

Oceanographic Data of the 28th Japanese
Antarctic Research Expedition
from November 1986 to April 1987

Yutaka MICHIDA and Shinobu INAZUMI
Hydrographic Department, Maritime Safety Agency
3-1, Tsukiji 5-chome, Chuo-ku, Tokyo 104

The results of the oceanographic observations on board icebreaker Shirase and tidal observation at Syowa Station are presented in this report. The oceanographic observations were carried out in the summer mission of the 28th Japanese Antarctic Research Expedition (JARE-28) in 1986-1987. Tidal observation was continued through the winter mission of JARE-27 in 1985-1986.

1. Oceanographic Observations

The track chart of icebreaker Shirase and the station location of oceanographic observations are shown in Figs. 1 and 2. Surface water sampling, and XBT, CTD and serial observations were made during the cruise. One surface drifting buoy was deployed in the area of the Antarctic circumpolar current.

(1) Surface water sampling

Surface temperature measurement and surface water sampling for chemical analysis were made twice or three times a day (once a day when Shirase stayed in ice-covered area). The results are given in Table 1.

(2) XBT observation

XBT (expendable bathythermograph) observations were carried out in the Southern Ocean en route from Fremantle to

Mauritius. The results are given in Table 2.

(3) CTD observation

CTD (conductivity, temperature and depth profiling system of Neil Brown Smart CTD type-c) observations were carried out in the Southern Ocean en route from the ice edge to Mauritius. The results are given in Table 3.

(4) Serial observation

Serial observations were carried out at 13 stations. The results including interpolated and calculated values of temperature, practical salinity, sigma-t and dynamic depth anomaly at each standard depth are given in Table 4, together with meteorological data.

(5) Chemical analysis of sampled water

The following methods and instruments were used in chemical analysis:

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 Metrohm Model E415-20S 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 reagent.

Ammonium-N* : Indophenol method

Petroleum oil : Integrated Ocean Service System method

Cd, Hg, Cu and Zn : Japan Hydrographic Department method

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

The results of analysis on petroleum oil, Cd, Hg, Cu and Zn concentrations are given in Table 5.

(6) Current observation with a surface drifting buoy

One surface drifting buoy was deployed at 47° 35'S, 47° 10'E on March 7, 1987. It had drifted northward in the early stage, then eastward and had been in operation till June 1987. The trajectory is shown in Fig. 3 and the location data are given in Table 6.

2. Tidal Observation

The tidal observation at Syowa Station has been carried out since 1965. At present, a pressure gauge (strain gauge) is operated. The sensor is placed in the Nisi-no-ura Cove on East Ongul Island at a depth of about 15 m below the sea surface, and the recorder is installed in the Earth Science Laboratory. Hourly, daily and monthly mean sea levels from February 1986 to January 1987 are given in Table 7.

New tide gauge (Meisei Denki Co. QWP-8-103D) was set on January 14, 1987 and has been operated since then.

Acknowledgments

The authors would like to express their sincere thanks to Prof. T. Hoshiai, the leader of JARE-28, and all the members of the expedition for their helpful support and valuable advices, and to Mr. K. Uchida and the other members of JARE-27 for their cooperation in maintenance and calibration of the tide gauge. The authors also express their thanks to Captain A. Kurata, the officers and the crew of icebreaker Shirase.

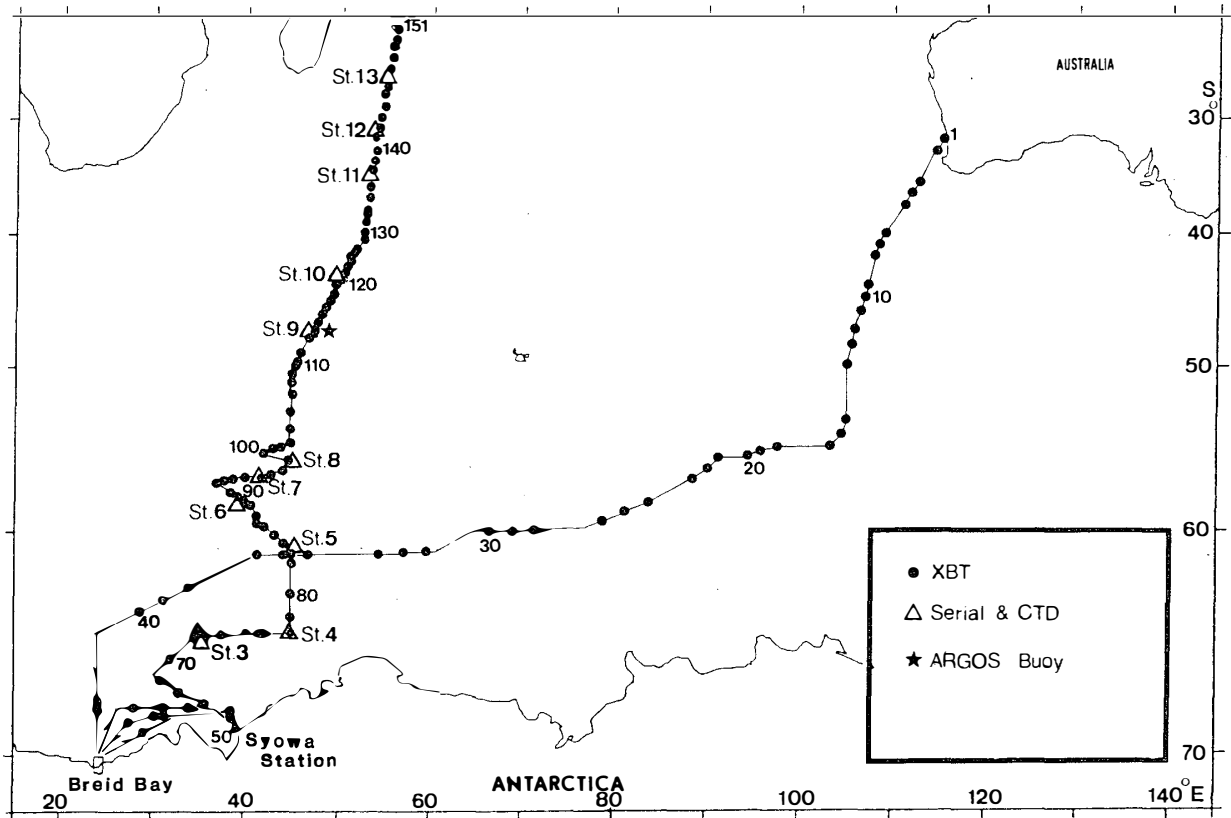


Fig. 1a. The track chart and the station location of oceanographic observations.

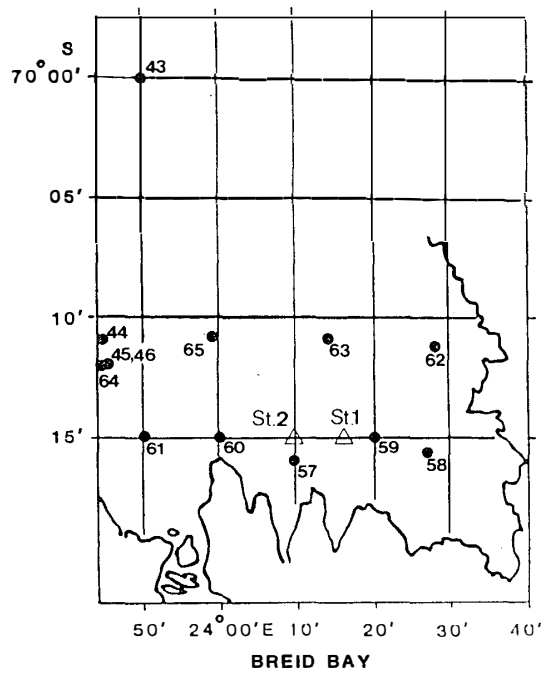


Fig. 1b. Same as in Fig.1a. The station location in Breid Bay.

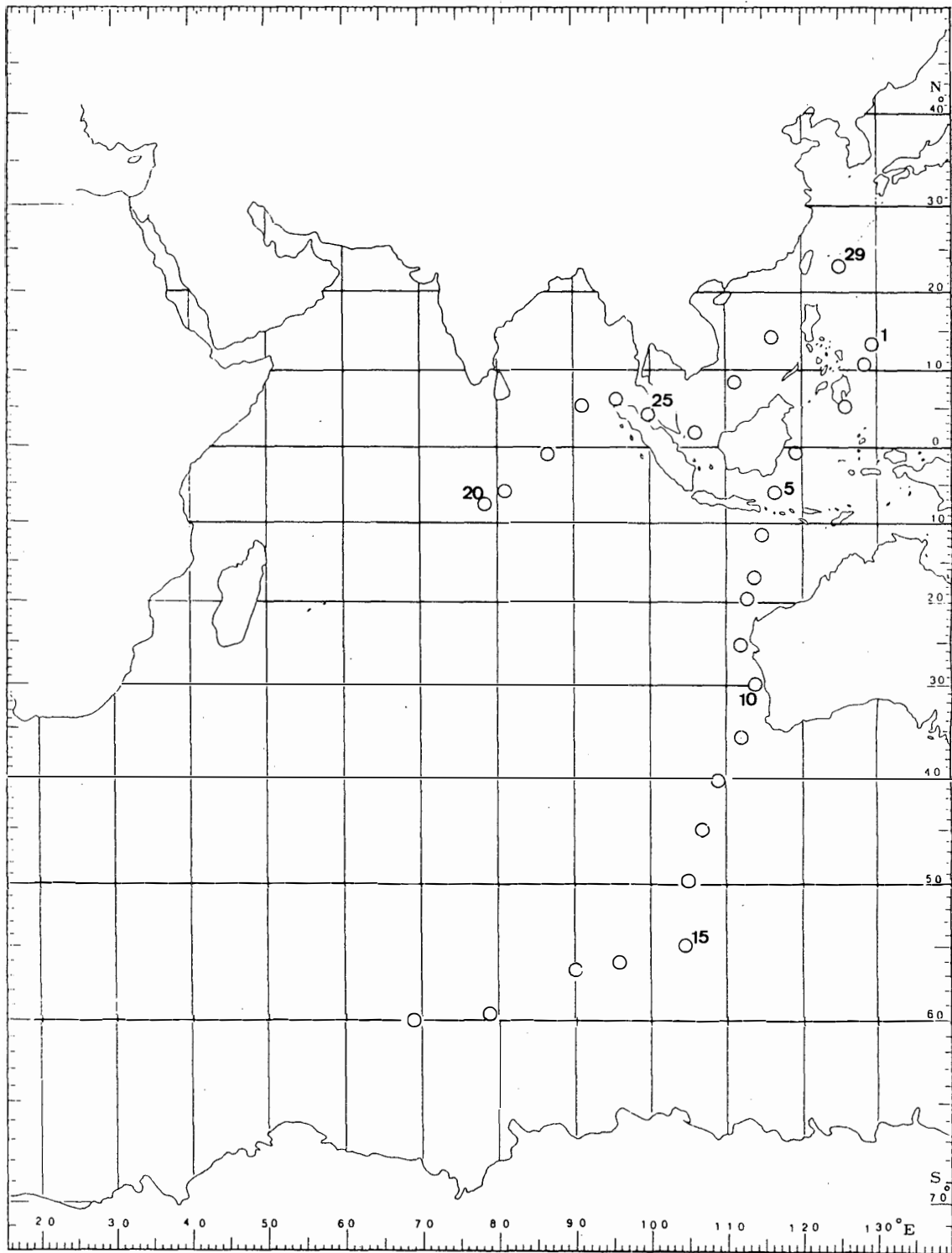


Fig. 2. The location of surface water sampling for marine pollution analysis (petroleum oil, Cd, Hg, Cu and Zn).

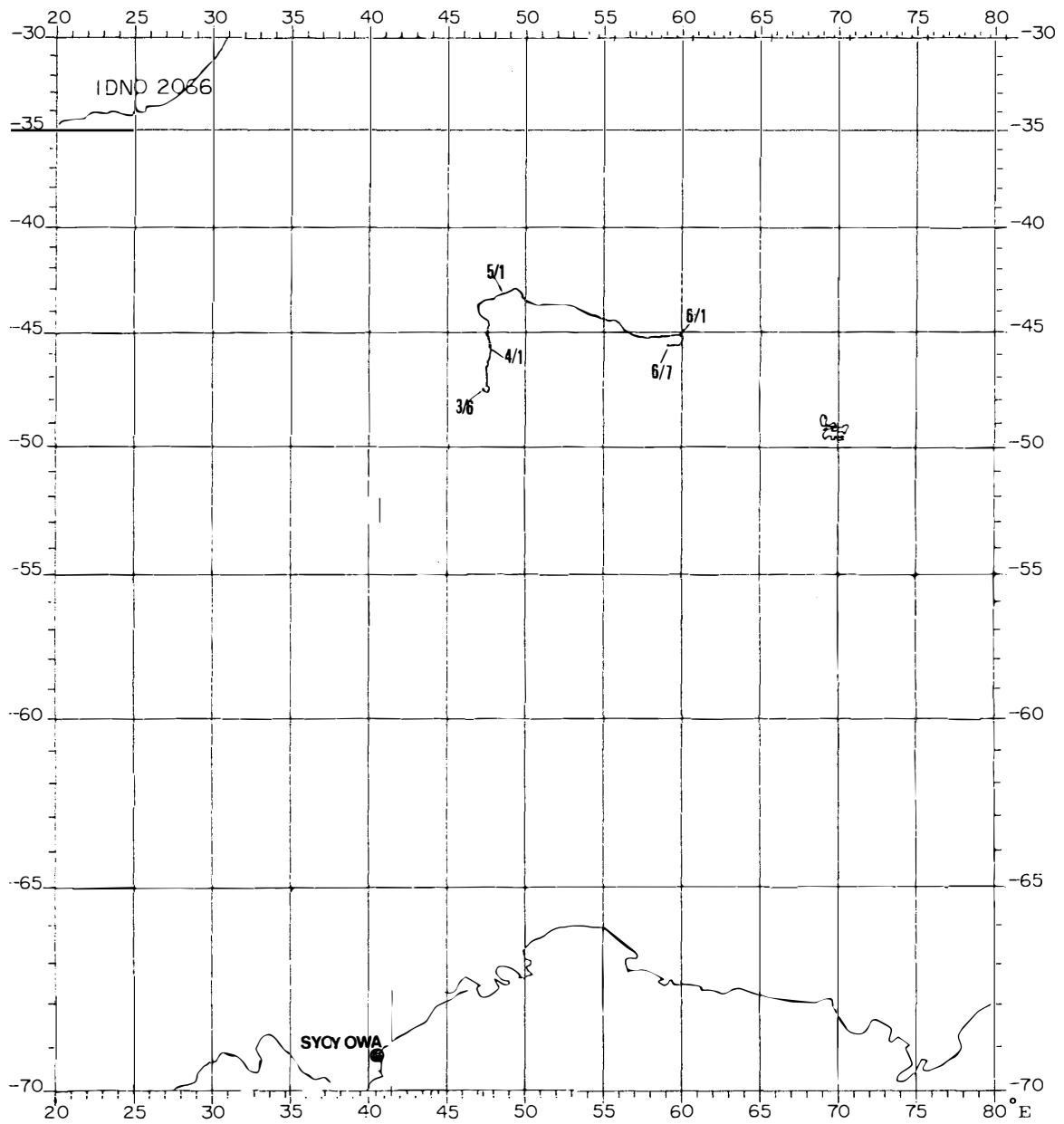


Fig. 3. The trajectory of the surface drifting buoy deployed on March 7, 1987.

Table 1. Data of surface observation on board icebreaker
Shirase in 1986-87.

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N
	GMT	LMT	Lat.	Long.	°C				ml/l	μg-atoms/l				
1986 Nov. 14			Leave Tokyo											
15	2300 *	0800	31-01 N	137-32 E	23.4	23.6	34.660	8.16	4.85	0.04	0	0.02	0.0	0.2
	0300	1200	30-07	137-04	23.3	23.2	34.668	8.18	4.93	0.04	0	0.00	0.0	0.1
	0900	1800	28-39	139-19	23.7	24.4	34.678	8.40	4.84	0.04	0	0.00	0.0	0.8
16	2300 *	0800	25-12	134-33	25.0	25.6	34.742	8.24	4.72	0.04	0	0.02	0.0	0.4
	0300	1200	24-11	134-03	26.0	26.8	34.790	8.20	4.65	0.04	1	0.00	0.0	0.1
	0900	1800	22-51	133-21	26.5	27.3	34.923	8.23	4.68	0.04	0	0.00	0.0	0.8
17	2300 *	0800	19-15	131-43	27.8	27.8	34.740	8.19	4.59	0.04	0	0.00	0.0	0.5
	0300	1200	18-16	131-18	28.5	28.2	34.498	8.22	4.53	0.04	1	0.02	0.0	0.5
	0900	1800	16-48	130-41	28.0	28.7	34.318	8.23	4.47	0.04	1	0.01	0.0	0.3
18	2300 *	0800	13-15	129-21	25.5	28.5	34.197	8.44	4.47	0.04	0	0.00	0.0	0.4
	0300	1200	12-16	129-04	25.1	28.7	34.076	8.44	4.53	0.04	0	0.01	0.0	0.5
	0910	1810	10-38	128-36	27.7	28.7	33.974	8.47	4.50	0.06	0	0.00	0.0	0.2
19	2300 *	0800	7-04	127-42	28.0	28.8	34.052	8.44	4.55	0.04	0	0.01	0.0	0.6
	0300	1200	6-24	127-25	28.8	29.1	34.003	8.23	4.51	0.04	0	0.01	0.0	0.4
	0900	1800	5-24	126-03	28.0	28.9	34.149	8.22	4.49	0.04	0	0.01	0.0	0.3
20	2300 *	0800	3-15	122-51	28.0	28.8	33.889	8.42	4.53	0.06	1	0.00	0.0	0.3
	0300	1200	2-50	122-19	28.4	28.6	33.645	8.49	4.59	0.04	1	0.00	0.0	0.0
	0900	1800	2-03	121-00	27.8	28.6	33.664	8.48	4.65	0.06	1	0.00	0.0	0.3
21	2300 *	0800	0-42 S	119-11	28.4	28.8	33.661	8.36	4.53	0.04	1	0.00	0.0	0.5
	0300	1200	1-41	118-48	24.6	29.1	33.600	8.41	4.57	0.04	2	0.00	0.0	0.0
	1015	1915	3-33	118-30	27.5	29.3	33.896	8.39	4.67	0.04	1	0.00	0.0	0.6

* The time of the date of the preceding day.

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N
	GMT	LMT	Lat.	Long.	°C									
Nov. 22	2300 *	0800	6-21 S	116-45 E	27.2	29.4	34.254	8.32	4.49	0.04	1	0.00	0.0	0.4
	0300	1200	7-20	116-27	29.0	28.6	34.079	8.38	4.56	0.09	1	0.00	0.0	0.2
	0900	1800	8-34	115-46	28.2	27.7	33.684	8.33	4.66	0.02	0	0.00	0.0	0.3
23	2300 *	0800	11-46	115-04	27.4	27.8	34.455	8.40	4.61	0.04	1	0.00	0.0	0.5
	0300	1200	12-40	114-52	27.4	28.2	34.443	8.52	4.68	0.08	1	0.00	0.0	0.0
	0900	1800	14-02	114-34	27.2	27.4	34.462	8.57	4.67	0.13	1	0.00	0.0	0.1
24	2300 *	0800	17-10	113-50	25.5	26.6	34.410	8.36	4.73	0.14	1	0.00	0.0	0.8
	0300	1200	18-11	113-39	26.0	26.5	34.424	8.39	4.75	0.11	1	0.00	0.0	0.1
	0900	1800	19-35	113-20	24.6	25.0	34.608	8.45	4.81	0.13	1	0.00	0.0	0.3
25	2300 *	0800	22-46	112-35	21.0	22.7	35.197	8.40	5.00	0.16	1	0.00	0.0	0.2
	0300	1200	23-40	112-22	21.3	22.7	35.195	8.49	5.00	0.16	1	0.00	0.0	0.3
	0900	1800	25-05	112-05	20.8	22.4	35.236	8.36	5.04	0.16	1	0.00	0.0	0.3
26	2300 *	0800	28-06	113-04	19.8	20.6	35.570	8.57	5.15	0.11	1	0.00	0.0	0.9
	0300	1200	28-58	113-24	19.4	20.3	35.672	8.42	5.25	0.13	1	0.00	0.0	0.2
	1800	0900	29-59	114-00	19.7	19.9	35.755	8.38	5.25	0.04	1	0.00	0.0	0.0
Dec. 3			Arrive in Fremantle											
			Leave Fremantle											
	0500	1300	31-57	115-24	18.1	19.3	35.788	8.46	5.35	0.10	1	0.00	0.0	0.8
	2300	1800	32-58	114-40	17.1	19.2	35.786	8.53	5.33	0.10	1	0.00	0.0	0.3
4	0000	0800	35-39	112-36	13.6	16.8	35.806	8.42	5.58	0.12	1	0.00	0.0	0.5
	0500	1300	36-37	111-55	13.3	15.9	35.716	8.59	5.73	0.12	1	0.00	0.0	0.2
5	1000	1800	37-34	111-10	13.0	15.0	35.549	8.53	5.82	0.18	0	0.00	0.0	0.4
	0000	0800	40-09	109-03	12.0	11.8	34.892	8.52	6.24	0.68	1	0.17	7.9	0.6
	0500	1300	40-58	108-22	11.0	11.6	34.804	8.47	6.27	0.65	1	0.15	9.1	0.0
	1000	1800	41-45	108-04	9.3	11.4	34.838	8.46	6.26	0.72	1	0.01	8.9	0.1

* The time of the date of the preceding day.

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N
	GMT	LMT	Lat.	Long.	°C									
Dec. 6	0000	0800	44-08 S	107-17 E	9.0	10.3	34.745	8.47	6.39	0.79	2	0.26	11	---
	0500	1300	45-03	107-00	10.0	10.4	34.801	8.52	6.36	0.79	1	0.26	10	0.7
	1000	1800	46-01	106-36	9.5	8.1	34.300	8.43	6.73	1.13	0	0.02	16	0.8
7	0100	0800	47-25	105-39	4.9	7.0	34.151	8.34	6.86	1.32	1	0.26	19	0.2
	0600	1300	48-31	105-28	4.5	5.4	34.011	8.02	7.18	1.55	5	0.22	24	0.0
	1100	1800	49-50	105-16	4.2	4.1	33.968	8.24	7.57	1.57	3	0.25	25	0.6
8	0100	0800	53-31	104-54	1.1	1.5	34.021	8.34	7.87	1.74	23	0.27	33	0.8
	0600	1300	54-45	104-45	1.2	1.1	34.051	8.41	7.92	1.83	30	0.24	27	0.5
	1100	1800	55-15	103-16	0.9	0.4	34.060	8.18	8.01	1.99	38	0.27	28	0.8
9	0100	0800	55-22	99-33	3.1	2.1	34.008	8.27	7.66	1.60	14	0.21	26	0.9
	0600	1300	55-31	95-51	2.9	2.5	33.985	8.27	7.60	1.63	11	0.20	25	0.9
	1100	1800	55-42	94-39	2.3	1.4	34.022	8.24	7.85	1.74	23	0.27	29	---
10	0200	0800	55-56	91-23	1.1	0.9	34.051	8.14	7.89	1.83	32	0.28	28	0.9
	0700	1300	56-24	89-57	1.9	0.7	34.012	8.24	7.95	1.83	30	0.25	27	0.5
	1200	1800	56-50	88-34	1.1	1.2	34.041	8.36	7.77	1.83	28	0.21	25	0.8
11	0200	0800	58-27	83-43	1.1	-0.1	34.066	8.15	8.21	1.57	58	0.18	27	0.6
	0700	1300	58-56	81-13	2.0	-0.4	34.019	8.16	8.28	1.78	55	0.18	30	0.8
	1200	1800	59-27	78-50	0.1	-0.4	34.030	8.23	8.09	2.07	55	0.20	30	0.6
12	0300	0800	60-00	71-31	0.4	-0.4	33.680	8.19	8.20	1.80	29	0.30	27	1.0
	0800	1300	60-01	68-57	0.5	-0.4	33.708	8.16	8.21	1.69	28	0.30	28	---
	1300	1800	60-03	66-31	1.2	-0.2	33.649	8.16	8.23	1.68	31	0.23	29	0.6
13	0300	0800	61-02	59-43	0.0	-0.2	33.735	8.16	8.06	1.88	38	0.30	26	0.6
	0800	1300	61-03	57-08	0.8	-0.2	33.739	8.92	8.05	1.92	33	0.30	27	0.6
	1300	1800	61-06	54-38	-0.1	-0.3	33.826	9.06	8.03	1.97	45	0.28	27	0.8
14	0400	0800	61-10	46-38	-0.9	-0.5	33.757	8.22	8.16	1.82	44	0.27	24	0.8
	0900	1300	61-10	43-57	-0.8	-0.5	33.806	8.23	8.13	1.83	45	0.29	27	0.8

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	
	GMT	LMT	Lat.	Long.	°C				ml/l	μg-atoms/l					
Dec. 14	1400	1800	61-12 S	41-16 E	0.1	-0.3	33.781	8.26	8.14	1.89	46	0.31	26	0.8	
15	0500	0800	62-48	33-51	-1.0	-1.1	33.897	8.29	7.97	1.97	56	0.27	25	0.8	
	1000	1300	63-22	31-21	1.1	-1.2	33.908	8.37	8.19	1.91	55	0.26	28	0.4	
	1500	1800	63-58	28-47	1.2	-1.1	33.794	8.32	8.13	1.97	54	0.26	28	1.0	
16	0500	0800	66-47	24-07	-1.0	-1.2	33.934	8.16	8.11	1.97	71	0.20	31	0.7	
	1000	1300	67-57	24-01	-1.0	-1.6	34.040	8.34	7.38	2.08	71	0.23	29	0.7	
	1500	1800	68-59	23-52	-1.8	-1.6	34.169	8.44	7.79	2.03	66	0.11	30	0.3	
17	0500	0800	70-11	23-46	-5.1	-1.6	34.030	8.53	8.41	1.82	56	0.05	26	0.4	
			Arrive at ice edge off Breid Bay												
	1000	1300	70-12	23-47	-3.3	-1.6	34.025	8.21	8.27	1.86	59	0.06	26	0.7	
	1500	1800			-2.1	-1.7	34.011	8.22	8.50	1.78	55	0.06	26	0.5	
18	0500	0800			-6.0	-1.7	33.995	8.21	8.39	1.80	58	0.05	27	0.8	
19	1000	1300			-4.2	-1.9	33.942	8.18	8.69	1.61	56	0.05	24	0.9	
22	0900	1200			-1.9	-1.5	33.935	8.29	8.73	1.57	53	0.08	25	0.0	
23	0900	1200			-4.6	-1.5	33.917	8.31	8.68	1.60	55	0.08	24	0.9	
24	0900	1200			-5.3	-1.6	33.939	8.29	8.74	1.80	47	0.08	25	0.6	
	1300	1600			-3.0	-1.6	33.864	8.27	8.81	1.54	55	0.12	24	0.7	
25	0700	1000			-8.0	-1.8	33.882	8.30	8.97	1.54	55	0.07	24	0.8	
	0900	1200			-6.0	-1.6	33.895	9.11	8.95	1.50	56	0.10	23	0.0	
26	0900	1200			-5.2	-1.5	32.937	8.30	8.84	1.39	53	0.12	22	0.7	
27	0900	1200			-0.9	-1.5	33.272	8.33	8.86	1.77	53	0.20	23	0.1	
	1200	1500			-0.6	-1.5	33.679	8.32	8.82	1.78	53	0.08	22	---	
28	0900	1200			-0.1	-1.3	33.743	8.31	8.86	1.50	53	0.10	24	0.3	
29	0900	1200			0.3	-1.1	33.759	8.29	8.82	1.38	52	0.10	21	0.0	
30	0900	1200			-2.4	-1.1	33.844	8.32	8.79	1.74	49	0.10	24	0.5	
31	0900	1200			-1.9	-1.3	33.781	8.29	8.78	1.46	54	0.06	21	0.9	

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N	
	GMT	LMT	Lat.	Long.	°C				ml/l	μg-atoms/l					
1987															
Jan. 1	0900	1200	70-12 S	23-47 E	0.0	-1.3	33.817	8.29	8.79	1.44	53	0.08	23	0.7	
2	0900	1200			0.0	-1.4	33.785	8.32	8.75	1.50	51	0.08	23	0.5	
3	0900	1200			-1.1	-1.4	33.778	8.27	8.68	1.66	46	0.08	25	0.5	
4	0900	1200			-1.0	-1.4	33.816	8.29	8.63	1.52	52	0.07	24	0.8	
5	0900	1200			-1.0	-1.5	33.716	8.27	8.58	1.49	52	0.09	24	0.8	
			Leave ice edge off Breid Bay												
	1500	1800	69-56	23-34	1.1	-1.6	33.795	8.25	8.42	1.66	53	0.08	24	---	
6	0500	0800	68-44	23-29	-1.9	-1.4	33.667	8.19	7.91	1.72	63	0.14	28	0.7	
	1000	1300	68-02	24-54	0.0	-1.8	33.634	8.16	7.80	1.91	68	0.16	28	0.8	
	1500	1800	67-57	27-47	0.3	-1.8	33.847	8.18	7.48	1.97	64	0.11	30	0.6	
7	0500	0800	68-04	35-56	-0.1	-0.9	34.014	8.24	8.00	1.88	63	0.11	30	0.4	
	1000	1300	68-21	37-59	0.6	-1.8	33.578	8.19	8.04	1.88	61	0.09	28	0.6	
	1500	1800	68-27	37-56	0.8	-1.8	33.616	8.24	7.89	1.89	58	0.07	28	0.8	
8	0500	0800	68-34	38-03	0.3	-1.8	33.496	8.28	8.30	1.75	56	0.08	27	0.4	
	1000	1300	68-35	38-05	1.9	-1.8	33.930	8.15	8.05	1.94	57	0.05	29	0.8	
	1500	1800	68-46	38-32	2.9	-1.7	33.748	8.27	7.98	1.97	60	0.06	29	0.6	
			Arrive at ice edge off Syowa Station												
			Left ice edge off Syowa Station												
Feb. 4	0900	1300	68-34	38-31	-0.7	-1.4	31.953	8.28	8.62	1.46	52	0.21	23	0.8	
	1500	1800	68-13	38-27	1.0	1.7	33.680	8.10	8.01	1.60	56	0.26	26	---	
5	0500	0800	68-21	31-16	0.2	0.7	34.129	8.21	8.18	1.47	49	0.20	24	0.9	
	1000	1300	68-24	30-47	-0.1	0.4	34.027	8.32	8.65	1.27	53	0.11	17	0.4	
	1500	1800	69-01	28-57	0.0	0.0	33.018	8.50	9.28	0.74	48	0.11	17	0.1	
6	0500	0800	70-00	24-01	-2.0	-1.3	33.071	8.44	9.44	0.61	36	0.18	12	0.4	
	0900	1200	70-16	23-45	-4.2	-1.3	33.418	8.33	8.98	1.02	32	0.20	12	0.1	

