-1.06	33.94	27.30
50	-1.07	33.95	27.30
60	-1.06	33.95	27.30
70	-1.05	33.95	27.31
75	-1.04	33.95	27.30
80	-1.04	33.95	27.31
90	-1.04	33.95	27.30
100	-1.04	33.95	27.30
125	-1.03	33.95	27.30
150	-0.98	33.97	27.31
175	-0.34	34.12	27.41
200	1.37	34.39	27.53
250	1.76	34.45	27.55
300	1.87	34.51	27.59
400	2.02	34.61	27.66
500	2.02	34.65	27.69

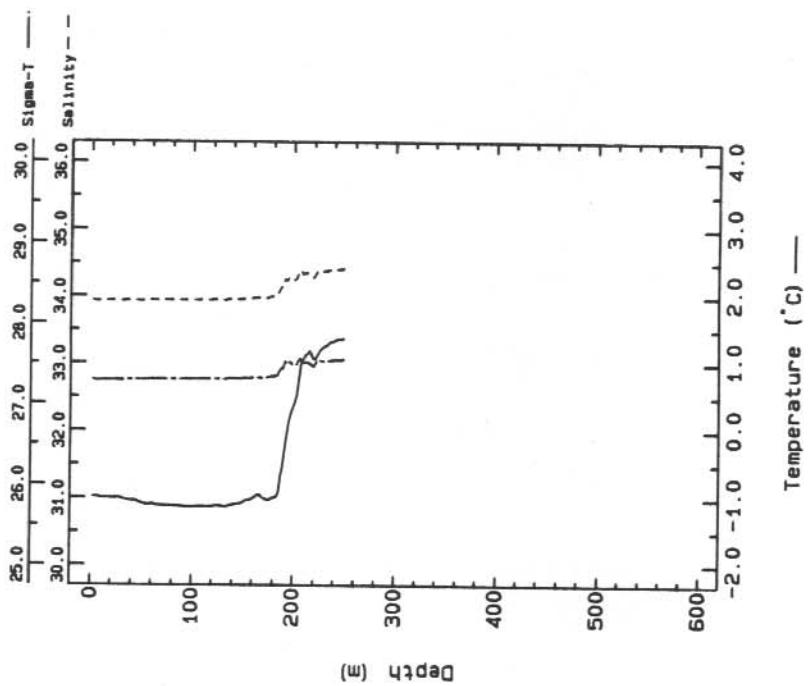


Cruise: ADEEX3 Station: 3
08 OCT 1985 0121 GMT
Latitude : 59°19.15'S
Longitude: 60°01.43'E
Depth: CTD 502 m Bottom NR

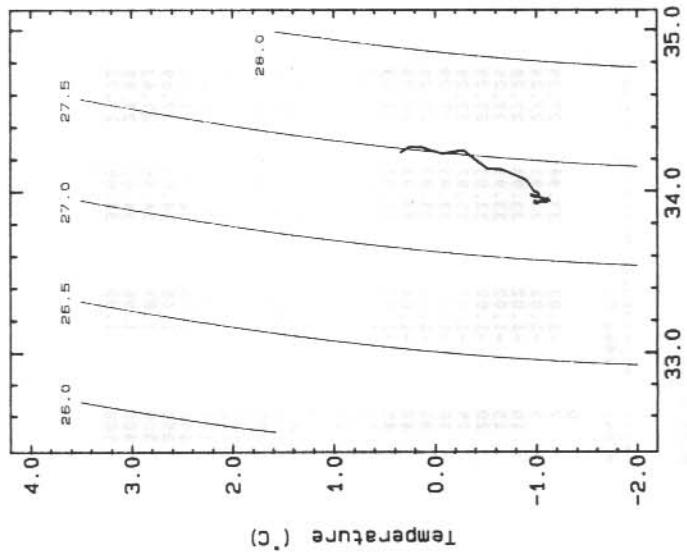


Cruise : ADBEX3
 Station : 4
 Station number : 4
 Date : 8 OCT 1985
 Start Time : 0525 GMT
 Ship : NELLA DAN
 Position : 59°19.29S 59°58.19E
 Cast Depth (m) : 252
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-0.99	33.94	27.30
2	-0.99	33.92	27.28
5	-0.99	33.92	27.28
10	-1.00	33.93	27.28
15	-1.00	33.93	27.29
20	-1.01	33.93	27.29
25	-1.00	33.93	27.29
30	-1.00	33.93	27.28
35	-1.03	33.93	27.29
40	-1.04	33.94	27.29
45	-1.05	33.94	27.29
50	-1.08	33.94	27.29
60	-1.09	33.94	27.30
70	-1.12	33.94	27.30
75	-1.12	33.94	27.30
80	-1.12	33.94	27.30
90	-1.13	33.94	27.30
100	-1.13	33.94	27.30
125	-1.12	33.94	27.30
150	-1.07	33.96	27.31
175	-1.03	33.98	27.33
200	0.34	34.24	27.48
250	1.37	34.42	27.55

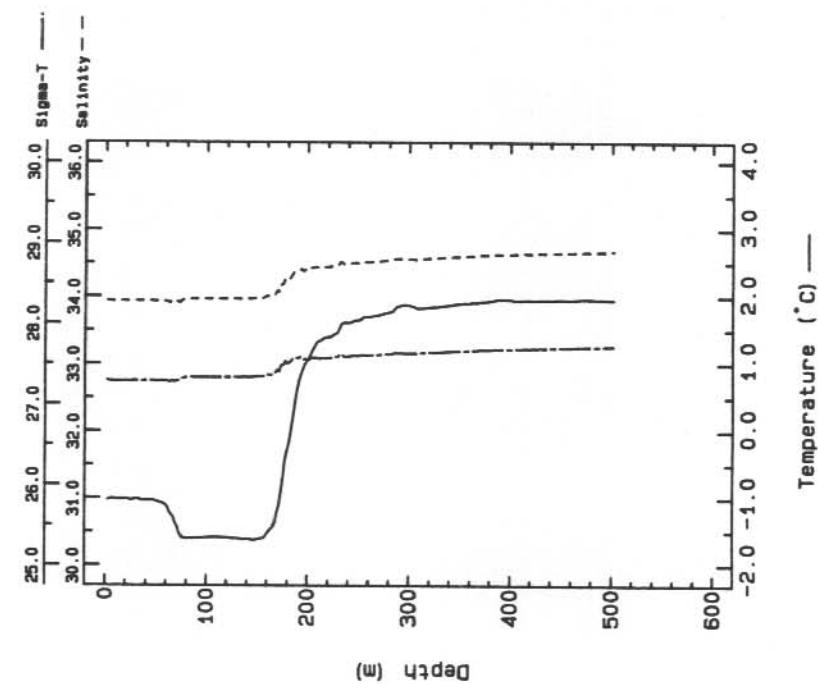


Cruise: ADBELEX3 Station: 4
08 OCT 1995 0525 GMT
Latitude : 59° 19' 29S
Longitude: 59° 56' 19E
Depth: CTD 252 m Bottom NR

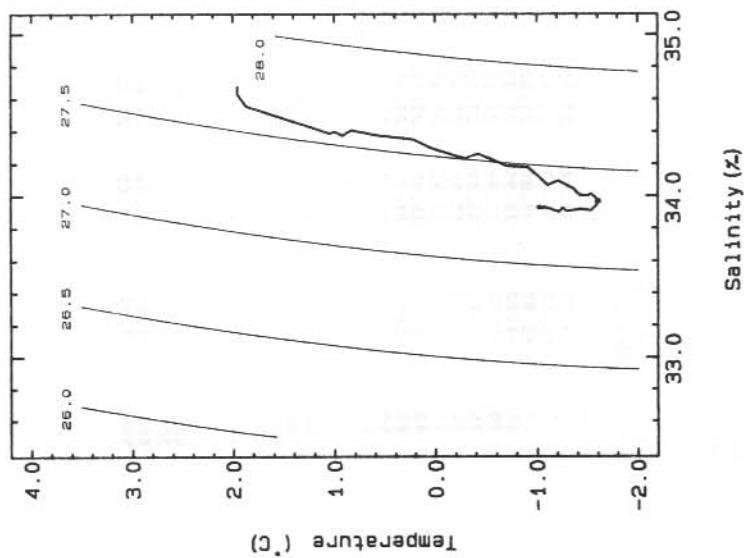


Cruise : ADBEX3 Station 5
 Station number : 5
 Date : 8 OCT 1985
 Start Time : 0644 GMT
 Ship : NELLA DAN
 Position : 59°2'.79S 60°00'.77E
 Cast Depth (m) : 504
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.03	33.94	27.29
2	-1.01	33.93	27.29
5	-1.02	33.93	27.28
10	-1.02	33.93	27.29
15	-1.02	33.93	27.29
20	-1.02	33.93	27.29
25	-1.03	33.92	27.28
30	-1.02	33.93	27.29
35	-1.03	33.93	27.28
40	-1.04	33.93	27.29
45	-1.04	33.93	27.29
50	-1.05	33.92	27.28
60	-1.11	33.92	27.28
70	-1.38	33.91	27.28
75	-1.56	33.93	27.30
80	-1.61	33.96	27.33
90	-1.60	33.96	27.33
100	-1.59	33.96	27.33
125	-1.61	33.96	27.33
150	-1.62	33.98	27.34
175	-0.81	34.18	27.48
200	1.05	34.39	27.55
250	1.65	34.50	27.59
300	1.87	34.56	27.63
400	1.96	34.63	27.68
500	1.95	34.68	27.72

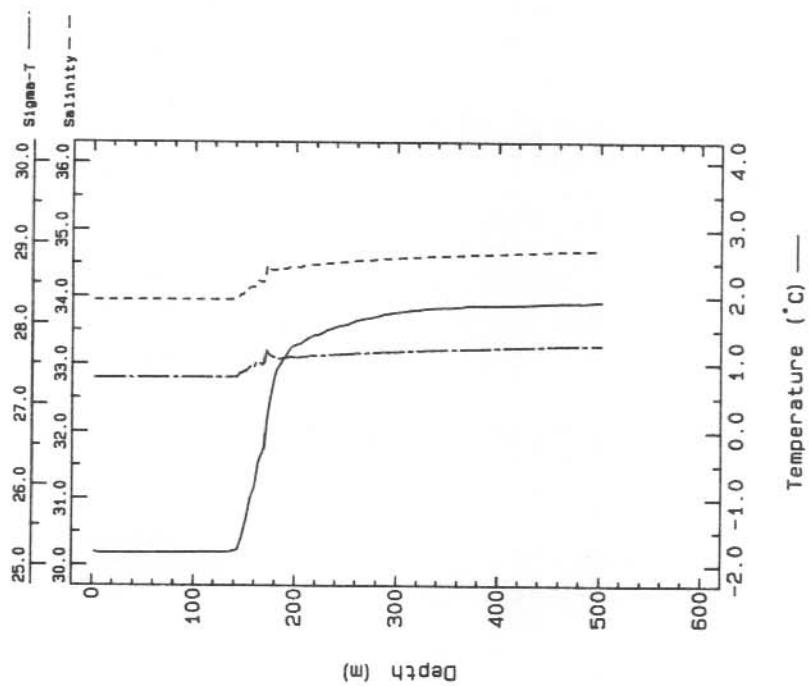


Cruise: ADBEX3 Station: 5
08 OCT 1985 0644 GMT
Latitude : 59° 27.79S
Longitude: 60° 00.77E
Depth: CTD 504 m Bottom NR

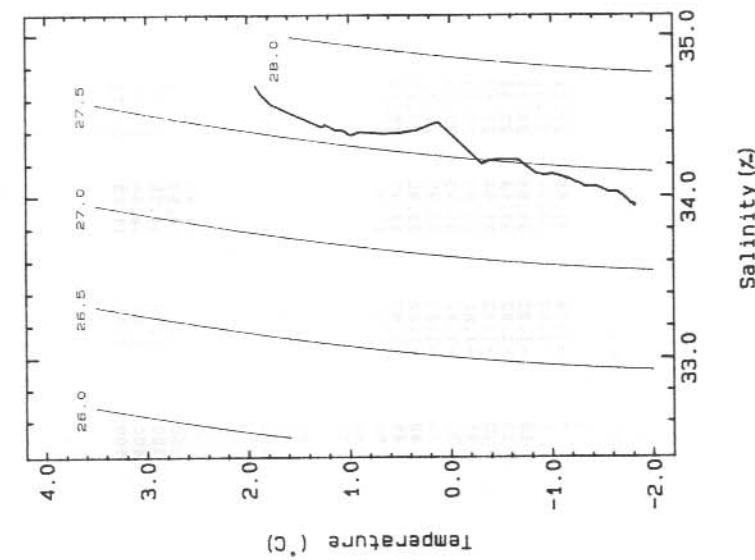


Cruise : ADBEX3 Station 6
 Station number : 6
 Date : 8 OCT 1985
 Start Time : 0746 GMT
 Ship : NELIA DAN
 Position : 59:31.54S 60:00.88E
 Cast Depth (m) : 504
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.81	33.94	27.32
2	-1.82	33.94	27.32
5	-1.82	33.94	27.32
10	-1.82	33.94	27.32
15	-1.82	33.95	27.33
20	-1.82	33.94	27.32
25	-1.82	33.95	27.33
30	-1.82	33.95	27.33
35	-1.82	33.95	27.33
40	-1.82	33.95	27.33
45	-1.82	33.95	27.33
50	-1.82	33.95	27.33
60	-1.82	33.95	27.33
70	-1.82	33.95	27.33
75	-1.82	33.95	27.33
80	-1.81	33.95	27.33
90	-1.81	33.95	27.33
100	-1.81	33.95	27.33
125	-1.81	33.95	27.33
150	-1.44	34.06	27.41
175	0.42	34.40	27.60
200	1.27	34.43	27.57
250	1.58	34.51	27.61
300	1.77	34.57	27.65
400	1.87	34.64	27.69
500	1.92	34.69	27.73



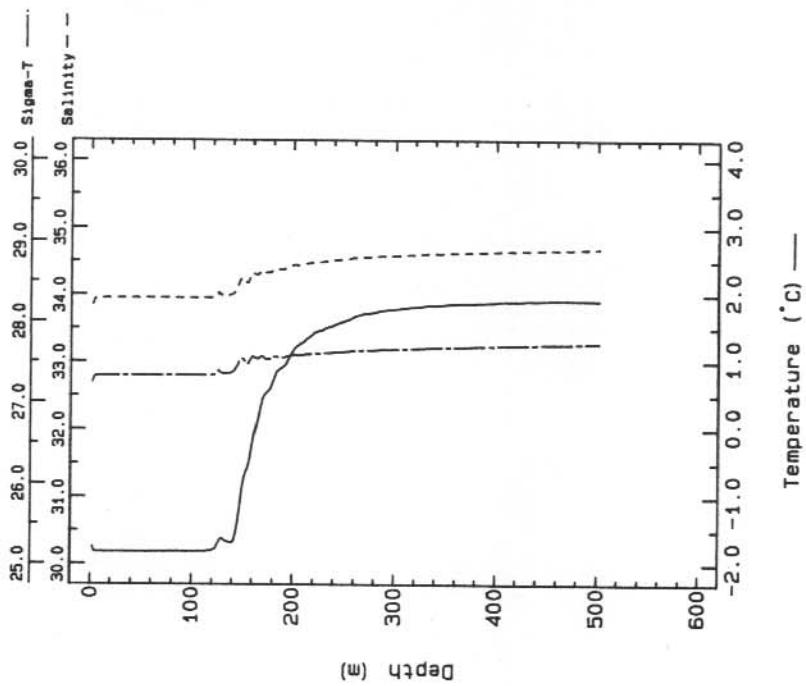
Cruise: ADBEX3 Station: 6
08 OCT 1985 0746 GMT
Latitude : 59° 31.54S
Longitude: 60° 00.88E
Depth: CTD 504 m Bottom NR



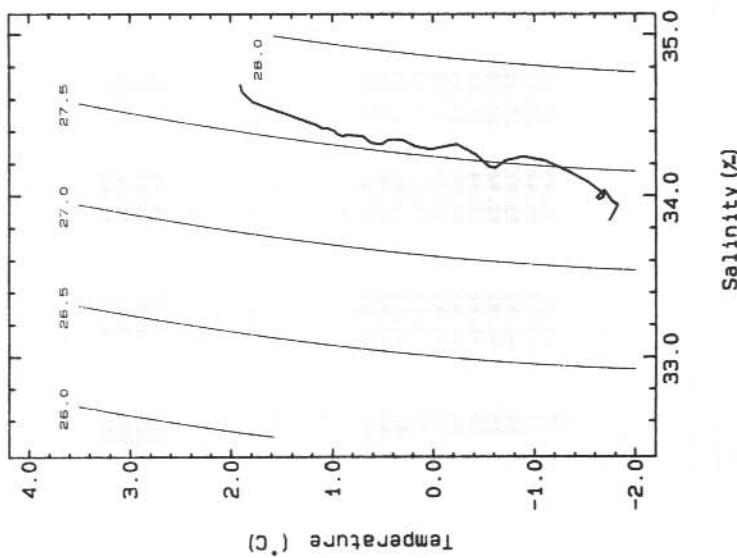
Cruise : ADBEX3
 Station 7
 Date : 8 OCT 1985
 Start Time : 0830 GMT
 Ship : NEELJA DAN
 Position : 59°33.16S 59°57.64E
 Cast Depth (m) : 504
 Bottom Depth (m) : Not Recorded

Depth (m)	Temperature (deg C)	Salinity	Sigma-T
0	-1.74	33.85	27.24
5	-1.82	33.94	27.32
10	-1.82	33.94	27.33
15	-1.82	33.94	27.32
20	-1.82	33.94	27.32
25	-1.82	33.95	27.33
30	-1.82	33.95	27.33
35	-1.82	33.95	27.33
40	-1.82	33.95	27.33
45	-1.82	33.95	27.33
50	-1.82	33.95	27.33
60	-1.81	33.95	27.33
70	-1.81	33.95	27.33
75	-1.81	33.95	27.33
80	-1.81	33.95	27.33
90	-1.81	33.95	27.33
100	-1.81	33.95	27.33
125	-1.72	34.01	27.37
150	-0.88	34.25	27.54
175	0.56	34.32	27.53
200	1.16	34.44	27.58
250	1.60	34.52	27.62
300	1.79	34.58	27.66
400	1.89	34.65	27.70
500	1.91	34.69	27.73

Cruise : ADBEX3 Station 7
 OB OCT 1985 0830 GMT
 Latitude 59°33.16S
 Longitude 59°57.64E
 Depth: CTD 504 m Bottom NR



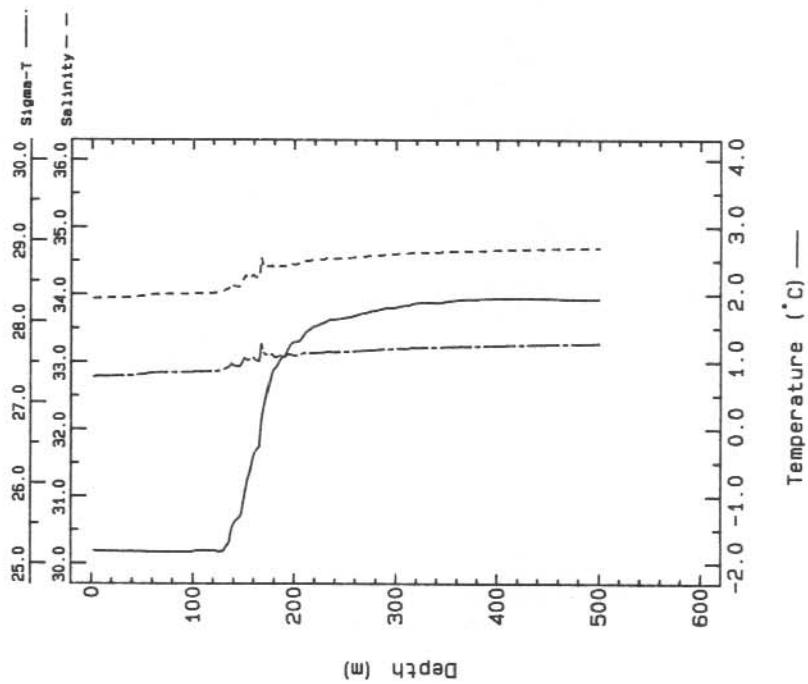
Cruise: ADBEX3 Station: 7
08 OCT 1985 0830 GMT
Latitude : 59° 33.16S
Longitude: 59° 57.64E
Depth: CTD 504 m Bottom NR



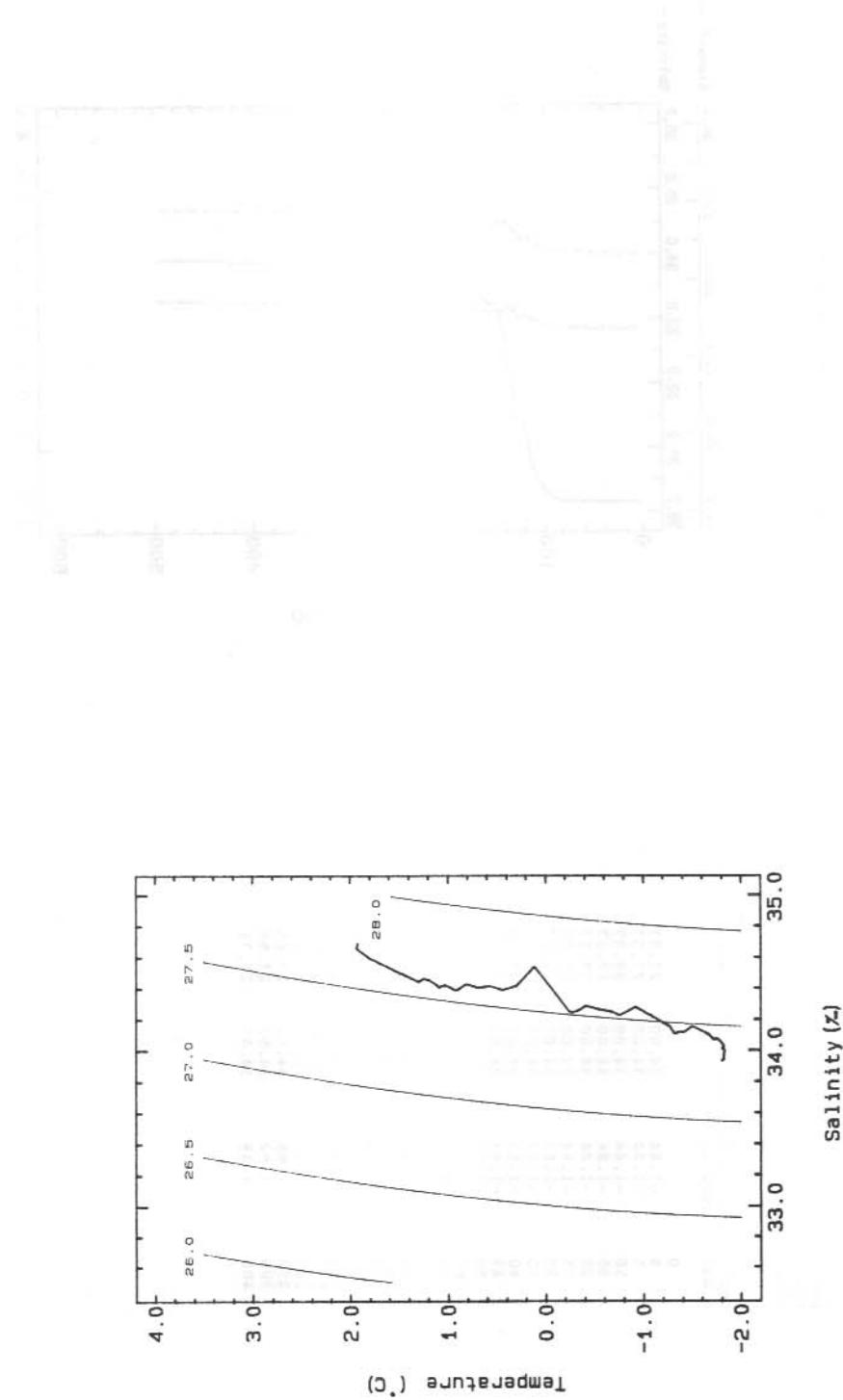
Cruise : ADBEX3 Station 8
 Station number : 8 OCT 1985
 Date : 0914 GMT
 Start Time : NELLA DAN
 Ship : Position 59:34.88S 59:58.07E
 Cast Depth (m) : 502
 Bottom Depth (m) : Not Recorded

 Depth Temperature (deg C) Salinity Sigma-T
 d bar
 0 -1.81 33.93 27.31
 5 -1.82 33.94 27.32
 10 -1.82 33.94 27.32
 15 -1.82 33.94 27.32
 20 -1.82 33.94 27.32
 25 -1.83 33.95 27.33
 30 -1.83 33.95 27.33
 35 -1.83 33.95 27.33
 40 -1.82 33.96 27.33
 45 -1.82 33.96 27.34
 50 -1.83 33.97 27.35
 60 -1.83 34.00 27.37
 70 -1.83 34.00 27.37
 75 -1.83 34.00 27.37
 80 -1.83 34.00 27.37
 90 -1.83 34.00 27.37
 100 -1.82 34.01 27.38
 125 -1.82 34.03 27.39
 150 -1.09 34.22 27.53
 175 0.63 34.41 27.59
 200 1.30 34.44 27.58
 250 1.65 34.54 27.63
 300 1.81 34.60 27.67
 400 1.94 34.66 27.70
 500 1.92 34.69 27.73

Cruise : ADBEX3 Station 8
 OB OCT 1985 0914 GMT
 Latitude 59:34.88S
 Longitude 59:58.07E
 Depth: CTD 562 m Bottom NR

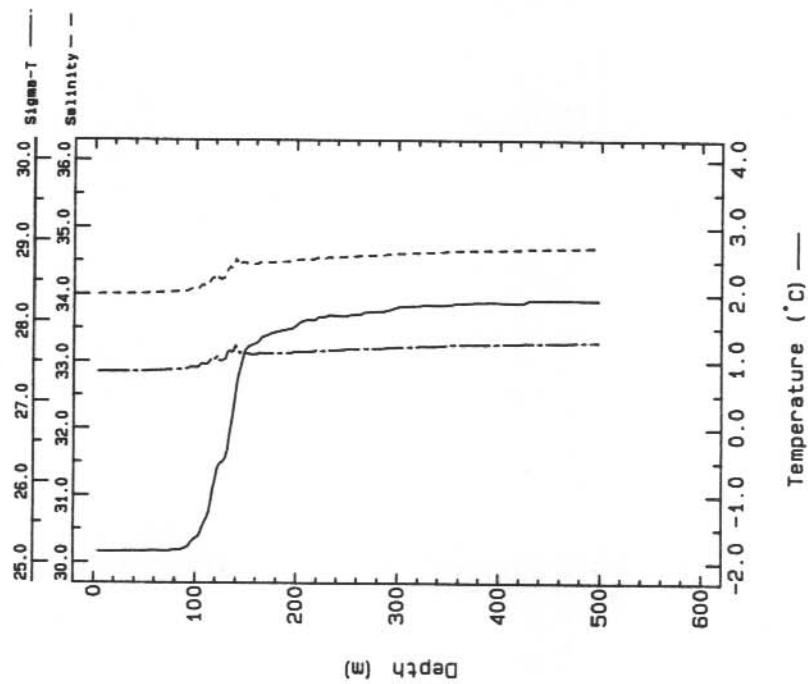


Cruise: ADBEX3 Station: 8
08 OCT 1985 0914 GMT
Latitude : 59° 34'.88S
Longitude: 59° 58'.07E
Depth: CTD 5002 m Bottom NR

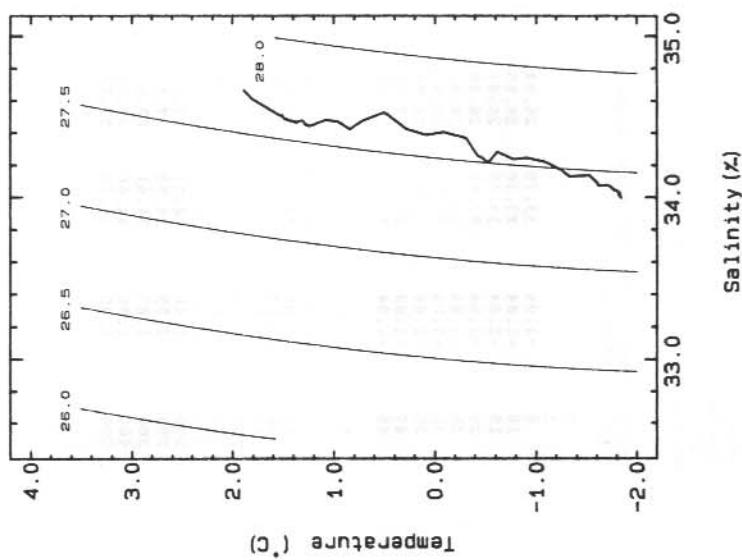


Cruise : ADBEX3 Station 9
 Station number : 9
 Date : 8 OCT 1985
 Start Time : 10:19 GMT
 Ship : NEELA DAN
 Position : 59:39.61S 60:03.95E
 Cast Depth (m) : 500
 Bottom Depth (m) : Not Recorded

Depth (bar)	Temperature (deg C)	Salinity	Sigma-T
0	-1.84	34.00	27.37
5	-1.84	34.00	27.37
10	-1.84	34.00	27.37
15	-1.84	34.00	27.37
20	-1.84	34.00	27.37
25	-1.84	34.00	27.37
30	-1.83	34.00	27.37
35	-1.83	34.01	27.37
40	-1.83	34.01	27.38
45	-1.83	34.01	27.37
50	-1.83	34.01	27.38
60	-1.83	34.02	27.39
70	-1.83	34.03	27.39
75	-1.83	34.03	27.39
80	-1.82	34.03	27.40
90	-1.78	34.05	27.41
100	-1.64	34.08	27.42
125	-0.52	34.22	27.50
150	1.17	34.46	27.60
175	1.42	34.48	27.60
200	1.53	34.51	27.61
250	1.68	34.57	27.65
300	1.82	34.62	27.68
400	1.89	34.67	27.71



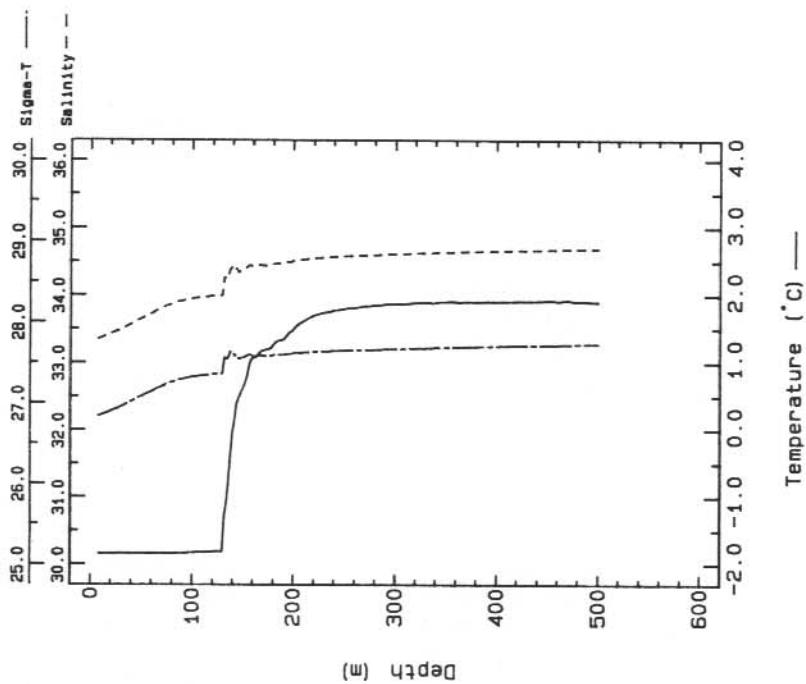
Cruise: ADBEX3 Station: 9
06 OCT 1985 1019 GMT
Latitude : 59° 39' 61S
Longitude: 60° 03' 95E
Depth: CTD 500 m Bottom NR



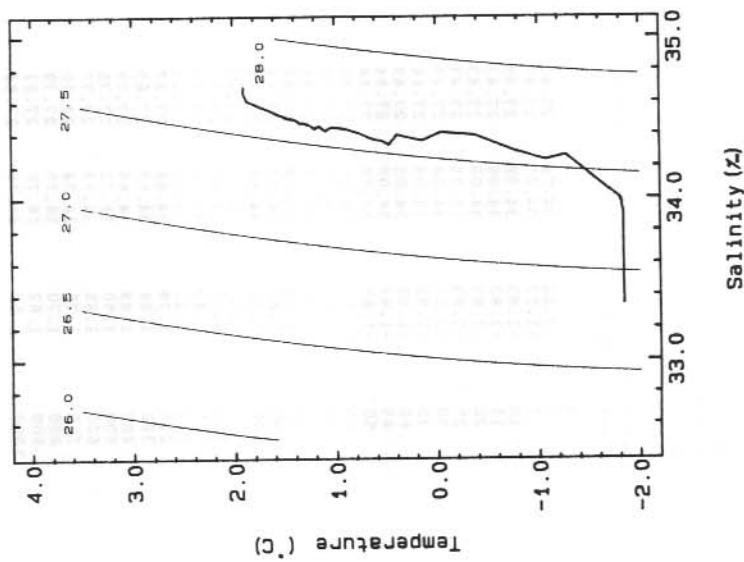
Cruise : ADBEX3
 Station number : 10
 Date : 8 OCT 1985
 Start Time : 1339 GMT
 Ship : NEELLA DAN
 Position : 55:57.66S 60:07.13E
 Cast Depth (m) : 502
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.84	33.35	26.84
5	-1.84	33.36	26.85
10	-1.84	33.39	26.87
15	-1.84	33.42	26.90
20	-1.84	33.45	26.93
25	-1.84	33.49	26.95
30	-1.84	33.53	26.98
35	-1.84	33.56	27.01
40	-1.84	33.61	27.05
45	-1.84	33.65	27.08
50	-1.84	33.72	27.14
60	-1.84	33.79	27.20
70	-1.84	33.84	27.24
75	-1.84	33.88	27.26
80	-1.84	33.91	27.30
90	-1.84	33.94	27.32
100	-1.83	33.99	27.36
125	-1.81	34.37	27.56
150	0.60	34.43	27.58
175	1.20	34.48	27.61
200	1.48	34.51	27.65
250	1.79	34.58	27.67
300	1.87	34.61	27.70
400	1.90	34.66	27.73
500	1.90	34.69	

