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NOTES

52

Oceanographic data: Prydz Bay region -
Antarctic Division BIOMASS Experiment I,
MV Nella Dan, November-December 1982

K.R. Kerry and E.J. Woehler

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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CONTENTS

ABSTRACT	1
1. INTRODUCTION	3
2. METHODS	6
2.1 Instrumentation and sampling procedures	6
3. PRESENTATION OF RESULTS	...	...	...	...	...	...	...	...	...	...	...	...	...	9
4. DATA STORAGE AND AVAILABILITY	...	...	...	...	...	...	...	...	...	...	...	...	...	166
ACKNOWLEDGMENTS	...	...	...	...	...	...	...	...	...	...	...	...	...	166
REFERENCES	...	...	...	...	...	...	...	...	...	...	...	...	...	166

FIGURES

1. ADBEX I cruise track	...	...	...	...	...	...	...	...	...	...	...	...	...	4
2. ADBEX I CTD stations	...	...	...	...	...	...	...	...	...	...	...	...	...	5
3. T/S data from all stations	9

TABLE

1. Hydrographic stations - position, GMT date and time	7
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OCEANOGRAPHIC DATA: PRYDZ BAY REGION -
ANTARCTIC DIVISION BIOMASS EXPERIMENT I,
MV NELLA DAN, NOVEMBER-DECEMBER 1982

by

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ABSTRACT

Seventy-nine CTD stations in Prydz Bay, Antarctica and adjacent waters were taken during the ADBEX I cruise, November-December 1982. At this time much of Prydz Bay was ice covered and so a grid of stations was taken rather than transect lines. Casts within the shelf zone were made to the bottom and 2000 m offshore. In situ salinity, temperature and sigma-t are tabulated for standard depths, and shown graphically. T/S plots for each station are given.

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1. INTRODUCTION

After participating in the First International BIOMASS Experiment (FIBEX) cruise on MV Nella Dan November-December 1982, Australia instigated a series of research cruises under the name of Antarctic Division BIOMASS Experiment (ADBEX). The aim was to follow up on work undertaken during FIBEX and to conduct additional research which would contribute to the objectives of the BIOMASS program. The area of interest was the Southern Ocean south of 60°S to the Antarctic coast and between 60°E and 90°E.

During ADBEX I, seventy-nine CTD stations were taken along the cruise track given in Figure 1. CTD stations are shown in Figure 2. A grid of stations was taken in the shelf zone of Prydz Bay itself and between the Australian Antarctic stations Mawson and Davis. Much of the region was covered in pack ice, with areas of unconsolidated pack ice. Navigation along transect lines was difficult and for the most part abandoned in favour of attempting to take stations in a grid to provide coverage of the region.

This Research Note is the third in the series presenting oceanographic data collected 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.

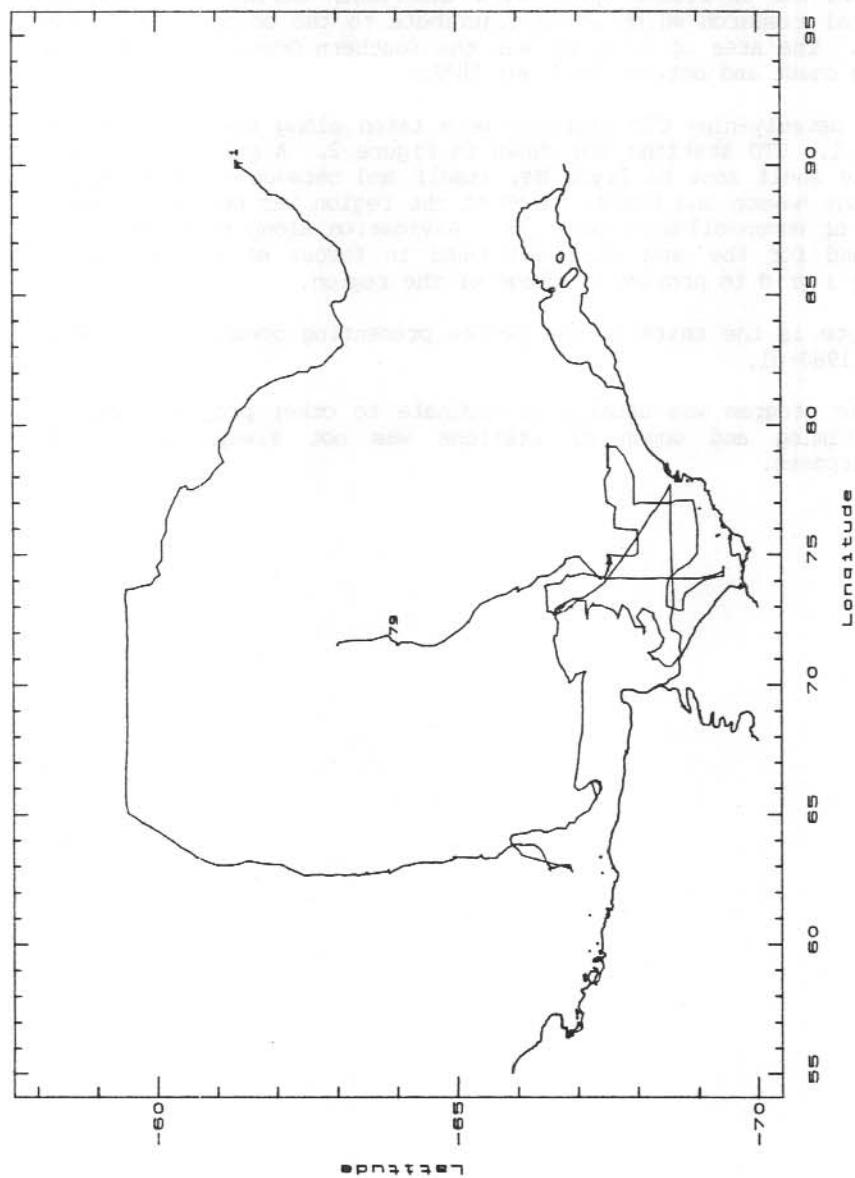


Figure 1. Cruise track of ADBEX I, 19 November to 17 December 1982.

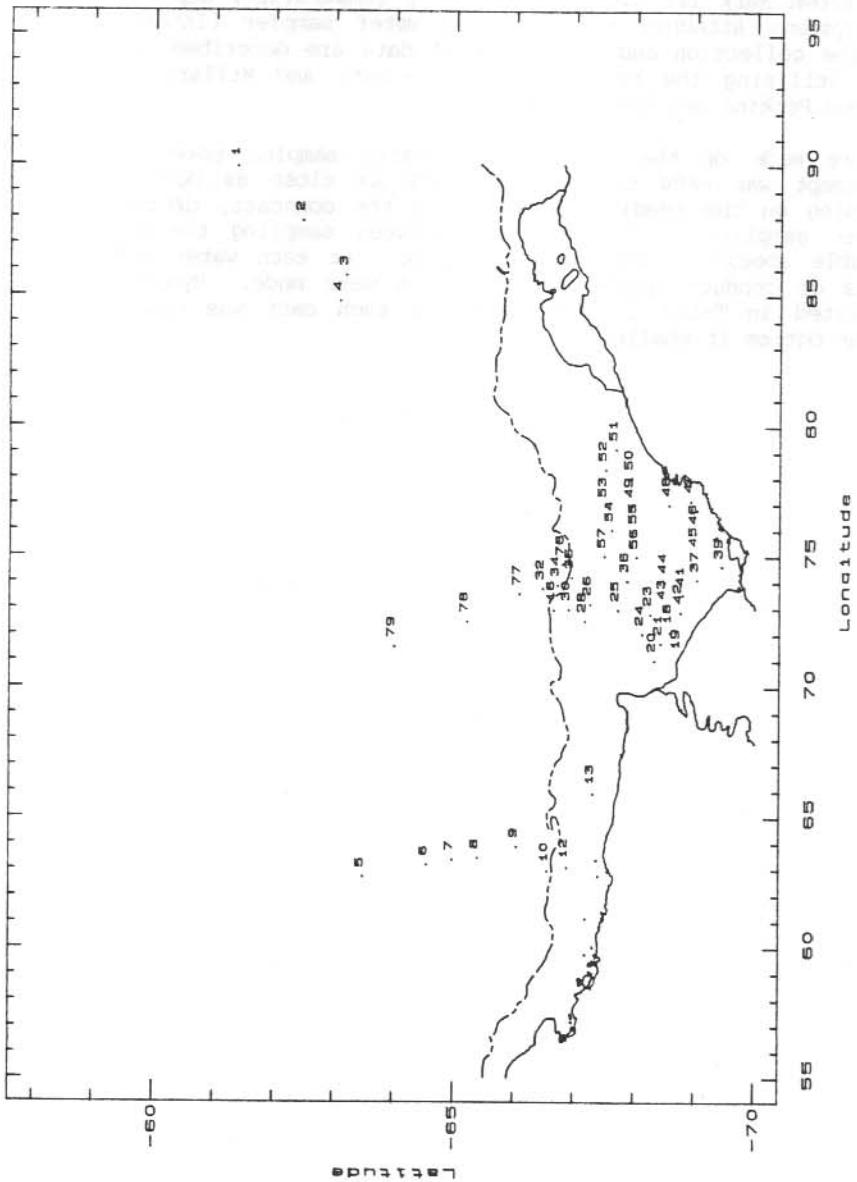


Figure 2. Location of CTD stations. Due to the proximity of some stations to each other, it was not possible to show some stations on the map, but their exact locations are given in Table 1. The station numbers of those missing are listed here, in brackets, following the number of the proximate mapped station: 10(11), 13(14, 15), 16(17), 26(27), 28(29), 32(33), 37(38), 39(40), 57(58-75). The dotted line marks the 1000 m contour.

2. METHODS

2.1 INSTRUMENTATION AND SAMPLING PROCEDURES/COLLECTION OF DATA

Continuous vertical profiles of conductivity and temperature were obtained using two Neil Brown Mark III CTD (conductivity, temperature, depth probes #2568, #2941) systems attached to a rosette water sampler (InterOcean). 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. Hydrographic stations are listed in Table 1. The depth of each cast was usually to 2000 m or to near bottom if shallower.

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

Cruise: ADBEX 1

Vessel: NELLA DAN

CTD Station	Position	Date	Time (GMT)
1	61:22.20S	89:54.10E	19 NOV 1982 1503
2	62:27.80S	87:50.00E	20 NOV 1982 1327
3	63:11.50S	85:44.30E	21 NOV 1982 0624
4	63:05.40S	84:44.90E	22 NOV 1982 0030
5	63:29.90S	62:40.80E	26 NOV 1982 1507
6	64:33.59S	63:09.20E	27 NOV 1982 0856
7	64:58.80S	63:20.80E	27 NOV 1982 1710
8	65:24.30S	63:25.10E	28 NOV 1982 0208
9	66:03.10S	63:50.80E	28 NOV 1982 1313
10	66:33.70S	62:54.20E	29 NOV 1982 0101
11	66:38.50S	62:58.10E	29 NOV 1982 0840
12	66:53.40S	63:02.90E	30 NOV 1982 0409
13	67:18.70S	65:53.40E	03 DEC 1982 0948
14	67:18.90S	65:35.50E	03 DEC 1982 1142
15	67:22.30S	65:49.60E	03 DEC 1982 1444
16	66:39.00S	72:55.10E	05 DEC 1982 1210
17	66:39.40S	72:58.50E	05 DEC 1982 1243
18	68:35.30S	72:04.19E	08 DEC 1982 1034
19	68:43.50S	71:06.00E	08 DEC 1982 1550
20	68:19.50S	70:59.10E	09 DEC 1982 2106
21	68:26.00S	71:38.30E	09 DEC 1982 0435
22	68:25.00S	71:37.20E	09 DEC 1982 0449
23	68:15.40S	72:45.00E	09 DEC 1982 1034
24	68:07.20S	72:00.20E	09 DEC 1982 1520
25	67:43.20S	72:55.40E	09 DEC 1982 2123
26	67:15.20S	73:07.40E	10 DEC 1982 0438
27	67:15.20S	73:07.40E	10 DEC 1982 0438
28	67:10.00S	72:29.30E	10 DEC 1982 0733
29	67:10.00S	72:33.00E	10 DEC 1982 0945
30	66:54.10S	72:56.30E	10 DEC 1982 1457
31	66:29.00S	72:48.10E	10 DEC 1982 0156
32	66:28.00S	73:44.00E	11 DEC 1982 0000
33	66:28.10S	73:44.00E	11 DEC 1982 0445
34	66:43.20S	73:52.10E	11 DEC 1982 1014
35	66:57.50S	74:10.40E	11 DEC 1982 1519
36	67:52.40S	74:02.09E	11 DEC 1982 2113
37	69:02.00S	74:05.00E	12 DEC 1982 0000
38	69:02.00S	74:05.20E	12 DEC 1982 0412
39	69:26.20S	74:35.50E	12 DEC 1982 0810
40	69:25.40S	74:12.20E	12 DEC 1982 1041
41	68:47.50S	73:30.20E	12 DEC 1982 1458
42	68:45.20S	72:50.10E	12 DEC 1982 1711
43	68:29.10S	73:00.10E	12 DEC 1982 1907
44	68:30.10S	74:00.40E	12 DEC 1982 2128
45	69:00.40S	75:02.20E	13 DEC 1982 0105
46	69:00.40S	75:54.10E	13 DEC 1982 0357
47	68:55.50S	77:06.20E	13 DEC 1982 0709
48	68:34.00S	76:58.20E	13 DEC 1982 1015
49	67:56.50S	76:55.20E	13 DEC 1982 1400
50	67:56.30S	78:01.00E	13 DEC 1982 1748

CTD Station	Position	Date	Time (GMT)
51	67:41.10S	79:07.10E	13 DEC 1982 2159
52	67:30.50S	78:20.00E	14 DEC 1982 0249
53	67:30.10S	76:56.10E	14 DEC 1982 0707
54	67:37.00S	76:00.20E	14 DEC 1982 0942
55	68:00.20S	75:55.10E	14 DEC 1982 1204
56	68:01.20S	74:57.40E	14 DEC 1982 1415
57	67:29.50S	74:59.40E	14 DEC 1982 1721
58	67:30.40S	74:58.30E	14 DEC 1982 2107
59	67:32.30S	74:52.00E	15 DEC 1982 0151
60	67:32.20S	74:49.30E	15 DEC 1982 0616
61	67:33.30S	74:49.90E	15 DEC 1982 0902
62	67:35.00S	74:38.50E	15 DEC 1982 1332
63	67:33.50S	74:39.80E	15 DEC 1982 1711
64	67:30.60S	74:59.00E	15 DEC 1982 2210
65	67:32.40S	74:40.50E	16 DEC 1982 0008
66	67:35.00S	74:40.00E	16 DEC 1982 0034
67	67:35.00S	74:40.00E	16 DEC 1982 0058
68	67:35.00S	74:40.00E	16 DEC 1982 0214
69	67:35.00S	74:40.00E	16 DEC 1982 0242
70	67:35.00S	74:40.00E	16 DEC 1982 0218
71	67:35.00S	74:40.00E	16 DEC 1982 0230
72	67:35.00S	74:40.00E	16 DEC 1982 0249
73	67:35.00S	74:40.00E	16 DEC 1982 0335
74	67:35.00S	74:40.00E	16 DEC 1982 0000
75	67:35.00S	74:40.00E	16 DEC 1982 0000
76	66:48.00S	74:41.20E	16 DEC 1982 1741
77	66:05.00S	73:32.00E	17 DEC 1982 0306
78	65:12.70S	72:28.30E	17 DEC 1982 0000
79	64:00.10S	71:30.80E	17 DEC 1982 0000

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.

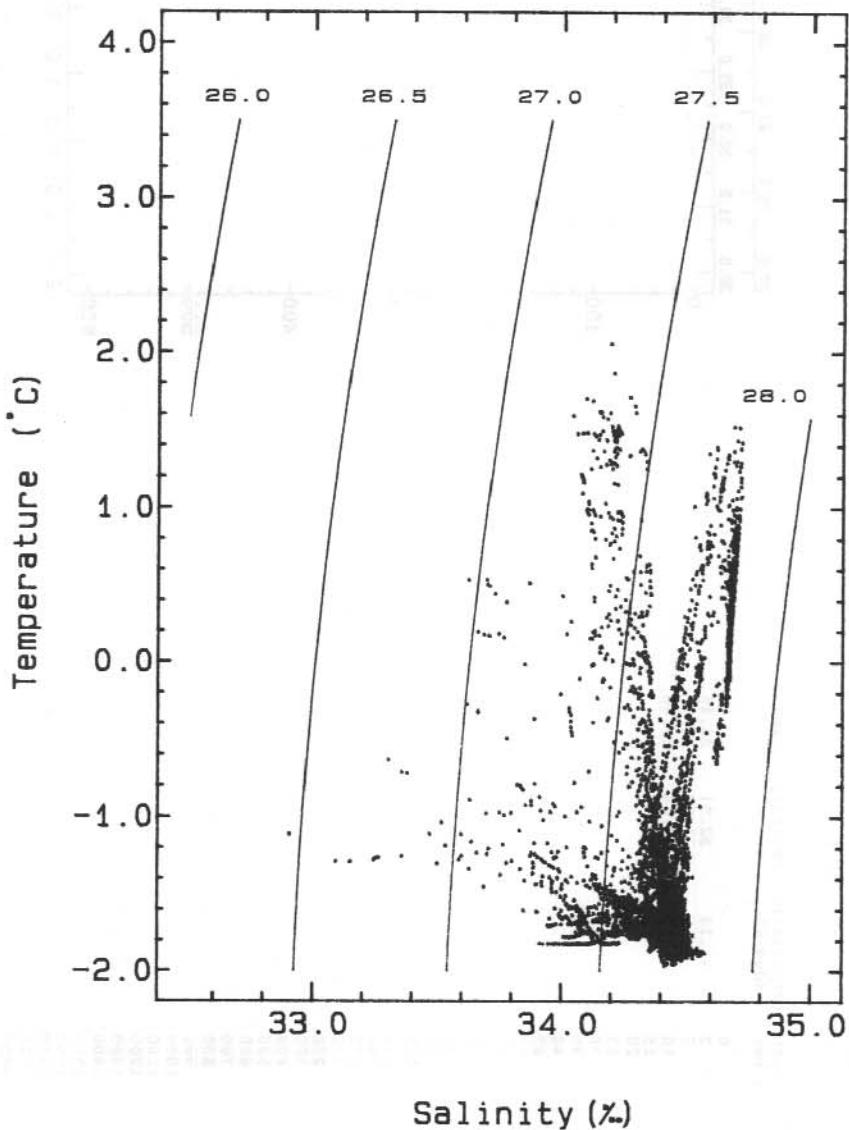
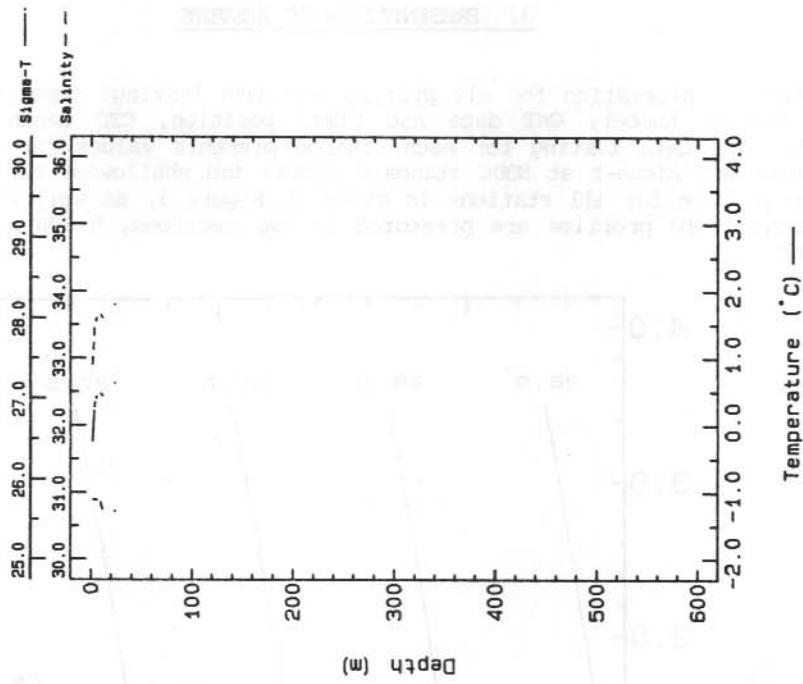


Figure 3. T/S data from all stations.

Cruise : ADBEX1
 Station number : 1
 Date : 19 NOV 1982
 Start Time : 1503 GMT
 Ship : NEELA DAN
 Position : 61°22' 20S 89°54'10E
 Cast Depth (m) : 3200
 Bottom Depth (m) : 4221 m

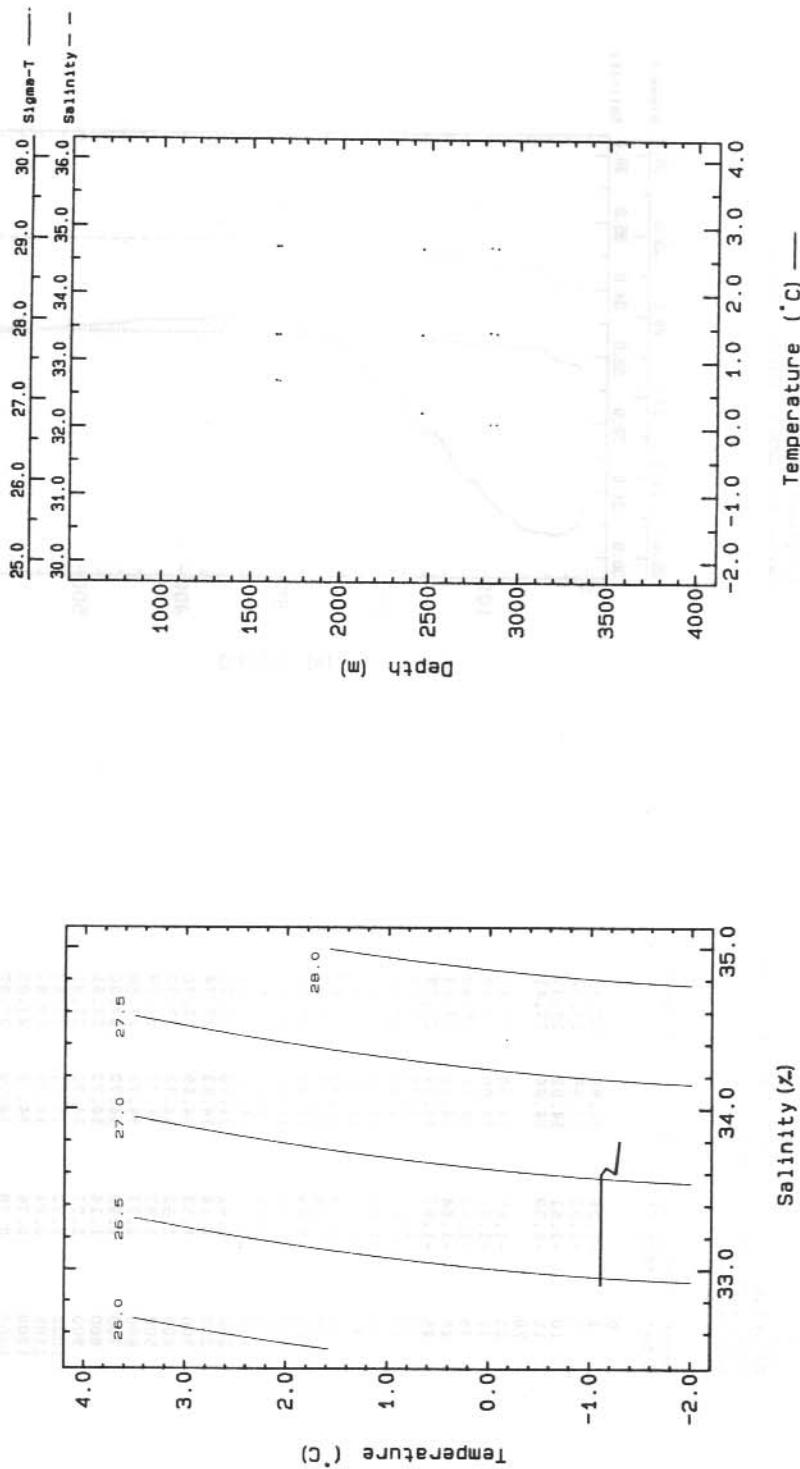
Cruise : ADBEX1 Station 1
 19 NOV 1982 1503 GMT
 Latitude 61° 22.20S
 Longitude 89° 54.10E
 Depth: CTD 3200 m Bottom 4221 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.11	32.91	26.46
5	-1.11	33.53	26.97
10	-1.16	33.64	27.06
15			
20			
25			
30			
35			
40			
45			
50			
60			
70			
75			
80			
90			
100			
125			
150			
175			
200			
250			
300			
400			
500			
600			
700			
800			
900			
1000			
1100			
1200			
1300			
1400			
1500			
1750			
2000			
2500			
3000			



Cruise: ADBEX1 Station: 1
19 NOV 1982 1503 GMT
Latitude : 61:22.20S
Longitude: 89:54.10E
Depth: CTD 3200 m Bottom 4221 m

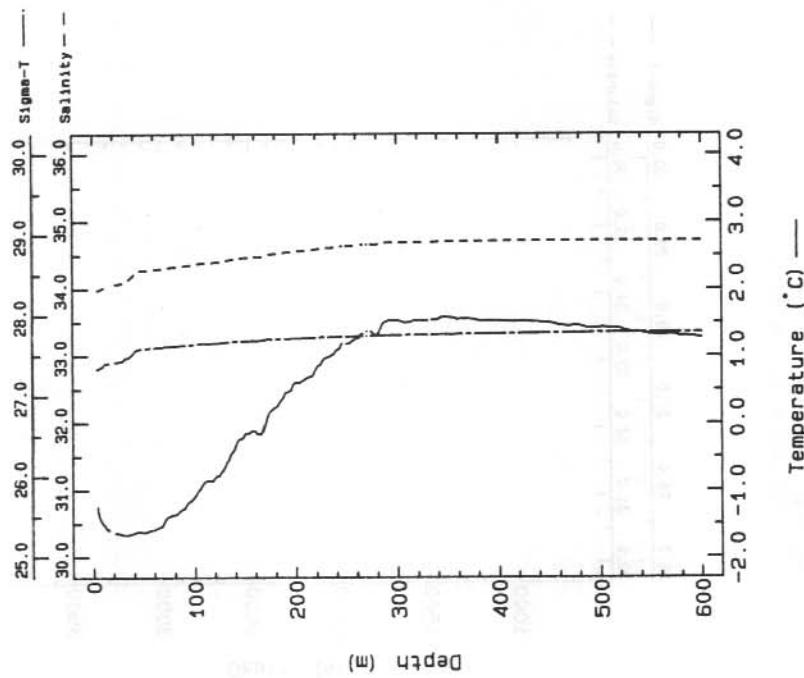
Cruise : ADBEX1 Station 1
19 NOV 1982 1503 GMT
Latitude 61: 22.20S
Longitude 89: 54.10E
Depth: CTD 3200 m Bottom 4221 m



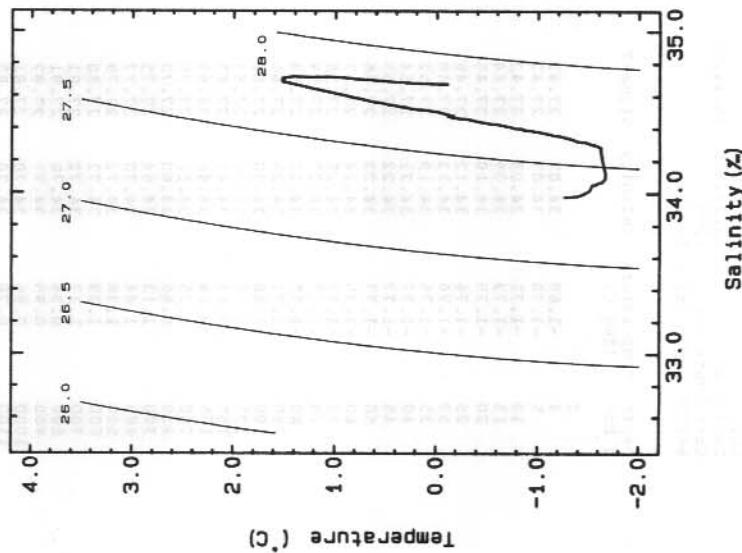
Cruise : ADBEX1
 Station number : 2
 Date : 20 NOV 1982
 Start Time : 1327 GMT
 Ship : NELLA DAN
 Position : 62°27'.80S 87°50'.00E
 Cast Depth (m) : 3200
 Bottom Depth (m) : 3838 m

Cruise : ADBEX1 Station 2
 20 NOV 1982 1327 GMT
 Latitude 62° 27'.80S
 Longitude 87° 50'.00E
 Depth: CTD 3200 m Bottom 3838 m

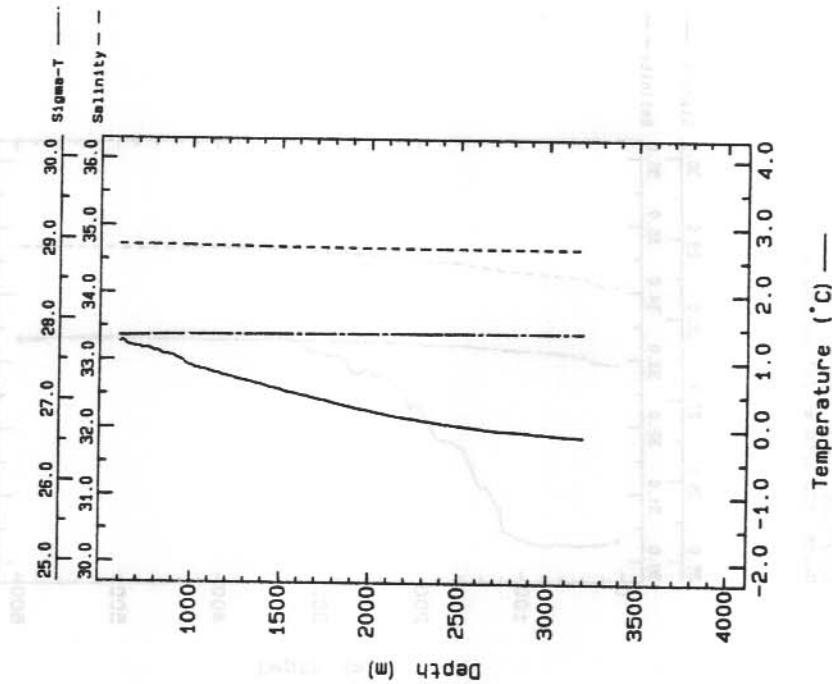
Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.26	33.98	27.33
4	-1.33	33.98	27.34
5	-1.51	34.02	27.37
10	-1.59	34.06	27.41
15	-1.65	34.08	27.43
20	-1.67	34.09	27.44
25	-1.66	34.15	27.49
30	-1.67	34.09	27.44
35	-1.66	34.15	27.49
40	-1.64	34.21	27.53
45	-1.62	34.27	27.59
50	-1.63	34.28	27.59
55	-1.59	34.29	27.60
60	-1.48	34.32	27.62
70	-1.48	34.32	27.62
75	-1.39	34.32	27.62
80	-1.36	34.33	27.62
90	-1.26	34.35	27.63
100	-1.09	34.37	27.65
125	-0.76	34.41	27.66
150	-0.16	34.47	27.69
175	0.17	34.52	27.71
200	0.61	34.56	27.72
250	1.18	34.63	27.74
300	1.52	34.69	27.76
400	1.52	34.71	27.77
500	1.42	34.72	27.79
600	1.27	34.71	27.80
700	1.20	34.72	27.80
800	1.14	34.72	27.81
900	1.07	34.72	27.81
1000	0.92	34.71	27.82
1100	0.84	34.71	27.82
1200	0.76	34.70	27.82
1300	0.70	34.70	27.82
1400	0.64	34.69	27.82
1500	0.57	34.69	27.82
1750	0.41	34.68	27.83
2000	0.25	34.68	27.83
2500	0.04	34.67	27.84
3000	-0.08	34.67	27.84



Cruise: ADBEX1 Station: 2
20 NOV 1982 1327 GMT
Latitude : 62.27.80S
Longitude: 87.50.00E
Depth: CTD 3200 m Bottom 3838 m



Cruise : ADBEX1 Station 2
20 NOV 1982 1327 GMT
Latitude 62.27.80S
Longitude 87.50.00E
Depth: CTD 3200 m Bottom 3838 m



Cruise	Station number	Temperature (deg C)	Salinity	Sigma-T
ADBEX1	3	-1.69	34.07	27.42
Date	21 NOV 1982	-1.70	34.08	27.42
Start Time	0624 GMT	-1.71	34.08	27.43
Ship	NEELA	-1.73	34.19	27.44
Position	63:11.50S 85:44.30E	-1.75	34.10	27.45
Cast Depth (m)	3200	-1.76	34.12	27.46
Bottom Depth (m)	3792 m	-1.76	34.13	27.48
Depth (m)	0	-1.76	34.19	27.52
Depth (m)	40	-1.77	34.21	27.54
Depth (m)	45	-1.77	34.22	27.55
Depth (m)	50	-1.77	34.23	27.55
Depth (m)	60	-1.75	34.24	27.57
Depth (m)	70	-1.77	34.26	27.58
Depth (m)	75	-1.77	34.27	27.59
Depth (m)	80	-1.75	34.28	27.59
Depth (m)	90	-1.72	34.29	27.60
Depth (m)	100	-1.68	34.30	27.61
Depth (m)	125	-1.15	34.36	27.64
Depth (m)	150	-0.61	34.42	27.67
Depth (m)	175	-0.19	34.46	27.68
Depth (m)	200	0.25	34.52	27.70
Depth (m)	250	0.86	34.60	27.73
Depth (m)	300	1.13	34.64	27.75
Depth (m)	400	1.44	34.70	27.77
Depth (m)	500	1.38	34.72	27.79
Depth (m)	600	1.29	34.72	27.80
Depth (m)	700	1.17	34.72	27.81
Depth (m)	800	0.94	34.70	27.81
Depth (m)	900	0.95	34.71	27.82
Depth (m)	1000	0.86	34.70	27.81
Depth (m)	1100	0.78	34.70	27.82
Depth (m)	1200	0.69	34.69	27.82
Depth (m)	1300	0.65	34.69	27.82
Depth (m)	1400	0.58	34.69	27.82
Depth (m)	1500	0.52	34.69	27.82
Depth (m)	1750	0.35	34.68	27.83
Depth (m)	2000	0.21	34.67	27.83
Depth (m)	2500			
Depth (m)	3000			

Cruise : ADBEX1 Station 3
 21 NOV 1982 0624 GMT
 Latitude 63:11.50S
 Longitude 85:44.30E
 Depth: CTD 3200 m Bottom 3792 m

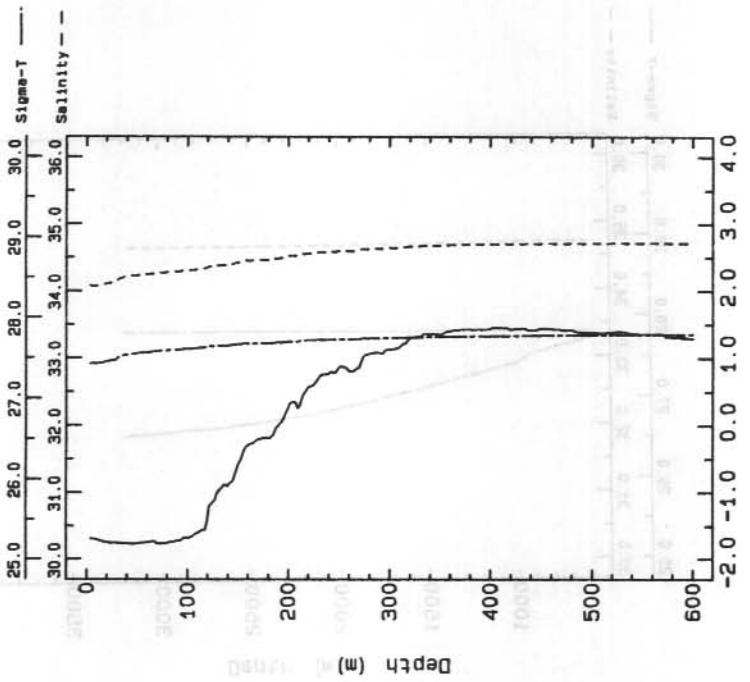
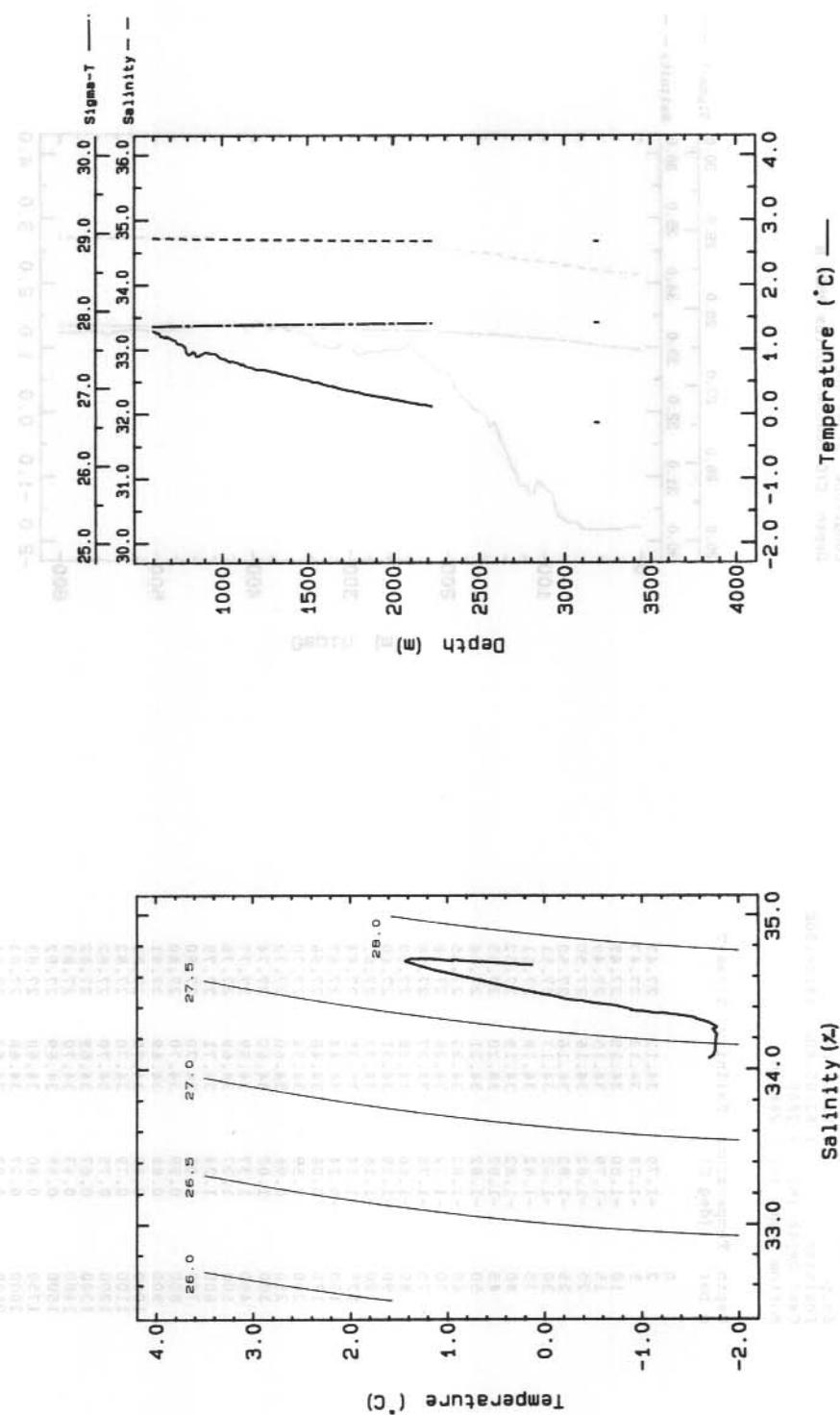
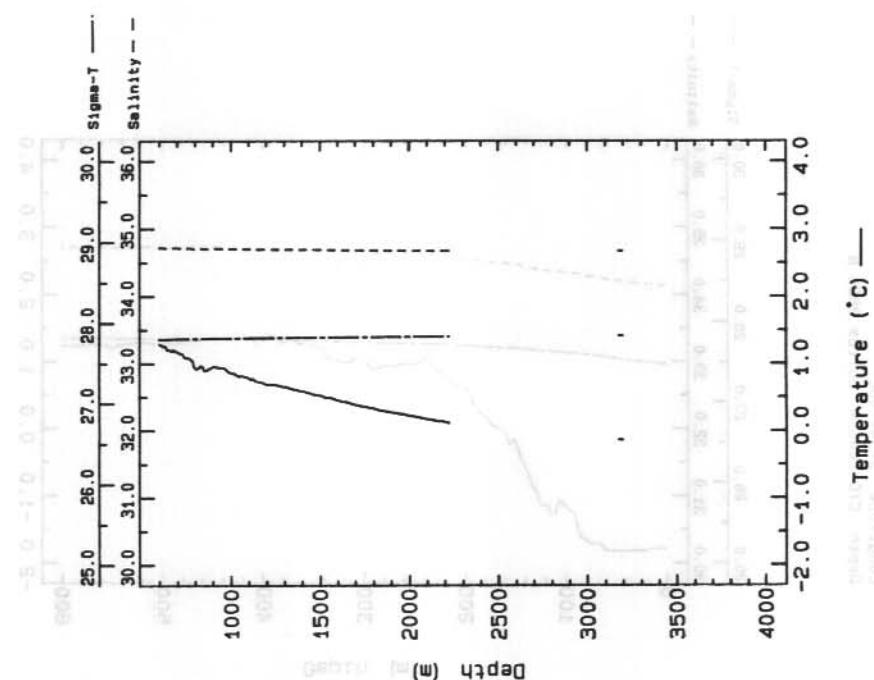


Fig. 14. Temperature (°C), Salinity (‰), and Sigma-T profiles versus depth for CTD cast 3.

Cruise: ADBEX1 Station: 3
 21 Nov 1982 0624 GMT
 Latitude : 63: 11.50S
 Longitude: 65: 44.30E
 Depth: CTD 3200 m Bottom 3792 m

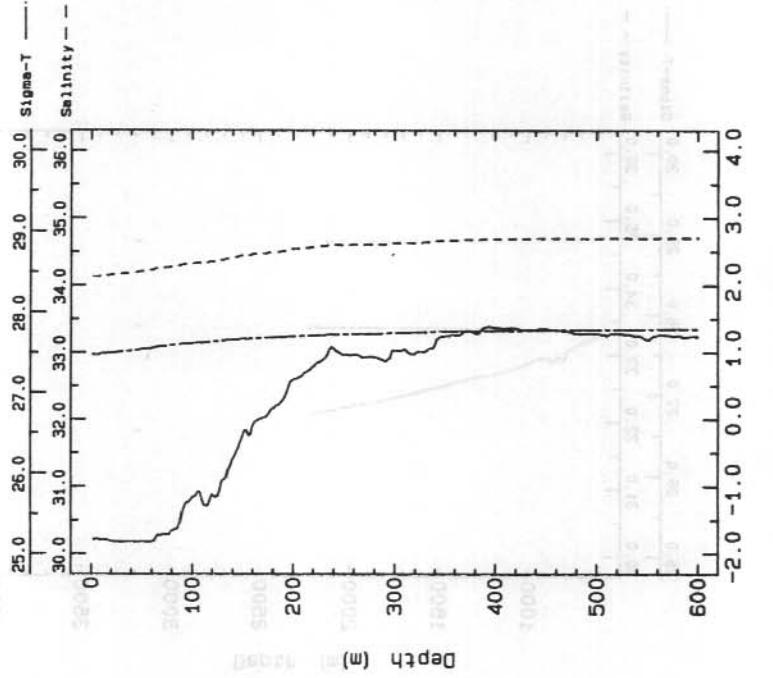


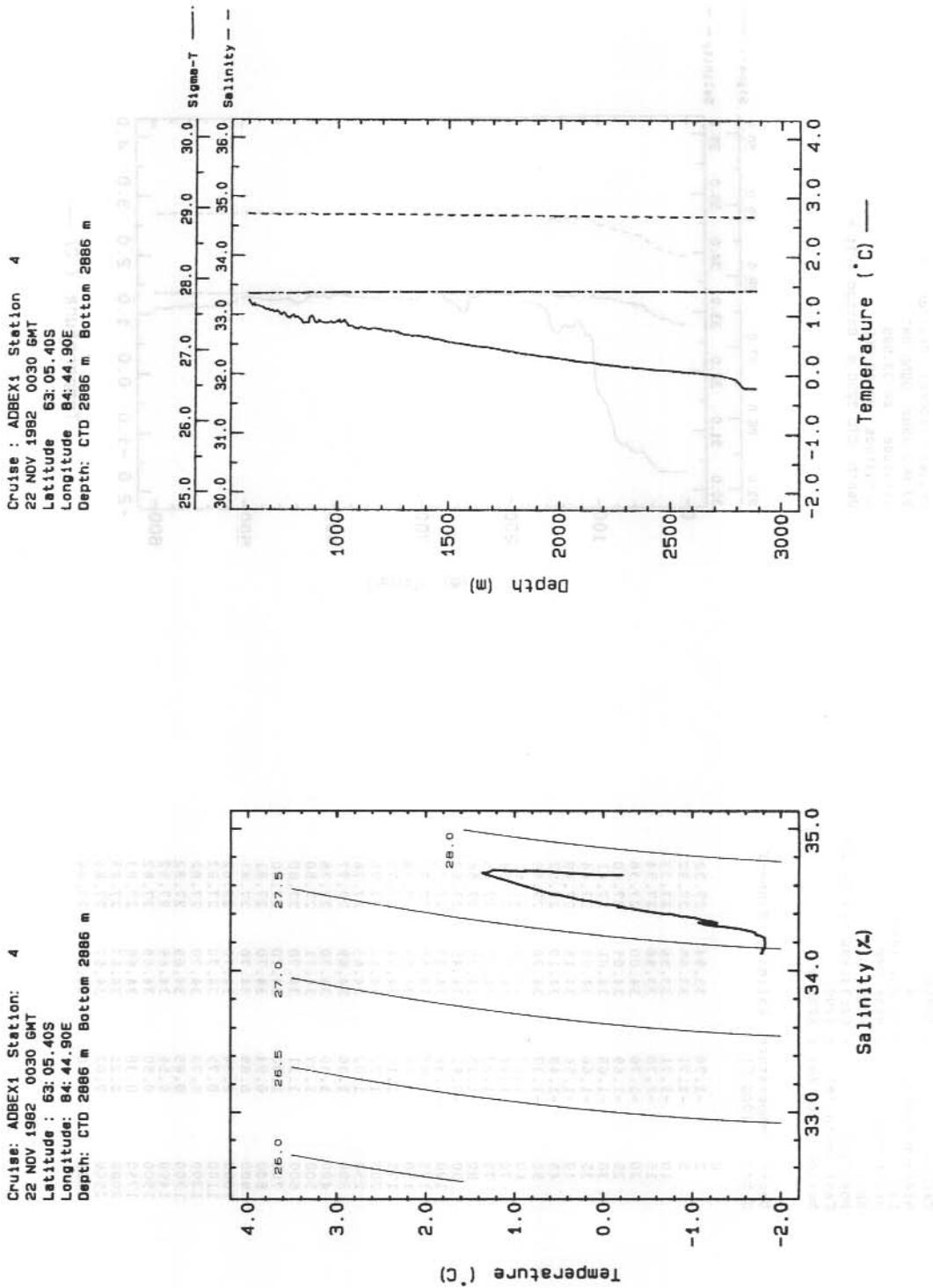
Cruise: ADBEX1 Station: 3
 21 Nov 1982 0624 GMT
 Latitude : 63: 11.50S
 Longitude: 65: 44.30E
 Depth: CTD 3200 m Bottom 3792 m



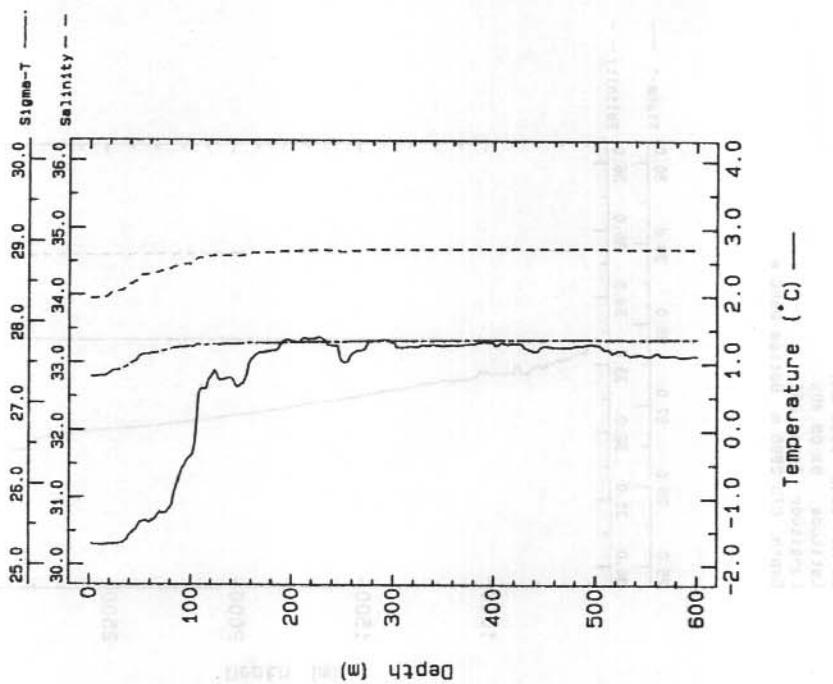
Cruise : ADBEX1 Station : 4
 Station number : 4
 Date : 22 NOV 1982
 Start Time : 0030 GMT
 Ship : NELLA DAN
 Position : 63°05'.40S 84°44'.90E
 Cast Depth (m) : 2886 m
 Bottom Depth (m) : 2886 m

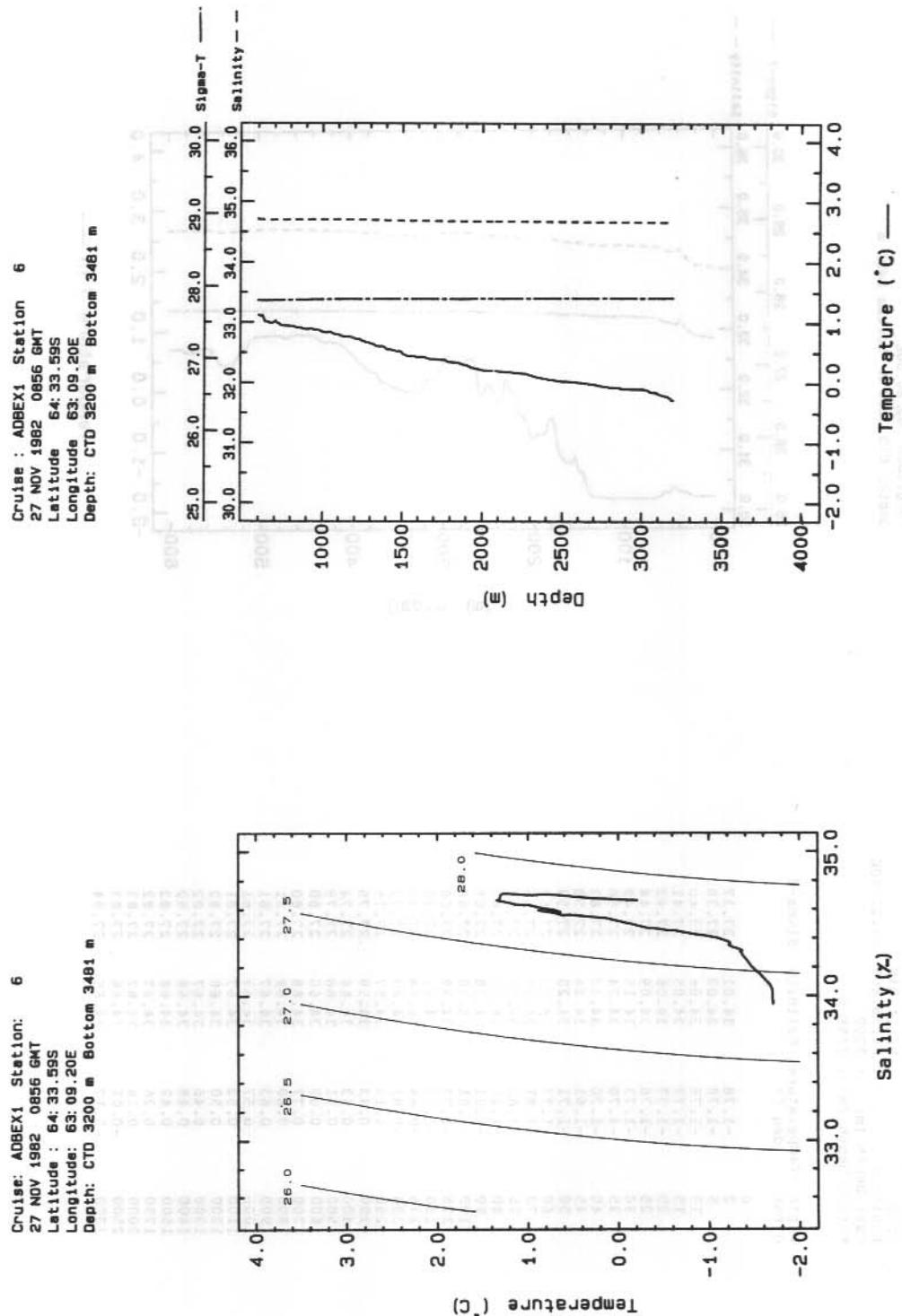
Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.79	34.12	27.47
5	-1.78	34.12	27.47
10	-1.80	34.15	27.49
15	-1.79	34.15	27.49
20	-1.82	34.16	27.50
25	-1.82	34.16	27.50
30	-1.82	34.17	27.51
35	-1.82	34.18	27.51
40	-1.82	34.19	27.52
45	-1.82	34.20	27.53
50	-1.82	34.21	27.54
60	-1.82	34.23	27.55
70	-1.72	34.26	27.58
75	-1.70	34.27	27.58
80	-1.66	34.28	27.59
90	-1.39	34.31	27.60
100	-1.16	34.33	27.61
125	-1.14	34.35	27.64
150	-0.24	34.44	27.67
175	0.06	34.48	27.68
200	0.59	34.54	27.70
250	0.96	34.60	27.72
300	1.02	34.62	27.74
400	1.37	34.49	27.77
500	1.27	34.69	27.78
600	1.24	34.71	27.79
700	1.06	34.70	27.80
800	0.99	34.70	27.80
900	0.88	34.69	27.81
1000	0.89	34.70	27.81
1100	0.79	34.75	27.82
1200	0.75	34.70	27.82
1300	0.67	34.69	27.82
1400	0.63	34.70	27.83
1500	0.55	34.69	27.82
1750	0.40	34.68	27.83
2000	0.27	34.68	27.83
2500	0.07	34.67	27.84





Cruise	ADBEX1	Station	6
Station number	6		
Date	27 NOV 1982		
Start Time	0856 GMT		
Ship	NEELA DAN		
Position	64°33'.59S 63°09'.20E		
Cast Depth (m)	3200		
Bottom Depth (m)	3481 m		
Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.70	33.94	27.32
5	-1.71	33.95	27.32
10	-1.71	33.96	27.33
15	-1.70	33.96	27.34
20	-1.70	34.00	27.36
25	-1.69	34.05	27.40
30	-1.68	34.06	27.41
35	-1.66	34.09	27.44
40	-1.56	34.15	27.49
45	-1.49	34.19	27.52
50	-1.37	34.28	27.58
60	-1.37	34.31	27.61
70	-1.21	34.35	27.64
75	-1.23	34.37	27.65
80	-1.15	34.39	27.66
90	-0.62	34.45	27.69
100	-0.38	34.47	27.70
125	0.87	34.59	27.72
150	0.69	34.59	27.74
175	1.17	34.64	27.75
200	1.32	34.66	27.75
250	1.02	34.65	27.76
300	1.30	34.69	27.77
400	1.30	34.70	27.78
500	1.27	34.70	27.78
600	1.11	34.71	27.80
700	1.00	34.70	27.80
800	0.94	34.70	27.81
900	0.89	34.70	27.81
1000	0.84	34.70	27.82
1100	0.79	34.70	27.82
1200	0.73	34.70	27.82
1300	0.65	34.69	27.82
1400	0.56	34.69	27.82
1500	0.50	34.69	27.82
1750	0.38	34.68	27.83
2000	0.21	34.67	27.83
2500	0.02	34.67	27.84
3000	-0.10	34.67	27.84

