

Meteorological and oceanographic data along the traverse routes over sea ice in Lützow-Holm Bay in 2002 (JARE-43)

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1. Introduction

Several small traverse expeditions were carried out over sea ice in Lützow-Holm Bay all the year round but the mid summer season around Syowa Station, for various observations, such as biology, geophysics, glaciology and so on, as well as the logistic maintenance. Every traverse routes were traced to avoid icebergs and unstable sea ice area.

In this report, we present the positions of various routes over sea ice as well as the results for meteorological, oceanographic and glaciological observations by the 43rd Japanese Antarctic Expedition (JARE-43). Mr. Nobuhiko Kizu compiled the report as the field leader in chief around coastal area near Syowa Station with Dr. Kokichi Kamiyama, the leader of the wintering party. Mr. Nobuhiko Kizu is also responsible for the field observation also as the leader of meteorological section in Syowa Station.

2. Traverse routes in Lützow-Holm Bay

In 2002, many traverse routes over the Sôya coastal area, as shown in Fig. 1, were traced out by JARE-43, which connected Syowa Station to several coastal areas and islands on sea ice.

Each traverse route was shown in Figs. 2, 3, 4 and 5 with the stakes as marker points. The GPS points of every stakes were also shown in Table 1. Mr. Nobuhiko Kizu is also responsible for GPS positioning of all routes but Route L, as shown in Fig. 2, by Dr. Hiroyuki Wakabayashi traced for land truth for satellite measurements.

3. Field observations on the traverse routes

During the traverses over sea ice from April to November, we observed ice thickness, stake height, snow depth, air temperature, ice temperature (10 cm, 50 cm below) and seawater temperature (used ND500 series by CHINO) along the main

routes.

Ice thickness along the routes was shown in Table 2. The length of stakes above surface was shown in Table 3 as the height of stakes, which is available net balance of sea ice and snow cover. The snow depth over sea ice is also available in Table 4.

In October and November, the temperatures of air, and of snow and ice 10 cm and 50 cm below ice surface at main points along the routes were observed as was shown in Tables 5, 6 and 7. The ice surface was opened by making the pit when sea ice was covered by snow. The temperature of sea water was also observed in November as was shown in Table 8.

During the same term, air temperature, wind-direction, wind-speed, air pressure and humidity are automatically observed by MAWS system at SL55, the point of which was shown in Fig. 5. These data are shown in Table 9 as daily summaries and in Table 10 as hourly synoptic data. The meteorological observations were also carried out at 06, 12 and 18 LT in each traverse and the results are shown in Table 11.

3. Instrument

The instruments used during the expeditions are listed here.

3.1. Glaciological instruments

Item	Instrument	Accuracy
Ice thickness	Tape measurement	
Stake height	Stake measurement	
Snow depth	Stake measurement	
Air temperature	Platinum resistance	-50~+300 (°C) ±0.1%
Ice temperature	Platinum resistance	-50~+300 (°C) ±0.1%
Seawater temperature	Platinum resistance	-50~+300 (°C) ±0.1%

3.2. Meteorological instruments

a) At SL55 observation (Tables 9 and 10)

Item	Instrument	Accuracy
Air pressure	Electronic barometer 600 - 1100 (hPa) (silicon capsule capacitance sensor)	± 0.3 hPa
Air temperature	Platinum resistance $-40\sim+60$ ($^{\circ}\text{C}$) in ventilated shield	$\pm 0.3^{\circ}\text{C}$
Hygrometer	Electronic hygrometer 0 - 100 (%) (polymer film capacitance sensor) in ventilated shield	$\pm 2\%$ (0-90%) $\pm 3\%$ (90-100%)
Wind vane and anemometer	Windmill type 0 - 60 (m/s) (lower motive limit 0.5 m/s) 0 - 360 (degree)	± 0.3 m/s (<10 m/s) <2% (>10 m/s) $\pm <3$ (degree)

b) During traverse observation (Tables 9, 10 and 11)

Item	Instrument	Accuracy
Air pressure	Aneroid gauge	± 1 hPa
Air temperature	Sling type glass thermometer	$\pm 0.5^{\circ}\text{C}$
Wind direction	Magnetic compass	$\pm 0.5^{\circ}\text{C}$
Wind speed	Portable 3-cup anemometer	± 0.5 m/s
Visibility	Visual observation	
Cloud amount	Visual observation	
Weather	Visual observation	
Individual cloud	Visual observation	

4. Notations appeared in Tables

The notations used in the tables are as follows.

Daily summaries at SL55 (JARE-43 traverse route point) on the sea ice in Table 9;

Pstn : Daily mean surface pressure for hourly observations;

Tm : Daily mean temperature for hourly observations;
 Tx, Tn : Daily maximum, minimum temperature;
 H : Daily mean relative humidity for hourly observations;
 Vm : Daily mean (scalar) of wind speed obtained from 24-hour wind run;
 Vx : Daily maximum wind speed;
 Gust : Daily maximum gust wind speed.

Surface synoptic data at SL55 (JARE-43 traverse route point) on the sea ice in Table 10.

MN DYL T: Local Standard Time (UTC+3 hr) in month, day and hour;
 Pstn : Surface pressure;
 T : Air temperature;
 Td : Dew-point temperature;
 H : Relative humidity;
 D : Wind direction in 16 directions;
 (When the wind speed is less than 0.3 m/s, shown by '-')
 V : Wind speed (10-minute mean);
 Vx : Hourly maximum wind speed;
 GUST : Hourly maximum gust speed.

Surface synoptic data observed on traverse in Table 11.

LST : Local standard time at Syowa Station (UTC + 3 hr);
 Point : Traverse route point;
 Pa : Air pressure (hPa);
 Ta : Air temperature (°C);
 WD : Wind direction in 16 directions;
 (When the wind speed is less than 3 m/s, shown by '-')
 WS : Wind speed (m/s);
 (When the wind speed is less than 3 m/s, shown by 'Calm')
 V : Visibility (km);
 N : Cloud amount (in tenth);
 W : Weather;
 CL Clear
 FN Fine
 HC Cloudy (upper cloud are predominant)
 CD Cloudy

SN Snow
CL : Individual cloud amount and type;
AP : Atmospheric phenomena.
SN Snow
BS Blowing snow

Acknowledgments

The expeditions were carried out by the contributions of many members of wintering party of JARE-43 and express here sincere thanks to all the members of JARE-43.

Reference

National Institute of Polar Research (2003): Nihon Nankyoku Chiiki Kansokutai Dai-43-ji-tai Houkoku. 2001-2003 (Report of the 43rd Japanese Antarctic Research Expedition 2001-2003). Tokyo, 533 p. (in Japanese).

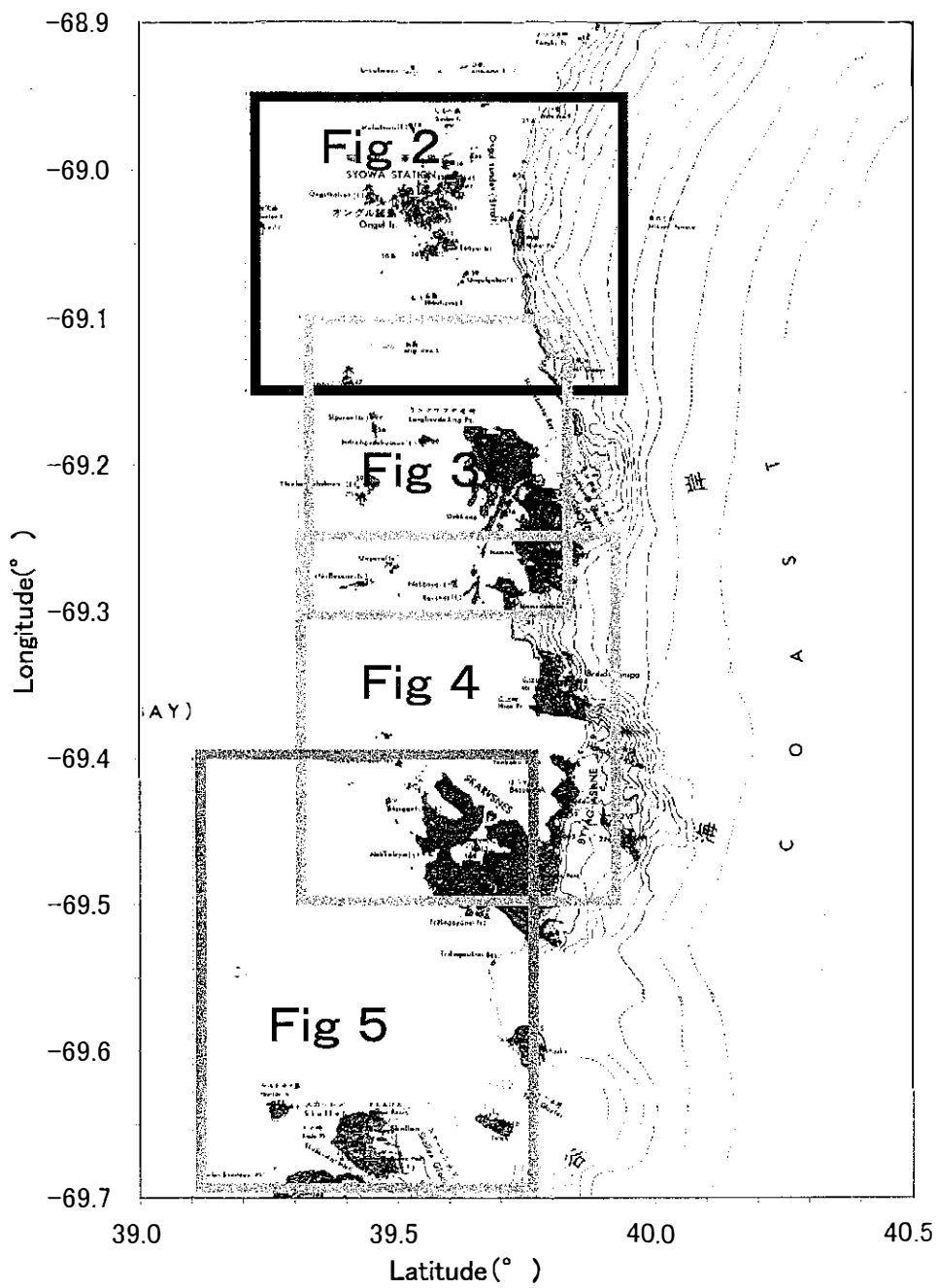


Fig. 1. Map of the Sôya Coast.

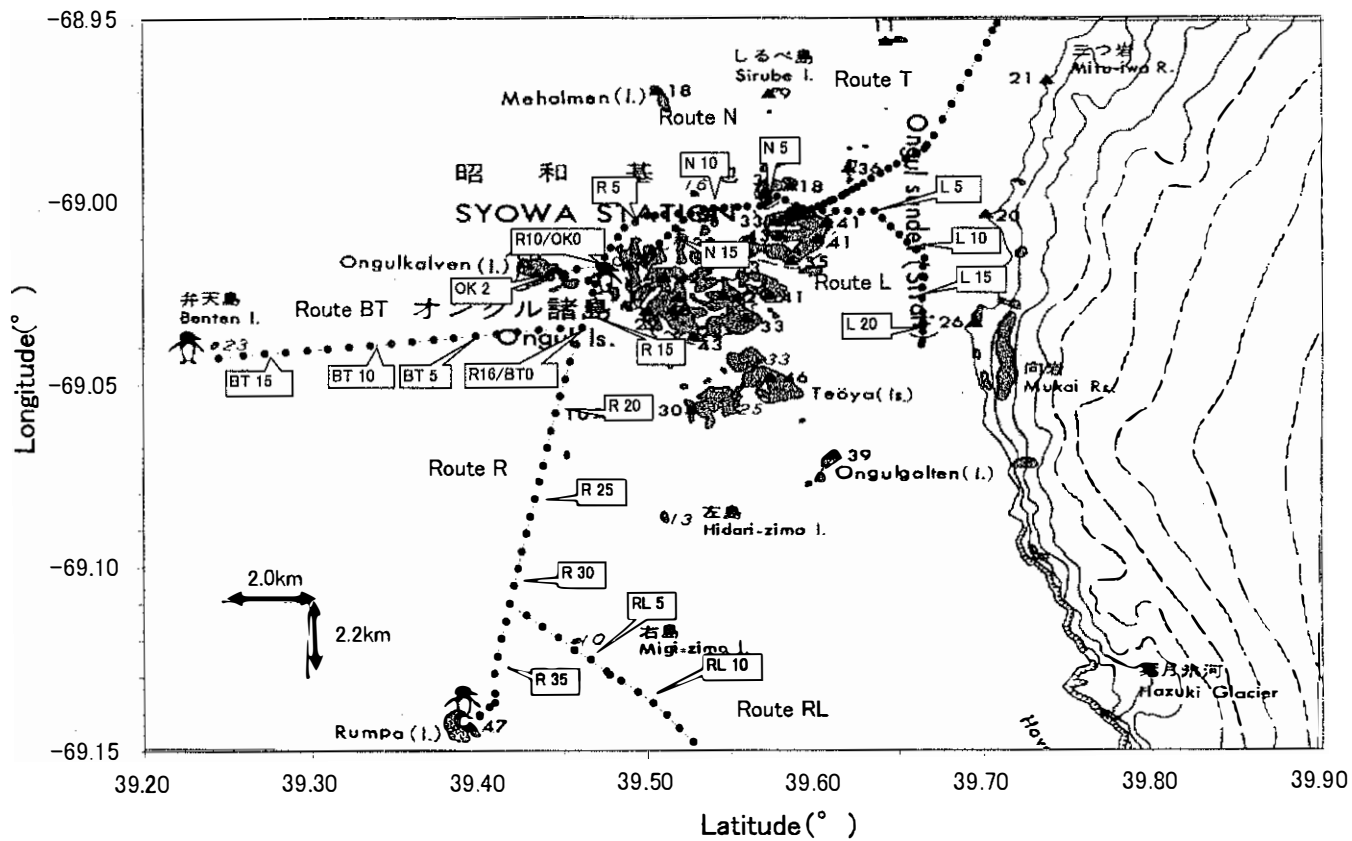


Fig. 2. Map of traverse route along the Sôya Coast (Part 1).

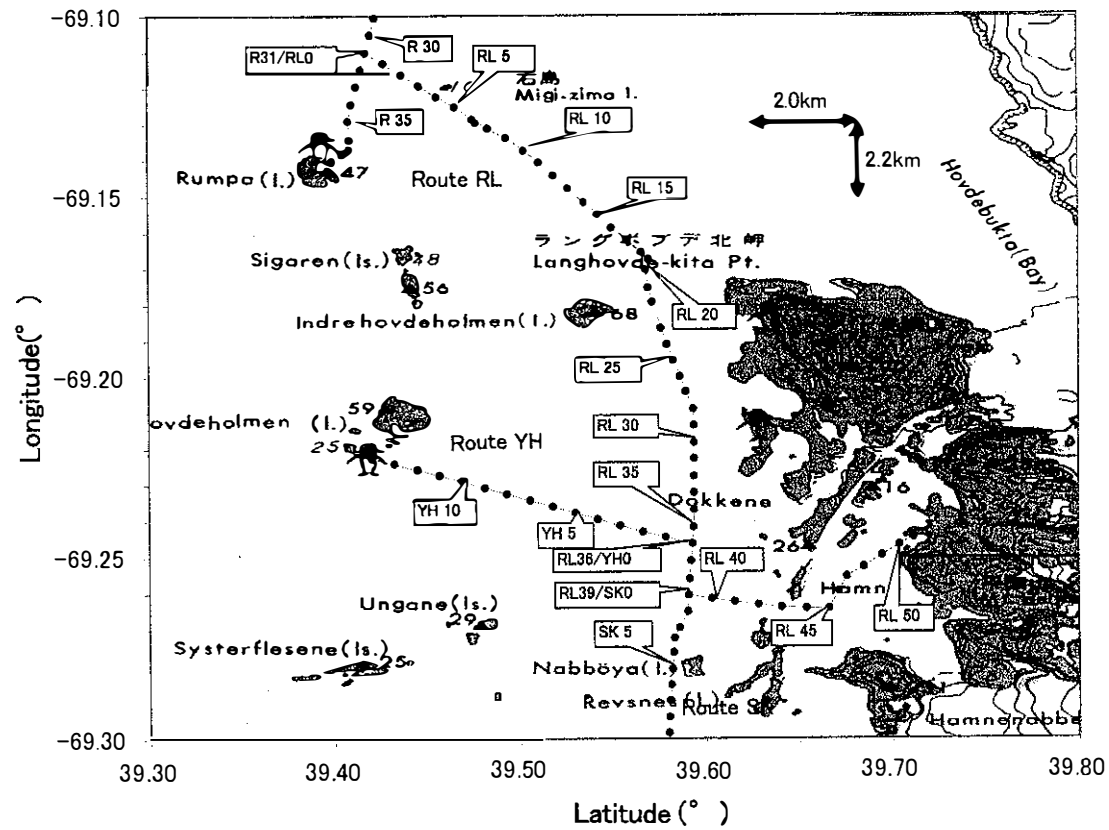


Fig. 3. Map of traverse route along the Sōya Coast (Part 2).

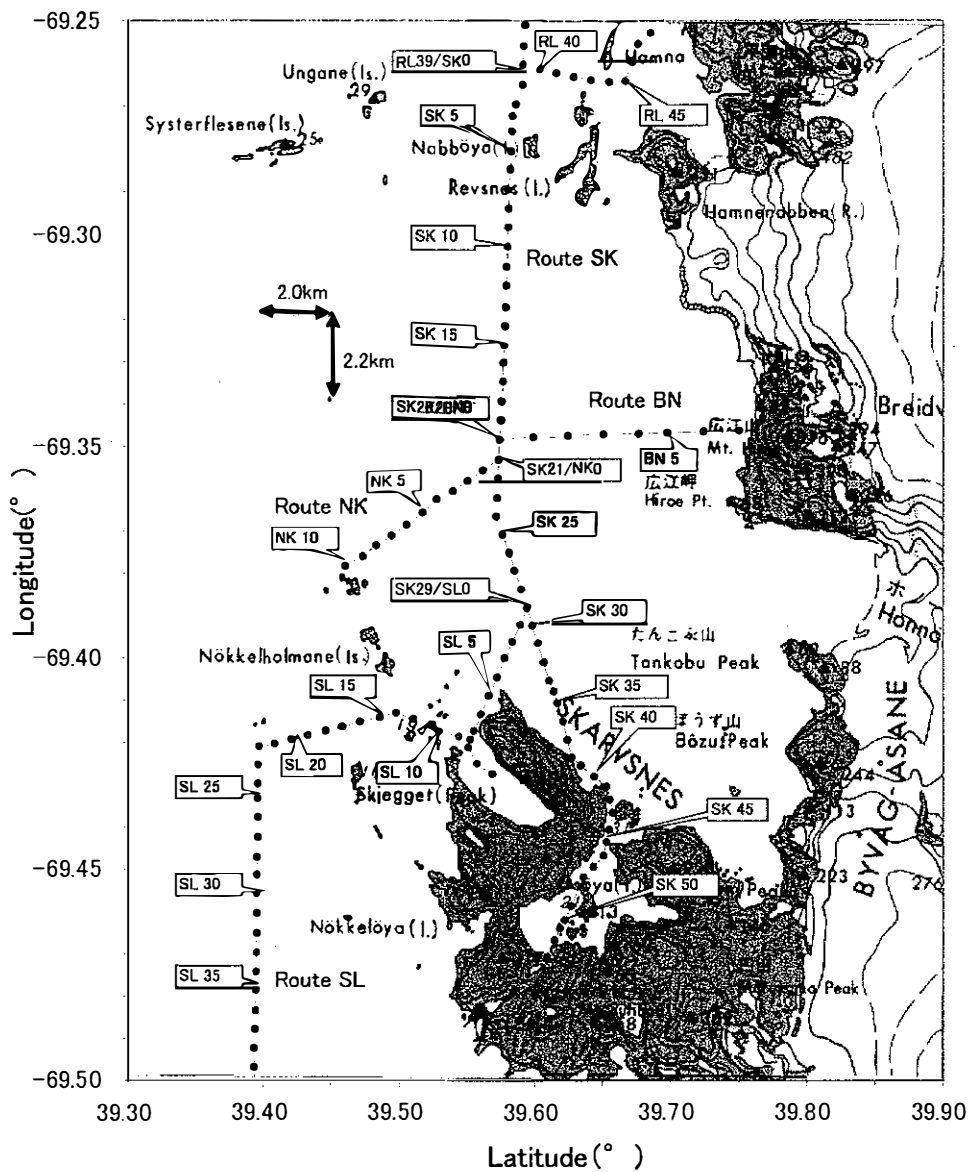


Fig. 4. Map of traverse route along the Sôya Coast (Part 3).

