

Oceanographic Data of the 33rd Japanese
Antarctic Research Expedition
from November 1991 to March 1992

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1. Oceanographic Observations

The track chart of the icebreaker "Shirase" and the station sites of oceanographic observations are shown in Fig. 1.

Surface water was sampled during the cruise. XBT, CTD and serial observations were made in the Southern Ocean off Australia.

Four surface drifting buoys and seven XCPs were deployed in the area of the Antarctic Circumpolar Current.

(1) Surface water sampling

Sea surface water sampling for surface measurement and chemical analysis was done twice or three times a day. The results are given in Table 1.

(2) XBT observations

XBT(expendable bathythermograph) observations were carried out at 240 stations in the Southern Ocean en route from Fremantle to Sydney.

The results are given in Table 2 and Figs. 2, 3, 4.

(3) CTD observations

CTD (conductivity, temperature and depth profiling system of Neil Brown Smart CTD type-c) observations were carried out at 14 stations in the Southern Ocean off Australia.

The results are given in Table 3.

(4) Serial observations

Serial observations were carried out at 14 stations. The results including interpolated and calculated values of temperature, practical salinity, sigma t-t and dynamic depth anomaly at each standard depth together with meteorological data are given in Table 4.

(5) Chemical analysis of sampled water

The following methods and instruments were used in chemical analysis for sample water collected with surface and serial observations:

Practical salinity : Conductive salinometer (Auto-Sal Model 8400A)

pH : Digital pH meter (Horiba Seisakujo F-16)

Dissolved oxygen : Winkler's method with a Metrohm Model E41520S Titrator.

Phosphate-P(*) : Molybdenum blue method

Silicate-Si(*) : Molybdenum yellow method

Nitrite-N(*) : Modified Morris and Riley method

Nitrate-N(*) : Sulphanilamide and N-(1-naphtyl)

ethylenediamine dihydrochloride were used as reagents.

Ammonium-N(*) : Indophenol method

Petroleum oil(**) : Integrated Global Ocean Service System method

Cd,Cu and Zn(**) : Japan Hydrographic Department method

(*Nutrients were analyzed with a Shimadzu Model UV-120 spectrophotometer with auto flow cell system.)

(** These items were employed at surface water sampling 19 stations (P1-P19) in order to monitor the level of marine pollution.)

The results are given in Table 5.

(6) Current observations with four surface drifting buoys

The first surface drifting buoy was deployed at 45° 55' S, 110° 08' E on December 6, 1991, the second was deployed at 54° 57' S, 108° 57' E on December 8, 1991, the third was deployed at 56° 33' S, 150° 01' E on March 13, 1992, and the fourth was deployed at 48° 14' S, 150° 04' E on March 15, 1992.

The trajectories are shown in Fig. 5.

(7) Vertical current observations with XCP

XCP (Expendable Current Profiler system of Sippican Inc. U.S.A.) observations were carried out at the following 7 stations.

| | | |
|-------------------|-----------|-----------------------|
| December 5, 1991 | 0505 (UT) | 41° 21' S, 110° 01' E |
| December 6, 1991 | 0456 (UT) | 45° 55' S, 110° 08' E |
| December 18, 1991 | 0918 (UT) | 70° 23' S, 23° 46' E |
| February 28, 1992 | 0725 (UT) | 64° 02' S, 38° 02' E |
| March 12, 1992 | 0056 (UT) | 64° 47' S, 150° 08' E |
| March 14, 1992 | 0225 (UT) | 56° 32' S, 150° 05' E |
| March 15, 1992 | 0342 (UT) | 52° 47' S, 150° 22' E |

The results are given in Fig. 6.

2. Tidal Observations

Tidal observations at Syowa Station have been carried out since 1965.

At present, a new tide gauge (Meisei Denki Co. QWP-8-303D) is being used to collect these data.

The sensor is in the Nisi-no-ura Cove on East Ongul Island at the sea bottom about 15 m below the sea surface, and the data logger is installed in the Earth Science Laboratory.

Hourly, daily and monthly mean sea levels from February 1991 to January 1992 are given in Table 6.

We have asked Mr. M. Kanao to take care of the tide gauges from February 1992 onward.

Acknowledgments

The authors would like to express their sincere thanks to Prof. M. Fukuchi, the leader of JARE-33, and Mr. M. Sano, the summer party leader of JARE-33, and to all the members of the expedition for their helpful support and valuable advice, and to Prof. Y. Fujii and Mr. K. I. Ohshima and the all the members of JARE-32 for their cooperation in maintenance of the tide gauge.

The authors also express their thanks Captain K. Saito, the officers and the crew of the icebreaker Shirase.

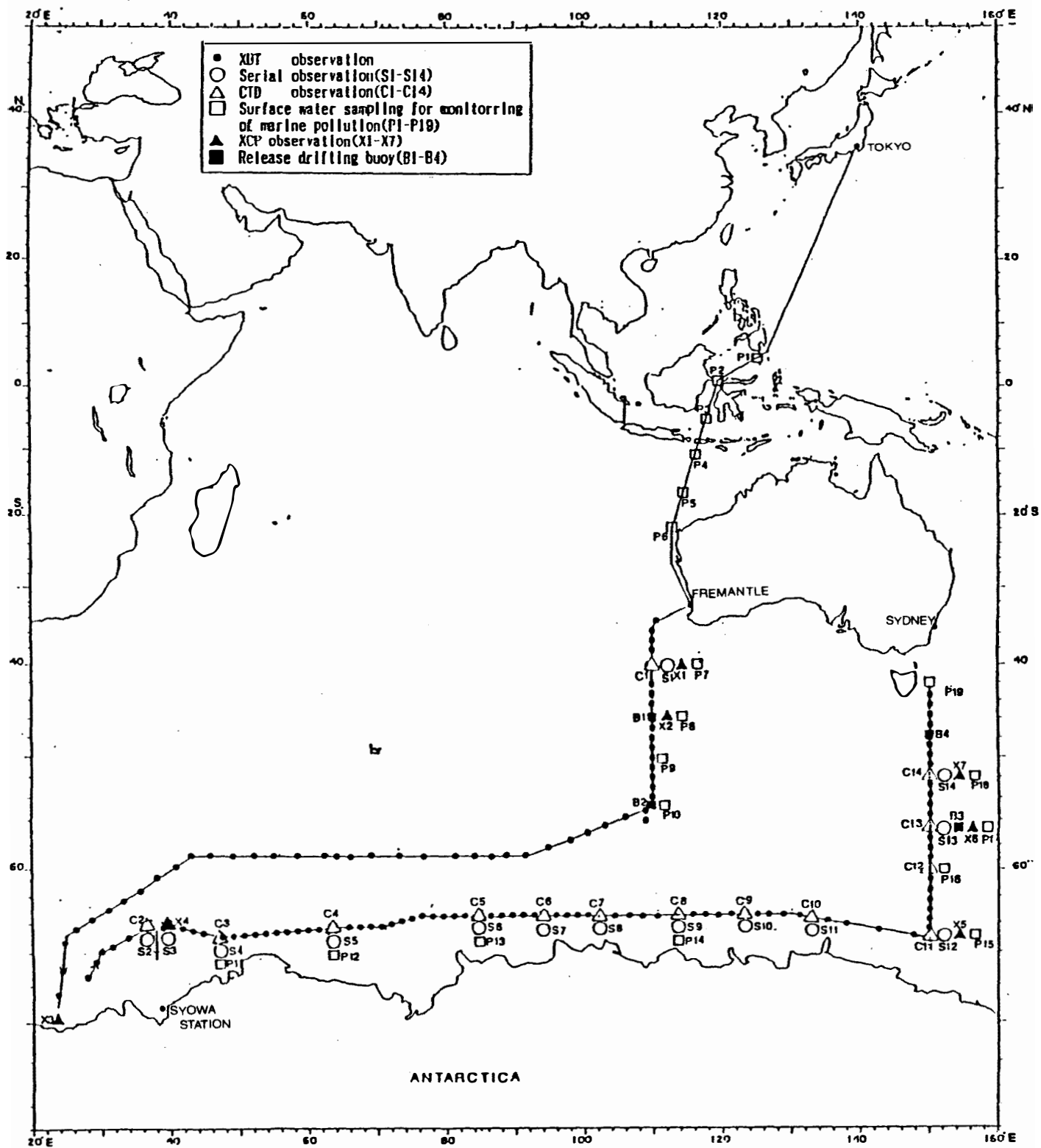


Fig. 1. The track chart of the icebreaker "Shirase" and the oceanographic observation station sites.

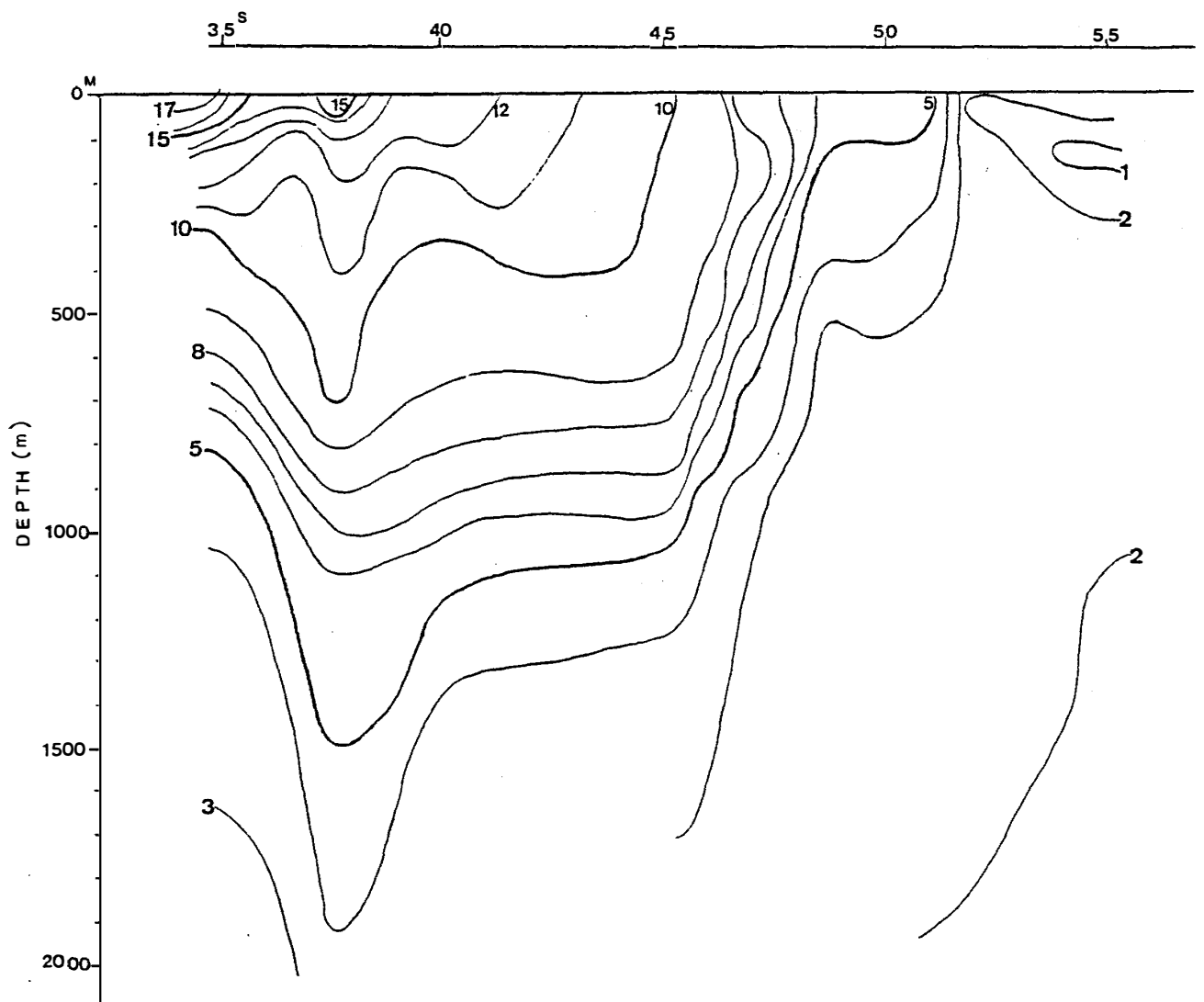


Fig. 2. Vertical profile of water temperature ($^{\circ}\text{C}$) observed on the 110°E line.

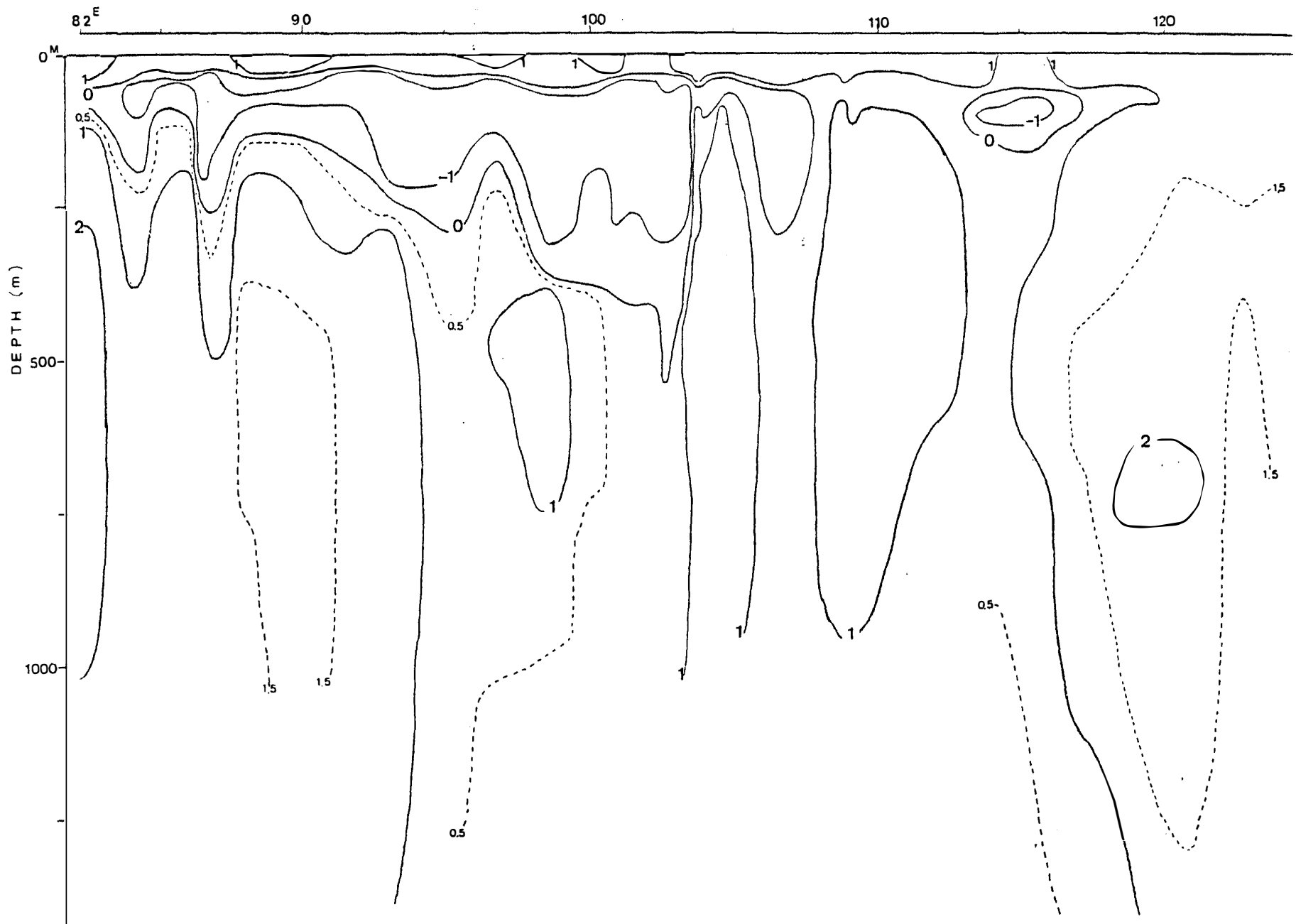


Fig. 3. Vertical profile of water temperature ($^{\circ}\text{C}$) observed on the $63^{\circ} 30'$ E line.

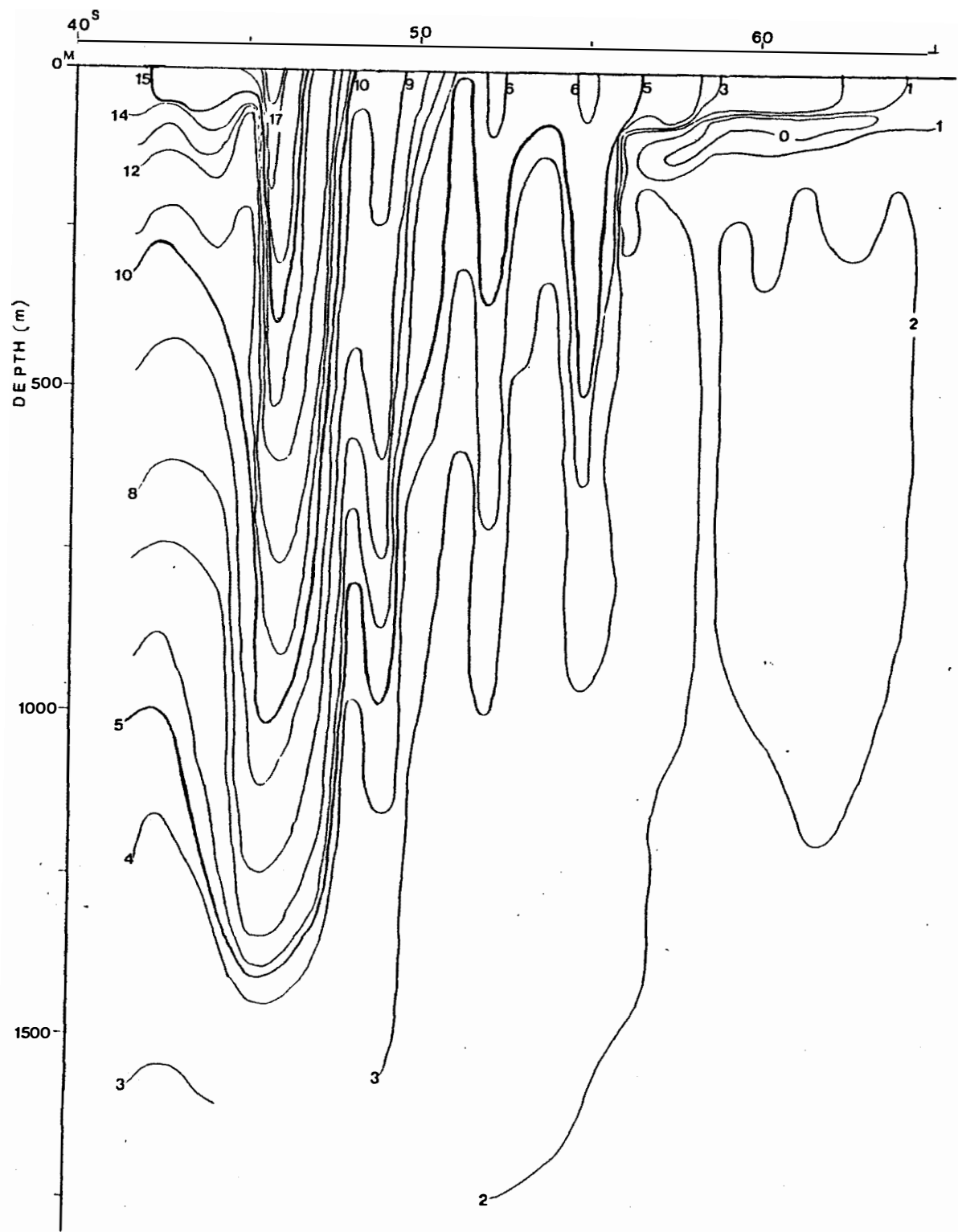


Fig. 4. Vertical profile of water temperature (°C) observed on the 150° E line.

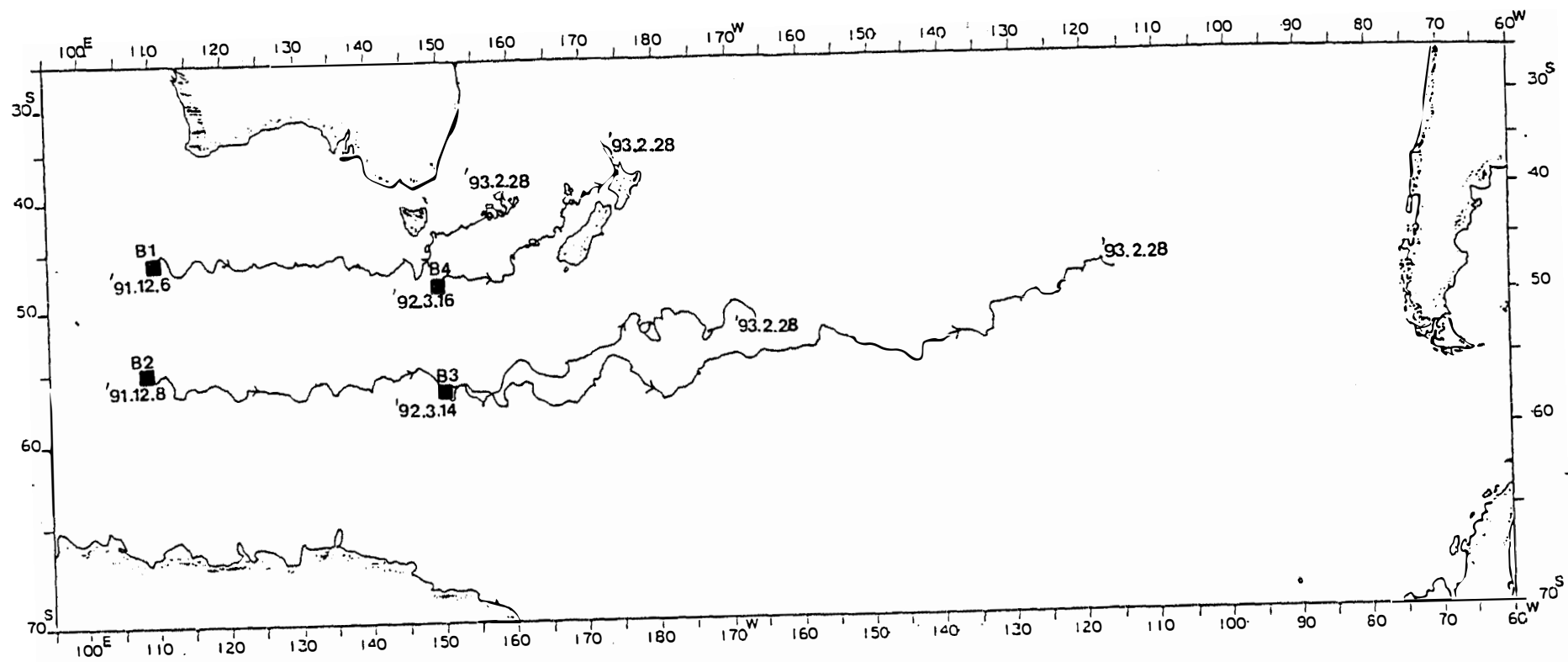
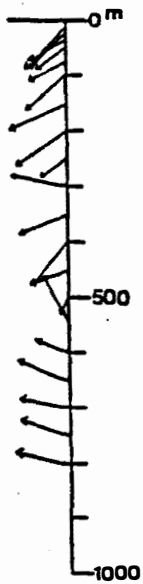
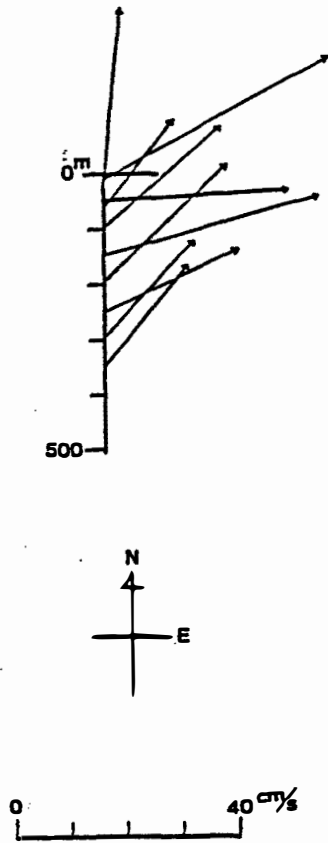


Fig. 5. The trajectory of a surface drifting buoy on February 28, 1992.

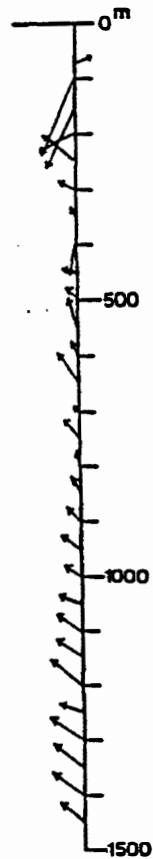
STATION: X 1
1991. 12. 5 05:05(UT)
LAT. 41-21S
LON. 110-01E



STATION: X 2
1991. 12. 6 04:56(UT)
LAT. 45-55S
LON. 110-08E



STATION: X 3
1991. 12. 18 09:14(UT)
LAT. 70-23S
LON. 23-46E



STATION: X 4
1992. 2. 28 07:25(UT)
LAT. 64-02S
LON. 38-02E

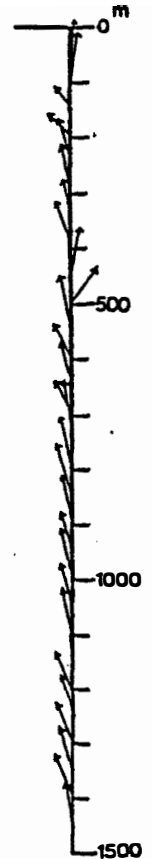


Fig. 6. Vertical profiles of ocean current by XCP.

STATION: X 5
1992. 3. 12 00:56(UT)
LAT. 64-47S
LON. 150-08E

STATION: X 6
1992. 3. 14 02:25(UT)
LAT. 56-32S
LON. 150-05E

STATION: X 7
1992. 3. 15 03:42(UT)
LAT. 52-47S
LON. 150-22E

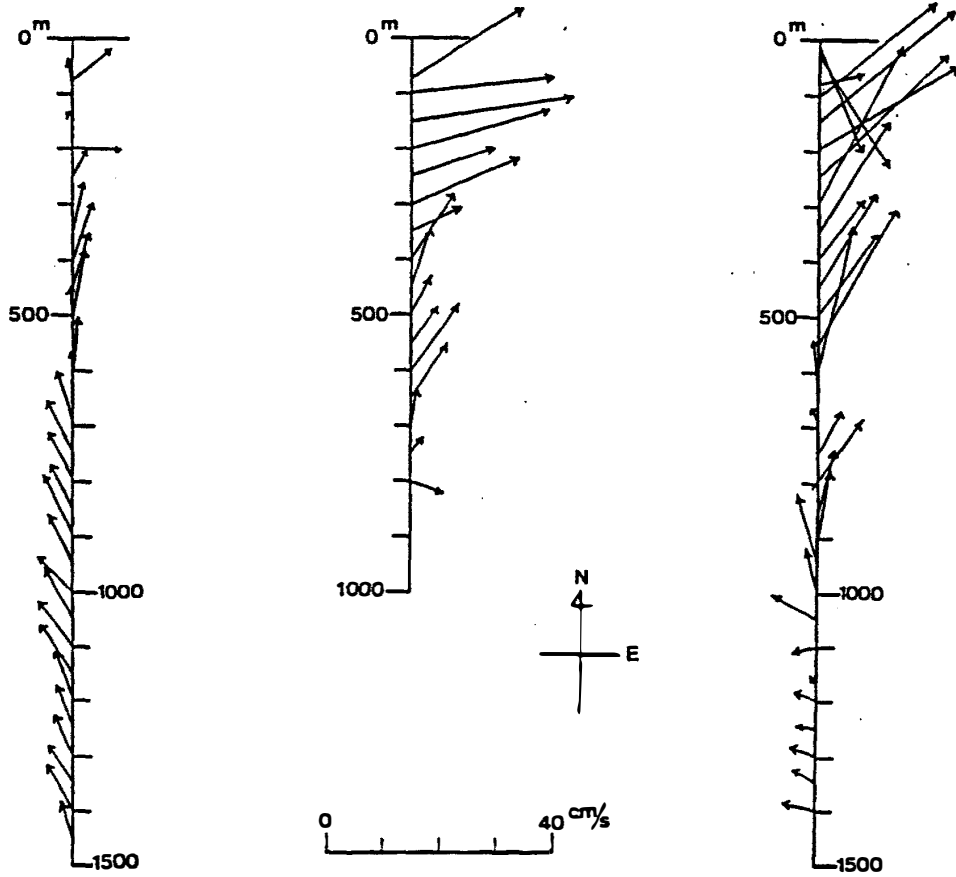


Fig. 6 (continued).

Table 1. Data of surface observation on board the icebreaker "Shirase" in 1990-91.

| Date | Time | | Position | | Air Temp. | Water Temp. | S | pH | D O | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N |
|---------|-------|------|----------------------|---------|-----------|-------------|--------|------|-----|--------------------|----------------------|--------------------|--------------------|--------------------|
| | U T | LMT | Lat. | Long. | °C | | | | | μmol / l | | | | |
| 1991 | | | | | | | | | | | | | | |
| Nov. 14 | | | Left | Tokyo | | | | | | | | | | |
| 15 | 2300* | 0800 | 31-14N | 137-59E | 21.3 | 23.1 | 34.589 | 7.89 | 207 | 0.15 | 4 | 0.04 | 1 | 1.2 |
| | 0900 | 1800 | 29-03 | 136-55 | 22.2 | 23.2 | 34.478 | 8.24 | 215 | 0.10 | 1 | 0.01 | 0 | 0.4 |
| 16 | 2300* | 0800 | 25-40 | 135-27 | 23.4 | 23.9 | 34.735 | 8.29 | 216 | 0.02 | 0 | 0.01 | 0 | 0.4 |
| | 0900 | 1800 | 23-17 | 134-28 | 23.9 | 26.8 | 34.980 | 8.30 | 208 | 0.03 | 0 | 0.02 | 0 | 0.2 |
| 17 | 2300* | 0800 | 19-53 | 133-01 | 25.1 | 26.3 | 34.643 | 8.29 | 205 | 0.02 | 0 | 0.04 | 0 | 0.2 |
| | 0900 | 1800 | 17-32 | 131-59 | 26.3 | 27.5 | 34.397 | 8.31 | 210 | 0.05 | 0 | 0.02 | 0 | 0.1 |
| 18 | 2300* | 0800 | 14-19 | 130-39 | 26.5 | 27.8 | 34.208 | 8.32 | 205 | 0.03 | 0 | 0.04 | 0 | 0.1 |
| | 0900 | 1800 | 12-07 | 129-49 | 27.0 | 27.4 | 33.882 | 8.33 | 205 | 0.05 | 0 | 0.00 | 0 | 0.0 |
| 19 | 2300* | 0800 | 8-45 | 128-26 | 27.1 | 27.7 | 33.796 | 8.01 | 202 | 0.05 | 1 | 0.00 | 0 | 0.0 |
| | 0900 | 1800 | 6-17 | 127-20 | 26.7 | 28.8 | 33.989 | 8.06 | 205 | 0.03 | 0 | 0.02 | 1 | 0.0 |
| 20 | 2300* | 0800 | 4-07 | 124-08 | 27.4 | 28.6 | 34.090 | 7.92 | 202 | 0.02 | 0 | 0.00 | 0 | 0.1 |
| | 0900 | 1800 | 2-45 | 122-05 | 27.6 | 30.8 | 33.958 | 8.29 | 201 | 0.03 | 0 | 0.01 | 0 | 0.1 |
| 21 | 2300* | 0800 | 0-20 | 119-34 | 28.4 | 28.3 | 33.515 | 8.03 | 203 | 0.02 | 0 | 0.00 | 0 | 0.0 |
| | 0900 | 1800 | 2-03 | 118-39 | 28.0 | 30.0 | 33.834 | 8.17 | 202 | 0.05 | 0 | 0.01 | 0 | 0.1 |
| 22 | 2300* | 0800 | 5-22 | 117-13 | 28.0 | 29.5 | 33.949 | 8.33 | 204 | 0.03 | 1 | 0.01 | 0 | 0.0 |
| | 0900 | 1800 | 7-39 | 116-16 | 27.9 | 30.1 | 34.194 | 8.15 | 201 | 0.06 | 1 | 0.02 | 0 | 0.0 |
| 23 | 2300* | 0800 | 10-52 | 115-16 | 28.2 | 28.6 | 34.700 | 8.03 | 207 | 0.07 | 0 | 0.00 | 1 | 0.0 |
| | 0900 | 1800 | 13-02 | 114-48 | 26.1 | 28.8 | 34.646 | 7.92 | 202 | 0.06 | 1 | 0.00 | 0 | 0.0 |
| 24 | 2300* | 0800 | 16-27 | 114-10 | 25.2 | 26.5 | 34.875 | 8.22 | 207 | 0.09 | 1 | 0.00 | 0 | 0.1 |
| | 0900 | 1800 | 18-41 | 113-39 | 24.5 | 25.1 | 35.043 | 8.23 | 214 | 0.09 | 0 | 0.02 | 0 | 0.0 |
| 25 | 2300* | 0800 | 22-00 | 112-51 | 24.8 | 23.8 | 35.076 | 8.23 | 219 | 0.12 | 1 | 0.00 | 0 | 0.1 |
| | 0900 | 1800 | 24-05 | 112-20 | 23.2 | 22.5 | 35.243 | 8.27 | 224 | 0.06 | 1 | 0.01 | 0 | 0.0 |
| 26 | 2300* | 0800 | 27-26 | 112-49 | 22.4 | 20.1 | 35.697 | 8.24 | 233 | 0.05 | 0 | 0.01 | 0 | 0.2 |
| | 0900 | 1800 | 29-36 | 113-42 | 20.8 | 19.5 | 35.737 | 8.22 | 236 | 0.05 | 0 | 0.00 | 0 | 0.4 |
| Nov. 28 | | | Arrived in Fremantle | | | | | | | | | | | |

* The time of the date of the preceding day.

