NURMIJÄRVI GEOPHYSICAL OBSERVATORY

MAGNETIC RESULTS 2007

Editors K. Pajunpää and H. Nevanlinna

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1 Introduction

This report presents magnetic measurements carried out at the Nurmijärvi (NUR) Geophysical Observatory between January 1 and December 31, 2007. The observatory is operated by the Finnish Meteorological Institute (FMI) and was part of the Space Research Division of the institute until the end of 2007. Information about the IMAGE magnetometer network is included in this report, as it is partly operated by the observatory. The Nurmijärvi Geophysical Observatory started recording the Earth's magnetic field in April 1952. The first yearbook was for 1953.

2 Description of the observatory

The observatory is located some 40 km NNW from Helsinki in the northern part of the Nurmijärvi municipality having about 38,000 inhabitants. The observatory lies on a moraine ridge by the lake Sääksjärvi. The 7 ha forest area of the observatory is limited to the lake in the North and North-East, to a nature reserve forest in the South and to a private forest in the West. There are no artificial disturbance sources nearby.

The coordinates of the observatory are:

	Lat.	Lon.
Geographical	$60^{\circ}30.5'N$	$24^{\circ}39.3'E$
Geomagnetic	$57^{\circ}43.8'$	$113^{\circ}28.8'$
Corr.geomagnetic	$56^{\circ}49.2'$	$102^{\circ}31.2'$

The magnetic coordinates are referred to the IGRF-95 model:

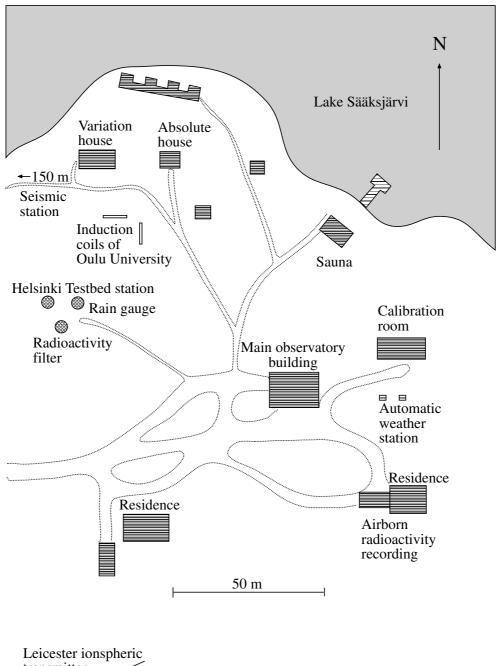
L-value 3.3 Height 105m

The Nurmijärvi observatory is running two digital magnetometers, which are controlled usually once per week with absolute measurements. Another magnetic recording system at the observatory is the three-component pulsation magnetometer of the Sodankylä Geophysical Observatory (Fig. 1). The Air quality department of FMI makes continuous airborne radioactivity recording. An automatic weather station observes the following: temperature, humidity, snow depth, current weather, rain and clouds. The Vaisala Company has at the observatory an automatic station as part of the Helsinki Testbed project. Precipitation and snow depth are measured also manually at the observatory. Helsinki University operates the seismic station. Nurmijärvi municipality needs the water level observations in the lake Sääksjärvi. University of Leicester installed a radio transmitter at the observatory in December 2006 for ionospheric research. The transmitter operates at several frequencies in the range 4 - 14 MHz. The receiver is in United Kingdom.

The Nurmijärvi observatory has a magnetic calibration and test laboratory that has facility and expertese for magnetometer and sight compass calibrations and for compass swing base measurements at airfields. The laboratory was accredited on 17th of August by FINAS (Finnish Accreditation Services) (see figure 2).

3 Recording instruments

In the variation house the Danish suspended flux gate magnetometer (FGE-89) is the primary instrument. The Ukrainian LEMI-004 flux gate magnetometer is



Leicester ionspheric transmitter

Figure 1: Formal map of the observatory.



AKKREDITOINTITODISTUS

ACCREDITATION CERTIFICATE

ILMATIETEEN LAITOS, AVARUUS JA YLÄILMAKEHÄ

MAGNEETTINEN KALIBROINTI- JA TESTILABORATORIO

RÖYKKÄ

on FINAS-akkreditointipalvelun akkreditoima kalibrointilaboratorio K050 päätöksellä K050/A01/2007.

Pätevyysalue on esitetty voimassa olevassa akkreditointipäätöksessä. Päätös on voimassa 17.08.2011 asti.

is calibration laboratory No. K050 accredited by FINAS-Finnish Accreditation Service.

The accreditation is based on the decision K050/A01/2007.

The scope of accreditation is presented in the valid accreditation decision.

The decision is valid until 17.08.2011.

Toimielin täyttää seuraavan standardin vaatimukset:

The above body conforms to the requirements of the following standard:

SFS-EN ISO/IEC 17025:2005

Espoo 17.08.2007

Leena Tikkanen

Heikki Myöhänen

Figure 2: Accreditation certificate of the magnetic calibration and test laboratory.

the second variometer. The sensors are directed in geographic North and East directions measuring the X, Y and Z components. The temperature in the variometer room is kept at $18^{\circ}C$. The FGE magnetometer data is corrected for temperature variations with coefficients -0.22, -0.10 and $-0.05nT/^{\circ}C$. Analog voltages from the magnetometers are AD-converted in the variation room and the digital data are transferred through optical wires to the computers in the main observatory building. The Linux based software stores the data in three files as one-second, ten-seconds and one-minute averages. Timing is based on GPS time sheared through the local network. The standard one-minute values are averages over one minute periods starting and ending at a half minute (e.g. 59:30 - 00:30, 00:30 - 01:30, 01:30 - 02:30). The given time is the starting minute at the centre of the period (00, 01, 02 etc.).

On May 30 a lightning strike hit close to the variation room and caused breakdown of the FGE magnetometer. The data recording was replaced by the LEMI-004 magnetometer and by a new Ukrainian GEOMAG-02 magnetotelluric station. The FGE was back in operation at the end of November. Few hours of data was lost due to lightning strike on 30th of May and another gap exist on 23rd of May.

4 Absolute measurements

The total field (F) was measured by a Polish PMP-7 proton precession magnetometer and declination and inclination with a DI-flux-magnetometer, which consists of a flux-gate element mounted on the telescope of a non-magnetic Zeiss-Jena theodolite (010B). The absolute measurements were done on average once a week. The base line values as determined for the FGE are shown in Fig. 4.

5 Data processing and dissemination

In the processing the final base line values and sensitivities were used and hourly mean values were calculated. The measured base line values were followed closer than half a nanoTesla. All the digital data were visually inspected on the computer screen.

Tables showing the three-hour K-indices were computed from 10 s data using the 'FMI' algorithm. The upper limit for K=9 is 750nT.

Daily magnetograms and K-indices were published in the monthly bulletin together with the Sodankylä Geophysical Observatory of the University of Oulu. The bulletin contains daily magnetograms of Nurmijärvi, Hankasalmi, Oulujärvi and Sodankylä, daily ionosond and riometer recordings and cosmic ray data.

Daily files of minute data were sent by e-mail for the INTERMAGNET system. INTERMAGNET CD-ROM 2005 was published in 2007 containing minute data, annual means and base line values from Nurmijärvi together with over a hundred of other magnetic observatories.

6 IMAGE stations

The IMAGE magnetometer network (Fig. 3) consisted at the end of 2007 of 29 stations from Tartu in Estonia to Ny Ålesund on Svalbard. The principal investigator of this international project was Ari Viljanen at FMI. The observatory operated

nine IMAGE stations in Finland (including Nurmijärvi), one in Estonia and one in northern Norway. At seven of the stations the service and absolute measurements were done in co-operation with the Sodankylä Geophysical Observatory of the Oulu University.

The data sampling intervals at the IMAGE stations were 1, 10 and 60 seconds. The IMAGE standard used the 10s values and they were averages over the seconds 00-10, 10-20, 20-30 etc. The time stamp given for the 10-second period was the first second of that period.

Data from MAS, IVA, MUO and PEL was transmitted through ISDN modems to Nurmijärvi. TAR in Estonia and HAN, MEK, KEV and KIL had ADSL or direct network connections and OUJ was still operated through ordinary modems. The data of the eleven stations were processed and inspected at the observatory and was sent for IMAGE filing. Data transmission from the other IMAGE stations was also operated at the observatory.

At Oulujärvi the absolute measurements were made in the new absolute house. In the table below the annual mean values are calculated for the old absolute house since 1993 and for the new absolute house since 2007. The coordinates of the station are $(64^{\circ}31'N, 27^{\circ}14'E)$.

X[nT]	Y[nT]	Z[nT]	
12971	1912	50591	
12953	1935	50616	
12951	1963	50642	
12937	1994	50664	
12926	2023	50701	
12912	2051	50742	
12902	2077	50780	
12892	2108	50828	
12889	2136	50867	
12886	2168	50914	
12870	2200	50961	
12878	2228	50998	
12867	2256	51035	
12866	2283	51063	
-21	+19	+9	New absolute house
12837	2333	51106	
	12971 12953 12951 12937 12926 12912 12902 12892 12889 12886 12870 12878 12867 12866 -21	12971 1912 12953 1935 12951 1963 12937 1994 12926 2023 12912 2051 12902 2077 12892 2108 12889 2136 12870 2200 12878 2228 12867 2256 12866 2283 -21 +19	12971 1912 50591 12953 1935 50616 12951 1963 50642 12937 1994 50664 12926 2023 50701 12912 2051 50742 12902 2077 50780 12892 2108 50828 12889 2136 50867 12886 2168 50914 12870 2200 50961 12878 2228 50998 12867 2256 51035 12866 2283 51063 -21 +19 +9

7 SAMNET stations

The observatory provided 1-second data from the stations KIL, OUJ, HAN and NUR for the SAMNET magnetometer network operated by the Lancaster University in United Kingdom.

8 Personnel

Ph.D. Kari Pajunpää, head of the observatory M.Sc. Anja Koistinen, assistant Mr. Pentti Posio, technician

9 IMAGE Magnetometer Network

IMAGE Magnetometer Network

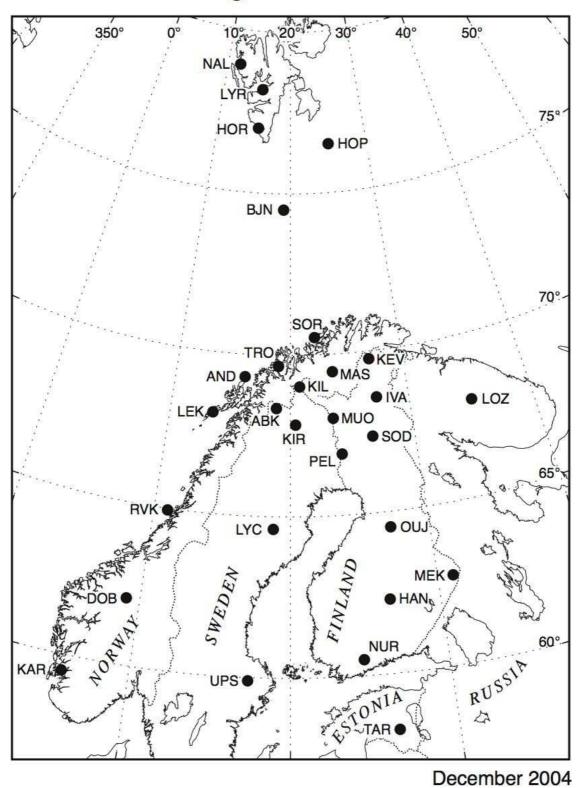
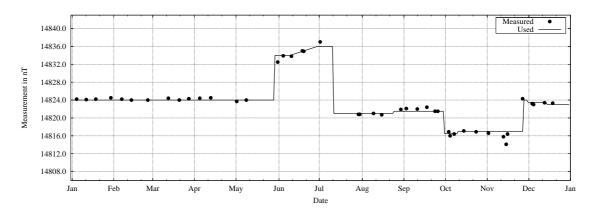
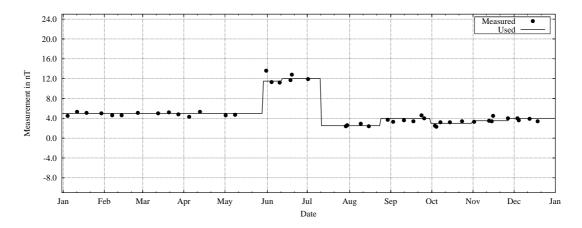


Figure 3: Map of IMAGE magnetometer network

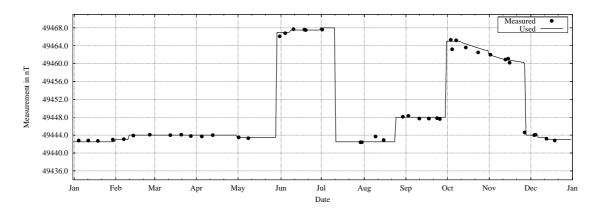
10 Baseline Measurements for FGE



(a) Baseline measurements for X component



(b) Baseline measurements for Y component



(c) Baseline measurements for Z component

Figure 4: Baseline measurements

11 Tables of Hourly Means of X, Y, and Z

Explanations of the tables:

- X is the North component of the magnetic vector
- Y is the East component of the magnetic vector
- ullet **Z** is the vertical component of the magnetic vector
- The unit is nanotesla (nT) = 10^{-9} T
- \bullet The time is universal time (UTC). The local time is UTC + 2 h (during the daylight saving time UTC + 3 h)

Nurmijärvi Finland $\label{eq:market} \mbox{January 2007 North component X in nT (X = 14800 nT + tabular values)}$

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		87	85	87	88	88	89	88	87	87	90	94	85	79	88	95	88	75	71	73	82	82	86	87	84	85
2	D	95	99	68	71	85	92	89	84	83	72	69	60	49	65	73	62	71	79	87	65	77	78	93	83	77
3	D	77	78	73	64	68	85	84	80	71	65	69	69	81	73	43	59	74	74	81	73	70	65	83	67	72
4		72	70	70	66	83	86	86	87	68	58	67	76	79	66	72	71	89	67	76	88	76	85	70	65	75
5		74	75	73	81	82	83	83	83	78	71	72	77	79	62	78	70	82	89	84	79	84	81	81	77	78
6		76	77	79	81	84	84	84	84	84	83	81	79	81	82	80	81	80	87	79	80	88	79	84	81	82
7	Q	79	82	83	82	82	82	82	80	80	78	77	78	81	78	82	83	84	85	85	84	83	81	80	81	81
8		78	79	81	82	84	86	85	83	83	83	82	86	86	84	86	87	88	86	83	86	90	83	86	84	84
9		85	85	87	89	91	92	89	86	82	81	83	89	93	90	88	87	87	82	79	81	88	89	88	86	87
10		85	83	82	80	89	90	85	84	83	76	77	85	84	84	83	79	71	68	76	78	82	83	82	82	81
11		80	79	77	78	83	85	91	93	86	84	81	81	82	82	87	85	82	84	82	80	83	83	83	81	83
12		87	82	80	77	79	79	77	76	74	74	74	77	81	84	84	86	84	85	85	84	84	84	83	83	81
13	Q	83	83	83	83	83	82	79	75	73	72	74	78	81	83	85	85	86	87	87	86	86	86	86	85	82
14		85	84	84	85	86	86	86	85	85	81	79	80	86	97	96	93	94	96	95	96	97	92	81	79	88
15		76	78	74	79	81	83	83	87	92	94	91	79	80	46	44	71	66	60	54	78	75	77	78	80	75
16		76	76	77	79	65	88	90	84	82	80	75	79	83	83	76	63	70	79	81	70	62	70	54	96	77
17	D	65	70	80	83	85	65	83	77	62	53	65	70	60	75	80	75	73	64	111	51	50	62	64	71	71
18		72	78	73	65	84	81	77	74	66	68	71	63	76	78	74	73	72	79	78	68	63	74	84	78	74
19		71	74	77	53	89	89	85	80	78	74	76	78	73	83	73	73	79	85	81	84	74	84	83	79	78
20		79	73	78	84	82	83	83	81	82	78	73	78	82	83	82	80	82	76	81	82	87	88	88	83	81
21		81	80	78	89	93	80	85	83	77	71	62	67	75	79	85	85	85	77	92	92	84	85	84	84	81
22		85	83	84	86	86	86	85	83	82	78	81	83	82	82	83	84	84	82	85	81	83	82	81	82	83
23		88	81	79	82	83	85	84	82	79	80	80	82	85	85	84	84	84	87	88	85	85	85	85	85	84
24	Q	85	86	87	88	89	89	88	87	83	82	80	80	82	85	88	87	80	84	86	85	86	86	84	84	85
25	Q	85	87	88	88	88	87	86	85	83	81	80	82	88	91	92	88	88	87	89	88	87	95	86	83	87
26	Q	85	89	90	90	90	89	90	85	79	79	78	80	81	84	87	89	89	90	89	89	88	90	88	85	86
27		83	82	84	83	86	90	88	86	81	80	84	84	87	90	89	90	90	90	91	89	85	87	84	94	86
28		88	81	91	90	91	88	89	89	87	85	79	82	87	93	94	94	93	94	92	85	82	78	83	81	87
29	D	93	94	91	93	97	98	100	89	95	90	88	89	88	89	73	89	61	114	50	59	59	65	76	70	84
30	D	70	62	61	75	72	73	83	81	71	69	76	65	67	73	59	75	78	75	89	75	86	93	72	53	73
31		68	79	74	82	78	78	77	68	71	70	55	64	69	64	77	81	79	80	106	55	76	72	67	76	74
All		80	80	80	80	84	85	85	83	80	77	76	78	80	80	80	81	81	82	84	79	80	81	81	80	81
Quiet		83	85	86	86	86	86	85	82	79	78	78	79	83	84	87	87	85	87	87	86	86	87	85	84	84
Dist.		80	80	75	77	81	83	88	83	76	70	73	71	69	75	66	72	71	81	84	65	68	72	77	69	75

January 2007 East component Y in nT (Y = 1700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		37	37	34	36	33	32	34	34	32	27	15	20	17	19	28	25	26	31	43	34	35	36	39	49	31
2	D	37	60	39	13	33	31	28	37	37	29	24	23	49	19	56	35	43	59	57	49	45	46	80	52	41
3	D	50	39	31	19	-3	18	28	29	30	28	32	45	33	24	57	52	27	37	64	55	52	60	56	30	37
4		35	31	21	20	28	33	31	26	37	40	42	31	27	36	47	37	63	48	37	42	40	51	44	49	37
5		43	39	33	32	31	34	37	33	39	34	39	36	30	47	35	38	42	46	39	37	44	40	40	43	38
6		41	35	36	35	36	37	37	36	37	35	31	30	32	34	36	34	47	59	39	34	36	38	42	41	37
7	Q	39	40	38	37	37	38	38	37	34	32	32	32	34	35	35	33	34	34	36	35	38	39	38	40	36
8		41	37	39	39	38	38	38	39	37	34	30	26	28	31	34	33	36	38	37	41	40	39	38	39	36
9		37	35	32	33	33	33	34	33	32	30	28	26	22	21	27	23	25	30	32	41	38	37	38	39	32
10		35	38	39	38	40	41	39	38	35	34	22	19	22	27	24	23	54	47	43	44	45	39	39	40	36
11		40	39	40	38	40	39	35	38	33	32	26	25	24	33	32	26	32	33	36	52	46	42	40	41	36
12		41	49	44	41	40	40	42	42	41	39	35	30	29	33	35	34	37	35	38	39	39	39	39	39	38
13	Q	38	40	40	39	40	41	43	43	39	36	33	30	30	33	36	37	37	38	37	38	38	38	38	38	37
14		37	37	37	37	37	38	41	41	37	34	29	27	27	29	32	34	34	34	35	36	34	35	41	48	35
15		49	55	54	56	48	47	46	44	33	19	15	25	22	49	31	34	43	55	68	63	47	43	39	41	43
16		36	35	34	34	16	20	37	35	34	33	30	30	30	32	35	33	53	42	41	75	57	42	17	29	36
17	D	45	13	44	31	37	22	31	27	35	41	31	32	32	27	31	31	36	49	156	73	106	92	60	42	47
18		34	31	38	15	14	36	37	40	43	45	35	37	39	32	43	53	80	35	37	100	72	48	30	38	42
19		51	43	49	17	31	35	40	44	43	39	37	31	36	35	50	48	38	46	44	61	64	50	30	40	42
20		36	31	23	36	36	33	38	43	37	35	41	35	31	31	33	35	37	48	41	42	50	48	39	43	38
21		37	36	29	32	34	33	21	24	35	36	34	28	24	31	38	37	37	40	58	50	39	38	37	36	35
22		35	39	38	36	36	38	39	39	37	34	29	28	30	31	35	37	37	43	57	56	42	40	40	39	38
23		34	37	39	39	39	41	41	40	37	33	31	27	28	32	34	35	38	41	40	38	39	39	39	38	37
24	Q	37	36	36	36	36	38	39	40	39	36	32	27	25	28	32	36	39	37	38	39	46	44	40	38	36
25	Q	36	36	35	35	36	38	40	41	41	36	33	29	25	26	28	31	34	36	35	38	43	48	51	49	37
26	Q	37	34	34	35	37	37	40	42	42	34	27	23	23	23	30	34	36	36	37	38	38	47	54	46	36
27		41	40	39	42	38	39	40	40	37	33	28	26	25	28	34	36	36	36	36	37	41	38	43	41	37
28		51	37	33	42	42	38	39	36	35	30	30	25	25	25	27	30	31	31	30	33	39	54	48	57	36
29	D	43	59	65	56	48	41	37	34	29	28	26	26	18	21	11	33	28	92	142	52	71	82	58	45	48
30	D	44	43	27	19	27	29	8	32	30	39	37	31	61	40	40	59	52	46	93	41	56	82	76	64	45
31		26	19	36	41	44	41	38	39	47	37	40	31	41	45	36	37	36	83	106	69	65	68	59	30	46
All		39	38	37	34	34	35	36	37	37	34	31	29	30	31	35	36	40	44	53	48	48	48	44	42	38
Quiet		38	37	36	36	37	38	40	40	39	35	31	28	27	29	32	34	36	36	37	37	41	43	44	42	36
Dist.		44	43	41	28	28	28	26	32	32	33	30	31	38	26	39	42	37	56	102	54	66	72	66	47	43

January 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mea
	_	56	59	60	59	59	60	61	62	61	59	57	60	65	67	64	63	73	81	86	72	69	61	57	43	6
	D	17	2	29	39	43	50	56	59	63	61	65	73	97	83	104	80	80	72	61	60	62	59	35	32	5
	D	36	45	48	38	34	50	60	64	67	69	72	83	74	76	92	90	77	76	75	68	47	16	22	38	
		55	51	38	44	55	61	63	64	68	75	71	70	73	80	80	79	74	67	71	64	54	55	43	50	
		57	59	61	61	62	64	65	65	68	69	70	70	72	80	76	77	76	69	65	67	68	60	62	65	
		65	64	63	62	63	64	64	63	62	62	64	67	68	67	68	68	71	64	61	66	61	63	62	62	
	Q	65	65	64	64	64	64	64	64	63	65	67	68	68	67	66	66	65	65	65	65	65	64	64	62	
		61	62	61	62	63	64	65	65	64	62	62	63	64	65	65	65	66	65	66	65	60	62	61	62	
		62	62	62	61	60	60	61	62	63	65	67	67	65	64	66	66	68	72	77	76	70	66	64	63	
0		63	63	63	59	60	60	61	62	62	61	62	64	66	66	67	71	88	79	74	71	68	66	64	63	
1		61	60	60	62	62	62	60	58	58	60	61	62	65	67	66	66	68	68	69	73	68	66	65	64	
2		54	51	60	62	64	65	66	65	65	66	66	66	67	68	67	66	66	66	66	66	65	64	64	64	
3	Q	64	64	64	64	64	64	65	64	63	62	62	64	66	67	67	66	65	65	64	64	64	64	64	64	
4	•	64	63	63	63	63	64	64	63	62	63	64	66	67	66	62	62	62	62	62	62	62	64	68	73	
5		71	70	67	66	64	62	61	58	55	55	63	63	72	105	135	90	90	91	92	72	68	65	64	63	
;		65	66	66	64	59	60	60	60	61	63	65	65	66	68	70	87	87	75	72	74	76	48	-5	23	
7	D	32	2	40	52	51	45	62	62	66	76	81	83	88	85	77	76	77	87	86	35	55	46	58	61	
3		62	54	56	55	53	58	64	68	71	76	73	76	78	77	80	81	82	72	71	79	69	68	11	2	
9		40	60	58	44	47	56	61	65	69	71	71	72	80	77	84	80	76	75	70	71	63	42	40	56	
0		56	58	60	62	63	63	64	65	65	66	67	65	65	68	69	69	69	71	69	69	68	56	51	52	
1		60	60	60	62	60	60	61	58	62	65	70	71	73	75	74	69	68	70	70	58	62	63	64	63	
2		61	63	64	64	64	64	64	64	63	63	62	63	67	68	68	67	67	69	68	63	63	64	64	64	
3		60	58	63	64	65	65	65	65	65	63	64	63	65	66	66	67	67	66	65	65	65	65	64	64	
4	Q	64	64	64	63	63	63	62	61	60	60	61	62	64	66	65	65	67	67	66	65	65	63	63	63	
5	Q	63	63	63	63	63	63	63	61	59	59	59	60	62	64	63	64	65	66	65	65	65	56	54	57	
3	Q	59	60	60	61	61	62	62	61	61	63	64	63	63	64	66	65	65	64	64	63	64	64	59	58	
7		59	61	62	62	64	63	63	61	59	58	59	60	63	64	64	63	63	63	63	64	66	65	64	57	
8		52	57	57	58	58	60	61	59	60	59	60	60	63	64	64	64	63	64	64	69	75	77	70	65	
9	D	56	37	45	49	51	53	53	53	53	53	53	53	58	63	105	185	107	212	109	119	82	20	-26	8	
)	D	23	40	19	22	34	61	58	61	65	72	69	74	87	82	94	87	80	74	74	66	66	24	29	32	
1		17	16	39	53	60	66	65	64	65	65	68	74	79	81	75	71	71	84	56	61	44	40	47	38	
ıll		54	53	56	57	58	61	62	62	63	64	65	67	70	72	75	75	73	75	70	68	64	57	50	53	_
uiet)		63	63	63	63	63	63	63	62	61	62	63	63	65	66	65	65	65	65	65	64	64	62	61	61	
Dist.		33	25	36	40	43	52	58	60	63	66	68	73	81	78	94	104	84	104	81	69	63	33	23	34	

Nurmijärvi Finland
February 2007 North component X in nT (X = 14800 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		72	82	80	84	83	85	84	81	74	66	60	61	72	80	77	73	79	79	81	82	78	90	82	79	78
2		79	78	80	81	83	85	83	86	84	81	79	78	81	82	82	78	77	77	89	83	84	85	87	86	82
3		82	82	80	81	82	85	89	91	87	84	80	79	82	85	85	85	85	86	87	86	87	86	84	83	84
4	Q	84	84	86	86	88	89	88	87	84	79	76	82	85	86	86	86	86	87	87	87	87	89	90	89	86
5		89	85	86	87	91	94	94	95	93	91	86	77	77	71	71	78	75	73	62	58	70	75	83	77	81
6		78	78	81	82	78	86	87	89	80	77	79	80	83	83	85	85	88	89	86	87	87	84	85	83	83
7	D	81	91	80	87	83	89	90	78	85	87	83	71	75	78	81	83	81	72	80	103	76	77	74	81	82
8		75	81	81	82	88	81	83	71	73	73	72	79	80	77	81	77	77	86	86	85	82	85	81	82	80
9		89	85	83	84	85	83	86	87	85	81	77	78	83	85	86	86	84	83	83	75	76	81	77	79	83
10		79	78	82	87	85	84	83	84	83	80	78	81	84	87	87	86	77	84	85	79	74	77	79	79	82
11		78	79	80	80	80	79	79	80	79	77	75	77	80	85	86	86	86	87	89	76	83	91	82	86	82
12		84	83	82	83	83	84	84	82	84	84	98	95	95	91	93	87	76	71	85	87	90	89	83	99	86
13	D	88	87	85	86	88	89	90	85	85	86	87	87	90	90	91	80	60	67	59	77	108	106	33	-10	79
14	D	66	72	78	82	86	84	80	82	81	74	66	68	76	78	76	84	82	82	77	53	64	78	80	78	76
15	D	79	74	70	51	77	83	86	81	78	75	73	68	71	77	80	81	85	78	81	88	97	82	84	88	79
16		85	85	86	88	86	81	80	78	77	76	75	76	69	75	82	85	83	82	89	79	84	83	100	86	82
17		77	69	74	80	82	82	88	85	77	77	74	73	75	81	77	77	86	81	82	83	85	81	68	81	79
18		81	81	80	81	82	83	83	80	74	74	76	76	74	75	78	76	69	81	78	74	85	84	86	85	79
19		85	85	86	87	89	90	89	85	80	78	77	76	78	85	86	79	82	81	85	88	86	87	86	87	84
20	Q	87	87	86	87	87	88	87	84	79	75	75	75	82	88	92	87	85	87	90	90	90	88	88	88	85
21	Q	86	87	87	90	88	87	87	84	79	77	80	83	87	90	89	87	87	88	88	89	90	92	90	90	87
22	Q	88	88	90	90	91	91	89	86	80	75	75	78	85	91	92	91	90	83	87	86	86	85	90	82	86
23		84	84	87	87	89	90	86	84	78	74	73	76	81	85	90	93	91	91	92	85	87	84	86	83	85
24	Q	85	90	88	87	89	88	88	85	82	80	81	86	89	90	90	91	93	92	92	93	92	90	88	86	88
25		87	87	89	90	89	88	90	91	93	92	92	90	91	92	90	90	88	87	82	85	90	92	90	94	90
26		88	84	81	89	95	98	89	86	83	71	76	82	88	90	90	88	87	87	87	88	89	88	89	89	87
27		89	90	93	94	97	99	104	106	98	91	94	94	96	96	95	84	69	85	77	82	56	75	81	86	89
28	D	83	76	70	76	88	49	57	74	75	74	65	59	68	78	83	78	87	68	71	75	79	45	86	66	72
All		82	82	82	84	86	85	86	84	82	79	78	78	81	84	85	83	82	82	83	82	84	84	83	81	83
Quiet		86	87	87	88	89	88	88	85	81	77	77	81	85	89	90	89	88	87	89	89	89	89	89	87	86
Dist.		79	80	77	76	84	79	81	80	81	79	75	71	76	80	82	81	79	73	74	79	85	78	71	61	77