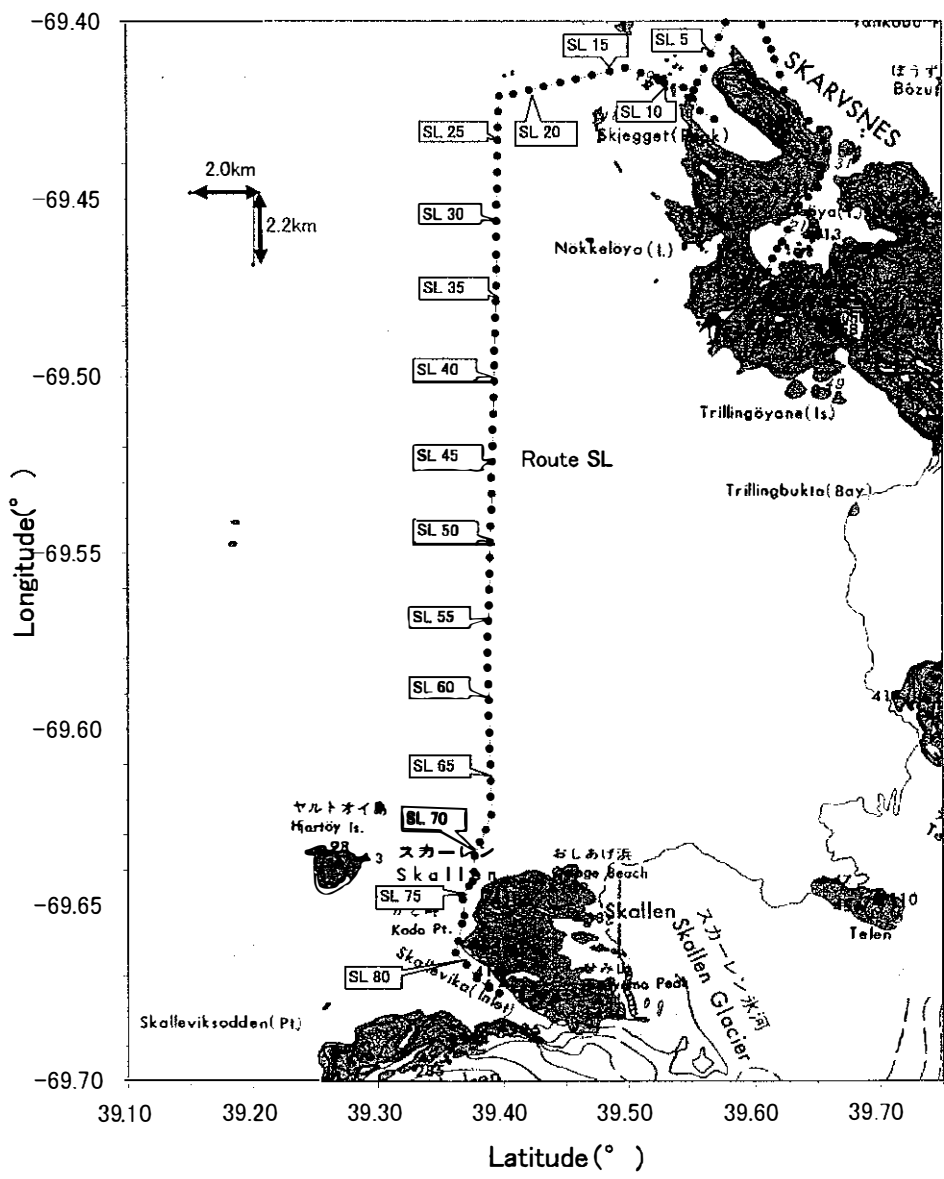


Fig. 5. Map of traverse route along the Sōya Coast (Part 4).

Table 1. Position of the traverse routes traced by JARE-43.

Route N(To Nishi-ongul Is.)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
N0	69 00.157	39 35.126	0.35
N1	69 00.073	39 35.364	0.56
N2	68 59.976	39 34.961	0.64
N3	68 59.917	39 34.673	0.76
N4	69 00.004	39 34.370	0.67
N5	69 00.055	39 34.195	0.67
N6	69 00.072	39 34.073	0.70
N7	69 00.083	39 33.599	0.95
N8	69 00.091	39 33.259	1.15
N9	69 00.103	39 32.782	1.15
N10	69 00.113	39 32.390	1.70
N11	69 00.121	39 32.038	1.92
N12/R0	69 00.192	39 31.589	2.20
N13	69 00.301	39 31.322	2.37
N14	69 00.435	39 31.031	2.57
N15	69 00.559	39 30.760	2.78
N16	69 00.689	39 30.459	3.02
N17	69 00.815	39 30.198	3.25

Route R(To Rumpa Is.)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
N12/R0	69 00.192	39 31.589	2.20
R1	69 00.197	39 31.123	2.51
R2	69 00.215	39 30.632	2.83
R3	69 00.225	39 30.315	3.04
R4	69 00.232	39 30.013	3.24
R5	69 00.337	39 29.598	3.52
R6	69 00.425	39 29.205	3.78
R7	69 00.579	39 28.973	3.96
R8	69 00.759	39 28.718	4.18
R9	69 00.907	39 28.495	4.39
R10/OK0	69 01.055	39 28.290	4.60
R11	69 01.294	39 27.904	4.99
R12	69 01.353	39 28.155	4.87
R13	69 01.496	39 28.071	5.03
R14	69 01.714	39 27.928	5.30
R15/BT0	69 02.067	39 27.684	5.79
R16	69 02.343	39 27.465	6.21
R17	69 02.623	39 27.246	6.65
R18	69 02.903	39 27.074	7.09
R19	69 03.192	39 26.888	7.54
R20	69 03.474	39 26.723	7.99
R21	69 03.760	39 26.553	8.47
R22	69 04.036	39 26.412	8.92
R23	69 04.323	39 26.266	9.40
R24	69 04.595	39 26.125	9.86
R25	69 04.877	39 25.973	10.34
R26	69 05.169	39 25.810	10.85
R27	69 05.457	39 25.664	11.35
R28	69 05.744	39 25.507	11.86
R29	69 06.035	39 25.360	12.37
R30	69 06.312	39 25.218	12.86
R31/RLO	69 06.604	39 25.070	13.36
R32	69 06.893	39 24.919	13.91
R33	69 07.174	39 24.769	14.41
R34	69 07.462	39 24.612	14.94
R35	69 07.743	39 24.500	15.44
R36	69 08.058	39 24.541	15.95
R37	69 08.218	39 24.514	16.23
R38	69 08.294	39 24.302	16.41
R39	69 08.419	39 23.955	16.72

Route L(To Mukaiwai)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
N0	69 00.157	39 35.123	0.35
L1	69 00.148	39 35.264	0.45
L2	69 00.161	39 35.445	0.57
L3	69 00.175	39 35.624	0.69
L0/T4	69 00.144	39 35.822	0.84
L1	69 00.150	39 36.292	1.15
L2	69 00.158	39 36.755	1.46
L3	69 00.157	39 37.198	1.76
L4	69 00.172	39 37.672	2.07
L5	69 00.155	39 38.150	2.39
L6	69 00.278	39 38.418	2.68
L7	69 00.412	39 38.718	3.01
L8	69 00.544	39 39.027	3.33
L9	69 00.669	39 39.310	3.63
L10	69 00.794	39 39.621	3.93
L11	69 00.934	39 39.919	4.27
L12	69 01.075	39 39.867	4.52
L13	69 01.246	39 39.868	4.85
L14	69 01.417	39 39.844	5.16
L15	69 01.592	39 39.837	5.49
L16	69 01.739	39 39.851	5.92
L17	69 01.823	39 39.852	6.36
L18	69 01.985	39 39.862	6.66
L19	69 02.142	39 39.860	6.95
L20	69 02.303	39 39.838	7.25
L21	69 02.357	39 39.833	7.35

Route OK(To Ongulkalven Is.)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
R10/OK0	69 01.055	39 28.290	4.60
OK1	69 01.104	39 27.494	5.13
OK2	69 01.148	39 26.884	5.54

Route RL(To Langhovde)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
R31/RL0	69° 06.604	39° 25.070	13.36
RL1	69° 06.788	39° 25.652	13.51
RL2	69° 06.976	39° 26.235	13.65
RL3	69° 07.161	39° 26.797	13.81
RL4	69° 07.341	39° 27.372	13.98
RL5	69° 07.518	39° 27.958	14.16
RL6	69° 07.714	39° 28.519	14.39
RL7	69° 07.771	39° 28.633	14.47
RL8	69° 07.864	39° 29.027	14.56
RL9	69° 08.044	39° 29.603	14.79
RL10	69° 08.232	39° 30.181	15.04
RL11	69° 08.439	39° 30.669	15.36
RL12	69° 08.656	39° 31.140	15.70
RL13	69° 08.869	39° 31.615	16.05
RL14	69° 09.097	39° 32.121	16.43
RL15	69° 09.301	39° 32.559	16.78
RL16	69° 09.513	39° 33.019	17.15
RL17	69° 09.734	39° 33.513	17.54
RL18	69° 09.946	39° 33.972	17.92
RL19	69° 10.055	39° 34.206	18.12
RL20	69° 10.233	39° 34.110	18.45
RL21	69° 10.510	39° 34.192	18.96
RL22	69° 10.789	39° 34.341	19.48
RL23	69° 11.190	39° 34.580	20.22
RL24	69° 11.458	39° 34.784	20.72
RL25	69° 11.726	39° 34.992	21.22
RL26	69° 11.998	39° 35.202	21.73
RL27	69° 12.260	39° 35.402	22.21
RL28	69° 12.535	39° 35.620	22.73
RL29	69° 12.805	39° 35.635	23.23
RL30	69° 13.097	39° 35.640	23.77
RL31	69° 13.363	39° 35.644	24.27
RL32	69° 13.658	39° 35.636	24.82
RL33	69° 13.932	39° 35.636	25.33
RL34	69° 14.211	39° 35.632	25.85
RL35	69° 14.505	39° 35.615	26.39
RL36/YH0	69° 14.777	39° 35.584	26.90
RL37	69° 15.062	39° 35.529	27.43
RL38	69° 15.358	39° 35.478	27.98
RL39/SK0	69° 15.628	39° 35.445	28.48
RL40	69° 15.686	39° 36.197	28.60
RL41	69° 15.740	39° 36.926	28.72
RL42	69° 15.788	39° 37.700	28.83
RL43	69° 15.832	39° 38.443	28.95
RL44	69° 15.852	39° 39.254	29.04
RL45	69° 15.849	39° 39.976	29.08
RL46	69° 15.567	39° 40.288	28.59
RL47	69° 15.323	39° 40.548	28.16
RL48	69° 15.167	39° 41.095	27.92
RL49	69° 14.978	39° 41.686	27.64
RL50	69° 14.794	39° 42.256	27.37
RL51	69° 14.673	39° 42.706	27.20

Route YH(To Yrehovdeholmen Is.)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
RL36/YH0	69° 14.777	39° 35.584	26.90
YH1	69° 14.671	39° 34.715	26.70
YH2	69° 14.587	39° 33.981	26.55
YH3	69° 14.481	39° 33.240	26.36
YH4	69° 14.373	39° 32.519	26.19
YH5	69° 14.265	39° 31.793	26.02
YH6	69° 14.162	39° 31.067	25.87
YH7	69° 14.059	39° 30.335	25.73
YH8	69° 13.955	39° 29.599	25.60
YH9	69° 13.852	39° 28.880	25.48
YH10	69° 13.749	39° 28.142	25.38
YH11	69° 13.649	39° 27.420	25.28
YH12	69° 13.554	39° 26.700	25.21
YH13	69° 13.452	39° 25.959	25.13
YH14	69° 13.355	39° 25.225	25.08

Route SK(To Skarvsnes)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
RL39/SK0	69° 15.628	39° 35.445	28.48
SK1	69° 15.901	39° 35.418	28.99
SK2	69° 16.165	39° 35.149	29.48
SK3	69° 16.335	39° 34.978	29.79
SK4	69° 16.572	39° 34.948	30.23
SK5	69° 16.849	39° 34.913	30.75
SK6	69° 17.106	39° 34.869	31.23
SK7	69° 17.366	39° 34.833	31.71
SK8	69° 17.644	39° 34.803	32.23
SK9	69° 17.907	39° 34.784	32.71
SK10	69° 18.178	39° 34.756	33.22
SK11	69° 18.454	39° 34.727	33.73
SK12	69° 18.727	39° 34.702	34.24
SK13	69° 18.998	39° 34.674	34.74
SK14	69° 19.266	39° 34.639	35.24
SK15	69° 19.538	39° 34.609	35.75
SK16	69° 19.811	39° 34.579	36.26
SK17	69° 20.084	39° 34.558	36.77
SK18	69° 20.361	39° 34.513	37.28
SK19	69° 20.630	39° 34.470	37.78
SK20/BNO	69° 20.903	39° 34.418	38.29
SK21/NKO	69° 21.175	39° 34.386	38.80
SK22	69° 21.457	39° 34.336	39.32
SK23	69° 21.733	39° 34.295	39.83
SK24	69° 21.989	39° 34.265	40.31
SK25	69° 22.253	39° 34.556	40.80
SK26	69° 22.512	39° 34.851	41.28
SK27	69° 22.772	39° 35.106	41.76
SK28	69° 23.033	39° 35.376	42.25
SK29/SLO	69° 23.298	39° 35.640	42.75
SK30	69° 23.547	39° 35.874	43.21
SK31	69° 23.804	39° 36.127	43.69
SK32	69° 24.066	39° 36.382	44.18
SK33	69° 24.324	39° 36.623	44.67
SK34	69° 24.477	39° 36.828	44.95
SK35	69° 24.642	39° 36.984	45.26
SK36	69° 24.902	39° 37.241	45.75
SK37	69° 25.165	39° 37.434	46.25
SK38	69° 25.417	39° 37.623	46.72
SK39	69° 25.529	39° 38.028	46.94
SK40	69° 25.685	39° 38.627	47.25
SK41	69° 25.828	39° 39.176	47.53
SK42	69° 26.017	39° 39.318	47.89
SK43	69° 26.199	39° 39.451	48.23
SK44	69° 26.442	39° 39.295	48.68
SK45	69° 26.617	39° 39.174	49.00
SK46	69° 26.810	39° 39.049	49.35
SK47	69° 26.967	39° 38.591	49.63
SK48	69° 27.115	39° 38.151	49.89
SK49	69° 27.525	39° 37.600	50.64
SK50	69° 27.725	39° 37.326	51.00
SK51	69° 27.837	39° 37.101	51.21
SK52	69° 28.010	39° 36.865	51.52
SK53	69° 28.245	39° 36.535	51.96

Route NK(To Nokkelholmane Is.)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
SK21/NKO	69° 21.175	39° 34.386	38.80
NK1	69° 21.338	39° 33.673	39.11
NK2	69° 21.488	39° 33.011	39.40
NK3	69° 21.633	39° 32.374	39.68
NK4	69° 21.746	39° 31.627	39.91
NK5	69° 21.938	39° 31.036	40.29
NK6	69° 22.110	39° 30.334	40.64
NK7	69° 22.265	39° 29.660	40.97
NK8	69° 22.404	39° 28.994	41.26
NK9	69° 22.557	39° 28.337	41.59
NK10	69° 22.699	39° 27.670	41.90

Route SL(To Skallen) Part1

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
SK29/SLO	69 23.298	39 35.640	42.75
SL1	69 23.533	39 35.329	43.18
SL2	69 23.783	39 34.989	43.64
SL3	69 24.023	39 34.655	44.09
SL4	69 24.276	39 34.315	44.56
SL5	69 24.550	39 33.932	45.08
SL6	69 24.803	39 33.599	45.55
SL7	69 25.045	39 33.290	45.99
SL8/SG0	69 25.163	39 33.131	46.23
SL9	69 25.120	39 32.631	46.16
SL10	69 25.043	39 31.744	46.04
SL11	69 24.997	39 31.492	45.96
SL12	69 24.951	39 31.390	45.88
SL13	69 24.868	39 30.622	45.75
SL14	69 24.784	39 29.865	45.63
SL15	69 24.844	39 29.147	45.78
SL16	69 24.910	39 28.294	45.95
SL17	69 24.977	39 27.524	46.12
SL18	69 25.037	39 26.781	46.29
SL19	69 25.103	39 25.986	46.47
SL20	69 25.160	39 25.279	46.64
SL21	69 25.227	39 24.523	46.83
SL22	69 25.264	39 23.837	46.97
SL23	69 25.523	39 23.793	47.45
SL24	69 25.792	39 23.769	47.95
SL25	69 26.004	39 23.762	48.34
SL26	69 26.271	39 23.753	48.83
SL27	69 26.550	39 23.751	49.34
SL28	69 26.825	39 23.735	49.85
SL29	69 27.089	39 23.726	50.33
SL30	69 27.361	39 23.724	50.83
SL31	69 27.634	39 23.710	51.34
SL32	69 27.920	39 23.704	51.87
SL33	69 28.183	39 23.691	52.35
SL34	69 28.462	39 23.679	52.87
SL35	69 28.726	39 23.664	53.35
SL36	69 29.004	39 23.654	53.87
SL37	69 29.270	39 23.631	54.36
SL38	69 29.549	39 23.615	54.88
SL39	69 29.819	39 23.597	55.37
SL40	69 30.087	39 23.584	55.87
SL41	69 30.356	39 23.559	56.37
SL42	69 30.641	39 23.540	56.89
SL43	69 30.899	39 23.526	57.37
SL44	69 31.179	39 23.513	57.89
SL45	69 31.447	39 23.490	58.39
SL46	69 31.727	39 23.472	58.90
SL47	69 31.992	39 23.450	59.39
SL48	69 32.269	39 23.428	59.91
SL49	69 32.532	39 23.407	60.39
SL50	69 32.807	39 23.383	60.90
SL51	69 33.083	39 23.364	61.41
SL52	69 33.356	39 23.348	61.92
SL53	69 33.624	39 23.328	62.42
SL54	69 33.901	39 23.306	62.93
SL55	69 34.167	39 23.284	63.42
SL56	69 34.428	39 23.266	63.90
SL57	69 34.705	39 23.273	64.42
SL58	69 34.967	39 23.21	64.90
SL59	69 35.244	39 23.285	65.41
SL60	69 35.514	39 23.302	65.91
SL61	69 35.788	39 23.310	66.41
SL62	69 36.062	39 23.331	66.92
SL63	69 36.343	39 23.346	67.44
SL64	69 36.606	39 23.372	67.92
SL65	69 36.888	39 23.381	68.44
SL66	69 37.161	39 23.402	68.94
SL67	69 37.438	39 23.425	69.45
SL68	69 37.689	39 23.151	69.94

continue

Route SL(To Skallen) Part2

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
SL69	69 37.943	39 22.876	70.43
SL70	69 38.177	39 22.621	70.88
SL71	69 38.440	39 22.556	71.37
SL72	69 38.594	39 22.519	71.66
SL73	69 38.679	39 22.342	71.83
SL74	69 38.842	39 21.998	72.15
SL75	69 38.907	39 22.043	72.27
SL76	69 39.178	39 22.107	72.77
SL77	69 39.336	39 22.005	73.07
SL78	69 39.614	39 21.819	73.59
SL79	69 39.813	39 21.693	73.97
SL80	69 40.020	39 22.225	74.31
SL81	69 40.249	39 22.714	74.70
SL82	69 40.418	39 23.301	74.97
SL83	69 40.503	39 23.786	75.10

Route SG(To Lanfjollen)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
SL8/SG0	69 25.163	39 33.131	46.23
SG1	69 25.281	39 33.048	46.45
SG2	69 25.507	39 33.436	46.87
SG3	69 25.655	39 34.113	47.13

Route BT(To Benten Is.)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
R15/BT0	69 02.067	39 27.684	5.79
BT1	69 02.083	39 26.905	6.26
BT2	69 02.104	39 26.136	6.70
BT3	69 02.140	39 25.366	7.18
BT4	69 02.170	39 24.619	7.65
BT5	69 02.202	39 23.873	8.12
BT6	69 02.237	39 23.087	8.63
BT7	69 02.267	39 22.369	9.09
BT8	69 02.298	39 21.600	9.58
BT9	69 02.330	39 20.865	10.06
BT10	69 02.359	39 20.106	10.55
BT11	69 02.388	39 19.359	11.03
BT12	69 02.414	39 18.590	11.53
BT13	69 02.443	39 17.859	12.01
BT14	69 02.471	39 17.085	12.51
BT15	69 02.488	39 16.338	12.99
BT16	69 02.515	39 15.576	13.49
BT17	69 02.561	39 14.688	14.08

Route BN(To Bredvognipa)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
SK20/BN0	69 20.903	39 34.418	38.29
BN1	69 20.871	39 35.917	38.23
BN2	69 20.848	39 37.462	38.22
BN3	69 20.826	39 39.063	38.25
BN4	69 20.809	39 40.592	38.30
BN5	69 20.799	39 41.873	38.38
BN6	69 20.788	39 43.445	38.49
BN7	69 20.771	39 45.019	38.63