Table 2. XBT observation data.

| NUMBER | DATE TIME UT | POSITION LAT. LONG. | | TEMPERATURE (°C) | | | | | | | | | | | | | | | | S.L. (M) | AIR TEMP. (°C) |
|---------|-----------------|------------------------|---------|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-------------|----------------------|
| | | | | DEPTH (M) | | | | | | | | | | | | | | | | | |
| | | | | 0 | 10 | 20 | 30 | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | | | |
| 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1100 | 1200 | 1300 | 1400 | | | | | | | |
| N 33001 | 12- 3 23.9 | 34-39S | 110-39E | 17.0 | 17.0 | 17.0 | 16.9 | 16.7 | 15.0 | 14.1 | 13.1 | 12.8 | 12.2 | 11.1 | 10.3 | 9.8 | 9.5 | 9.2 | 42 | 16.0 | |
| | | | | 9.0 | 8.5 | 8.0 | 7.2 | 6.5 | 5.9 | 5.3 | 4.7 | 4.4 | 4.2 | 4.1 | 3.9 | 3.4 | 3.3 | 3.1 | | | |
| | | | | 3.0 | 3.0 | 2.9 | 2.8 | | | | | | | | | | | | | | |
| H 33002 | 12- 4 05.9 | 35-46 | 110-02 | 15.1 | 14.9 | 14.7 | 14.4 | 15.2 | 13.5 | 13.0 | 12.4 | 12.2 | 11.7 | 11.2 | 10.9 | 10.4 | 10.1 | 9.8 | - | 14.5 | |
| N 33003 | 10.4 | 36-48 | 110-02 | 14.3 | 14.3 | 14.1 | 14.0 | 13.1 | 12.6 | 11.9 | 11.7 | 11.6 | 11.0 | 11.0 | 10.8 | 10.4 | 10.2 | 10.1 | 51 | 13.6 | |
| H 33004 | 14.0 | 37-43 | 110-02 | 15.2 | 15.3 | 15.3 | 15.3 | 15.3 | 13.6 | 13.2 | 12.8 | 12.6 | 12.0 | 11.3 | 11.2 | 11.2 | 11.2 | 10.9 | 68 | 12.7 | |
| | | | | 10.8 | 10.8 | 10.7 | - | 10.1 | 9.9 | 9.4 | 8.8 | 8.1 | - | - | 6.0 | 5.6 | 5.4 | 5.2 | | | |
| | | | | 5.0 | 4.9 | 4.8 | 4.6 | | | | | | | | | | | | | | |
| H 33005 | 19.9 | 39-08 | 110-00 | 12.9 | 12.9 | 12.9 | 12.7 | 12.6 | 12.5 | 12.1 | 11.4 | 11.1 | 10.9 | 10.8 | 10.7 | 10.3 | 9.9 | 9.6 | 74 | 12.6 | |
| H 33006 | 12- 5 01.0 | 40-24 | 109-59 | 12.3 | 12.3 | 12.3 | 12.1 | 12.0 | | | | | | | | | | | | | |
| H 33008 | 23.0 | 44-03 | 110-02 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.5 | 10.4 | 10.3 | 9.9 | 9.9 | 10.0 | 10.1 | 10.0 | 9.6 | 92 | 10.0 | |
| | | | | 9.5 | 9.6 | 9.4 | 9.1 | 8.7 | 8.3 | 7.8 | 7.3 | 6.9 | | | | | | | | | |
| H 33009 | 12- 6 01.0 | 45-13 | 110-00 | 10.0 | 10.1 | 10.1 | 10.1 | 10.1 | 10.0 | 9.9 | 9.9 | 9.9 | 9.9 | 9.8 | 9.6 | 9.6 | 9.5 | 9.5 | 71 | 10.0 | |
| | | | | 9.5 | 9.4 | 9.3 | 8.9 | 8.6 | 8.0 | 7.6 | 7.1 | 6.5 | 6.0 | 5.6 | 4.8 | 4.2 | 3.8 | 3.5 | | | |
| | | | | 3.3 | 3.2 | | | | | | | | | | | | | | | | |
| N 33010 | 05.2 | 46-05 | 110-15 | - | 9.5 | 9.5 | 9.5 | 9.5 | 9.7 | 10.1 | 10.1 | 9.9 | 9.6 | 9.5 | 9.4 | 8.9 | 9.1 | 8.7 | 71 | 10.0 | |
| | | | | 8.5 | 8.1 | 7.7 | 7.1 | 6.6 | 6.1 | 5.7 | 5.2 | 4.8 | | | | | | | | | |
| H 33011 | 10.0 | 46-51 | 110-50 | 7.8 | 7.9 | 7.9 | 7.8 | 7.8 | 7.9 | 8.3 | 8.7 | 8.7 | 8.3 | 8.3 | 7.7 | 7.7 | 7.1 | 7.6 | 69 | 10.4 | |
| | | | | 6.9 | 6.3 | 5.8 | 5.3 | 4.9 | 4.6 | 4.3 | 4.1 | 3.8 | | | | | | | | | |
| H 33012 | 12- 7 01.0 | 48-49 | 108-44 | 5.4 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.2 | 5.0 | 4.7 | 4.3 | 4.2 | 4.2 | 4.1 | 3.7 | 3.5 | 104 | 4.5 | |
| | | | | 3.2 | 2.9 | 2.9 | 2.8 | 2.8 | 2.9 | 2.8 | 2.8 | 2.7 | | | | | | | | | |
| N 33013 | 04.8 | 49-42 | 108-42 | - | 5.4 | 5.3 | 5.3 | 5.3 | 5.3 | 5.2 | 4.8 | 4.7 | 4.3 | 4.2 | 4.4 | 4.2 | 3.9 | 3.5 | 105 | 3.9 | |
| | | | | 3.3 | 3.1 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.7 | 2.7 | 2.7 | 2.7 | | | |
| | | | | 2.7 | 2.7 | 2.7 | | | | | | | | | | | | | | | |
| H 33014 | 06.9 | 50-52 | 108-44 | 5.4 | 5.4 | 5.4 | 5.4 | 5.3 | 5.3 | 5.2 | 4.3 | 3.9 | 4.0 | 4.1 | 3.9 | 3.7 | 3.3 | 3.1 | 103 | 4.7 | |
| | | | | 3.0 | 2.8 | 2.8 | 2.6 | 2.6 | 2.7 | 2.6 | 2.6 | 2.6 | | | | | | | | | |
| H 33015 | 14.7 | 51-55 | 108-51 | 2.1 | 2.0 | 1.9 | 1.9 | 2.0 | 2.5 | 2.3 | 2.3 | 2.4 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 | 2.7 | - | 2.6 | |
| | | | | 2.7 | 2.7 | 2.8 | 2.7 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.6 | 2.5 | 2.5 | 2.4 | 2.4 | | |
| H 33016 | 12- 8 00.9 | 54-05 | 109-01 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 1.5 | 1.2 | 0.8 | 0.6 | 1.9 | 2.0 | 2.1 | 2.2 | 2.2 | 2.3 | 55 | 2.4 | |
| | | | | 2.5 | 2.4 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.5 | 2.5 | 2.4 | 2.3 | 2.2 | | |
| H 33017 | 04.7 | 54-57 | 108-57 | 2.3 | 2.2 | 2.1 | 2.1 | 2.1 | 1.6 | 1.3 | 1.1 | 0.8 | 1.3 | 1.9 | 2.1 | 2.1 | 2.1 | 2.2 | - | 2.7 | |
| | | | | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | | | |
| N 33018 | 09.9 | 55-21 | 107-23 | 2.7 | 2.7 | 2.6 | 2.6 | 2.5 | 2.0 | 1.7 | 1.3 | 1.2 | 1.2 | 2.0 | 2.1 | 2.1 | 2.3 | 2.3 | 47 | 2.7 | |
| | | | | 2.4 | | | | | | | | | | | | | | | | | |
| N 33019 | 14.6 | 55-41 | 105-52 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.2 | 2.1 | 1.9 | 1.6 | 1.1 | 2.4 | 2.4 | 2.4 | 2.5 | 2.7 | 55 | 2.4 | |
| | | | | 2.8 | 2.8 | 2.7 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.7 | 2.6 | 2.6 | 2.5 | | |

| | | | | | | | | | | | | | | | | | | | | | |
|---------|-------|------|-------|--------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|----|------|
| N 33020 | 12-9 | 04.5 | 56-53 | 100-32 | 1.0 | 1.0 | 1.0 | 1.0 | 0.0 | -0.4 | -0.4 | -0.5 | 0.3 | 1.4 | 1.8 | 2.0 | 2.0 | 2.0 | 2.0 | 31 | 2.6 |
| N 33021 | | 09.9 | 57-22 | 098-14 | 1.8 | 1.8 | 1.8 | 1.8 | 1.3 | 0.8 | 0.3 | -0.1 | -0.2 | 0.2 | 1.6 | 2.0 | 2.0 | 2.1 | 2.2 | 40 | 1.7 |
| N 33022 | | 14.8 | 57-46 | 096-08 | 0.9 | 0.8 | 0.6 | 0.5 | -0.1 | -0.3 | -0.6 | -0.8 | 0.1 | 1.7 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | - | 0.7 |
| N 33023 | 12-10 | 02.0 | 58-44 | 091-26 | 1.4 | 1.3 | 1.2 | | | | | | | | | | | | | | |
| | | | | | - | 1.0 | 0.7 | 0.2 | 0.3 | 0.1 | -0.2 | 0.1 | 1.0 | 1.8 | 2.2 | 2.3 | 2.4 | 2.4 | 2.4 | - | 1.3 |
| | | | | | 2.4 | 2.5 | 2.5 | 2.6 | 2.6 | 2.7 | | | | | | | | | | | |
| N 33024 | | 07.1 | 58-59 | 089-15 | 1.3 | 1.2 | 1.3 | 1.0 | 0.6 | 0.6 | 0.3 | 0.3 | 0.8 | 1.6 | 1.9 | 2.0 | 2.1 | 2.2 | 2.3 | 20 | 0.9 |
| N 33025 | | 11.9 | 59-00 | 087-21 | 1.3 | 1.3 | 1.2 | 1.2 | 0.8 | 0.7 | 0.5 | 0.3 | 0.6 | 1.6 | 2.0 | 2.1 | 2.2 | 2.2 | 2.4 | 27 | 0.6 |
| N 33026 | | 15.8 | 59-02 | 085-31 | 0.3 | 0.4 | 0.3 | -0.3 | -0.6 | -0.9 | -0.6 | 0.5 | 1.3 | 1.6 | 1.7 | 1.7 | 1.7 | 1.6 | 1.7 | 21 | -0.4 |
| N 33027 | 12-11 | 02.9 | 59-00 | 080-22 | -0.3 | -0.3 | -0.3 | -0.9 | -1.0 | -1.1 | 0.5 | 1.6 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 25 | -0.5 |
| N 33028 | | 08.0 | 59-03 | 078-01 | 0.2 | -0.0 | -0.2 | -0.8 | -1.0 | -1.1 | -0.4 | 0.2 | 1.2 | 1.8 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | - | 1.6 |
| N 33029 | | 12.9 | 58-58 | 076-03 | 0.1 | 0.1 | -0.0 | -0.9 | -1.1 | -1.3 | -1.4 | 0.2 | 1.6 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 14 | 0.0 |
| N 33030 | | 16.9 | 59-03 | 073-48 | -0.1 | -0.3 | -0.3 | -0.4 | -0.9 | -1.0 | -1.0 | 0.8 | 1.7 | 1.9 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | - | -0.6 |
| N 33031 | 12-12 | 03.0 | 59-00 | 069-00 | - | 0.6 | 0.5 | 0.5 | 0.4 | -0.5 | -0.5 | -0.4 | -0.5 | 1.1 | 1.8 | 2.0 | 2.1 | 2.1 | 2.2 | - | -0.4 |
| N 33032 | | 07.9 | 59-00 | 066-43 | 0.7 | 0.4 | 0.4 | 0.3 | -0.5 | -0.7 | -0.3 | -0.4 | -0.5 | 1.2 | 1.8 | 1.9 | 1.9 | 2.0 | 2.1 | - | -0.5 |
| N 33033 | | 12.8 | 59-01 | 064-15 | - | 0.6 | 0.5 | 0.4 | -0.3 | -0.2 | -0.3 | -0.6 | -0.6 | 1.1 | 1.7 | 2.0 | 2.1 | 2.1 | 2.2 | - | 0.1 |
| N 33034 | | 16.9 | 59-01 | 062-19 | -0.2 | -0.2 | -0.3 | -0.3 | -0.3 | -0.9 | -1.2 | -1.3 | -0.1 | 1.5 | 1.8 | 2.0 | 2.0 | 2.0 | 2.1 | 51 | -0.7 |
| N 33035 | 12-13 | 04.0 | 59-00 | 056-58 | - | -0.1 | -0.1 | -0.1 | -0.6 | -0.7 | -0.6 | -0.3 | -0.2 | 1.5 | 1.8 | 2.0 | 2.1 | 2.2 | 2.1 | 41 | -0.8 |
| | | | | | 2.1 | 2.0 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 1.9 | 1.9 | 1.8 | 1.8 | | |
| N 33036 | | 08.9 | 59-01 | 054-44 | 1.7 | 1.7 | 1.6 | | | | | | | | | | | | | | |
| | | | | | 0.6 | 0.6 | 0.7 | 0.8 | 0.4 | 0.2 | 0.2 | -0.0 | 0.2 | 1.3 | 1.5 | 2.0 | 1.9 | 2.0 | 2.0 | 19 | 1.1 |
| N 33037 | | 13.9 | 59-01 | 052-28 | - | 0.2 | -0.0 | -0.4 | -0.8 | -0.9 | -1.4 | -1.3 | -0.6 | 1.4 | 1.8 | 1.9 | 2.0 | 2.0 | 2.0 | - | 0.5 |
| N 33038 | | 17.8 | 59-01 | 050-35 | 0.2 | 0.2 | 0.1 | -0.2 | -0.7 | -1.1 | -1.4 | -1.0 | -0.0 | 1.4 | 1.7 | 1.9 | 1.9 | 2.0 | 2.0 | 16 | 1.1 |
| N 33039 | 12-14 | 04.9 | 59-00 | 045-12 | - | 0.8 | 0.9 | 0.8 | 0.3 | -0.0 | -0.2 | 0.1 | 0.5 | 1.8 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 31 | 0.2 |
| | | | | | 2.1 | | | | | | | | | | | | | | | | |

| NUMBER | DATE TIME UT | POSITION LAT. LONG. | | TEMPERATURE (°C) | | | | | | | | | | | | | | S.L. (M) | AIR TEMP. (°C) | | |
|---------|-----------------|------------------------|---------|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------------|----------------------|------|------|
| | | | | DEPTH (M) | | | | | | | | | | | | | | | | | |
| | | | | 0 | 10 | 20 | 30 | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | | | 450 | |
| 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1100 | 1200 | 1300 | 1400 | | | | | | | |
| N 33040 | 12-14 09.9 | 59-00S | 042-59E | 0.5 2.0 | 0.4 | 0.3 | 0.3 | -0.2 | -0.6 | -0.7 | -0.1 | 0.5 | 1.6 | 1.8 | 1.9 | 2.1 | 2.1 | 2.1 | - | 0.2 | |
| N 33041 | 14.7 | 59-14 | 040-52 | - 2.4 | 0.1 | -0.1 | -0.2 | -0.3 | -1.2 | -0.9 | -0.4 | -0.0 | 1.6 | 1.7 | 1.9 | 2.1 | 2.3 | 2.4 | - | 0.7 | |
| N 33042 | 19.6 | 59-58 | 038-58 | 0.0 1.7 | -0.3 | -0.8 | -0.9 | -1.0 | -1.7 | -1.6 | -1.2 | 0.4 | 1.5 | 1.7 | 1.7 | 1.8 | 1.8 | 1.8 | - | -0.4 | |
| N 33043 | 12-15 02.3 | 60-57 | 036-09 | -0.7 1.7 | -0.7 | -0.8 | -1.0 | -1.7 | -1.7 | -1.4 | -0.0 | 1.2 | 1.7 | 1.8 | 1.8 | 1.7 | 1.7 | 1.7 | - | -0.3 | |
| N 33044 | 05.0 | 61-20 | 035-01 | -0.5 1.5 | -0.5 | -1.1 | -1.1 | -1.7 | -1.5 | -1.1 | -0.9 | -0.6 | 1.4 | 1.5 | 1.6 | 1.7 | 1.7 | 1.7 | - | -0.8 | |
| N 33045 | 10.0 | 62-03 | 032-59 | -0.7 1.4 | -0.7 | -1.2 | -1.4 | -1.7 | -1.7 | -1.7 | -0.6 | 0.9 | 1.4 | 1.5 | 1.6 | 1.5 | 1.5 | 1.5 | 16 | 0.5 | |
| N 33046 | 15.0 | 62-48 | 030-47 | - 1.4 | -0.4 | -1.0 | -1.4 | -1.6 | -1.8 | -1.7 | 0.8 | 1.2 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | - | 0.4 | |
| N 33047 | 19.0 | 63-23 | 029-00 | -1.0 1.5 | -1.2 | -1.4 | -1.6 | -1.7 | -1.7 | -0.5 | 1.2 | 1.5 | 1.6 | 1.7 | 1.6 | 1.6 | 1.5 | 1.5 | - | -0.6 | |
| N 33048 | 12-16 04.8 | 64-32 | 025-18 | -1.7 1.3 | -1.7 | -1.7 | -1.7 | -1.8 | -1.8 | -1.8 | 0.1 | 1.2 | 1.4 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 | - | -0.9 | |
| N 33051 | 12-17 14.6 | 69-18 | 023-45 | 0.5 1.0 | 0.5 | 0.5 | 0.4 | -1.7 | -1.7 | -1.7 | -1.7 | -1.7 | -1.5 | 0.6 | 0.9 | 1.1 | 1.0 | 1.0 | 1.1 | - | -0.1 |
| N 33052 | 12-18 03.4 | 70-08 | 023-47 | -1.1 -1.7 | -1.1 | -1.1 | -1.6 | -1.7 | -1.8 | -1.8 | -1.8 | -1.9 | -1.9 | -1.8 | -1.7 | -1.7 | -1.7 | -1.7 | - | -5.4 | |
| N 33053 | 04.0 | 70-08 | 023-48 | -1.1 | -1.1 | -1.6 | -1.6 | -1.7 | -1.8 | -1.7 | -1.7 | -1.8 | -1.8 | -1.8 | -1.7 | -1.5 | | | - | -5.0 | |
| N 33054 | 05.0 | 70-02 | 023-49 | - 1.0 | -1.6 | -1.7 | -1.8 | -1.8 | -1.8 | -1.8 | -1.8 | -1.8 | -1.8 | -1.8 | -1.7 | -1.4 | -1.1 | -0.4 | - | -3.5 | |
| N 33056 | 12-20 02.0 | 65-51 | 029-54 | 1.0 -1.5 | 1.0 | -1.6 | -1.5 | -1.6 | -1.7 | -1.7 | -1.8 | -0.3 | 0.7 | 1.3 | 1.4 | 1.5 | 1.4 | 1.5 | 1.4 | - | -1.3 |
| N 33057 | 05.0 | 65-38 | 030-58 | -1.5 | -1.5 | -1.5 | -1.5 | -1.8 | -1.8 | -1.7 | -0.7 | 0.3 | 1.3 | 1.4 | 1.5 | 1.5 | 1.5 | 1.4 | 30 | -1.2 | |
| N 33058 | 09.9 | 65-13 | 032-49 | -1.5 0.8 | -1.7 | -1.7 | -1.8 | -1.8 | -1.8 | -1.7 | -1.5 | -0.8 | 0.5 | 0.8 | 1.0 | 1.0 | 1.0 | 0.9 | - | -0.1 | |
| N 33061 | 12-21 03.3 | 64-00 | 037-58 | -0.6 1.5 | -0.6 | -0.7 | -0.7 | -1.6 | -1.1 | 0.5 | 1.1 | 1.3 | 1.5 | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 | 34 | -0.3 | |
| N 33062 | 06.0 | 64-01 | 038-02 | -0.5 1.7 | -0.5 | -0.5 | -0.6 | -1.6 | 0.5 | 1.3 | 1.4 | 1.5 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | - | 0.6 | |
| | | | | 1.5 | 1.5 | 1.5 | 1.4 | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | |
|---------|------|------|-------|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------|-----|----|------|
| N 33072 | 2-22 | 19.5 | 68-09 | 039-06 | -0.8 0.4 | -0.6 0.6 | -0.2 0.6 | -0.1 0.6 | -0.1 0.5 | -0.5 0.5 | -0.5 0.4 | -1.7 0.4 | -1.8 0.4 | -1.8 0.4 | -1.7 0.4 | -1.7 0.4 | -1.4 0.4 | -0.2 | 0.4 | - | -4.0 |
| N 33073 | 2-23 | 06.8 | 67-58 | 034-20 | -1.0 1.1 | -1.0 1.2 | -1.1 1.2 | -1.1 1.2 | -1.1 1.1 | -1.1 0.9 | -1.8 0.7 | -1.8 0.6 | -1.8 0.5 | -1.8 0.4 | -1.7 0.3 | -1.0 0.3 | -0.3 | 0.8 | 1.0 | - | 1.7 |
| N 33074 | | 09.6 | 68-00 | 036-00 | -0.1 1.3 | -1.1 | -1.2 | -1.1 | -1.2 | -1.7 | -1.8 | -1.8 | -1.8 | -1.7 | -1.5 | -0.5 | 0.4 | 0.8 | 1.2 | - | 3.4 |
| N 33075 | | 18.7 | 67-50 | 039-58 | -0.5 1.1 | -0.6 | -0.6 | -0.5 | -0.5 | -0.5 | -1.7 | -1.8 | -1.8 | -1.7 | -0.8 | 0.6 | 0.9 | 0.9 | 1.1 | - | -2.3 |
| N 33076 | 2-24 | 03.2 | 67-50 | 036-03 | -0.5 1.2 | -0.5 | -0.5 | -0.5 | -0.5 | -1.8 | -1.8 | -1.9 | -1.9 | -1.9 | -1.8 | -0.6 | 1.1 | 1.2 | 1.3 | - | -1.9 |
| N 33077 | | 13.0 | 67-50 | 032-01 | 0.1 0.4 | 0.1 | 0.1 | 0.1 | -0.1 | -1.8 | -1.8 | -1.6 | - | -1.8 | -1.6 | -1.1 | -0.6 | -0.0 | 0.2 | 44 | -2.0 |
| N 33078 | | 14.1 | 67-40 | 031-02 | - | 0.1 | 0.1 | 0.1 | 0.1 | -1.4 | -1.8 | -1.8 | -1.8 | -1.8 | -1.7 | -1.2 | -0.5 | -0.0 | 0.2 | 54 | -1.7 |
| N 33079 | | 22.4 | 67-40 | 035-48 | -0.3 0.8 | -0.3 | -0.3 | -0.3 | -0.3 | -1.4 | -1.8 | -1.8 | -1.8 | -1.4 | -0.1 | 0.8 | 1.1 | 1.1 | 1.1 | 53 | -4.4 |
| N 33080 | 2-25 | 07.5 | 67-41 | 039-54 | -0.0 1.0 | -0.0 | -0.0 | -0.1 | -0.1 | -1.3 | -1.6 | -1.2 | -0.4 | 0.8 | 1.2 | 1.2 | 1.2 | 1.1 | 1.0 | 74 | -3.0 |
| N 33081 | | 08.9 | 67-30 | 040-00 | -0.3 0.9 | -0.3 | -0.3 | -0.3 | -0.5 | -1.6 | -1.8 | -1.8 | -1.8 | -1.8 | -1.4 | -0.1 | 0.7 | 1.3 | 1.2 | 41 | -3.1 |
| N 33082 | | 17.5 | 67-30 | 036-00 | 0.1 1.0 | 0.1 | 0.2 | 0.1 | 0.1 | -1.8 | -1.8 | -1.8 | -1.8 | -0.7 | 0.3 | 0.9 | 1.1 | 1.0 | 1.1 | 54 | -1.9 |
| N 33083 | | 17.9 | 67-30 | 035-44 | -0.1 1.0 | -0.1 | -0.1 | -0.1 | -0.1 | -1.6 | -1.7 | -1.7 | -1.5 | -0.6 | 0.6 | 0.9 | 1.1 | 1.0 | 1.0 | 55 | -1.1 |
| N 33084 | 2-26 | 02.0 | 67-31 | 032-05 | 0.4 0.6 | 0.4 | 0.4 | 0.4 | 0.4 | -1.7 | -1.8 | -1.8 | -1.8 | -1.7 | -1.6 | -1.0 | -0.3 | 0.2 | 0.5 | 52 | -2.5 |
| N 33085 | | 03.3 | 67-20 | 031-59 | 0.5 0.7 | 0.5 | 0.5 | 0.5 | 0.4 | -1.8 | -1.8 | -1.8 | -1.8 | -1.1 | -0.5 | -0.2 | 0.6 | 0.6 | 0.6 | 46 | -2.5 |
| N 33086 | | 12.3 | 67-20 | 035-57 | 0.0 1.3 | - | -0.1 | - | -0.1 | -1.1 | -1.8 | - | -1.4 | - | 1.0 | 1.3 | 1.2 | 1.2 | 1.3 | - | -3.2 |
| N 33087 | | 16.7 | 67-20 | 037-58 | -0.2 1.2 | -0.2 | -0.3 | -0.3 | -0.3 | -1.8 | -1.8 | -1.8 | -1.7 | -0.3 | 0.8 | 1.2 | 1.3 | 1.3 | 1.3 | - | -1.4 |
| N 33088 | | 21.1 | 66-25 | 037-59 | 0.9 1.5 | 0.9 | 0.9 | 0.9 | 0.2 | -1.6 | 0.2 | 1.1 | 1.4 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.5 | 47 | 0.5 |
| N 33089 | 2-27 | 02.1 | 65-14 | 037-59 | 1.5 1.4 | 1.5 | 1.5 | 1.5 | -1.7 | -1.6 | -1.3 | 0.4 | 1.1 | 1.4 | 1.5 | 1.7 | 1.7 | 1.5 | 1.5 | 48 | 0.9 |
| N 33090 | | 06.5 | 64-13 | 038-01 | 1.8 1.4 | 1.8 | 1.7 | 1.7 | -1.6 | -0.9 | 0.2 | 0.8 | 1.2 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 41 | 1.2 |
| N 33091 | | 07.3 | 64-02 | 038-02 | 1.8 1.8 | 1.8 | 1.8 | 1.7 | 1.6 | -1.3 | -0.7 | 0.2 | 1.1 | 1.5 | 1.6 | 1.8 | 1.8 | 1.8 | 1.8 | 44 | 2.0 |

| NUMBER | DATE TIME UT | POSITION LAT. LONG. | | TEMPERATURE (°C) | | | | | | | | | | | | | | S.L. (M) | AIR TEMP. (°C) | | | |
|---------|-----------------|------------------------|---------|-------------------|-------------------|-------------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------|-------------|-----|-----|
| | | | | DEPTH (M) | | | | | | | | | | | | | | | | | | |
| | | | | 0 500 1500 | 10 550 1600 | 20 600 1700 | 30 650 1800 | 50 700 | 75 750 | 100 800 | 125 850 | 150 900 | 200 950 | 250 1000 | 300 1100 | 350 1200 | 400 1300 | | | 450 1400 | | |
| N 33092 | 2-27 12.7 | 64-01S | 038-09E | 1.4 1.8 2.4 | 1.2 1.8 2.4 | 1.0 1.8 | 1.0 1.8 | | 1.7 | -1.6 | -0.7 | 0.7 | 1.1 | 1.4 | 1.6 | 2.0 | 2.1 | 2.3 | 2.3 | 49 | 1.5 | |
| N 33093 | 2-28 04.5 | 64-03 | 037-58 | 1.7 1.4 | 1.7 | 1.7 | 1.7 | 1.6 | -1.3 | -1.0 | 0.5 | 1.0 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | | - | 2.6 | |
| N 33094 | 09.0 | 64-02 | 038-01 | 1.7 1.7 | 1.7 | 1.6 | 1.6 | -1.3 | -1.5 | -0.6 | 0.7 | 1.2 | 1.5 | 1.6 | 1.7 | 1.8 | 1.7 | 1.7 | | 41 | 2.8 | |
| N 33095 | 2-29 11.2 | 64-10 | 037-49 | 1.7 1.5 | 1.7 1.5 | 1.7 1.5 | 1.7 1.5 | -1.4 1.5 | -1.3 1.5 | 0.3 1.5 | 1.1 1.5 | 1.3 1.5 | 1.5 1.4 | 1.5 1.4 | 1.5 1.4 | 1.5 1.4 | 1.5 1.3 | 1.5 1.0 | | - | 1.1 | |
| N 33096 | 15.1 | 64-19 | 039-10 | 1.5 1.4 | 1.5 | 1.5 | 1.5 | 0.8 | -1.6 | 0.7 | 1.2 | 1.4 | 1.5 | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 | | - | 0.7 | |
| N 33097 | 17.3 | 64-25 | 040-04 | 1.7 1.7 | 1.7 1.7 | 1.7 1.7 | 1.7 1.8 | 1.6 2.0 | -1.3 2.1 | 0.7 2.2 | 1.4 2.2 | 1.5 2.2 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | | 37 | 0.7 | |
| N 33098 | 19.2 | 64-32 | 040-53 | 1.6 1.6 | 1.6 | 1.6 | 1.6 | 1.4 | -1.4 | 1.2 | 1.5 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 | 1.6 | 1.6 | | 39 | 0.7 | |
| N 33099 | 22.1 | 64-39 | 041-48 | 1.4 -1.5 | 1.4 1.5 | 1.4 1.4 | 1.4 1.4 | 1.3 1.3 | -1.3 1.3 | 0.5 1.2 | 1.4 1.2 | 1.6 1.2 | 1.6 1.1 | 1.6 1.1 | 1.6 1.0 | 1.6 0.9 | 1.5 0.9 | 1.5 0.8 | | 50 | 0.5 | |
| N 33100 | 23.3 | 64-47 | 042-35 | 0.7 1.0 1.5 | 0.7 1.0 | 1.0 | 1.0 | 1.0 | -1.1 | 0.8 | 1.4 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.5 | | 50 | 0.5 | |
| N 33101 | 3- 1 01.3 | 64-56 | 043-30 | 1.1 1.7 | 1.1 1.6 | 1.1 1.6 | 1.1 1.6 | -1.0 1.5 | -1.5 1.5 | 1.3 1.4 | 1.5 1.4 | 1.6 1.3 | 1.7 1.3 | 1.7 1.3 | 1.7 | 1.7 | 1.7 | 1.7 | | - | 0.5 | |
| N 33102 | 03.3 | 65-00 | 044-22 | 1.0 1.5 | 0.9 | 0.9 | 0.9 | 0.9 | -1.6 | -1.6 | -0.1 | 1.4 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | | 50 | 0.5 | |
| N 33103 | 05.0 | 64-59 | 045-04 | 0.9 1.4 | 0.9 1.4 | 0.8 1.3 | 0.8 1.2 | 0.8 1.1 | -1.5 1.1 | -1.5 0.9 | -0.9 1.0 | 0.2 0.9 | 1.0 0.8 | 1.3 0.8 | 1.4 0.8 | 1.4 0.7 | 1.4 0.6 | 1.4 0.5 | | 64 | 0.5 | |
| N 33104 | 06.7 | 65-01 | 045-47 | 0.5 0.9 1.0 | 0.4 0.9 | 0.4 0.9 | 0.3 0.9 | 0.9 | -1.5 | -1.6 | -1.7 | -1.7 | 0.4 | 0.8 | 0.8 | 0.9 | 0.9 | 1.0 | | 51 | 0.6 | |
| N 33105 | 08.1 | 65-00 | 046-21 | 1.0 1.9 | 0.9 1.8 | 0.9 1.7 | 0.9 1.9 | 0.9 1.9 | -1.6 1.9 | -1.5 1.8 | -1.3 1.7 | -1.7 1.8 | -1.4 1.7 | 0.2 1.7 | 1.9 | 2.0 | 2.3 | 2.0 | | 52 | 0.7 | |
| N 33106 | 13.5 | 65-04 | 046-44 | 1.1 1.3 | 1.0 1.3 | 1.0 1.3 | 1.0 1.3 | 0.9 1.3 | -1.6 1.3 | -1.5 1.3 | -1.6 1.3 | -1.4 1.2 | -0.2 1.2 | 0.9 1.2 | 1.0 | 1.1 | 1.2 | 1.2 | | 49 | 2.4 | |
| N 33107 | 15.8 | 65-03 | 047-09 | 0.6 1.2 | 0.6 1.2 | 0.6 1.1 | 0.6 0.9 | 0.6 1.1 | -1.8 0.9 | -1.8 1.0 | -1.9 1.0 | -1.8 0.9 | -1.8 1.2 | -1.8 | -1.6 | -0.2 | 1.0 | 1.5 | 1.5 | | 50 | 0.7 |
| N 33108 | 16.9 | 65-00 | 047-36 | 0.7 0.4 | 0.7 | 0.6 | 0.6 | 0.6 | -1.7 | -1.7 | -1.7 | -1.7 | -1.6 | -1.4 | -1.0 | -0.2 | 0.0 | 0.3 | | 55 | 0.7 | |

| | | | | | | | | | | | | | | | | | | | | |
|---------|------|-------|--------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|------|
| N 33109 | 17.6 | 65-00 | 047-51 | 0.9 | 0.9 | 0.8 | 0.8 | 0.8 | -1.7 | -1.7 | -1.8 | -1.7 | -1.7 | -1.4 | -0.4 | 0.6 | 0.9 | 0.9 | 55 | -0.1 |
| | | | | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.6 | 0.5 | 0.4 | 0.4 | 0.3 | | | | | |
| N 33110 | 19.2 | 65-00 | 048-30 | 0.5 | 0.4 | 0.4 | 0.4 | 0.5 | -1.7 | -1.6 | -1.5 | -1.6 | -1.6 | -1.0 | 0.9 | 0.7 | 0.7 | 0.8 | 40 | -0.6 |
| | | | | 0.7 | | | | | | | | | | | | | | | | |
| N 33111 | 21.2 | 65-00 | 049-19 | 0.5 | 0.4 | 0.4 | 0.4 | -0.9 | -1.6 | -1.5 | -1.3 | -0.9 | -0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 39 | -0.1 |
| | | | | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | | | |
| N 33112 | 23.0 | 65-01 | 049-56 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | -1.6 | -1.4 | -1.4 | -1.0 | -0.6 | -0.2 | 0.3 | 0.6 | 0.2 | 0.2 | 50 | -1.2 |
| | | | | 0.4 | | | | | | | | | | | | | | | | |
| N 33113 | 3- 2 | 02.3 | 64-59 | 051-03 | 0.1 | 0.1 | 0.1 | 0.1 | -1.5 | -1.5 | -1.3 | -1.1 | -0.3 | 0.3 | 1.2 | 1.3 | 1.3 | 1.3 | 51 | -1.9 |
| | | | | | 1.3 | 1.2 | 1.1 | 1.0 | 0.9 | 0.9 | | | | | | | | | | |
| N 33114 | 04.0 | 64-59 | 051-31 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | -1.7 | -1.7 | -1.8 | -1.7 | -1.4 | -0.3 | 0.6 | 0.8 | 1.0 | 0.9 | 50 | -2.6 |
| | | | | | 0.9 | 1.1 | 1.0 | 1.1 | 1.1 | 1.0 | 1.0 | 0.9 | 1.0 | | | | | | | |
| N 33115 | 05.9 | 65-00 | 052-05 | -0.2 | -0.2 | -0.2 | -0.2 | -0.2 | -1.1 | -1.5 | -1.6 | -1.6 | -1.2 | -0.4 | 0.3 | 0.1 | -0.0 | 0.3 | 78 | -2.7 |
| | | | | 0.6 | | | | | | | | | | | | | | | | |
| N 33116 | 09.0 | 64-56 | 052-56 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.2 | -0.8 | -0.5 | -0.3 | 0.5 | 0.6 | 1.0 | 1.2 | 1.3 | 1.3 | 69 | -3.0 |
| | | | | 1.2 | 1.3 | 1.3 | 1.2 | 1.2 | 1.1 | 1.1 | 1.0 | 1.0 | 0.6 | 0.8 | | | | | | |
| N 33117 | 12.0 | 64-50 | 053-54 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | -1.4 | -1.6 | -1.7 | -1.7 | -1.5 | -0.4 | -0.3 | -0.3 | -0.4 | -0.7 | - | -2.5 |
| | | | | -0.4 | | | | | | | | | | | | | | | | |
| N 33118 | 14.8 | 64-48 | 055-03 | 0.6 | 0.6 | 0.6 | 0.6 | -0.8 | -0.1 | 0.3 | -0.3 | 0.5 | 1.2 | 1.5 | 1.8 | 1.8 | 1.7 | 1.7 | 39 | -2.2 |
| | | | | 1.7 | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.7 | 1.7 | 1.7 | | | | | | |
| N 33119 | 15.0 | 64-48 | 055-06 | 0.6 | 0.6 | 0.6 | 0.6 | -0.1 | -0.5 | -0.2 | -0.3 | 0.7 | 1.5 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 43 | -2.2 |
| | | | | 1.6 | | | | | | | | | | | | | | | | |
| N 33120 | 15.2 | 64-47 | 055-12 | 0.7 | 0.7 | 0.7 | 0.7 | 0.2 | -0.5 | 0.8 | 1.4 | 1.6 | 1.7 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 46 | -2.2 |
| | | | | 1.6 | | | | | | | | | | | | | | | | |
| N 33121 | 18.9 | 64-39 | 056-55 | 0.7 | 0.7 | 0.7 | 0.7 | 0.4 | -0.5 | 0.4 | 1.2 | 1.6 | 1.7 | 1.8 | 1.8 | 1.7 | 1.7 | 1.7 | 44 | -1.6 |
| | | | | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | | |
| N 33122 | 21.3 | 64-39 | 058-00 | 0.9 | 0.8 | 0.8 | | | | | | | | | | | | | | |
| | | | | 0.6 | 0.6 | 0.6 | 0.6 | 0.4 | -0.9 | -0.6 | 1.3 | 1.5 | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 47 | -1.7 |
| | | | | 1.8 | | | | | | | | | | | | | | | | |
| N 33123 | 3- 3 | 02.2 | 64-33 | 060-20 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | -0.7 | 0.5 | 1.4 | 1.5 | 1.7 | 1.8 | 1.8 | 1.8 | 1.7 | 54 | -1.7 |
| | | | | 1.7 | | | | | | | | | | | | | | | | |
| N 33124 | 03.9 | 64-32 | 061-12 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | -0.9 | 0.5 | 1.1 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 51 | -0.8 |
| | | | | 2.0 | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 | 1.7 | 1.7 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | | |
| N 33125 | 07.9 | 64-22 | 063-11 | 1.1 | 1.0 | | | | | | | | | | | | | | | |
| | | | | 0.6 | 0.6 | 0.6 | 0.6 | 0.2 | -0.7 | -0.1 | 0.6 | - | - | 1.2 | 1.4 | 1.5 | 1.4 | 1.5 | 36 | -0.2 |
| | | | | 1.5 | | | | | | | | | | | | | | | | |
| N 33126 | 11.9 | 64-22 | 063-34 | 0.6 | 0.6 | 0.6 | 0.6 | -0.7 | -0.9 | -0.4 | -0.0 | 0.3 | 1.0 | 1.4 | 1.8 | 2.1 | 2.0 | 1.8 | 39 | -0.6 |
| | | | | 1.7 | 1.6 | 1.5 | 1.5 | | | | | | | | | | | | | |
| N 33128 | 12.3 | 64-21 | 063-36 | 0.6 | 0.5 | 0.5 | 0.5 | 0.3 | -0.9 | -0.3 | 0.2 | 0.6 | 1.1 | 1.4 | 1.3 | 1.4 | 1.4 | 1.4 | - | -0.6 |
| | | | | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.6 | | | | | |