Cruise : ADBEX3 Station 10
 OB OCT 1985 1339 GMT
 Latitude 59.57.66S
 Longitude 60.07.13E
 Depth: CTD 502 m Bottom NR

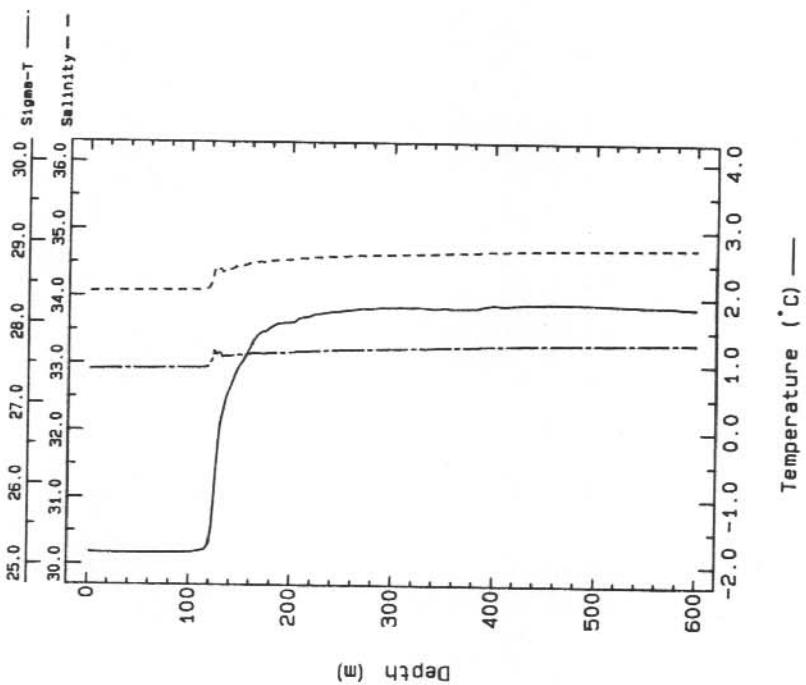


Cruise: ADBEX3 Station: 10
08 OCT 1985 1339 GMT
Latitude : 59° 57'.66S
Longitude: 60° 07'.13E
Depth: CTD 502 m Bottom NR



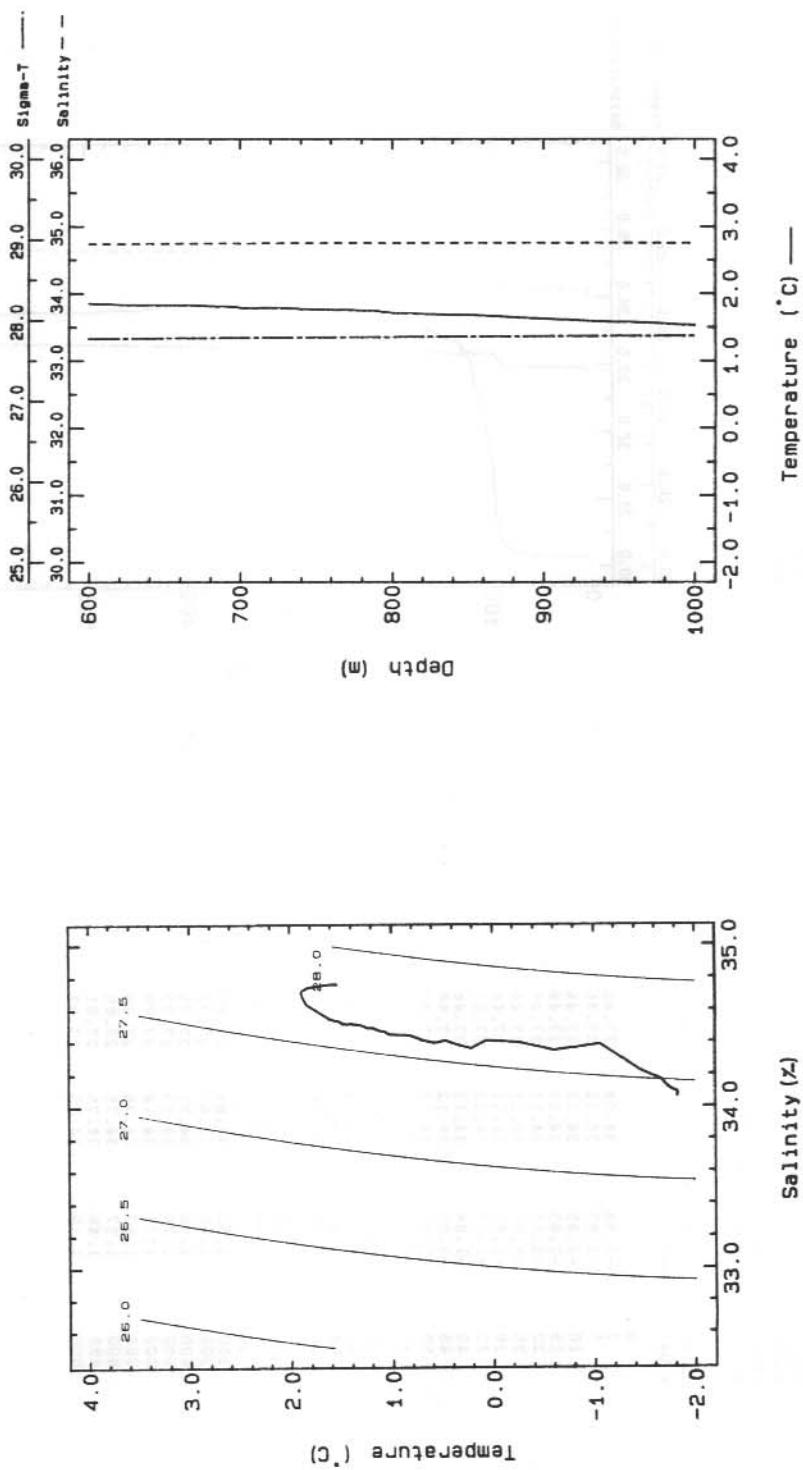
Cruise	Station number	ADBEX3	Temperature (deg C)	Salinity	Sigma-T
Station number	:	11			
Date	:	9 OCT 1985			
Start Time	:	1045 GMT			
Ship	:	NELLA DAN			
Position	:	61:15.87S 60:04.88E			
Cast Depth (m)	:	1002			
Bottom Depth (m)	:	Not Recorded			
Depth d bar					
0	-1.82	34.06	27.42		
5	-1.83	34.07	27.43		
10	-1.83	34.08	27.43		
15	-1.83	34.08	27.43		
20	-1.83	34.08	27.43		
25	-1.83	34.08	27.43		
30	-1.83	34.08	27.43		
35	-1.83	34.08	27.44		
40	-1.83	34.08	27.43		
45	-1.83	34.08	27.44		
50	-1.83	34.08	27.44		
60	-1.83	34.09	27.44		
70	-1.83	34.09	27.44		
75	-1.83	34.09	27.44		
80	-1.82	34.09	27.44		
90	-1.82	34.09	27.44		
100	-1.81	34.10	27.45		
125	-0.83	34.37	27.63		
150	0.99	34.45	27.60		
175	1.49	34.51	27.62		
200	1.62	34.55	27.64		
250	1.79	34.61	27.67		
300	1.84	34.63	27.69		
400	1.89	34.69	27.73		
500	1.90	34.71	27.75		
600	1.85	34.73	27.77		
700	1.78	34.74	27.78		
800	1.70	34.75	27.79		
900	1.62	34.76	27.81		
1000	1.53	34.76	27.81		

Cruise : ADBEX3 Station 11
 09 OCT 1985 1045 GMT
 Latitude 61:15.87S
 Longitude 60:04.88E
 Depth: CTD 10002 m Bottom NR



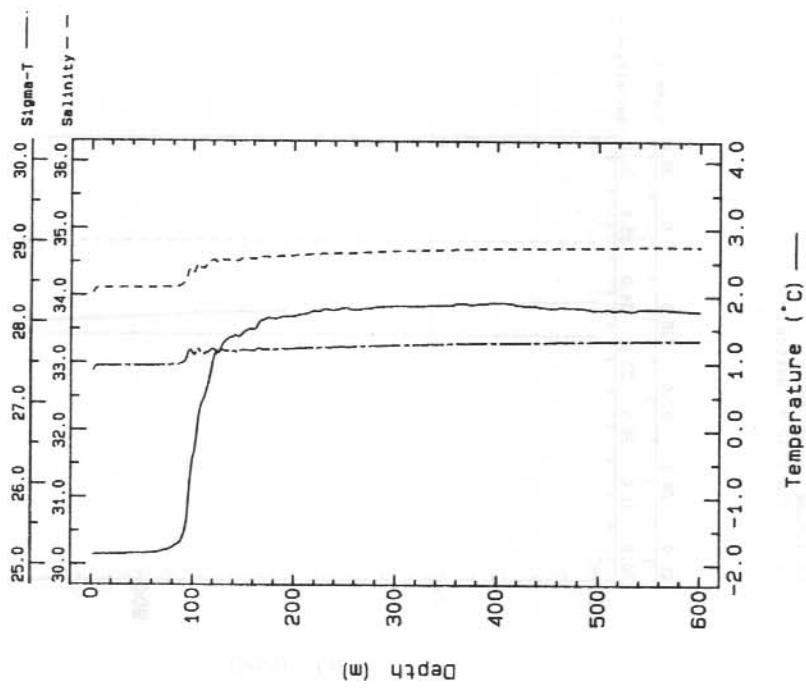
Cruise: ADBEX3 Station: 11
09 OCT 1985 1045 GMT
Latitude : 61:15.87S
Longitude: 60:04.88E
Depth: CTD 1002 m Bottom NR

Cruise : ADBEX3 Station 11
09 OCT 1985 1045 GMT
Latitude 61:15.87S
Longitude 60:04.88E
Depth: CTD 1002 m Bottom NR



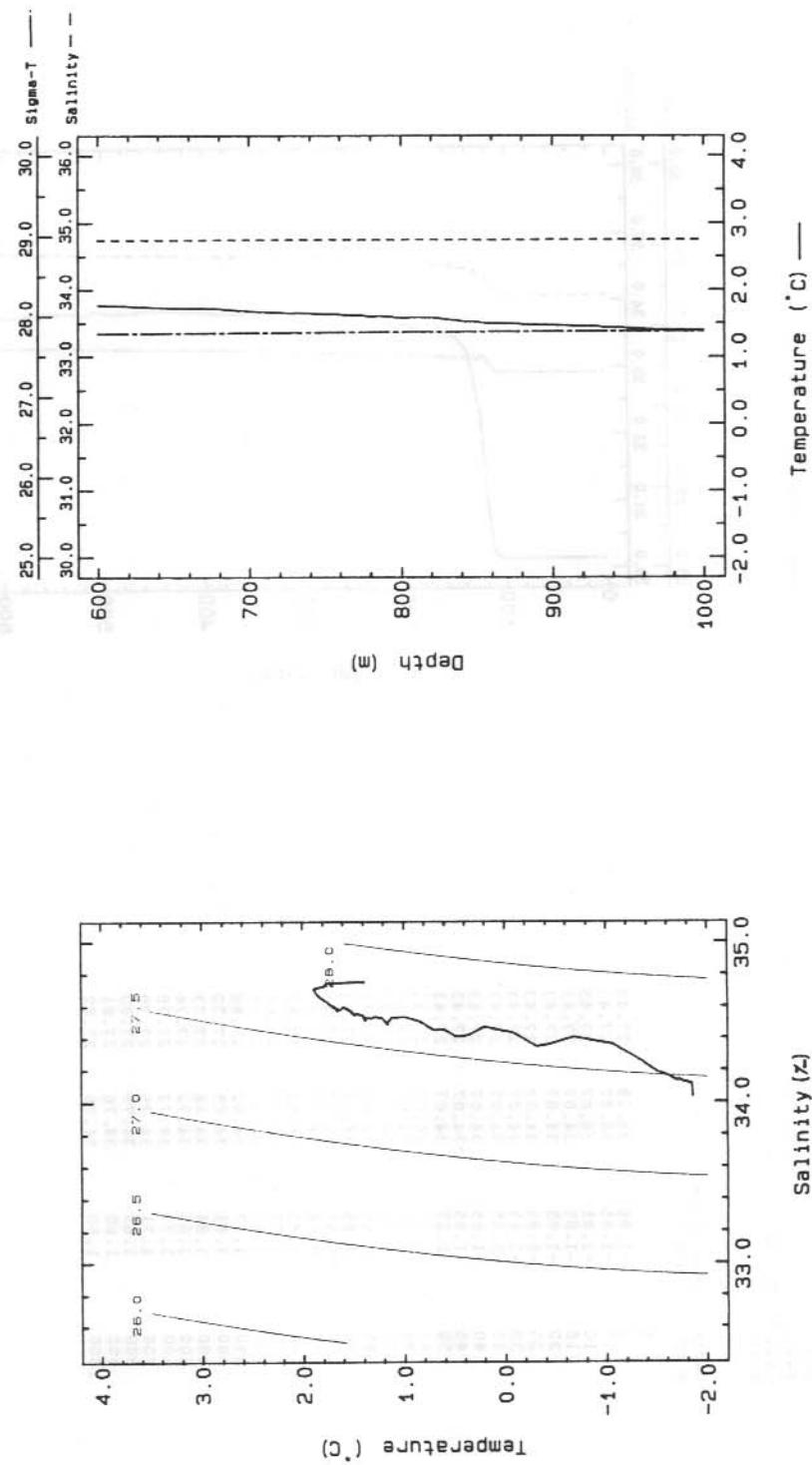
Cruise	ADBEX3	Station number	12	Date	10 OCT 1985	Start Time	1239 GMT	Position	NELIA DAN	Cast Depth (m)	62±2.14S	Bottom Depth (m)	1002	Bottom Depth (m)	Not Recorded
Depth (bar)	Temperature (deg C)	Salinity	Sigma-T												
0	-1.86	34.04	27.40												
5	-1.85	34.11	27.46												
10	-1.85	34.11	27.46												
15	-1.85	34.11	27.46												
20	-1.85	34.11	27.46												
25	-1.85	34.11	27.46												
30	-1.85	34.11	27.46												
35	-1.84	34.12	27.47												
40	-1.84	34.12	27.47												
45	-1.83	34.12	27.46												
50	-1.83	34.12	27.46												
60	-1.82	34.12	27.46												
70	-1.80	34.13	27.47												
75	-1.78	34.13	27.47												
80	-1.75	34.14	27.48												
90	-1.60	34.17	27.50												
100	-0.45	34.36	27.61												
125	1.16	34.49	27.62												
150	1.44	34.55	27.65												
175	1.66	34.58	27.66												
200	1.69	34.60	27.67												
250	1.82	34.64	27.69												
300	1.85	34.67	27.72												
400	1.90	34.71	27.75												
500	1.79	34.73	27.77												
600	1.77	34.74	27.78												
700	1.67	34.75	27.79												
800	1.57	34.75	27.80												
900	1.46	34.75	27.81												
1000	1.39	34.75	27.82												

Cruise : ADBEX3 Station 12
 10 OCT 1985 1239 GMT
 Latitude 62° 27.14S
 Longitude 59° 53.78E
 Depth: CTD 1002 m Bottom NR



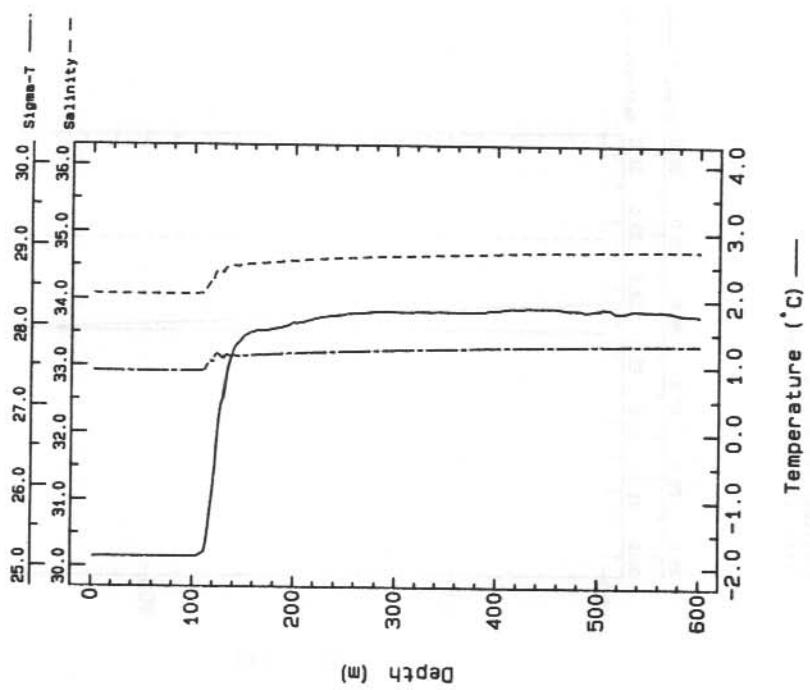
Cruise: ADBEX3 Station: 12
10 OCT 1985 1239 GMT
Latitude : 62° 27.14S
Longitude: 59° 53.78E
Depth: CTD 1002 m Bottom NR

Cruise : ADBEX3 Station 12
10 OCT 1985 1239 GMT
Latitude 62° 27.14S
Longitude 59° 53.78E
Depth: CTD 1002 m Bottom NR



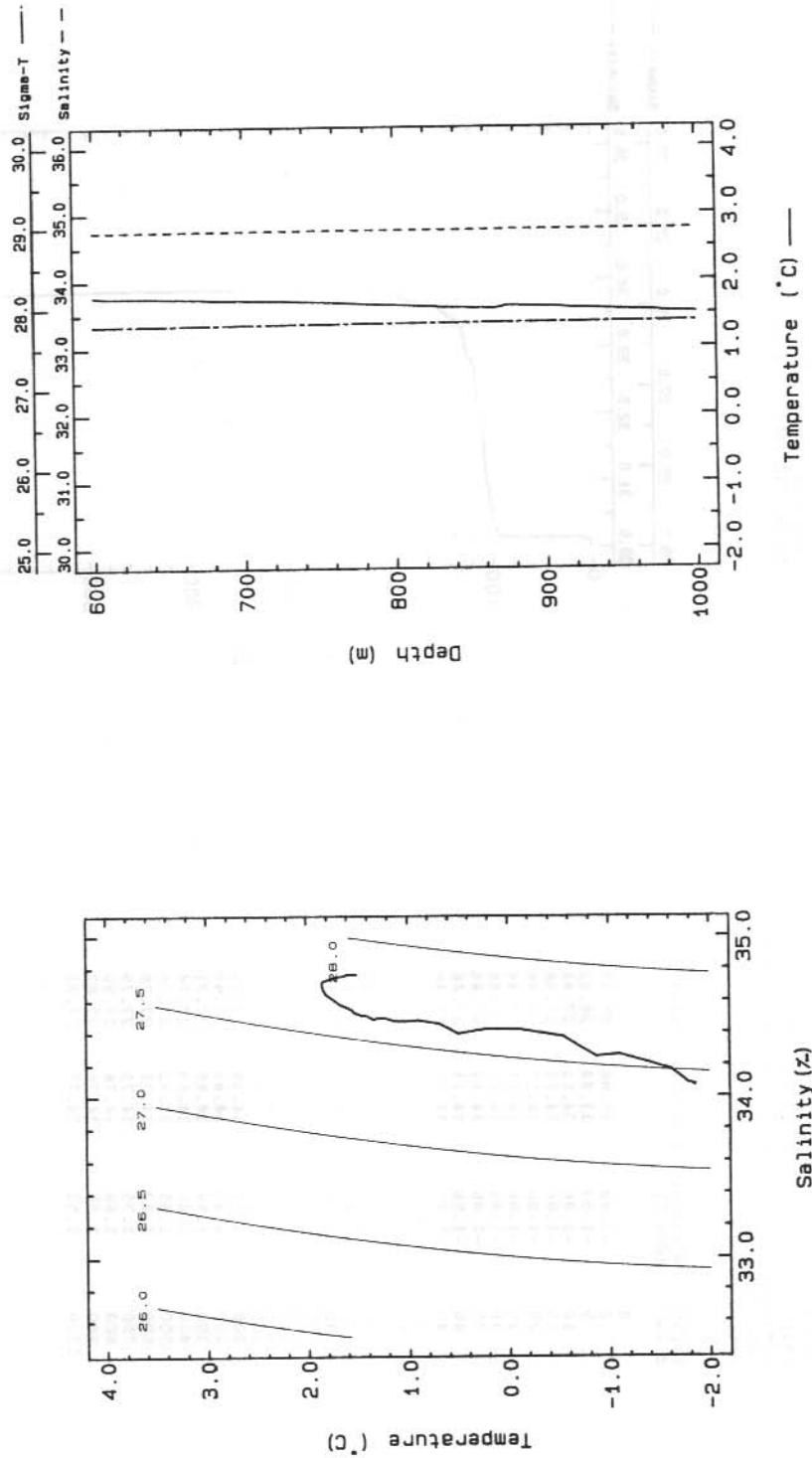
Cruise : ADBEX3
 Station 13
 12 OCT 1985 1455 GMT
 Latitude 62.33.36S
 Longitude 62.37.16E
 Depth: CTD 1002 m Bottom NR
 Position : 62°33'36"S 62°37'16"E
 Cast Depth (m) : 1002
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.86	34.08	27.43
2	-1.85	34.07	27.43
5	-1.85	34.07	27.43
10	-1.85	34.07	27.43
15	-1.85	34.07	27.43
20	-1.85	34.07	27.43
25	-1.85	34.07	27.43
30	-1.85	34.07	27.43
35	-1.85	34.07	27.43
40	-1.85	34.07	27.43
45	-1.85	34.07	27.43
50	-1.85	34.07	27.43
60	-1.85	34.07	27.43
70	-1.85	34.07	27.43
75	-1.85	34.07	27.43
80	-1.85	34.07	27.43
90	-1.85	34.07	27.43
100	-1.85	34.07	27.43
125	0.04	34.42	27.64
150	1.43	34.51	27.62
175	1.54	34.54	27.64
200	1.65	34.57	27.65
250	1.77	34.62	27.68
300	1.81	34.65	27.70
400	1.84	34.68	27.73
500	1.85	34.72	27.76
600	1.77	34.73	27.78
700	1.71	34.75	27.79
800	1.63	34.75	27.80
900	1.60	34.76	27.81
1000	1.50	34.76	27.82



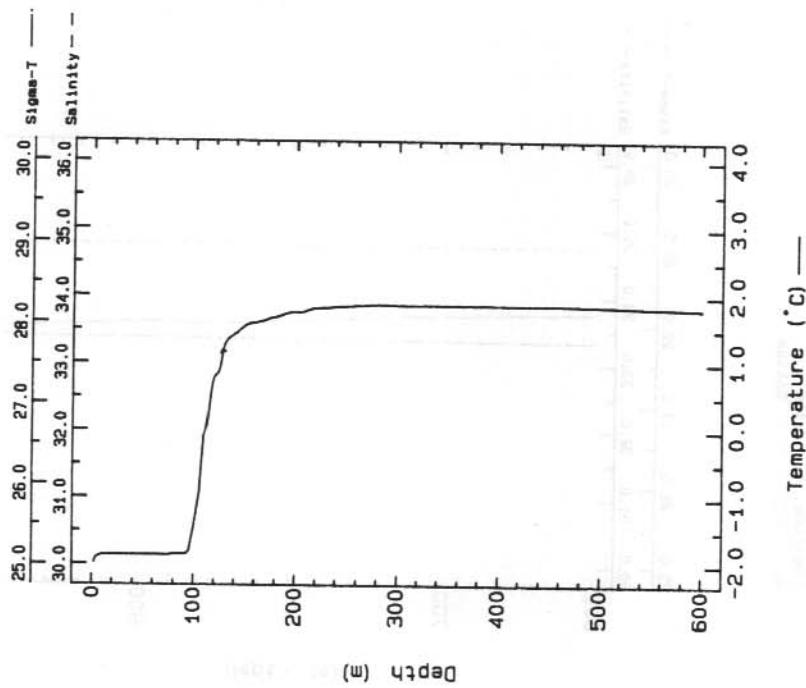
Cruise: ADBEX3 Station: 13
12 OCT 1985 1455 GMT
Latitude: 62° 33.36S
Longitude: 62° 37.16E
Depth: CTD 1002 m Bottom NR

Cruise : ADBEX3 Station 13
12 OCT 1985 1455 GMT
Latitude 62° 33.36S
Longitude 62° 37.16E
Depth: CTD 1002 m Bottom NR

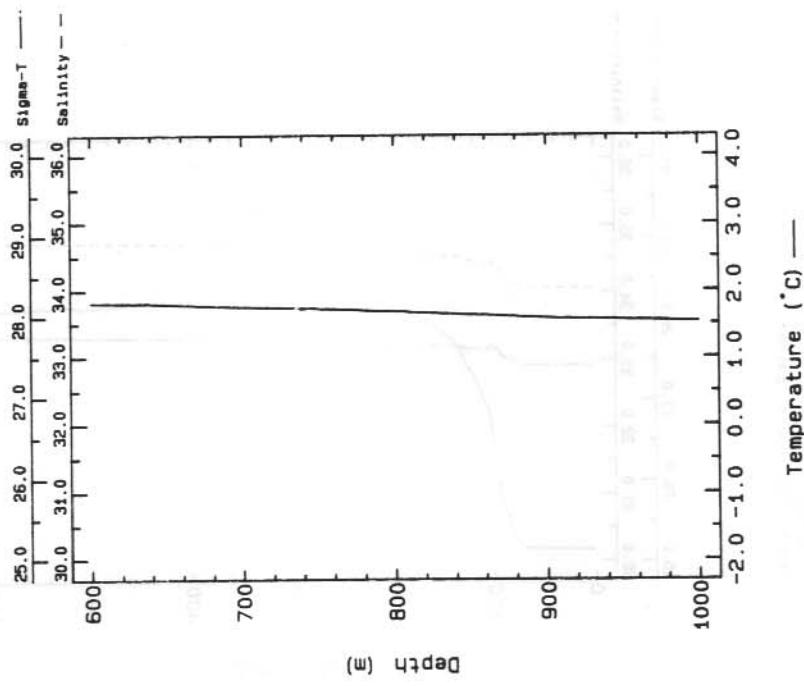


Cruise : ADBEX3
 Station number : 14
 Date : 13 OCT 1985
 Start Time : 1443 GMT
 Ship : NELLA DAN
 Position : 62°56.05S 62°31.97E
 Cast Depth (m) : 1002
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.98	31.96	25.71
2	-1.89	33.44	26.92
5	-1.86	34.11	27.46
10	-1.86	34.11	27.46
15	-1.86	34.11	27.46
20	-1.86	34.11	27.46
25	-1.86	34.11	27.46
30	-1.86	34.11	27.46
35	-1.86	34.11	27.46
40	-1.86	34.11	27.46
45	-1.86	34.11	27.46
50	-1.86	34.11	27.46
60	-1.86	34.11	27.46
70	-1.86	34.11	27.46
75	-1.86	34.11	27.46
80	-1.85	34.11	27.46
90	-1.84	34.11	27.46
100	-1.47	34.19	27.51
125	0.92	34.47	27.62
150	1.55	34.54	27.64
175	1.67	34.57	27.65
200	1.76	34.59	27.66
250	1.85	34.63	27.69
300	1.86	34.66	27.71
400	1.86	34.69	27.74
500	1.85	34.72	27.76
600	1.82	34.74	27.78
700	1.75	34.75	27.79
800	1.68	34.76	27.80
900	1.58	34.76	27.82
1000	1.52	34.77	27.82



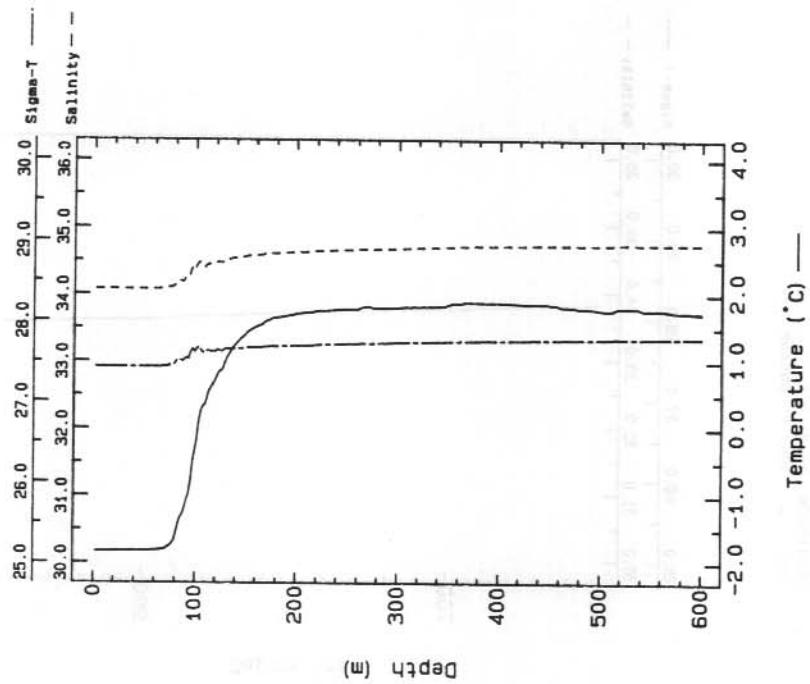
Cruise : ADBEX3 Station 14
13 OCT 1985 1443 GMT
Latitude 62.56.05S
Longitude 62.31.97E
Depth: CTD 1002 m Bottom NR



Cruise : ADBEX3
 Station 15
 Station number : 15
 Date : 14 OCT 1985
 Start Time : 1117 GMT
 Ship : NELLA DAN
 Position : 63°04' 03S 62°59' 04E
 Cast Depth (m) : 1002
 Bottom Depth (m) : Not Recorded

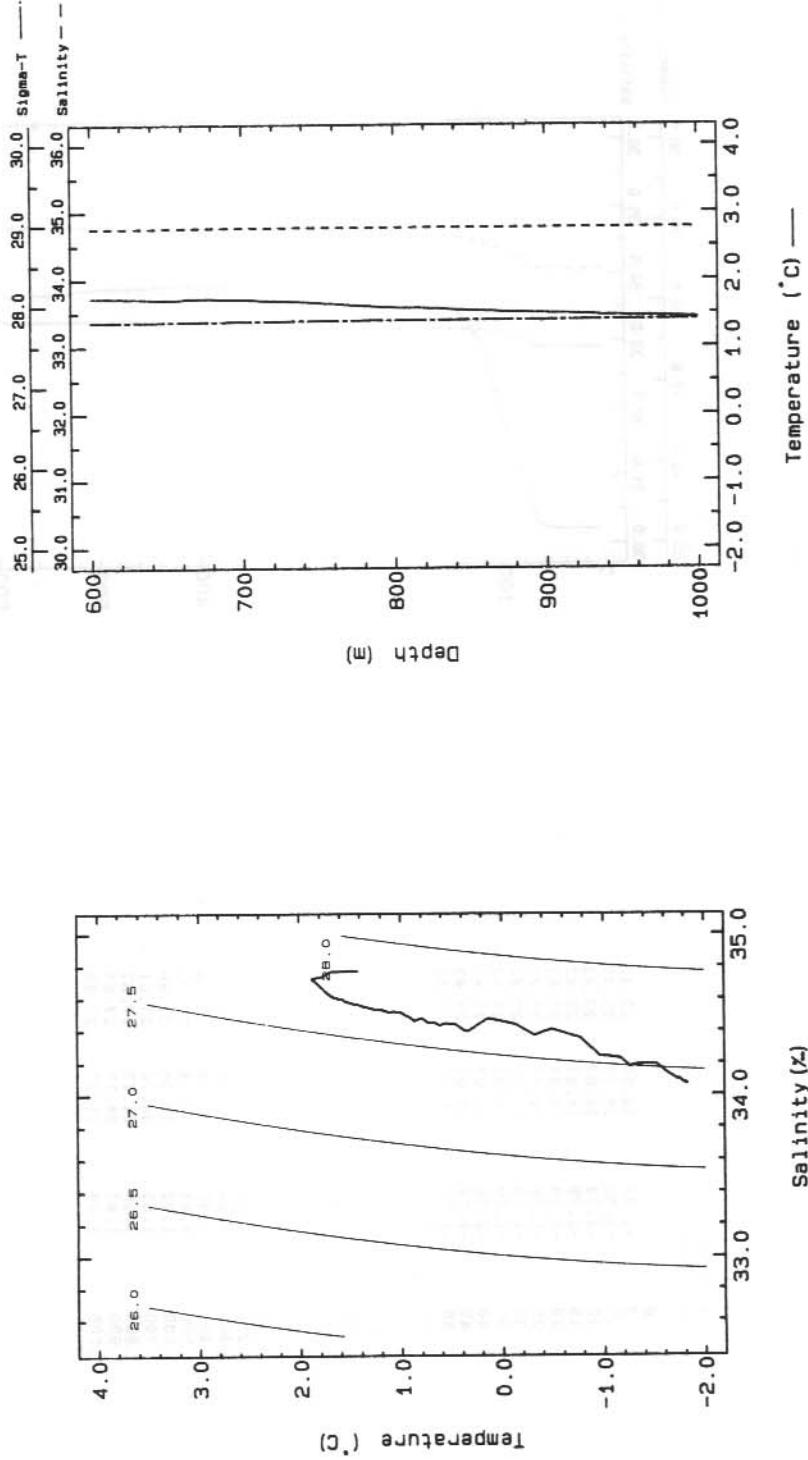
Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.83	34.07	27.42
2	-1.83	34.07	27.43
5	-1.83	34.07	27.43
10	-1.83	34.07	27.43
15	-1.83	34.07	27.42
20	-1.82	34.07	27.42
25	-1.82	34.07	27.42
30	-1.82	34.07	27.42
35	-1.82	34.07	27.42
40	-1.82	34.07	27.42
45	-1.82	34.07	27.42
50	-1.82	34.07	27.42
60	-1.81	34.07	27.43
70	-1.79	34.08	27.43
75	-1.74	34.10	27.45
80	-1.65	34.13	27.47
90	-1.18	34.23	27.53
100	-0.32	34.37	27.61
125	0.86	34.46	27.62
150	1.40	34.56	27.67
175	1.63	34.61	27.68
200	1.71	34.63	27.70
250	1.78	34.66	27.72
300	1.80	34.69	27.73
400	1.88	34.73	27.76
500	1.77	34.74	27.78
600	1.72	34.76	27.80
700	1.70	34.77	27.81
800	1.57	34.77	27.82
900	1.49	34.77	27.83
1000	1.42	34.77	27.83

