

OCEANOGRAPHIC DATA OF THE 27TH JAPANESE ANTARCTIC
RESEARCH EXPEDITION FROM NOVEMBER 1985 to APRIL 1986

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This report presents the data of the oceanographic observations on board the icebreaker Shirase and the tidal observation at Syowa Station. The oceanographic observations were carried out in the summer mission of the 27th Japanese Antarctic Research Expedition (JARE-27) in 1985-1986, and the tidal observation was carried out in the winter mission of JARE-26 in 1984-1985.

1. The Oceanographic Observations

Figure 1 shows the track chart of the icebreaker Shirase from November 14, 1985 to April 20, 1986. The surface observations, expendable bathythermograph (XBT) observations and serial observations were made during the cruise.

The details of these observations are given in the following:

(1) The surface observation

Surface temperature measurement and surface water sampling for chemical analyses were made twice a day (at 0800 and 1900 local time) during the cruise, and an additional observation at 1300 LT was made in the Southern Ocean *en route* from Fremantle to Mauritius. The results are given in Table 1 and Figs. 2-1, 2-2, 3-1 and 3-2.

(2) The XBT observation

The expendable bathythermograph (XBT) observation was made in the Southern Ocean *en route* from Fremantle to Mauritius. Locations of the stations are shown in Fig. 1. The results are given in Table 2, and Figs. 4 and 5.

(3) The CTD observation

The conductivity temperature and depth profiling system (CTD) observation was made in the Southern Ocean *en route* from ice edge to Mauritius. The sensor is portable CSTD system Model 8770 (Guildine instruments). Locations of the stations are shown in Fig. 1. The results are given in Table 3.

(4) The serial observation

The serial observation was made at 26 stations (see Fig. 1). The results together with meteorological data are given in Table 4, which also includes interpolated and computed values of temperature, practical salinity, sigma-t and dynamic depth anomalies at standard depths.

(5) Chemical analyses of sea water

The following methods and instrument were used for chemical analyses.

Practical salinity	: Inductive salinometer (Auto-lab Model 601 MK III)
pH	: Digital pH meter (Denki Kagaku Keiki Co. HG-3)
Dissolved oxygen	: The Winkler's method with a Metrhom Model E 415-20 S titrator
Phosphate-P *	: Molybdenum blue method
Silicate-Si *	: Molybdenum yellow method
Nitrate-N *	: Modified Morris and Riley method
Nitrite-N *	: Sulphanilamide and N-(1-naphtyl)-ethylene-diamine Dihydrochloride were used as reagents.
Ammonium-N *	: Indophenol method
Petroleum oil	: Integrated Ocean Service System method
Cadmium, Mercury	: Japan Hydrographic Department method
Copper, Zinc	
Cesium 137	: Japan Hydrographic Department method
Strontium 90	

(* The nutrient matters were measured with a Shimadzu Model UV-210A spectrophotometer with the auto flow cell system.)

The results of petroleum oil, cadmium, mercury, copper and zinc concentrations are given in Table 5. Cesium 137 and strontium 90 concentrations are given in Table 6.

2. Tidal Observation

The tidal observation at Syowa Station has been carried out since 1965. At present, a pressure-type tide gauge with a straingauge as the pressure sensor (Kyowa Shoko Co. SWL-7) is operated. The sensor of the tide gauge is placed in the Nisi-no-ura Cove on East Ongul Island, and the recorder is set in the Earth Science Laboratory. Table 7 shows hourly, daily mean and monthly mean values from January 1985 to January 1986.

Acknowledgment

The authors are indebted to Prof. Y. Yoshida (leader of JARE-27 National Institute of Polar Research) and the members of JARE-27 for their kind support and advice. Thanks are due to Captain A. Kurata of the ice-breaker Shirase and his officers and crew, for their cooperation which made these observations possible. The maintenance of tidal gauge was carried out by Mr. S. Matumura, JARE-26.

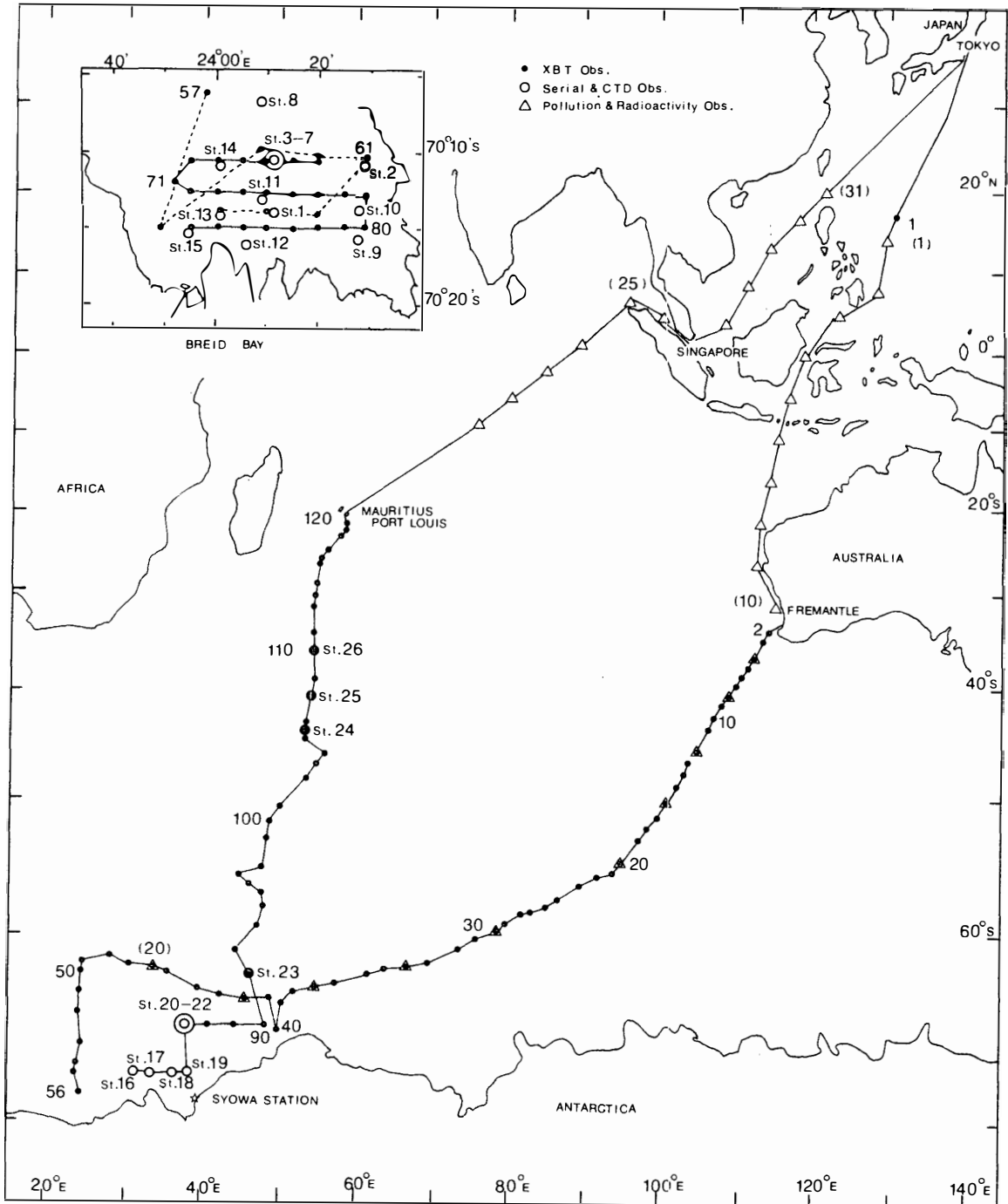


Fig. 1. The track chart and the station location of oceanographic observations of icebreaker Shirase from November 14, 1985 to April 20, 1985.

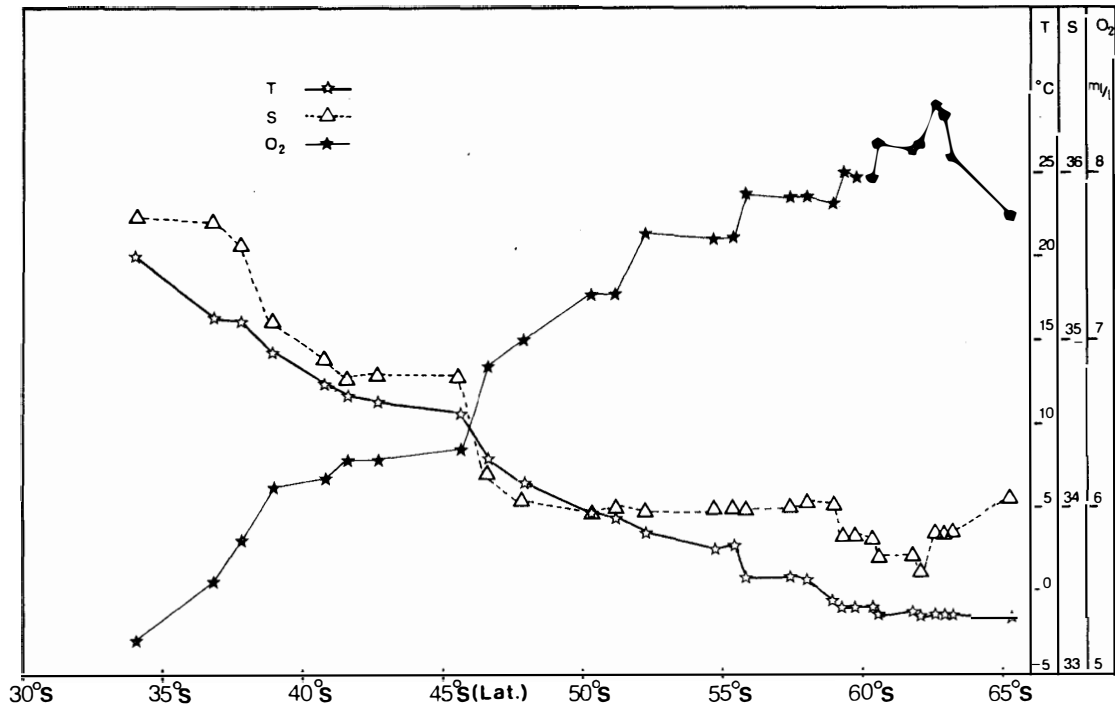


Fig. 2-1. Latitudinal changes of salinity, water temperature and dissolved oxygen observed on the southward leg between Fremantle and ice edge.

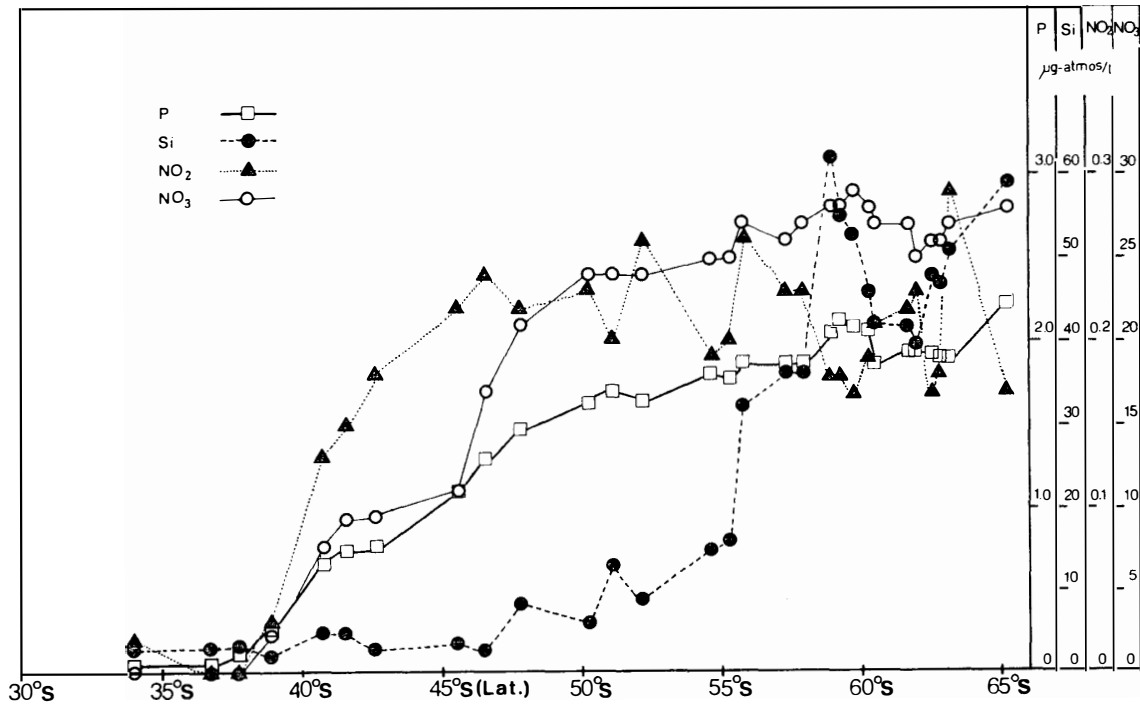


Fig. 2-2. Latitudinal changes of phosphate-p, silicate-si, nitrate-n and nitrite-n observed on the southward leg between Fremantle and ice edge.

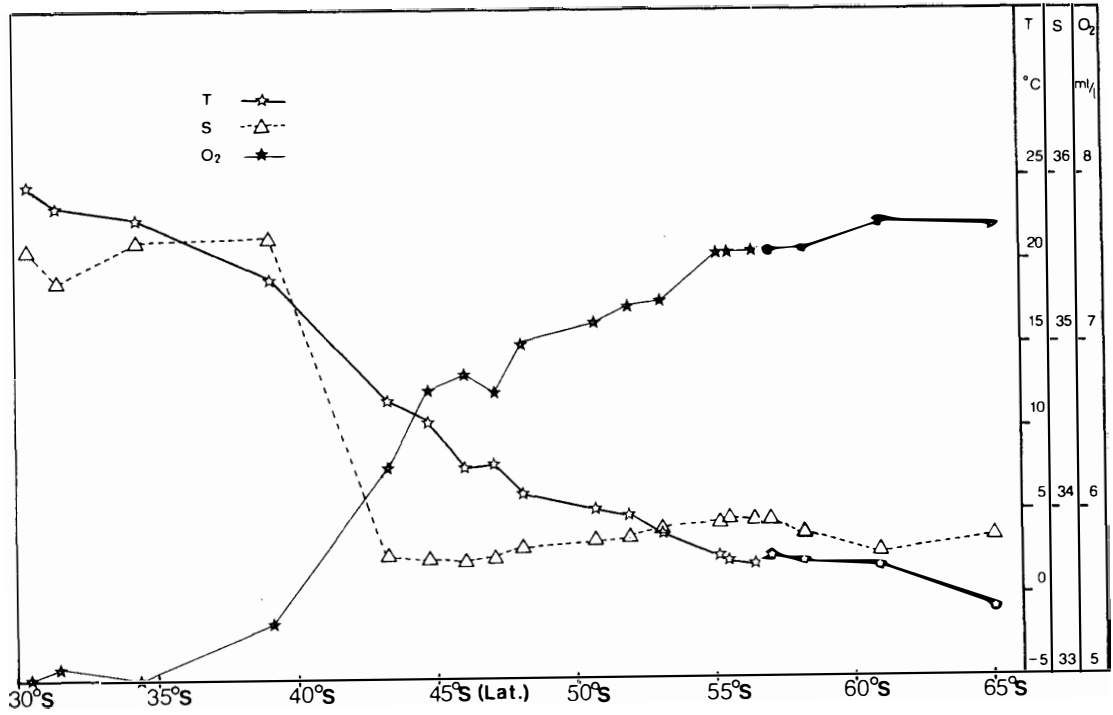


Fig. 3-1. Latitudinal changes of salinity, water temperature and dissolved oxygen observed on the northward leg between ice edge and Port Louis.

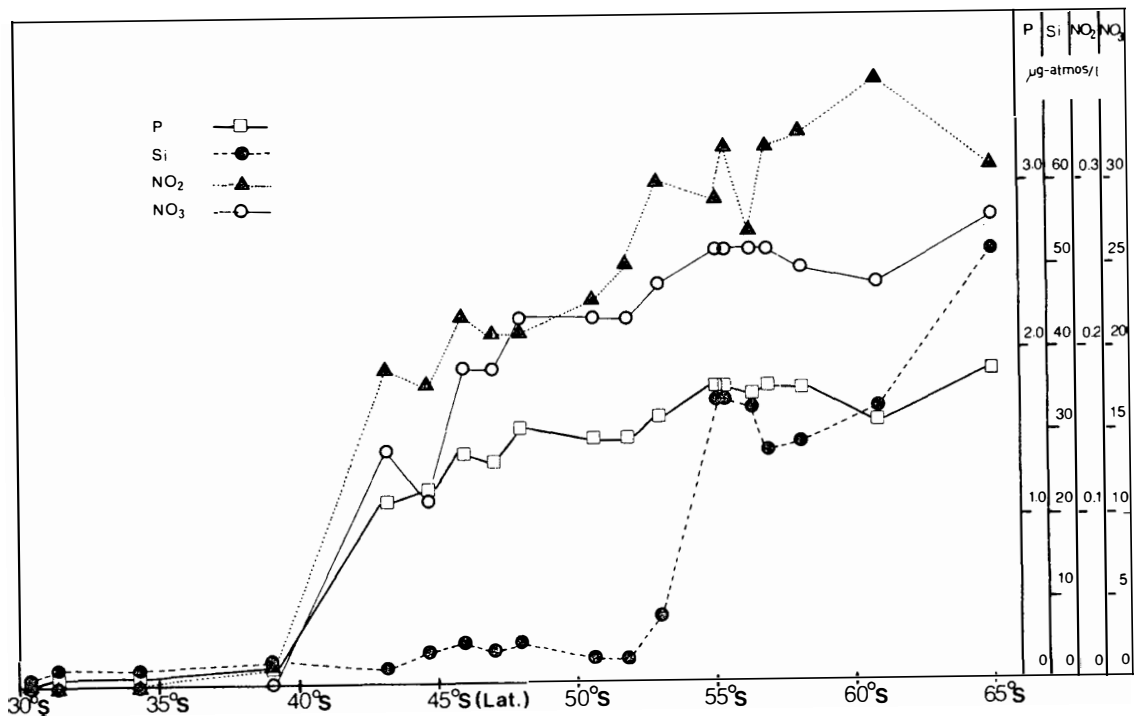


Fig. 3-2. Latitudinal changes of phosphate-p, silicate-si, nitrate-n and nitrite-n observed on the northward leg between ice edge and Port Louis.

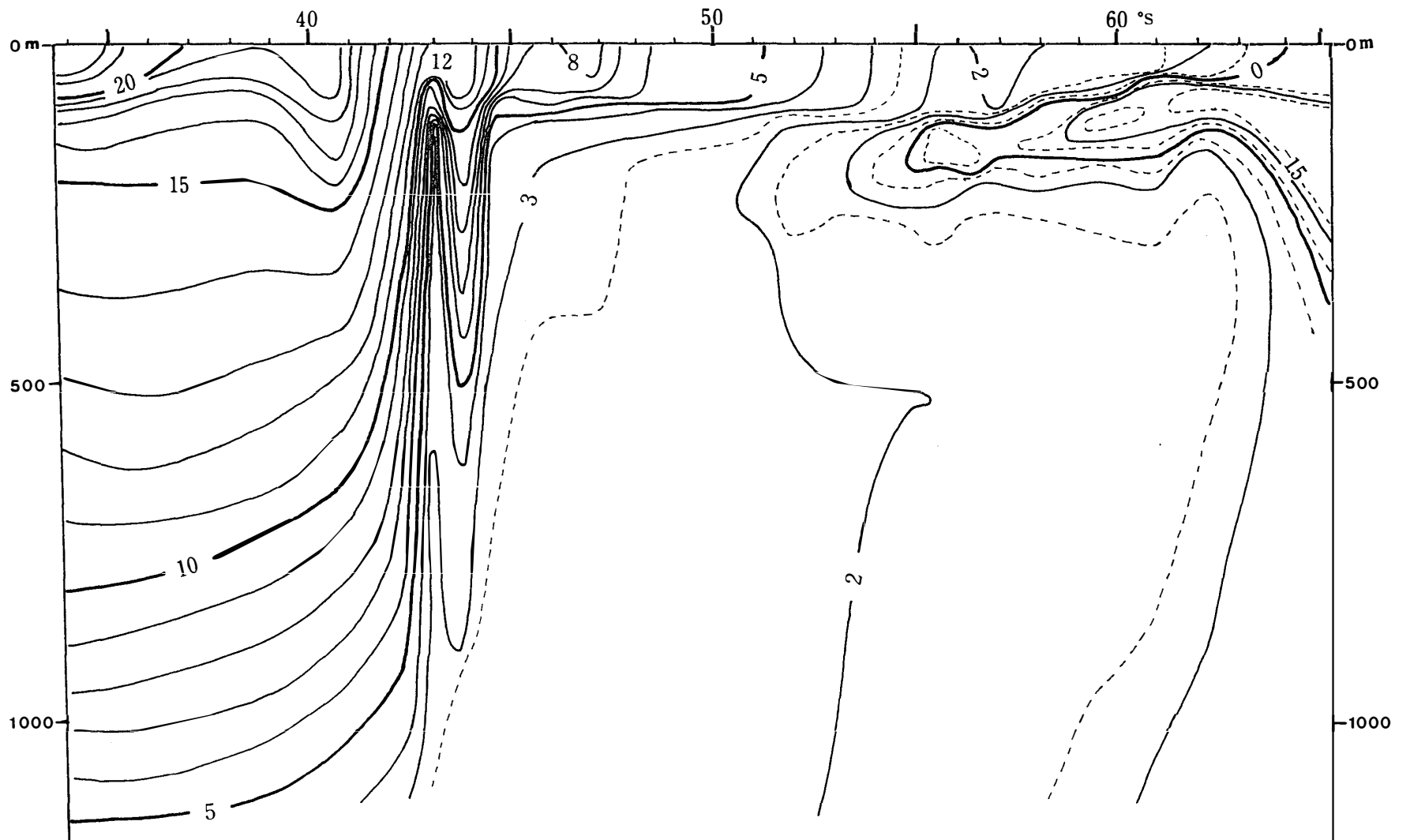


Fig. 4. Vertical profile of water temperature observed on the southward leg between Fremantle and ice edge.

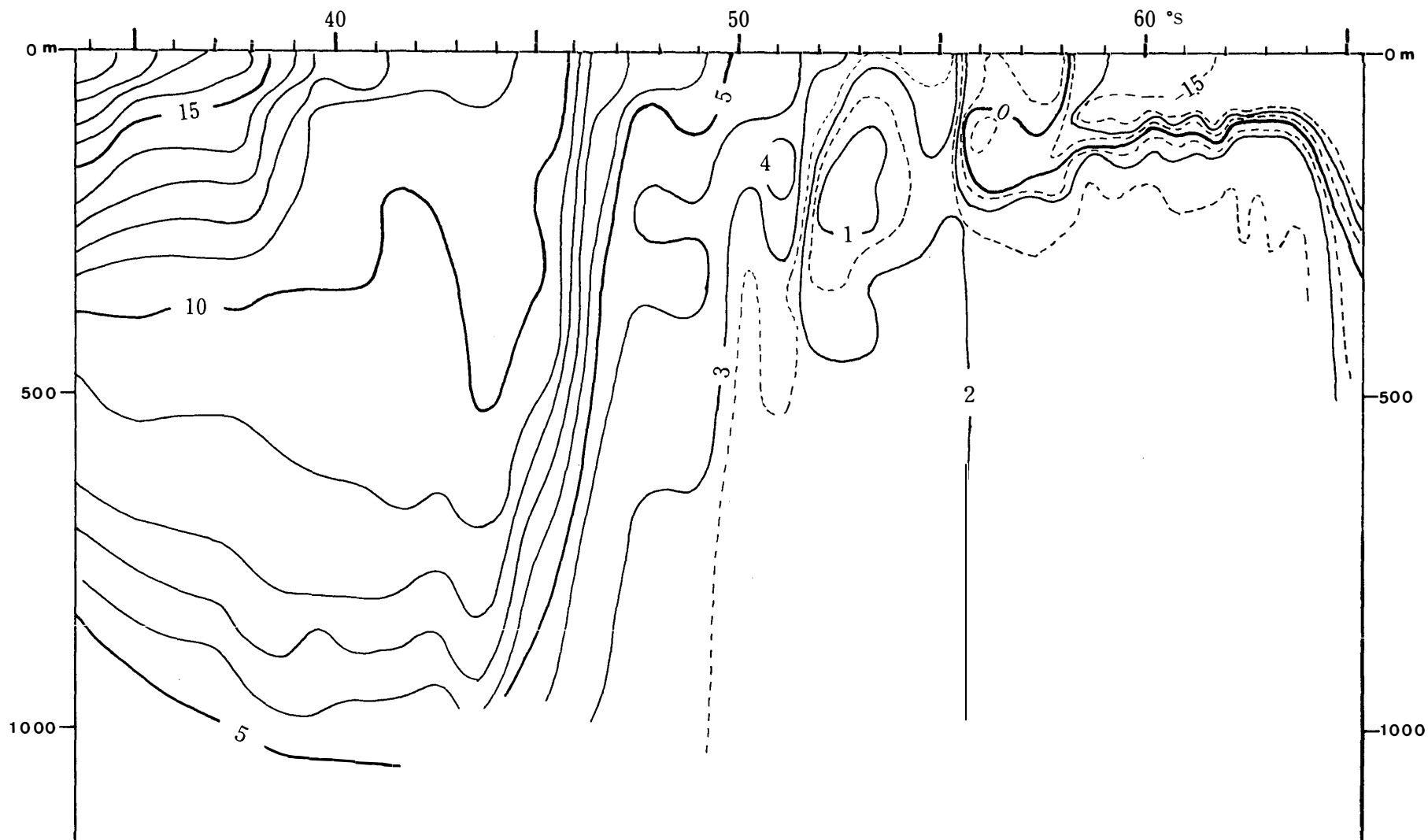


Fig. 5. Vertical profile of water temperature ($^{\circ}\text{C}$) observed on the northward leg between ice edge and Port Louis.

Table 1. Surface observation data.

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂ (ml/l)	PO ₄ ⁻	SiO ₃ ⁻	NO ₂ ⁻	NO ₃ ⁻	NH ₄ ⁻
	GMT	LT	Latitude	Longitude	(°C)	P				Si	N	N	N	
(μg-atoms/l)														
1985														
November														
14			Left Tokyo											
15	2300*	0800	31 29 N	137 50 E	18.7	22.3	34.701	8.38	5.03	0.00	1	0.01	—	—
	1000	1900	28 55	136 23	21.0	24.1	34.722	8.39	4.87	0.00	1	0.00	—	—
16	2300*	0800	25 42	134 46	22.9	25.3	34.646	8.40	4.76	0.00	2	0.00	—	0.1
	0900	1800	23 11	133 30	24.7	26.6	34.831	8.42	4.61	0.00	2	0.00	—	0.1
	1000	1900	22 56	133 24	25.3	27.1	34.818	8.43	4.57	0.00	1	0.00	—	0.0
17	2300*	0800	19 40	131 53	27.2	27.4	34.501	8.37	4.65	0.00	1	0.00	—	0.1
	1000	1900	17 02	130 45	27.9	28.6	34.486	8.38	4.55	0.00	0	0.00		0.1
18	2300*	0800	13 47	129 29	27.7	28.6	34.211	8.40	4.49	0.00	0	0.00	0.0	0.1
	1000	1900	11 03	128 44	28.1	29.0	33.946	8.40	4.52	0.00	1	0.00	0.0	0.3
19	2300*	0800	7 33	127 48	28.3	28.9	33.718	8.41	4.45	0.00	1	0.00	0.0	0.2
	1000	1900	5 45	126 27	29.2	29.0	34.012	8.38	4.51	0.00	1	0.00	0.0	0.3
20	2300*	0800	3 38	123 24	28.3	29.1	34.124	8.38	4.46	0.00	1	0.00	0.0	0.3
	1000	1900	1 58	120 57	28.5	29.7	34.063	8.38	4.46	0.00	2	0.01	0.0	0.7
21	2300*	0800	0 43 S	119 09	27.0	29.1	33.447	8.37	4.52	0.00	2	0.00	0.0	0.2
	1000	1900	3 34	118 29	26.3	29.7	33.519	8.38	4.55	0.02	3	0.00	0.0	0.3
22	2300*	0800	6 35	116 42	28.6	29.7	—	8.33	4.41	0.00	1	0.00	0.0	0.2
	1000	1900	9 06	115 38	28.0	29.7	34.438	8.33	4.50	0.05	1	0.00	0.0	0.1
23	2300*	0800	12 05	114 59	26.9	27.7	34.597	8.35	4.49	0.02	3	0.00	0.0	0.0
	1000	1900	14 31	114 29	26.0	27.9	34.450	8.36	4.53	0.02	1	0.00	0.1	0.1
24	2300*	0800	17 16	113 53	23.6	25.0	34.946	8.39	4.71	0.07	3	0.00	0.0	0.2
	1000	1900	19 32	113 21	23.4	24.0	34.911	8.41	4.79	0.07	3	0.00	0.0	0.2

* The time of date of the preceding day.