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N
	GMT	LMT	Lat.	Long.	°C				ml/l	μg-atoms/l				
Feb. 12	0438	0738	70-17 S	24-10 E	-8.7	0.0	33.276	8.35	9.02	0.68	28	0.17	17	0.5
	0511	0811	70-16	24-27	-8.6	0.0	33.241	8.35	8.89	0.65	26	0.17	16	0.7
	0528	0828	70-15	24-20	-8.6	0.0	33.270	8.35	8.99	0.69	28	0.16	16	0.7
	0609	0909	70-15	24-00	-8.6	0.0	33.241	8.35	9.05	0.65	27	0.17	16	0.5
	0628	0928	70-15	23-50	-8.6	0.0	33.228	8.34	9.07	0.61	26	0.17	16	0.9
	1111	1411	70-12	24-29	-5.5	0.0	33.271	8.31	9.05	0.93	38	0.16	17	0.5
	1153	1453	70-11	24-14	-5.5	0.0	33.312	8.30	9.05	1.08	42	0.12	23	0.2
	1328	1628	70-12	23-46	-4.3	0.0	33.341	8.30	9.08	0.80	35	0.14	17	0.4
	13	1013	1313	70-11	24-00	-5.3	-1.6	33.336	8.36	9.09	1.13	43	0.10	17
15	1600	1800	68-43	27-00	-2.5	-0.2	33.997	8.12	8.01	1.75	57	0.20	25	0.4
16	0500	0800	68-00	35-46	-1.1	0.4	34.008	8.12	7.89	1.82	60	0.21	24	0.5
	1000	1300	68-28	38-28	-1.8	-1.2	33.108	8.17	8.22	1.72	56	0.19	20	0.5
18	1000	1300	68-45	38-33	0.0	-1.5	31.439	8.31	8.65	1.64	48	0.25	22	0.8
19	0900	1200	68-45	38-31	-1.7	-1.2	22.924	8.95	1.15	0.52	18	0.11	24	0.1
23	0015	0315	68-02	35-40	-0.2	0.4	34.043	8.09	7.91	1.71	57	0.20	27	0.3
	0500	0800	67-47	34-12	1.0	0.2	34.047	8.18	7.86	1.84	56	0.18	26	0.8
	0955	1255	67-30	32-51	1.2	0.4	34.114	8.13	7.89	1.83	56	0.16	29	0.8
24	1500	1800	67-01	31-02	1.1	0.8	33.981	8.14	7.71	1.78	60	0.21	27	0.7
	0500	0800	65-09	34-35	1.0	0.8	34.118	8.14	7.73	1.87	50	0.20	27	0.6
	1000	1300	65-08	34-55	1.2	1.0	34.087	8.13	7.60	1.81	54	0.19	25	0.3
25	1500	1800	65-10	35-53	0.7	1.3	33.942	8.05	7.71	1.74	48	0.25	27	0.8
	0500	0800	65-00	40-03	2.1	1.3	33.951	8.17	7.69	1.78	49	0.28	27	0.2
	1000	1300	64-58	41-31	3.5	1.3	33.939	8.15	7.71	1.87	48	0.33	27	0.0
26	1500	1800	64-58	42-15	2.6	1.3	33.950	8.14	7.69	1.86	49	0.33	28	0.0
	1500	1800	64-16	44-51	2.0	1.8	33.996	8.11	7.65	1.86	50	0.34	26	0.0
27	0500	0800	61-34	44-54	1.9	0.0	33.801	8.18	7.73	1.74	33	0.37	24	0.2

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N
	GMT	LMT	Lat.	Long.	°C				ml/l	μg-atoms/l				
Feb. 27	1000	1300	61-06 S	44-43 E	2.2	1.8	33.792	8.16	7.80	1.73	35	0.36	26	0.1
	1500	1800	60-42	44-01	2.5	2.2	33.837	8.15	7.63	1.73	26	0.34	24	0.1
28	0500	0800	59-47	41-54	2.8	2.0	33.805	8.14	7.64	1.63	30	0.31	25	0.2
	1000	1300	59-30	41-18	3.0	2.3	33.820	8.15	7.59	1.60	27	0.36	25	0.4
Mar. 1	1500	1800	59-13	41-04	3.0	2.1	33.814	8.12	7.58	1.65	27	0.38	25	0.4
	0500	0800	58-12	39-37	0.8	2.2	33.810	8.19	7.58	1.65	30	0.35	25	0.5
2	1500	1800	57-56	39-08	2.5	2.2	33.860	8.18	7.53	1.66	29	0.30	24	0.5
	0500	0800	57-25	37-03	2.9	2.3	33.878	8.18	7.66	1.63	31	0.33	26	0.7
3	1000	1300	57-15	37-20	4.0	2.5	33.893	8.17	7.63	1.70	29	0.31	27	0.8
	1500	1800	57-12	38-26	3.0	2.9	33.951	8.18	7.57	1.70	28	0.29	26	0.9
4	1500	1800	56-47	42-43	3.3	2.6	33.896	8.21	7.51	1.76	26	0.31	26	0.7
	1500	1800	56-08	44-39	2.9	3.3	33.948	8.19	7.42	1.63	16	0.32	25	0.7
5	0500	0800	55-38	41-59	2.8	3.0	33.945	8.19	7.50	1.73	23	0.31	25	0.8
	1000	1300	55-26	42-46	4.0	2.9	33.925	8.21	7.53	1.79	26	0.32	24	0.7
6	1500	1800	55-14	43-47	6.9	3.3	33.918	8.19	7.45	1.71	25	0.33	25	0.7
	0500	0800	53-03	44-48	3.5	3.6	33.935	8.15	7.49	1.65	23	0.25	23	0.5
7	1000	1300	51-48	44-48	3.8	4.4	33.895	8.16	7.34	1.58	10	0.24	22	0.6
	1500	1800	50-32	44-53	4.0	4.8	33.876	8.15	7.28	1.60	10	0.22	21	0.8
8	0900	1300	47-21	47-20	6.9	6.6	33.876	8.19	7.05	1.53	3	0.20	21	0.2
	1400	1800	46-16	48-04	7.5	6.5	33.829	8.19	7.09	1.47	2	0.23	22	0.2
9	0900	1300	42-52	50-28	13.2	10.6	33.797	8.22	6.59	1.15	0	0.18	16	0.2
	1400	1800	42-05	51-04	16.8	16.5	34.909	8.31	5.74	0.26	0	0.02	0.0	0.0
10	0400	0800	39-48	52-29	18.0	18.4	35.317	8.33	5.46	0.19	0	0.00	0.0	0.0
	0900	1300	38-43	52-42	19.5	18.5	35.272	8.34	5.49	0.19	0	0.05	0.0	0.0
10	1400	1800	37-45	52-53	20.2	19.8	35.643	8.33	5.30	0.11	0	0.00	0.0	0.1
	0900	1300	34-46	53-29	21.3	21.6	35.620	8.27	5.19	0.11	0	0.00	0.0	0.0

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N
	GMT	LMT	Lat.	Long.	°C				ml/l	μg-atoms/l				
Mar. 10	1400	1800	33-46 S	53-40 E	20.9	21.8	35.501	8.28	5.12	0.10	0	0.00	0.0	0.1
11	0900	1300	30-45	54-15	24.8	24.8	35.572	8.24	4.86	0.10	0	0.00	0.0	0.1
	1400	1800	29-46	54-24	24.8	25.0	35.641	8.22	4.81	0.08	0	0.00	0.0	0.0
12	0400	0800	27-01	54-52	25.6	26.5	35.254	8.25	4.72	0.10	0	0.00	0.0	0.0
	1400	1800	25-17	55-07	26.8	27.3	35.066	8.29	4.64	0.10	0	0.01	0.0	0.0
13	0400	0800	22-46	55-37	28.1	27.6	35.063	8.25	4.93	0.15	0	0.00	0.0	0.1
	0900	1300	22-12	55-43	29.0	28.3	35.008	8.24	4.87	0.13	0	0.00	0.0	0.1
	1400	1800	21-39	55-52	28.0	29.0	35.038	8.25	4.66	0.18	0	0.00	0.0	0.0
14	0400	0800	20-07	57-22	27.7	28.9	35.049	8.23	4.90	0.19	0	0.00	0.0	0.1
	1400	1800	19-05	59-03	28.1	28.9	34.885	8.26	4.54	0.15	0	0.00	0.0	0.2
15			Arrive in Port Louis											
22			Left Port Louis											
	0300	0800	17-42	62-03	26.9	28.2	35.033	8.27	4.91	0.15	0	0.00	0.0	0.0
	1300	1800	16-36	64-20	29.9	29.5	34.241	8.29	4.86	0.13	0	0.00	0.0	0.1
23	0300	0800	14-57	67-30	28.1	28.9	34.378	8.30	4.67	0.15	0	0.00	0.0	0.1
	1300	1800	13-40	69-46	28.9	29.2	34.608	8.31	4.53	0.18	0	0.00	0.0	0.2
24	0300	0800	11-44	72-39	28.1	29.1	34.212	8.29	4.71	0.15	0	0.00	0.0	0.4
	1300	1800	10-23	74-34	28.7	29.5	33.875	8.31	4.58	0.11	0	0.00	0.0	0.1
25	0200	0800	8-33	77-05	27.5	29.2	34.073	8.27	4.57	0.11	0	0.00	0.0	0.0
	1200	1800	7-42	78-27	29.4	29.5	34.103	8.28	4.61	0.11	0	0.00	0.0	0.0
26	0200	0800	5-36	81-16	----	29.2	34.027	8.28	4.77	0.13	0	0.00	0.0	0.0
	1200	1800	4-08	83-00	----	29.7	34.412	8.28	4.59	0.18	0	0.00	0.0	0.0
27	0600	0800	2-17	85-11	29.1	29.8	34.598	8.28	4.66	0.15	0	0.00	0.0	0.1
	1200	1800	0-58	86-40	29.2	30.4	34.309	8.29	4.56	0.16	0	0.00	0.0	0.0
28	0200	0800	1-16 N	89-17	28.4	29.6	34.094	8.26	4.78	0.15	0	0.00	0.0	0.0
	1100	1800	2-57	91-10	27.7	29.3	33.866	8.28	4.57	0.13	0	0.00	0.0	0.0

Date	Time		Position		Air temp.	Water temp.	S	pH	O ₂	PO ₄ -P	SiO ₃ -Si	NO ₂ -N	NO ₃ -N	NH ₄ -N
	GMT	LMT	Lat.	Long.	°C				ml/l	μg-atoms/l				
Mar. 29	0100	0800	5-06 N	93-39 E	28.6	28.3	33.996	8.24	4.72	0.19	0	0.02	0.0	0.1
	1100	1800	6-11	95-39	29.2	29.3	33.130	8.26	4.55	0.11	0	0.00	0.0	0.1
30	0100	0800	5-05	98-43	28.5	29.3	31.906	8.22	4.83	0.11	1	0.00	0.0	0.1
	1100	1800	4-09	99-47	29.8	29.4	31.751	8.22	4.66	0.13	1	0.00	0.0	0.1
31	0100	0800	4-07	99-51	28.0	29.4	31.683	8.24	4.80	0.10	0	0.00	0.0	0.3
Apr. 3			Arrive in Singapore											

28020	86	12	09	10.8	55-42S	94-39E	1.4	1.3	1.3	1.3	1.3	1.3	1.1	0.5	0.6	1.2	2.1	2.1	2.2	2.1	2.2	2.2	80
28021	86	12	10	01.8	55-55S	91-22E	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.3	0.1	1.2	1.9	2.1	2.1	2.1	2.1	2.0	96
28022	86	12	10	06.8	56-23S	89-59E	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.0	-0.3	0.5	1.7	1.8	-	-	-	-	
28023	86	12	10	06.9	56-23S	89-56E	0.6 2.0	0.6 1.9	0.6 1.8	0.6 1.7	0.6 1.6	0.5	0.5	0.1	-0.2	0.8	1.7	1.8	1.9	1.9	1.9	1.9	110
28024	86	12	10	11.8	56-50S	88-34E	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.8	1.2	1.7	1.8	2.1	2.1	2.1	2.2	2.2	114
28025	86	12	11	01.8	58-26S	83-43E	-0.2	-0.2	-0.2	-0.2	-0.3	-1.4	-1.0	-0.7	0.2	1.1	1.5	1.3	1.6	1.5	1.4	1.4	

STATION	DATE	TIME	POSITION		TEMPERATURE (°C)																S.L. (M)
					DEPTH (M)																
					0	10	20	30	50	75	100	125	150	200	250	300	350	400	450	500	
	(U T)	LAT.	LONG.	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000			
28026	86 12 11	06.8	58-56S	81-12E	-0.4 1.7	-0.5 1.6	-0.5 1.5	-0.5	-0.7	-1.4	-1.0	0.7	1.4	1.7	1.8	1.8	1.8	1.8	1.8	1.7	40
28027	86 12 11	11.9	59-27S	78-50E	-0.4	-0.5	-0.5	-0.5	-0.6	-0.8	-0.3	1.0	1.5	1.8	2.0	2.0	2.0	2.0	2.0	2.0	60
28028	86 12 12	02.8	60-00S	71-30E	-0.5	-0.5	-0.5	-0.6	-0.6	-1.7	-1.8	-1.8	-1.5	1.0	1.8	1.9	1.9	1.9	1.9	2.0	64
28029	86 12 12	07.8	60-01S	68-57E	-1.4 2.0	-0.5 2.0	-0.5 2.0	-0.6 2.0	-0.6	-1.0	-1.8	-1.6	-1.0	1.1	1.7	1.8	1.8	1.8	1.9	2.0	
28030	86 12 12	12.8	60-02S	66-30E	-0.2	-0.3	-0.3	-0.4	-0.5	-1.4	-1.3	-1.0	-0.1	1.4	1.8	2.0	2.0	2.1	2.1	2.1	53
28031	86 12 13	02.8	61-01S	59-42E	-0.2	-0.3	-0.5	-0.5	-0.9	-1.6	-1.5	-1.5	-0.4	1.7	1.9	2.0	2.0	2.0	2.1	2.1	46
28032	86 12 13	07.8	61-02S	57-07E	0.1 2.0	-0.3 1.9	-0.4 1.7	-0.5 1.7	-0.5	-1.2	-1.7	-1.7	-0.9	1.5	1.8	1.8	1.9	1.9	1.9	1.9	
28033	86 12 13	12.8	61-06S	54-37E	-0.6	-0.6	-0.7	-0.7	-0.8	-1.7	-1.6	0.5	1.4	1.7	1.9	1.9	1.9	1.9	1.9	1.9	
28034	86 12 13	12.9	61-06S	54-37E	0.3	-0.6	-0.7	-0.7	-0.7	-1.7	-1.7	0.5	1.3	1.8	1.8	1.9	1.9	1.9	1.9	1.9	
28035	86 12 14	03.8	61-10S	46-37E	-0.5	-0.5	-0.6	-1.0	-1.3	-1.7	-1.7	-1.1	0.1	1.4	1.6	1.5	1.5	1.3	1.2	1.2	18
28036	86 12 14	08.8	61-10S	43-56E	-0.4 1.7	-0.6 1.6	-0.7 1.5	-1.0	-1.4	-1.5	-1.8	-1.5	0.3	1.3	1.5	1.6	1.6	1.6	1.6	1.7	
28037	86 12 14	13.8	61-11S	41-16E	-0.2	-0.5	-0.6	-0.6	-1.0	-1.4	-1.6	-1.5	-0.6	1.4	1.7	1.8	1.8	1.8	1.8	1.7	
28038	86 12 15	03.8	62-48S	33-51E	-1.1	-1.1	-1.1	-1.1	-1.2	-1.7	-1.7	-1.8	-0.4	1.4	1.5	1.5	1.5	1.5	1.4	1.4	41
28039	86 12 15	09.8	63-22S	31-21E	-1.1 1.4	-1.3 1.3	-1.3 1.2	-1.3	-1.5	-1.8	-1.9	-0.3	0.8	1.2	1.3	1.4	1.5	1.8	1.6	1.5	42
28040	86 12 15	14.8	63-58S	28-46E	-1.1	-1.2	-1.2	-1.3	-1.7	-1.7	-1.6	-1.5	-1.2	1.0	1.3	1.3	1.3	1.3	1.2	1.2	36
28041	86 12 16	04.8	66-46S	24-07E	-	-	-	-	-1.7	-1.2	0.8	1.1	1.2	1.4	1.4	1.3	1.3	1.2	1.2	1.1	
28042	86 12 16	09.8	67-56S	24-00E	-1.6	-1.7	-1.8	-1.8	-1.8	-	-	-	-	-	-	-	-	-	-	-	
28043	86 12 16	21.1	70-00S	23-50E	-1.6	-1.7	-1.7	-1.7	-1.7	-1.7	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.7	-1.2	-0.1	0.6	145
28044	86 12 16	22.5	70-11S	23-46E	-1.7	-1.8	-1.8	-1.8	-1.7	-1.7	-1.8	-1.8	-1.9	-1.8	-	-	-	-	-	-	

28045	86	12	17	10.5	70-12S	23-46E	-1.6	-1.5	-1.6	-1.6	-1.5	-1.5	-1.7	-1.5	-1.3	-	-	-	-	-	-	50	
28046	87	01	04	15.1	70-12S	23-46E	-1.7	-1.7	-1.7	-1.6	-1.7	-1.8	-1.8	-1.8	-1.9	-1.9	-	-	-	-	-	-	
28047	87	01	06	17.2	67-58S	28-14E	-1.7	-1.8	-1.8	-1.8	-1.8	-	-	-1.8	-1.7	-	-	1.0	1.1	1.1	-	-	
28048	87	01	06	22.0	67-58S	31-27E	-1.5	-1.5	-1.5	-1.5	-1.5	-1.8	-1.8	-1.8	-1.8	-1.8	-1.7	-1.5	-0.8	-0.0	0.3	0.5	54
28049	87	01	07	05.0	68-04S	33-56E	-0.9	-0.9	-0.9	-0.9	-1.3	-1.6	-1.8	-1.8	-1.8	-1.8	-1.7	-1.6	-1.1	-0.1	-0.6	0.6	42
28050	87	01	09	17.7	69-00S	39-37E	-1.6	-1.6	-1.7	-1.7	-1.6	-1.5	-1.5	-1.5	-1.4	-1.4	-	-	-	-	-	-	-

STATION	DATE (U T)	TIME	POSITION LAT. LONG.		TEMPERATURE (°C) DEPTH (M)																S.L. (M)	
					0	10	20	30	50	75	100	125	150	200	250	300	350	400	450	500		
					600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000			
28051	87 02 01	14.0	69-03S	39-07E	-1.2	-1.7	-1.7	-1.8	-1.7	-1.7	-1.6	-1.6	-1.5	-1.4	-	-	-	-	-	-	-	-
28052	87 02 04	08.4	68-30S	38-29E	0.3	0.1	-0.3	-0.8	-1.3	-1.4	-1.6	-1.7	-1.8	-1.8	-1.7	-1.6	-1.6	-	-	-	-	-
28053	87 02 04	15.0	68-12S	38-26E	1.8	1.8	1.9	0.5	-0.3	-0.7	-1.0	-1.4	-1.7	-1.6	-0.9	-0.0	0.3	0.3	0.3	0.3	0.4	13
28054	87 02 05	04.9	68-21S	31-15E	0.7	0.7	0.7	0.7	-1.0	-1.7	-1.8	-1.8	-1.8	-1.8	-1.6	-1.0	-0.6	-0.2	0.1	0.4	43	
28055	87 02 05	09.0	68-23S	30-46E	0.4	0.3	0.3	-1.2	-1.6	-1.8	-1.9	-1.9	-2.0	-1.8	-1.6	-1.2	-0.5	0.0	0.2	0.3	23	
28056	87 02 05	14.9	69-01S	28-56E	-0.2	-0.2	-0.1	-0.8	-1.3	-1.5	-1.8	-1.8	-1.8	-1.7	-1.6	-1.3	-0.6	-0.1	0.2	0.3	13	
28057	87 02 12	04.6	70-16S	24-10E	-1.5	-1.4	-1.4	-1.4	-1.3	-1.6	-1.8	-1.8	-1.8	-1.8	-1.8	-	-	-	-	-	-	61
28058	87 02 12	05.1	70-15S	24-27E	-1.5	-1.5	-1.5	-1.4	-1.4	-1.8	-1.9	-1.9	-1.9	-1.9	-	-	-	-	-	-	-	55
28059	87 02 12	05.4	70-15S	24-20E	-1.4	-1.4	-1.4	-1.4	-1.3	-1.4	-1.7	-1.8	-1.8	-1.8	-1.8	-	-	-	-	-	-	66
28060	87 02 12	06.1	70-14S	24-00E	-1.5	-1.5	-1.5	-1.5	-1.3	-1.5	-1.8	-1.9	-1.9	-1.8	-	-	-	-	-	-	-	30
28061	87 02 12	06.4	70-15S	23-50E	-1.4	-1.5	-1.5	-1.5	-1.4	-1.2	-1.7	-1.7	-1.8	-1.8	-1.8	-	-	-	-	-	-	61
28062	87 02 12	12.1	70-11S	24-28E	-1.5	-1.6	-1.7	-1.6	-1.5	-1.8	-1.8	-1.8	-1.8	-	-	-	-	-	-	-	-	
28063	87 02 12	12.8	70-11S	24-14E	-1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28064	87 02 12	13.4	70-12S	23-46E	-1.3	-1.3	-1.4	-1.4	-1.7	-1.6	-1.7	-1.8	-1.8	-1.8	-	-	-	-	-	-	-	40
28065	87 02 13	10.2	70-11S	23-59E	-1.8	-1.8	-1.8	-1.7	-1.7	-1.7	-1.9	-1.9	-1.9	-1.9	-	-	-	-	-	-	-	
28066	87 02 15	15.7	68-40S	27-27E	-0.3	-0.2	-0.3	-0.3	-0.6	-1.6	-1.9	-1.9	-1.9	-1.7	-1.0	-0.1	0.5	0.7	0.8	0.9	33	
28067	87 02 23	00.1	68-02S	35-40E	0.2	0.2	0.2	0.2	0.2	-0.5	-1.4	-1.9	-1.9	-1.8	-1.6	-0.9	-0.4	0.4	0.3	0.3	0.5	
28068	87 02 23	09.9	67-30S	32-51E	0.3	0.3	0.4	0.3	0.3	-1.0	-1.5	-1.6	-1.6	-1.5	-1.0	-0.3	0.1	0.5	0.6	0.6	56	
28069	87 02 23	14.8	67-00S	31-01E	0.8	0.7	0.7	0.6	0.3	-1.7	-1.8	-1.7	-1.4	-0.7	-0.0	0.4	0.6	0.7	0.8	0.7	29	

28070	87	02	23	21.0	66-10S	32-03E	0.9	0.9	0.9	1.0	-1.1	-1.7	-1.2	-0.3	0.4	0.8	0.9	1.0	1.0	1.0	0.9	0.9	
28071	87	02	24	04.8	65-08S	34-34E	0.8	0.8	0.8	0.7	-1.0	-1.8	-1.8	-1.3	-0.6	0.3	0.7	0.8	0.8	0.8	0.9	0.9	36
28072	87	02	24	10.0	65-07S	34-54E	0.8	0.9	0.8	0.8	0.4	-1.6	-1.9	-1.8	-1.3	-0.4	0.1	0.4	-	-	-	-	45
28073	87	02	24	14.9	65-09S	35-52E	1.3	1.3	1.3	1.3	0.8	-1.4	-0.5	0.9	1.3	1.4	1.5	1.5	1.4	1.4	1.3	1.3	39
28074	87	02	24	20.0	65-05S	37-25E	1.4	1.3	1.3	1.4	1.3	-1.4	0.2	0.9	1.2	1.4	1.4	1.4	1.4	1.4	1.4	1.4	50
28075	87	02	25	04.9	64-59S	40-02E	1.3	1.3	1.3	1.3	1.3	-1.4	-0.4	0.8	1.2	1.4	1.5	1.4	1.4	1.4	1.4	1.3	50
							1.2	1.1	1.0	0.9	0.9	0.8	0.7	0.6	0.6	0.5	-	-	-	-	-		

STATION	DATE (U T)	TIME	POSITION		TEMPERATURE (°C)																	S.L. (M)
			LAT.	LONG.	0 600	10 700	20 800	30 900	50 1000	75 1100	100 1200	125 1300	150 1400	200 1500	250 1600	300 1700	350 1800	400 1900	450 2000	500		
RE076	87 02 25	09.8	65-00S	41-31E	1.3 1.2	1.2 1.1	1.2 1.0	1.2 0.9	1.2 0.8	-0.9 0.7	0.7 0.7	1.3 0.6	1.4 0.5	1.5 0.5	1.5 0.5	1.5 0.4	1.5 0.4	1.4 0.3	1.4 0.3	1.3	62	
28077	87 02 25	14.8	64-58S	42-14E	1.3	1.3	1.3	1.3	1.3	1.0	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.3	50	
28078	87 02 26	11.5	64-55S	44-50E	1.2 1.0	1.1 0.9	1.1 0.7	1.0 0.7	1.0 0.5	0.7 0.4	0.1 0.4	0.7	0.9	1.2	1.3	1.3	1.2	1.2	1.1	1.1	72	
28079	87 02 26	14.8	64-15S	44-50E	1.7	1.3	1.3	1.3	1.2	-0.5	1.2	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.3	7	
28080	87 02 26	20.9	63-06S	44-51E	1.7	1.5	1.5	1.5	1.3	-1.3	0.9	1.4	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.5	5	
28081	87 02 27	04.8	61-34S	44-53E	1.7	1.7	1.7	1.7	1.6	-1.1	-1.4	-0.3	1.1	1.6	1.8	1.8	1.9	1.8	1.8	1.8	49	
28082	87 02 27	09.9	61-05S	44-42E	1.6 1.7	1.7 1.7	1.7 1.5	1.7 1.4	1.7 1.4	-1.1 1.3	-1.5 1.2	-1.3 1.1	0.2 1.0	1.4 0.9	1.6 0.8	1.7 0.7	1.7 0.7	1.8 0.6	1.8	1.8	65	
28083	87 02 27	14.8	60-41S	44-00E	2.1	2.1	2.1	2.1	2.1	-0.2	-0.5	-0.6	-0.4	1.7	1.8	1.9	1.9	1.9	1.9	1.9	64	
28084	87 02 27	20.8	60-15S	43-03E	2.2	2.0	2.0	2.0	2.0	-0.2	-1.3	-1.0	0.0	1.4	1.6	1.7	1.8	1.7	1.8	1.8	63	
28085	87 02 28	04.8	59-46S	41-54E	2.1	2.1	2.1	2.1	2.0	-0.7	-1.1	-0.5	0.6	1.6	1.9	1.9	1.9	1.9	1.7	1.7	57	
28086	87 02 28	09.8	59-30S	41-18E	2.2 1.6	2.2 1.5	2.2 1.4	2.2 1.4	2.1 1.3	1.3 1.2	-1.1 1.1	-1.3	-0.9	1.2	1.6	1.7	1.6	1.7	1.7	1.6	68	
28087	87 02 28	14.8	59-12S	41-03E	2.1	2.1	2.1	2.1	2.1	-0.4	-0.8	-0.9	-0.7	1.1	1.6	1.8	1.8	1.9	1.9	1.9	66	
28088	87 02 28	21.0	58-46S	40-31E	2.0	2.0	2.0	2.0	2.0	1.5	-1.0	-1.1	-0.7	1.1	1.5	1.6	1.7	1.8	1.8	1.8	71	
28089	87 03 01	04.8	58-11S	39-37E	2.3	2.3	2.3	2.3	2.3	1.6	-0.7	-0.7	-0.5	0.7	1.5	1.7	1.8	1.8	1.8	1.9	70	
28090	87 03 01	14.9	57-56S	39-08E	2.3	2.3	2.3	2.3	2.3	2.0	-0.7	-0.7	-0.5	0.5	1.3	1.5	1.6	1.7	1.7	1.7	65	
28091	87 03 01	20.8	57-44S	38-18E	2.6	2.6	2.6	2.6	2.6	1.5	0.8	0.6	1.1	1.6	1.7	1.9	1.9	1.9	1.9	2.0	63	
28092	87 03 02	04.8	57-24S	37-03E	2.4	2.4	2.4	2.3	2.4	2.3	0.0	-0.5	-0.1	0.7	1.3	1.7	1.8	1.9	1.9	1.9	77	
28093	87 03 02	09.8	57-15S	37-19E	2.6 1.7	2.5 1.6	2.5 1.6	2.4 1.6	2.5 1.5	2.4 1.4	1.6 1.3	-0.7 1.2	-0.8 1.1	-0.1 1.0	0.7 0.9	1.4	1.6	1.7	1.7	1.7	93	
28094	87 03 02	14.8	57-11S	38-26E	2.9	2.9	2.8	2.9	2.8	2.8	1.5	0.7	0.4	1.0	1.5	1.9	2.0	2.0	2.1	2.0	83	

