

AUSTRALIAN NATIONAL ANTARCTIC RESEARCH EXPEDITIONS

ANARE
RESEARCH
NOTES
45

SIBEX II cruise to the Prydz Bay region, 1985:
nutrient data

S.E. Humphries

ANTARCTIC DIVISION
DEPARTMENT OF SCIENCE

ANARE RESEARCH NOTES (ISSN 0729-6533)

This series allows rapid publication in a wide range of disciplines. Copies of this and other ANARE Research Notes are available from the Antarctic Division. Any person who has participated in Australian National Antarctic Research Expeditions is invited to publish through this series. Before submitting manuscripts authors should obtain a style guide from:

The Publications Office
Antarctic Division
Channel Highway
Kingston
Tasmania 7150
Australia.

Published February 1987
ISBN: 0 7246 1507 5

CONTENTS

ABSTRACT	1
1. INTRODUCTION	3
2. METHODS	3
3. NUTRIENT DATA	12
ACKNOWLEDGMENTS	101

FIGURES

1. Cruise track	4
2. Location of CTD stations	5
3. Location of CTD stations at which nutrient samples were taken ...	8
4. Average concentration of $\text{NO}_3\text{-N}$	9
5. Average concentration of $\text{PO}_4\text{-P}$	10
6. Average concentration of $\text{SiO}_3\text{-Si}$	11

TABLE

1. CTD stations	6
------------------------	---

CONTENTS

1. Introduction	1
2. Theoretical background	10
3. Methodology	25
4. Results	45
5. Discussion	65

References

1. Smith, J. (1998). The impact of globalization on the environment. *Journal of Environmental Economics*, 20(1), 1-20.

2. Brown, M. (2001). Globalization and the environment: A critical review. *Environmental Economics*, 22(3), 301-320.

3. Green, P. (2005). The environmental consequences of globalization. *Journal of Economic Surveys*, 19(2), 223-250.

4. White, R. (2008). Globalization and the environment: A review of the literature. *Journal of Economic Surveys*, 22(2), 273-300.

Index

A	1
B	10
C	20
D	30
E	40

SIBEX II CRUISE NUTRIENT DATA

by

S.E. Humphries

Antarctic Division
Department of Science
Kingston, Tasmania, Australia

ABSTRACT

Nitrate, phosphate and silicate concentrations obtained during the SIBEX II cruise to the Prydz Bay region in January 1985, are plotted with depth and the raw data are tabulated. Nitrite concentrations were insignificant and values are only tabulated. The location of the sampling stations and the average concentration of each nutrient in the top 100 m of the water column are mapped.

State of Illinois

James M. Cook
Governor
Springfield, Illinois

Dear Sir:
I have the honor to acknowledge the receipt of your letter of the 10th inst. and in reply to inform you that the same has been forwarded to the proper authorities for their consideration. I am, Sir, very respectfully,
Yours truly,
James M. Cook

1. INTRODUCTION

The SIBEX II cruise to the Prydz Bay region from 3 January to 26 January 1985, is the fourth Antarctic Division cruise contributing to the international BIOMASS (Biological Investigation of Marine Antarctic Systems and Stocks) program. Nutrient data were collected at forty-four of the fifty-seven hydrographic stations to assist with the interpretation of phytoplankton distribution and abundance, a principal food source of krill. The sampling locations and depths were not, therefore, selected on the basis of nutrient-related considerations.

The concentration of nitrate, phosphate and silicate is plotted with depth for each station to 600 m and for deeper casts, a second plot is shown. The sigma-t profile is included on the plots to give an indication of the water column structure at the time of sampling. Nitrite values are tabulated.

In addition to the depth profiles, the average concentration to 100 m of the three major nutrient species is mapped to give a first-order approximation of the horizontal pattern of nutrient distribution in the upper layers.

2. METHODS

Water samples were collected using a rosette sampler with 5 L Niskin bottles, in conjunction with the CTD unit. Sub-samples of 250 mL were filtered through GF/F glass fibre filters, transferred to rinsed polyethylene bottles and immediately frozen for later analysis in Australia.

Analyses were carried out by the Australian Government Analytical Laboratories with the standard methods of Grasshoff, K., Ehrhardt, M., Kremling, K. (1983) Methods of Seawater Analysis (Second Edition); Verlag Chemie.

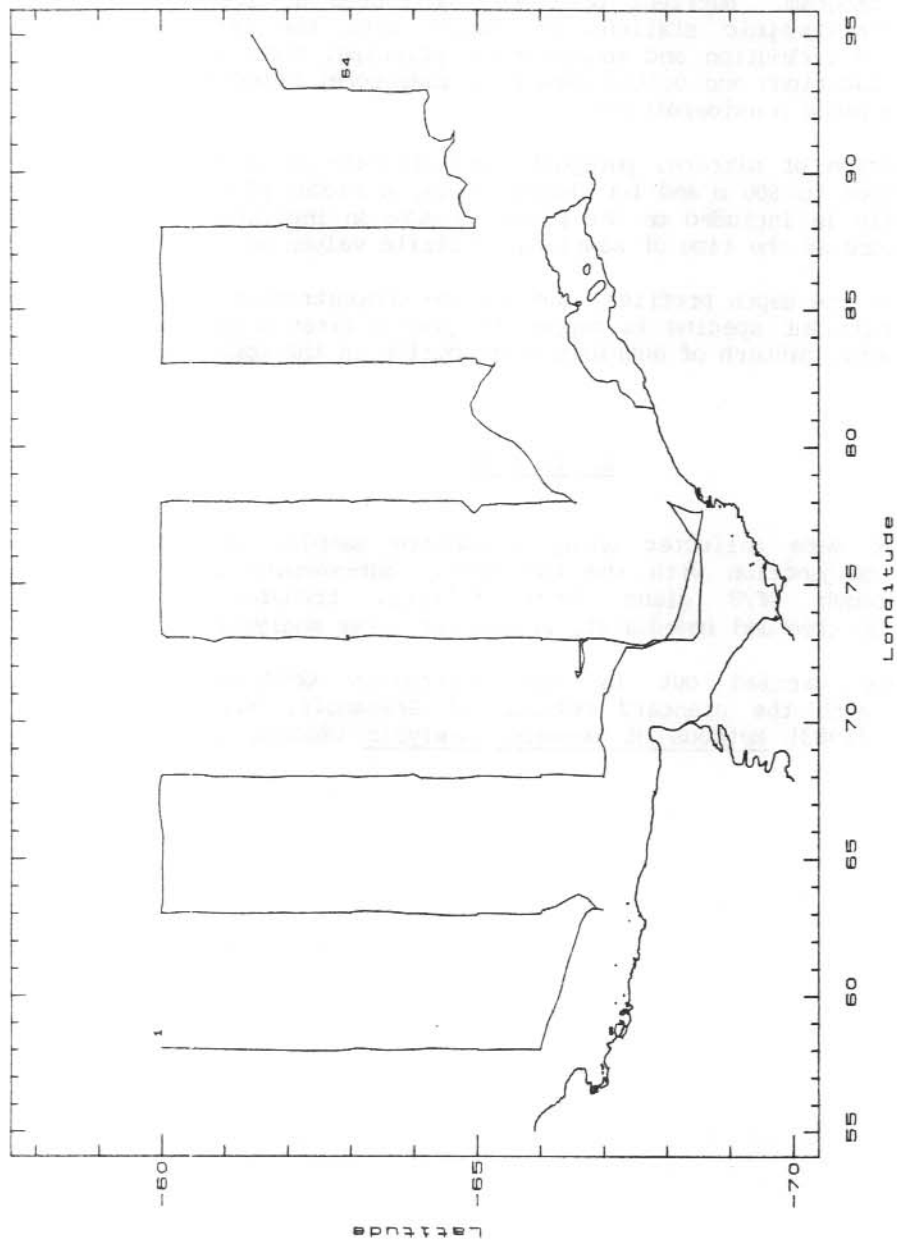


Figure 1. Cruise track of SIBEX II, 3 January to 26 January 1985. The dotted line marks the 1000 m contour.

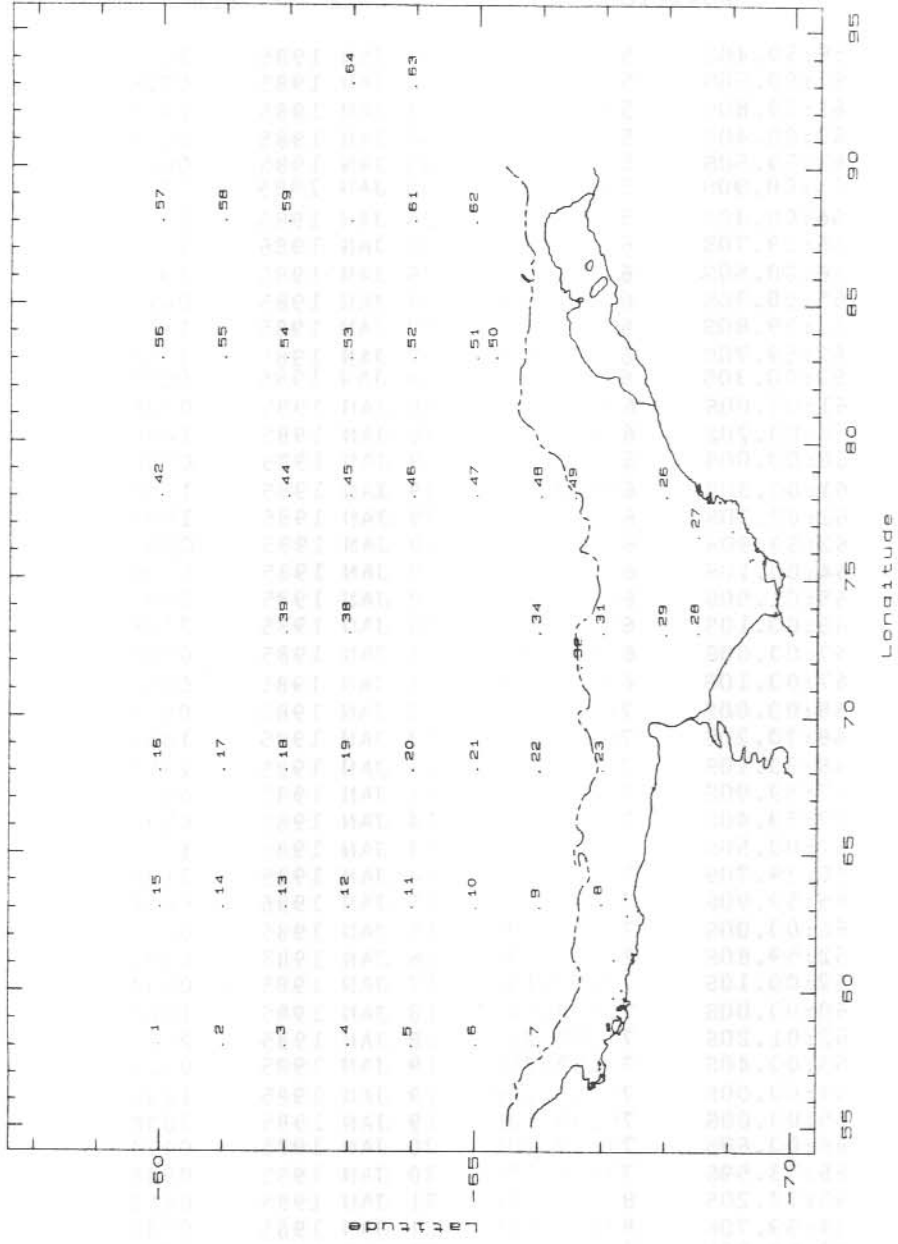


Figure 2. Location of CTD stations. Due to the proximity of some stations to each other, it was not possible to show some stations on the map, but their exact locations are given in Table 1. The station numbers of the excluded stations are given here in brackets, following the number of the approximate mapped station: 23(24); 29(30); 34(35).

Table 1. CTD station list for SIBEX II, 3 January to 26 January 1985. The stations at which nutrient samples were taken are marked with an asterisk (*).

CTD Station	Position		Date	Time (GMT)
* 1	59:59.40S	58:01.60E	03 JAN 1985	2252
2	61:00.80S	57:59.10E	04 JAN 1985	0705
* 3	61:59.80S	57:58.60E	04 JAN 1985	1417
* 4	63:00.40S	58:00.50E	04 JAN 1985	2115
* 5	63:59.50S	57:57.50E	05 JAN 1985	0610
* 6	65:00.90S	58:00.30E	05 JAN 1985	1252
* 7	66:00.40S	57:59.80E	05 JAN 1985	1920
* 8	66:59.70S	63:07.50E	06 JAN 1986	1211
* 9	66:00.50S	62:59.20E	06 JAN 1985	1923
* 10	65:00.30S	62:58.30E	07 JAN 1985	0423
* 11	63:59.80S	63:00.10E	07 JAN 1985	1101
* 12	62:59.70S	62:59.90E	07 JAN 1985	1715
* 13	62:00.30S	63:00.50E	08 JAN 1985	0057
* 14	61:00.00S	63:00.50E	08 JAN 1985	0729
* 15	60:00.20S	63:00.20E	08 JAN 1985	1400
* 16	60:00.00S	68:00.00E	09 JAN 1985	0356
* 17	61:00.30S	68:00.30E	09 JAN 1985	1158
* 18	62:00.30S	68:00.30E	09 JAN 1985	1803
* 19	62:59.90S	67:58.50E	10 JAN 1985	0001
* 20	64:00.10S	68:00.20E	10 JAN 1985	0756
* 21	65:01.50S	68:02.80E	10 JAN 1985	1445
* 22	66:00.10S	67:59.10E	10 JAN 1985	2128
23	67:00.00S	68:00.30E	11 JAN 1985	0700
* 24	67:00.10S	68:00.10E	11 JAN 1985	0855
* 26	68:00.00S	78:00.20E	13 JAN 1985	0915
27	68:30.20S	76:30.90E	13 JAN 1985	1453
28	68:30.10S	73:00.40E	13 JAN 1985	2353
* 29	67:59.90S	72:57.40E	14 JAN 1985	0413
30	67:59.40S	72:56.70E	14 JAN 1985	0530
* 31	67:00.50S	73:00.30E	14 JAN 1985	1211
32	66:39.70S	71:46.10E	14 JAN 1985	2136
34	65:59.90S	72:59.60E	15 JAN 1986	0826
* 35	66:00.00S	72:59.40E	15 JAN 1985	0837
38	62:59.80S	73:00.20E	16 JAN 1985	0702
39	62:00.10S	73:00.10E	17 JAN 1985	0934
42	60:00.00S	78:00.00E	18 JAN 1985	1000
44	62:01.20S	77:59.20E	18 JAN 1985	2115
* 45	63:00.40S	77:59.70E	19 JAN 1985	0315
* 46	64:00.00S	77:58.20E	19 JAN 1985	1232
* 47	65:00.00S	78:00.10E	19 JAN 1985	2038
* 48	66:00.60S	77:59.20E	20 JAN 1985	0424
* 49	66:33.59S	77:57.20E	20 JAN 1985	0948
* 50	65:17.20S	83:02.30E	21 JAN 1985	0412
* 51	64:59.70S	83:00.10E	21 JAN 1985	0735
* 52	63:59.90S	83:00.30E	21 JAN 1985	1757
* 53	62:59.90S	83:00.20E	22 JAN 1985	0023
* 54	61:59.30S	83:00.20E	22 JAN 1985	1323
* 55	60:59.80S	83:00.00E	22 JAN 1985	1917

* 56	60:00.10S	82:58.90E	23 JAN 1985	0133
* 57	60:00.10S	88:00.30E	23 JAN 1985	1620
* 58	60:59.80S	88:00.40E	23 JAN 1985	2359
* 59	62:00.40S	87:59.80E	24 JAN 1985	0607
* 60	62:59.90S	87:59.80E	24 JAN 1985	1212
* 61	64:00.00S	88:00.00E	24 JAN 1985	2009
* 62	64:58.10S	87:58.10E	25 JAN 1985	0211
63	63:58.80S	92:56.40E	26 JAN 1985	0132
64	62:59.50S	93:00.70E	26 JAN 1985	0804

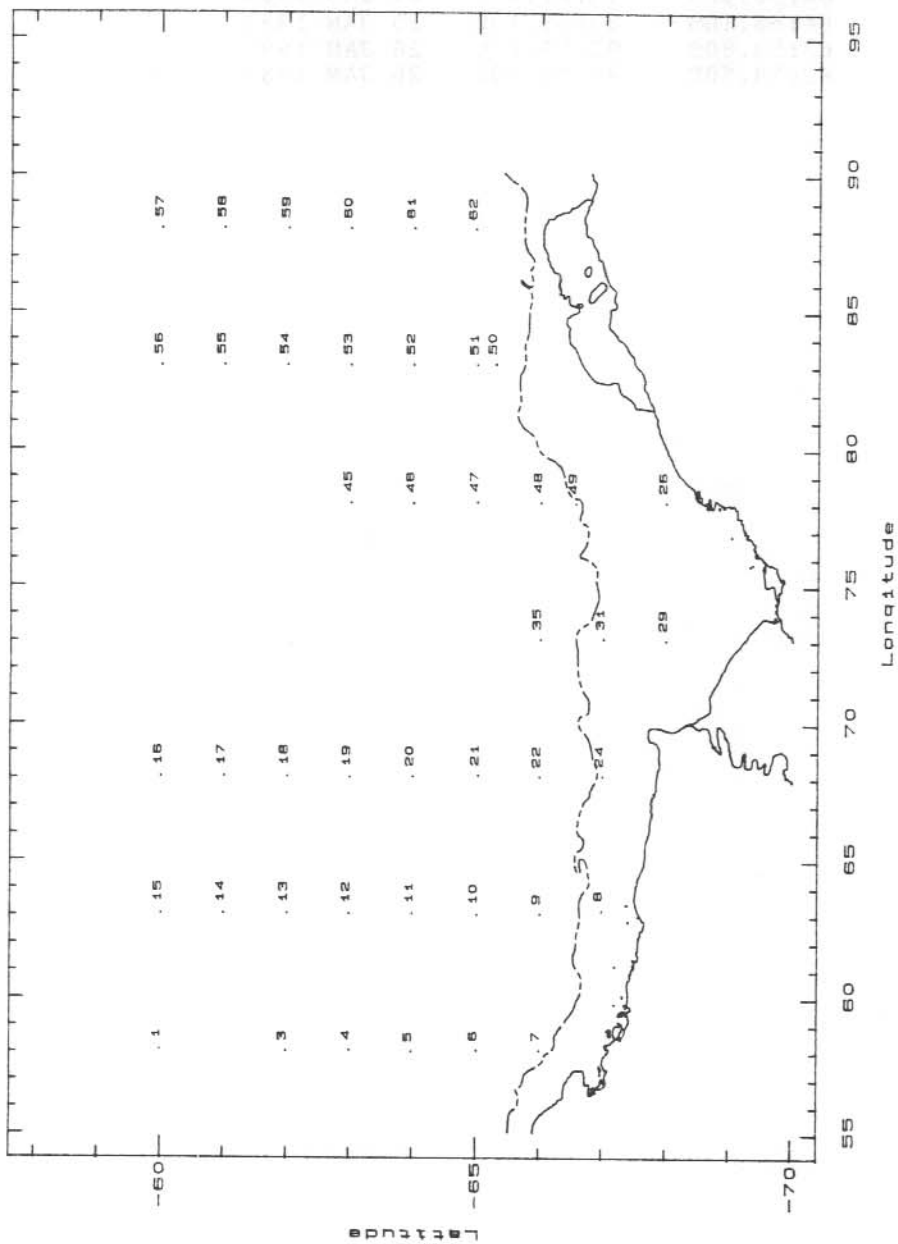


Figure 3. Location of CTD stations at which nutrient samples were taken.

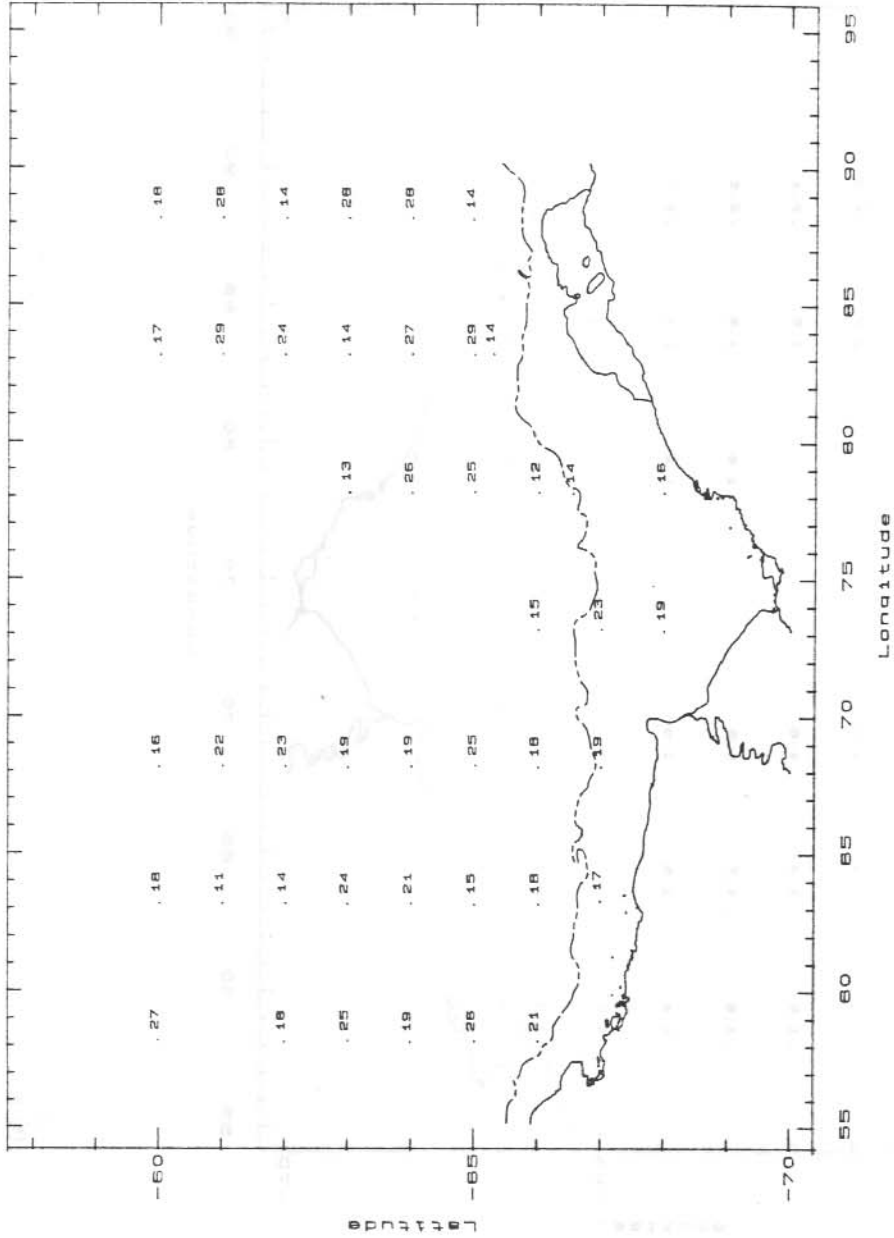


Figure 4. Average concentration at each station of $\text{NO}_3\text{-N}$ between 0 and 100 m.

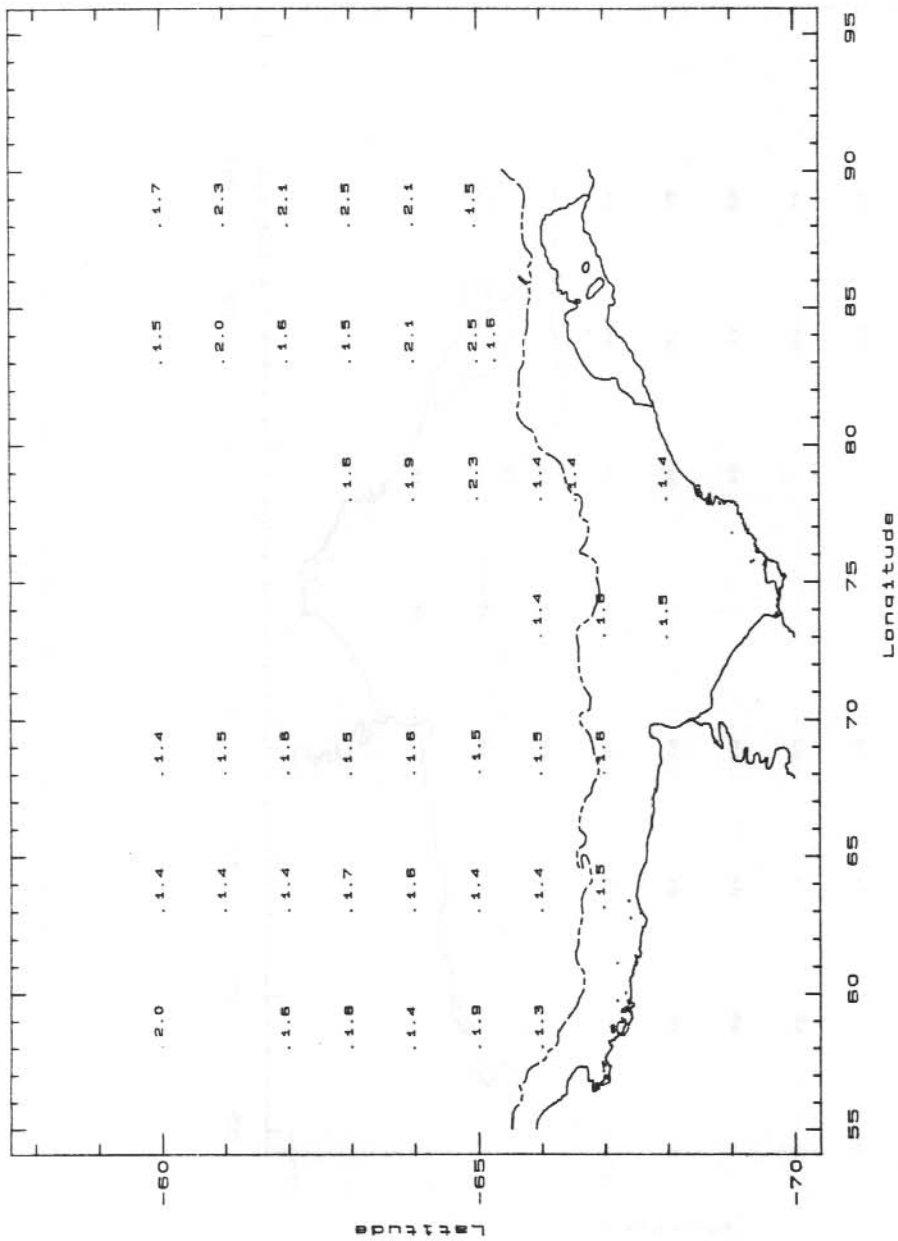


Figure 5. Average concentration at each station of IO₄-P between 0 and 100 m.

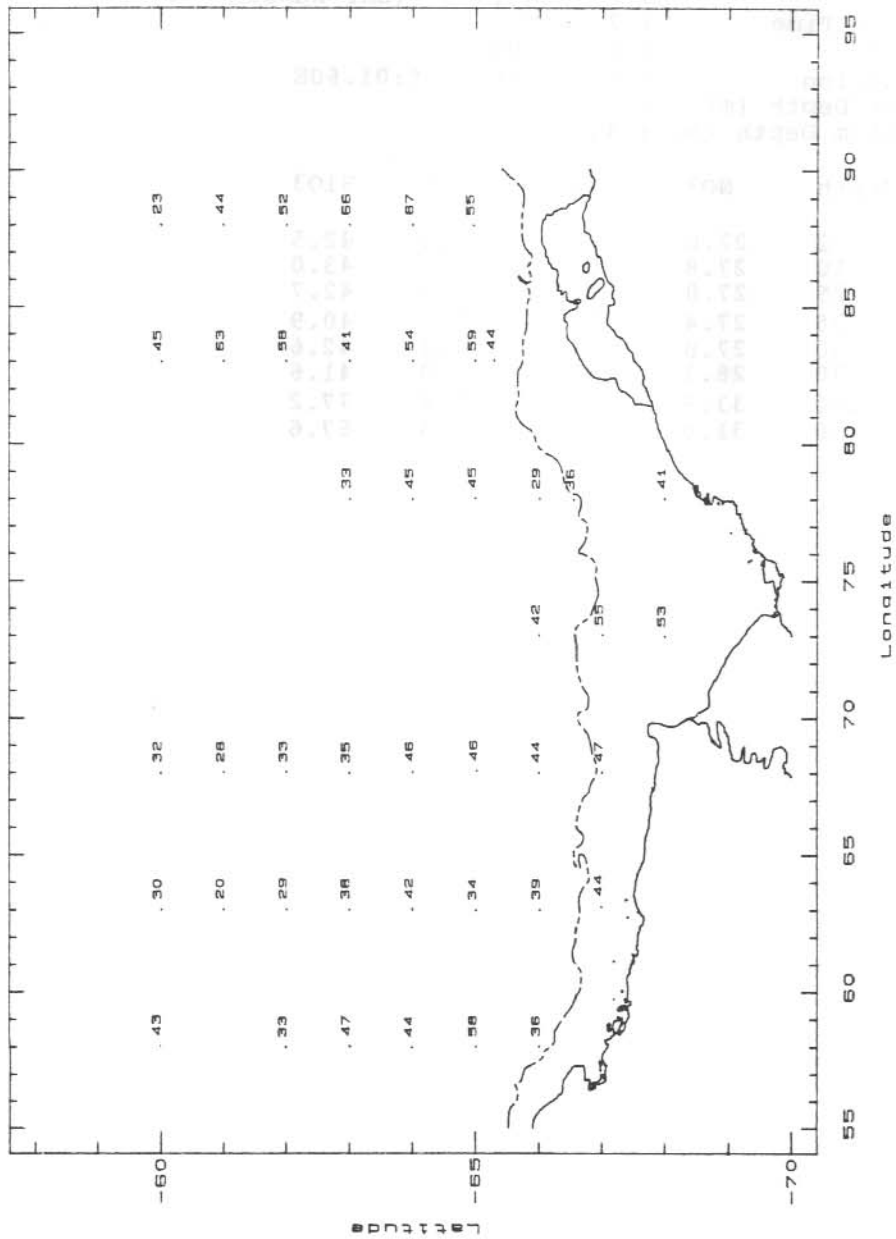


Figure 6. Average concentration at each station of $\text{SiO}_3\text{-Si}$ between 0 and 100 m.