Date	Time		Position		Air temp.	Water temp.	s	pH	O ₂ (ml/l)	PO ₄ ⁻	SiO ₃ ⁻	NO ₂ ⁻	NO ₃ ⁻	NH ₄ ⁻
	GMT	LT	Latitude	Longitude	(°C)	P				Si	N	N	N	(μg-atoms/l)
November														
25	2300*	0800	22 07 S	112 46 E	22.2	22.6	35.248	8.40	4.92	0.09	1	0.00	0.0	0.3
	1000	1900	24 31	112 09	22.0	22.1	35.346	8.40	4.96	0.05	3	0.00	0.0	0.4
26	2300*	0800	27 14	112 40	21.5	21.2	35.513	8.38	5.09	0.12	3	0.01	0.0	0.1
	1000	1900	29 11	113 33	20.3	21.0	35.582	8.38	5.09	0.05	3	0.00	0.0	0.1
27	2300*	0800	31 50	115 13	19.8	20.1	35.683	8.37	5.17	0.00	4	0.00	0.0	0.1
28			Arrived in Fremantle											
December														
3			Left Fremantle											
	1100	1900	33 57	113 57	17.9	19.9	35.724	8.40	5.20	0.05	3	0.02	0.0	0.1
4	0000	0800	36 41	111 52	16.8	16.3	35.697	8.36	5.55	0.05	3	0.00	0.0	0.5
	0500	1300	37 44	111 01	13.8	16.1	35.557	8.37	5.80	0.12	3	0.00	0.0	0.5
	1100	1900	38 53	110 07	14.0	14.4	35.105	8.33	6.12	0.30	2	0.03	2.4	0.2
5	0000	0800	40 43	108 33	10.6	12.5	34.885	8.31	6.16	0.65	5	0.13	7.7	0.1
	0500	1300	41 30	107 55	11.3	11.7	34.758	8.30	6.26	0.74	5	0.15	9.3	0.1
	1100	1900	42 36	106 58	11.3	11.4	34.782	8.30	6.27	0.77	3	0.18	9.5	0.3
6	0100	0800	45 27	104 29	12.0	10.6	34.771	8.26	6.34	1.09	4	0.22	11	0.1
	0600	1300	46 30	103 44	11.2	7.8	34.185	8.23	6.84	1.30	3	0.24	17	0.4
	1200	1900	47 48	103 02	8.5	6.5	34.029	8.21	6.98	1.46	8	0.22	21	0.3
7	0100	0800	50 15	100 51	5.9	4.7	33.970	8.21	7.27	1.63	6	0.23	24	0.2
	0600	1300	51 04	99 51	6.1	4.4	33.987	8.19	7.28	1.70	13	0.20	24	0.1
	1200	1900	52 08	98 29	4.8	3.4	33.974	8.22	7.62	1.63	9	0.26	24	0.1

* The time of date of the preceding day.

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂ (ml/l)	PO ₄ ⁻ P	SiO ₃ ⁻ Si	NO ₂ ⁻ N	NO ₃ ⁻ N	NH ₄ ⁻ N
	GMT	LT	Latitude	Longitude	(°C)					(μg-atoms/l)				
December 8	0100	0800	54 40 S	94 58 E	2.7	2.6	33.975	8.23	7.60	1.79	15	0.19	25	0.2
	0600	1300	55 16	93 30	2.8	2.7	33.980	8.20	7.60	1.77	16	0.20	25	0.2
	1200	1900	55 45	91 23	2.0	0.9	33.974	8.19	7.86	1.86	32	0.26	27	0.1
9	0200	0800	57 18	86 46	1.2	0.9	33.991	8.21	7.85	1.86	36	0.23	26	0.2
	0700	1300	57 53	84 57	1.2	0.7	34.013	8.22	7.84	1.86	36	0.23	27	0.1
10	1300	1900	58 52	82 57	-0.2	-0.5	34.007	8.16	7.80	2.05	62	0.18	28	0.1
	0200	0800	59 14	79 46	-1.4	-1.0	33.821	8.11	7.99	2.14	55	0.18	28	0.1
	0700	1300	59 41	78 06	-1.0	-1.0	33.821	8.18	7.96	2.09	53	0.17	29	0.1
11	1300	1900	60 17	75 43	-1.0	-0.9	33.802	8.18	7.97	2.07	46	0.19	28	0.1
	0300	0800	61 25	69 12	-1.0	-1.5	33.697	8.20	8.17	1.86	42	0.21	27	0.0
	0800	1300	61 42	66 47	-0.2	-1.3	33.709	8.23	8.14	1.95	42	0.22	27	0.0
12	1400	1900	61 57	63 55	-0.8	-1.5	33.634	8.21	8.16	1.95	40	0.23	25	0.1
	0400	0800	62 32	57 12	-0.9	-1.4	33.848	8.22	8.40	1.93	48	0.17	26	0.1
	0900	1300	62 50	54 40	-0.8	-1.4	33.821	8.21	8.33	1.91	47	0.18	26	0.1
13	1500	1900	63 09	52 00	-1.1	-1.5	33.847	8.18	8.08	1.91	51	0.29	27	0.2
	0400	0800	65 19	49 31	0.1	-1.6	34.065	8.17	7.74	2.23	59	0.17	28	0.0
	16	0400	0800	63 21	48 33	-1.5	-1.1	33.865	8.21	8.07	2.02	51	0.24	27
16	0900	1300	63 21	45 39	-1.0	-1.2	33.827	8.17	8.12	2.02	53	0.24	27	0.2
	1500	1900	63 19	42 21	-1.2	-1.3	33.680	8.13	7.97	2.09	55	0.26	28	0.2
	17	0500	0800	62 01	35 27	-1.5	-1.6	33.759	8.22	7.96	2.16	52	0.27	27
17	1000	1300	61 39	33 20	-1.5	-1.5	33.590	8.21	8.09	1.95	49	0.25	25	0.5
	1600	1900	61 23	30 25	-0.7	-1.6	33.769	8.19	8.03	1.95	51	0.26	24	0.6
	18	0500	0800	61 37	24 27	-1.3	-1.7	33.907	8.21	8.09	2.05	52	0.25	26
18	1000	1300	62 02	24 17	-0.2	-1.6	33.821	8.20	8.04	1.95	52	0.27	26	0.3
	1600	1900	63 13	24 00	1.2	-1.6	33.714	8.15	8.00	1.93	52	0.24	24	0.2

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂ (ml/l)	PO ₄ ⁻	SiO ₃ ⁻	NO ₂ ⁻	NO ₃ ⁻	NH ₄ ⁻
	GMT	LT	Latitude	Longitude	(°C)					(μg-atoms/l)				
December 19	0500	0800	65 55 S	24 02 E	-2.4	-1.7	34.029	8.20	7.62	2.09	59	0.20	28	0.2
	1000	1300	66 58	24 00	-2.8	-1.7	34.031	8.14	7.58	2.14	64	0.21	27	0.0
	1600	1900	67 36	23 47	-2.5	-1.8	34.142	8.15	7.29	2.16	71	0.14	30	0.2
December 20	0500	0800	70 06	23 58	-3.7	-1.6	34.108	8.15	8.21	2.05	67	0.07	26	0.3
Arrived at the Breid Bay														
December 29	0912	1212	70 10.3	24 29.3	-2.0	-1.2	34.112	8.13	8.06	2.23	66	0.08	27	0.1
	1206	1506	70 13.8	24 10.0	-2.2	0.2	34.067	8.45	9.98	1.49	62	0.12	13	0.4
December 31	Left the Breid Bay													
1986														
January 4	Arrived at the Ongle Islands													
February 7	Left the Ongle Islands													
February 11	Arrived at the Breid Bay													
February 13	1224	1524	70 10.5	24 19.7	-0.2	-1.3	33.660	8.43	9.46	1.29	52	0.12	16	0.4
	1239	1539	70 10.5	24 10.0	-0.2	-1.3	33.696	8.45	9.26	1.29	52	0.12	17	0.5
	1304	1604	70 10.4	23 55.0	0.0	-1.5	33.606	8.46	9.29	1.29	54	0.10	17	0.5
	1318	1618	70 12.0	23 51.6	0.0	-1.2	33.694	8.45	9.16	1.31	55	0.11	16	0.4
	1342	1642	70 12.5	24 05.0	0.0	-1.0	33.639	8.44	9.41	1.22	52	0.11	15	0.3
	1406	1706	70 12.7	24 20.1	0.0	-1.1	33.706	8.43	9.28	1.29	55	0.10	17	0.2
	1422	1722	70 12.9	24 28.8	0.0	-1.2	33.719	8.45	9.20	1.38	55	0.11	17	0.3
	1434	1734	70 14.9	24 29.1	0.0	-1.1	33.831	8.44	9.14	1.38	55	0.12	15	0.4
	1507	1807	70 15.1	24 09.9	0.9	-1.2	33.744	8.41	9.16	1.33	56	0.12	16	0.3
	1532	1832	70 15.1	23 55.0	0.9	-1.4	33.780	8.39	8.99	1.27	58	0.09	17	0.3
February 15	Left the Breid Bay													
February 27	0235	0535	65 00	41 01	-0.7	0.7	33.844	8.19	7.73	1.87	53	0.35	28	0.6
	1754	2054	65 00	44 30	0.2	0.8	33.848	8.12	7.71	1.87	52	0.31	28	0.3

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂ (ml/l)	PO ₄ ⁻	SiO ₃ ⁻	NO ₂ ⁻	NO ₃ ⁻	NH ₄ ⁻
	GMT	LT	Latitude	Longitude	(°C)					P	Si	N	N	N
March														
2	1500	1900	60 51 S	44 36 E	1.8	1.7	33.758	8.13	7.71	1.56	33	0.36	24	0.3
3	1500	1900	58 06	47 54	2.7	1.9	33.862	8.10	7.57	1.76	29	0.33	25	0.4
4	0400	0800	56 56	47 41	2.1	2.2	33.947	8.15	7.54	1.78	28	0.32	26	0.8
	1500	1900	56 18	46 16	2.0	1.8	33.945	8.17	7.57	1.73	33	0.27	26	0.9
5	0400	0800	55 25	44 41	1.9	2.1	33.949	8.17	7.56	1.78	34	0.32	26	0.5
	1500	1900	55 05	47 17	2.4	2.3	33.927	8.21	7.55	1.78	34	0.29	26	0.7
6	0400	0800	53 02	48 02	4.0	3.8	33.896	8.16	7.26	1.60	8	0.30	24	0.9
	0900	1300	51 50	48 26	4.0	4.8	33.855	8.19	7.22	1.47	3	0.25	22	0.3
7	1500	1900	50 39	49 57	4.2	5.2	33.837	8.20	7.14	1.47	3	0.23	22	0.2
	0400	0800	48 02	53 24	5.3	6.2	33.790	8.10	7.01	1.53	5	0.21	22	0.4
8	0900	1300	47 01	54 41	7.5	8.0	33.726	8.19	6.72	1.33	4	0.21	19	0.5
	1500	1900	45 58	55 25	8.1	7.7	33.710	8.18	6.83	1.38	5	0.22	19	0.5
9	0400	0800	44 38	53 02	10.0	10.4	33.723	8.24	6.74	1.16	4	0.18	11	0.4
	1500	1900	43 10	53 38	12.8	11.7	33.749	8.21	6.26	1.09	2	0.19	14	0.6
10	1500	1900	39 03	54 22	20.0	19.0	35.644	8.37	5.34	0.09	3	0.01	0.0	0.1
11	1500	1900	34 16	54 29	22.0	22.6	35.635	8.36	5.00	0.04	2	0.00	0.0	0.2
	0400	0800	31 25	54 27	23.5	23.4	35.394	8.35	5.08	0.04	2	0.00	0.0	0.1
12	0900	1300	30 19	54 29	24.7	24.6	35.582	8.38	5.02	0.00	1	0.00	0.0	0.1
	1500	1900	29 06	54 33	25.0	25.1	35.605	8.38	5.30	0.00	1	0.00	0.0	0.0
13	0400	0800	26 41	55 02	26.2	26.3	35.351	8.37	4.77	0.04	1	0.00	0.0	0.3
	0900	1300	25 57	55 20	26.6	26.3	35.326	8.40	4.79	0.09	2	0.00	0.0	0.1
13	1500	1900	25 04	55 55	26.2	26.5	35.357	8.43	4.71	0.04	2	0.00	0.0	0.0
	0400	0800	23 16	57 30	26.8	26.4	35.245	8.36	4.77	0.00	2	0.00	0.0	0.0
	0900	1300	22 31	58 05	26.9	26.7	35.325	8.38	4.72	0.04	2	0.00	0.0	0.0
	1500	1900	21 41	58 19	27.3	26.6	35.257	8.42	4.72	0.00	1	0.02	0.0	0.0

Table 2. XBT observation data.

STATION	1	2	3	4	5	6	7	8	9	10	11	12
DATE	3 12 85	3 12 85	4 12 85	4 12 85	4 12 85	4 12 85	5 12 85	5 12 85	5 12 85	5 12 85	6 12 85	6 12 85
TIME (GMT)	10-54	15-49	23-52	4-53	10-35	15-52	23-57	4-56	10-52	15-51	0-54	6-0
(L T)	18-54	23-49	7-52	12-53	18-35	23-52	7-57	12-56	18-52	23-51	7-54	13-0
LATITUDE	33 57 S	34 59 S	36 41 S	37 44 S	38 53 S	39 40 S	40 43 S	41 30 S	42 36 S	43 36 S	45 27 S	46 30 S
LONGITUDE	113 57 E	113 10 E	111 52 E	111 1 E	110 7 E	109 28 E	108 33 E	107 55 E	106 58 E	106 5 E	104 29 E	103 44 E
0	20.0	18.5	17.1	16.7	14.5	13.0	12.6	11.7	11.5	11.5	10.5	7.8
10	20.0	18.5	17.0	16.5	14.5	13.0	12.5	11.7	11.4	11.5	10.3	7.7
20	20.0	18.5	17.0	16.4	14.4	13.0	12.5	11.7	11.4	11.4	10.3	7.7
30	19.9	18.3	16.4	16.4	14.4	13.0	12.5	11.6	11.3	11.4	10.3	7.7
50	18.5	17.0	16.2	16.1	13.3	11.6	12.5	11.6	11.2	11.3	10.2	7.7
75	17.7	15.8	15.3	15.2	12.4	11.2	11.0	10.5	10.5	11.2	10.1	7.2
100	16.8	15.0	14.8	14.8	12.0	10.8	10.9	10.2	10.2	10.8	10.1	6.6
125	16.0	14.3	14.3	14.6	11.8	10.7	10.9	10.1	10.2	10.5	10.2	6.5
150	15.3	13.8	13.8	14.3	11.6	10.6	10.9	10.1	10.2	10.3	9.9	6.3
200	14.2	13.1	12.7	13.3	11.2	10.5	10.4	10.0	10.2	10.1	9.5	6.1
250	13.0	12.2	11.8	12.4	11.0	10.4	10.3	10.0	10.1	10.1	9.8	6.1
300	11.7	10.8	10.9	11.5	10.6	10.2	10.2	9.9	10.1	10.1	10.0	5.4
400	9.8	9.8	9.7	10.2	9.7	10.0	10.1	9.8	9.9	10.1	9.4	5.2
500	9.0		9.1		9.5	9.6	9.7	9.7	9.8	10.0	8.7	4.9
600	8.4		8.7		9.1	9.3	9.3	9.4	9.3	9.7	7.1	4.1
700	7.4		8.2		8.7	8.7	8.8	8.9	8.7	9.0	5.8	3.7
800	5.8		7.1		8.1	8.0	8.1	8.0	7.8	8.3	5.0	3.3
900	4.5		5.7		7.1	6.8	6.9	6.8	6.6	7.2	4.2	3.1
1000					5.8		5.4	5.6	5.3			

STATION	13	14	15	16	17	18	19	20	21	22	23	24
DATE	6 12 85	6 12 85	7 12 85	7 12 85	7 12 85	7 12 85	8 12 85	8 12 85	8 12 85	8 12 85	9 12 85	9 12 85
TIME (GMT)	11-55	16-52	1-16	5-54	11-54	16-48	0-52	5-54	11-48	16-50	1-48	6-57
(L T)	18-55	23-52	8-16	12-54	18-54	23-48	7-52	12-54	18-48	23-50	7-48	12-57
LATITUDE	47 48 S	48 51 S	50 15 S	51 4 S	52 8 S	53 8 S	54 40 S	55 16 S	55 45 S	56 19 S	57 18 S	57 53 S
LONGITUDE	103 2 E	102 29 E	100 51 E	99 51 E	98 29 E	97 7 E	94 58 E	93 30 E	91 23 E	89 42 E	86 46 E	84 57 E
0	6.5	6.3	4.7	4.3	3.4	2.1	2.6	2.7	1.0	0.3	0.8	0.7
10	6.4	6.2	4.6	4.2	3.4	2.0	2.5	2.5	0.8	0.3	0.7	0.7
20	6.4	6.2	4.6	4.1	3.0	2.0	2.5	2.5	0.8	0.3	0.6	0.7
30	6.4	6.2	4.6	4.1	2.9	1.8	2.5	2.5	0.8	0.3	0.6	0.6
50	6.3	6.2	4.6	4.0	2.9	1.6	2.5	2.5	0.8	0.3	0.6	0.6
75	5.0	5.3	4.6	4.0	2.7	1.5	2.4	2.5	0.7	0.3	0.5	0.5
100	4.7	5.0	3.9	4.1	2.3	1.2	2.3	2.4	-0.1	-0.5	0.2	0.1
125	4.4	4.9	3.7	4.0	2.0	0.9	2.1	2.0	-0.3	-0.5	0.0	-0.3
150	4.2	4.7	3.2	4.0	1.5	0.9	2.0	1.6	-0.4	-0.2	-0.2	-0.5
200	4.0	4.3	3.0	5.7	0.7	2.0	1.8	1.6	0.6	0.0	0.9	0.7
250	3.9	3.9	2.9	3.6	0.9	0.8	1.9	2.0	1.5	1.4	1.4	1.4
300	4.0	4.3	2.6	3.8	1.3	1.8	2.0	2.2	1.9	1.6	1.5	1.6
400	3.8	3.9	2.4	3.3	1.7	1.8	2.2	2.2	2.0	1.8	1.9	1.8
500	3.5	3.5		3.5	2.2	2.0	2.0	2.6	2.1	1.6	1.9	1.8
600	3.2	3.2		3.2	2.2	2.0	2.2	2.7	2.1	1.8	1.9	
700	2.9	2.9		3.0	2.1	2.0	2.3	2.8	2.0	1.8	1.8	
800	2.8	2.8		2.9	2.2	2.0	2.2	2.8	2.0	1.8	1.8	
900	2.7	2.7		2.8	2.1	2.0	2.2	2.7	1.9	1.7	1.8	
1000		2.6						2.6		1.7		

STATION	25	26	27	28	29	30	31	32	33	34	35	36
DATE	9 12 85	10 12 85	10 12 85	10 12 85	10 12 85	10 12 85	11 12 85	11 12 85	11 12 85	11 12 85	12 12 85	12 12 85
TIME(GMT)	12-55	18-0	1-54	6-54	12-50	17-53	2-50	7-54	13-49	18-53	3-49	8-52
(L T)	18-55	0-0	7-54	12-54	18-50	23-53	7-50	12-54	18-49	23-53	7-49	12-52
LATITUDE	58 20 S	58 38 S	59 14 S	59 41 S	60 17 S	60 42 S	61 25 S	61 42 S	61 57 S	62 11 S	62 32 S	62 50 S
LONGITUDE	82 57 E	81 50 E	79 46 E	78 6 E	75 43 E	73 29 E	69 12 E	66 47 E	63 55 E	61 33 E	57 12 E	54 40 E
0	-0.5	-0.8	-1.0	-1.0	-0.9	-1.2	-1.3	-1.3	-1.5	-1.3	-1.3	-1.4
10	-0.5	-0.8	-1.1	-1.1	-1.0	-1.3	-1.4	-1.4	-1.6	-1.4	-1.5	-1.5
20	-0.5	-0.8	-1.1	-1.1	-1.0	-1.3	-1.4	-1.4	-1.6	-1.4	-1.5	-1.5
30	-0.5	-0.9	-1.1	-1.1	-1.0	-1.4	-1.5	-1.5	-1.7	-1.4	-1.5	-1.5
50	-0.5	-0.9	-1.2	-1.3	-1.1	-1.4	-1.5	-1.5	-1.7	-1.7	-1.7	-1.6
75	-1.2	-1.5	-1.6	-1.6	-1.5	-1.7	-1.6	-1.7	-1.8	-1.7	-1.8	-1.7
100	-0.5	-1.5	-1.4	-1.5	-0.3	-1.7	-0.1	-1.7	-1.7	0.5	-1.1	0.0
125	0.2	-0.2	-0.4	-0.5	0.8	0.2	0.9	-0.7	-0.1	1.3	0.6	1.0
150	1.2	1.1	0.4	0.7	1.2	0.8	1.2	0.5	0.9	1.4	1.1	1.3
200	1.5	1.5	1.3	1.5	1.5	1.4	1.5	1.4	1.4	1.5	1.3	1.5
250	1.7	1.5	1.7	1.6	1.5	1.5	1.7	1.6	1.5	1.5	1.4	1.5
300	1.7	1.5	1.7	1.6	1.6	1.6	1.8	1.7	1.6	1.5	1.5	1.5
400	1.8	1.5	1.8	1.6	1.7	1.7	1.8	1.7	1.7	1.5	1.5	1.6
500	1.8		1.8									
600	1.7		1.8									
700	1.6		1.7									
800	1.5		1.6									
900	1.5		1.5									

STATION	37	38	39	40	41	42	43	44	45	46	47	48
DATE	12 12 85	12 12 85	13 12 85	16 12 85	16 12 85	16 12 85	16 12 85	17 12 85	17 12 85	17 12 85	17 12 85	18 12 85
TIME(GMT)	14-47	19-57	3-54	3-51	8-52	14-47	19-57	4-54	9-52	15-50	20-52	4-48
(L T)	18-47	23-57	7-54	7-51	12-52	18-47	23-57	7-54	12-52	18-50	23-52	7-48
LATITUDE	63 9 S	63 43 S	65 19 S	63 21 S	63 21 S	63 19 S	62 53 S	62 1 S	61 39 S	61 23 S	61 9 S	61 37 S
LONGITUDE	52 0 E	50 10 E	49 31 E	48 33 E	45 39 E	42 21 E	39 41 E	35 27 E	33 20 E	30 25 E	27 57 E	24 27 E
0	-1.5	-1.6	-1.6	-1.2	-1.2	-1.2	-1.3	-1.6	-1.5	-1.4	-1.5	-1.7
10	-1.6	-1.8	-1.7	-1.2	-1.2	-1.5	-1.3	-1.6	-1.5	-1.5	-1.6	-1.8
20	-1.6	-1.8	-1.7	-1.2	-1.4	-1.6	-1.4	-1.7	-1.5	-1.6	-1.6	-1.8
30	-1.6	-1.8	-1.7	-1.4	-1.5	-1.6	-1.4	-1.7	-1.6	-1.6	-1.6	-1.8
50	-1.7	-1.8	-1.8	-1.7	-1.8	-1.7	-1.5	-1.7	-1.7	-1.7	-1.8	-1.8
75	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.7	-1.7	-1.8
100	-0.5	0.0	-1.9	-1.8	0.0	-1.8	-1.8	-1.0	-1.8	-1.7	-1.0	-1.8
125	0.5	1.0	-1.9	-0.5	0.9	0.5	-0.6	0.5	-1.6	-0.4	-0.5	-1.0
150	1.0	1.2	-1.9	1.0	1.1	1.0	0.6	0.6	0.0	0.4	0.2	-0.1
200	1.2	1.4	-1.8	1.4	1.2	1.2	1.1	1.0	0.9	1.0	0.8	0.5
250	1.4	1.5	-1.0	1.4	1.2	1.2	1.1	1.1	1.1	1.1	1.0	0.8
300	1.5	1.5	-0.2	1.4	1.2	1.2	1.1	1.1	1.1	1.3	1.1	0.8
400	1.5	1.5	0.2	1.5	1.2	1.2	1.3	1.2	1.2	1.3	1.2	1.0
500				1.4								
600				1.3								
700				1.3								
800				1.2								
900				1.1								

STATION	49	50	51	52	53	54	55	56	57	58	59	60
DATE	18 12 85	18 12 85	18 12 85	19 12 85	19 12 85	19 12 85	19 12 85	20 12 85	25 12 85	29 12 85	29 12 85	29 12 85
TIME (GMT)	9-51	15-50	20-54	4-54	9-48	15-47	20-53	4-52	5-20	8-37	8-57	9-12
(L T)	12-51	18-50	23-54	7-54	12-48	18-47	23-53	7-52	8-20	11-37	11-57	12-12
LATITUDE	62 2 S	63 13 S	64 16 S	65 55 S	66 58 S	67 36 S	68 41 S	70 6 S	70 15 S	70 10 S	70 10 S	70 10 S
LONGITUDE	24 17 E	24 0 E	23 59 E	24 2 E	24 0 E	23 47 E	23 55 E	23 58 E	23 49 E	24 9 E	24 20 E	24 29 E
0	-1.6	-1.6	-1.6	-1.7	-1.7	-1.7	-1.7	-1.6	-1.0	-0.3	-0.3	-1.2
10	-1.7	-1.7	-1.7	-1.8	-1.7	-1.8	-1.8	-1.6	-1.1	-0.6	-1.0	-1.4
20	-1.8	-1.7	-1.7	-1.8	-1.7	-1.8	-1.8	-1.6	-1.3	-1.1	-1.2	-1.4
30	-1.8	-1.8	-1.7	-1.8	-1.7	-1.8	-1.8	-1.6	-1.4	-1.2	-1.3	-1.6
50	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.6	-1.6	-1.3	-1.5	-1.7
75	-1.8	-1.8	-1.8	-1.7	-1.8	0.0	-1.8	-1.6	-1.7	-1.5	-1.6	-1.7
100	-1.8	-1.8	-0.2	0.2	0.0	0.3	-1.8	-1.6	-1.8	-1.6	-1.7	-1.7
125	-0.8	-0.7	0.5	0.6	0.3	0.5	-1.8	-1.8	-1.8	-1.7	-1.7	-1.7
150	0.0	0.3	0.7	0.7	0.5	0.8	-1.1	-1.8	-1.8	-1.7	-1.8	-1.7
200	0.9	1.2	1.0	1.0	0.8	0.9	-0.2	-1.8	-1.8	-1.8	-1.8	-1.8
250	1.1	1.2	1.0	1.1	0.9	0.9	0.5	-1.8	-1.8			
300	1.1	1.1	1.0	1.1	0.9	0.9	0.6	-1.8				
400	1.1	1.1	1.1	1.1	1.0	0.9	0.7	-1.8				