Route T(To Tottuki Pt.)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
T0	69 00.160	39 35.123	0.34
T1	69 00.148	39 35.264	0.41
T2	69 00.161	39 35.445	0.48
T3	69 00.175	39 35.624	0.57
T4	69 00.144	39 35.822	0.71
T5	69 00.125	39 35.915	0.79
T6	69 00.079	39 36.141	0.96
T7	69 00.037	39 36.349	1.12
T8	68 59.996	39 36.552	1.27
T9	68 59.970	39 36.685	1.37
T10	68 59.903	39 36.986	1.62
T11	68 59.857	39 37.160	1.75
T12	68 59.805	39 37.361	1.92
T13	68 59.760	39 37.535	2.06
T14	68 59.699	39 37.750	2.24
T15	68 59.621	39 38.035	2.48
T16	68 59.540	39 38.362	2.74
T17	68 59.466	39 38.649	2.98
T18	68 59.390	39 38.944	3.22
T19	68 59.304	39 39.271	3.49
T20	68 59.215	39 39.619	3.78
T21	68 59.143	39 39.928	4.02
T22	68 59.078	39 40.030	4.15
T23	68 58.922	39 40.276	4.45
T24	68 58.664	39 40.586	4.90
T25	68 58.400	39 40.906	5.37
T26	68 58.153	39 41.216	5.85
T27	68 57.905	39 41.525	6.32
T28	68 57.652	39 41.847	6.81
T29	68 57.413	39 42.148	7.27
T30	68 57.216	39 42.383	7.65
T31	68 57.098	39 42.547	7.89
T32	68 56.916	39 42.808	8.26
T33	68 56.749	39 43.059	8.60
T34	68 56.687	39 43.268	8.78
T35	68 56.585	39 43.643	9.09
T36	68 56.381	39 44.344	9.68
T37	68 56.356	39 44.447	9.76
T38	68 56.272	39 44.753	10.01
T39	68 56.216	39 45.052	10.22
T40	68 56.136	39 45.431	10.50
T41	68 55.955	39 45.911	10.98
T42	68 55.727	39 46.371	11.49
T43	68 55.641	39 46.540	11.68
T44	68 55.513	39 46.809	11.98
T45	68 55.352	39 47.390	12.46
T46	68 55.299	39 47.603	12.63
T47	68 55.220	39 47.905	12.88
T48	68 55.148	39 47.990	13.02
T49	68 55.017	39 48.291	13.33
T50	68 54.938	39 48.609	13.58
T51	68 54.870	39 49.088	13.89
T52	68 54.824	39 49.400	14.10
T53	68 54.771	39 49.610	14.27

Route N.P(To S16)

Point	Latitude(S)	Longitude(E)	Distance from SYOWA St.(km)
N0	68 54.814	39 49.872	14.33
N1	68 54.906	39 49.924	14.23
N2	68 55.008	39 49.874	14.08
N3	68 55.101	39 49.870	13.95
N4	68 55.194	39 50.208	14.00
N5	68 55.238	39 50.384	14.03
N6	68 55.335	39 50.746	14.09
N7	68 55.388	39 50.891	14.10
N8	68 55.587	39 51.482	14.17
N9	68 55.709	39 52.011	14.31
N10	68 55.720	39 52.570	14.60
N11	68 55.715	39 52.810	14.73
N12	68 55.709	39 53.171	14.94
N13	68 55.778	39 53.365	14.97
N14	68 55.846	39 53.674	15.07
N15	68 55.949	39 54.048	15.17
N16	68 56.040	39 54.320	15.24
P14	68 56.166	39 54.486	15.21
P15	68 56.382	39 54.749	15.17
P16	68 56.558	39 54.755	15.01
P17	68 56.810	39 54.784	14.82
P18	68 57.104	39 54.797	14.59
P19	68 57.244	39 54.784	14.48
P20	68 57.435	39 54.768	14.33
P21	68 57.595	39 54.753	14.21
P22	68 57.764	39 54.733	14.09
P23	68 57.990	39 54.744	13.95
P24	68 58.056	39 55.030	14.10
P25	68 58.151	39 55.422	14.30
P26	68 58.238	39 55.840	14.52
P27	68 58.315	39 56.250	14.75
P28	68 58.415	39 56.685	14.99
P29	68 58.496	39 57.114	15.23
P30	68 58.583	39 57.532	15.47
P31	68 58.673	39 57.940	15.70
P32	68 58.779	39 58.483	16.02
P33	68 58.869	39 58.930	16.28
P34	68 58.964	39 59.338	16.52
P35	68 59.116	39 59.512	16.60
P36	68 59.275	39 59.683	16.67
P37	68 59.451	39 59.734	16.67
P38	68 59.638	39 59.767	16.66
P39	68 59.782	39 59.819	16.68
P40	68 59.965	39 59.890	16.70
P41	69 00.189	39 59.973	16.75
P42	69 00.393	40 00.047	16.79
P43	69 00.541	40 00.356	17.00
P44	69 00.674	40 00.598	17.17
P45	69 00.798	40 00.738	17.27
P46	69 00.960	40 01.046	17.50
P47	69 01.141	40 01.413	17.77
P48	69 01.350	40 01.771	18.04
P49	69 01.488	40 02.105	18.29
P50	69 01.629	40 02.451	18.55
S16	69 01.770	40 03.110	19.02

Table 3. Stake height.

Route Point	August					September				October			November				Route Point
	17	18	19	20	21	4	5	6	10	6	7	8	5	6	7	24	
N5	-	-	-	-	215	-	-	-	217	202	-	-	197	-	-	204	N5
N10	-	-	-	-	204	206	-	-	-	207	-	-	208	-	-	210	N10
R5	208	-	-	-	-	208	-	-	-	209	-	-	188	-	-	170	R5
R10	201	-	-	-	-	212	-	-	-	212	-	-	213	-	-	215	R10
R 15	212	-	-	-	-	223	-	-	-	226	-	-	224	-	-	202	R15
R20	182	-	-	-	-	191	-	-	-	168	-	-	176	-	-	190	R20
R25	174	-	-	-	-	165	-	-	-	129	-	-	129	-	-	131	R25
R30	190	-	-	-	-	194	-	-	-	179	-	-	172	-	-	178	R30
RL 5	190	-	-	-	-	188	-	-	-	140	-	-	145	-	-	148	RL 5
RL10	205	-	-	-	-	206	-	-	-	206	-	-	198	-	-	198	RL 10
RL 15	201	-	-	-	-	189	-	-	-	184	-	-	190	-	-	193	RL 15
RL 20	195	-	-	-	-	195	-	-	-	176	-	-	183	-	-	187	RL20
RL 25	-	195	-	-	-	197	-	-	-	184(NEW)	-	-	174	-	-	165	RL 25
RL30	-	196	-	-	-	192	-	-	-	191	-	-	181	-	-	156	RL30
RL 35	-	185	-	-	-	195	-	-	-	196	-	-	175	-	-	164	RL 35
RL39	-	190	-	-	-	192	-	-	-	197	-	-	199	-	-	191	RL 39
SK 5	-	-	191	-	-	194	-	-	-	-	-	195(New)	187	-	-	167	SK 5
SK6	-	-	190	-	-	-	-	-	-	184	-	-	-	-	-	-	SK6
SK10	-	-	-	191	-	197	-	-	-	201	-	-	194	-	-	184	SK 10
SK15	-	-	-	207	-	210	-	-	-	-	213	-	215	-	-	178	SK15
SK 20	-	-	-	195	-	198	-	-	-	-	179	-	182	-	-	183	SK 20
SK 25	-	-	-	203	-	207	-	-	-	-	206	-	-	195	-	207	SK 25
SK 29	-	-	-	185	-	187	-	-	-	-	189	-	-	189	-	192	SK 29
SL5	-	-	-	-	201	202	-	-	-	-	199	-	-	-	194	192	SL5
SL10	-	-	-	-	199	-	-	-	-	-	200	-	-	-	184	191	SL10
SL15	-	-	-	-	-	-	200	-	-	-	202	-	-	-	194	194	SL15
SL20	-	-	-	-	-	-	193	-	-	-	196	-	-	-	185	194	SL20
SL25	-	-	-	-	-	-	196	-	-	-	197	-	-	-	185	191	SL25
SL30	-	-	-	-	-	-	198	-	-	-	201	-	-	-	198	193	SL30
SL35	-	-	-	-	-	-	190	-	-	-	190	-	-	-	191	188	SL35
SL40	-	-	-	-	-	-	188	-	-	-	192	-	-	-	184	189	SL40
SL45	-	-	-	-	-	-	191	-	-	-	215	-	-	-	187	189	SL45
SL50	-	-	-	-	-	-	193	-	-	-	195	-	-	-	197	195	SL50
SL55	-	-	-	-	-	-	191	-	-	-	191	-	-	-	192	191	SL55
SL60	-	-	-	-	-	-	-	194	-	-	-	192	-	-	191	192	SL60
SL65	-	-	-	-	-	-	-	190	-	-	-	191	-	-	193	192	SL65
SL70	-	-	-	-	-	-	-	198	-	-	-	198	-	-	198	158	SL70
SL75	-	-	-	-	-	-	-	191	-	-	-	192	-	-	193	-	SL75
SL80	-	-	-	-	-	-	-	198	-	-	-	198	-	-	195	-	SL80

unit : cm
 NEW : Re-installation

BT11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BT11	
BT12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61	-	-	-	-	-	-	-	-	-	-	-	-	-	BT12	
BT13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	-	-	-	-	-	-	-	-	-	-	-	-	-	BT13	
BT14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	BT14	
BT15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-	-	-	-	-	-	BT15	
BT16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-	-	-	-	-	-	-	-	-	-	-	BT16	
BT17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	BT17	
YH1-YH6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	YH1-YH6	
YH7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	YH7	
YH8-YH14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	YH8-YH14	
BN1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BN1	
BN2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BN2	
BN3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BN3	
BN4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BN4	
BN5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BN5	
BN6-BN7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BN6-BN7	
NK3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NK3	
NK6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NK6	
NK9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NK9	
L10	5	0	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L10	
L11	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L11	
L12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L12	
L13	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L13	
L14	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L14	
L15	5	0	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L15	
L16	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L16	
L17	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L17	
L18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L18
L19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L19
L20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L20
L21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L21

unit : cm

Table 5. Air temperature.

Route Point	October			November				Route Point
	6	7	8	5	6	7	10	
N5	-7.3	-	-	-11.3	-	-	-	N5
N10	-7.9	-	-	-12.9	-	-	-	N10
R5	-7.0	-	-	-11.7	-	-	-	R5
R10	-6.0	-	-	-13.2	-	-	-	R10
R15	-7.8	-	-	-11.0	-	-	-	R15
R20	-6.7	-	-	-12.6	-	-	-	R20
R25	-6.0	-	-	-9.2	-	-	-	R25
R30	-5.5	-	-	-10.2	-	-	-	R30
RL5	-7.3	-	-	-9.9	-	-	-	RL5
RL10	-7.2	-	-	-7.5	-	-	-	RL10
RL15	-6.2	-	-	-7.2	-	-	-	RL15
RL20	-7.4	-	-	-8.1	-	-	-	RL20
RL25	-6.1	-	-	-7.6	-	-	-	RL25
RL30	-6.8	-	-	-7.6	-	-	-	RL30
RL35	-7.5	-	-	-8.2	-	-	-	RL35
RL39	-7.4	-	-	-8.1	-	-	-	RL39
SK5	-	-	-8.3	-8.0	-	-	-	SK5
SK6	-7.6	-	-	-	-	-	-	SK6
SK10	-9.6	-	-	-8.4	-	-	-	SK10
SK15	-	-10.5	-	-8.3	-	-	-	SK15
SK20	-	-10.5	-	-9.5	-	-	-	SK20
SK25	-	-8.6	-	-	-8.6	-	-	SK25
SK29	-	-7.0	-	-	-8.4	-	-	SK29
SL5	-	-6.1	-	-	-	-12.3	-	SL5
SL10	-	-6.2	-	-	-	-13.2	-	SL10
SL15	-	-10.0	-	-	-	-11.7	-	SL15
SL20	-	-8.9	-	-	-	-11.9	-	SL20
SL25	-	-8.5	-	-	-	-9.6	-	SL25
SL30	-	-11.9	-	-	-	-9.0	-	SL30
SL35	-	-12.1	-	-	-	-8.1	-	SL35
SL40	-	-12.5	-	-	-	-7.8	-	SL40
SL45	-	-12.3	-	-	-	-7.2	-	SL45
SL50	-	-12.0	-	-	-	-6.7	-	SL50
SL55	-	-12.0	-	-	-	-6.4	-	SL55
SL60	-	-	-10.0	-	-	-5.0	-	SL60
SL65	-	-	-8.6	-	-	-5.8	-	SL65
SL70	-	-	-7.9	-	-	-4.2	-	SL70
SL75	-	-	-8.5	-	-	-4.6	-	SL75
SL80	-	-	-8.0	-	-	-4.0	-	SL80
YH2	-	-	-	-	-	-	-3.1	YH2
YH5	-	-	-	-	-	-	-2.7	YH5
YH8	-	-	-	-	-	-	-2.8	YH8
YH11	-	-	-	-	-	-	-3.4	YH11
YH14	-	-	-	-	-	-	-3.6	YH14
BN1	-	-	-	-	-10.8	-	-	BN1
BN2	-	-	-	-	-9.3	-	-	BN2
BN3	-	-	-	-	-8.7	-	-	BN3
BN4	-	-	-	-	-8.3	-	-	BN4
BN5	-	-	-	-	-7.2	-	-	BN5
BN6	-	-	-	-	-7.3	-	-	BN6
BN7	-	-	-	-	-7.6	-	-	BN7
NK3	-	-	-	-	-6.9	-	-	NK3
NK6	-	-	-	-	-7.9	-	-	NK6
NK9	-	-	-	-	-7.1	-	-	NK9

Table 6. Ice temperature (10 cm below ice surface).

Route Point	October			November			Route Point	
	6	7	8	5	6	7		10
N5	-7.1	-	-	-5.2	-	-	-	N5
N10	-7.0	-	-	-9.0	-	-	-	N10
R5	-6.8	-	-	-3.2	-	-	-	R5
R10	-7.0	-	-	-10.4	-	-	-	R10
R15	-6.8	-	-	-4.7	-	-	-	R15
R20	-6.0	-	-	-8.0	-	-	-	R20
R25	-4.6	-	-	-6.7	-	-	-	R25
R30	-5.7	-	-	-10.8	-	-	-	R30
RL5	-8.0	-	-	-5.8	-	-	-	RL5
RL10	-7.3	-	-	-2.3	-	-	-	RL10
RL15	-7.2	-	-	-7.4	-	-	-	RL15
RL20	-6.3	-	-	-7.0	-	-	-	RL20
RL25	-5.8	-	-	-3.0	-	-	-	RL25
RL30	-6.1	-	-	-2.5	-	-	-	RL30
RL35	-7.5	-	-	-2.1	-	-	-	RL35
RL39	-8.6	-	-	-6.6	-	-	-	RL39
SK5	-	-	-7.5	-3.5	-	-	-	SK5
SK6	-7.0	-	-	-	-	-	-	SK6
SK10	-9.3	-	-	-6.0	-	-	-	SK10
SK15	-	-10.7	-	-3.4	-	-	-	SK15
SK20	-	-11.2	-	-6.3	-	-	-	SK20
SK25	-	-7.6	-	-	-6.8	-	-	SK25
SK29	-	-5.5	-	-	-7.3	-	-	SK29
SL5	-	-4.8	-	-	-	7.0	-	SL5
SL10	-	-4.1	-	-	7.0	0.8	-	SL10
SL15	-	-4.0	-	-	8.0	0.9	-	SL15
SL20	-	-5.5	-	-	-	7.0	-	SL20
SL25	-	-4.7	-	-	7.0	0.5	-	SL25
SL30	-	-5.9	-	-	8.0	0.7	-	SL30
SL35	-	-6.0	-	-	7.0	0.8	-	SL35
SL40	-	-8.9	-	-	7.0	0.8	-	SL40
SL45	-	-9.0	-	-	8.0	0.1	-	SL45
SL50	-	-8.3	-	-	8.0	0.3	-	SL50
SL55	-	-8.8	-	-	7.0	0.2	-	SL55
SL60	-	-	-9.1	-	-	7.0	-	SL60
SL65	-	-	-7.8	-	6.0	0.4	-	SL65
SL70	-	-	-6.1	-	0.0	0.4	-	SL70
SL75	-	-	-5.2	-	0.0	0.8	-	SL75
SL80	-	-	-6.7	-	5.0	0.3	-	SL80
YH2	-	-	-	-	-	-	-0.9	YH2
YH5	-	-	-	-	-	-	0.5	YH5
YH8	-	-	-	-	-	-	1.0	YH8
YH11	-	-	-	-	-	-	-1.0	YH11
YH14	-	-	-	-	-	-	0.9	YH14
BN1	-	-	-	-	-9.6	-	-	BN1
BN2	-	-	-	-	-7.8	-	-	BN2
BN3	-	-	-	-	-6.9	-	-	BN3
BN4	-	-	-	-	-5.2	-	-	BN4
BN5	-	-	-	-	-7.6	-	-	BN5
BN6	-	-	-	-	-5.5	-	-	BN6
BN7	-	-	-	-	-3.5	-	-	BN7
NK3	-	-	-	-	-6.2	-	-	NK3
NK6	-	-	-	-	-0.6	-	-	NK6
NK9	-	-	-	-	-6.9	-	-	NK9

Table 7. Ice temperature (50 cm below ice surface).

Route Point	October			November				Route Point
	6	7	8	5	6	7	10	
N5	-7.1	-	-	-4.7	-	-	-	N5
N10	-7.2	-	-	-6.5	-	-	-	N10
R5	-6.1	-	-	-2.1	-	-	-	R5
R10	-7.1	-	-	-6.8	-	-	-	R10
R15	-6.9	-	-	-2.1	-	-	-	R15
R20	-5.9	-	-	-5.3	-	-	-	R20
R25	-5.0	-	-	-6.0	-	-	-	R25
R30	-6.1	-	-	-8.0	-	-	-	R30
RL5	-8.0	-	-	-6.0	-	-	-	RL5
RL10	-8.6	-	-	-2.0	-	-	-	RL10
RL15	-8.0	-	-	-6.3	-	-	-	RL15
RL20	-5.2	-	-	-5.7	-	-	-	RL20
RL25	-7.6	-	-	-2.4	-	-	-	RL25
RL30	-7.2	-	-	-2.4	-	-	-	RL30
RL35	-7.7	-	-	-2.6	-	-	-	RL35
RL39	-9.0	-	-	-6.2	-	-	-	RL39
SK5	-	-	-6.3	-2.3	-	-	-	SK5
SK6	-8.0	-	-	-	-	-	-	SK6
SK10	-9.7	-	-	-5.5	-	-	-	SK10
SK15	-	-10.0	-	-2.4	-	-	-	SK15
SK20	-	-9.7	-	-8.0	-	-	-	SK20
SK25	-	-7.1	-	-	-5.4	-	-	SK25
SK29	-	-7.5	-	-	-6.2	-	-	SK29
SL5	-	-6.4	-	-	-	-5.9	-	SL5
SL10	-	-6.8	-	-	-	-5.9	-	SL10
SL15	-	-6.3	-	-	-	-7.2	-	SL15
SL20	-	-4.3	-	-	-	-6.3	-	SL20
SL25	-	-7.6	-	-	-	-5.7	-	SL25
SL30	-	-6.7	-	-	-	-7.1	-	SL30
SL35	-	-9.1	-	-	-	-6.9	-	SL35
SL40	-	-8.0	-	-	-	-7.1	-	SL40
SL45	-	-9.3	-	-	-	-7.5	-	SL45
SL50	-	-10.1	-	-	-	-8.1	-	SL50
SL55	-	-9.8	-	-	-	-8.2	-	SL55
SL60	-	-	-9.5	-	-	-7.5	-	SL60
SL65	-	-	-8.9	-	-	-5.5	-	SL65
SL70	-	-	-5.8	-	-	-0.4	-	SL70
SL75	-	-	-6.8	-	-	-3.3	-	SL75
SL80	-	-	-7.2	-	-	-5.9	-	SL80
YH2	-	-	-	-	-	-	-3.4	YH2
YH5	-	-	-	-	-	-	-2.7	YH5
YH8	-	-	-	-	-	-	-1.4	YH8
YH11	-	-	-	-	-	-	-4.0	YH11
YH14	-	-	-	-	-	-	-2.4	YH14
BN1	-	-	-	-	-8.2	-	-	BN1
BN2	-	-	-	-	-6.8	-	-	BN2
BN3	-	-	-	-	-5.7	-	-	BN3
BN4	-	-	-	-	-3.3	-	-	BN4
BN5	-	-	-	-	-6.3	-	-	BN5
BN6	-	-	-	-	-4.0	-	-	BN6
BN7	-	-	-	-	-1.8	-	-	BN7
NK3	-	-	-	-	-4.6	-	-	NK3
NK6	-	-	-	-	-1.0	-	-	NK6
NK9	-	-	-	-	-6.7	-	-	NK9

Table 8. Sea water temperature.