February 2007 East component Y in nT (Y = 1700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		19	41	35	35	37	40	42	45	41	43	36	28	30	32	36	39	35	38	60	47	43	49	45	41	39
2		42	39	41	40	38	38	39	40	40	41	39	35	33	35	37	39	40	39	48	42	42	43	42	39	40
3		41	41	40	37	39	39	38	38	38	39	36	30	31	32	34	36	37	37	37	38	39	40	40	40	37
4	Q	39	39	40	40	37	39	39	40	39	38	34	28	29	34	35	37	38	38	38	39	40	39	40	42	38
5		40	43	41	41	38	38	38	38	38	37	35	31	25	22	14	21	23	24	37	59	52	51	51	56	37
6		54	47	42	48	44	30	41	38	40	34	31	34	30	31	33	32	32	31	32	34	38	43	47	51	38
7	D	50	58	64	52	45	43	39	39	42	35	26	25	25	20	29	29	33	51	36	59	71	59	66	63	44
8		53	47	51	22	35	40	39	40	36	36	34	25	14	26	27	38	69	35	33	36	44	43	46	46	38
9		45	47	44	41	42	39	39	40	40	34	31	28	27	32	34	35	37	39	39	46	45	47	51	42	39
10		40	40	37	48	47	44	43	45	43	40	36	31	30	32	33	34	35	35	35	41	43	46	45	49	40
11		49	45	47	45	46	45	45	45	44	40	34	28	27	30	34	35	36	35	30	31	35	44	52	49	40
12		47	46	46	45	42	43	42	39	35	35	25	18	18	13	29	23	25	27	29	35	35	38	49	79	36
13	D	48	43	37	25	38	37	37	40	38	34	35	32	30	30	33	36	70	62	49	49	91	75	67	45	45
14	D	83	36	35	38	39	35	39	41	37	37	34	41	33	35	35	32	35	68	69	79	43	55	41	37	44
15	D	39	41	52	30	44	47	45	46	40	39	32	33	37	39	37	43	65	50	38	47	38	43	44	31	42
16		35	42	41	39	37	39	41	46	47	42	37	32	34	37	40	47	47	40	58	42	42	42	51	48	42
17		54	44	36	46	46	39	45	43	43	38	30	30	26	31	47	38	49	39	38	40	48	69	54	47	43
18		36	41	43	42	43	44	45	45	42	38	33	25	27	29	34	40	44	41	46	51	50	49	41	39	40
19		40	39	39	39	40	41	44	46	44	38	30	28	27	28	34	38	38	47	37	38	40	41	41	40	38
20	Q	39	40	39	40	40	41	44	45	41	36	29	25	24	27	34	38	39	40	38	38	39	40	41	42	37
21	Q	42	43	41	42	42	43	46	46	43	37	30	26	28	33	38	37	37	37	37	38	40	41	38	37	38
22	Q	37	37	37	38	40	42	46	48	47	41	32	26	23	25	30	31	32	33	33	38	42	51	59	49	38
23		43	38	45	48	45	47	47	48	46	38	28	20	19	23	30	32	35	35	35	45	51	50	53	52	40
24	Q	35	39	44	43	43	43	43	44	42	36	29	25	26	29	30	30	29	30	30	35	38	42	43	47	37
25		49	50	47	48	48	44	40	39	37	34	29	28	25	26	27	25	22	25	48	36	36	43	47	44	37
26		51	57	61	38	38	39	44	47	44	41	35	29	29	33	38	39	38	38	38	39	39	40	39	40	41
27		40	40	40	39	39	39	39	41	40	35	28	25	26	26	30	27	35	35	57	103	88	64	46	89	45
28	D	83	83	57	41	42	19	3	9	24	29	29	28	26	40	34	64	64	62	53	39	59	14	46	70	42
All		45	45	44	40	41	40	40	41	40	37	32	28	27	30	33	35	40	40	41	45	47	46	47	48	40
Quiet		39	40	40	40	40	42	44	45	42	37	31	26	26	29	33	34	35	36	35	38	40	42	44	43	38
Dist.		61	52	49	37	41	36	32	35	36	35	31	32	30	33	34	41	53	59	49	55	60	49	53	49	43

February 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		16	47	60	63	64	65	66	66	65	69	69	72	70	69	71	72	70	71	74	68	69	63	50	59	64
2		63	65	66	66	66	66	65	65	64	65	64	65	68	69	69	70	70	71	69	66	67	66	62	60	66
3		60	62	63	65	65	67	65	65	63	61	59	60	63	66	66	67	67	66	66	66	65	65	65	65	64
4	Q	64	64	63	63	64	63	62	62	61	63	64	65	65	67	66	66	66	66	66	65	65	64	63	62	64
5		61	60	60	61	61	61	59	58	57	56	56	60	65	70	73	74	78	87	100	97	87	79	73	65	69
6		66	66	66	65	62	52	50	53	56	61	60	60	62	65	66	67	66	67	70	69	69	70	69	68	63
7	D	63	46	46	54	59	61	59	60	62	60	59	62	66	74	75	73	74	79	74	68	54	66	59	56	63
8		59	63	59	56	50	61	61	65	65	62	62	64	69	71	72	76	79	68	68	69	71	70	69	67	66
9		59	57	61	63	63	62	63	65	64	60	60	61	62	65	66	66	67	68	69	73	75	71	68	68	65
10		68	65	57	59	60	62	65	65	63	63	65	67	68	69	68	68	72	69	69	70	70	73	71	70	67
11		71	70	69	67	66	66	66	65	65	65	65	66	68	69	69	68	68	68	67	73	73	71	68	67	68
12		65	66	66	66	65	65	64	64	62	61	59	57	58	62	64	70	85	92	80	76	72	69	63	55	67
13	D	49	58	60	58	60	64	65	66	64	61	63	63	64	67	67	72	94	105	99	75	60	-4	-9	-122	54
14	D	3	44	67	67	68	67	68	66	62	64	70	72	77	83	81	76	75	78	84	45	13	51	62	63	63
15	D	62	62	57	58	63	68	67	66	65	64	66	69	74	75	78	79	77	78	78	71	34	47	59	53	65
16		57	64	65	65	65	66	65	65	66	66	68	71	74	76	76	75	74	74	68	70	70	69	52	35	67
17		48	56	62	62	63	66	64	62	62	63	67	71	73	76	88	83	80	74	73	72	71	63	44	47	66
18		60	66	68	69	69	68	66	64	62	62	63	67	71	74	75	78	80	75	76	76	69	60	65	67	69
19		68	67	67	67	67	67	67	67	65	62	65	68	68	72	72	72	73	75	71	69	69	68	67	66	68
20	Q	67	66	66	66	66	66	66	65	63	64	64	65	67	68	70	68	69	69	67	67	66	66	65	64	66
21	Q	62	64	65	65	65	66	65	64	62	61	62	66	69	70	68	66	66	66	66	66	66	64	64	64	65
22	Q	64	65	65	65	65	65	65	65	63	63	64	65	66	67	66	65	66	69	69	71	71	68	61	64	66
23		66	64	63	64	63	62	61	60	57	54	56	60	64	67	67	65	65	65	66	69	68	67	63	62	63
24	Q	58	54	59	62	63	63	62	61	60	58	57	59	62	64	65	65	65	65	66	66	65	65	65	65	62
25		65	64	62	58	59	59	59	59	57	56	58	59	60	63	65	67	68	74	79	75	71	69	67	65	64
26		63	58	58	57	57	59	62	61	57	56	56	58	61	62	62	63	64	65	65	65	65	65	65	64	61
27		64	64	63	63	62	61	60	58	53	54	57	60	63	62	62	68	84	74	81	58	40	64	51	30	61
28	D	12	17	20	49	51	41	51	58	55	62	70	81	91	94	79	86	71	80	90	81	70	12	22	20	57
All		57	59	61	62	63	63	63	63	61	61	62	65	67	70	70	71	73	73	74	70	64	61	59	52	64
Quiet		63	62	64	64	65	65	64	63	62	62	62	64	66	67	67	66	67	67	67	67	67	65	64	64	65
Dist.		38	45	50	57	60	60	62	63	62	62	65	69	74	79	76	77	78	84	85	68	46	34	39	14	60

Nurmijärvi Finland $\label{eq:march_2007} \mbox{March 2007 North component X in nT (X = 14800 nT + tabular values)}$

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		76	77	86	87	80	76	73	76	73	71	72	73	62	70	67	67	73	83	83	83	84	85	83	83	77
2		83	82	83	84	83	81	74	68	69	63	65	67	72	80	82	84	85	86	86	87	85	87	94	86	80
3	Q	86	85	86	87	87	86	85	81	75	72	73	75	81	87	89	84	84	88	89	88	87	90	92	91	85
4		90	90	90	93	93	93	90	81	73	68	69	70	76	85	86	90	91	94	95	93	92	91	89	85	86
5		103	87	89	90	93	93	91	87	82	80	63	76	82	83	78	78	77	77	80	93	86	87	83	86	84
6	D	87	74	70	72	98	97	83	82	81	76	76	82	71	86	88	82	82	83	80	83	86	95	90	53	82
7	D	49	84	84	83	84	86	72	82	72	64	79	83	83	82	85	82	78	95	86	68	69	71	83	69	78
8		70	78	76	81	86	85	83	80	76	72	71	72	72	78	81	80	84	90	89	85	88	85	85	85	81
9	Q	85	84	84	85	86	86	86	80	72	66	68	74	81	85	88	87	84	86	79	73	75	75	78	82	80
10		78	85	87	90	94	93	95	88	84	79	77	76	79	81	85	86	87	90	87	97	85	90	91	88	86
11		84	85	86	86	88	90	92	86	81	75	74	70	73	89	93	92	83	81	82	85	88	91	90	89	85
12		88	88	88	84	89	88	87	85	86	85	92	95	71	70	88	93	88	75	83	80	100	98	92	88	87
13	D	83	109	82	68	85	79	77	72	59	48	70	70	81	95	89	86	82	88	89	89	81	89	87	87	81
14	D	82	78	85	80	89	88	85	77	71	65	70	66	64	80	84	87	93	84	88	89	89	91	88	88	82
15		87	87	85	85	87	87	84	74	71	58	57	65	80	90	90	87	83	88	88	90	96	96	83	74	82
16		71	94	72	76	90	85	84	79	74	74	73	78	85	83	79	86	85	88	89	92	89	97	89	76	83
17		83	89	84	84	88	88	83	73	67	68	60	65	75	84	86	87	86	87	89	87	88	89	90	89	82
18		88	87	89	91	93	93	91	83	74	70	67	71	77	86	84	86	85	88	91	92	92	92	94	91	86
19	Q	90	89	90	91	93	94	91	81	71	62	65	69	76	83	88	89	89	92	93	91	91	92	91	89	86
20	Q	89	88	90	92	94	93	86	76	64	61	63	73	81	89	92	87	88	91	97	93	93	93	94	93	86
21	Q	93	94	95	96	97	96	93	85	76	70	69	74	81	88	93	95	95	96	97	98	98	98	97	96	90
22		96	94	95	97	97	97	94	83	73	64	64	73	80	83	90	94	95	87	91	96	95	92	95	91	88
23		92	92	91	93	94	91	92	90	78	74	76	70	76	88	94	70	71	73	85	91	87	85	71	59	83
24	D	84	80	93	98	77	57	52	33	28	36	51	64	82	84	59	73	76	82	88	92	87	84	88	90	72
25		95	93	93	94	91	87	80	78	76	62	44	67	85	82	66	69	76	77	80	84	85	83	75	81	79
26		84	83	83	80	81	84	80	76	70	66	68	72	76	81	86	94	91	53	66	76	85	82	85	85	79
27		87	85	82	85	86	82	68	67	69	77	58	60	77	79	81	78	85	89	74	72	81	87	87	91	79
28		85	80	76	79	79	79	79	74	66	63	63	71	78	79	80	84	84	88	88	92	92	88	87	87	80
29		85	85	83	83	84	85	82	76	74	73	72	74	77	79	81	87	88	91	95	95	94	96	97	97	85
30		97	94	93	93	97	95	93	87	83	72	67	61	72	84	90	86	84	88	92	94	95	94	94	95	88
31		93	92	92	93	94	95	94	88	81	78	77	78	86	91	87	85	91	92	95	97	96	97	104	106	91
All		85	87	86	86	89	87	84	78	73	68	68	72	77	83	84	84	85	85	87	88	88	89	89	86	83
Quiet		89	88	89	90	91	91	88	81	71	66	68	73	80	86	90	88	88	91	91	89	89	90	90	90	85
Dist.		77	85	83	80	87	81	74	69	62	58	69	73	76	85	81	82	82	86	86	84	82	86	87	77	79

March 2007 East component Y in nT (Y = 1700 nT + tabular values)

_ D	Char	-	_		-,-		- 0	7			10	- 11	10	10	- 1.7	1.5	10	- 15	10	10	00	01	00	00	0.1	Mean
Day 1	Char	21	30	3 50	4 51	5 39	6 34	33	8 36	9 34	37	11	12 28	13 48	14	15 48	16 57	17 60	18 54	19	20 42	21 42	22	23 43	24 42	Mean 41
2		43	42	42	43	43	48		50	45	38	31	23		45			42	42	42		44	42		42	
								50				30		26	33	37	39				49			42 37		41
3	Q	40	41	42	42	43	45	50	51	45	36	27	23	24	28	35	40	38	39	41	43	44	43		39	39
4		41	40	41	41	43	46	53	57	52	42	28	20	21	21	29	33	36	36	36	37	59	47	43	48	40
5		51	53	46	47	46	47	50	50	48	37	28	15	16	14	23	23	28	39	45	85	83	45	50	53	43
6	D	60	39	38	44	47	35	43	51	42	35	21	1	14	21	25	34	36	37	40	47	48	46	54	68	39
7	D	45	67	80	58	60	54	53	49	42	42	34	29	24	21	40	64	39	66	66	78	77	63	66	56	53
8		42	50	46	46	47	43	49	52	53	45	34	26	23	24	29	34	35	37	46	42	40	43	42	40	40
9	Q	42	42	44	43	44	47	53	55	52	43	32	25	21	24	30	32	32	36	41	51	55	55	67	55	43
10		56	50	55	53	52	49	46	45	44	39	32	27	21	20	28	34	35	37	38	63	50	48	50	48	42
11		51	51	51	49	48	48	46	47	43	33	13	0	7	12	17	15	14	32	43	35	39	40	45	47	34
12		43	42	41	37	42	46	49	47	42	37	23	11	12	17	28	26	28	32	48	41	80	69	43	44	39
13	D	40	51	82	42	44	43	48	47	42	33	33	18	35	23	44	57	36	58	69	76	57	38	37	21	45
14	D	29	29	55	52	46	48	48	48	44	37	26	18	21	26	38	63	63	38	40	60	45	46	41	39	42
15		42	45	44	38	45	47	52	58	51	45	32	24	23	25	31	38	41	38	43	43	56	61	53	41	42
16		14	34	52	39	52	51	54	53	48	39	28	24	21	35	45	37	37	38	38	43	52	44	50	50	41
17		29	44	46	41	42	41	47	51	48	39	29	24	26	26	32	36	43	54	53	48	45	43	41	40	40
18		39	39	40	43	45	47	53	57	54	46	37	27	21	20	26	35	39	45	47	43	41	43	41	38	40
19	Q	39	40	41	42	42	45	52	56	54	45	32	21	16	18	28	36	39	41	41	43	44	44	40	40	39
20	Q	41	41	42	44	47	51	57	58	50	38	25	18	17	22	32	41	39	38	46	45	43	41	40	39	40
21	Q	40	41	43	44	46	49	52	54	47	36	24	16	13	17	26	33	34	34	36	38	39	40	39	41	37
22	Q	39	41	43	43	48	51	54	58	54	43	25	12	8	14	25	33	36	43	39	39	41	47	46	46	39
														7												
23 24	D	45	47	49	45	50 56	50 24	55 39	55 42	48 37	39 32	21 19	14 15	12	4	1 18	-2 34	28 38	35	40	38 37	44	61 43	68	56 43	37 36
	D	41	56 47	54 47	60 48	49	53	53	49	46	39	30	24	18	0 25		41	41	41 41	41 40	42	39 45	60	41 55	44	42
25		44	41		40		99	99					24			33	41									42
26		43	49	48	51	46	46	52	51	48	43	33	25	19	22	31	51	85	57	49	42	40	46	46	36	44
27		45	44	41	49	49	50	39	46	43	31	26	20	20	24	30	37	35	44	101	86	48	38	39	42	43
28		43	49	47	44	47	48	56	56	53	46	36	27	23	27	33	38	45	52	49	49	47	42	41	41	43
29		43	47	49	50	50	51	54	53	50	44	35	29	28	30	36	37	37	35	37	38	39	40	41	42	41
30		41	40	51	49	45	48	55	57	54	43	29	21	22	32	35	38	40	39	39	39	40	40	41	43	41
31		44	46	47	46	45	47	52	56	56	45	30	24	22	24	30	36	38	36	38	39	44	43	39	38	40
All		41	44	48	46	47	46	50	51	47	40	28	20	20	22	30	37	39	42	46	48	49	47	46	44	41
Quiet		40	41	42	43	44	47	53	55	50	40	28	20	18	22	30	36	36	38	41	44	45	45	45	43	39
Dist.		43	49	62	51	50	41	46	47	41	36	27	16	21	18	33	50	42	48	51	60	53	47	48	45	43

March 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		13	33	57	60	60	57	59	61	60	61	63	70	83	87	92	92	88	73	72	71	70	68	67	67	66
2		67	68	68	68	68	69	69	68	66	65	66	69	75	75	73	71	70	70	70	69	68	67	57	60	68
3	Q	64	66	66	67	67	67	66	64	62	62	64	68	71	72	71	71	71	69	69	69	68	66	64	65	67
4		65	65	65	65	65	65	65	65	63	62	64	66	68	71	70	69	67	67	66	67	68	66	65	60	66
5		33	43	59	62	63	63	62	60	59	58	60	65	69	72	74	79	82	84	81	79	47	63	59	44	63
6	D	45	40	20	18	30	43	53	57	58	58	64	74	88	78	71	69	69	69	71	70	66	59	51	37	57
7	D	-14	18	27	38	51	51	60	65	62	64	62	65	70	78	94	95	75	74	53	51	57	54	43	36	55
8		42	55	62	62	63	66	69	70	66	62	61	64	67	72	74	73	71	71	70	69	70	69	68	68	66
9	Q	68	67	67	67	67	67	67	65	63	61	62	65	67	71	75	75	74	74	79	84	80	74	70	64	70
10		63	60	58	61	60	58	59	59	58	55	56	58	61	67	71	72	73	72	75	68	62	65	62	58	63
11		62	66	66	66	66	66	66	65	63	61	63	66	64	72	78	81	87	104	103	89	84	78	76	70	73
12		69	67	67	66	66	65	65	64	60	57	58	65	67	76	74	73	82	90	85	81	61	41	55	63	67
13	D	39	-23	4	12	30	55	68	67	68	72	68	75	85	79	101	90	78	75	69	45	54	51	60	35	57
14	D	36	39	45	59	64	63	65	66	64	63	66	72	79	86	88	88	73	68	69	69	66	66	67	67	66
15		67	66	65	65	65	66	65	63	63	64	68	68	72	72	72	73	74	71	70	70	69	37	47	50	65
16		40	37	43	54	59	61	65	64	62	58	58	64	69	81	81	76	71	70	69	69	68	29	33	44	59
17		50	60	62	64	63	63	63	65	66	63	63	68	75	74	74	72	72	73	70	69	68	68	67	67	67
18		67	67	67	67	68	68	67	63	60	57	58	60	63	68	69	69	69	70	69	68	67	66	61	62	65
19	Q	64	65	66	66	66	67	68	67	63	58	57	59	63	66	68	68	67	67	67	67	67	65	64	65	65
20	Q	66	66	66	67	68	68	68	66	62	57	56	60	64	68	72	72	69	68	67	65	66	66	65	66	66
21	Q	66	66	65	65	65	66	66	65	64	60	60	62	64	69	69	68	66	66	66	66	65	65	65	64	65
22		63	63	63	64	64	65	65	63	60	57	54	56	60	65	68	69	69	73	70	68	67	67	65	64	64
23		65	64	64	64	65	65	65	60	57	54	53	57	63	74	90	107	109	100	85	77	73	52	39	4	67
24	D	4	10	-9	11	31	40	57	66	71	80	112	94	97	102	88	79	73	73	72	71	73	76	73	72	63
25		71	70	69	69	69	69	68	65	62	63	69	69	80	98	109	87	77	73	72	74	75	70	65	70	73
26		73	73	71	70	71	71	71	69	68	65	61	62	69	71	71	92	104	109	97	84	76	74	70	60	75
27		67	70	68	69	70	67	67	66	61	57	59	65	65	70	73	75	73	80	97	71	72	70	69	60	69
28		58	64	66	65	64	67	69	68	66	63	64	66	69	72	74	73	74	74	72	69	64	66	68	69	68
29		70	69	69	67	66	67	66	66	64	60	59	62	67	71	72	70	69	68	68	68	68	67	68	67	67
30		67	64	64	64	64	68	67	64	61	57	60	63	67	73	73	69	68	68	69	68	68	68	68	68	66
31		68	68	67	67	67	69	69	65	61	57	55	56	59	65	68	68	68	68	68	68	68	68	66	64	65
All		54	55	57	59	61	63	65	64	63	61	63	65	70	75	77	77	75	75	74	70	68	63	62	58	66
Quiet		65	66	66	66	66	67	67	65	63	60	60	63	66	69	71	71	69	69	70	70	69	67	66	65	66
Dist.		22	17	17	28	41	51	61	64	65	67	74	76	84	85	88	84	74	72	67	61	63	61	59	49	60

Nurmijārvi Finland ${\it April~2007~North~component~X~in~nT~(X=14800~nT~+~tabular~values)}$

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	D	101	67	114	84	88	87	55	32	41	59	65	77	55	54	59	73	75	74	79	76	92	50	83	54	71
2	D	47	54	62	51	77	63	46	59	49	51	49	59	68	74	81	85	75	76	92	105	77	71	64	68	67
3		72	81	83	68	74	86	76	64	53	49	56	66	76	87	99	91	88	79	71	84	90	87	87	82	77
4		82	73	79	72	70	84	76	68	60	58	55	66	76	78	85	90	92	86	84	92	91	85	85	93	78
5		82	84	85	85	88	92	91	81	74	66	65	71	76	83	87	92	91	92	91	90	89	89	90	93	84
6		86	87	85	87	90	92	90	79	63	56	63	74	86	91	97	95	89	87	86	89	93	91	91	89	85
7		84	79	83	89	89	92	88	81	74	66	63	71	81	89	95	93	89	90	91	91	93	93	94	93	85
8	Q	91	90	89	89	89	93	93	84	74	62	64	71	82	92	97	94	91	93	98	97	97	98	102	113	89
9		111	119	97	96	101	114	107	78	76	70	66	62	68	76	84	89	89	90	92	91	93	92	94	95	89
10		91	89	91	94	93	92	89	82	74	71	70	79	76	83	99	84	96	92	93	101	99	99	101	94	89
11		98	93	96	97	95	94	91	83	74	72	70	74	79	83	89	89	95	96	98	96	96	97	98	99	90
12		97	94	92	92	95	93	89	81	72	64	65	55	63	98	80	79	85	89	79	84	87	88	90	87	83
13	Q	85	86	86	87	84	79	74	70	67	63	65	71	77	82	87	89	90	89	91	92	92	93	93	93	83
14		94	94	95	95	95	91	82	75	68	62	61	70	85	90	92	90	92	97	97	96	97	94	91	97	88
15		91	92	89	96	100	93	87	75	70	64	65	71	80	83	82	82	85	91	90	93	91	92	92	92	85
16	Q	92	91	90	89	86	84	78	73	70	73	77	81	87	86	87	88	94	95	96	95	96	96	97	97	87
17		97	97	97	99	95	91	83	76	74	74	76	73	79	62	70	86	91	93	79	84	86	89	90	99	85
18		90	83	77	80	86	78	76	71	62	62	67	74	88	91	94	89	96	98	91	94	101	93	83	92	84
19		83	86	81	85	90	80	71	65	66	68	71	81	80	86	86	85	91	92	96	95	95	95	97	94	84
20	Q	92	89	88	88	90	89	86	77	71	65	64	72	82	86	92	97	97	98	100	101	104	106	103	96	89
21	Q	92	93	93	95	94	89	81	72	63	58	56	65	76	85	93	97	101	101	102	101	103	100	98	97	88
22		95	101	101	109	111	101	92	85	79	69	60	59	76	95	90	97	92	89	101	102	105	102	107	101	92
23		102	86	97	109	109	72	62	79	66	52	49	62	74	83	87	90	90	86	88	86	85	84	86	87	82
24		89	91	92	90	86	83	80	71	62	61	62	72	82	84	87	92	93	98	104	99	103	104	102	99	87
25		98	94	87	91	90	87	80	72	65	62	67	73	82	91	88	100	99	89	92	95	95	94	93	93	86
26		94	91	87	91	90	85	78	70	64	58	58	65	85	85	96	105	109	96	107	98	90	89	88	81	86
27	D	84	83	80	87	85	82	73	71	70	72	50	67	80	98	95	103	105	100	103	90	99	96	51	77	83
28	D	53	70	76	82	70	44	48	32	43	39	39	71	83	83	102	117	81	97	97	86	90	95	101	75	74
29	D	76	88	59	73	72	50	69	71	40	53	65	72	89	87	94	93	76	91	102	121	94	75	84	84	78
30		61	79	65	62	51	65	57	36	30	38	61	82	94	89	94	97	104	89	88	93	98	94	92	90	75
All		87	87	86	87	88	84	78	70	64	61	62	70	79	84	89	92	91	91	93	94	94	91	91	90	83
Quiet		90	90	89	89	89	87	82	75	69	64	65	72	81	86	91	93	94	95	98	97	98	99	98	99	87
Dist.		72	72	78	75	79	65	58	53	49	55	53	69	75	79	86	93	83	93 88	98 95	96	90	77	77	72	75
Dist.		12	12	10	7.0	79	00	- 00	93	49	JJ	JO	09	10	79	- 50	94	ಾ	- 00	95	90	90	- 11	- 11	12	7.0

April 2007 East component Y in nT (Y = 1700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	D	47	48	58	86	71	70	65	64	47	44	35	10	0	12	7	31	71	50	54	52	97	80	44	90	51
2	D	86	58	67	48	21	8	46	52	48	45	28	11	17	10	39	35	34	37	52	66	63	69	72	79	46
3		42	43	57	52	41	49	56	59	54	44	36	20	14	16	23	31	54	104	52	44	46	43	42	36	44
4		35	32	42	51	45	58	68	68	65	51	36	27	22	28	33	38	43	48	44	47	56	52	55	45	45
5		50	46	52	51	47	55	61	63	57	47	33	19	16	19	26	34	45	44	45	47	46	44	44	41	43
6		41	46	51	52	52	52	58	59	53	40	26	16	15	24	33	39	42	40	41	42	53	50	46	44	42
7		47	38	43	54	53	55	58	58	53	42	28	16	13	20	29	36	40	43	43	43	46	45	43	43	41
8	Q	42	44	46	49	53	57	62	62	54	43	29	17	12	16	25	33	42	38	38	40	42	42	40	37	40
9		43	44	50	48	47	57	61	58	52	36	18	5	7	20	31	39	44	44	44	44	46	45	42	40	40
10		35	40	47	51	53	58	60	59	54	44	26	10	11	20	25	33	36	42	44	40	42	37	34	51	40
11		49	45	48	51	51	53	56	57	53	44	33	23	16	20	27	33	37	38	40	41	42	42	43	41	41
12		42	42	45	46	50	57	64	65	56	44	30	16	10	34	33	35	53	47	63	54	45	42	42	42	44
13	Q	44	45	47	50	52	54	59	57	52	41	30	20	19	26	32	38	40	40	41	43	43	44	44	45	42
14		45	46	48	51	52	56	60	60	56	45	31	21	18	22	30	35	37	39	38	40	42	44	49	34	42
15		55	52	53	64	64	58	54	49	43	34	25	17	16	24	35	49	45	44	42	42	41	42	43	43	43
16	Q	45	46	48	50	53	57	61	61	54	44	33	28	25	29	36	41	43	43	41	40	40	41	42	43	43
17		44	46	49	54	60	62	59	55	43	28	14	6	-4	8	21	29	27	54	60	55	50	43	39	32	39
18		55	68	57	50	55	53	51	46	41	35	30	23	21	25	27	30	33	38	42	44	70	79	61	49	45
19		57	53	48	47	55	58	56	48	48	39	31	23	20	25	31	33	36	39	40	41	43	44	46	46	42
20	Q	40	48	49	51	59	65	69	65	56	42	29	17	10	15	21	28	35	39	38	40	40	48	51	50	42
21	Q	46	51	53	55	58	61	66	66	58	45	28	15	12	17	21	27	35	43	42	40	40	44	45	45	42
22		45	49	56	51	63	66	63	66	58	44	24	6	6	7	20	31	44	47	40	42	63	52	43	53	43
23		46	34	28	53	59	51	30	50	46	42	36	30	29	35	40	43	50	55	48	48	48	49	49	49	44
24		48	49	51	56	60	63	64	60	51	40	32	25	22	27	32	38	39	39	39	43	41	43	44	48	44
25		49	48	49	59	66	68	71	66	55	42	28	21	22	27	35	44	54	59	49	42	40	40	42	42	47
26		40	47	41	56	66	72	74	66	54	41	27	19	14	22	29	31	37	40	36	40	51	51	60	55	45
27	D	54	61	55	67	74	76	71	62	50	33	22	7	15	20	25	28	27	49	71	75	41	49	66	133	51
28	D	111	59	67	68	70	68	59	50	48	30	26	10	1	17	41	50	39	55	73	49	48	30	48	73	50
29	D	36	50	64	50	56	48	43	53	50	40	19	18	11	36	29	30	42	44	54	71	68	74	61	55	46
30		74	52	57	54	44	42	68	63	41	32	28	25	28	36	40	48	65	44	42	46	47	44	44	45	46
										-																
All		50	48	51	54	55	57	60	59	52	41	28	17	15	22	29	36	42	46	47	47	49	48	47	51	44
Quiet		43	47	49	51	55	59	63	62	55	43	30	19	16	21	27	33	39	40	40	41	41	44	44	44	42
Dist.		67	55	62	64	59	54	57	56	48	38	26	11	9	19	28	35	42	47	61	62	63	60	58	86	49

April 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	D	58	34	-8	11	48	50	54	58	61	72	70	71	91	109	101	103	115	97	93	80	59	33	-16	7	61
2	D	-32	-4	34	25	30	34	58	75	76	80	80	91	93	94	105	99	106	96	72	42	51	51	19	8	58
3		39	61	63	62	68	74	74	74	72	74	71	69	70	72	77	78	99	100	84	76	70	69	72	67	72
4		56	38	41	53	54	67	72	74	71	66	65	70	74	79	76	77	79	81	80	72	59	64	64	53	66
5		59	66	68	69	70	71	72	72	71	67	62	65	70	75	76	76	79	75	75	74	73	72	71	65	71
6		60	64	68	70	71	73	71	69	66	65	63	66	70	72	76	76	78	79	79	76	73	67	61	54	70
7		59	61	63	66	70	72	72	70	68	64	60	61	66	73	75	75	74	72	71	71	70	69	69	68	68
8	Q	68	69	70	70	70	70	70	67	65	61	60	60	63	69	74	75	76	72	70	69	69	68	68	65	68
9		65	60	66	69	71	68	63	65	63	56	55	59	68	72	74	73	72	70	69	70	70	69	68	64	67
10		65	66	69	69	70	72	70	66	62	55	53	58	64	72	79	76	76	85	81	73	71	58	37	22	65
11		42	61	67	67	68	70	70	67	66	62	58	59	63	68	72	72	71	69	68	68	68	68	68	67	66
12		67	66	65	66	66	68	69	67	64	62	66	74	84	110	97	85	84	80	79	74	71	69	66	66	74
13	Q	69	71	72	72	72	74	72	69	66	63	61	61	65	69	70	71	72	70	70	70	70	69	69	69	69
14		69	69	70	70	68	69	70	70	68	63	56	57	61	68	69	67	67	68	69	69	69	68	66	44	66
15		41	53	56	54	57	61	63	62	63	61	60	61	67	73	78	82	80	77	74	71	70	69	69	69	65
16	Q	69	69	70	70	68	66	65	64	59	55	53	53	59	66	70	73	73	70	68	68	68	68	67	67	66
17		68	68	69	68	67	65	61	62	57	51	52	61	82	90	97	98	102	113	79	80	74	74	67	32	72
18		29	44	54	57	61	64	68	64	64	61	57	59	65	66	71	74	76	77	78	76	63	54	59	62	63
19		56	63	66	65	66	66	64	62	65	64	64	66	70	72	73	74	75	73	70	70	69	69	67	64	67
20	Q	60	63	65	66	67	68	68	67	66	62	58	58	64	66	67	69	70	68	67	67	68	64	57	60	65
21	Q	65	67	69	69	69	70	68	62	61	60	59	60	64	66	66	68	72	73	71	69	68	68	67	67	67
22		66	65	65	61	57	61	62	62	59	54	49	49	58	69	76	85	92	85	76	71	65	57	42	50	64
23		59	37	-3	6	37	49	59	61	59	56	58	60	63	67	71	73	78	78	74	72	71	71	71	71	58
24		71	71	72	72	71	70	68	64	62	56	54	54	59	63	65	69	69	68	69	69	69	67	65	66	66
25		68	67	67	67	66	68	68	67	64	61	60	59	62	65	66	74	80	79	74	71	69	69	69	69	68
26		65	65	67	70	69	69	67	63	59	55	56	58	65	72	75	74	77	77	74	73	69	64	52	60	66
27	D	64	67	66	66	67	65	61	55	54	56	58	63	67	77	76	79	82	97	90	66	65	43	-27	-57	58
28	D	-67	-16	28	66	62	55	66	65	69	71	88	82	98	111	129	105	98	93	80	71	67	37	19	23	62
29	D	34	33	39	51	47	50	51	58	63	74	71	79	81	94	84	90	91	84	77	59	48	45	40	23	61
30		-32	-9	15	33	37	44	54	59	63	68	73	77	83	85	86	91	89	77	73	74	67	66	67	71	59
All		49	53	56	59	62	64	66	65	64	62	62	64	70	77	79	79	82	80	75	70	67	63	54	50	66
Quiet		66	68	69	69	69	70	68	66	63	60	58	58	63	67	69	71	72	71	69	69	68	67	66	66	67
Dist.		11	23	32	44	51	51	58	62	64	71	73	77	86	97	99	95	98	93	82	64	58	42	7	1	60
Dist.		11	20	92	-1-1	91	01	90	02	01	11	10	- 1.1	00	91	33	30	90	33	02	94	90	42	- 1	1	00