STATION	61	62	63	64	65	66	67	68	69	70	71	72
DATE	29 12 85	29 12 85	29 12 85	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86
TIME (GMT)	11-51	12-6	12-18	12-24	12-31	12-39	12-47	12-56	13-4	13-18	13-25	13-34
(L T)	14-51	15-6	15-18	15-24	15-31	15-39	15-47	15-56	16-4	16-18	16-25	16-34
LATITUDE	70 14 S	70 14 S	70 14 S	70 11 S	70 10 S	70 11 S	70 11 S	70 10 S	70 10 S	70 12 S	70 13 S	70 13 S
LONGITUDE	24 20 E	24 10 E	24 1 E	24 20 E	24 15 E	24 10 E	24 5 E	24 0 E	23 55 E	23 52 E	23 55 E	24 0 E
0	-0.1	0.2	0.5	-1.3	-1.0	-1.2	-1.3	-1.3	-1.3	-1.2	-1.2	-1.1
10	-0.5	-0.9	-0.5	-1.3	-1.2	-1.2	-1.3	-1.4	-1.4	-1.3	-1.3	-1.2
20	-1.1	-1.2	-1.0	-1.5	-1.3	-1.3	-1.3	-1.4	-1.5	-1.4	-1.4	-1.3
30	-1.3	-1.3	-1.3	-1.7	-1.5	-1.5	-1.5	-1.4	-1.6	-1.4	-1.5	-1.5
50	-1.6	-1.5	-1.7	-1.7	-1.7	-1.7	-1.5	-1.6	-1.7	-1.7	-1.7	-1.6
75	-1.6	-1.6	-1.7	-1.8	-1.8	-1.7	-1.7	-1.7	-1.8	-1.8	-1.8	-1.8
100	-1.7	-1.7	-1.7	-1.8	-1.8	-1.8	-1.7	-1.7	-1.8	-1.8	-1.8	-1.8
125	-1.7	-1.7	-1.7	-1.8	-1.8	-1.8	-1.8	-1.7	-1.8	-1.8	-1.8	-1.8
150	-1.8	-1.8	-1.7	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8
200	-1.8	-1.8		-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8
250	-1.8			-1.8								
300	-1.8											

STATION	73	74	75	76	77	78	79	80	81	82	83	84
DATE	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86	13 2 86
TIME (GMT)	13-42	13-50	13-59	14- 6	14-15	14-22	14-34	14-41	14-49	14-58	15- 7	15-15
(L T)	16-42	16-50	16-59	17- 6	17-15	17-22	17-34	17-41	17-49	17-58	18- 7	18-15
LATITUDE	70 13 S	70 13 S	70 13 S	70 13 S	70 13 S	70 13 S	70 15 S	70 15 S	70 15 S	70 15 S	70 15 S	70 15 S
LONGITUDE	24 5 E	24 10 E	24 15 E	24 20 E	24 25 E	24 29 E	24 29 E	24 25 E	24 20 E	24 15 E	24 10 E	24 5 E
0	-1.2	-1.2	-1.0	-1.1	-1.0	-1.2	-1.0	-1.0	-1.0	-1.2	-1.0	-1.0
10	-1.3	-1.2	-1.2	-1.2	-1.2	-1.3	-1.2	-1.2	-1.2	-1.3	-1.2	-1.2
20	-1.3	-1.4	-1.2	-1.3	-1.4	-1.3	-1.3	-1.4	-1.3	-1.4	-1.3	-1.3
30	-1.6	-1.6	-1.3	-1.5	-1.6	-1.6	-1.6	-1.6	-1.4	-1.5	-1.5	-1.6
50	-1.7	-1.7	-1.5	-1.7	-1.7	-1.8	-1.8	-1.8	-1.7	-1.6	-1.7	-1.8
75	-1.8	-1.7	-1.7	-1.8	-1.8	-1.8	-1.8	-1.9	-1.7	-1.8	-1.7	-1.8
100	-1.8	-1.7	-1.7	-1.8	-1.8	-1.8	-1.8	-1.9	-1.7	-1.8	-1.8	-1.8
125	-1.8	-1.7	-1.8	-1.8	-1.8	-1.8	-1.8	-1.9	-1.7	-1.8	-1.8	-1.8
150	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-2.0	-1.8	-1.8	-1.8	-1.8
200	-1.8		-1.8	-1.8	-1.8		-1.8	-2.0	-1.8	-1.8	-1.8	-1.8
250			-1.8	-1.8				-2.0	-1.8	-1.8		

STATION	85	86	87	88	89	90	91	92	93	94	95	96
DATE	13 2 86	13 2 86	27 2 86	27 2 86	1 3 86	2 3 86	2 3 86	3 3 86	3 3 86	4 3 86	4 3 86	5 3 86
TIME (GMT)	15-23	15-32	2-35	17-54	4- 0	7-25	15- 8	3-53	14-59	3-56	15-57	3-55
(L T)	18-23	18-32	5-35	20-54	8- 0	11-25	19- 8	7-53	18-59	7-56	19-57	7-55
LATITUDE	70 15 S	70 15 S	65 0 S	66 0 S	64 56 S	62 6 S	60 51 S	59 33 S	58 6 S	56 56 S	56 18 S	55 25 S
LONGITUDE	24 0 E	23 55 E	41 1 E	44 30 E	48 5 E	46 6 E	44 37 E	47 2 E	47 54 E	47 41 E	46 19 E	44 41 E
0	-1.2	-1.2	0.7	0.8	-0.1	1.1	1.7	1.6	1.9	2.2	1.8	2.1
10	-1.3	-1.4	0.6	0.7	-0.1	0.9	1.7	1.5	1.8	2.1	1.8	2.0
20	-1.4	-1.4	0.5	0.6	-0.2	0.9	1.6	1.5	1.8	2.1	1.8	2.0
30	-1.4	-1.5	0.5	0.6	-0.2	0.9	1.5	1.5	1.8	2.1	1.8	2.0
50	-1.8	-1.5	-0.3	0.5	-0.2	0.9	0.0	1.5	1.8	2.1	1.8	2.0
75	-1.8	-1.8	1.0	0.7	-0.2	-1.7	-1.0	1.0	1.2	2.1	1.8	2.0
100	-1.8	-1.8	1.3	1.2	-1.8	-1.4	-1.2	-1.3	0.0	1.9	1.5	2.0
125	-1.8	-1.8	1.3	1.3	-1.8	0.0	-1.1	-1.5	-0.2	0.1	0.0	-0.4
150	-1.8	-1.8	1.4	1.4	-1.8	0.8	-0.7	-0.7	-0.5	0.0	-0.5	-0.6
200		-1.8	1.4	1.4	-1.8	1.3	0.7	0.9	0.6	1.0	0.5	0.5
250			1.4	1.4	-1.3	1.5	1.2	1.3	1.4	1.5	1.4	1.0
300			1.4	1.4	-0.6	1.5	1.5	1.5	1.7	1.7	1.6	1.4
400			1.3	1.3	0.2	1.6	1.6	1.7	1.8	1.8	1.7	1.7
500			1.2	1.2	0.4	1.6	1.7	1.7	1.8	1.8	1.7	1.7
600			1.2	1.1	0.3	1.5	1.6	1.7	1.8	1.8	1.7	1.7
700			1.1	1.0	0.3	1.3	1.6	1.7	1.7	1.8	1.7	1.7
800			1.0	1.0	0.2	1.2	1.5	1.6	1.7	1.7	1.7	1.7
900			0.8	0.8	0.2	1.1	1.4	1.5	1.7	1.7	1.6	1.6
1000			0.8	0.7	0.2	1.0	1.2	1.4	1.5	1.6	1.5	1.5
1100			0.7	0.6	0.1	0.9	1.2	1.3	1.5	1.6	1.5	1.5
1200			0.6	0.6	0.0	0.8	1.1	1.2			1.3	1.5
1300			0.5	0.5		0.6	1.0	1.1				
1400			0.4	0.4		0.5	1.0					
1500			0.4	0.3		0.5	0.9					
1600			0.3	0.3		0.5	0.7					
1700			0.3	0.2		0.4	0.6					
1800			0.2	0.2		0.3						

STATION	97	98	99	100	101	102	103	104	105	106	107	108
DATE	5 3 86	6 3 86	6 3 86	6 3 86	7 3 86	7 3 86	7 3 86	8 3 86	8 3 86	8 3 86	9 3 86	9 3 86
TIME(GMT)	16- 0	3-58	8-56	15-56	3-53	8-56	14-58	3-54	10-17	15-56	7-32	14-57
(L T)	20- 0	7-58	12-56	19-56	7-53	12-56	18-58	7-54	14-17	19-56	11-32	18-57
LATITUDE	55 5 S	53 2 S	51 50 S	50 39 S	48 2 S	47 1 S	45 58 S	44 38 S	43 50 S	43 10 S	40 40 S	39 3 S
LONGITUDE	47 17 E	48 2 E	48 26 E	49 57 E	53 24 E	54 41 E	55 25 E	53 2 E	53 11 E	53 38 E	54 15 E	53 22 E
0	2.3	3.8	4.7	5.2	6.1	8.1	7.7	10.4	12.3	11.7	19.5	19.0
10	2.2	3.7	4.7	5.2	6.0	8.0	7.6	10.4	12.3	11.6	19.5	18.8
20	2.1	3.7	4.7	5.2	6.0	8.0	7.6	10.4	12.2	11.6	19.4	18.8
30	2.1	3.7	4.7	5.2	6.0	8.0	7.6	10.4	12.2	11.5	19.4	18.7
50	2.1	3.7	4.7	5.2	6.0	8.0	7.5	10.3	12.2	11.5	19.4	18.7
75	2.1	3.7	4.5	5.2	6.0	6.0	7.0	6.6	12.2	6.7	19.1	17.3
100	2.0	2.9	2.8	4.0	4.7	4.5	5.0	5.6	11.0	5.2	18.2	16.5
125	0.2	1.7	2.0	2.7	3.5	3.6	3.8	4.4	10.2	4.7	17.9	15.9
150	0.0	1.3	2.2	2.5	2.8	3.1	3.2	4.1	9.9	4.3	17.3	15.6
200	0.1	1.1	1.4	2.2	2.4	2.6	2.7	4.0	9.5	4.0	16.2	15.2
250	1.1	1.3	1.3	2.2	2.2	2.6	2.7	3.9	8.5	4.0	15.0	14.7
300	1.5	1.6	1.6	2.3	2.3	2.6	2.7	3.8	7.8	4.0	14.3	14.3
400	1.7	1.8	2.0	2.3	2.3	2.5	2.4	3.3	6.3	3.7	13.3	13.5
500	1.9	2.0	2.0	2.3	2.2	2.4	2.4	2.8	5.3	3.3	12.0	12.6
600	1.9	2.0	2.1	2.4	2.2	2.4	2.4	2.7	4.1	3.1	10.8	11.7
700	1.8	2.1	2.1	2.4	2.3	2.3	2.4	2.6	3.7	3.0	9.4	10.3
800	1.7	2.1	2.1	2.4	2.2	2.3	2.4	2.5	3.4	3.0		9.1
900	1.7	2.0	2.1		2.2	2.4	2.4	2.5	3.0	2.9		7.9
1000	1.7	2.0	2.1		2.2	2.4	2.4	2.5	2.9	2.7		6.3
1100	1.7	2.0	2.1		2.2	2.4	2.4	2.4	2.9	2.7		5.1
1200	1.5	2.0	2.0		2.2	2.3		2.4	2.7	2.7		4.5
1300	1.4	2.0	2.0		2.2	2.3		2.4		2.7		
1400	1.3	2.0	2.0		2.2	2.3		2.4		2.7		
1500		1.9	1.9		2.1	2.2		2.3		2.6		
1600			1.8		2.1	2.2		2.2		2.6		
1700					2.0			2.2		2.5		
1800								2.2		2.5		

STATION	109	110	111	112	113	114	115	116	117	118	119
DATE	10 3 86	10 3 86	11 3 86	11 3 86	11 3 86	12 3 86	12 3 86	12 3 86	13 3 86	13 3 86	13 3 86
TIME (GMT)	5-51	15- 2	3-53	8-53	14-52	3-56	8-48	14-52	3-58	8-53	14-54
(L T)	9-51	19- 2	7-53	12-53	18-52	7-56	12-48	18-52	7-58	12-53	18-54
LATITUDE	36 7 S	34 16 S	31 25 S	30 19 S	29 6 S	26 41 S	25 57 S	25 4 S	23 16 S	22 31 S	21 48 S
LONGITUDE	54 31 E	54 29 E	54 27 E	54 29 E	54 33 E	55 2 E	55 20 E	55 55 E	57 30 E	58 5 E	58 19 E
0	20.5	22.6	23.4	24.3	25.1	26.3	26.2	26.5	26.4	26.5	26.4
10	20.4	22.5	23.4	24.3	25.1	26.3	26.2	26.5	26.4	26.5	26.4
20	20.1	22.4	22.5	23.7	24.7	26.3	26.2	26.5	26.4	26.6	26.4
30	20.1	22.3	22.2	23.4	23.7	26.3	26.2	26.5	26.4	26.6	26.4
50	19.0	21.9	20.9	21.7	22.8	25.3	26.1	25.6	25.5	26.6	26.4
75	17.3	20.3	18.4	19.4	21.0	22.5	23.1	23.5	23.0	23.0	24.0
100	16.5	17.8	17.3	18.0	18.5	21.3	21.3	21.0	21.8	21.8	22.6
125	16.2	17.0	16.2	17.0	17.2	20.1	20.0	20.0	21.1	21.0	21.6
150	15.9	16.2	15.5	16.4	16.2	18.8	19.0	19.0	20.1	20.2	20.9
200	15.3	15.2	14.6	15.7	15.3	17.2	17.3	17.2	19.0	18.1	19.2
250	14.7	14.6	14.2	15.0	14.8	16.2	16.1	16.0	16.9	16.5	17.8
300	14.5	14.5	14.0	14.5	14.1	15.3	15.5	15.0	15.5	15.0	16.0
400	13.7	13.9	13.2	13.6	13.3	14.0	13.7	13.8	13.3	13.2	13.6
500	13.1	13.1	12.2		12.4	12.6		12.8	12.2		12.0
600	12.3	12.1	11.5		11.3	11.5		11.5	11.0		10.5
700	11.2	11.2	10.3		10.3	10.5		10.5	10.0		9.4
800	9.9	10.1	9.3		9.1	9.4		9.5	8.7		8.6
900		8.6	8.2		7.8	8.1		8.4	7.3		7.3
1000		7.3	6.6		6.2	6.5		6.8	5.7		5.8
1100		5.9	5.3		9.9	5.0		5.5	4.8		5.0
1200		5.2	4.3		9.2	4.2		4.4	4.3		4.2
1300		4.3	3.8		8.8	3.8		4.0	3.8		3.7
1400		4.0	3.4		8.4	3.6		3.5			3.3
1500		4.0	3.2		8.1	3.2		3.2			3.1
1600		4.0	3.0		7.9	3.0		3.0			
1700			2.9		7.8	2.8		2.8			
1800			2.7		7.6	2.7					

Table 3. CTD observation data.

<p>27CT01 LAT70 10S LONG23 52E 12/25/85 09:00 (LT)</p> <p>Depth SAL Temp.</p> <p>13.8 33.97 -1.36 20.5 34.05 -1.41 30.6 34.09 -1.49 40.9 34.10 -1.35</p> <p>51.8 34.16 -1.48 60.8 34.16 -1.51 80.9 34.21 -1.64 100.4 34.22 -1.69 124.3 34.22 -1.73</p> <p>150.2 34.24 -1.79 175.1 34.24 -1.88 200.2 34.24 -1.87 224.5 34.26 -1.86 251.0 34.28 -1.83</p>	<p>27CT02 LAT70 10S LONG24 11E 12/25/85 10:00 (LT)</p> <p>Depth SAL Temp.</p> <p>7.3 34.09 -0.91 10.0 34.12 -0.95 19.9 34.11 -0.99 30.2 34.19 -1.22 40.1 34.17 -1.30</p> <p>50.2 34.19 -1.41 59.7 34.22 -1.50 80.2 34.22 -1.62 100.0 34.24 -1.76 125.0 34.26 -1.78</p> <p>150.1 34.26 -1.78 175.1 34.26 -1.82 200.0 34.27 -1.82 225.0 34.31 -1.84</p>	<p>27CT03 LAT70 11S LONG24 29E 12/25/85 15:05 (LT)</p> <p>Depth SAL Temp.</p> <p>10.2 33.76 -1.01 19.7 33.92 -1.06 30.0 34.02 -1.21 40.1 34.04 -1.23</p> <p>49.9 34.06 -1.24 60.0 34.09 -1.35 79.9 34.10 -1.51 100.1 34.15 -1.63 125.0 34.18 -1.71</p> <p>150.5 34.21 -1.75 174.7 34.22 -1.76 200.2 34.22 -1.77 225.1 34.23 -1.78 249.9 34.27 -1.82</p> <p>275.2 34.28 -1.82</p>	<p>27CT04 LAT70 10S LONG24 11E 12/26/85 09:15 (LT)</p> <p>Depth SAL Temp.</p> <p>6.7 33.71 -0.75 10.1 34.00 -0.75 20.0 34.04 -0.82 29.8 34.10 -0.79 40.1 34.19 -1.37</p> <p>49.9 34.19 -1.51 60.0 34.21 -1.58 80.0 34.21 -1.56 100.4 34.21 -1.68 125.0 34.23 -1.72</p> <p>149.7 34.22 -1.78 175.1 34.25 -1.81 199.8 34.28 -1.82 224.9 34.30 -1.83 250.0 34.30 -1.83</p>
<p>27CT05 LAT70 14S LONG24 13E 12/26/85 13:50 (LT)</p> <p>Depth SAL Temp.</p> <p>5.9 34.00 -0.92 10.0 34.01 -0.93 20.0 34.04 -0.95 30.0 34.10 -1.09 40.1 34.19 -1.36</p> <p>49.9 34.19 -1.46 59.9 34.19 -1.47 79.9 34.21 -1.65 100.0 34.22 -1.76 125.0 34.23 -1.76</p> <p>150.1 34.26 -1.81 175.2 34.25 -1.81 200.1 34.29 -1.82 225.1 34.30 -1.84</p>	<p>27CT06 LAT70 10.1S LONG24 11.4E 12/26/85 17:00 (LT)</p> <p>Depth SAL Temp.</p> <p>6.7 33.60 -0.73 10.1 34.03 -0.77 20.1 34.08 -0.80 30.1 34.13 -0.88 40.1 34.17 -1.09</p> <p>50.1 34.19 -1.53 60.3 34.19 -1.55 79.9 34.20 -1.56 100.0 34.21 -1.71 125.0 34.21 -1.77</p> <p>149.9 34.23 -1.77 175.1 34.25 -1.81 200.0 34.24 -1.82 224.8 34.28 -1.83 250.0 34.29 -1.83</p>	<p>27CT07 LAT70 09.8S LONG24 10.4E 12/26/85 21:35 (LT)</p> <p>Depth SAL Temp.</p> <p>6.7 34.14 -0.89 10.0 34.05 -0.91 20.0 34.08 -1.01 30.0 34.13 -1.38 39.8 34.13 -1.50</p> <p>50.2 34.16 -1.60 59.9 34.21 -1.48 80.0 34.20 -1.56 99.9 34.22 -1.62 125.0 34.22 -1.73</p> <p>149.8 34.22 -1.77 175.1 34.24 -1.80 200.0 34.25 -1.81 224.9 34.24 -1.81 250.1 34.29 -1.83</p>	<p>27CT08 LAT70 09.6S LONG24 11.5E 12/27/85 02:37 (LT)</p> <p>Depth SAL Temp.</p> <p>6.3 34.07 -0.93 10.1 34.07 -0.90 20.1 34.09 -1.14 30.1 34.14 -1.43 39.9 34.16 -1.12</p> <p>50.1 34.19 -1.34 60.0 34.21 -1.53 79.9 34.21 -1.65 99.9 34.23 -1.70 125.0 34.22 -1.72</p> <p>149.9 34.23 -1.76 174.9 34.23 -1.78 200.1 34.26 -1.80 225.0 34.28 -1.82 250.0 34.30 -1.83</p>

<p>27CT09 LAT70 11.1S LONG24 11.0E 12/27/85 09:38 (LT)</p> <table border="1"> <thead> <tr> <th>Depth</th> <th>SAL</th> <th>Temp.</th> </tr> </thead> <tbody> <tr><td>4.9</td><td>32.21</td><td>-0.66</td></tr> <tr><td>9.9</td><td>34.14</td><td>-0.88</td></tr> <tr><td>20.0</td><td>34.17</td><td>-1.30</td></tr> <tr><td>30.3</td><td>34.19</td><td>-1.51</td></tr> <tr><td>39.9</td><td>34.21</td><td>-1.60</td></tr> <tr><td>50.1</td><td>34.22</td><td>-1.65</td></tr> <tr><td>60.0</td><td>34.22</td><td>-1.63</td></tr> <tr><td>79.9</td><td>34.22</td><td>-1.68</td></tr> <tr><td>100.0</td><td>34.21</td><td>-1.70</td></tr> <tr><td>125.0</td><td>34.22</td><td>-1.76</td></tr> <tr><td>150.1</td><td>34.23</td><td>-1.79</td></tr> <tr><td>174.9</td><td>34.24</td><td>-1.80</td></tr> <tr><td>200.1</td><td>34.27</td><td>-1.82</td></tr> <tr><td>225.0</td><td>34.28</td><td>-1.82</td></tr> <tr><td>250.0</td><td>34.30</td><td>-1.84</td></tr> </tbody> </table>	Depth	SAL	Temp.	4.9	32.21	-0.66	9.9	34.14	-0.88	20.0	34.17	-1.30	30.3	34.19	-1.51	39.9	34.21	-1.60	50.1	34.22	-1.65	60.0	34.22	-1.63	79.9	34.22	-1.68	100.0	34.21	-1.70	125.0	34.22	-1.76	150.1	34.23	-1.79	174.9	34.24	-1.80	200.1	34.27	-1.82	225.0	34.28	-1.82	250.0	34.30	-1.84	<p>27CT10 LAT70 06.5S LONG24 08.0E 12/29/85 09:55 (LT)</p> <table border="1"> <thead> <tr> <th>Depth</th> <th>SAL</th> <th>Temp.</th> </tr> </thead> <tbody> <tr><td>6.7</td><td>33.99</td><td>-0.34</td></tr> <tr><td>10.0</td><td>33.99</td><td>-0.34</td></tr> <tr><td>20.0</td><td>33.99</td><td>-0.40</td></tr> <tr><td>30.0</td><td>34.07</td><td>-1.12</td></tr> <tr><td>39.9</td><td>34.10</td><td>-1.57</td></tr> <tr><td>49.9</td><td>34.14</td><td>-1.66</td></tr> <tr><td>59.9</td><td>34.16</td><td>-1.68</td></tr> <tr><td>80.0</td><td>34.18</td><td>-1.71</td></tr> <tr><td>100.0</td><td>34.19</td><td>-1.70</td></tr> <tr><td>125.0</td><td>34.22</td><td>-1.71</td></tr> <tr><td>150.1</td><td>34.23</td><td>-1.73</td></tr> <tr><td>175.2</td><td>34.23</td><td>-1.75</td></tr> <tr><td>200.0</td><td>34.26</td><td>-1.78</td></tr> <tr><td>225.0</td><td>34.25</td><td>-1.79</td></tr> <tr><td>249.9</td><td>34.26</td><td>-1.80</td></tr> <tr><td>274.8</td><td>34.30</td><td>-1.82</td></tr> <tr><td>300.1</td><td>34.33</td><td>-1.84</td></tr> </tbody> </table>	Depth	SAL	Temp.	6.7	33.99	-0.34	10.0	33.99	-0.34	20.0	33.99	-0.40	30.0	34.07	-1.12	39.9	34.10	-1.57	49.9	34.14	-1.66	59.9	34.16	-1.68	80.0	34.18	-1.71	100.0	34.19	-1.70	125.0	34.22	-1.71	150.1	34.23	-1.73	175.2	34.23	-1.75	200.0	34.26	-1.78	225.0	34.25	-1.79	249.9	34.26	-1.80	274.8	34.30	-1.82	300.1	34.33	-1.84	<p>27CT11 LAT70 15.7S LONG24 27.8E 12/29/85 13:10 (LT)</p> <table border="1"> <thead> <tr> <th>Depth</th> <th>SAL</th> <th>Temp.</th> </tr> </thead> <tbody> <tr><td>7.7</td><td>34.12</td><td>-1.46</td></tr> <tr><td>10.0</td><td>34.12</td><td>-1.48</td></tr> <tr><td>20.1</td><td>34.14</td><td>-1.49</td></tr> <tr><td>30.0</td><td>34.18</td><td>-1.66</td></tr> <tr><td>40.2</td><td>34.18</td><td>-1.68</td></tr> <tr><td>50.1</td><td>34.20</td><td>-1.75</td></tr> <tr><td>60.2</td><td>34.20</td><td>-1.76</td></tr> <tr><td>79.9</td><td>34.20</td><td>-1.76</td></tr> <tr><td>100.1</td><td>34.21</td><td>-1.78</td></tr> <tr><td>125.0</td><td>34.22</td><td>-1.81</td></tr> <tr><td>149.9</td><td>34.23</td><td>-1.82</td></tr> <tr><td>175.1</td><td>34.24</td><td>-1.83</td></tr> <tr><td>200.0</td><td>34.31</td><td>-1.84</td></tr> </tbody> </table>	Depth	SAL	Temp.	7.7	34.12	-1.46	10.0	34.12	-1.48	20.1	34.14	-1.49	30.0	34.18	-1.66	40.2	34.18	-1.68	50.1	34.20	-1.75	60.2	34.20	-1.76	79.9	34.20	-1.76	100.1	34.21	-1.78	125.0	34.22	-1.81	149.9	34.23	-1.82	175.1	34.24	-1.83	200.0	34.31	-1.84	<p>27CT12 LAT69 00.3S LONG39 37.6E 01/30/86 08:50 (LT)</p> <table border="1"> <thead> <tr> <th>Depth</th> <th>SAL</th> <th>Temp.</th> </tr> </thead> <tbody> <tr><td>6.4</td><td>34.20</td><td>-0.99</td></tr> <tr><td>10.0</td><td>34.04</td><td>-1.23</td></tr> <tr><td>20.1</td><td>34.11</td><td>-1.44</td></tr> <tr><td>30.1</td><td>34.13</td><td>-1.57</td></tr> <tr><td>39.8</td><td>34.14</td><td>-1.58</td></tr> <tr><td>50.1</td><td>34.17</td><td>-1.63</td></tr> <tr><td>60.0</td><td>34.17</td><td>-1.66</td></tr> <tr><td>79.9</td><td>34.18</td><td>-1.61</td></tr> <tr><td>100.0</td><td>34.23</td><td>-1.50</td></tr> <tr><td>124.8</td><td>34.26</td><td>-1.44</td></tr> <tr><td>150.1</td><td>34.30</td><td>-1.38</td></tr> <tr><td>175.1</td><td>34.31</td><td>-1.30</td></tr> <tr><td>199.7</td><td>34.33</td><td>-1.27</td></tr> <tr><td>225.1</td><td>34.35</td><td>-1.23</td></tr> <tr><td>250.0</td><td>34.37</td><td>-1.18</td></tr> <tr><td>274.9</td><td>34.39</td><td>-1.12</td></tr> </tbody> </table>	Depth	SAL	Temp.	6.4	34.20	-0.99	10.0	34.04	-1.23	20.1	34.11	-1.44	30.1	34.13	-1.57	39.8	34.14	-1.58	50.1	34.17	-1.63	60.0	34.17	-1.66	79.9	34.18	-1.61	100.0	34.23	-1.50	124.8	34.26	-1.44	150.1	34.30	-1.38	175.1	34.31	-1.30	199.7	34.33	-1.27	225.1	34.35	-1.23	250.0	34.37	-1.18	274.9	34.39	-1.12
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Table 4. Serial observation data.