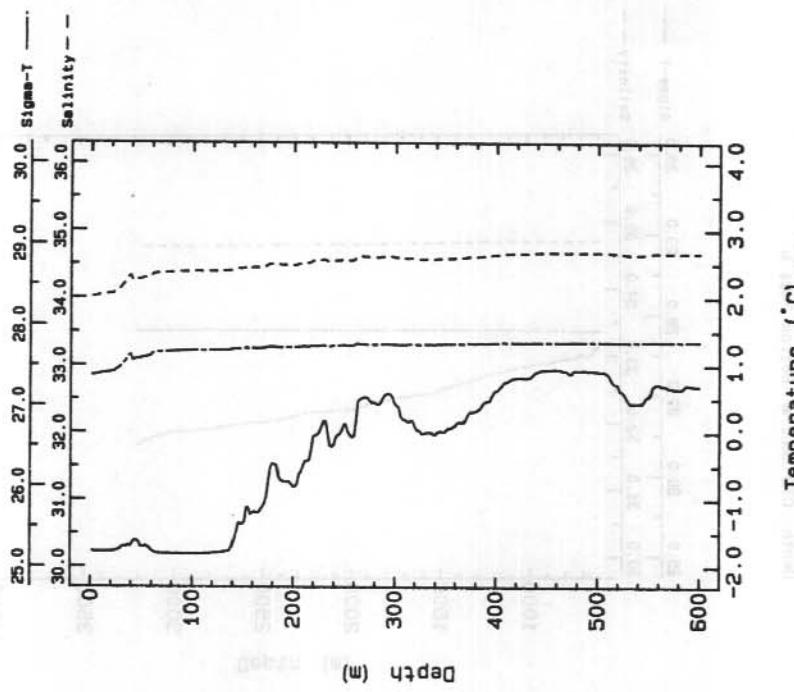




Cruise : ADBEX1 Station 7
 Cruise number : 7
 Date : 27 NOV 1982
 Start Time : 1710 GMT
 Ship : NELLA DAN
 Position : 64°58'.80S 63°20'.80E
 Cast Depth (m) : 3200
 Bottom Depth (m) : 3498 m

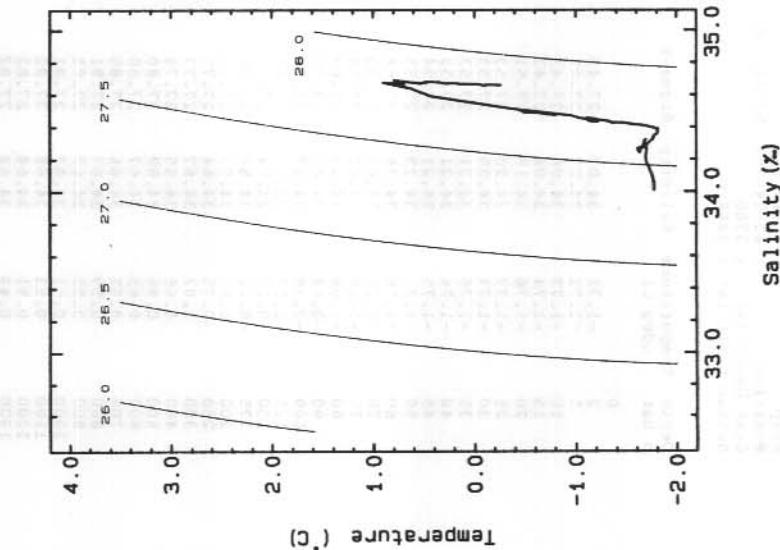
Depth (bar)
 Temperature (deg C)

Depth (bar)	Temperature (deg C)	Salinity	Sigma-T
0	34.01	27.37	
2	-1.78	34.02	27.38
5	-1.78	34.04	27.40
10	-1.78	34.04	27.40
15	-1.78	34.05	27.41
20	-1.77	34.06	27.42
25	-1.76	34.09	27.44
30	-1.73	34.15	27.49
35	-1.70	34.24	27.56
40	-1.70	34.32	27.63
45	-1.51	34.26	27.58
50	-1.71	34.28	27.59
60	-1.77	34.32	27.63
70	-1.81	34.36	27.66
75	-1.81	34.37	27.67
80	-1.81	34.37	27.67
90	-1.81	34.38	27.68
100	-1.81	34.38	27.68
125	-1.79	34.39	27.68
150	-1.37	34.43	27.70
175	-0.84	34.48	27.73
200	-0.81	34.47	27.72
250	0.13	34.57	27.75
300	0.43	34.59	27.75
400	0.63	34.64	27.78
500	0.91	34.68	27.79
600	0.69	34.66	27.80
700	0.77	34.68	27.80
800	0.80	34.69	27.81
900	0.63	34.67	27.81
1000	0.57	34.67	27.81
1100	0.52	34.67	27.81
1200	0.50	34.68	27.82
1300	0.46	34.67	27.82
1400	0.48	34.68	27.82
1500	0.42	34.68	27.82
1750	0.26	34.67	27.83
2000	0.16	34.67	27.83
2500	-0.01	34.66	27.83
3000	-0.17	34.66	27.84



Cruise: ADBEX1 Station: 7
27 NOV 1982 1710 GMT
Latitude : 64° 58.80S
Longitude: 63° 20.80E
Depth: CTD 3200 m Bottom 3498 m

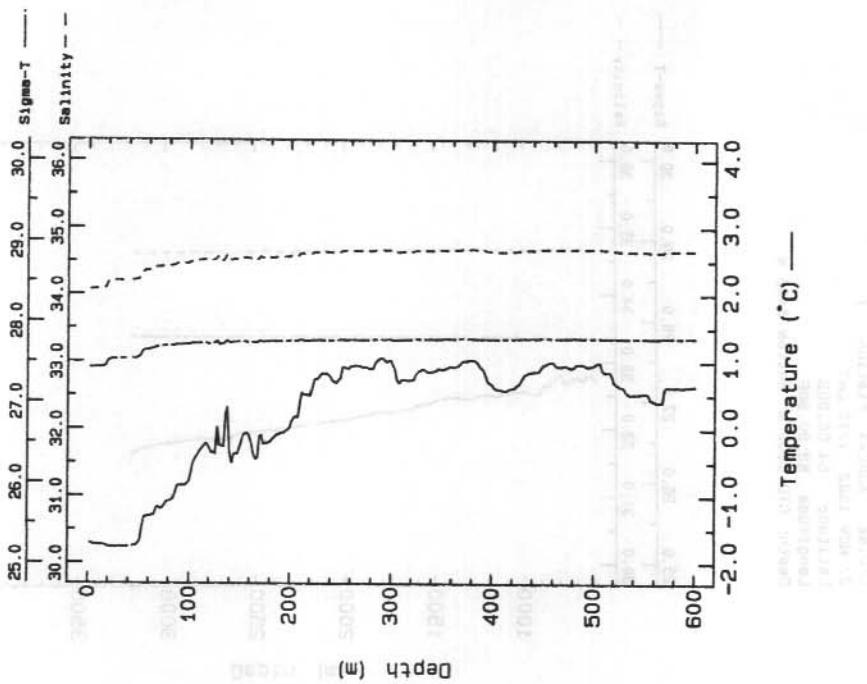
Cruise : ADBEX1 Station 7
27 NOV 1982 1710 GMT
Latitude 64:58.80S
Longitude 63:20.80E
Depth: CTD 3200 m Bottom 3498 m



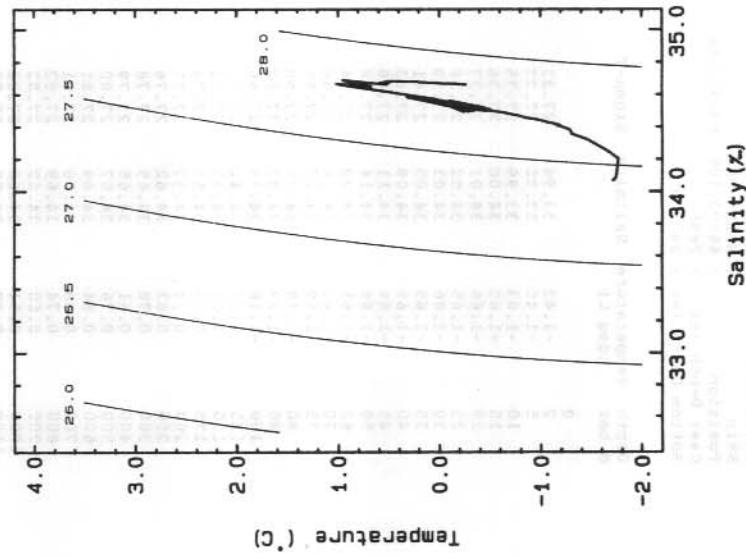
Cruise : ADBEX1 Station 8
 Station number : 8
 Date : 28 NOV 1982
 Start Time : 0208 GMT
 Ship : NEELIA DAN
 Position : 65°24'.30S 63°25'.10E
 Cast Depth (m) : 3200
 Bottom Depth (m) : 3466 m

Depth (m)
 Temperature (deg C)
 Salinity
 Sigma-T

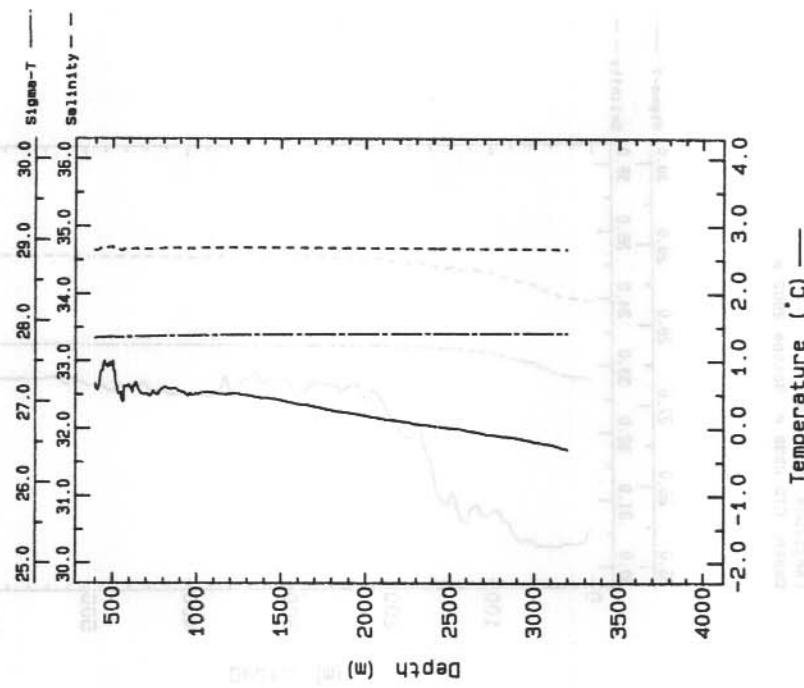
Depth (m)	Temperature (deg C)	Salinity	Sigma-T
0	-1.71	34.07	27.42
5	-1.73	34.07	27.43
10	-1.73	34.08	27.43
15	-1.74	34.08	27.43
20	-1.76	34.18	27.51
25	-1.77	34.20	27.53
30	-1.77	34.20	27.53
35	-1.76	34.21	27.53
40	-1.76	34.21	27.53
45	-1.75	34.21	27.54
50	-1.71	34.23	27.55
60	-1.29	34.36	27.64
70	-1.16	34.41	27.68
75	-1.16	34.42	27.69
80	-1.08	34.43	27.69
90	-0.84	34.45	27.70
100	-0.78	34.47	27.72
125	-0.37	34.51	27.73
150	-0.27	34.54	27.75
175	-0.22	34.54	27.75
200	0.03	34.57	27.76
250	0.75	34.64	27.77
300	1.02	34.67	27.77
400	0.66	34.65	27.78
500	0.96	34.69	27.80
600	0.65	34.67	27.80
700	0.51	34.66	27.80
800	0.59	34.67	27.81
900	0.55	34.67	27.81
1000	0.51	34.67	27.81
1100	0.53	34.68	27.82
1200	0.51	34.67	27.82
1300	0.49	34.68	27.82
1400	0.45	34.68	27.83
1500	0.41	34.68	27.83
1750	0.30	34.68	27.83
2000	0.19	34.67	27.83
2500	0.00	34.67	27.84
3000	-0.20	34.66	27.84



Cruise: ADBEX1 Station: B
28 Nov 1982 0208 GMT
Latitude: 65° 24.30S
Longitude: 63° 25.10E
Depth: CTD 3200 m Bottom 3466 m



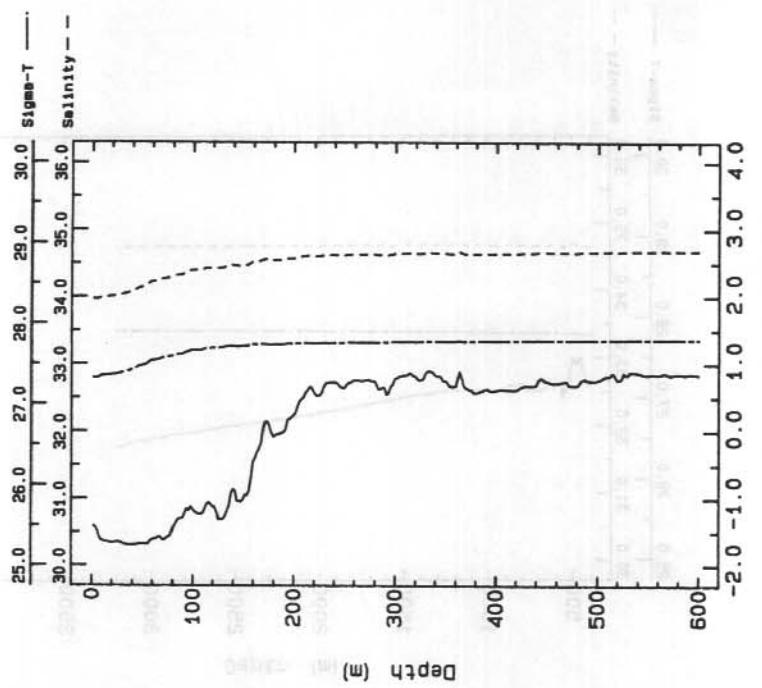
Cruise : ADBEX1 Station: B
28 Nov 1982 0208 GMT
Latitude: 65° 24.30S
Longitude: 63° 25.10E
Depth: CTD 3200 m Bottom 3466 m



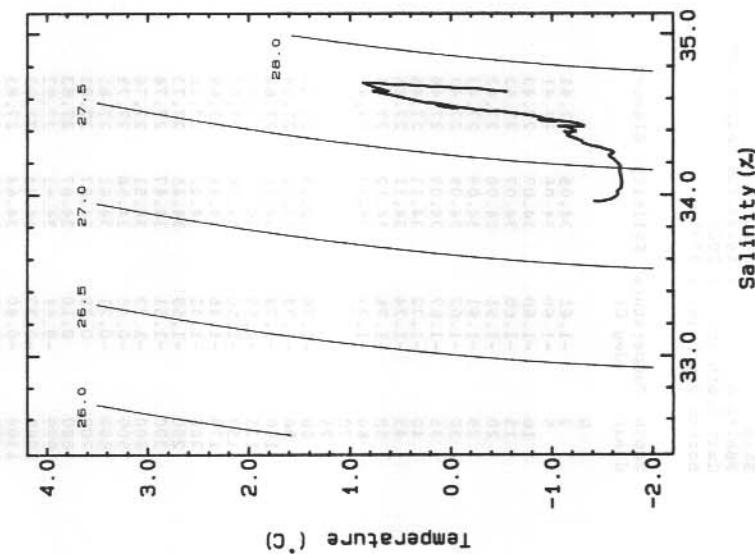
Cruise : ADBEX1 Station 9
 Station number : 9
 Date : 28 NOV 1982
 Start Time : 1313 GMT
 Ship : NEIL DAN
 Position : 66°03'.10S 63°50'.80E
 Cast Depth (m) : 2898
 Bottom Depth (m) : 2902 m

Cruise : ADBEX1 Station 9
 28 NOV 1982 1313 GMT
 Latitude 66:03.10S
 Longitude 63:50.80E
 Depth: CTD 2898 m Bottom 2902 m

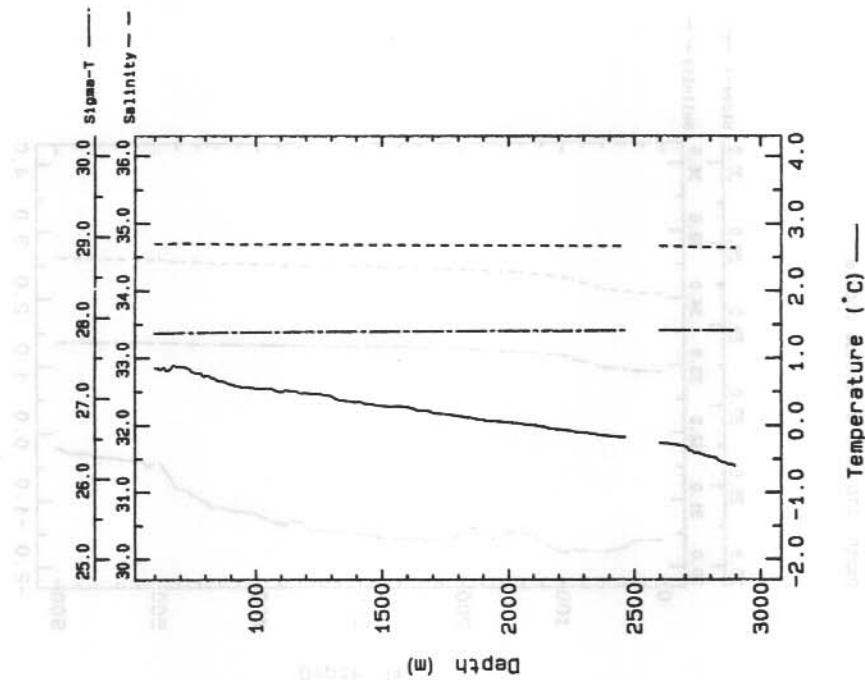
Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.42	33.96	27.13
2	-1.46	33.96	27.33
5	-1.63	33.99	27.35
10	-1.65	34.00	27.36
15	-1.66	34.01	27.37
20	-1.66	34.02	27.38
25	-1.65	34.03	27.39
30	-1.66	34.05	27.41
35	-1.69	34.08	27.43
40	-1.69	34.11	27.46
45	-1.68	34.14	27.48
50	-1.68	34.22	27.54
60	-1.61	34.26	27.58
70	-1.62	34.28	27.59
75	-1.59	34.30	27.60
80	-1.48	34.33	27.62
90	-1.29	34.39	27.66
100	-1.16	34.42	27.70
125	-1.26	34.47	27.72
150	-1.01	34.55	27.74
175	0.10	34.57	27.75
200	0.23	34.62	27.76
250	0.63	34.65	27.78
300	0.78	34.69	27.79
400	0.61	34.65	27.79
500	0.76	34.67	27.80
600	0.84	34.69	27.81
700	0.88	34.70	27.81
800	0.74	34.69	27.82
900	0.60	34.69	27.82
1000	0.54	34.68	27.82
1100	0.49	34.68	27.82
1200	0.47	34.69	27.83
1300	0.43	34.68	27.83
1400	0.34	34.68	27.83
1500	0.28	34.68	27.83
1750	0.16	34.67	27.83
2000	0.04	34.67	27.83
2500			



Cruise: ADBEX1 Station: 9
28 NOV 1982 1313 GMT
Latitude : 66: 03.10S
Longitude: 63: 50.80E
Depth: CTD 2898 m Bottom 2902 m



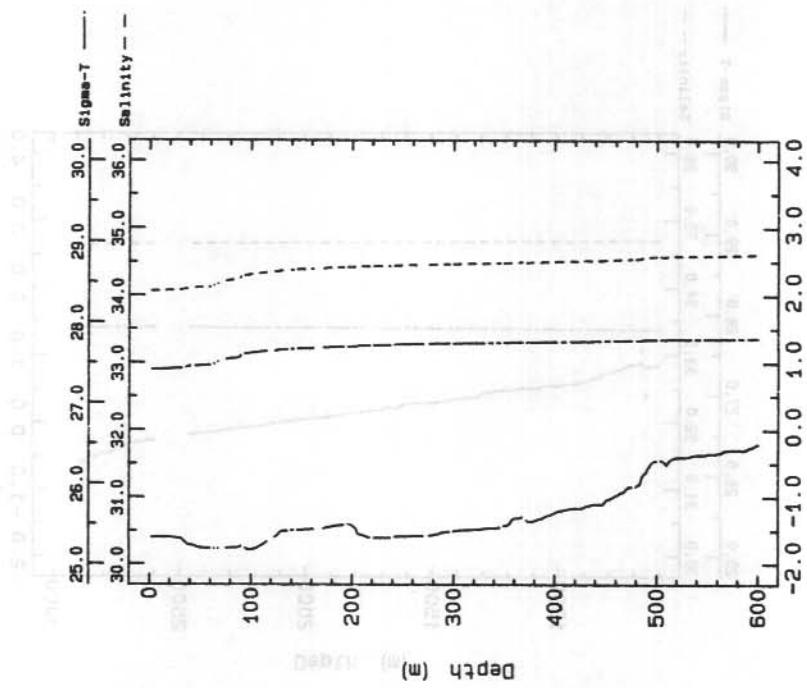
Cruise : ADBEX1 Station 9
28 NOV 1982 1313 GMT
Latitude 66: 03.10S
Longitude 63: 50.80E
Depth: CTD 2898 m Bottom 2902 m



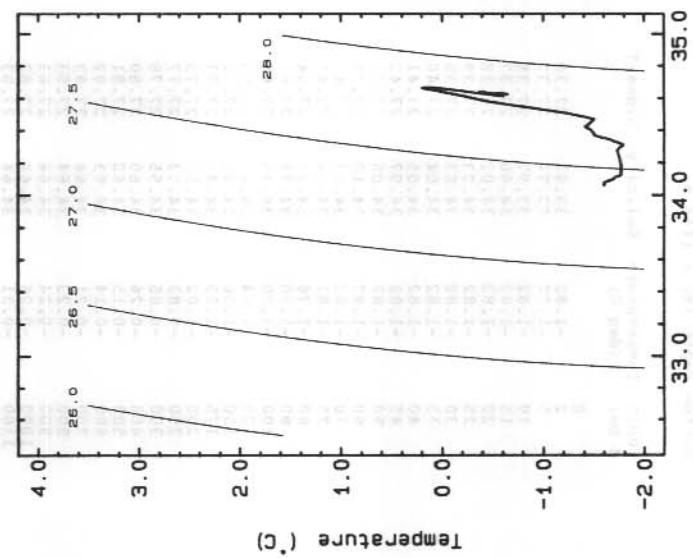
Cruise : ADBEX1
 Station : 10
 Date : 29 NOV 1982
 Start Time : 0101 GMT
 Ship : NELLA DAN
 Position : 66.33.70S 62.54.20E
 Cast Depth (m) : 2000
 Bottom Depth (m) : 2003 m

Cruise : ADBEX1 Station 10
 29 NOV 1982 0101 GMT
 Latitude 66.33.70S
 Longitude 62.54.20E
 Depth: CTD 2000 m Bottom 2003 m

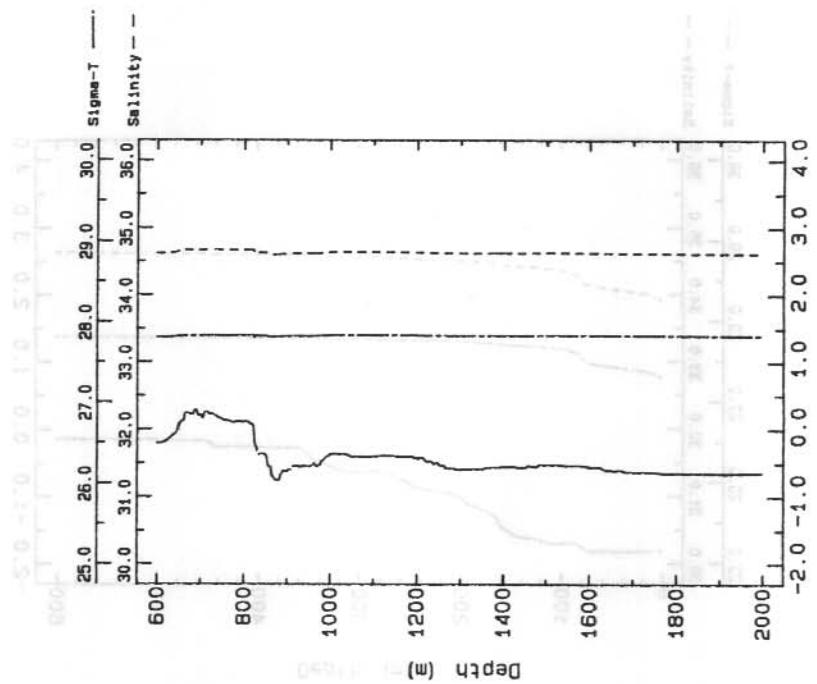
Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.61	34.06	27.41
5	-1.60	34.06	27.41
10	-1.60	34.07	27.42
15	-1.60	34.07	27.42
20	-1.61	34.08	27.42
25	-1.61	34.08	27.43
30	-1.62	34.08	27.43
35	-1.67	34.09	27.44
40	-1.72	34.11	27.46
45	-1.74	34.11	27.46
50	-1.76	34.12	27.46
60	-1.77	34.13	27.47
70			
75			
80	-1.76	34.23	27.55
90	-1.73	34.27	27.59
100	-1.79	34.31	27.62
125	-1.59	34.35	27.65
150	-1.50	34.38	27.67
175	-1.46	34.41	27.69
200	-1.42	34.42	27.70
250	-1.59	34.45	27.73
300	-1.51	34.47	27.74
400	-1.23	34.51	27.76
500	-0.45	34.58	27.79
600	-0.21	34.61	27.81
700	0.20	34.67	27.83
800	0.10	34.67	27.83
900	-0.61	34.61	27.82
1000	-0.37	34.64	27.83
1100	-0.40	34.64	27.83
1200	-0.42	34.63	27.83
1300	-0.60	34.62	27.83
1400	-0.55	34.63	27.83
1500	-0.52	34.63	27.83
1750	-0.64	34.62	27.83



Cruise: ADEEX1 Station: 10
29 NOV 1982 0101 GMT
Latitude : 66.33.70S
Longitude: 62.54.20E
Depth: CTD 2000 m Bottom 2003 m

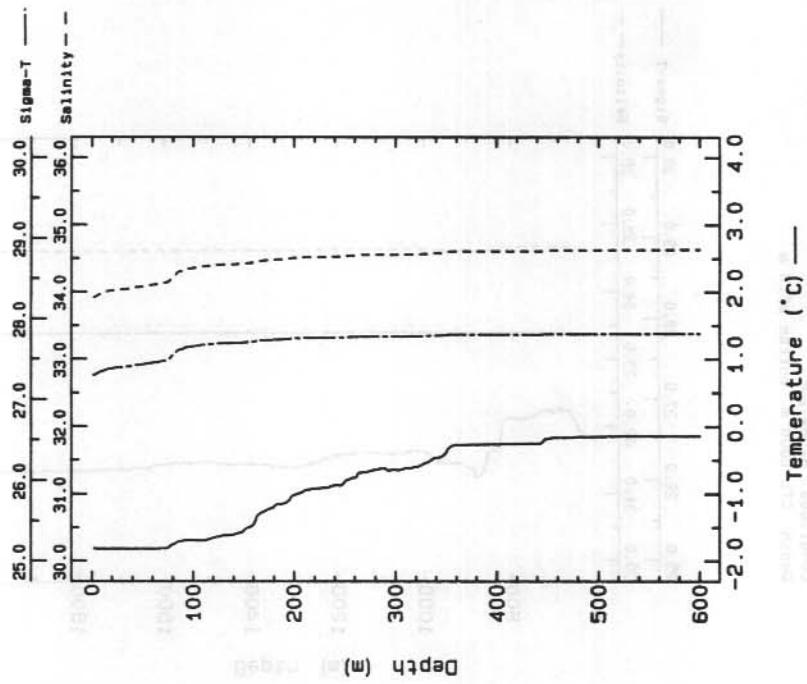


Cruise : ADEEX1 Station 10
29 NOV 1982 0101 GMT
Latitude : 66.33.70S
Longitude 62.54.20E
Depth: CTD 2000 m Bottom 2003 m



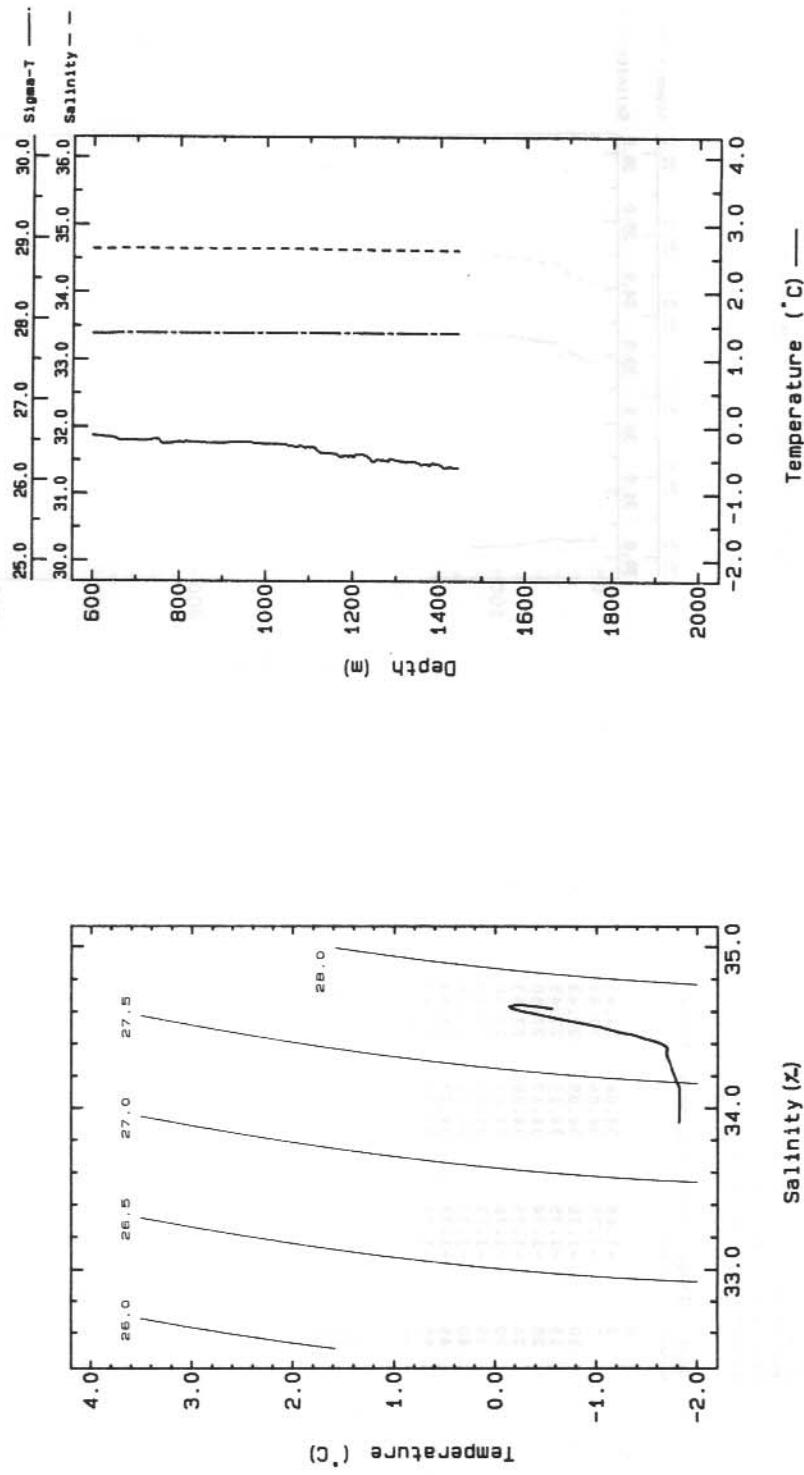
Cruise	Station number	Temperature d bar (deg C)	Salinity	Sigma-T
ABBEEXI	11	-1.82	33.91	27.30
	5	-1.82	33.94	27.32
	10	-1.82	33.97	27.35
	15	-1.82	34.00	27.37
	20	-1.82	34.02	27.38
	25	-1.82	34.03	27.39
	30	-1.82	34.03	27.39
	35	-1.82	34.04	27.40
	40	-1.82	34.05	27.41
	45	-1.82	34.07	27.42
	50	-1.82	34.08	27.43
	60	-1.82	34.10	27.45
	70	-1.82	34.13	27.47
	75	-1.81	34.14	27.48
	80	-1.76	34.21	27.54
	90	-1.70	34.31	27.62
	100	-1.70	34.35	27.65
	125	-1.64	34.40	27.69
	150	-1.56	34.42	27.70
	175	-1.23	34.47	27.73
	200	-1.02	34.51	27.75
	250	-0.83	34.53	27.77
	300	-0.65	34.55	27.78
	400	-0.26	34.60	27.80
	500	-0.15	34.62	27.81
	600	-0.14	34.63	27.82
	700	-0.21	34.64	27.83
	800	-0.23	34.64	27.83
	900	-0.24	34.64	27.83
	1000	-0.26	34.64	27.83
	1100	-0.31	34.64	27.83
	1200	-0.46	34.63	27.83
	1300	-0.51	34.62	27.82
	1400	-0.57	34.62	27.82

Cruise : ABBEXI Station 11
 29 NOV 1982 0840 GMT
 Latitude 66.38.50S
 Longitude 62.58.10E
 Depth: CTD 1446 m Bottom 1448 m



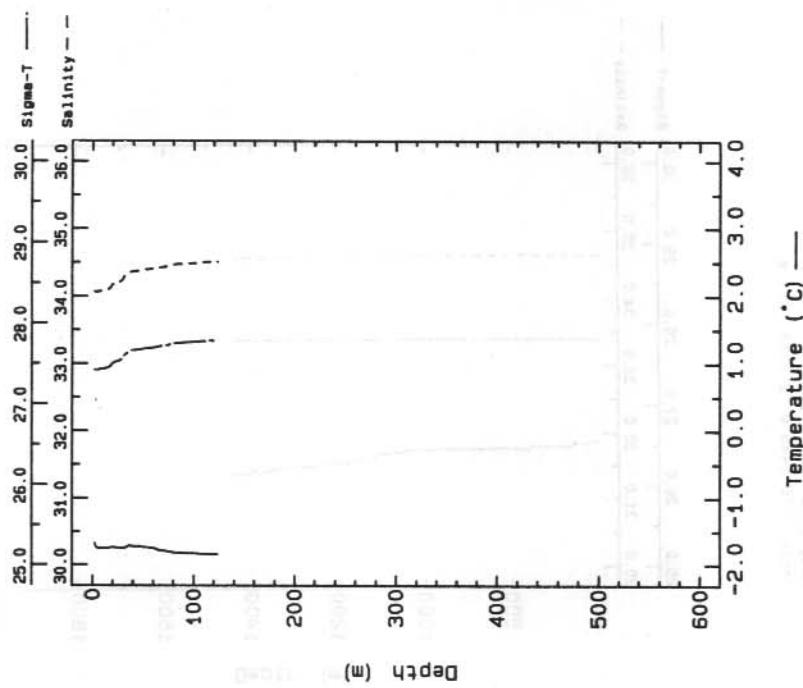
Cruise: ADBEX1 Station: 11
29 NOV 1982 0840 GMT
Latitude : 66°38.50S
Longitude: 62°58.10E
Depth: CTD 1446 m Bottom 1446 m

Cruise : ADBEX1 Station 11
29 Nov 1982 0840 GMT
Latitude 66: 38.50S
Longitude 62: 58.10E
Depth: CTD 1446 m Bottom 1446 m

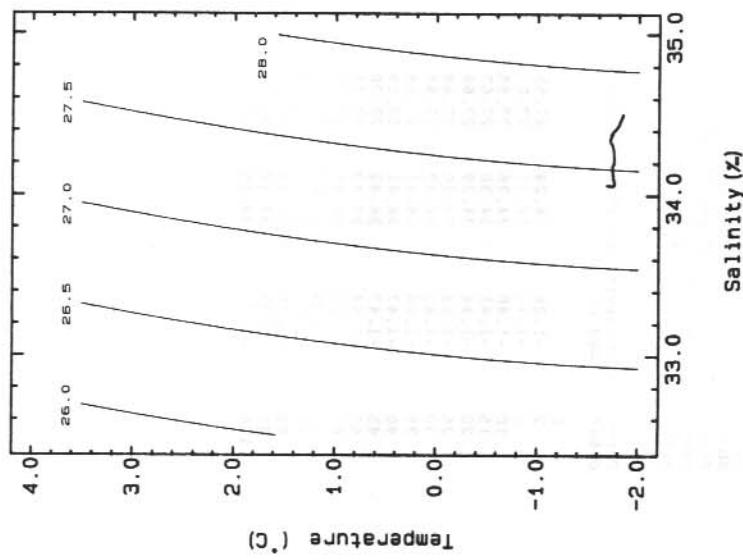


Cruise : ADBEX1 Station 12
 Station number : 12
 Date : 30 NOV 1982
 Start Time : 0409 GMT
 Ship : NEELLA DAN
 Position : 66°53'.40S 63°02'.90E
 Cast Depth (m) : 126
 Bottom Depth (m) : 130 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.68	34.06	27.42
5	-1.75	34.06	27.42
10	-1.76	34.08	27.43
15	-1.75	34.10	27.45
20	-1.74	34.17	27.50
25	-1.75	34.20	27.53
30	-1.76	34.24	27.56
35	-1.73	34.33	27.63
40	-1.73	34.36	27.66
45	-1.73	34.37	27.67
50	-1.74	34.38	27.68
60	-1.76	34.40	27.69
70	-1.80	34.43	27.72
75	-1.81	34.44	27.73
80	-1.82	34.46	27.75
90	-1.83	34.48	27.76
100	-1.84	34.49	27.76
125	-1.74	34.45	27.73

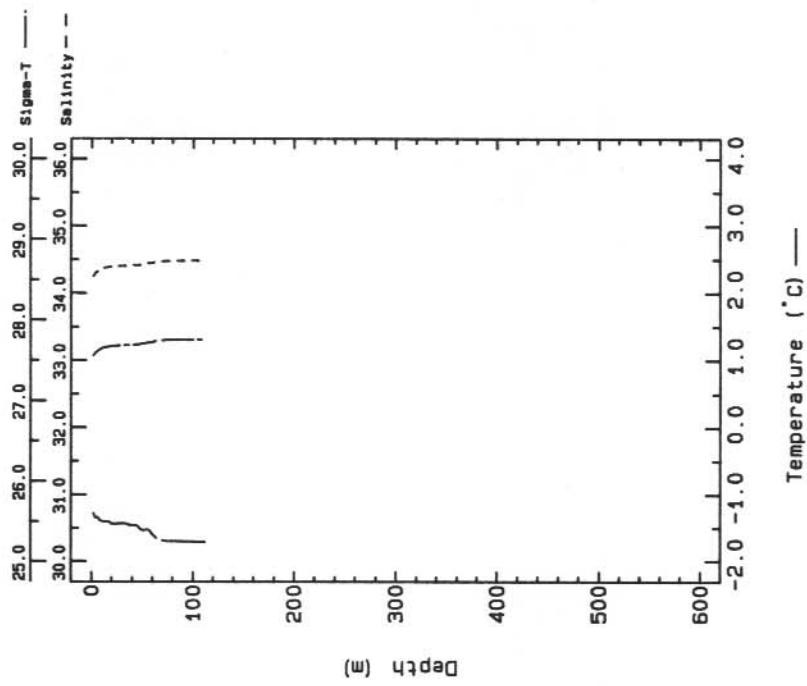


Cruise: ADBEX1 Station: 12
30 NOV 1982 0409 GMT
Latitude : 66° 53.40S
Longitude: 63° 02.90E
Depth: CTD 126 m Bottom 130 m

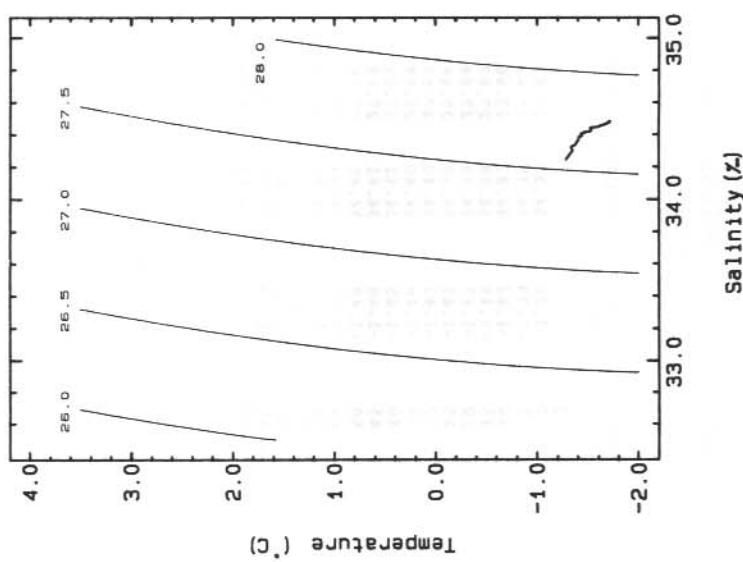


Cruise	Station number	Temperature d bar (deg C)	Salinity	Sigma-T
ADBEX1	13	-1.28	34.24	27.55
		-1.34	34.31	27.61
		-1.40	34.36	27.65
		-1.41	34.38	27.67
		-1.44	34.39	27.68
		-1.44	34.40	27.68
		-1.43	34.40	27.68
		-1.44	34.41	27.69
		-1.44	34.41	27.69
		-1.47	34.41	27.69
		-1.47	34.42	27.70
		-1.54	34.43	27.71
		-1.60	34.45	27.73
		-1.69	34.47	27.75
		-1.71	34.48	27.75
		-1.70	34.48	27.75
		-1.71	34.48	27.75
		-1.71	34.48	27.76
		-1.71	34.48	27.76

Cruise : ADBEX1 Station 13
 03 DEC 1982 0948 GMT
 Latitude 67.18.70S
 Longitude 65.53.40E
 Depth: CTD 114 m Bottom 117 m



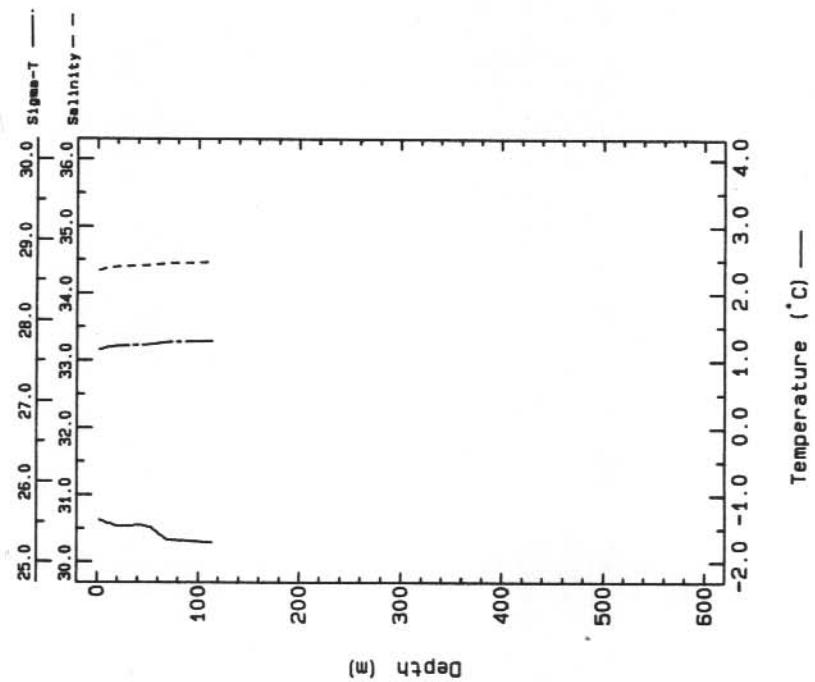
Cruise: ADBEX1 Station: 13
03 DEC 1982 0948 GMT
Latitude : 67° 18'.70S
Longitude: 65° 53'.40E
Depth: CTD 114 m Bottom 117 m



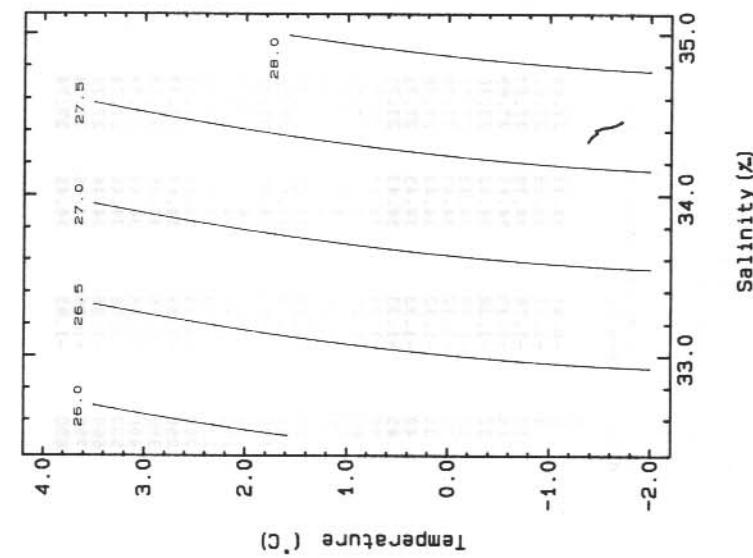
Cruise : ADBEX1 Station 14
 Station number : 14
 Date : 03 DEC 1982
 Start Time : 1142 GMT
 Ship : NELIA DAN
 Position : 67°18' S 65°35' 50"E
 Cast Depth (m) : 116
 Bottom Depth (m) : 118 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.38	34.33	27.63
5	-1.39	34.35	27.64
10	-1.43	34.37	27.66
15	-1.45	34.38	27.67
20	-1.47	34.39	27.68
25	-1.47	34.39	27.68
30	-1.47	34.40	27.68
35	-1.46	34.40	27.69
40	-1.45	34.41	27.69
45	-1.46	34.41	27.69
50	-1.48	34.41	27.69
60	-1.57	34.43	27.71
70	-1.67	34.45	27.73
75	-1.68	34.45	27.73
80	-1.68	34.45	27.73
90	-1.69	34.45	27.73
100	-1.70	34.45	27.74

Cruise : ADBEX1 Station 14
 03 DEC 1982 1142 GMT
 Latitude 67°18' S
 Longitude 65°35' 50"E
 Depth: CTD 116 m Bottom 118 m

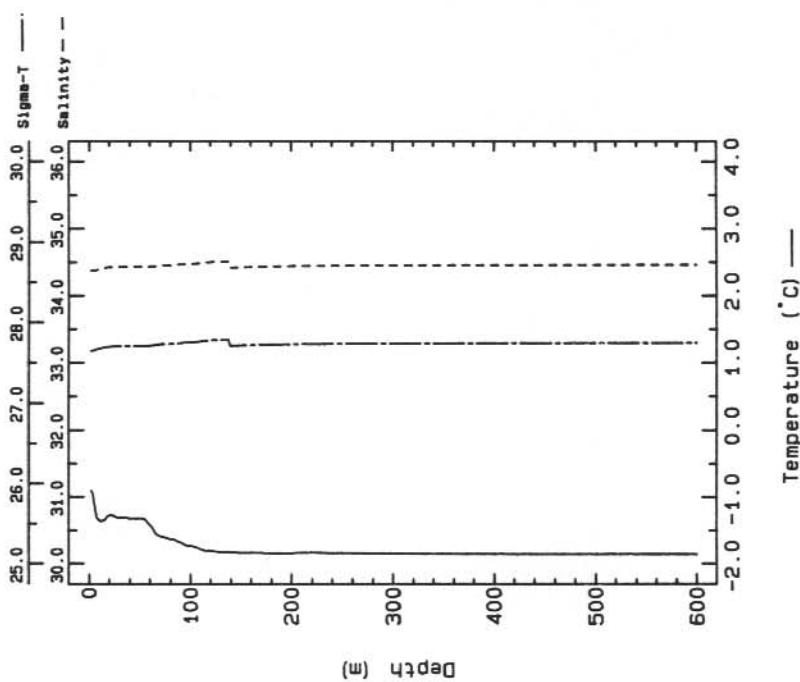


Cruise: ADBEX1 Station: 14
03 DEC 1982 1142 GMT
Latitude : 67°18.90S
Longitude: 65°35.50E
Depth: CTD 116 m Bottom 118 m



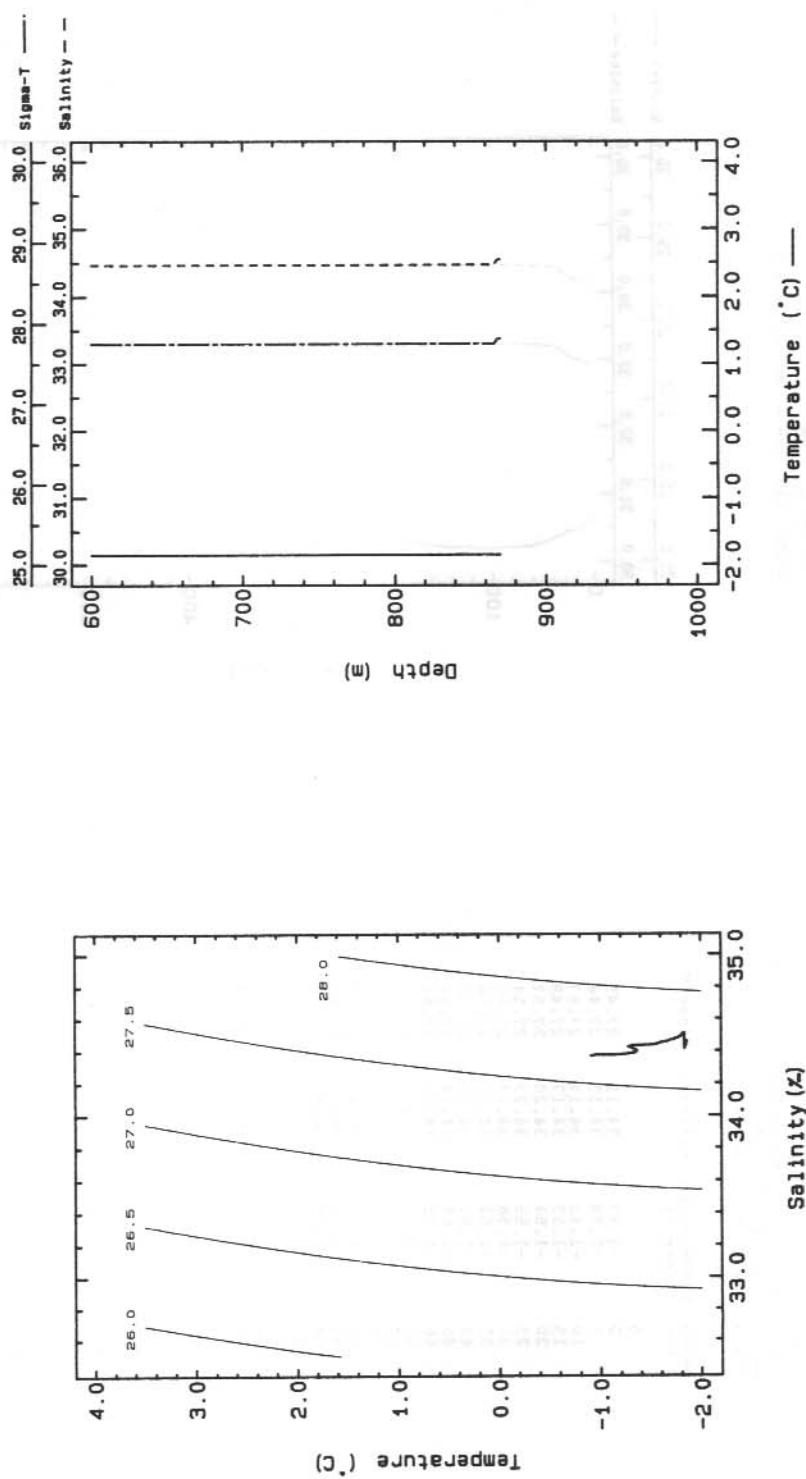
Cruise	ADBEX1	Station	15
Station number	:	15	
Date	:	3 DEC 1982	
Start Time	:	1444 GMT	
Ship	:	NELLA DAN	
Position	:	67°22' 30S	65°49' 60E
Cast Depth (m)	:	872	
Bottom Depth (m)	:	890	m
Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-0.91	34.37	27.64
5	-1.07	34.38	27.65
10	-1.36	34.39	27.67
15	-1.35	34.41	27.69
20	-1.28	34.42	27.70
25	-1.29	34.43	27.70
30	-1.32	34.43	27.70
35	-1.32	34.43	27.70
40	-1.33	34.43	27.71
45	-1.33	34.43	27.71
50	-1.33	34.43	27.71
60	-1.42	34.43	27.71
70	-1.59	34.45	27.73
75	-1.61	34.45	27.73
80	-1.64	34.46	27.73
90	-1.69	34.47	27.74
100	-1.74	34.47	27.75
125	-1.83	34.51	27.78
150	-1.85	34.42	27.71
175	-1.85	34.43	27.72
200	-1.85	34.44	27.73
250	-1.85	34.44	27.73
300	-1.86	34.45	27.73
400	-1.86	34.45	27.74
500	-1.86	34.46	27.74
600	-1.86	34.46	27.74
700	-1.86	34.46	27.74
800	-1.85	34.46	27.74

Cruise : ADBEX1 Station 15
 03 DEC 1982 1444 GMT
 Latitude 67° 22' 30S
 Longitude 65° 49' 60E
 Position CTD 872 m Bottom 890 m



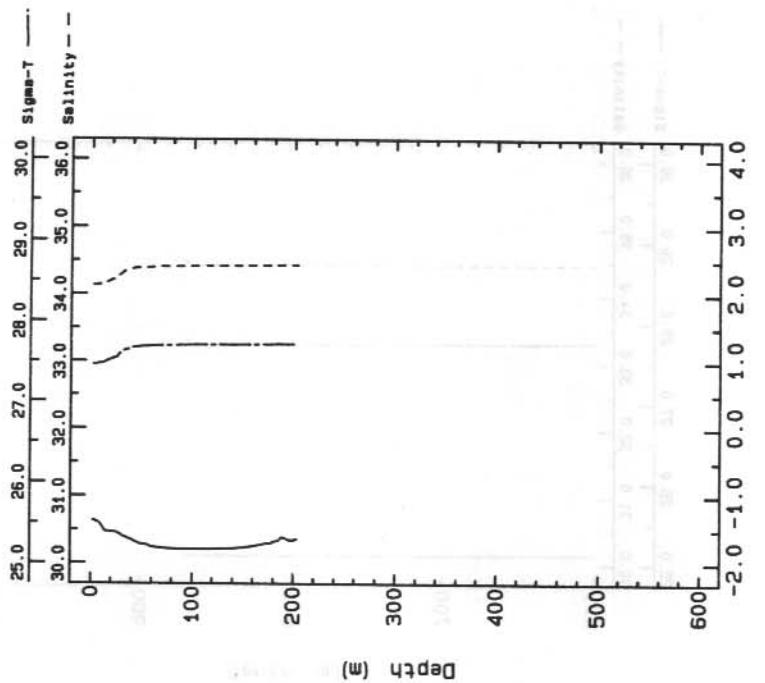
Cruise: ADBEX1 Station: 15
03 DEC 1982 1444 GMT
Latitude: 67° 22' 30S
Longitude: 65° 49' 60E
Depth: CTD 872 m Bottom 890 m

Cruise : ADBEX1 Station 15
03 DEC 1982 1444 GMT
Latitude 67. 22. 30S
Longitude 65. 49. 60E
Depth: CTD 872 m Bottom 890 m

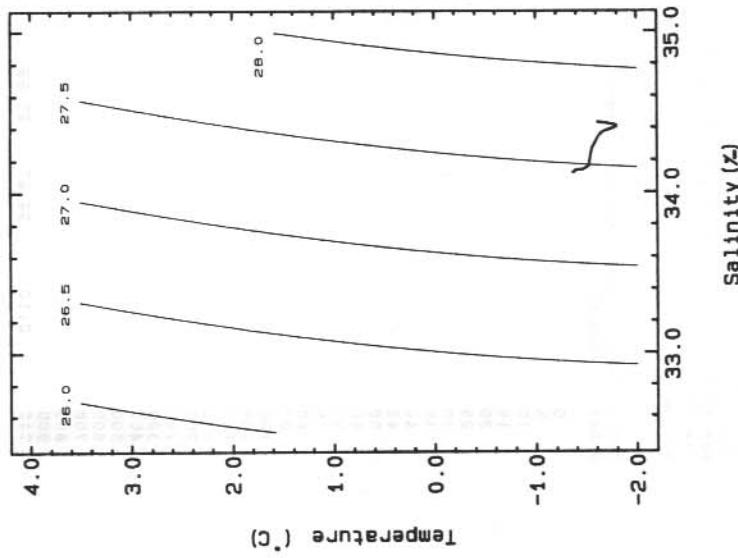


Cruise : ADBEX1
 Station number : 16
 Date : 5 DEC 1982
 Start Time : 1210 GMT
 Ship : NEELA DAN
 Position : 66.39.00S 72:55.10E
 Cast Depth (m) : 206
 Bottom Depth (m) : 208 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.37	34.12	27.45
5	-1.38	34.13	27.46
10	-1.43	34.14	27.47
15	-1.53	34.17	27.49
20	-1.54	34.20	27.52
25	-1.55	34.23	27.54
30	-1.58	34.29	27.60
35	-1.62	34.34	27.64
40	-1.65	34.37	27.66
45	-1.69	34.38	27.68
50	-1.72	34.39	27.68
60	-1.76	34.40	27.69
70	-1.78	34.40	27.69
75	-1.79	34.40	27.69
80	-1.79	34.40	27.69
90	-1.80	34.41	27.70
100	-1.80	34.41	27.70
125	-1.79	34.41	27.70
150	-1.77	34.42	27.71
175	-1.70	34.43	27.71
200	-1.66	34.43	27.72