Cruise : ADBEX3 Station 15
 14 OCT 1985 1117 GMT
 Latitude 63° 04.03S
 Longitude 62° 59.04E
 Depth: CTD 1002 m Bottom NR



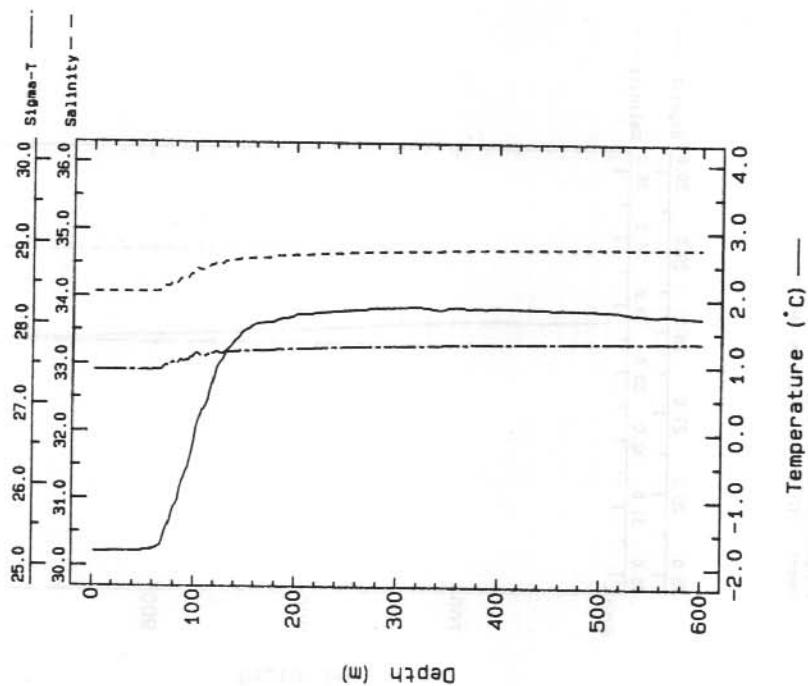
Cruise: ADBEX3 Station: 15
14 OCT 1985 1117 GMT
Latitude: 63.04.03S
Longitude: 62.59.04E
Depth: CTD 10002 m Bottom NR

Cruise : ADBEX3 Station 15
14 OCT 1985 1117 GMT
Latitude 63.04.03S
Longitude 62.59.04E
Depth: CTD 10002 m Bottom NR



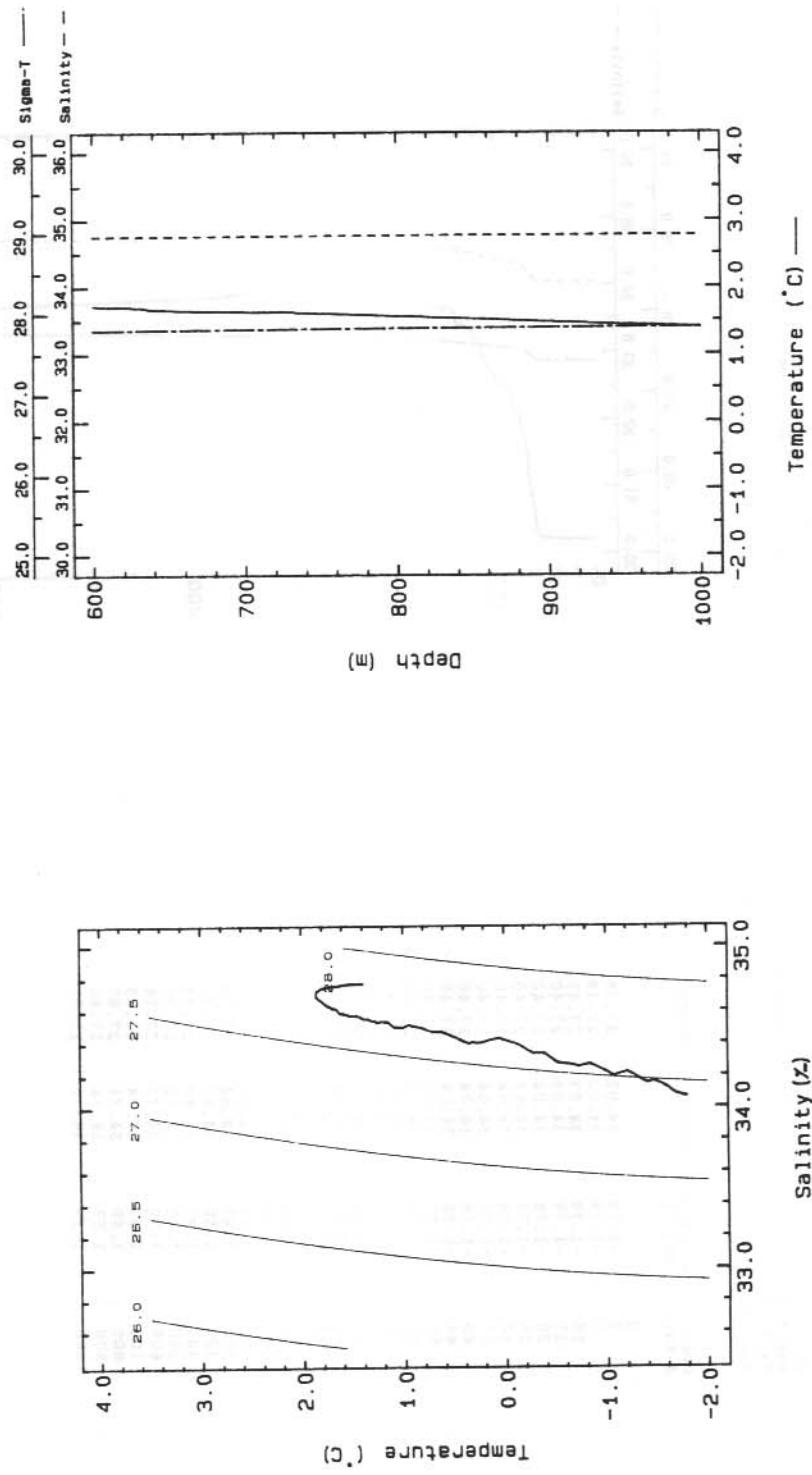
Cruise	: ADBEX3	Station	16
Station number	:		
Date	:	15 OCT 1985	
Start Time	:	1034 GMT	
Ship	:	NELLA DAN	
Position	:	63°25.51S 62°51.08E	
Cast Depth (m)	:	1002	
Bottom Depth (m)	:	Not Recorded	
Depth	Temperature	Salinity	Sigma-T
d bar	(deg C)		
0	-1.80	34.07	27.42
2	-1.80	34.07	27.42
5	-1.79	34.07	27.42
10	-1.79	34.07	27.42
15	-1.79	34.07	27.42
20	-1.78	34.07	27.42
25	-1.78	34.07	27.42
30	-1.78	34.07	27.42
35	-1.79	34.07	27.42
40	-1.78	34.07	27.42
45	-1.78	34.07	27.42
50	-1.77	34.07	27.42
60	-1.75	34.08	27.43
70	-1.60	34.13	27.47
75	-1.38	34.16	27.49
80	-1.12	34.20	27.51
90	-0.67	34.26	27.54
100	-0.14	34.39	27.62
125	1.03	34.50	27.64
150	1.51	34.57	27.67
175	1.63	34.59	27.67
200	1.74	34.63	27.70
250	1.81	34.67	27.72
300	1.86	34.69	27.74
400	1.85	34.72	27.76
500	1.81	34.74	27.78
600	1.72	34.75	27.80
700	1.63	34.76	27.81
800	1.56	34.77	27.82
900	1.47	34.77	27.83
1000	1.39	34.77	27.83

Cruise : ADBEX3 Station 16
 15 OCT 1985 1034 GMT
 Latitude 63°25.51S
 Longitude 62°51.08E
 Depth: CTD 1002 m Bottom NR



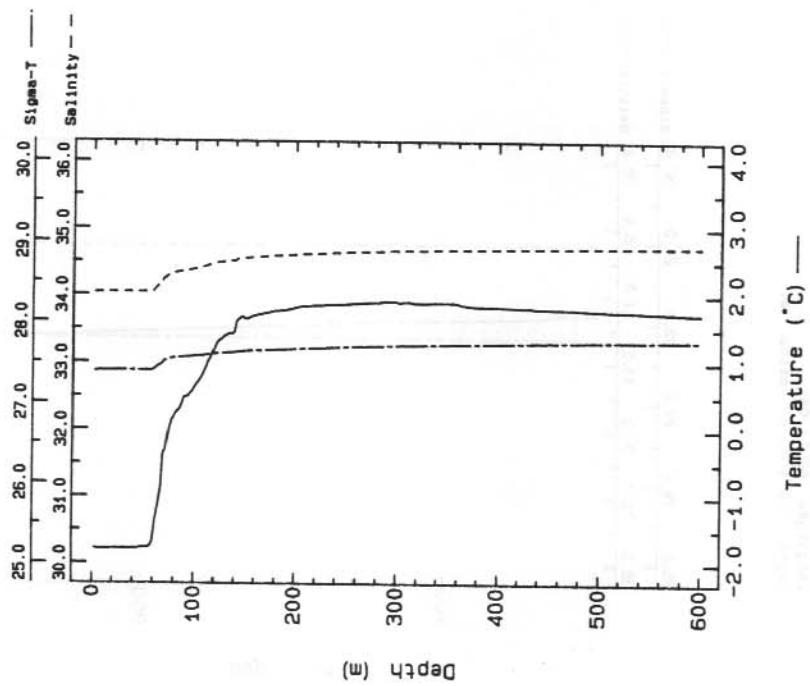
Cruise: ADBEX3 Station: 16
15 OCT 1985 1034 GMT
Latitude : 63: 25.51S
Longitude: 62: 51.08E
Depth: CTD 1002 m Bottom NR

Cruise : ADBEX3 Station 16
15 OCT 1985 1034 GMT
Latitude 63: 25.51S
Longitude 62: 51.08E
Depth: CTD 1002 m Bottom NR



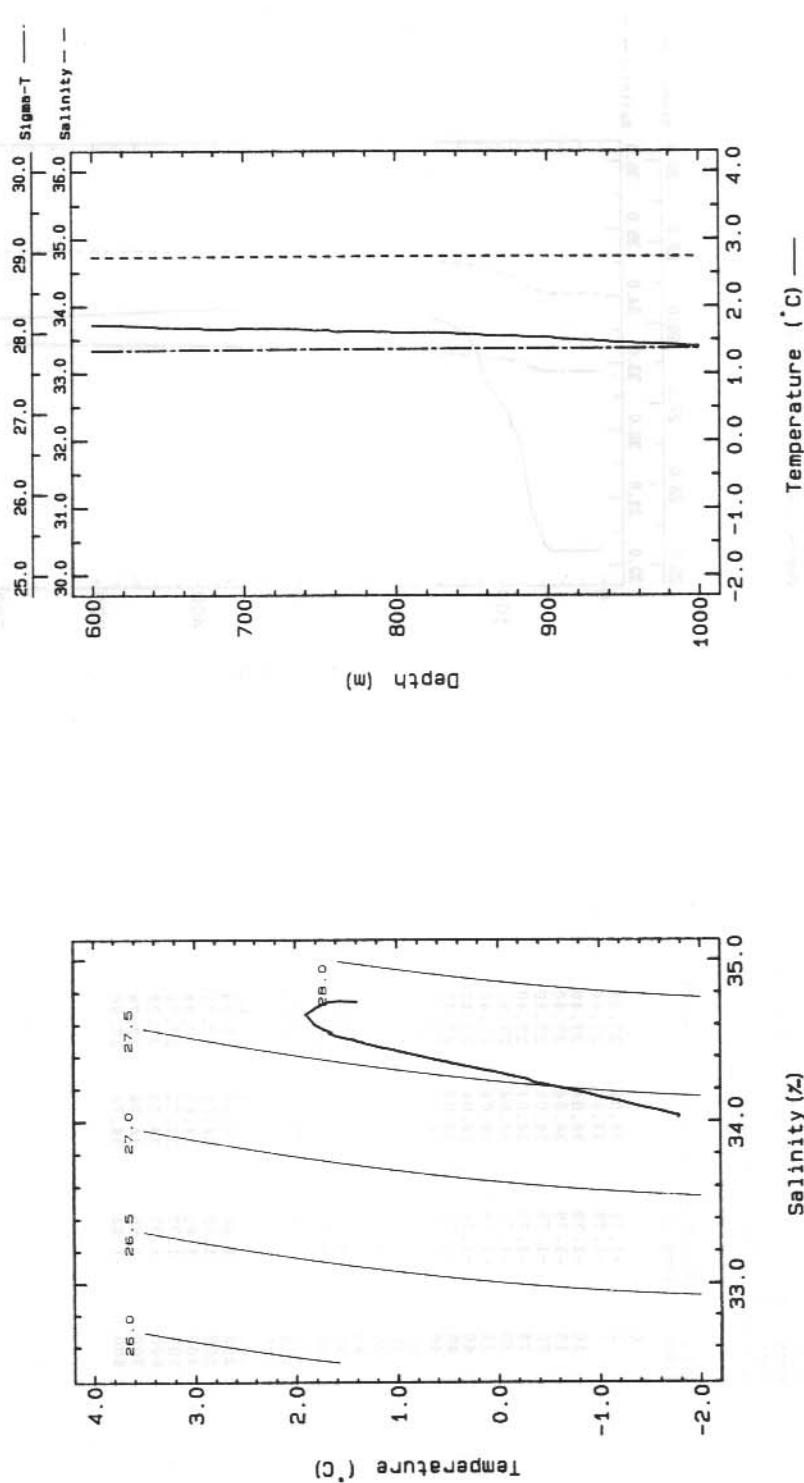
Cruise : ADBEX3
 Station number : 17
 Date : 16 OCT 1985
 Start Time : 0509 GMT
 Ship : NELLA DAN
 Position : 63°22.69S 63°02.53E
 Cast Depth (m) : 1002
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.78	34.02	27.39
5	-1.79	34.03	27.39
10	-1.79	34.03	27.40
15	-1.79	34.03	27.40
20	-1.78	34.04	27.40
25	-1.78	34.04	27.40
30	-1.78	34.04	27.40
35	-1.78	34.04	27.40
40	-1.78	34.04	27.40
45	-1.78	34.04	27.40
50	-1.77	34.04	27.40
60	-1.66	34.06	27.41
70	-0.36	34.24	27.51
75	-0.04	34.30	27.54
80	0.20	34.33	27.55
90	0.49	34.36	27.57
100	0.63	34.38	27.57
125	1.33	34.49	27.61
150	1.64	34.55	27.64
175	1.75	34.58	27.65
200	1.81	34.60	27.67
250	1.87	34.64	27.69
300	1.90	34.67	27.71
400	1.83	34.69	27.74
500	1.77	34.72	27.76
600	1.72	34.73	27.78
700	1.67	34.74	27.79
800	1.60	34.74	27.80
900	1.53	34.74	27.80
1000	1.39	34.74	27.81



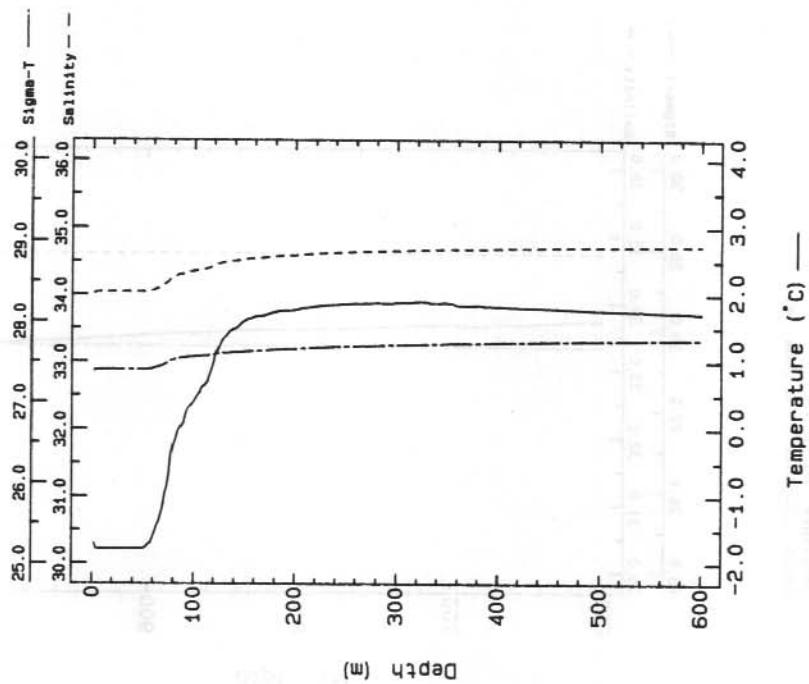
Cruise: ADBEX3 Station: 17
16 OCT 1985 0509 GMT
Latitude : 63: 22.69S
Longitude: 63: 02.53E
Depth: CTD 1002 m Bottom NR

Cruise : ADBEX3 Station 17
16 OCT 1985 0509 GMT
Latitude 63: 22.69S
Longitude 63: 02.53E
Depth: CTD 1002 m Bottom NR



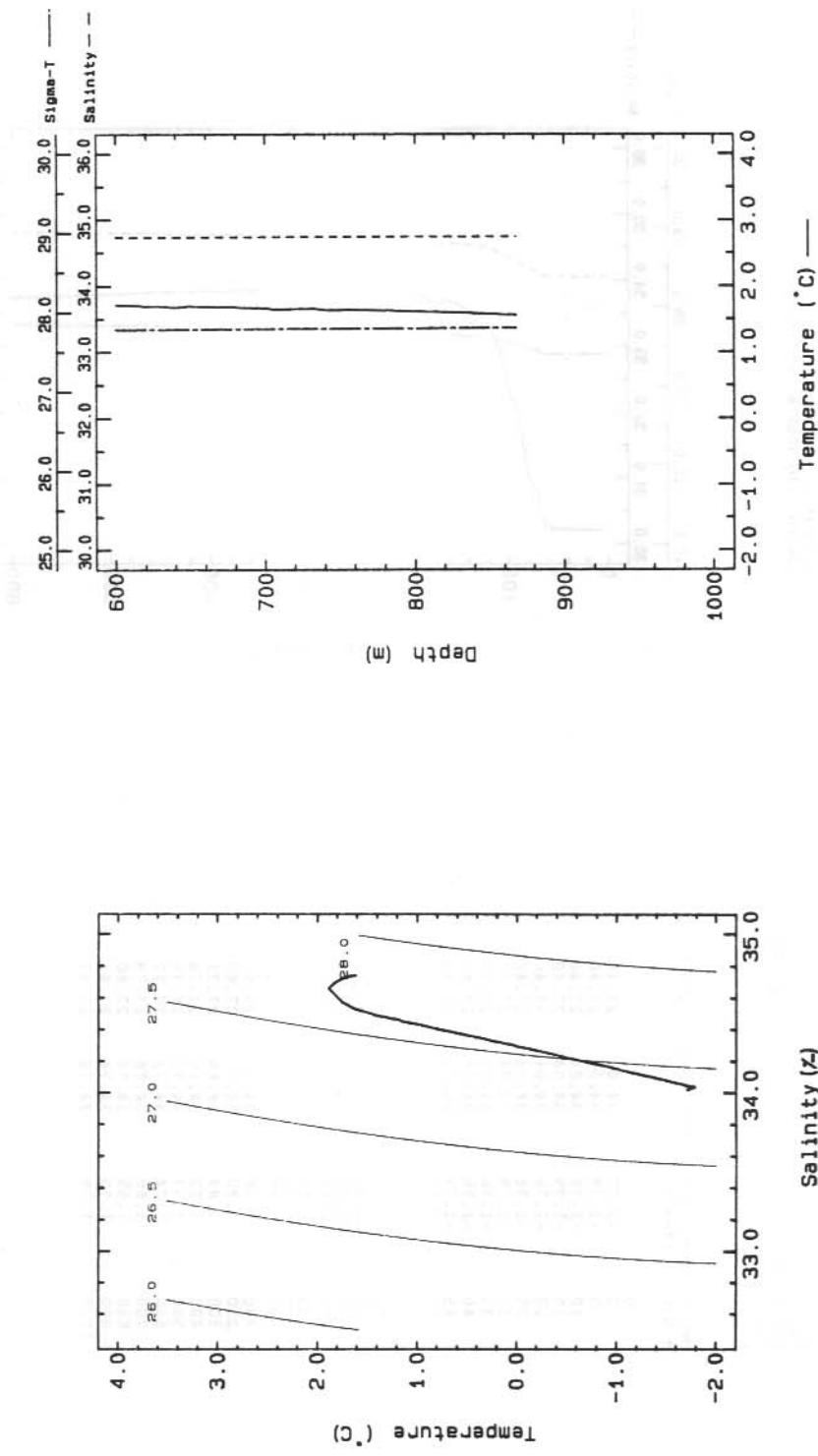
Cruise : ADBEX3
 Station number : 18
 Date : 16 OCT 1985
 Start Time : 0703 GMT
 Ship : NELIA DAN
 Position : 63°22'.81S 63°03'.86E
 Cast Depth (m) : 870
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.71	34.02	27.38
5	-1.79	34.04	27.40
10	-1.79	34.04	27.40
15	-1.79	34.04	27.40
20	-1.79	34.04	27.40
25	-1.78	34.04	27.40
30	-1.78	34.04	27.40
35	-1.78	34.04	27.40
40	-1.78	34.04	27.40
45	-1.78	34.04	27.40
50	-1.78	34.04	27.40
60	-1.61	34.06	27.41
70	-1.15	34.13	27.45
75	-0.76	34.19	27.49
80	-0.24	34.26	27.52
90	0.10	34.31	27.55
100	0.41	34.35	27.56
125	1.22	34.47	27.60
150	1.61	34.53	27.63
175	1.72	34.57	27.65
200	1.77	34.59	27.66
250	1.86	34.64	27.69
300	1.89	34.66	27.71
400	1.82	34.69	27.74
500	1.77	34.72	27.76
600	1.71	34.73	27.78
700	1.66	34.74	27.79
800	1.61	34.74	27.80



Cruise: ADBEX3 Station: 1B
16 OCT 1985 0703 GMT
Latitude: 63:22.81S
Longitude: 63:03.86E
Depth: CTD 870 m Bottom NR

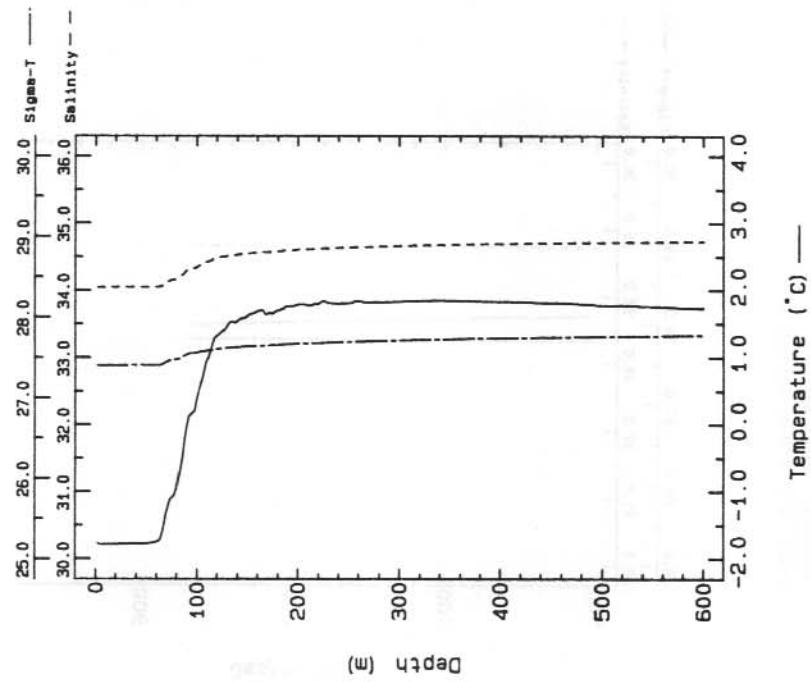
Cruise : ADBEX3 Station 1B
16 OCT 1985 0703 GMT
Latitude 63: 22.81S
Longitude 63: 03.86E
Depth: CTD 870 m Bottom NR



Cruise : ADBEX3 Station 19
 Station number : 19
 Date : 16 OCT 1985
 Start Time : 0959 GMT
 Ship : NELLA DAN
 Position : 63°22.78S 63°06.66E
 Cast Depth (m) : 1002
 Bottom Depth (m) : Not Recorded

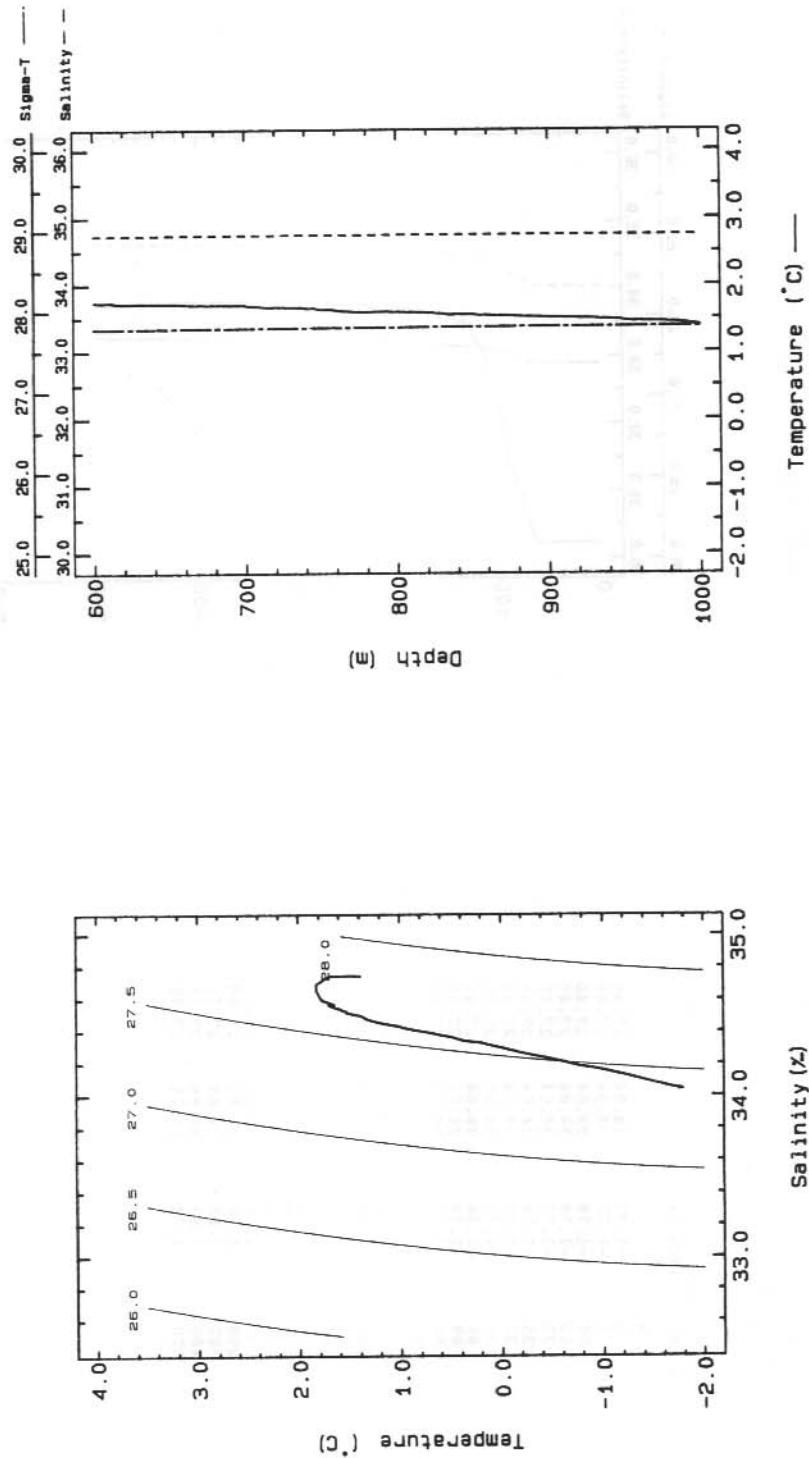
Depth bar
d
Temperature (deg C)
Salinity Sigma-T

0	-1.77	34.04	27.40
5	-1.79	34.04	27.40
10	-1.79	34.04	27.40
15	-1.79	34.04	27.40
20	-1.79	34.04	27.40
25	-1.78	34.04	27.40
30	-1.78	34.04	27.40
35	-1.78	34.04	27.40
40	-1.78	34.04	27.40
45	-1.77	34.04	27.40
50	-1.77	34.04	27.40
60	-1.75	34.05	27.40
70	-1.33	34.11	27.44
75	-1.10	34.15	27.47
80	-0.96	34.17	27.48
90	-0.02	34.29	27.54
100	0.36	34.34	27.55
125	1.38	34.50	27.61
150	1.61	34.54	27.64
175	1.65	34.57	27.65
200	1.78	34.60	27.67
250	1.80	34.63	27.69
300	1.83	34.66	27.71
400	1.83	34.69	27.74
500	1.77	34.71	27.76
600	1.74	34.73	27.77
700	1.69	34.74	27.79
800	1.59	34.74	27.80
900	1.50	34.74	27.81
1000	1.39	34.74	27.81



Cruise: ADBEX3 Station: 19
16 OCT 1985 0959 GMT
Latitude : 63: 22.78S
Longitude: 63: 06.66E
Depth: CTD 1002 m Bottom NR

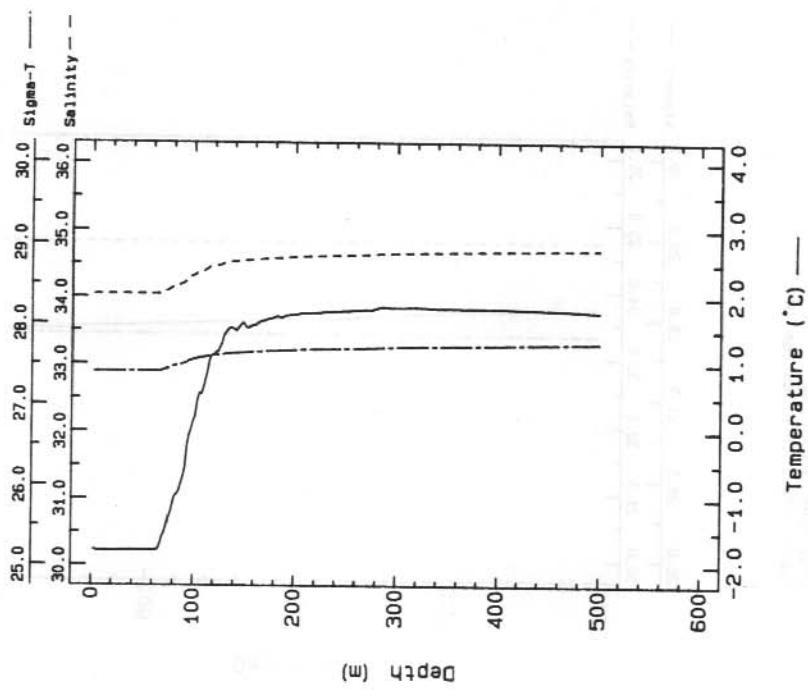
Cruise : ADBEX3 Station 19
16 OCT 1985 0959 GMT
Latitude 63: 22.78S
Longitude 63: 06.66E
Depth: CTD 1002 m Bottom NR



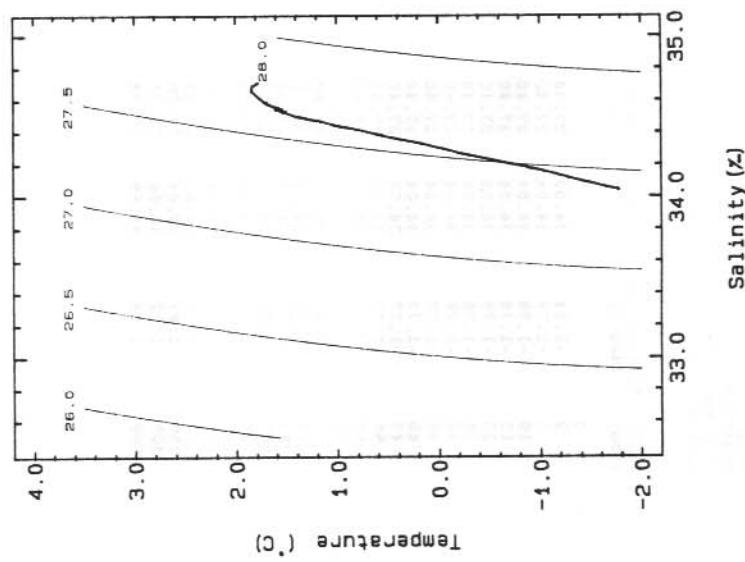
Cruise : ADBEX3 Station 20
 Station number : 20
 Date : 16 OCT 1985
 Start Time : 10:37 GMT
 Ship : NEELJA DAN
 Position : 63:22.64S 63:07.14E
 Cast Depth (m) : 502
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.77	34.04	27.40
5	-1.79	34.04	27.40
10	-1.78	34.04	27.40
15	-1.78	34.04	27.40
20	-1.78	34.04	27.40
25	-1.78	34.04	27.40
30	-1.78	34.04	27.40
35	-1.78	34.05	27.41
40	-1.78	34.04	27.40
45	-1.78	34.04	27.40
50	-1.78	34.05	27.40
60	-1.78	34.04	27.40
70	-1.58	34.07	27.42
75	-1.34	34.11	27.44
80	-1.04	34.16	27.47
90	-0.66	34.21	27.50
100	0.15	34.33	27.56
125	1.22	34.48	27.61
150	1.60	34.54	27.64
175	1.68	34.58	27.66
200	1.74	34.60	27.67
250	1.80	34.63	27.69
300	1.85	34.66	27.71
400	1.83	34.69	27.74
500	1.78	34.71	27.76

Cruise : ADBEX3 Station 20
 16 OCT 1985 10:37 GMT
 Latitude 63:22.64S
 Longitude 63:07.14E
 Depth: CTD 502 m Bottom NR