Route Point	November 24
RL39	-1.0
SK5	-1.4
SK10	-1.7
SK15	-1.6
SK20	-1.9
SK25	-1.7
SK29	-1.8
SL5	-1.7
SL10	-1.8
SL15	-1.7
SL20	-1.8
SL25	-1.7
SL30	-1.8
SL35	-1.9
SL40	-1.9
SL45	-1.8
SL50	-2.0
SL55	-1.9
SL60	-1.6
SL65	-1.7
SL70	-1.3

Unit : °C

Table 9. Daily summaries at SL55 on the sea ice.

Month	Day	Pstn hPa	Tm °C	Tx °C	Tn °C	H %	Vm m/s	Vx m/s	Gust m/s
9	6	986.6	-26.5	-19.2	-33.7	63	1.1	4.9	6
	7	989.1	-28.6	-22.4	-34.7	69	0.3	2.5	4.9
	8	994.7	-22.9	-19.2	-26.3	64	1.6	3.5	4.4
	9	1004.9	-31	-23.3	-35	63	0.8	2.9	3.5
	10	1000.1	-24.9	-19.9	-34.1	57	1.4	5.2	7.9
	11	991.2	-14.4	-8	-22.5	82	3.7	14.6	19.8
	12	988.7	-7.9	-5.8	-9.6	71	8.7	14	18.5
	13	985.5	-13.9	-7.3	-19.3	74	3.6	7.5	11.1
	14	992.5	-16.7	-14.7	-19.4	77	2.1	6.6	8.5
	15	970.2	-10.5	-7.6	-16.9	79	18.8	29.7	41.6
	16	978.1	-10.8	-8.1	-12.6	64	11.9	21.8	30.5
	17	980.5	-19.2	-12	-27.7	75	1	3.9	5.6
	18	981.3	-25.4	-19.1	-29.1	70	0.1	1.9	3.2
	19	985.1	-18.1	-13.4	-24	76	0.4	2.6	12.5
	20	980.7	-18.3	-13	-24.2	75	1.1	2.9	3.8
	21	980.1	-22.9	-19	-27.1	66	1.1	4.4	5.8
	22	979.8	-19.1	-13.7	-24.9	67	1.7	3.9	5.2
	23	990.4	-11.7	-6	-19.2	51	4.8	11.4	17.8
	24	994.1	-17.4	-12.7	-22.5	63	2	5	7.5
	25	994.5	-24.4	-17.8	-29.5	70	0.3	2.2	3
	26	998.8	-23.8	-18.1	-28.4	75	0.5	2.5	3.5
	27	998.2	-25.1	-20	-30.6	76	0	2	2.6
	28	983.9	-12.8	-6	-22.6	69	2.6	10.5	16
	29	983.7	-9.9	-5.5	-14.3	81	3.3	8.4	11.9
	30	989.4	-18.4	-11.7	-27	70	1.7	5	6.4
10	1	995	-27.1	-20.8	-34.1	69	0.2	2.1	2.7
	2	1005.1	-29.5	-19.3	-35.6	68	0.1	2.3	3
	3	998.8	-24.1	-13.8	-35.5	63	1.4	3.7	5.9
	4	997.9	-17	-8.1	-25.7	54	2.2	6	10
	5	996.9	-14.8	-9.8	-23.7	58	9.8	19.4	30
	6	994.5	-10.3	-7.8	-12.1	50	16.5	19.1	29
	7	1005.5	-11.7	-11	-12.2	75	4.9	16.2	23.5
	8	1004.5	-10.9	-8.1	-15.5	76	1.3	2.4	4.2
	9	994.5	-14.5	-9.3	-17.7	75	1.5	2.9	3.6
	10	993.5	-14.6	-10.6	-19.7	72	1.6	3.1	4
	11	1006.7	-17.6	-10.3	-24.4	72	0.8	3	3.7
	12	999.7	-15.1	-10.5	-20.2	72	1.8	4	5.1
	13	999.5	-7	-4.1	-11	73	2.4	5.9	8.9
	14	996	-7	-3	-12.1	75	2.1	6.7	9.8
	15	990.2	-8.2	-5.5	-11.1	85	2.4	4.9	6.7
	16	992.3	-12.8	-8.1	-23.9	86	1.9	5.2	6.7
	17	995.1	-15	-8.5	-20.7	82	0.6	2.5	3
	18	992.7	-9	-2.6	-18.5	73	2.2	4.4	7.7
	19	987.1	-8.7	-3.4	-13.4	65	2.8	6.3	9.1
	20	984.3	-8.3	-5.7	-12.7	58	7	13.1	20.6
	21	982.5	-13.4	-7.2	-20.3	61	2.6	11.7	18.2
	22	983.7	-16.3	-7.8	-21.7	65	1.4	2.8	3.9
	23	997.2	-17	-10.2	-24	70	1.1	2.2	2.6
	24	996.6	-17.1	-5	-26.6	69	1	4.3	5.2
	25	990.7	-10	-6.7	-13	67	2.5	6.2	9.7
	26	988.8	-10.9	-7.4	-15.9	67	2.5	6.3	9.9
	27	987.9	-9.9	0.2	-14.6	67	1.7	4.4	6.4
	28	992.3	-12.8	-8	-22.3	66	1.7	4.1	6
	29	997.7	-14.8	-8.3	-21.9	70	1	2	2.6
	30	996.4	-10.5	-2.5	-20.1	70	1.6	4.9	6.1
	31	997.7	-9.7	-5.1	-17.2	69	2	5.2	6.9
11	1	994.2	-15.1	-4.8	-22.7	73	1.5	4.2	5.2
	2	999.1	-15.9	-8.6	-25.2	72	1	3.1	4
	3	999.7	-14.5	-3.6	-24.3	71	0.9	3.3	4.1
	4	998.5	-15.5	-6.9	-22.4	76	0.8	2.5	3.2
	5	1000.1	-13.8	0.8	-22.8	75	0.6	2.9	4

Table 10. Hourly surface synoptic data at SL55 on the sea ice.

MN	DY	LT	Pstn hPa	T deg.C	Td deg.C	H %	D	V m/s	Vx m/s	Gust m/s
9	5	23	983.8	-25.7	-30.3	66	S	1.9	1.9	2.4
9	6	00	984.4	-29.7	-31.1	66	W	1.2	1.6	2.5
9	6	01	984.8	-25.6	-30.4	64	-	0.1	2.6	3.0
9	6	02	985.2	-19.8	-26.9	54	E	1.2	2.2	2.6
9	6	03	985.6	-22.2	-29.1	54	ENE	2.9	2.9	3.7
9	6	04	985.8	-21.8	-29.3	51	ENE	2.8	2.8	3.6
9	6	05	986.1	-20.3	-28.2	50	ENE	3.3	3.3	5.1
9	6	06	986.5	-26.2	-31.7	60	NW	2.4	4.9	6.0
9	6	07	986.6	-25.0	-30.1	63	SSW	1.1	2.8	3.8
9	6	08	987.1	-23.3	-28.8	61	WSW	1.3	1.7	2.7
9	6	09	987.3	-25.6	-30.1	66	SSW	1.8	2.0	2.5
9	6	10	987.1	-27.5	-33.0	60	NW	1.3	1.6	2.3
9	6	11	987.0	-24.8	-29.5	65	ENE	1.5	1.5	1.8
9	6	12	986.8	-25.4	-30.4	63	NW	0.3	0.9	1.8
9	6	13	986.6	-23.4	-27.9	67	S	0.8	1.8	2.2
9	6	14	986.4	-25.6	-30.8	62	W	1.1	1.1	2.0
9	6	15	986.3	-25.8	-30.5	65	-	0.0	0.6	1.7
9	6	16	986.3	-26.5	-30.9	66	-	0.0	0.0	0.0
9	6	17	986.5	-29.6	-33.8	67	N	2.7	2.7	3.6
9	6	18	986.7	-30.6	-34.4	69	NNE	2.8	3.0	4.0
9	6	19	986.8	-29.9	-33.6	70	-	0.1	1.8	3.2
9	6	20	987.0	-31.2	-34.9	69	-	0.1	0.1	1.5
9	6	21	987.3	-32.4	-36.2	69	-	0.0	0.0	0.0
9	6	22	987.9	-32.8	-36.5	69	-	0.0	0.0	0.0
9	6	23	988.2	-33.7	-37.8	67	-	0.0	0.0	0.0
9	7	00	988.6	-33.5	-37.4	68	-	0.0	0.0	0.0
9	7	01	989.1	-31.6	-35.2	71	-	0.0	0.0	0.0
9	7	02	989.5	-32.2	-35.8	70	SSW	1.5	1.5	2.2
9	7	03	990.0	-31.9	-35.3	72	-	0.0	2.5	4.9
9	7	04	990.4	-34.5	-38.3	69	-	0.0	0.9	2.3
9	7	05	990.5	-31.4	-34.6	74	-	0.0	0.0	0.0
9	7	06	990.3	-31.2	-34.5	73	-	0.0	1.6	2.3
9	7	07	990.1	-33.7	-37.4	69	-	0.0	0.3	1.9
9	7	08	989.9	-32.4	-35.9	71	SW	1.2	1.4	1.8
9	7	09	989.8	-30.0	-33.6	70	SSW	0.9	1.5	2.2
9	7	10	989.5	-30.3	-34.2	69	-	0.0	0.8	2.2
9	7	11	989.3	-28.8	-32.6	69	WSW	1.4	1.4	2.3
9	7	12	989.3	-27.9	-32.2	67	-	0.1	1.2	2.2
9	7	13	989.2	-26.2	-31.1	63	-	0.0	0.2	1.5
9	7	14	989.0	-25.5	-30.5	63	-	0.0	0.0	0.0
9	7	15	988.8	-25.5	-30.0	66	-	0.0	0.0	0.0
9	7	16	988.6	-25.4	-29.4	69	-	0.0	0.0	0.0
9	7	17	988.3	-26.6	-30.1	72	-	0.0	0.0	0.0
9	7	18	988.2	-27.3	-30.8	72	SW	0.8	1.6	2.4
9	7	19	988.1	-25.3	-29.1	70	W	1.1	1.6	2.5
9	7	20	988.2	-26.3	-30.4	68	-	0.0	0.8	2.1
9	7	21	988.1	-25.9	-30.2	67	-	0.0	0.2	1.4
9	7	22	988.1	-24.5	-29.2	65	-	0.0	0.8	2.1
9	7	23	988.4	-23.6	-28.0	67	-	0.0	1.6	1.9
9	8	00	988.6	-22.4	-27.4	64	SE	2.1	2.1	2.6
9	8	01	988.6	-22.7	-28.0	62	S	1.2	1.9	2.7
9	8	02	988.8	-21.7	-27.2	61	S	2.2	2.2	3.2
9	8	03	989.3	-22.9	-27.7	65	SW	1.6	1.8	2.8
9	8	04	989.7	-22.3	-27.5	63	-	0.0	1.6	2.0
9	8	05	990.0	-22.4	-27.5	63	S	1.7	1.7	2.9
9	8	06	990.3	-24.2	-28.5	67	-	0.0	0.9	2.5
9	8	07	990.7	-23.5	-27.9	67	SSW	1.0	1.9	2.3
9	8	08	991.3	-23.3	-27.6	68	S	2.4	2.4	3.0
9	8	09	992.1	-21.3	-27.6	57	E	0.8	2.8	3.3
9	8	10	992.8	-21.4	-27.0	61	SE	1.9	2.8	3.6
9	8	11	993.5	-21.1	-26.6	61	-	0.0	2.6	4.1
9	8	12	994.6	-20.3	-25.4	64	SSE	0.9	2.6	3.3
9	8	13	995.0	-20.4	-25.2	65	SSE	1.5	1.7	2.0
9	8	14	995.6	-20.2	-24.9	66	SSE	1.1	1.7	2.0
9	8	15	996.2	-20.3	-25.2	65	E	1.6	1.6	2.2
9	8	16	997.1	-20.1	-25.8	61	-	0.0	1.2	2.9
9	8	17	998.0	-21.9	-26.5	67	S	0.5	1.0	3.3
9	8	18	998.6	-24.5	-29.2	65	S	1.3	1.8	2.2
9	8	19	999.6	-25.0	-29.3	68	SSE	2.1	2.1	2.6

9	8	20	1000.3	-24.5	-29.5	63	SSE	3.0	3.2	4.4
9	8	21	1001.0	-24.9	-29.8	64	SSE	2.9	3.2	4.0
9	8	22	1001.7	-25.4	-30.3	64	S	3.2	3.2	3.9
9	8	23	1002.1	-25.8	-30.6	64	S	2.9	3.5	4.3
9	9	00	1002.6	-26.1	-31.0	63	S	2.6	3.2	3.9
9	9	01	1003.1	-26.3	-31.4	62	S	2.4	2.9	3.5
9	9	02	1003.8	-32.2	-37.0	63	WNW	1.5	2.1	2.7
9	9	03	1004.2	-32.1	-36.6	65	W	1.6	1.6	2.6
9	9	04	1004.4	-33.2	-37.6	64	-	0.0	0.4	1.6
9	9	05	1004.5	-28.1	-32.3	68	SSE	2.2	2.2	2.7
9	9	06	1004.5	-33.7	-38.1	64	-	0.1	1.8	2.3
9	9	07	1004.8	-33.5	-37.8	65	-	0.0	1.6	2.3
9	9	08	1004.9	-33.1	-37.7	64	WSW	0.3	1.8	2.4
9	9	09	1005.2	-32.2	-36.9	63	WSW	1.8	1.8	2.4
9	9	10	1005.4	-31.7	-37.1	59	-	0.0	1.4	1.8
9	9	11	1005.4	-30.0	-35.4	59	-	0.0	0.0	0.0
9	9	12	1005.5	-29.1	-34.3	61	WNW	0.9	1.6	2.5
9	9	13	1005.7	-28.0	-33.0	62	WNW	1.3	1.8	2.3
9	9	14	1006.0	-25.4	-32.7	51	-	0.0	0.3	1.2
9	9	15	1005.9	-26.2	-32.2	57	-	0.0	0.0	0.0
9	9	16	1005.7	-29.1	-34.1	62	NW	1.3	1.3	2.2
9	9	17	1005.5	-30.1	-35.1	62	-	0.0	1.3	3.2
9	9	18	1005.3	-33.1	-37.5	65	-	0.0	0.8	2.6
9	9	19	1005.4	-33.9	-38.1	66	W	0.6	1.8	2.7
9	9	20	1005.1	-32.4	-36.4	68	-	0.0	0.0	0.0
9	9	21	1004.7	-33.8	-37.9	67	W	0.6	0.6	2.8
9	9	22	1004.6	-33.9	-37.8	68	W	2.4	2.4	3.4
9	9	23	1004.5	-33.6	-37.8	66	WNW	1.5	1.5	2.7
9	10	00	1004.0	-33.6	-38.2	63	WSW	1.8	2.4	3.0
9	10	01	1003.8	-32.3	-37.0	63	-	0.0	1.0	2.9
9	10	02	1004.0	-26.3	-34.5	46	SE	3.6	3.6	5.0
9	10	03	1004.0	-27.3	-33.8	54	E	2.1	3.6	5.9
9	10	04	1004.0	-24.1	-34.1	39	SSW	2.0	2.3	4.5
9	10	05	1003.9	-26.6	-34.6	47	S	2.3	3.2	4.2
9	10	06	1003.4	-26.6	-33.9	50	S	3.1	3.8	6.0
9	10	07	1002.6	-27.1	-35.3	46	SW	2.1	4.9	7.9
9	10	08	1002.4	-23.3	-31.9	45	SSW	3.7	5.2	7.8
9	10	09	1002.1	-22.3	-32.1	40	S	2.0	2.2	3.8
9	10	10	1001.5	-22.3	-31.0	45	SE	0.8	1.5	2.4
9	10	11	1001.7	-23.5	-31.1	50	SSW	1.7	3.0	4.0
9	10	12	1001.0	-21.9	-29.8	49	S	1.8	1.8	3.4
9	10	13	999.7	-21.2	-27.2	59	SSE	0.9	2.1	2.6
9	10	14	999.0	-24.4	-29.9	60	WNW	2.2	2.2	3.5
9	10	15	998.7	-24.9	-30.6	59	W	1.5	2.5	3.2
9	10	16	998.2	-23.6	-28.4	65	-	0.1	1.6	2.4
9	10	17	997.6	-24.6	-29.2	66	NNE	1.3	1.5	3.1
9	10	18	996.9	-25.9	-30.5	66	-	0.2	1.4	2.3
9	10	19	996.6	-26.8	-31.2	67	W	1.1	1.3	2.6
9	10	20	996.4	-25.4	-30.0	65	-	0.0	0.8	2.2
9	10	21	996.1	-24.7	-28.9	68	-	0.0	0.0	0.0
9	10	22	995.7	-24.2	-28.3	69	-	0.0	0.0	0.0
9	10	23	994.7	-23.9	-27.8	70	WNW	1.3	1.4	2.1
9	11	00	994.7	-22.3	-26.3	70	NW	0.9	1.8	2.4
9	11	01	994.6	-21.7	-25.7	70	-	0.2	1.1	1.7
9	11	02	993.9	-21.4	-24.9	73	-	0.0	0.8	2.4
9	11	03	993.3	-19.7	-23.6	71	WSW	1.3	2.2	3.6
9	11	04	993.1	-19.6	-22.3	79	NNE	0.6	1.7	2.6
9	11	05	992.9	-19.6	-22.0	81	-	0.0	0.3	1.7
9	11	06	992.8	-19.2	-21.5	82	-	0.0	0.0	0.0
9	11	07	992.4	-19.1	-21.4	82	-	0.0	0.0	0.0
9	11	08	992.4	-18.3	-20.5	82	NNW	0.9	1.5	4.2
9	11	09	992.4	-18.3	-20.7	82	ESE	0.9	0.9	2.7
9	11	10	992.3	-17.6	-19.8	83	S	2.1	2.1	3.0
9	11	11	992.1	-15.6	-17.4	86	SW	1.1	2.7	3.6
9	11	12	992.0	-13.7	-15.5	86	-	0.1	1.1	1.9
9	11	13	991.6	-13.1	-14.7	87	-	0.2	1.1	1.5
9	11	14	991.1	-11.6	-13.3	88	S	2.1	2.1	2.8
9	11	15	990.2	-11.0	-12.8	87	SSE	2.7	2.7	3.5
9	11	16	989.0	-8.6	-11.6	79	ENE	6.8	6.8	9.6
9	11	17	988.3	-9.0	-11.7	80	NE	2.3	5.2	7.2
9	11	18	987.0	-9.0	-11.0	85	ENE	6.8	7.1	11.0
9	11	19	986.9	-8.4	-10.0	89	ENE	12.5	12.5	18.2
9	11	20	987.3	-8.3	-9.8	89	NE	13.2	13.2	17.4