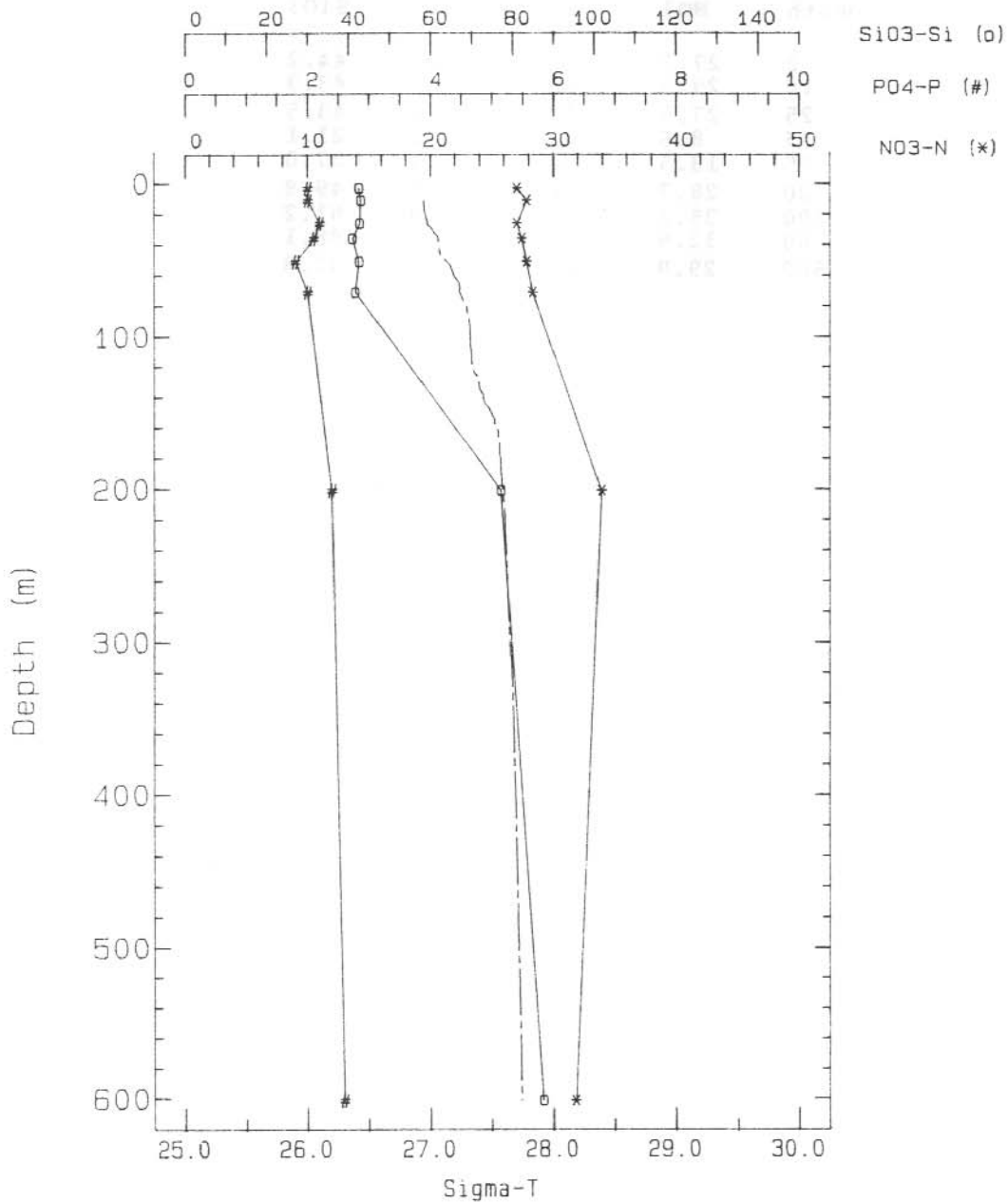
3. NUTRIENT DATA

Cruise : SIBEX2
Station number : 1
Date : 03-JAN-1985 (DAY NUMBER 3)
Start Time : 2252 GMT
Ship : NELLA DAN
Position : 59:59.40S 58:01.60E
Cast Depth (m) : 610
Bottom Depth (m) : 4900

Depth	NO3	NO2	PO4	SiO3
2	27.0	0.3	2.0	42.5
10	27.8	0.0	2.0	43.0
25	27.0	0.2	2.2	42.7
35	27.4	0.2	2.1	40.9
50	27.8	0.1	1.8	42.6
70	28.3	0.2	2.0	41.6
200	33.9	0.0	2.4	77.2
600	31.8	0.1	2.6	87.6

SIBEX2 NUTRIENTS - SIGMA-T

Cruise: SIBEX2 Station: 1
 03 JAN 1985 2252 GMT
 Latitude : 59:59.40S
 Longitude: 58:01.60E
 Depth: CTD 610 m Bottom 4900 m

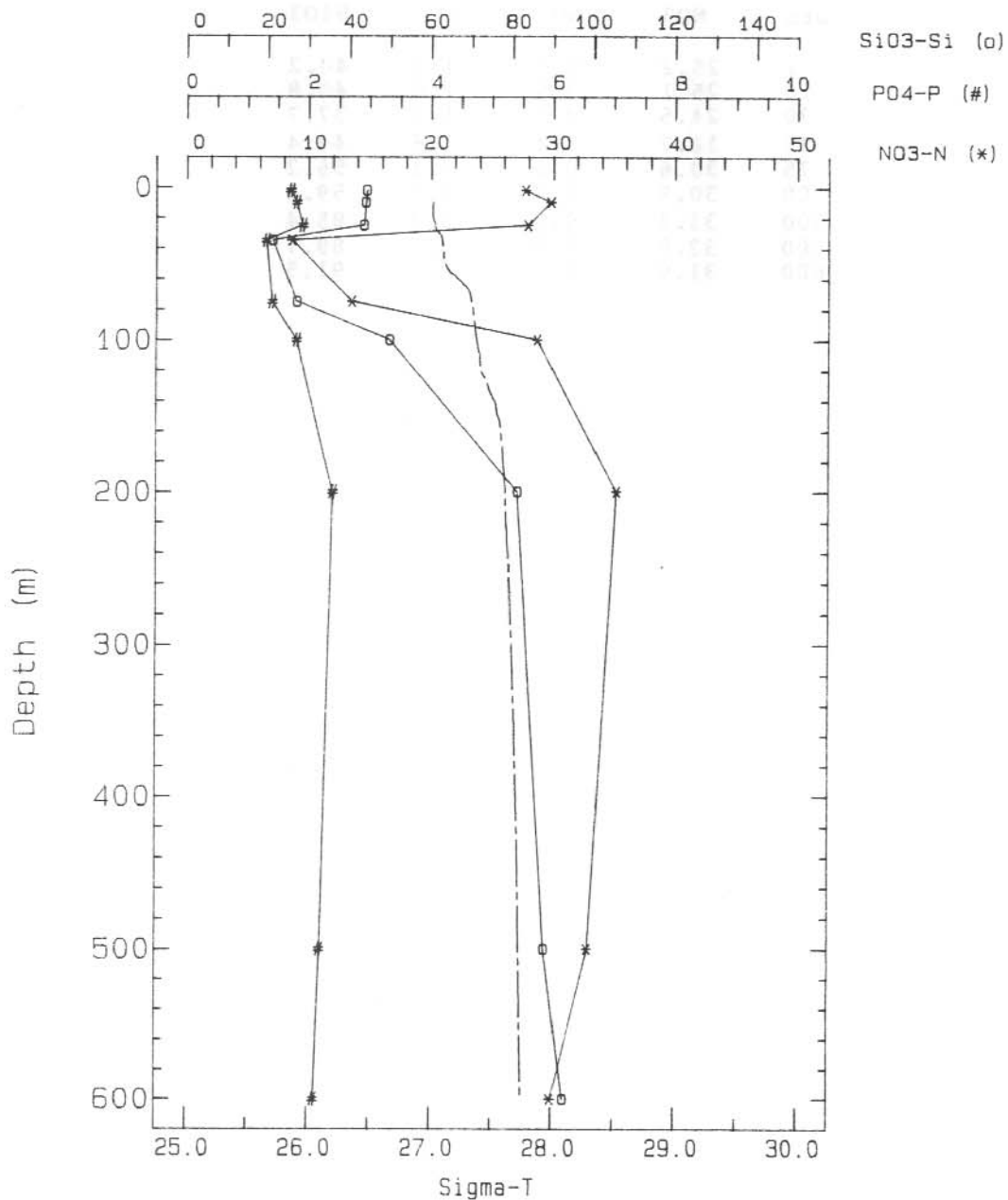


Cruise : SIBEX2
 Station number : 3
 Date : 04-JAN-1985 (DAY NUMBER 4)
 Start Time : 1417 GMT
 Ship : NELLA DAN
 Position : 61:59.80S 57:58.60E
 Cast Depth (m) : 610
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	27.7	0.6	1.7	44.2
10	29.8	0.4	1.8	43.9
25	27.9	0.4	1.9	43.5
35	8.6	0.2	1.3	21.1
75	13.5	0.2	1.4	27.0
100	28.7	0.3	1.8	49.8
200	35.2	0.2	2.4	81.2
500	32.9	0.0	2.2	88.1
600	29.9	0.1	2.1	92.8

SIBEX2 NUTRIENTS - SIGMA-T

Cruise: SIBEX2 Station: 3
 04 JAN 1985 1417 GMT
 Latitude : 61:59.80S
 Longitude: 57:58.60E
 Depth: CTD 610 m Bottom NR



Cruise : SIBEX2
Station number : 4
Date : 04-JAN-1985 (DAY NUMBER 4)
Start Time : 2115 GMT
Ship : NELLA DAN
Position : 63:00.40S 58:00.50E
Cast Depth (m) : 604
Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	25.2	0.5	1.3	40.2
10	25.1	0.5	1.6	40.8
20	24.5	0.5	1.3	37.7
35	18.7	0.4	1.6	40.4
75	30.6	0.2	2.1	56.2
100	30.8	0.3	2.1	59.5
200	33.8	0.2	2.3	85.4
500	32.8	0.0	2.2	89.7
600	31.9	0.0	2.2	91.5

SIBEX2 NUTRIENTS - SIGMA-T

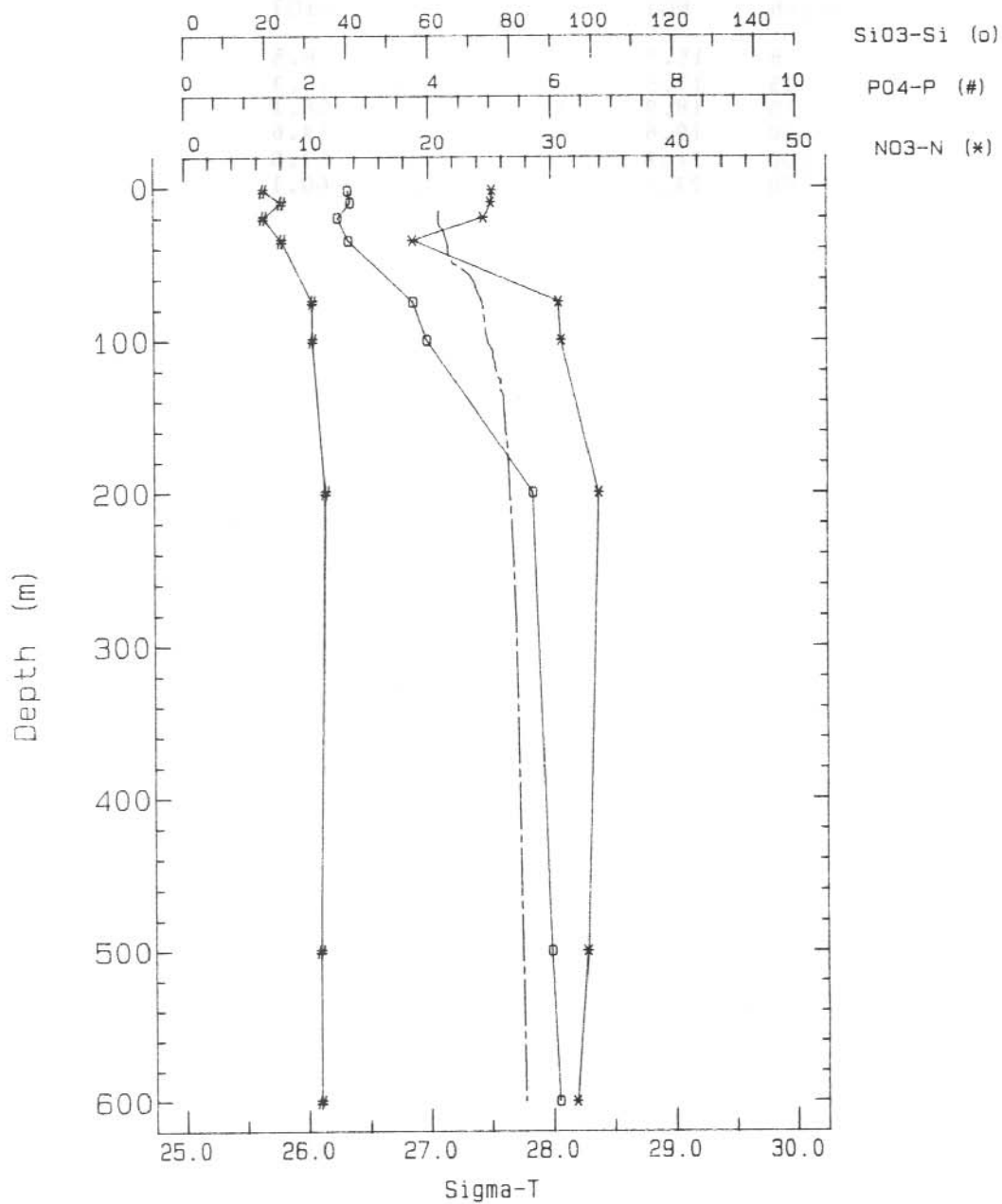
Cruise: SIBEX2 Station: 4

04 JAN 1985 2115 GMT

Latitude: 63:00.40S

Longitude: 58:00.50E

Depth: CTD 604 m Bottom NR



Cruise : SIBEX2
Station number : 5
Date : 05-JAN-1985 (DAY NUMBER 5)
Start Time : 0610 GMT
Ship : NELLA DAN
Position : 63:59.50S 57:57.50E
Cast Depth (m) : 610
Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
8	15.9	0.3	0.9	26.5
25	17.5	0.2	1.0	30.3
35	18.9	0.1	1.4	36.1
50	19.6	0.2	1.6	44.6
100	24.8	0.0	1.8	67.0
500	23.1	0.0	1.7	60.1

SIBEX2 NUTRIENTS - SIGMA-T

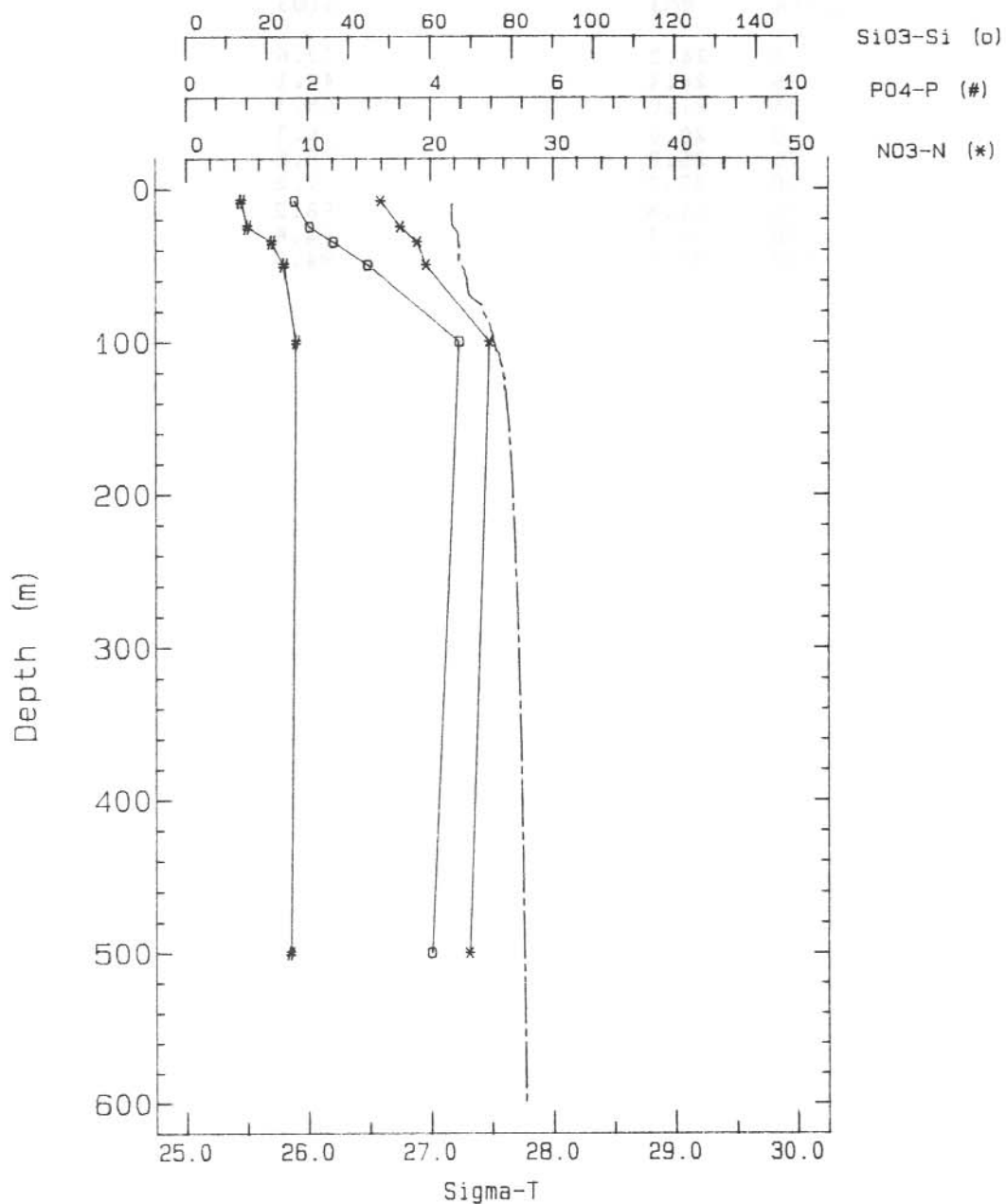
Cruise: SIBEX2 Station: 5

05 JAN 1985 0610 GMT

Latitude : 63:59.50S

Longitude: 57:57.50E

Depth: CTD 610 m Bottom NR

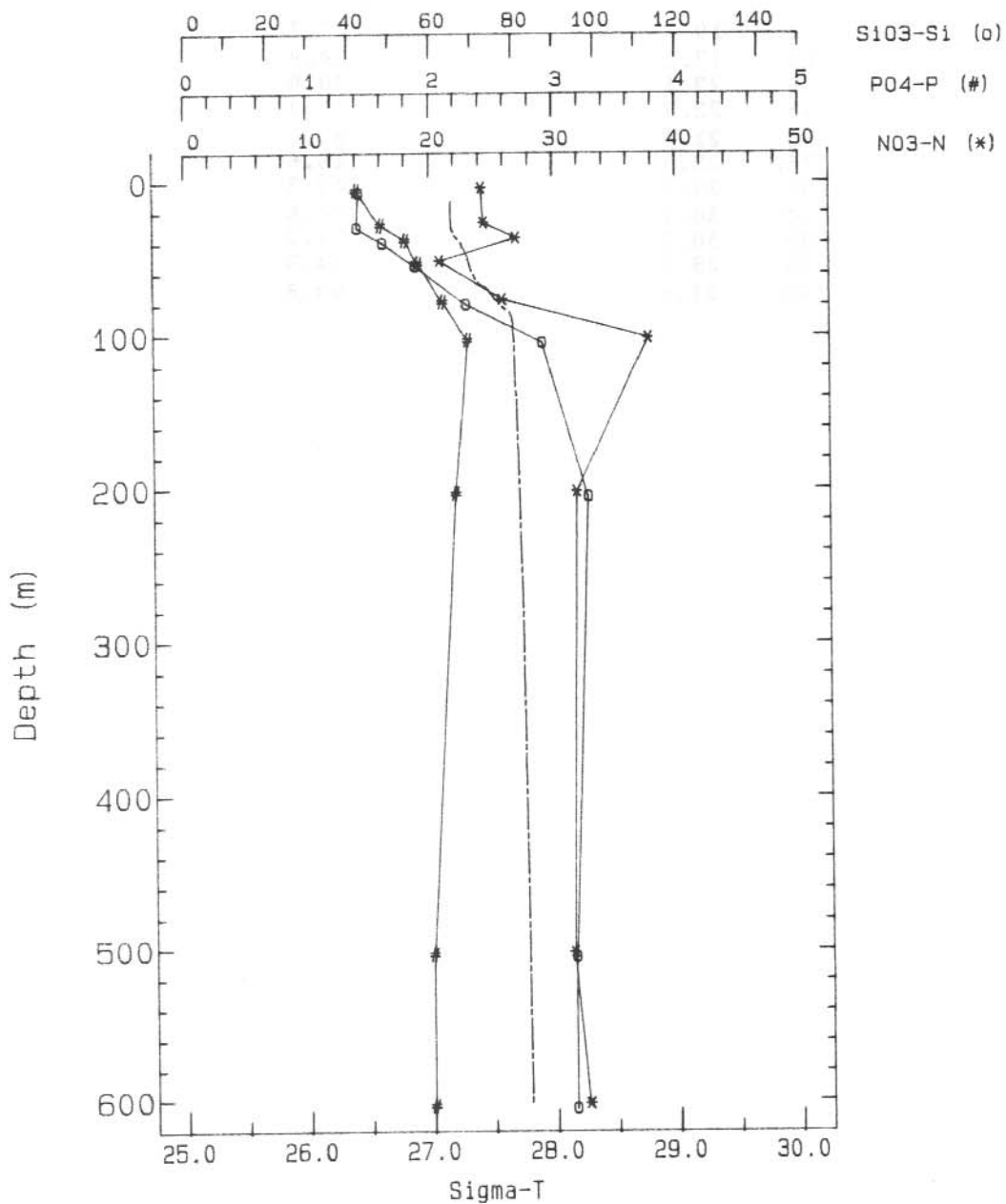


Cruise : SIBEX2
 Station number : 6
 Date : 05-JAN-1985 (DAY NUMBER 5)
 Start Time : 1252 GMT
 Ship : NELLA DAN
 Position : 65:00.90S 58:00.30E
 Cast Depth (m) : 612
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	24.2	0.2	1.4	42.6
25	24.4	0.3	1.6	42.1
35	27.0	0.2	1.8	48.3
50	20.8	0.1	1.9	56.3
75	25.9	0.1	2.1	68.6
100	37.7	0.3	2.3	87.2
200	31.8	0.1	2.2	98.2
500	31.4	0.0	2.0	94.6
600	32.6	0.0	2.0	94.5

SIBEX 2 NUTRIENTS-SIGMA-t

Cruise : SIBEX2 Station 6
 05-JAN-1985 1252 GMT
 Lat 65: 00.90S Lon 58: 00.30E
 Depth: CTD 612 m Bottom 0 m

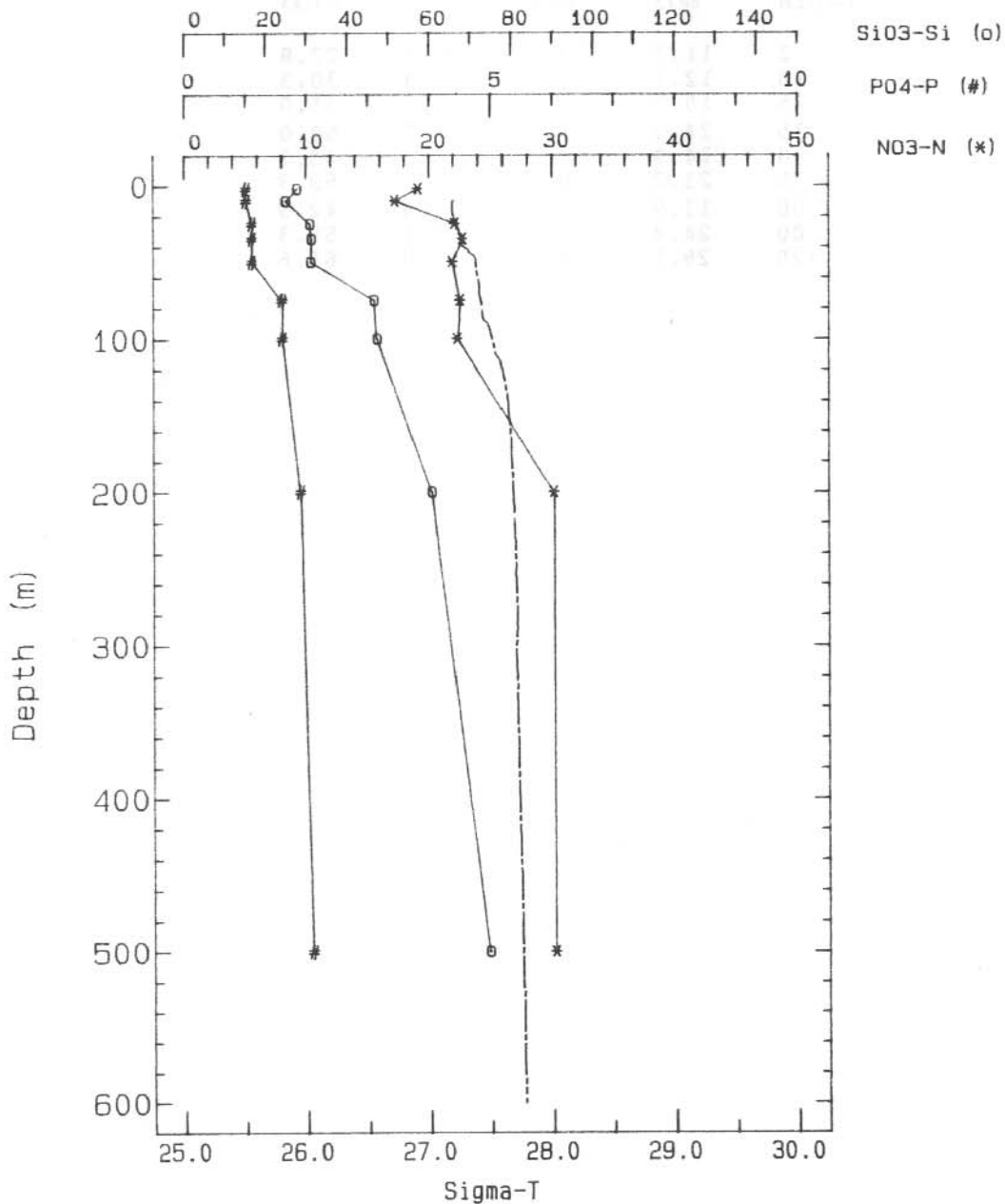


Cruise : SIBEX2
 Station number : 7
 Date : 05-JAN-1985 (DAY NUMBER 5)
 Start Time : 1920 GMT
 Ship : NELLA DAN
 Position : 66:00.40S 57:59.80E
 Cast Depth (m) : 2394
 Bottom Depth (m) : 2400

Depth	NO3	NO2	PO4	SiO3
2	19.1	0.3	1.0	27.7
10	17.2	0.2	1.0	24.9
25	22.1	0.3	1.1	30.9
35	22.7	0.3	1.1	31.3
50	21.9	0.3	1.1	31.1
75	22.5	0.1	1.6	46.6
100	22.3	0.3	1.6	47.3
200	30.1	0.1	1.9	60.6
500	30.2	0.1	2.1	74.7
1000	28.8	0.0	2.4	104.3
2090	23.6	0.1	1.8	90.8

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 7
 05-JAN-1985 1920 GMT
 Lat 66:00.40S Lon 57:59.80E
 Depth: CTD 2394 m Bottom 2400 m

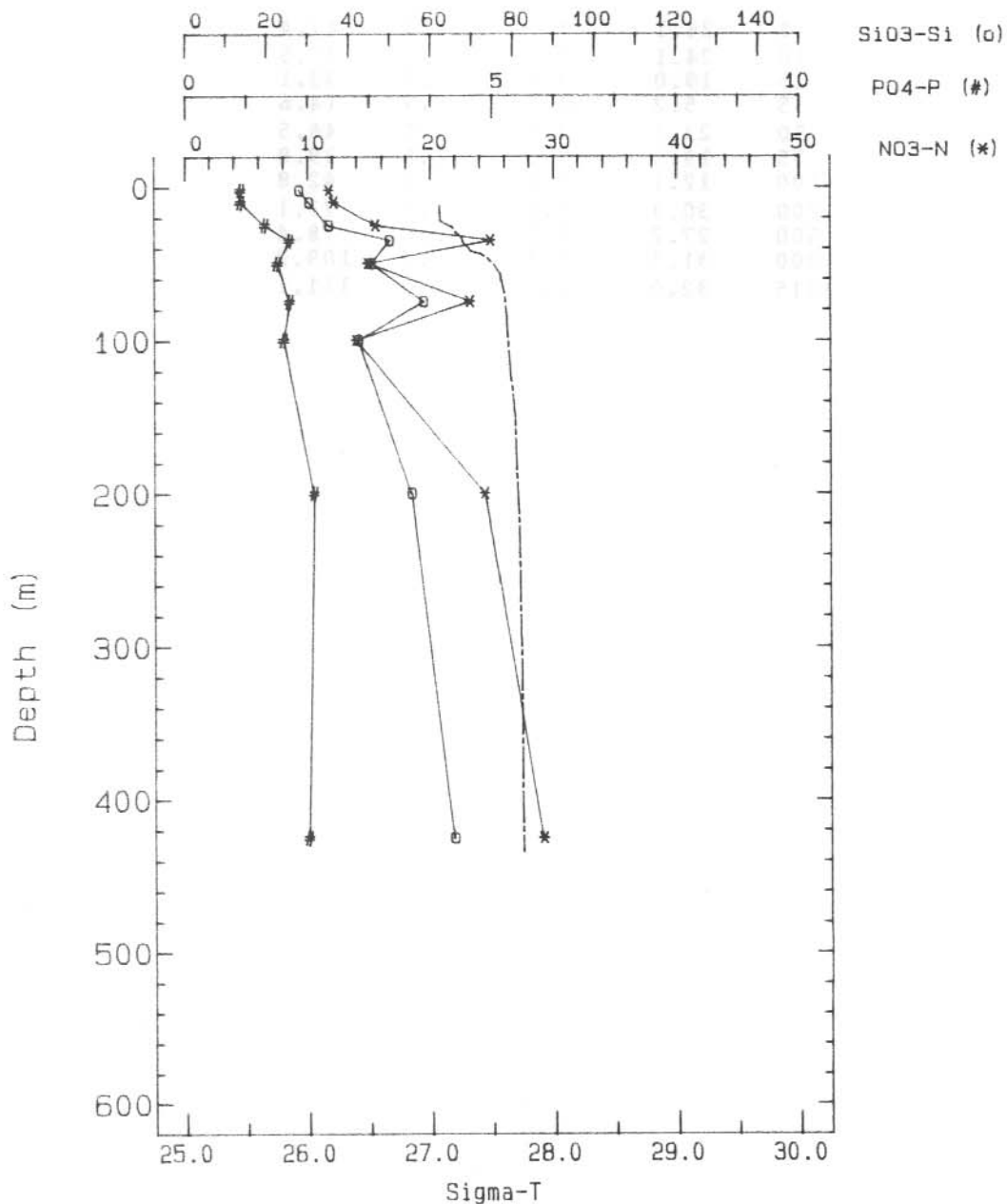


Cruise : SIBEX2
 Station number : 8
 Date : 06-JAN-1986 (DAY NUMBER 6)
 Start Time : 1211 GMT
 Ship : NELLA DAN
 Position : 66:59.70S 63:07.50E
 Cast Depth (m) : 436
 Bottom Depth (m) : 443

Depth	NO3	NO2	PO4	SiO3
2	11.7	0.2	0.9	27.8
10	12.1	0.2	0.9	30.3
25	15.5	0.2	1.3	35.0
35	24.9	0.2	1.7	50.0
50	14.9	0.2	1.5	45.3
75	23.2	0.2	1.7	58.3
100	13.9	0.1	1.6	42.3
200	24.4	0.1	2.1	55.3
425	29.1	0.2	2.0	65.6

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 8
 06-JAN-1986 1211 GMT
 Lat 66:59.70S Lon 63:07.50E
 Depth: CTD 436 m Bottom 443 m

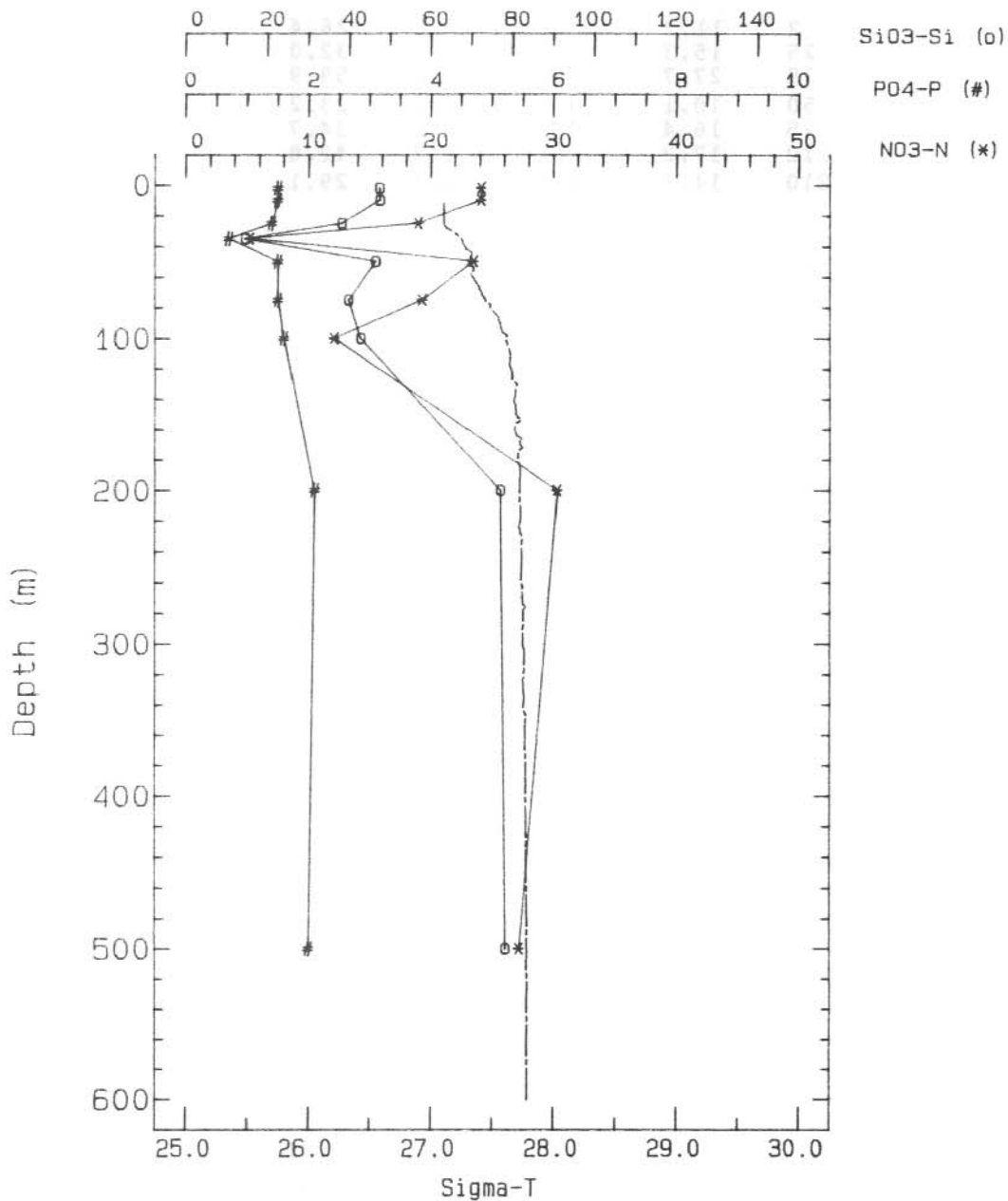


Cruise : SIBEX2
 Station number : 9
 Date : 06-JAN-1985 (DAY NUMBER 6)
 Start Time : 1923 GMT
 Ship : NELLA DAN
 Position : 66:00.50S 62:59.20E
 Cast Depth (m) : 2768
 Bottom Depth (m) : 3450