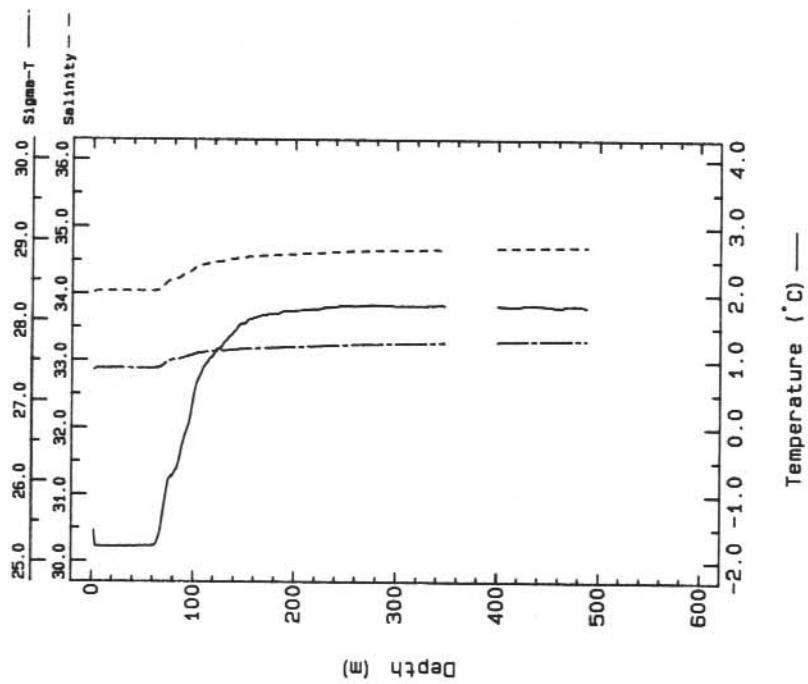
Cruise: ADBEX3 Station: 20
16 OCT 1985 1037 GMT
Latitude : 63° 22.6' S
Longitude: 63° 07.1' E
Depth: CTD 502 m Bottom NR



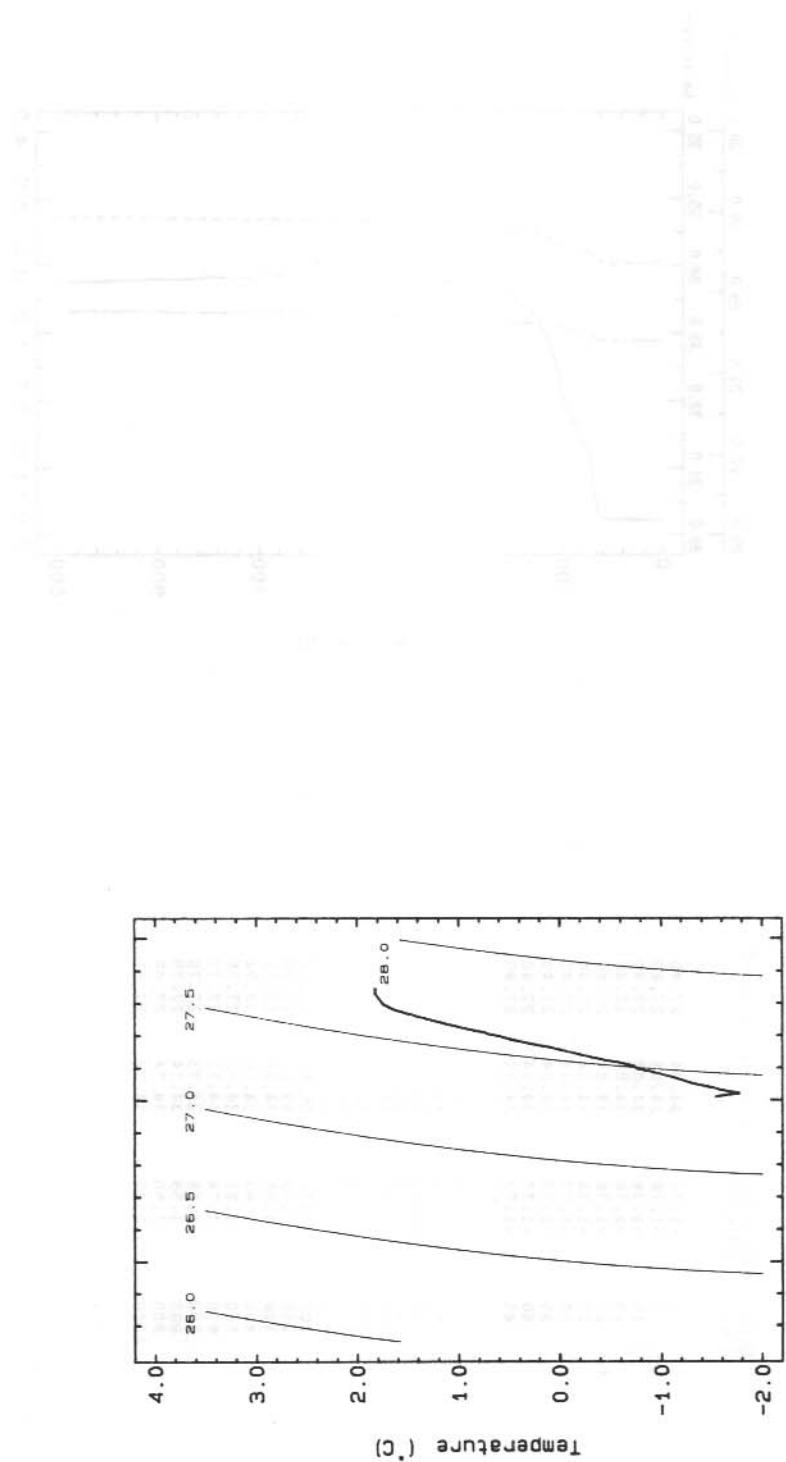
Cruise : ADBEX3
 Station number : 21
 Date : 16 OCT 1985
 Start Time : 1321 GMT
 Ship : NELIA DAN
 Position : 63°21'.63S 63°09'.89E
 Cast Depth (m) : 490
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.54	34.02	27.38
5	-1.78	34.04	27.40
10	-1.78	34.04	27.40
15	-1.78	34.04	27.40
20	-1.78	34.04	27.40
25	-1.78	34.04	27.40
30	-1.78	34.04	27.40
35	-1.77	34.04	27.40
40	-1.77	34.04	27.40
45	-1.77	34.04	27.40
50	-1.77	34.04	27.40
60	-1.76	34.04	27.40
70	-1.32	34.10	27.44
75	-0.85	34.18	27.49
80	-0.69	34.22	27.51
90	-0.20	34.28	27.54
100	0.44	34.37	27.57
125	1.18	34.48	27.62
150	1.55	34.55	27.64
175	1.70	34.58	27.66
200	1.75	34.60	27.67
250	1.82	34.64	27.70
300	1.82	34.66	27.71
400	1.82	34.69	27.74

Cruise : ADBEX3 Station 21
 16 OCT 1985 1321 GMT
 Latitude 63°21'.63S
 Longitude 63°09'.89E
 Depth: CTD 490 m Bottom NR

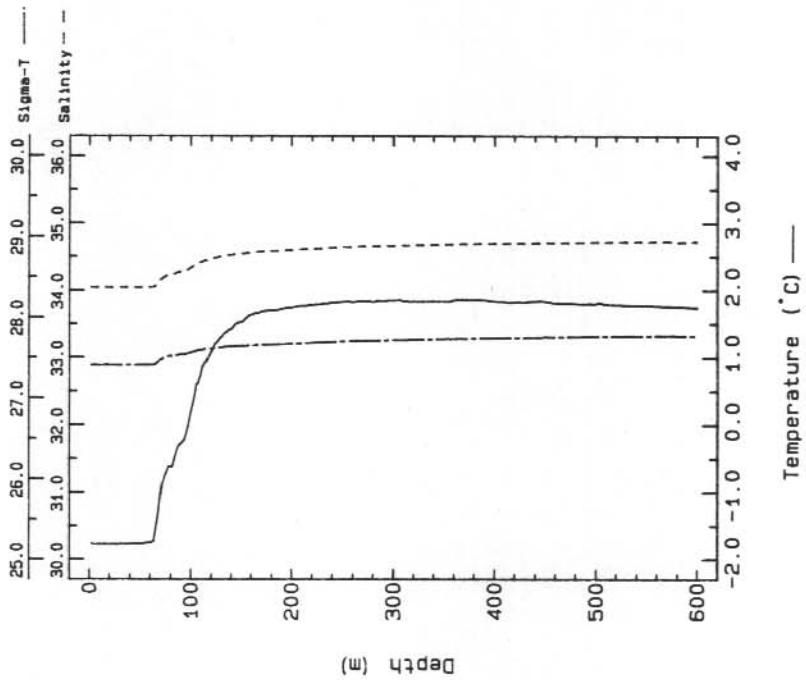


Cruise: ADBEX3 Station: 21
16 OCT 1985 1321 GMT
Latitude : 63° 21' 63S
Longitude: 63° 09' 89E
Depth: CTD 490 m Bottom NR



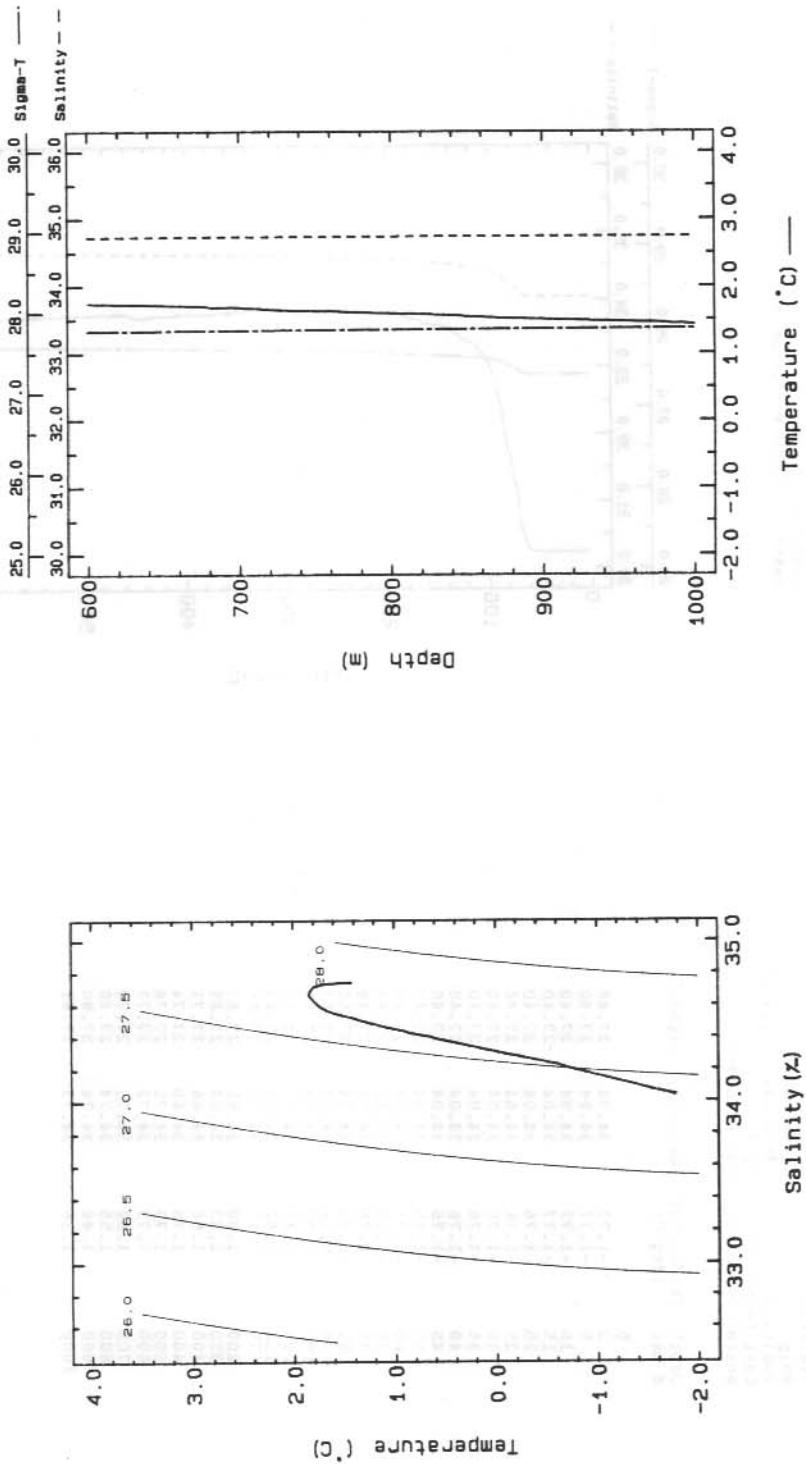
Cruise : ADBEX3
 Station 22
 Date : 16 OCT 1985
 Start Time : 1344 GMT
 Ship : NELLA DAN
 Position : 63°21'.52S 63°10'.29E
 Cast Depth (m) : 1012
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.76	34.04	27.40
5	-1.78	34.04	27.40
10	-1.78	34.04	27.40
15	-1.78	34.04	27.40
20	-1.78	34.04	27.40
25	-1.78	34.04	27.40
30	-1.77	34.04	27.40
35	-1.77	34.04	27.40
40	-1.77	34.04	27.40
45	-1.77	34.04	27.40
50	-1.77	34.04	27.40
60	-1.75	34.04	27.40
70	-1.11	34.15	27.47
75	-0.74	34.21	27.50
80	-0.63	34.23	27.51
90	-0.28	34.28	27.53
100	0.16	34.33	27.56
125	1.22	34.49	27.62
150	1.52	34.54	27.64
175	1.70	34.58	27.66
200	1.75	34.60	27.67
250	1.83	34.64	27.70
300	1.85	34.66	27.71
400	1.83	34.69	27.74
500	1.80	34.72	27.76
600	1.74	34.72	27.77
700	1.68	34.73	27.78
800	1.59	34.74	27.79
900	1.50	34.74	27.80
1000	1.42	34.74	27.81



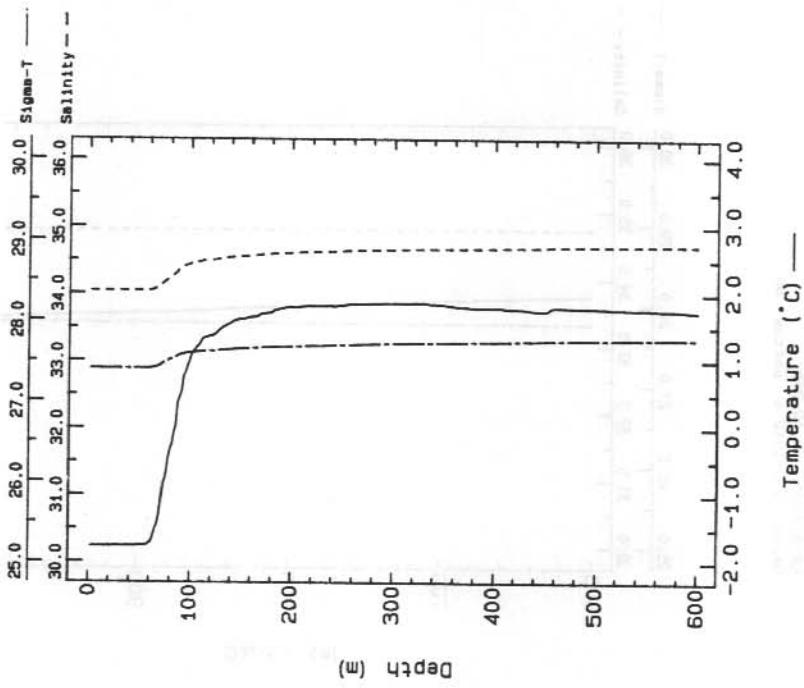
Cruise: ADBEX3 Station: 22
16 OCT 1985 1344 GMT
Latitude : 63:21.52S
Longitude: 63:10.29E
Depth: CTD 1012 m Bottom NR

Cruise : ADBEX3 Station 22
16 OCT 1985 1344 GMT
Latitude 63: 21.52S
Longitude 63: 10.29E
Depth: CTD 1012 m Bottom NR



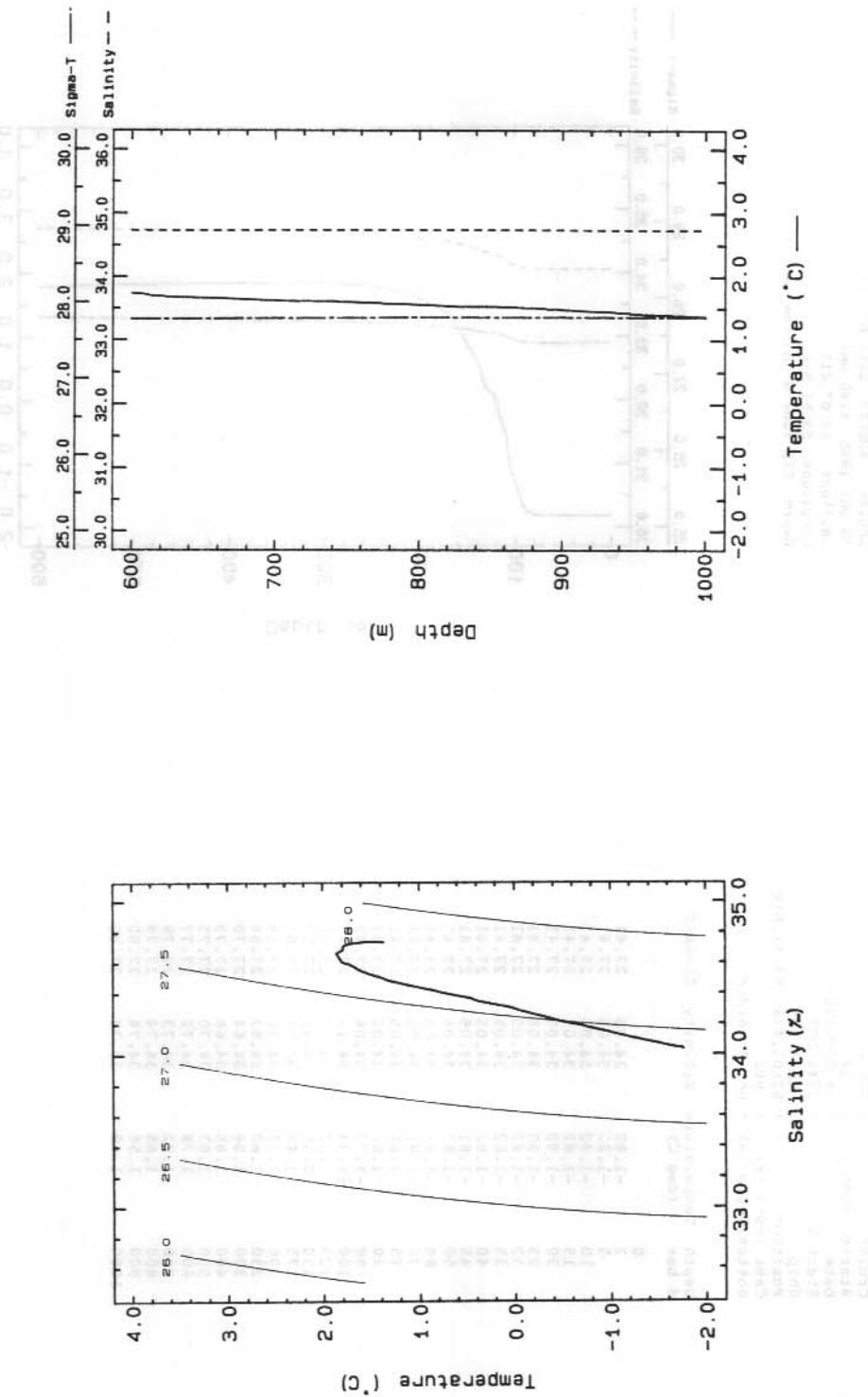
Cruise : ADBEX3
 Station 23
 Date : 18 OCT 1985
 Start Time : 0356 GMT
 Ship : NELLA DAN
 Position : 63°31.6'N 63°14.0'W
 Cast Depth (m) : 1002
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.77	34.04	27.40
2	-1.77	34.04	27.40
5	-1.77	34.04	27.40
10	-1.77	34.04	27.40
15	-1.77	34.04	27.40
20	-1.76	34.04	27.40
25	-1.76	34.04	27.40
30	-1.76	34.04	27.40
35	-1.76	34.04	27.40
40	-1.76	34.04	27.40
45	-1.76	34.04	27.40
50	-1.75	34.04	27.40
60	-1.71	34.05	27.40
70	-1.28	34.10	27.44
75	-0.76	34.18	27.48
80	-0.33	34.24	27.51
90	0.46	34.37	27.57
100	1.02	34.44	27.59
125	1.40	34.51	27.62
150	1.62	34.55	27.64
175	1.71	34.59	27.66
200	1.80	34.61	27.67
250	1.83	34.64	27.69
300	1.86	34.66	27.71
400	1.79	34.68	27.74
500	1.79	34.71	27.76
600	1.73	34.72	27.77
700	1.62	34.73	27.79
800	1.55	34.74	27.80
900	1.48	34.74	27.80
1000	1.36	34.73	27.81



Cruise: ADBEX3 Station: 23
18 OCT 1985 0356 GMT
Latitude : 63:31.64S
Longitude: 63:14.09E
Depth: CTD 1002 m Bottom NR

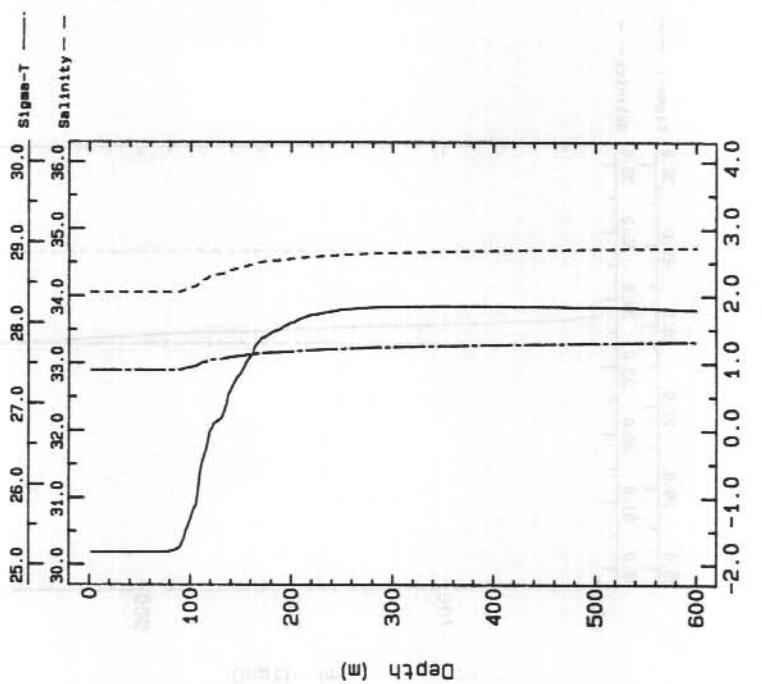
Cruise : ADBEX3 Station 23
18 OCT 1985 0356 GMT
Latitude 63:31.64S
Longitude 63:14.09E
Depth: CTD 1002 m Bottom NR



Cruise : ADBEX3
 Station : 24
 Date : 18 OCT 1985
 Start Time : 1746 GMT
 Ship : NELLA DAN
 Position : 63°07'.41S 63°51'.61E
 Cast Depth (m) : 1002
 Bottom Depth (m) : Not Recorded

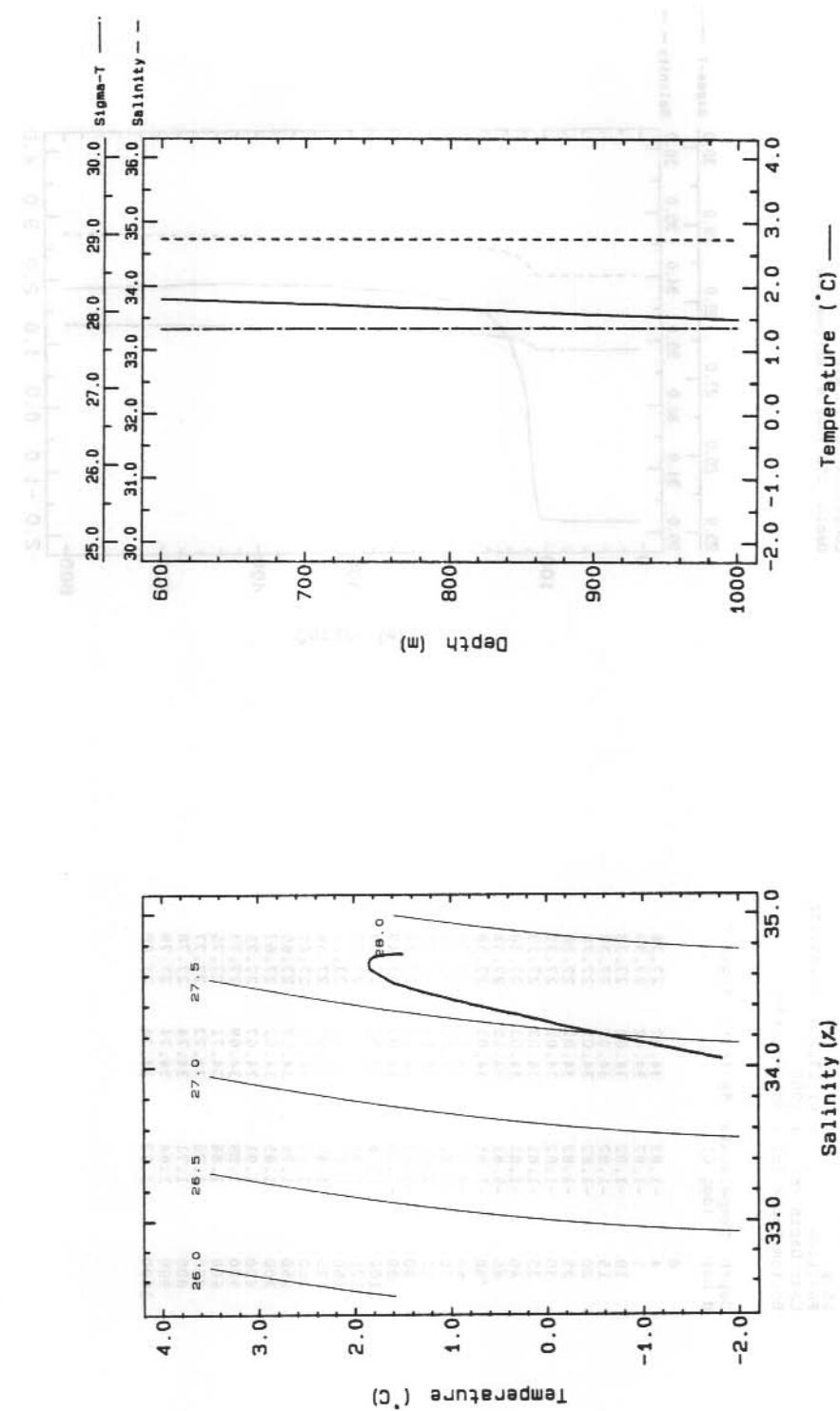
Depth bar (deg C)

Depth bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.82	34.05	27.41
2	-1.82	34.05	27.41
5	-1.82	34.05	27.41
10	-1.82	34.05	27.41
15	-1.82	34.05	27.41
20	-1.82	34.05	27.41
25	-1.82	34.05	27.41
30	-1.82	34.05	27.41
35	-1.82	34.05	27.41
40	-1.82	34.05	27.41
45	-1.81	34.05	27.41
50	-1.81	34.06	27.41
60	-1.81	34.05	27.41
70	-1.81	34.06	27.41
75	-1.81	34.05	27.41
80	-1.80	34.06	27.41
90	-1.73	34.06	27.42
100	-1.33	34.12	27.45
125	0.12	34.32	27.55
150	0.85	34.42	27.59
175	1.40	34.51	27.63
200	1.61	34.56	27.65
250	1.80	34.62	27.68
300	1.84	34.64	27.70
400	1.85	34.68	27.73
500	1.83	34.70	27.75
600	1.79	34.72	27.77
700	1.72	34.73	27.78
800	1.65	34.74	27.79
900	1.56	34.74	27.80
1000	1.49	34.74	27.80



Cruise: ADBEX3 Station: 24
18 OCT 1985 1746 GMT
Latitude : 63: 07.41S
Longitude: 63: 51.61E
Depth: CTD 1002 m Bottom NR

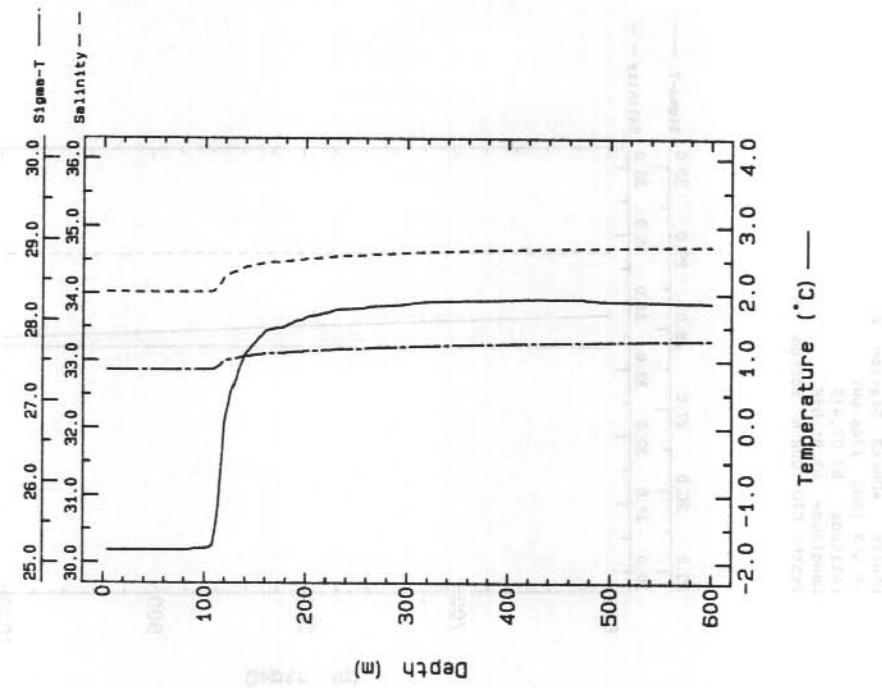
Cruise : ADBEX3 Station 24
18 OCT 1985 1746 GMT
Latitude 63: 07.41S
Longitude 63: 51.61E
Depth: CTD 1002 m Bottom NR



Cruise : ADBEX3
 Station : 25
 Station number : 25
 Date : 20 OCT 1985
 Start Time : 1528 GMT
 Ship : NELLA DAN
 Position : 61:27.75S 62:33.47E
 Cast Depth (m) : 1002
 Bottom Depth (m) : Not Recorded

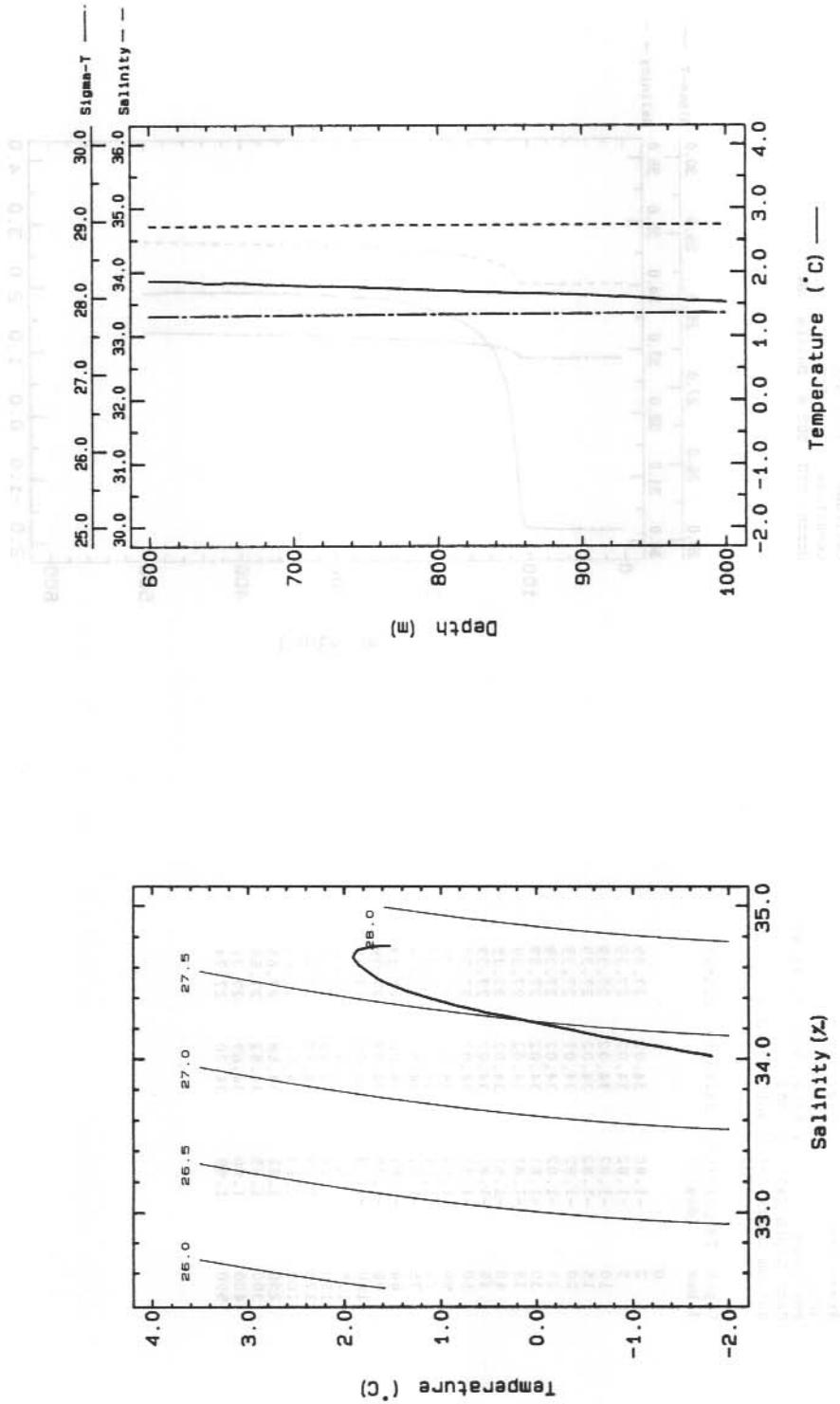
Cruise : ADBEX3 Station 25
 Date : 20 OCT 1985 1528 GMT
 Latitude : 61:27.75S
 Longitude : 62:33.47E
 Depth: CTD 1002 m Bottom NR