9	11	21	988.5	-8.7	-9.9	91	NE	14.0	14.0	19.4
9	11	22	990.0	-9.5	-11.0	88	NNE	10.0	14.6	19.8
9	11	23	990.8	-9.5	-11.7	84	NE	5.4	9.5	12.2
9	12	00	990.9	-9.2	-12.0	80	ENE	7.2	8.0	11.4
9	12	01	991.3	-9.4	-12.3	79	ENE	7.9	9.9	14.1
9	12	02	991.1	-8.8	-12.3	76	ENE	7.4	9.1	11.8
9	12	03	990.9	-9.4	-11.5	85	E	9.1	9.1	12.7
9	12	04	990.6	-7.9	-12.0	72	E	5.8	8.1	10.5
9	12	05	990.0	-7.8	-11.3	76	ENE	8.0	8.0	10.7
9	12	06	989.7	-7.8	-11.5	75	ENE	8.3	9.5	12.8
9	12	07	989.7	-7.5	-13.0	64	ENE	10.8	11.8	14.7
9	12	08	989.9	-8.4	-12.6	71	ENE	4.4	9.5	12.4
9	12	09	989.8	-6.9	-12.6	64	E	6.6	6.6	8.4
9	12	10	989.7	-6.1	-11.9	64	ENE	10.2	10.2	13.5
9	12	11	989.8	-5.9	-13.1	57	ENE	9.2	9.5	12.9
9	12	12	989.5	-6.7	-12.3	65	E	6.9	9.1	15.4
9	12	13	988.8	-7.1	-11.6	71	E	8.6	9.0	12.1
9	12	14	988.3	-7.5	-11.4	74	E	10.5	10.8	14.3
9	12	15	987.8	-7.5	-11.4	73	E	10.0	10.7	14.5
9	12	16	987.6	-7.7	-11.8	73	E	11.2	11.5	16.7
9	12	17	987.2	-7.9	-12.0	73	E	10.5	11.5	15.5
9	12	18	986.6	-8.3	-11.6	77	E	12.3	12.3	17.0
9	12	19	986.0	-8.4	-11.3	80	E	13.7	14.0	18.5
9	12	20	985.7	-8.8	-11.9	78	E	12.8	13.6	17.3
9	12	21	985.6	-8.7	-12.8	72	E	11.4	13.1	17.2
9	12	22	986.2	-8.7	-13.8	66	ENE	7.6	11.4	15.6
9	12	23	986.8	-8.5	-15.4	57	SE	1.4	6.6	10.2
9	13	00	986.8	-7.8	-15.7	53	SE	4.8	4.8	7.9
9	13	01	986.7	-7.8	-16.6	49	E	3.5	7.3	11.1
9	13	02	986.6	-8.5	-16.5	53	SE	3.3	3.8	9.3
9	13	03	986.3	-8.2	-16.7	50	E	6.4	6.4	9.0
9	13	04	986.3	-9.3	-13.1	74	NE	3.1	4.5	8.3
9	13	05	986.1	-10.1	-13.0	80	SSE	2.4	4.4	6.9
9	13	06	985.7	-9.6	-13.8	72	ESE	3.1	3.1	4.3
9	13	07	985.6	-11.1	-13.0	86	S	3.9	3.9	5.1
9	13	08	985.4	-11.4	-13.0	88	S	3.4	4.4	6.1
9	13	09	985.2	-12.4	-14.4	85	S	2.3	3.3	4.1
9	13	10	984.8	-12.5	-15.4	79	SSW	3.5	3.5	4.3
9	13	11	984.9	-12.6	-16.3	74	SSW	2.7	4.2	5.2
9	13	12	984.9	-12.8	-16.8	72	WSW	2.7	2.7	3.8
9	13	13	984.7	-14.8	-18.4	74	WSW	3.4	3.4	4.1
9	13	14	984.9	-14.5	-18.1	75	WSW	5.0	5.0	6.4
9	13	15	985.0	-15.9	-18.9	77	WSW	6.3	6.3	8.3
9	13	16	984.9	-17.8	-20.5	80	WSW	7.0	7.5	9.6
9	13	17	985.0	-18.1	-20.7	80	WSW	5.0	7.1	9.1
9	13	18	985.2	-18.7	-21.4	79	WSW	5.9	5.9	7.6
9	13	19	985.3	-18.9	-21.9	77	WSW	3.8	5.6	6.9
9	13	20	985.5	-19.1	-22.0	77	WSW	3.2	3.9	5.0
9	13	21	985.7	-18.9	-21.6	79	WSW	2.5	4.0	4.9
9	13	22	985.7	-18.5	-21.3	79	WSW	1.6	2.7	3.4
9	13	23	986.2	-18.1	-21.8	79	W	3.1	3.1	3.9
9	14	00	986.4	-19.2	-22.0	79	W	2.5	2.5	3.4
9	14	01	987.1	-19.2	-22.0	78	WNW	1.4	2.2	3.1
9	14	02	987.8	-19.2	-22.3	77	NW	1.7	2.5	3.3
9	14	03	988.4	-18.6	-21.8	76	-	0.0	0.1	0.7
9	14	04	988.8	-19.0	-22.1	77	NNW	1.6	2.5	3.3
9	14	05	989.1	-18.8	-22.0	76	-	0.0	1.6	1.9
9	14	06	989.6	-18.1	-21.1	77	E	1.5	1.5	2.0
9	14	07	990.3	-17.7	-20.7	78	NE	1.2	1.6	2.1
9	14	08	990.8	-17.4	-20.4	77	NNE	0.6	0.9	1.5
9	14	09	991.3	-16.9	-20.1	77	-	0.0	0.0	0.0
9	14	10	992.1	-16.5	-19.7	76	-	0.0	0.0	0.5
9	14	11	992.7	-16.3	-19.4	77	SSE	2.2	2.2	2.9
9	14	12	993.2	-15.8	-19.0	77	SSE	2.3	2.5	3.6
9	14	13	993.8	-15.2	-18.6	75	SE	1.4	1.9	2.7
9	14	14	994.4	-15.2	-17.5	83	NNE	5.1	5.1	7.0
9	14	15	995.2	-15.5	-17.7	83	NNE	5.2	6.6	8.5
9	14	16	995.6	-15.4	-17.6	83	NE	4.3	5.2	6.5
9	14	17	995.5	-15.4	-17.9	81	NE	2.9	5.1	6.4
9	14	18	995.9	-15.5	-17.7	83	SE	1.4	2.0	2.9
9	14	19	996.2	-15.1	-17.9	79	SSE	3.1	3.1	4.9
9	14	20	996.3	-15.1	-18.1	78	SE	2.1	3.0	4.1
9	14	21	996.0	-15.1	-18.6	75	SSE	2.4	3.4	4.5

9	14	22	995.5	-15.5	-19.4	72	SE	2.9	3.0	4.5
9	14	23	994.7	-17.6	-21.5	72	S	3.1	3.7	4.8
9	15	00	994.0	-16.1	-20.3	70	E	5.6	6.3	8.0
9	15	01	992.6	-15.7	-20.7	65	ENE	4.3	5.4	7.5
9	15	02	990.5	-15.7	-21.1	63	S	3.7	4.0	6.9
9	15	03	988.3	-16.2	-20.6	69	S	2.6	3.8	4.7
9	15	04	986.0	-15.3	-20.6	64	SSW	1.4	2.1	3.2
9	15	05	983.4	-15.7	-19.8	71	WSW	2.7	3.2	5.3
9	15	06	980.5	-13.6	-18.6	66	W	2.6	3.1	4.1
9	15	07	978.5	-10.4	-13.3	80	ENE	9.4	11.1	15.5
9	15	08	973.8	-8.9	-10.7	87	E	21.6	21.6	29.1
9	15	09	972.5	-9.5	-11.8	84	E	19.5	24.3	32.9
9	15	10	969.3	-8.9	-10.4	89	E	23.5	23.5	32.4
9	15	11	966.3	-8.6	-10.7	65	E	28.1	28.1	39.1
9	15	12	965.5	-8.6	-11.2	82	E	25.4	27.7	38.7
9	15	13	963.4	-8.7	-11.6	80	E	29.5	29.5	41.0
9	15	14	962.9	-9.1	-10.4	90	E	23.8	26.0	35.1
9	15	15	960.5	-8.3	-11.0	81	ENE	23.8	27.7	41.6
9	15	16	960.3	-8.4	-10.4	85	ENE	24.6	26.9	37.6
9	15	17	959.3	-8.3	-10.3	86	ENE	27.5	27.8	39.6
9	15	18	956.9	-8.6	-10.0	89	ENE	27.6	28.0	39.0
9	15	19	957.4	-8.8	-10.0	91	ENE	27.0	29.1	40.7
9	15	20	957.3	-8.5	-10.1	88	ENE	29.4	29.4	41.0
9	15	21	959.1	-8.2	-10.8	81	ENE	28.4	29.7	40.9
9	15	22	960.2	-8.0	-12.1	72	ENE	25.2	28.4	38.9
9	15	23	962.6	-8.1	-12.4	71	NE	22.6	26.8	36.2
9	16	00	964.9	-8.1	-12.8	69	NE	20.8	23.0	32.7
9	16	01	966.8	-9.9	-11.7	87	NE	17.8	19.8	29.6
9	16	02	968.6	-9.9	-13.5	75	NE	18.7	19.7	28.5
9	16	03	969.5	-9.5	-15.4	62	NE	18.9	21.7	30.5
9	16	04	970.8	-9.8	-15.8	61	NE	16.2	21.8	29.2
9	16	05	971.4	-10.0	-15.7	63	ENE	14.6	18.1	24.9
9	16	06	971.8	-10.1	-16.1	61	ENE	16.5	17.0	22.2
9	16	07	972.9	-11.0	-16.6	63	ENE	13.6	17.5	23.2
9	16	08	974.1	-10.7	-17.0	60	ENE	15.5	15.5	21.0
9	16	09	975.3	-11.0	-16.5	64	ENE	15.6	16.0	22.6
9	16	10	977.0	-10.2	-16.5	60	ENE	11.2	14.1	18.7
9	16	11	978.6	-10.1	-16.5	59	ENE	11.6	11.9	16.1
9	16	12	979.6	-10.4	-16.7	60	NE	12.3	12.3	17.5
9	16	13	980.6	-10.5	-16.1	64	NE	10.9	12.3	16.7
9	16	14	981.4	-10.4	-16.4	62	NE	12.1	12.1	16.8
9	16	15	982.2	-10.7	-16.8	61	NE	8.8	12.9	19.2
9	16	16	983.1	-11.1	-17.0	62	NE	10.2	10.2	14.0
9	16	17	983.6	-11.3	-17.2	62	NE	9.3	9.7	13.5
9	16	18	984.3	-11.7	-17.3	63	NE	8.6	9.9	14.0
9	16	19	984.9	-12.3	-17.1	68	NNE	4.7	7.7	11.5
9	16	20	985.1	-12.2	-17.4	65	NE	6.5	6.5	9.2
9	16	21	985.4	-11.9	-17.8	62	NE	8.3	8.3	11.8
9	16	22	985.9	-12.1	-17.8	63	NE	4.4	7.5	11.9
9	16	23	986.1	-12.0	-17.8	62	NE	4.2	4.9	7.7
9	17	00	986.2	-12.0	-17.5	64	ENE	3.7	4.7	7.2
9	17	01	986.1	-12.3	-17.3	66	E	1.2	3.9	5.6
9	17	02	986.1	-13.4	-16.3	79	SW	1.0	2.3	4.8
9	17	03	985.8	-13.4	-15.6	83	E	1.8	1.9	3.2
9	17	04	985.6	-14.3	-16.5	84	ESE	1.0	1.8	2.5
9	17	05	985.1	-14.4	-16.6	83	-	0.0	0.8	2.0
9	17	06	984.3	-16.6	-18.9	82	SSE	2.3	2.3	3.0
9	17	07	983.6	-17.2	-19.8	80	S	1.8	2.1	2.9
9	17	08	982.9	-17.7	-20.7	77	SSW	1.7	1.8	2.6
9	17	09	982.1	-17.2	-20.7	74	S	1.8	2.3	2.8
9	17	10	981.4	-17.4	-21.6	70	WSW	0.7	1.6	2.0
9	17	11	980.6	-18.8	-22.3	74	W	1.3	2.5	2.9
9	17	12	979.8	-19.8	-23.1	75	WNW	2.2	2.2	3.1
9	17	13	979.0	-19.4	-22.8	74	W	1.5	2.3	2.9
9	17	14	978.2	-19.4	-22.9	74	-	0.2	1.3	1.8
9	17	15	977.7	-19.8	-23.7	71	W	0.7	1.1	2.0
9	17	16	977.2	-20.7	-25.1	68	-	0.0	0.0	0.0
9	17	17	977.1	-22.7	-26.9	69	-	0.0	0.0	0.0
9	17	18	976.8	-23.4	-26.7	75	-	0.0	0.0	0.0
9	17	19	976.5	-21.4	-24.2	78	-	0.0	0.0	0.0
9	17	20	976.4	-22.8	-26.4	73	SSW	1.8	1.8	2.7
9	17	21	976.1	-22.3	-26.3	70	SSW	2.2	2.4	3.2
9	17	22	976.0	-25.9	-29.5	72	-	0.0	1.0	2.2

9	17	23	975.8	-26.9	-30.6	71	-	0.0	0.3	1.7
9	18	00	975.7	-27.7	-31.3	72	W	0.6	0.6	2.1
9	18	01	975.9	-27.6	-31.1	72	W	1.1	1.9	3.2
9	18	02	976.2	-28.1	-31.7	72	-	0.0	1.6	2.6
9	18	03	976.6	-28.4	-31.8	73	-	0.0	0.0	0.0
9	18	04	977.1	-28.4	-31.7	74	-	0.0	0.0	0.0
9	18	05	977.5	-27.4	-30.3	76	-	0.0	0.0	0.0
9	18	06	978.2	-23.9	-26.9	77	-	0.0	0.0	0.0
9	18	07	978.6	-27.9	-31.4	72	-	0.0	0.0	0.0
9	18	08	979.3	-26.5	-31.6	62	-	0.0	0.0	0.0
9	18	09	979.7	-24.3	-30.0	59	-	0.0	0.0	0.0
9	18	10	980.2	-27.8	-31.8	69	-	0.0	0.0	0.0
9	18	11	980.8	-23.4	-28.6	62	-	0.0	0.0	0.0
9	18	12	981.5	-24.8	-28.8	69	-	0.0	1.1	2.2
9	18	13	982.1	-23.3	-27.5	69	-	0.0	0.4	2.0
9	18	14	982.4	-20.7	-25.9	63	-	0.0	0.0	0.0
9	18	15	982.9	-22.1	-26.5	67	-	0.0	0.1	1.5
9	18	16	983.7	-20.5	-26.6	58	-	0.0	0.0	0.0
9	18	17	984.3	-23.6	-27.8	69	-	0.0	0.0	0.0
9	18	18	984.6	-26.9	-30.3	73	-	0.0	0.0	0.0
9	18	19	984.7	-27.4	-30.4	76	-	0.0	0.0	0.0
9	18	20	985.3	-26.1	-29.3	74	-	0.0	0.4	2.1
9	18	21	985.6	-25.2	-28.6	73	-	0.0	1.1	2.5
9	18	22	986.2	-24.4	-27.6	75	-	0.0	0.3	2.6
9	18	23	986.5	-23.5	-26.6	75	-	0.0	0.0	0.0
9	19	00	986.6	-23.8	-26.8	76	-	0.0	0.0	0.0
9	19	01	986.7	-22.6	-25.8	75	-	0.0	0.0	0.0
9	19	02	986.9	-21.8	-24.9	76	-	0.0	0.1	1.2
9	19	03	986.8	-21.0	-24.2	76	WNW	0.7	0.7	2.0
9	19	04	986.6	-19.8	-23.1	75	-	0.2	0.2	3.0
9	19	05	986.4	-19.4	-22.3	78	-	0.0	0.0	0.0
9	19	06	986.5	-19.3	-22.1	79	-	0.0	0.0	0.0
9	19	07	986.6	-18.8	-21.4	79	-	0.0	0.0	0.0
9	19	08	986.7	-18.8	-21.7	78	-	0.0	0.0	0.0
9	19	09	986.9	-17.7	-20.9	77	-	0.0	0.0	0.0
9	19	10	986.7	-17.3	-20.9	74	SE	0.8	0.8	2.0
9	19	11	986.4	-17.4	-21.3	72	-	0.0	0.9	1.7
9	19	12	986.2	-16.8	-20.4	74	SW	1.3	1.3	2.2
9	19	13	985.7	-14.9	-18.8	72	S	1.0	2.1	2.7
9	19	14	985.3	-14.7	-18.6	72	-	0.0	0.4	2.0
9	19	15	984.9	-15.2	-17.9	79	W	1.0	1.3	2.0
9	19	16	984.5	-15.3	-18.1	79	SW	1.6	1.6	2.2
9	19	17	983.8	-14.4	-17.5	77	SSW	2.3	2.6	3.5
9	19	18	983.6	-14.2	-18.3	71	SSW	1.2	1.6	4.1
9	19	19	983.3	-15.9	-19.1	76	-	0.3	1.0	1.9
9	19	20	983.0	-17.5	-20.0	81	-	0.3	1.4	2.2
9	19	21	982.7	-18.7	-21.7	77	SSW	0.5	0.8	12.5
9	19	22	982.0	-20.1	-23.1	78	SW	0.7	0.7	2.6
9	19	23	981.3	-19.5	-22.6	77	-	0.1	1.1	2.4
9	20	00	980.7	-20.3	-23.2	77	SW	0.9	1.0	2.1
9	20	01	980.0	-22.2	-25.1	77	WSW	1.9	1.9	2.6
9	20	02	980.1	-22.5	-25.7	75	-	0.1	1.6	2.5
9	20	03	979.9	-21.8	-24.8	76	SE	1.7	2.3	2.9
9	20	04	979.9	-18.2	-21.8	73	-	0.2	1.8	2.5
9	20	05	980.0	-19.4	-23.1	73	-	0.0	0.7	1.5
9	20	06	980.6	-19.0	-22.4	75	SW	1.0	1.3	2.3
9	20	07	980.7	-17.9	-21.0	76	W	1.5	1.9	2.3
9	20	08	980.9	-17.5	-20.7	76	-	0.0	1.6	2.4
9	20	09	980.9	-16.6	-20.3	73	S	2.1	2.2	3.1
9	20	10	981.0	-17.1	-20.3	76	-	0.1	1.4	1.9
9	20	11	981.0	-14.9	-18.0	77	SSW	0.9	1.1	1.6
9	20	12	980.9	-13.8	-16.8	78	WSW	1.1	1.2	1.5
9	20	13	980.8	-14.5	-17.6	77	WSW	1.7	1.8	2.4
9	20	14	980.7	-14.2	-17.7	74	SSW	2.4	2.9	3.7
9	20	15	980.5	-14.4	-18.5	71	WSW	1.5	2.4	3.0
9	20	16	980.6	-14.3	-18.6	70	SSE	0.3	1.6	2.2
9	20	17	980.7	-16.2	-20.2	71	-	0.0	1.0	1.8
9	20	18	980.8	-19.9	-22.5	80	SW	0.4	1.0	2.3
9	20	19	981.0	-20.0	-22.3	82	-	0.0	0.1	1.6
9	20	20	981.0	-21.6	-24.9	75	SSE	2.5	2.5	3.2
9	20	21	981.0	-21.9	-25.6	72	SSE	2.5	2.9	3.6
9	20	22	981.1	-22.0	-25.9	71	S	2.0	2.4	3.3
9	20	23	981.1	-23.3	-26.9	72	S	1.4	2.4	3.8