28095	87	03	02	20.8	57-05S	39-49E	2.7	2.4	2.4	2.4	2.4	2.4	2.2	-0.5	-0.6	0.0	0.9	1.5	1.7	1.8	1.8	-	94
28096	87	03	03	09.8	56-56S	41-54E	2.5	2.6	2.6	2.5	2.5	2.5	-0.6	-0.9	-0.8	1.2	1.6	1.7	1.8	1.8	1.8	1.8	81
28097	87	03	03	14.8	56-46S	42-42E	2.6	2.6	2.6	2.6	2.5	2.4	-0.5	-0.8	-0.2	1.5	1.7	1.8	1.8	1.8	1.8	1.8	73
28098	87	03	03	20.9	56-35S	43-45E	2.7	2.7	2.7	2.7	2.6	2.6	-0.1	-0.5	-0.7	1.3	-	-	-	-	-	-	83
28099	87	03	04	14.8	56-07S	44-39E	3.2	3.3	3.1	3.1	3.1	3.1	1.3	0.1	0.3	1.7	1.9	2.0	2.1	2.1	2.1	2.1	82
28100	87	03	05	04.8	55-37S	41-59E	3.0	3.0	3.0	3.0	3.0	2.4	0.4	2.3	0.9	1.6	1.9	1.9	2.0	2.0	2.1	2.0	68

STATION	DATE	TIME	POSITION		TEMPERATURE (°C)																S.L. (M)
					DEPTH (M)																
					0	10	20	30	50	75	100	125	150	200	250	300	350	400	450	500	
600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000							
28101	87 03 05	09.9	55-25S	42-46E	2.9	2.9	2.9	2.9	2.9	2.9	2.0	0.5	0.1	0.9	1.8	1.9	1.9	1.9	2.1	1.9	79
					1.8	2.0	1.9	2.0	1.8	1.8	1.7	1.5	1.5	1.4	1.3	-	-	-	-	-	
28102	87 03 05	14.8	55-14S	43-47E	3.4	3.3	3.2	3.0	2.7	2.6	0.1	-0.6	-0.4	0.8	2.0	1.9	1.8	1.8	1.9	1.9	
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28103	87 03 05	20.0	55-00S	44-46E	3.3	3.3	3.3	3.2	3.2	3.1	0.1	-0.5	-0.2	1.2	1.7	1.8	1.9	2.0	2.0	2.0	74
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28104	87 03 05	23.9	54-02S	44-48E	3.2	3.3	3.3	3.3	3.2	3.1	2.1	-0.3	-0.4	-0.1	0.9	1.5	1.7	1.8	1.9	1.9	71
					1.8	1.8	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	
28105	87 03 06	03.8	53-02S	44-48E	3.6	3.6	3.6	3.6	3.6	3.6	3.3	1.8	0.9	0.5	1.3	1.8	2.0	2.1	2.1	-	86
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28106	87 03 06	08.8	51-47S	44-48E	4.3	4.4	4.3	4.2	4.0	3.9	2.3	1.3	1.1	1.3	1.8	2.0	2.1	2.1	2.2	2.2	24
					2.3	2.2	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	
28107	87 03 06	11.4	51-08S	44-50E	4.6	4.6	4.7	4.6	4.5	4.4	4.0	2.5	1.5	1.1	1.5	1.8	2.0	2.1	2.3	2.3	66
					2.3	2.3	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	
28108	87 03 06	13.8	50-32S	44-52E	4.6	4.7	4.7	4.6	4.6	4.6	4.1	2.8	1.9	1.8	1.7	2.3	2.3	2.4	2.4	2.5	88
					2.6	2.4	2.5	2.4	2.5	-	-	-	-	-	-	-	-	-	-	-	
28109	87 03 06	16.4	49-56S	45-04E	5.8	5.9	5.9	5.9	5.9	5.7	4.3	3.3	3.0	2.9	3.1	3.0	2.9	2.8	2.7	2.6	83
					2.6	2.7	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	
28110	87 03 06	18.8	49-23S	45-34E	5.7	5.8	5.8	5.8	5.8	5.5	3.9	3.3	3.8	3.5	3.5	3.4	3.3	3.2	3.0	2.8	74
					2.8	2.7	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	
28111	87 03 06	19.8	49-10S	45-46E	5.5	5.6	5.6	5.6	5.5	5.5	5.1	3.6	3.0	2.6	2.8	3.0	2.8	2.6	2.4	2.6	79
					2.5	2.4	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	
28112	87 03 07	01.3	47-55S	46-49E	5.9	6.0	6.0	6.0	6.0	6.0	5.6	4.8	4.2	4.5	4.3	4.1	3.8	3.6	3.3	3.0	93
					2.8	2.8	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	
28113	87 03 07	08.8	47-21S	47-19E	6.3	6.4	6.3	6.3	6.3	6.0	4.8	4.3	4.0	3.8	3.9	3.7	3.5	3.3	3.0	2.9	58
					2.7	2.6	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	
28114	87 03 07	11.4	46-47S	47-42E	6.7	6.8	6.7	6.7	6.7	6.7	6.5	5.8	4.5	4.0	4.1	3.8	3.6	3.4	3.2	2.9	98
					2.8	2.7	2.6	2.6	-	-	-	-	-	-	-	-	-	-	-	-	
28115	87 03 07	13.8	46-15S	48-04E	6.4	6.3	6.2	6.1	6.0	6.0	6.0	5.4	3.5	3.1	3.4	3.2	3.2	2.9	2.7	2.6	
					2.6	2.7	2.7	2.6	-	-	-	-	-	-	-	-	-	-	-	-	
28116	87 03 07	16.5	45-39S	48-29E	7.1	7.0	6.8	6.7	6.7	6.6	5.0	3.6	3.3	3.4	3.4	3.4	2.9	2.7	2.6	2.6	25
					2.7	2.5	2.5	2.4	-	-	-	-	-	-	-	-	-	-	-	-	
28117	87 03 07	19.0	45-07S	48-53E	8.1	8.1	8.1	8.1	8.1	8.1	5.2	4.4	3.7	3.6	3.4	3.5	3.3	2.9	2.7	2.6	
					2.6	2.4	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	
28118	87 03 07	21.0	44-41S	49-14E	8.4	8.4	8.2	8.1	7.6	6.9	4.9	4.2	3.6	3.2	3.1	3.1	2.9	2.8	2.6	2.6	
					2.5	2.4	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	
28119	87 03 07	23.8	44-03S	49-40E	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

28120	87	03	08	02.6	43-26S	50-07E	8.9 2.4	9.0 2.5	8.9 2.4	8.8 -	8.8 -	8.3 -	4.5 -	3.8 -	3.5 -	3.2 -	3.1 -	3.3 -	2.9 -	2.7 -	2.5 -	2.5	
28121	87	03	08	06.8	43-12S	50-14E	9.8 -	9.7 -	9.3 -	9.3 -	9.0 -	6.7 -	5.1 -	4.0 -	3.7 -	-	-	-	-	-	-	-	
28122	87	03	08	07.0	43-12S	50-13E	10.0 -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28123	87	03	08	09.0	42-51S	50-28E	10.5 3.0	10.6 2.9	10.4 2.8	10.2 2.7	9.2 2.7	7.0 -	5.5 -	4.9 -	4.1 -	3.5 -	3.7 -	3.7 -	3.6 -	3.5 -	3.3 -	3.3	
28124	87	03	08	10.3	42-38S	50-38E	12.2 4.1	12.2 3.5	12.3 3.3	12.2 3.0	11.4 2.6	9.8 -	7.5 -	7.1 -	6.8 -	7.8 -	7.2 -	6.3 -	6.2 -	5.8 -	5.3 -	4.7	41
28125	87	03	08	11.8	42-24S	50-50E	14.9 4.9	14.9 4.1	14.9 4.0	14.9 3.4	11.2 -	12.7 -	11.8 -	11.1 -	10.7 -	9.9 -	8.9 -	8.3 -	8.0 -	6.9 -	6.6 -	5.8	32

STATION	DATE	TIME	POSITION		TEMPERATURE (°C)															S.L. (M)	
					DEPTH (M)																
					0	10	20	30	50	75	100	125	150	200	250	300	350	400	450		500
600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000							
28126	87 03 08	13.8	42-04S	51-04E	16.2	16.3	16.3	16.3	16.3	15.1	14.1	13.4	13.1	12.1	11.1	13.9	9.7	8.9	8.3	7.7	65
					7.2	4.9	4.1	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-
28127	87 03 08	16.0	41-43S	51-23E	17.9	18.0	18.0	17.8	16.9	16.0	15.2	13.7	12.9	12.3	11.6	11.1	10.3	9.6	8.8	8.1	29
					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28128	87 03 08	19.0	41-29S	51-33E	16.3	16.4	16.4	16.4	16.2	15.0	13.7	13.3	12.7	12.0	11.1	10.7	10.2	9.9	9.2	8.6	35
					7.1	5.8	5.0	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-
28129	87 03 08	19.8	41-05S	51-48E	16.5	16.5	16.6	16.6	16.6	16.5	15.5	14.0	12.6	11.8	10.0	10.5	9.8	9.3	8.9	8.7	75
					7.3	6.0	5.1	4.7	4.2	-	-	-	-	-	-	-	-	-	-	-	-
28130	87 03 08	22.0	40-44S	52-03E	17.5	17.6	17.6	17.7	17.7	17.1	16.0	15.4	15.0	14.4	13.6	12.9	12.0	11.5	11.0	10.5	60
					9.4	7.8	6.3	5.6	4.8	-	-	-	-	-	-	-	-	-	-	-	-
28131	87 03 09	01.5	40-11S	52-22E	18.6	18.6	18.6	18.6	18.0	17.5	16.8	16.5	15.9	15.3	14.0	13.5	13.1	12.5	11.8	11.1	37
					10.1	8.5	7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28132	87 03 09	03.8	39-47S	52-28E	18.3	18.3	18.4	18.4	18.5	17.8	15.1	14.8	14.3	13.7	12.9	12.2	11.7	11.3	10.6	10.3	57
					9.3	7.7	6.9	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-
28133	87 03 09	08.8	38-42S	52-42E	18.2	18.2	18.1	18.1	18.1	16.0	15.4	14.8	14.2	13.5	13.2	12.3	11.7	11.1	10.9	10.3	54
					9.5	8.1	6.9	5.7	4.8	4.0	-	-	-	-	-	-	-	-	-	-	-
28134	87 03 09	11.6	38-09S	52-48E	19.3	19.4	19.3	19.3	19.3	18.1	16.7	15.8	15.3	14.5	13.9	13.3	12.7	11.6	10.8	10.6	57
					9.5	8.3	7.0	5.6	-	-	-	-	-	-	-	-	-	-	-	-	-
28135	87 03 09	13.8	37-44S	52-53E	19.5	19.4	19.4	19.4	18.7	17.6	17.1	16.8	16.4	15.7	14.7	14.3	13.8	13.0	12.4	12.0	39
					10.6	9.7	8.1	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-
28136	87 03 09	18.9	36-46S	53-07E	20.3	20.4	20.3	20.3	20.1	18.0	17.2	16.7	16.2	15.6	15.1	14.7	14.2	13.5	13.2	12.8	49
					11.6	10.5	9.2	8.1	7.0	-	-	-	-	-	-	-	-	-	-	-	-
28137	87 03 09	23.6	35-48S	53-16E	21.4	21.5	21.0	20.8	19.4	18.1	17.4	17.0	16.5	16.0	15.5	14.8	14.4	14.1	13.7	13.2	9
					12.0	10.7	9.7	8.4	6.9	-	-	-	-	-	-	-	-	-	-	-	-
28138	87 03 10	08.8	34-45S	53-29E	21.3	21.4	21.3	21.3	21.2	19.2	17.8	16.7	16.4	15.9	15.3	14.8	14.3	13.8	13.1	12.5	55
					11.6	10.7	9.6	8.6	7.1	-	-	-	-	-	-	-	-	-	-	-	-
28139	87 03 10	13.8	33-46S	53-40E	21.3	21.2	21.1	21.0	19.0	16.7	15.5	15.0	15.0	14.8	14.6	14.4	14.1	13.6	13.4	13.1	32
					12.2	11.2	10.0	8.6	7.1	5.7	-	-	-	-	-	-	-	-	-	-	-
28140	87 03 10	18.8	39-45S	53-50E	22.6	22.7	22.6	22.6	20.3	17.6	15.9	15.5	15.0	14.2	13.8	13.6	13.3	12.9	12.5	12.1	40
					11.0	9.9	8.7	7.6	5.7	4.6	-	-	-	-	-	-	-	-	-	-	-
28141	87 03 11	00.0	31-43S	53-59E	23.5	23.6	23.6	22.7	21.0	17.2	16.2	15.7	15.3	14.8	14.5	14.1	13.6	13.3	12.9	12.4	25
					11.3	10.1	8.6	7.0	5.8	-	-	-	-	-	-	-	-	-	-	-	-
28142	87 03 11	08.8	30-45S	54-14E	24.7	24.5	24.4	24.2	22.4	18.3	16.9	16.1	25.7	15.2	14.5	14.0	13.6	13.4	10.3	12.6	27
					11.2	10.2	9.0	7.4	6.0	-	-	-	-	-	-	-	-	-	-	-	-
28143	87 03 11	13.8	29-46S	54-23E	24.9	24.8	24.6	24.4	23.7	18.5	17.1	16.1	15.6	15.0	14.6	14.0	13.6	13.1	12.7	12.1	42
					11.0	10.0	8.3	7.1	5.6	4.7	-	-	-	-	-	-	-	-	-	-	-
28144	87 03 11	18.9	28-44S	54-33E	24.7	24.2	23.9	23.4	20.5	17.3	16.2	15.5	15.2	14.6	14.2	13.8	13.4	13.0	12.6	12.1	14
					10.9	9.6	8.5	7.2	5.6	4.4	-	-	-	-	-	-	-	-	-	-	-

28145	87	03	12	00.3	27-38S	54-44E	25.8	25.8	24.9	24.5	23.3	19.8	18.2	17.3	16.8	15.6	14.8	14.3	13.7	13.2	12.8	12.3	12
							11.3	10.0	8.7	7.3	-	-	-	-	-	-	-	-	-	-	-	-	
28146	87	03	12	03.8	26-00S	54-51E	16.4	16.1	25.5	25.3	24.4	19.4	17.9	17.3	16.6	15.4	14.9	14.3	13.8	13.2	12.9	12.2	
							11.2	10.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28147	87	03	12	13.8	25-16S	55-07E	27.1	27.1	26.5	26.3	24.5	21.8	20.7	19.7	18.6	16.8	15.4	14.4	13.7	13.1	12.6	12.0	14
							10.9	9.8	8.6	7.2	5.8	-	-	-	-	-	-	-	-	-	-	-	
28148	87	03	12	19.0	24-10S	55-22E	27.0	27.1	27.0	26.4	25.8	24.2	22.2	21.2	20.4	18.1	16.1	15.1	14.4	13.4	12.7	12.0	20
							11.0	9.6	8.5	6.9	5.5	4.6	-	-	-	-	-	-	-	-	-	-	
28149	87	03	13	08.8	22-11S	55-42E	27.9	27.7	27.3	26.8	25.5	22.4	21.3	20.9	20.2	18.4	16.6	15.4	14.2	13.4	12.6	12.0	
							10.5	9.5	7.9	6.6	5.6	4.8	4.0	3.6	3.3	3.0	2.8	2.6	2.5	-	-	-	
28150	87	03	13	13.8	21-38S	55-51E	28.8	28.9	28.7	28.6	26.7	24.2	23.1	22.0	21.5	19.3	17.5	15.8	14.3	12.7	12.4	11.5	
							10.2	9.4	7.8	6.2	5.3	4.6	4.0	3.7	-	-	-	-	-	-	-	-	

STATION	DATE (U T)	TIME	POSITION		TEMPERATURE (°C)																	S.L. (M)	
			LAT.	LONG.	0	10	20	30	50	75	100	125	150	200	250	300	350	400	450	500			
					600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000				
28151	87	03	13	13.8	21-38S	55-51E	28.8	28.9	28.7	28.6	26.7	24.2	23.1	22.0	21.5	19.3	17.5	15.8	14.3	12.7	12.4	11.5	32
							10.2	9.4	7.8	6.2	5.3	4.6	4.0	3.7	-	-	-	-	-	-	-	-	

Table 3. CTD data.

<p>Stn. 1 1987/02/13 15:15 (UT) 70-15 S 24-10 E PRESS TEMP. SAL. (dB) (°C)</p> <p>10.0 -1.327 32.143 20.1 -1.389 32.593 30.0 -1.420 32.813 39.6 -1.432 32.989 49.9 -1.361 33.199 75.2 -1.676 33.867 100.1 -1.680 33.987 124.5 -1.855 34.042 150.0 -1.859 34.067 174.1 -1.793 34.089 199.8 -1.783 34.114</p>	<p>Stn. 2 1987/02/14 11:50 (UT) 70-15 S 24-16 E PRESS TEMP. SAL. (dB) (°C)</p> <p>10.2 -1.256 33.119 20.2 -1.285 33.154 29.9 -1.354 33.178 39.9 -1.532 33.259 49.7 -1.591 33.367 75.3 -1.619 33.903 99.8 -1.613 34.015 125.1 -1.736 34.068 150.0 -1.782 34.085 174.0 -1.796 34.094 200.0 -1.804 34.103 224.4 -1.800 34.118</p>	<p>Stn. 4 1987/02/26 05:00 (UT) 64-57 S 45-05 E PRESS TEMP. SAL. (dB) (°C)</p> <p>10.1 0.882 33.953 19.9 0.879 33.967 30.7 0.875 33.970 40.7 0.877 33.970 49.7 0.859 33.989 75.4 -1.083 34.167 100.0 -0.608 34.323 124.8 -0.184 34.426 149.9 0.288 34.490 199.7 0.584 34.564 224.8 0.853 34.604 300.1 1.043 34.632 325.0 1.026 34.635 499.7 0.855 34.666 600.4 0.873 34.597 700.1 0.647 34.675 800.2 0.592 34.656</p>	<p>Stn. 5 1987/02/27 07:30 (UT) 61-10 S 44-46 E PRESS TEMP. SAL. (dB) (°C)</p> <p>10.1 1.689 33.724 19.6 1.683 33.734 30.4 1.676 33.730 39.2 1.672 33.724 50.0 1.593 33.724 75.1 -1.560 33.908 99.7 -1.350 33.966 124.9 -0.379 34.182 175.2 1.420 34.447 199.3 1.539 34.482 224.3 1.690 34.527 250.2 1.727 34.556 275.7 1.759 34.568 300.3 1.774 34.582 324.4 1.794 34.594 350.4 1.800 34.609 500.3 1.801 34.651 599.1 1.741 34.675 700.0 1.641 34.682 799.9 1.566 34.682</p>
<p>Stn. 6 1987/03/01 06:20 (UT) 58-09 S 39-35 E PRESS TEMP. SAL. (dB) (°C)</p> <p>10.4 2.297 33.761 20.3 2.305 33.783 29.9 2.322 33.793 39.8 2.343 33.823 49.7 2.375 33.838 100.4 -0.650 33.983 124.0 -0.449 34.041 150.6 0.324 34.244 174.3 0.893 34.277 200.0 1.339 34.374 224.3 1.553 34.441 250.0 1.714 34.493 274.3 1.782 34.511 349.8 1.839 34.580 400.2 1.833 34.607 499.3 1.842 34.643 599.5 1.833 34.665 699.9 1.771 34.677</p>	<p>Stn. 7 1987/03/03 05:30 (UT) 56-59 S 41-46 E PRESS TEMP. SAL. (dB) (°C)</p> <p>10.4 2.616 33.753 19.6 2.615 33.826 30.3 2.621 33.832 40.1 2.626 33.841 75.0 2.633 33.820 99.8 -0.455 33.915 125.7 -0.864 33.941 149.8 -0.412 34.072 174.2 0.902 34.340 250.4 1.668 34.517 275.3 1.764 34.505 300.3 1.771 34.565 324.6 1.799 34.578 350.7 1.800 34.599 400.5 1.821 34.611 499.9 1.737 34.640 599.8 1.748 34.661</p>	<p>Stn. 8 1987/03/04 08:00 (UT) 56-16 S 44-59 E PRESS TEMP. SAL. (dB) (°C)</p> <p>9.5 3.089 33.836 20.0 3.083 33.861 30.0 3.088 33.854 39.9 3.063 33.861 50.3 3.051 33.864 100.1 0.578 33.917 124.4 0.246 33.974 174.4 0.975 34.124 250.7 1.829 34.412 274.0 1.828 34.448 350.3 1.995 34.486 499.7 1.932 34.602 600.4 1.935 34.653 700.4 1.928 34.674 800.6 1.889 34.685 900.1 1.834 34.704 1000.0 1.705 34.702</p>	<p>Stn. 9 1987/03/07 03:30 (UT) 47-46 S 46-55 E PRESS TEMP. SAL. (dB) (°C)</p> <p>9.9 6.154 33.765 19.2 6.142 33.781 30.5 6.151 33.795 49.9 6.154 33.812 74.9 6.132 33.817 100.3 5.876 33.851 124.8 5.193 33.894 149.9 4.711 33.977 174.8 4.533 34.011 200.3 4.598 34.078 224.7 4.706 34.123 300.5 4.179 34.152 324.5 3.841 34.139 349.6 3.725 34.148 400.0 3.547 34.155 499.7 3.241 34.199 599.8 2.875 34.231</p>

Stn. 10 1987/03/08 05:10 (UT) 43-11 S 50-18 E	Stn. 11 1987/03/10 07:05 (UT) 34-55 S 53-27 E	Stn. 12 1987/03/11 07:00 (UT) 30-58 S 54-14 E	Stn. 13 1987/03/12 10:15 (UT) 25-56 S 55-03 E
PRESS TEMP. SAL. (dB) (°C)	PRESS TEMP. SAL. (dB) (°C)	PRESS TEMP. SAL. (dB) (°C)	PRESS TEMP. SAL. (dB) (°C)
10.2 9.976 33.631	9.8 21.762 35.592	9.6 24.841 35.555	9.7 26.897 35.188
19.8 9.977 33.674	20.0 21.749 35.603	19.6 24.779 35.569	19.2 26.434 35.240
30.2 9.980 33.693	29.6 21.680 35.608	29.3 24.501 35.573	30.8 25.963 35.269
39.7 9.962 33.700	49.7 21.191 35.623	40.4 23.886 35.571	39.8 24.517 35.409
49.8 9.731 33.700	100.0 18.100 35.574	49.0 22.952 35.597	100.2 20.135 35.598
75.8 7.854 33.738	124.2 17.022 35.560	100.1 17.493 35.582	124.4 19.232 35.606
100.4 5.464 33.813	149.6 16.512 35.517	125.7 16.169 35.523	175.4 17.623 35.552
125.2 4.518 33.870	174.6 15.813 35.504	150.5 15.652 35.498	200.4 16.485 35.523
149.9 3.907 33.930	200.6 15.615 35.493	174.2 15.368 35.461	225.1 15.974 35.481
174.0 3.989 34.007	225.0 15.233 35.466	200.1 15.005 35.436	399.2 13.264 35.182
249.8 3.417 34.028	250.8 15.004 35.425	224.8 14.710 35.399	500.5 12.167 35.051
274.5 3.335 34.054	274.0 14.834 35.376	249.9 14.436 35.370	699.7 10.019 34.809
300.3 3.269 34.081	299.7 14.455 35.343	300.0 13.944 35.308	800.1 8.813 34.638
324.3 3.504 34.148	324.4 14.306 35.309	324.5 13.788 35.288	
349.7 3.459 34.151	399.8 13.596 35.235	350.9 13.541 35.242	
400.1 3.181 34.173	499.9 12.642 35.095	500.2 12.202 35.072	
499.7 2.791 34.206	599.8 11.855 35.004	599.8 11.299 34.853	
700.0 2.602 34.341	699.9 10.747 34.844	699.7 10.091 34.813	
	800.7 9.577 34.724	800.9 8.722 34.641	
	899.8 8.417 34.606	900.3 7.288 34.514	

Table 4. Serial observation data.

STATION 2800001

METEOROLOGICAL OBSERVATION

DATE	: 2-13-1987	TIME (UT)	: 1500	WIND DIRECTION	: SE
TIME (UT)	: 15:42	WEATHER	: 02	VELOCITY	: 6 M/S
LATITUDE	: 70°14'S	AIR TEMPERATURE (DRY)	: -3.5 °C	HUMIDITY	: 77 %
LONGITUDE	: 24° 9'E	(WET)	: **** °C	SEA	: SE / 2
DEPTH	: 257 M	ATMOSPHERIC PRESSURE	: 984.8 MB	SWELL	: N / 0
				VISIBILITY	: 7

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	PO4	SI03	N02	N03	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)		(ML/L)			(µG-ATOMS/L)				(M)	(°C)			
0	-1.10	33.289	8.99	8.34	0.68	27	0.18	12.	0.4	0	-1.10	33.289	26.770	0.
5	-1.20	33.270	8.99	8.34	0.71	25	0.18	14.	0.3	10	-1.27	33.270	26.760	0.0127
15	-1.32	33.276	9.04	8.36	0.65	26	0.16	13.	0.5	20	-1.34	33.274	26.765	0.0254
24	-1.34	33.273	9.03	8.37	0.68	27	0.17	15.	0.5	30	-1.37	33.254	26.750	0.0382
43	-1.43	33.304	9.01	8.35	0.89	30	0.17	17.	0.7	50	-1.43	33.498	26.950	0.0619
65	-1.46	33.936	7.93	8.17	1.84	52	0.20	27.	1.0	75	-1.56	34.028	27.384	0.0841
88	-1.70	34.059	7.72	8.13	1.99	57	0.08	27.	0.6	100	-1.75	34.081	27.432	0.1005
123	-1.82	34.113	7.65	8.11	2.04	60	0.09	28.	0.3	125	-1.83	34.119	27.465	0.1158
130	-1.87	34.135	7.48	8.11	2.12	61	0.15	32.	0.2	150	-1.90	34.154	27.496	0.1304
175	-1.86	34.150	7.52	8.10	2.07	60	0.09	27.	0.2	200	-1.84	34.166	27.504	0.1586
220	-1.81	34.182	7.61	8.11	1.78	60	0.13	28.	0.2					

STATION 280002

METEOROLOGICAL OBSERVATION

DATE : 2-14-1987 TIME (UT) : 1100 WIND DIRECTION : ESE
 TIME (UT) : 11:48 WEATHER : 01 VELOCITY : 6 M/S
 AIR TEMPERATURE (DRY) : -6.0 °C HUMIDITY : 68 %
 (WET) : **** °C SEA : ESE/ 1
 ATMOSPHERIC PRESSURE : 985.5 MB SWELL : N / 0
 VISIBILITY : 7

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	PO4	SI03	N02	N03	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)		(ML/L)			(µG-ATOMS/L)				(M)	(°C)			
0	-1.10	33.309	8.95	8.28	0.61	26	0.20	14.	0.5	0	-1.10	33.309	26.786	0.
10	-1.29	33.283	8.97	8.27	0.73	27	0.19	12.	0.5	10	-1.29	33.283	26.771	0.0126
19	-1.35	33.282	9.01	8.27	0.73	29	0.18	13.	0.5	20	-1.37	33.283	26.774	0.0252
29	-1.52	33.300	9.07	8.27	0.94	36	0.16	13.	0.5	30	-1.53	33.300	26.792	0.0377
48	-1.68	33.393	9.08	8.26	1.31	46	0.12	17.	0.4	50	-1.68	33.434	26.905	0.0615
71	-1.62	33.885	8.06	8.09	1.95	53	0.12	25.	0.9	75	-1.63	33.927	27.304	0.0851
95	-1.72	34.042	7.76	8.05	2.10	58	0.09	27.	0.8	100	-1.72	34.064	27.418	0.1026
120	-1.71	34.122	7.59	8.05	2.10	64	0.11	28.	0.4	125	-1.71	34.129	27.470	0.1181
144	-1.71	34.141	7.53	8.04	2.25	63	0.13	29.	0.1	150	-1.72	34.143	27.482	0.1328
193	-1.82	34.155	7.53	8.03	2.08	64	0.07	29.	0.	200	-1.83	34.159	27.498	0.1614
240	-1.82	34.188	7.53	8.02	2.04	63	0.05	29.	0.					