Nurmijärvi Finland $\mbox{May 2007 North component X in nT (X = 14800 nT + tabular values)}$

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		90	79	76	88	85	74	64	55	61	60	67	77	84	87	86	90	94	95	93	88	87	88	88	87	81
2	Q	83	82	85	86	87	81	73	64	57	58	65	74	83	86	88	87	90	91	93	94	94	93	93	92	82
3		91	88	90	89	86	80	70	65	62	62	67	79	90	93	91	91	96	97	103	102	94	92	93	91	86
4		92	91	94	92	90	84	78	69	63	58	58	64	83	97	100	98	97	100	103	97	99	95	94	94	87
5	Q	90	91	90	91	89	81	69	58	54	56	62	75	92	100	101	100	96	95	97	98	97	95	93	92	86
6	Q	91	93	94	94	89	84	79	71	65	59	61	72	84	94	97	99	100	101	106	107	108	104	102	101	90
7	D	97	98	95	94	92	88	86	79	74	84	89	96	81	100	121	136	113	91	88	96	94	86	87	94	94
8		97	97	94	84	67	79	79	61	62	65	59	58	79	101	84	103	108	92	106	98	100	92	88	92	85
9		95	94	92	87	90	90	83	74	66	61	61	72	83	89	93	93	96	97	99	99	97	95	94	91	87
10		91	89	91	92	90	86	78	71	64	63	66	73	84	94	98	101	97	103	100	109	94	92	93	94	88
11		94	96	96	95	90	87	80	76	71	71	73	75	85	87	91	92	90	101	98	100	99	96	96	96	89
12	Q	94	94	92	91	90	84	84	81	76	76	78	86	91	95	94	96	97	97	100	100	97	97	96	96	91
13	Q	96	96	96	93	88	83	79	74	75	73	76	81	88	96	97	97	98	100	101	100	98	97	97	96	91
14		96	98	99	98	95	91	86	78	67	64	71	82	87	94	101	105	106	107	102	102	99	98	97	98	93
15		99	99	102	103	102	99	93	83	69	68	76	84	93	85	89	87	97	99	102	106	107	101	97	97	93
16		97	97	98	98	96	93	86	75	67	63	67	75	85	91	98	100	100	100	101	104	105	103	106	96	92
17		95	96	96	96	95	84	81	80	75	72	76	84	101	97	104	101	105	104	102	98	94	107	98	80	93
18	D	72	89	93	96	94	88	82	62	49	68	77	88	96	116	103	107	117	115	106	101	101	99	102	103	93
19		100	97	100	96	89	80	75	72	71	68	66	96	114	94	102	109	111	103	114	99	97	97	100	101	94
20		98	101	100	94	89	85	80	77	77	78	73	79	92	101	108	101	103	102	105	102	99	94	95	94	93
21		95	90	93	97	98	93	88	81	77	73	73	79	86	94	105	104	108	112	113	113	114	114	111	96	96
22		90	96	101	104	100	96	93	89	86	78	80	84	96	102	114	92	109	122	115	124	83	80	65	70	95
23	D	97	109	106	104	100	95	71	23	29								76	80	99	101	32	51	55	55	(75)
24	D	-1	61	84	86	58	53	49	41	45	48	55	67	85	89	121	123	128	112	102	88	61	74	85	82	75
25	D	82	85	81	85	78		36	41	59	69	70	78	67	74	101	123	130	114	99	88	80	90	86	83	(82)
26		85	90	79	50	61	77	82	70	63	56	56	58	102	111	106	96	103	97	89	99	89	92	89	88	83
27		87	88	83	77	72	66	62	66	65	58	68	72	91	95	85	93	114	100	105	114	96	86	85	86	84
28		88	82	77	77	78	71	68	62	59	51	59	75	89	89	91	87	89	91	92	94	94	89	86	86	80
29		87	88	89	89	81	71	61	58	60	63	72	81	96	93	87	84	89	99	94	98	96	93	93	92	84
30		87	91	96	98	93	86	78	75					85	88	90	95	98	99	98	98	95	91	91	90	(91)
31		91	92	94	94	89	80	75	66	59	61	68	81	89	92	101	104	104	110	105	106	111	108	103	94	91
All		89	91	92	91	87	83	76	68	64	65	68	77	89	94	98	100	102	101	101	101	94	93	92	91	88
Quiet		91	91	91	91	89	83	77	69	65	64	68	77	88	94	95	96	96	97	99	100	99	97	96	96	88
Dist.		69	88	92	93	84	81	65	49	51	67	72	82	82	95	111	122	112	102	99	95	73	80	83	83	85

May 2007 East component Y in nT (Y = 1700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		42	45	29	44	65	69	64	58	48	34	24	18	20	28	36	42	46	58	68	60	49	43	42	46	45
2	Q	50	51	59	62	66	69	68	58	43	29	21	19	22	31	39	46	47	48	47	46	46	46	45	46	46
3		47	52	56	60	65	67	66	57	46	31	17	7	9	19	28	34	44	44	48	56	51	48	46	49	44
4		49	47	54	59	58	61	65	63	53	37	24	19	16	23	32	39	43	45	46	46	52	48	46	47	45
5	Q	48	48	53	66	69	72	72	65	53	41	27	17	15	23	33	40	43	44	45	43	45	46	48	49	46
6	Q	49	50	58	65	66	67	69	63	49	35	25	16	16	23	28	32	35	36	38	40	46	49	50	48	44
7	D	51	56	63	74	67	68	72	67	51	32	21	12	17	23	27	18	52	58	49	41	44	75	84	49	49
8		52	56	58	62	41	48	48	50	46	41	24	22	20	21	30	34	36	42	60	66	50	55	40	33	43
9		41	51	55	57	61	64	64	59	44	29	18	16	19	27	37	44	53	47	43	42	51	46	48	47	44
10		48	50	51	56	61	67	69	60	44	30	21	15	16	28	38	44	47	46	48	51	59	47	46	48	45
11		50	53	59	64	66	67	64	56	45	33	25	23	22	25	29	35	41	45	45	46	49	41	47	48	45
12	Q	52	55	58	60	58	59	58	51	41	33	30	26	27	33	37	39	40	41	43	45	46	46	48	51	45
13	Q	52	52	52	53	51	51	51	51	42	35	27	23	24	29	33	33	37	40	42	42	43	45	47	49	42
14		50	52	54	58	59	59	58	54	47	36	24	13	13	20	29	35	39	46	55	57	47	47	47	49	44
15		50	46	50	55	59	63	66	62	54	43	33	24	20	23	31	41	48	47	48	55	63	61	48	48	47
16		51	52	52	56	60	63	67	58	45	33	18	11	14	21	32	42	50	53	49	46	46	54	50	55	45
17		56	59	65	62	65	66	67	63	52	36	19	11	12	20	31	40	45	46	47	48	47	53	75	81	49
18	D	83	71	75	71	69	73	71	67	38	21	12	6	4	-1	14	22	31	43	54	54	50	48	50	39	44
19		55	58	59	65	69	73	64	56	45	32	27	21	11	21	32	35	39	61	63	59	49	49	45	31	47
20		33	54	59	65	65	72	64	61	48	30	17	13	20	25	30	37	42	43	46	49	50	43	42	50	44
21		49	50	49	62	64	68	68	62	54	46	31	19	15	20	25	34	38	39	40	39	39	40	43	50	43
22		53	57	60	63	68	69	71	68	60	46	30	21	19	13	14	22	30	39	46	69	77	85	85	52	51
23	D	43	75	77	76	79	73	65	62	26								42	47	82	114	70	134	100	101	(74)
24	D	86	67	76	81	78	73	68	67	57	38	30	25	18	25	27	30	49	42	43	51	33	54	75	70	53
25	D	62	56	55	63	68		52	43	45	41	26	30	27	24	38	41	46	47	53	44	28	55	50	43	(45)
26		46	60	67	60	42	58	76	67	57	44	33	22	35	37	34	44	56	45	44	47	40	47	47	43	48
27		33	47	57	64	68	65	62	52	45	41	25	20	28	36	43	42	56	44	47	59	59	49	48	41	47
28		51	60	59	60	67	65	63	60	51	42	35	30	27	36	43	51	53	49	49	50	48	48	47	52	50
29		54	59	62	68	75	77	66	53	42	35	29	23	21	29	35	39	41	41	44	48	49	48	46	47	47
30		48	48	62	72	74	72	65	61					18	22	34	43	48	48	45	41	40	43	44	45	(49)
31		46	48	57	64	68	65	62	57	49	33	19	12	14	19	26	34	38	38	36	36	36	44	47	48	41
All		51	54	58	63	64	66	65	59	47	36	24	18	19	24	31	37	44	45	49	51	48	53	52	50	46
Quiet		50	51	56	61	62	64	63	58	46	35	26	20	21	28	34	38	40	42	43	43	45	46	48	49	44
Dist.		65	65	69	73	72	72	66	61	43	33	22	18	16	18	26	28	44	47	56	61	45	73	72	60	50

May 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		67	62	46	49	61	67	68	67	65	59	61	62	69	73	72	74	76	82	80	75	73	69	59	62	67
2	Q	66	67	70	71	74	76	75	70	62	59	58	61	68	71	74	75	75	74	72	71	71	71	71	69	70
3		68	71	73	73	72	70	69	66	58	55	58	64	72	76	78	76	78	78	78	67	70	70	71	71	70
4		71	70	68	70	71	73	75	70	65	63	63	59	65	70	74	75	74	74	74	73	70	69	70	70	70
5	Q	70	68	68	70	72	71	71	66	62	58	57	62	65	68	71	73	73	73	73	71	71	71	70	70	69
6	Q	70	69	71	72	71	71	70	65	60	54	55	57	60	61	65	68	68	68	68	69	69	67	67	68	66
7	D	68	68	68	65	64	65	64	61	51	41	40	42	50	58	69	93	132	119	100	82	71	62	70	74	70
8		75	76	73	72	63	62	62	61	62	58	61	65	69	76	82	83	86	89	81	56	44	54	59	54	68
9		66	70	72	70	67	68	69	66	63	63	60	62	73	77	77	78	80	77	77	75	72	70	70	71	71
10		73	73	73	74	75	76	74	71	67	66	69	68	68	69	71	76	76	77	77	68	61	68	68	67	71
11		71	72	73	73	73	74	71	67	60	59	61	64	68	68	71	72	73	76	75	74	70	64	65	68	69
12	Q	70	71	71	71	72	73	71	68	61	58	59	62	62	65	68	69	70	71	71	71	70	69	70	70	68
13	Q	69	70	69	67	65	63	63	62	57	53	53	53	57	61	62	65	69	70	70	70	69	69	69	70	64
14		70	71	71	69	68	69	70	70	65	57	54	55	62	65	67	70	74	76	79	74	69	68	68	70	68
15		69	69	68	67	68	66	63	60	57	51	46	52	65	71	76	75	76	73	73	70	57	59	65	68	65
16		69	70	70	69	68	66	66	66	59	52	49	53	63	70	72	72	72	71	68	67	67	66	53	53	65
17		61	66	68	65	63	62	61	60	59	59	60	61	65	64	68	74	77	79	79	77	74	67	41	33	64
18	D	43	57	65	67	69	68	63	55	56	53	56	59	64	78	90	90	98	105	99	79	72	68	69	61	70
19		70	73	72	71	70	68	69	71	73	69	68	68	73	77	80	80	86	91	77	75	69	69	69	54	73
20		37	54	61	64	68	71	70	68	62	59	59	66	73	78	84	82	80	78	73	62	68	63	56	64	67
21		69	68	70	70	72	74	74	69	66	60	54	59	66	69	72	74	75	74	73	71	69	68	68	69	69
22		71	73	73	72	72	72	68	65	59	53	55	68	75	80	87	86	79	82	88	50	42	31	26	3	64
23	D	-21	21	43	51	62	60	58	59	64								89	85	94	69	-6	-12	-40	-39	(37)
24	D	-66	-20	43	59	61	71	71	77	83	76	75	76	88	105	107	127	113	93	90	52	29	-9	5	41	60
25	D	66	73	76	75	74		71	76	77	76	78	89	82	83	95	100	96	93	90	71	49	67	73	73	(78)
26		71	71	65	55	47	54	62	63	67	69	76	84	118	118	112	102	101	80	81	66	66	69	65	66	76
27		55	61	67	76	78	77	79	81	80	85	80	75	83	86	88	88	90	80	81	65	64	69	71	65	76
28		69	64	70	72	76	77	81	82	78	70	64	68	76	79	78	75	75	76	76	77	75	75	74	75	74
29		75	75	74	75	74	74	76	78	72	62	61	67	75	81	82	78	77	77	77	77	75	74	74	73	74
30		73	73	71	70	72	74	73	72					70	76	78	80	81	79	78	77	75	75	75	75	(75)
31		75	77	78	78	75	71	68	68	66	64	62	68	70	73	75	77	76	77	75	74	70	63	66	68	71
All		60	65	68	68	69	69	69	68	65	61	60	64	70	75	78	80	82	81	79	70	63	61	60	60	69
Quiet		69	69	70	70	71	71	70	66	60	56	56	59	63	65	68	70	71	71	71	70	70	69	69	69	67
Dist.		18	40	59	63	66	66	66	65	66	61	62	67	71	81	90	103	106	99	95	71	43	35	35	42	65

Nurmijärvi Finland $\label{eq:model} \mbox{June 2007 North component X in nT (X = 14800 nT + tabular values)}$

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		91	100	96	89	85	81	77	72	69	59	73	73	84	91	99	103	99	108	116	106	114	116	112	107	93
2		108	110	108	97	92	89	87	88	76	66	72	80	92	94	105	108	108	105	108	111	107	112	104	104	97
3	D	102	105	107	110	107	101	86	75	67	70	70	78	89	96	98	104	100	115	125	106	103	104	104	106	97
4		98	99	98	91	92	98	92	80	67	66	71	75	80	98	94	124	119	128	117	100	95	95	95	95	94
5	Q	96	97	98	96	99	98	86	70	58	60	70	81	87	95	93	97	96	100	103	102	101	99	98	92	90
6	Q	93	95	98	97	93	89	79	69	59	55	53	65	82	90	93	99	97	98	101	101	101	98	95	94	87
7	Q	92	92	95	99	97	93	84	76	68	65	64	76	89	98	100	97	99	98	106	110	111	108	108	108	93
8		108	110	97	94	95	100	91	74	62	63	69	78	92	103	112	122	119	111	102	97	92	81	98	91	94
9		91	91	87	89	88	87	83	78	66	65	66	76	56	70	84	91	97	105	99	101	103	98	95	95	86
10		93	94	85	82	86	89	83	70	52	58	70	80	89	86	90	92	94	100	99	101	97	92	91	91	86
11	Q	90	89	87	85	84	83	76	69	65	65	67	76	87	87	88	96	98	103	101	102	101	94	90	89	86
12	Q	91	92	89	88	84	78	78	76	67	63	66	79	87	89	92	94	99	104	103	102	97	95	97	98	88
13		97	99	97	96	91	88	81	73	71	75	83	77	79	86	97	100	104	114	121	100	100	95	100	104	93
14	D	101	87	102	102	98	76	76	75	78	88	64	52	77	83	93	94	121	114	116	107	109	105	106	88	92
15		86	93	97	92	84	68	73	75	72	65	66	66	66	84	90	101	105	106	107	107	104	100	98	96	88
16		93	91	89	84	89	91	85	75	65	69	74	83	93	83	97	106	108	114	99	97	92	90	90	93	90
17		91	92	91	94	97	95	92	81	72	67	62	70	72	89	82	90	92	102	107	101	98	96	95	93	88
18		95	94	91	94	95	92	88	79	67	58	60	69	76	81	87	95	104	106	110	102	100	95	93	91	89
19		91	89	95	95	93	89	87	74	56	54	51	59	76	86	95	93	93	102	104	101	99	98	97	96	86
20		95	95	95	94	96	93	88	79	74	66	60	66	75	88	99	100	102	93	95	98	98	99	99	97	89
21	D	96	97	96	92	96	91	83	79	81	85	78	102	101	96	131	82	92	111	102	103	106	106	86	107	96
22	D	83	67	77	90	96	88	67	60	55	52	53	70	77	86	97	96	95	96	99	99	108	77	103	93	83
23		89	81	93	97	86	73	71	63	55	60	60	73	89	91	93	89	94	95	103	105	100	94	90	92	85
24		92	97	92	90	84	80	74	67	58	62	68	81	100	96	112	104	107	104	101	99	98	90	88	82	89
25		83	92	93	90	83	76	71	62	57	55	65	84	97	99	98	104	103	107	105	99	98	92	90	95	87
26		97	96	96	92	86	81	77	73	73	75	85	87	86	90	98	99	104	109	109	102	100	100	96	95	92
27		95	96	90	94	89	80	71	69	69	68	66	70	85	97	105	103	107	103	98	96	94	92	93	94	88
28		92	95	96	94	87	82	79	73	65	66	76	88	101	112	106	108	110	105	101	103	106	103	100	104	94
29	D	104	104	104	101	92	79	70	62	59	63	74	89	96	101	119	118	122	124	120	123	108	97	94	98	97
30		102	100	97	94	90	84	80	76	70	71	75	74	84	91	98	100	99	101	102	100	96	95	94	92	90
4.11		0.1	0.4	0.1	00	01	0.0	00	70	00	0.5	00	70	0.5	0.1	00	100	100	100	100	100	101	07	07	- 00	- 00
All		94	94	94	93	91	86 88	80	73 72	66	65 62	68	76	85	91	98 93	100 96	103	106	106 103	103	101 102	97	97	96	90
Quiet		92	93	93	93 99	91		81	70	63	72	64 68	75 78	86	92 92		96	98 106	101	112	103 108	102	99 98	97 98	96	89 93
Dist.		97	92	97	99	98	87	76	70	68	12	08	78	88	92	107	99	100	112	112	108	107	98	98	98	93

June 2007 East component Y in nT (Y = 1700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		49	59	66	65	65	57	58	61	51	34	18	13	11	18	24	26	35	36	36	42	41	42	49	55	42
2		50	53	58	64	66	69	72	61	51	40	19	9	9	16	21	28	35	47	48	47	46	39	46	53	44
3	D	50	54	58	72	79	82	81	76	60	47	36	24	17	18	24	29	29	39	47	61	47	47	63	56	50
4		44	58	65	62	58	65	66	68	59	42	28	12	7	8	23	32	36	52	58	62	53	52	54	53	47
5	Q	54	55	58	63	66	68	74	72	60	44	28	15	16	22	31	38	43	46	44	44	43	44	48	47	47
6	Q	53	56	60	63	69	77	82	79	63	42	24	15	15	20	30	38	43	46	46	45	43	41	44	45	47
7	Q	51	52	65	73	75	77	78	71	60	42	26	19	22	24	28	34	41	42	42	41	40	40	41	43	47
8		39	55	63	75	81	69	79	83	70	51	32	21	15	21	26	30	33	39	45	47	61	51	61	57	50
9		61	66	71	76	86	82	79	70	54	37	24	9	15	24	30	34	40	44	55	44	42	46	41	50	49
10		53	53	47	39	58	74	76	70	59	47	34	24	24	25	30	38	41	43	45	49	45	44	44	46	46
11	Q	49	57	64	67	69	72	70	64	55	45	32	19	19	27	38	46	51	50	48	47	48	50	48	49	49
12	Q	50	53	58	68	75	76	74	63	48	33	23	20	22	27	35	44	51	50	50	48	49	49	51	52	49
13		55	56	62	68	73	75	71	60	47	36	22	14	17	20	20	33	39	36	51	49	45	45	40	47	45
14	D	41	32	65	67	71	52	41	33	41	43	26	14	10	17	24	31	45	68	70	64	62	56	71	53	46
15		53	62	66	70	62	53	62	71	68	52	33	24	21	23	29	43	41	43	42	44	46	48	48	50	48
16		59	61	54	51	57	59	62	59	50	42	34	23	25	31	31	33	41	48	52	47	51	52	54	51	47
17		44	52	57	67	72	70	70	65	54	40	28	22	24	22	26	35	38	42	43	45	46	46	46	47	46
18		50	51	50	58	66	71	74	71	62	47	29	15	13	17	26	37	43	49	63	46	44	44	47	49	47
19		53	44	53	60	64	64	67	68	57	48	36	23	23	28	36	40	48	46	46	47	45	46	48	48	47
20		49	53	58	65	72	77	82	74	65	55	41	30	27	27	33	42	47	48	48	46	46	47	45	44	51
21	D	44	47	52	57	59	67	66	59	55	41	26	9	1	5	15	26	36	39	56	38	36	42	54	67	42
22	D	84	61	53	65	66	78	81	69	57	42	22	19	9	14	29	34	34	39	44	45	42	64	70	62	49
23		67	41	50	63	84	77	76	73	55	46	34	26	21	25	29	38	42	43	41	40	46	47	46	47	48
24		50	63	69	69	72	73	70	62	51	46	34	21	16	28	32	37	46	43	39	45	61	43	47	57	49
25		59	64	69	72	74	72	71	67	59	46	31	23	27	35	39	38	38	46	46	43	45	50	50	53	51
26		56	59	62	64	69	68	65	62	55	47	31	29	36	37	36	35	37	37	46	43	41	44	50	54	48
27		55	58	58	75	81	74	70	68	61	46	35	31	33	33	38	44	49	51	44	43	45	49	52	46	52
28		47	55	67	72	73	71	69	61	51	41	32	23	18	20	28	32	35	37	37	40	43	45	51	56	46
29	D	53	58	65	70	78	76	69	67	58	46	32	30	30	29	22	20	26	26	30	47	66	64	49	52	49
30		53	53	70	72	76	73	70	66	59	49	38	27	22	21	29	36	44	49	50	48	48	48	50	51	50
All		52	55	60	66	71	71	71	66	56	44	29	20	19	23	29	35	40	44	47	46	47	48	50	51	48
Quiet		51	55	61	67	71	74	75	70	57	41	26	18	19	24	32	40	46	47	46	45	45	45	47	47	48
Dist.		54	51	59	66	71	71	68	61	54	44	28	19	13	17	23	28	34	42	50	51	51	55	61	58	47

June 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		66	65	70	70	69	66	67	66	61	56	60	60	63	68	70	75	73	72	73	75	74	72	71	72	68
2		74	74	73	73	71	71	69	66	64	63	59	54	59	62	67	73	74	74	74	74	73	71	71	71	69
3	D	73	75	75	72	68	63	65	69	67	65	68	72	77	75	75	81	79	79	85	90	81	75	67	54	73
4		65	68	71	69	68	73	72	69	67	63	62	67	75	81	83	88	89	90	80	82	79	78	77	76	75
5	Q	78	78	78	76	73	74	77	78	77	72	69	71	76	78	80	82	82	80	78	77	74	69	68	69	76
6	Q	73	76	74	73	73	74	77	77	74	66	60	66	76	77	77	76	76	78	77	76	75	74	74	73	74
7	Q	72	72	72	70	68	70	72	72	67	59	58	63	68	73	75	73	72	72	74	74	72	72	71	71	70
8		69	68	68	70	70	66	65	63	56	56	59	68	69	65	66	75	85	92	87	82	71	60	41	55	68
9		63	65	66	63	60	61	64	65	64	60	68	78	82	87	90	88	82	81	84	77	75	65	56	64	71
10		68	63	59	49	52	62	64	60	58	63	62	67	72	74	79	77	76	77	77	75	73	73	72	73	68
11	Q	73	71	72	73	72	74	75	74	66	63	62	65	69	67	67	73	78	80	78	77	75	69	72	74	72
12	Q	74	73	72	75	76	74	73	71	66	65	57	59	70	73	78	78	75	74	77	76	75	72	68	69	72
13	_	72	74	73	73	71	71	73	72	70	68	64	67	74	80	83	83	85	85	85	84	82	80	77	77	76
14	D	74	57	64	72	71	67	65	62	60	61	66	70	72	81	90	89	103	109	101	93	71	64	34	63	73
15		69	74	77	77	71	65	64	65	66	67	66	70	76	80	82	86	83	81	78	78	77	76	74	71	74
16		66	70	71	72	71	69	71	71	71	68	65	70	85	90	88	87	89	93	93	86	81	77	76	77	77
17		74	74	75	77	74	76	74	70	69	70	72	72	78	81	81	85	85	85	83	81	78	76	76	75	77
18		75	75	74	75	76	74	72	69	68	67	63	66	70	73	79	84	88	88	88	81	79	76	75	71	75
19		70	68	73	71	69	71	73	71	66	62	64	67	69	72	80	86	88	84	82	79	77	76	75	75	74
20		76	76	75	77	76	72	76	76	74	72	68	69	69	71	79	80	82	81	76	74	74	74	74	74	75
21	D	75	76	75	71	68	69	69	66	58	49	49	61	73	78	100	101	92	91	93	80	76	64	50	12	71
22	D	25	29	35	48	59	68	70	75	71	71	75	91	85	85	83	87	85	81	80	78	74	69	59	60	68
23		61	51	45	48	57	67	75	73	72	69	66	70	75	78	82	86	85	79	79	73	74	74	65	60	69
24 25		68	66 78	69 79	73 79	74 77	75 73	77 75	74 74	71 71	69 70	66	68 65	75	81 76	86 78	85	90	86	84 82	83 80	76 78	68 76	71 74	73 74	75 76
		75										65		73			78	78	83							76
26		76	77	78	79	76	75	78	75	73	68	66	67	72	76	79	75	75	76	79	76	75	74	74	76	75
27		77	75	70	70	69	67	68	73	71	63	62	65	71	73	76	80	81	82	82	79	77	76	75	70	73
28		65	66	73	76	71	65	69	71	69	70	73	73	74	78	86	83	81	78	76	75	73	72	70	73	73
29	D	72	74	75	77	76	71	64	58	62	63	58	63	70	77	76	72	70	68	72	79	81	65	72	76	70
30		78	74	67	64	61	65	70	71	70	72	71	71	75	74	75	81	83	81	78	76	76	75	74	73	73
All		70	69	70	70	70	70	71	70	67	65	64	68	73	76	80	82	82	82	81	79	76	72	68	68	73
Quiet		74	74	74	73	72	73	75	74	70	65	61	65	72	74	75	76	77	77	77	76	74	71	71	71	73
Dist.		64	62	65	68	69	68	67	66	64	62	63	71	75	79	85	86	86	85	86	84	77	67	56	53	71

Nurmijärvi Finland $\label{eq:lambda} \mbox{July 2007 North component X in nT (X = 14800 nT + tabular values)}$

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		91	93	96	95	90	82	74	67	67	69	73	78	83	76	85	94	98	101	101	101	98	91	88	88	87
2		90	94	97	97	91	83	75	69	66	65	75	77	87	93	100	102	100	100	101	101	101	102	99	96	90
3		95	97	101	101	98	93	87	82	77	71	70	69	85	108	123	113	106	109	99	104	106	105	104	88	95
4	D	90	86	102	104	95	79	70	79	71	44	49	67	79	115	98	115	108	104	111	96	90	92	87	89	88
5		92	90	91	87	85	78	75	67	60	58	56	62	79	85	86	96	95	97	100	103	99	92	91	98	84
6		90	93	96	93	90	85	77	70	61	61	67	71	77	91	101	106	109	103	103	104	105	94	91	90	89
7		89	88	92	96	89	78	70	65	56	63	72	80	85	86	90	91	96	102	100	103	101	97	89	90	86
8		82	82	85	85	81	74	72	70	64	57	61	66	75	85	89	97	104	108	100	99	97	95	91	90	84
9	Q	89	89	90	89	85	75	70	67	62	59	60	70	84	93	98	99	100	99	101	102	98	96	96	97	86
10		98	97	98	99	95	87	82	76	78	77	76	73	71	82	91	96	99	105	117	122	120	120	105	102	94
11	D	73	71	97	89	95	73	53	54	61	45	54	51	82	92	107	100	86	95	94	94	92	94	93	89	81
12		83	88	88	85	76	74	72	67	70	66	67	62	66	75	98	103	104	102	102	96	90	84	82	83	83
13	_	82	85	85	82	77	67	63	64	62	61	64	71	81	84	88	91	95	100	100	102	108	106	104	101	84
14	D	99	102	97	92	90	90	90	84	80	78	76	69	91	111	120	125	97	103	138	86	86	86	75	84	94
15		58	70	81	87	71	61	71	69	60	56	56	62	79	89	92	86	91	96	102	101	87	89	86	84	78
16		83	86	86	86	83	81	77	69	63	60	54	57	66	79	86	94	95	94	98	98	96	93	91	90	82
17		91	92	90	94	85	80	74	68	66	68	71	71	77	80	84	89	91	95	99	98	98	95	93	92	85
18	Q	89	90	89	91	87	86	79	75	65	55	54	62	74	82	87	95	99	100	101	101	100	99	97	96	86
19	Q	95	97	99	100	100	96	84	74	69	69	71	80	83	86	90	89	90	95	102	101	99	98	100	99	90
20	D	98	97	96	94	95	94	98	87	70	49	42	55	48	73	84	85	79	87	95	98	95	101	81	87	83
21		91	95	83	67	79	75	65	64	62	61	56	59	56	83	92	89	91	97	103	101	103	80	89	88	80
22		84	86	87	89	85	76	71	66	62	65	71	73	83	89	93	89	92	91	94	94	95	94	93	90	84
23		90	91	91	94	90	82	73	62	60	59	60	67	77	86	89	93	95	102	99	97	95	98	97	95	85
24	Q	94	95	94	94	91	82	76	74	73	67	61	69	74	89	100	96	100	99	99	99	98	95	96	96	88
25	Q	94	94	96	97	91	85	82	79	72	70	69	69	79	79	89	94	94	98	102	100	99	96	95	95	88
26		95	96	96	97	95	90	81	75	71	71	75	83	94	101	117	129	132	104	125	110	106	101	108	107	98
27		89	101	102	97	85	80	78	65	52	50	54	62	76	73	86	99	95	96	96	96	95	92	91	90	83
28		91	93	89	94	93	94	87	73	63	54	53	65	76	84	90	97	100	99	99	103	102	103	102	102	88
29	D	110	108	109	100	81	113	108	88	84	74	55	71	77	86	100	106	119	105	108	109	103	86	106	94	96
30		75	89	90	70	77	61	63	56	54	63	61	66	76	88	94	104	91	100	95	97	94	92	91	94	81
31		92	93	91	87	83	80	74	66	57	59	69	81	82	94	113	95	93	96	97	101	98	97	97	93	87
All		89	91	93	91	87	82	76	71	66	62	63	68	77	88	95	99	98	99	103	101	98	96	94	93	87
Quiet		92	93	93	94	91	85	78	74	68	64	63	70	79	86	93	94	97	98	101	101	99	97	97	97	88
Dist.		94	93	100	96	91	90	84	78	73	58	55	63	75	95	102	106	98	99	109	97	93	92	88	89	88