9	21	00	980.9	-22.8	-26.5	72	SSE	2.0	2.3	2.9
9	21	01	980.9	-24.6	-28.0	73	-	0.0	1.9	2.8
9	21	02	981.0	-24.1	-27.8	72	-	0.0	1.4	2.7
9	21	03	980.9	-25.9	-29.8	70	-	0.0	0.1	1.8
9	21	04	980.9	-22.5	-27.5	64	SSE	1.3	2.3	3.4
9	21	05	980.6	-24.6	-28.6	69	SE	2.1	2.4	3.6
9	21	06	980.7	-25.8	-29.6	71	-	0.0	1.6	2.4
9	21	07	980.4	-26.0	-30.0	69	-	0.0	0.0	0.0
9	21	08	980.7	-22.6	-28.4	60	SSE	0.9	2.0	2.8
9	21	09	980.7	-20.8	-27.9	53	-	0.0	0.0	0.0
9	21	10	980.8	-24.2	-28.1	71	-	0.2	0.2	1.9
9	21	11	980.8	-23.5	-28.3	65	W	1.4	1.4	2.1
9	21	12	980.6	-23.4	-27.8	67	-	0.1	0.5	1.9
9	21	13	980.7	-22.6	-26.8	69	-	0.0	1.3	1.7
9	21	14	980.3	-20.4	-25.8	62	WSW	2.2	2.3	3.3
9	21	15	980.0	-20.4	-25.9	61	SW	1.9	2.2	2.7
9	21	16	979.8	-20.9	-26.3	62	SSW	0.8	2.2	2.6
9	21	17	979.3	-22.5	-27.4	65	SW	1.2	1.8	2.4
9	21	18	979.1	-21.0	-25.8	66	-	0.1	0.6	1.9
9	21	19	979.0	-23.2	-27.6	68	SSW	1.7	2.5	3.1
9	21	20	978.8	-21.9	-26.6	66	SE	2.4	2.4	3.3
9	21	21	978.9	-21.3	-26.3	64	S	2.9	3.3	4.2
9	21	22	978.8	-21.4	-26.2	65	SSE	2.9	4.4	5.8
9	21	23	978.9	-20.2	-25.2	64	-	0.0	3.6	4.4
9	22	00	978.7	-19.0	-23.8	66	S	1.2	2.6	3.4
9	22	01	978.6	-22.0	-26.2	69	SSW	2.3	2.3	3.3
9	22	02	978.8	-22.3	-26.0	72	SW	1.7	2.9	3.5
9	22	03	978.6	-24.0	-28.0	70	S	0.7	1.6	2.3
9	22	04	978.6	-24.0	-28.5	66	SSW	1.8	2.4	3.5
9	22	05	978.4	-23.2	-27.1	71	-	0.0	2.8	4.2
9	22	06	978.5	-23.1	-28.0	64	S	1.9	1.9	2.9
9	22	07	978.5	-22.8	-27.4	66	-	0.0	2.3	2.8
9	22	08	978.6	-20.8	-24.9	70	-	0.0	0.5	2.0
9	22	09	978.9	-19.3	-23.3	70	SSW	1.3	2.0	2.5
9	22	10	978.8	-17.8	-22.0	70	SSW	1.6	1.9	2.5
9	22	11	978.8	-16.5	-20.7	70	S	1.7	2.4	3.0
9	22	12	979.1	-13.8	-20.0	59	SSE	2.3	2.3	3.1
9	22	13	979.2	-14.8	-19.8	66	S	1.6	2.2	3.1
9	22	14	979.6	-16.8	-20.8	71	WSW	1.4	1.4	2.1
9	22	15	979.9	-16.1	-20.1	71	SSW	1.7	1.7	2.0
9	22	16	980.1	-16.7	-20.6	72	SSW	1.8	2.1	2.3
9	22	17	980.4	-17.5	-21.1	73	S	2.4	2.6	3.3
9	22	18	980.8	-18.0	-22.2	70	ESE	2.4	2.6	3.2
9	22	19	981.2	-18.1	-21.9	72	SSW	2.6	2.7	3.8
9	22	20	981.6	-18.5	-23.5	65	S	2.4	3.0	3.8
9	22	21	982.1	-18.8	-24.8	59	SSE	1.6	2.9	4.1
9	22	22	982.8	-17.7	-24.1	58	SE	2.3	3.4	4.4
9	22	23	983.3	-18.7	-24.3	61	ESE	2.8	3.2	4.3
9	23	00	983.9	-17.3	-23.8	57	ESE	3.6	3.9	5.2
9	23	01	984.6	-17.5	-24.8	53	ESE	3.1	3.4	4.9
9	23	02	985.0	-14.8	-24.3	44	SSE	2.4	2.9	5.1
9	23	03	985.7	-15.3	-24.2	47	SSE	3.3	3.3	4.9
9	23	04	985.9	-13.3	-23.0	44	ESE	7.3	7.3	12.5
9	23	05	986.1	-13.0	-23.3	42	SE	5.9	7.1	11.6
9	23	06	985.9	-14.4	-21.1	57	E	7.1	7.1	13.4
9	23	07	986.6	-13.4	-20.9	53	ENE	5.5	6.5	9.9
9	23	08	987.2	-12.6	-19.2	58	E	6.3	9.1	14.8
9	23	09	987.6	-11.6	-17.8	60	E	8.8	8.8	13.2
9	23	10	988.5	-11.2	-16.6	65	E	9.5	11.4	16.2
9	23	11	989.4	-10.2	-16.0	62	E	8.8	9.9	13.9
9	23	12	989.7	-9.4	-15.7	60	E	9.1	9.7	16.1
9	23	13	991.2	-8.9	-17.4	50	SW	2.9	10.9	16.0
9	23	14	991.7	-8.1	-18.6	43	SW	3.4	4.4	11.3
9	23	15	993.0	-6.9	-20.1	34	SW	3.2	3.6	17.8
9	23	16	993.1	-6.0	-21.5	28	W	1.4	5.2	13.2
9	23	17	993.9	-7.9	-17.9	44	E	5.6	5.6	10.3
9	23	18	994.7	-8.7	-18.3	46	SE	3.3	7.4	11.1
9	23	19	995.4	-9.9	-18.2	50	S	2.6	2.9	5.4
9	23	20	995.7	-10.7	-18.1	54	ESE	5.6	8.4	13.3
9	23	21	996.0	-11.9	-18.6	58	S	2.6	6.2	9.3
9	23	22	996.0	-12.9	-19.1	59	ESE	1.6	4.9	7.5
9	23	23	996.5	-14.5	-20.8	59	ESE	3.2	3.9	5.1
9	24	00	996.6	-15.5	-21.3	61	SSE	3.2	3.2	4.1

9	24	01	996.7	-16.5	-23.5	55	SSW	1.5	4.4	5.9
9	24	02	996.4	-14.8	-22.1	54	ESE	3.0	3.0	4.6
9	24	03	996.0	-16.0	-23.6	52	SE	4.0	4.5	7.1
9	24	04	995.7	-15.8	-23.3	53	SE	3.5	4.2	5.8
9	24	05	995.4	-15.9	-24.8	46	SE	1.5	3.7	5.1
9	24	06	995.3	-16.0	-24.3	49	SE	5.0	5.0	7.5
9	24	07	995.1	-16.2	-23.8	52	SE	3.8	3.9	6.2
9	24	08	995.1	-17.1	-25.5	48	WSW	1.1	2.8	4.0
9	24	09	994.8	-16.9	-23.0	59	SSW	1.6	2.7	4.7
9	24	10	994.9	-16.5	-22.9	58	SW	1.3	1.4	2.5
9	24	11	994.6	-15.5	-20.7	64	SSE	0.9	1.7	2.9
9	24	12	994.3	-15.4	-19.8	69	SSE	1.6	2.1	2.7
9	24	13	994.0	-14.4	-19.2	67	S	1.3	2.4	2.9
9	24	14	993.7	-14.3	-20.4	60	WSW	1.2	1.4	2.7
9	24	15	993.5	-16.4	-20.7	69	W	2.0	2.8	3.4
9	24	16	993.1	-17.2	-21.4	70	W	0.7	1.9	2.2
9	24	17	992.8	-17.8	-21.7	71	S	1.7	1.7	2.1
9	24	18	992.6	-19.2	-23.0	72	-	0.0	1.3	2.2
9	24	19	992.4	-21.1	-24.1	77	S	2.2	2.2	2.8
9	24	20	992.1	-21.2	-24.1	78	S	1.9	1.9	2.7
9	24	21	992.0	-20.9	-24.3	75	S	2.8	3.0	3.5
9	24	22	991.8	-21.4	-24.8	74	SSE	2.3	2.8	3.4
9	24	23	991.6	-21.6	-25.3	72	SSE	2.5	2.5	3.0
9	25	00	991.5	-21.9	-25.5	72	SSE	1.9	2.4	3.2
9	25	01	991.5	-26.4	-29.9	72	-	0.0	2.2	3.0
9	25	02	991.4	-27.3	-30.8	72	-	0.0	0.0	0.0
9	25	03	991.5	-27.7	-31.3	71	-	0.0	0.0	0.0
9	25	04	991.4	-28.4	-31.9	72	-	0.0	1.0	2.2
9	25	05	991.7	-28.7	-32.1	73	-	0.0	0.0	0.0
9	25	06	991.9	-29.1	-32.5	72	-	0.0	0.0	0.0
9	25	07	992.4	-27.1	-32.7	59	-	0.0	0.0	0.0
9	25	08	992.9	-26.1	-31.3	61	W	0.4	0.4	2.2
9	25	09	993.2	-22.0	-29.0	53	-	0.0	0.0	0.0
9	25	10	993.8	-24.1	-27.9	71	-	0.0	1.1	1.9
9	25	11	994.2	-21.8	-26.1	68	-	0.0	0.0	0.0
9	25	12	993.0	-21.2	-24.8	73	W	1.8	1.8	2.5
9	25	13	995.0	-19.6	-23.4	71	W	1.0	2.0	2.4
9	25	14	995.6	-19.6	-24.2	67	WNW	1.5	1.6	2.1
9	25	15	995.9	-19.0	-23.9	65	WNW	1.0	1.4	1.7
9	25	16	996.2	-19.5	-24.4	65	-	0.0	0.9	1.4
9	25	17	996.5	-19.6	-25.0	62	-	0.0	0.0	0.0
9	25	18	996.9	-19.8	-24.7	65	-	0.0	0.0	0.0
9	25	19	997.1	-24.9	-28.4	73	-	0.0	0.0	0.0
9	25	20	997.3	-27.8	-30.9	75	W	0.7	0.7	1.9
9	25	21	997.4	-27.6	-30.4	77	-	0.0	0.7	1.9
9	25	22	997.5	-28.6	-31.5	76	-	0.0	0.0	0.0
9	25	23	997.6	-28.1	-30.9	77	-	0.0	0.7	1.9
9	26	00	997.8	-28.4	-31.4	75	-	0.0	0.5	2.1
9	26	01	998.0	-27.0	-29.8	77	-	0.0	0.0	0.0
9	26	02	998.2	-27.4	-30.5	75	-	0.0	0.0	0.0
9	26	03	998.3	-27.1	-30.4	74	-	0.0	0.0	0.0
9	26	04	998.4	-25.9	-29.1	75	-	0.0	0.8	2.1
9	26	05	998.4	-24.8	-27.9	76	-	0.0	0.0	0.0
9	26	06	998.3	-25.4	-28.7	74	-	0.0	0.0	0.0
9	26	07	998.4	-25.1	-28.9	70	-	0.0	0.0	0.0
9	26	08	998.6	-23.2	-28.4	63	-	0.0	0.0	0.0
9	26	09	998.6	-21.6	-26.4	65	-	0.0	0.0	0.0
9	26	10	998.6	-20.2	-24.0	71	-	0.0	0.0	0.0
9	26	11	998.7	-19.5	-23.1	73	NNE	1.3	1.3	2.2
9	26	12	998.9	-18.7	-21.9	76	-	0.3	1.8	2.5
9	26	13	998.9	-19.1	-21.6	80	N	1.9	2.2	2.8
9	26	14	999.0	-19.2	-21.9	79	N	2.3	2.4	3.2
9	26	15	998.8	-20.3	-22.4	84	NNW	1.9	2.2	3.0
9	26	16	998.7	-21.6	-23.9	81	N	2.4	2.4	3.1
9	26	17	998.8	-22.8	-25.3	80	NNW	0.9	2.5	3.5
9	26	18	999.0	-24.3	-27.0	79	-	0.0	1.8	2.5
9	26	19	999.3	-25.1	-28.0	77	-	0.0	1.7	2.5
9	26	20	999.3	-25.3	-28.2	77	-	0.0	0.0	0.0
9	26	21	999.3	-25.7	-28.6	76	-	0.0	0.0	0.0
9	26	22	999.2	-26.4	-29.4	76	-	0.0	0.0	0.0
9	26	23	999.5	-27.2	-30.3	75	-	0.0	0.0	0.0
9	27	00	999.5	-27.2	-30.3	75	-	0.0	0.0	0.0
9	27	01	999.5	-28.7	-32.0	73	-	0.0	0.0	0.0

10	18	09	992.3	-7.0	-11.3	71	WNW	1.9	2.5	4.9
10	18	10	992.4	-6.7	-9.9	78	WSW	1.7	2.6	3.8
10	18	11	992.2	-7.1	-9.8	81	SW	3.7	3.7	5.3
10	18	12	992.3	-6.1	-11.7	64	ESE	2.9	4.4	7.7
10	18	13	992.3	-5.9	-11.8	63	ENE	3.8	4.4	7.7
10	18	14	992.3	-6.2	-10.3	73	SW	2.8	3.1	4.4
10	18	15	992.3	-5.0	-11.4	61	SW	1.7	1.7	3.7
10	18	16	992.6	-5.6	-10.9	66	SSW	2.3	2.5	4.0
10	18	17	992.8	-8.2	-12.2	73	SW	2.7	2.7	5.1
10	18	18	993.0	-8.4	-11.2	80	W	2.5	3.3	4.1
10	18	19	993.1	-7.8	-12.0	72	SSW	1.4	2.8	5.0
10	18	20	993.4	-9.4	-12.4	79	W	2.3	2.3	2.7
10	18	21	993.9	-9.4	-11.8	82	WNW	3.0	3.7	5.2
10	18	22	994.3	-9.7	-12.0	83	NNE	0.5	2.7	4.2
10	18	23	994.4	-11.9	-13.7	86	NNW	1.9	3.8	5.6
10	19	00	994.3	-12.1	-14.1	84	WSW	0.7	1.2	1.9
10	19	01	994.2	-13.1	-15.1	85	WNW	0.9	1.7	2.4
10	19	02	993.8	-13.3	-15.2	86	SW	1.3	1.8	2.7
10	19	03	993.2	-12.0	-14.3	83	SSW	3.0	3.0	3.6
10	19	04	992.4	-11.9	-14.3	83	S	2.3	3.5	4.5
10	19	05	991.8	-10.0	-14.5	69	S	2.7	2.7	4.0
10	19	06	991.4	-9.6	-14.1	70	S	3.3	3.6	4.7
10	19	07	991.0	-8.6	-14.8	61	ESE	3.7	3.8	7.2
10	19	08	990.6	-7.9	-14.5	59	ESE	2.5	5.0	7.1
10	19	09	989.8	-7.8	-12.8	67	S	2.9	3.3	5.4
10	19	10	988.9	-6.8	-12.5	64	S	3.2	4.3	5.3
10	19	11	988.4	-6.6	-11.7	67	ESE	1.3	3.1	3.7
10	19	12	987.3	-6.4	-12.2	64	SSW	2.0	2.0	3.1
10	19	13	986.2	-5.9	-12.2	61	SW	2.2	2.8	3.9
10	19	14	984.9	-5.1	-10.8	64	WSW	1.7	2.9	3.5
10	19	15	984.1	-3.9	-10.3	61	SSW	1.6	2.7	3.7
10	19	16	983.1	-8.3	-13.3	67	SSW	2.4	2.4	3.0
10	19	17	982.3	-8.5	-13.7	66	SE	1.9	2.5	3.2
10	19	18	981.8	-9.0	-15.7	58	SSE	2.6	2.6	4.7
10	19	19	981.6	-6.9	-15.2	52	ESE	5.0	5.4	8.5
10	19	20	981.6	-9.1	-16.5	55	ESE	4.7	6.3	9.1
10	19	21	981.6	-9.5	-17.4	53	S	3.4	4.2	6.0
10	19	22	981.7	-9.3	-17.8	50	ESE	3.0	3.5	5.3
10	19	23	981.6	-9.1	-17.0	53	E	4.1	5.0	8.0
10	20	00	981.6	-10.0	-17.4	55	ESE	2.5	5.1	8.2
10	20	01	982.1	-9.9	-17.5	54	NE	2.0	2.3	3.7
10	20	02	982.4	-8.2	-16.4	52	ESE	3.7	5.9	8.7
10	20	03	982.8	-8.3	-17.1	49	ENE	2.4	3.5	9.1
10	20	04	983.3	-10.4	-18.4	52	SE	1.3	3.3	7.7
10	20	05	983.8	-10.0	-17.7	53	SSE	2.4	2.4	9.8
10	20	06	983.8	-9.3	-17.6	51	ENE	2.8	7.5	15.4
10	20	07	984.0	-8.6	-17.7	48	ESE	3.9	6.6	12.6
10	20	08	983.8	-8.3	-15.5	56	NE	5.9	6.8	10.7
10	20	09	983.7	-7.7	-15.1	56	ENE	4.0	8.0	13.2
10	20	10	984.0	-6.3	-14.7	52	NE	5.6	11.3	16.0
10	20	11	984.4	-6.9	-13.3	60	E	7.3	8.5	13.5
10	20	12	984.1	-6.6	-12.6	62	E	8.1	9.6	15.3
10	20	13	984.2	-6.3	-12.9	60	ENE	8.0	9.6	14.3
10	20	14	983.9	-6.5	-11.8	66	ENE	9.6	11.0	15.4
10	20	15	984.4	-6.2	-12.5	61	ENE	7.4	9.7	13.7
10	20	16	984.3	-6.6	-12.5	63	E	8.9	9.0	13.6
10	20	17	984.7	-7.2	-13.1	63	NE	5.7	9.9	13.7
10	20	18	985.3	-7.6	-14.4	59	NE	6.1	6.2	10.3
10	20	19	985.1	-8.9	-14.8	62	E	8.1	8.5	15.8
10	20	20	985.7	-10.0	-15.0	67	E	11.9	11.9	17.6
10	20	21	986.3	-10.7	-15.9	65	E	10.0	12.7	17.5
10	20	22	986.6	-11.0	-16.6	63	E	9.0	11.0	16.0
10	20	23	986.4	-12.0	-16.3	71	E	11.8	12.4	20.6
10	21	00	986.4	-12.6	-17.1	69	E	11.1	13.1	18.8
10	21	01	986.0	-13.0	-17.3	70	E	11.1	11.7	17.3
10	21	02	986.2	-13.2	-18.3	66	E	8.3	11.0	18.2
10	21	03	986.4	-12.8	-20.9	51	ENE	3.8	7.6	12.0
10	21	04	986.0	-13.6	-22.1	49	SE	3.6	3.8	7.3
10	21	05	985.7	-13.3	-22.4	46	SE	1.3	2.0	4.0
10	21	06	985.5	-15.8	-21.6	61	S	1.7	2.4	3.2
10	21	07	985.1	-13.6	-21.6	51	SE	3.6	4.5	6.5
10	21	08	984.7	-13.5	-22.8	46	N	1.2	3.7	5.8
10	21	09	984.0	-11.7	-21.0	46	SE	5.1	6.1	10.0

10	21	10	983.9	-11.3	-18.8	54	NNW	1.3	3.1	5.2
10	21	11	983.5	-9.8	-17.8	52	WSW	1.0	1.3	2.4
10	21	12	982.9	-9.7	-18.2	50	W	1.3	1.3	1.7
10	21	13	982.4	-9.6	-18.8	47	SW	1.5	1.5	2.1
10	21	14	981.9	-9.9	-17.3	55	SW	2.7	2.7	3.4
10	21	15	981.1	-9.5	-15.8	60	SW	1.5	2.3	3.5
10	21	16	980.2	-10.4	-15.3	67	WNW	1.6	1.6	2.2
10	21	17	979.7	-11.4	-16.7	65	WNW	1.7	2.2	2.6
10	21	18	979.1	-13.8	-17.7	72	WNW	1.6	2.1	2.9
10	21	19	978.7	-14.8	-19.4	68	SSW	0.6	2.0	2.6
10	21	20	978.5	-18.7	-22.1	74	W	1.6	1.9	2.4
10	21	21	978.4	-18.3	-20.8	81	-	0.0	1.7	2.0
10	21	22	978.4	-18.1	-20.6	81	S	1.6	2.2	2.7
10	21	23	978.4	-18.1	-21.8	73	SSE	1.7	1.7	2.3
10	22	00	978.2	-17.6	-22.2	67	SSE	3.0	3.0	3.7
10	22	01	978.4	-18.5	-23.0	88	SE	1.9	2.8	3.9
10	22	02	978.6	-19.5	-23.5	71	SSW	1.8	2.2	2.6
10	22	03	978.8	-20.2	-24.1	71	S	2.0	2.2	2.9
10	22	04	979.1	-20.3	-23.8	74	S	1.0	2.4	2.9
10	22	05	979.4	-20.0	-24.7	67	S	1.5	2.1	2.5
10	22	06	979.7	-19.0	-23.5	67	SSW	1.1	1.7	2.5
10	22	07	980.1	-18.7	-24.3	61	SSW	1.2	1.2	1.8
10	22	08	980.4	-17.2	-22.7	62	SSW	1.4	1.6	2.1
10	22	09	980.8	-16.2	-21.9	61	W	0.7	1.2	1.8
10	22	10	981.5	-14.8	-20.2	64	WNW	0.9	1.4	2.5
10	22	11	982.3	-13.1	-18.7	63	W	0.7	1.4	3.5
10	22	12	983.1	-13.2	-18.8	63	W	1.6	1.8	2.8
10	22	13	983.7	-11.3	-18.6	55	SSW	1.6	1.7	2.2
10	22	14	984.4	-10.6	-18.3	54	S	1.3	1.7	2.0
10	22	15	985.1	-9.6	-16.8	56	SW	0.9	1.1	1.5
10	22	16	985.8	-10.8	-17.6	57	WSW	1.0	1.0	1.2
10	22	17	986.4	-12.0	-18.4	59	W	1.1	1.3	1.4
10	22	18	987.2	-13.7	-19.8	60	W	1.1	1.4	1.8
10	22	19	988.2	-16.7	-21.7	65	W	1.2	1.5	1.7
10	22	20	988.9	-18.6	-22.8	69	SSW	1.8	1.8	2.2
10	22	21	989.8	-19.2	-22.2	77	S	2.0	2.1	2.4
10	22	22	990.4	-19.1	-22.7	73	SSE	1.4	2.5	3.9
10	22	23	991.1	-19.9	-22.7	79	S	1.3	1.6	2.2
10	23	00	991.7	-20.3	-23.2	78	S	1.4	1.7	2.0
10	23	01	992.1	-18.6	-23.2	67	SE	0.8	1.6	2.1
10	23	02	992.9	-20.2	-25.3	64	W	0.4	0.9	1.8
10	23	03	993.5	-20.8	-24.1	75	-	0.0	0.4	1.0
10	23	04	994.0	-20.8	-24.6	71	-	0.0	0.0	0.0
10	23	05	994.7	-20.8	-24.7	71	-	0.0	0.0	0.0
10	23	06	995.1	-22.1	-26.1	70	SW	1.2	1.7	2.1
10	23	07	995.6	-17.0	-20.9	72	S	1.7	1.7	2.0
10	23	08	998.2	-15.4	-20.1	67	S	1.2	1.9	2.4
10	23	09	996.7	-17.2	-21.3	70	W	1.4	1.4	1.8
10	23	10	997.2	-14.7	-19.1	69	W	2.0	2.2	2.6
10	23	11	997.7	-13.0	-18.4	64	WSW	1.6	2.0	2.6
10	23	12	998.1	-11.2	-17.4	60	WSW	1.0	1.7	2.0
10	23	13	998.2	-11.3	-17.5	61	WSW	1.8	1.8	2.1
10	23	14	998.6	-10.4	-17.8	65	WSW	1.1	1.9	2.3
10	23	15	998.9	-10.4	-16.9	59	W	1.2	1.4	1.7
10	23	16	999.1	-11.4	-16.2	68	WNW	1.3	1.4	1.7
10	23	17	999.2	-14.0	-17.7	73	W	1.6	1.7	2.1
10	23	18	999.3	-14.0	-18.2	70	W	1.1	1.8	2.2
10	23	19	999.5	-17.0	-20.6	74	W	1.5	1.5	1.7
10	23	20	1000.0	-18.0	-21.4	75	WSW	0.6	1.3	1.5
10	23	21	1000.0	-20.4	-23.4	77	W	1.0	1.0	1.3
10	23	22	1000.3	-22.2	-25.1	77	WNW	1.1	1.5	1.7
10	23	23	1000.6	-22.6	-25.2	79	-	0.0	1.2	1.6
10	24	00	1000.8	-24.0	-26.7	78	-	0.0	1.0	1.6
10	24	01	1000.9	-24.2	-26.9	78	-	0.0	0.0	0.0
10	24	02	1001.0	-25.9	-28.6	78	-	0.0	0.0	0.0
10	24	03	1001.3	-26.0	-28.6	79	-	0.0	0.0	0.0
10	24	04	1001.2	-22.6	-24.7	83	SSE	0.6	0.6	1.8
10	24	05	1000.7	-22.8	-25.7	77	S	1.7	1.7	2.0
10	24	06	1000.3	-20.3	-23.8	74	SW	1.2	1.5	1.8
10	24	07	999.9	-21.4	-25.0	73	SW	1.6	1.6	2.1
10	24	08	999.3	-19.9	-24.2	68	WNW	0.9	1.6	2.0
10	24	09	998.9	-18.0	-22.6	67	WSW	1.1	1.1	1.7
10	24	10	998.6	-12.9	-19.2	59	SW	0.6	0.9	1.3