STATION 2800003

METEOROLOGICAL OBSERVATION

DATE : 2-24-1987
 TIME (UT) : 6:24
 LATITUDE : 65° 3'S
 LONGITUDE : 34°43'E
 DEPTH : 1850 M

TIME (UT) : 600
 WEATHER : 08
 AIR TEMPERATURE (DRY) : 1.0 °C
 (WET) : **** °C
 ATMOSPHERIC PRESSURE : 968.3 MB

WIND DIRECTION : ENE
 VELOCITY : 7 M/S
 HUMIDITY : 93 %
 SEA : ENE/ 2
 SWELL : E / 6
 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	DO2	PH	PO4	SI03	NO2	NO3	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)		(ML/L)			(µG-ATOMS/L)				(M)	(°C)			
0	1.00	34.087	7.72	8.16	1.79	53	0.23	28.	0.5	0	1.00	34.087	27.311	0.
8	0.99	34.094	7.76	8.14	1.84	53	0.23	27.	0.4	10	0.99	34.091	27.315	0.0075
16	0.97	34.083	7.75	8.12	1.91	53	0.23	28.	0.4	20	0.97	34.088	27.314	0.0150
25	0.92	34.100	7.76	8.12	1.87	53	0.23	27.	0.4	30	0.74	34.117	27.352	0.0223
41	0.13	34.162	7.72	8.13	1.89	54	0.17	28.	0.6	50	-0.59	34.202	27.490	0.0353
62	-1.44		7.29	8.09	2.10	62	0.11	30.	0.3	75	-1.72	34.304	27.613	0.0484
83	-1.69	34.333	7.16	8.04	2.18	63	0.15	31.	0.1	100	-1.23	34.369	27.650	0.0595
104	-1.07	34.380	6.59	8.02	2.02	68	0.13	31.	0.1	125	-0.30	34.492	27.711	0.0695
124	-0.31	34.490	5.86	8.01	2.34	78	0.06	32.	0.1	150	-0.19	34.524	27.732	0.0785
165	-0.27	34.522	5.89	8.01	2.31	80	0.01	32.	0.1	200	0.15	34.561	27.744	0.0959
204	0.21	34.567	5.53	7.99	2.13	83	0.05	32.	0.1	250	0.86	34.647	27.771	0.1125
244	0.84	34.642	5.05	7.97	2.29	93	0.01	32.	0.	300	0.84	34.666	27.787	0.1282
322	0.72	34.663	5.01	7.98	2.25	95	0.04	32.	0.2	400	0.75	34.670	27.796	0.1585
401	0.75	34.670	5.07	7.99	2.25	99	0.02	33.	0.2	500	0.79	34.687	27.807	0.1881
481	0.80	34.686	5.01	7.98	2.16	103	0.04	32.	0.	600	0.73	34.693	27.816	0.2168
562	0.73	34.690	5.03	7.99	2.16	107	0.06	31.	0.1	700	0.70	34.697	27.821	0.2449
646	0.73	34.696	4.91	7.99	2.26	110	0.	32.	0.1	800	0.63	34.692	27.822	0.2728
732	0.68	34.697	4.91	7.98	2.15	112	0.	32.	0.1	900	0.54	34.690	27.825	0.3005
819	0.62	34.691	4.93	7.98	2.21	119	0.	33.	0.1	1000	0.44	34.689	27.831	0.3276
1041	0.40	34.689	4.99	7.97	2.37	123	0.	33.	0.	1250	0.29	34.677	27.830	0.3943
1269	0.29	34.675	5.00	7.96	2.28		0.08	33.	0.					

STATION 2800004

METEOROLOGICAL OBSERVATION

DATE : 2-26-1987
 TIME (UT) : 5: 0
 LATITUDE : 64°56'S
 LONGITUDE : 45° 4'E
 DEPTH : 3970 M

TIME (UT) : 500
 WEATHER : 02
 AIR TEMPERATURE (DRY) : 1.3 °C
 (WET) : **** °C
 ATMOSPHERIC PRESSURE : 979.1 MB

WIND DIRECTION : W
 VELOCITY : 7 M/S
 HUMIDITY : 74 %
 SEA : W / 2
 SWELL : W / 6
 VISIBILITY : 7

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	PO4	SI03	NO2	NO3	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)		(ML/L)			(µG-ATOMS/L)				(M)	(°C)			
0	0.90	34.049	7.74	8.11	1.76	53	0.25	27.	0.1	0	0.90	34.049	27.287	0.
8	0.88	34.043	7.75	8.12	1.76	53	0.25	26.	0.5	10	0.88	34.043	27.284	0.0078
17	0.86	34.044	7.73	8.11	1.81	52	0.25	27.	1.4	20	0.86	34.044	27.286	0.0156
25	0.85	34.044	7.76	8.12	1.79	53	0.25	27.	0.4	30	0.85	34.044	27.286	0.0233
41	0.86	34.045	7.77	8.12	1.76	53	0.25	27.	0.9	50	0.99	34.035	27.270	0.0390
61	0.86	34.049	7.73	8.11	1.78	53	0.28	27.	0.6	75	-0.58	34.174	27.467	0.0565
81	-1.16	34.238	7.30	8.06	1.92	61	0.15	29.	0.4	100	-0.75	34.370	27.633	0.0696
102	-0.65	34.381	6.26	8.02	2.05	73	0.24	31.	1.1	125	-0.50	34.447	27.684	0.0801
122	-0.56	34.437	6.11	8.01	2.12	74	0.11	29.	0.1	150	0.04	34.527	27.722	0.0896
162	0.33	34.563	5.76	7.99	2.13	83	0.02	32.	0.3	200	0.73	34.628	27.764	0.1068
200	0.73	34.628	5.02	7.98	2.02	89	0.02	30.	0.1	250	0.98	34.638	27.756	0.1234
238	0.94	34.630	4.93	7.97	2.04	90	0.01	31.	0.	300	1.05	34.671	27.778	0.1398
315	1.05	34.682	4.79	7.97	2.07	95	0.01	30.	0.	400	0.91	34.683	27.797	0.1707
396	0.91	34.683	4.88	7.98	2.13	95	0.02	31.	0.1	500	0.80	34.688	27.808	0.2003
481	0.82	34.688	4.95	7.98	2.02	99	0.02	30.	0.	600	0.70	34.685	27.812	0.2292
568	0.73	34.685	5.01	7.98	2.07	99	0.03	31.	0.	700	0.64	34.686	27.816	0.2577
658	0.65	34.686	5.03	7.98	2.04	102		31.	0.2	800	0.58	34.690	27.823	0.2857
749	0.62	34.687	5.04	7.98	2.04	105	0.01	30.	0.1	900	0.50	34.692	27.829	0.3130
841	0.55	34.692	5.02	7.98	2.05	108	0.01	31.	0.1	1000	0.42	34.689	27.832	0.3398
1033	0.40	34.687	5.01	7.97	2.21	115	0.	31.	0.	1250	0.28	34.674	27.828	0.4064
1259	0.28	34.674	5.06	7.95	2.10	117	0.04	32.	0.2	1500	0.11	34.675	27.838	0.4711
1487	0.11	34.675	5.14	7.95	2.20	120	0.06	33.	0.2	1750	0.06	34.675	27.841	0.5332
1715	0.07	34.675	5.25	7.95	2.08	123		31.	0.2	2000	-0.04	34.672	27.844	0.5936
2172	-0.11	34.670	5.45	7.96	2.12	125	0.02	33.	0.2	2250	-0.13	34.669	27.846	0.6518
2630	-0.21	34.667	5.49	7.95	2.04	126	0.02	32.	0.3	2500	-0.19	34.668	27.848	0.7079
3085		34.664		7.94	1.94	122	0.07	31.	0.2	2750	-0.23	34.666	27.848	0.7624
3536	-0.33	34.656	5.78	7.95	2.02	122	0.02	32.	0.2	3000	-0.27	34.665	27.850	0.8153
										3500	-0.33	34.657	27.846	0.9177

STATION 2800005

METEOROLOGICAL OBSERVATION

DATE : 2-27-1987
 TIME (UT) : 7:30
 LATITUDE : 61° 9'S
 LONGITUDE : 44° 46'E
 DEPTH : 5210 M

TIME (UT) : 700
 WEATHER : 02
 AIR TEMPERATURE (DRY) : 2.0 °C
 (WET) : **** °C
 ATMOSPHERIC PRESSURE : 997.1 MB

WIND DIRECTION : WSW
 VELOCITY : 9 M/S
 HUMIDITY : 90 %
 SEA : WSW/ 2
 SWELL : WNW/ 7
 VISIBILITY : 7

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	PO4	SI03	N02	N03	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)		(ML/L)			(µG-ATOMS/L)				(M)	(°C)			
0	1.80	33.806	7.68	8.11	1.62	35	0.39	25.	0.1	0	1.80	33.806	27.030	0.
8	1.68	33.779	7.68	8.12	1.62	35	0.39	25.	0.1	10	1.67	33.779	27.018	0.0103
16	1.68	33.782	7.67	8.12	1.73	34	0.37	23.	0.1	20	1.68	33.778	27.017	0.0206
24	1.67	33.774	7.64	8.12	1.68	34	0.36	25.	0.1	30	1.67	33.777	27.016	0.0309
40	1.65	33.787	7.65	8.13	1.66	35	0.37	25.	0.1	50	1.77	33.782	27.013	0.0516
61	1.49	33.793	7.68	8.12	1.70	34	0.37	26.	0.2	75	-0.59	33.887	27.235	0.0748
82	-1.60	33.938	8.21	8.10	1.74	33	0.23	26.	0.2	100	-1.61	33.985	27.351	0.0940
100	-1.61	33.985	7.84	8.09	1.81	40	0.22	27.	0.2	125	-0.94	34.107	27.427	0.1108
118	-1.24	34.057	7.40	8.04	1.99	50	0.28	26.	0.2	150	0.23	34.299	27.528	0.1256
153	0.38	34.323	5.78	7.96	2.28	53	0.03	32.	0.	200	1.56	34.530	27.629	0.1508
188	1.44	34.502	4.54	7.91	2.20	70	0.01	32.	0.	250	1.70	34.591	27.667	0.1729
223	1.63	34.560	4.32	7.89	2.23	86	0.	34.	0.	300	1.74	34.630	27.695	0.1935
295	1.74	34.627	4.16	7.91	2.29	88	0.	33.	0.	400	1.82	34.680	27.729	0.2322
371	1.79	34.668	4.20	7.91	2.31	90	0.	32.	0.	500	1.82	34.708	27.752	0.2687
451	1.86	34.697	4.23	7.92	2.16	92	0.	32.	0.	600	1.73	34.729	27.776	0.3034
534	1.78	34.714	4.33	7.93	2.20	92	0.01	31.	0.	700	1.65	34.740	27.790	0.3366
619	1.72	34.733	4.49	7.94	2.13	93	0.	31.	0.					
706	1.64	34.740	4.49	7.93		94	0.	31.	0.					
794	1.58	34.748	4.55	7.94	2.07	95	0.	30.	0.					

STATION 2800006

METEOROLOGICAL OBSERVATION

DATE : 3- 1-1987
 TIME (UT) : 6:18
 LATITUDE : 58° 8'S
 LONGITUDE : 39°46'E
 DEPTH : 5350 M

TIME (UT) : 600
 WEATHER : 02
 AIR TEMPERATURE (DRY) : 1.7 °C
 (WET) : **** °C
 ATMOSPHERIC PRESSURE : 978.6 MB

WIND DIRECTION : W
 VELOCITY : 10 M/S
 HUMIDITY : 95 %
 SEA : W / 2
 SWELL : NW / 6
 VISIBILITY : 7

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	PO4	SI03	NO2	NO3	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)		(ML/L)			(µG-ATOMS/L)				(M)	(°C)			
0	2.30	33.868	7.56	8.17	1.65	28	0.40	26.	0.4	0	2.30	33.868	27.041	0.
7	2.34	33.853	7.56	8.18	1.65	28	0.37	25.	0.3	10	2.33	33.855	27.028	0.0102
14	2.32	33.858	7.55	8.18	1.74	30	0.36	24.	0.3	20	2.31	33.854	27.029	0.0204
21	2.31	33.853	7.53	8.18	1.66	28	0.36	24.	0.3	30	2.32	33.859	27.032	0.0306
33	2.32	33.863	7.53	8.18	1.63	26	0.36	24.	0.3	50	2.36	33.877	27.043	0.0508
48	2.33	33.873	7.55	8.18	1.65	27	0.36	25.	0.3	75	1.13	33.950	27.193	0.0743
62	2.27	33.909	7.53	8.18	1.58	28	0.38	26.	0.4	100	-0.62	34.023	27.346	0.0941
78	0.81	33.960	7.74	8.18	1.83	38	0.30	24.	0.6	125	-0.66	34.037	27.359	0.1118
93	-0.38	34.018	7.90	8.15	2.00	43	0.31	25.	0.6	150	-0.17	34.128	27.411	0.1288
122	-0.70	34.029	7.88	8.15	2.04	49	0.33	28.	0.6	200	0.95	34.348	27.524	0.1590
151	-0.14	34.133	7.17	8.12	2.05	57	0.05	28.	0.	250	1.63	34.513	27.610	0.1848
180	0.52	34.259	6.15	8.06	2.29	65	0.02	33.	0.	300	1.76	34.583	27.656	0.2077
237	1.54	34.485	4.56	7.97	2.46	77	0.02	35.	0.	400	1.82	34.644	27.701	0.2497
293	1.74	34.575	4.27	7.96	2.49	83	0.01	37.	0.	500	1.83	34.685	27.733	0.2884
352	1.83	34.628	4.19	7.97	2.34	85	0.	33.	0.	600	1.79	34.715	27.760	0.3248
412	1.81	34.647	4.29	7.98	2.41	87	0.	32.	0.	700	1.74	34.734	27.779	0.3594
475	1.83	34.675	4.22	7.98	2.31	88	0.01	32.	0.	800	1.67	34.742	27.791	0.3928
541	1.81	34.699	4.32	8.00	2.18	88	0.02	32.	0.	900	1.57	34.741	27.797	0.4255
827	1.65	34.743	4.57	8.01	2.18	91	0.	31.	0.	1000	1.45	34.735	27.801	0.4579
997	1.45	34.735	4.61	8.01	2.08	98	0.02	31.	0.	1250	1.12	34.733	27.823	0.5355
1181	1.19	34.736	4.70	8.01	2.25	103	0.	31.	0.					
1364	1.04	34.725	4.76	7.96	2.15	108	0.04	31.	0.					

STATION 2800007

METEOROLOGICAL OBSERVATION

DATE : 3- 3-1987
 TIME (UT) : 5:30
 LATITUDE : 56°58'S
 LONGITUDE : 41°45'E
 DEPTH : 5280 M

TIME (UT) : 500
 WEATHER : 02
 AIR TEMPERATURE (DRY) : 2.5 °C
 (WET) : **** °C
 ATMOSPHERIC PRESSURE : 989.9 MB

WIND DIRECTION : WNW
 VELOCITY : 8 M/S
 HUMIDITY : 75 %
 SEA : WNW/ 2
 SWELL : WNW/ 6
 VISIBILITY : 7

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	PO4	SI03	N02	N03	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)		(ML/L)			(µG-ATOMS/L)				(M)	(°C)			
0	2.70	33.908	7.51	8.20	1.57	26	0.38	26.	0.4	0	2.70	33.908	27.040	0.
6	2.61	33.905	7.49	8.21	1.62	26	0.36	26.	0.4	10	2.60	33.905	27.046	0.0101
13	2.60	33.905	7.52	8.20	1.65	27	0.34	23.	0.4	20	2.59	33.902	27.044	0.0201
19	2.59	33.902	7.47	8.20	1.63	26	0.36	26.	0.5	30	2.61	33.906	27.046	0.0302
31	2.61	33.906	7.48	8.19	1.63	26	0.36	23.	0.5	50	2.58	33.904	27.047	0.0503
46	2.58	33.904	7.46	8.20	1.68	26	0.39	25.	0.5	75	2.67	33.904	27.039	0.0756
61	2.58	33.905	7.47	8.20	1.63	26	0.36	25.	0.7	100	-0.56	33.987	27.315	0.0976
77	2.59	33.907	7.46	8.20	1.62	26	0.37	24.	0.7	125	-0.89	33.979	27.322	0.1161
91	0.05	33.981	7.93	8.20	1.87	38	0.29	26.		150	-0.60	34.071	27.384	0.1338
118	-0.77	33.976	7.98	8.18	1.95	45	0.26	27.	0.9	200	1.27	34.434	27.572	0.1636
145	-0.82	34.032	7.65	8.16	1.87	48	0.31	27.	0.5	250	1.72	34.578	27.655	0.1873
171	0.48	34.255	5.96	8.08	2.18	63	0.03	34.	0.	300	1.76	34.613	27.680	0.2085
222	1.57	34.525	4.37	7.99	2.37	79	0.02	34.	0.	400	1.81	34.669	27.721	0.2484
275	1.73	34.595	4.19	7.98	2.41	83	0.	34.	0.	500	1.75	34.686	27.740	0.2858
331	1.78	34.630	4.15	7.99	2.28	85	0.02	32.	0.	600	1.72	34.712	27.763	0.3216
392	1.81	34.666	4.19	7.99	2.31	88	0.	33.	0.	700	1.70	34.729	27.778	0.3560
457	1.81	34.682	4.22	8.01	2.25	88	0.	32.	0.	800	1.65	34.739	27.790	0.3894
526	1.72	34.689	4.30	8.02	2.12	90	0.	32.	0.1	900	1.58	34.741	27.796	0.4222
598	1.72	34.712	4.39	8.03	2.10	90	0.01	30.	0.	1000	1.46	34.743	27.807	0.4543
898	1.58	34.741	4.56	8.04	2.10	93	0.	30.	0.	1250	1.13	34.790	27.868	0.5261
1024	1.43	34.745	4.65	8.05	2.15	98	0.02	31.	0.	1500	0.92	34.711	27.818	0.5960
1176	1.18	34.816	4.72	8.05	2.16	103	0.	31.	0.	1750	0.64	34.711	27.836	0.6682
1354	1.07	34.733	4.74	8.05	2.08	107	0.02	32.	0.	2000	0.48	34.702	27.839	0.7364
1752	0.64	34.711	4.83	8.05	2.04	118	0.	32.	0.	2250	0.36	34.696	27.841	0.8027
2179	0.39	34.697	4.93	8.03	2.15	124	0.	32.	0.	2500	0.25	34.691	27.843	0.8671
2620	0.21	34.689	5.05	8.01	2.26	127	0.01	33.	0.	2750	0.16	34.686	27.844	0.9297
3071	0.03	34.679	5.13	8.05	2.12	129	0.	32.	0.	3000	0.06	34.681	27.846	0.9902

STATION 2800008

METEOROLOGICAL OBSERVATION

DATE : 3- 4-1987
 TIME (UT) : 8: 6
 LATITUDE : 56°16'S
 LONGITUDE : 44°58'E
 DEPTH : 4950 M

TIME (UT) : 800
 WEATHER : 02
 AIR TEMPERATURE (DRY) : 2.8 °C
 (WET) : **** °C
 ATMOSPHERIC PRESSURE : 982.0 MB

WIND DIRECTION : W
 VELOCITY : 1 M/S
 HUMIDITY : 73 %
 SEA : W / 1
 SWELL : W / 6
 VISIBILITY : 7

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	P04	SI03	N02	N03	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)		(ML/L)			(µG-ATOMS/L)				(M)	(°C)			
0	3.40	33.933	7.41	8.20	1.63	24	0.33	26.	0.6	0	3.40	33.933	26.996	0.
10	3.14	33.922	7.46	8.20	1.65	24	0.33	26.	0.6	10	3.14	33.922	27.012	0.0104
20	3.07	33.919	7.44	8.19	1.68	23	0.31	25.	0.4	20	3.07	33.919	27.016	0.0208
30	3.06	33.919	7.50	8.19	1.66	24	0.30	25.	0.4	30	3.06	33.919	27.017	0.0311
49	3.04	33.918	7.43	8.20	1.63	24	0.30	22.	0.6	50	3.05	33.917	27.016	0.0518
74	2.99	33.909	7.42	8.19	1.68	23	0.31	25.	0.5	75	2.98	33.910	27.017	0.0777
99	2.19	33.949	7.59	8.19	1.71	25	0.26	25.	0.7	100	2.10	33.950	27.123	0.1024
123	0.19	33.985	7.76	8.18	1.95	41	0.24	27.	1.2	125	0.16	33.991	27.283	0.1238
146	0.33	34.071	7.12	8.14	2.10	47	0.18	29.	0.1	150	0.40	34.089	27.349	0.1425
193	1.26	34.287	5.39	8.03	2.36	60	0.	33.	0.	200	1.36	34.315	27.470	0.1756
240	1.77	34.443	4.47	7.99	2.42	72	0.	34.	0.	250	1.81	34.461	27.555	0.2040
288	1.85	34.508	4.28	7.97	2.42	76	0.	34.	0.	300	1.87	34.522	27.599	0.2296
384	1.95	34.599	4.08	7.98	2.39	81	0.	33.	0.	400	1.95	34.609	27.662	0.2762
481	1.91	34.647	4.16	7.99	2.39	85	0.	33.	0.	500	1.91	34.656	27.703	0.3182
577	1.94	34.687	4.23	8.00	2.28	87	0.	32.	0.	600	1.94	34.695	27.732	0.3575
673	1.94	34.718	4.33	8.02	2.18	87	0.	31.	0.	700	1.92	34.725	27.758	0.3946
769	1.88	34.741	4.44	8.04	2.16	87	0.	31.	0.	800	1.89	34.746	27.777	0.4300
797	1.89	34.746	4.51	8.05	2.12	87	0.	30.	0.	900	1.74	34.751	27.792	0.4640
882	1.81	34.750	4.54	8.05	2.12	88	0.	30.	0.	1000	1.39	34.756	27.822	0.4957
1089	1.11	34.755	4.65	8.06	2.10	93	0.	30.	0.	1250	1.34	34.723	27.799	0.5742
1293	1.43	34.715	4.78	8.04	2.13	98	0.	30.	0.	1500	1.21	34.731	27.815	0.6547
1495	1.21	34.731	4.78	8.05	2.18	103	0.	30.	0.	1750	0.96	34.730	27.831	0.7311
1700	1.02	34.732	4.79	8.04	2.12	111	0.	31.	0.1	2000	0.70	34.716	27.837	0.8033
2125	0.58	34.707	4.89	8.04	2.18	122	0.	32.	0.1	2250	0.50	34.703	27.838	0.8726
2569	0.33	34.694	5.06	8.02	2.28	128	0.	31.	0.	2500	0.36	34.696	27.841	0.9395
3023	0.12	34.671	5.19	8.04	2.29	129	0.	32.	0.	2750	0.24	34.684	27.838	1.0046
3486	-0.05	34.672	5.36	8.03	2.07	132	0.	32.	0.	3000	0.13	34.672	27.834	1.0684
3954	-0.13	34.670	5.57	8.03	2.26	132	0.01	33.	0.	3500	-0.05	34.672	27.844	1.1886

STATION 2800009

METEOROLOGICAL OBSERVATION

DATE : 3- 7-1987
 TIME (UT) : 2:30
 LATITUDE : 47°45'S
 LONGITUDE : 46°55'E
 DEPTH : 3312 M

TIME (UT) : 200
 WEATHER : 02
 AIR TEMPERATURE (DRY) : 5.7 °C
 (WET) : **** °C
 ATMOSPHERIC PRESSURE : 1022.9 MB

WIND DIRECTION : W
 VELOCITY : 7 M/S
 HUMIDITY : 90 %
 SEA : W / 2
 SWELL : SSE/ 6
 VISIBILITY : 6

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	PO4	SI03	N02	N03	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)		(ML/L)			(µG-ATOMS/L)				(M)	(°C)			
0	6.20	33.876	7.05	8.16	1.44	3	0.28	22.	0.3	0	6.20	33.876	26.639	0.
8	6.14	33.845	7.02	8.17	1.42	3	0.25	21.	0.3	10	6.13	33.846	26.625	0.0140
15	6.13	33.853	7.01	8.17	1.41	3	0.24	19.	0.3	20	6.14	33.853	26.629	0.0280
23	6.14	33.853	7.00	8.17	1.44	3	0.25	21.	0.2	30	6.14	33.855	26.630	0.0420
36	6.13	33.856	6.99	8.17	1.42	3	0.27	17.	0.3	50	6.11	33.854	26.633	0.0701
52	6.11	33.854	6.99	8.17	1.39	3	0.26	21.	0.3	75	6.12	33.853	26.631	0.1052
68	6.11	33.856	6.99	8.17	1.39	3	0.26	20.	0.3	100	5.92	33.870	26.670	0.1399
84	6.12	33.852	7.00	8.17	1.39	3	0.24	20.	0.3	125	4.77	33.940	26.861	0.1720
98	6.00	33.865	7.11	8.18	1.52	3	0.27	18.	0.4	150	4.22	33.972	26.946	0.2008
127	4.67	33.946	7.08	8.15	1.39	8	0.33	19.	0.5	200	3.92	34.034	27.026	0.2546
154	4.17	33.974	6.94	8.14	1.52	10	0.31	21.	0.1	250	4.26	34.164	27.094	0.3052
181	3.86	33.986	6.94	8.14	1.63	12	0.09	25.	0.	300	4.22	34.214	27.138	0.3533
231	4.17	34.126	6.40	8.12	1.71	14	0.02	25.	0.1	400	3.62	34.215	27.200	0.4450
283	4.31	34.208	6.01	8.07	1.89	17	0.	27.	0.1	500	3.29	34.247	27.257	0.5314
339	3.93	34.212	5.88	8.07	1.86	20	0.	28.	0.	600	2.89	34.287	27.326	0.6122
401	3.62	34.215	5.86	8.06	1.99	24	0.02	29.	0.	700	2.69	34.340	27.386	0.6871
467	3.40	34.238	5.60	8.04	2.04	28	0.	28.	0.1	800	2.61	34.395	27.437	0.7572
538	3.15	34.258	5.42	8.03	1.99	33	0.	31.	0.1	900	2.59	34.450	27.482	0.8232
611	2.85	34.293	5.17	8.00	2.21	40	0.	30.	0.1	1000	2.53	34.502	27.529	0.8854
860	2.61	34.428	4.48	7.95	2.33	58	0.	34.	0.1	1250	2.41	34.617	27.631	1.0253
1045	2.51	34.525	4.19	7.94	2.41	68	0.01	33.	0.	1500	2.46	34.591	27.606	1.1593
1245	2.41	34.618	4.17	7.94	2.37	74	0.	33.	0.	1750	2.33	34.697	27.702	1.2879
1454	2.47	34.575	4.30	7.96	2.08	74	0.	31.	0.1	2000	2.17	34.791	27.791	1.3970
1889	2.23	34.771	4.66	8.01	1.99	74	0.	29.	0.1	2250	2.03	34.794	27.804	1.4954
2338	1.98	34.780	4.86	8.01		83	0.	29.	0.					

STATION 2800010

METEOROLOGICAL OBSERVATION

DATE : 3- 8-1987
 TIME (UT) : 4:12
 LATITUDE : 43°10'S
 LONGITUDE : 50°17'E
 DEPTH : 2641 M

TIME (UT) : 400
 WEATHER : 02
 AIR TEMPERATURE (DRY) : 11.3 °C
 (WET) : **** °C
 ATMOSPHERIC PRESSURE : 1022.0 MB

WIND DIRECTION : NE
 VELOCITY : 10 M/S
 HUMIDITY : 90 %
 SEA : NE / 2
 SWELL : NE / 5
 VISIBILITY : 7

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	PO4	SI03	NO2	NO3	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)		(ML/L)			(µG-ATOMS/L)				(M)	(°C)			
0	10.00	33.754	6.58	8.23	1.20	0	0.24	18.	0.	0	10.00	33.754	25.979	0.
7	10.07	33.749	6.63	8.22	1.21	0	0.22	15.	0.4	10	10.07	33.750	25.964	0.0202
14	10.06	33.752	6.60	8.22	1.20	0	0.21	18.	0.3	20	10.05	33.748	25.966	0.0406
21	10.05	33.747	6.60	8.23	1.20	0	0.20	14.	0.4	30	9.89	33.742	25.989	0.0608
35	9.77	33.742	6.66	8.23	1.16	1	0.19	17.	0.3	50	9.42	33.755	26.076	0.1003
52	9.35	33.758	6.71	8.23	1.20	0	0.20	19.	0.1	75	7.69	33.796	26.374	0.1451
69	8.21	33.781	6.79	8.21	1.28	1	0.21	26.	0.5	100	5.61	33.862	26.702	0.1826
85	6.80	33.824	6.86	8.20	1.37	3	0.23	18.	1.0	125	4.43	33.909	26.873	0.2141
101	5.54	33.864	6.97	8.19	1.44	3	0.31	21.	0.	150	3.99	33.955	26.956	0.2426
131	4.27	33.919	6.99	8.18	1.63	7	0.50	26.	0.	200	3.47	34.005	27.047	0.2956
159	3.92	33.970	6.91	8.17	1.57	10	0.01	25.	0.	250	3.33	34.070	27.112	0.3450
187	3.56	33.989	6.71	8.14	1.70	13	0.	26.	0.	300	3.26	34.117	27.156	0.3920
241	3.35	34.061	6.42	8.12	1.83	18	0.	29.	0.	400	3.19	34.206	27.234	0.4807
299	3.26	34.116	6.16	8.10	1.94	22	0.	27.	0.	500	2.80	34.235	27.292	0.5633
364	3.32	34.191	5.76	8.09	1.95	25	0.	30.	0.	600	2.65	34.308	27.364	0.6402
434	3.03	34.213	5.59	8.06	2.05	30	0.01	32.	0.	700	2.64	34.374	27.417	0.7116
509	2.77	34.239	5.38	8.05	2.12	35	0.	30.	0.	800	2.62	34.422	27.457	0.7792
587	2.65	34.298	5.01	8.02	2.15	44	0.	33.	0.	900	2.59	34.470	27.498	0.8436
668	2.65	34.358	4.69	8.01	2.28	51	0.	35.	0.	1000	2.55	34.516	27.539	0.9046
1202	2.44	34.604	4.24	7.99	2.34	73	0.	34.	0.	1250	2.42	34.638	27.647	1.0416
1340	2.37	34.697	4.31	7.99	2.18	75	0.	31.		1500	2.29	34.741	27.741	1.1575
1576	2.26	34.749	4.55	8.01	2.04	75	0.	27.	0.	1750	2.22	34.766	27.766	1.2620
1817	2.20	34.769	4.78	8.03	1.89	77	0.	29.	0.	2000	2.08	34.774	27.784	1.3632
2303	1.76	34.764	4.95	8.04	1.94	88	0.	26.	0.	2250	1.83	34.767	27.798	1.4611

STATION 2800011

METEOROLOGICAL OBSERVATION

DATE : 3-10-1987
 TIME (UT) : 6: 6
 LATITUDE : 34°54'S
 LONGITUDE : 53°27'E
 DEPTH : 3850 M

TIME (UT) : 600
 WEATHER : 02
 AIR TEMPERATURE (DRY) : 20.5 °C
 (WET) : **** °C
 ATMOSPHERIC PRESSURE : 1015.0 MB

WIND DIRECTION : NNE
 VELOCITY : 8 M/S
 HUMIDITY : 91 %
 SEA : NNE/ 2
 SWELL : NE / 6
 VISIBILITY : 7

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	PO4	SI03	NO2	NO3	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)	(ML/L)	(µG-ATOMS/L)							(M)	(°C)			
0	21.80	35.655	5.12	8.28	0.13	0	0.01	0.	0.	0	21.80	35.655	24.773	0.
10	21.73	35.647	5.15	8.28	0.16	0	0.02	0.	0.	10	21.73	35.647	24.787	0.0316
19	21.69	35.649	5.12	8.28	0.13	0	0.	0.	0.	20	21.69	35.649	24.799	0.0631
29	21.60	35.647	5.11	8.28	0.15	0	0.01	0.	0.	30	21.59	35.648	24.826	0.0944
47	21.10	35.659	5.24	8.29	0.15	0	0.02	0.	0.	50	20.86	35.655	25.032	0.1550
70	19.08	35.619	6.13	8.31	0.15	0	0.01	0.	0.	75	18.80	35.614	25.543	0.2224
92	17.98	35.602	5.69	8.31	0.18	0	0.05	0.	0.	100	17.53	35.595	25.844	0.2804
115	16.77	35.582	5.57	8.31	0.19	0	0.11	0.	0.	125	16.44	35.574	26.088	0.3320
137	16.15	35.564	5.41	8.29	0.29	0	0.15	1.	0.	150	15.95	35.558	26.189	0.3797
182	15.63	35.535	5.24	8.28	0.39	1	0.04	3.	0.	200	15.38	35.504	26.277	0.4711
226	15.03	35.457	5.19	8.27	0.44	2	0.02	5.	0.	250	14.82	35.429	26.343	0.5596
270	14.66	35.408	5.09	8.25	0.52	2	0.01	7.	0.	300	14.35	35.368	26.398	0.6458
359	13.76	35.293	5.01	8.23	0.63	1	0.	8.	0.	400	13.52	35.264	26.492	0.8129
449	13.23	35.228	5.11	8.23	0.69	3	0.01	9.	0.	500	12.72	35.155	26.570	0.9740
540	12.31	35.096	5.05	8.22	0.81	4	0.	11.	0.	600	11.86	35.047	26.653	1.1293
633	11.61	35.019	5.13	8.20	0.89	3	0.02	13.	0.	700	10.94	34.920	26.725	1.2788
726	10.65	34.879	5.03	8.19	1.21	5	0.	15.	0.	800	9.78	34.783	26.820	1.4213
820	9.52	34.757	4.95	8.16	1.41	7	0.	18.	0.	900	8.33	34.642	26.943	1.5534
914	8.12	34.622	4.82	8.13	1.41	18	0.	22.	0.	1000	6.93	34.523	27.053	1.6738
1179	4.96	34.403	4.77	8.07	2.02	30	0.01	30.	0.	1250	4.46	34.399	27.259	1.9326
1421	3.65	34.439	4.41	8.00	2.26	35	0.	33.	0.	1500	3.39	34.466	27.422	2.1427
1661	3.03	34.529	4.19	7.98	2.31	63	0.	34.	0.	1750	2.88	34.562	27.546	2.3175
1900	2.72	34.619	4.20	7.99	2.15	74	0.	33.	0.					