July 2007 East component Y in nT (Y = 1700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		54	58	60	64	66	66	69	69	62	50	34	23	18	24	31	39	46	47	45	44	47	49	49	56	49
2		57	58	59	60	64	69	73	65	50	41	34	30	30	30	30	35	39	43	42	44	46	46	46	48	47
3		50	55	64	69	76	79	75	66	58	44	29	19	6	1	1	16	27	35	38	35	38	37	66	79	44
4	D	62	71	74	71	82	82	65	68	61	45	35	27	19	15	40	45	36	52	52	46	47	45	50	52	52
5		57	61	62	71	69	73	75	71	60	49	35	25	24	29	34	36	37	41	42	46	48	44	46	46	49
6		56	62	67	70	67	67	68	63	49	37	22	13	12	17	29	39	43	52	48	46	47	54	55	55	47
7		57	56	56	69	78	79	78	69	59	51	38	30	26	24	29	34	38	41	43	43	44	66	55	58	51
8		70	61	69	66	59	63	67	71	66	53	36	22	21	22	28	38	43	47	47	46	47	48	48	50	50
9	Q	54	56	63	72	79	77	74	67	57	46	35	29	24	27	36	39	42	44	45	46	46	47	50	52	50
10		53	55	59	62	67	62	61	63	58	47	31	22	25	28	31	36	38	37	29	29	32	35	51	75	45
11	D	112	136	115	71	77	61	38	60	52	48	40	29	31	25	34	49	66	45	42	46	52	51	51	52	58
12		58	67	64	66	67	68	74	70	67	62	49	36	34	34	39	45	48	48	48	62	53	48	51	54	55
13		57	60	63	63	67	70	69	63	53	46	38	37	38	41	43	41	43	43	45	45	44	45	48	50	50
14	D	50	51	60	62	69	67	67	64	51	38	28	20	10	13	7	36	45	50	74	76	72	56	63	59	49
15		70	81	83	68	69	66	71	66	68	62	46	34	35	36	40	49	53	54	56	58	50	50	51	51	57
16		46	55	64	68	70	72	74	68	61	52	40	31	29	32	34	42	47	46	45	48	55	51	49	52	51
17		54	54	55	63	69	75	74	69	58	50	40	31	30	31	34	36	41	45	46	47	51	52	53	54	51
18	Q	58	60	60	65	70	69	63	63	62	53	37	26	24	26	31	36	39	41	44	44	46	48	51	54	49
19	Q	57	59	60	62	66	72	76	74	70	60	49	40	36	34	35	37	43	47	47	49	50	51	51	53	53
20	D	55	57	60	63	66	65	65	71	69	46	15	-9	-11	9	17	32	52	51	47	46	49	54	73	64	46
21		69	71	79	48	43	66	78	63	59	57	52	37	40	39	37	43	48	51	46	47	75	58	58	57	55
22		60	62	66	70	76	73	72	65	55	46	38	34	33	37	42	46	46	46	46	47	48	49	50	52	52
23		54	57	63	68	76	81	81	74	61	50	39	29	29	33	40	45	50	50	53	48	49	47	49	55	53
24	Q	58	59	61	64	70	71	72	70	64	55	40	33	32	35	37	45	49	47	43	43	45	48	51	50	52
25	Q	57	61	64	67	70	73	74	69	57	43	29	27	26	31	39	43	45	43	44	45	46	47	51	56	50
26		60	63	66	69	69	68	66	60	50	36	29	27	25	23	16	16	14	37	32	59	45	44	50	58	45
27		30	49	63	69	67	52	65	62	57	44	32	22	22	31	46	47	49	49	50	49	49	52	54	57	49
28		60	60	61	66	70	73	75	76	70	60	48	37	35	38	45	48	50	47	43	42	44	45	51	48	54
29	D	56	81	72	77	72	55	61	69	64	48	34	21	13	22	30	37	32	38	36	52	65	44	42	72	50
30		71	71	74	61	69	66	59	68	57	46	36	25	24	30	37	51	52	43	43	44	46	49	51	54	51
31		62	65	66	68	70	70	70	66	62	48	37	30	31	37	50	50	52	50	45	46	46	49	51	52	53
All		59	64	66	66	69	69	69	67	59	49	36	27	25	27	33	40	44	45	45	47	49	49	52	56	51
Quiet		57	59	61	66	71	72	72	69	62	51	38	31	28	30	36	40	44	44	45	45	46	48	51	53	51
Dist.		67	79	76	69	73	66	59	66	59	45	30	17	12	17	25	40	46	47	50	53	57	50	56	60	51

July 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		75	75	74	72	71	71	68	65	60	65	69	73	77	74	77	80	78	77	75	75	75	74	71	73	73
2		75	76	74	74	75	75	74	72	68	67	66	66	72	75	79	80	79	77	74	73	73	73	72	72	73
3	_	73	74	74	73	73	71	67	61	61	61	55	58	62	69	76	89	102	101	93	81	77	73	56	58	72
4	D	66	62	70	69	67	67	68	74	75	72	81	73	79	90	104	104	103	105	83	81	80	80	80	79	80
5		78	78	75	75	72	70	68	73	77	71	70	69	76	79	80	82	78	76	76	77	73	73	73	62	74
6		66	73	75	72	71	70	72	73	74	73	72	75	77	82	91	89	85	86	81	80	69	67	69	72	76
7		70	68	61	59	63	65	65	60	61	62	64	69	74	75	74	76	79	80	79	77	75	67	67	61	69
8		62	64	65	65	69	72	74	75	70	67	64	66	73	76	77	78	81	84	82	80	77	75	74	75	73
9	Q	76	76	76	75	72	67	63	63	62	63	62	62	63	63	65	69	72	75	76	75	74	73	73	73	70
10		74	74	74	75	74	72	70	68	62	56	61	68	70	72	73	73	75	74	71	71	69	67	53	33	68
11	D	11	-4	53	74	81	70	62	62	74	78	82	95	93	86	85	98	108	93	85	84	82	81	79	75	74
12		70	72	75	77	73	73	72	77	73	70	69	73	81	82	87	89	89	88	87	88	80	76	76	76	78
13		78	80	81	80	80	79	77	77	71	71	74	76	78	79	82	78	78	79	78	78	76	75	75	75	77
14	D	75	75	78	78	76	73	70	68	63	61	62	74	100	130	156	165	162	127	44	42	71	68	66	51	85
15		-28	10	-4	43	61	65	74	71	78	78	78	84	88	88	93	90	89	87	84	77	75	78	78	75	67
16		69	73	78	79	78	76	77	75	75	74	75	78	80	83	82	85	86	84	83	83	80	79	79	79	79
17		79	78	73	78	79	80	81	78	80	70	60	67	76	80	83	84	83	82	80	81	79	78	77	77	78
18	Q	77	79	78	78	76	75	73	73	73	70	68	68	71	72	73	73	77	79	80	79	78	77	77	77	75
19	Q	77	78	78	78	77	78	78	74	69	70	64	64	69	77	79	78	79	79	78	78	77	77	76	76	75
20	D	76	77	77	77	73	70	67	67	65	65	62	70	82	103	96	102	110	99	89	83	81	63	24	29	75
21		61	73	69	41	36	52	64	64	65	68	68	67	76	84	89	88	86	83	81	82	70	74	75	71	70
22		75	80	80	81	78	72	73	70	68	67	67	71	78	82	82	81	81	80	78	77	77	77	78	78	76
23		79	80	82	83	83	82	80	78	76	72	69	72	78	79	80	80	80	81	81	78	77	75	72	76	78
24	Q	77	78	79	79	76	77	75	71	65	63	62	63	67	73	78	77	76	78	75	75	75	76	76	75	74
25	Q	75	77	78	79	77	73	69	71	73	71	70	71	75	79	79	81	80	78	78	78	77	76	76	77	76
26		77	77	76	76	72	69	71	68	66	67	65	64	64	62	62	62	70	88	80	82	73	71	65	59	70
27		51	42	56	69	71	73	74	67	60	64	70	80	88	97	102	97	86	79	78	77	76	76	77	77	74
28		78	78	77	75	73	73	74	71	72	73	70	72	78	83	84	83	80	79	77	76	76	75	74	68	76
29	D	50	59	71	71	67	58	57	59	58	61	68	74	80	88	82	81	79	79	78	76	72	65	42	54	68
30		42	42	53	45	58	60	68	69	73	69	68	74	78	81	82	91	86	83	81	80	78	79	77	74	70
31		75	77	78	80	77	77	82	86	86	83	79	78	85	91	94	89	83	78	77	77	77	77	74	70	80
All		66	68	70	72	72	71	71	70	69	68	68	71	77	82	85	86	86	84	79	77	76	74	70	69	74
Quiet		77	77	78	78	75	74	72	70	68	67	65	65	69	73	75	76	77	78	77	77	76	76	76	75	74
Dist.		55	54	70	74	73	67	65	66	67	67	71	77	87	99	104	110	112	100	76	73	77	71	58	57	76

Nurmijärvi Finland ${\rm August~2007~North~component~X~in~nT~(X=14800~nT+tabular~values)}$

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	D	94	90	88	91	90	70	61	77	67	68	70	65	87	106	88	105	106	104	104	113	94	86	94	87	88
2		90	87	88	87	81	77	75	71	64	60	64	69	76	84	82	86	93	102	104	98	97	94	93	95	84
3		92	91	89	88	88	84	84	80	65	57	56	62	68	84	87	101	98	94	94	94	92	92	95	89	84
4	Q	89	90	91	90	89	84	79	75	69	64	60	68	77	86	94	101	101	97	92	92	92	93	93	89	86
5	Q	90	92	93	95	93	94	90	82	73	66	66	74	85	92	98	104	104	101	102	104	101	97	93	96	91
6	D	91	90	96	95	91	89	89	91	81	68	72	74	90	100	103	107	106	91	102	112	109	120	81	89	93
7	D	97	88	51	105	99	85	58	43	46	53	65	69	74	97	93	83	95	115	95	100	116	93	91	79	83
8		89	86	91	82	65	64	75	70	66	67	71	75	79	88	98	97	92	88	92	90	91	89	88	85	82
9		84	81	87	87	83	78	73	73	67	64	73	77	79	84	95	95	92	97	100	98	98	98	97	93	86
10	D	95	95	95	92	87	83	82	82	81	78	87	84	73	124	134	96	92	127	108	86	89	88	98	86	93
11		79	68	84	89	83	78	72	73	67	72	75	78	85	95	100	104	106	92	83	104	84	82	88	90	85
12		89	89	90	93	90	88	81	72	66	62	61	71	81	87	95	95	94	88	91	90	89	88	89	90	85
13	Q	87	86	84	84	86	87	82	76	68	62	63	71	82	85	86	89	91	95	93	93	95	92	90	90	84
14		89	88	92	92	89	86	80	73	64	56	58	66	77	86	93	95	93	99	103	100	101	99	104	106	87
15		103	109	98	89	82	89	84	76	74	70	67	70	88	84	86	94	102	93	100	104	98	99	97	92	90
16		93	88	85	85	90	89	80	75	62	55	56	72	87	93	102	98	94	97	96	91	89	88	91	90	85
17		90	91	92	91	86	82	79	75	68	64	69	78	90	98	96	93	91	93	97	97	97	97	94	94	88
18		99	94	92	94	92	83	74	68	65	64	68	73	85	95	95	93	92	93	97	99	97	94	95	95	87
19		96	95	94	93	89	86	86	84	78	78	81	82	94	92	107	98	94	91	95	93	93	93	93	94	91
20		91	89	91	91	87	84	80	71	63	61	64	74	80	84	89	93	93	94	98	100	102	103	99	95	86
21		95	104	100	99	98	96	93	91	83	79	73	81	82	88	91	101	98	98	99	99	99	97	96	97	93
22		96	97	97	96	96	97	97	91	79	67	64	72	75	88	94	92	89	95	94	95	96	97	97	96	90
23	Q	96	95	93	91	91	88	85	79	71	62	63	73	81	81	91	87	92	94	97	98	99	99	97	96	88
24	Q	97	96	94	90	88	85	80	74	73	80	86	93	89	91	91	91	94	96	99	100	101	102	101	99	91
25		99	100	97	97	94	88	87	88	84	85	90	83	92	82	89	101	109	99	102	106	90	89	91	91	93
26		91	90	86	86	85	76	70	61	59	67	78	88	89	120	121	104	108	109	82	98	99	101	101	102	90
27	D	99	101	95	87	81	76	54	48	63	65	78	81	87	93	88	86	91	92	98	101	92	69	79	75	83
28		87	83	82	91	87	83	75	59	52	38	53	65	83	95	84	86	85	89	92	90	92	93	85	85	80
29		84	85	85	85	80	73	66	59	58	64	71	77	83	89	87	92	90	93	92	102	92	96	91	90	83
30		89	83	79	79	83	80	72	63	64	71	81	90	91	92	90	91	91	90	94	98	96	91	94	90	85
31		90	92	88	87	82	80	74	68	60	62	62	81	88	92	94	102	96	96	96	99	96	90	86	79	85
All		92	91	89	90	87	83	78	73	68	65	69	75	83	92	95	95	96	97	96	98	96	94	93	91	87
Quiet		92	92	91	90	89	88	83	77	71	67	68	76	83	87	92	94	96	97	96	98	98	97	95	94	88
Dist.		95	93	85	94	90	80	69	68	68	66	74	75	82	104	101	96	98	106	101	102	100	91	89	83	88

August 2007 East component Y in nT (Y = 1700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	D	53	82	73	74	81	73	60	60	51	46	27	28	19	13	26	39	51	47	55	71	55	58	43	45	51
2		59	62	63	67	74	81	86	80	71	57	41	31	28	26	36	45	50	55	48	53	49	51	54	56	55
3		56	52	59	68	72	73	67	65	60	54	46	33	22	22	31	40	41	45	47	49	51	54	61	59	51
4	Q	60	57	59	64	67	73	76	73	67	56	41	29	25	25	31	39	48	51	53	52	52	54	58	57	53
5	Q	56	56	60	66	70	77	81	76	67	58	45	30	22	27	36	42	45	46	48	51	48	49	52	50	52
6	D	54	59	62	70	75	77	75	66	54	44	37	29	19	22	31	35	30	59	51	38	48	157	107	80	58
7	D	69	53	37	57	59	70	71	71	57	53	46	40	32	38	38	37	51	87	53	54	50	49	69	49	54
8		58	57	65	66	60	55	58	64	61	55	47	43	39	38	43	52	54	53	52	55	53	51	53	55	54
9		55	55	64	69	72	75	74	71	60	50	41	33	34	41	45	45	46	44	43	45	47	52	52	56	53
10	D	60	61	63	67	67	64	66	67	60	46	34	26	23	15	12	14	56	115	80	56	54	59	67	82	55
11		85	79	82	74	67	64	67	70	68	59	44	34	34	52	43	43	59	61	69	72	58	54	50	54	60
12		55	70	79	79	77	73	71	68	66	54	42	34	33	33	43	50	53	56	61	56	56	52	54	56	57
13	Q	58	61	63	68	74	76	76	72	65	54	41	30	27	30	39	48	56	58	57	54	52	53	55	53	55
14		51	49	58	66	72	76	75	68	57	43	26	16	14	23	37	45	52	55	56	57	53	56	55	52	51
15		52	42	60	67	75	62	76	77	67	51	36	22	14	21	30	39	42	52	49	48	50	46	51	56	49
16		59	60	62	66	71	74	71	67	59	45	30	21	15	21	30	43	51	53	53	55	53	57	55	53	51
17		49	47	64	72	78	77	76	73	62	44	29	18	21	32	45	53	55	53	49	56	49	55	53	54	53
18		53	62	64	69	79	83	80	73	62	47	32	24	28	38	44	49	52	49	46	48	51	52	55	59	54
19		59	60	63	65	66	66	63	59	56	47	36	29	21	26	31	39	49	53	55	52	52	54	55	57	51
20		60	60	61	68	73	74	72	64	56	45	37	30	31	40	46	50	51	48	47	48	48	54	59	61	53
21		57	59	69	67	71	73	71	69	61	48	36	25	23	23	35	43	49	46	47	48	51	54	58	58	52
22		60	60	61	66	71	76	76	74	70	59	45	25	28	36	47	51	53	54	56	54	53	54	56	56	56
23	Q	58	61	64	70	71	75	77	74	67	55	39	31	29	34	42	48	51	51	51	56	54	56	57	58	55
24	Q	57	59	63	64	65	70	71	68	56	41	29	28	33	42	48	53	52	48	49	51	52	52	53	53	52
25		55	48	61	73	76	74	69	59	51	48	30	23	15	11	32	43	46	48	44	72	70	66	60	58	51
26		60	56	66	69	73	74	71	65	57	42	25	13	17	18	26	36	35	48	68	42	45	52	84	64	50
27	D	70	63	73	79	72	72	68	43	43	33	22	21	30	38	50	54	53	52	52	75	89	62	49	48	55
28		58	82	89	84	82	78	73	67	56	50	33	22	28	50	49	54	58	57	57	66	56	64	58	54	59
29		59	62	66	69	74	75	75	70	59	44	33	30	30	35	40	48	54	53	57	65	66	68	58	58	56
30		65	67	64	69	72	77	74	70	56	42	33	32	33	40	50	55	56	53	52	57	59	60	58	57	56
31		57	57	64	71	69	68	61	53	43	29	25	18	18	26	35	42	45	56	51	49	50	62	73	75	50
All		59	60	64	69	72	73	72	68	59	48	36	27	25	30	38	44	50	55	53	55	54	59	59	58	54
Quiet		58	59	62	66	70	74	76	73	64	53	39	30	27	32	39	46	50	51	51	53	52	53	55	54	54
Dist.		61	64	62	69	71	71	68	61	53	44	33	29	24	25	31	36	48	72	58	59	59	77	67	61	54

August 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1	D	40	25	52	67	71	67	69	71	71	72	72	76	72	88	89	94	100	94	91	76	66	64	49	52	70
2		70	73	75	80	80	81	82	79	73	68	69	75	83	91	97	102	98	92	86	83	79	78	79	78	81
3		78	77	78	79	77	77	75	75	71	69	68	71	76	79	82	85	80	78	77	77	78	78	74	73	76
4	Q	76	78	79	80	80	80	77	76	76	75	73	73	76	75	77	81	84	81	79	78	78	78	75	76	77
5	Q	77	78	79	79	77	75	76	77	73	68	65	63	68	74	77	76	76	75	76	77	76	76	76	73	75
6	D	71	74	77	78	75	73	72	71	71	71	66	68	75	81	86	93	96	107	92	86	82	42	-18	42	72
7	D	48	51	8	28	43	59	66	79	84	85	83	85	94	109	98	93	105	97	83	79	48	37	36	49	69
8		61	75	79	79	76	79	78	81	83	82	80	74	72	79	85	86	88	86	84	83	81	77	75	73	79
9		72	73	78	79	78	76	73	73	72	68	70	70	72	77	81	81	82	81	82	81	79	78	74	77	76
10	D	79	79	79	78	77	76	75	73	72	70	66	69	71	91	111	145	135	110	64	77	81	77	65	56	82
11		47	42	54	70	81	82	84	84	79	75	73	75	85	101	101	102	107	103	100	70	76	74	72	62	79
12		72	76	74	74	73	73	76	77	79	77	81	85	87	85	85	85	84	84	85	84	81	80	80	81	80
13	Q	81	82	82	83	80	78	78	76	75	74	72	69	72	78	81	83	84	83	81	80	79	79	79	79	79
14		79	77	80	81	80	81	78	77	76	70	62	57	66	76	85	88	84	83	81	79	79	78	76	73	77
15		71	51	56	64	71	71	74	66	65	65	68	74	85	90	85	84	85	90	85	82	75	72	70	70	74
16		67	63	63	71	78	78	75	75	71	73	70	66	69	73	81	82	80	81	83	85	84	82	79	79	75
17		74	72	76	79	79	81	79	76	75	72	70	72	78	81	84	84	81	79	79	81	78	76	77	77	78
18		69	70	78	80	79	81	82	77	71	69	70	69	71	74	75	76	76	75	75	77	77	78	78	78	75
19		78	78	79	80	80	81	79	78	75	72	65	66	74	79	87	89	88	84	80	78	78	78	78	77	78
20		76	78	80	81	79	74	74	74	71	68	63	63	67	73	77	78	77	76	76	77	76	77	76	75	74
21		74	69	70	75	75	73	72	69	66	64	62	64	69	75	78	80	83	81	80	79	79	79	78	78	74
22		78	78	79	81	81	80	78	74	72	67	66	67	73	84	95	98	92	86	85	82	81	79	78	78	80
23	Q	78	78	80	80	79	79	79	77	75	75	73	70	77	82	83	82	79	79	80	79	78	78	77	77	78
24	Q	77	77	78	79	80	81	80	76	72	67	66	72	80	83	83	81	77	75	76	77	77	77	76	76	77
25		76	67	70	74	74	73	71	69	68	66	66	69	81	89	91	89	86	84	83	83	75	77	79	77	77
26		77	75	74	72	72	74	76	74	72	70	68	67	71	79	84	94	95	102	83	82	78	76	81	78	78
27	D	77	73	68	73	80	84	80	75	72	65	62	69	78	84	84	84	80	79	80	77	46	61	54	30	71
28		23	36	66	73	73	76	77	76	76	82	93	89	97	103	93	87	83	81	83	85	79	77	74	73	77
29		67	77	82	84	83	84	84	81	78	74	72	74	78	85	84	84	83	82	83	81	75	76	73	72	79
30		75	77	79	79	77	74	72	74	72	70	70	73	77	81	82	83	81	80	80	80	76	76	76	76	77
31		77	79	79	80	80	79	76	69	66	67	69	76	83	88	87	88	84	83	81	82	81	83	71	67	78
All		70	69	72	75	76	77	76	75	73	71	70	71	77	83	86	88	87	85	82	80	76	74	70	70	77
Quiet		78	79	80	80	79	79	78	76	74	72	70	69	74	78	80	80	80	79	78	78	78	77	77	76	77
Dist.		63	60	57	65	69	72	72	74	74	72	70	73	78	91	93	102	103	97	82	79	64	56	37	46	73

Nurmijärvi Finland September 2007 North component X in n
T $({\rm X}=14800~{\rm nT+tabular~values})$

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		81	88	90	91	92	88	78	70	55	57	70	69	78	94	103	102	100	90	101	114	112	91	93	102	88
2	D	88	102	89	52	79	90	83	62	40	36	31	52	70	80	86	89	92	80	94	95	83	88	93	89	77
3		90	82	81	72	83	73	69	67	61	63	69	68	66	75	88	107	89	83	88	88	89	95	99	81	80
4		79	79	79	85	85	82	78	68	55	51	59	72	84	85	88	85	86	89	89	90	92	88	93	93	81
5		83	90	82	83	74	62	62	57	47	62	69	72	72	78	82	88	93	92	90	98	84	87	93	89	79
6		88	88	73	90	86	85	81	74	67	65	62	60	86	93	90	93	90	81	73	79	82	75	96	86	81
7		60	53	64	77	82	77	70	63	61	60	64	75	77	79	90	84	85	101	84	87	86	91	88	89	77
8		87	83	85	85	81	78	70	72	71	66	64	77	83	91	93	93	79	81	86	86	82	86	85	83	81
9	Q	85	85	84	83	83	80	74	68	65	65	74	79	86	85	83	89	88	92	95	95	95	95	92	91	84
10	Q	90	89	87	85	85	85	77	69	67	68	72	77	83	84	85	80	84	89	90	90	91	92	93	93	83
11	Q	93	92	90	88	86	87	85	80	73	68	72	76	80	81	87	89	86	89	89	91	90	89	93	89	85
12	Q	90	88	88	92	90	86	83	73	66	62	65	72	79	87	91	92	90	92	93	94	94	94	94	93	85
13	Q	92	90	91	92	93	92	87	79	68	62	67	76	88	92	92	91	91	93	95	99	101	101	100	98	89
14		98	94	94	94	93	93	86	77	67	66	68	77	80	88	92	92	96	106	111	108	106	100	95	95	91
15		97	94	96	95	94	90	83	78	72	71	75	79	84	85	88	88	90	91	95	97	98	93	102	93	89
16		90	91	89	89	87	86	79	72	71	70	77	85	90	93	90	89	90	95	91	93	93	93	93	92	87
17		91	90	88	86	86	85	81	75	72	73	76	76	83	88	92	91	93	94	96	96	97	99	102	106	88
18		104	96	88	94	94	90	84	79	76	76	83	85	90	88	87	87	89	92	94	94	94	93	93	93	89
19		92	90	91	89	90	85	85	80	76	76	79	84	88	90	89	92	93	95	97	95	94	93	93	93	89
20		92	92	92	92	92	98	99	94	89	85	90	88	90	97	97	102	83	89	96	74	66	79	76	82	89
21		82	92	86	81	82	82	86	86	77	77	74	77	84	92	80	91	94	99	98	93	90	116	100	84	88
22		85	90	93	94	88	85	80	74	73	72	69	72	72	84	83	79	74	82	89	94	94	75	85	90	82
23	D	81	80	90	88	88	50	74	74	62	62	64	67	71	81	82	86	90	90	91	88	98	86	85	92	80
24		76	83	87	82	78	79	85	76	64	58	60	70	66	84	77	85	98	98	87	87	86	93	92	87	81
25		80	84	87	88	87	85	80	72	64	62	67	76	84	91	89	87	87	86	86	96	94	88	85	84	83
26		82	79	84	89	87	86	82	75	70	67	68	76	82	86	85	86	88	89	88	89	91	91	88	88	83
27	D	88	86	89	91	92	91	86	81	76	69	67	72	87	95	99	105	71	65	80	90	109	76	74	80	84
28	D	68	61	88	97	88	86	86	54	35	47	56	66	78	79	84	91	91	91	92	135	81	48	57	76	76
29	D	57	76	64	81	73	56	77	63	43	45	46	64	76	82	74	73	76	77	96	92	85	65	73	59	70
30		70	82	87	85	84	71	76	62	56	66	68	73	79	79	82	87	86	86	103	91	89	88	87	84	80
All		85	86	86	86	86	82	80	72	65	64	67	74	80	86	88	90	88	89	92	94	91	88	90	88	83
Quiet		90	89	88	88	87	86	81	74	68	65	70	76	83	86	88	88	88	91	92	94	94	94	94	93	85
Dist.		76	81	84	82	84	74	81	67	51	52	53	64	76	83	85	89	84	81	90	100	91	73	76	79	77

September 2007 East component Y in nT (Y = 1700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		65	60	61	65	68	70	65	55	42	28	17	15	23	30	37	46	49	59	79	75	84	76	65	72	54
2	D	19	64	75	64	46	59	74	69	59	44	33	29	7	9	46	59	68	58	72	94	71	45	48	43	52
3		48	67	61	58	58	62	63	64	58	49	39	34	38	38	44	85	68	53	51	53	56	61	50	62	55
4		61	57	58	66	72	74	74	71	63	52	43	39	43	48	55	60	60	59	62	61	57	58	58	63	59
5		43	73	77	70	63	60	57	53	55	39	39	32	35	43	44	49	53	54	58	70	69	58	59	46	54
6		50	68	61	65	73	70	68	65	59	46	37	35	42	45	53	58	61	76	79	62	62	65	75	77	60
7		79	57	51	60	68	71	69	68	64	52	41	33	32	47	52	54	59	78	58	54	56	54	58	58	57
8		60	59	60	68	67	69	70	66	59	50	45	40	39	42	49	55	69	56	56	73	65	59	59	59	58
9	Q	59	59	61	63	65	67	67	65	58	47	37	33	33	39	49	51	50	50	52	54	55	58	61	58	54
10	Q	62	58	62	65	66	68	71	68	56	45	35	33	36	43	50	54	52	52	58	55	57	56	56	58	55
11	Q	58	61	62	63	65	66	66	63	59	50	39	34	34	39	44	49	51	49	51	52	55	62	58	57	54
12	Q	60	62	65	66	67	65	64	62	56	45	32	28	31	39	48	53	54	54	55	55	55	59	58	60	54
13	Q	60	60	59	61	63	67	67	66	61	51	37	33	34	40	47	51	53	52	52	53	53	55	55	57	54
14		59	59	62	63	65	67	70	67	61	48	36	30	30	34	42	48	48	43	43	46	50	59	65	62	52
15		65	75	73	69	66	67	69	66	59	52	45	43	42	45	47	49	51	49	51	58	58	60	63	66	58
16		64	67	68	69	67	69	71	65	54	41	32	32	38	45	50	52	52	51	56	51	53	55	57	58	55
17		61	63	65	66	69	70	68	64	59	51	40	36	37	40	43	45	48	49	50	52	54	55	57	56	54
18		62	63	51	56	66	69	67	63	58	51	39	40	41	43	46	50	51	53	55	56	57	58	59	59	55
19		60	61	62	65	67	66	61	58	57	50	44	42	38	35	40	44	48	51	53	54	57	58	59	60	54
20		60	60	59	59	61	64	67	67	63	56	46	43	35	29	27	30	35	41	83	107	97	76	72	42	57
21		64	66	70	69	66	66	64	64	61	56	51	44	37	31	33	41	44	39	43	55	54	80	97	86	57
22		73	59	61	66	67	68	68	66	61	54	48	44	45	38	39	39	44	50	55	70	110	80	72	66	60
23	D	59	46	57	62	57	38	33	60	60	57	44	42	43	39	43	49	51	57	52	63	70	74	49	73	53
24		88	58	68	59	58	45	59	63	63	59	50	39	38	35	42	47	66	74	62	62	62	56	59	52	57
25		36	38	68	67	66	69	69	69	62	54	43	35	38	45	51	53	53	64	56	68	72	77	67	64	58
26		62	57	59	63	61	65	68	67	64	55	46	42	44	49	54	56	55	56	57	58	63	60	62	61	58
27	D	61	60	60	59	61	66	69	66	61	55	46	42	34	36	42	51	101	79	46	61	124	86	67	62	62
28	D	28	54	53	52	64	75	73	69	65	56	48	48	46	47	49	52	56	59	48	83	122	88	38	100	61
29	D	46	85	75	59	66	43	63	58	71	57	54	60	50	75	50	85	84	70	70	63	73	109	97	60	68
30		55	55	74	74	71	67	60	66	64	51	52	49	51	57	61	61	70	65	74	64	81	65	66	59	63
L																										
All		57	61	63	64	65	65	66	64	60	50	41	38	37	41	46	53	57	57	58	63	68	65	62	62	57
Quiet		60	60	62	64	65	67	67	65	58	48	36	32	34	40	47	52	52	51	54	54	55	58	58	58	54
Dist.		42	62	64	59	59	56	62	64	63	54	45	44	36	41	46	59	72	64	57	73	92	80	60	68	59