Depth	NO3	NO2	PO4	SiO3
2	24.1	0.1	1.5	47.4
10	24.1	0.3	1.5	47.5
25	19.0	0.0	1.4	38.1
35	5.2	0.2	0.7	14.6
50	23.5	0.3	1.5	46.5
75	19.3	0.2	1.5	39.8
100	12.1	0.2	1.6	42.8
200	30.3	0.0	2.1	77.1
500	27.2	0.1	2.0	78.4
1000	31.3	0.1	2.2	109.2
3415	32.0	0.1	2.3	111.1

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 9
 06-JAN-1985 1923 GMT
 Lat 66:00.50S Lon 62:59.20E
 Depth: CTD 2768 m Bottom 3450 m

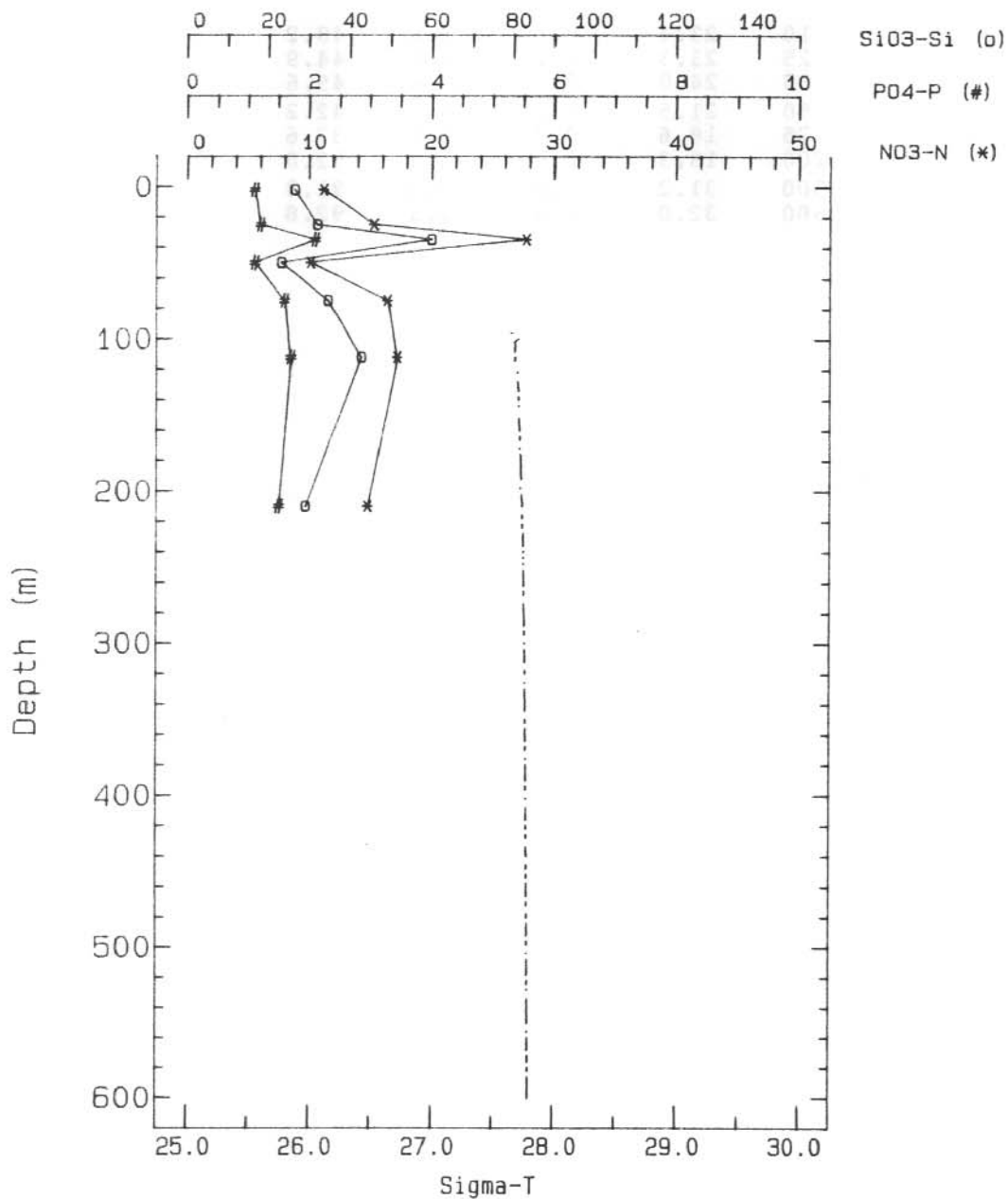


Cruise : SIBEX2
 Station number : 10
 Date : 07-JAN-1985 (DAY NUMBER 7)
 Start Time : 0423 GMT
 Ship : NELLA DAN
 Position : 65:00.30S 62:58.30E
 Cast Depth (m) : 610
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	11.2	0.1	1.1	26.4
25	15.3	0.1	1.2	32.0
35	27.7	0.2	2.1	59.9
50	10.1	0.1	1.1	23.2
75	16.4	0.1	1.6	34.7
112	17.2	0.2	1.7	42.8
210	14.8	0.1	1.5	29.1

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 10
 07-JAN-1985 0423 GMT
 Lat 65:00.30S Lon 62:58.30E
 Depth: CTD 610 m Bottom 0 m

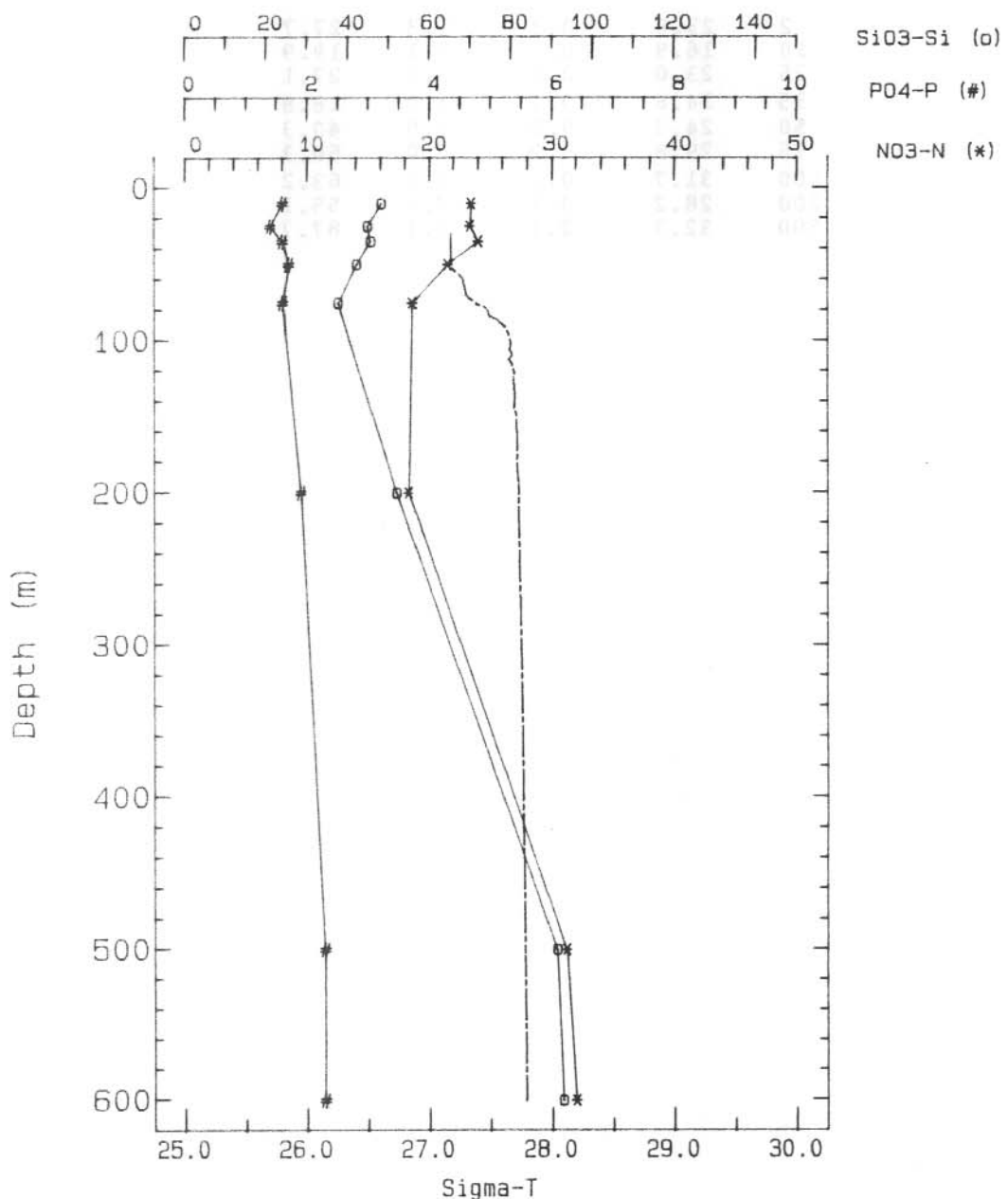


Cruise : SIBEX2
 Station number : 11
 Date : 07-JAN-1985 (DAY NUMBER 7)
 Start Time : 1101 GMT
 Ship : NELLA DAN
 Position : 63:59.80S 63:00.10E
 Cast Depth (m) : 610
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
10	23.4	0.1	1.6	48.2
25	23.3	0.2	1.4	44.9
35	24.0	0.3	1.6	45.6
50	21.5	0.2	1.7	42.2
75	18.6	0.3	1.6	37.6
200	18.3	0.2	1.9	52.0
500	31.2	0.0	2.3	91.3
600	32.0	0.1	2.3	92.8

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 11
 07-JAN-1985 1101 GMT
 Lat 63:59.80S Lon 63:00.10E
 Depth: CTD 610 m Bottom 0 m

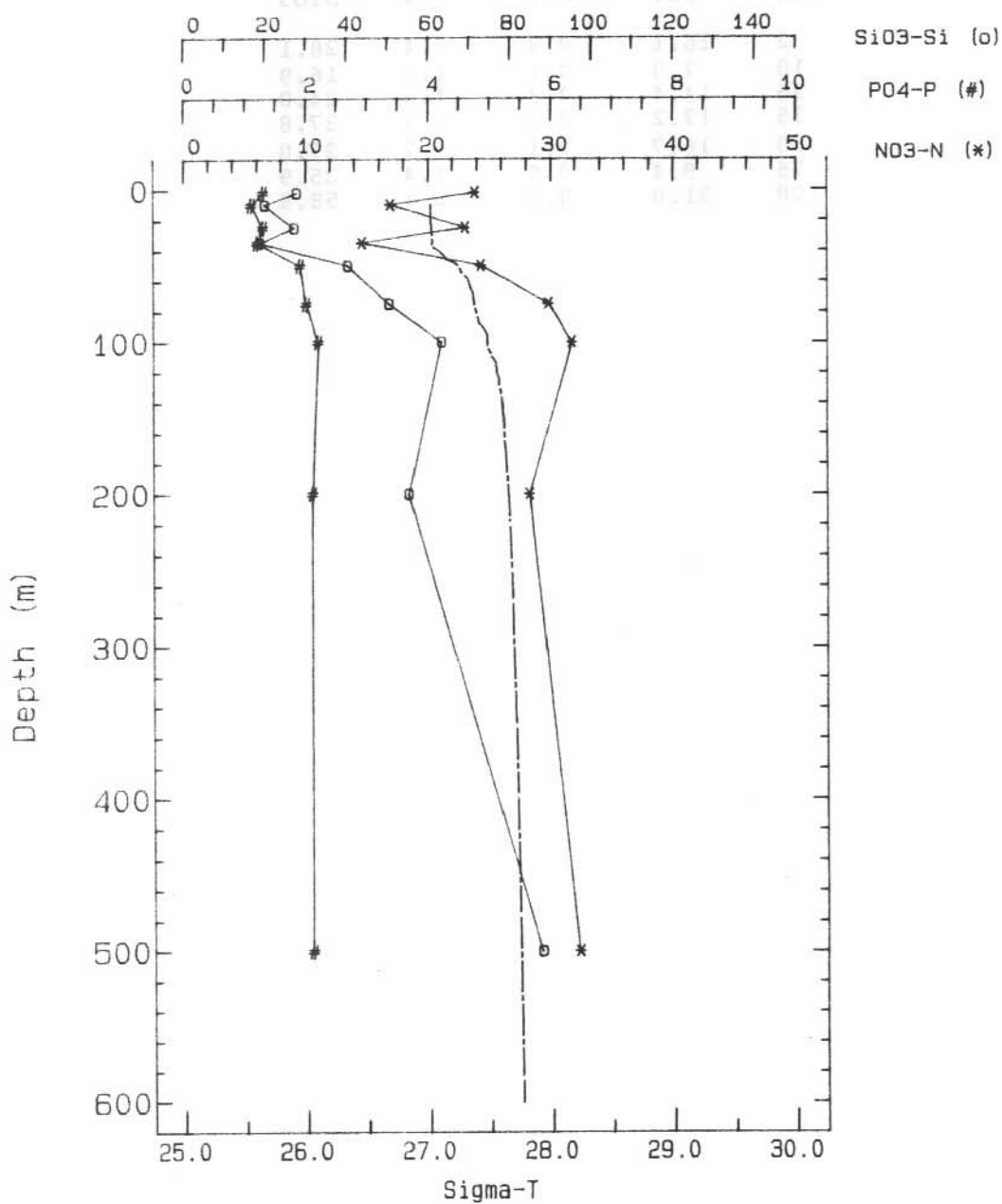


Cruise : SIBEX2
 Station number : 12
 Date : 07-JAN-1985 (DAY NUMBER 7)
 Start Time : 1715 GMT
 Ship : NELLA DAN
 Position : 62:59.70S 62:59.90E
 Cast Depth (m) : 610
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	23.8	0.3	1.3	27.7
10	16.9	0.2	1.1	19.9
25	23.0	0.2	1.3	27.1
35	14.6	0.2	1.2	18.8
50	24.3	0.2	1.9	40.3
75	29.8	0.2	2.0	50.3
100	31.7	0.2	2.2	63.2
200	28.2	0.1	2.1	55.1
500	32.3	0.1	2.1	87.7

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 12
 07-JAN-1985 1715 GMT
 Lat 62:59.70S Lon 62:59.90E
 Depth: CTD 610 m Bottom 0 m



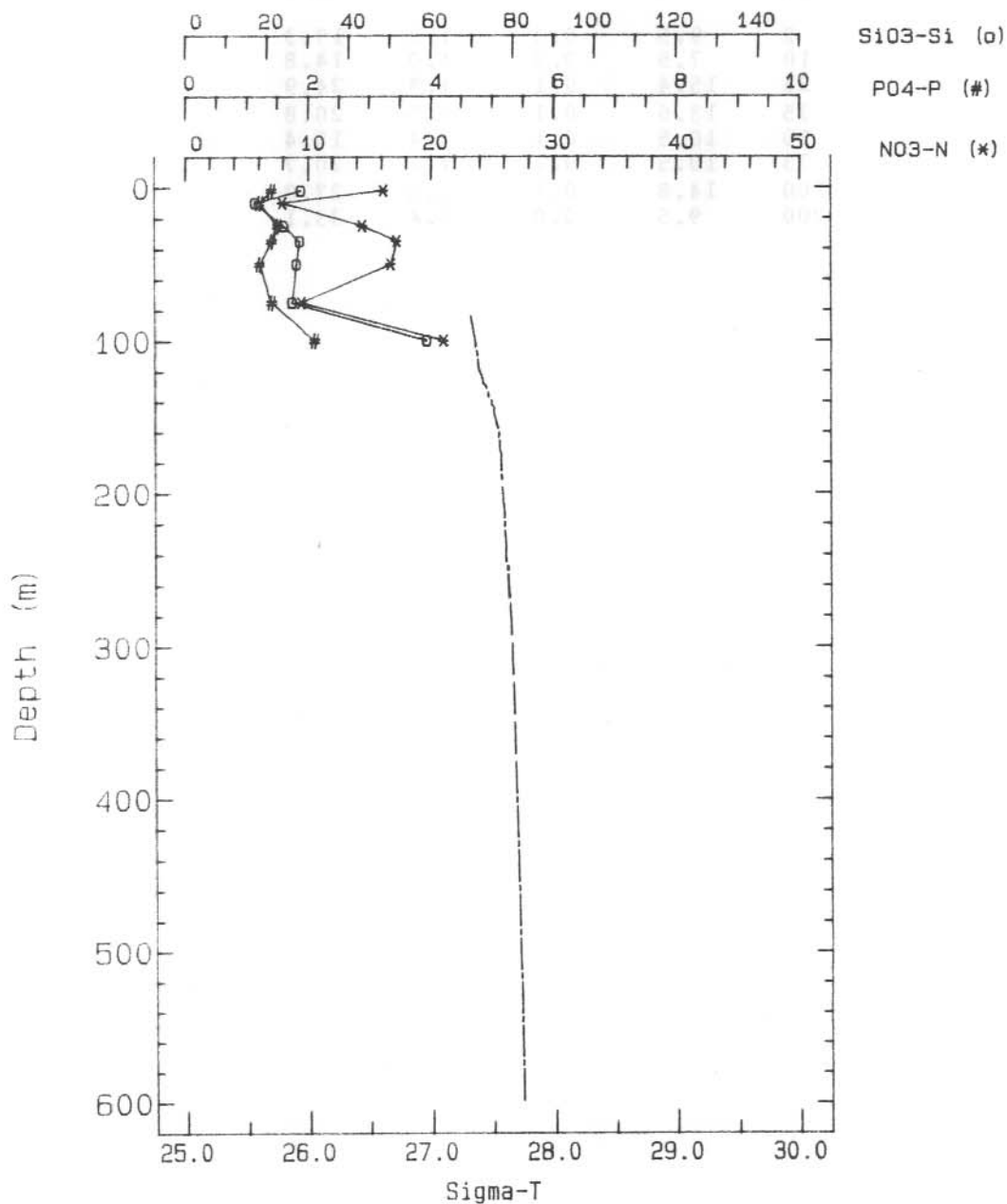
Cruise : SIBEX2
 Station number : 13
 Date : 08-JAN-1985 (DAY NUMBER 8)
 Start Time : 0057 GMT
 Ship : NELLA DAN
 Position : 62:00.30S 63:00.50E
 Cast Depth (m) : 610
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	16.1	0.3	1.4	28.1
10	7.9	0.1	1.2	16.9
25	14.4	0.3	1.5	24.0
35	17.2	0.2	1.4	27.8
50	16.7	0.1	1.2	27.0
75	9.4	0.0	1.4	25.9
100	21.0	0.0	2.1	58.8

0.05 0.05 0.05 0.05 0.05 0.05

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 13
 08-JAN-1985 0057 GMT
 Lat 62:00.30S Lon 63:00.50E
 Depth: CTD 610 m Bottom 0 m

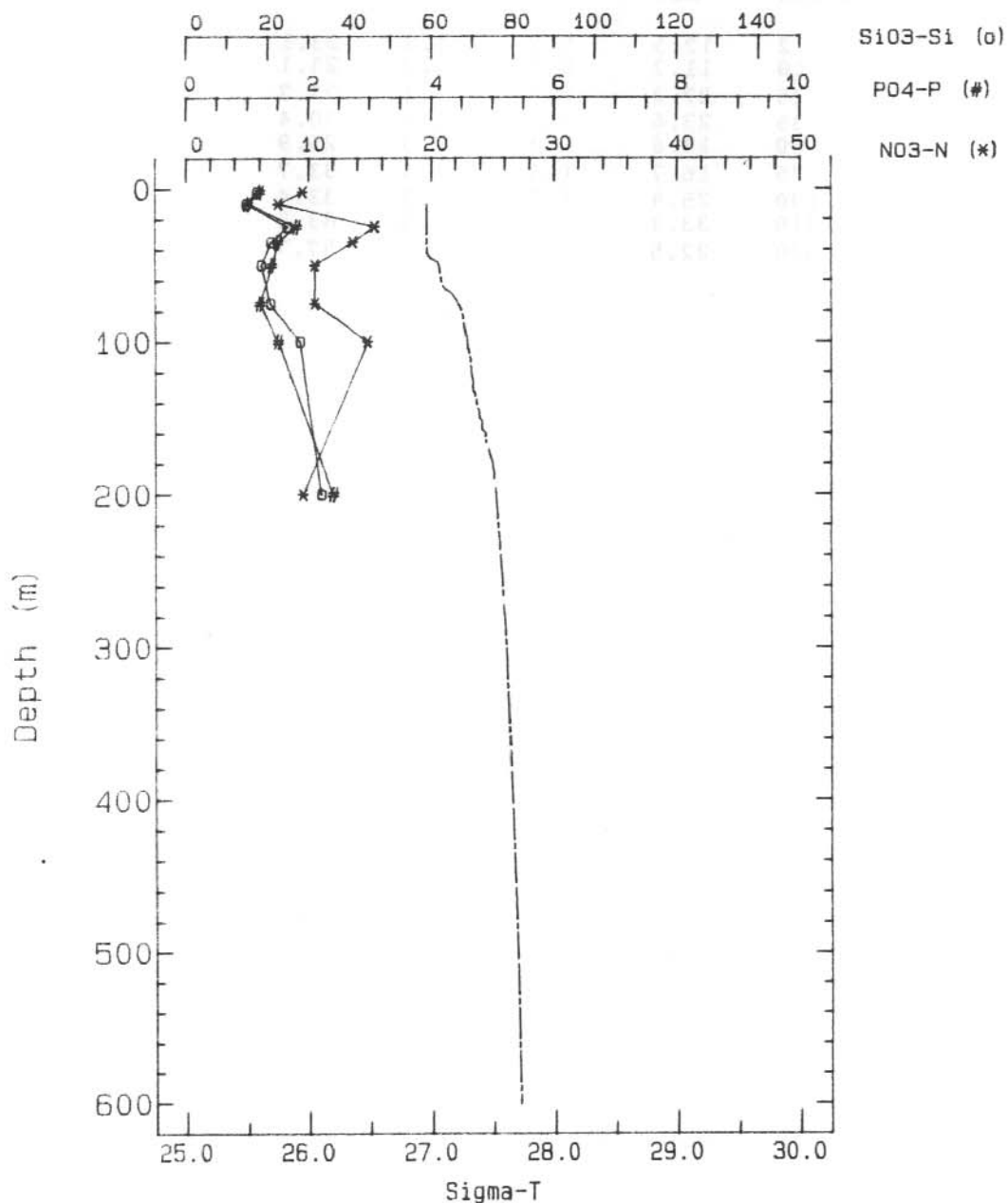


Cruise : SIBEX2
Station number : 14
Date : 08-JAN-1985 (DAY NUMBER 8)
Start Time : 0729 GMT
Ship : NELLA DAN
Position : 61:00.00S 63:00.50E
Cast Depth (m) : 608
Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	9.5	0.3	1.2	17.3
10	7.5	0.2	1.0	14.8
25	15.4	0.1	1.8	24.9
35	13.6	0.1	1.5	20.8
50	10.5	0.1	1.4	18.4
75	10.5	0.1	1.2	20.7
100	14.8	0.1	1.5	27.8
200	9.5	0.0	2.4	33.1

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 14
 08-JAN-1985 0729 GMT
 Lat 61:00.00S Lon 63:00.50E
 Depth: CTD 608 m Bottom 0 m

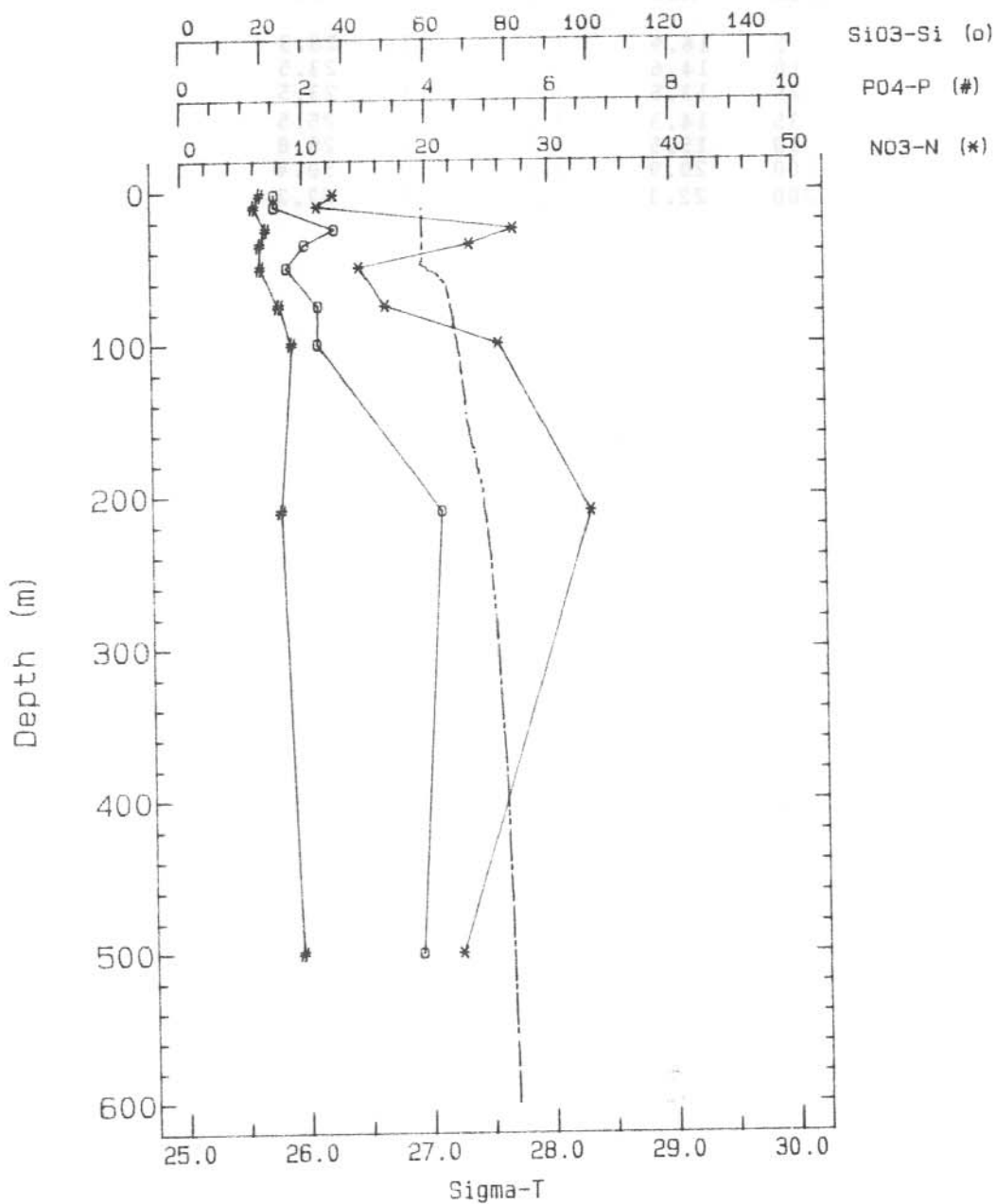


Cruise : SIBEX2
Station number : 15
Date : 08-JAN-1985 (DAY NUMBER 8)
Start Time : 1400 GMT
Ship : NELLA DAN
Position : 60:00.20S 63:00.20E
Cast Depth (m) : 610
Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	12.5	0.2	1.3	23.1
10	11.2	0.2	1.2	23.1
25	27.2	0.3	1.4	37.7
35	23.6	0.3	1.3	30.4
50	14.6	0.1	1.3	25.9
75	16.7	0.1	1.6	33.7
100	25.9	0.3	1.8	33.4
210	33.3	0.0	1.6	63.5
500	22.5	0.1	1.9	57.7

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 15
 08-JAN-1985 1400 GMT
 Lat 60:00.20S Lon 63:00.20E
 Depth: CTD 610 m Bottom 0 m

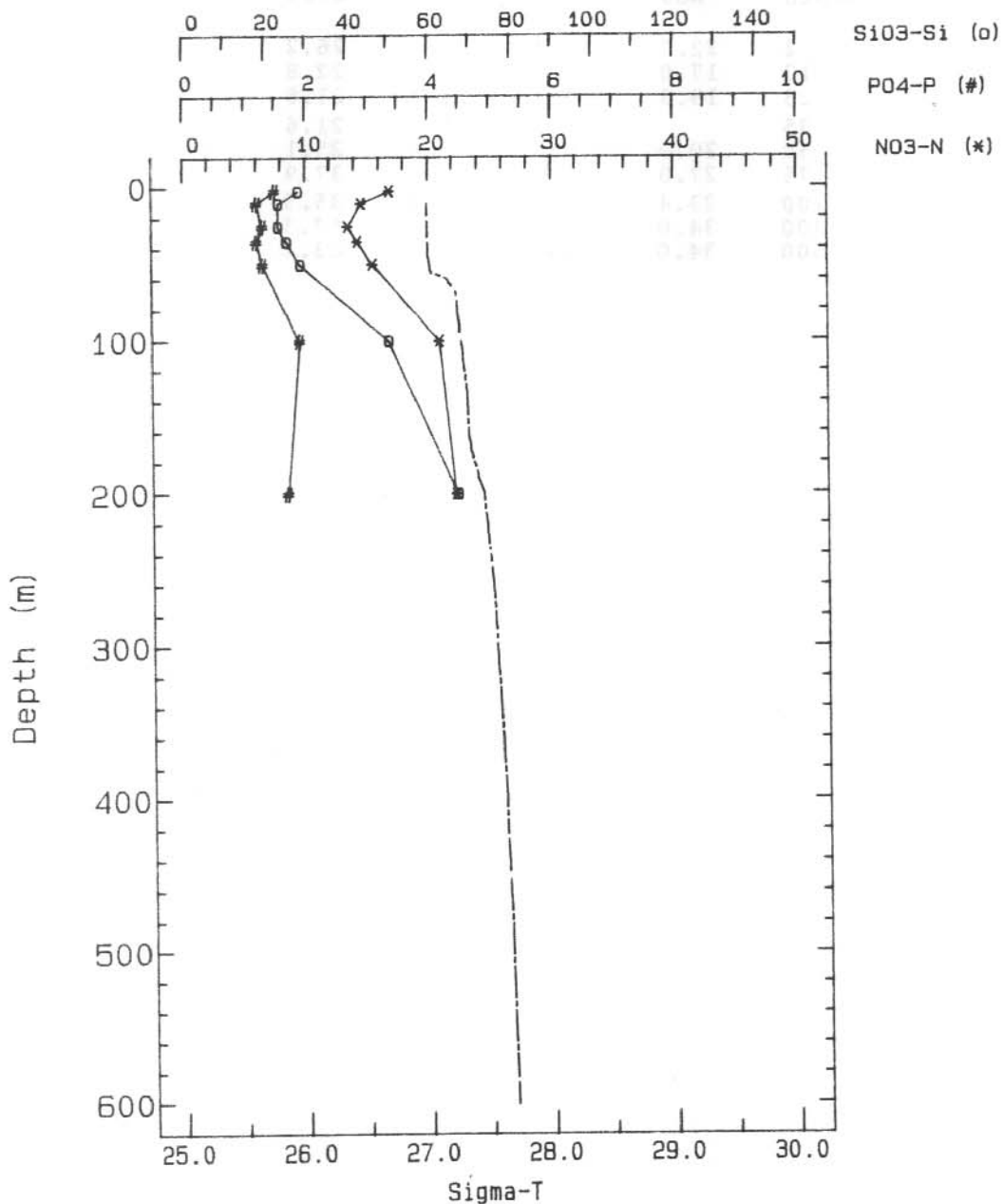


Cruise : SIBEX2
Station number : 16
Date : 09-JAN-1985 (DAY NUMBER 9)
Start Time : 0356 GMT
Ship : NELLA DAN
Position : 60:00.00S 68:00.00E
Cast Depth (m) : 608
Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	16.9	0.2	1.5	28.3
10	14.6	0.3	1.2	23.5
25	13.5	0.9	1.3	23.5
35	14.3	0.2	1.2	25.5
50	15.5	0.1	1.3	28.8
100	20.9	0.2	1.9	50.4
200	22.3	0.2	1.7	67.2