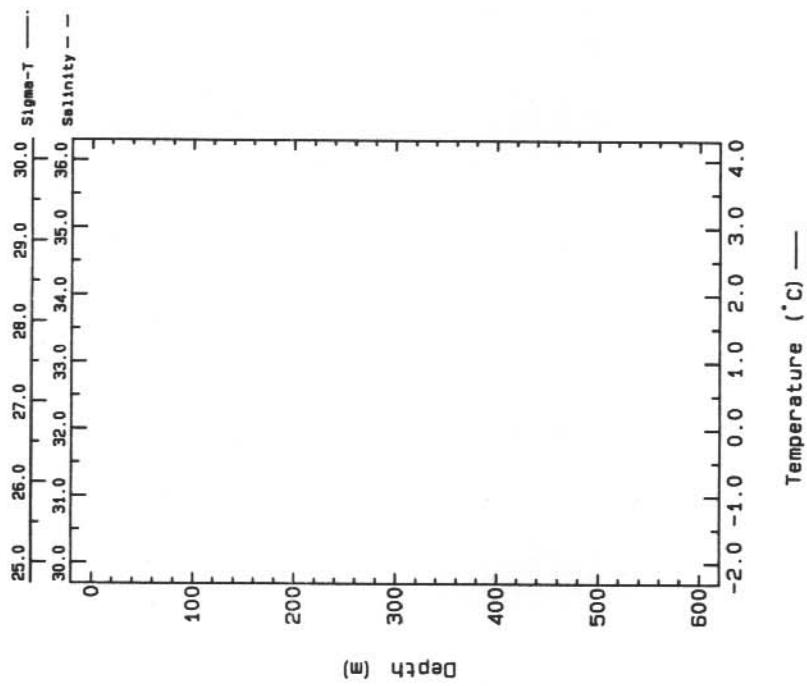
Cruise: ADBEX1 Station: 16
05 DEC 1982 1210 GMT
Latitude : 66°39.00S
Longitude: 72°55.10E
Depth: CTD 206 m Bottom 208 m



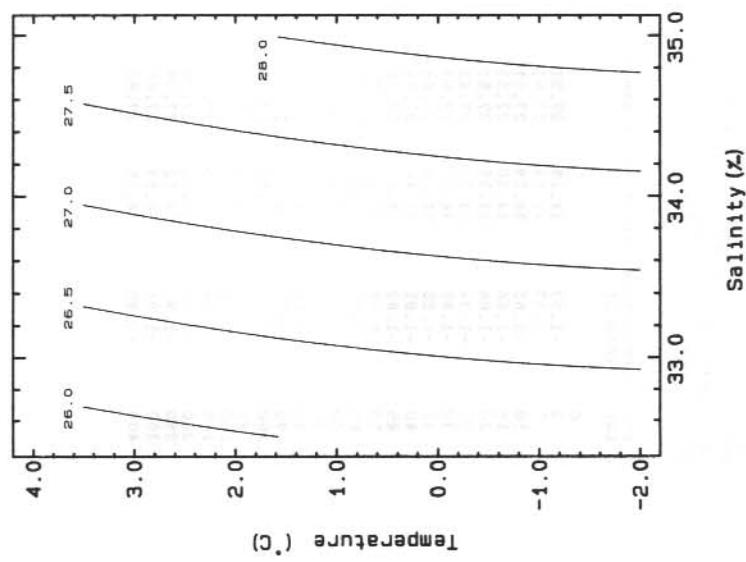
Cruise : ADBEX1
 Station 17
 Station number : 17
 Date : 5 DEC 1982
 Start Time : 1243 GMT
 Ship : NELLA DAN
 Position : 66°39'.40S 72°58'.50E
 Cast Depth (m) : 954
 Bottom Depth (m) : 957 m

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

0			
5			
10			
15			
20			
25			
30			
35			
40			
45			
50			
60			
70			
75			
80			
90			
100			
125			
150			
175			
200			
250			
300			
400			
500			
600			
700			
800			
900			
948	0.12	34.67	27.83

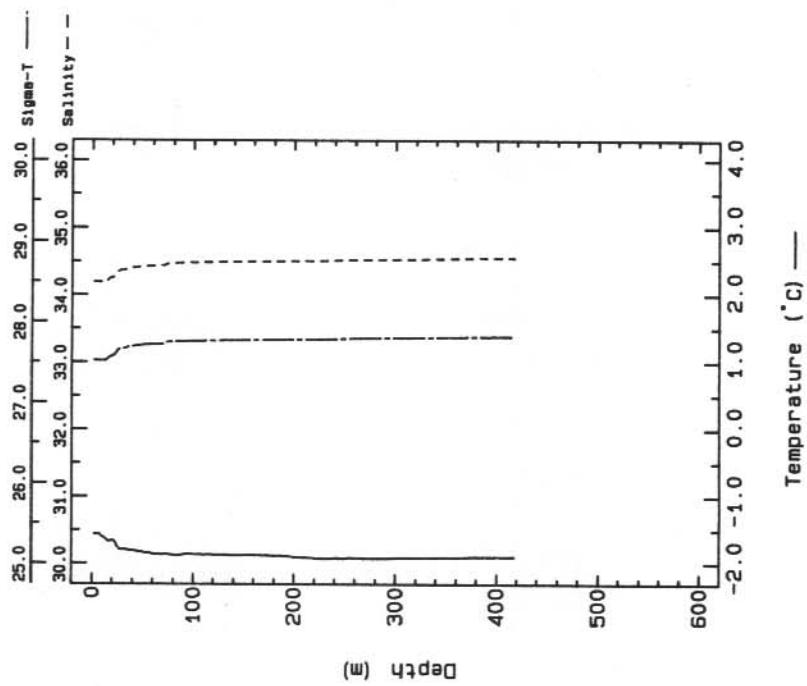


Crusade: ADEBEK1 Station: 17
05 DEC 1982 1243 GMT
Latitude : 66° 39.40S
Longitude: 72° 56.50E
Depth: CTD 954 m Bottom 957 m

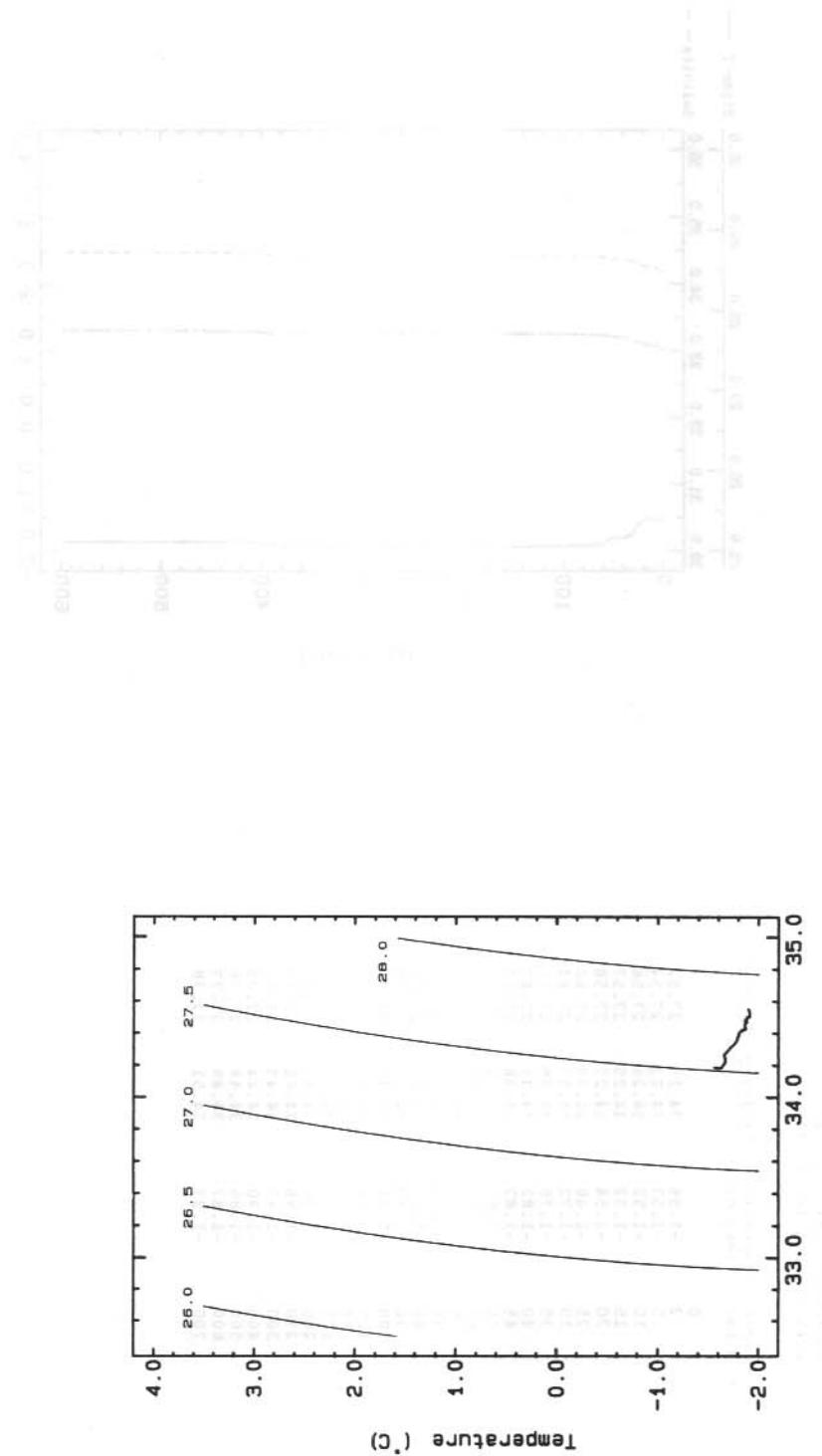


Cruise : ADBEX1 Station 1B
 Station number : 18
 Date : 08 DEC 1982 1034 GMT
 Start Time : 1034 GMT
 Ship : NEELJA DAN
 Position : 68°35'.30S 72°04'.19E
 Cast Depth (m) : 420
 Bottom Depth (m) : 430 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.57	34.19	27.51
5	-1.57	34.19	27.51
10	-1.61	34.19	27.51
15	-1.66	34.20	27.53
20	-1.66	34.25	27.57
25	-1.74	34.32	27.62
30	-1.80	34.37	27.67
35	-1.80	34.38	27.68
40	-1.81	34.40	27.69
45	-1.82	34.41	27.70
50	-1.84	34.42	27.71
60	-1.86	34.43	27.72
70	-1.87	34.44	27.72
75	-1.87	34.46	27.74
80	-1.88	34.47	27.75
90	-1.87	34.48	27.76
100	-1.87	34.48	27.76
125	-1.87	34.49	27.77
150	-1.88	34.49	27.77
175	-1.88	34.50	27.77
200	-1.91	34.51	27.78
250	-1.92	34.52	27.79
300	-1.91	34.53	27.80
400	-1.90	34.55	27.82

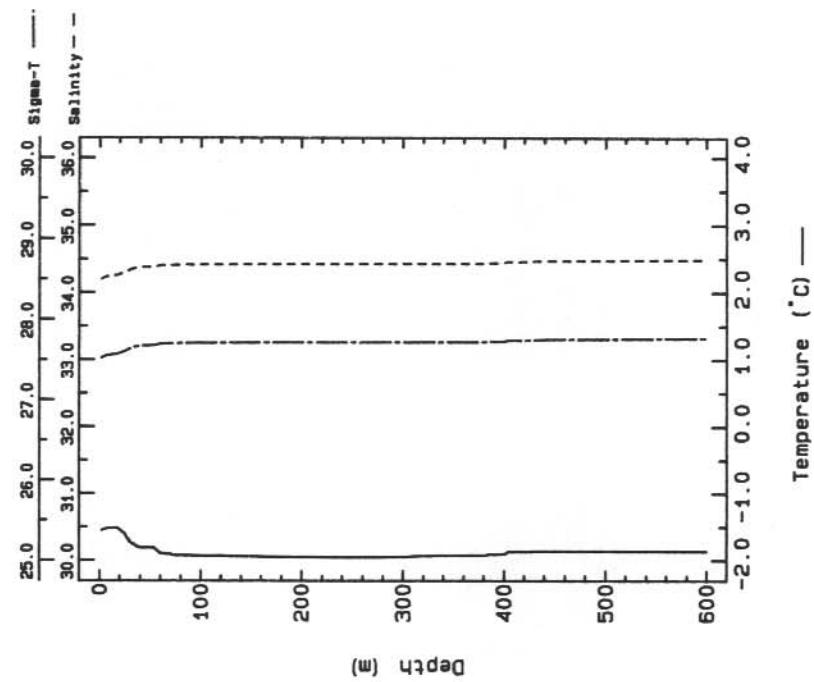


Cruise: ADBEX1 Station: 18
08 DEC 1982 1034 GMT
Latitude : 68.35.30S
Longitude: 72.04.19E
Depth: CTD 420 m Bottom 430 m



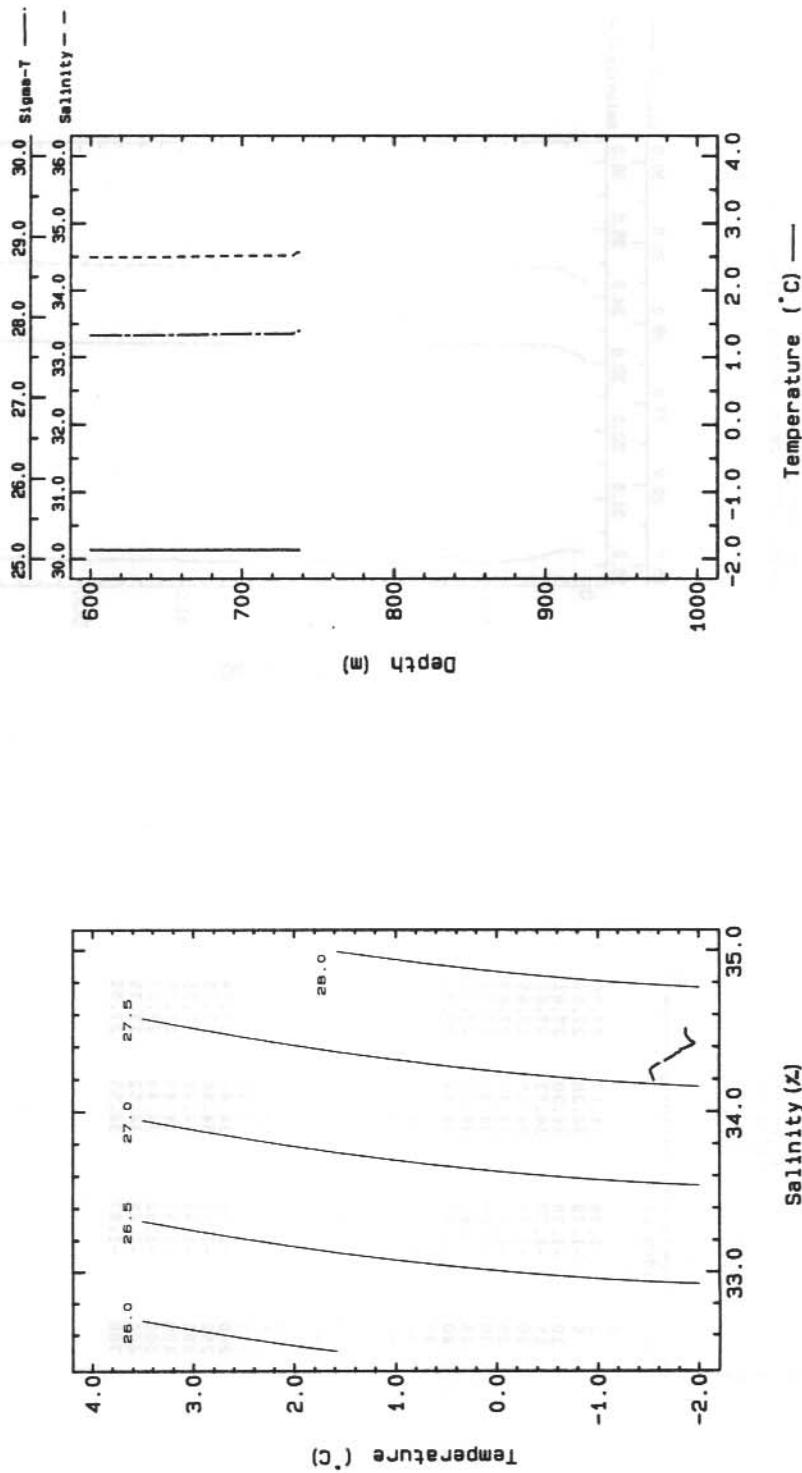
Cruise : ADBEX1 Station 19
 Station number : 19
 Date : 8 DEC 1982
 Start Time : 1550 GMT
 Ship : NELLA DAN
 Position : 68°43'50S 71°06'00E
 Cast Depth (m) : 740
 Bottom Depth (m) : 748 m

depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.56	34.19	27.52
5	-1.53	34.22	27.54
10	-1.52	34.24	27.56
15	-1.52	34.25	27.57
20	-1.54	34.27	27.58
25	-1.60	34.30	27.60
30	-1.72	34.33	27.64
35	-1.78	34.36	27.66
40	-1.82	34.37	27.67
45	-1.82	34.38	27.67
50	-1.81	34.38	27.68
60	-1.89	34.40	27.69
70	-1.91	34.41	27.70
75	-1.93	34.41	27.70
80	-1.93	34.41	27.71
90	-1.93	34.41	27.71
100	-1.94	34.41	27.71
125	-1.94	34.42	27.71
150	-1.95	34.42	27.71
175	-1.96	34.42	27.71
200	-1.96	34.42	27.72
250	-1.96	34.42	27.72
300	-1.95	34.43	27.72
400	-1.90	34.44	27.73
500	-1.86	34.48	27.76
600	-1.87	34.49	27.77
700	-1.87	34.51	27.79



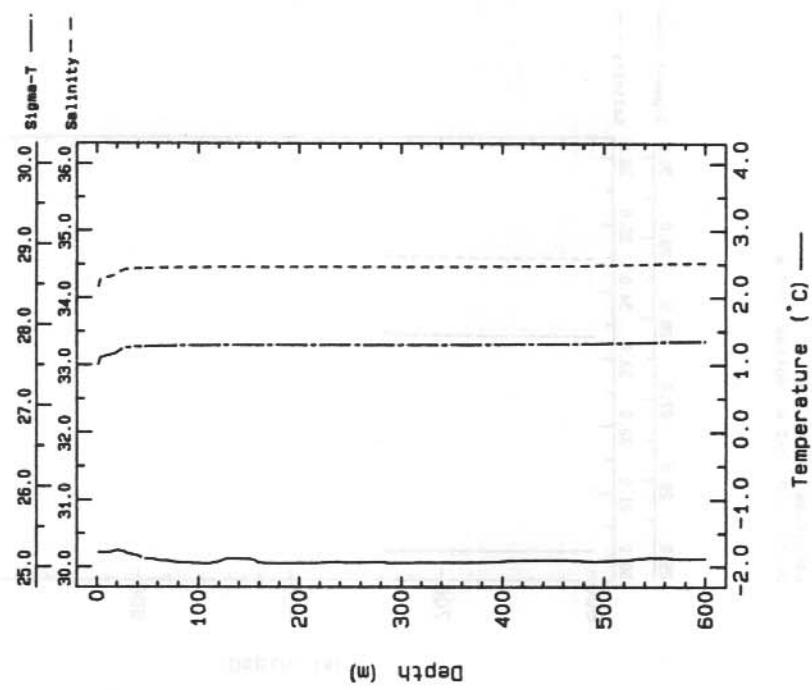
Cruise: ADBEX1 Station: 19
08 DEC 1982 1550 GMT
Latitude : 68: 43.50S
Longitude: 71: 06.00E
Depth: CTD 740 m Bottom 748 m

Cruise : ADBEX1 Station 19
08 DEC 1982 1550 GMT
Latitude 68: 43.50S
Longitude 71: 06.00E
Depth: CTD 740 m Bottom 748 m



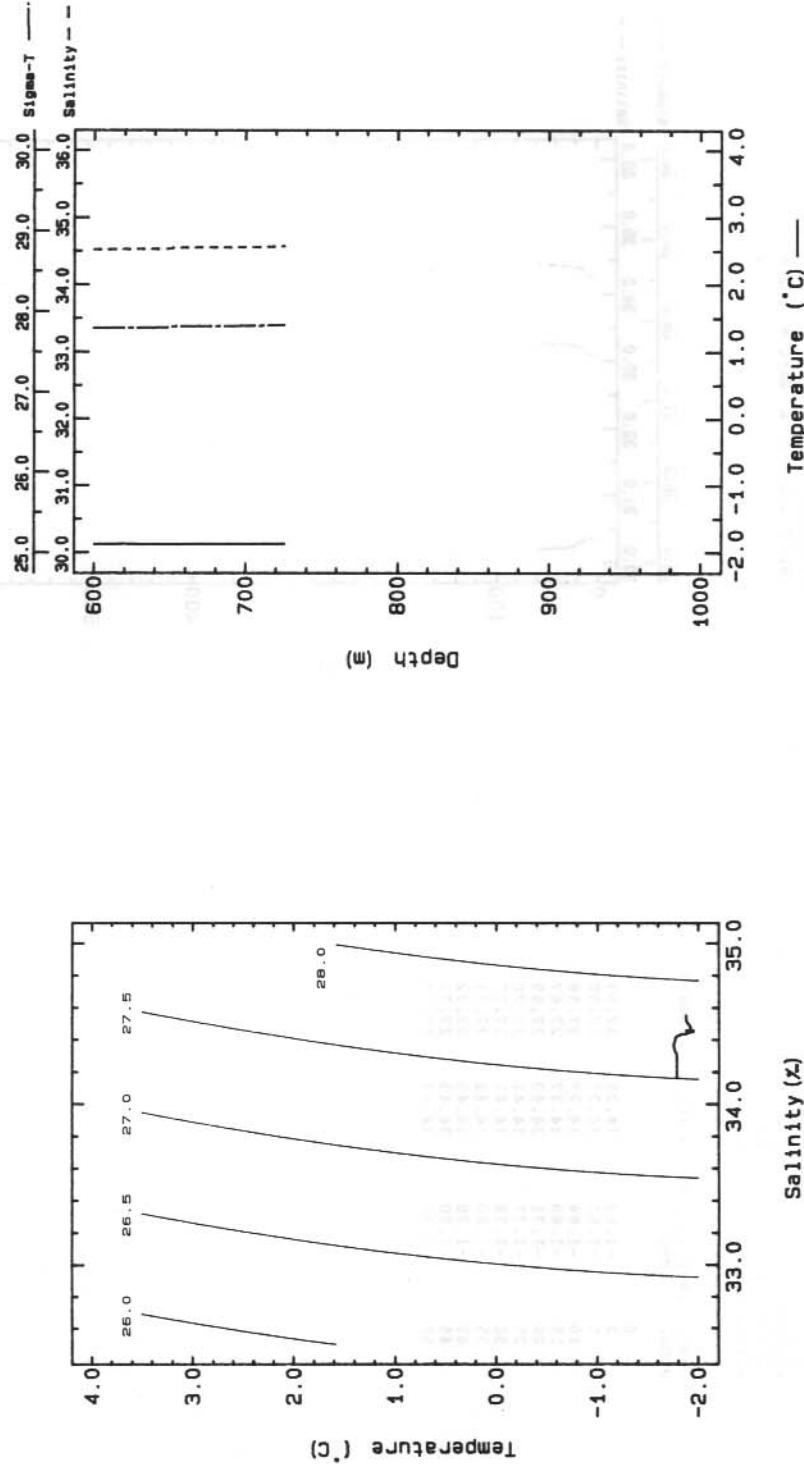
Cruise : ADBEX1
 Station number : 20
 Date : 9 DEC 1982
 Start Time : 2106 GMT
 Ship : NEELA DAN
 Position : 68°19'50S 70°59'10E
 Cast Depth (m) : 728
 Bottom Depth (m) : 731 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.79	34.17	27.50
2	-1.79	34.28	27.59
5	-1.78	34.30	27.61
10	-1.77	34.32	27.63
15	-1.76	34.35	27.65
20	-1.77	34.40	27.69
25	-1.77	34.43	27.71
30	-1.80	34.43	27.72
35	-1.82	34.43	27.72
40	-1.83	34.44	27.72
45	-1.88	34.44	27.73
50	-1.90	34.44	27.73
60	-1.91	34.45	27.74
70	-1.93	34.45	27.74
75	-1.93	34.45	27.74
80	-1.93	34.45	27.74
90	-1.94	34.45	27.74
100	-1.95	34.45	27.74
125	-1.89	34.46	27.74
150	-1.88	34.46	27.74
175	-1.95	34.46	27.74
200	-1.94	34.46	27.74
250	-1.94	34.46	27.75
300	-1.94	34.46	27.75
400	-1.92	34.47	27.75
500	-1.92	34.49	27.77
600	-1.88	34.52	27.79
700	-1.87	34.55	27.82



Cruise: AD8EX1 Station: 20
09 DEC 1982 2106 GMT
Latitude : 68:19.50S
Longitude: 70:59.10E
Depth: CTD 728 m Bottom 731 m

Cruise : AD8EX1 Station 20
09 DEC 1982 2106 GMT
Latitude 68:19.50S
Longitude 70:59.10E
Depth: CTD 728 m Bottom 731 m



Cruise : ADBEX1

Station number :

21

Date :

9 DEC 1982

Start Time :

04:55 GMT

Ship :

NEELIA DAN

Position :

68°26'00S

71°38'30E

Cast Depth (m) :

60

Bottom Depth (m) :

662 m

Depth bar
d (m)

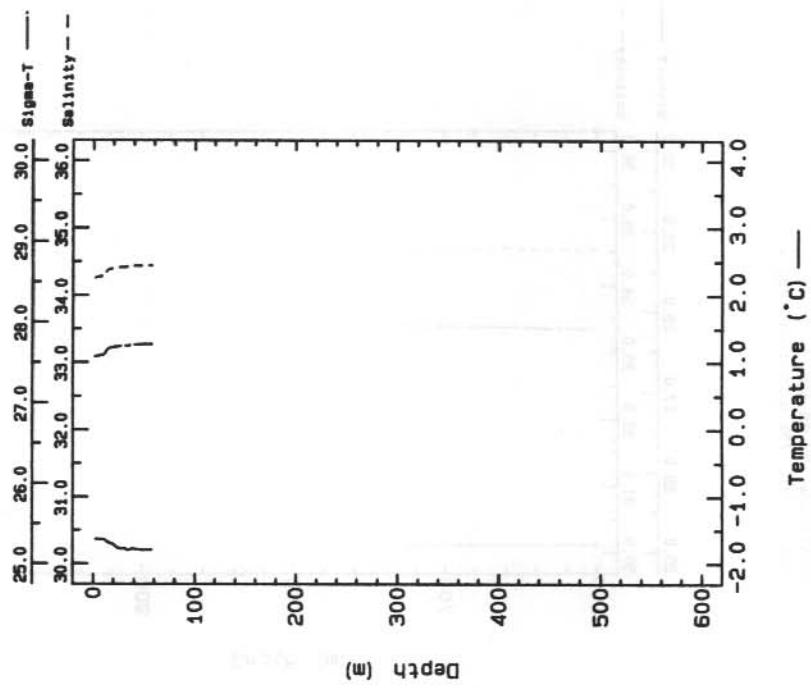
Temperature
(deg C)

Salinity

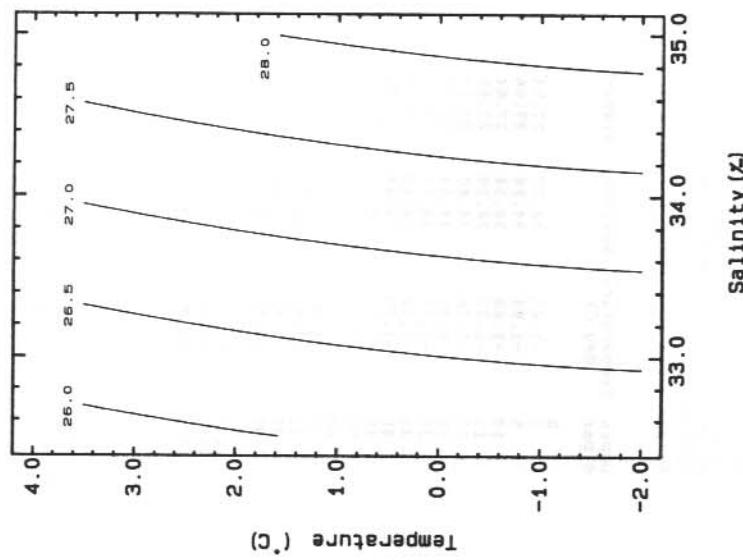
Sigma-T

0	-1.63	34.25	27.57
5	-1.64	34.27	27.58
10	-1.64	34.27	27.58
15	-1.69	34.37	27.67
20	-1.71	34.40	27.69
25	-1.77	34.41	27.70
30	-1.78	34.41	27.70
35	-1.80	34.42	27.71
40	-1.78	34.43	27.72
45	-1.80	34.43	27.72
50	-1.80	34.44	27.72

Cruise : ADBEX1 Station 21
09 DEC 1982 0435 GMT
Latitude 68°26.00S
Longitude 71°38.30E
Depth: CTD 60 m Bottom 662 m

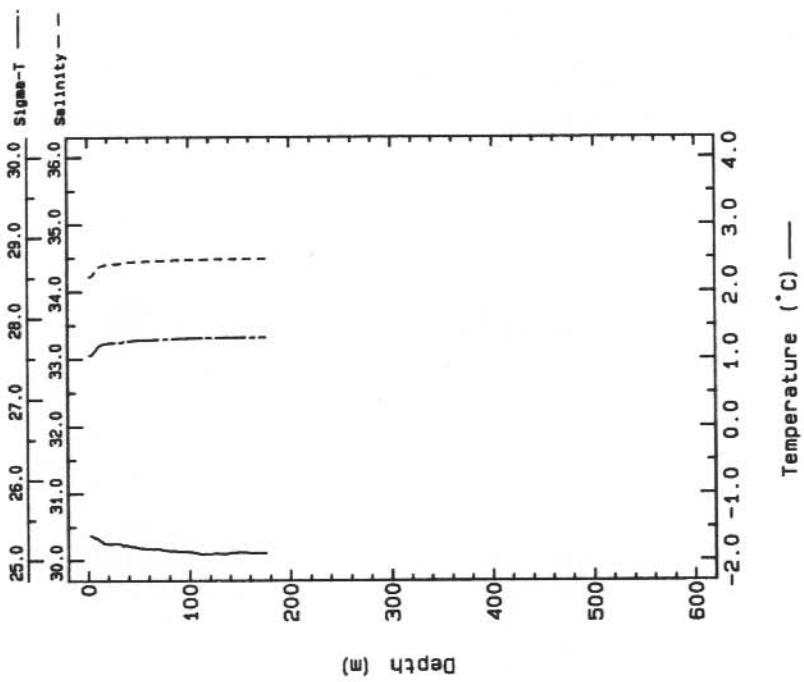


Cruise: ADBEX1 Station: 21
09 DEC 1982 0435 GMT
Latitude : 68° 26.00S
Longitude: 71° 38.30E
Depth: CTD 60 m Bottom 662 m

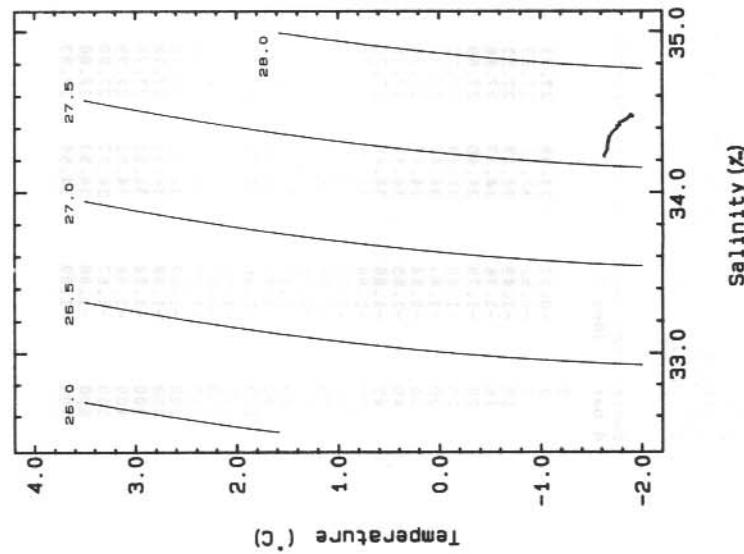


Cruise : ADBEX1 Station 22
 Station number : 22
 Date : 9 DEC 1982
 Start Time : 0449 GMT
 Ship : NELLA DAN
 Position : 68°25.00S 71°37.20E
 Cast Depth (m) : 178
 Bottom Depth (m) : 627 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.63	34.22	27.54
2	-1.64	34.24	27.56
5	-1.68	34.34	27.64
10	-1.73	34.39	27.68
15	-1.76	34.40	27.69
20	-1.76	34.41	27.70
25	-1.75	34.41	27.70
30	-1.75	34.41	27.70
35	-1.78	34.42	27.71
40	-1.79	34.44	27.72
45	-1.80	34.44	27.73
50	-1.82	34.44	27.73
60	-1.83	34.45	27.73
70	-1.83	34.45	27.74
75	-1.86	34.46	27.74
80	-1.86	34.46	27.74
90	-1.88	34.47	27.75
100	-1.88	34.47	27.75
125	-1.90	34.48	27.76
150	-1.88	34.48	27.76
175	-1.89	34.48	27.76



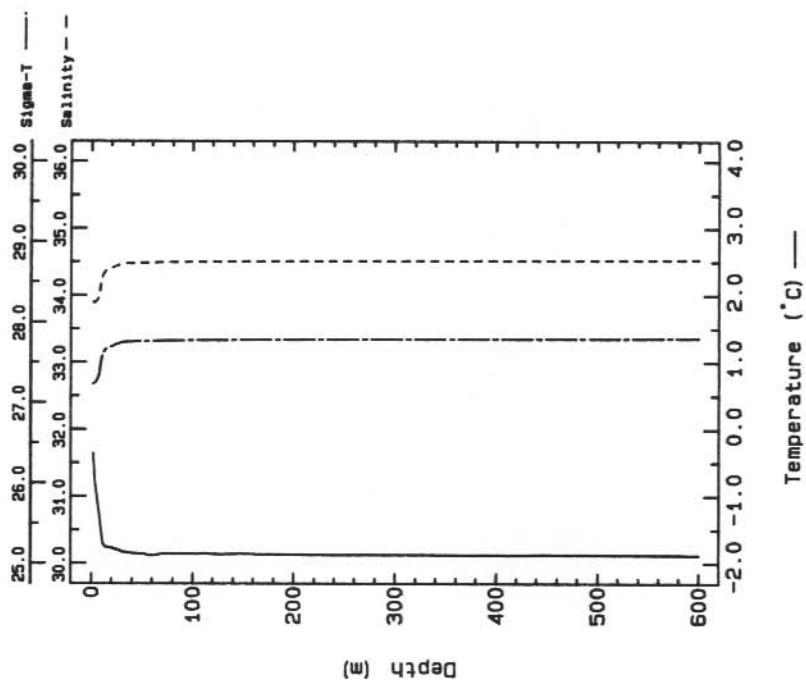
Cruise: ADBEX1 Station: 22
09 DEC 1982 0419 GMT
Latitude : 68:25.00S
Longitude: 71:37.20E
Depth: CTD 178 m Bottom 627 m



Cruise : ADBEXI
 Station 23
 Station number : 23
 Date : 9 DEC 1982
 Start Time : 1034 GMT
 Ship : NELLA DAN
 Position : 68°15'.40S 72°45'.00E
 Cast Depth (m) : 760
 Bottom Depth (m) : 799 m

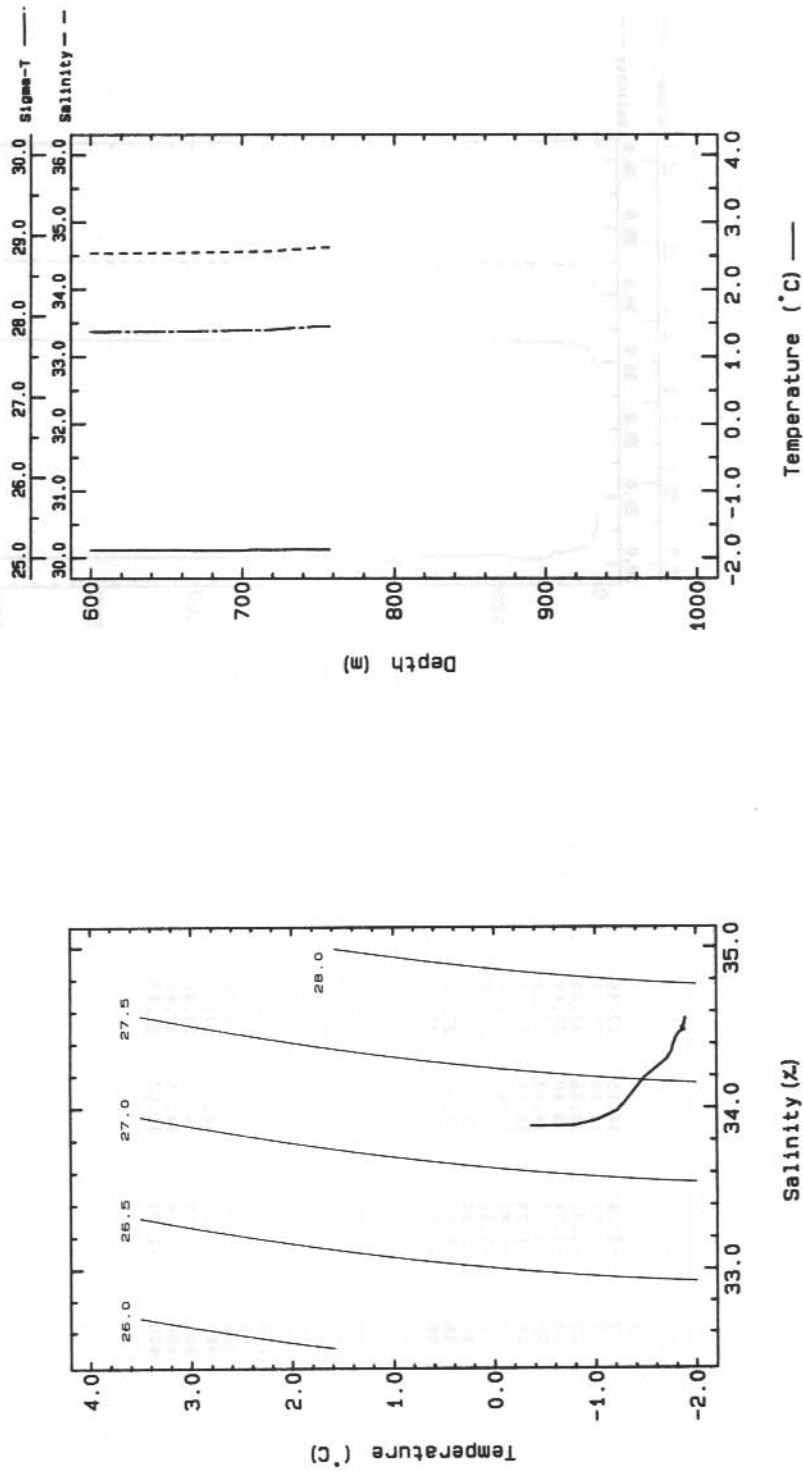
Cruise : ADBEXI Station 23
 09 DEC 1982 1034 GMT
 Latitude 68° 15'.40S
 Longitude 72° 45'.00E
 Depth: CTD 760 m Bottom 799 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-0.37	33.89	27.23
5	-0.91	33.91	27.27
10	-1.49	34.19	27.51
15	-1.76	34.37	27.66
20	-1.78	34.40	27.69
25	-1.80	34.44	27.72
30	-1.81	34.46	27.75
35	-1.84	34.47	27.75
40	-1.85	34.48	27.76
45	-1.86	34.48	27.76
50	-1.86	34.48	27.76
60	-1.88	34.49	27.77
70	-1.86	34.49	27.77
75	-1.86	34.49	27.77
80	-1.86	34.49	27.77
90	-1.86	34.49	27.77
100	-1.86	34.50	27.77
125	-1.87	34.50	27.77
150	-1.85	34.50	27.78
175	-1.87	34.51	27.78
200	-1.87	34.51	27.78
250	-1.88	34.51	27.78
300	-1.88	34.51	27.78
400	-1.88	34.52	27.79
500	-1.87	34.52	27.80
600	-1.88	34.53	27.80
700	-1.89	34.56	27.83



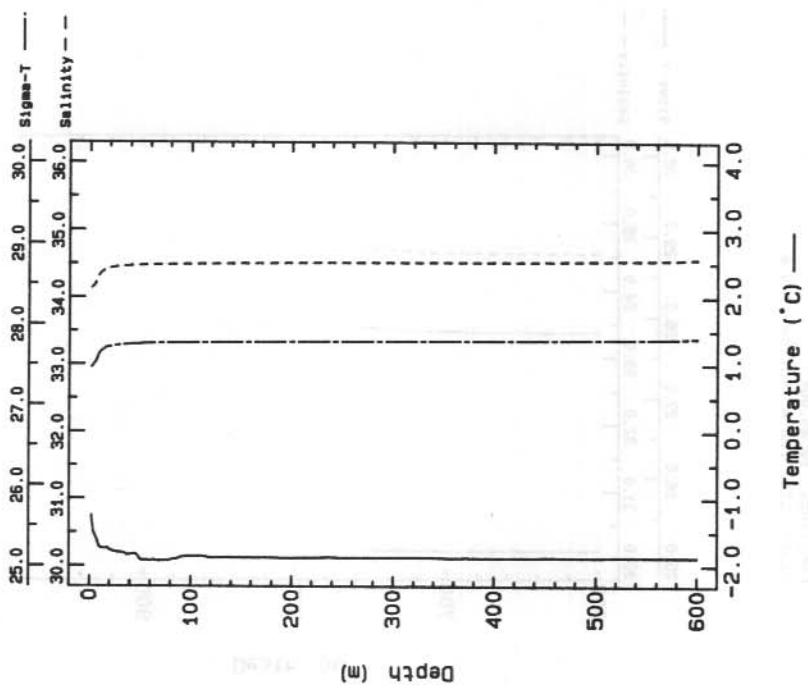
Cruise: ADBEX1 Station: 23
09 DEC 1982 1034 GMT
Latitude : 68: 15.40S
Longitude: 72: 45.00E
Depth: CTD 760 m Bottom 799 m

Cruise : ADBEX1 Station 23
09 DEC 1982 1034 GMT
Latitude 68: 15.40S
Longitude 72: 45.00E
Depth: CTD 760 m Bottom 799 m

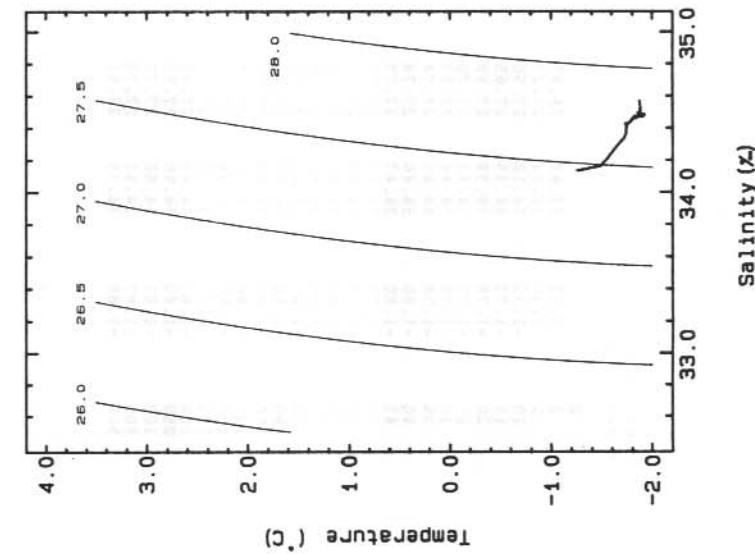


Cruise : ADBEX1 Station 24
 Station number : 24
 Date : 9 DEC 1982
 Start Time : 1520 GMT
 Ship : NELLA DAN
 Position : 68:07.20S 72:00.20E
 Cast Depth (m) : 610
 Bottom Depth (m) : 618

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.26	34.13	27.46
5	-1.53	34.19	27.51
10	-1.72	34.34	27.64
15	-1.74	34.40	27.69
20	-1.77	34.43	27.71
25	-1.79	34.44	27.73
30	-1.80	34.45	27.74
35	-1.81	34.46	27.74
40	-1.84	34.47	27.75
45	-1.82	34.47	27.75
50	-1.91	34.47	27.75
60	-1.92	34.48	27.76
70	-1.92	34.48	27.76
75	-1.92	34.48	27.76
80	-1.91	34.49	27.77
90	-1.87	34.49	27.77
100	-1.86	34.49	27.77
125	-1.88	34.49	27.77
150	-1.88	34.50	27.78
175	-1.88	34.50	27.78
200	-1.88	34.51	27.78
250	-1.88	34.51	27.79
300	-1.87	34.51	27.79
400	-1.88	34.52	27.80
500	-1.88	34.54	27.81
600	-1.87	34.57	27.83

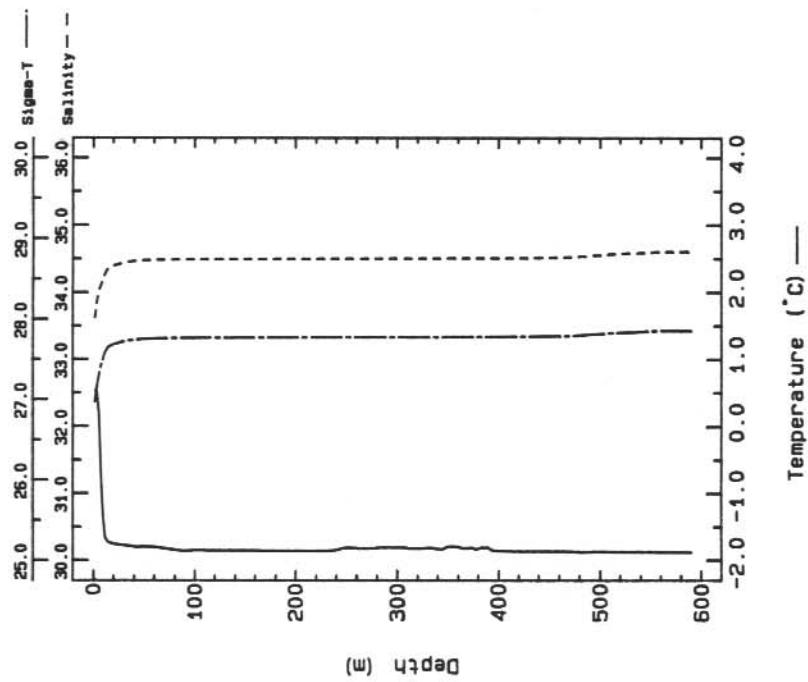


Cruise: ADBEX1 Station: 24
09 DEC 1982 1920 GMT
Latitude : 68:07.20S
Longitude: 72:00.20E
Depth: CTD 610 m Bottom 618 m

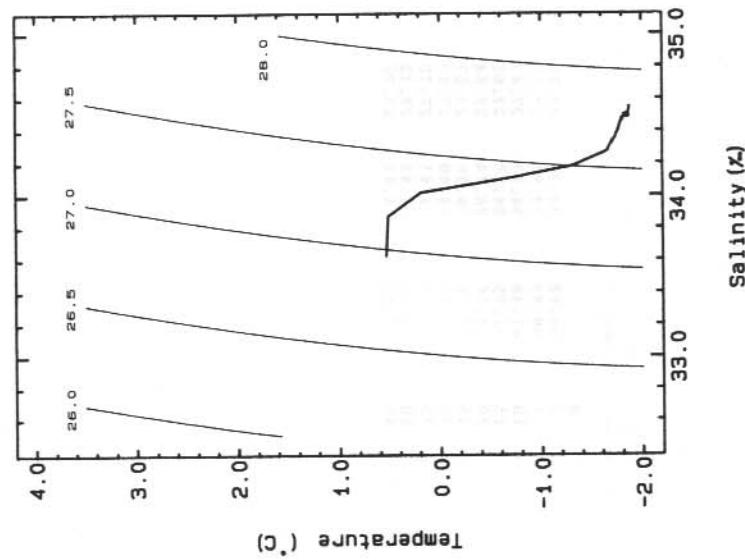


Cruise	ADBEX1	Station number	25
Date	9 DEC 1982	Start Time	2123 GMT
Ship	NELLA DAN	Position	
Cast Depth (m)		67°43' 20S	67°55' 40E
Bottom Depth (m)	592	Depth (m)	
Depth bar	Temperature (deg C)	Salinity	Sigma-T
0	0.53	33.62	26.97
5	0.35	33.94	27.23
10	-1.32	34.18	27.50
15	-1.72	34.35	27.65
20	-1.76	34.39	27.68
25	-1.77	34.41	27.70
30	-1.78	34.44	27.72
35	-1.79	34.45	27.74
40	-1.80	34.46	27.74
45	-1.80	34.47	27.75
50	-1.79	34.47	27.75
60	-1.81	34.48	27.76
70	-1.83	34.48	27.76
75	-1.84	34.48	27.76
80	-1.85	34.49	27.76
90	-1.86	34.49	27.76
100	-1.85	34.49	27.77
125	-1.86	34.49	27.77
150	-1.86	34.49	27.77
175	-1.87	34.49	27.77
200	-1.87	34.49	27.77
250	-1.82	34.50	27.77
300	-1.81	34.50	27.77
400	-1.87	34.51	27.78
500	-1.88	34.55	27.82

Cruise : ADBEX1 Station 25
 09 DEC 1982 2123 GMT
 Latitude 67° 43'.20S
 Longitude 72° 55'.40E
 Depth: CTD 592 m Bottom 599 m

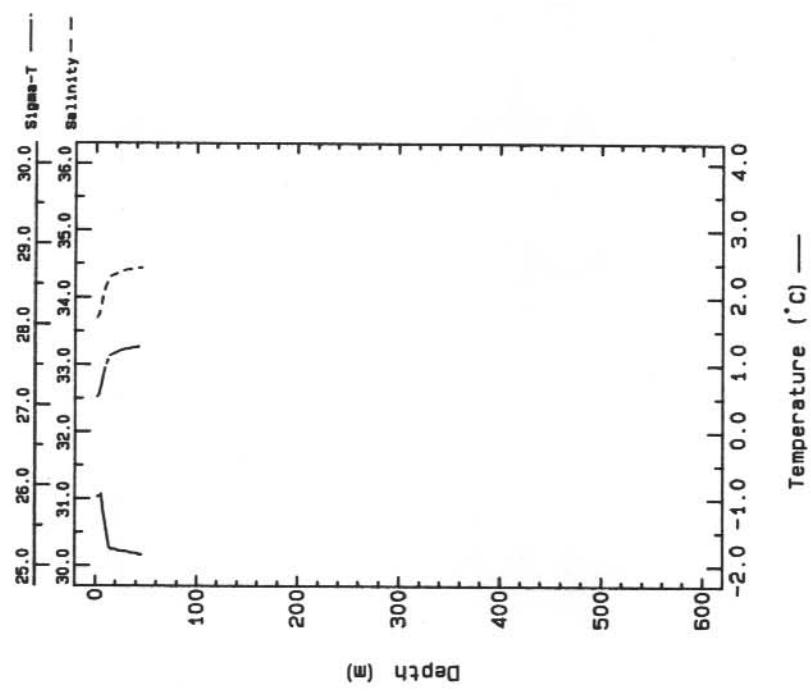


Cruise: ADDEXI Station: 25
09 DEC 1982 2123 GMT
Latitude : 67° 43' 20S
Longitude: 72° 55'.40E
Depth: CTD 592 m Bottom 599 m

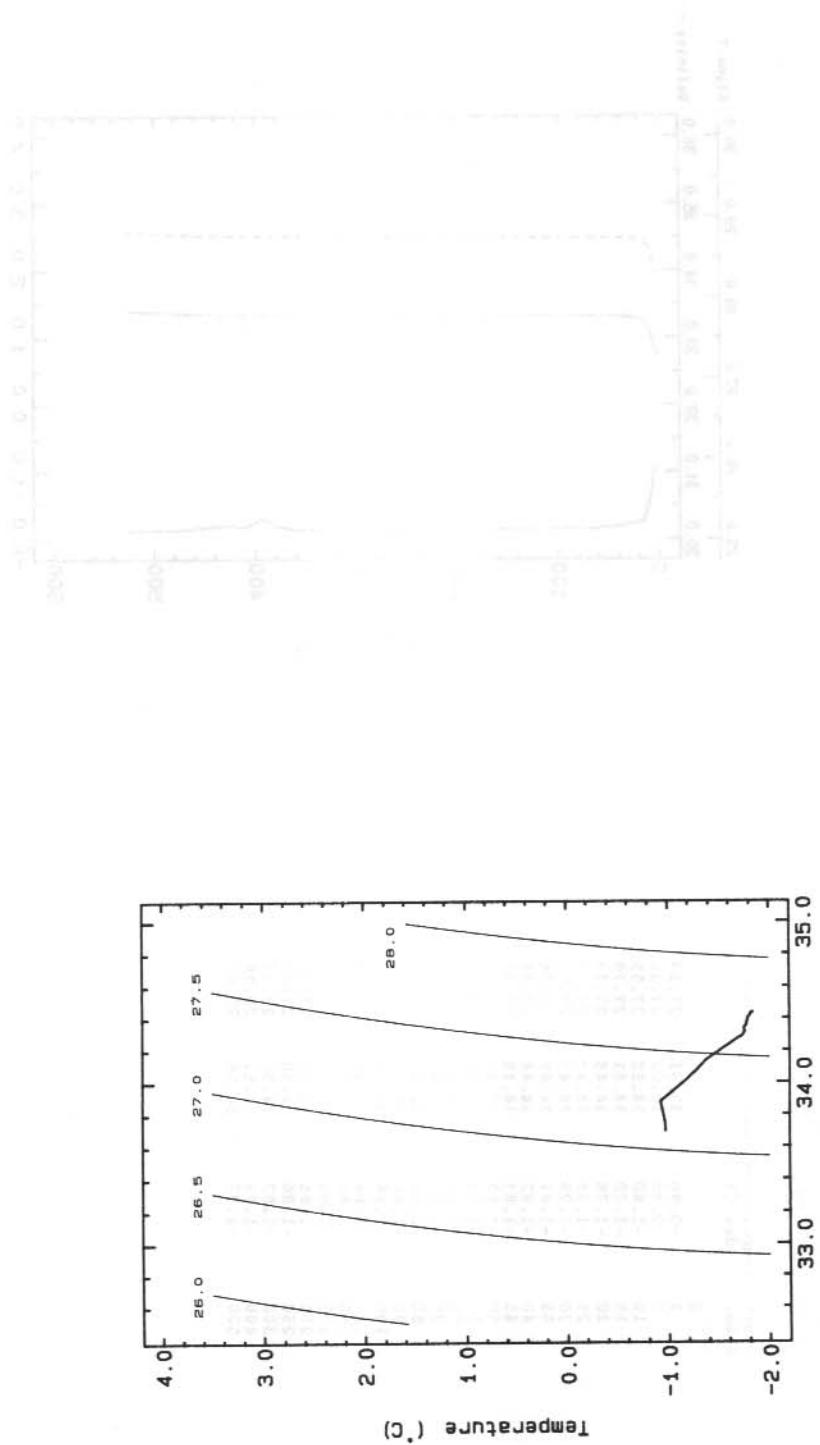


Cruise : ADBEX1 Station : 26
 Station number : 26
 Date : 10 DEC 1982
 Start Time : 0438 GMT
 Ship : NELLA DAN
 Position : 67°15'.20S 73°07'.40E
 Cast Depth (m) : 48
 Bottom Depth (m) : 539 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-0.98	33.70	27.10
2	-0.95	33.81	27.19
5	-1.28	34.13	27.47
10	-1.75	34.30	27.61
15	-1.76	34.34	27.64
20	-1.78	34.38	27.67
25	-1.79	34.40	27.69
30	-1.81	34.41	27.70
35	-1.82	34.43	27.72
40	-1.84	34.44	27.72
45	-1.84	34.44	27.72