September 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
l	_	74	81	83	83	82	81	77	72	71	74	76	85	88	82	84	86	88	92	85	71	52	40	42	21	74
2	D	30	15	43	33	42	57	67	68	75	81	93	111	105	120	118	111	106	98	80	48	61	63	65	59	73
3		64	75	80	78	78	79	84	83	78	76	80	86	98	98	97	112	102	94	89	87	87	74	49	52	83
4		71	79	83	84	85	85	82	82	83	83	84	84	88	87	87	85	84	84	84	84	80	82	82	75	83
5		66	58	66	74	74	79	81	81	80	76	78	89	99	102	99	94	90	90	89	71	72	80	77	64	80
6		72	74	73	74	74	75	76	75	75	75	79	81	83	87	90	101	116	120	105	94	89	76	25	4	79
7		28	14	36	56	71	81	81	82	78	77	76	81	85	91	93	92	92	91	80	85	84	81	83	84	75
8		83	81	80	81	83	82	81	83	83	80	81	83	84	85	86	89	95	91	89	89	79	80	79	81	84
9	Q	84	84	85	85	85	86	85	82	78	74	74	77	82	86	86	86	84	83	83	83	83	83	82	80	83
10	Q	81	82	82	82	81	80	78	77	75	75	77	80	84	88	89	87	86	85	85	85	85	83	83	82	82
11	Q	81	81	82	82	83	82	82	80	78	77	76	77	82	86	87	86	87	86	86	86	83	80	80	81	82
12	Q	80	81	80	79	79	80	78	77	76	75	77	81	85	88	87	85	82	82	82	82	82	82	80	81	81
13	Q	81	82	82	82	82	81	79	77	74	74	75	76	75	77	79	79	79	81	81	81	80	80	79	77	79
14		74	78	80	80	81	80	80	79	78	74	70	69	73	78	82	81	78	77	78	79	80	78	76	79	78
15		79	79	80	79	80	82	82	80	78	77	74	75	76	79	80	79	79	80	81	83	82	80	74	75	79
16		77	76	78	80	82	84	82	78	76	73	76	79	81	80	79	79	79	80	82	81	81	81	81	81	79
17		80	81	81	81	82	82	81	79	79	76	74	75	76	80	81	80	80	79	80	80	81	80	78	73	79
18		66	71	70	69	73	75	76	77	78	76	74	73	73	79	79	80	81	81	81	81	81	81	80	80	76
19		80	79	78	79	81	82	79	75	74	73	75	77	76	77	78	79	79	79	79	80	80	80	80	80	78
20		79	79	79	80	81	81	78	76	75	72	72	74	74	76	77	89	96	95	114	81	69	87	82	42	79
21		42	56	64	74	80	83	84	81	78	73	72	74	78	84	85	86	84	84	91	93	90	74	53	71	76
22		72	71	71	75	77	79	80	82	82	80	76	71	74	87	90	98	97	93	89	89	60	68	76	78	80
23	D	74	78	78	80	77	73	72	77	83	80	81	85	85	86	89	89	88	87	85	86	77	64	22	45	77
24		51	70	68	77	69	75	75	78	79	79	77	79	86	96	92	94	93	83	81	85	84	74	74	71	79
25		54	59	70	77	80	82	82	81	80	80	79	80	81	83	84	84	85	87	84	85	65	69	77	77	78
26		77	77	80	81	82	84	85	84	83	80	77	78	78	82	82	82	82	83	83	83	82	81	82	82	81
27	D	82	81	81	82	83	84	83	78	78	77	74	73	74	77	78	84	116	125	95	91	60	55	69	58	81
28	D	23	17	26	50	65	78	79	76	86	83	79	82	83	85	86	87	88	88	89	62	50	42	-53	12	61
29	D	20	22	24	42	46	61	77	74	91	96	96	98	101	116	109	117	108	102	86	44	42	42	38	16	70
30		16	54	65	74	76	78	85	86	93	91	91	87	86	89	91	91	93	90	81	67	69	72	79	79	78
All		65	67	71	74	76	79	80	79	79	78	78	81	83	87	87	89	90	89	86	80	75	73	66	65	78
Quiet		81	82	82	82	82	82	81	79	76	75	76	78	82	85	85	85	83	83	83	83	83	82	81	80	81
Dist.		46	43	50	57	63	70	75	74	83	83	84	90	89	97	96	98	101	100	87	66	58	53	28	38	72

Nurmijärvi Finland ${\it October~2007~North~component~X~in~nT~(X=14800~nT~+~tabular~values)}$

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		85	85	76	86	90	89	78	68	60	56	57	61	68	77	82	80	81	81	83	86	93	95	90	85	79
2		83	79	76	85	84	84	76	70	63	59	61	67	73	77	75	79	82	84	87	92	87	88	84	90	78
3	D	85	84	87	79	91	81	71	54	51	58	65	67	80	83	70	75	78	82	91	87	92	93	98	73	78
4		68	71	50	71	69	85	85	76	60	58	66	73	79	79	75	78	78	87	99	86	84	86	87	86	77
5		84	83	84	82	90	81	70	65	60	65	67	72	78	69	73	76	79	79	84	93	86	87	87	87	78
6		88	87	84	86	89	89	79	69	62	60	66	70	74	70	70	73	79	87	88	89	88	88	92	88	80
7		85	85	88	89	88	86	77	67	60	55	59	67	74	77	81	83	86	85	85	86	87	88	89	88	80
8	Q	87	87	87	89	91	90	83	73	64	57	58	66	76	84	88	89	90	92	93	91	89	91	92	89	83
9	Q	87	88	90	93	94	93	84	67	55	52	56	65	74	80	86	88	89	89	90	93	93	93	93	92	83
10	Q	91	91	92	92	94	97	95	85	74	64	63	65	71	75	81	84	87	88	90	89	90	90	90	91	85
11	Q	91	92	93	94	96	97	95	86	75	67	65	70	79	87	91	92	93	94	95	94	95	91	93	96	88
12		95	95	95	97	99	100	98	90	73	69	69	78	81	87	91	92	91	96	97	89	82	84	84	87	88
13		86	88	90	91	94	93	89	81	75	70	68	72	81	86	90	91	93	95	96	95	95	93	96	96	88
14		90	85	88	88	89	95	85	77	75	62	64	69	75	76	81	82	85	90	92	92	93	92	90	89	83
15		87	81	88	90	91	91	88	80	73	71	75	80	86	91	91	89	91	91	92	91	92	91	90	89	87
16		89	89	89	90	91	91	88	81	72	66	68	77	83	89	85	74	68	77	84	90	91	92	91	90	84
17	Q	88	87	88	89	89	90	89	81	71	67	71	78	85	90	90	89	91	93	93	93	93	92	92	92	87
18		93	93	92	88	86	93	97	92	73	76	81	66	80	83	85	91	92	94	82	85	79	69	89	84	85
19	D	72	86	82	89	88	91	84	71	63	69	73	81	81	65	56	69	67	67	68	67	78	81	84	84	76
20		79	73	95	76	75	85	71	68	60	54	60	67	80	85	83	84	80	74	83	82	83	86	85	83	77
21		82	83	82	84	86	87	83	77	70	69	73	77	80	85	84	83	84	85	85	87	88	90	86	82	82
22		83	83	86	86	88	87	85	78	73	75	78	84	92	95	92	91	90	80	84	76	87	73	75	74	83
23		76	88	87	80	88	91	81	76	73	70	74	77	78	83	86	87	90	82	80	90	89	86	84	85	82
24		84	83	86	89	91	90	87	79	70	67	69	75	78	85	86	87	84	83	87	90	90	90	88	91	84
25	D	88	85	88	92	94	98	96	88	80	74	72	84	91	83	65	68	71	69	38	54	20	50	70	60	74
26	D	57	65	67	64	73	80	83	77	71	70	69	63	44	53	62	79	75	101	102	61	76	81	81	81	72
27	D	70	76	70	71	84	89	84	79	69	46	38	57	69	71	70	77	92	64	66	72	81	85	81	83	73
28		73	76	79	82	82	85	80	73	68	66	65	63	79	84	79	82	97	71	68	70	79	81	80	79	77
29		78	78	84	84	87	88	82	76	69	62	60	66	74	72	71	66	62	65	61	54	62	83	80	81	73
30		76	72	59	82	82	79	76	71	72	65	58	64	69	74	78	75	78	76	78	85	78	79	82	78	74
31		80	82	84	84	88	89	88	78	72	72	72	73	75	75	77	82	81	83	96	82	83	84	80	78	81
All		83	83	83	85	88	89	84	76	68	64	66	71	77	80	80	82	83	83	84	84	84	85	87	85	81
Quiet		89	89	90	91	93	93	89	78	68	61	63	69	77	83	87	88	90	91	92	92	92	91	92	92	85
Dist.		74	79	79	79	86	88	84	74	67	63	63	70	73	71	64	74	77	77	73	68	70	78	83	76	75

October 2007 East component Y in nT (Y = 1700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		53	57	52	48	57	64	70	66	64	56	47	48	41	46	50	56	73	63	62	60	65	60	59	57	57
2		63	62	56	60	60	66	68	65	65	56	47	42	41	45	50	55	58	57	59	68	64	65	65	59	58
3	D	70	66	66	56	53	63	47	49	48	50	37	38	36	38	88	50	54	71	72	68	57	61	65	70	57
4		56	56	49	61	56	63	68	66	64	53	47	41	54	49	55	91	59	62	61	68	63	61	61	60	59
5		61	60	60	56	55	56	60	63	67	58	51	50	45	52	56	59	57	62	63	65	71	64	61	61	59
6		60	61	62	59	60	64	70	68	65	52	40	34	40	47	51	57	57	58	59	59	60	60	58	64	57
7		62	59	60	59	61	66	72	73	64	56	42	37	36	44	52	53	56	58	59	61	60	59	59	59	57
8	Q	60	60	60	60	63	68	74	76	70	61	50	42	39	43	52	56	56	56	57	58	60	61	67	65	59
9	Q	59	61	62	64	64	67	73	75	70	57	45	35	34	42	51	55	55	56	56	60	58	58	58	58	57
10	Q	58	58	58	60	62	65	72	76	72	62	49	41	40	44	51	55	56	57	58	60	62	59	58	59	58
11	Q	59	59	59	59	61	63	68	74	73	61	48	37	35	41	51	54	54	56	56	60	61	61	61	62	57
12		59	59	60	59	61	61	65	66	63	52	41	30	34	43	50	49	47	50	53	57	71	90	82	61	57
13		60	59	60	60	62	65	69	71	67	55	45	37	37	45	50	51	51	52	55	57	59	59	65	68	57
14		65	61	63	64	64	70	69	64	57	51	37	34	29	38	49	52	54	54	55	58	60	62	66	65	56
15		66	64	56	62	64	65	68	69	64	49	39	37	40	44	49	51	51	52	55	59	60	60	61	61	56
16		60	60	60	60	61	64	68	71	67	54	44	39	38	43	46	46	49	53	59	57	59	60	60	61	56
17	Q	61	60	57	60	62	65	68	71	66	56	45	38	39	46	52	52	54	56	58	58	59	60	61	60	57
18		61	62	62	63	67	56	63	62	62	45	36	31	36	45	52	55	54	52	53	55	83	92	69	77	58
19	D	67	70	59	64	67	68	68	65	61	53	42	36	28	56	55	48	69	98	99	89	85	62	67	63	64
20		59	30	56	45	28	43	55	61	57	51	49	40	47	50	54	55	68	82	80	69	67	59	59	61	55
21		63	62	63	62	62	63	65	68	64	58	52	48	50	55	58	57	59	60	62	87	69	67	66	63	62
22		54	59	59	61	60	63	68	71	65	54	45	44	47	51	55	54	54	61	103	76	81	91	83	70	64
23		43	62	68	60	56	68	71	74	65	53	53	48	47	55	58	57	56	57	57	68	74	70	68	62	60
24		63	61	60	61	62	63	65	66	62	55	47	44	47	53	57	56	60	66	59	59	61	62	61	62	59
25	D	63	60	60	58	58	61	65	66	64	56	46	37	27	24	22	40	109	124	129	115	121	120	96	89	71
26	D	70	63	65	65	64	68	68	70	71	65	55	47	50	53	63	77	58	93	89	83	73	59	63	63	66
27	D	61	61	60	44	55	52	59	61	58	55	47	49	57	49	76	62	90	73	78	72	68	70	59	60	62
28		67	56	56	60	58	58	60	62	63	64	53	58	53	55	69	66	94	86	73	69	69	73	67	65	65
29		60	46	57	61	62	61	62	62	58	52	44	41	43	56	69	70	62	73	106	99	93	88	71	63	65
30		57	50	54	51	60	60	63	70	67	61	58	56	55	57	59	64	90	69	66	72	70	68	64	61	63
31		59	62	60	57	57	59	61	66	57	50	49	50	54	62	63	70	63	64	68	67	72	68	66	63	61
All		61	59	59	59	59	62	66	67	64	55	46	42	42	47	55	57	62	66	68	68	69	68	65	64	60
Quiet		59	59	59	61	62	65	71	75	70	59	48	39	37	43	51	54	55	56	57	59	60	60	61	61	58
Dist.		66	64	62	57	59	62	61	62	60	56	45	41	40	44	61	56	76	92	93	85	81	74	70	69	64

October 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		78	76	77	73	73	79	82	82	81	86	88	95	91	93	93	94	94	90	89	88	85	75	70	75	84
2		76	80	81	81	81	83	84	84	84	84	81	80	85	88	91	90	89	87	87	84	82	78	75	48	82
3	D	46	75	78	79	75	76	78	77	77	76	83	81	85	108	121	98	93	94	87	85	60	39	31	46	77
4		56	40	45	67	77	84	84	82	83	84	86	92	103	100	99	108	95	94	76	78	84	86	85	85	82
5		84	83	81	80	76	76	82	84	83	80	80	82	86	90	94	93	93	92	91	79	77	82	85	84	84
6		82	82	83	84	85	86	88	88	86	81	80	85	92	95	97	96	93	90	88	87	86	85	77	75	86
7		81	83	83	84	86	88	88	87	83	79	78	80	88	93	94	89	88	87	87	87	86	85	84	84	85
8	Q	84	84	84	85	86	88	89	88	85	82	80	80	82	86	87	85	84	85	84	84	85	84	80	79	84
9	Q	81	83	84	83	83	86	88	88	85	81	80	82	86	89	89	87	86	86	86	84	84	84	84	84	85
10	Q	84	84	83	84	84	85	85	86	83	79	79	81	86	89	91	88	88	88	87	87	86	85	85	85	85
11	Q	84	84	84	84	83	84	85	81	77	75	76	80	86	89	87	85	84	84	84	84	83	84	84	80	83
12		81	82	81	81	81	82	84	83	81	78	79	82	83	85	86	85	85	85	85	89	92	88	81	85	83
13		85	85	85	85	85	85	86	84	82	80	80	82	85	88	86	85	85	85	84	85	84	84	82	74	84
14		74	81	83	83	83	83	84	85	83	84	85	87	90	90	90	90	90	88	87	86	86	85	85	85	85
15		83	82	80	81	82	83	85	84	82	80	82	85	87	87	85	85	86	86	86	86	87	86	85	84	84
16		84	83	83	83	83	84	85	85	82	81	80	82	85	88	89	96	104	101	96	90	87	86	85	85	87
17	Q	84	83	82	83	83	84	86	86	82	78	75	77	83	86	85	84	84	84	84	83	83	83	83	82	83
18		81	79	80	79	81	82	83	82	80	77	74	75	81	84	85	84	84	86	93	107	103	108	93	84	85
19	D	78	77	81	84	83	82	82	82	81	78	78	81	91	118	118	110	112	103	95	73	62	38	73	82	85
20		78	52	54	52	60	69	80	85	84	85	89	91	91	91	90	91	100	96	81	81	86	83	85	86	81
21		87	87	87	87	88	88	89	88	86	85	86	87	88	90	88	88	89	89	90	88	85	78	80	82	87
22		81	83	86	85	86	87	88	87	84	83	84	87	90	88	85	85	87	95	95	94	89	78	81	79	86
23		58	74	79	81	80	82	85	87	84	82	83	85	90	92	89	88	88	91	97	92	79	84	85	87	84
24		87	85	86	87	85	87	90	91	90	86	87	89	90	91	89	88	90	93	90	89	87	86	86	83	88
25	D	82	83	84	84	84	84	85	86	85	84	84	89	94	102	112	123	163	160	116	69	48	96	80	77	94
26	D	79	85	87	90	97	95	94	92	92	90	90	96	104	117	121	116	102	90	69	81	83	63	58	67	90
27	D	77	82	81	82	85	85	90	91	91	94	100	103	104	99	106	100	100	92	101	95	90	79	79	70	91
28		75	77	83	84	88	89	92	92	90	86	86	93	92	94	97	94	96	87	94	97	92	88	86	86	89
29		86	81	83	86	88	87	88	87	87	90	90	90	95	101	108	106	112	109	110	98	16	29	77	81	87
30		79	71	70	80	83	88	93	96	95	95	96	96	99	99	98	99	101	94	94	92	91	91	87	86	90
31		84	87	88	88	88	90	90	90	89	89	90	92	96	98	97	98	93	93	86	89	88	85	84	82	90
All		79	79	80	82	83	84	86	86	84	83	84	86	90	94	95	94	95	93	90	87	81	79	80	79	85
Quiet		83	84	83	84	84	85	87	86	82	79	78	80	84	88	88	86	85	85	85	85	84	84	83	82	84
Dist.		72	80	82	84	85	84	86	85	85	84	87	90	96	109	115	109	114	108	93	81	69	63	64	68	87

Nurmijārvi Finland $\label{eq:November 2007 North component X in nT (X = 14800 nT + tabular values)}$

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		78	81	84	86	88	88	85	77	69	71	71	77	84	84	82	79	77	78	87	84	86	88	87	84	81
2	Q	84	86	86	88	90	91	91	84	80	77	75	76	83	84	85	86	88	88	89	88	86	86	86	85	85
3	Q	84	84	85	85	87	88	88	81	76	79	80	80	82	80	84	83	83	83	81	83	84	85	85	84	83
4		83	87	86	87	89	90	88	83	79	78	79	83	84	81	80	84	87	89	74	75	75	81	84	87	83
5		86	84	86	87	87	87	87	84	80	79	79	79	84	86	84	85	85	88	89	89	87	88	89	89	85
6	Q	88	88	89	90	90	91	92	91	86	83	83	83	84	88	89	91	91	91	92	92	90	89	91	91	89
7	Q	89	91	91	91	92	92	90	89	85	81	80	82	87	89	90	90	90	90	91	90	90	92	90	89	89
8		88	89	90	91	92	92	92	89	87	87	89	89	92	94	95	96	94	95	91	88	85	86	85	86	90
9		88	92	89	89	92	93	92	90	85	82	87	90	93	92	89	87	86	91	93	93	91	90	89	92	90
10		97	91	94	92	90	90	90	86	82	74	77	79	78	83	81	80	83	90	90	90	89	87	87	86	86
11	Q	85	86	87	88	90	90	87	82	80	77	78	81	83	90	90	90	89	90	89	88	90	89	89	85	86
12		88	87	87	88	90	91	88	82	77	78	82	89	93	95	94	95	96	95	86	92	92	90	90	82	89
13		80	79	87	91	101	100	93	90	83	82	84	82	89	88	87	88	86	84	79	78	85	86	88	79	86
14		85	78	81	81	83	82	81	78	73	68	79	86	76	81	81	62	68	82	88	86	89	93	86	81	80
15		85	83	83	84	84	89	84	82	79	78	79	83	83	85	83	83	86	81	82	89	90	78	85	88	84
16		84	84	84	87	87	84	80	79	78	82	83	85	84	84	80	80	86	85	85	84	91	84	80	92	84
17		75	77	81	82	84	76	78	83	81	77	77	79	82	81	82	84	88	79	78	83	84	83	83	84	81
18		84	85	84	86	82	83	84	79	78	77	79	81	84	85	85	84	84	87	87	87	87	86	87	86	84
19		85	83	84	85	87	88	87	82	77	76	79	82	86	88	88	88	89	89	97	97	98	97	92	98	88
20	D	103	91	87	87	90	92	96	94	98	86	82	76	77	81	29	28	20	31	43	30	23	28	60	72	67
21	D	62	64	75	69	70	76	63	62	50	49	52	64	71	76	74	68	71	74	73	74	79	79	77	75	69
22		76	76	77	76	77	79	82	78	73	72	74	80	84	85	84	73	64	61	72	59	59	66	54	49	72
23	D	89	72	74	73	71	81	78	60	63	66	60	69	75	63	71	76	77	76	86	73	80	82	79	77	74
24	D	76	72	74	82	81	82	85	83	73	74	74	68	67	75	72	74	60	59	73	74	63	73	77	81	74
25	D	82	81	78	81	79	89	84	67	76	73	76	71	81	76	81	80	75	70	88	87	79	97	84	79	80
26		71	80	69	80	83	83	73	81	78	74	61	74	75	80	79	83	80	79	80	75	82	79	85	82	78
27		84	86	86	87	84	93	91	90	86	75	76	82	83	82	82	85	87	86	85	83	78	80	78	81	84
28		80	81	89	89	88	89	88	86	83	82	82	82	77	73	75	76	76	73	80	81	82	80	92	85	82
29		84	85	87	88	91	91	88	87	83	84	83	88	88	83	71	74	82	87	87	85	87	87	88	87	85
30		87	87	88	89	89	89	89	90	86	84	83	85	91	93	93	91	90	88	92	95	89	90	86	87	89
All		84	83	84	85	86	88	86	82	79	77	77	80	83	83	81	81	81	81	84	82	82	83	84	83	82
Quiet		86	87	87	88	90	90	89	85	81	79	79	81	84	86	87	88	88	89	88	88	88	88	88	87	86
Dist.		82	76	78	78	78	84	81	73	72	69	69	70	74	74	65	65	61	62	73	68	65	72	75	77	72

November 2007 East component Y in nT (Y = 1700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		52	50	65	64	64	63	63	64	61	55	54	51	52	55	58	59	61	62	61	62	65	64	62	63	60
2	Q	64	63	62	60	60	59	61	64	61	56	52	51	52	54	56	58	58	58	59	60	66	67	64	62	59
3	Q	62	63	63	63	63	65	65	65	61	56	52	54	57	60	61	60	59	60	62	63	63	63	63	63	61
4		61	63	65	65	64	65	65	65	63	58	53	49	51	54	50	56	61	80	89	85	87	98	76	64	66
5		60	64	60	62	57	56	60	63	59	54	53	54	56	57	58	59	58	59	60	61	62	64	63	63	59
6	Q	63	62	62	62	62	63	63	66	67	61	54	51	52	55	57	58	59	61	60	61	62	62	61	61	60
7	Q	61	61	63	63	63	62	64	66	67	62	53	49	51	55	57	58	59	60	61	61	64	62	63	63	60
8		63	61	59	63	62	63	62	63	62	57	52	49	50	54	55	55	57	59	59	61	64	68	67	67	60
9		65	65	66	63	62	62	63	66	65	59	51	46	49	51	52	54	51	57	59	60	61	62	67	66	59
10		68	67	63	62	63	65	65	66	63	61	57	54	50	53	55	53	54	58	60	63	67	67	65	67	61
11	Q	65	63	64	63	63	64	65	66	64	57	53	50	52	53	56	58	60	60	61	63	65	67	70	62	61
12		61	64	64	63	64	64	65	65	62	54	50	48	52	58	60	60	59	57	65	74	63	65	66	70	61
13		78	80	87	80	71	70	64	62	61	48	43	48	45	49	55	53	54	55	68	76	68	71	83	60	64
14		56	74	60	71	66	67	67	67	63	60	53	43	47	57	49	71	68	55	61	64	71	72	70	69	63
15		64	69	73	71	66	66	64	62	59	55	50	50	54	53	66	69	69	62	62	75	79	95	72	61	65
16		68	67	66	62	61	62	62	60	57	52	52	51	47	57	58	61	71	66	71	75	70	75	77	69	63
17		87	71	67	67	68	68	55	67	68	63	59	56	56	60	63	61	61	67	73	65	65	68	66	63	65
18		62	63	59	58	66	68	68	68	65	62	57	56	58	59	60	60	66	63	63	65	65	65	64	64	63
19		64	62	65	65	64	65	66	67	65	60	56	55	56	58	61	62	62	63	59	59	58	66	64	46	61
20	D	55	66	65	64	62	64	65	62	58	51	29	25	27	69	57	124	150	131	135	148	123	97	83	77	78
21	D	69	60	55	63	62	55	58	50	46	58	67	56	59	64	66	79	70	77	71	72	72	75	69	67	64
22		67	67	65	65	56	55	52	60	62	62	57	56	55	54	53	60	102	94	98	98	82	90	73	91	70
23	D	80	75	70	63	50	59	58	64	67	60	60	55	57	79	88	63	60	69	67	75	87	75	80	70	68
24	D	66	66	54	64	70	69	66	64	72	66	59	55	67	67	55	124	96	68	102	115	84	78	73	46	73
25	D	56	55	63	62	61	59	60	60	56	53	53	55	62	51	63	93	85	69	74	71	79	75	86	96	67
26		84	73	71	64	67	62	64	66	67	64	64	62	59	65	71	70	64	67	74	77	77	70	66	68	68
27		68	64	62	62	60	58	65	64	61	65	60	56	53	58	63	62	73	68	72	72	87	76	79	72	66
28		68	60	59	61	62	64	64	64	64	62	58	55	59	63	58	61	87	65	66	71	74	72	75	71	65
29		67	65	64	63	63	63	64	64	64	61	57	56	56	57	62	59	72	74	65	67	72	72	68	66	64
30		65	64	63	62	63	64	66	65	63	60	57	57	55	58	61	61	61	68	63	70	74	73	70	65	64
All		66	65	64	64	63	63	63	64	62	58	54	52	53	58	59	66	69	67	70	73	72	72	70	66	64
Quiet		63	62	62	62	62	63	63	65	64	58	53	51	53	56	57	58	59	60	61	62	64	64	64	62	60
Dist.		65	65	61	63	61	61	61	60	60	58	54	49	54	66	66	96	92	83	90	96	89	80	78	71	70

November 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		75	72	83	85	86	87	89	89	88	87	89	91	92	91	91	91	94	93	88	88	89	86	85	85	87
2	Q	87	87	87	86	86	85	85	86	86	85	86	88	88	89	88	88	88	88	88	89	89	88	86	86	87
3	Q	86	86	86	86	86	86	86	85	83	83	84	85	87	90	90	89	89	89	90	90	89	88	87	87	87
4		87	87	86	86	86	84	84	83	82	82	81	84	87	88	90	90	91	88	94	89	89	82	82	86	86
5		87	87	87	86	85	83	84	84	81	82	84	87	88	88	89	89	88	88	88	87	87	87	86	86	86
6	Q	86	86	86	86	86	85	84	83	78	76	78	80	83	86	86	86	86	86	85	86	85	85	85	84	84
7	Q	84	84	83	82	83	82	82	82	81	79	78	81	85	86	86	86	86	86	86	86	86	85	84	84	84
8		84	84	84	83	83	83	82	81	78	76	79	79	82	83	83	83	83	83	84	87	88	87	87	86	83
9		84	81	82	83	83	82	82	81	78	78	79	82	84	84	85	88	89	90	87	86	86	85	85	83	84
10		73	79	81	82	83	83	83	82	78	79	83	84	88	88	88	90	91	89	88	88	88	87	86	84	84
11	Q	83	83	84	84	85	84	84	85	84	83	83	82	85	86	86	86	86	86	86	86	86	85	82	83	84
12		82	83	84	85	84	84	84	84	84	81	79	82	84	84	84	84	84	84	89	89	82	84	83	82	84
13		83	75	78	75	76	76	80	82	83	80	81	83	85	86	87	88	89	93	100	101	97	89	82	72	84
14		63	69	80	82	87	87	88	88	86	87	89	87	91	93	92	104	104	96	91	91	90	89	86	86	88
15		83	82	86	86	86	87	88	88	87	86	87	90	89	90	93	91	90	91	92	88	72	73	79	73	86
16		81	85	86	86	86	86	86	86	84	86	86	86	89	90	92	93	93	91	89	90	80	76	74	48	85
17		56	78	83	85	85	85	86	85	85	84	86	88	90	91	91	90	89	94	94	92	90	90	88	88	86
18		88	88	86	84	86	87	87	87	85	85	86	88	90	90	90	90	91	89	89	88	88	88	87	87	88
19		86	84	86	87	87	87	87	87	86	86	88	89	89	89	88	88	88	87	86	85	84	82	82	64	86
20	D	62	75	81	83	82	82	81	80	78	80	90	92	106	215	176	235	202	172	142	111	90	61	36	45	106
21	D	71	83	81	77	91	92	96	97	95	104	113	108	107	106	101	105	101	100	97	97	94	86	86	91	95
22		92	92	92	91	90	89	90	91	92	92	94	93	92	95	96	109	129	117	166	128	85	67	39	19	93
23	D	32	69	83	85	84	88	91	96	101	97	97	98	99	105	103	97	97	99	88	93	87	83	76	77	89
24	D	79	79	80	82	88	91	91	92	91	92	92	93	99	100	99	115	108	111	115	84	89	87	86	77	93
25	D	62	74	80	88	91	91	89	91	93	92	93	98	100	99	97	107	97	107	96	90	90	73	42	55	87
26		61	61	69	77	81	84	89	92	90	92	94	95	96	96	95	94	93	94	97	97	94	87	80	87	87
27		88	89	88	88	88	88	88	86	86	87	89	88	91	93	94	93	94	93	93	93	91	86	83	86	89
28		86	87	88	89	90	91	90	89	89	89	89	90	94	98	100	101	105	99	99	99	97	94	86	85	93
29		88	89	89	90	90	90	90	91	91	89	89	90	92	94	97	99	100	95	95	94	93	90	90	90	92
30		90	90	90	90	90	90	91	89	88	88	89	90	90	91	90	90	91	92	91	92	89	89	89	88	90
All		78	82	84	85	86	86	87	87	86	86	87	88	91	95	94	98	97	96	96	92	88	84	80	78	88
Quiet		85	85	85	85	85	85	84	84	82	81	82	83	85	88	87	87	87	87	87	87	87	86	85	85	85
Dist.		61	76	81	83	87	89	90	91	92	93	97	98	102	125	115	132	121	118	107	95	90	78	65	69	94

Nurmijärvi Finland $\label{eq:component X in nT (X = 14800 nT + tabular values)}$