| NUMBER | DATE TIME UT | POSITION LAT. LONG. | | TEMPERATURE (°C) DEPTH (M) | | | | | | | | | | | | | | S.L. (M) | AIR TEMP. (°C) | |
|---------|-----------------|------------------------|---------|-------------------------------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-------------|----------------------|------|
| | | | | 0 | 10 | 20 | 30 | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | | | 450 |
| | | | | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1100 | 1200 | 1300 | | | 1400 |
| N 33130 | 3- 3 16.4 | 64-18S | 065-31E | 0.8 | 0.9 | 0.9 | 0.9 | 0.5 | -0.8 | 0.6 | 1.6 | 1.7 | 2.0 | 2.2 | 2.3 | 2.4 | 2.2 | 2.1 | 46 | -1.8 |
| | | | | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 1.9 | | | | | | | | |
| N 33131 | 19.0 | 64-09 | 066-55 | 1.1 | 1.1 | 1.1 | 1.1 | -1.1 | -0.6 | 0.7 | 1.0 | 1.3 | 1.5 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 35 | -2.0 |
| | | | | 1.6 | 1.6 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 | 1.2 | 1.2 | 1.2 | 1.1 | 1.0 | 1.0 | 0.9 | 0.8 | | |
| N 33132 | 3- 4 00.4 | 64-06 | 069-31 | 0.8 | 0.8 | 0.7 | 0.7 | | | | | | | | | | | | | |
| | | | | 0.8 | 0.8 | 0.8 | 0.6 | -0.9 | -0.2 | 1.1 | 1.1 | 1.5 | 1.7 | 1.7 | 1.7 | 1.8 | 1.7 | 1.7 | 28 | -3.1 |
| | | | | 1.6 | | | | | | | | | | | | | | | | |
| N 33135 | 03.3 | 63-59 | 071-00 | 1.2 | 1.3 | 1.1 | 1.1 | -1.2 | -1.5 | -1.4 | -0.4 | -0.1 | 0.7 | 1.1 | 1.2 | 1.3 | 1.3 | 1.4 | 38 | -3.2 |
| | | | | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.1 | 1.0 | 1.0 | 1.0 | 0.9 | | | | | | | |
| N 33136 | 08.1 | 63-50 | 073-33 | 1.3 | 1.3 | 1.3 | 1.3 | -1.2 | -0.2 | 0.9 | 1.5 | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.9 | - | -3.6 |
| | | | | 2.0 | | | | | | | | | | | | | | | | |
| N 33137 | 13.3 | 63-35 | 076-14 | 1.4 | 1.4 | 1.4 | 1.4 | -0.6 | 0.5 | 1.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.9 | 2.0 | - | 2.1 | 36 | -2.8 |
| | | | | 2.1 | | | | | | | | | | | | | | | | |
| N 33138 | 18.2 | 63-29 | 078-46 | 1.2 | 1.2 | 1.2 | 1.2 | -0.6 | -0.7 | 0.9 | 1.5 | 1.7 | 1.8 | 1.8 | 1.9 | 1.8 | 1.9 | 1.9 | 39 | -3.5 |
| | | | | 1.8 | 1.8 | 1.7 | 1.7 | 1.7 | 1.6 | 1.6 | 1.5 | 1.4 | 1.4 | 1.3 | 1.3 | 1.1 | 1.1 | 1.0 | | |
| | | | | 0.9 | 0.8 | 0.7 | | | | | | | | | | | | | | |
| N 33139 | 3- 5 02.0 | 63-30 | 082-40 | 1.3 | 1.2 | 1.2 | 1.2 | 1.0 | -0.7 | 0.2 | 1.0 | 1.4 | 1.7 | 1.9 | 2.0 | 2.0 | 2.0 | 2.1 | - | -1.5 |
| | | | | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 1.9 | 1.9 | 1.8 | 1.8 | | |
| N 33140 | 05.9 | 63-30 | 084-25 | 0.8 | 0.8 | 0.8 | 0.8 | -1.0 | -1.3 | -1.0 | -0.7 | -0.6 | -0.0 | 0.9 | 0.8 | 0.8 | 1.1 | 1.1 | - | 1.0 |
| | | | | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 | 1.3 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | | | | | | |
| N 33141 | 11.4 | 63-30 | 085-02 | 0.9 | 0.7 | 0.7 | -0.4 | -1.0 | -0.4 | 0.1 | 0.5 | 0.5 | 0.9 | 1.3 | 1.5 | 1.6 | 1.6 | 1.6 | 26 | 0.0 |
| | | | | 1.5 | | | | | | | | | | | | | | | | |
| N 33142 | 14.1 | 63-28 | 086-19 | - | 0.8 | 0.8 | 0.8 | -1.1 | -0.7 | 0.0 | 0.5 | 0.6 | 1.1 | 1.4 | 1.5 | 1.4 | 1.1 | 1.3 | 26 | -0.1 |
| | | | | 1.5 | 1.2 | 1.5 | 1.5 | 1.3 | 1.1 | 1.1 | 1.2 | 1.1 | 1.1 | | | | | | | |
| N 33143 | 14.3 | 63-28 | 086-21 | - | 0.7 | 0.7 | 0.6 | -1.6 | -1.7 | -1.1 | -0.9 | 0.1 | 0.2 | 0.8 | 1.5 | 1.6 | 1.8 | 2.0 | 29 | -0.1 |
| | | | | 1.9 | | | | | | | | | | | | | | | | |
| N 33144 | 14.4 | 63-28 | 086-25 | - | 0.7 | 0.7 | -1.1 | -1.7 | -1.5 | -1.2 | -1.3 | -1.3 | -1.0 | -0.3 | 0.6 | 1.0 | 1.4 | 1.5 | 23 | -0.1 |
| | | | | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | | | | | | | | |
| N 33145 | 14.6 | 63-28 | 086-29 | - | 0.6 | 0.6 | 0.3 | -1.5 | -1.7 | -1.6 | -1.5 | -1.4 | -0.9 | 0.1 | 0.9 | 1.4 | 1.0 | 1.2 | 26 | -0.1 |
| | | | | | | | | | | | | | | | | | | | | |
| N 33146 | 14.7 | 63-28 | 086-33 | - | 0.5 | 0.5 | 0.5 | -1.6 | -1.7 | -1.6 | -1.5 | -1.4 | -1.1 | 0.1 | 0.1 | 0.2 | 0.9 | 1.1 | 32 | -0.1 |
| | | | | 1.2 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | | | | | | |
| N 33147 | 14.9 | 63-28 | 086-38 | - | 0.6 | 0.6 | 0.6 | -1.6 | -1.6 | -1.5 | -1.4 | -1.2 | -0.8 | -0.2 | 0.8 | 0.9 | 1.2 | 1.3 | 30 | -0.1 |
| | | | | | | | | | | | | | | | | | | | | |
| N 33148 | 15.2 | 63-28 | 086-48 | - | 0.6 | 0.6 | -0.2 | -1.4 | -1.1 | -1.4 | -0.9 | -1.1 | -0.7 | 0.1 | 0.4 | 1.0 | 0.8 | 0.9 | 24 | -0.1 |
| | | | | | | | | | | | | | | | | | | | | |
| N 33149 | 15.4 | 63-28 | 086-53 | 0.5 | 0.6 | 0.1 | -1.5 | -1.7 | -1.7 | -1.6 | -1.4 | -1.3 | -0.7 | -0.1 | 0.2 | 0.7 | 0.9 | 0.9 | - | -0.1 |
| | | | | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | | | | | | | |

| | | | | |
|---------|-----------|-------|--------|--|
| N 33150 | 18.2 | 63-29 | 088-07 | 1.5 1.5 1.5 1.5 -0.2 -1.3 -0.9 -0.1 0.5 1.0 1.2 1.3 1.4 1.6 1.6 39 -0.8 |
| | | | | 1.7 1.6 1.6 1.6 1.5 1.5 1.4 1.4 1.4 1.3 1.3 1.3 1.2 1.1 1.0 |
| N 33151 | 22.0 | 63-30 | 089-48 | 0.9 0.9 0.8 0.8 |
| | | | | 1.3 1.3 1.3 1.3 -0.9 -1.3 -0.6 -0.1 0.5 0.9 1.1 1.2 1.3 1.4 1.8 35 -0.9 |
| | | | | 2.0 2.0 2.0 2.1 2.2 2.1 2.1 2.1 2.2 2.2 2.2 |
| N 33152 | 3- 6 02.0 | 63-30 | 091-42 | 0.9 0.9 0.9 -1.3 -1.6 -1.2 -0.9 -0.6 -0.1 0.3 0.8 0.9 1.1 1.1 1.3 - - -0.3 |
| | | | | 1.2 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.2 1.2 |
| N 33153 | 05.9 | 63-29 | 093-31 | 1.2 1.3 |
| | | | | 0.6 0.5 0.5 -1.7 -1.8 -1.8 -1.8 -1.8 -1.7 -1.2 0.2 1.2 1.2 1.2 1.2 - -0.5 |
| | | | | 1.2 1.2 1.1 1.1 1.1 1.0 1.0 1.0 1.0 |
| N 33156 | 13.9 | 63-30 | 095-27 | 1.0 0.9 0.9 0.9 -0.7 -1.7 -1.6 -1.5 -1.5 -1.0 -0.7 0.1 0.3 0.4 0.5 39 0.1 |
| | | | | 0.8 0.7 0.9 0.8 0.8 0.8 0.9 0.8 0.8 0.8 |
| N 33157 | 17.1 | 63-30 | 096-51 | 1.0 1.0 1.0 1.0 -1.3 -1.4 -1.5 -1.1 -0.3 0.3 0.7 0.8 0.9 0.9 1.0 39 -0.5 |
| | | | | 1.0 0.9 0.9 0.9 0.8 0.8 0.7 0.7 0.6 0.5 0.5 0.4 0.4 0.3 |
| N 33158 | 21.4 | 63-30 | 098-45 | 0.6 0.6 0.6 0.6 0.2 -1.8 -1.8 -1.9 -1.8 -1.8 -1.7 -1.3 0.7 1.1 1.2 43 -1.5 |
| | | | | 1.2 1.2 1.2 1.1 1.1 1.0 0.9 0.8 0.8 0.7 |
| N 33159 | 3- 7 01.1 | 63-30 | 100-21 | 1.2 1.2 1.2 1.2 -1.4 -1.6 -1.6 -1.7 -1.5 -0.9 -0.4 -0.3 -0.2 0.5 0.6 39 -1.5 |
| | | | | 0.7 0.6 0.5 0.5 0.5 0.4 0.3 0.3 0.2 0.2 0.2 0.0 0.1 -0.1 -0.1 |
| N 33160 | 02.9 | 63-29 | 101-01 | 1.1 1.1 1.1 1.1 -1.9 -1.9 -1.9 -1.9 -1.9 -1.9 -1.2 -0.7 -0.1 0.0 0.2 32 -1.8 |
| | | | | 0.3 |
| N 33161 | 04.7 | 63-28 | 101-36 | 0.8 0.8 0.8 0.8 -1.6 -1.8 -1.8 -1.8 -1.8 -1.6 -1.2 -0.6 -0.2 -0.0 0.1 39 -2.0 |
| | | | | 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.0 -0.0 0.0 -0.0 |
| N 33162 | 08.5 | 63-26 | 102-24 | 0.8 0.8 0.7 0.7 -1.8 -1.8 -1.9 -1.9 -1.9 -1.9 -1.8 -1.6 -0.7 -0.0 0.1 36 -2.2 |
| | | | | 0.2 0.3 0.2 0.3 0.4 0.4 0.4 0.3 |
| N 33163 | 09.1 | 63-27 | 102-43 | 0.8 0.8 0.7 0.7 -0.9 -1.8 -1.8 -1.8 -1.8 -1.8 -1.7 -1.4 0.3 0.0 0.1 42 -2.2 |
| | | | | -0.2 0.2 0.3 0.3 0.3 0.3 0.2 0.2 |
| N 33164 | 09.6 | 63-28 | 103-00 | 1.1 1.1 1.1 1.1 -0.6 -1.8 -1.8 -1.8 -1.8 -1.8 -1.5 -1.1 -0.5 -0.3 0.1 31 -2.6 |
| | | | | 0.4 |
| N 33165 | 10.0 | 63-29 | 102-52 | 1.3 1.3 1.3 1.3 -1.3 -1.8 -1.8 -1.8 -1.8 -1.8 -1.5 -1.2 -0.7 -0.4 -0.1 32 -2.6 |
| | | | | 0.3 0.4 0.6 0.5 0.5 0.5 0.7 0.7 0.7 |
| N 33166 | 11.1 | 63-30 | 103-26 | 1.4 1.4 1.4 1.4 -1.4 -1.8 -1.8 -1.8 -1.8 -1.6 -1.2 -0.2 0.4 1.1 1.3 37 -2.6 |
| | | | | 1.3 |
| N 33167 | 11.8 | 63-30 | 103-48 | 1.7 1.8 1.8 1.7 1.2 -0.5 0.2 0.1 0.7 1.1 0.7 1.1 1.2 1.3 1.3 48 -2.5 |
| | | | | 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 |
| N 33168 | 11.9 | 63-30 | 103-52 | 1.6 1.6 1.6 1.6 -0.4 -0.7 -0.1 -0.0 0.7 0.9 0.0 0.8 - 1.3 1.3 44 -2.5 |
| | | | | 1.3 |
| N 33169 | 12.0 | 63-30 | 103-54 | 1.5 1.5 1.5 1.5 -0.1 -0.3 1.3 0.5 - 0.7 1.5 1.4 0.9 1.4 1.4 47 -2.5 |
| | | | | 1.4 |
| N 33170 | 12.1 | 63-30 | 103-57 | 1.6 1.6 1.6 1.6 0.1 1.4 1.6 1.5 1.6 1.6 1.6 1.5 1.5 1.6 1.5 30 -2.5 |
| | | | | 1.4 |
| N 33171 | 12.3 | 63-30 | 104-02 | 1.7 1.7 1.7 1.7 -0.7 -0.3 -0.3 0.6 -0.1 1.3 1.2 1.6 1.6 1.6 1.6 42 -2.5 |
| | | | | 1.5 |

| NUMBER | DATE TIME UT | POSITION | | TEMPERATURE (°C) | | | | | | | | | | | | | | | S.L. (M) | AIR TEMP. (°C) | | | | |
|---------|-----------------|----------|---------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------------|----------------------|------|--|--|--|
| | | LAT. | LONG. | 0 | 10 | 20 | 30 | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | | | | | | |
| | | | | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1100 | 1200 | 1300 | 1400 | | | | | | |
| | | | | 1500 | 1600 | 1700 | 1800 | | | | | | | | | | | | | | | | | |
| N 33172 | 3- 7 12.4 | 63-30S | 104-06E | 1.7 1.5 | 1.7 | 1.7 | 1.7 | 1.7 | 0.2 | -0.8 | -0.6 | -0.5 | 0.1 | 1.0 | 1.2 | 1.3 | 1.5 | 1.4 | 1.5 | 46 | -2.5 | | | |
| N 33173 | 12.6 | 63-29 | 104-13 | 1.7 1.4 | 1.7 | 1.7 | 1.7 | 1.7 | -0.7 | -0.8 | 1.1 | 0.7 | 1.1 | 1.1 | 1.1 | 1.3 | 1.4 | 1.4 | 54 | -2.3 | | | | |
| N 33174 | 12.8 | 63-29 | 104-20 | - 1.4 | - | - | 1.7 | 0.1 | -0.1 | - | - | - | 1.3 | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | - | -2.3 | | | | |
| N 33177 | 13.4 | 63-30 | 104-39 | 1.6 1.4 | 1.6 | 1.6 | 1.6 | -0.6 | -0.1 | 1.6 | 1.6 | 1.7 | 1.4 | 1.7 | 1.6 | 1.6 | 1.7 | 1.6 | 36 | -2.3 | | | | |
| N 33178 | 13.8 | 63-30 | 104-51 | 1.7 1.8 | 1.7 | 1.7 | 1.7 | -0.6 | 0.3 | 1.3 | 1.0 | 1.5 | 1.4 | 1.5 | 1.8 | 1.8 | 1.8 | 1.8 | - | -2.2 | | | | |
| N 33179 | 17.0 | 63-29 | 106-36 | 1.3 0.8 | 1.3 | 1.3 | 1.3 | 1.3 | -1.6 | -1.9 | -1.9 | -1.7 | -1.2 | -0.5 | 0.1 | 0.5 | 0.6 | 0.7 | 54 | -1.8 | | | | |
| N 33181 | 21.2 | 63-30 | 108-48 | 0.2 1.4 1.5 | 0.2 | 0.2 | 0.1 | 0.6 | 0.8 | 1.0 | 1.1 | 1.1 | 1.2 | 1.2 | 1.3 | 1.4 | 1.5 | 1.5 | 46 | -2.2 | | | | |
| N 33182 | 21.4 | 63-30 | 108-53 | 1.6 1.4 | 1.6 | 1.6 | 1.6 | 1.7 | 1.0 | 1.2 | 1.3 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 58 | -2.2 | | | | |
| N 33183 | 22.0 | 63-29 | 109-13 | 1.4 1.3 | 1.4 | 1.4 | 1.4 | -0.4 | -1.2 | 0.5 | 1.1 | 1.2 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 47 | -2.4 | | | | |
| N 33184 | 23.0 | 63-30 | 109-44 | 1.4 1.5 | 1.4 | 1.4 | 1.4 | -0.5 | 0.8 | 1.2 | 1.4 | 1.5 | 1.5 | 1.5 | 1.6 | 1.6 | 1.6 | 1.5 | 43 | -2.4 | | | | |
| N 33185 | 3- 8 03.0 | 63-29 | 111-55 | - 1.2 | 1.6 | 1.5 | 2.2 | 0.3 | 0.4 | 0.8 | 1.1 | 1.2 | 1.2 | 1.2 | 1.3 | 1.3 | 1.2 | 1.2 | - | -2.1 | | | | |
| N 33186 | 10.0 | 63-28 | 114-03 | 1.2 0.8 | 1.2 | 1.2 | 1.1 | 1.1 | -0.5 | -1.3 | -0.6 | 0.1 | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | - | -2.3 | | | | |
| N 33187 | 12.9 | 63-30 | 115-25 | 0.9 1.2 | 0.9 | 0.8 | 0.8 | 0.8 | -1.4 | -1.4 | -0.8 | -0.1 | 0.6 | 0.8 | 0.8 | 1.0 | 1.1 | 1.1 | 62 | -2.0 | | | | |
| N 33188 | 16.0 | 63-29 | 117-00 | 1.6 1.5 | 1.6 | 1.6 | 1.6 | 1.5 | -0.6 | -0.6 | 0.6 | 1.1 | 1.3 | 1.3 | 1.3 | 1.4 | 1.4 | 1.5 | 56 | -0.3 | | | | |
| N 33189 | 20.0 | 63-30 | 118-55 | 0.5 1.4 1.8 | 0.5 | 1.3 | 1.2 | 1.0 | 0.9 | 1.2 | 1.2 | 1.2 | 1.4 | 1.4 | 1.4 | 1.5 | 1.6 | 1.6 | - | 0.1 | | | | |
| N 33190 | 23.8 | 63-30 | 120-52 | 1.7 1.9 | 1.7 | 1.7 | 1.7 | 1.7 | 1.2 | 1.4 | 1.4 | 1.4 | 1.5 | 1.6 | 1.6 | 1.6 | 1.8 | 1.8 | 60 | 0.2 | | | | |
| N 33191 | 3- 9 03.7 | 63-30 | 122-48 | 1.3 1.4 1.4 | 1.4 | 1.3 | 1.3 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.4 | 1.5 | 1.6 | 1.6 | 1.5 | 1.5 | - | 0.2 | | | | |

| | | | | | | | | | | | | | | | | | | | | | |
|---------|------|-------|--------|--------|------|-----|-----|-----|------|------|------|------|------|-----|-----|-----|-----|-----|-----|------|------|
| N 33192 | 09.4 | 63-30 | 124-22 | 1.6 | 1.5 | 1.6 | 1.4 | 1.4 | 0.8 | 1.2 | 1.4 | 1.4 | 1.5 | 1.6 | 1.7 | 1.7 | 1.8 | 1.8 | 23 | 0.3 | |
| | | | | 1.8 | 1.8 | 1.9 | 1.8 | 1.8 | 1.8 | 1.8 | 1.7 | 1.7 | 1.6 | | | | | | | | |
| N 33193 | 12.0 | 63-30 | 125-40 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | -0.3 | 0.9 | 1.5 | 1.7 | 1.6 | - | 1.6 | 1.7 | 1.7 | - | 50 | 0.1 | |
| | | | | - | - | 1.7 | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 | 1.4 | 1.4 | | | | | | | | |
| N 33194 | 15.0 | 63-30 | 127-17 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.5 | 1.6 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | - | 0.2 | |
| | | | | 1.7 | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | | | |
| N 33195 | 21.7 | 63-35 | 130-41 | 1.0 | 1.4 | 1.4 | 1.4 | 1.3 | 0.8 | 1.4 | 1.6 | 1.6 | 1.8 | 1.7 | 1.8 | 1.7 | 1.8 | 1.8 | - | 0.6 | |
| | | | | 1.7 | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | | | | | | | |
| N 33196 | 3-10 | 00.9 | 63-48 | 132-07 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 0.3 | -0.2 | -0.1 | 0.4 | 1.1 | 1.3 | 1.6 | 1.7 | 1.6 | 1.6 | 52 | -0.6 |
| | | | | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 | 1.3 | 1.2 | 1.2 | 1.1 | 1.1 | 1.0 | | | |
| N 33197 | 02.8 | 63-55 | 132-59 | 0.9 | 0.9 | 1.4 | 1.4 | 1.3 | 1.3 | -1.4 | -1.4 | -1.5 | -1.3 | 0.2 | 0.9 | 1.0 | 1.1 | 1.3 | 1.4 | 54 | -0.9 |
| | | | | 1.6 | 1.4 | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 | 1.1 | 1.2 | 1.1 | 1.1 | | | | | | | |
| N 33198 | 07.9 | 64-03 | 133-59 | 1.4 | 1.4 | 1.3 | 1.2 | 0.2 | 0.9 | 1.4 | 1.6 | 1.6 | 1.6 | 1.9 | 1.8 | 1.9 | 1.9 | 1.9 | 30 | -0.0 | |
| | | | | 1.8 | 1.7 | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.2 | | | | |
| N 33199 | 10.9 | 64-13 | 134-59 | - | - | - | - | 0.6 | -0.0 | 0.2 | 0.9 | 1.1 | 1.5 | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | - | 1.2 | |
| | | | | 1.5 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.1 | 1.1 | 1.0 | 1.0 | 0.9 | 0.8 | 0.7 | | | |
| N 33201 | 15.9 | 64-28 | 136-38 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.1 | -1.6 | -1.5 | -0.9 | -0.3 | 0.0 | 0.6 | 0.8 | 1.0 | 1.0 | 73 | -2.7 | |
| | | | | 1.0 | | | | | | | | | | | | | | | | | |
| N 33202 | 3-11 | 03.0 | 64-48 | 141-04 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | -0.0 | -0.1 | 0.5 | 1.1 | 1.3 | 1.5 | 1.5 | 1.6 | 1.7 | 1.8 | 53 | -3.0 |
| | | | | 1.8 | 1.9 | 2.1 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | | | | | | |
| N 33204 | 07.1 | 64-51 | 143-05 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.8 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 | 54 | -4.8 | |
| | | | | 1.5 | 1.5 | 1.5 | 1.5 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.1 | | | | | | | |
| N 33205 | 12.6 | 64-54 | 145-19 | 0.9 | 0.9 | 0.9 | 0.9 | 1.1 | 1.1 | 1.5 | 1.7 | 1.9 | 1.9 | 1.8 | 1.8 | 1.7 | 1.8 | 1.8 | 44 | -3.2 | |
| | | | | 1.8 | | | | | | | | | | | | | | | | | |
| N 33206 | 14.0 | 64-57 | 147-02 | -0.9 | -0.7 | 0.8 | 1.1 | 1.0 | 0.9 | 0.3 | 1.0 | 0.9 | 1.4 | 1.6 | 1.4 | 1.5 | 1.5 | 1.5 | - | -3.3 | |
| | | | | 1.4 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.3 | 1.2 | 1.2 | 1.2 | 1.1 | 1.0 | 1.0 | 0.9 | 0.8 | | | |
| N 33207 | 20.2 | 64-49 | 149-31 | 0.7 | 0.6 | 0.5 | 0.7 | 0.7 | 0.9 | 0.9 | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.7 | 1.8 | - | -5.7 |
| | | | | 1.8 | 1.7 | 1.7 | 1.7 | 1.6 | 1.5 | 1.5 | 1.5 | 1.4 | 1.3 | 1.4 | 1.3 | | | | | | |
| N 33208 | 3-12 | 01.1 | 64-47 | 150-08 | 0.3 | 0.3 | 1.0 | 1.1 | 1.3 | 1.1 | 1.7 | 1.8 | 1.8 | 1.9 | 1.8 | 1.9 | 1.8 | 1.9 | 1.8 | - | -2.3 |
| | | | | 1.8 | 1.8 | 1.7 | 1.7 | 1.7 | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 | | | | | | | |
| N 33209 | 06.5 | 63-57 | 149-24 | 1.1 | 1.1 | 1.1 | 1.1 | 1.2 | 0.2 | 1.4 | 1.7 | 1.9 | 2.2 | 2.3 | 2.3 | 2.4 | 2.4 | 2.4 | 53 | -1.4 | |
| | | | | 2.5 | 2.4 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | | | | | | | | | | |
| N 33210 | 09.9 | 63-07 | 149-42 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | -0.3 | 1.4 | 1.7 | 1.8 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 59 | 0.2 | |
| | | | | 2.1 | 2.0 | 2.0 | 2.0 | | | | | | | | | | | | | | |
| N 33211 | 14.0 | 62-12 | 149-58 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | -0.2 | 0.2 | 1.5 | 1.6 | 1.9 | 1.9 | 2.1 | 2.1 | 2.2 | 2.2 | 65 | 1.8 | |
| | | | | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 2.0 | 1.9 | 1.9 | | | |
| N 33212 | 18.4 | 61-13 | 150-03 | 1.8 | 1.7 | 2.3 | 2.3 | 2.2 | -0.2 | -0.4 | 1.5 | 1.8 | 2.1 | 2.3 | 2.4 | 2.4 | 2.4 | 2.4 | 37 | 2.7 | |
| | | | | 2.3 | 2.3 | 2.3 | 2.3 | 2.4 | 2.3 | 2.2 | 2.2 | 2.1 | 2.1 | | | | | | | | |

| NUMBER | DATE TIME UT | POSITION LAT. LONG. | | TEMPERATURE (°C) | | | | | | | | | | | | | | | S.L. (M) | AIR TEMP. (°C) |
|---------|--------------------|------------------------|---------|------------------|-----|-----|-----|-----|------|------|------|------|------|------|-----|-----|-----|-----|-------------|----------------------|
| | | | | DEPTH (M) | | | | | | | | | | | | | | | | |
| | | | | 0 | 10 | 20 | 30 | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | | |
| 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1100 | 1200 | 1300 | 1400 | | | | | | |
| N 33213 | 3-12 22.2 | 60-23S | 149-59E | 2.1 | 2.1 | 2.1 | 2.0 | 2.1 | -0.5 | 0.1 | 1.2 | 1.7 | 1.8 | 1.9 | 1.9 | 2.0 | 2.0 | 2.1 | 57 | 3.1 |
| | | | | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.2 | 2.2 | 2.1 | 2.1 | 2.0 | 2.0 | | |
| N 33214 | 3-13 01.6 | 59-55 | 150-00 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2 | 1.2 | -0.7 | -0.0 | 1.3 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 50 | 3.3 |
| | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 | | | | |
| N 33215 | 05.8 | 59-15 | 150-02 | 2.3 | 2.3 | 2.3 | 2.3 | 2.2 | -0.4 | 1.4 | 1.7 | 1.8 | 1.8 | 2.1 | 2.4 | 2.5 | 2.6 | 2.7 | 53 | 3.5 |
| | | | | 2.8 | 2.8 | 2.9 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.7 | | | | | | | | |
| N 33216 | 09.6 | 58-39 | 150-03 | 3.0 | 3.0 | 2.9 | 2.9 | 2.9 | -0.3 | 0.2 | 1.5 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 57 | 3.7 |
| | | | | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | | | | | | | | |
| N 33217 | 14.2 | 57-57 | 150-01 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.4 | 0.2 | -0.4 | 0.6 | 1.9 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 77 | 4.2 |
| | | | | 2.1 | 2.0 | 2.1 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.8 | 1.7 | 1.6 | | |
| N 33218 | 17.9 | 57-19 | 150-02 | 1.5 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 2.2 | -0.0 | 0.0 | 1.7 | 2.0 | 2.1 | 2.1 | 2.1 | 2.2 | 87 | 4.0 |
| | | | | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 1.9 | 1.8 | 1.7 | | |
| N 33219 | 21.8 | 56-42 | 150-00 | 1.6 | 1.6 | 1.5 | | | | | | | | | | | | | 63 | 3.9 |
| | | | | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 3.4 | 0.8 | 0.2 | 1.2 | 2.0 | 2.1 | 2.1 | 2.2 | 2.3 | 2.2 | | |
| | | | | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.1 | 2.0 | | |
| N 33220 | 3-14 05.9 | 56-07 | 150-16 | 1.9 | 1.8 | 3.0 | 1.7 | | | | | | | | | | | | 74 | 4.7 |
| | | | | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.5 | 2.0 | 1.5 | 1.3 | 1.3 | 1.9 | 2.0 | 2.1 | 2.2 | 2.4 | | |
| | | | | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.5 | | | | |
| N 33221 | 09.4 | 55-40 | 150-14 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.6 | 5.2 | 4.7 | 4.6 | 4.4 | 4.4 | 4.2 | 4.1 | 3.8 | 3.4 | 54 | 5.1 |
| | | | | 3.4 | 2.9 | 2.9 | 2.9 | 3.0 | 3.0 | 3.0 | 3.0 | 2.9 | 2.8 | 2.8 | 2.8 | 2.8 | 2.7 | | | |
| N 33222 | 14.1 | 55-01 | 150-07 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 7.5 | 7.3 | 7.2 | 6.8 | 6.6 | 6.4 | 6.4 | 5.9 | 5.5 | 87 | 4.8 |
| | | | | 5.1 | 4.8 | 4.5 | 4.0 | 3.7 | 3.5 | 3.4 | 3.2 | 3.1 | 3.0 | 2.9 | 2.8 | | | | | |
| N 33223 | 18.4 | 53-55 | 150-02 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 4.7 | 4.8 | 3.4 | 3.5 | 3.4 | 3.1 | 2.9 | 2.8 | 2.7 | 80 | 5.7 |
| | | | | 2.0 | 2.5 | 2.6 | 2.2 | 2.8 | 2.7 | 2.6 | 2.8 | 2.7 | 2.7 | 2.7 | 2.6 | 2.6 | 2.6 | 2.6 | | |
| N 33224 | 21.4 | 53-08 | 150-01 | 2.5 | 6.5 | 6.5 | 6.4 | 6.1 | 5.9 | 5.7 | 5.1 | 4.0 | 3.7 | 3.9 | 3.7 | 3.5 | 3.3 | 3.1 | 40 | 7.0 |
| | | | | 2.9 | 2.9 | 2.8 | 2.7 | 2.7 | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 | 2.6 | 2.6 | 2.5 | 2.5 | 2.4 | | |
| N 33225 | 3-15 05.9 | 52-20 | 150-14 | 2.4 | 2.4 | | | | | | | | | | | | | | 98 | 6.6 |
| | | | | 8.5 | 8.5 | 8.5 | 8.5 | 8.4 | 8.4 | 8.3 | 6.8 | 7.0 | 7.1 | 6.7 | 6.4 | 5.6 | 6.0 | 5.6 | | |
| | | | | 5.4 | 5.1 | 4.7 | 4.4 | 4.1 | 4.0 | 3.7 | 3.4 | 3.2 | 3.0 | 3.0 | 2.8 | 2.7 | 2.6 | 2.5 | | |
| N 33227 | 09.8 | 51-22 | 149-59 | 2.5 | 2.5 | 2.4 | 2.8 | | | | | | | | | | | | - | 6.4 |
| | | | | 4.9 | 5.0 | 4.9 | 4.9 | 4.8 | 4.8 | 4.8 | 4.9 | 4.9 | 4.8 | 4.2 | 4.2 | 3.8 | 3.8 | 3.3 | | |
| | | | | 3.2 | 3.3 | 3.0 | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | |
|---------|-----------|-------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| N 33228 | 14.1 | 50-12 | 149-59 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 7.5 | 6.4 | 6.1 | 5.9 | 5.7 | 5.6 | 5.8 | 5.8 | 5.3 | 87 | 6.4 | |
| | | | | 5.0 | 4.4 | 4.1 | 3.9 | 3.5 | 3.3 | 3.1 | 3.2 | 3.0 | 3.0 | 3.1 | 2.9 | 2.8 | 2.8 | 2.8 | | | |
| N 33229 | 17.6 | 49-15 | 150-01 | 2.8 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.1 | 9.0 | 9.1 | 9.1 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 54 | 7.7 | |
| | | | | 8.9 | 8.7 | 8.1 | 7.8 | 7.6 | 7.1 | 6.7 | 6.1 | 5.7 | 5.2 | 4.9 | 4.4 | 3.9 | 3.6 | 3.3 | | | |
| N 33230 | 21.7 | 48-18 | 150-02 | 3.2 | - | - | - | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 8.9 | 8.7 | 8.3 | 8.0 | - | 8.7 | |
| | | | | 7.7 | 7.4 | 6.8 | 6.3 | 5.9 | 5.5 | 5.0 | 4.7 | 4.4 | 4.1 | 3.8 | 3.4 | 3.2 | | | | | |
| N 33231 | 3-16 01.8 | 47-17 | 150-08 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 12.7 | 13.6 | 13.4 | 13.6 | 12.1 | 13.1 | 13.0 | 12.2 | 11.8 | 94 | 10.1 | |
| | | | | 11.4 | 11.3 | 10.8 | 10.6 | 10.3 | 10.0 | 9.7 | 9.3 | 9.1 | 8.7 | 8.2 | 7.4 | 7.1 | 6.3 | 4.7 | | | |
| N 33232 | 05.1 | 46-33 | 150-00 | 3.3 | 14.7 | 14.7 | 14.8 | 15.3 | 16.0 | 16.1 | 15.5 | 14.5 | 16.4 | 15.5 | 16.1 | 14.4 | 14.4 | 14.5 | 13.6 | - | 10.7 |
| | | | | 13.0 | 12.9 | 13.1 | 12.5 | 12.4 | 12.1 | 12.4 | 11.3 | 11.1 | 10.3 | 10.0 | 9.0 | 8.4 | 7.5 | 8.0 | | | |
| N 33234 | 08.1 | 45-51 | 150-07 | 18.9 | 18.9 | 18.8 | 19.0 | 19.3 | 19.1 | 19.7 | 19.3 | 18.9 | 18.5 | 17.6 | | | | | - | 11.0 | |
| N 33235 | 08.2 | 45-47 | 150-08 | 17.8 | 18.0 | 17.7 | 17.7 | 18.1 | 19.0 | 18.3 | 18.3 | 17.4 | 17.2 | 16.7 | 15.5 | 15.9 | 15.4 | 15.5 | - | 11.0 | |
| | | | | 14.8 | 15.2 | 13.9 | 15.1 | 14.5 | 14.1 | 13.7 | 14.0 | 9.5 | | | | | | | | | |
| N 33236 | 11.0 | 45-09 | 150-08 | 13.5 | - | 13.6 | - | - | - | - | 12.9 | 12.3 | 11.4 | 10.8 | 10.3 | 9.9 | 10.8 | 10.2 | - | 11.4 | |
| | | | | 10.3 | 9.6 | 9.9 | 9.5 | 9.3 | 8.9 | 8.4 | 8.8 | 6.8 | | | | | | | | | |
| N 33237 | 13.9 | 44-27 | 150-07 | 15.2 | 15.2 | 15.2 | 15.2 | 15.2 | 14.7 | 13.9 | 12.9 | 13.0 | 11.8 | 11.3 | 11.0 | 10.4 | 9.9 | 9.4 | 71 | 12.1 | |
| | | | | 9.0 | 8.8 | 8.4 | 8.2 | 7.9 | 7.6 | 7.1 | 6.6 | | | | | | | | | | |
| N 33238 | 19.0 | 43-12 | 150-22 | 15.4 | 15.5 | 15.4 | 15.5 | 15.5 | 15.5 | 14.3 | 13.5 | 13.0 | | | | | | | 86 | 13.2 | |
| N 33239 | 21.6 | 42-33 | 150-30 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 14.4 | 13.1 | 12.4 | 11.8 | 11.2 | 10.5 | 9.9 | 9.6 | 9.3 | 9.0 | 64 | 13.4 | |
| | | | | 8.8 | 8.5 | 8.1 | 7.8 | 7.5 | 7.0 | 6.7 | 6.2 | 5.8 | 5.3 | 5.0 | 4.4 | 3.8 | 3.5 | 3.2 | | | |
| N 33240 | 3-17 00.2 | 42-14 | 150-38 | 3.1 | 2.9 | 2.7 | - | - | - | 14.1 | 13.3 | 12.8 | 12.3 | 11.5 | 11.0 | 10.3 | 9.7 | 9.4 | 9.2 | 57 | 14.0 |
| | | | | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 | 14.1 | 13.3 | 12.8 | 12.3 | 11.5 | 11.0 | 10.3 | 9.7 | 9.4 | 9.2 | | | |
| | | | | 8.9 | 8.7 | 8.4 | 8.0 | 7.6 | 7.2 | 6.9 | 6.9 | 5.9 | 5.4 | 5.1 | 4.5 | 4.3 | 3.7 | - | | | |

STATION: C 7
 1992. 3. 7 5:23(UT)
 LAT. 63-27S
 LON. 101-54E

| PRESS | TEMP. | PSAL. |
|-------|--------|--------|
| (db) | (°C) | |
| 20.0 | 0.763 | 33.863 |
| 30.0 | 0.766 | 33.862 |
| 40.0 | 0.763 | 33.868 |
| 50.0 | -0.469 | 34.035 |
| 75.0 | -1.705 | 34.254 |
| 125.0 | -1.742 | 34.305 |
| 250.0 | -1.351 | 34.366 |
| 300.0 | -0.365 | 34.465 |
| 400.0 | -0.154 | 34.515 |
| 500.0 | 0.163 | 34.567 |
| 800.0 | 0.155 | 34.585 |
| 900.0 | 0.103 | 34.587 |
| 962.8 | 0.039 | 34.585 |

STATION: C 8
 1992. 3. 8 7:02(UT)
 LAT. 63-28S
 LON. 113-05E

| PRESS | TEMP. | PSAL. |
|-------|--------|--------|
| (db) | (°C) | |
| 10.0 | 1.471 | 33.903 |
| 20.0 | 1.473 | 33.915 |
| 30.0 | 1.472 | 33.922 |
| 40.0 | 1.468 | 33.926 |
| 75.0 | -0.404 | 34.390 |
| 100.0 | 0.848 | 34.514 |
| 125.0 | 1.337 | 34.574 |
| 200.0 | 1.382 | 34.616 |
| 300.0 | 1.493 | 34.659 |
| 500.0 | 1.392 | 34.660 |
| 600.0 | 1.331 | 34.650 |
| 700.0 | 1.257 | 34.661 |
| 800.0 | 1.167 | 34.657 |
| 900.0 | 1.067 | 34.650 |
| 920.1 | 1.049 | 34.649 |

STATION: C 9
 1992. 3. 9 6:07(UT)
 LAT. 63-30S
 LON. 123-07E

| PRESS | TEMP. | PSAL |
|-------|-------|--------|
| (db) | (°C) | |
| 10.0 | 1.528 | 33.824 |
| 20.0 | 1.409 | 33.880 |
| 30.0 | 1.387 | 33.919 |
| 40.0 | 1.371 | 33.937 |
| 50.0 | 1.317 | 33.948 |
| 75.0 | 1.205 | 34.397 |
| 100.0 | 1.193 | 34.535 |
| 125.0 | 1.415 | 34.581 |
| 150.0 | 1.478 | 34.594 |
| 200.0 | 1.532 | 34.613 |
| 300.0 | 1.607 | 34.643 |
| 500.0 | 1.553 | 34.666 |
| 600.0 | 1.478 | 34.667 |
| 700.0 | 1.401 | 34.667 |
| 900.0 | 1.229 | 34.663 |
| 993.1 | 1.147 | 34.656 |

STATION: C 1 0
 1992. 3. 10 5:00(UT)
 LAT. 63-57S
 LON. 133-13E

| PRESS | TEMP. | PSAL. |
|-------|--------|--------|
| (db) | (°C) | |
| 10.0 | 1.357 | 33.802 |
| 20.0 | 1.354 | 33.835 |
| 30.0 | 1.344 | 33.838 |
| 40.0 | 1.237 | 33.887 |
| 50.0 | 1.045 | 33.920 |
| 75.0 | -0.666 | 34.148 |
| 100.0 | -1.414 | 34.278 |
| 125.0 | -1.147 | 34.325 |
| 200.0 | 0.607 | 34.512 |
| 250.0 | 1.160 | 34.572 |
| 300.0 | 1.177 | 34.592 |
| 400.0 | 1.503 | 34.641 |
| 500.0 | 1.438 | 34.652 |
| 600.0 | 1.416 | 34.660 |
| 700.0 | 1.317 | 34.661 |
| 800.0 | 1.234 | 34.659 |
| 877.9 | 1.130 | 34.649 |

STATION: C 1 1
 1992. 3. 11 23:49(UT)
 LAT. 64-48S
 LON. 150-05E

| PRESS | TEMP. | PSAL. |
|--------|-------|--------|
| (db) | (°C) | |
| 10.0 | 0.362 | 33.627 |
| 20.0 | 0.644 | 33.700 |
| 30.0 | 1.137 | 33.780 |
| 40.0 | 1.178 | 33.784 |
| 50.0 | 1.210 | 33.823 |
| 75.0 | 0.731 | 34.238 |
| 100.0 | 1.656 | 34.467 |
| 125.0 | 1.859 | 34.526 |
| 250.0 | 1.891 | 34.607 |
| 300.0 | 1.877 | 34.622 |
| 400.0 | 1.853 | 34.667 |
| 500.0 | 1.838 | 34.660 |
| 900.0 | 1.450 | 34.665 |
| 1000.0 | 1.354 | 34.660 |
| 1008.2 | 1.348 | 34.660 |

STATION: C 1 2
 1992. 3. 12 22:48(UT)
 LAT. 60-15S
 LON. 150-01E

| PRESS | TEMP. | PSAL |
|-------|--------|--------|
| (db) | (°C) | |
| 10.0 | 2.306 | 33.742 |
| 20.0 | 2.294 | 33.769 |
| 30.0 | 2.290 | 33.773 |
| 40.0 | 2.274 | 33.788 |
| 100.0 | -0.465 | 34.118 |
| 150.0 | 1.745 | 34.478 |
| 200.0 | 1.973 | 34.543 |
| 250.0 | 1.989 | 34.577 |
| 500.0 | 1.935 | 34.647 |
| 726.1 | 1.837 | 34.672 |

STATION: C 1 3
1992. 3. 14 1:00(UT)
LAT. 56-32S
LON. 150-05E

STATION: C 1 4
1992. 3. 15 1:15(UT)
LAT. 52-48S
LON. 150-09E

| PRBSS (db) | TEMP. (°C) | PSAL. |
|---------------|---------------|--------|
| 10.0 | 5.209 | 33.669 |
| 20.0 | 5.186 | 33.726 |
| 30.0 | 4.423 | 33.702 |
| 50.0 | 4.171 | 33.722 |
| 75.0 | 2.218 | 33.757 |
| 100.0 | 0.733 | 33.836 |
| 125.0 | 0.948 | 34.003 |
| 200.0 | 2.141 | 34.330 |
| 250.0 | 2.266 | 34.402 |
| 300.0 | 2.333 | 34.468 |
| 400.0 | 2.322 | 34.531 |
| 600.0 | 2.156 | 34.601 |
| 667.5 | 2.136 | 34.616 |

| PRBSS (db) | TEMP. (°C) | PSAL. |
|---------------|---------------|--------|
| 10.0 | 7.487 | 33.885 |
| 20.0 | 7.475 | 33.913 |
| 30.0 | 7.456 | 33.911 |
| 40.0 | 7.456 | 33.896 |
| 75.0 | 7.454 | 33.910 |
| 125.0 | 6.880 | 34.176 |
| 150.0 | 6.745 | 34.154 |
| 200.0 | 6.123 | 34.107 |
| 300.0 | 6.093 | 34.212 |
| 400.0 | 5.510 | 34.264 |
| 500.0 | 4.539 | 34.226 |
| 600.0 | 3.866 | 34.224 |
| 700.0 | 3.436 | 34.243 |
| 704.7 | 3.430 | 34.247 |

Table 4. Serial observation data.