STATION 8703012

METEOROLOGICAL OBSERVATION

DATE : 3-11-1987
 TIME (UT) : 6: 0
 LATITUDE : 30°57'S
 LONGITUDE : 54°13'E
 DEPTH : 4250 M

TIME (UT) : 600
 WEATHER : 02
 AIR TEMPERATURE (DRY) : 25.1 °C
 (WET) : **** °C
 ATMOSPHERIC PRESSURE : 1013.0 MB

WIND DIRECTION : ENE
 VELOCITY : 7 M/S
 HUMIDITY : 68 %
 SEA : ENE/ 1
 SWELL : ESE/ 7
 VISIBILITY : 7

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	PO4	SI03	N02	N03	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)	(ML/L)	(µG-ATOMS/L)							(M)	(°C)			
0	24.80	35.596	4.88	8.24	0.08	0	0.	0.	0.	0	24.80	35.596	23.854	0.
10	24.83	35.594	4.86	8.25	0.08	0	0.	0.	0.	10	24.83	35.594	23.844	0.0405
20	24.72	35.589	4.88	8.25	0.10	0	0.	0.	0.	20	24.72	35.589	23.873	0.0809
30	24.34	35.598	4.92	8.24	0.10	0	0.	0.	0.	30	24.34	35.598	23.994	0.1206
49	20.92	35.623	5.37	8.26	0.13	0	0.	0.	0.	50	20.79	35.624	25.028	0.1892
74	18.33	35.633	5.70	8.27	0.15	0	0.	0.	0.	75	18.25	35.632	25.695	0.2548
99	16.75	35.598	5.58	8.25	0.21	0	0.01	0.	0.	100	16.71	35.597	26.042	0.3086
124	16.00	35.562	5.29	8.23	0.27	1	0.07	0.	0.	125	15.98	35.560	26.184	0.3567
148	15.54	35.520	5.08	8.22	0.42	2	0.05	4.	0.	150	15.51	35.518	26.259	0.4024
197	14.91	35.468	5.18	8.21	0.47	2	0.01	5.	0.	200	14.88	35.464	26.357	0.4902
245	14.38	35.401	5.16	8.21	0.53	2	0.	6.	0.	250	14.33	35.394	26.422	0.5748
293	13.88	35.341	5.21	8.20	0.58	3	0.	7.	0.1	300	13.82	35.334	26.484	0.6570
389	13.16	35.255	5.21	8.17	0.69	3	0.	8.	0.	400	13.08	35.244	26.566	0.8162
485	12.44	35.145	5.18	8.16	0.82	3	0.	9.	0.	500	12.31	35.124	26.626	0.9709
580	11.51	35.007	5.10	8.15	0.89	3	0.	11.	0.	600	11.28	34.975	26.705	1.1206
676	10.35	34.858	5.03	8.12	1.15	5	0.	13.	0.	700	10.05	34.825	26.807	1.2628
771	9.14	34.731	4.94	8.09	0.97	8	0.	16.	0.	800	8.77	34.697	26.918	1.3954
867	7.84	34.607	4.78	8.06	1.47	13	0.	20.	0.	900	7.26	34.539	27.020	1.5177
963	6.16	34.415	4.71	8.03	1.78	22	0.	23.	0.	1000	5.67	34.395	27.116	1.6292
1238	3.66	34.479	4.38	7.96	2.31	48	0.	28.	0.1	1250	3.59	34.484	27.417	1.8557
1486	2.97	34.613	4.20	7.97	2.20	60	0.	35.	0.1					

STATION 2800013

METEOROLOGICAL OBSERVATION

DATE : 3-12-1987
 TIME (UT) : 9:18
 LATITUDE : 25°55'S
 LONGITUDE : 55° 3'E
 DEPTH : 4900 M

TIME (UT) : 900
 WEATHER : 02
 AIR TEMPERATURE (DRY) : 26.3 °C
 (WET) : **** °C
 ATMOSPHERIC PRESSURE : 1010.4 MB

WIND DIRECTION : ENE
 VELOCITY : 4 M/S
 HUMIDITY : 82 %
 SEA : ENE/ 2
 SWELL : ESE/ 7
 VISIBILITY : 7

O B S E R V E D										I N T E R P O L A T E D				
DEPTH	T	S	DO2	PH	PO4	SI03	N02	N03	NH4	DEPTH	T	S	SIGMA-T	DELTA-D
(M)	(°C)		(ML/L)			(µG-ATOMS/L)				(M)	(°C)			
0	26.80	35.186	4.76	8.26	0.06	0	0.	0.	0.	0	26.80	35.186	22.924	0.
7	26.88	35.169	4.71	8.27	0.08	0	0.	0.	0.	10	26.86	35.197	22.913	0.0494
15	26.78	35.252	4.77	8.27	0.06	0	0.	0.	0.	20	26.66	35.277	23.037	0.0982
22	26.60	35.283	4.75	8.27	0.08	0	0.	0.	0.	30	26.30	35.283	23.155	0.1459
36	25.80	35.291	4.89	8.27	0.08	0	0.	0.	0.	50	22.76	35.458	24.352	0.2290
54	21.88	35.509	5.12	8.28	0.11	0	0.	0.	0.	75	20.81	35.570	24.981	0.3112
71	20.99	35.555	4.67	8.26	0.23	0	0.20	0.	0.	100	20.00	35.623	25.238	0.3830
90	20.21	35.616	4.84	8.26	0.18	0	0.20	0.	0.	125	17.69	35.635	25.836	0.4449
109	19.69	35.623	4.47	8.23	0.31	1	0.05	2.	0.	150	15.69	35.638	26.310	0.4942
144	15.54	35.642	4.62	8.22	0.32	2	0.02	2.	0.	200	16.53	35.565	26.060	0.5880
178	17.02	35.602	4.55	8.21	0.44	2	0.	4.	0.	250	15.31	35.487	26.280	0.6832
210	16.15	35.547	4.80	8.22	0.44	2	0.01	4.	0.	300	14.53	35.414	26.395	0.7710
274	14.91	35.453	4.93	8.20	0.53	1	0.	6.	0.	400	13.26	35.253	26.537	0.9361
343	13.98	35.347	5.07	8.19	0.63	2	0.	7.	0.	500	12.20	35.101	26.630	1.0920
418	13.05	35.223	5.06	8.18	0.65	2	0.	10.	0.	600	11.19	34.968	26.716	1.2409
497	12.23	35.105	5.08	8.16	0.84	3	0.	12.	0.	700	10.10	34.826	26.799	1.3830
580	11.38	34.995	5.12	8.16	0.89	3	0.	13.	0.					
666	10.51	34.876	5.11	8.15	0.99	4	0.	15.	0.					
753	9.38	34.746	5.04	8.11	1.20	5	0.01	18.	0.					

Table 5. Petroleum oil, Cd, Hg, Cu and Zn concentrations in surface sea water from 1986 to 1987.

Date	Time		Position		Air temp.	Water temp.	Petroleum oil	Cadmiun	Mercury	Copper	Zinc	
	GMT	LMT	Latitude	Longitude	°C		µg/l					
November												
1	18	0900	1800	13-15 N	129-21 E	25.5	28.5	3.4				
2	18	0910	1810	10-38	128-36	27.7	28.7	2.4				
3	19	0900	1800	5-24	126-03	28.0	28.9	1.3				
4	21	2300	0800	0-42 S	119-11	28.4	28.8	1.6				
5	22	2300	0800	6-21	116-45	27.2	29.4	1.4	No sample			
6	23	2300	0800	11-46	115-04	27.4	27.8	2.2				
7	24	2300	0800	17-10	113-50	25.5	26.6	2.1				
8	24	0900	1800	19-35	113-20	24.6	25.0	2.7				
9	25	0900	1800	25-05	112-05	20.8	22.4	0.9				
10	26	0900	1800	29-59	114-00	19.7	19.9	1.2				
December												
11	4	0000	0800	35-39	112-36	13.6	16.8		0.013	0.001	0.2	3.6
12	5	0000	0800	40-09	109-03	12.0	11.8		0.003	0.001	0.2	3.0
13	6	0500	1300	45-03	107-00	10.0	10.4		0.011	0.002	1.1	2.5
14	7	1100	1800	49-50	105-16	4.2	4.1		0.029	0.000	0.2	1.9
15	8	0600	1300	54-45	104-45	1.2	1.1	No sampl	0.038	0.001	0.2	1.4
16	9	0600	1300	55-31	95-51	2.9	2.5		0.034	0.000	0.1	1.5
17	10	0700	1300	56-24	89-57	1.9	0.7		0.042	0.001	0.0	2.3
18	11	1200	1800	59-27	78-50	0.1	-0.4		0.051		0.1	0.9
19	12	0800	1300	60-01	68-57	0.5	-0.4		0.035		0.0	1.2
March												
20	25	1200	1800	7-42	78-27	29.4	29.5	1.6				
21	26	0200	0800	5-36	81-16	28.7	29.2	1.1				
22	27	1200	1800	0-58	86-40	29.2	30.4	2.0				
23	28	1100	1800	2-57 N	91-10	27.7	29.3	1.3				
24	29	1100	1800	6-11	95-39	29.2	29.3	1.2	No sample			
April												
25	1	1100	1800	4-08	99-50	29.6	30.3	1.6				
26	9	0900	1800	2-01	105-57	28.7	29.5	1.6				
27	11	2250	0750	8-44	111-21	28.0	28.6	1.6				
28	12	0215	1215	14-37	116-14	30.1	29.4	1.7				
29	14	0900	1800	22-57	124-50	23.0	25.9	1.2				

Table 6. The location data of the surface drifting buoy.

DATE			TIME(UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	3	7	14	1	53	-47.583	47.148	1.41
87	3	7	14	55	19	-47.594	47.162	1.29
87	3	7	16	43	34	-47.604	47.176	1.29
87	3	7	18	22	50	-47.612	47.198	1.29
87	3	7	22	5	2	-47.597	47.244	1.29
87	3	7	23	52	48	-47.576	47.243	1.29
87	3	8	1	32	5	-47.578	47.226	1.29
87	3	8	2	22	11	-47.566	47.213	1.29
87	3	8	4	9	1	-47.585	47.191	1.29
87	3	8	5	42	37	-47.599	47.200	1.29
87	3	8	12	4	6	-47.636	47.280	1.29
87	3	8	13	51	24	-47.619	47.303	1.41
87	3	8	16	15	6	-47.606	47.298	1.29
87	3	8	18	1	56	-47.601	47.289	1.41
87	3	8	19	37	25	-47.619	47.266	1.41
87	3	8	21	54	2	-47.631	47.273	1.29
87	3	8	23	42	17	-47.650	47.300	1.29
87	3	9	1	16	21	-47.647	47.318	1.29
87	3	9	2	0	47	-47.665	47.349	1.29
87	3	9	5	20	44	-47.664	47.391	1.17
87	3	9	11	53	5	-47.671	47.431	1.17
87	3	9	13	40	51	-47.675	47.437	1.17
87	3	9	15	17	17	-47.685	47.461	1.29
87	3	9	15	52	45	-47.679	47.448	1.29
87	3	9	17	40	3	-47.681	47.464	1.29
87	3	9	19	16	29	-47.684	47.469	1.29
87	3	9	21	43	30	-47.682	47.481	1.29
87	3	10	1	5	21	-47.676	47.492	1.29
87	3	10	1	39	23	-47.672	47.503	1.29
87	3	10	3	25	16	-47.669	47.503	1.29
87	3	10	5	5	29	-47.667	47.496	1.29
87	3	10	11	43	1	-47.664	47.526	1.52
87	3	10	13	30	19	-47.662	47.534	1.52
87	3	10	15	6	44	-47.652	47.547	1.41
87	3	10	15	30	51	-47.652	47.543	1.41
87	3	10	18	50	48	-47.638	47.534	1.41
87	3	10	21	33	25	-47.637	47.530	1.41
87	3	11	0	54	47	-47.637	47.543	1.41
87	3	11	1	18	25	-47.638	47.543	1.41
87	3	11	3	3	22	-47.631	47.556	1.41
87	3	11	4	43	34	-47.629	47.558	1.29
87	3	11	11	31	30	-47.628	47.594	1.29
87	3	11	13	18	48	-47.624	47.609	1.29
87	3	11	14	57	7	-47.610	47.613	1.29
87	3	11	15	8	56	-47.621	47.616	1.29
87	3	11	16	50	34	-47.615	47.623	1.29
87	3	11	18	35	30	-47.616	47.618	1.29
87	3	11	21	21	53	-47.622	47.644	1.29
87	3	12	0	49	52	-47.602	47.678	1.29
87	3	12	2	35	45	-47.587	47.687	1.29

DATE			TIME(UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	3	12	5	56	10	-47.568	47.664	1.29
87	3	12	11	20	53	-47.571	47.665	1.29
87	3	12	13	9	7	-47.568	47.671	1.41
87	3	12	14	45	33	-47.557	47.668	1.41
87	3	12	14	47	26	-47.560	47.681	1.41
87	3	12	16	35	13	-47.552	47.688	1.41
87	3	12	18	8	19	-47.543	47.688	1.41
87	3	12	21	11	43	-47.531	47.679	1.41
87	3	12	22	59	1	-47.521	47.684	1.41
87	3	13	0	39	13	-47.510	47.677	1.29
87	3	13	2	13	45	-47.513	47.672	1.41
87	3	13	5	34	38	-47.514	47.670	1.41
87	3	13	11	9	44	-47.470	47.706	1.41
87	3	13	12	58	27	-47.455	47.675	1.41
87	3	13	21	1	2	-47.453	47.646	1.52
87	3	13	22	47	23	-47.446	47.633	1.52
87	3	14	10	59	2	-47.411	47.570	
87	3	14	14	20	21	-47.423	47.559	1.88
87	3	14	15	44	57	-47.423	47.557	1.76
87	3	14	17	32	14	-47.423	47.569	1.76
87	3	14	19	8	39	-47.419	47.570	1.76
87	3	14	20	50	45	-47.410	47.573	1.76
87	3	14	22	36	37	-47.394	47.560	1.64
87	3	15	0	17	45	-47.389	47.532	1.64
87	3	15	1	31	1	-47.392	47.516	1.64
87	3	15	3	17	21	-47.408	47.514	1.64
87	3	15	4	56	36	-47.415	47.517	1.64
87	3	15	10	48	14	-47.410	47.549	1.64
87	3	15	14	10	2	-47.387	47.526	1.64
87	3	15	15	22	21	-47.394	47.522	1.76
87	3	15	18	42	44	-47.413	47.511	1.76
87	3	15	20	40	54	-47.420	47.520	1.76
87	3	15	22	24	52	-47.412	47.536	1.76
87	3	16	0	6	1	-47.408	47.547	1.76
87	3	16	2	48	35	-47.393	47.550	1.76
87	3	16	4	35	24	-47.384	47.539	1.76
87	3	16	10	37	25	-47.374	47.526	1.76
87	3	16	14	5	22	-47.374	47.543	1.76
87	3	16	15	4	55	-47.368	47.556	1.76
87	3	16	16	41	48	-47.363	47.563	1.76
87	3	16	18	27	12	-47.345	47.570	1.64
87	3	16	22	8	24	-47.315	47.562	1.64
87	3	16	23	56	9	-47.308	47.542	1.64
87	3	17	1	35	24	-47.308	47.515	1.64
87	3	17	2	26	55	-47.309	47.518	1.64
87	3	17	4	14	13	-47.318	47.511	1.64
87	3	17	5	52	31	-47.316	47.520	1.64
87	3	17	10	27	6	-47.308	47.567	1.76
87	3	17	12	15	19	-47.281	47.559	1.76
87	3	17	13	55	30	-47.271	47.546	1.88

DATE			TIME(UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	3	17	16	19	39	-47.262	47.530	1.88
87	3	17	18	6	56	-47.259	47.515	1.76
87	3	17	21	58	2	-47.287	47.516	1.88
87	3	17	23	45	19	-47.282	47.550	1.88
87	3	18	1	24	34	-47.277	47.562	1.99
87	3	18	2	5	12	-47.262	47.585	1.88
87	3	18	5	26	4	-47.203	47.584	1.64
87	3	18	11	57	22	-47.143	47.522	1.64
87	3	18	13	44	39	-47.142	47.516	1.64
87	3	18	15	57	55	-47.141	47.532	1.64
87	3	18	17	44	44	-47.132	47.547	1.64
87	3	18	19	21	8	-47.117	47.564	1.64
87	3	18	21	47	10	-47.083	47.569	1.64
87	3	18	23	34	27	-47.064	47.551	1.64
87	3	19	1	9	26	-47.051	47.534	1.64
87	3	19	1	44	25	-47.048	47.528	1.64
87	3	19	3	30	45	-47.050	47.509	1.64
87	3	19	5	9	59	-47.054	47.505	1.64
87	3	19	11	46	56	-47.037	47.556	1.52
87	3	19	13	33	44	-47.015	47.572	1.52
87	3	19	15	10	8	-46.996	47.548	1.52
87	3	19	15	36	8	-46.992	47.569	1.52
87	3	19	17	23	24	-46.976	47.562	1.52
87	3	19	18	55	33	-46.964	47.545	1.52
87	3	19	21	36	41	-46.971	47.531	1.52
87	3	20	0	58	0	-46.972	47.550	1.52
87	3	20	1	23	3	-46.974	47.556	1.52
87	3	20	3	8	26	-46.959	47.581	1.52
87	3	20	4	47	40	-46.936	47.579	1.52
87	3	20	11	35	28	-46.894	47.512	1.76
87	3	20	13	23	40	-46.898	47.508	1.64
87	3	20	15	1	1	-46.902	47.497	1.64
87	3	20	18	34	37	-46.894	47.541	1.52
87	3	20	21	26	9	-46.861	47.565	1.64
87	3	21	0	53	36	-46.821	47.536	1.52
87	3	21	2	39	56	-46.806	47.525	1.52
87	3	21	4	27	12	-46.799	47.494	1.52
87	3	21	11	24	56	-46.791	47.527	1.64
87	3	21	13	12	40	-46.773	47.538	1.64
87	3	21	14	50	1	-46.756	47.544	1.64
87	3	21	14	51	54	-46.749	47.545	1.64
87	3	21	16	40	36	-46.733	47.529	1.52
87	3	21	18	13	13	-46.725	47.509	1.52
87	3	21	21	15	37	-46.736	47.480	1.64
87	3	21	23	2	24	-46.743	47.485	1.52
87	3	22	0	42	35	-46.746	47.499	1.64
87	3	22	2	18	30	-46.736	47.529	1.64
87	3	22	4	5	46	-46.720	47.533	1.52
87	3	22	5	38	51	-46.699	47.535	1.64
87	3	22	11	14	20	-46.666	47.503	1.64

DATE			TIME (UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	3	22	13	2	32	-46.667	47.493	1.64
87	3	22	14	40	49	-46.666	47.498	1.64
87	3	22	16	19	6	-46.669	47.496	1.64
87	3	22	17	51	43	-46.668	47.507	1.64
87	3	22	21	4	30	-46.656	47.521	1.64
87	3	22	22	51	17	-46.636	47.527	1.64
87	3	23	0	32	24	-46.619	47.521	1.64
87	3	23	1	57	28	-46.614	47.518	1.64
87	3	23	5	22	32	-46.608	47.480	1.52
87	3	23	14	23	59	-46.593	47.515	1.76
87	3	23	15	49	59	-46.581	47.505	1.76
87	3	23	17	36	46	-46.572	47.498	1.76
87	3	23	19	13	10	-46.569	47.476	1.76
87	3	23	20	54	16	-46.566	47.477	1.76
87	3	23	22	40	7	-46.568	47.474	1.76
87	3	24	0	20	17	-46.571	47.470	1.64
87	3	24	1	35	52	-46.570	47.487	1.64
87	3	24	3	21	43	-46.579	47.493	1.76
87	3	24	5	1	53	-46.577	47.511	1.76
87	3	24	10	52	27	-46.548	47.524	1.76
87	3	24	14	14	11	-46.548	47.516	1.76
87	3	24	15	27	54	-46.556	47.524	1.76
87	3	24	18	47	45	-46.567	47.563	1.76
87	3	24	20	43	59	-46.547	47.597	1.76
87	3	24	22	29	49	-46.534	47.590	1.76
87	3	25	0	9	59	-46.521	47.596	1.76
87	3	25	2	53	0	-46.502	47.603	1.64
87	3	25	4	39	18	-46.494	47.576	1.64
87	3	25	10	41	13	-46.477	47.606	1.76
87	3	25	14	9	6	-46.477	47.646	1.76
87	3	25	15	5	48	-46.477	47.638	1.76
87	3	25	18	31	47	-46.423	47.653	1.64
87	3	25	22	11	57	-46.392	47.612	1.64
87	3	25	23	59	41	-46.391	47.592	1.64
87	3	26	1	38	54	-46.403	47.580	1.64
87	3	26	2	31	20	-46.396	47.585	1.64
87	3	26	4	18	35	-46.398	47.581	1.64
87	3	26	5	56	52	-46.397	47.584	1.64
87	3	26	10	29	57	-46.351	47.616	1.64
87	3	26	12	19	33	-46.333	47.597	1.64
87	3	26	13	58	46	-46.330	47.577	1.64
87	3	26	14	44	7	-46.327	47.579	1.64
87	3	26	16	31	51	-46.343	47.564	1.64
87	3	26	18	11	4	-46.348	47.577	1.64
87	3	26	22	1	37	-46.344	47.626	1.64
87	3	26	23	47	26	-46.324	47.628	1.64
87	3	27	2	10	7	-46.321	47.628	1.64
87	3	27	5	30	25	-46.313	47.633	1.64
87	3	27	10	19	4	-46.279	47.630	1.64
87	3	27	12	8	12	-46.275	47.616	1.64

DATE			TIME (UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	3	27	13	48	21	-46.278	47.612	1.64
87	3	27	16	3	28	-46.281	47.626	1.64
87	3	27	17	43	9	-46.271	47.638	1.64
87	3	27	21	50	42	-46.235	47.650	1.52
87	3	27	23	37	57	-46.224	47.636	1.64
87	3	28	1	12	55	-46.229	47.624	1.52
87	3	28	1	48	49	-46.227	47.624	1.52
87	3	28	5	8	11	-46.231	47.620	1.52
87	3	28	11	50	40	-46.207	47.662	1.52
87	3	28	13	37	54	-46.203	47.678	1.52
87	3	28	15	14	17	-46.213	47.683	1.52
87	3	28	15	41	12	-46.200	47.674	1.52
87	3	28	17	28	26	-46.198	47.665	1.52
87	3	28	19	5	45	-46.195	47.659	1.52
87	3	28	21	39	45	-46.203	47.674	1.52
87	3	29	1	1	56	-46.203	47.683	1.52
87	3	29	1	27	27	-46.199	47.705	1.52
87	3	29	3	13	16	-46.199	47.703	1.52
87	3	29	4	52	28	-46.190	47.704	1.52
87	3	29	11	39	38	-46.158	47.685	1.76
87	3	29	13	27	20	-46.165	47.677	1.76
87	3	29	15	3	42	-46.163	47.703	1.64
87	3	29	15	20	14	-46.164	47.694	1.64
87	3	29	18	39	6	-46.146	47.726	1.52
87	3	29	21	29	39	-46.127	47.732	1.41
87	3	30	0	57	2	-46.103	47.718	1.52
87	3	30	2	44	44	-46.098	47.711	1.52
87	3	30	4	31	30	-46.098	47.702	1.52
87	3	31	0	39	47	-46.048	47.700	1.52
87	3	31	2	23	14	-46.050	47.720	1.52
87	3	31	4	9	31	-46.039	47.728	1.52
87	3	31	5	43	59	-46.030	47.737	1.52
87	3	31	11	24	4	-45.969	47.735	1.52
87	3	31	12	59	0	-45.969	47.725	1.52
87	3	31	14	42	27	-45.976	47.741	1.52
87	3	31	16	16	55	-45.968	47.738	1.52
87	3	31	18	2	43	-45.964	47.754	1.52
87	3	31	22	47	33	-45.926	47.759	1.41
87	4	1	0	35	43	-45.922	47.752	1.41
87	4	1	0	29	6	-45.923	47.752	1.41
87	4	1	2	1	41	-45.920	47.755	1.41
87	4	1	5	21	57	-45.917	47.747	1.41
87	4	1	11	7	13	-45.899	47.754	1.41
87	4	1	14	28	26	-45.899	47.750	1.41
87	4	1	15	55	20	-45.900	47.758	1.41
87	4	1	17	35	28	-45.902	47.769	1.52
87	4	1	19	14	11	-45.894	47.785	1.41
87	4	1	20	57	37	-45.890	47.794	1.41
87	4	1	22	37	16	-45.873	47.792	1.41
87	4	2	0	17	24	-45.860	47.782	1.41

DATE			TIME(UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		° C
87	4	2	1	40	32	-45.849	47.785	1.41
87	4	2	3	19	15	-45.839	47.783	1.29
87	4	2	4	59	23	-45.830	47.782	1.29
87	4	2	10	56	28	-45.755	47.783	1.41
87	4	2	14	17	40	-45.740	47.728	1.29
87	4	2	15	33	15	-45.746	47.730	1.29
87	4	2	17	13	23	-45.750	47.736	1.29
87	4	2	18	52	34	-45.744	47.747	1.29
87	4	2	22	26	32	-45.715	47.766	1.29
87	4	3	0	7	8	-45.699	47.749	1.29
87	4	3	1	19	24	-45.691	47.749	1.29
87	4	3	2	57	39	-45.678	47.738	1.29
87	4	3	4	37	47	-45.674	47.717	1.17
87	4	3	14	7	22	-45.650	47.706	1.29
87	4	3	18	31	24	-45.640	47.716	1.29
87	4	3	22	15	16	-45.620	47.697	1.29
87	4	3	23	56	20	-45.631	47.683	1.29
87	4	4	2	36	26	-45.661	47.681	1.17
87	4	4	4	16	6	-45.675	47.696	1.29
87	4	4	10	34	23	-45.621	47.797	1.41
87	4	4	12	15	56	-45.592	47.778	1.29
87	4	4	13	56	3	-45.575	47.754	
87	4	4	14	48	57	-45.580	47.725	1.29
87	4	4	16	30	1	-45.568	47.697	1.41
87	4	4	18	9	12	-45.580	47.668	1.29
87	4	4	22	5	20	-45.614	47.694	1.29
87	4	4	23	45	28	-45.605	47.718	1.29
87	4	5	1	26	32	-45.582	47.744	1.29
87	4	5	2	14	42	-45.575	47.770	1.29
87	4	5	5	34	57	-45.508	47.758	1.41
87	4	5	10	22	34	-45.468	47.683	1.41
87	4	5	12	5	31	-45.470	47.663	1.41
87	4	5	5	34	57	-45.508	47.758	1.29
87	4	5	13	46	6	-45.479	47.666	1.41
87	4	5	16	8	44	-45.477	47.691	1.29
87	4	5	17	48	51	-45.460	47.705	1.29
87	4	5	21	53	58	-45.402	47.706	1.29
87	4	5	23	33	36	-45.381	47.683	1.29
87	4	6	1	16	34	-45.374	47.669	1.29
87	4	6	1	53	24	-45.364	47.656	1.29
87	4	6	3	32	6	-45.357	47.637	1.29
87	4	6	1	16	34	-45.374	47.669	1.41
87	4	6	5	13	10	-45.364	47.609	1.29
87	4	6	11	54	6	-45.357	47.670	1.41
87	4	6	13	35	9	-45.332	47.695	1.41
87	4	6	15	46	26	-45.294	47.681	1.41
87	4	6	17	26	33	-45.268	47.651	1.29
87	4	6	19	5	44	-45.266	47.613	1.29
87	4	6	21	43	28	-45.282	47.584	1.29
87	4	7	1	5	7	-45.300	47.623	1.17