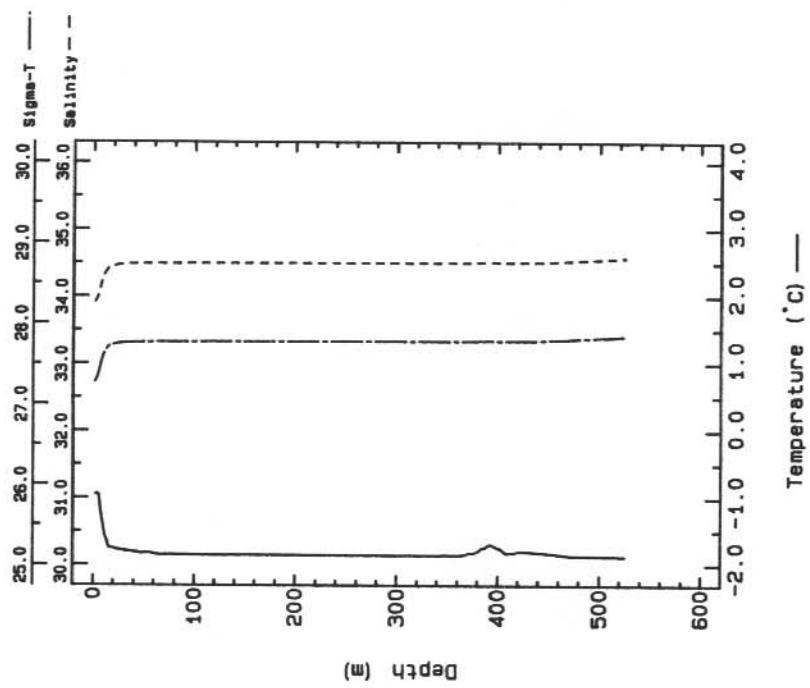
Cruise: ADEBEIX1 Station: 26
10 DEC 1982 0438 GMT
Latitude : 67°15'20S
Longitude: 73°07'40E
Depth: CTD 48 m Bottom 539 m



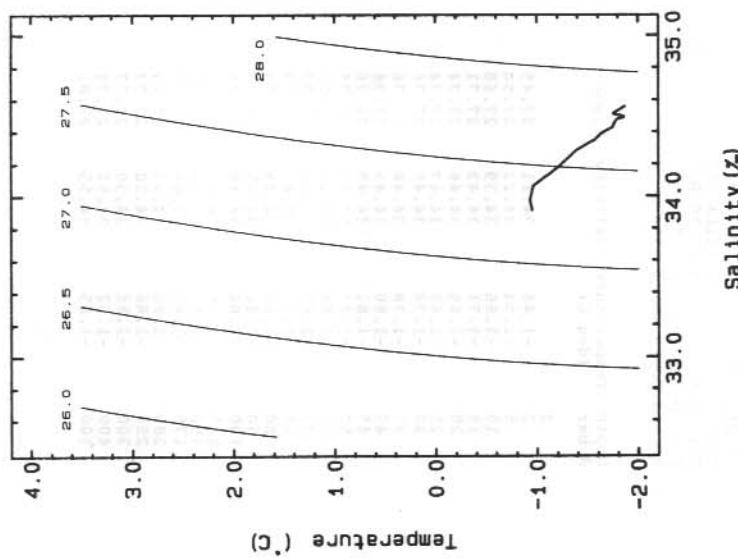
Cruise : ADBEX1
 Station number : 27
 Date : 10 DEC 1982
 Start Time : 0438 GMT
 Ship : NELLA DAN
 Position : 67°15'.20S 73°07'.40E
 Cast Depth (m) : 528
 Bottom Depth (m) : 539

Cruise : ADBEX1 Station 27
 10 DEC 1982 0438 GMT
 Latitude 67°15'.20S
 Longitude 73°07'.40E
 Depth: CTD 528 m Bottom 539 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-0.96	33.91	27.27
5	-0.95	34.02	27.35
10	-1.40	34.28	27.59
15	-1.70	34.41	27.70
20	-1.76	34.45	27.73
25	-1.78	34.47	27.75
30	-1.79	34.47	27.75
35	-1.81	34.48	27.75
40	-1.82	34.48	27.76
45	-1.83	34.48	27.76
50	-1.83	34.49	27.76
60	-1.84	34.49	27.76
70	-1.86	34.49	27.77
75	-1.85	34.49	27.77
80	-1.86	34.49	27.77
90	-1.86	34.49	27.77
100	-1.86	34.49	27.77
125	-1.86	34.49	27.77
150	-1.86	34.49	27.77
175	-1.86	34.49	27.77
200	-1.86	34.50	27.77
250	-1.86	34.50	27.77
300	-1.87	34.50	27.77
400	-1.75	34.51	27.78
500	-1.87	34.56	27.82

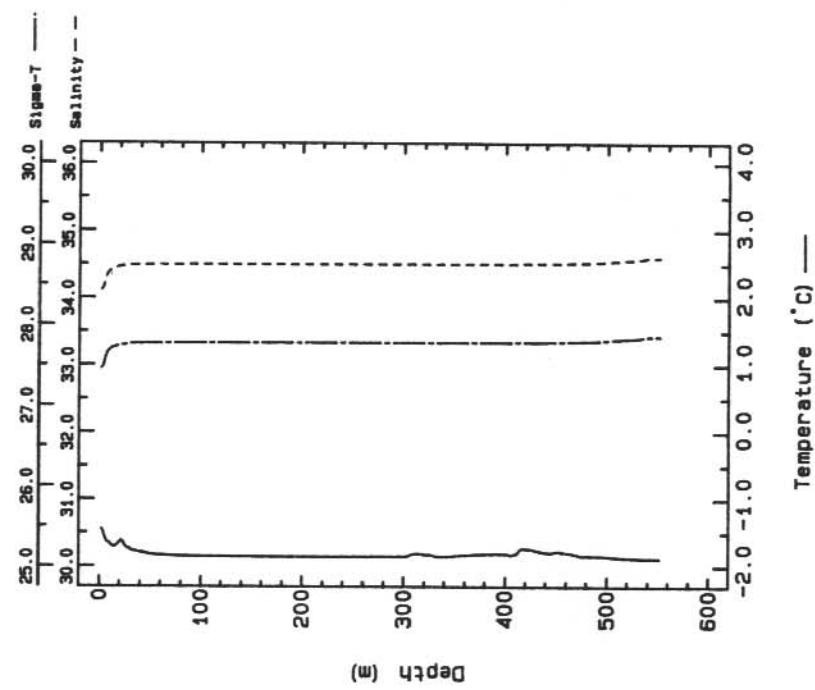


Cruise: ADEEX1 Station: 27
10 DEC 1982 0338 GMT
Latitude : 67° 15'.20S
Longitude: 73° 07'.40E
Depth: CTD 528 m Bottom 539 m

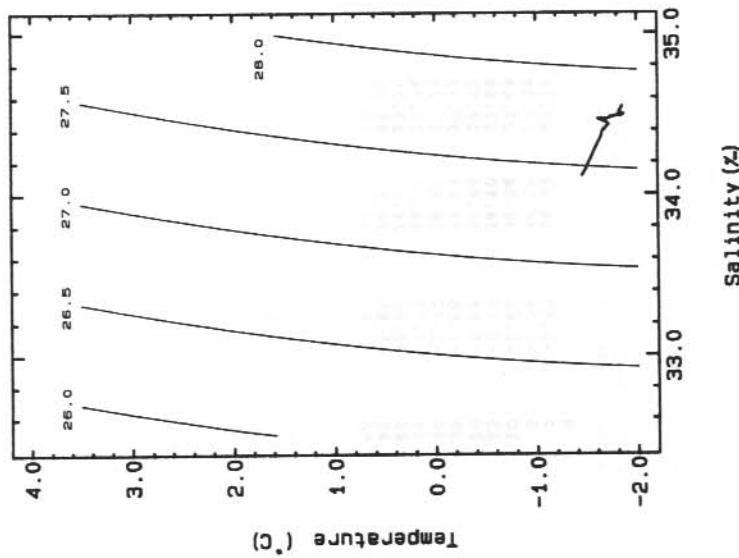


Cruise : ADBEX1 Station 28
 Station number : 28
 Date : 10 DEC 1982
 Start Time : 0733 GMT
 Ship : NELLA DAN
 Position : 67°10'.00S 72°29'.30E
 Cast Depth (m) : 554
 Bottom Depth (m) : 558 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.46	34.11	27.45
2	-1.54	34.22	27.54
5	-1.66	34.39	27.68
10	-1.71	34.43	27.71
15	-1.65	34.46	27.74
20	-1.68	34.47	27.74
25	-1.74	34.48	27.76
30	-1.78	34.48	27.76
35	-1.78	34.48	27.76
40	-1.80	34.49	27.76
45	-1.81	34.49	27.76
50	-1.83	34.49	27.76
60	-1.84	34.49	27.77
70	-1.85	34.49	27.77
75	-1.85	34.49	27.77
80	-1.85	34.49	27.77
90	-1.86	34.49	27.77
100	-1.86	34.49	27.77
125	-1.86	34.49	27.77
150	-1.86	34.49	27.77
175	-1.86	34.49	27.77
200	-1.86	34.49	27.77
250	-1.86	34.50	27.77
300	-1.86	34.50	27.77
400	-1.82	34.51	27.78
500	-1.85	34.55	27.81



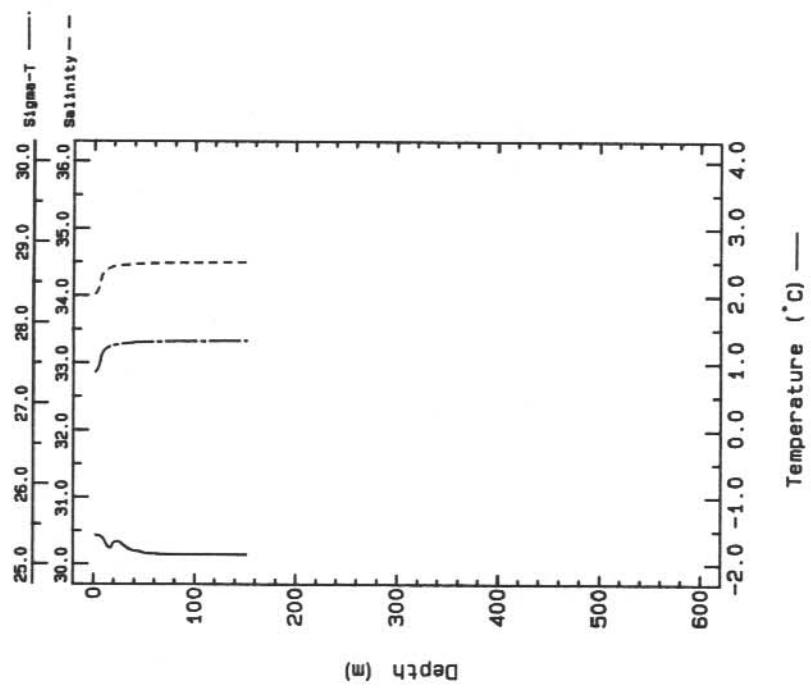
Cruise: ADBEX1 Station: 28
10 DEC 1982 0733 GMT
Latitude : 67:10.00S
Longitude: 72:29.30E
Depth: CTD 554 m Bottom 558 m



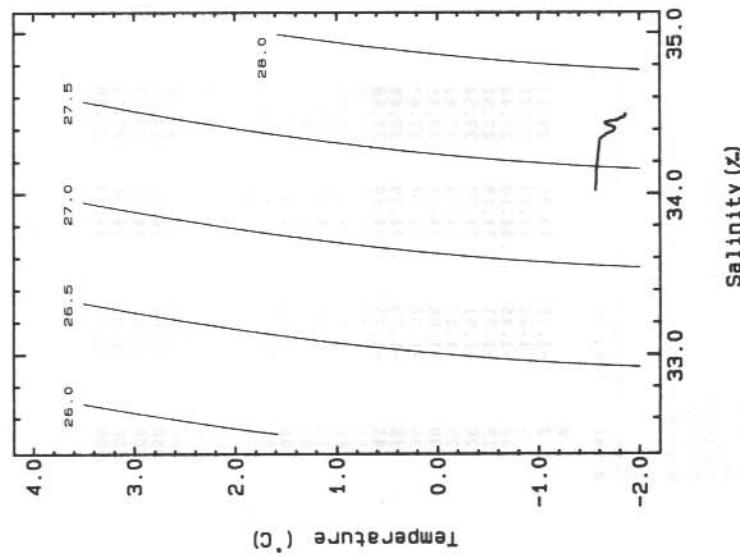
Cruise : ADBEXI
 Station number : 29
 Date : 10 DEC 1982
 Start Time : 0945 GMT
 Ship : NELIA DAN
 Position : 67°10' 0.00S 72°33.00E
 Cast Depth (m) : 154
 Bottom Depth (m) : 470 m

Depth (bar)	Temperature (deg C)	Salinity	Sigma-T
0	-1.57	34.02	27.38
2	-1.58	34.10	27.44
5	-1.61	34.34	27.64
10	-1.75	34.40	27.69
15	-1.68	34.43	27.72
20	-1.66	34.44	27.72
25	-1.72	34.45	27.73
30	-1.77	34.46	27.74
35	-1.80	34.47	27.75
40	-1.81	34.47	27.75
45	-1.84	34.47	27.75
50	-1.85	34.48	27.76
60	-1.86	34.48	27.76
70	-1.86	34.48	27.76
75	-1.86	34.48	27.76
80	-1.86	34.48	27.76
90	-1.86	34.49	27.77
100	-1.86	34.49	27.77
125	-1.86	34.49	27.77
150	-1.86	34.49	27.77

Cruise : ADBEXI Station 29
 10 DEC 1982 0945 GMT
 Latitude 67°10'.00S
 Longitude 72°33.00E
 Depth: CTD 154 m Bottom 470 m



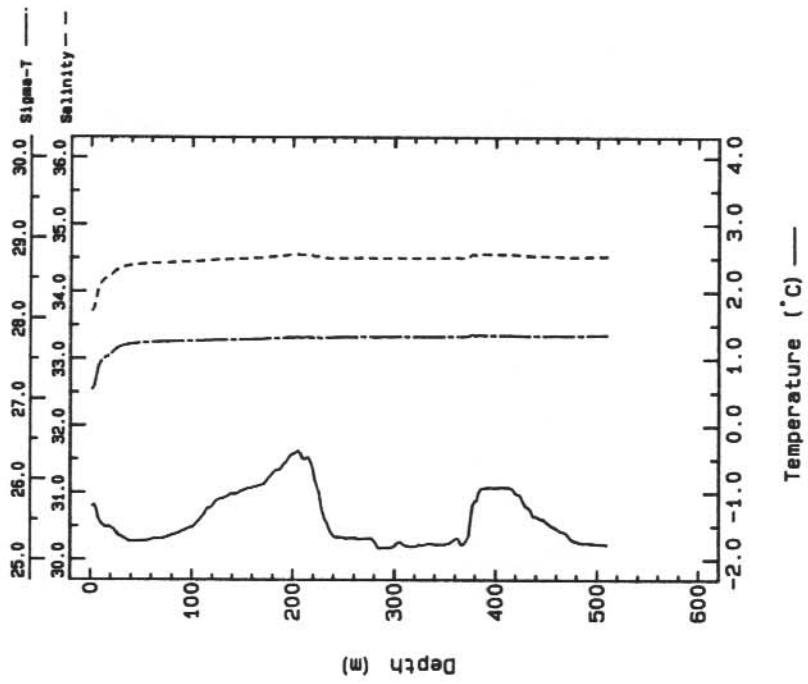
Cruise: ADBEX1 Station: 29
10 DEC 1992 0945 GMT
Latitude : 67° 10.00S
Longitude: 72° 33.00E
Depth: CTD 154 m Bottom 470 m



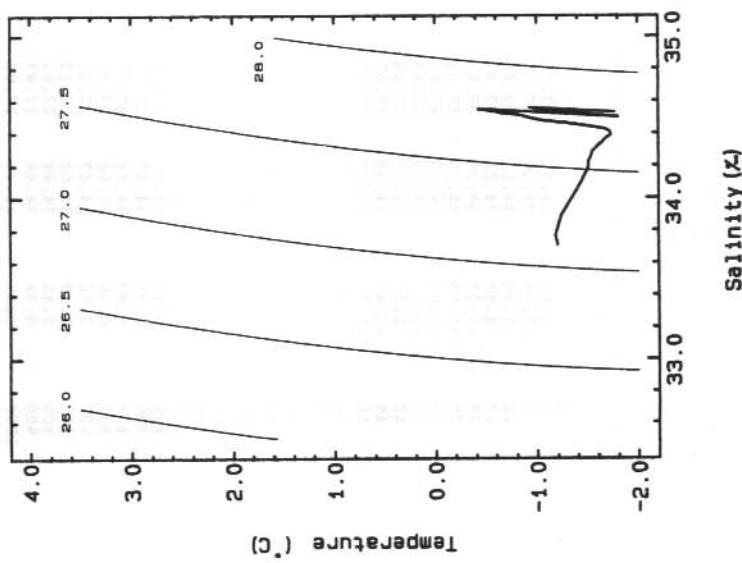
Cruise : ADBEX1 Station 30
 Station number : 30
 Date : 10 DEC 1982
 Start Time : 1457 GMT
 Ship : NELLA DAN
 Position : 66:54.10S 72:56.30E
 Cast Depth (m) : 512
 Bottom Depth (m) : Not Recorded

Cruise : ADBEX1 Station 30
 10 DEC 1982 1457 GMT
 Latitude 66:54.10S
 Longitude 72:56.30E
 Depth: CTD 512 m Bottom NR

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.20	33.71	27.11
5	-1.21	33.83	27.21
10	-1.45	34.10	27.44
15	-1.51	34.19	27.51
20	-1.51	34.22	27.54
25	-1.58	34.30	27.61
30	-1.66	34.35	27.65
35	-1.70	34.37	27.67
40	-1.73	34.39	27.68
45	-1.73	34.40	27.69
50	-1.72	34.40	27.69
60	-1.70	34.42	27.70
70	-1.68	34.42	27.71
75	-1.67	34.43	27.71
80	-1.63	34.43	27.71
90	-1.57	34.44	27.72
100	-1.51	34.44	27.72
125	-1.11	34.47	27.73
150	-0.97	34.49	27.74
175	-0.80	34.51	27.75
200	-0.43	34.55	27.76
250	-1.68	34.50	27.77
300	-1.81	34.50	27.77
400	-0.33	34.56	27.79
500	-1.77	34.53	27.80

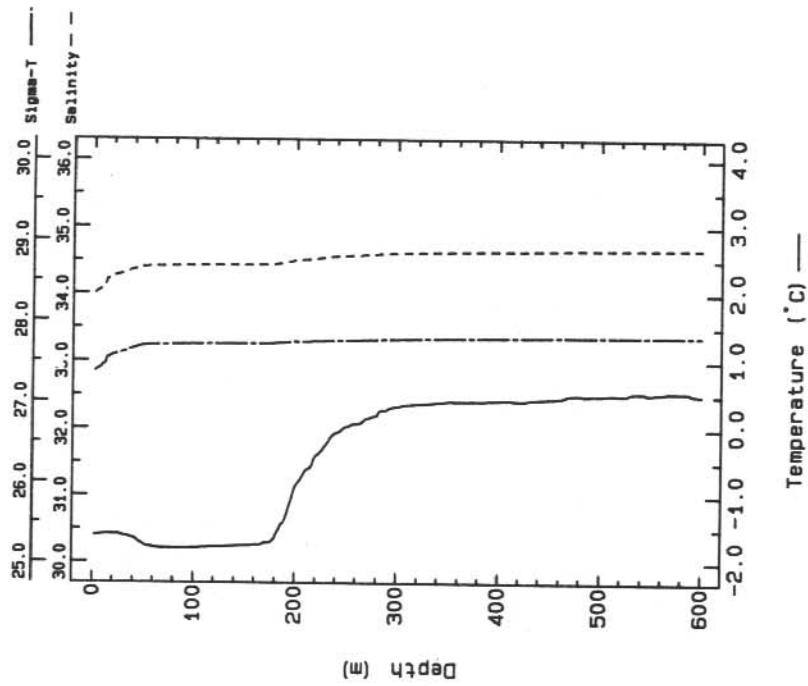


Cruise: ADBEX1 Station: 30
10 DEC 1982 1457 GMT
Latitude : 66° 54.10S
Longitude: 72° 56.30E
Depth: CTD 512 m Bottom NR



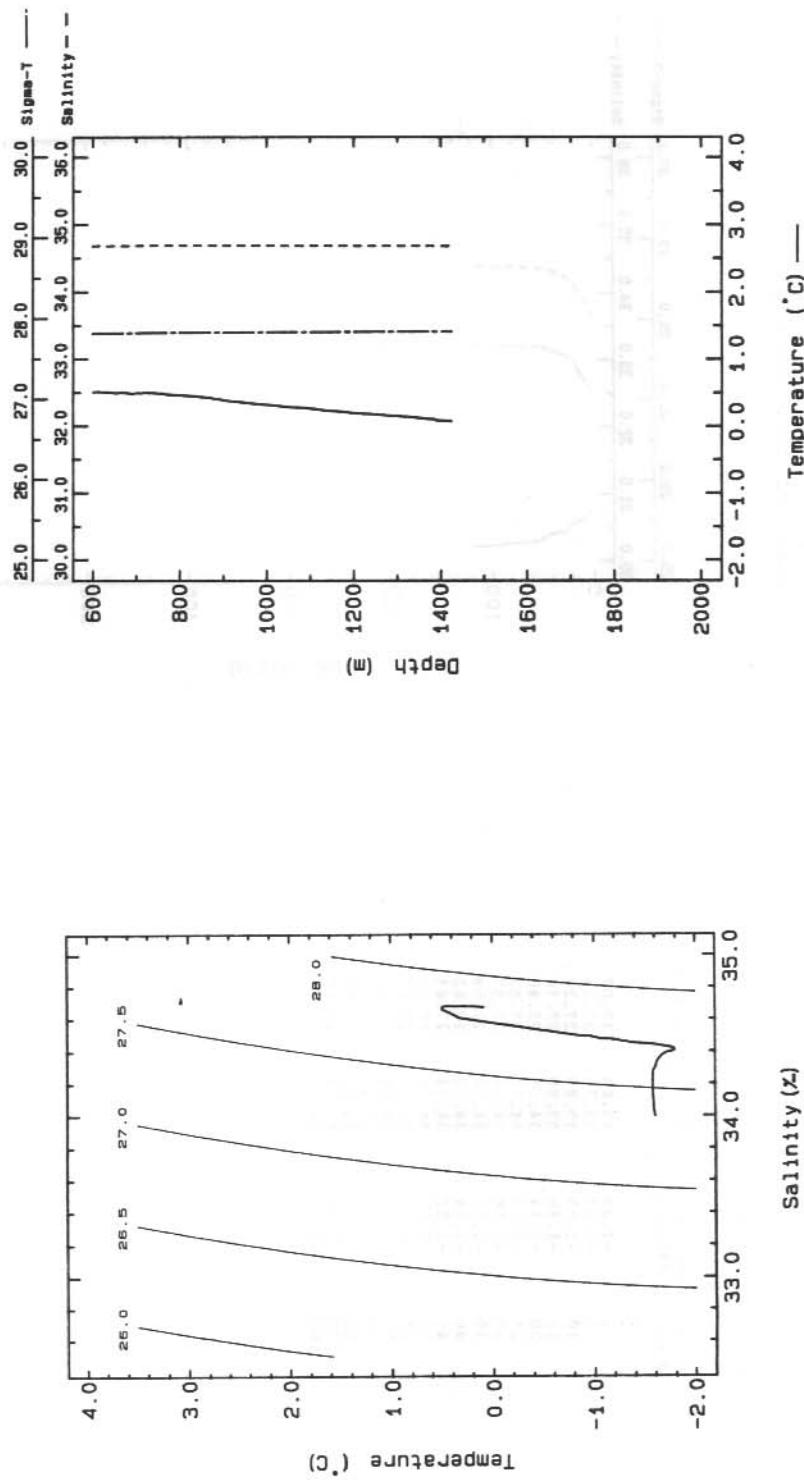
Cruise	ADBEX1	Temperature (deg C)	Salinity	Sigma-T
Station number	31	Depth d bar	Depth (m)	Depth (E)
Date	10 DEC 1982	-1.61	34.00	27.36
Start Time	0156 GMT	-1.59	34.04	27.39
Ship	NELLA DAN	-1.59	34.11	27.45
Position	66°29.00S 72°48.10E	-1.58	34.21	27.54
Cast Depth (m)	1428	-1.59	34.25	27.57
Bottom Depth (m)	Not Recorded	-1.59	34.28	27.59
		-1.61	34.30	27.61
		-1.62	34.33	27.63
		-1.64	34.35	27.65
		-1.69	34.38	27.67
		-1.73	34.40	27.69
		-1.78	34.40	27.69
		-1.79	34.41	27.70
		-1.79	34.41	27.70
		-1.80	34.41	27.70
		-1.79	34.41	27.70
		-1.79	34.42	27.71
		-1.77	34.42	27.71
		-1.75	34.43	27.71
		-1.70	34.43	27.72
		-0.86	34.50	27.74
		0.03	34.57	27.76
		0.33	34.61	27.77
		0.42	34.64	27.79
		0.50	34.66	27.80
		0.50	34.67	27.81
		0.49	34.68	27.82
		0.45	34.68	27.82
		0.38	34.68	27.83
		0.31	34.68	27.83
		0.26	34.68	27.83
		0.19	34.68	27.83
		0.15	34.67	27.83
		0.08	34.67	27.83

Cruise: ADBEX1 Station: 31
 10 DEC 1982 0156 GMT
 Latitude : 66°29.00S
 Longitude: 72°48.10E
 Depth: CTD 1428 m Bottom NR



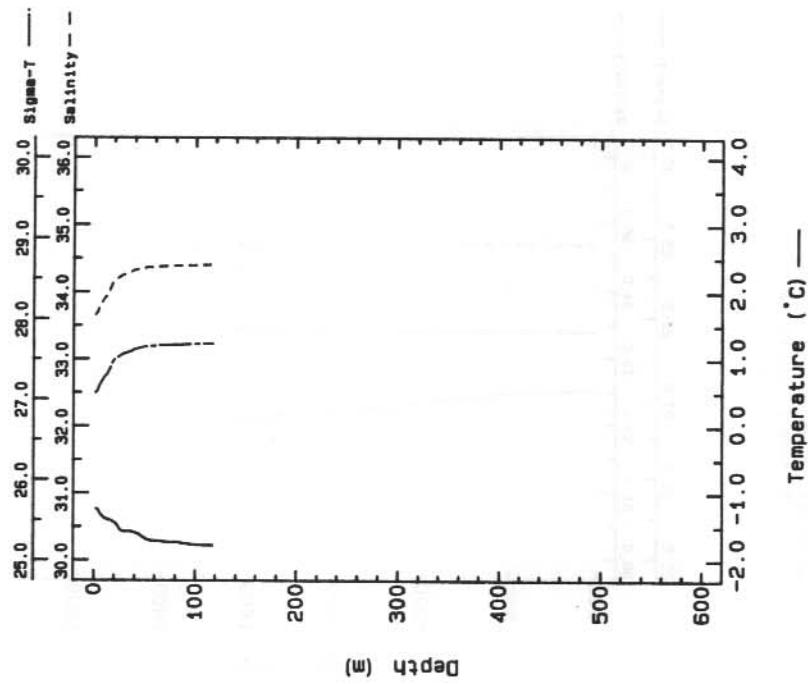
Cruise: ADBEX1 Station: 31
10 DEC 1982 0156 GMT
Latitude : 66:29.00S
Longitude: 72:48.10E
Depth: CTD 1428 m Bottom NR

Cruise: ADBEX1 Station: 31
10 DEC 1982 0156 GMT
Latitude : 66:29.00S
Longitude: 72:48.10E
Depth: CTD 1428 m Bottom NR

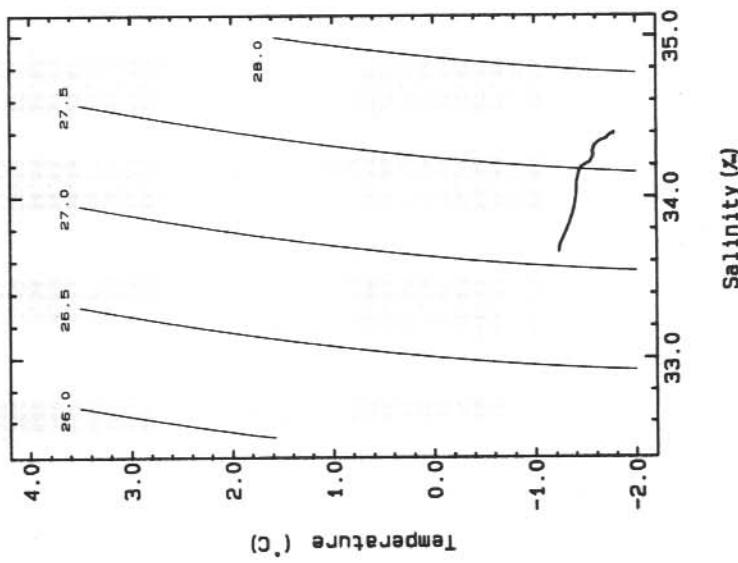


Cruise : ADBEX1 Station 32
 Station number : 32
 Date : 11 DEC 1982
 Start Time : 0000 GMT
 Ship : NELLA DAN
 Position : 66°28.00S 73°44.00E
 Cast Depth (m) : 120
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.24	33.66	27.07
2	-1.27	33.74	27.14
5	-1.37	33.89	27.26
10	-1.40	33.98	27.34
15	-1.44	34.15	27.48
20	-1.52	34.21	27.53
25	-1.58	34.26	27.57
30	-1.57	34.28	27.59
35	-1.59	34.32	27.62
40	-1.62	34.34	27.64
45	-1.67	34.35	27.65
50	-1.71	34.37	27.67
60	-1.73	34.38	27.67
70	-1.74	34.38	27.68
75	-1.74	34.38	27.68
80	-1.74	34.38	27.68
90	-1.76	34.39	27.68
100	-1.77	34.39	27.69

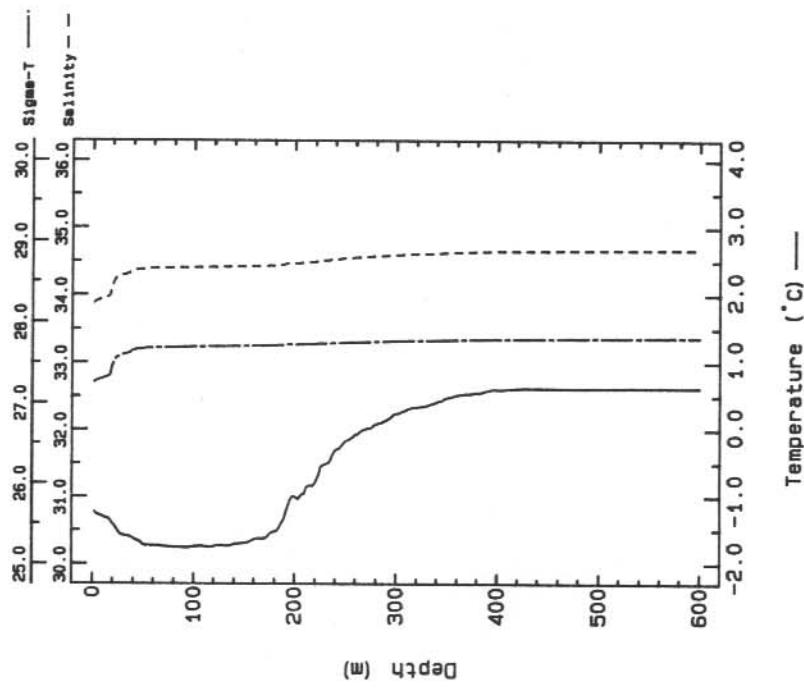


Cruise: ADDEX1 Station: 32
11 DEC 1982 0000 GMT
Latitude : 66:28.00S
Longitude: 73:44.00E
Depth: CTD 1200 m Bottom NR



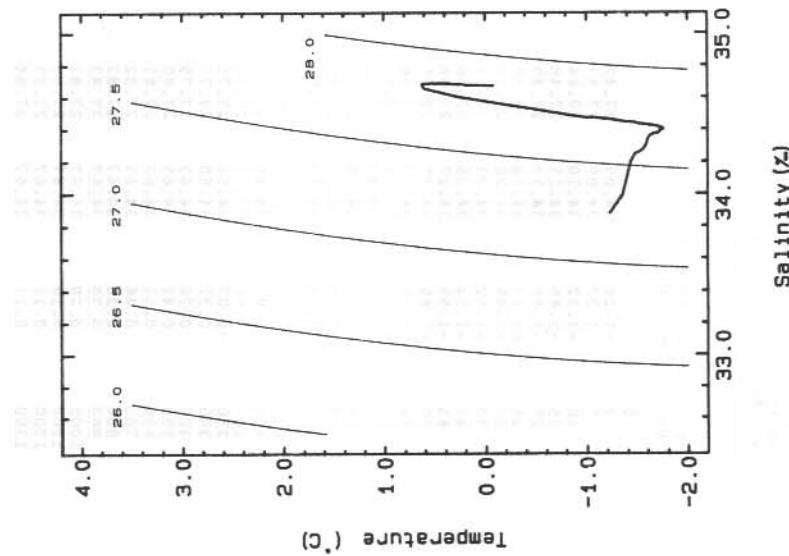
Cruise : ADDEX1
 Station number : 33
 Date : 11 DEC 1982
 Start Time : 0445 GMT
 Ship : NELIA DAN
 Position : 66°28'10S 73°44'.00E
 Cast Depth (m) : 214.4
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.23	33.88	27.25
2	-1.27	33.91	27.28
5	-1.30	33.93	27.30
10	-1.33	33.96	27.32
15	-1.40	34.12	27.45
20	-1.51	34.25	27.57
25	-1.58	34.29	27.60
30	-1.60	34.31	27.61
35	-1.62	34.36	27.65
40	-1.66	34.37	27.67
45	-1.72	34.38	27.67
50	-1.73	34.39	27.68
60	-1.75	34.39	27.69
70	-1.75	34.40	27.69
75	-1.75	34.40	27.69
80	-1.76	34.40	27.69
90	-1.76	34.40	27.69
100	-1.75	34.40	27.70
125	-1.73	34.41	27.70
150	-1.70	34.42	27.70
175	-1.57	34.43	27.71
200	-1.00	34.47	27.72
250	-0.18	34.55	27.75
300	0.25	34.60	27.77
400	0.60	34.65	27.79
500	0.62	34.67	27.80
600	0.63	34.68	27.81
700	0.60	34.68	27.82
800	0.54	34.69	27.82
900	0.48	34.68	27.82
1000	0.41	34.68	27.83
1100	0.35	34.68	27.83
1200	0.27	34.68	27.83
1300	0.22	34.67	27.83
1400	0.15	34.67	27.83
1500	0.13	34.67	27.83
1750	0.03	34.67	27.84
2000	-0.04	34.67	27.84

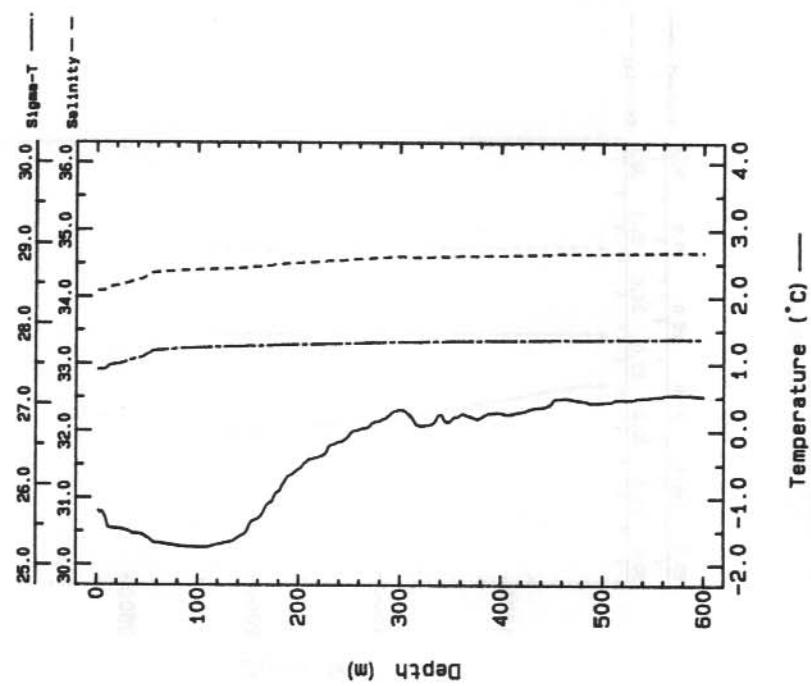


Cruise: ADBEX1 Station: 33
11 DEC 1982 0445 GMT
Latitude : 66: 28.10S
Longitude: 73: 44.00E
Depth: CTD 2144 m Bottom NR

Cruise : ADBEX1 Station 33
11 DEC 1982 0445 GMT
Latitude 66: 28.10S
Longitude 73: 44.00E
Depth: CTD 2144 m Bottom NR

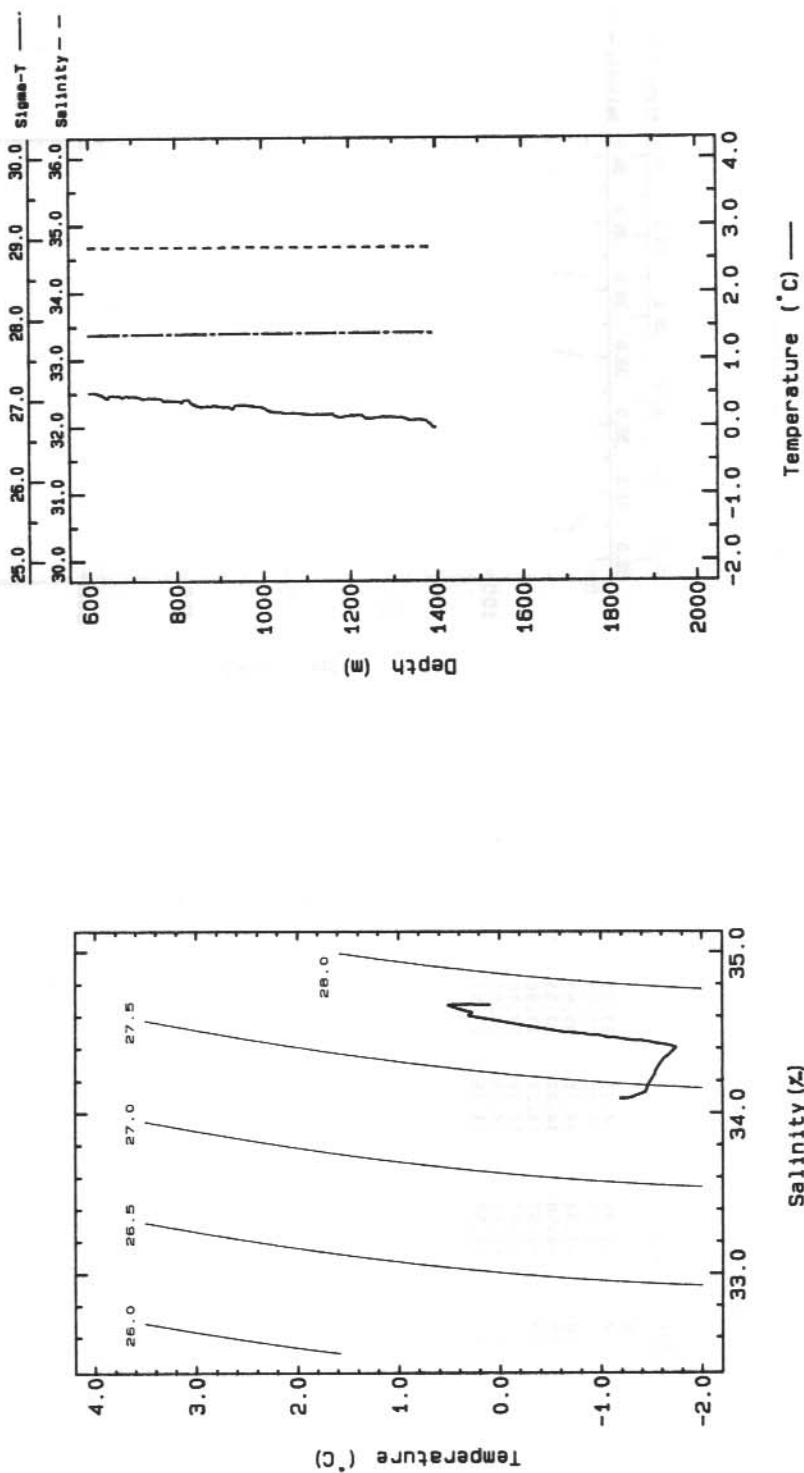


Cruise	Sta	Temperature (deg C)	Salinity	Sigma-T
	d bar			
ADBEX1	34	34.09	27.42	
Station number	34	34.09	27.43	
Date	11 DEC 1982	34.10	27.44	
Start Time	1014 GMT	34.15	27.48	
Ship	NELLA DAN	34.17	27.49	
Position	66°43.2'N 73°52.10'E	34.18	27.50	
Cast Depth (m)	1400	34.20	27.52	
Bottom Depth (m)	1652	34.23	27.54	
0	-1.20	34.09	27.42	
5	-1.22	34.09	27.43	
10	-1.32	34.10	27.44	
15	-1.45	34.15	27.48	
20	-1.46	34.17	27.49	
25	-1.47	34.18	27.50	
30	-1.49	34.18	27.50	
35	-1.52	34.23	27.54	
40	-1.54	34.25	27.56	
45	-1.55	34.27	27.58	
50	-1.60	34.31	27.61	
60	-1.68	34.37	27.66	
70	-1.70	34.38	27.67	
75	-1.71	34.38	27.68	
80	-1.72	34.39	27.68	
90	-1.74	34.40	27.69	
100	-1.74	34.40	27.69	
125	-1.68	34.42	27.71	
150	-1.47	34.44	27.72	
175	-1.01	34.48	27.73	
200	-0.56	34.51	27.74	
250	-0.07	34.56	27.75	
300	0.31	34.60	27.77	
400	0.26	34.63	27.79	
500	0.42	34.65	27.80	
600	0.51	34.67	27.81	
700	0.46	34.67	27.82	
800	0.38	34.67	27.82	
900	0.30	34.67	27.83	
1000	0.28	34.67	27.83	
1100	0.18	34.67	27.83	
1200	0.16	34.67	27.83	
1300	0.14	34.67	27.84	



Cruise: ADBEX1 Station: 34
11 DEC 1982 1014 GMT
Latitude: 66° 43' 20S
Longitude: 73° 52' 10E
Depth: CTD 1400 m Bottom 1652 m

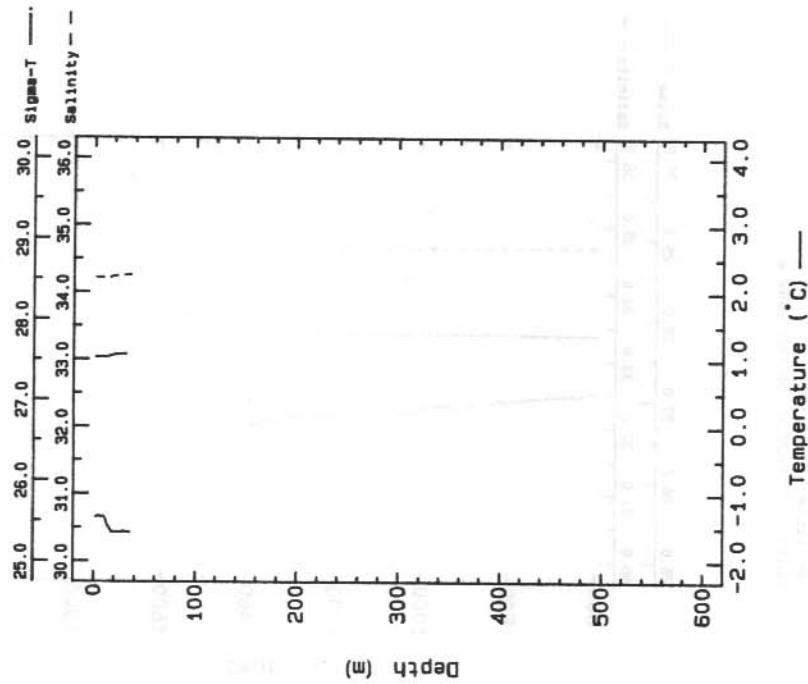
Cruise : ADBEX1 Station 34
11 DEC 1982 1014 GMT
Latitude 66: 43.20S
Longitude 73: 52.10E
Depth: CTD 1400 m Bottom 1652 m



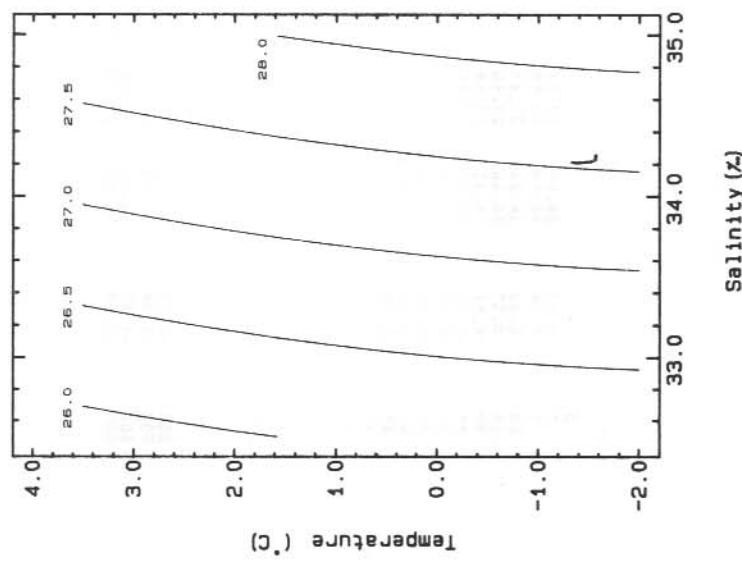
Cruise : ADBEX1 Station 35
 Station number : 35
 Date : 11 DEC 1982
 Start Time : 1519 GMT
 Ship Position : NELLA DAN
 : 66°57'50S 74°10'40E
 Cast Depth (m) : 38
 Bottom Depth (m) : 438 m

Depth (m)	Temperature (deg C)	Salinity	Sigma-T
0	-1.35	34.21	27.53
5	-1.33	34.21	27.53
10	-1.34	34.21	27.53
15	-1.50	34.22	27.53
20	-1.57	34.24	27.56
25	-1.57	34.24	27.56
30	-1.57	34.25	27.57
35	-1.58	34.26	27.57

Cruise : ADBEX1 Station 35
 Date : 11 DEC 1982 1519 GMT
 Latitude : 66°57'50S
 Longitude : 74°10'40E
 Depth: CTD 38 m Bottom 438 m

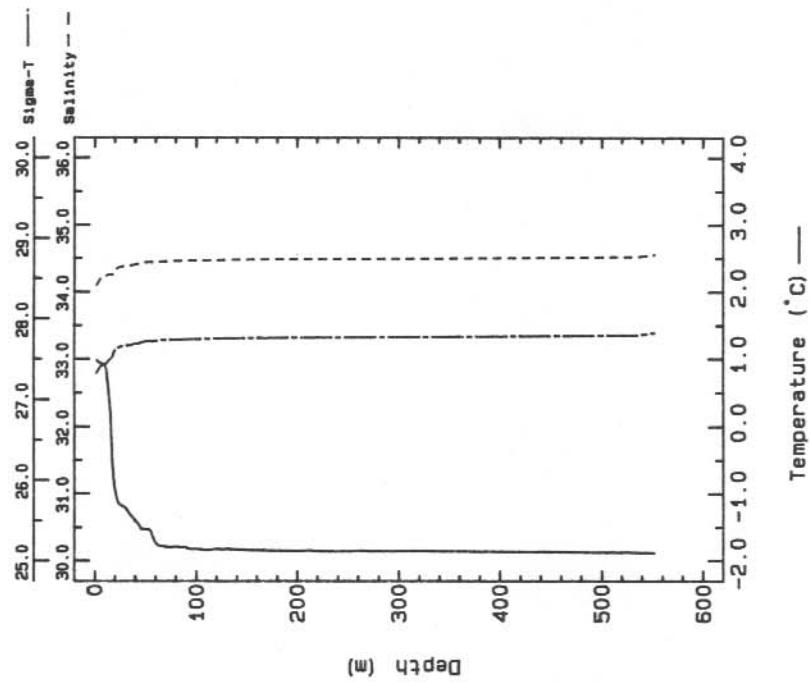


Cruise: AODEX1 Station: 35
11 DEC 1982 1519 GMT
Latitude : 66°57'.50S
Longitude: 74°10'.40E
Depth: CTD 38 m Bottom 436 m

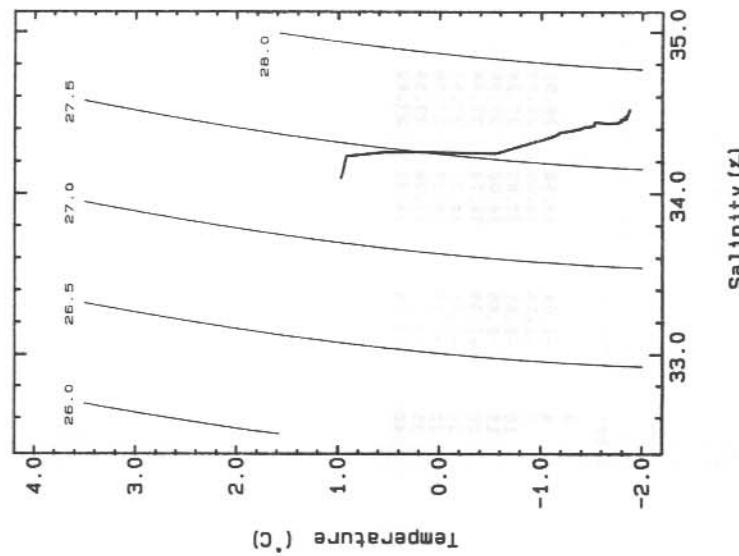


Cruise : ADBEX1
 Station 36
 Station number : 36
 Date : 11 DEC 1982
 Start Time : 2113 GMT
 Ship : NELLA DAN
 Position : 67°52'.40S 74°02'.09E
 Cast Depth (m) : 554
 Bottom Depth (m) : 560 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T'
0	0.97	34.10	27.32
2	0.94	34.18	27.39
5	0.92	34.23	27.43
10	0.92	34.26	27.49
15	0.97	34.31	27.59
20	-0.91	34.37	27.65
25	-1.16	34.38	27.66
30	-1.20	34.39	27.67
35	-1.30	34.39	27.67
40	-1.40	34.40	27.68
45	-1.50	34.42	27.70
50	-1.53	34.44	27.72
60	-1.73	34.44	27.72
70	-1.79	34.45	27.73
75	-1.80	34.45	27.74
80	-1.79	34.46	27.74
90	-1.80	34.46	27.75
100	-1.83	34.46	27.75
125	-1.83	34.47	27.75
150	-1.84	34.48	27.76
175	-1.85	34.49	27.76
200	-1.86	34.49	27.76
250	-1.86	34.49	27.77
300	-1.86	34.49	27.77
400	-1.87	34.50	27.78
500	-1.88	34.52	27.79

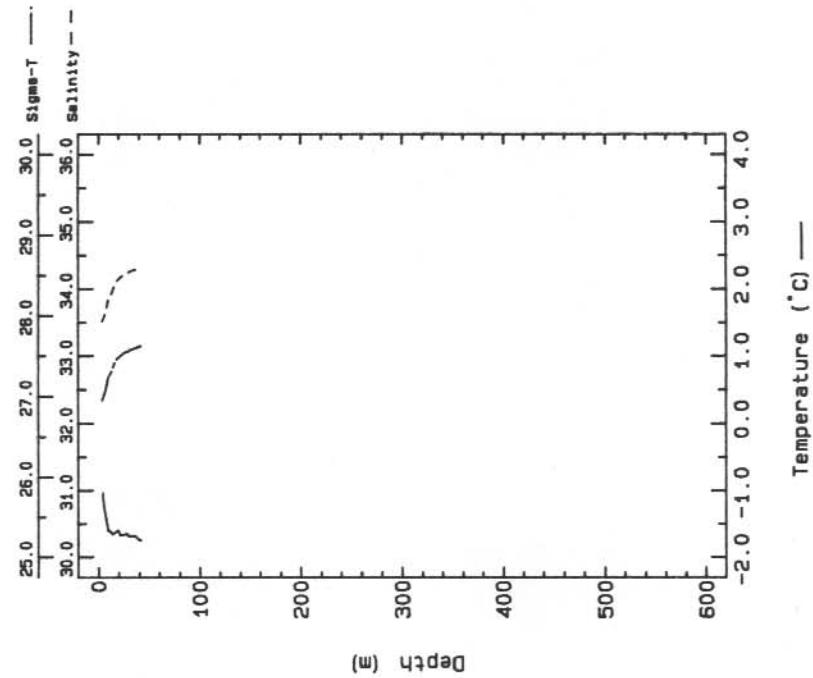


Cruise: ADBEX1 Station: 36
11 DEC 1992 2113 GMT
Latitude : 67.52.-05
Longitude: 74.02.-09E
Depth: CTD 554 m Bottom 560 m

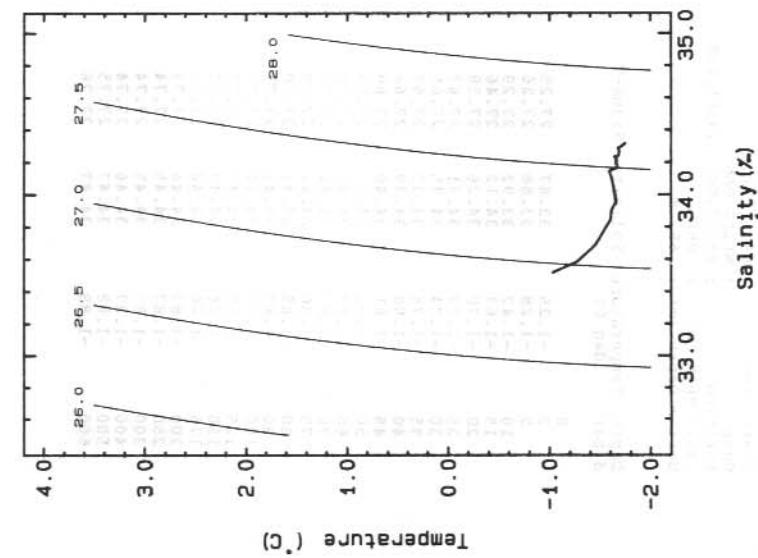


Cruise : ADBEX1 Station 37
 Station number : 37
 Date : 12 DEC 1982
 Start Time : 0000 GMT
 Ship : NELIA DAN
 Position : 69°02'.00S 74°05'.00E
 Cast Depth (m) : 44
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.04	33.52	26.95
4	-1.16	33.55	26.99
5	-1.61	33.85	27.24
10	-1.65	34.00	27.36
15	-1.59	34.14	27.48
20	-1.66	34.21	27.53
25	-1.68	34.24	27.56
30	-1.68	34.28	27.59
35	-1.74	34.31	27.62
40	-1.74	34.31	27.62

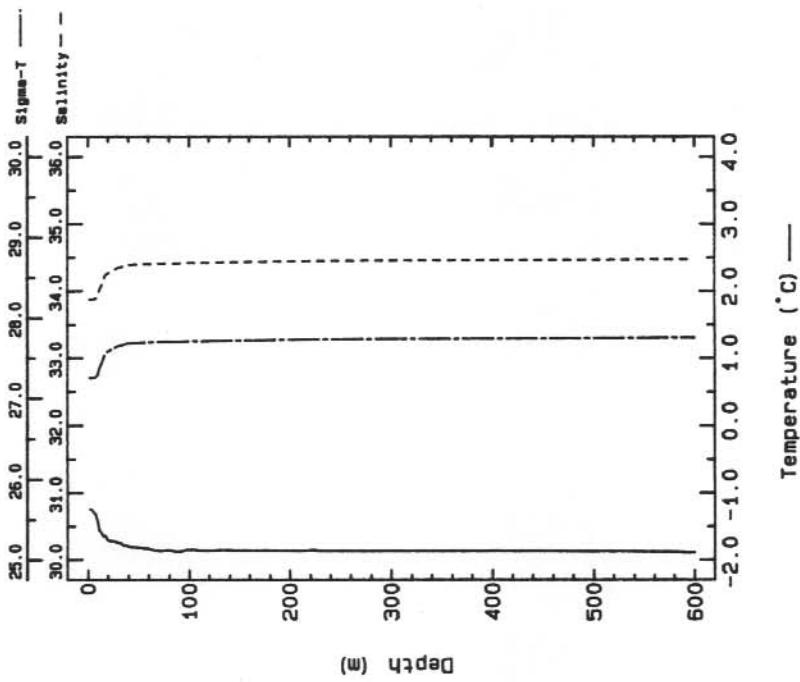


Cruise: ADBEXI Station: 37
12 DEC 1982 0000 GMT
Latitude : 69° 02'.00S
Longitude: 74° 05'.00E
Depth: CTD 44 m Bottom NR