Station 1

Meteorological observation

Date : December 05, 1991
 Time (UT) : 07:00
 Latitude : 41° 25' S
 Longitude : 110° 07' E
 Depth : 3800 m

Weather time (UT) : 07:00
 Weather : c
 Air temperature (dry) : 13.7 °C
 (wet) : 9.9 °C
 Atmospheric pressure : 1004.2 hPa

Wind direction : NW
 velocity : 14m/s
 Humidity : 78 %
 Wave : NW / 3
 Swell : WSW / 4
 Visibility : 20km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|--------------|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | (μmol / l) | | | | | | | | | | |
| 0 | 11.90 | 35.022 | 8.06 | 273 | ---- | 10 | 0.15 | 9. | 0.1 | 0 | 11.90 | 35.022 | 26.63 | 0. |
| 18 | 12.58 | 35.950 | 8.14 | 276 | ---- | 13 | 0.33 | 8. | 0.6 | 10 | 12.38 | 34.962 | 26.49 | 0.015 |
| 28 | 12.63 | 34.990 | 8.17 | 275 | ---- | 13 | 0.32 | 8. | 0.0 | 20 | 12.60 | 34.953 | 26.44 | 0.030 |
| 38 | 12.64 | 35.082 | 8.18 | 271 | ---- | 10 | ---- | ---- | 0.1 | 30 | 12.63 | 35.007 | 26.47 | 0.046 |
| 67 | 12.48 | 35.213 | 8.18 | ---- | ---- | 10 | 0.15 | 6. | 0.1 | 50 | 12.59 | 35.158 | 26.60 | 0.076 |
| 120 | 11.99 | 35.172 | 8.17 | 257 | ---- | 14 | 0.19 | 10. | 0.0 | 75 | 12.41 | 35.159 | 26.67 | 0.111 |
| 172 | 11.53 | 35.072 | 8.15 | 260 | ---- | 17 | 0.18 | 7. | 0.1 | 100 | 12.20 | 35.207 | 26.70 | 0.146 |
| 215 | 11.20 | 35.014 | 8.16 | 261 | ---- | 19 | 0.60 | 6. | 0.1 | 125 | 11.97 | 35.187 | 26.72 | 0.179 |
| 247 | 11.07 | 34.992 | 8.15 | 262 | ---- | 20 | 0.15 | 8. | 0.1 | 150 | 11.74 | 35.163 | 26.73 | 0.213 |
| 334 | 10.64 | 34.902 | 8.15 | 264 | ---- | 21 | 0.02 | 11. | 0.1 | 200 | 11.29 | 35.112 | 26.75 | 0.280 |
| 368 | 10.36 | 34.856 | 8.14 | 260 | ---- | 26 | 0.17 | 13. | 0.0 | 250 | 11.06 | 35.031 | 26.76 | 0.347 |
| 384 | 12.93 | 34.821 | 8.13 | 252 | ---- | 30 | 0.02 | 9. | 0.6 | 300 | 10.81 | 34.989 | 26.76 | 0.414 |
| 432 | 9.81 | 34.752 | 8.10 | 248 | ---- | 31 | 0.00 | 13. | 0.5 | 400 | 12.10 | 34.794 | 26.41 | 0.566 |
| 463 | ----- | 34.731 | 8.11 | 255 | ---- | 35 | 0.02 | 12. | 0.3 | 500 | 9.43 | 34.699 | 26.81 | 0.717 |
| 487 | 9.45 | 34.705 | 8.13 | 252 | ---- | ---- | 0.00 | 13. | ---- | 600 | 9.23 | 34.669 | 26.82 | 0.850 |
| 575 | 9.31 | 34.683 | 8.10 | 251 | ---- | 35 | 0.01 | 17. | 0.5 | 700 | 8.62 | 34.589 | 26.86 | 0.983 |
| 618 | 9.16 | 34.658 | 8.10 | 243 | ---- | 37 | 0.00 | 18. | 0.0 | | | | | |
| 667 | 8.87 | 34.621 | 8.07 | 242 | ---- | 40 | 0.03 | 19. | 0.0 | | | | | |
| 721 | 8.43 | 34.566 | 8.07 | 232 | ---- | ---- | 0.02 | 25. | 0.5 | | | | | |

Station 2

Meteorological observation

Date : December 21, 1991
 Time (UT) : 08:00
 Latitude : 64° 05' S
 Longitude : 37° 57' E
 Depth : 4964 m

Weather time (UT) : 05:00
 Weather : c
 Air temperature (dry) : 0.7 °C
 (wet) : -2.2 °C
 Atmospheric pressure : 986.6 hPa

Wind direction : ESE
 velocity : 5 m/s
 Humidity : 81 %
 Wave : ESE/ 2
 Swell : NW / 4
 Visibility : 30km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|-------|-----|--------------------|--------------------------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|-------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si (μmol / l) | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ t | ΔD |
| | | | | | | | | | | | | | | |
| 0 | -0.80 | 33.877 | 7.95 | 355 | 1.85 | 52 | 0.26 | --- | 0.4 | 0 | -0.80 | 33.877 | 27.24 | 0. |
| 8 | -0.53 | 33.891 | 8.03 | 358 | 1.84 | 53 | 0.31 | --- | 0.3 | 10 | -0.54 | 33.890 | 27.24 | 0.008 |
| 16 | -0.58 | 33.883 | 8.04 | 359 | 1.88 | 53 | 0.26 | --- | 0.2 | 20 | -0.65 | 33.884 | 27.24 | 0.016 |
| 24 | -0.74 | 33.893 | 8.06 | 359 | 1.93 | 54 | 0.24 | --- | 0.3 | 30 | -1.07 | 33.942 | 27.30 | 0.024 |
| 40 | -1.65 | 34.041 | 8.07 | 351 | 1.93 | 54 | 0.21 | --- | 0.3 | 50 | -1.68 | 34.089 | 27.44 | 0.038 |
| 60 | -1.70 | 34.138 | 8.09 | 336 | 1.87 | 56 | 0.22 | --- | 0.2 | 75 | -1.58 | 34.226 | 27.55 | 0.053 |
| 80 | -1.51 | 34.254 | 8.05 | 317 | 2.01 | 61 | 0.21 | --- | 0.3 | 100 | -0.68 | 34.346 | 27.61 | 0.065 |
| 95 | -1.00 | 34.314 | 8.04 | 295 | 2.06 | 67 | 0.10 | --- | 0.2 | 125 | 0.89 | 34.513 | 27.66 | 0.076 |
| 116 | 0.54 | 34.471 | 7.95 | 224 | 2.32 | 81 | 0.02 | --- | 0.1 | 150 | 1.33 | 34.569 | 27.68 | 0.087 |
| 147 | 1.32 | 34.568 | 7.95 | 198 | 2.10 | 87 | 0.05 | --- | 0.5 | 200 | 1.39 | 34.591 | 27.69 | 0.107 |
| 189 | 1.34 | 34.585 | 7.95 | 196 | 2.17 | 89 | 0.01 | --- | 0.4 | 250 | 1.47 | 34.618 | 27.71 | 0.127 |
| 213 | 1.44 | 34.598 | 7.95 | 196 | 2.26 | 90 | 0.00 | --- | 0.2 | 300 | 1.48 | 34.642 | 27.72 | 0.146 |
| 286 | 1.48 | 34.637 | 7.95 | 194 | 2.06 | 92 | 0.00 | --- | 0.2 | 400 | 1.47 | 34.658 | 27.74 | 0.182 |
| 364 | ----- | 34.648 | ----- | 199 | 2.26 | 94 | 0.04 | --- | 0.2 | 500 | 1.36 | 34.671 | 27.76 | 0.218 |
| 432 | 1.45 | 34.666 | 7.98 | 199 | 2.06 | 96 | 0.00 | --- | 0.4 | 600 | 1.28 | 34.666 | 27.76 | 0.252 |
| 494 | 1.37 | 34.671 | 7.97 | 205 | 2.22 | 97 | 0.02 | --- | 0.2 | 700 | 1.19 | 34.669 | 27.77 | 0.287 |
| 561 | 1.31 | 34.669 | 7.97 | 206 | 2.27 | 98 | 0.04 | --- | 0.8 | 800 | 1.09 | 34.661 | 27.77 | 0.321 |
| 632 | 1.25 | 34.664 | 7.96 | 207 | 2.23 | 101 | 0.00 | --- | 0.3 | 1000 | 0.85 | 34.654 | 27.78 | 0.388 |
| 698 | 1.19 | 34.669 | 7.99 | 209 | 1.91 | 101 | 0.05 | --- | 0.3 | 1200 | 0.69 | 34.648 | 27.78 | 0.453 |
| 871 | 1.01 | 34.657 | 7.98 | 214 | 2.17 | 108 | 0.00 | --- | 1.2 | 1500 | 0.47 | 34.618 | 27.77 | 0.550 |
| 1049 | 0.80 | 34.653 | 7.97 | 215 | 2.09 | 111 | 0.13 | --- | 1.1 | 2000 | 0.23 | 34.625 | 27.79 | 0.706 |
| 1233 | 0.66 | 34.647 | 7.97 | 260 | 1.84 | 118 | 0.04 | --- | 1.5 | 2500 | 0.04 | 34.613 | 27.79 | 0.853 |
| 1404 | 0.53 | 34.617 | 7.99 | 214 | 2.18 | 119 | 0.00 | --- | 1.5 | 3000 | -0.09 | 34.605 | 27.79 | 0.993 |
| 1772 | 0.34 | 34.628 | 7.96 | 222 | 2.26 | 123 | 0.00 | --- | 0.5 | 3500 | -0.09 | 34.598 | 27.79 | 1.130 |
| 2182 | 0.15 | 34.622 | 7.95 | 226 | 2.22 | 128 | 0.09 | --- | 0.4 | | | | | |
| 2594 | 0.01 | 34.611 | 7.93 | 231 | 2.29 | 127 | 0.01 | --- | 0.3 | | | | | |
| 3043 | -0.10 | 34.604 | 7.93 | 239 | 2.23 | 127 | 0.02 | --- | 0.3 | | | | | |
| 3523 | -0.09 | 34.598 | 7.97 | 245 | 2.16 | 126 | 0.07 | --- | 1.6 | | | | | |

Station 3

Meteorological observation

Date : February 29, 1992
 Time (UT) : 06:00
 Latitude : 64° 07' S
 Longitude : 37° 57' E
 Depth : 4955 m

Weather time (UT) : 06:00
 Weather : s
 Air temperature (dry) : 1.0 °C
 (wet) : -1.0 °C
 Atmospheric pressure : 978.3h Pa

Wind direction : ENE
 velocity : 6m/s
 Humidity : 86 %
 Wave : ENE/ 3
 Swell : E / 4
 Visibility : 20km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|--------------|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | (μmol / l) | | | | | | | | | | |
| 0 | 1.80 | 33.851 | ---- | 347 | 1.46 | 33 | 0.23 | --- | 0.8 | 0 | 1.80 | 33.851 | 27.07 | 0. |
| 7 | 1.70 | 33.820 | ---- | 345 | 1.46 | 33 | 0.21 | --- | 0.4 | 10 | 1.70 | 33.816 | 27.05 | 0.010 |
| 14 | 1.70 | 33.811 | ---- | 346 | 1.46 | 31 | 0.20 | --- | 0.1 | 20 | 1.69 | 33.798 | 27.03 | 0.020 |
| 21 | 1.69 | 33.796 | ---- | 346 | 1.48 | 30 | 0.20 | --- | 0.0 | 30 | 1.70 | 33.793 | 27.03 | 0.030 |
| 35 | 1.70 | 33.792 | ---- | 333 | 1.48 | 31 | 0.21 | --- | 0.1 | 50 | -1.34 | 34.031 | 27.38 | 0.047 |
| 53 | -1.59 | 34.062 | 8.03 | 344 | 1.98 | 51 | 0.26 | --- | 0.5 | 75 | -1.21 | 34.156 | 27.48 | 0.063 |
| 74 | -1.25 | 34.150 | 8.00 | 324 | 2.11 | 57 | 0.23 | --- | 0.3 | 100 | 0.18 | 34.363 | 27.58 | 0.077 |
| 90 | -0.63 | 34.258 | 8.93 | 284 | ---- | ---- | ---- | --- | 0.4 | 125 | 0.90 | 34.482 | 27.64 | 0.089 |
| 103 | 0.35 | 34.387 | 7.90 | 245 | 2.36 | 75 | 0.13 | --- | 0.1 | 150 | 1.26 | 34.537 | 27.66 | 0.100 |
| 130 | 0.98 | 34.494 | 7.89 | 213 | 2.38 | 83 | 0.07 | --- | 0.0 | 200 | 1.48 | 34.588 | 27.68 | 0.121 |
| 160 | 1.35 | 34.552 | 7.88 | 199 | 2.39 | 87 | 0.01 | --- | 0.2 | 250 | 1.52 | 34.614 | 27.70 | 0.141 |
| 190 | 1.47 | 34.582 | 7.88 | 199 | 2.42 | 89 | 0.01 | --- | 0.0 | 300 | 1.53 | 34.634 | 27.71 | 0.160 |
| 247 | 1.52 | 34.613 | 7.89 | 194 | 2.33 | 90 | 0.01 | --- | 0.0 | 400 | 1.51 | 34.647 | 27.73 | 0.198 |
| 308 | 1.53 | 34.636 | 7.89 | 196 | 2.39 | 93 | 0.03 | --- | 0.1 | 500 | 1.42 | 34.662 | 27.74 | 0.234 |
| 360 | 1.53 | 34.638 | 7.88 | 198 | 2.30 | 94 | 0.00 | --- | 0.1 | 600 | 1.34 | 34.670 | 27.76 | 0.270 |
| 422 | 1.49 | 34.651 | 7.90 | 202 | 2.35 | 95 | 0.00 | --- | 0.0 | 700 | 1.26 | 34.680 | 27.77 | 0.304 |
| 481 | 1.44 | 34.660 | 7.89 | 204 | 2.33 | 97 | 0.01 | --- | 0.0 | 800 | 1.15 | 34.684 | 27.78 | 0.337 |
| 542 | 1.37 | 34.665 | 7.89 | 207 | 2.32 | 98 | 0.01 | --- | 0.0 | 1000 | 0.92 | 34.677 | 27.79 | 0.402 |
| 600 | 1.34 | 34.670 | 7.88 | 204 | 2.20 | 98 | 0.01 | --- | 0.1 | 1200 | 0.73 | 34.669 | 27.80 | 0.464 |
| 747 | 1.22 | 34.684 | 7.90 | 209 | 2.36 | 105 | 0.01 | --- | 0.0 | 1500 | 0.52 | 34.659 | 27.80 | 0.556 |
| 890 | 1.03 | 34.684 | 7.90 | 207 | 2.18 | 106 | 0.01 | --- | 0.2 | 2000 | 0.24 | 34.647 | 27.81 | 0.702 |
| 1045 | 0.88 | 34.675 | 7.89 | 214 | 2.10 | 110 | 0.01 | --- | 0.3 | 2500 | 0.05 | 34.643 | 27.82 | 0.840 |
| 1188 | 0.74 | 34.669 | 7.90 | 211 | 2.26 | 113 | 0.00 | --- | 0.1 | | | | | |
| 1520 | 0.51 | 34.658 | 7.88 | 220 | 2.35 | 121 | 0.01 | --- | 0.1 | | | | | |
| 1839 | 0.32 | 34.649 | 7.87 | 220 | 2.30 | 123 | 0.01 | --- | 0.2 | | | | | |
| 2191 | 0.16 | 34.645 | 7.86 | 224 | 2.42 | 125 | 0.00 | --- | 0.2 | | | | | |
| 2593 | 0.02 | 34.642 | 7.85 | 232 | 2.29 | 127 | 0.01 | --- | 0.1 | | | | | |

Station 4

Meteorological observation

Date : March 01, 1992
 Time (UT) : 11:00
 Latitude : 65° 02' S
 Longitude : 46° 51' E
 Depth : 3200 m

Weather time (UT) : 11:00
 Weather : bc
 Air temperature (dry) : 2.6 °C
 (wet) : 0.2 °C
 Atmospheric pressure : 976.2 hPa

Wind direction : N
 velocity : 6 m/s
 Humidity : 84 %
 Wave : N / 3
 Swell : E / 4
 Visibility : 30km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|-----|--------------------|--------------------------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|-------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si (μmol / l) | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ t | ΔD |
| | | | | | | | | | | | | | | |
| 7 | 0.94 | 33.825 | 8.10 | 353 | 1.82 | 46 | 0.28 | --- | 0.2 | 10 | 0.94 | 33.822 | 27.10 | 0.009 |
| 14 | 0.93 | 33.821 | 8.08 | 350 | 1.83 | 45 | 0.26 | --- | 0.1 | 20 | 0.89 | 33.832 | 27.11 | 0.019 |
| 22 | 0.88 | 33.834 | 8.06 | 349 | 1.85 | 46 | 0.26 | --- | 0.1 | 30 | 0.88 | 33.831 | 27.11 | 0.028 |
| 36 | 0.89 | 33.827 | 8.06 | 348 | 1.87 | 46 | 0.26 | --- | 0.3 | 50 | 0.88 | 33.830 | 27.11 | 0.047 |
| 54 | 0.88 | 33.831 | 8.08 | 348 | 1.74 | 46 | 0.27 | --- | 0.3 | 75 | -0.95 | 34.037 | 27.37 | 0.068 |
| 72 | -0.72 | 34.005 | 8.03 | 336 | 1.99 | 53 | 0.18 | --- | 0.4 | 100 | -1.63 | 34.174 | 27.50 | 0.083 |
| 85 | -1.54 | 34.138 | 8.01 | 320 | 2.10 | 58 | 0.15 | --- | 0.5 | 125 | -1.57 | 34.250 | 27.56 | 0.097 |
| 102 | -1.64 | 34.179 | 7.98 | 316 | 2.20 | 59 | 0.18 | --- | 0.2 | 150 | -1.68 | 34.274 | 27.59 | 0.109 |
| 126 | -1.57 | 34.253 | 7.99 | 313 | 2.15 | 62 | 0.13 | --- | 0.2 | 200 | -0.73 | 34.425 | 27.68 | 0.131 |
| 166 | -1.75 | 34.296 | 7.98 | 321 | 2.15 | 59 | 0.03 | --- | 0.2 | 250 | 0.57 | 34.567 | 27.72 | 0.150 |
| 183 | -1.22 | 34.368 | 7.97 | 301 | 2.21 | 66 | 0.01 | --- | 0.3 | 300 | 1.12 | 34.652 | 27.76 | 0.168 |
| 247 | 0.51 | 34.560 | 7.91 | 236 | 2.29 | 82 | 0.00 | --- | 0.3 | 400 | 1.05 | 34.678 | 27.78 | 0.200 |
| 306 | 1.13 | 34.657 | 7.89 | 213 | 2.36 | 90 | 0.00 | --- | 0.2 | 500 | 0.95 | 34.687 | 27.80 | 0.231 |
| 360 | 1.14 | 34.679 | 7.89 | 214 | 2.29 | 93 | 0.01 | --- | 0.2 | 600 | 0.81 | 34.688 | 27.81 | 0.261 |
| 420 | 1.02 | 34.677 | 7.90 | 217 | 2.29 | 91 | 0.00 | --- | 0.1 | 700 | 0.71 | 34.689 | 27.81 | 0.290 |
| 460 | 1.01 | 34.689 | 7.91 | 216 | 2.27 | 94 | 0.00 | --- | 0.3 | 800 | 0.56 | 34.684 | 27.82 | 0.318 |
| 539 | 0.89 | 34.686 | 7.90 | 221 | 2.29 | 95 | 0.00 | --- | 0.1 | 1000 | 0.40 | 34.682 | 27.83 | 0.373 |
| 591 | 0.82 | 34.688 | 7.91 | 223 | 2.21 | 95 | 0.00 | --- | 0.2 | 1200 | 0.25 | 34.677 | 27.83 | 0.426 |
| 740 | 0.67 | 34.689 | 7.90 | 226 | 2.29 | 103 | 0.01 | --- | 0.2 | 1500 | 0.19 | 34.675 | 27.83 | 0.504 |
| 885 | 0.41 | 34.675 | 7.91 | 228 | 2.23 | 105 | 0.00 | --- | 0.3 | | | | | |
| 1037 | 0.39 | 34.683 | 7.89 | 226 | 2.21 | 113 | 0.00 | --- | 0.4 | | | | | |
| 1196 | 0.25 | 34.677 | 7.91 | 227 | 2.30 | 115 | 0.00 | --- | 0.4 | | | | | |
| 1534 | 0.18 | 34.675 | 7.89 | 235 | 2.29 | 122 | 0.00 | --- | 0.4 | | | | | |
| 1951 | ---- | 34.674 | 7.87 | 236 | 2.32 | 125 | 0.00 | --- | 0.3 | | | | | |

Station 5

Meteorological observation

Date : March 03, 1992
 Time (UT) : 09:00
 Latitude : 64° 23' S
 Longitude : 63° 27' E
 Depth : 3400 m

Weather time (UT) : 09:00
 Weather : bc
 Air temperature (dry) : 0.4 °C
 (wet) : -4.9 °C
 Atmospheric pressure : 990.0 hPa

Wind direction : SW
 velocity : 10m/s
 Humidity : 68 %
 Wave : SW / 3
 Swell : ESE / 4
 Visibility : 25km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|--------------|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | (μmol / l) | | | | | | | | | | |
| 0 | 0.76 | 33.166 | 8.07 | 344 | 1.85 | 47 | 0.18 | --- | 0.6 | 0 | 0.60 | 33.166 | 26.59 | 0. |
| 7 | 0.57 | 33.194 | 8.05 | 347 | 1.87 | 46 | 0.19 | --- | 0.9 | 10 | 0.57 | 33.202 | 26.63 | 0.014 |
| 15 | 0.58 | 33.216 | 8.04 | 345 | 1.87 | 46 | 0.19 | --- | 0.6 | 20 | 0.58 | 33.229 | 26.65 | 0.028 |
| 23 | 0.58 | 33.237 | 8.04 | 343 | 1.87 | 46 | 0.18 | --- | 0.7 | 30 | 0.58 | 33.251 | 26.66 | 0.042 |
| 38 | 0.58 | 33.257 | 8.03 | 339 | 0.87 | 50 | 0.18 | --- | 1.1 | 50 | 0.26 | 33.187 | 26.63 | 0.069 |
| 57 | -0.04 | 33.149 | 8.00 | 326 | 1.98 | 61 | 0.15 | --- | 0.6 | 75 | -1.05 | 33.159 | 26.66 | 0.104 |
| 77 | -1.09 | 33.167 | 7.96 | 296 | 2.21 | 66 | 0.13 | --- | 0.6 | 100 | -0.84 | 33.269 | 26.74 | 0.137 |
| 92 | -0.98 | 33.240 | 7.92 | 282 | 2.20 | 70 | 0.20 | --- | 0.7 | 125 | -0.38 | 33.352 | 26.79 | 0.169 |
| 108 | -0.70 | 33.296 | 7.91 | 259 | 2.36 | 77 | 0.18 | --- | 0.7 | 150 | 0.10 | 33.419 | 26.82 | 0.199 |
| 139 | -0.11 | 33.394 | 7.89 | 243 | 2.30 | 81 | 0.09 | --- | 0.2 | 200 | 0.50 | 33.444 | 26.82 | 0.260 |
| 168 | 0.41 | 33.440 | 7.89 | 196 | 2.33 | 83 | 0.04 | --- | 0.3 | 250 | 1.16 | 33.516 | 26.84 | 0.320 |
| 195 | 0.45 | 33.440 | 7.89 | 237 | 2.36 | 89 | 0.03 | --- | 0.2 | 300 | 1.14 | 33.517 | 26.84 | 0.380 |
| 255 | 1.17 | 33.518 | 7.87 | 175 | 2.32 | 90 | 0.00 | --- | 0.2 | 400 | 1.13 | 33.506 | 26.84 | 0.500 |
| 316 | 1.12 | 33.517 | 7.87 | 214 | 2.35 | 91 | 0.00 | --- | 0.0 | 500 | 1.14 | 33.481 | 26.82 | 0.622 |
| 368 | 1.06 | 33.506 | 7.88 | 215 | 2.30 | 93 | 0.00 | --- | 0.3 | | | | | |
| 431 | 1.21 | 33.506 | 7.87 | 214 | 2.30 | 94 | 0.00 | --- | 0.3 | | | | | |
| 487 | 1.14 | 33.485 | 7.88 | 215 | 2.29 | 95 | 0.00 | --- | 0.2 | | | | | |
| 537 | 1.19 | 33.470 | 7.87 | 215 | 2.30 | 78 | 0.00 | --- | 0.1 | | | | | |

Station 6

Meteorological observation

Date : March 05 ,1992
 Time (UT) : 07:00
 Latitude : 63° 30' S
 Longitude : 84° 35' E
 Depth : 3800 m

Weather time (UT) : 07:00
 Weather : s
 Air temperature (dry) : 0.6 °C
 (wet) : -0.9 °C
 Atmospheric pressure : 976.1 hPa

Wind direction : E
 velocity : 10m/s
 Humidity : 90%
 Wave : E / 3
 Swell : E / 1
 Visibility : 10km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|--------------|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | (μmol / l) | | | | | | | | | | |
| 0 | 0.90 | 33.399 | 8.17 | 348 | 1.31 | 18 | 0.23 | --- | 0.1 | 0 | 0.90 | 33.399 | 26.76 | 0. |
| 6 | 0.98 | 33.417 | 8.18 | 348 | 1.33 | 18 | 0.24 | --- | 0.2 | 10 | 0.98 | 33.403 | 26.76 | 0.013 |
| 13 | 0.98 | 33.395 | 8.19 | 350 | 1.36 | 17 | 0.24 | --- | 0.1 | 20 | 0.98 | 33.399 | 26.76 | 0.025 |
| 19 | 0.98 | 33.397 | 8.17 | 350 | 1.36 | 18 | 0.24 | --- | 0.1 | 30 | 1.01 | 33.416 | 26.77 | 0.038 |
| 32 | 1.02 | 33.419 | 8.17 | 350 | 1.36 | 18 | 0.24 | --- | 0.1 | 50 | 1.10 | 33.821 | 27.09 | 0.060 |
| 58 | 1.13 | 34.020 | 8.16 | 331 | 2.14 | 50 | 0.16 | --- | 0.9 | 75 | -1.08 | 34.220 | 27.52 | 0.079 |
| 64 | -1.27 | 34.152 | 8.08 | 308 | 2.32 | 63 | 0.16 | --- | 1.0 | 100 | -0.22 | 34.175 | 27.45 | 0.094 |
| 75 | -1.08 | 34.220 | 8.00 | 294 | 2.36 | 65 | 0.23 | --- | 0.8 | 125 | -0.59 | 34.401 | 27.65 | 0.107 |
| 86 | -1.04 | 34.297 | 7.98 | 282 | 2.38 | 71 | 0.23 | --- | 0.4 | 150 | -0.22 | 34.460 | 27.68 | 0.117 |
| 90 | -1.01 | 34.348 | 7.95 | 284 | 2.30 | 73 | 0.11 | --- | 0.2 | 200 | 0.52 | 34.547 | 27.71 | 0.137 |
| 100 | -0.22 | 34.175 | 7.95 | 325 | 2.40 | 75 | 0.05 | --- | 0.4 | 250 | 0.87 | 34.593 | 27.73 | 0.155 |
| 110 | -1.02 | 34.233 | 8.02 | 289 | 2.33 | 67 | 0.20 | --- | 0.9 | 300 | 1.05 | 34.626 | 27.74 | 0.173 |
| 127 | -0.55 | 34.410 | 7.97 | 269 | 2.27 | 75 | 0.04 | --- | 0.3 | 400 | 1.32 | 34.693 | 27.78 | 0.207 |
| 171 | 0.09 | 34.496 | 7.95 | 249 | 2.39 | 79 | 0.02 | --- | 0.2 | 500 | 1.37 | 34.708 | 27.79 | 0.239 |
| 220 | 0.81 | 34.575 | 7.91 | 232 | 2.33 | 85 | 0.01 | --- | 0.3 | 600 | 1.24 | 34.719 | 27.80 | 0.270 |
| 274 | 0.91 | 34.605 | 7.91 | 224 | 2.38 | 86 | 0.01 | --- | 0.2 | 700 | 1.30 | 34.738 | 27.81 | 0.300 |
| 327 | 1.17 | 34.648 | 7.90 | 213 | 2.35 | 89 | 0.01 | --- | 0.1 | 800 | 1.13 | 34.731 | 27.82 | 0.330 |
| 375 | 1.27 | 34.681 | 7.91 | 211 | 2.35 | 90 | 0.00 | --- | 0.1 | 1000 | 0.88 | 34.705 | 27.82 | 0.388 |
| 437 | 1.40 | 34.702 | 7.90 | 210 | 2.17 | 93 | 0.00 | --- | 0.4 | 1200 | 0.81 | 34.702 | 27.82 | 0.446 |
| 579 | 1.23 | 34.715 | 7.92 | 214 | 2.26 | 95 | 0.00 | --- | 0.5 | 1500 | 0.67 | 34.699 | 27.82 | 0.533 |
| 714 | 1.31 | 34.738 | 7.91 | 211 | 2.18 | 101 | 0.00 | --- | 0.3 | | | | | |
| 866 | 1.00 | 34.723 | 7.92 | 217 | 2.15 | 103 | 0.00 | --- | 0.4 | | | | | |
| 1030 | 0.86 | 34.702 | 7.90 | 219 | 2.33 | 107 | 0.00 | --- | 0.5 | | | | | |
| 1372 | 0.76 | 34.702 | 7.90 | 217 | 2.27 | 118 | 0.00 | --- | 0.4 | | | | | |
| 1798 | 0.38 | 34.688 | 7.89 | 221 | 2.36 | 125 | 0.00 | --- | 0.4 | | | | | |

Station 7

Meteorological observation

Date : March 06 ,1992
 Time (UT) : 07:00
 Latitude : 63° 30' S
 Longitude : 93° 42' E
 Depth : 3200 m

Weather time (UT) : 07:00
 Weather : bc
 Air temperature (dry) : -0.9 °C
 (wet) : -4.2 °C
 Atmospheric pressure : 974.5 hPa

Wind direction : E
 velocity : 10m/s
 Humidity : 78%
 Wave : ESE/ 3
 Swell : E / 4
 Visibility : 30km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|--------------|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | (μmol / l) | | | | | | | | | | |
| 0 | 0.70 | 33.735 | 7.65 | 354 | 1.45 | 19 | 0.22 | --- | 0.3 | 0 | 0.70 | 33.735 | 27.05 | 0. |
| 8 | 0.73 | 33.729 | 8.02 | 354 | 1.37 | 19 | 0.22 | --- | 0.1 | 10 | 0.74 | 33.726 | 27.04 | 0.010 |
| 17 | 0.76 | 33.729 | 8.10 | 355 | 1.40 | 19 | 0.22 | --- | 0.1 | 20 | 0.71 | 33.734 | 27.05 | 0.020 |
| 26 | 0.40 | 33.767 | 8.11 | 351 | 1.57 | 26 | 0.22 | --- | 0.3 | 30 | -0.01 | 33.834 | 27.17 | 0.030 |
| 43 | -1.60 | 34.202 | 8.02 | 327 | 2.23 | 62 | 0.20 | --- | 0.5 | 50 | -1.71 | 34.224 | 27.55 | 0.044 |
| 65 | -1.73 | 34.271 | 7.99 | 329 | 2.17 | 65 | 0.14 | --- | 0.1 | 75 | -1.68 | 34.023 | 27.38 | 0.059 |
| 87 | -1.59 | 34.731 | 7.98 | 317 | 2.24 | 69 | 0.13 | --- | 0.2 | 100 | -1.41 | 34.364 | 27.65 | 0.073 |
| 99 | -1.41 | 34.363 | 7.97 | 306 | 2.30 | 71 | 0.14 | --- | 0.2 | 125 | -1.57 | 34.384 | 27.67 | 0.083 |
| 116 | -1.65 | 34.372 | 7.98 | 319 | 2.26 | 71 | 0.03 | --- | 0.1 | 150 | -1.30 | 34.417 | 27.69 | 0.093 |
| 150 | -1.30 | 34.417 | 7.97 | 304 | 2.23 | 74 | 0.03 | --- | 0.2 | 200 | -0.54 | 34.509 | 27.74 | 0.111 |
| 183 | -0.89 | 34.471 | 7.95 | 285 | 2.27 | 79 | 0.02 | --- | 0.2 | 250 | 0.48 | 34.619 | 27.77 | 0.128 |
| 210 | -0.32 | 34.532 | 7.93 | 267 | 2.32 | 83 | 0.02 | --- | 0.2 | 300 | 0.89 | 34.674 | 27.79 | 0.143 |
| 272 | 0.78 | 34.656 | 7.91 | 230 | 2.32 | 94 | 0.01 | --- | 0.3 | 400 | 1.08 | 34.709 | 27.81 | 0.173 |
| 338 | 0.92 | 34.682 | 7.91 | 218 | 2.35 | 97 | 0.02 | --- | 0.3 | 500 | 1.07 | 34.718 | 27.81 | 0.202 |
| 366 | 1.05 | 34.704 | 7.91 | 214 | 2.33 | 101 | 0.01 | --- | 0.1 | 600 | 0.97 | 34.715 | 27.82 | 0.231 |
| 467 | 1.08 | 34.715 | 7.90 | 210 | 2.35 | 103 | 0.01 | --- | 0.3 | 700 | 0.91 | 34.716 | 27.82 | 0.259 |
| 531 | 1.06 | 34.720 | 7.87 | 211 | 2.33 | 105 | 0.01 | --- | 0.3 | 800 | 0.83 | 34.711 | 27.82 | 0.287 |
| 602 | 0.97 | 34.715 | 7.89 | 220 | 2.35 | 107 | 0.00 | --- | 0.2 | 1000 | 0.64 | 34.696 | 27.82 | 0.343 |
| 661 | 0.94 | 34.717 | 7.91 | 212 | 2.32 | 110 | 0.01 | --- | 0.3 | 1200 | 0.47 | 34.710 | 27.85 | 0.397 |
| 828 | 0.80 | 34.709 | 7.90 | 213 | 2.38 | 115 | 0.01 | --- | 0.2 | 1500 | 0.27 | 34.684 | 27.84 | 0.474 |
| 996 | 0.64 | 34.696 | 7.91 | 215 | 2.30 | 119 | 0.01 | --- | 0.3 | 2000 | 0.04 | 34.676 | 27.84 | 0.600 |
| 1173 | 0.49 | 34.712 | 7.90 | 219 | 2.27 | 123 | 0.01 | --- | 0.3 | | | | | |
| 1356 | 0.34 | 34.688 | 7.89 | 224 | 2.39 | 126 | 0.01 | --- | 0.3 | | | | | |
| 1743 | 0.19 | 34.679 | 7.89 | 233 | 2.35 | 127 | 0.02 | --- | 0.3 | | | | | |
| 2192 | -0.10 | 34.674 | 7.88 | 240 | 2.35 | 123 | 0.01 | --- | 0.3 | | | | | |