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.82	34.02	27.38
4	-1.82	34.02	27.38
5	-1.82	34.02	27.38
10	-1.82	34.02	27.38
15	-1.82	34.02	27.38
20	-1.82	34.02	27.38
25	-1.82	34.02	27.38
30	-1.82	34.02	27.38
35	-1.81	34.02	27.38
40	-1.81	34.02	27.38
45	-1.81	34.02	27.38
50	-1.81	34.02	27.38
60	-1.81	34.02	27.38
70	-1.81	34.02	27.38
75	-1.81	34.02	27.39
80	-1.81	34.02	27.38
90	-1.79	34.02	27.39
100	-1.78	34.02	27.39
125	0.44	34.29	27.51
150	1.27	34.43	27.57
175	1.49	34.48	27.59
200	1.64	34.52	27.62
250	1.78	34.57	27.65
300	1.85	34.62	27.67
400	1.91	34.67	27.71
500	1.89	34.69	27.73
600	1.86	34.71	27.75
700	1.78	34.72	27.77
800	1.71	34.74	27.78
900	1.64	34.74	27.79
1000	1.52	34.74	27.80



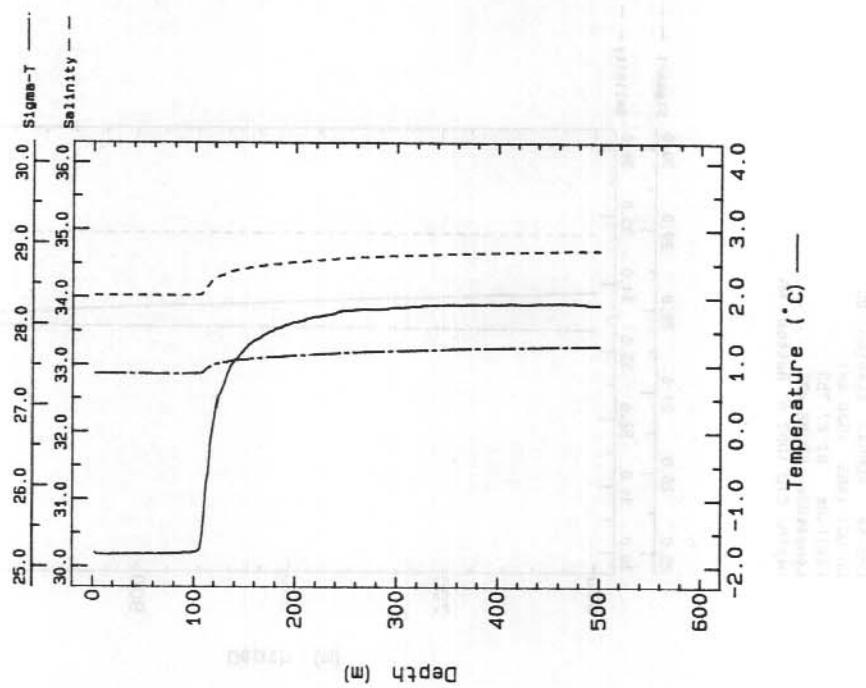
Cruise: ADBEX3 Station: 25
20 OCT 1985 1528 GMT
Latitude : 61:27.75S
Longitude: 62:33.47E
Depth: CTD 1002 m Bottom NR

Cruise : ADBEX3 Station 25
20 OCT 1985 1528 GMT
Latitude 61:27.75S
Longitude 62:33.47E
Depth: CTD 1002 m Bottom NR

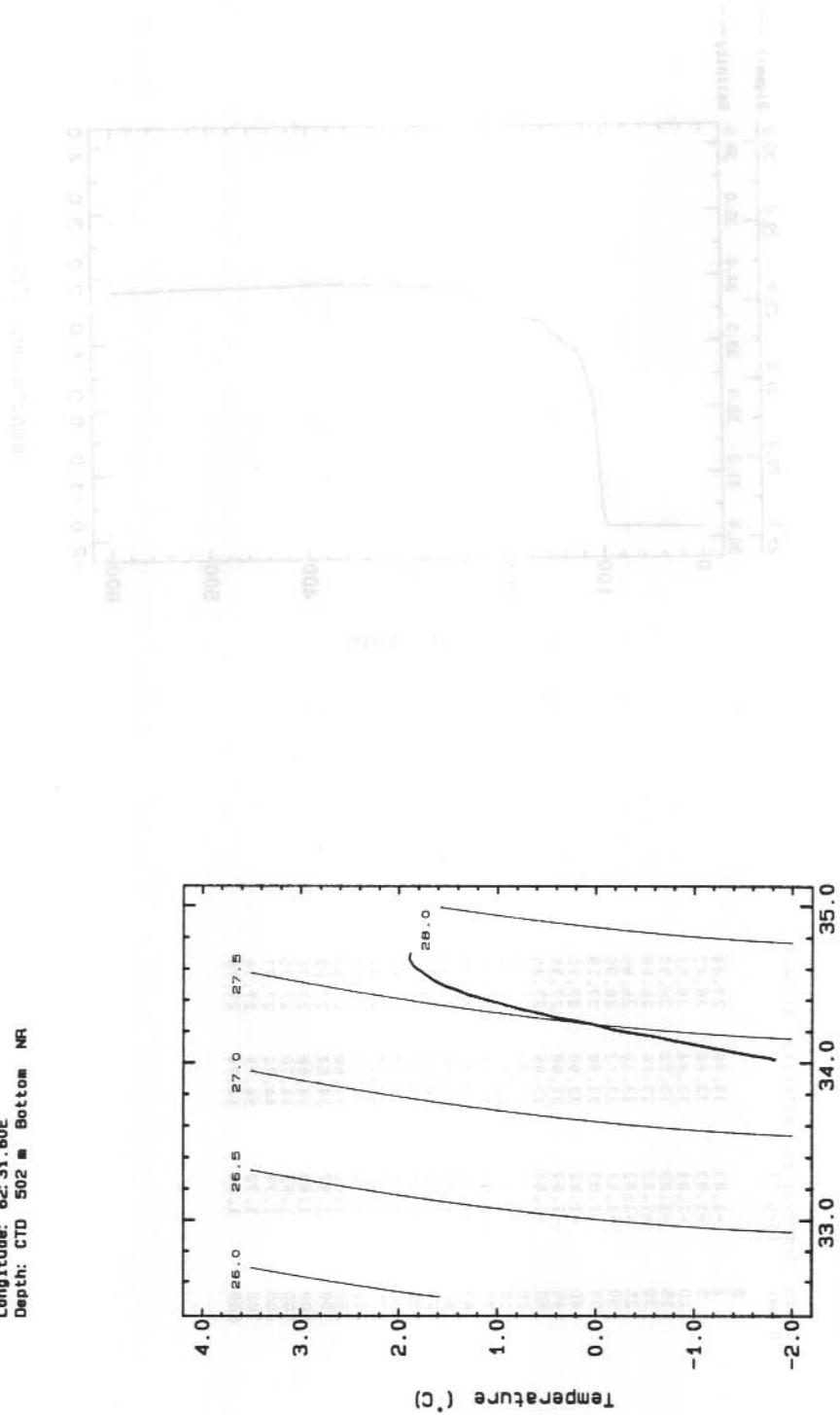


Cruise : ADBEX3
 Station number : 26
 Date : 20 OCT 1985
 Start Time : 1622 GMT
 Ship : NELLA DAN
 Position : 61:27.95S 62:31.60E
 Cast Depth (m) : 502
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.80	34.02	27.39
5	-1.82	34.02	27.39
10	-1.82	34.02	27.39
15	-1.82	34.02	27.39
20	-1.82	34.02	27.39
25	-1.82	34.02	27.39
30	-1.81	34.02	27.39
35	-1.81	34.02	27.39
40	-1.81	34.02	27.39
45	-1.81	34.02	27.39
50	-1.81	34.02	27.39
60	-1.81	34.02	27.39
70	-1.81	34.02	27.39
75	-1.81	34.02	27.39
80	-1.81	34.02	27.39
90	-1.79	34.03	27.39
100	-1.78	34.03	27.39
125	0.57	34.32	27.52
150	1.24	34.43	27.57
175	1.49	34.48	27.60
200	1.63	34.52	27.62
250	1.81	34.58	27.65
300	1.85	34.62	27.68
400	1.90	34.67	27.71
500	1.88	34.70	27.74

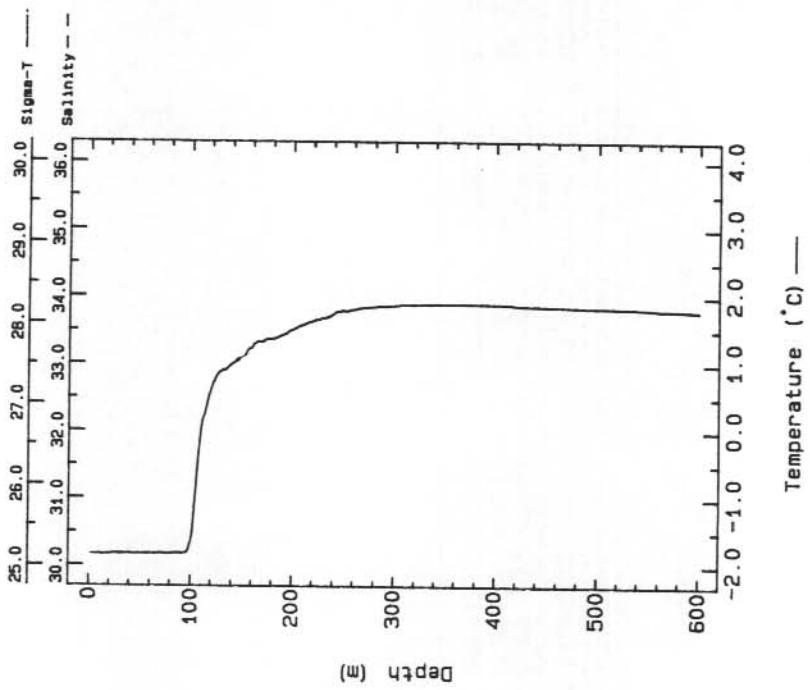


Cruise: ADBEX3 Station: 26
20 OCT 1985 1622 GMT
Latitude : 61° 27.95S
Longitude: 62° 31.60E
Depth: CTD 502 m Bottom NFR

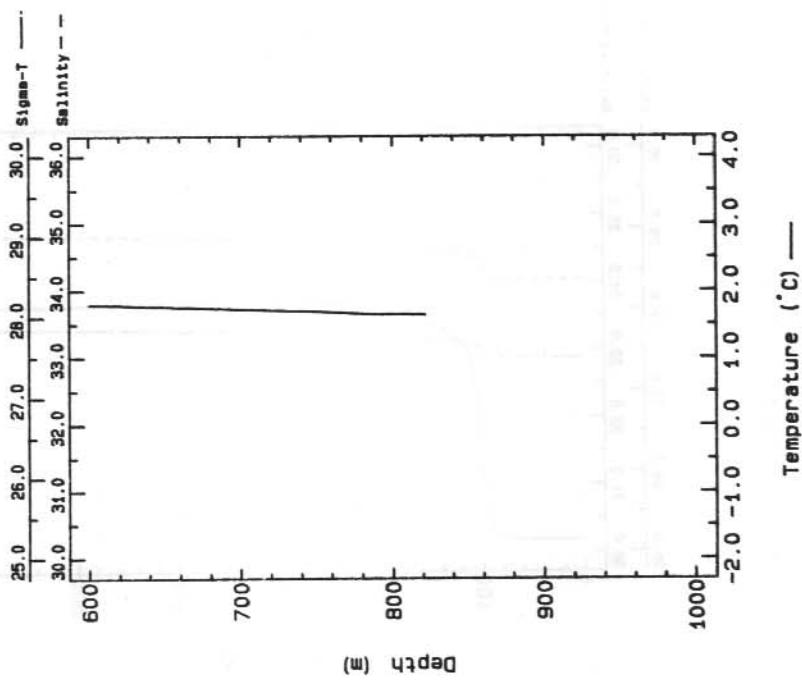


Cruise : ADBEX3 Station 27
 Station number : 27
 Date : 22 OCT 1985
 Start Time : 0317 GMT
 Ship : NELLA DAN
 Position : 61:32.93S 54:34.18E
 Cast Depth (m) : 824
 Bottom Depth (m) : Not Recorded

Depth (m)	Temperature (deg C)	Salinity	Sigma-T
0	-1.83	33.96	27.34
5	-1.83	32.84	26.42
10	-1.84	32.94	26.51
15	-1.83	33.02	26.57
20	-1.83	33.16	26.68
25	-1.83	33.30	26.80
30	-1.83	33.42	26.90
35	-1.83	33.90	27.29
40	-1.82	33.98	27.35
45	-1.83	33.98	27.35
50	-1.83	33.98	27.35
60	-1.82	33.98	27.35
70	-1.82	33.98	27.35
75	-1.82	33.92	27.35
80	-1.82	33.98	27.35
90	-1.82	33.98	27.35
100	-1.66	34.00	27.37
125	0.80	34.36	27.54
150	1.08	34.42	27.57
175	1.36	34.49	27.61
200	1.50	34.53	27.63
250	1.80	34.60	27.67
300	1.87	34.64	27.69
400	1.88	34.68	27.72
500	1.83	34.70	27.75
600	1.79	34.72	27.77
700	1.72	34.73	27.78
800	1.64	34.74	27.79



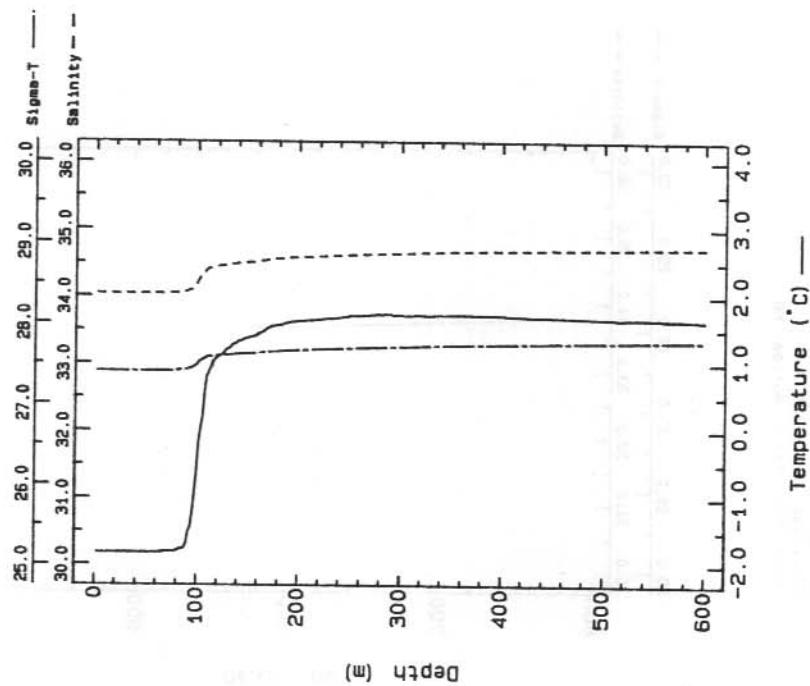
Cruise : ADDBEX3 Station 27
22 OCT 1985 03:17 GMT
Latitude 6° 32.9' S
Longitude 54° 34.1' E
Depth: CTD 824 m Bottom NR



Cruise : ADBEX3
 Station 28
 Date 23 OCT 1985
 Start Time 0457 GMT
 Ship NELLA DAN
 Position 63°0'.20S 53°42.87E
 Cast Depth (m) 1002
 Bottom Depth (m) Not Recorded

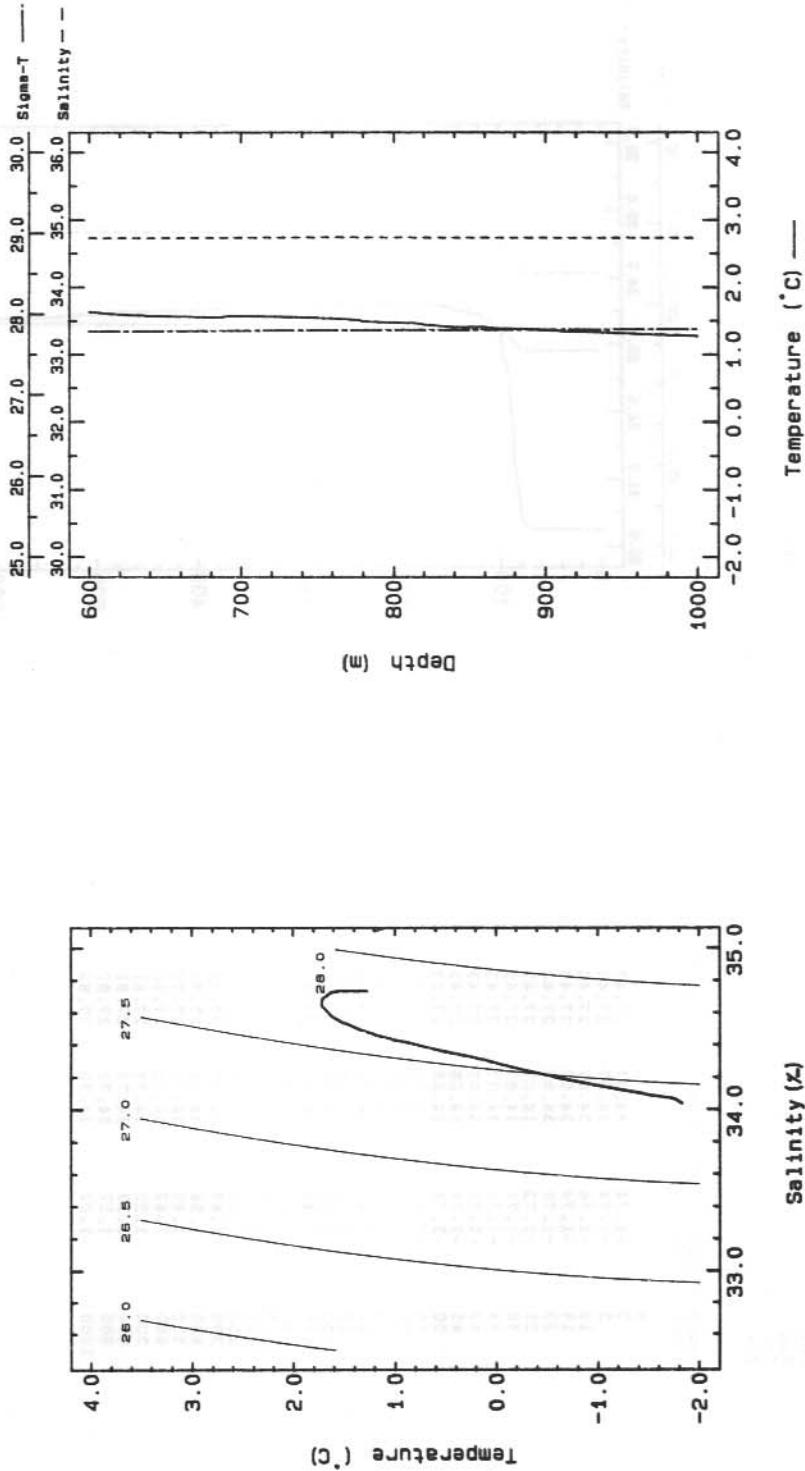
Depth bar
 Temperature (deg C)
 Salinity Sigma-T

Depth bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.83	34.04	27.40
2	-1.83	34.04	27.40
5	-1.83	34.04	27.40
10	-1.83	34.04	27.40
15	-1.83	34.04	27.40
20	-1.83	34.03	27.40
25	-1.83	34.04	27.40
30	-1.83	34.03	27.40
35	-1.83	34.04	27.40
40	-1.82	34.03	27.40
45	-1.82	34.04	27.40
50	-1.82	34.04	27.40
60	-1.82	34.04	27.40
70	-1.81	34.04	27.41
75	-1.80	34.04	27.40
80	-1.79	34.05	27.41
90	-1.69	34.07	27.42
100	-0.61	34.20	27.49
125	1.14	34.45	27.60
150	1.38	34.50	27.62
175	1.56	34.55	27.65
200	1.63	34.58	27.67
250	1.71	34.62	27.69
300	1.72	34.65	27.71
400	1.71	34.69	27.74
500	1.66	34.71	27.76
600	1.63	34.72	27.78
700	1.56	34.73	27.79
800	1.47	34.74	27.80
900	1.35	34.73	27.81
1000	1.27	34.73	27.81



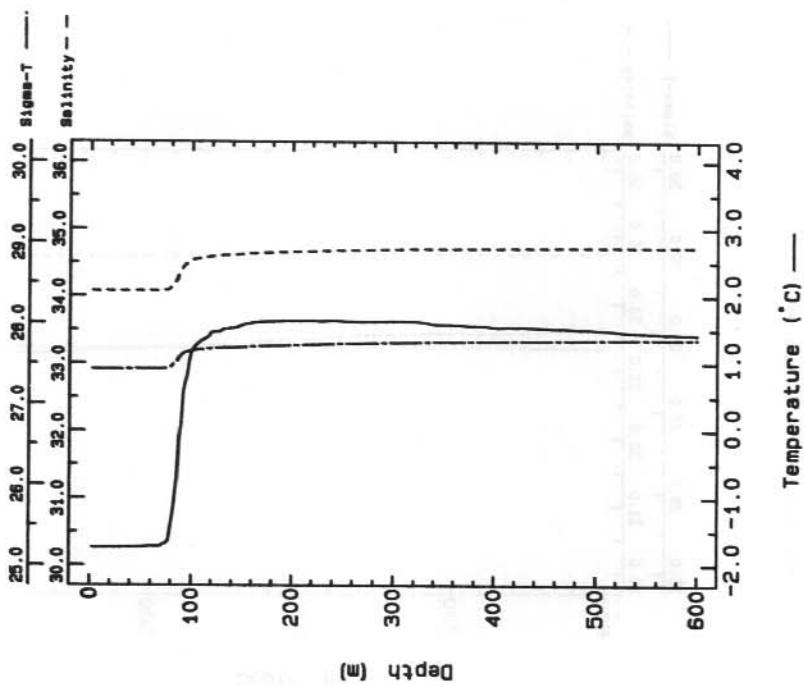
Cruise: ADBEX3 Station: 28
23 OCT 1985 0457 GMT
Latitude : 63: 01.20S
Longitude: 53: 42.87E
Depth: CTD 1002 m Bottom NR

Cruise : ADBEX3 Station 28
23 OCT 1985 0457 GMT
Latitude 63: 01.20S
Longitude 53: 42.87E
Depth: CTD 1002 m Bottom NR



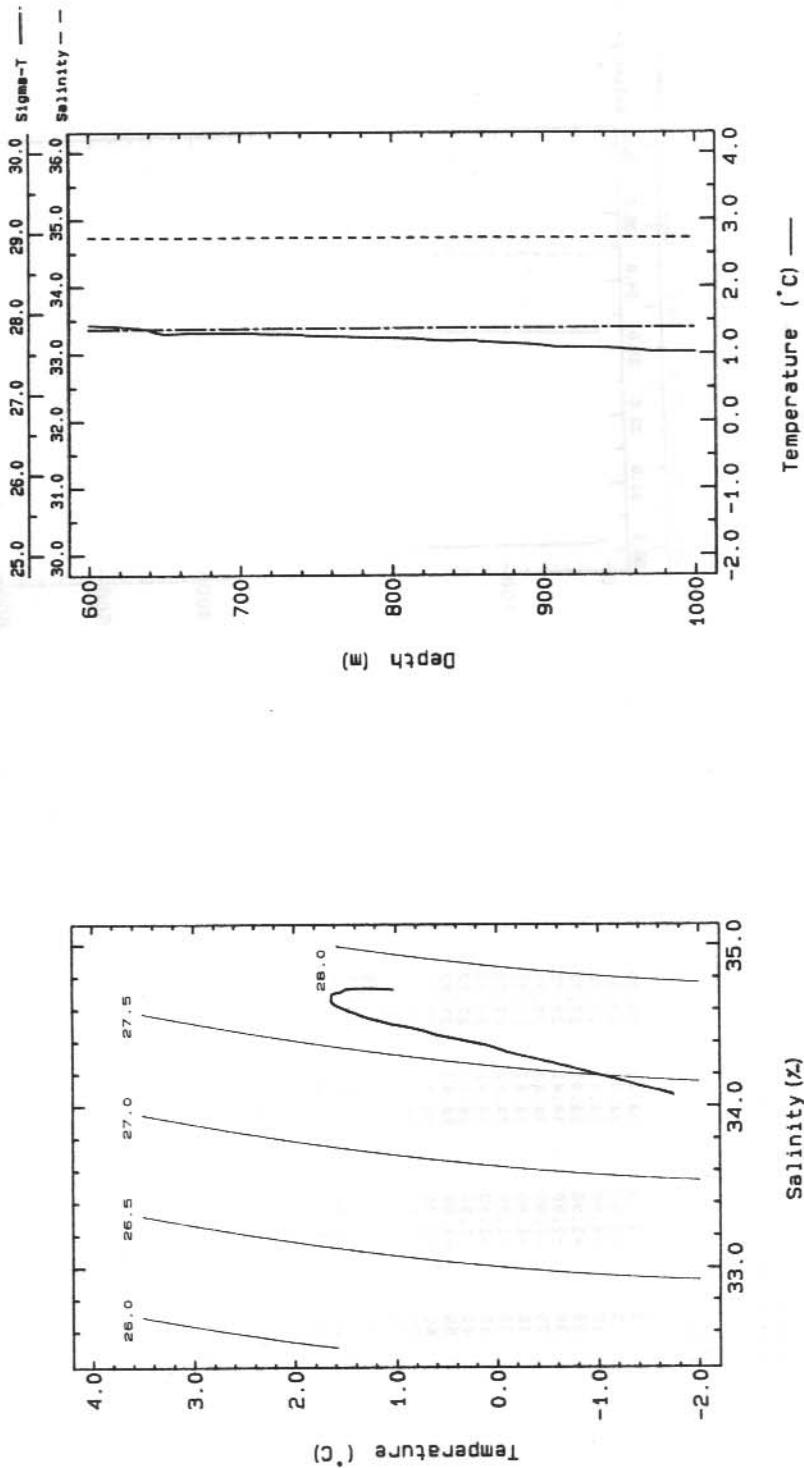
Cruise : ADBEX3
 Station number : 29
 Date : 24 OCT 1985
 Start Time : 1346 GMT
 Ship : NEELA DAN
 Position : 64.00.77S 53.04.32E
 Cast Depth (m) : 1002
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.74	34.07	27.42
5	-1.74	34.07	27.42
10	-1.74	34.07	27.42
15	-1.74	34.07	27.43
20	-1.74	34.07	27.42
25	-1.73	34.07	27.42
30	-1.73	34.07	27.43
35	-1.73	34.07	27.43
40	-1.73	34.07	27.43
45	-1.73	34.08	27.43
50	-1.73	34.08	27.43
60	-1.72	34.08	27.43
70	-1.72	34.08	27.43
75	-1.67	34.09	27.43
80	-1.42	34.12	27.46
90	0.11	34.18	27.60
100	1.17	34.53	27.66
125	1.47	34.60	27.69
150	1.57	34.62	27.70
175	1.62	34.64	27.71
200	1.63	34.66	27.73
250	1.62	34.68	27.75
300	1.62	34.70	27.76
400	1.54	34.71	27.77
500	1.49	34.72	27.79
600	1.42	34.73	27.80
700	1.30	34.73	27.81
800	1.23	34.73	27.81
900	1.12	34.72	27.82
1000	1.02	34.72	27.82



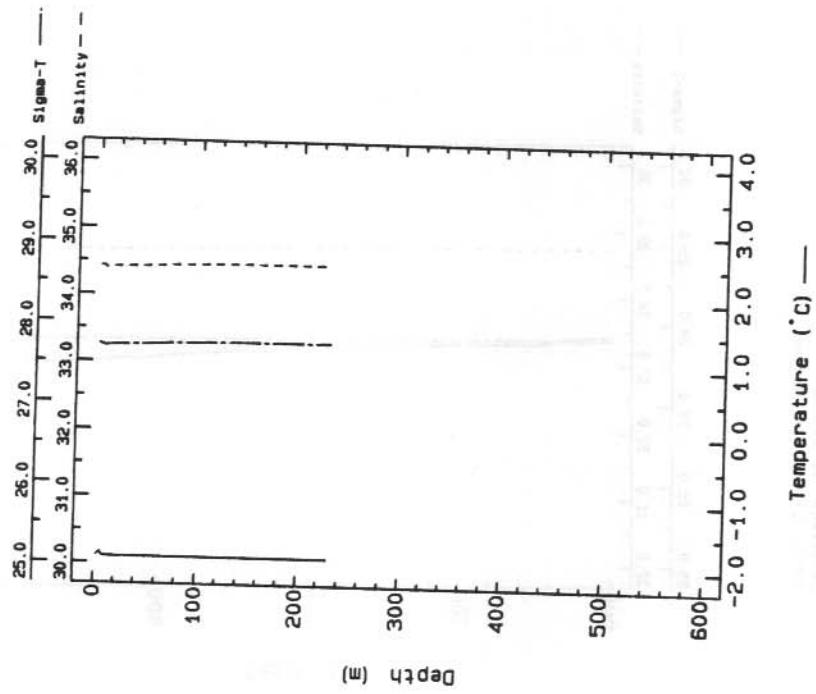
Cruise: ADBEX3 Station: 29
24 OCT 1985 1346 GMT
Latitude : 64:00.77S
Longitude : 53:04.32E
Depth: CTD 1002 m Bottom NR

Cruise : ADBEX3 Station 29
24 OCT 1985 1346 GMT
Latitude 64:00.77S
Longitude 53:04.32E
Depth: CTD 1002 m Bottom NR

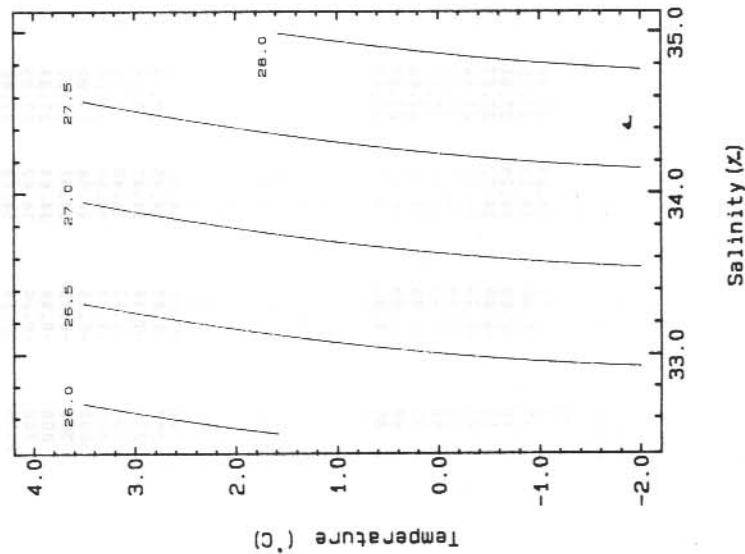


Cruise : ADBEX3
 Station number : 30
 Date : 27 OCT 1985
 Start Time : 1442 GMT
 Ship : NELLA DAN
 Position : 65°55'.4N 51°22'.89E
 Cast Depth (m) : 232
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.89	34.42	27.72
2	-1.85	34.42	27.71
5	-1.90	34.41	27.70
10	-1.90	34.41	27.71
15	-1.90	34.41	27.71
20	-1.90	34.41	27.71
25	-1.90	34.42	27.71
30	-1.90	34.42	27.71
35	-1.90	34.42	27.71
40	-1.90	34.42	27.71
45	-1.90	34.42	27.71
50	-1.90	34.43	27.72
60	-1.90	34.43	27.72
70	-1.90	34.44	27.73
75	-1.90	34.45	27.73
80	-1.90	34.45	27.74
90	-1.90	34.45	27.74
100	-1.90	34.45	27.74
125	-1.90	34.46	27.75
150	-1.90	34.47	27.75
175	-1.90	34.47	27.75
200	-1.90	34.47	27.75

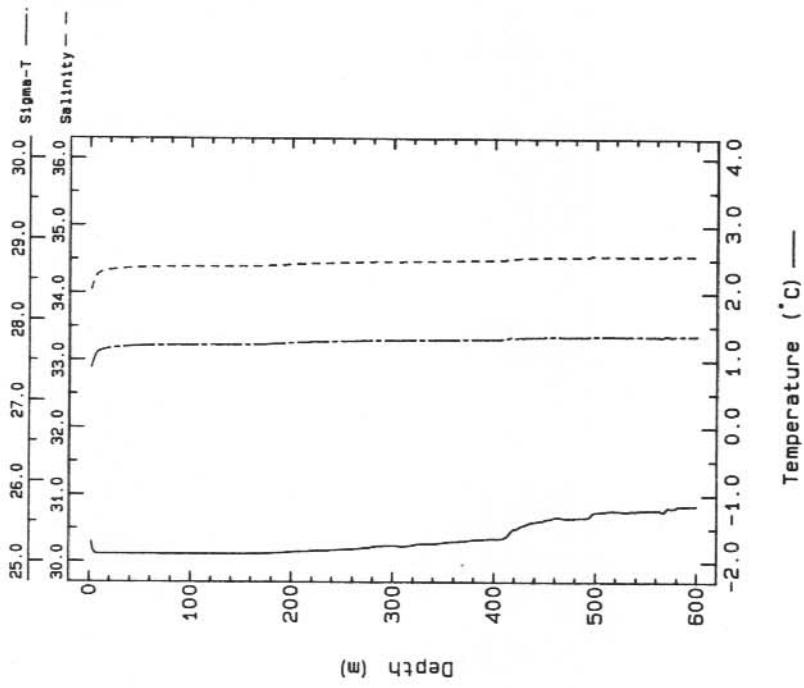


Cruise: ADBEX3 Station: 30
27 OCT 1985 1442 GMT
Latitude : 65:55.41S
Longitude: 51:22.89E
Depth: CTD 232 m Bottom NR