Station 1

Meteorological observation

Date : 25,12,1985
 Time (GMT) : 0728-0807
 (L T) : 1028-1107
 Latitude : 70°15'S
 Longitude : 24°10'E
 Depth : 246 m

Time (GMT) : 0800
 (L T) : 1100
 Weather : bc
 Air temperature (dry) : -3.5°C
 (wet) : -6.1°C
 Atmospheric pressure : 981.8 mb
 Wind direction : SE
 velocity : 3 m/s
 Humidity : 80 %
 Sea : SE/O
 Swell : 0
 Visibility : 8

O b s e r v e d										I n t e r p o l a t e d				
Depth	T	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth	T	S	δt	ΔD
(m)	(°C)			(ml/l)		(μg-atoms/l)				(m)	(°C)			
0	-1.00	34.082	8.38	9.33	1.78	64.	***** *	18.00	0.1	0	-1.00	34.082	27.430	0.
13	-0.87	34.074	8.38	9.46	1.62	64.	0.08	19.00	0.1	10	-0.86	34.073	27.418	0.0066
23	-1.06	34.086	8.38	9.05	1.78	65.	0.09	21.00	0.2	20	-0.99	34.081	27.429	0.0133
32	-1.16	34.109	8.30	8.62	1.87	66.	0.09	23.00	0.1	30	-1.13	34.103	27.453	0.0198
42	-1.33	34.133	8.27	8.25	1.96	66.	0.10	25.00	0.1	40	-1.29	34.129	27.478	0.0260
51	-1.51	34.139	8.24	7.97	2.07	66.	0.09	27.00	0.1	50	-1.49	34.139	27.492	0.0321
65	-1.57	34.141	8.25	7.81	2.07	66.	0.09	27.00	0.2	60	-1.56	34.140	27.496	0.0380
89	-1.70	34.159	8.20	7.63	2.11	66.	0.09	29.00	0.1	75	-1.62	34.148	27.503	0.0469
112	-1.75	34.172	8.20	7.56	2.20	66.	0.05	29.00	0.	100	-1.72	34.166	27.521	0.0613
136	-1.82	34.173	8.20	7.38	2.13	67.	0.05	29.00	0.	125	-1.78	34.173	27.528	0.0753
184	-1.84	34.188	8.20	7.37	2.09	66.	0.08	29.00	0.	150	-1.83	34.176	27.531	0.0892
231	-1.82	34.219	8.18	7.37	2.13	66.	0.08	28.00	0.	175	-1.84	34.184	27.538	0.1036
										200	-1.83	34.197	27.548	0.1165

Station 2

Meteorological observation

Date : 25,12,1985
 Time (GMT) : 1120-1159
 (L T) : 1420-1459
 Latitude : 70°11'S
 Longitude : 24°29'E
 Depth : 280 m

Time (GMT) : 1200
 (L T) : 1500
 Weather : bc
 Air temperature (dry) : -1.0°C
 (wet) : -4.5°C
 Atmospheric pressure : 983.8 mb
 Wind direction : ENE
 velocity : 3 m/s
 Humidity : 77 %
 Sea : ENE/O
 Swell : 0
 Visibility : 8

O b s e r v e d										I n t e r p o l a t e d				
Depth	T	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth	T	S	δt	ΔD
(m)	(°C)			(ml/l)		(μg-atoms/l)				(m)	(°C)			
0	-1.10	34.090	8.30	8.66	1.78	68.	0.08	23.00	0.1	0	-1.10	34.090	27.440	0.
13	-1.06	34.082	8.34	8.88	1.73	67.	0.15 *	23.00	0.1	10	-1.03	34.083	27.433	0.0065
23	-1.28	34.081	8.29	8.55	1.87	66.	0.07	25.00	0.1	20	-1.21	34.080	27.436	0.0131
33	-1.28	34.093	8.29	8.46	1.91	66.	0.07	24.00	0.1	30	-1.28	34.089	27.446	0.0195
43	-1.37	34.095	8.27	8.26	1.93	66.	0.06	24.00	0.	40	-1.34	34.095	27.452	0.0259
53	-1.43	34.102	8.25	8.01	1.96	68.	0.05	26.00	0.	50	-1.41	34.100	27.458	0.0323
63	-1.51	34.108	8.24	7.91	2.11	68.	0.06	28.00	1.0 *	60	-1.48	34.106	27.466	0.0385
78	-1.54	34.125	8.24	7.90	1.91	67.	0.07	28.00	0.1	75	-1.53	34.122	27.480	0.0478
103	-1.62	34.137	8.21	7.72	1.98	67.	0.06	29.00	0.1	100	-1.61	34.136	27.493	0.0628
128	-1.68	34.157	8.20	7.62	2.16	67.	0.04	29.00	0.1	125	-1.67	34.155	27.510	0.0774
153	-1.68	34.164	8.20	7.58	2.16	68.	0.	29.00	0.1	150	-1.68	34.163	27.517	0.0917
203	-1.75	34.185	8.19	7.49	2.13	67.	0.	30.00	0.	175	-1.70	34.172	27.525	0.1058
253	-1.80	34.218	8.18	7.42	2.07	65.	0.	31.00	0.	200	-1.74	34.183	27.535	0.1196
										250	-1.79	34.216	27.563	0.1462

Station 3

Meteorological observation

Date : 26,12,1985
 Time (GMT) : 0526-0609
 (L T) : 0826-0909
 Latitude : 70°10'S
 Longitude : 24°11'E
 Depth : 261 m

Time (GMT) : 0600
 (L T) : 0900
 Weather : bc
 Air temperature (dry) : -2.5°C
 (wet) : -3.8°C
 Atmospheric pressure : 990.4 mb
 Wind direction : ESE
 velocity : 5 m/s
 Humidity : 92%
 Sea : ESE/1
 Swell : 0
 Visibility : 6

Observed										Interpolated				
Depth	T	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth	T	S	dt	ΔD
(m)	(°C)			(ml/l)	(μg-atoms/l)					(m)	(°C)			
0	-0.80	34.095	8.41	9.64	1.42	64.	0.13	16.00	0.1	0	-0.80	34.095	27.433	0.
12	-0.75	34.083	8.38	9.65	1.44	64.	0.14	17.00	0.1	10	-0.75	34.083	27.422	0.0066
22	-0.76	34.096	8.38	9.59	1.42	64.	0.09	17.00	0.	20	-0.73	34.091	27.428	0.0132
31	-1.32	34.132	8.27	8.30	1.91	65.	0.08	24.00	0.2	30	-1.25	34.128	27.476	0.0196
41	-1.42	34.137	8.23	8.12	1.91	66.	0.08	25.00	0.2	40	-1.42	34.137	27.489	0.0257
51	-1.51	34.142	8.20	7.91	1.93	66.	0.08	26.00	0.2	50	-1.50	34.142	27.495	0.0317
61	-1.51	34.146	8.20	7.91	1.91	66.	0.08	26.00	0.2	60	-1.51	34.146	27.498	0.0376
75	-1.57	34.150	8.20	7.84	1.87	66.	0.08	27.00	0.3	75	-1.57	34.150	27.503	0.0464
100	-1.67	34.155	8.19	7.68	2.00	66.	0.08	27.00	0.3	100	-1.67	34.155	27.510	0.0610
124	-1.69	34.163	8.18	7.65	2.04	66.	0.07	28.00	0.2	125	-1.69	34.163	27.518	0.0753
148	-1.73	34.171	8.16	7.52	1.98	66.	0.06	29.00	0.2	150	-1.73	34.172	27.525	0.0894
196	-1.76	34.192	8.17	7.41	2.07	66.	0.06	29.00	0.1	175	-1.75	34.182	27.534	0.1033
245	-1.78	34.218	8.18	7.41	2.02	64.	0.07	30.00	0.2	200	-1.76	34.194	27.544	0.1169

Station 4

Meteorological observation

Date : 26,12,1985
 Time (GMT) : 1248-1330
 (L T) : 1548-1630
 Latitude : 70°10'S
 Longitude : 24°11'E
 Depth : 252 m

Time (GMT) : 1300
 (L T) : 1600
 Weather : bc
 Air temperature (dry) : -0.8°C
 (wet) : -3.0°C
 Atmospheric pressure : 992.3 mb
 Wind direction : NNE
 velocity : 2 m/s
 Humidity : 85%
 Sea : NNE/1
 Swell : 0
 Visibility : 8

Observed										Interpolated				
Depth	T	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth	T	S	dt	ΔD
(m)	(°C)			(ml/l)	(μg-atoms/l)					(m)	(°C)			
0	-0.50	34.082	8.40	9.65	1.42	64.	0.14	16.00	0.1	0	-0.50	34.082	27.411	0.
12	-0.75	34.083	8.40	9.76	1.67	64.	0.11	17.00	0.2	10	-0.69	34.081	27.418	0.0067
22	-1.14	34.102	8.30	8.81	2.02	65.	0.08	21.00	0.3	20	-1.06	34.097	27.445	0.0133
32	-1.38	34.133	8.26	8.17	2.13	66.	0.08	25.00	0.4	30	-1.34	34.127	27.478	0.0196
42	-1.49	34.144	8.22	7.97	2.24	66.	0.10	26.00	0.3	40	-1.47	34.143	27.495	0.0256
51	-1.47	34.148	8.21	7.94	2.20	66.	0.07	27.00	0.2	50	-1.47	34.148	27.499	0.0316
61	-1.50	34.148	8.21	7.95	2.24	66.	0.08	26.00	0.3	60	-1.49	34.148	27.500	0.0375
76	-1.65	34.157	8.20	7.70	2.22	66.	0.07	28.00	0.3	75	-1.63	34.156	27.510	0.0462
100	-1.71	34.162	8.18	7.60	2.33	66.	0.07	28.00	0.1	100	-1.71	34.162	27.517	0.0606
124	-1.75	34.166	8.17	7.57	2.27	66.	0.07	28.00	0.1	125	-1.75	34.167	27.522	0.0748
149	-1.77	34.181	8.17	7.49	2.24	65.	0.06	29.00	0.1	150	-1.77	34.181	27.534	0.0887
197	-1.78	34.198	8.17	7.52	2.27	66.	0.06	29.00	0.1	175	-1.77	34.191	27.542	0.1024
245	-1.81	34.220	8.18	7.40	4.13 *	84. *	***** *	***** *	0.1	200	-1.78	34.199	27.549	0.1159

Station 5.

Meteorological observation

Date : 26.12.1985
 Time (GMT) : 1800-1833
 (L T) : 2100-2133
 Latitude : 70°10'S
 Longitude : 24°10'E
 Depth : 270 m

Time (GMT) : 1800
 (L T) : 2100
 Weather : bc
 Air temperature (dry) : -1.1°C
 (wet) : -3.8°C
 Atmospheric pressure : 993.1 mb
 Wind direction : NE
 velocity : 4 m/s
 Humidity : 82 %
 Sea : NE/0
 Swell : 0
 Visibility : 8

O b s e r v e d										I n t e r p o l a t e d				
Depth	T	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth	T	S	δt	Δ0
(m)	(°C)			(ml/l)	(μg-atoms/l)					(m)	(°C)			
0	-0.90	34.041	8.41	9.64	1.47	65.	0.08	17.00	0.2	0	-0.90	34.041	27.394	0.
13	-0.97	34.050	8.38	9.65	1.58	65.	0.11	18.00	0.2	10	-0.90	34.047	27.398	0.0069
23	-1.39	34.066	8.30	8.76	1.84	65.	0.08	21.00	0.3	20	-1.26	34.061	27.423	0.0137
33	-1.40	34.074	8.28	8.43	1.82	65.	0.07	22.00	0.3	30	-1.42	34.070	27.435	0.0203
42	-1.36	34.108	8.27	8.32	1.93	66.	0.07	23.00	0.6	40	-1.36	34.100	27.457	0.0267
52	-1.36	34.128	8.25	8.26	1.93	66.	0.06	24.00	0.5	50	-1.35	34.125	27.477	0.0329
62	-1.48	34.146	8.22	8.05	2.00	66.	0.07	26.00	0.4	60	-1.45	34.143	27.494	0.0389
77	-1.57	34.149	8.22	7.83	2.00	66.	0.06	26.00	0.4	75	-1.56	34.149	27.503	0.0478
102	-1.64	34.155	8.21	7.65	2.07	67.	0.06	28.00	0.3	100	-1.63	34.154	27.509	0.0624
127	-1.74	34.161	8.18	7.52	2.09	67.	0.06	28.00	0.2	125	-1.73	34.160	27.516	0.0767
151	-1.75	34.177	8.18	7.50	2.09	66.	0.05	29.00	0.2	150	-1.75	34.176	27.530	0.0908
201	-1.76	34.189	8.19	7.45	2.09	66.	0.05	29.00	0.3	175	-1.75	34.183	27.535	0.1046
251	-1.81	34.226	8.19	7.38	2.09	64.	0.07	29.00	0.2	200	-1.76	34.189	27.540	0.1182
										250	-1.80	34.225	27.570	0.1446

Station 6

Meteorological observation

Date : 27.12.1985
 Time (GMT) : 2255-2330*
 (L T) : 0155-0230
 Latitude : 70°10'S
 Longitude : 24°11'E
 Depth : 274 m

Time (GMT) : 2300
 (L T) : 0200
 Weather : bc
 Air temperature (dry) : -1.0°C
 (wet) : -3.6°C
 Atmospheric pressure : 993.4 mb
 Wind direction : SE
 velocity : 3 m/s
 Humidity : 81 %
 Sea : SE/1
 Swell : 0
 Visibility : 8

O b s e r v e d										I n t e r p o l a t e d				
Depth	T	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth	T	S	δt	Δ0
(m)	(°C)			(ml/l)	(μg-atoms/l)					(m)	(°C)			
0	-1.10	34.061	8.36	9.32	1.49	65.	0.08	20.00	0.1	0	-1.10	34.061	27.417	0.
12	-1.04	34.053	8.35	9.32	1.49	64.	0.07	21.00	0.1	10	-1.00	34.051	27.406	0.0068
22	-1.44	34.080	8.27	8.36	1.89	64.	0.04	24.00	0.3	20	-1.35	34.074	27.436	0.0134
32	-1.46	34.086	8.25	8.17	1.89	64.	0.06	25.00	0.3	30	-1.47	34.084	27.447	0.0199
42	-1.43	34.129	8.25	8.14	1.96	65.	0.04	26.00	0.4	40	-1.43	34.120	27.475	0.0262
52	-1.43	34.145	8.24	8.03	1.96	66.	0.04	27.00	0.3	50	-1.42	34.143	27.494	0.0322
62	-1.51	34.149	8.23	7.96	2.00	67.	0.04	27.00	0.3	60	-1.49	34.149	27.500	0.0382
77	-1.63	34.153	8.21	7.74	1.98	66.	0.04	29.00	0.2	75	-1.61	34.153	27.507	0.0469
102	-1.71	34.159	8.21	7.56	2.09	66.	0.04	30.00	0.2	100	-1.70	34.159	27.514	0.0614
127	-1.75	34.163	8.19	7.54	2.09	66.	0.04	30.00	0.2	125	-1.74	34.163	27.518	0.0757
152	-1.77	34.165	8.20	7.57	2.13	66.	0.	31.00	0.2	150	-1.76	34.165	27.521	0.0898
201	-1.76	34.179	8.19	7.52	2.13	66.	0.	31.00	0.2	175	-1.76	34.169	27.524	0.1038
251	-1.81	34.219	8.19	7.42	2.09	65.	0.02	32.00	0.1	200	-1.76	34.179	27.532	0.1177
										250	-1.80	34.218	27.565	0.1444

* The time of date of the preceding day.

Station 7

Meteorological observation

Date : 27, 12, 1985
 Time (GMT) : 0555-0630
 (L T) : 0855-0930
 Latitude : 70°11'S
 Longitude : 24°11'E
 Depth : 270 m

Time (GMT) : 0600
 (L T) : 0900
 Weather : bc
 Air temperature (dry) : -2.0 °C
 (wet) : -7.5 °C
 Atmospheric pressure : 992.4 mb
 Wind direction : SSW
 velocity : 1 m/s
 Humidity : 67%
 Sea : SSW/1
 Swell : 0
 Visibility : 8

O b s e r v e d										I n t e r p o l a t e d				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	δt	ΔD
					(μg-atoms/l)									
0	-0.80	34.090	8.41	9.81	1.40	64.	0.11	16.00	0.2	0	-0.80	34.090	27.429	0.
13	-0.76	34.083	8.40	9.96	1.40	64.	0.08	17.00	0.3	10	-0.73	34.082	27.421	0.0066
23	-0.98	34.095	8.32	9.13	1.60	66.	0.07	19.00	0.3	20	-0.90	34.090	27.433	0.0133
33	-1.24	34.113	8.28	8.49	1.82	66.	0.06	23.00	0.3	30	-1.16	34.107	27.456	0.0197
43	-1.44	34.132	8.24	8.11	1.89	66.	0.07	26.00	0.4	40	-1.38	34.127	27.479	0.0259
53	-1.56	34.141	8.21	7.85	1.96	67.	0.04	29.00	0.4	50	-1.53	34.139	27.493	0.0319
63	-1.63	34.146	8.20	7.80	2.11	67.	0.05	29.00	0.4	60	-1.61	34.145	27.500	0.0379
78	-1.61	34.157	8.20	7.72	2.00	67.	0.06	29.00	0.4	75	-1.61	34.155	27.509	0.0466
103	-1.65	34.166	8.20	7.67	2.07	67.	0.07	30.00	0.4	100	-1.64	34.165	27.518	0.0610
128	-1.74	34.166	8.19	7.56	2.13	67.	0.05	30.00	0.3	125	-1.72	34.166	27.521	0.0752
153	-1.78	34.179	8.18	7.51	2.16	66.	0.04	31.00	0.3	150	-1.77	34.177	27.531	0.0892
203	-1.77	34.208	8.18	7.42	2.16	66.	0.04	31.00	0.2	175	-1.78	34.192	27.543	0.1029
253	-1.81	34.233	8.19	7.37	2.13	65.	0.04	32.00	0.2	200	-1.77	34.206	27.554	0.1163
										250	-1.80	34.232	27.576	0.1421

Station 8

Meteorological observation

Date : 29.12.1985
 Time (GMT) : 0542-0643
 (L T) : 0842-0943
 Latitude : 70° 70' S
 Longitude : 24° 90' E
 Depth : 1072m

Time (GMT) : 0600
 (L T) : 0900
 Weather : b
 Air temperature (dry) : -3.1 °C
 (wet) : -6.4 °C
 Atmospheric pressure : 995.4 mb
 Wind direction : SW
 velocity : 4 m/s
 Humidity : 78 %
 Sea : SW/O
 Swell : 0
 Visibility : 8

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si (µg-atoms/l)	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	δt	Δ0
0	-0.30	34.039	8.45	10.10	1.51	66.	0.12	14.00	0.2	0	-0.30	34.039	27.367	0.
13	-0.39	34.036	8.43	10.30	1.24	65.	0.10	15.00	0.3	10	-0.29	34.033	27.362	0.0072
23	-1.06	34.063	8.35	9.58	1.51	64.	0.08	19.00	0.3	20	-0.84	34.054	27.402	0.0143
33	-1.40	34.087	8.27	8.29	1.89	66.	0.08	24.00	0.4	30	-1.32	34.080	27.440	0.0209
52	-1.64	34.116	8.21	7.68	2.00	66.	0.06	28.00	0.5	40	-1.53	34.099	27.461	0.0273
77	-1.62	34.153	8.20	7.57	2.00	65.	0.05	28.00	0.5	50	-1.63	34.113	27.476	0.0335
102	-1.51	34.149	8.21	7.88	2.00	66.	0.07	27.00	0.6	60	-1.65	34.130	27.490	0.0396
127	-1.67	34.164	8.21	7.61	1.96	65.	0.06	29.00	0.7	75	-1.63	34.151	27.506	0.0484
152	-1.69	34.173	8.20	7.64	2.02	64.	0.07	29.00	0.8	100	-1.51	34.150	27.502	0.0630
201	-1.77	34.194	8.18	7.51	1.91	64.	0.06	30.00	0.4	125	-1.65	34.163	27.516	0.0775
251	-1.77	34.218	8.18	7.49	2.04	62.	0.05	30.00	0.2	150	-1.69	34.172	27.525	0.0916
301	-1.80	34.267	8.18	7.44	2.04	62.	0.03	30.00	0.1	175	-1.72	34.182	27.534	0.1055
400	-1.43	34.360	8.16	6.96	2.07	66.	0.	30.00	0.1	200	-1.76	34.194	27.544	0.1191
499	-1.29	34.662	8.10	4.88	2.22	101.	0.01	32.00	0.1	250	-1.77	34.217	27.563	0.1455
599	0.75	34.687	8.06	4.86	2.29	105.	0.	31.00	0.1	300	-1.80	34.266	27.603	0.1703
698	0.70	34.693	8.07	4.85	2.29	107.	0.02	31.00	0.1	400	-1.43	34.360	27.669	0.2148
797	0.64	34.688	8.05	4.89	2.33	109.	0.	32.00	0.	500	-1.26	34.663	27.909	0.2447
896	0.53	34.686	8.05	4.89	2.27	112.	0.	32.00	0.2	600	0.75	34.687	27.831	0.2683
996	0.44	34.682	8.05	4.93	2.24	115.	0.	32.00	0.	700	0.69	34.693	27.839	0.2968
										800	0.63	34.688	27.839	0.3250
										900	0.52	34.686	27.844	0.3528

Station 9

Meteorological observation

Date : 29,12,1985
 Time (GMT) : 0945-1008
 (L T) : 1245-1308
 Latitude : 70° 16' S
 Longitude : 24° 28' E
 Depth : 230 m

Time (GMT) : 1000
 (L T) : 1300
 Weather : b
 Air temperature (dry) : -2.0 °C
 (wet) : -5.6 °C
 Atmospheric pressure : 996.3 mb
 Wind direction : W
 velocity : 4 m/s
 Humidity : 76 %
 Sea : W/1
 Swell : 0
 Visibility : 8

O b s e r v e d										I n t e r p o l a t e d				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	δt	ΔD
					(μg-atoms/l)									
0	-1.30	34.156	8.20	7.79	2.09	66.	0.08	28.00	0.2	0	-1.30	34.156	27.500	0.
11	-1.51	34.155	8.20	7.81	2.00	66.	0.07	28.00	0.1	10	-1.49	34.155	27.505	0.0059
21	-1.65	34.156	8.18	7.62	2.11	66.	0.06	29.00	0.2	20	-1.64	34.156	27.510	0.0117
30	-1.64	34.154	8.19	7.58	2.16	66.	0.06	29.00	0.1	30	-1.64	34.154	27.509	0.0176
40	-1.68	34.155	8.19	7.53	2.16	66.	0.06	29.00	0.2	40	-1.68	34.155	27.510	0.0234
49	-1.69	34.157	8.16	7.46	2.18	66.	0.06	29.00	0.2	50	-1.69	34.157	27.513	0.0292
59	-1.72	34.159	8.17	7.46	2.20	66.	0.06	30.00	0.2	60	-1.72	34.159	27.515	0.0349
73	-1.73	34.157	8.18	7.46	2.00	66.	0.06	28.00	0.2	75	-1.73	34.157	27.513	0.0436
97	-1.76	34.160	8.19	7.43	2.04	65.	0.07	28.00	0.2	100	-1.76	34.160	27.517	0.0579
121	-1.77	34.164	8.17	7.43	2.20	66.	0.06	28.00	0.2	125	-1.77	34.164	27.520	0.0721
145	-1.77	34.170	8.17	7.40	2.24	65.	0.07	29.00	0.2	150	-1.77	34.173	27.528	0.0861
192	-1.81	34.231	8.17	7.38	2.24	64.	0.05	30.00	0.1	175	-1.78	34.201	27.551	0.0998

Station 10

Meteorological observation

Date : 13,02,1986
 Time (GMT) : 0927-1010
 (L T) : 1227-1310
 Latitude : 70° 14' S
 Longitude : 24° 28' E
 Depth : 268 m

Time (GMT) : 0900
 (L T) : 1200
 Weather : bc
 Air temperature (dry) : -2.5 °C
 (wet) : -5.8 °C
 Atmospheric pressure : 988.8 mb
 Wind direction : SE
 velocity : 9 m/s
 Humidity : 78 %
 Sea : SE/3
 Swell : 0
 Visibility : 8

O b s e r v e d										I n t e r p o l a t e d				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	δt	ΔD
					(μg-atoms/l)									
0	-1.30	33.757	8.48	9.33	1.29	50.	0.12	16.00	0.3	0	-1.30	33.757	27.178	0.
10	-1.21	33.750	8.48	9.43	1.29	48.	0.12	16.00	0.3	10	-1.21	33.750	27.169	0.0090
20	-1.31	33.866	8.44	9.12	1.44	52.	0.12	19.00	0.3	20	-1.31	33.866	27.266	0.0176
29	-1.39	33.920	8.41	8.68	1.64	53.	0.11	20.00	0.3	30	-1.42	33.933	27.323	0.0255
39	-1.68	34.045	8.32	7.91	2.02	59.	0.08	26.00	0.7 *	40	-1.69	34.051	27.427	0.0326
48	-1.72	34.085	8.27	7.52	2.02	60.	0.08	28.00	0.4	50	-1.72	34.097	27.465	0.0390
58	-1.72	34.135	8.25	7.54	2.07	60.	0.08	27.00	0.4	60	-1.72	34.134	27.495	0.0451
72	-1.74	34.111	8.24	7.45	2.07	59.	0.10	27.00	0.6	75	-1.74	34.112	27.477	0.0541
96	-1.76	34.136	8.23	7.43	2.04	60.	0.11	28.00	0.4	100	-1.76	34.139	27.500	0.0691
120	-1.80	34.154	8.22	7.41	2.13	60.	0.08	30.00	0.4	125	-1.79	34.158	27.516	0.0835
144	-1.77	34.173	8.21	7.38	2.16	60.	0.08	29.00	0.4	150	-1.76	34.176	27.530	0.0976
192	-1.78	34.196	8.21	7.35	2.20	60.	0.07	30.00	0.3	175	-1.77	34.189	27.540	0.1113
241	-1.78	34.225	8.21	7.39	2.18	59.	0.05	29.00	0.4	200	-1.78	34.200	27.550	0.1248

Station 11

Meteorological observation

Date : 14,02,1986
 Time (GMT) : 0715 - 0745
 (L T) : 1015 - 1045
 Latitude : 70°13'S
 Longitude : 24°9'E
 Depth : 275 m

Time (GMT) : 0700
 (L T) : 1000
 Weather : bc
 Air temperature (dry) : -1.4 °C
 (wet) : -4.5 °C
 Atmospheric pressure : 990.0 mb
 Wind direction : ESE
 velocity : 8 m/s
 Humidity : 86 %
 Sea : ESE/1
 Swell : 0
 Visibility : 7

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	δt	ΔD
					(μg-atoms/l)									
0	-1.40	33.684	8.42	9.23	1.22	54.	0.13	17.00	0.4	0	-1.40	33.684	27.121	0.
11	-1.32	33.673	8.40	9.34	1.22	53.	0.13	17.00	0.4	10	-1.32	33.673	27.111	0.0096
19	-1.33	33.675	8.40	9.33	1.22	54.	0.11	17.00	0.2	20	-1.32	33.667	27.106	0.0192
27	-1.31	33.679	8.40	9.32	1.20	53.	0.11	17.00	0.2	30	-1.39	33.786	27.204	0.0284
35	-1.55	33.977	8.30	8.29	1.71	62.	0.08	24.00	0.3	40	-1.63	34.043	27.419	0.0361
43	-1.67	34.057	8.22	7.78	1.89	64.	0.08	28.00	0.3	50	-1.69	34.077	27.448	0.0426
51	-1.70	34.078	8.18	7.55	1.96	64.	0.08	30.00	0.5	60	-1.73	34.095	27.463	0.0489
63	-1.74	34.100	8.17	7.44	2.02	65.	0.09	27.00	0.5	75	-1.74	34.115	27.480	0.0582
83	-1.75	34.123	8.15	7.39	2.02	65.	0.09	29.00	0.3	100	-1.77	34.135	27.496	0.0731
104	-1.78	34.137	8.13	7.36	2.09	66.	0.07	30.00	0.2	125	-1.77	34.155	27.513	0.0877
124	-1.77	34.154	8.12	7.34	2.09	66.	0.07	31.00	0.2	150	-1.77	34.180	27.533	0.1017
164	-1.78	34.194	8.12	7.34	2.02	65.	0.06	31.00	0.1	175	-1.78	34.205	27.553	0.1153
205	-1.81	34.233	8.13	7.36	2.02	64.	0.05	31.00	0.1	200	-1.80	34.228	27.573	0.1283

Station 12

Meteorological observation

Date : 14,02,1986
 Time (GMT) : 1320 - 1356
 (L T) : 1620 - 1656
 Latitude : 70°16'S
 Longitude : 24°6'E
 Depth : 228 m

Time (GMT) : 1300
 (L T) : 1600
 Weather : bc
 Air temperature (dry) : -1.5 °C
 (wet) : -4.2 °C
 Atmospheric pressure : 991.4 mb
 Wind direction : SE
 velocity : 8 m/s
 Humidity : 82 %
 Sea : SE/2
 Swell : 0
 Visibility : 8