Station 8

Meteorological observation

Date : March 07 ,1992
 Time (UT) : 06:00
 Latitude : 63° 27' S
 Longitude : 101° 54' E
 Depth : 1260 m

Weather time (UT) : 06:00
 Weather : s
 Air temprature (dry) : -0.8 °C
 (wet) : -5.3 °C
 Atmospheric pressure : 977.8 hPa

Wind direction : SE
 velocity : 9m/s
 Humidity : 72%
 Wave : SE / 4
 Swell : E / 7
 Visibility : 15km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|--------------|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | (μmol / l) | | | | | | | | | | |
| 0 | 0.70 | 33.936 | 8.09 | 351 | 1.52 | 29 | 0.23 | --- | 0.3 | 0 | 0.70 | 33.936 | 27.21 | 0. |
| 7 | 0.52 | 33.943 | 8.09 | 352 | 1.51 | 29 | 0.25 | --- | 0.4 | 10 | 0.52 | 33.945 | 27.23 | 0.008 |
| 15 | 0.53 | 33.947 | 8.09 | 353 | 1.51 | 29 | 0.24 | --- | 0.2 | 20 | 0.53 | 33.950 | 27.23 | 0.017 |
| 22 | 0.53 | 33.951 | 8.08 | 352 | 1.54 | 29 | 0.24 | --- | 0.2 | 30 | 0.37 | 33.985 | 27.27 | 0.025 |
| 26 | 0.52 | 33.958 | 8.08 | 351 | 1.54 | 29 | 0.24 | --- | 0.3 | 50 | -1.80 | 34.288 | 27.60 | 0.038 |
| 54 | -1.93 | 34.309 | 7.99 | 327 | 2.24 | 66 | 0.16 | --- | 0.2 | 75 | -1.82 | 34.315 | 27.62 | 0.049 |
| 73 | -1.82 | 34.313 | 7.95 | 324 | 2.24 | 69 | 0.17 | --- | 0.2 | 100 | -1.82 | 34.343 | 27.65 | 0.060 |
| 85 | ----- | 34.323 | 7.95 | 323 | 2.29 | 69 | 0.13 | --- | 0.1 | 125 | -1.81 | 34.357 | 27.66 | 0.071 |
| 100 | -1.82 | 34.343 | 7.95 | 324 | 2.29 | 69 | 0.11 | --- | 0.1 | 150 | -1.79 | 34.373 | 27.67 | 0.081 |
| 135 | ----- | 34.363 | 7.95 | 323 | 2.24 | 70 | 0.03 | --- | 0.1 | 200 | -1.67 | 34.396 | 27.69 | 0.101 |
| 166 | -1.78 | 34.384 | 7.95 | 323 | 2.23 | 69 | 0.01 | --- | 0.2 | 250 | -1.21 | 34.445 | 27.71 | 0.119 |
| 195 | -1.70 | 34.392 | 7.95 | 318 | 2.26 | 70 | 0.00 | --- | 0.1 | 300 | -0.94 | 34.488 | 27.74 | 0.137 |
| 252 | -1.20 | 34.447 | 7.93 | 301 | 2.27 | 74 | 0.00 | --- | 0.2 | 400 | -0.25 | 34.581 | 27.78 | 0.169 |
| 321 | -0.82 | 34.506 | 7.93 | 287 | 2.32 | 79 | 0.00 | --- | 0.2 | 500 | 0.04 | 34.628 | 27.80 | 0.198 |
| 385 | -0.34 | 34.574 | 7.90 | 267 | 2.32 | 87 | 0.00 | --- | 0.2 | 600 | 0.01 | 34.634 | 27.81 | 0.227 |
| 455 | -0.04 | 34.606 | 7.91 | 255 | 2.29 | 93 | 0.00 | --- | 0.3 | 700 | 0.18 | 34.664 | 27.83 | 0.254 |
| 522 | 0.06 | 34.638 | 7.91 | 245 | 2.33 | 99 | 0.00 | --- | 0.1 | 800 | 0.09 | 34.663 | 27.83 | 0.280 |
| 607 | 0.01 | 34.634 | 7.90 | 246 | 2.33 | 101 | 0.00 | --- | 0.3 | | | | | |
| 677 | 0.20 | 34.664 | 7.90 | 233 | 2.33 | 111 | 0.00 | --- | 0.3 | | | | | |
| 904 | 0.00 | 34.662 | 7.88 | 239 | 2.26 | 115 | 0.00 | --- | 0.2 | | | | | |

Station 9

Meteorological observation

Date : March 08 ,1992
 Time (UT) : 06:00
 Latitude : 63° 28' S
 Longitude : 113° 05' E
 Depth : 3496 m

Weather time (UT) : 06:00
 Weather : c
 Air temperature (dry) : -0.5 °C
 (wet) : -3.7 °C
 Atmospheric pressure : 984.1 hPa

Wind direction : S
 velocity : 7m/s
 Humidity : 79%
 Wave : S / 3
 Swell : SE / 4
 Visibility : 20km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|--------------|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | (μmol / l) | | | | | | | | | | |
| 0 | 1.30 | 34.011 | 8.06 | 334 | 1.77 | 51 | 0.25 | --- | 0.6 | 0 | 1.30 | 34.011 | 27.23 | 0. |
| 9 | 1.33 | 33.996 | 8.06 | 333 | 1.86 | 51 | 0.24 | --- | 0.4 | 10 | 1.33 | 33.995 | 27.22 | 0.008 |
| 18 | 1.33 | 33.987 | 8.06 | 334 | 1.87 | 51 | 0.25 | --- | 0.6 | 20 | 1.33 | 33.988 | 27.21 | 0.017 |
| 27 | 1.35 | 34.000 | 8.07 | 333 | 1.87 | 51 | 0.25 | --- | 0.5 | 30 | 1.34 | 33.999 | 27.22 | 0.025 |
| 45 | 1.35 | 33.995 | 8.07 | 334 | 1.86 | 51 | 0.24 | --- | 0.7 | 50 | 1.10 | 34.047 | 27.27 | 0.042 |
| 68 | -0.52 | 34.427 | 8.00 | 284 | 2.24 | 74 | 0.09 | --- | 0.2 | 75 | -0.25 | 34.473 | 27.69 | 0.056 |
| 91 | 0.48 | 34.556 | 7.92 | 230 | 2.39 | 82 | 0.13 | --- | 0.1 | 100 | 0.83 | 34.592 | 27.73 | 0.066 |
| 112 | 0.22 | 34.629 | 7.90 | 203 | 2.46 | 86 | 0.14 | --- | 0.2 | 125 | 1.10 | 34.616 | 27.73 | 0.075 |
| 128 | 1.10 | 34.613 | 7.90 | 209 | 2.45 | 87 | 0.20 | --- | 0.2 | 150 | 1.30 | 34.670 | 27.76 | 0.083 |
| 143 | 1.30 | 34.668 | 7.92 | 206 | 2.33 | 90 | 0.01 | --- | 0.2 | 200 | 1.31 | 34.676 | 27.76 | 0.100 |
| 207 | 1.31 | 34.679 | 7.91 | 206 | 2.35 | 91 | 0.00 | --- | 0.2 | 250 | 1.41 | 34.697 | 27.77 | 0.116 |
| 241 | 1.41 | 34.695 | 7.92 | 206 | 2.35 | 93 | 0.00 | --- | 0.2 | 300 | 1.38 | 34.706 | 27.78 | 0.132 |
| 316 | 1.37 | 34.708 | 7.93 | 205 | 2.29 | 94 | 0.00 | --- | 0.2 | 400 | 1.37 | 34.712 | 27.79 | 0.164 |
| 388 | 1.38 | 34.712 | 7.94 | 206 | 2.33 | 97 | 0.00 | --- | 0.2 | 500 | 1.28 | 34.715 | 27.80 | 0.195 |
| 465 | 1.30 | 34.709 | 7.93 | 207 | 2.30 | 99 | 0.00 | --- | 0.1 | 600 | 1.21 | 34.723 | 27.81 | 0.225 |
| 543 | 1.26 | 34.723 | 7.93 | 208 | 2.30 | 101 | 0.00 | --- | 0.0 | 700 | 1.13 | 34.722 | 27.81 | 0.255 |
| 620 | 1.19 | 34.723 | 7.93 | 207 | 2.30 | 103 | 0.00 | --- | 0.1 | 800 | 1.04 | 34.716 | 27.81 | 0.284 |
| 697 | 1.13 | 34.722 | 7.93 | 209 | 2.32 | 106 | 0.00 | --- | 0.2 | 1000 | 0.86 | 34.705 | 27.82 | 0.343 |
| 771 | 1.07 | 34.718 | 7.94 | 211 | 2.26 | 109 | 0.00 | --- | 0.3 | 1200 | 0.74 | 34.689 | 27.81 | 0.401 |
| 967 | 0.88 | 34.708 | 7.93 | 213 | 2.36 | 114 | 0.00 | --- | 0.3 | 1500 | 0.50 | 34.687 | 27.83 | 0.487 |
| 1160 | 0.76 | 34.690 | 7.94 | 215 | 2.29 | 118 | 0.00 | --- | 0.4 | 2000 | 0.16 | 34.673 | 27.83 | 0.621 |
| 1365 | 0.67 | 34.688 | 7.93 | 218 | 2.23 | 122 | 0.00 | --- | 0.5 | | | | | |
| 1579 | 0.40 | 34.687 | 7.91 | 221 | 2.42 | 125 | 0.00 | --- | 0.6 | | | | | |
| 2043 | 0.15 | 34.671 | 7.91 | 232 | 2.35 | 129 | 0.00 | --- | 0.5 | | | | | |

Station 10

Meteorological observation

Date : March 09 ,1992
 Time (UT) : 05:00
 Latitude : 63° 30' S
 Longitude : 123° 07' E
 Depth : 3859 m

Weather time (UT) : 05:00
 Weather : c
 Air temprature (dry) : 0.3 °C
 (wet) : -4.4 °C
 Atmospheric pressure : 988.3 hPa

Wind direction : W
 velocity : 5m/s
 Humidity : 71%
 Wave : W / 2
 Swell : SE / 4
 Visibility : 30km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|--------------|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | (μmol / l) | | | | | | | | | | |
| 0 | 1.70 | 34.016 | 8.11 | 334 | 1.82 | 46 | 0.25 | --- | 0.3 | 0 | 1.70 | 34.016 | 27.21 | 0. |
| 20 | 1.40 | 34.002 | 8.08 | 334 | 1.86 | 45 | 0.24 | --- | 0.7 | 10 | 1.51 | 34.005 | 27.21 | 0.009 |
| 30 | 1.41 | 34.008 | 8.07 | 336 | 1.85 | 46 | 0.24 | --- | 0.1 | 20 | 1.40 | 34.002 | 27.22 | 0.017 |
| 38 | 1.31 | 34.018 | 8.07 | 334 | 1.87 | 46 | 0.24 | --- | 0.1 | 30 | 1.41 | 34.008 | 27.22 | 0.025 |
| 57 | 1.25 | 34.028 | 8.06 | 334 | 1.87 | 47 | 0.24 | --- | 0.1 | 50 | 1.26 | 34.023 | 27.24 | 0.042 |
| 81 | 1.25 | 34.549 | 7.95 | 226 | 2.32 | 81 | 0.05 | --- | 0.1 | 75 | 1.25 | 34.451 | 27.59 | 0.058 |
| 104 | 1.33 | 34.626 | 7.90 | 201 | 2.42 | 86 | 0.08 | --- | 0.6 | 100 | 1.32 | 34.620 | 27.72 | 0.069 |
| 126 | 1.36 | 34.644 | 7.89 | 199 | 2.48 | 87 | 0.10 | --- | 0.6 | 125 | 1.36 | 34.644 | 27.73 | 0.078 |
| 148 | 1.27 | 34.641 | 7.90 | 202 | 2.46 | 89 | 0.11 | --- | 0.2 | 150 | 1.27 | 34.642 | 27.74 | 0.087 |
| 192 | 1.44 | 34.676 | 7.90 | 199 | 2.35 | 90 | 0.01 | --- | 0.2 | 200 | 1.45 | 34.681 | 27.76 | 0.104 |
| 236 | 1.51 | 34.698 | 7.90 | 201 | 2.33 | 91 | 0.00 | --- | 0.2 | 250 | 1.53 | 34.721 | 27.78 | 0.121 |
| 283 | 1.57 | 34.788 | 7.92 | 201 | 2.33 | 93 | 0.00 | --- | 0.3 | 300 | 1.56 | 34.785 | 27.83 | 0.135 |
| 375 | 1.50 | 34.720 | 7.92 | 202 | 2.29 | 95 | 0.00 | --- | 0.2 | 400 | 1.50 | 34.723 | 27.79 | 0.164 |
| 468 | 1.50 | 34.732 | 7.93 | 205 | 2.33 | 95 | 0.00 | --- | 0.2 | 500 | 1.47 | 34.734 | 27.80 | 0.196 |
| 562 | 1.40 | 34.737 | 7.94 | 208 | 2.29 | 98 | 0.00 | --- | 0.0 | 600 | 1.38 | 34.735 | 27.81 | 0.226 |
| 654 | 1.34 | 34.733 | 7.94 | 209 | 2.30 | 101 | 0.00 | --- | 0.1 | 700 | 1.30 | 34.731 | 27.81 | 0.256 |
| 745 | 1.27 | 34.730 | 7.93 | 211 | 2.29 | 101 | 0.00 | --- | 0.0 | 800 | 1.23 | 34.801 | 27.87 | 0.284 |
| 838 | 1.21 | 34.841 | 7.92 | 211 | 2.30 | 105 | 0.00 | --- | 0.1 | 1000 | 1.08 | 34.726 | 27.82 | 0.338 |
| 932 | 1.14 | 34.729 | 7.93 | 212 | 2.24 | 107 | 0.00 | --- | 0.3 | 1200 | 0.91 | 34.716 | 27.82 | 0.396 |
| 1168 | 0.94 | 34.718 | 7.93 | 215 | 2.32 | 113 | 0.00 | --- | 0.4 | 1500 | 0.71 | 34.702 | 27.82 | 0.483 |
| 1392 | 0.75 | 34.706 | 7.91 | 217 | 2.29 | 118 | 0.00 | --- | 0.1 | 2000 | 0.34 | 34.691 | 27.84 | 0.621 |
| 1638 | 0.68 | 34.699 | 7.90 | 221 | 2.21 | 122 | 0.00 | --- | 0.1 | 2500 | 0.09 | 34.681 | 27.84 | 0.747 |
| 1878 | 0.41 | 34.694 | 7.90 | 224 | 2.39 | 126 | 0.00 | --- | 0.4 | | | | | |
| 2362 | 0.15 | 34.684 | 7.90 | 232 | 2.36 | 129 | 0.00 | --- | 0.2 | | | | | |
| 2858 | -0.05 | 34.674 | 7.90 | 242 | 2.35 | 126 | 0.00 | --- | 0.1 | | | | | |

Station 11

Meteorological observation

Date : March 10, 1992
 Time (UT) : 04:00
 Latitude : 63° 57' S
 Longitude : 133° 13' E
 Depth : 3112 m

Weather time (UT) : 04:00
 Weather : bc
 Air temperature (dry) : 0.8 °C
 (wet) : -4.7 °C
 Atmospheric pressure : 983.0 hPa

Wind direction : W
 velocity : 5m/s
 Humidity : 67%
 Wave : W / 3
 Swell : NNW / 4
 Visibility : 30km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|--------------|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | (μmol / l) | | | | | | | | | | |
| 0 | 1.40 | 33.917 | 8.00 | 340 | 1.76 | 43 | 0.27 | --- | 0.5 | 0 | 1.40 | 33.917 | 27.15 | 0. |
| 8 | 1.31 | 33.894 | 8.06 | 342 | 1.80 | 42 | 0.27 | --- | 0.2 | 10 | 1.31 | 33.895 | 27.14 | 0.009 |
| 15 | 1.30 | 33.898 | 8.06 | 341 | 1.83 | 42 | 0.27 | --- | 0.2 | 20 | 1.28 | 33.898 | 27.14 | 0.018 |
| 23 | 1.27 | 33.899 | 8.06 | 340 | 1.85 | 42 | 0.28 | --- | 0.1 | 30 | 1.20 | 33.934 | 27.18 | 0.027 |
| 39 | 1.07 | 34.001 | 8.05 | 339 | 1.80 | 49 | 0.24 | --- | 0.2 | 50 | 0.87 | 34.009 | 27.26 | 0.044 |
| 58 | 0.67 | 34.024 | 8.06 | 340 | 1.92 | 49 | 0.23 | --- | 0.1 | 75 | -0.80 | 34.218 | 27.51 | 0.061 |
| 83 | -1.35 | 34.297 | 8.01 | 323 | 2.21 | 63 | 0.11 | --- | 0.2 | 100 | -1.48 | 34.358 | 27.65 | 0.074 |
| 95 | -1.51 | 34.350 | 8.00 | 320 | 2.24 | 67 | 0.05 | --- | 0.4 | 125 | -0.47 | 34.456 | 27.69 | 0.084 |
| 114 | -1.40 | 34.371 | 8.00 | 317 | 2.26 | 67 | 0.04 | --- | 0.1 | 150 | 0.99 | 34.574 | 27.70 | 0.093 |
| 141 | 1.02 | 34.576 | 7.90 | 213 | 2.42 | 82 | 0.03 | --- | 0.1 | 200 | 0.56 | 34.569 | 27.73 | 0.112 |
| 184 | 0.41 | 34.565 | 7.92 | 237 | 2.40 | 82 | 0.03 | --- | --- | 250 | 1.01 | 34.640 | 27.76 | 0.130 |
| 198 | 0.54 | 34.568 | 7.91 | 238 | 2.45 | 82 | 0.04 | --- | 0.4 | 300 | 1.30 | 34.676 | 27.76 | 0.146 |
| 272 | 1.18 | 34.664 | 7.91 | 210 | 2.36 | 90 | 0.00 | --- | 0.2 | 400 | 1.39 | 34.706 | 27.78 | 0.179 |
| 337 | 1.37 | 34.692 | 7.91 | 207 | 2.38 | 90 | 0.00 | --- | 0.1 | 500 | 1.35 | 34.716 | 27.79 | 0.210 |
| 361 | 1.41 | 34.707 | 7.92 | 206 | 2.29 | 93 | 0.00 | --- | 0.1 | | | | | |
| 464 | 1.32 | 34.705 | 7.92 | 210 | 2.33 | 94 | 0.00 | --- | 0.2 | | | | | |
| 517 | 1.38 | 34.725 | 7.92 | 210 | 2.32 | 97 | 0.00 | --- | 0.1 | | | | | |

Station 12

Meteorological observation

Date : March 11, 1992
 Time (UT) : 22:00
 Latitude : 64° 48' S
 Longitude : 150° 05' E
 Depth : 3354 m

Weather time (UT) : 22:00
 Weather : bc
 Air temperature (dry) : -5.1 °C
 (wet) : -11.3 °C
 Atmospheric pressure : 990.9 hPa

Wind direction : SSE
 velocity : 4m/s
 Humidity : 62%
 Wave : SSE/ 2
 Swell : NWN/ 1
 Visibility : 40km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|--------------|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | (μmol / l) | | | | | | | | | | |
| 0 | 0.80 | 33.871 | 8.07 | 344 | 1.85 | 40 | 0.31 | --- | 0.5 | 0 | 0.80 | 33.871 | 27.15 | 0. |
| 20 | 0.90 | 33.854 | 8.06 | 342 | 1.85 | 40 | 0.31 | --- | 0.6 | 10 | 0.85 | 33.856 | 27.13 | 0.009 |
| 29 | 1.00 | 33.868 | 8.06 | 343 | 1.88 | 40 | 0.30 | --- | 0.5 | 20 | 0.91 | 33.854 | 27.13 | 0.018 |
| 39 | 1.01 | 33.868 | 8.06 | 343 | 1.88 | 39 | 0.31 | --- | 0.3 | 30 | 1.01 | 33.868 | 27.13 | 0.028 |
| 58 | 1.20 | 33.909 | 8.05 | 343 | 1.85 | 39 | 0.27 | --- | 0.4 | 50 | 1.12 | 33.884 | 27.14 | 0.046 |
| 82 | 0.95 | 34.537 | 7.95 | 353 | 2.19 | 58 | 0.11 | --- | 0.2 | 75 | 0.98 | 34.392 | 27.56 | 0.064 |
| 105 | 1.64 | 34.382 | 7.87 | 196 | 2.48 | 73 | 0.22 | --- | 0.3 | 100 | 1.55 | 34.389 | 27.52 | 0.077 |
| 129 | 1.74 | 34.587 | 7.87 | 188 | 2.47 | 78 | 0.10 | --- | 0.4 | 125 | 1.73 | 34.572 | 27.65 | 0.090 |
| 153 | 1.78 | 34.609 | 7.86 | 188 | 2.47 | 81 | 0.03 | --- | 0.1 | 150 | 1.78 | 34.606 | 27.67 | 0.101 |
| 200 | 1.85 | 34.650 | 7.87 | 189 | 2.37 | 82 | 0.00 | --- | 0.1 | 200 | 1.85 | 34.650 | 27.70 | 0.121 |
| 247 | 1.80 | 34.672 | 7.87 | 198 | 2.31 | 83 | 0.00 | --- | 0.3 | 250 | 1.80 | 34.673 | 27.73 | 0.140 |
| 284 | 1.83 | 34.689 | 7.88 | 195 | 2.31 | 85 | 0.00 | --- | 0.3 | 300 | 1.82 | 34.695 | 27.74 | 0.158 |
| 385 | 1.74 | 34.712 | 7.89 | 202 | 2.24 | 86 | 0.00 | --- | 0.4 | 400 | 1.74 | 34.715 | 27.76 | 0.193 |
| 478 | 1.77 | 34.730 | 7.90 | 200 | 2.19 | 87 | 0.00 | --- | 0.2 | 500 | 1.75 | 34.732 | 27.78 | 0.227 |
| 571 | 1.69 | 34.735 | 7.91 | 203 | 2.17 | 89 | 0.00 | --- | 0.2 | 600 | 1.66 | 34.736 | 27.79 | 0.259 |
| 665 | 1.60 | 34.737 | 7.91 | 207 | 2.19 | 91 | 0.00 | --- | 0.4 | 700 | 1.56 | 34.737 | 27.79 | 0.292 |
| 759 | 1.50 | 34.737 | 7.91 | 208 | 2.19 | 94 | 0.00 | --- | 0.1 | 800 | 1.46 | 34.737 | 27.80 | 0.324 |
| 852 | 1.42 | 34.737 | 7.91 | 209 | 2.19 | 97 | 0.00 | --- | 0.1 | 1000 | 1.30 | 34.734 | 27.81 | 0.386 |
| 946 | 1.35 | 34.768 | 7.91 | 212 | 2.11 | 99 | 0.00 | --- | 0.4 | 1200 | 1.08 | 34.724 | 27.82 | 0.447 |
| 1184 | 1.09 | 34.725 | 7.91 | 214 | 2.21 | 106 | 0.00 | --- | 0.4 | 1500 | 0.87 | 34.710 | 27.82 | 0.536 |
| 1422 | 0.91 | 34.713 | 7.91 | 215 | 2.11 | 111 | 0.00 | --- | 0.3 | 2000 | 0.45 | 34.692 | 27.83 | 0.679 |
| 1659 | 0.81 | 34.707 | 7.90 | 220 | 2.13 | 116 | 0.00 | --- | 0.3 | 2500 | 0.16 | 34.683 | 27.84 | 0.809 |
| 1899 | 0.52 | 34.694 | 7.88 | 221 | 2.28 | 120 | 0.00 | --- | 0.5 | | | | | |
| 2387 | 0.21 | 34.685 | 7.88 | 231 | 2.24 | 123 | 0.00 | --- | 0.6 | | | | | |
| 2880 | 0.00 | 34.677 | 7.88 | 240 | 2.23 | 120 | 0.00 | --- | 0.5 | | | | | |

Station 13

Meteorological observation

Date : March 13, 1992
 Time (UT) : 23:00
 Latitude : 56° 32' S
 Longitude : 150° 05' E
 Depth : 3611 m

Weather time (UT) : 23:00
 Weather : bc
 Air temperature (dry) : 4.1 °C
 (wet) : 1.2 °C
 Atmospheric pressure : 989.7 hPa

Wind direction : SW
 velocity : 10m/s
 Humidity : 82%
 Wave : SW / 3
 Swell : NWN/ 4
 Visibility : 30km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|-----|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | | | | | | | | | | | |
| 0 | 4.10 | 33.784 | 8.10 | 328 | 1.52 | 11 | 0.30 | --- | 0.3 | 0 | 4.10 | 33.784 | 26.81 | 0. |
| 7 | 4.59 | 33.786 | 8.09 | 322 | 1.45 | 5 | 0.28 | --- | 0.5 | 10 | 4.59 | 33.786 | 26.76 | 0.013 |
| 14 | 4.60 | 33.785 | 8.08 | 324 | 1.49 | 5 | 0.27 | --- | 0.2 | 20 | 4.46 | 33.783 | 26.77 | 0.025 |
| 21 | 4.45 | 33.783 | 8.08 | 325 | 1.54 | 6 | 0.28 | --- | 0.3 | 30 | 4.38 | 33.783 | 26.78 | 0.038 |
| 35 | 4.35 | 33.783 | 8.08 | 326 | 1.49 | 7 | 0.28 | --- | 0.4 | 50 | 4.11 | 33.796 | 26.82 | 0.063 |
| 53 | 4.03 | 33.800 | 8.09 | 328 | 1.54 | 6 | 0.27 | --- | 0.3 | 75 | 2.40 | 33.840 | 27.01 | 0.091 |
| 71 | 2.59 | 33.837 | 8.06 | 337 | 1.86 | 5 | 0.24 | --- | 0.7 | 100 | 0.60 | 33.964 | 27.24 | 0.114 |
| 85 | 2.04 | 33.755 | 8.06 | 339 | 1.99 | 10 | 0.24 | --- | 1.0 | 125 | 0.97 | 34.108 | 27.33 | 0.134 |
| 94 | 0.59 | 33.921 | 8.03 | 332 | 2.10 | 23 | 0.23 | --- | 0.8 | 150 | 1.73 | 34.151 | 27.31 | 0.153 |
| 113 | 0.63 | 34.053 | 7.98 | 303 | 2.14 | 33 | 0.12 | --- | 0.3 | 200 | 1.98 | 34.384 | 27.48 | 0.187 |
| 163 | 1.93 | 34.191 | 7.94 | 269 | 2.27 | -- | 0.25 | --- | 0.3 | 250 | 2.11 | 34.501 | 27.56 | 0.215 |
| 188 | 1.91 | 34.347 | 7.88 | 213 | 2.48 | 58 | 0.04 | --- | 0.3 | 300 | 2.14 | 34.528 | 27.58 | 0.241 |
| 219 | 2.08 | 34.437 | 7.87 | 194 | 2.47 | 68 | 0.01 | --- | 0.3 | 400 | 2.13 | 34.356 | 27.45 | 0.298 |
| 234 | 2.10 | 34.493 | 7.85 | 184 | 2.50 | 69 | 0.00 | --- | 0.2 | 500 | 2.13 | 34.423 | 27.50 | 0.360 |
| 319 | 2.15 | 34.538 | 7.86 | 182 | 2.44 | 73 | 0.00 | --- | 0.2 | 600 | 2.07 | 34.446 | 27.52 | 0.419 |
| 397 | 2.13 | 34.355 | 7.85 | 210 | 2.48 | 58 | 0.03 | --- | 0.1 | | | | | |
| 453 | 2.06 | 34.368 | 7.83 | 197 | 2.52 | 62 | 0.01 | --- | 0.1 | | | | | |
| 509 | 2.14 | 34.433 | 7.83 | 193 | 2.52 | 66 | 0.01 | --- | 0.1 | | | | | |
| 622 | 2.07 | 34.468 | 7.82 | 188 | 2.44 | 68 | 0.01 | --- | 0.3 | | | | | |
| 639 | 2.08 | 34.538 | 7.81 | 181 | 2.45 | 73 | 0.00 | --- | 0.3 | | | | | |
| 660 | 2.07 | 34.587 | 7.82 | 181 | 2.37 | 77 | 0.00 | --- | 0.1 | | | | | |

Station 14

Meteorological observation

Date : March 14 ,1992
 Time (UT) : 23:00
 Latitude : 52° 48' S
 Longitude : 150° 09' E
 Depth : 4040 m

Weather time (UT) : 23:00
 Weather : c
 Air temprature (dry) : 7.2 °C
 (wet) : 4.2 °C
 Atmospheric pressure : 997.4 hPa

Wind direction : NW
 velocity : 11m/s
 Humidity : 84%
 Wave : NW / 4
 Swell : W / 4
 Visibility : 20km

| O b s e r v e d | | | | | | | | | | I n t e r p o l a t e d | | | | |
|-----------------|-----------|--------|------|--------------|--------------------|----------------------|--------------------|--------------------|--------------------|-------------------------|-----------|--------|----------------|-------|
| Depth (m) | T (°C) | S | pH | DO | PO ₄ -P | SiO ₃ -Si | NO ₂ -N | NO ₃ -N | NH ₄ -N | depth (m) | T (°C) | S | σ _t | ΔD |
| | | | | (μmol / l) | | | | | | | | | | |
| 0 | 7.70 | 33.993 | 8.14 | 299 | 1.33 | 1 | 0.26 | --- | 0.2 | 0 | 7.70 | 33.993 | 26.53 | 0. |
| 6 | 7.52 | 33.980 | 8.14 | 299 | 1.35 | 2 | 0.24 | --- | 0.7 | 10 | 7.17 | 33.993 | 26.60 | 0.015 |
| 12 | 7.54 | 33.996 | 8.13 | 301 | 1.37 | 1 | 0.26 | --- | 0.2 | 20 | 7.55 | 33.981 | 26.54 | 0.029 |
| 18 | 7.55 | 33.981 | 8.13 | 301 | 1.40 | 1 | 0.26 | --- | 0.2 | 30 | 7.53 | 33.983 | 26.54 | 0.044 |
| 31 | 7.53 | 33.983 | 8.13 | 301 | 1.35 | 1 | 0.26 | --- | 0.3 | 50 | 7.53 | 33.985 | 26.55 | 0.074 |
| 46 | 7.53 | 33.986 | 8.14 | 299 | 1.34 | 1 | 0.26 | --- | 0.0 | 75 | 7.51 | 33.979 | 26.54 | 0.111 |
| 62 | 7.52 | 33.978 | 8.13 | 300 | 1.38 | 1 | 0.26 | --- | 0.4 | 100 | 6.80 | 34.193 | 26.81 | 0.145 |
| 73 | | 33.979 | 8.07 | 299 | 1.41 | 1 | 0.25 | --- | 0.5 | 125 | 6.65 | 34.209 | 26.84 | 0.176 |
| 82 | 7.50 | 33.978 | 8.13 | 300 | 1.41 | 1 | 0.26 | --- | 0.2 | 150 | 6.39 | 34.199 | 26.87 | 0.206 |
| 95 | 6.85 | 34.184 | 8.10 | 291 | 1.40 | 3 | 0.16 | --- | 0.1 | 200 | 6.13 | 34.196 | 26.90 | 0.265 |
| 125 | 6.65 | 34.209 | 8.09 | 287 | 1.42 | 5 | 0.01 | --- | 0.2 | 250 | 6.05 | 34.219 | 26.93 | 0.323 |
| 137 | 6.48 | 34.205 | 8.10 | 285 | 1.48 | 6 | 0.00 | --- | 0.2 | 300 | 6.03 | 34.259 | 26.96 | 0.338 |
| 182 | ---- | 34.189 | 8.01 | 284 | 1.51 | 6 | 0.00 | --- | 0.3 | 400 | 5.31 | 34.280 | 27.07 | 0.487 |
| 220 | 6.09 | 34.206 | 8.08 | 277 | 1.59 | 7 | 0.00 | --- | 0.2 | 500 | 4.67 | 34.287 | 27.15 | 0.587 |
| 254 | 6.05 | 34.221 | 8.06 | 274 | 1.61 | 8 | 0.00 | --- | 0.1 | 600 | 3.89 | 34.282 | 27.23 | 0.679 |
| 292 | 6.03 | 34.252 | 8.05 | 263 | 1.65 | 10 | 0.00 | --- | 0.1 | 700 | 3.46 | 34.294 | 27.28 | 0.765 |
| 320 | 6.02 | 34.275 | 8.04 | 255 | 1.68 | 11 | 0.00 | --- | 0.2 | 800 | 2.48 | 34.626 | 27.63 | 0.831 |
| 340 | 5.77 | 34.246 | 8.04 | 258 | 1.73 | 12 | 0.00 | --- | 0.1 | | | | | |
| 360 | 5.57 | 34.300 | 8.02 | 244 | 1.80 | 15 | 0.00 | --- | 0.6 | | | | | |
| 375 | 5.53 | 34.241 | 8.03 | 255 | 1.78 | 12 | 0.00 | --- | 0.6 | | | | | |
| 423 | 5.10 | 34.308 | 8.00 | 235 | 1.82 | 18 | 0.00 | --- | 0.2 | | | | | |
| 483 | 4.86 | 34.294 | 7.98 | 237 | 1.82 | 20 | 0.00 | --- | 0.2 | | | | | |
| 515 | 4.50 | 34.282 | 7.97 | 236 | 2.02 | 23 | 0.00 | --- | 0.6 | | | | | |
| 626 | 3.73 | 34.282 | 7.96 | 231 | 2.13 | 31 | 0.00 | --- | 0.3 | | | | | |
| 725 | 3.36 | 34.301 | 7.94 | 226 | 2.19 | 37 | 0.00 | --- | 0.3 | | | | | |
| 825 | 2.24 | 34.713 | 7.93 | 192 | 2.20 | -- | 0.00 | --- | 0.2 | | | | | |
| 971 | 2.71 | 34.394 | 7.90 | 205 | 2.34 | 55 | 0.00 | --- | 0.3 | | | | | |

Table 5. Petroleum, Cd, Cu and Zn concentrations in surface sea water.

| Station No. | Date | Time | | Position | | Air Temp. | Water Temp. | Petroleum Oil | Cadmium | Copper | Zinc | Mercury | |
|-------------|-------|-------|-------|----------|---------|-----------|-------------|---------------------|---------|---------|-------|---------|---------|
| | | U T | LMT | Lat. | Long. | ('C) | | ($\mu\text{g/l}$) | | | | | |
| P - 1 | 1991 | | | | | | | | * | * | * | * | |
| | 11.19 | 23:00 | 08:00 | 4-07N | 124-08E | 27.4 | 28.0 | 34.6 | < 0.003 | 0.3 | 0.7 | 0.018 | |
| | 2 | 11.20 | 23:00 | 08:00 | 0-20 | 119-34 | 28.4 | 28.5 | 6.3 | < 0.003 | 0.6 | 1.5 | 0.049 |
| | 3 | 11.21 | 23:00 | 08:00 | 5-22S | 117-13 | 28.0 | 28.1 | 7.6 | < 0.003 | < 0.3 | 1.4 | 0.016 |
| | 4 | 11.22 | 23:00 | 08:00 | 10-52 | 115-16 | 28.2 | 28.1 | 7.5 | < 0.003 | < 0.3 | 0.9 | 0.022 |
| | 5 | 11.23 | 23:00 | 08:00 | 16-27 | 114-10 | 25.2 | 29.1 | 5.6 | < 0.003 | < 0.3 | < 0.3 | 0.010 |
| | 6 | 11.24 | 23:00 | 08:00 | 22-00 | 112-51 | 24.8 | 29.7 | 6.7 | 0.009 | 0.6 | 4.1 | 0.007 |
| | 7 | 12. 5 | 5:00 | 12:00 | 41-25 | 110-07 | 13.7 | 28.8 | 5.6 | 0.006 | < 0.3 | 2.5 | 0.006 |
| | 8 | 12. 6 | 5:00 | 12:00 | 46-05 | 108-42 | 10.0 | 10.3 | 3.4 | 0.008 | 0.3 | 4.4 | < 0.001 |
| | 9 | 12. 7 | 5:00 | 12:00 | 49-42 | 108-42 | 3.9 | 6.8 | 3.7 | 0.034 | < 0.3 | 3.5 | 0.003 |
| 10 | 12. 8 | 5:00 | 12:00 | 54-57 | 108-57 | 2.7 | 2.9 | 3.8 | 0.022 | < 0.3 | 2.1 | 0.003 | |
| 11 | 1992 | | | | | | | | | | | | |
| | 3. 1 | 11:00 | 14:00 | 65-02 | 46-51 | 2.6 | 0.8 | 6.6 | 0.038 | < 0.3 | 2.1 | 0.006 | |
| | 12 | 3. 3 | 09:00 | 13:00 | 64-24 | 63-26 | 0.4 | 0.6 | 4.2 | 0.045 | < 0.3 | 2.0 | 0.003 |
| | 13 | 3. 5 | 07:00 | 13:00 | 63-30 | 84-35 | 0.6 | 0.9 | 6.3 | 0.014 | < 0.3 | 1.3 | 0.004 |
| | 14 | 3. 8 | 06:00 | 13:00 | 63-28 | 113-05 | -0.5 | 1.3 | 5.1 | 0.042 | 0.6 | 8.5 | 0.13 |
| | 15 | 3.11 | 22:00 | 08:00 | 64-49 | 150-04 | -5.1 | 0.8 | 5.6 | 0.036 | 0.5 | 4.0 | 0.19 |
| | 16 | 3.12 | 22:00 | 08:00 | 60-15 | 145-00 | 3.1 | 2.2 | 3.7 | 0.038 | 0.8 | 6.5 | 0.005 |
| | 17 | 3.13 | 23:00 | 09:00 | 56-33 | 150-03 | 4.0 | 4.2 | 4.1 | 0.023 | 0.8 | 6.8 | 0.007 |
| | 18 | 3.14 | 23:00 | 09:00 | 52-48 | 150-05 | 7.2 | 7.7 | 5.0 | 0.014 | 0.8 | 13.3 | 0.002 |
| 19 | 3.16 | 22:00 | 08:00 | 42-14 | 150-35 | 13.4 | 15.0 | 3.5 | 0.025 | 0.6 | 6.3 | 0.002 | |

* ZERO means under detection limit (Cd:0.003 Cu:0.3 Zn:0.3 Hg:0.001)

Table 6. Hourly tidal observation data from February 1991 to January 1992.