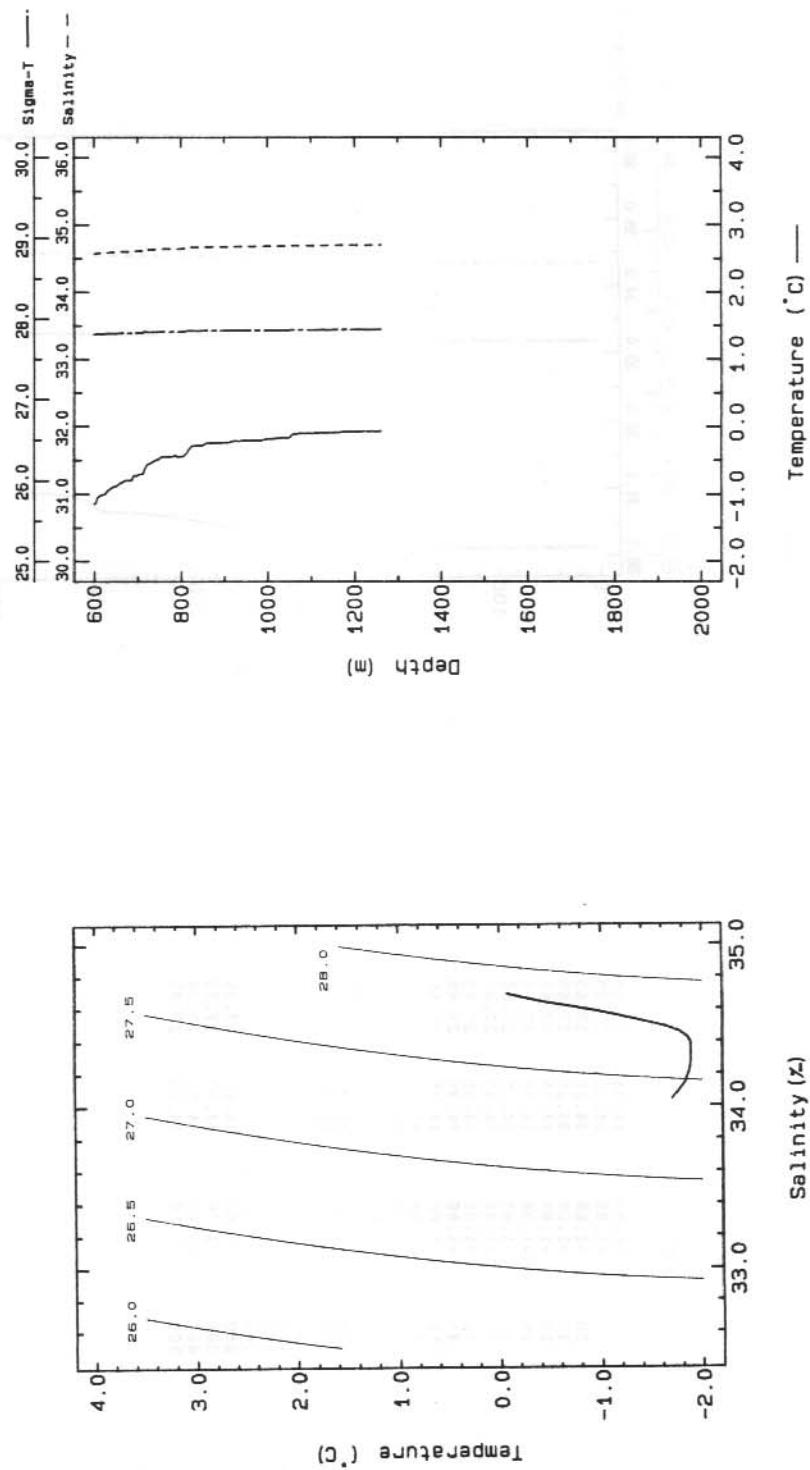
Cruise : ADBEX3
 Station : 31
 Station number : 31
 Date : 30 OCT 1985
 Start Time : 1310 GMT
 Ship : NELLA DAN
 Position : 65°59'21S 50°17'08E
 Cast Depth (m) : 1264
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.71	34.04	27.40
5	-1.86	34.19	27.52
10	-1.89	34.29	27.61
15	-1.89	34.32	27.63
20	-1.89	34.33	27.64
25	-1.89	34.35	27.65
30	-1.89	34.35	27.66
35	-1.89	34.36	27.66
40	-1.89	34.37	27.67
45	-1.89	34.37	27.67
50	-1.89	34.38	27.67
60	-1.89	34.38	27.68
70	-1.89	34.38	27.68
75	-1.89	34.39	27.68
80	-1.89	34.38	27.68
90	-1.89	34.39	27.68
100	-1.88	34.39	27.68
125	-1.88	34.39	27.69
150	-1.88	34.39	27.69
175	-1.87	34.40	27.70
200	-1.85	34.42	27.72
250	-1.82	34.45	27.74
300	-1.76	34.47	27.75
400	-1.65	34.49	27.76
500	-1.25	34.55	27.80
600	-1.15	34.56	27.81
700	-0.73	34.61	27.83
800	-0.44	34.64	27.84
900	-0.24	34.67	27.85
1000	-0.19	34.68	27.86
1100	-0.11	34.69	27.86
1200	-0.08	34.69	27.86



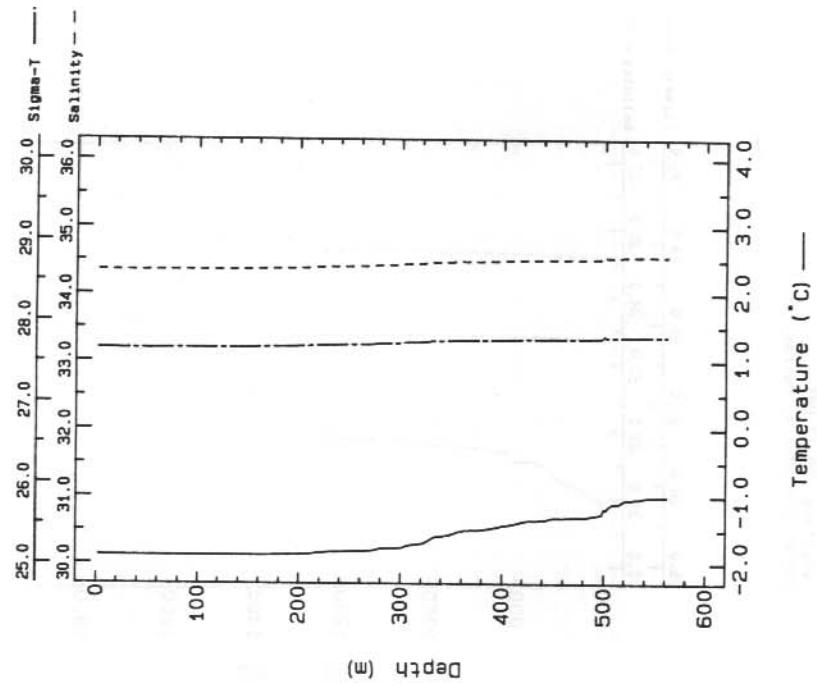
Cruise: ADBEX3 Station: 31
30 OCT 1985 1310 GMT
Latitude : 65° 59'.21S
Longitude: 50° 17'.08E
Depth: CTD 1264 m Bottom NR

Cruise : ADBEX3 Station 31
30 OCT 1985 1310 GMT
Latitude 65: 59.21S
Longitude 50: 17.08E
Depth: CTD 1264 m Bottom NR

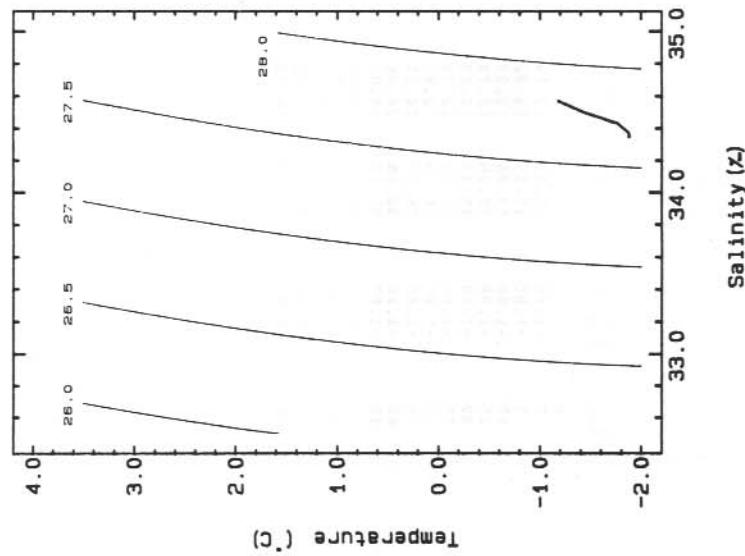


Cruise : ADBEX3
 Station 32
 Station number : 32
 Date : 4 NOV 1985
 Start Time : 0538 GMT
 Ship : NELLA DAN
 Position : 65°52.80S 50°23.13E
 Cast Depth (m) : 564
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.87	34.35	27.65
5	-1.88	34.35	27.65
10	-1.88	34.35	27.65
15	-1.88	34.35	27.65
20	-1.88	34.35	27.65
25	-1.88	34.35	27.65
30	-1.88	34.35	27.65
35	-1.88	34.35	27.65
40	-1.88	34.35	27.65
45	-1.88	34.35	27.65
50	-1.88	34.35	27.65
60	-1.88	34.35	27.65
70	-1.88	34.35	27.66
75	-1.88	34.35	27.66
80	-1.88	34.35	27.66
90	-1.88	34.35	27.66
100	-1.88	34.35	27.66
125	-1.88	34.36	27.66
150	-1.88	34.36	27.66
175	-1.87	34.37	27.67
200	-1.87	34.38	27.68
250	-1.82	34.41	27.70
300	-1.76	34.43	27.72
400	-1.43	34.50	27.76
500	-1.18	34.57	27.81

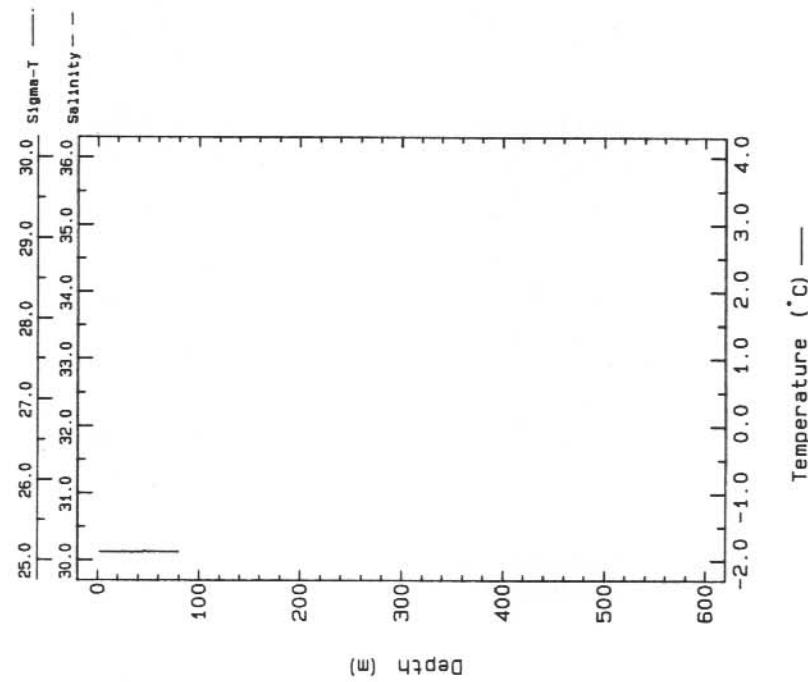


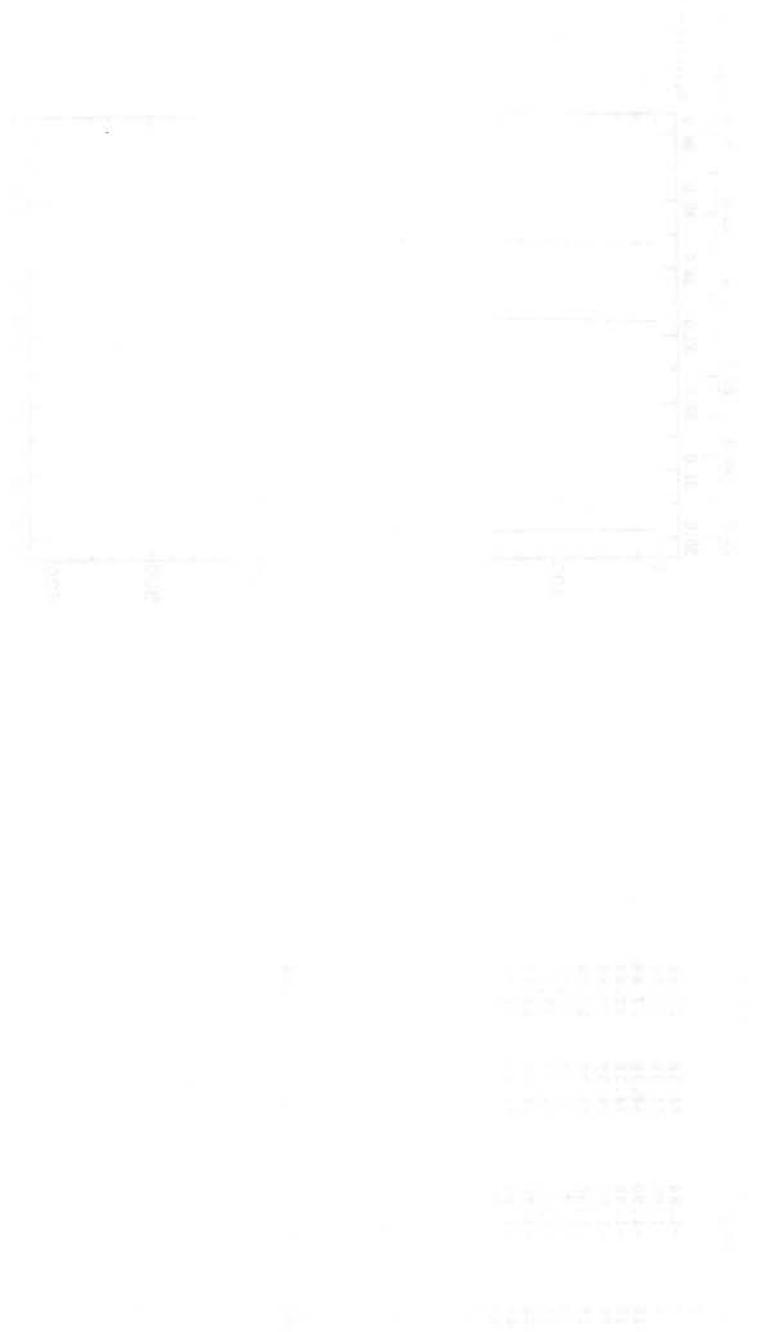
Cruise: ADBEX3 Station: 32
04 NOV 1985 0538 GMT
Latitude : 65° 52.80S
Longitude: 50° 23.13E
Depth: CTD 564 m Bottom NR



Cruise : ADBEX3
 Station 33
 Start number : 33
 Date : 4 NOV 1985
 Start Time : 0713 GMT
 Ship : NELLA DAN
 Position : 65°53.62S 50°23.12E
 Cast Depth (m) : 82
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.88	15.32	32.0
2	-1.88	15.35	32.0
5	-1.88	15.36	32.0
10	-1.88	15.36	32.0
15	-1.88	15.36	32.0
20	-1.88	15.37	32.0
25	-1.88	15.37	32.0
30	-1.88	16.09	32.0
35	-1.88	12.82	32.0
40	-1.88	30.17	32.0
45	-1.87	30.66	32.0
50	-1.87	31.09	32.0
60	-1.87	31.43	32.0
70	-1.87	31.98	32.0
75	-1.87	32.35	32.0
80	-1.87	32.50	32.0

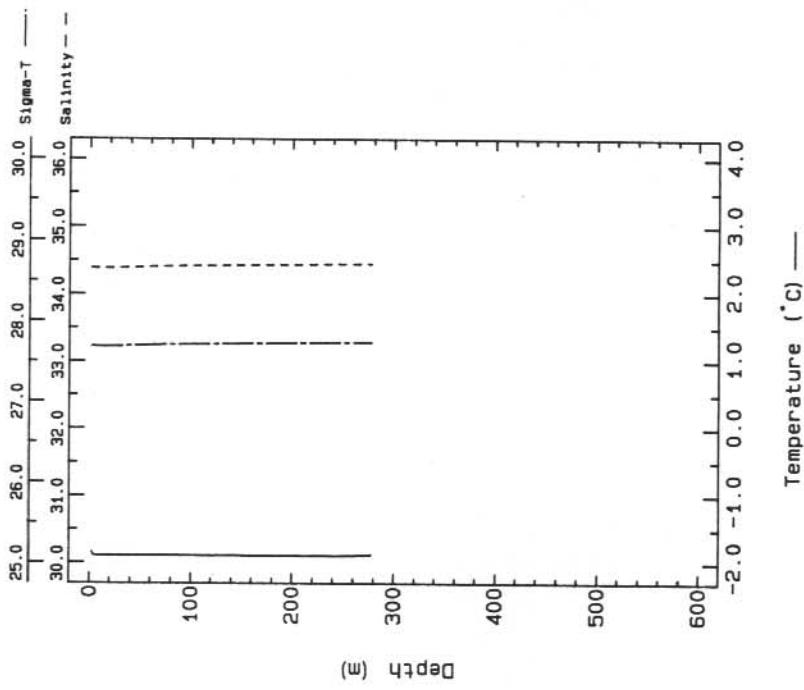




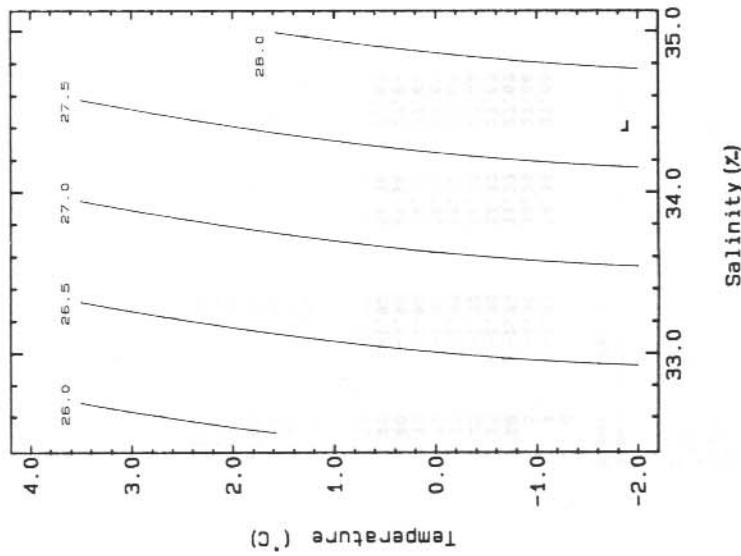
Cruise : ADBEX3
 Station number : 34
 Date : 6 NOV 1985
 Start Time : 1648 GMT
 Ship : NELLA DAN
 Position : 66°06'.09S 49°48'.74E
 Cast Depth (m) : 280
 Bottom Depth (m) : Not Recorded

Cruise : ADBEX3 Station 34
 06 NOV 1985 1648 GMT
 Latitude 66° 06. 09S
 Longitude 49° 48.74E
 Depth: CTD 280 m Bottom NR

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.84	34.38	27.68
5	-1.89	34.38	27.68
10	-1.90	34.38	27.68
15	-1.90	34.38	27.68
20	-1.90	34.38	27.68
25	-1.90	34.38	27.68
30	-1.90	34.38	27.68
35	-1.90	34.39	27.69
40	-1.90	34.40	27.69
45	-1.89	34.40	27.69
50	-1.89	34.40	27.70
60	-1.89	34.40	27.70
70	-1.89	34.41	27.70
75	-1.89	34.41	27.70
80	-1.89	34.41	27.71
90	-1.89	34.41	27.71
100	-1.89	34.42	27.71
125	-1.89	34.42	27.71
150	-1.89	34.43	27.72
175	-1.90	34.43	27.72
200	-1.89	34.44	27.73
250	-1.89	34.45	27.74



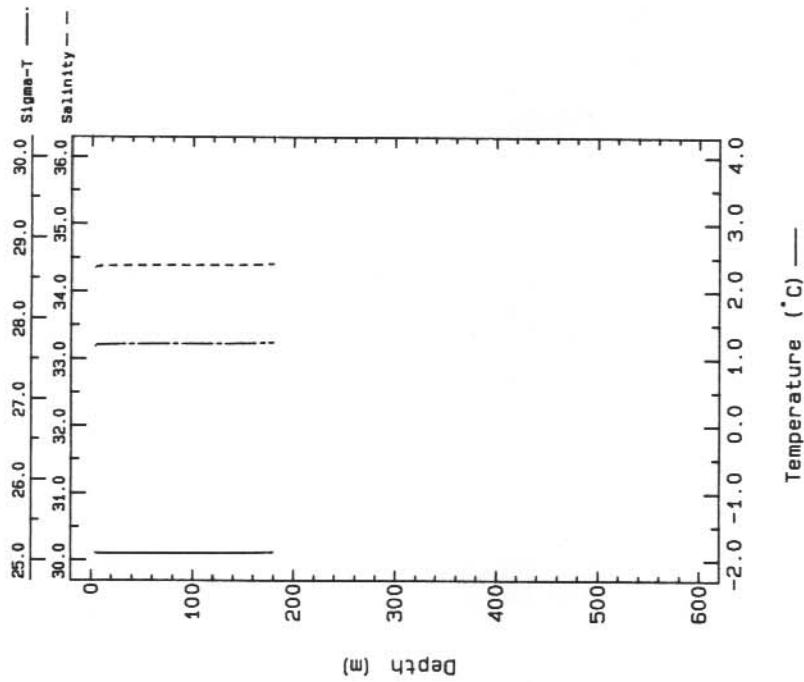
Cruise: ADDEX3 Station: 34
06 NOV 1985 1648 GMT
Latitude : 66.06.09S
Longitude: 48.48.74E
Depth: CTD 280 m Bottom NR



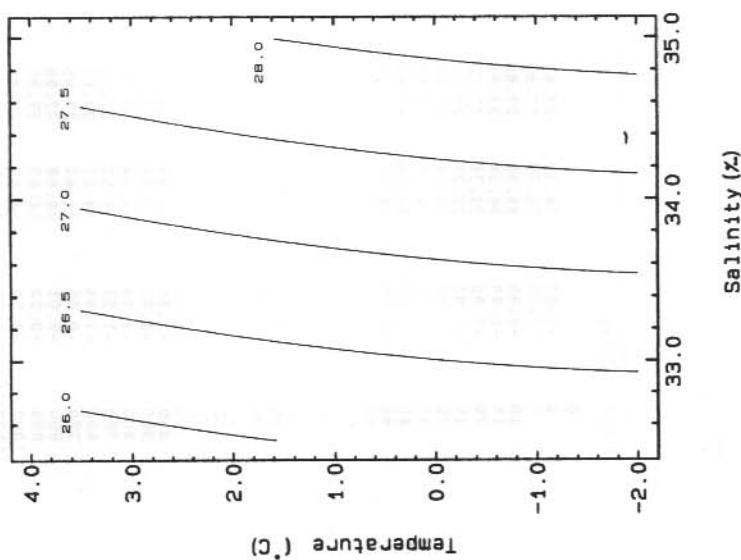
Cruise : ADBEX3
 Station 35
 Station number : 35
 Date : 9 NOV 1985
 Start Time : 0723 GMT
 Ship : NELLA DAN
 Position : 65°14' 87S 50°04' 58E
 Cast Depth (m) : 182
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.89	34.34	27.65
5	-1.90	34.35	27.66
10	-1.90	34.37	27.67
15	-1.90	34.37	27.67
20	-1.90	34.38	27.68
25	-1.90	34.38	27.68
30	-1.90	34.38	27.68
35	-1.90	34.38	27.68
40	-1.90	34.38	27.68
45	-1.90	34.38	27.68
50	-1.90	34.38	27.68
60	-1.90	34.38	27.68
70	-1.90	34.38	27.68
75	-1.90	34.38	27.68
80	-1.90	34.38	27.68
90	-1.90	34.38	27.68
100	-1.90	34.38	27.68
125	-1.90	34.39	27.69
150	-1.89	34.39	27.69
175	-1.88	34.40	27.70

Cruise : ADBEX3 Station 35
 09 NOV 1985 0723 GMT
 Latitude 65°54'.87S
 Longitude 50°04'.58E
 Depth: CTD 182 m Bottom NR



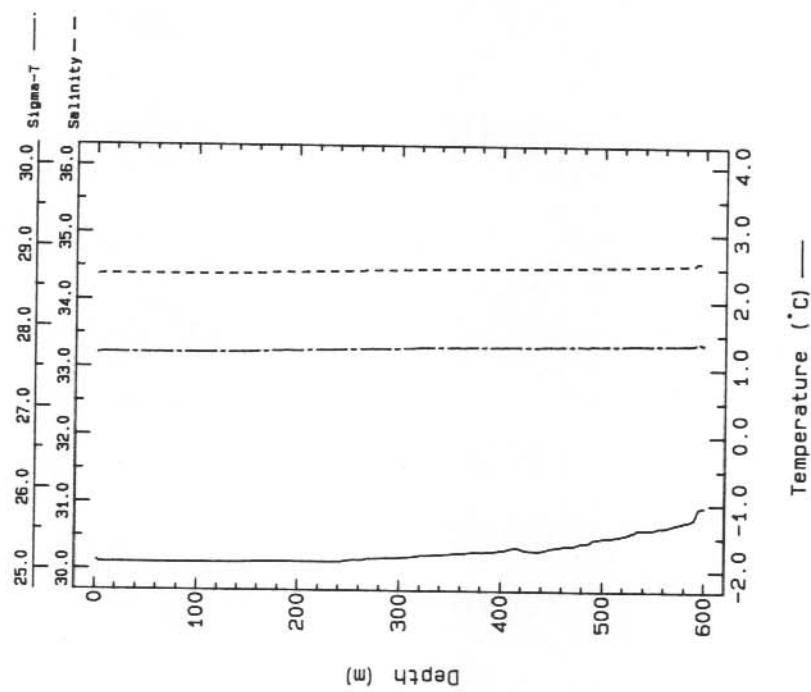
Cruise: ADBEX3 Station: 35
09 NOV 1985 0723 GMT
Latitude : 65° 54.875'
Longitude: 50° 04.588'
Depth: CTD 182 m Bottom NR



Cruise : ADBEX3
 Station 36
 Station number : 36
 Date : 9 NOV 1985
 Start Time : 0737 GMT
 Ship : NELIA DAN
 Position : 65:54.80S 50:04.67E
 Cast Depth (m) : 1640
 Bottom Depth (m) : Not Recorded

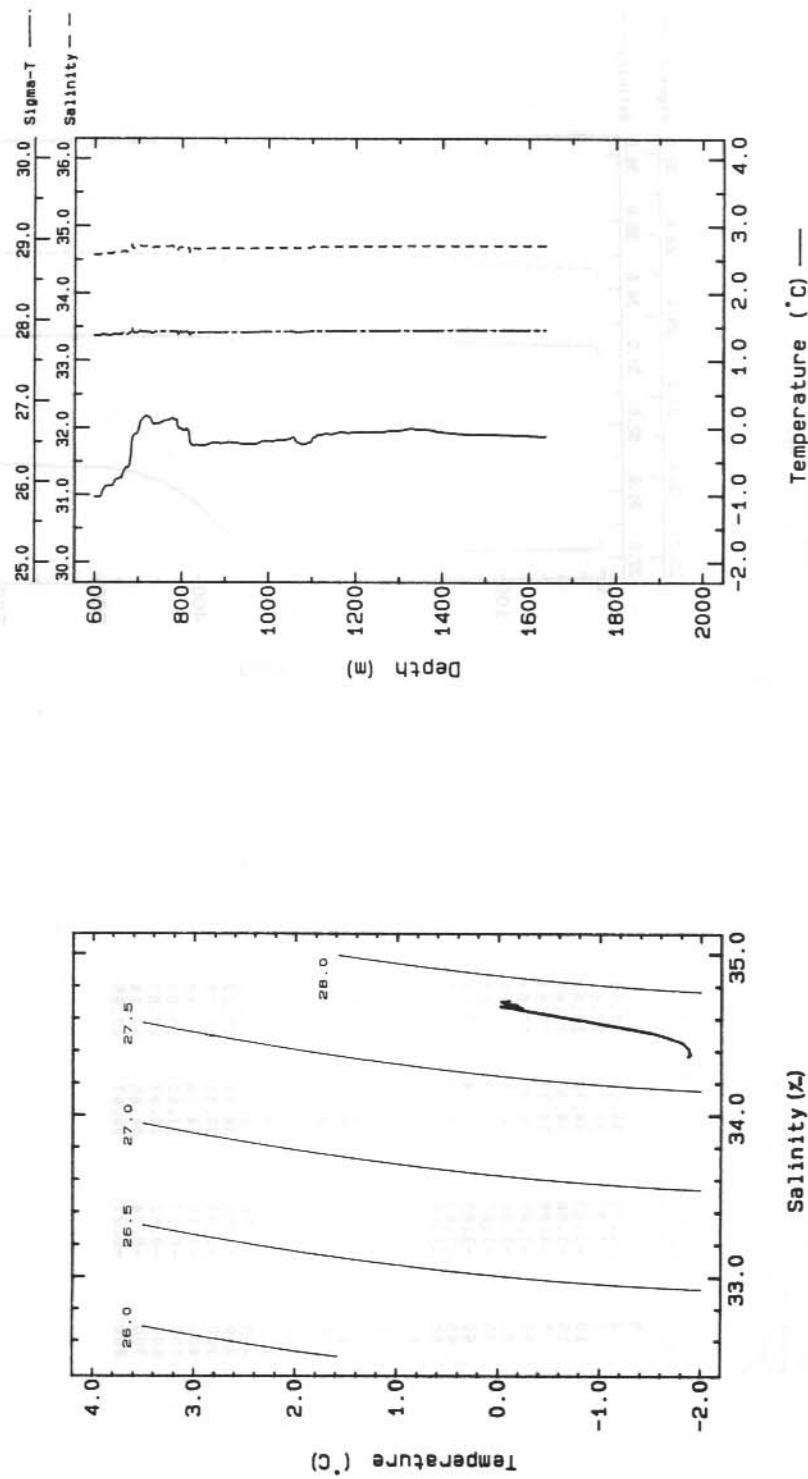
Depth (bar)
 Temperature (deg C)

Depth (bar)	Temperature (deg C)	Salinity	Sigma-T
0	-1.87	34.37	27.67
5	-1.89	34.38	27.68
10	-1.90	34.38	27.68
15	-1.90	34.38	27.68
20	-1.90	34.38	27.68
25	-1.90	34.38	27.68
30	-1.90	34.38	27.68
35	-1.90	34.38	27.68
40	-1.90	34.38	27.68
45	-1.90	34.38	27.68
50	-1.90	34.38	27.68
60	-1.90	34.38	27.68
70	-1.90	34.38	27.68
75	-1.90	34.38	27.68
80	-1.89	34.38	27.68
90	-1.90	34.38	27.68
100	-1.90	34.38	27.68
125	-1.89	34.39	27.68
150	-1.89	34.39	27.69
175	-1.88	34.41	27.70
200	-1.88	34.41	27.71
250	-1.86	34.44	27.73
300	-1.82	34.45	27.74
400	-1.70	34.48	27.76
500	-1.51	34.51	27.78
600	-1.04	34.57	27.81
700	-0.05	34.67	27.85
800	-0.01	34.68	27.85
900	-0.22	34.67	27.85
1000	-0.19	34.67	27.85
1100	-0.19	34.69	27.86
1200	-0.06	34.70	27.87
1300	-0.04	34.71	27.87
1400	-0.06	34.71	27.87
1500	-0.10	34.71	27.88



Cruise: ADBEX3 Station: 36
09 NOV 1985 0737 GMT
Latitude : 65: 54.80S
Longitude: 50: 04.67E
Depth: CTD 1640 m Bottom NR

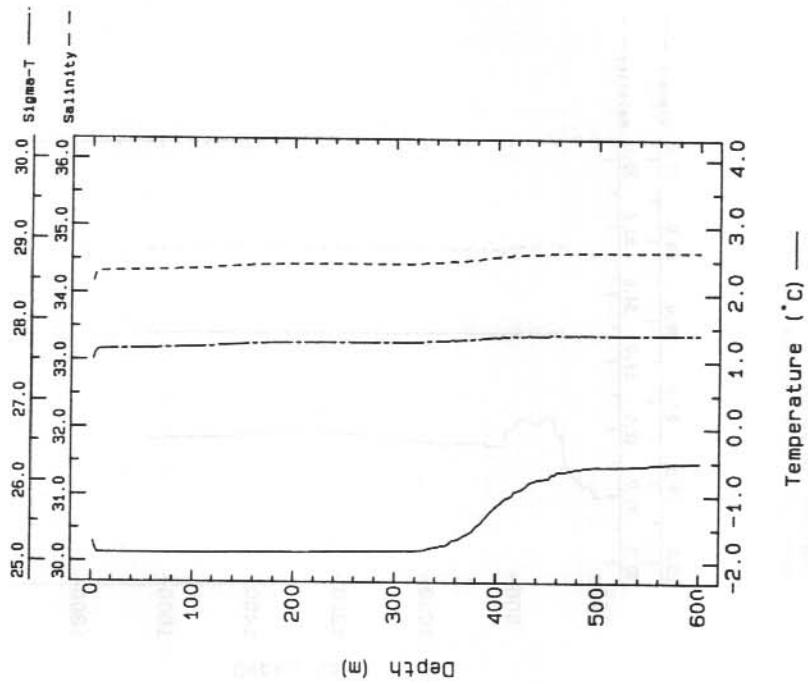
Cruise : ADBEX3 Station 36
09 NOV 1985 0737 GMT
Latitude 65: 54.80S
Longitude 50: 04.67E
Depth: CTD 1640 m Bottom NR



Cruise : ADBEX3
 Station number : 37
 Date : 19 NOV 1985
 Start Time : 1313 GMT
 Ship : NELLA DAN
 Position : 65:50.88S 50:33.91E
 Cast Depth (m) : 86.2
 Bottom Depth (m) : Not Recorded