DATE			TIME (UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	4	7	1	32	2	-45.301	47.631	1.17
87	4	7	3	10	44	-45.292	47.655	1.29
87	4	7	4	50	51	-45.269	47.660	1.29
87	4	7	13	24	36	-45.207	47.587	1.41
87	4	7	15	3	45	-45.215	47.570	1.41
87	4	7	15	25	0	-45.218	47.577	1.41
87	4	7	18	43	49	-45.233	47.587	1.41
87	4	7	21	32	52	-45.232	47.613	1.29
87	4	7	23	12	59	-45.216	47.633	1.41
87	4	8	0	54	2	-45.195	47.613	1.29
87	4	8	2	48	47	-45.173	47.587	1.29
87	4	8	4	28	53	-45.173	47.553	1.41
87	4	8	13	13	30	-45.230	47.597	1.41
87	4	8	14	53	7	-45.193	47.615	1.41
87	4	8	15	2	34	-45.204	47.611	1.41
87	4	8	16	44	6	-45.163	47.606	1.41
87	4	8	18	22	47	-45.131	47.591	1.52
87	4	8	21	21	45	-45.108	47.530	1.29
87	4	8	23	2	20	-45.101	47.494	1.41
87	4	8	23	2	20	-45.101	47.494	1.41
87	4	9	0	43	23	-45.116	47.483	1.41
87	4	9	2	27	45	-45.130	47.480	1.41
87	4	9	4	7	23	-45.133	47.497	1.29
87	4	9	5	47	29	-45.128	47.524	1.41
87	4	9	11	22	15	-45.057	47.567	1.64
87	4	9	5	47	29	-45.128	47.524	1.64
87	4	9	13	2	49	-45.030	47.554	1.64
87	4	9	14	42	26	-45.016	47.514	1.64
87	4	9	16	21	36	-45.028	47.486	1.64
87	4	9	18	1	14	-45.041	47.468	1.52
87	4	9	21	11	32	-45.067	47.496	1.52
87	4	9	22	50	41	-45.067	47.523	1.52
87	4	10	0	32	13	-45.054	47.545	1.52
87	4	10	2	6	11	-45.031	47.567	1.52
87	4	10	5	26	23	-44.978	47.543	1.52
87	4	10	11	11	3	-44.994	47.478	1.64
87	4	10	12	52	34	-45.016	47.474	1.64
87	4	10	14	32	11	-45.021	47.503	1.64
87	4	10	15	59	33	-45.027	47.531	1.64
87	4	10	17	40	7	-45.019	47.556	1.52
87	4	10	21	0	47	-44.987	47.564	1.52
87	4	10	22	40	25	-44.972	47.546	1.52
87	4	11	0	21	27	-44.967	47.532	1.52
87	4	11	1	44	33	-44.964	47.542	1.41
87	4	11	3	24	11	-44.962	47.528	1.41
87	4	11	5	4	17	-44.964	47.535	1.41
87	4	11	11	0	16	-44.930	47.574	1.52
87	4	11	14	21	25	-44.893	47.592	1.41
87	4	11	17	18	29	-44.864	47.576	1.41
87	4	11	18	57	38	-44.861	47.561	1.41

DATE			TIME (UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	4	11	22	29	38	-44.855	47.559	1.41
87	4	12	0	10	41	-44.850	47.561	1.41
87	4	12	3	2	4	-44.838	47.598	1.41
87	4	12	4	42	10	-44.819	47.603	1.41
87	4	12	10	49	1	-44.774	47.618	1.29
87	4	12	14	10	37	-44.772	47.614	1.41
87	4	12	15	15	46	-44.767	47.611	1.29
87	4	12	18	36	26	-44.737	47.650	1.41
87	4	12	22	19	16	-44.712	47.676	1.41
87	4	12	23	59	21	-44.696	47.663	1.41
87	4	13	2	40	49	-44.680	47.658	1.29
87	4	13	4	19	30	-44.668	47.649	1.29
87	4	13	10	38	8	-44.661	47.654	1.29
87	4	13	12	20	6	-44.645	47.657	1.29
87	4	13	14	0	40	-44.632	47.673	1.41
87	4	13	16	35	31	-44.605	47.661	1.41
87	4	13	18	14	39	-44.592	47.650	1.41
87	4	13	22	7	52	-44.578	47.646	1.41
87	4	13	23	48	54	-44.573	47.634	1.41
87	4	14	1	31	21	-44.562	47.624	1.41
87	4	14	2	19	1	-44.570	47.634	1.41
87	4	14	5	39	12	-44.560	47.638	1.41
87	4	14	10	27	38	-44.506	47.635	1.41
87	4	14	5	39	12	-44.560	47.638	1.41
87	4	14	13	50	38	-44.490	47.599	1.41
87	4	14	16	13	13	-44.481	47.594	1.41
87	4	14	21	57	51	-44.450	47.581	1.41
87	4	14	23	37	56	-44.429	47.559	1.41
87	4	15	1	19	54	-44.417	47.536	1.41
87	4	15	1	57	40	-44.408	47.535	1.41
87	4	15	3	37	17	-44.410	47.522	1.41
87	4	15	5	17	50	-44.410	47.503	1.41
87	4	15	13	39	12	-44.357	47.432	1.41
87	4	15	15	51	23	-44.357	47.406	1.41
87	4	15	19	11	5	-44.344	47.377	1.41
87	4	15	21	47	20	-44.325	47.365	1.41
87	4	16	1	8	27	-44.305	47.285	1.41
87	4	16	3	14	58	-44.304	47.248	1.41
87	4	16	1	8	27	-44.305	47.285	1.41
87	4	16	4	55	31	-44.303	47.227	1.41
87	4	16	11	47	39	-44.220	47.133	1.41
87	4	16	13	27	44	-44.198	47.124	1.41
87	4	16	15	29	31	-44.196	47.087	1.29
87	4	16	17	10	5	-44.181	47.070	1.29
87	4	16	18	49	41	-44.158	47.066	1.29
87	4	16	21	36	48	-44.141	47.035	1.29
87	4	16	23	16	25	-44.128	47.048	1.29
87	4	17	0	57	26	-44.105	47.028	1.29
87	4	17	2	53	34	-44.092	47.023	1.29
87	4	17	4	33	39	-44.076	47.002	1.29

DATE			TIME(UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	4	17	11	37	5	-44.053	46.988	1.41
87	4	17	13	17	38	-44.042	47.001	1.41
87	4	17	14	56	17	-44.034	46.998	1.41
87	4	17	15	7	37	-44.032	47.000	1.41
87	4	17	16	49	6	-44.018	46.988	1.41
87	4	17	18	27	46	-44.008	46.999	1.41
87	4	17	21	26	12	-44.002	46.988	1.41
87	4	17	23	5	19	-44.006	46.991	1.41
87	4	17	23	5	19	-44.006	46.991	1.29
87	4	18	0	47	17	-44.004	47.005	1.29
87	4	18	2	32	33	-43.998	47.020	1.29
87	4	18	4	11	40	-43.983	47.019	1.41
87	4	18	5	52	41	-43.967	47.014	1.41
87	4	18	11	25	28	-43.930	46.998	1.64
87	4	18	5	52	41	-43.967	47.014	1.76
87	4	18	13	6	57	-43.928	46.983	1.76
87	4	18	14	46	32	-43.932	46.975	1.76
87	4	18	16	27	5	-43.931	46.981	1.64
87	4	18	18	6	41	-43.933	46.984	1.64
87	4	18	21	15	2	-43.920	47.009	1.76
87	4	18	22	54	38	-43.908	47.019	1.76
87	4	19	0	35	38	-43.895	47.007	1.76
87	4	19	2	10	31	-43.892	47.001	1.88
87	4	19	5	31	8	-43.885	46.964	1.76
87	4	19	11	14	44	-43.899	46.999	1.88
87	4	19	12	56	12	-43.886	47.030	1.76
87	4	19	14	35	48	-43.872	47.036	1.64
87	4	19	16	5	57	-43.861	47.023	1.76
87	4	19	17	45	4	-43.855	47.010	1.88
87	4	19	21	4	43	-43.850	47.013	1.88
87	4	19	22	44	18	-43.849	47.011	1.88
87	4	20	0	24	50	-43.847	47.014	1.88
87	4	20	1	49	19	-43.851	47.027	2.23
87	4	20	3	28	54	-43.853	47.028	2.23
87	4	20	5	8	30	-43.851	47.019	2.23
87	4	20	11	4	21	-43.809	47.007	2.46
87	4	20	12	45	21	-43.788	47.014	2.34
87	4	20	14	25	25	-43.777	46.990	2.23
87	4	20	15	42	50	-43.783	46.985	2.34
87	4	20	17	23	50	-43.787	46.974	2.34
87	4	20	19	2	29	-43.799	46.983	2.34
87	4	20	22	33	0	-43.804	46.974	2.23
87	4	21	0	13	32	-43.793	46.975	2.23
87	4	21	3	6	45	-43.764	46.971	2.23
87	4	21	4	46	49	-43.754	46.942	2.34
87	4	21	10	53	3	-43.770	46.914	2.34
87	4	21	14	15	2	-43.773	46.924	2.11
87	4	21	15	21	35	-43.774	46.926	2.11
87	4	21	18	41	13	-43.778	46.921	2.11
87	4	21	22	21	37	-43.763	46.947	1.99

DATE			TIME (UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	4	22	0	3	5	-43.751	46.936	1.88
87	4	22	2	45	26	-43.745	46.939	1.88
87	4	22	4	25	1	-43.742	46.927	1.88
87	4	22	10	42	5	-43.757	46.969	1.99
87	4	22	12	24	1	-43.734	46.984	1.99
87	4	22	14	4	32	-43.718	46.999	1.88
87	4	22	14	59	45	-43.714	46.991	1.88
87	4	22	16	40	16	-43.698	46.984	1.88
87	4	22	18	19	51	-43.698	46.969	1.76
87	4	22	22	12	3	-43.715	46.981	1.76
87	4	22	23	52	6	-43.718	47.002	1.76
87	4	23	1	34	30	-43.710	47.016	1.76
87	4	23	2	24	3	-43.703	47.037	1.76
87	4	23	4	3	38	-43.688	47.040	1.76
87	4	23	5	44	9	-43.669	47.038	1.88
87	4	23	10	31	33	-43.674	47.018	1.99
87	4	23	12	13	28	-43.681	47.022	1.88
87	4	23	5	44	9	-43.669	47.038	1.88
87	4	23	13	53	31	-43.692	47.034	1.99
87	4	23	16	18	24	-43.687	47.066	1.88
87	4	23	17	58	55	-43.679	47.079	1.88
87	4	23	22	1	28	-43.663	47.084	1.88
87	4	24	1	22	59	-43.658	47.095	1.76
87	4	24	2	2	37	-43.661	47.104	1.88
87	4	24	3	41	15	-43.658	47.117	1.76
87	4	24	5	21	46	-43.651	47.120	1.88
87	4	24	12	2	24	-43.638	47.140	1.99
87	4	24	13	42	55	-43.636	47.160	1.88
87	4	24	15	56	57	-43.628	47.187	1.88
87	4	24	17	37	0	-43.617	47.209	1.88
87	4	24	19	15	10	-43.607	47.227	1.88
87	4	24	21	50	26	-43.592	47.230	1.76
87	4	25	1	12	25	-43.589	47.234	1.76
87	4	25	1	41	12	-43.590	47.249	1.76
87	4	25	3	19	50	-43.592	47.274	1.76
87	4	25	1	12	25	-43.589	47.234	1.99
87	4	25	5	0	50	-43.576	47.283	1.76
87	4	25	11	51	24	-43.528	47.307	2.11
87	4	25	13	31	55	-43.531	47.313	2.11
87	4	25	15	35	5	-43.529	47.341	1.99
87	4	25	17	15	8	-43.526	47.355	1.88
87	4	25	18	54	15	-43.523	47.377	2.11
87	4	25	21	39	54	-43.506	47.403	1.88
87	4	25	23	19	29	-43.504	47.408	1.88
87	4	25	23	19	29	-43.504	47.408	1.88
87	4	26	1	1	25	-43.504	47.427	1.88
87	4	26	2	57	59	-43.499	47.444	1.88
87	4	26	4	38	2	-43.497	47.457	1.88
87	4	26	11	40	51	-43.488	47.529	1.99
87	4	26	13	21	21	-43.486	47.549	1.99

DATE			TIME(UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	4	26	15	0	55	-43.481	47.561	1.99
87	4	26	18	32	20	-43.477	47.594	1.88
87	4	26	21	29	17	-43.479	47.636	1.88
87	4	26	23	8	52	-43.476	47.656	1.88
87	4	27	0	50	19	-43.472	47.670	1.76
87	4	27	2	36	58	-43.465	47.697	1.76
87	4	27	4	16	3	-43.458	47.711	1.64
87	4	27	5	57	31	-43.454	47.723	1.76
87	4	27	11	30	8	-43.446	47.785	1.99
87	4	27	13	10	38	-43.449	47.808	1.99
87	4	27	14	50	12	-43.448	47.829	2.11
87	4	27	14	50	40	-43.450	47.835	2.11
87	4	27	16	32	7	-43.444	47.861	1.76
87	4	27	18	11	12	-43.445	47.877	1.76
87	4	27	21	18	32	-43.421	47.914	1.76
87	4	27	22	58	6	-43.426	47.914	2.23
87	4	28	0	38	36	-43.430	47.920	2.58
87	4	28	2	14	51	-43.431	47.938	2.69
87	4	28	5	35	23	-43.432	47.953	2.69
87	4	28	11	18	51	-43.449	47.973	2.81
87	4	28	5	35	23	-43.432	47.953	2.69
87	4	28	12	59	49	-43.457	47.971	2.81
87	4	28	14	39	51	-43.469	47.979	2.69
87	4	28	16	9	58	-43.473	48.001	2.69
87	4	28	17	49	59	-43.472	48.016	2.69
87	4	28	21	7	41	-43.468	48.022	2.69
87	4	28	22	47	42	-43.462	48.018	2.69
87	4	29	0	28	13	-43.464	48.017	2.69
87	4	29	1	54	5	-43.467	48.010	2.69
87	4	29	3	32	42	-43.467	48.016	2.69
87	4	29	5	13	12	-43.464	48.009	2.58
87	4	29	11	8	1	-43.435	47.995	2.81
87	4	29	12	48	59	-43.427	48.004	2.69
87	4	29	14	29	0	-43.416	48.012	2.69
87	4	29	15	48	17	-43.409	48.008	2.69
87	4	29	17	28	19	-43.392	48.016	2.69
87	4	29	19	6	56	-43.382	48.028	2.69
87	4	29	22	36	26	-43.349	48.067	2.58
87	4	30	0	17	24	-43.332	48.084	2.58
87	4	30	1	32	26	-43.323	48.123	2.58
87	4	30	3	11	31	-43.326	48.132	2.46
87	4	30	4	51	32	-43.321	48.145	2.46
87	4	30	10	57	11	-43.302	48.217	2.69
87	4	30	14	18	38	-43.303	48.230	2.58
87	4	30	15	26	6	-43.296	48.231	2.58
87	4	30	17	7	4	-43.296	48.252	2.58
87	4	30	18	45	12	-43.296	48.281	2.58
87	4	30	22	26	29	-43.287	48.369	2.46
87	5	1	0	7	26	-43.271	48.394	2.34
87	5	1	2	49	44	-43.253	48.440	2.34

DATE			TIME (UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	5	1	4	29	45	-43.233	48.448	2.46
87	5	1	10	46	15	-43.194	48.496	2.46
87	5	1	14	8	10	-43.200	48.524	2.34
87	5	1	15	3	51	-43.198	48.549	2.34
87	5	1	18	24	50	-43.184	48.633	2.23
87	5	1	22	15	4	-43.137	48.696	2.23
87	5	1	23	55	33	-43.123	48.697	2.23
87	5	2	2	27	56	-43.131	48.722	2.23
87	5	2	4	7	29	-43.135	48.751	2.34
87	5	2	10	34	48	-43.091	48.871	2.46
87	5	2	12	17	10	-43.091	48.872	2.46
87	5	2	13	55	18	-43.088	48.893	2.46
87	5	2	16	23	26	-43.087	48.909	2.46
87	5	2	18	2	31	-43.086	48.932	2.46
87	5	2	22	4	31	-43.063	48.998	2.46
87	5	2	23	45	1	-43.045	49.005	2.34
87	5	3	1	26	55	-43.038	49.027	2.46
87	5	3	5	26	34	-43.018	49.086	2.58
87	5	3	10	24	14	-42.958	49.176	2.58
87	5	3	12	6	8	-42.959	49.195	2.58
87	5	3	5	26	34	-43.018	49.086	2.58
87	5	3	13	47	5	-42.949	49.219	2.58
87	5	3	16	2	0	-42.946	49.258	2.46
87	5	3	17	41	33	-42.950	49.280	2.46
87	5	3	21	53	29	-42.955	49.367	2.46
87	5	3	23	33	30	-42.937	49.383	2.58
87	5	4	1	15	52	-42.932	49.379	2.58
87	5	4	1	45	7	-42.925	49.396	2.58
87	5	4	3	24	12	-42.930	49.382	2.58
87	5	4	1	15	52	-42.932	49.379	2.81
87	5	4	5	4	41	-42.939	49.385	2.58
87	5	4	11	55	5	-42.968	49.441	2.81
87	5	4	13	36	2	-42.967	49.445	2.81
87	5	4	15	39	38	-42.971	49.447	2.69
87	5	4	17	20	7	-42.975	49.439	2.69
87	5	4	21	43	21	-42.991	49.443	2.69
87	5	5	1	4	18	-43.005	49.464	2.69
87	5	5	1	24	7	-43.013	49.468	2.69
87	5	5	3	2	42	-43.017	49.488	2.69
87	5	5	1	4	18	-43.005	49.464	2.81
87	5	5	4	42	42	-43.016	49.495	2.69
87	5	5	11	44	23	-43.016	49.516	2.81
87	5	5	13	24	23	-43.025	49.517	2.81
87	5	5	15	18	3	-43.041	49.537	2.81
87	5	5	16	58	32	-43.051	49.538	2.81
87	5	5	18	38	3	-43.053	49.554	2.69
87	5	5	21	32	7	-43.061	49.599	2.69
87	5	5	23	12	7	-43.065	49.603	2.69
87	5	6	0	54	28	-43.074	49.613	2.58
87	5	6	2	41	33	-43.085	49.616	2.58

DATE			TIME (UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	5	6	4	21	5	-43.095	49.623	2.58
87	5	6	11	33	37	-43.126	49.700	2.46
87	5	6	14	55	31	-43.117	49.731	2.58
87	5	6	16	36	28	-43.120	49.725	2.58
87	5	6	18	16	29	-43.131	49.710	2.58
87	5	6	21	21	52	-43.158	49.687	2.58
87	5	6	23	0	56	-43.184	49.686	2.58
87	5	7	0	42	22	-43.211	49.713	2.58
87	5	7	2	19	32	-43.233	49.733	2.58
87	5	7	3	59	32	-43.241	49.758	2.46
87	5	7	5	40	29	-43.249	49.775	2.46
87	5	7	11	22	27	-43.280	49.767	2.46
87	5	7	5	40	29	-43.249	49.775	2.46
87	5	7	13	3	51	-43.308	49.757	2.46
87	5	7	14	42	55	-43.341	49.781	2.46
87	5	7	16	14	53	-43.348	49.800	2.46
87	5	7	17	54	25	-43.355	49.819	2.34
87	5	7	21	11	7	-43.361	49.853	2.34
87	5	7	22	50	39	-43.367	49.850	2.34
87	5	8	0	32	4	-43.378	49.860	2.34
87	5	8	1	58	23	-43.383	49.869	2.34
87	5	8	5	18	24	-43.402	49.893	2.46
87	5	8	11	11	41	-43.436	49.926	2.46
87	5	8	12	52	37	-43.459	49.920	2.46
87	5	8	14	32	9	-43.474	49.944	2.46
87	5	8	15	52	48	-43.482	49.963	2.46
87	5	8	17	32	48	-43.488	49.976	2.46
87	5	8	21	0	49	-43.496	50.005	2.46
87	5	8	22	39	52	-43.519	49.999	2.46
87	5	9	0	20	49	-43.532	50.011	2.46
87	5	9	1	37	14	-43.535	50.017	2.46
87	5	9	3	15	49	-43.538	50.042	2.46
87	5	9	4	56	46	-43.535	50.046	2.46
87	5	9	11	0	54	-43.541	50.082	2.81
87	5	9	12	42	19	-43.551	50.078	2.93
87	5	9	14	21	51	-43.571	50.090	2.93
87	5	9	15	31	11	-43.566	50.102	2.93
87	5	9	17	11	11	-43.573	50.120	3.05
87	5	9	18	49	46	-43.577	50.138	3.05
87	5	9	22	30	2	-43.580	50.203	3.05
87	5	10	0	10	30	-43.567	50.224	3.05
87	5	10	2	54	39	-43.558	50.243	2.93
87	5	10	4	34	38	-43.559	50.245	2.93
87	5	10	10	49	37	-43.595	50.295	2.81
87	5	10	14	10	32	-43.621	50.330	2.81
87	5	10	15	9	2	-43.630	50.354	2.81
87	5	10	18	29	1	-43.624	50.411	2.93
87	5	10	22	18	42	-43.643	50.464	2.93
87	5	10	23	59	9	-43.646	50.481	3.05
87	5	11	2	32	54	-43.668	50.506	3.05

DATE			TIME(UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	5	11	4	12	53	-43.686	50.532	3.05
87	5	11	10	38	39	-43.717	50.668	3.40
87	5	11	14	0	2	-43.723	50.725	3.28
87	5	11	14	46	43	-43.721	50.733	3.16
87	5	11	16	28	7	-43.725	50.760	3.05
87	5	11	18	7	9	-43.728	50.772	2.93
87	5	11	22	8	9	-43.734	50.801	2.93
87	5	11	23	48	8	-43.742	50.813	2.81
87	5	12	2	10	33	-43.763	50.848	2.93
87	5	12	3	51	0	-43.769	50.873	3.05
87	5	12	5	31	56	-43.766	50.917	3.05
87	5	12	10	27	10	-43.741	50.973	3.16
87	5	12	12	9	31	-43.724	50.986	3.16
87	5	12	5	31	56	-43.766	50.917	3.40
87	5	12	13	49	30	-43.726	51.000	3.16
87	5	12	16	5	48	-43.722	51.029	3.52
87	5	12	17	45	48	-43.721	51.048	3.63
87	5	12	21	57	39	-43.716	51.106	3.63
87	5	12	23	37	10	-43.708	51.124	3.52
87	5	13	1	19	31	-43.700	51.157	3.40
87	5	13	1	50	10	-43.703	51.181	3.40
87	5	13	3	28	44	-43.692	51.207	3.28
87	5	13	5	9	40	-43.687	51.247	3.28
87	5	13	10	16	14	-43.660	51.315	3.63
87	5	13	11	58	34	-43.674	51.338	3.75
87	5	13	13	39	2	-43.689	51.363	3.98
87	5	13	15	44	29	-43.696	51.423	4.10
87	5	13	17	24	28	-43.699	51.466	4.22
87	5	13	21	46	14	-43.695	51.594	4.22
87	5	13	23	27	10	-43.683	51.623	4.22
87	5	14	1	9	2	-43.685	51.653	4.22
87	5	14	1	28	22	-43.691	51.655	4.22
87	5	14	3	7	24	-43.688	51.684	3.75
87	5	14	1	9	2	-43.685	51.653	3.63
87	5	14	4	47	51	-43.693	51.704	3.63
87	5	14	11	47	34	-43.726	51.837	3.63
87	5	14	13	28	28	-43.733	51.872	3.52
87	5	14	15	22	35	-43.725	51.912	3.40
87	5	14	17	2	33	-43.721	51.936	3.28
87	5	14	18	41	35	-43.720	51.969	3.16
87	5	14	21	35	35	-43.716	52.015	3.05
87	5	15	0	57	53	-43.723	52.056	3.05
87	5	15	2	45	24	-43.739	52.101	3.05
87	5	15	4	25	51	-43.732	52.132	2.93
87	5	15	11	36	50	-43.715	52.254	2.93
87	5	15	13	17	45	-43.725	52.273	2.93
87	5	15	15	1	1	-43.723	52.308	2.93
87	5	15	18	20	1	-43.724	52.374	2.93
87	5	15	21	25	21	-43.715	52.447	2.93
87	5	16	0	47	39	-43.700	52.504	2.93

DATE			TIME (UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	5	16	2	24	48	-43.709	52.538	2.93
87	5	16	0	47	39	-43.700	52.504	2.93
87	5	16	4	4	18	-43.711	52.557	2.93
87	5	16	11	26	8	-43.727	52.751	2.93
87	5	16	13	6	35	-43.720	52.792	2.81
87	5	16	14	38	32	-43.715	52.817	2.81
87	5	16	16	19	27	-43.720	52.847	2.81
87	5	16	17	58	57	-43.736	52.867	2.81
87	5	16	21	14	39	-43.761	52.951	2.69
87	5	16	22	53	41	-43.777	53.004	2.69
87	5	17	0	36	1	-43.781	53.054	2.69
87	5	17	2	2	47	-43.792	53.107	2.69
87	5	17	3	42	17	-43.794	53.158	2.58
87	5	17	5	23	12	-43.800	53.191	2.58
87	5	17	11	14	58	-43.868	53.318	2.34
87	5	17	5	23	12	-43.800	53.191	2.23
87	5	17	12	55	52	-43.898	53.367	2.34
87	5	17	14	35	22	-43.930	53.422	2.34
87	5	17	15	57	25	-43.926	53.466	2.34
87	5	17	17	37	24	-43.932	53.510	2.58
87	5	17	22	43	27	-43.955	53.601	2.81
87	5	18	0	24	50	-43.968	53.633	3.05
87	5	18	1	41	42	-43.979	53.650	2.93
87	5	18	5	0	42	-44.025	53.719	2.93
87	5	18	11	4	16	-44.077	53.911	2.69
87	5	18	12	45	10	-44.080	53.952	3.16
87	5	18	14	24	40	-44.088	53.980	3.28
87	5	18	15	35	52	-44.094	53.996	3.28
87	5	18	17	15	50	-44.113	54.005	3.40
87	5	18	20	53	12	-44.179	54.072	3.16
87	5	18	22	33	10	-44.203	54.120	2.93
87	5	19	0	14	5	-44.214	54.204	2.81
87	5	19	1	20	34	-44.220	54.252	2.58
87	5	19	2	59	7	-44.199	54.303	2.58
87	5	19	4	39	5	-44.187	54.364	2.69
87	5	19	10	53	30	-44.183	54.427	2.81
87	5	19	12	34	24	-44.209	54.449	2.69
87	5	19	14	14	22	-44.232	54.469	2.69
87	5	19	15	13	19	-44.251	54.505	2.69
87	5	19	16	53	45	-44.269	54.555	2.58
87	5	19	18	33	14	-44.273	54.580	2.69
87	5	19	20	42	26	-44.277	54.666	2.69
87	5	19	22	21	56	-44.279	54.698	2.69
87	5	20	2	37	30	-44.280	54.723	2.46
87	5	20	4	17	28	-44.296	54.726	2.34
87	5	20	10	42	15	-44.383	54.837	1.88
87	5	20	12	23	9	-44.383	54.885	1.76
87	5	20	14	3	36	-44.373	54.924	1.88
87	5	20	14	51	41	-44.370	54.938	1.64
87	5	20	18	11	38	-44.352	54.962	1.64

DATE			TIME(UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	5	20	22	11	39	-44.381	54.962	1.88
87	5	20	23	52	6	-44.396	54.988	1.88
87	5	20	23	52	34	-44.397	54.989	1.88
87	5	21	2	15	55	-44.411	55.025	1.88
87	5	21	3	55	25	-44.409	55.058	1.88
87	5	21	10	31	30	-44.394	55.117	1.99
87	5	21	13	53	48	-44.400	55.131	2.11
87	5	21	14	29	38	-44.404	55.140	2.11
87	5	21	16	10	33	-44.422	55.158	1.88
87	5	21	17	50	3	-44.444	55.177	1.99
87	5	21	22	0	55	-44.462	55.270	1.99
87	5	21	23	41	21	-44.454	55.292	1.99
87	5	22	1	54	20	-44.442	55.310	1.88
87	5	22	3	34	18	-44.441	55.301	1.99
87	5	22	5	14	45	-44.453	55.290	1.99
87	5	22	10	20	18	-44.491	55.335	1.99
87	5	22	5	14	45	-44.453	55.290	2.34
87	5	22	13	42	6	-44.501	55.391	2.23
87	5	22	15	48	57	-44.491	55.406	2.46
87	5	22	17	28	27	-44.480	55.411	2.69
87	5	22	21	49	40	-44.478	55.394	2.69
87	5	22	23	30	34	-44.483	55.376	2.69
87	5	23	1	32	42	-44.487	55.364	2.69
87	5	23	4	52	37	-44.492	55.354	2.58
87	5	23	10	9	28	-44.462	55.358	2.34
87	5	23	11	51	19	-44.459	55.339	2.34
87	5	23	13	31	17	-44.452	55.332	2.34
87	5	23	17	7	14	-44.459	55.328	2.11
87	5	23	18	45	47	-44.467	55.338	2.11
87	5	23	21	39	18	-44.462	55.354	1.88
87	5	23	23	19	16	-44.457	55.359	1.76
87	5	24	1	1	35	-44.449	55.358	1.76
87	5	24	1	11	58	-44.451	55.366	1.76
87	5	24	4	30	57	-44.446	55.369	1.64
87	5	24	9	57	42	-44.466	55.395	1.64
87	5	24	11	40	1	-44.470	55.417	1.64
87	5	24	13	20	56	-44.475	55.427	1.64
87	5	24	13	20	56	-44.475	55.427	1.88
87	5	24	15	4	39	-44.476	55.445	1.88
87	5	24	16	45	33	-44.480	55.454	1.88
87	5	24	18	24	34	-44.487	55.468	1.99
87	5	24	21	29	23	-44.478	55.487	2.11
87	5	24	23	8	52	-44.466	55.484	2.11
87	5	25	0	50	14	-44.462	55.497	1.99
87	5	25	2	28	47	-44.452	55.513	1.99
87	5	25	0	50	14	-44.462	55.497	1.64
87	5	25	4	8	44	-44.441	55.508	1.99
87	5	25	11	29	35	-44.437	55.544	1.52
87	5	25	13	10	1	-44.437	55.563	1.41
87	5	25	13	10	1	-44.437	55.563	1.41