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	δt	ΔD
					(μg-atoms/l)									
0	-1.30	33.753	8.35	9.20	1.44	53.	0.13	19.00	0.	0	-1.30	33.753	27.174	0.
12	-1.33	33.753	8.35	9.21	1.36	53.	0.13	19.00	0.1	10	-1.32	33.749	27.172	0.0090
22	-1.36	33.794	8.34	9.16	1.44	55.	0.13	20.00	0.	20	-1.35	33.781	27.199	0.0179
31	-1.37	33.896	8.31	8.84	1.51	57.	0.11	21.00	0.2	30	-1.36	33.883	27.281	0.0263
41	-1.63	34.034	8.23	7.86	1.96	62.	0.09	29.00	0.2	40	-1.60	34.021	27.400	0.0337
51	-1.75	34.093	8.17	7.54	2.11	64.	0.08	32.00	0.3	50	-1.74	34.090	27.459	0.0403
60	-1.73	34.101	8.15	7.53	2.11	64.	0.08	31.00	0.4	60	-1.73	34.101	27.468	0.0465
75	-1.75	34.108	8.14	7.45	2.11	64.	0.08	31.00	0.3	75	-1.75	34.108	27.474	0.0558
99	-1.76	34.125	8.13	7.33	2.04	65.	0.08	33.00	0.2	100	-1.76	34.126	27.489	0.0709
123	-1.79	34.142	8.11	7.37	2.11	64.	0.08	33.00	0.2	125	-1.79	34.144	27.504	0.0856
147	-1.79	34.163	8.10	7.34	2.18	64.	0.07	34.00	0.2	150	-1.79	34.166	27.522	0.0999
195	-1.79	34.220	8.08	7.32	2.16	63.	0.06	34.00	0.2	175	-1.79	34.194	27.545	0.1137

Station 13

Meteorological observation

Date : 14,02,1986
 Time (GMT) : 1917-1945
 (L T) : 2217-2245
 Latitude : 70° 14'S
 Longitude : 24° 1'E
 Depth : 214 m

Time (GMT) : 1900
 (L T) : 2200
 Weather : bc
 Air temperature (dry) : -0.6 °C
 (wet) : -1.5 °C
 Atmospheric pressure : 992.6 mb
 Wind direction : ESE
 velocity : 7 m/s
 Humidity : 82 %
 Sea : ESE/2
 Swell : 0
 Visibility : 8

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	dt	ΔD
					(μg-atoms/l)									
0	-1.30	33.756	8.39	9.18	1.31	55.	0.14	18.00	0.	0	-1.30	33.756	27.177	0.
12	-1.30	33.760	8.37	9.25	1.33	55.	0.12	18.00	0.	10	-1.29	33.754	27.175	0.0090
21	-1.37	33.818	8.33	9.01	1.56	56.	0.11	20.00	0.1	20	-1.36	33.811	27.223	0.0178
31	-1.35	33.857	8.31	8.87	1.51	57.	0.11	20.00	0.1	30	-1.34	33.851	27.255	0.0262
41	-1.67	34.026	8.22	7.84	2.00	63.	0.08	29.00	0.5	40	-1.63	34.009	27.391	0.0337
50	-1.72	34.076	8.16	7.63	2.20	66.	0.08	31.00	0.3	50	-1.72	34.076	27.447	0.0404
60	-1.73	34.097	8.12	7.55	2.16	65.	0.08	32.00	0.4	60	-1.73	34.097	27.465	0.0467
75	-1.76	34.110	8.11	7.40	2.20	66.	0.07	33.00	0.2	75	-1.76	34.110	27.476	0.0560
99	-1.79	34.130	8.10	7.36	2.18	66.	0.08	32.00	0.4	100	-1.79	34.131	27.493	0.0710
123	-1.80	34.144	8.09	7.32	2.20	66.	0.06	32.00	0.4	125	-1.79	34.146	27.506	0.0857
147	-1.79	34.168	8.08	7.36	2.22	65.	0.08	33.00	0.3	150	-1.78	34.171	27.526	0.0999
196	-1.80	34.206	8.07	7.28	2.22	66.	0.07	35.00	0.2	175	-1.79	34.192	27.543	0.1136

Station 14

Meteorological observation

Date : 15,02,1986
 Time (GMT) : 0148-0227
 (L T) : 0448-0527
 Latitude : 70° 11'S
 Longitude : 24° 1'E
 Depth : 229 m

Time (GMT) : 0100
 (L T) : 0400
 Weather : bc
 Air temperature (dry) : -4.3 °C
 (wet) : -7.2 °C
 Atmospheric pressure : 995.5 mb
 Wind direction : SE
 velocity : 6 m/s
 Humidity : 80 %
 Sea : SE/1
 Swell : 0
 Visibility : 8

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	dt	ΔD
					(μg-atoms/l)									
0	-1.50	33.652	8.39	9.21	1.44	53.	0.12	19.00	0.2	0	-1.50	33.652	27.098	0.
10	-1.49	33.644	8.37	9.27	1.33	53.	0.12	18.00	0.2	10	-1.49	33.644	27.092	0.0098
19	-1.50	33.649	8.36	9.28	1.33	53.	0.10	19.00	0.1	20	-1.49	33.645	27.092	0.0195
28	-1.44	33.651	8.37	9.24	1.44	53.	0.10	18.00	0.2	30	-1.46	33.690	27.128	0.0292
38	-1.57	33.864	8.27	8.35	1.93	57.	0.10	25.00	1.1	40	-1.57	33.889	27.292	0.0378
47	-1.59	33.950	8.21	8.04	1.91	59.	0.08	27.00	0.9	50	-1.60	33.970	27.359	0.0454
56	-1.63	34.004	8.18	7.84	2.07	62.	0.09	29.00	0.7	60	-1.66	34.027	27.406	0.0524
70	-1.75	34.076	8.14	7.45	2.07	63.	0.08	31.00	0.4	75	-1.76	34.090	27.460	0.0622
94	-1.76	34.122	8.13	7.35	2.18	63.	0.09	32.00	0.3	100	-1.76	34.133	27.494	0.0774
117	-1.77	34.158	8.12	7.39	2.20	63.	0.09	33.00	0.1	125	-1.77	34.166	27.522	0.0918
140	-1.78	34.178	8.11	7.38	2.27	64.	0.08	32.00	0.1	150	-1.78	34.186	27.538	0.1057
186	-1.77	34.208	8.10	7.40	2.13	62.	0.08	33.00	0.	175	-1.77	34.202	27.551	0.1192

Station 15

Meteorological observation

Date : 15,02,1986
 Time (GMT) : 0720-0753
 (L T) : 1020-1053
 Latitude : 70° 15' S
 Longitude : 23° 53' E
 Depth : 255 m

Time (GMT) : 0700
 (L T) : 1000
 Weather : bc
 Air temperature (dry) : -5.9 °C
 (wet) : -9.4 °C
 Atmospheric pressure : 998.3 mb
 Wind direction : SE
 velocity : 14 m/s
 Humidity : 76 %
 Sea : SE/2
 Swell : 0
 Visibility : 7

O b s e r v e d										I n t e r p o l a t e d				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	σ _t	ΔD
					(μg-atoms/l)									
0	-1.50	33.776	8.36	8.95	1.40	57.	0.13	20.00	0.1	0	-1.50	33.776	27.199	0.
9	-1.49	33.746	8.35	9.07	1.33	56.	0.12	19.00	0.1	10	-1.49	33.745	27.174	0.0089
17	-1.50	33.749	8.34	9.07	1.36	56.	0.12	19.00	0.1	20	-1.48	33.753	27.179	0.0179
26	-1.44	33.773	8.34	9.00	1.36	56.	0.11	18.00	0.1	30	-1.43	33.809	27.223	0.0266
34	-1.44	33.844	8.32	8.85	1.47	58.	0.12	20.00	0.3	40	-1.43	33.862	27.266	0.0350
43	-1.43	33.865	8.29	8.76	1.49	58.	0.11	21.00	0.3	50	-1.43	33.873	27.276	0.0430
51	-1.44	33.877	8.27	8.71	1.51	59.	0.11	22.00	0.3	60	-1.65	34.008	27.391	0.0505
64	-1.77	34.073	8.19	7.43	2.02	66.	0.08	30.00	0.4	75	-1.85	34.119	27.485	0.0602
85	-1.85	34.118	8.14	7.14	2.13	70.	0.03	33.00	0.1	100	-1.87	34.137	27.501	0.0751
106	-1.88	34.141	8.10	7.08	2.18	71.	0.03	33.00	0.	125	-1.83	34.132	27.496	0.0897
127	-1.83	34.131	8.09	7.12	2.20	71.	0.03	33.00	0.	150	-1.82	34.131	27.495	0.1044
170	-1.85	34.141	8.09	7.06	2.16	71.	0.03	35.00	0.1					

Station 16

Meteorological observation

Date : 18,02,1986
 Time (GMT) : 0457-0722
 (L T) : 0757-1022
 Latitude : 67°30'S
 Longitude : 31°1'E
 Depth : 3855 m

Time (GMT) : 0500
 (L T) : 0800
 Weather : bc
 Air temperature (dry) : -0.6 °C
 (wet) : -4.5 °C
 Atmospheric pressure : 987.5 mb
 Wind direction : wsw
 velocity : 9m/s
 Humidity : 75%
 Sea : wsw/2
 Swell : ENE /3
 Visibility : 8

O b s e r v e d										I n t e r p o l a t e d				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	δt	ΔD
					(μg-atoms/l)									
0	-0.70	33.964	8.21	8.08	1.89	58.	0.17	28.00	0.3	0	-0.70	33.964	27.324	0.
12	-0.49	33.939	8.20	8.10	1.87	60.	0.18	26.00	0.4	10	-0.49	33.940	27.296	0.0077
20	-0.61	33.947	8.20	8.11	1.91	59.	0.17	29.00	0.3	20	-0.61	33.947	27.306	0.0155
29	-0.73	33.960	8.20	8.11	1.91	59.	0.15	28.00	0.3	30	-0.78	33.969	27.331	0.0232
46	-1.69	34.132	8.19	7.76	1.98	58.	0.11	30.00	0.2	40	-1.34	34.065	27.428	0.0302
67	-1.83	34.234	8.18	7.49	2.00	58.	0.12	30.00	0.	50	-1.76	34.159	27.516	0.0364
88	-1.83	34.256	8.15	7.50	2.07	58.	0.08	30.00	0.	60	-1.85	34.211	27.560	0.0419
110	-1.83	34.278	8.16	7.47	2.00	59.	0.03	29.00	0.	75	-1.83	34.247	27.589	0.0497
131	-1.82	34.289	8.15	7.43	2.00	59.	0.01	30.00	0.	100	-1.83	34.269	27.606	0.0621
174	-1.74	34.311	8.14	7.35	2.09	60.	0.	31.00	0.1	125	-1.82	34.286	27.621	0.0740
217	-1.61	34.337	8.13	7.15	2.13	63.	0.	30.00	0.	150	-1.79	34.299	27.630	0.0857
260	-1.05	34.401	8.10	6.62	2.13	70.	0.	30.00	0.	175	-1.74	34.311	27.639	0.0971
345	0.56	34.591	8.07	5.10	2.20	88.	0.	32.00	0.	200	-1.69	34.324	27.648	0.1082
431	1.08	34.682	8.05	4.68	2.22	96.	0.03	34.00	0.1	250	-1.20	34.383	27.681	0.1295
517	0.97	34.684	8.04	4.79	2.27	98.	0.	32.00	0.	300	-0.26	34.491	27.730	0.1490
602	0.87	34.688	8.05	4.81	2.22	102.	0.	31.00	0.	400	0.99	34.660	27.794	0.1837
688	0.82	34.691	8.04	4.83	2.27	105.	0.	33.00	0.	500	1.01	34.687	27.814	0.2152
774	0.73	34.688	8.05	4.82	2.24	108.	0.	34.00	0.1	600	0.87	34.688	27.824	0.2453
860	0.69	34.696	8.05	4.82	2.20	110.	0.	34.00	0.	700	0.80	34.690	27.831	0.2748
1073	0.40	34.677	8.05	4.97	2.33	114.	0.01	34.00	0.	800	0.71	34.690	27.836	0.3037
1288	0.32	34.679	8.04	4.94	2.24	119.	0.01	34.00	0.	900	0.63	34.694	27.844	0.3319
1505	0.24	34.671	8.03	5.04	2.27	120.	0.02	33.00	0.1	1000	0.50	34.685	27.845	0.3596
1723	0.14	34.667	8.02	5.12	2.29	122.	0.	34.00	0.	1250	0.32	34.678	27.850	0.4272
2174	-0.03	34.663	8.02	5.25	2.31	125.	0.	34.00	0.	1500	0.24	34.671	27.849	0.4937
2641	-0.12	34.659	8.02	5.35	2.24	123.	0.01	34.00	0.	1750	0.12	34.667	27.851	0.5590
3133	-0.18	34.657	8.00	5.45	2.22	124.	0.	34.00	0.1	2000	0.02	34.664	27.855	0.6223
										2250	-0.04	34.662	27.857	0.6836
										2500	-0.09	34.660	27.858	0.7431
										2750	-0.13	34.658	27.858	0.8014
										3000	-0.16	34.657	27.859	0.8584

Station 17

Meteorological observation

Date : 19,02,1986
 Time (GMT) : 0505-0605
 (L T) : 0805-0905
 Latitude : 67° 30' S
 Longitude : 32° 59' E
 Depth : 955 m

Time (GMT) : 0500 Wind direction : SSE
 (L T) : 0800 velocity : 4 m/s
 Weather : bc Humidity : 92 %
 Air temperature (dry) : -1.4 °C Sea : SSE/1
 (wet) : -2.5 °C Swell : WSW/1
 Atmospheric pressure : 990.6 mb Visibility : 8

Observed										Interpolated				
Depth	T	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth	T	S	σt	ΔD
(m)	(°C)			(ml/l)	(μg-atoms/l)					(m)	(°C)			
0	-0.50	34.061	8.19	8.03	2.04	61.	0.16	25.00	0.9	0	-0.50	34.061	27.394	0.
12	-0.51	34.062	8.17	8.04	2.00	61.	0.14	26.00	0.8	10	-0.50	34.061	27.394	0.0069
22	-0.54	34.068	8.16	8.05	2.02	61.	0.14	26.00	0.8	20	-0.53	34.067	27.400	0.0138
31	-0.54	34.072	8.17	8.05	2.04	61.	0.14	26.00	0.7	30	-0.53	34.071	27.404	0.0207
51	-0.92	34.108	8.16	7.99	2.04	61.	0.12	27.00	0.7	40	-0.66	34.083	27.418	0.0274
75	-1.62	34.221	8.13	7.60	2.13	62.	0.09	28.00	0.4	50	-0.89	34.105	27.445	0.0340
100	-1.83	34.289	8.11	7.39	2.20	62.	0.12	29.00	0.2	60	-1.19	34.149	27.491	0.0402
125	-1.83	34.310	8.11	7.33	2.18	63.	0.03	27.00	0.1	75	-1.62	34.221	27.562	0.0487
149	-1.72	34.328	8.10	7.23	2.20	65.	0.01	29.00	0.1	100	-1.83	34.289	27.623	0.0612
198	-1.19	34.391	8.08	6.73	2.31	71.	0.	30.00	0.	125	-1.83	34.310	27.640	0.0727
248	-0.46	34.475	8.04	6.05	2.44	79.	0.	29.00	0.	150	-1.71	34.329	27.652	0.0839
297	0.19	34.561	8.03	5.69	2.42	90.	0.	30.00	0.	175	-1.47	34.358	27.669	0.0947
396	0.67	34.649	8.02	4.98	2.44	100.	0.	30.00	0.	200	-1.16	34.394	27.688	0.1050
494	0.67	34.670	8.02	4.93	2.53	106.	0.	32.00	0.	250	-0.43	34.479	27.727	0.1245
592	0.60	34.677	8.01	4.92	2.53	112.	0.	31.00	0.	300	0.21	34.565	27.765	0.1424
691	0.47	34.686	8.01	4.93	2.53	115.	0.	31.00	0.	400	0.67	34.651	27.807	0.1748
790	0.21	34.670	8.02	5.09	2.62	121.	0.	32.00	0.	500	0.66	34.671	27.823	0.2049
888	0.11	34.671	8.03	5.17	2.56	123.	0.	32.00	0.	600	0.59	34.678	27.834	0.2337
										700	0.44	34.685	27.848	0.2613
										800	0.19	34.669	27.850	0.2878

Station 18

Meteorological observation

Date : 20,02,1986
 Time (GMT) : 0453-0653
 (L T) : 0753-0953
 Latitude : 67°30'S
 Longitude : 37°40'E
 Depth : 3075m

Time (GMT) : 0500
 (L T) : 0800
 Weather : bc
 Air temperature (dry) : -4.0 °C
 (wet) : -5.2 °C
 Atmospheric pressure : 993.8 mb
 Wind direction : S
 velocity : 1 m/s
 Humidity : 92 %
 Sea : S /O
 Swell : WNW/1
 Visibility : 2

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	dt	ΔD
					(μg-atoms/l)									
0	-0.30	33.979	8.16	7.92	1.91	61.	0.20	30.00	0.3	0	-0.30	33.979	27.319	0.
13	-0.20	33.973	8.14	7.93	1.91	61.	0.19	31.00	0.5	10	-0.19	33.974	27.310	0.0077
23	-0.34	33.974	8.14	7.94	1.93	61.	0.18	32.00	0.4	20	-0.29	33.973	27.314	0.0154
33	-0.37	33.979	8.14	7.93	1.93	62.	0.18	31.00	0.4	30	-0.36	33.977	27.320	0.0231
52	-0.72	34.027	8.14	7.79	1.93	61.	0.14	31.00	0.4	40	-0.45	33.989	27.334	0.0306
77	-1.75	34.209	8.12	7.16	2.00	62.	0.10	33.00	0.1	50	-0.66	34.019	27.367	0.0380
102	-1.78	34.257	8.10	7.07	2.07	62.	0.11	32.00	0.	60	-1.06	34.085	27.435	0.0448
127	-1.77	34.291	8.10	7.07	1.98	62.	0.06	31.00	0.	75	-1.67	34.194	27.542	0.0538
151	-1.73	34.318	8.10	7.11	2.02	62.	0.01	33.00	0.	100	-1.79	34.256	27.595	0.0669
200	-1.25	34.376	8.08	6.80	2.11	67.	0.01	34.00	0.	125	-1.77	34.289	27.621	0.0789
249	-0.43	34.488	8.04	6.07	2.16	76.	0.	35.00	0.	150	-1.73	34.317	27.643	0.0904
298	0.29	34.571	8.03	5.41	2.20	84.	0.	36.00	0.	175	-1.55	34.343	27.659	0.1015
396	0.62	34.633	8.02	5.12	2.18	89.	0.	36.00	0.	200	-1.25	34.376	27.677	0.1121
494	0.55	34.648	8.03	5.15	2.18	92.	0.	34.00	0.	250	-0.41	34.490	27.736	0.1316
592	0.43	34.647	8.02	5.23	2.20	95.	0.	34.00	0.	300	0.30	34.573	27.766	0.1493
690	0.48	34.658	8.02	5.13	2.20	99.	0.	36.00	0.	400	0.62	34.634	27.797	0.1821
788	0.39	34.659	8.01	5.13	2.24	102.	0.	36.00	0.	500	0.54	34.648	27.813	0.2130
886	0.34	34.661	8.01	5.14	2.22	105.	0.	36.00	0.	600	0.43	34.648	27.819	0.2428
984	0.49	34.682	8.01	4.89	2.22	114.	0.	36.00	0.	700	0.47	34.658	27.825	0.2721
1229	0.33	34.675	8.00	4.98	2.31	118.	0.	36.00	0.	800	0.37	34.659	27.831	0.3008
1474	0.19	34.671	7.99	5.05	2.22	121.	0.	36.00	0.	900	0.35	34.664	27.836	0.3289
1719	0.13	34.664	7.97	5.14	2.22	122.	0.	36.00	0.	1000	0.49	34.683	27.844	0.3566
1965	0.02	34.672	7.97	5.23	2.27	123.	0.	36.00	0.	1250	0.31	34.675	27.847	0.4246
2464	-0.13	34.661	7.98	5.35	2.27	125.	0.	36.00	0.	1500	0.18	34.670	27.851	0.4908
2963	-0.22	34.655	7.97	5.50	2.22	122.	0.	36.00	0.	1750	0.11	34.665	27.850	0.5556
										2000	0.00	34.672	27.862	0.6180
										2250	-0.07	34.668	27.863	0.6774
										2500	-0.13	34.660	27.860	0.7355
										2750	-0.18	34.657	27.860	0.7926

Station 19

Meteorological observation

Date : 21,02,1986
 Time (GMT) : 0452-0704
 (L T) : 0752-1004
 Latitude : 67° 30' S
 Longitude : 37° 40' E
 Depth : 3368 m

Time (GMT) : 0500
 (L T) : 0800
 Weather : bc
 Air temperature (dry) : -0.5 °C
 (wet) : -2.1 °C
 Atmospheric pressure : 993.9 mb
 Wind direction : E
 velocity : 12 m/s
 Humidity : 88 %
 Sea : E/4
 Swell : 9
 Visibility : 8

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	δt	ΔD
					(μg-atoms/l)									
0	-0.30	33.952	8.20	7.87	1.96	62.	0.24	27.00	0.5	0	-0.30	33.952	27.297	0.
11	-0.06	33.979	8.18	7.84	1.96	62.	0.23	27.00	0.4	10	-0.06	33.978	27.307	0.0078
17	-0.06	33.979	8.16	7.91	1.98	62.	0.23	28.00	0.4	20	-0.05	33.979	27.307	0.0156
23	-0.05	33.978	8.18	7.85	2.00	62.	0.23	28.00	0.4	30	-0.07	33.978	27.307	0.0233
35	-0.09	33.977	8.18	7.84	2.00	62.	0.22	28.00	0.4	40	-0.04	33.966	27.296	0.0311
50	-0.06	33.956	8.16	7.81	2.00	63.	0.21	28.00	0.4	50	-0.06	33.956	27.289	0.0390
65	-0.75	34.022	8.15	7.58	2.04	63.	0.17	27.00	0.4	60	-0.46	33.991	27.335	0.0467
80	-1.76	34.167	8.15	7.21	2.02	62.	0.13	27.00	0.2	75	-1.45	34.120	27.476	0.0569
95	-1.81	34.215	8.14	7.18	2.04	62.	0.13	29.00	0.	100	-1.81	34.226	27.571	0.0710
125	-1.81	34.261	8.12	7.21	2.09	62.	0.03	29.00	0.	125	-1.81	34.261	27.600	0.0836
155	-1.75	34.290	8.12	7.21	2.09	61.	0.01	29.00	0.	150	-1.76	34.285	27.618	0.0957
185	-1.54	34.332	8.12	6.98	2.09	64.	0.01	29.00	0.	175	-1.63	34.315	27.639	0.1072
245	0.02	34.533	8.08	5.59	2.18	81.	0.	31.00	0.	200	-1.16	34.381	27.678	0.1180
306	0.41	34.595	8.06	5.28	2.22	86.	0.	31.00	0.	250	0.08	34.542	27.753	0.1372
367	0.37	34.610	8.06	5.30	2.22	88.	0.	30.00	0.	300	0.40	34.593	27.776	0.1544
427	0.51	34.633	8.06	5.20	2.22	92.	0.	30.00	0.	400	0.43	34.621	27.798	0.1866
488	0.75	34.668	8.05	4.96	2.24	97.	0.	31.00	0.1	500	0.77	34.672	27.818	0.2173
550	0.82	34.681	8.06	4.88	2.22	99.	0.	31.00	0.	600	0.83	34.689	27.828	0.2470
612	0.83	34.690	8.05	4.82	2.22	103.	0.	30.00	0.2	700	0.82	34.696	27.834	0.2761
765	0.79	34.696	8.05	4.83	2.27	107.	0.	30.00	0.1	800	0.75	34.695	27.838	0.3048
918	0.61	34.688	8.04	4.90	2.20	110.	0.	30.00	0.	900	0.63	34.689	27.841	0.3331
1074	0.45	34.674	8.03	4.98	2.22	112.	0.	31.00	0.	1000	0.51	34.680	27.840	0.3612
1240	0.37	34.674	8.02	4.97	2.29	116.	0.	31.00	0.	1250	0.36	34.674	27.844	0.4304
1598	0.19	34.667	8.01	5.10	2.31	121.	0.	31.00	0.	1500	0.23	34.669	27.847	0.4978
2030	-0.01	34.659	8.03	5.27	2.29	123.	0.	31.00	0.	1750	0.11	34.664	27.850	0.5634
										2000	0.00	34.660	27.852	0.6269

Station 20

Meteorological observation

Date : 25.02.1986
 Time (GMT) : 0448-0732
 (L T) : 0748-1032
 Latitude : 65° 0' S
 Longitude : 37° 40' E
 Depth : 4885 m

Time (GMT) : 0500
 (L T) : 0800
 Weather : bc
 Air temperature (dry) : 1.1 °C
 (wet) : -0.4 °C
 Atmospheric pressure : 1002.0 mb
 Wind direction : E
 velocity : 4 m/s
 Humidity : 90 %
 Sea : E /1
 Swell : NNW /3
 Visibility : 7

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	dt	ΔD
					(μg-atoms/l)									
0	1.00	33.795	8.20	7.66	1.78	49.	0.38	25.00	0.4	0	1.00	33.795	27.100	0.
11	0.99	33.791	8.18	7.74	1.69	49.	0.38	28.00	0.3	10	0.99	33.791	27.098	0.0097
21	0.97	33.789	8.18	7.72	1.78	49.	0.38	28.00	0.3	20	0.97	33.789	27.097	0.0195
31	0.95	33.797	8.18	7.72	1.78	49.	0.40	28.00	0.3	30	0.96	33.794	27.101	0.0292
50	-1.22	34.051	8.19	7.68	1.84	51.	0.22	29.00	0.2	40	-0.03	33.906	27.247	0.0382
74	-1.02	34.186	8.16	7.06	1.91	60.	0.17	29.00	0.1	50	-1.22	34.051	27.413	0.0457
96	0.96	34.511	8.06	4.96	2.27	84.	0.03	34.00	0.1	60	-1.46	34.106	27.465	0.0522
117	1.32	34.584	8.03	4.48	2.24	90.	0.10	34.00	0.	75	-0.93	34.201	27.524	0.0612
139	1.42	34.605	8.00	4.38	2.24	91.	0.03	35.00	0.	100	1.09	34.536	27.688	0.0735
182	1.54	34.649	7.99	4.31	2.29	93.	0.	34.00	0.	125	1.37	34.595	27.716	0.0836
226	1.61	34.677	8.00	4.34	2.27	95.	0.	34.00	0.	150	1.45	34.617	27.728	0.0933
271	1.58	34.686	8.00	4.37	2.18	95.	0.	29.00	0.	175	1.52	34.642	27.743	0.1026
361	1.50	34.704	8.02	4.42	2.04	97.	0.	31.00	0.	200	1.57	34.663	27.756	0.1117
452	1.42	34.713	8.03	4.51	2.11	99.	0.	32.00	0.	250	1.60	34.683	27.770	0.1294
542	1.35	34.708	8.02	4.56	2.13	101.	0.	32.00	0.	300	1.55	34.692	27.781	0.1465
633	1.22	34.713	8.04	4.62	2.11	105.	0.	33.00	0.	400	1.46	34.709	27.801	0.1794
723	1.12	34.715	8.02	4.66	2.20	108.	0.	32.00	0.	500	1.38	34.711	27.808	0.2114
814	1.02	34.712	8.02	4.67	2.09	110.	0.	33.00	0.	600	1.26	34.711	27.816	0.2428
905	0.92	34.712	8.03	4.71	2.09	112.	0.	33.00	0.	700	1.14	34.715	27.828	0.2734
1132	0.71	34.701	8.03	4.79	2.24	118.	0.	34.00	0.	800	1.03	34.713	27.834	0.3032
1365	0.53	34.689	8.01	4.84	2.18	123.	0.	34.00	0.	900	0.92	34.712	27.840	0.3324
1595	0.45	34.685	7.99	4.82	2.18	126.	0.	33.00	0.1	1000	0.82	34.708	27.844	0.3611
1827	0.33	34.679	7.99	4.88	2.22	129.	0.	34.00	0.	1250	0.61	34.694	27.846	0.4316
2310	0.14	34.668	7.99	5.07	2.24	130.	0.	34.00	0.	1500	0.48	34.686	27.847	0.5011
2798	-0.04	34.666	7.99	5.22	2.18	132.	0.	34.00	0.	1750	0.37	34.681	27.849	0.5694
3286	-0.16	34.663	7.97	5.40	2.13	131.	0.	31.00	0.3 *	2000	0.25	34.674	27.850	0.6363
3774	-0.23	34.659	7.98	5.51	2.18	131.	0.10	33.00	0.3 *	2250	0.16	34.669	27.851	0.7018
4262	-0.29	34.650	7.98	5.61	2.20	133.	0.03	32.00	0.2 *	2500	0.06	34.667	27.855	0.7653
										2750	-0.02	34.666	27.859	0.8262
										3000	-0.09	34.665	27.861	0.8846
										3250	-0.15	34.663	27.863	0.9409
										3500	-0.19	34.662	27.864	0.9954
										3750	-0.22	34.659	27.863	1.0485
										4000	-0.25	34.655	27.862	1.1004
										4250	-0.28	34.650	27.859	1.1513