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 16
 09-JAN-1985 0356 GMT
 Lat 60:00.00S Lon 68:00.00E
 Depth: CTD 608 m Bottom 0 m

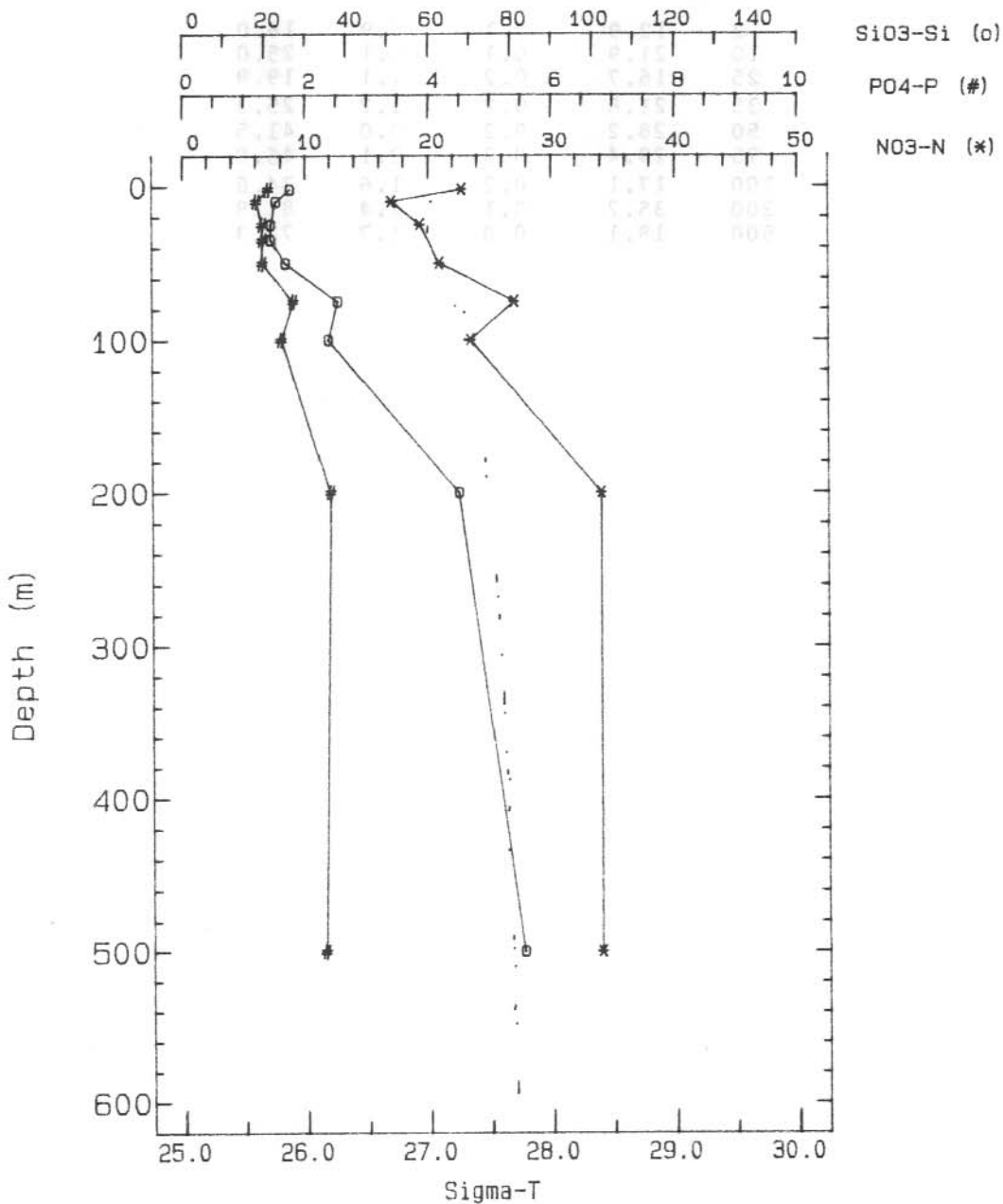


Cruise : SIBEX2
 Station number : 17
 Date : 09-JAN-1985 (DAY NUMBER 9)
 Start Time : 1158 GMT
 Ship : NELLA DAN
 Position : 61:00.30S 68:00.30E
 Cast Depth (m) : 610
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	22.7	0.3	1.4	26.2
10	17.0	0.4	1.2	22.8
25	19.3	0.2	1.3	21.6
35			1.3	21.6
50	20.9	0.2	1.3	25.1
75	27.0	0.3	1.8	37.9
100	23.4	0.5	1.6	35.5
200	34.0	0.0	2.4	67.3
500	34.0	0.0	2.3	83.2

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 17
 09-JAN-1985 1158 GMT
 Lat 61:00.30S Lon 68:00.30E
 Depth: CTD 610 m Bottom 0 m

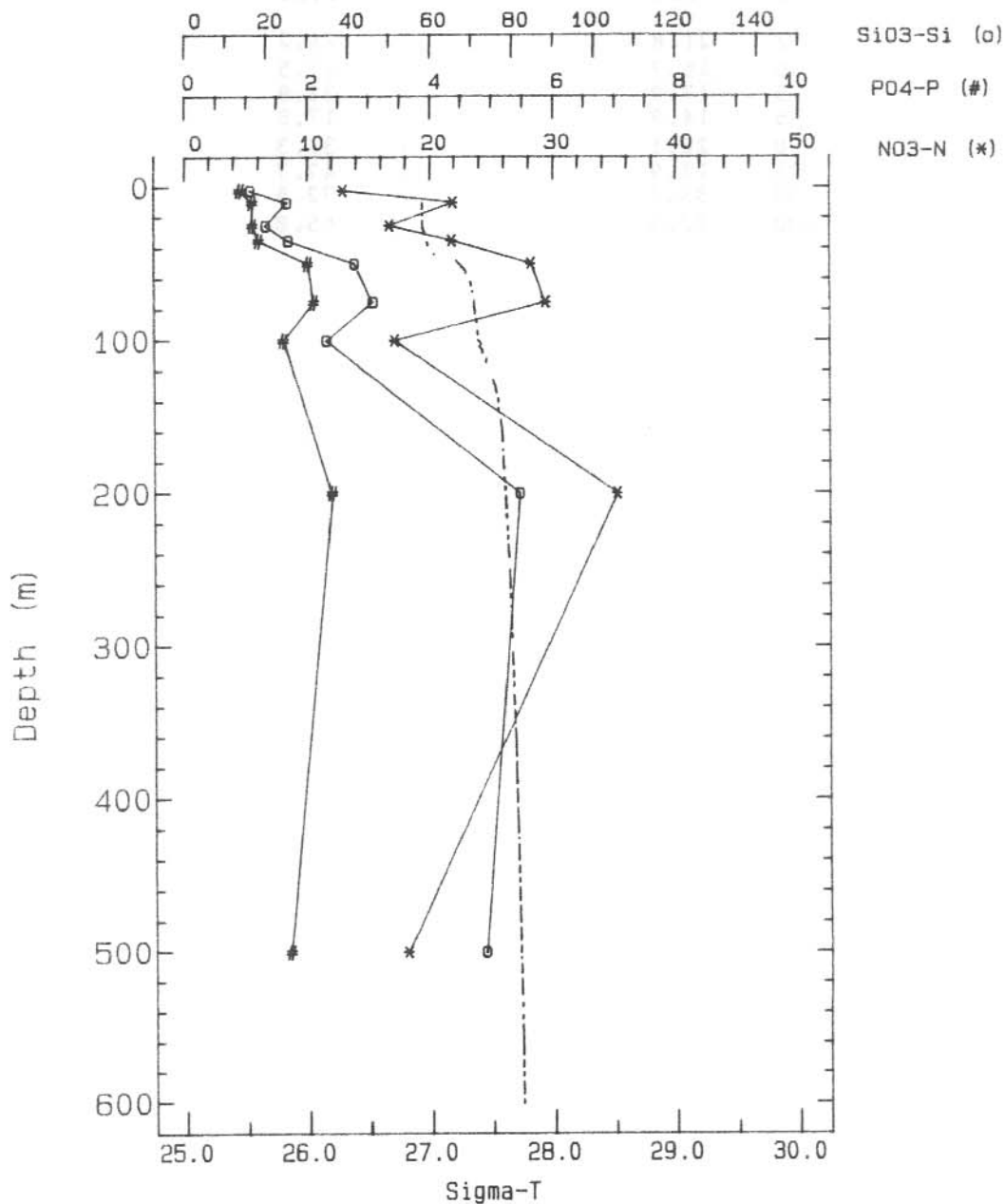


Cruise : SIBEX2
Station number : 18
Date : 09-JAN-1985 (DAY NUMBER 9)
Start Time : 1803 GMT
Ship : NELLA DAN
Position : 62:00.30S 68:00.30E
Cast Depth (m) : 612
Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	12.9	0.1	0.9	16.0
10	21.9	0.1	1.1	25.0
25	16.7	0.2	1.1	19.8
35	21.8	0.2	1.2	25.3
50	28.2	0.2	2.0	41.5
75	29.4	0.3	2.1	46.0
100	17.1	0.2	1.6	34.6
200	35.2	0.1	2.4	81.8
500	18.1	0.0	1.7	73.3

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 18
 09-JAN-1985 1803 GMT
 Lat 62:00.30S Lon 68:00.30E
 Depth: CTD 612 m Bottom 0 m

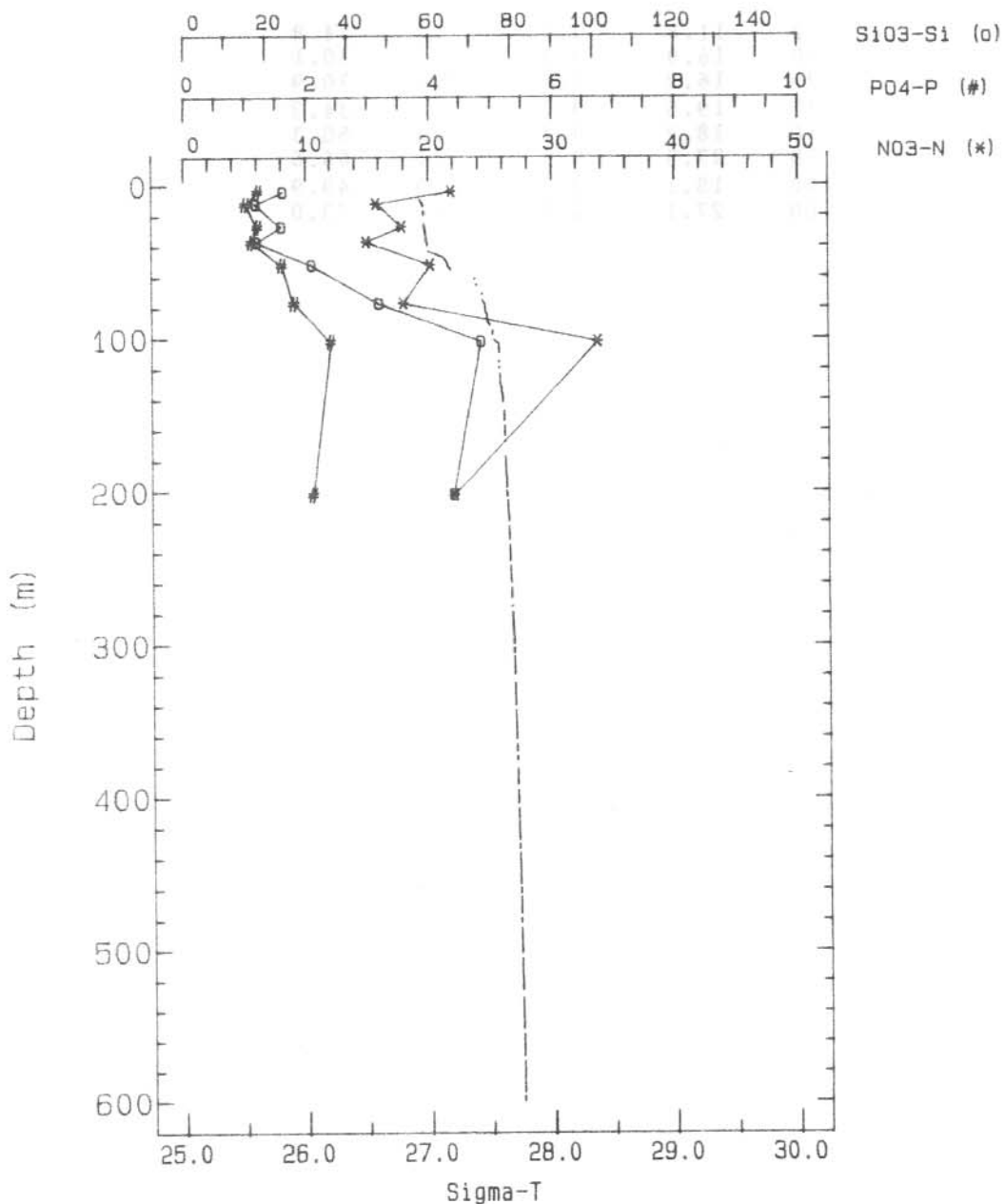


Cruise : SIBEX2
Station number : 19
Date : 10-JAN-1985 (DAY NUMBER 10)
Start Time : 0001 GMT
Ship : NELLA DAN
Position : 62:59.90S 67:58.50E
Cast Depth (m) : 612
Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	21.8	0.2	1.2	24.2
10	15.7	0.2	1.0	17.5
25	17.8	0.2	1.2	23.9
35	14.9	0.1	1.1	17.8
50	20.1	0.1	1.6	31.3
75	17.9	0.0	1.8	47.7
100	33.7	0.0	2.4	72.5
200	22.0	0.0	2.1	65.8

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 19
 10-JAN-1985 0001 GMT
 Lat 62:59.90S Lon 67:58.50E
 Depth: CTD 612 m Bottom 0 m

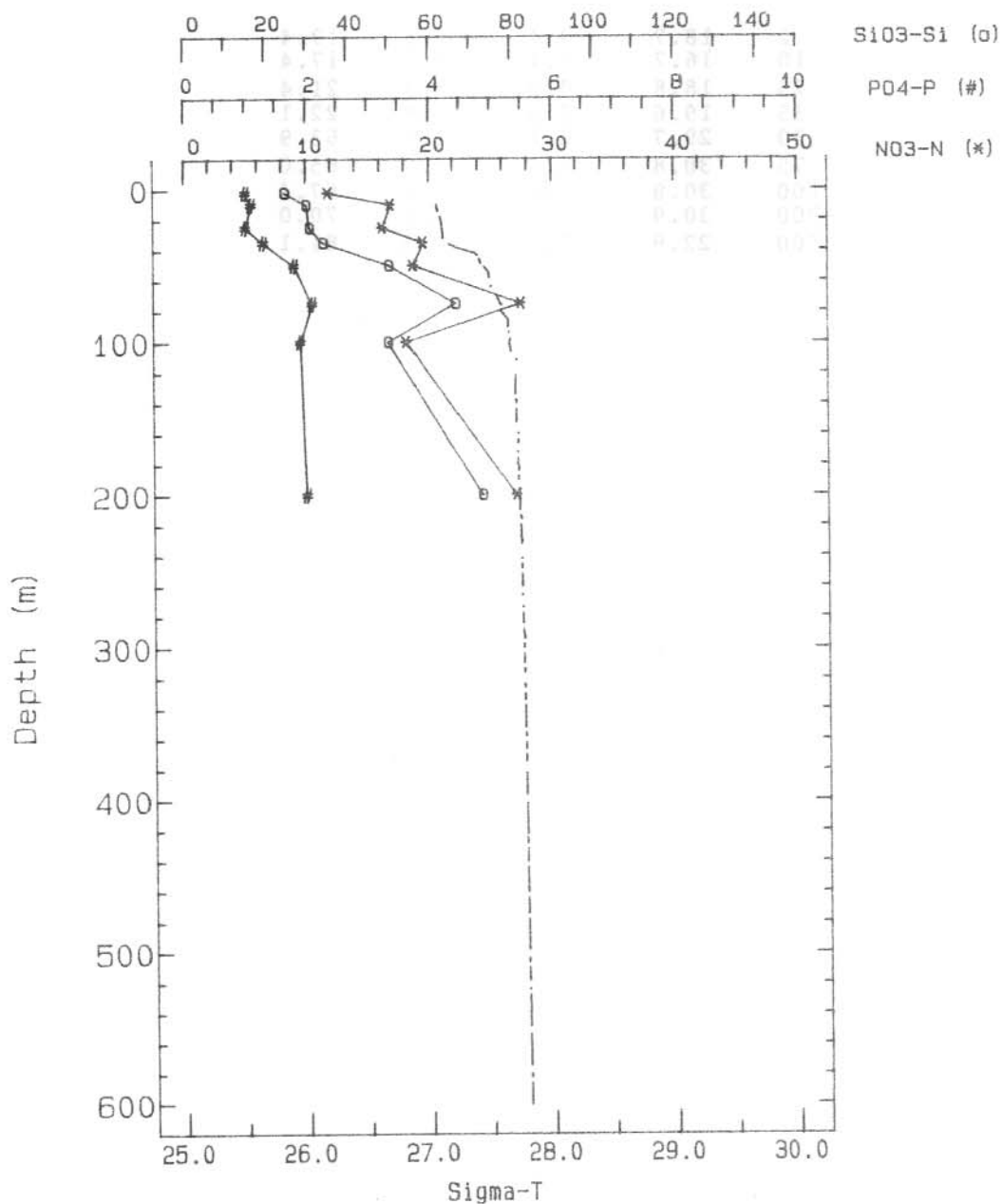


Cruise : SIBEX2
Station number : 20
Date : 10-JAN-1985 (DAY NUMBER 10)
Start Time : 0756 GMT
Ship : NELLA DAN
Position : 64:00.10S 68:00.20E
Cast Depth (m) : 610
Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	11.8	0.1	1.0	24.8
10	16.9	0.2	1.1	30.1
25	16.2	0.2	1.0	30.9
35	19.5	0.2	1.3	34.2
50	18.7	0.1	1.8	50.3
75	27.5	0.1	2.1	66.6
100	18.1	0.0	1.9	49.9
200	27.1	0.4	2.0	73.0

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 20
 10-JAN-1985 0756 GMT
 Lat 64:00.10S Lon 68:00.20E
 Depth: CTD 610 m Bottom 0 m

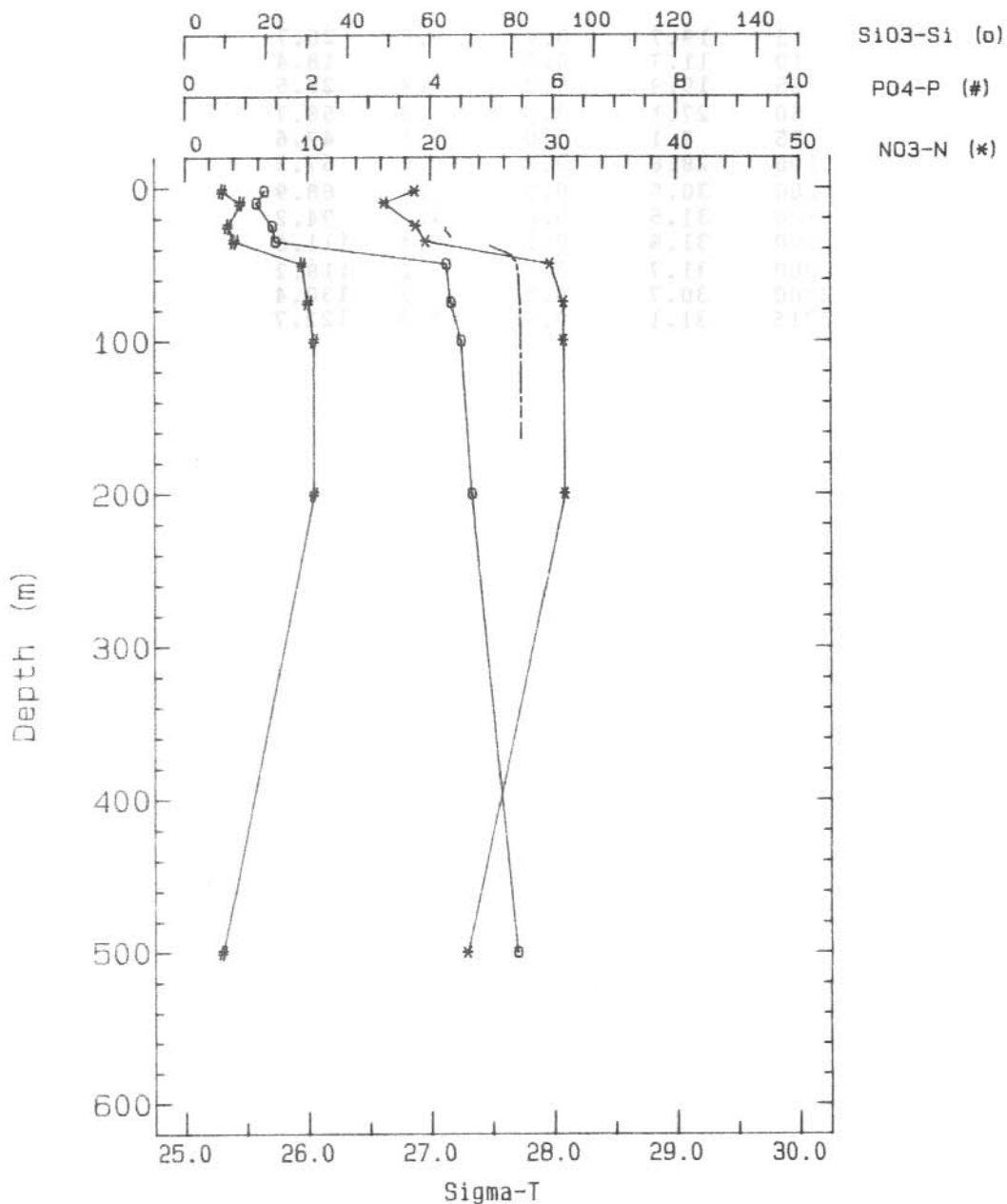


Cruise : SIBEX2
Station number : 21
Date : 10-JAN-1985 (DAY NUMBER 10)
Start Time : 1445 GMT
Ship : NELLA DAN
Position : 65:01.50S 68:02.80E
Cast Depth (m) : 294
Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	18.7	0.4	0.6	19.4
10	16.2	0.4	0.9	17.4
25	18.8	0.3	0.7	21.4
35	19.6	0.3	0.8	22.1
50	29.7	0.1	1.9	63.9
75	30.8	0.1	2.0	65.0
100	30.8	0.1	2.1	67.4
200	30.9	0.2	2.1	70.0
500	22.9	0.1	0.6	81.1

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 21
 10-JAN-1985 1445 GMT
 Lat 65: 01.50S Lon 68: 02.80E
 Depth: CTD 294 m Bottom 0 m

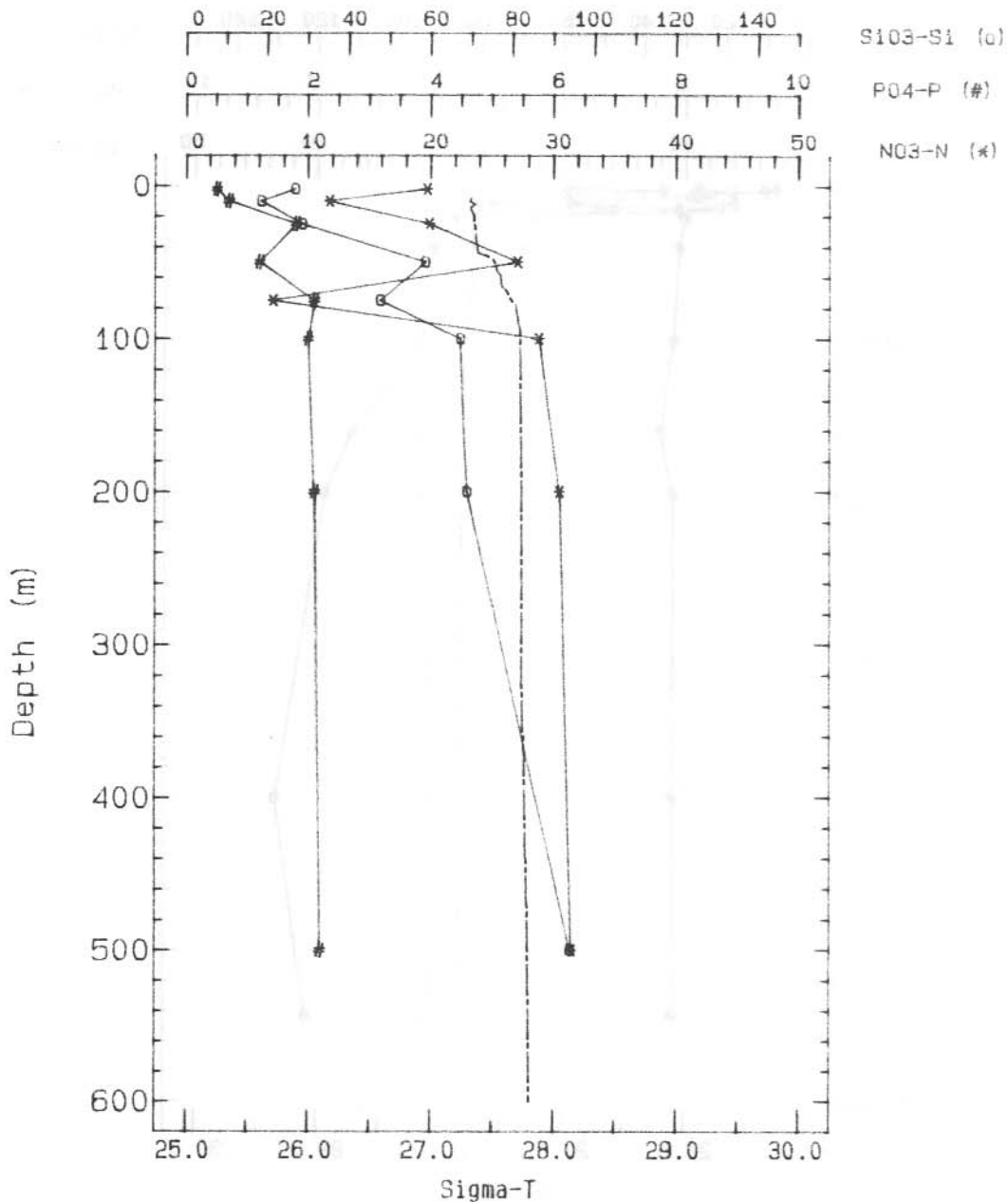


Cruise : SIBEX2
 Station number : 22
 Date : 10-JAN-1985 (DAY NUMBER 10)
 Start Time : 2128 GMT
 Ship : NELLA DAN
 Position : 66:00.10S 67:59.10E
 Cast Depth (m) : 2720
 Bottom Depth (m) : 2730

Depth	NO3	NO2	PO4	SiO3
2	19.7	0.4	0.5	26.7
10	11.7	0.2	0.7	18.4
25	19.9	0.2	1.8	28.5
50	27.1	0.1	1.2	58.7
75	7.1	0.0	2.1	47.6
100	28.8	0.1	2.0	67.2
200	30.5	0.2	2.1	68.9
500	31.5	0.0	2.2	94.2
800	31.8	0.1	2.4	111.6
1000	31.7	0.1	2.2	118.2
2000	30.7	0.0	2.2	130.4
2715	31.1	0.0	2.2	122.7

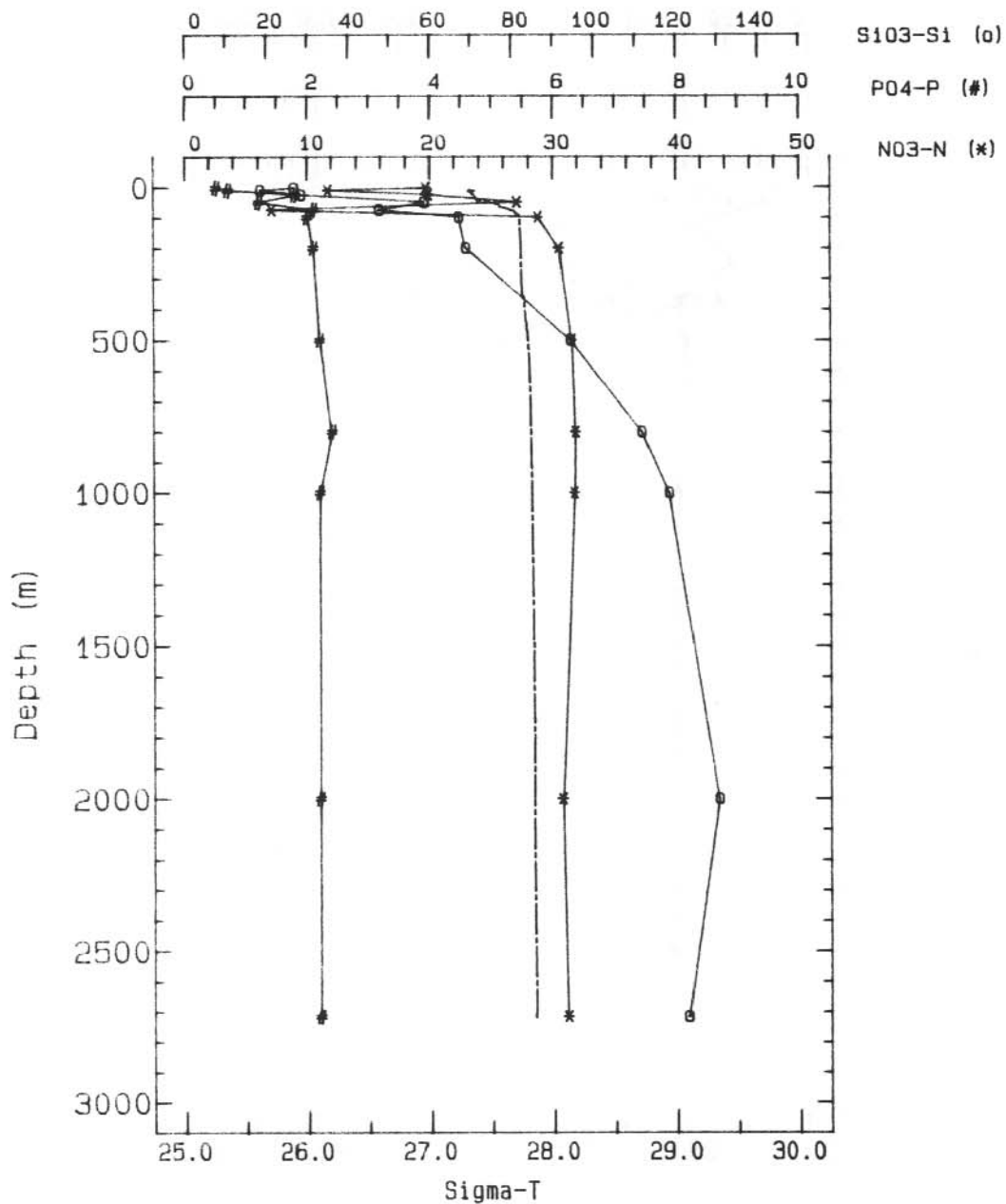
SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 22
 10-JAN-1985 2128 GMT
 Lat 66:00.10S Lon 67:59.10E
 Depth: CTD 2720 m Bottom 2730 m



SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 22
 10-JAN-1985 2128 GMT
 Lat 66:00.10S Lon 67:59.10E
 Depth: CTD 2720 m Bottom 2730 m