DATE			TIME(UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	5	25	14	42	54	-44.435	55.596	1.41
87	5	25	18	3	17	-44.421	55.646	1.52
87	5	25	21	17	32	-44.438	55.698	1.52
87	5	26	0	39	20	-44.472	55.760	1.64
87	5	26	2	7	2	-44.489	55.800	1.64
87	5	26	3	46	59	-44.501	55.834	1.52
87	5	26	11	18	10	-44.576	55.987	1.64
87	5	26	3	46	59	-44.501	55.834	1.64
87	5	26	12	59	4	-44.609	56.005	1.64
87	5	26	16	1	59	-44.670	56.079	1.64
87	5	26	17	41	28	-44.708	56.109	1.64
87	5	26	21	7	1	-44.755	56.180	1.64
87	5	27	0	28	48	-44.810	56.233	1.99
87	5	27	1	46	8	-44.836	56.250	2.34
87	5	27	3	25	8	-44.861	56.281	2.34
87	5	27	5	6	58	-44.897	56.301	3.40
87	5	27	11	7	37	-44.973	56.457	2.93
87	5	27	5	6	58	-44.897	56.301	3.05
87	5	27	12	48	2	-44.997	56.485	2.93
87	5	27	14	27	31	-45.019	56.547	3.05
87	5	27	15	40	7	-45.024	56.574	3.28
87	5	27	17	19	35	-45.040	56.617	3.16
87	5	27	20	56	27	-45.097	56.731	3.40
87	5	27	22	36	52	-45.115	56.777	3.28
87	5	28	0	17	46	-45.140	56.853	3.05
87	5	28	1	25	11	-45.150	56.898	2.81
87	5	28	3	3	43	-45.164	56.976	2.58
87	5	28	4	44	36	-45.164	57.019	2.34
87	5	28	10	56	35	-45.187	57.232	2.58
87	5	28	12	37	0	-45.197	57.281	2.58
87	5	28	14	16	29	-45.203	57.335	2.58
87	5	28	15	17	46	-45.205	57.389	2.69
87	5	28	16	58	40	-45.211	57.455	2.69
87	5	28	18	36	44	-45.213	57.518	2.58
87	5	28	20	45	54	-45.229	57.596	2.58
87	5	28	22	25	50	-45.218	57.637	2.69
87	5	29	0	6	43	-45.224	57.687	2.69
87	5	29	1	3	18	-45.245	57.714	2.69
87	5	29	2	42	17	-45.245	57.769	2.69
87	5	29	4	22	14	-45.247	57.838	2.81
87	5	29	10	45	58	-45.196	58.123	2.81
87	5	29	12	26	50	-45.188	58.176	2.81
87	5	29	14	6	19	-45.191	58.224	2.81
87	5	29	14	55	48	-45.195	58.245	2.81
87	5	29	16	36	41	-45.205	58.292	2.81
87	5	29	18	15	41	-45.221	58.369	2.81
87	5	29	20	35	42	-45.219	58.481	3.05
87	5	29	22	14	13	-45.211	58.557	3.05
87	5	29	23	56	3	-45.193	58.609	3.05
87	5	30	4	0	42	-45.177	58.726	3.40

DATE			TIME (UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		°C
87	5	30	10	34	47	-45.186	58.956	3.75
87	5	30	12	15	40	-45.187	59.028	3.87
87	5	30	13	55	36	-45.188	59.083	3.87
87	5	30	14	34	44	-45.183	59.117	3.98
87	5	30	17	54	9	-45.164	59.215	4.10
87	5	30	20	25	0	-45.163	59.292	4.10
87	5	30	22	4	0	-45.156	59.344	4.10
87	5	30	23	44	52	-45.155	59.399	4.10
87	5	31	1	59	13	-45.154	59.476	4.22
87	5	31	3	38	41	-45.146	59.518	4.10
87	5	31	10	23	35	-45.136	59.681	4.10
87	5	31	12	4	56	-45.138	59.709	4.22
87	5	31	13	44	52	-45.136	59.732	4.22
87	5	31	14	12	12	-45.140	59.748	4.22
87	5	31	15	53	5	-45.139	59.771	4.45
87	5	31	17	33	1	-45.145	59.788	4.45
87	5	31	20	14	13	-45.135	59.833	4.34
87	5	31	21	53	12	-45.136	59.849	4.34
87	6	1	1	37	7	-45.131	59.885	4.22
87	6	1	3	16	35	-45.135	59.891	4.10
87	6	1	10	12	48	-45.173	59.915	3.75
87	6	1	13	33	36	-45.164	59.921	3.75
87	6	1	15	31	55	-45.165	59.927	3.75
87	6	1	17	11	23	-45.173	59.936	3.52
87	6	1	21	42	53	-45.195	59.993	3.98
87	6	1	23	23	17	-45.201	60.020	4.10
87	6	2	1	16	25	-45.217	60.037	4.10
87	6	2	4	35	20	-45.234	60.053	3.98
87	6	2	10	2	0	-45.274	60.050	3.87
87	6	2	13	23	16	-45.305	60.033	3.75
87	6	2	15	9	19	-45.318	60.040	3.75
87	6	2	16	49	15	-45.335	60.024	3.63
87	6	2	18	28	15	-45.347	60.030	3.52
87	6	2	21	32	5	-45.358	60.015	3.40
87	6	2	23	12	29	-45.373	60.012	3.52
87	6	3	0	54	18	-45.384	60.001	3.52
87	6	3	2	33	18	-45.401	59.998	3.52
87	6	3	4	13	42	-45.417	59.995	3.52
87	6	3	4	13	42	-45.417	59.995	3.52
87	6	3	16	28	7	-45.512	59.913	3.63
87	6	3	21	22	15	-45.557	59.894	3.63
87	6	3	23	1	42	-45.564	59.880	3.63
87	6	4	0	33	36	-45.573	59.870	3.63
87	6	4	0	43	30	-45.567	59.859	3.63
87	6	4	2	11	39	-45.566	59.861	
87	6	4	3	52	31	-45.564	59.833	3.52
87	6	4	9	39	26	-45.569	59.783	3.75
87	6	4	11	21	43	-45.576	59.767	3.75
87	6	4	17	46	20	-45.594	59.704	3.75
87	6	4	21	10	26	-45.610	59.706	3.63

DATE			TIME(UT)			LATITUDE	LONGITUDE	WATER TEMP.
Y	M	D	H	M	S	DEGREE		° C
87	6	5	0	33	6	-45.593	59.691	3.63
87	6	5	1	50	24	-45.581	59.685	3.63
87	6	5	3	30	19	-45.575	59.658	3.63
87	6	5	12	51	41	-45.570	59.565	3.05
87	6	5	12	51	41	-45.570	59.565	3.05
87	6	5	14	3	19	-45.573	59.559	2.93
87	6	5	15	44	40	-45.567	59.531	3.05
87	6	5	17	24	7	-45.570	59.510	3.05
87	6	5	20	59	31	-45.582	59.481	2.93
87	6	6	0	21	42	-45.591	59.470	2.81
87	6	6	1	29	35	-45.587	59.469	2.93
87	6	6	4	48	57	-45.590	59.434	2.93
87	6	6	10	59	24	-45.585	59.371	3.28
87	6	6	12	40	44	-45.583	59.339	3.40
87	6	6	14	20	11	-45.580	59.300	3.16
87	6	6	15	23	20	-45.587	59.280	3.05
87	6	6	17	2	47	-45.593	59.239	3.16
87	6	6	20	49	58	-45.608	59.178	3.52
87	6	6	22	29	25	-45.607	59.158	3.52
87	6	7	0	10	17	-45.610	59.141	3.52
87	6	7	1	7	47	-45.601	59.130	3.52
87	6	7	2	46	45	-45.614	59.118	3.52
87	6	7	4	26	40	-45.610	59.086	3.40

Table 7. Hourly tidal observation data from February 1986 to January 1987.

STATION : SHOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : JAN. 1 - JAN. 31, 1986
 UNIT : CENTIMETER

The zero level of the tide gauge
 relative to the bench mark No.1040 ;
 -4.039 m Jan.25 1986
 -4.043 m Jan.16 1987

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	148	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	116	134	158	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	188	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	168	182	191	196	199	191	174	149	120	96	80	73	76	90	110	131	151	163	168	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	128	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	108	109	118	127	139	149	155	158	157	3311	138	3465	139										
17	154	147	140	135	132	131	134	138	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	123	126	132	137	143	147	152	157	161	164	165	165	3391	141	3556	142										
20	165	164	159	153	146	139	127	120	115	112	110	111	115	120	129	140	150	156	161	163	166	167	168	168	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	168	158	146	130	116	102	92	90	92	101	115	134	151	164	173	177	178	176	174	174	3501	146	3675	147										
23	174	178	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	190	199	200	194	178	154	124	99	77	69	71	85	103	131	157	173	179	180	174	166	3576	149	3737	149										
28	161	157	161	169	181	195	201	199	188	171	141	115	89	76	75	83	100	124	147	163	174	175	169	161	3575	149	3728	149										
29	153	147	147	153	165	180	187	191	189	175	154	130	107	90	83	86	100	120	139	157	168	173	169	161	3524	147	3676	147										
30	152	144	140	143	152	164	178	184	185	182	168	148	130	112	103	103	108	121	140	154	165	173	168	159	3576	149	3727	149										
31	151	141	132	130	135	146	157	167	175	174	168	154	141	131	123	119	123	133	145	160	169	174	174	165	3587	149	3743	150										
SUM	5133	5035	5057	5116	5128	5046	4863	4597	4241	3834	3473	3177	2836	2593	2380	2193	2000	1811	1628	1451	1288	1132	1000	888	788	698	618	548	488	428	368	308	248	188	128	68	TOTAL	109219
MEAN	166	164	162	163	165	165	163	157	148	137	124	112	104	102	106	116	128	142	154	164	170	172	171	168	MONTHLY MEAN					146.8	CM							

STATION : SHOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : FEB. 1 - FEB. 28, 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	156	145	134	127	128	134	141	150	158	163	164	161	154	151	146	141	144	150	157	163	171	176	174	169	3657	152	3816	153	
2	159	148	137	127	121	122	124	130	137	144	151	154	155	156	157	159	160	163	168	174	179	179	178	174	3656	152	3823	153	
3	167	158	149	139	127	121	118	117	119	122	125	131	134	141	150	157	161	166	171	176	180	182	182	181	3574	149	3751	150	
4	177	171	164	154	144	135	124	114	108	108	109	113	125	136	151	167	177	184	190	192	191	191	189	186	3700	154	3884	155	
5	184	183	177	170	163	151	137	120	107	95	91	91	98	109	129	153	169	179	187	193	192	189	188	186	3641	152	3825	153	
6	184	185	186	184	179	171	154	134	113	94	76	69	70	81	101	130	151	173	187	191	189	187	183	177	3549	148	3730	149	
7	181	185	188	193	195	191	177	156	128	101	79	65	62	67	85	113	138	161	180	190	190	184	177	174	3560	148	3732	149	
8	172	178	184	194	201	205	197	177	153	123	93	74	63	64	78	100	127	154	175	187	189	182	174	166	3610	150	3771	151	
9	161	166	175	185	200	208	207	197	175	145	114	87	67	61	69	88	111	138	163	176	179	173	164	152	3561	148	3705	148	
10	144	145	153	167	184	197	203	199	185	164	135	104	85	74	76	90	113	137	161	175	178	174	163	148	3554	148	3693	148	
11	139	134	138	152	170	186	197	199	192	175	151	126	104	91	91	101	116	137	157	169	175	170	159	147	3576	149	3710	148	
12	134	126	127	137	154	173	184	192	194	183	167	148	127	109	101	102	118	137	152	168	174	172	164	149	3592	150	3727	149	
13	135	126	121	125	138	156	170	180	183	176	164	145	128	114	107	107	117	134	151	164	174	174	166	154	3509	146	3650	146	
14	141	130	123	123	131	144	159	170	176	173	165	154	139	129	121	120	129	141	155	168	176	178	173	163	3581	149	3730	149	
15	149	136	129	127	127	137	147	156	163	167	164	158	153	148	147	149	154	161	171	180	184	184	177	167	3735	156	3889	156	
16	154	141	132	127	126	131	137	141	144	147	146	141	137	134	132	137	142	151	161	170	175	177	174	167	3524	147	3681	147	
17	157	147	139	134	131	131	133	135	137	137	135	134	134	134	136	144	155	161	170	178	181	182	180	175	3580	149	3747	150	
18	167	160	154	149	143	140	137	131	131	127	126	124	126	133	137	147	157	163	171	178	180	180	177	174	3612	151	3781	151	
19	169	163	158	155	150	146	139	130	122	116	113	111	114	122	133	147	162	172	178	184	185	182	180	177	3608	150	3782	151	
20	174	173	172	171	167	163	153	138	127	117	108	103	104	112	126	143	161	175	183	188	187	186	181	177	3689	154	3865	155	
21	176	176	178	180	178	174	165	146	127	112	98	91	92	101	116	137	163	180	190	194	192	186	178	174	3704	154	3876	155	
22	172	174	178	183	185	183	174	161	140	118	102	91	88	96	111	136	161	180	193	197	194	185	174	168	3744	156	3910	156	
23	166	170	179	187	194	196	190	176	151	124	100	82	76	83	98	120	144	168	184	191	189	180	168	160	3676	153	3832	153	
24	156	160	169	180	193	200	199	187	167	139	113	89	76	75	85	106	133	158	173	183	184	171	161	151	3608	150	3751	150	
25	143	145	154	169	186	202	207	199	182	157	126	100	81	73	78	97	122	144	163	176	177	169	155	142	3547	148	3679	147	
26	132	131	137	151	170	189	202	204	194	174	147	120	98	84	84	95	114	137	157	169	172	164	151	134	3510	146	3630	145	
27	120	114	114	127	146	169	184	192	190	178	157	131	108	93	91	97	112	132	151	163	168	164	149	132	3382	141	3500	140	
28	118	106	102	111	127	147	167	181	185	181	170	152	134	119	112	114	127	143	159	170	176	172	160	140	3473	145	3596	144	
SUM	4387	4276	4251	4328	4458	4602	4626	4512	4288	3960	3589	3249	3032	2990	3148	3497	3938	4379	4758	5007	5081	4799	4564	TOTAL	100712				
MEAN	157	153	152	155	159	164	165	161	153	141	128	116	108	107	112	125	141	156	170	179	181	178	171	163	MONTHLY MEAN	149.9	CM		

STATION : SHOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : MAR. 1 - MAR. 31, 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	123	110	101	101	113	129	147	162	171	173	170	160	151	141	137	140	147	157	170	179	182	178	167	151	3560	148	3693	148	
2	133	118	106	102	104	115	128	140	151	160	164	159	157	153	151	154	159	168	177	187	189	187	179	166	3607	150	3757	150	
3	150	136	123	114	111	113	119	126	132	141	144	147	147	154	159	166	171	176	185	191	194	192	187	176	3654	152	3818	153	
4	164	153	142	131	124	121	120	120	121	125	131	138	145	156	167	177	182	190	197	200	201	198	194	187	3784	158	3963	159	
5	179	172	164	155	147	139	131	121	114	113	114	120	130	141	157	176	190	197	201	204	201	197	192	187	3842	160	4025	161	
6	183	180	179	175	170	162	148	134	118	109	100	100	109	121	137	158	177	188	197	199	197	192	186	181	3800	158	3980	159	
7	180	182	184	185	185	180	167	147	128	109	95	89	93	104	124	148	168	187	197	197	191	182	173	169	3764	157	3934	157	
8	170	174	181	189	195	194	184	167	145	121	102	90	85	95	115	137	161	181	193	195	187	176	165	157	3759	157	3915	157	
9	156	163	173	187	200	205	201	190	165	138	115	101	94	97	110	134	156	178	191	194	187	172	157	147	3811	159	3954	158	
10	143	150	163	180	198	209	212	203	184	156	129	104	93	93	105	128	152	172	187	191	184	169	154	140	3799	158	3932	157	
11	133	137	150	169	190	207	215	214	198	177	151	127	108	104	111	124	145	167	181	189	185	170	151	136	3839	160	3964	159	
12	125	124	135	154	177	197	211	214	204	187	163	141	121	111	114	129	149	167	181	190	187	173	154	137	3845	160	3967	159	
13	122	116	121	135	157	180	197	205	203	192	173	153	137	127	126	136	152	168	184	192	190	178	158	141	3843	160	3967	159	
14	124	113	115	124	143	166	182	193	196	191	178	161	149	139	139	146	159	174	187	192	189	178	161	141	3840	160	3964	159	
15	124	114	110	116	131	149	167	177	183	183	174	158	149	141	138	144	154	169	185	193	194	187	171	154	3765	157	3903	156	
16	138	123	118	119	126	141	155	166	174	177	175	170	163	162	164	167	175	186	194	200	198	190	177	162	3920	163	4065	163	
17	145	131	123	120	124	133	141	151	157	161	166	163	160	162	166	171	180	187	196	200	200	194	183	170	3884	162	4041	162	
18	157	145	137	134	133	137	142	146	151	155	160	160	161	166	172	177	187	194	200	204	202	196	186	178	3980	166	4147	166	
19	167	157	152	148	146	145	145	146	147	147	150	148	153	159	168	177	188	197	204	207	204	200	194	185	4034	168	4214	169	
20	180	174	168	164	162	157	152	148	143	138	138	138	147	155	168	184	195	203	207	207	203	196	189	182	4098	171	4276	171	
21	178	177	174	173	170	164	156	146	134	126	123	124	131	141	160	177	190	200	203	201	195	187	178	174	3982	166	4154	166	
22	172	175	180	181	182	179	169	155	141	127	117	114	121	129	149	170	188	200	207	204	196	185	175	170	3986	166	4155	166	
23	169	174	183	189	193	192	184	168	148	131	118	112	113	125	145	167	187	201	207	204	194	181	170	164	4019	167	4181	167	
24	162	170	181	194	204	207	200	186	163	138	121	109	108	117	134	157	177	195	203	202	190	175	160	149	4002	167	4149	166	
25	147	157	174	191	207	218	218	206	184	160	135	118	110	114	130	152	172	190	201	200	189	169	153	138	4033	168	4166	167	
26	133	140	156	180	203	220	227	226	208	184	156	134	121	121	132	152	171	189	198	196	184	163	141	123	4058	169	4172	167	
27	114	114	126	150	175	199	214	218	211	195	171	151	136	129	137	154	172	188	198	198	187	166	143	121	3967	165	4071	163	
28	104	101	108	127	157	182	204	215	216	207	190	172	154	145	150	161	178	195	204	204	195	177	152	127	4025	168	4134	165	
29	109	98	98	112	133	160	184	200	208	207	200	187	175	166	166	171	186	198	208	211	207	192	170	146	4092	171	4217	169	
30	125	110	102	108	120	141	162	179	191	200	199	193	189	184	182	187	197	211	220	222	218	206	187	165	4198	175	4342	174	
31	144	126	114	109	117	127	141	157	170	180	186	185	185	186	190	194	202	212	220	222	221	212	197	182	4179	174	4343	174	
SUM	4553	4441	4616	4897	5168	5323	5326	4908	4608	4195	4238	4503	4195	4503	5367	6083	6041	5304	TOTAL							120969			
MEAN	147	142	143	149	158	167	172	172	166	158	149	140	135	137	145	159	173	187	196	199	195	184	171	158	MONTHLY MEAN	162.6	CM		

STATION : SHOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : MAY 1 - MAY 31, 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	189	179	168	158	150	145	144	144	147	152	161	170	180	191	201	207	210	210	210	210	207	204	200	197	4334	181	4529	181	
2	195	190	187	181	173	165	157	151	149	148	153	163	174	184	197	205	210	208	205	201	195	190	190	189	4360	182	4552	182	
3	192	197	198	200	197	188	178	168	158	154	154	159	168	180	193	202	207	206	198	192	182	173	170	171	4385	183	4562	182	
4	177	186	194	200	203	198	187	174	163	152	147	151	160	171	186	195	202	201	194	183	170	159	155	157	4265	178	4429	177	
5	164	175	190	203	208	209	203	189	175	161	153	152	160	170	183	194	201	202	194	180	163	148	140	138	4255	177	4402	176	
6	147	161	178	196	210	214	211	202	187	172	161	158	161	170	184	194	203	204	195	182	162	141	129	124	4246	177	4375	175	
7	129	144	164	186	205	217	218	214	201	186	173	166	167	174	186	198	207	209	202	188	166	144	127	117	4288	179	4406	176	
8	118	131	148	172	194	209	217	214	204	192	179	172	169	174	185	197	206	210	205	193	172	148	128	114	4251	177	4362	174	
9	111	117	133	157	180	198	210	214	209	198	187	178	174	177	185	194	207	212	209	200	179	155	134	115	4233	176	4341	174	
10	108	111	124	146	168	189	205	211	210	203	195	187	180	180	186	197	208	214	213	203	184	160	135	114	4231	176	4335	173	
11	104	101	108	125	147	168	187	196	198	196	190	185	179	180	184	196	207	213	215	210	196	174	151	131	4141	173	4258	170	
12	117	109	111	125	143	163	179	191	197	199	194	190	189	187	190	199	206	214	217	214	200	181	161	138	4214	176	4335	173	
13	121	113	111	118	130	147	163	176	186	190	187	187	187	185	187	194	203	208	211	211	202	188	170	151	4126	172	4258	170	
14	132	121	115	118	124	137	151	161	171	179	182	182	184	187	187	191	198	206	210	210	204	194	180	166	4090	170	4240	170	
15	150	137	130	129	131	137	147	158	167	172	179	181	185	190	191	194	200	204	205	206	200	194	184	172	4143	173	4304	172	
16	161	151	141	137	134	136	142	147	154	162	169	177	182	189	193	194	199	199	197	197	193	188	182	174	4098	171	4265	171	
17	167	161	154	150	144	143	143	143	146	151	157	167	174	182	189	192	194	192	190	189	185	180	179	177	4049	169	4226	169	
18	177	177	174	173	167	161	156	150	149	151	154	162	172	181	189	194	197	194	190	184	176	170	170	171	4139	172	4315	173	
19	176	181	186	187	185	180	171	161	152	151	151	159	169	180	188	195	196	189	182	170	158	151	149	152	4119	172	4280	171	
20	161	172	185	194	194	192	184	170	160	148	147	152	161	171	180	189	190	186	176	160	144	133	127	131	4007	167	4148	166	
21	141	158	178	195	204	206	200	189	174	159	152	153	159	170	181	187	193	188	176	157	136	119	108	108	3991	166	4110	164	
22	119	138	163	190	208	219	220	211	197	182	171	168	172	180	189	198	203	199	189	167	143	120	103	96	4145	173	4246	170	
23	101	118	143	171	198	217	226	223	213	200	187	180	179	185	194	203	209	209	200	181	153	125	101	87	4203	175	4288	172	
24	85	94	116	145	175	201	219	226	225	217	205	198	193	196	205	215	221	223	219	204	179	149	118	97	4325	180	4413	177	
25	88	86	100	124	151	179	203	218	223	223	217	210	204	204	210	219	227	231	232	223	201	174	145	118	4410	184	4511	180	
26	101	92	94	108	127	154	178	197	210	216	214	214	209	207	210	217	226	233	233	231	220	199	174	147	4411	184	4535	181	
27	124	109	104	109	119	139	161	180	195	206	211	214	214	212	212	217	225	233	237	237	227	214	192	170	4461	186	4610	184	
28	149	129	116	115	118	126	141	154	169	181	190	197	200	200	199	198	204	210	216	220	216	210	201	184	4243	177	4412	176	
29	169	154	139	127	126	130	135	144	154	165	177	186	189	193	194	192	194	196	200	204	204	203	200	193	4168	174	4355	174	
30	187	177	165	154	147	144	144	147	154	159	165	175	181	184	186	186	183	181	181	181	182	183	183	183	4112	171	4293	172	
31	181	178	174	170	164	158	155	153	153	158	163	170	178	183	185	184	181	175	170	167	167	167	170	171	4075	170	4253	170	
SUM	4441	4447	4591	4863	5124	5369	5576	5550	5483	5425	5463	5553	5717	5929	6137	6317	6359	6271	6055	5666	5238	4856	4553	130518	TOTAL				
MEAN	143	143	148	157	165	173	179	180	179	177	175	176	179	184	191	198	204	205	202	195	183	169	157	147	MONTHLY MEAN	175.4	CM		

STATION : SHOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : JUNE 1 - JUNE 30, 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	178	182	183	182	180	174	167	162	160	161	164	170	175	181	184	183	180	174	164	158	151	147	149	153	4062	169	4223	169	
2	161	170	175	179	181	180	174	167	161	158	157	163	169	174	177	177	173	167	158	148	137	134	134	137	3911	163	4060	162	
3	149	159	171	184	190	191	187	181	175	168	167	169	174	179	184	186	184	174	166	153	137	127	122	124	4001	167	4135	165	
4	134	145	161	177	187	194	193	190	183	175	172	174	178	183	190	194	194	188	179	163	147	133	123	122	4079	170	4208	168	
5	129	141	161	178	194	206	209	205	199	191	184	183	185	190	197	203	203	199	188	172	152	133	120	114	4236	177	4355	174	
6	119	131	146	167	187	200	207	206	199	194	186	180	183	185	193	199	203	200	193	177	154	134	117	107	4167	174	4274	171	
7	107	114	131	152	173	191	203	207	205	199	194	189	188	190	198	207	211	212	207	195	174	153	131	117	4248	177	4359	174	
8	111	116	127	147	168	187	204	211	211	208	204	199	197	197	202	210	217	219	216	206	186	164	140	122	4369	182	4480	179	
9	111	110	119	134	154	175	193	204	208	207	202	197	195	194	198	206	214	218	219	213	197	176	154	132	4330	180	4448	178	
10	118	114	117	128	146	165	182	194	203	204	200	197	193	192	193	198	207	212	214	213	200	181	161	141	4273	178	4395	176	
11	122	113	112	119	133	151	168	183	194	199	198	197	195	194	196	198	207	214	216	215	208	194	175	154	4255	177	4394	176	
12	139	124	119	123	131	143	158	174	186	192	194	194	192	190	189	190	195	202	208	209	204	197	184	167	4204	175	4357	174	
13	153	138	129	129	131	139	151	162	175	182	187	190	190	189	187	187	190	193	197	200	200	197	190	179	4165	174	4332	173	
14	167	154	147	141	141	143	151	159	168	177	186	190	190	192	189	186	186	185	187	189	187	187	183	178	4163	173	4337	173	
15	174	166	157	152	147	145	148	151	157	165	173	179	180	181	180	177	172	169	170	170	169	170	171	173	3996	167	4170	167	
16	174	171	169	166	161	157	154	154	157	162	167	173	178	180	180	177	171	166	159	157	154	154	158	164	3963	165	4134	165	
17	171	176	180	180	177	170	166	162	160	161	164	170	175	177	178	175	168	158	149	139	130	129	131	140	3886	162	4038	162	
18	152	164	176	184	187	184	179	172	167	163	164	167	172	175	177	174	170	158	147	131	118	111	111	119	3822	159	3956	158	
19	134	151	171	188	198	201	199	193	184	177	174	175	180	184	187	187	183	171	156	138	118	104	97	100	3950	165	4061	162	
20	111	130	154	180	199	209	212	208	201	192	185	184	187	191	195	197	194	184	170	149	121	100	86	81	4020	168	4107	164	
21	87	104	128	156	184	204	214	217	213	206	197	194	194	198	203	207	208	204	192	170	141	116	94	79	4110	171	4186	167	
22	76	88	104	131	161	187	204	215	217	213	204	200	199	200	207	214	217	217	210	192	169	138	108	84	4155	173	4230	169	
23	75	75	84	104	133	160	184	200	210	207	205	200	194	196	201	210	217	223	220	212	193	167	136	111	4117	172	4208	168	
24	91	81	83	95	118	138	164	185	198	202	202	200	194	190	195	204	213	220	227	224	214	196	170	142	4146	173	4266	171	
25	120	104	96	100	114	131	151	171	187	197	197	197	191	186	184	190	197	204	212	217	214	203	185	163	4111	171	4253	170	
26	142	124	111	109	114	125	141	156	170	181	185	186	183	177	172	173	177	184	195	201	203	199	190	180	3978	166	4142	166	
27	164	147	136	128	126	133	144	154	167	177	184	184	182	179	171	167	167	170	175	184	189	190	187	183	3988	166	4163	167	
28	175	163	153	146	141	143	148	154	163	170	176	178	177	173	167	161	156	155	159	163	168	174	174	174	3911	163	4085	163	
29	174	170	164	161	155	152	154	157	162	168	173	177	178	175	168	163	155	151	149	148	152	156	158	163	3883	162	4050	162	
30	167	169	168	167	167	164	164	164	165	170	174	176	175	172	168	164	156	147	140	137	135	137	141	146	3833	160	3987	159	
SUM	4085	4094	4232	4487	4778	5042	5273	5418	5505	5519	5532	5543	5564	5610	5664	5685	5638	5542	5343	5022	4701	4149	122332	TOTAL					
MEAN	136	136	141	150	159	168	176	181	184	184	184	185	185	187	189	190	188	185	178	167	157	146	138	MONTHLY MEAN					169.9 CM