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		85	98	88	90	94	96	95	93	87	87	81	86	89	93	92	91	92	91	91	91	89	87	86	87	90
2		88	88	87	88	93	95	92	92	88	82	82	86	90	91	89	88	89	89	89	87	88	88	87	86	88
3	Q	87	87	88	90	91	91	89	87	84	83	84	85	90	93	93	92	91	91	91	91	91	91	91	91	89
4	Q	90	90	92	94	96	96	94	93	92	91	89	90	90	88	88	91	95	96	93	92	91	90	88	85	91
5		83	79	87	89	89	87	87	86	86	88	87	89	93	91	89	87	88	91	91	90	90	87	86	87	88
6		87	87	88	87	86	88	88	88	87	88	89	91	95	95	94	94	93	91	90	92	89	83	84	84	89
7	Q	84	87	88	89	93	92	90	88	86	85	87	90	93	94	93	92	92	92	91	89	90	89	87	88	90
8	Q	88	88	90	91	91	90	89	88	86	84	85	89	94	95	95	95	94	94	95	95	94	92	92	88	91
9		87	88	90	90	94	93	92	88	85	85	86	91	95	93	88	78	78	79	83	79	79	86	87	86	87
10		85	85	86	87	88	93	90	88	87	85	83	83	87	93	94	92	97	100	99	94	86	76	42	61	86
11	D	75	76	73	80	83	85	89	83	80	73	79	85	75	76	80	68	74	87	80	75	68	83	78	77	78
12		78	69	73	77	81	82	75	81	81	75	70	74	79	83	84	84	84	84	84	82	80	89	82	76	79
13		88	73	77	76	86	85	82	81	80	79	78	78	78	84	85	84	83	83	82	98	81	83	83	83	82
14		81	80	82	83	85	87	87	87	87	82	74	84	85	87	88	88	86	86	80	87	87	85	83	86	84
15		83	81	82	83	85	87	89	88	86	83	81	83	85	86	85	85	87	87	87	87	87	87	86	86	85
16		85	84	85	85	86	87	89	86	85	82	83	87	90	91	88	86	86	85	85	86	84	85	86	80	86
17	D	83	84	87	95	98	107	108	101	88	72	71	76	71	72	63	52	55	56	65	63	76	80	70	91	79
18	D	80	68	68	68	83	80	70	69	71	73	72	64	55	69	60	73	72	63	75	91	81	90	76	74	73
19																										(-14800)
20	D	74	75	87	90	81	82	88	85	78	77	78	80	82	77	86	63	54	78	75	79	75	86	78	70	78
21	D	65	68	70	75	84	86	74	79	80	77	79	70	84	83	78	65	73	75	80	78	91	83	80	81	77
22		80	82	83	82	84	86	83	79	81	82	80	78	74	76	82	82	84	83	70	76	78	80	80	91	81
23		79	82	82	83	84	87	85	85	83	79	75	66	72	81	81	85	88	82	83	80	79	88	84	82	81
24		82	84	83	84	86	89	85	83	81	79	80	82	84	86	83	82	81	85	86	85	86	83	79	83	83
25	Q	82	84	86	85	85	87	90	89	87	88	88	88	87	87	88	88	87	87	88	86	84	83	83	82	86
26		83	83	86	86	88	89	90	90	91	90	89	94	94	91	92	91	91	92	92	91	91	90	91	91	90
27		88	89	89	86	90	92	90	86	87	85	83	87	87	86	88	87	91	93	90	93	88	96	87	88	89
28		86	82	90	89	89	86	87	86	85	84	84	85	89	89	89	88	88	88	86	86	87	86	84	84	86
29		83	84	85	86	88	88	87	86	85	82	86	90	92	92	90	89	89	88	89	87	85	83	90	87	87
30		80	83	85	87	93	92	92	93	93	91	93	95	97	98	96	92	86	85	89	89	88	87	86	87	90
31		87	87	90	91	91	92	91	91	92	96	93	94	101	100	96	94	93	87	90	85	88	88	82	82	91
All		83	82	84	85	88	89	88	87	85	83	82	84	86	87	87	84	85	86	86	86	85	86	83	83	85
Quiet		86	87	89	90	91	91	90	89	87	86	86	88	91	91	91	91	92	92	92	91	90	89	88	87	89
Dist.		75	74	77	81	86	88	86	83	80	74	76	75	73	75	73	64	66	72	75	77	78	85	76	78	77

December 2007 East component Y in nT (Y = 1700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		58	53	66	65	65	64	63	63	64	59	54	51	53	58	60	63	63	64	65	65	66	67	67	65	62
2		64	63	64	64	64	64	65	65	63	60	56	54	55	60	61	62	63	64	64	65	67	66	65	64	63
3	Q	62	62	62	63	63	64	65	66	64	61	59	58	57	58	60	62	64	64	64	63	63	63	63	62	62
4	Q	62	61	62	63	62	62	63	64	64	60	55	52	54	56	56	59	62	63	63	65	66	65	66	67	61
5		65	71	68	66	66	65	64	63	59	58	54	53	56	59	59	59	62	63	65	66	65	65	64	63	62
6		63	62	62	64	63	66	67	66	63	58	56	55	58	61	62	64	64	64	65	68	73	74	73	68	64
7	Q	65	65	65	63	67	69	68	67	63	59	56	55	58	60	62	63	64	64	65	66	68	66	65	63	64
8	Q	64	63	63	62	63	64	65	65	63	59	54	54	57	59	61	62	62	64	64	65	66	69	70	68	63
9		67	61	63	64	65	64	65	65	62	58	55	54	56	58	56	56	54	60	93	90	77	73	67	64	64
10		65	63	64	65	62	63	66	67	63	60	55	48	43	53	59	58	58	58	60	64	86	95	164	116	69
11	D	71	70	71	68	63	64	65	72	65	66	63	59	53	64	67	63	88	85	83	81	81	92	76	77	71
12		73	71	60	52	74	73	76	72	65	64	68	60	61	66	65	65	65	65	66	70	72	97	90	78	69
13		88	78	70	64	65	57	67	69	65	63	60	58	61	60	64	64	64	64	64	79	67	69	69	69	67
14		69	68	67	69	68	65	67	68	65	65	63	61	57	61	64	65	64	64	64	71	69	73	71	69	66
15		69	66	67	67	67	66	69	70	67	63	61	59	58	62	64	65	73	68	66	68	67	69	68	68	66
16		65	67	67	68	66	65	67	67	64	59	58	57	58	59	61	65	62	63	64	67	71	62	83	72	65
17	D	66	65	64	62	63	58	57	55	63	54	54	47	66	58	61	94	118	81	84	104	86	80	74	66	70
18	D	103	80	78	64	58	51	60	49	48	57	57	63	70	64	64	91	90	95	93	85	72	65	92	86	72
19																										(-1700)
20	D	64	51	60	62	60	55	65	58	64	58	61	59	58	70	69	71	97	87	102	95	80	81	87	87	71
21	D	70	55	64	60	66	64	66	65	66	65	69	65	66	65	74	106	69	78	79	80	75	76	71	67	70
22		66	64	61	58	63	67	70	72	69	63	59	58	62	69	66	81	91	97	82	87	68	78	77	70	71
23		71	73	64	65	66	66	66	69	67	68	63	70	69	66	74	68	77	69	69	77	82	81	78	70	70
24		67	66	65	64	62	64	67	71	69	65	60	59	62	65	65	68	66	66	67	68	79	87	75	69	67
25	Q	66	66	65	64	66	66	67	67	65	63	60	61	62	66	67	68	67	66	67	68	69	73	72	71	66
26		70	66	65	67	68	67	67	66	64	63	62	58	57	59	59	58	61	62	65	67	68	68	69	70	64
27		70	68	70	68	65	62	64	64	61	57	57	57	61	64	64	63	60	60	63	65	69	77	71	68	65
28		68	49	64	70	68	63	66	67	67	66	64	60	60	64	65	66	67	66	67	71	72	69	69	68	66
29		69	68	66	66	67	67	67	66	64	63	61	58	62	65	66	65	65	64	66	67	70	70	77	74	66
30		68	67	67	63	64	65	66	65	64	63	59	61	60	60	63	62	63	66	67	68	70	70	68	67	65
31		66	66	67	66	67	67	66	65	63	61	60	62	58	58	60	60	61	69	64	69	74	89	75	70	66
All		68	65	65	64	65	64	66	66	64	61	59	58	59	61	63	67	69	69	70	73	72	74	76	71	66
Quiet		64	63	63	63	64	65	66	66	64	60	57	56	58	60	61	63	64	64	65	65	66	67	67	66	63
Dist.		75	64	67	63	62	58	63	60	61	60	61	59	63	64	67	85	92	85	88	89	79	79	80	77	71

December 2007 Vertical component Z in nT (Z = 49700 nT + tabular values)

Day	Char	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1		85	74	81	85	86	85	85	85	84	85	88	88	88	88	88	89	89	89	89	89	89	89	89	88	87
2		87	88	88	88	88	88	88	86	84	83	85	86	89	90	89	90	89	89	90	90	90	88	89	88	88
3	Q	88	88	88	88	88	88	88	87	86	85	85	87	90	90	89	89	89	89	89	88	88	88	87	87	88
4	Q	86	86	87	87	86	86	86	85	84	85	86	86	88	89	89	90	90	88	89	89	88	88	88	87	87
5		85	85	88	88	88	87	88	87	85	84	85	88	90	90	90	91	91	91	90	90	89	88	88	88	88
6		88	88	88	88	89	89	88	88	87	87	88	90	90	89	89	89	88	89	89	90	90	88	88	89	88
7	Q	89	89	88	87	86	86	88	87	87	88	89	89	90	89	89	89	89	89	89	90	89	89	88	88	88
8	Q	88	88	87	87	87	87	87	87	87	87	86	87	87	87	87	87	87	88	87	87	87	87	86	85	87
9		86	86	85	86	86	86	87	86	86	86	87	88	89	88	89	94	97	101	104	90	92	90	89	89	89
10		88	88	88	87	87	86	86	85	85	84	85	88	89	89	88	88	88	88	89	98	99	87	78	60	87
11	D	61	83	90	91	90	92	90	92	89	91	93	92	96	101	102	109	115	101	95	98	78	56	83	84	91
12		75	82	76	68	87	90	91	96	95	97	98	99	98	98	95	95	95	95	96	98	102	104	92	92	92
13		89	87	92	95	92	90	93	94	93	93	94	95	96	96	95	95	96	96	98	95	91	94	93	92	94
14		92	91	91	91	91	92	91	90	89	88	91	93	94	94	93	93	94	94	98	98	94	94	93	91	93
15		90	91	92	92	92	92	92	91	90	90	90	90	93	94	94	94	95	92	92	92	92	92	91	90	92
16		88	89	89	90	90	90	91	91	91	90	89	88	90	92	92	93	94	95	96	96	96	86	79	90	91
17	D	92	92	91	89	86	84	82	82	87	91	96	102	130	108	114	123	140	117	110	108	96	83	76	42	97
18	D	40	60	73	80	86	84	96	96	96	96	99	105	119	112	115	125	103	112	101	91	73	54	56	67	89
19																										(-49700)
20	D	83	85	89	88	87	88	91	89	92	93	96	97	99	103	100	111	124	115	91	93	92	82	76	76	93
21	D	76	78	86	94	93	91	91	95	93	94	95	97	100	99	100	108	102	107	102	85	75	86	90	92	93
22		93	93	92	92	92	92	93	93	94	94	94	96	100	104	100	102	98	98	99	96	71	88	87	73	93
23		74	83	87	91	92	93	92	94	93	93	95	98	102	100	100	97	98	95	97	97	92	80	82	89	92
24		92	92	93	92	93	93	94	94	92	91	92	95	97	96	95	96	96	96	95	94	96	91	92	93	94
25	Q	92	92	92	92	93	93	92	91	91	91	90	91	94	95	94	94	94	93	93	93	94	95	94	94	93
26		93	92	90	90	91	91	90	89	89	90	89	88	90	92	92	92	93	93	93	93	93	92	91	89	91
27		90	89	89	89	90	88	89	88	89	89	89	90	94	94	94	93	92	92	94	93	94	92	84	88	90
28		89	85	87	88	88	89	91	92	92	91	91	92	94	94	93	92	92	92	93	93	93	91	91	92	91
29		92	92	92	92	91	91	91	90	90	92	91	93	95	93	93	92	92	92	92	92	93	92	89	80	91
30		87	90	89	89	90	90	91	90	90	90	90	89	90	90	90	90	93	95	93	93	92	92	91	91	91
31		91	91	90	89	89	89	89	87	87	88	89	91	91	90	90	91	92	96	95	98	91	84	82	86	90
All		85	86	88	89	89	89	89	90	89	90	90	92	95	94	94	96	96	96	94	93	90	87	86	85	91
Quiet		89	89	89	88	88	88	88	87	87	87	87	88	90	90	90	90	90	89	89	89	89	89	89	88	89
Dist.		70	79	86	89	88	88	90	91	91	93	96	99	109	105	106	115	117	110	100	95	83	72	76	72	92

12 Hourly Means minus Monthly Means

12.1 All Days

Month	Component	v	·	ъT
North	Component	- 7	ın	n ı

Month/Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
January	0	0	-1	0	3	4	5	2	-1	-4	-4	-3	-1	-1	-1	0	0	1	3	-1	-1	1	0	-1	14881
February	0	0	0	1	3	3	3	2	-1	-4	-5	-5	-1	1	2	1	-1	-1	0	0	1	1	0	-2	14883
March	2	4	3	4	6	5	1	-5	-10	-15	-15	-11	-6	0	1	1	2	3	4	5	5	6	6	3	14883
April	4	3	3	4	4	1	-5	-13	-20	-22	-21	-13	-5	1	5	8	8	8	9	10	10	7	7	7	14883
May	1	4	4	3	-1	-5	-12	-20	-24	-23	-19	-11	1	6	10	12	14	13	13	13	6	5	4	3	14888
June	4	4	4	3	1	-4	-10	-17	-24	-25	-23	-14	-5	1	8	10	13	16	16	13	11	7	6	6	14890
July	2	5	6	5	1	-5	-10	-16	-21	-25	-24	-18	-9	1	9	12	11	13	16	14	12	9	7	6	14887
August	5	4	2	3	0	-4	-9	-14	-19	-22	-18	-12	-4	5	8	9	9	10	9	11	9	7	6	4	14887
September	1	2	3	3	3	-1	-3	-11	-19	-19	-16	-10	-3	3	4	6	5	6	9	11	8	5	7	5	14883
October	2	3	3	5	7	9	4	-5	-13	-16	-15	-10	-4	-1	-1	1	3	3	4	3	3	5	6	4	14881
November	1	0	2	3	4	5	3	0	-4	-6	-5	-2	0	1	-1	-2	-2	-1	1	0	0	1	1	1	14882
December	-2	-3	-1	0	3	4	3	1	0	-2	-3	-1	1	2	1	-1	0	0	1	1	0	1	-3	-2	14885
Winter	0	-1	0	1	3	4	3	1	-1	-4	-4	-3	0	1	0	-1	-1	0	1	0	0	1	0	-1	14883
Equinox	2	3	3	4	5	3	-1	-8	-15	-18	-17	-11	-4	1	3	4	4	5	6	7	7	6	6	5	14883
Summer	3	4	4	4	0	-4	-10	-17	-22	-24	-21	-14	-4	3	9	11	12	13	14	13	9	7	6	5	14888
Year	2	2	2	3	3	1	-3	-8	-13	-15	-14	-9	-3	2	4	5	5	6	7	7	5	5	4	3	14884

East Component Y in nT

Month/Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
January	1	0	-1	-4	-4	-3	-2	-1	-2	-4	-7	-9	-9	-7	-3	-3	1	6	14	9	10	10	6	4	1738
February	6	5	4	1	1	0	1	2	1	-3	-8	-12	-13	-10	-7	-4	0	0	2	5	7	7	8	9	1740
March	0	4	7	5	6	5	9	11	7	-1	-12	-21	-21	-18	-10	-4	-2	1	5	8	8	6	5	3	1741
April	6	4	7	10	11	13	16	15	8	-3	-15	-26	-29	-22	-15	-8	-2	2	3	3	6	5	4	7	1744
May	4	8	12	16	18	20	18	13	1	-11	-22	-28	-28	-22	-15	-9	-3	-1	2	5	2	6	6	4	1746
June	5	7	13	18	23	23	23	19	9	-4	-18	-27	-29	-25	-19	-13	-7	-4	-1	-1	0	0	3	4	1748
July	8	13	16	16	19	19	19	17	9	-2	-14	-24	-26	-23	-18	-11	-7	-5	-5	-3	-2	-2	1	5	1751
August	5	6	11	15	18	19	18	14	6	-5	-18	-26	-28	-23	-16	-9	-4	1	0	1	0	5	5	4	1754
September	1	4	6	7	8	8	9	8	3	-7	-15	-19	-20	-16	-11	-4	0	0	1	6	12	9	5	5	1757
October	1	-1	0	-1	0	3	6	8	4	-4	-13	-18	-18	-12	-4	-3	3	6	9	8	9	8	6	4	1760
November	2	1	0	0	-1	-1	-1	0	-1	-6	-10	-12	-11	-6	-4	2	5	3	6	9	9	8	6	2	1764
December	2	-1	-1	-2	-1	-2	0	-1	-3	-5	-7	-9	-7	-5	-3	1	3	3	4	7	6	8	10	5	1766
Winter	3	1	0	-1	-1	-2	-1	0	-1	-4	-8	-10	-10	-7	-4	-1	2	3	7	8	8	8	7	5	1752
Equinox	2	3	5	5	6	7	10	10	5	-4	-14	-21	-22	-17	-10	-5	0	2	4	6	9	7	5	5	1750
Summer	6	9	13	16	19	20	20	15	6	-5	-18	-26	-28	-23	-17	-11	-5	-2	-1	0	0	2	4	4	1750
Year	3	4	6	7	8	9	10	9	3	-4	-13	-19	-20	-16	-10	-5	-1	1	3	5	5	6	5	5	1751

Vertical Component Z in nT

Month/Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
January	-9	-10	-7	-7	-6	-3	-2	-1	-1	1	2	3	6	8	12	12	9	12	7	4	1	-7	-13	-11	49764
February	-8	-5	-4	-2	-2	-2	-2	-2	-3	-3	-2	0	3	5	6	7	8	9	10	6	0	-3	-6	-12	49764
March	-12	-11	-9	-7	-4	-2	-1	-1	-3	-5	-3	0	5	9	12	11	10	10	8	4	2	-2	-4	-7	49766
April	-17	-13	-10	-6	-3	-2	0	0	-1	-3	-4	-2	5	11	13	14	16	15	10	5	1	-3	-11	-15	49766
May	-9	-4	-1	0	0	1	1	-1	-4	-8	-8	-5	2	6	10	12	14	12	10	2	-5	-7	-9	-9	49769
June	-3	-3	-3	-2	-3	-3	-2	-3	-5	-8	-9	-5	0	4	7	9	10	9	8	6	3	-1	-4	-4	49773
July	-9	-7	-4	-2	-2	-3	-3	-4	-5	-6	-6	-3	3	7	10	12	12	10	5	3	2	0	-4	-6	49774
August	-7	-7	-4	-1	0	0	0	-1	-3	-5	-6	-5	0	7	10	12	11	9	5	3	0	-2	-7	-6	49777
September	-14	-11	-7	-4	-2	1	2	0	1	0	0	2	5	9	9	11	12	11	8	2	-3	-5	-12	-13	49778
October	-7	-6	-5	-4	-3	-1	1	1	-1	-3	-2	1	4	8	10	8	9	7	4	1	-4	-6	-6	-6	49785
November	-9	-6	-4	-3	-2	-2	-1	-1	-2	-2	-1	1	3	8	6	10	9	8	8	4	0	-4	-8	-10	49788
December	-6	-4	-3	-2	-1	-2	-1	-1	-1	-1	0	1	4	4	4	5	6	5	4	3	-1	-4	-4	-6	49791
Winter	-8	-6	-4	-4	-3	-2	-1	-1	-2	-1	0	1	4	6	7	8	8	8	7	4	0	-4	-8	-10	49777
Equinox	-12	-10	-8	-5	-3	-1	0	0	-1	-3	-2	0	5	9	11	11	12	11	7	3	-1	-4	-8	-10	49774
Summer	-7	-5	-3	-1	-1	-1	-1	-2	-4	-7	-7	-4	1	6	9	11	12	10	7	4	0	-3	-6	-6	49773
Year	-9	-7	-5	-3	-2	-1	-1	-1	-2	-4	-3	-1	3	7	9	10	10	10	7	4	0	-4	-7	-9	49774

12.2 Quiet Days

North Component X in nT

Month/Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
January	-1	1	2	2	2	2	0	-2	-5	-6	-6	-5	-2	0	2	2	1	2	3	2	2	3	1	-1	14884
February	0	1	1	2	2	2	1	-1	-6	-9	-9	-5	-1	3	3	2	2	1	2	3	3	2	3	0	14886
March	3	3	4	5	6	6	3	-5	-14	-19	-18	-12	-5	1	5	3	3	5	6	3	4	4	5	5	14885
April	3	3	2	2	2	-1	-5	-12	-18	-23	-22	-15	-7	-1	4	6	7	8	10	10	11	11	11	12	14887
May	3	3	4	3	1	-5	-11	-19	-23	-24	-20	-11	0	6	8	8	8	9	12	12	11	9	8	8	14888
June	3	4	4	4	2	-1	-8	-17	-26	-27	-25	-14	-3	3	4	7	9	12	14	15	13	10	8	7	14889
July	5	5	6	6	3	-3	-9	-14	-20	-23	-25	-18	-9	-2	5	7	9	11	13	13	11	9	9	9	14888
August	4	4	3	2	2	0	-5	-11	-17	-21	-20	-12	-5	-1	4	6	8	9	9	10	10	9	7	6	14888
September	5	3	3	2	2	1	-4	-11	-18	-20	-15	-9	-2	1	2	3	3	6	7	9	9	9	9	7	14885
October	4	4	5	6	8	8	4	-7	-17	-24	-22	-16	-8	-2	2	3	5	6	7	7	7	6	7	7	14885
November	-1	1	1	2	3	4	3	-1	-5	-7	-7	-6	-3	0	1	1	2	2	2	2	2	2	2	0	14886
December	-3	-2	-1	0	2	2	1	0	-2	-3	-3	-1	1	2	2	2	2	3	2	1	0	-1	-1	-3	14889
Winter	-1	0	1	1	2	2	1	-1	-4	-6	-7	-4	-1	1	2	2	2	2	2	2	2	2	1	-1	14887
Equinox	4	3	3	4	4	4	0	-9	-17	-22	-19	-13	-6	0	3	4	4	6	7	7	8	8	8	8	14886
Summer	4	4	4	4	2	-2	-8	-15	-21	-24	-22	-14	-4	2	5	7	9	10	12	12	11	9	8	8	14888
Year	2	2	3	3	3	1	-2	-8	-14	-17	-16	-10	-4	1	4	4	5	6	7	7	7	6	6	5	14887

East Component Y in nT

Month/Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
January	1	1	0	0	1	2	3	4	3	-2	-5	-8	-9	-8	-4	-2	0	0	0	1	4	7	8	6	1736
February	1	2	3	3	3	4	6	7	5	0	-7	-11	-11	-8	-4	-3	-3	-2	-2	0	2	5	7	6	1738
March	1	2	3	4	5	8	13	15	10	0	-11	-19	-21	-18	-9	-3	-3	-2	2	5	6	5	5	3	1739
April	1	5	7	9	13	17	21	20	13	1	-12	-23	-26	-21	-15	-8	-3	-1	-2	-1	-1	2	2	2	1742
May	6	7	12	16	17	19	19	13	1	-10	-18	-24	-24	-17	-10	-6	-4	-3	-2	-1	1	2	3	4	1744
June	4	7	13	19	23	26	28	22	9	-7	-21	-30	-29	-24	-15	-8	-2	-1	-2	-3	-3	-3	-1	0	1748
July	6	8	11	15	20	21	21	18	11	1	-13	-20	-23	-20	-15	-11	-7	-6	-6	-6	-4	-3	0	2	1751
August	4	5	8	13	16	21	23	19	11	-1	-14	-24	-26	-22	-14	-8	-3	-3	-2	-1	-2	-1	1	1	1754
September	6	6	8	10	11	13	13	11	4	-6	-18	-22	-20	-14	-7	-2	-2	-3	0	0	1	4	4	4	1754
October	2	2	2	3	5	8	14	17	12	2	-10	-19	-20	-15	-7	-3	-2	-1	-1	2	2	2	4	3	1758
November	2	2	2	2	2	2	3	5	4	-2	-8	-10	-8	-5	-3	-2	-1	0	0	1	4	4	4	2	1760
December	1	0	0	0	1	2	2	3	1	-3	-6	-7	-6	-4	-2	-1	1	1	2	2	3	4	4	3	1763
Winter	1	1	1	1	2	3	4	5	3	-2	-7	-9	-8	-6	-3	-2	-1	0	0	1	3	5	6	4	1749
Equinox	2	4	5	6	8	11	15	16	10	-1	-13	-21	-22	-17	-9	-4	-3	-2	0	1	2	3	4	3	1748
Summer	5	7	11	16	19	22	22	18	8	-4	-17	-24	-25	-21	-14	-8	-4	-3	-3	-3	-2	-1	1	2	1749
Year	3	4	6	8	10	12	14	13	7	-2	-12	-18	-19	-14	-9	-5	-3	-2	-1	0	1	2	3	3	1749

Vertical Component Z in nT

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Month/Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
January	0	0	0	0	0	0	0	-1	-2	-2	-1	0	1	2	2	2	2	2	1	1	1	-1	-3	-3	49763
February	-1	-2	-1	0	0	0	0	-1	-3	-3	-2	-1	1	2	2	1	2	2	2	2	2	1	-1	-1	49765
March	-1	0	0	0	0	1	0	-1	-4	-7	-7	-4	-1	3	5	4	3	2	3	4	3	0	-1	-2	49766
April	-1	1	2	2	2	3	2	-1	-3	-7	-9	-8	-4	0	2	5	6	4	2	2	2	0	-1	-1	49767
May	2	2	2	3	3	4	3	-1	-7	-11	-11	-8	-5	-2	1	3	4	4	4	3	3	2	2	2	49767
June	1	1	1	1	0	1	2	2	-3	-8	-11	-8	-1	1	3	4	4	4	4	3	2	-1	-2	-1	49773
July	3	4	4	4	2	0	-2	-4	-5	-6	-9	-8	-5	-1	1	2	3	4	4	3	2	2	2	2	49774
August	1	2	3	3	2	1	1	-1	-3	-5	-7	-8	-3	1	3	3	3	2	1	1	1	0	0	-1	49777
September	0	1	1	1	1	0	-1	-3	-5	-6	-5	-3	0	4	4	3	2	2	2	2	1	0	0	-1	49781
October	-1	0	0	0	0	1	3	2	-1	-5	-6	-4	1	4	4	2	1	1	1	1	0	0	-1	-2	49784
November	0	0	0	0	0	-1	-1	-1	-3	-4	-3	-2	0	2	2	2	2	1	2	2	2	1	0	-1	49785
December	0	0	0	0	-1	-1	-1	-1	-2	-1	-1	-1	1	1	1	1	1	1	1	1	1	1	0	-1	49789
Winter	0	-1	0	0	0	0	-1	-1	-2	-3	-2	-1	1	2	2	1	2	2	1	2	1	0	-1	-1	49775
Equinox	0	0	1	1	1	1	1	-1	-3	-6	-7	-5	-1	3	4	3	3	2	2	2	1	0	-1	-1	49775
Summer	2	2	2	3	2	2	1	-1	-4	-8	-10	-8	-3	0	2	3	4	3	3	3	2	1	0	0	49773
Year	0	1	1	1	1	1	1	-1	-3	-5	-6	-5	-1	1	2	3	3	2	2	2	2	0	0	-1	49774

12.3 Disturbed Days

North Component X in nT

Month/Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
January	5	5	0	2	6	7	13	7	1	-6	-2	-4	-6	0	-10	-3	-4	6	8	-11	-7	-3	2	-7	14875
February	2	2	-1	-1	7	1	3	2	3	2	-3	-7	-1	3	4	4	2	-4	-4	2	7	0	-6	-17	14877
March	-2	6	4	1	8	3	-5	-10	-17	-21	-10	-6	-3	7	2	3	3	8	7	5	3	7	8	-2	14879
April	-3	-2	3	1	4	-9	-16	-22	-26	-20	-21	-5	0	5	12	20	8	13	20	21	16	3	2	-3	14875
May	-15	4	8	9	0	-4	-20	-35	-33	-17	-12	-2	-2	10	27	38	28	18	14	10	-11	-4	-1	-1	14884
June	4	-1	4	6	5	-6	-16	-23	-25	-21	-25	-14	-5	-1	15	6	13	19	20	15	14	5	6	5	14893
July	6	5	12	8	3	2	-4	-10	-15	-30	-33	-26	-13	7	14	18	10	10	21	8	5	3	0	0	14888
August	7	5	-3	6	2	-7	-19	-20	-20	-22	-14	-13	-6	16	13	8	10	18	13	14	12	3	1	-5	14888
September	-1	4	7	4	7	-3	4	-11	-26	-26	-25	-13	-1	6	8	11	7	3	13	23	14	-5	-1	2	14877
October	0	5	4	5	12	13	9	-1	-8	-11	-11	-4	-2	-4	-10	-1	2	2	-2	-6	-5	3	8	2	14875
November	10	3	5	6	6	12	9	1	-1	-3	-4	-3	1	1	-7	-7	-12	-11	0	-5	-8	-1	3	4	14872
December	-2	-3	0	4	9	11	9	6	3	-3	-1	-2	-4	-2	-4	-13	-11	-5	-2	0	1	8	-1	1	14877
Winter	4	2	1	3	7	8	8	4	2	-2	-2	-4	-3	1	-4	-5	-6	-4	1	-3	-2	1	0	-4	14876
Equinox	-1	3	5	3	7	1	-2	-11	-19	-19	-17	-7	-1	3	3	8	5	7	10	11	7	2	4	0	14876
Summer	0	3	5	7	2	-4	-15	-22	-23	-23	-21	-14	-6	8	17	17	15	16	17	12	5	2	1	0	14888
Year	1	3	4	4	6	2	-3	-9	-14	-15	-13	-9	-3	4	5	6	5	6	9	6	4	2	2	-2	14880

East Component Y in nT

Month/Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
January	0	-1	-2	-16	-15	-15	-17	-12	-11	-10	-13	-12	-5	-17	-4	-1	-6	13	59	11	22	29	23	3	1743
February	17	9	6	-6	-2	-7	-11	-9	-7	-9	-12	-12	-14	-11	-10	-3	10	15	6	11	17	6	9	6	1743
March	0	6	19	8	8	-2	3	5	-1	-7	-16	-27	-22	-25	-10	8	0	5	8	17	11	4	5	3	1743
April	18	7	13	15	10	5	8	8	0	-10	-23	-38	-40	-30	-21	-14	-6	-2	12	14	15	12	9	38	1749
May	13	14	18	21	20	20	14	9	-8	-19	-29	-34	-35	-34	-25	-24	-8	-4	4	9	-7	21	20	8	1752
June	7	4	12	19	24	24	21	14	7	-3	-19	-28	-34	-30	-24	-19	-13	-5	3	4	4	8	14	11	1747
July	16	28	25	18	23	15	8	15	9	-6	-20	-33	-39	-34	-25	-11	-5	-4	-1	2	6	-1	5	9	1751
August	7	9	7	15	17	17	14	7	-1	-10	-21	-26	-30	-29	-23	-19	-6	18	4	4	5	23	13	7	1754
September	-17	2	5	0	0	-3	3	5	4	-6	-14	-15	-23	-18	-13	0	13	5	-2	13	33	21	0	8	1759
October	2	0	-2	-7	-5	-2	-3	-2	-4	-8	-19	-23	-25	-20	-3	-9	12	28	29	21	17	10	6	5	1764
November	-5	-5	-9	-7	-9	-9	-8	-10	-10	-12	-16	-21	-16	-4	-4	26	22	13	20	26	19	10	8	1	1770
December	4	-7	-3	-8	-9	-13	-8	-11	-10	-11	-10	-12	-8	-7	-4	14	21	14	17	18	8	8	9	6	1771
Winter	4	-1	-2	-9	-9	-11	-11	-10	-10	-11	-13	-14	-11	-10	-6	9	12	14	25	17	16	13	12	4	1757
Equinox	1	4	9	4	3	0	3	4	0	-8	-18	-26	-27	-23	-12	-4	4	9	12	16	19	12	5	13	1754
Summer	11	14	15	18	21	19	14	11	2	-9	-22	-30	-34	-32	-24	-18	-8	1	2	5	2	13	13	9	1751
Year	5	5	7	4	5	2	2	2	-3	-9	-18	-23	-24	-21	-14	-4	3	8	13	13	12	13	10	9	1754