Station 21

Meteorological observation

Date : 25,02,1986
 Time (GMT) : 1707-2004
 (L T) : 2007-2304
 Latitude : 65° 0' S
 Longitude : 37° 40' E
 Depth : 4885 m

Time (GMT) : 1700
 (L T) : 2000
 Weather : bc
 Air temperature (dry) : 0.0 °C
 (wet) : -3.6 °C
 Atmospheric pressure : 998.7 mb
 Wind direction : E
 velocity : 3 m/s
 Humidity : 76 %
 Sea : E/1
 Swell : NW/3
 Visibility : 8

Observed										Interpolated				
Depth	T	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth	T	S	dt	ΔD
(m)	(°C)			(ml/l)	(μg-atoms/l)					(m)	(°C)			
0	1.00	33.791	8.17	7.72	1.78	49.	0.35	28.00	0.5	0	1.00	33.791	27.097	0.
11	0.97	33.784	8.16	7.75	1.78	49.	0.34	29.00	0.3	10	0.97	33.784	27.093	0.0098
21	0.96	33.788	8.15	7.73	1.80	50.	0.35	28.00	0.3	20	0.96	33.788	27.097	0.0195
31	0.95	33.785	8.16	7.72	1.80	49.	0.33	28.00	0.3	30	0.96	33.783	27.092	0.0293
50	-1.33	34.079	8.17	7.63	1.87	52.	0.14	29.00	0.2	40	-0.05	33.909	27.251	0.0384
74	-1.80	34.238	8.12	6.70	1.96	64.	0.13	30.00	0.2	50	-1.33	34.079	27.439	0.0457
97	1.12	34.538	8.03	4.76	2.29	87.	0.03	35.00	0.	60	-1.90	34.150	27.512	0.0519
118	1.36	34.582	8.01	4.44	2.22	90.	0.08	34.00	0.	75	-1.67	34.252	27.589	0.0600
139	1.46	34.624	7.99	4.33	2.22	92.	0.	35.00	0.	100	1.22	34.551	27.691	0.0715
183	1.57	34.659	7.98	4.30	2.29	92.	0.	34.00	0.	125	1.40	34.597	27.716	0.0815
228	1.57	34.669	7.97	4.34	2.27	95.	0.	34.00	0.	150	1.49	34.637	27.741	0.0911
273	1.55	34.677	7.99	4.35	2.18	95.	0.	34.00	0.	175	1.55	34.656	27.752	0.1002
362	1.50	34.706	8.00	4.41	2.16	96.	0.	34.00	0.	200	1.57	34.664	27.757	0.1092
452	1.41	34.714	8.01	4.52	2.16	99.	0.	32.00	0.	250	1.56	34.673	27.765	0.1269
542	1.32	34.713	8.01	4.58	2.16	102.	0.	31.00	0.	300	1.53	34.686	27.777	0.1442
633	1.23	34.717	8.02	4.64	2.16	104.	0.	33.00	0.	400	1.46	34.711	27.803	0.1773
725	1.13	34.712	8.01	4.66	2.22	107.	0.	32.00	0.	500	1.36	34.714	27.812	0.2089
815	1.01	34.710	8.01	4.70	2.13	108.	0.	32.00	0.	600	1.26	34.716	27.821	0.2399
907	0.90	34.705	8.02	4.68	2.09	112.	0.03	33.00	0.	700	1.15	34.714	27.826	0.2704
1134	0.70	34.702	8.02	4.78	2.27	116.	0.	34.00	0.	800	1.03	34.710	27.832	0.3003
1362	0.53	34.692	8.00	4.79	2.22	121.	0.	34.00	0.	900	0.90	34.705	27.836	0.3298
1591	0.45	34.682	7.97	4.79	2.22	126.	0.	34.00	0.	1000	0.81	34.703	27.841	0.3588
1824	0.55	34.682	7.97	4.82	2.22	126.	0.	34.00	0.	1250	0.60	34.697	27.849	0.4293
2297	0.14	34.670	7.97	5.04	2.29	131.	0.	34.00	0.	1500	0.46	34.685	27.847	0.4983
2779	-0.02	34.664	7.97	5.18	2.20	131.	0.	34.00	0.	1750	0.51	34.682	27.841	0.5684
3272	-0.15	34.659	7.95	5.38	2.20	130.	0.	35.00	0.	2000	0.43	34.678	27.843	0.6391
3765	-0.24	34.658	7.95	5.54	2.20	130.	0.	33.00	0.	2250	0.19	34.671	27.851	0.7067
4262	-0.30	34.651	7.94	5.61	2.22	131.	0.	33.00	0.	2500	0.05	34.667	27.855	0.7702
										2750	-0.01	34.664	27.857	0.8313
										3000	-0.08	34.661	27.858	0.8905
										3250	-0.14	34.659	27.859	0.9478
										3500	-0.19	34.659	27.861	1.0030
										3750	-0.23	34.658	27.863	1.0563
										4000	-0.27	34.655	27.863	1.1079
										4250	-0.29	34.651	27.860	1.1583

Station 22

Meteorological observation

Date : 26,02,1986
 Time (GMT) : 0453-0735
 (L T) : 0753-1035
 Latitude : 65° 0' S
 Longitude : 37° 40' E
 Depth : 4885 m

Time (GMT) : 0500
 (L T) : 0800
 Weather : bc
 Air temperature (dry) : -0.3 °C
 (wet) : -4.0 °C
 Atmospheric pressure : 998.8 mb
 Wind direction : ESE
 velocity : 3 m/s
 Humidity : 76 %
 Sea : ESE/0
 Swell : NW/3
 Visibility : 7

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	δt	ΔD
					(μg-atoms/l)									
0	0.90	33.788	8.17	7.74	1.78	49.	0.33	27.00	0.7	0	0.90	33.788	27.101	0.
13	0.93	33.780	8.17	7.75	1.78	49.	0.33	29.00	0.3	10	0.93	33.781	27.093	0.0098
23	0.89	33.784	8.17	7.76	1.78	49.	0.33	28.00	0.4	20	0.90	33.782	27.095	0.0195
33	0.85	33.798	8.18	7.73	1.78	49.	0.33	28.00	0.3	30	0.90	33.789	27.101	0.0293
53	-1.49	34.093	8.17	7.57	1.87	53.	0.16	29.00	0.2	40	0.02	33.885	27.228	0.0384
78	0.05	34.365	8.09	5.89	2.07	74.	0.06	33.00	0.1	50	-1.14	34.040	27.401	0.0460
102	1.29	34.565	8.01	4.56	2.31	90.	0.04	34.00	0.1	60	-1.29	34.178	27.518	0.0523
127	1.40	34.600	8.00	4.39	2.24	91.	0.04	34.00	0.	75	-0.25	34.337	27.605	0.0603
152	1.48	34.625	7.99	4.34	2.24	92.	0.	35.00	0.	100	1.21	34.553	27.693	0.0716
202	1.60	34.664	7.98	4.33	2.27	94.	0.	35.00	0.	125	1.41	34.601	27.718	0.0817
252	1.58	34.679	7.97	4.35	2.24	95.	0.	33.00	0.	150	1.47	34.623	27.732	0.0913
302	1.55	34.687	7.98	4.38	2.18	96.	0.	32.00	0.	175	1.54	34.645	27.744	0.1006
401	1.47	34.702	8.00	4.46	2.13	98.	0.	33.00	0.	200	1.59	34.663	27.754	0.1097
501	1.36	34.710	8.00	4.55	2.13	101.	0.	32.00	0.	250	1.58	34.679	27.768	0.1274
601	1.25	34.712	8.00	4.62	2.13	103.	0.	32.00	0.	300	1.55	34.687	27.777	0.1447
700	1.14	34.712	8.00	4.67	2.11	107.	0.	32.00	0.1	400	1.47	34.702	27.795	0.1781
800	1.02	34.712	8.01	4.69	2.20	110.	0.	33.00	0.	500	1.36	34.710	27.809	0.2103
899	0.91	34.699	8.01	4.73	2.13	112.	0.	32.00	0.	600	1.25	34.712	27.818	0.2415
999	0.80	34.706	8.01	4.74	*****	*****	*****	*****	***	700	1.14	34.712	27.826	0.2721
1248	0.61	34.692	8.00	4.82	2.22	121.	0.	33.00	0.	800	1.02	34.712	27.834	0.3019
1497	0.45	34.679	7.98	4.83	2.22	125.	0.	34.00	0.	900	0.90	34.699	27.831	0.3315
1746	0.37	34.676	7.98	4.86	2.22	128.	0.	34.00	0.	1000	0.79	34.706	27.844	0.3606
1999	0.27	34.669	7.98	4.96	2.22	130.	0.	35.00	0.	1250	0.60	34.692	27.844	0.4313
2505	0.07	34.663	7.97	5.11	2.24	132.	0.	34.00	0.	1500	0.44	34.679	27.843	0.5012
3010	-0.10	34.654	7.98	5.27	2.20	132.	0.	34.00	0.	1750	0.36	34.676	27.845	0.5704
3515	-0.20	34.657	7.97	5.42	2.16	130.	0.	32.00	0.	2000	0.27	34.669	27.845	0.6384
4021	-0.27	34.649	7.96	5.59	2.18	131.	0.	34.00	0.	2250	0.16	34.666	27.848	0.7049
4526	-0.31	34.651	7.96	5.62	2.22	135.	0.	33.00	0.	2500	0.07	34.663	27.851	0.7693
										2750	-0.01	34.658	27.852	0.8315
										3000	-0.09	34.654	27.853	0.8916
										3250	-0.15	34.655	27.857	0.9495
										3500	-0.19	34.657	27.860	1.0051
										3750	-0.23	34.653	27.859	1.0589
										4000	-0.26	34.649	27.857	1.1115
										4250	-0.29	34.649	27.858	1.1630
										4500	-0.30	34.651	27.860	1.2129

Station 23

Meteorological observation

Date : 02,03,1986
 Time (GMT) : 0420-0722
 (L T) : 0820-1122
 Latitude : 62° 11' S
 Longitude : 46° 4' E
 Depth : 4889 m

Time (GMT) : 0400
 (L T) : 0800
 Weather : bc
 Air temperature (dry) : 0.5 °C
 (wet) : 0.2 °C
 Atmospheric pressure : 983.5 mb
 Wind direction : SW
 velocity : 7 m/s
 Humidity : 98 %
 Sea : SW/4
 Swell : ESE/7
 Visibility : 7

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	dt	Δ0
					(μg-atoms/l)									
0	1.10	33.794	8.19	7.81	1.76	39.	0.38	27.00	0.1	0	1.10	33.794	27.093	0.
11	1.06	33.796	8.19	7.80	1.69	40.	0.35	27.00	0.1	10	1.06	33.796	27.097	0.0098
17	1.05	33.796	8.19	7.83	1.71	39.	0.36	27.00	0.1	20	1.04	33.801	27.101	0.0195
23	1.05	33.806	8.20	7.80	1.73	40.	0.35	28.00	0.1	30	1.05	33.809	27.108	0.0292
35	1.06	33.810	8.18	7.75	1.76	40.	0.34	29.00	0.1	40	1.21	33.804	27.093	0.0389
50	1.14	33.823	8.20	7.89	1.67	40.	0.34	28.00	0.1	50	1.14	33.823	27.114	0.0486
66	-1.38	34.031	8.19	7.85	1.89	48.	0.18	29.00	0.2	60	-0.43	33.950	27.301	0.0573
80	-1.38	34.092	8.18	7.49	1.89	54.	0.22	32.00	0.2	75	-1.52	34.076	27.442	0.0679
97	-0.74	34.182	8.12	6.71	2.04	62.	0.20	32.00	0.	100	-0.53	34.213	27.518	0.0832
122	0.88	34.436	8.02	5.07	2.36	81.	0.	35.00	0.	125	0.97	34.453	27.629	0.0962
153	1.41	34.542	8.00	4.49	2.38	86.	0.	36.00	0.	150	1.40	34.538	27.669	0.1076
184	1.55	34.580	8.00	4.33	2.33	88.	0.	36.00	0.1	175	1.53	34.573	27.687	0.1184
360	1.73	34.679	8.03	4.29	2.22	93.	0.	34.00	0.2	200	1.59	34.594	27.700	0.1288
417	1.68	34.697	8.02	4.35	2.20	93.	0.	34.00	0.	250	1.70	34.633	27.722	0.1489
475	1.63	34.707	8.01	4.40	2.22	95.	0.	33.00	0.	300	1.75	34.660	27.740	0.1681
531	1.65	34.720	8.03	4.45	2.11	95.	0.	32.00	0.	400	1.69	34.692	27.771	0.2047
592	1.56	34.726	8.03	4.52	2.11	96.	0.06	32.00	0.	500	1.64	34.713	27.791	0.2391
718	1.45	34.730	8.02	4.59	2.16	99.	0.	34.00	0.	600	1.55	34.727	27.809	0.2721
852	1.25	34.719	8.03	4.61	2.11	103.	0.	31.00	0.1	700	1.46	34.730	27.818	0.3040
985	1.14	34.718	8.03	4.65	2.11	108.	0.	33.00	0.1	800	1.32	34.724	27.822	0.3354
1120	1.00	34.706	8.03	4.72	2.18	112.	0.	33.00	0.1	900	1.20	34.719	27.827	0.3664
1410	0.73	34.697	8.03	4.76	2.20	117.	0.	34.00	0.2 *	1000	1.12	34.717	27.831	0.3971
1716	0.50	34.688	8.01	4.87	2.24	123.	0.01	34.00	0.2 *	1250	0.87	34.701	27.834	0.4725
2046	0.35	34.681	7.99	4.86	2.22	127.	0.	33.00	0.	1500	0.65	34.694	27.843	0.5458
2409	0.20	34.675	8.00	5.06	2.22	132.	0.	33.00	0.2 *	1750	0.48	34.687	27.848	0.6163
2811	0.06	34.668	8.00	5.19	2.27	131.	0.	33.00	0.2 *	2000	0.36	34.682	27.850	0.6848
										2250	0.26	34.678	27.853	0.7517
										2500	0.16	34.673	27.855	0.8166
										2750	0.07	34.669	27.856	0.8797

Station 24

Meteorological observation

Date : 08,03,1986
 Time (GMT) : 0841-1116
 (L T) : 1241-1516
 Latitude : 43° 51' S
 Longitude : 53° 8' E
 Depth : 3581 m

Time (GMT) : 0800
 (L T) : 1200
 Weather : bc
 Air temperature (dry) : 11.4 °C
 (wet) : 11.4 °C
 Atmospheric pressure : 1023.7 mb
 Wind direction : WNW
 velocity : 12 m/s
 Humidity : 100 %
 Sea : WNW/3
 Swell : W /6
 Visibility : 6

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	δt	Δ0
					(μg-atoms/l)									
0	12.40	34.395	8.30	6.09	0.62	2.	0.18	7.00	0.3	0	12.40	34.395	26.062	0.
10	12.28	34.386	8.30	6.12	0.62	2.	0.18	7.00	0.6	10	12.28	34.386	26.078	0.0195
17	12.28	34.386	8.30	6.14	0.62	2.	0.17	8.00	0.2	20	12.28	34.388	26.080	0.0389
22	12.28	34.389	8.32	6.11	0.62	3.	0.17	8.00	0.4	30	12.29	34.391	26.080	0.0584
38	12.28	34.389	8.30	6.13	0.64	2.	0.17	8.00	0.2	40	12.26	34.388	26.083	0.0779
45	12.23	34.385	8.31	6.09	0.64	2.	0.16	8.00	0.1	50	12.21	34.384	26.089	0.0973
56	12.22	34.385	8.29	6.13	0.64	2.	0.17	8.00	0.3	60	12.22	34.385	26.089	0.1168
65	12.23	34.386	8.30	6.10	0.64	2.	0.18	7.00	0.1	75	12.23	34.386	26.088	0.1460
75	12.23	34.386	8.30	6.09	0.64	2.	0.18	8.00	0.	100	11.34	34.513	26.354	0.1917
100	11.34	34.513	8.27	5.78	0.80	3.	0.13	11.00	0.2	125	10.31	34.649	26.643	0.2309
116	10.53	34.631	8.22	5.51	1.02	4.	0.	14.00	0.	150	9.89	34.646	26.714	0.2659
130	10.23	34.650	8.21	5.37	1.04	5.	0.	16.00	0.	175	9.54	34.627	26.758	0.2997
170	9.61	34.629	8.20	5.23	1.11	8.	0.	18.00	0.1	200	9.22	34.619	26.804	0.3325
223	8.92	34.610	8.18	5.04	1.29	9.	0.	19.00	0.4	250	8.47	34.590	26.901	0.3950
277	8.04	34.567	8.14	4.84	1.49	13.	0.	22.00	0.4	300	7.81	34.550	26.969	0.4539
337	7.39	34.514	8.12	4.80	1.56	16.	0.	24.00	0.	400	6.09	34.420	27.105	0.5625
391	6.21	34.429	8.11	4.89	1.80	19.	0.	27.00	0.1	500	4.88	34.340	27.188	0.6608
464	5.42	34.374	8.10	5.00	1.78	23.	0.	27.00	0.	600	3.93	34.308	27.265	0.7513
545	4.28	34.309	8.09	5.20	1.96	27.	0.01	29.00	0.3 *	700	3.57	34.337	27.324	0.8355
579	4.04	34.306	8.07	5.25	2.09	30.	0.	29.00	0.4 *	800	3.22	34.384	27.395	0.9137
719	3.53	34.346	8.04	4.78	2.11	42.	0.	31.00	0.3 *	900	2.96	34.437	27.461	0.9857
852	3.05	34.411	8.01	4.45	2.24	53.	0.	33.00	0.	1000	2.85	34.490	27.514	1.0524
986	2.87	34.483	7.99	4.22	2.33	63.	0.	33.00	0.	1250	2.57	34.602	27.627	1.2010
1329	2.50	34.631	7.99	4.19	2.24	74.	0.	32.00	0.	1500	2.39	34.686	27.710	1.3289
1673	2.31	34.726	7.99	4.38	2.13	77.	0.	31.00	0.3 *	1750	2.26	34.737	27.762	1.4431
2010	2.12	34.749	8.01	4.58	1.91	80.	0.	29.00	0.	2000	2.12	34.749	27.783	1.5506

Station 25

Meteorological observation

Date : 09,03,1986
 Time (GMT) : 0438-0729
 (L T) : 0838-1129
 Latitude : 40°35'S
 Longitude : 54° 0'E
 Depth : 4470m

Time (GMT) : 0400
 (L T) : 0800
 Weather : bc
 Air temperature (dry) : 18.8 °C
 (wet) : 13.7 °C
 Atmospheric pressure : 1023.9mb
 Wind direction : NNW
 velocity : 12 m/s
 Humidity : 72 %
 Sea : NNW/4
 Swell : NW/6
 Visibility : 8

O b s e r v e d										I n t e r p o l a t e d				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P (µg-atoms/l)	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	dt	ΔD
0	19.40	35.536	8.38	5.19	0.09	3.	0.02	0.	0.4	0	19.40	35.536	25.345	0.
10	19.51	35.526	8.39	5.22	0.09	3.	0.01	0.	0.3	10	19.51	35.526	25.309	0.0266
16	19.51	35.526	8.38	5.24	0.09	3.	0.	0.	0.3	20	19.50	35.528	25.313	0.0533
21	19.50	35.528	8.39	5.21	0.07	3.	0.	0.	0.2	30	19.50	35.530	25.313	0.0801
32	19.51	35.530	8.38	5.18	0.09	3.	0.	0.	0.3	40	19.49	35.530	25.317	0.1069
45	19.48	35.530	8.39	5.14	0.09	3.	0.	0.	0.3	50	19.51	35.528	25.309	0.1338
57	19.50	35.532	8.38	5.18	0.09	3.	0.	0.	0.5	60	19.37	35.542	25.356	0.1605
70	18.90	35.584	8.37	5.06	0.13	3.	0.18	1.00	0.2	75	18.76	35.600	25.557	0.1988
82	18.62	35.618	8.36	5.15	0.11	3.	0.18	0.	0.3	100	18.31	35.641	25.702	0.2587
105	18.24	35.641	8.36	5.17	0.11	3.	0.40	0.	0.3	125	17.86	35.606	25.786	0.3162
130	17.77	35.594	8.35	4.79	0.29	3.	0.	4.00	0.2	150	17.38	35.560	25.868	0.3718
157	17.26	35.550	8.33	4.65	0.36	5.	0.	5.00	0.3	175	17.03	35.542	25.940	0.4259
204	16.59	35.520	8.33	4.60	0.44	5.	0.	6.00	0.2	200	16.65	35.524	26.015	0.4783
252	15.14	35.370	8.30	4.79	0.51	5.	0.	8.00	0.2	250	15.20	35.376	26.235	0.5767
304	14.37	35.316	8.29	4.80	0.56	5.	0.	9.00	0.4	300	14.41	35.318	26.363	0.6674
353	13.76	35.268	8.29	4.99	0.60	5.	0.	9.00	0.4	400	13.28	35.221	26.525	0.8366
400	13.28	35.221	8.27	4.98	0.69	5.	0.	10.00	0.2	500	11.81	34.997	26.641	0.9945
416	13.07	35.193	8.28	4.98	0.69	5.	0.	11.00	*** *	600	10.72	34.892	26.760	1.1426
475	12.48	35.110	8.27	4.98	0.76	5.	0.	12.00	0.1	700	9.46	34.752	26.869	1.2809
484	12.04	35.039	8.27	5.07	0.78	6.	0.	13.00	0.1	800	7.77	34.583	27.001	1.4077
544	11.60	34.985	8.26	4.99	0.84	6.	0.	14.00	0.1	900	6.07	34.500	27.170	1.5192
558	11.20	34.949	8.26	5.04	0.93	7.	0.	15.00	0.	1000	4.82	34.445	27.278	1.6162
619	10.64	34.876	8.24	4.96	1.02	7.	0.	17.00	0.	1250	3.71	34.409	27.368	1.8327
733	8.90	34.697	8.21	4.77	1.33	13.	0.	21.00	0.					
806	7.67	34.574	8.17	4.75	1.51	16.	0.	25.00	0.					
868	6.57	34.523	8.15	4.69	1.69	22.	0.	28.00	0.					
1256	3.72	34.410	8.11	4.46	2.07	47.	0.	34.00	0.					

Station 26

Meteorological observation

Date : 10,03,1986
 Time (GMT) : 0435-0651
 (L T) : 0835-1051
 Latitude : 36° 7'S
 Longitude : 54° 31'E
 Depth : 4090 m

Time (GMT) : 0400
 (L T) : 0800
 Weather : bc
 Air temperature (dry) : 20.8°C
 (wet) : 20.8°C
 Atmospheric pressure : 1024.8mb
 Wind direction : N
 velocity : 6 m/s
 Humidity : 100%
 Sea : N/2
 Swell : NW/1
 Visibility : 8

Observed										Interpolated				
Depth (m)	T (°C)	S	pH	O ₂ (ml/l)	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	Depth (m)	T (°C)	S	dt	ΔD
					(μg-atoms/l)									
0	20.50	35.681	8.37	5.25	0.07	3.	0.	0.	0.1	0	20.50	35.681	25.166	0.
12	20.38	35.662	8.36	5.24	0.07	3.	0.	0.	0.3	10	20.40	35.665	25.179	0.0280
22	20.21	35.646	8.36	5.26	0.04	3.	0.	0.	0.2	20	20.24	35.649	25.209	0.0559
32	20.06	35.633	8.37	5.24	0.04	3.	0.	0.	0.3	30	20.08	35.635	25.241	0.0835
52	19.92	35.628	8.38	5.27	0.04	3.	0.	0.	0.3	40	20.05	35.630	25.246	0.1110
77	18.25	35.595	8.38	5.42	0.09	3.	0.	0.	0.	50	19.95	35.628	25.271	0.1384
102	16.82	35.567	8.35	5.18	0.22	3.	0.05	2.00	0.5	60	19.46	35.619	25.392	0.1651
127	16.21	35.540	8.35	5.09	0.27	4.	0.01	3.00	0.6	75	18.41	35.598	25.645	0.2025
152	15.89	35.518	8.34	5.08	0.31	4.	0.	4.00	0.	100	16.91	35.569	25.988	0.2580
202	15.33	35.466	8.33	5.12	0.40	4.	0.01	5.00	0.	125	16.23	35.542	26.127	0.3080
253	14.74	35.412	8.31	5.09	0.49	4.	0.	6.00	0.	150	15.91	35.520	26.185	0.3557
303	14.44	35.382	8.32	5.11	0.49	5.	0.	7.00	0.	175	15.62	35.495	26.230	0.4025
403	13.69	35.294	8.31	5.11	0.58	5.	0.	8.00	0.	200	15.35	35.468	26.272	0.4483
503	13.07	35.203	8.30	5.08	0.69	6.	0.	9.00	0.	250	14.77	35.415	26.359	0.5375
603	12.20	35.077	8.27	5.03	0.82	7.	0.	11.00	0.	300	14.45	35.384	26.404	0.6243
703	10.93	34.906	8.26	5.01	1.00	8.	0.	14.00	0.	400	13.71	35.297	26.494	0.7932
804	9.57	34.750	8.22	4.90	1.24	11.	0.	17.00	0.	500	13.08	35.206	26.552	0.9574
904	8.27	34.623	8.19	4.76	1.38	16.	0.	21.00	0.	600	12.23	35.081	26.626	1.1174
1004	7.24	34.535	8.17	4.71	1.60	19.	0.01	23.00	0.	700	10.97	34.911	26.731	1.2704
1255	4.36	34.366	8.13	4.78	2.11	36.	0.	29.00	0.	800	9.62	34.756	26.845	1.4136
1505	3.45	34.438	8.10	4.30	2.18	55.	0.	30.00	0.	900	8.31	34.627	26.954	1.5462
1755	2.94	34.553	8.07	4.08	2.22	68.	0.	31.00	0.	1000	7.27	34.538	27.037	1.6695
2006	2.69	34.643	8.06	4.15	2.20	75.	0.	30.00	0.	1250	4.41	34.368	27.263	1.9358
2510	2.21	34.746	8.07	4.54	2.02	85.	0.	28.00	0.	1500	3.45	34.435	27.414	2.1519
3016	1.76	34.748	8.06	4.68	2.07	97.	0.	29.00	0.	1750	2.94	34.551	27.554	2.3326
3522	1.21	34.724	8.05	4.80	2.07	114.	0.	29.00	0.	2000	2.69	34.641	27.648	2.4864
4028	0.70	34.699	8.05	4.91	2.16	131.	0.	30.00	0.	2250	2.45	34.706	27.721	2.6217
										2500	2.21	34.745	27.772	2.7430
										2750	2.00	34.755	27.797	2.8550
										3000	1.77	34.749	27.810	2.9615
										3250	1.50	34.739	27.821	3.0629
										3500	1.23	34.725	27.830	3.1585
										3750	0.97	34.713	27.838	3.2479
										4000	0.72	34.700	27.844	3.3311

Table 5. Petroleum oil, cadmium, copper and zinc concentrations ($\mu\text{g/l}$)
in surface sea water.