STATION : SHOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : JULY 1 - JULY 31, 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	154	159	164	168	171	170	170	167	168	168	169	173	175	174	170	167	160	151	144	134	128	127	129	134	3794	158	3935	157
2	141	151	161	170	178	181	181	178	177	174	174	177	180	179	179	176	170	161	152	139	128	122	121	124	3874	161	4005	160
3	131	144	159	171	184	191	194	193	189	187	185	186	187	187	189	188	184	175	166	151	135	124	118	118	4036	168	4163	167
4	127	138	153	170	187	196	202	204	200	194	191	191	194	198	200	197	192	181	167	150	134	121	118	4196	175	4319	173	
5	123	134	152	170	191	208	215	217	215	210	206	201	202	204	209	213	212	208	197	182	161	140	124	114	4408	184	4522	181
6	114	123	138	158	181	197	211	217	215	211	207	200	198	201	207	212	216	214	208	195	175	154	132	120	4404	184	4519	181
7	115	120	132	152	175	194	210	219	217	214	210	204	200	203	209	215	220	223	220	207	193	170	141	123	4486	187	4601	184
8	115	113	122	138	160	182	202	212	215	214	208	204	200	197	200	210	215	220	221	212	196	177	148	131	4412	184	4528	181
9	116	111	115	128	146	168	186	206	206	205	204	197	190	190	193	197	207	215	219	217	206	187	161	141	4305	179	4429	177
10	124	114	113	122	137	155	174	191	200	200	199	192	187	182	180	187	197	203	210	212	205	193	170	152	4199	175	4333	173
11	134	120	116	120	127	145	163	177	189	193	192	188	184	178	176	177	184	194	204	208	209	203	190	171	4142	173	4298	172
12	156	142	132	131	140	149	164	180	192	197	198	194	188	182	175	174	177	183	192	198	200	198	193	181	4216	176	4383	175
13	167	155	146	140	144	152	160	172	183	189	191	190	182	176	169	164	164	167	173	180	185	190	189	185	4113	171	4293	172
14	180	173	166	158	157	161	166	174	181	187	190	190	186	178	171	164	156	154	158	162	167	174	178	182	4113	171	4297	172
15	184	183	180	177	175	175	176	180	184	190	193	194	191	184	174	169	158	147	146	148	149	156	161	170	4144	173	4322	173
16	178	184	187	188	188	188	185	185	187	187	190	193	190	187	179	170	160	147	138	134	132	134	138	147	4096	171	4257	170
17	161	174	187	197	200	203	202	200	198	198	200	200	198	197	193	186	174	159	147	133	124	119	120	127	4197	175	4337	173
18	140	155	177	193	204	213	214	211	208	206	204	202	202	203	200	195	187	173	156	137	121	108	101	104	4214	176	4328	173
19	114	128	154	179	197	214	220	221	217	212	209	204	207	207	208	209	204	195	178	158	133	111	97	91	4267	178	4361	174
20	94	108	131	157	185	207	221	227	225	219	212	207	207	208	213	217	218	214	204	187	158	131	107	91	4348	181	4436	177
21	88	94	109	135	164	189	209	219	220	216	208	201	198	200	207	213	219	221	218	205	180	150	122	97	4282	178	4367	175
22	85	83	92	113	138	164	187	204	208	207	200	192	186	187	193	202	215	221	223	219	203	176	146	118	4162	173	4261	170
23	99	90	93	108	128	154	177	195	204	204	197	190	179	177	182	190	204	218	224	227	220	202	176	152	4190	175	4317	173
24	127	111	108	116	131	152	174	190	201	203	197	187	177	168	167	172	184	198	208	216	215	206	187	165	4160	173	4302	172
25	142	126	118	121	129	146	164	178	187	191	188	179	169	159	153	154	161	174	188	202	206	204	195	180	4014	167	4177	167
26	163	148	138	135	139	151	164	177	186	193	190	182	173	162	151	147	151	159	171	182	192	194	192	185	4025	168	4201	168
27	176	167	160	153	157	164	172	184	191	195	196	189	180	170	160	152	150	154	161	169	180	184	186	184	4134	172	4314	173
28	180	176	170	168	169	172	179	187	193	196	195	190	184	173	164	156	149	149	153	159	164	169	171	174	4140	173	4316	173
29	176	175	176	176	179	182	187	194	198	198	198	197	188	180	172	163	156	151	150	152	154	157	160	165	4184	174	4353	174
30	169	175	181	189	194	198	204	207	209	209	207	206	200	194	187	179	173	164	160	155	151	151	151	154	4367	182	4529	181
31	162	167	177	190	199	207	209	211	212	210	209	207	204	202	197	190	184	173	164	155	147	140	138	139	4393	183	4539	182
SUM	4335	4341	4507	4791	5154	5528	5842	6071	6175	6177	6117	5883	5783	5725	5708	5706	5677	5634	5502	5267	4985	4663	4437	130015	TOTAL			
MEAN	140	140	145	155	166	178	188	196	199	199	197	194	190	187	185	184	183	182	177	170	161	150	143		MONTHLY MEAN	174.8	CM	

STATION : SHOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : AUG. 1 - AUG. 31, 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	146	155	167	181	196	204	208	210	206	203	201	198	194	194	192	187	182	174	164	151	141	130	123	124	4231	176	4362	174	
2	131	142	157	177	194	207	211	212	210	207	201	197	195	196	196	198	196	188	178	164	150	133	122	120	4282	178	4404	176	
3	122	134	150	167	187	204	214	217	214	209	205	199	198	200	205	207	207	206	197	180	163	141	124	118	4368	182	4484	179	
4	116	126	141	162	186	204	214	218	216	209	202	197	193	195	200	207	210	210	204	189	169	146	126	111	4351	181	4459	178	
5	108	112	125	145	168	189	204	210	208	203	195	187	181	184	190	197	208	212	209	200	181	155	132	115	4218	176	4324	173	
6	106	105	117	134	157	180	197	207	207	202	194	185	177	176	184	194	207	215	217	212	196	172	147	125	4213	176	4324	173	
7	111	108	113	128	151	172	191	204	207	202	194	184	174	171	176	184	199	212	220	219	209	190	166	141	4226	176	4350	174	
8	124	114	114	125	142	163	183	196	200	197	187	177	165	160	158	169	183	196	210	217	213	200	180	157	4130	172	4269	171	
9	139	127	123	130	143	161	178	194	199	196	187	175	163	153	150	154	165	180	194	205	207	201	188	170	4082	170	4233	169	
10	151	137	131	129	140	155	168	182	190	190	183	169	157	146	139	136	144	155	169	186	194	193	186	177	3907	163	4071	163	
11	164	151	143	142	146	155	168	176	183	184	180	168	151	141	131	125	127	134	147	159	169	176	177	174	3771	157	3938	158	
12	167	160	157	152	153	161	167	177	183	182	180	172	158	146	133	124	121	123	129	137	148	156	161	167	3714	155	3881	155	
13	167	168	169	168	169	172	178	185	189	187	185	179	165	154	141	127	120	114	115	119	123	130	136	143	3703	154	3854	154	
14	151	156	163	169	172	177	180	180	185	184	180	176	170	157	147	138	127	115	110	106	103	105	110	117	3578	149	3707	148	
15	129	143	156	169	178	184	187	187	187	185	181	177	174	170	162	155	144	131	121	111	101	94	94	99	3619	151	3729	149	
16	110	127	145	167	184	194	199	200	197	193	190	187	184	183	182	177	172	161	147	129	112	98	91	89	3818	159	3916	157	
17	98	112	135	160	183	199	208	209	203	198	192	187	187	188	190	193	192	186	172	151	129	108	91	83	3954	165	4038	162	
18	84	96	118	143	170	194	207	209	208	200	190	184	181	186	192	200	207	207	199	184	158	131	106	91	4045	169	4130	165	
19	85	91	108	133	161	185	201	207	204	196	185	174	170	174	184	197	208	215	214	203	181	152	122	101	4051	169	4141	166	
20	90	90	101	123	147	173	190	198	197	187	174	159	151	154	166	179	197	210	214	212	194	170	144	118	3938	164	4040	162	
21	102	94	101	115	137	161	180	188	190	182	168	152	141	138	145	160	181	199	209	214	209	190	167	144	3867	161	3988	160	
22	121	111	114	125	141	165	180	189	190	184	170	153	139	132	134	146	167	188	202	212	212	202	184	165	3926	164	4073	163	
23	147	135	132	140	152	172	187	194	197	191	177	161	145	134	130	137	153	170	189	203	207	204	195	183	4035	168	4203	168	
24	168	154	151	154	166	181	194	202	205	199	185	167	150	138	131	131	139	154	170	184	194	193	187	180	4077	170	4246	170	
25	169	161	157	160	167	181	190	198	200	195	187	170	153	141	134	130	134	143	154	166	176	178	177	173	3994	166	4161	166	
26	167	164	165	165	171	181	192	197	200	196	188	177	161	147	140	131	131	137	143	151	157	161	163	164	3949	165	4111	164	
27	162	162	166	171	177	186	195	197	198	195	189	181	170	157	148	141	138	137	141	144	147	149	152	157	3960	165	4119	165	
28	159	163	172	179	186	194	200	201	203	200	195	189	180	170	163	157	152	149	146	144	144	144	145	149	4084	170	4238	170	
29	154	160	170	183	194	202	205	207	206	202	197	190	184	177	173	169	166	158	152	147	140	136	135	137	4144	173	4288	172	
30	144	153	167	181	194	203	208	206	204	201	196	192	186	183	180	178	174	167	158	148	137	129	123	122	4134	172	4264	171	
31	130	140	157	175	190	199	205	204	199	194	187	182	178	179	183	185	184	179	169	156	142	127	119	115	4078	170	4197	168	
SUM	4122	4385	4752	5202	5658	5989	6161	6053	5825	5545	5124	5079	5235	5363	5106	4473	TOTAL									124447			
MEAN	133	134	141	153	168	183	193	199	200	195	188	179	170	165	164	165	169	172	173	171	165	155	144	136	167.3	MONTHLY MEAN	167.3	CM	

STATION : SHOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : SEP. 1 - SEP. 30, 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	119	131	147	170	187	201	207	206	200	193	186	179	177	178	184	190	192	190	181	168	151	131	114	111	4093	171	4206	168	
2	113	122	140	163	183	199	207	207	200	193	183	174	173	177	185	195	202	204	200	185	164	143	122	111	4145	173	4254	170	
3	109	115	132	154	178	197	207	207	200	189	179	168	164	167	180	195	207	214	212	202	184	158	135	119	4172	174	4284	171	
4	112	116	129	150	174	193	204	204	198	185	170	157	151	154	165	181	199	213	217	212	197	174	149	129	4133	172	4251	170	
5	118	117	129	147	170	190	203	205	199	185	167	151	139	138	148	167	188	207	220	224	213	196	172	149	4142	173	4278	171	
6	136	130	135	153	170	192	205	209	204	190	174	154	137	133	138	151	175	196	214	221	220	206	184	167	4194	175	4344	174	
7	150	139	140	151	168	186	197	204	202	189	170	151	134	124	124	137	155	177	198	211	216	210	197	181	4111	171	4277	171	
8	166	156	154	158	171	186	199	204	202	194	175	155	139	124	118	121	135	156	177	194	205	206	203	194	4092	171	4276	171	
9	184	176	174	176	187	199	207	212	212	204	187	167	149	133	123	120	126	139	154	171	181	189	190	187	4147	173	4333	173	
10	186	183	181	184	191	201	210	214	213	207	197	180	161	145	132	127	126	131	141	151	161	172	177	179	4150	173	4333	173	
11	183	185	190	194	198	207	214	216	214	208	201	188	174	161	149	141	134	134	134	138	144	151	155	164	4177	174	4351	174	
12	174	184	194	201	209	214	218	219	217	212	205	198	187	178	169	159	152	143	137	134	131	133	137	144	4249	177	4404	176	
13	155	170	188	203	211	218	220	220	216	210	206	200	194	190	186	180	174	162	147	137	127	120	117	121	4272	178	4403	176	
14	131	147	170	189	205	215	214	212	210	203	196	194	191	192	194	195	193	182	171	152	134	120	110	111	4231	176	4350	174	
15	119	134	154	177	198	210	214	207	201	192	182	178	178	184	192	198	202	199	187	169	148	127	109	104	4163	173	4270	171	
16	107	119	139	164	185	200	207	202	190	177	165	159	158	166	180	193	203	207	201	187	163	137	116	104	4029	168	4129	165	
17	100	110	128	152	174	190	200	197	184	167	152	142	140	150	166	187	202	210	211	203	184	155	129	114	3947	164	4055	162	
18	108	111	125	147	169	186	194	190	179	161	143	128	124	130	146	170	191	206	214	210	197	173	149	131	3882	162	4002	160	
19	120	119	131	147	167	186	195	194	184	164	145	127	118	120	134	157	181	198	214	216	208	190	170	151	3936	164	4073	163	
20	137	134	140	154	175	189	195	196	188	167	146	125	113	109	120	138	161	185	201	208	207	198	179	164	3929	164	4082	163	
21	153	148	150	161	180	194	204	204	195	178	155	134	116	108	112	126	147	171	190	203	207	203	190	180	4009	167	4179	167	
22	170	164	164	174	189	201	210	212	205	190	170	147	131	118	118	127	141	160	179	190	195	196	188	180	4119	172	4293	172	
23	174	170	170	177	192	202	209	213	207	197	180	160	142	132	127	129	138	153	167	181	189	189	189	184	4171	174	4351	174	
24	180	181	183	187	197	206	214	214	209	203	188	170	154	142	137	134	137	145	155	166	175	177	180	180	4214	176	4394	176	
25	180	182	189	196	202	213	217	220	214	206	195	180	164	152	144	141	142	145	150	157	161	163	167	169	4249	177	4422	177	
26	173	180	187	195	204	210	214	215	210	204	195	182	170	162	154	152	150	148	147	151	152	151	151	157	4214	176	4376	175	
27	162	170	180	190	198	204	206	205	200	194	189	181	173	169	166	163	158	154	151	147	145	141	141	145	4132	172	4286	171	
28	154	166	180	192	204	208	208	207	200	194	189	183	177	175	175	175	171	166	158	151	141	136	133	136	4179	174	4324	173	
29	145	159	175	190	204	210	212	208	201	194	187	182	180	183	186	189	189	184	174	162	148	138	131	132	4263	178	4401	176	
30	138	152	171	189	204	213	214	206	197	186	177	169	170	177	186	195	200	198	190	176	159	144	132	131	4274	178	4409	176	
SUM	4356	4769	5185	5644	6020	6225	6229	6051	5736	5354	4963	4678	4571	4638	4833	5071	5277	5392	5377	5207	4927	4616	4429	124018	TOTAL				
MEAN	145	149	159	173	188	201	208	208	202	191	178	165	156	152	155	161	169	176	180	179	174	164	154	148	MONTHLY MEAN	172.2	CM		

STATION : SHOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : NOV. 1 - NOV. 30, 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	137	148	162	177	187	189	182	165	142	120	104	97	99	116	141	170	194	207	212	208	194	175	160	148	3834	160	3979	159		
2	145	154	166	180	190	194	189	172	149	124	101	87	84	94	118	145	174	195	208	210	204	190	175	163	3811	159	3968	159		
3	157	160	170	184	194	199	196	180	156	127	103	81	71	75	92	118	149	172	193	204	206	198	187	176	3748	156	3918	157		
4	170	169	176	189	200	204	204	192	174	147	117	94	77	71	79	98	124	150	171	190	198	198	194	188	3774	157	3957	158		
5	183	181	185	195	207	214	214	207	192	171	141	116	94	82	81	90	107	127	149	168	181	187	189	188	3849	160	4037	161		
6	188	186	187	195	204	212	214	211	203	186	163	138	117	102	94	94	103	115	131	147	160	170	176	179	3875	161	4057	162		
7	182	184	185	189	197	203	204	205	200	189	173	153	134	118	105	101	101	104	111	122	134	144	154	163	3755	156	3925	157		
8	170	176	180	184	188	193	193	192	189	183	175	164	151	140	130	121	116	113	113	116	121	127	137	147	3719	155	3876	155		
9	157	167	174	178	180	181	180	177	175	173	169	164	159	155	151	146	139	131	126	123	122	126	134	141	3728	155	3880	155		
10	152	164	174	178	180	179	174	169	165	162	159	160	162	165	167	166	161	152	144	137	129	126	127	135	3787	158	3932	157		
11	145	157	166	174	176	172	166	156	148	144	142	146	150	160	169	173	174	169	157	147	137	131	128	133	3720	155	3861	154		
12	141	152	164	171	174	170	161	147	136	126	124	125	133	147	164	174	182	182	174	164	152	140	137	137	3677	153	3821	153		
13	144	156	168	176	180	177	165	148	131	116	110	109	118	134	155	174	187	191	189	180	167	154	148	145	3722	155	3872	155		
14	150	161	171	182	187	184	173	155	135	118	104	100	106	124	145	167	186	196	197	191	179	169	159	154	3793	158	3950	158		
15	157	167	178	189	194	193	183	164	141	121	104	96	99	113	135	157	178	193	200	198	190	179	170	161	3860	161	4021	161		
16	161	167	180	190	197	197	186	169	147	123	101	89	89	96	114	139	162	181	192	195	190	184	177	168	3794	158	3959	158		
17	165	170	181	190	197	198	191	177	156	131	108	92	84	87	102	124	149	168	184	193	190	187	179	173	3776	157	3946	158		
18	170	172	180	190	199	203	199	187	167	144	120	101	91	89	98	118	140	160	177	187	190	187	184	180	3833	160	4009	160		
19	176	175	180	190	198	203	203	194	179	157	134	111	97	92	94	108	126	147	164	177	184	186	183	181	3839	160	4018	161		
20	179	177	181	190	197	203	202	197	185	167	144	122	105	96	96	104	117	135	151	167	174	176	177	176	3818	159	3993	160		
21	175	175	177	184	193	200	201	196	187	173	154	134	120	108	102	106	117	127	142	155	165	171	173	172	3807	159	3981	159		
22	174	175	175	180	186	194	195	193	188	177	164	147	132	121	115	114	118	121	131	141	151	158	163	166	3779	157	3949	158		
23	170	174	174	177	180	184	184	182	178	172	161	148	137	127	120	118	118	121	125	134	141	148	155	161	3689	154	3856	154		
24	167	171	175	174	175	176	176	174	172	167	160	153	144	138	133	128	127	127	127	130	134	140	146	153	3667	153	3827	153		
25	160	164	170	172	172	172	167	164	159	156	154	151	148	147	147	144	141	138	134	134	133	134	139	147	3647	152	3802	152		
26	155	162	167	171	171	168	162	155	150	144	143	147	150	154	158	160	159	156	149	142	138	137	141	148	3687	154	3843	154		
27	156	164	172	176	174	170	160	148	140	133	129	131	139	151	160	168	172	171	164	155	147	142	141	147	3710	155	3864	155		
28	154	163	173	177	177	170	157	144	127	114	111	113	126	144	161	177	186	187	183	174	162	154	150	150	3734	156	3889	156		
29	155	166	174	182	180	174	160	139	120	101	94	94	104	123	147	169	187	195	196	190	180	166	160	158	3714	155	3875	155		
30	161	169	179	184	186	181	167	144	118	96	81	76	81	100	126	154	178	196	202	202	194	184	173	166	3698	154	3866	155		
SUM	4856	5244	5620	5657	5203	4809	3947	3501	3799	4472	4896	4947	4816	TOTAL	112844															
MEAN	162	168	175	182	187	189	184	173	160	145	132	121	117	119	127	138	149	158	163	166	165	162	161	160	MONTHLY MEAN	156.7	CM			

STATION : SHOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : DEC. 1 - DEC. 31, 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	168	174	182	190	194	191	178	154	127	99	77	66	65	78	101	131	161	184	200	207	205	198	189	181	3700	154	3878	155	
2	178	182	190	199	204	203	194	175	147	117	89	67	58	61	76	101	132	160	184	197	200	199	195	188	3696	154	3881	155	
3	185	186	194	201	209	212	207	194	172	139	109	81	62	58	64	82	108	135	159	180	191	196	195	193	3712	155	3901	156	
4	189	187	192	200	208	213	211	205	190	163	134	106	82	71	68	77	94	115	138	157	175	184	187	189	3735	156	3922	157	
5	187	185	188	193	200	208	209	207	200	183	160	136	113	96	86	87	94	106	123	140	156	167	174	178	3776	157	3956	158	
6	180	177	177	180	187	194	197	199	197	189	173	156	138	121	109	102	101	106	115	127	141	152	160	166	3744	156	3913	157	
7	169	169	168	167	169	171	176	179	180	178	172	164	153	141	131	121	118	116	121	127	134	144	152	158	3678	153	3841	154	
8	163	165	165	162	160	158	158	159	161	161	161	160	155	148	143	137	132	129	128	129	131	137	147	154	3603	150	3763	151	
9	160	164	164	160	157	152	146	143	141	142	142	144	146	151	152	153	150	146	142	141	140	142	146	151	3575	149	3732	149	
10	157	160	161	160	156	147	141	131	126	124	125	129	134	142	150	154	155	154	151	149	146	144	144	151	3491	145	3646	146	
11	155	160	161	159	155	148	135	123	111	109	107	111	119	130	142	153	159	161	161	157	153	150	149	153	3421	143	3580	143	
12	159	161	166	167	164	156	143	127	114	103	96	96	104	118	134	153	164	168	170	165	161	157	154	155	3455	144	3614	145	
13	159	166	173	174	170	163	150	133	116	101	88	86	92	107	124	145	160	169	175	174	171	165	162	160	3483	145	3647	146	
14	164	167	172	177	177	171	160	140	121	102	84	80	82	95	111	133	154	168	177	180	179	172	166	163	3495	146	3660	146	
15	165	170	177	180	182	177	169	151	128	107	90	78	77	86	101	125	148	165	175	180	181	179	171	166	3528	147	3694	148	
16	166	170	178	185	187	187	180	162	143	118	95	78	72	74	88	106	131	152	168	175	177	176	172	167	3507	146	3672	147	
17	165	167	174	181	187	189	185	170	152	128	104	84	72	70	80	94	118	141	158	172	177	177	173	170	3488	145	3655	146	
18	167	166	172	180	185	190	188	180	163	140	114	91	75	71	73	89	109	131	147	162	172	172	171	169	3477	145	3644	146	
19	167	165	167	174	182	188	187	183	171	151	127	105	87	75	75	84	98	117	134	150	161	165	164	162	3439	143	3601	144	
20	162	159	159	163	170	177	180	179	172	157	137	115	97	87	81	84	94	110	126	142	153	161	164	161	3390	141	3548	142	
21	158	157	156	157	164	170	174	175	169	159	144	127	110	98	92	91	98	110	122	136	147	155	157	157	3383	141	3537	141	
22	154	154	154	150	154	158	163	165	164	158	150	137	123	110	102	100	101	109	118	130	141	149	154	156	3354	140	3511	140	
23	157	157	153	150	149	150	151	153	153	151	148	141	132	124	115	111	112	114	121	129	137	144	151	155	3358	140	3514	141	
24	156	156	153	151	147	144	142	143	143	142	143	142	137	134	131	128	127	124	125	131	137	141	146	154	3377	141	3534	141	
25	157	155	154	151	144	140	136	132	130	131	131	132	135	137	141	144	144	141	141	141	143	146	147	154	3407	142	3566	143	
26	159	160	157	153	147	137	127	119	114	113	114	124	133	144	154	162	163	164	161	157	154	154	154	156	3480	145	3640	146	
27	160	162	163	159	150	141	127	114	108	101	100	108	119	135	154	170	177	181	181	177	172	167	165	166	3557	148	3726	149	
28	169	173	173	171	164	153	139	120	102	91	88	90	98	117	142	163	177	190	194	191	186	180	173	174	3618	151	3795	152	
29	177	179	181	182	179	167	149	128	104	85	71	65	71	84	111	140	167	182	193	196	195	190	183	182	3561	148	3744	150	
30	183	187	190	194	193	187	174	147	121	96	74	59	57	68	86	114	144	174	191	202	203	200	192	187	3623	151	3810	152	
31	187	191	197	201	205	203	195	176	149	119	88	68	58	59	74	96	127	155	180	194	199	200	196	187	3704	154	3888	156	
SUM	5182	5231	5311	5371	5399	5345	5171	4866	4489	4057	3635	3326	3190	3391	3730	4117	4477	4779	4995	5118	5163	5153	5163	5163	TOTAL	109815			
MEAN	167	169	171	173	174	172	167	157	145	131	117	107	102	103	109	120	133	144	154	161	165	167	166	167	MONTHLY MEAN	147.6	CM		

STATION : SHOWA STATION
 LATITUDE : 69° 0' 28'' S
 LONGITUDE : 39° 34' 13'' E
 DURATION : JAN. 1 - JAN. 31, 1987
 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	184	190	197	204	206	204	190	169	137	107	80	59	54	58	75	101	129	154	174	188	190	188	184	3606	150	3783	151						
2	177	174	178	185	195	203	206	202	188	166	137	106	80	67	65	72	86	108	131	156	170	177	178	176	3583	149	3753	150						
3	170	167	165	169	180	192	200	200	197	185	163	134	111	91	84	83	90	107	127	145	160	170	174	171	3635	151	3803	152						
4	168	159	154	153	161	170	180	184	185	181	170	151	131	113	101	97	98	107	121	137	153	161	166	167	3568	149	3730	149						
5	162	155	147	142	142	149	156	164	169	170	166	158	145	133	122	114	111	117	125	138	149	157	162	162	3515	146	3675	147						
6	160	152	145	137	134	137	140	147	153	157	159	154	152	148	144	142	141	144	148	155	163	168	171	171	3622	151	3792	152						
7	170	163	155	147	140	137	136	138	142	147	150	151	154	154	154	153	152	152	155	159	163	167	168	169	3676	153	3844	154						
8	168	164	158	149	143	136	130	127	126	127	127	129	133	137	142	147	151	153	154	158	161	164	165	167	3516	147	3683	147						
9	167	165	162	156	149	140	131	121	115	112	111	113	118	127	137	147	156	163	166	171	173	174	172	172	3518	147	3692	148						
10	174	173	170	165	159	150	138	124	114	108	104	101	105	117	132	148	156	163	170	173	173	173	172	170	3532	147	3702	148						
11	170	172	172	171	167	158	146	131	114	102	94	88	89	104	117	136	151	164	173	176	175	174	173	170	3487	145	3659	146						
12	172	174	176	175	174	170	157	141	122	106	93	87	87	99	113	134	154	170	180	185	186	182	176	174	3587	149	3759	150						
13	172	174	177	181	183	180	170	153	135	113	94	84	81	88	104	125	148	167	179	186	187	184	176	173	3614	151	3765	151						
14	171	171	177	182	184	186	178	162	142	116	89	75	68	68	81	104	127	150	168	176	180	177	172	168	3472	145	3639	146						
15	167	168	174	180	187	190	187	173	151	127	99	78	66	65	76	92	116	142	161	170	174	175	170	163	3451	144	3609	144						
16	158	157	162	172	181	186	189	178	161	134	108	85	66	59	65	83	103	127	149	164	171	170	167	163	3358	140	3515	141						
17	157	154	156	163	175	182	183	180	168	144	118	94	71	61	60	71	91	114	136	153	163	165	161	156	3276	137	3427	137						
18	151	147	147	154	165	175	182	180	174	157	134	107	88	72	69	74	91	117	136	151	161	164	161	156	3313	138	3463	139						
19	150	141	138	142	151	162	171	176	174	164	150	125	103	88	78	79	89	106	128	142	154	159	157	153	3280	137	3426	137						
20	146	141	134	132	140	149	159	166	168	166	154	137	118	104	94	91	95	105	120	136	147	154	154	151	3261	136	3405	136						
21	144	137	130	126	127	131	137	144	147	147	146	137	124	112	105	101	101	111	123	134	144	151	154	150	3163	132	3309	132						
22	146	138	131	126	122	121	125	129	135	137	138	134	127	124	121	117	117	121	128	138	148	151	154	155	3183	133	3335	133						
23	152	145	138	129	121	118	114	115	120	123	127	129	129	131	131	132	133	134	139	145	151	155	158	159	3228	135	3384	135						
24	156	149	143	137	126	118	109	104	104	104	106	111	116	123	132	140	144	147	151	154	157	159	159	159	3208	134	3366	135						
25	158	155	149	144	134	122	108	99	90	83	83	87	94	108	123	133	152	161	164	167	167	168	168	168	3190	133	3358	134						
26	168	167	165	160	151	138	120	101	87	72	65	64	71	85	106	129	146	161	171	174	174	174	173	173	3195	133	3369	135						
27	174	174	174	174	170	161	140	116	96	75	59	53	56	68	92	114	141	161	175	183	184	180	175	173	3268	136	3441	138						
28	173	175	178	182	184	180	164	144	116	87	65	48	43	45	65	88	118	145	166	179	180	178	174	170	3247	135	3415	137						
29	168	173	178	187	196	197	190	171	143	111	78	52	36	35	45	68	97	127	154	170	176	173	167	163	3255	136	3412	136						
30	157	157	166	178	192	200	200	192	170	143	106	76	55	48	51	71	98	124	147	168	177	175	166	155	3372	141	3518	141						
31	146	142	146	159	175	191	199	199	190	167	138	108	83	70	67	75	94	118	142	161	170	168	160	149	3417	142	3554	142						
SUM	5056	4935	4935	5012	4949	4949	4465	4465	4068	3638	3236	2959	2898	3034	3748	4641	5179	5191	4978	5237	5110	TOTAL					105596							
MEAN	163	160	159	160	162	162	160	153	144	131	117	104	95	93	98	108	121	136	150	161	167	169	167	165	MONTHLY MEAN					141.9 CM				