10	24	11	998.0	-11.9	-18.4	58	WSW	0.4	0.9	1.5
10	24	12	997.3	-12.8	-18.8	61	WSW	1.5	2.0	2.5
10	24	13	996.4	-12.8	-18.7	61	W	2.0	2.0	2.6
10	24	14	995.8	-11.5	-17.7	60	W	1.2	2.2	2.7
10	24	15	995.0	-5.4	-18.6	35	-	0.0	0.8	1.5
10	24	16	994.1	-8.8	-16.0	56	-	0.0	0.0	0.0
10	24	17	993.3	-12.1	-16.7	88	WNW	1.0	1.1	1.4
10	24	18	992.5	-14.3	-18.3	72	WNW	1.2	1.2	1.7
10	24	19	991.8	-16.0	-20.1	71	W	0.8	1.5	2.1
10	24	20	991.5	-17.7	-21.1	74	SW	0.4	0.8	1.1
10	24	21	991.3	-20.7	-23.2	60	WSW	0.1	1.0	1.3
10	24	22	991.3	-16.5	-20.9	69	ESE	2.1	2.2	2.9
10	24	23	991.4	-14.2	-19.4	65	E	4.0	4.0	5.0
10	25	00	991.4	-12.5	-17.8	65	SE	3.2	4.3	5.2
10	25	01	991.4	-11.7	-17.9	60	ESE	2.4	3.1	4.2
10	25	02	991.1	-12.3	-17.2	67	SSE	3.0	3.7	4.9
10	25	03	991.0	-11.6	-16.6	66	SE	2.7	2.9	4.6
10	25	04	990.8	-11.9	-16.7	67	S	2.9	3.1	4.3
10	25	05	990.8	-11.5	-16.8	65	ESE	1.9	3.6	5.5
10	25	06	990.8	-10.7	-16.9	61	SE	2.6	2.7	4.7
10	25	07	990.9	-10.4	-17.4	57	ESE	6.2	6.2	8.3
10	25	08	991.1	-9.7	-17.6	53	E	4.7	5.3	7.9
10	25	09	991.1	-9.9	-16.3	59	SE	2.2	5.7	9.7
10	25	10	991.0	-9.5	-15.8	60	E	3.8	3.8	6.6
10	25	11	991.1	-8.5	-16.3	53	S	2.1	3.6	5.6
10	25	12	991.2	-7.6	-17.1	46	SSW	3.0	3.3	6.6
10	25	13	991.1	-7.4	-15.3	53	S	1.2	2.6	4.9
10	25	14	991.0	-9.0	-11.8	80	SSW	3.2	3.2	5.5
10	25	15	990.8	-8.6	-12.8	72	S	2.0	2.7	3.9
10	25	16	990.7	-9.0	-12.6	75	SSW	1.3	1.6	2.2
10	25	17	990.5	-8.7	-13.4	69	S	2.6	2.6	3.8
10	25	18	990.2	-9.2	-13.0	74	S	2.0	2.6	3.4
10	25	19	990.0	-9.6	-13.3	75	S	2.3	2.8	3.6
10	25	20	989.9	-10.2	-13.3	76	S	2.2	2.4	2.9
10	25	21	989.7	-10.1	-13.5	76	SSW	2.0	2.2	2.8
10	25	22	989.7	-10.6	-13.7	78	SSW	1.0	2.0	2.5
10	25	23	989.8	-10.3	-13.6	77	SSE	2.0	2.0	2.6
10	26	00	990.0	-10.0	-15.0	67	E	4.3	4.3	6.3
10	26	01	990.0	-10.1	-15.2	67	SE	3.2	4.0	5.2
10	26	02	990.1	-10.1	-16.3	61	E	5.1	5.1	7.2
10	26	03	989.9	-10.9	-16.9	62	ESE	6.0	6.3	9.9
10	26	04	989.8	-11.3	-17.3	61	E	5.1	6.0	8.2
10	26	05	989.9	-10.8	-18.7	52	ENE	3.1	5.0	7.9
10	26	06	989.8	-12.9	-18.7	62	NE	2.3	3.5	5.3
10	26	07	989.7	-11.7	-17.9	60	ENE	2.1	2.7	3.9
10	26	08	989.6	-12.0	-17.5	63	ENE	1.9	3.3	4.6
10	26	09	989.4	-10.1	-16.2	61	WSW	1.4	1.7	2.5
10	26	10	989.5	-10.7	-15.1	70	W	1.8	1.8	2.4
10	26	11	989.4	-8.8	-14.5	63	SW	1.9	1.9	2.4
10	26	12	989.1	-6.5	-14.3	63	WSW	2.2	2.4	3.0
10	26	13	988.8	-8.3	-14.7	60	WSW	2.5	2.9	3.7
10	26	14	988.5	-7.8	-14.3	60	SW	2.1	2.4	3.0
10	26	15	988.0	-7.6	-13.5	63	WSW	2.5	2.6	3.3
10	26	16	987.6	-8.3	-13.2	68	WSW	1.9	2.3	2.9
10	26	17	987.5	-10.1	-13.8	74	WSW	1.3	2.3	3.0
10	26	18	987.5	-11.2	-15.0	74	WSW	1.5	1.5	2.2
10	26	19	987.3	-13.2	-16.3	78	WSW	1.2	1.2	1.7
10	26	20	987.3	-14.0	-16.8	79	SSW	2.0	2.0	2.3
10	26	21	987.6	-14.0	-16.5	82	SE	1.9	2.0	2.4
10	26	22	987.9	-15.6	-17.9	82	ENE	1.8	2.6	2.9
10	26	23	988.0	-14.1	-17.0	79	E	2.3	2.3	2.6
10	27	00	988.1	-12.1	-16.8	68	E	2.3	2.3	3.0
10	27	01	988.2	-11.3	-17.0	62	SE	1.0	2.2	3.3
10	27	02	988.3	-12.3	-17.5	65	E	1.8	1.8	2.6
10	27	03	988.6	-11.8	-18.0	60	SSE	2.1	2.1	4.1
10	27	04	988.7	-14.1	-18.4	70	S	2.7	2.9	3.9
10	27	05	988.7	-13.9	-18.0	71	S	2.6	3.1	4.0
10	27	06	988.7	-13.7	-17.6	72	S	2.6	2.8	3.5
10	27	07	988.6	-12.8	-16.9	71	SSE	2.2	2.5	3.3
10	27	08	988.6	-11.5	-16.3	68	S	2.2	2.5	3.1
10	27	09	988.3	-10.4	-15.0	69	S	1.6	2.0	2.6
10	27	10	986.3	-7.4	-14.6	56	SSW	0.6	1.1	1.7
10	27	11	988.2	-6.8	-12.2	66	W	1.2	1.2	1.7

10	27	12	988.1	-6.7	-12.2	65	W	1.5	1.5	2.1
10	27	13	987.9	-6.1	-11.3	66	W	1.7	1.7	2.0
10	27	14	987.6	-5.9	-11.3	66	W	1.6	1.9	2.6
10	27	15	987.3	-4.2	-11.0	59	SW	0.9	1.6	1.9
10	27	16	987.1	-4.7	-11.0	61	SW	0.9	1.3	1.7
10	27	17	987.0	-4.0	-9.9	64	WNW	0.4	0.9	1.2
10	27	18	986.8	-8.0	-11.1	7.8	WSW	0.7	1.2	1.4
10	27	19	986.8	-9.3	-11.7	83	SW	0.8	1.1	1.3
10	27	20	987.2	-13.2	-15.3	84	W	1.1	1.1	1.4
10	27	21	987.4	-13.2	-15.1	86	E	0.7	1.5	1.9
10	27	22	987.5	-12.1	-18.1	61	ENE	3.8	3.8	5.1
10	27	23	988.1	-12.8	-18.4	63	ENE	3.5	4.3	5.4
10	28	00	988.7	-12.2	-18.7	59	ENE	4.4	4.4	6.4
10	28	01	989.2	-12.0	-19.5	54	ESE	1.3	3.6	4.7
10	28	02	989.7	-11.8	-20.2	50	SE	2.4	2.9	5.2
10	28	03	990.1	-12.6	-20.3	53	SSE	1.7	3.5	6.0
10	28	04	990.6	-17.1	-20.7	74	S	2.0	2.2	3.3
10	28	05	991.0	-13.7	-20.9	54	ESE	3.3	3.3	4.6
10	28	06	991.4	-13.1	-19.9	57	SE	2.0	4.1	5.4
10	28	07	991.5	-12.8	-17.8	66	S	2.4	2.4	3.5
10	28	08	991.9	-9.0	-15.4	60	SSW	0.8	2.2	3.0
10	28	09	992.0	-9.2	-15.5	60	S	1.8	2.1	2.7
10	28	10	992.3	-9.8	-14.6	68	W	1.3	1.6	1.9
10	28	11	992.5	-9.9	-14.9	67	WSW	2.9	2.9	3.4
10	28	12	992.6	-9.1	-15.1	61	WSW	2.8	3.3	4.0
10	28	13	992.5	-8.7	-15.4	8	WSW	2.5	3.0	3.6
10	28	14	992.7	-8.7	-14.1	65	WSW	2.6	2.6	3.1
10	28	15	993.0	-8.7	-14.0	86	WNW	2.0	2.7	3.4
10	28	16	993.2	-9.8	-13.7	73	NNW	1.9	2.2	2.7
10	28	17	993.3	-10.1	-15.1	67	WNW	1.1	1.6	2.1
10	28	18	993.5	-12.0	-16.0	72	W	1.1	1.2	1.5
10	28	19	993.6	-14.6	-17.9	76	W	1.7	1.7	2.0
10	28	20	993.8	-15.5	-18.7	77	-	0.0	1.7	2.1
10	28	21	994.1	-19.0	-21.9	78	W	1.4	1.4	1.7
10	28	22	994.5	-20.6	-23.1	80	-	0.0	0.1	1.1
10	28	23	994.8	-21.9	-24.4	80	-	0.0	0.0	0.0
10	29	00	995.3	-21.8	-24.5	79	-	0.0	0.0	0.0
10	29	01	995.9	-18.6	-21.4	78	-	0.0	0.0	0.0
10	29	02	996.4	-19.3	-23.1	72	-	0.0	0.0	0.0
10	29	03	996.9	-20.0	-21.9	84	-	0.0	0.0	0.0
10	29	04	997.3	-19.3	-22.2	77	-	0.0	1.3	1.9
10	29	05	997.6	-20.6	-23.7	76	-	0.0	1.8	2.0
10	29	06	998.0	-21.3	-25.0	72	WNW	1.3	1.3	1.6
10	29	07	998.2	-17.9	-22.7	66	WSW	1.0	1.5	2.1
10	29	08	998.4	-15.6	-20.7	65	WSW	1.2	1.4	1.9
10	29	09	998.6	-14.5	-19.1	68	WSW	1.1	1.5	1.7
10	29	10	998.7	-11.9	-17.1	65	SW	1.1	1.2	1.5
10	29	11	998.7	-10.4	-16.3	62	WSW	1.6	1.6	2.1
10	29	12	998.6	-9.0	-15.1	61	SW	1.4	1.7	2.2
10	29	13	998.5	-9.2	-15.5	60	SW	2.0	2.0	2.6
10	29	14	998.4	-8.7	-15.1	60	WSW	2.0	2.0	2.6
10	29	15	998.2	-8.8	-15.3	59	SW	1.8	2.0	2.5
10	29	16	998.0	-9.3	-15.0	63	WSW	1.8	1.9	2.4
10	29	17	997.8	-10.2	-14.6	71	WSW	1.4	1.7	2.2
10	29	18	997.7	-11.6	-16.2	69	WSW	1.5	1.5	1.8
10	29	19	997.5	-13.7	-17.6	73	WSW	1.1	1.7	2.0
10	29	20	997.4	-16.5	-20.2	73	W	1.4	1.7	2.0
10	29	21	997.4	-16.6	-19.6	78	SSW	1.2	1.2	1.8
10	29	22	997.5	-19.3	-22.2	77	WSW	1.4	1.9	2.1
10	29	23	997.4	-20.2	-22.8	79	WNW	0.5	1.5	1.7
10	30	00	997.4	-20.0	-22.8	79	-	0.0	0.0	0.0
10	30	01	997.4	-15.6	-18.8	76	-	0.2	0.2	2.7
10	30	02	997.7	-14.9	-19.6	67	S	0.7	2.4	2.8
10	30	03	997.7	-14.3	-19.4	66	E	0.3	1.4	2.3
10	30	04	997.9	-16.8	-20.4	74	SSW	1.8	1.8	2.3
10	30	05	997.8	-15.7	-19.5	73	SSW	1.7	1.9	2.3
10	30	06	997.5	-14.9	-18.9	72	SSW	1.8	1.8	2.4
10	30	07	997.3	-12.3	-17.4	66	S	1.6	2.1	3.1
10	30	08	997.1	-10.2	-16.6	59	SW	0.7	1.5	2.0
10	30	09	997.0	-11.1	-16.0	67	W	1.0	1.3	1.8
10	30	10	996.7	-9.3	-14.0	69	W	1.3	1.3	1.8
10	30	11	996.6	-8.6	-13.2	70	W	1.6	1.7	2.4
10	30	12	996.6	-6.5	-12.4	63	WSW	1.2	2.2	2.7

10	30	13	996.2	-7.2	-12.8	65	SW	2.1	2.2	3.0
10	30	14	995.9	-6.6	-11.6	67	SW	2.0	2.9	3.9
10	30	15	995.6	-4.9	-11.0	62	SW	1.6	2.4	3.1
10	30	16	995.2	-5.3	-10.6	66	WSW	1.7	1.7	2.5
10	30	17	994.9	-6.6	-10.1	76	W	2.3	2.4	3.1
10	30	18	994.8	-7.1	-11.0	74	WSW	1.3	2.7	3.2
10	30	19	994.8	-8.4	-11.5	79	SW	1.0	1.0	1.5
10	30	20	994.9	-9.1	-12.1	79	S	0.7	0.7	1.0
10	30	21	995.4	-10.5	-12.6	85	S	1.8	1.8	2.0
10	30	22	995.9	-8.0	-13.3	66	E	2.5	2.5	4.0
10	30	23	996.6	-10.1	-14.9	68	ESE	3.4	3.6	4.6
10	31	00	996.9	-10.8	-15.6	68	ENE	2.9	4.9	6.1
10	31	01	997.2	-8.8	-14.3	65	E	4.1	4.1	6.6
10	31	02	997.6	-9.2	-14.5	66	ENE	4.5	5.2	6.9
10	31	03	998.0	-9.6	-15.4	63	E	3.7	3.8	5.6
10	31	04	998.3	-9.8	-15.3	64	WSW	0.4	3.1	4.8
10	31	05	998.7	-9.8	-16.3	59	SE	1.9	2.4	4.0
10	31	06	998.5	-11.4	-15.8	70	SSE	2.0	2.4	3.9
10	31	07	998.4	-11.6	-15.7	72	S	1.8	2.7	3.5
10	31	08	998.3	-10.2	-14.7	70	S	1.9	2.3	2.8
10	31	09	998.4	-8.9	-14.2	66	W	1.4	1.4	1.9
10	31	10	998.4	-9.3	-13.2	73	W	1.9	2.3	2.9
10	31	11	998.5	-6.0	-11.6	64	WSW	0.9	2.5	3.1
10	31	12	998.4	-5.9	-11.7	63	WSW	1.4	1.8	2.2
10	31	13	998.2	-5.8	-12.2	60	SW	1.9	1.9	2.4
10	31	14	998.1	-5.9	-10.5	70	WSW	2.3	2.3	3.1
10	31	15	998.0	-5.7	-10.6	69	SW	1.9	2.5	3.2
10	31	16	997.9	-5.5	-11.3	63	WSW	1.1	1.8	2.5
10	31	17	997.5	-7.0	-11.4	71	SW	1.6	1.9	2.4
10	31	18	997.2	-8.0	-11.9	73	SW	1.3	1.7	2.9
10	31	19	996.8	-11.0	-14.4	76	W	1.9	1.9	2.1
10	31	20	996.6	-13.8	-16.7	79	WSW	1.8	2.1	2.5
10	31	21	996.5	-15.1	-17.9	79	WSW	1.6	1.9	2.3
10	31	22	996.1	-16.8	-19.0	83	WSW	1.5	2.2	2.4
10	31	23	996.0	-14.5	-17.4	76	S	2.8	2.8	3.5
11	1	00	996.0	-14.2	-17.6	76	S	3.0	3.0	3.7
11	1	01	995.7	-15.5	-18.7	77	SSE	2.6	3.1	3.8
11	1	02	995.5	-15.5	-19.1	74	S	2.5	2.9	3.6
11	1	03	995.1	-20.4	-24.2	72	W	1.9	2.7	3.3
11	1	04	995.0	-21.8	-25.0	75	W	0.7	2.1	2.8
11	1	05	994.7	-20.5	-24.3	72	-	0.0	0.6	2.1
11	1	06	994.5	-19.3	-23.0	73	-	0.0	0.0	0.3
11	1	07	994.0	-18.4	-22.2	72	WSW	1.4	1.6	2.1
11	1	08	993.7	-16.3	-20.3	71	W	1.8	1.8	2.3
11	1	09	993.3	-13.0	-17.5	69	W	1.2	2.1	2.7
11	1	10	993.4	-12.5	-16.6	71	W	1.8	2.0	2.5
11	1	11	993.3	-7.3	-15.4	52	N	0.5	1.2	1.7
11	1	12	993.1	-10.6	-15.9	65	N	3.1	3.1	4.2
11	1	13	993.2	-11.5	-15.9	70	N	3.5	3.5	4.5
11	1	14	993.2	-11.2	-15.6	70	NNW	3.8	4.2	5.2
11	1	15	993.5	-10.9	-14.8	73	N	3.0	3.6	4.8
11	1	16	993.5	-10.3	-14.3	72	NNW	2.0	2.9	3.7
11	1	17	993.7	-10.7	-15.3	69	WNW	1.2	2.6	3.4
11	1	18	993.7	-5.0	-14.9	46	-	0.0	0.9	1.1
11	1	19	993.9	-12.2	-16.5	70	NNW	0.5	0.7	1.0
11	1	20	994.2	-16.9	-19.3	82	NNW	1.2	1.5	1.8
11	1	21	994.3	-18.7	-20.6	65	W	1.2	1.2	1.4
11	1	22	994.7	-20.1	-22.1	84	-	0.0	0.1	1.1
11	1	23	995.2	-22.0	-24.0	84	-	0.0	0.0	0.0
11	2	00	995.6	-22.5	-24.9	81	-	0.0	0.0	0.0
11	2	01	995.9	-23.7	-26.3	79	-	0.0	0.0	0.0
11	2	02	998.4	-24.5	-27.2	78	-	0.0	0.0	0.0
11	2	03	996.9	-25.1	-27.9	77	-	0.0	0.0	0.0
11	2	04	997.4	-24.5	-27.2	78	-	0.0	0.0	0.0
11	2	05	997.9	-22.8	-25.4	79	-	0.0	0.0	0.0
11	2	06	998.3	-21.3	-23.8	80	-	0.0	0.0	0.0
11	2	07	998.8	-18.5	-20.7	83	-	0.0	0.0	0.0
11	2	08	999.4	-14.1	-16.2	84	-	0.0	0.0	0.0
11	2	09	999.7	-12.8	-16.2	75	-	0.0	0.0	0.0
11	2	10	1000.2	-9.9	-14.5	69	SW	1.1	1.1	1.5
11	2	11	1000.4	-9.9	-15.7	63	W	1.9	1.9	2.3
11	2	12	1000.5	-9.4	-16.1	59	WSW	2.4	2.4	3.1
11	2	13	1000.6	-9.3	-17.4	52	WSW	2.8	3.1	4.0