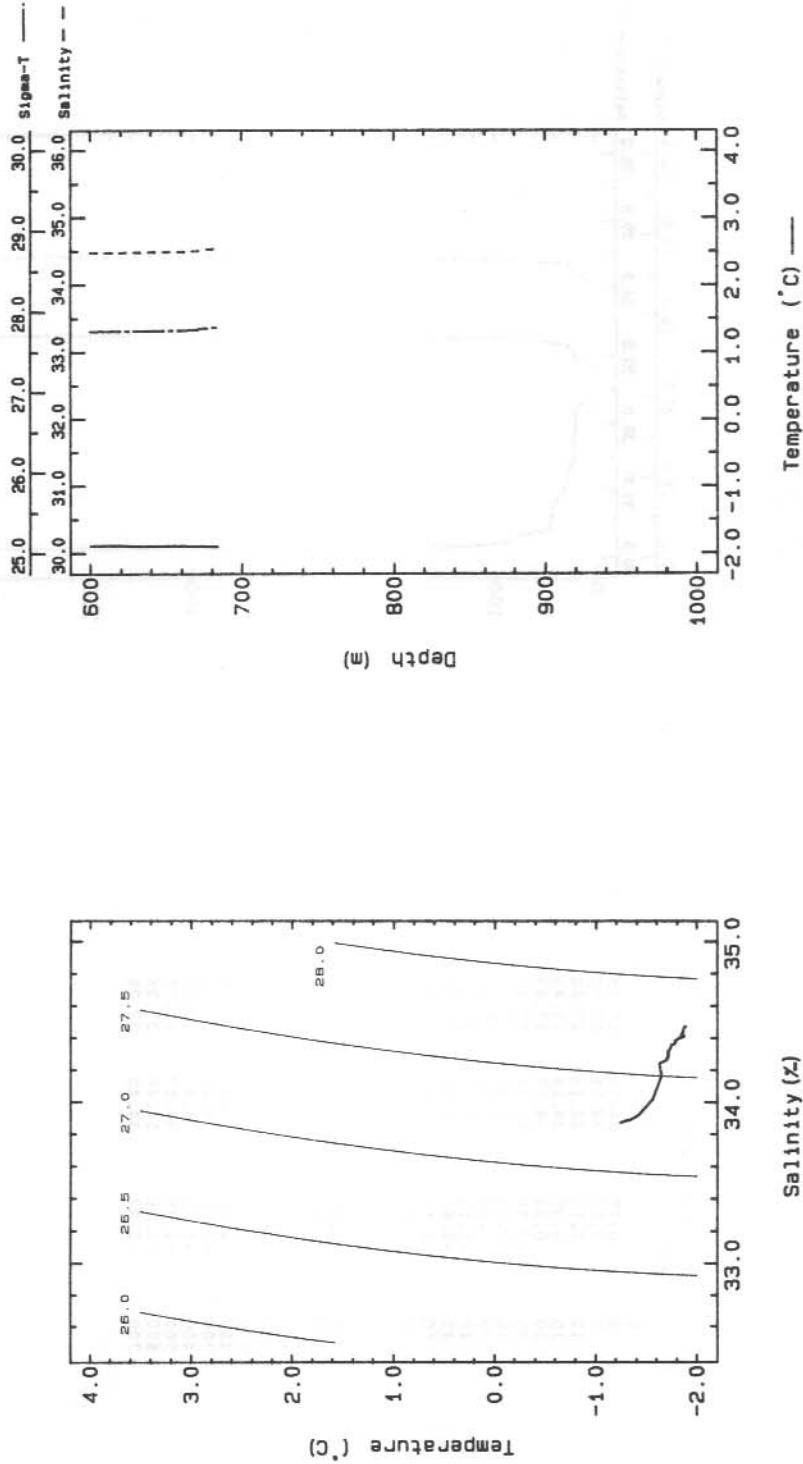
Cruise : ADBEX1 Station 38
 Station number : 38
 Date : 12 DEC 1982
 Start Time : 0412 GMT
 Ship : NELLA DAN
 Position : 69.02.00S 74.05.20E
 Cast Depth (m) : 686
 Bottom Depth (m) : 692 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.25	33.87	27.25
2	-1.28	33.88	27.26
5	-1.42	33.92	27.29
10	-1.63	34.12	27.46
15	-1.70	34.26	27.58
20	-1.72	34.31	27.62
25	-1.74	34.35	27.65
30	-1.78	34.37	27.67
35	-1.80	34.39	27.68
40	-1.81	34.40	27.69
45	-1.82	34.40	27.69
50	-1.83	34.40	27.70
60	-1.83	34.40	27.70
70	-1.87	34.41	27.70
75	-1.86	34.41	27.70
80	-1.85	34.41	27.70
90	-1.87	34.41	27.71
100	-1.85	34.42	27.71
125	-1.85	34.43	27.72
150	-1.86	34.43	27.72
175	-1.86	34.44	27.72
200	-1.87	34.44	27.73
250	-1.87	34.45	27.74
300	-1.87	34.45	27.74
400	-1.87	34.46	27.74
500	-1.88	34.47	27.75
600	-1.89	34.47	27.76

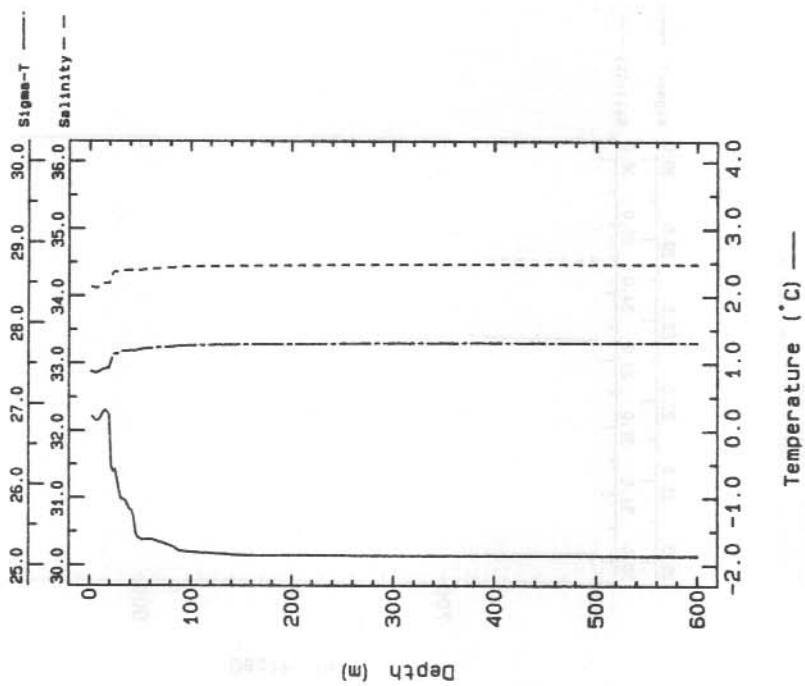


Cruise: ADBEX1 Station: 38
12 DEC 1982 0412 GMT
Latitude : 69° 02' .00S
Longitude: 74° 05' .20E
Depth: CTD 686 m Bottom 692 m

Cruise : ADBEX1 Station 38
12 DEC 1982 0412 GMT
Latitude 69° 02'.00S
Longitude 74° 05'.20E
Depth: CTD 686 m Bottom 692 m

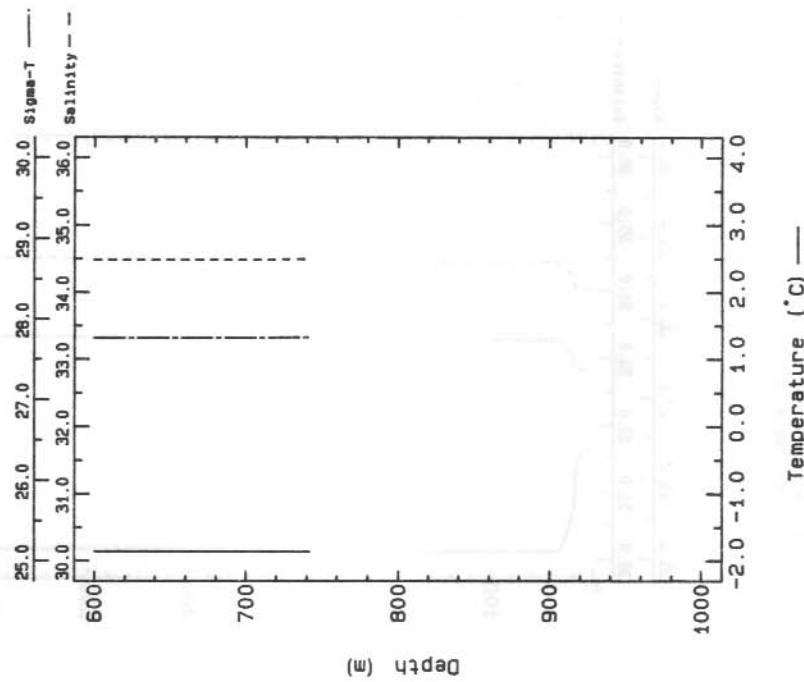
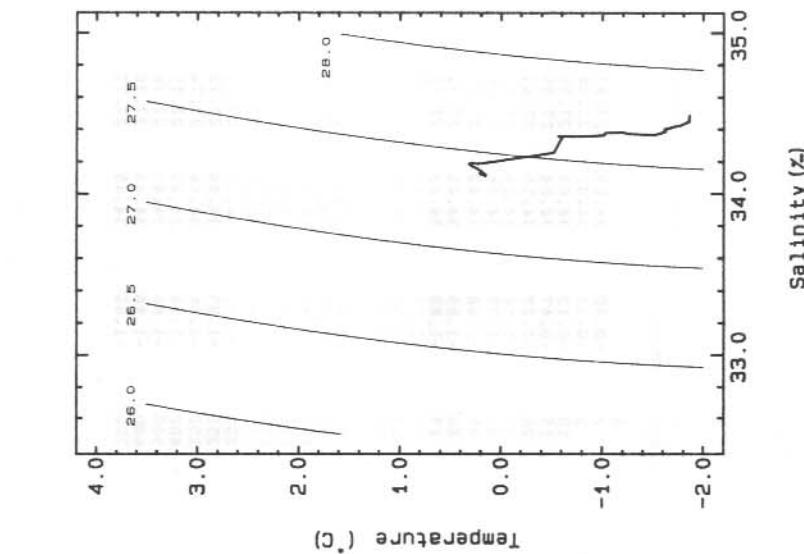


Cruise	ADBEX1	Temperature (deg C)	Salinity	Sigma-T
Station number	: 39			
Date	: 12 DEC 1982			
Start Time	: 0810 GMT			
Ship	: NELLA DAN			
Position	: 69°26.20S 74°35.50E			
Cast Depth (m)	: 744			
Bottom Depth (m)	: 746			
Depth (bar)				
0	0.20	34.13	27.39	
5	0.17	34.11	27.38	
10	0.17	34.13	27.40	
15	0.30	34.18	27.43	
20	0.23	34.18	27.43	
25	-0.59	34.35	27.61	
30	-0.89	34.36	27.63	
35	-1.04	34.38	27.65	
40	-1.18	34.38	27.66	
45	-1.41	34.36	27.65	
50	-1.61	34.38	27.67	
60	-1.62	34.40	27.69	
70	-1.67	34.41	27.70	
75	-1.69	34.41	27.70	
80	-1.72	34.42	27.70	
90	-1.80	34.43	27.72	
100	-1.81	34.43	27.72	
125	-1.83	34.44	27.73	
150	-1.86	34.45	27.74	
175	-1.86	34.45	27.73	
200	-1.85	34.45	27.74	
250	-1.86	34.46	27.74	
300	-1.86	34.47	27.75	
400	-1.86	34.47	27.75	
500	-1.86	34.47	27.75	
600	-1.86	34.48	27.76	
700	-1.87	34.48	27.76	



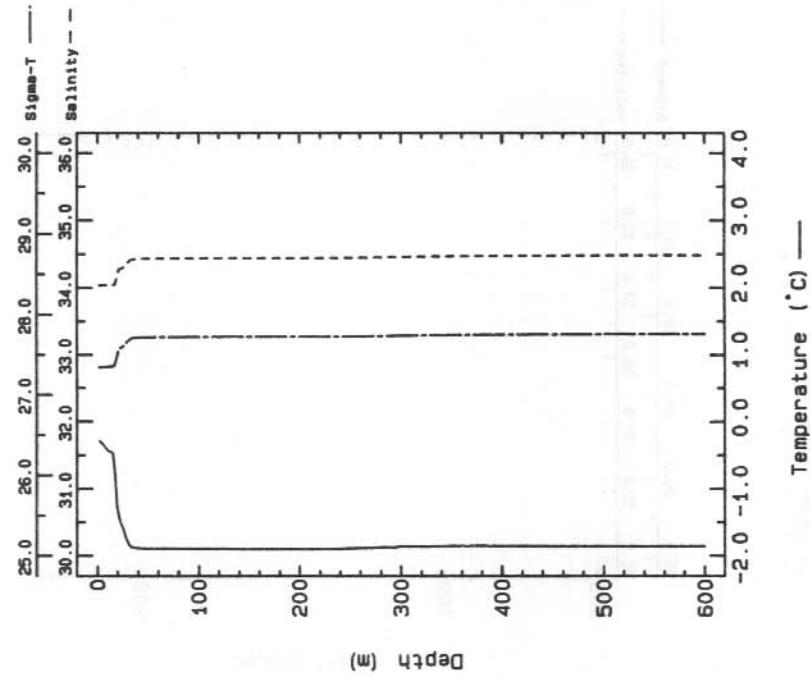
Cruise: ADBEX1 Station: 39
12 DEC 1982 0810 GMT
Latitude : 69° 26.20S
Longitude: 74° 35.50E
Depth: CTD 744 m Bottom 746 m

Cruise : ADBEX1 Station 39
12 DEC 1982 0810 GMT
Latitude 69° 26.20S
Longitude 74° 35.50E
Depth: CTD 744 m Bottom 746 m



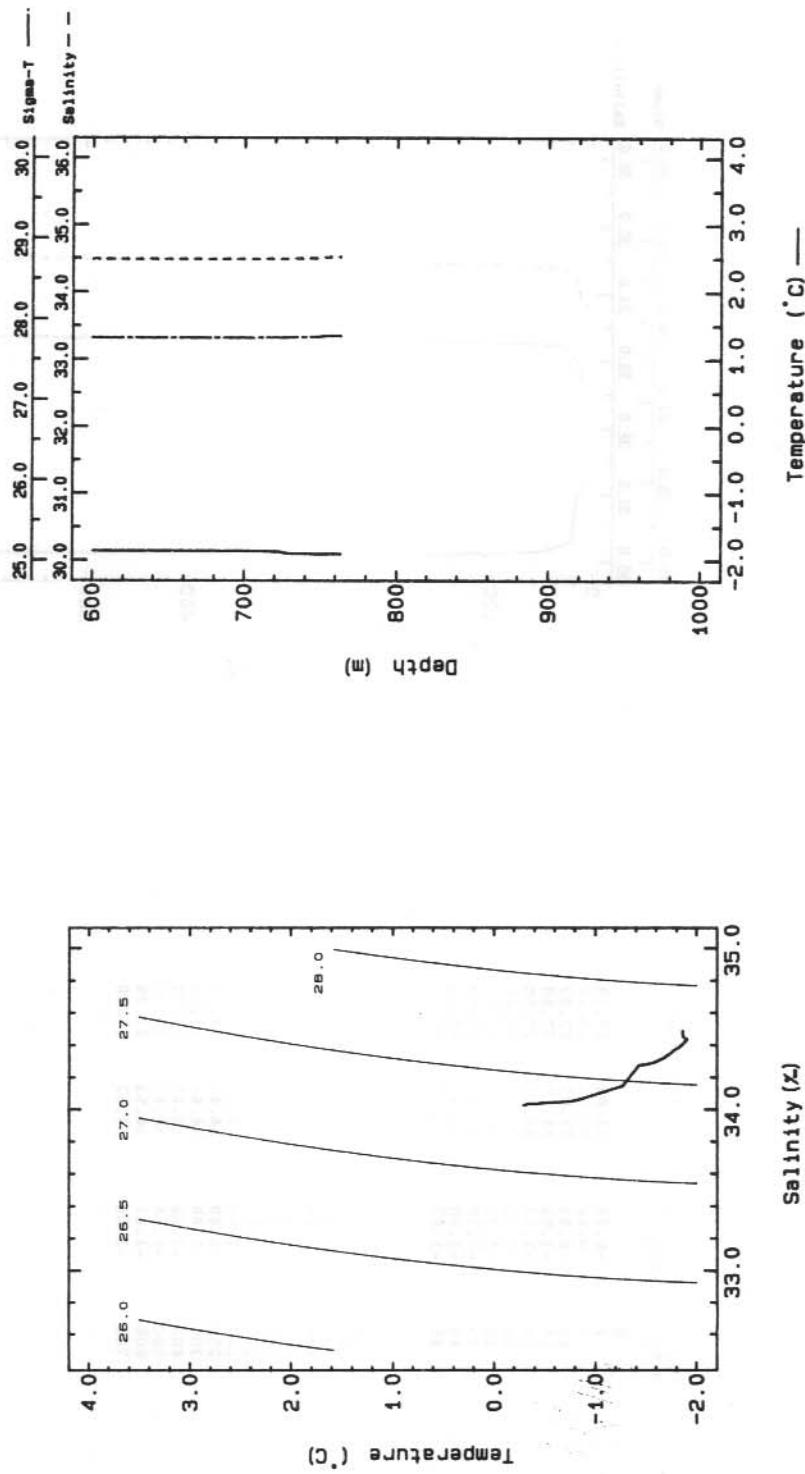
Cruise : ADBEX1 Station 40
 Station number : 40
 Date : 12 DEC 1982 1041 GMT
 Start Time : 1041 GMT
 Ship : NELLA DAN
 Position : 69°25.40S 74°12.20E
 Cast Depth (m) : 766
 Bottom Depth (m) : 769 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-0.30	34.03	27.33
5	-0.33	34.03	27.34
10	-0.42	34.03	27.35
15	-0.47	34.04	27.35
20	-1.27	34.15	27.47
25	-1.56	34.29	27.60
30	-1.77	34.36	27.66
35	-1.88	34.42	27.71
40	-1.89	34.42	27.71
45	-1.89	34.43	27.72
50	-1.90	34.43	27.72
60	-1.90	34.43	27.72
70	-1.90	34.43	27.72
75	-1.90	34.43	27.72
80	-1.90	34.43	27.72
90	-1.90	34.43	27.72
100	-1.90	34.43	27.72
125	-1.90	34.43	27.72
150	-1.91	34.43	27.72
175	-1.91	34.44	27.73
200	-1.91	34.44	27.73
250	-1.89	34.44	27.73
300	-1.86	34.46	27.74
400	-1.86	34.47	27.75
500	-1.86	34.48	27.76
600	-1.86	34.48	27.76
700	-1.86	34.49	27.77



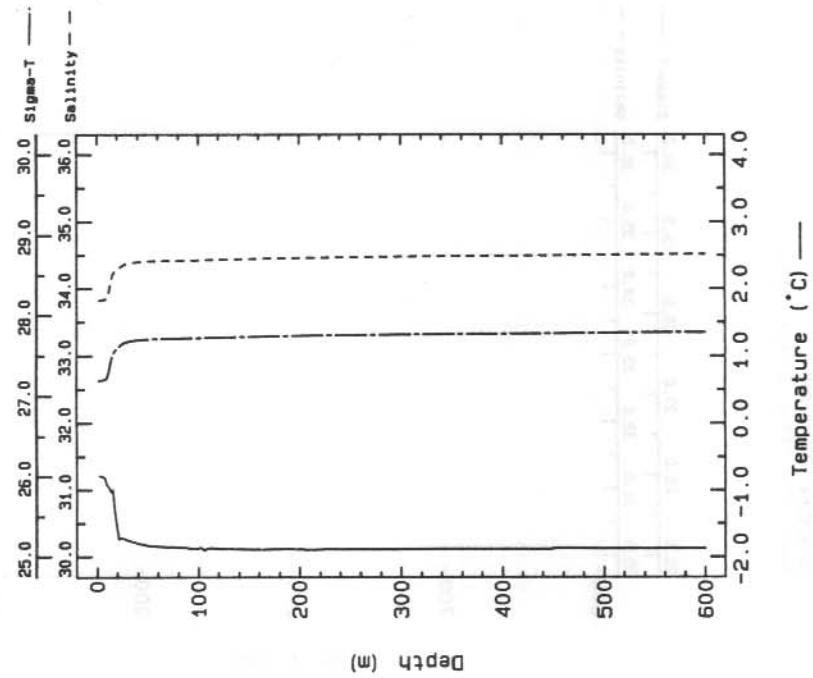
Cruise: ADBEX1 Station: 40
12 DEC 1982 1041 GMT
Latitude : 69°25'.40S
Longitude: 74°12'.20E
Depth: CTD 766 m Bottom 769 m

Cruise : ADBEX1 Station 40
12 DEC 1982 1041 GMT
Latitude 69° 25.40S
Longitude 74° 12.20E
Depth: CTD 766 m Bottom 769 m



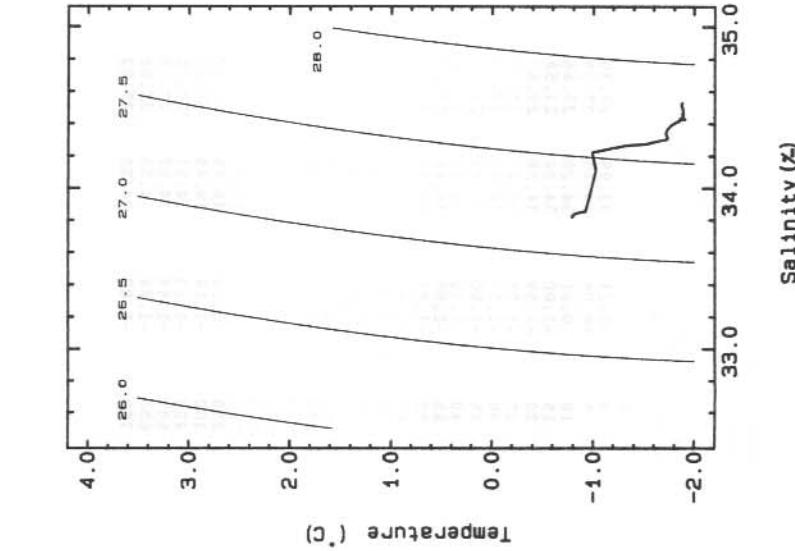
Cruise : ADBEXI
 Station 41
 Station number : 41
 Date : 12 DEC 1982
 Start Time : 1458 GMT
 Ship : NELLA DAN
 Position : 68°47'.50S 73°30'.20E
 Cast Depth (m) : 742
 Bottom Depth (m) : 751 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-0.79	33.82	27.19
5	-0.80	33.83	27.20
10	-0.93	33.85	27.22
15	-1.01	34.17	27.48
20	-1.53	34.28	27.58
25	-1.72	34.35	27.65
30	-1.75	34.38	27.67
35	-1.78	34.40	27.69
40	-1.80	34.40	27.69
45	-1.82	34.41	27.70
50	-1.84	34.41	27.70
60	-1.85	34.42	27.71
70	-1.85	34.42	27.71
75	-1.86	34.42	27.71
80	-1.86	34.42	27.72
90	-1.88	34.43	27.72
100	-1.87	34.43	27.72
125	-1.88	34.44	27.73
150	-1.89	34.45	27.73
175	-1.89	34.46	27.74
200	-1.89	34.47	27.75
250	-1.89	34.47	27.75
300	-1.89	34.49	27.76
400	-1.88	34.49	27.77
500	-1.88	34.51	27.78
600	-1.87	34.52	27.79
700	-1.88	34.53	27.80



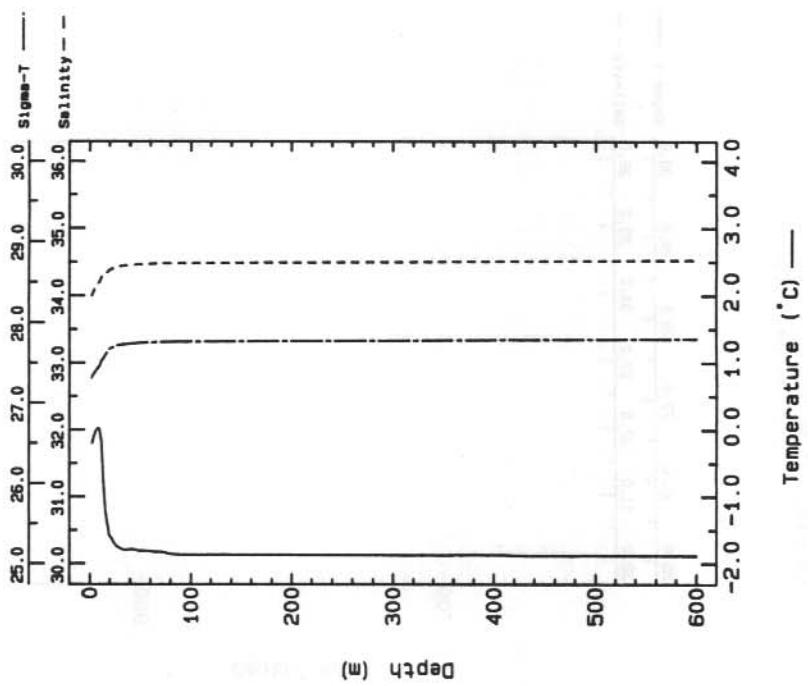
Cruise: AD8EX1 Station: 41
12 DEC 1982 1458 GMT
Latitude : 68° 47' 50S
Longitude: 73° 30.20E
Depth: CTD 742 m Bottom 751 m

Cruise : AD8EX1 Station 41
12 DEC 1982 1458 GMT
Latitude 68° 47' 50S
Longitude 73° 30.20E
Depth: CTD 742 m Bottom 751 m



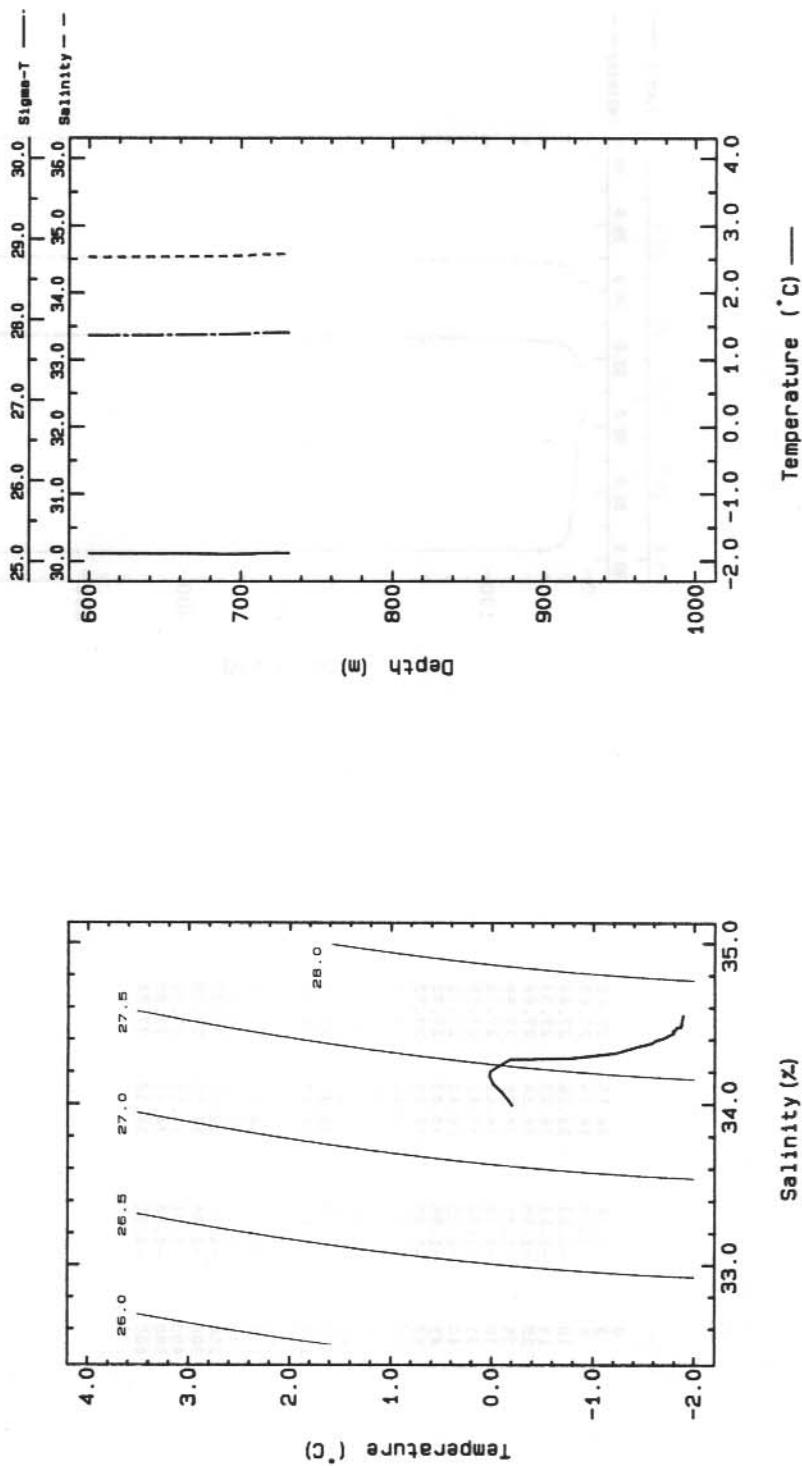
Cruise : ADBEX1 Station 42
 Station number : 42
 Date : 12 DEC 1982
 Start Time : 1711 GMT
 Ship : NELLA DAN
 Position : 68°45'.20S 72°50'.10E
 Cast Depth (m) : 734
 Bottom Depth (m) : 737 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-0.21	33.99	27.30
5	-0.06	34.10	27.38
10	0.01	34.20	27.46
15	-1.00	34.40	27.58
20	-1.59	34.38	27.67
25	-1.71	34.41	27.70
30	-1.77	34.43	27.72
35	-1.80	34.44	27.73
40	-1.79	34.45	27.74
45	-1.80	34.46	27.74
50	-1.81	34.46	27.75
60	-1.82	34.47	27.75
70	-1.83	34.48	27.76
75	-1.84	34.48	27.76
80	-1.86	34.48	27.76
90	-1.87	34.48	27.76
100	-1.87	34.48	27.76
125	-1.87	34.48	27.76
150	-1.87	34.48	27.76
175	-1.87	34.49	27.77
200	-1.87	34.49	27.77
250	-1.88	34.49	27.77
300	-1.88	34.49	27.77
400	-1.88	34.51	27.78
500	-1.88	34.52	27.79
600	-1.88	34.53	27.80
700	-1.89	34.55	27.82



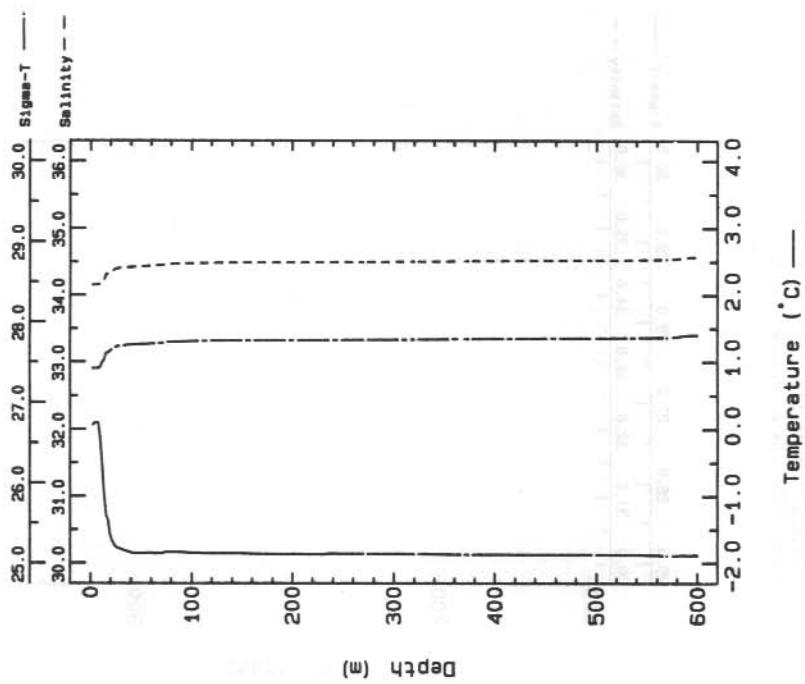
Cruise: ADBEX1 Station: 42
12 DEC 1982 1711 GMT
Latitude : 68° 45'.20S
Longitude: 72° 50'.10E
Depth: CTD 734 m Bottom 737 m

Cruise : ADBEX1 Station 42
12 DEC 1982 1711 GMT
Latitude 68: 45. 20S
Longitude 72: 50. 10E
Depth: CTD 734 m Bottom 737 m



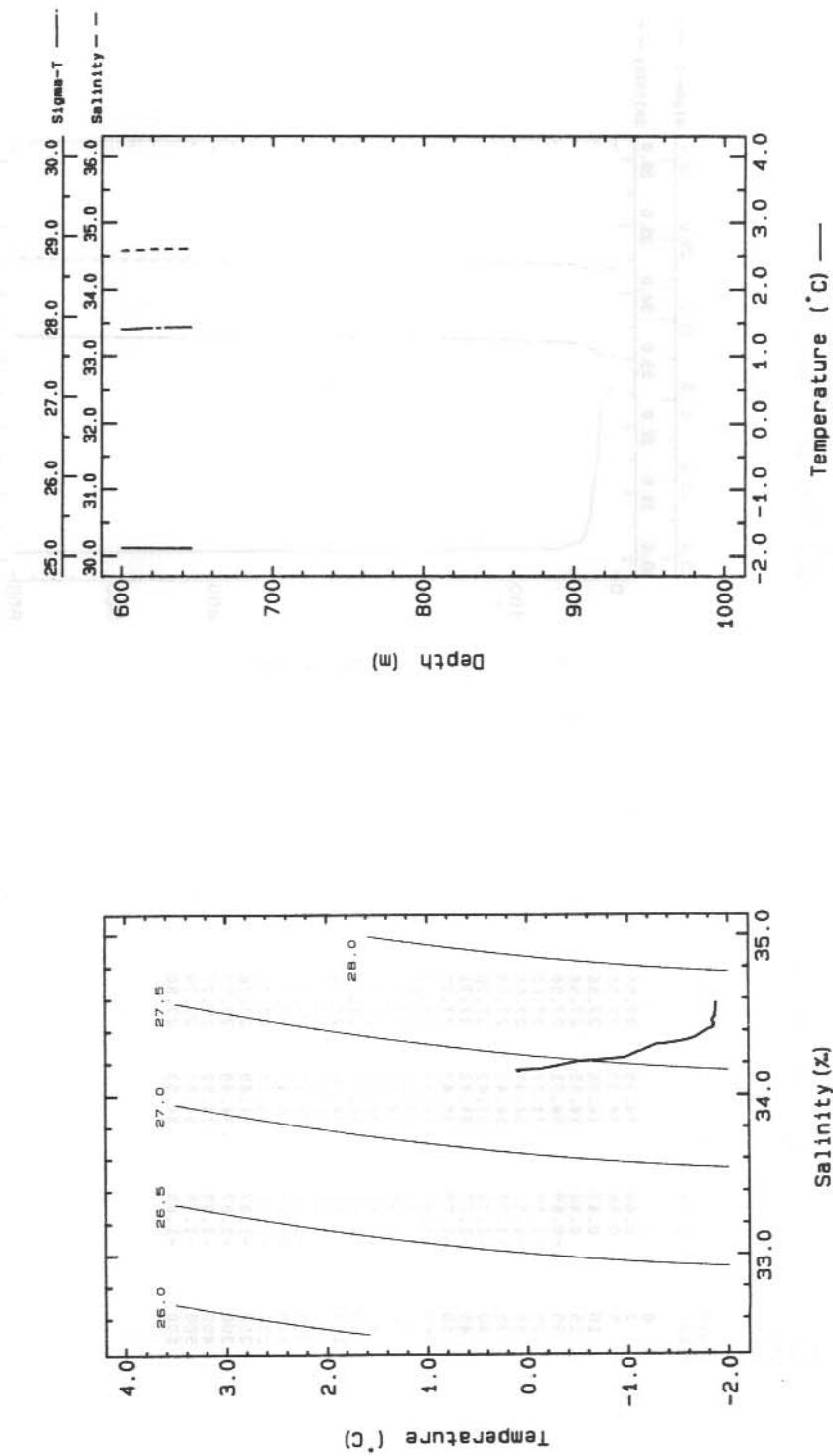
Cruise : ADBEX1
 Station 43
 Station number : 43
 Date : 12 DEC 1982
 Start Time : 1907 GMT
 Ship : NELLIA DAN
 Position : 68°29'.10S 73°00'.10E
 Cast Depth (m) : 648
 Bottom Depth (m) : 650 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	0.06	34.15	27.42
2	0.10	34.15	27.42
5	-0.13	34.16	27.44
10	-1.13	34.27	27.57
15	-1.58	34.34	27.64
20	-1.75	34.39	27.68
25	-1.79	34.41	27.70
30	-1.82	34.41	27.70
35	-1.85	34.42	27.71
40	-1.86	34.43	27.72
45	-1.85	34.43	27.72
50	-1.85	34.44	27.73
60	-1.86	34.45	27.73
70	-1.86	34.46	27.74
75	-1.84	34.46	27.74
80	-1.84	34.46	27.75
90	-1.84	34.47	27.75
100	-1.85	34.47	27.76
125	-1.86	34.48	27.76
150	-1.86	34.49	27.77
175	-1.87	34.49	27.77
200	-1.87	34.49	27.77
250	-1.87	34.50	27.77
300	-1.86	34.50	27.78
400	-1.88	34.52	27.79
500	-1.88	34.53	27.80
600	-1.88	34.58	27.84



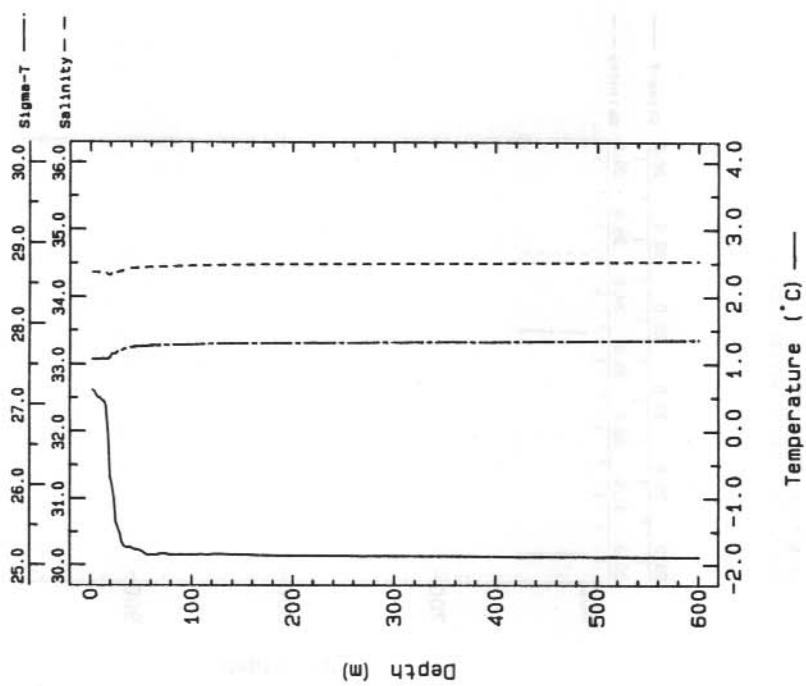
Cruise: ADBEX1 Station: 43
12 DEC 1982 1907 GMT
Latitude: 68°29'.10S
Longitude: 73°00'.10E
Depth: CTD 648 m Bottom 650 m

Cruise : ADBEX1 Station 43
12 DEC 1982 1907 GMT
Latitude 68°29'.10S
Longitude 73°00'.10E
Depth: CTD 648 m Bottom 650 m



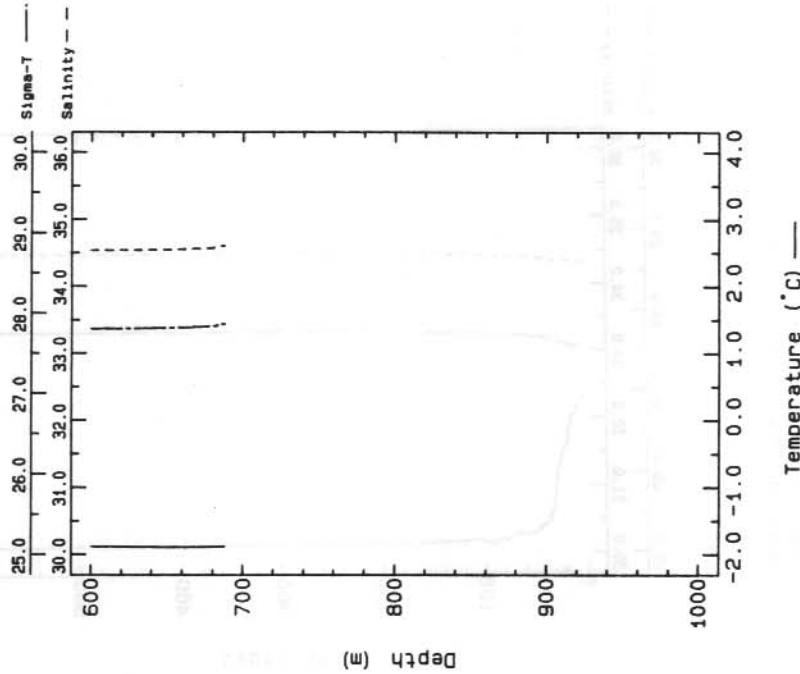
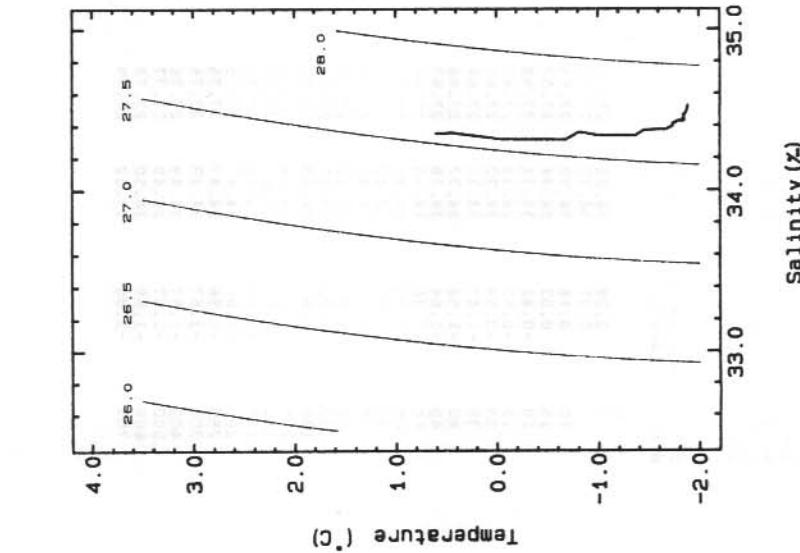
Cruise : ADBEX1 Station 44
 Station number : 44
 Date : 12 DEC 1982
 Start Time : 2128 GMT
 Ship : NELLA DANS
 Position : 68°30'10"S 74°00'40"E
 Cast Depth (m) : 690
 Bottom Depth (m) : 692 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	0.60	34.35	27.55
2	0.56	34.35	27.55
5	0.49	34.35	27.56
10	0.40	34.35	27.56
15	-0.69	34.31	27.58
20	-1.19	34.34	27.62
25	-1.53	34.37	27.66
30	-1.74	34.40	27.69
35	-1.74	34.42	27.70
40	-1.77	34.42	27.71
45	-1.79	34.43	27.72
50	-1.85	34.44	27.72
60	-1.83	34.44	27.73
70	-1.84	34.44	27.73
75	-1.85	34.44	27.73
80	-1.85	34.45	27.74
90	-1.85	34.46	27.74
100	-1.85	34.47	27.75
125	-1.84	34.47	27.75
150	-1.85	34.47	27.75
175	-1.86	34.47	27.75
200	-1.87	34.48	27.76
250	-1.87	34.48	27.76
300	-1.87	34.49	27.77
400	-1.88	34.50	27.77
500	-1.89	34.51	27.79
600	-1.89	34.53	27.80



Cruise: ADBEX1 Station: 44
12 DEC 1982 2128 GMT
Latitude : 68° 30' 10S
Longitude: 74° 00'.40E
Depth: CTD 690 m Bottom 692 m

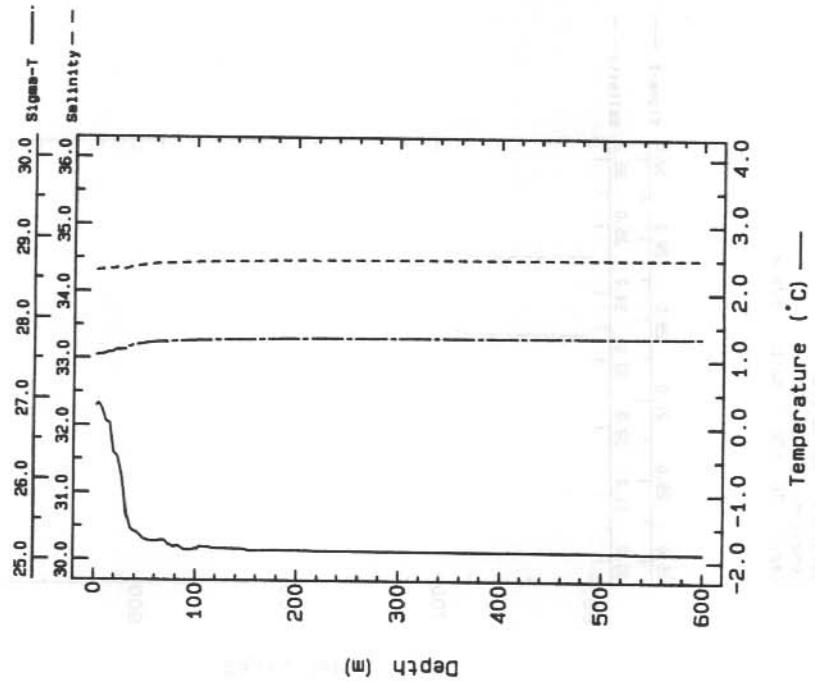
Cruise : ADBEX1 Station 44
12 DEC 1982 2128 GMT
Latitude 68° 30' 10S
Longitude 74° 00'.40E
Depth: CTD 690 m Bottom 692 m



Cruise : ADBEX1 Station 45
 Station number : 45
 Date : 13 DEC 1982
 Start Time : 0105 GMT
 Ship : NELLA DAN
 Position : 69:00.40S 75:02.20E
 Cast Depth (m) : 756
 Bottom Depth (m) : 760 m

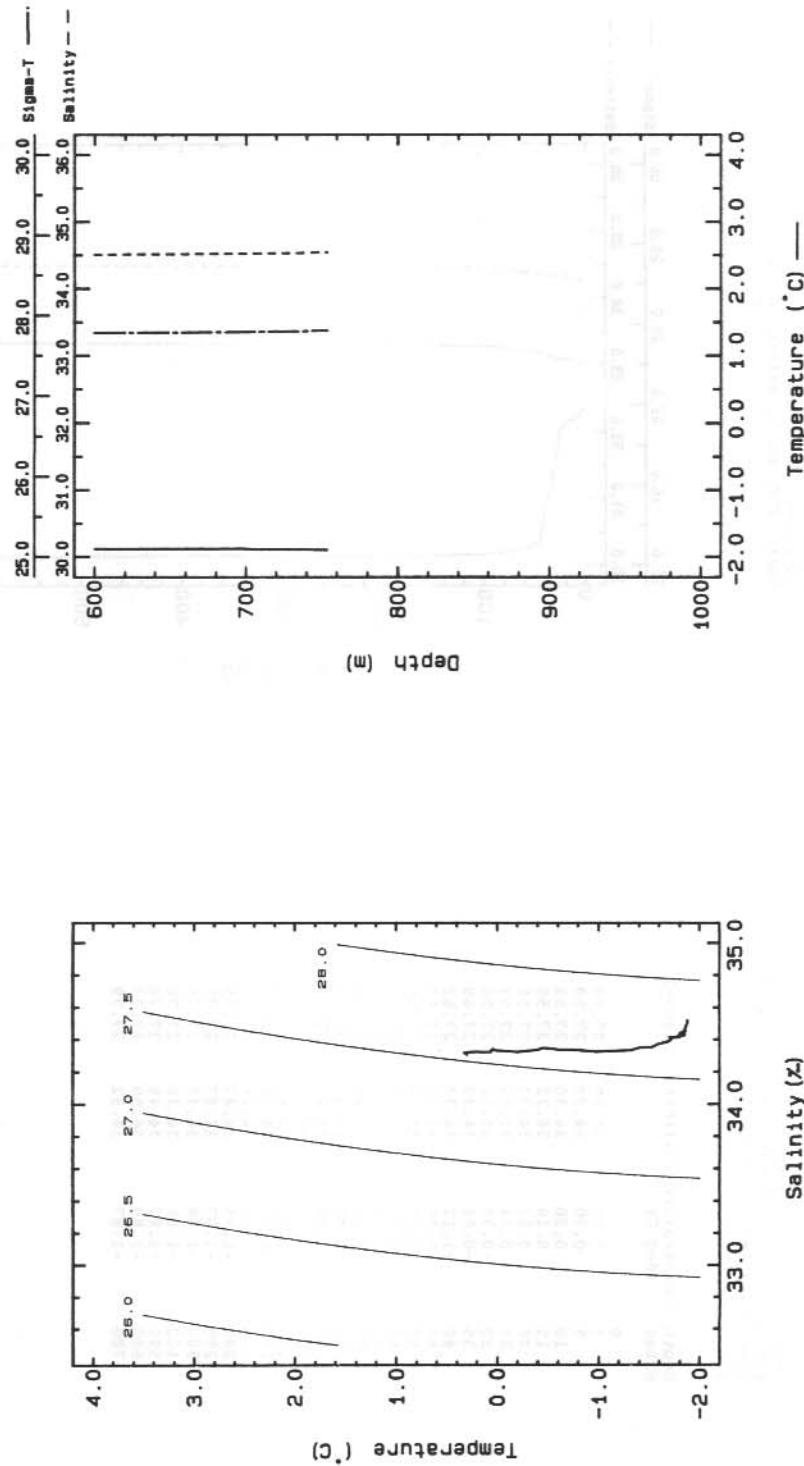
Depth Temperature (deg C)
 d bar Salinity Sigma-T

0	0.29	34.31	27.53
5	0.31	34.32	27.54
10	0.16	34.32	27.55
15	0.03	34.34	27.57
20	-0.41	34.34	27.59
25	-0.55	34.34	27.60
30	-0.99	34.32	27.60
35	-1.47	34.35	27.64
40	-1.58	34.37	27.66
45	-1.64	34.38	27.67
50	-1.70	34.39	27.68
60	-1.73	34.41	27.70
70	-1.71	34.42	27.70
75	-1.78	34.42	27.70
80	-1.81	34.43	27.72
90	-1.85	34.43	27.72
100	-1.83	34.43	27.72
125	-1.83	34.44	27.73
150	-1.85	34.45	27.74
175	-1.85	34.46	27.75
200	-1.86	34.47	27.75
250	-1.86	34.47	27.75
300	-1.87	34.48	27.76
400	-1.87	34.49	27.76
500	-1.87	34.49	27.77
600	-1.88	34.50	27.78
700	-1.88	34.52	27.79



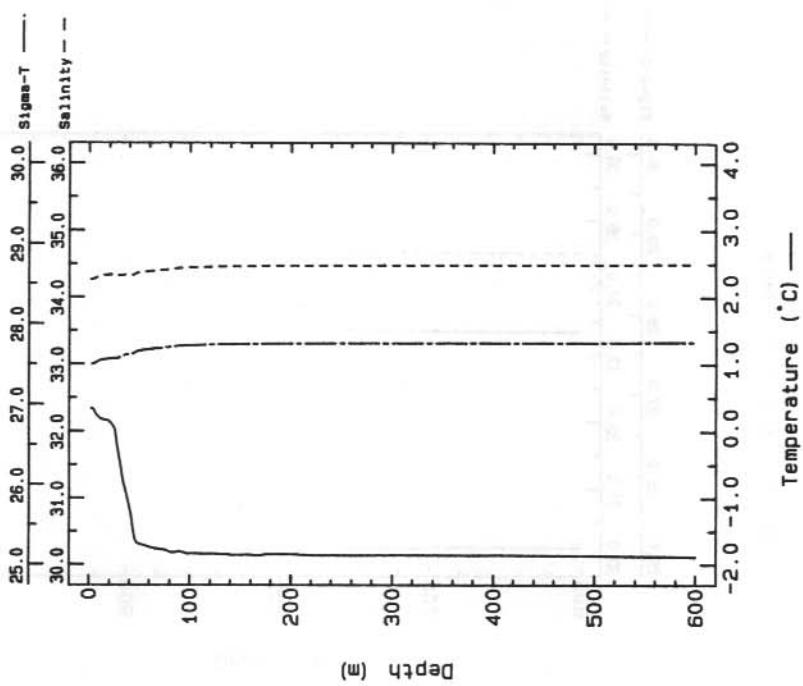
Cruise: ADBEX1 Station: 45
13 DEC 1982 0105 GMT
Latitude : 69.00.-40S
Longitude: 75.02.-20E
Depth: CTD 756 m Bottom 760 m

Cruise : ADBEX1 Station 45
13 DEC 1982 0105 GMT
Latitude 69.00.-40S
Longitude 75.02.-20E
Depth: CTD 756 m Bottom 760 m



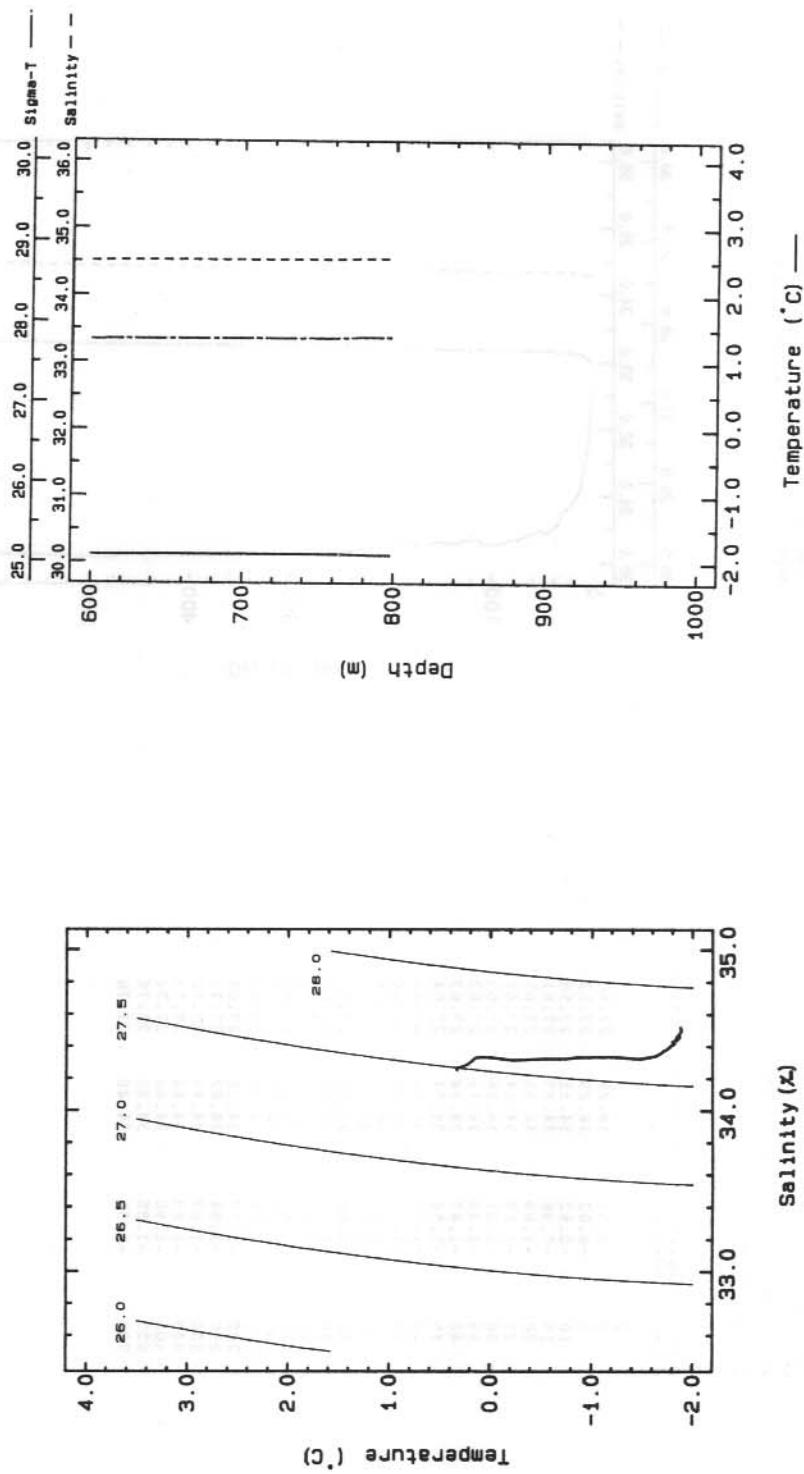
Cruise	Sta	Temperature (deg C)	Salinity	Sigma-T
Station number	: 46			
Date	: 13 DEC 1982			
Start Time	: 0357 GMT			
Ship	: NELLA DAN			
Position	: 69°10' 40S			
Cast Depth (m)	: 800			
Bottom Depth (m)	: 802 m			
Depth	bar			
0		0.33	34.25	27.49
5		0.30	34.27	27.50
10		0.20	34.30	27.53
15		0.16	34.32	27.55
20		0.13	34.33	27.56
25		0.04	34.33	27.57
30		-0.39	34.32	27.58
35		-0.81	34.33	27.60
40		-1.12	34.33	27.62
45		-1.56	34.33	27.63
50		-1.70	34.36	27.66
60		-1.75	34.38	27.68
70		-1.78	34.40	27.69
75		-1.79	34.41	27.70
80		-1.82	34.42	27.71
90		-1.80	34.43	27.72
100		-1.84	34.44	27.73
125		-1.84	34.45	27.74
150		-1.86	34.46	27.74
175		-1.85	34.46	27.75
200		-1.85	34.47	27.75
250		-1.87	34.47	27.75
300		-1.86	34.47	27.75
400		-1.86	34.48	27.76
500		-1.87	34.48	27.76
600		-1.89	34.50	27.77
700		-1.87	34.52	27.79