Station No.	Date	Time		Position		Air temp.	Water temp.	Petroleum oil	Cadmium	Mercury	Copper	Zinc
		GHT	LT	Latitude	Longitude	(°C)		($\mu\text{g/l}$)				
	1985											
	November											
(1)	18	2300*	0800	13 47 N	129 29 E	27.7	28.6	0.4	—	—	—	—
(2)	19	2300*	0800	7 33	127 48	28.3	28.9	3.7	—	—	—	—
(3)	20	2300*	0800	3 38	123 24	28.3	29.1	2.7	—	—	—	—
(4)	21	2300*	0800	0 43 S	119 09	27.0	29.1	1.3	—	—	—	—
(5)	22	2300*	0800	6 35	116 42	28.6	29.7	1.1	—	—	—	—
(6)	23	2300*	0800	12 05	114 59	26.9	27.7	0.6	0.012	0.002	0.5	0.8
(7)	24	2300*	0800	17 16	113 53	23.6	25.0	0.8	0.004	0.002	0.4	0.0
(8)	25	2300*	0800	22 07	112 46	22.2	22.6	0.6	0.019	0.001	0.6	1.2
(9)	26	2300*	0800	27 14	112 40	21.5	21.2	1.6	0.015	0.003	0.4	1.2
(10)	27	2300*	0800	31 50	115 13	19.8	20.1	—	0.011	0.001	0.4	0.5
	December											
(11)	4	0000	0800	36 41	111 52	16.8	16.3	—	0.030	0.001	0.5	1.1
(12)	5	0000	0800	40 43	108 33	10.6	12.5	—	0.014	0.001	0.4	1.6
(13)	6	0100	0800	45 27	104 29	12.0	10.6	—	0.016	0.001	0.2	0.3
(14)	7	0100	0800	50 15	100 51	5.9	4.7	—	0.036	0.001	0.2	0.1
(15)	8	0100	0800	54 40	94 58	2.7	2.6	—	0.041	0.001	0.2	1.2
	1986											
	March											
(21)	24	1300	1800	9 37	75 34	28.0	29.0	0.7	—	—	—	—
(22)	25	1200	1800	6 35	79 59	27.7	29.0	1.2	—	—	—	—
(23)	26	1200	1800	2 37	84 44	27.6	28.1	0.5	—	—	—	—
(24)	27	1200	1800	0 57 N	89 14	28.5	29.2	1.0	—	—	—	—
(25)	29	0100	0800	6 09	95 37	27.9	29.0	1.0	—	—	—	—
(26)	30	0100	0800	4 04	99 53	28.0	29.3	1.0	—	—	—	—
	April											
(27)	10	0000	0800	3 00	108 19	27.4	28.4	1.0	—	—	—	—
(28)	11	0000	0800	8 00	111 03	28.1	28.4	0.9	—	—	—	—
(29)	12	0000	0800	12 28	114 24	28.1	27.8	0.8	—	—	—	—
(30)	13	0000	0800	16 34	118 00	27.5	28.1	0.6	—	—	—	—
(31)	14	2300*	0800	20 03	121 52	26.7	27.4	0.9	—	—	—	—

* The time of date of the preceding day.
— No sample

Table 6. Radioactivity concentrations (Bq/ton) in surface sea water.

Station No.	Date	Time		Position		Air temp.	Water temp.	Radioactivity	
		GMT	LT	Latitude	Longitude	(°C)		¹³⁷ Cs	⁹⁰ Sr
								(Bq/ton)	
	1985 December								
(16)	10	0700	1300	59 41 S	78 06 E	-1.0	-1.0	0.20 ± 0.030	0.048 ± 0.011
(17)	11	0800	1300	61 42	66 47	-0.2	-1.3	0.18 ± 0.033	0.056 ± 0.011
(18)	12	0900	1300	62 50	54 40	-0.8	-1.4	0.089 ± 0.059	0.10 ± 0.015
(19)	16	0900	1300	63 21	45 39	-1.0	-1.2	0.096 ± 0.056	0.081 ± 0.015
(20)	17	1000	1300	61 39	33 20	-1.5	-1.5	0.11 ± 0.033	0.078 ± 0.011

Table 7. Hourly tidal observation data.

STATION : SYOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : JAN. 1 - JAN. 31, 1985
 UNIT : CENTIMETER

DATE	TIME																							(24 H)		(25 H)			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUM	MEAN	SUM	MEAN	
1	165	167	165	159	154	145	135	127	122	118	115	118	122	127	136	143	149	150	151	152	153	155	159	164	3451	144	3618	145	
2	167	171	171	167	160	151	136	123	115	104	101	105	110	118	132	145	153	161	163	162	162	162	163	168	3470	145	3642	146	
3	172	176	177	176	171	160	141	125	111	96	87	89	94	104	124	143	156	165	172	172	169	169	170	170	3489	145	3661	146	
4	172	178	182	181	179	169	152	130	109	92	81	75	78	91	111	135	156	172	180	182	179	179	172	171	3506	146	3681	147	
5	175	181	186	189	189	181	163	143	117	89	71	62	61	73	91	117	144	166	180	185	185	185	178	176	3487	145	3664	147	
6	177	181	188	194	196	191	179	156	131	102	73	59	53	60	79	103	131	158	175	185	189	188	183	180	3511	146	3691	148	
7	180	184	191	198	205	206	198	176	150	118	85	60	46	49	61	86	119	148	172	189	197	196	190	186	3590	150	3770	151	
8	180	182	189	200	208	215	212	199	179	149	119	91	73	64	66	82	112	141	167	185	195	196	192	187	3783	158	3964	159	
9	181	179	184	193	206	213	214	209	193	169	140	113	89	77	79	91	112	136	160	179	192	194	192	189	3884	162	4065	163	
10	181	175	176	182	194	203	210	210	201	183	156	130	104	88	81	85	99	118	140	158	173	179	181	178	3785	158	3956	158	
11	171	165	162	166	173	183	193	193	191	185	176	147	124	105	91	88	96	104	122	142	155	167	170	170	3639	152	3806	152	
12	167	162	155	152	157	165	173	180	185	183	176	161	144	126	111	102	104	113	124	139	150	163	168	168	3628	151	3795	152	
13	167	162	155	147	145	149	153	160	166	169	168	160	157	145	135	129	126	130	137	146	155	166	171	172	3670	153	3841	154	
14	171	166	158	150	142	137	137	140	144	145	150	153	152	151	149	145	144	147	147	152	161	167	173	177	3658	152	3836	153	
15	178	173	167	160	151	142	132	129	129	128	131	136	144	149	153	160	162	160	162	165	168	173	176	180	3708	155	3891	156	
16	183	181	178	171	161	147	132	121	114	110	111	113	122	136	150	167	180	184	186	185	184	185	183	185	3769	157	3956	158	
17	187	186	185	181	171	160	142	126	111	100	95	95	104	119	134	153	171	182	187	188	188	186	185	184	3720	155	3908	156	
18	188	193	194	193	193	184	169	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
19	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
20	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
21	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
22	174	175	182	198	211	217	219	207	188	160	129	95	75	65	70	87	109	136	159	180	188	188	183	176	3771	157	3940	158	
23	169	164	168	184	198	210	214	212	201	180	153	127	108	94	96	104	124	149	170	189	198	196	189	180	3977	166	4147	166	
24	170	163	164	171	185	201	209	211	206	189	165	142	118	102	96	98	116	136	155	173	185	188	183	173	3899	162	4062	162	
25	163	155	154	158	168	185	194	201	198	189	170	146	127	109	100	103	114	133	152	167	180	183	180	171	3800	158	3962	158	
26	162	152	147	145	153	165	178	183	183	181	168	150	132	122	113	113	119	126	140	155	168	173	173	167	3668	153	3830	153	
27	162	150	144	140	144	152	162	168	173	171	167	155	144	131	124	122	128	133	145	157	168	173	173	170	3656	152	3819	153	
28	163	162	146	142	140	145	149	153	158	160	158	153	145	137	134	131	134	137	152	159	167	171	174	171	3641	152	3806	152	
29	165	157	150	144	139	140	139	144	147	149	149	150	148	141	136	140	145	149	154	165	170	176	177	176	3650	152	3820	153	
30	170	165	158	150	145	142	140	136	136	137	136	140	144	147	153	160	169	174	179	185	186	188	188	185	3813	159	3996	160	
31	183	178	171	167	158	151	144	136	129	126	127	129	127	138	151	162	171	176	185	187	189	189	186	183	3843	160	4027	161	
SUM	4843	4747	4796	4719	4187	3557	3045	3056	3643	4316	4754	4998	TOTAL	101337															
MEAN	173	171	170	170	171	172	169	163	155	144	132	121	113	110	113	122	135	148	160	170	176	180	179	176	MONTHLY MEAN	154.0 CM			

STATION : SYOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : FEB. 1 - FEB. 28, 1985
 UNIT : CENTIMETER

DATE	TIME																							(24 H)		(25 H)			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUM	MEAN	SUM	MEAN	
1	184	182	177	173	165	158	147	133	124	116	114	111	117	130	148	163	179	186	192	195	196	193	189	189	3861	161	4052	162	
2	191	192	192	189	182	172	154	141	124	107	95	92	94	106	128	149	169	186	196	200	199	197	193	190	3838	160	4027	161	
3	189	192	195	197	197	190	177	153	131	107	89	80	81	91	109	138	164	184	199	206	205	201	195	190	3860	161	4050	162	
4	190	194	199	206	209	205	192	172	145	121	98	81	76	86	102	130	161	187	202	210	211	203	193	185	3958	165	4141	166	
5	183	187	193	202	211	215	208	193	167	137	106	83	72	74	88	113	144	171	190	202	205	200	189	180	3913	163	4087	163	
6	174	176	184	195	209	218	219	208	185	158	124	96	78	71	73	99	124	155	177	192	197	196	187	176	3876	162	4042	162	
7	166	164	171	185	201	215	221	221	202	174	142	111	83	67	67	79	101	128	153	171	184	176	164	155	3701	154	3854	154	
8	153	148	151	161	180	198	210	213	209	192	163	137	111	89	81	86	106	130	151	170	180	180	172	160	3731	155	3877	155	
9	146	135	132	138	153	175	191	200	202	198	180	159	135	115	106	107	120	137	156	173	184	185	179	165	3771	157	3924	157	
10	153	139	129	128	136	153	171	184	193	198	194	181	164	148	140	139	148	159	172	185	193	195	191	177	3970	165	4133	165	
11	163	150	135	128	129	140	151	163	177	185	189	188	180	177	171	167	171	176	184	196	202	203	200	190	4115	171	4292	172	
12	177	162	150	139	132	137	140	146	156	166	170	173	171	171	163	171	176	181	187	194	201	202	200	196	4066	169	4255	170	
13	189	177	168	154	145	139	137	135	138	143	144	148	154	158	166	179	181	186	193	200	203	204	206	202	4049	169	4247	170	
14	198	190	183	176	166	158	149	140	133	130	131	133	141	153	166	180	193	199	202	209	209	209	208	202	4158	173	4358	174	
15	200	198	194	189	182	173	159	144	130	120	114	114	119	132	159	169	187	200	203	210	213	210	205	205	4125	172	4328	173	
16	203	203	205	206	205	193	182	160	138	121	106	99	102	114	132	159	182	198	210	215	213	208	202	200	4161	173	4361	174	
17	200	203	210	215	218	217	202	180	158	132	111	98	97	102	122	146	172	194	210	216	213	205	197	192	4210	175	4402	176	
18	192	197	206	216	225	226	217	198	172	143	116	97	91	96	116	143	169	193	206	213	210	202	189	178	4211	175	4387	175	
19	176	179	192	208	216	226	224	210	189	161	133	111	101	100	114	137	164	187	203	210	210	200	184	171	4206	175	4372	175	
20	166	169	179	197	213	225	230	224	204	179	150	125	108	102	110	124	151	176	194	205	205	197	183	167	4183	174	4341	174	
21	158	158	165	180	202	218	224	225	213	190	163	138	113	109	114	127	146	171	193	202	202	197	190	166	4159	173	4313	173	
22	154	150	154	167	190	210	223	227	222	202	178	154	135	122	124	133	152	176	193	205	206	199	184	166	4226	176	4379	175	
23	153	146	144	155	176	195	211	217	216	205	195	163	146	133	132	139	154	177	195	205	210	206	191	172	4226	176	4384	175	
24	158	149	145	151	166	187	205	215	217	213	193	184	171	158	154	159	172	188	205	213	216	212	198	181	4415	184	4579	183	
25	164	151	146	148	153	176	190	202	210	203	200	190	177	167	166	167	176	190	203	212	215	211	200	184	4411	184	4578	183	
26	167	157	143	146	151	163	176	185	193	195	193	187	177	171	170	172	179	187	197	204	210	210	203	189	4330	180	4504	180	
27	174	163	154	150	151	157	167	173	178	180	179	177	175	172	176	179	192	198	206	214	218	215	203	197	4353	181	4537	181	
28	184	172	163	156	153	156	158	160	163	166	167	171	173	179	187	197	203	211	216	219	219	217	211	203	4404	184	4598	184	
SUM	4905	4764	4855	5021	5200	5122	4889	4547	3781	3493	4051	5011	5646	5633	5128	TOTAL	114487												
MEAN	175	171	170	173	179	186	187	183	175	162	148	135	127	125	132	145	162	179	193	202	205	201	193	183	MONTHLY MEAN	170.4	CM		

STATION : SYOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : MAR. 1 - MAR. 31, 1985
 UNIT : CENTIMETER

DATE	TIME																								(24 H)		(25 H)			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUM	MEAN	SUM	MEAN		
1	194	186	178	170	165	162	155	157	154	154	156	160	163	173	186	199	209	218	224	226	223	218	212	205	4447	185	4646	186		
2	199	194	188	184	180	170	162	154	146	141	139	141	146	157	173	192	204	215	221	225	222	217	210	202	4381	183	4580	183		
3	199	197	197	194	193	186	173	158	142	129	121	118	123	136	154	178	197	210	218	224	220	213	205	199	4284	179	4483	179		
4	199	201	207	207	207	203	188	167	146	123	106	100	101	112	135	162	184	201	217	219	215	206	196	188	4190	175	4378	175		
5	188	193	201	212	217	218	207	187	160	133	112	97	95	104	125	155	181	204	218	222	214	201	186	177	4207	175	4383	175		
6	176	181	193	209	222	228	223	207	183	153	123	104	95	99	117	144	172	194	211	215	210	196	177	163	4195	175	4357	174		
7	162	163	176	197	215	231	234	225	202	174	142	114	95	93	108	133	160	184	202	210	207	191	172	153	4144	173	4286	171		
8	142	141	154	176	199	222	235	236	223	201	170	142	121	113	118	136	161	183	200	209	204	189	168	147	4190	175	4320	173		
9	130	123	131	149	176	202	224	233	233	219	196	172	149	136	137	147	166	189	203	212	210	196	174	153	4259	177	4393	176		
10	134	120	118	131	154	181	205	220	228	225	210	189	172	154	150	154	168	190	204	215	218	205	184	163	4292	179	4435	177		
11	143	125	116	121	137	160	180	200	210	214	210	198	183	176	168	170	180	194	210	222	224	215	201	180	4337	181	4492	180		
12	155	140	128	124	130	144	160	176	186	197	199	193	188	184	183	184	193	206	218	224	225	218	209	191	4355	181	4527	181		
13	172	155	143	134	130	134	142	153	162	172	178	180	184	192	193	199	205	211	218	225	226	218	212	202	4340	181	4527	181		
14	187	172	162	152	143	142	139	141	144	148	154	162	169	180	193	201	210	217	222	226	224	220	214	207	4328	180	4525	181		
15	197	192	184	176	163	162	152	145	143	142	144	150	155	172	189	206	217	223	227	228	223	218	214	208	4435	185	4636	185		
16	201	201	197	194	191	182	168	157	145	137	134	137	146	162	181	201	217	226	230	228	222	213	207	201	4478	187	4679	187		
17	201	202	207	208	207	201	192	172	154	139	123	126	133	148	165	190	208	222	226	223	214	205	193	188	4452	186	4640	186		
18	188	194	202	210	215	217	208	189	167	146	132	123	123	134	157	180	201	215	222	222	210	194	182	176	4407	184	4582	183		
19	175	183	194	208	217	222	218	201	180	157	135	123	119	126	145	168	190	207	215	214	204	189	171	162	4322	180	4482	179		
20	160	167	181	201	217	225	226	214	193	168	144	125	120	121	140	164	184	204	214	212	201	183	163	151	4278	178	4424	177		
21	146	151	168	188	209	222	226	220	201	180	155	133	123	126	137	160	181	199	210	210	199	180	160	144	4228	176	4364	175		
22	136	138	153	176	197	215	227	227	214	194	172	150	138	135	145	162	182	200	210	211	201	181	159	141	4264	178	4392	176		
23	128	126	137	156	181	205	217	223	217	201	181	161	147	141	146	159	179	196	207	210	201	181	159	138	4197	175	4320	173		
24	123	116	123	139	163	188	204	213	214	204	188	171	159	150	152	163	181	197	208	210	202	187	162	142	4159	173	4283	171		
25	124	115	116	127	147	170	188	201	202	198	188	173	160	154	156	166	180	194	207	210	204	191	168	149	4088	170	4219	169		
26	131	120	118	125	141	160	178	193	197	196	191	178	170	164	165	173	183	198	209	211	207	195	176	155	4134	172	4272	171		
27	138	125	119	121	131	146	162	176	185	187	186	179	172	170	176	181	192	202	213	217	214	204	187	168	4151	173	4300	172		
28	149	136	129	126	130	138	150	160	167	174	177	176	176	178	184	191	199	208	215	218	217	207	194	180	4179	174	4344	174		
29	165	152	145	141	138	140	147	154	159	163	167	170	176	180	191	199	208	213	219	219	215	209	199	188	4258	177	4434	177		
30	176	165	159	152	148	147	146	146	146	149	154	159	166	180	192	201	212	218	220	220	216	210	200	193	4275	178	4461	178		
31	186	183	178	172	166	162	155	147	142	139	141	146	154	170	186	202	217	223	226	224	218	210	201	197	4345	181	4539	182		
SUM	5104	5002	5435	5791	5545	4932	4520	4947	5921	6664	6611	5815	4957	5180	5685	5752	5257	4650	4620	5420	6360	6761	6259	5411			TOTAL		132599	
MEAN	165	160	161	167	175	163	167	186	179	170	159	150	146	149	160	175	191	205	215	218	213	202	188	175			MONTHLY MEAN		178.2	CM

STATION : SYOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : APR. 1 - APR. 30, 1985
 UNIT : CENTIMETER

DATE	TIME																							(24 H)		(25 H)					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUM	MEAN	SUM	MEAN			
1	194	193	195	194	190	180	169	153	141	131	127	131	140	157	180	200	213	221	224	219	209	200	191	187	4339	181	4524	181			
2	185	192	197	200	201	197	184	164	147	129	121	121	131	147	169	193	213	223	225	219	206	192	181	175	4312	180	4491	180			
3	179	185	198	211	220	220	209	190	165	143	126	118	122	134	158	184	203	216	221	213	198	178	163	153	4307	179	4462	178			
4	155	165	184	203	221	229	225	210	185	159	135	120	117	125	144	171	192	208	213	208	188	166	145	134	4201	175	4333	173			
5	132	141	163	187	212	230	235	227	208	180	158	137	128	131	148	169	192	209	214	209	195	169	146	127	4247	177	4366	175			
6	119	126	143	173	203	228	242	246	235	216	191	171	155	154	162	184	202	216	224	221	203	177	151	125	4467	186	4575	183			
7	108	106	119	145	176	205	229	239	233	229	209	190	176	168	172	185	205	221	228	227	214	189	163	132	4473	186	4586	183			
8	113	105	109	124	150	179	202	221	231	227	217	205	192	184	184	193	208	222	231	232	224	202	176	151	4482	187	4609	184			
9	127	110	105	113	129	151	176	195	206	212	207	201	195	189	190	196	207	220	228	229	221	210	187	164	4368	182	4511	180			
10	143	122	114	113	120	135	153	165	182	192	196	199	200	198	201	205	213	223	230	234	230	219	205	187	4379	182	4547	182			
11	168	153	139	132	132	137	145	153	163	171	181	188	190	200	207	211	216	225	229	230	230	222	213	204	4439	185	4631	185			
12	192	179	171	159	153	153	153	151	155	159	167	174	183	195	205	213	219	221	221	221	218	213	205	197	4477	187	4667	187			
13	190	185	180	172	169	159	153	148	143	143	148	155	164	174	191	205	213	216	213	213	207	200	196	192	4328	180	4519	181			
14	191	190	191	191	188	180	168	159	150	141	143	147	153	166	184	200	209	214	213	205	198	190	184	183	4338	181	4522	181			
15	184	189	195	198	198	195	184	172	159	146	141	143	150	163	180	196	208	213	210	203	193	183	172	172	4346	181	4522	181			
16	176	183	192	201	206	207	201	185	168	155	146	143	148	159	176	192	206	212	211	201	189	174	162	159	4352	181	4515	181			
17	163	174	188	201	212	216	211	200	184	163	148	146	147	159	175	192	207	214	211	203	189	170	156	151	4380	183	4531	181			
18	151	164	181	200	215	224	223	212	196	175	159	148	147	155	170	187	201	208	208	198	181	162	144	131	4341	181	4475	179			
19	134	143	162	187	205	219	225	219	204	187	169	158	153	159	173	188	201	211	209	201	184	161	139	126	4316	180	4438	178			
20	122	130	147	171	195	213	221	221	212	193	179	168	159	163	175	183	203	214	214	205	188	166	143	125	4315	180	4433	177			
21	118	122	135	160	187	207	220	223	217	206	192	179	169	168	177	190	205	215	217	209	194	172	147	127	4356	182	4474	179			
22	118	117	127	147	172	195	213	221	219	212	200	188	179	177	183	194	207	217	221	217	203	181	156	135	4399	183	4518	181			
23	119	115	121	135	155	180	197	208	209	206	200	190	184	182	188	198	209	219	223	221	209	190	165	143	4365	182	4491	180			
24	126	116	115	125	142	159	179	192	200	200	196	192	188	186	188	196	205	213	221	219	211	198	176	154	4295	179	4433	177			
25	139	125	120	124	137	150	166	179	189	193	194	191	191	191	192	196	203	213	220	219	212	200	182	164	4290	179	4437	177			
26	147	135	127	126	132	141	151	161	173	184	188	190	192	196	200	202	209	213	216	219	212	202	190	172	4278	178	4436	177			
27	158	145	135	132	132	134	140	147	154	161	168	176	181	188	195	201	208	212	214	213	210	203	193	182	4182	174	4353	174			
28	171	163	155	150	143	142	143	146	148	153	161	168	176	188	196	203	209	212	212	209	204	199	193	187	4231	176	4412	176			
29	181	178	173	169	161	153	147	143	141	143	147	156	167	178	192	201	206	209	207	201	195	187	184	181	4200	175	4382	175			
30	182	164	185	184	179	171	159	147	139	134	137	142	153	168	184	196	205	206	201	192	182	173	168	167	4138	172	4311	172			
SUM	4584		4666		5234		5623		5460		5051		4930		5439		6195		6529		6097		5176							TOTAL	129941
MEAN	153	151	156	164	174	183	187	187	182	175	168	165	164	170	181	194	207	215	218	214	203	188	173	160						MONTHLY MEAN	180.5 CM

STATION : SYOWA STATION
 LATITUDE : 69° 0' 28" S
 LONGITUDE : 39° 34' 13" E
 DURATION : JULY 1 - JULY 31, 1985
 UNIT : CENTIMETER

DATE	TIME																							(24 H)		(25 H)						
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUM	MEAN	SUM	MEAN				
1	103	118	141	166	191	207	219	222	216	207	203	203	201	204	209	213	213	209	197	176	149	124	101	90	4282	178	4372	175				
2	90	96	116	140	166	191	207	216	216	210	204	200	198	201	208	213	218	219	212	197	172	141	116	96	4243	177	4329	173				
3	86	89	101	122	150	175	199	212	217	216	209	203	200	200	209	215	223	229	228	218	200	176	145	121	4343	181	4449	178				
4	106	100	104	121	145	168	190	206	214	216	214	206	200	199	203	208	218	225	229	225	214	195	170	145	4421	184	4545	182				
5	124	110	110	119	138	156	176	196	208	213	210	206	200	195	195	201	208	219	230	229	226	213	192	172	4446	185	4595	184				
6	149	134	128	129	143	156	172	191	203	210	210	208	203	198	192	193	199	212	221	228	227	222	208	187	4523	188	4696	188				
7	173	158	147	143	149	158	169	187	200	207	210	206	203	196	192	191	191	199	208	216	218	216	210	199	4546	189	4737	189				
8	191	176	167	160	162	165	178	188	196	203	209	207	200	195	191	184	184	189	195	201	206	205	203	197	4552	190	4742	190				
9	190	182	176	171	168	171	175	185	189	192	196	195	192	188	181	178	173	170	176	180	183	188	188	188	4375	182	4558	182				
10	183	179	179	174	172	174	173	179	184	187	189	190	187	179	175	169	161	158	158	160	164	166	168	172	4180	174	4354	174				
11	174	175	178	178	179	180	179	183	184	186	188	188	191	188	184	179	176	169	162	159	156	156	156	157	162	4179	174	4347	174			
12	168	176	179	183	189	191	191	190	191	191	192	193	192	189	186	183	174	168	159	152	146	147	146	151	4227	176	4383	175				
13	156	168	178	186	195	202	203	199	199	196	195	196	195	195	194	191	181	176	164	156	143	136	133	138	4275	178	4422	177				
14	147	158	171	187	199	207	210	210	206	203	199	202	200	202	203	202	195	183	176	160	145	133	127	128	4358	182	4492	180				
15	134	146	164	181	200	210	216	213	215	210	206	204	207	206	209	210	207	203	191	172	152	134	119	116	4431	185	4552	182				
16	121	133	151	171	191	209	219	222	219	213	208	207	204	205	212	214	214	211	203	184	165	144	123	113	4456	186	4568	183				
17	112	122	135	158	180	201	215	222	221	214	210	206	200	201	207	215	213	218	214	200	176	153	132	114	4444	185	4553	182				
18	109	114	129	147	174	196	213	225	225	222	217	213	206	206	215	222	229	231	230	220	200	175	145	125	4589	191	4699	188				
19	110	106	116	136	158	180	201	216	221	220	214	209	205	203	207	216	224	232	234	230	215	194	167	141	4555	190	4679	187				
20	124	114	118	131	146	168	193	211	214	217	213	204	199	194	193	203	215	222	231	232	222	210	186	161	4521	183	4662	186				
21	141	126	122	129	141	159	179	194	206	208	206	199	191	183	180	184	196	204	214	219	220	210	196	176	4383	183	4539	182				
22	156	138	132	130	141	152	167	184	195	199	200	194	189	179	173	172	177	187	198	207	212	210	204	192	4287	179	4463	179				
23	176	160	152	149	152	160	174	187	196	200	201	199	189	179	170	166	165	171	179	191	196	202	200	193	4307	179	4495	180				
24	189	178	168	164	162	164	172	173	188	190	192	187	178	171	160	148	144	145	147	156	163	165	170	175	4055	169	4231	169				
25	176	174	168	162	164	164	165	173	176	177	182	181	177	166	157	147	137	131	130	136	139	145	151	158	3836	160	4003	160				
26	167	172	177	180	180	181	182	183	187	188	187	190	183	179	172	159	150	141	131	125	127	129	135	143	3958	165	4114	165				
27	156	168	180	188	195	199	197	197	193	195	196	194	193	193	188	180	170	159	144	132	125	121	122	129	4114	171	4255	170				
28	141	156	174	190	204	210	212	210	206	203	203	202	202	203	199	195	187	176	161	141	125	112	106	110	4228	176	4347	174				
29	119	136	154	177	198	213	220	221	215	211	206	204	205	206	208	211	206	198	184	162	139	122	104	98	4318	180	4419	177				
30	101	117	134	157	186	204	216	229	216	210	206	200	193	204	206	210	213	206	197	180	152	125	105	94	4257	177	4346	174				
31	89	95	114	135	161	187	202	210	207	203	192	189	184	188	195	204	211	211	209	194	173	145	118	98	4114	171	4203	168				
SUM	4360	4563	5279	5984	6325	6267	6073	5963	5970	5911	5450	4748													TOTAL							
		4374	4864	5658	6235	6317	6188	5991	5973	5969	5735	5114	4487												133803							
MEAN	141	141	147	157	170	183	193	201	204	204	202	200	196	193	193	193	193	193	191	185	176	165	153	145	MONTHLY MEAN	179.8	CM					

STATION : SYOWA STATION
 LATITUDE : 59° 0' 28" S
 LONGITUDE : 39° 34' 13" E
 DURATION : AUG. 1 - AUG. 31, 1985
 UNIT : CENTIMETER