Vertical Component Z in nT

Month/Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
January	-28	-36	-25	-21	-18	-9	-4	-1	2	5	7	12	20	17	33	43	23	43	20	8	2	-28	-38	-27	49761
February	-22	-15	-10	-3	0	0	2	3	1	2	5	9	14	18	16	17	18	23	25	8	-14	-26	-22	-46	49760
March	-38	-43	-42	-32	-18	-9	1	4	5	8	15	16	24	25	29	25	14	12	7	2	4	2	-1	-10	49760
April	-49	-37	-28	-16	-9	-9	-2	2	4	11	13	17	26	37	39	35	38	33	22	4	-2	-18	-53	-59	49760
May	-47	-25	-6	-1	1	1	1	1	2	-3	-3	2	6	16	26	38	41	34	30	6	-22	-30	-29	-23	49765
June	-7	-9	-6	-3	-3	-4	-4	-5	-7	-9	-8	0	4	8	14	15	15	14	15	13	5	-4	-15	-18	49771
July	-21	-23	-7	-2	-4	-9	-11	-10	-9	-9	-5	1	10	23	28	33	36	24	0	-3	1	-5	-18	-19	49776
August	-10	-13	-16	-8	-4	-1	-1	1	1	-1	-3	0	5	18	21	29	30	24	9	6	-8	-17	-36	-27	49773
September	-27	-29	-22	-15	-10	-2	3	2	11	11	12	18	17	25	24	26	29	28	15	-6	-14	-19	-44	-34	49772
October	-15	-7	-5	-3	-2	-3	-1	-2	-2	-3	0	3	9	22	28	22	27	20	6	-7	-19	-24	-23	-19	49787
November	-33	-18	-13	-11	-7	-5	-4	-3	-2	-1	3	4	8	31	21	38	27	24	14	1	-4	-16	-29	-25	49794
December	-22	-13	-7	-4	-4	-5	-3	-2	-1	1	3	6	16	12	14	22	24	18	7	2	-10	-20	-16	-20	49792
Winter	-26	-21	-14	-10	-7	-5	-2	-1	0	2	5	8	15	19	21	30	23	27	16	5	-7	-23	-26	-30	49777
Equinox	-32	-29	-24	-17	-10	-6	0	2	4	7	10	13	19	27	30	27	27	23	13	-2	-8	-15	-30	-31	49770
Summer	-21	-17	-9	-4	-2	-3	-4	-4	-4	-6	-5	1	7	16	22	29	30	24	13	5	-6	-14	-25	-22	49771
Year	-27	-22	-16	-10	-6	-5	-2	-1	0	1	3	8	14	21	24	28	27	25	14	3	-7	-17	-27	-27	49773

13 Monthly and Annual Means

All days

	Z	Н	D	F	X	Y	I
January	49764	14982	$6^{\circ} 39.8'$	51970	14881	1738	$73^{\circ} 14.7'$
February	49764	14984	$6^{\circ} \ 40.1'$	51971	14883	1740	$73^{\circ} 14.6'$
March	49766	14984	$6^{\circ} \ 40.3'$	51973	14883	1741	$73^{\circ} 14.6'$
April	49766	14985	$6^{\circ} \ 40.9'$	51973	14883	1744	$73^{\circ} \ 14.5'$
May	49769	14990	$6^{\circ} 41.4'$	51977	14888	1746	$73^{\circ} \ 14.3'$
June	49773	14992	$6^{\circ} 41.6'$	51982	14890	1748	$73^{\circ} \ 14.2'$
July	49774	14989	$6^{\circ} \ 42.4'$	51982	14887	1751	$73^{\circ} 14.4'$
August	49777	14990	$6^{\circ} \ 43.1'$	51985	14887	1754	$73^{\circ} \ 14.4'$
September	49778	14987	$6^{\circ} \ 43.9'$	51985	14883	1757	$73^{\circ} 14.7'$
October	49785	14984	$6^{\circ} \ 44.6'$	51992	14881	1760	$73^{\circ}\ 15.0'$
November	49788	14987	$6^{\circ} \ 45.6'$	51994	14882	1764	$73^{\circ} 14.9'$
December	49791	14990	$6^{\circ} 46.0'$	51998	14885	1766	$73^{\circ} 14.7'$
Winter	49777	14985	$6^{\circ} \ 42.9'$	51983	14883	1752	$73^{\circ} 14.7'$
Equinox	49774	14985	$6^{\circ} \ 42.4'$	51981	14883	1750	$73^{\circ} 14.7'$
Summer	49773	14990	$6^{\circ} 42.1'$	51981	14888	1750	$73^{\circ} \ 14.3'$
Year	49774	14987	$6^{\circ} 42.5'$	51982	14884	1751	$73^{\circ} 14.6'$

5 Quiet days

	Z	Н	D	F	X	Y	Ι
January	49763	14985	6° 39.3′	51971	14884	1736	73° 14.5′
February	49765	14987	$6^{\circ} \ 39.5'$	51973	14886	1738	$73^{\circ} 14.4'$
March	49766	14987	$6^{\circ} 39.9'$	51974	14885	1739	$73^{\circ} 14.5'$
April	49767	14989	$6^{\circ} 40.4'$	51975	14887	1742	$73^{\circ} \ 14.3'$
May	49767	14990	$6^{\circ} 41.0'$	51976	14888	1744	$73^{\circ} 14.3'$
June	49773	14991	$6^{\circ} 41.7'$	51981	14889	1748	$73^{\circ} 14.3'$
July	49774	14990	$6^{\circ} 42.4'$	51982	14888	1751	$73^{\circ} 14.4'$
August	49777	14991	$6^{\circ} \ 43.1'$	51985	14888	1754	$73^{\circ} 14.4'$
September	49781	14988	$6^{\circ} \ 43.2'$	51989	14885	1754	$73^{\circ} 14.6'$
October	49784	14988	$6^{\circ} 44.0'$	51991	14885	1758	73° 14.7′
November	49785	14990	$6^{\circ} \ 44.6'$	51993	14886	1760	$73^{\circ} 14.6'$
December	49789	14993	$6^{\circ} \ 45.2'$	51997	14889	1763	$73^{\circ} 14.4'$
Winter	49775	14989	$6^{\circ} \ 42.1'$	51983	14887	1749	$73^{\circ} \ 14.5'$
Equinox	49775	14988	$6^{\circ} 41.9'$	51982	14886	1748	$73^{\circ} 14.5'$
Summer	49773	14990	$6^{\circ} \ 42.0'$	51981	14888	1749	$73^{\circ} 14.3'$
Year	49774	14989	6° 42.0′	51982	14887	1749	73° 14.4′

5 Disturbed days

	Z	Н	D	F	X	Y	I
January	49761	14977	6° 41.1′	51966	14875	1743	73° 15.0′
February	49760	14979	$6^{\circ} 41.0'$	51966	14877	1743	$73^{\circ} 14.8'$
March	49760	14981	$6^{\circ} \ 40.8'$	51966	14879	1743	73° 14.7′
April	49760	14977	$6^{\circ} 42.3'$	51965	14875	1749	73° 14.9′
May	49765	14987	$6^{\circ} 42.7'$	51972	14884	1752	$73^{\circ} 14.4'$
June	49771	14995	$6^{\circ} 41.4'$	51981	14893	1747	73° 14.0′
July	49776	14991	$6^{\circ} 42.4'$	51985	14888	1751	$73^{\circ} \ 14.4'$
August	49773	14991	$6^{\circ} \ 43.2'$	51981	14888	1754	$73^{\circ} 14.3'$
September	49772	14981	$6^{\circ} 44.7'$	51978	14877	1759	$73^{\circ} 14.9'$
October	49787	14979	$6^{\circ} \ 45.8'$	51992	14875	1764	73° 15.3′
November	49794	14977	$6^{\circ} 47.2'$	51998	14872	1770	$73^{\circ}\ 15.6'$
December	49792	14982	$6^{\circ} 47.3'$	51998	14877	1771	$73^{\circ}\ 15.2'$
Winter	49777	14979	$6^{\circ} \ 44.2'$	51982	14876	1757	73° 15.1′
Equinox	49770	14979	$6^{\circ} \ 43.4'$	51975	14876	1754	$73^{\circ}\ 15.0'$
Summer	49771	14991	$6^{\circ} \ 42.4'$	51980	14888	1751	$73^{\circ} 14.3'$
Year	49773	14983	$6^{\circ} 43.3'$	51979	14880	1754	73° 14.8′

14 Hourly Means of All Days as Sequenced in Bartels' 27-day Solar Rotation Number

14.1 H-Component

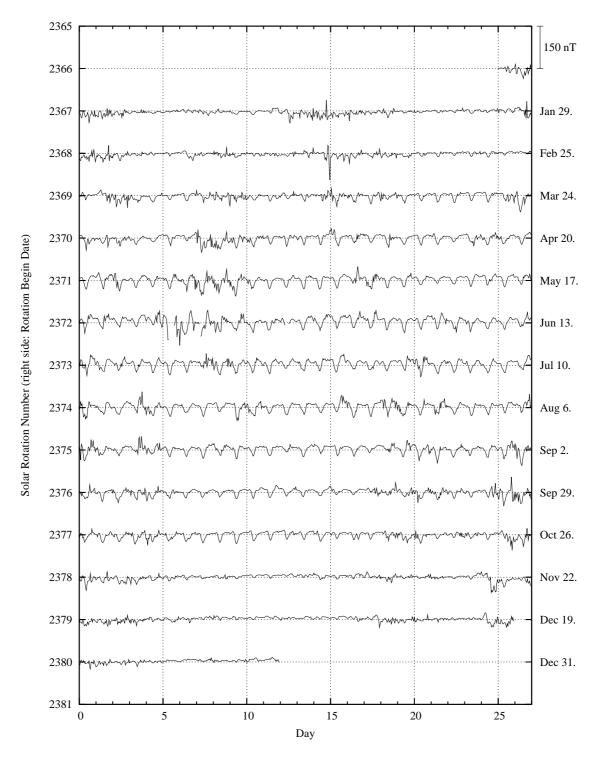


Figure 5: Hourly means of H sequenced in Bartels' solar rotation cycles.

14.2 D-Component

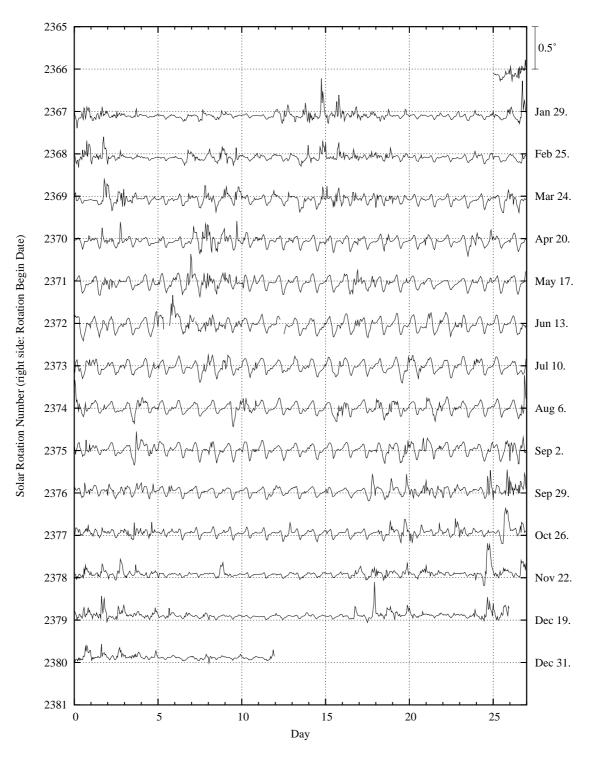


Figure 6: Hourly means of D sequenced in Bartels' solar rotation cycles.

14.3 Z-Component

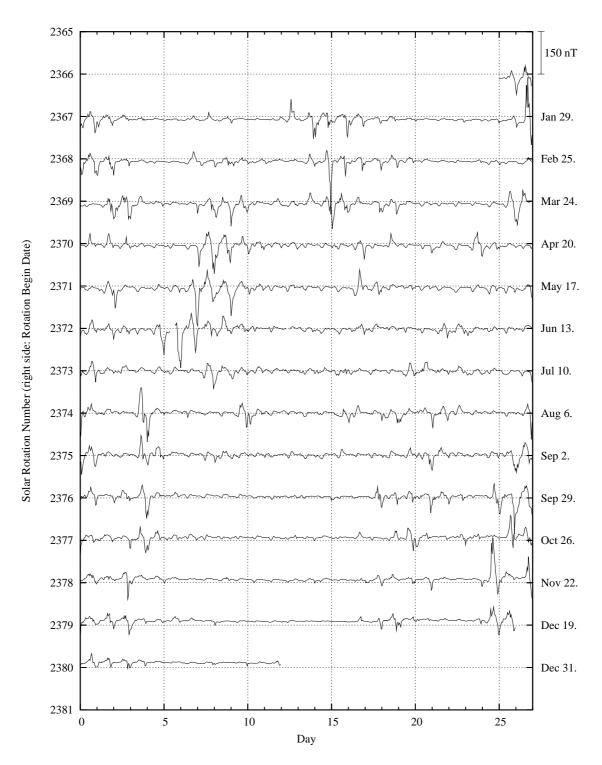


Figure 7: Hourly means of Z sequenced in Bartels' solar rotation cycles.

15 K-Indices

15.1 Monthly Tables of K-Indices

Januar	У										Februa	ary										March										
Day					Κ					Ak	Day					K					Ak	Day					K					Ak
1	1	0	0	2		3	2	2	3	7	1	3	1	2	2		1	1	3	3	9	1	4	2	2	2	5	3	3	1	0	10
2	4	3	2	3		5	3	3	4	21	2	1	1	2	2		1	1	2	1	5	2	0	1	2	1]		1	2	2	4
3	1	3	3	3		4	4	4	3	18	3	1	1	0	1		1	0	0	0	2	3	0	0	0	0	1		1	1	2	2
4	2	2	3	3		3	4	3	3	15	4	0	0	0	1		0	0	0	1	1	4	0	0	1	1	1		0	3	2	4
5	2	2	2	2		3	3	2	2	9	5	1	0	0	1		2	2	3	2	5	5	2	0	1	2	2	2	1	5	3	11
6	1	1	1	1		1	3	2	1	5	6	1	2	2	2		1	1	1	1	5	6	3	4	2	3	2		2	2	4	14
7	0	0	0	0		1	0	0	1	1	7	3	2	2	2		2	2	4	3	12	7	4	2	3	3	5	3	3	3	3	16
8	1	0	0	0		0	2	2	1	3	8	2	3	2	1		2	3	2	2	9	8	2	1	1	0	1		1	2	1	4
9	0	0	1	0		1	1	2	0	2	9	2	1	2	0		0	1	2	2	4	9	0	0	0	0	1		1	2	2	3
10	0	1	1	2		2	4	1	1	7	10	1	1	0	0		0	2	3	2	4	10	2	0	1	1]		2	3	2	6
11	1	1	2	1		2	1	3	1	6	11	0	0	0	0		0	0	2	2	2	11	1	1	1	2	2	2	3	3	2	8
12	2	0	0	0		0	0	0	0	1	12	0	0	0	2		3	2	1	3	6	12	1	2	2	3	5	3	2	4	3	12
13	0	0	0	0		0	0	0	0	0	13	2	2	2	2		2	3	4	6	20	13	4	3	3	4	4	Į	4	4	3	23
14	0	0	0	0		1	1	2	3	4	14	4	2	3	3		2	3	5	2	18	14	3	2	1	3	5	3	3	3	1	11
15	2	1	2	2		4	3	4	1	12	15	3	3	2	3		2	3	3	2	12	15	1	1	2	2	5	3	2	3	4	11
16	0	4	1	1		2	3	4	4	14	16	2	1	1	1		2	2	3	3	8	16	4	3	1	1	5	3	1	2	3	11
17	4	3	3	3		3	3	6	4	26	17	2	2	1	2		3	3	2	3	10	17	3	2	2	2	2	2	2	2	0	7
18	2	3	3	3		3	4	5	4	21	18	2	0	1	2		1	2	3	2	6	18	0	0	1	2	2	2	2	1	1	4
19	2	3	2	1		3	2	3	4	12	19	0	0	0	1		1	2	0	0	2	19	0	0	0	2	()	1	1	1	2
20	2	2	2	2		1	2	3	3	9	20	0	0	0	1		0	1	0	0	1	20	0	0	0	0	1		1	1	1	2
21	2	2	2	2		2	2	3	0	7	21	0	0	0	0		0	0	0	0	0	21	0	0	1	1	1		1	0	0	2
22	1	0	0	1		1	2	3	0	4	22	0	0	0	0		1	1	1	2	2	22	1	0	1	1	1		1	1	1	3
23	1	1	1	1		0	1	0	0	2	23	2	1	0	0		0	0	2	1	3	23	0	1	2	2	5	3	3	2	3	9
24	0	0	0	0		0	1	2	0	1	24	2	0	0	1		0	0	1	0	2	24	3	3	2	3	4	Į	2	2	1	12
25	0	0	0	1		0	0	1	2	2	25	1	0	0	0		1	2	3	1	4	25	2	1	2	3	3	3	2	2	2	9
26	1	0	1	1		1	1	0	2	3	26	2	3	2	1		0	0	0	0	4	26	1	1	1	2	2	2	4	2	2	8
27	1	1	0	0		1	0	1	2	2	27	0	0	3	2		2	3	4	4	12	27	2	2	2	3	2	2	2	4	2	11
28	3	1	0	1		1	0	2	2	5	28	3	4	3	3		3	4	3	4	20	28	2	2	2	2	1		2	2	1	6
29	3	2	2	2		4	6	6	4	31												29	0	0	1	1	1		1	1	1	2
30	3	3	3	3		4	4	4	4	21												30	2	1	1	2	1	-	0	0	0	3
31	3	2	2	3		2	5	5	4	22												31	0	1	2	1	2	2	1	1	2	4
Mean										9.5	Mean										6.7	Mean										7.5

April											May											June										
Day					K					Ak	Day					Κ					Ak	Day					Κ	_				Ak
1	4	3	3	3		4	4	4	5	25	1	2	2	2	1		2	2	2	1	6	1	2	1	1	3		1	2		2	8
2	4	3	3	3		3	3	4	3	18	2	1	1	0	0		0	1	0	0	1	2	2	2	2	2		2	2		2	7
3	3	3	2	1		2	4	2	2	11	3	1	0	1	1		2	2	2	1	4	3	2	2	1	2		3	4	3	3	12
4	2	2	2	2		2	2	2	2	7	4	1	0	0	1		2	1	2	0	3	4	3	2	1	2		3	3		1	9
5	1	1	1	1		1	1	1	2	4	5	1	0	0	1		0	0	0	1	1	5	0	0	0	1		1	2	1	1	2
6	1	0	0	0		1	1	2	1	2	6	1	0	0	0		0	0	1	1	1	6	0	1	0	1		1	1	0	0	2
7	2	1	0	0		1	1	0	0	2	7	1	1	3	3		4	5	3	4	19	7	1	1	1	1		1	1	1	1	3
8	0	0	1	1		1	1	1	2	3	8	2	3	3	3		4	3	3	3	16	8	2	3	2	2		3	2	2	3	10
9	3	2	3	3		2	1	1	2	9	9	1	1	2	2		3	2	1	1	6	9	1	1	2	3		3	2	2	2	8
10	2	1	0	2		3	3	2	3	9	10	0	0	1	1		1	2	3	1	4	10	2	2	2	2		2	1	2	1	6
11	2	1	1	1		1	0	0	1	3	11	0	0	0	1		2	2	2	1	3	11	1	0	1	1		1	2	2	1	4
12	2	2	2	2		4	3	2	1	10	12	0	1	1	2		0	1	0	0	2	12	0	1	0	1		2	0	1	1	2
13	1	0	0	0		0	0	0	0	0	13	0	1	1	1		1	1	0	0	2	13	0	0	2	2		1	3	3	2	7
14	0	1	0	1		2	2	1	3	5	14	0	0	1	1		0	2	2	1	3	14	3	2	3	4		3	4	3	3	17
15	2	1	1	2		1	1	1	0	4	15	1	0	1	2		2	1	2	2	5	15	2	2	2	2		2	2	1	1	6
16	0	0	0	0		0	0	0	0	0	16	0	1	1	1		1	1	0	2	3	16	2	2	1	2		3	2	1	1	7
17	0	1	2	3		4	3	2	3	11	17	1	2	0	1		2	1	2	3	6	17	2	1	1	2		3	2	1	1	6
18	3	2	1	2		1	2	3	3	9	18	3	2	3	4		5	3	2	2	18	18	1	1	1	2		2	2	3	1	6
19	2	2	1	1		2	1	0	2	5	19	2	2	3	3		4	3	3	2	14	19	2	1	2	1		2	2	1	0	5
20	1	0	0	0		1	1	0	2	2	20	3	2	1	3		1	1	2	2	8	20	1	1	1	1		1	2	0	1	3
21	1	1	0	0		0	1	1	1	2	21	2	1	0	1		1	2	2	3	6	21	1	1	1	4		4	3	3	4	15
22	2	2	1	3		3	3	3	3	12	22	1	1	2	2		4	3	4	5	17	22	3	2	2	3		3	2	2	4	13
23	3	4	3	2		2	2	0	0	10	23	4	2	4				3	5	5	29	23	3	3	2	2		2	1	1	2	8
24	1	0	1	2		1	2	2	1	4	24	5	3	2	3		4	4	4	4	24	24	2	2	1	2		3	2	3	1	8
25	2	1	1	1		3	2	1	0	5	25	3	3	2	3		3	4	3	2	15	25	1	0	1	1		2	2	1	2	4
26	2	1	1	2		2	3	2	3	8	26	3	3	2	3		4	4	2	2	15	26	0	1	1	2		2	1	1	1	4
27	2	1	1	3		3	3	5	5	19	27	2	2	2	2		3	4	3	2	12	27	2	2	1	1		1	2	1	1	5
28	5	3	3	4		4	4	4	5	29	28	2	1	1	2		2	0	0	1	4	28	2	1	0	1		2	2	1	2	5
29	3	3	3	3		3	3	4	3	17	29	1	1	1	1		2	2	2	1	5	29	1	1	1	2		2	3	3	3	9
30	4	3	3	2		3	3	2	1	13	30	1	1	0			1	1	0	0	2	30	2	2	2	2		1	1	1	0	5
											31	1	1	1	1		2	1	2	2	5											
Mean										8.6	Mean										8.4	Mear	1									6.9

July											Αυ	gust										Se	eptem	bei	ŗ								
Day					Κ					Ak	D	ay				K					Ak	Ι)ay					K					Ak
1	1	1	2	2		2	2	1	2	6	1	4	3	3	3		3	3	3	2	16	1		1	0	2	2		2	3	3	3	9
2	0	1	2	1		2	1	0	0	3	2	1	1		2		3	2	1	1	6	2		4	4	2	3		4	3	4	3	20
3	1	1	1	2		2	3	1	3	7	3	1		1	1		3	2	0	2	5	3		3	2	2	2		3	3	2	3	11
4	3	3	3	4		4	3	3	1	17	4	0	0		1		0	0	0	1	1	4		2	2	2	2		2	1	2	2	7
5	1	1	2	2		2	1	2	2	6	5	0	0	1	1		1	1	1	1	2	5		3	2	2	3		2	2	3	2	10
6	1	1	1	2		2	2	2	1	5	6	1			3		3	3	4	6	20	6		2	2	1	2		2	3	3	4	11
7	2	1	1	1		2	2	2	2	6	7	4					3	4	3	3	18	7		3	2	2	2		2	3	2	1	9
8	2	2	1	1		1	1	1	0	4	8	2					2	2	1	2	8	8		2	1	2	2		2	2	3	1	7
9	0	1	0	1		1	0	1	0	2	9	1	1				1	1	2	1	5	9		0	0	1	1		2	2	0	1	3
10	0	1	2	1		1	0	2	4	6	10	1	1	1	3		5	5	4	3	20	10)	1	0	0	1		0	1	1	0	2
11	4	4	4	4		3	3	2	1	19	11	3	2	2	2		2	3	4	2	12	11	L	0	0	0	1		1	1	1	1	2
12	2	2	2	1		2	1	2	1	6	12	2	1	1	2		2	1	1	1	5	12	2	1	0	0	1		0	0	0	1	1
13	0	1	1	1		1	1	1	2	3	13	1	0	1	1		1	0	0	0	2	13	3	0	0	0	1		0	0	1	1	1
14	1	1	2	3		4	4	5	3	18	14	1	0	0	1		1	1	1	2	3	14	1	1	0	0	1		2	3	2	1	5
15	3	3	3	2		2	2	2	1	10	15	3	2	1	2		3	3	2	2	10	15	5	2	0	1	1		2	2	2	2	5
16	2	1	1	2		1	1	1	0	4	16	2	1	1	2		1	1	2	1	5	16	5	1	1	0	1		1	1	1	0	2
17	1	1	1	1		1	0	1	0	2	17	2	1	0	1		1	1	2	1	4	17	7	0	0	0	1		0	0	1	2	2
18	1	1	1	1		0	0	0	0	2	18	1	0	0	1		1	0	1	0	2	18	3	2	1	0	1		1	0	0	0	2
19	0	0	0	1		1	1	1	1	2	19	0	0	0	2		3	2	1	0	2	19)	1	1	2	2		2	1	0	0	4
20	0	2	3	4		5	3	1	3	16	20	1	0	0	1		1	1	1	2	12	20)	0	1	0	2		3	3	4	4	12
21	3	3	2	2		3	2	4	2	13	21	2	0	1	2		2	2	1	1	5	21	L	3	1	1	2		3	2	2	4	11
22	1	1	1	1		1	1	0	0	2	22	0	0	1	2		2	2	2	0	4	22	2	2	2	2	2		3	3	4	3	13
23	1	1	1	2		1	1	1	2	4	23	0	0	0	1		2	1	1	0	2	23	3	3	4	3	3		2	2	3	3	15
24	0	1	1	2		2	1	0	1	3	24	0	1	0	1		1	1	1	0	2	24	1	3	3	3	2		3	3	2	2	12
25	0	1	0	1		1	1	0	0	2	25	3	1	1	3		4	2	3	2	12	25	5	3	2	2	2		1	2	3	2	9
26	0	0	0	1		2	4	3	3	8	26	1	1	1	2		3	4	4	3	13	26	i i	1	1	1	2		0	0	2	1	3
27	3	3	2	2		3	2	0	0	8	27	3	2	3	3		3	3	4	3	16	27	7	0	0	1	3		2	5	4	4	16
28	1	1	1	1		1	1	1	3	5	28	3	2	2	3		2	1	2	2	9	28	3	4	3	3	2		2	3	5	5	23
29	4	3	2	3		3	3	3	4	17	29	2	1	1	1		2	2	2	2	6	29)	4	4	3	3		4	3	4	4	23
30	3	2	3	2		2	3	2	1	10	30	1	1	1	2		1	0	1	1	3	30)	3	3	2	2		2	2	3	2	10
31	1	1	2	2		3	2	1	2	7	31	1	1	1	2		1	2	3	3	7												
Mean										7.2	Me	ean									7.6	Μ	ean						_				8.7

Octob	er										Novem	ıber										Dec	ember									
Day					Κ					Ak	Day					Κ					Ak	Da	у				K					Ak
1	2	2	1	2		2	3	2	2	8	1	3	1	1	1		1	1	2	1	5	1	3	0	0	1	(~		0	2
2	1	1	1	0		1	0	2	3	4	2	0	0	1	1		0	0	1	1	2	2	0	0	1	2	(0	2
3	2	3	2	2		4	3	3	3	14	3	0	0	0	0		1	0	1	0	1	3	0	0	0	0	1				0	0
4 5	3 1	2	2	2		3	3	3	0 1	10 6	4 5	1	0	0	0		1	4	3	3 1	8 2	4 5	$\frac{0}{2}$	0	0	0	(1	1 2
			1										-					U		_					1							
6	1	1	1	1		1	1	0	2	3	6	0	0	0	0		1	0	0	0	0	6	0	1	1	0					1	3
7	0	0	1	1		1	0	0	0	1	7	0	0	0	0		0	0	0	1	0	7	0	1	0	0	(0	1
8 9	0	0	0	0		0	0	0	2	1	8	1	0	1	0		0	1	1	1 2	2	8	0	0	0	0	(1	0
10	0	0	0	0		0	0	0	0	1 0	9	1 2	0	0 1	1		1	1 2	0	0	3	9	1 0	1	0	0					5	4 10
										-																						
11	0	0	0	0		0	1	1	1	1	11	2	0	1	1		1	0	1	2	3	11	3	2	2	2	;				3	15
12	0	0	2	1		1	2	2	3	5	12	1	0	0	1		0	1	3	2	4	12	2	3	2	2	1				3	8
13	0	0	0	1		1	0	0	1	1	13	3	2	2	2		2	1	2	4	10	13	2	2	1	1	1				0	5
14 15	1 2	1	1	1		1	1	0	1	3	14 15	3	2	2	2		2	3	2	2	9	14	0	1	1	2	(1	3 2
	2		U	1		1	1	1	U	2		2	1	0	1			2			8	15	1	0	U	_	1		1			
16	0	0	0	1		1	2	1	0	2	16	1	0	1	1		2	3	3	3	8	16	1	0	0	0	(3	3
17	1	0	0	0		0	0	0	0	0	17	2	2	2	1		1	3	3	1	8	17	2	2	3	3					3	16
18	0	2	2	3		2	2	3	3	9	18	1	1	0	0		0	2	0	0	2	18	3	3	2	3					4	19
19 20	2	3	2	3		3	4	4	3	16	19	1	0	0	0		0	0	2	3	3 23	19	3	2	2 2	2	4				3	10
20	3	3	3	2		1	3	3	1	11	20	2	1	2	3		5	5	4	4	23	20	2	2	2	2	•) 4	4	4	3	14
21	0	0	1	1		1	1	3	2	4	21	2	2	2	3		3	3	2	1	10	21	3	2	2	2	2				2	12
22	1	0	0	1		1	2	3	3	6	22	0	2	1	1		2	4	4	3	11	22	1	1	1	2					2	9
23	3	2	1	2		2	1	2	1	7	23	3	2	2	2		3	3	3	2	11	23	2	2	2	2					2	7
24	0	0	1	1		1	2	2	0	3	24	2	1	2	2		3	5	4	3	16	24	0	0	0	1	(2	3
25	1	0	0	3		3	4	4	4	14	25	2	2	3	2		2	4	4	3	14	25	0	0	0	1	1	. (0	0	0	1
26	2	2	2	2		3	4	4	2	13	26	3	2	2	3		2	1	2	2	9	26	1	0	0	0	1				1	2
27	2	2	2	2		3	4	3	3	13	27	1	2	1	1		1	2	2	2	5	27	1	1	1	1	1				3	5
28	2	1	0	2		2	4	2	1	8	28	2	0	1	1		2	3	2	2	6	28	3	1	1	0	1				0	4
29	2	1	1	1		3	3	5	4	15	29	0	0	0	1		1	3	2	1	4	29	0	0	0	0	(2	1
30	3	2	2	1		2	3	2	1	8	30	0	0	1	0		1	2	2	1	3	30	1	0	0	1	1		1		0	2
31	1	0	1	1		2	2	3	2	6												31	0	0	0	1		2	1	3	2	4
Mean										6.3	Mean										6.4	Mea	an									5.5