Cruise : ADBEX1 Station 46
 13 DEC 1982 0357 GMT
 Latitude 69° 00' 40S
 Longitude 75° 54.10E
 Depth: CTD 800 m Bottom 802 m



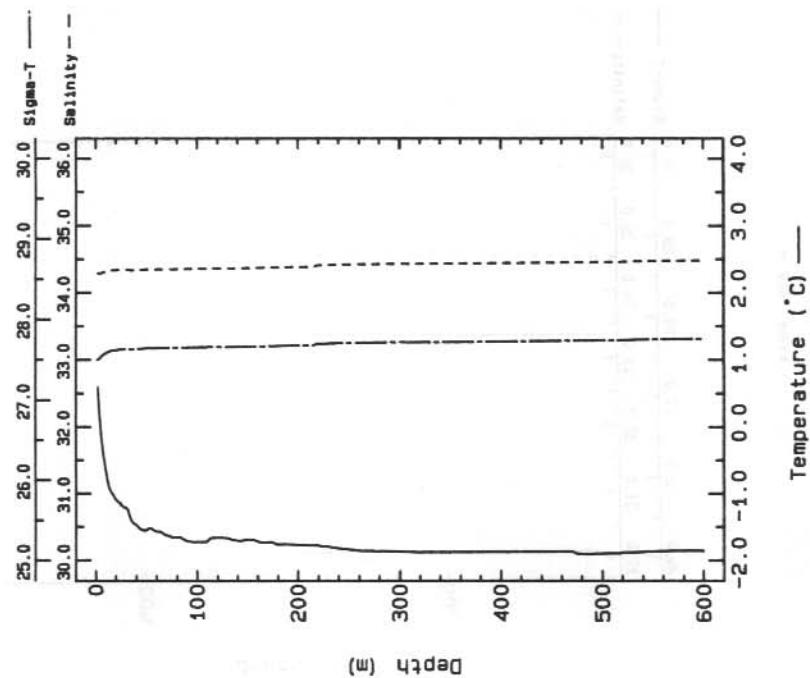
Cruise: ADBEX1 Station: 46
13 DEC 1982 0357 GMT
Latitude : 69: 00. 40S
Longitude: 75: 54. 10E
Depth: CTD 800 m Bottom 802 m

Cruise : ADBEX1 Station 46
13 DEC 1982 0357 GMT
Latitude 69: 00. 40S
Longitude 75: 54. 10E
Depth: CTD 800 m Bottom 802 m



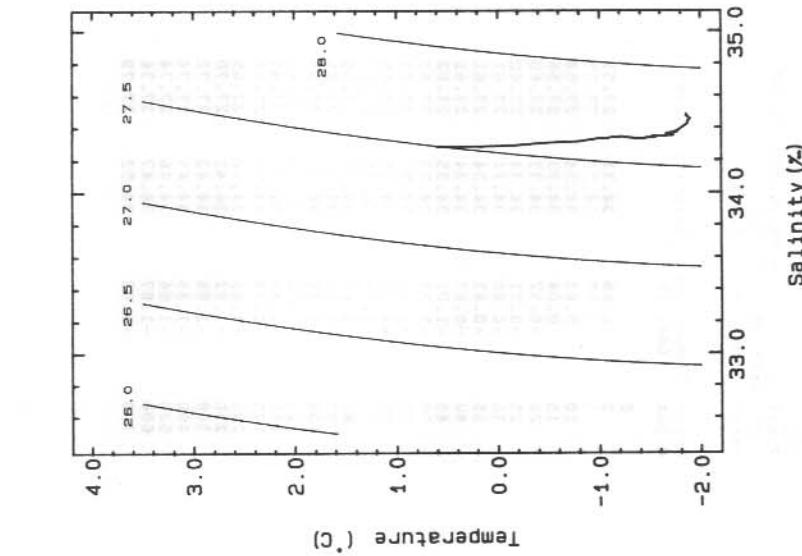
Cruise : ADBEX1 Station 47
 Station number : 47
 Date : 13 DEC 1982
 Start Time : 0709 GMT
 Ship : NELLA DAN
 Position : 68°55'.50S 77°06'.20E
 Cast Depth (m) : 710
 Bottom Depth (m) : 724 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	0.59	34.28	27.50
2	-0.02	34.29	27.53
5	-0.62	34.31	27.58
10	-0.96	34.33	27.61
15	-1.09	34.33	27.61
20	-1.17	34.34	27.62
25	-1.21	34.34	27.63
30	-1.39	34.33	27.62
35	-1.47	34.34	27.63
40	-1.54	34.34	27.64
45	-1.55	34.34	27.64
50	-1.57	34.35	27.64
60	-1.63	34.35	27.64
70	-1.66	34.35	27.65
75	-1.66	34.35	27.65
80	-1.66	34.35	27.65
90	-1.72	34.35	27.65
100	-1.73	34.35	27.65
125	-1.67	34.36	27.66
150	-1.69	34.37	27.66
175	-1.74	34.37	27.67
200	-1.77	34.38	27.68
250	-1.84	34.42	27.71
300	-1.87	34.43	27.72
400	-1.87	34.44	27.73
500	-1.90	34.46	27.74
600	-1.86	34.48	27.76
700	-1.86	34.48	27.76



Cruise: ADBEX1 Station: 47
13 DEC 1982 0709 GMT
Latitude : 68.55.50S
Longitude: 77.06.20E
Depth: CTD 710 m Bottom 724 m

Cruise : ADBEX1 Station 47
13 DEC 1982 0709 GMT
Latitude 68.55.50S
Longitude 77.06.20E
Depth: CTD 710 m Bottom 724 m



Cruise : ADBEX1

Station number : 48

Date : 13 DEC 1982

Start Time : 1015 GMT

Ship : NELLA DAN

Position : 68:34.00S

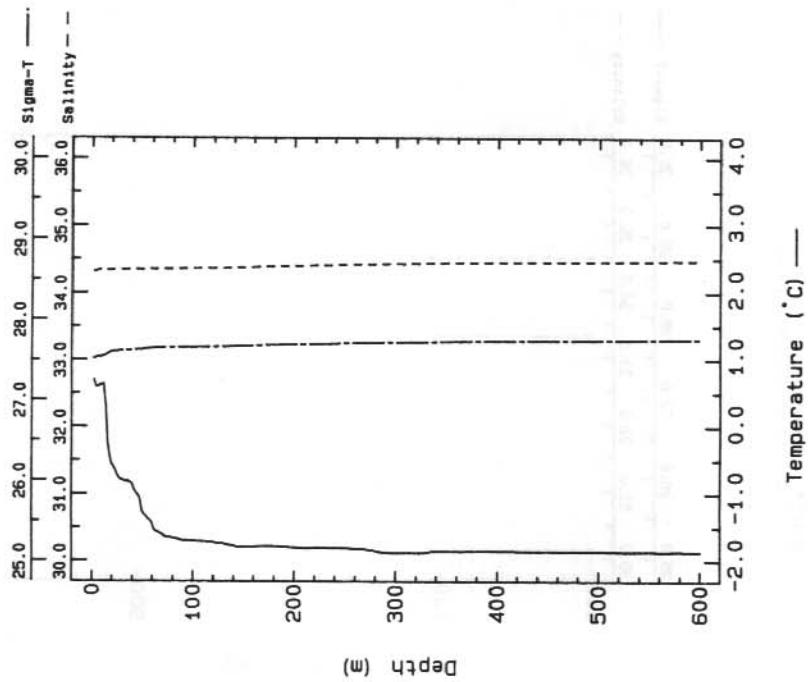
Cast Depth (m) : 722

Bottom Depth (m) : 729

Cruise : ADBEX1 Station 48
13 DEC 1982 1015 GMT
Latitude 68:34.00S
Longitude 76:58.20E
Depth: CTD 722 m Bottom 729 m

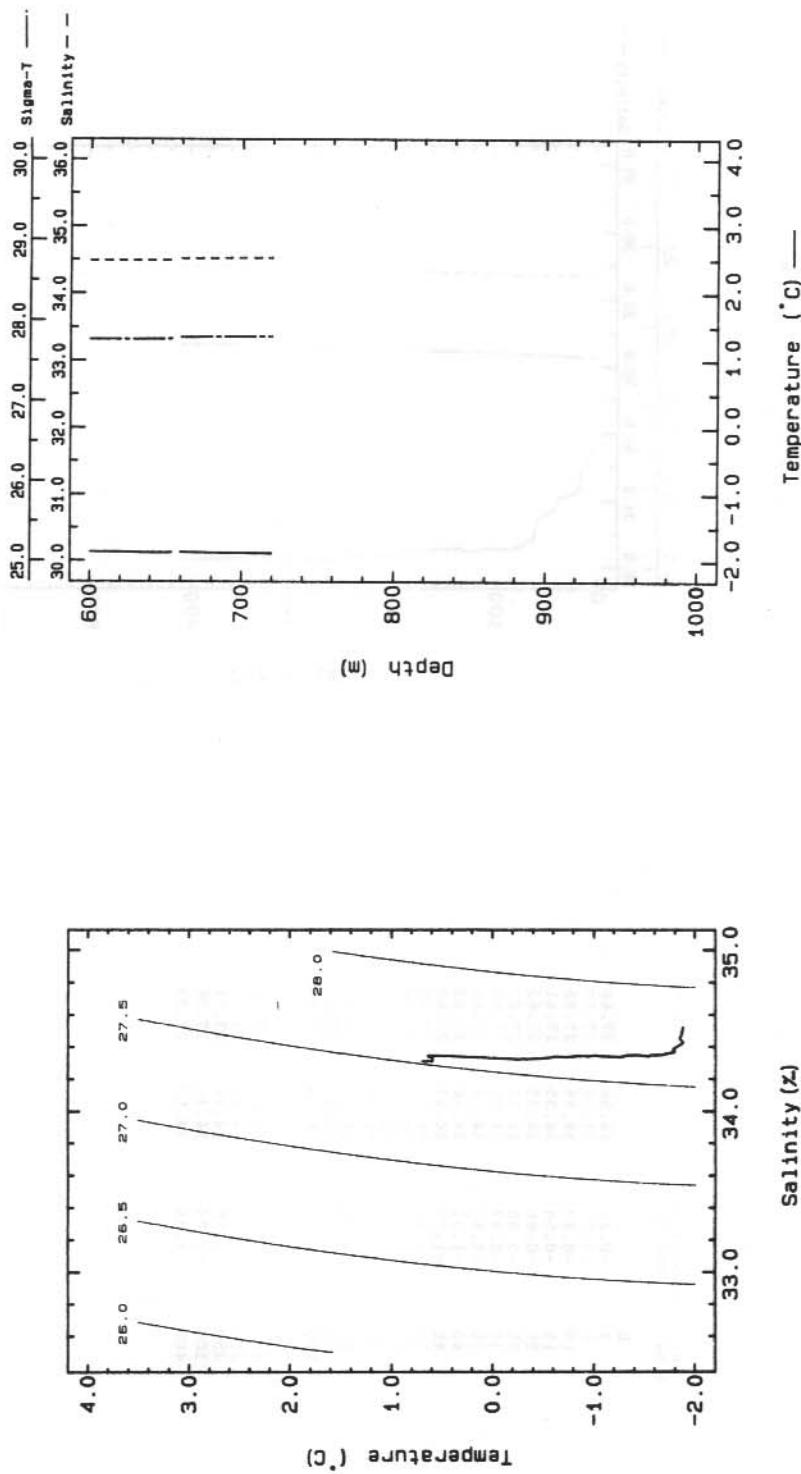
Depth (bar)
Temperature (deg C)

Depth (bar)	Temperature (deg C)	Salinity	Sigma-T
0	0.69	34.31	27.51
5	0.59	34.32	27.53
10	0.63	34.34	27.54
15	0.04	34.33	27.56
20	-0.57	34.33	27.60
25	-0.71	34.34	27.60
30	-0.80	34.34	27.61
35	-0.83	34.34	27.61
40	-0.87	34.34	27.61
45	-1.01	34.35	27.62
50	-1.27	34.33	27.62
60	-1.45	34.35	27.64
70	-1.61	34.35	27.65
75	-1.66	34.35	27.65
80	-1.67	34.35	27.65
90	-1.70	34.35	27.65
100	-1.71	34.35	27.65
125	-1.74	34.36	27.66
150	-1.80	34.37	27.67
175	-1.79	34.38	27.68
200	-1.81	34.40	27.69
250	-1.82	34.41	27.70
300	-1.88	34.43	27.72
400	-1.85	34.45	27.74
500	-1.86	34.46	27.74
600	-1.87	34.47	27.76
700	-1.88	34.52	27.79



Cruise: ADBEX1 Station: 48
13 DEC 1982 1015 GMT
Latitude : 68°34'.00S
Longitude: 76°58'.20E
Depth: CTD 722 m Bottom 729 m

Cruise : ADBEX1 Station 48
13 DEC 1982 1015 GMT
Latitude 68°34'.00S
Longitude 76°58'.20E
Depth: CTD 722 m Bottom 729 m



Cruise : ADBEX1

Station number : 49

Date : 13 DEC 1982

Start Time : 1400 GMT

Ship : NELLIA DAN

Position : 67°56'50S

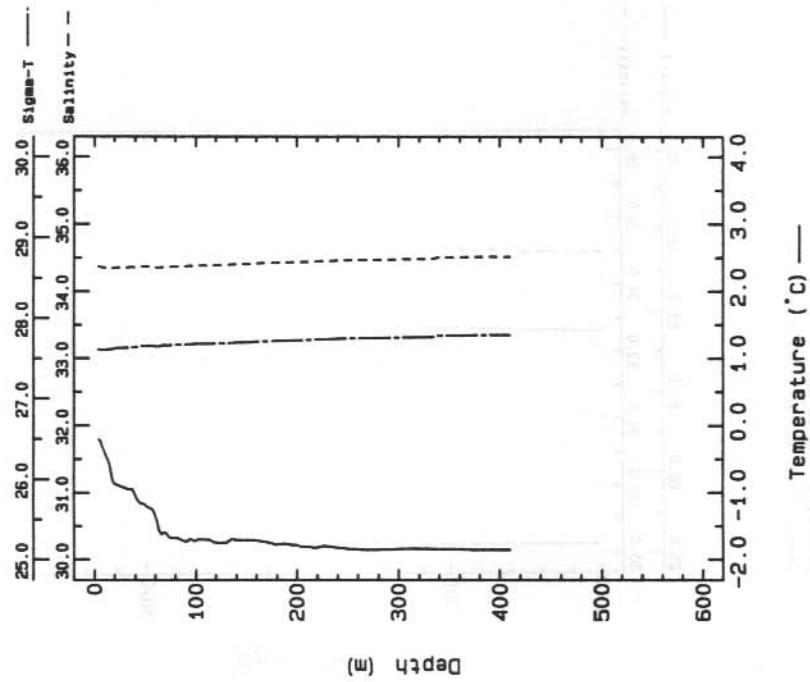
Cast Depth (m) : 412

Bottom Depth (m) : 420 m

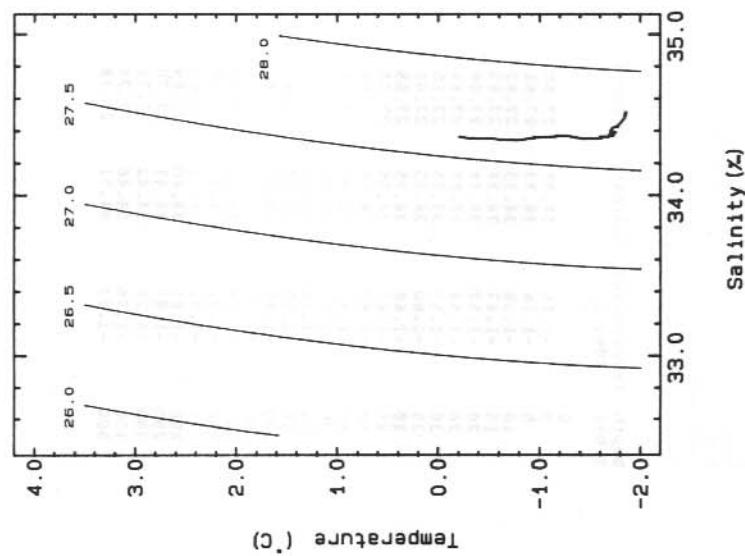
Cruise : ADBEX1 Station 49
13 DEC 1982 1400 GMT
Latitude 67°56'50S
Longitude 76°55'20E
Depth: CTD 412 m Bottom 420 m

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

0	-0.21	34.36	27.60
5	-0.22	34.36	27.60
10	-0.37	34.35	27.60
15	-0.56	34.35	27.61
20	-0.86	34.35	27.62
25	-0.90	34.35	27.63
30	-0.93	34.35	27.63
35	-0.95	34.36	27.63
40	-1.02	34.36	27.63
45	-1.15	34.37	27.65
50	-1.18	34.37	27.65
60	-1.32	34.36	27.65
70	-1.60	34.37	27.66
75	-1.68	34.36	27.66
80	-1.68	34.37	27.67
90	-1.74	34.37	27.67
100	-1.73	34.38	27.68
125	-1.76	34.39	27.68
150	-1.71	34.41	27.70
175	-1.77	34.42	27.71
200	-1.79	34.44	27.72
250	-1.85	34.46	27.74
300	-1.84	34.48	27.76
400	-1.86	34.52	27.79

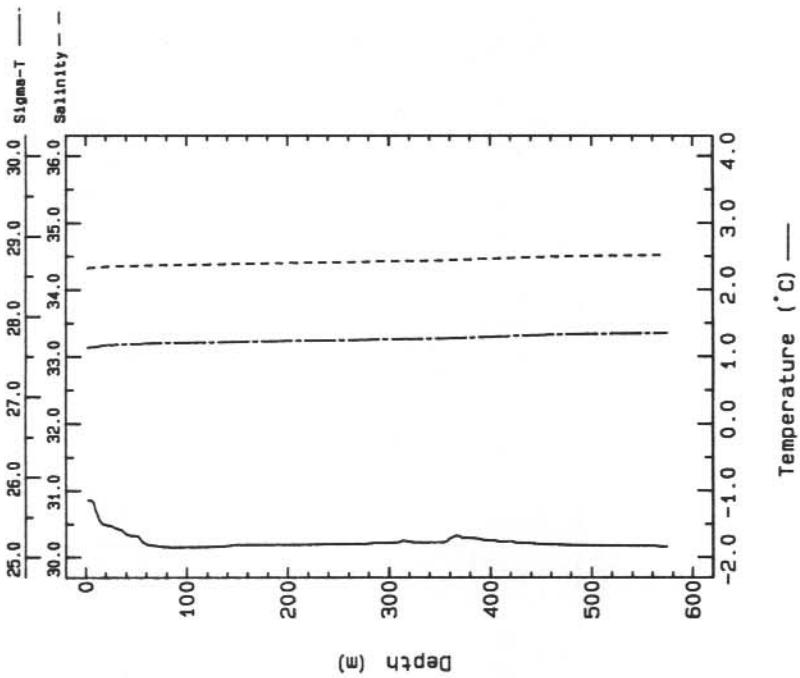


Cruise: ADBEX1 Station: 49
13 DEC 1982 1400 GMT
Latitude : 67° 55.50S
Longitude: 76° 55.20E
Depth: CTD 412 m Bottom 420 m

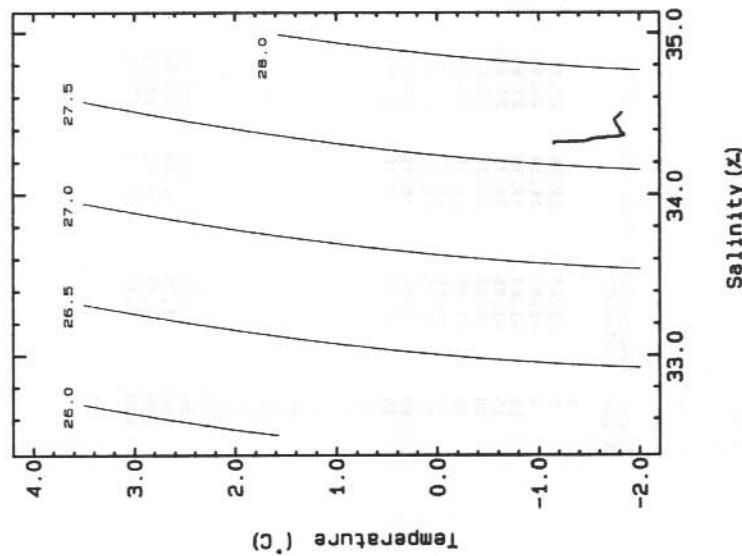


Cruise	Number	Temperature (deg C)	Salinity	Sigma-T
Station				
ADBEX1	50			
Date	: 13 DEC 1982			
Start Time	: 17:48 GMT			
Ship	: NELLA DAN			
Position	: 67:56.30S 78:01.00E			
Cast Depth (m)	: 576			
Bottom Depth (m)	: 582			
Depth (bar)				
0	-1.16	34.31	27.60	
2	-1.16	34.33	27.61	
5	-1.30	34.33	27.62	
10	-1.47	34.34	27.63	
15	-1.52	34.34	27.64	
20	-1.54	34.35	27.64	
25	-1.57	34.35	27.65	
30	-1.60	34.35	27.65	
35	-1.60	34.35	27.65	
40	-1.66	34.35	27.65	
45	-1.68	34.35	27.65	
50	-1.68	34.36	27.66	
60	-1.81	34.36	27.66	
70	-1.83	34.36	27.66	
75	-1.84	34.36	27.67	
80	-1.85	34.37	27.67	
90	-1.85	34.37	27.67	
100	-1.85	34.37	27.67	
125	-1.84	34.38	27.67	
150	-1.81	34.38	27.68	
175	-1.81	34.39	27.69	
200	-1.81	34.40	27.69	
250	-1.81	34.41	27.70	
300	-1.78	34.42	27.71	
400	-1.75	34.46	27.74	
500	-1.83	34.51	27.78	

Cruise : ADBEX1 Station 50
 13 DEC 1982 17:48 GMT
 Latitude 67:56.30S
 Longitude 78:01.00E
 Depth: CTD 576 m Bottom 582 m

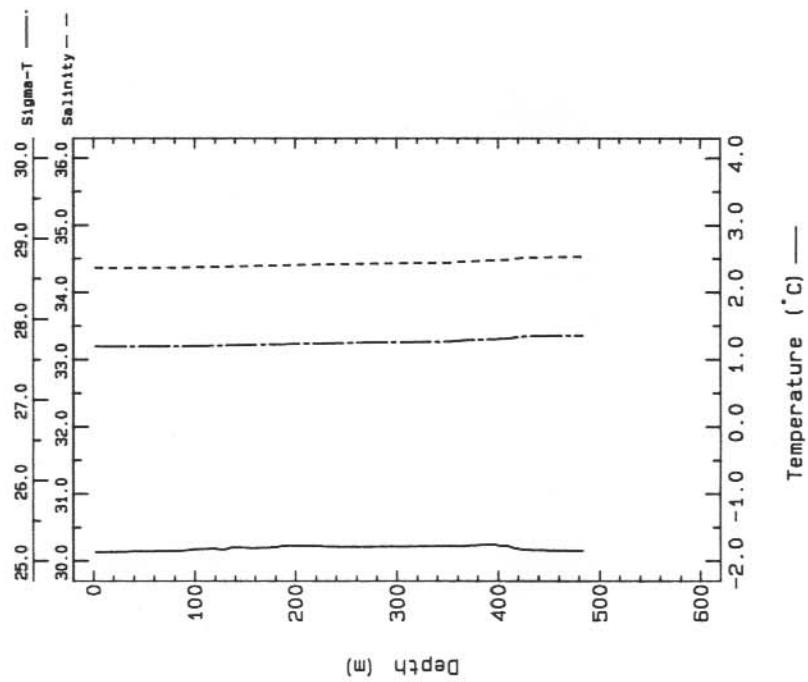


Cruise: ADBEX1 Station: 50
13 DEC 1982 1748 GMT
Latitude : 67° 55'.30S
Longitude: 78° 01'.00E
Depth: CTD 576 m Bottom 562 m

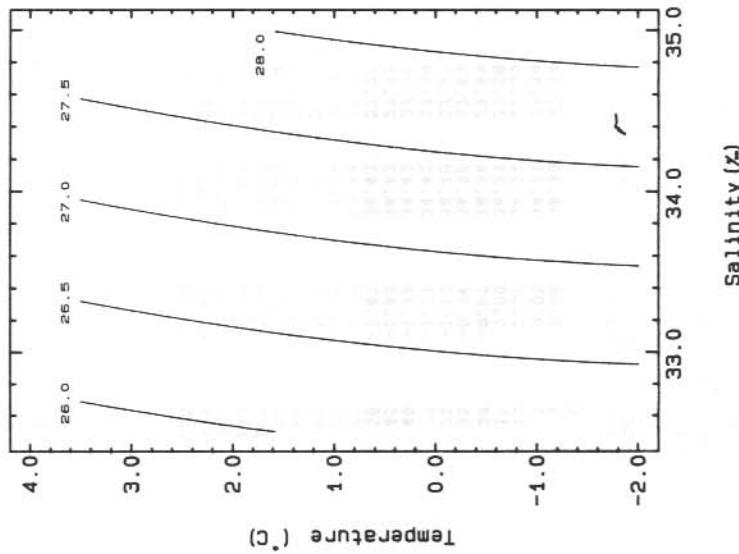


Cruise : ADBEX1
 Station number : 51
 Date : 13 DEC 1982
 Start Time : 2159 GMT
 Ship : NELIA DAN
 Position : 67:41.10S 79:07.10E
 Cast Depth (m) : 486 m
 Bottom Depth (m) : 488 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.87	34.36	27.66
2	-1.87	34.36	27.66
5	-1.87	34.35	27.66
10	-1.87	34.35	27.66
15	-1.86	34.35	27.66
20	-1.86	34.36	27.66
25	-1.86	34.36	27.66
30	-1.86	34.35	27.66
35	-1.86	34.36	27.66
40	-1.86	34.36	27.66
45	-1.85	34.36	27.66
50	-1.86	34.36	27.66
60	-1.86	34.36	27.66
70	-1.85	34.36	27.66
75	-1.85	34.36	27.66
80	-1.85	34.36	27.66
90	-1.84	34.36	27.67
100	-1.83	34.37	27.67
125	-1.83	34.37	27.67
150	-1.80	34.38	27.68
175	-1.80	34.39	27.69
200	-1.77	34.40	27.70
250	-1.79	34.41	27.70
300	-1.79	34.43	27.72
400	-1.77	34.48	27.75

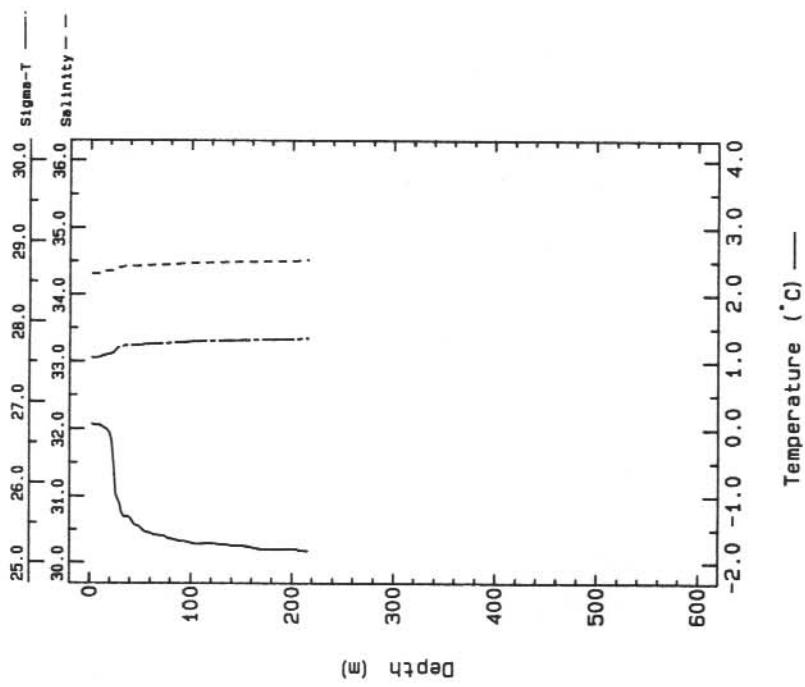


Cruise: ADBEX1 Station: 51
13 DEC 1982 2159 GMT
Latitude : 67.41.10S
Longitude: 79.07.10E
Depth: CTD 486 m Bottom 488 m

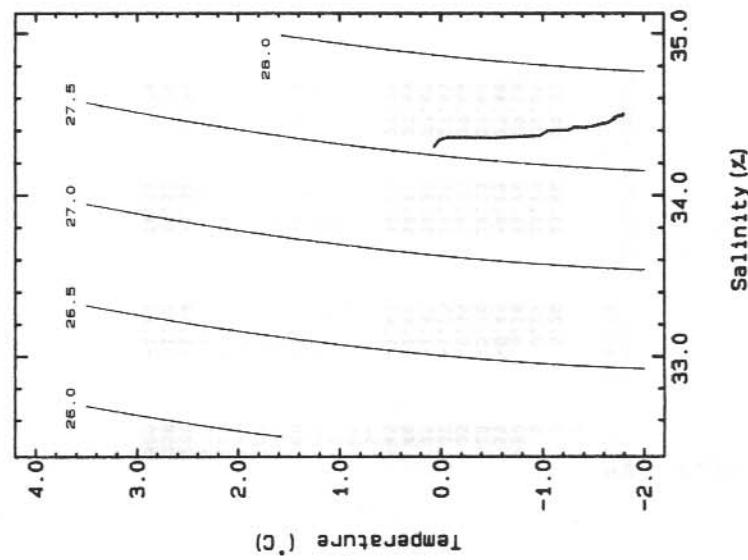


Cruise : ADBEX1 Station 52
 Station number : 52
 Date : 14 DEC 1982 0249 GMT
 Start Time : 0249 GMT
 Ship : NEELA DAN
 Position : 6°30'.50S 78°20'.00E
 Cast Depth (m) : 218
 Bottom Depth (m) : 220 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	0.06	34.30	27.54
2	0.05	34.31	27.54
5	0.05	34.31	27.54
10	0.05	34.31	27.55
15	0.00	34.34	27.58
20	-0.07	34.36	27.59
25	-0.76	34.46	27.63
30	-1.12	34.40	27.67
35	-1.31	34.42	27.69
40	-1.33	34.42	27.70
45	-1.43	34.42	27.70
50	-1.47	34.43	27.70
60	-1.56	34.44	27.72
70	-1.59	34.44	27.72
75	-1.61	34.44	27.72
80	-1.65	34.45	27.73
90	-1.67	34.46	27.74
100	-1.70	34.47	27.75
125	-1.72	34.48	27.76
150	-1.75	34.49	27.76
175	-1.80	34.50	27.77
200	-1.79	34.50	27.77

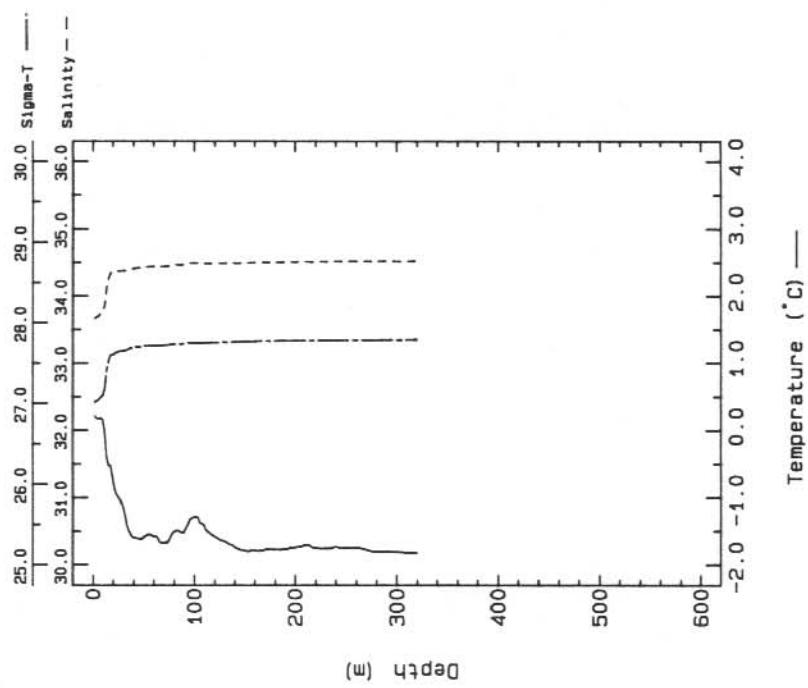


Cruise: ABBEXI Station: 52
14 DEC 1982 0249 GMT
Latitude : 67° 30'.50S
Longitude: 78° 20'.00E
Depth: CTD 218 m Bottom 220 m

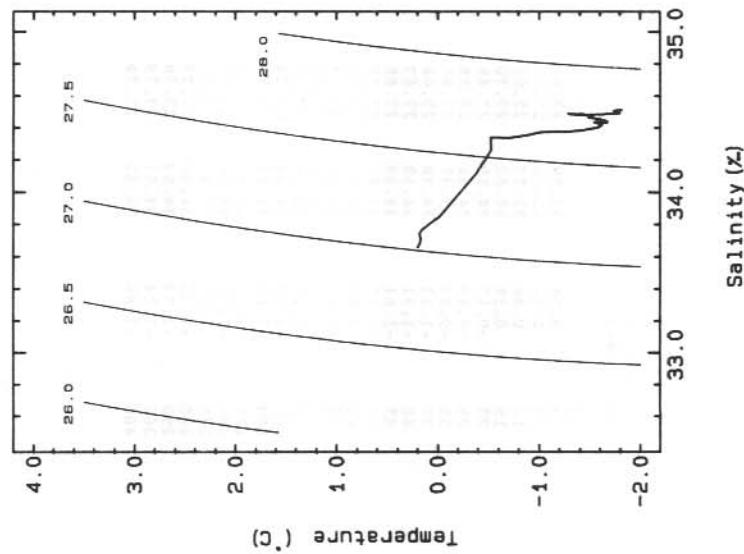


Cruise : ADBEX1 Station 53
 Station number : 53
 Date : 14 DEC 1982
 Start Time : 0707 GMT
 Ship : NELLA DAN
 Position : 67:30.10S 76:56.10E
 Cast Depth (m) : 322
 Bottom Depth (m) : 323 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	0.20	33.66	27.01
2	0.17	33.70	27.05
5	0.16	33.76	27.10
10	-0.46	34.19	27.18
15	-0.70	34.33	27.60
20	-0.99	34.37	27.64
25	-1.15	34.38	27.65
30	-1.47	34.39	27.68
35	-1.60	34.41	27.69
40	-1.61	34.42	27.70
45	-1.59	34.43	27.71
50	-1.58	34.44	27.72
60	-1.68	34.44	27.72
70	-1.63	34.45	27.73
75	-1.50	34.46	27.74
80	-1.51	34.47	27.74
90	-1.29	34.49	27.75
100	-1.63	34.49	27.76
125	-1.79	34.49	27.77
150	-1.77	34.50	27.77
175	-1.75	34.51	27.78
200	-1.74	34.51	27.78
250	-1.75	34.51	27.78
300	-1.81	34.51	27.79

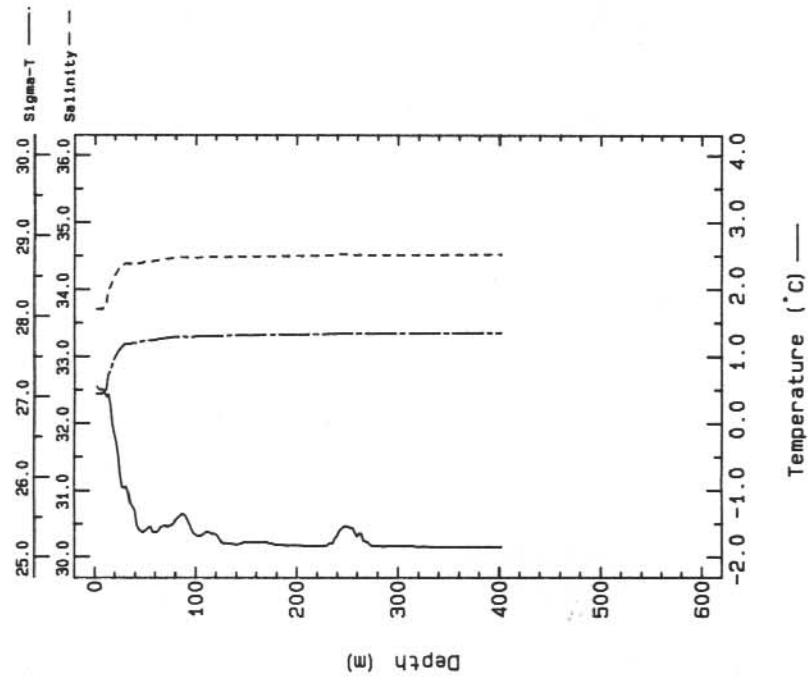


Cruise: ADBEX1 Station: 53
14 DEC 1982 0707 GMT
Latitude : 67° 30'.10S
Longitude: 76° 56'.10E
Depth: CTD 322 m Bottom 323 m

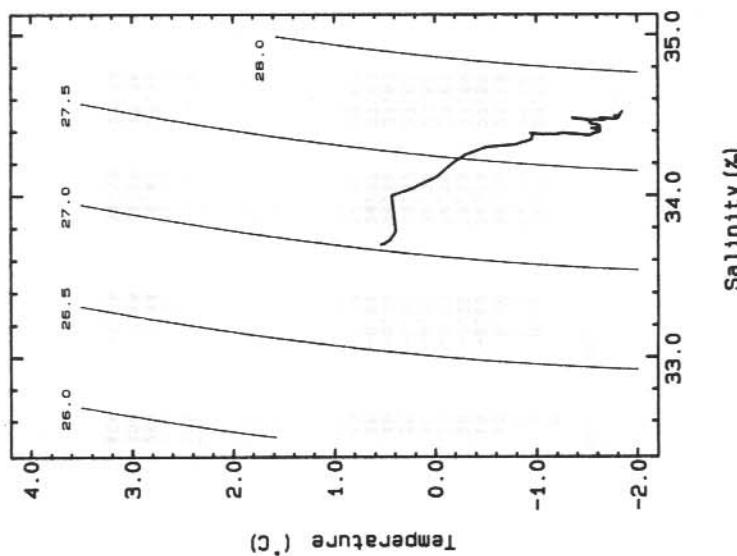


Cruise : ADBEX1
 Station number : 54
 Date : 14 DEC 1982
 Start Time : 0942 GMT
 Ship : NELLA DAN
 Position : 67°37.0'N 76°00.20'E
 Cast Depth (m) : 404
 Bottom Depth (m) : 406 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	0.54	33.70	27.02
5	0.50	33.70	27.03
10	0.44	33.73	27.06
15	0.34	34.02	27.30
20	-0.17	34.19	27.46
25	-0.65	34.31	27.58
30	-0.97	34.38	27.65
35	-1.13	34.38	27.66
40	-1.31	34.39	27.67
45	-1.61	34.39	27.68
50	-1.61	34.41	27.70
60	-1.63	34.43	27.71
70	-1.53	34.45	27.73
75	-1.53	34.46	27.74
80	-1.45	34.48	27.75
90	-1.39	34.48	27.74
100	-1.67	34.47	27.75
125	-1.77	34.47	27.75
150	-1.78	34.49	27.77
175	-1.80	34.49	27.77
200	-1.83	34.50	27.77
250	-1.53	34.52	27.78
300	-1.84	34.51	27.79
400	-1.85	34.52	27.79

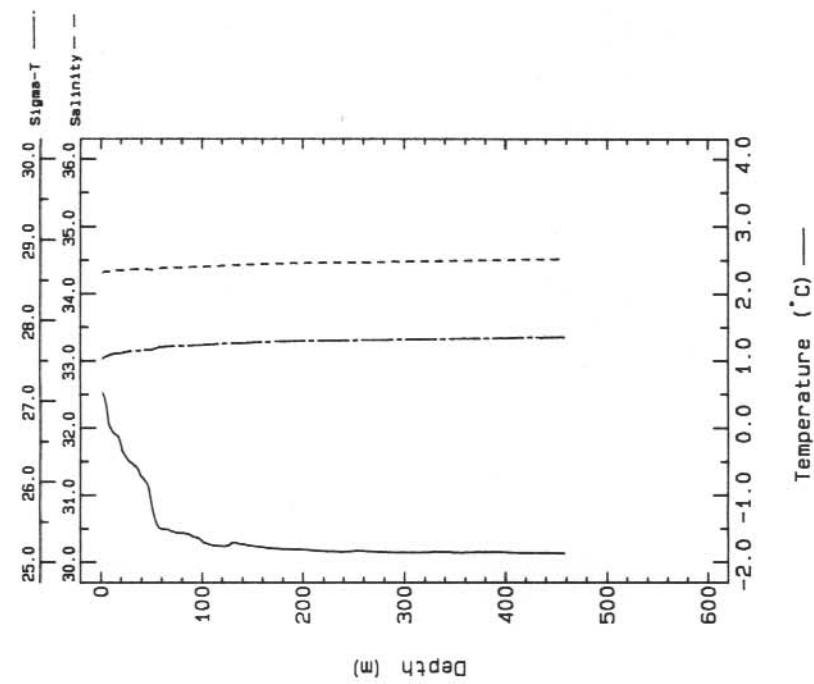


Cruise: ADBEX1 Station: 54
14 DEC 1982 0912 GMT
Latitude : 67° 37.00S
Longitude: 76° 00.20E
Depth: CTD 404 m Bottom 406 m

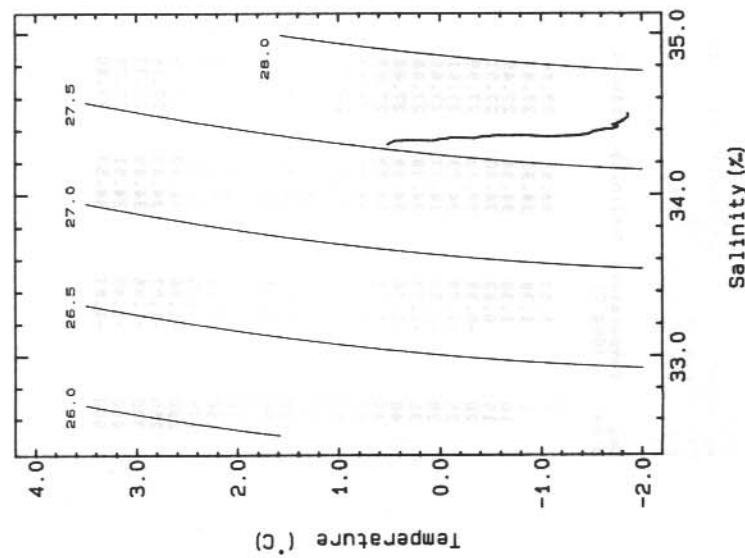


Cruise : ADBEX1
 Station 55
 Station number : 55
 Date : 14 DEC 1982
 Start Time : 1204 GMT
 Ship : NEELLA DAN
 Position : 68°00' N 20°55.10'E
 Cast Depth (m) : 460
 Bottom Depth (m) : 463 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	0.51	34.31	27.52
5	0.38	34.33	27.55
10	0.00	34.34	27.58
15	-0.10	34.35	27.59
20	-0.21	34.35	27.59
25	-0.42	34.36	27.61
30	-0.51	34.36	27.62
35	-0.58	34.37	27.62
40	-0.72	34.36	27.63
45	-0.81	34.37	27.63
50	-1.08	34.35	27.63
60	-1.50	34.38	27.67
70	-1.54	34.39	27.68
75	-1.56	34.39	27.68
80	-1.57	34.40	27.68
90	-1.61	34.40	27.69
100	-1.68	34.40	27.69
125	-1.76	34.43	27.71
150	-1.76	34.44	27.72
175	-1.80	34.46	27.74
200	-1.82	34.46	27.75
250	-1.84	34.47	27.75
300	-1.86	34.48	27.76
400	-1.86	34.50	27.78

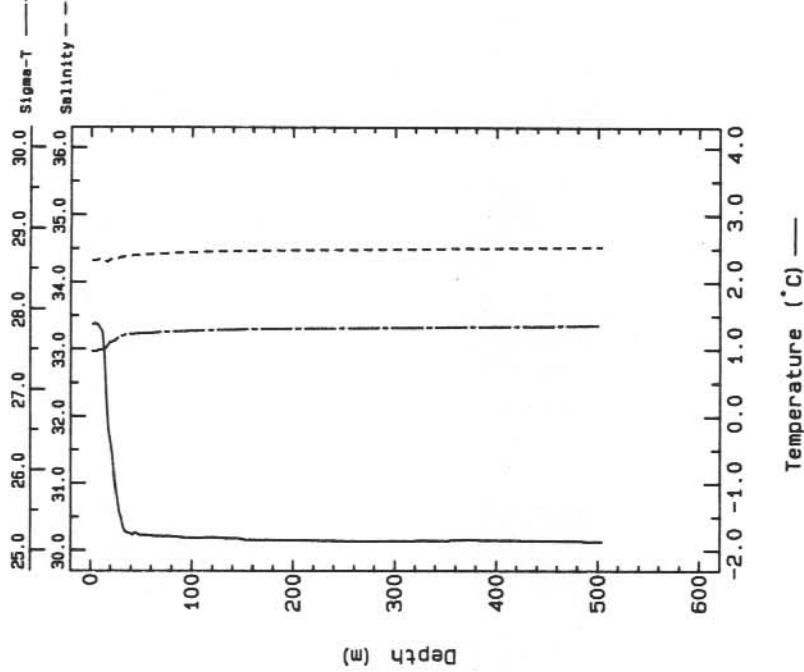


Cruise: ADBEX1 Station: 55
14 DEC 1982 1204 GMT
Latitude : 68° 00'.20S
Longitude: 75° 55'.10E
Depth: CTD 460 m Bottom 463 m

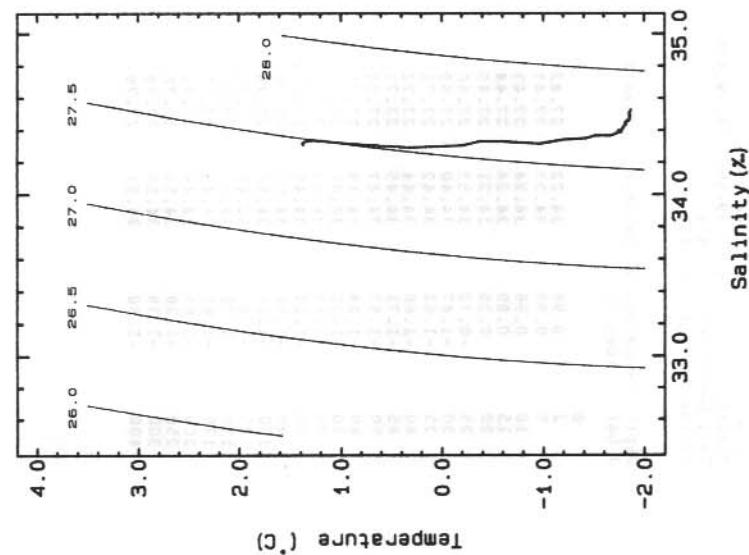


Cruise : ADBEX1
 Station 56
 Start number : 56
 Date : 14 DEC 1982
 Start Time : 1415 GMT
 Ship : NELLA DAN
 Position : 68°01'.20S 74°57'.40E
 Cast Depth (m) : 506
 Bottom Depth (m) : 512 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.37	34.31	27.46
5	1.38	34.32	27.47
10	1.30	34.34	27.49
15	0.62	34.30	27.51
20	-0.38	34.33	27.59
25	-1.09	34.33	27.61
30	-1.52	34.37	27.66
35	-1.73	34.38	27.68
40	-1.76	34.39	27.68
45	-1.74	34.40	27.69
50	-1.77	34.40	27.69
60	-1.78	34.41	27.70
70	-1.79	34.42	27.71
75	-1.79	34.42	27.71
80	-1.80	34.43	27.72
90	-1.81	34.43	27.72
100	-1.82	34.44	27.73
125	-1.82	34.45	27.74
150	-1.84	34.46	27.74
175	-1.85	34.47	27.75
200	-1.86	34.47	27.75
250	-1.87	34.48	27.76
300	-1.86	34.49	27.77
400	-1.85	34.51	27.78
500	-1.87	34.53	27.80



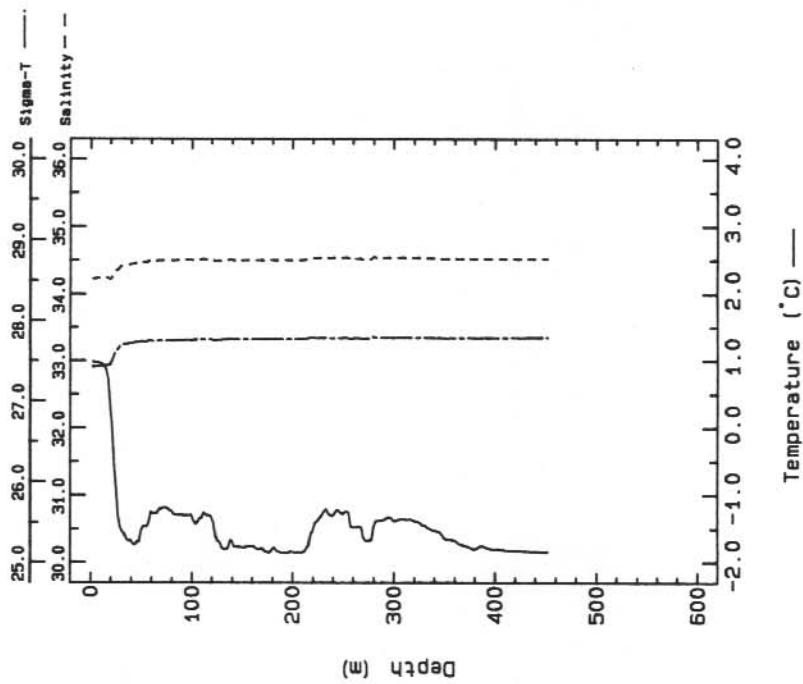
Cruise: ADBEX1 Station: 56
14 DEC 1982 1415 GMT
Latitude : 68° 01.20S
Longitude: 74° 57.40E
Depth: CTD 506 m Bottom 512 m



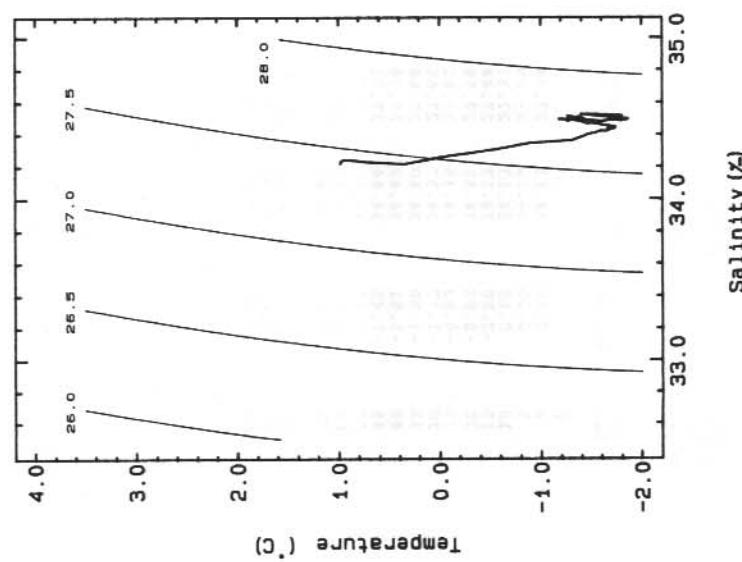
Cruise : ADBEX1 Station 57
 Station number : 57
 Date : 14 DEC 1982
 Start Time : 1721 GMT
 Ship : NELLIA DAN
 Position : 67°29'50S 74°59'40E
 Cast Depth (m) : 454
 Bottom Depth (m) : 457 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	0.98	34.22	27.42
2	0.98	34.23	27.43
5	0.98	34.24	27.43
10	0.96	34.24	27.43
15	0.89	34.24	27.44
20	0.35	34.21	27.45
25	-0.72	34.33	27.60
30	-1.47	34.40	27.69
35	-1.63	34.42	27.71
40	-1.66	34.44	27.72
45	-1.71	34.45	27.73
50	-1.52	34.47	27.74
60	-1.24	34.49	27.75
70	-1.20	34.49	27.75
75	-1.19	34.49	27.75
80	-1.24	34.49	27.75
90	-1.30	34.50	27.76
100	-1.29	34.50	27.76
125	-1.65	34.48	27.76
150	-1.78	34.49	27.77
175	-1.85	34.49	27.77
200	-1.85	34.49	27.77
250	-1.28	34.53	27.78
300	-1.39	34.53	27.78
400	-1.80	34.51	27.79

Cruise : ADBEX1 Station 57
 14 DEC 1982 1721 GMT
 Latitude 67°29'50S
 Longitude 74°59'40E
 Depth: CTD 454 m Bottom 457 m



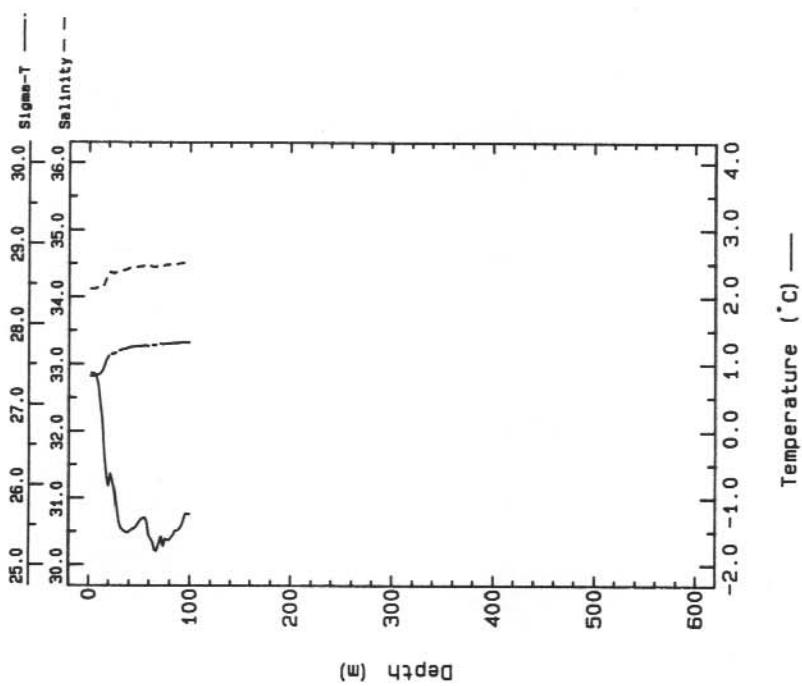
Cruise: ADBEX1 Station: 57
14 DEC 1992 1721 GMT
Latitude : 67° 29' 50S
Longitude: 74° 59' 40E
Depth: CTD 454 m Bottom 457 m