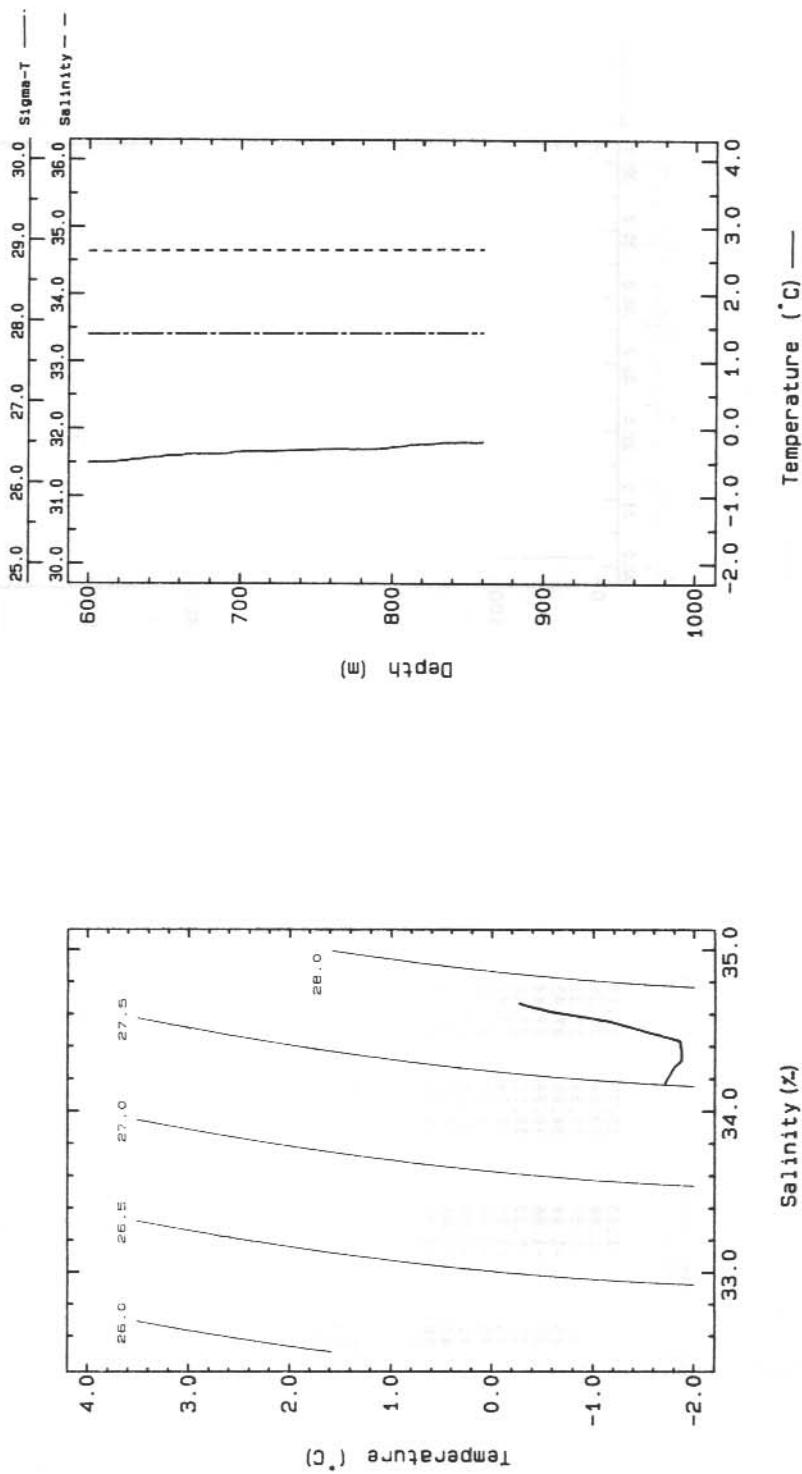
Cruise : ADBEX3 Station 37
 19 NOV 1985 1313 GMT
 Latitude 65:50.88S
 Longitude 50:33.91E
 Depth: CTD 862 m Bottom NR

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.71	34.17	27.51
5	-1.83	34.29	27.61
10	-1.87	34.32	27.63
15	-1.88	34.33	27.63
20	-1.88	34.33	27.64
25	-1.88	34.33	27.64
30	-1.88	34.33	27.64
35	-1.87	34.33	27.64
40	-1.87	34.34	27.64
45	-1.87	34.34	27.64
50	-1.87	34.34	27.65
60	-1.87	34.34	27.65
70	-1.87	34.35	27.65
75	-1.87	34.35	27.65
80	-1.87	34.35	27.66
90	-1.87	34.36	27.66
100	-1.87	34.36	27.66
125	-1.87	34.39	27.69
150	-1.86	34.41	27.70
175	-1.86	34.43	27.72
200	-1.86	34.43	27.72
250	-1.85	34.44	27.72
300	-1.84	34.44	27.73
400	-1.16	34.56	27.80
500	-0.57	34.62	27.83
600	-0.51	34.63	27.83
700	-0.34	34.65	27.84
800	-0.27	34.67	27.85



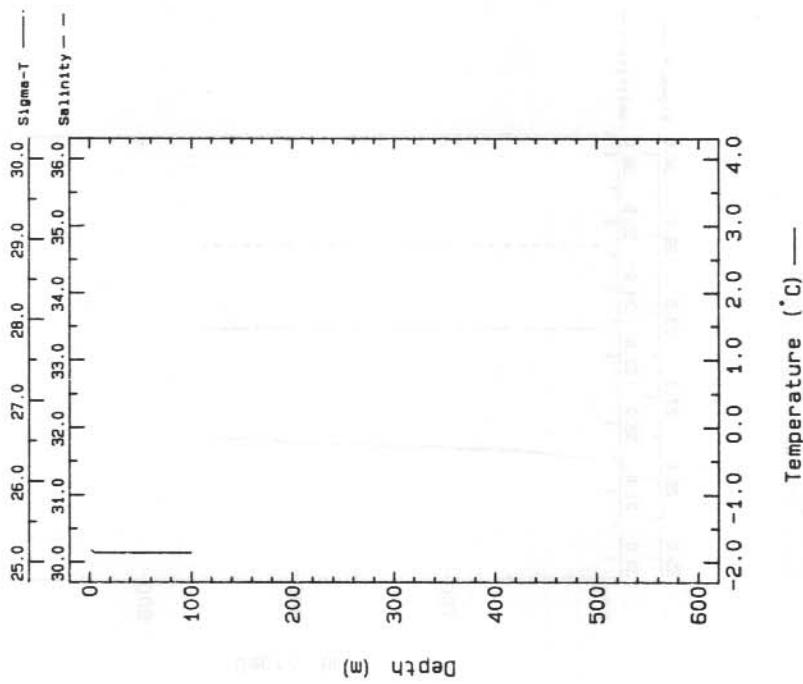
Cruise: ADBEX3 Station: 37
19 NOV 1985 1313 GMT
Latitude: 65° 50.88S
Longitude: 50° 33.91E
Depth: CTD 862 m Bottom NR

Cruise : ADBEX3 Station 37
19 NOV 1985 1313 GMT
Latitude 65° 50.88S
Longitude 50° 33.91E
Depth: CTD 862 m Bottom NR



Cruise : ADBEX3 Station 38
 Station number : 38
 Date : 19 NOV 1985
 Start Time : 1421 GMT
 Ship : NELLA DAN
 Position : 65:50.49S 50:33.32E
 Cast Depth (m) : 102
 Bottom Depth (m) : Not Recorded

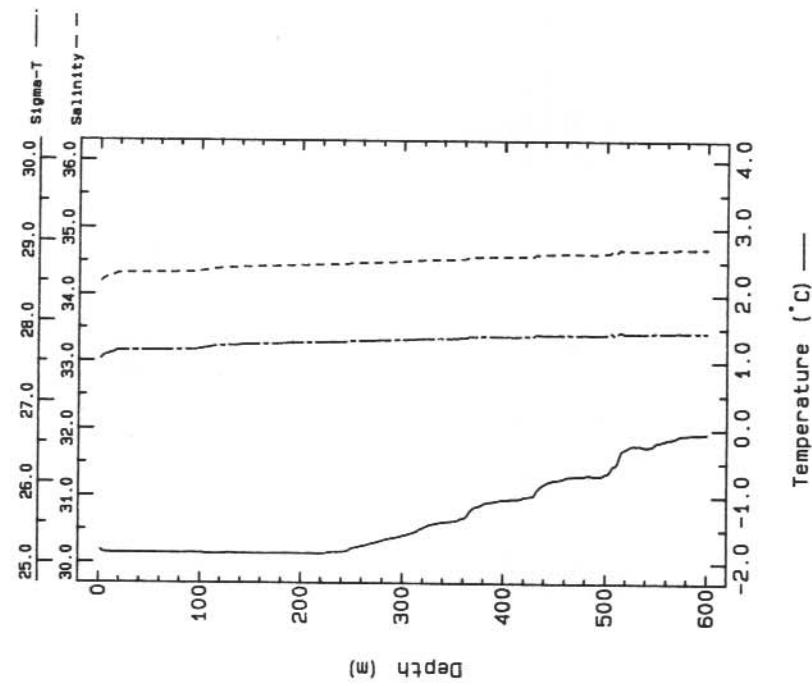
Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.83	33.77	27.18
5	-1.86	33.89	27.28
10	-1.86	33.99	27.36
15	-1.86	34.05	27.41
20	-1.86	34.09	27.44
25	-1.87	34.12	27.46
30	-1.87	34.14	27.48
35	-1.86	34.15	27.49
40	-1.86	34.16	27.50
45	-1.86	34.18	27.51
50	-1.86	34.19	27.52
60	-1.86	34.20	27.53
70	-1.86	34.23	27.55
75	-1.86	34.23	27.56
80	-1.87	34.24	27.57
90	-1.86	34.26	27.58
100	-1.86	34.27	27.59





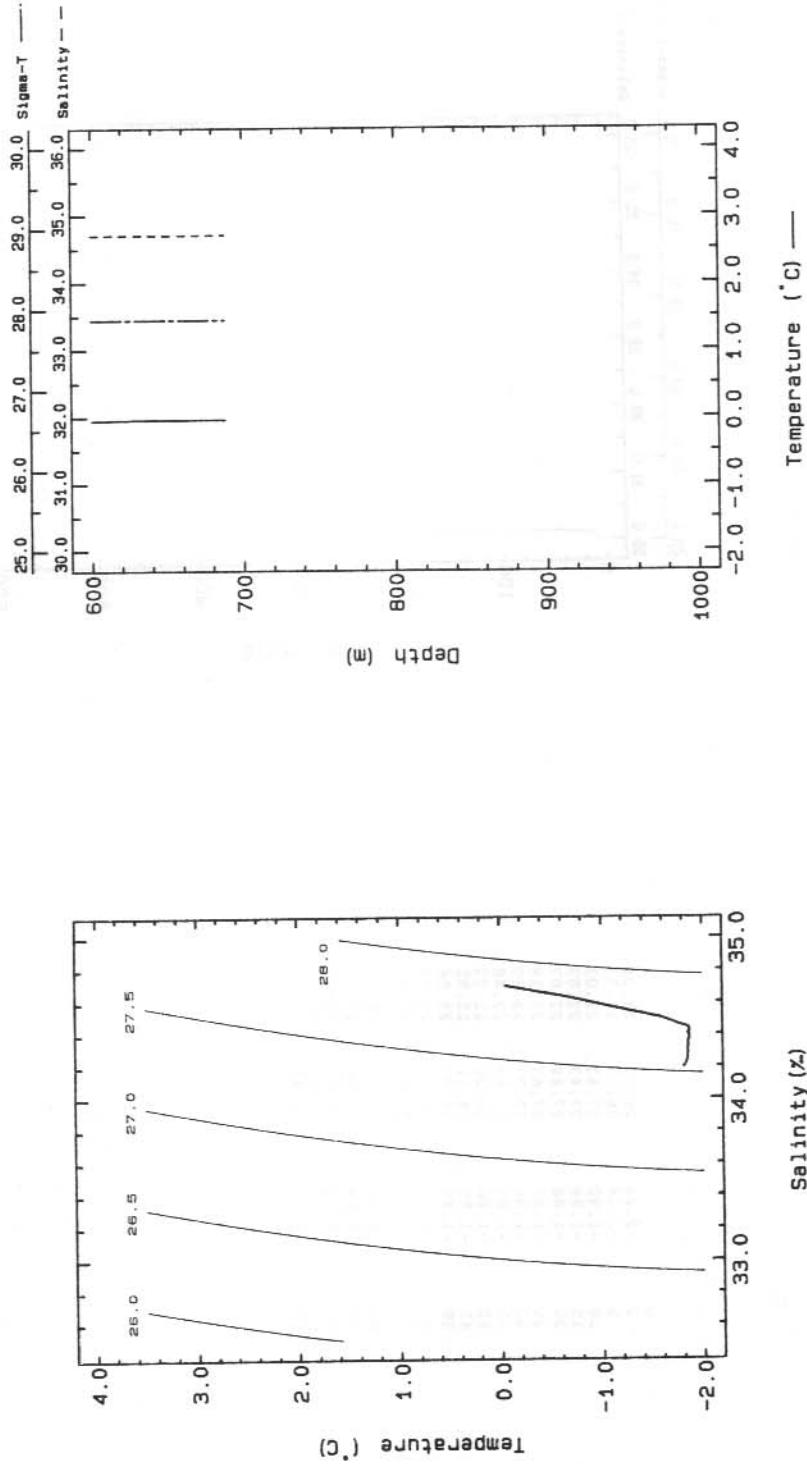
Cruise : ADBEX3 Station 39
 Station number : 39
 Date : 22 NOV 1985
 Start Time : 0702 GMT
 Ship : NELIA DAN
 Position : 65.4°.80S 50.4°.28E
 Cast Depth (m) : 690
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.82	34.19	27.53
2	-1.85	34.24	27.56
5	-1.85	34.27	27.59
10	-1.85	34.29	27.61
15	-1.85	34.32	27.63
20	-1.85	34.33	27.63
25	-1.85	34.32	27.63
30	-1.85	34.32	27.63
35	-1.85	34.33	27.63
40	-1.86	34.33	27.63
45	-1.86	34.33	27.63
50	-1.86	34.33	27.64
60	-1.86	34.33	27.64
70	-1.86	34.33	27.64
75	-1.86	34.33	27.64
80	-1.86	34.33	27.64
90	-1.85	34.34	27.64
100	-1.85	34.35	27.66
125	-1.86	34.40	27.70
150	-1.87	34.42	27.71
175	-1.86	34.43	27.72
200	-1.86	34.44	27.73
250	-1.78	34.48	27.75
300	-1.59	34.50	27.77
400	-1.05	34.58	27.81
500	-0.66	34.63	27.84
600	-0.06	34.70	27.87

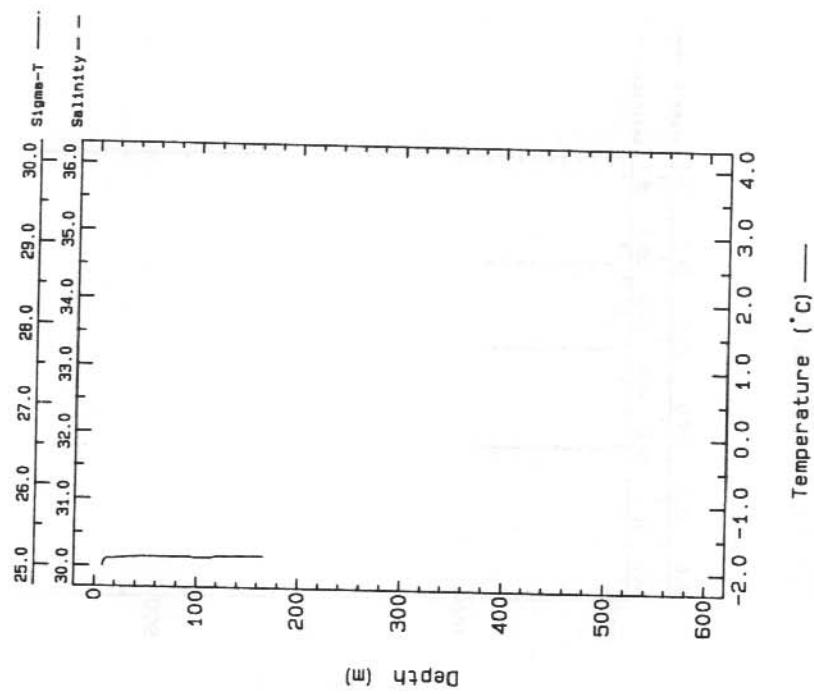


Cruise: ADBEX3 Station: 39
22 NOV 1985 0702 GMT
Latitude : 65: 47. 80S
Longitude: 50: 46. 28E
Depth: CTD 690 m Bottom NR

Cruise : ADBEX3 Station 39
22 NOV 1985 0702 GMT
Latitude 65: 47. 80S
Longitude 50: 46. 28E
Depth: CTD 690 m Bottom NR



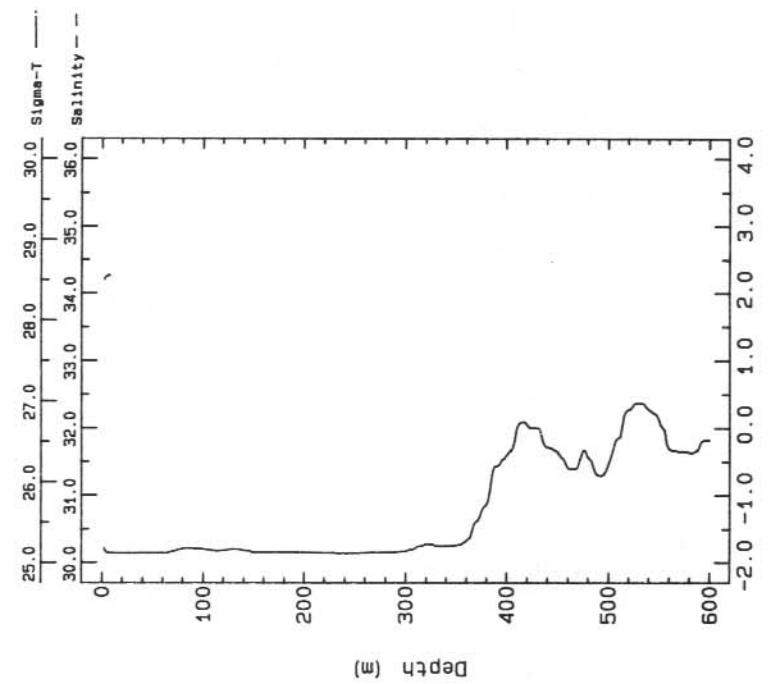
Cruise : ADBEX3
 Station number : 41
 Date : 22 NOV 1985
 Start Time : 0800 GMT
 Ship : NELLA DAN
 Position : 65°47.75S 50°46.38E
 Cast Depth (m) : 168
 Bottom Depth (m) : Not Recorded
 Depth bar (deg C)
 Temperature (deg C) Salinity Sigma-T
 0 -2.23 26.52 21.29
 5 -2.14 26.55 21.31
 10 -1.90 27.43 22.03
 15 -1.88 27.43 22.03
 20 -1.88 27.48 22.07
 25 -1.87 27.63 22.19
 30 -1.86 27.77 22.30
 35 -1.86 27.88 22.40
 40 -1.86 28.28 22.72
 45 -1.85 28.51 22.91
 50 -1.85 28.70 23.06
 60 -1.85 32.55 26.19
 70 -1.85 33.40 26.88
 75 -1.85 33.43 26.90
 80 -1.85 33.52 26.98
 90 -1.85 33.56 27.01
 100 -1.86 33.62 27.06
 125 -1.83 33.87 27.27
 150 -1.83 33.93 27.31



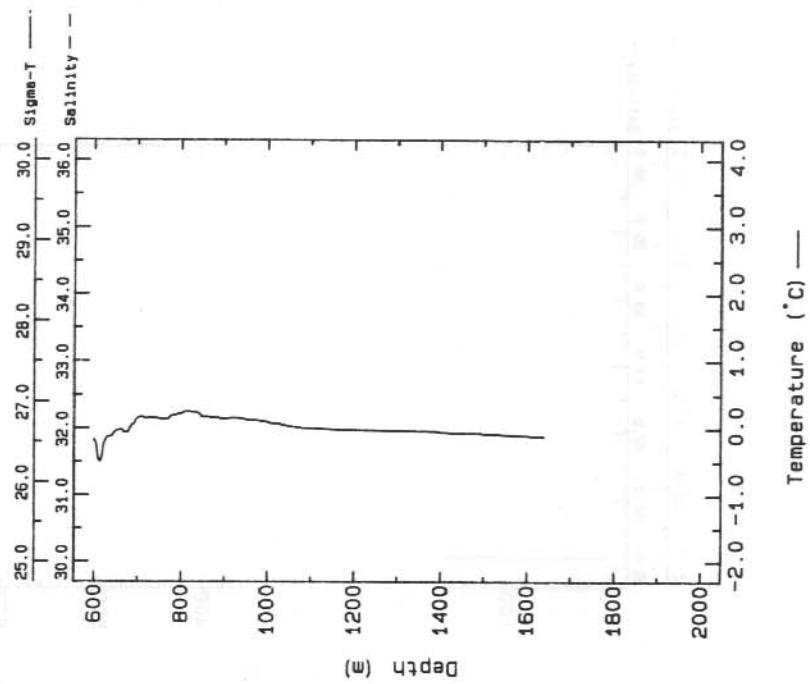


Cruise : ADBEX3
 Station number : 42
 Date : 25 NOV 1985
 Start Time : 0905 GMT
 Ship : NEELLA DAN
 Position : 65°39'55S 51°11'46E
 Cast Depth (m) : 1640
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.79	34.20	27.53
5	-1.85	34.26	27.58
10	-1.86	34.29	27.60
15	-1.86	34.32	27.63
20	-1.86	34.37	27.67
25	-1.86	34.52	27.79
30	-1.86	34.69	27.93
35	-1.86	34.83	28.04
40	-1.86	34.85	28.06
45	-1.86	34.86	28.07
50	-1.86	34.87	28.08
60	-1.85	34.89	28.09
70	-1.83	34.92	28.11
75	-1.81	34.94	28.14
80	-1.79	34.97	28.15
90	-1.79	34.99	28.17
100	-1.80	35.01	28.18
125	-1.81	35.05	28.22
150	-1.85	35.07	28.24
175	-1.85	35.09	28.26
200	-1.85	35.11	28.27
250	-1.86	35.13	28.29
300	-1.83	35.16	28.31
400	-0.41	35.32	28.39
500	-0.56	35.34	28.41
600	-0.17	35.36	28.41
700	0.15	35.42	28.43
800	0.22	35.43	28.44
900	0.14	35.43	28.44
1000	0.09	35.42	28.44
1100	0.00	35.42	28.45
1200	-0.03	35.42	28.45
1300	-0.04	35.42	28.45
1400	-0.06	35.42	28.45
1500	-0.08	35.43	28.46

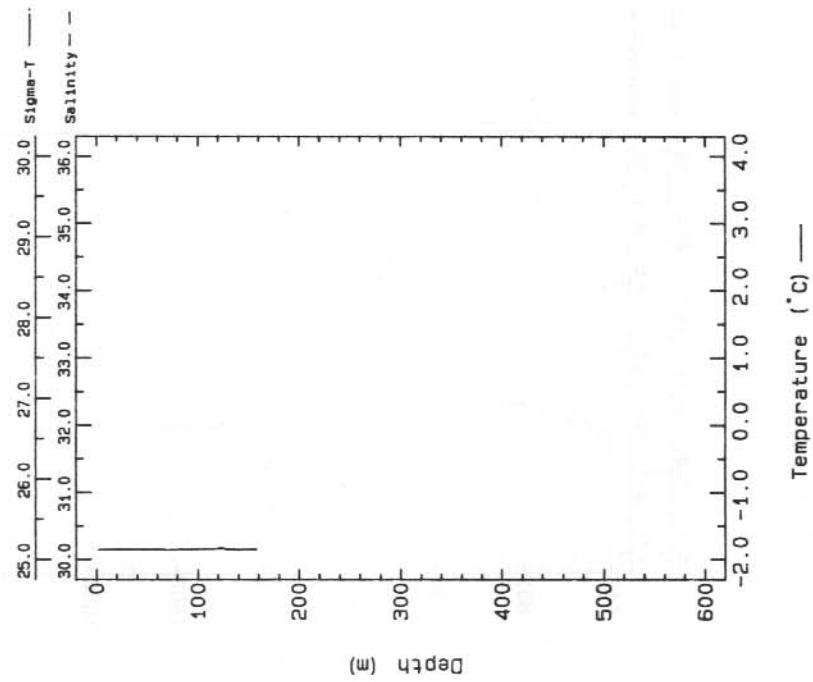


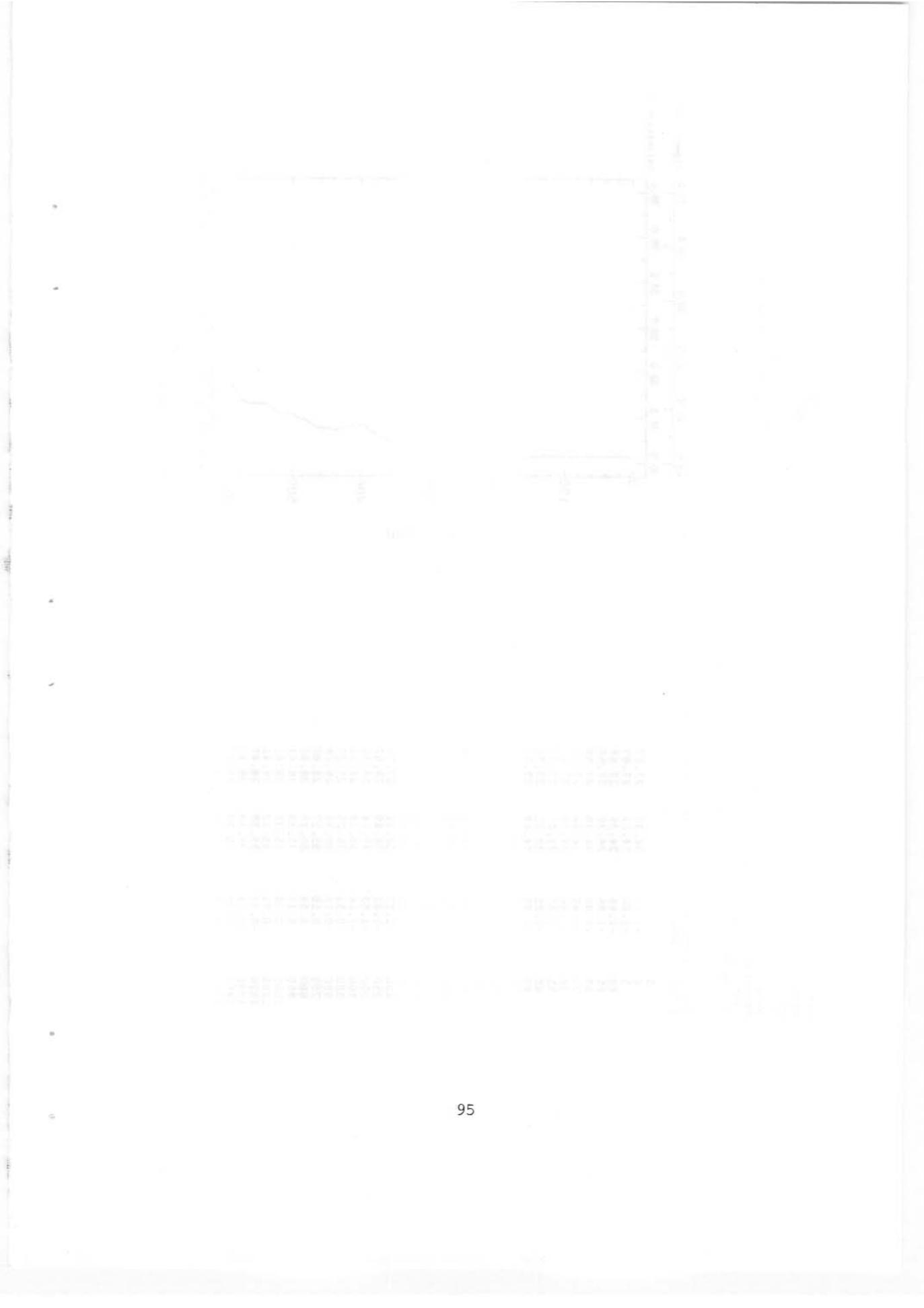
Cruise : ADBEX3 Station 42
25 NOV 1985 0905 GMT
Latitude 65.39.55S
Longitude 51.11.46E
Depth: CTD 1640 m Bottom NR



Cruise : ADBEX3
 Station number : 43
 Date : 25 NOV 1985
 Start Time : 1308 GMT
 Ship : NELIA DAN
 Position : 65:40.61S 51:11.35E
 Cast Depth (m) : 160
 Bottom Depth (m) : Not Recorded

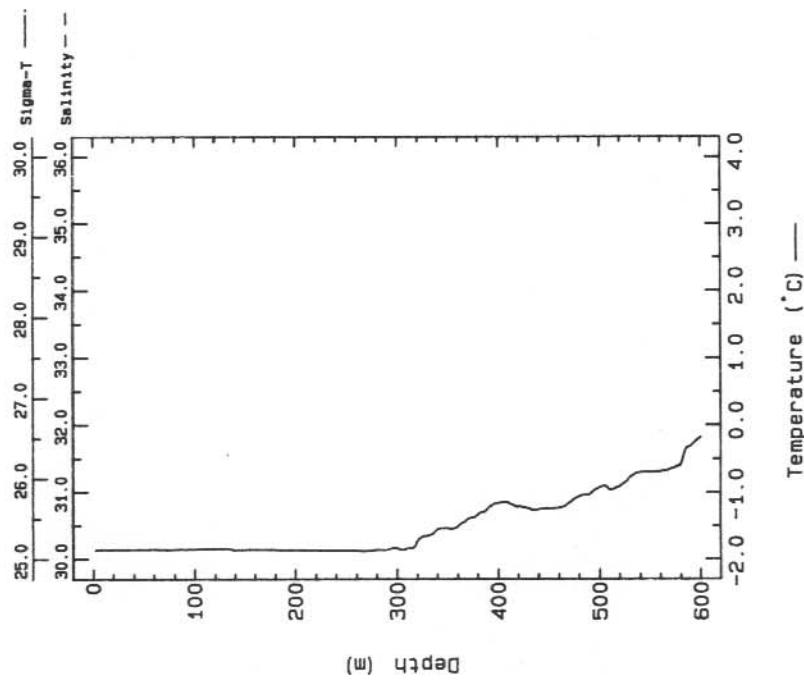
Depth (bar)	Temperature (deg C)	Salinity	Sigma-T
0	-1.86	32.21	25.91
2	-1.85	32.82	26.41
5	-1.85	33.37	26.86
10	-1.85	33.55	27.00
15	-1.85	33.72	27.15
20	-1.85	33.78	27.19
25	-1.85	33.81	27.21
30	-1.85	33.87	27.26
35	-1.85	33.87	27.26
40	-1.85	33.93	27.31
45	-1.85	33.98	27.35
50	-1.85	34.02	27.39
60	-1.85	34.07	27.43
70	-1.86	34.13	27.48
75	-1.86	34.17	27.51
80	-1.85	34.20	27.53
90	-1.85	34.28	27.60
100	-1.84	34.39	27.68
125	-1.83	35.08	28.24
150	-1.85	35.10	28.26



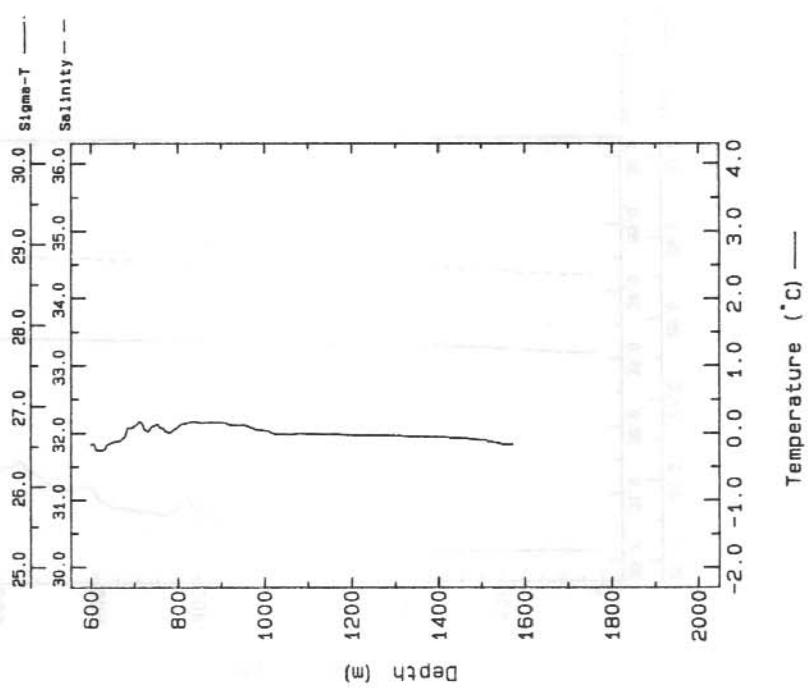


Cruise : ADBEX3
 Station 44
 Date : 25 NOV 1985
 Start Time : 1315 GMT
 Ship : NEELA DAN
 Position : 65:40.64S 51:11.34E
 Cast Depth (m) : 1574
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.87	34.37	27.67
2	-1.85	34.35	27.65
5	-1.86	34.36	27.66
10	-1.86	34.39	27.68
15	-1.86	34.38	27.68
20	-1.86	34.38	27.68
25	-1.85	34.38	27.68
30	-1.86	34.38	27.68
35	-1.85	34.40	27.70
40	-1.85	34.41	27.70
45	-1.85	34.49	27.77
50	-1.85	34.50	27.78
60	-1.85	34.52	27.79
70	-1.86	34.53	27.80
75	-1.86	34.55	27.81
80	-1.86	34.56	27.82
90	-1.85	34.59	27.85
100	-1.85	34.54	27.81
125	-1.84	34.55	27.82
150	-1.86	34.41	27.70
175	-1.86	34.42	27.71
200	-1.87	34.46	27.74
250	-1.87	34.80	28.02
300	-1.83	35.14	28.30
400	-1.16	35.20	28.32
500	-0.93	35.25	28.35
600	-0.18	35.33	28.38
700	0.10	35.37	28.40
800	0.08	35.38	28.41
900	0.15	35.39	28.41
1000	0.04	35.38	28.41
1100	-0.01	35.37	28.41
1200	-0.03	35.38	28.41
1300	-0.04	35.38	28.42
1400	-0.06	35.38	28.42
1500	-0.11	35.38	28.42