15.2 K-Indices Sequenced in Bartel's Solar Rotation Number

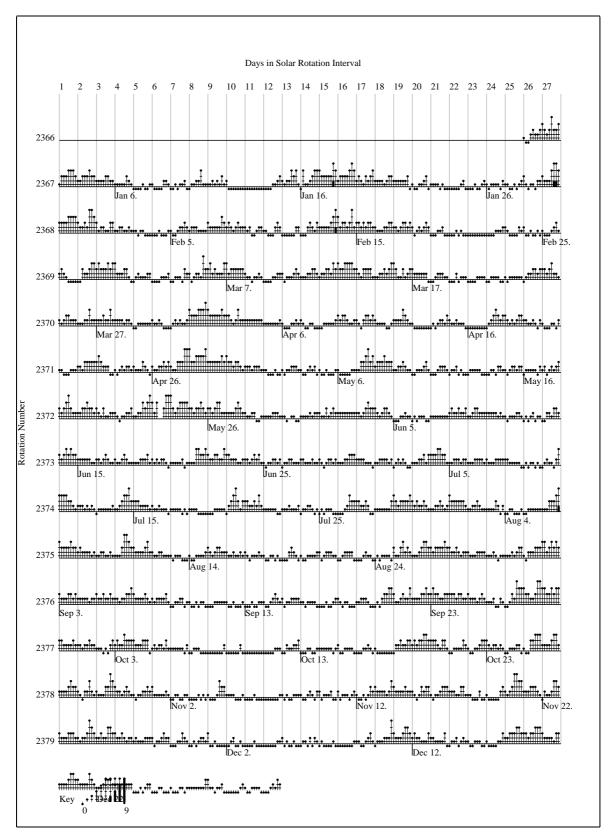


Figure 8: K-indices sequenced in Bartel's solar rotation number

15.3 Ak-Indices

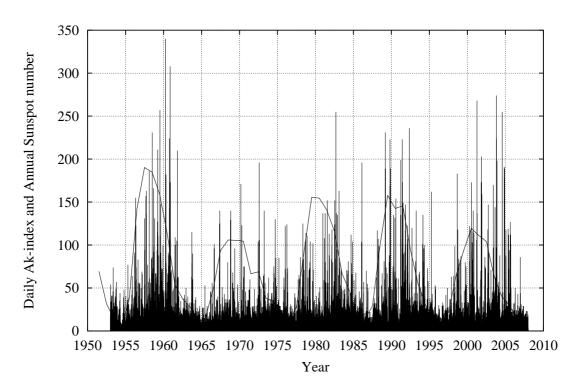


Figure 9: Daily Ak-indices (vertical lines) and sunspots (solid line)

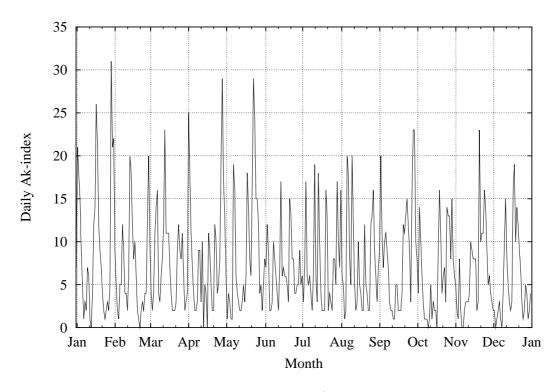


Figure 10: Daily Ak-indices

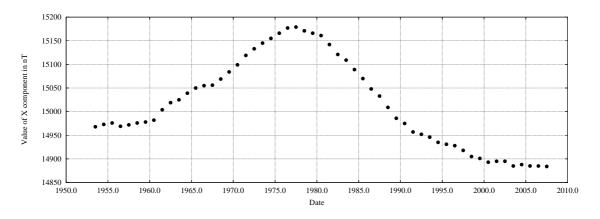
15.4 Table of Annual Ak-indices

 $\rm m/M$ denotes sunspot minimum/maximum

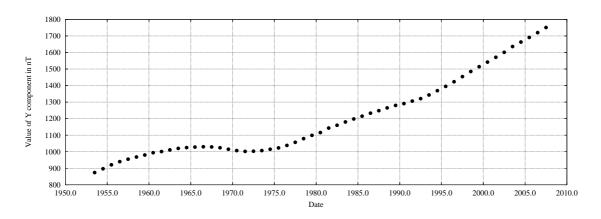
Year	Ak
1953	11
$1954 \mathrm{m}$	8
1955	9
1956	14
1957M	16
1958	18
1959	21
1960	22
1961	12
1962	10
1963	10
1964m	8
1965	6
1966	8
1967	10
1968M	11
1969	10
1970	10
1971	9
1972	10
1973	13
1974	15
1975	11
$1976 \mathrm{m}$	10
1977	9
1978	13
1979M	12
1980	9

Year	Ak
1981	13
1982	19
1983	15
1984	14
1985	10
$1986 \mathrm{m}$	10
1987	8
1988	11
1989M	16
1990	13
1991	21
1992	15
1993	13
1994	16
1995	11
$1996 \mathrm{m}$	9
1997	8
1998	12
1999	12
2000M	15
2001	14
2002	13
2003	22
2004	14
2005	14
2006	8
2007	7

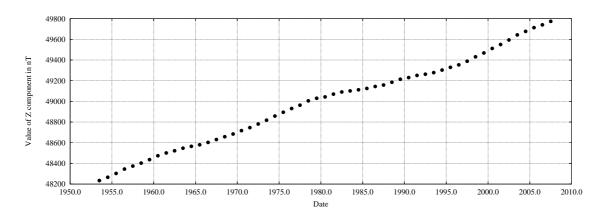
16 Annual Means



(a) Annual means for X component

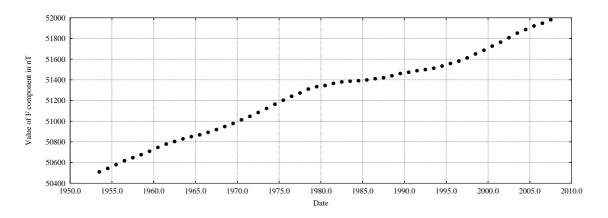


(b) Annual means for Y component

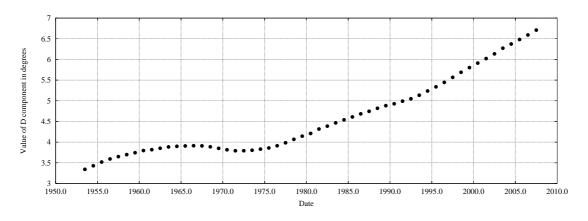


(c) Annual means for Z component

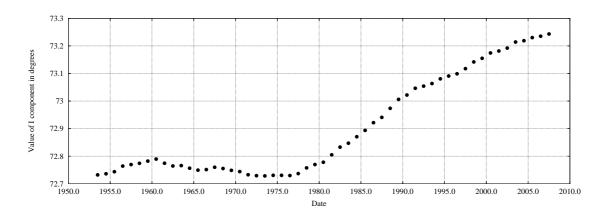
Figure 11: Figures of annual means of X, Y, and Z



(a) Annual means for F component



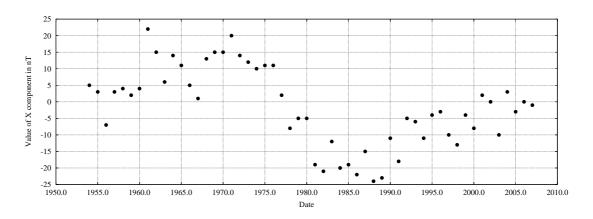
(b) Annual means for D component



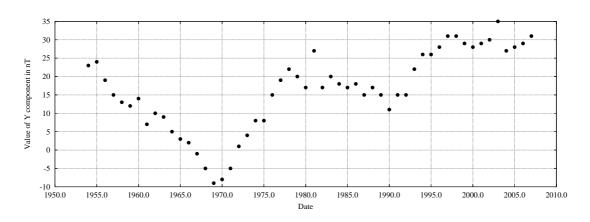
(c) Annual means for I component

Figure 12: Figures of annual means of F, D, and I

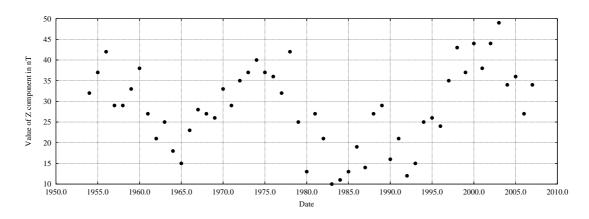
17 Secular Variation



(a) Annual change of X component

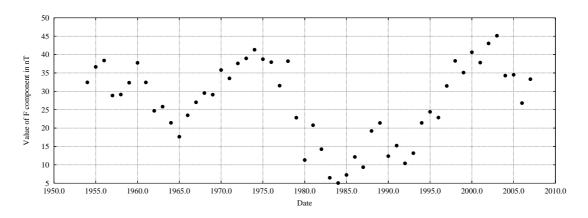


(b) Annual change of Y component

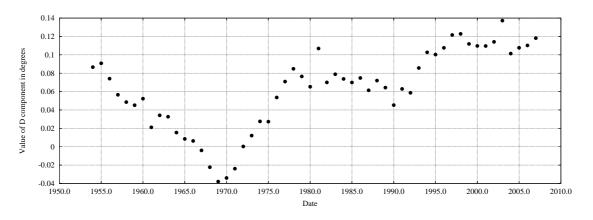


(c) Annual change of Z component

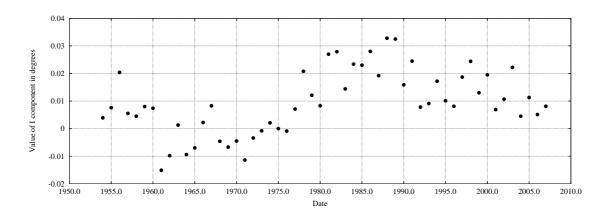
Figure 13: Annual change of components $X,\,Y,\,\mathrm{and}\,\,X$



(a) Annual change of F component



(b) Annual change of D component



(c) Annual change of I component

Figure 14: Annual change of components F, D, and I

18 Tables of Annual Means

18.1 All Days

Year	X	Y	Z	D	Н	F	I
1953	14968	874	48234	3° 20.5′	14993	50511	72° 43.9′
1954	14973	897	48266	$3^{\circ} \ 25.7'$	15000	50543	$72^{\circ} \ 44.2'$
1955	14976	921	48303	3° 31.1′	15004	50580	$72^{\circ} \ 44.6'$
1956	14969	940	48345	3° 35.6′	14998	50618	72° 45.8′
1957	14972	955	48374	3° 39.0′	15002	50647	72° 46.2′
1958	14976	968	48403	3° 41.9′	15007	50676	72° 46.4′
1959	14978	980	48436	3° 44.6′	15010	50708	72° 46.9′
1960	14982	994	48474	3° 47.7′	15015	50746	72° 47.4′
1961	15004	1001	48501	3° 49.0′	15037	50779	72° 46.5′
1962	15019	1011	48522	3° 51.1′	15053	50803	72° 45.9′
1963	15025	1020	48547	3° 53.0′	15060	50829	72° 45.9′
1964	15039	1025	48565	3° 53.9′	15074	50851	72° 45.4′
1965	15050	1028	48580	3° 54.5′	15085	50868	72° 45.0′
1966	15055	1030	48603	3° 54.8′	15090	50892	72° 45.1′
1967	15056	1029	48631	$3^{\circ} 54.6'$	15091	50919	$72^{\circ} \ 45.6'$
1968	15069	1024	48658	$3^{\circ} 53.3'$	15104	50948	$72^{\circ} \ 45.3'$
1969	15084	1015	48684	$3^{\circ} 51.0'$	15118	50977	$72^{\circ} \ 44.9'$
1970	15099	1007	48717	$3^{\circ} 48.9'$	15133	51013	$72^{\circ} \ 44.6'$
1971	15119	1002	48746	$3^{\circ} 47.5'$	15152	51047	$72^{\circ} \ 44.0'$
1972	15133	1003	48781	$3^{\circ} 47.5'$	15166	51084	$72^{\circ} \ 43.8'$
1973	15145	1007	48818	3° 48.2′	15178	51123	72° 43.7′
1974	15155	1015	48858	$3^{\circ} 49.9'$	15189	51165	$72^{\circ} \ 43.8'$
1975	15166	1023	48895	3° 51.5′	15200	51203	$72^{\circ} \ 43.8'$
1976	15177	1038	48931	$3^{\circ} 54.8'$	15212	51241	$72^{\circ} \ 43.8'$
1977	15179	1057	48963	$3^{\circ} 59.0'$	15216	51273	$72^{\circ} \ 44.2'$
1978	15171	1079	49005	4° 04.1′	15209	51311	72° 45.5′
1979	15166	1099	49030	4° 08.7′	15206	51334	72° 46.2′
1980	15161	1116	49043	4° 12.6′	15202	51345	72° 46.7′
1981	15142	1143	49070	4° 19.0′	15185	51366	72° 48.3′
1982	15121	1160	49091	4° 23.2′	15165	51380	72° 50.0′
1983	15109	1180	49101	4° 27.9′	15155	51387	72° 50.8′
1984	15089	1198	49112	4° 32.4′	15136	51392	72° 52.2′
1985	15070	1215	49125	$4^{\circ} \ 36.6'$	15119	51399	$72^{\circ} 53.6'$
1986	15048	1233	49144	4° 41.1′	15098	51411	$72^{\circ} 55.3'$
1987	15033	1248	49158	$4^{\circ} \ 44.7'$	15085	51420	$72^{\circ} 56.4'$
1988	15009	1265	49185	4° 49.1′	15062	51440	72° 58.4′
1989	14986	1280	49214	$4^{\circ} 52.9'$	15041	51461	$73^{\circ}\ 00.4'$
1990	14975	1291	49230	$4^{\circ} 55.6'$	15031	51473	73° 01.3′
1991	14957	1306	49251	$4^{\circ} 59.4'$	15014	51489	$73^{\circ} \ 02.8'$
1992	14952	1321	49263	$5^{\circ} \ 02.9'$	15010	51499	$73^{\circ} \ 03.3'$
1993	14946	1343	49278	5° 08.1′	15006	51512	73° 03.8′
1994	14935	1369	49303	5° 14.2′	14998	51534	73° 04.8′
1995	14931	1395	49329	5° 20.3′	14996	51558	73° 05.4′
1996	14928	1423	49353	5° 26.7′	14996	51581	73° 05.9′
1997	14918	1454	49388	$5^{\circ} 34.0'$	14989	51612	73° 07.1′
1998	14905	1485	49431	5° 41.4′	14979	51651	73° 08.5′
1999	14901	1514	49468	5° 48.1′	14978	51686	73° 09.3′
2000	14893	1542	49512	5° 54.7′	14973	51726	73° 10.5′
2001	14895	1571	49550	6° 01.2′	14978	51764	73° 10.9′
2002	14895	1601	49594	$6^{\circ}~08.1'$	14981	51807	$73^{\circ} \ 11.5'$
2003	14885	1636	49643	6° 16.3′	14975	51852	73° 12.9′
2004	14888	1663	49677	$6^{\circ} 22.4'$	14981	51887	73° 13.1′
2005	14885	1691	49713	$6^{\circ} 28.9'$	14981	51921	$73^{\circ} \ 13.8'$
2006	14885	1720	49740	$6^{\circ} \ 35.5'$	14984	51948	$73^{\circ} \ 14.1'$
2007	14884	1751	49774	$6^{\circ} 42.6'$	14987	51981	$73^{\circ} 14.6'$

18.2 Quiet Days

Year	X	Y	Z	D	Н	F	I
1953	14975	872	48235	3° 20.0′	15000	50514	$72^{\circ} \ 43.5'$
1954	14977	895	48266	3° 25.2′	15004	50544	$72^{\circ} \ 43.9'$
1955	14980	919	48302	3° 30.6′	15008	50580	$72^{\circ} \ 44.4'$
1956	14978	936	48343	$3^{\circ} 34.6'$	15007	50619	$72^{\circ} \ 45.2'$
1957	14978	951	48372	3° 38.0′	15008	50647	$72^{\circ} \ 45.8'$
1958	14984	965	48400	3° 41.1′	15015	50676	72° 45.9′
1959	14986	976	48433	3° 43.6′	15018	50708	72° 46.4′
1960	14993	989	48474	3° 46.4′	15026	50749	72° 46.7′
1961	15010	998	48501	3° 48.2′	15043	50780	72° 46.1′
1962	15022	1009	48523	$3^{\circ} 50.6'$	15056	50805	$72^{\circ} \ 45.7'$
1963	15032	1018	48547	3° 52.5′	15066	50831	72° 45.5′
1964	15042	1024	48566	3° 53.7′	15077	50852	72° 45.2′
1965	15051	1027	48581	3° 54.2′	15086	50869	72° 44.9′
1966	15059	1028	48602	3° 54.3′	15094	50892	72° 44.8′
1967	15062	1028	48630	3° 54.3′	15097	50920	72° 45.2′
1968	15073	1022	48657	3° 52.7′	15108	50948	72° 45.1′
1969	15089	1013	48684	3° 50.4′	15123	50979	72° 44.6′
1970	15104	1005	48715	3° 48.4′	15137	51013	72° 44.3′
1971	15124	1001	48746	3° 47.2′	15157	51048	72° 43.6′ 72° 43.4′
1972	15139	1001	48780	$3^{\circ} 47.0'$	15172	51085	72° 43.4′
1973	15151	1004	48819	$3^{\circ} 47.5'$	15184	51126	$72^{\circ} \ 43.4'$
1974	15162	1012	48859	$3^{\circ} 49.1'$	15196	51167	$72^{\circ} \ 43.4'$
1975	15171	1020	48896	$3^{\circ} 50.8'$	15205	51206	$72^{\circ} \ 43.5'$
1976	15182	1035	48930	$3^{\circ} 54.0'$	15217	51242	$72^{\circ} \ 43.5'$
1977	15184	1054	48963	$3^{\circ} 58.2'$	15221	51274	$72^{\circ} \ 43.9'$
1978	15178	1075	49003	4° 03.1′	15216	51311	$72^{\circ} \ 45.0'$
1979	15171	1096	49028	$4^{\circ} 07.9'$	15211	51333	$72^{\circ} \ 45.8'$
1980	15163	1115	49042	$4^{\circ} 12.3'$	15204	51345	$72^{\circ} \ 46.5'$
1981	15148	1140	49067	4° 18.2′	15191	51365	72° 47.9′
1982	15128	1157	49090	$4^\circ\ 22.4'$	15172	51381	$72^\circ\ 49.5'$
1983	15115	1176	49101	$4^{\circ} \ 26.9'$	15161	51388	$72^{\circ} 50.5'$
1984	15095	1195	49113	$4^{\circ} \ 31.6'$	15142	51394	$72^{\circ} 51.9'$
1985	15076	1212	49125	$4^{\circ} \ 35.8'$	15125	51401	$72^{\circ} 53.2'$
1986	15055	1230	49144	$4^{\circ} \ 40.2'$	15105	51413	$72^{\circ} 54.9'$
1987	15037	1246	49158	$4^{\circ} 44.2'$	15089	51422	$72^{\circ} 56.2'$
1988	15014	1262	49182	$4^{\circ} 48.3'$	15067	51438	$72^{\circ} 58.1'$
1989	14995	1276	49213	4° 51.8′	15049	51463	$72^{\circ} 59.8'$
1990	14982	1288	49227	$4^{\circ} 54.8'$	15037	51472	$73^{\circ}\ 00.8'$
1991	14965	1302	49248	$4^{\circ} 58.3'$	15022	51488	$73^{\circ} \ 02.2'$
1992	14959	1318	49261	$5^{\circ} \ 02.1'$	15017	51499	$73^{\circ} \ 02.8'$
1993	14952	1341	49277	5° 07.5′	15012	51513	73° 03.4′
1994	14944	1365	49304	$5^{\circ} 13.1'$	15006	51537	73° 04.3′
1995	14937	1392	49328	$5^{\circ} 19.4'$	15002	51559	73° 05.1′
1996	14934	1421	49353	$5^{\circ}\ 26.1'$	15001	51583	73° 05.6′
1997	14923	1452	49388	$5^{\circ} 33.4'$	14993	51614	$73^{\circ} \ 06.7'$
1998	14910	1484	49431	5° 41.0′	14984	51652	73° 08.2′
1999	14905	1512	49467	5° 47.5′	14981	51686	73° 09.0′
2000	14900	1540	49510	5° 54.1′	14979	51726	73° 10.0′
2001	14901	1569	49548	6° 00.6′	14983	51764	73° 10.5′
2002	14901	1599	49593	6° 07.5′	14987	51808	73° 11.1′
2003	14896	1632	49644	6° 15.1′	14985	51856	73° 12.2′
2004	14894	1660	49677	$6^{\circ} 21.6'$	14986	51888	$73^{\circ} \ 12.8'$
2005	14891	1689	49714	$6^{\circ} 28.3'$	14986	51924	$73^{\circ} \ 13.5'$
2006	14889	1718	49740	$6^{\circ} 34.9'$	14988	51949	$73^{\circ} \ 13.9'$
2007	14887	1749	49774	$6^{\circ}~42.0'$	14989	51982	$73^{\circ}\ 14.4'$
L							

18.3 Disturbed Days

Year	X	Y	Z	D	Н	F	I
1953	14959	879	48230	3° 21.8′	14985	50504	72° 44.4′
1954	14968	899	48264	3° 26.2′	14995	50540	72° 44.4′
1955	14967	924	48301	3° 32.0′	14995	50575	72° 45.2′
1956	14952	945	48344	3° 37.0′	14982	50612	72° 46.9′
1957	14959	961	48376	3° 40.5′	14990	50645	72° 47.0′
1958	14958	974	48407	3° 43.5′	14990	50675	72° 47.7′
1959	14963	986	48439	3° 46.2′	14995	50707	72° 47.9′
1960	14960	1004	48468	3° 50.4′	14994	50734	72° 48.6′
1961	14992	1005	48498	3° 50.1′	15026	50772	72° 47.2′
1962	15013	1013	48522	3° 51.6′	15047	50802	$72^{\circ} \ 46.3'$
1963	15014	1025	48543	$3^{\circ} 54.3'$	15049	50822	$72^{\circ} \ 46.6'$
1964	15035	1027	48564	$3^{\circ} 54.5'$	15070	50848	$72^{\circ} \ 45.6'$
1965	15044	1030	48580	$3^{\circ} 55.0'$	15079	50866	$72^{\circ} \ 45.3'$
1966	15046	1033	48602	$3^{\circ} 55.7'$	15081	50888	$72^{\circ} \ 45.6'$
1967	15042	1034	48630	$3^{\circ} 55.9'$	15077	50914	$72^{\circ} \ 46.5'$
1968	15061	1028	48659	3° 54.3′	15096	50947	72° 45.8′
1969	15074	1019	48684	3° 52.0′	15108	50974	72° 45.5′
1970	15089	1013	48721	3° 50.0′	15123	51014	72° 45.4′
1971	15111	1006	48746	3° 48.5′	15144	51044	72° 44.5′
1972	15122	1007	48780	3° 48.6′	15155	51080	72° 44.4′
1973	15133	1013	48816	3° 49.8′	15167	51118	72° 44.4′
1974	15147	1019	48857	3° 50.9′	15181	51161	72° 44.3′
1975	15157	1027	48892	3° 52.6′	15192	51198	72° 44.3′
1976	15166	1042	48931	3° 55.8′	15202	51238	72° 44.5′
1977	15169	1061	48962	4° 00.1′	15206	51269	$72^{\circ} \ 44.8'$
1978	15158	1086	49006	$4^{\circ} 05.9'$	15197	51308	$72^{\circ} \ 46.3'$
1979	15158	1103	49031	$4^{\circ} 09.7'$	15198	51332	$72^{\circ} \ 46.7'$
1980	15153	1120	49046	4° 13.6′	15194	51346	$72^{\circ} \ 47.2'$
1981	15133	1146	49073	$4^{\circ} 19.8'$	15176	51366	$72^{\circ} 48.9'$
1982	15106	1166	49089	$4^{\circ} 24.8'$	15151	51374	$72^{\circ} 50.9'$
1983	15099	1184	49099	$4^{\circ} 29.0'$	15145	51382	$72^{\circ} 51.4'$
1984	15078	1203	49108	$4^{\circ} \ 33.7'$	15126	51385	$72^{\circ} 52.8'$
1985	15061	1219	49124	$4^{\circ} \ 37.6'$	15110	51395	$72^{\circ} 54.1'$
1986	15037	1237	49141	$4^{\circ} \ 42.2'$	15088	51405	$72^{\circ} 55.9'$
1987	15027	1250	49161	$4^{\circ} \ 45.3'$	15079	51422	$72^{\circ} 56.9'$
1988	15001	1268	49186	4° 49.9′	15054	51438	72° 58.9′
1989	14968	1287	49212	4° 54.9′	15023	51454	73° 01.4′
1990	14964	1296	49232	4° 57.0′	15020	51472	73° 02.0′
1991	14942	1313	49257	5° 01.3′	15000	51490	73° 03.8′
1992	14943	1324	49264	5° 03.8′	15002	51497	73° 03.8′
1993	14937	1348	49277	5° 09.4′	14998	51509	73° 04.3′
1994	14924	1373	49300	5° 15.4′	14987	51528	73° 05.5′
1995	14924	1398	49328	5° 21.1′	14989	51555	73° 05.9′
1996	14923	1425	49350	5° 27.3′	14991	51577	73° 06.2′
1997	14909	1457	49388	5° 34.9′	14980	51610	73° 07.6′
1998	14893	1489	49431	$5^{\circ} 42.6'$	14967	51647	73° 09.3′
1999	14891	1517	49468	5° 49.0′	14968	51683	73° 09.9′
2000	14878	1547	49514	$5^{\circ} 56.2'$	14958	51724	73° 11.4′
2001	14880	1576	49554	6° 02.8′	14963	51764	73° 11.9′
2002	14886	1604	49594	6° 09.0′	14972	51805	$73^{\circ} \ 12.1'$
2003	14866	1643	49641	$6^{\circ} 18.4'$	14957	51845	$73^{\circ} \ 14.0'$
2004	14875	1669	49675	$6^{\circ} 24.1'$	14968	51881	$73^{\circ} \ 13.9'$
2005	14879	1696	49711	$6^{\circ} \ 30.2'$	14975	51918	$73^{\circ} \ 14.1'$
2006	14878	1722	49738	$6^{\circ} 36.1'$	14977	51944	$73^{\circ} \ 14.5'$
2007	14880	1754	49773	$6^{\circ} 43.4'$	14983	51979	$73^{\circ} \ 14.8'$

19 Earth's Magnetic Field Maps of Finland 2008.0

The isolines of total field (F) and horizontal field (H) are given in nanoteslas (nT), declination (D, positive eastwards) and inclination (I, positive downwards) in degrees of arc (see also www.geo.fmi.fi/MAGN/magncharts.html)

TOTAL INTENSITY (F) 2008.0

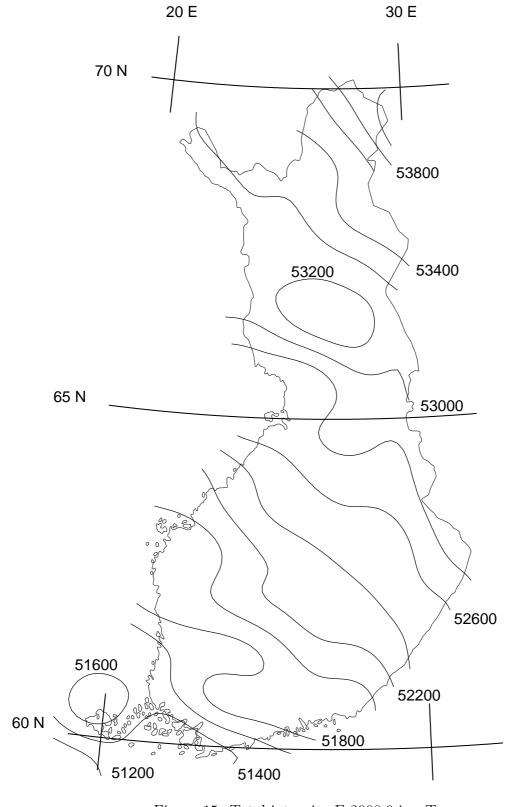


Figure 15: Total intensity F 2008.0 in nT $\,$

HORIZONTAL INTENSITY (H) 2008.0

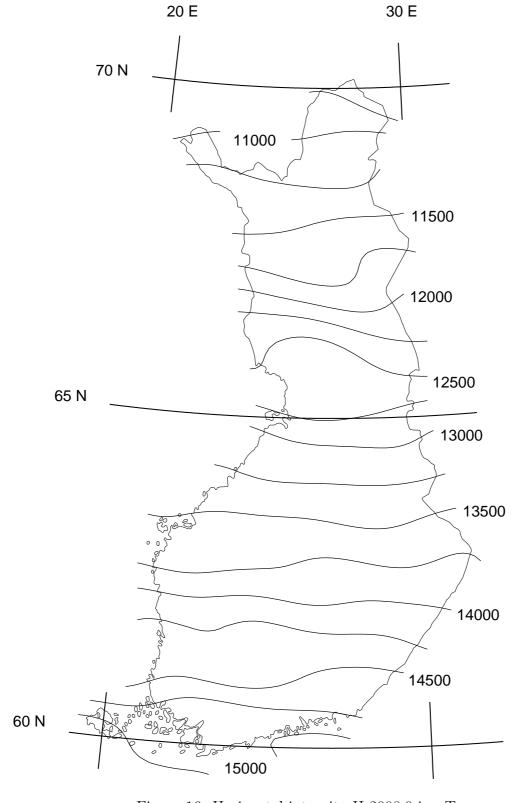


Figure 16: Horizontal intensity H 2008.0 in nT $\,$

DECLINATION (D) 2008.0

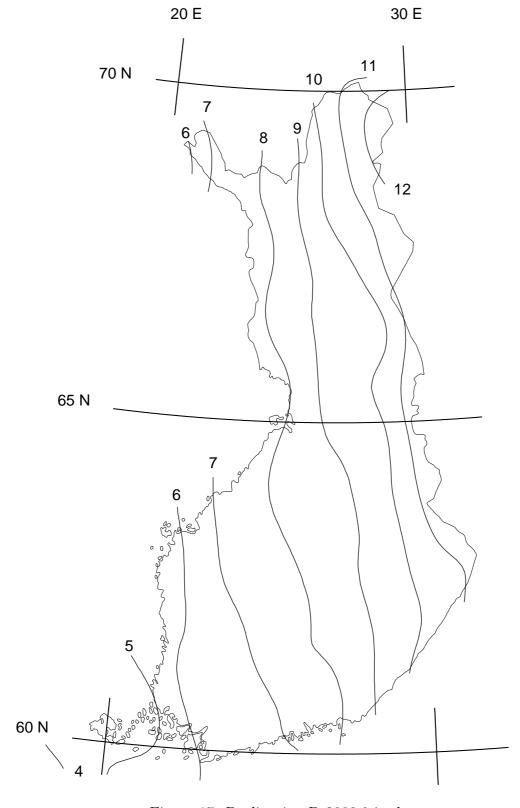


Figure 17: Declination D 2008.0 in degreees

INCLINATION (I) 2008.0

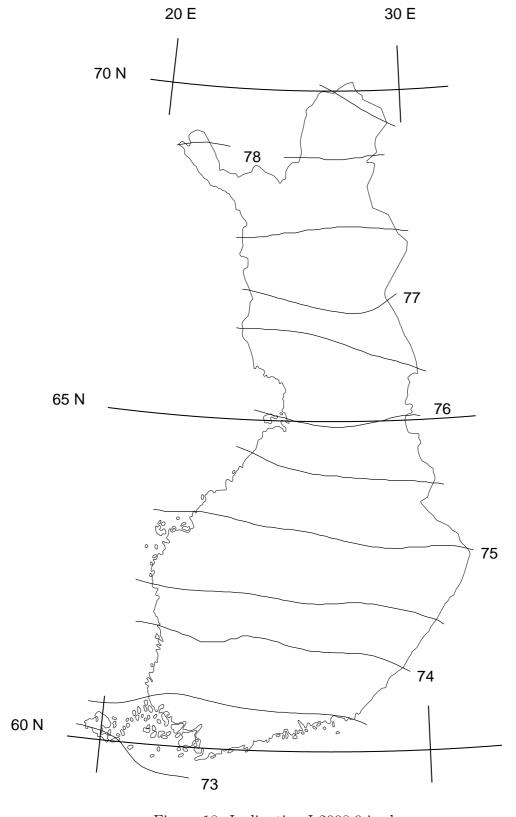


Figure 18: Inclination I 2008.0 in degrees

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The series Magnetic Results is ceased in 2006. New issues of the Nurmijärvi yearbooks will hereafter appear in the FMI series Reports.

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