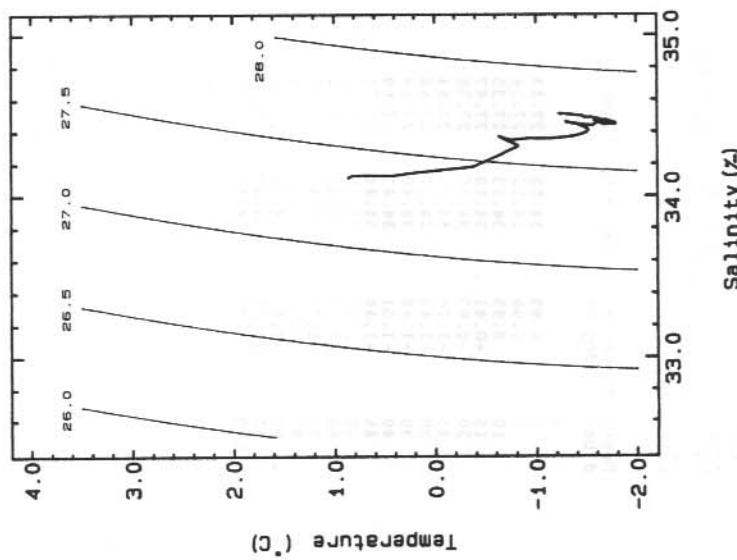
Cruise : ADBEX1 Station 58
 Station number : 58
 Date : 14 DEC 1982
 Start Time : 2107 GMT
 Ship : NELLA DAN
 Position : 67°30'.40S 74°58'.30E
 Cast Depth (m) : 102
 Bottom Depth (m) : 460 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	0.86	34.11	27.34
5	0.85	34.12	27.35
10	0.68	34.13	27.37
15	-0.10	34.17	27.44
20	-0.83	34.31	27.59
25	-0.83	34.35	27.62
30	-1.37	34.37	27.66
35	-1.50	34.40	27.68
40	-1.51	34.42	27.70
45	-1.45	34.44	27.71
50	-1.36	34.45	27.72
60	-1.57	34.44	27.72
70	-1.68	34.47	27.75
75	-1.67	34.47	27.74
80	-1.63	34.48	27.75
90	-1.46	34.50	27.76
100	-1.25	34.51	27.76

Cruise : ADBEX1 Station 58
 14 DEC 1982 2107 GMT
 Latitude 67°30'.40S
 Longitude 74°58'.30E
 Depth: CTD 102 m Bottom 460 m



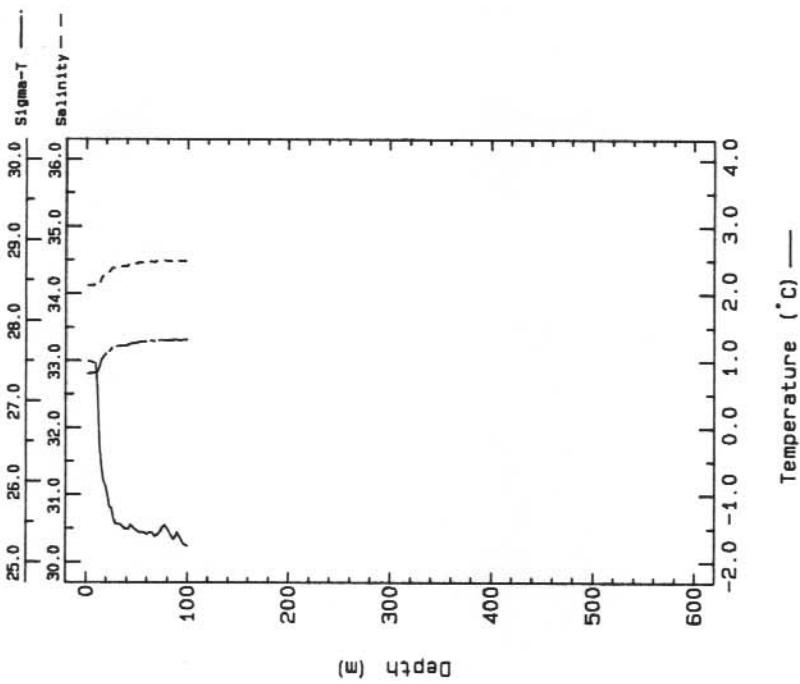
Cruise: AD8EX1 Station: 58
14 DEC 1982 2107 GMT
Latitude : 67.30.40S
Longitude: 74.58.30E
Depth: CTD 102 m Bottom 460 m



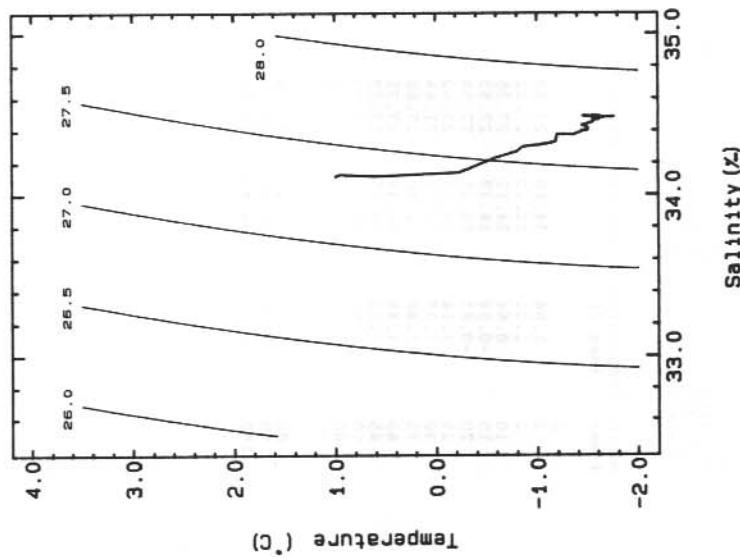
Cruise	: ADBEXI	Station	59
Station number	: 59		
Date	: 15 DEC 1982	GMT	
Start Time	: 0151	GMT	
Ship	: NELLA DAN		
Position	: 67°32.30S	Longitude	74°52.00E
Cast Depth (m)	: 102	CTD	102 m Bottom 470 m
Bottom Depth (m)	: 470 m		

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	0.99	34.12	27.33
5	0.98	34.12	27.34
10	0.95	34.13	27.35
15	-0.41	34.19	27.47
20	-0.87	34.30	27.58
25	-1.20	34.35	27.64
30	-1.44	34.39	27.68
35	-1.46	34.40	27.68
40	-1.51	34.41	27.69
45	-1.46	34.44	27.71
50	-1.53	34.45	27.72
60	-1.59	34.47	27.74
70	-1.60	34.48	27.75
75	-1.50	34.49	27.76
80	-1.50	34.48	27.75
90	-1.55	34.49	27.76
100	-1.76	34.48	27.76

Cruise : ADBEXI Station 59
 15 DEC 1982 0151 GMT
 Latitude 67°32.30S
 Longitude 74°52.00E
 Depth: CTD 102 m Bottom 470 m



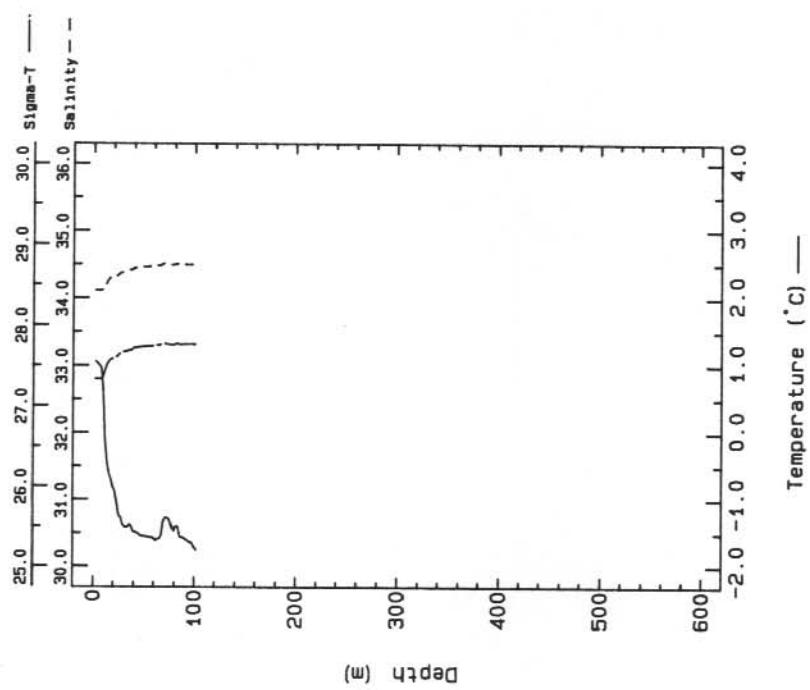
Cruise: ABBEX1 Station: 59
15 DEC 1982 0151 GMT
Latitude : 67° 32.30S
Longitude: 74° 52.00E
Depth: CTD 102 m Bottom 470 m



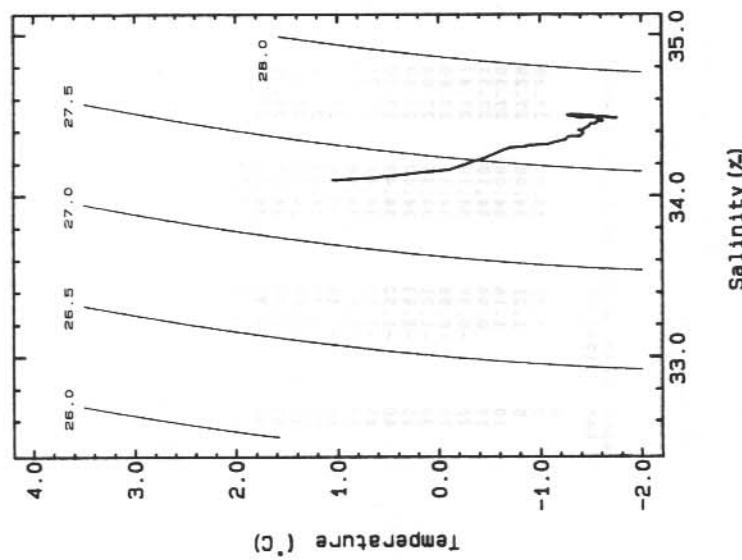
Cruise : ADBEX1 Station 60
 Station number : 60
 Date : 15 DEC 1982 0616 GMT
 Start Time : 0616 GMT
 Ship : NELLA DAN
 Position : 67°32'.20S 74°49'.30E
 Cast Depth (m) : 104 m
 Bottom Depth (m) : 470 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.04	34.10	27.32
5	1.01	34.10	27.32
10	-0.64	34.12	27.36
15	-0.54	34.26	27.53
20	-0.83	34.31	27.58
25	-1.16	34.34	27.62
30	-1.39	34.37	27.66
35	-1.40	34.40	27.68
40	-1.49	34.44	27.71
45	-1.52	34.45	27.73
50	-1.56	34.46	27.73
60	-1.58	34.46	27.74
70	-1.32	34.51	27.77
75	-1.30	34.50	27.76
80	-1.48	34.49	27.76
90	-1.59	34.49	27.76
100	-1.72	34.48	27.76

Cruise : ADBEX1 Station 60
 15 DEC 1982 0616 GMT
 Latitude 67° 32'.20S
 Longitude 74° 49'.30E
 Depth: CTD 104 m Bottom 470 m

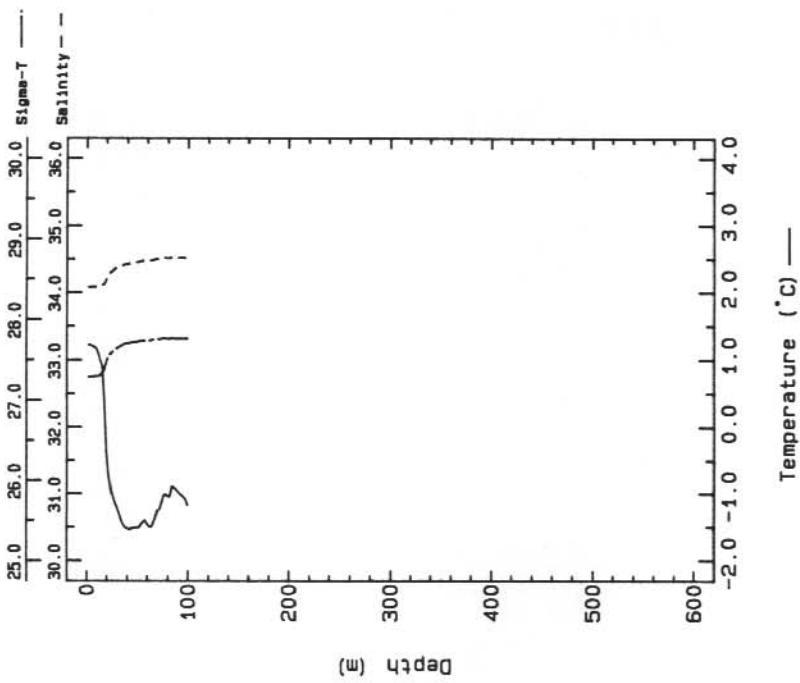


Cruise: ADEEX1 Station: 60
15 DEC 1982 0616 GMT
Latitude : 67°32.20S
Longitude: 74°49.30E
Depth: CTD 104 m Bottom 470 m

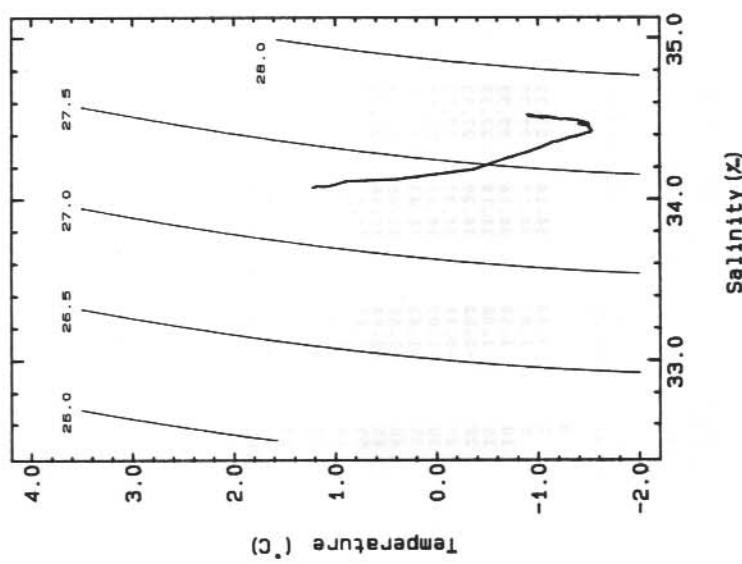


Cruise : ADBEX1 Station 61
 Station number : 61
 Date : 15 DEC 1982
 Start Time : 0902 GMT
 Ship : NELIA DAN
 Position : 67°13'.30S 74°49'.90E
 Cast Depth (m) : 102
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.21	34.07	27.29
2	1.21	34.08	27.29
5	1.16	34.08	27.30
10	0.94	34.10	27.33
15	-0.36	34.19	27.47
20	-0.38	34.31	27.60
25	-1.21	34.36	27.64
30	-1.43	34.40	27.68
35	-1.52	34.42	27.70
40	-1.52	34.44	27.71
45	-1.51	34.44	27.72
50	-1.46	34.46	27.73
60	-1.25	34.50	27.76
70	-1.08	34.51	27.76
75	-1.05	34.51	27.75
80	-0.97	34.51	27.76
90	-1.18	34.50	27.75
100			

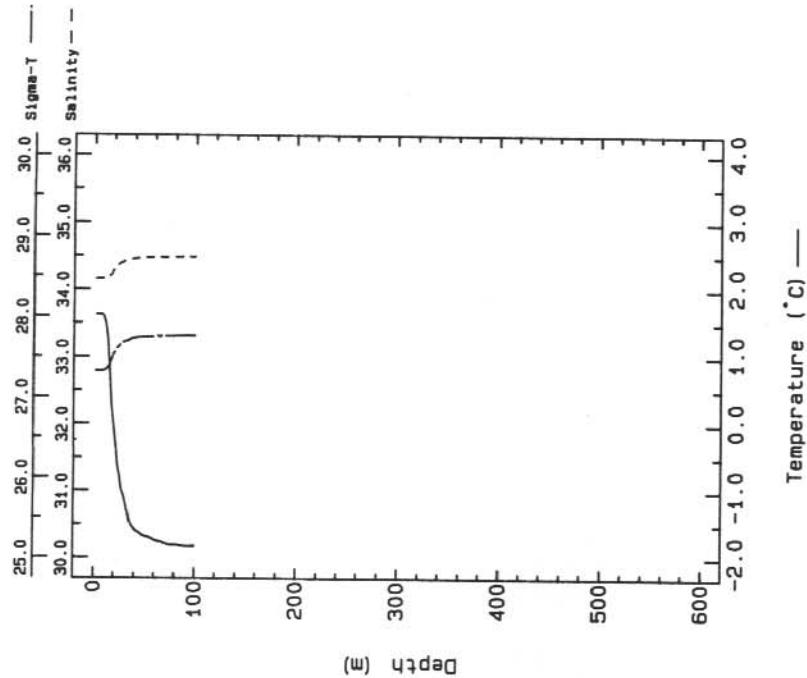


Cruise: ADBEXI Station: 61
15 DEC 1982 0902 GMT
Latitude : 67° 33.30S
Longitude: 74° 49.90E
Depth: CTD 102 m Bottom NR

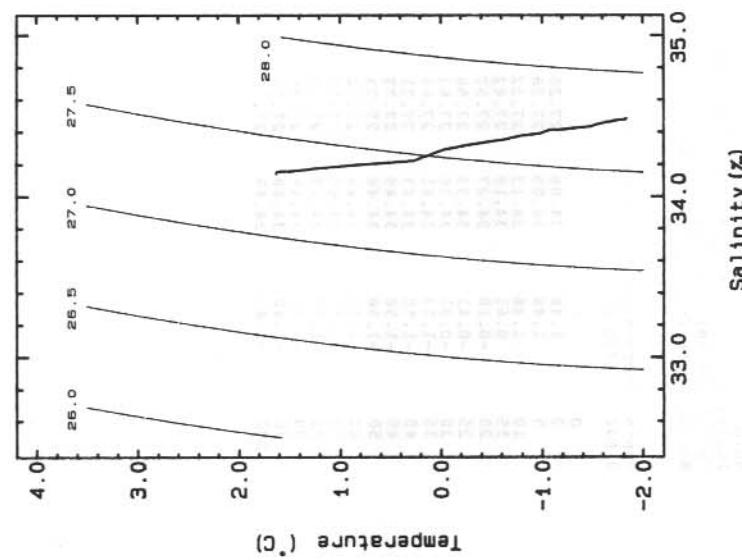


Cruise : ADBEX1
 Station number : 62
 Date : 15 DEC 1982
 Start Time : 1332 GMT
 Ship : NELIA DAN
 Position : 67°35'.00S 74°38'.50E
 Cast Depth (m) : 102
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.62	34.14	27.32
2	1.62	34.15	27.32
5	1.58	34.16	27.33
10	1.06	34.19	27.39
15	-0.02	34.29	27.53
20	-0.71	34.37	27.63
25	-1.07	34.41	27.68
30	-1.41	34.43	27.71
35	-1.58	34.45	27.73
40	-1.64	34.46	27.74
45	-1.69	34.47	27.74
50	-1.74	34.47	27.75
60	-1.79	34.47	27.75
70	-1.81	34.48	27.76
75	-1.82	34.48	27.76
80	-1.83	34.48	27.76
90	-1.83	34.48	27.76
100	-1.83	34.48	27.76

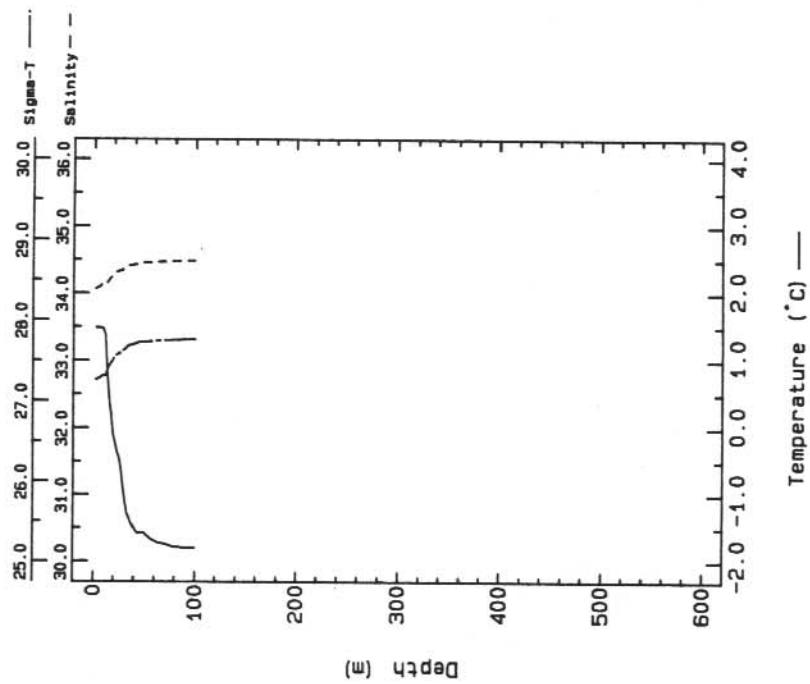


Cruise: ADDEXI Station: 62
15 DEC 1982 1332 GMT
Latitude : 67° 35' 00S
Longitude: 74° 38' .50E
Depth: CTD 102 m Bottom NR

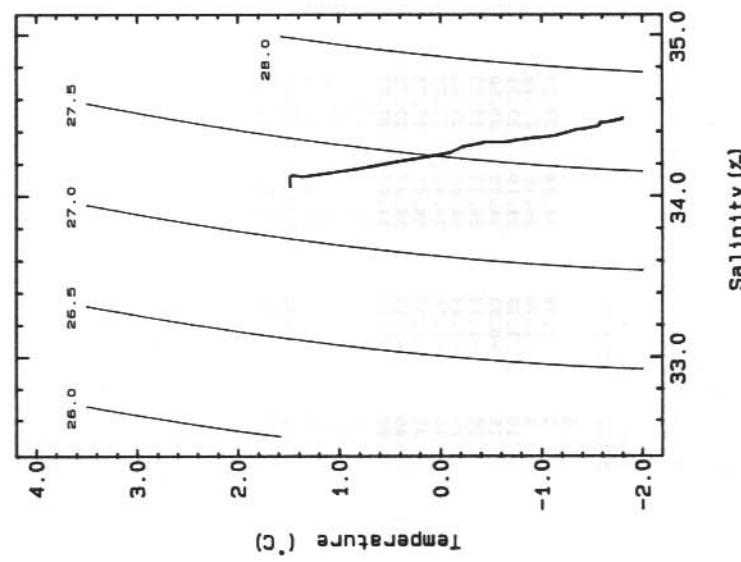


Cruise : ADBEX1 Station 63
 Station number : 63
 Date : 15 DEC 1982
 Start Time : 1711 GMT
 Ship : NELIA DAN
 Position : 67°31'.50S 74°39'.80E
 Cast Depth (m) : 102
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.48	34.06	27.26
5	1.48	34.09	27.28
10	1.46	34.13	27.32
15	0.61	34.19	27.42
20	-0.10	34.27	27.52
25	-0.41	34.33	27.58
30	-0.92	34.36	27.63
35	-1.33	34.41	27.68
40	-1.50	34.43	27.71
45	-1.58	34.45	27.73
50	-1.58	34.46	27.73
60	-1.70	34.46	27.74
70	-1.74	34.47	27.75
75	-1.77	34.47	27.75
80	-1.79	34.48	27.75
90	-1.80	34.48	27.76
100	-1.80	34.49	27.76

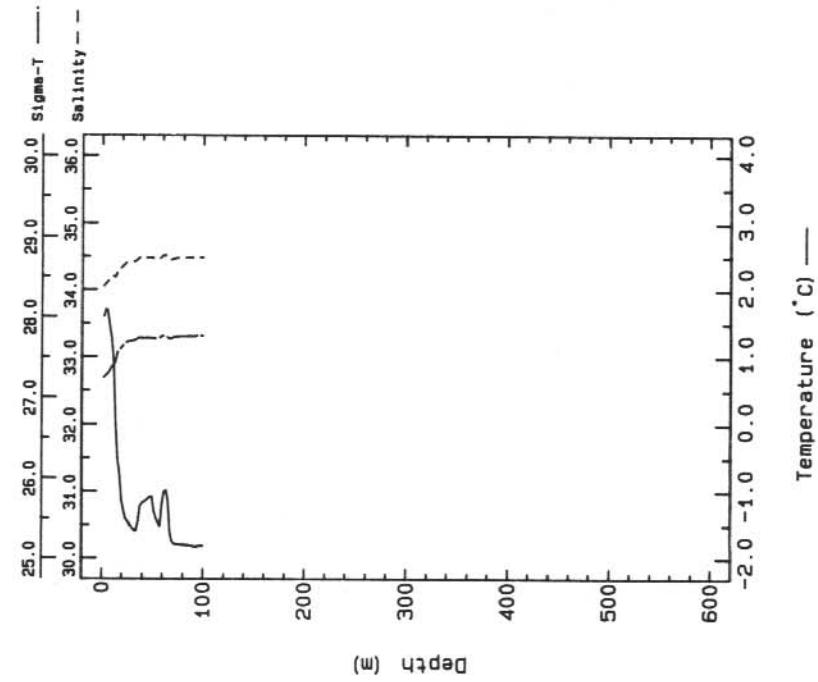


Cruise: ADEEX1 Station: 63
15 DEC 1982 1711 GMT
Latitude: 67° 33.50S
Longitude: 74° 39.80E
Depth: CTD 102 m Bottom NR

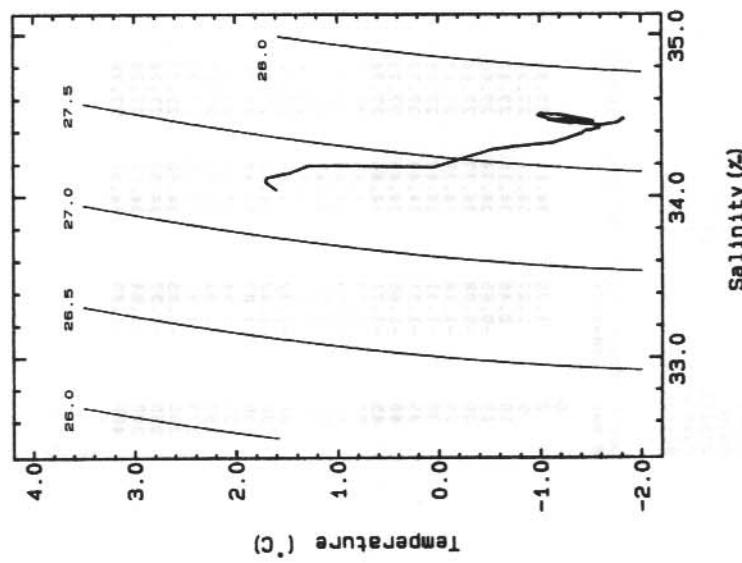


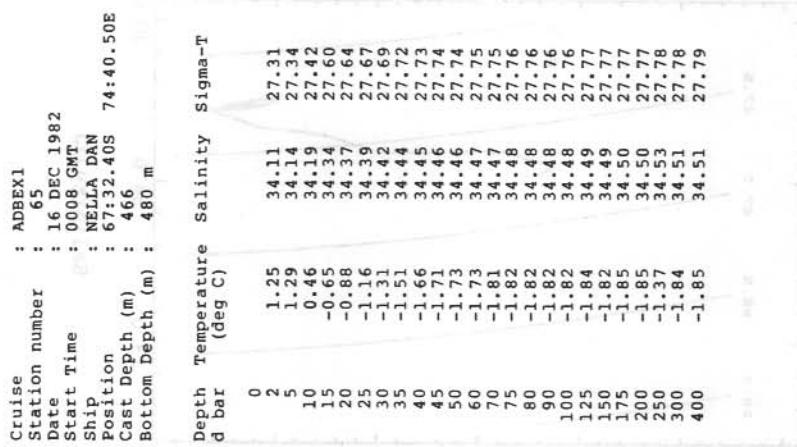
Cruise : ADBEX1
 Station 64
 Date : 15 DEC 1982
 Start Time : 2210 GMT
 Ship : NELLA DAN
 Position : 67:30.60S 74:59.00E
 Cast Depth (m) : 102
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.59	34.04	27.23
5	1.70	34.10	27.28
10	1.28	34.19	27.38
15	-0.23	34.23	27.50
20	-1.13	34.33	27.62
25	-1.44	34.40	27.68
30	-1.56	34.42	27.70
35	-1.53	34.45	27.73
40	-1.17	34.47	27.73
45	-1.12	34.47	27.73
50	-1.08	34.47	27.73
60	-1.20	34.51	27.76
70	-1.75	34.46	27.74
75	-1.80	34.47	27.75
80	-1.81	34.48	27.76
90	-1.83	34.48	27.76
100	-1.82	34.48	27.76



Cruise: ADEBEX1 Station: 64
15 DEC 1982 2210 GMT
Latitude : 67.30.60S
Longitude: 74.59.00E
Depth: CTD 102 m Bottom NR





Cruise : ADBEX1 Station 65
 Date : 16 DEC 1982 0008 GMT
 Latitude : 67.32.40S
 Longitude : 74:40.50E
 Depth: CTD 466 m Bottom 480 m

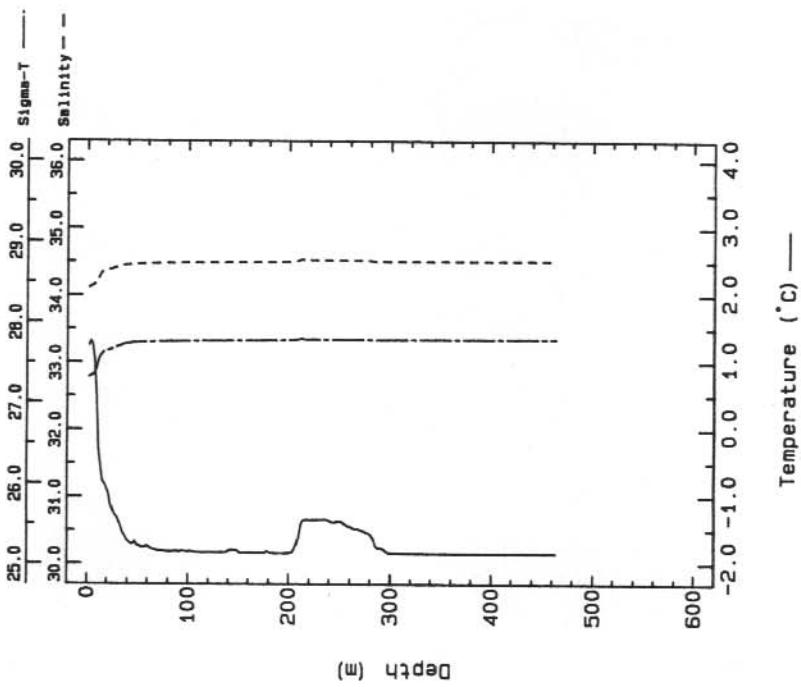
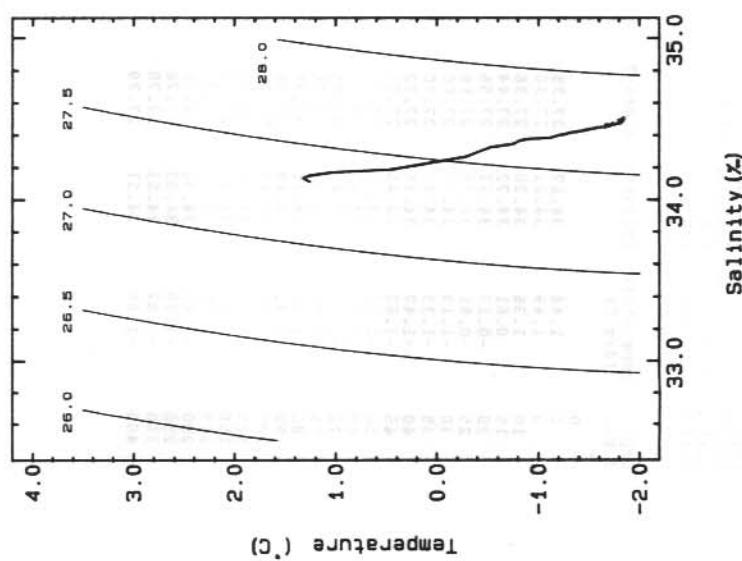
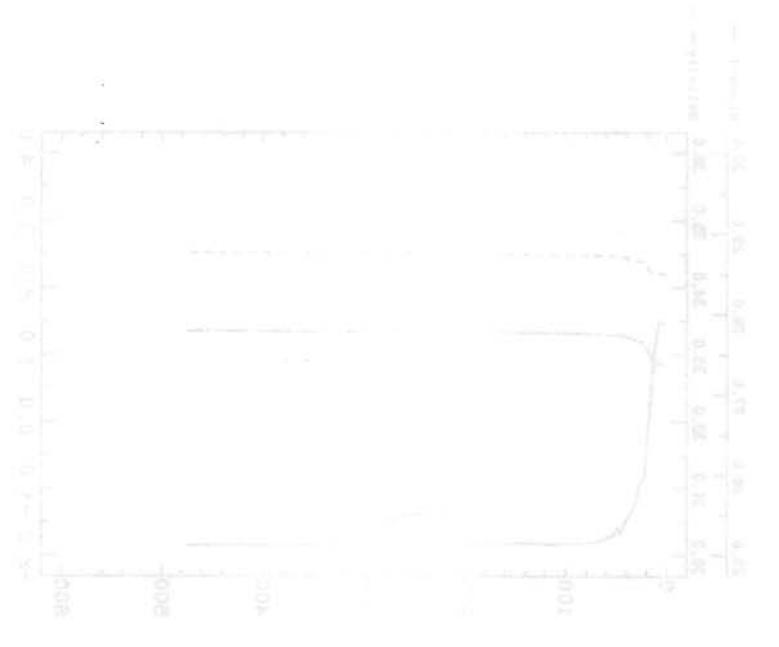


Fig. 10.10.26.01
 Temperature : 0.1 0.5 1.0
 Sigma-T : 0.05 0.1 0.15
 Salinity : 0.05 0.1 0.15
 (bottom) : 0.05 0.1 0.15

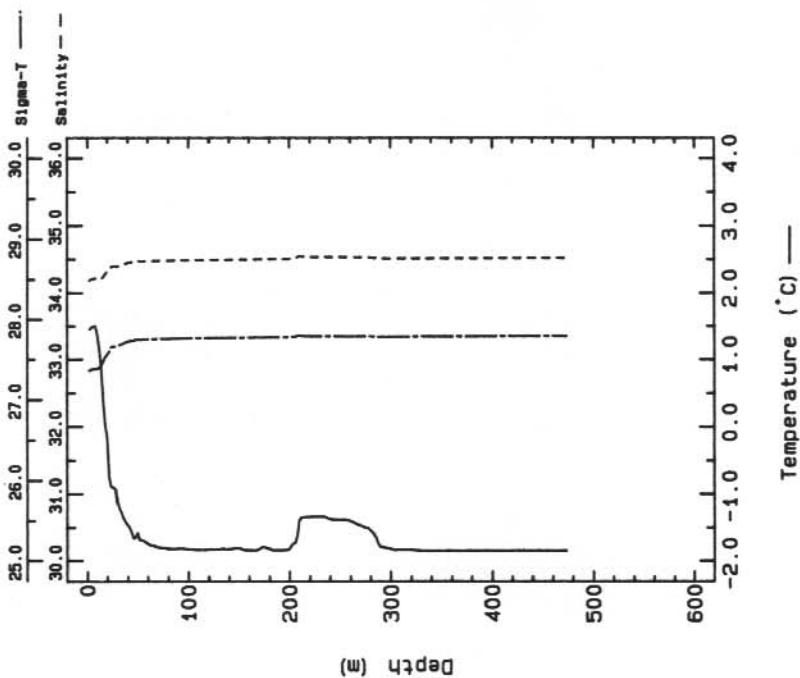
Cruise: ADEEX1 Station: 65
16 DEC 1982 0008 GMT
Latitude : 67° 32' 40"S
Longitude: 74° 40' 50"E
Depth: CTD 466 m Bottom 480 m



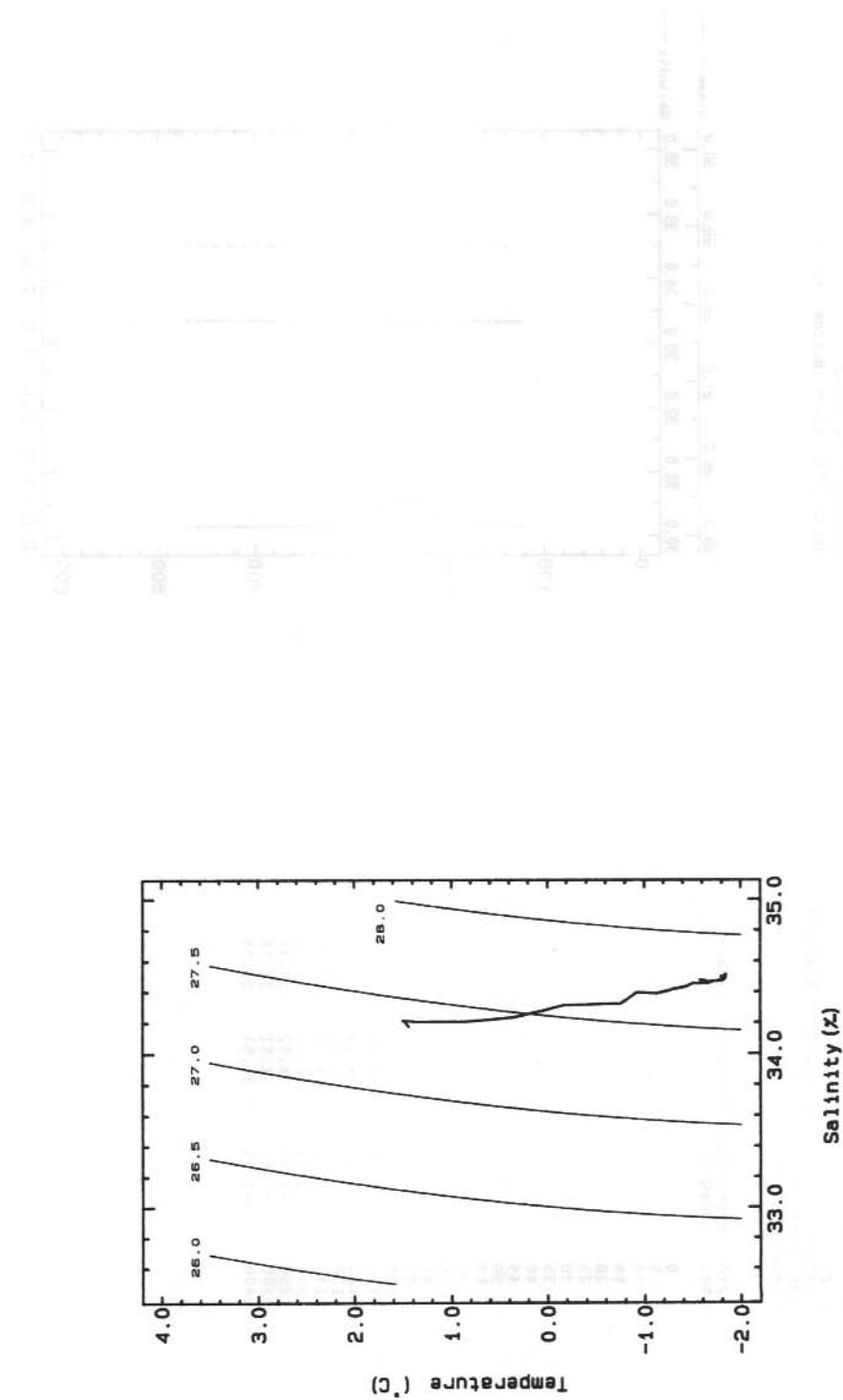
Cruise : ADBEX1 Station 66
 Station number : 66
 Date : 16 DEC 1982
 Start Time : 0034 GMT
 Ship : NELLA DAN
 Position : 67°35.00S 74°40.00E
 Cast Depth (m) : 476
 Bottom Depth (m) : 480 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.44	34.17	27.35
2	1.49	34.21	27.38
5	1.36	34.20	27.38
10	0.61	34.22	27.44
15	-0.17	34.31	27.56
20	-0.91	34.39	27.66
25	-1.13	34.39	27.66
30	-1.33	34.42	27.70
35	-1.33	34.42	27.70
40	-1.47	34.45	27.72
45	-1.62	34.45	27.73
50	-1.58	34.48	27.75
60	-1.75	34.47	27.75
70	-1.80	34.47	27.75
75	-1.81	34.48	27.76
80	-1.82	34.48	27.76
90	-1.81	34.48	27.76
100	-1.83	34.49	27.76
125	-1.83	34.49	27.77
150	-1.81	34.49	27.77
175	-1.80	34.50	27.77
200	-1.83	34.50	27.78
250	-1.39	34.53	27.78
300	-1.82	34.51	27.78
400	-1.85	34.51	27.79

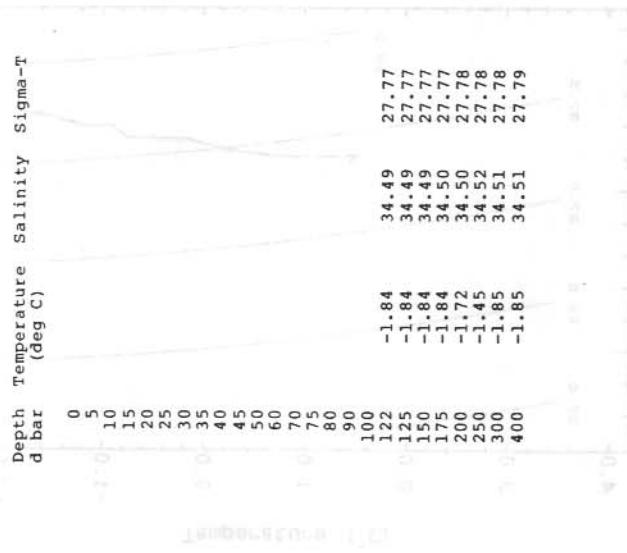
Cruise : ADBEX1 Station 66
 16 DEC 1982 0034 GMT
 Latitude 67°35.00S
 Longitude 74°40.00E
 Depth: CTD 476 m Bottom 480 m



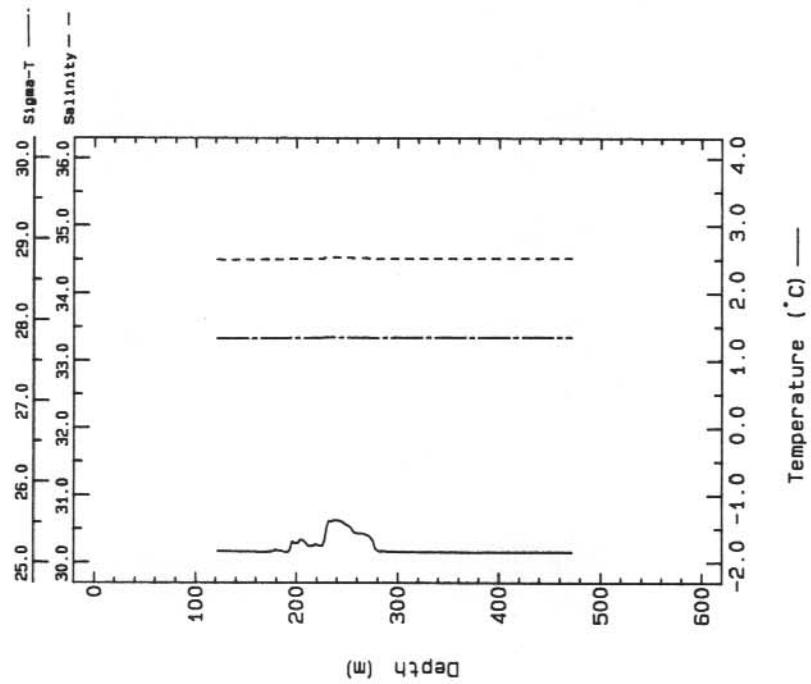
Cruise: ADBEX1 Station: 66
16 DEC 1982 0034 GMT
Latitude : 67:35.00S
Longitude: 74:40.00E
Depth: CTD 476 m Bottom 480 m



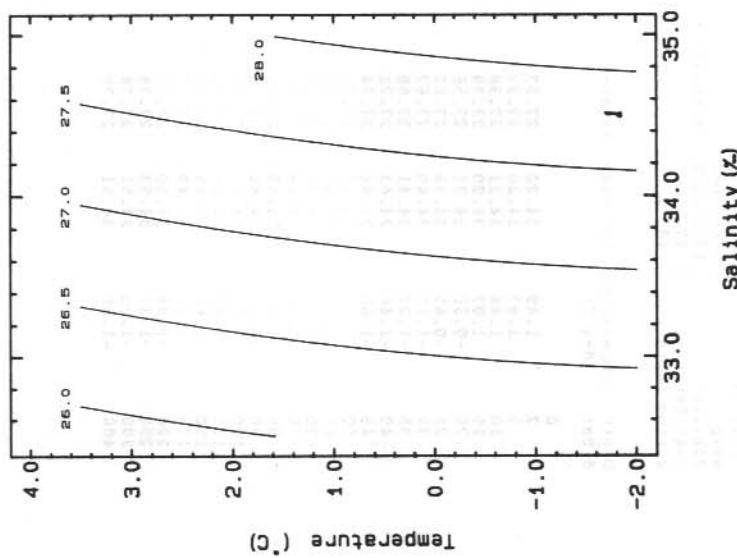
Cruise : ADBEX1
 Station number : 67
 Date : 16 DEC 1982
 Start Time : 0058 GMT
 Ship : NELLIA DAN
 Position : 67°35.00S 74°40.00E
 Cast Depth (m) : 474 m
 Bottom Depth (m) : 478 m



Cruise : ADBEX1 Station 67
 16 DEC 1982 0058 GMT
 Latitude 67° 35.00S
 Longitude 74° 40.00E
 Depth: CTD 474 m Bottom 478 m



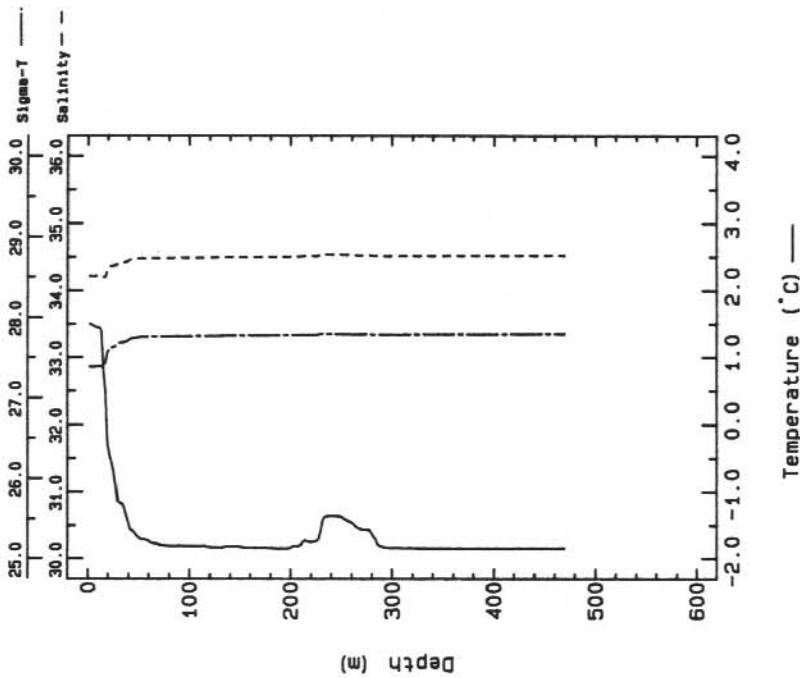
Cruise: ADBEX1 Station: 67
16 DEC 1982 0058 GMT
Latitude : 67.35.00S
Longitude: 74.40.00E
Depth: CTD 474 m Bottom 478 m



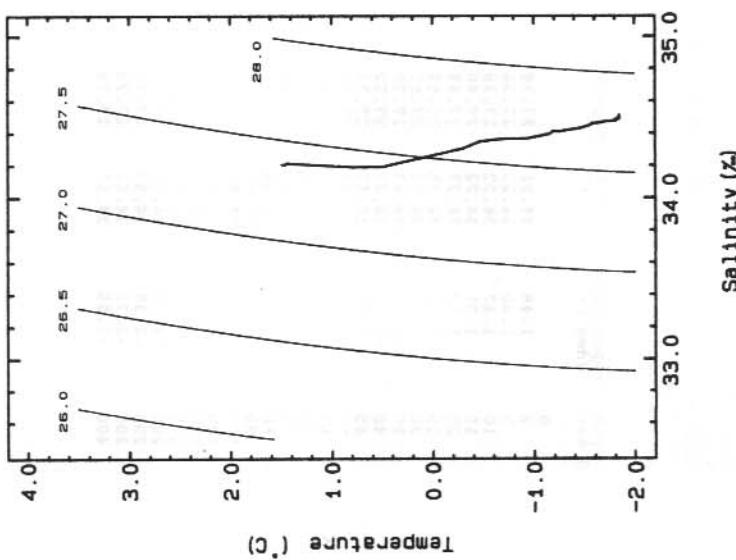
Cruise : ADBEX1
 Station 68
 Station number : 68
 Date : 16 DEC 1982
 Start Time : 0214 GMT
 Ship : NELLA DAN
 Position : 67°35.00S 74°40.00E
 Cast Depth (m) : 472
 Bottom Depth (m) : 480 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.49	34.20	27.37
5	1.47	34.20	27.37
10	1.44	34.21	27.38
15	1.07	34.20	27.39
20	-0.30	34.31	27.56
25	-0.65	34.36	27.62
30	-1.15	34.40	27.67
35	-1.22	34.41	27.68
40	-1.46	34.43	27.71
45	-1.60	34.46	27.74
50	-1.69	34.47	27.75
60	-1.73	34.47	27.75
70	-1.79	34.48	27.75
75	-1.81	34.48	27.76
80	-1.82	34.48	27.76
90	-1.81	34.48	27.76
100	-1.81	34.48	27.76
125	-1.84	34.49	27.76
150	-1.82	34.49	27.77
175	-1.84	34.49	27.77
200	-1.84	34.50	27.77
250	-1.37	34.53	27.78
300	-1.85	34.51	27.78
400	-1.85	34.51	27.79

Cruise : ADBEX1 Station 68
 16 DEC 1982 0214 GMT
 Latitude 67°35.00S
 Longitude 74°40.00E
 Depth: CTD 472 m Bottom 480 m

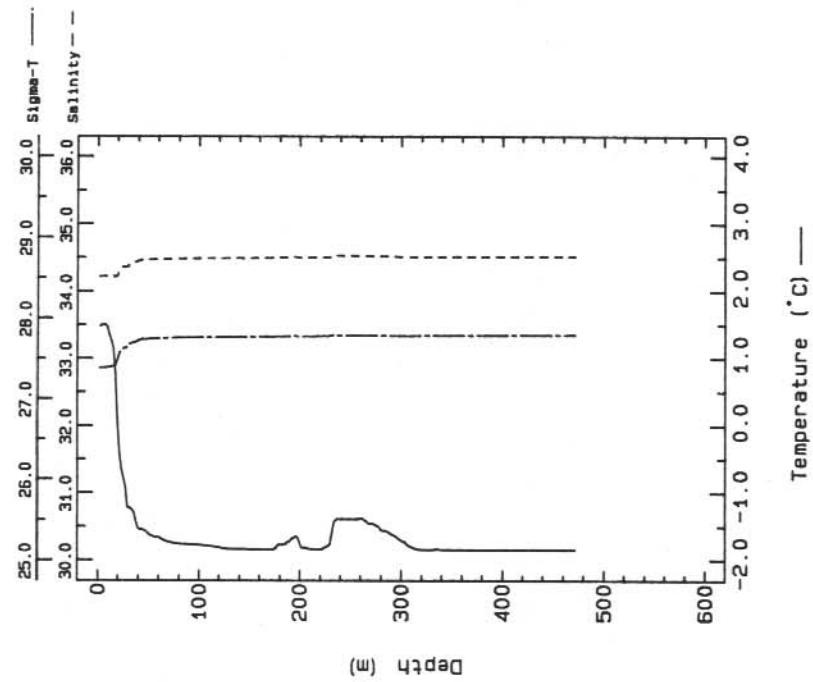


Cruise: ADBEX1 Station: 68
16 DEC 1982 02:44 GMT
Latitude : 67° 35.00S
Longitude: 74° 40.00E
Depth: CTD 472 m Bottom 480 m

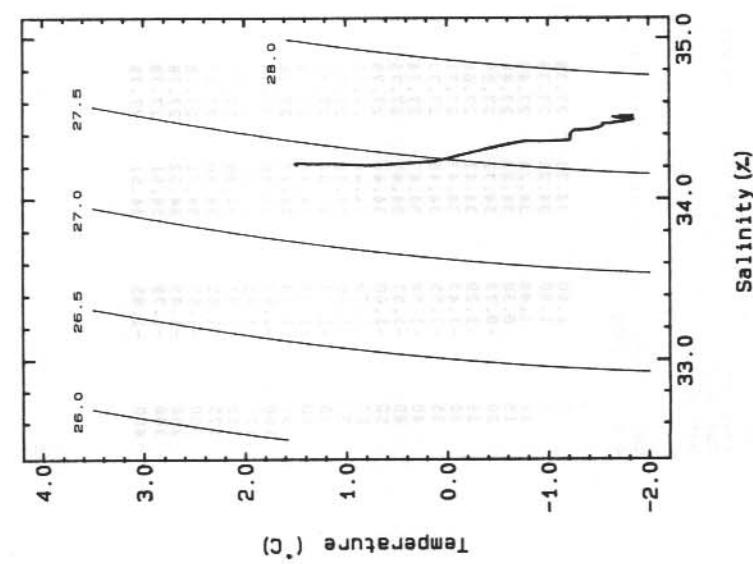


Cruise : ADBEX1
 Station 69
 Station number : 69
 Date : 16 DEC 1982
 Start Time : 0242 GMT
 Ship : NELLA DAN
 Position : 67°35'.00S 74°40'.00E
 Cast Depth (m) : 474
 Bottom Depth (m) : 480 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.48	34.21	27.38
5	1.50	34.22	27.38
10	1.47	34.22	27.39
15	1.21	34.22	27.40
20	0.12	34.23	27.48
25	-0.72	34.35	27.62
30	-1.22	34.36	27.65
35	-1.28	34.43	27.70
40	-1.53	34.45	27.72
45	-1.55	34.47	27.74
50	-1.61	34.46	27.74
60	-1.66	34.47	27.75
70	-1.73	34.48	27.75
75	-1.75	34.48	27.76
80	-1.76	34.48	27.76
90	-1.77	34.48	27.76
100	-1.78	34.49	27.76
125	-1.83	34.49	27.77
150	-1.84	34.49	27.77
175	-1.83	34.50	27.77
200	-1.73	34.50	27.77
250	-1.39	34.53	27.78
300	-1.70	34.51	27.78
400	-1.85	34.51	27.79

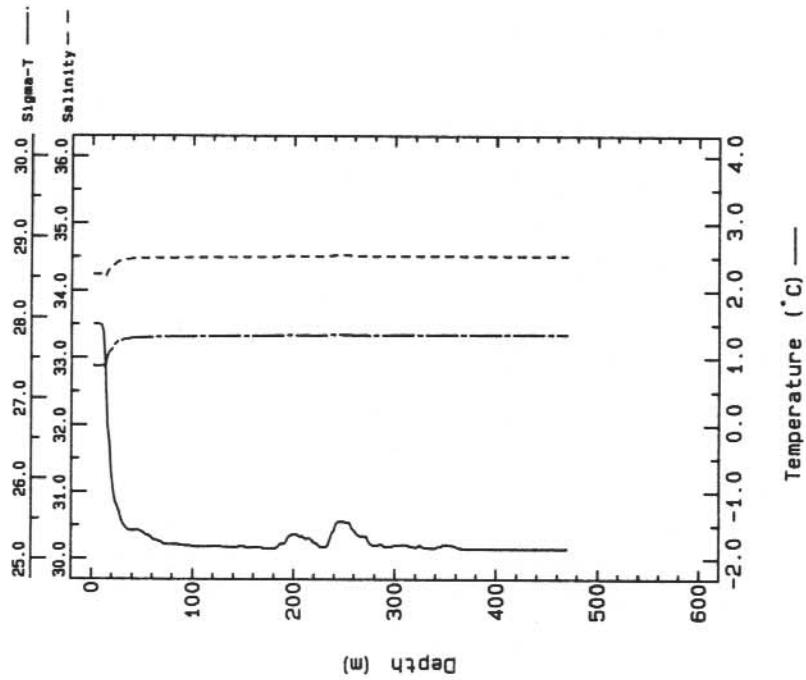


Cruise: ADBEX1 Station: 69
16 DEC 1982 0242 GMT
Latitude : 67.35.00S
Longitude: 74.40.00E
Depth: CTD 474 m Bottom 480 m