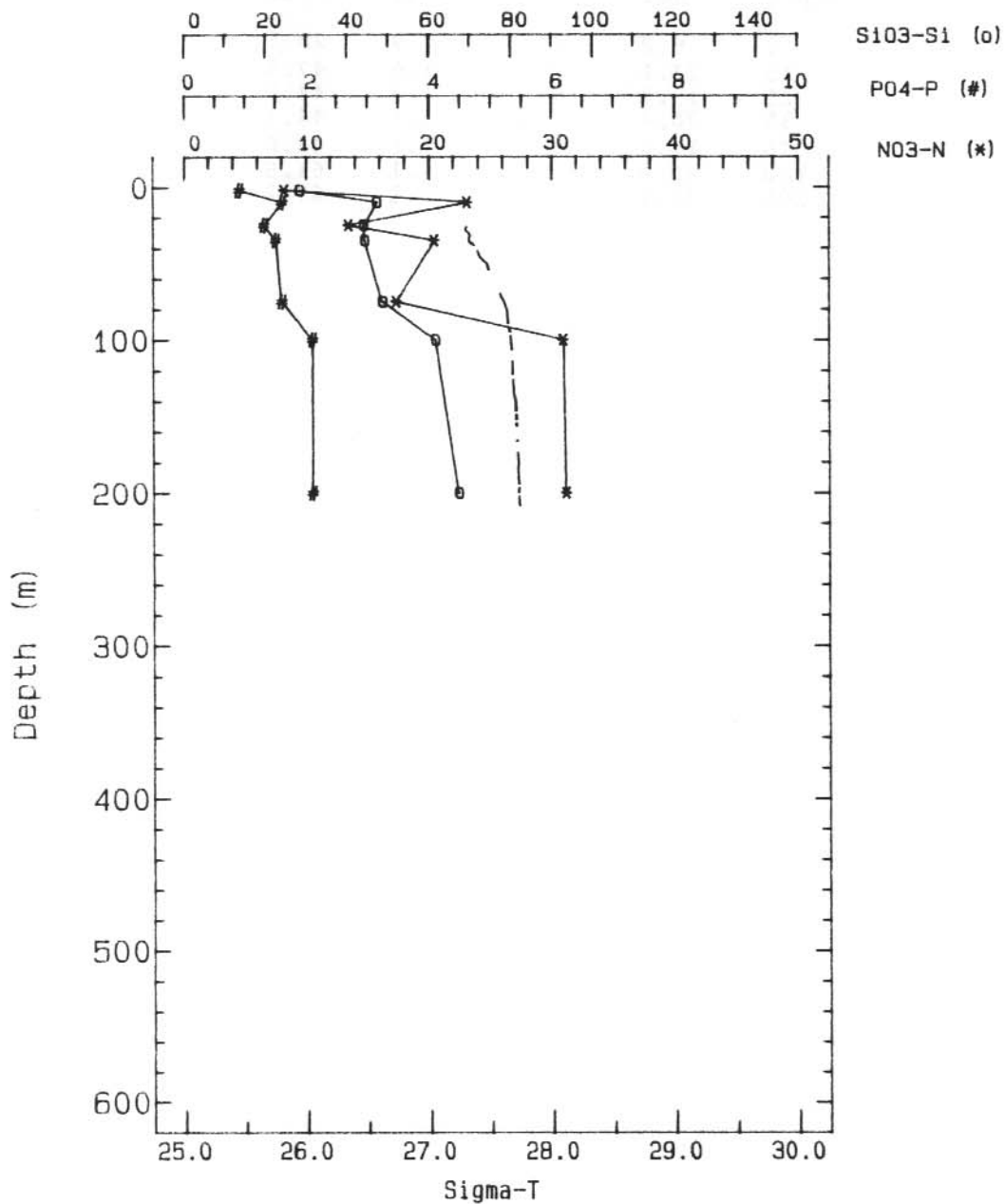


Cruise : SIBEX2
 Station number : 24
 Date : 11-JAN-1985 (DAY NUMBER 11)
 Start Time : 0855 GMT
 Ship : NELLA DAN
 Position : 67:00.10S 68:00.10E
 Cast Depth (m) : 210
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	8.2	0.1	0.9	28.3
10	23.1	0.3	1.6	47.3
25	13.4	0.3	1.3	44.0
35	20.4	0.2	1.5	44.3
75	17.3	0.1	1.6	48.6
100	30.9	0.1	2.1	61.5
200	31.1	0.1	2.1	67.2

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 24
 11-JAN-1985 0855 GMT
 Lat 67:00.10S Lon 68:00.10E
 Depth: CTD 210 m Bottom 0 m

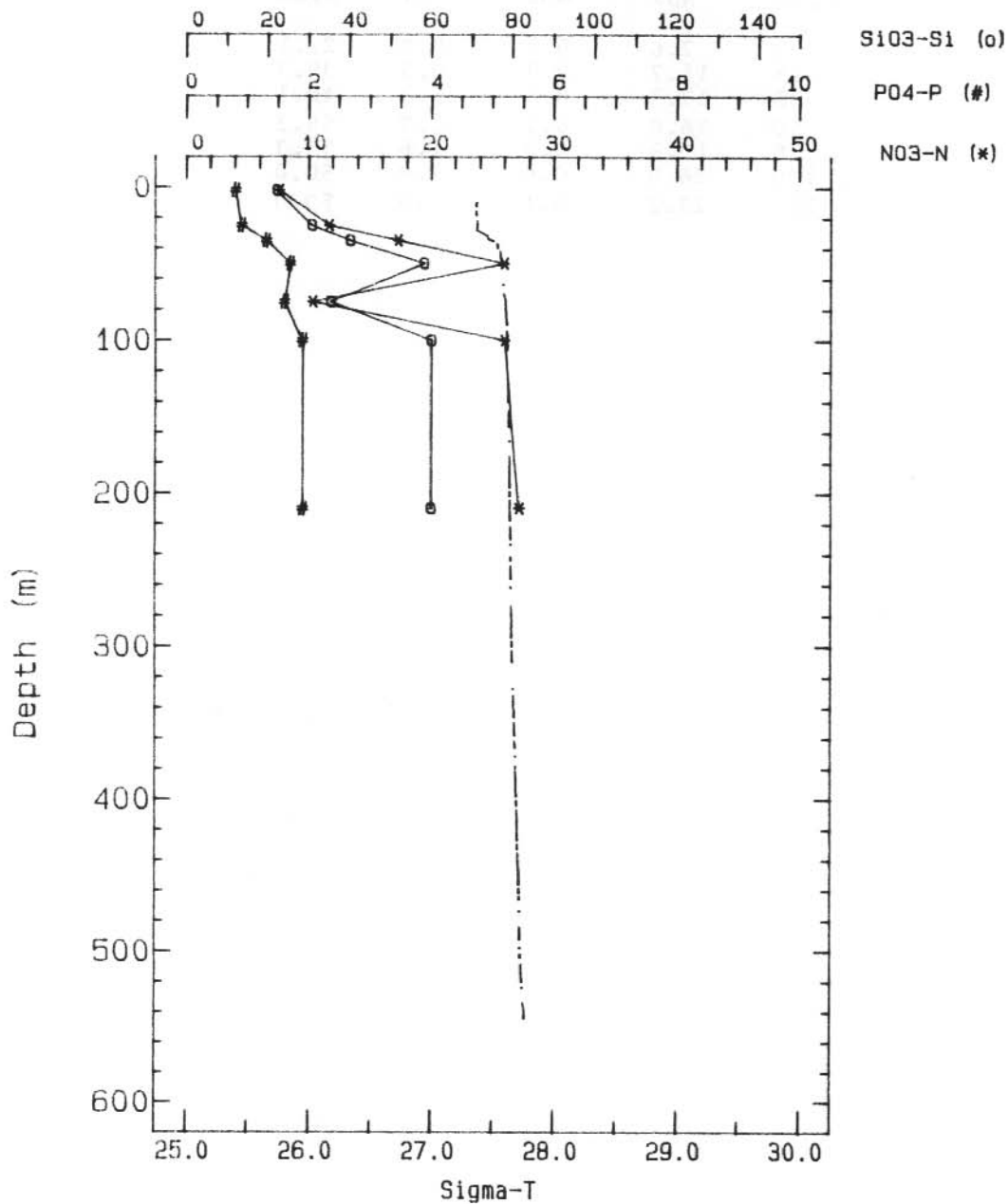


Cruise : SIBEX2
 Station number : 26
 Date : 13-JAN-1985 (DAY NUMBER 13)
 Start Time : 0915 GMT
 Ship : NELLA DAN
 Position : 68:00.00S 78:00.20E
 Cast Depth (m) : 548
 Bottom Depth (m) : 580

Depth	NO3	NO2	PO4	SiO3
2	7.6	0.1	0.8	22.1
25	11.7	0.3	0.9	30.7
35	17.3	0.3	1.3	40.1
50	26.0	0.1	1.7	58.3
75	10.3	0.0	1.6	35.3
100	26.0	0.0	1.9	60.0
210	27.2	0.1	1.9	59.9

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 26
 13-JAN-1985 0915 GMT
 Lat 68: 00.00S Lon 78: 00.20E
 Depth: CTD 548 m Bottom 580 m

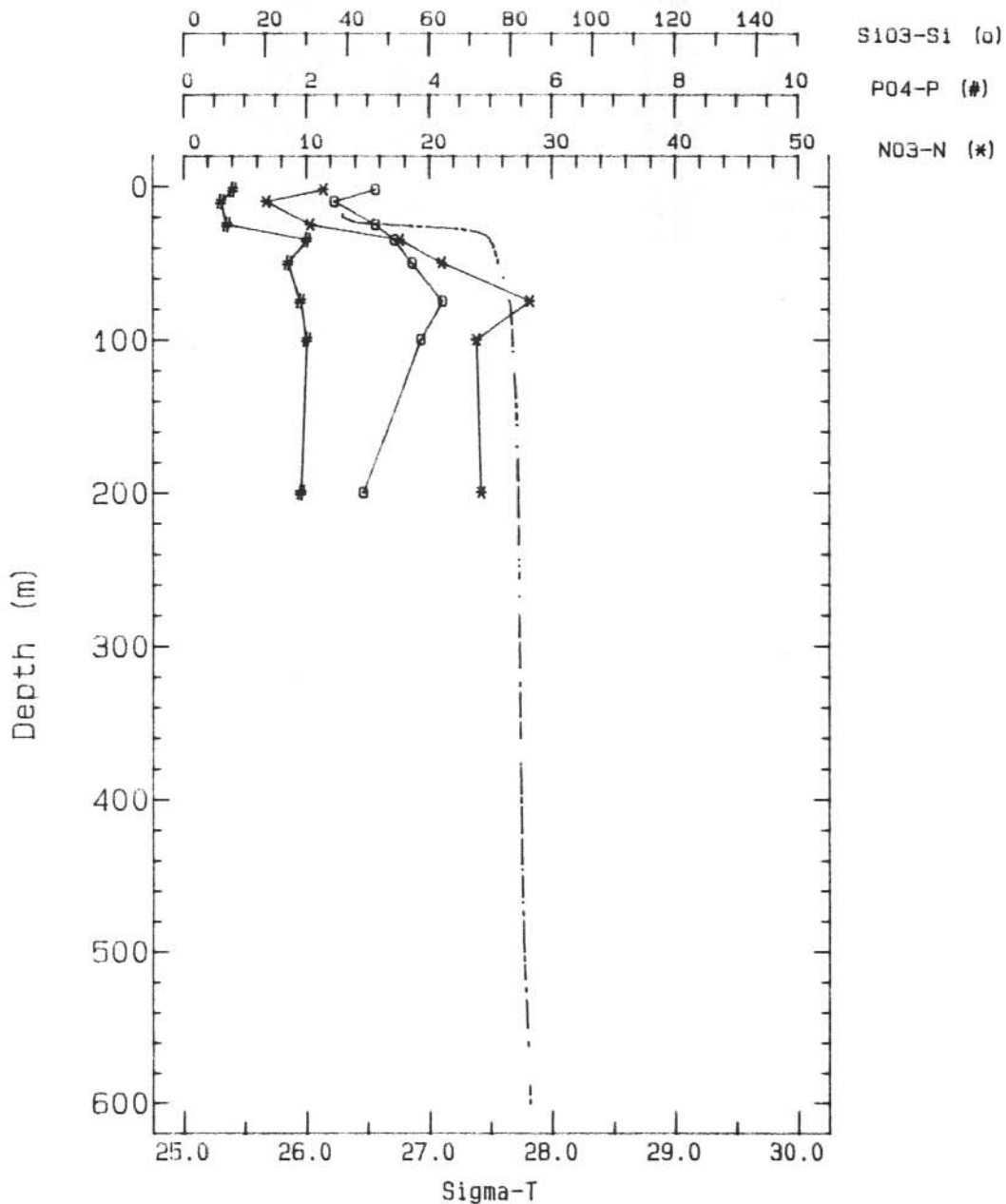


Cruise : SIBEX2
 Station number : 29
 Date : 14-JAN-1985 (DAY NUMBER 14)
 Start Time : 0413 GMT
 Ship : NELLA DAN
 Position : 67:59.90S 72:57.40E
 Cast Depth (m) : 634
 Bottom Depth (m) : 642

Depth	NO3	NO2	PO4	SiO3
2	11.4	0.0	0.8	46.8
10	6.7	0.0	0.6	36.8
25	10.3	0.0	0.7	46.9
35	17.6	0.0	2.0	51.4
50	21.0	0.2	1.7	55.8
75	28.2	0.1	1.9	63.1
100	23.8	0.2	2.0	57.9
200	24.2	0.2	1.9	43.7

SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 29
 14-JAN-1985 0413 GMT
 Lat 67:59.90S Lon 72:57.40E
 Depth: CTD 634 m Bottom 642 m



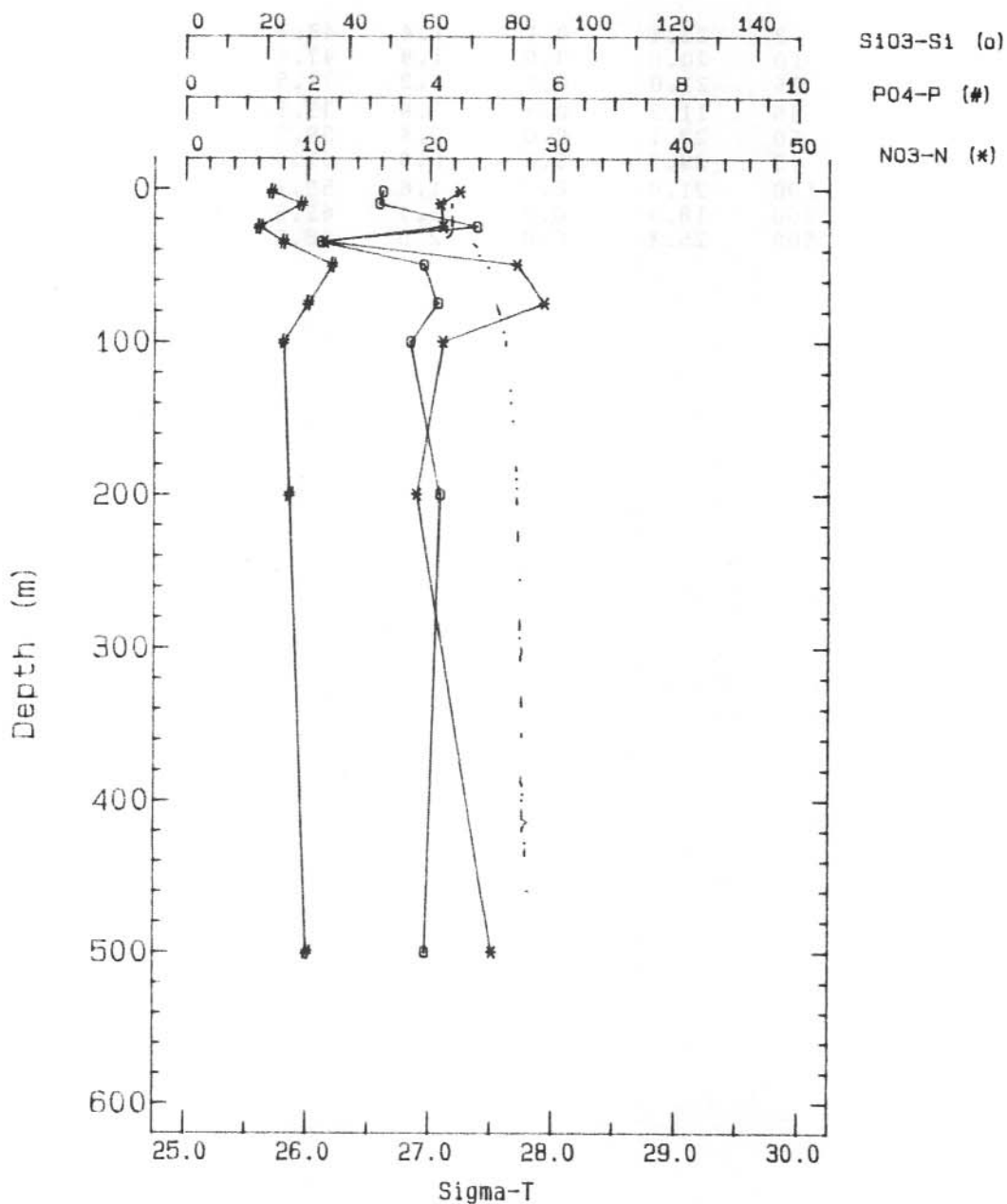
Cruise : SIBEX2
 Station number : 31
 Date : 14-JAN-1985 (DAY NUMBER 14)
 Start Time : 1211 GMT
 Ship : NELLA DAN
 Position : 67:00.50S 73:00.30E
 Cast Depth (m) : 508
 Bottom Depth (m) : 515

Depth	NO3	NO2	PO4	SiO3
2	22.4	0.1	1.4	48.3
10	20.8	0.0	1.9	47.4
25	21.0	0.1	1.2	71.5
35	11.3	0.1	1.6	33.1
50	27.1	0.0	2.4	58.5
75	29.3	0.2	2.0	61.9
100	21.0	0.0	1.6	55.1
200	18.9	0.0	1.7	62.5
500	25.1	0.0	2.0	58.9



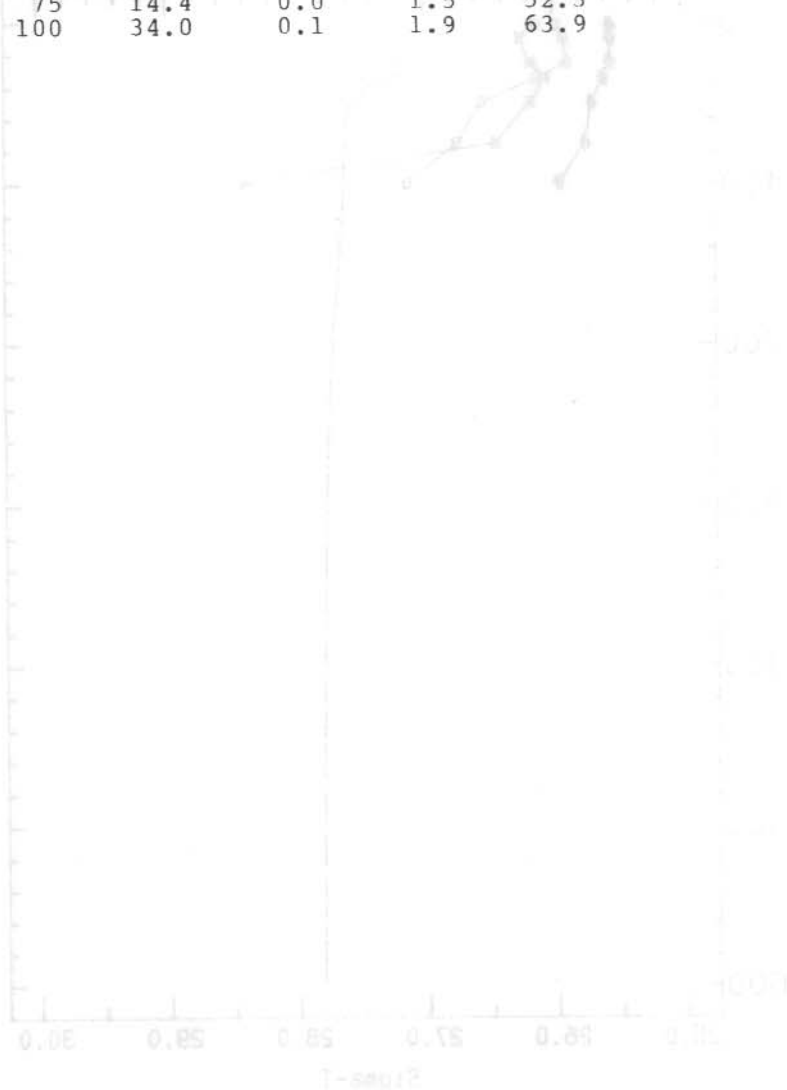
SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 31
 14-JAN-1985 1211 GMT
 Lat 67:00.50S Lon 73:00.30E
 Depth: CTD 508 m Bottom 515 m



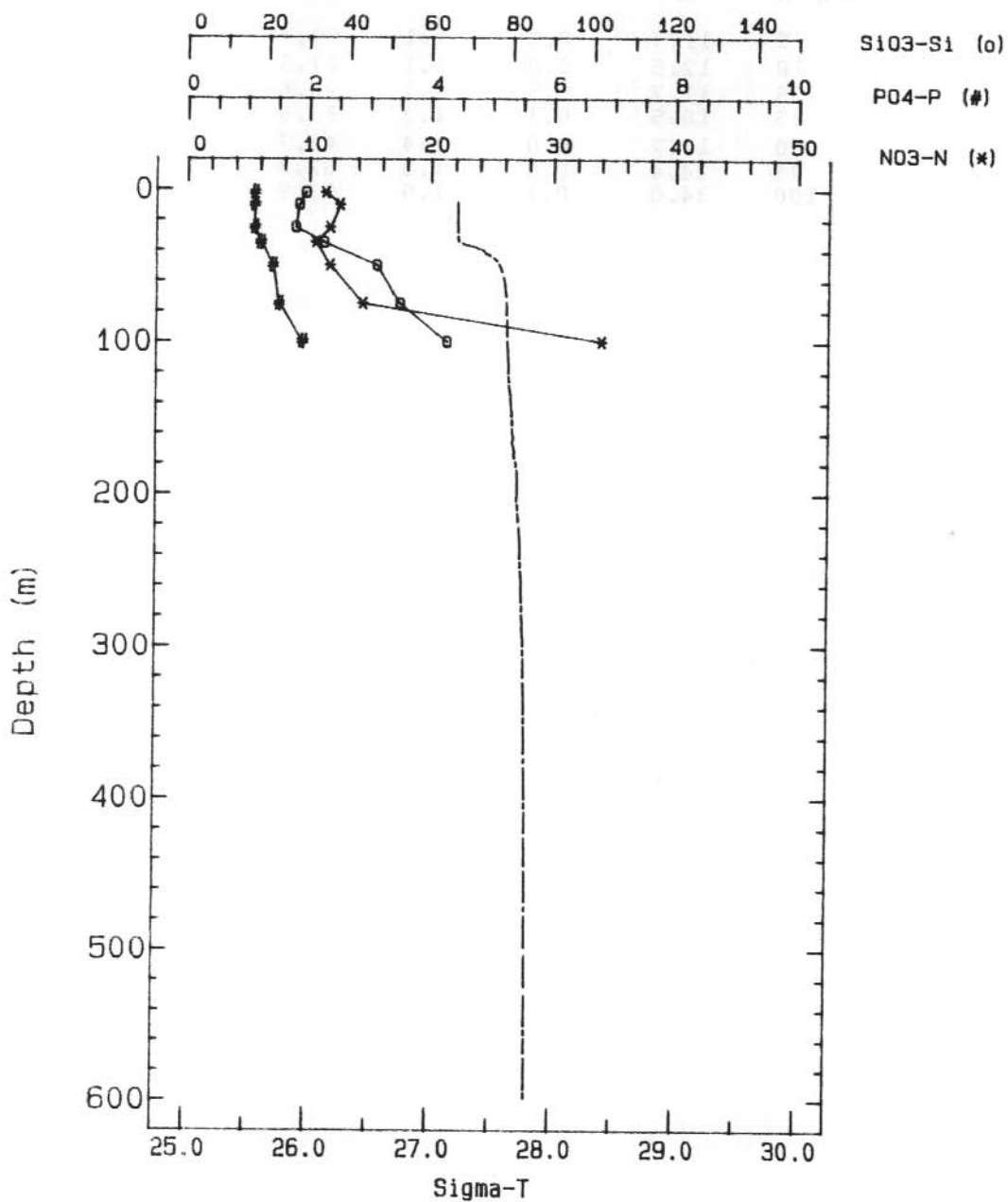
Cruise : SIBEX2
 Station number : 35
 Date : 15-JAN-1985 (DAY NUMBER 15)
 Start Time : 0837 GMT
 Ship : NELLA DAN
 Position : 66:00.00S 72:59.40E
 Cast Depth (m) : 2584
 Bottom Depth (m) : 2592

Depth	NO3	NO2	PO4	SiO3
2	11.3	0.1	1.1	29.1
10	12.5	0.0	1.1	27.5
25	11.7	0.3	1.1	26.6
35	10.5	0.1	1.2	33.6
50	11.7	0.0	1.4	46.7
75	14.4	0.0	1.5	52.3
100	34.0	0.1	1.9	63.9



SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 35
 15-JAN-1985 0837 GMT
 Lat 66:00.00S Lon 72:59.40E
 Depth: CTD 2584 m Bottom 2592 m

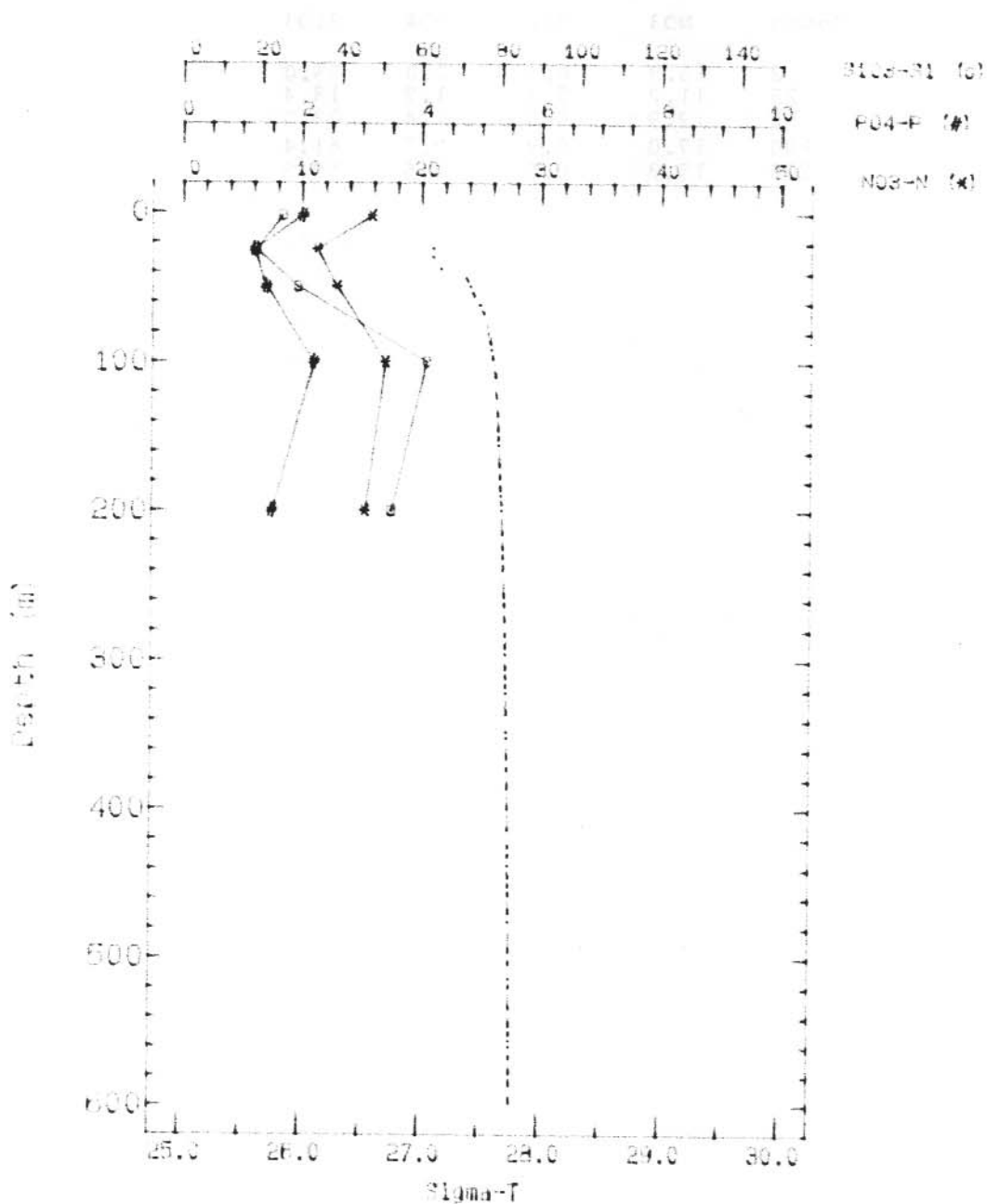


Cruise : SIBEX2
Station number : 45
Date : 19-JAN-1985 (DAY NUMBER 19)
Start Time : 0315 GMT
Ship : NELLA DAN
Position : 63:00.40S 77:59.70E
Cast Depth (m) : 612
Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	15.8	0.4	2.0	25.0
25	11.2	0.1	1.2	18.4
50	12.9	0.0	1.4	29.9
100	17.0	0.2	2.2	61.4
200	15.3	0.0	1.5	52.5

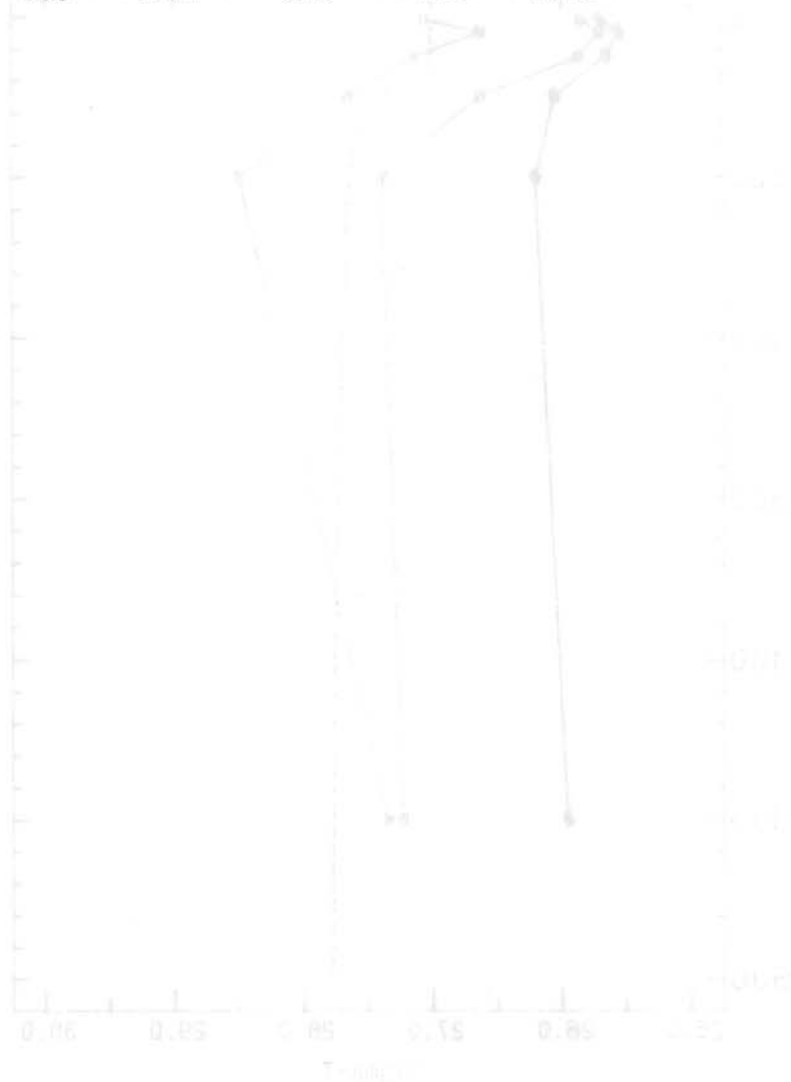
SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 45
 19-JAN-1985 0815 GMT
 Lat 68:00.409 Lon 77:59.70E
 Depth: STD 612 m Bottom 0 m