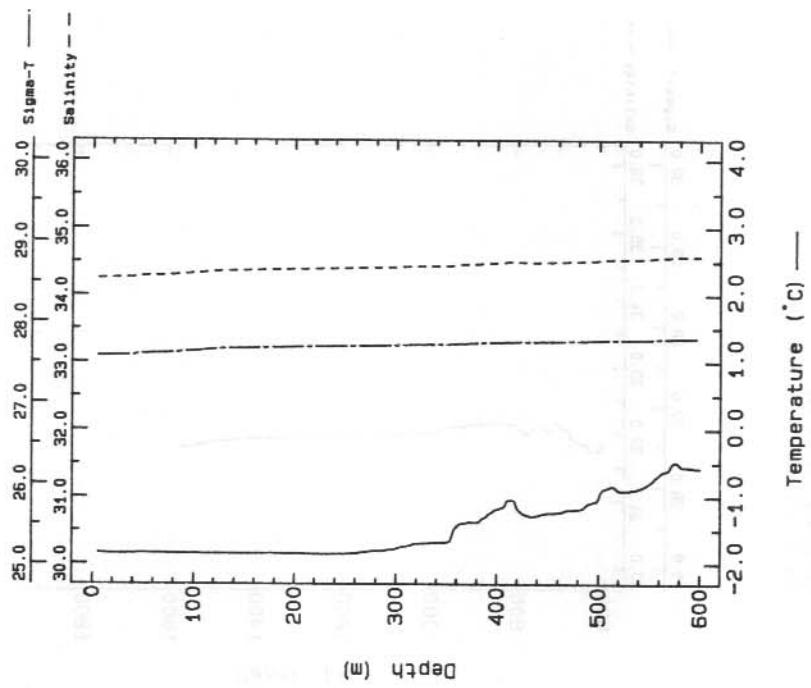


Cruise : ADBEX3 Station 44
25 NOV 1985 1315 GMT
Latitude 65° 40.64S
Longitude 51° 11.34E
Depth: CTD 1574 m Bottom NR



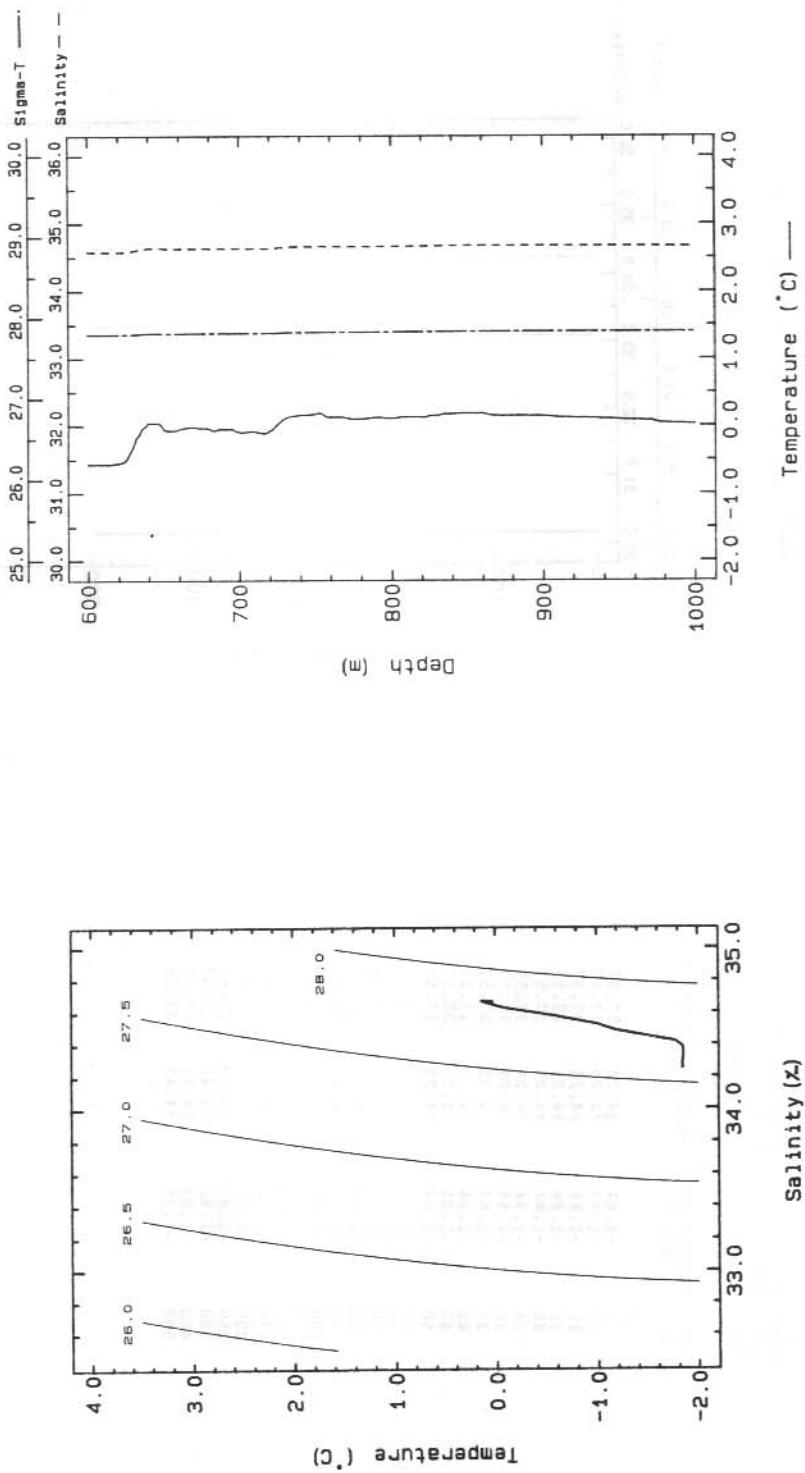
Cruise : ADBEX3 Station 45
 Station number : 45
 Date : 25 NOV 1985
 Start Time : 1442 GMT
 Ship : NELLA DAN
 Position : 65.40.99S 51.11.48E
 Cast Depth (m) : 1002
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0			
5	-1.84	34.25	27.57
6	-1.84	34.25	27.57
10	-1.84	34.26	27.58
15	-1.85	34.26	27.58
20	-1.85	34.26	27.58
25	-1.85	34.26	27.58
30	-1.85	34.26	27.58
35	-1.85	34.26	27.58
40	-1.85	34.26	27.58
45	-1.84	34.28	27.59
50	-1.84	34.28	27.60
60	-1.84	34.29	27.60
70	-1.84	34.29	27.61
75	-1.85	34.30	27.61
80	-1.85	34.30	27.61
90	-1.85	34.32	27.63
100	-1.85	34.33	27.64
125	-1.85	34.36	27.66
150	-1.85	34.36	27.66
175	-1.85	34.38	27.68
200	-1.85	34.38	27.68
250	-1.86	34.40	27.69
300	-1.77	34.42	27.71
400	-1.19	34.49	27.74
500	-1.02	34.52	27.77
600	-0.57	34.58	27.79
700	-0.10	34.63	27.81
800	0.10	34.66	27.83
900	0.14	34.67	27.83
1000	0.02	34.66	27.83



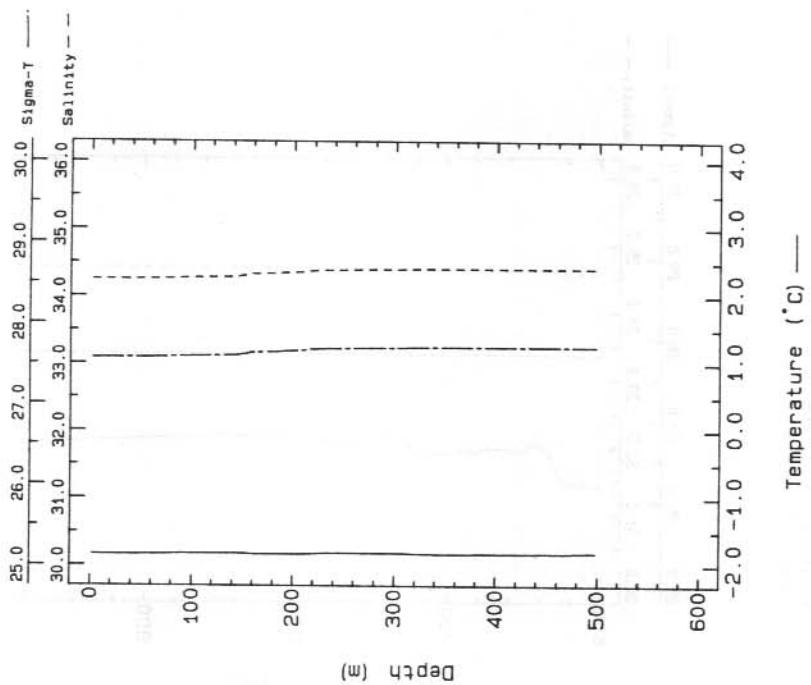
Cruise: ADBEX3 Station: 45
25 NOV 1985 1442 GMT
Latitude: 65:40.99S
Longitude: 51:11.48E
Depth: CTD 1002 m Bottom NR

Cruise : ADBEX3 Station 45
25 NOV 1985 1442 GMT
Latitude 65: 40.99S
Longitude 51: 11.48E
Depth: CTD 1002 m Bottom NR

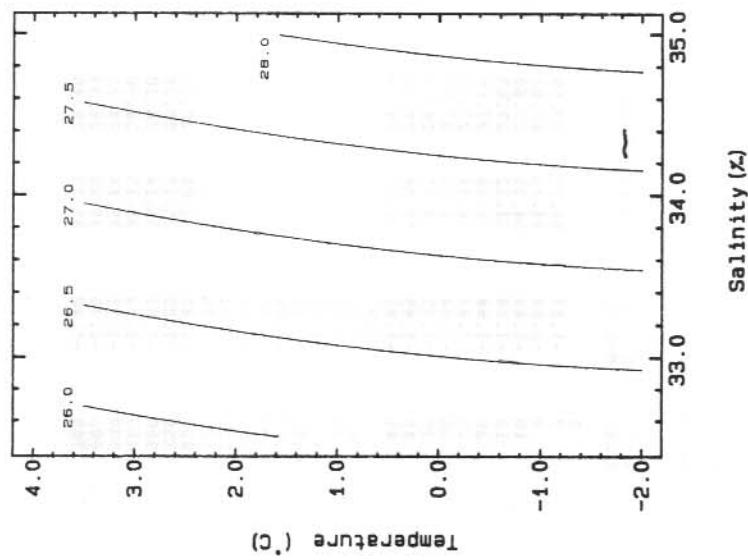


Cruise : ADBEX3 Station 46
 Station number : 46
 Date : 29 NOV 1985
 Start Time : 1310 GMT
 Ship : NEELLA DAN
 Position : 66:03.15S 49:49.78E
 Cast Depth (m) : 500
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.84	34.24	27.57
2	-1.83	34.24	27.57
5	-1.84	34.24	27.57
10	-1.84	34.24	27.57
15	-1.84	34.25	27.57
20	-1.84	34.25	27.57
25	-1.84	34.25	27.57
30	-1.84	34.25	27.57
35	-1.84	34.25	27.57
40	-1.84	34.25	27.57
45	-1.84	34.25	27.57
50	-1.84	34.25	27.57
60	-1.83	34.25	27.57
70	-1.83	34.26	27.58
75	-1.83	34.26	27.58
80	-1.83	34.26	27.58
90	-1.82	34.27	27.59
100	-1.82	34.27	27.59
125	-1.82	34.28	27.59
150	-1.83	34.30	27.61
175	-1.84	34.33	27.64
200	-1.83	34.35	27.65
250	-1.81	34.39	27.68
300	-1.82	34.40	27.69
400	-1.83	34.41	27.70
500	-1.35	34.47	27.74

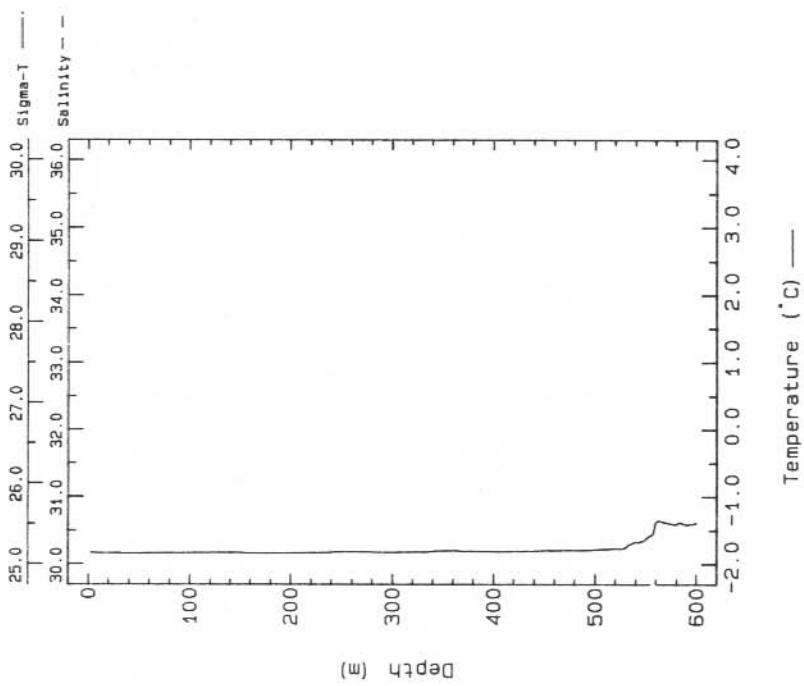


Cruise: ADBEX3 Station: 46
29 NOV 1985 1310 GMT
Latitude : 66° 03.15S
Longitude: 49° 49.78E
Depth: CTD 500 m Bottom NR

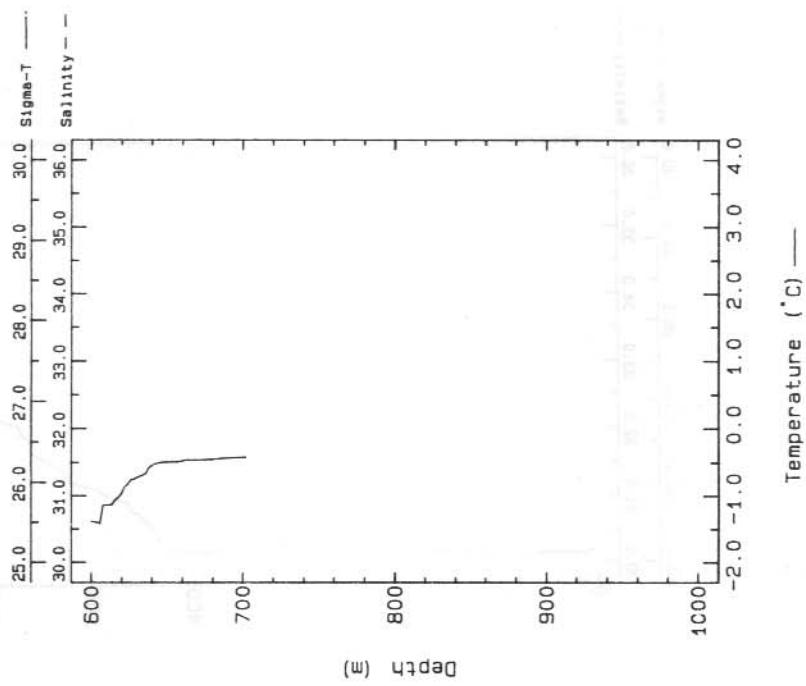


Cruise : ADBEX3
 Station number : 47
 Date : 29 NOV 1985
 Start Time : 1356 GMT
 Ship : NELIA DAN
 Position : 66.03.13S 49.49.85E
 Cast Depth (m) : 704
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.83	34.27	27.59
2	-1.84	34.30	27.61
5	-1.84	34.31	27.62
10	-1.84	34.32	27.63
15	-1.84	34.36	27.66
20	-1.84	34.46	27.74
25	-1.84	34.72	27.96
30	-1.84	34.83	28.04
35	-1.85	34.86	28.07
40	-1.85	34.87	28.08
45	-1.85	34.88	28.08
50	-1.85	34.90	28.10
60	-1.84	34.91	28.11
70	-1.84	34.92	28.12
75	-1.84	34.92	28.12
80	-1.84	34.93	28.12
90	-1.84	34.93	28.12
100	-1.83	34.94	28.13
125	-1.83	34.97	28.15
150	-1.84	35.03	28.20
175	-1.85	35.06	28.23
200	-1.84	35.08	28.25
250	-1.82	35.13	28.28
300	-1.83	35.14	28.30
400	-1.82	35.15	28.30
500	-1.78	35.16	28.31
600	-1.39	35.20	28.33
700	-0.42	35.33	28.40



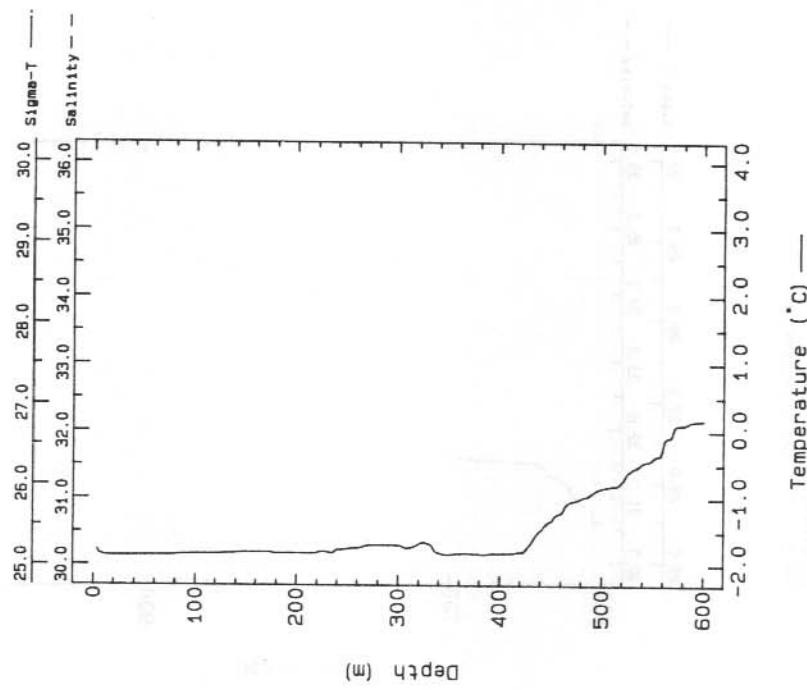
Cruise : ADBEX3 Station 47
29 NOV 1985 1356 GMT
Latitude 66° 03.1' S
Longitude 49° 49.8' E
Depth: CTD 704 m Bottom NR



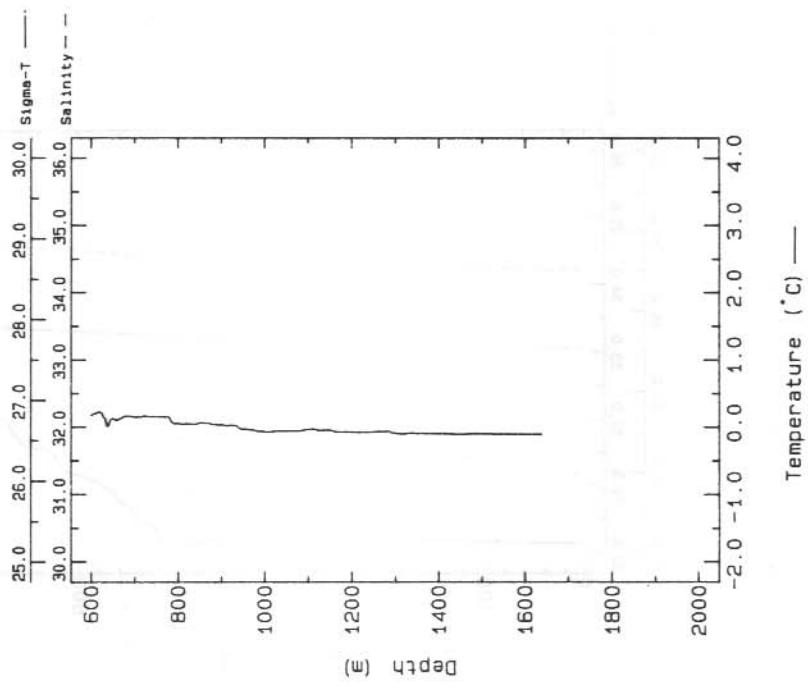
Cruise : ADBEX3
 Station : 4B
 Station number : 48
 Date : 6 DEC 1985
 Start Time : 0939 GMT
 Ship : NELIA DAN
 Position : 66°15'.41S 49°14'.20E
 Cast Depth (m) : 1640
 Bottom Depth (m) : Not Recorded

Cruise : ADBEX3 Station 4B
 06 DEC 1985 0939 GMT
 Latitude 66°15'.41S
 Longitude 49°14'.20E
 Depth: CTD 1640 m Bottom NR

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.78	34.14	27.48
5	-1.81	34.16	27.50
10	-1.85	34.24	27.57
15	-1.86	34.26	27.58
20	-1.86	34.32	27.63
25	-1.86	34.39	27.68
30	-1.86	34.71	27.95
35	-1.86	34.78	28.01
40	-1.86	34.82	28.03
45	-1.85	34.83	28.05
50	-1.85	34.85	28.06
60	-1.85	34.87	28.08
70	-1.85	34.88	28.09
75	-1.85	34.89	28.09
80	-1.84	34.90	28.10
90	-1.83	34.92	28.12
100	-1.83	34.95	28.14
125	-1.82	34.97	28.16
150	-1.81	34.98	28.16
175	-1.82	34.99	28.17
200	-1.82	35.01	28.19
250	-1.75	35.06	28.23
300	-1.71	35.09	28.25
400	-1.82	35.14	28.30
500	-0.84	35.26	28.36
600	0.17	35.39	28.41
700	0.15	35.40	28.42
800	0.05	35.40	28.42
900	0.03	35.41	28.43
1000	-0.07	35.39	28.43
1100	-0.04	35.40	28.43
1200	-0.08	35.40	28.44
1300	-0.10	35.41	28.44
1400	-0.10	35.41	28.44
1500	-0.10	35.42	28.45



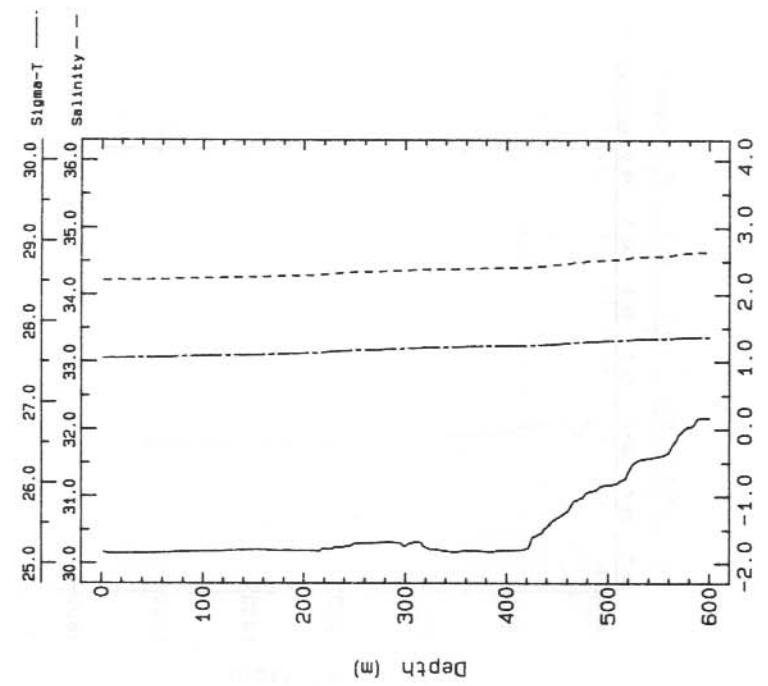
Cruise : ADBEX3 Station 4B
06 DEC 1985 0939 GMT
Latitude 66.15.41S
Longitude 49.14.20E
Depth: CTD 1640 m Bottom NR



Cruise : ADBEX3
 Station number : 49
 Date : 6 DEC 1985
 Start Time : 1110 GMT
 Ship : NELLA DAN
 Position : 66°1.45S 49°14.19E
 Cast Depth (m) : 1640
 Bottom Depth (m) : Not Recorded

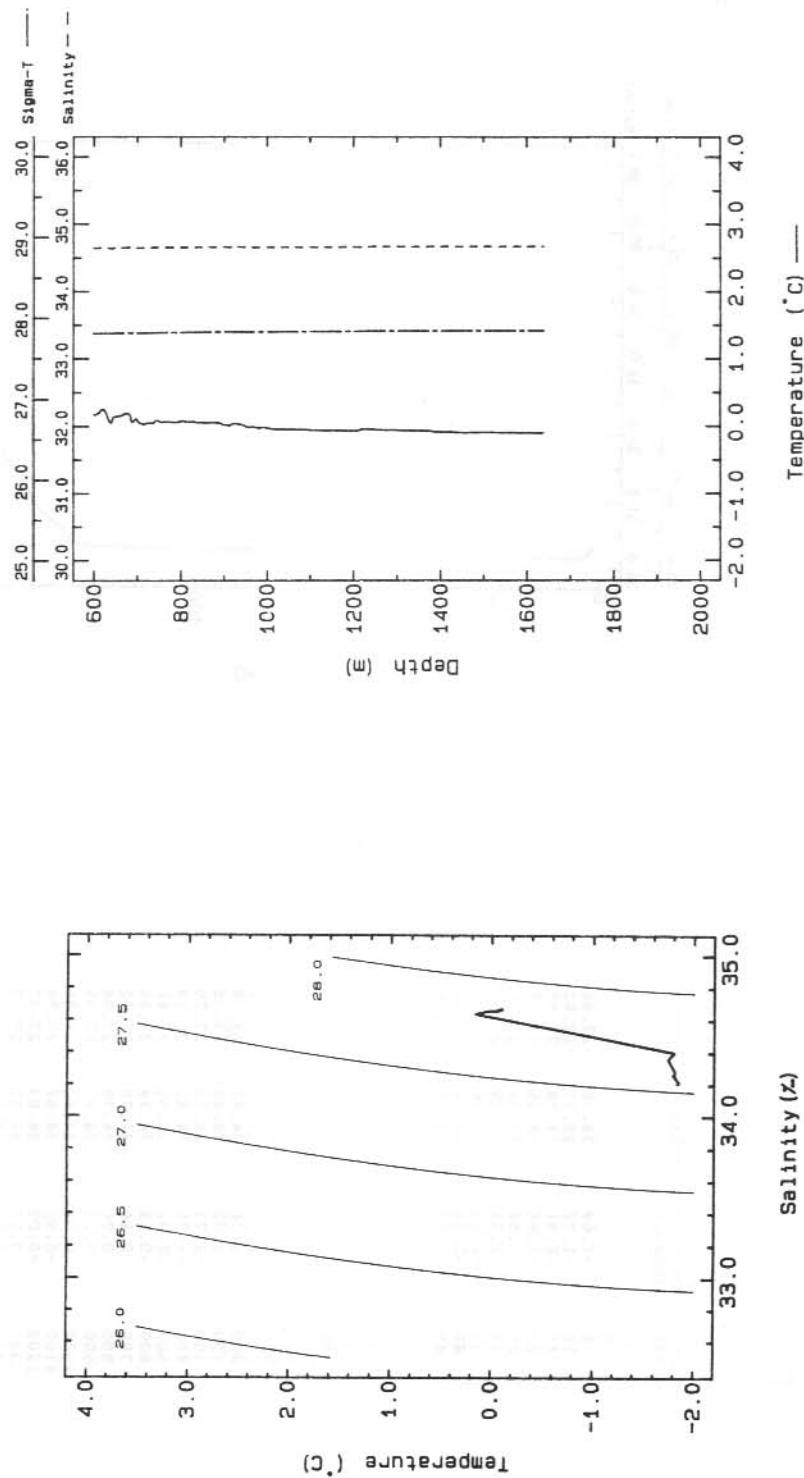
Depth bar
 Temperature (deg C)
 Salinity Sigma-T

Depth bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.84	34.21	27.54
5	-1.85	34.21	27.54
10	-1.85	34.22	27.54
15	-1.85	34.22	27.54
20	-1.85	34.22	27.55
25	-1.85	34.22	27.55
30	-1.85	34.22	27.55
35	-1.85	34.22	27.55
40	-1.85	34.22	27.55
45	-1.84	34.22	27.55
50	-1.84	34.22	27.55
60	-1.84	34.22	27.55
70	-1.84	34.23	27.55
75	-1.83	34.24	27.56
80	-1.82	34.24	27.56
90	-1.82	34.24	27.57
100	-1.82	34.25	27.57
125	-1.81	34.25	27.57
150	-1.79	34.26	27.58
175	-1.81	34.27	27.59
200	-1.81	34.29	27.60
250	-1.70	34.34	27.64
300	-1.74	34.36	27.66
400	-1.81	34.40	27.69
500	-0.82	34.52	27.76
600	0.17	34.64	27.81
700	0.10	34.65	27.82
800	0.07	34.65	27.82
900	0.02	34.66	27.83
1000	-0.03	34.66	27.83
1100	-0.06	34.66	27.83
1200	-0.07	34.66	27.84
1300	-0.06	34.67	27.84
1400	-0.09	34.67	27.84
1500	-0.09	34.67	27.84



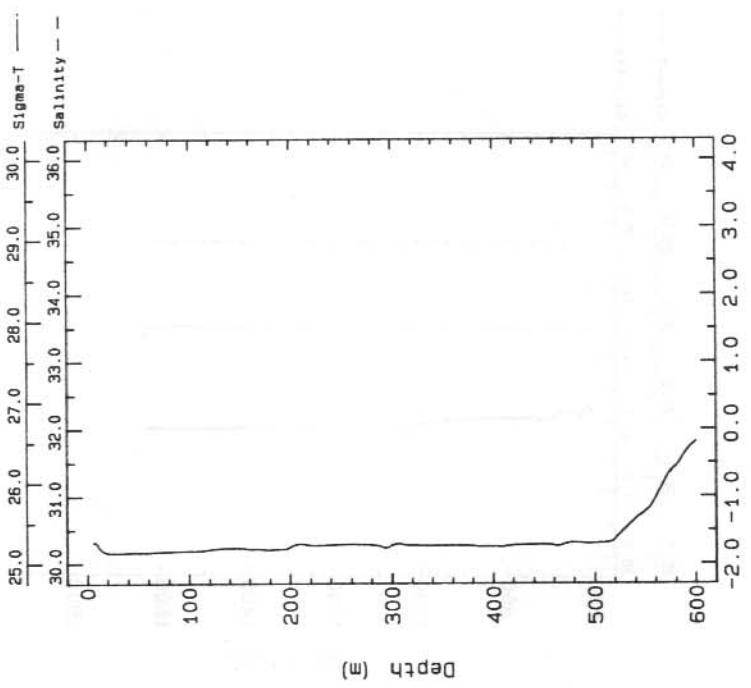
Cruise: ADDEX3 Station: 49
06 DEC 1985 1110 GMT
Latitude : 66:15.45S
Longitude: 49:14.19E
Depth: CTD 1640 m Bottom NR

Cruise : ADDEX3 Station 49
06 DEC 1985 1110 GMT
Latitude 66:15.45S
Longitude 49:14.19E
Depth: CTD 1640 m Bottom NR

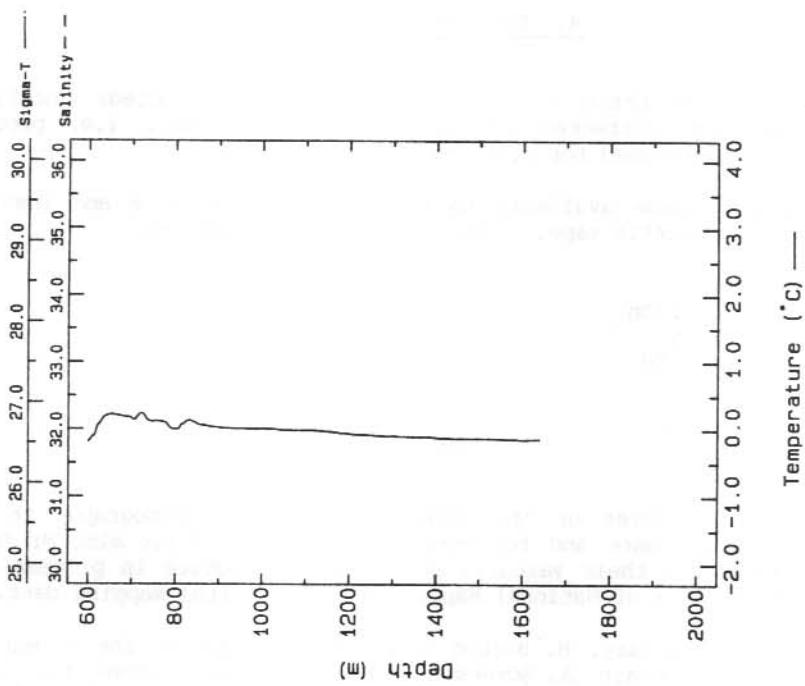


Cruise	Sta	Temperature	Salinity	Sigma-T
number	50	(deg C)		
Date	13 DEC 1985			
Start Time	: 1023 GMT			
Ship	: NELLIA DAN			
Position	: 66:16.79S 49:07.32E			
Cast Depth (m)	: 1640			
Bottom Depth (m)	: Not Recorded			
Depth	d bar			
0	0			
5	-1.69	34.36	27.66	
10	-1.72	34.31	27.62	
15	-1.81	34.34	27.65	
20	-1.84	34.36	27.66	
25	-1.84	34.36	27.66	
30	-1.84	34.36	27.66	
35	-1.84	34.36	27.66	
40	-1.84	34.36	27.66	
45	-1.83	34.36	27.66	
50	-1.84	34.36	27.66	
60	-1.83	34.37	27.67	
70	-1.82	34.37	27.67	
75	-1.82	34.37	27.67	
80	-1.82	34.37	27.67	
90	-1.81	34.37	27.67	
100	-1.81	34.37	27.67	
125	-1.78	34.40	27.69	
150	-1.77	34.42	27.71	
175	-1.80	34.43	27.72	
200	-1.76	34.46	27.74	
250	-1.72	34.48	27.76	
300	-1.73	34.52	27.79	
400	-1.75	34.52	27.79	
500	-1.70	34.55	27.81	
600	-0.19	34.55	27.91	
700	0.16	34.78	27.92	
800	0.00	34.79	27.94	
900	0.02	34.81	27.95	
1000	0.01	34.82	27.96	
1100	-0.02	34.82	27.96	
1200	-0.07	34.83	27.97	
1300	-0.10	34.83	27.98	
1400	-0.13	34.83	27.98	
1500	-0.14	34.84	27.98	

Cruise : ADBEX3 Station 50
 13 DEC 1985 1023 GMT
 Latitude 66:16.79S
 Longitude 49:07.32E
 Depth: CTD 1640 m Bottom NR



Cruise : ADBEEX3 Station 50
13 DEC 1985 1023 GMT
Latitude 66.16.79S
Longitude 49.07.32E
Depth: CTD 1640 m Bottom NR



4. DATA STORAGE AND AVAILABILITY

Data exist in three formats; raw data, as collected; uncalibrated and de-spiked but corrected for sensor constants etc., i.e. processed; and 2 dbar averages used for plotting and presentation.

Data may be made available to other research workers and institutions on nine track magnetic tape. Enquiries should be made to:

The Director
Antarctic Division
Channel Highway
KINGSTON TAS 7150

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