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : Feb. 1~Feb. 28 1991
 Unit : CENTIMETER

The zero level of the tide gauge
 relative to the bench mark No. 1040:
 -3.589m Jan. 18 1992

| 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 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| 3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| 4 | --- | 93 | 85 | 81 | 94 | 113 | 130 | 145 | 155 | 157 | 152 | 140 | 128 | 118 | 111 | 114 | 124 | 139 | 156 | 167 | 173 | 171 | 159 | 144 | --- | --- | --- | --- | |
| 5 | 127 | 112 | 99 | 92 | 97 | 108 | 124 | 133 | 145 | 153 | 152 | 147 | 140 | 138 | 139 | 140 | 150 | 160 | 173 | 183 | 188 | 187 | 180 | 168 | 3435 | 143 | 3586 | 143 | |
| 6 | 151 | 134 | 122 | 110 | 107 | 110 | 116 | 124 | 130 | 135 | 138 | 138 | 133 | 135 | 139 | 143 | 150 | 155 | 162 | 170 | 173 | 169 | 164 | 156 | 3364 | 140 | 3505 | 140 | |
| 7 | 141 | 129 | 119 | 110 | 103 | 103 | 101 | 100 | 105 | 108 | 112 | 115 | 119 | 124 | 136 | 143 | 152 | 159 | 165 | 169 | 172 | 171 | 164 | 168 | 3188 | 133 | 3340 | 134 | |
| 8 | 152 | 142 | 135 | 127 | 120 | 116 | 111 | 104 | 103 | 104 | 105 | 112 | 120 | 128 | 142 | 158 | 169 | 178 | 183 | 183 | 183 | 181 | 164 | 169 | 3389 | 141 | 3555 | 142 | |
| 9 | 166 | 160 | 152 | 148 | 141 | 132 | 121 | 110 | 102 | 97 | 96 | 97 | 106 | 122 | 140 | 160 | 174 | 183 | 188 | 189 | 183 | 178 | 164 | 169 | 3478 | 145 | 3641 | 146 | |
| 10 | 163 | 164 | 161 | 159 | 156 | 147 | 134 | 117 | 102 | 88 | 81 | 80 | 87 | 102 | 122 | 145 | 163 | 177 | 182 | 181 | 174 | 166 | 158 | 154 | 3363 | 140 | 3517 | 141 | |
| 11 | 154 | 154 | 160 | 160 | 159 | 155 | 141 | 120 | 101 | 83 | 69 | 65 | 70 | 87 | 110 | 134 | 158 | 175 | 183 | 182 | 178 | 166 | 157 | 151 | 3272 | 136 | 3424 | 137 | |
| 12 | 152 | 155 | 161 | 170 | 174 | 169 | 159 | 141 | 117 | 93 | 71 | 62 | 62 | 75 | 98 | 125 | 151 | 169 | 180 | 181 | 174 | 159 | 145 | 136 | 3279 | 137 | 3415 | 137 | |
| 13 | 136 | 142 | 151 | 165 | 174 | 176 | 172 | 154 | 128 | 100 | 73 | 57 | 54 | 63 | 85 | 113 | 142 | 166 | 179 | 180 | 176 | 160 | 144 | 136 | 3226 | 134 | 3359 | 134 | |
| 14 | 133 | 139 | 154 | 172 | 187 | 196 | 196 | 181 | 160 | 128 | 100 | 80 | 66 | 70 | 89 | 117 | 147 | 169 | 184 | 191 | 181 | 165 | 149 | 132 | 3486 | 145 | 3610 | 144 | |
| 15 | 124 | 129 | 142 | 162 | 182 | 197 | 203 | 196 | 174 | 149 | 118 | 90 | 73 | 71 | 84 | 108 | 138 | 160 | 178 | 186 | 179 | 162 | 142 | 124 | 3471 | 145 | 3582 | 143 | |
| 16 | 111 | 110 | 124 | 142 | 167 | 191 | 199 | 199 | 191 | 166 | 135 | 113 | 92 | 82 | 88 | 113 | 137 | 160 | 176 | 184 | 182 | 164 | 143 | 124 | 3493 | 146 | 3599 | 144 | |
| 17 | 106 | 97 | 105 | 121 | 145 | 170 | 187 | 194 | 190 | 171 | 149 | 123 | 101 | 87 | 89 | 105 | 124 | 147 | 162 | 171 | 171 | 154 | 132 | 110 | 3311 | 138 | 3400 | 136 | |
| 18 | 89 | 80 | 78 | 92 | 115 | 141 | 162 | 174 | 178 | 171 | 152 | 127 | 111 | 98 | 97 | 108 | 126 | 146 | 160 | 171 | 170 | 160 | 139 | 115 | 3287 | 137 | 3383 | 135 | |
| 19 | 96 | 80 | 72 | 82 | 100 | 121 | 146 | 158 | 165 | 165 | 155 | 142 | 126 | 115 | 111 | 118 | 129 | 147 | 157 | 168 | 170 | 159 | 142 | 120 | 3144 | 131 | 3241 | 130 | |
| 20 | 97 | 81 | 68 | 67 | 80 | 97 | 118 | 137 | 147 | 154 | 153 | 148 | 142 | 139 | 137 | 143 | 156 | 169 | 181 | 190 | 191 | 183 | 172 | 153 | 3303 | 138 | 3435 | 137 | |
| 21 | 132 | 115 | 101 | 93 | 95 | 106 | 119 | 130 | 142 | 151 | 157 | 156 | 155 | 157 | 160 | 165 | 172 | 182 | 191 | 196 | 196 | 189 | 178 | 163 | 3601 | 150 | 3744 | 150 | |
| 22 | 143 | 126 | 110 | 98 | 92 | 92 | 95 | 100 | 107 | 114 | 118 | 125 | 129 | 140 | 152 | 160 | 169 | 178 | 184 | 190 | 189 | 183 | 176 | 165 | 3335 | 139 | 3488 | 140 | |
| 23 | 153 | 139 | 126 | 117 | 105 | 98 | 95 | 91 | 89 | 92 | 98 | 105 | 117 | 132 | 148 | 163 | 178 | 186 | 192 | 194 | 192 | 186 | 178 | 171 | 3345 | 139 | 3510 | 140 | |
| 24 | 165 | 159 | 149 | 142 | 131 | 120 | 106 | 92 | 81 | 75 | 75 | 82 | 94 | 112 | 132 | 155 | 171 | 183 | 188 | 187 | 179 | 174 | 167 | 162 | 3281 | 137 | 3441 | 138 | |
| 25 | 160 | 159 | 158 | 157 | 150 | 139 | 121 | 99 | 81 | 63 | 55 | 54 | 65 | 83 | 108 | 135 | 157 | 171 | 177 | 178 | 169 | 158 | 149 | 143 | 3089 | 129 | 3232 | 129 | |
| 26 | 143 | 152 | 156 | 161 | 167 | 160 | 142 | 120 | 95 | 69 | 51 | 46 | 51 | 69 | 95 | 127 | 151 | 172 | 183 | 182 | 171 | 157 | 146 | 140 | 3106 | 129 | 3247 | 130 | |
| 27 | 141 | 152 | 164 | 179 | 192 | 196 | 185 | 163 | 138 | 106 | 83 | 69 | 64 | 75 | 103 | 131 | 159 | 180 | 193 | 191 | 180 | 165 | 146 | 134 | 3489 | 145 | 3622 | 145 | |
| 28 | 133 | 144 | 161 | 181 | 203 | 213 | 210 | 193 | 166 | 132 | 99 | 78 | 63 | 67 | 89 | 113 | 141 | 162 | 176 | 177 | 162 | 144 | 123 | 105 | 3435 | 143 | 3536 | 141 | |
| 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : Mar. 1~Mar. 31 1991
 Unit : CENTIMETER

| DATE | TIME | | | | | | | | | | | | | | | | | | | | | | | (2 4 H) | | (2 5 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 | 101 | 105 | 123 | 155 | 190 | 205 | 207 | 198 | 170 | 151 | 119 | 94 | 77 | 76 | 93 | 118 | 143 | 166 | 180 | 183 | 170 | 150 | 128 | 106 | 3408 | 142 | 3503 | 140 | |
| 2 | 95 | 96 | 111 | 137 | 165 | 188 | 205 | 207 | 199 | 178 | 151 | 123 | 104 | 99 | 105 | 125 | 153 | 171 | 185 | 191 | 180 | 159 | 132 | 110 | 3569 | 149 | 3660 | 146 | |
| 3 | 91 | 82 | 91 | 114 | 142 | 169 | 191 | 198 | 197 | 183 | 162 | 139 | 119 | 110 | 114 | 129 | 152 | 172 | 184 | 190 | 185 | 167 | 142 | 117 | 3540 | 148 | 3636 | 145 | |
| 4 | 96 | 83 | 82 | 96 | 122 | 149 | 172 | 184 | 190 | 183 | 170 | 151 | 136 | 122 | 125 | 137 | 155 | 174 | 188 | 194 | 188 | 177 | 153 | 128 | 3555 | 148 | 3661 | 146 | |
| 5 | 106 | 89 | 84 | 91 | 109 | 132 | 154 | 169 | 178 | 178 | 171 | 159 | 149 | 143 | 138 | 148 | 164 | 181 | 193 | 201 | 197 | 186 | 166 | 143 | 3629 | 151 | 3750 | 150 | |
| 6 | 121 | 104 | 92 | 89 | 101 | 116 | 135 | 148 | 159 | 164 | 161 | 154 | 151 | 146 | 148 | 153 | 164 | 177 | 190 | 196 | 195 | 186 | 171 | 151 | 3572 | 149 | 3704 | 148 | |
| 7 | 132 | 116 | 104 | 98 | 104 | 111 | 122 | 132 | 141 | 147 | 149 | 147 | 147 | 148 | 151 | 158 | 168 | 178 | 186 | 194 | 192 | 185 | 175 | 161 | 3546 | 148 | 3688 | 148 | |
| 8 | 142 | 129 | 120 | 113 | 110 | 113 | 118 | 122 | 126 | 133 | 138 | 139 | 142 | 150 | 157 | 167 | 177 | 184 | 192 | 197 | 195 | 188 | 180 | 171 | 3603 | 150 | 3762 | 150 | |
| 9 | 159 | 148 | 140 | 136 | 131 | 128 | 127 | 125 | 125 | 130 | 133 | 137 | 143 | 155 | 164 | 177 | 185 | 193 | 196 | 197 | 195 | 187 | 179 | 171 | 3762 | 157 | 3926 | 157 | |
| 10 | 164 | 159 | 151 | 148 | 142 | 137 | 129 | 121 | 114 | 112 | 112 | 120 | 130 | 140 | 157 | 177 | 186 | 193 | 197 | 194 | 186 | 178 | 170 | 165 | 3682 | 153 | 3843 | 154 | |
| 11 | 161 | 158 | 159 | 156 | 151 | 145 | 134 | 118 | 106 | 98 | 92 | 95 | 105 | 122 | 142 | 163 | 178 | 188 | 190 | 186 | 178 | 169 | 161 | 160 | 3515 | 146 | 3675 | 147 | |
| 12 | 160 | 165 | 172 | 178 | 178 | 175 | 160 | 146 | 129 | 112 | 102 | 100 | 108 | 124 | 146 | 169 | 184 | 193 | 196 | 189 | 178 | 164 | 154 | 149 | 3731 | 155 | 3882 | 155 | |
| 13 | 151 | 158 | 171 | 181 | 186 | 185 | 173 | 154 | 131 | 108 | 95 | 88 | 94 | 110 | 134 | 159 | 181 | 194 | 200 | 195 | 180 | 167 | 155 | 148 | 3698 | 154 | 3848 | 154 | |
| 14 | 150 | 162 | 180 | 195 | 206 | 211 | 203 | 184 | 158 | 133 | 110 | 98 | 97 | 109 | 131 | 159 | 178 | 195 | 197 | 193 | 176 | 156 | 137 | 125 | 3843 | 160 | 3968 | 159 | |
| 15 | 125 | 138 | 157 | 177 | 197 | 204 | 200 | 184 | 160 | 134 | 107 | 87 | 81 | 88 | 109 | 136 | 159 | 173 | 181 | 175 | 155 | 133 | 112 | 98 | 3470 | 145 | 3564 | 143 | |
| 16 | 94 | 105 | 128 | 156 | 183 | 200 | 207 | 199 | 178 | 153 | 127 | 105 | 93 | 99 | 117 | 141 | 164 | 183 | 190 | 185 | 167 | 142 | 117 | 97 | 3530 | 147 | 3617 | 145 | |
| 17 | 87 | 93 | 114 | 142 | 172 | 195 | 209 | 211 | 197 | 176 | 150 | 126 | 113 | 110 | 124 | 145 | 165 | 182 | 194 | 191 | 173 | 146 | 118 | 94 | 3627 | 151 | 3704 | 148 | |
| 18 | 77 | 75 | 89 | 116 | 147 | 174 | 192 | 201 | 197 | 180 | 160 | 139 | 124 | 115 | 124 | 140 | 160 | 178 | 188 | 189 | 175 | 149 | 120 | 92 | 3501 | 146 | 3574 | 143 | |
| 19 | 73 | 65 | 71 | 92 | 123 | 152 | 174 | 189 | 194 | 188 | 173 | 157 | 143 | 136 | 140 | 153 | 174 | 190 | 202 | 202 | 195 | 173 | 145 | 117 | 3621 | 151 | 3714 | 149 | |
| 20 | 93 | 79 | 77 | 83 | 113 | 142 | 164 | 181 | 194 | 196 | 188 | 178 | 170 | 164 | 164 | 174 | 190 | 203 | 211 | 215 | 207 | 190 | 161 | 134 | 3871 | 161 | 3979 | 159 | |
| 21 | 108 | 87 | 76 | 79 | 93 | 111 | 130 | 146 | 158 | 165 | 166 | 160 | 156 | 157 | 156 | 163 | 174 | 186 | 194 | 197 | 193 | 178 | 158 | 134 | 3525 | 147 | 3634 | 145 | |
| 22 | 109 | 89 | 76 | 69 | 75 | 84 | 99 | 109 | 120 | 130 | 137 | 139 | 143 | 149 | 157 | 167 | 176 | 186 | 197 | 201 | 200 | 192 | 179 | 163 | 3346 | 139 | 3494 | 140 | |
| 23 | 148 | 132 | 119 | 111 | 105 | 106 | 113 | 116 | 122 | 133 | 140 | 146 | 156 | 167 | 178 | 189 | 196 | 203 | 209 | 209 | 208 | 199 | 189 | 179 | 3773 | 157 | 3938 | 158 | |
| 24 | 165 | 154 | 145 | 135 | 124 | 118 | 114 | 109 | 108 | 113 | 120 | 126 | 139 | 155 | 168 | 180 | 192 | 195 | 194 | 193 | 188 | 178 | 173 | 167 | 3653 | 152 | 3818 | 153 | |
| 25 | 165 | 162 | 158 | 155 | 145 | 137 | 124 | 109 | 103 | 100 | 100 | 107 | 123 | 141 | 160 | 177 | 189 | 195 | 193 | 187 | 178 | 170 | 164 | 162 | 3613 | 151 | 3774 | 151 | |
| 26 | 161 | 167 | 173 | 175 | 172 | 162 | 145 | 124 | 108 | 96 | 87 | 89 | 100 | 118 | 140 | 162 | 176 | 185 | 181 | 173 | 160 | 146 | 136 | 135 | 3471 | 145 | 3612 | 144 | |
| 27 | 141 | 150 | 165 | 175 | 178 | 177 | 164 | 142 | 117 | 96 | 84 | 80 | 89 | 105 | 128 | 155 | 173 | 180 | 181 | 172 | 154 | 137 | 124 | 121 | 3388 | 141 | 3514 | 141 | |
| 28 | 126 | 142 | 160 | 178 | 192 | 197 | 188 | 169 | 143 | 117 | 101 | 89 | 92 | 109 | 130 | 153 | 173 | 183 | 182 | 174 | 154 | 129 | 112 | 105 | 3498 | 146 | 3607 | 144 | |
| 29 | 109 | 125 | 150 | 174 | 197 | 209 | 209 | 196 | 170 | 146 | 122 | 106 | 103 | 111 | 133 | 155 | 173 | 186 | 187 | 175 | 153 | 124 | 100 | 87 | 3600 | 150 | 3685 | 147 | |
| 30 | 85 | 97 | 123 | 150 | 176 | 197 | 205 | 197 | 180 | 156 | 132 | 113 | 103 | 108 | 127 | 149 | 168 | 179 | 182 | 176 | 153 | 126 | 100 | 79 | 3461 | 144 | 3530 | 141 | |
| 31 | 69 | 80 | 100 | 128 | 160 | 183 | 198 | 202 | 192 | 174 | 152 | 131 | 121 | 121 | 135 | 156 | 172 | 187 | 193 | 184 | 165 | 138 | 110 | 86 | 3537 | 147 | | | |
| SUM | 3764 | 3861 | 4589 | 5065 | 4764 | 4111 | 3674 | 4295 | 5342 | 5933 | 5365 | 4521 | 3694 | 4182 | 4912 | 4990 | 4463 | 3822 | 3907 | 4834 | 5733 | 5898 | 5069 | 4203 | TOTAL | 111138 | | | |
| MEAN | 121 | 125 | 148 | 163 | 154 | 133 | 119 | 139 | 172 | 191 | 173 | 146 | 119 | 135 | 157 | 161 | 144 | 123 | 126 | 156 | 185 | 190 | 164 | 136 | MONTHLY MEAN | 149.4 | | | |

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : Apr. 1~Apr. 30 1991
 Unit : CENTIMETER

| DATE | TIME | | | | | | | | | | | | | | | | | | | | | | | (2 4 H) | | (2 5 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 | 69 | 69 | 85 | 111 | 142 | 168 | 189 | 198 | 195 | 182 | 166 | 148 | 135 | 131 | 142 | 158 | 176 | 191 | 197 | 194 | 179 | 154 | 122 | 98 | 3599 | 150 | 3677 | 147 | |
| 2 | 78 | 69 | 78 | 97 | 125 | 151 | 171 | 187 | 190 | 182 | 172 | 158 | 145 | 142 | 145 | 159 | 177 | 193 | 199 | 199 | 188 | 164 | 146 | 113 | 3628 | 151 | 3720 | 149 | |
| 3 | 92 | 81 | 80 | 93 | 115 | 139 | 161 | 176 | 182 | 185 | 180 | 169 | 162 | 157 | 159 | 169 | 182 | 196 | 204 | 205 | 197 | 178 | 155 | 129 | 3746 | 156 | 3853 | 154 | |
| 4 | 107 | 93 | 86 | 88 | 103 | 122 | 139 | 152 | 161 | 165 | 165 | 160 | 154 | 153 | 154 | 162 | 172 | 181 | 193 | 194 | 188 | 176 | 156 | 135 | 3559 | 148 | 3674 | 147 | |
| 5 | 115 | 100 | 91 | 90 | 98 | 109 | 124 | 139 | 147 | 154 | 158 | 159 | 156 | 160 | 164 | 167 | 176 | 186 | 195 | 195 | 192 | 181 | 167 | 149 | 3572 | 149 | 3707 | 148 | |
| 6 | 135 | 121 | 110 | 105 | 107 | 111 | 118 | 127 | 137 | 141 | 148 | 149 | 153 | 159 | 166 | 174 | 178 | 185 | 190 | 189 | 189 | 180 | 169 | 159 | 3600 | 150 | 3745 | 150 | |
| 7 | 145 | 135 | 128 | 120 | 121 | 118 | 119 | 121 | 124 | 128 | 133 | 141 | 147 | 155 | 164 | 170 | 176 | 180 | 181 | 181 | 175 | 169 | 163 | 155 | 3549 | 148 | 3695 | 148 | |
| 8 | 146 | 141 | 137 | 133 | 128 | 124 | 120 | 116 | 113 | 114 | 123 | 126 | 137 | 151 | 163 | 172 | 180 | 181 | 179 | 178 | 173 | 166 | 162 | 160 | 3523 | 147 | 3682 | 147 | |
| 9 | 159 | 161 | 161 | 159 | 157 | 150 | 140 | 132 | 126 | 121 | 123 | 132 | 145 | 159 | 173 | 185 | 194 | 195 | 193 | 186 | 178 | 167 | 166 | 166 | 3828 | 160 | 3994 | 160 | |
| 10 | 166 | 173 | 180 | 183 | 182 | 177 | 164 | 151 | 137 | 126 | 123 | 128 | 138 | 152 | 168 | 181 | 190 | 193 | 184 | 171 | 157 | 142 | 134 | 134 | 3838 | 160 | 3978 | 159 | |
| 11 | 140 | 150 | 159 | 171 | 176 | 170 | 160 | 142 | 123 | 107 | 99 | 101 | 107 | 124 | 142 | 158 | 171 | 174 | 166 | 151 | 134 | 119 | 106 | 106 | 3356 | 140 | 3471 | 139 | |
| 12 | 115 | 132 | 149 | 164 | 178 | 182 | 171 | 155 | 135 | 114 | 100 | 99 | 103 | 117 | 140 | 159 | 171 | 178 | 172 | 155 | 135 | 113 | 100 | 95 | 3332 | 139 | 3437 | 137 | |
| 13 | 105 | 125 | 148 | 173 | 194 | 203 | 203 | 189 | 168 | 147 | 131 | 120 | 122 | 135 | 150 | 170 | 182 | 188 | 183 | 166 | 142 | 115 | 90 | 81 | 3630 | 151 | 3717 | 149 | |
| 14 | 87 | 104 | 128 | 159 | 186 | 201 | 208 | 202 | 184 | 163 | 144 | 129 | 125 | 133 | 149 | 167 | 182 | 191 | 189 | 173 | 148 | 117 | 92 | 77 | 3638 | 152 | 3711 | 148 | |
| 15 | 73 | 88 | 118 | 146 | 179 | 208 | 220 | 224 | 215 | 197 | 179 | 162 | 155 | 158 | 170 | 189 | 204 | 212 | 209 | 197 | 171 | 137 | 106 | 83 | 4000 | 167 | 4072 | 163 | |
| 16 | 72 | 74 | 93 | 124 | 155 | 184 | 204 | 215 | 214 | 201 | 189 | 176 | 164 | 161 | 175 | 189 | 201 | 214 | 215 | 204 | 183 | 153 | 119 | 93 | 3972 | 166 | 4044 | 162 | |
| 17 | 72 | 69 | 80 | 103 | 134 | 162 | 187 | 206 | 213 | 209 | 201 | 191 | 183 | 182 | 187 | 199 | 214 | 224 | 230 | 225 | 208 | 178 | 147 | 118 | 4122 | 172 | 4240 | 170 | |
| 18 | 118 | 77 | 77 | 91 | 114 | 141 | 164 | 184 | 196 | 202 | 198 | 195 | 192 | 187 | 191 | 199 | 212 | 221 | 226 | 224 | 214 | 193 | 164 | 138 | 4118 | 172 | 4231 | 169 | |
| 19 | 113 | 95 | 86 | 87 | 100 | 121 | 141 | 157 | 175 | 184 | 188 | 191 | 191 | 192 | 196 | 200 | 209 | 218 | 224 | 225 | 218 | 203 | 181 | 160 | 4055 | 169 | 4190 | 168 | |
| 20 | 135 | 119 | 105 | 97 | 100 | 109 | 122 | 133 | 147 | 160 | 168 | 173 | 179 | 185 | 187 | 194 | 199 | 205 | 212 | 212 | 207 | 200 | 190 | 173 | 3911 | 163 | 4068 | 163 | |
| 21 | 157 | 142 | 126 | 117 | 111 | 110 | 114 | 120 | 125 | 138 | 147 | 158 | 166 | 175 | 185 | 188 | 194 | 195 | 197 | 197 | 195 | 190 | 183 | 178 | 3808 | 159 | 3977 | 159 | |
| 22 | 169 | 164 | 152 | 147 | 135 | 127 | 125 | 119 | 120 | 127 | 132 | 144 | 155 | 163 | 178 | 183 | 186 | 185 | 182 | 179 | 176 | 168 | 164 | 167 | 3747 | 156 | 3913 | 157 | |
| 23 | 166 | 165 | 164 | 162 | 156 | 142 | 131 | 122 | 116 | 112 | 115 | 124 | 137 | 152 | 164 | 175 | 178 | 176 | 170 | 162 | 154 | 148 | 144 | 147 | 3582 | 149 | 3739 | 150 | |
| 24 | 157 | 168 | 175 | 178 | 179 | 172 | 156 | 142 | 130 | 120 | 119 | 124 | 137 | 149 | 165 | 177 | 182 | 178 | 171 | 159 | 144 | 133 | 128 | 131 | 3674 | 153 | 3817 | 153 | |
| 25 | 143 | 161 | 178 | 191 | 197 | 192 | 182 | 166 | 147 | 133 | 128 | 128 | 136 | 151 | 166 | 177 | 184 | 181 | 171 | 154 | 133 | 115 | 106 | 105 | 3725 | 155 | 3843 | 154 | |
| 26 | 118 | 137 | 156 | 177 | 193 | 195 | 188 | 174 | 155 | 136 | 126 | 124 | 126 | 141 | 157 | 169 | 176 | 179 | 167 | 146 | 124 | 106 | 87 | 81 | 3538 | 147 | 3632 | 145 | |
| 27 | 94 | 114 | 138 | 163 | 185 | 197 | 197 | 186 | 169 | 151 | 137 | 128 | 128 | 140 | 157 | 169 | 178 | 181 | 173 | 157 | 126 | 103 | 78 | 69 | 3518 | 147 | 3592 | 144 | |
| 28 | 74 | 88 | 118 | 148 | 174 | 193 | 205 | 198 | 185 | 171 | 159 | 148 | 144 | 155 | 170 | 186 | 197 | 201 | 198 | 180 | 155 | 124 | 98 | 84 | 3753 | 156 | 3832 | 153 | |
| 29 | 79 | 88 | 111 | 140 | 168 | 192 | 205 | 209 | 200 | 183 | 172 | 160 | 149 | 158 | 172 | 183 | 197 | 203 | 199 | 186 | 160 | 133 | 102 | 81 | 3831 | 160 | 3900 | 156 | |
| 30 | 69 | 73 | 89 | 114 | 143 | 168 | 186 | 197 | 193 | 182 | 172 | 160 | 150 | 148 | 161 | 175 | 186 | 194 | 195 | 185 | 163 | 135 | 107 | 83 | 3628 | 151 | | | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUM | 3468 | 3686 | 4435 | 4914 | 4822 | 4495 | 4284 | 4960 | 5604 | 5764 | 5106 | 4032 | | | | | | | | | | | | | | TOTAL | 111380 | | |
| MEAN | 116 | 123 | 148 | 164 | 161 | 150 | 143 | 165 | 187 | 192 | 170 | 134 | | | | | | | | | | | | | MONTHLY MEAN | 154.7 | | | |
| | | 116 | 134 | 158 | 165 | 155 | 147 | 154 | 177 | 193 | 184 | 152 | 122 | | | | | | | | | | | | | | | | |

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : May 1~May 31 1991
 Unit : CENTIMETER

| DATE | TIME | | | | | | | | | | | | | | | | | | | | | | | | (2 4 H) | | (2 5 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 | 68 | 63 | 72 | 96 | 122 | 148 | 169 | 183 | 187 | 182 | 172 | 164 | 158 | 155 | 160 | 171 | 182 | 195 | 197 | 192 | 176 | 150 | 123 | 97 | 3582 | 149 | 3659 | 146 | | |
| 2 | 77 | 70 | 75 | 88 | 110 | 137 | 157 | 173 | 180 | 181 | 176 | 170 | 167 | 161 | 166 | 173 | 186 | 197 | 201 | 197 | 185 | 165 | 142 | 115 | 3632 | 151 | 3730 | 149 | | |
| 3 | 98 | 84 | 81 | 87 | 104 | 120 | 140 | 156 | 167 | 172 | 172 | 167 | 164 | 162 | 163 | 169 | 181 | 191 | 198 | 198 | 190 | 177 | 159 | 144 | 3644 | 152 | 3760 | 150 | | |
| 4 | 116 | 101 | 94 | 98 | 105 | 121 | 140 | 154 | 165 | 176 | 180 | 179 | 178 | 178 | 180 | 182 | 192 | 198 | 205 | 209 | 201 | 192 | 178 | 160 | 3882 | 162 | 4025 | 161 | | |
| 5 | 143 | 130 | 121 | 122 | 124 | 135 | 147 | 160 | 172 | 181 | 187 | 191 | 192 | 195 | 197 | 197 | 198 | 203 | 210 | 213 | 209 | 200 | 190 | 175 | 4192 | 175 | 4360 | 174 | | |
| 6 | 168 | 153 | 144 | 139 | 134 | 135 | 139 | 147 | 153 | 160 | 167 | 172 | 178 | 182 | 184 | 184 | 185 | 184 | 184 | 183 | 178 | 172 | 164 | 164 | 3973 | 166 | 4133 | 165 | | |
| 7 | 160 | 152 | 145 | 140 | 135 | 132 | 131 | 133 | 137 | 142 | 150 | 157 | 166 | 172 | 177 | 180 | 177 | 174 | 171 | 167 | 165 | 163 | 159 | 159 | 3744 | 156 | 3902 | 156 | | |
| 8 | 158 | 156 | 152 | 151 | 146 | 140 | 133 | 127 | 125 | 126 | 133 | 142 | 150 | 160 | 165 | 169 | 167 | 162 | 156 | 150 | 142 | 141 | 140 | 140 | 3531 | 147 | 3679 | 147 | | |
| 9 | 148 | 155 | 159 | 161 | 161 | 156 | 146 | 137 | 128 | 126 | 129 | 136 | 146 | 157 | 166 | 171 | 171 | 163 | 153 | 142 | 132 | 124 | 122 | 127 | 3516 | 147 | 3656 | 146 | | |
| 10 | 140 | 151 | 163 | 172 | 175 | 172 | 163 | 148 | 140 | 131 | 128 | 135 | 142 | 153 | 165 | 170 | 171 | 164 | 151 | 135 | 119 | 105 | 104 | 109 | 3506 | 146 | 3630 | 145 | | |
| 11 | 124 | 142 | 161 | 180 | 192 | 195 | 187 | 175 | 159 | 147 | 141 | 142 | 152 | 162 | 175 | 181 | 184 | 176 | 160 | 138 | 116 | 99 | 87 | 86 | 3661 | 153 | 3763 | 151 | | |
| 12 | 102 | 124 | 149 | 173 | 193 | 201 | 201 | 193 | 178 | 161 | 151 | 151 | 156 | 164 | 178 | 188 | 195 | 189 | 174 | 150 | 124 | 99 | 82 | 76 | 3752 | 156 | 3839 | 154 | | |
| 13 | 87 | 107 | 135 | 166 | 192 | 210 | 216 | 211 | 200 | 186 | 171 | 163 | 163 | 171 | 184 | 192 | 198 | 196 | 182 | 158 | 127 | 99 | 73 | 61 | 3848 | 160 | 3911 | 156 | | |
| 14 | 63 | 81 | 107 | 139 | 171 | 197 | 211 | 217 | 211 | 199 | 186 | 177 | 175 | 179 | 192 | 203 | 210 | 211 | 204 | 184 | 154 | 122 | 91 | 68 | 3952 | 165 | 4013 | 161 | | |
| 15 | 61 | 70 | 92 | 121 | 152 | 183 | 203 | 215 | 214 | 213 | 201 | 195 | 188 | 189 | 197 | 208 | 221 | 223 | 219 | 207 | 178 | 149 | 116 | 87 | 4102 | 171 | 4163 | 167 | | |
| 16 | 70 | 66 | 75 | 103 | 130 | 160 | 184 | 206 | 213 | 213 | 211 | 208 | 200 | 201 | 209 | 219 | 230 | 236 | 236 | 232 | 213 | 186 | 155 | 123 | 4279 | 178 | 4349 | 174 | | |
| 17 | 99 | 84 | 83 | 96 | 117 | 142 | 167 | 187 | 203 | 210 | 210 | 211 | 209 | 204 | 208 | 218 | 226 | 235 | 242 | 235 | 227 | 207 | 180 | 151 | 4351 | 181 | 4450 | 178 | | |
| 18 | 124 | 103 | 93 | 93 | 104 | 123 | 140 | 160 | 175 | 184 | 191 | 193 | 192 | 191 | 188 | 190 | 198 | 208 | 214 | 215 | 212 | 200 | 182 | 161 | 4034 | 168 | 4177 | 167 | | |
| 19 | 143 | 122 | 106 | 100 | 100 | 109 | 121 | 136 | 151 | 164 | 174 | 176 | 181 | 180 | 178 | 178 | 179 | 185 | 190 | 196 | 196 | 192 | 184 | 175 | 3816 | 159 | 3976 | 159 | | |
| 20 | 160 | 144 | 134 | 120 | 113 | 116 | 121 | 133 | 142 | 151 | 164 | 171 | 177 | 177 | 175 | 173 | 172 | 172 | 172 | 177 | 179 | 177 | 178 | 175 | 3773 | 157 | 3942 | 158 | | |
| 21 | 169 | 163 | 155 | 145 | 133 | 129 | 127 | 126 | 132 | 140 | 148 | 157 | 164 | 166 | 167 | 166 | 159 | 154 | 149 | 143 | 144 | 147 | 146 | 152 | 3581 | 149 | 3735 | 149 | | |
| 22 | 154 | 157 | 156 | 151 | 144 | 138 | 128 | 124 | 121 | 121 | 129 | 136 | 142 | 145 | 150 | 148 | 140 | 133 | 124 | 119 | 109 | 107 | 115 | 122 | 3213 | 134 | 3343 | 134 | | |
| 23 | 130 | 145 | 156 | 160 | 161 | 157 | 147 | 140 | 132 | 130 | 137 | 145 | 150 | 161 | 168 | 171 | 166 | 147 | 139 | 123 | 112 | 105 | 105 | 111 | 3398 | 142 | 3526 | 141 | | |
| 24 | 128 | 142 | 158 | 170 | 176 | 175 | 166 | 157 | 148 | 147 | 142 | 150 | 160 | 165 | 172 | 175 | 172 | 161 | 150 | 131 | 112 | 103 | 96 | 104 | 3560 | 148 | 3679 | 147 | | |
| 25 | 119 | 135 | 159 | 178 | 189 | 197 | 194 | 183 | 175 | 164 | 161 | 159 | 167 | 176 | 186 | 190 | 189 | 184 | 168 | 150 | 130 | 116 | 101 | 102 | 3872 | 161 | 3985 | 159 | | |
| 26 | 113 | 136 | 159 | 180 | 203 | 213 | 220 | 208 | 199 | 188 | 182 | 178 | 186 | 193 | 199 | 207 | 208 | 204 | 188 | 167 | 140 | 118 | 100 | 89 | 4178 | 174 | 4277 | 171 | | |
| 27 | 99 | 117 | 135 | 164 | 187 | 204 | 213 | 211 | 204 | 191 | 179 | 177 | 174 | 180 | 191 | 198 | 201 | 202 | 191 | 168 | 142 | 113 | 92 | 76 | 4009 | 167 | 4087 | 163 | | |
| 28 | 78 | 89 | 114 | 142 | 164 | 189 | 206 | 209 | 206 | 196 | 188 | 181 | 177 | 181 | 197 | 206 | 212 | 216 | 210 | 195 | 167 | 142 | 113 | 92 | 4070 | 170 | 4154 | 166 | | |
| 29 | 84 | 91 | 108 | 134 | 160 | 186 | 204 | 213 | 209 | 206 | 197 | 186 | 179 | 182 | 193 | 205 | 213 | 215 | 215 | 200 | 177 | 151 | 124 | 98 | 4130 | 172 | 4214 | 169 | | |
| 30 | 84 | 84 | 95 | 113 | 140 | 160 | 179 | 190 | 194 | 189 | 179 | 173 | 165 | 162 | 170 | 178 | 189 | 196 | 197 | 191 | 171 | 147 | 122 | 98 | 3766 | 157 | 3847 | 154 | | |
| 31 | 81 | 74 | 83 | 101 | 124 | 151 | 172 | 189 | 203 | 205 | 200 | 197 | 194 | 190 | 194 | 202 | 218 | 225 | 227 | 224 | 211 | 189 | 161 | 136 | 4151 | 173 | | | | |
| SUM | 3548 | | 3819 | | 4369 | | 5172 | | 5323 | | 5236 | | 5292 | | 5594 | | 5889 | | 5580 | | 5043 | | 4092 | | TOTAL | 118698 | | | | |
| | | 3591 | | 4183 | | 4931 | | 5301 | | 5282 | | 5239 | | 5394 | | 5762 | | 5900 | | 5490 | | 4563 | | 3733 | | | | | | |
| MEAN | 114 | | 123 | | 141 | | 167 | | 172 | | 169 | | 171 | | 180 | | 190 | | 180 | | 163 | | 132 | | MONTHLY MEAN | 159.5 | | | | |
| | | 116 | | 135 | | 159 | | 171 | | 170 | | 169 | | 174 | | 186 | | 190 | | 177 | | 147 | | 120 | | | | | | |