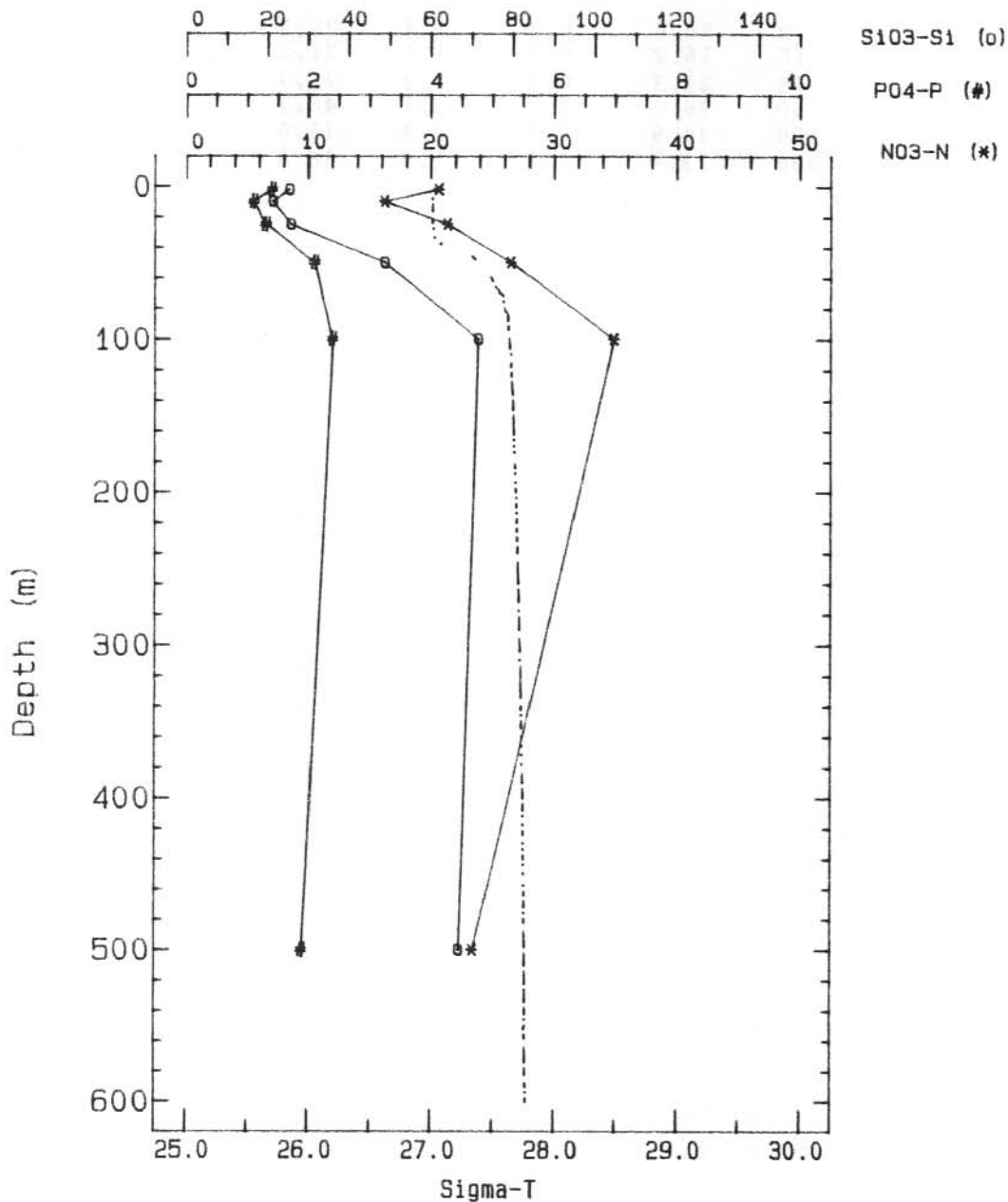
Cruise : SIBEX2
 Station number : 46
 Date : 19-JAN-1985 (DAY NUMBER 19)
 Start Time : 1232 GMT
 Ship : NELLA DAN
 Position : 64:00.00S 77:58.20E
 Cast Depth (m) : 608
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	20.6	0.2	1.4	25.3
10	16.2	0.2	1.1	21.2
25	21.3	0.3	1.3	25.7
50	26.5	0.2	2.1	48.7
100	34.9	0.1	2.4	71.6
500	23.4	0.0	1.9	66.8



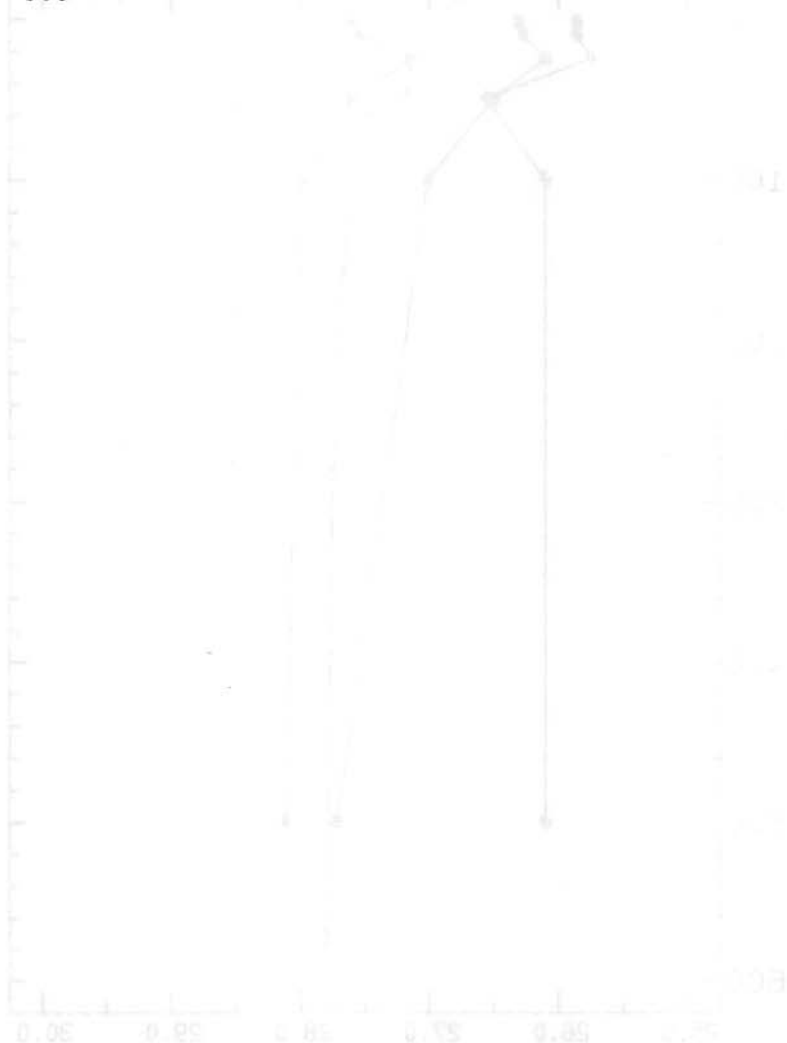
SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 46
 19-JAN-1985 1232 GMT
 Lat 64: 00.00S Lon 77: 58.20E
 Depth: CTD 608 m Bottom 0 m



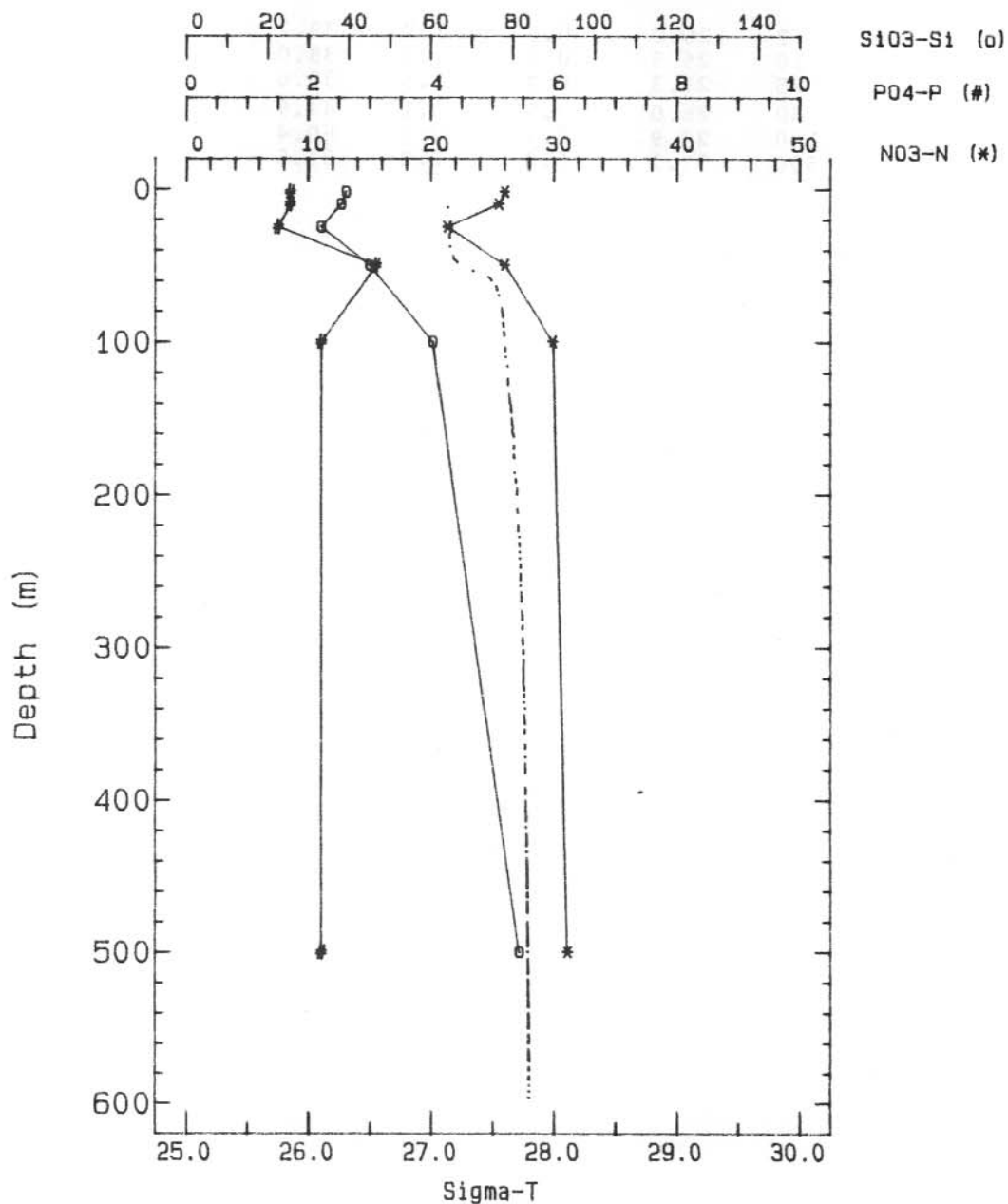
Cruise : SIBEX2
 Station number : 47
 Date : 19-JAN-1985 (DAY NUMBER 19)
 Start Time : 2038 GMT
 Ship : NELLA DAN
 Position : 65:00.00S 78:00.10E
 Cast Depth (m) : 610
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	26.0	0.5	1.7	39.2
10	25.5	0.3	1.7	38.0
25	21.3	0.4	1.5	33.0
50	26.0	0.5	3.1	44.9
100	29.9	0.1	2.2	60.4
500	31.1	0.0	2.2	81.5



SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 47
 19-JAN-1985 2038 GMT
 Lat 65:00.00S Lon 78:00.10E
 Depth: CTD 610 m Bottom 0 m



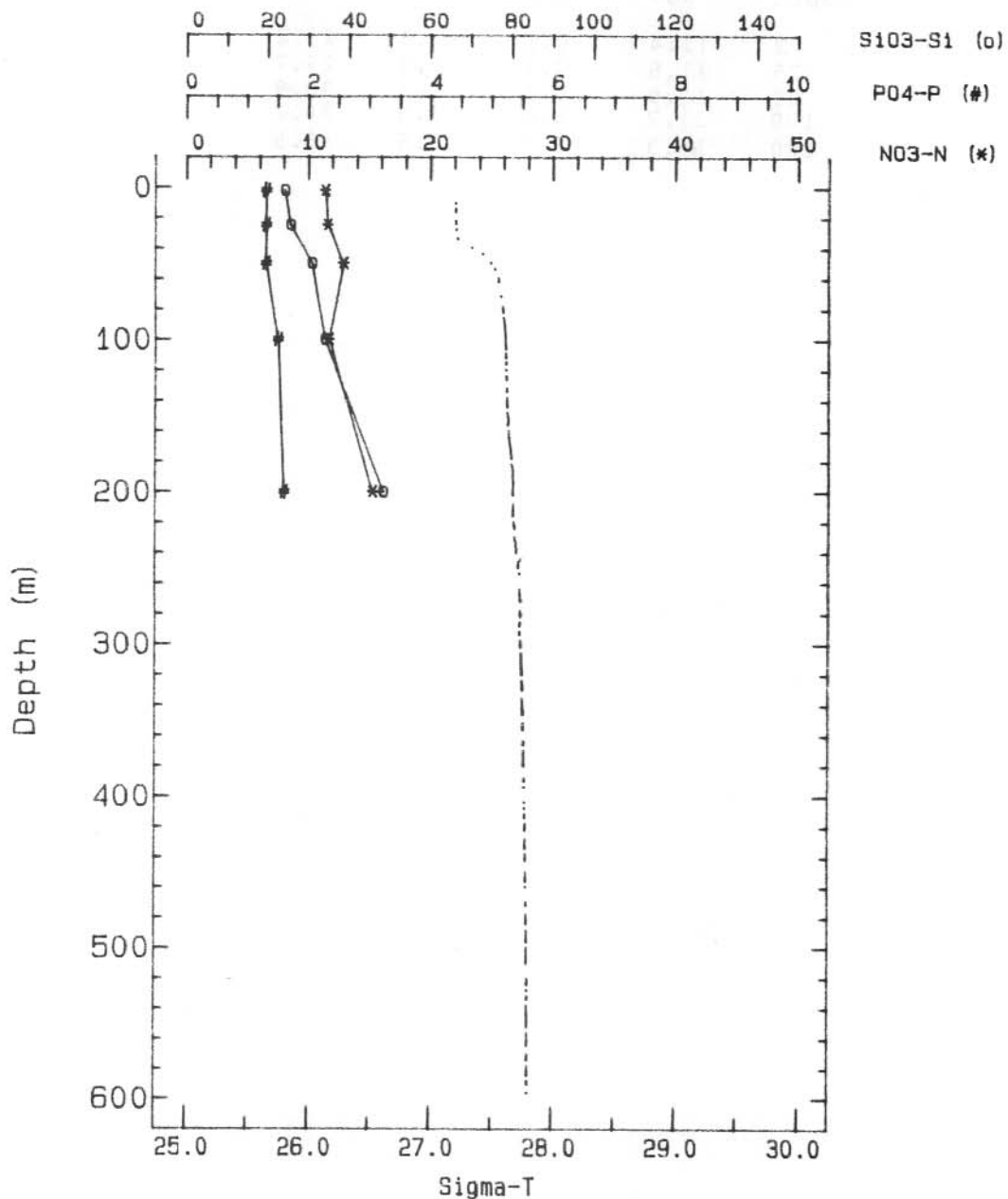
Cruise : SIBEX2
 Station number : 48
 Date : 20-JAN-1985 (DAY NUMBER 20)
 Start Time : 0424 GMT
 Ship : NELLA DAN
 Position : 66:00.60S 77:59.20E
 Cast Depth (m) : 614
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	11.4	0.1	1.3	24.2
25	11.6	0.4	1.3	25.7
50	12.9	0.1	1.3	30.9
100	11.7	0.0	1.5	34.2
200	15.3	0.1	1.6	48.6



SIBEX 2 NURIENTS - SIGMA-T

Cruise : SIBEX2 Station 48
 20-JAN-1985 0424 GMT
 Lat 66:00.60S Lon 77:59.20E
 Depth: CTD 614 m Bottom 0 m



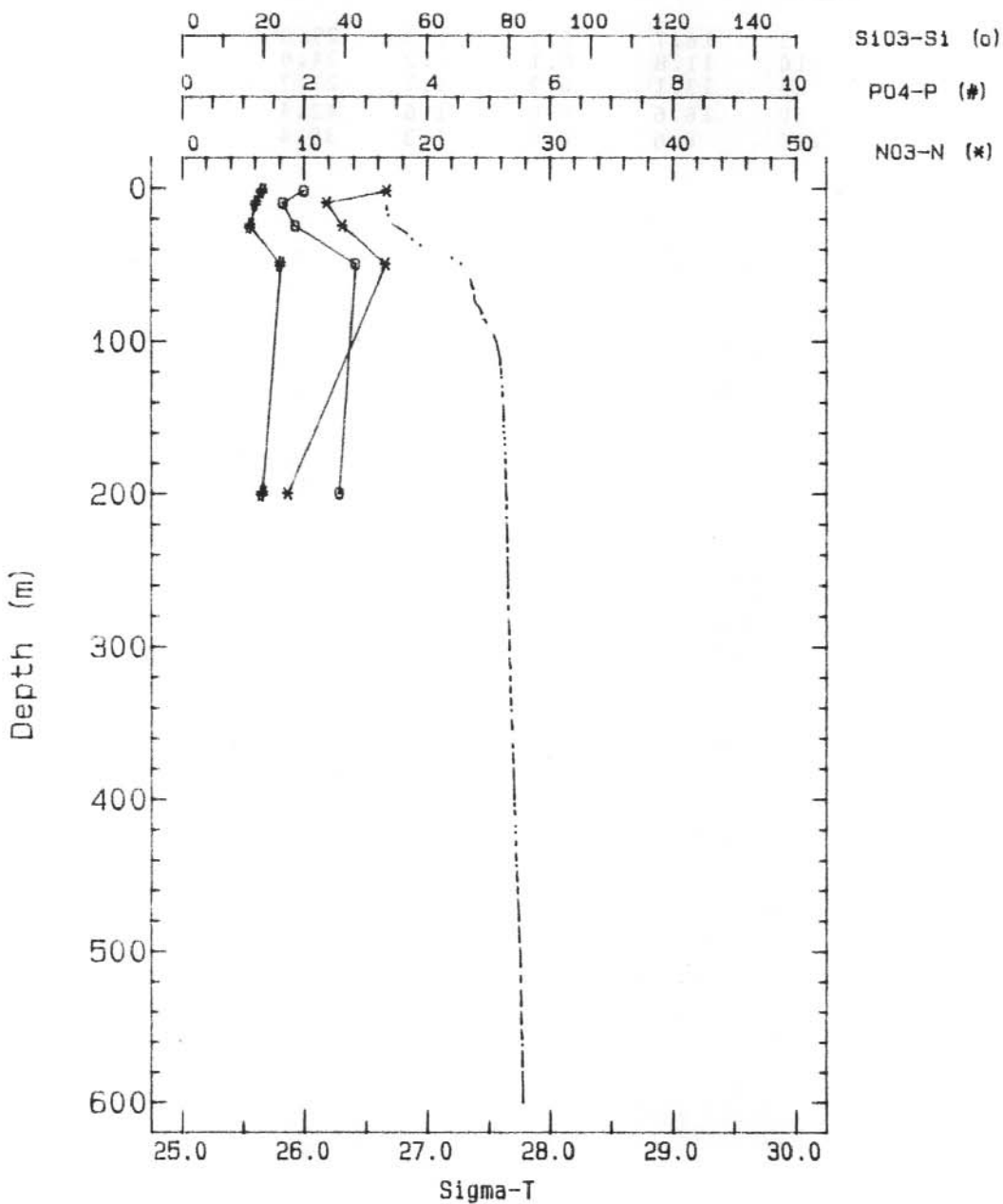
Cruise : SIBEX2
 Station number : 49
 Date : 20-JAN-1985 (DAY NUMBER 20)
 Start Time : 0948 GMT
 Ship : NELLA DAN
 Position : 66:33.59S 77:57.20E
 Cast Depth (m) : 610
 Bottom Depth (m) : 1200

Depth	NO3	NO2	PO4	SiO3
2	16.7	0.1	1.3	29.8
10	11.8	0.1	1.2	24.6
25	13.1	0.2	1.1	27.7
50	16.6	0.0	1.6	42.4
200	8.6	0.0	1.3	38.4



SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 49
 20-JAN-1985 0948 GMT
 Lat 63: 33.59S Lon 77: 57.20E
 Depth: CTD 610 m Bottom 1200 m



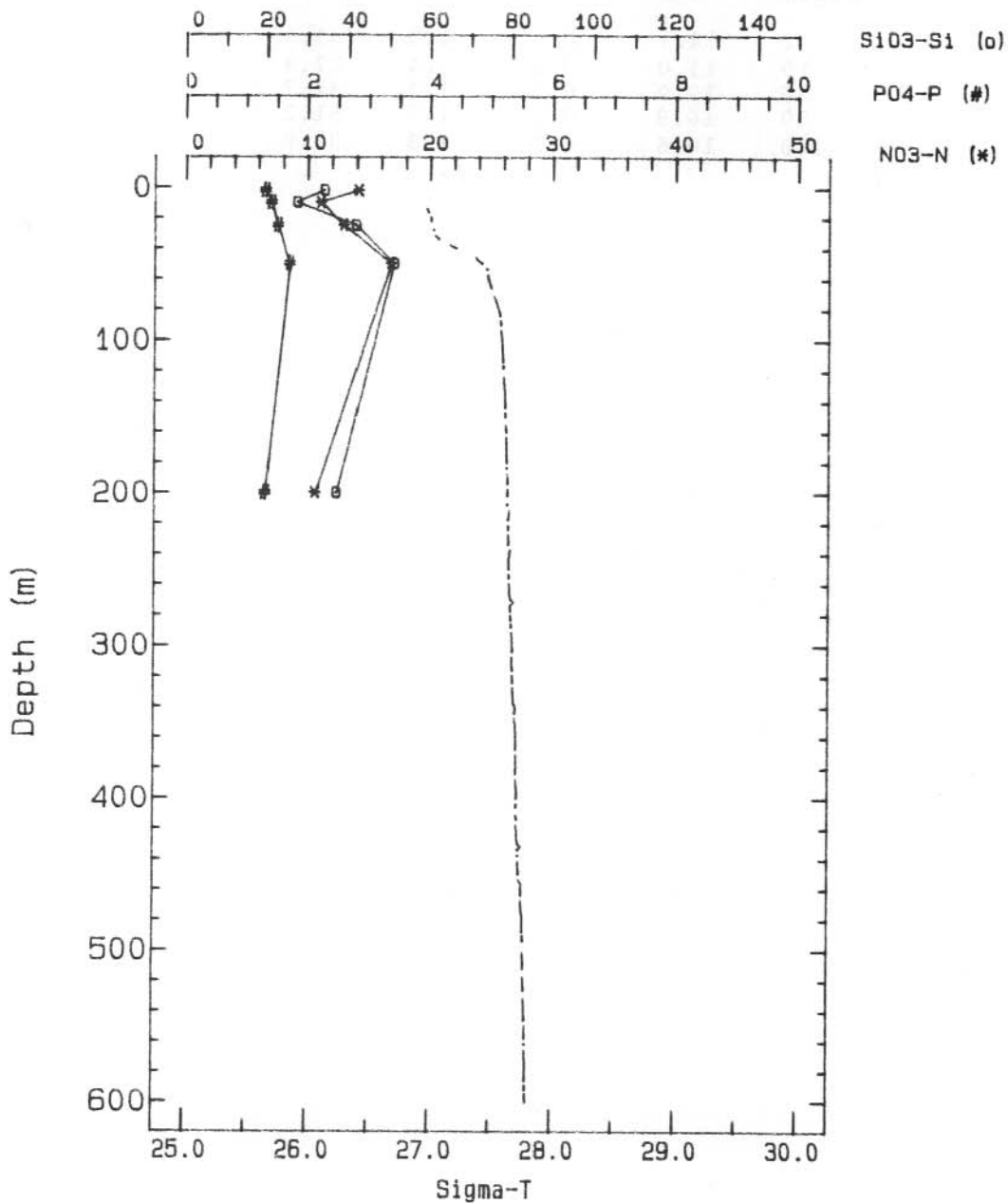
Cruise : SIBEX2
 Station number : 50
 Date : 21-JAN-1985 (DAY NUMBER 21)
 Start Time : 0412 GMT
 Ship : NELLA DAN
 Position : 65:17.20S 83:02.30E
 Cast Depth (m) : 608
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	14.1	0.0	1.3	33.9
10	11.0	0.0	1.4	27.3
25	12.9	0.1	1.5	41.7
50	16.8	0.1	1.7	51.2
200	10.6	0.0	1.3	37.0



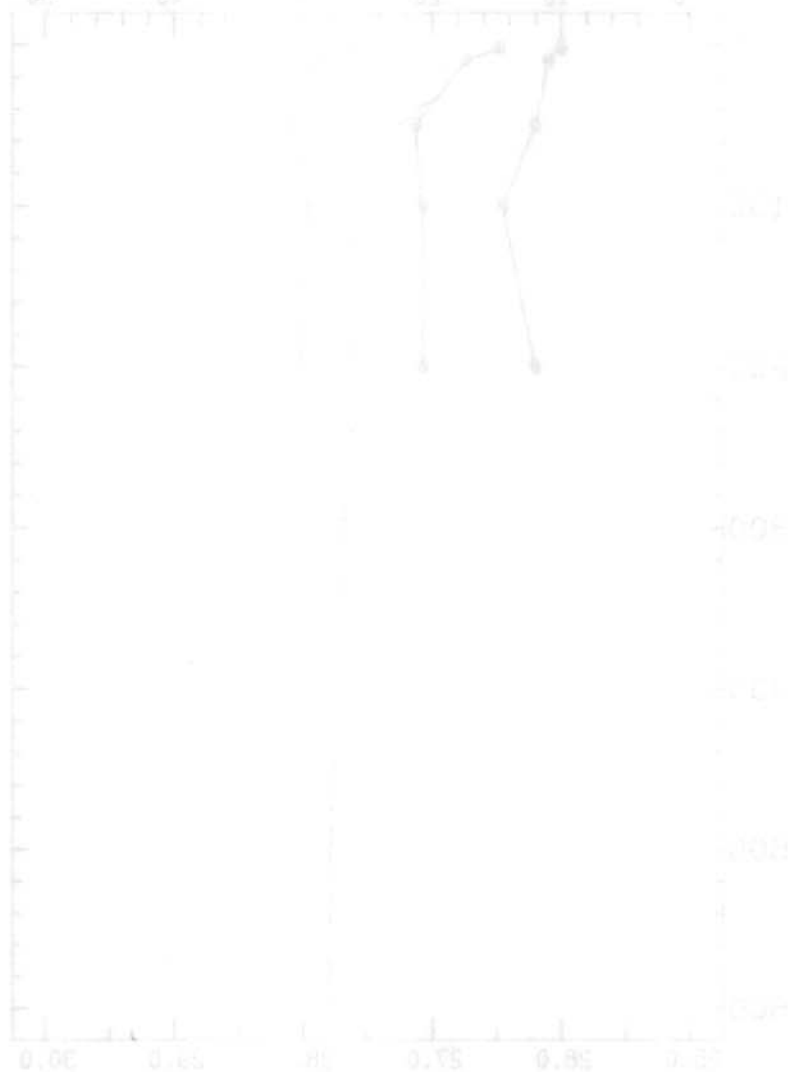
SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 50
 21-JAN-1985 0412 GMT
 Lat 65: 17.20S Lon 83: 02.30E
 Depth: CTD 608 m Bottom 0 m



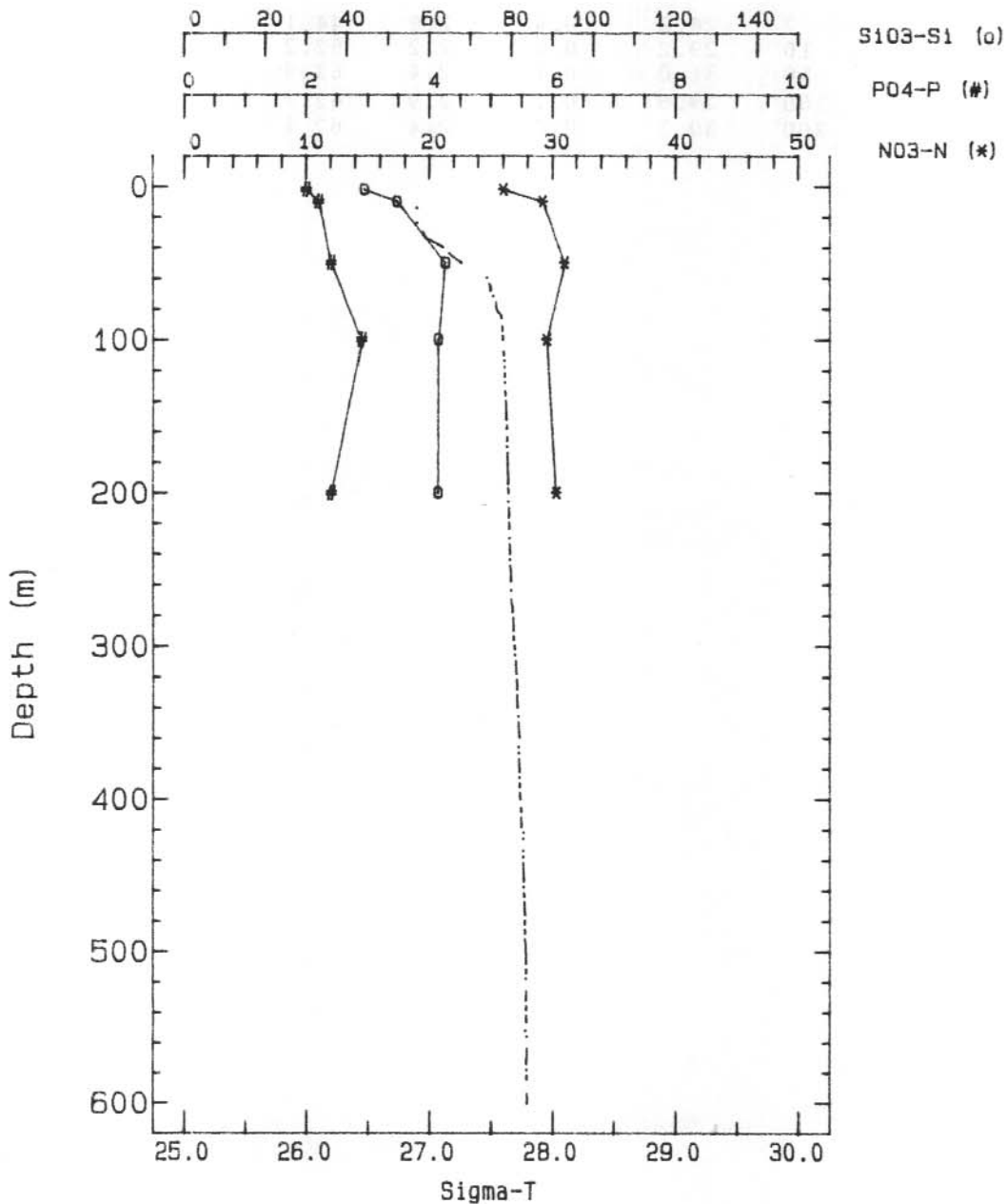
Cruise : SIBEX2
 Station number : 51
 Date : 21-JAN-1985 (DAY NUMBER 21)
 Start Time : 0735 GMT
 Ship : NELLA DAN
 Position : 64:59.70S 83:00.10E
 Cast Depth (m) : 608
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	26.0	0.4	2.0	44.1
10	29.2	0.1	2.2	52.2
50	31.0	0.1	2.4	63.9
100	29.5	0.1	2.9	62.2
200	30.3	0.0	2.4	62.1



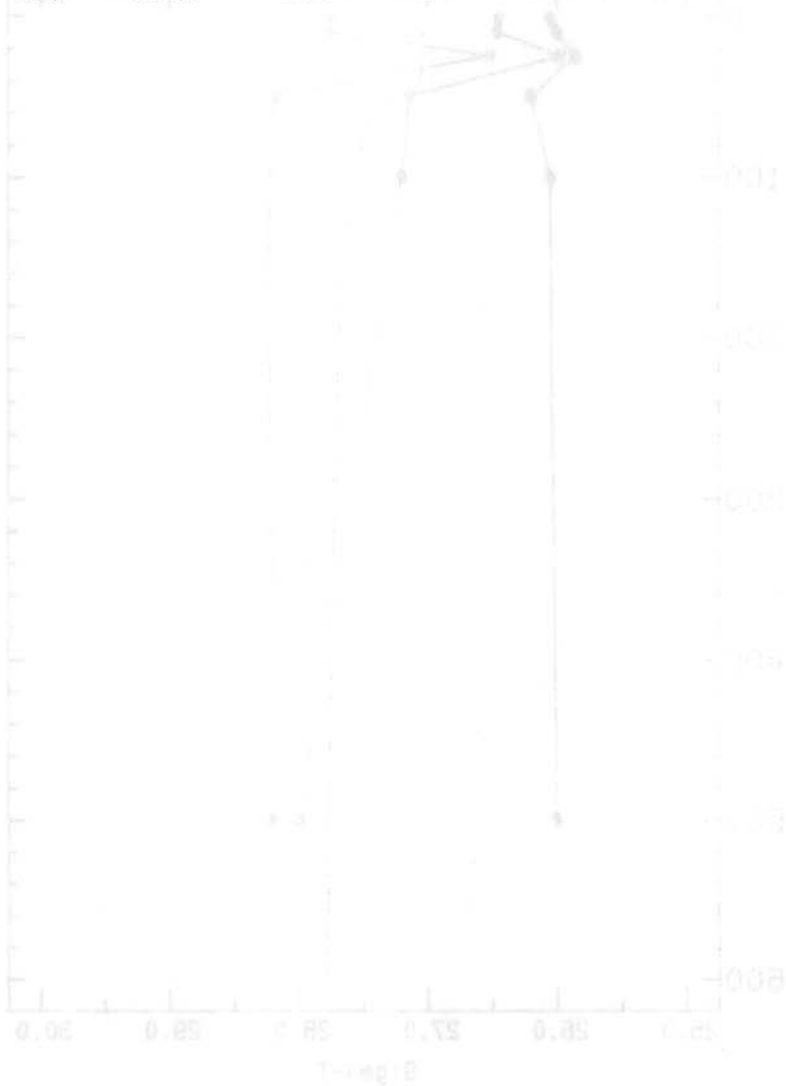
SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 51
 21-JAN-1985 0735 GMT
 Lat 64:59.70S Lon 83:00.10E
 Depth: CTD 608 m Bottom 0 m