11	2	14	1000.5	-8.9	-16.4	55	WSW	2.4	2.8	3.5
11	2	15	1000.5	8.9	15.8	57	WSW	2.3	2.3	2.9
11	2	18	1000.2	-9.2	-14.3	87	WSW	2.4	2.6	3.3
11	2	17	1000.1	-9.8	-14.6	68	W	1.5	2.1	2.6
11	2	18	999.8	-12.0	-15.9	73	W	1.7	1.8	2.2
11	2	19	999.8	-13.9	-17.8	73	W	1.8	1.8	2.2
11	2	20	999.5	-15.9	-19.3	75	W	1.3	1.4	1.8
11	2	21	999.6	-17.4	-20.6	76	W	2.6	2.6	2.9
11	2	22	999.7	-18.9	-21.6	79	WSW	1.4	2.5	3.0
11	2	23	999.7	-20.0	-22.8	78	-	0.0	1.2	1.9
11	3	00	999.7	-19.7	-22.0	82	-	0.0	0.0	0.0
11	3	01	999.5	-22.9	-25.7	78	-	0.0	0.0	0.0
11	3	02	999.7	-20.4	-22.8	81	-	0.0	0.0	0.0
11	3	03	999.8	-24.2	-27.1	77	-	0.0	0.0	0.0
11	3	04	1000.0	-23.0	-26.4	74	-	0.0	0.0	0.0
11	3	05	1000.0	-18.2	-22.5	69	-	0.0	1.6	2.5
11	3	06	1000.1	-21.1	-25.0	71	W	1.5	1.8	2.5
11	3	07	1000.3	-18.6	-22.9	69	W	1.3	1.6	2.1
11	3	08	1000.4	-15.4	-20.3	66	WSW	0.9	1.9	2.7
11	3	09	1000.6	-13.0	-17.8	68	WSW	1.5	1.5	2.0
11	3	10	1000.8	-5.0	-15.4	44	-	0.0	1.4	2.0
11	3	11	1000.9	-8.1	-14.7	59	WNW	0.4	0.8	1.2
11	3	12	1000.9	-5.7	-14.1	52	-	0.0	1.0	1.4
11	3	13	1000.6	-6.8	-13.8	58	WSW	0.7	0.7	1.2
11	3	14	1000.4	-3.7	-14.8	42	-	0.0	1.1	1.6
11	3	15	1000.1	-6.3	-13.4	57	-	0.0	0.0	0.0
11	3	16	999.6	-8.9	-12.4	75	W	3.1	3.3	3.9
11	3	17	999.3	-9.7	-12.9	77	W	2.9	3.2	4.1
11	3	18	998.9	-11.0	-14.0	78	W	2.5	2.7	3.2
11	3	19	998.7	-12.8	-15.8	78	W	1.8	2.5	2.9
11	3	20	998.6	-14.8	-17.8	78	W	1.5	2.0	2.3
11	3	21	998.6	-16.5	-19.3	79	-	0.0	0.9	1.7
11	3	22	998.7	-18.7	-21.3	80	NW	1.3	1.5	2.0
11	3	23	998.5	-19.7	-22.0	82	W	1.2	1.2	2.1
11	4	00	998.4	-20.3	-22.2	85	W	0.4	2.1	2.4
11	4	01	998.2	-21.4	-23.4	84	-	0.0	0.0	0.0
11	4	02	998.3	-22.0	-24.1	83	-	0.3	2.0	2.6
11	4	03	998.2	-22.3	-24.5	82	-	0.0	0.2	1.7
11	4	04	998.3	-21.2	-23.5	81	-	0.0	1.1	1.8
11	4	05	998.3	-20.8	-22.9	83	N	0.8	0.8	2.7
11	4	06	998.5	-18.4	-21.0	80	NNE	1.0	1.4	2.3
11	4	07	998.6	-15.2	-19.5	70	-	0.2	0.4	1.2
11	4	08	998.7	-15.7	-19.4	73	N	0.8	0.9	1.3
11	4	09	998.9	-14.4	-19.2	67	NNE	0.8	1.3	1.9
11	4	10	998.8	-11.9	-16.1	70	N	1.3	1.4	1.9
11	4	11	999.0	-12.2	-15.8	75	N	2.1	2.1	2.5
11	4	12	998.9	-12.3	-15.3	78	N	2.4	2.5	3.2
11	4	13	998.8	-11.7	-15.5	74	NNW	1.6	2.5	3.1
11	4	14	998.6	-11.5	-15.6	72	NW	1.8	2.5	3.1
11	4	15	998.5	-10.9	-15.6	69	NNW	1.2	1.5	2.3
11	4	16	998.3	-9.7	-15.4	63	NNW	0.8	1.3	1.9
11	4	17	998.2	-7.7	-15.2	55	-	0.0	0.6	1.4
11	4	18	998.1	-10.5	-15.0	69	NNW	0.5	0.9	1.2
11	4	19	998.1	-12.8	-16.5	74	NNE	0.6	1.0	1.2
11	4	20	998.3	-14.5	-16.9	82	NE	0.6	1.2	1.5
11	4	21	998.5	-15.6	-18.1	82	-	0.0	0.8	0.8
11	4	22	998.7	-18.7	-20.5	86	-	0.0	0.0	0.0
11	4	23	999.0	-19.9	-21.8	84	-	0.0	0.0	0.0
11	5	00	999.1	-20.7	-22.9	83	-	0.0	0.0	0.0
11	5	01	999.3	-20.0	-22.1	83	-	0.0	0.0	0.0
11	5	02	999.3	-22.3	-24.7	81	-	0.0	0.0	0.0
11	5	03	999.8	-22.7	-25.2	80	-	0.0	0.0	0.0
11	5	04	999.7	-20.8	-22.9	83	-	0.0	0.0	0.0
11	5	05	1000.0	-22.3	-24.8	80	-	0.0	0.0	0.0
11	5	06	1000.3	-16.9	-18.6	87	-	0.0	0.0	0.0
11	5	07	1000.4	-17.2	-19.6	82	-	0.0	0.0	0.0
11	5	08	1000.4	-14.1	-16.4	82	-	0.0	0.1	1.2
11	5	09	1000.6	-10.1	-13.9	74	-	0.0	0.0	0.0
11	5	10	1000.7	-4.3	-12.7	52	-	0.0	0.0	0.0
11	5	11	1000.9	-7.5	-14.3	58	-	0.0	0.0	0.0
11	5	12	1000.9	-1.5	-15.8	33	-	0.2	0.2	0.9
11	5	13	1000.7	-9.3	-13.6	71	NNW	1.4	2.0	2.7
11	5	14	1000.5	-8.7	-14.0	65	N	1.4	1.5	2.0

11	5	15	1000.3	-8.3	-13.8	65	NNW	1.7	1.7	2.4
11	5	16	1000.2	-9.6	-13.6	73	NNW	2.5	2.5	3.2
11	5	17	1000.0	-10.9	-14.5	75	NNW	2.9	2.9	4.0
11	5	18	999.9	-11.4	-14.3	79	NW	2.0	2.6	3.5
11	5	19	999.8	-12.0	-14.7	81	NNW	0.9	1.7	2.3
11	5	20	999.8	-12.4	-14.8	82	-	0.0	0.5	1.0
11	5	21	999.6	-15.1	-17.1	84	-	0.0	0.7	1.3
11	5	22	999.5	-16.6	-18.7	84	-	0.0	1.4	2.1
11	5	23	999.4	-17.3	-19.2	85	-	0.0	0.1	0.6
11	6	00	999.4	-18.7	-20.4	86	-	0.0	2.0	2.7
11	6	01	999.3	-18.5	-20.2	87	-	0.0	0.0	0.0
11	6	02	999.0	-17.9	-19.8	85	-	0.0	0.0	0.0
11	6	03	998.7	-17.6	-19.3	86	-	0.0	1.0	1.9
11	8	04	998.4	-18.1	-18.0	85	-	0.0	0.0	0.0
11	6	05	998.1	-15.9	-18.2	82	-	0.0	0.0	0.0
11	8	08	997.8	-15.3	-17.7	82	-	0.0	0.0	0.0
11	6	07	997.2	-12.7	-15.3	81	S	1.8	1.8	2.3
11	6	08	996.9	-12.2	-15.5	76	W	1.7	2.0	2.6
11	6	09	996.8	-10.8	-14.6	74	WSW	1.8	2.6	3.1
11	6	10	996.6	-10.2	-14.3	72	SW	1.8	1.8	2.8
11	6	11	996.4	-10.3	-14.0	74	WSW	3.3	3.3	4.0
11	6	12	996.1	-9.2	-13.6	70	WSW	2.7	3.3	3.9
11	6	13	995.8	-8.9	-13.3	70	SW	3.0	3.1	3.9
11	6	14	995.4	-7.7	-13.1	65	SW	1.6	3.3	4.1
11	6	15	995.0	-6.0	-13.8	54	WNW	0.5	1.0	1.5
11	6	16	994.6	-7.9	-14.1	61	NNW	1.4	1.4	2.1
11	6	17	994.3	-8.7	-13.8	66	NNW	2.0	2.0	2.7
11	6	18	994.0	-9.7	-12.3	81	NNW	3.3	3.5	4.3
11	6	19	993.8	-10.8	-13.6	80	NNW	3.3	4.1	5.3
11	6	20	993.7	-11.2	-13.9	80	NNW	1.9	2.9	3.7
11	6	21	993.7	-11.3	-14.3	78	-	0.2	1.1	1.8
11	6	22	993.7	-11.7	-14.6	79	-	0.0	0.0	0.0
11	6	23	993.4	-12.5	-14.8	83	-	0.0	0.0	0.0
11	7	00	993.3	-15.1	-17.1	85	W	1.4	1.4	1.7
11	7	01	992.9	-16.2	-18.4	83	-	0.1	1.3	2.0
11	7	02	992.3	-18.9	-19.0	84	W	2.1	2.1	2.4
11	7	03	991.8	-17.1	-19.5	81	-	0.0	1.4	2.2
11	7	04	991.3	-19.3	-21.8	81	-	0.0	0.0	0.0
11	7	05	990.8	-18.4	-21.5	76	WSW	0.7	1.8	2.8
11	7	08	990.5	-16.2	-20.7	69	SW	1.1	1.9	2.2
11	7	07	990.1	-15.9	-20.2	70	W	1.2	1.5	2.1
11	7	08	990.1	-14.8	-18.5	73	W	2.1	2.1	2.6
11	7	09	990.0	-11.6	-15.9	70	WSW	1.7	2.5	3.1
11	7	10	990.1	-10.6	-14.8	71	W	1.6	1.6	2.1
11	7	11	990.2	-8.1	-13.7	64	-	0.0	1.0	1.6
11	7	12	990.1	-7.3	-12.9	64	SSE	1.2	1.5	2.2
11	7	13	990.1	-5.3	-12.6	57	S	1.1	1.3	1.7
11	7	14	989.9	-5.6	-14.6	49	WSW	1.8	1.8	2.4

Table 11. Surface synoptic data observed on traverse.

	Month	Day	LST Hour	LST Min	Point	Pa hPa	Ta °C	WD	WS m/s	V km	N	W	CL	AP
Travers 1	8	17	9	00	Syowa	968	-14	ENE	14	>30	10-	CD	7Ac,10-Ci	-
To Skarvsnes	8	17	12	00	R31	967	-13	E	9	>30	10-	HC	3Ac,10-Ci	-
	8	17	19	00	RL20	969	-20	SW	4	>30	10	CD	10Ac	-
	8	18	7	00	RL19	965	-13	SW	3	15	10	SN	10Sc	SN
	8	18	13	00	RL26	971	-12	-	Calm	15	10	CD	8Sc,10Ac	-
	8	18	19	00	Yukidorizawa Cabin	966	-8	N	8	5	10	CD	10Sc	SN
	8	19	7	50	Yukidorizawa Cabin	970	-11	SW	4	5	10	SN	10St	SN
	8	19	13	00	RL52	978	-12	SW	4	10	10	SN	10Sc	SN
	8	19	18	00	SK6	977	-13	-	Calm	10	10	CD	10Sc	-
	8	20	6	00	SK6	977	-29	-	Calm	>30	4	FN	1Sc,4Ac	-
	8	20	12	00	SK31	985	-21	-	Calm	>30	10-	CD	10-Sc	-
	8	20	18	00	SK53	987	-18	-	Calm	15	10	SN	10Sc	SN
	8	21	6	00	SK53	981	-17	-	Calm	10	7	SN	4Sc,3Ac	SN
	8	21	12	00	SK53	986	-18	-	Calm	15	10-	SN	10-Sc	SN
	8	21	18	30	SK53	985	-20	-	Calm	10	10	SN	10Sc	SN
	8	22	6	00	SK53	984	-20	-	Calm	10	10	SN	10Sc	SN
	8	22	12	00	Hamna Icefall	984	-20	-	Calm	10	10	SN	10Sc	SN
Travers 2	9	4	6	00	Syowa	981	-17	SSE	4	>30	8	FN	5Sc,4Ac	-
To Skallen	9	4	18	00	SL5	985	-17	E	3	>30	8	FN	2Ac,8Ci	-
	9	5	6	00	SL5	981	-19	ENE	6	>30	0+	CL	0+Ac	-
	9	5	12	00	SL21	984	-21	-	Calm	>30	0+	CL	0+Ac	-
	9	5	18	00	SL55	985	-24	-	Calm	>30	0+	CL	0+Ac	-
	9	6	6	00	SL55	984	-27	-	Calm	>50	7	FN	2Sc,6Ac,1Ci	-
	9	6	12	00	SL74	987	-20	-	Calm	>30	1	CL	1Ci	-
	9	6	18	00	SL83	987	-27	-	Calm	>30	0+	CL	0Ci	-
	9	7	6	00	SL83	988	-26	-	Calm	>30	10-	HD	0+Ac,0+Ci	-
	9	7	12	00	SL83	986	-27	-	Calm	>30	10-	HD	0+Sc,0+Ac,8Cs,10-Ci	-
	9	7	18	00	SL83	988	-23	-	Calm	>30	10-	CD	2Sc,5Ac,10-Ci	-
	9	8	6	00	SL83	988	-20	SE	4	>30	10-	CD	1Sc,7Ac,10-Ci	-
	9	8	18	00	SL83	994	-20	SE	4	>30	0+	CL	0+Ac	-
	9	9	6	00	SL83	1000	-24	SE	4	>30	0	CL	-	-
	9	9	12	00	SL74	1002	-23	-	Calm	>30	0	CL	-	-
	9	9	18	00	SK35	1001	-29	NW	3	>30	0	CL	-	-
	9	10	6	00	Yukidorizawa Cabin	995	-26	-	Calm	>30	1	CL	0+Ac,1Ci	-
	9	10	12	00	Hamna Icefall	999	-22	-	Calm	>30	10-	HD	10-Ci	-
Travers 3	10	6	9	00	Syowa	990	-10	E	18	3	0	CL	-	BS
To Skallen	10	6	12	30	R30	992	-7.3	E	8	8	0	CL	-	-
	10	6	18	00	SK1	988	-8	E	15	20	1	CL	1Ci	BS
	10	7	6	00	SL5	993	-11	ENE	10	>30	1	CL	1Ci	-
	10	7	12	00	NK5	999	-6.6	-	Calm	>30	1	CL	1Sc	-
	10	7	18	00	SL30	1000	-13	-	Calm	>30	10-	CD	10-Sc	-
	10	8	6	00	SL55	1005	-11	-	Calm	20	10	SN	10Sc	SN
	10	8	12	00	Skallen Icefall	1005	-7	-	Calm	>30	10	CD	10Sc	-
	10	8	18	30	Osiage beach	1003	-7.5	-	Calm	>30	10	CD	10Sc	-
	10	9	6	00	SL55	995	-16	-	Calm	>30	1	CL	1Ac	-
	10	9	12	00	SL39	994	-9.8	-	Calm	>30	4	FN	4Sc,0+Ac	-

	Month	Day	LST Hour	LST Min	Point	Pa hPa	Ta °C	WD	WS m/s	V km	N	W	CL	AP
Travers 4	11	5	9	00	Syowa	998	-13	NNW	1	30	7	FN	7Ac	-
To Skallen	11	5	12	00	RL4	996	-11	-	Calm	>30	4	HD	4Cs,10-Ci	-
	11	5	18	00	SK15	997	-11	WNW	Calm	>30	10	HD	0+Sc,8Cs,10-Ci	-
	11	6	6	00	BN1	994	-11	ENE	3	>30	10	HD	10-Cs,6Ci	-
	11	6	12	50	BN7	994	-7.7	-	Calm	>30	10	CD	10-Sc	-
	11	6	18	00	SK34	994	-9.7	NW	-	>30	10	CD	10-Sc	-
	11	7	6	00	SK36	988	-13	-	Calm	>30	8	FN	3Sc,6Ac	-
	11	7	12	00	SL45	989	-7.2	-	Calm	>30	9	CD	9Sc	-
	11	7	19	10	SL83	986	-5.4	SE	4	>30	0+	CL	0+Ci	-
	11	8	6	00	SL83	991	-9	SE	3	>30	0	CL	-	-
	11	8	13	00	SL83	991	-3	-	Calm	>30	0	CL	-	-
	11	8	20	20	SL83	987	-6.3	SE	4	>30	0	CL	-	-
	11	9	6	00	SL83	991	-6	SE	4	>30	10	CD	10-Sc	-
	11	9	12	20	SL16	991	-2.3	-	Calm	>30	9	CD	1Sc,9Ac	-
	11	9	18	00	Yukidorizawa Cabin	989	-2.2	WSW	4	>30	7	FN	0+Sc,7Ac	-
	11	10	6	00	Yukidorizawa Cabin	987	-4.5	E	6	>30	8	FN	1Ac,8Ci	-
	11	10	12	00	YH14	986	-4.4	SE	4	>30	9	HD	9Ci	-
	11	10	21	20	Foot in Mt. Hamne	985	-3.2	NE	4	>30	1	CL	1Ac	-
	11	11	6	10	Yukidorizawa Cabin	985	-6.5	-	Calm	>30	7	FN	4Ac,3Ci	-
	11	11	12	00	Yukidorizawa Cabin	983	-4.2	-	Calm	>30	0+	CL	0+Ac	-
Travers 5	11	24	9	00	Syowa	975	-11	NNE	4	30	9	SN	9Sc	SN
To Skallen	11	24	12	00	RL39	978	-6.7	NNE	5	>30	7	FN	6Sc,2Ac	-
	11	24	18	00	SL70	982	-7.6	-	Calm	>30	9	CD	2Sc,9Ac	-
	11	25	6	00	SL28	982	-16	-	Calm	>30	0	CL	-	-
	11	25	12	00	Funazoko Pond	982	-8.1	-	Calm	>30	0+	CL	0+Ci	-
	11	25	18	00	Foot in Mt.Futago	979	-9.4	-	Calm	>30	0	CL	-	-
	11	26	6	00	Yukidorizawa Cabin	981	-10	-	Calm	>30	1	CL	1Ci	-
	11	26	12	00	Yatude stream	-	-	-	-	>30	10	HD	0+Sc,10-Ci	-
	11	26	19	00	Yukidorizawa Cabin	984	-4.2	-	Calm	20	9	HD	9Ci	-
	11	27	6	00	Yukidorizawa Cabin	986	-5.6	-	Calm	>30	10	HD	10-Ci	-