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : Jun. 1~Jun. 30 1991
 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 | 115 | 102 | 100 | 106 | 124 | 145 | 167 | 179 | 190 | 193 | 190 | 187 | 181 | 177 | 177 | 184 | 195 | 203 | 212 | 214 | 205 | 195 | 171 | 148 | 4060 | 169 | 4192 | 168 | |
| 2 | 132 | 119 | 111 | 116 | 124 | 142 | 158 | 175 | 185 | 189 | 186 | 183 | 178 | 171 | 165 | 168 | 176 | 181 | 187 | 190 | 185 | 175 | 160 | 137 | 3893 | 162 | 4015 | 161 | |
| 3 | 122 | 106 | 97 | 97 | 100 | 110 | 126 | 141 | 152 | 162 | 165 | 166 | 164 | 158 | 155 | 154 | 159 | 164 | 174 | 179 | 179 | 174 | 165 | 154 | 3523 | 147 | 3664 | 147 | |
| 4 | 141 | 129 | 120 | 111 | 112 | 122 | 127 | 138 | 150 | 158 | 164 | 167 | 164 | 160 | 156 | 150 | 147 | 147 | 151 | 158 | 158 | 157 | 154 | 147 | 3488 | 145 | 3629 | 145 | |
| 5 | 141 | 129 | 123 | 119 | 114 | 117 | 121 | 124 | 138 | 144 | 152 | 160 | 163 | 159 | 157 | 155 | 148 | 148 | 152 | 154 | 160 | 161 | 163 | 162 | 3464 | 144 | 3627 | 145 | |
| 6 | 163 | 158 | 155 | 149 | 144 | 143 | 143 | 146 | 147 | 152 | 159 | 166 | 169 | 168 | 161 | 156 | 149 | 139 | 137 | 135 | 132 | 134 | 139 | 142 | 3586 | 149 | 3735 | 149 | |
| 7 | 149 | 152 | 157 | 157 | 152 | 148 | 148 | 142 | 142 | 145 | 149 | 159 | 158 | 160 | 158 | 151 | 142 | 126 | 122 | 112 | 105 | 107 | 115 | 123 | 3379 | 141 | 3516 | 141 | |
| 8 | 137 | 152 | 159 | 167 | 173 | 173 | 164 | 160 | 157 | 157 | 157 | 164 | 165 | 171 | 172 | 167 | 160 | 147 | 133 | 117 | 103 | 97 | 101 | 115 | 3568 | 149 | 3697 | 148 | |
| 9 | 129 | 146 | 166 | 182 | 193 | 192 | 188 | 183 | 176 | 167 | 164 | 169 | 170 | 177 | 179 | 175 | 169 | 154 | 136 | 116 | 96 | 82 | 78 | 85 | 3672 | 153 | 3773 | 151 | |
| 10 | 101 | 120 | 146 | 169 | 190 | 201 | 204 | 196 | 192 | 178 | 173 | 174 | 174 | 178 | 183 | 183 | 180 | 167 | 149 | 124 | 99 | 78 | 74 | 74 | 3707 | 154 | 3779 | 151 | |
| 11 | 72 | 96 | 121 | 152 | 180 | 199 | 207 | 207 | 203 | 192 | 182 | 178 | 180 | 183 | 189 | 194 | 190 | 183 | 169 | 141 | 108 | 81 | 60 | 46 | 3713 | 155 | 3762 | 150 | |
| 12 | 49 | 66 | 89 | 123 | 152 | 176 | 194 | 203 | 203 | 191 | 181 | 178 | 175 | 178 | 187 | 193 | 197 | 193 | 182 | 159 | 128 | 94 | 62 | 38 | 3591 | 150 | 3623 | 145 | |
| 13 | 32 | 37 | 53 | 81 | 112 | 142 | 165 | 179 | 181 | 179 | 172 | 164 | 160 | 162 | 169 | 178 | 186 | 188 | 183 | 170 | 142 | 110 | 78 | 47 | 3270 | 136 | 3298 | 132 | |
| 14 | 28 | 25 | 32 | 52 | 82 | 113 | 139 | 158 | 171 | 170 | 165 | 161 | 152 | 151 | 158 | 169 | 178 | 188 | 193 | 186 | 171 | 147 | 112 | 82 | 3183 | 133 | 3238 | 130 | |
| 15 | 55 | 40 | 38 | 49 | 73 | 100 | 127 | 146 | 159 | 167 | 164 | 160 | 155 | 148 | 147 | 158 | 167 | 177 | 189 | 192 | 184 | 168 | 141 | 115 | 3219 | 134 | 3308 | 132 | |
| 16 | 89 | 69 | 59 | 60 | 78 | 96 | 117 | 137 | 156 | 163 | 163 | 162 | 156 | 147 | 142 | 144 | 153 | 161 | 176 | 184 | 187 | 180 | 164 | 143 | 3286 | 137 | 3410 | 136 | |
| 17 | 124 | 103 | 89 | 85 | 90 | 101 | 119 | 135 | 150 | 162 | 163 | 162 | 157 | 147 | 141 | 137 | 138 | 145 | 158 | 167 | 171 | 172 | 167 | 158 | 3341 | 139 | 3484 | 139 | |
| 18 | 143 | 127 | 114 | 105 | 104 | 108 | 115 | 128 | 142 | 151 | 156 | 158 | 155 | 147 | 139 | 133 | 124 | 125 | 132 | 140 | 146 | 152 | 154 | 153 | 3251 | 135 | 3400 | 136 | |
| 19 | 149 | 143 | 134 | 127 | 121 | 123 | 125 | 133 | 142 | 149 | 152 | 160 | 159 | 149 | 143 | 137 | 126 | 119 | 120 | 125 | 131 | 139 | 144 | 147 | 3297 | 137 | 3451 | 138 | |
| 20 | 154 | 159 | 158 | 154 | 152 | 150 | 149 | 156 | 160 | 168 | 173 | 180 | 178 | 175 | 170 | 160 | 151 | 138 | 133 | 127 | 126 | 130 | 137 | 141 | 3553 | 148 | 3706 | 148 | |
| 21 | 153 | 162 | 169 | 175 | 178 | 175 | 176 | 173 | 176 | 176 | 179 | 184 | 189 | 184 | 185 | 176 | 161 | 151 | 137 | 126 | 115 | 118 | 120 | 127 | 3865 | 161 | 4006 | 160 | |
| 22 | 141 | 151 | 161 | 174 | 176 | 178 | 161 | 171 | 165 | 162 | 162 | 163 | 164 | 163 | 159 | 156 | 147 | 131 | 115 | 101 | 84 | 77 | 75 | 82 | 3419 | 142 | 3514 | 141 | |
| 23 | 95 | 111 | 125 | 147 | 166 | 164 | 168 | 167 | 162 | 153 | 157 | 159 | 159 | 169 | 165 | 171 | 163 | 156 | 139 | 124 | 105 | 92 | 87 | 87 | 3391 | 141 | 3487 | 139 | |
| 24 | 96 | 118 | 136 | 162 | 180 | 192 | 196 | 197 | 196 | 192 | 186 | 189 | 193 | 194 | 203 | 208 | 206 | 198 | 183 | 164 | 134 | 110 | 96 | 94 | 4023 | 168 | 4118 | 165 | |
| 25 | 95 | 107 | 134 | 158 | 181 | 199 | 213 | 218 | 213 | 201 | 197 | 197 | 196 | 200 | 210 | 215 | 214 | 208 | 197 | 173 | 146 | 122 | 99 | 83 | 4176 | 174 | 4263 | 171 | |
| 26 | 87 | 93 | 113 | 137 | 160 | 181 | 193 | 195 | 191 | 183 | 171 | 161 | 162 | 164 | 173 | 179 | 183 | 183 | 178 | 159 | 133 | 105 | 83 | 62 | 3629 | 151 | 3686 | 147 | |
| 27 | 57 | 69 | 87 | 113 | 138 | 162 | 182 | 189 | 191 | 180 | 172 | 163 | 163 | 163 | 169 | 182 | 189 | 194 | 192 | 178 | 155 | 129 | 101 | 80 | 3598 | 150 | 3668 | 147 | |
| 28 | 70 | 71 | 84 | 108 | 139 | 159 | 182 | 195 | 197 | 188 | 180 | 172 | 164 | 165 | 171 | 178 | 191 | 198 | 199 | 191 | 172 | 146 | 116 | 92 | 3728 | 155 | 3801 | 152 | |
| 29 | 73 | 69 | 73 | 93 | 119 | 143 | 166 | 180 | 186 | 181 | 174 | 166 | 156 | 150 | 158 | 166 | 178 | 190 | 197 | 193 | 179 | 157 | 126 | 105 | 3385 | 141 | 3469 | 139 | |
| 30 | 84 | 70 | 73 | 84 | 102 | 127 | 144 | 164 | 170 | 169 | 160 | 154 | 144 | 137 | 137 | 147 | 161 | 174 | 179 | 184 | 177 | 160 | 142 | 119 | 3362 | 140 | | | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUM | 3176 | 3376 | 4109 | 4784 | 5143 | 5068 | 5003 | 4987 | 5028 | 4904 | 4316 | 3584 | | | | | | | | | | | | | | TOTAL | 106620 | | |
| MEAN | 106 | 113 | 137 | 159 | 171 | 169 | 167 | 166 | 168 | 163 | 144 | 119 | | | | | | | | | | | | | | MONTHLY MEAN | 148.1 | | |

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : Jul. 1~Jul. 31 1991
 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 | 98 | 87 | 83 | 93 | 113 | 137 | 159 | 177 | 191 | 197 | 190 | 184 | 178 | 171 | 164 | 172 | 183 | 197 | 210 | 213 | 213 | 199 | 183 | 162 | 3954 | 165 | 4097 | 164 | |
| 2 | 143 | 129 | 122 | 122 | 131 | 148 | 162 | 179 | 189 | 193 | 189 | 181 | 174 | 161 | 153 | 149 | 160 | 171 | 180 | 193 | 195 | 195 | 182 | 164 | 3965 | 165 | 4114 | 165 | |
| 3 | 149 | 129 | 122 | 120 | 126 | 135 | 146 | 159 | 169 | 171 | 174 | 166 | 155 | 143 | 134 | 126 | 124 | 139 | 145 | 155 | 164 | 164 | 164 | 157 | 3372 | 141 | 3519 | 141 | |
| 4 | 147 | 141 | 133 | 129 | 130 | 138 | 145 | 160 | 168 | 174 | 177 | 172 | 163 | 149 | 141 | 131 | 124 | 134 | 144 | 149 | 156 | 160 | 158 | 3547 | 148 | 3699 | 148 | | |
| 5 | 152 | 149 | 145 | 141 | 140 | 142 | 146 | 154 | 158 | 160 | 165 | 163 | 158 | 147 | 135 | 127 | 116 | 112 | 114 | 116 | 124 | 132 | 138 | 147 | 3381 | 141 | 3533 | 141 | |
| 6 | 152 | 151 | 160 | 160 | 161 | 167 | 163 | 170 | 177 | 182 | 180 | 180 | 181 | 170 | 160 | 139 | 132 | 128 | 128 | 122 | 126 | 133 | 139 | 147 | 3730 | 155 | 3894 | 156 | |
| 7 | 164 | 177 | 185 | 194 | 199 | 200 | 201 | 197 | 196 | 192 | 191 | 186 | 184 | 175 | 169 | 159 | 144 | 130 | 119 | 108 | 98 | 102 | 104 | 111 | 3885 | 162 | 4017 | 161 | |
| 8 | 132 | 148 | 167 | 184 | 198 | 203 | 206 | 204 | 197 | 192 | 190 | 190 | 186 | 187 | 179 | 173 | 156 | 142 | 122 | 103 | 82 | 70 | 67 | 72 | 3750 | 156 | 3837 | 153 | |
| 9 | 87 | 104 | 128 | 151 | 171 | 184 | 188 | 187 | 182 | 173 | 170 | 171 | 171 | 171 | 169 | 163 | 150 | 132 | 111 | 84 | 68 | 55 | 54 | 3395 | 141 | 3463 | 139 | | |
| 10 | 68 | 88 | 115 | 144 | 172 | 193 | 207 | 209 | 206 | 197 | 192 | 187 | 190 | 193 | 199 | 202 | 201 | 193 | 177 | 151 | 121 | 93 | 66 | 51 | 3815 | 159 | 3872 | 155 | |
| 11 | 57 | 69 | 93 | 123 | 157 | 180 | 197 | 207 | 206 | 198 | 191 | 185 | 182 | 185 | 195 | 203 | 207 | 205 | 197 | 178 | 147 | 111 | 81 | 58 | 3812 | 159 | 3863 | 155 | |
| 12 | 51 | 57 | 74 | 104 | 136 | 165 | 190 | 203 | 209 | 204 | 197 | 189 | 187 | 185 | 197 | 212 | 225 | 232 | 236 | 229 | 203 | 174 | 138 | 109 | 4006 | 167 | 4098 | 164 | |
| 13 | 92 | 88 | 98 | 117 | 148 | 177 | 198 | 213 | 217 | 209 | 196 | 185 | 175 | 169 | 176 | 187 | 202 | 215 | 224 | 220 | 209 | 186 | 148 | 117 | 4166 | 174 | 4257 | 170 | |
| 14 | 91 | 77 | 76 | 89 | 113 | 138 | 160 | 178 | 187 | 182 | 177 | 162 | 147 | 138 | 142 | 150 | 167 | 188 | 200 | 206 | 200 | 187 | 163 | 133 | 3651 | 152 | 3760 | 150 | |
| 15 | 109 | 87 | 81 | 88 | 105 | 128 | 148 | 163 | 177 | 177 | 166 | 155 | 142 | 126 | 121 | 125 | 141 | 157 | 177 | 187 | 192 | 187 | 172 | 150 | 3461 | 144 | 3591 | 144 | |
| 16 | 130 | 112 | 97 | 97 | 107 | 126 | 143 | 160 | 168 | 169 | 166 | 153 | 138 | 124 | 111 | 108 | 118 | 130 | 144 | 157 | 169 | 172 | 165 | 152 | 3316 | 138 | 3458 | 138 | |
| 17 | 142 | 127 | 115 | 109 | 118 | 127 | 142 | 155 | 163 | 168 | 165 | 155 | 138 | 126 | 111 | 102 | 101 | 111 | 122 | 134 | 147 | 152 | 153 | 150 | 3233 | 135 | 3379 | 135 | |
| 18 | 146 | 142 | 136 | 133 | 135 | 140 | 152 | 161 | 171 | 173 | 171 | 167 | 155 | 139 | 127 | 118 | 108 | 106 | 115 | 123 | 127 | 135 | 141 | 142 | 3228 | 135 | 3373 | 135 | |
| 19 | 145 | 146 | 147 | 144 | 146 | 152 | 156 | 160 | 169 | 171 | 165 | 165 | 157 | 144 | 132 | 124 | 113 | 105 | 102 | 105 | 107 | 113 | 119 | 125 | 3312 | 138 | 3446 | 138 | |
| 20 | 134 | 138 | 145 | 154 | 158 | 161 | 163 | 168 | 172 | 174 | 175 | 171 | 167 | 160 | 153 | 144 | 136 | 124 | 116 | 109 | 107 | 107 | 110 | 116 | 3462 | 144 | 3591 | 144 | |
| 21 | 129 | 139 | 151 | 165 | 172 | 178 | 181 | 182 | 180 | 179 | 177 | 176 | 175 | 171 | 165 | 159 | 148 | 135 | 123 | 108 | 100 | 92 | 87 | 92 | 3546 | 149 | 3669 | 147 | |
| 22 | 105 | 121 | 139 | 155 | 167 | 178 | 182 | 181 | 180 | 175 | 174 | 171 | 170 | 171 | 171 | 168 | 163 | 151 | 138 | 123 | 104 | 90 | 84 | 83 | 3544 | 148 | 3636 | 145 | |
| 23 | 92 | 108 | 127 | 150 | 165 | 178 | 187 | 183 | 178 | 171 | 165 | 164 | 163 | 169 | 167 | 169 | 167 | 157 | 147 | 127 | 106 | 87 | 77 | 70 | 3474 | 145 | 3554 | 142 | |
| 24 | 80 | 95 | 117 | 141 | 164 | 181 | 189 | 191 | 188 | 180 | 173 | 171 | 167 | 172 | 182 | 185 | 182 | 180 | 172 | 150 | 130 | 102 | 85 | 74 | 3651 | 152 | 3728 | 149 | |
| 25 | 77 | 87 | 112 | 136 | 160 | 182 | 195 | 197 | 190 | 184 | 176 | 167 | 164 | 174 | 182 | 190 | 198 | 197 | 190 | 172 | 147 | 117 | 92 | 74 | 3760 | 157 | 3831 | 153 | |
| 26 | 71 | 82 | 99 | 123 | 151 | 175 | 188 | 194 | 190 | 180 | 167 | 160 | 152 | 161 | 169 | 180 | 192 | 197 | 194 | 181 | 157 | 128 | 103 | 80 | 3674 | 153 | 3739 | 150 | |
| 27 | 65 | 68 | 89 | 113 | 138 | 162 | 173 | 187 | 185 | 172 | 160 | 145 | 142 | 142 | 152 | 164 | 180 | 193 | 196 | 188 | 166 | 141 | 111 | 87 | 3519 | 147 | 3588 | 144 | |
| 28 | 69 | 67 | 80 | 103 | 130 | 154 | 176 | 183 | 182 | 171 | 160 | 146 | 136 | 136 | 142 | 160 | 175 | 188 | 200 | 199 | 186 | 162 | 133 | 112 | 3550 | 148 | 3642 | 146 | |
| 29 | 92 | 80 | 86 | 103 | 124 | 149 | 168 | 181 | 180 | 173 | 160 | 143 | 127 | 120 | 129 | 140 | 156 | 174 | 190 | 193 | 182 | 164 | 142 | 119 | 3475 | 145 | 3575 | 143 | |
| 30 | 100 | 90 | 89 | 96 | 119 | 140 | 154 | 171 | 174 | 167 | 154 | 139 | 124 | 114 | 114 | 123 | 138 | 156 | 176 | 187 | 183 | 177 | 159 | 142 | 3386 | 141 | 3510 | 140 | |
| 31 | 124 | 110 | 107 | 120 | 134 | 160 | 176 | 187 | 196 | 193 | 181 | 163 | 147 | 133 | 129 | 131 | 142 | 155 | 175 | 187 | 195 | 188 | 173 | 160 | 3637 | 152 | | | |
| SUM | 3393 | 3618 | 4488 | 5341 | 5695 | 5434 | 4995 | 4772 | 4869 | 5123 | 4620 | 3894 | | | | | | | | | | | | | | TOTAL | | | |
| | 3393 | 4001 | 4978 | 5619 | 5601 | 5212 | 4950 | 4800 | 4946 | 4752 | 4284 | 3568 | | | | | | | | | | | | | | 111675 | | | |
| MEAN | 109 | 117 | 145 | 172 | 184 | 175 | 161 | 154 | 157 | 165 | 149 | 126 | | | | | | | | | | | | | | MONTHLY MEAN | | | |
| | 109 | 129 | 161 | 181 | 181 | 168 | 160 | 155 | 160 | 153 | 138 | 115 | | | | | | | | | | | | | | 150.1 | | | |

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : Aug. 1~Aug. 31 1991
 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 | 145 | 132 | 127 | 128 | 140 | 156 | 167 | 177 | 180 | 182 | 172 | 156 | 136 | 128 | 113 | 113 | 119 | 132 | 151 | 165 | 173 | 176 | 174 | 165 | 3607 | 150 | 3764 | 151 | |
| 2 | 157 | 146 | 144 | 140 | 144 | 160 | 171 | 178 | 184 | 183 | 178 | 162 | 144 | 130 | 116 | 109 | 109 | 116 | 128 | 143 | 152 | 157 | 162 | 158 | 3571 | 149 | 3726 | 149 | |
| 3 | 155 | 155 | 154 | 156 | 159 | 168 | 178 | 184 | 187 | 187 | 184 | 174 | 155 | 142 | 128 | 113 | 105 | 104 | 109 | 117 | 125 | 134 | 140 | 144 | 3557 | 148 | 3709 | 148 | |
| 4 | 152 | 156 | 157 | 164 | 170 | 177 | 185 | 190 | 190 | 193 | 187 | 180 | 168 | 155 | 140 | 130 | 120 | 113 | 109 | 109 | 117 | 123 | 124 | 138 | 3647 | 152 | 3798 | 152 | |
| 5 | 151 | 165 | 178 | 184 | 197 | 203 | 206 | 209 | 211 | 209 | 210 | 201 | 195 | 187 | 178 | 168 | 157 | 140 | 131 | 121 | 113 | 116 | 115 | 126 | 4071 | 170 | 4210 | 168 | |
| 6 | 139 | 156 | 175 | 192 | 204 | 213 | 212 | 212 | 206 | 203 | 197 | 193 | 187 | 185 | 177 | 170 | 159 | 142 | 124 | 108 | 89 | 78 | 76 | 79 | 3876 | 162 | 3965 | 159 | |
| 7 | 89 | 112 | 137 | 163 | 182 | 197 | 201 | 202 | 197 | 190 | 186 | 180 | 179 | 181 | 183 | 184 | 177 | 166 | 150 | 124 | 101 | 82 | 75 | 74 | 3712 | 155 | 3786 | 151 | |
| 8 | 74 | 91 | 122 | 149 | 178 | 196 | 207 | 208 | 202 | 195 | 187 | 180 | 183 | 189 | 197 | 205 | 207 | 202 | 190 | 164 | 136 | 105 | 81 | 67 | 3915 | 163 | 3984 | 159 | |
| 9 | 69 | 83 | 109 | 139 | 168 | 195 | 207 | 211 | 201 | 189 | 180 | 169 | 168 | 176 | 187 | 201 | 212 | 212 | 204 | 187 | 154 | 122 | 91 | 68 | 3902 | 163 | 3961 | 158 | |
| 10 | 59 | 69 | 87 | 116 | 147 | 172 | 191 | 195 | 190 | 178 | 160 | 145 | 140 | 144 | 159 | 179 | 196 | 208 | 210 | 197 | 174 | 143 | 105 | 81 | 3645 | 152 | 3708 | 148 | |
| 11 | 63 | 64 | 75 | 98 | 129 | 154 | 174 | 184 | 174 | 164 | 145 | 126 | 118 | 118 | 127 | 150 | 171 | 192 | 204 | 204 | 192 | 163 | 131 | 101 | 3421 | 143 | 3498 | 140 | |
| 12 | 77 | 71 | 77 | 95 | 122 | 144 | 166 | 176 | 172 | 159 | 141 | 119 | 102 | 98 | 100 | 120 | 142 | 167 | 187 | 196 | 194 | 176 | 152 | 125 | 3278 | 137 | 3379 | 135 | |
| 13 | 101 | 92 | 88 | 102 | 123 | 148 | 169 | 178 | 178 | 167 | 150 | 127 | 107 | 94 | 92 | 101 | 120 | 140 | 162 | 178 | 182 | 175 | 158 | 139 | 3271 | 136 | 3393 | 136 | |
| 14 | 122 | 107 | 98 | 108 | 122 | 141 | 156 | 168 | 169 | 162 | 142 | 122 | 106 | 87 | 77 | 78 | 96 | 118 | 134 | 153 | 164 | 162 | 152 | 142 | 3086 | 129 | 3217 | 129 | |
| 15 | 131 | 120 | 115 | 117 | 131 | 145 | 162 | 168 | 171 | 173 | 160 | 142 | 121 | 108 | 97 | 92 | 102 | 118 | 133 | 151 | 165 | 174 | 176 | 171 | 3343 | 139 | 3515 | 141 | |
| 16 | 172 | 167 | 167 | 174 | 181 | 197 | 210 | 217 | 220 | 218 | 213 | 196 | 180 | 166 | 150 | 142 | 140 | 148 | 150 | 162 | 170 | 174 | 178 | 180 | 4272 | 178 | 4447 | 178 | |
| 17 | 175 | 179 | 179 | 184 | 188 | 193 | 203 | 208 | 207 | 209 | 200 | 190 | 173 | 159 | 149 | 140 | 133 | 127 | 127 | 134 | 137 | 142 | 143 | 147 | 4026 | 168 | 4182 | 167 | |
| 18 | 156 | 160 | 167 | 177 | 180 | 190 | 196 | 197 | 199 | 198 | 192 | 186 | 178 | 168 | 156 | 148 | 142 | 131 | 127 | 122 | 124 | 122 | 122 | 129 | 3867 | 161 | 4005 | 160 | |
| 19 | 138 | 151 | 159 | 171 | 178 | 188 | 191 | 188 | 187 | 185 | 179 | 177 | 169 | 167 | 157 | 153 | 146 | 140 | 125 | 122 | 109 | 106 | 105 | 108 | 3699 | 154 | 3818 | 153 | |
| 20 | 119 | 134 | 151 | 165 | 178 | 188 | 192 | 186 | 186 | 182 | 177 | 175 | 172 | 168 | 164 | 168 | 160 | 147 | 136 | 124 | 108 | 98 | 89 | 91 | 3658 | 152 | 3760 | 150 | |
| 21 | 102 | 116 | 139 | 160 | 175 | 187 | 191 | 187 | 182 | 178 | 170 | 166 | 168 | 170 | 175 | 176 | 174 | 165 | 155 | 135 | 117 | 100 | 84 | 83 | 3655 | 152 | 3744 | 150 | |
| 22 | 89 | 103 | 131 | 152 | 170 | 181 | 188 | 182 | 175 | 161 | 160 | 154 | 155 | 159 | 175 | 180 | 181 | 179 | 172 | 156 | 138 | 112 | 99 | 94 | 3646 | 152 | 3747 | 150 | |
| 23 | 101 | 115 | 138 | 162 | 184 | 200 | 208 | 203 | 190 | 177 | 162 | 159 | 158 | 161 | 174 | 187 | 194 | 195 | 185 | 169 | 147 | 116 | 93 | 83 | 3861 | 161 | 3942 | 158 | |
| 24 | 81 | 92 | 115 | 137 | 163 | 181 | 191 | 188 | 176 | 160 | 144 | 134 | 134 | 141 | 154 | 173 | 187 | 192 | 190 | 175 | 153 | 120 | 95 | 80 | 3556 | 148 | 3626 | 145 | |
| 25 | 70 | 78 | 100 | 128 | 150 | 175 | 185 | 183 | 174 | 157 | 141 | 127 | 124 | 132 | 149 | 173 | 193 | 205 | 210 | 205 | 186 | 158 | 129 | 110 | 3642 | 152 | 3740 | 150 | |
| 26 | 98 | 103 | 118 | 140 | 165 | 187 | 199 | 197 | 188 | 170 | 149 | 129 | 120 | 123 | 136 | 158 | 179 | 195 | 201 | 202 | 188 | 162 | 135 | 111 | 3765 | 157 | 3861 | 154 | |
| 27 | 96 | 91 | 103 | 122 | 144 | 169 | 180 | 182 | 170 | 157 | 132 | 109 | 97 | 93 | 105 | 125 | 153 | 173 | 191 | 197 | 186 | 170 | 145 | 124 | 3414 | 142 | 3520 | 141 | |
| 28 | 106 | 101 | 108 | 124 | 145 | 167 | 181 | 186 | 181 | 164 | 143 | 121 | 103 | 98 | 101 | 119 | 146 | 169 | 188 | 199 | 199 | 188 | 169 | 151 | 3557 | 148 | 3692 | 148 | |
| 29 | 135 | 126 | 127 | 138 | 158 | 175 | 188 | 194 | 190 | 178 | 151 | 128 | 108 | 93 | 93 | 104 | 119 | 142 | 163 | 178 | 183 | 178 | 165 | 150 | 3564 | 149 | 3705 | 148 | |
| 30 | 141 | 130 | 128 | 135 | 147 | 163 | 179 | 180 | 177 | 166 | 148 | 125 | 102 | 85 | 79 | 79 | 94 | 112 | 133 | 149 | 160 | 163 | 160 | 153 | 3288 | 137 | 3435 | 137 | |
| 31 | 147 | 142 | 143 | 149 | 161 | 174 | 184 | 191 | 191 | 181 | 168 | 147 | 128 | 108 | 98 | 97 | 103 | 114 | 128 | 145 | 158 | 161 | 167 | 165 | 3550 | 148 | | | |
| SUM | 3610 | 4016 | 4983 | 5818 | 5805 | 5208 | 4478 | 4286 | 4636 | 4907 | 4694 | 3990 | | | | | | | | | | | | | | TOTAL | | | |
| | | 3707 | 4469 | 5484 | 5909 | 5575 | 4799 | 4313 | 4435 | 4804 | 4891 | 4356 | 3737 | | | | | | | | | | | | | 112922 | | | |
| MEAN | 116 | 130 | 161 | 188 | 187 | 168 | 144 | 138 | 150 | 158 | 151 | 129 | | | | | | | | | | | | | | MONTHLY MEAN | | | |
| | | 120 | 144 | 177 | 191 | 180 | 155 | 139 | 143 | 155 | 158 | 141 | 121 | | | | | | | | | | | | | 151.7 | | | |

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : Sep. 1~Sep.30 1991
 Unit : CENTIMETER

| DATE | TIME | | | | | | | | | | | | | | | | | | | | | | | (2 4 H) | | (2 5 H) | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|--------------|------|------|--|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | SUM | MEAN | SUM | MEAN | |
| 1 | 165 | 170 | 173 | 178 | 187 | 199 | 210 | 212 | 212 | 205 | 195 | 178 | 160 | 143 | 129 | 123 | 119 | 121 | 127 | 133 | 142 | 145 | 150 | 155 | 3931 | 164 | 4089 | 164 | |
| 2 | 158 | 168 | 174 | 180 | 186 | 193 | 201 | 202 | 200 | 193 | 184 | 172 | 157 | 141 | 128 | 118 | 108 | 100 | 99 | 100 | 102 | 108 | 111 | 118 | 3601 | 150 | 3736 | 149 | |
| 3 | 135 | 145 | 160 | 170 | 179 | 187 | 193 | 194 | 187 | 183 | 182 | 171 | 160 | 155 | 144 | 138 | 124 | 115 | 106 | 94 | 87 | 87 | 90 | 100 | 3486 | 145 | 3600 | 144 | |
| 4 | 114 | 129 | 154 | 171 | 186 | 192 | 195 | 191 | 188 | 180 | 176 | 173 | 169 | 168 | 167 | 165 | 155 | 141 | 124 | 107 | 89 | 81 | 76 | 77 | 3568 | 149 | 3660 | 146 | |
| 5 | 92 | 116 | 140 | 159 | 178 | 188 | 191 | 188 | 177 | 167 | 162 | 158 | 162 | 165 | 170 | 174 | 174 | 163 | 144 | 117 | 98 | 74 | 61 | 60 | 3478 | 145 | 3539 | 142 | |
| 6 | 61 | 88 | 116 | 142 | 165 | 178 | 182 | 177 | 163 | 151 | 139 | 139 | 140 | 156 | 169 | 179 | 190 | 191 | 175 | 153 | 125 | 96 | 74 | 66 | 3415 | 142 | 3486 | 139 | |
| 7 | 71 | 86 | 110 | 142 | 169 | 180 | 189 | 185 | 171 | 154 | 139 | 130 | 138 | 149 | 165 | 194 | 214 | 216 | 219 | 200 | 176 | 143 | 119 | 97 | 3756 | 157 | 3853 | 154 | |
| 8 | 97 | 110 | 131 | 160 | 184 | 201 | 208 | 205 | 183 | 162 | 143 | 126 | 124 | 135 | 158 | 186 | 209 | 223 | 225 | 218 | 197 | 161 | 133 | 111 | 3990 | 166 | 4088 | 164 | |
| 9 | 98 | 99 | 118 | 142 | 163 | 181 | 190 | 181 | 163 | 140 | 115 | 94 | 87 | 90 | 111 | 139 | 165 | 187 | 199 | 203 | 188 | 161 | 137 | 112 | 3463 | 144 | 3560 | 142 | |
| 10 | 97 | 95 | 109 | 131 | 154 | 175 | 186 | 180 | 166 | 146 | 123 | 97 | 78 | 76 | 89 | 112 | 140 | 168 | 187 | 198 | 191 | 175 | 153 | 130 | 3356 | 140 | 3470 | 139 | |
| 11 | 114 | 107 | 114 | 131 | 153 | 171 | 181 | 183 | 173 | 154 | 126 | 100 | 81 | 70 | 75 | 95 | 122 | 147 | 171 | 186 | 189 | 178 | 162 | 145 | 3328 | 139 | 3461 | 138 | |
| 12 | 133 | 126 | 129 | 142 | 161 | 181 | 193 | 195 | 189 | 171 | 147 | 122 | 100 | 86 | 84 | 92 | 108 | 133 | 155 | 169 | 177 | 177 | 167 | 155 | 3492 | 146 | 3638 | 146 | |
| 13 | 146 | 142 | 140 | 148 | 165 | 180 | 190 | 191 | 186 | 178 | 156 | 132 | 108 | 97 | 86 | 87 | 98 | 115 | 135 | 147 | 159 | 160 | 161 | 152 | 3459 | 144 | 3610 | 144 | |
| 14 | 151 | 149 | 150 | 155 | 161 | 178 | 190 | 190 | 187 | 178 | 161 | 141 | 121 | 105 | 97 | 90 | 94 | 105 | 117 | 129 | 139 | 139 | 142 | 143 | 3412 | 142 | 3554 | 142 | |
| 15 | 142 | 147 | 150 | 154 | 165 | 175 | 182 | 175 | 181 | 176 | 165 | 148 | 130 | 121 | 109 | 105 | 101 | 102 | 108 | 113 | 119 | 123 | 129 | 131 | 3351 | 140 | 3486 | 139 | |
| 16 | 135 | 142 | 150 | 157 | 165 | 172 | 177 | 178 | 177 | 174 | 164 | 158 | 144 | 137 | 128 | 124 | 120 | 116 | 113 | 116 | 116 | 119 | 124 | 131 | 3437 | 143 | 3579 | 143 | |
| 17 | 142 | 147 | 160 | 170 | 178 | 183 | 187 | 185 | 182 | 179 | 172 | 166 | 157 | 152 | 144 | 141 | 132 | 124 | 117 | 106 | 100 | 97 | 95 | 106 | 3522 | 147 | 3636 | 145 | |
| 18 | 114 | 127 | 142 | 154 | 163 | 171 | 170 | 165 | 159 | 153 | 152 | 146 | 144 | 146 | 149 | 145 | 142 | 136 | 126 | 111 | 102 | 90 | 90 | 95 | 3292 | 137 | 3400 | 136 | |
| 19 | 108 | 124 | 142 | 160 | 172 | 175 | 175 | 170 | 162 | 155 | 151 | 149 | 151 | 159 | 166 | 171 | 169 | 160 | 146 | 131 | 116 | 97 | 88 | 91 | 3488 | 145 | 3587 | 143 | |
| 20 | 99 | 117 | 141 | 155 | 168 | 177 | 173 | 167 | 153 | 145 | 138 | 138 | 138 | 148 | 163 | 173 | 175 | 174 | 160 | 142 | 122 | 103 | 88 | 85 | 3442 | 143 | 3535 | 141 | |
| 21 | 93 | 114 | 133 | 154 | 174 | 182 | 182 | 172 | 158 | 144 | 136 | 135 | 142 | 152 | 171 | 190 | 198 | 201 | 193 | 178 | 152 | 130 | 112 | 104 | 3700 | 154 | 3808 | 152 | |
| 22 | 108 | 125 | 151 | 171 | 195 | 201 | 200 | 191 | 173 | 152 | 135 | 128 | 134 | 147 | 165 | 191 | 204 | 211 | 210 | 195 | 169 | 146 | 124 | 110 | 3936 | 164 | 4042 | 162 | |
| 23 | 106 | 122 | 138 | 159 | 179 | 192 | 192 | 178 | 156 | 134 | 117 | 101 | 99 | 116 | 136 | 166 | 182 | 197 | 202 | 191 | 170 | 145 | 120 | 100 | 3598 | 150 | 3695 | 148 | |
| 24 | 97 | 102 | 119 | 142 | 163 | 177 | 177 | 167 | 145 | 122 | 98 | 82 | 75 | 88 | 110 | 139 | 165 | 188 | 197 | 198 | 182 | 160 | 138 | 120 | 3351 | 140 | 3461 | 138 | |
| 25 | 110 | 114 | 127 | 151 | 171 | 183 | 187 | 177 | 157 | 130 | 104 | 81 | 71 | 74 | 93 | 123 | 149 | 173 | 192 | 194 | 188 | 173 | 150 | 132 | 3404 | 142 | 3525 | 141 | |
| 26 | 121 | 120 | 131 | 146 | 166 | 182 | 186 | 181 | 163 | 138 | 107 | 85 | 68 | 62 | 75 | 100 | 128 | 152 | 175 | 186 | 187 | 174 | 162 | 147 | 3342 | 139 | 3476 | 139 | |
| 27 | 134 | 128 | 137 | 149 | 169 | 182 | 187 | 184 | 171 | 149 | 119 | 90 | 70 | 60 | 65 | 80 | 104 | 131 | 152 | 166 | 176 | 174 | 164 | 157 | 3298 | 137 | 3446 | 138 | |
| 28 | 148 | 144 | 147 | 160 | 173 | 187 | 194 | 191 | 183 | 166 | 139 | 112 | 89 | 73 | 69 | 74 | 92 | 112 | 133 | 148 | 160 | 167 | 164 | 160 | 3221 | 134 | 3379 | 135 | |
| 29 | 158 | 157 | 157 | 166 | 180 | 189 | 194 | 194 | 188 | 175 | 153 | 128 | 106 | 87 | 80 | 77 | 81 | 92 | 109 | 123 | 131 | 142 | 146 | 146 | 3359 | 140 | 3510 | 140 | |
| 30 | 151 | 154 | 157 | 163 | 173 | 181 | 183 | 186 | 181 | 172 | 157 | 142 | 122 | 105 | 92 | 87 | 85 | 90 | 100 | 106 | 112 | 126 | 134 | 142 | 3301 | 138 | | | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUM | 3598 | 4200 | 5145 | 5645 | 5234 | 4355 | 3625 | 3687 | 4247 | 4616 | 4361 | 3764 | | | | | | | | | | | | | | TOTAL | | | |
| | 3814 | 4662 | 5493 | 5535 | 4826 | 3922 | 3563 | 3978 | 4484 | 4558 | 4051 | 3578 | | | | | | | | | | | | | | 104777 | | | |
| MEAN | 120 | 140 | 172 | 188 | 174 | 145 | 121 | 123 | 142 | 154 | 145 | 125 | | | | | | | | | | | | | | MONTHLY MEAN | | | |
| | 127 | 155 | 183 | 185 | 161 | 131 | 119 | 133 | 149 | 152 | 135 | 119 | | | | | | | | | | | | | | 145.5 | | | |