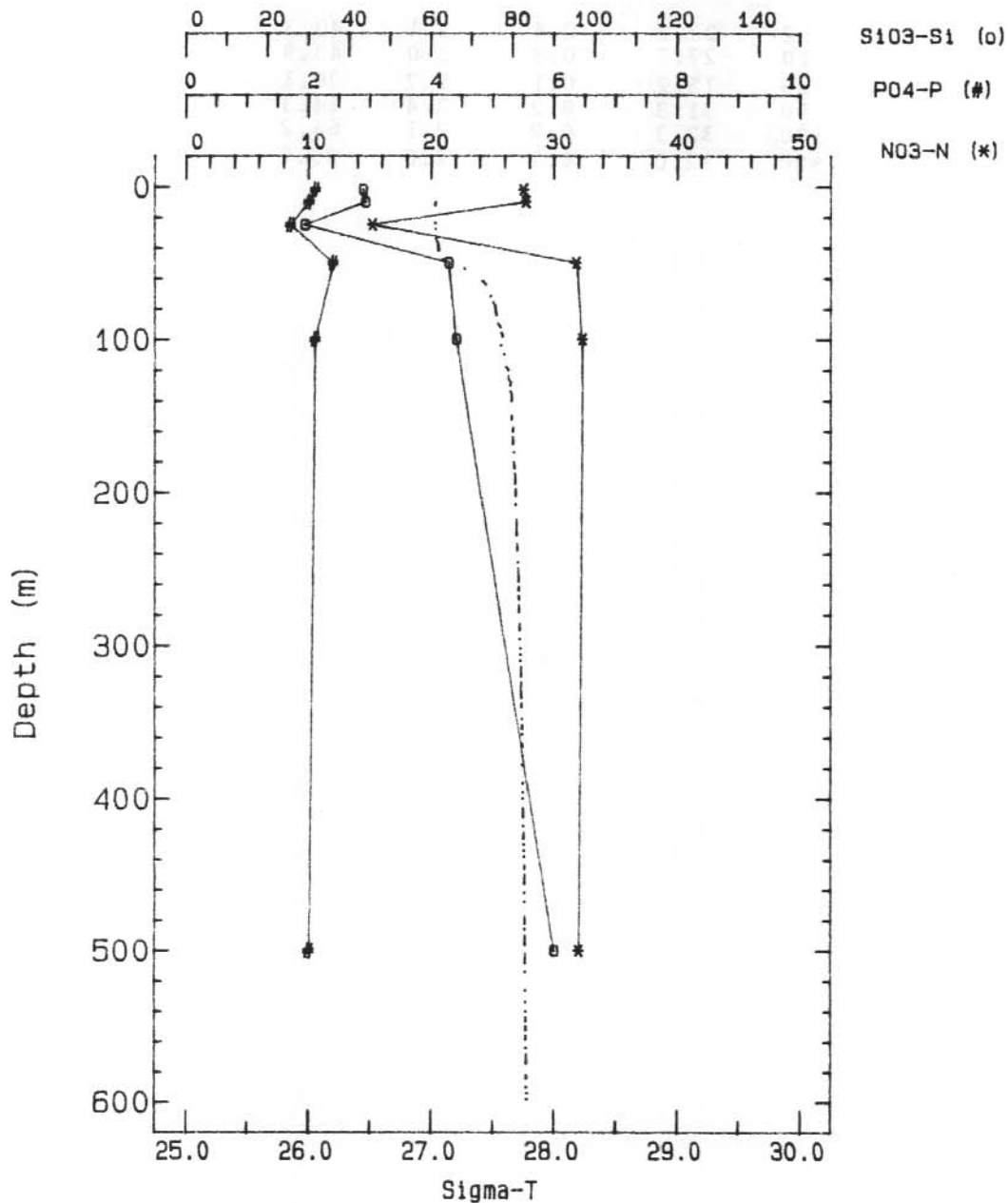
Cruise : SIBEX2
 Station number : 52
 Date : 21-JAN-1985 (DAY NUMBER 21)
 Start Time : 1757 GMT
 Ship : NELLA DAN
 Position : 63:59.90S 83:00.30E
 Cast Depth (m) : 612
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	27.5	0.4	2.1	43.3
10	27.7	0.3	2.0	43.9
25	15.2	0.1	1.7	29.1
50	31.8	0.2	2.4	64.3
100	32.3	0.2	2.1	66.2
500	32.0	0.1	2.0	90.1



SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 52
 21-JAN-1986 1757 GMT
 Lat 63: 59.90S Lon 83: 00.30E
 Depth: CTD 612 m Bottom 0 m



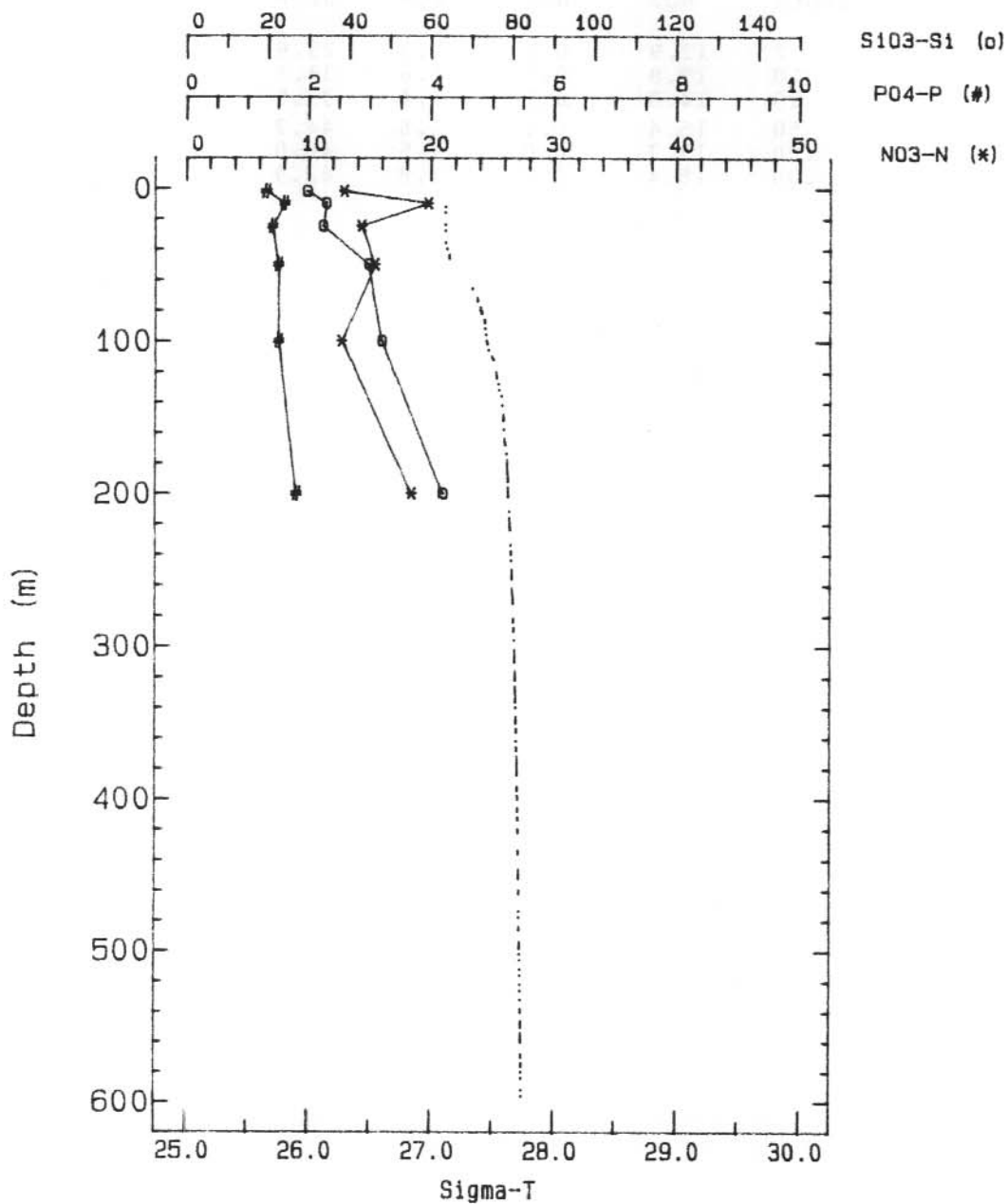
Cruise : SIBEX2
 Station number : 53
 Date : 22-JAN-1985 (DAY NUMBER : 22)
 Start Time : 0023 GMT
 Ship : NELLA DAN
 Position : 62:59.90S 83:00.20E
 Cast Depth (m) : 610
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	12.9	0.1	1.3	29.6
10	19.8	0.1	1.6	34.3
25	14.3	0.1	1.4	33.5
50	15.4	0.1	1.5	44.7
100	12.7	0.0	1.5	48.0
200	18.4	0.0	1.8	62.9



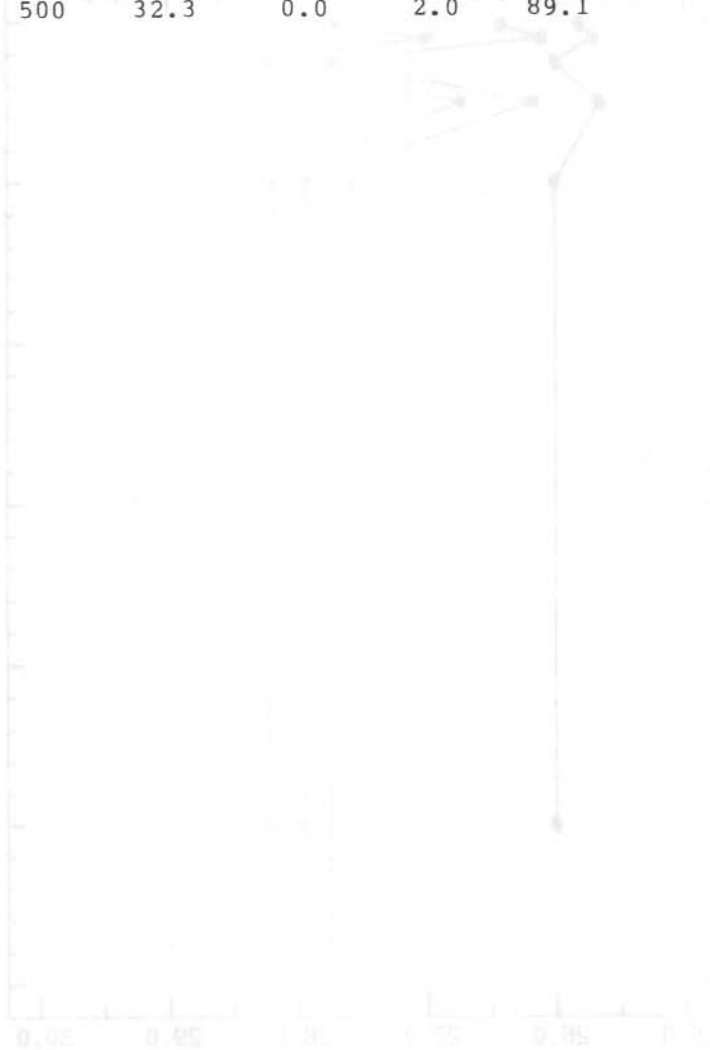
SIBEX 2 NUTRIENTS

Cruise : SIBEX2 Station 53
 22-JAN-1985 0023 GMT
 Lat 62: 59.90S Lon 83: 00.20E
 Depth: CTD 610 m Bottom 0 m



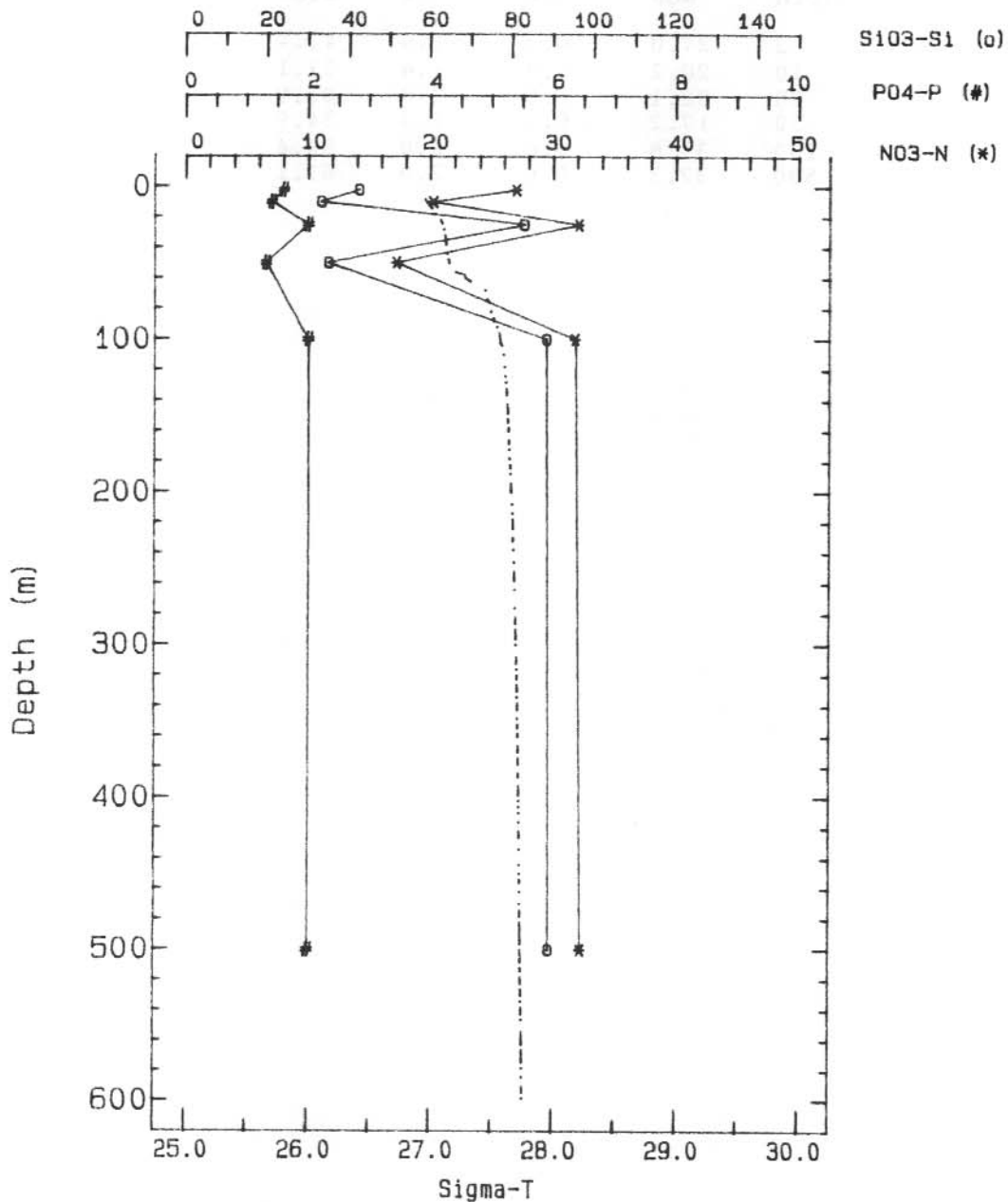
Cruise : SIBEX2
 Station number : 54
 Date : 22-JAN-1985 (DAY NUMBER 22)
 Start Time : 1323 GMT
 Ship : NELLA DAN
 Position : 61:59.30S 83:00.20E
 Cast Depth (m) : 608
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	27.0	0.2	1.6	42.4
10	20.2	0.2	1.4	33.1
25	32.1	0.0	2.0	82.9
50	17.2	0.1	1.3	34.9
100	31.8	0.0	2.0	88.4
500	32.3	0.0	2.0	89.1



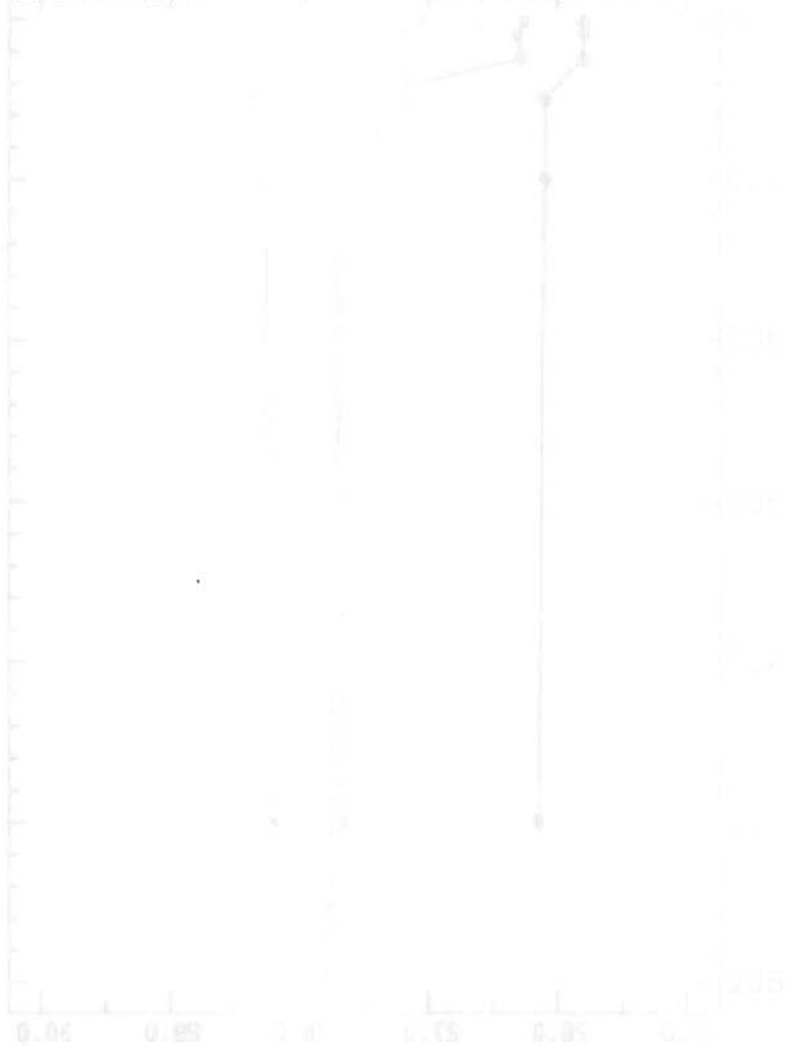
SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 54
 22-JAN-1985 1323 GMT
 Lat 61: 59.30S Lon 83: 00.20E
 Depth: CTD 608 m Bottom 0 m



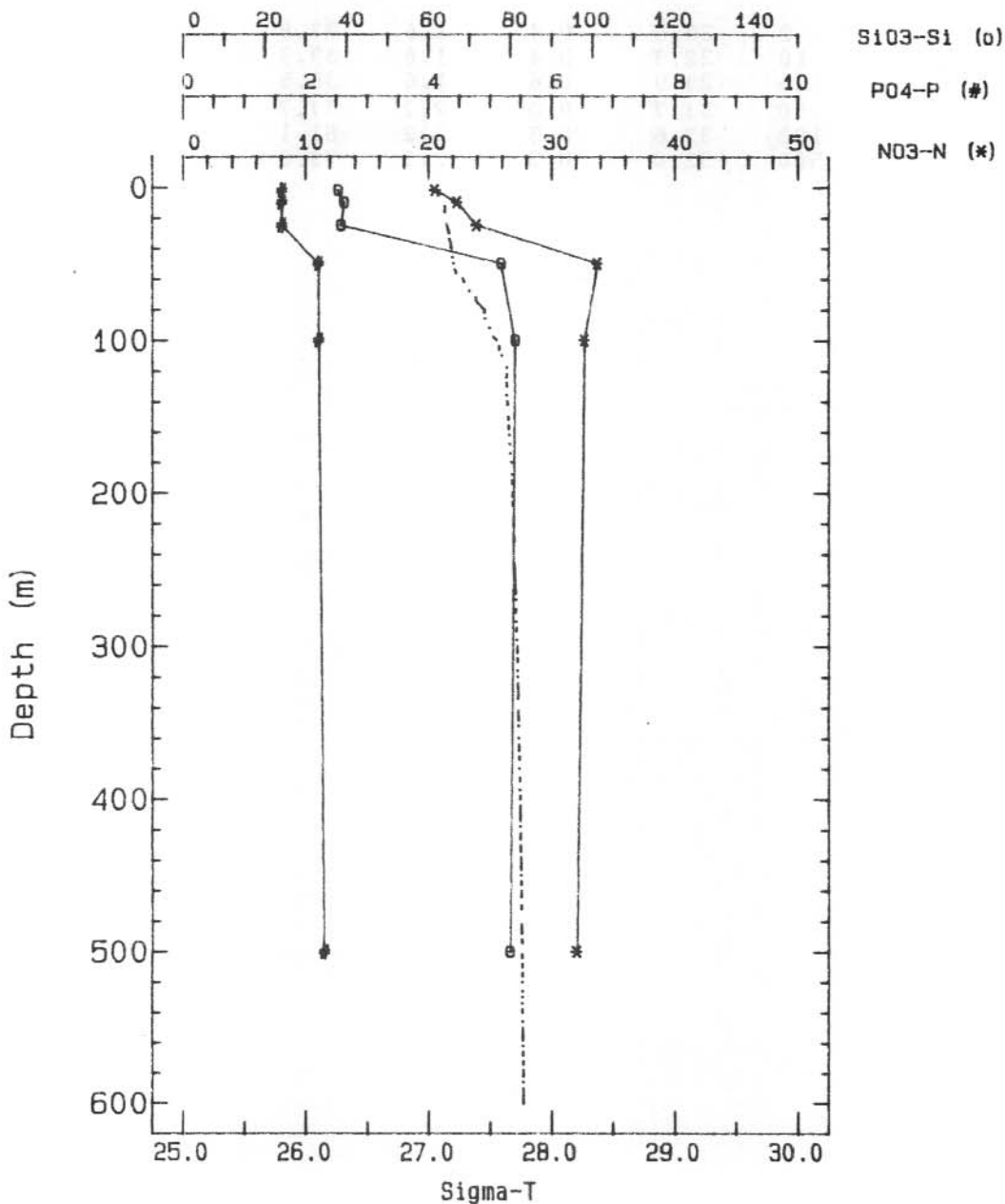
Cruise : SIBEX2
 Station number : 55
 Date : 22-JAN-1985 (DAY NUMBER 22)
 Start Time : 1917 GMT
 Ship : NELLA DAN
 Position : 60:59.80S 83:00.00E
 Cast Depth (m) : 608
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	20.5	0.4	1.6	37.8
10	22.3	0.4	1.6	39.3
25	23.9	0.6	1.6	38.5
50	33.7	0.0	2.2	77.7
100	32.6	0.3	2.2	81.1
500	32.0	0.2	2.3	79.8



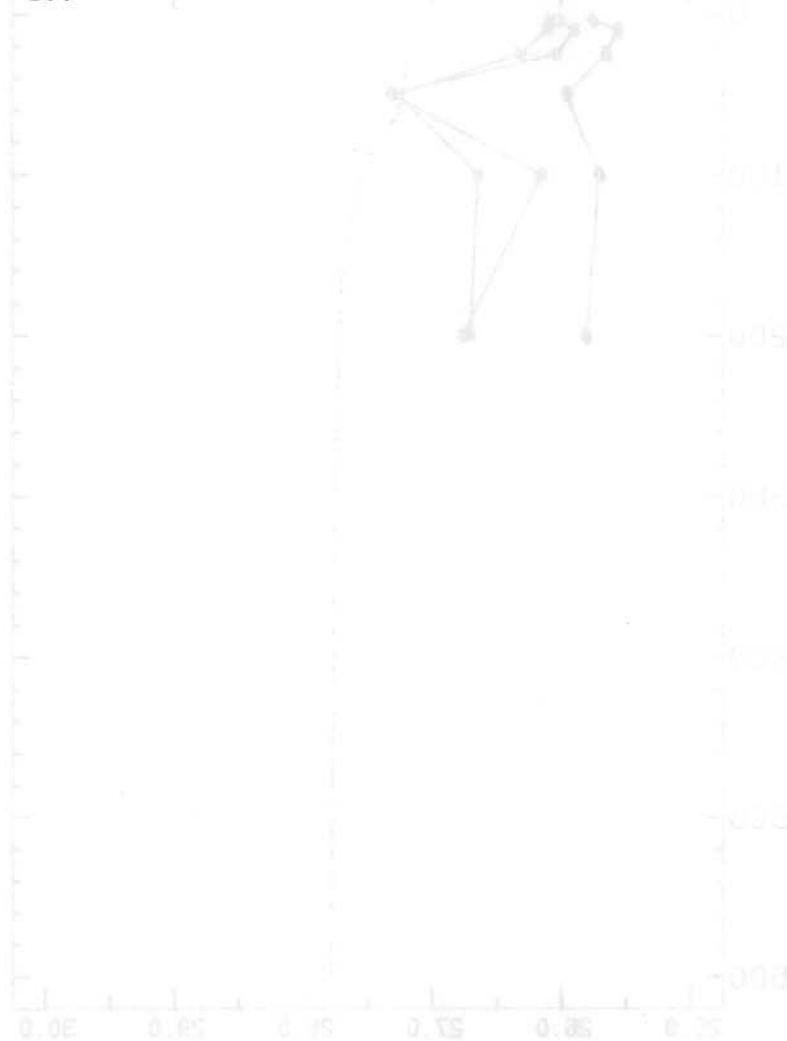
SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 55
 22-JAN-1985 1917 GMT
 Lat 60: 59.80S Lon 83: 00.00E
 Depth: CTD 608 m Bottom 0 m



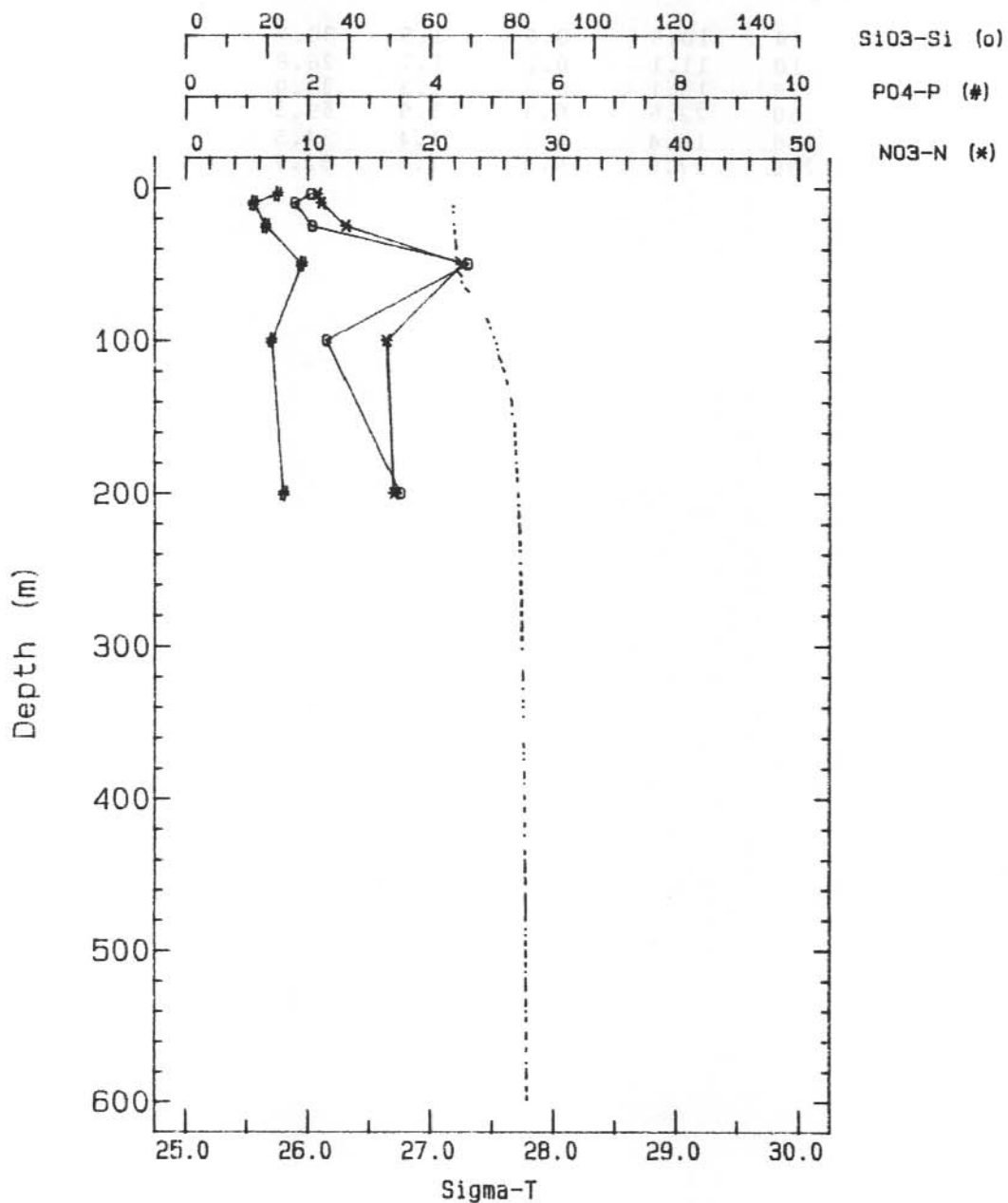
Cruise : SIBEX2
 Station number : 56
 Date : 23-JAN-1985 (DAY NUMBER 23)
 Start Time : 0133 GMT
 Ship : NELLA DAN
 Position : 60:00.10S 82:58.90E
 Cast Depth (m) : 614
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
4	10.8	0.6	1.5	30.7
10	11.1	0.2	1.1	26.8
25	13.1	0.4	1.3	31.0
50	22.6	0.3	1.9	69.3
100	16.4	0.3	1.4	34.5
200	17.0	0.3	1.6	52.7



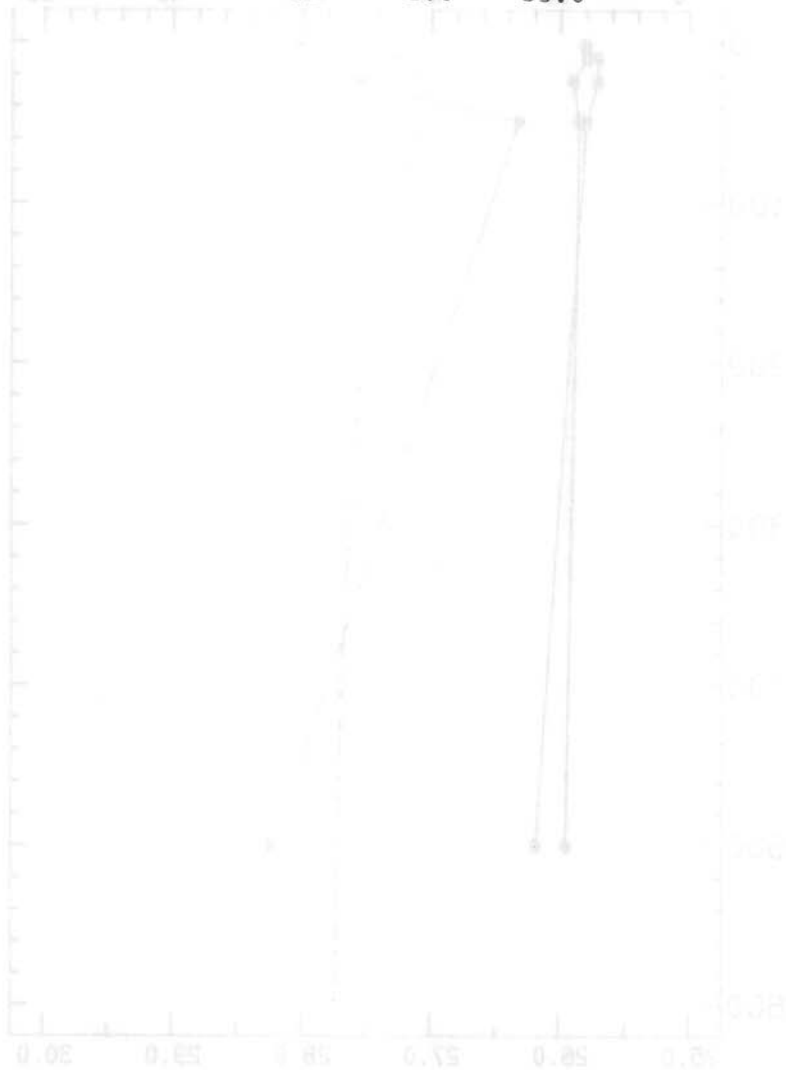
SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 56
 23-JAN-1985 0133 GMT
 Lat 60:00.10S Lon 82:58.90E
 Depth: CTD 614 m Bottom 0 m