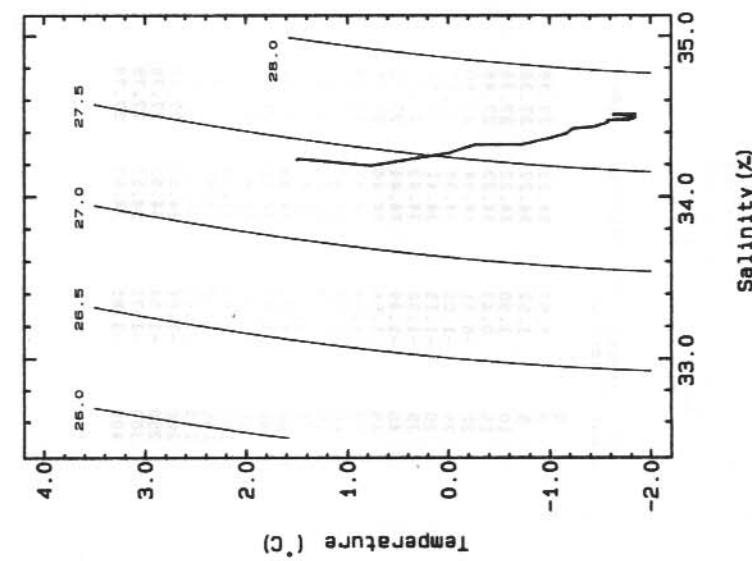


Cruise	ADBEX1	Station number	70
Date	16 DEC 1982	Start Time	0218 GMT
Ship	NEELA DAN	Position	
Cast Depth (m)	67°35.00'S	74°40.00'E	
Bottom Depth (m)	472		
	480 m		
Depth (m)	Temperature (deg C)	Salinity	Sigma-T
0	1.50	34.23	27.39
5	1.50	34.23	27.39
10	1.48	34.24	27.40
15	0.38	34.23	27.46
20	-0.73	34.32	27.59
25	-1.20	34.41	27.68
30	-1.43	34.43	27.71
35	-1.55	34.46	27.73
40	-1.58	34.47	27.74
45	-1.57	34.47	27.75
50	-1.60	34.48	27.75
60	-1.70	34.48	27.75
70	-1.76	34.48	27.76
75	-1.79	34.48	27.76
80	-1.79	34.48	27.76
90	-1.79	34.48	27.76
100	-1.82	34.48	27.76
125	-1.81	34.49	27.77
150	-1.81	34.49	27.77
175	-1.85	34.50	27.77
200	-1.63	34.51	27.78
250	-1.45	34.52	27.78
300	-1.79	34.51	27.78
400	-1.85	34.51	27.79

Cruise : ADBEX1 Station 70
 16 DEC 1982 0218 GMT
 Latitude 67° 35.00S
 Longitude 74° 40.00E
 Depth: CTD 472 m Bottom 480 m

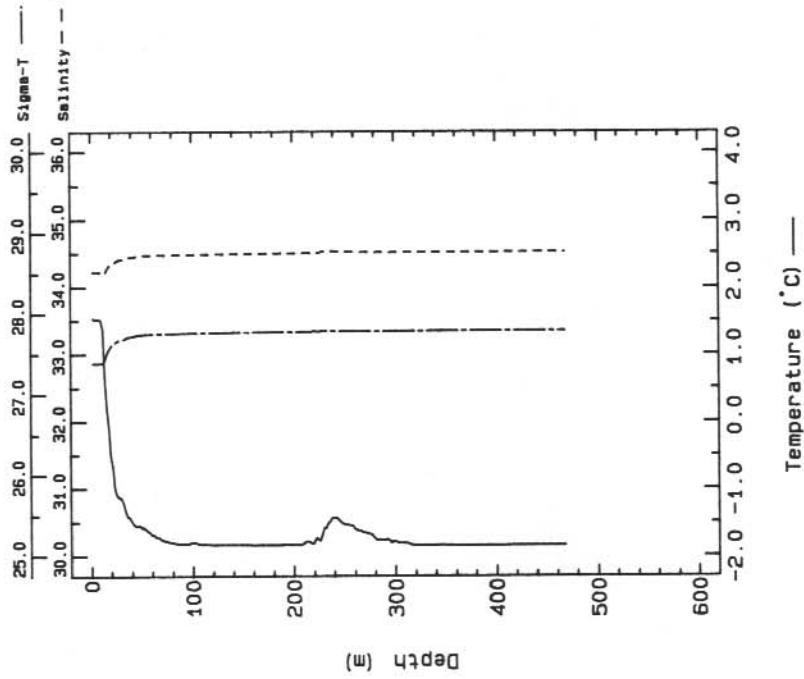


Cruise: ADGEEX1 Station: 70
16 DEC 1982 0218 gmt
Latitude : 67:35.00S
Longitude: 74:40.00E
Depth: CTD 472 m Bottom 480 m

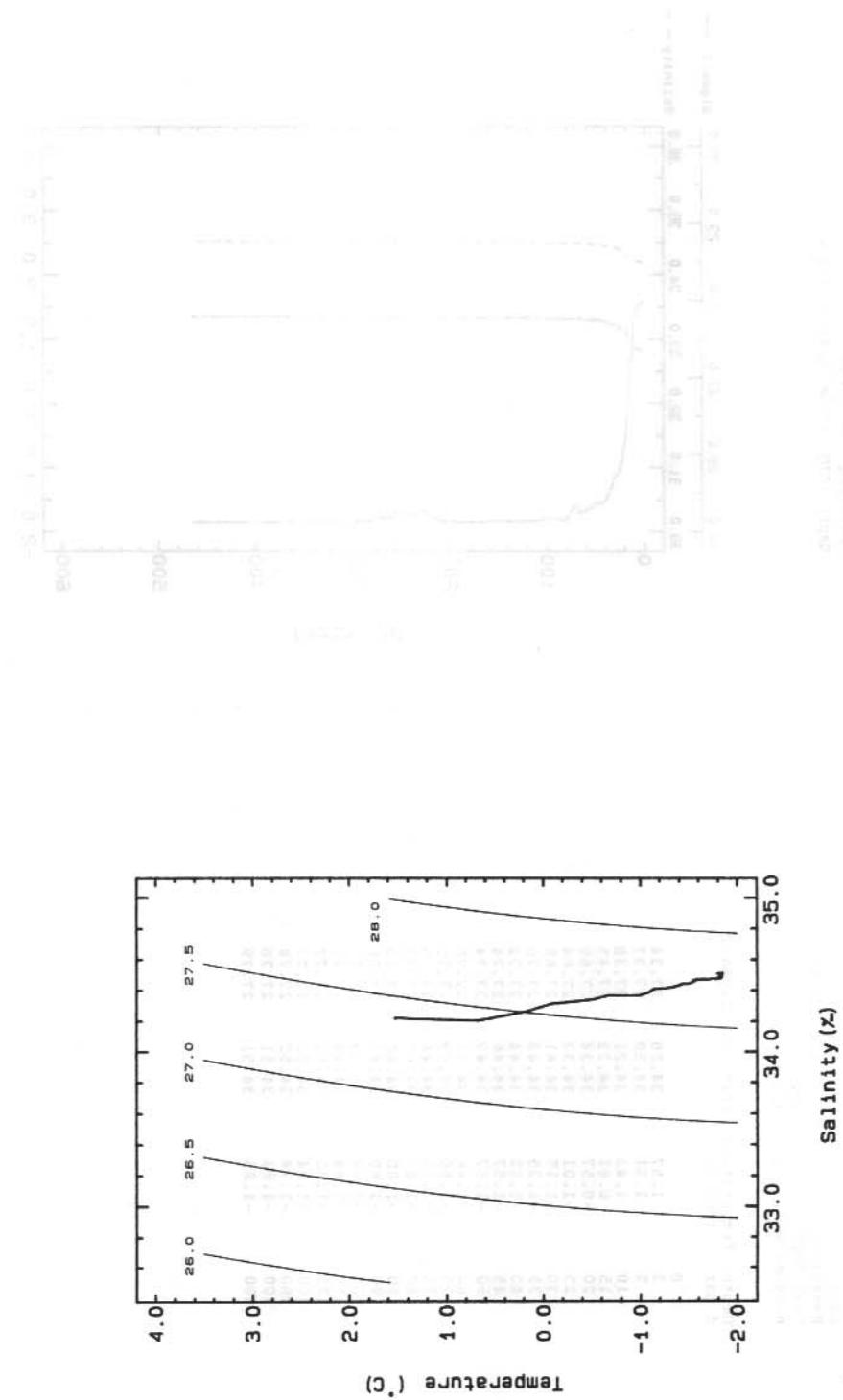


Cruise : ADBEX1 Station 71
 Station number : 71
 Date : 16 DEC 1982
 Start Time : 0230 GMT
 Ship : NEELJA DAN
 Position : 67°35.0' S 74°40.0' E
 Cast Depth (m) : 470
 Bottom Depth (m) : 479 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.53	34.22	27.38
5	1.52	34.22	27.38
10	1.50	34.22	27.39
15	0.43	34.23	27.46
20	-0.51	34.34	27.60
25	-1.05	34.38	27.65
30	-1.15	34.41	27.68
35	-1.38	34.43	27.71
40	-1.49	34.44	27.72
45	-1.56	34.46	27.74
50	-1.58	34.47	27.74
60	-1.69	34.47	27.75
70	-1.77	34.47	27.75
75	-1.79	34.48	27.75
80	-1.81	34.48	27.76
90	-1.83	34.48	27.76
100	-1.80	34.48	27.76
125	-1.64	34.49	27.77
150	-1.84	34.49	27.77
175	-1.84	34.50	27.77
200	-1.84	34.50	27.77
250	-1.54	34.52	27.78
300	-1.79	34.51	27.78
400	-1.85	34.51	27.79



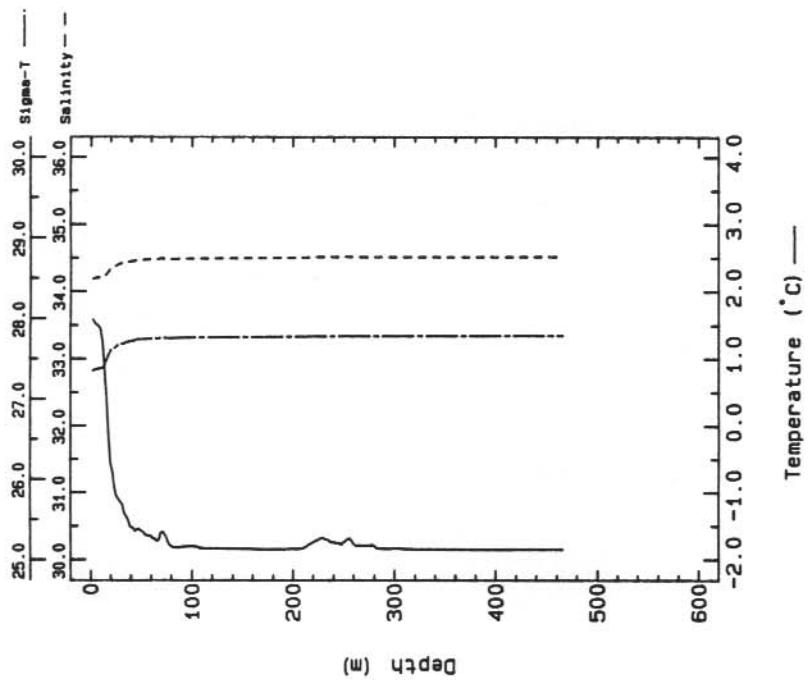
Cruise: ADBEX1 Station: 71
16 DEC 1982 0230 GMT
Latitude : 67°35.00S
Longitude: 74°40.00E
Depth: CTD 470 m Bottom 479 m



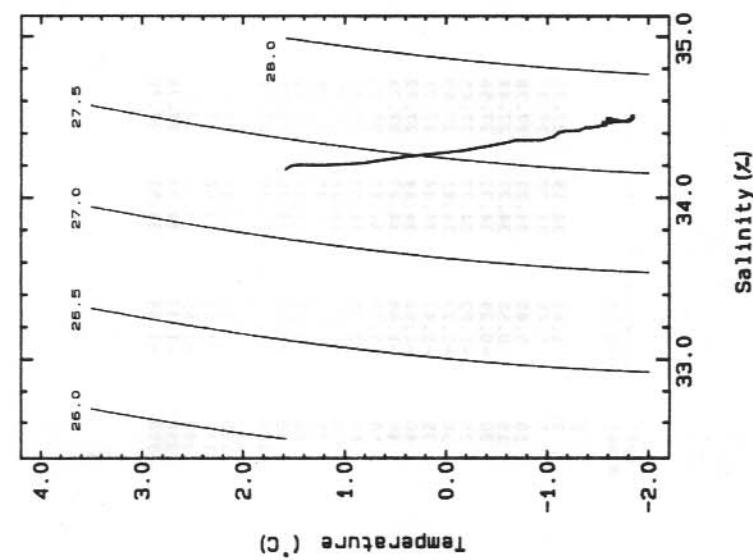
Cruise : ADBEX1
 Station number : 72
 Date : 16 DEC 1982
 Start time : 0249 GMT
 Ship : NELLA DAN
 Position : 67°35.00S 74°40.00E
 Cast Depth (m) : 470
 Bottom Depth (m) : 475 m

Cruise : ADBEX1 Station 72
 16 DEC 1982 0249 GMT
 Latitude 67°35.00S
 Longitude 74°40.00E
 Depth: CTD 470 m Bottom 475 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.57	34.18	27.34
5	1.51	34.20	27.37
10	1.43	34.21	27.38
15	0.61	34.23	27.45
20	-0.57	34.34	27.60
25	-1.01	34.37	27.64
30	-1.15	34.41	27.68
35	-1.35	34.43	27.70
40	-1.52	34.44	27.72
45	-1.57	34.46	27.74
50	-1.57	34.47	27.74
60	-1.66	34.47	27.75
70	-1.60	34.49	27.76
75	-1.66	34.48	27.75
80	-1.80	34.47	27.75
90	-1.80	34.48	27.76
100	-1.80	34.49	27.76
125	-1.84	34.49	27.77
150	-1.84	34.49	27.77
175	-1.85	34.50	27.77
200	-1.84	34.50	27.77
250	-1.74	34.52	27.79
300	-1.83	34.51	27.78
400	-1.85	34.51	27.79

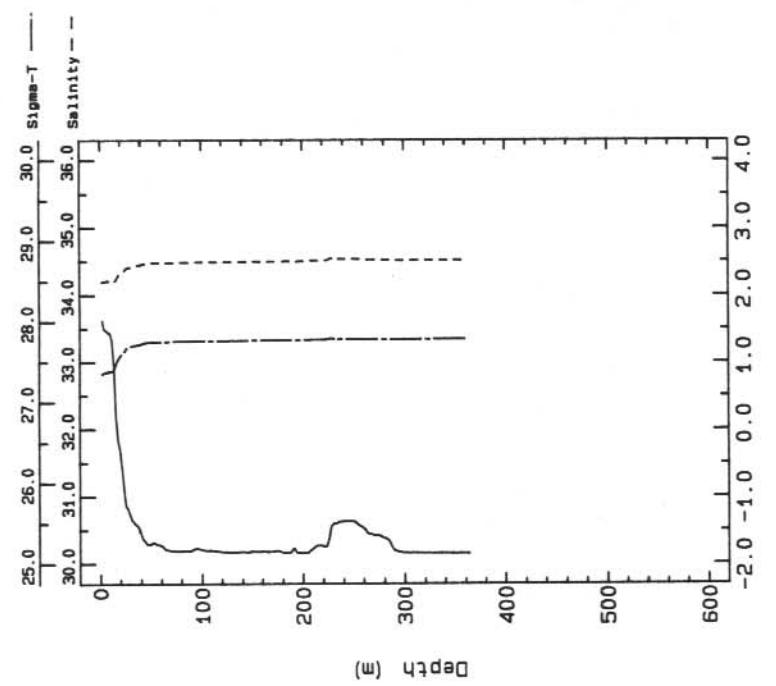


Cruise: ADBEX1 Station: 72
16 DEC 1982 0249 GMT
Latitude : 67° 35.00S
Longitude: 74° 40.00E
Depth: CTD 470 m Bottom 475 m

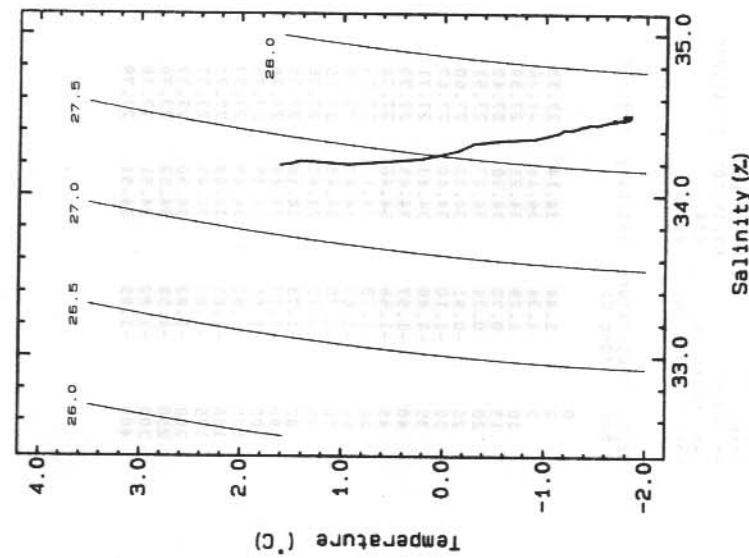


Cruise : ADBEX1 Station 73
 Station number : 73
 Date : 16 DEC 1982
 Start Time : 0335 GMT
 Ship : NELLA DAN
 Position : 67:35.00S 74:40.00E
 Cast Depth (m) : 366
 Bottom Depth (m) : 490 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	1.61	34.19	27.35
5	1.48	34.20	27.37
10	1.42	34.21	27.38
15	0.58	34.21	27.14
20	-0.29	34.32	27.58
25	-1.02	34.37	27.65
30	-1.27	34.41	27.69
35	-1.41	34.44	27.71
40	-1.52	34.44	27.72
45	-1.69	34.47	27.74
50	-1.70	34.47	27.75
60	-1.73	34.47	27.75
70	-1.81	34.48	27.76
75	-1.82	34.48	27.76
80	-1.82	34.48	27.76
90	-1.80	34.48	27.76
100	-1.79	34.48	27.76
125	-1.83	34.49	27.76
150	-1.82	34.49	27.77
175	-1.81	34.50	27.77
200	-1.85	34.50	27.77
250	-1.37	34.53	27.78
300	-1.84	34.51	27.78



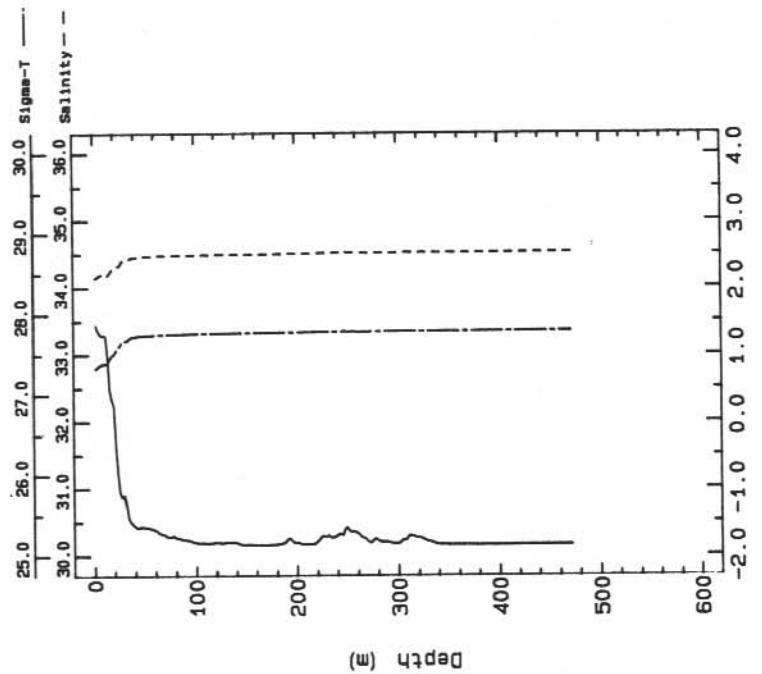
Cruise: AD8EX1 Station: 73
16 DEC 1982 0335 GMT
Latitude : 67° 35.00S
Longitude: 74° 40.00E
Depth: CTD 366 m Bottom 490 m



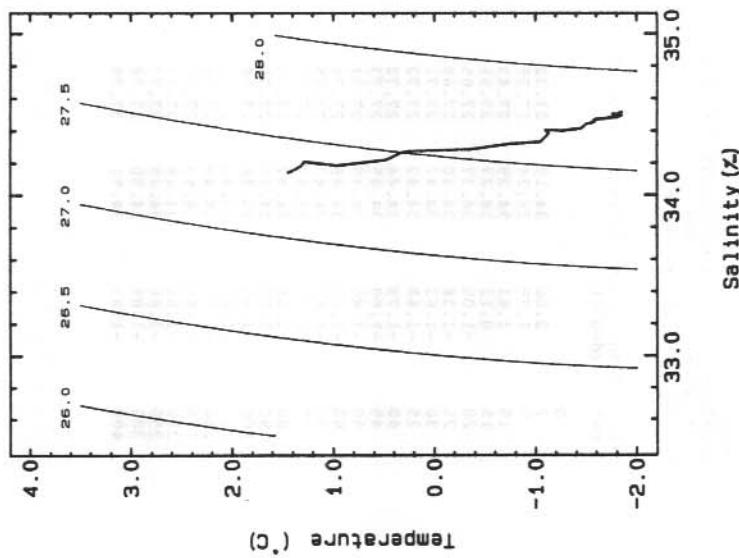
Cruise : ADBEX1 Station 74
 Station number : 74
 Date : 16 DEC 1982
 Start Time : 0000 GMT
 Ship : NELIA DAN
 Position : 67°35'.00S 74°40'.00E
 Cast Depth (m) : 474
 Bottom Depth (m) : 481 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T (deg C)
0	1.44	34.14	27.33
2	1.34	34.18	27.36
5	1.29	34.21	27.39
10	0.72	34.20	27.42
15	0.24	34.27	27.51
20	-0.91	34.33	27.60
25	-1.10	34.40	27.67
30	-1.18	34.43	27.71
35	-1.57	34.45	27.73
40	-1.58	34.46	27.74
45	-1.58	34.47	27.74
50	-1.63	34.47	27.75
60	-1.70	34.48	27.75
70	-1.72	34.48	27.76
75	-1.73	34.48	27.75
80	-1.77	34.48	27.76
90	-1.81	34.49	27.76
100	-1.82	34.49	27.77
125	-1.85	34.49	27.77
150	-1.85	34.49	27.77
175	-1.85	34.49	27.77
200	-1.82	34.50	27.77
250	-1.58	34.52	27.78
300	-1.82	34.51	27.78
400	-1.85	34.51	27.79

Cruise : ADBEX1 Station 74
 16 DEC 1982 0000 GMT
 Latitude 67° 35.00S
 Longitude 74° 40.00E
 Depth: CTD 474 m Bottom 481 m

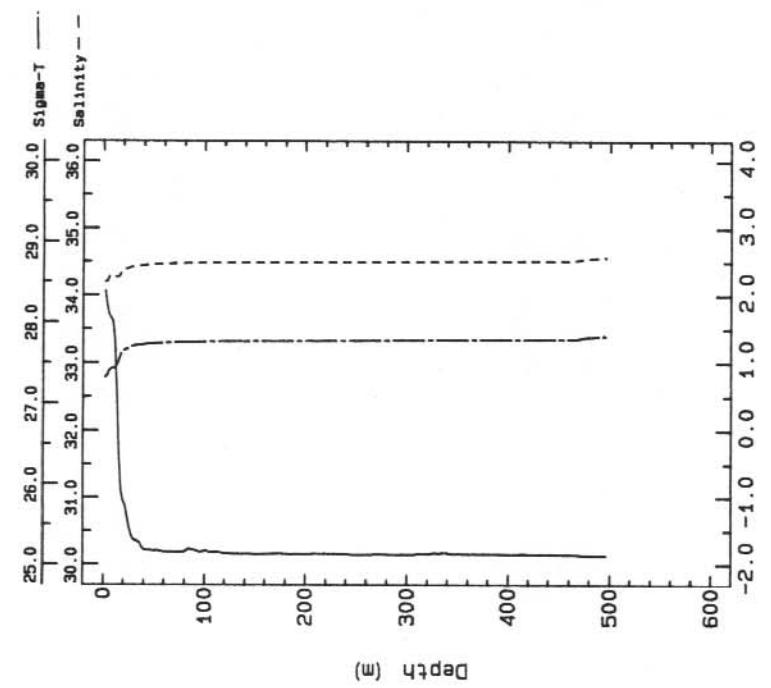


Cruise: ADGEEX1 Station: 74
16 DEC 1982 0000 GMT
Latitude : 67.35.00S
Longitude: 74.40.00E
Depth: CTD 474 m Bottom 481 m

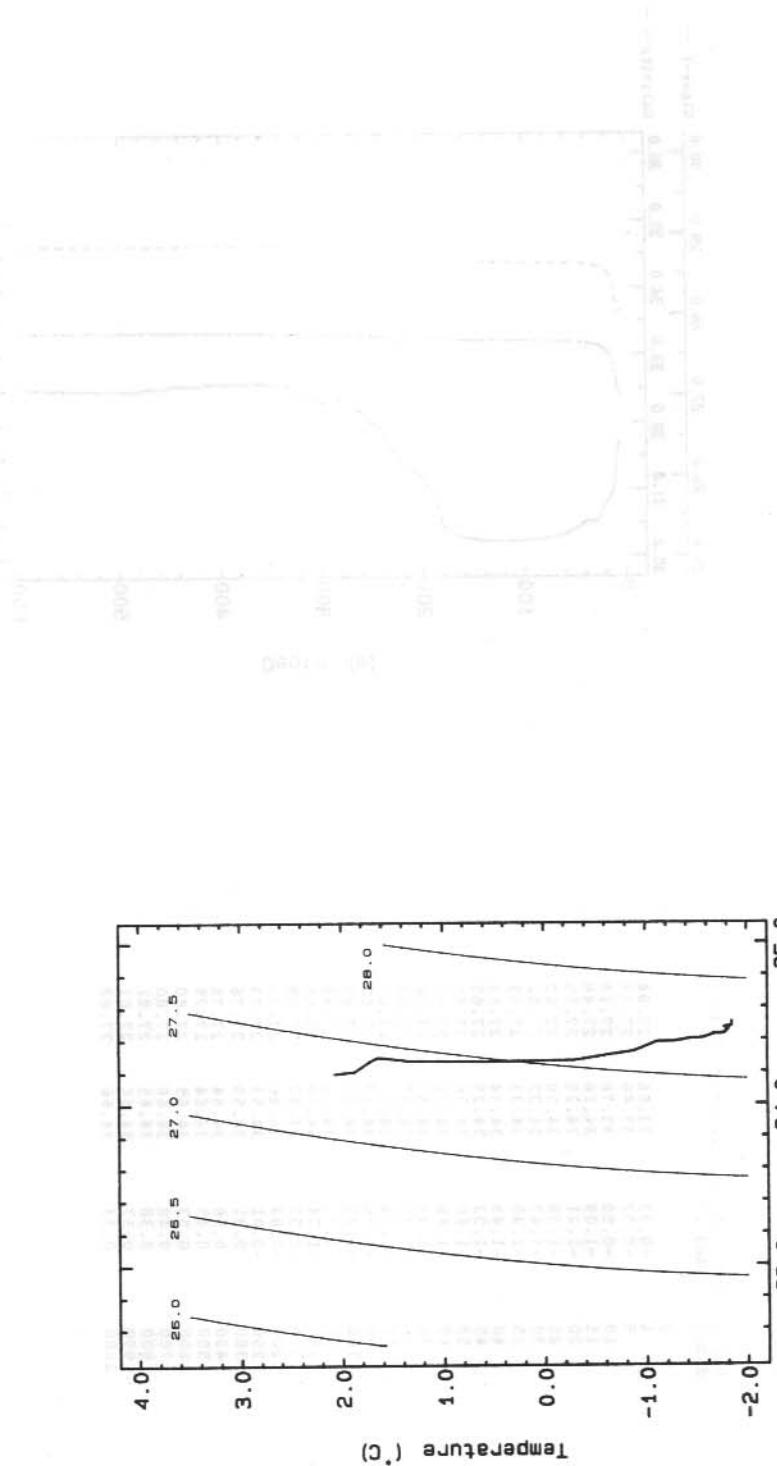


Cruise : ADBEX1 Station 75
 Station number : 75
 Date : 16 DEC 1982
 Start Time : 0000 GMT
 Ship : NELLA DAN
 Position : 67°35'.00S 74°40'.00E
 Cast Depth (m) : 498
 Bottom Depth (m) : 500 m

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	2.06	34.19	27.32
5	1.79	34.24	27.38
10	1.61	34.29	27.43
15	0.12	34.27	27.51
20	-1.05	34.37	27.65
25	-1.36	34.40	27.68
30	-1.63	34.42	27.71
35	-1.68	34.43	27.72
40	-1.79	34.44	27.72
45	-1.80	34.45	27.73
50	-1.80	34.45	27.74
60	-1.82	34.46	27.74
70	-1.82	34.47	27.75
75	-1.82	34.47	27.75
80	-1.81	34.47	27.75
90	-1.79	34.47	27.75
100	-1.80	34.48	27.76
125	-1.85	34.48	27.76
150	-1.86	34.49	27.76
175	-1.85	34.49	27.77
200	-1.85	34.49	27.77
250	-1.86	34.49	27.77
300	-1.86	34.50	27.78
400	-1.85	34.51	27.78

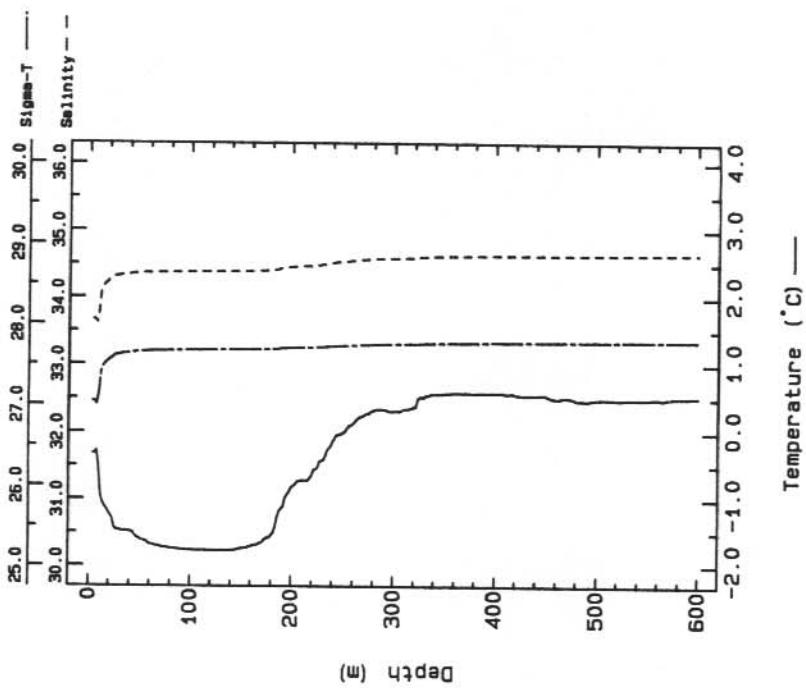


Cruise: ADBEX1 Station: 75
16 DEC 1982 0000 GMT
Latitude : 67°35'.00S
Longitude: 74°40'.00E
Depth: CTD 498 m Bottom 500 m



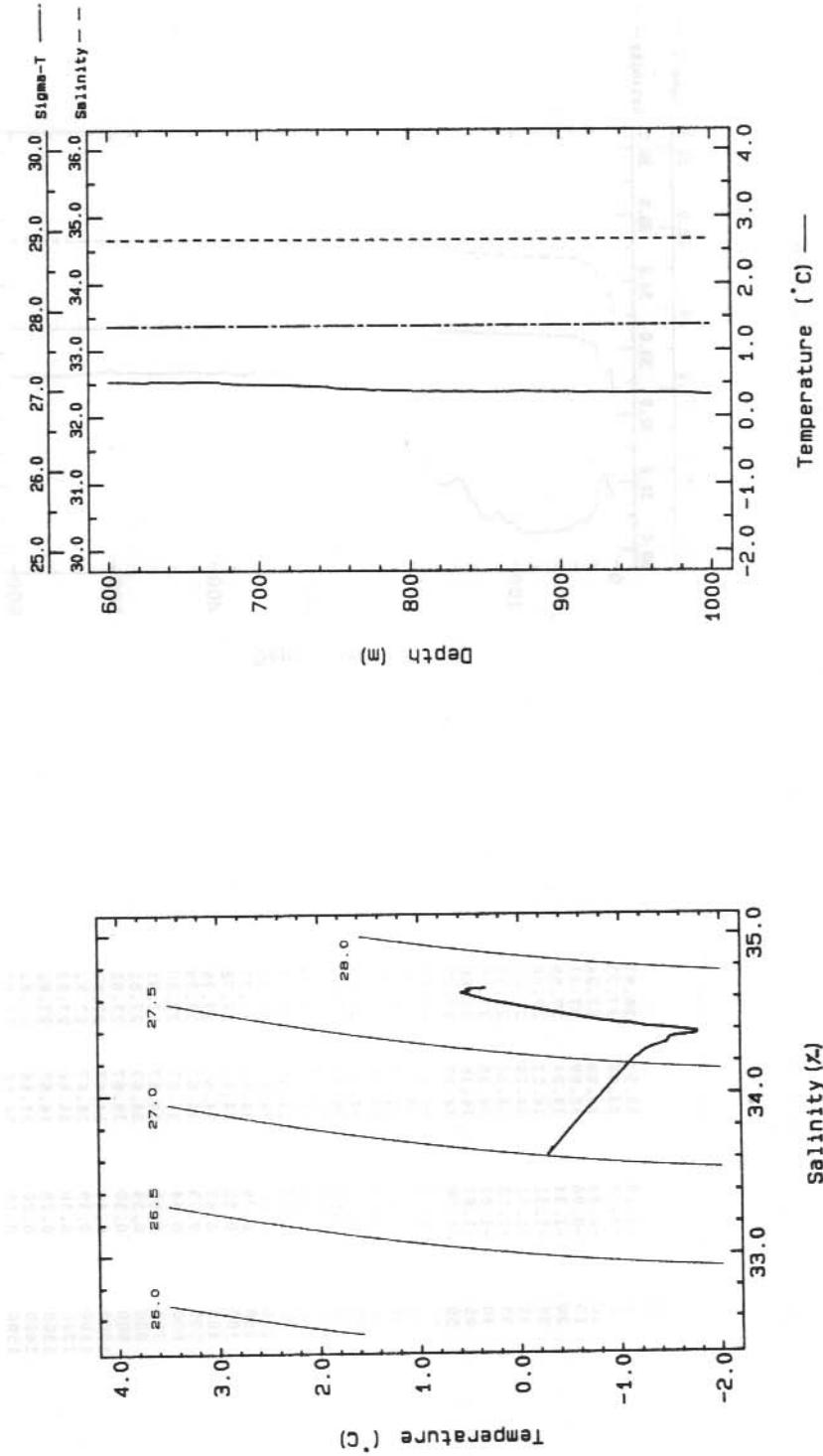
Cruise	ADBEX1	Station number	76	Date	16 DEC 1982	Start Time	1741 GMT	Ship	NELLA DAN	Position	66:48.00S 74:41.20E	Cast Depth (m)	1004	Bottom Depth (m)	1900
Depth (bar)	Temperature (deg C)	Salinity	Sigma-T												
0	-0.33	33.66	27.04												
5	-0.32	33.66	27.04												
10	-0.50	33.78	27.14												
15	-1.09	34.18	27.49												
20	-1.21	34.25	27.55												
25	-1.38	34.30	27.60												
30	-1.47	34.32	27.62												
35	-1.48	34.33	27.63												
40	-1.49	34.34	27.63												
45	-1.53	34.35	27.65												
50	-1.60	34.36	27.65												
60	-1.68	34.36	27.66												
70	-1.71	34.37	27.66												
75	-1.73	34.37	27.67												
80	-1.74	34.37	27.67												
90	-1.76	34.37	27.67												
100	-1.77	34.38	27.67												
125	-1.77	34.38	27.68												
150	-1.74	34.39	27.68												
175	-1.59	34.40	27.68												
200	-0.83	34.46	27.69												
250	-0.01	34.53	27.70												
300	0.31	34.59	27.73												
400	0.58	34.64	27.76												
500	0.49	34.64	27.78												
600	0.53	34.65	27.79												
700	0.48	34.66	27.80												
800	0.38	34.65	27.81												
900	0.37	34.66	27.81												
1000	0.33	34.66	27.82												

Cruise : ADBEX1 Station 76
 16 DEC 1982 1741 GMT
 Latitude 66:48.00S
 Longitude 74:41.20E
 Depth: CTD 1004 m Bottom 1900 m



Cruise: ADBEX1 Station: 76
16 DEC 1982 1741 GMT
Latitude: 66:48.00S
Longitude: 74:41.20E
Depth: CTD 1004 m Bottom 1900 m

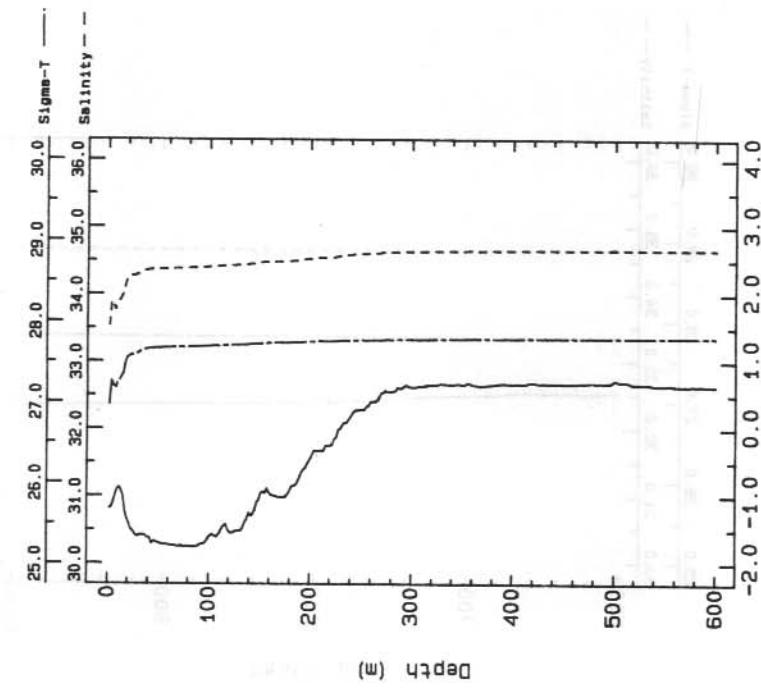
Cruise : ADBEX1 Station 76
16 DEC 1982 1741 GMT
Latitude 66: 48.00S
Longitude 74: 41.20E
Depth: CTD 1004 m Bottom 1900 m



Cruise : ADBEX1
 Station number : 77
 Date : 17 DEC 1982
 Start Time : 0306 GMT
 Ship : NELIA DAN
 Position : 66°05'.00S 73°32'.00E
 Cast Depth (m) : 1640
 Bottom Depth (m) : 2580, m

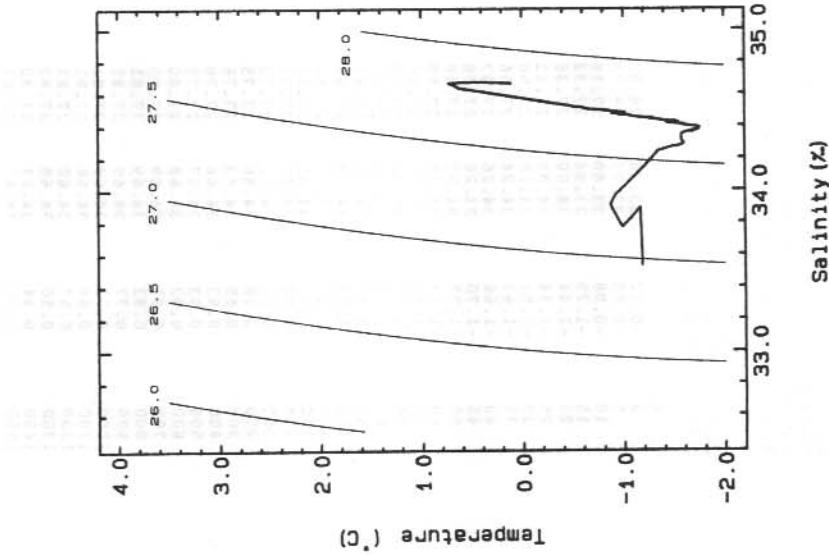
Depth bar
 d bar
 (deg C)

Depth	Temperature (deg C)	Salinity	Sigma-T
0	-1.19	33.53	26.97
2	-1.13	33.86	27.23
5	-0.89	33.88	27.24
10	-0.96	33.99	27.33
15	-1.34	34.44	27.55
20	-1.51	34.27	27.58
25	-1.61	34.29	27.60
30	-1.58	34.34	27.64
35	-1.62	34.36	27.65
40	-1.68	34.36	27.66
45	-1.70	34.37	27.67
50	-1.72	34.37	27.67
60	-1.75	34.38	27.67
70	-1.75	34.38	27.68
75	-1.74	34.38	27.68
80	-1.74	34.38	27.68
90	-1.73	34.39	27.68
100	-1.61	34.40	27.69
125	-1.54	34.42	27.70
150	-1.05	34.47	27.72
175	-1.02	34.48	27.73
200	-0.46	34.53	27.75
250	0.29	34.60	27.77
300	0.62	34.63	27.78
400	0.67	34.65	27.79
500	0.73	34.67	27.79
600	0.64	34.67	27.80
700	0.59	34.67	27.81
800	0.54	34.67	27.81
900	0.50	34.67	27.81
1000	0.44	34.67	27.82
1100	0.39	34.67	27.82
1200	0.30	34.66	27.82
1300	0.25	34.67	27.82
1400	0.20	34.66	27.82
1500	0.16	34.66	27.82



Cruise: ADBEX1 Station: 77
17 DEC 1982 0306 GMT
Latitude : 66:05.00S
Longitude: 73:32.00E
Depth: CTD 1640 m Bottom 2580 m

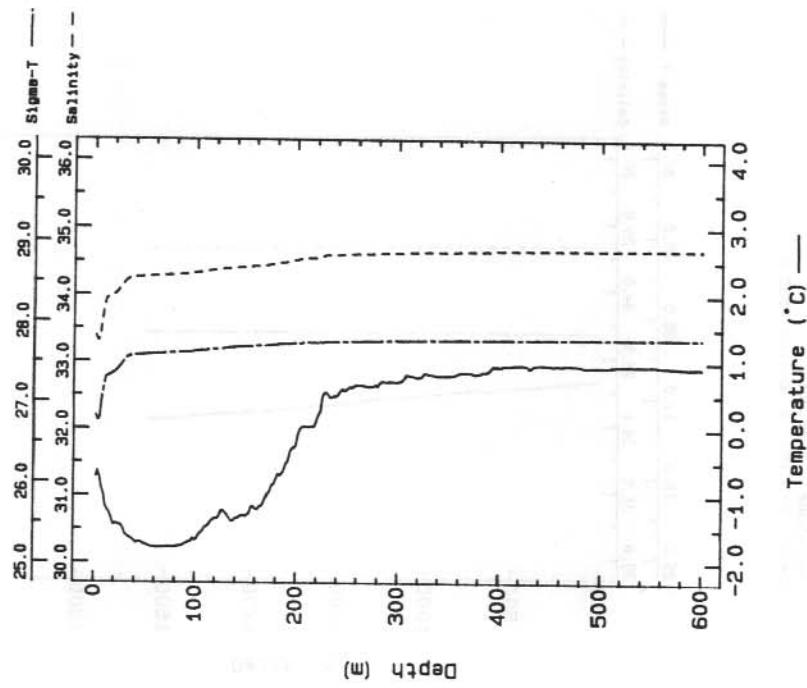
Cruise : ADBEX1 Station 77
17 DEC 1982 0306 GMT
Latitude 66:05.00S
Longitude 73:32.00E
Depth: CTD 1640 m Bottom 2580 m



Cruise : ADBEX1 Station 78
 Station number : 78
 Date : 17 DEC 1982
 Start Time : 0000 GMT
 Ship : NEELA DAN
 Position : 65°12.70S 72°28.30E
 Cast Depth (m) : 1638
 Bottom Depth (m) : Not Recorded

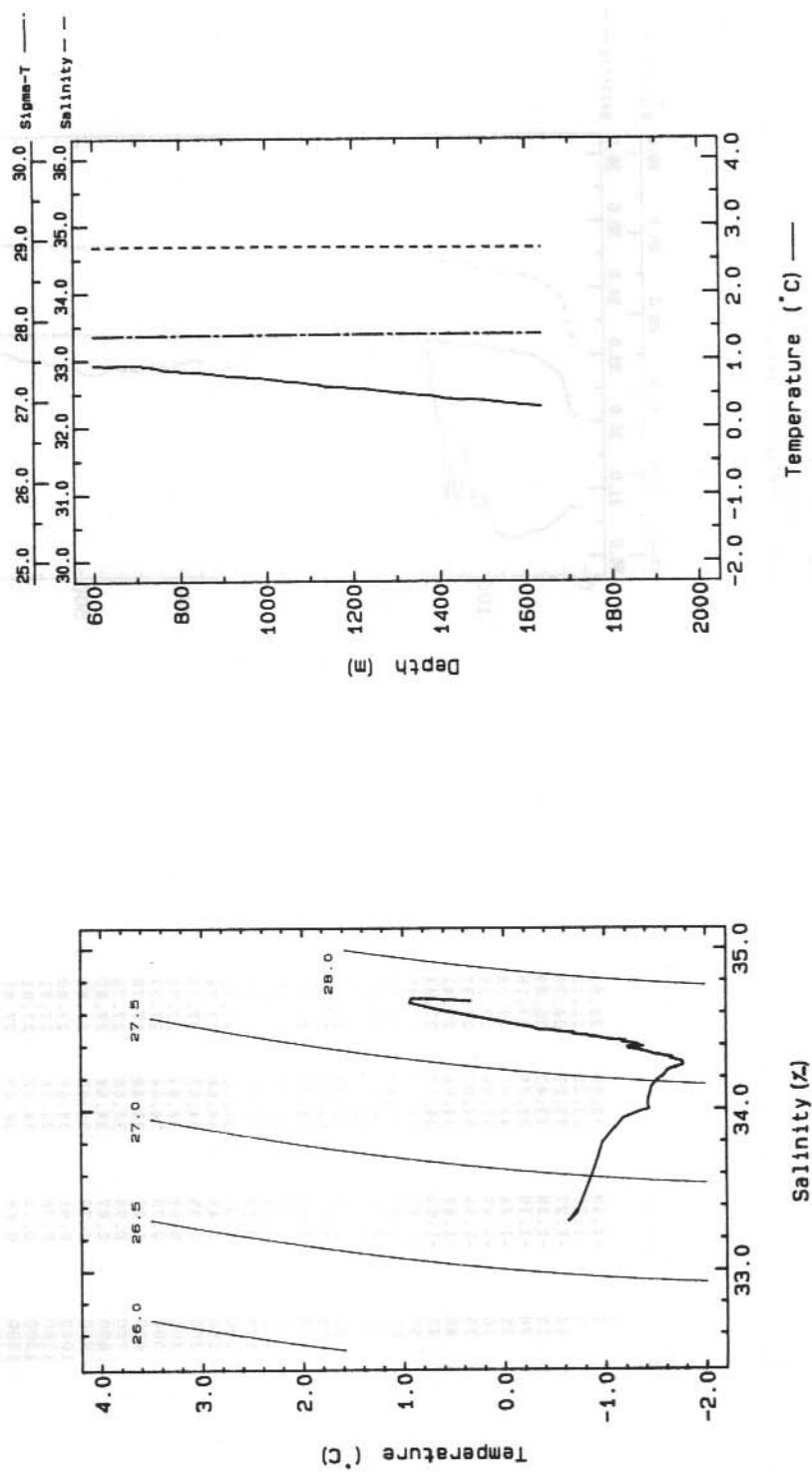
Cruise : ADBEX1 Station 78
 17 DEC 1982 0000 GMT
 Latitude 65°12.70S
 Longitude 72°28.30E
 Depth: CTD 1638 m Bottom NR

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-0.72	33.38	26.83
5	-0.68	33.33	26.79
10	-0.98	33.80	27.18
15	-1.25	33.96	27.32
20	-1.44	34.00	27.36
25	-1.44	34.08	27.42
30	-1.51	34.18	27.50
35	-1.63	34.24	27.56
40	-1.68	34.26	27.57
45	-1.70	34.26	27.58
50	-1.73	34.27	27.58
60	-1.77	34.28	27.59
70	-1.77	34.28	27.60
75	-1.77	34.29	27.60
80	-1.77	34.29	27.61
90	-1.72	34.30	27.61
100	-1.67	34.33	27.63
125	-1.27	34.38	27.66
150	-1.31	34.41	27.69
175	-0.89	34.45	27.71
200	-0.24	34.52	27.73
250	0.58	34.60	27.75
300	0.69	34.63	27.76
400	0.93	34.66	27.78
500	0.93	34.67	27.79
600	0.92	34.68	27.80
700	0.91	34.69	27.80
800	0.83	34.69	27.81
900	0.77	34.69	27.81
1000	0.72	34.69	27.81
1100	0.64	34.68	27.81
1200	0.57	34.68	27.81
1300	0.50	34.68	27.82
1400	0.44	34.67	27.82
1500	0.39	34.67	27.82



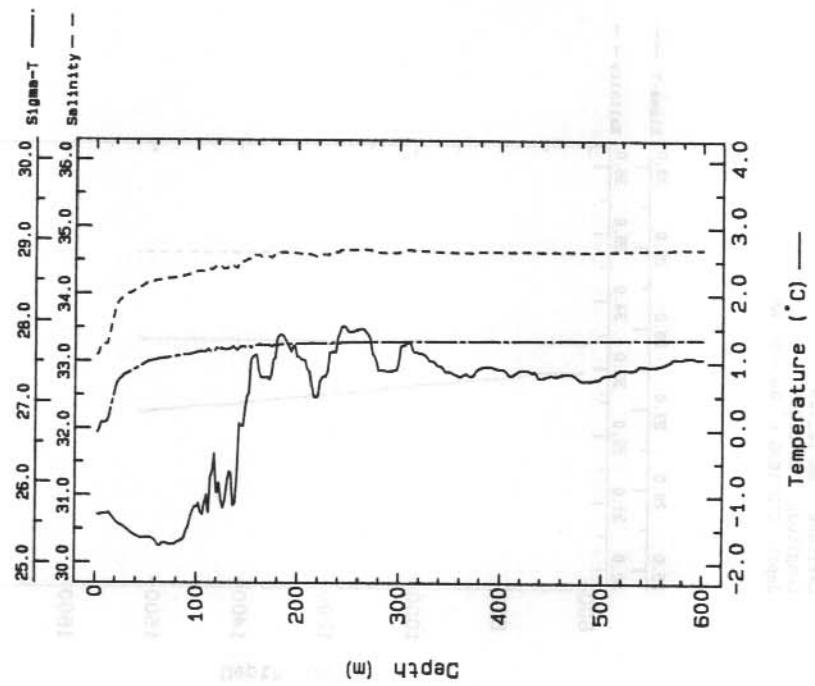
Cruise: ADBEX1 Station: 7B
17 DEC 1982 0000 GMT
Latitude : 65: 12.70S
Longitude: 72: 28.30E
Depth: CTD 1638 m Bottom NR

Cruise : ADBEX1 Station 7B
17 DEC 1982 0000 GMT
Latitude 65: 12.70S
Longitude 72: 28.30E
Depth: CTD 1638 m Bottom NR



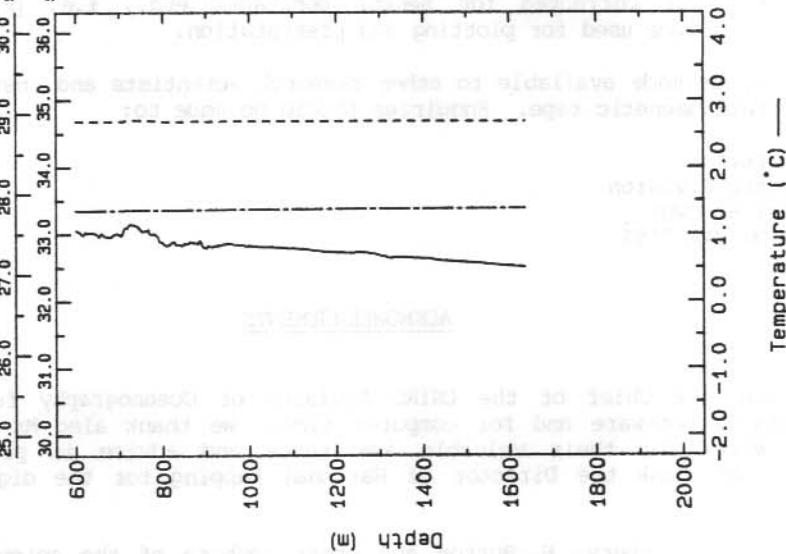
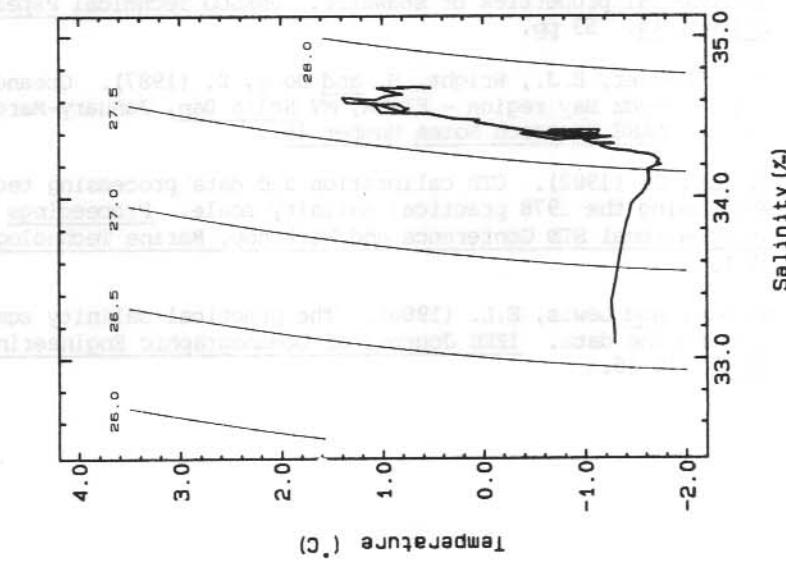
Cruise : ADBEX1 Station 79
 Station number : 79
 Date : 17 DEC 1982
 Start Time : 0000 GMT
 Ship : NELLA DAN
 Position : 64° 00.10S 71° 30.80E
 Cast Depth (m) : 1638
 Bottom Depth (m) : Not Recorded

Depth d bar	Temperature (deg C)	Salinity	Sigma-T
0	-1.29	33.09	26.62
5	-1.29	33.20	26.70
10	-1.27	33.25	26.75
15	-1.28	33.43	26.89
20	-1.38	33.75	27.16
25	-1.44	33.91	27.28
30	-1.49	33.98	27.34
35	-1.55	34.02	27.37
40	-1.61	34.06	27.41
45	-1.63	34.10	27.44
50	-1.63	34.15	27.49
60	-1.69	34.19	27.52
70	-1.71	34.21	27.54
75	-1.73	34.23	27.55
80	-1.70	34.25	27.57
90	-1.51	34.28	27.58
100	-1.17	34.32	27.61
125	-1.13	34.38	27.66
150	0.48	34.51	27.69
175	0.92	34.55	27.69
200	1.07	34.60	27.72
250	1.45	34.66	27.74
300	0.99	34.63	27.75
400	0.89	34.63	27.76
500	0.79	34.64	27.77
600	1.06	34.68	27.78
700	0.99	34.68	27.79
800	0.87	34.68	27.80
900	0.78	34.68	27.80
1000	0.81	34.69	27.80
1100	0.78	34.68	27.81
1200	0.72	34.68	27.81
1300	0.68	34.69	27.81
1400	0.63	34.68	27.81
1500	0.57	34.68	27.82



Cruise: ADBEX1 Station: 79
17 DEC 1982 0000 GMT
Latitude: 64.00.10S
Longitude: 71.30.80E
Depth: CTD 1638 m Bottom NR

Cruise : ADBEX1 Station 79
17 DEC 1982 0000 GMT
Latitude 64.00.10S
Longitude 71.30.80E
Depth: CTD 1638 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 scientists 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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