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : Oct. 1~Oct. 31 1991
 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 | 165 | 174 | 188 | 197 | 206 | 208 | 214 | 212 | 206 | 197 | 186 | 178 | 166 | 153 | 143 | 137 | 126 | 124 | 120 | 122 | 124 | 129 | 140 | 3969 | 165 | 4118 | 165 | | |
| 2 | 149 | 162 | 175 | 186 | 193 | 194 | 198 | 194 | 188 | 183 | 177 | 172 | 167 | 164 | 157 | 150 | 140 | 125 | 114 | 104 | 98 | 96 | 98 | 110 | 3694 | 154 | 3818 | 153 | | |
| 3 | 124 | 139 | 158 | 170 | 180 | 183 | 178 | 175 | 167 | 160 | 156 | 155 | 158 | 162 | 164 | 163 | 158 | 142 | 126 | 111 | 96 | 86 | 87 | 92 | 3490 | 145 | 3592 | 144 | | |
| 4 | 102 | 124 | 144 | 160 | 172 | 177 | 169 | 156 | 146 | 140 | 133 | 135 | 145 | 154 | 166 | 179 | 178 | 170 | 155 | 134 | 112 | 97 | 88 | 86 | 3422 | 143 | 3521 | 141 | | |
| 5 | 99 | 118 | 140 | 159 | 173 | 174 | 166 | 153 | 134 | 119 | 111 | 107 | 117 | 136 | 156 | 173 | 182 | 182 | 172 | 148 | 123 | 101 | 80 | 80 | 3303 | 138 | 3389 | 136 | | |
| 6 | 86 | 101 | 123 | 143 | 160 | 164 | 160 | 142 | 120 | 100 | 88 | 86 | 92 | 113 | 137 | 165 | 183 | 191 | 190 | 172 | 149 | 123 | 101 | 90 | 3179 | 132 | 3270 | 131 | | |
| 7 | 91 | 106 | 124 | 144 | 162 | 168 | 162 | 148 | 123 | 97 | 76 | 66 | 68 | 87 | 117 | 146 | 172 | 185 | 192 | 181 | 162 | 201 | 115 | 102 | 3195 | 133 | 3293 | 132 | | |
| 8 | 98 | 105 | 124 | 142 | 157 | 166 | 165 | 147 | 124 | 97 | 71 | 54 | 50 | 62 | 88 | 118 | 151 | 174 | 187 | 186 | 176 | 154 | 133 | 118 | 3047 | 127 | 3159 | 126 | | |
| 9 | 112 | 113 | 129 | 151 | 169 | 180 | 180 | 169 | 146 | 116 | 91 | 69 | 58 | 62 | 81 | 112 | 139 | 164 | 182 | 189 | 186 | 170 | 151 | 138 | 3257 | 136 | 3382 | 135 | | |
| 10 | 125 | 123 | 136 | 155 | 171 | 182 | 184 | 176 | 158 | 131 | 101 | 76 | 55 | 52 | 64 | 86 | 113 | 141 | 160 | 174 | 178 | 168 | 154 | 143 | 3206 | 134 | 3340 | 134 | | |
| 11 | 134 | 131 | 138 | 155 | 172 | 183 | 188 | 182 | 170 | 148 | 121 | 95 | 75 | 67 | 71 | 89 | 112 | 137 | 160 | 175 | 183 | 185 | 176 | 170 | 3417 | 142 | 3583 | 143 | | |
| 12 | 166 | 162 | 165 | 180 | 194 | 208 | 213 | 210 | 202 | 186 | 160 | 132 | 110 | 93 | 91 | 99 | 109 | 127 | 144 | 159 | 168 | 171 | 167 | 165 | 3781 | 158 | 3943 | 158 | | |
| 13 | 162 | 162 | 163 | 171 | 183 | 194 | 200 | 200 | 196 | 181 | 163 | 141 | 120 | 106 | 103 | 102 | 108 | 123 | 137 | 146 | 156 | 163 | 166 | 165 | 3711 | 155 | 3877 | 155 | | |
| 14 | 166 | 170 | 172 | 177 | 185 | 195 | 201 | 202 | 197 | 187 | 173 | 158 | 140 | 127 | 119 | 115 | 115 | 123 | 131 | 135 | 144 | 149 | 154 | 160 | 3795 | 158 | 3955 | 158 | | |
| 15 | 160 | 166 | 171 | 177 | 182 | 187 | 189 | 189 | 186 | 178 | 170 | 156 | 143 | 137 | 128 | 123 | 121 | 121 | 120 | 124 | 127 | 129 | 138 | 147 | 3669 | 153 | 3823 | 153 | | |
| 16 | 154 | 164 | 170 | 175 | 183 | 185 | 183 | 182 | 178 | 175 | 167 | 162 | 154 | 148 | 144 | 142 | 137 | 131 | 126 | 123 | 120 | 124 | 127 | 134 | 3688 | 154 | 3832 | 153 | | |
| 17 | 144 | 154 | 163 | 171 | 175 | 171 | 169 | 167 | 159 | 155 | 150 | 146 | 146 | 148 | 151 | 148 | 142 | 136 | 129 | 124 | 118 | 114 | 117 | 124 | 3521 | 147 | 3677 | 147 | | |
| 18 | 156 | 147 | 162 | 172 | 177 | 177 | 170 | 161 | 153 | 147 | 142 | 146 | 151 | 157 | 165 | 170 | 164 | 159 | 141 | 135 | 124 | 116 | 114 | 120 | 3626 | 151 | 3755 | 150 | | |
| 19 | 129 | 144 | 160 | 170 | 178 | 176 | 162 | 152 | 141 | 133 | 127 | 127 | 136 | 141 | 161 | 171 | 173 | 171 | 158 | 142 | 125 | 113 | 108 | 110 | 3508 | 146 | 3628 | 145 | | |
| 20 | 120 | 133 | 154 | 165 | 174 | 171 | 160 | 142 | 125 | 112 | 106 | 108 | 119 | 134 | 155 | 171 | 180 | 181 | 172 | 155 | 138 | 117 | 108 | 106 | 3406 | 142 | 3521 | 141 | | |
| 21 | 115 | 131 | 148 | 161 | 175 | 174 | 160 | 141 | 124 | 103 | 91 | 92 | 103 | 123 | 148 | 173 | 189 | 196 | 195 | 180 | 161 | 143 | 125 | 123 | 3474 | 145 | 3589 | 144 | | |
| 22 | 129 | 142 | 160 | 178 | 187 | 190 | 179 | 159 | 135 | 110 | 92 | 87 | 94 | 115 | 143 | 170 | 194 | 208 | 211 | 201 | 185 | 165 | 145 | 136 | 3715 | 155 | 3851 | 154 | | |
| 23 | 136 | 146 | 161 | 179 | 190 | 192 | 182 | 161 | 133 | 105 | 81 | 66 | 65 | 84 | 112 | 142 | 172 | 189 | 201 | 199 | 186 | 168 | 149 | 136 | 3535 | 147 | 3664 | 147 | | |
| 24 | 129 | 136 | 151 | 167 | 178 | 185 | 175 | 157 | 131 | 98 | 71 | 50 | 33 | 52 | 76 | 106 | 138 | 163 | 182 | 189 | 184 | 169 | 155 | 145 | 3220 | 134 | 3358 | 134 | | |
| 25 | 138 | 140 | 153 | 168 | 182 | 190 | 185 | 173 | 147 | 116 | 87 | 69 | 44 | 43 | 62 | 87 | 117 | 145 | 168 | 181 | 183 | 178 | 171 | 161 | 3288 | 137 | 3441 | 138 | | |
| 26 | 153 | 156 | 165 | 180 | 196 | 208 | 207 | 199 | 181 | 154 | 125 | 97 | 77 | 71 | 79 | 100 | 126 | 152 | 175 | 192 | 202 | 203 | 197 | 193 | 3788 | 158 | 3978 | 159 | | |
| 27 | 190 | 186 | 190 | 201 | 214 | 222 | 224 | 218 | 203 | 179 | 150 | 123 | 96 | 80 | 78 | 87 | 100 | 119 | 141 | 155 | 167 | 174 | 174 | 174 | 3845 | 160 | 4017 | 161 | | |
| 28 | 172 | 172 | 173 | 180 | 192 | 201 | 201 | 199 | 190 | 175 | 152 | 127 | 106 | 87 | 75 | 75 | 82 | 93 | 110 | 124 | 136 | 146 | 154 | 157 | 3479 | 145 | 3640 | 146 | | |
| 29 | 161 | 166 | 169 | 174 | 182 | 192 | 196 | 199 | 195 | 187 | 176 | 159 | 141 | 126 | 117 | 109 | 107 | 110 | 119 | 128 | 140 | 150 | 160 | 169 | 3732 | 156 | 3909 | 156 | | |
| 30 | 177 | 183 | 186 | 191 | 195 | 197 | 199 | 200 | 196 | 194 | 186 | 177 | 166 | 159 | 148 | 137 | 129 | 122 | 119 | 123 | 123 | 130 | 138 | 147 | 3922 | 163 | 4080 | 163 | | |
| 31 | 158 | 167 | 174 | 176 | 175 | 176 | 170 | 164 | 163 | 160 | 157 | 158 | 156 | 156 | 152 | 148 | 139 | 125 | 117 | 112 | 107 | 112 | 117 | 126 | 3565 | 149 | | | | |
| SUM | 4289 | | 4875 | | 5603 | | 5683 | | 5023 | | 4048 | | 3463 | | 3951 | | 4407 | | 4758 | | 4579 | | 4196 | | | TOTAL | | 109447 | | |
| | | 4514 | | 5266 | | 5768 | | 5431 | | 4513 | | 3682 | | 3512 | | 4099 | | 4505 | | 4721 | | 4439 | | 4167 | | | | | | |
| MEAN | 138 | | 157 | | 181 | | 183 | | 162 | | 131 | | 112 | | 127 | | 142 | | 153 | | 148 | | 135 | | | MONTHLY MEAN | | 147.1 | | |
| | | 146 | | 170 | | 186 | | 175 | | 146 | | 119 | | 113 | | 132 | | 145 | | 152 | | 143 | | 134 | | | | | | |

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : Nov. 1~Nov. 30 1991
 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 | 140 | 155 | 162 | 170 | 172 | 168 | 161 | 158 | 151 | 147 | 149 | 154 | 161 | 173 | 177 | 183 | 177 | 165 | 156 | 142 | 133 | 128 | 129 | 137 | 3748 | 156 | 3898 | 156 | | |
| 2 | 150 | 165 | 175 | 180 | 181 | 175 | 160 | 147 | 133 | 124 | 125 | 130 | 142 | 158 | 172 | 183 | 186 | 179 | 164 | 148 | 135 | 123 | 120 | 124 | 3679 | 153 | 3813 | 153 | | |
| 3 | 134 | 147 | 160 | 168 | 171 | 164 | 149 | 130 | 112 | 100 | 94 | 98 | 114 | 133 | 157 | 175 | 188 | 189 | 178 | 164 | 144 | 130 | 122 | 123 | 3444 | 144 | 3576 | 143 | | |
| 4 | 132 | 142 | 157 | 167 | 173 | 169 | 153 | 128 | 107 | 88 | 74 | 77 | 90 | 114 | 141 | 166 | 186 | 194 | 193 | 181 | 162 | 143 | 131 | 126 | 3394 | 141 | 3529 | 141 | | |
| 5 | 135 | 146 | 160 | 173 | 181 | 179 | 161 | 141 | 114 | 88 | 69 | 64 | 70 | 94 | 123 | 153 | 177 | 192 | 199 | 194 | 178 | 161 | 147 | 141 | 3440 | 143 | 3582 | 143 | | |
| 6 | 142 | 150 | 166 | 178 | 186 | 187 | 176 | 153 | 125 | 94 | 73 | 58 | 58 | 74 | 101 | 129 | 160 | 180 | 193 | 194 | 184 | 168 | 154 | 143 | 3426 | 143 | 3566 | 143 | | |
| 7 | 140 | 147 | 160 | 175 | 185 | 189 | 178 | 163 | 136 | 104 | 77 | 57 | 47 | 56 | 77 | 107 | 135 | 157 | 177 | 183 | 176 | 167 | 155 | 144 | 3292 | 137 | 3431 | 137 | | |
| 8 | 139 | 142 | 155 | 169 | 181 | 189 | 185 | 170 | 147 | 118 | 88 | 66 | 51 | 53 | 69 | 92 | 119 | 143 | 164 | 178 | 179 | 172 | 163 | 158 | 3290 | 137 | 3440 | 138 | | |
| 9 | 150 | 148 | 158 | 167 | 184 | 195 | 192 | 180 | 165 | 137 | 108 | 84 | 67 | 59 | 64 | 82 | 107 | 127 | 151 | 162 | 170 | 171 | 161 | 158 | 3347 | 139 | 3499 | 140 | | |
| 10 | 152 | 149 | 154 | 165 | 178 | 188 | 191 | 185 | 174 | 152 | 124 | 101 | 83 | 70 | 69 | 82 | 100 | 118 | 139 | 156 | 166 | 170 | 168 | 164 | 3398 | 142 | 3558 | 142 | | |
| 11 | 160 | 160 | 160 | 167 | 178 | 190 | 192 | 190 | 183 | 166 | 145 | 124 | 104 | 88 | 79 | 89 | 102 | 115 | 131 | 146 | 156 | 162 | 163 | 160 | 3510 | 146 | 3671 | 147 | | |
| 12 | 161 | 158 | 157 | 154 | 165 | 176 | 180 | 183 | 179 | 169 | 154 | 138 | 119 | 108 | 102 | 101 | 107 | 116 | 127 | 141 | 150 | 155 | 160 | 161 | 3521 | 147 | 3683 | 147 | | |
| 13 | 162 | 163 | 163 | 163 | 165 | 174 | 176 | 174 | 173 | 166 | 157 | 142 | 127 | 118 | 111 | 108 | 105 | 106 | 117 | 124 | 131 | 138 | 142 | 148 | 3453 | 144 | 3603 | 144 | | |
| 14 | 150 | 154 | 153 | 153 | 154 | 158 | 156 | 157 | 156 | 151 | 145 | 141 | 132 | 124 | 121 | 118 | 116 | 111 | 115 | 118 | 119 | 126 | 133 | 137 | 3298 | 137 | 3442 | 138 | | |
| 15 | 144 | 147 | 150 | 150 | 147 | 144 | 142 | 139 | 140 | 137 | 137 | 137 | 137 | 137 | 136 | 135 | 135 | 129 | 124 | 125 | 124 | 126 | 134 | 140 | 3296 | 137 | 3445 | 138 | | |
| 16 | 149 | 154 | 158 | 158 | 155 | 149 | 140 | 134 | 128 | 127 | 129 | 133 | 139 | 146 | 151 | 155 | 153 | 148 | 139 | 132 | 127 | 125 | 127 | 133 | 3547 | 148 | 3690 | 148 | | |
| 17 | 143 | 150 | 156 | 158 | 152 | 144 | 133 | 120 | 110 | 105 | 106 | 113 | 121 | 136 | 150 | 157 | 160 | 158 | 148 | 140 | 132 | 123 | 124 | 129 | 3268 | 136 | 3407 | 136 | | |
| 18 | 139 | 150 | 156 | 158 | 155 | 146 | 130 | 111 | 98 | 88 | 87 | 95 | 110 | 127 | 147 | 165 | 173 | 173 | 167 | 155 | 142 | 133 | 127 | 130 | 3262 | 136 | 3401 | 136 | | |
| 19 | 139 | 147 | 158 | 163 | 161 | 152 | 135 | 112 | 91 | 76 | 71 | 75 | 90 | 112 | 138 | 162 | 179 | 185 | 183 | 173 | 160 | 148 | 140 | 138 | 3288 | 137 | 3482 | 137 | | |
| 20 | 144 | 154 | 164 | 171 | 171 | 163 | 143 | 119 | 93 | 70 | 57 | 56 | 69 | 93 | 120 | 149 | 177 | 189 | 193 | 187 | 175 | 161 | 141 | 143 | 3302 | 138 | 3449 | 138 | | |
| 21 | 147 | 157 | 166 | 175 | 177 | 172 | 155 | 128 | 99 | 71 | 51 | 38 | 43 | 64 | 92 | 125 | 154 | 175 | 188 | 189 | 181 | 169 | 157 | 148 | 3221 | 134 | 3369 | 135 | | |
| 22 | 148 | 155 | 166 | 176 | 182 | 182 | 168 | 146 | 116 | 83 | 56 | 38 | 32 | 44 | 71 | 102 | 136 | 161 | 182 | 193 | 190 | 181 | 173 | 162 | 3243 | 135 | 3402 | 136 | | |
| 23 | 159 | 163 | 173 | 184 | 196 | 197 | 188 | 170 | 143 | 109 | 75 | 49 | 34 | 36 | 54 | 80 | 109 | 141 | 162 | 180 | 185 | 181 | 177 | 168 | 3277 | 137 | 3432 | 137 | | |
| 24 | 155 | 161 | 172 | 182 | 193 | 200 | 197 | 185 | 167 | 135 | 102 | 72 | 50 | 41 | 43 | 65 | 92 | 118 | 141 | 161 | 175 | 177 | 174 | 172 | 3330 | 139 | 3496 | 140 | | |
| 25 | 166 | 164 | 169 | 179 | 191 | 200 | 203 | 198 | 186 | 163 | 135 | 105 | 80 | 83 | 56 | 67 | 85 | 105 | 130 | 149 | 161 | 171 | 171 | 172 | 3469 | 145 | 3638 | 146 | | |
| 26 | 169 | 165 | 164 | 172 | 183 | 194 | 198 | 200 | 195 | 181 | 161 | 135 | 111 | 92 | 81 | 78 | 86 | 97 | 116 | 132 | 146 | 159 | 162 | 164 | 3541 | 148 | 3705 | 148 | | |
| 27 | 164 | 160 | 157 | 160 | 165 | 173 | 178 | 182 | 185 | 179 | 171 | 155 | 138 | 123 | 107 | 100 | 97 | 101 | 109 | 123 | 134 | 143 | 150 | 153 | 3507 | 146 | 3662 | 146 | | |
| 28 | 155 | 152 | 148 | 144 | 144 | 146 | 150 | 153 | 157 | 157 | 157 | 152 | 143 | 137 | 127 | 119 | 114 | 110 | 114 | 123 | 129 | 136 | 147 | 153 | 3367 | 140 | 3524 | 141 | | |
| 29 | 157 | 156 | 156 | 151 | 143 | 143 | 141 | 141 | 142 | 146 | 152 | 155 | 156 | 156 | 158 | 152 | 145 | 140 | 135 | 134 | 139 | 141 | 143 | 152 | 3534 | 147 | 3691 | 148 | | |
| 30 | 157 | 159 | 158 | 152 | 142 | 135 | 124 | 117 | 117 | 118 | 122 | 129 | 141 | 149 | 156 | 161 | 157 | 149 | 145 | 140 | 136 | 137 | 137 | 142 | 3380 | 141 | | | | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUM | 4482 | 4811 | 5111 | 4935 | 4222 | 3351 | 2959 | 3200 | 4117 | 4580 | 4619 | 4432 | 4482 | 4620 | 4982 | 5111 | 4935 | 4222 | 3351 | 2959 | 3200 | 4117 | 4580 | 4619 | 4432 | TOTAL | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | 102072 | | | |
| MEAN | 149 | 160 | 170 | 165 | 141 | 112 | 99 | 107 | 137 | 153 | 154 | 148 | 149 | 154 | 167 | 171 | 154 | 121 | 102 | 103 | 125 | 146 | 156 | 151 | 147 | MONTHLY MEAN | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | 141.8 | | | |

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : Dec. 1~Dec. 31 1991
 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 | 151 | 155 | 156 | 153 | 146 | 134 | 118 | 105 | 95 | 91 | 96 | 104 | 118 | 136 | 150 | 160 | 166 | 165 | 158 | 150 | 144 | 140 | 141 | 143 | 3275 | 136 | 3427 | 137 | |
| 2 | 152 | 159 | 162 | 163 | 156 | 144 | 126 | 108 | 94 | 83 | 82 | 91 | 106 | 124 | 148 | 167 | 178 | 179 | 178 | 169 | 158 | 149 | 146 | 147 | 3369 | 140 | 3522 | 141 | |
| 3 | 153 | 160 | 166 | 168 | 164 | 154 | 134 | 113 | 91 | 75 | 66 | 69 | 83 | 102 | 129 | 152 | 171 | 181 | 183 | 178 | 167 | 155 | 149 | 147 | 3470 | 145 | 3624 | 145 | |
| 4 | 154 | 162 | 169 | 172 | 175 | 166 | 145 | 124 | 99 | 73 | 57 | 51 | 61 | 80 | 105 | 131 | 158 | 175 | 181 | 178 | 171 | 160 | 149 | 147 | 3243 | 135 | 3393 | 136 | |
| 5 | 150 | 157 | 166 | 174 | 177 | 173 | 160 | 138 | 112 | 84 | 63 | 51 | 51 | 68 | 94 | 123 | 153 | 173 | 184 | 189 | 183 | 172 | 163 | 158 | 3316 | 138 | 3437 | 139 | |
| 6 | 157 | 163 | 174 | 187 | 192 | 192 | 184 | 164 | 136 | 105 | 81 | 61 | 54 | 64 | 86 | 111 | 137 | 163 | 180 | 186 | 186 | 178 | 138 | 159 | 3438 | 143 | 3591 | 144 | |
| 7 | 153 | 156 | 165 | 178 | 187 | 191 | 184 | 171 | 147 | 117 | 87 | 62 | 50 | 51 | 68 | 93 | 115 | 142 | 165 | 177 | 178 | 174 | 164 | 155 | 3330 | 139 | 3480 | 139 | |
| 8 | 150 | 151 | 160 | 172 | 184 | 193 | 191 | 180 | 164 | 139 | 109 | 85 | 68 | 64 | 72 | 91 | 118 | 142 | 161 | 178 | 184 | 180 | 174 | 166 | 3476 | 145 | 3636 | 145 | |
| 9 | 160 | 157 | 160 | 172 | 184 | 194 | 197 | 190 | 178 | 156 | 126 | 103 | 83 | 69 | 71 | 85 | 105 | 129 | 146 | 164 | 174 | 173 | 168 | 161 | 3505 | 146 | 3659 | 146 | |
| 10 | 154 | 147 | 149 | 156 | 167 | 178 | 183 | 183 | 174 | 160 | 136 | 114 | 94 | 80 | 76 | 82 | 99 | 117 | 135 | 151 | 164 | 169 | 166 | 160 | 3394 | 141 | 3549 | 142 | |
| 11 | 155 | 148 | 148 | 150 | 158 | 170 | 175 | 178 | 176 | 166 | 148 | 129 | 108 | 98 | 92 | 93 | 103 | 115 | 132 | 147 | 158 | 165 | 166 | 160 | 3438 | 143 | 3594 | 144 | |
| 12 | 156 | 152 | 144 | 142 | 150 | 160 | 163 | 168 | 170 | 162 | 154 | 138 | 123 | 111 | 104 | 103 | 106 | 114 | 127 | 139 | 148 | 156 | 159 | 154 | 3403 | 142 | 3565 | 143 | |
| 13 | 162 | 146 | 140 | 135 | 136 | 142 | 146 | 150 | 154 | 152 | 147 | 140 | 129 | 120 | 115 | 111 | 111 | 117 | 122 | 131 | 137 | 144 | 147 | 148 | 3282 | 137 | 3428 | 137 | |
| 14 | 146 | 141 | 135 | 129 | 126 | 124 | 125 | 129 | 132 | 135 | 133 | 133 | 131 | 126 | 126 | 124 | 124 | 126 | 128 | 134 | 137 | 141 | 147 | 149 | 3181 | 133 | 3327 | 133 | |
| 15 | 146 | 143 | 139 | 133 | 124 | 118 | 115 | 113 | 115 | 118 | 121 | 125 | 128 | 131 | 135 | 137 | 136 | 137 | 134 | 134 | 137 | 136 | 140 | 144 | 3139 | 131 | 3283 | 131 | |
| 16 | 144 | 142 | 140 | 133 | 123 | 113 | 104 | 99 | 96 | 96 | 101 | 110 | 119 | 128 | 138 | 146 | 149 | 149 | 145 | 142 | 140 | 139 | 138 | 142 | 3076 | 128 | 3220 | 129 | |
| 17 | 144 | 145 | 142 | 138 | 128 | 114 | 101 | 86 | 79 | 78 | 79 | 87 | 101 | 121 | 137 | 151 | 162 | 164 | 162 | 158 | 153 | 148 | 146 | 147 | 3071 | 128 | 3222 | 129 | |
| 18 | 151 | 153 | 154 | 150 | 142 | 129 | 109 | 90 | 72 | 64 | 62 | 68 | 81 | 101 | 126 | 149 | 167 | 176 | 178 | 175 | 166 | 159 | 156 | 153 | 3131 | 130 | 3287 | 131 | |
| 19 | 156 | 161 | 162 | 161 | 160 | 145 | 124 | 100 | 77 | 56 | 46 | 44 | 58 | 80 | 105 | 136 | 160 | 177 | 184 | 185 | 177 | 169 | 163 | 158 | 3144 | 131 | 3304 | 132 | |
| 20 | 160 | 167 | 176 | 178 | 178 | 172 | 154 | 128 | 100 | 74 | 51 | 46 | 54 | 69 | 99 | 134 | 161 | 183 | 201 | 208 | 200 | 190 | 181 | 175 | 3439 | 143 | 3612 | 144 | |
| 21 | 173 | 178 | 186 | 193 | 196 | 191 | 178 | 152 | 120 | 87 | 56 | 36 | 32 | 33 | 64 | 95 | 128 | 158 | 179 | 189 | 189 | 185 | 176 | 164 | 3338 | 139 | 3498 | 140 | |
| 22 | 160 | 163 | 172 | 180 | 189 | 194 | 186 | 167 | 138 | 102 | 68 | 42 | 24 | 23 | 39 | 65 | 93 | 125 | 151 | 170 | 176 | 173 | 165 | 156 | 3121 | 130 | 3262 | 130 | |
| 23 | 141 | 141 | 156 | 168 | 181 | 191 | 190 | 182 | 161 | 129 | 96 | 63 | 40 | 28 | 32 | 42 | 76 | 105 | 132 | 151 | 160 | 162 | 157 | 148 | 3032 | 126 | 3171 | 127 | |
| 24 | 139 | 135 | 139 | 149 | 163 | 177 | 182 | 181 | 172 | 150 | 121 | 90 | 63 | 47 | 39 | 49 | 68 | 91 | 114 | 135 | 149 | 154 | 152 | 145 | 3004 | 125 | 3141 | 126 | |
| 25 | 137 | 129 | 127 | 131 | 143 | 160 | 169 | 175 | 173 | 162 | 142 | 115 | 87 | 67 | 58 | 59 | 69 | 82 | 99 | 120 | 138 | 142 | 140 | 133 | 2957 | 123 | 3082 | 123 | |
| 26 | 125 | 116 | 111 | 107 | 114 | 127 | 140 | 148 | 157 | 159 | 146 | 132 | 113 | 98 | 85 | 80 | 82 | 88 | 106 | 122 | 133 | 138 | 142 | 137 | 2906 | 121 | 3034 | 121 | |
| 27 | 128 | 118 | 105 | 97 | 98 | 103 | 109 | 118 | 127 | 133 | 133 | 127 | 120 | 110 | 104 | 97 | 100 | 100 | 107 | 120 | 130 | 136 | 142 | 142 | 2804 | 117 | 2937 | 117 | |
| 28 | 133 | 125 | 119 | 110 | 101 | 101 | 107 | 112 | 118 | 128 | 133 | 138 | 141 | 139 | 139 | 138 | 135 | 136 | 139 | 145 | 151 | 155 | 158 | 157 | 3158 | 132 | 3311 | 132 | |
| 29 | 153 | 144 | 135 | 125 | 116 | 104 | 100 | 102 | 104 | 107 | 114 | 121 | 130 | 138 | 143 | 148 | 149 | 149 | 149 | 153 | 155 | 155 | 157 | 158 | 3209 | 134 | 3368 | 135 | |
| 30 | 159 | 154 | 148 | 140 | 129 | 118 | 108 | 98 | 94 | 94 | 100 | 107 | 121 | 134 | 148 | 159 | 170 | 170 | 168 | 170 | 168 | 169 | 165 | 169 | 3360 | 140 | 3532 | 141 | |
| 31 | 172 | 167 | 165 | 160 | 152 | 139 | 123 | 108 | 96 | 89 | 91 | 93 | 105 | 125 | 142 | 156 | 171 | 178 | 178 | 175 | 172 | 168 | 162 | 163 | 3450 | 140 | | | |
| SUM | 4674 | 4670 | 4736 | 4736 | 4346 | 3921 | 3145 | 2776 | 3169 | 4020 | 4706 | 4983 | 4817 | | | | | | | | | | | | TOTAL | | | | |
| | | 4635 | 4704 | 4711 | 4260 | 3524 | 2875 | 2865 | 3567 | 4315 | 4798 | 4934 | 4745 | | | | | | | | | | | | 100459 | | | | |
| MEAN | 151 | 151 | 153 | 140 | 126 | 101 | 90 | 102 | 130 | 152 | 161 | 155 | | | | | | | | | | | | | MONTHLY MEAN | | | | |
| | | 150 | 152 | 152 | 137 | 114 | 93 | 92 | 115 | 139 | 154 | 159 | 153 | | | | | | | | | | | | 135.0 | | | | |

Station : SYOWA STATION
 Latitude : 69° 00' 28" S
 Longitude : 39° 34' 13" E
 Duration : Jan. 1~Jan. 31 1992
 Unit : CENTIMETER

| DATE | TIME | | | | | | | | | | | | | | | | | | | | | | | (2 4 H) | | (2 5 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 | 167 | 163 | 165 | 163 | 154 | 142 | 125 | 105 | 85 | 70 | 65 | 65 | 74 | 93 | 113 | 138 | 158 | 167 | 174 | 173 | 167 | 161 | 158 | 156 | 3201 | 133 | 3361 | 134 | | |
| 2 | 160 | 163 | 169 | 171 | 169 | 160 | 145 | 126 | 102 | 81 | 67 | 62 | 69 | 86 | 108 | 135 | 159 | 174 | 182 | 184 | 180 | 171 | 160 | 160 | 3343 | 139 | 3503 | 140 | | |
| 3 | 160 | 164 | 172 | 176 | 178 | 173 | 159 | 137 | 112 | 88 | 65 | 51 | 52 | 66 | 87 | 115 | 142 | 160 | 172 | 178 | 175 | 164 | 153 | 147 | 3246 | 135 | 3393 | 136 | | |
| 4 | 147 | 152 | 160 | 169 | 173 | 175 | 165 | 160 | 122 | 93 | 67 | 50 | 45 | 51 | 72 | 98 | 126 | 155 | 170 | 174 | 175 | 166 | 153 | 145 | 3163 | 132 | 3304 | 132 | | |
| 5 | 141 | 145 | 157 | 167 | 177 | 182 | 179 | 165 | 142 | 114 | 84 | 60 | 49 | 52 | 69 | 94 | 120 | 147 | 167 | 176 | 176 | 167 | 156 | 147 | 3233 | 135 | 3374 | 135 | | |
| 6 | 141 | 140 | 147 | 163 | 178 | 184 | 186 | 178 | 158 | 131 | 101 | 76 | 57 | 52 | 65 | 85 | 111 | 135 | 158 | 170 | 175 | 167 | 155 | 142 | 3255 | 136 | 3389 | 136 | | |
| 7 | 134 | 129 | 134 | 146 | 162 | 176 | 180 | 175 | 161 | 140 | 110 | 83 | 65 | 55 | 59 | 76 | 100 | 124 | 145 | 160 | 169 | 162 | 151 | 142 | 3138 | 131 | 3268 | 131 | | |
| 8 | 130 | 124 | 125 | 135 | 152 | 166 | 178 | 178 | 171 | 155 | 129 | 104 | 85 | 70 | 69 | 82 | 103 | 124 | 145 | 160 | 169 | 169 | 158 | 144 | 3225 | 134 | 3360 | 134 | | |
| 9 | 135 | 125 | 122 | 128 | 144 | 160 | 173 | 179 | 178 | 167 | 144 | 123 | 104 | 87 | 83 | 87 | 103 | 123 | 142 | 158 | 164 | 167 | 159 | 147 | 3302 | 138 | 3437 | 137 | | |
| 10 | 135 | 124 | 118 | 118 | 129 | 144 | 156 | 165 | 167 | 160 | 149 | 131 | 115 | 102 | 94 | 94 | 105 | 121 | 135 | 148 | 159 | 162 | 153 | 143 | 3227 | 134 | 3358 | 134 | | |
| 11 | 131 | 123 | 112 | 105 | 115 | 124 | 135 | 146 | 156 | 154 | 151 | 139 | 128 | 118 | 111 | 111 | 116 | 128 | 141 | 152 | 162 | 166 | 160 | 154 | 3238 | 135 | 3379 | 135 | | |
| 12 | 141 | 126 | 129 | 107 | 105 | 115 | 122 | 127 | 138 | 143 | 142 | 135 | 131 | 128 | 124 | 123 | 128 | 134 | 142 | 153 | 155 | 160 | 159 | 152 | 3219 | 134 | 3361 | 134 | | |
| 13 | 142 | 129 | 118 | 109 | 103 | 103 | 104 | 110 | 119 | 124 | 127 | 130 | 131 | 132 | 133 | 138 | 141 | 143 | 150 | 154 | 158 | 153 | 158 | 155 | 3164 | 132 | 3309 | 132 | | |
| 14 | 145 | 133 | 124 | 116 | 105 | 99 | 95 | 97 | 101 | 105 | 109 | 116 | 124 | 133 | 142 | 151 | 159 | 162 | 166 | 166 | 171 | 171 | 168 | 165 | 3223 | 134 | 3386 | 135 | | |
| 15 | 163 | 158 | 143 | 135 | 124 | 111 | 102 | 95 | 90 | 89 | 92 | 102 | 114 | 128 | 142 | 159 | 169 | 173 | 177 | 175 | 173 | 168 | 166 | 162 | 3310 | 138 | 3470 | 139 | | |
| 16 | 160 | 156 | 150 | 142 | 131 | 119 | 102 | 86 | 71 | 63 | 62 | 67 | 79 | 98 | 122 | 142 | 160 | 174 | 177 | 176 | 174 | 167 | 163 | 161 | 3102 | 129 | 3262 | 130 | | |
| 17 | 160 | 161 | 160 | 157 | 150 | 139 | 119 | 96 | 75 | 57 | 47 | 48 | 59 | 79 | 108 | 135 | 160 | 180 | 189 | 193 | 188 | 178 | 168 | 164 | 3170 | 132 | 3334 | 133 | | |
| 18 | 164 | 167 | 168 | 173 | 173 | 161 | 144 | 118 | 88 | 63 | 43 | 31 | 33 | 52 | 78 | 111 | 142 | 167 | 181 | 190 | 185 | 174 | 164 | 157 | 3127 | 130 | 3282 | 131 | | |
| 19 | 155 | 160 | 168 | 178 | 180 | 180 | 170 | 145 | 113 | 78 | 41 | 25 | 31 | 43 | 55 | 106 | 154 | 172 | 179 | 142 | 157 | 171 | 134 | 138 | 3075 | 128 | 3215 | 129 | | |
| 20 | 140 | 195 | 151 | 163 | 170 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 24 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | 139 | 123 | 107 | 94 | 95 | 101 | 106 | 118 | 131 | 137 | 142 | 143 | 139 | 141 | 142 | 142 | 145 | 151 | 160 | 170 | 175 | 174 | 172 | 162 | 3309 | 138 | 3461 | 138 | | |
| 27 | 152 | 136 | 124 | 111 | 103 | 99 | 100 | 104 | 108 | 115 | 122 | 126 | 130 | 135 | 142 | 150 | 155 | 160 | 166 | 171 | 175 | 175 | 170 | 166 | 3295 | 137 | 3455 | 138 | | |
| 28 | 160 | 150 | 141 | 128 | 122 | 115 | 106 | 100 | 101 | 103 | 104 | 111 | 120 | 129 | 142 | 152 | 163 | 169 | 171 | 175 | 176 | 173 | 170 | 167 | 3348 | 140 | 3511 | 140 | | |
| 29 | 163 | 157 | 151 | 142 | 134 | 126 | 113 | 101 | 93 | 87 | 87 | 90 | 99 | 114 | 132 | 148 | 161 | 171 | 175 | 174 | 171 | 168 | 163 | 160 | 3280 | 137 | 3440 | 138 | | |
| 30 | 160 | 160 | 158 | 154 | 149 | 141 | 124 | 108 | 93 | 81 | 75 | 74 | 84 | 100 | 120 | 141 | 162 | 174 | 178 | 178 | 175 | 167 | 160 | 158 | 3274 | 136 | 3433 | 137 | | |
| 31 | 159 | 161 | 163 | 165 | 164 | 159 | 142 | 124 | 102 | 85 | 72 | 67 | 73 | 87 | 109 | 138 | 160 | 175 | 183 | 183 | 178 | 169 | 160 | 154 | 3332 | 139 | | | | |