DATE	TIME																								(24 H)		(25 H)	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUM	MEAN	SUM	MEAN
1	89	89	102	124	146	172	189	202	202	194	186	176	172	174	180	191	202	209	209	203	185	161	134	108	3999	167	4094	164
2	95	90	96	113	134	158	178	191	194	192	183	173	165	166	172	179	194	206	207	209	201	182	155	130	3963	165	4074	163
3	111	100	104	114	134	151	172	187	193	191	183	170	162	156	157	169	182	194	206	212	207	191	172	150	3968	165	4098	164
4	130	114	114	119	135	150	168	182	190	187	180	168	161	150	149	155	165	179	191	203	203	196	181	164	3934	164	4083	163
5	149	134	128	133	141	157	172	183	191	191	185	174	164	153	147	149	157	169	180	192	200	194	187	177	4007	167	4170	167
6	163	153	149	148	153	164	178	187	193	194	190	179	170	158	153	147	154	161	172	184	190	190	189	180	4098	171	4271	171
7	173	168	164	161	166	172	180	191	196	197	194	184	174	165	156	152	153	157	164	174	181	185	185	180	4172	174	4347	174
8	175	174	171	175	178	183	191	198	203	205	200	194	180	172	164	157	153	156	160	164	171	175	180	179	4258	177	4437	177
9	179	180	182	184	189	193	198	202	205	205	202	200	190	179	173	163	156	155	157	155	157	161	161	164	4290	179	4458	178
10	168	172	179	183	188	194	195	198	197	196	193	191	186	179	173	166	158	152	146	147	144	141	144	146	4136	172	4293	172
11	157	167	182	193	201	202	202	202	203	199	195	194	186	183	181	175	166	160	152	142	136	130	128	134	4170	174	4312	172
12	142	152	168	185	194	205	210	209	206	203	200	196	195	192	191	186	183	174	166	153	140	131	123	126	4230	176	4366	175
13	136	145	164	183	202	217	225	221	219	214	207	202	203	203	202	203	201	195	181	164	145	126	115	114	4387	183	4506	180
14	119	131	149	168	193	209	219	221	217	209	201	199	194	199	202	206	209	206	196	180	157	133	116	108	4340	181	4448	178
15	108	117	136	158	183	202	216	220	217	208	201	191	190	196	201	209	217	219	212	199	176	149	122	107	4354	181	4456	178
16	102	108	124	144	171	196	211	217	216	207	197	190	192	185	192	205	216	221	222	215	196	168	142	119	4346	181	4454	178
17	108	109	117	137	160	189	206	215	215	207	197	187	178	177	187	198	215	228	233	231	217	194	169	141	4414	184	4535	181
18	121	114	119	134	154	176	194	206	210	202	191	177	165	160	165	176	193	210	222	228	225	207	182	159	4291	179	4427	177
19	135	120	120	130	145	165	182	195	201	194	185	169	150	144	142	151	166	185	203	216	219	210	195	175	4098	171	4255	170
20	157	142	138	141	152	172	187	195	202	195	187	171	155	141	135	137	149	165	192	200	208	209	203	190	4113	171	4288	172
21	175	164	154	156	160	174	184	194	198	194	187	172	153	141	130	125	131	142	155	172	184	191	192	188	4016	167	4199	168
22	183	175	172	171	174	183	191	198	205	204	197	182	166	151	139	130	127	133	142	156	164	175	179	180	4077	170	4260	170
23	183	183	183	185	187	193	199	206	206	205	202	192	179	166	155	142	136	133	133	136	144	151	154	164	4117	172	4290	172
24	173	179	187	194	201	203	210	211	213	210	205	201	191	183	172	163	153	144	139	136	134	136	141	149	4228	176	4386	175
25	158	172	187	198	207	215	219	218	217	215	211	209	202	199	193	188	177	167	153	144	136	130	126	134	4375	182	4521	181
26	146	159	179	198	215	222	223	221	220	213	209	205	201	202	202	198	193	182	167	150	135	119	111	112	4382	183	4502	180
27	120	134	157	179	199	213	219	213	210	203	198	194	193	194	199	203	202	196	187	164	143	126	108	104	4258	177	4366	175
28	108	119	139	164	187	203	215	214	209	199	192	187	187	189	198	205	210	212	202	187	163	137	115	104	4245	177	4348	174
29	103	110	127	150	174	194	206	207	199	193	180	173	172	179	188	203	212	219	213	202	183	156	133	115	4191	175	4299	172
30	108	113	127	151	174	197	208	212	206	194	182	168	165	171	179	195	215	224	225	221	205	180	154	132	4306	179	4426	177
31	120	120	131	151	172	191	209	211	205	193	177	162	154	155	165	180	202	215	221	221	210	188	165	144	4262	178	4391	176
SUM	4295	4548	4924	5369	5815	6156	6327	6213	5729	5486	5342	5547	5698	5660	5122	4760	TOTAL	130025								MONTHLY MEAN	174.8 CM	
MEAN	139	139	147	159	173	188	199	204	205	200	193	185	177	173	172	174	179	183	184	183	176	165	154	144				

STATION : SYOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : SEP. 1 - SEP. 30, 1985
 UNIT : CENTIMETER

DATE	TIME																							(24 H)		(25 H)						
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUM	MEAN	SUM	MEAN				
1	129	124	131	149	167	189	203	208	204	194	178	161	149	145	153	167	187	208	218	223	219	205	182	162	4254	177	4400	176				
2	146	138	140	153	167	182	201	207	202	193	173	157	144	135	138	153	171	190	205	214	215	204	190	171	4189	175	4349	174				
3	160	150	153	158	172	186	202	208	205	196	180	162	146	135	133	142	160	175	191	205	208	201	193	179	4200	175	4365	175				
4	165	158	157	164	175	186	200	207	204	196	183	162	146	137	129	132	143	157	174	185	192	193	186	178	4109	171	4278	171				
5	169	165	165	168	178	187	195	201	199	196	183	164	149	139	131	131	139	147	158	170	177	178	176	171	4035	168	4201	168				
6	166	167	168	172	180	189	197	201	201	195	188	172	156	144	136	132	135	140	149	157	164	164	163	168	4009	167	4175	167				
7	166	167	172	178	186	194	201	202	201	198	188	178	164	153	146	141	138	140	142	147	149	153	155	156	4015	167	4176	167				
8	161	170	175	183	190	199	204	204	205	198	192	184	174	165	160	153	148	146	143	143	144	143	146	153	4083	170	4240	170				
9	157	167	179	190	202	211	212	212	211	205	199	193	186	180	175	173	165	157	151	145	139	133	134	140	4216	176	4364	175				
10	148	159	175	194	204	212	216	215	208	203	194	190	186	183	182	180	175	169	156	144	132	124	118	122	4189	175	4318	173				
11	129	145	162	182	197	208	212	209	205	196	192	186	184	186	190	192	190	183	172	154	138	124	113	111	4160	173	4276	171				
12	116	132	152	173	199	214	215	212	206	198	188	183	183	186	194	203	206	203	193	174	152	131	115	109	4237	177	4349	174				
13	112	123	144	168	189	208	216	214	204	193	183	175	172	180	192	204	216	219	214	197	175	147	124	109	4278	178	4383	175				
14	105	114	134	156	180	201	209	208	197	183	168	157	152	161	175	195	212	223	223	215	196	166	137	120	4187	174	4299	172				
15	112	115	123	151	173	194	207	205	197	184	162	146	140	142	158	178	201	220	228	228	217	191	165	142	4184	174	4312	172				
16	128	126	137	152	173	193	205	205	196	181	157	133	126	124	134	154	180	203	221	230	225	210	186	166	4150	173	4298	172				
17	148	140	145	155	174	191	201	205	197	179	159	135	117	109	113	130	153	177	201	216	220	214	200	182	4060	169	4228	169				
18	168	158	157	165	179	194	205	209	203	189	168	144	124	110	107	116	133	152	176	194	205	207	202	191	4056	169	4241	170				
19	185	177	176	180	192	204	211	214	209	198	181	157	136	120	110	112	120	134	150	167	181	187	188	188	4077	170	4262	170				
20	185	182	183	186	194	204	214	217	214	206	193	172	153	136	124	117	120	127	136	146	157	164	171	177	4078	170	4258	170				
21	189	185	190	198	203	211	219	220	218	213	204	190	175	164	149	142	136	135	136	143	149	151	159	168	4238	177	4411	176				
22	173	186	196	203	210	216	220	218	215	209	205	198	187	177	171	161	153	144	138	132	131	130	134	142	4249	177	4402	176				
23	153	164	179	192	203	209	210	208	203	198	194	189	186	181	179	175	170	159	149	135	127	121	120	125	4129	172	4265	171				
24	136	151	168	186	201	207	206	204	194	190	186	185	183	185	189	189	188	182	166	152	136	124	116	120	4144	173	4271	171				
25	127	142	161	181	198	205	207	203	193	186	177	172	174	181	193	200	201	197	186	172	153	134	122	119	4184	174	4309	172				
26	125	140	158	179	198	211	212	204	194	182	169	165	169	179	188	201	211	212	205	190	170	147	131	123	4263	173	4387	175				
27	124	135	153	174	192	207	207	201	189	176	161	153	156	165	180	198	212	219	219	206	186	163	140	123	4244	177	4371	175				
28	127	135	152	172	189	203	207	197	185	168	151	141	139	148	166	188	205	218	222	216	201	176	156	141	4202	175	4337	173				
29	135	141	154	170	191	203	206	201	185	165	146	132	125	129	145	167	187	206	214	212	201	183	159	142	4099	171	4234	169				
30	135	137	148	161	180	195	199	194	180	157	133	124	113	112	127	147	171	190	205	209	202	190	172	155	3941	164	4085	163				
SUM	4370	4792	5635	6219	6024	6213	5725	4965	4591	4873	5332	5421	4958	4458	TOTAL													124459				
MEAN	146	150	160	173	183	200	207	207	201	191	178	166	156	153	156	162	171	178	181	181	175	165	155	149	MONTHLY MEAN		172.9 CM					

STATION : SYOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : OCT. 1 - OCT. 31, 1985
 UNIT : CENTIMETER

DATE	TIME																									(24 H)		(25 H)										
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUM	MEAN	SUM	MEAN										
1	144	144	153	166	185	195	200	200	186	167	144	127	114	111	122	140	161	182	199	206	204	195	180	167	3992	166	4151	166										
2	159	155	160	171	186	200	204	201	192	174	153	132	117	111	116	130	150	170	186	197	200	194	184	175	4017	167	4185	167										
3	168	167	169	178	190	201	206	205	197	182	161	139	123	114	112	122	137	155	172	186	192	192	185	178	4031	168	4205	168										
4	174	171	173	182	194	202	208	206	199	187	168	147	132	121	116	122	132	145	158	171	179	181	179	178	4025	168	4200	168										
5	175	175	178	184	196	204	210	209	202	193	177	158	143	132	125	125	131	141	151	161	168	173	173	174	4058	169	4234	169										
6	176	178	186	193	209	207	211	211	204	197	186	168	153	145	135	133	135	139	145	150	157	160	163	169	4101	171	4273	171										
7	172	179	187	197	202	208	211	211	204	197	189	175	163	154	147	146	143	141	139	143	143	145	150	158	4104	171	4268	171										
8	164	176	186	196	204	210	208	204	200	193	186	175	170	164	160	159	153	150	147	143	141	139	141	147	4116	172	4278	171										
9	162	175	188	203	212	217	217	209	203	193	186	182	179	179	178	179	175	168	158	147	142	137	134	140	4263	178	4416	177										
10	153	166	185	200	214	217	213	205	196	184	176	171	175	180	185	186	186	181	168	152	140	128	120	123	4204	175	4336	173										
11	132	150	167	185	200	208	204	195	182	169	161	157	159	170	180	190	198	196	185	168	147	130	115	113	4061	169	4180	167										
12	119	133	153	174	193	203	199	188	174	154	142	139	140	153	173	190	204	208	205	193	170	148	128	121	4004	167	4126	165										
13	122	133	150	170	187	197	194	185	166	145	127	117	121	133	156	180	200	215	218	211	192	168	147	135	3969	165	4097	164										
14	128	137	153	169	188	197	195	186	164	138	117	102	99	109	130	157	185	207	219	221	210	188	168	151	3918	163	4059	162										
15	141	146	159	175	192	201	201	188	169	141	114	93	85	87	107	133	164	189	209	219	215	201	187	172	3888	162	4048	162										
16	160	159	169	182	194	205	208	199	183	155	125	101	85	81	89	111	138	164	188	204	209	202	194	185	3889	162	4064	163										
17	175	172	176	186	200	211	215	210	197	175	147	121	99	85	88	99	118	142	163	180	190	196	193	188	3926	164	4110	164										
18	184	181	182	193	203	213	217	215	205	190	166	139	117	102	93	99	109	121	141	157	170	179	180	182	3938	164	4123	165										
19	185	185	187	193	206	213	218	216	212	200	186	164	143	128	121	114	117	122	133	143	154	166	171	173	4050	169	4232	169										
20	182	189	195	200	208	213	215	215	211	206	194	179	167	155	143	133	132	130	132	141	144	149	157	167	4157	173	4332	173										
21	175	188	197	202	208	214	212	209	204	200	193	187	178	170	163	159	150	143	139	137	139	139	143	153	4201	175	4362	174										
22	161	175	190	198	204	206	202	196	193	190	182	180	179	178	179	177	171	161	153	143	135	132	133	141	4159	173	4312	172										
23	153	164	179	193	197	197	193	186	177	171	163	169	170	177	181	185	182	176	164	153	141	132	130	132	4070	170	4213	169										
24	143	158	173	187	196	197	192	180	169	160	155	156	163	172	182	191	196	192	182	171	153	140	135	135	4078	170	4218	169										
25	140	156	171	186	196	199	193	179	167	153	144	144	151	164	182	196	206	210	200	190	171	157	146	144	4145	173	4293	172										
26	148	152	179	193	206	207	199	186	166	150	139	138	142	153	172	193	208	215	213	205	191	173	161	156	4255	177	4414	177										
27	159	170	183	197	210	213	205	190	171	149	135	127	132	143	164	188	204	216	219	215	200	185	171	161	4307	179	4467	179										
28	160	169	182	194	205	210	203	188	167	144	125	116	113	124	145	168	191	207	215	213	204	190	178	165	4176	174	4339	174										
29	163	169	179	193	207	211	207	193	171	146	125	110	104	119	128	151	174	194	207	211	204	195	182	174	4108	171	4278	171										
30	170	171	182	197	206	213	208	197	179	150	129	111	99	104	117	136	161	183	197	205	204	196	187	179	4083	170	4257	170										
31	174	174	181	193	202	208	209	199	182	159	131	111	99	97	106	121	145	166	180	194	197	193	186	179	3986	166	4162	166										
SUM	4921	5451	6191	6377	6377	6377	5792	4831	4214	4395	5056	5485	5406	5001	TOTAL	126279																						
MEAN	159	165	176	188	200	206	206	199	187	171	156	143	136	136	142	152	163	172	177	178	174	168	161	159	169.7	CM												

STATION : SYOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : NOV. 1 - NOV. 30, 1985
 UNIT : CENTIMETER

DATE	TIME																							(24 H)		(25 H)					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUM	MEAN	SUM	MEAN			
1	176	177	182	192	203	210	210	202	188	167	143	122	105	99	104	115	133	152	170	185	192	191	186	184	3988	166	4169	167			
2	181	179	183	192	202	208	210	204	193	176	156	134	117	111	110	114	128	143	156	171	179	185	184	182	3998	167	4180	167			
3	182	183	186	193	201	208	210	207	198	184	165	145	129	116	109	114	119	129	143	154	164	172	175	178	3964	165	4146	166			
4	182	184	188	194	201	209	210	206	200	190	175	157	140	130	125	121	127	131	137	146	153	159	166	170	4001	167	4179	167			
5	178	184	189	193	199	203	203	201	196	185	175	166	155	145	138	133	131	130	132	137	142	146	154	160	3975	166	4145	166			
6	170	178	185	191	193	196	194	189	184	178	171	167	159	153	150	147	140	136	132	129	131	133	140	147	3893	162	4052	162			
7	159	171	179	188	193	193	185	180	172	168	161	161	161	161	162	162	160	150	143	138	132	130	134	140	3883	162	4036	161			
8	153	167	178	189	193	190	181	171	162	157	152	154	153	164	171	178	175	170	160	147	134	129	130	131	3894	162	4037	161			
9	143	157	170	183	186	184	175	159	145	134	131	134	143	157	174	185	194	192	173	164	146	133	129	129	3825	159	3961	158			
10	136	147	163	177	182	178	167	152	130	115	107	116	136	157	178	194	198	191	179	162	144	134	132	3682	153	3818	153				
11	136	148	161	175	182	182	170	153	129	109	94	91	101	119	145	175	196	212	214	207	191	175	158	150	3773	157	3926	157			
12	153	160	173	186	193	193	184	164	138	109	89	78	78	93	118	150	180	200	214	214	203	193	175	165	3803	158	3965	159			
13	162	167	180	192	202	205	196	173	153	122	94	76	69	78	97	124	156	183	202	212	210	203	194	182	3837	160	4016	161			
14	179	181	189	201	210	216	211	198	175	145	115	89	74	72	84	104	132	157	180	197	204	204	201	195	3913	163	4102	164			
15	189	189	195	204	216	222	221	211	195	163	133	110	89	78	80	91	109	132	154	172	185	191	193	192	3924	164	4114	165			
16	190	189	192	202	212	217	221	215	203	185	159	136	112	94	88	92	103	119	135	152	167	177	182	184	3925	164	4110	164			
17	185	187	187	194	202	210	213	212	207	195	173	158	139	123	110	106	110	116	127	138	150	162	171	175	3955	165	4136	165			
18	181	183	186	189	192	198	201	200	197	193	184	167	156	147	136	129	126	125	123	134	142	148	157	167	3966	165	4140	166			
19	174	179	183	185	185	187	187	188	186	181	173	171	163	160	155	146	142	135	133	136	137	140	147	156	3934	164	4098	164			
20	164	172	178	181	189	178	174	171	169	163	165	167	168	167	165	165	161	154	149	145	141	143	149	155	3929	164	4093	164			
21	164	172	181	184	183	179	170	164	153	154	153	154	157	164	163	171	172	167	159	154	149	147	150	156	3930	164	4093	164			
22	163	173	181	185	185	178	168	157	143	141	140	143	147	153	168	176	181	179	173	165	155	151	151	156	3922	163	4083	163			
23	161	171	179	185	185	179	166	151	140	129	123	125	133	147	161	175	185	186	182	176	166	153	154	154	3871	161	4032	161			
24	161	168	177	182	183	179	164	147	132	118	111	112	122	136	156	174	188	195	193	185	176	167	160	159	3845	160	4008	160			
25	163	171	180	187	189	185	174	156	135	117	106	103	110	125	144	165	183	194	196	193	184	175	165	162	3862	161	4027	161			
26	165	172	181	189	194	190	179	162	139	117	100	93	94	105	124	150	174	189	197	196	189	182	173	168	3822	159	3991	160			
27	169	175	185	193	196	198	188	171	149	124	104	94	93	100	118	143	164	183	196	200	196	189	182	175	3885	162	4060	162			
28	175	178	185	195	202	204	196	180	161	136	112	97	89	93	108	129	154	175	188	199	199	194	189	184	3922	163	4103	164			
29	181	182	189	197	204	207	204	189	171	144	119	101	89	86	95	113	136	157	177	187	191	190	186	184	3878	162	4060	162			
30	182	182	187	196	204	210	208	198	182	158	132	110	94	90	94	106	126	146	164	178	186	187	186	183	3889	162	4070	163			
SUM	5057	5452	5852	5740	5035	4130	3659	3914	4579	5003	5056	4955															TOTAL				
		5226	5674	5896	5436	4567	3822	3707	4231	4834	5090	4998	4955															116888			
MEAN	169	174	182	190	195	197	191	181	169	152	138	127	122	124	130	141	153	161	167	170	169	167	165	165	MONTHLY MEAN						
																								162.3 CM							

STATION : SYOWA STATION
 LATITUDE : 69° 0' 28" S
 LONGITUDE : 39° 34' 13" E
 DURATION : DEC. 1 - DEC. 31, 1985
 UNIT : CENTIMETER

DATE	TIME																							(24 H)		(25 H)		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUM	MEAN	SUM	MEAN
1	181	180	182	189	199	206	206	200	190	171	149	126	109	99	98	104	118	137	152	165	177	184	183	183	3888	162	4071	163
2	183	182	183	187	194	202	204	200	191	177	157	135	116	103	99	103	109	123	137	150	163	172	175	177	3822	159	4002	160
3	180	180	182	184	188	193	194	192	188	178	164	148	133	120	112	112	114	120	131	142	154	163	170	175	3817	159	3995	160
4	178	180	181	182	184	185	185	185	182	176	169	157	144	137	130	125	123	124	129	135	140	151	158	164	3804	159	3974	159
5	170	171	175	174	173	174	171	171	170	173	171	160	156	154	147	143	137	134	132	135	137	144	150	157	3779	157	3943	158
6	164	169	172	172	168	165	160	155	153	151	152	154	154	157	157	157	154	147	143	137	137	140	146	153	3717	155	3878	155
7	161	168	171	172	168	161	152	144	137	132	134	137	143	153	161	164	168	162	154	150	146	144	147	154	3683	153	3844	154
8	161	168	174	175	171	161	147	132	121	112	112	119	127	147	164	176	182	183	175	168	161	155	154	157	3702	154	3866	155
9	164	172	178	179	175	165	147	129	111	98	95	97	113	133	158	182	198	204	202	194	181	174	167	167	3785	158	3957	158
10	172	179	186	188	188	178	162	140	116	95	84	84	94	112	140	168	192	207	211	209	199	190	179	176	3849	160	4030	161
11	181	186	193	199	201	194	178	154	123	97	76	68	70	83	109	134	168	190	203	208	206	201	191	185	3798	158	3985	159
12	187	191	197	206	207	205	192	172	144	113	87	67	60	65	80	105	137	166	186	199	202	199	194	188	3749	156	3934	157
13	185	189	197	204	211	213	206	190	165	133	103	78	61	59	67	85	112	140	164	184	192	194	191	188	3711	155	3896	156
14	185	185	192	202	210	216	216	207	188	163	133	105	82	71	70	81	99	122	144	164	177	183	185	184	3764	157	3945	158
15	181	178	181	188	195	204	207	204	194	175	152	127	102	84	78	81	91	107	125	143	161	171	173	176	3678	153	3852	154
16	174	169	171	172	173	188	192	192	189	179	163	141	120	102	92	88	94	105	119	133	149	161	165	163	3604	150	3773	151
17	169	166	165	164	168	174	177	182	180	177	168	155	140	128	116	111	112	117	124	134	144	155	163	167	3656	152	3824	153
18	168	167	164	168	166	162	164	163	163	169	166	162	158	150	142	136	130	129	133	139	146	152	155	164	3716	155	3880	155
19	164	163	163	161	153	151	148	149	149	148	143	147	144	144	141	135	135	135	137	139	145	150	154	160	3566	149	3730	149
20	164	162	161	159	153	147	143	139	140	140	142	145	146	150	154	154	154	154	153	150	152	154	157	161	3634	151	3798	152
21	164	165	164	162	157	150	142	135	131	130	131	135	140	148	155	163	167	168	165	161	160	160	162	163	3678	153	3845	154
22	167	171	172	168	162	155	144	133	125	119	120	123	131	142	154	166	174	176	176	173	170	169	167	168	3725	155	3899	156
23	174	176	178	179	173	164	150	134	120	109	103	109	115	124	142	157	168	176	180	182	176	173	172	172	3706	154	3882	155
24	176	181	184	186	182	173	158	142	123	108	98	96	101	113	131	152	169	180	186	188	185	181	177	175	3745	156	3923	157
25	173	185	188	192	190	182	171	150	129	111	96	89	93	103	119	142	161	178	186	189	190	185	180	178	3765	157	3944	158
26	179	183	188	194	195	191	179	161	140	116	96	86	85	92	108	131	154	173	185	192	193	190	186	182	3779	157	3958	158
27	179	184	189	195	199	197	189	174	150	126	100	84	79	81	94	115	139	161	173	188	191	188	185	180	3745	156	3923	157
28	178	181	185	192	200	202	197	185	164	140	115	91	77	77	84	104	125	145	164	182	187	187	185	179	3726	155	3903	156
29	177	178	181	190	199	203	200	190	174	151	122	99	84	75	79	92	112	136	155	172	182	185	183	180	3699	154	3876	155
30	177	175	178	185	194	200	203	195	183	164	139	112	94	80	78	85	102	121	142	159	171	176	176	172	3661	153	3829	153
31	168	166	165	171	176	183	188	188	181	165	145	123	102	88	80	82	92	109	126	141	156	166	167	167	3495	146	3658	146
SUM	5389	5540	5677	5677	5472	4814	3990	3473	3639	4290	4897	5230	5297	TOTAL													115446	
MEAN	174	176	179	182	183	182	177	167	155	142	129	118	112	112	117	127	138	149	158	165	169	171	171	172	MONTHLY MEAN			155.2 CM

STATION : SYOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : JAN. 1 - JAN. 27, 1986
 UNIT : CENTIMETER

DATE	TIME																							(24 H)		(25 H)				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	SUM	MEAN	SUM	MEAN		
1	163	161	157	157	164	171	176	181	174	168	157	136	119	106	94	92	97	107	121	136	149	158	162	163	3469	145	3631	145		
2	162	157	154	151	154	158	163	167	169	165	159	150	137	127	116	110	110	114	123	134	144	156	162	164	3506	146	3668	147		
3	162	159	154	151	147	148	148	151	154	155	153	151	144	138	134	129	126	127	132	138	145	151	159	163	3519	147	3683	147		
4	164	160	154	149	142	137	133	132	134	136	139	138	140	141	140	140	138	134	134	138	144	143	154	156	3425	143	3586	143		
5	161	158	155	148	141	130	123	116	114	114	120	125	132	142	150	154	157	154	151	154	156	156	159	164	3434	143	3600	144		
6	166	166	162	155	148	136	120	110	102	103	104	112	125	140	157	169	178	181	179	178	175	171	171	174	3582	149	3758	150		
7	176	175	174	170	161	149	131	113	100	90	85	89	96	115	134	153	176	187	193	190	185	181	178	178	3585	149	3763	151		
8	178	181	183	183	176	164	148	124	103	84	74	70	78	93	117	142	170	188	198	198	197	191	185	184	3609	150	3793	152		
9	184	188	191	193	192	185	167	144	117	91	69	56	60	70	89	119	150	175	191	198	200	197	191	186	3603	150	3788	152		
10	185	189	194	200	205	201	191	171	146	112	83	61	53	62	79	103	130	161	184	196	199	196	191	185	3677	153	3858	154		
11	181	184	189	198	207	210	208	192	170	140	107	83	66	61	68	83	110	136	157	179	188	189	185	178	3668	153	3842	154		
12	174	172	178	188	200	207	210	202	184	162	130	104	83	71	72	85	103	127	153	170	180	182	178	171	3686	154	3851	154		
13	165	160	161	163	182	191	196	199	191	174	149	120	96	80	73	76	90	110	131	151	163	163	168	164	3526	147	3683	147		
14	157	151	147	152	162	174	183	187	185	178	158	135	115	96	85	86	98	110	123	144	157	162	163	161	3469	145	3622	145		
15	153	146	139	139	145	154	161	169	174	171	161	145	123	113	101	97	102	110	125	141	153	158	160	155	3400	142	3550	142		
16	150	144	137	133	134	139	144	152	155	154	151	139	128	120	111	109	109	119	127	139	149	155	158	157	3311	138	3465	139		
17	154	147	140	135	132	131	134	133	142	142	141	137	130	125	124	124	125	129	137	145	154	161	162	161	3350	140	3507	140		
18	157	152	146	139	134	131	133	134	133	135	137	134	134	131	133	137	139	144	149	155	160	164	164	164	3439	143	3601	144		
19	162	156	150	144	137	133	127	123	122	122	121	122	122	123	125	132	137	143	147	152	157	161	164	165	3391	141	3556	142		
20	165	164	159	153	146	139	127	129	115	112	110	111	115	120	129	140	150	156	161	163	166	167	168	163	3424	143	3592	144		
21	168	166	165	162	155	147	137	125	115	107	102	100	106	114	126	140	153	161	169	171	172	172	172	171	3476	145	3648	146		
22	172	173	173	172	163	153	146	130	116	102	92	90	92	101	115	134	151	164	173	177	178	176	174	174	3501	146	3675	147		
23	174	173	179	181	180	171	161	144	124	104	89	82	81	90	106	130	151	164	176	184	185	181	178	177	3570	149	3747	150		
24	177	181	184	189	191	186	174	155	133	110	90	80	76	80	96	120	141	162	178	184	186	184	179	175	3611	150	3785	151		
25	174	178	184	190	195	195	185	168	147	120	93	76	69	71	83	106	132	154	172	183	186	182	178	172	3593	150	3762	150		
26	169	172	178	185	195	199	197	181	163	134	105	81	66	65	74	90	117	144	164	174	181	181	174	168	3557	148	3720	149		
27	163	164	169	177	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
SUM	4516	4455	4293	4123	3682	3079	2692	2838	3446	4053	4413	4433	4438	4482	4462	4244	3923	3385	2827	2699	3109	3764	4277	4451	4399	TOTAL	92054			
MEAN	167	166	165	165	163	159	151	142	130	118	109	104	104	109	120	133	145	156	165	170	171	171	169	169	169	MONTHLY MEAN	146.6	CM		