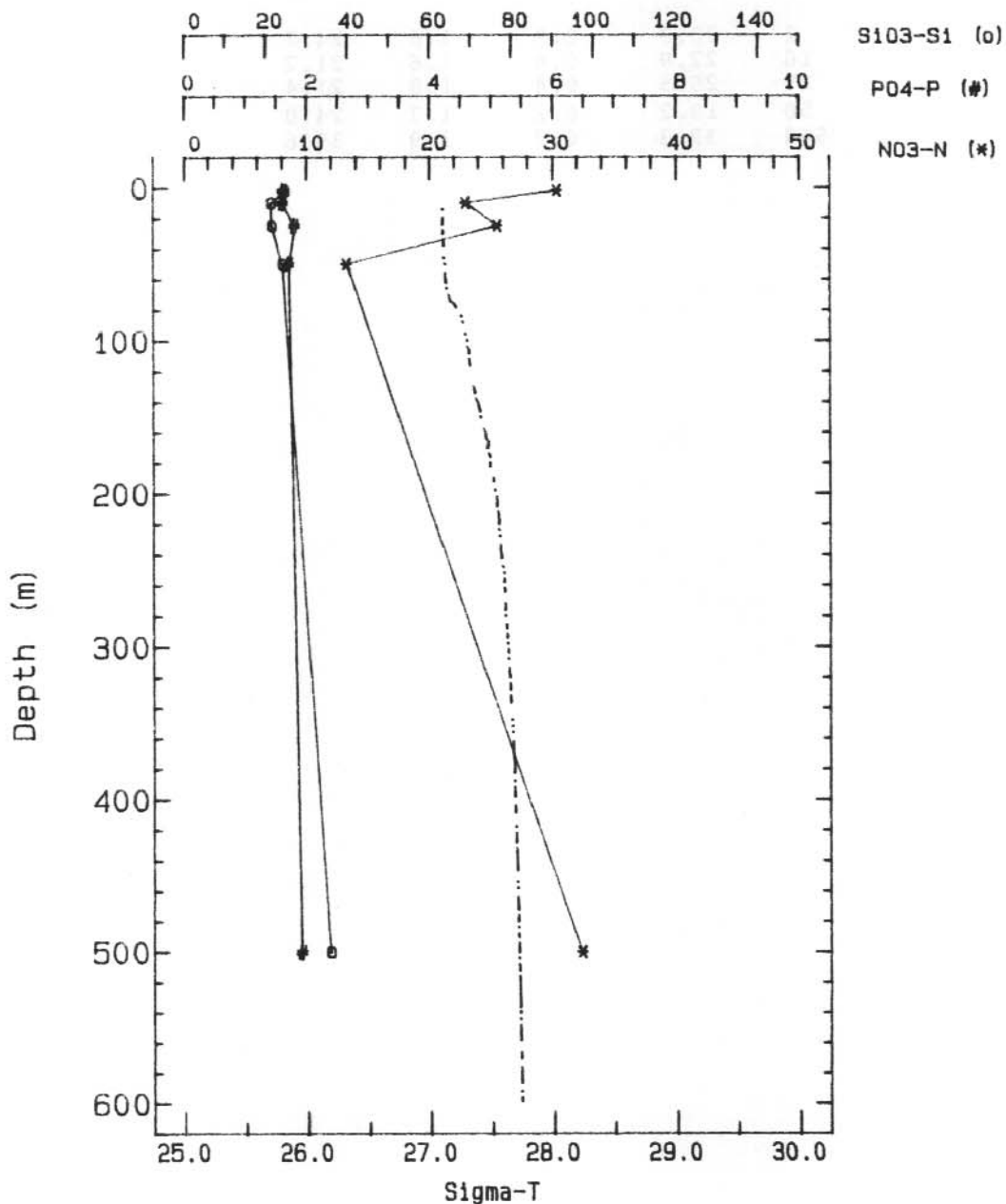
Cruise : SIBEX2
 Station number : 57
 Date : 23-JAN-1985 (DAY NUMBER 23)
 Start Time : 1620 GMT
 Ship : NELLA DAN
 Position : 60:00.10S 88:00.30E
 Cast Depth (m) : 608
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	30.3	0.9	1.6	24.7
10	22.9	0.4	1.6	21.2
25	25.5	0.4	1.8	21.4
50	13.2	0.2	1.7	24.0
500	32.3	0.2	1.9	35.6



SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 57
 23-JAN-1985 1620 GMT
 Lat 60:00.10S Lon 88:00.30E
 Depth: CTD 608 m Bottom 0 m

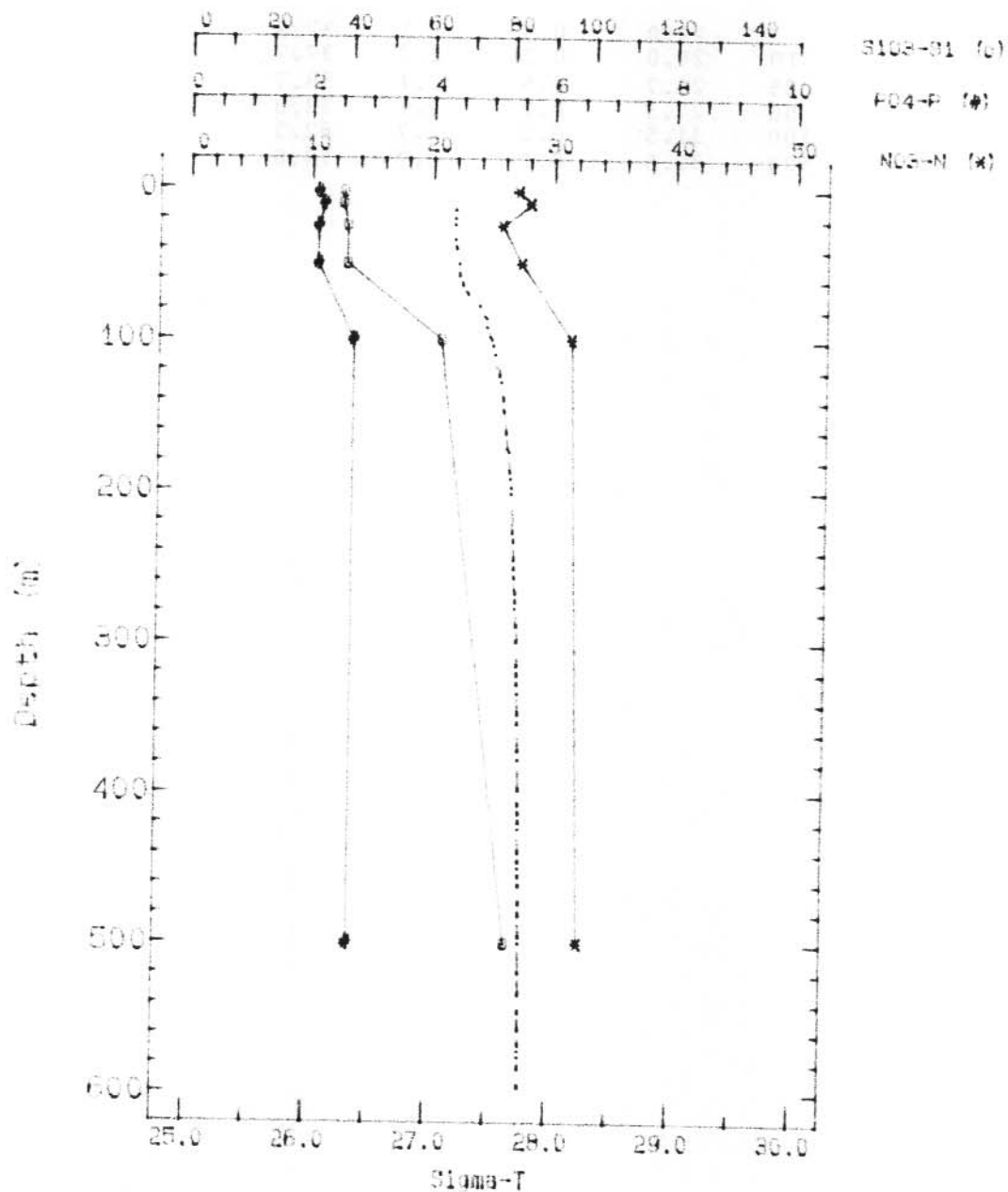


Cruise : SIBEX2
Station number : 58
Date : 23-JAN-1985 (DAY NUMBER 23)
Start Time : 2359 GMT
Ship : NELLA DAN
Position : 60:59.80S 88:00.40E
Cast Depth (m) : 608
Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	27.0	0.5	2.1	37.9
10	28.0	0.2	2.2	37.7
25	25.7	0.5	2.1	38.7
50	27.3	0.2	2.1	38.8
100	31.5	0.2	2.7	62.3
500	32.5	0.2	2.7	79.6

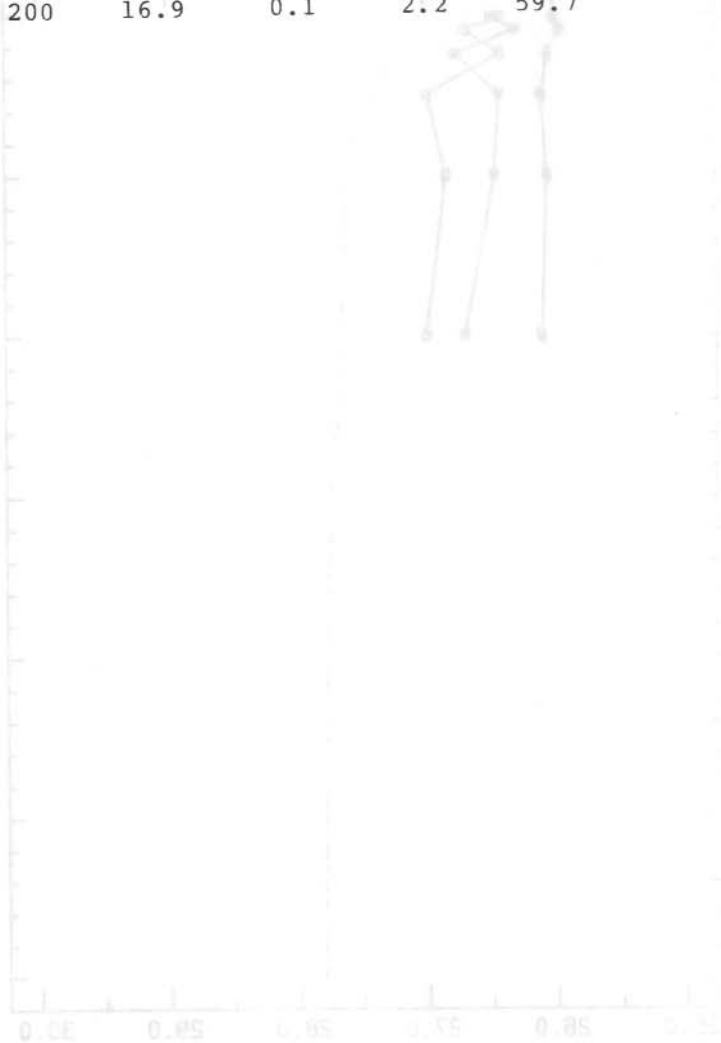
SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 58
 23-JAN-1985 2339 GMT
 Lat 60:59.80S Lon 28:00.40E
 Depth: CTD 605 m Bottom: 0 m



Cruise : SIBEX2
 Station number : 59
 Date : 24-JAN-1985 (DAY NUMBER 24)
 Start Time : 0607 GMT
 Ship : NELLA DAN
 Position : 62:00.40S 87:59.80E
 Cast Depth (m) : 610
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	14.9	0.2	2.0	42.2
10	12.9	0.2	1.9	50.5
25	17.6	0.1	2.1	42.5
50	14.2	0.3	2.2	59.4
100	14.6	0.0	2.1	55.0
200	16.9	0.1	2.2	59.7



SIBEX 2 NUTRIENTS - SIGMA-T

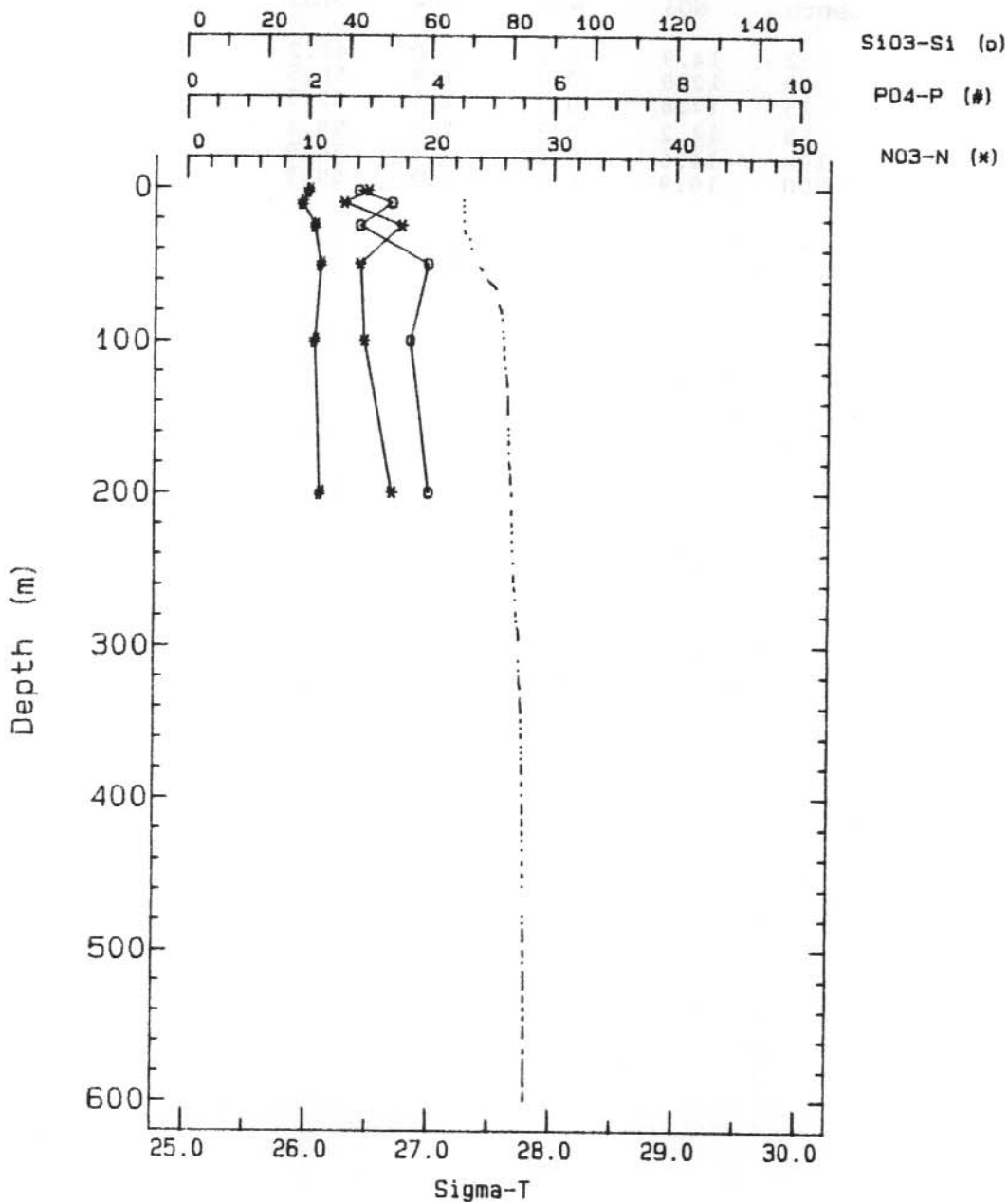
Cruise: SIBEX2 Station: 59

24 JAN 1985 0607 GMT

Latitude : 62: 00.40S

Longitude: 87: 59.80E

Depth: CTD 610 m Bottom NR



Cruise : SIBEX2
 Station number : 60
 Date : 24-JAN-1985 (DAY NUMBER 24)
 Start Time : 1212 GMT
 Ship : NELLA DAN
 Position : 62:59.90S 87:59.80E
 Cast Depth (m) : 604
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	28.5	0.3	2.4	58.6
10	27.1	0.2	2.4	58.5
33	28.2	0.2	2.5	59.3
50	26.3	0.0	2.5	64.5
100	31.7	0.1	2.7	83.7
500	19.2	0.0	2.3	77.6



SIBEX 2 NUTRIENTS - SIGMA-T

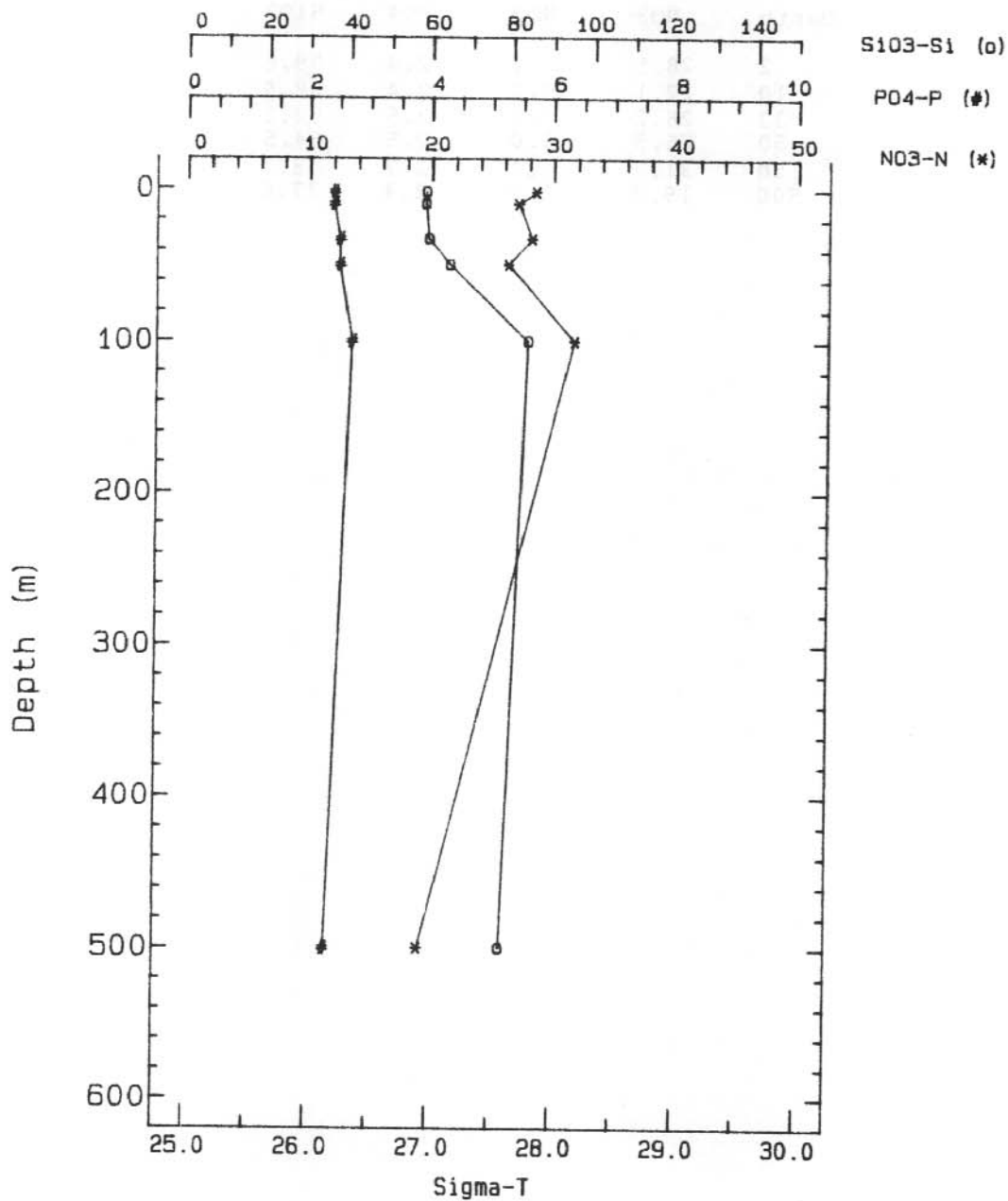
Cruise: SIBEX2 Station: 60

24 JAN 1985 1212 GMT

Latitude : 62:59.90S

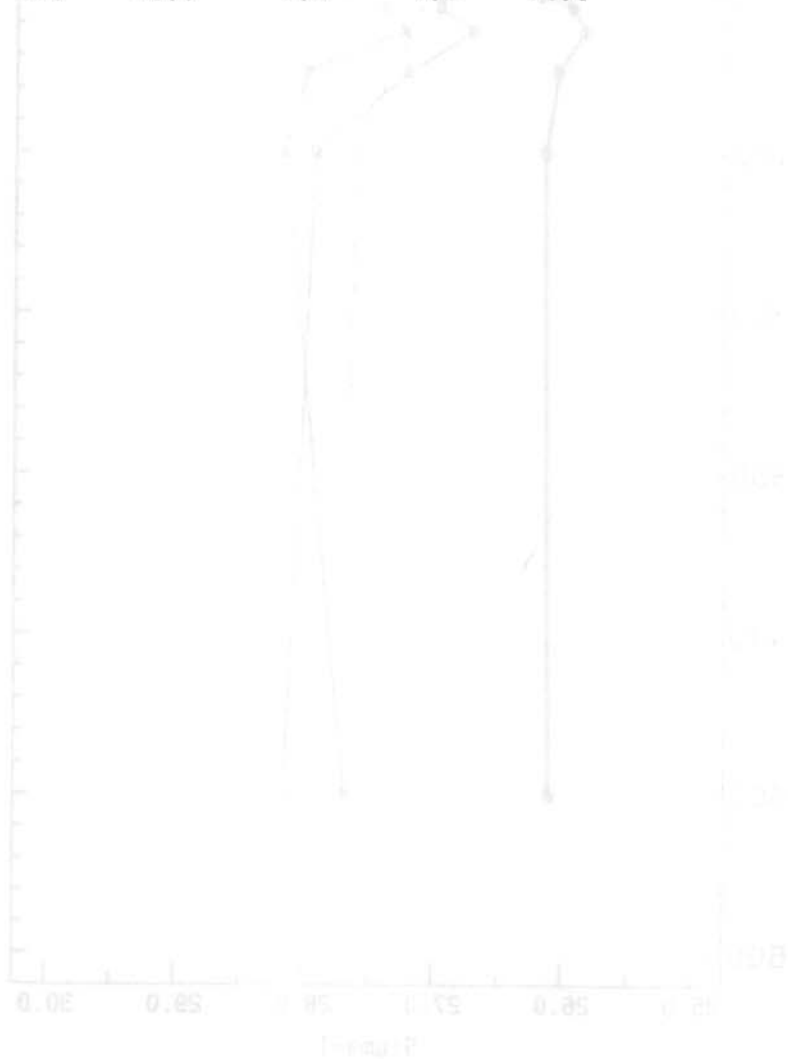
Longitude: 87:59.80E

Depth: CTD 604 m Bottom NR



Cruise : SIBEX2
 Station number : 61
 Date : 24-JAN-1985 (DAY NUMBER 24)
 Start Time : 2009 GMT
 Ship : NELLA DAN
 Position : 64:00.00S 88:00.00E
 Cast Depth (m) : 266
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	28.5	0.1	2.4	58.7
10	23.8	0.3	1.9	59.1
25	22.4	0.0	1.7	51.2
50	30.0	0.3	2.1	66.1
100	31.7	0.1	2.3	87.9
500	26.8	0.2	2.2	94.6



SIBEX 2 NUTRIENTS - SIGMA-T

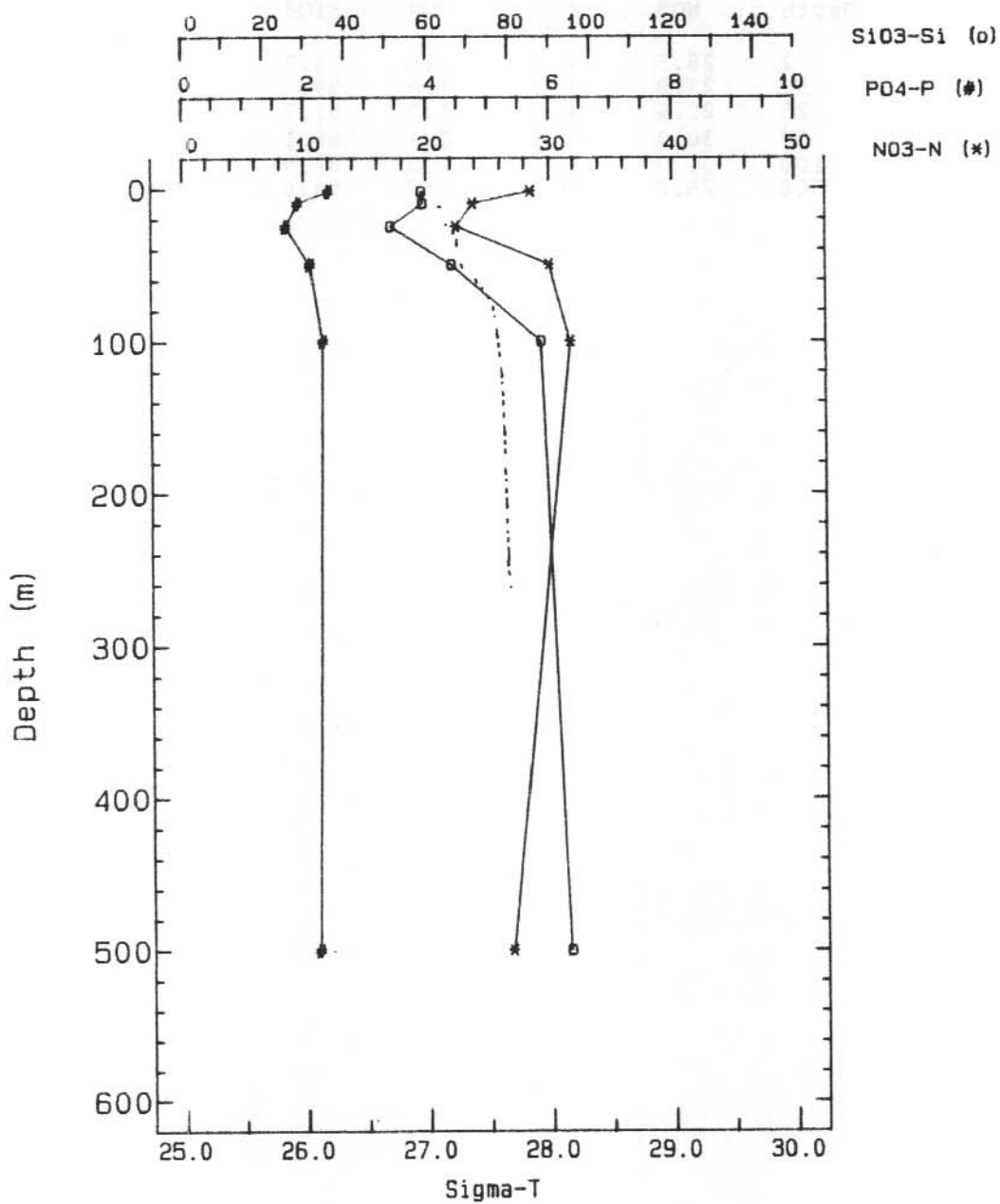
Cruise: SIBEX2 Station: 61

24 JAN 1985 2009 GMT

Latitude : 64:00.00S

Longitude: 88:00.00E

Depth: CTD 266 m Bottom NR



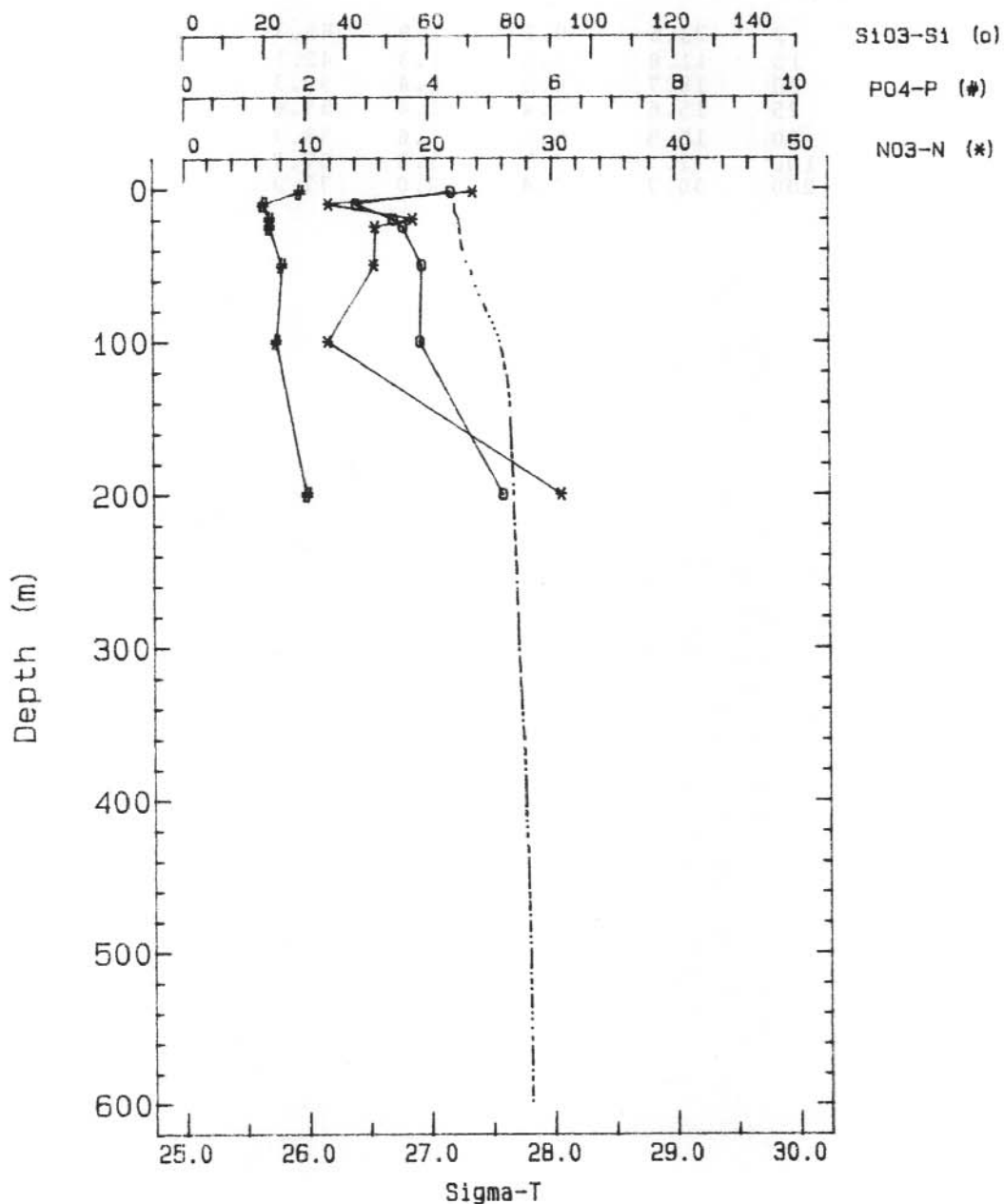
Cruise : SIBEX2
 Station number : 62
 Date : 25-JAN-1985 (DAY NUMBER 25)
 Start Time : 0211 GMT
 Ship : NELLA DAN
 Position : 64:58.10S 87:58.10E
 Cast Depth (m) : 610
 Bottom Depth (m) : Not Recorded

Depth	NO3	NO2	PO4	SiO3
2	23.6	0.3	1.9	65.3
10	11.8	0.3	1.3	42.1
20	18.7	0.2	1.4	51.3
25	15.6	0.4	1.4	53.6
50	15.5	0.1	1.6	58.3
100	11.7	0.7	1.5	57.7
200	30.7	0.4	2.0	77.9



SIBEX 2 NUTRIENTS - SIGMA-T

Cruise : SIBEX2 Station 62
 25-JAN-1985 0211 GMT
 Lat 64: 58.10S Lon 87: 58.10E
 Depth: CTD 610 m Bottom 0 m



ACKNOWLEDGMENTS

The water samples were collected by Dr Harvey Marchant, Dr Simon Wright and Malcolm Robb. Eric Woehler processed the CTD data. Dr David Watts developed the plotting software.

